PLACER COUNTY OFFICE OF EDUCATION

REQUEST FOR PROPOSALS
FOR
LEASE-LEASEBACK
CONSTRUCTION SERVICES FOR:

OFFICE BUILDING TENANT IMPROVEMENTS, ANNEX BUILDING ALTERATIONS, AND SITE IMPROVEMENTS @ VARIOUS SITES

Proposal Deadline:

August 31, 2023 at 1:00 PM

RFP Issue Date: July 31, 2023

TABLE OF CONTENTS

RFP/Q Notice & Information

I. Insurance
II. Full Opportunity
III. Limitations
IV. Restrictions on Lobbying and Contacts
V. Proposal Format and Content
VI. Selection Process
VII. General Information

Appendix B

1. Plans and Specifications
   a. Tenant Improvements @ 1400 Stanford Ranch in Rocklin, CA
   b. Annex Building Alterations @ 365 Nevada Street in Auburn, CA
   c. Site Improvements @ 360 Nevada Street in Auburn, CA
   d. Technical Specifications

The Placer County Office of Education (PCOE) is seeking proposals for the modernization of an office building, conversion of an office into a warehouse and a playground improvement. The office modernization project is located in Rocklin, CA. The address is 1400 W Stanford Ranch Rd, Rocklin 95765. The office conversion into a warehouse is located at 365 Nevada Street, Auburn 95603. The playground improvement is located at 360 Nevada Street, Auburn 95603. All three locations are considered one project for the purposes of selecting a contractor. Every respondent should address the three separate project locations and submit a cost proposal for each location and a total for the entire project. This is a hard bid Lease Lease-Back project. The final contract documents will be provided to the finalist upon selection.

To submit a proposal, Respondents must be properly licensed by the California Contractors State License Board and registered with the Department of Industrial Relations ("DIR") as required by law. Only Respondents who have been prequalified by the County Office in accordance with Public Contract Code section 20111.6 are eligible to respond to this RFQ/P. Pre-Qualification must be completed on www.Qualitybidders.com

The selected developer will be required to comply with the prevailing wage requirements, the skilled and trained workforce requirements, and the County Office's bonding and insurance requirements The selected developer shall be required to work cooperatively with County Office staff, the Governing Board, all other technical consultants, the architect, the project inspector, and any program and/or construction manager, if any, retained by the County Office for the Project, other County Office committees, and the community at large to deliver a timely and professional completion of the Project. The selected developer and its subcontractors shall comply with all applicable federal, state and local laws regarding COVID-19, including Vaccination and Testing Requirements.

The Project is further defined in the attached **APPENDIX B.** Respondents' Proposal shall include Respondent's proposed fees and costs to perform the Project if the Respondent is awarded the contract.

The County Office intends to select one Respondent that best meets the County Office's needs to perform the Project. The criteria on which the County Office makes its determination will be based on the County Office's adopted best value methodology and criteria provided in this RFQ/P.

Lease-Leaseback Structure

The Project will be funded from various sources, and any agreement reached will conform to the statutory framework for the lease-leaseback delivery method pursuant to Education Code section 17406, et seq. Financing for a portion of the construction of the Project will be included in the final contract agreement. During construction, the County Office shall pay tenant improvement payments. Once the Project is complete, the developer shall lease the completed facilities back to the County Office for a pre-determined monthly lease payment amount. However, the County Office intends that the lease will include an early termination payment option for the County Office.

I. Insurance

The County Office requires at least the following insurance coverage from the selected developer:

Commercial General Liability	Product Liability and Completed Operations, Fire Damage Liability – Split Limit	Developer: $2,000,000 per occurrence; $5,000,000 annual aggregate Subcontractors (over 10%): $2,000,000 per occurrence; $4,000,000 annual aggregate
Excess Liability		Developer: $5,000,000 per occurrence; $10,000,000 annual aggregate Subcontractors (over 10%): $3,000,000 per occurrence; $6,000,000 annual aggregate
Automobile Liability – Any Auto	Combined Single Limit	$3,000,000 (limits may be met with Excess Liability Policy required herein)
Workers' Compensation		Statutory limits pursuant to State law
Employer's Liability		$1,000,000
Pollution Liability		$2,000,000 per occurrence; $2,000,000 annual aggregate

Selected developer shall provide to the County Office certificate(s) of insurance and endorsements satisfactory to the County Office. Insurance policy(ies) shall not be amended or modified and coverage amounts shall not be reduced without thirty (30) days' written notice to County Office prior to modification and/or cancellation. For Commercial General Liability and Automobile Liability, County Office shall be named as an additional insured on all policies. Selected developer's policy(ies) shall be primary; any insurance carried by the County Office shall only be secondary and supplemental. Selected developer shall not allow any employee or subcontractor to commence work on any contract or any subcontract until the proof of insurance required of the developer or subcontractor has been provided to and accepted by the County Office.

II. FULL OPPORTUNITY

The County Office hereby affirmatively ensures that all Respondents, including without limitation Disadvantaged Business Enterprises ("DBE"), Small Local Business Enterprise ("SLBE"), Small Emerging Local Business Enterprise ("SELBE") and Disabled Veterans Business Enterprise ("DVBE") firms, shall be afforded full opportunity to submit qualifications in response to this RFQ/P and will not be discriminated against on the basis of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or veteran or military status in any consideration leading to the award of contract.

III. LIMITATIONS

This RFQ/P is neither a formal request for bids, nor an offer by the County Office to contract with any party responding to this RFQ/P. The County Office reserves the right to add additional prequalified Respondents for consideration after distribution of this RFQ/P if it is found to be in the best interest of the County Office. All decisions concerning selection of the developer will be made in the best interests of the County Office. The awarding of the contract pursuant to this RFQ/P, if at all, is at the sole discretion of the County Office.

The County Office makes no representation that participation in the RFQ/P process will lead to an award of contract or any consideration whatsoever. The County Office shall in no event be responsible for the cost of preparing any RFQ/P Packet in response to this RFQ/P.

RFQ/P Packets and any other supporting materials submitted to the County Office in response to this RFQ/P will not be returned and will become the property of the County Office unless portions of the materials are designated as proprietary at the time of submittal and are specifically requested to be returned. Vague designations and/or blanket statements regarding entire pages or documents are insufficient and will not bind the County Office to protect the designated matter from disclosure. Pursuant to *Michaelis, Montanari, & Johnson v. Superior Court* (2006) 38 Cal.4th 1065, RFQ/P Packets shall be held confidential by the County Office and shall not be subject to disclosure under the California Public Records Act until after either: (1) the County Office and the successful Respondent have completed negotiations and entered into an Agreement, or (2) the County Office has rejected all Proposals. Furthermore, the County Office will have no liability to the Respondent or other party as a result of any public disclosure of any RFQ/P Packet.

IV. RESTRICTIONS ON LOBBYING AND CONTACTS

From the period beginning on the date of the issuance of this RFQ/P and ending on the date of the award of the contract, no person, or entity submitting in response to this RFQ/P, nor any officer, employee, representative, agent, or consultant representing such a person or entity shall contact through any means or engage in any discussion regarding this RFQ/P, the evaluation or selection process/or the award of the contract with any member of the County Office, Governing Board, or selection members. Any such contact shall be grounds for the disqualification of the Respondent submitting a RFQ/P Packet.

V. Proposal Format and Content

The Respondent's Proposal should be clear, concise, complete, well organized and demonstrate both Respondent's qualifications and its ability to follow instructions.

Provide three hard copies and a separate electronic pdf file of the Proposal **without the fee proposal** in a three-ring binder, not to exceed 30 single-sided pages total length (Binder cover pages, Table of Contents, Tabs, Addenda (if any), OSHA forms, and financial information forms in Section 12 below, are excluded from page count). If an addendum is issued, please include it right after the cover letter. In the event of any discrepancy between the hard copy and the pdf copy of the Proposal, the hard copy will control. In a separate, sealed envelope provide three hard copies and one electronic copy of the fee proposal. The entire proposal package (binders and fee proposal) shall be separately sealed in a box or envelope labeled with a copy of the "Submittal Cover" specified below.

The failure to include the Non-Collusion affidavit (Attachment A) will cause the Proposal to be rejected.

All General Contractors interested in submitting a bid for this project must pre-qualify with Qualitybidders.com. Upon selection, electrical, mechanical, and plumbing subcontractors must also be pre-qualified.

All Respondents shall follow the order and format specified below. Please tab each section of the submittal to correspond to the numbers shown below.

Submittal Cover

Include the RFP's title and submittal due date, the name, address, fax number, and the telephone number of responding firm (or firms if there is a joint venture or association).

Table of Contents

Include complete and clear listings of heading and pages to allow easy reference to key information.

Job Walk, attend one from below (1st location is 1400 W Stanford Ranch Rd)

August 8, 2023, 9:00 am, 1400 W Stanford Ranch, followed by 360/365 Nevada Street

August 9, 2023, 9:00 am, 1400 W Stanford Ranch, followed by 360/365 Nevada Street

Proposal Due Date

Proposal are due on Tuesday, August 29, 2023, 1:00 pm. They must be received at 360 Nevada Street, Auburn CA 95603, Attn: Martin Fregoso

Question Deadline

All questions should for the County Office or the Architect should be submitted no later than August 17, 2023.

Body of Submittal

The following sections should be included in the order listed:

1.	A cover letter signed by an officer of the firm submitting the Proposal, or signed by another person with authority to act on behalf of and bind the firm. Indicate contact person(s) for the project. If an addendum is issued, please also acknowledge it on the cover letter. The cover letter shall include a certification in substantially the following form: "[Respondent] certifies under penalty of perjury, under the laws of the State of California, that all information provided in its Proposal, including without limitation in exhibits thereto and its Cost Proposal, is true and correct." **Failure to include such a certification shall make the Proposal non-responsive and unavailable for award.**	**Pass/Fail**
2.	All issued addenda. It is the responsibility of Respondents to check the District's website to ensure that they have received all addenda.	**Pass/Fail**
3.	Respondents must hold a California Contractors License, Class B, which is current, valid and in good standing with the California Contractor's State License Board. Provide the following information for the license: a. Name of license holder exactly as on file b. License Classification c. License Number d. Date Issued e. Expiration Date	**Pass/Fail**
4.	General information about your firm, including number of employees, years in business, name(s) of owner(s), home office location, local office location (if different), DIR registration number, whether you are a small business or disabled veteran business enterprise (DVBE), and market areas. Also include any signatory requirements to Union participation.	**5 Points**
5.	Describe the history of any disputes and performance problems. At a minimum, discuss any of the following that have occurred: a. Suspension or revocation of any license of the Respondent, or of any parent, subsidiary, predecessor company, or affiliated company, within the last ten years. An affiliated company is one with at least 10% common ownership, or with the same qualifying individual, or that has two or more board members or officers in common. (Less 2-10 points per incident, depending on the reason, the company, and when the incident occurred) b. Any EPA, Air Quality Management District, or Regional Water Quality Control Board finding against the Respondent or the owner of a project on which the Respondent was the prime contractor in the past five years. (Less one point per incident) c. In the past five years, any violation by the Respondent of any provision of California apprenticeship laws or regulations, or the laws pertaining to use of apprentices on public works, or the laws requiring use of a "skilled and trained workforce" on certain public works projects. (Less one point per incident)	**20 Points** Loss of points from the total possible is specified for each issue

	d. Payment by the Respondent of liquidated damages of $50,000 or more on any contract in the last five years. State the number of days for which liquidated damages were assessed. (Less 1 point per incident. The District retains discretion to subtract additional points for any incident in which over $100,000 in liquidated damages was paid, up to a maximum of 5 points.) e. Termination of the Respondent for default within the last ten years. (Less 10 points if in the last 5 years; less 5 points if > 5 years ago). f. Termination of the Respondent for convenience within the last ten years. Provide a detailed description of the circumstances around termination and contact information for the terminating owner; the District may contact the owner to verify circumstances. (Less up to 3 points per termination, with a maximum of 10 points, if circumstances indicate serious performance issues resulted in the termination.) g. In the past five years, cancellation of any insurance policy or refusal of any insurance company to renew an insurance policy due to non-payment of premiums or losses claimed. (Less 3 points per incident) h. Any finding by any public entity in the past five years that the Respondent was not a "responsible" bidder or proposer. (Less 2 points per incident, unless based solely on lack of experience) i. Any finding by a court or arbitrator in the past ten years that the Respondent was liable for making any false or fraudulent claim or material misrepresentation to a public agency or entity. (Less 10 points if in the last 5 years; less 5 points if > 5 years ago) j. Withdrawal of a bid for mistake. (Less one point per incident) k. Withdrawal after a contract award to the Respondent. (Less 3 points per incident) l. Any judgments **against** the Respondent in the past five years in actions in court or arbitration involving disputes with the owner of a construction project. This includes matters in which the Respondent was either plaintiff or defendant, and includes matters settled after judgment was announced. (Less up to 5 points per incident) m. Any claims in excess of $100,000 made in the past five years which were either a) asserted by the Respondent against a project owner in arbitration or litigation and compromised for 45% or less than the amount asserted or b) asserted against the Respondent by a project owner in arbitration or litigation and compromised for 55% or more than the amount asserted. (Less 3 points per incident) n. Any claims in excess of $100,000 made in the past five years in a design-build or lease-leaseback contract which were asserted by the Respondent against a project owner in mediation and compromised for 45% or less than the amount asserted. (Less 3 points per incident)	

6. Describe the Respondent's safety record and safety program, including at least a. The Respondent's worker safety program and how construction safety would be managed for the project. (4 points) b. Any CAL OSHA or Federal OSHA finding against the Respondent for any "serious," "willful" or "repeat" violations of its safety or health regulations in the past five years. (none = 3 points; 1-2 = 2 points; 3-4 = 1 point; > 4 = 0 points) c. For each of the last three complete years - Provide the Average Lost Workday Incident Rate (LWIR), the Average Recordable Incident Rate (RIR) and the Experience Modification Rate (EMR) provided by your worker's compensation insurance carrier. (3 points)	**10 points**
7. Identify the key personnel proposed to work on the Project, providing the names and levels of responsibility of the day-to-day project manager and superintendent and other key personnel. Emphasize specific experience as it relates to this project. Attach résumés for all identified key staff. Projects referenced on résumés should include contract value, start and finish dates, and delivery method (*e.g.,* design-build, lease-leaseback, construction manager at risk, or design-bid-build). No substitution of personnel identified will be allowed without the District's approval.	**10 Points**
8. Specific Respondent experience with similar K-12 public school projects, with projects conducted under Education Code section 17406 *et seq* ***(Lease Lease- back)*** strongly preferred and receiving higher scores**.** Please include brief project description, constructed values, dates (start and completion), names of District contacts and architect/engineer contacts. The District may contact selected project contacts to assess similarity of work and quality of performance. Greater points will be awarded for demonstrated experience with the proposed project team. For purposes of this requirement, Respondents will receive greater points for demonstrated experience on Lease Lease-back projects of $5 million or more and on projects that consist of or include administration buildings, or similar office space. Clearly identify any and all LLB projects where you exceeded the originally established TBR or Guaranteed Maximum Price in the past 10 years (identify the initial contract value, the amount and the reasons for exceeding the TBR). Provide District contact information for each such project.	**15 Points**

9.	Describe in detail your approach and methods for carrying out the Construction Services (Phase II), including without limitation: a. Any creative methodology or technology that your firm uses or unique resources that your firm can offer. b. Discuss past experience with innovative project delivery techniques likely to promote the goals of the District as stated in the RFP. c. Describe how Respondent will manage the Project during construction. d. Address how the Respondent's team will work in a deeply collaborative manner as part of our team, and specifically how this will change the individuals' roles from those typically required in public school construction. e. Describe capabilities for project scheduling, including typical software programs utilized and experience of personnel in these programs. Discuss briefly the plan for scheduling of this Project, including tracking and schedule updates. f. Describe how the Respondent will comply with "skilled and trained workforce requirements," including stating whether the Respondent operates its own State-approved apprenticeship program. Describe how the Respondent will ensure skilled and trained workforce is provided by all tiers of subcontractors and trades.	**15 Points**
10.	Financial Information – Provide the following financial information: a. A letter from a financial institution stating a current line of credit. b. A letter from a California admitted surety or insurance company stating bonding limit that can be applied to this Project(s). c. A letter from insurance company indicating ability to provide insurance. d. Indicate current value of all work the Respondent has under contract.	**5 Points**

11.	Non-Collusion Affidavit	**Pass/Fail**

Maximum Technical Points: 80 Points

	Fee Proposal Scoring	
LLB Entity's Cost Proposal	Low fee: 40 points Up to 01.00 percentage point higher: 36 points 1.01 to 1.5 percentage point higher: 33 points 1.51 to 2.5 percentage point higher: 30 points 2.51 to 3.25 percentage point higher: 28 points 3.26 to 4.00 percentage points higher: 25 points 4.01 to 4.5 percentage points higher: 23 points 4.51 to 5.0 percentage points higher: 21 points More than 5.0 percentage points higher: 0 points	**40 Points**
Post-construction financing rate	Finance rate will be ranked from lowest rate to highest. Lowest rate to up to .50% over the lowest rate:5 points Lowest rate plus .51% to 1.0%: 3 points Lowest rate plus 1.01% to 1.5%: 2 points Lowest rate plus 1.51% to 2.0%: 1 points 1 pointsLowest rate plus 2.01% or more: 0 points	**5 Points**

Maximum Fee Proposal Points: 45 Points

V. Selection Process

1. The purpose of this Request for Proposals is to enable the Placer County Office of Education (COE) to select the firm offering the best value to the COE for award of a lease-leaseback instrument under the provisions of Education Code section 17406.

2. The COE will use the qualifications-based selection process outlined below.

3. A review and selection committee composed of key District officials and consultants will review and evaluate all Proposals based on the scoring criteria identified in Section I above and will conduct interviews as appropriate. The evaluation team first will evaluate the Qualifications / Technical portion of the submitted Proposals to determine whether they meet the format and content requirements and the standards specified in the RFP. All compliant Proposals will be scored using the technical criteria identified above. The evaluation team will not open the contents of the sealed fee proposal during this part of the evaluation.

4. After the evaluation team scores all Proposals, each Proposal shall be assigned a Technical Score that is the average of the individual evaluators' scores for the Proposal. A Proposal must receive at least 70% of the available technical points to have the Fee Proposal opened and continue with the evaluation.

5. After all Technical Scores are assigned, the Fee Proposals will be opened and scored in accordance with the standards identified above. The Respondent's Fee Proposal Score will be added to its Technical Score to obtain a total Proposal Score.

6. The Total Proposal Scores will be used to create a short list of two or three Respondents to be interviewed by the evaluation team, at the sole discretion of the COE.

7. Prior to the interviews, the COE will develop standard questions to ask of each presenter, which the COE may or may not share with the short-listed Respondents prior to the interviews. The interview score will be worth a maximum of 45 points.

8. After the interviews, the interview score will be added to the Total Proposal Score for each interviewed Respondent. The COE will rank Respondents by highest to lowest score (highest to lowest best value score). If the COE elects to proceed with award, then, in a Notice of Intent to Award, the District shall publicly announce the rankings and scores, identify the intended awardee offering the best value, identify the intended awardee's price, and state the date of the Board meeting at which the award will be recommended.

9. Proposals will be opened privately to assure confidentiality and avoid disclosure of the contents to competing Respondents prior to and during the review, evaluation, and negotiation processes. However, to the extent that the submittals are public records under California law, they may be released to members of the public if specifically requested under the California Public Records Act.

10. The COE reserves the right to request additional information at any time, which, in its sole opinion, is necessary to assure that a Respondent's competence, number of qualified employees, business organization and financial resources are adequate to perform the required lease-leaseback services for the COE.

11. If the Respondent to which the LLB instrument is awarded fails to execute the Site Lease and Facilities Lease within two weeks following award by the Board, then the Board may award the LLB Instrument to the next-highest scored Respondent if the Board finds the award to be in the best interest of the COE

VI. General Information

1. Amendments. The COE reserves the right to cancel or revise in part or in its entirety this RFP. If the COE cancels or revises this RFP, then it will do so by addenda posted to the COE's website and provided to Respondents. The COE also reserves the right to extendthe date responses are due.

2. Inquires. Any questions regarding this RFP or selection process may be directed in writing to Martin Fregoso, 360 Nevada Street, Auburn CA 95603 or via email to mfregoso@placercoe.org. Applicants are requested not to contact other COE staff or Board members in connection with this selection process. Any applicants who violate this request may be disqualified from further consideration.

   The COE will reply regarding substantive issues by addenda which will be uploaded to the COE's website. It is the responsibility of the Respondent to check the COE's website for updated information prior to the Proposal due date. Questions received after the deadline noted in the RFP may not be answered. Only questions answered by formal written addendawill be binding.

   Respondents are encouraged to submit questions regarding any ambiguity, uncertainty, orother perceived flaw in this RFP. Any such issue which is not raised with the COE's designated representative prior to the deadline to submit Proposals shall be waived, and the COE will not consider any challenge based on the contents, structure, or terms of this RFP after the Proposal deadline. **Specifically, the COE does not intend to consider any requested substantive changes to the Facilities and/or Site Leases after the Proposal.**

Attachment A

NONCOLLUSION AFFIDAVIT

In accordance with Public Contract Code §7106. _____

(Contractor's full name)

being first duly sworn, deposes and says that he or she is _____

(Contractor's title)

of _____

(Company's name)

the party making the foregoing Proposal that the Proposal is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the Proposal is genuine and not collusive or sham; that the Contractor has not directly or indirectly induced or solicited any other Contractor to put in a false or sham Proposal, and has not directly or indirectly colluded, conspired connived, or agreed with any Contractor or anyone else to put in a sham Proposal, or that anyone shall refrain from proposing; that the Contractor has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the price submitted by the Contractor or any other Contractor, or to fix any overhead, profit, or cost element of the Proposal price, or of that of any other Contractor, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed Contract; that all statements contained in the Proposal are true; and further, that the Contractor has not, directly or indirectly, submitted his or her Proposal price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, Proposal depository, or to any member or agent thereof to effectuate a collusive or sham Proposal.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

This form must be notarized prior to submission with Proposal.

Signature: _____

I assert that I have the requisite authority to bind _____ (Contractor Name) in the making of this Affidavit. I am over the age of 18, have personal knowledge of the facts set forth above, and declare that the facts provided in this Affidavit are true and correct in all their representations.

Attachment A

Dated this_____day of _____, 2010 at _____ (City),

_____ (State);

By:

_____	_____
(Signature)	*(Print Name)*
_____	_____

APPENDIX B

Plans and Technical Specifications

Tenant Improvements @ 1400 Stanford Ranch in Rocklin, CA

Annex Building Alterations @ 365 Nevada Street in Auburn, CA

Site Improvements @ 360 Nevada Street in Auburn, CA

Specifications

Tenant Improvements @ 1400 Stanford Ranch in Rocklin, CA

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY

PLACER COUNTY OFFICES OF EDUCATION

NEW MAIN OFFICE

TENANT IMPROVEMENTS

1400 STANFORD RANCH, ROCKLIN CA 95765

GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF GOVERNING CODES LISTED IN "APPLICABLE CODES" AND ALL GOVERNING LOCAL CODES AND REGULATIONS.
2. THE OWNER / ARCHITECT HAVE OBTAINED APPROVAL OF THE PRIMARY AUTHORITY HAVING JURISDICTION (DSA, HCAI, CITY BUILDING PERMIT). CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL OTHER REQUIRED PERMITS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
3. UNLESS STATED OTHERWISE IN THE SPECIFICATIONS, SPECIAL INSPECTION IS REQUIRED FOR SHOP AND FIELD STRUCTURAL WELDING.
4. WHERE INCORPORATED IN THE CONSTRUCTION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN COPIES OF HCAI OR DSA PRE-APPROVALS FOR PRE-APPROVED ITEMS OR SYSTEMS INCORPORATED INTO THE CONSTRUCTION AND DISTRIBUTE TO OWNER'S REPRESENTATIVE, ARCHITECT AND INSPECTOR.
5. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO FURNISH AND AND INSTALL ALL MATERIALS AND WORK DESCRIBED, DEPICTED OR DETAILED WITHIN THESE DOCUMENTS REGARDLESS OF THE LOCATION OF THAT MATERIAL OR WORK WITHIN THE DOCUMENTS OR OMISSION (WHETHER DELIBERATE OR ACCIDENTAL) OF THAT MATERIAL OR WORK BY A SUBCONTRACTOR ON HIS/HER BID.
6. THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL CONSIDER THESE DOCUMENTS IN THEIR ENTIRETY. DISCREPANCIES OR CONTRADICTIONS BETWEEN PORTIONS OF THESE DOCUMENTS MUST BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AT LEAST 72 HOURS PRIOR TO BID OPENING FOR CLARIFICATION. OTHERWISE, THE MOST RESTRICTIVE REQUIREMENT SHALL BE IN FORCE AT NO ADDITIONAL COST TO THE OWNER.
7. THE CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR THE SAFETY OF ALL PERSONS ON OR ABOUT THE CONSTRUCTION SITE, IN ACCORDANCE WITH APPLICABLE LAWS AND CODES. CONTRACTOR ESTABLISH PROCEDURES TO ASSURE ALL PERSONS ENTERING A POSSIBLY HAZARDOUS AREA, INCLUDING WORKERS, SUBCONTRACTORS, OTHER CONTRACTORS, VISTORS, AND OTHERS ARE AWARE OF APPROPRIATE / REQUIRED SAFETY PROCEDURES. COMPLY WITH LOCAL, STATE, AND FEDERAL SAFETY STANDARDS, INCLUDING OSHA REQUIREMENTS AND WITH THE SAFETY PROVISIONS OF THE LATEST MANUAL OF ACCIDENT PREVENTION PUBLISHED BY THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA.
8. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING TEMPORARY FENCING AND GATES, SIGNAGE, SECURITY LIGHTING OR OTHER SECURITY AND CONTROL MEASURES NECESSARY TO PROVIDE FOR THE SAFETY OF THE PUBLIC AND FACILITY USERS UNTIL THE COMPLETION OF THE WORK.
9. THE CONTRACTOR IS RESPONSIBLE TO FOR PROTECTION OF ADJACENT PROPERTY AND SHALL REPAIR AND / OR REPLACE ALL PROPERTY DAMAGED DURING THE COURSE ON THE WORK.
10. THE CONTRACTOR SHALL LIMIT HIS / HER ACTIVITY TO THE AREA DESCRIBED WITHIN THE DOCUMENTS UNLESS OTHERWISE PERMITTED BY THE OWNER'S REPRESENTATIVE.
11. THE CONTRACTOR IS RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF ANY ITEMS DAMAGED OR DISTURBED DURING THE COURSE OF THE WORK. INSTALLATION SHALL MATCH EXISTING IN KIND, QUALITY, AND PERFORMANCE.
12. WHERE EXISTING CONSTRUCTION AND FINISHES ARE CUT, DAMAGED, OR REMODELED, PATCH WITH MATERIALS TO MATCH IN KIND, QUALITY, PERFORMANCE CHARACTERISTICS, AND APPEARANCE.
13. ALL DIMENSIONS ARE TO FACE OF STUD, UNLESS OTHERWISE NOTED. DIMENSIONS NOTED AS "CLR" MEAN CLEAR DIMENSION TO FACE OF FINISH. VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES FOUND.
14. VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS. NOTIFY ARCHITECT OF ANY DISCREPANCIES FOUND. VERIFY DIMENSIONS OF ALL OWNER-FURNISHED ITEMS, INCLUDING FURNITURE AND EQUIPMENT, TO ENSURE PROPER COORDINATION WITH CONSTRUCTION.
15. ALL ITEMS IN THESE DRAWINGS ARE NEW UNLESS OTHERWISE NOTED.
16. ALL UTILITIES REQUIRED FOR THE CONTINUOUS OPERATION OF ALL OCCUPIED EXISTING FACILITIES SHALL BE MAINTAINED IN SERVICE AT ALL TIMES. ANY SHUT DOWNS FOR NEW CONNECTIONS MUST BE COORDINATED WITH THE OWNER'S REPRESENTATIVE TWO WEEKS PRIOR TO THE REQUESTED SHUT DOWN.
17. COORDINATION WITH OTHER CONTRACTS: IF ANY PART OF THIS CONTRACTOR'S WORK DEPENDS UPON THE WORK OF A SEPARATE CONTRACTOR, THIS CONTRACTOR SHALL INSPECT SUCH OTHER WORK AND PROMPTLY REPORT IN WRITING TO THE OWNER'S REPRESENTATIVE ANY DEFECTS IN SUCH OTHER WORK THAT RENDER IT UNSUITABLE TO RECEIVE THE WORK OF THIS CONTRACTOR. FAILURE OF THIS CONTRACTOR TO SO INSPECT AND REPORT SHALL CONSTITUTE AN ACCEPTANCE OF THE OTHER CONTRACTOR'S WORK, EXCEPT AS TO DEFECTS WHICH MAY DEVELOP IN OTHER CONTRACTOR'S WORK AFTER EXECUTION OF THIS CONTRACTOR'S WORK.
18. COORDINATION OF SCHEDULE: PORTIONS OF THIS WORK MAY BE REQUIRED TO BE COMPLETED ON SCHEDULE IN ORDER TO AVOID DELAY TO OTHER CONTRACTORS OR OWNERS OPERATIONS. CONTRACTOR SHALL STRICTLY ADHER TO ESTABLISHED COMPLETION DATES AS DESIGNATED IN THE SPECIFICATIONS AND COORDINATE WORK SCHEDULE WITH THE OWNER'S REPRESENTATIVE AND OTHER CONTRACTORS. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND LIQUIDATED DAMAGES.
19. SCHEDULE ALL WORK WITH THE OWNER'S REPRESENTATIVE, INCLUDING CONSTRUCTION ACCESS AND STORAGE, AND WORK OUTSIDE THE "EXTENT OF WORK" SET FORTH IN THESE DOCUMENTS. THE CONSTRUCTION SCHEDULE SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO THE START OF CONSTRUCTION.
20. CONSTRUCTION PROCEDURES SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO THE START OF CONSTRUCTION.
21. DEMOLITION IS NOT NECESSARILY LIMITED TO ONLY WHAT IS SHOWN ON THIS OR OTHER DRAWINGS OR AS OUTLINED IN THE SPECIFICATIONS. THE INTENT IS TO INDICATE GENERAL SCOPE OF DEMOLITION REQUIRED. CONTRACTOR SHALL INCLUDE ALL MISCELLANEOUS DEMOLITON, CUTTING AND PATCHING REQUIRED TO COMPLETE THE PROJECT IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.
22. ALL ITEMS IDENTIFIED TO BE SALVAGED SHALL BE DELIVERED IN GOOD CONDITION TO A PLACE OF STORAGE AS DIRECTED BY THE OWNER'S REPRESENTATIVE. ALL OTHER ITEMS MUST BE DISPOSED OF OFF-SITE IN A LEGAL MANNER.
23. ARCHITECT IS NOT RESPONSIBLE FOR THE DISCOVERY, PRESENCE, HANDLING, REMOVAL OR DISPOSAL OF, OR EXPOSURE OF PERSONS TO, HAZARDOUS MATERIALS OR TOXIC SUBSTANCES IN ANY FORM AT THE PROJECT SITE. TO THE EXTENT THESE DOCUMENTS RELATE TO SUCH ISSUES, ARCHITECT'S PARTICIPATION IS SOLELY ADMINISTRATIVE WITHOUT ANY RESPONSIBILITY FOR THE CONTENT OR EXECUTION OF SUCH DOCUMENTS.
24. DETAIL DRAWINGS WITH REFERENCES TO FIRE-RATED ASSEMBLIES OR CONSTRUCTION WHICH HAVE BEEN TESTED BY UNDERWRITERS LABORATORIES, THE CALIFORNIA BUILDING CODE OR ANY OTHER APPROVED TESTING AGENCY, SHALL BE CONSTRUED TO INCLUDE ALL WORK AND PROCEDURES CONTAINED IN THE REFERENCED ASSEMBLY DESCRIPTION,.
25. ALL PIPE AND DUCT PENETRATIONS THROUGH FIRE RATED CONSTRUCTION SHALL BE FIRE STOPPED AND SEALED TO MAINTAIN THE REQUIRED RATING.
26. CONTRACTOR TO MAINTAIN CONTEMPORANEOUSLY RECORDED "AS-BUILT" INFORMATION OF ALL WORK, WHICH SHALL BE MARKED IN COLOR ON THE DRAWINGS AND SPECIFICATIONS. A SCANNED PDF OF THE "AS-BUILT" DRAWINGS AND SPECIFICATIONS SHALL BE TURNED OVER TO THE OWNER'S REPRESENTATIVE PRIOR TO FINAL APPLICATION FOR PAYMENT. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
27. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION AND DUST COVERS ADJACENT TO OCCUPIED AREAS AS REQUIRED TO CONTAIN DUST AND DEBRIS WITHIN CONSTRUCTION AREA. BROOM CLEAN ALL AREAS, INLCUDING SIDEWALKS AND DRIVEWAYS EACH DAY. KEEP DIRT AND DUST TO A MINIMUM.
28. WORK SHALL BE EXECUTED IN A CAREFUL AND ORDERLY MANNER WITH THE LEAST POSSIBLE DISTURBANCE TO PUBLIC AND TO OCCUPANTS OF EXISTING BUILDING.
29. CLEAN ALL EXPOSED SURFACES AND NEW EQUIPMENT AFTER COMPLETION.

APPLICABLE CODES

ALL WORK PERFORMED UNDER THIS CONTRACT IS TO CONFORM TO THE FOLLOWING CODES AND REGULATIONS:

2022 CALIFORNIA BUILDING ADMINISTRATIVE CODE,
PART 1, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)

2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24, CCR BASED ON THE 2021 INTERNATIONAL BUILDING CODE (IBC) WITH 2021 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24, CCR BASED ON THE 2020 NATIONAL ELECTRICAL CODE (NEC) WITH 2020 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24, CCR BASED ON THE 2021 UNIFORM MECHANICAL CODE (UMC) WITH 2021 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24, CCR BASED ON THE 2021 UNIFORM PLUMBING CODE (UPC) WITH 2021 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA ENERGY EFFICIENCY STANDARDS (ENERGY CODE), PART 6, TITLE 24 CCR

2022 SAFETY CODE FOR ELEVATORS AND ESCALATORS
(ASME A17.1-2019)

2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24, CCR BASED ON THE 2021 INTERNATIONAL FIRE CODE (IFC) WITH 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA EXISTING BUILDING CODE, PART 10, TITLE 24 CCR
(2021 IEB CODE AND 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA GREEN BUILDING CODE (CALGreen), PART 11, TITLE 24, CCR

2022 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 CCR

TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

NFPA 13	INSTALLATION OF SPRINKLER SYSTEMS	2022 EDITION
NFPA 14	INSTALLATION OF STANDPIPE SYSTEMS	2019 EDITION
NFPA 17	STANDARD FOR DRY CHEMICAL EXTINGUISHING SYS.	2021 EDITION
NFPA 17A	STANDARD FOR WET CHEMICAL SYS.	2021 EDITION
NFPA 20	INSTALLATION OF STATIONARY PUMPS	2019 EDITION
NFPA 24	INSTALLATION OF PRIVATE FIRE MAINS	2019 EDITION
NFPA 72	NATIONAL FIRE ALARM AND SIGNALING CODE	2022 EDITION
NFPA 80	FIRE DOORS AND OTHER OPENING PROTECTIVES	2019 EDITION
NFPA 92	STANDARD FOR SMOKE CONTROL SYSTEMS	2018 EDITION
NFPA 253	CRITICAL RADIANT FLUX OF FLOOR COVERING SYS	2019 EDITION
NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEM	2018 EDITION

REFERENCE CODE SECTIONS FOR APPLICABLE STANDARDS - 2022 CBC CHAPTER 35 AND 2022 CFC CHAPTER 45

THE ABOVE CODES AND REGULATIONS REFER TO THE LATEST EDITION OR REVISION IN FORCE ON THE DATE OF THE CONTRACT, UNLESS OTHERWISE STATED. NOTHING ON THE DRAWINGS IS TO BE CONSTRUED AS REQUIRING OR PERMITTING WORK THAT IS CONTRARY TO THE LISTED CODES AND REGULATIONS, OR OTHER LOCAL, STATE OR FEDERAL CODES OR REGULATIONS WHICH MAY BE APPLICABLE.

COMPLIANCE WITH CFC CHAPTER 33, FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION, AND CBC CHAPTER 33, SAFETY DURING CONSTRUCTION WILL BE ENFORCED.

DEFERRED APPROVALS

1. FIRE SPRINKLER MODIFICATIONS.
2. FIRE ALARM MODIFICATIONS.

VICINITY MAP

NO SCALE



OWNER

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BEVIER STRUCTURAL ENGINEERING TEL. (916) 631-3030
2479 SUNRISE BLVD,
GOLD RIVER, CA 95670
CONTACT: BILL BEVIER

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2431 CAPITOL AVE
SACRAMENTO, CA 95816
CONTACT: NIRAV SHAH

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M.NEILS ENGINEERING INC. TEL. (916) 923-4400
100 HOWE AVE #235N
SACRAMENTO, CA 95825
CONTACT: STUART LINDSAY

CIVIL
WARREN CONSULTING ENGINEERS, INC. TEL. (916) 985-1870
1117 WINDFIELD WAY, SUITE 110
EL DORADO HILLS, CA 95762
CONTACT: ANTHONY TASSANO

LANDSCAPE ARCHITECT
WARREN CONSULTING ENGINEERS, INC. TEL. (916) 369-3990
2707 K STREET, SUITE 201
SACRAMENTO, CA 95816
CONTACT: PETER LARIMER

CODE SUMMARY

SITE

ZONING: B - P/C

PARCEL NO.: APN 017-081-025-00

BUILDING

BUILDING AREA:
FIRST FLOOR 34,515 SF
SECOND FLOOR 34,515 SF
TOTAL 69,030 SF

BUILDING OCCUPANCY: B

CONSTRUCTION CLASSIFICATION: IIIB

FIRE PROTECTION SYSTEM: FIRE SPRINKLERS

NUMBER OF STORIES: 2

SCOPE OF WORK

1. RECONFIGURATION OF EXISTING FIRST-FLOOR OPEN AND CLOSED OFFICES, INCLUDING ANCILLARY ROOMS, TO ESTABLISH A LARGE AND FLEXIBLE BOARDROOM FOR PUBLIC MEETINGS/GATHERINGS WITH AUDIO/VISUAL, FLOOR POWER RECEPTACLES, LIGHTING, HVAC, AND OPERABLE PARTITIONS UPGRADES.
2. A NEW RECEPTIONIST STATION ON THE FIRST FLOOR IN THE MAIN LOBBY
3. RECONFIGURATION OF EXISTING 2ND FLOOR OPEN AND CLOSED OFFICES TO ESTABLISH A NEW SUPERINTENTNCTS OFFICES SUITE
4. NEW WINDOW LITES AR SELECT OFFICES THROUGHOUT THE FIRST AND SECOND FLOORS (EXCLUDE LEASED AREAS)
5. RECONFIGURATION OF EXISTING FIRST-FLOOR CONFERENCE AND STORAGE TO BECOME SECURED IT STORAGE.
6. REPLACE/RE-FINISH EXISTING FLOORING, WALL PAINT, MISC. CASEWORK, AND SIGNAGE THROUGHOUT THE FIRST AND SECOND FLOORS. (EXCLUDE LEASED AREAS)

INDEX OF DRAWINGS

ARCHITECTURAL
A0.01 TITLE SHEET
A0.02 SYMBOLS, LEGENDS AND ABBREVIATIONS
A1.01 SITE PLAN
A1.02 EGRESS PLAN - FIRST FLOOR
A1.03 EGRESS PLAN - SECOND FLOOR
A2.01 DEMOLITION PLAN - FIRST FLOOR
A2.02 DEMOLITION PLAN - SECOND FLOOR
A2.03 REMODEL FLOOR PLAN - FIRST FLOOR
A2.04 REMODEL FLOOR PLAN - SECOND FLOOR
A2.06 PARTIAL REMODEL PLAN - FIRST FLOOR
A2.07 PARTIAL REMODEL PLAN - SECOND FLOOR - WEST
A2.08 PARTIAL REMODEL PLAN - SECOND FLOOR - EAST
A2.20 DOOR SCHEDULE AND TYPES
A2.30 WINDOW/STOREFRONT TYPES AND SCHEDULE
A3.01 EXTERIOR ELEVATIONS
A4.01 ENLARGED PLANS & INT. ELEVATIONS - RESTROOMS
A4.03 ENLARGED PLANS & INT. ELEVATIONS - FIRST FLOOR
A4.06 ENLARGED PLANS & INT. ELEVATIONS - RECEPTION
A5.01 INTERIOR ELEVATIONS - FIRST FLOOR
A5.02 INTERIOR ELEVATIONS - FIRST FLOOR
A5.03 INTERIOR ELEVATIONS - SECOND FLOOR
A6.01 DEMO REFLECTED CEILING PLAN - FIRST FLOOR
A6.02 DEMO REFLECTED CEILING PLAN - SECOND FLOOR
A6.03 REMODEL REFLECTED CEILING PLAN - FIRST FLOOR
A6.04 REMODEL REFLECTED CEILING PLAN - SECOND FLOOR - WEST
A6.05 REMODEL REFLECTED CEILING PLAN - SECOND FLOOR - EAST
A8.01 EXTERIOR DETAILS - WALL
A9.01 INTERIOR PARTITION TYPES
A9.02 INTERIOR DETAILS - PARTITIONS
A9.03 ACCESSIBLITY DETAILS
A9.04 INTERIOR DETAILS - CEILING
A9.05 INTERIOR DETAILS - MISC
A9.10 CASEWORK DETAILS - WORKING
A9.12 CASEWORK DETAILS - RECEPTION

INTERIORS
I1.00 INTERIOR FINISH SCHEDULE, SYMBOL LEGEND & GENERAL NOTES
I2.02 OVERALL FIRST FLOOR - FINISH PLAN
I2.03 OVERALL SECOND FLOOR - FINISH PLAN
I2.04 OVERALL FIRST FLOOR - MANUFACTURER CARPET INSTALLATION DIAGRAM
I2.05 OVERALL FIRST FLOOR - MANUFACTURER CARPET INSTALLATION DIAGRAM
I2.06 OVERALL SECOND FLOOR - MANUFACTURER CARPET INSTALLATION DIAGRAM
I2.07 OVERALL SECOND FLOOR - MANUFACTURER CARPET INSTALLATION DIAGRAM

FURNITURE
FF2.02 OVERALL FIRST FLOOR FURNITURE PLAN
FF2.03 OVERALL SECOND FLOOR FURNITURE PLAN

SIGNAGE
SG1.01 SIGNAGE SCHEDULE
SG2.01 PARTIAL SIGNAGE PLAN - FIRST FLOOR
SG2.02 PARTIAL SIGNAGE PLAN - SECOND FLOOR - WEST
SG2.03 PARTIAL SIGNAGE PLAN - SECOND FLOOR - EAST
SG9.01 SIGNAGE DETAILS

STRUCTURAL
S1.0 GENERAL NOTES
S1.1 TYPICAL DETAILS
S1.2 TYPICAL DETAILS
S2.1 SECOND FLOOR PARTIAL FRAMING PLAN & DETAILS

MECHANICAL
M0.01 MECHANICAL LEGEND, NOTES AND SCHEDULES
M0.02 MECHANICAL SCHEDULES
M1.11 MECHANICAL FIRST FLOOR PARTIAL DEMOLITION PLAN - WEST
M1.21 MECHANICAL SECOND FLOOR PARTIAL DEMOLITION PLAN - WEST
M1.22 MECHANICAL SECOND FLOOR PARTIAL DEMOLITION PLAN - EAST
M2.11 MECHANICAL FIRST FLOOR PARTIAL REMODEL PLAN - WEST
M2.21 MECHANICAL SECOND FLOOR PARTIAL REMODEL PLAN -WEST
M2.22 MECHANICAL SECOND FLOOR PARTIAL REMODEL - EAST
M2.23 MECHANICAL DETAILS
M5.02 MECHANICAL DETAILS
MP0.01 MECHANICAL AND PLUMBING SPECIFICATIONS
MP0.02 MECHANICAL AND PLUMBING SPECIFICATIONS

PLUMBING
P0.1 PLUMBING LEGEND, NOTES AND SCHEDULES
P1.11 PLUMBING FIRST FLOOR PARTIAL DEMOLITION PLAN - WEST
P1.21 PLUMBING SECOND FLOOR PARTIAL DEMOLITION PLAN - WEST
P1.22 PLUMBING SECOND FLOOR PARTIAL DEMOLITION PLAN - EAST
P2.11 PLUMBING FIRST FLOOR PARTIAL REMODEL PLAN - WEST
P2.12 PLUMBING FIRST FLOOR PARTIAL ENLARGED REMODEL PLANS - RESTROOMS
P2.21 PLUMBING SECOND FLOOR PARTIAL REMODEL PLAN - WEST
P5.01 PLUMBING DETAILS

ELECTRICAL
E0.01 ELECTRICAL SHEET INDEX, ABBREVIATIONS, SYMBOL LIST, AND NOTES
E0.02 LUMINAIRE SCHEDULE AND ELECTRICAL NOTES
E2.01 FIRST FLOOR PARTIAL PLAN - DEMOLITION - WEST - LIGHTING
E2.02 SECOND FLOOR PARTIAL PLAN - DEMOLITION - WEST - LIGHTING
E2.03 SECOND FLOOR PARTIAL PLAN - DEMOLITION - EAST - LIGHTING
E2.04 FIRST FLOOR PARTIAL PLAN - REMODEL - WEST - LIGHTING
E2.05 SECOND FLOOR PARTIAL PLAN - REMODEL - WEST - LIGHTING
E2.06 SECOND FLOOR PARTIAL PLAN - REMODEL - EAST LIGHTING
E3.01 FIRST FLOOR PARTIAL PLAN - DEMOLITION - WEST - ELECTRICAL
E3.02 SECOND FLOOR PARTIAL PLAN - DEMOLITION - WEST ELECTRICAL
E3.03 SECOND FLOOR PARTIAL PLAN - DEMOLITION - EAST - ELECTRICAL
E3.04 FIRST FLOOR PARTIAL PLAN - REMODEL - WEST - ELECTRICAL
E3.05 SECOND FLOOR PARTIAL PLAN - REMODEL WEST - ELECTRICAL
E3.06 SECOND FLOOR PARTIAL PLAN - REMODEL - EAST - ELECTRICAL
E4.01 PARTIAL ONE LINE POWER DIAGRAM, AND LOAD CALCULATIONS
E4.02 PANEL SCHEDULES
E5.01 ELECTRICAL DETAILS
E5.02 ELECTRICAL DETAILS
E6.01 TITLE 24 INDOOR LIGHTING COMPLIANCE FORMS
E6.02 TITLE 24 OUTDOOR LIGHTING COMPLIANCE FORMS

CIVIL
C1.0 NOTES & LEGEND
C2.0 EXISTING CONDITIONS
C3.0 DEMOLITION PLAN
C4.0 HOTIZONTAL CONTROL
C5.0 GRADING PLAN
C6.0 UTILITY PLAN
C7.0 STORMWATER CONTROL PLAN
C8.0 DETAILS
C9.0 EROSION CONTROL PLAN
C9.1 EROSION CONTROL DETAIL

LANDSCAPE
L0.1 SITE PLAN
L1.1 TREE PLANTING PLAN
L2.1 SHRUB PLANTING PLAN
L3.1 LANDSCAPE IRRIGATION PLAN
L4.1 SITE INSTALLATION DETAILS
L4.2 LANDSCAPE PLANTING DETAILS
L4.3 LANDSCAPE IRRIGATION DETAILS
L5.1 WATER EFFICIENCY CHARTS AND CALCULATIONS

PCOE GOLD IN EDUCATION

Revisions

Delta	Date	Revisions	By

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CONSTRUCTION DOCUMENTS

AGENCY APPROVAL

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Project
TENANT IMPROVEMENTS

Sheet Title
TITLE SHEET

Client Project Number: N/A

Scale:
Drawn By: SH/LDM
Checked By: HC
Issue Date: July 21, 2023
Revit Version: 2023

Sheet
A0.01
Sheet 1 of 200

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7/30/2023 9:26:28 PM

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY

ABBREVIATIONS

&	AND
@	AT
℄	CENTERLINE
Ø	DIAMETER
#	POUND OR NUMBER
A/C	AIR CONDITIONING
AC	ASPHALTIC CONCRETE
ACOUS	ACOUSTICAL
ACT	ACOUSTIC CEILING TILE
ADD	ADDITIONAL
ADJ	ADJACENT
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
ALUM	ALUMINIUM
ANOD	ANODIZED
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
BITUM	BITUMINOUS
BD	BOARD
BLDG	BUILDING
BLKG	BLOCKING
BOT	BOTTOM
BTWN	BETWEEN
BUR	BUILT-UP ROOFING
CAB	CABINET
CB	CATCH BASIN
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
CG	CORNER GUARD
CJ	CONTROL JOINT
CLG	CEILING
CLO	CLOSET
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT
COL	COLUMN
COMP	COMPOSITION
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CORR	CORRIDOR
CT	CERAMIC TILE
CUST	CUSTODIAN
DBL	DOUBLE
DEMO	DEMOLITION
DEPT	DEPARTMENT
DF	DRINKING FOUNTAIN
DI	DRAIN OR DROP INLET
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DISP	DISPENSER
DIV	DIVISION
DN	DOWN
DS	DOWNSPOUT
DTL	DETAIL
DW	DISHWASHER
DWG	DRAWING
(E)	EXISTING
E	EAST
EA	EACH
EF	EXHAUST FAN
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
ENCL	ENCLOSURE
EQ	EQUAL
EQUIP	EQUIPMENT
EVA	EMERGENCY VEHICLE ACCESS
EWC	ELECTRICAL WATER COOLER
EXP	EXPANSION
EXT	EXTERIOR
FA	FIRE ALARM
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FIN	FINISH
FLR	FLOOR
FO	FACE OF
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOS	FACE OF STUD
FRP	FIBERGLASS REINFORCED PANEL
FT	FOOT OR FEET
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GSM	GALVANIZED WHEET METAL
GYP	GYPSUM
HB	HOSE BIB
HC	HOLLOW CORE
HD	HEAD
HDWR	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HR	HOUR
HT	HEIGHT
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
JAN	JANITOR
JT	JOINT
LAB	LABORATORY
LAM	LAMINATE
LAV	LAVATORY
LBS	POUNDS
LT	LIGHT
MAX	MAXIMUM
MB	MACHINE BOLT
MDF	MEDIUM DENSITY FIREBOARD
MECH	MECHANICAL
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MOD	MODULAR
MTD	MOUNTED
MTG	MOUNTING
MTL	METAL
MUL	MULLION
(N)	NEW
N/A	NOT APPLICABLE
N	NORTH
NIC	NOT IN CONTRACT
NO or #	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
O/	OVER
OC	ON CENTER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
OPP	OPPOSITE
PL	PLATE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLYWD	PLYWOOD
PR	PAIR
PTD	PAPER TOWEL DISPENSER
PVC	POLYVINYL CHLORIDE
(R)	RELOCATE
RB	RESILIENT OR RUBBER BASE
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REF	REFERENCE
REFR	REFRIGERATOR
REINF	REINFORCED
REQ	REQUIRED
RF	RESILIENT FLOORING
RM	ROOM
RO	ROUGH OPENING
RWL	RAIN WATER LEADER
S	SOUTH
SC	SOLID CORE
SCD	SEE CIVIL DRAWINGS
SCHED	SCHEDULE
SD	SOAP DISPENSER
SED	SEE ELECTRICAL DRAWINGS
SF	SQUARE FEET
SFPD	SEE FIRE PROTECTION DRAWINGS
SHT	SHEET
SIM	SIMILAR
SLD	SEE LANDSCAPE DRAWINGS
SMD	SEE MECHANICAL DRAWINGS
SMS	SHEET METAL SCREW
SND	SANITARY NAPKIN DISPENSER
SPD	SEE PLUMBING DRAWINGS
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
SSD	SEE STRUCTURAL DRAWINGS
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SUSP	SUSPEND
TEL	TELEPHONE
TEMP	TEMPORARY
THK	THICK
T.O.	TOP OF
TOC	TOP OF CURB
TOP	TOP OF PARAPET
TOS	TOP OF SLAB
TOW	TOP OF WALL
TPD	TOILET PAPER DISPENSER
TV	TELEVISION
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
W	WEST
w/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD
WH	WATER HEATER

SYMBOLS

GRID LINE

BUILDING ELEVATION
- ELEVATION IDENTIFICATION
- SHEET WHERE ELEVATION IS SHOWN

BUILDING OR WALL SECTION
- SECTION IDENTIFICATION
- SHEET WHERE SECTION IS SHOWN

DETAIL
- DETAIL IDENTIFICATION
- SHEET WHERE DETAIL IS SHOWN

INTERIOR ELEVATION(S)
- DETAIL NO. OF ELEVATION
- NO ARROWS MEAN ELEVATION NOT SHOWN
- SHEET WHERE ELEVATION IS SHOWN
- ELEVATION IDENTIFICATION

WORK POINT, CONTROL POINT OR DATUM POINT

REVISIONS
- REVISION NUMBER, SEE REVISION SCHEDULE ON TITLE BLOCK
- AREA OF REVISION

ROOM IDENTIFICATION
- ROOM NAME
- KAISER ROOM CODE NAME
- ROOM NUMBER
- CEILING HEIGHT (OTHER THAN EXISTING OR 8'-0" A.F.F.)

KEYNOTE TAG
- REFER TO KEYNOTE LIST LOCATED ON PLAN SHEETS

AREA OF NO WORK

DOOR TAG (SEE DOOR SCHEDULE)
- DOOR MARK
- HARDWARE GROUP

DOOR MARK

(E) DOOR TO REMAIN

(E) DOOR TO BE REMOVED

(N) DOOR & DOOR FRAME

WALL TAG
- WALL TYPE - REFER TO DRAWING SHEET A9.01

WINDOW TAG (SEE WINDOW SCHEDULE)
- WINDOW MARK

CASEWORK TAG
- CASEWORK TYPE; REFER TO WI NORTH AMERICAN ARCHITECTURAL WOODWORK & KAISER CASEWORK STANDARDS
- CASEWORK DIMENSIONS
- CUSTIMIZATIONS & SPECIALTY HARDWARE

PCOE GOLD IN EDUCATION

Delta	Date	Revisions	By

Revisions

PLAN CHECK SET

CONSTRUCTION DOCUMENTS

AGENCY APPROVAL

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Project

TENANT IMPROVEMENTS

Sheet Title

SYMBOLS, LEGENDS AND ABBREVIATIONS

Client Project Number: N/A

Scale:	12" = 1'-0"
Drawn By:	Author
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Issue Date:	July 21, 2023
Revit Version:	2023

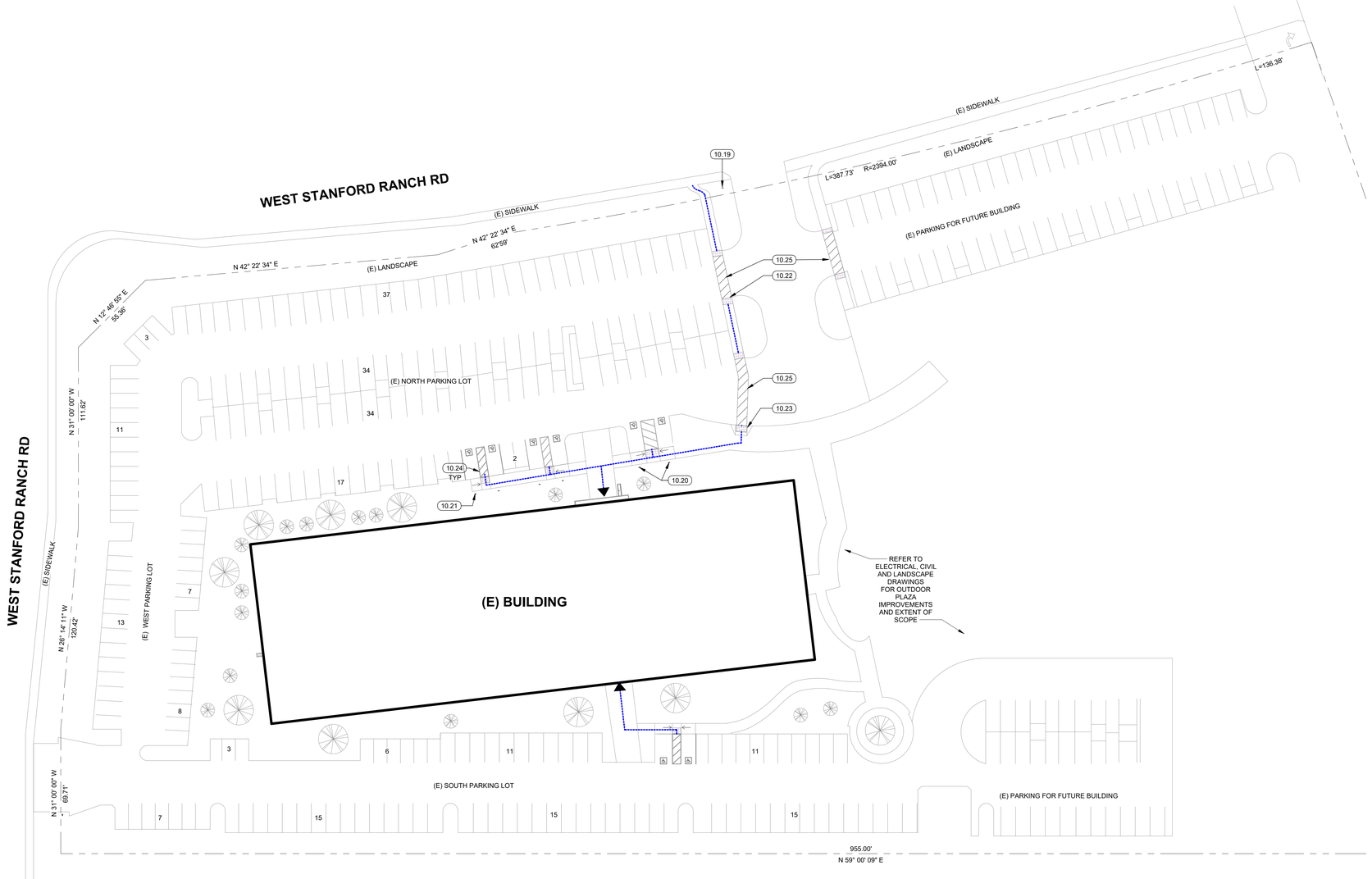
Sheet **A0.02**

Sheet 2 of 200

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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY



30 SITE PLAN
1" = 30'-0"

GENERAL NOTES

1. REFER TO E, C, AND L SHEETS FOR ADDITIONAL INFO.

DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT

THE PATH OF TRAVEL IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS MEETS THE REQUIREMENTS OF THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE (CBC) ACCESSIBILITY PROVISIONS FOR PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS AND STRUCTURAL REPAIRS. AS PART OF THE DESIGN OF THIS PROJECT, THE POT WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WERE DETERMINED TO BE NONCOMPLIANT WITHTHE CBC HAVE BEEN IDENTIFIED AND THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THIS PROJECT'S WORK THROUGH DETAILS, DRAWINGS AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS. ANY NONCOMPLIANT ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARDSHIP ARE INDICATED IN THESE CONSTRUCTION DOCUMENTS.

DURING CONSTRUCTION, IF POT ITEMS WITHIN THE SCOPE OF THE PROJECT REPRESENTED AS CBC COMPLIANT ARE FOUND TO BE NONCONFORMING BEYOND REASONABLE CONSTRUCTION TOLERANCES,THE ITEMS SHALL BE BROUGHT INTO COMPLIANCE WITH THE CBC AS A PART OF THIS PROJECT BY MEANS OF A CONSTRUCTION CHANGE DOCUMENT.

ACCESSIBLE PATH OF TRAVEL AS INDICATED ON PLAN IS A BARRIER-FREE ACCESS ROUTE WITHOUT ANY ABRUPT LEVEL CHANGES EXCEEDING 1/2 "IF BEVELED AT 1:2 MAX SLOPE, OR VERTICAL LEVEL CHANGES NOT EXCEEDING 1/4 "MAX, AND AT LEASE 48"IN WIDTH. SURFACE IS STABLE, FIRM, AND SLIP RESISTANT. CROSS SLOPE DOES NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 5%, UNLESS OTHERWISE INDICATED. ACCESSIBLE PATH OF TRAVEL SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80 "MINIMUM, AND PROTRUDING OBJECTS GREATER THAN 4 "PROJECTION FROM WALL AND ABOVE 27 "AND LESS THAN 80". ARCHITECT SHALL VERIFY THAT THERE ARE NO BARRIERS IN THE PATH OF TRAVEL.

LEGEND

ACCESSIBLE ROUTE SERVING AREA OF NEW WORK

THE ACCESSIBLE ROUTE AS INDICATED ON PLAN IS A BARRIER FREE ROUTE WITHOUT ANY ABRUPT LEVEL CHANGES EXCEEDING 1/2" BEVELED AT 1:2 MAX. SLOPE, OR VERTICAL LEVEL CHANGES NOT EXCEEDING 1/4" MAX. AND AT LEAST 36" IN WIDTH. SURFACE IS STABLE, FIRM, AND SLIP RESISTANT. CROSS SLOPE DOES NOT EXCEED 1:48 AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 1:20 UNLESS OTHERWISE INDICATED. THE ACCESSIBLE ROUTE SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80" MIN., AND PROTRUDING OBJECTS GREATER THAN 4" PROJECTION FROM WALL AND ABOVE 27" AND LESS THAN 80". CONTRACTOR TO VERIFY ALL BARRIERS HAVE BEEN REMOVED AND COMPLIANCE WITH CBC 11B

ACCESSIBLE BUILDING ENTRANCE

PARKING COUNT

NORTH LOT	
STANDARD STALLS:	124 EXISTING
ACCESSIBLE STALLS:	6 EXISTING (3 VAN + 3 AUTO)
WEST LOT	
STANDARD STALLS:	42 EXISTING
SOUTH LOT	
STANDARD STALLS:	80 EXISTING
ACCESSIBLE STALLS:	2 EXISTING (1 VAN + 1 AUTO)
TOTAL SPACES:	**254**
*REQ'D ACCESSIBLE SPACES: (PER TABLE 11B-208.2)	7 (2 VAN MIN. + 5 AUTO)

BUILDING INFORMATION & CODE ANALYSIS

OCCUPANCY TYPE:	GROUPS A-3 / B
CONSTRUCTION TYPE:	TYPE III - B W/ AUTOMATIC FIRE SPRINKLER SYSTEM
STORIES:	2 (CBC TABLE 504.4 ALLOWABLE STORIES 2)
HEIGHT:	18' - 10" (CBC TABLE 504.3 ALLOWABLE HEIGHT 60')
PROJECT AREA:	FIRST FLOOR 34,739 SF SECOND FLOOR 34,739 SF TOTAL SF 69,030 SF

CBA TABLE 601
FIRE RESISTANCE RATINGS OF BUILDING ELEMENTS

- PRIMARY STRUCTURAL FRAME: 3 HOUR
- EXTERIOR NON-BEARING WALLS: 1 HOUR LESS THAN 40', 2 HOURS LESS THAN 20'
- INTERIOR NONBEARING WALLS AND PARTITIONS: 1 HOUR
- FLOOR CONSTRUCTION AND SECONDARY MEMBERS: 2 HOUR
- ROOF CONSTRUCTION AND SECONDARY MEMBERS: 2 HOUR
- EXIT STAIRWAYS: 2 HOUR
- CORRIDOR: 1 HOUR

SITE PLAN KEYNOTES

10.19	(E) TOW AWAY PARKING SIGN
10.20	(E) ACCESSIBLE VAN PARKING WITH 'MIN. FINE' SIGN
10.21	(E) ACCESSIBLE PARKING SIGN WITH 'MIN. FINE' SIGN
10.22	(E) DETECTABLE WARNING SURFACE
10.23	(E) ACCESSIBLE CURB RAMP
10.24	(E) ACCESSIBLE 'NO PARKING' AISLE
10.25	REMOVE ACCESS AISLE STRIPE AND RE-STRIPE

PCOE
GOLD IN EDUCATION

Revisions

Delta	Date	Revisions	By

PLAN CHECK SET
CONSTRUCTION DOCUMENTS

AGENCY APPROVAL

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HY Architects Project number: 6013

Facility
NEW MAIN OFFICE
1400 STANFORD RANCH, ROCKLIN CA 95765

Project
TENANT IMPROVEMENTS

Sheet Title
SITE PLAN

Client Project Number: N/A

Scale:	As indicated
Drawn By:	SH
Checked By:	HC
Issue Date:	July 21, 2023
Revit Version:	2023

Sheet **A1.01**
Sheet of 200

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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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CODE COMPLIANCE LEGEND

CODE COMPLIANCE ROOM TAG

EXAM ROOM
210 | 2
100 | 2
B | 1
150

- ROOM NAME
- ROOM NUMBER
- NUMBER OF OCCUPANTS
- NUMBER OF EXITS REQUIRED
- ROOM AREA SQ. FT.
- OCCUPANCY GROUP
- LOAD FACTOR

EXIT AND EXIT ACCESS

- CPET (COMMON PATH OF EGRESS TRAVEL).
- EATD (EXIT ACCESS TRAVEL DISTANCE).
- MAX DIAGONAL DIMENSION OF AREA
- EXIT FROM ACCESSIBLE PATH OF TRAVEL
- DEFEND-IN-PLACE REFUGE AREA

EXIT WIDTHS

- EGRESS WIDTH PER OCCUPANT

100 x 0.15 = 15"
REQUIRED CAPACITY: 15"
REQUIRED WIDTH: 32"
EXIT WIDTH PROVIDED: 36"

- SUM OF OCCUPANTS AT THIS LOCATION ALONG MEANS OF EGRESS
- PANIC EXIT DEVICE REQUIRED

(#) PATH OF EGRESS W/ # OF OCCUPANTS

FEC — RECESSED FIRE EXTINGUISHER CABINET

1 HOUR FIRE RATED WALL

EXIT TRAVEL DISTANCE

*CPET = COMMON PATH OF EGRESS TRAVEL
EATD = EXIT ACCESS TRAVEL DISTANCE

FROM BOARDROOM A
CPET1: 35' - 1" (< 100' - 0"); OK
TO EATD1: 0 (< 300' - 0"); OK

FROM BOARDROOM B
CPET2: 35' - 1" (< 100' - 0"); OK
TO EATD2: 0 (< 300' - 0"); OK

FROM PD BREAKOUT \ ROOM SMALL CLASSROOM
CPET3: 43' - 10" < 100'-0"; OK
TO EATD2: 27' - 11" (< 300' - 0"); OK
TO EATD3: 40' - 6" (< 300' - 0"); OK

FROM BREAKROOM
CPET3: 62' - 1" < 100'-0"; OK
TO EATD4: 5' - 8" (< 300' - 0"); OK
TO EATD3: 22' - 4" (< 300' - 0"); OK
56516516

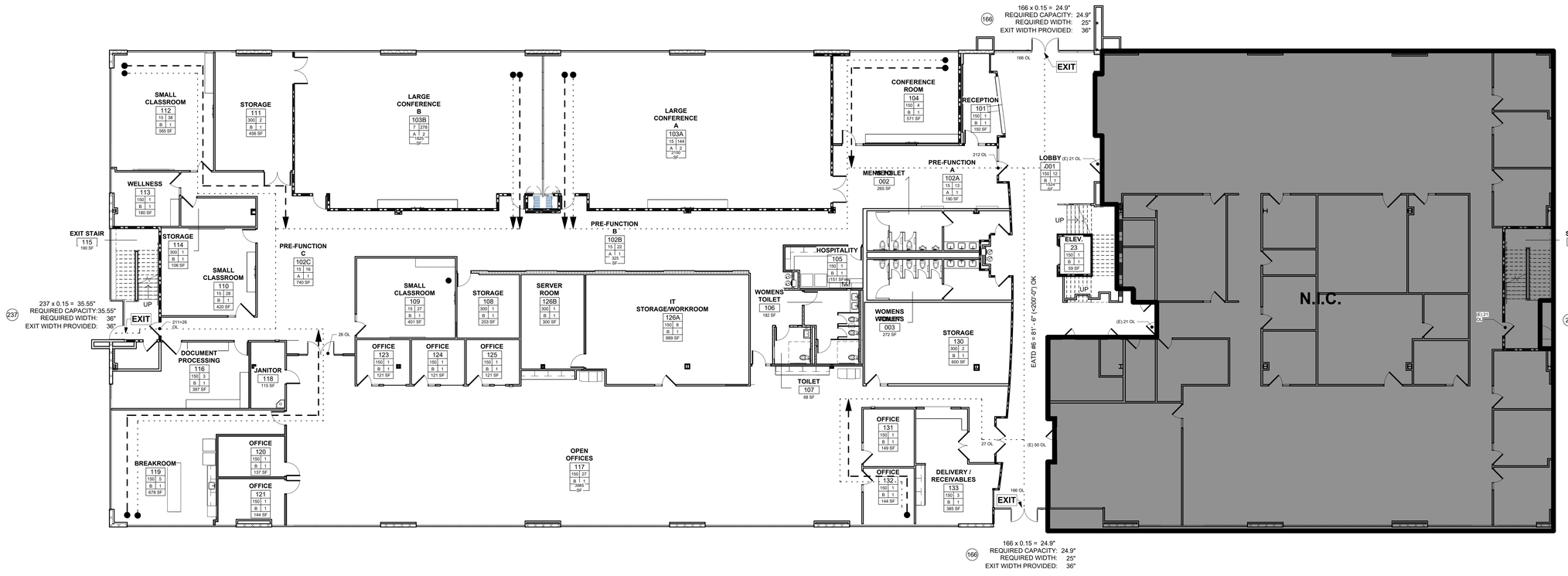
PARTITION LEGEND

EXISTING WALL & PARTITION TYPES:

- (E) 1 HR. RATED FIRE PARTITION
- (E) NON- RATED FIRE- RESISTIVE PARTITION
- (E) PARTITION TO BE DEMOLISHED.

NEW WALL & PARTITION TYPES:

- (N) NON- RATED FIRE- RESISTIVE PARTITION



30 **EGRESS PLAN - FIRST FLOOR**
3/32" = 1'-0"

PCOE GOLD IN EDUCATION

#	Revisions		
Delta	Date	Revisions	By

PLAN CHECK SET
CONSTRUCTION DOCUMENTS

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HY Architects Project number: 6013

Facility
NEW MAIN OFFICE
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Project
TENANT IMPROVEMENTS

Sheet Title
EGRESS PLAN - FIRST FLOOR

Client Project Number: N/A

Scale: As indicated
Drawn By: LDM/SH
Checked By: HC
Issue Date: July 21, 2023
Revit Version: 2023

Sheet **A1.02**
Sheet 2 of 200

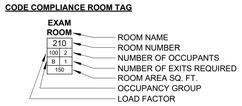
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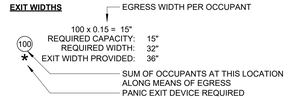
CODE COMPLIANCE ROOM TAG



EXIT AND EXIT ACCESS

- CPET (COMMON PATH OF EGRESS TRAVEL).
- EATD (EXIT ACCESS TRAVEL DISTANCE).
- MAX DIAGONAL DIMENSION OF AREA
- EXIT FROM ACCESSIBLE PATH OF TRAVEL
- DEFEND-IN-PLACE REFUGE AREA

EXIT WIDTHS



- PATH OF EGRESS W/ # OF OCCUPANTS
- FEC — RECESSED FIRE EXTINGUISHER CABINET
- 1 HOUR FIRE RATED WALL

EXIT TRAVEL DISTANCE

*CPET = COMMON PATH OF EGRESS TRAVEL
EATD = EXIT ACCESS TRAVEL DISTANCE

FROM SUPERINTENDENT
CPET1: 59' 10" (< 100' - 0"); OK
TO EATD1: 0 (< 300' - 0"); OK

FROM OFFICE # (near breakroom)
CPET2: 0 (< 100' - 0"); OK
TO EATD2: 0 (< 300' - 0"); OK

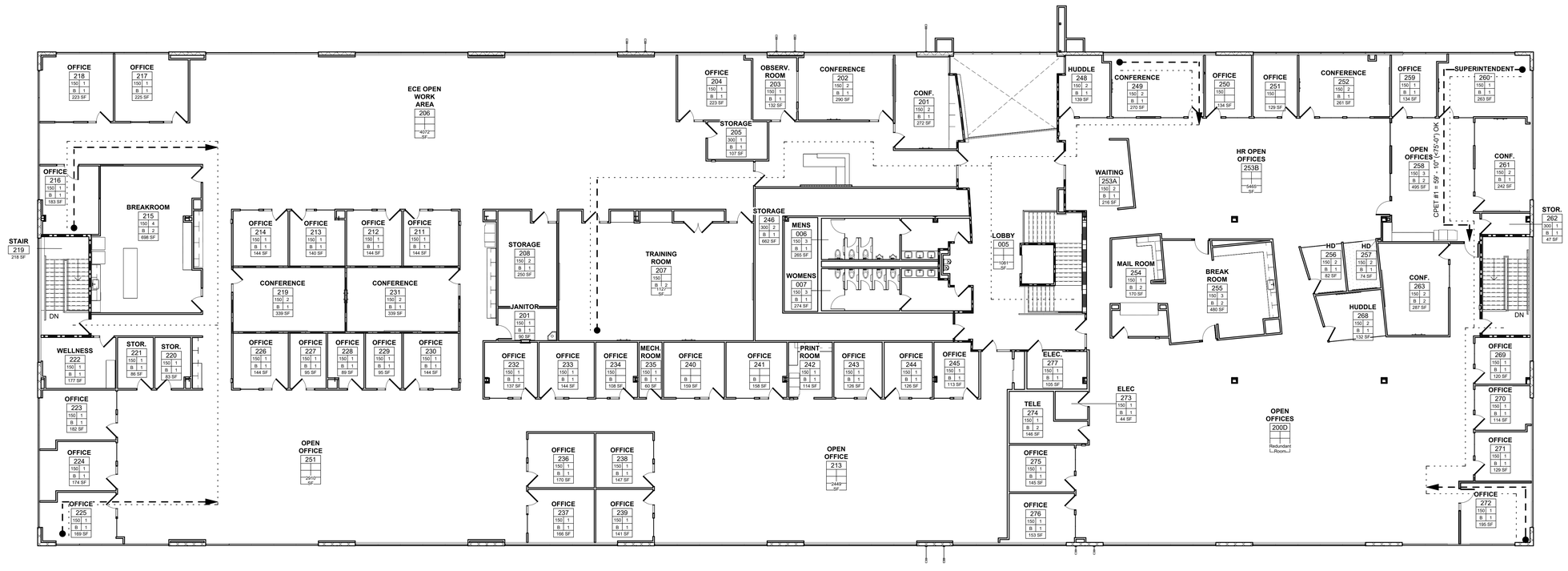
PARTITION LEGEND

EXISTING WALL & PARTITION TYPES:

- (E) 1 HR. RATED FIRE PARTITION
- (E) NON- RATED FIRE- RESISTIVE PARTITION
- (E) PARTITION TO BE DEMOLISHED.

NEW WALL & PARTITION TYPES:

- (N) NON- RATED FIRE- RESISTIVE PARTITION



30 EGRESS PLAN - SECOND FLOOR

3/32" = 1'-0"

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Delta	Date	Revisions	By

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HY Architects Project number: 6013

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Project

TENANT IMPROVEMENTS

Sheet Title

EGRESS PLAN - SECOND FLOOR

Client Project Number: N/A

Scale:	As indicated	Sheet	A1.03
Drawn By:	LDM/SH		
Checked By:	HC		
Issue Date:	July 21, 2023		
Revit Version:	2023	Sheet	2 of 200

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DEMO NOTES

D2.02	PATCH AND REPAIR, GYP BD WALL FINISH LEVEL TO MATCH (E)
D2.04	WINDOW TREATMENT, DEMO HORIZONTAL MINI BLINDS, TYP
D2.05	SAW CUT, PROVIDE FLOOR TRENCH FOR FLOOR OUTLETS, SED, SEE DETAIL A9.XX
D2.09	DEMO (E) GYPSUM BOARD AND LEAVE (E) FRAMING AS-IS
D2.10	FLOORING, DEMO WALK-OFF CARPET AND PREP FLOORING FOR NEW PER MANU RECOMMENDATIONS.
D2.11	FLOORING, DEMO TILE AND PREP FLOORING FOR NEW PER MANU. RECOMMENDATIONS.
D2.12	FLOORING, DEMO CARPET AND PREP FLOORING FOR NEW PER MANU. RECOMMENDATIONS.
D2.13	FLOORING, DEMO RUBBER FLOORING AND PREP FLOORING FOR NEW PER MAN. RECOMMENDATIONS.
D2.14	FLOORING, DEMO RESILIENT WOOD PLANK FLOORING AND PREP FLOORING FOR NEW PER MAN. RECOMMENDATIONS.
D2.15	FLOORING, DEMO VCT FLOORING AND PREP FLOORING FOR NEW PER MAN. RECOMMENDATIONS.
D2.16	WALL TILE, DEMO WAINSCOT AND PREP WALL FOR NEW TILE WAINSCOT
D2.17	WALL BASE, PROTECT AND REINSTALL BASE AT LOBBY
D2.18	ACCESSORIES, DEMO ALL RESTROOM ACCESSORIES EXCEPT PAPER TOWEL, TRASH RECEPTACLES, AND NAPKIN DISPENSER WO
D2.19	TOILET PARTITION, DEMO FLOOR AND WALL MOUNTED TOILET PARTITIONS
D2.20	MIRROR, DEMO MIRROR AND PATCH WALL. WALL FINISH LEVEL TO MATCH (E)
D2.21	(E) CASEWORK TO REMAIN; REMOVE (E) LAMINATE FROM COUNTER TOP AND FROM BODY OF CABINET. PREP FOR (N) LAMINATE.. SEE INTERIOR ELEVATIONS.
D2.22	COUNTER TOP, DEMO COUNTERTOP AND MOUNTING HARDWARE. PATCH AND REPAIR. WALL FINISH LEVEL TO MATCH (E).
D2.23	COUNTER TOP, DEMO HORIZONTAL SURFACE AND PREP FOR NEW. SEE INTERIOR ELEVATIONS
D2.25	CASEWORK, DEMO BUILT-IN CABINETS

DEMO NOTES

D2.26	WALL TILE, DEMO 2-STORY WALL TILE AT ELEVATOR CORE. PREP WALL FOR NEW GYP. BD. WALL FINISH LEVEL AND WALL BASE TO MATCH (E) LOBBY.
D2.27	FIRE ALARM, RELOCATE DEVICES. SEE FA DRAWINGS
D2.28	ELECTRICAL, FURNITURE WHIP TO REMAIN. CONTRACTOR TO PROTECT DURING CONSTRUCTION.
D2.29	ELECTRICAL, DEMO FURNITURE WHIP, PROVIDE COVER PLATES WITH COLOR TO MATCH WALL.
D2.30	ELECTRICAL, DEMO FURNITURE POWERPOLE.
D2.32	ELECTRICAL, RELO SURFACE MOUNTED TRANSFORMER SHUT-OFF, SED
D2.34	ELECTRICAL, DEMO SURFACE MOUNTED CONDUITS
D2.35	LIGHT FIXTURE, DEMO WALL SCONCE, SED
D2.36	MOP SINK, EXISTING TO REMAIN. PROTECT DURING CONSTRUCTION
D2.37	DRINKING FOUNTAIN, DEMO AND CAP PLUMBING LINES. SPD.
D2.38	PLUMBING, DEMO AND CAP PLUMBING LINE.
D2.39	SINK FIXTURE, DEMO PLUMBING FIXTURES, SPD.
D2.40	SHOWER ENCLOSURE, DEMO AND CAP PLUMBING LINES, SPD.
D2.41	IT, CONTRACTOR TO COORDINATE WITH DISTRICT IT PRIOR TO CONSTRUCTION. SED
D2.54	REMOVE (E) CARPET FLOORING AT STAIR AND LANDING. PROVIDE NEW RUBBER STAIR TREAD AND NOSING.

DEMOLITION PLAN LEGEND

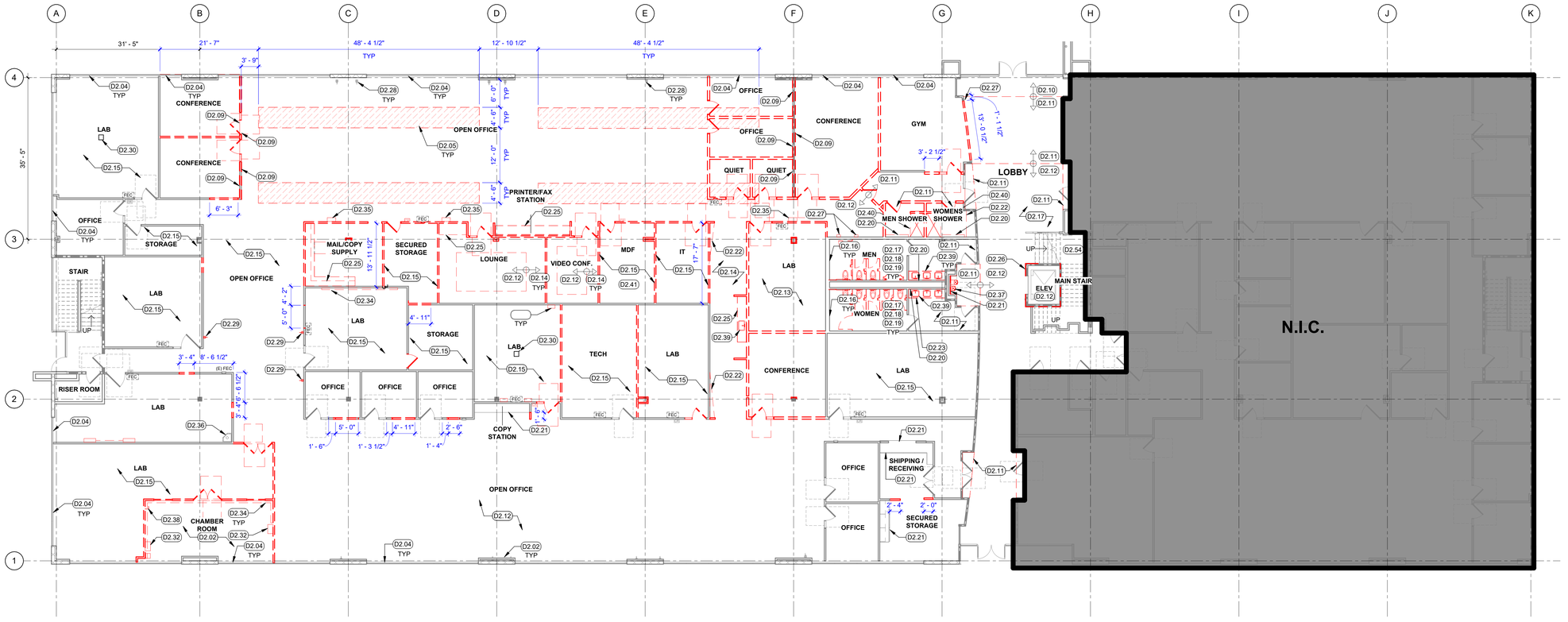
NOTE: FOR ANY PARTITION THAT IS NOT TAGGED ON THE PLAN, REFER TO ITS CORRESPONDING GRAPHIC IN THIS WALL LEGEND TO DETERMINE ITS TYPE

EXISTING WALL & PARTITION TYPES:

- (E) EXTERIOR MASONRY WALL (BRICK VENEER O/ CMU).
- (E) 1 HR. RATED FIRE PARTITION (CORRIDOR) W/ 20 MIN. PROTECTED OPENINGS.
- (E) NON- RATED FIRE- RESISTIVE PARTITION (W/ UNPROTECTED OPENINGS) AND/ OR EXTERIOR WALL TO REMAIN.
- (E) PARTITION TO BE DEMOLISHED.
- (E) DOOR AND SIDELITE TO REMAIN. DEMO MINI BLINDS AT SITELITE WO.
- REMOVE (E) DOOR & FRAME, TYP
- REMOVE (E) DOOR, FRAME, AND SIDELITE, TYP
- REMOVE (E) CARD READERS AND SAVE FOR REUSE, TYP.
- REMOVE (E) FIRE EXTINGUISHER AND SAVE FOR REUSE, TYP.
- (E) FIRE EXTINGUISHER TO REMAIN

GENERAL NOTES

1. NOTIFY ARCHITECT OF ANY IN THE FIELD DISCREPANCIES PRIOR TO START OF CONSTRUCTION.
2. ALL DIMENSIONS SHALL BE FACE OF STUD, UON. DIMENSIONS NOTED AS "CLR" REFER TO CLEAR DIMENSION FROM FACE OF FINISH.
3. REFER TO S, M, P, E, C & L SERIES SHEETS FOR ADDITIONAL INFORMATION.



30 FIRST FLOOR OVERALL DEMOLITION PLAN

3/32" = 1'-0"

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Revisions

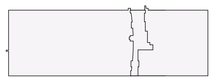
Delta	Date	Revisions	By

PLAN CHECK SET

CONSTRUCTION DOCUMENTS

AGENCY APPROVAL

KEY PLAN



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HY Architects Project number: 6013

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Project

TENANT IMPROVEMENTS

Sheet Title

DEMOLITION PLAN - FIRST FLOOR

Client Project Number: N/A

Scale:	As indicated
Drawn By:	SH/LDM
Checked By:	HC
Issue Date:	July 21, 2023
Revit Version:	2023

Sheet **A2.01**

Sheet 2 of 200

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7/30/2023 9:26:40 PM

0 5' 50' — GRAPHIC SCALES: 1/16" = 1'-0"
0 5' 25' — 1/8" = 1'-0"
0 1' 12' — 1/4" = 1'-0"
0 1' 6' — 1/2" = 1'-0"
0 4' — 3/4" = 1'-0"
0 1' 3' — 1" = 1'-0"
0 2' — 1 1/2" = 1'-0"
0 1' — 3" = 1'-0"

IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY

DEMO NOTES

D2.01	PATCH AND REPAIR, INFILL FLOOR CORE, REMOVE DATA LINES WO
D2.02	PATCH AND REPAIR, GYP BD WALL FINISH LEVEL TO MATCH (E)
D2.04	WINDOW TREATMENT, DEMO HORIZONTAL MINI BLINDS, TYP
D2.11	FLOORING, DEMO TILE AND PREP FLOORING FOR NEW PER MANU. RECOMMENDATIONS.
D2.12	FLOORING, DEMO CARPET AND PREP FLOORING FOR NEW PER MANU. RECOMMENDATIONS.
D2.14	FLOORING, DEMO RESILIENT WOOD PLANK FLOORING AND PREP FLOORING FOR NEW PER MAN. RECOMMENDATIONS.
D2.15	FLOORING, DEMO VCT FLOORING AND PREP FLOORING FOR NEW PER MAN. RECOMMENDATIONS.
D2.16	WALL TILE, DEMO WAINSCOT AND PREP WALL FOR NEW TILE WAINSCOT
D2.17	WALL BASE, PROTECT AND REINSTALL BASE AT LOBBY
D2.18	ACCESSORIES, DEMO ALL RESTROOM ACCESSORIES EXCEPT PAPER TOWEL, TRASH RECEPTACLES, AND NAPKIN DISPENSER WO
D2.19	TOILET PARTITION, DEMO FLOOR AND WALL MOUNTED TOILET PARTITIONS
D2.20	MIRROR, DEMO MIRROR AND PATCH WALL. WALL FINISH LEVEL TO MATCH (E)
D2.21	(E) CASEWORK TO REMAIN; REMOVE (E) LAMINATE FROM COUNTER TOP AND FROM BODY OF CABINET. PREP FOR (N) LAMINATE.. SEE INTERIOR ELEVATIONS.
D2.23	COUNTER TOP, DEMO HORIZONTAL SURFACE AND PREP FOR NEW. SEE INTERIOR ELEVATIONS
D2.24	CASEWORK, BUILT-IN CABINETS TO REMAIN. PROTECT DURING CONSTRUCTION..
D2.25	CASEWORK, DEMO BUILT-IN CABINETS

DEMO NOTES

D2.26	WALL TILE, DEMO 2-STORY WALL TILE AT ELEVATOR CORE. PREP WALL FOR NEW GYP. BD. WALL FINISH LEVEL AND WALL BASE TO MATCH (E) LOBBY.
D2.28	ELECTRICAL, FURNITURE WHIP TO REMAIN. CONTRACTOR TO PROTECT DURING CONSTRUCTION.
D2.33	ELECTRICAL, (E) FLOOR OUTLETS TO REMAIN.
D2.35	LIGHT FIXTURE, DEMO WALL SCONCE, SED
D2.38	PLUMBING, DEMO AND CAP PLUMBING LINE.
D2.39	SINK FIXTURE, DEMO PLUMBING FIXTURES, SPD.
D2.41	IT, CONTRACTOR TO COORDINATE WITH DISTRICT IT PRIOR TO CONSTRUCTION. SED
D2.43	DOOR, DEMO OPERABLE PARTIAL HEIGHT BI-FOLDING DOOR AND COUNTER
D2.44	PARTITION, DEMO OPERABLE PARTITION AND TRACK.
D2.45	EQUIPMENT, DEMO DISHWASHER AND CAP PLUMBING LINE
D2.46	EQUIPMENT, ELEC PANEL TO REMAIN.
D2.47	EQUIPMENT, MONITORS TO REMAIN.
D2.48	SIGNAGE, REPLACE ORACLE BRUSHED ALUMINUM SIGNAGE WITH "PCOE" HEIGHT TO MATCH (E). PROVIDE NEW WHITE PLASTIC LAMINATE
D2.49	WALL PROTECTION, DEMO WOOD CHAIR RAIL
D2.52	FURNITURE, (E) FURNITURE TO REMAIN. TEMP RELOCATE AND PROTECT DURING CONSTRUCTION.
D2.54	REMOVE (E) CARPET FLOORING AT STAIR AND LANDING. PROVIDE NEW RUBBER STAIR TREAD AND NOSING.

DEMOLITION PLAN LEGEND

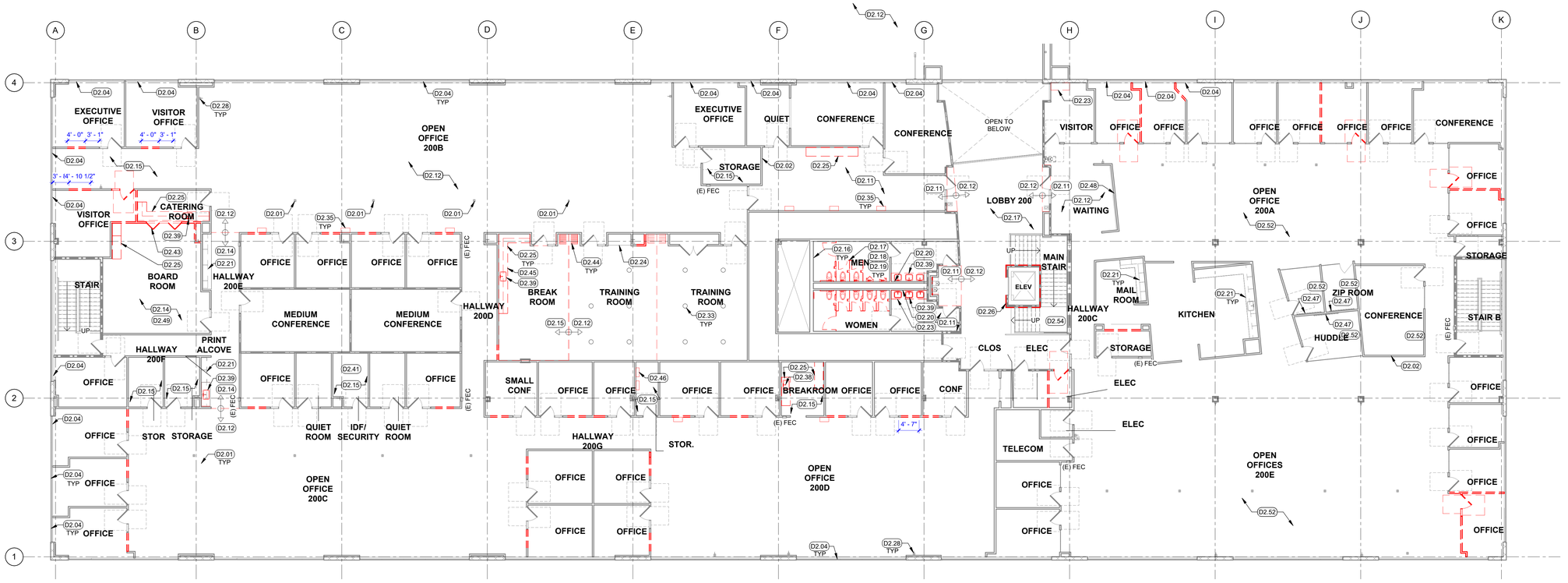
NOTE: FOR ANY PARTITION THAT IS NOT TAGGED ON THE PLAN, REFER TO ITS CORRESPONDING GRAPHIC IN THIS WALL LEGEND TO DETERMINE ITS TYPE

EXISTING WALL & PARTITION TYPES:

- (E) EXTERIOR MASONRY WALL (BRICK VENEER O/ CMU).
- (E) 1 HR. RATED FIRE PARTITION (CORRIDOR) W/ 20 MIN. PROTECTED OPENINGS.
- (E) NON- RATED FIRE- RESISTIVE PARTITION (W/ UNPROTECTED OPENINGS) AND/ OR EXTERIOR WALL TO REMAIN.
- (E) PARTITION TO BE DEMOLISHED.
- (E) DOOR AND SIDELITE TO REMAIN. DEMO MINI BLINDS AT SITELITE WO.
- REMOVE (E) DOOR & FRAME, TYP
- OR — REMOVE (E) DOOR, FRAME, AND SIDELITE, TYP
- (E) FEC — REMOVE (E) CARD READERS AND SAVE FOR REUSE, TYP.
- (E) FEC — REMOVE (E) FIRE EXTINGUISHER AND SAVE FOR REUSE, TYP.
- (E) FIRE EXTINGUISHER TO REMAIN

GENERAL NOTES

1. NOTIFY ARCHITECT OF ANY IN THE FIELD DISCREPANCIES PRIOR TO START OF CONSTRUCTION.
2. ALL DIMENSIONS SHALL BE FACE OF STUD, UON. DIMENSIONS NOTED AS "CLR" REFER TO CLEAR DIMENSION FROM FACE OF FINISH.
3. REFER TO S, M, P, E, C & L SERIES SHEETS FOR ADDITIONAL INFORMATION.



30 DEMO PLAN - SECOND FLOOR
3/32" = 1'-0"

PCOE GOLD IN EDUCATION

Revisions			
Delta	Date	Revisions	By

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CONSTRUCTION DOCUMENTS

AGENCY APPROVAL

KEY PLAN

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HY Architects Project number: 6013

Facility
NEW MAIN OFFICE
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Project
TENANT IMPROVEMENTS

Sheet Title
DEMOLITION PLAN - SECOND FLOOR

Client Project Number: N/A

Scale: As indicated
Drawn By: SH/LDM
Checked By: HC
Issue Date: July 21, 2023
Revit Version: 2023

Sheet
A2.02
Sheet 2 of 200

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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY

FLOOR PLAN SYMBOL LEGEND

- N.I.C. - NOT IN CONTRACT
- (E) DOOR TO REMAIN, TYP
- DOOR, TYP. SEE DOOR SCHEDULE
- (E) FIRE EXTINGUISER TO REMAIN

GENERAL NOTES

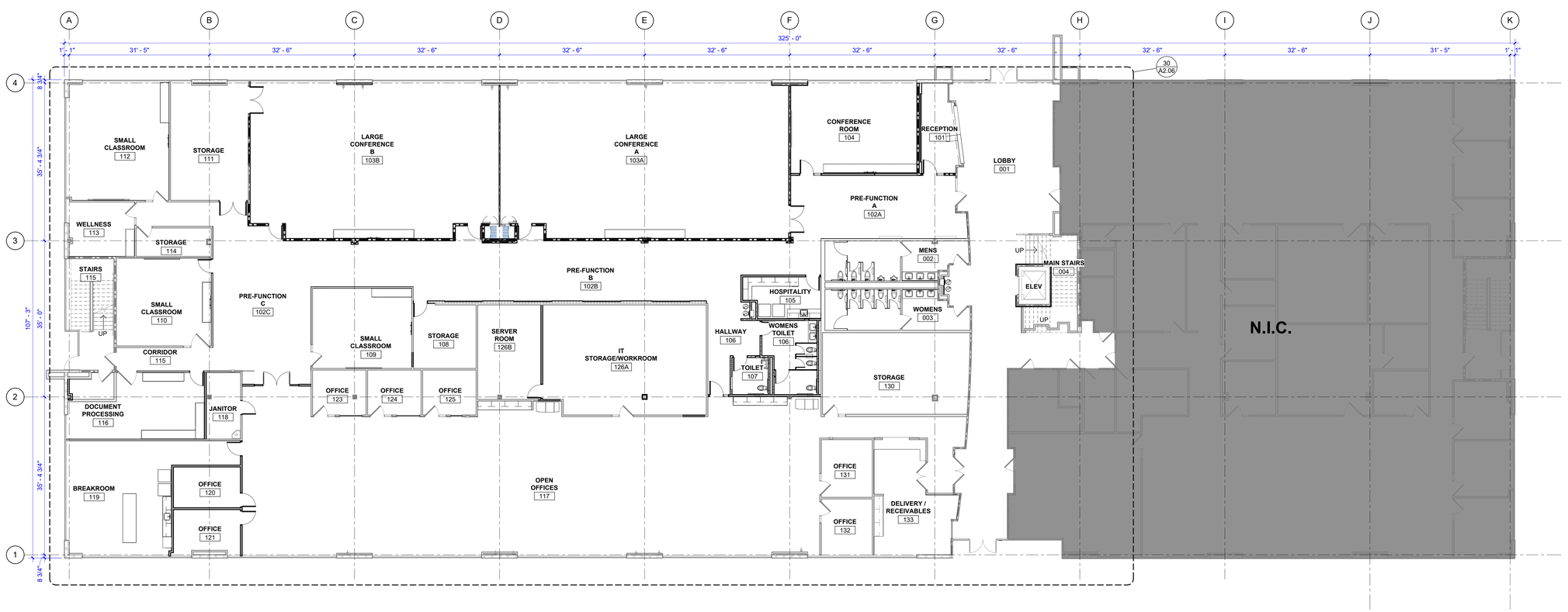
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PARTITION LEGEND

NOTE: FOR ANY PARTITION THAT IS NOT TAGGED ON THE PLAN, REFER TO ITS CORRESPONDING GRAPHIC IN THIS WALL LEGEND TO DETERMINE ITS TYPE

EXISTING WALL & PARTITION TYPES:

- (E) EXTERIOR MASONRY WALL (BRICK VENEER O/ CMU).
- (E) 1 HR. RATED FIRE PARTITION (CORRIDOR) W/ 20 MIN. PROTECTED OPENINGS.
- (E) NON- RATED FIRE- RESISTIVE PARTITION (W/ UNPROTECTED OPENINGS) AND/ OR EXTERIOR WALL TO REMAIN.
- PARTITION, TYP



30 FIRST FLOOR OVERALL REMODEL PLAN
3/32" = 1'-0"

PCOE
GOLD IN EDUCATION

Revisions

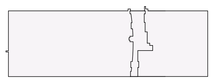
Delta	Date	Revisions	By

PLAN CHECK SET

CONSTRUCTION DOCUMENTS

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HY Architects Project number: 6013

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NEW MAIN OFFICE
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Project
TENANT IMPROVEMENTS

Sheet Title
REMODEL FLOOR PLAN - FIRST FLOOR

Client Project Number: N/A

Scale:	As indicated
Drawn By:	SH/LDM
Checked By:	HC
Issue Date:	July 21, 2023
Revit Version:	2023

Sheet **A2.03**

Sheet 2 of 200

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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY

KEYNOTES

FLOOR PLAN SYMBOL LEGEND

- NO WORK (E) DOOR TO REMAIN
- (E) DOOR TO REMAIN, TYP
- DOOR, TYP. SEE DOOR SCHEDULE

PARTITION LEGEND

NOTE: FOR ANY PARTITION THAT IS NOT TAGGED ON THE PLAN, REFER TO ITS CORRESPONDING GRAPHIC IN THIS WALL LEGEND TO DETERMINE ITS TYPE

EXISTING WALL & PARTITION TYPES:

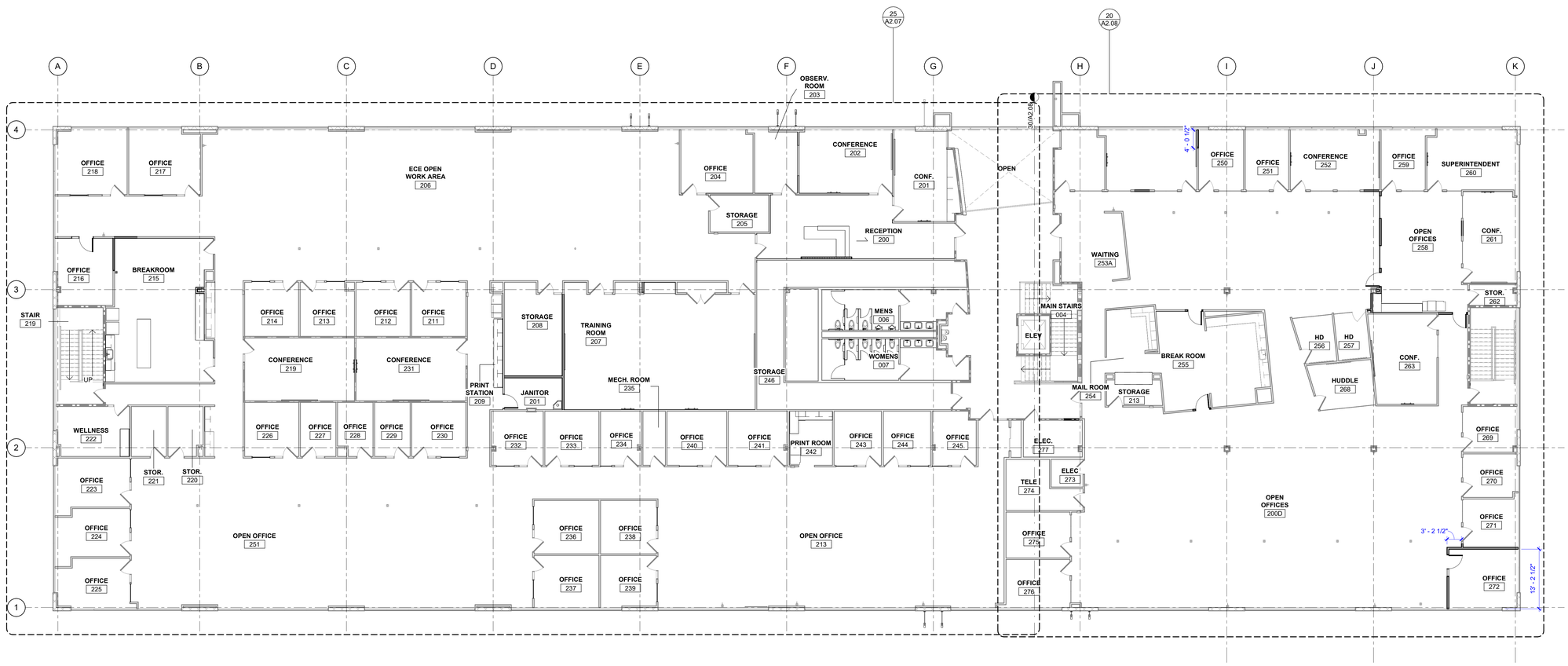
- (E) CONCRETE TILT-UP WALL TO REMAIN
- (E) 1 HR. RATED FIRE PARTITION (CORRIDOR) W/ 20 MIN. PROTECTED OPENINGS.
- (E) 1 HR. RATED FIRE WALL W/ 45 MIN. PROTECTED OPENINGS.
- (E) NON- RATED FIRE- RESISTIVE PARTITION (W/ UNPROTECTED OPENINGS) AND/ OR EXTERIOR WALL TO REMAIN.

NEW WALL & PARTITION TYPES:

- A — NON-FIRE RATED FULL HEIGHT PARTITION W/ UNPROTECTED OPENINGS, TYP UON, SEE 2/A9.01
- B — NON-FIRE RATED PATIAL HEIGHT PARTITION W/ UNPROTECTED OPENINGS, TYP UON, SEE 7/A9.01
- C — NON-FIRE RATED FULL HEIGHT CAVITY PARTITION W/ UNPROTECTED OPENINGS, TYP UON, SEE 12/A9.01
- D — NON-FIRE RATED FULL HEIGHT CAVITY PARTITION W/ UNPROTECTED OPENINGS, TYP UON, SEE 17/A9.01
- F — NON-FIRE RATED FURRED WALL W/ UNPROTECTED OPENINGS, TYP UON, SEE 22/A9.01
- W — 1 HR RATED CORRIDOR PARTITION W/ 20 MIN. PROTECTED OPENINGS, TYP UON, SEE -/---
- X — 1 HR RATED WALL W/ 45 MIN PROTECTED OPENINGS, TYP UON, SEE 4/A9.01
- Y — 1 HR RATED CAVITY WALL W/ 45 MIN PROTECTED OPENINGS, TYP UON, SEE 9/A9.01

GENERAL NOTES

1. NOTIFY ARCHITECT OF ANY IN THE FIELD DISCREPANCIES PRIOR TO START OF CONSTRUCTION.
2. ALL DIMENSIONS SHALL BE FACE OF STUD, UON. DIMENSIONS NOTED AS "CLR" REFER TO CLEAR DIMENSION FROM FACE OF FINISH.
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30 REMODEL FLOOR PLAN - SECOND FLOOR

3/32" = 1'-0"

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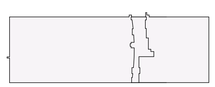
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Delta	Date	Revisions	By

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CONSTRUCTION DOCUMENTS

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KEY PLAN



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HY Architects Project number: 6013

Facility

NEW MAIN OFFICE
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Project

TENANT IMPROVEMENTS

Sheet Title

REMODEL FLOOR PLAN - SECOND FLOOR

Client Project Number: N/A

Scale: As indicated
Drawn By: SH/LDM
Checked By: HC
Issue Date: July 21, 2023
Revit Version: 2023

Sheet **A2.04**

Sheet 2 of 200

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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KEYNOTES

03.02	CONCRETE SLAB INFILL, SEE DETAILS 4 & 5/A9.05
06.03	BUILT IN CABINET WITH SOLID SURFACE COUNTER TOP, SEE DETAIL A9.XX
06.04	CASEWORK CREDENZA WITH AV CABINET. SED FOR AV REQUIREMENTS. SEE DETAIL A9.XX
06.05	BUILT IN BASE CABINET WITH SOLID SURFACE AND COUNTER HEIGHT SEATING. SEE DETAIL A9.XX
09.06	MODULAR WALL PANELS, 3D RECLAIMED WOOD WALL PANELS ANCHORED TO WALL. SEE DETAIL AND INTERIOR SHEETS.
09.07	PRIVACY OPAQUE WINDOW FILM
09.08	ACCENT TILE BACKSPLASH, SEE INTERIOR ELEVATIONS
11.01	REFRIGERATOR; OFOI
11.02	TV MOUNTING BRACKET, SEE DETAIL 18/A9.05 PROVIDE POWER & DATA, SED.
11.04	FULL SIZE COPIER, PROVIDE POWER & DATA, SED
11.05	STACKED MICROWAVE, PROVIDE POWER, SED
11.06	COFFEE MACHINE, PROVIDE POWER AND WATER LINE.
11.08	DIGITAL DIRECTORY, PROVIDE BACK & POWER & DATA, SED
12.01	WHITE BOARD, OFOI, PROVIDE BACKING, SEE DETAIL 1/A9.02
12.03	MOSS WALL, PROVIDE BACKING IN WALL NICHE
22.03	HI-LO BOTTLE FILLER/DRINKING FOUNTAIN, SEE DETAIL 20 & 30/A9.03 AND SPD
22.06	ACCESSIBLE SINK WITH GARBAGE DISPOSAL AND MONITION ACTIVATED FIXTURE, SPD AND SED.
26.13	ELECTRICAL DUPLEX FLOOR BOX, SED

FLOOR PLAN SYMBOL LEGEND

NO WORK (E) DOOR TO REMAIN

(E) DOOR TO REMAIN, TYP

DOOR, TYP. SEE DOOR SCHEDULE

PARTITION LEGEND

NOTE: FOR ANY PARTITION THAT IS NOT TAGGED ON THE PLAN, REFER TO ITS CORRESPONDING GRAPHIC IN THIS WALL LEGEND TO DETERMINE ITS TYPE

EXISTING WALL & PARTITION TYPES:

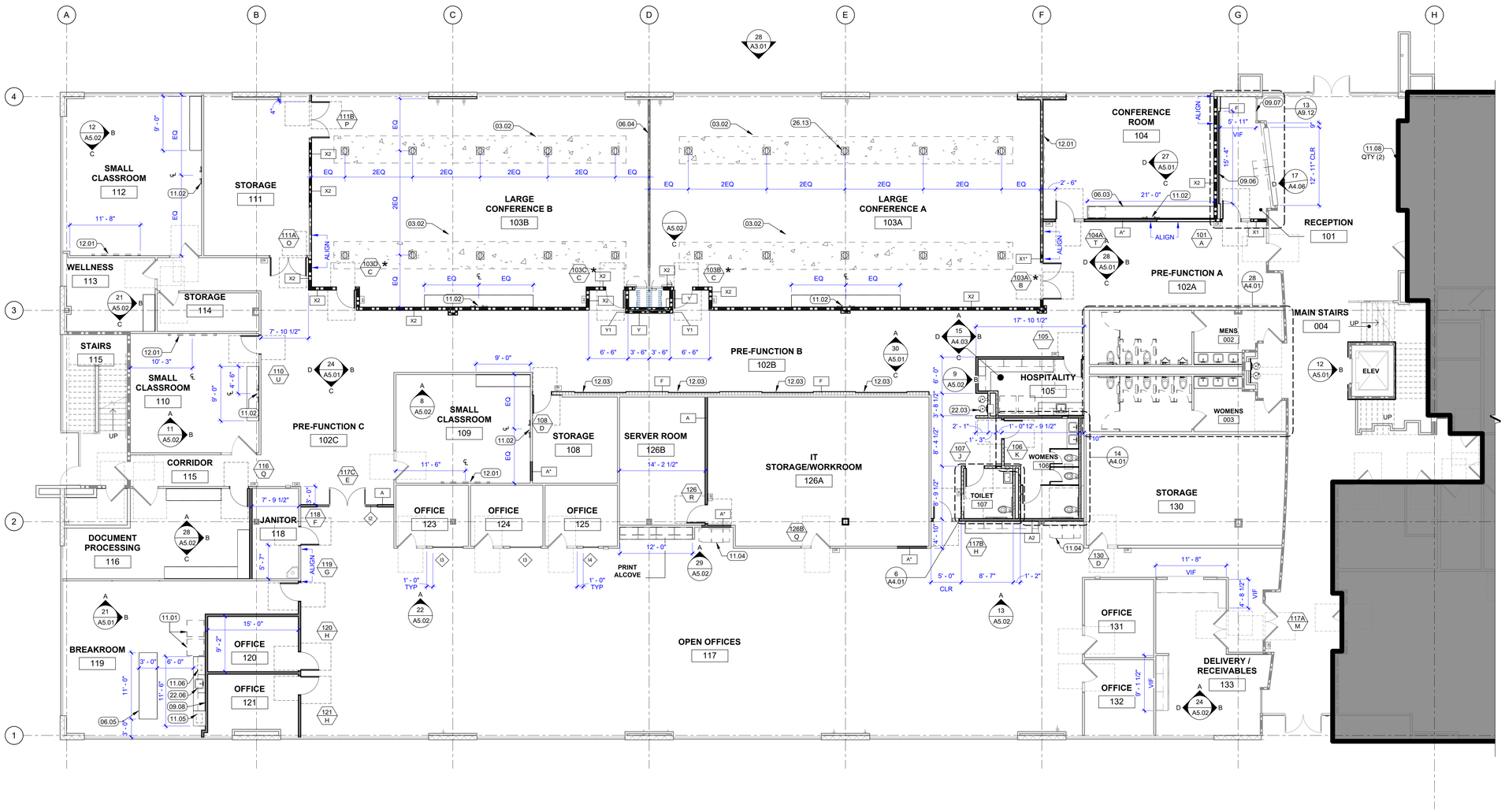
- (E) CONCRETE TILT-UP WALL TO REMAIN
- (E) 1 HR. RATED FIRE PARTITION (CORRIDOR) W/ 20 MIN. PROTECTED OPENINGS.
- (E) 1 HR. RATED FIRE WALL W/ 45 MIN. PROTECTED OPENINGS.
- (E) NON- RATED FIRE- RESISTIVE PARTITION (W/ UNPROTECTED OPENINGS) AND/ OR EXTERIOR WALL TO REMAIN.

NEW WALL & PARTITION TYPES:

- A — NON-FIRE RATED FULL HEIGHT PARTITION W/ UNPROTECTED OPENINGS, TYP UON, SEE 2/A9.01
- B — NON-FIRE RATED PATIAL HEIGHT PARTITION W/ UNPROTECTED OPENINGS, TYP UON, SEE 7/A9.01
- C — NON-FIRE RATED FULL HEIGHT CAVITY PARTITION W/ UNPROTECTED OPENINGS, TYP UON, SEE 12/A9.01
- D — NON-FIRE RATED FULL HEIGHT CAVITY PARTITION W/ UNPROTECTED OPENINGS, TYP UON, SEE 17/A9.01
- F — NON-FIRE RATED FURRED WALL W/ UNPROTECTED OPENINGS, TYP UON, SEE 22/A9.01
- W — 1 HR RATED CORRIDOR PARTITION W/ 20 MIN. PROTECTED OPENINGS, TYP UON, SEE -/---
- X — 1 HR RATED WALL W/ 45 MIN PROTECTED OPENINGS, TYP UON, SEE 4/A9.01
- Y — 1 HR RATED CAVITY WALL W/ 45 MIN PROTECTED OPENINGS, TYP UON, SEE 9/A9.01

GENERAL NOTES

1. NOTIFY ARCHITECT OF ANY IN THE FIELD DISCREPANCIES PRIOR TO START OF CONSTRUCTION.
2. ALL DIMENSIONS SHALL BE FACE OF STUD, UON. DIMENSIONS NOTED AS "CLR" REFER TO CLEAR DIMENSION FROM FACE OF FINISH.
3. REFER TO S, M, P, E, C & L SERIES SHEETS FOR ADDITIONAL INFORMATION.



30 FIRST FLOOR PARTIAL REMODEL PLAN - WEST
1/8" = 1'-0"

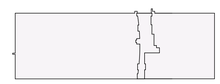
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HY Architects Project number: 6013

Facility
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1400 STANFORD RANCH, ROCKLIN CA 95765

Project
TENANT IMPROVEMENTS

Sheet Title
PARTIAL REMODEL PLAN - FIRST FLOOR

Client Project Number: N/A

Scale: As indicated
Drawn By: SH/LDM
Checked By: HC
Issue Date: July 21, 2023
Revit Version: 2023

Sheet **A2.06**

Sheet 2 of 200

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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY

KEYNOTES

06.03	BUILT IN CABINET WITH SOLID SURFACE COUNTER TOP, SEE DETAIL A9.XX
06.04	CASEWORK CREDENZA WITH AV CABINET. SED FOR AV REQUIREMENTS. SEE DETAIL A9.XX
09.08	ACCENT TILE BACKSPLASH, SEE INTERIOR ELEVATIONS
11.01	REFRIGERATOR, OFOI
11.02	TV MOUNTING BRACKET, SEE DETAIL 18/A9.05 PROVIDE POWER & DATA, SED.
11.04	FULL SIZE COPIER, PROVIDE POWER & DATA, SED
11.05	STACKED MICROWAVE, PROVIDE POWER, SED
11.06	COFFEE MACHINE, PROVIDE POWER AND WATER LINE.
12.01	WHITE BOARD, OFOI, PROVIDE BACKING, SEE DETAIL 1/A9.02
12.02	TACK BOARD, OFOI, PROVIDE BACKING, SEE DETAILS
22.04	SINK FIXTURE WITH HARDWIRED MOTION SENSOR, SPD
22.06	ACCESSIBLE SINK WITH GARBAGE DISPOSAL AND MONITION ACTIVATED FIXTURE, SPD AND SED.
22.07	CHILLED FILTER WATER BOTTLE FILLER, SPD

FLOOR PLAN SYMBOL LEGEND

- NO WORK (E) DOOR TO REMAIN
- (E) DOOR TO REMAIN, TYP
- DOOR, TYP. SEE DOOR SCHEDULE

PARTITION LEGEND

NOTE: FOR ANY PARTITION THAT IS NOT TAGGED ON THE PLAN, REFER TO ITS CORRESPONDING GRAPHIC IN THIS WALL LEGEND TO DETERMINE ITS TYPE

EXISTING WALL & PARTITION TYPES:

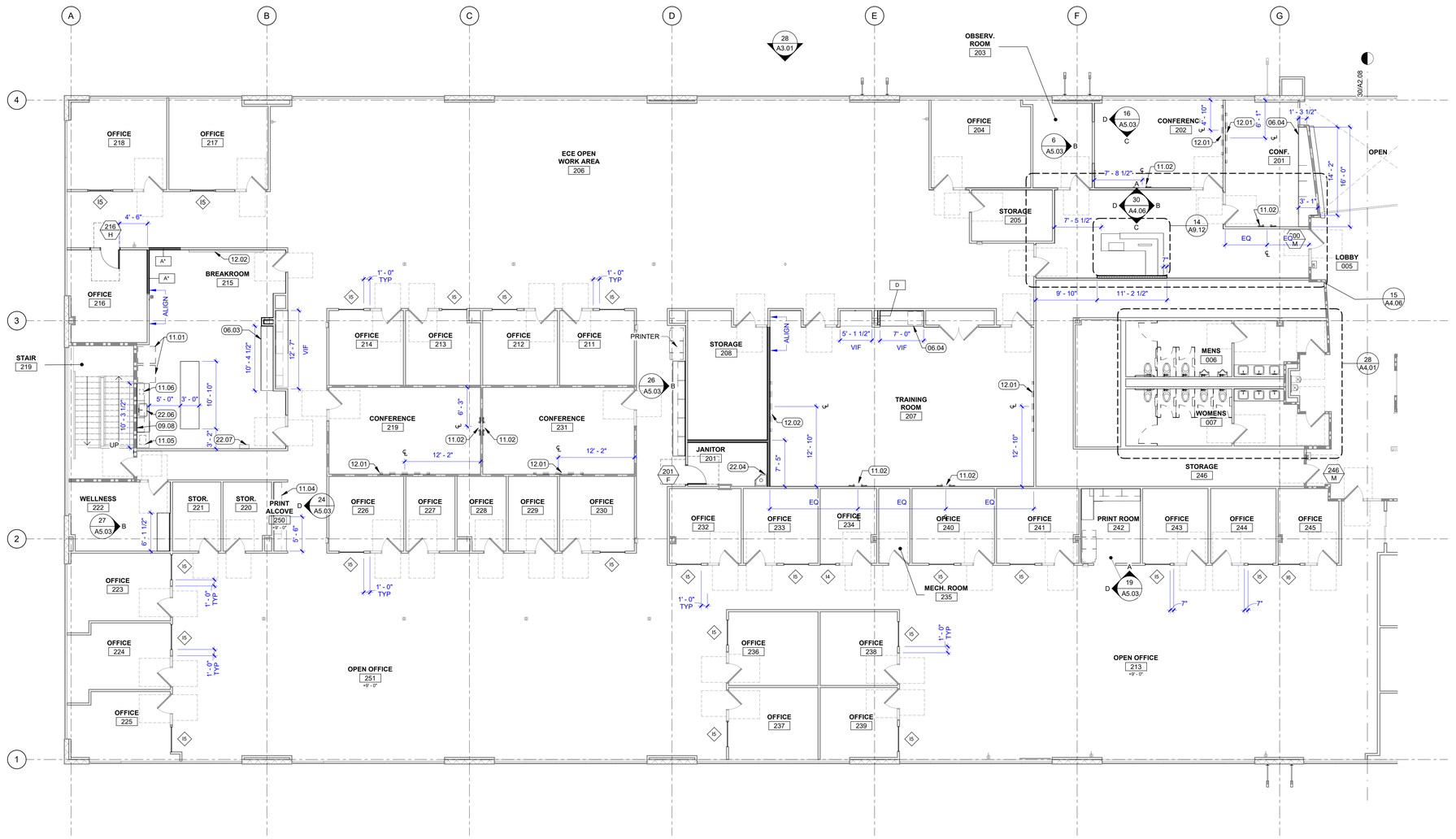
- (E) CONCRETE TILT-UP WALL TO REMAIN
- (E) 1 HR. RATED FIRE PARTITION (CORRIDOR) W/ 20 MIN. PROTECTED OPENINGS.
- (E) 1 HR. RATED FIRE WALL W/ 45 MIN. PROTECTED OPENINGS.
- (E) NON- RATED FIRE- RESISTIVE PARTITION (W/ UNPROTECTED OPENINGS) AND/ OR EXTERIOR WALL TO REMAIN.

NEW WALL & PARTITION TYPES:

- A — NON-FIRE RATED FULL HEIGHT PARTITION W/ UNPROTECTED OPENINGS, TYP UON, SEE 2/A9.01
- B — NON-FIRE RATED PATIAL HEIGHT PARTITION W/ UNPROTECTED OPENINGS, TYP UON, SEE 7/A9.01
- C — NON-FIRE RATED FULL HEIGHT CAVITY PARTITION W/ UNPROTECTED OPENINGS, TYP UON, SEE 12/A9.01
- D — NON-FIRE RATED FULL HEIGHT CAVITY PARTITION W/ UNPROTECTED OPENINGS, TYP UON, SEE 17/A9.01
- F — NON-FIRE RATED FURRED WALL W/ UNPROTECTED OPENINGS, TYP UON, SEE 22/A9.01
- W — 1 HR RATED CORRIDOR PARTITION W/ 20 MIN. PROTECTED OPENINGS, TYP UON, SEE -/---
- X — 1 HR RATED WALL W/ 45 MIN PROTECTED OPENINGS, TYP UON, SEE 4/A9.01
- Y — 1 HR RATED CAVITY WALL W/ 45 MIN PROTECTED OPENINGS, TYP UON, SEE 9/A9.01

GENERAL NOTES

1. NOTIFY ARCHITECT OF ANY IN THE FIELD DISCREPANCIES PRIOR TO START OF CONSTRUCTION.
2. ALL DIMENSIONS SHALL BE FACE OF STUD, UON. DIMENSIONS NOTED AS "CLR" REFER TO CLEAR DIMENSION FROM FACE OF FINISH.
3. REFER TO S, M, P, E, C & L SERIES SHEETS FOR ADDITIONAL INFORMATION.



25 **SECOND FLOOR PARTIAL REMODEL PLAN - WEST**
1/8" = 1'-0"

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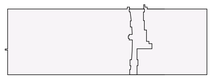
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PLAN CHECK SET

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HY Architects Project number: 6013

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NEW MAIN OFFICE
1400 STANFORD RANCH, ROCKLIN CA 95765

Project
TENANT IMPROVEMENTS

Sheet Title
PARTIAL REMODEL PLAN - SECOND FLOOR - WEST

Client Project Number: N/A

Scale: As indicated
Drawn By: SH/LDM
Checked By: HC
Issue Date: July 21, 2023
Revit Version: 2023

Sheet
A2.07
Sheet 2 of 200

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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY

KEYNOTES

06.03	BUILT IN CABINET WITH SOLID SURFACE COUNTER TOP, SEE DETAIL A9.XX
11.02	TV MOUNTING BRACKET, SEE DETAIL 18/A9.05 PROVIDE POWER & DATA, SED.
11.04	FULL SIZE COPIER, PROVIDE POWER & DATA, SED
12.01	WHITE BOARD, OFOI, PROVIDE BACKING, SEE DETAIL 1/A9.02
26.12	TELECONFERENCING SPEAKERS AND MICROPHONE, PROVIDE DATA & POWER, SED.

FLOOR PLAN SYMBOL LEGEND

NO WORK (E) DOOR TO REMAIN

(E) DOOR TO REMAIN, TYP

DOOR, TYP. SEE DOOR SCHEDULE

PARTITION LEGEND

NOTE: FOR ANY PARTITION THAT IS NOT TAGGED ON THE PLAN, REFER TO ITS CORRESPONDING GRAPHIC IN THIS WALL LEGEND TO DETERMINE ITS TYPE

EXISTING WALL & PARTITION TYPES:

(E) CONCRETE TILT-UP WALL TO REMAIN

(E) 1 HR. RATED FIRE PARTITION (CORRIDOR) W/ 20 MIN. PROTECTED OPENINGS.

(E) 1 HR. RATED FIRE WALL W/ 45 MIN. PROTECTED OPENINGS.

(E) NON- RATED FIRE- RESISTIVE PARTITION (W/ UNPROTECTED OPENINGS) AND/ OR EXTERIOR WALL TO REMAIN.

NEW WALL & PARTITION TYPES:

A — NON-FIRE RATED FULL HEIGHT PARTITION W/ UNPROTECTED OPENINGS, TYP UON, SEE 2/A9.01

B — NON-FIRE RATED PATIAL HEIGHT PARTITION W/ UNPROTECTED OPENINGS, TYP UON, SEE 7/A9.01

C — NON-FIRE RATED FULL HEIGHT CAVITY PARTITION W/ UNPROTECTED OPENINGS, TYP UON, SEE 12/A9.01

D — NON-FIRE RATED FULL HEIGHT CAVITY PARTITION W/ UNPROTECTED OPENINGS, TYP UON, SEE 17/A9.01

F — NON-FIRE RATED FURRED WALL W/ UNPROTECTED OPENINGS, TYP UON, SEE 22/A9.01

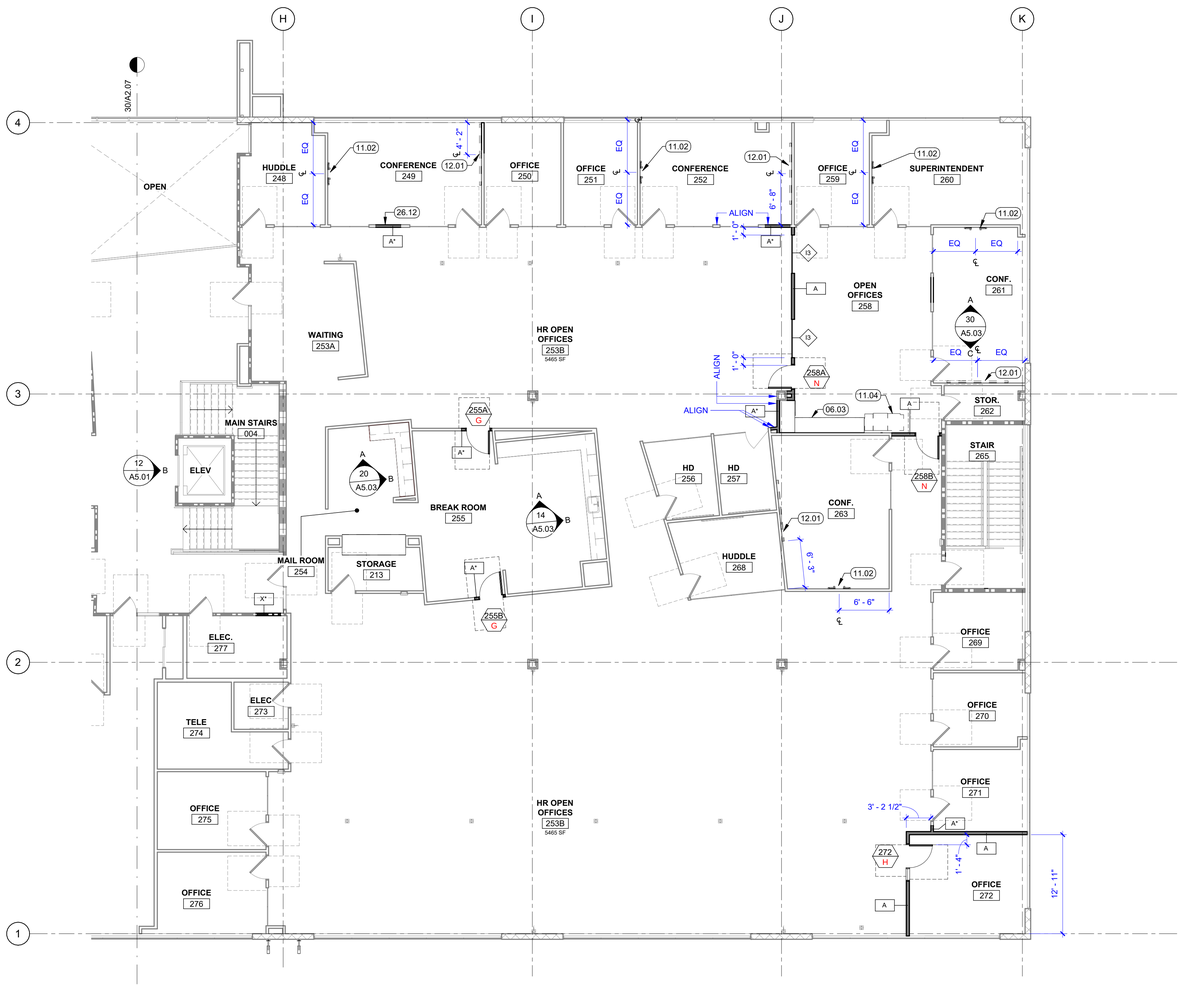
W — 1 HR RATED CORRIDOR PARTITION W/ 20 MIN. PROTECTED OPENINGS, TYP UON, SEE -/---

X — 1 HR RATED WALL W/ 45 MIN PROTECTED OPENINGS, TYP UON, SEE 4/A9.01

Y — 1 HR RATED CAVITY WALL W/ 45 MIN PROTECTED OPENINGS, TYP UON, SEE 9/A9.01

GENERAL NOTES

1. NOTIFY ARCHITECT OF ANY IN THE FIELD DISCREPANCIES PRIOR TO START OF CONSTRUCTION.
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20 SECOND FLOOR PARTIAL REMODEL PLAN - EAST

1/8" = 1'-0"

PLAN CHECK SET

CONSTRUCTION DOCUMENTS

AGENCY APPROVAL

KEY PLAN



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Revisions			
Delta	Date	Revisions	By

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HY Architects Project number: 6013

Facility

NEW MAIN OFFICE
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Project

TENANT IMPROVEMENTS

Sheet Title

PARTIAL REMODEL PLAN - SECOND FLOOR - EAST

Client Project Number: N/A

Scale:	As indicated
Drawn By:	SH/LDM
Checked By:	HC
Issue Date:	July 21, 2023
Revit Version:	2023

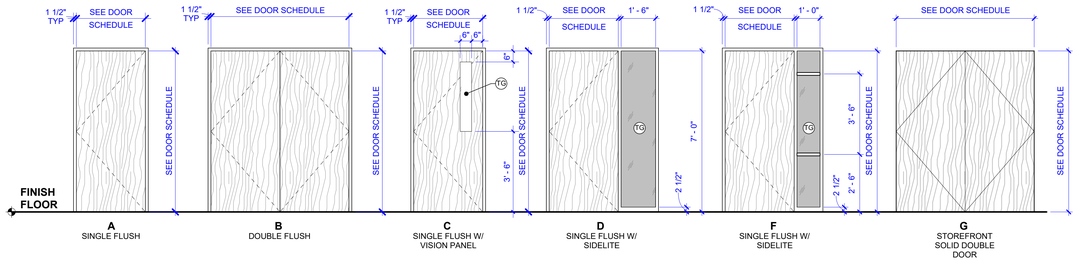
Sheet **A2.08**

Sheet 2 of 200

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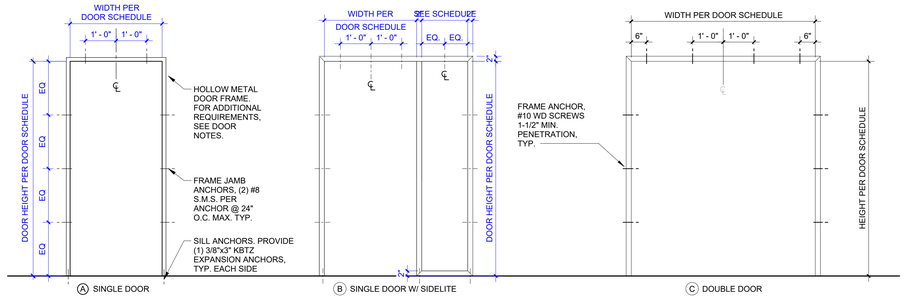
GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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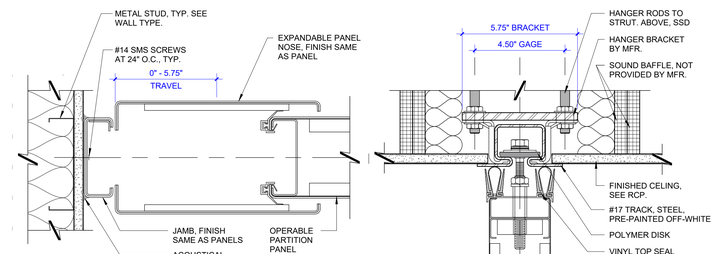
26 DOOR TYPES

3/8" = 1'-0"



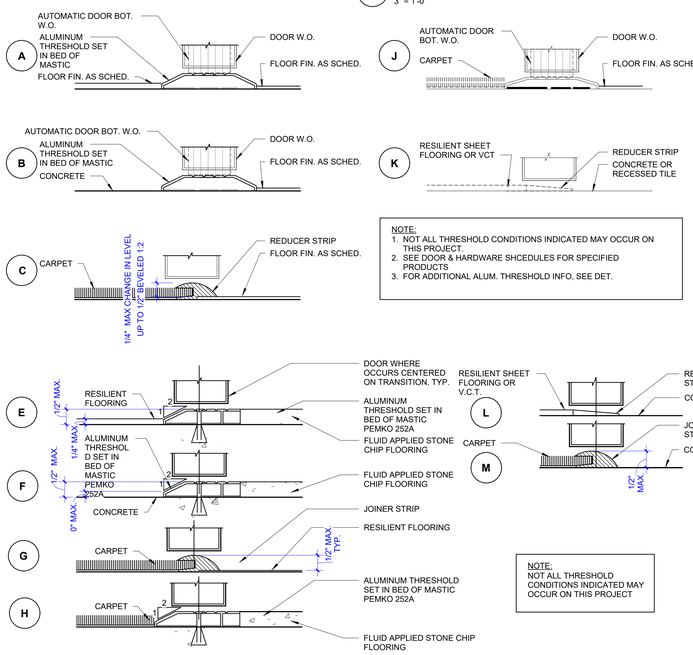
27 FRAME ANCHORAGE

1/2" = 1'-0"



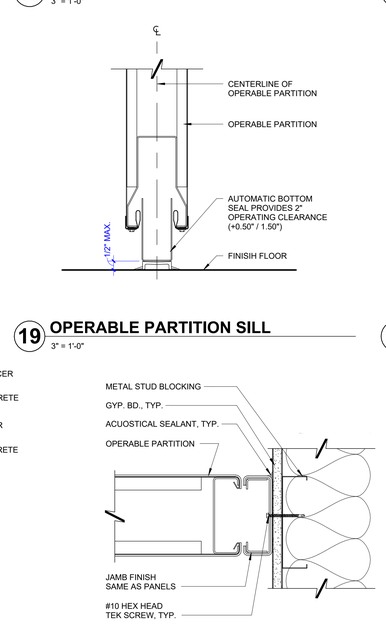
23 OPERABLE PARTITION JAMB @ EXPANDABLE PANEL

3" = 1'-0"



30 THRESHOLD TYPES

6" = 1'-0"



18 OPERABLE PARTITION HEAD

3" = 1'-0"

19 OPERABLE PARTITION SILL

3" = 1'-0"

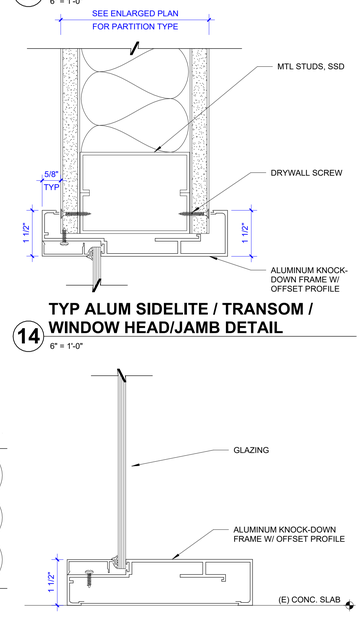
20 OPERABLE PARTITION JAMB

3" = 1'-0"

12 DOOR SCHEDULE

6" = 1'-0"

LOCATION	MARK	DOOR NOMINAL SIZE WIDTH	DOOR NOMINAL SIZE HEIGHT	DOOR MATERIAL	DOOR TYPE	DOOR GLASS	FRAME MATERIAL	FRAME DETAILS (REF. DWG. A2.20 U.O.N.) HEAD	FRAME DETAILS (REF. DWG. A2.20 U.O.N.) JAMB	FRAME DETAILS (REF. DWG. A2.20 U.O.N.) HANDING	HARDWARE	FIRE RATING	REMARKS
RECEPTION #101	101	3' - 0"	8' - 0"	WD	D	TG	HM	8 / -	9 / -			45 MIN	1
LARGE CONFERENCE A #103A	103A	6' - 0"	8' - 0"	WD	B		HM	8 / -	9 / -			45 MIN	2
LARGE CONFERENCE A #103A	103B	3' - 0"	8' - 0"	WD	A		HM	8 / -	9 / -			45 MIN	2
LARGE CONFERENCE B #103B	103C	3' - 0"	8' - 0"	WD	A		HM	8 / -	9 / -			45 MIN	2
LARGE CONFERENCE B #103B	103D	3' - 0"	8' - 0"	WD	A		HM	8 / -	9 / -			45 MIN	2
CONFERENCE ROOM #104	104A	3' - 0"	8' - 0"	WD	D	TG	AL	13 / -	14 / -				1
HOSPITALITY #105	105	3' - 0"	8' - 0"	WD	C	TG	AL	13 / -	14 / -				
WOMENS TOILET #106	106	3' - 0"	8' - 0"	WD	A		AL	13 / -	14 / -				
TOILET #107	107	3' - 0"	8' - 0"	WD	A		AL	13 / -	14 / -				
STORAGE #108	108	3' - 0"	8' - 0"	WD	A		AL	13 / -	14 / -				
SMALL CLASSROOM #110	110	3' - 0"	8' - 0"	WD	C	TG	AL	13 / -	14 / -				
STORAGE #111	111A	6' - 0"	8' - 0"	WD	B		AL	13 / -	14 / -				1
STORAGE #111	111B	6' - 0"	8' - 0"	WD	B		HM	8 / -	9 / -			45 MIN	
DOCUMENT PROCESSING #116	116	3' - 0"	8' - 0"	WD	C	TG	AL	13 / -	14 / -				1
OPEN OFFICES #117	117A	6' - 0"	8' - 0"	(E)	(E)		(E)						1
OPEN OFFICES #117	117B	3' - 0"	8' - 0"	WD	F	TG	AL	13 / -	14 / -				1
OPEN OFFICES #117	117C	6' - 0"	8' - 0"	WD	G	TG	AL	13 / -	13 / -				1
JANITOR #118	118	3' - 0"	8' - 0"	WD	A		AL	13 / -	14 / -				
BREAKROOM #119	119	3' - 0"	8' - 0"	WD	C	TG	AL	13 / -	14 / -				
OFFICE #120	120	3' - 0"	8' - 0"	WD	A		AL	13 / -	14 / -				
OFFICE #121	121	3' - 0"	8' - 0"	WD	A		AL	13 / -	14 / -				
SERVER ROOM #126B	126	3' - 0"	8' - 0"	WD	A		AL	13 / -	14 / -				1
IT STORAGE/WORKROOM #126A	126B	3' - 0"	8' - 0"	(E)	(E)		(E)						1
STORAGE #130	130	3' - 0"	8' - 0"	(E)	(E)		(E)						1
LOBBY #005	200	3' - 0"	8' - 0"	(E)	(E)		(E)						1
JANITOR #201	201	3' - 0"	8' - 0"	WD	A		AL	13 / -	14 / -				
OFFICE #216	216	3' - 0"	8' - 0"	WD	C	TG	AL	13 / -	14 / -				
STORAGE #246	246	3' - 0"	8' - 0"	(E)	(E)		(E)						
BREAK ROOM #255	255A	3' - 0"	8' - 0"	WD	C	TG	AL	13 / -	14 / -				
BREAK ROOM #255	255B	3' - 0"	8' - 0"	WD	C	TG	AL	13 / -	14 / -				
OPEN OFFICES #258	258A	3' - 0"	8' - 0"	WD	C	TG	AL	13 / -	14 / -				
OPEN OFFICES #258	258B	3' - 0"	8' - 0"	WD	C	TG	AL	13 / -	14 / -				1
OFFICE #272	272	3' - 0"	8' - 0"	WD	D		AL	13 / -	14 / -				



13 TYP ALUM DOOR HEAD FRAME AT SIDELITE/TRANSOM (HEAD SIM)

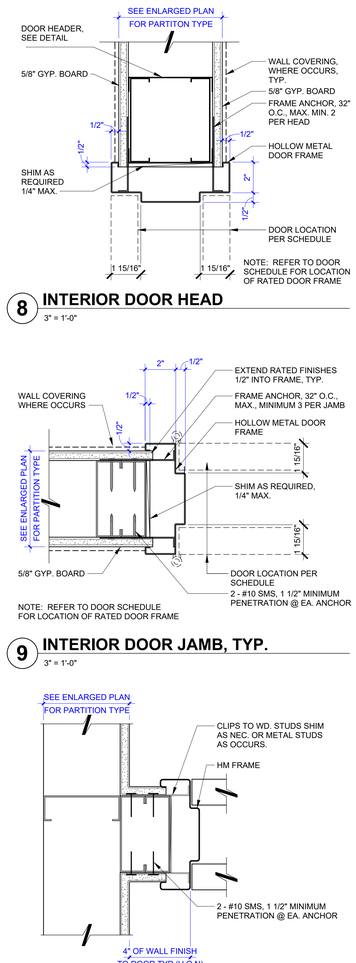
6" = 1'-0"

14 TYP ALUM SIDELITE / TRANSOM / WINDOW HEAD/JAMB DETAIL

6" = 1'-0"

15 TYP ALUM SIDELITE / TRANSOM / WINDOW SILL

6" = 1'-0"



8 INTERIOR DOOR HEAD

3" = 1'-0"

9 INTERIOR DOOR JAMB, TYP.

3" = 1'-0"

10 DOOR JAMB AT ADJACENT WALL

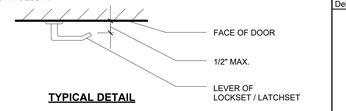
3" = 1'-0"

GENERAL NOTES

1. WHERE DIMENSIONS ARE NOT PROVIDED ON DWGS. OTHER THAN THE FLOOR PLANS TO LOCATE DOOR OPENINGS, APPLY THE FOLLOWING RULES, IN ORDER, TO DETERMINE THE LOCATION OF DOOR OPENINGS:



2. SEE SPECIFICATIONS FOR HARDWARE GROUPS.
3. ALL NEW HARDWARE TO BE ADA COMPLIANT, INCLUDING LEVER ACTION DOOR KNOBS. ALL LEVER RETURNS SHALL BE WITHIN 1/2" OF THE FACE OF DOORS AS SHOWN BELOW.



TYPICAL DETAIL

4. ADJUST DOOR CLOSER FOR MAXIMUM PUSH/PULL EFFORT TO OPERATE DOOR AS FOLLOWS:
(EFFORT SHALL BE APPLIED AT RIGHT ANGLES TO CENTER PLANE OF DOOR):
   A. INTERIOR DOORS: NOT TO EXCEED 5 POUNDS.
   B. FIRE RATED DOORS: NOT TO EXCEED 15 POUNDS.
5. 32" MINIMUM CLEARANCE THROUGH ALL DOORS, WHICH HAVE A MINIMUM OPENING OF 90 DEGREES.
6. PULL SIDE: 18" WIDE X 60" DEEP STRIKE SIDE CLEARANCE AT ALL INTERIOR DOORS AND A 24" WIDE X 60" DEEP STRIKE SIDE CLEARANCE AT ALL EXTERIOR DOORS.
7. PUSH SIDE: 12" WIDE X 48" DEEP STRIKE SIDE CLEARANCE AT ALL DOORS.
8. ALL DOOR CLEARANCES HAVE LEVEL LANDINGS NO MORE THAN 2% SLOPE WHICH CONNECT TO ACCESSIBLE ROUTES.
9. THRESHOLDS AT ALL DOORS HAVE A MAXIMUM ¼" CHANGE IN LEVEL, OR MAXIMUM ½" CHANGE IN LEVEL BEVELED 1:2.
10. DOORS HAVE A CLOSING TIME OF 5 SECONDS MINIMUM FROM 90 DEGREES TO 12 DEGREES. SWINGING DOORS HAVE A 10" MINIMUM OF SMOOTH, UNINTERRUPTED SURFACE OF THE DOOR ON THE PUSH SIDE.
11. HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERABLE PARTS OF DOORS AND GATES MOUNTED BETWEEN 34 "-44 AFF, AND DOES NOT REQUIRE PINCHING, GRASPING, OR TWISTING OF THE WRIST TO OPERATE.
12. HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERABLE PARTS OF DOORS AND GATES MOUNTED BETWEEN 34 "-44 AFF, AND DOES NOT REQUIRE PINCHING, GRASPING, OR TWISTING OF THE WRIST TO OPERATE.
13. REFER TO GENERAL NOTES ON ID1.00 FOR FINISHES.
14. ALL EXIT DOORS SHALL RECEIVE PANIC HARDWARE. SEE DOOR SCHEDULE AND HARDWARE GROUPS. SPECIFICATIONS SECTION 08 71 00.

DOOR & FRAME COLUMN REFERENCE GUIDE

1. DOOR MARK: SPECIFIC NUMBER ASSIGNED TO INDIVIDUAL DOOR: E-EXISTING TO REMAIN
2. NOMINAL DOOR SIZE: DESIGNATES NOMINAL WIDTH AND HEIGHT OF DOOR IN FEET AND INCHES. DOOR WIDTH IS GIVEN PER LEAF. REFER TO FLOOR PLAN FOR PAIRS OF DOORS. THICKNESS OF DOOR IS GIVEN IN INCHES.
3. DOOR MATERIAL (MTRL): INDICATES MATERIAL FROM WHICH DOOR IS CONSTRUCTED: HM-HOLLOW METAL, WD-SOLID CORE WOOD, AL-ALUMINUM, FRP - SOLID CORE WOOD FINISHED W/ FRP, IR - SOLID CORE WOOD FINISHED W/ IMPACT RESISTANT (ACROVYN)
4. DOOR TYPE: ALPHANUMERICAL DOOR DESIGNATIONS ARE DERIVED FROM THOSE IDENTIFIED BY THE STEEL DOOR INSTITUTE NOMENCLATURE FOR STANDARD DOOR DESIGNS (SEE DOOR TYPES)
5. DOOR GLASS: DESIGNATES TYPE OF GLASS TO BE USED IN DOOR: TG-TEMPERED GLASS, WG-WIRE GLASS, LAM-LAMINATED GLASS, ETC.
6. FRAME MATERIAL (MTRL): INDICATES MATERIAL FROM WHICH FRAME IS CONSTRUCTED: HM-HOLLOW METAL, WD-WOOD, AL-ALUMINUM, SST - STAINLESS STEEL, ETC.
7. FRAME DETAILS: REFERENCE NUMBERS FOR FRAME SECTIONS AS CONDITIONS EXIST AT THE WALLS OR JAMBS OF DOORS, ETC.
8. HARDWARE GROUP: NUMERICAL DESIGNATION OF HARDWARE GROUPING TO BE APPLIED TO DOOR AND FRAME. REFER TO SPECIFICATIONS FOR DESCRIPTION OF HARDWARE CONTAINED WITHIN GROUPING.
9. FIRE RATING FOR DOOR AND FRAME: DESIGNATES NUMBER OF MINUTES FOR THE ALPHABETICAL FIRE RESISTANCE RATING CLASSIFICATION LABEL REQUIRED FOR DOOR AND FRAME.
10. SIGNAGE: DESIGNATES SIGNS ADJACENT TO DOORS. REFER TO SIGN SCHEDULE FOR SIGN TYPE AND DETAILS.
11. REMARKS: DESIGNATES OR REFERENCES SPECIAL, UNUSUAL OR ABSTRACT CONDITIONS WHICH EXIST AND ARE NOT COVERED IN SCHEDULE ITEMS 1 THROUGH 11. SEE REMARKS BELOW.
    REMARKS:
    1. CARD READER - CARD READERS SHALL COMPLY WITH ALL CRITERIA SPECIFIED IN CBC 1010.1.9.10 - FOR MORE INFO, SEE SPECIFICATIONS AND CBC 1010.1.9.10 NOTE BELOW.
    2. PANIC HARDWARE IN ACCORDANCE WITH UL 305

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Delta	Date	Revisions	By

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HY Architects Project number: 6013

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Project
TENANT IMPROVEMENTS

Sheet Title
DOOR SCHEDULE AND TYPES

Client Project Number: N/A

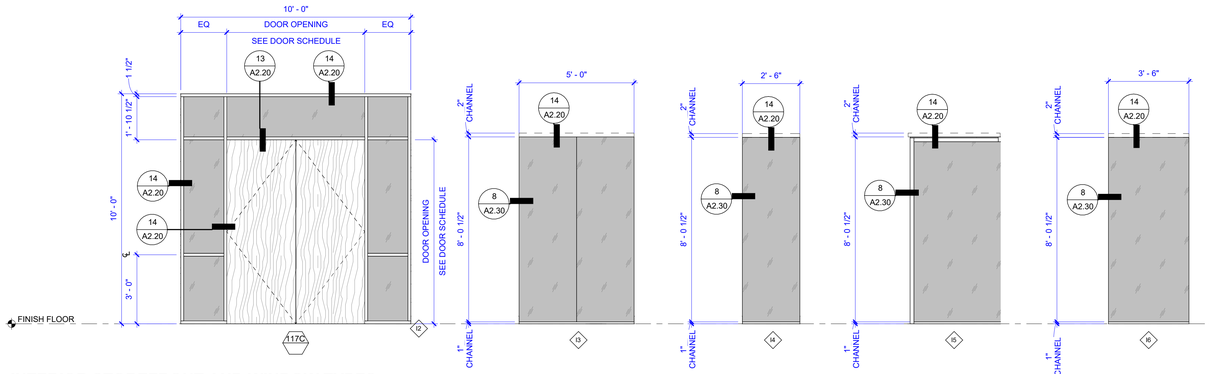
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Issue Date: July 21, 2023
Revit Version: 2023

Sheet
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Sheet of 200

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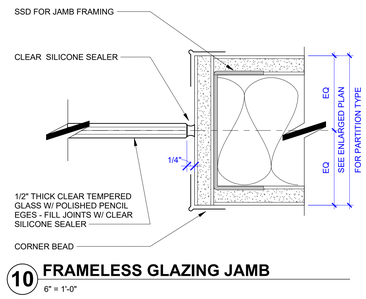
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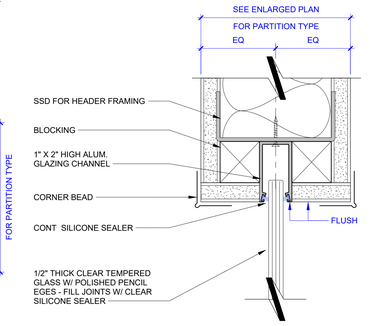
27 INTERIOR STOREFRONT AND WINDOW TYPES

3/8" = 1'-0"



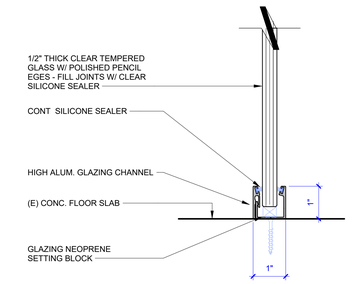
10 FRAMELESS GLAZING JAMB

6" = 1'-0"



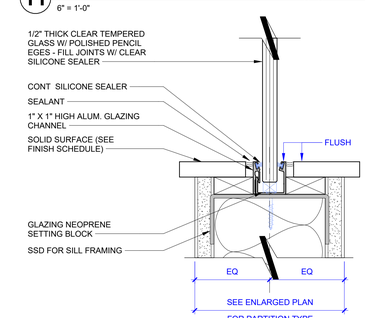
9 FRAMELESS GLAZING HEADER

6" = 1'-0"



11 FRAMELESS GLAZING SILL AT (E) FLOOR

6" = 1'-0"



8 FRAMELESS GLAZING SILL

6" = 1'-0"

WINDOW SCHEDULE REFERENCE GUIDE

1. SIZE: OVERALL WIDTH AND HEIGHT OF WINDOW IN FEET AND INCHES, INCLUDING FRAME.
2. MATERIAL: INDICATES MATERIAL FROM WHICH FRAME IS CONSTRUCTED, I.E., HM - HOLLOW METAL, WD - WOOD, AL - ALUMINUM, ETC.
3. GLASS: DESIGNATES TYPE OF GLASS TO BE INSTALLED IN WINDOW, I.E., TG - TEMPERED GLASS, LAM - LAMINATED GLASS, WG - WIRE GLASS, INSUL - INSULATING GLASS, ETC.
4. DETAILS: REFERENCE NUMBERS FOR SECTIONS AS CONDITIONS EXIST AT THE WALL, SILL, OR HEAD OF FRAMES WITH ANY UNUSUAL DETAIL REFERENCED UNDER SEPARATE HEADING 5D.
5. WINDOW FRAME FIRE RATING: DESIGNATES ALPHABETICAL FIRE RESISTANCE RATING CLASSIFICATION LABEL REQUIRED FOR WINDOW FRAME WITH TIME PERIOD REQUIRED IN HOURS.
6. REMARKS: REFERENCES SPECIAL, UNUSUAL OR ABSTRACT CONDITIONS WHICH EXIST AND ARE NOT COVERED IN SCHEDULE ITEMS 1 THRU 5.
   A. PROVIDE WINDOW LIGHT ACCENT REVEAL, SED

FOR TYP. FLASHING AT OPENINGS, SEE 30/A8.14

GENERAL NOTES:

1. ALIGN VERTICAL MULLIONS BETWEEN LOWER & UPPER WINDOW SYSTEMS.
2. FIELD VERIFY ALL WINDOW SIZES & SUBMIT TO ARCHITECT FOR REVIEW. PRIOR TO ORDERING.

SEE SPEC SECTION 08 80 00

- ALL EXT. WDW. & STOREFRONT SYSTEMS' GLAZING: GUARDIAN INDUSTRIES SUNGUARD SNX 51/23 ON CLEAR (GRAY TINT) OR EQ., TRANSMITTANCE 26%, REFLECTANCE OUT 7/ IN 13, U-VALUE .29, SHGC .16.
- INTERIOR WINDOWS: ALL INTERIOR WINDOWS TO BE DUAL-PANE CLEAR GLAZING, WITH NO TINT, UON

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Delta	Date	Revisions	By

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HY Architects Project number: 6013

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Project

TENANT IMPROVEMENTS

Sheet Title

WINDOW/STOREFRONT TYPES AND SCHEDULE

Client Project Number: N/A

Scale:	As indicated
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Checked By:	HC
Issue Date:	July 21, 2023
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Sheet

A2.30

Sheet of 200

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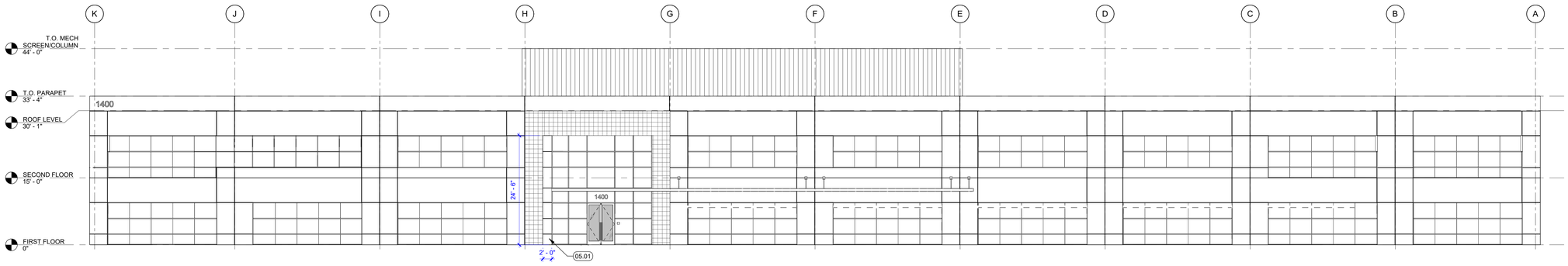
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EXTERIOR ELEVATIONS GENERAL NOTES

1. NOTIFY ARCHITECT OF ANY IN THE FIELD DISCREPANCIES PRIOR TO START OF CONSTRUCTION.
2. ALL DIMENSIONS SHALL BE FACE OF STUD, UON. DIMENSIONS NOTED AS "CLR" REFER TO CLEAR DIMENSION FROM FACE OF FINISH.
3. REFER TO I, SG, S, M, P, E, C SERIES SHEETS FOR ADDITIONAL INFORMATION.

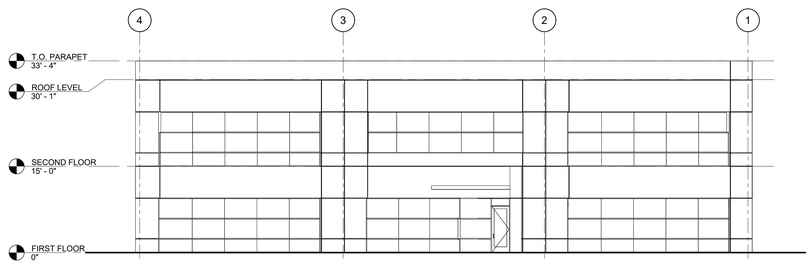
KEYNOTES

05.01	METAL CLADDING, SEE SHEET A8.01



28 NORTH EXTERIOR ELEVATION

3/32" = 1'-0"



24 WEST EXTERIOR ELEVATION

3/32" = 1'-0"

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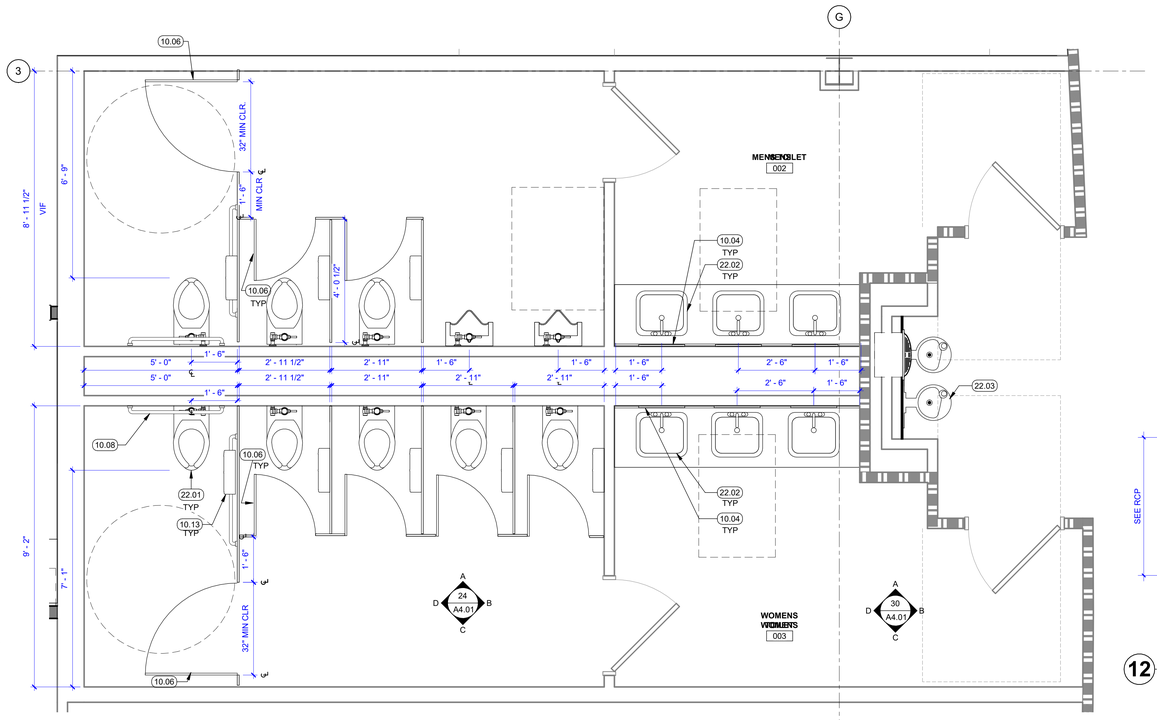
Sheet **A3.01**

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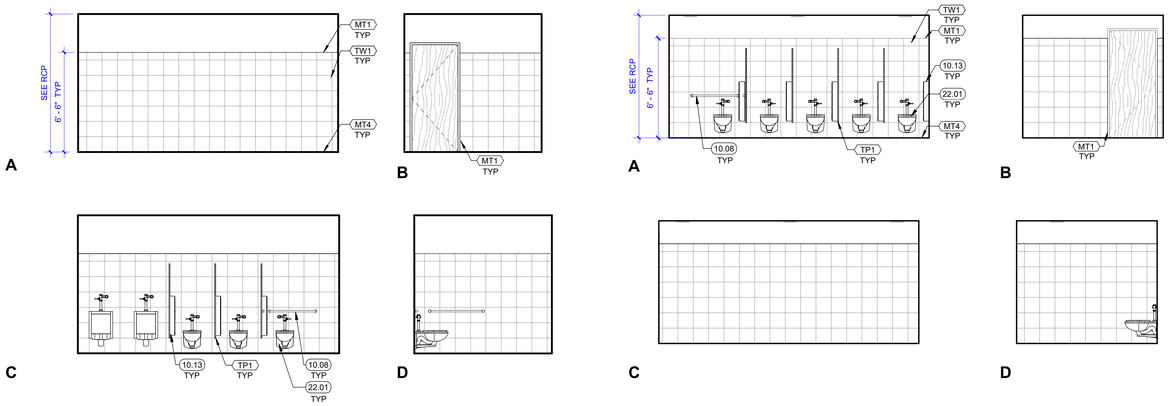
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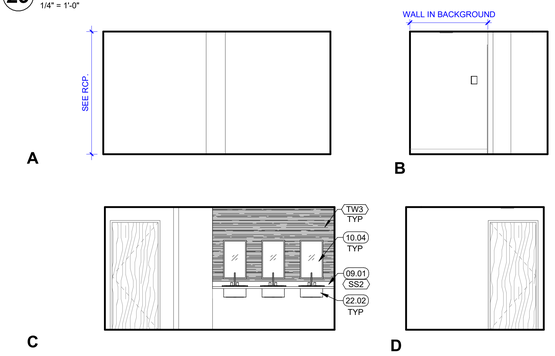


NOTE: ROOM 1XX WOMEN - LAVATORY IS OPPOSITE

28 TYPICAL MEN'S AND WOMEN'S RESTROOMS
1/2" = 1'-0"

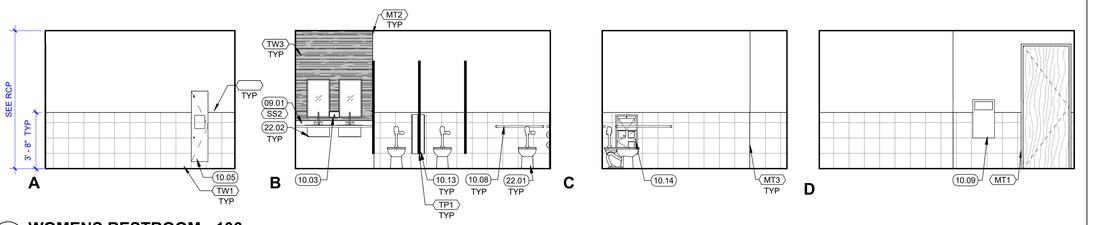


29 TYPICAL MEN'S RESTROOM
1/4" = 1'-0"

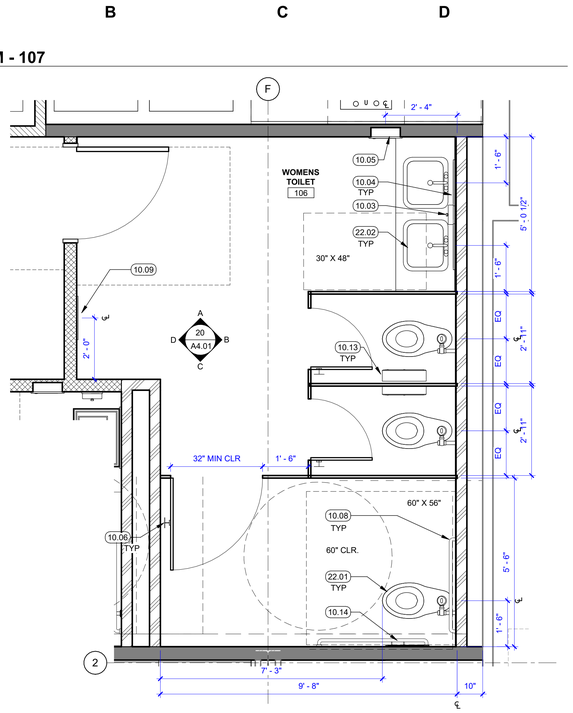


30 TYPICAL MEN'S AND WOMEN'S RESTROOMS - LAVATORY
1/4" = 1'-0"

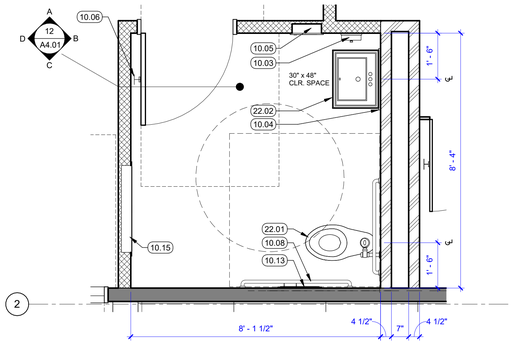
24 TYPICAL WOMEN'S RESTROOM
1/4" = 1'-0"



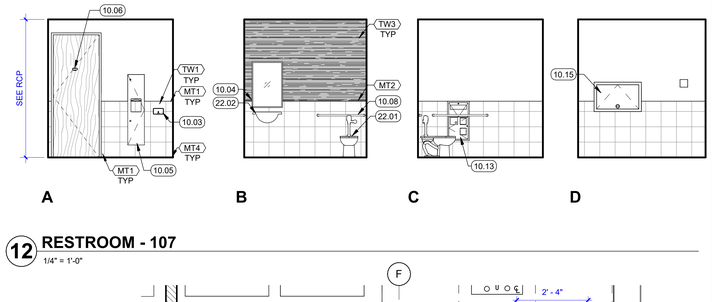
20 WOMENS RESTROOM - 106
1/4" = 1'-0"



6 RESTROOM - 107
1/2" = 1'-0"



12 RESTROOM - 107
1/4" = 1'-0"



14 WOMEN'S RESTROOM - 106
1/2" = 1'-0"

GENERAL NOTES

1. NOTIFY ARCHITECT OF ANY IN THE FIELD DISCREPANCIES PRIOR TO START OF CONSTRUCTION.
2. ALL DIMENSIONS SHALL BE FACE OF STUD, UON. DIMENSIONS NOTED AS "CLR" REFER TO CLEAR DIMENSION FROM FACE OF FINISH.
3. REFER TO S, M, P, E, C & L SERIES SHEETS FOR ADDITIONAL INFORMATION.

PARTITION LEGEND

NOTE: FOR ANY PARTITION THAT IS NOT TAGGED ON THE PLAN, REFER TO ITS CORRESPONDING GRAPHIC IN THIS WALL LEGEND TO DETERMINE ITS TYPE

EXISTING WALL & PARTITION TYPES:

- (E) EXTERIOR MASONRY WALL (BRICK VENEER O/ CMU).
- (E) 1 HR. RATED FIRE PARTITION (CORRIDOR) W/ 20 MIN. PROTECTED OPENINGS.
- (E) NON- RATED FIRE- RESISTIVE PARTITION (W/ UNPROTECTED OPENINGS) AND/ OR EXTERIOR WALL TO REMAIN.
- (E) PARTITION TO BE DEMOLISHED.
- PARTITION, TYP

KEYNOTES

09.01	NEW COUNTER
10.03	SOAP DISPENSER, SEE DETAIL 13/A9.01
10.04	MIRROR TO BE CENTERED ABOVE SINK, SEE DETAIL 13/A9.01
10.05	RECESSED PAPER TOWEL DISPENSER AND TRASH RECEPTACLE , SEE DETAIL 13/A9.02
10.06	COAT HOOK, SEE DETAIL 13/A9.02
10.08	48" SIDE GRAB BAR, SEE DETAIL 14/A9.01
10.09	RECESSED TRASH RECEPTACLE, SEE DETAIL 13/A9.02
10.13	SURFACE-MOUNTED, SEAT-COVER DISPENSER, SANITARY NAPKIN DISPOSAL AND TOILET TISSUE DISPENSER
10.14	RECESSED SEAT-COVER DISPENSER, SANITARY NAPKIN DISPOSAL AND TOILET TISSUE DISPENSER SEE DETAIL 13/A9.02
10.15	RECESSED KOALA CARE BABY CHANGING STATION
22.01	WALL MOUNTED TOILET, SPD
22.02	WALL MOUNTED LAV, SPD
22.03	HI-LO BOTTLE FILLER/DRINKING FOUNTAIN, SEE DETAIL 20 & 30/A9.03 AND SPD

PCOE GOLD IN EDUCATION

Revisions

Delta	Date	Revisions	By

PLAN CHECK SET
CONSTRUCTION DOCUMENTS

AGENCY APPROVAL

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HIBSER YAMAUCHI Architects, Inc.
4602 2nd Street, Suite 3
Davis, CA 95618
530.758.1270 tel | 530.758.4789 fax

HY Architects Project number: 6013

Facility
NEW MAIN OFFICE
1400 STANFORD RANCH, ROCKLIN CA 95765

Project
TENANT IMPROVEMENTS

Sheet Title
ENLARGED PLANS & INT. ELEVATIONS - RESTROOMS

Client Project Number: N/A

Scale:	As indicated
Drawn By:	Author
Checked By:	HC
Issue Date:	July 21, 2023
Revit Version:	2023

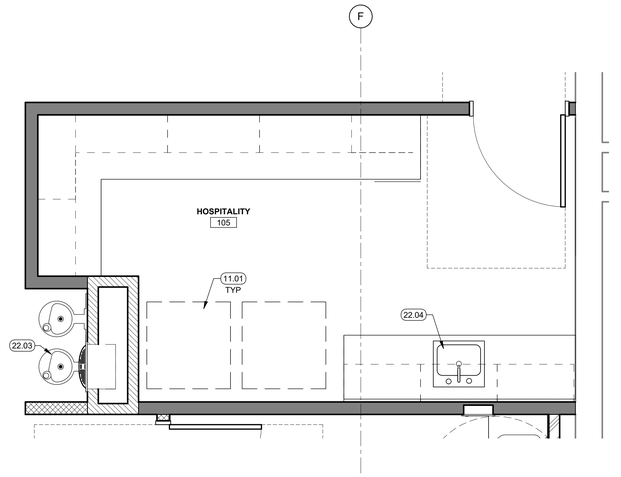
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Sheet 2 of 200

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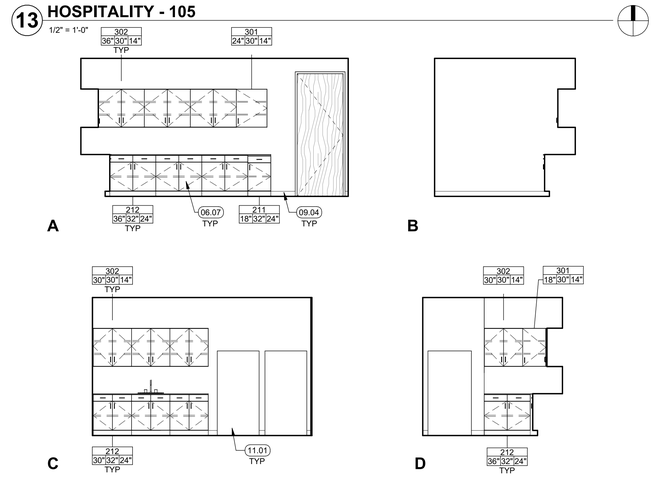
GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY



13 HOSPITALITY - 105

1/2" = 1'-0"



15 HOSPITALITY - 105

1/4" = 1'-0"

GENERAL NOTES

1. NOTIFY ARCHITECT OF ANY IN THE FIELD DISCREPANCIES PRIOR TO START OF CONSTRUCTION.
2. ALL DIMENSIONS SHALL BE FACE OF STUD, UON. DIMENSIONS NOTED AS "CLR" REFER TO CLEAR DIMENSION FROM FACE OF FINISH.
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- (E) PARTITION TO BE DEMOLISHED.
- PARTITION, TYP

KEYNOTES

06.07	BUILT IN CABINET WITH PLASTIC LAMINATE COUNTER TOP, SEE DETAILS ON SHEET A9.10
09.04	FLOORING & WALL BASE. SEE FLOORING FINISH & I1.00 FOR GENERAL FINISH NOTES FOR TYPES PER LOCATION
11.01	REFRIGERATOR; OFOI
22.03	HI-LO BOTTLE FILLER/DRINKING FOUNTAIN, SEE DETAIL 20 & 30/A9.03 AND SPD
22.04	SINK FIXTURE WITH HARDWIRED MOTION SENSOR, SPD

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Revisions

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CONSTRUCTION DOCUMENTS

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HY Architects Project number: 6013

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NEW MAIN OFFICE
1400 STANFORD RANCH, ROCKLIN CA 95765

Project

TENANT IMPROVEMENTS

Sheet Title

ENLARGED PLANS & INT. ELEVATIONS - FIRST FLOOR

Client Project Number: N/A

Scale:	As indicated
Drawn By:	Author
Checked By:	HC
Issue Date:	July 21, 2023
Revit Version:	2023

Sheet

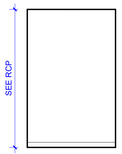
A4.03

Sheet 2 of 200

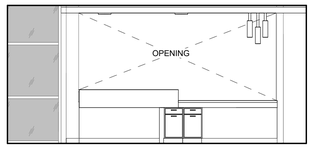
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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

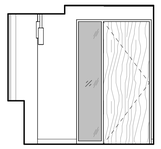
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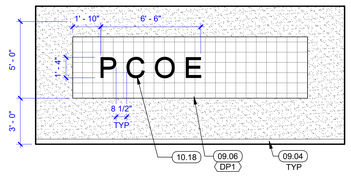
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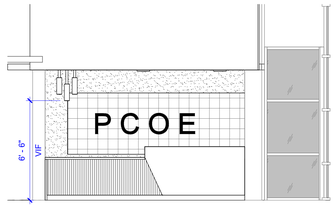


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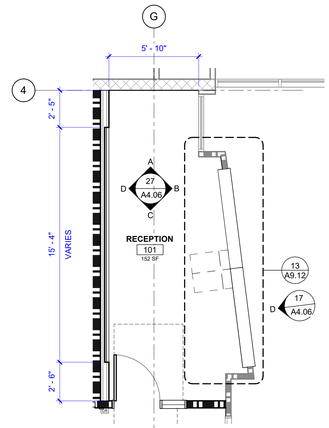


D

27 RECEPTION - 101
1/4" = 1'-0"



17 RECEPTION - 101 - DESK, FRONT
1/4" = 1'-0"



7 RECEPTION PLAN - 101
1/4" = 1'-0"

GENERAL NOTES

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- PARTITION, TYP

DEMO NOTES

09.04	FLOORING & WALL BASE. SEE FLOORING FINISH & I1.00 FOR GENERAL FINISH NOTES FOR TYPES PER LOCATION
09.06	MODULAR WALL PANELS, 3D RECLAIMED WOOD WALL PANELS ANCHORED TO WALL. SEE DETAIL AND INTERIOR SHEETS.
10.18	H" 3D BRUSHED ALUMINUM SIGNAGE

KEYNOTES

09.04	FLOORING & WALL BASE. SEE FLOORING FINISH & I1.00 FOR GENERAL FINISH NOTES FOR TYPES PER LOCATION
09.06	MODULAR WALL PANELS, 3D RECLAIMED WOOD WALL PANELS ANCHORED TO WALL. SEE DETAIL AND INTERIOR SHEETS.
10.18	H" 3D BRUSHED ALUMINUM SIGNAGE

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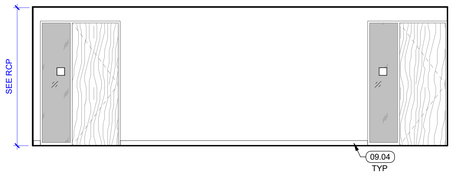
Revisions

Delta	Date	Revisions	By

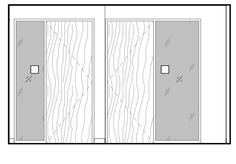
PLAN CHECK SET

CONSTRUCTION DOCUMENTS

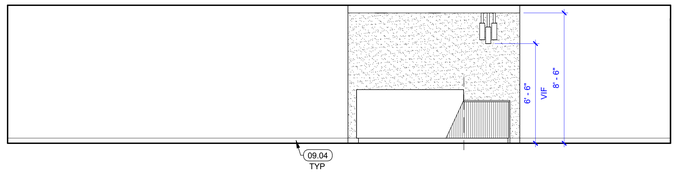
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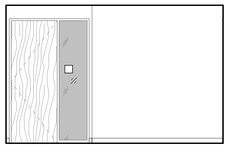
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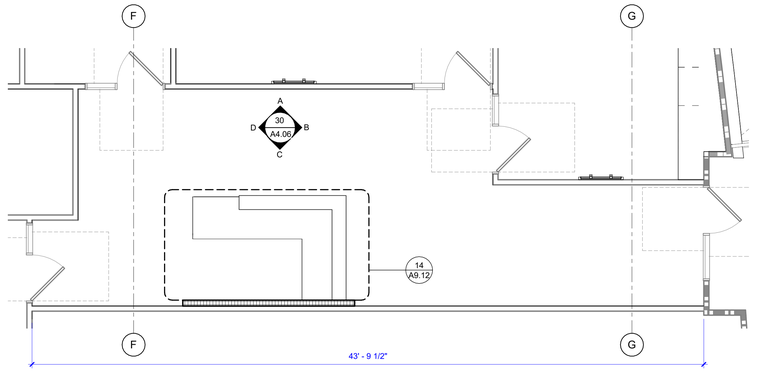


C



D

30 RECEPTION - 200
1/4" = 1'-0"



15 RECEPTION PLAN - 200
1/4" = 1'-0"

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HY Architects Project number: 6013

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Project

TENANT IMPROVEMENTS

Sheet Title

ENLARGED PLANS & INT. ELEVATIONS - RECEPTION

Client Project Number: N/A

Scale: 1/4" = 1'-0"
Drawn By: Author
Checked By: HC
Issue Date: July 21, 2023
Revit Version: 2023

Sheet **A4.06**

Sheet 2 of 200

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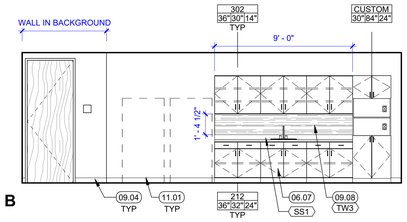
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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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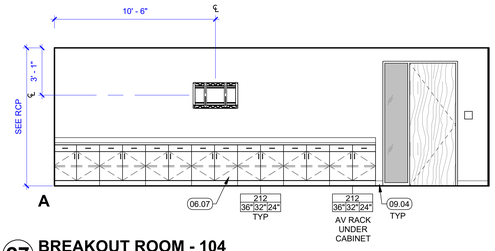
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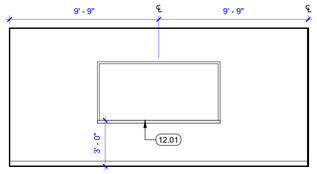
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21 BREAKROOM - 119

1/4" = 1'-0"



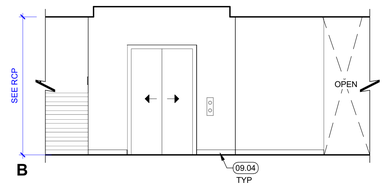
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D

27 BREAKOUT ROOM - 104

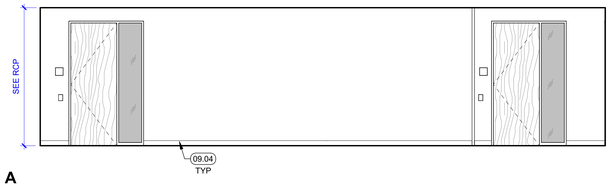
1/4" = 1'-0"



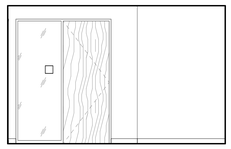
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12 TYPICAL ELEVATOR CORE

1/4" = 1'-0"



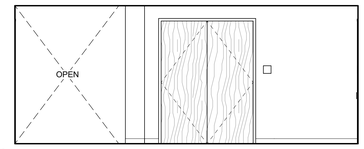
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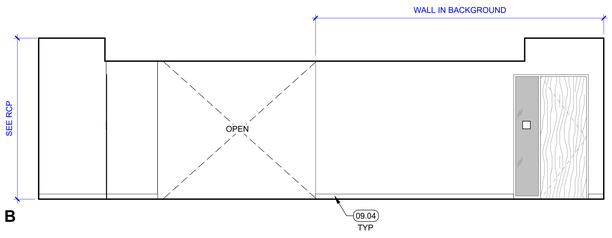
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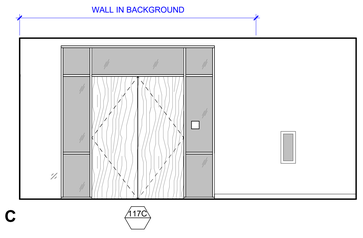
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28 PRE-FUCTION A - 102A

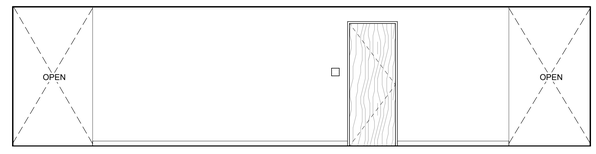
1/4" = 1'-0"



B



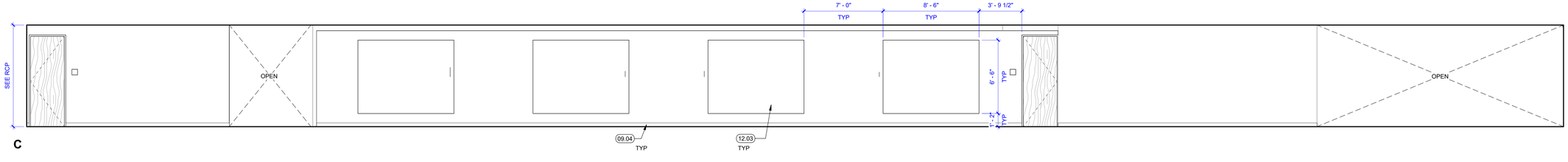
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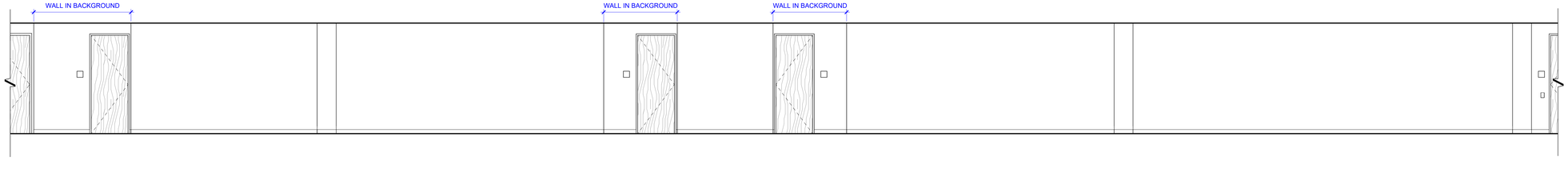
D

24 BOARDROOM PRE-FUCTION - 102C

1/4" = 1'-0"



C



A

30 PRE-FUCTION - 102B

1/4" = 1'-0"

GENERAL INTERIOR ELEVATION NOTES

1. REFER TO ID1.00 FOR FINISH SYMBOL LEGEND, GENERAL NOTES, & SCHEDULE.
2. REFER TO FF SERIES SHEETS FOR FURNITURE CODE DESCRIPTIONS & SPECIFICATIONS.
3. REFER TO Q SERIES SHEETS FOR EQUIPMENT, TOILET & LAVATORY ACCESSORY CODE DESCRIPTIONS & SPECIFICATIONS.
4. REFER TO SG SERIES SHEETS FOR SIGNAGE CODE DESCRIPTIONS & SPECIFICATIONS.
5. FOR ADA COMPLIANT MOUNTING HEIGHTS OF FURNITURE, EQUIPMENT, TOILET & LAVATORY ACCESSORIES REFER TO A9.03.
6. ALL CASEWORK @ HORIZONTAL SURFACES TO RECEIVE PL1, VERTICAL SURFACES TO RECEIVE PL2, UON.

INTERIOR ELEVATION KEYNOTES

06.07	BUILT IN CABINET WITH PLASTIC LAMINATE COUNTER TOP, SEE DETAILS ON SHEET A9.10
09.04	FLOORING & WALL BASE. SEE FLOORING FINISH & I1.00 FOR GENERAL FINISH NOTES FOR TYPES PER LOCATION
09.08	ACCENT TILE BACKSPLASH, SEE INTERIOR ELEVATIONS
11.01	REFRIGERATOR; OFOI
12.01	WHITE BOARD, OFOI, PROVIDE BACKING, SEE DETAIL 1/A9.02
12.03	MOSS WALL, PROVIDE BACKING IN WALL NICHE

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Revisions

Delta	Date	Revisions	By

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HIBSER YAMAUCHI Architects, Inc.
4602 2nd Street, Suite 3
Davis, CA 95618
530.758.1270 tel ¦ 530.758.4789 fax

HY Architects Project number: 6013

Facility

NEW MAIN OFFICE
1400 STANFORD RANCH, ROCKLIN CA 95765

Project

TENANT IMPROVEMENTS

Sheet Title

INTERIOR ELEVATIONS - FIRST FLOOR

Client Project Number: N/A

Scale: 1/4" = 1'-0"
Drawn By: Author
Checked By: HC
Issue Date: July 21, 2023
Revit Version: 2023

Sheet

A5.01

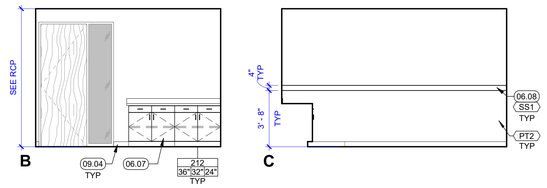
Sheet 2 of 200

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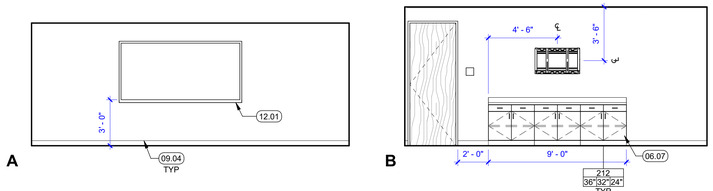
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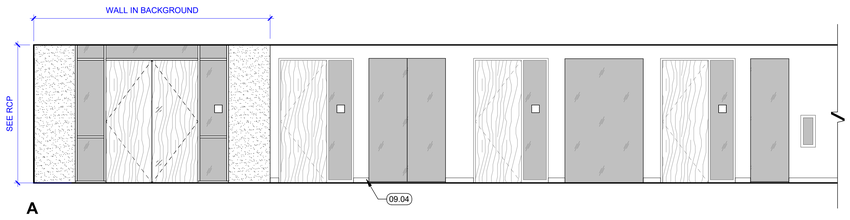
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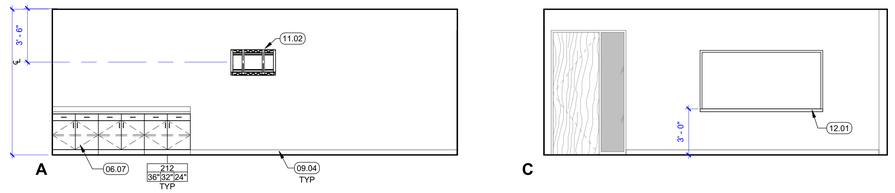
21 WELLNESS - 113
1/4" = 1'-0"



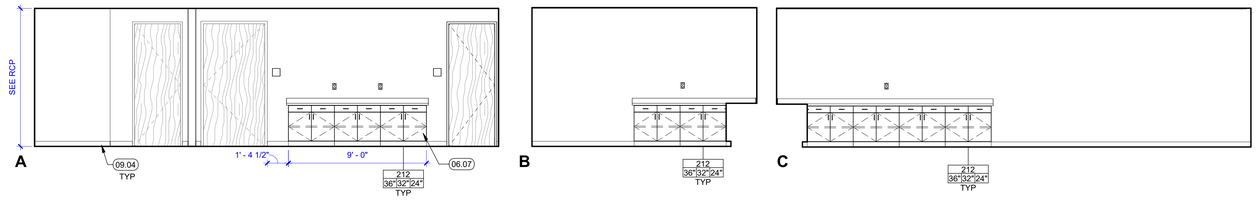
11 SMALL CLASSROOM - 110
1/4" = 1'-0"



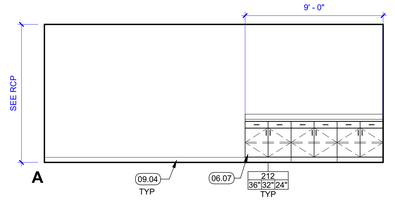
22 TECH/SELPA OPEN OFFICES - 117
1/4" = 1'-0"



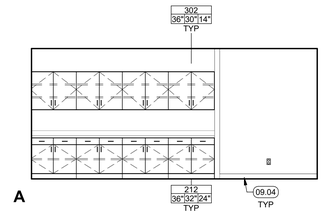
12 SMALL CLASSROOM - 112
1/4" = 1'-0"



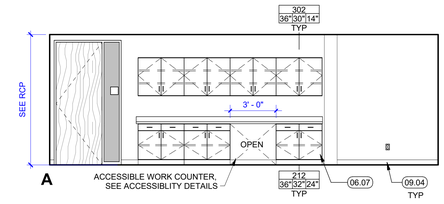
28 DOCUMENT PROCESSING - 116
1/4" = 1'-0"



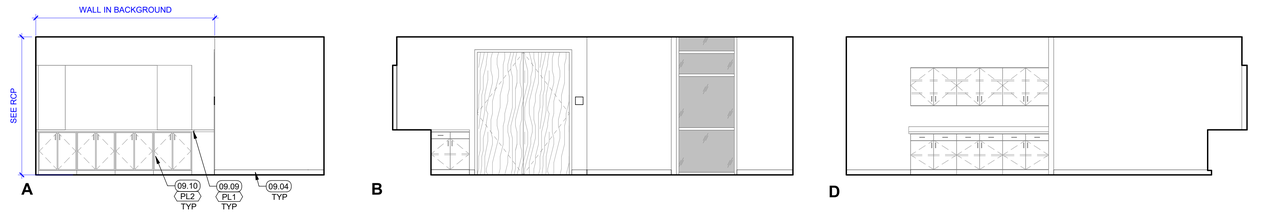
8 SMALL CLASSROOM - 109
1/4" = 1'-0"



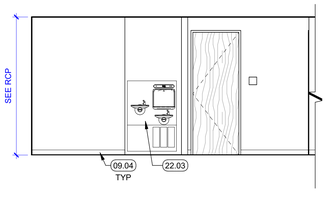
29 PRINT ALCOVE - 127
1/4" = 1'-0"



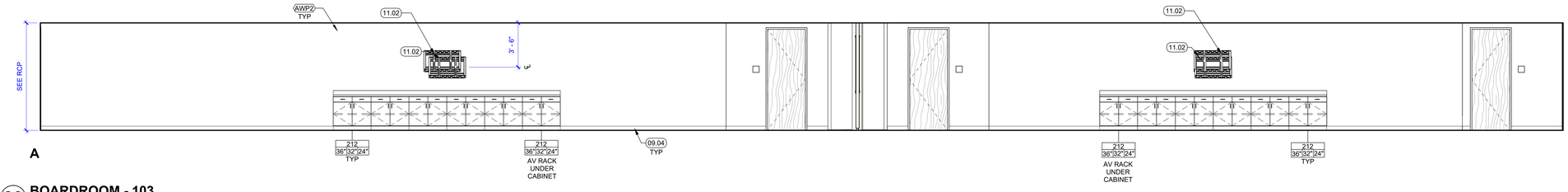
13 PRINT ALCOVE - 128 AND STORAGE - 129
1/4" = 1'-0"



24 DELIVERY / RECEIVABLES - 133
1/4" = 1'-0"



9 HALLWAY - 106
1/4" = 1'-0"



30 BOARDROOM - 103
1/4" = 1'-0"

GENERAL INTERIOR ELEVATION NOTES

1. REFER TO ID1.00 FOR FINISH SYMBOL LEGEND, GENERAL NOTES, & SCHEDULE.
2. REFER TO FF SERIES SHEETS FOR FURNITURE CODE DESCRIPTIONS & SPECIFICATIONS.
3. REFER TO Q SERIES SHEETS FOR EQUIPMENT, TOILET & LAVATORY ACCESSORY CODE DESCRIPTIONS & SPECIFICATIONS.
4. REFER TO SG SERIES SHEETS FOR SIGNAGE CODE DESCRIPTIONS & SPECIFICATIONS.
5. FOR ADA COMPLIANT MOUNTING HEIGHTS OF FURNITURE, EQUIPMENT, TOILET & LAVATORY ACCESSORIES REFER TO A9.03.
6. ALL CASEWORK @ HORIZONTAL SURFACES TO RECEIVE PL1, VERTICAL SURFACES TO RECEIVE PL2, UON.

INTERIOR ELEVATION KEYNOTES

06.07	BUILT IN CABINET WITH PLASTIC LAMINATE COUNTER TOP, SEE DETAILS ON SHEET A9.10
06.08	SOLID SURFACE CHAIR RAIL, SEE DETAIL 14/A9.05
09.04	FLOORING & WALL BASE. SEE FLOORING FINISH & I1.00 FOR GENERAL FINISH NOTES FOR TYPES PER LOCATION
09.09	LAMINATE ON COUNTERTOP OF (E) CABINET.
09.10	LAMINATE ON BODY OF (E) CABINET.
11.02	TV MOUNTING BRACKET, SEE DETAIL 18/A9.05 PROVIDE POWER & DATA, SED.
12.01	WHITE BOARD, OFOI, PROVIDE BACKING, SEE DETAIL 1/A9.02
22.03	HI-LO BOTTLE FILLER/DRINKING FOUNTAIN, SEE DETAIL 20 & 30/A9.03 AND SPD

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HY Architects Project number: 6013

Facility
NEW MAIN OFFICE
1400 STANFORD RANCH, ROCKLIN CA 95765

Project
TENANT IMPROVEMENTS

Sheet Title
INTERIOR ELEVATIONS - FIRST FLOOR

Client Project Number: N/A

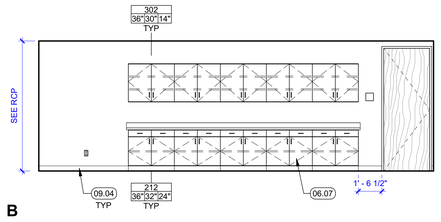
Scale: 1/4" = 1'-0"
Drawn By: Author
Checked By: HC
Issue Date: July 21, 2023
Revit Version: 2023

Sheet
A5.02
Sheet 2 of 200

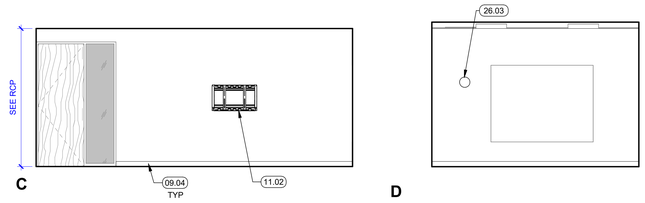
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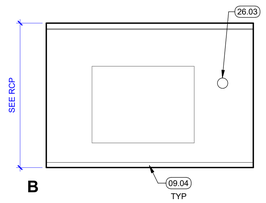
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26 PRINT STATION - 209
1/4" = 1'-0"

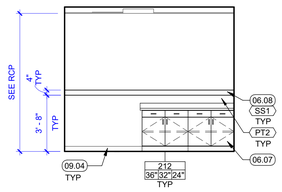


16 CONFERENCE - 202
1/4" = 1'-0"

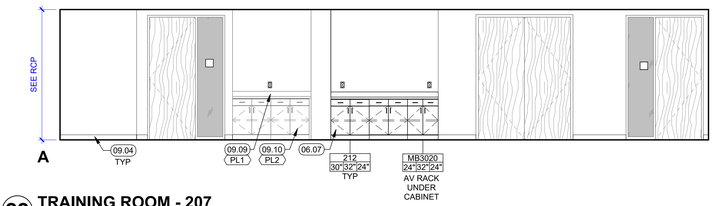


6 OBERSERVATION - 203
1/4" = 1'-0"

06.07	BUILT IN CABINET WITH PLASTIC LAMINATE COUNTER TOP, SEE DETAILS ON SHEET A9.10
06.08	SOLID SURFACE CHAIR RAIL, SEE DETAIL 14/A9.05
09.04	FLOORING & WALL BASE, SEE FLOORING FINISH & I1.00 FOR GENERAL FINISH NOTES FOR TYPES PER LOCATION
09.08	ACCENT TILE BACKSPLASH, SEE INTERIOR ELEVATIONS
09.09	LAMINATE ON COUNTERTOP OF (E) CABINET.
09.10	LAMINATE ON BODY OF (E) CABINET.
11.01	REFRIGERATOR, OFOI
11.02	TV MOUNTING BRACKET, SEE DETAIL 18/A9.05 PROVIDE POWER & DATA, SED.
12.01	WHITE BOARD, OFOI, PROVIDE BACKING, SEE DETAIL 1/A9.02
26.03	TWO WAY SPEAKER, PROVIDE POWER, SED

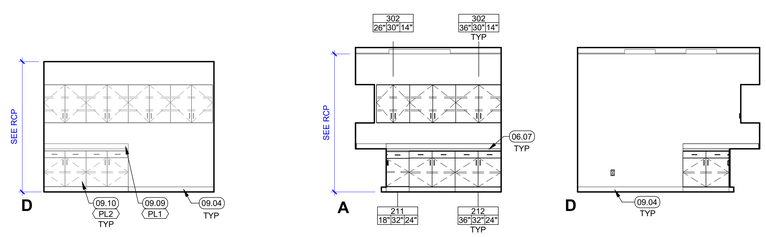


27 WELLNESS - 222
1/4" = 1'-0"



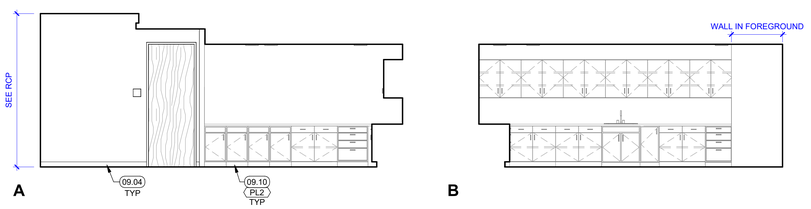
22 TRAINING ROOM - 207
1/4" = 1'-0"

23 BREAKROOM - 215
1/4" = 1'-0"

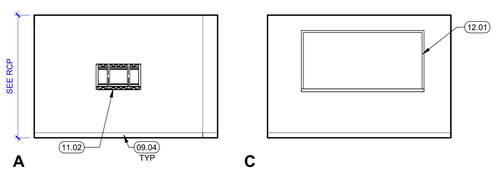


24 PRINT ALCOVE - 250
1/4" = 1'-0"

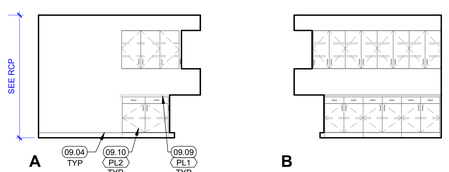
19 PRINT ROOM - 242
1/4" = 1'-0"



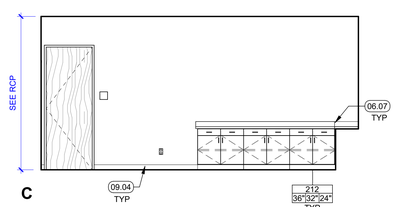
14 BREAKROOM - 225
1/4" = 1'-0"



30 CONFERENCE - 261
1/4" = 1'-0"



20 MAILROOM - 254
1/4" = 1'-0"



15 OPEN OFFICE - 258
1/4" = 1'-0"

GENERAL INTERIOR ELEVATION NOTES

1. REFER TO ID1.00 FOR FINISH SYMBOL LEGEND, GENERAL NOTES, & SCHEDULE.
2. REFER TO FF SERIES SHEETS FOR FURNITURE CODE DESCRIPTIONS & SPECIFICATIONS.
3. REFER TO Q SERIES SHEETS FOR EQUIPMENT, TOILET & LAVATORY ACCESSORY CODE DESCRIPTIONS & SPECIFICATIONS.
4. REFER TO SG SERIES SHEETS FOR SIGNAGE CODE DESCRIPTIONS & SPECIFICATIONS.
5. FOR ADA COMPLIANT MOUNTING HEIGHTS OF FURNITURE, EQUIPMENT, TOILET & LAVATORY ACCESSORIES REFER TO A9.03.
6. ALL CASEWORK @ HORIZONTAL SURFACES TO RECEIVE PL1, VERTICAL SURFACES TO RECEIVE PL2, UON.

INTERIOR ELEVATION KEYNOTES

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Delta	Date	Revisions	By

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HY Architects Project number: 6013

Facility
NEW MAIN OFFICE
1400 STANFORD RANCH, ROCKLIN CA 95765

Project
TENANT IMPROVEMENTS

Sheet Title
INTERIOR ELEVATIONS - SECOND FLOOR

Client Project Number: N/A

Scale: 1/4" = 1'-0"
Drawn By: Author
Checked By: HC
Issue Date: July 21, 2023
Revit Version: 2023

Sheet
A5.03
Sheet 2 of 200

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RCP LEGEND

- DEMO (E) SUSPENDED ACCOUSTICAL CEILING SYSTEM, TYP
- DEMO (E) GYPSUM BOARD CEILING, TYP
- DEMO (E) 2X4 RECESSED LIGHT FIXTURE, TYP SED
- DEMO (E) 2X2 RECESSED LIGHT FIXTURE, TYP SED
- RETURN GRILLE, TYP SMD
- EXHAUST DIFFUSER, TYP SMD
- SUPPLY DIFFUSER, TYP SMD
- (E) ELEMENT(S) TO BE DEMOLISHED, SEE DEMO KEYNOTES
- (E) SUSPENDED ACCOUSTICAL CEILING SYSTEM TO REMAIN, TYP
- (E) GYPSUM BOARD CEILING TO REMAIN, TYP
- (E) 2X4 RECESSED LIGHT FIXTURE TO REMAIN, TYP
- (E) 2X2 RECESSED LIGHT FIXTURE TO REMAIN, TYP
- (E) SURFACE RECESSED CAN FIXTURE TO REMAIN, TYP
- (E) RETURN GRILLE TO REMAIN, TYP
- (E) EXHAUST DIFFUSER TO REMAIN, TYP
- (E) SUPPLY DIFFUSER TO REMAIN, TYP
- (E) ILLUMINATED DIRECTIONAL EXIT SIGN TO REMAIN, TYP

GENERAL NOTES

1. NOTIFY ARCHITECT OF ANY IN THE FIELD DISCREPANCIES PRIOR TO INSTALLATION.
2. REFER TO I1.00 FOR FINISH SCHEDULE, SYMBOL LEGEND & GENERAL NOTES FOR CEILING FINISH & WINDOW TREATMENT TYPES PER LOCATION.
3. REFER TO Q, SG, S, M, P, E, SE, & F SERIES SHEETS FOR ADDITIONAL INFORMATION.



30 DEMO REFLECTED CELING PLAN - FIRST FLOOR
3/32" = 1'-0"

PCOE
GOLD IN EDUCATION

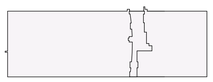
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KEY PLAN



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HY Architects Project number: 6013

Facility
NEW MAIN OFFICE
1400 STANFORD RANCH, ROCKLIN CA 95765

Project
TENANT IMPROVEMENTS

Sheet Title
DEMO REFLECTED CEILING PLAN - FIRST FLOOR

Client Project Number: N/A

Scale: As indicated
Drawn By: Author
Checked By: HC
Issue Date: July 21, 2023
Revit Version: 2023

Sheet
A6.01
Sheet 2 of 200

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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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RCP LEGEND

- DEMO (E) SUSPENDED ACCOUSTICAL CEILING SYSTEM, TYP
- DEMO (E) GYPSUM BOARD CEILING, TYP
- DEMO (E) 2X4 RECESSED LIGHT FIXTURE, TYP SED
- DEMO (E) 2X2 RECESSED LIGHT FIXTURE, TYP SED
- RETURN GRILLE, TYP SMD
- EXHAUST DIFFUSER, TYP SMD
- SUPPLY DIFFUSER, TYP SMD
- (E) ELEMENT(S) TO BE DEMOLISHED, SEE DEMO KEYNOTES
- (E) SUSPENDED ACCOUSTICAL CEILING SYSTEM TO REMAIN, TYP
- (E) GYPSUM BOARD CEILING TO REMAIN, TYP
- (E) 2X4 RECESSED LIGHT FIXTURE TO REMAIN, TYP
- (E) 2X2 RECESSED LIGHT FIXTURE TO REMAIN, TYP
- (E) SURFACE RECESSED CAN FIXTURE TO REMAIN, TYP
- (E) RETURN GRILLE TO REMAIN, TYP
- (E) EXHAUST DIFFUSER TO REMAIN, TYP
- (E) SUPPLY DIFFUSER TO REMAIN, TYP
- (E) ILLUMINATED DIRECTIONAL EXIT SIGN TO REMAIN, TYP

GENERAL NOTES

1. NOTIFY ARCHITECT OF ANY IN THE FIELD DISCREPANCIES PRIOR TO INSTALLATION.
2. REFER TO I1.00 FOR FINISH SCHEDULE, SYMBOL LEGEND & GENERAL NOTES FOR CEILING FINISH & WINDOW TREATMENT TYPES PER LOCATION.
3. REFER TO Q, SG, S, M, P, E, SE, & F SERIES SHEETS FOR ADDITIONAL INFORMATION.



30 DEMO REFLECTED CELING PLAN - SECOND FLOOR

3/32" = 1'-0"

PCOE GOLD IN EDUCATION

Revisions

Delta	Date	Revisions	By

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KEY PLAN



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Project

TENANT IMPROVEMENTS

Sheet Title

DEMO REFLECTED CEILING PLAN - SECOND FLOOR

Client Project Number: N/A

Scale:	As indicated	Sheet	A6.02
Drawn By:	Author		
Checked By:	HC		
Issue Date:	July 21, 2023		
Revit Version:	2023	Sheet	2 of 200

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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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RCP LEGEND

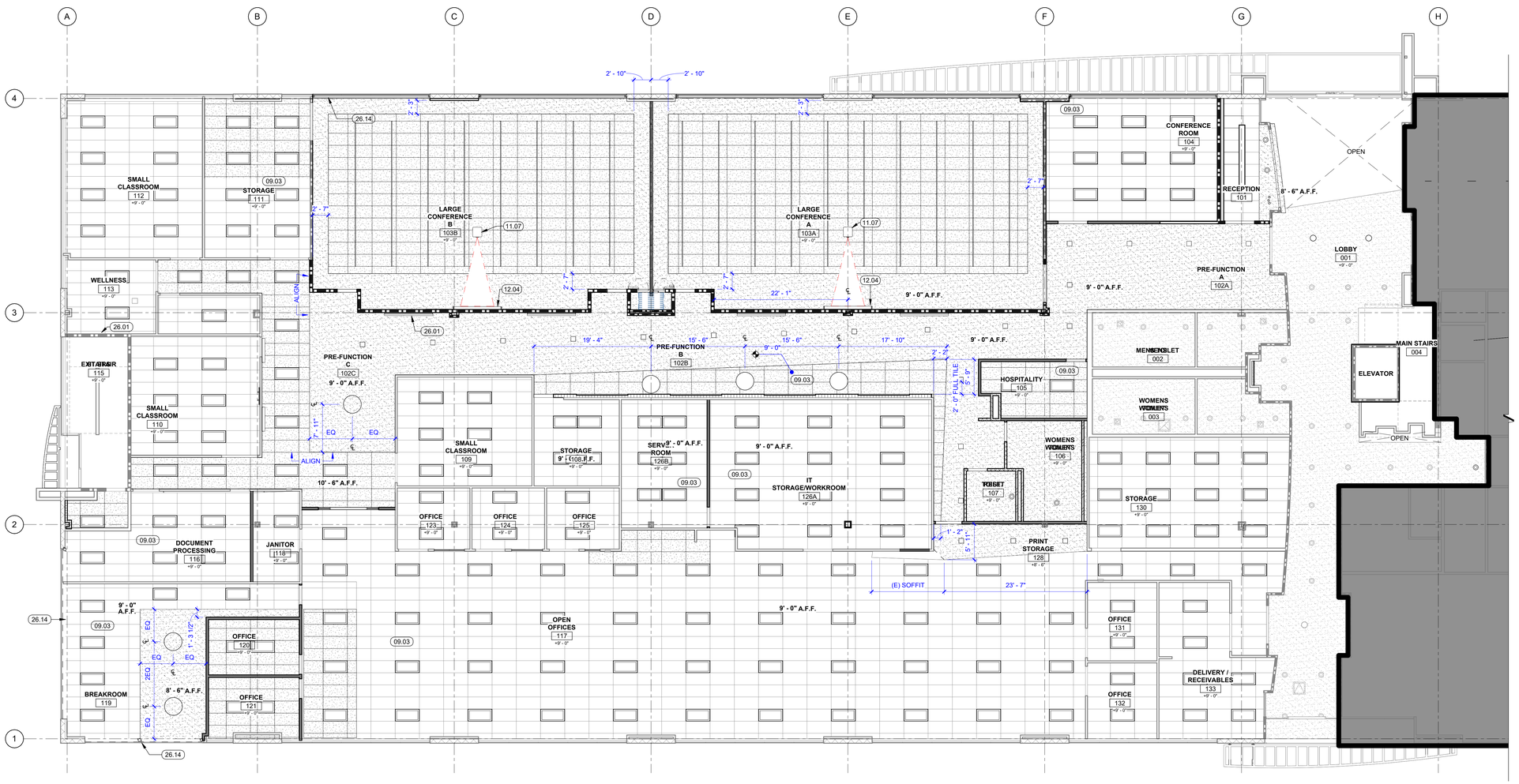
- RETURN GRILLE, TYP SMD
- SUPPLY DIFFUSER, TYP SMD
- (E) RETURN GRILLE TO REMAIN, TYP
- (E) SUPPLY DIFFUSER TO REMAIN, TYP.
- (E) SUSPENDED ACCOUSTICAL CEILING SYSTEM TO REMAIN, TYP
- (E) GYPSUM BOARD CEILING TO REMAIN, TYP
- (E) 2X4 RECESSED LIGHT FIXTURE TO REMAIN, TYP
- (E) RECESSED LIGHT FIXTURE TO REMAIN, TYP
- (E) WALL WASH FIXTURE, SED
- 24" x 48" SUSPENDED ACCOUSTICAL CEILING SYSTEM. SEE SHEETS A9.04
- GYPSUM BOARD CEILING SEE SHEETS A9.04 REFER TO FINISH SCHEDULE & GENERAL FINISH NOTES ON I1.00 FOR PAINT COLOR & SHEEN PER LOCATION
- 2X4 RECESSED LIGHT FIXTURE, TYP SED
- SQUARE DOWN LIGHTS, TYP.
- DECORATIVE PENDANT FIXTURE
- UNDER CAB TASK LIGHT, TYP. FOR PRINT STATIONS

KEYNOTES

09.03	ACOUSTIC CEILING TILE
11.07	CEILING MTD PROJECTOR SEE DETAIL A9.XX, PROVIDE POWER SED
12.04	PROJECTOR SCREEN, PROVIDE BACKING, SEE DETAILS
26.01	WALL MOUNTED LIGHT FIXTURE, PROVIDE POWER, SED
26.14	AUTOMATIC ROLLER SHADES, TYP.

GENERAL NOTES

1. NOTIFY ARCHITECT OF ANY IN THE FIELD DISCREPANCIES PRIOR TO INSTALLATION.
2. REFER TO I1.00 FOR FINISH SCHEDULE, SYMBOL LEGEND & GENERAL NOTES FOR CEILING FINISH & WINDOW TREATMENT TYPES PER LOCATION.
3. REFER TO Q, SG, S, M, P, E, SE, & F SERIES SHEETS FOR ADDITIONAL INFORMATION.



30 FIRST FLOOR OVERALL REMODEL REFLECTED CEILING PLANS - WEST
1/8" = 1'-0"

PCOE GOLD IN EDUCATION

Revisions

Delta	Date	Revisions	By

PLAN CHECK SET
CONSTRUCTION DOCUMENTS

AGENCY APPROVAL

KEY PLAN

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HY Architects Project number: 6013

Facility
NEW MAIN OFFICE
1400 STANFORD RANCH, ROCKLIN CA 95765

Project
TENANT IMPROVEMENTS

Sheet Title
REMODEL REFLECTED CEILING PLAN - FIRST FLOOR

Client Project Number: N/A

Scale:	As indicated
Drawn By:	Author
Checked By:	HC
Issue Date:	July 21, 2023
Revit Version:	2023

Sheet **A6.03**

Sheet 2 of 200

7/30/2023 9:27:40 PM C:\Users\CNguyen\Documents\6013 PCOE 1400 Stanford Ranch_Central_23 recover_cnguyenQLS64.rvt

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY

RCP LEGEND

- RETURN GRILLE, TYP SMD
- SUPPLY DIFFUSER, TYP SMD
- (E) RETURN GRILLE TO REMAIN, TYP
- (E) SUPPLY DIFFUSER TO REMAIN, TYP.
- (E) SUSPENDED ACCOUSTICAL CEILING SYSTEM TO REMAIN, TYP
- (E) GYPSUM BOARD CEILING TO REMAIN, TYP
- (E) 2X4 RECESSED LIGHT FIXTURE TO REMAIN, TYP
- (E) RECESSED LIGHT FIXTURE TO REMAIN, TYP
- (E) WALL WASH FIXTURE, SED
- 24" x 48" SUSPENDED ACCOUSTICAL CEILING SYSTEM. SEE SHEETS A9.04
- GYPSUM BOARD CEILING SEE SHEETS A9.04 REFER TO FINISH SCHEDULE & GENERAL FINISH NOTES ON I1.00 FOR PAINT COLOR & SHEEN PER LOCATION
- 2X4 RECESSED LIGHT FIXTURE, TYP SED
- SQUARE DOWN LIGHTS, TYP.
- DECORATIVE PENDANT FIXTURE
- UNDER CAB TASK LIGHT, TYP. FOR PRINT STATIONS

KEYNOTES

09.03	ACOUSTIC CEILING TILE
26.01	WALL MOUNTED LIGHT FIXTURE, PROVIDE POWER, SED
26.05	UNDER CAB TASK LIGHT, TYP. FOR PRINT STATIONS, PROVIDE POWER, SED.
26.06	SQUARE DOWN LIGHTS, PROVIDE POWER, SED.

GENERAL NOTES

1. NOTIFY ARCHITECT OF ANY IN THE FIELD DISCREPANCIES PRIOR TO INSTALLATION.
2. REFER TO I1.00 FOR FINISH SCHEDULE, SYMBOL LEGEND & GENERAL NOTES FOR CEILING FINISH & WINDOW TREATMENT TYPES PER LOCATION.
3. REFER TO Q, SG, S, M, P, E, SE, & F SERIES SHEETS FOR ADDITIONAL INFORMATION.



30 SECOND FLOOR OVERALL REMODEL REFLECTED CEILING PLAN - WEST
1/8" = 1'-0"

PCOE GOLD IN EDUCATION

Revisions

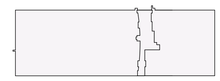
Delta	Date	Revisions	By

PLAN CHECK SET

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Project

TENANT IMPROVEMENTS

Sheet Title

REMODEL REFLECTED CEILING PLAN - SECOND FLOOR - WEST

Client Project Number: N/A

Scale:	As indicated	Sheet	A6.04
Drawn By:	Author		
Checked By:	HC		
Issue Date:	July 21, 2023		
Revit Version:	2023	Sheet	2 of 200

7/30/2023 9:27:44 PM C:\Users\CNguyen\Documents\6013 PCOE 1400 Stanford Ranch_Central_23 recover_cnguyenDL594.rvt

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY

RCP LEGEND

- RETURN GRILLE, TYP SMD
- SUPPLY DIFFUSER, TYP SMD
- (E) RETURN GRILLE TO REMAIN, TYP
- (E) SUPPLY DIFFUSER TO REMAIN, TYP.
- (E) SUSPENDED ACCOUSTICAL CEILING SYSTEM TO REMAIN, TYP
- (E) GYPSUM BOARD CEILING TO REMAIN, TYP
- (E) 2X4 RECESSED LIGHT FIXTURE TO REMAIN, TYP
- (E) RECESSED LIGHT FIXTURE TO REMAIN, TYP
- (E) WALL WASH FIXTURE, SED
- 24" x 48" SUSPENDED ACCOUSTICAL CEILING SYSTEM. SEE SHEETS A9.04
- GYPSUM BOARD CEILING SEE SHEETS A9.04 REFER TO FINISH SCHEDULE & GENERAL FINISH NOTES ON I1.00 FOR PAINT COLOR & SHEEN PER LOCATION
- 2X4 RECESSED LIGHT FIXTURE, TYP SED
- SQUARE DOWN LIGHTS, TYP.
- DECORATIVE PENDANT FIXTURE
- UNDER CAB TASK LIGHT, TYP. FOR PRINT STATIONS

KEYNOTES

09.03	ACOUSTIC CEILING TILE

GENERAL NOTES

1. NOTIFY ARCHITECT OF ANY IN THE FIELD DISCREPANCIES PRIOR TO INSTALLATION.
2. REFER TO I1.00 FOR FINISH SCHEDULE, SYMBOL LEGEND & GENERAL NOTES FOR CEILING FINISH & WINDOW TREATMENT TYPES PER LOCATION.
3. REFER TO Q, SG, S, M, P, E, SE, & F SERIES SHEETS FOR ADDITIONAL INFORMATION.



20 SECOND FLOOR PARTIAL REMODEL REFLECTED CEILING PLAN - EAST
3/32" = 1'-0"

PCOE GOLD IN EDUCATION

Revisions

Delta	Date	Revisions	By

PLAN CHECK SET
CONSTRUCTION DOCUMENTS

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Project
TENANT IMPROVEMENTS

Sheet Title
REMODEL REFLECTED CEILING PLAN - SECOND FLOOR - EAST

Client Project Number: N/A

Scale:	As indicated
Drawn By:	Author
Checked By:	HC
Issue Date:	July 21, 2023
Revit Version:	2023

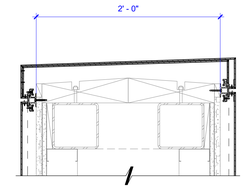
Sheet **A6.05**

Sheet 2 of 200

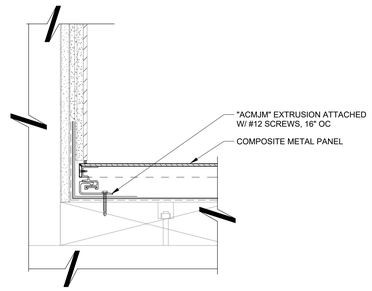
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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

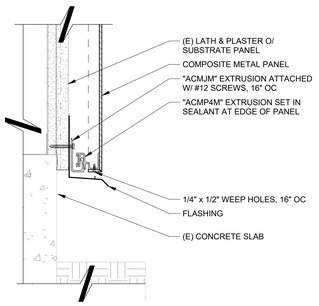
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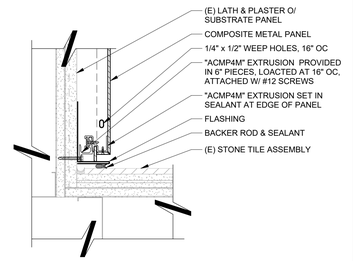
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1 1/2" = 1'-0"



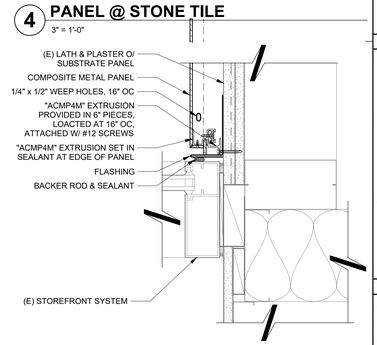
2 PANEL @ COPING & STONE TILE
3" = 1'-0"



3 PANEL @ PLASTER SILL
3" = 1'-0"



4 PANEL @ STONE TILE
3" = 1'-0"



5 PANEL @ CURTAIN WALL JAB
3" = 1'-0"

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HY Architects Project number: 6013

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Project
TENANT IMPROVEMENTS

Sheet Title
EXTERIOR DETAILS - WALL

Client Project Number: N/A

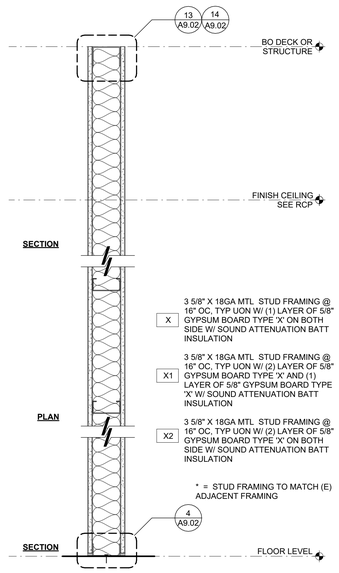
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Drawn By: Author
Checked By: HC
Issue Date: July 21, 2023
Revit Version: 2023

Sheet
A8.01
Sheet 2 of 200

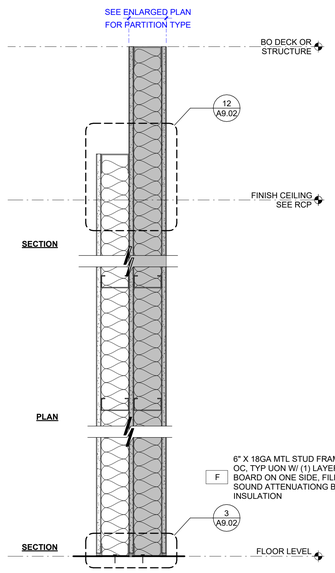
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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

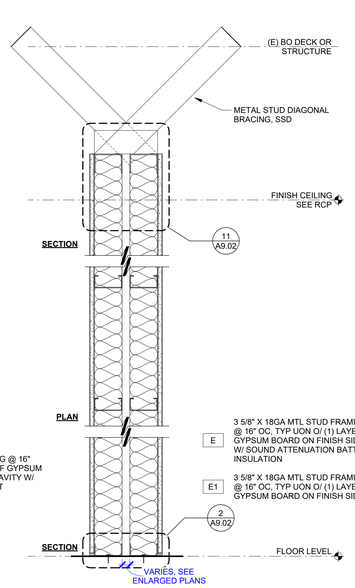
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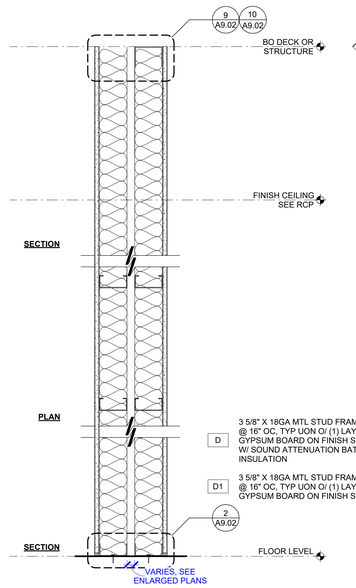
4 TYPE X - 1 HR FIRE RATED WALL (UL HW-D-0264)
1 1/2" = 1'-0"



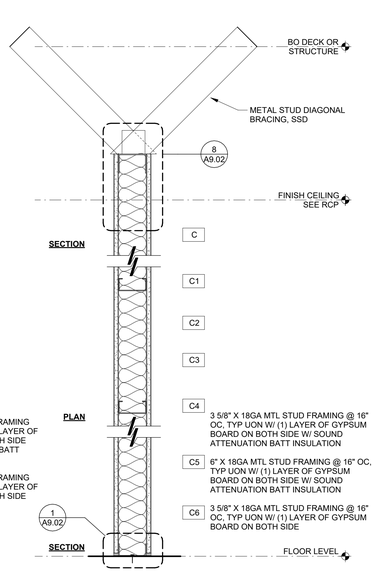
22 TYPE F - FURRING PARTITION
1 1/2" = 1'-0"



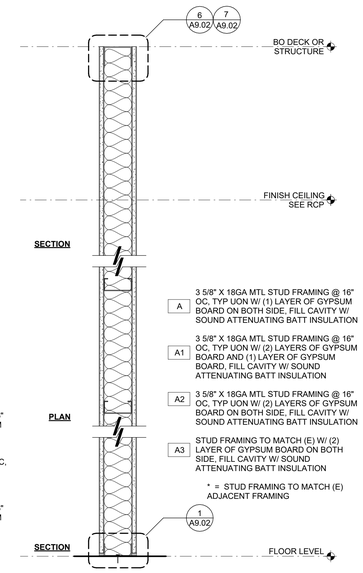
17 TYPE D - PARTIAL HEIGHT CAVITY PARTITION
1 1/2" = 1'-0"



12 TYPE C - FULL HIGHT CAVITY PARTITION
1 1/2" = 1'-0"



7 TYPE B - PARTIAL HEIGHT PARTITION
1 1/2" = 1'-0"



2 TYPE A - FULL HEIGHT PARTITION
1 1/2" = 1'-0"

9 TYPE Y - 1 HR FIRE RATED CAVITY WALL
1 1/2" = 1'-0"

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#	Revisions		
Delta	Date	Revisions	By

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HY Architects Project number: 6013

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NEW MAIN OFFICE
1400 STANFORD RANCH, ROCKLIN CA 95765

Project
TENANT IMPROVEMENTS

Sheet Title
INTERIOR PARTITION TYPES

Client Project Number: N/A

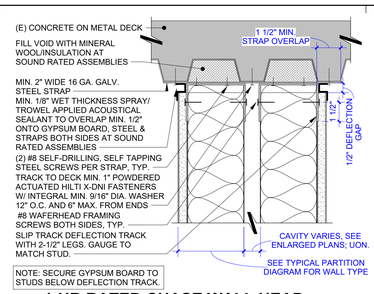
Scale: 1 1/2" = 1'-0"
Drawn By: CN
Checked By: KC
Issue Date: July 21, 2023
Revit Version: 2023

Sheet
A9.01
Sheet of 200

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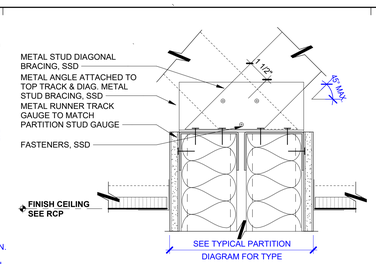
GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY



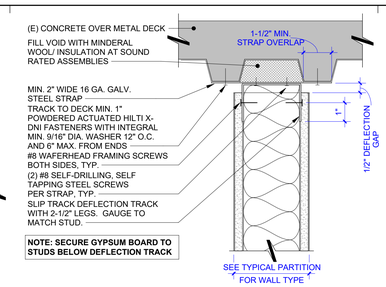
16 1-HR RATED CHASE WALL HEAD PARALLEL TO METAL DECK

3" = 1'-0"



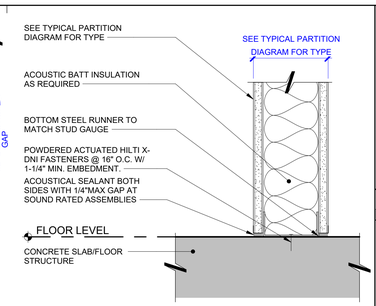
11 CHASE PARTITION ABOVE CEILING

3" = 1'-0"



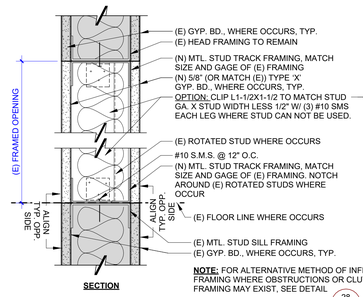
6 NON-RATED PARTITION HEAD PARALLEL TO FRAMING

3" = 1'-0"



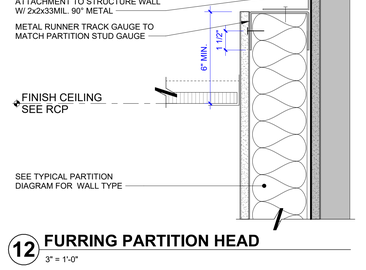
1 NON-RATED PARTITION BASE

3" = 1'-0"



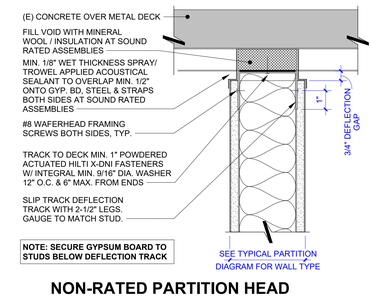
22 WALL INFILL DETAIL

3" = 1'-0"



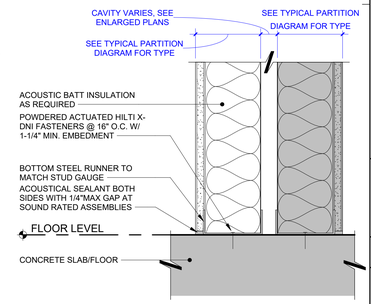
12 FURRING PARTITION HEAD

3" = 1'-0"



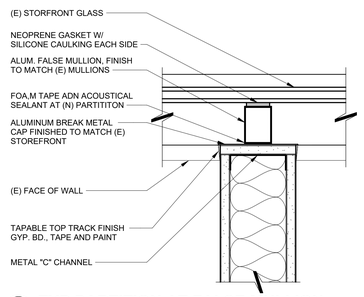
7 NON-RATED PARTITION HEAD PERPENDICULAR TO FRAMING

3" = 1'-0"



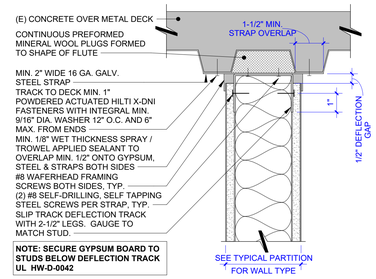
2 NON-RATED CHASE PARTITION BASE

3" = 1'-0"



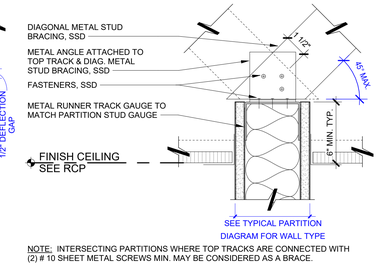
18 TYP PARTITION AT FALSE MULLION

3" = 1'-0"



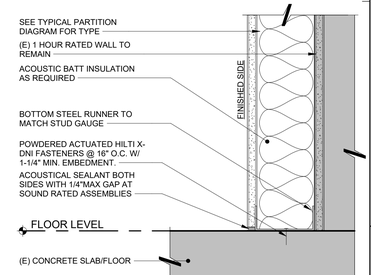
13 1 HR. FIRE BARRIER HEAD PARALLEL TO FRAMING

3" = 1'-0"



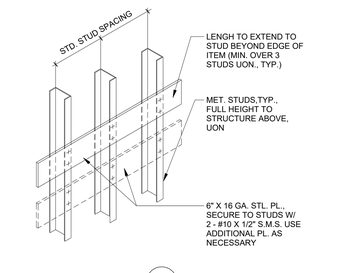
8 TYPICAL PARTITION ABOVE CEILING

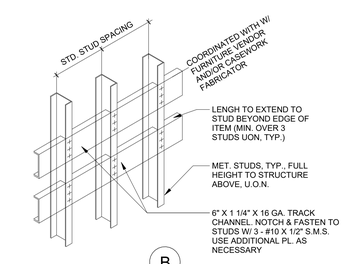
3" = 1'-0"



3 NON-RATED CHASE PARTITION

3" = 1'-0"

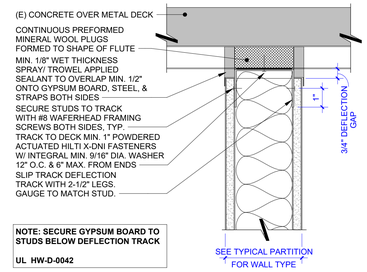




MOUNTING SCREWS: #10 SHEET METAL SCREWS

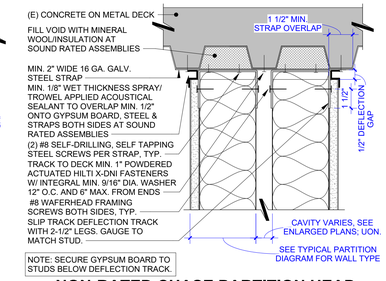
20 BACKING PLATE DETAIL

N.T.S.



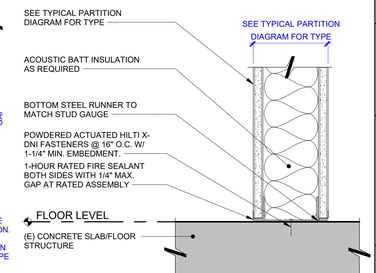
14 1 HR. FIRE BARRIER HEAD PERPENDICULAR TO FRAMING

3" = 1'-0"



9 NON-RATED CHASE PARTITION HEAD PARALLEL TO METAL DECK

3" = 1'-0"

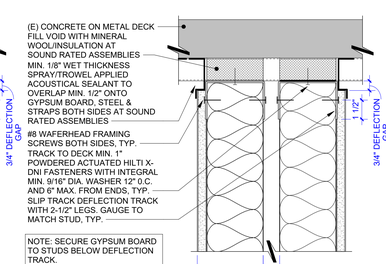


4 1-HR RATED WALL BASE

3" = 1'-0"

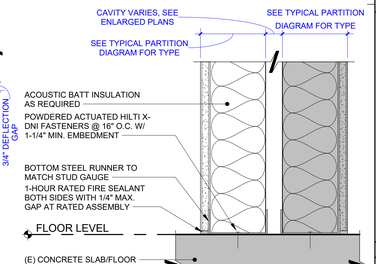
15 1-HR RATED CHASE WALL HEAD PERP. TO METAL DECK

3" = 1'-0"



10 NON-RATED CHASE PARTITION HEAD PERP. TO METAL DECK

3" = 1'-0"



5 1-HR RATED CHASE WALL BASE

3" = 1'-0"

PCOE GOLD IN EDUCATION

Revisions			
Delta	Date	Revisions	By

PLAN CHECK SET

CONSTRUCTION DOCUMENTS

AGENCY APPROVAL

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Project

TENANT IMPROVEMENTS

Sheet Title

INTERIOR DETAILS - PARTITIONS

Client Project Number: N/A

Scale:	As indicated
Drawn By:	CN
Checked By:	KC
Issue Date:	July 21, 2023
Revit Version:	2023

Sheet

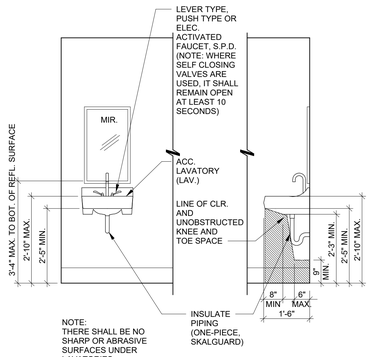
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Sheet of 200

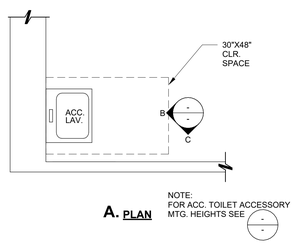
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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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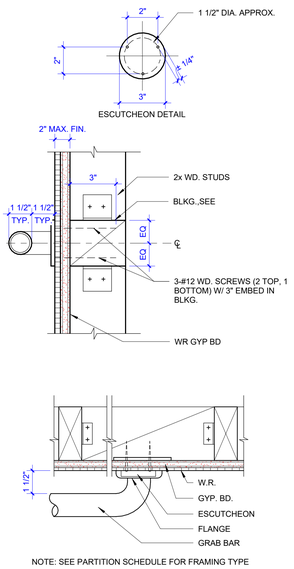


B. ELEVATION **C. ELEVATION**



A. PLAN

23 TYICAL ACCESSIBLE LAVATORY
1/2" = 1'-0"

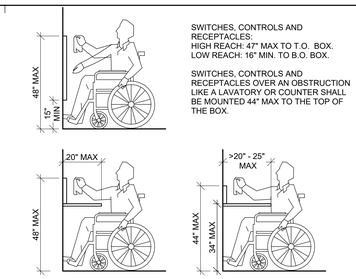


18 GRAB BAR SECTION
3" = 1'-0"

TYPICAL ACCESSIBLE MOUNTING HEIGHTS

DESCRIPTION	DIM.	ADULT (INCHES)	CHILD (INCHES)		DETAIL REFERENCE
			AGE 5-8	AGE 9-12	
TOILET CENTERING FROM WALL	A	17.5	15	15	25 / -
TOILET SEAT HEIGHT/DIMENSIONS TO TOP OF SEAT	B	17-19	15	15	25 / -
GRAB BAR HEIGHT (TOP OF GRIPPING SURFACE)	C	33 - 36	25	25	25 / -
TOILET PAPER DISPENSER IN FRONT OF TOILET TO ℄	D	7 MIN. - 9 MAX	7 MIN. - 9 MAX	7 MIN. - 9 MAX	25 / -
TOILET PAPER DISPENSER HEIGHT TO OUTLET	E	19 MIN.	17	17	ABOVE
NAPKIN DISPOSAL IN FRONT OF TOILET	F	12 MAX.	12 MAX.	12 MAX.	ABOVE
DISPENSER HEIGHT	G	39 MAX.*	39 MAX.*	39 MAX.*	ABOVE
MIRROR HEIGHT ABOVE LAVATORY/ SINK (TO EDGE OF REFLECTIVE SURFACE)	G	39 MAX.*	36 MAX.	36 MAX.	ABOVE
MIRROR HEIGHT NOT ABOVE LAVATORY/ SINK (TO EDGE OF REFLECTIVE SURFACE)	-	34 MAX.	34 MAX.	34 MAX.	ABOVE
FULL HEIGHT MIRROR (TO EDGE OF REFLECTIVE SURFACE)	J	15" MIN.	15" MIN.	15" MIN.	ABOVE
LAVATORY/SINK TOP HEIGHT	K	34 MAX.	31 MAX.	31 MAX.	10 / -
LAVATORY/SINK KNEE CLEARANCE	L	27 MIN. **	24 MIN.	24 MIN.	10 / -
PARTITION TOE CLEARANCE	-	9 MIN.	12 MIN.	12 MIN.	35 / -
DRINKING FOUNTAIN BUBBLER HEIGHT	-	36 MAX.	30 MAX.	30 MAX.	28 / -
DRINKING FOUNTAIN KNEE CLEARANCE	-	27 MIN.	24 MIN.	24 MIN.	28 / -
RAMP/STAIR HANDRAIL HEIGHT	-	34-38	27	27	N/A
FIRE EXTINGUISHER HEIGHT	G	39 MAX.*	N/A	N/A	N/A
COAT HOOK	P	47	N/A	N/A	N/A

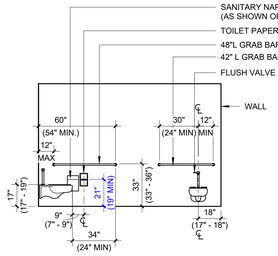
* 39" MAX TO OPERABLE PART OF UNIT.
** 29" AT FRONT APRON



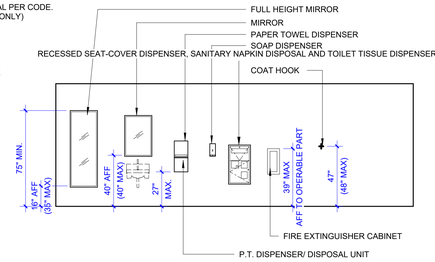
SWITCHES, CONTROLS AND RECEPTACLES:
HIGH REACH: 47" MAX TO T.O. BOX.
LOW REACH: 16" MIN. TO B.O. BOX.

SWITCHES, CONTROLS AND RECEPTACLES OVER AN OBSTRUCTION LIKE A LAVATORY OR COUNTER SHALL BE MOUNTED 44" MAX TO THE TOP OF THE BOX.

1 FORWARD APPROACH/REACH RANGES - ACCESSIBLE COUNTER
3/8" = 1'-0"



TOILET ROOM FIXTURES

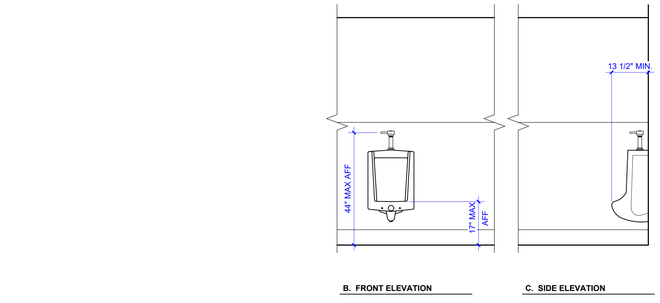


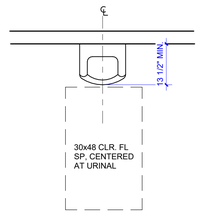
TOILET ROOM ACCESSORIES

NOTES

1. ALL FIXTURES AND ACCESSORIES ARE ACCESSIBLE UNLESS OTHERWISE NOTED OR IMENSIONED.
2. SEE INTERIOR ELEVATIONS FOR TOILET ACCESSORY LOCATIONS, U.O.N.
3. ALL ACCESSORIES ARE TO BE ACCESSIBLE WITH A MAXIMUM REACH HEIGHT OF 39" FROM FLOOR TO CENTER OF FUNCTIONAL POINT.
4. PROVIDE 2X WOOD BLOCKING (OVER 3 STUDS MIN.) FOR ALL TOILET ACCESSORIES.
5. DRAIN & H.W. PIPING TO BE INSULATED AREA BENEATH SINK TO BE FREE OF ALL SHARP OR ABRASIVE SURFACES.

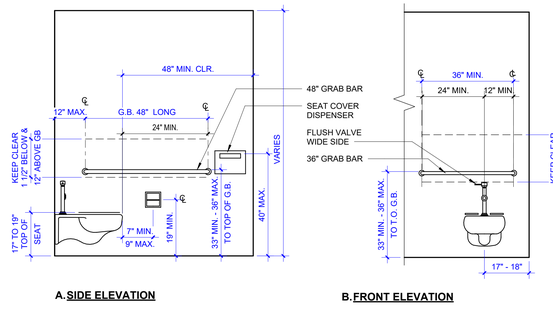
13 TOILET ROOM MOUNTING HEIGHTS
1/4" = 1'-0"





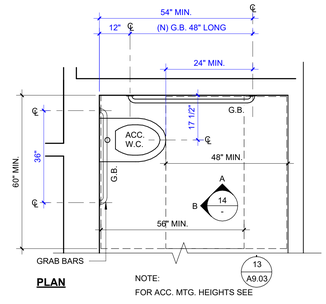
A. PLAN

24 ACCESSIBLE URINAL
1/2" = 1'-0"



A. SIDE ELEVATION

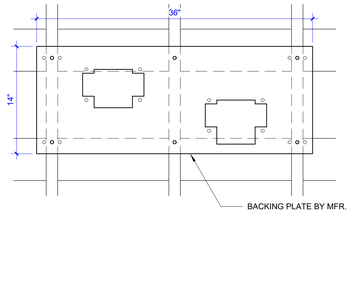
B. FRONT ELEVATION



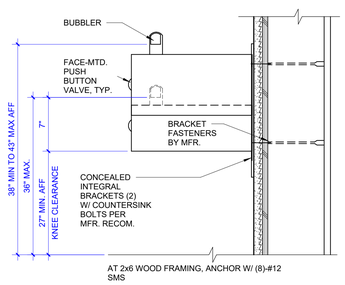
PLAN

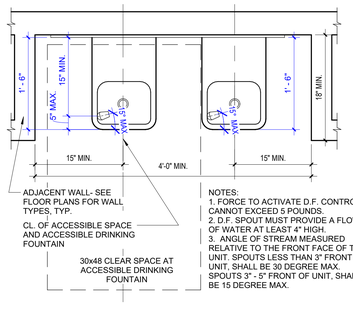
NOTE: FOR ACC. MTG. HEIGHTS SEE

14 ACCESSIBLE SINGLE-USER TOILET ROOM
1/2" = 1'-0"

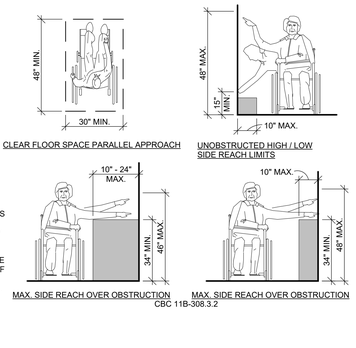


30 DRINKING FOUNTAIN ANCHORAGE & CLEARANCES
1 1/2" = 1'-0"

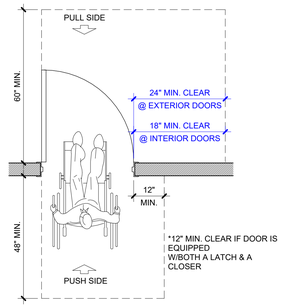




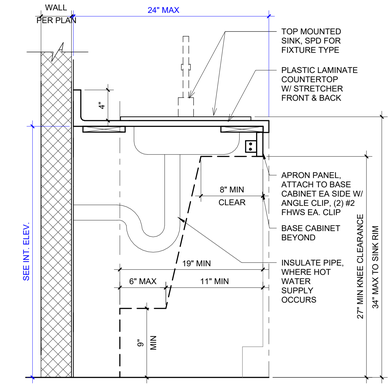
20 DRINKING FOUNTAIN CLEARANCES
1" = 1'-0"



15 ACCESSIBLE SIDE REACH RANGE
3/8" = 1'-0"



10 TYPICAL DOOR CLEAR SPACE
1/2" = 1'-0"



5 ACCESSIBLE SINK CASEWORK
1 1/2" = 1'-0"

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Project
TENANT IMPROVEMENTS

Sheet Title
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Checked By:	HC
Issue Date:	July 21, 2023
Revit Version:	2023

Sheet **A9.03**
Sheet of 200

Delta	Date	Revisions	By
#		Revisions	

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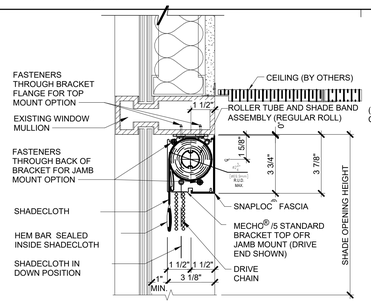
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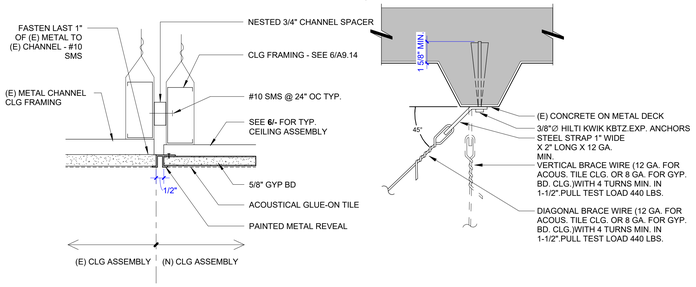
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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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21 MECO SHADE- MOTORIZED
3" = 1'-0"



16 (E) TO (N) GYP. CEILING JOINT
3" = 1'-0"

11 WIRE ATTACHMENT TO STRUCTURE ABOVE
3" = 1'-0"

CEILING NOTES FOR METAL SUSPENSION SYSTEM FOR LAY IN PANEL CEILINGS

PROVIDE METAL SUSPENSION SYSTEMS FOR LAY IN PANEL CEILINGS AS FOLLOW:

GENERAL- REQUIREMENTS FOR DESIGN AND INSTALLATION OF SUSPENDED ACOUSTICAL CEILING SYSTEMS ARE CONTAIN IN 2016 CBC SECTION 808 AND SHALL BE INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF ASTM C635 AND ASTM C636 , AND ASCE 7-10 SECTION 13.5.6.2.2.

1. CEILING NOTES : THE FOLLOWING NOTES WILL BE ACCEPTABLE IN PLANS AND SPECIFICATIONS FOR CEILING SYSTEMS WHOSE TOTAL WEIGHT, INCLUDING AIR CONDITIONING/HEATING GRILLS AND LIGHT FIXTURES, DOES NOT EXCEED TWO (2) PSF , HEAVIER SYSTEMS, AND THOSE SUPPORTING LATERAL LOADS FROM PARTITIONS, WILL REQUIRE SPECIAL DESIGN DETAILS.

1.1 #12 GAGE (MIN.) HANGER WIRES MAY BE USED FOR UP TO AND INCLUDING 4 FT. BY 4 FT. GRID SPACING AND SHALL BE ATTACHED TO MAIN RUNNERS.

1.2 PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN EIGHT (8) INCHES OF THE SUPPORT OR WITHIN ONE-FOURTH (1/4) OF THE LENGTH OF THE END TEE, WHICHEVER IS LEAST, FOR THE PERIMETER OF THE CEILING AREA. END CONNECTIONS FOR RUNNERS WHICH ARE DESIGNED AND DETAILED TO RESIST THE APPLIED VERTICAL AND HORIZONTAL FORCES MAY BE USED IN LIEU OF THE #12 GAGE HANGER WIRES, SUBJECT TO OSHPD REVIEW AND APPROVAL.

1.3 PROVIDE TRAPEZE OR OTHER SUPPLEMENTARY SUPPORT MEMBERS AT OBSTRUCTIONS TO TYPICAL HANGER SPACING. PROVIDE ADDITIONAL HANGERS, STRUTS OR BRACES AS REQUIRED AT ALL CEILING BREAKS, SOFFITS OR DISCONTINUOUS AREAS. HANGER WIRES THAT ARE MORE THAN 1 IN 6 OUT OF PLUMB ARE TO HAVE COUNTER-SLOPING WIRES.

1.4 CEILING GRID MEMBERS MAY BE ATTACHED TO NOT MORE THAN TWO (2) ADJACENT WALLS. CEILING GRID MEMBERS SHALL BE AT LEAST 3/4" INCH CLEAR OF OTHER WALLS. IF WALLS RUN DIAGONALLY TO CEILING GRID SYSTEM RUNNERS, ONE END OF MAIN AND CROSS RUNNERS SHOULD BE FREE, AND A MINIMUM OF 3/4" INCH CLEAR OF WALL.

1.5 AT THE PERIMETER OF THE CEILING AREA WHERE MAIN OR CROSS RUNNERS ARE NOT CONNECTED TO THE ADJACENT WALL, PROVIDE INTERCONNECTION BETWEEN THE RUNNERS AT THE FREE END TO PREVENT LATERAL SPREADING. A METAL STRUT OR A #16 GAGE WIRE WITH A POSITIVE MECHANICAL CONNECTION TO THE RUNNER MAY BE USED. WHERE THE PERPENDICULAR DISTANCE FROM THE WALL TO THE FIRST PARALLEL RUNNER IS 12 INCHES OR LESS, THIS INTERLOCK IS NOT REQUIRED.

1.6 PROVIDE BRACING ASSEMBLIES CONSISTING OF A COMPRESSION STRUT AND FOUR (4) #12 GAGE SPLAYED BRACING WIRES ORIENTED 90 DEGREES FROM EACH OTHER AT THE FOLLOWING SPACING:

1. FOR ESSENTIAL SERVICES BUILDINGS , PLACE BRACING ASSEMBLIES NOT MORE THAN 8 FT. BY 12 FT. ON CENTER.
2. PROVIDE BRACING ASSEMBLIES AT LOCATIONS NOT MORE THAN ONE HALF (1/2) THE SPACINGS GIVEN IN ITEMS 1 & 2 ABOVE, FROM EACH PERIMETER WALL AND AT THE EDGE OF VERTICAL CEILING OFFSETS.
   THE SLOPE OF THESE WIRES SHALL NOT EXCEED 45 DEGREES FROM THE PLANE OF THE CEILING AND SHALL BE TAUT. SPLICES IN BRACING WIRES ARE NOT TO BE PERMITTED WITHOUT SPECIAL OSHPD APPROVAL.
3. SUSPENDED ACOUSTICAL CEILING SYSTEMS WITH A CEILING AREA OF 144 SQUARE FEET OR LESS, AND FIRE RATED SUSPENDED ACOUSTICAL CEILING SYSTEMS WITH A CEILING AREA OF 96 SQUARE FEET OR LESS, SURROUNDED BY WALLS WHICH CONNECT DIRECTLY TO THE STRUCTURE ABOVE, DO NOT REQUIRE BRACING ASSEMBLIES WHEN ATTACHED TO TWO ADJACENT WALLS.

1.7 FASTEN HANGER WIRES WITH NOT LESS THAN THREE (3) TIGHT TURNS. FASTEN BRACING WIRES WITH FOUR (4) TIGHT TURNS. MAKE ALL TIGHT TURNS WITHIN A DISTANCE OF 1-1/2 INCHES. HANGER OR BRACING WIRE ANCHORS TO THE STRUCTURE SHOULD BE INSTALLED IN SUCH A MANNER THAT THE DIRECTION OF THE ANCHOR ALIGNS AS CLOSELY AS POSSIBLE WITH THE DIRECTION OF THE WIRE.
NOTE: WIRE TURNS MADE BY MACHINE WHERE BOTH STRANDS HAVE BEEN DEFORMED OR BENT IN WRAPPING CAN WAIVE THE 1-1/2 INCH REQUIREMENT, BUT THE NUMBER OF TURNS SHOULD BE MAINTAINED, AND BE AS TIGHT AS POSSIBLE.

1.8 SEPARATE ALL CEILING HANGER AND BRACING WIRES AT LEAST SIX (6) INCHES FROM ALL UNBRACED DUCTS, PIPES, CONDUIT, ETC.

1.9 WHEN DRILLED-IN CONCRETE ANCHORS OR SHOT-IN ANCHORS ARE USED IN REINFORCED CONCRETE FOR HANGER WIRES, 1 OUT OF 10 MUST BE FIELD TESTED FOR 200 LBS. IN TENSION. WHEN DRILLED-IN CONCRETE ANCHORS ARE USED FOR BRACING WIRES, 1 OUT OF 2 MUST BE FIELD TESTED FOR 440 LBS. IN TENSION. SHOT-IN ANCHORS IN CONCRETE ARE NOT PERMITTED FOR BRACING WIRES. IF ANY SHOT-IN OR DRILLED-IN ANCHOR FAILS, SEE 2016 CBC SECTION 191
NOTE: DRILLED-IN OR SHOT-IN ANCHORS REQUIRE SPECIAL OSHPD APPROVAL PRIOR TO USE IN PRESTRESSED CONCRETE.

1.10 ATTACH ALL LIGHT FIXTURES AND CEILING MOUNTED AIR TERMINALS, TO THE CEILING GRID RUNNERS TO RESIST A HORIZONTAL FORCE EQUAL TO THE WEIGHT OF THE FIXTURES. SCREWS OR APPROVED FASTENERS ARE REQ'D.

1.11 FLUSH OR RECESSED LIGHT FIXTURES AND AIR TERMINALS, WEIGHING LESS THAN 56 LBS., MAY BE SUPPORTED DIRECTLY ON THE RUNNERS OF A HEAVY DUTY GRID SYSTEM BUT, IN ADDITION, THEY MUST HAVE A MINIMUM OF TWO (2) #12 GAGE SLACK SAFETY WIRES ATTACHED TO THE FIXTURE AT DIAGONAL CORNERS AND ANCHORED TO THE STRUCTURE ABOVE. ALL 2 FT. X 4 FT. LIGHT FIXTURES MUST HAVE SLACK SAFETY WIRES AT EACH CORNER. ALL FLUSH OR RECESSED LIGHT FIXTURES AND AIR TERMINALS WEIGHING 56 LBS. OR MORE MUST BE INDEPENDENTLY SUPPORTED BY NOT LESS THAN FOUR (4) TAUT #12 GAGE WIRES, EACH ATTACHED TO THE FIXTURE AND TO THE STRUCTURE ABOVE REGARDLESS OF THE TYPE OF CEILING GRID SYSTEM USED. THE FOUR (4) TAUT #12 GAGE WIRES, INCLUDING THEIR ATTACHMENT TO THE STRUCTURE ABOVE, MUST BE CAPABLE OF SUPPORTING FOUR (4) TIMES THE WEIGHT OF THE UNIT.

1.12 ALL FIXTURES AND AIR TERMINALS SUPPORTED ON HEAVY DUTY GRID SYSTEMS MUST BE INDEPENDENTLY SUPPORTED BY NOT LESS THAN FOUR (4) TAUT #12 GAGE WIRES EACH ATTACHED TO THE FIXTURE OR TERMINAL, AND TO THE STRUCTURE ABOVE.

1.13 SUPPORT SURFACE MOUNTED LIGHT FIXTURES BY AT LEAST TWO POSITIVE DEVICES WHICH SURROUND THE CEILING RUNNER AND WHICH ARE EACH SUPPORTED FROM THE STRUCTURE ABOVE BY A #9 GAGE (MIN.) WIRE. SPRING CLIPS OR CLAMPS THAT CONNECT ONLY TO THE RUNNER ARE NOT ACCEPTABLE. PROVIDE ADDITIONAL SUPPORTS WHEN LIGHT FIXTURES ARE 8 FT. OR LONGER.

1.14 SUPPORT PENDANT MOUNTED LIGHT FIXTURES DIRECTLY FROM THE STRUCTURE ABOVE WITH HANGER WIRES OR CABLES PASSING THROUGH EACH PENDANT HANGER AND CAPABLE OF SUPPORTING FOUR (4) TIMES THE WEIGHT OF THE FIXTURE. A BRACING ASSEMBLY, IS REQUIRED WHERE THE PENDANT HANGER PENETRATES THE CEILING. SPECIAL DETAILS ARE REQUIRED TO ATTACH THE PENDANT HANGER TO THE BRACING ASSEMBLY TO TRANSMIT HORIZONTAL FORCES.

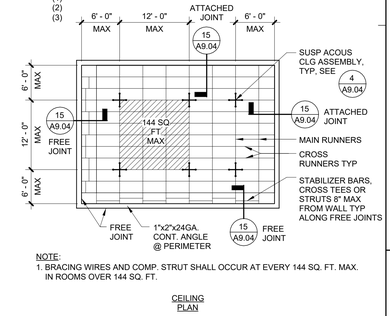
1.15 CLASSIFICATION OF CEILING GRID IS HEAVY DUTY. COMPONENTS SHALL COMPLY W/ THE FOLLOWING SCHEDULE:

MANUFACTURER	MAIN RUNNER	CROSS RUNNER	
ARMSTRONG	7301	7340	(1)
CHICAGO METALLIC	200	1204	(2)
DONN	DX26	DX424	(3)

FOOTNOTES: (#)
(1) FOR 2 X 2 GRID USE 7324
(2) FOR 2 X 2 GRID USE 1226
(3) FOR 2 X 2 GRID USE DX216

MANUFACTURER'S CATALOG NO. OF DETAIL FOR RUNNER SPLICE - PER MANUFACTURER'S RECOMMENDATION OSHPD ASCE 7-10 SECTION 13.5.6.2.2b

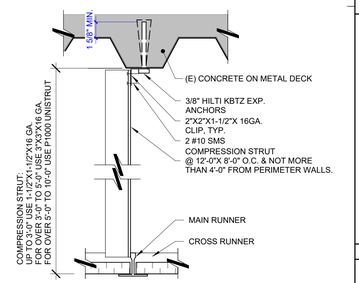
1.16 ALTERNATE MANUFACTURERS AND SYSTEMS MUST BE SUBMITTED
1.17 (NOT USED)
1.18 FOR CEILING AREAS EXCEEDING 2,500 SQ.
1.19 FOR PENETRATIONS IN LAY-IN
1.20 CHANGES IN CEILING PLAN ELEVATION SHALL BE PROVIDED WITH POSITIVE BRACING.
1.21 CABLE TRAYS AND ELECTRICAL CONDUITS SHALL BE SUPPORTED INDEPENDENTLY OF THE CEILING. 11A.1.3.9 OF ASCE 7-10 & 1705A.11.5.
1.22 SUSPENDED CEILINGS SHALL BE SUBJECT TO THE SPECIAL INSPECTION REQUIREMENTS OF 2016 CBC SECTIONS



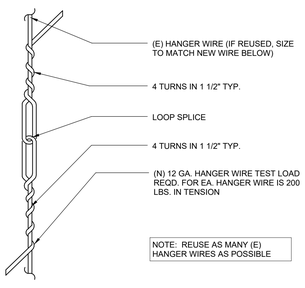
NOTE:
1. BRACING WIRES AND COMP. STRUT SHALL OCCUR AT EVERY 144 SQ. FT. MAX. IN ROOMS OVER 144 SQ. FT.

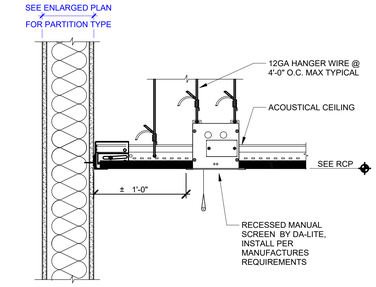
CEILING PLAN

4 SUSPENDED ACOUSTICAL CEILING BRACING SYSTEM
3" = 1'-0"

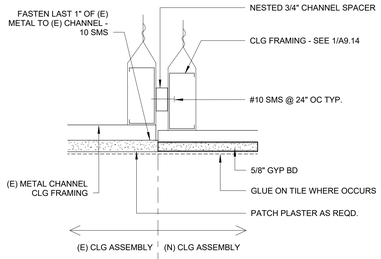


12 HANGAR WIRE SPLICE1
3" = 1'-0"

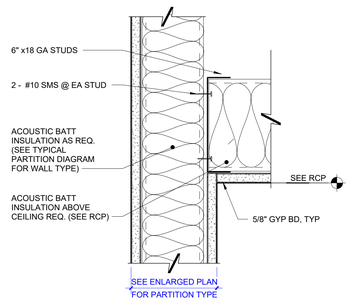


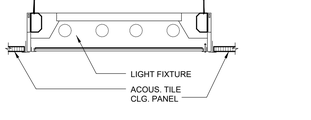


22 PROJECTION SCREEN
1 1/2" = 1'-0"

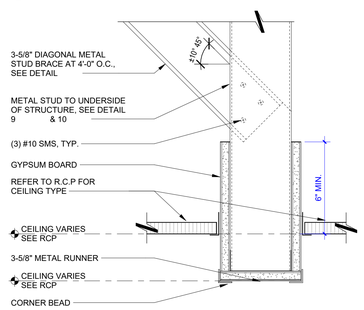


17 (E) TO (N) HARD CEILING JOINT
3" = 1'-0"

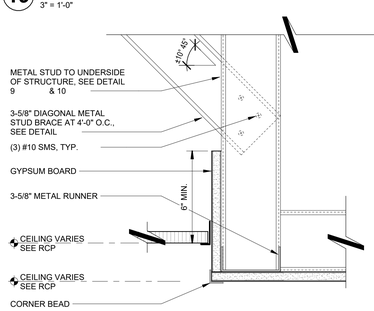




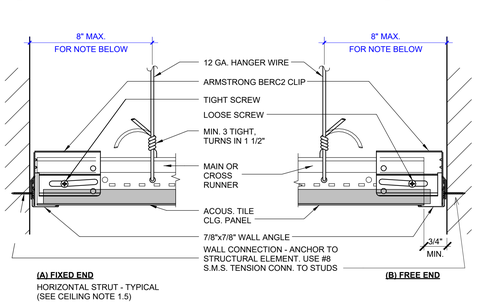
18 GYPSUM CEILING AT PERIMETER
3" = 1'-0"



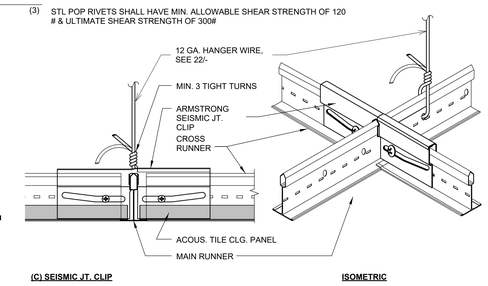
19 CASED OPENING HEAD
3" = 1'-0"



20 GYP. B.D. SOFFIT DETAIL
3" = 1'-0"



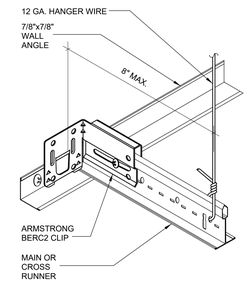
NOTES:
(1) 1/4 OF THE LENGTH OF THE END UNNER WHICHEVER IS LESS.
(2) NAILS @ END OF HORIZONTAL STRUTS ARE TO BE PLACED W NAIL HEAD TOWARD SPAN OR STRUT
(3) STL POP RIVETS SHALL HAVE MIN. ALLOWABLE SHEAR STRENGTH OF 120 # & ULTIMATE SHEAR STRENGTH OF 300#

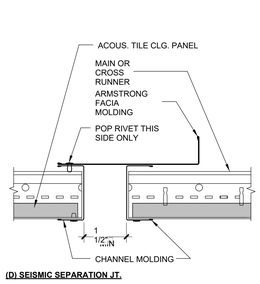


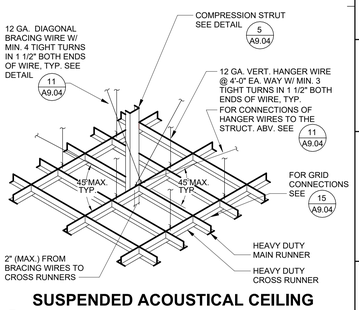
13 LIGHT FIXTURE
1 1/2" = 1'-0"

15 HANGAR WIRE CONNECTION TO GRID
3" = 1'-0"

8 ACOUSTICAL CEILING NOTES
12" = 1'-0"







SUSPENDED ACOUSTICAL CEILING BRACING SYSTEM

5 A9.04 COMPRESSION STRUT - ACOUSTICAL CEILING
SCALE: 3" = 1'-0"

PCOE GOLD IN EDUCATION

#	Revisions		
Delta	Date	Revisions	By

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CONSTRUCTION DOCUMENTS

AGENCY APPROVAL

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HY Architects Project number: 6013

Facility
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1400 STANFORD RANCH, ROCKLIN CA 95765

Project
TENANT IMPROVEMENTS

Sheet Title
INTERIOR DETAILS - CEILING

Client Project Number: N/A

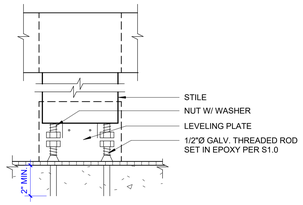
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Checked By: Checker
Issue Date: July 21, 2023
Revit Version: 2023

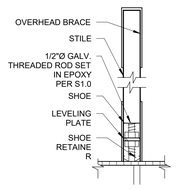
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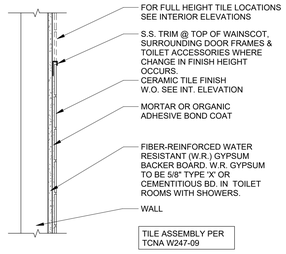
GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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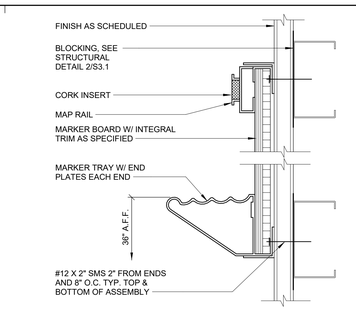


16 TOILET PARTITION ANCHORAGE
3" = 1'-0"

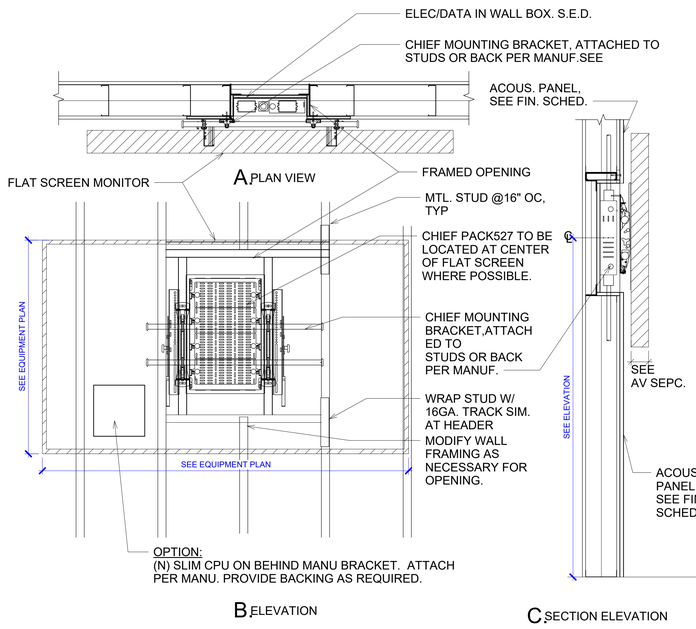


*SEE FINISH SCHEDULE FOR S.S. TRIM

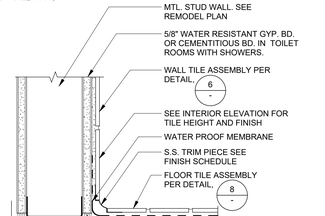
6 TILED WALL DETAIL
1 1/2" = 1'-0"



1 MARKER BOARD MOUNTING
6" = 1'-0"

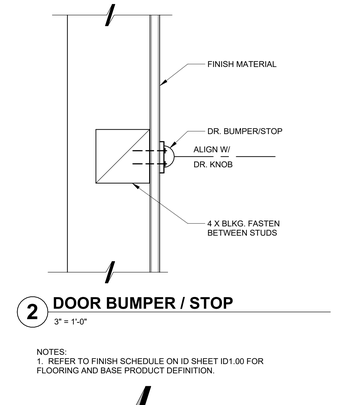


18 FLAT SCREEN BACKING
1" = 1'-0"

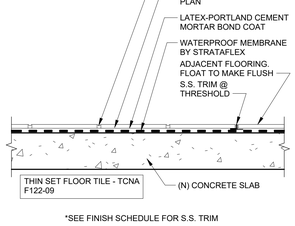


*NOTE:
1.SEE FINISH SCHEDULE FOR S.S. TRIM.
2. SEE DETAIL 7/A9.08.

7 FLOOR TO WALL TILE
3" = 1'-0"



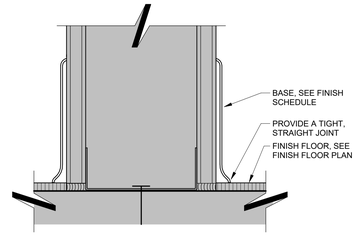
2 DOOR BUMPER / STOP
3" = 1'-0"



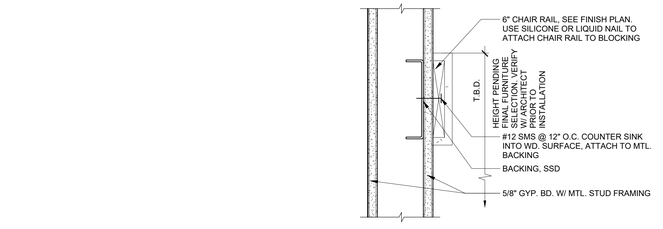
*SEE FINISH SCHEDULE FOR S.S. TRIM

8 TILE FLOOR
3" = 1'-0"

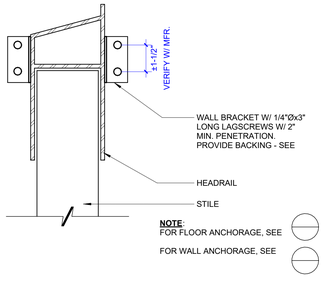
NOTES:
1. REFER TO FINISH SCHEDULE ON ID SHEET ID1.00 FOR FLOORING AND BASE PRODUCT DEFINITION.



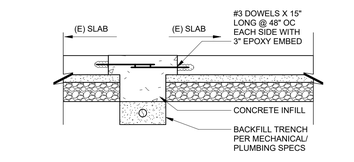
3 WALL BASE
6" = 1'-0"



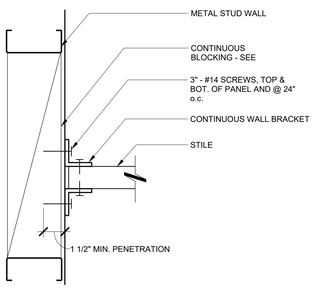
14 CHAIR RAIL
3" = 1'-0"



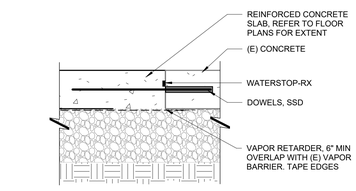
9 PARTITION HEAD RAIL
3" = 1'-0"



4 SLAB INFILL AT SAWCUT
3/4" = 1'-0"



10 PARTITION @ WALL
3" = 1'-0"



5 SLAB-ON-GRADE WATERPROOFING TO (E) CONCRETE
1 1/2" = 1'-0"

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Revisions			
Delta	Date	Revisions	By

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CONSTRUCTION DOCUMENTS

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HY Architects Project number: 6013

Facility
NEW MAIN OFFICE
1400 STANFORD RANCH, ROCKLIN CA 95765

Project
TENANT IMPROVEMENTS

Sheet Title
INTERIOR DETAILS - MISC

Client Project Number: N/A

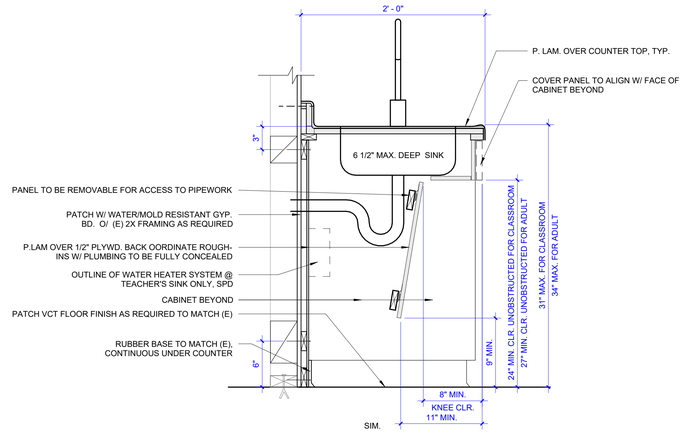
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Drawn By: JF/SH
Checked By: HC
Issue Date: July 21, 2023
Revit Version: 2023

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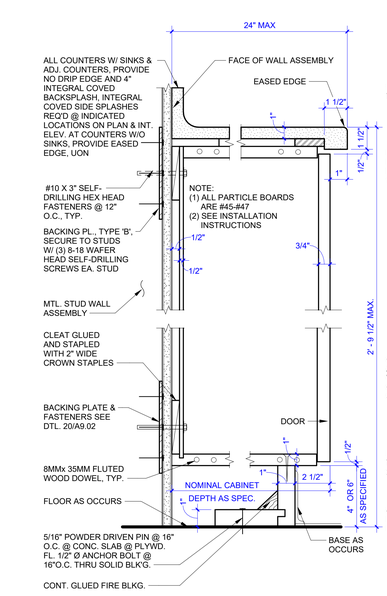
GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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12 OPEN BASE CABINET2

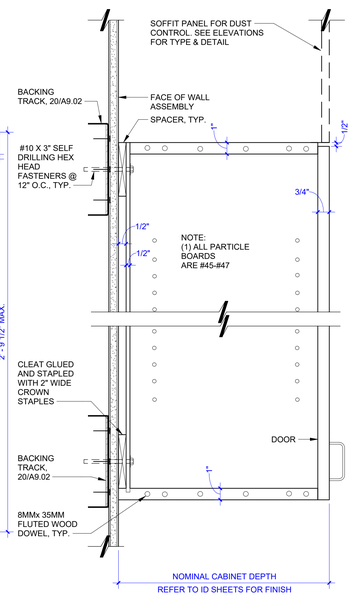
1 1/2" = 1'-0"



*FOR INTERIOR FINISHES REFER TO INTERIOR ELEVATIONS

14 LOWER CABINET DTL., TYP.

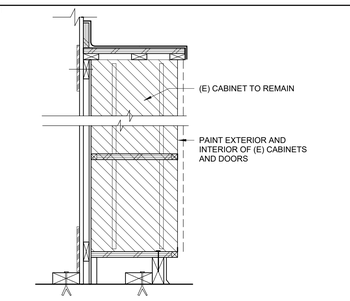
3" = 1'-0"



*NOTE: 1.5MM PVC EDGE BANDING @ DOORS
*FOR INTERIOR FINISHES REFER TO INTERIOR ELEVATIONS

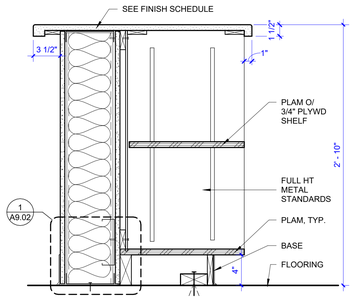
9 UPPER CABINET DTL., TYP.

3" = 1'-0"



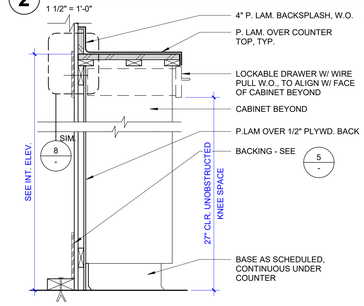
1 EXISTING BASE CABINET

1 1/2" = 1'-0"



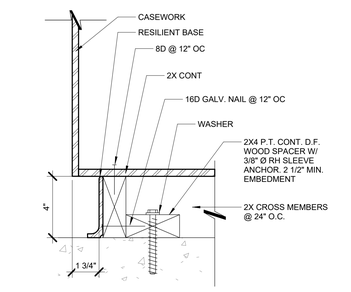
2 OPEN ADJ. SHELF CABINET

1 1/2" = 1'-0"



3 BREAKROOM ISLAND COUNTER & CABINET, TYP

1 1/2" = 1'-0"



4 CABNIET BASE ANCHOR

3" = 1'-0"

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Delta	Date	Revisions	By

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HY Architects Project number: 6013

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Project

TENANT IMPROVEMENTS

Sheet Title

CASEWORK DETAILS - WORKING

Client Project Number: N/A

Scale:	As indicated
Drawn By:	JF/SH
Checked By:	HC
Issue Date:	July 21, 2023
Revit Version:	2023

Sheet

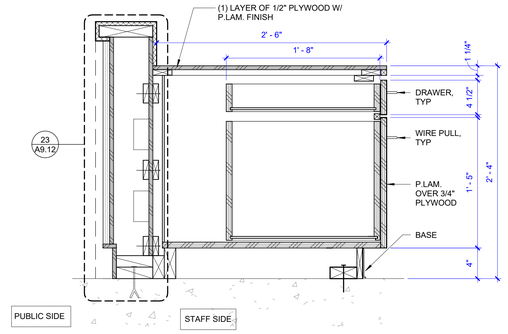
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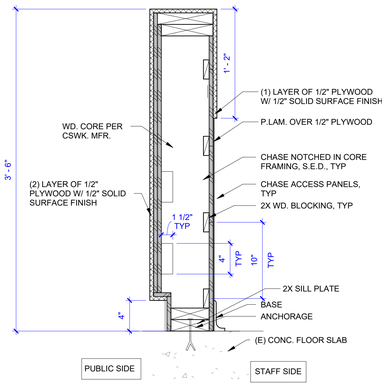
GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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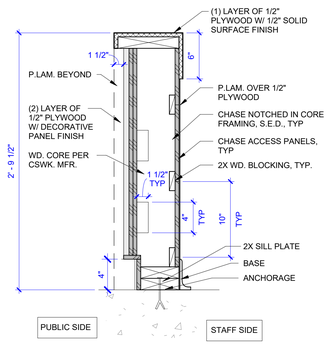
NOTES:
1. REFER TO INTERIOR ELEVATIONS & FINISH SCHEDULE FOR FINISHES

22 RECEPTION 100 - DESK DRAWER CABINET
1 1/2" = 1'-0"



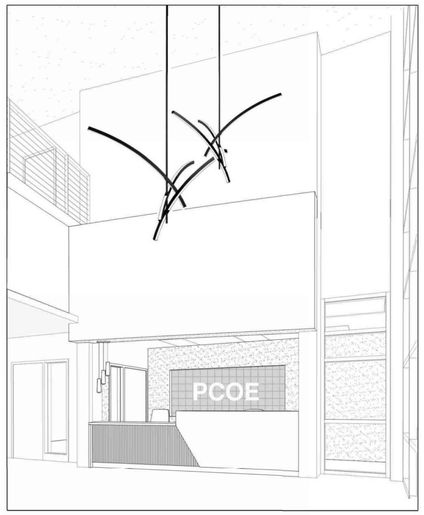
NOTES:
1. FOR FINISHES, REFER TO FINISH SCHEDULE & INTERIOR ELEVATIONS
2. ALL PLYWOOD TO BE FIRE RESISTIVE

23 RECEPTION 100
1 1/2" = 1'-0"

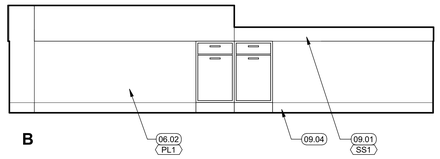


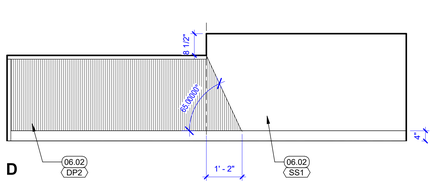
NOTES:
1. REFER TO INTERIOR ELEVATIONS & FINISH SCHEDULE FOR FINISHES

18 RECEPTION 100 - ACCESSIBLE COUNTER
1 1/2" = 1'-0"



3D PERSPECTIVE

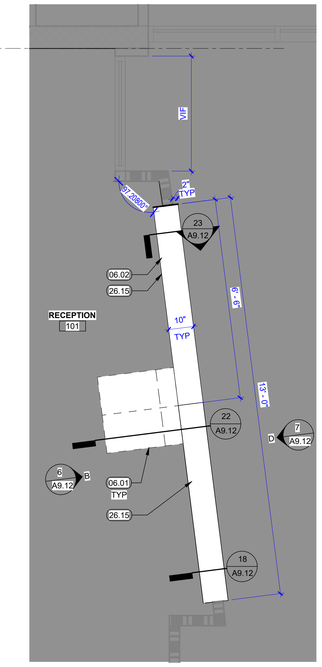




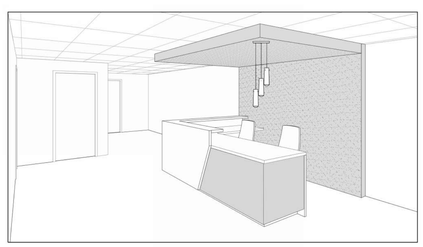
13 RECEPTION - 101
1/2" = 1'-0"

KEYNOTES

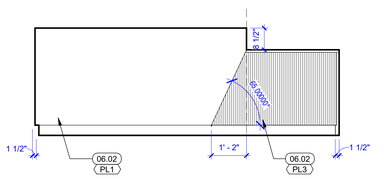
06.01	BUILT IN FILE STORAGE CABINET, SEE ELEVATIONS AND DETAILS
06.02	CUSTOM MILLWORK RECEPTION, SEE ELEVATIONS AND DETAILS
09.01	NEW COUNTER
09.04	FLOORING & WALL BASE. SEE FLOORING FINISH & I1.00 FOR GENERAL FINISH NOTES FOR TYPES PER LOCATION
26.15	PROVIDE POWER FOR ELECTRIC HEIGHT ADJUSTABLE DESK



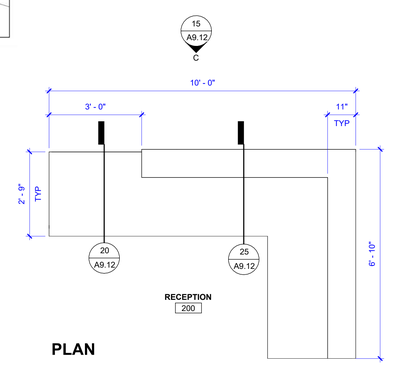
PLAN



3D PERSPECTIVE

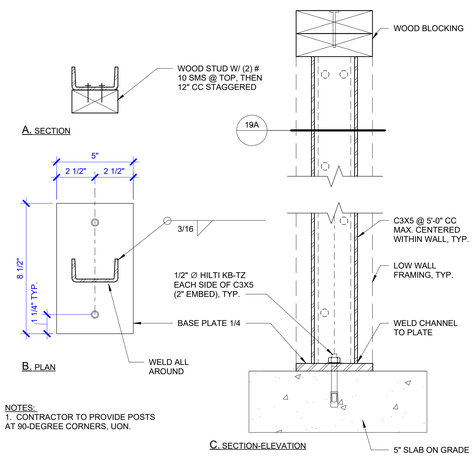


C



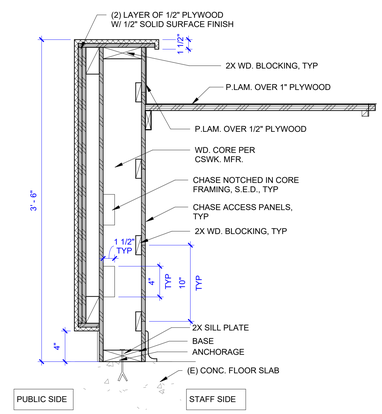
PLAN

14 RECEPTION - 200
1/2" = 1'-0"



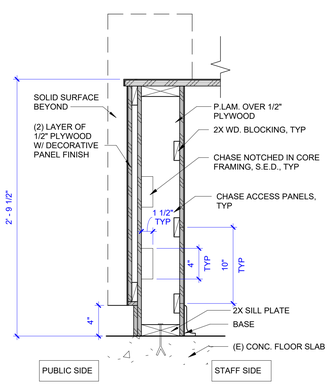
NOTES:
1. CONTRACTOR TO PROVIDE POSTS AT 90-DEGREE CORNERS, UON.

30 METAL POST @ LOW WALL
3" = 1'-0"



NOTES:
1. FOR FINISHES, REFER TO FINISH SCHEDULE & INTERIOR ELEVATIONS
2. ALL PLYWOOD TO BE FIRE RESISTIVE

25 RECEPTION 200
1 1/2" = 1'-0"



NOTES:
1. FOR FINISHES, REFER TO FINISH SCHEDULE & INTERIOR ELEVATIONS
2. ALL PLYWOOD TO BE FIRE RESISTIVE

20 RECEPTION 200 - ACCESSIBLE COUNTER
1 1/2" = 1'-0"

PCOE GOLD IN EDUCATION

Revisions

Delta	Date	Revisions	By

PLAN CHECK SET

CONSTRUCTION DOCUMENTS

AGENCY APPROVAL

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Facility

NEW MAIN OFFICE
1400 STANFORD RANCH, ROCKLIN CA 95765

Project

TENANT IMPROVEMENTS

Sheet Title

CASEWORK DETAILS - RECEPTION

Client Project Number: N/A

Scale: As indicated
Drawn By: JF/SH
Checked By: HC
Issue Date: July 21, 2023
Revit Version: 2023

Sheet

A9.12

Sheet of 200

C:\Users\CNguyen\Documents\6013 PCOE 1400 Stanford Ranch_Central_23 recover_cnguyenQL584.rvt
7/30/2023 9:28:06 PM

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY

FINISH SCHEDULE

Material: Hatch Icon	CODE	PRODUCT DESCRIPTION	MANUFACTURER	MODEL INFORMATION	COLOR & FINISH INFORMATION
ACCESSORIES					
	AWP1	ACOUSTICAL WALL PANEL, FIELD	ZUMN	DESIGN & ACOUSTICAL PATTERN PROVIDED BY SIGNATURE GRAPHICS SHANE DUNCAN 916.275.9307	COLOR NAME: MEDIUM GREY
	AWP2	ACOUSTICAL WALL PANEL, ACCENT	ZUMN	DESIGN & ACOUSTICAL PATTERN PROVIDED BY SIGNATURE GRAPHICS SHANE DUNCAN 916.275.9307	COLOR NAME: DARK BLUE
	MT1	METAL TRIM, FIELD	SCHLUTER	SERIES: SCHIENE EDGE TRIM HEIGHT: 5/16" PRODUCT CODE: E80EB INSTALL: PROFILE, TILE TO DOOR FRAME, TOP OF TILE	COLOR NAME: STAINLESS STEEL V2A FINISH: BRUSHED STAINLESS STEEL
	MT2	METAL TRIM, ACCENT	SCHLUTER	SERIES: DECO 1/4" WIDE REVEAL HEIGHT: 5/16" PRODUCT CODE: E80D INSTALL: PROFILE, ACCENT WALL TILE TO FIELD TILE	COLOR NAME: STAINLESS STEEL V2A FINISH: STAINLESS STEEL
	MT3	METAL TRIM, ACCENT	SCHLUTER	SERIES: QUADEC SQUARE EDGE TRIM HEIGHT: 5/16" PRODUCT CODE: Q80EB INSTALL: PROFILE, OUTSIDE CORNERS OF TILED SURFACES	COLOR NAME: STAINLESS STEEL V2A FINISH: BRUSHED STAINLESS STEEL
	MT4	METAL TRIM, ACCENT	SCHLUTER	SERIES: DILEX-XXX HEIGHT: 5/16" PRODUCT CODE: XXX INSTALL: HORIZONTAL-VERTICAL TILE INTERSECTION	
	TP1	TOILET PARTITION	ARBORITE	HIGH PRESSURE LAMINATE	COLOR NO.: P325 COLOR NAME: BRUSHED PEWTER FINISH NO.: MX FINISH NAME: METALUX
	WC1	WALL COVERING, FIELD	LEN-TEX	STYLE SERIES NO.: STYLE SERIES NAME: SIZE: THICKNESS: 53/54"	COLOR NAME: AGED RIFT WHITE OAK
	WT1	WINDOW TREATMENT		BRACKET NO.: BRACKET SERIES NAME: SHADE SERIES NO.: SHADE SERIES NAME: SHADE OPACITY: OPERATION: MANUAL OR MOTORIZED	FACIA COLOR NAME: SHADE COLOR NO.: SHADE COLOR NAME:
CASEWORK					
	DP1	DECORATIVE PANEL	TERRAMAI	COLLECTION: MODULAR PANELS SERIES NAME: 3D CUBE	COLOR NAME: ORCHARD WALNUT
	DP2	DECORATIVE PANEL	TERRAMAI	COLLECTION: MODULAR PANELS SERIES NAME: SQUARE SLATE	COLOR NAME: ORCHARD WALNUT
	PL1	PLASTIC LAMINATE, FIELD	WILSONART	HIGH PRESSURE LAMINATE	COLOR NO.: D427 COLOR NAME: LINEN FINISH NO.: 60 FINISH NAME: MATTE
	PL2	PLASTIC LAMINATE, ACCENT	WILSONART	HIGH PRESSURE LAMINATE	COLOR NO.: 17017 COLOR NAME: HARTLEY WALNUT FINISH NO.: 60 FINISH NAME: MATTE
	PL3	PLASTIC LAMINATE, ACCENT	WILSONART	HIGH PRESSURE LAMINATE	COLOR NO.: 7984 COLOR NAME: MANGALORE MANGO FINISH NO.: 60 FINISH NAME: MATTE
	SS1	SOLID SURFACE, FIELD	CORIAN	SERIES NO.: SHEET SHEET SIZE: AS NOTED IN FABRICATION DETAILS THICKNESS: AS NOTED IN FABRICATION DETAILS	COLOR NAME: WHITE ONYX
	SS2	SOLID SURFACE, ACCENT	LX HAUSYS	COLLECTION: HIMACS THICKNESS: 1/2"	COLOR NO.: Z003 COLOR NAME: STRATO WIND FINISH:
CEILING					
	ACT1	ACOUSTICAL CEILING TILE, FIELD	ARMSTRONG	GRID STYLE SERIES NO.: 7301 GRID STYLE SERIES: PRELUDE XL 15/16" EXPOSED TEE GRID TILE STYLE SERIES NO.: 1910 & 1913 TILE STYLE SERIES NAME: ULTIMA; SQUARE LAY-IN SIZE: 24" X 24" & 24" X 48" THICKNESS: 3/4"	COLOR NAME: WHITE
	ACT2	ACOUSTICAL CEILING TILE, HIGH ACOUSTICAL	ARMSTRONG	GRID STYLE SERIES NO.: 7301 GRID STYLE SERIES: PRELUDE XL 15/16" EXPOSED TEE GRID TILE STYLE SERIES NO.: 1940 & 1943 TILE STYLE SERIES NAME: ULTIMA HIGH NRC; SQUARE LAY-IN SIZE: 24" X 24" & 24" X 48"; REFER TO RCP FOR GRID SIZES THICKNESS: 3/4"	COLOR NAME: WHITE
	ACT3	ACOUSTICAL CEILING TILE, WASHABLE	ARMSTRONG	GRID STYLE SERIES NO.: 7301 GRID STYLE SERIES: PRELUDE XL 15/16" EXPOSED TEE GRID TILE STYLE SERIES NO.: 1935 & 1938 TILE STYLE SERIES NAME: ULTIMA HEALTHZONE; SQUARE LAY-IN SIZE: 24" X 24" & 24" X 48"; REFER TO RCP FOR GRID SIZES THICKNESS: 3/4"	COLOR NAME: WHITE
FLOORING					
	CPT1	CARPET, FIELD	MOHAWK	COLLECTION: NUTOPIA 2 STYLE SERIES NO.: GT446 STYLE SERIES NAME: URBAN FIELD II SIZE: 12" X 36" THICKNESS:	COLOR NO.: 989 COLOR NAME: PAVEMENT
	CPT2	CARPET, ACCENT	MOHAWK	COLLECTION: NUTOPIA 2 STYLE SERIES NO.: GT445 STYLE SERIES NAME: URBAN FRINGE II SIZE: 12" X 36" THICKNESS:	COLOR NO.: 959 COLOR NAME: METROPOLIS
	CPT3	CARPET, ACCENT	MOHAWK	COLLECTION: NUTOPIA 2 STYLE SERIES NO.: GT444 STYLE SERIES NAME: URBAN PASSAGE II SIZE: 12" X 36" THICKNESS:	COLOR NO.: 959 COLOR NAME: METROPOLIS
	CPT4	CARPET, ACCENT	MOHAWK	COLLECTION: NUTOPIA 2 STYLE SERIES NO.: GT445 STYLE SERIES NAME: URBAN FRINGE II SIZE: 12" X 36" THICKNESS:	COLOR NO.: 975 COLOR NAME: RIVERSIDE
	CPT5	CARPET, ACCENT	MOHAWK	COLLECTION: NUTOPIA 2 STYLE SERIES NO.: GT444 STYLE SERIES NAME: URBAN PASSAGE II SIZE: 12" X 36" THICKNESS:	COLOR NO.: 975 COLOR NAME: RIVERSIDE
	CPT6	CARPET, ACCENT	MOHAWK	COLLECTION: LICHEN STYLE SERIES NO.: GT388 STYLE SERIES NAME: MACRO BLOOM SIZE: 12" X 36" THICKNESS:	COLOR NO.: 975 COLOR NAME: FELT FINISH
	CPT7	CARPET, ACCENT	MOHAWK	COLLECTION: LICHEN STYLE SERIES NO.: GT397 STYLE SERIES NAME: MICRO BLOOM SIZE: 12" X 36" THICKNESS:	COLOR NO.: 975 COLOR NAME: FELT FINISH
	CPT8	CARPET, ACCENT	MOHAWK	COLLECTION: NUTOPIA 2 STYLE SERIES NO.: GT445 STYLE SERIES NAME: URBAN FRINGE II SIZE: 12" X 36" THICKNESS:	COLOR NO.: 956 COLOR NAME: GREEN SPACE
	CPT9	CARPET, ACCENT	MOHAWK	COLLECTION: NUTOPIA 2 STYLE SERIES NO.: GT444 STYLE SERIES NAME: URBAN PASSAGE II SIZE: 12" X 36" THICKNESS:	COLOR NO.: 956 COLOR NAME: GREEN SPACE
	CPT10	CARPET, ACCENT	MOHAWK	COLLECTION: LICHEN STYLE SERIES NO.: GT388 STYLE SERIES NAME: MACRO BLOOM SIZE: 12" X 36" THICKNESS:	COLOR NO.: 956 COLOR NAME: ISLAND MOSS
	CPT11	CARPET, ACCENT	MOHAWK	COLLECTION: LICHEN STYLE SERIES NO.: GT397 STYLE SERIES NAME: MICRO BLOOM SIZE: 12" X 36" THICKNESS:	COLOR NO.: 956 COLOR NAME: ISLAND MOSS
	CPT12	CARPET, ACCENT	MOHAWK	COLLECTION: NUTOPIA 2 STYLE SERIES NO.: GT445 STYLE SERIES NAME: URBAN FRINGE II SIZE: 12" X 36" THICKNESS:	COLOR NO.: 985 COLOR NAME: METROSCAPE
	CPT13	CARPET, ACCENT	MOHAWK	COLLECTION: NUTOPIA 2 STYLE SERIES NO.: GT444 STYLE SERIES NAME: URBAN PASSAGE II SIZE: 12" X 36" THICKNESS:	COLOR NO.: 985 COLOR NAME: METROSCAPE
	CPT14	CARPET, ACCENT	MOHAWK	COLLECTION: NUTOPIA 2 STYLE SERIES NO.: GT444 STYLE SERIES NAME: URBAN PASSAGE II SIZE: 12" X 36" THICKNESS:	COLOR NO.: 945 COLOR NAME: SKYWAY
	CPT15	CARPET, ACCENT	MOHAWK	COLLECTION: NUTOPIA 2 STYLE SERIES NO.: GT445 STYLE SERIES NAME: URBAN FRINGE II SIZE: 12" X 36" THICKNESS:	COLOR NO.: 945 COLOR NAME: SKYWAY
	CPT16	CARPET, ACCENT	MOHAWK	COLLECTION: LICHEN STYLE SERIES NO.: GT397 STYLE SERIES NAME: MICRO BLOOM SIZE: 12" X 36" THICKNESS:	COLOR NO.: 945 COLOR NAME: SILVA

FINISH SCHEDULE

Material: Hatch Icon	CODE	PRODUCT DESCRIPTION	MANUFACTURER	MODEL INFORMATION	COLOR & FINISH INFORMATION
	CPT17	CARPET, ACCENT	MOHAWK	COLLECTION: LICHEN STYLE SERIES NO.: GT388 STYLE SERIES NAME: MACRO BLOOM SIZE: 12" X 36" THICKNESS:	COLOR NO.: 945 COLOR NAME: SILVA
	RB1	BASE, 4" TOP SET RUBBER	TARKETT	BASEWORKS THERMOSET RUBBER WALL BASE COVED TOE PROFILE 120' COILED LENGTHS HAND WRAP INSIDE & OUTSIDE CORNERS	COLOR NO: 63 COLOR NAME: BURNT UMBER
	RB2	BASE, 4" TOP SET RUBBER	TARKETT	BASEWORKS THERMOSET RUBBER WALL BASE COVED TOE PROFILE 120' COILED LENGTHS HAND WRAP INSIDE & OUTSIDE CORNERS	COLOR NO: TG6 COLOR NAME: MINK WG
	RT1	RESILIENT TILE, FIELD	MOHAWK	COLLECTION: LARGE & LOCAL STYLE SERIES NO.: C0128 STYLE SERIES NAME: LARGE & LOCAL WOOD SIZE: 9.25" X 59" THICKNESS:	COLOR NO.: 978 COLOR NAME: WOODY
	RT2	RESILIENT TILE, ACCENT	MOHAWK	COLLECTION: LIVING LOCAL STYLE SERIES NO.: C0178 STYLE SERIES NAME: OPTIC HUES SIZE: 12" X 24" THICKNESS:	COLOR NO.: 820 COLOR NAME: NUANCE
	SDT1	STATIC DISSIPATIVE TILE, FIELD	ARMSTRONG	COLLECTION: EXCELON SDT STYLE SERIES NO.: STYLE SERIES NAME: SIZE: 12" X 12" THICKNESS: 1/8"	COLOR NO.: 51957 COLOR NAME: RIDGE
	TS1	TRANSITION STRIP, CARPET TO RESILIENT	JOHNSONITE	SERIES NO.: SERIES NAME:	COLOR NO.: COLOR NAME:
	TS2	TRANSITION STRIP, TILE TO CARPET	SCHLUTER		
	VCT1	VINYL COMPOSITE TILE, FIELD	ARMSTRONG	COLLECTION: PREMIUM EXCELON RAFFIA STREAM STYLE SERIES NO.: TBD STYLE SERIES NAME: TBD SIZE: 12" X 24" THICKNESS: 0.125"	COLOR NO.: 55901 COLOR NAME: RAIN
	WM1	WALK-OFF MAT, FIELD	PATCRAFT	COLLECTION: WALK FORWARD STYLE SERIES NO.: 10535 STYLE SERIES NAME: CONNECTING SIZE: 24" X 24" THICKNESS:	COLOR NO.: 00560 COLOR NAME: SAUNTER
PAINT					
	PT1	PAINT, FIELD	SHERWIN-WILLIAMS	REFER TO SPECIFICATIONS FOR PAINT SYSTEMS	COLOR NO.: 7757 COLOR NAME: HIGH REFLECTIVE WHITE
	PT2	PAINT, ACCENT	SHERWIN-WILLIAMS	REFER TO SPECIFICATIONS FOR PAINT SYSTEMS	COLOR NO.: 6479 COLOR NAME: DRIZZLE
	PT3	PAINT, ACCENT	SHERWIN-WILLIAMS	REFER TO SPECIFICATIONS FOR PAINT SYSTEMS	COLOR NO.: 6003 COLOR NAME: PROPER GRAY
	PT4	PAINT, ACCENT	SHERWIN-WILLIAMS	REFER TO SPECIFICATIONS FOR PAINT SYSTEMS	COLOR NO.: 6431 COLOR NAME: LEAPFROG
	PT5	PAINT, ACCENT	SHERWIN-WILLIAMS	REFER TO SPECIFICATIONS FOR PAINT SYSTEMS	COLOR NO.: 6516 COLOR NAME: DOWN POUR
TILE					
	TF1	TILE, FLOOR, FIELD	TILE MANUFACTURER: DALTILE GROUT MANUFACTURER: MAPEI	TILE COLLECTION: ARTICULO TILE STYLE SERIES NO.: TILE STYLE SERIES NAME: TILE SIZE: 12" X 24" TILE THICKNESS: 5/16" EPOXY GROUT MODEL: KERAPOXY CQ	TILE COLOR NO.: AR10 TILE COLOR NAME: HEADLINE GREY RECTANGLE TILE FINISH: MATTE GROUT COLOR NO.: GROUT COLOR NAME:
	TW1	TILE, WALL, FIELD	TILE MANUFACTURER: DALTILE GROUT MANUFACTURER: MAPEI	COLLECTION: IMAGICA SIZE: 24" X 24" THICKNESS: 5/16" EPOXY GROUT MODEL: KERAPOXY CQ	TILE COLOR NO.: IG95 TILE COLOR NAME: VISION TILE FINISH: MATTE GROUT COLOR NO.: GROUT COLOR NAME:
	TW2	TILE, WALL, ACCENT	TILE MANUFACTURER: AMERICAN OLEAN GROUT MANUFACTURER: MAPEI	COLLECTION: COLOR APPEAL STYLE SERIES NO.: STYLE SERIES NAME: SIZE: 12" X 18" SHEET THICKNESS: 5/16" EPOXY GROUT MODEL: KERAPOXY CQ	TILE COLOR NO.: C130 TILE COLOR NAME: BLUE MOON TILE FINISH: GLASS RANDOM INTERLOCKING MOSAIC GROUT COLOR NO.: GROUT COLOR NAME:
	TW3	TILE, WALL, ACCENT	TILE MANUFACTURER: AMERICAN OLEAN GROUT MANUFACTURER: MAPEI	COLLECTION: COLOR APPEAL STYLE SERIES NO.: STYLE SERIES NAME: SIZE: 12" X 18" SHEET THICKNESS: 5/16" EPOXY GROUT MODEL: KERAPOXY CQ	TILE COLOR NO.: C134 TILE COLOR NAME: SILVER SPRING TILE FINISH: GLASS RANDOM INTERLOCKING MOSAIC GROUT COLOR NO.: GROUT COLOR NAME:

FINISH SYMBOL LEGEND

- (E) (N) — EXTENT OF EXISTING (E) & NEW (N) FLOORING
- XXX — MATERIAL FINISH
- WALL PROTECTION (WP)
- P — PAINT FINISH
- RS — FLOORING FINISH
- FLOORING / INSTALLATION — DIRECTION OF FLOORING INSTALLATION. REFER TO FINISH SCHEDULE & GENERAL FINISH NOTES FOR ALL OTHER INSTALLATIONS.
- FLOORING / INSTALLATION — QUARTER TURN FLOORING INSTALLATION
- TYPE / W | H | D / COMMENTS — CASEWORK TYPE: REFER TO WI NORTH AMERICAN ARCHITECTURAL WOODWORK & KAISER CASEWORK STANDARDS; CASEWORK DIMENSIONS; CUSTIMIZATIONS & SPECIALTY HARDWARE COMMENTS

GENERAL FINISH NOTES

PROJECT REQUIREMENTS

1.1 REFER TO NEW/ REMODEL PLANS, INTERIOR ELEVATIONS, AND SPECIFICATIONS FOR FINISH INFORMATION AND ADDITIONAL INFORMATION ON SUBSTRATE PREP WORK & REQUIRED TESTING PRIOR TO FINISHES INSTALLATION.

1.2 NOTIFY ARCHITECT OF ANY IN THE FIELD DISCREPANCIES PRIOR TO FINISHES INSTALLATION.

1.3 GENERAL CONTRACTOR & SUB-CONTRACTORS TO VERIFY LEAD TIMES ON ALL PRODUCTS IMMEDIATELY UPON PROJECT AWARDMENT. SOME PRODUCTS REQUIRE 6-12 WEEKS LEAD TIME AND SUBSTITUTIONS ARE NOT ALLOWED, UON. ALLOW FOR MULTIPLE ROUNDS OF SUBMITTAL REVIEWS WITHIN THE PROJECT SCHEDULE.

1.4 REFER TO SPECIFICATIONS FOR SUBMITTAL REQUIREMENTS. REFER TO BELOW FOR ADDITIONAL PROJECT SPECIFIC REQUIREMENTS.

1.5 PROVIDE COMPLETE FLOORING SUBMITTAL IN 1 PACKAGE: FLOORING, SLAB PREP AND ADHESIVE PRODUCT DATA AND SAFETY DATA SHEETS, FLOORING SEAM DIAGRAM, AND (3) PHYSICAL SAMPLES FOR EACH PRODUCT IN THE SPECIFIED COLOR AND FINISH.

1.6 PROVIDE COMPLETE WALL PROTECTION SUBMITTAL IN 1 PACKAGE: WALL PROTECTION, ADHESIVE, AND ATTACHMENT PRODUCT DATA AND SAFETY DATA SHEETS, SHOP DRAWINGS INDICATING TYPES PER LOCATION, FABRICATION DETAILS, AND (3) PHYSICAL SAMPLES FOR EACH PRODUCT IN THE SPECIFIED COLOR AND FINISH.

1.7 PROVIDE COMPLETE PAINT SUBMITTAL IN 1 PACKAGE: PAINT AND PRIMER PRODUCT DATA AND SAFETY DATA SHEETS, AND (3) PHYSICAL BRUSHOUTS FOR EACH SPECIFIED COLOR AND SHEEN.

1.8 REFER TO **KAISER'S ARCHITECTURAL WOOD CASEWORK SPECIFICATIONS** & NORTH AMERICAN ARCHITECTURAL WOODWORK STANDARDS (NAAWS) FOR ADDITIONAL REQUIREMENTS.

AGENCY/CODE REQUIREMENTS

2.1 INTERIOR WALL AND CEILING FINISHES SHALL COMPLY WITH 2016 CBC SECTION 803, BE CLASSIFIED IN ACCORDANCE WITH ASTM E84 OR UL 723, TESTED IN ACCORDANCE WITH NFPA 286 AND TABLE 803.11.

2.2 INTERIOR FLOOR FINISH AND COVERINGS SHALL COMPLY WITH 2016 CBC SECTION 804, BE TESTED IN ACCORDANCE WITH NFPA 253, COMPLY WITH ASTM E648 & SHALL HAVE A SPECIFIC OPTICAL DENSITY SMOKE RATING NOT TO EXCEED 450 PER ASTM E662.

ACCESSORIES

3.1 ALL WALLS TO RECEIVE CORNER GUARD CG1 @ 90˚ OUTSIDE CORNERS OF WING WALLS, SEE **X/X.XX**, CG2 @ 90˚ OUTSIDE CORNERS, SEE **X/X.XX** & CG3 @ 135˚ OUTSIDE CORNERS, SEE **X/X.XX**. INSTALL CORNER GUARDS DIRECTLY ABOVE THE WALL BASE. REFER TO REMODEL PLANS FOR TYPES PER LOCATION.

3.2 **GROUND UP COMMUNITY CARE PROJECTS**: ALL WALL TO RECEIVE CORNER GUARD CG4, UON @ 90˚ OUTSIDE CORNERS, SEE **X/X.XX** ALL AREAS W/ LARGE EQUIPMENT/GURNEY IMPACT SHALL RECEIVE CORNER GUARD CG1 @ 90˚ OUTSIDE CORNERS, SEE **X/X.XX** INSTALL CORNER GUARDS DIRECTLY ABOVE THE WALL BASE. REFER TO REMODEL PLANS FOR TYPES PER LOCATION.

3.3 WHERE OCCURS, WALLS SHALL RECEIVE CRASH RAIL CR1, SEE **X/X.XX**, BUMPER HANDRAIL BH1, SEE **X/X.XX**. REFER TO REMODEL PLANS FOR TYPES PER LOCATION.

3.4 WHERE OCCURS, WALLS SHALL RECEIVE WALL PROTECTION WP1, SEE **X/X.XX**. TOILET ROOMS SHALL RECEIVE WP2 OR FRP1, SEE **X/X.XX**. REFER TO REMODEL PLANS FOR TYPES PER LOCATION.

3.5 ALL WINDOWS SHALL RECEIVE WINDOW TREATMENT WT1, SEE **X/X.XX**. REFER TO REFLECTED CEILING PLANS FOR TYPES PER LOCATION.

3.6 ALL PATIENT/ TREATMENT ROOMS SHALL RECEIVE PC1, SEE **X & X/A9.XX**. ALL TOILET ROOMS WITH SHOWERS SHALL RECEIVE PC2, SEE **X & X/A9.XX.**

3.7 PROVIDE TWO (2) SETS OF PRIVACY CURTAINS PER EACH LOCATION. LABEL EACH CURTAIN WITH EMBROIDERED TAG THAT CONTAINS THE FOLLOWING INFORMATION: ROOM NUMBER, CURTAIN LENGTH & HEIGHT, FABRIC MANUFACTURER, PATTERN, COLOR & CURTAIN FABRICATOR.

CASEWORK

4.1 ALL CASEWORK SHALL RECEIVE PL1 & SS1, UON ON INTERIOR ELEVATIONS.

4.2 ALL INTERIORS OF ENCLOSED CABINETS INCLUDING SHELVING SHALL RECEIVE MELAMINE FINISH, UON. ALL INTERIORS OF OPEN CABINETS INCLUDING SHELVING SHALL MATCH THE EXTERIOR LAMINATE FINISH, UON.

4.3 REFER TO CASEWORK DETAILS FOR METAL REVEAL & ACCENT TRIM MODELS & FINISHES.

CEILING

5.1 CEILING GRIDS SHALL RECEIVE THE FOLLOWING ACOUSTICAL CEILING TILES PER ROOM TYPE:

A. ALL AREAS SHALL RECEIVE ACT1, UON.
B. OFFICES, DICTATION ROOMS & CONFERENCE ROOMS SHALL RECEIVE ACT2.
C. MED-PREP, FOOD-PREP, STAFF LOUNGE, PATIENT/ TREATMENT, UTILITY, EVS & TOILET ROOMS SHALL RECEIVE ACT3.

FLOORING

6.1 GENERAL CONTRACTOR & SUB-CONTRACTORS SHALL TEST THE FLOORING SUBSTRATE FOR ALL FLOORING MANUFACTURER REQUIRED TESTING INCLUDING MOISTURE CONTENT, POROSITY & RAIDANT HEAT LEVELS, REFER TO SPECIFICATIONS. SUBMIT TEST RESULTS FOR ARCHITECT'S REVIEW PRIOR TO ORDERING FLOORING & START OF FLOORING INSTALLATION. DIAMOND GRIND & BEAD BLAST SUBSTRATE, PROVIDE MOISTURE BARRIER & FLOOR LEVELERS TO ENSURE SUBSTRATE IS LEVEL, SMOOTH, FREE OF DUST & CONSTRUCTION DEBRIS & READY TO RECEIVE NEW FLOORING MATERIAL.

6.2 TOP SET WALL BASE SHALL BE B1, UON. SEE **X/X.XX**. REFER TO INTERIOR ELEVATIONS, FINISH SCHEDULE & FLOORING FINISH PLANS. @ ALL SINK LOCATIONS PROVIDE WELD / CLEAR SEALANT @ TOP-SET WALL BASE TRANSITION TO FLOORING.

6.3 FLOORING & WALL BASE SHALL CONTINUE UNDER ADA COMPLIANT SLOPED & INTEGRAL TOE-KICK SINK CABINETS & WALL HUNG COUNTER. REFER TO INTERIOR ELEVATIONS.

6.4 ALL FLOORING TRANSITIONS TO BE FLOATED, LEVEL, & FLUSH. CONTRACTOR TO ENSURE THAT SLOPE DOES NOT EXCEED 2% IN EITHER DIRECTION. WHERE FLOOR JOINTS OCCUR @ DOORWAYS JOINT SHALL BE @ CL OF DOOR AND COMPLETELY HIDDEN FROM VIEW WHEN DOOR IS IN THE CLOSED POSITION. REFER TO FLOORING FINISH PLANS FOR TYPES PER LOCATION & SEE **X/X.XX**

6.5 ALL CURVED FLOORING PATTERN ARCS ARE TO BE EASED AND SMOOTH IN APPEARANCE AND LASER FABRICATED. INTRICATE FLOOR PATTERNS ARE NOT TO BE CUT IN THE FIELD BY HAND. COLD WELD ALL ARCS & COLOR TRANSITIONS.

6.6 FOR ESTIMATING/BIDDING PURPOSES INCLUDE MULTIPLE PATTERN/ACCENT PAINT COLORS FOR FLOORING.

6.7 CONTRACTOR TO REFER TO FLOORING MANUFACTURER'S FLOORING INSTALLATION DIAGRAM FOR INTRICATE FLOORING PATTERNS.

PAINT

7.1 ALL WALLS IN THE ENTIRE PROJECT AREA'S SCOPE OF WORK SHALL RECEIVE PAINT P1, UON. REFER TO PAINT FINISH PLANS. WHERE AREAS ARE NOT IN THE PROJECT SCOPE OF WORK, TERMINATE PAINT AT THE NEAREST INSIDE/OUTSIDE CORNER.

7.2 FOR ESTIMATING/BIDDING PURPOSES, INCLUDE MULTIPLE ACCENT PAINT COLORS

7.3 ALL METAL DOORS & FRAMES & WINDOW FRAMES TO RECEIVE **PX** IN SEMI-GLOSS FINISH, UON.

7.4 CEILING & WALL METAL ACCESS PANELS TO RECEIVE **P1** IN SEMI-GLOSS FINISH, UON.

7.5 ALL GYPSUM BOARD WALLS, SOFFITS, & CEILINGS SHALL RECEIVE EGG-SHELL FINISH, UON.

7.6 PROJECT SPECIFIC ROOMS: ANTE, DECONTAMINATION, DELIVERY, OR, STERILIZER, NUC MED IMAGINE, LAB, HOT LAB, PHARMACY, ICU, PROCEDURE, UPTAKE, SOILED UTILITY ROOMS, MED-PREP, FOOD-PREP, STAFF LOUNGE, PATIENT/ TREATMENT, UTILITY, EVS & TOILET ROOM WALLS & CEILINGS SHALL RECEIVE SEMI-GLOSS FINISH, UON.

7.7 LABS SHALL RECEIVE EPOXY PAINT SYSTEM, UON.

7.8 ALL WALLS SHALL RECEIVE PAINT FINISH PRIOR TO INSTALLATION OF WALL BASE, CASEWORK & CEILING GRID'S PERIMETER WALL TRIM.

7.9 FLOAT & SKIM WALLS TO BE LEVEL & SMOOTH TO MATCH EXISTING & TO RECEIVE NEW WALL BASE.

7.10 REFER TO INTERIOR ELEVATIONS FOR UNIQUE ACCENT PAINT PATTERNS.

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Revisions

Delta	Date	Revisions	By

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HY Architects Project number: 6013

Facility

NEW MAIN OFFICE
1400 STANFORD RANCH, ROCKLIN CA 95765

Project

TENANT IMPROVEMENTS

Sheet Title

INTERIOR FINISH SCHEDULE, SYMBOL LEGEND & GENERAL NOTES

Client Project Number: N/A

Scale:	1/4" = 1'-0"
Drawn By:	Author
Checked By:	Checker
Issue Date:	July 21, 2023
Revit Version:	2023

Sheet **I1.00**

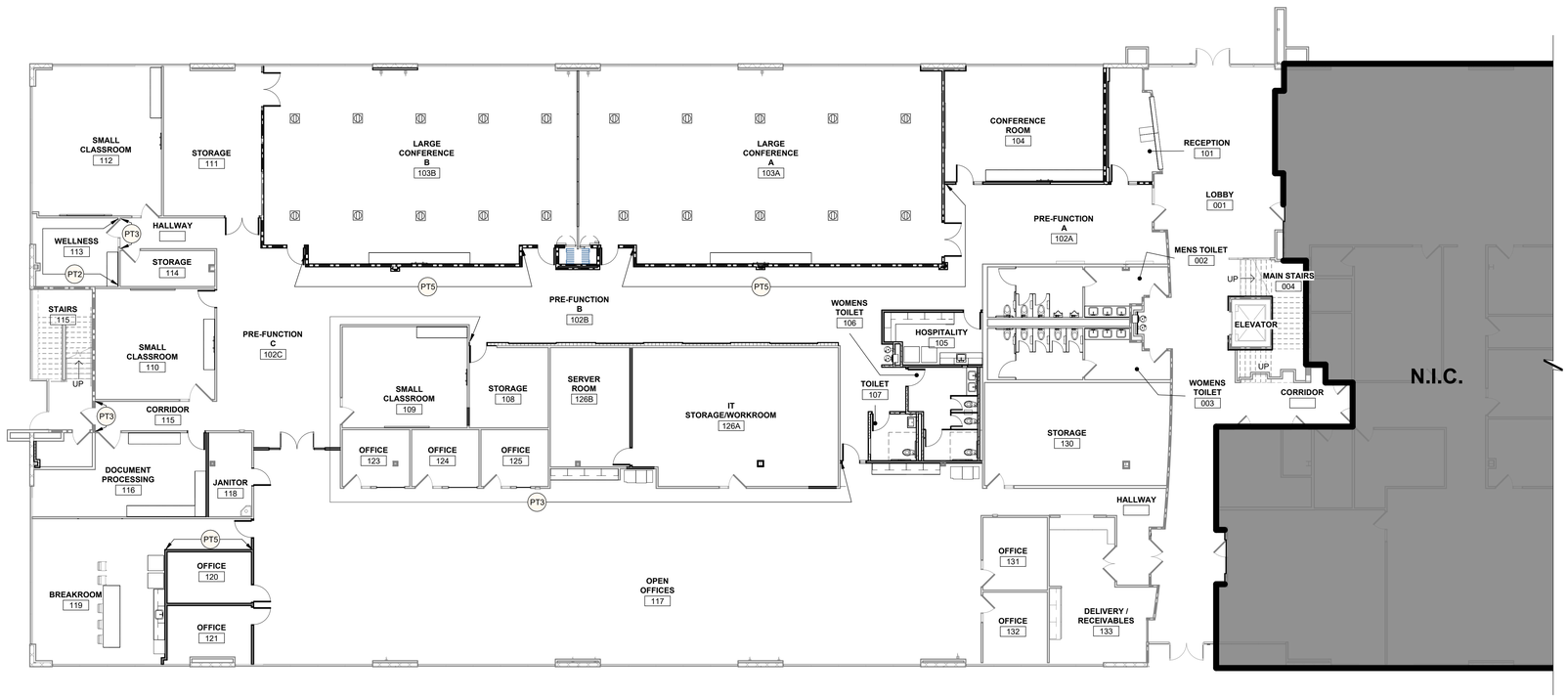
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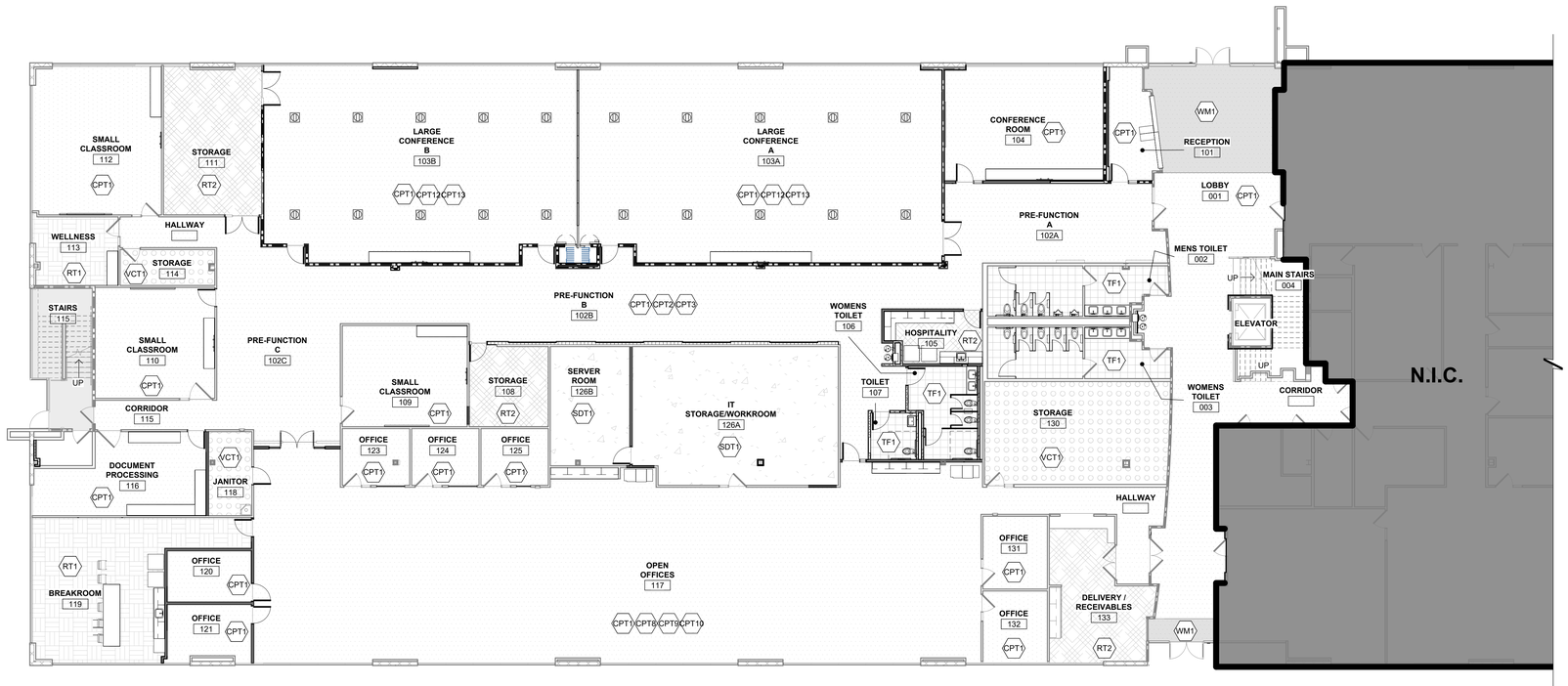
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28 FIRST FLOOR PAINT FINISH PLAN - WEST

3/32" = 1'-0"



30 FIRST FLOOR FLOORING FINISH PLAN - WEST

3/32" = 1'-0"

GENERAL FINISH NOTES

1. REFER TO I1.00 FOR FINISH SYMBOL LEGEND, GENERAL NOTES & SCHEDULE.
2. REFER TO I2.04 & I2.05 FOR CARPET INSTALLATION DIAGRAMS.

FLOORING FINISH HATCH LEGEND

- CARPET
- RESILIENT FLOORING
- VCT FLOORING
- SDT FLOORING
- TILE FLOORING
- FLOORING TO REMAIN

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Revisions

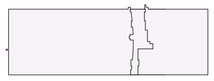
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Project

TENANT IMPROVEMENTS

Sheet Title

OVERALL FIRST FLOOR - FINISH PLAN

Client Project Number: N/A

Scale:	As indicated	Sheet	I2.02
Drawn By:	Author		
Checked By:	Checker		
Issue Date:	July 21, 2023		
Revit Version:	2023	Sheet	of 200

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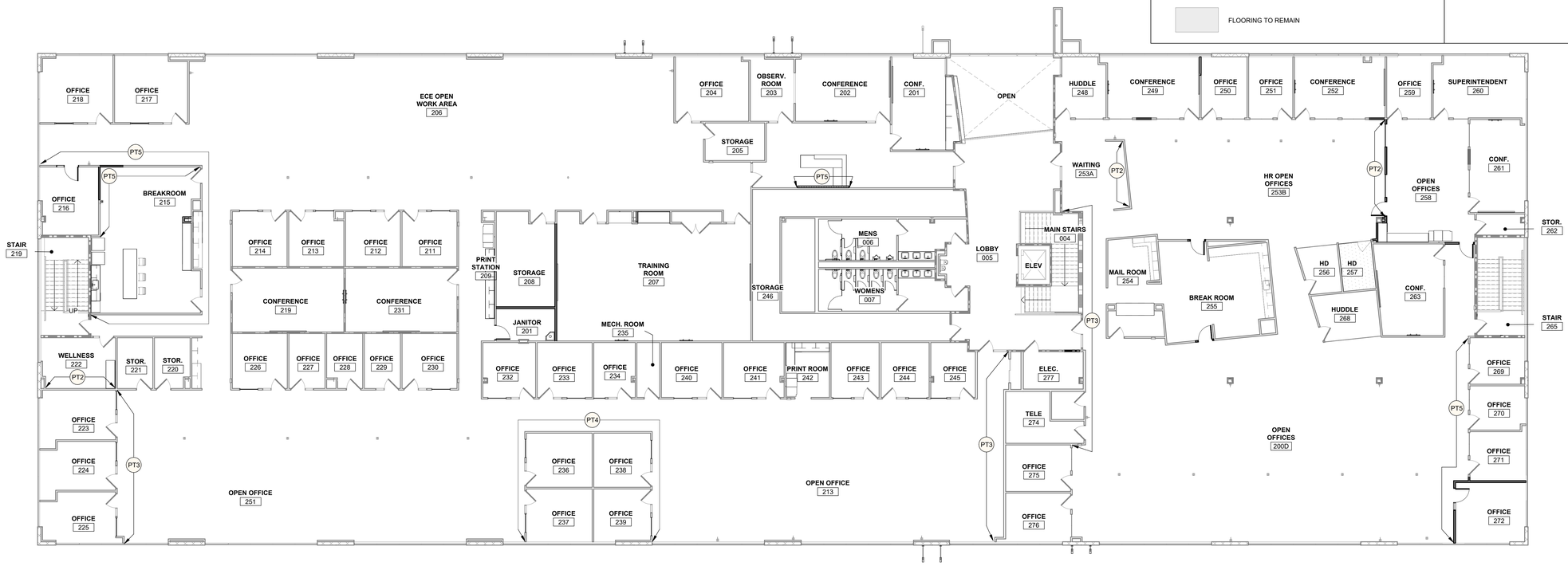
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FLOORING FINISH HATCH LEGEND

- CARPET
- RESILIENT FLOORING
- VCT FLOORING
- SDT FLOORING
- TILE FLOORING
- FLOORING TO REMAIN

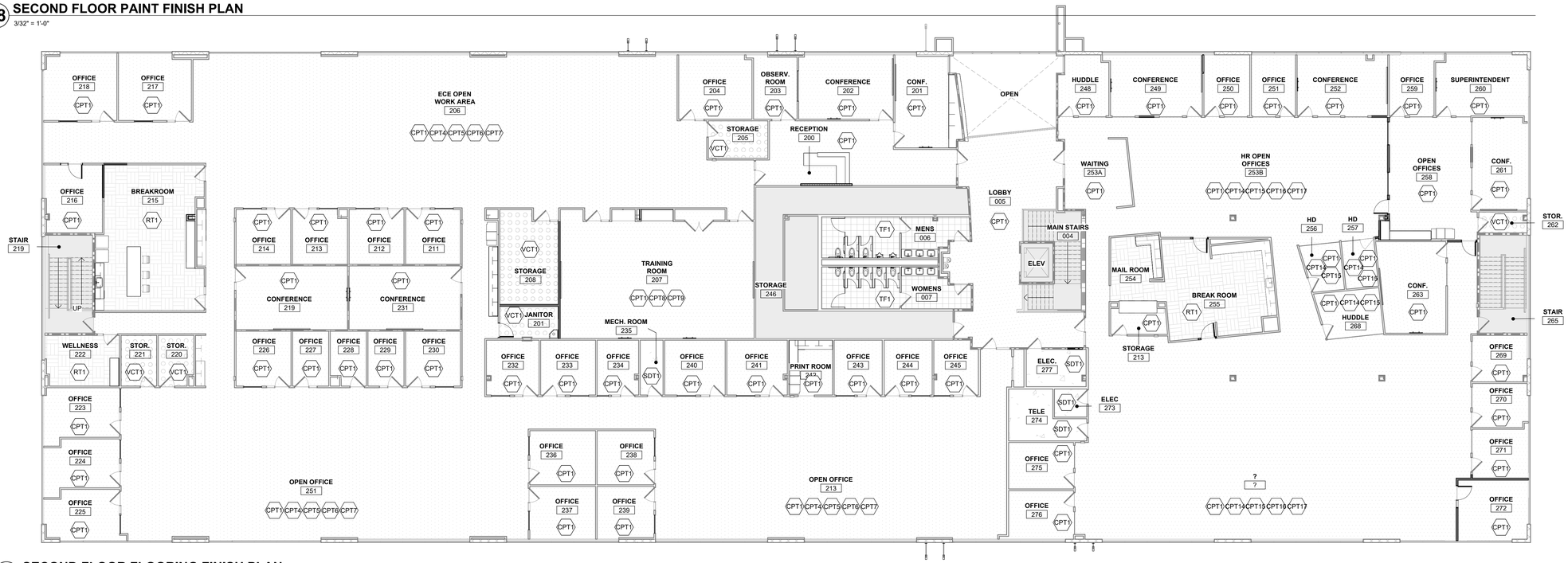
GENERAL FINISH NOTES

1. REFER TO I1.00 FOR FINISH SYMBOL LEGEND, GENERAL NOTES & SCHEDULE.
2. REFER TO I2.04 & I2.05 FOR CARPET INSTALLATION DIAGRAMS.



28 SECOND FLOOR PAINT FINISH PLAN

3/32" = 1'-0"



30 SECOND FLOOR FLOORING FINISH PLAN

3/32" = 1'-0"

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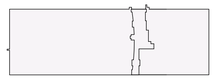
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1400 STANFORD RANCH, ROCKLIN CA 95765

Project

TENANT IMPROVEMENTS

Sheet Title

OVERALL SECOND FLOOR - FINISH PLAN

Client Project Number: N/A

Scale:	As indicated
Drawn By:	Author
Checked By:	Checker
Issue Date:	July 21, 2023
Revit Version:	2023

Sheet

I2.03

Sheet of 200

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Collection: Nutopia II
Product: Urban Field II
Color: 989
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 1278 SY



Collection: Nutopia II
Product: Urban Fringe II
Color: 985
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 143 SY



Collection: Nutopia II
Product: Urban Fringe II
Color: 959
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 46 SY



Collection: Lichen
Product: Macro Bloom
Color: 956
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 240 SY



Collection: Nutopia II
Product: Urban Fringe II
Color: 956
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 26 SY



Collection: Nutopia II
Product: Urban Passage II
Color: 985
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 41 SY



Collection: Nutopia II
Product: Urban Passage II
Color: 959
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 30 SY



Collection: Lichen
Product: Micro Bloom
Color: 956
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 55 SY



Collection: Nutopia II
Product: Urban Passage II
Color: 956
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 30 SY

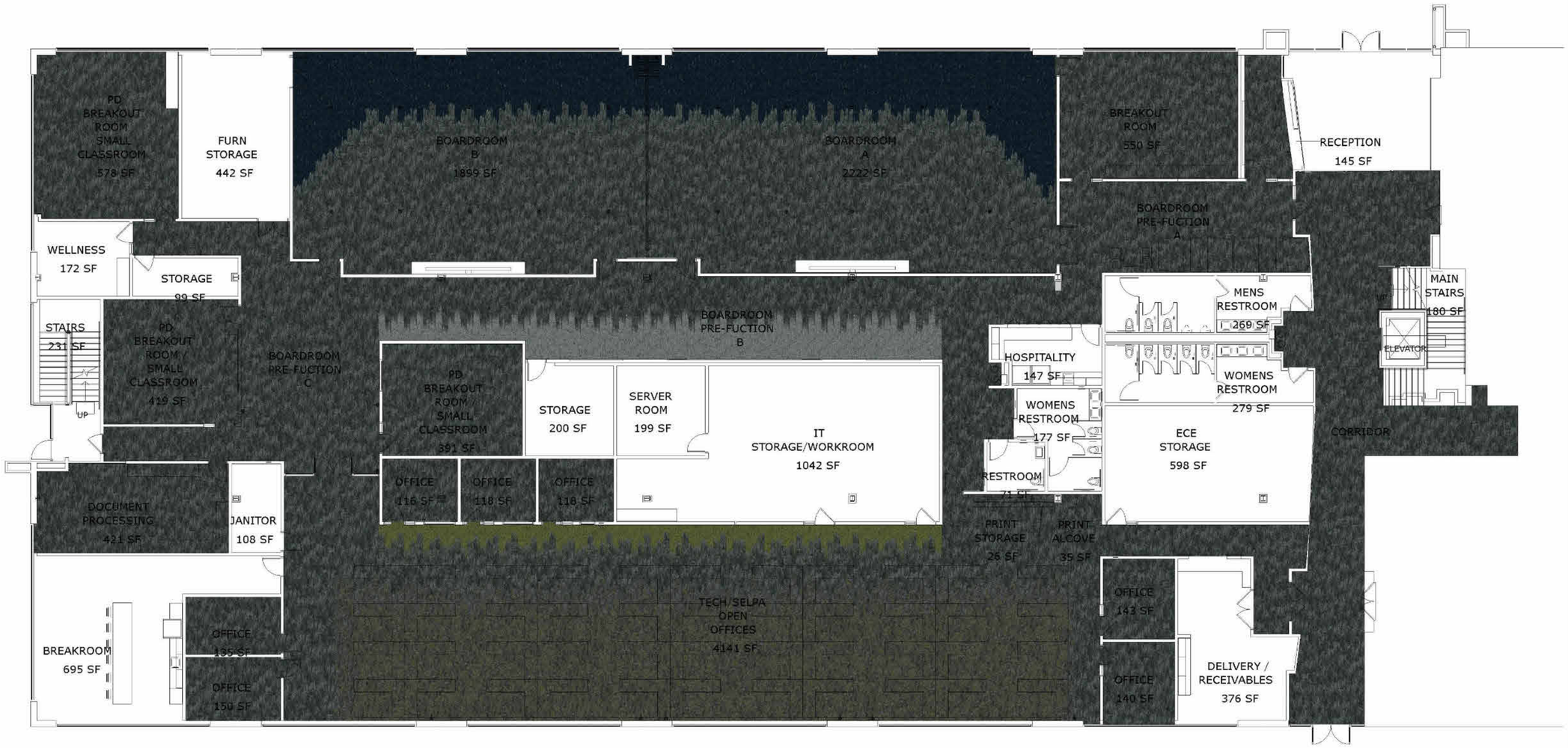


PHOTO INSTALLATION IMAGE

Floor Plan

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Job #: 164833 **Drawing #:** 50317
Account Executive: JONNA KELEDJIAN
Revision: R0
Date: 7/13/23 **Page:** 03
Drawn By: CF

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GOLD IN EDUCATION

Revisions

Delta	Date	Revisions	By

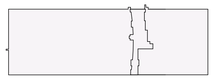
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HY Architects Project number: 6013

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NEW MAIN OFFICE
1400 STANFORD RANCH, ROCKLIN CA 95765

Project
TENANT IMPROVEMENTS

Sheet Title
OVERALL FIRST FLOOR - MANUFACTURER CARPET INSTALLATION DIAGRAM

Client Project Number: N/A

Scale: 1" = 100'-0"
Drawn By: Author
Checked By: Checker
Issue Date: July 21, 2023
Revit Version: 2023

Sheet
I2.04
Sheet of 200

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IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY

Collection: Nutopia II
Product: Urban Field II
Color: 989
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 1278 SY

Collection: Nutopia II
Product: Urban Fringe II
Color: 985
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 143 SY

Collection: Nutopia II
Product: Urban Fringe II
Color: 959
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 46 SY

Collection: Lichen
Product: Macro Bloom
Color: 956
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 240 SY

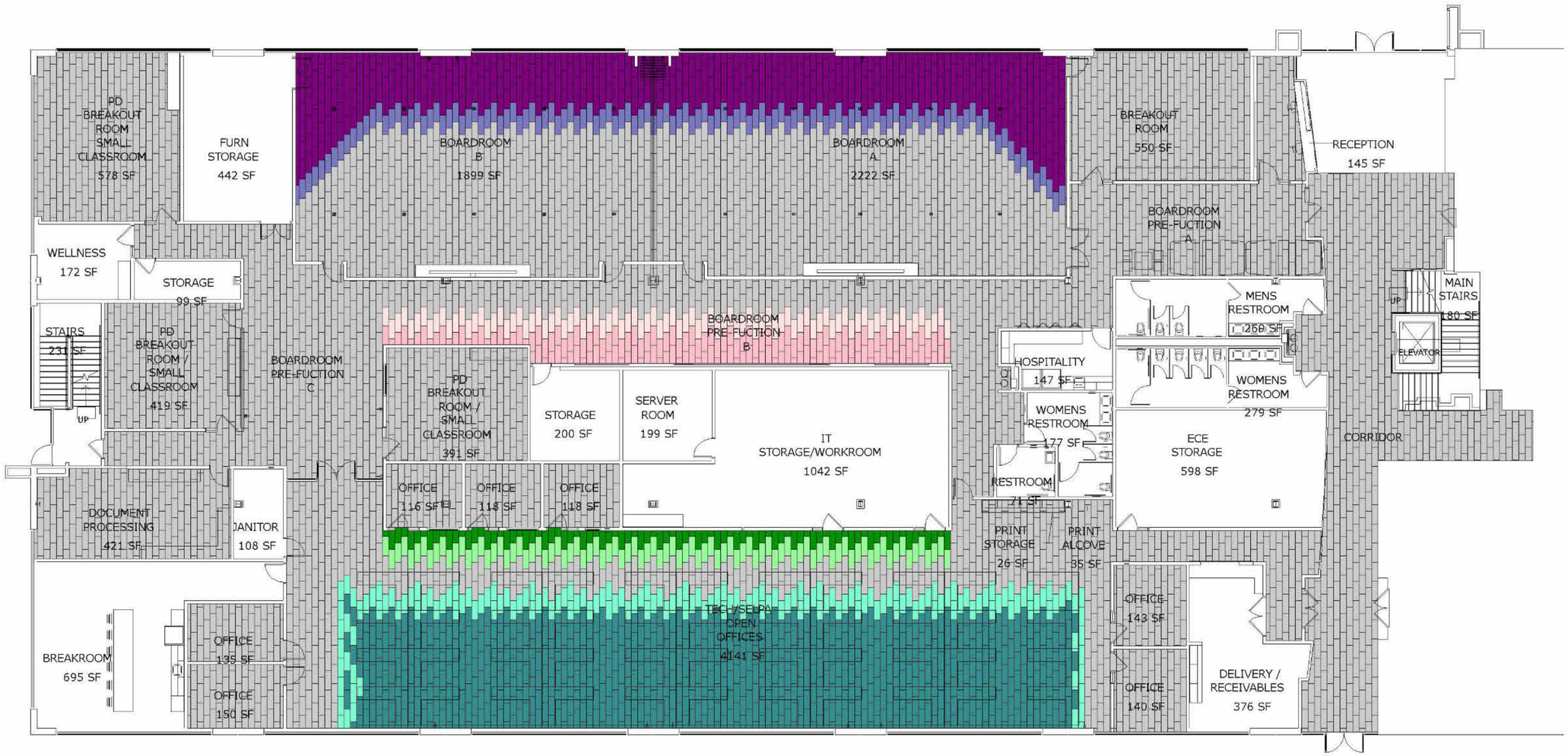
Collection: Nutopia II
Product: Urban Fringe II
Color: 956
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 26 SY

Collection: Nutopia II
Product: Urban Passage II
Color: 985
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 41 SY

Collection: Nutopia II
Product: Urban Passage II
Color: 959
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 30 SY

Collection: Lichen
Product: Micro Bloom
Color: 956
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 55 SY

Collection: Nutopia II
Product: Urban Passage II
Color: 956
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 30 SY



Installation Guide

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Job #: 164833 **Drawing #:** 50317
Account Executive: JONNA KELEDJIAN
Revision: R0
Date: 7/13/23 **Page:** 06
Drawn By: CF

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HY Architects Project number: 6013

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Project
TENANT IMPROVEMENTS

Sheet Title
OVERALL FIRST FLOOR - MANUFACTURER CARPET INSTALLATION DIAGRAM

Client Project Number: N/A

Scale: 1" = 100'-0"
Drawn By: Author
Checked By: Checker
Issue Date: July 21, 2023
Revit Version: 2023

Sheet
I2.05
Sheet of 200

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Collection: Nutopia II
Product: Urban Field II
Color: 989
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 1278 SY



Collection: Nutopia II
Product: Urban Fringe II
Color: 975
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 72 SY



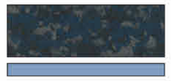
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Installation: Brick Ashlar
Estimate: 56 SY



Collection: Nutopia II
Product: Urban Fringe II
Color: 956
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 26 SY



Collection: Lichen
Product: Macro Bloom
Color: 945
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 236 SY



Collection: Lichen
Product: Macro Bloom
Color: 975
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 484 SY



Collection: Nutopia II
Product: Urban Passage II
Color: 975
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 94 SY



Collection: Nutopia II
Product: Urban Passage II
Color: 989
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 30 SY



Collection: Nutopia II
Product: Urban Passage II
Color: 956
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 30 SY



Collection: Lichen
Product: Micro Bloom
Color: 945
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 72 SY



Collection: Lichen
Product: Micro Bloom
Color: 975
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 93 SY

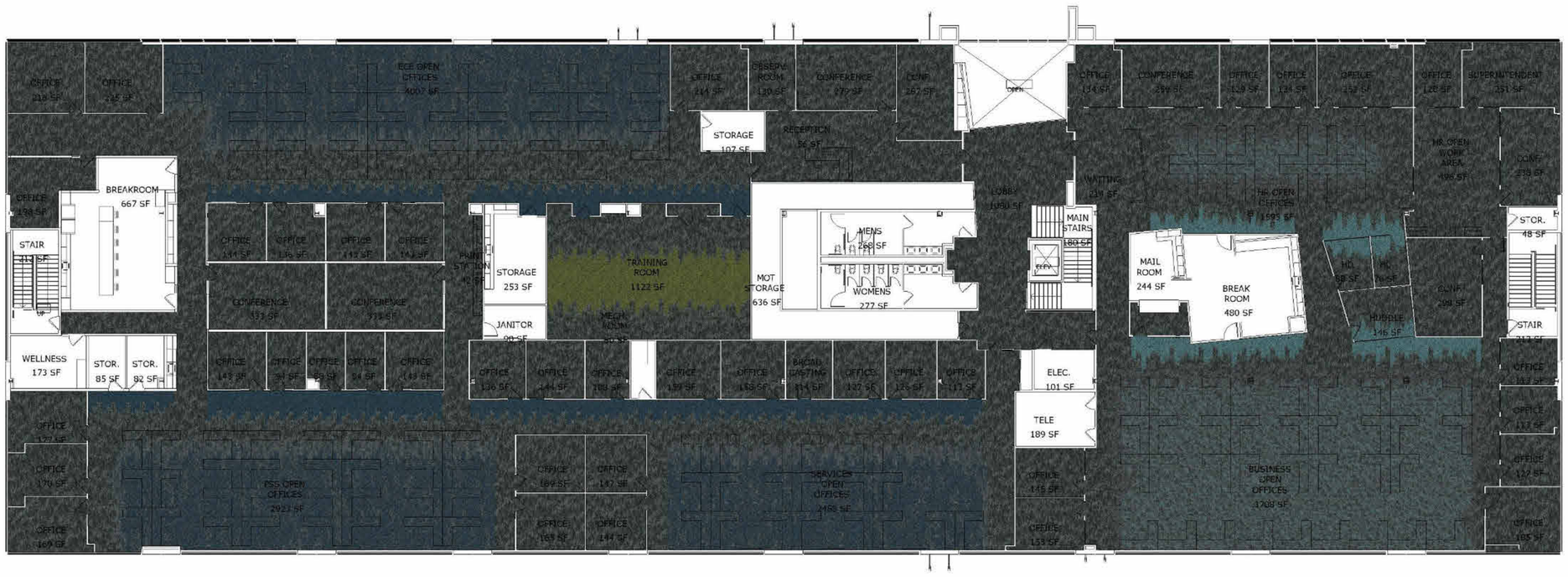


PHOTO INSTALLATION IMAGE

Floor Plan

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Job #: 164833 **Drawing #:** 50317
Account Executive: JONNA KELEDJIAN
Revision: R0
Date: 7/13/23 **Page:** 03
Drawn By: CF

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Delta	Date	Revisions	By

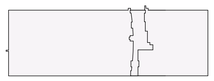
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HY Architects Project number: 6013

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Project
TENANT IMPROVEMENTS

Sheet Title
OVERALL SECOND FLOOR - MANUFACTURER CARPET INSTALLATION DIAGRAM

Client Project Number: N/A

Scale: 1" = 100'-0"
Drawn By: Author
Checked By: Checker
Issue Date: July 21, 2023
Revit Version: 2023

Sheet **I2.06**
Sheet of 200

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Collection: Nutopia II
Product: Urban Field II
Color: 989
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 1278 SY



Collection: Nutopia II
Product: Urban Fringe II
Color: 975
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 72 SY



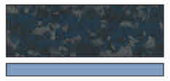
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Product: Urban Fringe II
Color: 989
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 86 SY



Collection: Nutopia II
Product: Urban Fringe II
Color: 956
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 26 SY



Collection: Lichen
Product: Macro Bloom
Color: 945
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 236 SY



Collection: Lichen
Product: Macro Bloom
Color: 975
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 484 SY



Collection: Nutopia II
Product: Urban Passage II
Color: 975
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 94 SY



Collection: Nutopia II
Product: Urban Passage II
Color: 989
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 30 SY



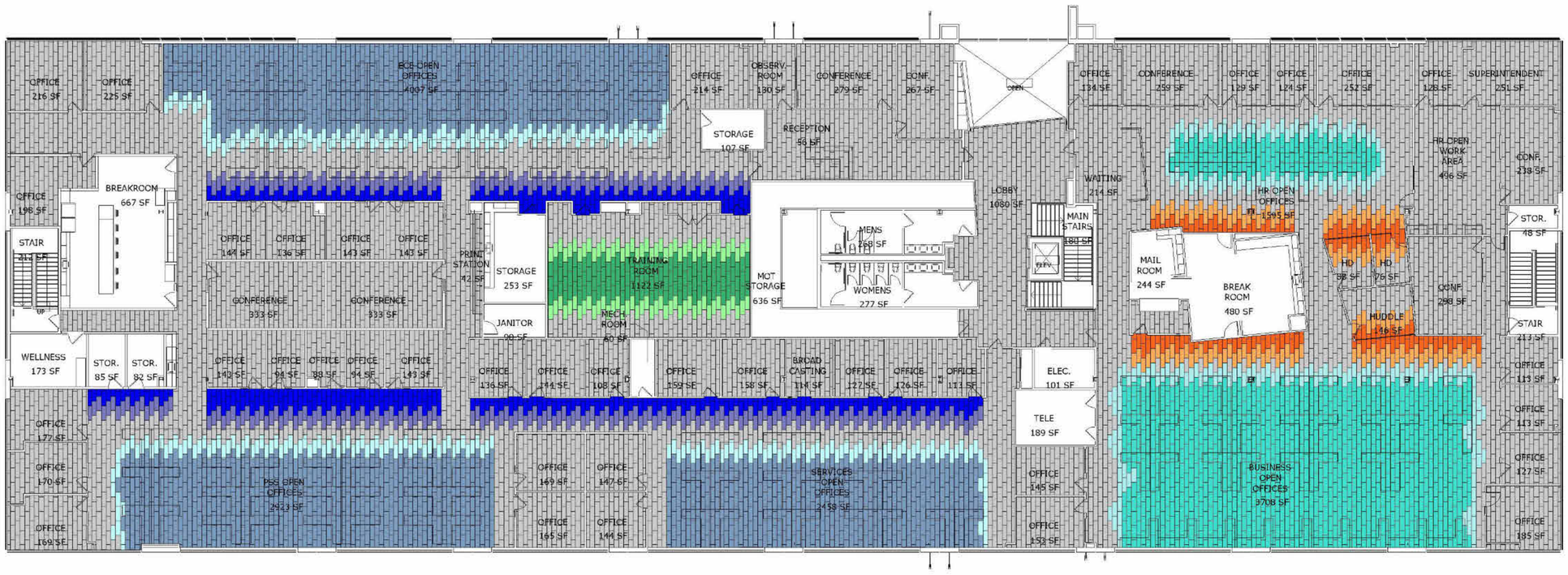
Collection: Nutopia II
Product: Urban Passage II
Color: 956
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 30 SY



Collection: Lichen
Product: Micro Bloom
Color: 945
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 72 SY



Collection: Lichen
Product: Micro Bloom
Color: 975
Size: 12" x 36"
Installation: Brick Ashlar
Estimate: 93 SY



Installation Guide

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Job Name: PCOE STANFORD RANCH
Job #: 164833 **Drawing #:** 50317
Account Executive: JONNA KELEDJIAN
Revision: R0
Date: 7/13/23 **Page:** 06
Drawn By: CF

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Revisions

Delta	Date	Revisions	By

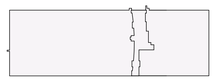
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530.758.1270 tel | 530.758.4789 fax

HY Architects Project number: 6013

Facility
NEW MAIN OFFICE
1400 STANFORD RANCH, ROCKLIN CA 95765

Project
TENANT IMPROVEMENTS

Sheet Title
OVERALL SECOND FLOOR - MANUFACTURER CARPET INSTALLATION DIAGRAM

Client Project Number: N/A

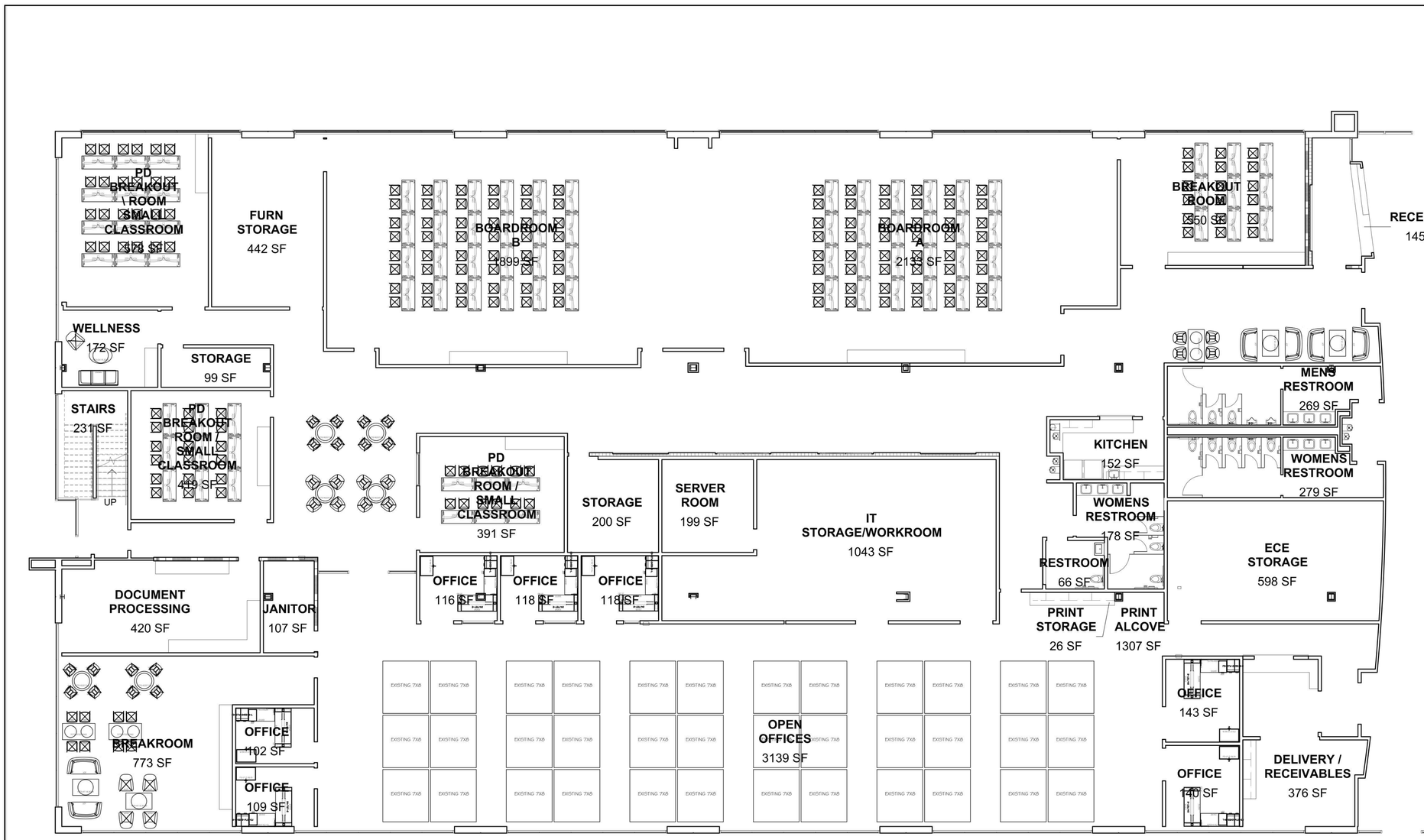
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Checked By: Checker
Issue Date: July 21, 2023
Revit Version: 2023

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Sheet of 200

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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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FIRST FLOOR

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SCALE: NTS

DATE: 6.6.2023

VERSION: 3

SYSTEM: VARIOUS

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San Leandro, CA 94577
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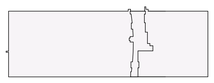
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Project

TENANT IMPROVEMENTS

Sheet Title

OVERALL FIRST FLOOR FURNITURE PLAN

Client Project Number: N/A

Scale:	1" = 100'-0"
Drawn By:	Author
Checked By:	Checker
Issue Date:	July 21, 2023
Revit Version:	2023

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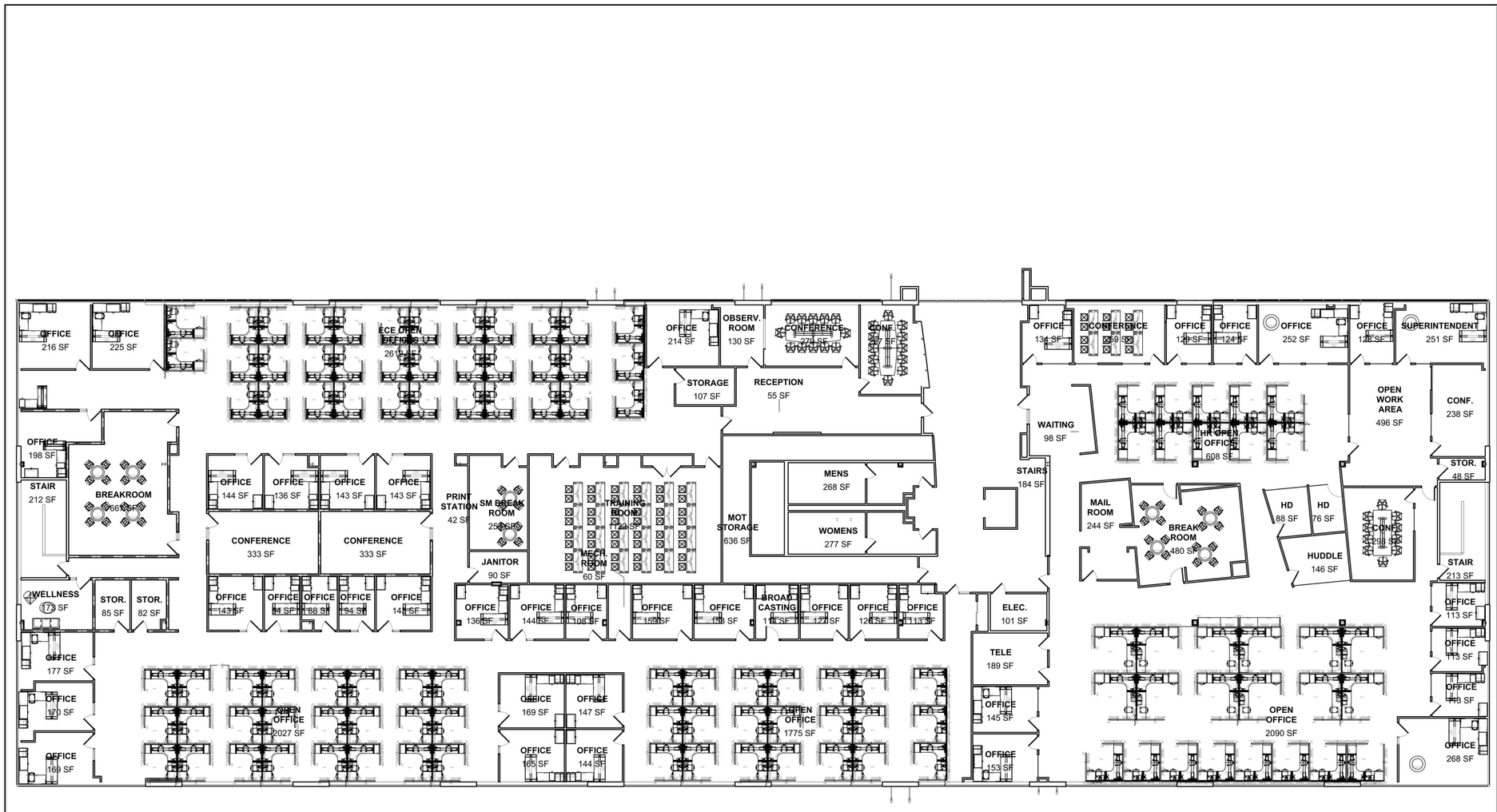
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Sheet Title
OVERALL SECOND FLOOR FURNITURE PLAN

Client Project Number: N/A

Scale:	1" = 100'-0"
Drawn By:	Author
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Issue Date:	July 21, 2023
Revit Version:	2023

Sheet **FF2.03**

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SIGNAGE SCHEDULE

LOCATION	SIGN TYPE	ITEM DESCRIPTION	SIGNAGE COPY	COPY COLOR	PLAQUE COLOR
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HY Architects Project number: 6013

Facility

NEW MAIN OFFICE
1400 STANFORD RANCH, ROCKLIN CA 95765

Project

TENANT IMPROVEMENTS

Sheet Title

SIGNAGE SCHEDULE

Client Project Number: N/A

Scale:
Drawn By: Author
Checked By: Checker
Issue Date: July 21, 2023
Revit Version: 2023

Sheet

SG1.01

Sheet of 200

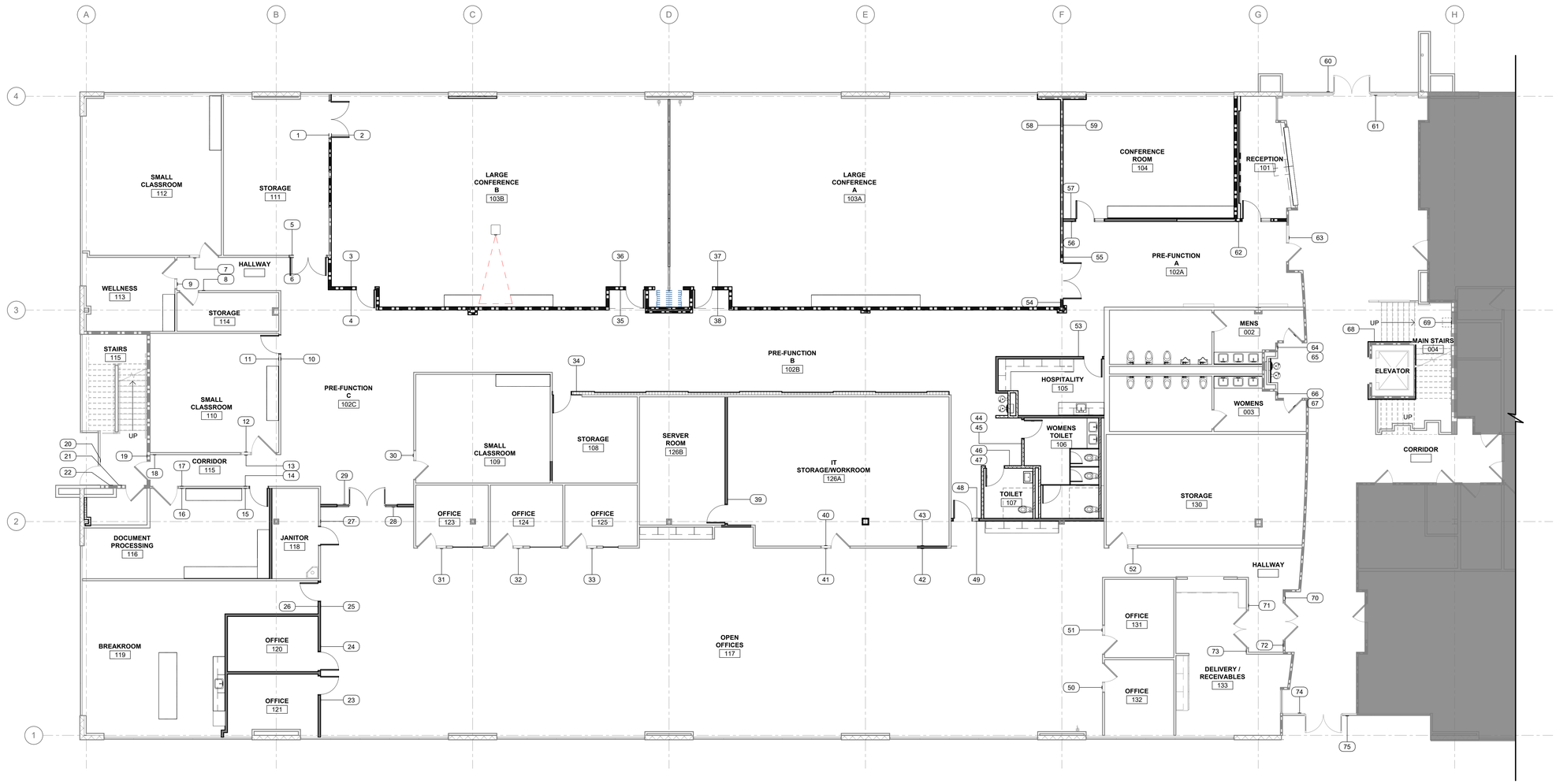
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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY

GENERAL SIGNAGE NOTES

1. REFER TO FOLLOWING SHEET FOR SIGNAGE SCHEDULE, GENERAL SIGNAGE NOTES & SIGNAGE LEGEND.



30 PARTIAL SIGNAGE PLAN - FIRST FLOOR
1/8" = 1'-0"

PCOE GOLD IN EDUCATION

Revisions

Delta	Date	Revisions	By

PLAN CHECK SET

CONSTRUCTION DOCUMENTS

AGENCY APPROVAL

KEY PLAN



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HY Architects Project number: 6013

Facility

NEW MAIN OFFICE
1400 STANFORD RANCH, ROCKLIN CA 95765

Project

TENANT IMPROVEMENTS

Sheet Title

PARTIAL SIGNAGE PLAN - FIRST FLOOR

Client Project Number: N/A

Scale:	As indicated	Sheet	SG2.01
Drawn By:	Author		
Checked By:	Checker		
Issue Date:	July 21, 2023		
Revit Version:	2023	Sheet	of 200

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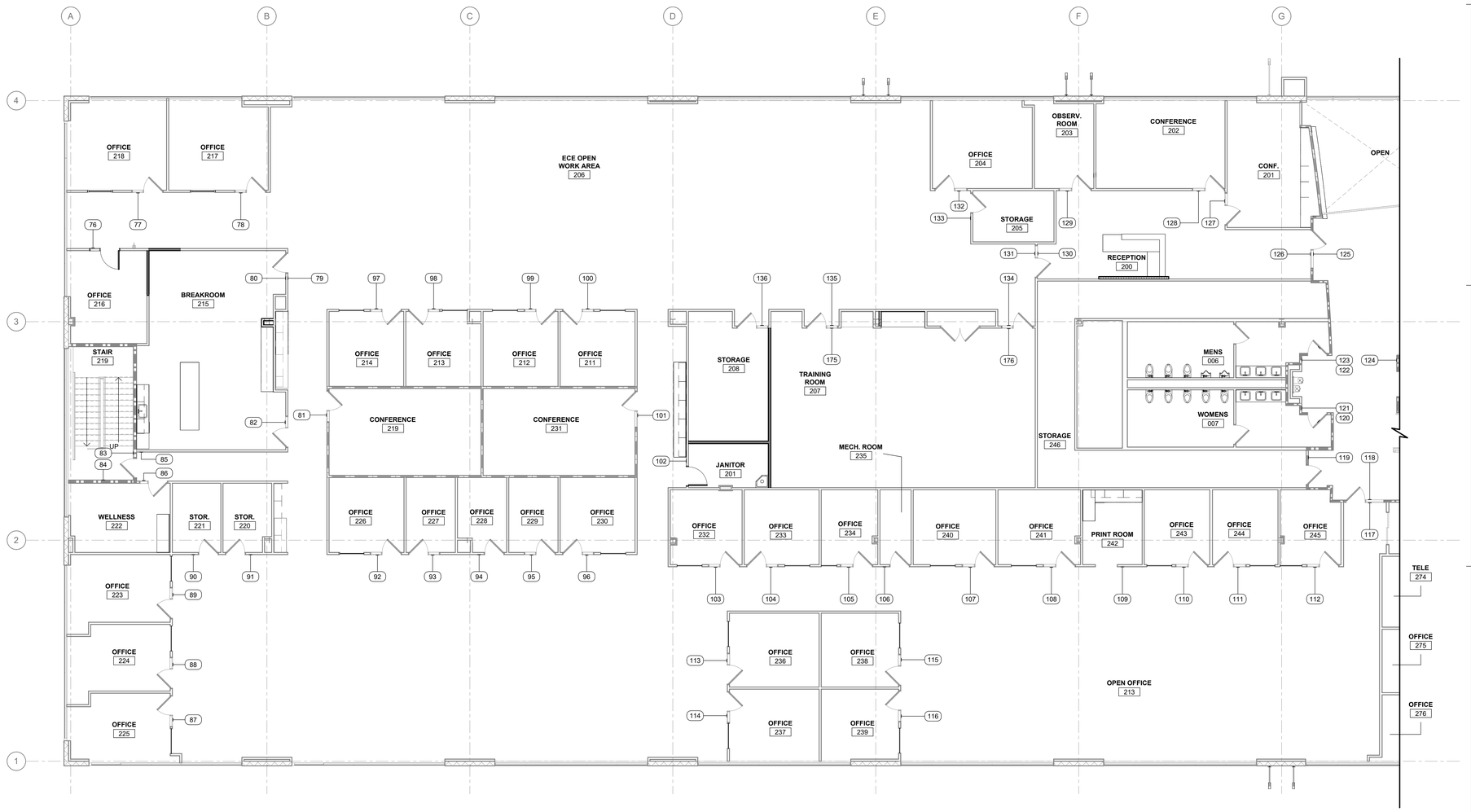
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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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GENERAL SIGNAGE NOTES

1. REFER TO FOLLOWING SHEET FOR SIGNAGE SCHEDULE, GENERAL SIGNAGE NOTES & SIGNAGE LEGEND.



25 PARTIAL SIGNAGE PLAN - SECOND FLOOR - WEST
1/8" = 1'-0"

PCOE GOLD IN EDUCATION

Revisions

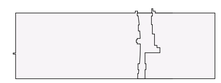
Delta	Date	Revisions	By

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Project

TENANT IMPROVEMENTS

Sheet Title

PARTIAL SIGNAGE PLAN - SECOND FLOOR - WEST

Client Project Number: N/A

Scale:	As indicated
Drawn By:	Author
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Issue Date:	July 21, 2023
Revit Version:	2023

Sheet **SG2.02**

Sheet of 200

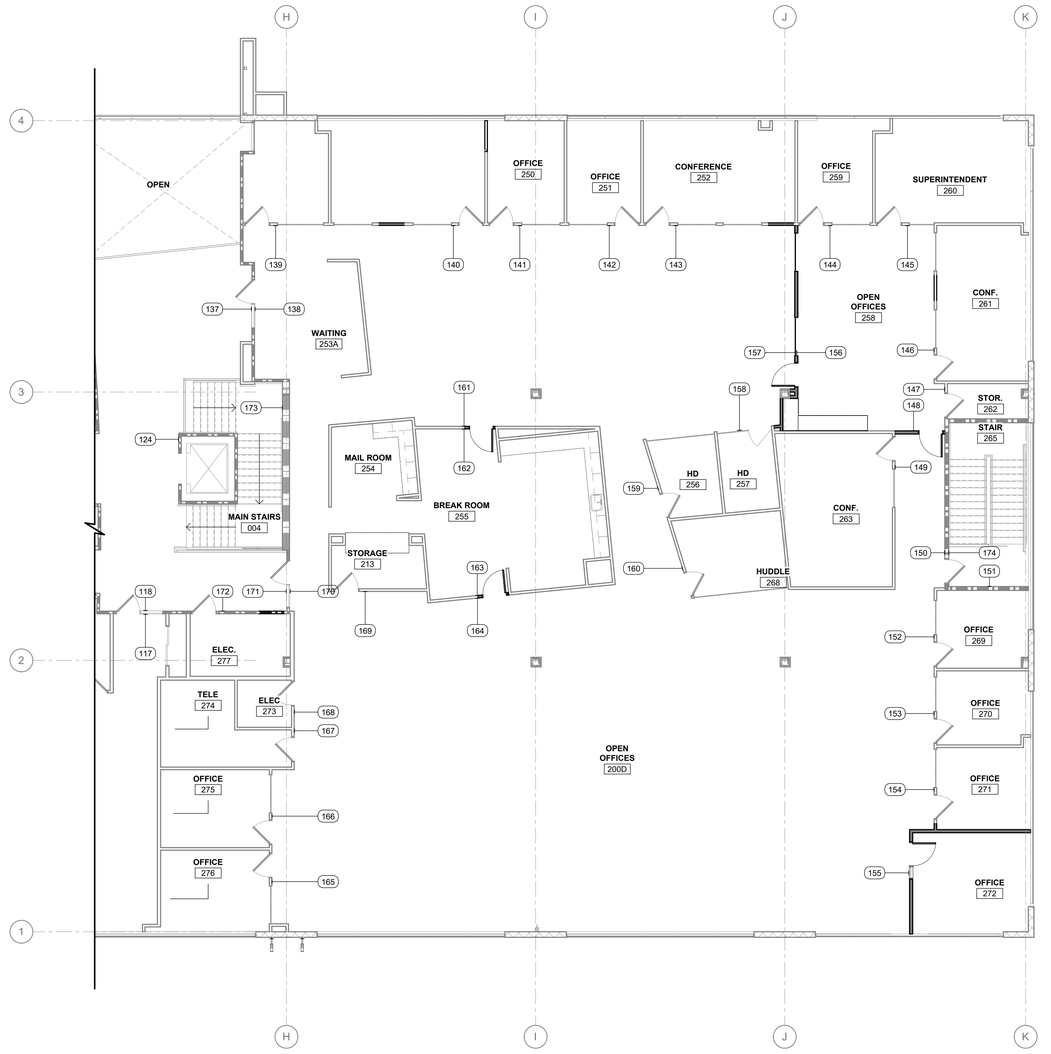
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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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GENERAL SIGNAGE NOTES

1. REFER TO FOLLOWING SHEET FOR SIGNAGE SCHEDULE, GENERAL SIGNAGE NOTES & SIGNAGE LEGEND.



15 PARTIAL SIGNAGE PLAN - SECOND FLOOR -EAST
1/8" = 1'-0"

PCOE
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Revisions

Delta	Date	Revisions	By

PLAN CHECK SET

CONSTRUCTION DOCUMENTS

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HY Architects Project number: 6013

Facility

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1400 STANFORD RANCH, ROCKLIN CA 95765

Project

TENANT IMPROVEMENTS

Sheet Title

PARTIAL SIGNAGE PLAN - SECOND FLOOR - EAST

Client Project Number: N/A

Scale: As indicated
Drawn By: Author
Checked By: Checker
Issue Date: July 21, 2023
Revit Version: 2023

Sheet **SG2.03**

Sheet of 200

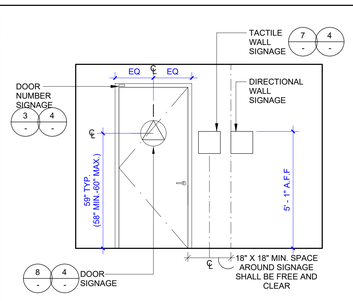
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GRAPHIC SCALES: 1/16" = 1'-0" (0 5' 50') | 1/8" = 1'-0" (0 5' 25') | 1/4" = 1'-0" (0 1' 12') | 1/2" = 1'-0" (0 1' 6') | 3/4" = 1'-0" (0 4') | 1" = 1'-0" (0 1' 3') | 1 1/2" = 1'-0" (0 2') | 3" = 1'-0" (0 1')

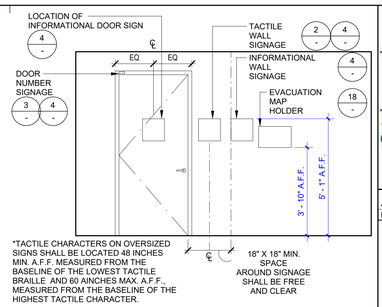
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VISUAL CHARACTER HEIGHTS		
HEIGHT TO FINISH FLOOR OR GROUND FROM BASELINE OF CHARACTER	**HORIZONTAL VIEWING DISTANCE**	**MINIMUM CHARACTER HEIGHT**
40 INCHES (1015 mm) TO LESS THAN OR EQUAL TO 70 INCHES (1780 MM)	LESS THAN 72 INCHES (1830 mm)	5/8 INCHES (16 mm)
	72 INCHES (1830 mm) AND GREATER	5/8 INCHES (16 mm), PLUS 1/8 INCH (3.2 mm) PER FOOT (305 mm) OF VIEWING DISTANCE ABOVE 72 INCHES (1830 mm)
GREATER THAN 70 INCHES (1780 mm) TO LESS THAN OR EQUAL TO 120 INCHES (3050 mm)	LESS THAN 180 INCHES (4570 mm)	2 INCHES (51 mm)
	180 INCHES (4570 mm) AND GREATER	2 INCHES (51 mm), PLUS 1/8 INCH (3.2 mm) PER FOOT (305 mm) OF VIEWING DISTANCE ABOVE 180 INCHES (4570 mm)
GREATER THAN 120 INCHES (3050 mm)	LESS THAN 21 FEET (6400 mm)	3 INCHES
	21 FEET (6400 mm) AND GREATER	3 INCHES (75 mm), PLUS 1/8 INCH (3.2 mm) PER FOOT (305 mm) OF VIEWING DISTANCE ABOVE 21 FEET (6400 mm)

11 VISUAL CHARACTER HEIGHT1
12" = 1'-0"



6 TOILET RM SIGNAGE MOUNTING HEIGHT
3/8" = 1'-0"



*TACTILE CHARACTERS ON OVERSIZED SIGNS SHALL BE LOCATED 48 INCHES MIN. A.F.F. MEASURED FROM THE BASELINE OF THE LOWEST TACTILE BRAILLE AND 60 AINCHES MAX. A.F.F., MEASURED FROM THE BASELINE OF THE HIGHEST TACTILE CHARACTER.

1 TYP. SIGNAGE MOUNTING HEIGHT
3/8" = 1'-0"

SYMBOL NOTES:

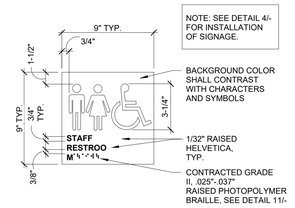
1. PICTOGRAMS, CHARACTERS, AND THEIR BACKGROUNDS SHALL HAVE NON-GLARE FINISH. THESE ELEMENTS SHALL CONTRAST WITH THEIR BACKGROUNDS, WITH EITHER LIGHT ON DARK BACKGROUND OR DARK ON LIGHT BACKGROUND.
2. INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL CONSIST OF A WHITE FIGURE ON A BLUE BACKGROUND; COLOR NO. 15090 IN FEDERAL STANDARD 595B.

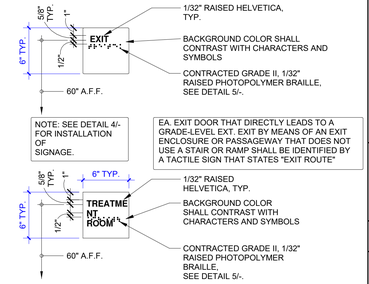
RAISED CHARACTER NOTES:

1. CHARACTERS TO BE 1/32" MIN. ABOVE THEIR BACKGROUND.
2. CHARACTERS TO BE IN UPPER CASE.
3. FONT TO BE SANS SERIF; CHARACTERS SHALL NOT BE ITALIC, OBLIQUE, SCRIPT, HIGHLY DECORATIVE, OR OF UNUSUAL FORMS.
4. TEXTS SHALL BE IN HORIZONTAL FORMAT.

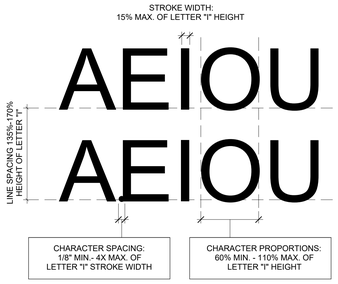
BRAILLE NOTES:

1. BRAILLE TO BE DOMED OR ROUNDED IN SHAPE.
2. THE INDICATION OF AN UPPERCASE LETTER OR LETTERS SHALL ONLY BE USED BEFORE THE FIRST WORK OF SENTENCES, PROPER NOUNS AND NAMES, INDIVIDUAL LETTERS OF THE ALPHABET, INITIALS AND ACRONYMS.

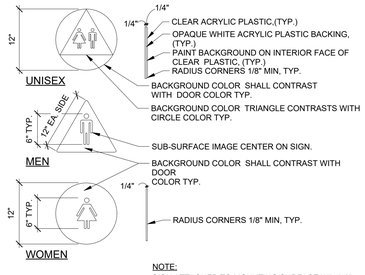




12 SYMBOL, CHARACTER & BRAILLE
1 1/2" = 1'-0"

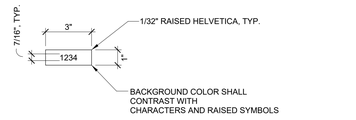


7 TOILET TACTILE SIGN FABRICATION
1 1/2" = 1'-0"

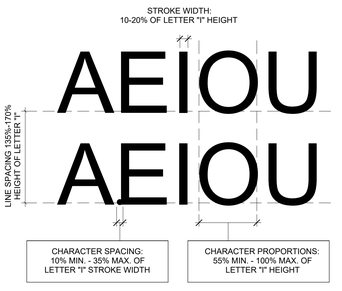


2 TACTILE SIGN, TYP.
1 1/2" = 1'-0"

NOTE: SEE DETAIL 4/- FOR INSTALLATION OF SIGNAGE.



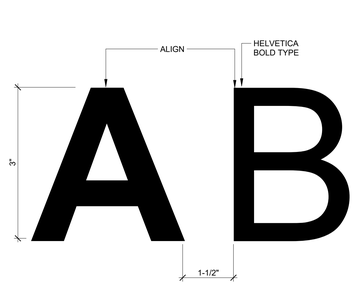
13 TACTILE SIGNAGE CHARACTERS
12" = 1'-0"



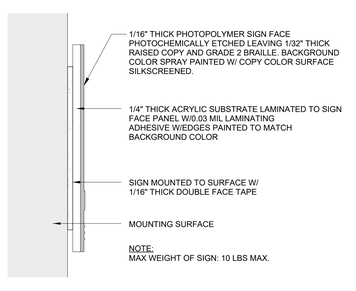
8 TOILET CIRCLE-TRIANGLE DOOR SIGN
1" = 1'-0"

3 DOOR NUMBER SIGN, TYP.
3" = 1'-0"

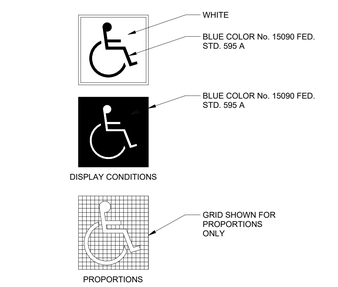
14 VISUAL SIGNAGE CHARACTERS
12" = 1'-0"



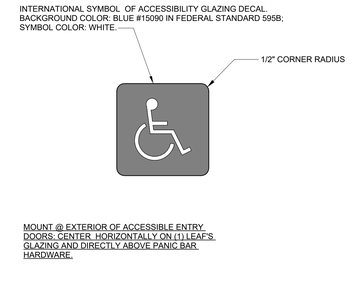
9 3D LETTERING
6" = 1'-0"



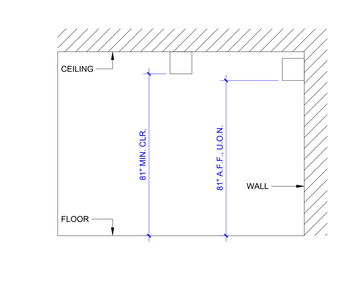
4 SIGNAGE INSTALLATION/FABRICATION1
6" = 1'-0"



16 SYMBOL OF ACCESSIBILITY
1 1/2" = 1'-0"



15 ISA DECAL
3" = 1'-0"



5 CEILING & WALL SIGN MTG. HEIGHTS
3/8" = 1'-0"

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Revisions

Delta	Date	Revisions	By

PLAN CHECK SET

CONSTRUCTION DOCUMENTS

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HY Architects Project number: 6013

Facility
NEW MAIN OFFICE
1400 STANFORD RANCH, ROCKLIN CA 95765

Project
TENANT IMPROVEMENTS

Sheet Title
SIGNAGE DETAILS

Client Project Number: N/A

Scale: As indicated
Drawn By: JF/SH
Checked By: STANDARDS COMMITTEE
Issue Date: July 21, 2023
Revit Version: 2023

Sheet
SG9.01
Sheet of 200

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7/30/2023 9:29:04 PM

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY

General

1. Interpretation of drawings & specifications
   A) For convenience, specifications have been prepared for this project and are arranged in several sections, but such separation shall not be considered as the limits of the work required by any separate trade. The terms and conditions of such limitations are wholly between the contractor and his subcontractors.
   B) In general, the working details will indicate dimensions, positions and kind of construction, and the specifications will indicate qualities and methods. Any work indicated on the working details mentioned but not in the specifications, or vice versa, shall be furnished as though fully set forth in both. Work not particularly detailed, marked, or specified, shall be the same as similar parts that are detailed, marked, or specified. If conflicts occur between drawings and specifications, the most expensive materials or methods will prevail.
   C) Should an error appear in the working details or specifications or in work done by others affecting this work, the contractor shall notify the architect at once and in writing. If the Contractor proceeds with the work so affected without having given such written notice and without receiving the necessary approval, decision or instruction in writing from the owner, then he shall have no valid claim against the owner, for the cost of so proceeding and shall make good any resulting damage or defect. No verbal approval, decision, or instruction shall be valid or be the basis for any claim against the owner, its officers, employees or agents. The foregoing includes typical errors in the specifications or notational errors in the working details where the interpretation is doubtful or where the error is sufficiently apparent as to place a reasonably prudent contractor on notice that, should he elect to proceed, he is doing so at his own risk.
2. Construction shall conform to all applicable codes and regulations.
3. Shop Drawing Note:
   A) Shop drawings shall be submitted in the form of one reproducible and two copies of each sheet.
   B) The purpose of shop drawing submittals by the Contractor is to demonstrate to the Structural Engineer that he understands the design concept by indicating which materials he intends to furnish and install, and by detailing the fabrication and installation methods he intends to use.
   C) Prior to fabrication, shop drawings shall be submitted for review to the Structural Engineer. Shop drawing submittals shall include, but are not necessarily limited to structural steel, reinforcing steel, glued laminated beams, and pre-fabricated wood roof framing items such as I-joists and trusses.
   D) Prior to submission the Contractor shall review all submittals for conformance with the contract documents and shall stamp submittals as being "Reviewed for Conformance".
   E) Shop drawing submittals processed by the Structural Engineer are not change orders.
   F) Any detail on the shop drawing that deviates from the contract documents shall clearly be marked with the note "This is a Change".
   G) Shop drawings or calculations submitted for review that require resubmittal for re-review shall be billed hourly for such time to the General Contractor. Re-review will not proceed without written approval from the General Contractor for additional engineering review services.
4. Safety Note:
   A) It is the Contractors responsibility to comply with the pertinent sections, as they apply to this project, of the "Construction Safety Orders" issued by the State of California latest edition, and all OSHA requirements.
   B) The owner and the Structural Engineer do not accept any responsibility for the Contractor's failure to comply with these requirements.
   C) The Contractor shall be responsible for adequate design and construction of all forms and shoring required.
5. The Contractor shall notify the Architect and Structural Engineer where a conflict or a discrepancy occurs between the structural drawings and any other portion of the contract documents or existing field conditions. Such notification shall be given in due time so as not to affect the construction schedule. In case of a conflict between structural drawings and specifications, the more restrictive condition shall take precedence unless written approval has been given for the least restrictive. Contractor shall verify all dimensions with architectural and structural drawings prior to commencing any work.
6. Where no specific detail is shown, the construction shall be identical or similar to that indicated for like cases of construction on this project. Should there be any question, contact the Architect and Structural Engineer prior to proceeding.
7. When construction attaches to an existing building, a complete set of drawings of the existing building shall be kept on the job site. Contractor to obtain these drawings from the owner.
8. Contractor shall provide an allowance equal to 2% of the bid for structural steel, misc. iron, light gauge framing, and reinforcing steel to be used at the discretion of the structural engineer. Unused amount to revert to the owner upon completion of the job.
9. Any substitutions for structural members, hardware, or details shall be reviewed by the Architect and Structural Engineer. Such review will be billed on a time and materials basis to the General Contractor with no guarantee that the substitution will be allowed.
10. Do not scale drawings. Contact the Architect or Structural Engineer for any dimensions not shown.
11. These drawings are not complete until reviewed and accepted by the local building official and signed by the owner and the Structural Engineer.
12. All drawings and written material appearing herein constitutes the original and unpublished work of the Structural Engineer and the same may not be duplicated, used or disclosed without written consent of the Structural Engineer.
13. The structure shown on these drawings is structurally sound only in its completed form. The stability of this structure depends on the diaphragms and the bracing members shown. The Contractor is to provide for the design and construction of shoring for all earth, forms, concrete, steel, wood, and masonry to resist gravity, earth, wind, seismic, and construction loads. Shoring shall remain in place until all diaphragms and lateral resisting elements are in place in their entirety. Construction materials shall be spread out if placed on framed floors or roofs. Load shall not exceed the design live load per square foot.

Design Criteria

1. Code: 2022 California Building Code (CBC)
2. Design Live Loads:

Area	Live Load	Remarks
Roof		
A) Flat to < 4:12	Lr = 20 psf	Reducible per code
B) 4:12 to ≤ 12:12	Lr = 12-20 psf	Reducible per code
Floor	L = 0 psf	Reducible per code

3. Snow Design Parameters:
   - Ground Snow Load: P_g = N/A
   - Flat-Roof Snow Load: P_f = N/A
   - Snow Exposure Factor: C_e = N/A
   - Snow Load Importance Factor: I_s = N/A
   - Thermal Factor: C_t = N/A
4. Wind Design Parameters:
   - Basic Design Wind Speed (3-sec gust): V = 95 mph
   - Nominal Design Wind speed (3-sec gust): V_{asd} = 74 mph
   - Risk Category: II
   - Exposure Category: B
   - Internal Pressure Coefficient: ±0.18
   - Analysis Method: Directional Procedure
5. Earthquake Design Parameters:
   - 5.1. Seismic Importance Factor: I_e = 1.0
   - 5.2. Risk Category: II
   - 5.3. Soil Site Classification: 'D'
   - 5.4. Seismic Design Category: 'D'
   - 5.5. Mapped Spectral Response Accel
     - A) Short period: S_s = 0.439g
     - B) 1-sec period: S_1 = 0.221g
   - 5.6 Design Spectral Response Accel
     - A) Short Period: S_{DS} = 0.424g
     - B) 1-sec period: S_{D1} = 0.321g
   - 5.7 Seismic Force Resisting System
     - A) Wood Bearing / Shear Walls & Flexible Diaphragm
   - 5.8 Seismic Base Shear: V = N/A
   - 5.9 Seismic Response Coefficient: C_s = N/A
   - 5.10 Response Modification Factor: R = N/A
   - 5.11 Analysis Procedure: Equivalent Lateral Force

Structural Steel

1. Fabrication, erection and materials shall conform to the specifications and standards of the AISC, as contained in the "AISC 360-16 Specifications of Structural Steel Buildings" & the "AISC Manual of Steel Construction", 15th edition and California Building Code latest edition.
2. Structural steel shall conform to the following specifications, u.n.o.:

Shapes	
Wide Flanges (W, WT)	ASTM A992
Wide Flanges (S, M), Angles (L)	ASTM A572
Channels (C), Misc Channels (MC)	ASTM A36 (t≤") ASTM A992 (>")
Hollow Structural Steel (HSS)	ASTM A500, Gr. C (F_y = 50 ksi)
Steel Circular Pipes (P)	ASTM A53, Type E or S, Gr. B
Plates & Bars	
Column Base Plates	ASTM A36
Brace Gusset Plates	ASTM A36
Beam Shear Connection Plates	ASTM A36
Column Continuity Plates	ASTM A572, Gr. 50
Beam Stiffener Plates	ASTM A36
Deck Closure Plates	ASTM A36
Stainless Steel Plates & Bars	ASTM A276
Other	ASTM A36
Nuts, Bolts, Rods, & Washers	
General Bolts	ASTM F3125, Gr A325-N
Slip Critical Bolts (see note #4 below)	ASTM F3125, Gr A325-SC
High Strength Bolts	ASTM F3125, Gr A325-N or Gr A490
Machine Bolts (general use)	ASTM A307
Bent & Headed Anchor Bolts	ASTM F1554, Gr. 36, 55, or 105
Partial & Fully Threaded Anchor Rods	ASTM F1554, Gr. 36, 55, or 105
Fully Threaded Rod (general use)	ASTM A36 (A307 Gr. A for ⅜"ø-)
Welded Shear Connectors	ASTM A108, Gr. 1015 thru 1020
Welded Threaded Studs	ASTM A108, Gr. 1015 thru 1020
Nuts for Bolts & Machine Bolts	ASTM A563
Hardened Washers	ASTM F436
Unhardened Washers	ASTM F844
Plain Washers	ASTM B18.22.1
Beveled Washers	ASTM B18.23.1

3. Bolted connections shall consist of unfinished bolts per the table above unless noted otherwise. Anchor bolts cast in concrete or masonry shall be headed bolts with cut thread, full diameter body style conforming to ASTM F1554 u.n.o. Unless noted otherwise, anchor bolts/rods shall be grade 36 except that welded anchor bolts shall be grade 55 per S1 Supplementary requirements. All bolted connections and base plates shall have standard cut washers unless noted otherwise. Washers at base plates shall be placed at top and bottom of plate.
4. "Slip-critical" bolted connections:
   A) "Slip-critical" connections (AISC 2023-SC design values with special inspection) are required at all braced frame connections, at all connections along chord lines and drag lines (as noted on plans), and u.n.o., at all bolts in oversized or slotted holes.
   B) The special inspector must be present during installation and tightening operation of "slip-critical" connections.
5. All structural steel shall receive minimum of one shop coat of red primer with a minimum dry film thickness of 2.0 mils. Do not shop prime or paint areas to be field welded, fireproofed, galvanized, to receive slip-critical high strength bolts, or to be embedded in concrete. Prior to priming or painting, clean structural steel in accordance with Steel Structures Painting Council (SSPC) recommendations & as required by the primer & paint manufacturer. Provide additional painting as noted in the specifications.
6. All structural steel shall be erected plumb and true to line. Temporary bracing shall be installed and shall be left in place until other means are provided to adequately brace the structure. Contractor responsible for reviewing all base plate and support conditions during erection and bracing as required. See AISC and OSHA requirements.
7. Place non-shrink grout under all base plates before adding vertical load. See Concrete Notes for non-shrink grout requirements.
8. Structural steel below grade shall have 3" minimum of concrete cover.
9. Provide ½"ø stitch bolts and ring fills, space at not more than 24" cc for all double angle members.
10. At wood to steel parallel contact, attach with ½"ø welded threaded studs at maximum 32"cc. & 6" from ends of wood member, typical unless noted otherwise.
11. Holes for unfinished bolts shall be of the same nominal diameter of the bolt plus 1/16". Use standard AISC gage and pitch for bolts except as noted otherwise. Holes for anchor bolts embedded in concrete shall be of the same nominal bolt diameter plus ⅜" unless noted otherwise.
12. Welding shall be done by the electric arc process in accordance with American Welding Society standards, using only certified welders. All groove welds shall have complete penetration unless noted otherwise. All exposed welds shall be ground smooth. All welding to be done using E70xx electrodes. In addition, welding of ASTM A572 grade 50 steel and ASTM A992 steel shall be done with electrodes capable of depositing weld metal with a maximum diffusible hydrogen content of 16ml/100g (H16). Weld lengths called for on plans are the net effective lengths required.
13. Minimum Fillet welds:
    - ⅜ø" @ t < ½"
    - ¼ø" @ t < ¾"
    - ⅜ø" @ t > ¾"
14. Welding Procedure Specifications (WPS) for shop and field pre-qualified weld joints and weld joints qualified by test shall be prepared for review prior for fabrication. All welding procedures that meet there requirements of AWS D1.1 Sec. 5.1 shall be considered as pre-qualified. Qualification testing is required when the depth of a partial penetration or complete penetration weld is 2" or greater.
15. Structural steel & fasteners that are permanently exposed to weather shall be either primed and painted or hot dipped galvanized in accordance with ASTM A123 & A153. Repair galvanizing after welding in accordance with ASTM A780.
16. When structural steel & connections will be exposed to view in the completed building, they shall be fabricated, erected & finished in compliance with Architecturally Exposed Structural Steel (AESS) guidelines & Section 10 of the AISC 303-22 "Code of Standard Practice for Steel Buildings and Bridges".

Lightgauge Metal Framing

1. All metal framing shall be formed from corrosion resistant steel conforming to ASTM A653 or ASTM A1011 with minimum yield strength of 33 ksi for 18 ga and lighter and 50 ksi for 16 ga and heavier.
2. Metal framing shown on the structural drawings shall have channel type sections with stiffened flanges having the minimum properties as shown in the light gauge metal framing schedule.
3. Metal tracks shall be the same gauge as framing which it supports, unless noted otherwise, with minimum flange width of 1¼" and minimum properties as shown in the light gauge metal framing schedule.
4. Galvanized coating must meet the ASTM C455 specification.
5. Factory punch-outs to be located along the centerline of the webs of the members and have a minimum center-to-center spacing of 24". Punch-outs to have a maximum width=1½" and a maximum length=4". Lightgauge framing members shall be cut such that the minimum distance between the end of the member and the near edge of the web punch-out=10".
6. All header members shall be un-punched.
7. Design properties of metal framing studs, channels & tracks shall conform to (or exceed) the Steel Stud Manufacturer's Association (SSMA) Product Technical Information catalog & ICC Report # ESR-3064P.

Demolition

1. Safety Notes:
   A. It is the Contractor's responsibility to comply with the pertinent sections, as they apply to this project, of the "Construction Safety Orders" issued by the State of California, latest edition, and all OSHA requirements.
   B. The Structural Engineer and Owner do not accept any responsibility for the Contractor's failure to comply with these requirements.
2. Shore or brace trusses, beams columns, and walls as required to maintain the stable integrity of the existing structure prior to demolition. It is the Contractor's sole responsibility to design and provide competent shoring and bracing for all loads imposed during and after demolition through completion of new construction.
3. All dimensions given to and of the existing structure are approximate. Verify by field measurements the dimensions of the existing structure. Where actual conditions deviate from the details shown on the drawings, notify the Structural Engineer for instructions prior to proceeding with work.
4. Demolition and removal of existing construction shall be made in such a manner as to avoid or minimize damage to adjacent construction.
5. Extent of demolition is to be as indicated on plans, sections and details. Demolition is to include removal and disposal construction.

Powder Actuated Fasteners (Shot Pins)

1. These notes govern all conditions called out on the plans as "PAF" or "shot pins", unless noted otherwise.
2. Installation, testing & inspection of all PAF's shall be in accordance with the applicable evaluation report, these plans, and any project specifications.
3. PAF's specified in these notes shall be used for dry, interior applications only.
4. Where no manufacturer is called out on the drawings, either Hilti or Simpson may be used at the contractor's option.

Hilti Anchors:

PAF's shall be manufactured by Hilti, Inc., Tulsa, Oklahoma in accordance with the ICC evaluation report referenced below.

Connected Material	Base Material	Base Material Thickness, 't'	Minimum Penetration into Base Material (f)	Hilti Fastener	Evaluation Report (Issue Date)
Metal Decking	Steel (all grades)	⅛" ≤ t' < ⅜"	Full	X-HSN24 (a)	ESR-2197 (11/22)
		½" ≤ t' < ½"	Full	X-ENP-19 L15	
		½" ≤ thicker	½"		
Cold Formed Steel (Light Gauge) & Non-Preservative Treated Wood	Steel (all grades)	⅜" ≤ t' < ½"	Full	X-U w/ P8 washer	ESR-2269 (06/22)
		½" ≤ thicker	½"		
	Normal Weight Concrete (including concrete fill over metal decking) (a)	3x penetration min	1"		
	CMU (grouted) (b) (c)				
2x Preservative Treated Wood	Concrete (d)	4½" min	1⅜"	X-CP 72	ESR-2379 (08/21)

Hilti Table Footnotes:

(a) 3" minimum edge distance & 4" minimum spacing required. Installations in concrete over metal deck may be installed either from underneath through the metal deck or from above directly into the concrete. For fasteners into the bottom of metal deck, spacing parallel to the deck flutes shall be 5.1" minimum.
(b) 4" minimum edge distance, and no more than one fastener shall be located in any given cell.
(c) Fasteners installed in the face of CMU shall be installed 1" minimum away from vertical mortar joints. At bed joints, fasteners shall not be spaced closer than 8"cc and must be installed a minimum of 8" from the end of the wall.
(d) 1⅜" minimum concrete edge distance required. Locate fastener 6" from ends of sill plates.
(e) Where X-EDNK22 THQ12 or X-EDN19 THQ12 are specified in decking manufacturer's literature, X-HSN24 may be used instead when in accordance with ICC ESR-3592 (12/1/16).
(f) Full penetration means the entire length of the tapered tip shall penetrate completely through the base material.

Simpson Anchors:

PAF's shall be manufactured by Simpson Strong-Tie Pleasanton, California in accordance with ICC Evaluation Report #ESR-2138, dated March 2022.

Connected Material	Base Material	Base Material Thickness, 't'	Minimum Penetration into Base Material (f)	Simpson Fastener (e)
Cold Formed Steel (Light Gauge) & Non-Preservative Treated Wood	Steel (all grades)	⅜" ≤ t' < ⅜"	Full	PDPA or PDPAT
		⅜" ≤ t' ≤ ½"	Partial	
		½" < t' ≤ ¾"	0.46"	
	Normal Weight Concrete (a)(b)	3x penetration min	⅜"	
	Light Weight Concrete fill over metal decking (b)	3x penetration min	⅜" for PDPA 1" for PDPAT	
	CMU (grouted or ungrouted) (c)	1¼" min face shell	Full	
2x Preservative Treated Wood	Normal Weight Concrete (a)	4½" min	1⅜"	PDPAL or PDPAL-MS

Simpson Table Footnotes:

(a) For installations in normal weight concrete, including concrete over metal deck, shall have 3½" minimum edge distance & 4" minimum spacing required .
(b) Fasteners into bottom of concrete over metal deck shall have ⅜" (1½" deck) or 1½" (3" deck) minimum to edge of deck web, 4" minimum to end of deck, & 4" minimum spacing.
(c) Fasteners shall be installed in the center of the CMU face shell and no more than one fastener shall be located in any given cell.
(d) 1⅜" minimum concrete edge distance required. Locate fastener 6" maximum from ends of sill plates.
(e) All PDP and PDPA pins may be ordered w/ washers or large washers by specifying "W" or "WL").
(f) Partial penetration means at least some portion of the tapered tip shall penetrate completely through the base material. Full penetration means the entire length of the tapered tip shall penetrate completely through the base material.

Expansion Anchors-Concrete:

1. Use Hilti Kwik Bolt-TZ2 Expansion Anchors as manufactured by Hilti Inc., Tulsa Oklahoma. ICC-ES Report No. ESR-4266 reissued December 2021.
2. Installation of anchors shall be in accordance with the manufacturer's recommendations, ICC-ES Report, and these notes.
3. Special Inspection is required in accordance with the 2022 CBC Sections 1705A.1.1.3 and 1910A.5. Special inspector must verify product, expiration date, concrete type and strength, anchor diameter and steel grade, compliance of drill bit, hole diameter and location, cleanliness of hole and anchor, and anchor embedment.
4. Each anchor type (loaded in either pullout or shear) shall be torque tested in accordance with CBC Section 1910A.5 to the appropriate test load shown in the table. If any anchor fails testing, all anchors of the same type not previously tested shall be tested until 20 consecutive anchors pass, then initial testing frequency may be resumed.
5. When installing anchors in existing concrete do not cut or damage existing reinforcing bars. Locate existing reinforcing bars with pachometer or x-ray if required.
6. The testing of the anchors shall be done by the Testing Laboratory and a report of the test results shall be submitted to the Building Dept. and Architect/Structural Engineer.
7. Anchors installed up into the bottom of metal deck with concrete fill shall be installed in the center of the low flute of the decking. The decking shall have a minimum thickness of 20 gauge. The minimum depth of embedment above the top of the deck shall be 1½". The effective depth of embedment is considered to be one-third of the metal deck height plus the depth of embedment above the top of the deck. There shall be a minimum concrete cover of 1" between the top surface of the concrete and the end of the bolt.

Normal Weight Concrete Anchors
f'c = 3000 psi
Hilti Kwik Bolt-TZ2 Expansion Anchors

Anchor Diameter	Embedment Effective/Nominal u.n.o.	Carbon Steel Anchors Installation Torque Torque Test Load (ft-lbs)	Stainless Steel Anchors Installation Torque Torque Test Load (ft-lbs)
⅜"	2" / 2½"	30	30
½"	3¼" / 3⅜"	50	40
⅝"	4" / 4½"	40	60
¾"	4⅜" / 5½"	110	125

Abbreviations

addl ..... Additional
alt ..... Alternate
AISC ..... American Institute of Steel Construction
APA ..... American Plywood Association
ASTM ..... American Society for Testing and Materials
AWS ..... American Welding Society
AB ..... Anchor bolt
& ..... And
arch ..... Architect/Architectural
@ ..... At
bo ..... Bottom of
bm ..... Beam
brg ..... Bearing
btr ..... Better
btwn ..... Between
blkg ..... Blocking
B.S. ..... Both sides
bott ..... Bottom
BN ..... Boundary nail
clg ..... Ceiling
cg ..... Center to center
℄ ..... Center line
clr ..... Clear
col ..... Column
CP ..... Complete Penetration
conc ..... Concrete
CMU ..... Concrete masonry unit
conn ..... Connection
CJ ..... Construction Joint
cont ..... Continuous
csk ..... Countersink
CTJ ..... Control Joint
DL ..... Dead Load
det ..... Detail
diag ..... Diagonal
dia ..... Diameter
do ..... Ditto
D.F. ..... Douglas Fir
dbl ..... Double
dn ..... Down
dwg ..... Drawing
eq ..... Each
EF ..... Each Face
embed ..... Embedment
EN ..... Edge Nail
EW ..... Each Way
elev, el ..... Elevation
eq ..... Equal
equip ..... Equipment
(e) ..... Existing
EJ ..... Expansion Joint
FC ..... Face of Concrete
FB ..... Face of Block
FM ..... Face of Masonry
FP ..... Face of Plywood/Sheathing
FS ..... Face of Stud
fin ..... Finish
F.F. ..... Finish Floor
F.G. ..... Finish grade
flr ..... Floor
ftg ..... Footing
fnd ..... Foundation
fc ..... Face of
frmg ..... Framing
galv ..... Galvanized
ga ..... Gauge
glb ..... Glued-laminated beam
gl. ..... Grid Line
hgr ..... Hanger
hdr ..... Header
ht ..... Height
HSB ..... High strength bolt
HSS ..... Hollow Steel Section
hk ..... Hook
horiz ..... Horizontal
I.d. ..... Inside diameter
int ..... Interior
inv ..... Inverted
jst ..... Joist
jh ..... Joist hanger
LS ..... Lag screw
LL ht. ..... Live load height
LL ..... Live Load
LLH ..... Long leg horizontal
LLV ..... Long leg vertical
LVL ..... Laminated Veneer Lumber
MB ..... Machine bolt
mfr ..... Manufacturer
max ..... Maximum
mech ..... Mechanical
MI ..... Malleable Iron
min ..... Minimum
misc ..... Miscellaneous
mtl. ..... Metal
N.I.C. ..... Not in contract
(N) ..... New
nts ..... Not to scale
..... Number or pounds
o/ ..... Over
oc ..... On center
OWJ ..... Open web joist
opng ..... Opening
opp ..... Opposite
O.H. ..... Opposite Hand
o.d. ..... Outside diameter
PP ..... Partial penetration
pc ..... piece
℗ ..... Plate
ply, plywd ..... Plywood
pcf ..... Pounds per cubic foot
psf ..... Pounds per square foot
psi ..... Pounds per square inch
PAF ..... Powder Actuated Fasteners
PTDF ..... Pressure Treated Douglas Fir
r, rad ..... Radius
REDWD ..... Redwood
reinf ..... Reinforcing
req'd ..... Required
rf ..... Roof
R.O. ..... Rough opening
ø ..... Round or diameter
sched ..... Schedule
S.A.D. ..... See architectural drawings
S.E.D. ..... See electrical drawings
S.M.D. ..... See mechanical drawings
SMS ..... Sheet Metal Screws
SDS ..... Simpson Strong-Drive Screw
SDSTS ..... Self drilling self tapping screw
SC ..... shear connector (⅜"ø u.n.o.)
shtg ..... Sheathing
sht ..... Sheet
SMS ..... Sheet metal screw
slm ..... Simpson
s.o.g. ..... Slab on grade
□ ..... square
stagg ..... Staggered
std ..... Standard
stl ..... Steel
sst ..... Stainless Steel
stfnr ..... Stiffener
struct ..... Structural
SP ..... structural plywood
SPEN ..... structural plywood nailing
symm ..... Symmetrical
TN ..... Toe nail
t.t.b ..... Top & bottom
t.o.c. ..... Top of concrete
t.o.f. ..... Top of framing
t.o.P. ..... Top of plate
t.o.s. ..... Top of Steel
t.o.n. ..... Top of Wall
t.&g ..... Tongue & Groove
TS ..... Tube Steel
typ ..... Typical
u.n.o. ..... Unless noted otherwise
vert. ..... Vertical
v.i.f. ..... Verify in field
w/ ..... With
w/in ..... Within
w/o ..... Without
WS ..... Wood screw
W.P. ..... Working point
WHS ..... Welded headed studs
WWF ..... Welded wire fabric
WCLIB ..... West Coast Lumber Inspection Bureau

Adhesive Anchor Notes - Concrete

1. Use Hilti HIT-HY 200 V3 Epoxy Adhesive Anchors as manufactured by Hilti, Inc., Tulsa, Oklahoma. ICC Report No. ESR-4868 Reissued November 2022.
2. Installation of anchors shall be in accordance with the manufacturer's recommendations, ICC report and these notes.
3. Special Inspection is required for Allowable Tension values indicated on plans or details.
4. Tension Test Load values are based on 80% of twice the tension values listed.
5. Allowable loads may be increased for duration of loads such as wind or seismic forces.
6. Each anchor type (loaded in either pullout or shear) shall have 50% of the anchors (alternate in each group arrangement) tested in tension to the tension loads shown in the plans. If any anchor fails testing, all anchors of the same type not previously tested shall be tested until 20 consecutive anchors pass, then resume the initial testing frequency.
7. When installing anchors in existing concrete do not cut or damage existing reinforcing bars.
8. The testing of the anchors shall be done by the Testing Laboratory and a report of the test results shall be submitted to Architect/Structural Engineer. Testing shall occur 24 hrs. minimum after the installation of the anchors.
9. Where the number of anchors of a specific size and type exceed 100, the following testing procedure may be used. The first 40 anchors shall be tested as specified in note 6 above. 10% of additional anchors shall be tested. Any failure shall be handled in the same manner as specified in note 6 above.
10. Anchors installed in metal deck with concrete shall be installed in the center of the low flute of the decking.

Test and Inspections

1. Tests and Inspections shall be provided as required below and shall conform to the requirements of the 2022 CBC, Chapter 17.
2. All Test and Inspections shall be performed by a certified special inspector from an established Testing & Inspection Company, unless noted otherwise. Jobsite visits by the Structural Engineer do not constitute inspections and are not a substitute for special inspection.
3. The special inspector shall observe the work indicated for conformance with the approved construction documents.
4. The special inspector shall furnish inspection reports to the building department, the engineer or architect of record, and other designated persons. All discrepancies shall be brought to the immediate attention of the contractor for correction, then, if uncorrected, to the proper design authority and to the building department.
5. The special inspector shall submit a final signed report stating whether the work requiring special inspection was, to the best of the inspector's knowledge, in conformance with the approved construction documents and the applicable workmanship provisions of the 2022 CBC.
6. It is the contractor's sole responsibility to see that these tests and inspections are performed.
7. Required Tests and Inspections are indicated below with a solid filled rectangle (■).
8. Continuous notation indicates the full-time observation of work requiring special inspection by an approved special inspector who is present at the work area. Periodic notation indicates the intermittent observation of work.

Tests & Documentation/Certification Required
Note: Coordinate with building department Test & Inspection form.

	Verification and Inspection	Continuous	Periodic
☐	A. Compact fill		
☐	B. Concrete mix design, cement, aggregates & admixtures		
☐	C. Concrete strength f'c test		
☐	D. Reinforcing steel mill certification		
■	E. Structural steel mill certification		
☐	F. Structural steel, cold formed steel, and anchor bolt sampling & testing (if not properly identified)		
☐	G. Non-destructive weld test for all complete penetration groove welds by Ultrasonic testing or Radiography		
☐	H. Masonry strength f'm		
☐	I. Masonry mortar, grout proportion, aggregates, additives		
■	J. Post installed anchors: Expansion / Epoxy Anchors		
☐	K. High strength bolts, nuts and washers		
☐	L. End-welded studs		
☐	M. Buckling Restrained Brace (Load Test)		
☐	N. Beam to column moment connection		
☐	O. Veneer bond strength test		
☐	P. Concrete prestressing tendons and anchorage		
☐	Q. Shotcrete preconstruction test		
☐	R. Shotcrete strength & core test		
☐	S. Prefabricated items		
☐	T. Test to support alternative designs		
☐	U. Isolator unit prototype & production testing		
	A. STEEL		
☐	1. Material verification of high-strength bolts, nuts & washers	○	●
☐	2. Inspection of high-strength bolting, bearing & typical connections	○	●
	3. Inspection of Welding Structural Steel: (Field/shop)		
☐	Complete & partial penetration groove welds	●	○
☐	Multi-pass fillet welds	●	○
☐	Single-pass fillet welds > ⅜ø"	●	○
■	Single-pass fillet welds ≤ ⅜ø"	○	●
■	Floor and roof deck welds	○	●
☐	4. Inspection of Steel Frame Joint Details for Compliance with Approved Construction Documents	○	●
☐	5. Automatic end-weld stud shear connectors	○	●
	B. CONCRETE		
☐	1. Concrete Placement	●	○
☐	2. Inspection of reinforcing steel & placement	○	●
☐	3. Inspection of anchors cast in concrete	○	●
☐	4. Precast concrete attachments & inserts	○	●
☐	5. Erection of precast concrete members	○	●
	C. WOOD		
☐	1. Verify grade and thickness of sheathing	○	●
☐	2. Verify nominal size of framing members at adjoining panel edges	○	●
☐	3. Verify nail diameter and length, number of fastener lines, spacing between fasteners in each line and at edge margins	○	●
☐	4. Verify positive connection of wood members supporting balcony or deck connections to exterior walls prior to concealment	○	●
	D. MASONRY PLACEMENT & GROUTING	○	●
	Note: refer to TMS 602-16 Tables 3 & 4		
☐	1. Level 2 masonry inspection (Risk Categories I, II, III)		
☐	2. Level 3 masonry inspection (Category IV, DSA, OSHPD)		
	E. SOIL (by Geotechnical Engineer)		
☐	1. Footing excavation	○	●
☐	2. Pile/Pier foundation	●	○
☐	3. Material verification below footing	○	●
☐	4. Excavation verification to proper depth	○	●
☐	5. Placement and compaction of controlled fill	●	○
☐	6. Site preparation prior to placement of controlled fill	○	●
	F. POST INSTALLED ANCHORS		
■	1. Expansion anchor installation	○	●
■	2. Epoxy anchor installation	●	○

PCOE GOLD IN EDUCATION

Revisions

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AGENCY APPROVAL

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HY Architects Project number: 6013

Facility
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Project
TENANT IMPROVEMENTS

Sheet Title
GENERAL NOTES

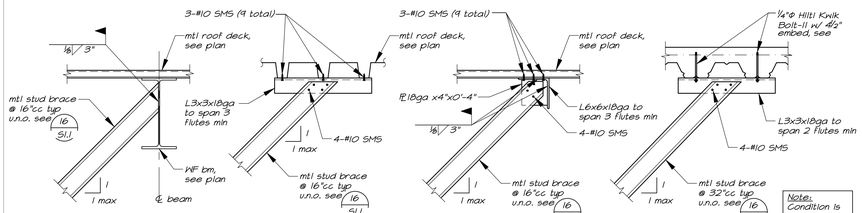
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Checked By: TB
Issue Date: July 21, 2023
Revit Version: 2023

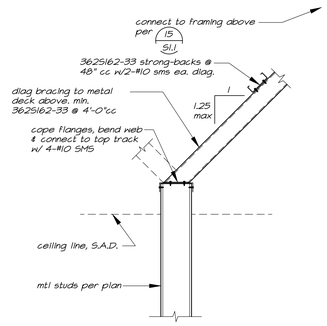
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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

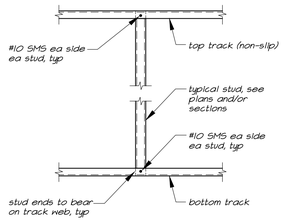
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15/S1.1 Typical Metal Stud Brace Connections

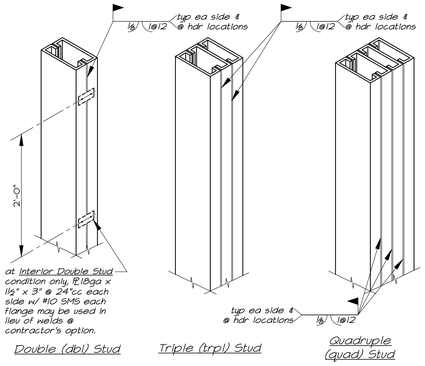


16/S1.1 Typical Bracing @ Top of Partition

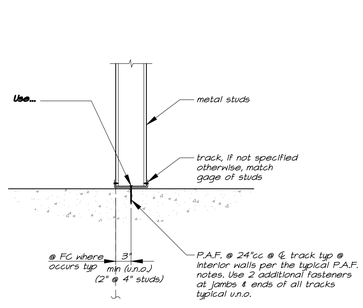


Note: Metal tracks shall be the same gauge as framing, unless noted otherwise, with a minimum flange width of 1¼".

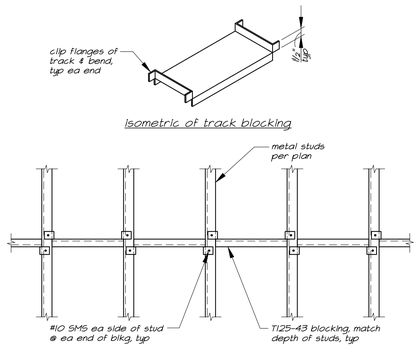
10/S1.1 Typical Stud to Track Connection



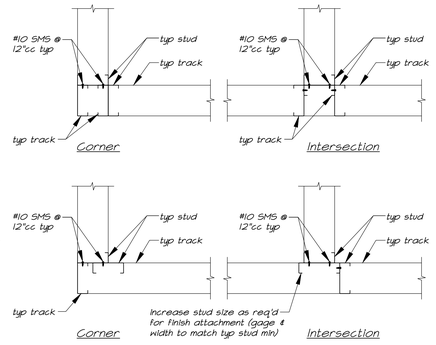
11/S1.1 Typ Multiple Stud Connection



12/S1.1 Typ Anchorage to Concrete



13/S1.1 Typical Blocking Elevation



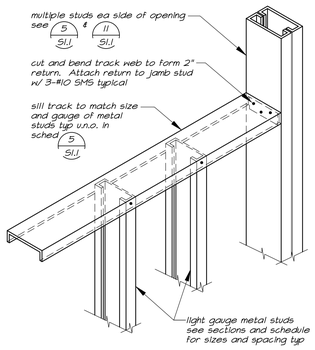
14/S1.1 Typical Wall Framing Plans

5/S1.1 Non-Bearing Wall Header Schedule

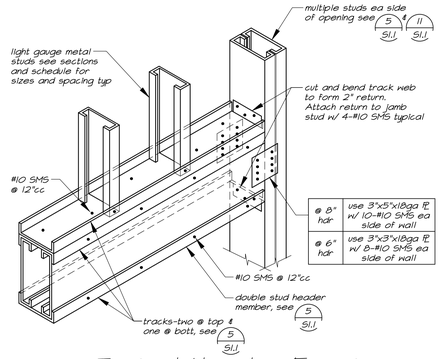
'H' Opening width max (or max width btwn diag braces)	Required jamb studs (11/S1.1)	Required hdr section (7/S1.1 typ uno)	Required sill section (6/S1.1)
4'-0" max (Intr walls)	600S137-43	600T150-54 ⌴	600T150-43
6'-0" max	dbl 600S137-43	dbl 800S137-43 w/ 600T125-43 t&b ⬚	600T150-43
9'-0" max	dbl 600S137-43	dbl 600S162-43 w/ 600T125-43 t&b ⬚	n/a
12'-0" max	dbl 600S162-43 (alt HSSAx4x¼)	dbl 800S162-43 w/ 600T125-68 t&b ⬚	n/a
over 12'-0" (see note #5)	dbl 600S137-43	dbl 800S137-43 w/ 600T125-43 t&b ⬚	n/a

Schedule Notes:

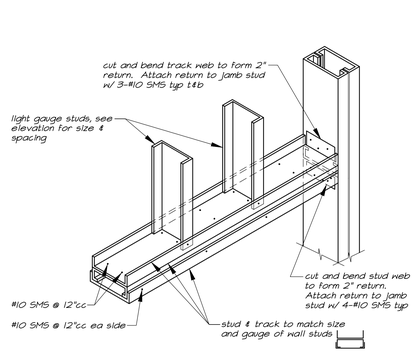
1. The requirements of this schedule shall govern unless specifically detailed or noted otherwise.
2. Metal stud section properties shall conform to the Steel Stud Manufacturer's Association Product Catalog (SSMA) as specified in the Lightgauge Steel notes.
3. All header members shall be un-punched.
4. At interior non-brg conditions, track width @ hdrs and sills shall match depth of studs as specified in the arch'l dwgs. Flange length & ga shall match table above.
5. At spans over 12'-0", provide diagonal bracing at headers/sills to structural framing @ 4'-0" cc max stn. ("H" = 4'-0" max @ these locations)
6. Maximum width shown in table is either the width between the jamb studs, or between diagonal bracing as shown in note #5 above (where diag bracing occurs).
7. Substitute 4" metal studs where occurs for openings 6'-0" max.



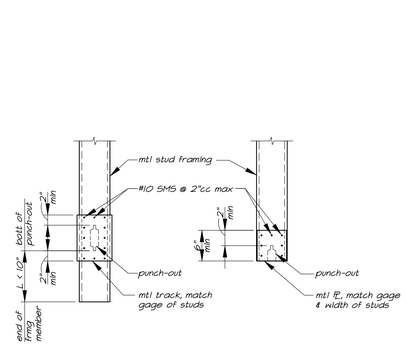
6/S1.1 Typical Sill Framing



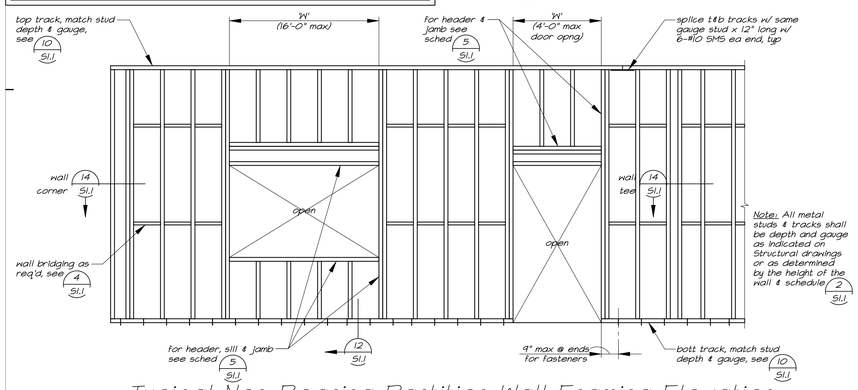
7/S1.1 Typical Header Framing



8/S1.1 Typical Header Framing



9/S1.1 Typ Stud Reinf @ Punch-Out



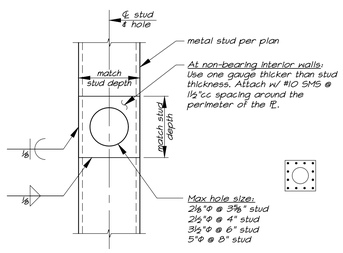
1/S1.1 Typical Non-Bearing Partition Wall Framing Elevation

Depth	Gage	Designation[3]	Height @ 16"cc	Height @ 24"cc
3⅝"	20	3625162-33	17'-1"	14'-11"
3⅝"	18	3625162-43	18'-7"	16'-3"
3⅝"	16	3625162-54	19'-11"	17'-5"
3⅝"	14	3625162-68	21'-4"	18'-7"
4"	20	4005162-33	18'-11"	16'-6"
4"	18	4005162-43	20'-7"	18'-0"
4"	16	4005162-54	22'-1"	19'-3"
4"	14	4005162-68	23'-8"	20'-8"
6"	20	6005162-33	26'-0"	22'-8"
6"	18	6005162-43	28'-4"	24'-9"
6"	16	6005162-54	30'-4"	26'-6"
6"	14	6005162-68	32'-7"	28'-5"
8"	18	8005162-43	35'-8"	31'-1"
8"	16	8005162-54	38'-4"	33'-6"
8"	14	8005162-68	41'-1"	35'-11"

Notes:
1. Studs shall be depth as indicated on Arch drawings and gauge as determined by height of wall and the schedule above.
2. For typical wall framing conditions, see elevation 1/S1.1
3. Designation conforms to Steel Stud Manufacturers Association standards.

2/S1.1 Interior Metal Stud Partitions

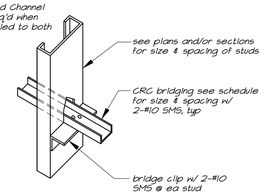
Maximum Height for Metal Studs with Deflection Limit L/240 | Non Bearing



3/S1.1 Typical Penetration Through Metal Stud

Bridging in Punch-Outs		
Stud Size	Bridging Member	Bridge Clip
3½"-8"	CRC-1½"x16ga @ 4'-0"cc max	1½"x2"x16ga x length to be ¼" less than stud width LLH typ

Notes:
1. CRC = Cold Rolled Channel
2. Bridging is not req'd when gyp board is applied to both sides of the wall



4/S1.1 Typical Stud Bridging

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Project
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Sheet Title
TYPICAL DETAILS

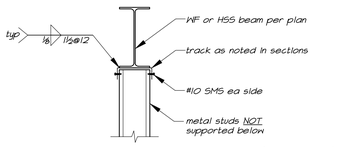
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Drawn By: KK
Checked By: TB
Issue Date: July 21, 2023
Revit Version: 2023

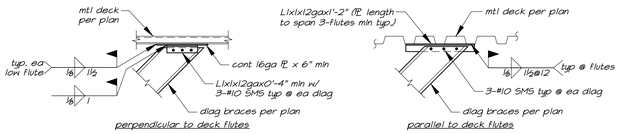
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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

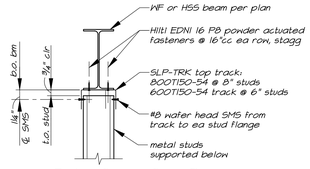
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Typical Stud to Steel Beam Connection (Suspended)

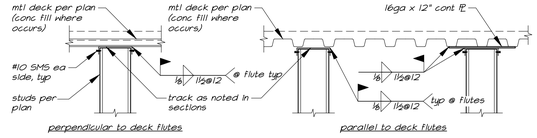


Diagonal Bracing to Metal Deck



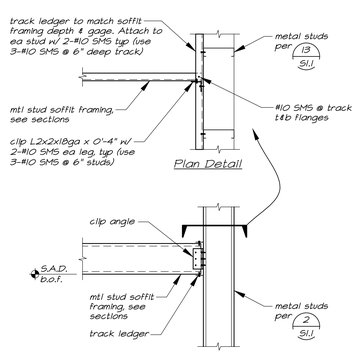
Typical Stud to Steel Beam Connection (Slip Track)

5 / S1.2 Detail — stud to beam

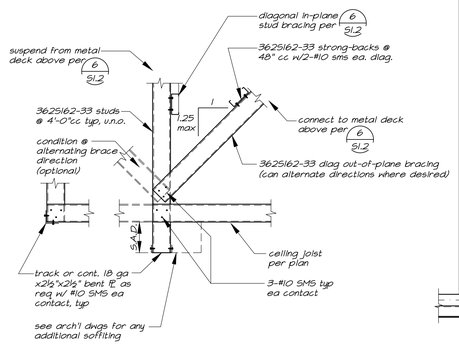


Typical Stud to Metal Deck Connection (Suspended)

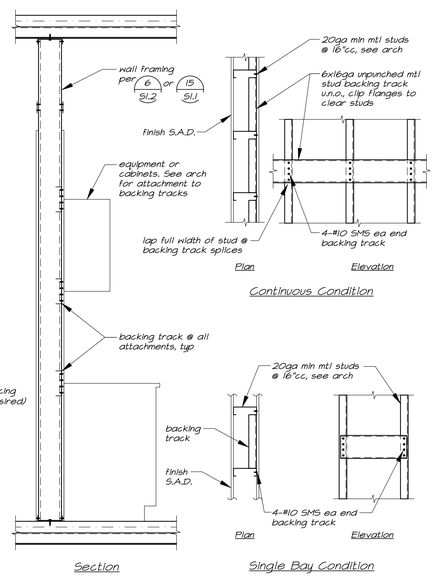
6 / S1.2 Detail — stud to metal deck



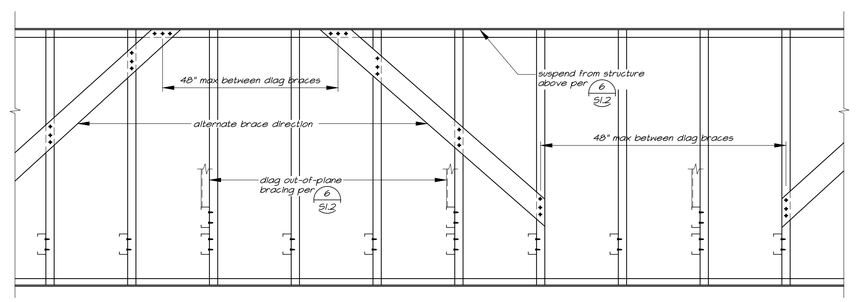
1 / S1.2 Typical Soffit Joist Support



2 / S1.2 Typical Hanging Soffit



3 / S1.2 Typical Backing



4 / S1.2 Typical Diagonal In-Plane Bracing @ Suspended Studs

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Project
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Sheet Title
TYPICAL DETAILS

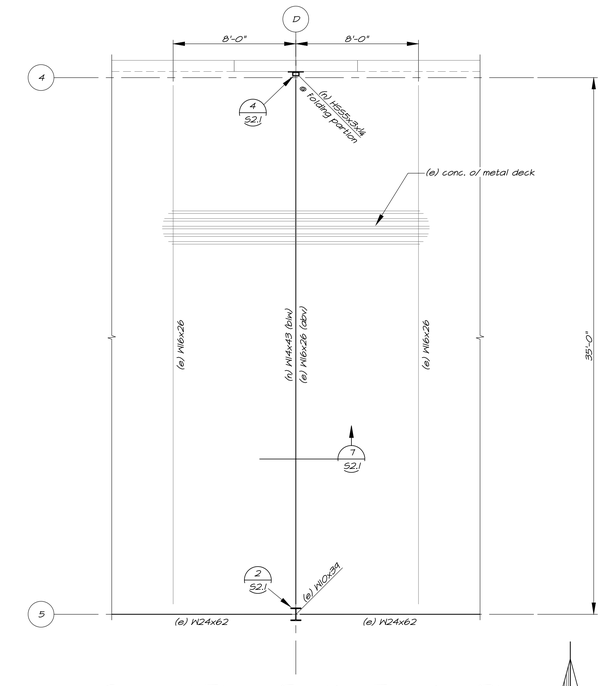
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Issue Date: July 21, 2023
Revit Version: 2023

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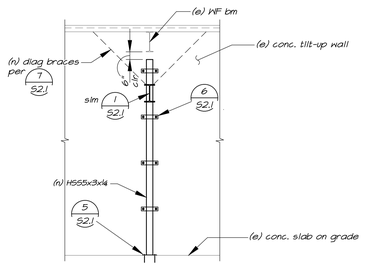
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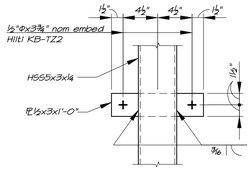


A S2.1 Second Floor Partial Framing Plan
¼"=1'-0"

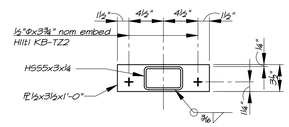
North



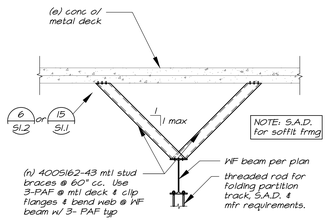
4 S2.1 Elevation
¼"=1'-0"



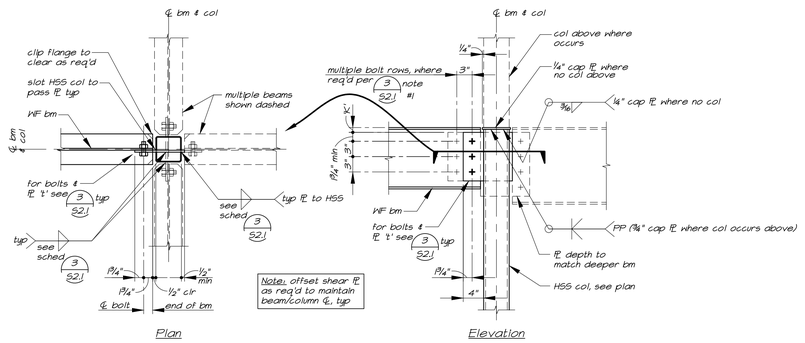
6 S2.1 Detail
1½"=1'-0"



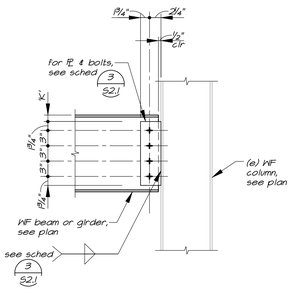
5 S2.1 Detail
1½"=1'-0"



7 S2.1 Detail
1/2"=1'-0"



1 S2.1 Beam to Column Connection
1"=1'-0" one or multiple sides



2 S2.1 Bm to WF Col Conn
1"=1'-0" column flange

bm size	No. & Dia. A325-N Bolts per row, n x ø	shear PL thickness	¼ W
C6, C8 & C10	2 - ⅞"ø	¼"	¼"
MC8 & MC10	2 - ⅞"ø	¼"	¼"
WT2 & WT4	3 - ⅞"ø	⅝"	¼"
W16	4 - ⅞"ø	⅜"	¼"
W18	5 - ⅞"ø	⅜"	¼"
W21	5 - ⅞"ø	⅜"	⅜"
W24	6 - ⅞"ø	½"	⅜"
W27	7 - ⅞"ø	½"	⅜"
W30	7 -1⅛"ø	½"	⅜"
W33	8 - ⅞"ø	½"	⅜"

Note:
1. Use A325-N bolts at connections, typ. A325 SC group A bolts are to be used at specific locations as indicated on framing plans. Use multiple rows of no. & dia. shown in schedule to achieve total number of bolts specified on plans. All slip critical connections shall have full-depth shear plates.

3 S2.1 Connection Schedule
n.t.s.

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Project
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Sheet Title
SECOND FLOOR PARTIAL FRAMING PLAN & DETAILS

Client Project Number: N/A

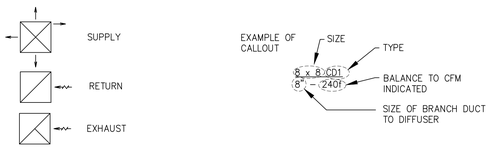
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DIFFUSER, REGISTER, & GRILLE SCHEDULE



SYMBOL	DESCRIPTION SHALL BE EQUAL TO:
CD1	CEILING DIFFUSER – 1 "TITUS" MODEL MCD, MODULAR CORE, STEEL CONSTRUCTION, FRAME TYPE 3 FOR T–BAR INSTALLATION. DIFFUSER, SIZE AND BLOW PATTERN AS INDICATED ON DRAWINGS. WHITE FINISH.
CD2	CEILING DIFFUSER – 2 "TITUS" MODEL MCD, MODULAR CORE, STEEL CONSTRUCTION, FRAME TYPE 1 FOR SURFACE MOUNTING. DIFFUSER, SIZE AND BLOW PATTERN AS INDICATED ON DRAWINGS. WHITE FINISH.
R1	RETURN REGISTER – 1 "TITUS" MODEL 50F, ½"x½"x1" EGG–CRATE GRID, ALUMINUM CONSTRUCTION, FRAME TYPE 3 FOR T–BAR INSTALLATION, WHITE PAINT, SIZE AS INDICATED ON DRAWINGS.
R2	RETURN REGISTER – 2 "TITUS" MODEL 50F, ½"x½"x1" EGG–CRATE GRID, ALUMINUM CONSTRUCTION, FRAME TYPE 1 FOR SURFACE MOUNTING, WHITE PAINT, SIZE AS INDICATED ON DRAWINGS.
ER1	EXHAUST REGISTER – 1 SAME AS R1
ER2	EXHAUST REGISTER – 2 SAME AS R2
LD1	LINER DIFFUSER – 1 "TITUS" MODEL FL, 1.5" SLOT WIDTH, 2 SLOTS, HIGHTHROW (HORIZONTAL AIRFLOW) WITH TITUS PLENUM. LENGH AS INDICATED ON DRAWINGS.

COMPLIANCE NOTES

MECHANICAL AND PLUMBING EQUIPMENT SHALL CONFORM TO THE FOLLOWING AS STATED IN THE ENERGY EFFICIENCY STANDARDS, 2022.

1. BE CERTIFIED BY THE MANUFACTURER AS COMPLYING WITH THE EFFICIENCY REQUIREMENTS AS PRESCRIBED IN SECTIONS:

110.1 APPLIANCES REGULATED BY THE APPLIANCE EFFICIENCY STANDARDS:
110.2 HVAC EQUIPMENT EFFICIENCY AND PACKAGED CONTROLS:
110.3 SERVICE WATER HEATING EFFICIENCY AND CONTROLS:
110.4 POOL AND SPA HEATING EFFICIENCY AND CONTROLS:
110.5 RESTRICTIONS ON PILOT LIGHTS:

2. BE SPECIFIED AND INSTALLED IN ACCORDANCE WITH SECTIONS.

120.1 REQUIREMENTS FOR VENTILATION:
120.2 REQUIRED CONTROLS FOR HVAC SYSTEMS:
120.2 (H) DEMAND SHED CONTROLS.
120.2 (I) ECONOMIZER FAULT DETECTION & DIAGNOSTIC.
120.3 REQUIREMENTS FOR PIPE INSULATION:
120.4 REQUIREMENTS FOR DUCT INSULATION:

MECHANICAL ABBREVIATIONS

AAV	AUTOMATIC AIR VENT
ABV	ABOVE
AB.C, OH	ABOVE CEILING, OVERHEAD
AC	AIR CONDITIONING
AD	ACCESS DOOR
ADA	AMERICANS W/ DISABILITIES ACT
AE	AIR EXTRACTOR
AFF	ABOVE FINISHED FLOOR
AL	ACOUSTICALLY LINED
AHU	AIR HANDLING UNIT
APD	AIR PRESSURE DROP
BHP	BRAKE HORSEPOWER
BOD	BOTTOM OF DUCT
BR	BRANCH
BTU	BRITISH THERMAL UNIT
BTUH	BTU PER HOUR
CAV	CONSTANT AIR VOLUME
CD	CONDENSATE DRAIN
CFM, f	CUBIC FEET OF AIR PER MINUTE
CFS	CUBIC FEET PER SECOND
CL	CENTERLINE
CO	CLEANOUT
CONC.	CONCRETE
CONN.	CONNECT
CR	CONDENSATE RETURN (STEAM)
CS	CURRENT SENSOR
CU	CONDENSING UNIT
CU FT	CUBIC FEET
CU IN	CUBIC INCHES
CVB	CONSTANT VOLUME BOX
CW	COLD WATER
DB	DRY BULB
DF	DOUGLAS FIR
DIA, ø	DIAMETER
DSP	DUCT STATIC PRESSURE SENSOR
EA, OA, RA, SA	EXHAUST, OUTSIDE, RETURN & SUPPLY AIR
E.C.	ELECTRICAL CONTRACTOR
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
FA	FACE AREA (SQUARE FEET)
FC	FLEXIBLE CONNECTION
FLA	FULL LOAD AMPS
FPI	FINS PER INCH
FPM	FEET PER MINUTE
GALV.	GALVANIZED
GA	GAUGE
GC	GENERAL CONTRACTOR
HP	HORSE POWER
HWS	HOT WATER SUPPLY
HWR	HOT WATER RETURN
HZ	FREQUENCY (HERTZ)
LBS	POUNDS
LRA	LOCKED ROTOR AMPS
LWT	LEAVING WATER TEMPERATURE
MAV	MANUAL AIR VENT
MAX	MAXIMUM
MBH	BTU PER HOUR (THOUSAND)
MC	MECHANICAL CONTRACTOR
MIN	MINIMUM
MPS	MEDIUM PRESSURE STEAM
(N) (E)	NEW, EXISTING
N.C.	NORMALLY CLOSED
NEG	NEGATIVE
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OP	OPERATING
PH	PHASE
POC	POINT OF CONNECTION
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TREATED
PTDF	PRESSURE TREATED DOUGLAS FIR
P&TRV	PRESSURE & TEMPERATURE RELIEF VALVE
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
(R) (D)	RISE, DROP
RD, OFL	ROOF DRAIN, OVERFLOW
REF	ROOF EXHAUST FAN
REQ'D	REQUIRED
RL	REFRIGERANT LIQUID
RPM	REVOLUTIONS PER MINUTE
RS	REFRIGERANT SUCTION,
SM	SHEET METAL
SMS	SHEET METAL SCREWS
ST SMS	SELF TAPPING SHEET METAL SCREW
SOV	SHUT OFF VALVE
SS	STAINLESS STEEL
STL	STEEL
TA, FA	TO ABOVE, FROM ABOVE
TB, FB	TO BELOW, FROM BELOW
TBR	TO BE REMOVED
TCC	TEMPERATURE CONTROL CONTRACTOR
TCP	TEMPERATURE CONTROL PANEL
THK	THICK
TR	TO REMAIN
TSP	TOTAL STATIC PRESSURE
TV	TURNING VANES
TYP	TYPICAL
UG, UF	UNDERGROUND, UNDERFLOOR
UON	UNLESS OTHERWISE NOTED
UTR	UP THROUGH ROOF
VAC	VOLTS ALTERNATING CURRENT
VFD	VARIABLE FREQUENCY DRIVE
WB	WET BULB
WG	WATER GAUGE
WOG	WATER OIL GAS PRESSURE RATING
WP	WATER PRESSURE
WPD	WATER PRESSURE DROP
WT, AT	WATERTIGHT, AIRTIGHT

APPLICABLE CODES

CODES:

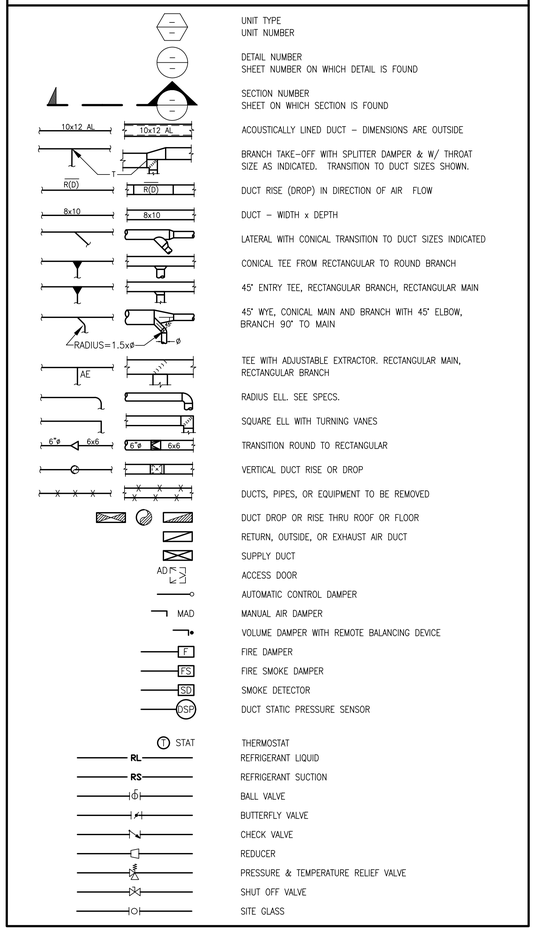
ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE REGULATIONS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

A) STATE OF CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, BUILDING STANDARDS:

2022 EDITION OF THE CALIFORNIA BUILDING CODE.
2022 EDITION OF THE CALIFORNIA ELECTRICAL CODE.
2022 EDITION OF THE CALIFORNIA MECHANICAL CODE.
2022 EDITION OF THE CALIFORNIA PLUMBING CODE.
2022 EDITION OF THE CALIFORNIA ENERGY CODE.

B) NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) LIFE SAFETY CODE, CR.

MECHANICAL LEGEND



EXISTING MECHANICAL EQUIPMENT SCHDULE

(E) AC 1 — ENERGY LABS CUSTOM DUAL FAN, DUAL DUCT CHANGOVER SYSTEM. COOLING ONLY SECTION 33,500 CFM @ 2.0 ESP, 46.97 BHP, 50 HP, COOLING ONLY SUPPLY FAN W/ VFD, CAPACITY 160 TONS, SENSIBLE 1,728 MBH. ACCESSORIES: 100% ECONOMIZER, ENERGY RECOVERY HEATWHEEL.
FACTORY HEATING/COOLING SECTION 13,500 CFM @1.75 ESP, 18.13 BHP, 20 HP COOLING/HEATING SUPPLY FAN W/ VFD. CAPACITY 50 TONS, SENSIBLE 540 MBH. NATURAL GAS INPUT/OUTPUT 800/600 MBH. ACCESSORIES: EVAPORATIVE CONDENSING, ROOF CURB, SINGLE POINT ELE. CONNECTION W/ NON–FUSED DISCONNCT. POWER 460V/3ø/60HZ, MCA 503.1, MOP 600. WEIGHT 50,000 LBS. EER10.7, AFUE 80%. OSA SET TO 10,500 CFM. SMOKE DETECTOR IN SUPPLY AIR FAN SYSTEM.

(E) REF 1 — GREENHECK ROOF EXHAUST FAN, MODEL GB–200–15, 4740 CFM @ 1.0 SP, 1½ HP, 460V/3ø/60Hz, ACCESSORY: ROOF CURB, GRAVITY BACK DRAFT DAMPER, DISCONNECT SWITCH.

NEW NOTES

1. INFORMATION LISTED ABOVE ARE FROM RECORD DRAWINGS. EQUIPMENT TO BE REUSED AND REBALANCED TO NEW PROPOSED CFM.

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Revisions

Delta	Date	Revisions	By

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CONSTRUCTION DOCUMENTS

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REGISTERED PROFESSIONAL ENGINEER — JEFFREY W. THOMPSON — No. M–028567 Exp. 6/30/2025 — MECHANICAL — STATE OF CALIFORNIA

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HY Architects Project number: 6013

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Project
TENANT IMPROVEMENTS

Sheet Title
MECHANICAL LEGEND, NOTES AND SCHEDULES

Client Project Number: N/A

Scale:	As indicated
Drawn By:	TURLEY
Checked By:	TURLEY
Issue Date:	July 21, 2023

Sheet **M0.01**

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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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VAV BOX SCHEDULE (2nd FLOOR WEST)

SYMBOL	MANUFACTURER	MODEL	INLET SIZE	MAX. COOLING CFM	MAX. HEATING CFM	MIN. CFM	MAX. APD (IN. WG.)	UNIT WEIGHT	TYPE	REMARKS
(E) VAV 201	TITUS	ESV-1000	8	800	600	300	--	--	SINGLE DUCT W/10KW ELEC HEATER	(E)VAV BOX
(E) VAV 202	ENVIRO-TEC	SGX	6	300	130	100	--	--	DOUBLE DUCT	(E)VAV BOX
(E) VAV 203	ENVIRO-TEC	SGX	6	400	140	120	--	--	DOUBLE DUCT	(E)VAV BOX
(E) VAV 204	ENVIRO-TEC	SGX	6	285	170	60	--	--	DOUBLE DUCT	(E)VAV BOX
(E) VAV 205	ENVIRO-TEC	SGX	8	540	315	140	--	--	DOUBLE DUCT	(E)VAV BOX
(E) VAV 206	ENVIRO-TEC	SGX	8	720	420	200	--	--	DOUBLE DUCT	(E)VAV BOX
(E) VAV 207	ENVIRO-TEC	SGX	6	175	105	40	--	--	DOUBLE DUCT	(E)VAV BOX
(E) VAV 208	ENVIRO-TEC	SGX	6	230	180	40	--	--	DOUBLE DUCT	(E)VAV BOX
(E) VAV 209	ENVIRO-TEC	SGX	6	240	180	40	--	--	DOUBLE DUCT	(E)VAV BOX
(N) VAV 210	TITUS	DEDV	12	800	600	220	--	80	DOUBLE DUCT	(N)VAV BOX
(N) VAV 211	TITUS	DEDV	12	750	550	200	--	80	DOUBLE DUCT	(N)VAV BOX
(E) VAV 212	ENVIRO-TEC	SGX	10	750	540	120	--	--	DOUBLE DUCT	(E)VAV BOX
(E) VAV 213	ENVIRO-TEC	SGX	6	380	-	100	--	--	SINGLE DUCT W/O HEATING	(E)VAV BOX
(E) VAV 214	ENVIRO-TEC	SGX	8	480	-	140	--	--	SINGLE DUCT W/O HEATING	(E)VAV BOX
(E) VAV 215	ENVIRO-TEC	SGX	8	720	-	200	--	--	SINGLE DUCT W/O HEATING	(E)VAV BOX
(E) VAV 216	ENVIRO-TEC	SGX	6	430	-	120	--	--	SINGLE DUCT W/O HEATING	(E)VAV BOX
(E) VAV 217	ENVIRO-TEC	SGX	10	800	-	220	--	--	SINGLE DUCT W/O HEATING	(E)VAV BOX
(E) VAV 218	ENVIRO-TEC	SGX	6	400	-	100	--	--	SINGLE DUCT W/O HEATING	(E)VAV BOX
(E) VAV 219	ENVIRO-TEC	SGX	6	400	-	100	--	--	SINGLE DUCT W/O HEATING	(E)VAV BOX
(E) VAV 220	ENVIRO-TEC	SGX	8	500	-	80	--	--	SINGLE DUCT W/O HEATING	(E)VAV BOX
(E) VAV 221	ENVIRO-TEC	SGX	8	720	-	200	--	--	SINGLE DUCT W/O HEATING	(E)VAV BOX
(E) VAV 222	ENVIRO-TEC	SGX	8	650	-	180	--	--	SINGLE DUCT W/O HEATING	(E)VAV BOX
(E) VAV 223	ENVIRO-TEC	SGX	8	225	-	50	--	--	SINGLE DUCT W/O HEATING	(E)VAV BOX
(E) VAV 224	ENVIRO-TEC	SGX	8	600	-	200	--	--	SINGLE DUCT W/O HEATING	(E)VAV BOX
(E) VAV 225	ENVIRO-TEC	SGX	8	600	-	200	--	--	SINGLE DUCT W/O HEATING	(E)VAV BOX
(E) VAV 226	ENVIRO-TEC	SGX	6	300	-	80	--	--	SINGLE DUCT W/O HEATING	(E)VAV BOX

VAV BOX SCHEDULE (1st FLOOR WEST)

SYMBOL	MANUFACTURER	MODEL	INLET SIZE	MAX. COOLING CFM	MAX. HEATING CFM	MIN. CFM	MAX. APD (IN. WG.)	UNIT WEIGHT	TYPE	REMARKS
(E) VAV 101	TITUS	ESV-1000	8	800	600	300	--	--	SINGLE DUCT W/10KW ELEC HEATER	(E)VAV BOX
(E) VAV 102	ENVIRO-TEC	SGX	6	230	200	60	--	--	DOUBLE DUCT	(E)VAV BOX
(E) VAV 103	ENVIRO-TEC	SGX	8	500	200	120	--	--	DOUBLE DUCT	(E)VAV BOX
(N) VAV 104A	TITUS	DEDV	12	1000	600	300	--	80	DOUBLE DUCT	(N)VAV BOX
(N) VAV 104B	TITUS	DEDV	10	900	550	270	--	70	DOUBLE DUCT	(N)VAV BOX
(E) VAV 105	ENVIRO-TEC	SGX	6	300	200	90	--	--	DOUBLE DUCT	(E)VAV BOX
(N) VAV 106	TITUS	DEDV	12	1300	800	360	--	80	DOUBLE DUCT	(N)VAV BOX
(N) VAV 107	TITUS	DEDV	12	1350	850	400	--	80	DOUBLE DUCT	(N)VAV BOX
(N) VAV 108	TITUS	DEDV	8	580	400	175	--	60	DOUBLE DUCT	(N)VAV BOX
(E) VAV 109	ENVIRO-TEC	SGX	8	520	440	120	--	--	DOUBLE DUCT	(E)VAV BOX
(E) VAV 110	ENVIRO-TEC	SGX	8	360	280	100	--	--	DOUBLE DUCT	(E)VAV BOX
(E) VAV 111	ENVIRO-TEC	SGX	8	425	-	110	--	--	SINGLE DUCT W/O HEATING	(E)VAV BOX
(N) VAV 112	TITUS	DEDV	10	650	500	180	--	70	DOUBLE DUCT	(N)VAV BOX
(E) VAV 113	ENVIRO-TEC	SGX	6	300	-	80	--	--	SINGLE DUCT W/O HEATING	(E)VAV BOX
(E) VAV 114	ENVIRO-TEC	SGX	6	300	-	80	--	--	SINGLE DUCT W/O HEATING	(E)VAV BOX
(E) VAV 115	ENVIRO-TEC	SGX	6	300	-	80	--	--	SINGLE DUCT W/O HEATING	(E)VAV BOX
(E) VAV 116	ENVIRO-TEC	SGX	6	300	-	80	--	--	SINGLE DUCT W/O HEATING	(E)VAV BOX
(E) VAV 117	ENVIRO-TEC	SGX	6	320	-	100	--	--	SINGLE DUCT W/O HEATING	(E)VAV BOX
(E) VAV 118	ENVIRO-TEC	SGX	8	720	-	150	--	--	SINGLE DUCT W/O HEATING	(E)VAV BOX
(E) VAV 119	ENVIRO-TEC	SGX	8	720	-	150	--	--	SINGLE DUCT W/O HEATING	(E)VAV BOX
(N) VAV 120A	TITUS	DESV	10	800	-	250	--	30	SINGLE DUCT W/O HEATING	(N)VAV BOX
(N) VAV 120B	TITUS	DESV	10	750	-	220	--	30	SINGLE DUCT W/O HEATING	(N)VAV BOX
(N) VAV 121	TITUS	DESV	6	200	-	50	--	25	SINGLE DUCT W/O HEATING	(N)VAV BOX
(E) VAV 122	ENVIRO-TEC	SGX	6	275	-	75	--	--	SINGLE DUCT W/O HEATING	(E)VAV BOX
(N) VAV 123	TITUS	DESV	6	200	-	50	--	25	SINGLE DUCT W/O HEATING	(N)VAV BOX

VAV BOX SCHEDULE (1st FLOOR EAST)

SYMBOL	MANUFACTURER	MODEL	INLET SIZE	MAX. CFM	MIN HEATING CFM	MIN COOLING CFM	COIL ROWS	GPM	EWT/LWT	MAX. WPD	MBH	LAT	VALVE (TYPE)	MAX. APD (IN. WG.)	UNIT WEIGHT	TYPE	REMARKS
(E) VAV 2-1	TITUS	ESV-3000	12	1530	-	615	--	--	--	--	--	--	--	--	--	SINGLE DUCT W/O HEATING COIL	(E)VAV BOX
(E) VAV 2-2	TITUS	ESV-3000	10	1170	350	470	2	1.5	180/150	--	15.1	--	2-WAY	--	--	SINGLE DUCT W/ HEATING COIL	(E)VAV BOX
(E) VAV 2-3	TITUS	ESV-3000	10	795	240	320	2	1.0	180/150	--	10.4	--	2-WAY	--	--	SINGLE DUCT W/ HEATING COIL	(E)VAV BOX
(N) VAV 2-4	TITUS	DESV	10	700	180	250	2	1.0	180/150	--	10.1	--	2-WAY	--	--	SINGLE DUCT W/ HEATING COIL	(N)VAV BOX
(E) VAV 2-5	TITUS	ESV-3000	12	1400	-	560	--	--	--	--	--	--	--	--	--	SINGLE DUCT W/O HEATING COIL	(N)VAV BOX
(E) VAV 2-6	TITUS	ESV-3000	8	475	145	190	2	0.6	180/150	--	6.0	--	2-WAY	--	--	SINGLE DUCT W/ HEATING COIL	(E)VAV BOX
(E) VAV 2-7	TITUS	ESV-3000	6	400	-	160	--	--	--	--	--	--	--	--	--	SINGLE DUCT W/O HEATING COIL	(N)VAV BOX
(E) VAV 2-8	TITUS	ESV-3000	8	710	215	285	2	0.9	180/150	--	9.1	--	2-WAY	--	--	SINGLE DUCT W/ HEATING COIL	(N)VAV BOX
(E) VAV 2-9	TITUS	ESV-3000	10	1060	-	425	--	--	--	--	--	--	--	--	--	SINGLE DUCT W/O HEATING COIL	(N)VAV BOX
(E) VAV 2-10	TITUS	ESV-3000	8	600	180	240	2	0.8	180/150	--	7.8	--	2-WAY	--	--	SINGLE DUCT W/ HEATING COIL	(E)VAV BOX
(E) VAV 2-11	TITUS	ESV-3000	10	850	255	340	2	1.1	180/150	--	11.2	--	2-WAY	--	--	SINGLE DUCT W/ HEATING COIL	(E)VAV BOX
(E) VAV 2-12	TITUS	ESV-3000	10	745	255	300	2	1.0	180/150	--	9.5	--	2-WAY	--	--	SINGLE DUCT W/ HEATING COIL	(E)VAV BOX
(E) VAV 2-13	TITUS	ESV-3000	10	1270	-	510	--	--	--	--	--	--	--	--	--	SINGLE DUCT W/O HEATING COIL	(N)VAV BOX
(E) VAV 2-14	TITUS	ESV-3000	8	580	-	235	--	--	--	--	--	--	--	--	--	SINGLE DUCT W/O HEATING COIL	(E)VAV BOX
(E) VAV 2-15	TITUS	ESV-3000	10	805	-	325	--	--	--	--	--	--	--	--	--	SINGLE DUCT W/O HEATING COIL	(E)VAV BOX
(N) VAV 2-4	TITUS	DESV	8	400	100	120	2	0.5	180/150	--	5.5	--	2-WAY	--	--	SINGLE DUCT W/ HEATING COIL	(S)VAV BOX

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Revisions

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Project Manager:	JT	Plot Date: Jul 22, 2023 - 1:49am	
Project Drafter:	-	Login: GYang	

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HY Architects Project number: 6013

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Project

TENANT IMPROVEMENTS

Sheet Title

MECHANICAL SCHEDULES

Client Project Number: N/A

Scale: As indicated
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Issue Date: July 21, 2023

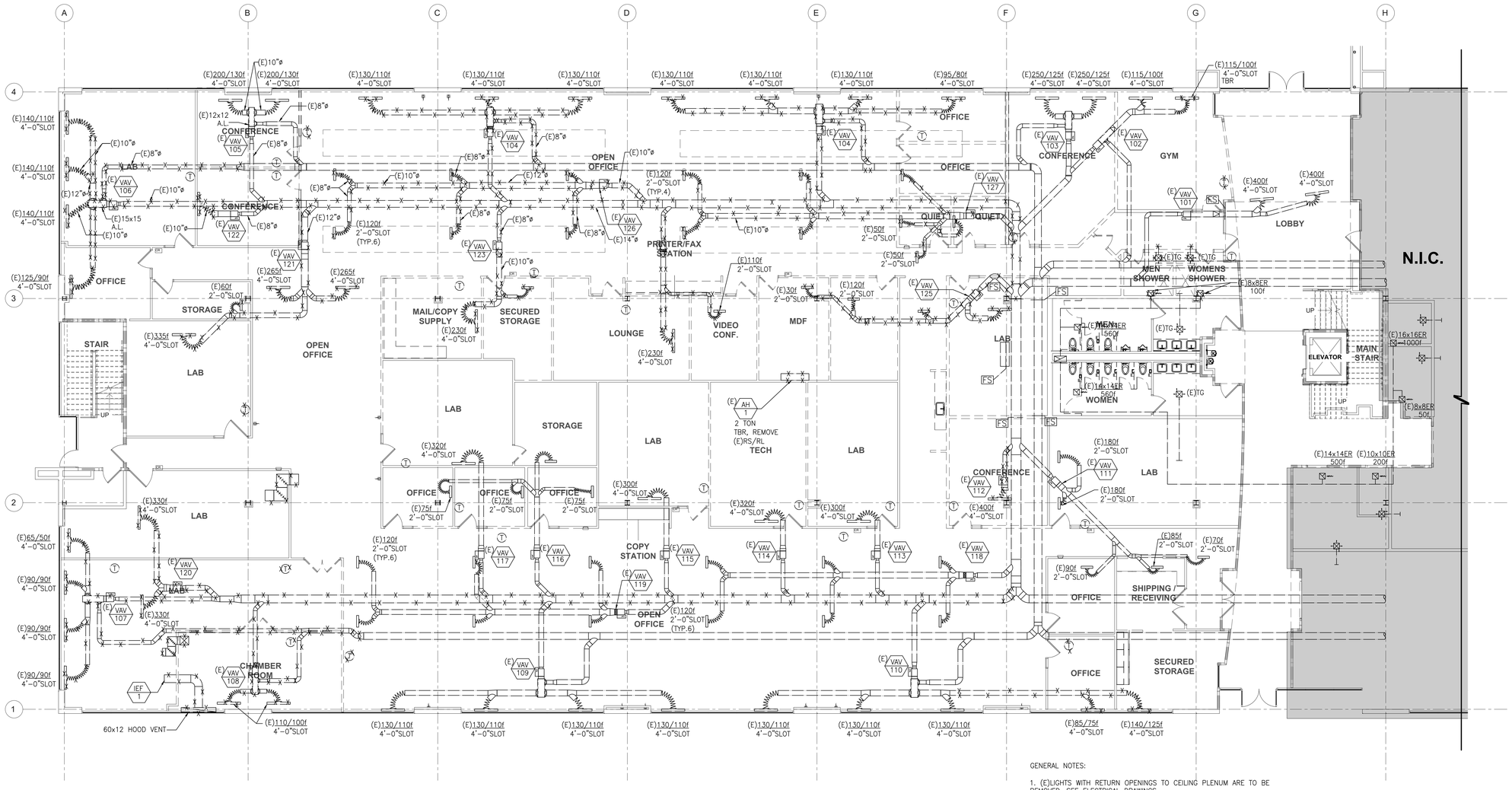
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MECHANICAL FIRST FLOOR PARTIAL DEMOLITION FLOOR PLAN – WEST

A

SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. (E)LIGHTS WITH RETURN OPENINGS TO CEILING PLENUM ARE TO BE REMOVED, SEE ELECTRICAL DRAWINGS.

2. CFM'S LISTED ON THE PLAN ARE FROM RECORD DRAWINGS AND ARE FOR REFERENCE ONLY.

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Project Manager:	JT	Plot Date:	Jul 22, 2023 - 1:45pm
Project Drafter:		Login:	QYang

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Project

TENANT IMPROVEMENTS

Sheet Title

MECHANICAL FIRST FLOOR PARTIAL DEMOLITION PLAN - WEST

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Issue Date: July 21, 2023

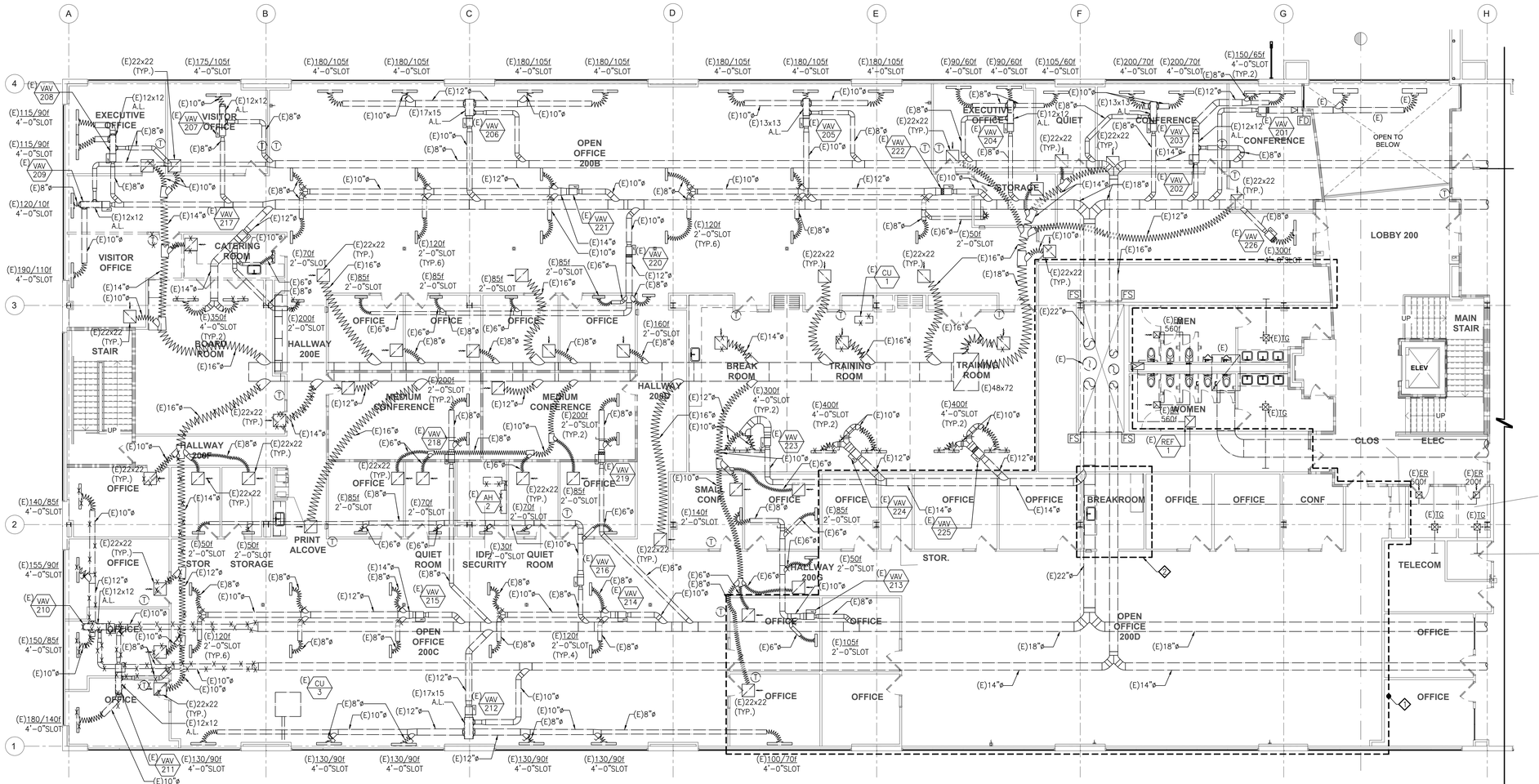
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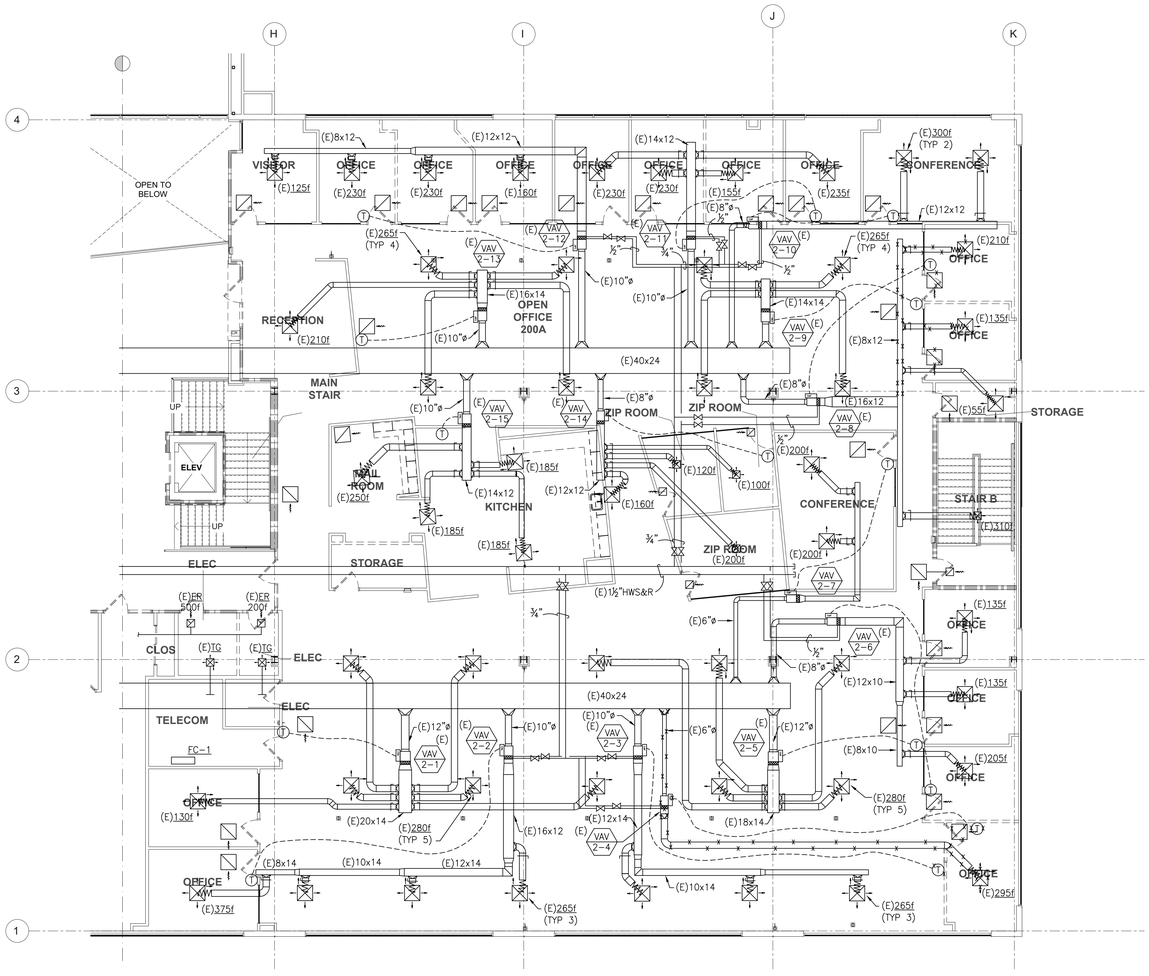
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EXECUTIVE OFFICE
VISITOR OFFICE
CATERING ROOM
VISITOR OFFICE
BOARD ROOM
STAIR
OFFICE
HALLWAY 200F
PRINT ALCOVE
STOR
STORAGE
OFFICE
OFFICE
OFFIC

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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MECHANICAL SECOND FLOOR PARTIAL DEMOLITION FLOOR PLAN – EAST

A

SCALE: 1/8" = 1'–0"

GENERAL NOTES:

1. CFM'S LISTED ON THE PLAN ARE FROM RECORD DRAWINGS AND ARE FOR REFERENCE ONLY.

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Project Manager:	JT	Plot Date: Jul 22, 2023 - 1:49pm	
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Project

TENANT IMPROVEMENTS

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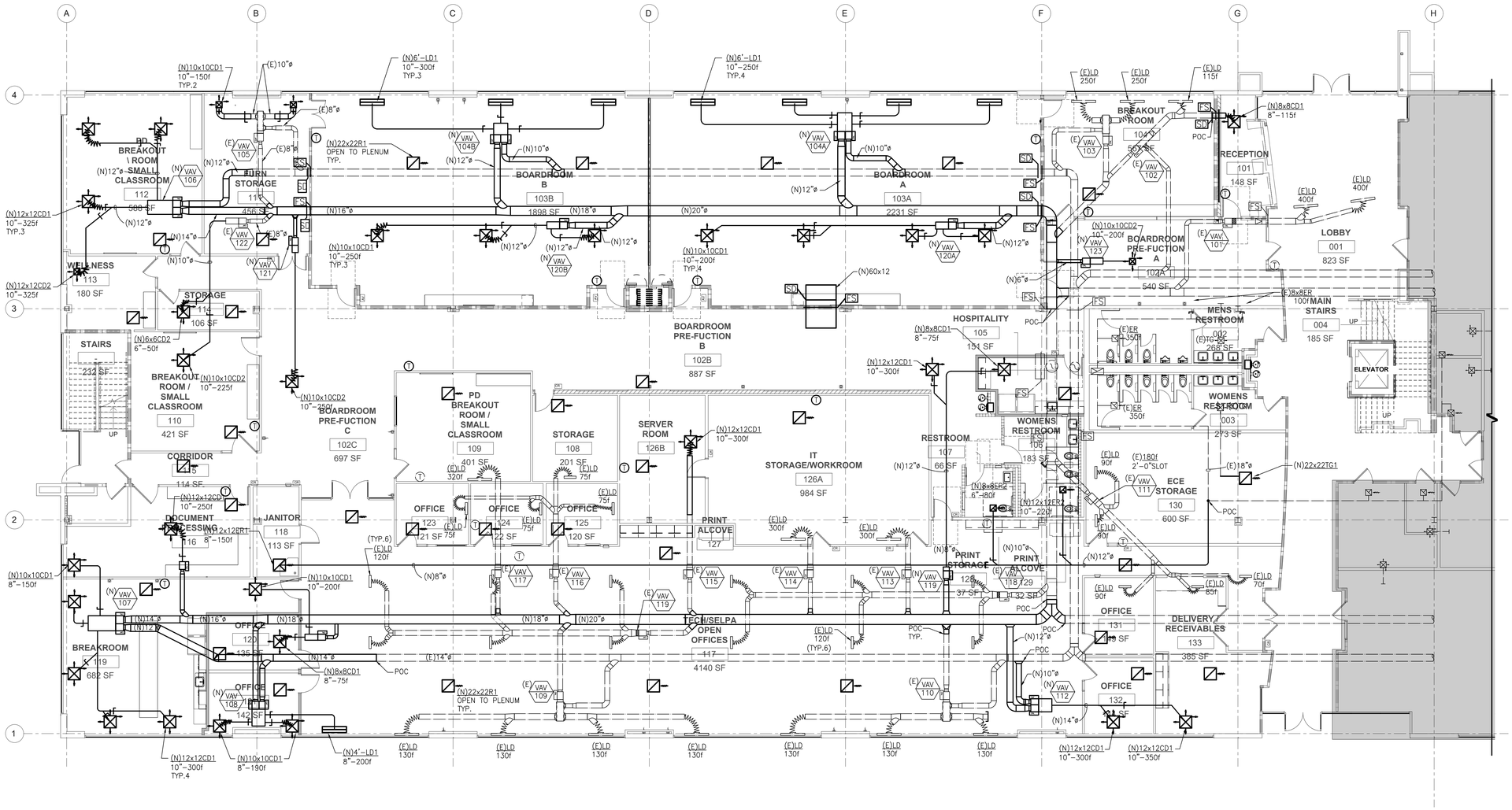
MECHANICAL SECOND FLOOR PARTIAL DEMOLITION PLAN - EAST

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MECHANICAL FIRST FLOOR PARTIAL REMODEL FLOOR PLAN – WEST

A — SCALE: 1/8" = 1'–0"

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Project Manager:	JT	Plot Date: Jul 22, 2023 - 1:48am	
Project Drafter:	-	Login: DYang	

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HY Architects Project number: 6013

Facility

NEW MAIN OFFICE
1400 STANFORD RANCH, ROCKLIN CA 95765

Project

TENANT IMPROVEMENTS

Sheet Title

MECHANICAL FIRST FLOOR PARTIAL REMODEL PLAN - WEST

Client Project Number: N/A

Scale:	As indicated
Drawn By:	TURLEY
Checked By:	TURLEY
Issue Date:	July 21, 2023

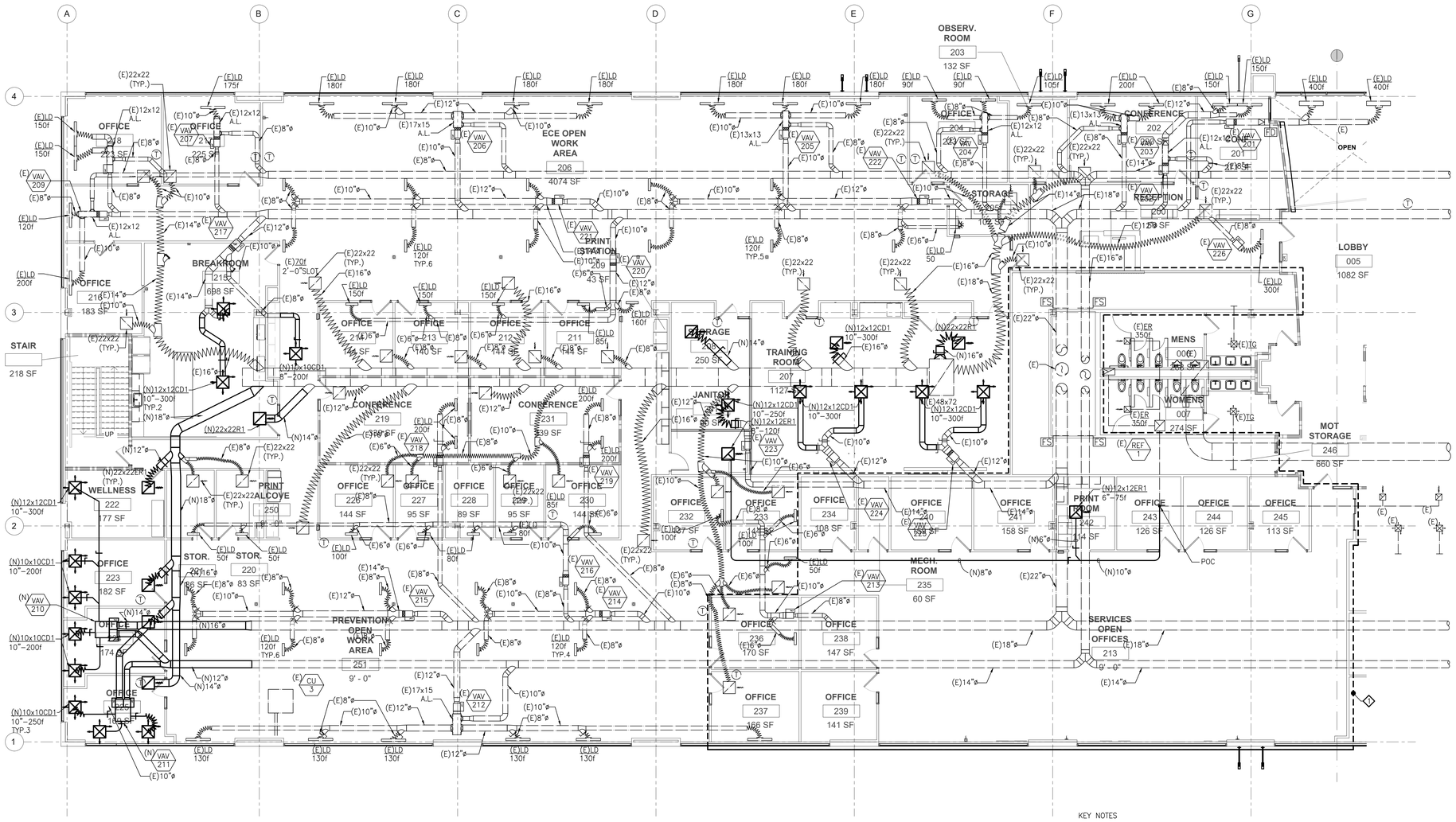
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M2.11

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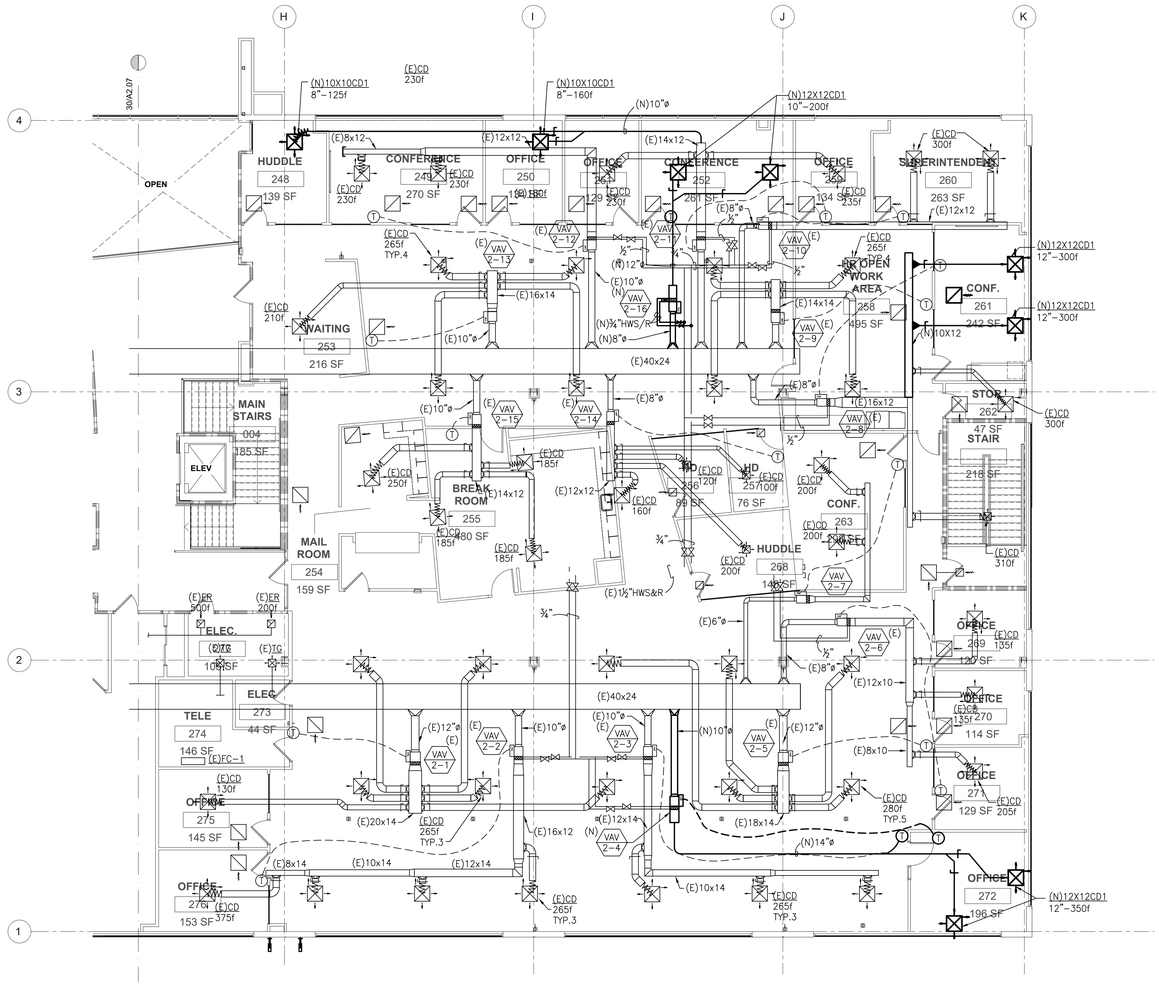
GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY


OBSERV. ROOM 203 132 SF
OFFICE 208 223 SF
OFFICE 207 225 SF
ECE OPEN WORK AREA 206 4074 SF
OFFICE 204
OFFICE 205
OFFICE 202
CONF. 201 242 SF
OPEN
STORAGE 50
RECEPTION 260 279 SF
LOBBY 005 1082 SF
BREAKROOM 213 698 SF
OFFICE 216 183 SF
PRINT STATION 209 43 SF
OFFICE 214 140 SF
OFFICE 212 144 SF
OFFICE 211 144 SF
STAIR 218 SF
CONFERENCE 219 339 SF
CONFERENCE 231 339 SF
STORAGE 250 SF
JANITOR 95 SF
TRAINING ROOM 207 1127 SF
MENS 004
WOMENS 007 274 SF
MOT STORAGE 246 660 SF
WELLNESS 222 177 SF
PRINT ALCOVE 250
OFFICE 227 95 SF
OFFICE 228 89 SF
OFFICE 229 95 SF
OFFICE 230 144 SF
OFFICE 232 127 SF
OFFICE 233 100 SF
OFFICE 234 108 SF
OFFICE 240 228 SF
OFFICE 241 158 SF
PRINT ROOM 242 214 SF
OFFICE 243 126 SF
OFFICE 244 126 SF
OFFICE 245 113 SF
POC
MECH. ROOM 235 60 SF
OFFICE 223 182 SF
OFFICE 224 174 SF
OFFICE 225 166 SF
STOR. 50f 220 83 SF
STOR. 50f 221 86 SF
PREVENTION OPEN WORK AREA 251
OFFICE 236 170 SF
OFFICE 238 147 SF
OFFICE 237 166 SF
OFFICE 239 141 SF
SERVICES OPEN OFFICES 213
(N)12x12CD1 10"–300f TYP.2
(N)10x10CD1 10"–200f
(N)10x10CD1 10"–250f TYP.3
(N)22x22R1
(N)22x22ER1
(N)12x12ER1
(N)48x72 (N)12x12CD1 10"–300f
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(N)12x12ER1
(E)70f 2'–0"SLOT
(E)LD 120f TYP.6
(E)LD 120f TYP.5
(E)LD 120f TYP.4
(E)17x15 A.L.
(E)13x13 A.L.
(E)12x12 A.L.
(E)22x22 (TYP.)
(E)ER 350f
(E)REF 1
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A MECHANICAL SECOND FLOOR PARTIAL REMODEL FLOOR PLAN – EAST

SCALE: 1/8" = 1'–0"

PCOE
GOLD IN EDUCATION

Revisions

Delta	Date	Revisions	By

PLAN CHECK SET

CONSTRUCTION DOCUMENTS

AGENCY APPROVAL

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(916) 325-1065
FAX: (916) 325-1075
Email: office@turleymech.com

Project Engineer:	JT	Job Number:	23131
Project Manager:	JT	Plot Date: Jul 22, 2023 - 1:49am	
Project Drafter:	-	Login: tDang	

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REGISTERED PROFESSIONAL ENGINEER — No. M–022554 — Exp. 6/30/2025 — MECHANICAL — STATE OF CALIFORNIA

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HY Architects Project number: 6013

Facility

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Project

TENANT IMPROVEMENTS

Sheet Title

MECHANICAL SECOND FLOOR PARTIAL REMODEL PLAN - EAST

Client Project Number: N/A

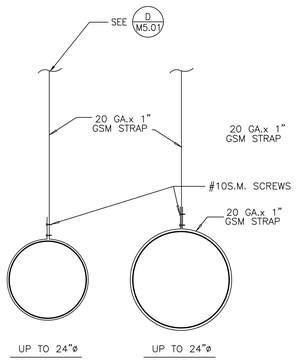
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Drawn By: TURLEY
Checked By: TURLEY
Issue Date: July 21, 2023

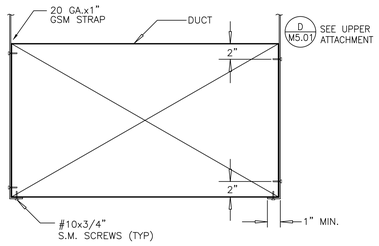
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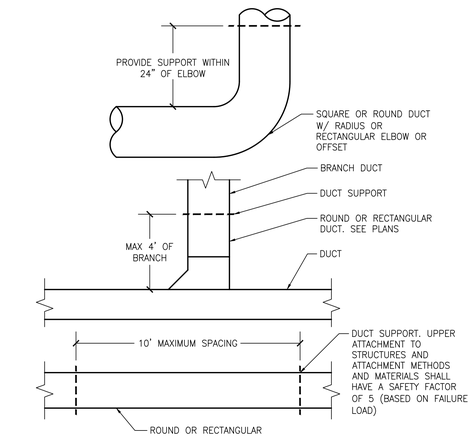




DUCT UP TO 20" WIDE OR LESS THAN 10 LBS/L.F.

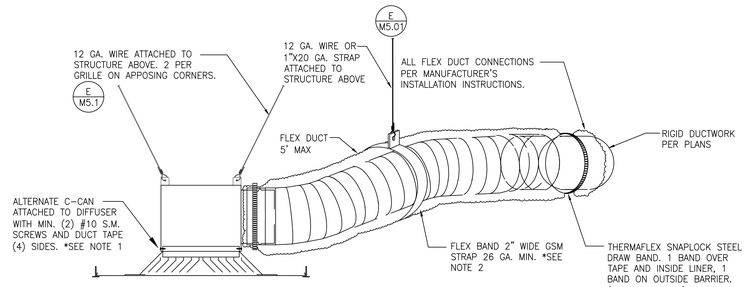
F LOWER DUCT HANGER ATTACHMENT DETAILS

NO SCALE



G DUCT SUPPORT LOCATION PLAN VIEW – TYP ALL DUCTING

NO SCALE

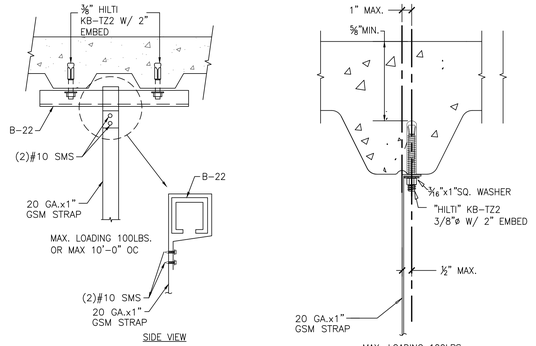


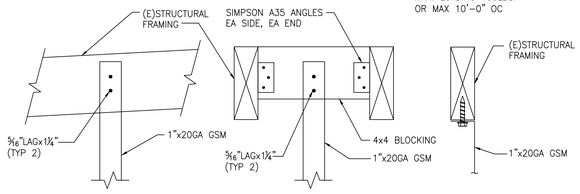
*NOTES:

1. C-CAN WITH ROUND COLLAR IN SIDE OF PLENUM, TO BE USED ONLY WHERE SPACE LIMITATION WILL NOT ALLOW FOR FLEX DUCT TO MAKE A FULL RADIUS 90° BEND INTO TOP OF STANDARD C-CAN.
2. MAXIMUM HANGER SPACING 48" O.C. MAXIMUM SAG BETWEEN HANGERS IS 1/2" PER FOOT, 2" MAXIMUM.
3. SEE UPPER ATTACHMENT DETAILS FOR HANGER WIRE SUPPORT TO STRUCTURE.
4. RIGID DUCTING MAY BE USED IN LIEU OF FLEXIBLE DUCTING.

C ALTERNATE DIFFUSER/GRILLE MOUNTING DETAIL

NO SCALE

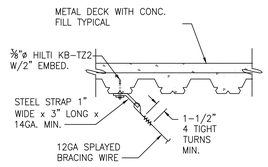


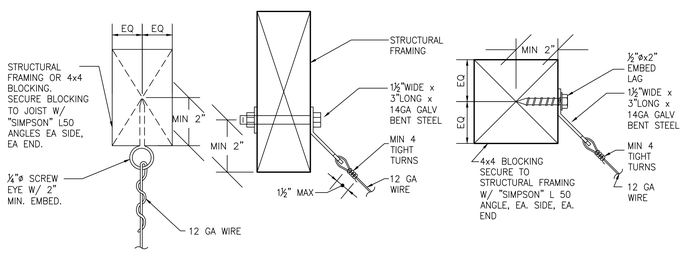


WOOD FRAMING ATTACHMENT DETAIL

D STRAP UPPER ATTACHMENT DETAIL

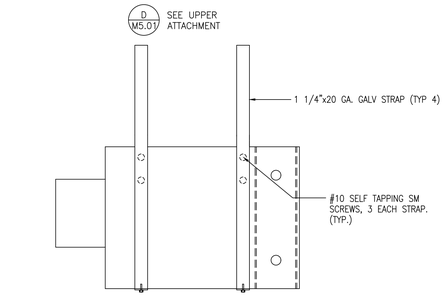
NO SCALE





E SPLAY WIRE ATTACHMENT DETAIL

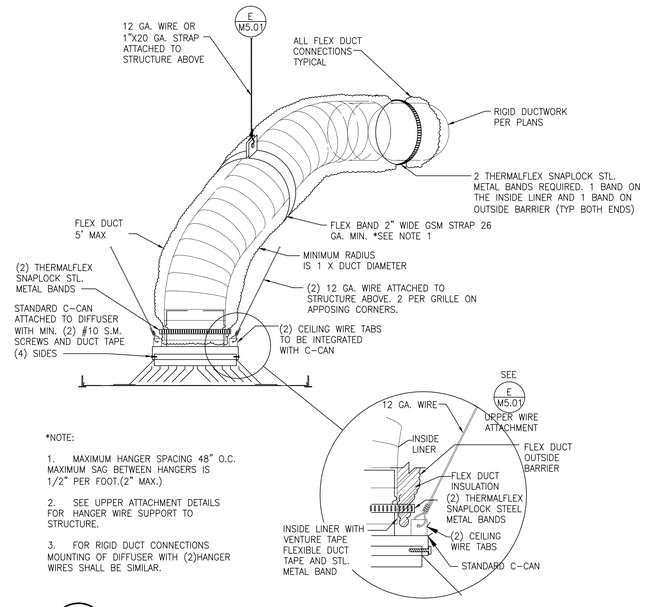
NO SCALE



1. MOUNT VAV BOX TO ALLOW FOR ADEQUATE ACCESS TO CONTROLS AND VALVES.
2. LABEL CEILING GRID BELOW VAV BOX W/ WHITE PLASTIC TAG W/ ENGRAVED NAME TAG. EPOXY TO CEILING GRID. LETTERING TO BE ½" HIGH (BLACK). LAMINENT TAG TO BE NO WIDER THAN CEILING GRID. SUBMIT SAMPLE FOR ENGINEER'S APPROVAL.

F VAV BOX MOUNTING

NO SCALE



*NOTE:

1. MAXIMUM HANGER SPACING 48" O.C. MAXIMUM SAG BETWEEN HANGERS IS 1/2" PER FOOT.(2" MAX.)
2. SEE UPPER ATTACHMENT DETAILS FOR HANGER WIRE SUPPORT TO STRUCTURE.
3. FOR RIGID DUCT CONNECTIONS MOUNTING OF DIFFUSER WITH (2)HANGER WIRES SHALL BE SIMILAR.

B DIFFUSER/GRILLE MOUNTING DETAIL

NO SCALE

PCOE GOLD IN EDUCATION

Revisions

Delta	Date	Revisions	By

PLAN CHECK SET

CONSTRUCTION DOCUMENTS

AGENCY APPROVAL

TURLEY & ASSOCIATES | MECHANICAL ENGINEERING GROUP, INC
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Project Engineer:	JT	Job Number:	23131
Project Manager:	JT	Plot Date: Jul 22, 2023 - 1:48am	
Project Drafter:	-	Login: DTang	

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REGISTERED PROFESSIONAL ENGINEER — W. TRACY TURLEY — No. M-026053 Exp. 6/30/2025 — MECHANICAL — STATE OF CALIFORNIA

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HY Architects Project number: 6013

Facility

NEW MAIN OFFICE
1400 STANFORD RANCH, ROCKLIN CA 95765

Project

TENANT IMPROVEMENTS

Sheet Title

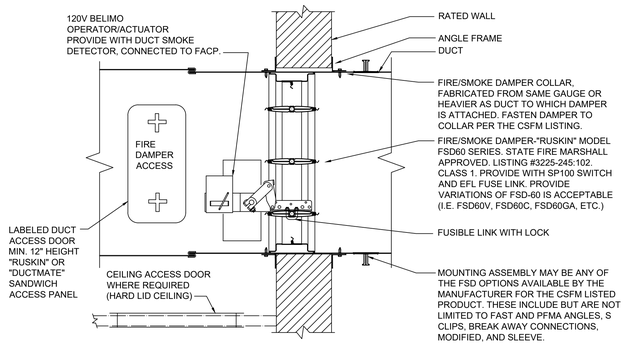
MECHANICAL DETAILS

Client Project Number: N/A

Scale:	As indicated	Sheet	M5.01
Drawn By:	TURLEY		
Checked By:	TURLEY		
Issue Date:	July 21, 2023	Sheet of	

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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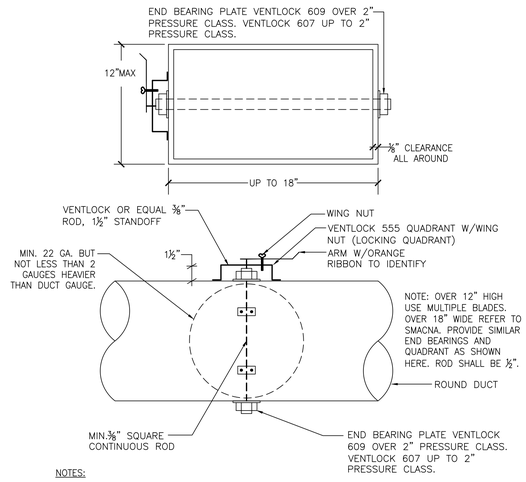


NOTES:

1. ALL FIRE/SMOKE DAMPERS SHALL BE INSTALLED IN STRICT CONFORMANCE WITH THE TERMS OF THE LISTING
2. FIRE/SMOKE DAMPER DETAIL FOR REFERENCE ONLY.
3. FIRE/SMOKE DAMPERS SHALL BE STATE FIRE MARSHALL APPROVED AND INSTALLED STRICTLY PER MANUFACTURERS PRINTED INSTRUCTIONS.
4. MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE MADE AVAILABLE TO THE INSPECTING AUTHORITIES.
5. DAMPER ACTUATOR & SMOKE DETECTOR SHALL BE INTERLOCKED WITH BUILDING ALARM SYSTEM. SEE ELECTRICAL DRAWINGS.
6. DAMPER SHALL CLOSE UPON LOSS OF POWER.
7. BALANCE CONTRACTOR TO TEST PRESSURE DIFFERENTIAL FOR PROJECTS WITH SAMPLE TUBE SMOKE DETECTORS. PROJECTS WITH TOTAL AREA DETECTION DO NOT REQUIRE PRESSURE VERIFICATION.
8. CLOSURE OF FSD SHALL CAUSE AIR MOVING EQUIPMENT TO SHUT DOWN. THE SMOKE ZONE IS THE ENTIRE FLOOR AND THEREFORE THE ENTIRE FLOOR AIR SYSTEMS SHUT DOWN. (EXHAUST FANS GREATER THAN 1500 CFM AND AC UNITS).
9. ACCESS POINT TO THE FIRE/SMOKE DAMPERS SHALL BE PERMANENTLY IDENTIFIED ON THE EXTERIOR BY A LABEL HAVING NOT LESS THAN 0.5" HIGH LETTERS READING "FIRE SMOKE DAMPER".

D FIRE SMOKE DAMPER DETAIL

NO SCALE

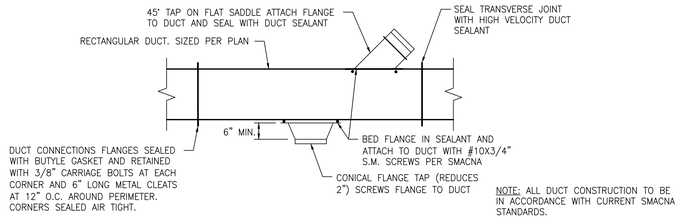


NOTES:

1. SEAL ALL JOINTS W/ A PERMANENT FLEXIBLE, HIGH PRESSURE DUCT SEALANT (UL 181 LISTED).
2. SYSTEM BUILT TO COMPLY W/ SMACNA LATEST REVISION. ITEMS LISTED ABOVE ARE MINIMUM REQUIREMENTS. PROVIDE ALL MATERIAL AND LABOR NECESSARY FOR COMPLETE WORKABLE SYSTEM.
3. SQUARE DAMPERS ARE ALSO REQUIRED AND SHALL MEET LATEST SMACNA STANDARDS. QUADRANTS SHALL HAVE STANDOFFS SIMILAR TO ONES SHOWN FOR ROUND DUCT.

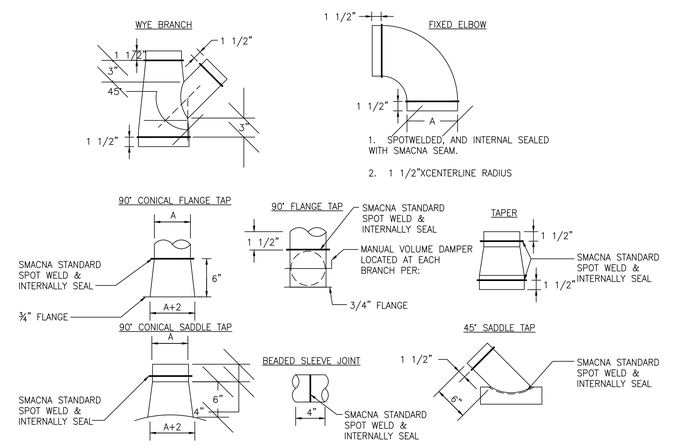
A TYPICAL BALANCE DAMPER

NO SCALE



NOTE: ALL DUCT CONSTRUCTION TO BE IN ACCORDANCE WITH CURRENT SMACNA STANDARDS.

B RECTANGULAR DUCT CONNECTION



C ROUND DUCT FITTINGS

PCOE GOLD IN EDUCATION

Revisions

Delta	Date	Revisions	By

PLAN CHECK SET

CONSTRUCTION DOCUMENTS

AGENCY APPROVAL

TURLEY & ASSOCIATES | MECHANICAL ENGINEERING GROUP, INC.
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Project Engineer:	JT	Job Number:	23131
Project Manager:	JT	Plot Date:	Jul 22, 2023 - 1:46pm
Project Drafter:	-	Login:	GYang

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REGISTERED PROFESSIONAL ENGINEER — JEFFREY W. THOMPSON — No. M-028567 — Exp. 6/30/2025 — MECHANICAL — STATE OF CALIFORNIA

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HY Architects Project number: 6013

Facility

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Project

TENANT IMPROVEMENTS

Sheet Title

MECHANICAL DETAILS

Client Project Number: N/A

Scale:	As indicated
Drawn By:	TURLEY
Checked By:	TURLEY
Issue Date:	July 21, 2023

Sheet

M5.02

Sheet of

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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SECTION 15010- MECHANICAL WORK- GENERAL REQUIREMENTS

SECTION 15010 – MECHANICAL WORK – GENERAL REQUIREMENTS

CONDITIONS OF CONTRACT AND DIVISION 1 APPLY TO THIS SECTION.

PART 1 – GENERAL

1.01 INCLUSIONS:

A. THIS SECTION APPLIES FOR ALL DIVISION 15 MECHANICAL SECTIONS. ALL CONDITIONS AND MATERIALS ARE PERTINENT TO THE OTHER SECTIONS AS IF REPEATED IN THOSE SECTIONS.

B. FURNISH AND INSTALL ANY INCIDENTAL WORK NOT SHOWN OR SPECIFIED WHICH IS NECESSARY TO PROVIDE A COMPLETE AND WORKABLE SYSTEM.

1.02 DRAWINGS:

A. EXAMINE ALL DRAWINGS PRIOR TO BIDDING OF WORK AND REPORT ANY DISCREPANCIES IN WRITING TO THE ARCHITECT.

CONTRACTOR SHALL VISIT THE SITE OF WORK AND EXAMINE EXISTING CONDITIONS IN ORDER TO BECOME FAMILIAR WITH THE SCOPE. IF DIMENSIONS ARE SHOWN ON THE PLANS, THEY SHALL BE VERIFIED AT THE SITE. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. FAILURE TO EXAMINE THE SITE SHALL NOT CONSTITUTE BASIS FOR CLAIMS FOR ADDITIONAL WORK BECAUSE OF LACK OF KNOWLEDGE OR LOCATION OF HIDDEN CONDITIONS WHICH COULD AFFECT THE SCOPE.

B. DRAWINGS SHOWING LOCATION OF EQUIPMENT, PIPING, DUCTWORK, ETC., ARE DIAGRAMMATIC AND JOB CONDITIONS WILL NOT ALWAYS PERMIT THEIR INSTALLATION IN THE LOCATION SHOWN. THE MECHANICAL DRAWINGS SHOW THE GENERAL ARRANGEMENT OF ALL PIPING, DUCTWORK, EQUIPMENT, ETC., AND SHALL BE FOLLOWED AS CLOSELY AS EXISTING CONDITIONS, ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHER TRADES WILL PERMIT. THE ARCHITECTURAL AND STRUCTURAL DRAWINGS SHALL BE CONSIDERED A PART OF THIS WORK INSOFAR AS THESE DRAWINGS FURNISH THE CONTRACTOR WITH INFORMATION RELATING TO DESIGN AND CONSTRUCTION OF THE BUILDING. ARCHITECTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER MECHANICAL DRAWINGS. BECAUSE OF THE SMALL SCALE OF THE MECHANICAL DRAWING, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS AND ACCESSORIES WHICH MAY BE REQUIRED. THE CONTRACTOR SHALL INVESTIGATE THE STRUCTURAL AND FINISH CONDITIONS AFFECTING THE WORK AND SHALL ARRANGE HIS WORK ACCORDINGLY PROVIDING SUCH FITTINGS, VALVES AND ACCESSORIES AS MAY BE REQUIRED TO MEET CONDITIONS. WHEN JOB CONDITIONS DO NOT PERMIT INSTALLATION OF EQUIPMENT, PIPING, DUCTWORK, ETC., IN THE LOCATIONS SHOWN, IT SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION IMMEDIATELY AND THE RELOCATION DETERMINED IN A JOINT CONFERENCE. CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE RELOCATION OF ANY ITEMS WITHOUT FIRST OBTAINING THE ARCHITECT'S APPROVAL. CONTRACTOR SHALL REMOVE AND RELOCATE SUCH ITEMS AT HIS OWN EXPENSE IF SO DIRECTED BY THE ARCHITECT.

C. EXECUTE WORK MENTIONED IN THE SPECIFICATIONS AND NOT SHOWN ON THE DRAWINGS, OR VICE VERSA; THE SAME AS IF SPECIFICALLY MENTIONED IN BOTH.

1.03 CODES:

A. PROVIDE ALL WORK AND MATERIALS IN FULL ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE CALIFORNIA CODE OF REGULATIONS (CCR), TITLE 21, TITLE 22, AND TITLE 24, AS APPLICABLE, SAFETY ORDERS OF THE DIVISION OF INDUSTRIAL SAFETY, (CAL OSHA); THE CALIFORNIA ELECTRIC CODE; THE CALIFORNIA PLUMBING CODE; THE CALIFORNIA BUILDING CODE; CALIFORNIA MECHANICAL CODE; STATE FIRE MARSHAL; AND OTHER APPLICABLE LAWS OR REGULATIONS. NOTHING IN THESE PLANS OR SPECIFICATIONS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES. FURNISH WITHOUT EXTRA CHARGE, ANY ADDITIONAL MATERIAL AND LABOR REQUIRED TO COMPLY WITH THESE RULES AND REGULATIONS.

B. WHERE MATERIAL OR EQUIPMENT IS SPECIFIED TO CONFORM TO STANDARDS SUCH AS AMERICAN SOCIETY OF TESTING AND MATERIALS (ASTM), UNDERWRITERS' LABORATORIES, INC., (UL), AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) AND THE LIKE, IT SHALL BE ASSUMED THAT THE MOST RECENT EDITION OF THE STANDARD IN EFFECT AT THE TIME OF BID SHALL BE USED.

1.04 FEES AND PERMITS:

A. PROCURE AND PAY FOR ALL PERMITS AND LICENSES REQUIRED.

1.05 FRAMING, CUTTING AND PATCHING:

A. SPECIAL FRAMING, RECESSES, CHASES AND BACKING FOR WORK OF THIS SECTION, UNLESS SPECIFICALLY OTHERWISE, IS COVERED UNDER OTHER SECTIONS. BE RESPONSIBLE FOR PROPER PLACEMENT OF ALL PIPE SLEEVES, HANGERS AND SUPPORTS AND LOCATION AND SIZING OF OPENINGS FOR WORK OF THIS SECTION.

1.06 SUBSTITUTIONS AND MATERIAL LIST:

A. PRODUCT NAMES ARE USED AS STANDARDS OF QUALITY, ITEMS FURNISHED AS STANDARD OR SPECIFIED EQUIPMENT SHALL BE FURNISHED ON ALL SUBSTITUTED EQUIPMENT AT NO EXTRA COST TO THE CONTRACT REGARDLESS OF DISPOSITION OF SUBMITTAL DATA; OTHER MATERIALS OR METHODS SHALL NOT BE USED UNLESS APPROVED IN WRITING BY THE ARCHITECT. THE BURDEN OF PROOF AS TO THE EQUALITY OF ANY PROPOSED MATERIAL SHALL BE UPON THE CONTRACTOR; ARCHITECT'S DECISION IS FINAL. ONLY ONE REQUEST FOR SUBSTITUTION SHALL BE CONSIDERED FOR EACH ITEM OF EQUIPMENT CAPACITIES SPECIFIED ARE MINIMUM ACCEPTABLE. SUBMITTALS WILL NOT BE ACCEPTED UNTIL COMPLIANCE WITH THE REQUIREMENTS OF CONTRACT DOCUMENTS HAS BEEN CONFIRMED BY THE CONTRACTOR.

B. UNLESS STIPULATED OTHERWISE IN GENERAL CONDITIONS AND DIVISION 1, SUBMIT A LIST OF 7 COPIES OF MATERIALS FOR APPROVAL WITHIN 30 DAYS AFTER THE AWARD OF THE CONTRACT. IT SHALL BE ACCOMPANIED BY SHOP DRAWINGS, PUMP PERFORMANCE CURVES, FAN CURVES, AND OTHER PERTINENT DATA, SHOWING THE SIZE AND CAPACITY OF THE PROPOSED MATERIALS. ALL MATERIALS TO BE USED, WHETHER SUBSTITUTIONS OR NOT, SHALL BE LISTED IN THE ORDER IN WHICH THEY APPEAR IN THE SPECIFICATIONS.

C. ANY MECHANICAL, ELECTRICAL, STRUCTURAL OR OTHER CHANGES REQUIRED FOR THE INSTALLATION OF ANY APPROVED SUBSTITUTED EQUIPMENT SHALL BE MADE TO THE SATISFACTION OF THE ARCHITECT AND WITHOUT ADDITIONAL COST TO THE OWNER. APPROVAL BY THE ARCHITECT OF THE SUBSTITUTED EQUIPMENT AND/OR DIMENSIONAL DRAWINGS DOES NOT WAIVE THESE REQUIREMENTS. UPON REQUEST, SUBMIT DRAWINGS OF MECHANICAL EQUIPMENT SPACES SHOWING SUBSTITUTED EQUIPMENT BEFORE INSTALLATION.

D. REVIEW OF MATERIAL SHALL NOT BE CONSTRUED AS AUTHORIZING ANY DEVIATIONS FROM THE SPECIFICATIONS UNLESS THE ATTENTION OF THE ARCHITECT HAS BEEN DIRECTED TO THE SPECIFIC DEVIATIONS.

E. FURNISH TO THE PROJECT REPRESENTATIVE, UPON REQUEST, COMPLETE INSTALLATION INSTRUCTIONS ON ALL MATERIALS AND EQUIPMENT BEFORE STARTING INSTALLATION OF SAME.

F. SUBMITTALS SHALL BEAR THE SPECIFICATION REFERENCE OR DRAWING LOCATION WHERE THEY ARE SPECIFIED. SUBMITTALS SHALL NOT BE ACCEPTED IN INCOMPLETE FORM. SUBMITTALS SHALL BE ORGANIZED INTO BOOKLETS FOR EACH SPECIFICATION SECTION AND SUBMITTED IN INDEXED LOOSE LEAF BINDERS WITH NOTATION WHEN IT IS A DEVIATION FROM THE SPECIFICATIONS.

G. HAVE FIRE DAMPER INSTALLATION INSTRUCTIONS AVAILABLE AT THE SITE DURING CONSTRUCTION FOR USE BY THE INSPECTOR.

1.07 SITE CONDITIONS:

A. INFORMATION ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS APPROXIMATE ONLY. DEVIATIONS FOUND NECESSARY DURING PROGRESS OF CONSTRUCTION TO CONFORM TO ACTUAL CONDITIONS, AS APPROVED BY THE ARCHITECT, SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGE CAUSED TO EXISTING SERVICES. PROMPTLY NOTIFY THE ARCHITECT IF SERVICES ARE FOUND WHICH ARE NOT SHOWN ON DRAWINGS.

1.08 GUARANTEE:

A. REPAIR OR REPLACE ANY DEFECTIVE WORK, MATERIALS OR PART WHICH MAY APPEAR WITHIN 1 YEAR OF THE DATE OF ACCEPTANCE. THIS SHALL INCLUDE DAMAGE BY LEAKS.

B. ON FAILURE TO COMPLY WITH THE ABOVE GUARANTEE WITHIN A REASONABLE LENGTH OF TIME AFTER NOTIFICATION IS GIVEN, THE ARCHITECT SHALL HAVE THE REPAIRS MADE AT THE CONTRACTOR'S EXPENSE.

1.09 MAINTENANCE AND OPERATING INSTRUCTIONS:

A. INSTRUCT THE OWNER'S AUTHORIZED REPRESENTATIVES IN OPERATION, ADJUSTMENT AND MAINTENANCE OF ALL MECHANICAL EQUIPMENT AND SYSTEMS. PROVIDE THREE COPIES OF CERTIFICATE SIGNED BY OWNER'S REPRESENTATIVES ATTESTING TO THEIR HAVING BEEN INSTRUCTED.

B. FURNISH THREE COMPLETE SETS OF OPERATING AND MAINTENANCE INSTRUCTIONS BOUND IN A HARDBACK BINDER AND INDEXED. START COMPILING THE DATA UPON APPROVAL OF LIST OF MATERIALS. FINAL OBSERVATION WILL NOT BE MADE UNTIL BOOKLETS ARE APPROVED BY ARCHITECT.

C. THESE SETS SHALL INCORPORATE THE FOLLOWING:

1. COMPLETE OPERATING INSTRUCTIONS FOR EACH ITEM OF HEATING, VENTILATING, AIR CONDITIONING AND PLUMBING EQUIPMENT.

2. TEST DATA AND AIR AND WATER BALANCING REPORTS AS SPECIFIED.

3. TYPEWRITTEN MAINTENANCE INSTRUCTIONS FOR EACH ITEM OF EQUIPMENT LISTING IN DETAIL THE LUBRICANT TO BE USED, FREQUENCY OF LUBRICATION, INSPECTIONS REQUIRED, ADJUSTMENT, ETC.

4. MANUFACTURER'S BULLETINS WITH PARTS NUMBERS, INSTRUCTIONS, ETC., FOR EACH ITEM OF EQUIPMENT, PROPERLY STRIPPED AND ASSEMBLED.

5. TEMPERATURE CONTROL DIAGRAMS AND LITERATURE.

6. A COMPLETE LIST OR SCHEDULE OF ALL MAJOR VALVES GIVING THE NUMBER OF THE VALVE, LOCATION AND THE ROOMS OR AREA CONTROLLED BY THE VALVE. IDENTIFY EACH VALVE WITH A PERMANENTLY ATTACHED METAL TAG STAMPED WITH NUMBER TO MATCH SCHEDULE. POST LIST IN FRAME UNDER PLASTIC ON WALL IN MECHANICAL ROOM OR WHERE DIRECTED.

1.10 SCHEDULE OF WORK:

A. ALL TEMPORARY CONNECTIONS REQUIRED TO MAINTAIN SERVICES, INCLUDING ADEQUATE HEAT AND COOLING, DURING THE COURSE OF THIS CONTRACT SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER. THE NORMAL FUNCTION OF THE BUILDING MUST NOT BE INTERRUPTED; NOTIFY THE OWNER SEVEN (7) DAYS IN ADVANCE BEFORE DISTURBING ANY SERVICE.

1.11 RECORD DRAWINGS:

A. UPON COMPLETION OF THE WORK AND AS A PRECEDENT TO FINAL PAYMENT, DELIVER TO THE ARCHITECT ORIGINALS OF ALL DRAWINGS SHOWING THE WORK EXACTLY AS INSTALLED. ALSO DELIVER TO THE ARCHITECT ONE COMPLETE SET OF REPRODUCIBLES OF ALL DRAWINGS SHOWING THE WORK EXACTLY AS INSTALLED. ALL RECORD DRAWINGS SHALL BE SIGNED BY THE CONTRACTOR VERIFYING THEIR ACCURACY.

1.12 DELIVERY AND STORAGE:

A. ALL EQUIPMENT, DUCTING AND PIPING DELIVERED TO SITE SHALL BE PROTECTED FROM THE WEATHER, HUMIDITY AND TEMPERATURE VARIATIONS, DIRT AND DUST AND OTHER CONTAMINANTS.

PART 2 – PRODUCTS

2.01 GENERAL:

A. MATERIALS OR EQUIPMENT OF THE SAME TYPE SHALL BE OF THE SAME BRAND WHEREVER POSSIBLE. ALL MATERIALS SHALL BE NEW AND IN GOOD CONDITION.

2.02 ELECTRIC MOTORS:

A. SHALL BE ALLIS-CHALMERS, GENERAL ELECTRIC, GOULD, LINCOLN, OR EQUAL, SELECTED FOR QUIET OPERATION. FURNISH MOTORS WITH SPLASHPROOF OR WEATHERPROOF HOUSINGS, WHERE REQUIRED OR RECOMMENDED BY THE MANUFACTURER. MATCH THE NAMEPLATE VOLTAGE RATING WITH THE ELECTRICAL SERVICE SUPPLIED. CHECK ELECTRICAL DRAWINGS. PROVIDE A TRANSFORMER FOR EACH MOTOR NOT WOUND PARTICULARLY FOR SYSTEM VOLTAGE. THE MINIMUM EFFICIENCIES SHALL BE AS DEFINED BY IEEE 112 TEST METHOD B AND NEMA STANDARD MG1-112–53B.

2.03 MOTOR STARTERS:

A. FURNISH STARTERS WITH THE PROPER SIZE THERMAL OVERLOAD UNITS, AMBIENT COMPENSATED. PROVIDE 3-PHASE MOTOR STARTERS WITH 3-PHASE OVERLOADS. MAGNETIC STARTERS SHALL HAVE NON-CAPTIVE AUXILIARY SWITCHES AND CONTROL TRANSFORMERS FURNISHED INTEGRAL WITH THE STARTER WHEN STARTER IS SERVING AN AUTOMATICALLY CONTROLLED MOTOR. STARTERS SHALL BE SQUARE D., ALLEN BRADLEY, OR EQUAL, IN NEMA TYPE I ENCLOSURE INSIDE AND NEMA TYPE 3R OUTSIDE AS REQUIRED. MINIMUM STARTER SIZE SHALL BE 1.

2.04 VALVES AND FITTINGS:

A. VALVES: SHALL BE DEZURIK, CRANE, NIBCO, KENNEDY, OR EQUAL

1. GATE VALVES THRU 2-1/2" –– CRANE #428, KENNEDY #427, NIBCO #T–595.

2. GATE VALVES 3" THRU 4" –– CRANE #460 OR #461, NIBCO #F–617.

3. GATE VALVES 5" AND LARGER --DEMCO NE, DEZURIK #660 OR NORRIS 83.1.0 WITH THROTTLING HANDLE.

4. CHECK VALVES 2–1/2" AND SMALLER –– MUESSCO #2038P, CRANE #36, NIBCO #T–413.

5. CHECK VALVES 3" AND LARGER –– MUESSCO #105AP, CRANE #373.

6. GAS VALVES –– DEZURIK #225SIRS–49.

7. GAS COCKS AT APPLIANCES –– CONBRA CO. 50 SERIES.

8. GAS PRESSURE REGULATORS –– RELIANCE #1803 OR #2003, ROCKWELL OR EQUAL WITH INTERNAL RELIEF FOR LPG.

9. VALVES IN THE GROUND SHALL BE CRANE #2487–1/2–0, MUELLER #A–2380–21 OR EQUAL, AND SHALL BE INSTALLED IN CHRISTY CONCRETE PRODUCTS #1 VALVE BOX WITH C210 C.I. LID, BROOKS #1–6T BOX WITH #1–6T C.I. LID OR EQUAL. NUT OPERATED VALVES IN ALHAMBRA FOUNDRY CO. #A–3204 OR EQUAL ACCESS BOXES MARKED FOR SERVICE. PROVIDE A TEE HANDLE WRENCH FOR EACH SIZE. SET ACCESS BOXES IN 4" THICK CONCRETE PAD, TROWEL SMOOTH AND EDGE, SET FLUSH WITH GRADE. WATER SERVICE VALVE IN GROUND SHALL BE AWWA, 200 PSI, NUT OPERATED.

10. VALVES IN COPPER LINES SHALL BE FURNISHED WITH ADAPTERS FOR SOLDERING JOINT TYPE OF EQUAL QUALITY TO SCREW TYPE VALVES.

11. GAY GATE –– CRANE #459 THRU 2", #467 FOR 2–1/2" AND LARGER; DEMCO NE–H FOR 4" AND LARGER.

12. BALL VALVES – NIBCO S 580, NIBCO #T–560, 2" MAXIMUM, MINIMUM 400 PSI CWP.

13. BALANCE VALVES –– BELL & GOSSETT CIRCUIT SETTER PLUS, ARMSTRONG CBV, OR EQUAL.

14. PROVIDE GATE OR BALL VALVES ON INLET OF EACH WATER HEATER AND INLET AND OUTLET OF EACH PUMP WHETHER SHOWN OR NOT.

15. BUTTERFLY VALVES: KEYSTONE 100, CRANE MONARCH 2200 OR EQUAL, NIBCO LD–2000.

B. UNIONS AND FLANGES:

1. STEEL 2" AND SMALLER --- 150# SCREWED BLACK OR GALVANIZED MALLEABLE IRON, MALTA PIPE, GROUND JOINT, BRASS–TO–IRON SEAT.

2. STEEL 2–1/2" AND LARGER --- 150# BLACK FLANGE UNION, FLAT FACED, FULL GASKET.

3. COPPER OR BRASS PIPE OR TUBING 2" OR SMALLER --- 150# CAST BRONZE GROUND JOINT, BRONZE–TO–BRONZE SEAT WITH COPPER–TO–COPPER END CONNECTIONS.

4. COPPER OR BRASS PIPE OR TUBING 2–1/2" AND LARGER --- 150# BRASS FLANGE UNION, FLAT FACED, FULL GASKET.

5. GASKETS – HOT AND COLD WATER --- GARLOCK STYLE 3200.

6. FLANGE BOLTS --- OPEN–HEARTH BOLT STEEL, SQUARE HEADS WITH COLD PRESSED HEXAGONAL NUTS, CADMIUM PLATED IN GROUND. PROVIDE COPPER PLATED STEEL BOLTS AND NUTS OR BRASS BOLTS AND NUTS FOR BRASS FLANGES.

C. VALVE BOXES: PRECAST CONCRETE OR CAST IRON WITH CAST IRON LOCKING TYPE COVERS LETTERED TO SUIT SERVICE – BROOKS NO. 3–TL, CHRISTIE NO. B3, FRASER NO. 3, ALHAMBRA A–3004 OR A–3005, ALHAMBRA E–2202 OR E–2702, OR EQUAL WITH EXTENSIONS TO SUITE CONDITIONS. CAST IRON BOXES OF SCREW TYPE OR SLIP TYPE, SIMILAR TO THOSE SPECIFIED HEREIN, WILL BE ACCEPTABLE. USE ONLY CAST IRON BOXES IN TRAFFIC AREAS.

MINIMUM INSIDE DIMENSION OR DIAMETER OF BOX: 4" FOR VALVE SIZES 3" AND SMALLER AND 5" FOR VALVE SIZES 4" AND LARGER.

WHERE SEVERAL VALVES OR OTHER EQUIPMENT ARE GROUPED TOGETHER, PROVIDE LARGER BOXES OF RECTANGULAR "VAULT" TYPE ADEQUATELY SIZED FOR CONDITIONS AND SIMILAR IN CONSTRUCTION TO THOSE SPECIFIED ABOVE.

2.05 PIPE HANGERS AND SUPPORTS:

A. THE WORK COVERED UNDER THIS SECTION CONSISTS OF THE FURNISHING OF ALL NECESSARY LABOR, SUPERVISION, MATERIALS, EQUIPMENT, AND SERVICES TO COMPLETELY EXECUTE THE PIPE HANGER AND SUPPORTS AS DESCRIBED IN THIS SPECIFICATION.

B. REFERENCES:

1. MSS–SP58 — MANUFACTURERS STANDARDIZATION SOCIETY: PIPE HANGERS AND SUPPORTS – MATERIALS, DESIGN, AND MANUFACTURE.

2. MSS–SP69 – MANUFACTURERS STANDARDIZATION SOCIETY: PIPE HANGERS AND SUPPORTS – SELECTION AND APPLICATION.

3. NFPA 13 – STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS.

4. ASTM A123 – SPECIFICATION FOR ZINC HOT–GALVANIZED COATINGS ON PRODUCTS FABRICATED FROM ROLLED, PRESSED, AND FORGED STEEL SHAPES, PLATES, BARS AND STRIP.

5. ASTM A653 G90 – SPECIFICATION FOR STEEL SHEET, ZINC–COATED BY THE HOT–DIP PROCESS.

6. ASTM B633 – SPECIFICATION FOR ELECTRODEPOSITED COATINGS OF ZINC ON IRON AND STEEL.

C. QUALITY ASSURANCE:

1. STEEL PIPE HANGERS AND SUPPORTS SHALL HAVE THE MANUFACTURERS NAME, PART NUMBER, AND APPLICABLE SIZE STAMPED IN THE PART ITSELF FOR IDENTIFICATION.

2. HANGERS AND SUPPORTS SHALL BE DESIGNED AND MANUFACTURED IN CONFORMANCE WITH MSS–SP58.

3. SUPPORTS FOR SPRINKLER PIPING SHALL BE IN CONFORMANCE WITH NFPA 13.

D. SUBMITTALS

1. SUBMIT PRODUCT DATA ON ALL HANGER AND SUPPORT PIECES. PRODUCT DATA TO INCLUDE, BUT LIMITED TO MATERIALS, FINISHES, APPROVALS, LOAD RATINGS, AND DIMENSIONAL INFORMATION.

E. ACCEPTABLE MANUFACTURERS

1. MANUFACTURER: SUBJECT TO COMPLIANCE WITH THESE SPECIFICATIONS, PIPE HANGER AND SUPPORT SYSTEMS SHALL BE AS MANUFACTURED BY TOLCO, INC., SUPERSTRUT, B–LINE, OR EQUAL.

F. PIPE HANGERS AND SUPPORTS

1. UNINSULATED PIPES 2 INCH AND SMALLER:

A. ADJUSTABLE STEEL SWIVEL RING (BAND TYPE) HANGER, TOLCO FIG. 2, FIG. 200.

B. ADJUSTABLE STEEL SWIVEL J–HANGER, TOLCO FIG. 3.

C. ADJUSTABLE STEEL CLEVIS HANGER, TOLCO FIG. 1, FIG 1LD.

2. UNINSULATED PIPES 2–1/2 INCH AND LARGER:

A. USTABLE STEEL CLEVIS HANGER TOLCO FIG. 1.

B. PIPE ROLL WITH SOCKETS, TOLCO FIG. 322.

C. ADJUSTABLE STEEL YOKE PIPE ROLL, TOLCO FIG. 324.

3. INSULATED PIPE – HOT PIPING:

A. 2 INCH AND SMALLER PIPES: USE ADJUSTABLE STEEL CLEVIS WITH GALVANIZED SHEET METAL SHIELD, TOLCO FIG. 1 WITH FIG. 220.

B. 2–1/2 INCH AND LARGER PIPES:

1) ADJUSTABLE STEEL YOKE PIPE ROLL WITH PIPE COVERING PROTECTION SADDLE, TOLCO FIG. 324 WIT FIG 260 THRU 265.

2) PIPE ROLL WITH SOCKETS WITH PIPE COVERING PROTECTION SADDLE, TOLCO FIG 322 WITH FIG 260 THRU 265.

G. PIPE CLAMPS: WHEN FLEXIBILITY IN THE HANGER ASSEMBLY IS REQUIRED DUE TO HORIZONTAL MOVEMENT, USE PIPE WITH WELDLESS EYE NUTS, TOLCO FIG. 4 OR FIG. 4H WITH FIG. 135. FOR INSULATED LINES USE BOLTED PIPE CLAMPS, TOLCO FIG. 5 WITH FIG.330.

H. MULTIPLE OR TRAPEZE HANGERS

1. TRAPEZE HANGERS SHALL BE CONSTRUCTED FROM 12 GAUGE ROLL FORMED STEEL CHANNEL, 1–5/8" X 1–5/8" MINIMUM, TOLSTRUT #12 STRUT OR STRONGER AS REQUIRED.

2. MOUNT PIPES TO STRUT CHANNEL TRAPEZE WITH TWO PIPE CLAMPS PER PIPE SUITABLE FOR OUTSIDE DIAMETER OF PIPE, TOLSTRUT FIG. EMTC, RIGID, O.D. OR UNIVERSAL PIPE CLAMPS AS REQUIRED.

3. FOR PIPES SUBJECT TO AXIAL MOVEMENT: STRUT MOUNTED ROLLER SUPPORT, TOLSTRUT FIG. ROL 12, 13, 14, 15 OR 16 AS REQUIRED. USE PIPE PROTECTION SHIELD OR SADDLES ON INSULATED LINES. TOLCO FIG. 220 OR FIG. 260–265.

I. VERTICAL SUPPORTS: STEEL RISER CLAMP SIZED TO FIT OUTSIDE DIAMETER OF PIPE, TOLCO FIG. 6.

J. COPPER TUBING SUPPORTS

1. HANGERS SHALL BE SIZED TO FIT COPPER TUBING OUTSIDE DIAMETERS.

A. ADJUSTABLE STEEL SWIVEL BAND HANGER, TOLCO FIG. 202.

B. MALLEABLE IRON RING HANGER, TOLCO FIG. 301CT.

C. ADJUSTABLE STEEL CLEVIS HANGER, TOLCO FIG. 81.

K. PLASTIC PIPE SUPPORTS: ADJUSTABLE BAND HANGER, PVC COATED WITH FLARED EDGES, TOLCO FIG. 203, V–BOTTOM SLEEVE HANGER WITH A "V" TROUGH SUPPORT, TOLCO FIG. 1V AND FIG. 1VT TO PROVIDE CONTINUOUS SUPPORT FOR FLEXIBLE PLASTIC PIPE.

L. SUPPLEMENTARY STRUCTURAL SUPPORTS: DESIGN AND FABRICATE SUPPORTS USING STRUCTURAL QUALITY STEEL BOLTED FRAMING MATERIALS AS MANUFACTURED BY TOLCO, INC. CHANNELS SHALL BE ROLL FORMED, 12 GAUGE STEEL, 1–5/8" X 1–5/8" OR GREATER AS REQUIRED BY LOADING CONDITIONS. SUBMIT DESIGNS FOR PIPE TUNNELS, PIPE GALLERIES, ETC., TO ENGINEER FOR APPROVAL. USE CLAMPS AND FITTINGS DESIGNED FOR USE WITH THE STRUT SYSTEM.

M. UPPER ATTACHMENTS

1. BEAM CLAMPS

A. BEAM CLAMPS SHALL BE USED WHERE PIPING IS TO BE SUSPENDED FROM BUILDING STEEL. CLAMP TYPE SHALL BE SELECTED ON THE BASIS OF LOAD TO BE SUPPORTED, AND LOAD CONFIGURATION.

B. C–CLAMPS SHALL HAVE LOCKNUTS AND CUP POINT SET SCREWS, TOLCO FIG. 64. REVERSIBLE TOP OR BOTTOM FLANGE C–CLAMPS SHALL BE USED WHEN ATTACHING A HANGER ROD TO THE TOP OF FLANGE OF STRUCTURAL SHAPES, TOLCO FIG. 65 AND FIG. 66. RETAINING STRAPS SHALL BE USED TO MAINTAIN THE CLAMPS POSITION ON THE BEAM WHERE REQUIRED.

C. CENTER LOADED BEAM CLAMPS SHALL BE USED WHERE SPECIFIED. STEEL CLAMPS SHALL BE TOLCO FIG. 62. MALLEABLE IRON OR FORGED STEEL BEAM CLAMPS WITH SWIVEL BASE SHALL BE TOLCO FIG. 329.

2. CONCRETE INSERTS

A. CAST IN PLACE SPOT CONCRETE INSERTS SHALL BE USED WHERE APPLICABLE, EITHER STEEL OR MALLEABLE IRON BODY, TOLCO FIG. 310 OR FIG. 309. SPOT INSERTS SHALL ALLOW FOR LATERAL ADJUSTMENT AND HAVE MEANS FOR ATTACHMENT TO FORMS. SELECT INSERTS TO SUIT THREADED HANGER ROD SIZES, TOLCO FIG. 310N OR FIG. 309N.

B. CONTINUOUS CONCRETE INSERTS SHALL BE USED WHERE APPLICABLE. CHANNELS SHALL BE 12 GAUGE STEEL, COMPLETE WITH STRYOFOAM INSERTS AND END CAPS WITH NAIL HOLES FOR ATTACHMENT TO FORMS. THE CONTINUOUS CONCRETE INSERT SHALL HAVE A LOAD RATING OF 2,000 LBS./FT. IN CONCRETE, TOLSTRUT FIG. B–12 CONCT.

N. VIBRATION ISOLATION AND SUPPORTS

1. FOR REFRIGERATION, AIR CONDITIONING, HYDRAULIC, PNEUMATIC, AND OTHER VIBRATING SYSTEM APPLICATIONS, USE A CLAMP THAT HAS A VIBRATION DAMPENING INSERT AND A NYLON INSERTED LOCKNUT. FOR COPPER AND STEEL TUBING USE TOLSTRUT CUSHION CLAMP.

2. FOR LARGER TUBING OR PIPING SUBJECTED TO VIBRATION, USE NEOPRENE OR SPRING HANGERS AS REQUIRED, OR AS SPECIFIED ELSEWHERE.

3. FOR BASE MOUNTED EQUIPMENT USE VIBRATION PADS, MOLDED NEOPRENE MOUNTS, OR SPRING AS REQUIRED. REFER TO DRAWINGS FOR REQUIREMENTS.

N. ACCESSORIES

1. HANGER RODS SHALL BE THREADED BOTH ENDS, OR CONTINUOUS THREADED RODS OF CIRCULAR CROSS SECTION TOLCO FIG. 100 OR FIG. 103. USE ADJUSTING LOCKNUTS AT UPPER ATTACHMENTS AND HANGERS. NO WIRE, CHAIN, OR PERFORATED STRAPS ARE ALLOWED.

2. SHIELDS SHALL BE 18ST GALVANIZED SHEET METAL, 12 INCH MINIMUM LENGTH, 18 GAUGE MINIMUM THICKNESS, DESIGNED TO MATCH OUTSIDE DIAMETER OF THE INSULATED PIPE, TOLCO FIG. 220.

P. INDOOR FINISHES

1. HANGERS AND CLAMPS FOR SUPPORT OF BARE COPPER PIPING SHALL BE COATED WITH COPPER COLORED EPOXY PAINT. ADDITIONAL PVC COATING OF THE EPOXY PAINTED HANGER SHALL BE USED WHERE NECESSARY.

2. HANGERS FOR OTHER THAN BARE COPPER PIPE SHALL BE ZINC PLATED IN ACCORDANCE WITH ASTM B633 – SC3.

3. STRUT CHANNELS SHALL BE PRE–GALVANIZED IN ACCORDANCE WITH ASTM A653 G90.

Q. OUTDOOR AREA FINISHES

1. HANGERS AND STRUT LOCATED OUTDOORS SHALL BE HOT DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123. ALL HANGER HARDWARE SHALL BE HOT DIP GALVANIZED. PLATED HARDWARE IS NOT ACCEPTABLE FOR OUTDOOR OR CORROSIVE USE.

2.06 SERVICE MARKERS:

A. 4" ROUND BY 30" LONG CONCRETE MARKER, HALEY MFG., CO., PENNSYLVANIA, OR EQUAL WITH ENGRAVED BRASS IDENTIFICATION PLATE

2.07 PIPE PROTECTION:

A. POLYETHYLENE COATING: EXTRUDED POLYETHYLENE COATING, X–TRU–COAT, OR FIELD WRAP 10 MIL RAYCHEM "THERMOFIT" POLYETHYLENE SLEEVE JOINTS, OR FIELD WRAP AS IN B.

B. TAPE WRAP: PRESSURE SENSITIVE POLYVINYL CHLORIDE TAPE, "TRANTEX #V–10 OR V–20", "SCOTCHRAP #50", SUPPHOT 100, OR EQUAL, WITH CONTINUOUS IDENTIFICATION. TAPE SHALL BE A MINIMUM OF 20 MILS THICK FOR FITTINGS AND IRREGULAR SURFACES, 2 WRAPS, 50% OVERLAP, AT 10 MILS TOTAL THICKNESS. TAPE SHALL BE LAMINATED WITH A SUITABLE ADHESIVE, WITHIS AS RECOMMENDED BY THE MANUFACTURER FOR THE PIPE SIZE. WRAP 50"–0" OR LONGER SECTIONS OF PIPING WITH AN APPROVED WRAPPING MACHINE.

C. PADCO WRAP: PROVIDE SPECIFICATIONS #0–40–240K DOUBLE WRAP, IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS OR PVC AS IN B. LAP PIPE WRAP A MINIMUM OF 2" AND STAGGER THE LAPS EVENLY. ALL PABCO PIPE WRAPPING SHALL BE DONE BY THE MANUFACTURER'S AGENT AND NOT BY THE CONTRACTOR, EXCEPT THE FIELD JOINTS.

D. FIELD JOINTS AND FITTINGS: PABCO DOUBLE WRAP AND POLYVINYL CHLORIDE TAPE AS ABOVE. PROVIDE AT LEAST 2 THICKNESSES OF TAPE OVER THE JOINT AND EXTEND A MINIMUM OF 4" OVER ADJACENT PIPE COVERING. USE "PRIMER NO 10" WHICH IS ADDED AS A SEPARATE COVERING. WIDTH OF TAPE ON FITTINGS SHALL NOT EXCEED 2". TAPE SHALL ADHERE EVENLY TO ALL SURFACES OF THE FITTINGS, WITHOUT AIR POCKETS.

2.08 ACCESS DOORS:

MILCOR, NEWMAN, OR EQUAL, WITH CONCEALED HINGES, SCREWDRIVER LOCKS, PRIME COATED WITH RUST INHIBITIVE PAINT, AND STYLE OF DOOR TO SUIT CEILING OR WALL CONSTRUCTION. ACCESS DOORS IN ACOUSTICAL TILE CEILINGS SHALL BE "SESAME" WITH TILE RECESS. DOORS SHALL BE 14 GAGE C.R. STEEL AND SHALL BE 22" X 30", 24" X 24" OR AS CLOSE TO THESE SIZES AS POSSIBLE AND AS REQUIRED, FIRE RATED TO MATCH RATING OF SURFACE IN WHICH INSTAL

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

IF THIS SHEET IS NOT 30"x42" , IT IS
A REDUCED PRINT SCALE ACCORDINGLY

SECTION 15400 - PLUMBING AND UTILITIES

SECTION 15400 – PLUMBING AND UTILITIES

PART 1 – GENERAL

1.01 DESCRIPTION OF WORK:

A. THE REQUIREMENTS OF THE GENERAL CONDITIONS AND DIVISION 1 APPLY TO ALL WORK HEREUNDER; ALSO, APPLICABLE PROVISIONS OF SECTION 15010 MECHANICAL WORK – GENERAL REQUIREMENTS.

B. FURNISH AND INSTALL ALL PLUMBING WORK INDICATED ON THE DRAWINGS AND DESCRIBED HEREIN. ALSO, ANY INCIDENTAL WORK NOT SHOWN OR SPECIFIED NECESSARY TO PROVIDE THE COMPLETE SYSTEM.

1.02 SERVICES:

A. MAKE ALL ARRANGEMENTS FOR THE UTILITIES REQUIRED. PAY ALL COSTS INVOLVED IN OBTAINING THE SERVICES, INCLUDING GAS SERVICE AND METER, WATER METER AND ACCESS BOX, STREET WORK, IN LIEU FEES FOR SEWER, ETC.

B. VERIFY THE LOCATION OF ALL SERVICES. NO EXTRA COST SHALL BE ALLOWED IF SERVICES ARE NOT AS SHOWN.

C. DETERMINE STORM AND SANITARY SEWER ELEVATION AT POINT OF CONNECTION BEFORE INSTALLING ANY SEWER PIPING. NOTIFY ARCHITECT IMMEDIATELY IF INDICATED GRADES CANNOT BE MAINTAINED.

1.03 RECORD DRAWINGS:

A PRINT OF THE PLUMBING PLAN SHOWING UNDERGROUND PIPING WILL BE FURNISHED BY THE CONTRACTOR ON WHICH HE SHALL INDICATE THE LOCATIONS OF THE UNDERGROUND INSTALLATIONS AS THE WORK PROGRESSES. THIS SHALL BE RETURNED TO ARCHITECT AT COMPLETION OF JOB.

PART 2 – PRODUCTS

2.01 CLEANOUTS:

A. CLEANOUTS SHALL BE "T" OR "Y" BRANCHES OR TRAP HUBS OF SAME MATERIAL AS PIPE IN WHICH THEY ARE PLACED. CLEANOUTS IN CAST IRON LINES SHALL HAVE CAST IRON BODIES WITH BRASS PLUGS. CLEANOUTS IN FLOORS AND SIDEWALKS SHALL BE JOSAM 56010 OR 56030 FOR CERAMIC TILE FLOORS WITH NICKEL BRONZE COVERS. CLEANOUTS IN VERTICAL LINES SHALL BE JOSAM 58710. FURNISH CLEANOUTS AT ENDS OF BRANCH LINES, AS THE BASE OF VERTICAL LINES, AT CHANGES IN DIRECTION AND WHERE SHOWN OR REQUIRED TO FACILITATE CLEANING. A MAXIMUM SPACING OF 50 FEET SHALL BE PROVIDED IN STRAIGHT RUNS OF PIPE. CLEANOUTS IN CAST IRON LINES SHALL HAVE CAST IRON BODIES WITH BRASS PLUGS. CLEANOUTS IN FLOORS AND SIDEWALKS SHALL BE JOSAM 56010 OR 56030 FOR CERAMIC TILE FLOORS AND NICKEL BRONZE COVERS. CLEANOUTS IN VERTICAL LINES SHALL BE JOSAM 58710. FURNISH CLEANOUTS AT ENDS OF BRANCH LINES, AS THE BASE OF VERTICAL LINES, AT CHANGES IN DIRECTION AND WHERE SHOWN OR REQUIRED TO FACILITATE CLEANING. A MAXIMUM SPACING OF 50 FEET SHALL BE PROVIDED IN STRAIGHT RUNS OF PIPE. CLEANOUTS IN FLOORS SHALL BE SET IN 12" X 12" X 12" CONCRETE PAD; TROWEL SMOOTH AND EDGE; SET FLUSH WITH FINISHED GRADE. CLEANOUTS TO BE FULL SIZE OF LINE UP TO A MAXIMUM OF 6". CLEANOUTS SHALL CLEAR ALL OBSTRUCTIONS BY 18" MINIMUM. FURNISH TO OWNER ONE WRENCH FOR EACH SIZE AND TYPE OF CLEANOUT USED. PERMANENTLY IDENTIFY EXTERIOR CLEANOUTS: SS FOR SANITARY SEWER, SD FOR STORM DRAIN.

2.02 PIPE AND FITTINGS INSIDE BUILDING:

A. SEE GENERAL REQUIREMENTS, SECTION 15010, FOR DIELECTRIC FITTINGS AND PIPE PROTECTION. TERMINATE 5'-0" OUTSIDE THE BUILDING LINE OR WHERE MARKED.

B. SOIL, STORM, WASTE AND VENT PIPE UNDERGROUND AND TO 6" ABOVE GROUND: SERVICE WEIGHT CAST IRON SOIL PIPE AND FITTINGS, ASPHALTIC COATED, CONFORMING TO CAST IRON SOIL PIPE INSTITUTE STANDARD #301 ASTM A-888 OR ASTM A-74 AND SO STAMPED. JOINTS SHALL BE NO-HUB CONFORMING TO CAST IRON SOIL PIPE INSTITUTE STANDARD #310; TY-SEAL OR EQUAL WITH GASKETS CONFORMING TO ASTM C 564 AND ASTM A74. SUSPENDED PIPE WITH NO-HUB JOINTS SHALL HAVE A SWAYBRACE AT 20'-0" MAXIMUM SPACING.

C. WASTE AND VENT PIPE ABOVE GROUND FROM LAVATORIES OR SINKS, DRAINWATER LEADERS AND OVERFLOWS ABOVE THE FLOOR: CAST IRON SOIL PIPE AND FITTINGS WITH NO HUB JOINTS CONFORMING TO THE REQUIREMENTS OF CISPI STANDARD 301, ASTM A-888 OR ASTM A-74 FOR ALL PIPE AND FITTINGS. JOINTS SHALL CONFORM TO CISPI 310 AND SHALL BE COUPLINGS WITH CORROSION RESISTANT METAL SHIELD, CLAMP ASSEMBLY AND ELASTOMERIC SEALING SLEEVE. COPPER DRAINAGE TUBING AND FITTINGS IS ACCEPTABLE WHEN APPROVED. CONDENSATE DRAINS SHALL BE TYPE L OR TYPE DWV HARD COPPER, WITH LONG SWEEP ELBOWS AND CLEANOUT TEES AT EACH CHANGE IN DIRECTION. CONNECT CONDENSATE DRAINS TO AIR CONDITIONING UNITS WITH P-TRAP AND RUN TO AN APPROVED RECEPTOR AND DRY WELL.

D. WATER PIPE (HOT AND COLD WATER): TYPE L COPPER TUBING, HARD TEMPER, WITH WROUGHT COPPER FITTINGS. CAPPED OR PLUGGED OUTLETS SHALL BE SCHEDULE 40 SCREWED BRASS. PROVIDE FULL SOLDER CUP FITTINGS.

E. GAS PIPE: SCHEDULE 40 BLACK STEEL WITH MALLEABLE IRON SCREWED FITTINGS ABOVE GRADE; WELDED BELOW GRADE WITH CLASS 150 WELDING FITTINGS. CONNECT TO EACH ITEM OF GAS-FIRED EQUIPMENT WITH DRIP LEG AND VALVE. PROVIDE FLEX CONNECTION IN APPROVED SIZES WHERE APPLICABLE.

F. ACID WASTE AND VENT PIPE UNDERGROUND TO 6" ABOVEGROUND: OSR FUSEAL, ORION, OR ENFIELD FLAME-RETARDANT POLYPROPYLENE PIPE AND FITTINGS ASSEMBLED WITH FUSION JOINTS. INSTALLATION SHALL COMPLY WITH MANUFACTURER'S RECOMMENDATIONS. PVC IS ALLOWED WHEN ACCEPTABLE BY LOCAL JURISDICTION. OBTAIN APPROVAL FROM LOCAL JURISDICTION.

G. ACID WASTE AND VENT PIPE ABOVEGROUND: IN INACCESSIBLE SPACES OR WITHIN WALLS: OSR FUSEAL, PVDF, ORION, OR ENFIELD FLAME-RETARDANT POLYPROPYLENE PIPE AND FITTINGS ASSEMBLED WITH FUSION JOINTS. INSTALLATION SHALL COMPLY WITH MANUFACTURER'S RECOMMENDATIONS.

IN ACCESSIBLE AREAS: FUSEAL, ENFIELD "ENFUSION", POLYPROPYLENE DRAINAGE PIPE AND FITTINGS, WITH MECHANICAL JOINTS.

F. WATER SERVICE PIPE: REFER TO 15500. PROVIDE CONCRETE THRUST BLOCK AT EACH CHANGE OF DIRECTION.

G. FURNACE HEAT EXCHANGER CONDENSATE PIPE: POLYETHYLENE FLEXIBLE TUBING, ASTM D3350 AND FITTINGS, FLAME RETARDANT. CONNECT TO FURNACE UNIT IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS. ENCASE ALL TUBING IN EMT CONDUIT.

2.03 PIPE AND FITTINGS OUTSIDE BUILDINGS:

A. SEE GENERAL REQUIREMENTS SECTION FOR DIELECTRIC FITTINGS AND PIPE CORROSIVE PROTECTION. CONNECT TO BUILDING SERVICES WHERE TERMINATED 5' OUTSIDE FOOTING LINE.

B. SANITARY AND STORM DRAIN PIPE: FIRST QUALITY, EXTRA STRENGTH, BELL AND SPIGOT CLAY SEWER PIPE ASTM #C-700-39 WITH FITTINGS CONFORMING TO ASTM C425-T, J-M PVC SEWER PIPE AND FITTINGS WITH RING-TITE JOINTS, ASTM D3034 SDR 35, OR SERVICE WEIGHT CAST IRON WHERE MARKED.

C. WATER PIPE IN GROUND 2" AND LARGER: SCHEDULE 40 GALVANIZED STEEL. FITTINGS SHALL BE THREADED GALVANIZED MALLEABLE IRON TO SIZES 4" AND SMALLER. J-M RING-TITE PVC, OR EQUAL, CONFORMING TO ASTM D2241-SDR21, CLASS 200 WITH RING-TITE FITTINGS OR DUCTILE IRON MECHANICAL JOINT COUPLINGS MAY BE USED BELOW GROUND AS ALLOWED BY LOCAL CODES OR TYPE K COPPER WITH WROUGHT COPPER FITTINGS AT THE CONTRACTORS OPTION. SIZES 1-1/2" AND SMALLER SHALL BE TYPE K COPPER TUBING, HARD TEMPER, WITH WROUGHT COPPER FITTINGS.

D. WATER SERVICE PIPING ABOVE GRADE:
CLASS 150 BELL AND SPIGOT DUCTILE CAST IRON WATER PIPE CONFORMING TO ANSI A21.6. PIPE SHALL BE LINED WITH A FACTORY-APPLIED 1/16" THICK CEMENT LINING WITH SMOOTH DENSE FINISH. FITTINGS SHALL CONFORM TO ANSI SPECIFICATION A21-10-1952, CLASS 250 PATTERN. FITTINGS SHALL BE LINED. PROVIDE CONCRETE THRUST BLOCK AT EACH CHANGE OF DIRECTION.

E. GAS PIPING ABOVEGROUND TO 18" BELOW GROUND:
SCHEDULE 40 BLACK STEEL WITH BEVELED ENDS FOR WELDING, WITH CLASS 150 WELDING FITTINGS. MITERING TO FORM ELBOWS OR TEES WILL NOT BE PERMITTED, WHERE BRANCH TEE CONNECTIONS OF WELDED PIPING ARE REQUIRED BONNEY "WELDOLET" FITTINGS MAY BE USED, IF THE BRANCH IS ONE-HALF OR THE DIAMETER OF THE MAIN OR LESS. PROVIDE GAS SERVICE SHUT-OFF VALVE ON DOWNSTREAM SIDE OF METER AND AT ENTRY TO EACH BUILDING CONSPICUOUSLY MARKED "GAS" WITH SIGN.

F. GAS PIPING UNDERGROUND:
FLEXCO PE2406 POLYETHYLENE GAS DISTRIBUTION PIPE ASTM D2513 AND ASTM D2683 FITTINGS WITH FUSION WELDED JOINTS. PIPE SHALL BE LABELED FOR NATURAL GAS IN ACCORDANCE WITH CPC.

AT TRANSITION BETWEEN POLYETHYLENE AND STEEL PIPING BELOW GRADE, PROVIDE CENTRAL PLASTICS COMPANY, OR EQUAL, DOUBLE "O" SEAL TRANSITION FITTINGS. PROVIDE MINIMUM OF 30 INCHES OF HORIZONTAL STEEL PIPE AT ALL CONNECTIONS TO ABOVE GROUND PIPING.

2.04 WATER HEATER:

A. CONNECT TO THE HOT AND COLD WATER LINES WITH A GATE VALVE, CHECK VALVE, J.R. SMITH #5020 HYDROTROL, UNION IN THE COLD WATER LINE AND A 3/4" ASME STANDARD PRESSURE AND TEMPERATURE RELIEF VALVE AND UNION HOT WATER LINE AT THE HEATER. RELIEF VALVE DIP TUBE SHALL EXTEND TO WITHIN 2" OF TANK.

B. DIP TUBES, SUPPLY AND HOT WATER NIPPLES, SUPPLY WATER BAFFLES OR HEAT TRAPS USED IN THE CONSTRUCTION OF THE TANK SHALL BE MADE TO WITHSTAND A TEMPERATURE OF 400 DEGREES F. WITHOUT DETERIORATING IN ANY MANNER AND THE OUTSIDE OF THE TANK JACKET SO LABELED.

C. HEATER SHALL HAVE A GLASS LINED STEEL TANK.

D. GAS FIRED: AUTOMATIC GAS-FIRED WATER HEATER, OF THE SIZE AND CAPACITY AS SCHEDULED ON THE DRAWINGS; AGA LABELED; 100% SAFETY SHUT-OFF CONTROLS. PROVIDE DURAVENT OR METALBESTOS FLUE CONNECTION THROUGH THE ROOF AND A TYPE L BREIDENT TOP, FLASH WATERTIGHT AT ROOF.

E. ELECTRIC: UNDERWRITER LABELED AUTOMATIC ELECTRIC WATER HEATER OF THE SIZE AND TYPE SHOWN ON THE DRAWINGS WITH HIGH TEMPERATURE CUTOFF. HEATER SHALL BE ON THE APPROVED LIST OF THE STATE OF CALIFORNIA AND COMPLY WITH TITLE 24 ENERGY REQUIREMENTS.

2.05 FIXTURES AND TRIM:

A. DESIGNATIONS ARE AMERICAN STANDARD UNLESS NOTED. KOHLER, ELJER, ARE ACCEPTABLE IF EQUAL IN UTILITY, QUALITY AND APPEARANCE.

B. P-TRAPS FOR LAVATORIES AND SINKS SHALL BE 17-GAUGE CHROME PLATED BRASS, ADJUSTABLE. PROVIDE OFSTET P-TRAPS FOR HANDICAPPED SINKS IN ORDER TO MAINTAIN ADA CLEARANCES.

C. CONCEALED STOPS SHALL BE 1/2" SPEEDWAY SSR44, LOCK SHIELD VALVES. 3/4" STOPS SHALL BE DCK BROS. #3150-LK. EXPOSED STOPS AND SUPPLIES SHALL BE 1/2" SPEEDWAY #537124 FOR LAVS, 537120L FOR WATER CLOSETS WITH IPS INLET, LOCK SHIELD, LOOSE KEY.

D. INSULATE DOMESTIC WATER AND WASTE PIPING BELOW HANDICAPPED PLUMBING FIXTURES WITH MOLDED PIPE INSULATION FOR SINGLE PIECE REMOVABLE INSULATION COVERS, HANDI LAV-GUARD OR EQUAL. CONFORM WITH ADA REQUIREMENTS.

E. INSTALL VALVE LEVER ON HANDICAP WATER CLOSETS ON WIDE SIDE OF FIXTURE.

F. OPERATING HANDLE OR VALVE FOR HANDICAPPED FIXTURES SHALL OPERATE WITH LESS THAN 5 POUNDS FORCE.

PART 3 – EXECUTION

3.01 SERVICES:

A. MAKE ALL ARRANGEMENTS FOR THE UTILITIES REQUIRED. PAY ALL COSTS INVOLVED IN OBTAINING THE SERVICES INCLUDING GAS SERVICE AND METER, WATER METER, PRESSURE REDUCING VALVE, ACCESS BOXES, STREET WORK.

B. VERIFY THE LOCATION OF ALL SERVICES. NO EXTRA COST SHALL BE ALLOWED IF SERVICES ARE NOT AS SHOWN.

3.02 RECORD DRAWINGS:

A. A PRINT OF THE PLUMBING PLAN SHOWING UNDERGROUND PIPING WILL BE FURNISHED TO THE CONTRACTOR ON WHICH HE SHALL INDICATE THE LOCATIONS OF THE UNDERGROUND INSTALLATIONS AS THE WORK PROGRESSES. THIS SHALL BE RETURNED TO THE ARCHITECT AT COMPLETION OF JOB.

3.03 DISINFECTION:

A. CLEAN AND DISINFECT: ALL HOT AND COLD WATER SYSTEMS CONNECTED TO DOMESTIC WATER SYSTEMS IN ACCORDANCE WITH AWWA STANDARD C651-92 AND AS REQUIRED BY THE LOCAL BUILDING AND HEALTH DEPARTMENT CODES. THIS PROCEDURE SHALL BE PERFORMED BY A WATER TREATMENT COMPANY THAT HAS A CURRENT CAL-EPA LICENSE TO APPLY DISINFECTANT CHLORINE IN POTABLE WATER.

B. PRELIMINARY PREPARATION: PROVIDE A 1" SERVICE COCK OR VALVE CONNECTED TO SYSTEM AT A POINT WITHIN 2'-0" OF ITS JUNCTION WITH WATER SUPPLY LINE AND INSTALL DISINFECTING AGENT INTO SYSTEM THROUGH THIS COCK. WHEN PROJECT IS COMPLETE, WITH ALL FIXTURES CONNECTED AND OPERABLE AND READY FOR USE AND WHEN, BY TEST, SYSTEM IS PROVED TO BE FREE FROM LEAKS, IT SHALL BE THOROUGHLY FLUSHED BY FULLY OPENING EVERY OUTLET AND OPENING EVERY FIXTURE UNTIL CLEAR WATER FLOWS FROM ALL OF THEM.

C. DISINFECTING AGENT: THE CHLORINE SHALL BE A REGISTERED PRODUCT WITH CAL-EPA FOR USE IN CALIFORNIA IN POTABLE WATER LINES, SUCH AS BACTICIDE, CAL-EPA REGISTRATION NO. 37962-20001.

D. DISINFECTING PROCEDURE: CONNECT A HAND OPERATED PUMP, 100 PSI RATING, MINIMUM TO THE 1" SERVICE COCK OR VALVE.

1. WITH SYSTEM COMPLETELY FULL OF WATER AND SUPPLY VALVE OPEN, ADMIT EVERY LINE AND FIXTURE OF SYSTEM SO THAT A TRICKLE OF WATER FLOWS FROM EACH.

2. INJECT DISINFECTANT UNTIL AN ORTHOTOLIDIN TEST AT EACH OUTLET SHOWS A CHLORINE RESIDUAL CONCENTRATION OF AT LEAST 50 PARTS PER MILLION (P.P.M.).

3. CLOSE ALL OUTLETS AND VALVES, INCLUDING VALVE CONNECTING TO PUBLIC WATER SUPPLY LINE AND SERVICE COCK ON SOLUTION INJECTION CONNECTION. MAINTAIN CONDITION FOR 24 HOURS AND CHLORINE RESIDUAL OF 50 P.P.M. SHOULD BE RETAINED IN SYSTEM FOR THIS 24 HOUR PERIOD. IF, AFTER 24 HOURS, ORTHOTOLIDIN TESTS INDICATE THAT CHLORINE RESIDUAL CONCENTRATION HAS DECREASED BELOW 50 P.P.M. THEN DISINFECTION PROCEDURE MUST BE REPEATED UNTIL AN APPROVED RESULT IS OBTAINED.

4. WHEN THE ABOVE PROCEDURE HAS BEEN COMPLETED, FLUSH OUT ENTIRE SYSTEM WITH FRESH WATER UNTIL AN ORTHOTOLIDIN TEST AT ANY OUTLET SHOWS A RESIDUAL OF NOT MORE THAN 0.5 P.P.M.

5. WARNING SIGNS SHALL BE PROVIDED AT ALL OUTLETS WHILE CHLORINATING THE SYSTEM.

3.04 PIPING CONNECTION:

A MINIMUM GRADE ON DRAIN, VENT, AND WASTE PIPING SHALL BE 1/4" PER FOOT UNLESS NOTED, OR LATER APPROVED. VENT PIPING SHALL BE CONNECTED TO A SOIL OR WASTE LINE.

B. CONNECTIONS FROM STACKS OR HORIZONTAL WASTES TO WALL OR FLOOR FINISH FOR WASTES FROM LAVATORIES, URINALS, SINKS, AND DRINKING FOUNTAINS AND CONNECTION BETWEEN FLOOR DRAINS AND TRAPS SHALL BE IPS 85% RED BRASS PIPE.

C. SPECIAL EQUIPMENT:

1. CERTAIN ITEMS OF EQUIPMENT WILL BE FURNISHED AND SET IN PLACE UNDER A DIFFERENT SECTION OF SPECIFICATIONS; FURNISH ALL SERVICES AND SINK FITTINGS AND WASTE TRAP IF REQUIRED.

2. MAKE COLD AND HOT WATER, DRAIN, VENT, AND OTHER REQUIRED CONNECTIONS TO ALL THE EQUIPMENT. EACH WATER CONNECTION SHALL HAVE A VALVE AND UNION IN THE LINE, UNLESS NOTED OTHERWISE.

3. SIZES AND LOCATIONS OF CONNECTION TO SPECIAL EQUIPMENT ARE SHOWN FOR EQUIPMENT MADE BY CERTAIN MANUFACTURERS. SECURE ROUGH-IN DATA FROM THE MANUFACTURER FOR THE EQUIPMENT TO BE INSTALLED AND ROUGH-IN ACCORDINGLY. FINAL CONNECTIONS SHALL CONFORM TO THE MANUFACTURER'S DIRECTIONS FOR THE EQUIPMENT FURNISHED AT NOT EXTRA COST TO THE OWNER.

D. TRAP PRIMERS: PROVIDE A TRAP PRIMER FOR EACH INDIRECT WASTE RECEPTACLE NOT RECEIVING DISCHARGE FROM A PLUMBING FIXTURE.

3.05 CLEANOUTS:

A. FURNISH CLEANOUTS AT ENDS OF BRANCH LINES, AT THE BASE OF VERTICAL LINES, AT CHANGES IN DIRECTION AND WHERE SHOWN OR REQUIRED TO FACILITATE CLEANING. A MAXIMUM SPACING OF 50 FEET INSIDE BUILDINGS, 100 FEET OUTSIDE, ALSO IN WASTE DROP FROM EACH SINK. CLEANOUT TO GRADE SHALL BE SET IN A 14" X 14" X 5" DEEP CONCRETE PAD, TROWEL SMOOTH AND EDGE; SET FLUSH WITH FINISHED GRADE. CLEANOUTS TO BE FULL SIZE OF LINE UP TO A MAXIMUM OF 6". CLEANOUTS SHALL CLEAR ALL OBSTRUCTIONS BY 18" MINIMUM. FURNISH TO OWNER ONE WRENCH FOR EACH SIZE AND TYPE OF CLEANOUT USED. PERMANENTLY IDENTIFY EXTERIOR CLEANOUTS: SS FOR SANITARY SEWER, SD FOR STORM DRAIN.

3.06 FIXTURES AND TRIM:

A. INSTALL ALL FIXTURES AT LOCATIONS SHOWN ON ARCHITECTURAL DRAWINGS. PROVIDE PROPER BACKING FOR HANGING BRACKETS AND HOLD DOWN SCREWS 2 X 6 BLOCKING SECURED WITH U.J.H. CLIPS OR CARRIERS AS SPECIFIED. GROUT VOIDS BETWEEN ALL FIXTURES AND ADJACENT SURFACES WITH CLEAR DOW SILICON SEALANT. INSTALL HOLD DOWN SCREWS AND WALL HUNG LAVATORIES.

B. ALL EXPOSED PIPING, BIBBBS, STOPS, FAUCETS, TRAPS, FLUSH VALVES AND OTHER TRIM FOR ALL FIXTURES SHALL BE CHROME PLATED INCLUDING PIPING INSIDE SINK CABINETS. PROVIDE HUBBS RIM FOR ALL COUNTER TYPE SINKS AND LAVATORIES. ENAMELED WARE SHALL BE CAST IRON WITH ACID RESISTING ENAMEL.

C. PROVIDE 85% OR IPS RED BRASS PIPE, SECURELY ANCHORED TO BUILDING CONSTRUCTION FOR EACH CONNECTION TO FAUCETS, FLUSH VALVES, STOPS, HOSE BIBBS, ETC. EACH FIXTURE EXCEPT HOSE BIBBS, SHALL HAVE A STOP VALVE INSTALLED ON WATER SUPPLY LINES TO PERMIT REPAIRING WITHOUT SHUTTING OFF WATER MAINS.

D. INSTALLATION FOR HANDICAP ACCESSIBLE FIXTURES SHALL CONFORM TO CHAPTER 16 CALIFORNIA PLUMBING CODE, SECTION 1115 B CALIFORNIA BUILDING CODE, AND ADA REQUIREMENTS.

E. PROVIDE WATER BRANCHES AT SINGLE PLUMBING FIXTURES WITH AIR CHAMBERS AT 12" LONG AND OF SAME DIAMETER PIPE AS BRANCHES. WHERE TWO OR MORE FIXTURES ARE LOCATED IN A ROW OR BATTER, CONTINUE WATER SUPPLY HEADER EITHER FULL SIZE OF BRANCH LINE WITH AIR CHAMBER ONE PIPE SIZE LARGER THAN HEADER AND A MINIMUM 24" LONG INSTALLED ON END OF HEADER OR PLACE AIR CHAMBER AT EACH FIXTURE, OR PROVIDE WATER HAMMER ARRESTOR.

F. GAS PIPING BELOW COVERED WALKS AND WHERE NOTED ON DRAWINGS SHALL BE INSTALLED IN WATERTIGHT SCHEDULE 40 PVC CONDUIT. CONDUIT SHALL BE VENTED WHERE NOTED.

G. INSTALL RAINWATER LEADERS, OVERFLOW DRAINS AND ROOF DRAINS IN ACCORDANCE WITH THE ARCHITECTURAL DETAILS.

H. PROVIDE CHRISTY, BROOKS, OR EQUAL, CONCRETE PIT, WITH SIZE AS NOTED ON DRAWINGS, OR AS REQUIRED, FOR WATER METER AND DETECTOR CHECK VALVE.

I. PROVIDE SHUT OFF VALVE ON EACH GAS BRANCH LINE AT GAS METER.

J. PROVIDE EXPANSION JOINT IN GAS PIPING AT BUILDING SEISMIC JOINTS.

END OF SECTION

SECTION 15500 - AUTOMATIC FIRE PROTECTION SYSTEM

SECTION 15500 – AUTOMATIC FIRE PROTECTION SYSTEM

CONDITIONS OF THE CONTRACT AND DIVISION 1 APPLY TO THIS SECTION.

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS:

A. THE REQUIREMENTS OF THE GENERAL CONDITIONS AND DIVISION 1 APPLY TO ALL WORK HEREUNDER; ALSO APPLICABLE PROVISIONS OF SECTION 15010 MECHANICAL WORK – GENERAL REQUIREMENTS.

B. FURNISH AND INSTALL ALL PLUMBING WORK INDICATED ON THE DRAWINGS AND DESCRIBED HEREIN. ALSO, ANY INCIDENTAL WORK NOT SHOWN OR SPECIFIED NECESSARY TO PROVIDE THE COMPLETE SYSTEM.

1.02 SCOPE:

A. THE CONTRACTOR SHALL FURNISH ALL LABOR, DESIGN DRAWINGS, CALCULATIONS, MATERIALS, TOOLS AND EQUIPMENT TO INSTALL THE WET PIPE AUTOMATIC FIRE SPRINKLER SYSTEM AS HEREINAFTER DESCRIBED, READY FOR SERVICE TO THE ENTIRE SATISFACTION OF THE ARCHITECT. SYSTEM SHALL BE DESIGNED FOR THE OCCUPANCY AS DETERMINED BY NFPA. A HYDRAULIC CALCULATED SYSTEM WILL BE ACCEPTABLE.

B. IT IS THE INTENT OF THESE SPECIFICATIONS TO PROVIDE FOR COMPLETE AND OPERATING FIRE PROTECTION AUTOMATIC SPRINKLER SYSTEM IN FULL COMPLIANCE WITH THE STANDARDS OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) PAMPHLET NO. 13, LATEST EDITION, AND CBC STANDARD 38-1. THE WORK SHALL ALSO BE IN ACCORDANCE WITH ALL LOCAL OR STATE REQUIREMENTS WHICH APPLY.

1.03 DRAWINGS:

A. ALL AREAS ABOVE AND BELOW THE FINISHED CEILINGS, EXTERIOR EXPOSURE, STAIRWAYS, ROOMS, AREAWAYS, ENTRY, ETC., AND OTHER AREAS REQUIRING SPRINKLERS SHALL BE ADEQUATELY PROTECTED. THE CONTRACTOR SHALL THOROUGHLY EXAMINE ALL ARCHITECTURAL AND OTHER DRAWINGS AS REQUIRED TO SATISFY THIS REQUIREMENT.

B. THE NUMBER OF HEADS INDICATED ON THE DRAWINGS SHALL NOT BE REDUCED. PROVIDE ANY ADDITIONAL HEADS REQUIRED TO OBTAIN APPROVALS.

1.04 APPLICABLE SPECIFICATIONS: THE FOLLOWING PUBLICATIONS FOR A PART OF THIS SPECIFICATION:

A. GENERAL: PER REQUIREMENTS IN 15010.

B. UNDERWRITERS' LABORATORIES, INC., (UL) PUBLICATIONS: LIST OF INSPECTED FIRE PROTECTION EQUIPMENT AND MATERIALS.

C. NATIONAL FIRE PROTECTION ASSOCIATION PAMPHLETS: STANDARD OF THE NFPA FOR THE INSTALLATION OF SPRINKLER EQUIPMENT.

1.05 SUPERVISION:

A. KEEP A COMPETENT SUPERINTENDENT ON THE JOB WHO SHALL COORDINATE THE ACTIVITIES OF THE CRAFTS AND MAINTAIN THE PROGRESS OF THE WORK TO THE SATISFACTION OF THE ARCHITECT.

1.06 SITE CONDITIONS:

A. VERIFY ALL DIMENSIONS AT THE BUILDING SITE AND CHECK EXISTING CONDITIONS BEFORE BEGINNING WORK. MAKE CHANGES WHICH ARE NECESSARY TO INSTALL THE WORK IN HARMONY WITH OTHER CRAFTS, THEY SHALL BE FIRST APPROVED BY THE ARCHITECT.

1.07 REGULATIONS:

A. ALL WORK SHALL BE INSTALLED IN STRICT CONFORMITY WITH CALIFORNIA BUILDING CODE (CBC), CALIFORNIA PLUMBING CODE (CPC), AND CALIFORNIA ELECTRIC CODES (CEC), ALL INDUSTRIAL SAFETY ORDERS, CALIFORNIA MECHANICAL CODE (CMC), NATIONAL FIRE CODE (NFC), AND ANY OTHER LAWS AND REGULATIONS OF LEGALLY CONSTITUTED AUTHORITIES HAVING JURISDICTION.

1.08 FEES AND PERMITS:

A. TAKE OUT ALL PERMITS AND PAY ALL FEES AND CHARGES OF ANY KIND REQUIRED IN CONNECTION WITH THIS WORK.

1.09 TEMPORARY CONNECTIONS:

A. ALL TEMPORARY CONNECTIONS REQUIRED TO MAINTAIN SERVICES DURING THE COURSE OF THIS CONTRACT SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER. THE NORMAL FUNCTION OF THE BUILDING MUST NOT BE INTERRUPTED; NOTIFY THE OWNER SEVEN DAYS IN ADVANCE BEFORE DISTURBING ANY SERVICE.

1.10 QUALITY ASSURANCE:

A. QUALIFICATIONS OF INSTALLER: UNLESS THE CONTRACTOR HAS SUBSTANTIAL PREVIOUS EXPERIENCE WITH THE CLASS OF WORK, THE SYSTEM SHALL BE INSTALLED BY A SUBCONTRACTOR WHO SPECIALIZES IN THIS WORK.

1.11 SUBMITTALS:

A. SHOP DRAWINGS AND PRODUCT DATA:

1. SUBMIT IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 01340.

2. SUBMIT SHOP DRAWINGS SHOWING THE LOCATION OF ALL SPRINKLER HEADS, PIPING, BRACING, HANGERS AND ANCHORS AND ALL NECESSARY WORKING DRAWINGS SHOWING COMPLETE DETAILS OF PIPING WITHIN THE BUILDING. DRAWINGS SHALL BE SUBMITTED FOR REVIEW PRIOR TO COMMENCEMENT OF ANY WORK. THE DRAWINGS SHALL BE REVIEWED, STAMPED AND APPROVED BY THE OFFICE OF THE STATE FIRE MARSHAL AND/OR THE AUTHORITY HAVING JURISDICTION AFTER REVIEW BY THE ENGINEER.

B. OPERATIONS AND MAINTENANCE DATA:

1. SUBMIT IN ACCORDANCE WITH THE REQUIREMENTS OF DIVISION 1.

C. INSTALLATION DRAWINGS: THE CONTRACTOR SHALL PREPARE INSTALLATION DRAWINGS FOR ALL PIPING AND SYSTEMS, AND SHALL COORDINATE THEM WITH THE ARCHITECTURAL REFLECTED CEILING PLANS AND WITH DRAWINGS FOR WORK OF OTHER TRADES. THE CONTRACTOR SHALL OBTAIN TRANSPARENCIES OF REFLECTED CEILING PLANS FROM THE ENGINEER AND SHALL SHOW ALL HEAD LOCATIONS THEREON, AND SHALL SUBMIT THESE DRAWINGS WITH SPRINKLER LAYOUT DRAWINGS, TO THE ENGINEER FOR REVIEW. THE CONTRACTOR SHALL THEN SUBMIT THESE DRAWINGS TO THE AUTHORITY HAVING JURISDICTION, AND OBTAIN THEIR APPROVALS. AFTER SUCH APPROVALS ARE OBTAINED, FURNISH FOUR SETS OF APPROVED INSTALLATION DRAWINGS TO THE ENGINEER.

PART 2 – PRODUCTS

2.01 GENERAL:

A. THE EQUIPMENT TO BE FURNISHED UNDER THIS SPECIFICATION SHALL BE ESSENTIALLY THE STANDARD PRODUCT OF THE MANUFACTURER. WHERE TWO OR MORE UNITS OF THE SAME CLASS OF EQUIPMENT ARE REQUIRED, THESE UNITS SHALL BE PRODUCTS OF A SINGLE MANUFACTURER. THE CONTRACTOR SHALL THOROUGHLY EXAMINE ALL ARCHITECTURAL AND OTHER DRAWINGS AS REQUIRED TO SATISFY THIS REQUIREMENT.

2.02 MATERIALS:

A. UNLESS OTHERWISE SHOWN ON THE DRAWINGS, SPECIFIED, OR DIRECTED BY THE ARCHITECT, ALL MATERIALS AND EQUIPMENT USED IN THE INSTALLATION OF THE SPRINKLER SYSTEMS SHALL BE LISTED AS APPROVED BY THE UL AND SHALL BE THE LATEST DESIGN OF THE MANUFACTURER. ALL WORK SHALL BE INSTALLED IN CONFORMITY WITH THE MOST RESTRICTIVE SPECIFICATIONS AND OTHER REQUIREMENTS SPECIFIED BELOW. ALL MATERIALS SHALL BE REVIEWED BY THE ARCHITECT PRIOR TO INSTALLATION.

B. WET SPRINKLER PIPE ABOVE GRADE SHALL BE SCHEDULE 40 BLACK STEEL, ASTM A-53, PIPE WITH UL APPROVED CAST IRON SCREWED SPRINKLER FITTINGS. UL APPROVED GROOVED FITTINGS AND COUPLINGS AT THE CONTRACTOR'S OPTION.

C. PIPE BELOW GRADE TO 12" ABOVE SHALL BE J.M BLUE BRUT PVC CLASS 100, C900, PIPE AND FITTINGS, UL LABELED, MAY BE USED. UNDERGROUND, OUTSIDE THE BUILDING IF ALLOWED BY LOCAL CODES. PIPING BELOW THE BUILDING TO 4" ABOVE FINISHED FLOOR WITHIN FIVE FEE OUTSIDE THE BUILDING FOOTPRINT) SHALL BE DUCTILE IRON PIPE WITH MECHANICAL RESTRAINT JOINTS IN ACCORDANCE WITH THE LOCAL JURISDICTION.

D. SPRINKLER HEADS:

1. IN GENERAL: PENDANT OR UPRIGHT HEADS, EXPOSED PATTERN ON EXPOSED PIPING; FLUSH ELEMENT TEMPERATURE RATINGS PER NFPA PAMPHLET NO. 13 REQUIREMENTS.

2. IN AREAS WITH SUSPENDED CEILINGS: SEMI-RECESSED STYLE HEADS, WITH INTERNAL ESCUTCHEON, OR CONCEALED TYPE WITH CHROME FINISH; FUSING ELEMENT TEMPERATURE RATINGS PER NFPA 13 REQUIREMENTS.

3. SI

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY

PLUMBING FIXTURE SCHEDULE

DF-1	ELECTRIC WATER COOLER, "HAWS" HWBFABL.VRC, HI-LO, STAINLESS STEEL, 115V-1 PH., R134a REFRIGERANT, PROVIDE SUPPLY AND STOP, A.D.A.
FD-1	FLOOR DRAIN, "SMITH" 2005, 5" DIA., NB TOP, CAST IRON BODY, TRAP PRIMER CONNECTION.
HB-1	HOSE BIBB, "WOODFORD" MODEL B74, LOCKING COVER, VACUUM BREAKER, LOOSE KEY
L-1	LAVATORY, "AMERICAN STANDARD" 0483.000 19¾"Wx13¾" RECTANGLE, UNDER COUNTER MOUNT, VITREOUS CHINA, ELECTRONIC BATTERY OPERATED FAUCET 7025103.002, 0.35 GPM, GRID STRAINER, PROVIDE SUPPLIES STOPS AND 17 GA. CHROME PLATED BRASS P-TRAP, ADA COMPLIANT.
L-2	LAVATORY: WALL MOUNTED AMERICAN STANDARD 0955.001EC, 21.25X20.5 VITREOUS CHINA, ELECTRONIC BATTERY OPERATED FAUCET 7025103.002, 0.35 GPM, PROVIDE 0062.000 SHROUD, PROVIDE WALL HANGAR WITH FLOOR FEET ZURN Z1231, PROVIDE RISERS, STOPS, AND TAILPIECE.
MS-1	MOP SINK: "FLORESTONE" 95, NEO ANGLE DROP FRONT, 3" INTEGRAL DRAIN WITH 18 GA. STAINLESS STEEL GRID, MR-371 FAUCET WITH VACUUM BREAKER AND BUCKET HOOK, MR-372 MOP HANGER WITH 3 CLAMPS, AND MR-370, 30" HOSE WITH SS CLAMP. PROVIDE SUPPLIES AND STOPS.
S-1	ELKAY MODEL LRAD191855, SELF RIMMING COUNTER MOUNTED SINK, 18 GAUGE TYPE 304 STAINLESS STEEL, 19"x18" SINGLE COMPARTMENT UNIT WITH 16"x11⅞"x5½" DEEP BOWL, SYMMONS SINGLE HANDLE FAUCET MODEL S-23-1.0, LEAD-FREE, 1.0 GPM FLOW. PROVIDE ELKAY MODEL JB-99 DRAIN. PROVIDE ZURN MODEL Z8802LRLK-XL-PC LEAD-FREE ANGLE STOPS.
UR-1	URINAL, "AMERICAN STANDARD" 6002001 PINTBROOK, 1.25 GPF, 6063013.002 BATTERY OPERATED FLUSH VALVE, WALL MOUNT, INSTALLED AT ADA HEIGHT, PROVIDE FLOOR MOUNT CARRIER.
UR-1	URINAL, SAME AS UR-1, INSTALLED AT STANDARD HEIGHT (NON-ADA).
WHA-1	WATER HAMMER ARRESTER, "J. R. SMITH" HYDROTROL, PROVIDE ACCESS DOOR.
TP-1	TRAP PRIMER: DIFFERENTIAL PRESSURE AUTOMATIC TYPE, CORROSION RESISTANT BRASS, INSTALL PER MANUFACTURER'S RECOMMENDATIONS, PROVIDE J.R. SMITH 12"X12" ACCESS PANEL, PPP #PR-500 OR EQUAL.
WC-1	WATER CLOSET, "AMERICAN STANDARD" 2294.011EC. WALL HUNG. FLUSH VALVE: 6065.121 ELECTRONIC FLUSH VALVE 1.28GPF, LITHIUM BATTERY INCLUDED. TOP OF SEAT @ 17" HIGH (ADA COMPLIANT), OPEN FRONT, 5901.100SS SELF-SUSTAINING CHECK HINGE. PROVIDE "ZURN" OR "J.R. SMITH" WALL HUNG CARRIER.
WC-2	WATER CLOSET: SAME AS WC-1, INSTALL @ STANDARD HEIGHT (TOP OF SEAT @ 15" HIGH, NON-ADA COMPLIANT)

PLUMBING EQUIPMENT SCHEDULE

WH 1 / WH 2	"CHRONOMITE" MODEL SR-20L208, 4.2 KW, 208v-1 PH, 20 AMPS, 0.35 GPM ATIVATION, SET TO 110°F, (TYP OF 2).
WH 3	"CHRONOMITE" MODEL SR-40208, 8320 WATTS, 1.0 GPM, 57°F RISE, 208v-1 PH.

PLUMBING ABBREVIATIONS

ABV	ABOVE
ABC, OH	ABOVE CEILING, OVERHEAD
AD	ACCESS DOOR
ADA	AMERICANS WITH DISABILITIES ACT
AFF	ABOVE FINISHED FLOOR
AIP	ABANDON IN PLACE
BR	BRANCH
CL	CENTERLINE
CO	CLEANOUT
CW	COLD WATER
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RETURN
DIA, ø	DIAMETER
FC	FLEXIBLE CONNECTION
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FSR	FIRE SPRINKLER RISER
GCO	GRADE CLEANOUT
HW	HOT WATER
HWR	HOT WATER RETURN
I.E.	INVERT ELEVATION
(N) (E)	NEW, EXISTING
NIC	NOT IN CONTRACT
POC	POINT OF CONNECTION
P, TRV	PRESSURE & TEMPERATURE RELIEF VALVE
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
(R) (D)	RISE, DROP
RD, OFL	ROOF DRAIN, OVERFLOW
RI	ROUGH-IN
RO	RUN-OUT
SMS	SHEET METAL SCREWS
SOV	SHUT OFF VALVE
TA, FA	TO ABOVE, FROM ABOVE
TB, FB	TO BELOW, FROM BELOW
TBR	TO BE REMOVED
TP	TRAP PRIMER
UG, UF	UNDERGROUND, UNDERFLOOR
UON	UNLESS OTHERWISE NOTED
UTR	UP THROUGH ROOF
V, VR, VTR	VENT, VENT RISER, VENT THRU ROOF
WT	WATERTIGHT
WCO	WALL CLEANOUT

APPLICABLE CODES

ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE REGULATIONS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

A) STATE OF CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24,

2022 EDITION OF THE CALIFORNIA BUILDING CODE.
2022 EDITION OF THE CALIFORNIA ELECTRICAL CODE.
2022 EDITION OF THE CALIFORNIA FIRE CODE.
2022 EDITION OF THE CALIFORNIA MECHANICAL CODE.
2022 EDITION OF THE CALIFORNIA PLUMBING CODE.

B) NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) LIFE SAFETY CODE

PLUMBING FIXTURE CONNECTION SCHEDULE

FIXTURE NAME	SYMBOL	VENT	WASTE		COLD WATER		HOT WATER	
			BR	RI	BR	RI	BR	RI
LAVATORY	L	1½"	2"	1½"	¾"	½"	¾"	½"
WATER CLOSET FLUSH VALVE (FV)	WC	2"	4"	4"	1¼	1"	–	–
URINAL FLUSH VALVE (FV)	UR	2"	4"	4"	1¼	1"	–	–
MOP SINK	MS	2"	3"	3"	¾"	¾"	¾"	¾"
SINK	S	1½"	2"	1½"	¾"	½"	¾"	½"
FLOOR DRAIN	FD	2"	2"	2"	–	–	–	–

PLUMBING LEGEND

CW	COLD WATER LINE
CD	CONDENSATE DRAIN
F	FIRE SERVICE LINE
G	GAS
HW	HOT WATER LINE
HWR	HOT WATER RETURN
LPG	LIQUID PETROLEUM GAS
OFL	OVERFLOW
X X X X X	PIPING OR EQUIPMENT TO BE REMOVED
RWL	RAINWATER LEADER
	RISE OR DROP IN DIRECTION OF FLOW
	SANITARY SOIL OR WASTE LINE
SCD	SECONDARY CONDENSATE DRAIN LINE
TP	TRAP PRIMER LINE
	VENT
	CLEANOUT & WALL CLEANOUT
	FIRE DEPARTMENT CONNECTION
	FLOOR/ GRADE CLEAN OUT
	FLOOR DRAIN
	HOSE BIBB/ WALL HYDRANT
	TRAP
	TRAP PRIMER
	BALANCING VALVE
	BALL VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	FLEXIBLE CONNECTION
	GATE VALVE
	SHUT OFF COCK
	PRESSURE GAUGE
	PRESSURE REDUCING VALVE
	REDUCER
	PRESSURE & TEMPERATURE RELIEF VALVE
	SHUT OFF VALVE
	STRAINER
	STRAINER & DRAIN VALVE WITH HOSE FITTING
	SOLENOID VALVE
	THERMOMETER
	UNION
MA	MEDICAL AIR
PA	PLANT COMPRESSED AIR
N	NITROGEN LINE
ND	NITROUS OXIDE
OX	OXYGEN LINE
VV	VACUUM LINE

COMPLIANCE NOTES

MECHANICAL AND PLUMBING EQUIPMENT SHALL CONFORM TO THE FOLLOWING AS STATED IN THE ENERGY EFFICIENCY STANDARDS, 2022.

1. BE CERTIFIED BY THE MANUFACTURER AS COMPLYING WITH THE EFFICIENCY REQUIREMENTS AS PRESCRIBED IN SECTIONS:
   - 110.1 APPLIANCES REGULATED BY THE APPLIANCE EFFICIENCY STANDARDS:
   - 110.2 HVAC EQUIPMENT EFFICIENCY AND PACKAGED CONTROLS:
   - 110.3 SERVICE WATER HEATING EFFICIENCY AND CONTROLS:
   - 110.4 POOL AND SPA HEATING EFFICIENCY AND CONTROLS:
   - 110.5 RESTRICTIONS ON PILOT LIGHTS:
2. BE SPECIFIED AND INSTALLED IN ACCORDANCE WITH SECTIONS.
   - 120.1 REQUIREMENTS FOR VENTILATION:
   - 120.2 REQUIRED CONTROLS FOR HVAC SYSTEMS:
     - 102.2 (H) DEMAND SHED CONTROLS.
     - 120.2 (I) ECONOMIZER FAULT DETECTION & DIAGNOSTIC.
   - 120.3 REQUIREMENTS FOR PIPE INSULATION:
   - 120.4 REQUIREMENTS FOR DUCT INSULATION:
   - 120.5 REQUIREMENTS FOR MECHANICAL SYSTEMS
   - 120.8 BUILDING COMMISSIONING
   - 120.9 REQUIREMENTS FOR COMMERCIAL BOILERS

PIPING MATERIAL SCHEDULE

SYSTEM	LOCATION	MATERIAL		MATERIAL	
		MATERIAL	TEST METHOD	MATERIAL	TEST METHOD
WASTE & VENT	ABOVE SLAB	STANDARD WEIGHT COATED CAST IRON PIPE	CISPI 301, ASTM A888	PLAIN END NO-HUB WITH NEOPRENE GASKET & STAINLESS STEEL COUPLING	ASTM A74, ASTM C564
WASTE & VENT	BELOW SLAB	PVC-DWV PIPE, SCHEDULE 40 THICKNESS	ASTM D1784 ASTM D1785	SOLVENT WELD	ASTM D2665 ASTM D2564
DOMESTIC CW & HW	ABOVE SLAB	TYPE "L" HARD TEMPER SEAMLESS COPPER	ASTM B88	WROUGHT COPPER FITTINGS WITH 95/5 TIN-SILVER SOLDERED JOINTS	ANSI B16.22
CONDENSATE DRAIN	ABOVE SLAB	TYPE "M" HARD TEMPER SEAMLESS COPPER	ASTM B88	WROUGHT COPPER FITTINGS WITH 95/5 TIN-SILVER SOLDERED JOINTS	ANSI B16.22
NATURAL GAS	ABOVE SLAB	SCHEDULE 40 BLACK STEEL PIPE	ASTM A120	150 PSI BLACK MALLEABLE IRON SCREWED FITTINGS	ANSI B16.3 ANSI B16.8

NOTES:
1. PRIME AND PAINT ALL GAS PIPING (BY OTHERS).
2. ALL CAST IRON PIPE SHALL BE AMERICAN MADE AND TESTED, NO IMPORTED PIPE IS ACCEPTABLE. TYLER PIPE, AB&I FOUNDRY OR CHARLOTTE PIPE.
3. COPPER FITTINGS ALLOWED: PROPRESS BY VIEGA, ASME B16.51, IAPMO LISTED, LEAD FREE.
4. GAS PIPE FITTINGS ALLOWED: MEGAPRESS G, ASME B31, IAPMO LISTED. FOR USE WITH CARBON STEEL.

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Revisions

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Project Manager:	JT	Plot Date:	Jul 22, 2023 - 1:46pm
Project Drafter:	-	Login:	GYang

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HY Architects Project number: 6013

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Project

TENANT IMPROVEMENTS

Sheet Title

PLUMBING LEGEND, NOTES AND SCHEDULES

Client Project Number: N/A

Scale: As indicated
Drawn By: TURLEY
Checked By: TURLEY
Issue Date: July 21, 2023

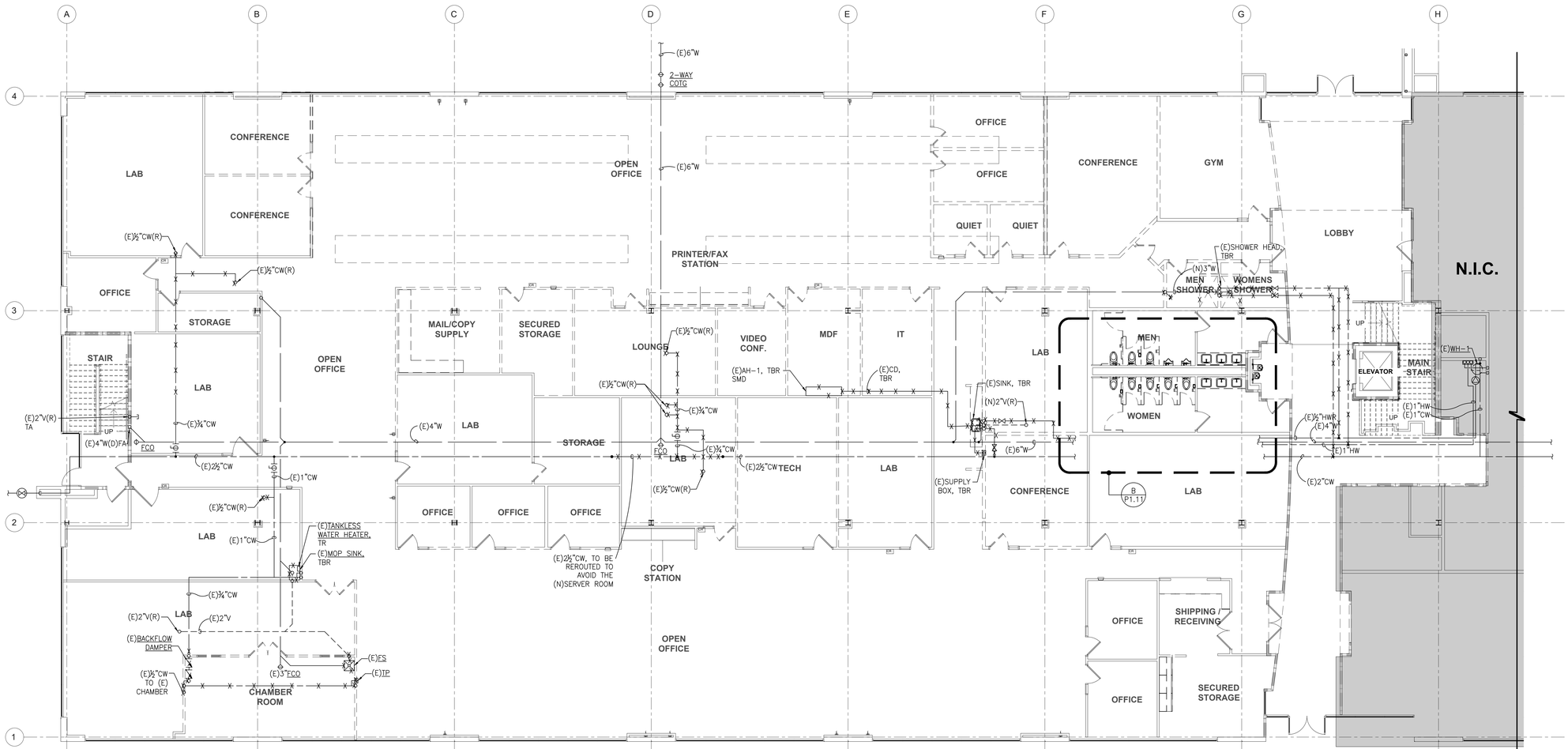
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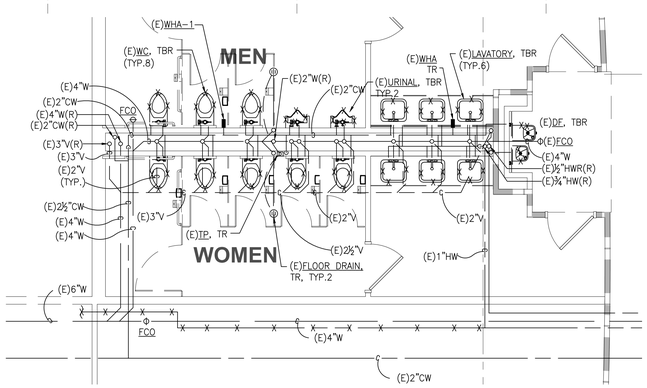


A PLUMBING FIRST FLOOR PARTIAL DEMOLITION FLOOR PLAN – WEST

SCALE: 1/8" = 1'-0"

NOTES:

1. FOR ALL DEMOED FIXTURES ON THIS PLAN (FIXTURES IN RESTROOMS ON ENLARGED PLAN ARE NOT INCLUDED), DISCONNECT PIPING CONNECTION, CUT WASTE AND VENT PIPING BEHIND ARCHITECTURAL FINISHES AND CAP, CUTBACK WATER PIPING TO MAIN BRANCH AND CAP TO AVOID DEAD LEGS.



B PLUMBING FIRST FLOOR PARTIAL DEMOLITION FLOOR PLAN – RESTROOMS

SCALE: 1/4" = 1'-0"

NOTES:

1. FOR ALL DEMOED FIXTURES ON THIS PLAN IN RESTROOMS, DISCONNECT PIPING AND RECONNECT TO NEW FIXTURES INSTALLED AT SAME LOCATION. MODIFY ROUGH-INS AS NEEDED FOR NEW FIXTURES.

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Project Engineer:	JT	Job Number:	23131
Project Manager:	JT	Plot Date: Jul 22, 2023 - 1:49am	
Project Drafter:		Login: DYang	

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REGISTERED PROFESSIONAL ENGINEER JUSTIN W. THOMPSON No. M-028567 Exp. 6/30/2025 MECHANICAL STATE OF CALIFORNIA

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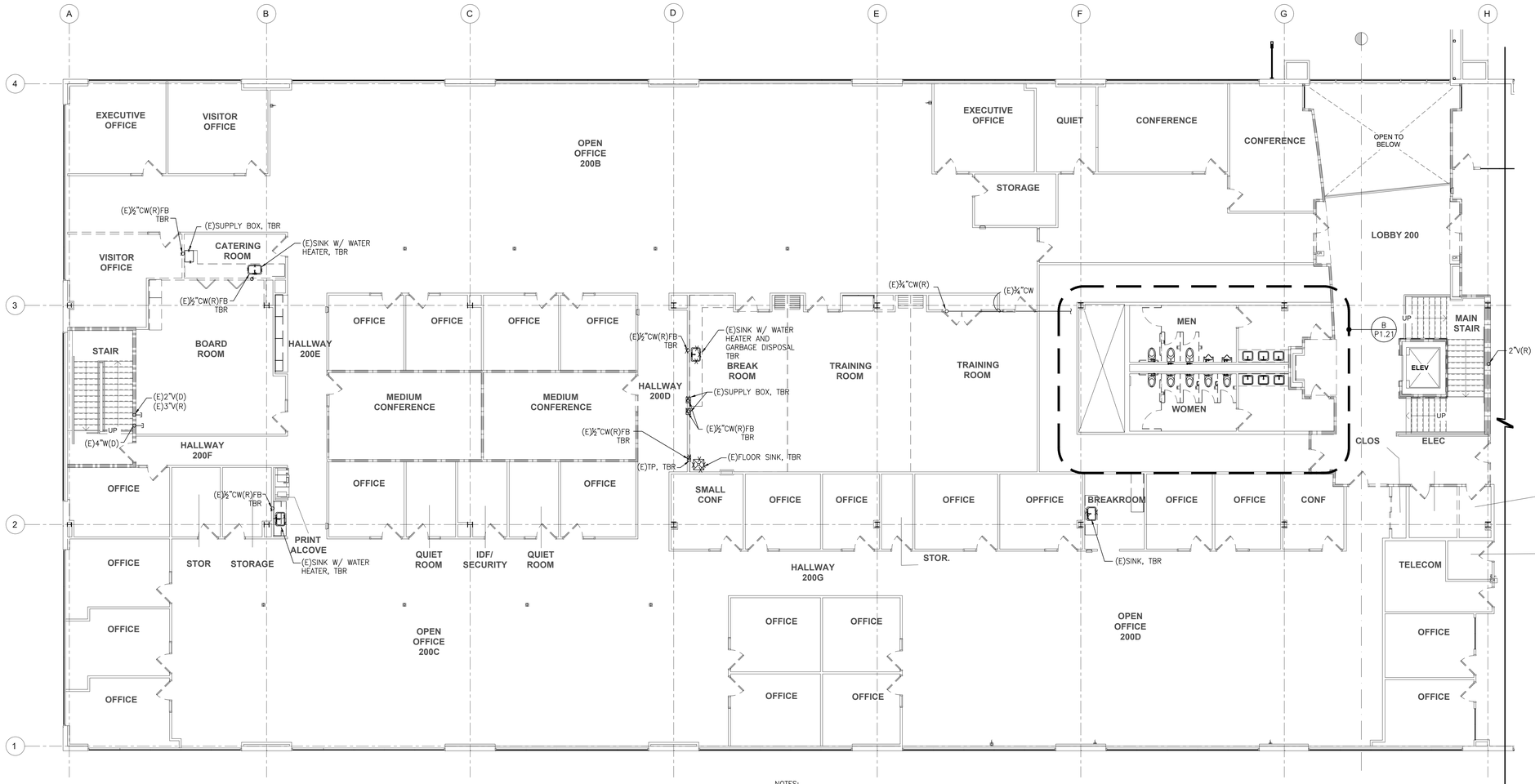
PLUMBING FIRST FLOOR PARTIAL DEMOLITION PLAN - WEST

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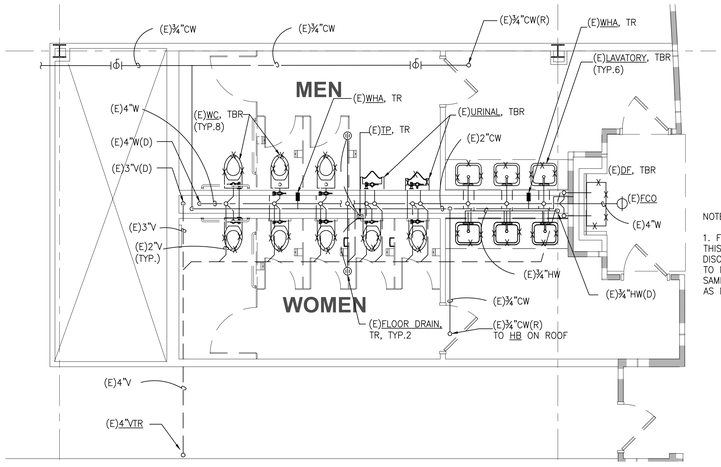


A PLUMBING SECOND FLOOR PARTIAL DEMOLITION FLOOR PLAN – WEST

SCALE: 1/8" = 1'-0"

NOTES:

1. FOR ALL DEMOED FIXTURES ON THIS PLAN (FIXTURES IN RESTROOMS ON ENLARGED PLAN ARE NOT INCLUDED), DISCONNECT PIPING CONNECTION, CUT WASTE AND VENT PIPING BEHIND ARCHITECTURAL FINISHES AND CAP, CUTBACK WATER PIPING TO MAIN BRANCH AND CAP TO AVOID DEAD LEGS.



B PLUMBING SECOND FLOOR PARTIAL DEMOLITION FLOOR PLAN – RESTROOMS

SCALE: 1/4" = 1'-0"

NOTES:

1. FOR ALL DEMOED FIXTURES ON THIS PLAN IN RESTROOMS, DISCONNECT PIPING AND RECONNECT TO NEW FIXTURES INSTALLED AT SAME LOCATION. MODIFY ROUGH-INS AS NEEDED FOR NEW FIXTURES.

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Project Manager:	JT	Plot Date:	Jul 22, 2023 - 1:46pm
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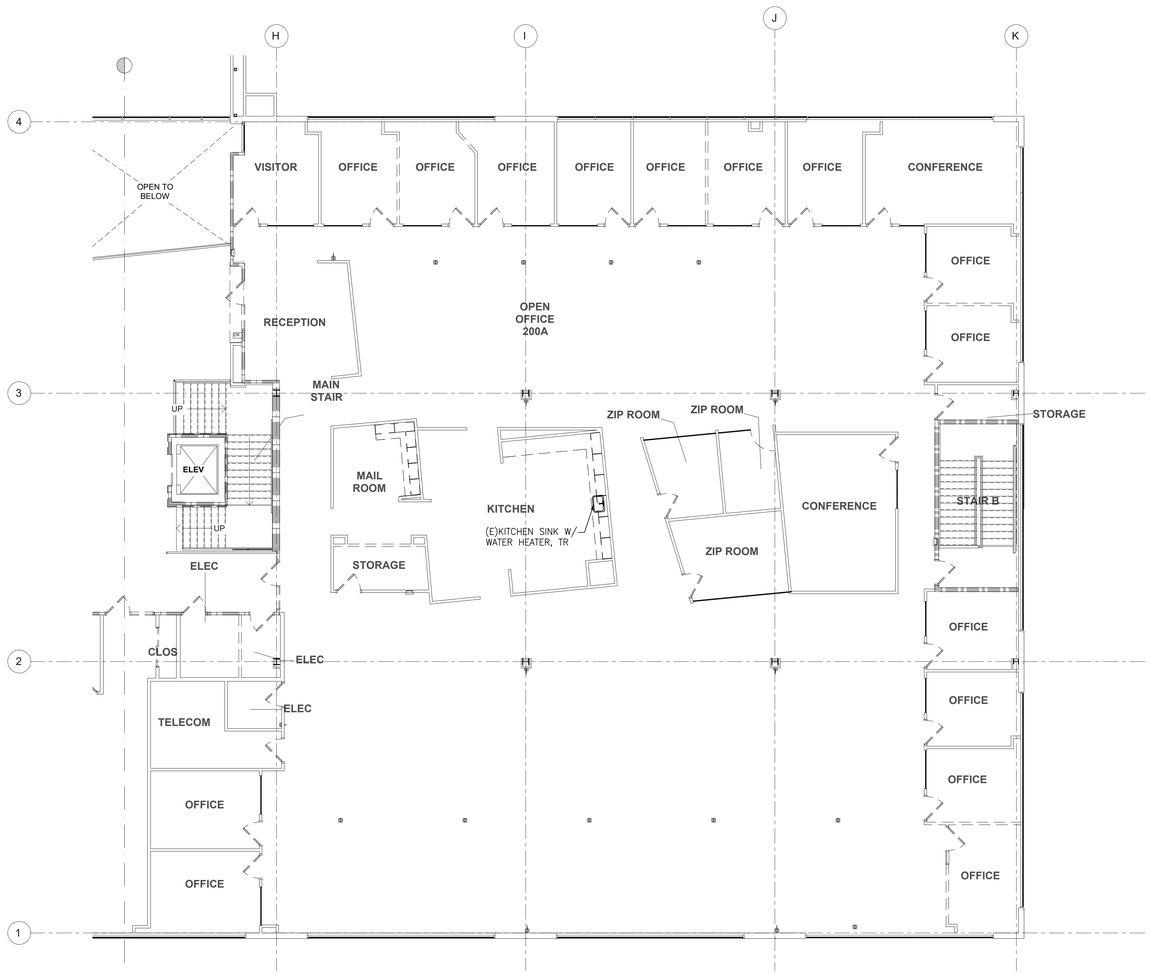
PLUMBING SECOND FLOOR PARTIAL DEMOLITION PLAN - WEST

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GENERAL NOTES

1. THERE IS NO PLUMBING DEMOLITION OR NEW SCOPE IN THIS AREA. NO NEW PLUMBING FLOOR PLAN IN THE SET.

A PLUMBING SECOND FLOOR PARTIAL DEMOLITION FLOOR PLAN – EAST

SCALE: 1/8" = 1'-0"

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PLUMBING SECOND FLOOR PARTIAL DEMOLITION PLAN - EAST

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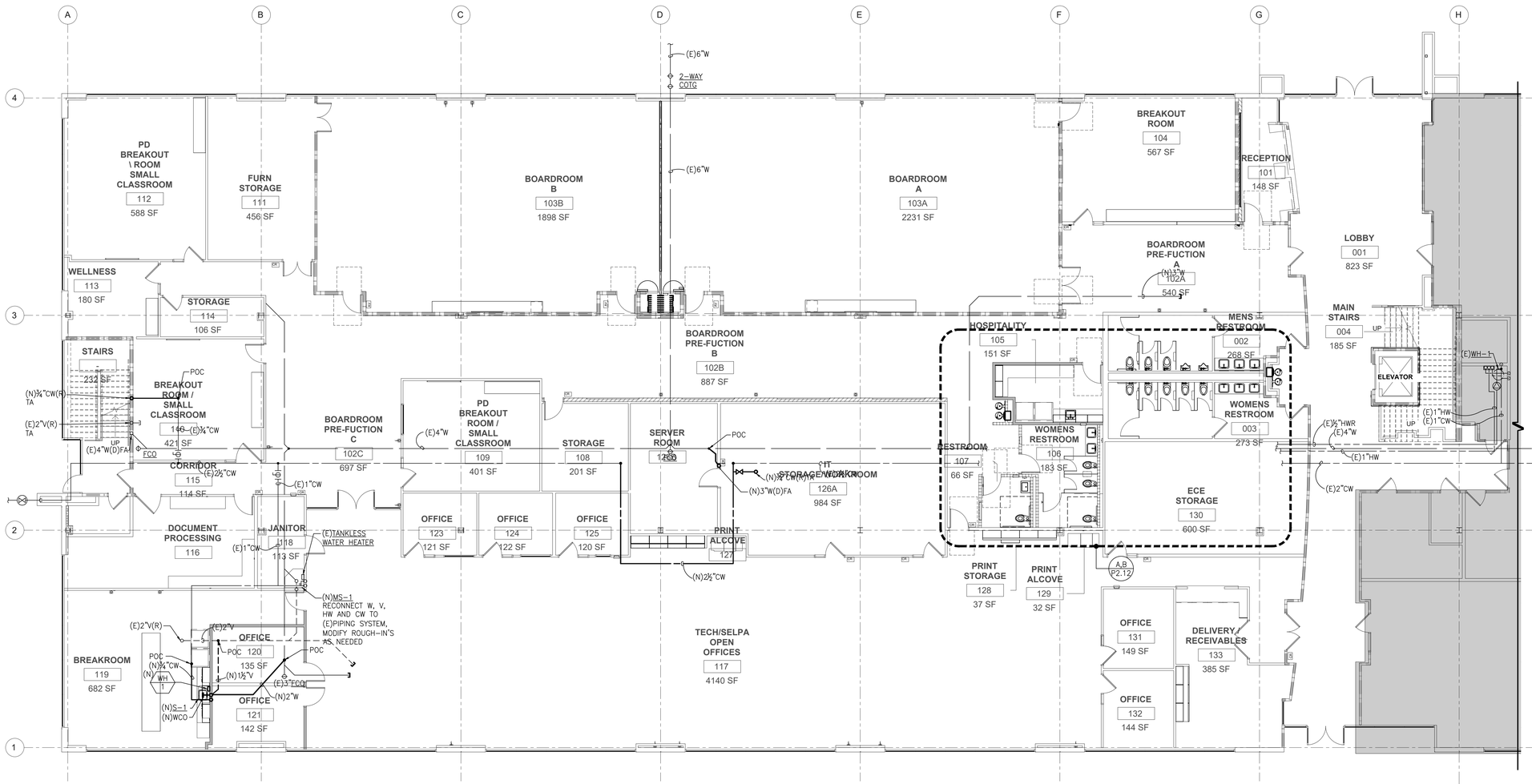
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PLUMBING FIRST FLOOR PARTIAL REMODEL FLOOR PLAN – WEST

A

SCALE: 1/8" = 1'-0"

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Project Drafter:	-	Login: DYang	

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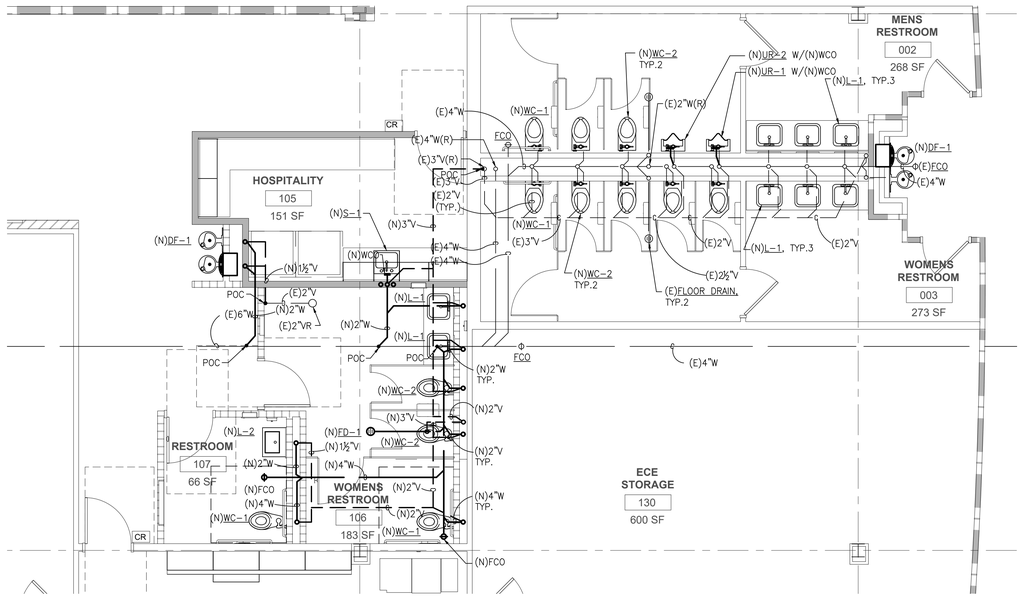
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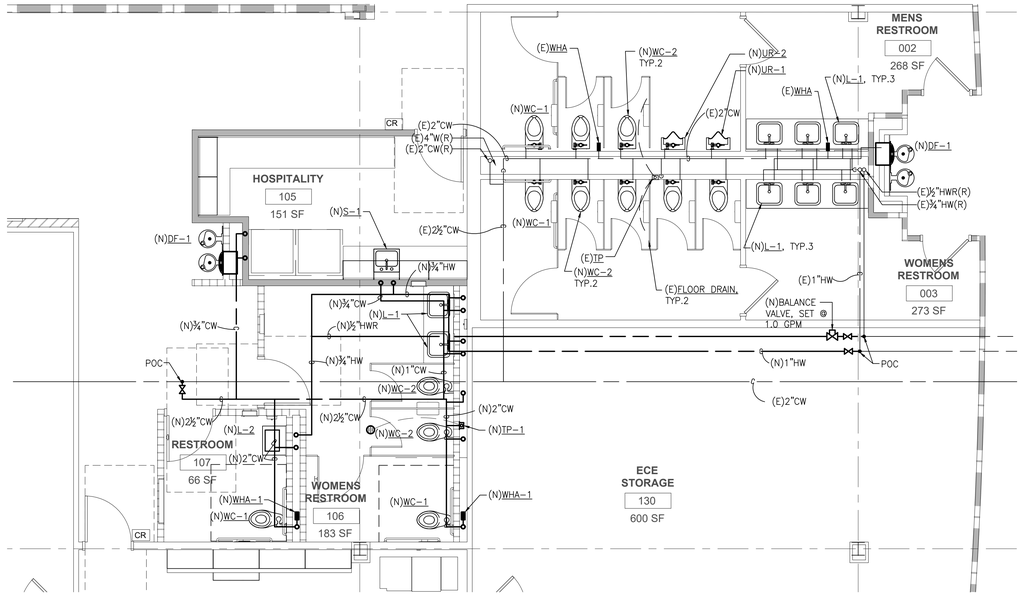
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PLUMBING FIRST FLOOR PARTIAL REMODEL FLOOR PLAN – RESTROOMS – WASTE AND VENT

A

SCALE: 1/4" = 1'-0"



PLUMBING FIRST FLOOR PARTIAL REMODEL FLOOR PLAN – RESTROOMS – DOMESTIC WATER

B

SCALE: 1/4" = 1'-0"

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Project Manager:	JT	Plot Date: Jul 22, 2023 - 1:49pm	
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HY Architects Project number: 6013

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Project

TENANT IMPROVEMENTS

Sheet Title

PLUMBING FIRST FLOOR PARTIALENLARGED REMODEL PLANS - RESTROOMS

Scale:	As indicated
Drawn By:	TURLEY
Checked By:	TURLEY
Issue Date:	July 21, 2023

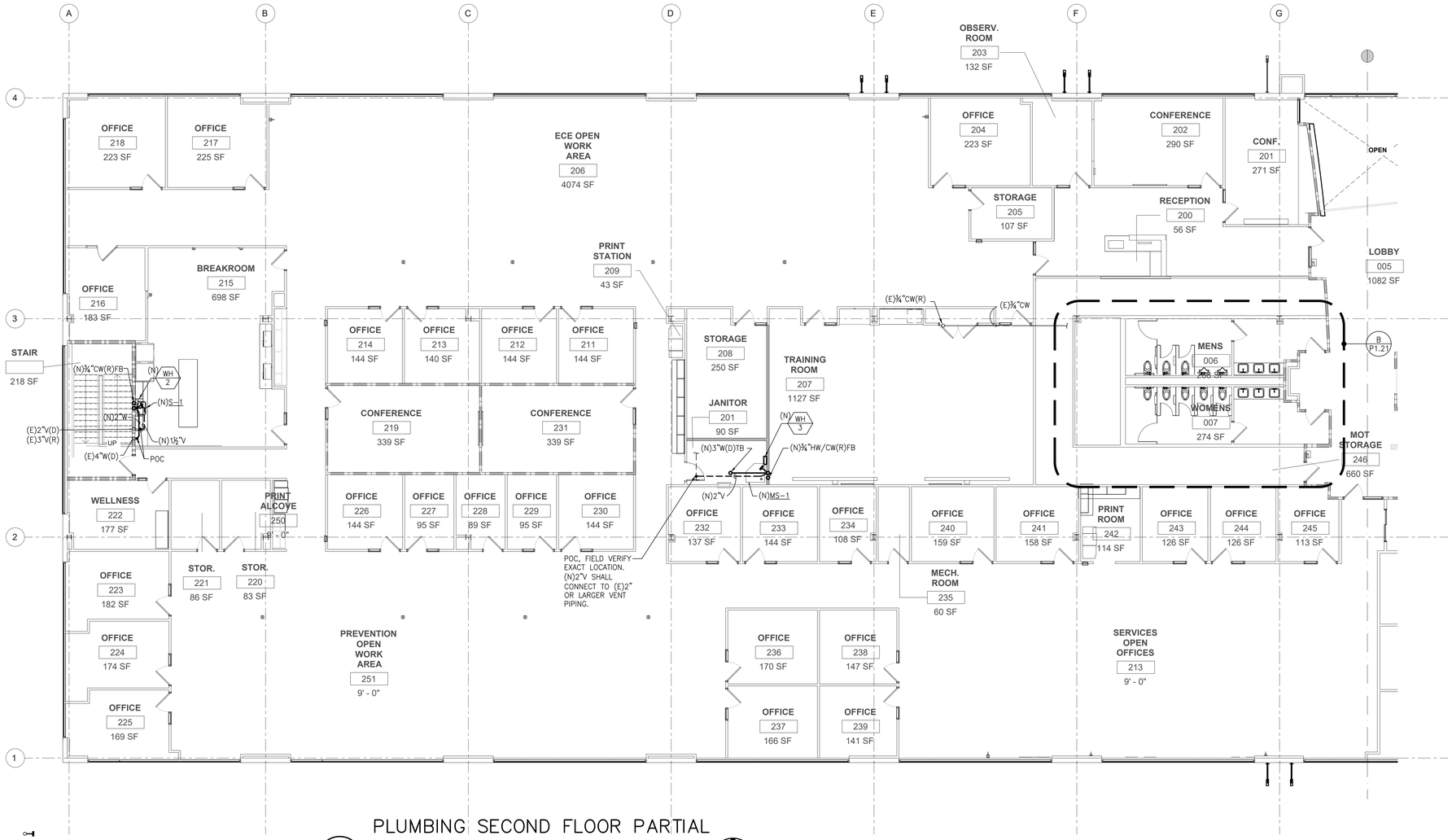
Sheet

P2.12

Sheet of

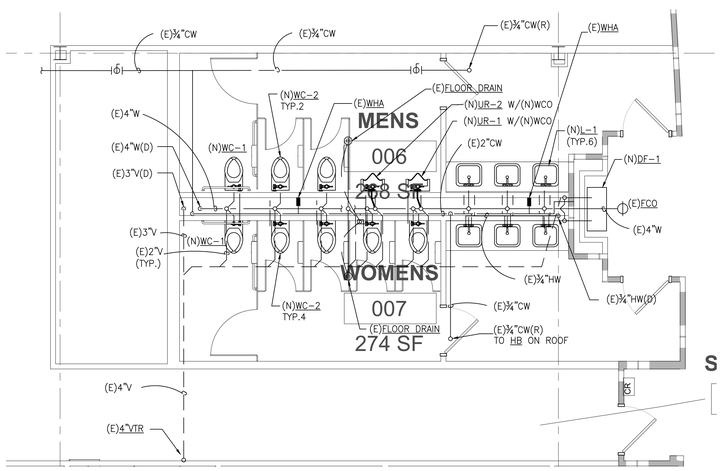
GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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A PLUMBING SECOND FLOOR PARTIAL REMODEL FLOOR PLAN – WEST

SCALE: 1/8" = 1'-0"



NOTES:

1. RECONNECT (E)PIPING TO NEW FIXTURES. MODIFY ROUGH-INS AS NEEDED.

B PLUMBING SECOND FLOOR PARTIAL REMODEL FLOOR PLAN – RESTROOMS

SCALE: 1/4" = 1'-0"

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Revisions

Delta	Date	Revisions	By

PLAN CHECK SET

CONSTRUCTION DOCUMENTS

AGENCY APPROVAL

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Project Manager:	JT	Plot Date:	Jul 22, 2023 - 1:49am
Project Drafter:	-	Login:	Chang

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Project

TENANT IMPROVEMENTS

Sheet Title

PLUMBING SECOND FLOOR PARTIAL REMODEL PLAN - WEST

Client Project Number: N/A

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Issue Date:	July 21, 2023

Sheet **P2.21**

Sheet of

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PIPE SUPPORT SCHEDULE

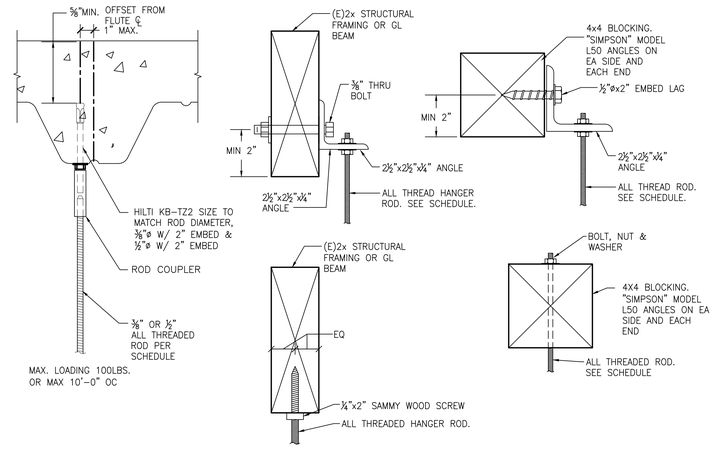
HORIZONTAL STEEL PIPE

NOMINAL PIPE SIZE	ROD DIAMETER	MAX. SPACING
½ – 1¼	⅜	7'0"
1½	⅜	9'0"
2	⅜	10'0"
2½	½	11'0"
3	½	12'0"
4	⅜	12'0"

HORIZONTAL COPPER PIPE

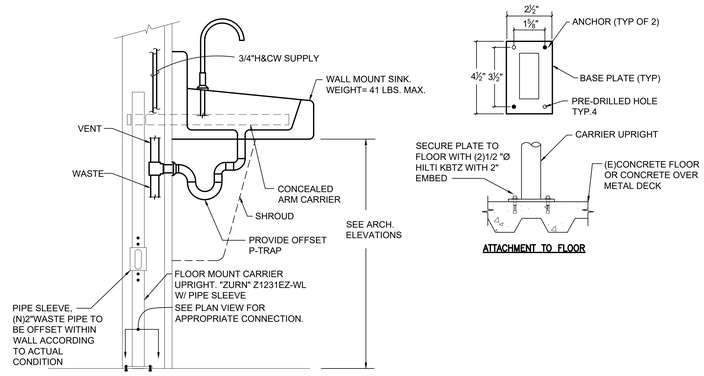
NOMINAL PIPE SIZE	ROD DIAMETER	MAXIMUM SPACING
½ –¾	⅜	5'0"
1	⅜	6'0"
1¼	⅜	6'0"
1½	⅜	6'0"
2	⅜	8'0"
2½	½	9'0"
3	½	10'0"

NOTES:
1. PROVIDE MEANS OF PREVENTING DISSIMILAR METAL CONTACT SUCH AS FELT OR NON ADHESIVE ISOLATION TAPE. GALVANIZED FELT ISOLATORS SIZED FOR COPPER TUBING MAY ALSO BE USED, TOLCO FIG.83.
2. SUPPORT HORIZONTAL CAST IRON ADJACENT TO EACH HUB, WITH 5 FEET MAXIMUM SPACING BETWEEN HANGERS.
3. INSTALL HANGERS TO PROVIDE A MINIMUM OF ½ INCH SPACE BETWEEN FINISHED COVERING AND ADJACENT WORK.
4. HANGERS SHALL BE INSTALLED WITHIN 18" OF EACH HORIZONTAL ELBOW.



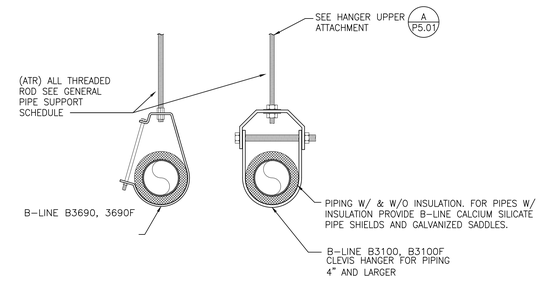
A HANGER ROD UPPER ATTACHMENT DETAIL

NO SCALE



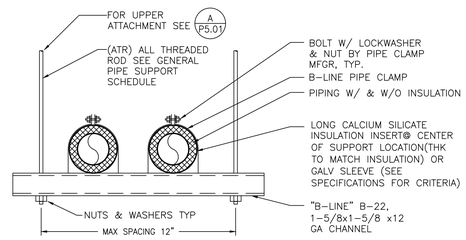
D WALL HUNG SINK/LAV SUPPORT

NO SCALE



B PIPE HANGER DETAIL

NO SCALE



TRAPEZE PIPE SUPPORT

NOTES:

1. MAX WEIGHT SUPPORTED BY A SINGLE TRAPEZE SHALL NOT EXCEED 100 LBS.

2. MAX SPACING BETWEEN TRAPEZE SUPPORT SHALL NOT EXCEED MAX SPACING REQUIREMENT FOR EACH PIPE (SEE GENERAL PIPE SUPPORT SCHEDULE) AND SHALL NOT EXCEED 10 FT.

C GRAVITY TRAPEZE PIPE SUPPORT DETAIL

NO SCALE

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Revisions

Delta	Date	Revisions	By

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Project Engineer:	JT	Job Number:	23131
Project Manager:	JT	Plot Date: Jul 22, 2023 - 1:46pm	
Project Drafter:	--	Login: GYang	

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Project

TENANT IMPROVEMENTS

Sheet Title

PLUMBING DETAILS

Client Project Number: N/A

Scale:	As indicated	Sheet	**P5.01**
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Checked By:	TURLEY		
Issue Date:	July 21, 2023	Sheet of	

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UNAUTHORIZED CHANGES & USES: All changes to these plans must be in writing and must be approved by M. Neils Engineering, Inc. preparing these plans will not be responsible for, or liable for unauthorized changes to or uses to these plans.

Jul 28, 2023 – 5:21pm, / ccollier-mcmaster

ABBREVIATIONS

A	AMPERES
AC	ALTERNATING CURRENT
AF	AUTO FAUCET / AUTO FLUSH
A.F.F.	ABOVE FINISHED FLOOR
A.I.C.	AMPERE INTERRUPTING CAPACITY
AMP	AMPERE
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
C.	CONDUIT
C.B.	CIRCUIT BREAKER
CKT	CIRCUIT
C.O.	CONDUIT ONLY, WITH PULL WIRE
C.T.	CURRENT TRANSFORMER
DC	DIRECT CURRENT
(E)	EXISTING
EL	EVENING LIGHT
EM	EMERGENCY
(ER)	EXISTING RELOCATED
EMT	ELECTRICAL METALLIC CONDUIT
(F)	FUTURE
FACP	FIRE ALARM CONTROL PANEL
FAPS	FIRE ALARM POWER SUPPLY
FATC	FIRE ALARM TERMINAL CABINET
GA.	GAUGE
GND	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
HP	HORSEPOWER
A.	HERTZ (CYCLES/SEC)
Isc	SHORT CIRCUIT AMPERES
ISO	ISOLATED
K	THOUSAND
KVA	KILO VOLT AMPERE
KW	KILO WATT
LM	LUMENS
LT.	LIGHT
LV	LOW VOLTAGE
MAX.	MAXIMUM
MDF	MAIN DISTRIBUTION FRAME
MFR.	MANUFACTURER
MIN.	MINIMUM
MTD.	MOUNTED
N	NEUTRAL
(N)	NEW
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NL	NIGHT LIGHT
NM	NON-METALLIC CABLE
PFB	PROVISIONS FOR FUTURE CIRCUIT BREAKER
PH	PHASE
(R)	REMOVE
(RE)	RELOCATE EXISTING
RCPT.	RECEPTACLE
S.M.S	SHEET METAL SCREW
SWBD	SWITCHBOARD
SYS	SYSTEM
TV	TELEVISION
TYP.	TYPICAL
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
V	VOLT
VA	VOLT-AMPERES
W	WIRE, WATT
WP	WEATHER PROTECTED
XFMR	TRANSFORMER

ELECTRICAL SYMBOL LIST

- LUMINAIRE - CEILING RECESSED MOUNTED (LETTER "a" DENOTES SWITCH FUNCTION, NUMBER "2" DENOTES CIRCUIT NUMBER - TYPICAL FOR ALL LUMINAIRES UNLESS NOTED OTHERWISE).
- LUMINAIRE - WALL MOUNTED
- WALL MOUNTED EXIT LUMINAIRE. ARROW SIGNIFIES DIRECTION, TYPICAL.
- WALL MOUNTED LOW LEVEL EXIT LUMINAIRE MOUNTED ADJACENT TO DOOR WITH CLOSEST EDGE OF SIGN MOUNTED WITHIN 4 INCHES OF DOOR FRAME. BOTTOM OF SIGN SHALL BE MOUNTED NOT LESS THAN 6 INCHES OR MORE THAN 8 INCHES ABOVE FINISHED FLOOR.
- CEILING OR PENDANT MOUNTED EXIT LUMINAIRE. ARROW SIGNIFIES DIRECTION, TYPICAL.
- CEILING OR PENDANT MOUNTED EXIT LUMINAIRE.
- ENCLOSED LUMINAIRE - SURFACE MOUNTED
- SUSPENDED LINEAR FIXTURE
- ENCLOSED LUMINAIRE - CEILING LAY-IN
- EMERGENCY ENCLOSED LUMINAIRE
- LUMINAIRE - CEILING SURFACE OR PENDANT MOUNTED
- SWITCH, +45" A.F.F. - "a,b" LETTER DENOTES MULTI-SWITCH FUNCTION, TYPICAL FOR ALL SWITCHES, MOTION SENSORS AND DAYLIGHT SENSORS UNLESS NOTED OTHERWISE. "K" DENOTES SINGLE POLE TOGGLE SWITCH.
- DIMMER SWITCH - SIZE AS NOTED ON PLAN
- OCCUPANCY SENSOR SWITCH WITH MANUAL OVERRIDE - WALL MOUNTED AT +45" A.F.F. UNLESS NOTED OTHERWISE
- OCCUPANCY AREA SENSOR SWITCH - CEILING MOUNTED OS = OCCUPANCY SENSOR; PC = PHOTOCELL; DL = DAYLIGHT
- JUNCTION BOX - SIZE AS REQUIRED BY CODE
- +XX" ABC-# DUPLEX CONVENIENCE OUTLET - NEMA 5-20R +18" A.F.F. TYPICAL FOR ALL CONVENIENCE OUTLETS, UNLESS NOTED OTHERWISE (OUTLETS ABOVE COUNTER MOUNTED HORIZONTALLY AT +44" A.F.F. UNO, "+XX" INDICATES MOUNTING HEIGHT OTHER THAN 18", "ABC-#" INDICATES PANEL AND CIRCUIT NUMBER - TYPICAL FOR ALL OUTLETS UNLESS NOTED OTHERWISE).
- GFCI DUPLEX CONVENIENCE OUTLET - NEMA 5-20R
- QUADPLEX CONVENIENCE OUTLET - NEMA 5-20R
- GFCI QUAD CONVENIENCE OUTLET - NEMA 5-20R
- SPECIAL RECEPTACLE AS SHOWN ON PLANS
- QUADPLEX CONVENIENCE OUTLET - NEMA 5-20R: (1) UNCONTROLLED DUPLEX RECEPTACLE, AND (1) CONTROLLED DUPLEX RECEPTACLE WITH A PERMANENT MARKING TO DIFFERENTIATE FROM THE UNCONTROLLED RECEPTACLES
- DIVIDED METAL POWER POLE, FLOOR TO CEILING WITH ONE COMPARTMENT FOR POWER CONDUCTORS AND DUPLEX RECEPTACLE, THE OTHER COMPARTMENT FOR VOICE DATA CABLING, COMPLETE WITH ALL MOUNTING HARDWARE.
- IN-FLOOR MULTI-SERVICE BOX WITH FLUSH ACCESSIBLE LID, 2 DUPLEX RECEPTACLES (POWER), DATA OUTLETS. REFER TO PLAN FOR SPECIFIC REQUIREMENTS.
- FLOOR MOUNTED DUPLEX CONVENIENCE OUTLET - NEMA 5-20R
- IN WALL DEVICE BOX WITH DESIGNATED AV AND POWER OUTLETS.
- 4-11/16" SQUARE BOX FOR DATA OUTLET - FLUSH IN WALL +18" A.F.F. PROVIDE 1" CONDUIT STUB INTO ACCESSIBLE CEILING AREA.
- (4) DATA OUTLET - FLUSH IN WALL +18" A.F.F. WHERE CONDUIT IS USED, 1" CONDUIT WITH A 4-11/16" SQUARE BOX 2-1/8" DEEP SHALL BE PLACED TO EACH COMMUNICATIONS OUTLET LOCATION. PROVIDE 1" CONDUIT STUB INTO ACCESSIBLE CEILING AREA. NUMBER IN PARENTHESIS INDICATE NUMBER OF DATA JACKS.
- CR 4-SQUARE OUTLET BOX MOUNTED AT 45" A.F.F. UNLESS NOTED. PROVIDE 1/2" CONDUIT STUB. SEE NOTE 6.
- K 4-SQUARE OUTLET BOX +45" AFF UNLESS NOTED. PROVIDE 3/4" CONDUIT STUB. SEE NOTE 6.
- SECURITY SYSTEM ELECTRONIC DOOR STRIKE. PROVIDE 1/2" CONDUIT STUB. SEE NOTE 6.
- PB 4-SQUARE OUTLET BOX MOUNTED + 45" A.F.F. UNLESS NOTED. PROVIDE 1/2" CONDUIT STUB. SEE NOTE 6.
- AP FUTURE WIRELESS ANTENNA CEILING MOUNTED ON SURFACE.
- FIRE ALARM MECHANICAL DUCT DETECTOR - COORDINATE LOCATION WITH HVAC DRAWINGS AND CONTRACTOR.
- FS FIRE SPRINKLER RISER FLOW SWITCH
- TS FIRE SPRINKLER RISER TAMPER SWITCH
- F/S FIRE/SMOKE DAMPER PROVIDED BY OTHER DIVISION, CONNECTION BY ELECTRICAL. SEE MECHANICAL PLANS
- PANELBOARD - SURFACE MOUNTED
- EXISTING PANELBOARD - SURFACE MOUNTED
- TERMINAL CABINET
- SWITCHBOARD, DISTRIBUTION PANEL, OR MOTOR CONTROL CENTER
- EQUIPMENT DISCONNECT SWITCH - EXTERNALLY OPERATED, FUSED WITH FUSE SIZE TO MATCH EQUIPMENT NAMEPLATE.
- EQUIPMENT DISCONNECT SWITCH - EXTERNALLY OPERATED, NON-FUSIBLE
- EQUIPMENT CIRCUIT BREAKER DISCONNECT - EXTERNALLY OPERATED
- EQUIPMENT CONTROLLER
- $_{OL} TOGGLE TYPE MOTOR RATED DISCONNECT SWITCH WITH OVERLOAD PROTECTION
- EQUIPMENT MOTOR POWER CONNECTIONS PART OF ELECTRICAL WORK
- EQ 1 MECHANICAL EQUIPMENT DESIGNATION - SEE MECHANICAL PLANS
- EXISTING CONDUIT AND WIRING
- EXISTING CONDUIT TO BE REMOVED OR ABANDONED, REMOVE WIRES. COORDINATE WITH OWNER.
- CONDUIT RUN CONCEALED IN CEILINGS OR WALLS. NUMBER OF HASH MARKS DENOTES QUANTITY OF WIRES. CURVED HASH MARK DENOTES QUANTITY OF #12 GREEN GROUND WIRES. CONDUCTORS OTHER THAN #12 ARE INDICATED ON PLANS. NO HASH MARKS DENOTES 2 #12 AWG AND 1 #12 GREEN GROUND IN 1/2" MINIMUM DIAMETER CONDUIT.
- FLEXIBLE CONDUIT CONCEALED. NUMBER OF HASH MARKS DENOTES QUANTITY OF WIRES. CURVED HASH MARK DENOTES QUANTITY OF #12 GREEN GROUND WIRES. CONDUCTORS OTHER THAN #12 ARE INDICATED ON PLANS. NO HASH MARKS DENOTES 2 #12 AWG AND 1 #12 GREEN GROUND IN 1/2" MINIMUM DIAMETER CONDUIT.
- CONDUIT RUN UNDERFLOOR OR UNDERGROUND MINIMUM 1" DIAMETER.
- CONDUIT HOMERUN TO PANELBOARD, SWITCHBOARD OR TERMINAL CABINET
- CONDUIT TURNED AND RISED UP
- CONDUIT TURNED AND DROPPED DOWN
- CONDUIT WITH CAP
- CONDUIT STUB WITH INSULATED BUSHING
- 1 DRAWING SHEET NUMBERED NOTE DESIGNATION - APPLIES TO NUMBERED NOTE ON SAME SHEET
- 1 / E1 DRAWING PLAN OR DETAIL DESIGNATION - "1" OR "A" DENOTES PLAN OR DETAIL NUMBER, "E-1" DENOTES SHEET NUMBER
- T ELECTRICAL TRANSFORMER. RATING PER SPECIFICATIONS.

SYMBOL LIST NOTES:

1. "ABC-#" INDICATES PANEL AND CIRCUIT NUMBER.
2. MINIMUM CONDUCTOR SIZE FOR 120V BRANCH CIRCUITS SHALL BE #12 AWG. AT A MINIMUM ALL BRANCH CIRCUITS SHALL CONTAIN 3/4"C, 2#12 AWG AND 1#12 GND UNLESS OTHERWISE INDICATED.
3. EXISTING ELECTRICAL EQUIPMENT, OUTLETS, AND DEVICES ARE SHOWN THE SAME AS NEW, EXCEPT LIGHTLY AND ACCOMPANIED BY (E). SUCH ELECTRICAL EQUIPMENT, OUTLETS, AND DEVICES ARE TO REMAIN AS IS, UNLESS OTHERWISE NOTED ON PLAN OR SPECIFICATION.
4. ELECTRICAL OUTLET BOXES MOUNTED ON OPPOSITE SIDES OF FIRE-RATED WALLS OR PARTITIONS SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES PER CBC, WHETHER SHOWN ON THE PLANS OR NOT.
5. VERIFY ON SITE THAT ALL PANELBOARDS HAVE MINIMUM WORKING SPACES PER CODE AND THAT THE DEDICATED PANELBOARD SPACES ARE CLEAR OF ALL DUCTS, PIPING AND EQUIPMENT FOREIGN TO THE PANEL BOARDS. NOTIFY THE ENGINEER FOR CORRECTIVE ACTION IN THE EVENT THAT FOREIGN OBJECTS IMPEDE THE DEDICATED PANELBOARD AREAS.
6. WHERE CONDUIT STUB IS INDICATED, PROVIDE CONDUIT WITH BUSHING AT THE END OF CONDUIT AND PULL ROPE INTO ACCESSIBLE CEILING AREA.

ELECTRICAL SHEET INDEX

No. OF SHEETS	DRAWING No.	DRAWING DESCRIPTIONS
1	E0.01	ELECTRICAL SHEET INDEX, ABBREVIATIONS, SYMBOL LIST, AND NOTES
2	E0.02	LUMINAIRE SCHEDULE AND ELECTRICAL NOTES
3	E2.01	FIRST FLOOR PARTIAL PLAN - DEMOLITION - WEST - LIGHTING
4	E2.02	SECOND FLOOR PARTIAL PLAN - DEMOLITION - WEST - LIGHTING
5	E2.03	SECOND FLOOR PARTIAL PLAN - DEMOLITION - EAST - LIGHTING
6	E2.04	FIRST FLOOR PARTIAL PLAN - REMODEL - WEST - LIGHTING
7	E2.05	SECOND FLOOR PARTIAL PLAN - REMODEL - WEST - LIGHTING
8	E2.06	SECOND FLOOR PARTIAL PLAN - REMODEL - EAST - LIGHTING
9	E3.01	FIRST FLOOR PARTIAL PLAN - DEMOLITION - WEST - ELECTRICAL
10	E3.02	SECOND FLOOR PARTIAL PLAN - DEMOLITION - WEST - ELECTRICAL
11	E3.03	SECOND FLOOR PARTIAL PLAN - DEMOLITION - EAST - ELECTRICAL
12	E3.04	FIRST FLOOR PARTIAL PLAN - REMODEL - WEST - ELECTRICAL
13	E3.05	SECOND FLOOR PARTIAL PLAN - REMODEL - WEST - ELECTRICAL
14	E3.06	SECOND FLOOR PARTIAL PLAN - REMODEL - EAST - ELECTRICAL
15	E4.01	PARTIAL ONE LINE POWER DIAGRAM, AND LOAD CALCULATIONS
16	E4.02	PANEL SCHEDULES
17	E5.01	ELECTRICAL DETAILS
18	E5.02	ELECTRICAL DETAILS
19	E6.01	TITLE 24 INDOOR LIGHTING COMPLIANCE FORMS
20	E6.02	TITLE 24 INDOOR LIGHTING COMPLIANCE FORMS

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Revisions

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REGISTERED PROFESSIONAL ENGINEER — YVES J. VAN ZANTEN — No. E15483 Exp. 6/30/25 — ELECTRICAL — STATE OF CALIFORNIA

07/28/2023

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Project
TENANT IMPROVEMENTS

Sheet Title
ELECTRICAL SHEET INDEX, ABBREVIATIONS, SYMBOL LIST, AND NOTES

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PROJECT #: 23045.21
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Sheet E0.01

Sheet 1 of

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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APPLICABLE CODES AND REGULATIONS

THE FOLLOWING ARE THE ENFORCEABLE CODES FOR FACILITIES UNDER THE AUTHORITY OF THE ALFRED E. ALQUIST HOSPITAL FACILITIES SEISMIC SAFETY ACT OF 1983:

2022 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE (PART 1, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)).

2022 CALIFORNIA BUILDING CODE - PART 2, TITLE 24, CCR (2021 IBC AND 2022 CALIFORNIA AMENDMENTS).

2022 CALIFORNIA ELECTRICAL CODE - PART 3, TITLE 24, CCR (2020 NEC AND 2022 CALIFORNIA AMENDMENTS).

2022 CALIFORNIA MECHANICAL CODE - PART 4, TITLE 24, CCR (2021 UMC AND 2022 CALIFORNIA AMENDMENTS).

2022 CALIFORNIA PLUMBING CODE - PART 5, TITLE 24, CCR (2021 UPC AND 2022 CALIFORNIA AMENDMENTS).

2022 CALIFORNIA FIRE CODE - PART 9, TITLE 24, CCR (2021 IFC AND 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE - PART 11, TITLE 24

2015 N.F.P.A. 101 LIFE SAFETY CODE

2016 N.F.P.A. 72 NATIONAL FIRE ALARM CODE

2016 EDITION TITLE 19, CALIFORNIA CODE OF REGULATIONS, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.

TITLE 8, CALIFORNIA CODE OF REGULATIONS, INDUSTRIAL STANDARDS.

TITLE 22, CALIFORNIA CODE OF REGULATIONS, SOCIAL SECURITY DIVISIONS 5, 7.

THE DEPARTMENT OF HEALTHCARE ACCESS AND INFORMATION (HCAI) REGULATIONS.

OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).

FACTORY MUTUAL SYSTEM (FM) REQUIREMENTS.

ALL APPLICABLE STATE AND LOCAL CODES AND REGULATIONS

DEMOLITION GENERAL NOTES

1. INFORMATION SHOWN RELATIVE TO EXISTING CONDITIONS IS BASED UPON AVAILABLE RECORDS AND DATA. THEREFORE, IT SHALL BE REGARDED AS AN APPROXIMATION ONLY. CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT. PRIOR TO SUBMITTING BID AND/OR BEFORE START OF ANY ELECTRICAL WORK, INSPECT ALL EXISTING LOCATIONS AND CONDITIONS AND ASCERTAIN WORK REQUIRED TO CLEAR PROJECT AREA OF ALL EXISTING ELECTRICAL ITEMS NOT BEING REUSED OR EXISTING TO REMAIN AS IS. REPORT ALL DISCREPANCIES AND COORDINATE ALL DEMOLITION WORK WITH THE OWNER'S REPRESENTATIVE. MAINTAIN SERVICE TO EXISTING ELECTRICAL EQUIPMENT IN AREAS ADJACENT TO REMODEL AREA, UNLESS OTHERWISE NOTED.
2. PROTECT ALL EXISTING ELECTRICAL EQUIPMENT ON EXISTING WALLS AND CEILINGS NOT REQUIRED TO BE DEMOLISHED UNLESS OTHERWISE NOTED. DELIVER ALL EXISTING ELECTRICAL EQUIPMENT IN REMODELED AREAS, THAT ARE REMOVED AND NOT REUSED ELSEWHERE, AND ARE DEEMED TO BE SALVAGEABLE IN THE JUDGMENT OF THE CONTRACTOR AND OWNER'S REPRESENTATIVE, TO THE OWNER. DELIVER ALL SALVAGED ELECTRICAL EQUIPMENT AND OTHER ITEMS TO A LOCATION DESIGNATED BY THE OWNER'S REPRESENTATIVE. REMOVE FROM SITE, ALL OTHER ELECTRICAL EQUIPMENT, HARDWARE, AND OTHER ITEMS THAT ARE DEEMED UNSALVAGEABLE BY CONTRACTOR AND THE OWNER'S REPRESENTATIVE.
3. CUT, PATCH AND MATCH IN ALL AREAS AFFECTED BY REMOVAL OF ELECTRICAL EQUIPMENT AND DEVICES.
4. CAUSE AS LITTLE INTERFERENCE OR INTERRUPTION OF EXISTING UTILITIES AND SERVICES. SCHEDULE ANY POWER OR OTHER UTILITY SHUTDOWN WITH THE OWNER'S REPRESENTATIVE. SHUTDOWNS WHICH MAY BE REQUIRED SHALL BE PRESENTED IN WRITING TO THE OWNER'S REPRESENTATIVE FOR APPROVAL TWO WEEKS PRIOR TO COMMENCEMENT OF WORK. SHUTDOWN WORK SHALL BE PERFORMED ON OVERTIME HOURS IF SO DIRECTED BY OWNER'S REPRESENTATIVE.
5. DISCONNECT AND REMOVE ALL EXISTING ELECTRICAL EQUIPMENT, FIXTURES, OUTLETS, DEVICES, CONDUIT, WIRING AND OTHER ELECTRICAL ITEMS, WHETHER SHOWN OR NOT, FROM EXISTING CEILINGS AND WALLS WHICH ARE TO BE DEMOLISHED. MAINTAIN CIRCUIT CONTINUITY TO ALL EXISTING REMAINING DEVICES, UNLESS OTHERWISE NOTED.
6. COORDINATE WITH OTHER TRADES AND PROMPTLY TRANSMIT ALL INFORMATION REQUIRED BY THEM. COORDINATE THE SEQUENCE OF DEMOLITION WITH OTHER TRADES TO ENSURE THAT ALL WORK PROCEEDS WITH A MINIMUM OF INTERFERENCE AND DELAY.
7. RELOCATE ALL CONDUITS THAT ARE TO REMAIN IN SERVICE WHICH ARE IN A LOCATION TO CONFLICT WITH NEW WORK.
8. WHEREVER EXISTING ELECTRICAL DEVICES, PANELS, CONDUITS, CABLES, AND OTHER ITEMS, CONFLICT WITH REMODEL WORK, WHETHER SHOWN OR NOT, RELOCATE THESE ITEMS TO COORDINATE WITH NEW CONSTRUCTION.
9. REUSE EXISTING CONDUITS AND WIRING WHEREVER POSSIBLE UNLESS OTHERWISE NOTED TO BE REMOVED.
10. PROVIDE PROTECTIVE COVERING OVER EXISTING EQUIPMENT WHEN INSTALLING ALL NEW WORK.
11. DISPOSAL OF BALLASTS: DISPOSE OR RECYCLE ALL EXISTING BALLASTS PROPERLY ACCORDING TO ENVIRONMENTAL PROTECTION AGENCY (EPA) AND RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) STANDARDS. INCLUDE ALL COSTS FOR DISPOSAL OR RECYCLING IN BID PROPOSAL. A CURRENT LIST OF BALLAST RECYCLERS CAN BE OBTAINED THROUGH https://www.epa.gov/pcbs/list-approved-polychlorinated-biphenyl-pcb-commercial-storage-and-disposal-facilities. COMMERCIAL STORAGE FACILITIES OR LANDFILL FACILITIES AS MEANS OF DISPOSAL IS NOT ALLOWED.
12. ASBESTOS REMOVAL: IN THE EVENT ASBESTOS IS FOUND TO BE PRESENT IN AREAS CONFLICTING WITH ELECTRICAL WORK, BEFORE CONTINUATION OF WORK IN THOSE AREAS, NOTIFY THE OWNER'S REPRESENTATIVE FOR THE REMOVAL OF SUCH HAZARDOUS MATERIAL BY A CERTIFIED ASBESTOS CONTRACTOR.
13. CIRCUIT NUMBERS AND CIRCUITING BASED UPON AS-BUILTS. ACTUAL CONDITION MAY VARY. TRACE AND VERIFY ALL CIRCUITS SHOWN ARE AVAILABLE FOR DEMOLITION AND REUSE DURING THE REMODEL PHASE. DOCUMENT ALL CHANGES ON AS-BUILT DRAWINGS.

BRANCH CIRCUIT VOLTAGE DROP TABLE

VOLTAGE DROP VALUES NOT EXCEEDING 2% FOR FEEDERS HAVE BEEN SHOWN ON THE ONE LINE DIAGRAM. IN LIEU OF VOLTAGE DROP CALCULATIONS FOR EACH BRANCH CIRCUIT IN SCOPE OF WORK, THE GENERAL DESIGN STANDARD BELOW HAS BEEN FOLLOWED TO ENSURE A VOLTAGE DROP OF 3% IS NOT EXCEEDED. WHERE THE CIRCUIT LOAD OR CIRCUIT LENGTH LISTED HAS BEEN EXCEEDED, A DETAILED VOLTAGE DROP CALCULATION FOR THAT CIRCUIT HAS BEEN PROVIDED WITH THE TITLE 24 COMPLIANCE DOCUMENTATION.

VOLTAGE	MAXIMUM CIRCUIT LOAD FOR 20 AMP CIRCUIT BREAKER	CONDUCTOR SIZE	MAXIMUM BRANCH CIRCUIT LENGTH
120 VOLT	9 AMPS (1.08 KVA)	#8 AWG	285 FEET
		#10 AWG	180 FEET
		#12 AWG	115 FEET
	12 AMPS (1.44 KVA)	#8 AWG	210 FEET
		#10 AWG	135 FEET
		#12 AWG	85 FEET
	16 AMPS (1.92 KVA)	#8 AWG	130 FEET
		#10 AWG	85 FEET
		#12 AWG	55 FEET
208 VOLT	9 AMPS (1.87 KVA)	#8 AWG	440 FEET
		#10 AWG	285 FEET
		#12 AWG	170 FEET
	12 AMPS (2.49 KVA)	#8 AWG	330 FEET
		#10 AWG	215 FEET
		#12 AWG	130 FEET
	16 AMPS (3.33 KVA)	#8 AWG	250 FEET
		#10 AWG	160 FEET
		#12 AWG	95 FEET
277 VOLT	9 AMPS (2.49 KVA)	#8 AWG	660 FEET
		#10 AWG	420 FEET
		#12 AWG	270 FEET
	12 AMPS (3.32 KVA)	#8 AWG	495 FEET
		#10 AWG	315 FEET
		#12 AWG	200 FEET
	16 AMPS (4.43 KVA)	#8 AWG	370 FEET
		#10 AWG	235 FEET
		#12 AWG	150 FEET
480 VOLT	9 AMPS (2.49 KVA)	#8 AWG	1320 FEET
		#10 AWG	840 FEET
		#12 AWG	540 FEET
	12 AMPS (3.32 KVA)	#8 AWG	980 FEET
		#10 AWG	620 FEET
		#12 AWG	400 FEET
	16 AMPS (4.43 KVA)	#8 AWG	740 FEET
		#10 AWG	460 FEET
		#12 AWG	300 FEET

LUMINAIRE SCHEDULE

TYPE	MANUFACTURER / CATALOG NO.	VOLTAGE / DESCRIPTION	LIGHT SOURCE (LED, WATTS, LUMENS, COLOR TEMPERATURE, CRI, R9 IF AVAILABLE)	MOUNTING	REMARK NOTE No.
A	FLUXWERX NB2-24-D-35-E1-M	UNV 120-277V 2X4 LED	LED, 47W, 5246LM, 3500K, 80CRI	T-BAR CEILING LAY-IN	1 2
B1	FLUXWERX NB1-22-B-35-E1-M	UNV 120-277V 2X2 LED	LED, 29W, 3300LM, 3500K, 80CRI	T-BAR CEILING LAY-IN	1 2
B2	FLUXWERX NB1-22-D-35-E1-M	UNV 120-277V 2X2 LED	LED, 47W, 5100LM, 3500K, 80CRI	T-BAR CEILING LAY-IN	1 2
C	LIGHTOLIER-SIGNIFY P6S-DL-25-935-CL-Z10-U	UNV 120-277V LED DOWNLIGHT	LED, 23.6W, 2500LM, 3500K, 90CRI	RECESSED	2
D	BRUCK - RENATA WEPLIGHT WEP-REN-32-LLED-3018-95	120-277V 12" ROUND LED CANOPY PENDANT	LED, 15.6W, 850LM, 3000K, 95CRI	SUSPENDED	
E	FINELITE HP-2-AM-WW-D-8'-K-V-835-277-FC-1%-AM12	UNV 120-277V LED LINEAR WALL WASHER	LED, 20.8W, 1872LM, 3500K, 80CRI	WALL, ARM MOUNT	2
F1	VODE LIGHTING LLC 707-Z2-SL-24'-ZZ-T1-AE-2-Z-SO-35-S4	UNV 120-277V 24' LINEAR LED	LED, 158.4W, 20352LM, 3500K, 80CRI	9/16" T-BAR CLIP, LOW PROFILE	2
F2	VODE LIGHTING LLC 707-Z2-SL-8'-96-T1-AE-2-Z-SO-35-S4	UNV 120-277V 8' LINEAR LED	LED, 52.8W, 6784LM, 3500K, 80CRI	9/16" T-BAR CLIP, LOW PROFILE	2
G	BRUCK - RENATA WEPLIGHT WEP-REN-30-LLED-3018-95	UNV 120-277V 11" ROUND LED CANOPY PENDANT	LED, 15.6W, 850LM, 3000K, 95CRI	SUSPENDED	
H	KENALL AUCLED-I-20L35K-277	277V 48" UNDER-CABINET LED	LED, 22W, 2003LM, 3500K	UNDER CABINET	
I	SONNEMAN SKU: 2583.25	120V 3-ARM LED CHANDELIER	LED, 75W, 2800LM, 3000K, 90 CRI	SUSPENDED	
J	LIGHTOLIER-SIGNIFY S7R-8-35K-10	277V ROUND LED DOWNLIGHT	LED, 14.7W, 1000LM, 3000K, 80 CRI	RECESSED	
K	AFX SSP-05MBSNSMRND3	120V MULTI ROUND PENDANT	LED, 60W	SUSPENDED	
L	NERA FNRS-	UNV 120-277V 8' LINEAR LED	LED, 36.2W, 4000LM, 3500K, 80 CRI	SUSPENDED	
M1	WILLIAMS LLM-4-L20-8-35-S-SQ	UNV 120-277V 1X4 LINEAR LED	LED, 13.8W, 2027LM, 3500K, 80CRI	SURFACE MOUNT	1
M2	WILLIAMS LLM-4-L20-8-35-P-SQ	UNV 120-277V 1X4 LINEAR LED, SUSPENDED	LED, 13.8W, 2027LM, 3500K, 80CRI	SUSPENDED	
X	WILLIAMS EXIT / CA - G - AF - WHT - EM	UNV 120-277V EXIT LIGHT	LED, 3.6W	UNIVERSAL MOUNT	
X1	CHLORIDE BY SIGNIFY CLU3-N-W	120-277V 4" EMERGENCY LED LUMINAIRE	LED, 6.6W, 5000K	WALL MOUNTED	1 3

LUMINAIRE SCHEDULE REMARK NOTES:

1. PROVIDE WITH SELF TESTING, SELF DIAGNOSTIC BATTERY PACK TO MAINTAIN ILLUMINATION FOR A MINIMUM OF 90 MINUTES PER CBC TO PROVIDE FULL LUMEN OUTPUT, WHERE INDICATED AS EM. BATTERY PACK OPTION PROVIDED BY MANUFACTURER FOR LUMINAIRES ON EMERGENCY POWER.
2. CONTROLS TO BE WATTSTOPPER DLM SYSTEM AND SHALL MEET TITLE 24 REQUIREMENTS.
3. BRANCH CIRCUIT TO TIE INTO SAME BRANCH CIRCUIT SERVING NORMAL LIGHTING.
4. REPLACEMENT EXTERIOR LUMINAIRES TO MATCH EXISTING. CONTRACTOR TO VERIFY MOUNTING HEIGHT PRIOR TO INSTALL. COORDINATE WITH ARCHITECT.
5. INSTALL POLE HEAD LUMINAIRE ON NEW 14' POLE. MOTION SENSOR "MS-L20" PROVIDED BY MANUFACTURER. POLE PROVIDED BY MANUFACTURER.

GENERAL NOTE:

REFER TO PLAN FOR LOCATION, AND SWITCH FUNCTION. REFER TO TITLE 24 FOR QUANTITIES.

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LUMINAIRE SCHEDULE AND ELECTRICAL NOTES

Client Project Number: N/A

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PROJECT MGR: Y. Van Zanten

Scale:	AS NOTED
Drawn By:	KL
Checked By:	YVZ
Issue Date:	July 21, 2023
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Sheet **E0.02**

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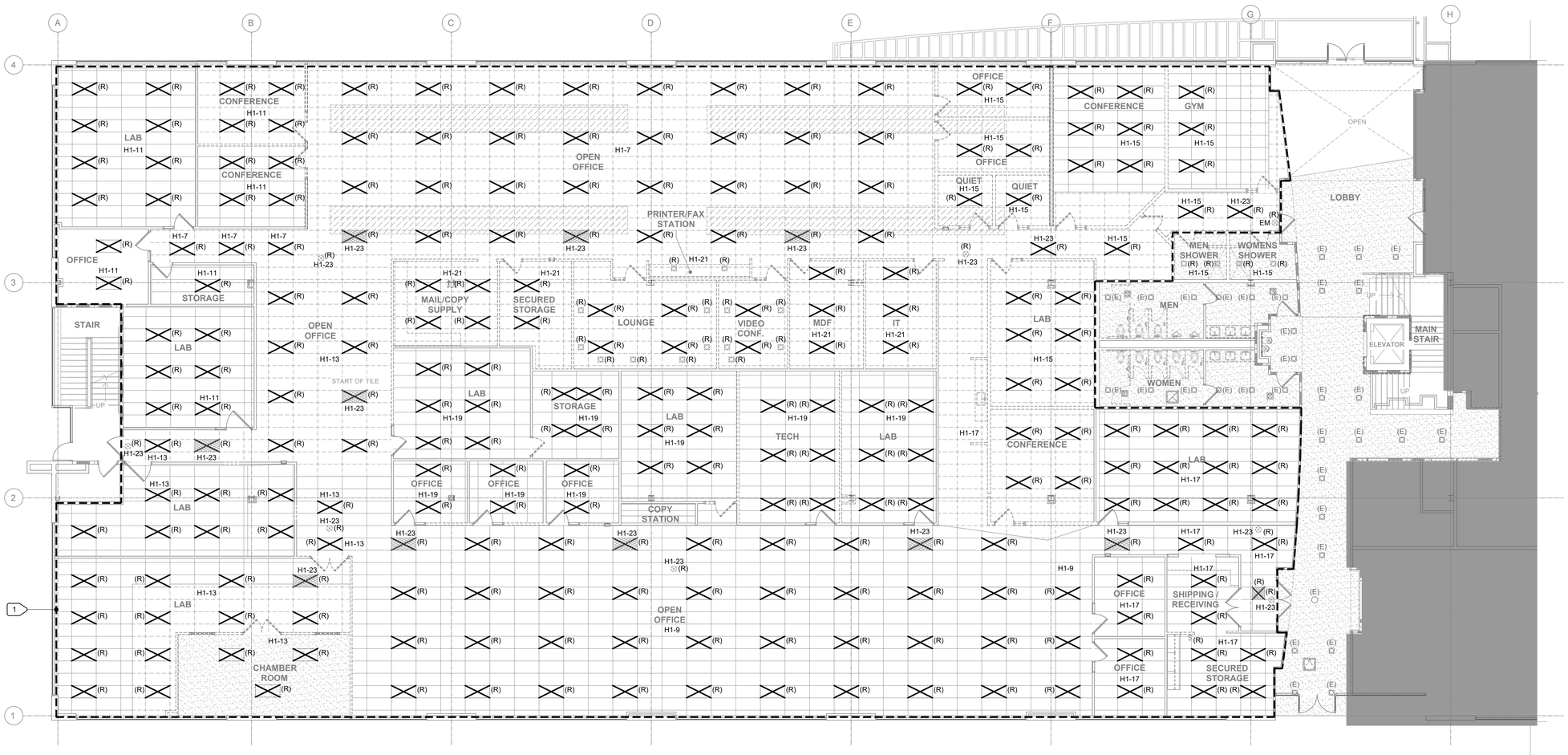
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NUMBERED NOTES

1. DISCONNECT AND REMOVE EXISTING 2x4 LUMINAIRES AND LUMINAIRE CONTROLS. PREP EXISTING CIRCUITS FOR RECONNECTION TO NEW LUMINAIRES. TYPICAL.



1 E2.01 FIRST FLOOR PARTIAL PLAN - DEMOLITION - WEST - LIGHTING

SCALE : 1/8" = 1'-0"

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FIRST FLOOR PARTIAL PLAN - DEMOLITION - WEST - LIGHTING

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PROJECT MGR: Y. Van Zanten

Client Project Number: N/A

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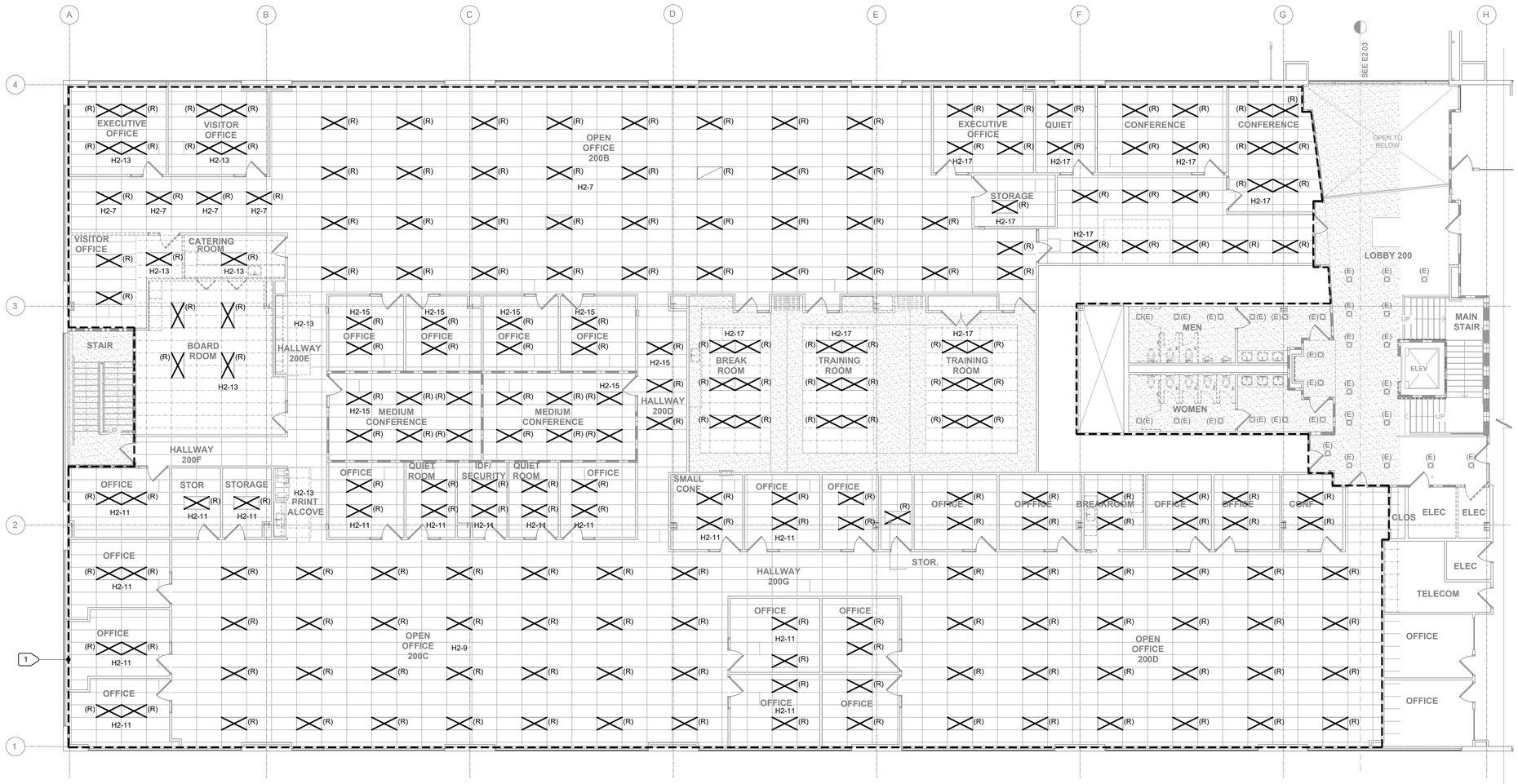
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GENERAL NOTES

1. LIGHTING RECORD DRAWINGS FOR AREAS WITHOUT CIRCUIT NUMBERS ARE MISSING. CONTRACTOR TO FIELD VERIFY CIRCUIT NUMBERS.

NUMBERED NOTES

(1) DISCONNECT AND REMOVE EXISTING 2x4 LUMINAIRES AND LUMINAIRE CONTROLS. PREP EXISTING CIRCUITS FOR RECONNECTION TO NEW LUMINAIRES. TYPICAL.



1 / E2.02 SECOND FLOOR PARTIAL PLAN - DEMOLITION - WEST - LIGHTING

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SECOND FLOOR PARTIAL PLAN - DEMOLITION - WEST - LIGHTING

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PROJECT #: 23045.21
PROJECT MGR: Y. Van Zanten

Client Project Number: N/A

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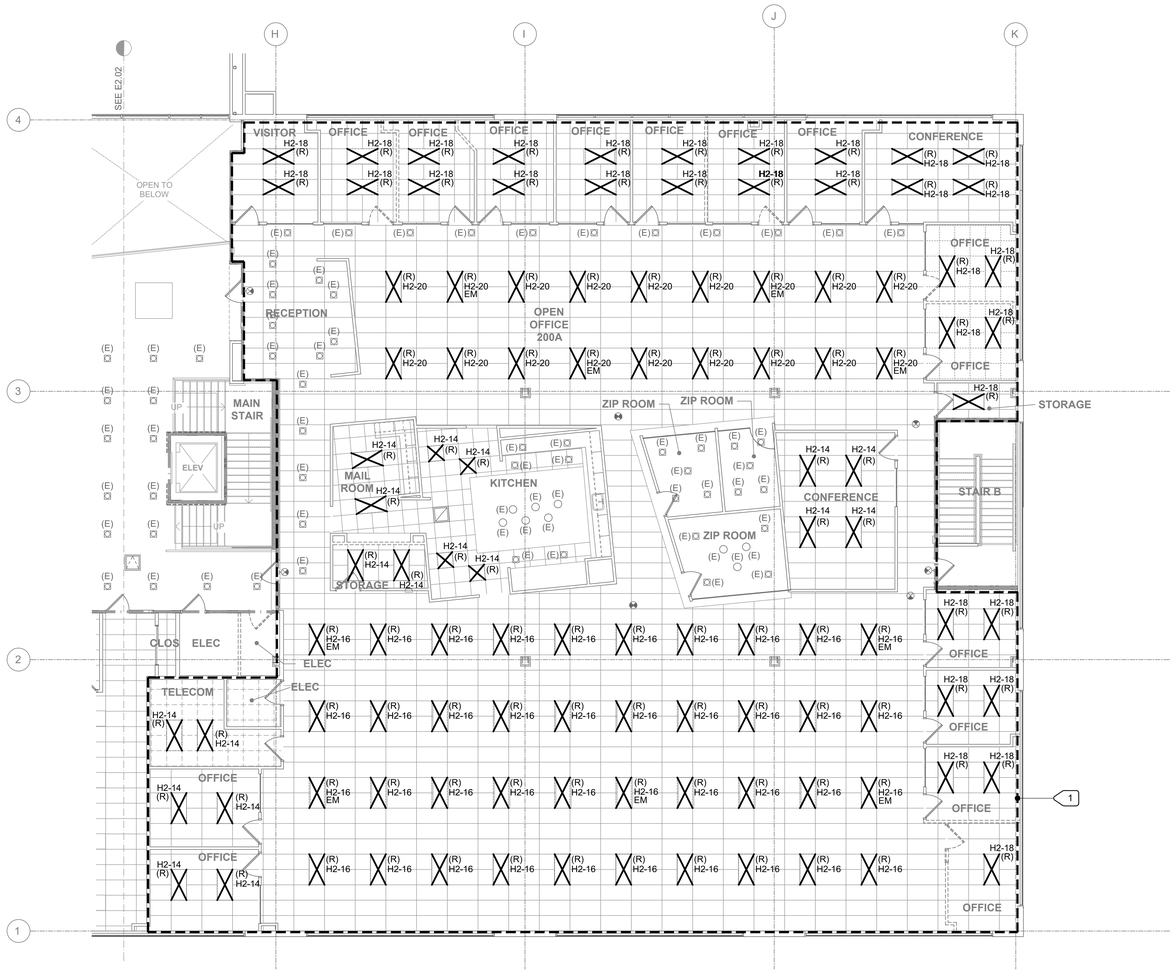
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1 E2.03 SECOND FLOOR PARTIAL PLAN - DEMOLITION - EAST - LIGHTING

SCALE : 1/8" = 1'-0"

NUMBERED NOTES

1 DISCONNECT AND REMOVE EXISTING 2X4 AND 2X2 LUMINAIRES AND LUMINAIRE CONTROLS. PREP EXISTING CIRCUITS FOR RECONNECTION TO NEW LUMINAIRES. TYPICAL.

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SECOND FLOOR PARTIAL PLAN - DEMOLITION - EAST - LIGHTING

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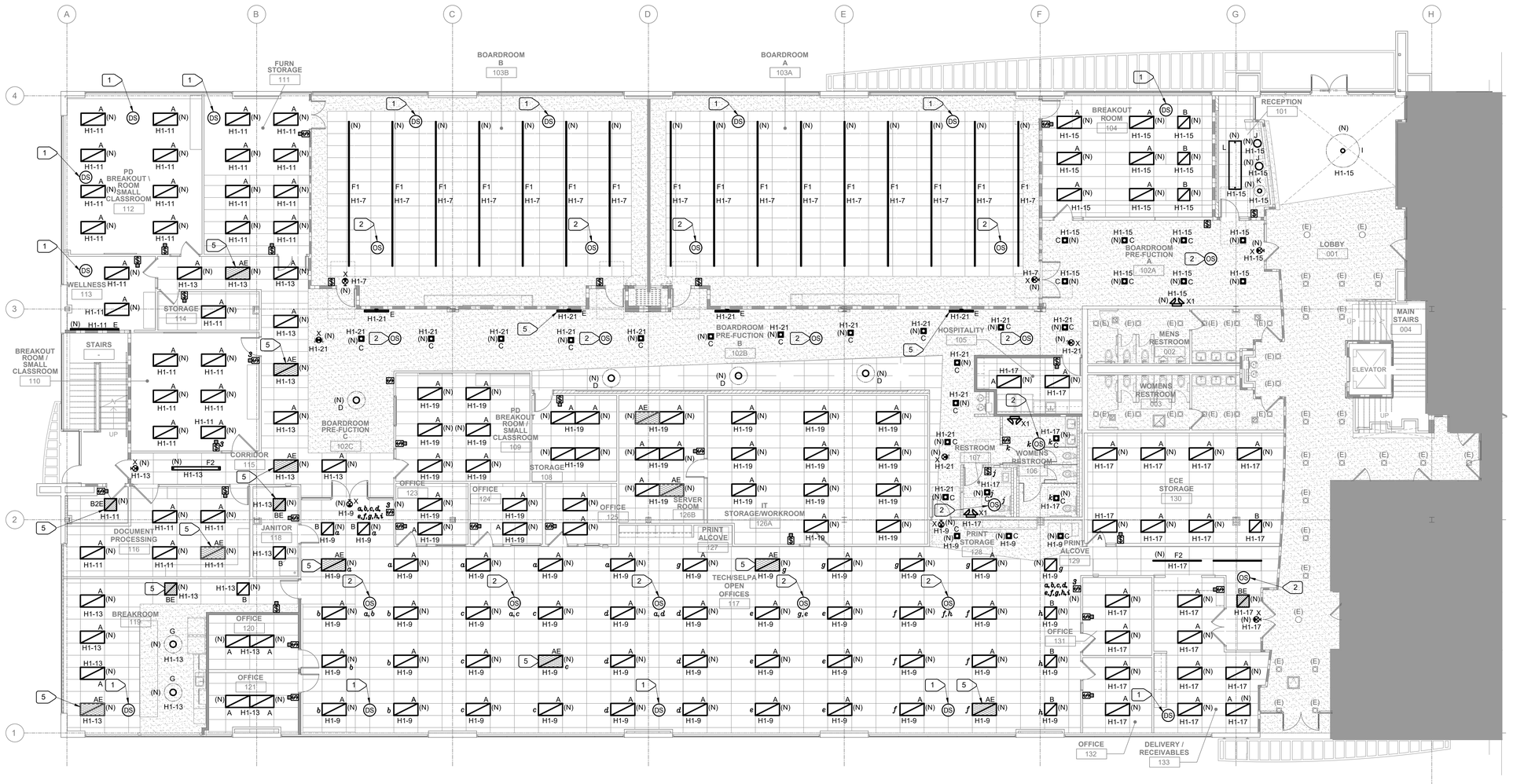
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GENERAL NOTE

1. CONNECT NEW LUMINAIRES TO EXISTING CIRCUITS.
2. EMERGENCY LIGHTING AND EXIT LIGHTS ARE TO BE CONNECTED TO GENERAL ROOM LIGHTING CIRCUIT.

NUMBERED NOTES

1. PROVIDE DAYLIGHT SENSOR FOR SIDELIT ZONE. INSTALL SENSOR WITHIN 1FT-3FT AWAY FROM THE WINDOW AND PER MANUFACTURER'S REQUIREMENTS.
2. PROVIDE OCCUPANCY SENSOR. AVOID MOUNTING SENSORS CLOSE TO AIR VENTS (PIR SENSORS SHOULD NOT BE WITHIN 4FT OF AIR VENT. ULTRASONIC SENSORS SHOULD NOT BE WITHIN 6FT OF AN AIR VENT0, TYPICAL. INSTALL PER MANUFACTURER'S REQUIREMENTS.
3. PROVIDE MULTI-FUNCTIONAL DIMMING SWITCH. PROVIDE THREE ZONES OF DIMMING.
4. EXISTING CIRCUITS IN PANEL "H1" TO BE REUSED.
5. INTERNAL BATTERY PROVIDED BY LUMINAIRE MANUFACTURER. ON LOSS OF POWER, LIGHITNG TO BE 100% ON.



1 / E2.04 FIRST FLOOR PARTIAL PLAN - REMODEL - WEST - LIGHTING

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FIRST FLOOR PARTIAL PLAN - REMODEL - WEST - LIGHTING

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PROJECT MGR: Y. Van Zanten

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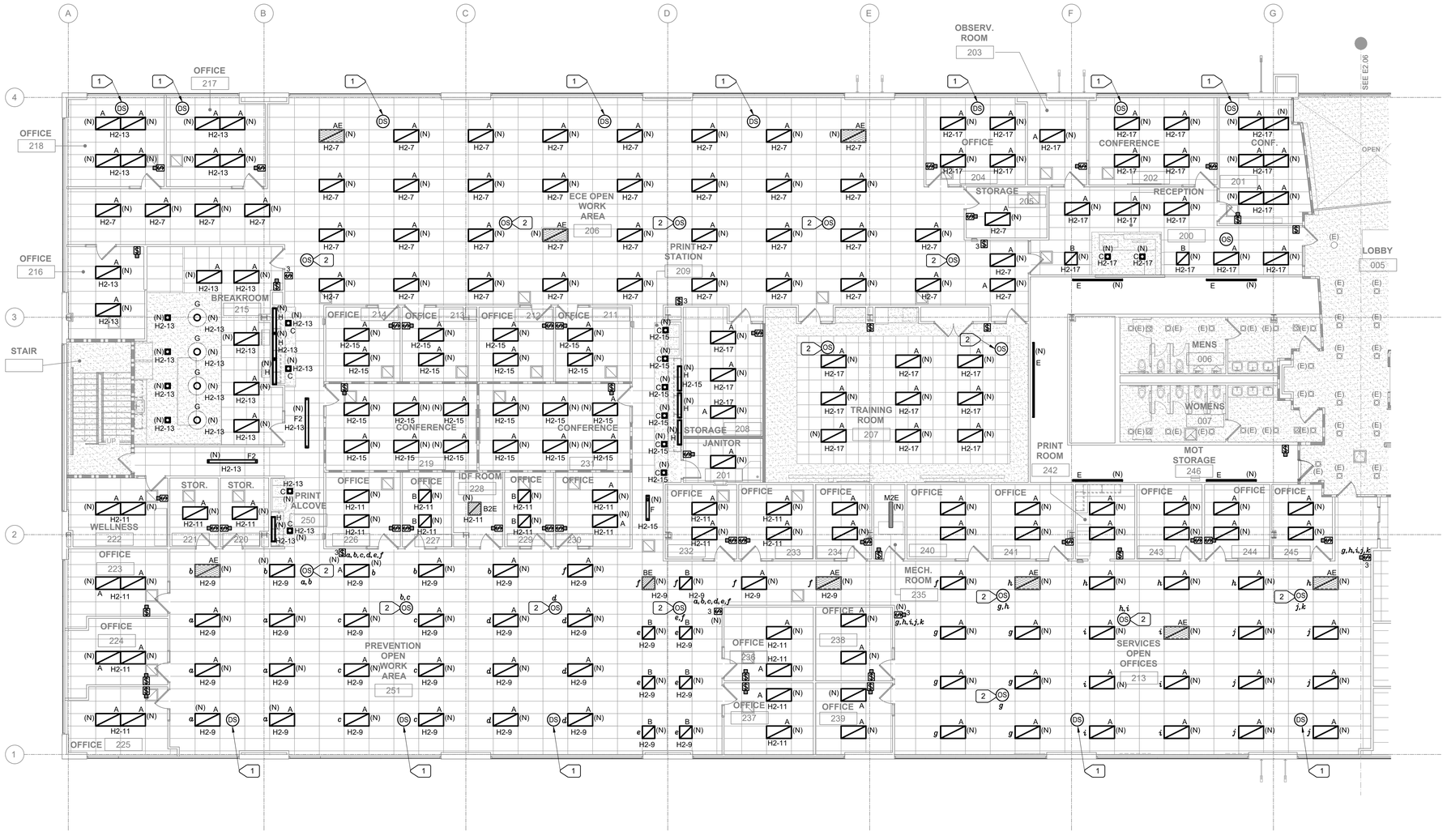
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GENERAL NOTE

1. CONNECT NEW LUMINAIRES TO EXISTING CIRCUITS.
2. EMERGENCY LIGHTING AND EXIT LIGHTS ARE TO BE CONNECTED TO GENERAL ROOM LIGHTING CIRCUIT.
3. CONTRACTOR TO VERIFY CIRCUITS FOR AREAS SHOWN WITHOUT CIRCUIT NUMBERS. AS-BUILT DRAWINGS ARE NOT AVAILABLE FOR THESE AREAS.

NUMBERED NOTES

1. PROVIDE DAYLIGHT SENSOR FOR SIDELIT ZONE. INSTALL SENSOR WITHIN 1FT-3FT AWAY FROM THE WINDOW AND PER MANUFACTURER'S REQUIREMENTS.
2. PROVIDE OCCUPANCY SENSOR. AVOID MOUNTING SENSORS CLOSE TO AIR VENTS (PIR SENSORS SHOULD NOT BE WITHIN 4FT OF AIR VENT. ULTRASONIC SENSORS SHOULD NOT BE WITHIN 6FT OF AN AIR VENT0, TYPICAL. INSTALL PER MANUFACTURER'S REQUIREMENTS.
3. PROVIDE MULTI-FUNCTIONAL DIMMING SWITCH. PROVIDE THREE ZONES OF DIMMING.
4. EXISTING CIRCUITS IN PANEL "H2" TO BE REUSED.
5. INTERNAL BATTERY PROVIDED BY LUMINAIRE MANUFACTURER. ON LOSS OF POWER, LIGHTING TO BE 100% ON



1 / E2.05 SECOND FLOOR PARTIAL PLAN - REMODEL - WEST - LIGHTING

SCALE : 1/8" = 1'-0"

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Revisions

Delta	Date	Revisions	By

AGENCY APPROVAL

KEY PLAN



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REGISTERED PROFESSIONAL ENGINEER YVETTE J. VAN ZANTEN No. E15483 Exp. 6/30/25 ELECTRICAL STATE OF CALIFORNIA

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TENANT IMPROVEMENTS

Sheet Title

SECOND FLOOR PARTIAL PLAN - REMODEL - WEST - LIGHTING

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PROJECT #: 23045.21
PROJECT MGR: Y. Van Zanten

Client Project Number: N/A

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Drawn By:	KL
Checked By:	YVZ
Issue Date:	July 21, 2023
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Sheet **E2.05**

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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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NUMBERED NOTES

1. PROVIDE DAYLIGHT SENSOR FOR SIDELIT ZONE. INSTALL SENSOR WITHIN 1FT-3FT AWAY FROM THE WINDOW AND PER MANUFACTURER'S REQUIREMENTS.
2. PROVIDE OCCUPANCY SENSOR. AVOID MOUNTING SENSORS CLOSE TO AIR VENTS (PIR SENSORS SHOULD NOT BE WITHIN 4FT OF AIR VENT. ULTRASONIC SENSORS SHOULD NOT BE WITHIN 6FT OF AN AIR VENT0, TYPICAL. INSTALL PER MANUFACTURER'S REQUIREMENTS.
3. PROVIDE MULTI-FUNCTIONAL DIMMING SWITCH. PROVIDE THREE ZONES OF DIMMING.
4. EXISTING CIRCUITS IN PANEL "H2" TO BE REUSED.
5. INTERNAL BATTERY PROVIDED BY LUMINAIRE MANUFACTURER. ON LOSS OF POWER, LIGHTING TO BE 100% ON



1 SECOND FLOOR PARTIAL PLAN - REMODEL - EAST - LIGHTING

E2.06

SCALE : 1/8" = 1'-0"

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Checked By: YVZ
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Sheet **E2.06**

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GRAPHIC SCALES: 1/16" = 1'-0" (0 5' 50') · 1/8" = 1'-0" (0 5' 25') · 1/4" = 1'-0" (0 1' 12') · 1/2" = 1'-0" (0 1' 6') · 3/4" = 1'-0" (0 4') · 1" = 1'-0" (0 1' 3') · 1 1/2" = 1'-0" (0 2') · 3" = 1'-0" (0 1')

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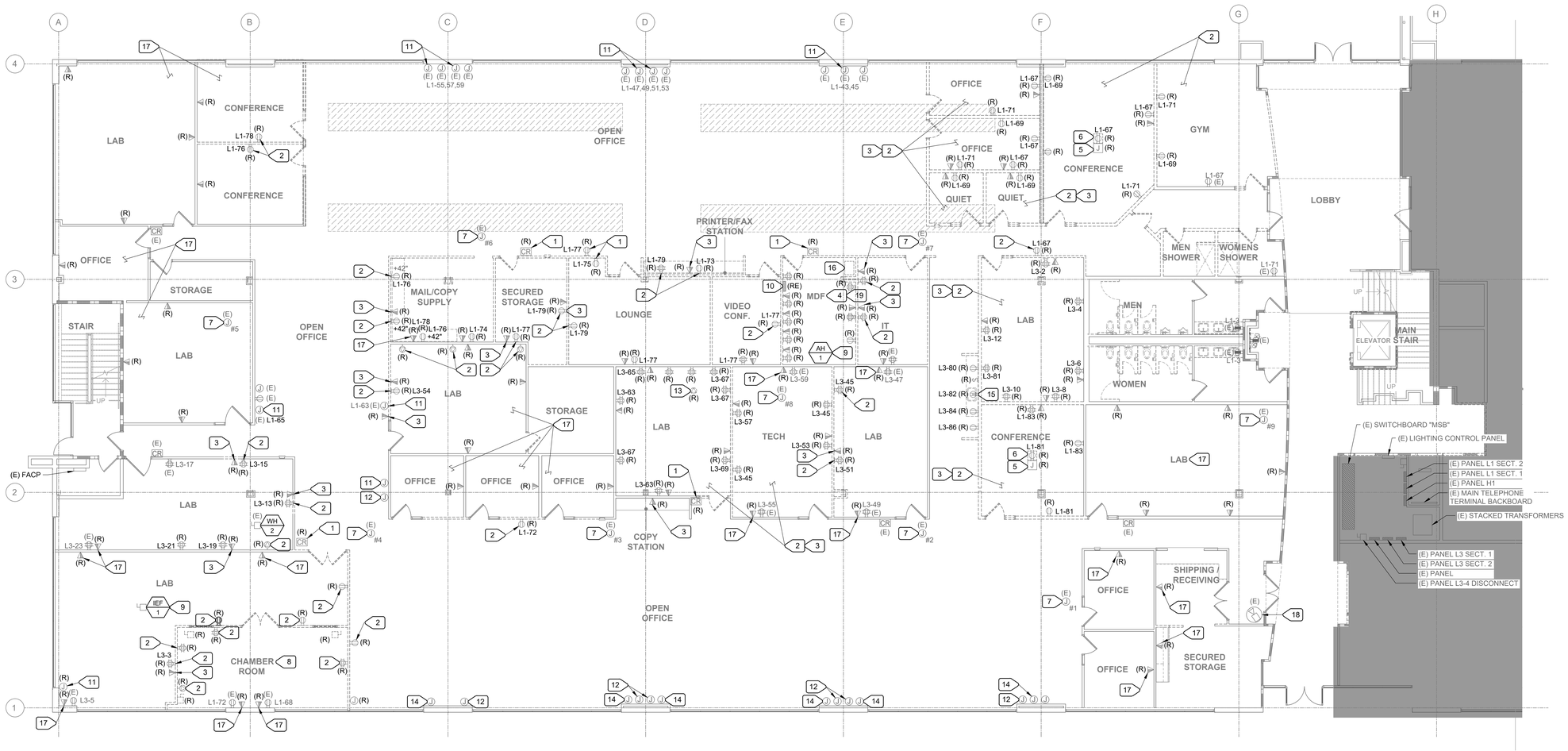
1. EXISTING DEVICES TO REMAIN ARE NOT SHOWN.
2. WHERE CIRCUIT NUMBERS ARE NOT SHOWN. CONTRACTOR SHALL VERIFY CIRCUIT NUMBERS SO THAT PANEL SCHEDULES CAN BE UPDATED.

EXISTING POWER JUNCTION BOX SCHEDULE (FROM AS-BUILT DRAWINGS)

1	PANEL L1 - CIRCUITS 40, 42; CIRCUITS 44, 46, 48; CIRCUITS 50, 52; CIRCUITS 54, 56, 58; CIRCUITS 60, 62 64
2	PANEL L1 - CIRCUITS 79, 81, 83; CIRCUITS 82, 84, 86; PANEL L3 - CIRCUITS 28, 30
3	PANEL L1 - CIRCUITS 66, 68, 70; CIRCUITS 61, 63, 65; PANEL L3 - CIRCUITS 44, 46, 48; CIRCUITS 50, 52, 54
4	PANEL L3 - CIRCUITS 1, 3, 5; CIRCUITS 7, 9, 11; CIRCUITS 13, 15, 17; CIRCUITS 19, 21, 23
5	PANEL L3 - CIRCUITS 25, 27, 29; CIRCUITS 31, 33, 35; CIRCUITS 63, 64, 66, 68; CIRCUITS 56, 58, 60, 62; PANEL L1 - 13
6	PANEL L1 - CIRCUITS 74, 76, 78; CIRCUITS 55, 57, 59; CIRCUITS 43, 45; CIRCUITS 47, 49; CIRCUITS 51 53
7	PANEL L1 - CIRCUITS 67, 69, 71; CIRCUITS 73, 75, 77; CIRCUITS 37, 39, 41; PANEL L3 - CIRCUITS 16, 26
8	PANEL L3 - CIRCUITS 55, 57, 59; CIRCUITS 63, 65, 67, 69; CIRCUITS 43, 45, 47; CIRCUITS 49, 51, 53
9	PANEL L3 - CIRCUITS 2,4, 6; CIRCUITS 8, 10, 12; CIRCUITS 14, 16, 18; CIRCUITS 20, 22, 24

NUMBERED NOTES

1. EXISTING CARD READER TO BE REMOVED.
2. DISCONNECT AND REMOVE EXISTING RECEPTACLE. REMOVE EXISTING CONDUCTORS AND CONDUIT TO LAST REMAINING DEVICE. ENSURE CIRCUIT CONTINUITY TO DOWNSTREAM DEVICES. TYPICAL.
3. DISCONNECT AND REMOVE EXISTING DATA OUTLET. REMOVE EXISTING CABLES AND CONDUIT BACK TO SOURCE. TYPICAL.
4. DISCONNECT AND REMOVE EXISTING RECEPTACLES, DATA OUTLETS, GROUND BUS BAR, DISCONNECT SWITCH AND UPS. REMOVE EXISTING CONDUCTORS, CABLES AND CONDUIT BACK TO SOURCE. RECEPTACLES ARE CIRCUITED TO PANEL "LUPS".
5. DISCONNECT AND REMOVE EXISTING DEVICE AND FLOOR BOX. REMOVE CABLES BACK TO SOURCE.
6. DISCONNECT AND REMOVE EXISTING FLOOR RECEPTACLE. REMOVE EXISTING CONDUCTORS BACK TO LAST REMAINING DEVICE.
7. EXISTING ABOVE CEILING JUNCTION BOX TO REMAIN. REFER TO SCHEDULE FOR EXISTING CIRCUITS. VERIFY LOCATION IN FIELD.
8. DISCONNECT AND REMOVE EXISTING DISCONNECT SWITCHES, CHAMBER CONTROL PANEL, BOOSTER TRANSFORMERS AND ALL ASSOCIATED EQUIPMENT. REMOVE EXISTING CONDUCTORS AND CONDUIT BACK TO SOURCE.
9. DISCONNECT AND REMOVE ELECTRIC SERVICE TO MECHANICAL EQUIPMENT BEING REMOVED AS INDICATED BY MECHANICAL DEMOLITION PLANS. REMOVE DISCONNECT SWITCH AND REMOVE EXISTING CONDUCTORS AND CONDUIT COMPLETE TO SOURCE.
10. EXISTING PANEL "LUPS" TO BE RELOCATED. DISCONNECT EXISTING FEEDER AND CIRCUITS.
11. EXISTING BOX WITH CONDUCTORS. REMOVE EXISTING CONDUCTORS BACK TO SOURCE OR TO RESPECTIVE J-BOX. IN J-BOX, TAPE AND TAG ALL CONDUCTORS. PROVIDE BLANK COVER PLATE.
12. PROVIDE BLANK COVER PLATES ON OPEN BOX THAT ARE NOT BEING REUSED. TYPICAL.
13. DISCONNECT AND REMOVE EXISTING TWISTLOCK RECEPTACLE. REMOVE EXISTING CONDUCTORS AND CONDUIT COMPLETE BACK TO SOURCE.
14. EXISTING BOX WITH CONDUCTORS TO REMAIN FOR FUTURE CONNECTION TO MODULAR FURNITURE. IF NOT BEING CONNECTED, CONDUCTORS MUST BE REMOVED AND BLANK COVER PLATE PROVIDED.
15. DISCONNECT EXISTING GARBAGE DISPOSAL. REMOVE EXISTING RECEPTACLE AND ASSOCIATED SWITCH. REMOVE EXISTING CONDUCTORS AND CONDUIT BACK TO SOURCE.
16. INTERCEPT (E) FEEDER TO (E) UPS ABOVE CEILING AND EXTEND TO NEW LOCATION. REFER TO SHEET E3.04 FOR NEW LOCATION. COORDINATE EXACT LOCATION WITH PCOE I.T. DEPARTMENT.
17. DISCONNECT AND REMOVE EXISTING DATA OUTLET. REMOVE EXISTING CABLES BACK TO SOURCE. PROTECT EXISTING BOX AND CONDUIT STUB FOR REUSE. TYPICAL.
18. ABANDON EXISTING CAMERA IN PLACE.
19. DISCONNECT EXISTING FIBER OPTIC CABLE FROM EXISTING MDF. PULL BACK TO ABOVE ACCESSIBLE CEILING SPACE AND COIL FOR RECONNECTION TO NEW MDF.



1 E3.01 — FIRST FLOOR PARTIAL PLAN - DEMOLITION - WEST - ELECTRICAL

SCALE : 1/8" = 1'-0"

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Project
TENANT IMPROVEMENTS

Sheet Title
FIRST FLOOR PARTIAL PLAN - DEMOLITION - WEST - ELECTRICAL

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PROJECT #: 23045.21
PROJECT MGR: Y. Van Zanten

Client Project Number: N/A

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Sheet **E3.01**

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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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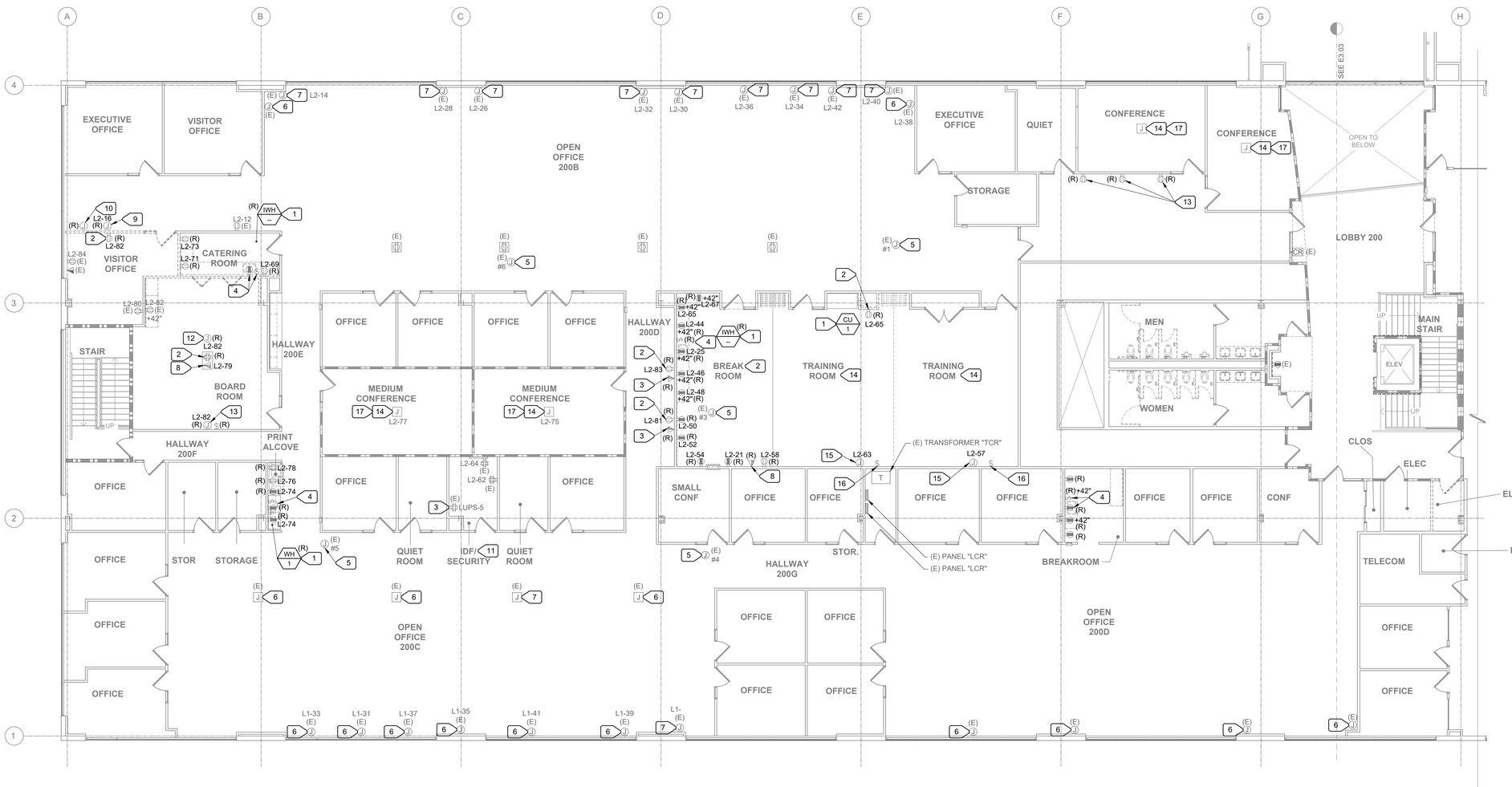
1. EXISTING DEVICES TO REMAIN ARE NOT SHOWN.
2. WHERE CIRCUIT NUMBERS ARE NOT SHOWN. CONTRACTOR SHALL VERIFY CIRCUIT NUMBERS SO THAT PANEL SCHEDULES CAN BE UPDATED.

EXISTING POWER JUNCTION BOX SCHEDULE (FROM AS-BUILT DRAWINGS)

1	PANEL L2 - CIRCUITS 34,36; CIRCUITS 38,40,42; CIRCUIT 23. PANEL L2 - CIRCUITS 43,45,47; CIRCUITS 49,51.
2	PANEL L2 - CIRCUITS 53,55,57; CIRCUITS 59,61,63. PANEL L2 - CIRCUITS 65,67; CIRCUITS 50,52,54,56.
3	PANEL L2 - CIRCUITS 18,20; CIRCUITS 44,46,48; CIRCUIT 81,83. PANEL L2 - CIRCUITS 75,77,79; CIRCUITS 25,19.
4	PANEL L2 - CIRCUITS 27,29; CIRCUITS 31,33,35,37; CIRCUIT 39,41. PANEL L2 - CIRCUITS 56,58,60.
5	PANEL L2 - CIRCUITS 80,82,84; CIRCUITS 62,64,66; CIRCUIT 68,70,72. PANEL L2 - CIRCUITS 74,76,78.
6	PANEL L2 - CIRCUITS 12,14,16; CIRCUITS 26,28; CIRCUIT 22,24. PANEL L2 - CIRCUITS 69,71,73; CIRCUITS 30,32.

NUMBERED NOTES

1. DISCONNECT AND REMOVE ELECTRIC SERVICE TO MECHANICAL EQUIPMENT BEING REMOVED AS INDICATED BY MECHANICAL DEMOLITION PLANS. REMOVE DISCONNECT SWITCH AND REMOVE EXISTING CONDUCTORS AND CONDUIT COMPLETE TO SOURCE.
2. DISCONNECT AND REMOVE EXISTING RECEPTACLE. REMOVE EXISTING CONDUCTORS AND CONDUIT TO LAST REMAINING DEVICE. ENSURE CIRCUIT CONTINUITY TO DOWNSTREAM DEVICES.
3. INTERCEPT EXISTING CONDUCTORS AND EXTEND TO NEW UPS PANEL IN NEW SERVER ROOM. REFER TO SHEET E3.04 FOR NEW LOCATION.
4. DISCONNECT EXISTING GARBAGE DISPOSAL. REMOVE EXISTING CONDUCTORS AND CONDUIT BACK TO SOURCE.
5. EXISTING ABOVE CEILING JUNCTION BOX TO REMAIN. REFER TO SCHEDULE FOR EXISTING CIRCUITS. VERIFY LOCATION IN FIELD.
6. EXISTING BOX WITH CONDUCTORS TO REMAIN FOR FUTURE CONNECTION TO MODULAR FURNITURE. IF NOT BEING USED, CONDUCTORS MUST BE REMOVED BACK TO SOURCE AND BLANK COVER PROVIDED ON EXISTING BOX.
7. PROVIDE BLANK COVER PLATE ON OPEN BOX THAT IS NOT BEING REUSED.
8. DISCONNECT AND REMOVE EXISTING DATA OUTLET. REMOVE CABLES AND CONDUIT BACK TO SOURCE.
9. EXISTING BOX WITH CONDUCTORS. REMOVE EXISTING CONDUCTORS AND CONDUIT BACK TO SOURCE.
10. EXISTING BOX WITH BLANK COVER PLATE. REMOVE BOX AND REMOVE CONDUIT BACK TO SOURCE. IF CABLING EXISTS, REMOVE BACK TO SOURCE.
11. COORDINATE REMOVAL OF IDF AND SECURITY PANELS WITH PCOE I.T. DEPARTMENT.
12. DISCONNECT AND REMOVE J-BOX FOR EXISTING PROJECTOR. REMOVE CONDUCTORS AND CONDUITS BACK TO SOURCE.
13. DISCONNECT AND REMOVE EXISTING UNDER COUNTER SURFACE MOUNTED RECEPTACLE. REMOVE EXISTING CONDUCTORS AND CONDUIT COMPLETE TO SOURCE.
14. DISCONNECT AND REMOVE DATA DEVICE. REMOVE CABLES BACK TO SOURCE. PROVIDE BLANK COVER ON EXISTING FLOOR BOX.
15. DISCONNECT AND REMOVE EXISTING POWER TO PROJECTOR AND PROJECTOR SCREEN. REMOVE EXISTING CONDUCTORS AND CABLES BACK TO SOURCE.
16. DISCONNECT AND REMOVE EXISTING SWITCH FOR PROJECTOR SCREEN. REMOVE CONDUCTORS BACK TO SOURCE.
17. DISCONNECT AND REMOVE EXISTING RECEPTACLES. REMOVE EXISTING CONDUCTORS BACK TO SOURCE.



1 / E3.02 SECOND FLOOR PARTIAL PLAN - DEMOLITION - WEST - ELECTRICAL

SCALE : 1/8" = 1'-0"

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Project

TENANT IMPROVEMENTS

Sheet Title

SECOND FLOOR PARTIAL PLAN - DEMOLITION - WEST - ELECTRICAL

Client Project Number: N/A

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PROJECT #: 23045.21
PROJECT MGR: Y. Van Zanten

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Sheet **E3.02**

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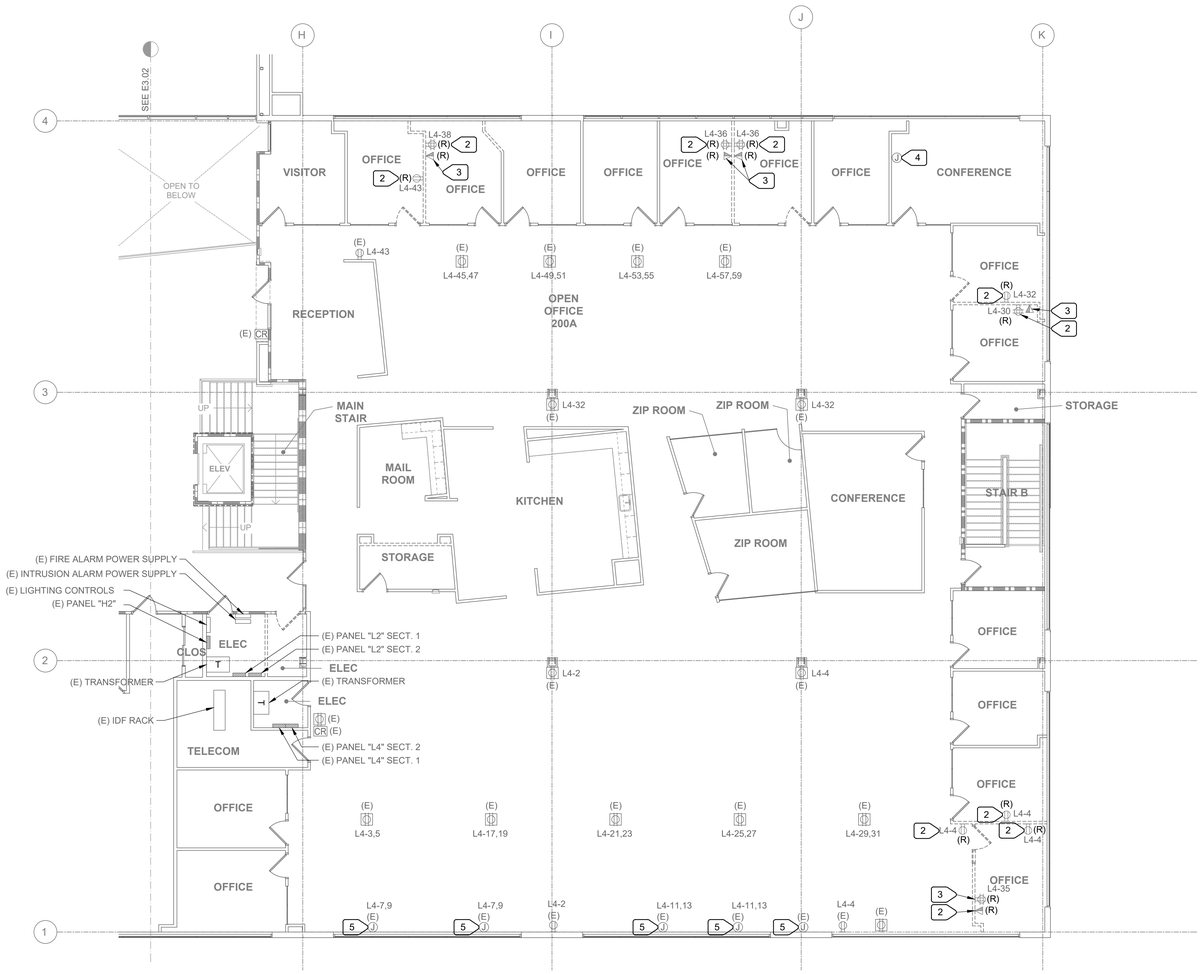
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GENERAL NOTE

1. EXISTING DEVICES TO REMAIN ARE NOT SHOWN.
2. WHERE CIRCUIT NUMBERS ARE NOT SHOWN. CONTRACTOR SHALL VERIFY CIRCUIT NUMBERS SO THAT PANEL SCHEDULES CAN BE UPDATED.

NUMBERED NOTES

1. EXISTING CARD READER TO BE REMOVED.
2. DISCONNECT AND REMOVE (E) RECEPTACLE. REMOVE EXISTING CONDUCTORS AND CONDUIT TO LAST REMAINING DEVICE. ENSURE CIRCUIT CONTINUITY TO DOWNSTREAM DEVICES. TYPICAL.
3. DISCONNECT AND REMOVE DATA OUTLET. REMOVE EXISTING CABLES AND CONDUIT BACK TO SOURCE. TYPICAL.
4. EXISTING BOX AT +46" WITHOUT FACEPLATE. PROVIDE NEW BLANK FACEPLATE.
5. EXISTING FURNITURE WHIP TO REMAIN.



1 / E3.03 SECOND FLOOR PARTIAL PLAN - DEMOLITION - EAST - ELECTRICAL

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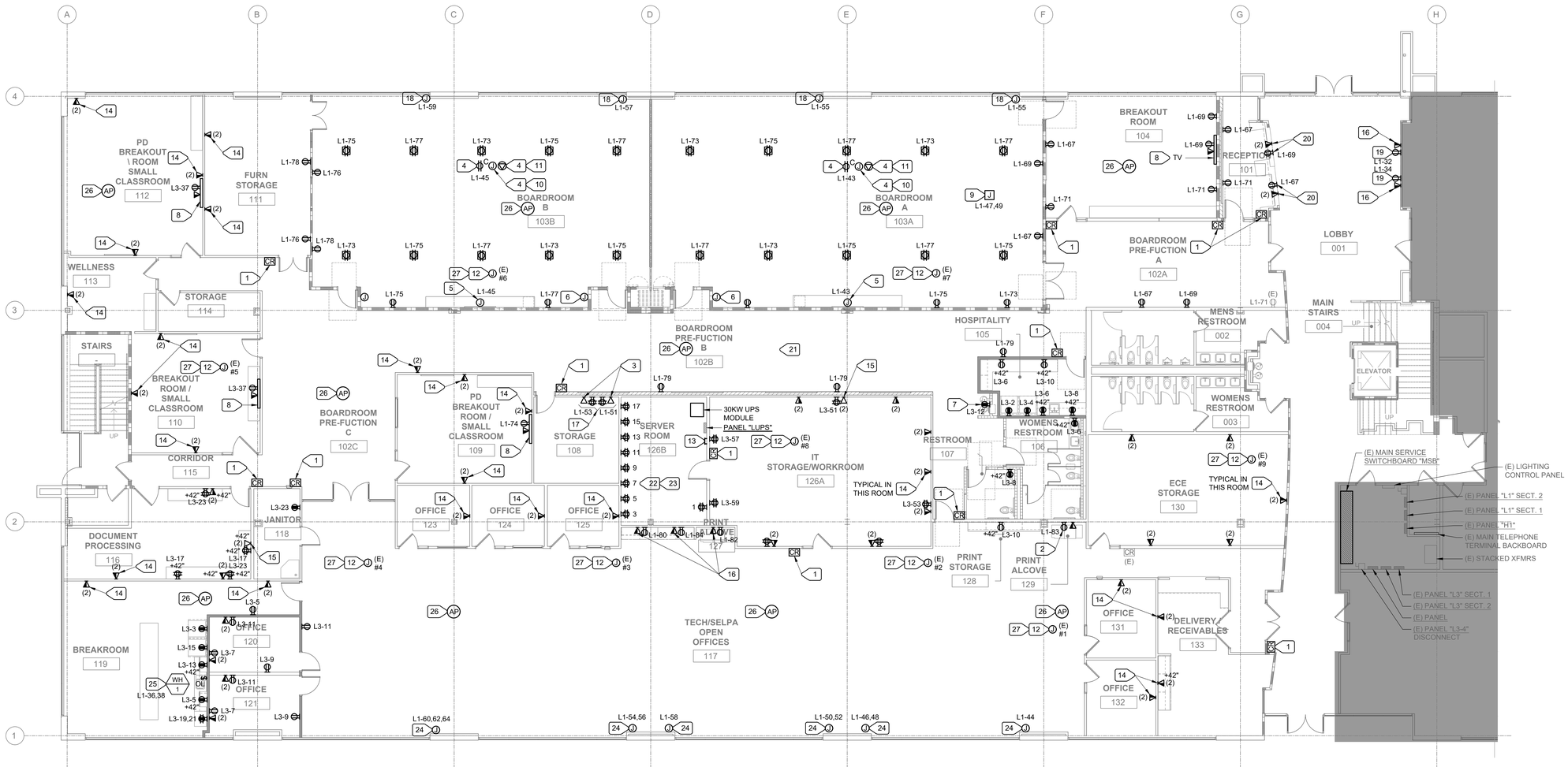
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GENERAL NOTE

1. CEC 210.4 REQUIRES THAT ALL MULTI-WIRE BRANCH CIRCUITS THAT SHARE A NEUTRAL CONDUCTOR MUST HAVE A BREAKER HANDLE TIE SO THAT EACH CIRCUIT IS DISCONNECTED SIMULTANEOUSLY.

NUMBERED NOTES

1. LOCATE 4 SQUARE BOX FOR CARD READER. STUB 1/2" C. TO ABOVE CEILING SPACE. PROVIDE PROTECTIVE BUSHING ON CONDUIT STUB.
2. PROVIDE 1/2" C. WITH (2) CAT6 CABLES TO MDF.
3. LOCATE FOR A/V RACK.
4. LOCATE FOR PROJECTOR.
5. LOCATE FOR PROJECTION SCREEN. VERIFY LOCATION OF CONTROL SWITCH WITH ARCHITECT.
6. LOCATE 4-GANG BOX FOR A/V CONTROLS. PROVIDE (2) 1-1/2" C. TO A/V RACK LOCATION FOR A/V CABLING.
7. LOCATE FOR ELECTRIC DRINKING FOUNTAIN.
8. PROVIDE CHIEF PAC525 IN WALL DEVICE BOX WITH DESIGNATED DATA AND POWER OUTLETS. PROVIDE 3/4" POWER CONDUIT. PROVIDE 1-1/4" DATA CONDUIT STUBBED TO ACCESSIBLE CEILING SPACE AND (1) CAT6 DATA CABLE TO MDF. PROVIDE PROTECTIVE BUSHING ON CONDUIT STUB. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT.
9. PROVIDE (2) 2" CONDUITS TO AV RACK LOCATION FOR AV CABLING. PROVIDE 2" POWER CONDUIT TO PANEL "L1". PROVIDE (12) CAT6 CABLES TO AV RACK FOR MICROPHONES.
10. PROVIDE 1-1/2" CONDUIT TO AV RACK FOR AV CABLES.
11. PROVIDE (1) CAT6 DATA CABLE BETWEEN PROJECTOR AND DATA OUTLET AT AV RACK. RUN DATA CABLE IN SAME CONDUIT AS AV CABLING.
12. EXISTING POWER JUNCTION BOX ABOVE CEILING. REFER TO SHEET E2.04 FOR CIRCUITS.
13. PROVIDE GROUND BUS BAR WITH STANDOFF INSULATORS, CHATSWORTH #40153-020 TMGB PATTERN, 4"W X 1/4"D X 20"L. SEE GROUND BUS DETAIL ON SHEET E5.01.
14. PROVIDE (2) DATA CAT6 CABLES TO MDF THROUGH EXISTING PATHWAY. PROVIDE (2) DATA JACKS AND NEW FACEPLATE AT EXISTING OUTLET BOX.
15. PROVIDE (2) CAT6 DATA CABLES TO MDF. TYPICAL UNLESS NOTED OTHERWISE .
16. PROVIDE (1) CAT6 DATA CABLE TO MDF.
17. LOCATE FOR AV RACK. VERIFY EXACT REQUIREMENTS WITH PCOE I.T. DEPARTMENT PRIOR TO ROUGH-IN.
18. LOCATE FOR AND CONNECT MOTORIZED SHADES. VERIFY LOCATION OF CONTROLS WITH ARCHITECT.
19. LOCATE FOR DIGITAL DISPLAYS. VERIFY EXACT HEIGHT WITH ARCHITECT.
20. MOUNT UNDER COUNTER. VERIFY EXACT LOCATION WITH ARCHITECT.
21. LOCATE EXISTING FIBER OPTIC CABLE COILED ABOVE CEILING DURING DEMOLITION. TEST EXISTING FIBER OPTIC CABLE AND SEND RESULT TO PCOE I.T. DEPARTMENT. IF FIBER PASSES TEST, EXTEND TO NEW MDF LOCATION WITHOUT SPLICING AND CONNECT. IF FIBER FAILS TEST, REPLACE WITH NEW.
22. RECEPTACLES IN SERVER ROOM WILL BE FED FROM PANEL "LUPS".
23. PROVIDE FLOOR TO CEILING 3/4" FIRE RETARDANT PLYWOOD BACKBOARD ON WEST WALL OF SERVER ROOM. PROVIDE (1) 4" CONDUIT ONLY AND (1) 2" CONDUIT ONLY TO ABOVE CEILING SPACE. LOCATE GROUND BUS CALLED FOR IN NOTE 13 ON PLYWOOD BACKBOARD.
24. PROVIDE POWER AND DATA MODULAR FURNITURE CONNECTIONS WITHIN 12" OF MODULAR FURNITURE. PROVIDE RECESSED BACK BOXES, FOR POWER AND DATA, WITH COVER PLATES.
    - (J) D — DATA - PROVIDE COVER PLATES WITH 1-1/4" DIAMETER OPENING, FLEX CONDUIT AND GROMMET FOR DATA CABLING. PROVIDE PULL ROPE IN CONDUIT.
    - (J) P — POWER - PROVIDE COVER PLATES WITH 3/4" DIAMETER OPENING WITH 90 DEGREE SHORT ELBOW AND WHIP FOR POWER. PROVIDE CONNECTORS FOR THE WHIPS AND TERMINATE POWER WHIP INTO CONNECTORS AT MODULAR FURNITURE. PROVIDE A MINIMUM OF ONE UNCONTROLLED AND ONE CONTROLLED DUPLEX RECEPTACLES PER WORK STATION.
25. PROVIDE 3/4" CONDUIT WITH 2 #10, 1 #10 GND. LOCATE DISCONNECT SWITCH UNDER SINK ADJACENT TO WATER HEATER.
26. PROVIDE (2) CAT6 CABLES TO MDF. VERIFY LOCATION WITH PCOE I.T. DEPARTMENT.
27. TAPE AND TAG EXISTING CONDUCTORS LEFT AS SPARE IN EXISTING JUNCTION AND AT EXISTING PANEL.



1 E3.04 FIRST FLOOR PARTIAL PLAN - REMODEL - WEST - ELECTRICAL

SCALE : 1/8" = 1'-0"

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Revisions

Delta	Date	Revisions	By

AGENCY APPROVAL

KEY PLAN



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REGISTERED PROFESSIONAL ENGINEER — YVETTE I. VAN ZANTEN — No. E15483 Exp. 6/30/25 — ELECTRICAL — STATE OF CALIFORNIA

07/28/2023

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HY Architects Project number: 6013

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Project

TENANT IMPROVEMENTS

Sheet Title

FIRST FLOOR PARTIAL PLAN - REMODEL - WEST - ELECTRICAL

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PROJECT #: 23045.21
PROJECT MGR: Y. Van Zanten

Client Project Number: N/A

Scale: AS NOTED
Drawn By: KL
Checked By: YVZ
Issue Date: July 21, 2023
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Sheet **E3.04**

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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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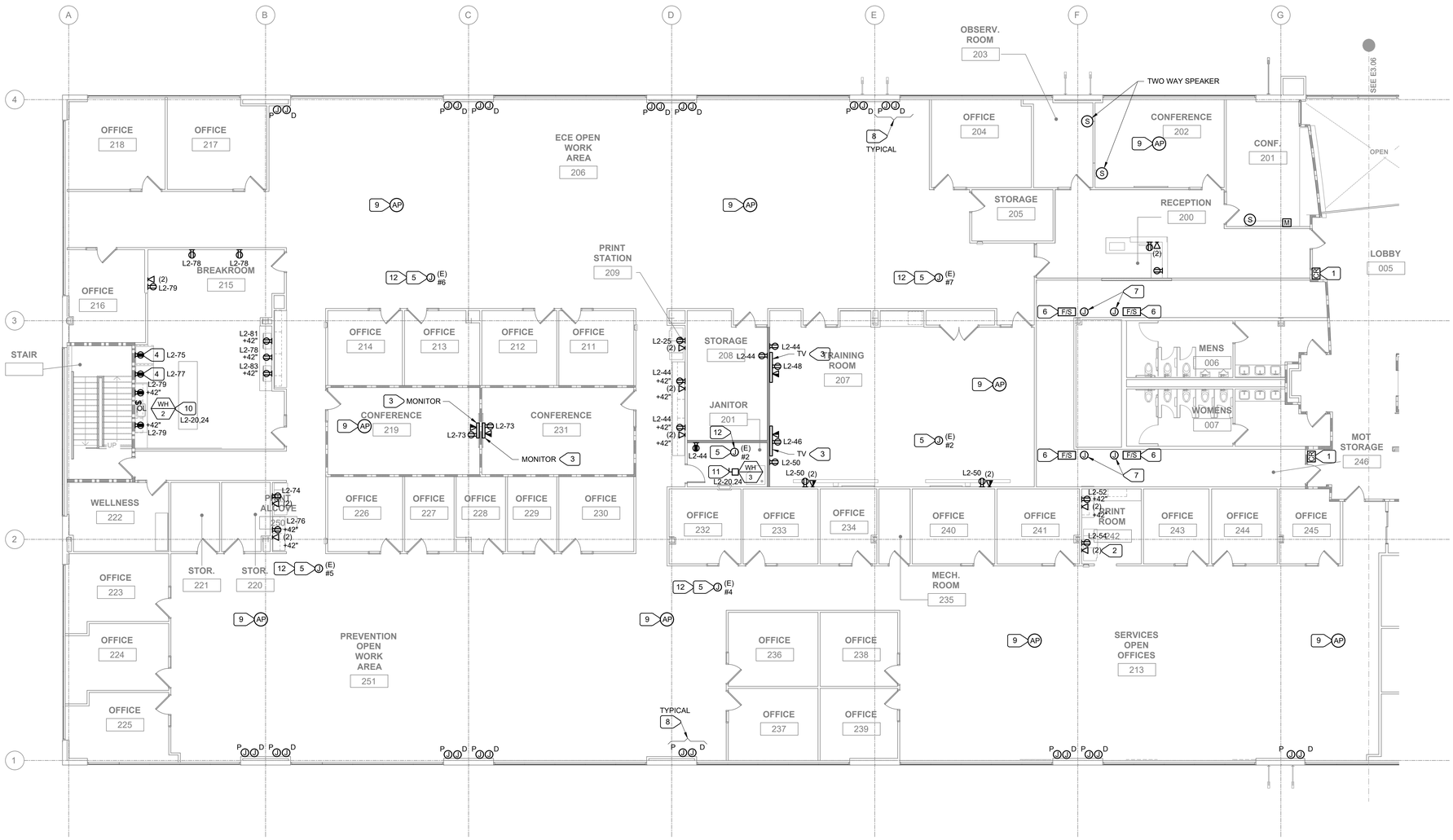
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GENERAL NOTES

1. CEC 210.4 REQUIRES THAT ALL MULTI-WIRE BRANCH CIRCUITS THAT SHARE A NEUTRAL CONDUCTOR MUST HAVE A BREAKER HANDLE TIE SO THAT EACH CIRCUIT IS DISCONNECTED SIMULTANEOUSLY.

NUMBERED NOTES

1. LOCATE SQUARE BOX FOR CARD READER, STUB 1/2" C. TO ABOVE CEILING SPACE. PROVIDE PROTECTIVE BUSHING ON CONDUIT STUB.
2. PROVIDE (2) CAT6 CABLES TO IDF IN ROOM 228. TYPICAL.
3. PROVIDE CHIEF PAC525 IN WALL DEVICE BOX WITH DESIGNATED AV AND POWER OUTLETS. PROVIDE 3/4" POWER CONDUIT. PROVIDE 1-1/4" DATA CONDUIT STUBBED TO ACCESSIBLE CEILING SPACE AND (1) CAT6 DATA CABLE TO IDF. PROVIDE PROTECTIVE BUSHING ON CONDUIT STUB. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT.
4. LOCATE FOR REFRIGERATOR.
5. EXISTING POWER JUNCTION BOX ABOVE CEILING. REFER TO SHEET E2.05 FOR CIRCUITS.
6. LOCATE FOR AND CONNECT POWER FOR FIRE SMOKE DAMPER. COORDINATE WITH MECHANICAL.
7. LOCATE FOR AND CONNECT POWER FOR DUCT SMOKE DETECTORS. COORDINATE WITH MECHANICAL.
8. PROVIDE POWER AND DATA MODULAR FURNITURE CONNECTIONS WITHIN 12" OF MODULAR FURNITURE. PROVIDE RECESSED BACK BOXES, FOR POWER AND DATA, WITH COVER PLATES.
   - J D — DATA - PROVIDE COVER PLATES WITH 1-1/4" DIAMETER OPENING, FLEX CONDUIT AND GROMMET FOR DATA CABLING. PROVIDE PULL ROPE IN CONDUIT.
   - J P — POWER - PROVIDE COVER PLATES WITH 3/4" DIAMETER OPENING WITH 90 DEGREE SHORT ELBOW AND WHIP FOR POWER. PROVIDE CONNECTORS FOR THE WHIPS AND TERMINATE POWER WHIP INTO CONNECTORS AT MODULAR FURNITURE. PROVIDE A MINIMUM OF ONE UNCONTROLLED AND ONE CONTROLLED DUPLEX RECEPTACLES PER WORK STATION.
9. PROVIDE (2) CAT6 CABLES TO MDF. VERIFY LOCATION WITH PCOE I.T. DEPARTMENT.
10. PROVIDE 3/4" CONDUIT WITH 2 #10, 1 #10. LOCATE DISCONNECT SWITCH UNDER SINK NEXT TO WATER HEATER.
11. PROVIDE 1" CONDUIT WITH 2 #6, 1 #10 GND. LOCATE DISCONNECT SWITCH ON WALL ADJACENT TO WATER HEATER.
12. TAPE AND TAG EXISTING CONDUCTORS LEFT AS SPARE IN JUNCTION BOX AND AT PANEL.



1 E3.05 — SECOND FLOOR PARTIAL PLAN - REMODEL - WEST - ELECTRICAL

SCALE : 1/8" = 1'-0"

PCOE — GOLD IN EDUCATION

Revisions			
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KEY PLAN



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REGISTERED PROFESSIONAL ENGINEER — YVETTE J. VAN ZANTEN — No. E15483 Exp. 6/30/25 — ELECTRICAL — STATE OF CALIFORNIA

07/28/2023

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Project
TENANT IMPROVEMENTS

Sheet Title
SECOND FLOOR PARTIAL PLAN - REMODEL - WEST - ELECTRICAL

Client Project Number: N/A

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PROJECT #: 23045.21
PROJECT MGR: Y. Van Zanten

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Sheet **E3.05**

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GENERAL NOTES

1. CEC 210.4 REQUIRES THAT ALL MULTI-WIRE BRANCH CIRCUITS THAT SHARE A NEUTRAL CONDUCTOR MUST HAVE A BREAKER HANDLE TIE SO THAT EACH CIRCUIT IS DISCONNECTED SIMULTANEOUSLY.

NUMBERED NOTES

1. PROVIDE POWER AND DATA MODULAR FURNITURE CONNECTIONS WITHIN 12" OF MODULAR FURNITURE. PROVIDE RECESSED BACK BOXES, FOR POWER AND DATA, WITH COVER PLATES.
   - (J) D DATA - PROVIDE COVER PLATES WITH 1-1/4" DIAMETER OPENING, FLEX CONDUIT AND GROMMET FOR DATA CABLING. PROVIDE PULL ROPE IN CONDUIT.
   - (J) P POWER - PROVIDE COVER PLATES WITH 3/4" DIAMETER OPENING WITH 90 DEGREE SHORT ELBOW AND WHIP FOR POWER. PROVIDE CONNECTORS FOR THE WHIPS AND TERMINATE POWER WHIP INTO CONNECTORS AT MODULAR FURNITURE. PROVIDE A MINIMUM OF ONE UNCONTROLLED AND ONE CONTROLLED DUPLEX RECEPTACLE PER WORK STATION.
2. PROVIDE CHIEF PAC525 IN WALL DEVICE BOX WITH DESIGNATED AV, DATA AND POWER OUTLETS. PROVIDE 3/4" POWER CONDUIT. PROVIDE 1-1/4" DATA CONDUIT. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT.
3. SIMILAR TO NUMBERED NOTE 1 BUT REUSE EXISTING FLOOR BOXES. TYPICAL.
4. PROVIDE (2) CAT6 DATA CABLES TO IDF IN ROOM 274. VERIFY EXACT LOCATION WITH PCOE I.T. DEPARTMENT.
5. PROVIDE (2) CAT6 DATA CABLES TO IDF IN ROOM 274. STUB 3/4" CONDUIT TO ABOVE CEILING SPACE. PROVIDE PROTECTIVE BUSHING ON CONDUIT STUB. TYPICAL.



1 / E3.06 SECOND FLOOR PARTIAL PLAN - REMODEL - EAST - ELECTRICAL

SCALE : 1/8" = 1'-0"

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Project
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Sheet Title
SECOND FLOOR PARTIAL PLAN - REMODEL - EAST - ELECTRICAL

Client Project Number: N/A

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PROJECT #: 23045.21
PROJECT MGR: Y. Van Zanten

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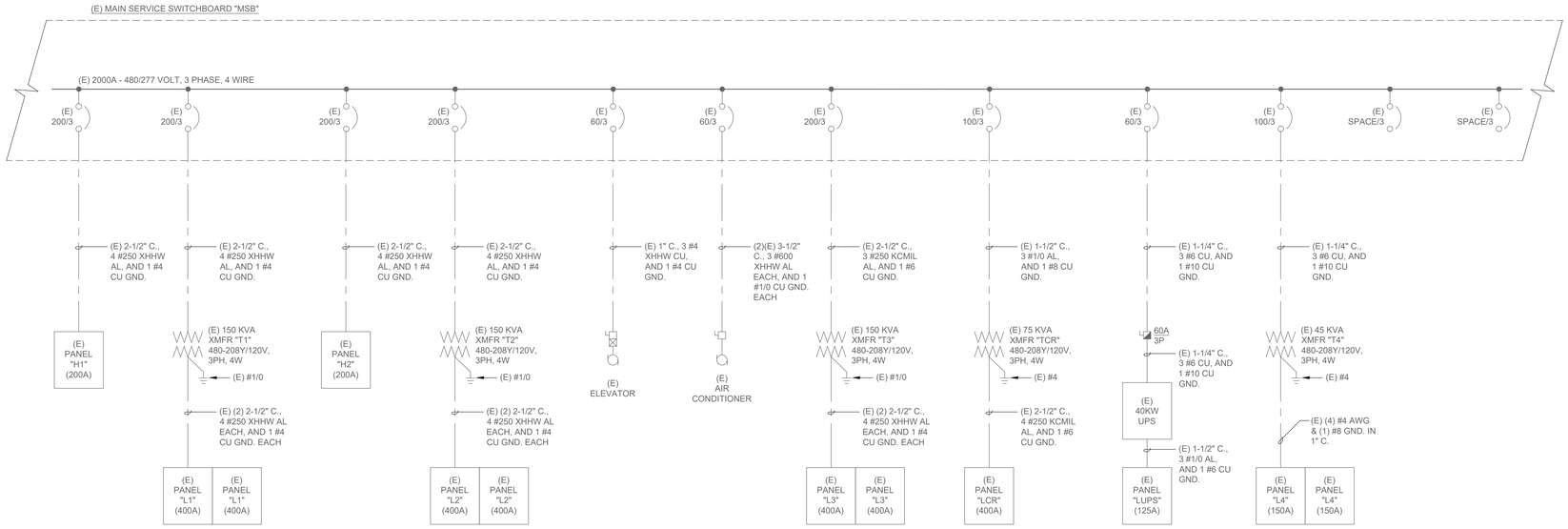
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NUMBERED NOTES



1 / E4.01 PARTIAL ONE LINE POWER DIAGRAM

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Sheet Title

PARTIAL ONE-LINE DIAGRAM

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Sheet 1 of

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EXISTING PANEL "L1" SECTION 1 SCHEDULE

POWER SOURCE: MAIN SWITCHBOARD "MSB" VIA XFMR "T1" | LOCATION: ELECTRICAL ROOM 1ST FLOOR
SYSTEM: NORMAL BRANCH

TYPE: | BUS: 400 AMPS | MAIN BKR: 400A | VOLTAGE: 208Y/120 VOLT, 3 PHASE, 4 WIRES | MOUNTING: SURFACE PANEL TYPE NEMA 1 | REMARKS: 42k AIC MIN. SYMM.

LOAD SERVED	kVA	CB	CKT	PHASE	CKT	CB	kVA	LOAD SERVED
LIGHTING LOBBY	0.6	20/1	1	A	2	20/1	0.4	RECEPTS ELEC ROOM
RECEPTS BATHROOM	0.4	20/1	3	B	4	20/1	0.5	LIGHTING CONTROL PANEL
RECEPTS LOBBY	0.5	20/1	5	C	6	20/1	0.5	IRRIGATION CONTROLLER
RECEPTS LOBBY	0.5	20/1	7	A	8	20/1	0.5	FIRE RISER
ELEVATOR PIT	0.2	20/1	9	B	10	20/1	0.5	FIRE ALARM CTRL PANEL
ELEVATOR PIT	0.2	20/1	11	C	12	20/1	**1.0**	**LOBBY CHANDELIER**
LIGHTING ELEVATOR	0.2	20/1	13	A	14	20/1		SPARE
ELEVATOR EQUIPMENT	0.2	20/1	15	B	16	20/1		SPARE
SUMP PUMP	1.2	20/1	17	C	18	20/1		SPARE
RECEPTS EXTERIOR	0.4	20/1	19	A	20	20/1		SPARE
RECEPTS EXTERIOR	0.4	20/1	21	B	22	20/1		SPARE
RECEPTS BLDG SIGNAGE	1.2	20/1	23	C	24	20/1		SPARE
FIRE SMOKE DAMPERS	0.5	20/1	25	A	26	20/1		SPARE
FIRE SMOKE DAMPERS	0.5	20/1	27	B	28	20/1		SPARE
VAV-101	1.0	20/1	29	C	30	20/1		SPARE
VAV-102	1.0	20/1	31	A	32	20/1	**1.1**	**DIGITAL DISPLAY**
DRINKING FOUNTAIN	0.5	20/1	33	B	34	20/1	**1.1**	**DIGITAL DISPLAY**
RECEPT WP	0.2	20/1	35	C	36	**25/2**	**2.1**	**WH-1**
SPARE		20/1 **[2][3]**	37	A	38		**2.1**	
SPARE		20/1 **[2][3]**	39	B	40	20/1	1.1	**DEL/RECEIVABLES**
SPARE		20/1 **[2][3]**	41	C	42	20/1	1.1	**DEL/RECEIVABLES**

NOTES:
[1] ALL CIRCUIT BREAKERS SHOWN ARE EXISTING, UNLESS NOTED OTHERWISE. BOLD TEXT INDICATES NEW WORK.
[2] PROVIDE HANDLE TIES FOR CIRCUIT BREAKERS THAT SHARE A NEUTRAL CONDUCTOR TO MEET CEC 210.4.
[3] DISCONNECT EXISTING CONDUCTORS FROM CIRCUIT BREAKERS LEFT AS SPARE. TAPE AND TAG EXISTING SPARE CONDUCTORS.
[4] CONNECTED LOAD INCLUDES LOAD FROM PANEL "L1" SECTION 2.

CONNECTED LOAD **[4]**
PHASE A= 20.8 kVA
PHASE B= 15.4 kVA
PHASE C= 18.5 kVA
TOTAL = 54.7 kVA
TOTAL = 151.9 Amperes

EXISTING PANEL "L2" SECTION 1 SCHEDULE

POWER SOURCE: MAIN SWITCHBOARD "MSB" VIA XFMR "T2" | LOCATION: ELECTRICAL ROOM 2ND FLOOR
SYSTEM: NORMAL BRANCH

TYPE: | BUS: 400 AMPS | MAIN BKR: 400A | VOLTAGE: 208Y/120 VOLT, 3 PHASE, 4 WIRES | MOUNTING: SURFACE PANEL TYPE NEMA 1 | REMARKS: 42k AIC MIN. SYMM.

LOAD SERVED	kVA	CB	CKT	PHASE	CKT	CB	kVA	LOAD SERVED
RCPTS BATHROOM	0.4	20/1	1	A	2	**20/1 [2]**	**1.4**	**TV - RM 260, 261**
RCPTS LOBBY	0.5	20/1	3	B	4	**20/1 [2]**	**0.7**	**RCPT - RM 261**
RCPTS ELECTRIC RM	0.4	20/1	5	C	6	**20/1 [2]**	**0.7**	**RCPT - RM 258**
RCPT ROOF	0.2	20/1	7	A	8	**20/1 [2]**	**0.7**	**RCPT - RM 252**
DRINKING FOUNTAIN	0.5	20/1	9	B	10	**20/1 [2]**	**0.7**	**RCPT - RM 249**
WATER HEATER WH-3	**4.2**	**50/2**	11	C	12	20/1 [2]	1.1	OPEN OFFICE **206** FURN
	4.2		13	A	14	20/1 [2]	0.5	OPEN OFFICE **206** FURN
SPACE		PFB	15	B	16	20/1 [2]	0.4	OPEN OFFICE **206** FURN
SPACE		PFB	17	C	18	**25/2**	**2.1**	**WATER HEATER WH-2**
TV - RM 249	**0.7**	**20/1 [2]**	19	A	20		**2.1**	
COPIER - RM 258	**1.2**	20/1 [2]	21	B	22	20/2		**SPARE**
2ND FLOOR WALL SCONCE	1.2	20/1	23	C	24			
COPIER-RM 209	1.2	20/1 [2]	25	A	26	20/1 [2]	1.1	OPEN OFFICE **206** FURN
OPEN OFFICE **251** FURN	1.1	20/1 [2]	27	B	28	20/1 [2]	1.1	OPEN OFFICE **206** FURN
OPEN OFFICE **251** FURN	1.1	20/1 [2]	29	C	30	20/1 [2]	1.1	OPEN OFFICE **206** FURN
OPEN OFFICE **251** FURN	1.1	20/1 [2]	31	A	32	20/1 [2]	1.1	OPEN OFFICE **206** FURN
OPEN OFFICE **251** FURN	1.1	20/1 [2]	33	B	34	20/1 [2]	1.1	OPEN OFFICE **206** FURN
OPEN OFFICE **251** FURN	1.1	20/1 [2]	35	C	36	20/1 [2]	1.1	OPEN OFFICE **206** FURN
OPEN OFFICE **251** FURN	1.1	20/1 [2]	37	A	38	20/1 [2]	1.1	OPEN OFFICE **206** FURN
OPEN OFFICE **251** FURN	1.1	20/1 [2]	39	B	40	20/1 [2]	1.1	OPEN OFFICE **206** FURN
OPEN OFFICE **251** FURN	1.1	20/1 [2]	41	C	42	20/1 [2]	1.1	OPEN OFFICE **206** FURN

NOTES:
[1] ALL CIRCUIT BREAKERS SHOWN ARE EXISTING, UNLESS NOTED OTHERWISE. BOLD TEXT INDICATES NEW WORK.
[2] PROVIDE HANDLE TIES FOR CIRCUIT BREAKERS THAT SHARE A NEUTRAL CONDUCTOR TO MEET CEC 210.4.
[3] DISCONNECT EXISTING CONDUCTORS FROM CIRCUIT BREAKERS LEFT AS SPARE. TAPE AND TAG EXISTING SPARE CONDUCTORS.
[4] **CONNECTED LOAD INCLUDES LOAD FROM PANEL "L2" SECTION 2.**

CONNECTED LOAD **[4]**
PHASE A= 25.5 kVA
PHASE B= 20.1 kVA
PHASE C= 26.9 kVA
TOTAL = 72.5 kVA
TOTAL = 201.4 Amperes

EXISTING PANEL "L3" SECTION 1 SCHEDULE

POWER SOURCE: MAIN SWITCHBOARD "MSB" VIA XFMR "T3" | LOCATION: ELECTRICAL ROOM 1ST FLOOR
SYSTEM: NORMAL BRANCH

TYPE: | BUS: 400 AMPS | MAIN BKR: 400A | VOLTAGE: 208Y/120 VOLT, 3 PHASE, 4 WIRES | MOUNTING: SURFACE PANEL TYPE NEMA 1 | REMARKS: 42k AIC MIN. SYMM.

LOAD SERVED	kVA	CB	CKT	PHASE	CKT	CB	kVA	LOAD SERVED
RCPTS-BREAKROOM	0.4	20/1	1	A	2	20/1	**1.0**	**REFRIGERATOR-RM 105**
REFRIGERATOR	**1.5**	20/1	3	B	4	20/1	1.0	**REFRIGERATOR-RM 105**
RCPTS- BREAKROOM	**0.5**	20/1	5	C	6	20/1	1.0	**RCPT-RM 105, 106**
RCPTS-BREAKROOM	**0.7**	20/1	7	A	8	20/1	1.0	**RCPT-RM 105, 107**
RCPTS-BREAKROOM	**0.7**	20/1	9	B	10	20/1	1.0	**RCPT-RM 105, 128**
RCPTS-BREAKROOM	**0.7**	20/1	11	C	12	20/1	1.0	**DRINKING FOUNTAIN**
RCPT-COFFEE MAKER	**1.0**	20/1	13	A	14	20/1	1.0	RCPTS - **ECE STORAGE**
REFRIGERATOR	**1.5**	20/1	15	B	16	20/1	1.0	RCPTS - **ECE STORAGE**
RCPTS DOCUMENT PROC.	**1.1**	20/1	17	C	18	20/1	1.0	RCPTS - **ECE STORAGE**
RCPT-MICROWAVE STACK	**1.5**	20/1	19	A	20	20/1	1.0	RCPTS- **ECE STORAGE**
RCPT-MICROWAVE STACK	**1.5**	20/1	21	B	22	20/1	1.0	RCPTS - **ECE STORAGE**
RCPTS DOCUMENT PROC.	**1.3**	20/1	23	C	24	20/1	1.0	RCPTS - **ECE STORAGE**
RCPTS **ROOM 112**	1.0	20/1	25	A	26	20/1	1.2	LTG WALL SC/PENDANT
RCPTS **ROOM 112**	1.0	20/1	27	B	28	40/2	4.2	WATER HEATER 2
RCPTS **ROOM 112**	1.0	20/1	29	C	30		4.2	
RCPTS **ROOM 112**	1.0	20/1	31	A	32	20/1	1.0	RCPT DQ LAB
RCPTS **ROOM 112**	1.0	20/1	33	B	34	20/1		SPARE
RCPTS **ROOM 112**	0.7	20/1	35	C	36	20/1		SPARE
RM 109, 110 & 112, TV	**1.2**	20/1	37	A	38	20/1		SPARE
SPARE		20/1	39	B	40	20/1		SPARE
SPARE		20/1	41	C	42	20/1		SPARE

NOTES:
[1] ALL CIRCUIT BREAKERS SHOWN ARE EXISTING, UNLESS NOTED OTHERWISE. BOLD TEXT INDICATES NEW WORK.

CONNECTED LOAD
PHASE A= 12.6 kVA
PHASE B= 15.1 kVA
PHASE C= 13.3 kVA
TOTAL = 41.1 kVA
TOTAL = 114.0 Amperes

EXISTING PANEL "L4" SECTION 1 SCHEDULE

POWER SOURCE: MAIN SWITCHBOARD "MSB" VIA XFMR " | LOCATION: ELECTRICAL ROOM E2A
SYSTEM: NORMAL BRANCH

TYPE: | BUS: 225 AMPS | MAIN BKR: 150A | VOLTAGE: 208Y/120 VOLT, 3 PHASE, 4 WIRES | MOUNTING: PANEL TYPE NEMA 1 | REMARKS: 10k AIC MIN. SYMM.

LOAD SERVED	kVA	CB	CKT	PHASE	CKT	CB	kVA	LOAD SERVED
RECEPTACLES	0.7	20/1 [2]	1	A	2	20/1 [2]	0.9	RECEPTACLES
RCPTS FURNITURE	0.7	20/1 [2]	3	B	4	20/1 [2]	1.3	RECEPTACLES
RCPTS FURNITURE	0.7	20/1 [2]	5	C	6	20/1 [2]	0.5	RECEPTACLES
RCPTS FURNITURE	0.7	20/1 [2]	7	A	8	20/1 [2]	0.5	RECEPTACLES
RCPTS FURNITURE	0.7	20/1 [2]	9	B	10	20/1 [2]	0.5	RECEPTACLES
RCPTS FURNITURE	0.7	20/1 [2]	11	C	12	20/1 [2]	1.0	RECEPTACLES
RCPTS FURNITURE	0.7	20/1 [2]	13	A	14	20/1 [2]	1.0	RECEPTACLES
RCPTS FURNITURE	0.7	20/1 [2]	15	B	16	20/1 [2]	0.2	RECEPTACLES
RCPTS FURNITURE	1.1	20/1 [2]	17	C	18	20/1 [2]	0.2	RECEPTACLES
RCPTS FURNITURE	1.1	20/1 [2]	19	A	20	20/1 [2]	0.7	RECEPTACLES
RCPTS FURNITURE	1.1	20/1 [2]	21	B	22	20/1 [2]	0.5	RECEPTACLES
RCPTS FURNITURE	1.1	20/1 [2]	23	C	24	20/1 [2]	0.5	RECEPTACLES
RCPTS FURNITURE	1.1	20/1 [2]	25	A	26	20/1 [2]	0.5	RECEPTACLES
RCPTS FURNITURE	1.1	20/1 [2]	27	B	28	20/1 [2]	0.9	RECEPTACLES
RCPTS FURNITURE	1.1	20/1 [2]	29	C	30	20/1 [2]	0.5	RECEPTACLES
RCPTS FURNITURE	1.1	20/1 [2]	31	A	32	20/1 [2]	1.1	RECEPTACLES
RECEPTACLES	0.9	20/1 [2]	33	B	34	20/1 [2]	0.4	RECEPTACLES
RECEPTACLES	0.9	20/1 [2]	35	C	36	20/1 [2]	1.1	RECEPTACLES
RECEPTACLES	0.5	20/1 [2]	37	A	38	20/1 [2]	1.1	RECEPTACLES
COPIER	1.0	20/1 [2]	39	B	40	20/1 [2]	0.7	RECEPTACLES
RECEPTACLES	0.5	20/1 [2]	41	C	42	20/1 [2]	1.1	RECEPTACLES

NOTES:
[1] ALL CIRCUIT BREAKERS SHOWN ARE EXISTING, UNLESS NOTED OTHERWISE. BOLD TEXT INDICATES NEW WORK.
[2] PROVIDE HANDLE TIES FOR CIRCUIT BREAKERS THAT SHARE A NEUTRAL CONDUCTOR TO MEET CEC 210.4.

CONNECTED LOAD
PHASE A= 12.8 kVA
PHASE B= 11.9 kVA
PHASE C= 12.7 kVA
TOTAL = 37.4 kVA
TOTAL = 103.9 Amperes

EXISTING PANEL "L1" SECTION 2 SCHEDULE

POWER SOURCE: PANEL "L1" SECTION 1 | LOCATION: ELECTRICAL ROOM 1ST FLOOR
SYSTEM: NORMAL BRANCH

TYPE: | BUS: 400 AMPS | MLO | VOLTAGE: 208Y/120 VOLT, 3 PHASE, 4 WIRES | MOUNTING: SURFACE PANEL TYPE NEMA 1 | REMARKS: 42k AIC MIN. SYMM.

LOAD SERVED	kVA	CB	CKT	PHASE	CKT	CB	kVA	LOAD SERVED
PROJECTOR/SCR-RM 103A	**1.0**	20/1 **[2]**	43	A	44	20/1 **[2]**	1.1	OPEN OFFICE **117**
PROJECTOR/SCR-RM 103B	**1.0**	20/1 **[2]**	45	B	46	20/1 **[2]**	1.1	OPEN OFFICE **117**
BOARDROOM DAIS-RCPT	**1.1**	20/1 **[2]**	47	C	48	20/1 **[2]**	1.1	OPEN OFFICE **117**
BOARDROOM DAIS-RCPT	**1.1**	20/1 **[2]**	49	A	50	20/1 **[2]**	1.1	OPEN OFFICE **117**
AV RACK - BOARDRM A	**0.4**	20/1 **[2]**	51	B	52	20/1 **[2]**	1.1	OPEN OFFICE **117**
AV RACK - BOARDRM B	**0.4**	20/1 **[2]**	53	C	54	20/1 **[2]**	1.1	OPEN OFFICE **117**
MOTORIZED SHADES	**1.0**	20/1 **[2]**	55	A	56	20/1 **[2]**	1.1	OPEN OFFICE **117**
MOTORIZED SHADES	**0.5**	20/1 **[2]**	57	B	58	20/1 **[2]**	1.1	OPEN OFFICE **117**
MOTORIZED SHADES	**0.5**	20/1 **[2]**	59	C	60	20/1 **[2]**	1.1	OPEN OFFICE **117**
SPARE		20/1 **[2][3]**	61	A	62	20/1 **[2]**	1.1	OPEN OFFICE **117**
SPARE		20/1 **[2][3]**	63	B	64	20/1 **[2]**	1.1	OPEN OFFICE **117**
SPARE		20/1 **[2][3]**	65	C	66	20/1 **[2]**	0.2	RCPT-PRINTER STATION
RCPT- RM 101, 104, 103A	**1.1**	20/1 **[2]**	67	A	68	20/1 **[2]**	0.9	SW OFFICES
RCPT- RM 101, 104, 103A	**0.9**	20/1 **[2]**	69	B	70	20/1 **[2]**	0.9	SW OFFICES
RCPT- RM 101, 104, 103A	**0.9**	20/1 **[2]**	71	C	72	20/1 **[2]**	0.9	SW OFFICES
RCPT-BOARDROOMS	**1.4**	20/1 **[2]**	73	A	74	20/1 **[2]**	1.0	**RM. 109 - TV**
RCPT-BOARDROOMS	**1.4**	20/1 **[2]**	75	B	76	20/1 **[2]**	**0.7**	**RCPT-NW RM 111,113**
RCPT-BOARDROOMS	1.4	20/1 **[2]**	77	C	78	20/1 **[2]**	**0.7**	**RCPT-NW RM 111,113**
RCPT-PREFUNCTION B	**0.5**	20/1 **[2]**	79	A	80	20/1 **[2]**	**1.2**	**COPIER-RM 127**
SPARE		20/1 **[2][3]**	81	B	82	20/1 **[2][3]**		**SPARE**
COPIER- RM 129	**1.2**	20/1 **[2]**	83	C	84	20/1 **[2][3]**		**SPARE**

NOTES:
[1] ALL CIRCUIT BREAKERS SHOWN ARE EXISTING, UNLESS NOTED OTHERWISE. BOLD TEXT INDICATES NEW WORK.
[2] PROVIDE HANDLE TIES FOR CIRCUIT BREAKERS THAT SHARE A NEUTRAL CONDUCTOR TO MEET CEC 210.4.
[3] DISCONNECT EXISTING CONDUCTORS FROM CIRCUIT BREAKERS LEFT AS SPARE. TAPE AND TAG EXISTING SPARE CONDUCTORS.

CONNECTED LOAD
PHASE A= 23.5 kVA
PHASE B= 16.1 kVA
PHASE C= 8.2 kVA
TOTAL = 47.7 kVA
TOTAL = 57.4 Amperes

EXISTING PANEL "L2" SECTION 2 SCHEDULE

POWER SOURCE: PANEL "L2" SECTION 1 | LOCATION: ELECTRICAL ROOM 2ND FLOOR
SYSTEM: NORMAL BRANCH

TYPE: | BUS: 400 AMPS | MLO | VOLTAGE: 208Y/120 VOLT, 3 PHASE, 4 WIRES | MOUNTING: SURFACE PANEL TYPE NEMA 1 | REMARKS: 42k AIC MIN. SYMM.

LOAD SERVED	kVA	CB	CKT	PHASE	CKT	CB	kVA	LOAD SERVED
NE CONF RMS, OFFICES	0.9	20/1	43	A	44	20/1	1.0	RCPT BREAK ROOM
NE CONF RMS, OFFICES	0.9	20/1	45	B	46	20/1	1.0	RCPT BREAK ROOM
NE CONF RMS, OFFICES	0.9	20/1	47	C	48	20/1	1.0	VENDING MACHINE
RCPTS CONF RM FLOOR	1.0	20/1	49	A	50	20/1	1.0	VENDING MACHINE
RCPTS CONF RM FLOOR	1.0	20/1	51	B	52	20/1	1.0	VENDING MACHINE
RCPTS TRAINING RM FLOOR	0.5	20/1	53	C	54	20/1	1.0	VENDING MACHINE
RCPTS TRAINING RM FLOOR	0.5	20/1	55	A	56	20/1	1.1	RCPTS SE OFFICE
TRAINING POJECTOR	0.6	20/1	57	B	58	20/1	0.9	RCPTS SE OFFICE
RCPTS TRAINING RM FLOOF	0.5	20/1	59	C	60	20/1	0.9	RCPTS SE OFFICE
RCPTS TRAINING RM FLOOF	0.5	20/1	61	A	62	20/1	1.0	RECEPTACLE IDF
TRAINING POJECTOR	0.6	20/1	63	B	64	20/1	1.0	RECEPTACLE IDF
RCPTS BREAK RM, OFFICE	0.7	20/1	65	C	66	20/1	0.9	RECEPTACLE OFFICE
RCPTS BREAK RM, OFFICE	0.5	20/1	67	A	68	20/1	1.1	RCPTS SW OFFICE
RCPTS OFFICE, FAX STATN	0.7	20/1	69	B	70	20/1	1.1	RCPTS SW OFFICE
RCPTS OFFICE, FAX STATN	0.7	20/1	71	C	72	20/1	0.9	RCPTS SW OFFICE
CATERING REFRIGERATOR	1.0	20/1	73	A	74	20/1	1.0	RCPT COFFEE BAR
RCPTS CONF RM FLOOR	1.0	20/1	75	B	76	20/1	1.0	RCPT COFFEE BAR
RCPTS CONF RM FLOOR	1.0	20/1	77	C	78	20/1	1.0	RCPT COFFEE BAR
RCPTS CONF RM FLOOR	1.0	20/1	79	A	80	20/1	0.9	RCPTS NW OFFICE
RCPT FILE AREA	1.0	20/1	81	B	82	20/1	1.3	RCPTS NW OFFICE
RCPT FILE AREA	0.2	20/1	83	C	84	20/1	0.7	RCPTS NW OFFICE

NOTES:
[1]

CONNECTED LOAD
PHASE A= 12.6 kVA
PHASE B= 13.1 kVA
PHASE C= 11.0 kVA
TOTAL = 36.7 kVA
TOTAL = 102.0 Amperes

EXISTING PANEL "L3" SECTION 2 SCHEDULE

POWER SOURCE: PANEL "L3" SECTION 1 | LOCATION: ELECTRICAL ROOM 1ST FLOOR
SYSTEM: NORMAL BRANCH

TYPE: | BUS: 400 AMPS | MLO | VOLTAGE: 208Y/120 VOLT, 3 PHASE, 4 WIRES | MOUNTING: SURFACE PANEL TYPE NEMA 1 | REMARKS: 42k AIC MIN. SYMM.

LOAD SERVED	kVA	CB	CKT	PHASE	CKT	CB	kVA	LOAD SERVED
SPARE		20/1 **[2][3]**	43	A	44	20/1 **[2]**	0.4	**RCPT-BREAKOUT RM 109**
RCPTS - **IT WORKROOM**	**1.4**	20/1 **[2]**	45	B	46	20/1 **[2]**	0.4	**RCPT-BREAKOUT RM 109**
RCPTS - **IT WORKROOM**	**1.0**	20/1 **[2]**	47	C	48	20/1 **[2]**	0.4	**RCPT-BREAKOUT RM 109**
RCPTS - **IT WORKROOM**	**1.0**	20/1 **[2]**	49	A	50	20/1 **[2]**	0.4	**RCPT-BREAKOUT RM 109**
RCPTS **IT WORKROOM**	**0.4**	20/1 **[2]**	51	B	52	20/1 **[2]**	0.4	**RCPT-BREAKOUT RM 109**
RCPT - **IT WORKROOM**	**0.4**	20/1 **[2]**	53	C	54	20/1 **[2][3]**		**SPARE**
RCPT - **IT WORKROOM**	**0.4**	20/1 **[2]**	55	A	56	20/1 **[2]**	0.4	**RCPT-BREAKOUT RM 110**
RCPTS **IT WORKROOM**	**0.4**	20/1 **[2]**	57	B	58	20/1 **[2]**	0.4	**RCPT-BREAKOUT RM 110**
RCPTS **IT WORKROOM**	**0.7**	20/1 **[2]**	59	C	60	20/1 **[2]**	0.4	**RCPT-BREAKOUT RM 110**
SPARE		20/1 **[2][3]**	61	A	62	20/1 **[2]**	0.4	**RCPT-BREAKOUT RM 110**
SPARE		20/1 **[2][3]**	63	B	64	20/1 **[2]**	0.4	**RCPT-BREAKOUT RM 110**
SPARE		20/1 **[2][3]**	65	C	66	20/1 **[2]**	0.4	**RCPT-BREAKOUT RM 110**
SPARE		20/1 **[2][3]**	67	A	68	20/1 **[2]**	0.4	**RCPT-BREAKOUT RM 110**
SPARE		20/1 **[2][3]**	69	B	70	20/1		SPACE
SPARE		20/1	71	C	72	20/1		SPACE
SPARE		20/1	73	A	74	20/1		SPACE
SPARE		20/1	75	B	76	20/1		SPACE
SPARE		20/1	77	C	78	20/1		SPACE
SPARE		20/1	79	A	80	20/1		SPACE
SPARE		20/1	81	B	82	20/1		SPACE
SPARE		20/1	83	C	84	20/1		SPACE

NOTES:
[1] ALL CIRCUIT BREAKERS SHOWN ARE EXISTING, UNLESS NOTED OTHERWISE. BOLD TEXT INDICATES NEW WORK.
[2] PROVIDE HANDLE TIES FOR CIRCUIT BREAKERS THAT SHARE A NEUTRAL CONDUCTOR TO MEET CEC 210.4.
[3] DISCONNECT EXISTING CONDUCTORS FROM CIRCUIT BREAKERS LEFT AS SPARE. TAPE AND TAG EXISTING CONDUCTORS.

CONNECTED LOAD
PHASE A= 3.3 kVA
PHASE B= 3.7 kVA
PHASE C= 3.2 kVA
TOTAL = 10.2 kVA
TOTAL = 28.2 Amperes

EXISTING PANEL "L4" SECTION 2 SCHEDULE

POWER SOURCE: PANEL "L4" SECTION 1 | LOCATION: ELECTRICAL ROOM E2A
SYSTEM: NORMAL BRANCH

TYPE: | BUS: 200 AMPS | MLO | VOLTAGE: 208Y/120 VOLT, 3 PHASE, 4 WIRES | MOUNTING: PANEL TYPE NEMA 1 | REMARKS: 10k AIC MIN. SYMM.

LOAD SERVED	kVA	CB	CKT	PHASE	CKT	CB	kVA	LOAD SERVED
RECEPTACLES	0.5	20/1	43	A	44	20/2	1.4	FC-1 / CU-1
RECEPTACLES	0.7	20/1	45	B	46		1.4	
RECEPTACLES	0.7	20/1	47	C	48	20/2	0.7	RECEPTACLE T/D
RECEPTACLES	0.7	20/1	49	A	50		0.7	
RECEPTACLES	0.7	20/1	51	B	52	20/2	0.7	RECEPTACLE T/D
RECEPTACLES	0.7	20/1	53	C	54		0.7	
RECEPTACLES	0.7	20/1	55	A	56	20/2	0.7	RECEPTACLE T/D
RECEPTACLES	0.7	20/1	57	B	58		0.7	
RECEPTACLES	0.7	20/1	59	C	60	20/2	0.7	RECEPTACLE T/D
LIGHTING	0.2	20/1	61	A	62		0.7	
RECEPTACLES T/D	0.7	20/1	63	B	64	20/1	0.8	COND PUMP CD-1
RECEPTACLES T/D	0.7	20/1	65	C	66	20/1	0.5	FIRE/SMOKE DAMPER
RECEPTACLES T/D	0.7	20/1	67	A	68	PFB		SPACE
SECURITY QUAD	0.4	20/1	69	B	70	PFB		SPACE
SECURITY DUPLEX	0.2	20/1	71	C	72	20/1	0.2	ROOF RECEPTACLES
SPACE		PFB	73	A	74	PFB		SPACE
SPACE		PFB	75	B	76	PFB		SPACE
SPACE		PFB	77	C	78	PFB		SPACE
SPACE		PFB	79	A	80	PFB		SPACE
SPACE		PFB	81	B	82	PFB		SPACE
SPACE		PFB	83	C	84	PFB		SPACE

NOTES:
[1] ALL CIRCUIT BREAKERS SHOWN ARE EXISTING, UNLESS NOTED OTHERWISE. BOLD TEXT INDICATES NEW WORK.
[2] PROVIDE HANDLE TIES FOR CIRCUIT BREAKERS THAT SHARE A NEUTRAL CONDUCTOR TO MEET CEC 210.4.

CONNECTED LOAD
PHASE A= 6.4 kVA
PHASE B= 6.9 kVA
PHASE C= 5.9 kVA
TOTAL = 19.1 kVA
TOTAL = 53.2 Amperes

EXISTING PANEL "H1" SCHEDULE

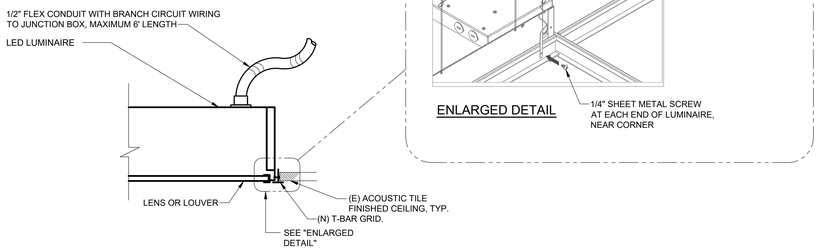
POWER SOURCE: MAIN SWITCHBOARD "MSB" | LOCATION: ELECTRICAL ROOM 1ST FLOOR
SYSTEM: NORMAL BRANCH

TYPE: | BUS: 400 AMPS | MLO | VOLTAGE: 480Y/277 VOLT, 3 PHASE, 4 WIRES | MOUNTING: SURFACE PANEL TYPE NEMA 1 | REMARKS: 42k AIC MIN. SYMM.

LOAD SERVED	kVA	CB	CKT	PHASE	CKT	CB	kVA	LOAD SERVED
WH-1	9.0	50/1	1	A	2	20/1	3.7	SITE LIGHTING EL
LIGHTING CONTROL PANEL	0.5	20/1	3	B	4	20/1	3.7	SITE LIGHTING NL
SPACE		PFB	5	C	6	20/1	2.0	BUILDING UPLIGHTS
BOARDRM A & B LTG	**2.7**	20/1 **[2]**	7	A	8	20/1	2.3	SITE LIGHTING EL
TECH/SELPA RM 117 LTG	**2.2**	20/1 **[2]**	9	B	10	20/1	2.3	SITE LIGHTING NL
1ST FLOOR WEST LTG	**1.5**	20/1 **[2]**	11	C	12	20/1	2.2	SITE BOLLARDS
RM 118,119,120,121,115 LTG	**1.0**	20/1 **[2]**	13	A	14	20/1	0.4	SOFFIT LIGHTING
1ST FLOOR NE LIGHTING	**1.0**	20/1 **[2]**	15	B	16	20/1	2.2	1ST FLOOR CORE LTG
1ST FLOOR SE LIGHTING	**1.5**	20/1 **[2]**	17	C	18	20/1	1.0	CORE NIGHT LIGHTS
1ST FLOOR INTERIOR LTG	**2.7**	20/1 **[2]**	19	A	20	20/1	1.6	2ND FLOOR CORE LTG
PREFUNCTION B & C LTG	**3.2**	20/1 **[2]**	21	B	22	20/1	0.9	LOBBY LIGHTING
SPARE		20/1 **[3]**	23	C	24	20/1		?
			25	A	26	20/1		?
?		30/3	27	B	28	20/1		SPARE
			29	C	30	PFB		SPACE
SPACE		PFB	31	A	32	PFB		SPACE
SPACE		PFB	33	B	34	PFB		SPACE
SPACE		PFB	35	C	36	PFB		SPACE
SPACE		PFB	37	A	38	PFB		SPACE
SPACE		PFB	39	B	40

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

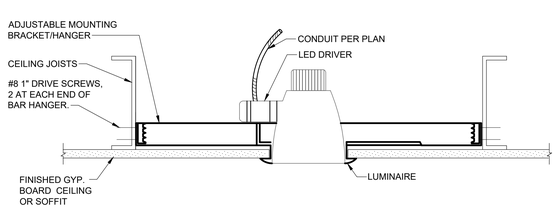
IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY



SIDE VIEW

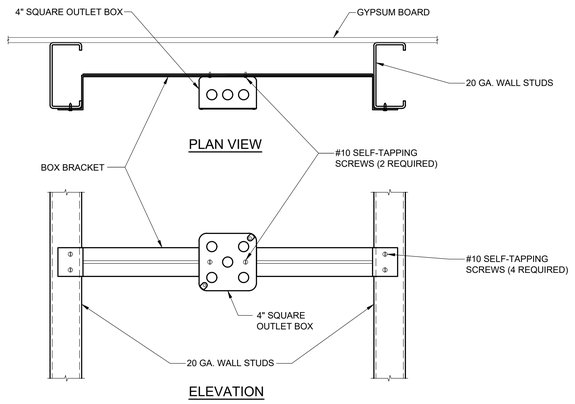
1 LAY-IN LUMINAIRE MOUNTING DETAIL (T-BAR CEILING)

E5.01 — NO SCALE



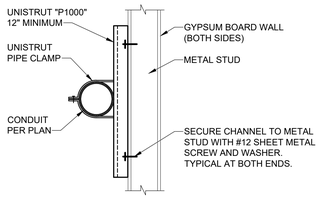
RECESSED DOWNLIGHT LED LUMINAIRE MOUNTING DETAIL

2 / E5.01 — NO SCALE



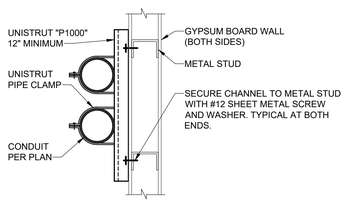
3 BOX SUPPORT (BETWEEN STUDS)

E5.01 — NO SCALE



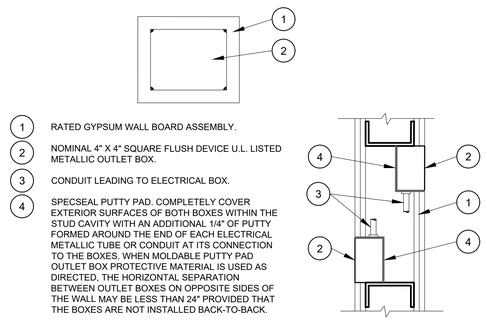
4 CONDUIT SURFACE MOUNTING DETAIL

E5.01 — NO SCALE



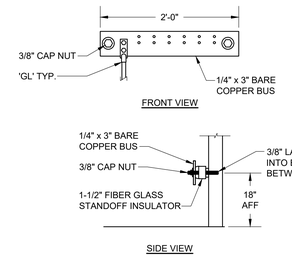
5 CONDUIT SURFACE MOUNTING DETAIL

E5.01 — NO SCALE



1 OR 2 HOUR RATED FIRESTOP FOR METALLIC ELECTRICAL OUTLET BOXES USING SPECSEAL PUTTY PADS

6 / E5.01 — NO SCALE



7 GROUND BUS DETAIL

E5.01 — NO SCALE

UNAUTHORIZED CHANGES & USES: M. Neils Engineering, Inc. preparing these plans will not be responsible for, or liable for unauthorized changes to or uses to these plans. All changes to these plans must be in writing and must be approved by M. Neils Engineering, Inc.

Jul 28, 2023 – 5:22pm, / coolier-mcmaster

PCOE GOLD IN EDUCATION

Revisions

Delta	Date	Revisions	By

AGENCY APPROVAL

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REGISTERED PROFESSIONAL ENGINEER — YVETTE J. VAN ZANTEN — No. E15483 Exp. 6/30/25 — ELECTRICAL — STATE OF CALIFORNIA

07/28/2023

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Project: TENANT IMPROVEMENTS

Sheet Title: ELECTRICAL DETAILS

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PROJECT #: 23045.21
PROJECT MGR: Y. Van Zanten

Client Project Number: N/A

Scale: AS NOTED
Drawn By: KL
Checked By: YVZ
Issue Date: July 21, 2023
Revit Version: 2023

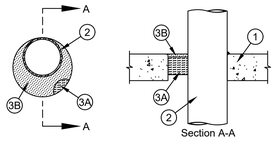
Sheet: **E5.01**

Sheet 1 of

0 5' 50' GRAPHIC SCALES: 1/16" = 1'-0"
0 5' 25' 1/8" = 1'-0"
0 1' 12' 1/4" = 1'-0"
0 1' 6' 1/2" = 1'-0"
0 4' 3/4" = 1'-0"
0 1' 3' 1" = 1'-0"
0 2' 1 1/2" = 1'-0"
0 1' 3" = 1'-0"
IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY

Classified by
Underwriters Laboratories, Inc.
to ANSI/UL 1479 (ASTM E814) and CAN/ULC S115 **System No. C-AJ-1213**

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings - 3 and 4 Hr (See Item 3C)	F Ratings - 3 and 4 Hr (See Item 3C)
T Rating - 0 Hr	FT Rating - 0 Hr
L Rating At Ambient - Less Than 1 CFM/sq ft	FH Ratings - 3 and 4 Hr (See Item 3C)
L Rating At 400 F - Less Than 1 CFM/sq ft	FTH Rating - 0 Hr
	L Rating At Ambient - Less Than 1 CFM/sq ft
	L Rating At 400 F - Less Than 1 CFM/sq ft



1. **Floor or Wall Assembly -** Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) concrete. Floor may also be constructed of any min 6 in. (152 mm) thick UL Classified hollow-core **Precast Concrete Units***. Wall may also be constructed of any UL Classified **Concrete Blocks***. Max diam of opening is 28 in. (711 mm). Max diam of opening in floor constructed of hollow-core precast concrete units is 7 in. (178 mm).
   See **Concrete Blocks** (CAZT) and **Precast Concrete Units** (CFTV) categories in the Fire Resistance Directory for names of manufacturers.
2. **Through Penetrant -** One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min 0 in. (point contact) to max 4 in. (102 mm). Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipe, conduit or tubing may be used:
   A. **Steel Pipe -** Nom 24 in. (610 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. **Iron Pipe -** Nom 24 in. (610 mm) diam (or smaller) cast or ductile iron pipe.
   C. **Conduit -** Nom 4 in. (102 mm) diam (or smaller) electrical metallic tubing, nom 6 in. (152 mm) diam (or smaller) steel conduit or nom 1 in. (25 mm) diam (or smaller) flexible steel conduit.
   D. **Copper Tubing -** Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing.
   E. **Copper Pipe -** Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.

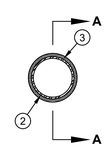
3. **Firestop System -** The Firestop system shall consist of the following:
   A. **Packing Material -** Min 3 in. 976 mm) thickness of min 4 pcf (64 kg/m3) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall as required to accommodate the required thickness of fill material. When floor is constructed of hollow-core precast concrete units, packing material is to be recessed from both surfaces of floor to accommodate the required thickness of fill material.
   B. **Fill, Void or Cavity Material* - Caulk -** Min 1/2 in. (13 mm) thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall. When floor is constructed of hollow-core precast concrete units, fill material is to be installed symmetrically on both sides of floor, flush with floor surfaces. At the point contact location between pipe and concrete, a min 3/8 in. (10 mm) diam bead of fill material shall be applied at the concrete/pipe interface on the top surface of floor and on both surfaces of wall or hollow-core precast concrete floor.
   SPECIFIED TECHNOLOGIES INC - SpecSeal LC 150 Sealant, SpecSeal LE600 Sealant
   C. **Steel Cover Plate -** (Not Shown) - Min 0.014 in. (0.4 mm) galv steel cut to fit the contour of the through-penetrant (Item 2) with a min 2 in. (51 mm) lap on the top surface of floor and both surfaces of wall assembly around the perimeter of the through-opening. Seams of steel cover plate shall overlap a min 1/2 in. (13 mm). Steel cover plate secured to top surface of floor and both surfaces of wall assembly by means of 1/4 in. (6 mm) diam by 1-3/4 in. (44 mm) long steel concrete anchors in conjunction with 1/4 in. (6 mm) by 1-1/4 in. (32 mm) diam steel fender washers spaced a max 6 in. (152 mm) OC.
   The hourly F Rating of the firestop system is dependent upon the use of the steel cover plate. If the steel cover plate is used, the F Rating of the firestop system is 4 hr. If the steel cover plate is omitted, the F Rating of the firestop system is 3 hr.

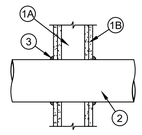
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

1 E5.02 UL FIRESTOP SYSTEM NO. C-AJ-1213
NO SCALE

Classified by
Underwriters Laboratories, Inc.
to ANSI/UL 1479 (ASTM E814) and CAN/ULC S115 **System No. W-L-1602**

ANSI/UL1479 (ASTM E814	CAN/ULC S115
F Ratings - 1 and 2 Hr (See Item 1)	F Ratings - 1 and 2 Hr (See Item 1)
T Rating - 0 Hr	FT Rating - 0 Hr
L Rating At Ambient - Less Than 1 CFM/ft2	FH Ratings - 1 and 2 Hr (See Item 1)
L Rating At 400°F - Less Than 1 CFM/ft2	FTH Rating - 0 Hr
	L Rating At Ambient - Less Than 5.1 L/S/m2
	L Rating At 204°C - Less Than 5.1 L/S/m2





1. **Wall Assembly -** The 1 or 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, V300, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. **Studs -** Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC. When steel studs are used and the diam of opening exceeds the width of stud cavity, the opening shall be framed on all sides using lengths of steel stud installed between the vertical studs and screw-attached to the steel studs at each end. The framed opening in the wall shall be 4 to 6 in. (102 to 152 mm) wider and 4 to 6 in. (102 to 152 mm) higher than the diam of the penetrating item such that, when the penetrating item is installed in the opening, a 2 to 3 in. (51 to 76 mm) clearance is present between the penetrating item and the framing on all four sides.
   B. **Gypsum Board* -** Thickness, type, number of layers, fastener type and sheet orientation shall be as specified in the individual U300, V300, U400, V400 or W400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 32 in. (813 mm) for steel stud walls. Max diam of opening is 14-1/2 in. (368 mm) for wood stud walls.
   The F and FH Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.

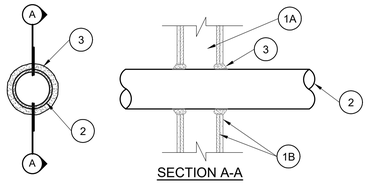
2. **Through Penetrant -** One metallic pipe, conduit or tube to be installed either concentrically or eccentrically within the firestop system. The annular space between the penetrant and the periphery of opening shall be min 0 in. (point contact) to max 2 in. (51 mm). Penetrant may be installed with continuous point contact. Penetrant to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
   A. **Steel Pipe -** Nom 30 in. (762 mm) diam (or smaller) Schedule 5 (or heavier) steel pipe.
   B. **Iron Pipe -** Nom 30 in. (762 mm) diam (or smaller) cast or ductile iron pipe.
   C. **Conduit -** Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or nom 6 in. (152 mm) diam (or smaller) steel conduit.
   D. **Copper Tubing -** Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.
   E. **Copper Pipe -** Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.
3. **Fill, Void or Cavity Material* - Sealant -** Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. At the point contact or continuous point contact locations, apply min 1/2 in. (13 mm) diam bead of sealant at the gypsum board/through penetrant interface on both surfaces of wall.
   SPECIFIED TECHNOLOGIES INC - SpecSeal Series SSS Sealant or SpecSeal LCI Sealant

***Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

2 E5.02 UL FIRESTOP SYSTEM NO. W-L-1602
NO SCALE

U.L. FIRE STOP SYSTEM # WL1001

F RATINGS-1, 2, 3 AND 4 HR (SEE ITEMS 2 AND 3)
T RATINGS-0, 1, 2, 3 AND 4 HR (SEE ITEM 3)
L RATING AT AMBIENT-LESS THAN 1 CFM/SQ FT (SEE ITEM 3)
L RATING AT 400 F-LESS THAN 1 CFM/SQ FT (SEE ITEM 3)



GENERAL NOTE:

"THROUGH PENETRATION FIRE STOP SYSTEM" DETAIL IS FOR REFERENCE ONLY. PENETRATIONS THROUGH FIRE-RATED FLOORS AND WALLS SHALL BE PROTECTED IN ACCORDANCE WITH CBC SECTION 714.3.1. SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS AND APPROVED LISTING. MANUFACTURER'S INSTALLATION INSTRUCTIONS AND APPROVED LISTING SHALL BE PROVIDED FOR REVIEW BY INSPECTION AUTHORITIES. SUBSTITUTIONS OF OR REVISIONS OR ADDITIONS TO APPROVED SYSTEMS SHALL BE SUBMITTED TO THE INSPECTOR OF RECORD AND THE STATE FIRE MARSHAL FOR FIELD REVIEW AND APPROVAL.

DETAIL KEY NOTES:

1. WALL ASSEMBLY - THE 1, 2, 3 OR 4 HOUR RATED GYPSUM WALLBOARD/STUD ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES WALL OR PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:

   A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS (MAXIMUM 2 HOUR FIRE RATED ASSEMBLIES) OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOMINAL 2 BY 4 INCH LUMBER SPACED 16 INCHES ON CENTER WITH NOMINAL 2 BY 4 INCH LUMBER END PLATES AND CROSS BRACES. STEEL STUDS TO BE MINIMUM 3-5/8 INCH WIDE BY 1-3/8 INCH DEEP CHANNELS SPACED MAXIMUM 24 INCH ON CENTER.

   B. GYPSUM BOARD* - NOMINAL 1/2 OR 5/8 INCH THICK, 4 FEET WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAXIMUM OPENING IS 13-1/2 INCHES.

2. PIPE OR CONDUIT - NOMINAL 12 INCH DIAMETER (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE, NOMINAL 12 INCH DIAMETER (OR SMALLER) STEEL CONDUIT, NOMINAL 4 INCH DIAMETER (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR TYPE L (OR HEAVIER) COPPER TUBING OR NOMINAL 1 INCH DIAMETER (OR SMALLER) FLEXIBLE STEEL CONDUIT. WHEN COPPER PIPE OR FLEXIBLE STEEL CONDUIT IS USED, MAXIMUM F RATING OF FIRESTOP SYSTEM (ITEM #3) IS 2 H. STEEL PIPES OR CONDUITS LARGER THAN NOMINAL 4 INCH DIAMETER MAY ONLY BE USED IN WALLS CONSTRUCTED USING STEEL CHANNEL STUDS. A MAXIMUM OF ONE PIPE OR CONDUIT IS PERMITTED IN THE FIRESTOP SYSTEM. PIPE OR CONDUIT TO BE INSTALLED NEAR CENTER OF STUD CAVITY WIDTH AND TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY.

3. FILL, VOID OR CAVITY MATERIAL* - CAULK FILL MATERIAL INSTALLED TO COMPLETELY FILL ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND GYPSUM WALLBOARD AND WITH A MINIMUM 1/4 INCH DIAMETER BEAD OF CAULK APPLIED TO PERIMETER OF PIPE OR CONDUIT AT ITS EGRESS FROM WALL. CAULK INSTALL SYMMETRICALLY ON BOTH SIDES OF WALL ASSEMBLY. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS SHOWN IN THE FOLLOWING TABLE. THE HOURLY RATING OF FIRESTOP SYSTEM IS DEPENDANT UPON THE TYPE OR SIZE OF THE PIPE OR CONDUIT AND THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED AS TABULATED BELOW.

MAX PIPE OR CONDUIT DIAM, (INCH)	ANNULAR SPACE	F RATING, HR	T RATING HR
1	0 TO 3/16	1 OR 2	0+, 1 OR 2
1	1/4 TO 1/2	3 OR 4	3 OR 4
4	0 TO 1/4	1 OR 2	0
6	1/4 TO 1/2	3 OR 4	0
12	3/16 TO 3/8	1 OR 2	0

+WHEN COPPER PIPE IS USED, T RATING IS 0 H.
MINNESOTA MINING AND MFG. CO. TYPE CP-25 WB+.

* BEARING THE UL CLASSIFICATION MARK

3 E5.02 FIRE-RATED STUD WALL CONDUIT PENETRATION DETAIL
NO SCALE

UNAUTHORIZED CHANGES & USES: M. Neils Engineering, Inc. preparing these plans will not be responsible for, or liable for unauthorized changes to or uses to these plans. All changes to these plans must be in writing and must be approved by M. Neils Engineering, Inc.
Jul 28, 2023 - 5:22pm, / ccollier-mcmaster

PCOE GOLD IN EDUCATION

Revisions

Delta	Date	Revisions	By

AGENCY APPROVAL

This document is the property of the Owner and is not to be used without his written permission

REGISTERED PROFESSIONAL ENGINEER — YVETTE C. VAN ZANTEN — No. E15483 Exp. 6/30/25 — ELECTRICAL — STATE OF CALIFORNIA
07/28/2023

HIBSER YAMAUCHI Architects, Inc.
4602 2nd Street, Suite 3
Davis, CA 95618
530.758.1270 tel | 530.758.4789 fax

HY Architects Project number: 6013

Facility
NEW MAIN OFFICE
1400 STANFORD RANCH, ROCKLIN CA 95765

Project
TENANT IMPROVEMENTS

Sheet Title
ELECTRICAL DETAILS

M. NEILS ENGINEERING, INC.
Electrical Engineers | Lighting Designers
100 Howe Ave., Suite 235N
Sacramento, CA 95825-8217
www.mneilsengineering.com
Tel: (916) 923-4400
PROJECT #: 23045.21
PROJECT MGR: Y. Van Zanten

Client Project Number: N/A

Scale:	AS NOTED
Drawn By:	KL
Checked By:	YVZ
Issue Date:	July 21, 2023
Revit Version:	2023

Sheet **E5.02**
Sheet 1 of

0 5' 50' GRAPHIC SCALES: 1/16" = 1'-0"
0 5' 25' 1/8" = 1'-0"
0 1' 12' 1/4" = 1'-0"
0 1' 6' 1/2" = 1'-0"
0 4' 3/4" = 1'-0"
0 1' 3' 1" = 1'-0"
0 2' 1 1/2" = 1'-0"
0 1' 3" = 1'-0"
IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-LTI-E**

This document is used to demonstrate compliance with requirements in 110.9, 110.12(c), 130.0, 130.1, 140.6 and 141.0(b)2 for indoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e) and 180.2(b)4 for indoor lighting scopes using the prescriptive path for multifamily occupancies. Multifamily includes dormitory and senior living facilities.

Project Name:	PCOE Stanford Ranch Corp Center Rocklin CA	**Report Page:**	**(Page 1 of 10)**
Project Address:		**Date Prepared:**	2023-07-28T19:46:41-04:00

A. GENERAL INFORMATION

01	Project Location (city)	Rocklin	04	Total Conditioned Floor Area (ft²)	54,228
02	Climate Zone	11	05	Total Unconditioned Floor Area (ft²)	0
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	2

● Office ● All Other Occupancies

B. PROJECT SCOPE

This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.6 / 170.2(e) or 141.0(b)2 / 180.2(b)4 for alterations.

Scope of Work	Conditioned Spaces		Unconditioned Spaces	
01	02	03	04	05
My Project Consists of (check all that apply):	Calculation Method	Area (ft²)	Calculation Method	Area (ft²)
☐ New Lighting System	N/A	0	N/A	0
☐ New Lighting System - Parking Garage	N/A	0	N/A	0
☒ Altered Lighting System	Area Category Method	54228	N/A	0
Total Area of Work (ft²)	54228			

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-LTI-E**

Project Name:	PCOE Stanford Ranch Corp Center Rocklin CA	**Report Page:**	**(Page 2 of 10)**
		Date Prepared:	2023-07-28T19:46:41-04:00

C. COMPLIANCE RESULTS

If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per 140.6(b)1 / 170.2(e)	Allowed Lighting Power per 140.6(b) / 170.2(e) (Watts)						Adjusted Lighting Power per 140.6(a) / 170.2(e) (Watts)				Compliance Results
	01	02	03	04	05		06	07		08	09
	Complete Building 140.6(c)1	Area Category 140.6(c)2 / 170.2(e)4	Area Category Additional 140.6(c)2G / 170.2(e)4Av (+)	Tailored 140.6(c)3 / 170.2(e)4B (+)	**Total Allowed** (Watts)		Total Designed (Watts)	Adjustments PAF Lighting Control Credits 140.6(a)2 / 170.2(e)1B (-)		**Total Adjusted** (Watts) *Includes Adjustments	**05 must be >= 08 140.6 / 170.2(e)**
	(See Table I)	(See Table I)	(See Table J)	(See Table K)			(See Table F)	(See Table P)			
Conditioned		26,420.05			26,420.05	≥	25,555.6		=	25555.6	COMPLIES
Unconditioned						≥			=		
Controls Compliance (See Table H for Details)											COMPLIES
Rated Power Reduction Compliance (See Table Q for Details)											

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-LTI-E**

Project Name:	PCOE Stanford Ranch Corp Center Rocklin CA	**Report Page:**	**(Page 3 of 10)**
		Date Prepared:	2023-07-28T19:46:41-04:00

F. INDOOR LIGHTING FIXTURE SCHEDULE

This table includes all planned permanent and portable lighting other than dwelling unit/ hotel/ motel room lighting. Multifamily dwelling unit and hotel/motel room lighting is documented in Table T. If using Table T to document lighting in multifamily common use areas providing shared provisions for living, eating, cooking or sanitation, those luminaires are not included here.

Designed Wattage: Conditioned Spaces

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change[1]	Watts per luminaire[2]	How is Wattage determined	Total Number of Luminaires	Excluded per 140.6(a)3 / 170.2(e)2C	Design Watts	Field Inspector	
									Pass	Fail
A	2X4 LED	No	NA	45	Mfr. Spec	446	No	20,070	☐	☐
B1	2X2 LED	No	NA	29	Mfr. Spec	40	No	1,160	☐	☐
B2	2X2 LED	No	NA	47	Mfr. Spec	2	No	94	☐	☐
C	LED DOWNLIGHT	No	NA	23.6	Mfr. Spec	33	No	778.8	☐	☐
D	12" ROUND LED CANOPY PENDANT	No	NA	15.6	Mfr. Spec	4	No	62.4	☐	☐
E	LED LINEAR WALL WASH	No	NA	20.8	Mfr. Spec	10	No	208	☐	☐
F1	24" LINEAR LED	No	NA	158.4	Mfr. Spec	15	No	2,376	☐	☐
F2	8' LINEAR LED	No	NA	52.8	Mfr. Spec	6	No	316.8	☐	☐
G	11" ROUND LED CANOPY	No	NA	15.6	Mfr. Spec	6	No	93.6	☐	☐
H	48" UNDER-CABINET LED	No	NA	22	Mfr. Spec	7	No	154	☐	☐
I	3-ARM LED CHANDELIER	No	NA	75	Mfr. Spec	1	No	75	☐	☐
J	ROUND LED DOWNLIGHT	No	NA	14.7	Mfr. Spec	2	No	29.4	☐	☐
K	MULTI ROUND PENDANT	No	NA	60	Mfr. Spec	1	No	60	☐	☐
L	8' LINEAR LED	No	NA	36.2	Mfr. Spec	1	No	36.2	☐	☐
M1	1X4 LINEAR LED	No	NA	13.8	Mfr. Spec	2	No	27.6	☐	☐
M2	1X4 LINEAR LUMINAIRE SUSPENDED	No	NA	13.8	Mfr. Spec	1	No	13.8	☐	☐
						Total Designed Watts: CONDITIONED SPACES		25,555.6		

[1]*FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per 140.6(a)4B / 170.2(e)2D is adjusted to be 75% /80% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.*

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-LTI-E**

Project Name:	PCOE Stanford Ranch Corp Center Rocklin CA	**Report Page:**	**(Page 4 of 10)**
		Date Prepared:	2023-07-28T19:46:41-04:00

F. INDOOR LIGHTING FIXTURE SCHEDULE

[1]*Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b). Wattage used must be the maximum rated for the luminaire, not the lamp.*

G. MODULAR LIGHTING SYSTEMS

This section does not apply to this project.

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

This table includes lighting controls for conditioned and unconditioned spaces.

Building Level Controls

01	02	03	
		Field Inspector	
		Pass	Fail
Mandatory Demand Response 110.12(c)	Shut-off controls 130.1(c) / 160.5(b)4C		
Required >= 4,000W subject to multilevel	See Area/Space Level Controls	☐	☐

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-LTI-E**

Project Name:	PCOE Stanford Ranch Corp Center Rocklin CA	**Report Page:**	**(Page 5 of 10)**
		Date Prepared:	2023-07-28T19:46:41-04:00

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

Area Level Controls

04	05	06	07	08	09	10	11	12	
Area Description	Complete Building or Area Category Primary Function Area	Manual Area Controls 130.1(a) / 160.5(b)4A	Multi-Level Controls 130.1(b) / 160.5(b)4B	Shut-Off Controls 130.1(c) // 160.5(b)4C	Primary/Sky lit Daylighting 130.1(d) / 160.5(b)4D	Secondary Daylighting 130.1(d) / 160.5(b)4D	Interlocked Systems 140.6(a)1/ 170.2(e)2A	Field Inspector	
								Pass	Fail
OPEN OFFICES 117, 251, 213, 206	Office (>250 square feet)	Readily Accessible	Dimmer	Occupancy Sensor	Included	Included	No	☐	☐
BOARDROOMS	Convention, Conference, Multipurpose and Meeting Center	Readily Accessible	Dimmer	Occupancy Sensor	Included	Included	No	☐	☐
ROOMS 112, 111, 113, 133, 201, 202	All Other Space Types	Readily Accessible	Dimmer	Occupancy Sensor	Included	Included	No	☐	☐
BOARDROOM PREFUNCTION A, B AND C	Lounge	Readily Accessible	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
RESTROOMS	Restroom	Readily Accessible	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
BREAKROOM 119	Kitchen/ Food Preparation	Readily Accessible	Dimmer	Occupancy Sensor	Included	Included	No	☐	☐
TRAINING ROOM 207	All Other Space Types	Readily Accessible	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
ALL REMAINING CORRIDORS AND OFFICES	All Other Space Types	Readily Accessible	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
					13				
					Plan Sheet Showing Daylit Zones:				
					Plan sheets E2.04, E2.05, E2.06				

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-LTI-E**

Project Name:	PCOE Stanford Ranch Corp Center Rocklin CA	**Report Page:**	**(Page 6 of 10)**
		Date Prepared:	2023-07-28T19:46:41-04:00

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Each area complying using the Complete Building or Area Category Methods per 140.6(b) are included in this table. Column 06 indicates if additional lighting power allowances per 140.6(c) or adjustments per 140.6(a) are being used .

Conditioned Spaces

01	02	03	04	05	06	
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowance / Adjustment	
					Area Category	PAF
OPEN OFFICES 117, 251, 213, 206	Office (>250 square feet)	0.6	12,648	7,588.8	No	No
BOARDROOMS	Convention, Conference, Multipurpose and Meeting Center	0.75	4,080	3,060	No	No
ROOMS 112, 111, 113, 133, 201, 202	All Other Space Types	0.4	1,665	666	No	No
BOARDROOM PREFUNCTION A, B AND C	Lounge	0.55	2,545	1,399.75	No	No
RESTROOMS	Restroom	0.65	128	83.2	No	No
BREAKROOM 119	Kitchen/ Food Preparation	0.95	650	617.5	No	No
TRAINING ROOM 207	All Other Space Types	0.4	1,127	450.8	No	No
ALL REMAINING CORRIDORS AND OFFICES	All Other Space Types	0.4	31,385	12,554	No	No
		TOTALS:	54,228	26,420.05	See Tables J, or P for detail	

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This section does not apply to this project.

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This section does not apply to this project.

UNAUTHORIZED CHANGES & USES: All changes to these plans must be in writing and must be approved by M. Neils Engineering, Inc. M. Neils Engineering, Inc. preparing these plans will not be responsible for, or liable for unauthorized changes to or uses to these plans.
Jul 28, 2023 - 5:22pm. / ccollier-mcmaster

PCOE GOLD IN EDUCATION

Revisions

Delta	Date	Revisions	By

AGENCY APPROVAL

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REGISTERED PROFESSIONAL ENGINEER — YVETTE L. VAN ZANTEN — No. E15483 Exp. 6/30/25 — ELECTRICAL — STATE OF CALIFORNIA

07/28/2023

HIBSER YAMAUCHI Architects, Inc.
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530.758.1270 tel | 530.758.4789 fax

HY Architects Project number: 6013

Facility
NEW MAIN OFFICE
1400 STANFORD RANCH, ROCKLIN CA 95765

Project
TENANT IMPROVEMENTS

Sheet Title
TITLE 24 INDOOR LIGHTING COMPLIANCE FORMS

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Electrical Engineers | Lighting Designers
100 Howe Ave., Suite 235N
Sacramento, CA 95825-8217
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PROJECT #: 23045.21
PROJECT MGR: Y. Van Zanten

Client Project Number: N/A

Scale:	AS NOTED
Drawn By:	KL
Checked By:	YVZ
Issue Date:	July 21, 2023
Revit Version:	2023

Sheet **E6.01**

Sheet 1 of

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This section does not apply to this project.

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED DECORATIVE /SPECIAL EFFECTS

This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This section does not apply to this project.

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

This section does not apply to this project.

Q. RATED POWER REDUCTION COMPLIANCE FOR ONE-FOR-ONE ALTERATIONS

This section does not apply to this project.

R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS

This section does not apply to this project.

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This section does not apply to this project.

T. DWELLING UNIT LIGHTING

This section does not apply to this project.

U. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selections have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-LTI-E - Must be submitted for all buildings

V. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selections have been changed by the permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and any with "-A" in the form name must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Form/Title	Systems/Spaces To Be Field Verified
NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	OPEN OFFICES 117, 251, 213, 206; BOARDROOMS ; ROOMS 112, 111, 113, 133, 201, 202; BOARDROOM PREFUNCTION A, B AND C; RESTROOMS ; BREAKROOM 119; TRAINING ROOM 207; ALL REMAINING CORRIDORS AND OFFICES
NRCA-LTI-03-A - Must be submitted for automatic daylight controls.	OPEN OFFICES 117, 251, 213, 206; BOARDROOMS ; ROOMS 112, 111, 113, 133, 201, 202; BREAKROOM 119
NRCA-LTI-04-A - Must be submitted for demand responsive lighting controls.	OPEN OFFICES 117, 251, 213, 206; BOARDROOMS ; ROOMS 112, 111, 113, 133, 201, 202; BOARDROOM PREFUNCTION A, B AND C; RESTROOMS ; BREAKROOM 119; TRAINING ROOM 207; ALL REMAINING CORRIDORS AND OFFICES

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Yvette J Van Zanten	Documentation Author Signature:
Company:	Signature Date:
Address:	CEA/ HERS Certification Identification (if applicable):
City/State/Zip:	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Yvette J Van Zanten	Responsible Designer Signature:
Company:	Date Signed:
Address:	License:
City/State/Zip:	Phone:

PCOE GOLD IN EDUCATION

Revisions

Delta	Date	Revisions	By

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Project

TENANT IMPROVEMENTS

Sheet Title

TITLE 24 INDOOR LIGHTING COMPLIANCE FORMS

Client Project Number: N/A

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Tel: (916) 923-4400
PROJECT #: 23045.21
PROJECT MGR: Y. Van Zanten

Scale:	AS NOTED	Sheet	**E6.02**
Drawn By:	KL		
Checked By:	YVZ		
Issue Date:	July 21, 2023		
Revit Version:	2023	Sheet	1 of

GRAPHIC SCALES: 0 5' 50' 1/16" = 1'-0" | 0 5' 25' 1/8" = 1'-0" | 0 1' 12' 1/4" = 1'-0" | 0 1' 6' 1/2" = 1'-0" | 0 4' 3/4" = 1'-0" | 0 1' 3' 1" = 1'-0" | 0 2' 1 1/2" = 1'-0" | 0 1' 3" = 1'-0"

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PROJECT NOTES

1. THE CONTRACTOR SHALL NOT BEGIN ANY WORK SHOWN ON THESE PLANS UNTIL THE CITY ENGINEER'S SIGNATURE OF APPROVAL IS AFFIXED HEREON AND ALL APPLICABLE PERMITS HAVE BEEN OBTAINED.
2. CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE CITY, OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE CITY, OWNER OR ENGINEER.
3. THE CONTRACTOR IS HEREBY NOTIFIED THAT PRIOR TO COMMENCING CONSTRUCTION, THEY SHALL CONTACT ALL UTILITY COMPANIES FOR VERIFICATION AT THE CONSTRUCTION SITE OF THE LOCATIONS OF ALL UNDERGROUND FACILITIES WHERE SUCH FACILITIES MAY CONFLICT WITH PLACEMENT OF IMPROVEMENTS SHOWN ON THIS PLAN. CALL "UNDERGROUND SERVICE ALERT" AT 811 (PHONE 800-227-2600) OR THROUGH THE WEBSITE AT HTTP://USANORTH811.ORG 48 HOURS IN ADVANCE PRIOR TO ANY EXCAVATION.
4. THE LOCATIONS OF ALL UNDERGROUND FACILITIES SHOWN ON THIS PLAN ARE APPROXIMATE. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL UNDERGROUND FACILITIES; HOWEVER, THE ENGINEER ASSUMES NO LIABILITY FOR THE ACCURACY OR COMPLETENESS OF THE EXISTING FACILITIES SHOWN HEREON OR FOR THE EXISTENCE OF OTHER UNDERGROUND UTILITIES OR OBJECTS WHICH THE CONTRACTOR MAY DISCOVER, BUT ARE NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING FACILITIES AND IMMEDIATELY NOTIFY THE ENGINEER IF ANY SUCH FACILITIES INTERFERE WITH THE CONSTRUCTION OF THE IMPROVEMENTS. THE CONTRACTOR SHALL STOP WORK UNTIL MITIGATIONS CAN BE MADE. ANY COSTS INCURRED RESULTING FROM CONTRACTOR'S FAILURE TO STOP AS DIRECTED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
5. ALL MATERIALS, METHODS, AND WORKMANSHIP SHALL CONFORM TO THE SPECIFICATION OF THE AGENCIES INVOLVED AND ALL WORK IS SUBJECT THE APPROVAL OF THEIR DIRECTOR OR AUTHORIZED REPRESENTATIVE.
6. THE CONTRACTOR SHALL NOTIFY THE CITY OF ROCKLIN'S PUBLIC SERVICES INSPECTORS MON.-FRI. 8:00 A.M. TO 4:00 P.M. AT (916) 625-5500 FOR A PRECONSTRUCTION MEETING 48 HOURS IN ADVANCE OF STARTING ANY CONSTRUCTION ACTIVITIES. PLACER COUNTY WATER AGENCY AND SOUTH PLACER MUNICIPAL UTILITY DISTRICT REQUIRE AT LEAST 48-HOURS PRIOR TO ANY CONSTRUCTION REQUESTS FOR INSPECTION OF PUBLIC FACILITIES. THEREFORE, NOTICE SHALL BE GIVEN 48-HOURS IN ADVANCE AND BE PERFORMED BY THE AGENCY'S DESIGNATED AGENT.
7. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY ENCROACHMENT PERMITS AND SHALL POSSESS APPROVED PLANS PRIOR TO BEGINNING OF CONSTRUCTION. A SET OF SIGNED AND APPROVED PLANS ARE TO BE ON THE JOB SITE AT ALL TIMES.
8. THE CONTRACTOR SHALL MAINTAIN THE EXISTING PUBLIC AND PRIVATE IMPROVEMENT WITHIN THE WORK AREA AND SHALL ADEQUATELY BARRICADE THE PROJECT SITE TO KEEP THE GENERAL PUBLIC FROM THE SITE. ANY IMPROVEMENTS DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY CONTRACTOR.
9. THE CONTRACTOR MUST EXPOSE THE END OF EXISTING GRAVITY LINES FOR THE SURVEYOR TO VERIFY LOCATION AND DEPTH OF FACILITIES PRIOR TO CONNECTION OF PROPOSED UTILITY. THE CONTRACTOR SHALL INCUR ALL COSTS FOR SUCH EXCAVATION.
10. THE CONTRACTOR SHALL AT ALL TIMES COORDINATE THEIR WORK WITH THAT OF OTHERS ON THE SITE. THE CONTRACTOR SHALL HAVE A RESPONSIBLE PARTY, WHO SHALL HAVE THE AUTHORITY TO REPRESENT AND ACT FOR THE CONTRACTOR ON THE JOB SITE DURING ALL WORKING HOURS.
11. CONTRACTOR SHALL BE IN RECEIPT OF THE CITY APPROVED PLANS PRIOR TO CONSTRUCTION.
12. CONTRACTOR SHALL NOTIFY UTILITY COMPANIES INVOLVED IN THE DEVELOPMENT PRIOR TO BEGINNING OF WORK.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING MONUMENTS AND/OR OTHER SURVEY MONUMENTS AND SHALL NOTIFY CITY OF ROCKLIN DEPARTMENT OF PUBLIC SERVICES OF ANY DAMAGED OR REMOVED CITY, STATE, OR BUREAU MONUMENTS. CONTRACTOR SHALL BE RESPONSIBLE TO RESTORE ANY DAMAGED OR REMOVED MONUMENTS.
14. CONTRACTOR SHALL NOTIFY DEPARTMENT OF PUBLIC SERVICES UPON APPLICATION FOR PERMIT AND PAYMENT OF REQUIRED FEE.
15. THE CONTRACTOR SHALL VERIFY ALL STREETS NAMES AND THEIR CORRECT SPELLING WITH THE FIRE DEPARTMENT AND BUILDING DIVISION BEFORE ORDERING STREET SIGNS.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUCTING THEIR OPERATION ENTIRELY OUTSIDE OF ANY FLOODPLAIN BOUNDARIES. FLOODPLAIN BOUNDARIES SHALL BE CLEARLY DELINEATED IN THE FIELD WITH ORANGE ESA FENCING AND SIX FOOT (6') STAKES TEN FEET (10') OC PRIOR TO CONSTRUCTION.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUCTING THEIR OPERATION ENTIRELY OUTSIDE OF ANY "NO GRADING AREA." THESE AREAS SHALL BE CLEARLY DELINEATED IN THE FIELD PRIOR TO CONSTRUCTION.
18. WHERE WORK IS BEING DONE IN AN OFFSITE EASEMENT THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNER 48 HOURS PRIOR TO COMMENCING WORK.

STREETS

1. PLACEMENT OF PROPOSED PUBLIC IMPROVEMENTS AND PROPOSED ONSITE IMPROVEMENTS SHALL NOT BE LIMITED TO THESE PLANS, BUT BE BUILT IN ACCORDANCE WITH THE CITY OF ROCKLIN IMPROVEMENT STANDARDS AND TO THE SATISFACTION OF THE CITY ENGINEER.
2. SIDEWALK RAMPS SHALL BE CONSTRUCTED AT THE CENTER OF ALL CURB RETURNS.
3. ALL UTILITY TRENCHING TO BE DONE AS PER TRENCH DETAILS.
4. ALL DROP INLETS SHALL BE TYPE "B" AS SHOWN IN THE CITY OF ROCKLIN IMPROVEMENT STANDARDS, DRAWING 4-2, EXCEPT AS NOTED.
5. CONSTRUCT SIDEWALK RAMPS PER LATEST CALTRANS STANDARDS.
6. CONSTRUCT MONUMENT BOX PER CITY OF ROCKLIN IMPROVEMENTS, STANDARD DRAWINGS 3-34.
7. STOP SIGNS, THERMOPLASTIC STOP BARS, AND THE THERMOPLASTIC WORD "STOP" SHALL CONFORM TO CALTRANS STANDARDS (R1, 30").
8. THE CONTRACTOR SHALL COORDINATE WITH ALL OTHER WORK TO ASSURE THAT ALL UNDERGROUND CONDUITS AND UTILITIES ARE INSTALLED PRIOR TO PAVING. ALL PIPES IN PAVED AREAS SHELL BE PLACED PRIOR TO PLACING AGGREGATE BASE. NO CURB, GUTTER, SIDEWALK FOR AGGREGATE BASE SHALL BE PLACED UNTIL ALL UNDERGROUND UTILITIES ARE INSTALLED.
9. EXISTING A.C. SURFACE SHALL BE CUT TO A NEAT STRAIGHT LINE, PARALLEL WITH THE STREET CENTERLINE AND THE EXPOSED EDGE AND VERTICAL EDGE OF GUTTER LIP SHALL BE TACKED WITH EMULSION PRIOR TO PAVING. THE CONTRACTOR SHALL PREVENT SAW CUT MATERIAL FROM ENTERING DRAINAGE STRUCTURES, WATERWAYS, DRAINAGE SWALES, ETC. MATERIAL SHALL BE GRADED, RECOMPACTED, AND RESEALED PRIOR TO PAVING. ANY CONCRETE, A.C.,TREES, FENCES, AND/OR OTHER OBSTRUCTIONS REQUIRED TO CONSTRUCT THE IMPROVEMENT SHALL BE REMOVED PRIOR TO PAVING.
10. TRAFFIC CONTROL PROCEDURES SHALL CONFORM TO THE MOST RECENT EDITION OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD). THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE CITY OF ROCKLIN FOR THE METHOD OF TRAFFIC CONTROL PRIOR TO STARTING CONSTRUCTION.
11. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE TO THE STREETS OR SIDEWALKS DURING THE CONSTRUCTION PHASE. IF THE CITY FINDS A SIGNIFICANT AMOUNT OF STREET DAMAGE, AN OVERLAY OF THE ENTIRE PROJECT OR STREET IN QUESTION WILL BE REQUIRED BEFORE A NOTICE OF COMPLETION IS PROCESSED. THE CONTRACTOR, DEVELOPER AND/OR BUILDER ARE TOTALLY RESPONSIBLE FOR THE QUALITY OF WORKMANSHIP ON THE PROJECT.
12. UTILITIES:
    - SEWER: SO. PLACER MUNICIPAL UTILITY DISTRICT (916) 786-8522
    - WATER: PLACER COUNTY WATER AGENCY (530) 823-4886
    - STORM DRAIN, TELECOMMUNICATION CONDUIT, STREET LIGHTS & TRAFFIC SIGNALS: CITY OF ROCKLIN (PUBLIC WORKS) (916) 625-5500
    - ELECTRICITY & NATURAL GAS: PACIFIC GAS & ELECTRIC (530) 320-0149
    - TELEPHONE: ATT (916) 409-1384
    - CABLE T.V.: WAVE BROADBAND (916) 630-7180
    - CONSOLIDATED (916) 786-1217
13. SEE INDIVIDUAL AGENCIES FOR SIZE, TYPE, AND LOCATION OF THEIR PROPOSED FACILITIES.
14. ALL OF THE ABOVE UTILITIES ARE MEMBERS OF THE "UNDERGROUND SERVICE ALERT" (U.S.A.) ONE CALL PROGRAM. THE CONTRACTOR OR ANY SUBCONTRACTOR FOR THIS PROJECT WILL BE REQUIRED TO NOTIFY MEMBERS OF (U.S.A.) 48 HOURS IN ADVANCE OF PERFORMING EXCAVATION WORK BY CALLING 811 (PHONE 800-227-2600) OR THROUGH THE WEBSITE AT HTTP: //USANORTH811.ORG. EXCAVATION, FOR THE PURPOSE OF THIS REQUIREMENT, IS DEFINED AS BEING 4" 6" OR MORE IN DEPTH BELOW THE EXISTING SURFACE.

EARTHWORK AND GRADING

1. THE CONTRACTOR SHALL CONTACT THE CITY OF ROCKLIN PUBLIC SERVICES, 48 HOURS PRIOR TO THE START OF EARTHWORK AND GRADING CONSTRUCTION.
2. GRADING SHALL NOT OCCUR ON THE PROJECT AREA UNTIL ALL EXISTING UTILITIES AND TREES AND SENSITIVE AREAS TO BE SAVED ARE ADEQUATELY PROTECTED PER THE CITY OF ROCKLIN CONSTRUCTION SPECIFICATIONS.
3. ALL COMPACTION TESTING SHALL BE PERFORMED BY THE CITY OR ITS DESIGNATED AGENT AND BE PAID FOR BY THE CITY (OR CONTRACTOR IN CASE OF RETESTING). TESTS WITHIN THE RIGHT-OF WAY SHALL BE APPROVED BY THE CITY OF ROCKLIN AND ALL TESTS OUTSIDE THE RIGHT-OF-WAY SHALL BE CERTIFIED BY THE SOILS ENGINEER FOR THE PROJECT.

   ALL UNSUITABLE AND SURPLUS MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE UNLESS THE ENGINEER SPECIFIES OTHERWISE.
4. UTILITY TRENCHING TO BE COMPLETED WITH FINAL EARTHWORK. THE PROJECT WILL BE TEMPORARILY SUSPENDED PER SEC 8-1.05 FOR ALLOWING PG&E AND WAVE BROADBAND TO INSTALL THEIR RESPECTIVE FACILITIES.
5. THE CONTRACTOR SHALL AT ALL TIMES CONFORM TO THE RECOMMENDATIONS FROM THE CITY OF ROCKLIN ON DUST CONTROL, AND ANY REQUIREMENTS OF PLACER COUNTY AIR POLLUTION CONTROL DISTRICT. AREAS SURROUNDING THE WORK SHALL BE KEPT CLEAN AND RETURNED TO ORIGINAL CONDITION UPON COMPLETION OF CONTRACT. GRADING SHALL NOT OCCUR WHEN WIND SPEED EXCEEDS 10 MPH CONTINUOUSLY FOR MORE THAN 1 HOUR.
6. CONTRACTOR SHALL APPLY EROSION CONTROL HYDROSEEDING TO ALL GRADED OR DISTURBED SOILS WITHIN THE WORK AREA AFTER COMPLETION OF IMPROVEMENTS OR AS SOON AS PRACTICAL AFTER GRADING TO REDUCE DUST AND EROSION POTENTIAL. STRAW OR HYDROMULCHING SHALL BE COMBINED WITH THE SEEDING ON SLOPES EQUAL TO OR GREATER THAN 10:1 AND PLACED PRIOR TO COMPLETION OF PROJECT IF DEEMED NECESSARY FOR CONTROLLING SOIL EROSION.
7. THE CONTRACTOR SHALL DO THE FOLLOWING IF GRADING AND CLEARING IMPROVEMENTS ARE INCOMPLETE BY OCTOBER 1ST:
   INSTALL EROSION PROTECTION ON SLOPES 10:1 OR STEEPER AND SWALES WITH SLOPES 2% OR GREATER
   PREVENT SEDIMENT FROM LEAVING THE PROJECT AREA
   GRADE GUTTER SAG POINTS TO DRAIN. PROVIDE FOR DRAINAGE FROM ENDS OF IMPROVEMENTS
   PREVENT SEDIMENTATION IN EXISTING STORM DRAIN SYSTEM AND CLEAN PIPES AS PER SPECIFICATION SS62
   SEAL OFF ALL SANITARY SEWER CONNECTIONS TO EXISTING SYSTEMS

   THE CONTRACTOR SHALL MAINTAIN WINTERIZATION FACILITIES AT ALL TIMES UNTIL THE CITY ACCEPTS THE ROAD IMPROVEMENTS.
8. PRIOR TO GRADING, A RAPTOR SURVEY SHALL BE DONE. NO CONSTRUCTION ACTIVITIES ARE ALLOWED WITHIN .25 MILES OF ANY IDENTIFIED RAPTOR NESTS BETWEEN THE DATES OF FEBRUARY 1ST THRU AUGUST 31ST AS APPROVED BY DIRECTOR.
9. APPROX. QUANTITY OF EARTHWORK: 251 CY CUT, 76 CY FILL
10. THOSE ENGAGED IN CONSTRUCTION ACTIVITY SHALL COMPLY WITH THE CITY OF ROCKLIN CONSTRUCTION NOISE COMPATIBILITY GUIDELINES, INCLUDING RESTRICTING CONSTRUCTION NOISE GENERATING ACTIVITIES WITHIN OR NEAR RESIDENTIAL AREAS TO BETWEEN 7:00 AM AND 7:00 PM ON WEEKDAYS AND 8:00 AM AND 7:00 PM ON THE WEEKENDS TO THE SATISFACTION OF THE PUBLIC SERVICES DIRECTOR OR BUILDING OFFICIAL.

STRIPING

1. ALL EXISTING PAVEMENT MARKINGS TO BE REMOVED SHALL BE REMOVED BY GRINDING, AND A SURFACE TREATMENT MAY BE REQUIRED BY THE CITY.
2. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC AND ARE TO CONFORM TO THE MOST RECENT EDITION OF THE CALTRANS STANDARD SPECIFICATIONS AND PLANS.

CONSTRUCTION STAKING/MONUMENTATION

1. NO WORK SHALL COMMENCE UNTIL STAKING IS PROVIDED.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL MONUMENTS AND OTHER SURVEY MARKERS.
3. ALL SURVEY MONUMENTS SHALL BE SET IN ACCORDANCE WITH THE CITY OF ROCKLIN SUBDIVISION ORDINANCE PRIOR TO FINAL INSPECTION AND ACCEPTANCE OF PUBLIC IMPROVEMENTS. MONUMENT BOXES SHALL BE FROM "IRONSIDES" 18-BODY WITH IL-LID MARKED "MONUMENT" OR APPROVED EQUAL.

LANDSCAPING

1. RAIN BIRD ESP-LX SERIES COMMERCIAL CONTROLLER WITH FLOW SMART MODULE WITH LEARN FLOW UTILITY AND FLOW USAGE TOTALIZER.
2. ALL CONTROLLERS SHALL HAVE AN NCC -3G CELLULAR CARTRIDGE WITH EXTERNAL ANTENNA USED FOR DIRECT COMMUNICATION WITH THE IQ CENTRAL COMPUTER.
3. NO CO-MINGLING OF ONSITE AND CITY OF ROCKLIN IRRIGATION AND LANDSCAPE
4. ALL IRRIGATION AND LANDSCAPE SUBMITTALS SHALL BE SENT TO CITY OF ROCKLIN INSPECTOR 916-625-5577
5. ALL IRRIGATION MAINLINE AND LATERALS SHALL BE SCHEDULE 40 PVC OR GREATER. NO CLASS 200.
6. ALL BACKFLOWS SHALL BE A WILKINS 975XL INSTALLED PER PCWA SPEC WITH AN INSULATED PLACER WATER WORKS ENCLOSURE.
7. ALL IRRIGATION AND LANDSCAPE SHALL CONFORM TO THE LATEST CALIFORNIA MWELO.

STORM DRAINS

STORM DRAIN REQUIREMENTS SHALL BE PER THE CITY OF ROCKLIN STANDARD SPECIFICATIONS INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. MINIMUM OF 12"DIAMETER PIPE WITHIN THE CITY RIGHT OF WAY AND MINIMUM 8"DIAMETER PIPE ON PRIVATE PROPERTY. PIPE ALTERNATIVES SHALL BE:
CONCRETE PIPE C76 REINFORCED CONCRETE PIPE
ASTM-12"IS SMALLEST
ASTM-C76 CLASS 5 (UNLESS OTHERWISE SHOWN ON PLANS)
HDPE (PER CALTRANS STANDARD, DIVISION VII, MOST RECENT EDITION)

THE CONTRACTOR SHALL MAINTAIN ALL EXISTING DRAINAGE FACILITIES WITHIN THE CONSTRUCTION AREA UNTIL NEW DRAINAGE IMPROVEMENTS ARE IN PLACE AND FUNCTIONING.

EXISTING STORM DRAIN FACILITIES SHALL BE EXPOSED AND INVERT VERIFIED PRIOR TO PLACEMENT OF ALL CONSTRUCTION SHALL CONFORM TO MANUFACTURERS SPECIFICATIONS AND TO REQUIREMENTS OF THE CITY OF ROCKLIN STANDARD SPECIFICATIONS.

CONFINED SPACE ENTRY (STORM DRAIN MANHOLES AND TRENCHING):

IT IS THE PROJECT OWNER/DEVELOPER'S RESPONSIBILITY AS HOST EMPLOYER TO HAVE A CONFINED SPACE ENTRY PROGRAM IN COMPLIANCE WITH THE REQUIREMENTS OF SECTIONS 5156-5159 OF TITLE 8, GENERAL INDUSTRIAL SAFETY ORDERS, AND CALIFORNIA CODE OF REGULATIONS. CITY OF ROCKLIN EXISTING MANHOLES ARE "PERMIT REQUIRED" CONFINED SPACES. THE HOST EMPLOYER'S CONTRACTOR MUST STRICTLY CONFORM TO THE CITY OF ROCKLIN PERMIT REQUIRED CONFINED SPACE ENTRY PROGRAM IN ENTERING ANY CITY OF ROCKLIN OWNED MANHOLE. REFER TO GS7-1.06.

A "NO DUMPING" STORM DRAIN MESSAGE SHALL BE PLACED ADJACENT TO ALL DRAIN INLETS IN ACCORDANCE WITH CITY STANDARD DRAWING 4-24.

SEWER

CONTACT SOUTH PLACER MUNICIPAL UTILITY DISTRICT FOR REQUIRED NOTES PERTAINING TO THE SEWER SYSTEM.

WATER

CONTACT PLACER COUNTY WATER AGENCY FOR REQUIRED NOTES PERTAINING TO THE WATER SYSTEM.

CULTURAL RESOURCES

IF EVIDENCE OF ARCHEOLOGICAL OR PALEONTOLOGICAL SITE IS UNCOVERED DURING GRADING OR OTHER CONSTRUCTION ACTIVITIES, WORK SHALL BE HALTED WITHIN 100 FT OF THE FIND AND THE CITY OF ROCKLIN ENVIRONMENTAL SERVICES DIVISION SHALL BE IMMEDIATELY NOTIFIED. A QUALIFIED ARCHAEOLOGIST OR PALEONTOLOGIST SHALL BE RETAINED AT THE EXPENSE OF THE DEVELOPER/CITY TO CONDUCT AN ON-SITE EVALUATION AND PROVIDE RECOMMENDATIONS FOR REMOVAL AND/OR PRESERVATION. WORK ON THE SITE SHALL NOT RESUME UNTIL THE ARCHAEOLOGIST OR PALEONTOLOGIST HAS HAD REASONABLE TIME TO CONDUCT AN EXAMINATION AND IMPLEMENT MITIGATION MEASURES DEEMED APPROPRIATE AND NECESSARY BY THE ENVIRONMENTAL SERVICES DIVISION TO REDUCE IMPACTS TO A LESS THAN SIGNIFICANT LEVEL.

EVIDENCE OF HUMAN BURIAL OR SCATTERED HUMAN REMAINS RELATED TO PRE-HISTORIC OCCUPATION OF THE AREA COULD BE INADVERTENTLY ENCOUNTERED ANYWHERE WITHIN THE PROJECT AREA DURING CONSTRUCTION ACTIVITY OR OTHER ACTIONS INVOLVING DISTURBANCE TO THE GROUND SURFACE AND SUBSURFACE COMPONENTS. IN THE EVENT OF SUCH AN INADVERTENT DISCOVERY, WORK SHALL BE HALTED WITHIN 100 FT OF THE FIND AND THE CITY OF ROCKLIN ENVIRONMENTAL SERVICES DIVISION AND THE COUNTY CORONER SHALL BE IMMEDIATELY NOTIFIED AND CONSULTED, PER STATE LAW.

AIR QUALITY

PRIOR TO ANY GRADING OR CONSTRUCTION ACTIVITY, A DUST CONTROL PLAN SHALL BE SUBMITTED FOR APPROVAL BY THE CITY ENGINEER AND THE PLACER COUNTY AIR POLLUTION CONTROL DISTRICT. THE DUST CONTROL PLAN SHALL SPECIFY MEASURES TO REDUCE DUST POLLUTION DURING ALL PHASES OF CONSTRUCTION.

ABBREVIATIONS

AB	ASPHALT BASE
AC	ASPHALT CONCRETE
ACP	ASBESTOS CEMENT PIPE
ABBREV	ABBREVIATION
ADA	AMERICANS WITH DISABILITIES ACT
APN	ASSESSORS PARCEL NUMBER
BC	BEGIN CURVE/BACK OF CURB
BFG	BOTTOM OF FINISH GRADE
BFP	BACKFLOW PREVENTER
BLDG	BUILDING
BM	BENCH MARK
BS	BOTTOM OF STAIR
BW	BACK OF WALK
CC	CONC
CONC	CONCRETE
C&G	CURB & GUTTER
CB	CATCH BASIN
CL	CENTERLINE
CO	CLEANOUT
COL	COLUMN
COM	COMMUNICATIONS
DI	DROP INLET
E	EAST
EC	END CURVE
EG	EXISTING GRADE
ELEC	ELECTRICAL
EP	EDGE OF PAVEMENT
EX	EXISTING
FC	FACE OF CURB
FDC	FIRE DEPARTMENT CONNECTION
FF	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FS	FINISHED SURFACE
FW	FIRE WATER
G	GAS
GB	GRADE BREAK
GND	GROUND
GR	GRATE ELEVATION
HDPE	HIGH DENSITY POLYETHYLENE
HP	HIGH POINT
IRR	IRRIGATION
INV	INVERT
JT	JOINT TRENCH
LF	LINEAR FEET
LG	LIP OF GUTTER
LOW	LIMIT OF WORK
LP	LOW POINT
LS	LANDSCAPE
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MON	MONUMENT
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
N	NORTH
NTS	NOT TO SCALE
OC	ON CENTER
OR	OFFICIAL RECORD
OD	OUTER DIAMETER
OH	OVERHEAD ELECTRIC
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTER DIAMETER
PA	PAVEMENT
PAVE	PAVEMENT
PCC	PORTLAND CEMENT CONCRETE
PED	PEDESTRIAN
PERF	PERFORATED
PG&E	PACIFIC GAS & ELECTRIC
PIV	POST INDICATOR VALVE
PL	PROPERTY LINE
POC	POINT OF CONNECTION
PR	PROPOSED
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RIM	UTILITY STRUCTURE RIM
S	SOUTH
S	SLOPE
SAD	SEE ARCHITECURAL DRAWINGS
SL	STREET LIGHT
SD	STORM DRAIN
SDAD	STORM DRAIN AREA DRAIN
SDCB	STORM DRAIN CATCH BASIN
SDCO	STORM DRAIN CLEANOUT
SDDI	STORM DRAIN DROP INLET
SDE	STORM DRAIN EASEMENT
SDMH	STORM DRAIN MANHOLE
SED	SEE ELECTRICAL DESIGN
SG	SUBGRADE
SL	STREET LIGHT
SLD	SEE LANDSCAPE DRAWINGS
SLP	SEE LANDSCAPE PLANS
SMD	SEE MECHANICAL DRAWINGS
SMP	SEE MECHANICAL PLANS
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEANOUT
SSLI	SANITARY SEWER LINE
SSMH	SANITARY SEWER MANHOLE
STD	STANDARD
SW	SIDEWALK
TC	TOP OF CURB
TELE	TELEPHONE
TFC	TOP OF FLUSH CURB
TFG	TOP OF FINISH GRADE
TG	TOP OF GRATE
TH	THRESHOLD
TLW	TOP OF LANDSCAPE WALL
TS	TOP OF STAIR
TSL	TOP OF SOIL LAYER
TSW	TOP OF SEAT WALL
TTC	THEORETICAL TOP OF CURB
TW	TOP OF WALL
TYP	TYPICAL
UB	UTILTIY BOX
UNK	UNKNOWN
UTL	UTILITY
VCP	VITRIFIED CLAY PIPE
W	WEST
W	WATER
W/	WITH
WM	WATER METER
WV	WATER VALVE

LEGEND

	EXISTING	PROPOSED
BFP		
BUILDING		
CURB		
COMMUNICATION LINE	COM	
DOMESTIC WATER LINE	W	
ELECTRICAL LINE	E	
OVERHEAD ELECTRICAL LINE	OH	
FIRE DEPARTMENT CONNECTION		
FIRE HYDRANT		
FIRE WATER LINE	FW	
GAS LINE, FOR REFERENCE ONLY	G	
IRRIGATION LINE	IRR	
STORM DRAIN MANHOLE		
PROPERTY LINE		
SEWER LINE	SS	
GRADE BREAK LINE		
FLOW LINE		
STORMWATER LINE	SD	
STORMWATER CATCH BASIN		
TREE		
WATER METER	WM	
WATER VALVE		
UNKNOWN LINE	UNK	
PIV		
PERFORATED PIPE		
AREA DRAIN		
SEWER MANHOLE	SS	
STORM DRAIN CLEANOUT		
SEWER CLEANOUT		
STREET LIGHT		

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HY Architects Project number: 6013

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Project

TENANT IMPROVEMENTS

Sheet Title

NOTES & LEGEND

Client Project Number: N/A

Scale:	As indicated
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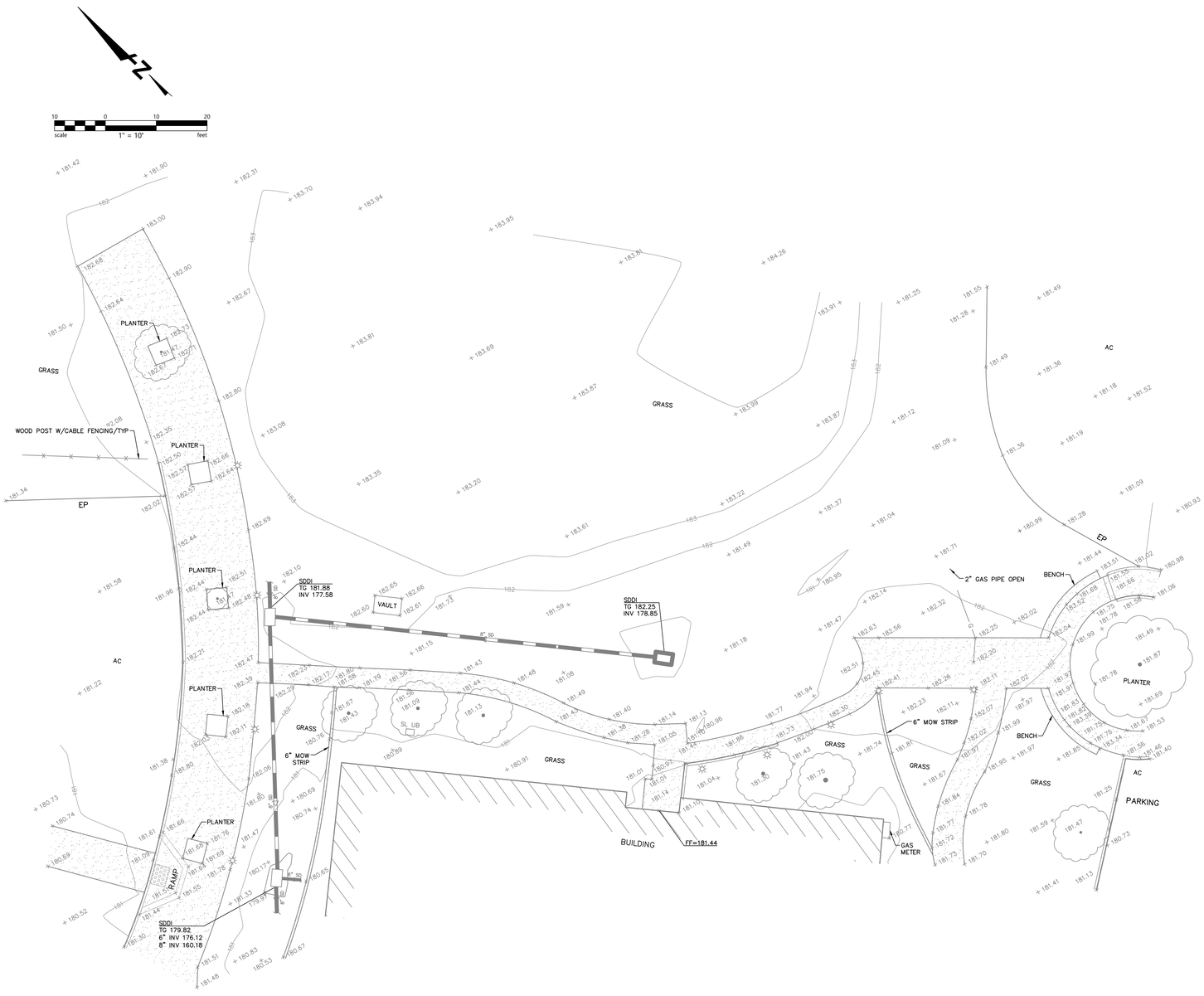
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EXISTING CONDITION NOTES

1. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE KNOWN UNDERGROUND UTILITIES. THE TYPES, LOCATIONS, EXTENTS, SIZES AND DEPTHS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE AND WERE OBTAINED FROM VARIOUS SOURCES, INCLUDING TOPOGRAPHIC FIELD SURVEYS AND AS-BUILT DRAWINGS PROVIDED BY THE PROPERTY OWNER. ABANDONED UNDERGROUND UTILITIES MAY EXIST, THE LOCATION OF WHICH ARE NOT KNOWN. CONTRACTOR IS CAUTIONED THAT THE TYPES, LOCATIONS, EXTENTS, SIZES AND DEPTHS OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS MAY NOT BE THE TYPES, LOCATIONS, EXTENTS, SIZES AND DEPTHS ENCOUNTERED IN THE FIELD.

2. ONLY EXCAVATION AND PHYSICAL EXPOSURE WILL REVEAL THE ACTUAL TYPES, EXTENT, SIZES, LOCATIONS AND DEPTHS OF EXISTING UNDERGROUND UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR POTHOLING EXISTING UNDERGROUND UTILITIES WITHIN THE AREA OF WORK. CONTRACTOR SHALL RETAIN A PRIVATE UTILITY LOCATOR TO IDENTIFY EXISTING UTILITIES. THE CONTRACTOR SHALL POTHOLE AS NECESSARY AT CONNECTION LOCATIONS AND PROPOSED UTILITY CROSSINGS TO FULLY LOCATE AND IDENTIFY EXISTING UTILITIES. POTHOLING SHALL BE DONE AND THE RESULTS, INCLUDING ANY CONFLICTS IDENTIFIED, REPORTED TO THE ENGINEER PRIOR TO THE START OF WORK.

3. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THEIR WORK TO AVOID CONFLICTS BETWEEN SEWER LATERALS, STORM DRAINS, WATER MAINS, AND ALL OTHER UNDERGROUND UTILITIES.

4. UTILITY INFORMATION IS OBTAINED BY AS-BUILT INFORMATION AS WELL AS SURVEY OBSERVATION. ALL EXISTING UTILITY INFORMATION IN THIS PLAN SET IS IDENTIFIED PER THE AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) STANDARD FOR LEVEL OF QUALITY. BELOW IS A LIST OF THE LEVEL OF QUALITY CATEGORIES WITH THE ASSOCIATED DEFINITION PER ASCE STANDARDS:

   (C) – INFORMATION OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE-GROUND UTILITY FEATURES AND BY USING PROFESSIONAL JUDGMENT IN CORRELATING THIS INFORMATION TO QUALITY LEVEL D INFORMATION.

   (D) – UTILITY LOCATION INFORMATION DERIVED FROM EXISTING RECORDS OR ORAL RECOLLECTIONS.

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Project

TENANT IMPROVEMENTS

Sheet Title

EXISTING CONDITIONS

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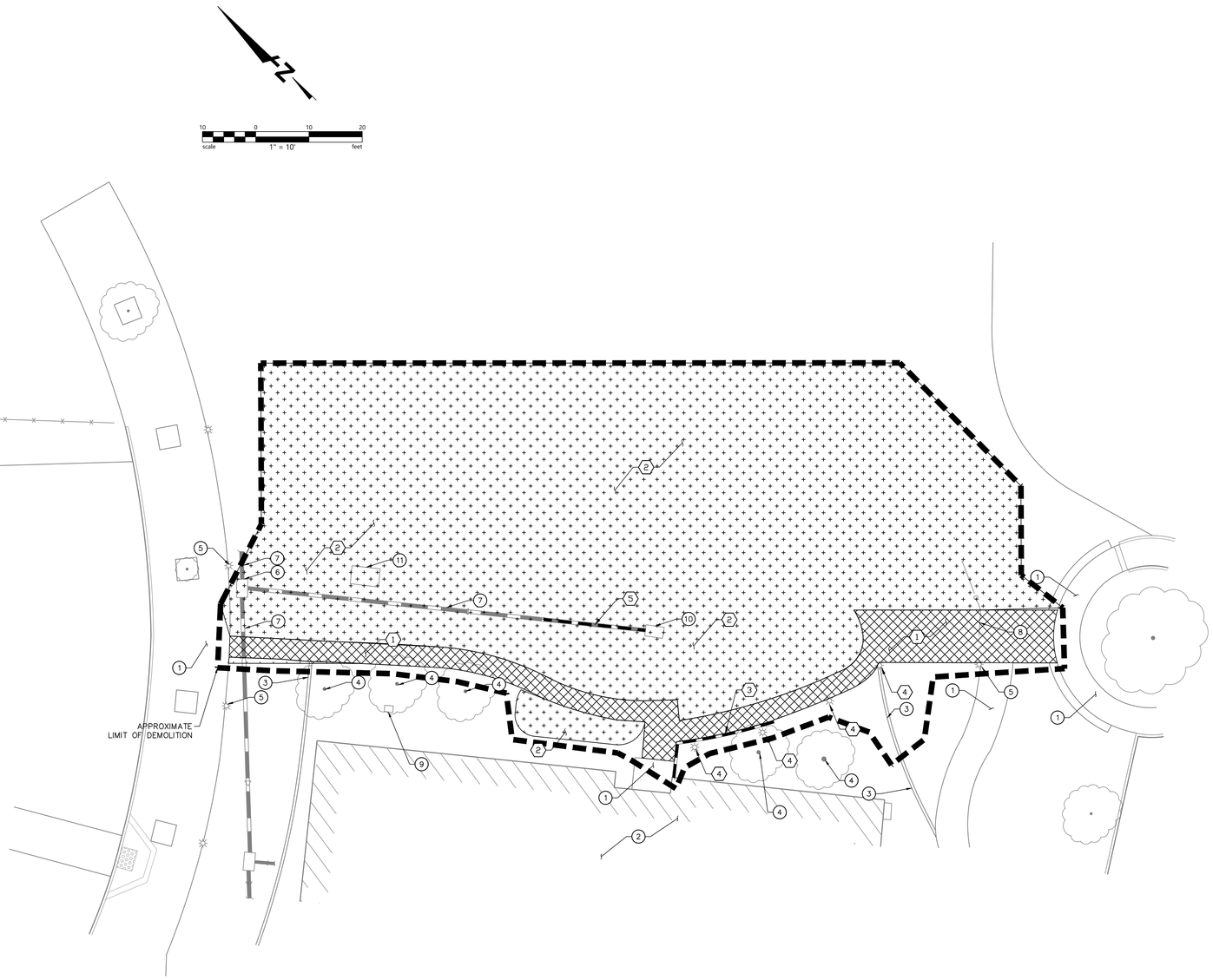
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DEMOLITION ITEMS

1. REMOVE EX CONCRETE AND AB TO SUBGRADE
2. CLEAR AND GRUB
3. REMOVE EX CURB
4. REMOVE EX LIGHT STRUCTURE
5. REMOVE EX STORM DRAIN LINE

PROTECTION AND RELOCATION ITEMS

1. PROTECT EX CONCRETE
2. PROTECT EX BUILDING
3. PROTECT EX CURB
4. PROTECT EX TREE
5. PROTECT EX LIGHT STRUCTURE
6. PROTECT EX STORM DRAIN INLET
7. PROTECT EX STORM DRAIN LINE
8. PROTECT EX GAS LINE
9. PROTECT EX ELECTRICAL STRUCTURE
10. RELOCATE EX STORM DRAIN CATCH BASIN, SEE SHEET C6.0 FOR RELOCATION PLAN
11. ADJUST ELECTRICAL VAULT TO GRADE, SEE SHEET C4.0 AND C5.0

DEMOLITION NOTES

1. CONTRACTOR TO USE CAUTION WHEN WORKING ADJACENT TO EXISTING BUILDING.
2. CONTRACTOR TO CLEAR AND GRUB WITHIN THE LIMITS OF PROPOSED WORK, UNLESS OTHERWISE NOTED ON PLANS.
3. RIM ELEVATIONS FOR EXISTING UTILITY STRUCTURES SHALL BE RAISED TO PROPOSED SURFACE ELEVATIONS.
4. THE UTILITY LINES AND STRUCTURES SHOWN ON THESE PLANS ARE DERIVED FROM RECORD DATA AND/OR SURFACE OBSERVATION AND ARE APPROXIMATE ONLY. ACTUAL LOCATION AND SIZE, TOGETHER WITH THE PRESENCE OF ANY ADDITIONAL UTILITY LINES AND STRUCTURES NOT SHOWN ON THIS PLAN, SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS IN THE FIELD AND INFORMATION SHOWN ON THESE PLANS.
5. THE CONTRACTOR IS REQUIRED BY STATE LAW TO ACTIVELY RESEARCH THE WORK AREA PRIOR TO COMMENCEMENT OF CONSTRUCTION, REFERENCE ANY MONUMENTS, AND REPLACE THOSE DAMAGED OR REMOVED DURING CONSTRUCTION.
6. THE LIMITS OF DEMOLITION SHOWN ARE APPROXIMATE ONLY. CONTRACTOR IS RESPONSIBLE FOR MATCHING EXISTING SURROUNDINGS, LANDSCAPE AND OTHER IMPROVEMENTS WITH A SMOOTH TRANSITION IN PAVING, CURBS, GUTTERS, AND SIDEWALKS AND AVOIDING ANY ABRUPT OR APPARENT CHANGES IN GRADES OR CROSS SLOPES OR HAZARDOUS CONDITIONS.
7. EXISTING CURB AND SIDEWALK AND LANDSCAPE/IRRIGATION WITHIN THE PROJECT LIMITS THAT ARE DAMAGED OR DISPLACED, EVEN THOUGH THEY WERE NOT TO BE REMOVED, SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST.
8. PROTECT ALL EXISTING UTILITIES AND SITE FEATURES FROM BEING DAMAGED, UNLESS OTHERWISE NOTED. ALL UTILITIES AND IMPROVEMENTS THAT BECOME DAMAGED DURING CONSTRUCTION SHALL BE COMPLETELY RESTORED AT NO ADDITIONAL COST TO THE OWNER AND TO THE SATISFACTION OF THE ENGINEER.

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Project

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Sheet Title

DEMOLITION PLAN

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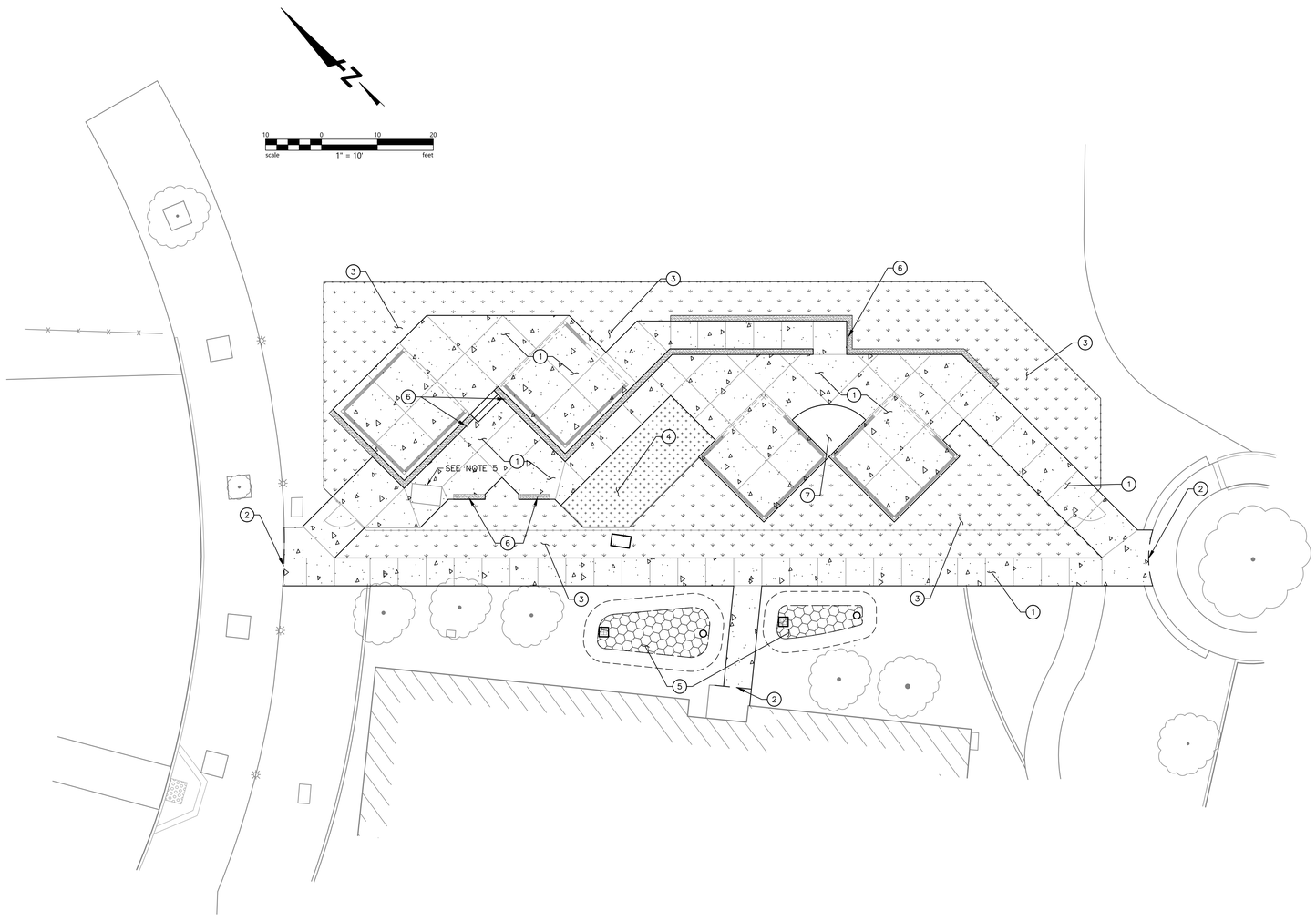
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SURFACE IMPROVEMENTS LEGEND

ITEM	SYMBOL	DESCRIPTION
1		CONCRETE, SEE DETAIL 1/C8.0
2		CONCRETE CONFORM, SEE DETAIL 2/C8.0
3		LANDSCAPE, SLP
4		ARTIFICIAL TURF, SLP
5		BIO RETENTION AREA, SEE DETAIL 3/C8.0
6		WALLS, SLP
7		WATER FEATURE, SLP

SURFACE IMPROVEMENTS NOTES:

1. THE LIMITS OF WORK ARE APPROXIMATE ONLY. CONTRACTOR IS RESPONSIBLE FOR MATCHING EXISTING SURROUNDINGS, LANDSCAPE, AND OTHER IMPROVEMENTS WITH A SMOOTH TRANSITION, AVOIDING ANY ABRUPT OR APPARENT CHANGES IN GRADES OR CROSS-SLOPES OR HAZARDOUS CONDITIONS.
2. EXISTING CONCRETE SHALL BE REMOVED AT THE NEAREST EXPANSION JOINTS.
3. NEW WORK SHALL MATCH EXISTING AS CLOSELY AS POSSIBLE IN FINISH, SCORING, AND COLOR.
4. EXISTING SITE FEATURES (CURBS, CONCRETE WALKS, LANDSCAPE, IRRIGATION, ETC.) DEMOLISHED DURING CONSTRUCTION SHALL BE REPLACED IN KIND.
5. CONTRACTOR TO ADJUST ELECTRICAL UTILITY VAULT AND PROVIDE ACCESSIBLE LID.

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Project

TENANT IMPROVEMENTS

Sheet Title

HORIZONTAL CONTROL

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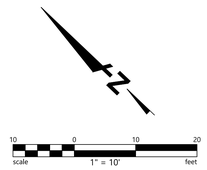
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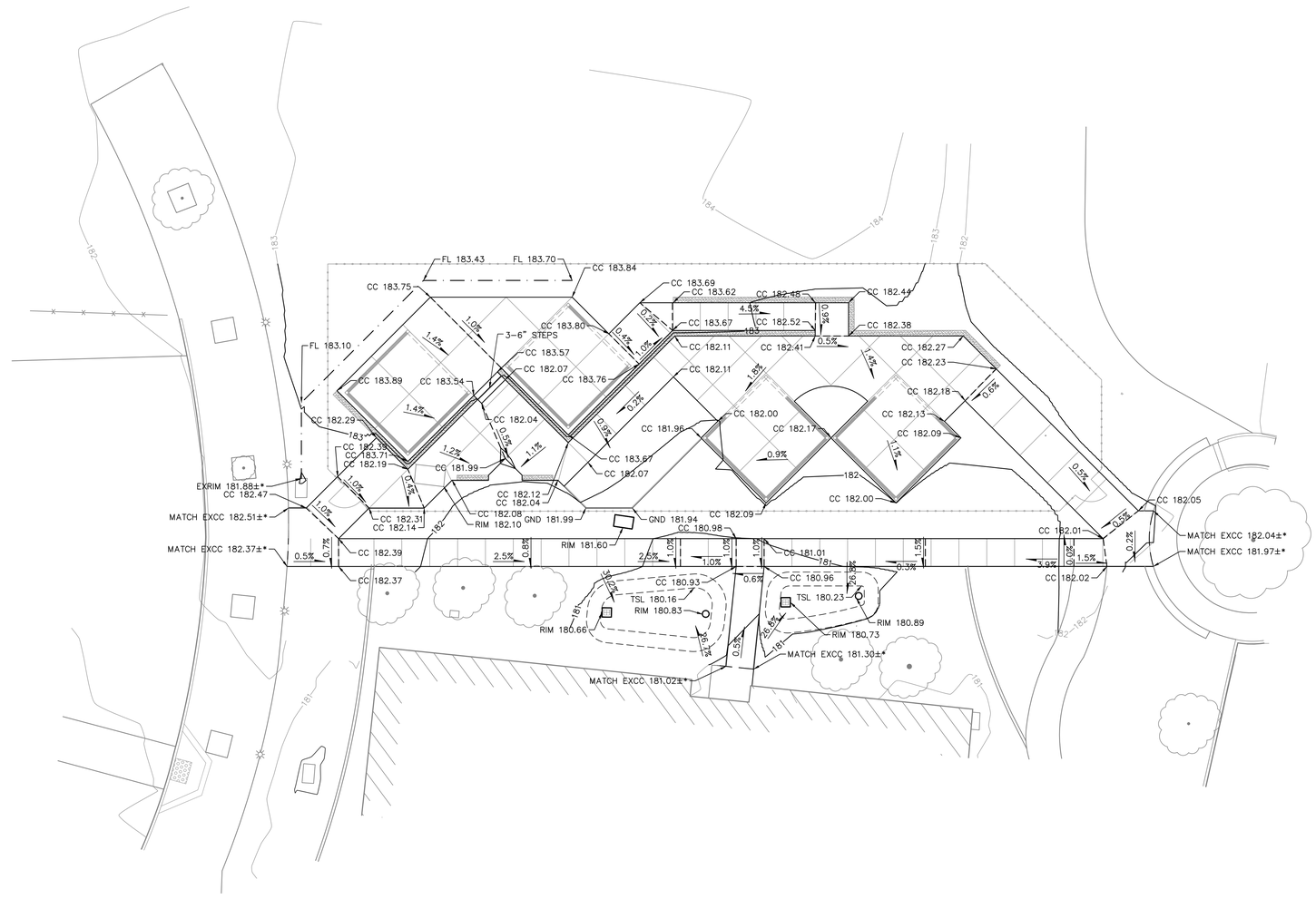
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GRADING LEGEND

CC XX.XX

GRADE BREAK LINE

FLOWLINE

ELEVATION LABEL:

CC	CONCRETE
EX	EXISTING
FL	FLOW LINE
GND	GROUND
GR	GRATE ELEVATION
TSL	TOP OF SOIL LAYER

GRADING NOTES:

1. PROPOSED SITE PLAN AND UTILITIES HAS BEEN SCREENED FOR CLARITY.
2. GRADING WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS AND THE REQUIREMENTS AND RECOMMENDATIONS CONTAINED IN THE PROJECT GEOTECHNICAL REPORT.
3. THE CONTRACTOR SHALL EXERCISE EXTREME CARE TO CONFORM TO THE LINES, GRADES, SECTIONS, AND DIMENSIONS AS SET FORTH ON THESE PLANS. GRADED AREAS SHALL CONFORM TO THE VERTICAL ELEVATIONS SHOWN WITHIN TOLERANCE OF ONE-TENTH OF A FOOT IN LANDSCAPED AREAS AND TWO-HUNDREDTHS OF A FOOT IN HARDSCAPED OR PAVED AREAS. WHERE GRADED AREAS DO NOT CONFORM TO THESE TOLERANCES, THE CONTRACTOR SHALL BE REQUIRED TO DO CORRECTIVE GRADING, AT NO EXTRA COST TO THE OWNER.
4. CONTRACTOR SHALL FIELD VERIFY FINISHED FLOOR ELEVATIONS OF EXISTING BUILDINGS PRIOR TO STARTING CONSTRUCTION.
5. CONTRACTOR SHALL TAKE CAUTION WHEN GRADING ADJACENT TO EXISTING BUILDINGS, TO PROTECT EXISTING FOUNDATIONS AND TO NOT TO COVER EXISTING VENTS.
6. RIMS OF UTILITY STRUCTURES SHALL BE ADJUSTED TO FINISHED GRADE IN AREAS OF RE-GRADING. IN PAVED AREAS, ELEVATION DIFFERENCE SHALL NOT BE MORE THAN ¼ INCH BETWEEN RIMS AND ADJACENT SURFACE.
7. WHERE IMPROVEMENTS INVOLVE ADA ACCESSIBILITY, CONTRACTOR'S ATTENTION IS DIRECTED TO THE FOLLOWING PARAMETERS THAT NEED TO BE MET WITH THE FINISHED CONSTRUCTION:
   a. WALKWAYS SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 4.9% AND A MAXIMUM CROSS SLOPE OF 2%.
   b. LANDINGS SHALL HAVE A MAXIMUM SLOPE OF 2% IN ALL DIRECTIONS, INCLUDING DIAGONAL.
   c. ADA PARKING STALLS AND STRIPED AISLE SHALL HAVE A MAXIMUM SLOPE OF 2% IN ALL DIRECTIONS, INCLUDING DIAGONAL.
   d. TRANSITIONS BETWEEN PROPOSED IMPROVEMENTS AND EXISTING CONDITIONS SHALL BE SMOOTH AND FREE OF ABRUPT CHANGES.

* CONTRACTOR SHALL FIELD VERIFY EXISTING GRADES AT CONFORMS PRIOR TO FORMING/AC WORK.

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GRADING PLAN

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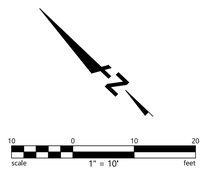
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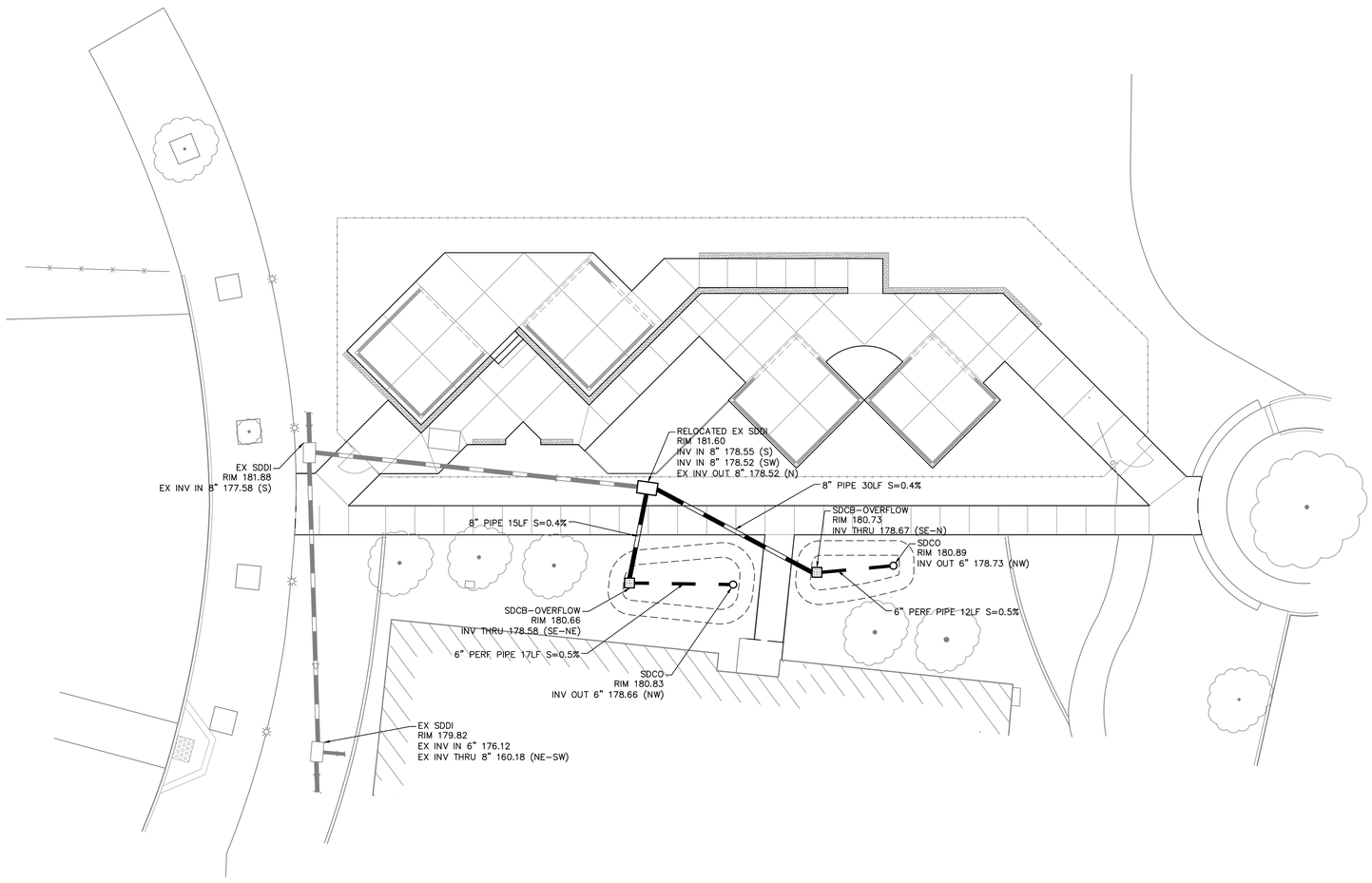
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UTILITY SCHEDULE

PIPING	
SYSTEM:	MATERIAL
STORM DRAIN	PVC SDR 35
STORM SUB DRAIN/PERF PIPE	HDPE SDR 35
STRUCTURES	
SYSTEM:	DETAIL
STORM DRAIN	
SDDI (12"X12")	SEE DETAIL 5/C8.0
CLEANOUT (BIORETENTION)	SEE DETAIL 4/C8.0

UTILITY NOTES

1. PROPOSED SITE PLAN HAS BEEN SCREENED FOR CLARITY.
2. RIM ELEVATIONS FOR EXISTING UTILITY STRUCTURES SHALL BE RAISED TO PROPOSED SURFACE ELEVATIONS. EXISTING STRUCTURES LOCATED WITHIN PROPOSED VEHICULAR ROADWAY, AN H-20 TRAFFIC-RATED TOP SHALL BE USED TO REPLACE THE EXISTING TOP OF THE ADJUSTED STRUCTURE. ALL STRUCTURES WITHIN THE PEDESTRIAN PATHWAY SHALL MEET ADA REQUIREMENTS. STRUCTURES WITH GRATES SHALL HAVE OPENINGS 1/2" MAXIMUM WIDE AND ELONGATED IN THE DIRECTION PERPENDICULAR TO THE DIRECTION OF DOMINANT PEDESTRIAN TRAVEL.
3. PROTECT ALL EXISTING UTILITIES AND SITE FEATURES FROM BEING DAMAGED, UNLESS OTHERWISE NOTED. ALL UTILITIES AND IMPROVEMENTS THAT BECOME DAMAGED DURING CONSTRUCTION SHALL BE COMPLETELY RESTORED AT NO ADDITIONAL COST TO THE OWNER AND TO THE SATISFACTION OF THE ENGINEER.
4. THE EXISTING UTILITY LINES AND STRUCTURES SHOWN ON THESE PLANS ARE DERIVED FROM RECORD DATA, UNDERGROUND UTILITY SURVEY AND/OR SURFACE OBSERVATION AND ARE APPROXIMATE ONLY. ACTUAL LOCATION AND SIZE, TOGETHER WITH THE PRESENCE OF ANY ADDITIONAL UTILITY LINES AND STRUCTURES NOT SHOWN ON THIS PLAN, SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY UPON DISCOVERY OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS IN THE FIELD AND INFORMATION SHOWN ON THESE PLANS.
5. EXISTING UNDERGROUND UTILITIES, INCLUDING THOSE MARKED UNKNOWN, ARE BASED ON SURVEY COMPLETED BY OTHERS AND PROVIDED TO BKF ENGINEERS FOR INCLUSION IN PLANS.
6. EXISTING PIPE LINES MAY HAVE CATHODIC PROTECTION. CONTRACTOR SHALL ENSURE THAT ALL CONNECTIONS TO EXISTING PIPE LINES ARE ELECTRICALLY COMMON WITH THE PIPE LINE.
7. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO THE START OF CONSTRUCTION.
8. LENGTH OF PIPES ARE HORIZONTAL DISTANCES FROM CENTER TO CENTER OF STRUCTURES, ROUNDED TO THE NEAREST FOOT AND ARE SHOWN FOR ENGINEERING CALCULATIONS ONLY. CONTRACTOR SHALL ESTIMATE THEIR OWN PIPE LENGTHS PRIOR TO BIDDING.
9. CONTRACTOR SHALL REPLACE EXISTING CONDITIONS IN KIND WITHIN LIMITS OF TRENCHING AREA FOR PROPOSED UTILITIES.

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Revisions

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Project

TENANT IMPROVEMENTS

Sheet Title

UTILITY PLAN

Client Project Number: N/A

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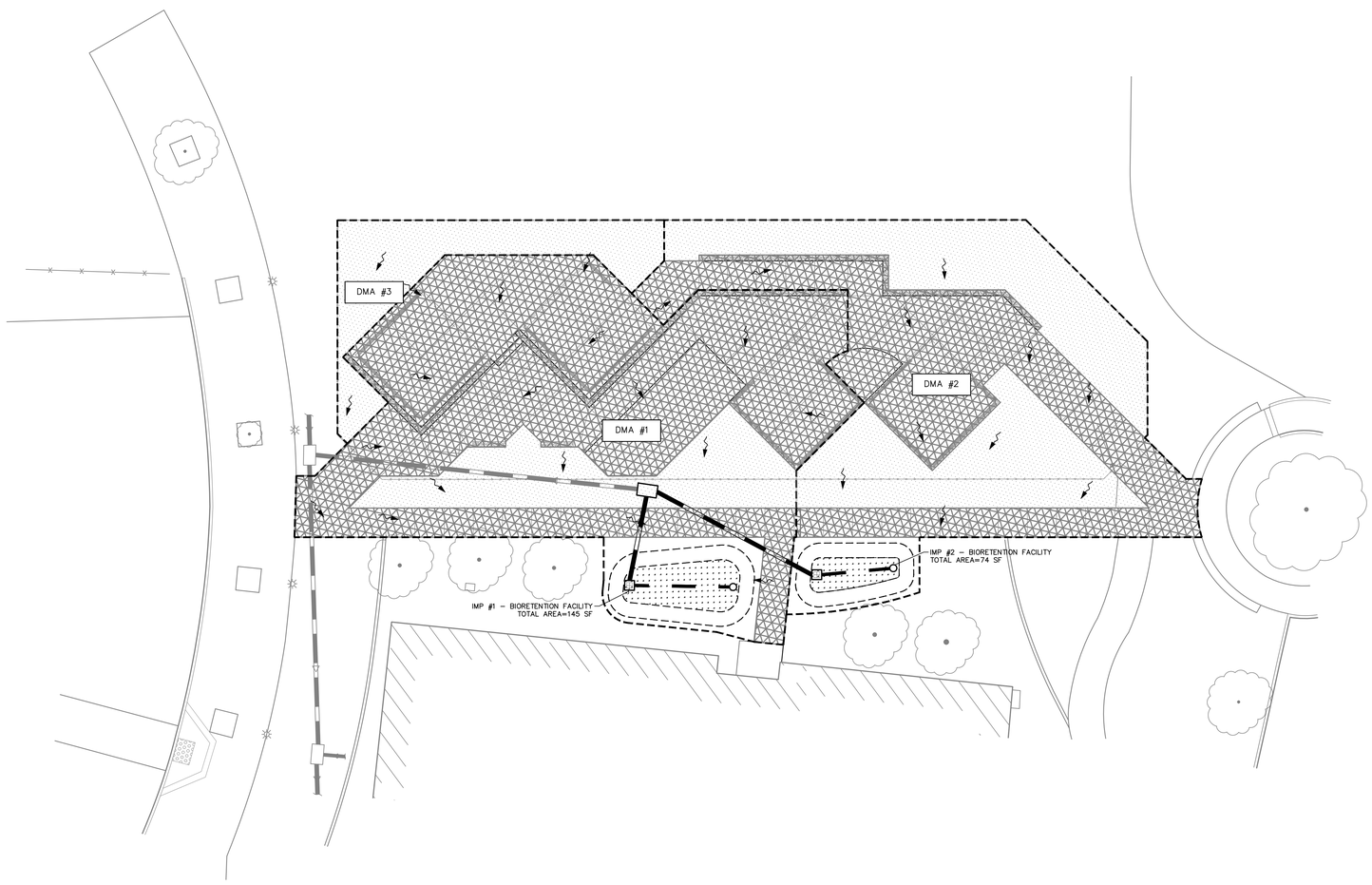
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10 0 10 20
scale 1" = 10' feet

CALCULATION TABLE OF STORMWATER TREATMENT SIZING

[DMA] NAME	(1) Treatment Type	(2) DMA Area (sf)	(3) Pervious Area (sf)	(4) Impervious Area (sf)	(5) Runoff Factor*	(6) DMA Area x Runoff Factor	(7) Facility Sizing Factor	(8) Required Bioretention Area (sf) (6) x (7) = (8)	(9) Available Bioretention Area (sf)
DMA 1	BIO	3,767	697	3,050	0.83	3,119.97	0.04	125	145
DMA 2	BIO	3,238	1,641	1,617	0.55	1,781.43	0.04	71	74
DMA 3	SELF-TREATING	621	621	0	0.10	62.10	N/A	0	0
TOTAL		**7,626**	**2,959**	**4,668**		**4,964**		**196**	**219**

*Runoff factors of 1.0 for impervious area and 0.1 for pervious used (Reference: City of Rocklin Post Construction Manual, 2019). Calculated as Runoff Factor = (% Impervious x 1.0) + (% Pervious x 0.1)



LEGEND:
IMPERVIOUS SURFACE
PERVIOUS SURFACE
BIORETENTION AREA

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Project

TENANT IMPROVEMENTS

Sheet Title

STORMWATER CONTROL PLAN

Client Project Number: N/A

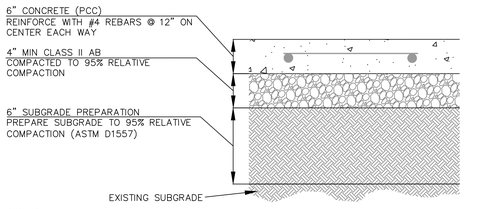
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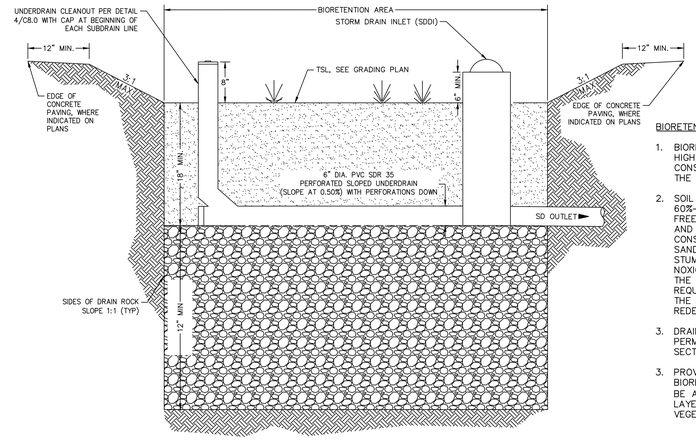
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NOTES:
1. AGGREGATE BASE TO BE IN CONFORMANCE WITH THE CALTRANS STANDARD SPECIFICATIONS FOR CLASS 2 AGGREGATE BASEROCK. MINIMUM R-VALUE SHALL BE 78.
2. SEE LANDSCAPE DRAWINGS FOR PAVEMENT COLOR AND FINISH.

① PEDESTRIAN SIDEWALK SECTION
NTS

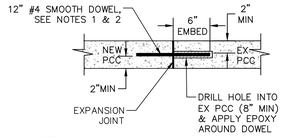


SECTION A-A

BIORETENTION NOTES

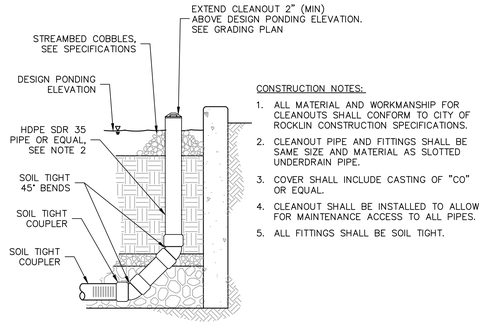
1. BIORETENTION AREAS WILL VARY AS TO LOCATION OF HIGH AND LOW POINTS BUT BASIC MATERIALS AND CONSTRUCTION METHODS SHOWN ABOVE SHALL REMAIN THE SAME.
2. SOIL LAYER SHALL CONSIST OF A UNIFORM MIX OF 60%-70% CONSTRUCTION SAND AND 30%-40% COMPOST, FREE OF STONES, STUMPS, ROOTS, OR SIMILAR OBJECTS AND FREE OF NOXIOUS WEEDS.SOIL LAYER SHALL CONSIST OF A UNIFORM MIX OF 60%-70% CONSTRUCTION SAND AND 30%-40% COMPOST, FREE OF STONES, STUMPS, ROOTS, OR SIMILAR OBJECTS AND FREE OF NOXIOUS WEEDS. BIOTREATMENT SOIL MIX SHALL MEET THE CENTRAL COAST POST-CONSTRUCTION STORMWATER REQUIREMENTS STANDARDS PER PROVISION E.12.K OF THE PHASE II PERMIT FOR NEW DEVELOPMENT AND REDEVELOPMENT.
3. DRAIN ROCK LAYER SHALL CONSIST OF CLASS 2 PERMEABLE MATERIAL PER CALTRANS SPECIFICATION SECTION 68-1.025.
3. PROVIDE A SANDY LOAM TOP LAYER ABOVE THE BIORETENTION SOIL MEDIA LAYER. THIS LAYER SHOULD BE A MINIMUM OF SIX (6) INCHES DEEP, BUT A DEEPER LAYER IS RECOMMENDED TO PROMOTE HEALTHY VEGETATION.

③ BIORETENTION POND
NTS



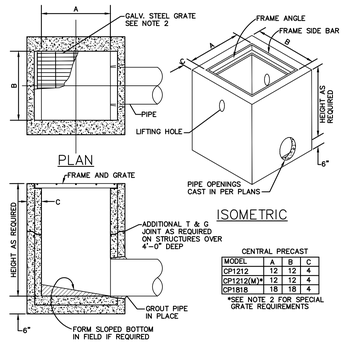
NOTES:
1. WHERE CONNECTING NEW PCC PAVEMENT TO EXISTING PCC PAVEMENT, INSTALL #4 SMOOTH DOWELS AT 18" O.C.
2. WHERE CONNECTING NEW CONCRETE CURB TO EXISTING CONCRETE CURB, INSTALL #4 SMOOTH DOWELS AT TOP & BOTTOM WITH 2" MIN COVER.

② CONCRETE CONFORM
NTS



CONSTRUCTION NOTES:
1. ALL MATERIAL AND WORKMANSHIP FOR CLEANOUTS SHALL CONFORM TO CITY OF ROCKLIN CONSTRUCTION SPECIFICATIONS.
2. CLEANOUT PIPE AND FITTINGS SHALL BE SAME SIZE AND MATERIAL AS SLOTTED UNDERDRAIN PIPE.
3. COVER SHALL INCLUDE CASTING OF "CO" OR EQUAL.
4. CLEANOUT SHALL BE INSTALLED TO ALLOW FOR MAINTENANCE ACCESS TO ALL PIPES.
5. ALL FITTINGS SHALL BE SOIL TIGHT.

④ CLEANOUT IN TREATMENT AREA
NTS



CENTRAL PRECAST

MODEL	A	B	C
CP1212	12	12	4
CP1212(M)*	12	12	4
CP1818	18	18	4

*SEE NOTE 2 FOR SPECIAL GRATE REQUIREMENTS

TYPICAL SECTION

NOTES :
1. CATCH BASIN SHALL BE JENSEN PRECAST DI OR EQUAL.
2. GRATES WITHIN PEDESTRIAN WALKWAYS SHALL BE ACCESSIBLE. GRATE OPENINGS SHALL BE 1/2" WIDE, AND ELONGATED IN THE DIRECTION PERPENDICULAR TO THE DIRECTION OF DOMINANT PEDESTRIAN TRAVEL.

⑤ STORM DRAIN CATCH BASIN
NTS

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Project
TENANT IMPROVEMENTS

Sheet Title
DETAILS

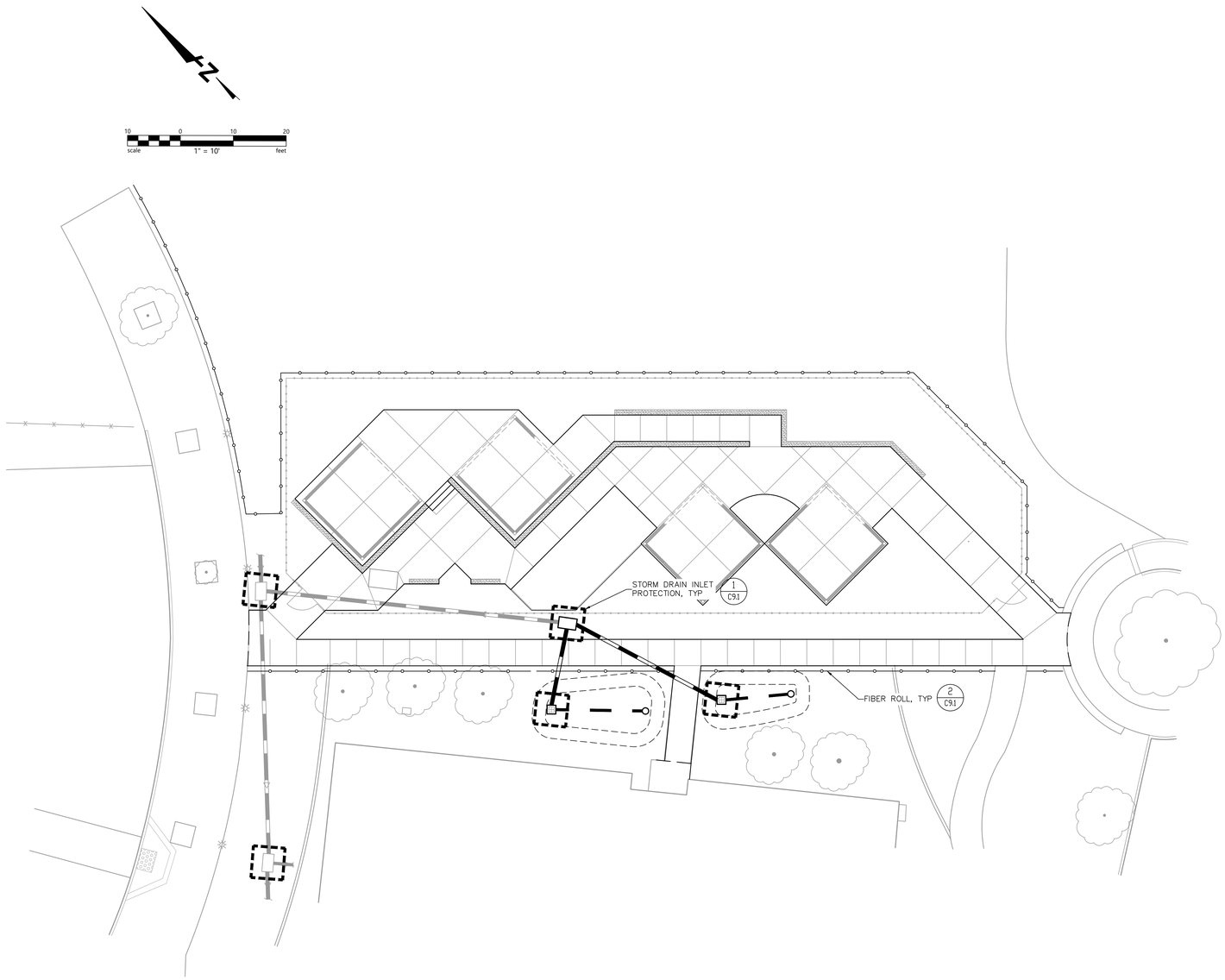
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LEGEND

STORM DRAIN INLET PROTECTION, SHEET C9.1/DETAIL 1

FIBER ROLL, SHEET C9.1/DETAIL 2

EROSION CONTROL NOTES:

1. REFERENCE: "CALIFORNIA STORM WATER BEST MANAGEMENT PRACTICE (BMP) HANDBOOK", LATEST EDITION.
2. CONSTRUCTION AREAS SHOWN ARE CONCEPTUAL. ACTUAL PLACEMENT TO BE DETERMINED BY CONTRACTOR BASED ON CURRENT BEST MANAGEMENT PRACTICES. CONTRACTOR SHALL SUBMIT A CONSTRUCTION STAGING PLAN.
3. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN EFFECT AND MAINTAINED BY THE CONTRACTOR ON A YEAR–ROUND BASIS UNTIL ALL DISTURBED AREAS ARE STABILIZED UNLESS OTHERWISE PERMITTED BY THE CITY INSPECTOR.
4. AS PART OF THE GRADING OPERATIONS, THE CONTRACTOR SHALL ENSURE THAT THE SITE IS WATERED PRIOR TO THE COMMENCEMENT OF GRADING.
5. ALL INLETS RECEIVING STORM WATER RUNOFF FROM THE PROJECT AREA MUST BE EQUIPPED WITH REQUIRED INLET PROTECTION.
6. ALL PAVED AREAS SHALL BE KEPT CLEAR OF EARTH MATERIALS AND DEBRIS. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT LADEN RUNOFF ENTERING THE STORM DRAIN SYSTEM.
7. ALL CONCRETE SLURRY SHALL BE CONTAINED IN CONCRETE WASH–OUT AREAS DESIGNATED ON–SITE.
8. STOCKPILED EARTHEN MATERIAL SHALL BE EITHER COVERED WITH A TARP OR WATERED SUFFICIENTLY TO ELIMINATE DUST.
9. TEMPORARY EROSION CONTROLS TO STABILIZE ALL DENUDED AREAS UNTIL PERMANENT EROSION CONTROLS ARE ESTABLISHED.
10. DELINEATE WITH FIELD MARKERS CLEARING LIMITS, EASEMENTS, SETBACKS, SENSITIVE OR CRITICAL AREAS, BUFFER ZONES, TREES, AND DRAINAGE COURSES.
11. PERFORM CLEARING AND EARTH MOVING ACTIVITIES ONLY DURING DRY WEATHER.
12. USE SEDIMENT CONTROLS OR FILTRATION TO REMOVE SEDIMENT WHEN DEWATERING AND OBTAIN ALL NECESSARY PERMITS.
13. PROTECT ALL STORM DRAIN INLETS IN VICINITY OF SITE USING SEDIMENT CONTROLS SUCH AS BERMS, FIBER ROLLS, OR FILTERS.
14. TRAP SEDIMENT ON–SITE, USING BMPS SUCH AS SEDIMENT BASINS OR TRAPS, EARTHEN DIKES OR BERMS, SILT FENCES, CHECK DAMS, SOIL BLANKETS OR MATS, COVERS FOR SOIL STOCK PILES, ETC.
15. DIVERT ON–SITE RUNOFF AROUND EXPOSED AREAS; DIVERT OFF–SITE RUNOFF AROUND THE SITE (E.G., SWALES AND DIKES).
16. PROTECT ADJACENT PROPERTIES AND UNDISTURBED AREAS FROM CONSTRUCTION IMPACTS USING VEGETATIVE BUFFER STRIPS, SEDIMENT BARRIERS OR FILTERS, DIKES, MULCHING, OR OTHER MEASURES AS APPROPRIATE.
17. LIMIT CONSTRUCTION ACCESS ROUTES AND STABILIZE DESIGNATED ACCESS POINTS.
18. NO CLEANING, FUELING, OR MAINTAINING VEHICLES ON–SITE, EXCEPT IN A DESIGNATED AREA WHERE WASHWATER IS CONTAINED AND TREATED.
19. STORE, HANDLE, AND DISPOSE OF CONSTRUCTION MATERIALS/WASTES PROPERLY TO PREVENT CONTACT WITH STORMWATER.
20. CONTRACTOR SHALL TRAIN AND PROVIDE INSTRUCTION TO ALL EMPLOYEES/SUBCONTRACTORS RE: CONSTRUCTION BMPS.
21. CONTROL AND PREVENT THE DISCHARGE OF ALL POTENTIAL POLLUTANTS, INCLUDING PAVEMENT CUTTING WASTES, PAINTS, CONCRETE, PETROLEUM PRODUCTS, CHEMICALS, WASHWATER OR SEDIMENTS, RINSE WATER FROM ARCHITECTURAL COPPER, AND NON–STORMWATER DISCHARGES TO STORM DRAINS AND WATERCOURSES.
22. CONTRACTOR SHALL PROVIDE INLET PROTECTION AT THE NEAREST DOWNSTREAM STORM DRAIN ALONG PROJECT SITE.

LOCATION OF CONSTRUCTION ACTIVITIES IS PRELIMINARY AND SHALL BE SUPERSEDED BY FINALIZED CONSTRUCTION ACTIVITY LOCATIONS, SHOWN/UPDATED BY CONTRACTOR.

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Project

TENANT IMPROVEMENTS

Sheet Title

EROSION
CONTROL PLAN

Client Project Number: N/A

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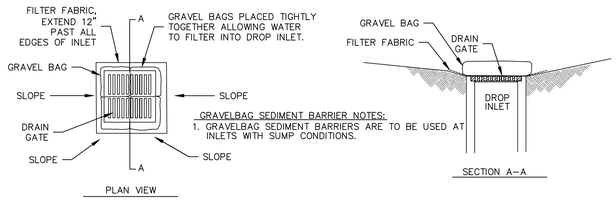
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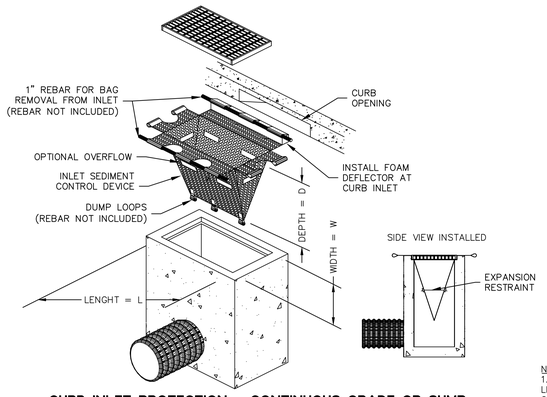
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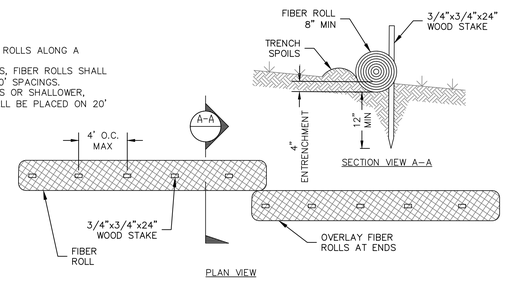
GRAVELBAG SEDIMENT BARRIER NOTES:
1. GRAVELBAG SEDIMENT BARRIERS ARE TO BE USED AT INLETS WITH SUMP CONDITIONS.

DRAINAGE INLET GRAVELBAG SEDIMENT BARRIER

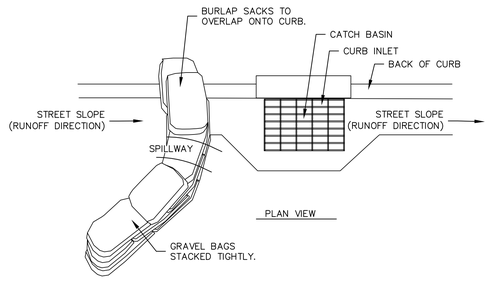


CURB INLET PROTECTION – CONTINUOUS GRADE OR SUMP

NOTES:
1. INSTALL FIBER ROLLS ALONG A LEVEL CONTOUR.
2. ON 2:1 SLOPES, FIBER ROLLS SHALL BE PLACED ON 10' SPACINGS.
3. ON 4:1 SLOPES OR SHALLOWER, FIBER ROLLS SHALL BE PLACED ON 20' SPACINGS.

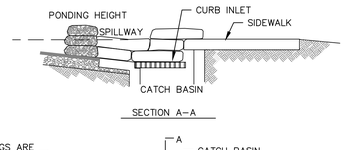


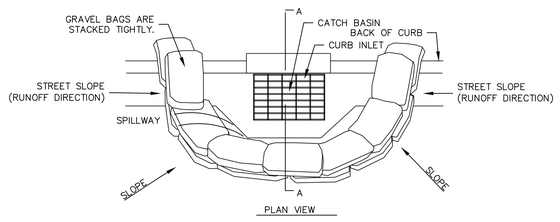
2 – FIBER ROLL
NOT TO SCALE



CURB INLET SEDIMENT BARRIER NOTES:
1. PLACE CURB TYPE SEDIMENT BARRIERS ON GENTLY SLOPING STREETS, WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
2. BAGS OF EITHER BURLAP OR WOVEN GEOTEXTILE FABRIC ARE FILLED WITH GRAVEL, LAYERED AND PACKED TIGHTLY.
3. LEAVE ONE GRAVELBAG GAP IN THE TOP ROW TO PROVIDE A SPILLWAY OVERFLOW. TOP OF SPILLWAY SHALL BE LOWER THAN TOP OF CURB.
4. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT, SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

CURB INLET SEDIMENT BARRIER – CONTINUOUS GRADE





CURB INLET SEDIMENT BARRIER – SUMP

1 – STORM DRAIN INLET PROTECTION
NOT TO SCALE

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EROSION CONTROL DETAIL

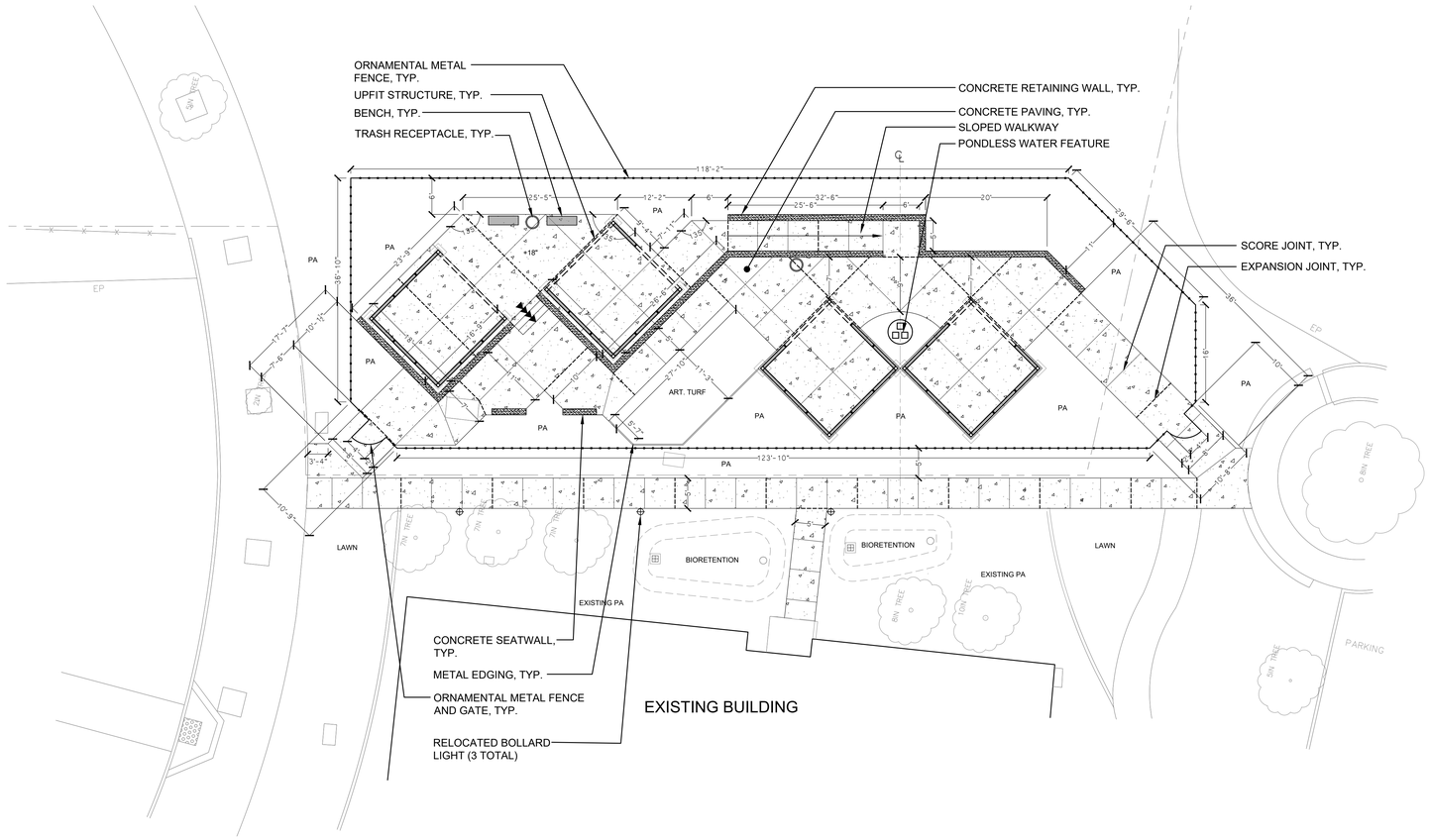
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KEY / SITE LEGEND

- CONCRETE PAVING
  FINISH: BROOM
  COLOR: NO COLOR
  SEE CIVIL SHEETS
- SCORE JOINT
  SEE DETAIL 2/L4.1
- EXPANSION JOINT
  SEE DETAIL 1/L4.1
- METAL EDGING
  SEE DETAIL 4/L4.1
- PA — DENOTES PLANTER AREA
- ORNAMENTAL METAL FENCE AND GATE
  6' TALL ORNAMENTAL METAL FENCE
  COLOR: BLACK
  SEE DETAIL 7/L4.1 AND 8/L4.1
- STAIR STEPS WITH HANDRAILS
  SEE DETAIL 5/L4.1 AND 6/L4.1
- CONCRETE RETAINING WALL OR SEATWALL
  SIZE: 12" WIDE, 18" TALL
  COLOR: NO COLOR
  SEE DETAIL 3/L4.1 AND 4/L4.1
- PONDLESS WATER FEATURE
  MANUFACTURER: THEPONDGUY.COM
  PRODUCT: RUSTIC TRIPLE BASALT FOUNTAIN KIT WITH MIXED POLISHED PEBBLES
- BENCH (2 TOTAL)
  MANUFACTURER: VICTOR STANLEY
  PRODUCT MODEL #: S-13
  SLATS: WOOD
  LEGS AND ARMRESTS COLORS: BLACK
  SEE DETAIL 9/L4.1.
- TRASH RECEPTACLE (2 TOTAL)
  MANUFACTURER: VICTOR STANLEY
  PRODUCT MODEL #: DYN-SD-36
  LID: TAPERED FORMED
  COLOR: BLACK
  SEE DETAIL 10/L4.1.
- SHADE STRUCTURES (4 TOTAL) (OFCI):
  MANUFACTURER: LANDSCAPE FORMS
  PRODUCT: UPFIT ADAPTIVE OUTDOOR STRUCTURE
  TOTAL SIZE: 16'X16'
  CONTACT: NATHAN DAMRATOWSKI
  (269)337-1247
  NATHAND@LANDSCAPEFORMS.COM
  CONTRACTOR TO POUR FOOTINGS FOR POSTS AND USE CERTIFIED UPFIT INSTALLER FOR STRUCTURE INSTALLATION. FOOTINGS TO BE INSTALLED 4-6" BELOW TOP OF CONCRETE
- RELOCATED BOLLARD LIGHT

10' 5' 0 10' 20'

SCALE: 1"= 10'-0"

PCOE GOLD IN EDUCATION

Revisions

	Revisions	By

AGENCY APPROVAL

PLAN CHECK SET

ISSUE DATE: 7/21/23 BY: BG

23-23

MTW group
LANDSCAPE ARCHITECTURE AND PLANNING
2707 K Street, Suite 201
Sacramento, CA 95816
916 369-3990

PROFESSIONAL LANDSCAPE ARCHITECT — PETER D. LARIMER — No. 5284 — 7/21/23 — 6/30/24 — STATE OF CALIFORNIA

Peter D. Larimer C-5284

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HY Architects Project number: 6013

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1400 STANFORD RANCH, ROCKLIN CA 95765

Project
TENANT IMPROVEMENTS

Sheet Title
SITE PLAN

Client Project Number: N/A

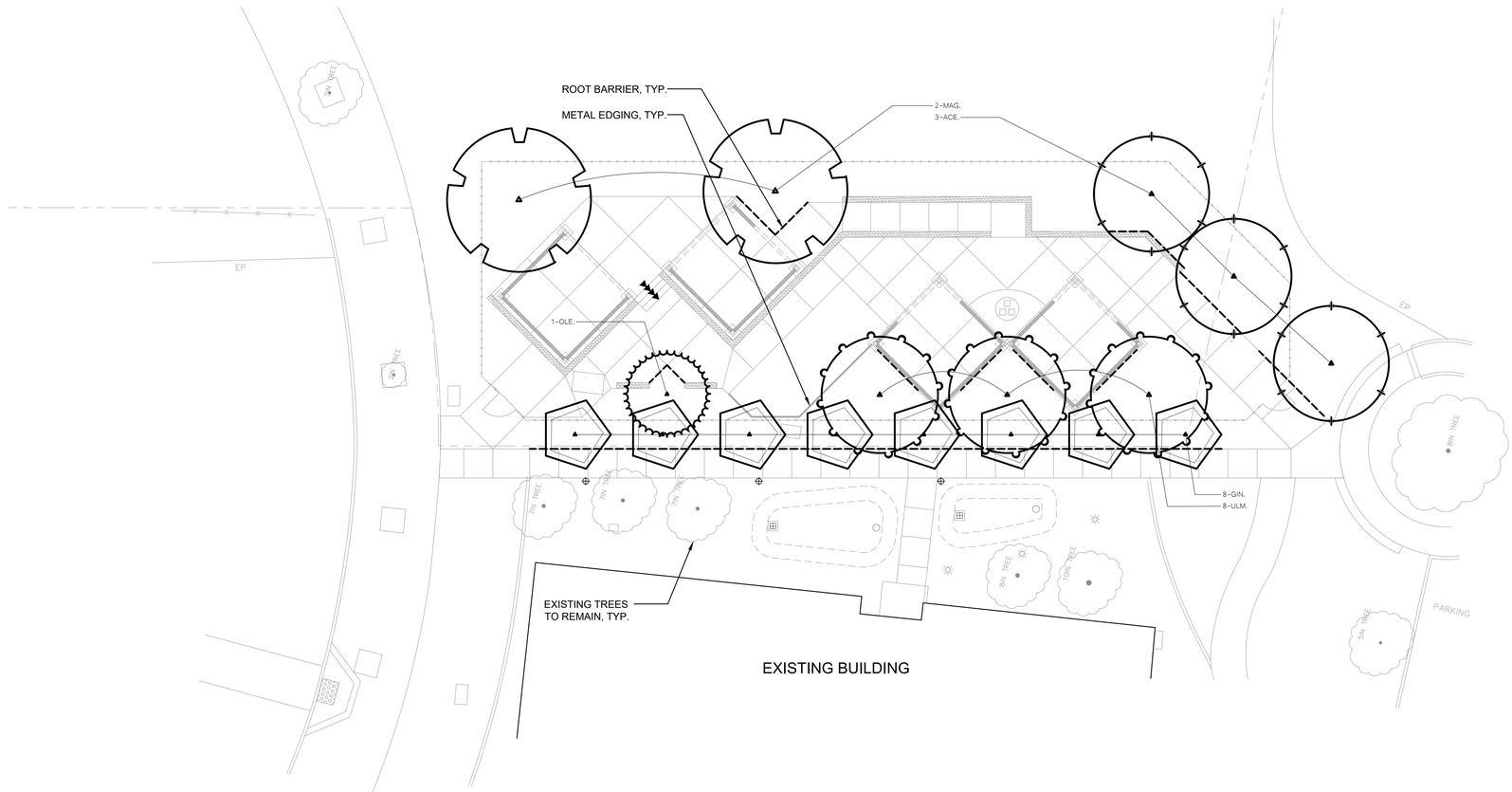
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Sheet **L0.1**

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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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GENERAL LANDSCAPE REQUIREMENTS/NOTES

1. NO PLANTING SHALL BE STARTED UNTIL SPRINKLER IRRIGATION SYSTEM HAS BEEN TESTED BY CONTRACTOR IN PRESENCE OF OWNER'S REPRESENTATIVE AND NOTED DEFICIENCIES CORRECTED.
2. NO PLANTING SHALL BE STARTED UNTIL SOIL PREPARATION AND FINISH GRADING OPERATIONS HAVE BEEN COMPLETED AND APPROVED BY THE OWNER'S REPRESENTATIVE.
3. QUANTITIES SHOWN ON PLANT MATERIAL LIST ARE APPROXIMATE. PROVIDE QUANTITIES INDICATED ON LANDSCAPE PLAN.
4. PLANT MATERIAL IS SUBJECT TO APPROVAL OF OWNER'S REPRESENTATIVE.
5. SEE SHEET L4.2 FOR PLANTING INSTALLATION DETAILS.

ENVIRONMENTAL REQUIREMENTS:

GENERAL: PROCEED WITH WORK IN ORDERLY AND TIMELY MANNER TO COMPLETE INSTALLATION OF LANDSCAPING WITHIN CONTRACT LIMITS.

PROTECTION:

EXISTING CONSTRUCTION: EXECUTE WORK IN AN ORDERLY AND CAREFUL MANNER TO PROTECT NEW CONCRETE WALKS, WORK OF OTHER TRADES, AND OTHER IMPROVEMENTS.

EXISTING UTILITIES: DETERMINE LOCATION OF UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNER WHICH WILL AVOID POSSIBLE DAMAGE. HAND EXCAVATE, AS REQUIRED, TO MINIMIZE POSSIBILITY OF DAMAGE TO UNDERGROUND UTILITIES. MAINTAIN GRADE STAKES SET BY OTHERS UNTIL REMOVAL IS MUTUALLY AGREED UPON BY ALL PARTIES CONCERNED. BE RESPONSIBLE FOR PROTECTION OF EXISTING UTILITIES WITHIN CONSTRUCTION AREA; REPAIR DAMAGE TO UTILITIES THAT OCCUR AS A RESULT OF OPERATIONS OF THIS WORK.

LANDSCAPING: PROTECT LANDSCAPE WORK AND MATERIALS FROM DAMAGE DUE TO LANDSCAPE OPERATIONS, OPERATIONS BY OTHER CONTRACTORS AND TRADES AND TRESPASSERS. MAINTAIN PROTECTION DURING INSTALLATION AND MAINTENANCE PERIODS. TREAT, REPAIR OR REPLACE DAMAGED LANDSCAPE WORK AS DIRECTED AT NO ADDITIONAL COST TO CONTRACT.

ADVERSE CONDITIONS: WHEN CONDITIONS DETRIMENTAL TO SOD OR PLANT GROWTH ARE ENCOUNTERED, SUCH AS RUBBLE FILL, ADVERSE DRAINAGE CONDITIONS, OR OBSTRUCTIONS, NOTIFY OWNER'S REPRESENTATIVE BEFORE STARTING WORK.

PLANTING AND TURF INSTALLATION SEASONS AND CONDITIONS

NO WORK SHALL BE DONE WHEN GROUND IS FROZEN, SNOW COVERED, TOO WET OR IN AN OTHERWISE UNSUITABLE CONDITION FOR AMENDING SOIL, FINISH GRADING OR PLANTING.

SOIL TESTING/SOIL IMPROVEMENT:

SEE SPECIFICATIONS 32 90 00, SECTION 3.02 PREPARATION / A. SOIL TESTING AND / C. SOIL PREPARATION.

SOIL PERCOLATION

EXCAVATE TREE PITS. FILL EXCAVATED TREE PITS WITH WATER TO 1/2 DEPTH OF PIT. PITS SHOULD DRAIN WITHIN 4 HOURS. IF PLANTING PITS DO NOT DRAIN, NOTIFY INSPECTOR IMMEDIATELY. PLANTING SHALL NOT BE STARTED UNTIL OWNER'S REPRESENTATIVE HAS RESOLVED A METHOD TO REMEDY DRAINAGE ISSUE.

PLANT MATERIAL STANDARDS

PLANTS SHALL BE IN ACCORDANCE WITH AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) ANSI Z60.1- AMERICAN STANDARD FOR NURSERY STOCK, EXCEPT AS OTHERWISE STATED IN SPECIFICATIONS OR SHOWN ON DRAWINGS. WHERE DRAWINGS OR SPECIFICATIONS ARE IN CONFLICT WITH ANSI Z60.1, DRAWINGS AND SPECIFICATIONS SHALL PREVAIL. PRUNE, THIN OUT AND SHAPE TREES IN ACCORDANCE WITH ANSI STANDARD HORTICULTURAL PRACTICE. PRUNE TREES TO RETAIN REQUIRED HEIGHT AND SPREAD, UNLESS OTHERWISE DIRECTED BY LANDSCAPE ARCHITECT. DO NOT CUT TREE LEADERS, AND REMOVE ONLY INJURED OR DEAD BRANCHES FROM FLOWERING TREES.

EXISTING LANDSCAPE AND SPRINKLER IRRIGATION SYSTEM

WORK LIMITS OF THIS PROJECT EXTEND INTO AREAS THAT WERE PREVIOUSLY DEVELOPED UNDER OTHER CONTRACTS. PRIOR TO START OF WORK, CONTRACTOR SHALL MEET WITH OWNER'S REPRESENTATIVE TO LOCATE ALL CONNECTIONS CALLED FOR ON DRAWINGS. WORK LIMITS/FENCING SHALL BE LAID OUT BY CONTRACTOR AND VERIFIED BY OWNER'S REPRESENTATIVE. FENCE TO BE INSTALLED AND IRRIGATION SYSTEM SHALL BE TESTED WITH CONTRACTOR, INSPECTOR, AND OWNER'S REPRESENTATIVE PRESENT. DEFICIENCIES SHALL BE NOTED AT THIS TIME AND ARE THE RESPONSIBILITY OF OWNER. AT COMPLETION OF WORK, SYSTEM WILL AGAIN BE TESTED, DEFICIENCIES NOTED AT THIS TIME THAT WERE NOT NOTED PREVIOUSLY WILL BE RESPONSIBILITY OF CONTRACTOR. EXISTING LANDSCAPE THAT HAS BEEN DAMAGED DUE TO CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITION BY CONTRACTOR AT NO ADDITIONAL COST TO OWNER. PRIOR TO MAKING ANY CONNECTION TO MAIN LINE, CONTRACTOR SHALL NOTIFY OWNER 1 WEEK IN ADVANCE SO ADJUSTMENTS TO EXISTING WATERING PROGRAMS CAN BE MADE.

KEY / LANDSCAPE LEGEND

KEY	LANDSCAPE LEGEND
▲	TREES
==========	ROOT BARRIER, INSTALL WHERE SHOWN ON PLANS
XXXXXXXXXX	METAL EDGING
7 - AAA.	PLANT QUANTITY
	PLANT KEY
*	EXISTING TREES TO REMAIN

TREE MATERIAL LIST

SIZE	QTY.	KEY	BOTANICAL NAME ... COMMON NAME	WATER USE
			TREES:	
24" BOX	3	ACE.	ACER BUERGERANIUM ... TRIDENT MAPLE	MEDIUM
24" BOX	8	GIN.	GINKGO BILOBA 'PRINCETON SENTRY' ... PRINCETON SENTRY GINKGO	MEDIUM
48" BOX	2	MAG.	MAGNOLIA GRANDIFLORA ... SOUTHERN MAGNOLIA	MEDIUM
24" BOX	1	OLE.	OLEA EUROPAEA 'SWAN HILL' ... SWAN HILL FRUITLESS OLIVE	LOW
24" BOX	3	ULM.	ULMUS WILSONIANA 'PROSPECTOR' ... PROSPECTOR ELM	LOW

10' 5' 0 10' 20'

SCALE: 1"= 10'-0"

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HY Architects Project number: 6013

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Project

TENANT IMPROVEMENTS

Sheet Title

TREE PLANTING PLAN

Client Project Number: N/A

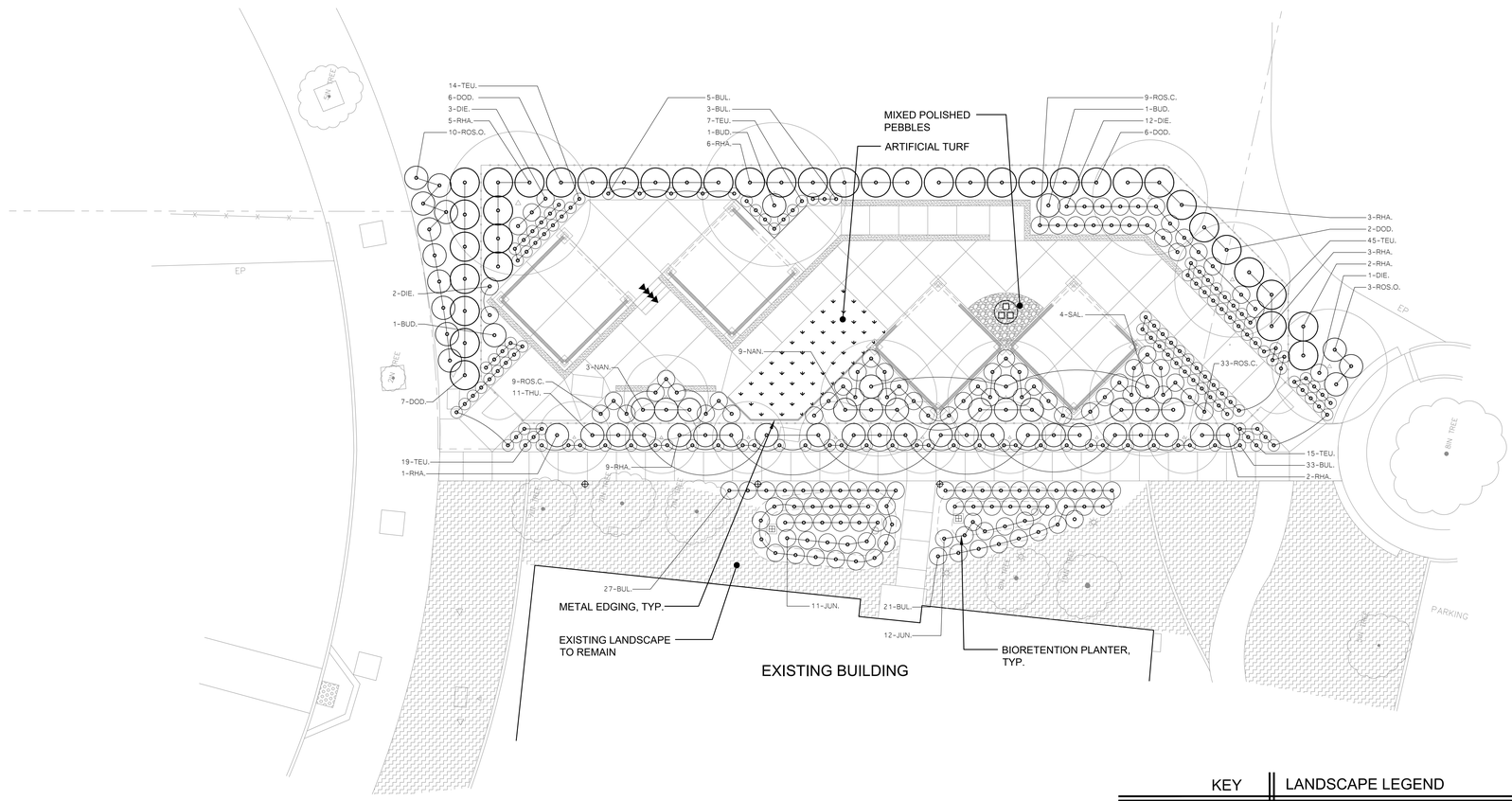
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Sheet **L1.1**

Sheet of

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4. PLANT MATERIAL IS SUBJECT TO APPROVAL OF OWNER'S REPRESENTATIVE.
5. SEE SHEET L4.2 FOR PLANTING INSTALLATION DETAILS.

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KEY | LANDSCAPE LEGEND

- TREE OUTLINE FOR REFERENCE
- SHRUBS
- ARTIFICIAL TURF — SEE DETAIL L4.1-1
- MIXED POLISHED PEBBLES
- EXISTING LANDSCAPE TO REMAIN — REPAIR LANDSCAPE WHEREVER NECESSARY.
- BIORETENTION PLANTER — SEE CIVIL DRAWINGS
- METAL EDGING
- PLANT QUANTITY
- PLANT KEY
- EXISTING TREES TO REMAIN

PLANT MATERIAL LIST

SIZE	QTY.	KEY	BOTANICAL NAME ... COMMON NAME	WATER USE
			SHRUBS:	
5 G.C.	3	BUD.	BUDDLEIA X PUGSTER BLUE ... PUGSTER BLUE BUTTERFLY BUSH	LOW
5 G.C.	89	BUL.	BULBINE FRUTESCENS 'HALLMARK' ... HALLMARK STALKED BULBINE	LOW
5 G.C.	12	DIE.	DIETES VEGETA ... FORTNIGHT LILY	LOW
5 G.C.	21	DOD.	DODONAEA VISCOSA 'PURPUREA' ... PURPLE HOPSEED BUSH	LOW
5 G.C.	23	JUN.	JUNCUS PATENS 'ELK BLUE' ... ELK BLUE CALIFORNIA GRAY RUSH	LOW
5 G.C.	12	NAN.	NANDINA DOMESTICA ... HEAVENLY BAMBOO	LOW
5 G.C.	31	RHA.	RHAMNUS CALIFORNICA 'MOUND SAN BRUNO' ... COFFEEBERRY	LOW
5 G.C.	51	ROS.C.	ROSA X 'FLOWER CARPET WHITE' ... WHITE CARPET ROSE	LOW
5 G.C.	13	ROS.O.	ROSAMRINUS OFFICINALIS 'INGRAM#1' ... INGRAM#1 ROSEMARY	LOW
5 G.C.	4	SAL.	SALVIA LEUCANTHA 'SANTA BARBARA' ... MEXICAN BUSH SAGE	LOW
5 G.C.	100	TEU.	TEUCRIUM CHAMAEDRYS ... GERMANDER	LOW
5 G.C.	11	THU.	THUJA OCCIDENTALIS 'DEGROOT'S SPIRE' ... DEGROOT'S SPIRE ARBORVITAE	MEDIUM

10' 5' 0 10' 20'

SCALE: 1"= 10'-0"

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Revisions

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PLA 5284 — 7/21/23 — 6/30/24 — Peter D. Larimer C-5284

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HY Architects Project number: 6013

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Project

TENANT IMPROVEMENTS

Sheet Title

SHRUB PLANTING PLAN

Client Project Number: N/A

Scale:
Drawn By: AC/PL
Checked By: PL
Issue Date: July 21, 2023
Revit Version:

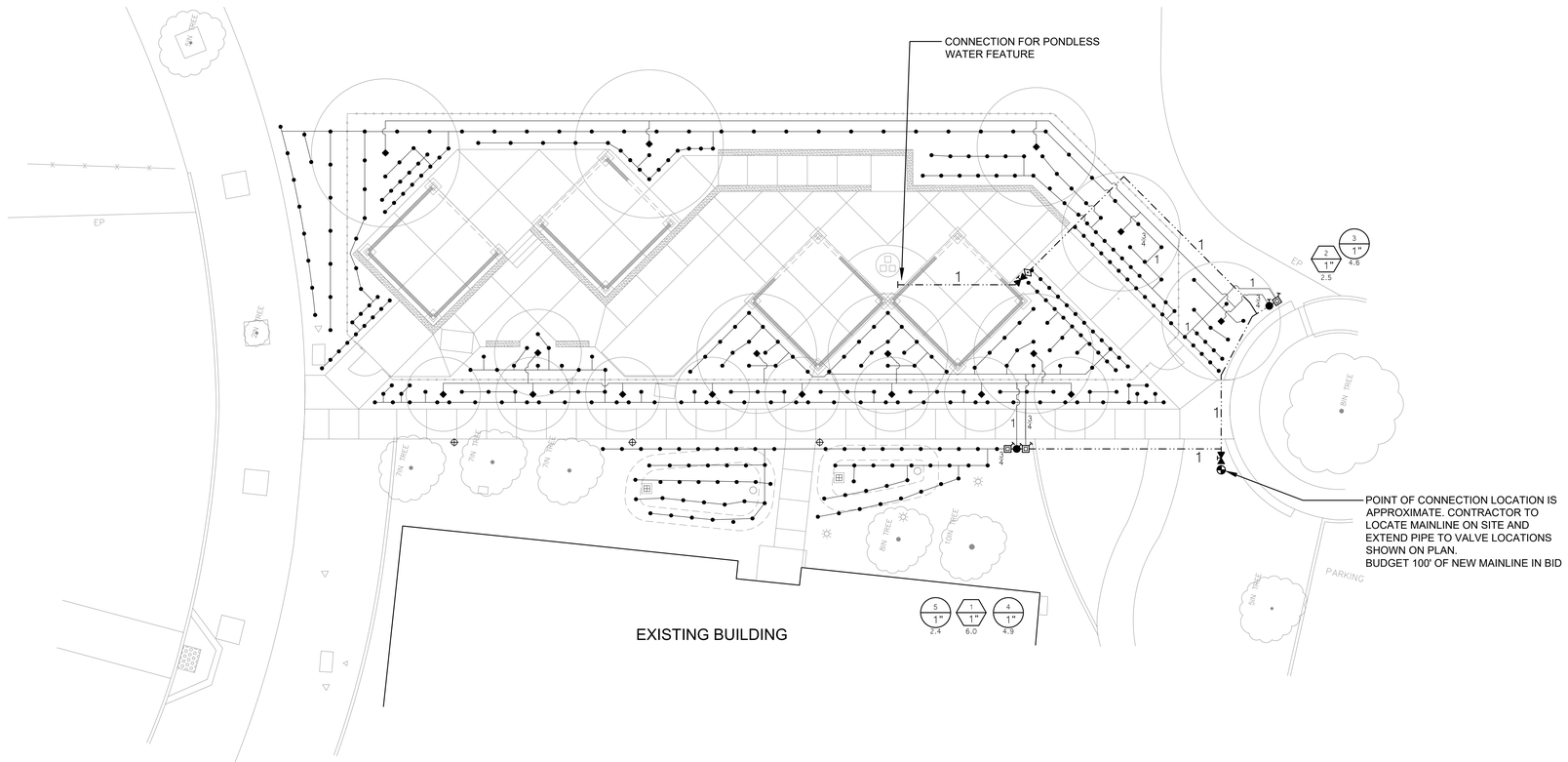
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SPRINKLER IRRIGATION NOTES

1. COMPOSITE BASE SHEET: PROPOSED IMPROVEMENTS SHOWN ON DRAWINGS ARE SUPERIMPOSED ON A COMPOSITE BASE SHEET. THE COMPOSITE BASE SHEET IS A COMPILATION OF ARCHITECTURAL, ENGINEERING, AND OTHER DATA THAT IS PROVIDED. THE LANDSCAPE ARCHITECT SHALL NOT BE HELD LIABLE FOR CHANGES, INACCURACIES, OMISSIONS, OR ERRORS PERTAINING TO THE COMPOSITE BASE SHEET. CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING THESE DOCUMENTS. ANY DISCREPANCIES NEED TO BE BROUGHT TO THE ATTENTION OF THE DESIGN TEAM AND RESOLVED PRIOR TO CONTINUATION OF WORK.
2. DESIGN PRESSURE SHOWN ON PLANS HAS BEEN FURNISHED BY WATER COMPANY OR WATER DISTRICT SERVING SITE. VERIFY PRESSURE ON-SITE PRIOR TO THE INSTALLATION OF ANY SPRINKLER IRRIGATION EQUIPMENT. IF THERE IS A DISCREPANCY, NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY IN WRITING SO ADJUSTMENTS CAN BE MADE BY LANDSCAPE ARCHITECT. FAILURE TO REPORT DISCREPANCIES AND CONTINUANCE OF WORK WILL RESULT IN ALL RE-DESIGN COSTS BEING CHARGED TO CONTRACTOR.
3. DETERMINE LOCATION OF UNDERGROUND UTILITIES. DAMAGE CAUSED BY INSTALLATION OF THIS WORK SHALL BE REPAIRED TO SATISFACTION OF GOVERNING AGENCY OR OWNER AT NO ADDITIONAL COST TO THE CONTRACT.
4. SPRINKLER OVER SPRAY SHALL NOT BE ALLOWED ON PUBLIC SIDEWALKS, BUILDING WALLS OR FENCES. MINIMUM OVERSPRAY MAY OCCUR IN PARKING AREAS. USE ADJUSTABLE NOZZLES WHENEVER POSSIBLE TO CONTROL SPRINKLER OVERSPRAY.
5. ALL LOCAL CODES AND ORDINANCES SHALL BE COMPLIED WITH. IF THERE IS A CONFLICT, NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY.
6. TESTING:
   A. PRESSURE TEST ALL UNDERGROUND PIPING AS FOLLOWS:
      SYSTEMS WITH BOOSTER PUMP:
      MAIN LINE - AT 100 PSI FOR 4 HOURS.
      LATERAL LINES - AT 100 PSI FOR 2 HOURS.
      SYSTEMS WITH OUT BOOSTER PUMP:
      MAIN LINE - AT STATIC PSI FOR 4 HOURS.
      LATERAL LINES - AT STATIC PSI FOR 2 HOURS.
   B. COVERAGE TEST: NOTE: PRIOR TO REQUESTING COVERAGE TEST, INSURE ALL HEADS ARE SET PLUMB, NOZZLES ARE ADJUSTED PROPERLY AND SYSTEM HAS BEEN CHECKED FOR AUTOMATION. REQUEST OWNER'S REPRESENTATIVES PRESENCE ON-SITE WHEN SPRINKLER SYSTEM IS COMPLETELY INSTALLED AND FULLY AUTOMATIC. PROVIDE ADEQUATE PERSONNEL AT THIS MEETING TO ADJUST AND FINE TUNE SYSTEM TO SATISFACTION OF OWNER'S REPRESENTATIVE.
7. LAYOUT ALL WORK PRIOR TO TRENCHING OPERATIONS TO DETERMINE IF MINOR MODIFICATIONS OR ADJUSTMENTS WILL BE REQUIRED.
8. INSTALL ALL SPRINKLER HEADS PERPENDICULAR TO SLOPES OR GRADE.
9. CONTROL WIRE SHALL BE UF-14, COLOR FOR LEAD AND WHITE FOR COMMON. SPLICES SHALL BE PERMITTED AT VALVE BOX LOCATIONS ONLY.
10. PROVIDE AND INSTALL AUTOMATIC CONTROLLER AND UF-14 CONTROL WIRE. ELECTRICAL SUBCONTRACTOR SHALL PROVIDE 110V SERVICE AND SERVICE HOOKUP FROM POWER SOURCE TO AUTOMATIC CONTROLLER.
11. COORDINATE ALL WORK WITH OTHER TRADES SO PROGRESS OF WORK IS NOT INTERRUPTED AND CAN BE COMPLETED IN A TIMELY MANNER.
12. NO PLANTING SHALL BE STARTED UNTIL ALL SPRINKLER WORK HAS BEEN TESTED AND APPROVED IN PRESENCE OF OWNER'S REPRESENTATIVE.
13. FOR SPRINKLER IRRIGATION INSTALLATION DETAILS, SEE SHEET NO. L4.3.

KEY / SPRINKLER IRRIGATION LEGEND

POINT OF CONNECTION:
IRRIGATION SYSTEM OPERATING WATER PRESSURE: 30 PSI
MAXIMUM FLOW IS 6 GPM

CONTRACTOR SHALL LOCATE EXISTING IRRIGATION MAINLINE
CONNECT AT THIS POINT AND EXTEND AS INDICATED ON DRAWINGS.

GATE VALVE:
TYPE:
LEEMCO LGT SERIES STAINLESS STEEL THREADED WITH A NON-RISING STEM AND HANDWHEEL.

GATE VALVE INSTALLED IN A VALVE BOX WITH TOP OF BOX SET FLUSH TO FINISH GRADE.
GATE VALVE TO BE LINE SIZE.

PRESSURE MAIN LINE:
TYPE:
ASTM D1785, PVC SCHEDULE 40.

TRENCH DEPTH:
IN PLANTED AREAS: 24" MINIMUM COVER.
UNDER PAVED AREAS: 24" MINIMUM COVER.
PVC SCHEDULE 40 SLEEVES ARE REQUIRED FOR ALL PIPING UNDER PAVEMENT.

LATERAL LINE:
TYPE:
ASTM D1785, PVC SCHEDULE 40, SOLVENT WELD ALL UNSIZED PIPE SHALL BE 3/4" SIZE.
TRENCH DEPTH:
IN PLANTED AREAS:
ROTOR HEADS: - 18" MINIMUM COVER.
BUBBLER HEADS: - 12" MINIMUM COVER.
UNDER PAVED AREAS: 24" MINIMUM COVER.
PVC SCHEDULE 40 SLEEVES ARE REQUIRED FOR ALL PIPING UNDER PAVEMENT.

KEY / SPRINKLER IRRIGATION LEGEND

AUTOMATIC CONTROL VALVE:
TORO P220-27 SERIES WITH EZREG PRESSURE REGULATOR.

AUTOMATIC DRIP IRRIGATION VALVE/FILTER/PRESSURE REGULATOR:
TORO DRIP ZONE VALVE KIT 700DK-075-LF.

QUICK COUPLER VALVE:
RAINBIRD 44NP OR APPROVED EQUAL.
VALVES SHALL HAVE LOCKING RUBBER COVERS, INSTALLED IN VALVE BOXES. TOP OF VALVE BOX SHALL HAVE BOLT DOWN LID AND TOP SET LEVEL TO FINISH GRADE.

TREE BUBBLER HEADS (TWO HEADS PER SYMBOL):
HUNTER ROOT ZONE WATERING SYSTEM RZWS-18-50-CV.

SHRUB BUBBLER:
HUNTER HEB-20 EMITTER WITH SCREEN CV.

A2 / 3/4" / 00 — INDICATES CONTROL VALVE AND STATION NUMBER
A1 / 1" / 0.00 — INDICATES CONTROL VALVE SIZE
INDICATES GALLONS PER MINUTE

10' 5' 0 10' 20'
SCALE: 1"= 10'-0"

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LANDSCAPE ARCHITECT — 7/21/23 — 6/30/24 — STATE OF CALIFORNIA

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Project
TENANT IMPROVEMENTS

Sheet Title
LANDSCAPE IRRIGATION PLAN

Client Project Number: N/A

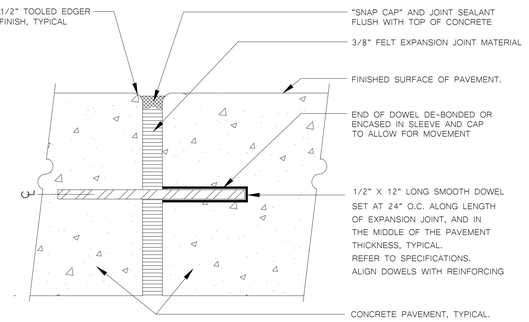
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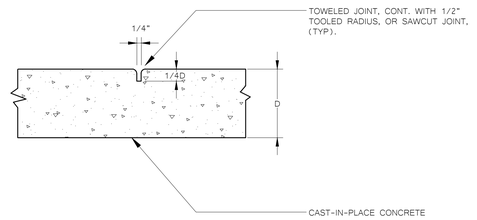
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IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY

NOTE:
1. REFER TO PLANS OR SPECIFICATIONS FOR LOCATIONS OF EXPANSION JOINTS, TYPICAL.
2. PROVIDE EXPANSION JOINTS BETWEEN CONCRETE AND RETAINING WALLS OR CURBS, TYPICAL.
2. PROVIDE EXPANSION JOINTS BETWEEN NEW CONCRETE AND EXISTING OR ADJACENT CONCRETE, TYPICAL.

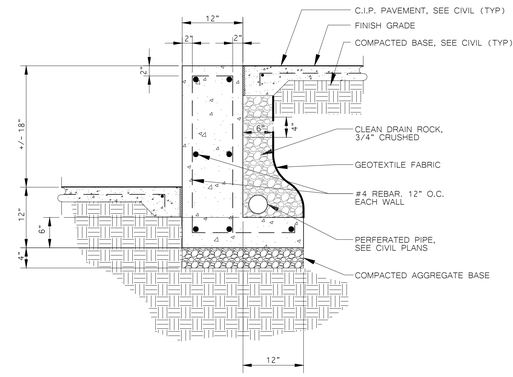


1 EXPANSION JOINT DETAIL



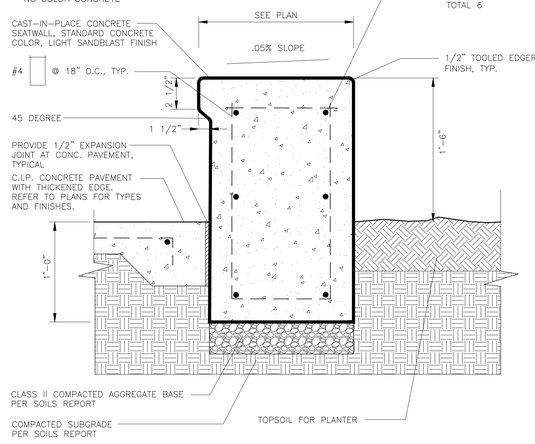
2 SCORE JOINT DETAIL

1. WALL FINISH TO BE HORIZONTAL 1"X3" BOARD FORM PATTERN, NO COLOR CONCRETE



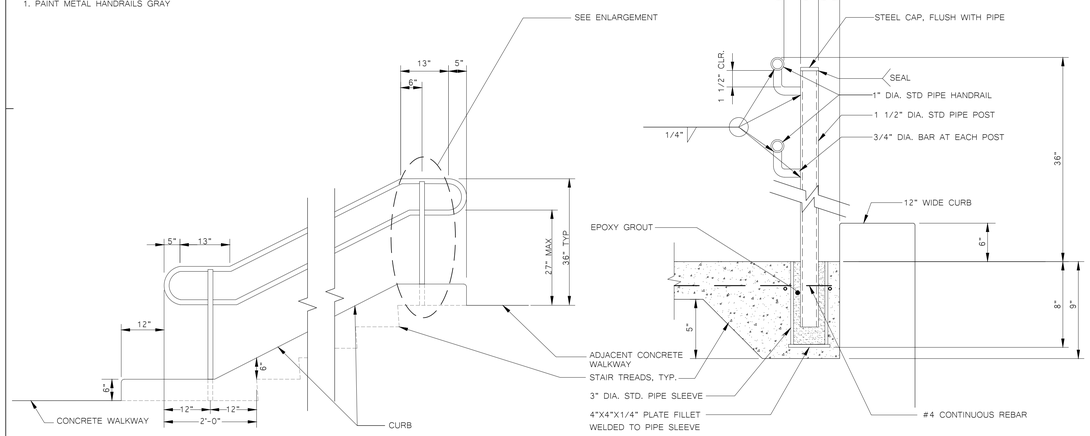
3 18" TALL BOARD FORM CONCRETE LANDSCAPE WALL

NOTE:
1. WALL FINISH TO BE HORIZONTAL 1"X3" BOARD FORM PATTERN, NO COLOR CONCRETE

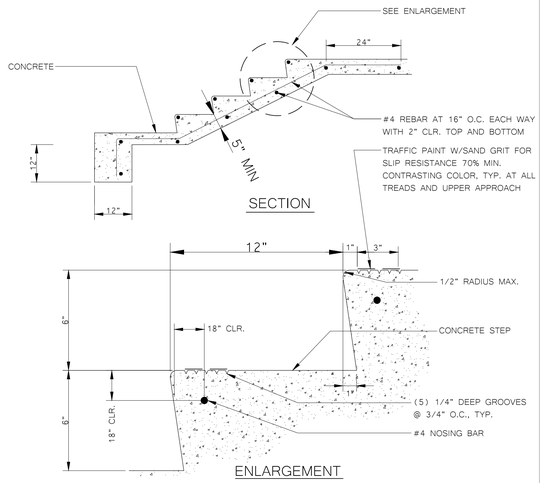


4 CAST-IN-PLACE CONCRETE SEATWALL

NOTE:
1. PAINT METAL HANDRAILS GRAY

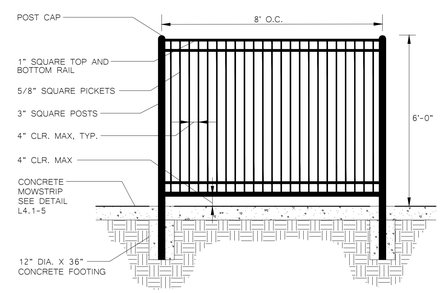


5 HANDRAIL AT STAIRS INSTALLATION DETAIL

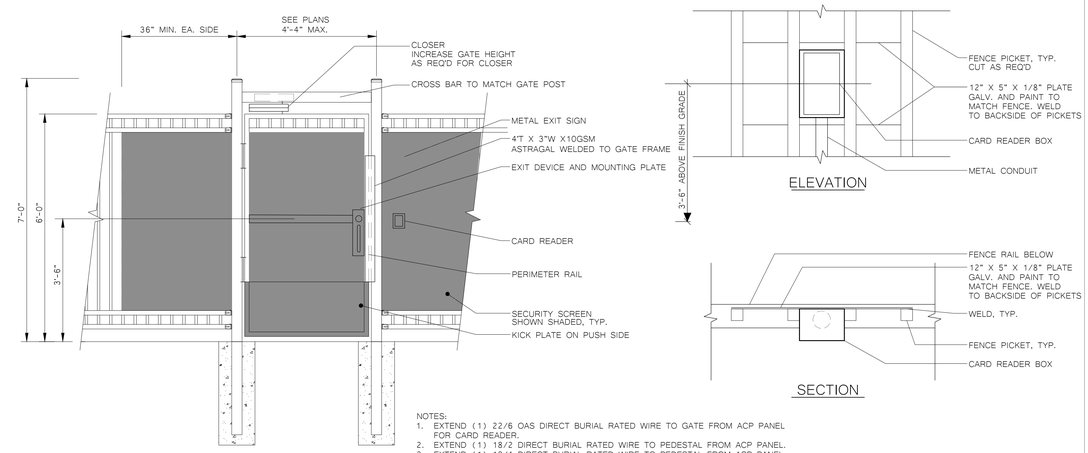


6 STAIRS SECTION AND NOSING DETAIL

NOTES:
1. BLACK POWDER COATED ORNAMENTAL IRON WITH 5/8" SQUARE PICKETS AND 3" SQUARE POSTS. THE OVERALL HEIGHT IS 6'.



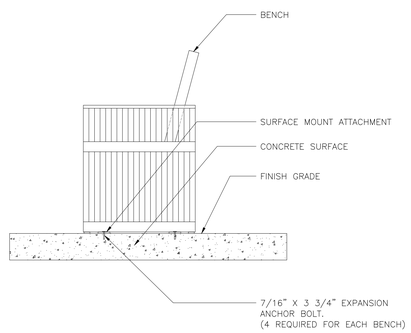
7 ORNAMENTAL METAL FENCE



NOTES:
1. EXTEND (1) 22/6 OAS DIRECT BURIAL RATED WIRE TO GATE FROM ACP PANEL FOR CARD READER.
2. EXTEND (1) 18/2 DIRECT BURIAL RATED WIRE TO PEDESTAL FROM ACP PANEL.
2. EXTEND (1) 18/4 DIRECT BURIAL RATED WIRE TO PEDESTAL FROM ACP PANEL.
3. SEE ELECTRICAL PLANS FOR CONDUIT PATH

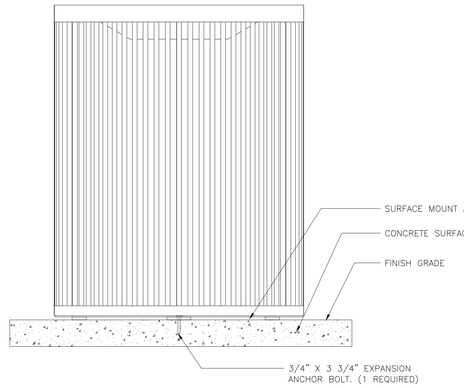
8 DECORATIVE METAL FENCE MAN GATE DETAIL

NOTE:
1. CONTRACTOR TO FOLLOW INSTALLATION INSTRUCTION PROVIDED BY MANUFACTURER.



9 BENCH SURFACE-MOUNT DETAIL

NOTE:
1. REFER TO MANUFACTURER GUIDELINE FOR ASSEMBLY INSTRUCTION.



10 TRASH RECEPTACLE DETAIL

PCOE GOLD IN EDUCATION

Revisions

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MTW group
LANDSCAPE ARCHITECTURE AND PLANNING
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916 369-3990

CALIFORNIA LANDSCAPE ARCHITECTS AND LANDSCAPE CONTRACTORS ASSOCIATION
7/21/23
6/30/24
STATE OF CALIFORNIA

Peter D. Larimer C-5284

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HY Architects Project number: 6013

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Project
TENANT IMPROVEMENTS

Sheet Title
SITE INSTALLATION DETAILS

Client Project Number: N/A

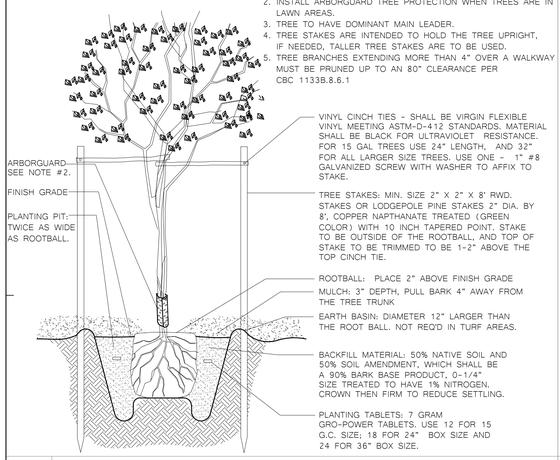
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NOTES:
1. VITAMIN B-1: SUPERTHRIVE, LIQUINOX START OR EQUAL. APPLY AS PER MANUFACTURER'S INSTRUCTIONS WITH THE SECOND WATERING OF THE BASIN.
2. INSTALL ARBORGUARD TREE PROTECTION WHEN TREES ARE IN LAWN AREAS.
3. TREE TO HAVE DOMINANT MAIN LEADER.
4. TREE STAKES ARE INTENDED TO HOLD THE TREE UPRIGHT, IF NEEDED, TALLER TREE STAKES ARE TO BE USED.
5. TREE BRANCHES EXTENDING MORE THAN 4" OVER A WALKWAY MUST BE PRUNED UP TO AN 80" CLEARANCE PER CBC 1133B.8.6.1



1 TREE PLANTING AND STAKING DETAIL

NOTE:
1. SEE TREE PLANTING DETAIL FOR ADDITIONAL INFORMATION.

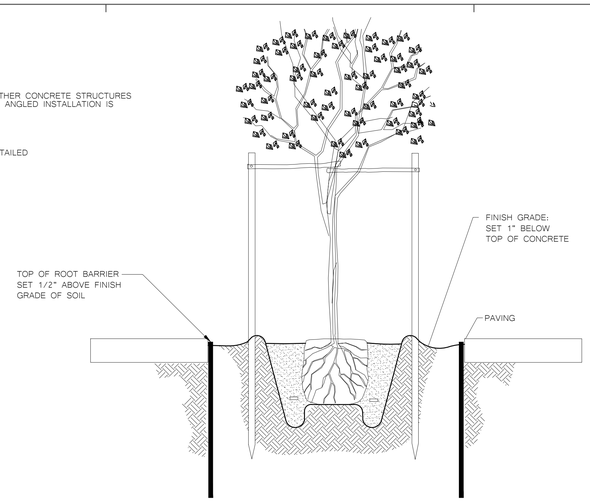
TREE ROOT BARRIER PROTECTION

1. CONTRACTOR TO REMOVE ALL CONCRETE SPOILS FROM FLATWORK, CURBS OR OTHER CONCRETE STRUCTURES TO ENSURE THE ROOT BARRIER IS ADJACENT TO THE CONCRETE AND VERTICAL. ANGLED INSTALLATION IS NOT ACCEPTABLE.
2. TREE SHALL BE LOCATED IN CENTER OR MIDPOINT OF PLANTER.
3. TREE ROOT BARRIER IS TO BE INSTALLED IN LOCATIONS SHOWN ON THE PLANS.
4. TREE ROOT BARRIER SHALL BE INSTALLED ADJACENT TO EDGE OF PAVING AS DETAILED
5. PLACE ROOT BARRIER SO THAT VERTICAL RIBS FACE TOWARD THE TREE.

ROOT BARRIER

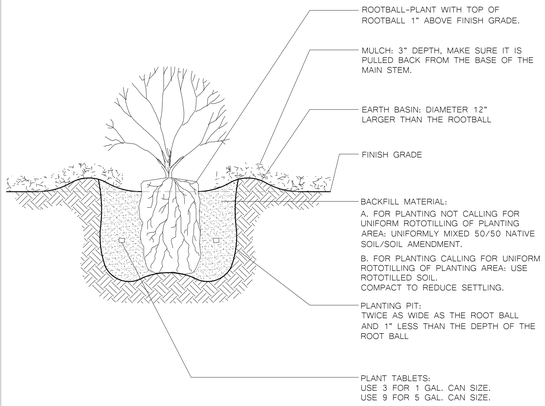
BY: DEEP ROOT PARTNERS OR NDS INC. OR APPROVED EQ.

15 GAL SIZE TREE OR LARGER:
24" MODULAR ROOT BARRIER PANEL



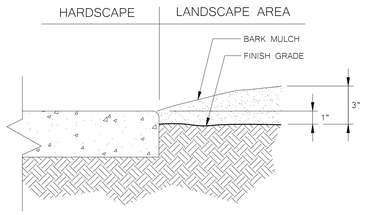
2 ROOT BARRIER CONTROL DETAIL

NOTE: VITAMIN B-1 SUPERTHRIVE LIQUINOX OR EQUAL. APPLY AS PER MANUFACTURE'S INSTRUCTIONS WITH SECOND WATERING OF THE BASIN.



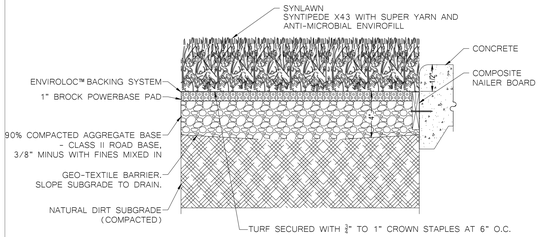
3 SHRUB PLANTING DETAIL

NOTES:
1. FINISH GRADE OF SOIL TO BE 1" BELOW ADJACENT HARDSCAPE FOR BOTH LAWN AREAS AND PLANTER BED AREAS
2. BARK MULCH DEPTH DOES NOT DICTATE THE ELEVATION OF THE FINISH GRADE
3. BARK MULCH TO BE FEATHERED DOWN TO 1" DEPTH, 12" FROM EDGE OF HARDSCAPE



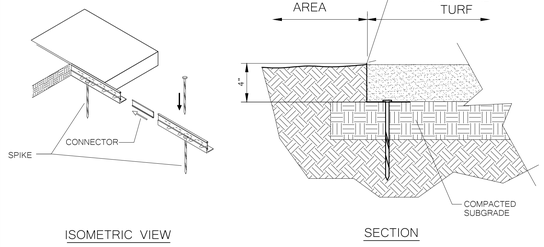
4 LANDSCAPE GRADE ADJACENT TO HARDSCAPE DETAIL

NOTE:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH SPECIFICATIONS BY FACTORY AUTHORIZED INSTALLERS.
2. GLUE TO BE SYNLAWN TURFGLUE 2K, 2 PART POLYURETHANE BASED TURF ADHESIVE. VERIFY BACKING CUSHION COMPATIBILITY WITH MANUFACTURER.
3. GRASS MUST BE INSTALLED AND SEAMED WITH ADJACENT PIECES RUNNING IN THE SAME DIRECTION.



5 ARTIFICIAL TURF DETAIL

NOTES:
1. INSTALL PER MANUFACTURER'S "INSTALLATION GUIDELINES"
2. 8'-0" SECTIONS CONNECTED WITH 4" SLIDING CONNECTOR.
3. CORNERS: NOTCH BASE ONLY AND FORM A CONTINUOUS CORNER
4. PERMALOC ASPHALT EDGE AS MANUFACTURED BY PERMALOC CORPORATION, HOLLAND MI. (800) 356-9660 FOR PRODUCT AND PURCHASING INFORMATION VISIT: WWW.PERMALOC.COM
5. FINISH TO BE (MF) MILL FINISH-NATURAL ALUMINUM
6. SIZE TO BE 4" X 3"



ISOMETRIC VIEW

SECTION

6 METAL EDGING DETAIL

PCOE GOLD IN EDUCATION

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LANDSCAPE ARCHITECT — PETER D. LARIMER — No. 5284 — 7/21/23 — 6/30/24 — STATE OF CALIFORNIA

Peter D. Larimer C-5284

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Project
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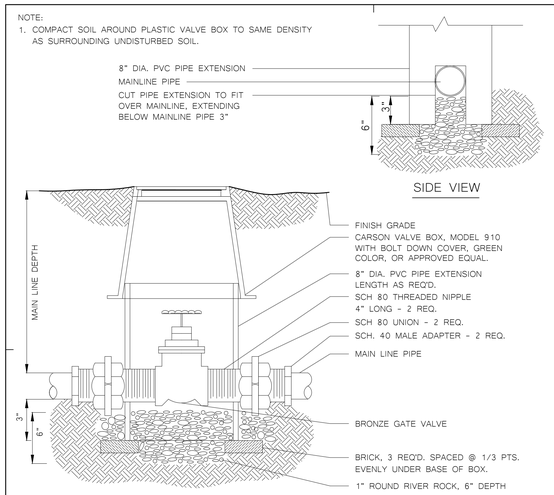
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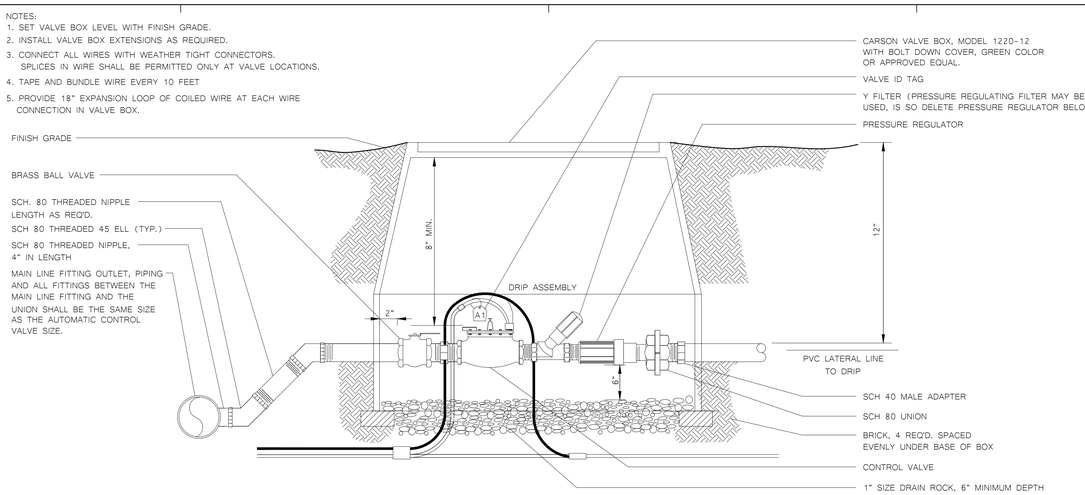
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NOTE:
1. COMPACT SOIL AROUND PLASTIC VALVE BOX TO SAME DENSITY AS SURROUNDING UNDISTURBED SOIL.

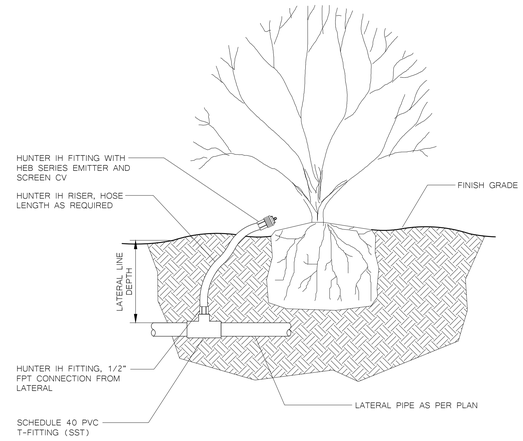


1 GATE VALVE DETAIL, 3" SIZE AND SMALLER

NOTES:
1. SET VALVE BOX LEVEL WITH FINISH GRADE.
2. INSTALL VALVE BOX EXTENSIONS AS REQUIRED.
3. CONNECT ALL WIRES WITH WEATHER TIGHT CONNECTORS. SPLICES IN WIRE SHALL BE PERMITTED ONLY AT VALVE LOCATIONS.
4. TAPE AND BUNDLE WIRE EVERY 10 FEET
5. PROVIDE 18" EXPANSION LOOP OF COILED WIRE AT EACH WIRE CONNECTION IN VALVE BOX.

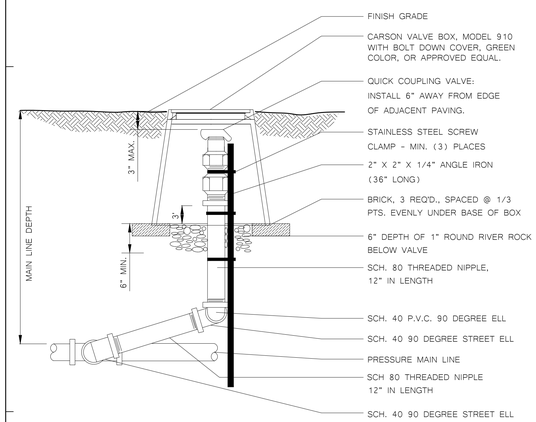


2 PRESSURE REGULATOR DRIP IRRIGATION VALVE DETAIL



3 SHRUB BUBBLER DETAIL

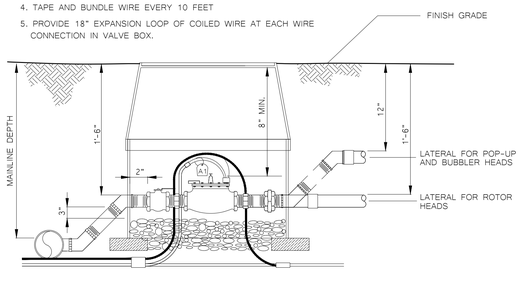
NOTES:
1. INSTALL VALVE BOXES SO THAT THE TOP OF THE BOX IS FLUSH WITH THE TOP OF ADJACENT SURFACE.
2. USE TEFLON TAPE ON ALL THREADED CONNECTIONS.



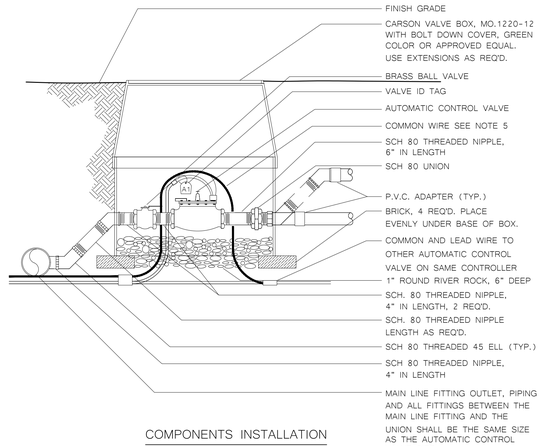
4 QUICK COUPLING VALVE DETAIL

NOTES:
1. SET VALVE BOX LEVEL WITH FINISH GRADE.
2. INSTALL VALVE BOX EXTENSIONS AS REQUIRED.
3. CONNECT ALL WIRES WITH WEATHER TIGHT CONNECTORS. SPLICES IN WIRE SHALL BE PERMITTED ONLY AT VALVE LOCATIONS.
4. TAPE AND BUNDLE WIRE EVERY 10 FEET
5. PROVIDE 18" EXPANSION LOOP OF COILED WIRE AT EACH WIRE CONNECTION IN VALVE BOX.
6. FOR VALVES WITH PRESSURE REGULATION FEATURE, SET VALVE PRESSURE AS PER MANUFACTURERS RECOMMENDATIONS TO THE PRESSURE AS FOLLOWS:

POP-UP SPRAY HEADS:	30 PSI
INTERMEDIATE POP-UP ROTOR HEADS:	50 PSI
POP-UP ROTOR HEADS:	70 PSI
BUBBLER HEADS:	30 PSI



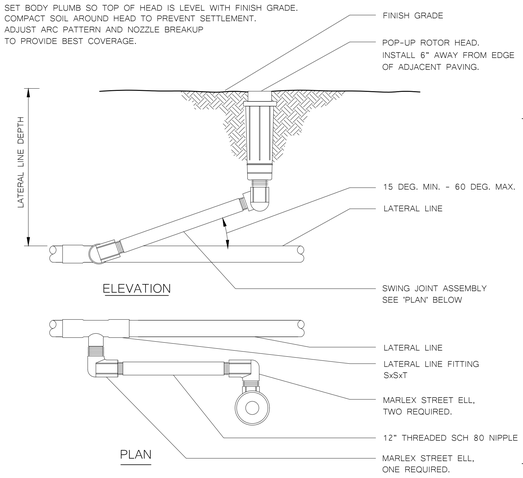
VALVE BOX, SETTINGS, AND CLEARANCES



COMPONENTS INSTALLATION

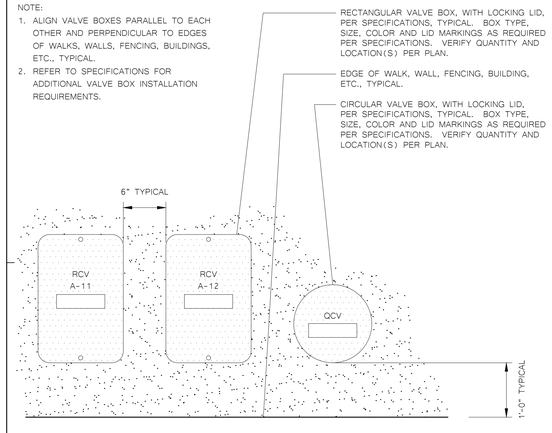
5 AUTOMATIC CONTROL VALVE/BALL VALVE DETAIL

NOTES:
1. SET BODY PLUMB SO TOP OF HEAD IS LEVEL WITH FINISH GRADE.
2. COMPACT SOIL AROUND HEAD TO PREVENT SETTLEMENT.
3. ADJUST ARC PATTERN AND NOZZLE BREAKUP TO PROVIDE BEST COVERAGE.



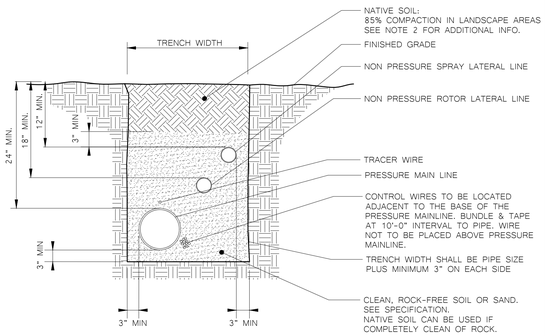
6 POP-UP ROTOR HEAD DETAIL

NOTE:
1. ALIGN VALVE BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGES OF WALKS, WALLS, FENCING, BUILDINGS, ETC., TYPICAL.
2. REFER TO SPECIFICATIONS FOR ADDITIONAL VALVE BOX INSTALLATION REQUIREMENTS.



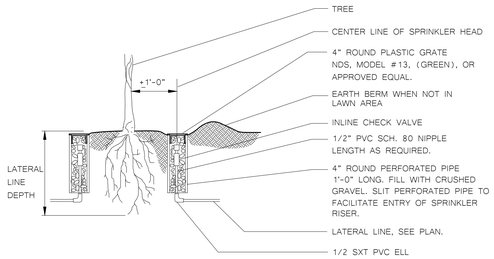
7 TYPICAL VALVE BOX LAYOUT

NOTES:
1. REFER TO SPECIFICATIONS AND PLAN SHEETS FOR MORE INFORMATION.
2. WHEN TRENCHES ARE LOCATED UNDER PAVEMENT, COMPACTION RATE FOR THE BACKFILL SHALL COMPLY WITH THE COMPACTION RATES REQUIRED FOR THOSE PAVING SECTIONS.
3. PIPES TO HAVE A MINIMUM OF 6" HORIZONTAL SEPARATION WHEN PLACED IN THE SAME TRENCH ALONG WITH A MINIMUM OF 6" VERTICAL SEPARATION BETWEEN PIPES.



8 PIPE TRENCH DETAIL

NOTES:
1. A SWING JOINT ASSEMBLY IS NOT REQUIRED FOR THIS INSTALLATION.
2. SEE TREE PLANTING DETAIL FOR ADDITIONAL INFORMATION.



9 TREE BUBBLER HEAD DETAIL

PCOE GOLD IN EDUCATION

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Sheet **L4.3**

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0 5' 50'
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IRRIGATION SCHEDULE TABLE

STATION #/HYDROZONE	PLANT WATER USE TYPE	PLANT FACTOR (PF)	IRRIGATION TYPE	FLOW (GPM)	PRECIP. RATE (PR) INCH/HR	IRRIGATION EFFICIENCY (IE)	SOIL TYPE	ROOT DEPTH	SLOPE	EXPOSURE	MAINTENANCE PERIOD (X/Y Z GAL) JANUARY	FEBUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMEBER	DECEMBER
1	TREE-MED	0.5	TREE BUBBLER	6.0	0.50	0.81	SANDY LOAM	12-24"	0-5%	FULL SUN	0 /1 0 GAL	0 /1 0 GAL	0 /1 0 GAL	32 /2 1,719 GAL	35 /3 2,750 GAL	28 /5 3,683 GAL	31 /5 4,125 GAL	22 /6 3,536 GAL	32 /3 2,554 GAL	50 /1 1,326 GAL	0 /1 0 GAL	0 /1 0 GAL
2	TREE-MED	0.5	TREE BUBBLER	2.5	0.50	0.81	SANDY LOAM	12-24"	0-5%	FULL SUN	0 /1 0 GAL	0 /1 0 GAL	0 /1 0 GAL	32 /2 716 GAL	35 /3 1,146 GAL	28 /5 1,535 GAL	31 /5 1,719 GAL	22 /6 1,473 GAL	32 /3 1,064 GAL	50 /1 553 GAL	0 /1 0 GAL	0 /1 0 GAL
3	SHRUB - LOW	0.2	POINT SOURCE DRIP	4.6	0.50	0.81	SANDY LOAM	12-24"	0-5%	FULL SUN	0 /1 0 GAL	0 /1 0 GAL	0 /1 0 GAL	13 /2 527 GAL	14 /3 843 GAL	11 /5 1,130 GAL	12 /5 1,265 GAL	9 /6 1,084 GAL	13 /3 783 GAL	20 /1 407 GAL	0 /1 0 GAL	0 /1 0 GAL
4	SHRUB - LOW	0.2	POINT SOURCE DRIP	4.9	0.50	0.81	SANDY LOAM	12-24"	0-5%	FULL SUN	0 /1 0 GAL	0 /1 0 GAL	0 /1 0 GAL	13 /2 562 GAL	14 /3 898 GAL	11 /5 1,203 GAL	12 /5 1,348 GAL	9 /6 1,155 GAL	13 /3 834 GAL	20 /1 433 GAL	0 /1 0 GAL	0 /1 0 GAL
5	SHRUB - LOW	0.2	POINT SOURCE DRIP	2.4	0.50	0.81	SANDY LOAM	12-24"	0-5%	FULL SUN	0 /1 0 GAL	0 /1 0 GAL	0 /1 0 GAL	13 /2 275 GAL	14 /3 440 GAL	11 /5 589 GAL	12 /5 660 GAL	9 /6 566 GAL	13 /3 409 GAL	20 /1 212 GAL	0 /1 0 GAL	0 /1 0 GAL
MONTHLY RAINFALL (CITY)											4.2	3.8	3.1	1.2	0.6	0.2	0.1	0.1	0.4	1	2.6	2.8
MONTHLY ET (CITY)											1.1 JAN	1.7 FEB	3.1 MAR	4.7 APR	6.2 MAY	7.7 JUN	8.5 JUL	7.3 AUG	5.6 SEP	3.7 OCT	1.7 NOV	1.0 DEC
MONTHLY TOTALS (GAL)											0 GAL	0 GAL	0 GAL	3,799 GAL	6,078 GAL	8,140 GAL	9,117 GAL	7,815 GAL	5,644 GAL	2,930 GAL	0 GAL	0 GAL

IRRIGATION HYDROZONE INFORMATION TABLE

STATION #/HYDROZONE	PLANT WATER USE TYPE	PLANT FACTOR (PF)	HYDROZONE AREA (HA) (SQ.FT.)	PF x HA (SQ.FT.)	IRRIGATION EFFICIENCY (IE)	ETWU (GALLONS)
1	TREE-MED	0.5	50	25.0	0.81	993
2	TREE-MED	0.5	120	60.0	0.81	2,384
3	SHRUB - LOW	0.2	2,086	417.2	0.81	16,574
4	SHRUB - LOW	0.2	1,453	290.6	0.81	11,544
5	SHRUB - LOW	0.2	616	123.2	0.81	4,894
		TOTAL AREA	4,325		ETWU TOTAL	36,389
		TOTAL AREA (SLA)				
Eto (Rocklin)	51.9					
ESTIMATED TOTAL WATER USAGE (ETWU) = (ETo)(0.62)(PF)(HA)/IE+SLA) = GAL/YEAR						
MAXIMUM APPLIED WATER ALLOWANCE (MAWA) = (ETo)(0.62)[(0.45 x LA)+(0.55 x SLA)] = GAL/YEAR						
					MAWA TOTAL	62,626

Plant Water Use Type		Plant Factor
Very Low		0 - 0.1
Low		0.2 - 0.3
Medium		0.4 - 0.6
High		0.7 - 1.0
SLA		1.0
Irrigation Efficiency		**IE**
Overhead		0.75
Drip		0.81

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Revisions

	Revisions	By

AGENCY APPROVAL

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ISSUE DATE: 7/21/23 BY: BG

23-23

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Project
TENANT IMPROVEMENTS

Sheet Title
WATER EFFICIENCY CHARTS AND CALCULATIONS

Client Project Number: N/A

Scale:
Drawn By: AC/PL
Checked By: PL
Issue Date: July 21, 2023
Revit Version:

Sheet
L5.1
Sheet of

Annex Building Alterations @ 365 Nevada Street in Auburn, CA

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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ANNEX BUILDING ALTERATIONS

365 NEVADA STREET AUBURN, CA 95603

GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF GOVERNING CODES LISTED IN "APPLICABLE CODES" AND ALL GOVERNING LOCAL CODES AND REGULATIONS.
2. THE OWNER / ARCHITECT HAVE OBTAINED APPROVAL OF THE PRIMARY AUTHORITY HAVING JURISDICTION (CITY BUILDING PERMIT). CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL OTHER REQUIRED PERMITS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
3. UNLESS STATED OTHERWISE IN THE SPECIFICATIONS, SPECIAL INSPECTION IS REQUIRED FOR SHOP AND FIELD STRUCTURAL WELDING.
4. WHERE INCORPORATED IN THE CONSTRUCTION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN COPIES OF HCAI OR DSA PRE-APPROVALS FOR PRE-APPROVED ITEMS OR SYSTEMS INCORPORATED INTO THE CONSTRUCTION AND DISTRIBUTE TO OWNER'S REPRESENTATIVE, ARCHITECT AND INSPECTOR.
5. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO FURNISH AND AND INSTALL ALL MATERIALS AND WORK DESCRIBED, DEPICTED OR DETAILED WITHIN THESE DOCUMENTS REGARDLESS OF THE LOCATION OF THAT MATERIAL OR WORK WITHIN THE DOCUMENTS OR OMISSION (WHETHER DELIBERATE OR ACCIDENTAL) OF THAT MATERIAL OR WORK BY A SUBCONTRACTOR ON HIS/HER BID.
6. THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL CONSIDER THESE DOCUMENTS IN THEIR ENTIRETY. DISCREPANCIES OR CONTRADICTIONS BETWEEN PORTIONS OF THESE DOCUMENTS MUST BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AT LEAST 72 HOURS PRIOR TO BID OPENING FOR CLARIFICATION. OTHERWISE, THE MOST RESTRICTIVE REQUIREMENT SHALL BE IN FORCE AT NO ADDITIONAL COST TO THE OWNER.
7. THE CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR THE SAFETY OF ALL PERSONS ON OR ABOUT THE CONSTRUCTION SITE, IN ACCORDANCE WITH APPLICABLE LAWS AND CODES. CONTRACTOR ESTABLISH PROCEDURES TO ASSURE ALL PERSONS ENTERING A POSSIBLY HAZARDOUS AREA, INCLUDING WORKERS, SUBCONTRACTORS, OTHER CONTRACTORS, VISTORS, AND OTHERS ARE AWARE OF APPROPRIATE / REQUIRED SAFETY PROCEDURES. COMPLY WITH LOCAL, STATE, AND FEDERAL SAFETY STANDARDS, INCLUDING OSHA REQUIREMENTS AND WITH THE SAFETY PROVISIONS OF THE LATEST MANUAL OF ACCIDENT PREVENTION PUBLISHED BY THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA.
8. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING TEMPORARY FENCING AND GATES, SIGNAGE, SECURITY LIGHTING OR OTHER SECURITY AND CONTROL MEASURES NECESSARY TO PROVIDE FOR THE SAFETY OF THE PUBLIC AND FACILITY USERS UNTIL THE COMPLETION OF THE WORK.
9. THE CONTRACTOR IS RESPONSIBLE TO FOR PROTECTION OF ADJACENT PROPERTY AND SHALL REPAIR AND / OR REPLACE ALL PROPERTY DAMAGED DURING THE COURSE ON THE WORK.
10. THE CONTRACTOR SHALL LIMIT HIS / HER ACTIVITY TO THE AREA DESCRIBED WITHIN THE DOCUMENTS UNLESS OTHERWISE PERMITTED BY THE OWNER'S REPRESENTATIVE.
11. THE CONTRACTOR IS RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF ANY ITEMS DAMAGED OR DISTURBED DURING THE COURSE OF THE WORK. INSTALLATION SHALL MATCH EXISTING IN KIND, QUALITY, AND PERFORMANCE.
12. WHERE EXISTING CONSTRUCTION AND FINISHES ARE CUT, DAMAGED, OR REMODELED, PATCH WITH MATERIALS TO MATCH IN KIND, QUALITY, PERFORMANCE CHARACTERISTICS, AND APPEARANCE.
13. ALL DIMENSIONS ARE TO FACE OF STUD, UNLESS OTHERWISE NOTED. DIMENSIONS NOTED AS "CLR" MEAN CLEAR DIMENSION TO FACE OF FINISH. VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES FOUND.
14. VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS. NOTIFY ARCHITECT OF ANY DISCREPANCIES FOUND. VERIFY DIMENSIONS OF ALL OWNER-FURNISHED ITEMS, INCLUDING FURNITURE AND EQUIPMENT, TO ENSURE PROPER COORDINATION WITH CONSTRUCTION.
15. ALL ITEMS IN THESE DRAWINGS ARE NEW UNLESS OTHERWISE NOTED.
16. ALL UTILITIES REQUIRED FOR THE CONTINUOUS OPERATION OF ALL OCCUPIED EXISTING FACILITIES SHALL BE MAINTAINED IN SERVICE AT ALL TIMES. ANY SHUT DOWNS FOR NEW CONNECTIONS MUST BE COORDINATED WITH THE OWNER'S REPRESENTATIVE TWO WEEKS PRIOR TO THE REQUESTED SHUT DOWN.
17. COORDINATION WITH OTHER CONTRACTS: IF ANY PART OF THIS CONTRACTOR'S WORK DEPENDS UPON THE WORK OF A SEPARATE CONTRACTOR, THIS CONTRACTOR SHALL INSPECT SUCH OTHER WORK AND PROMPTLY REPORT IN WRITING TO THE OWNER'S REPRESENTATIVE ANY DEFECTS IN SUCH OTHER WORK THAT RENDER IT UNSUITABLE TO RECEIVE THE WORK OF THIS CONTRACTOR. FAILURE OF THIS CONTRACTOR TO SO INSPECT AND REPORT SHALL CONSTITUTE AN ACCEPTANCE OF THE OTHER CONTRACTOR'S WORK, EXCEPT AS TO DEFECTS WHICH MAY DEVELOP IN OTHER CONTRACTOR'S WORK AFTER EXECUTION OF THIS CONTRACTOR'S WORK.
18. COORDINATION OF SCHEDULE: PORTIONS OF THIS WORK MAY BE REQUIRED TO BE COMPLETED ON SCHEDULE IN ORDER TO AVOID DELAY TO OTHER CONTRACTORS OR OWNERS OPERATIONS. CONTRACTOR SHALL STRICTLY ADHER TO ESTABLISHED COMPLETION DATES AS DESIGNATED IN THE SPECIFICATIONS AND COORDINATE WORK SCHEDULE WITH THE OWNER'S REPRESENTATIVE AND OTHER CONTRACTORS. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND LIQUIDATED DAMAGES.
19. SCHEDULE ALL WORK WITH THE OWNER'S REPRESENTATIVE, INCLUDING CONSTRUCTION ACCESS AND STORAGE, AND WORK OUTSIDE THE "EXTENT OF WORK" SET FORTH IN THESE DOCUMENTS. THE CONSTRUCTION SCHEDULE SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO THE START OF CONSTRUCTION.
20. CONSTRUCTION PROCEDURES SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO THE START OF CONSTRUCTION.
21. DEMOLITION IS NOT NECESSARILY LIMITED TO ONLY WHAT IS SHOWN ON THIS OR OTHER DRAWINGS OR AS OUTLINED IN THE SPECIFICATIONS. THE INTENT IS TO INDICATE GENERAL SCOPE OF DEMOLITION REQUIRED. CONTRACTOR SHALL INCLUDE ALL MISCELLANEOUS DEMOLITON, CUTTING AND PATCHING REQUIRED TO COMPLETE THE PROJECT IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.
22. ALL ITEMS IDENTIFIED TO BE SALVAGED SHALL BE DELIVERED IN GOOD CONDITION TO A PLACE OF STORAGE AS DIRECTED BY THE OWNER'S REPRESENTATIVE. ALL OTHER ITEMS MUST BE DISPOSED OF OFF-SITE IN A LEGAL MANNER.
23. ARCHITECT IS NOT RESPONSIBLE FOR THE DISCOVERY, PRESENCE, HANDLING, REMOVAL OR DISPOSAL OF, OR EXPOSURE OF PERSONS TO, HAZARDOUS MATERIALS OR TOXIC SUBSTANCES IN ANY FORM AT THE PROJECT SITE. TO THE EXTENT THESE DOCUMENTS RELATE TO SUCH ISSUES, ARCHITECT'S PARTICIPATION IS SOLELY ADMINISTRATIVE WITHOUT ANY RESPONSIBILITY FOR THE CONTENT OR EXECUTION OF SUCH DOCUMENTS.
24. DETAIL DRAWINGS WITH REFERENCES TO FIRE-RATED ASSEMBLIES OR CONSTRUCTION WHICH HAVE BEEN TESTED BY UNDERWRITERS LABORATORIES, THE CALIFORNIA BUILDING CODE OR ANY OTHER APPROVED TESTING AGENCY, SHALL BE CONSTRUED TO INCLUDE ALL WORK AND PROCEDURES CONTAINED IN THE REFERENCED ASSEMBLY DESCRIPTION..
25. ALL PIPE AND DUCT PENETRATIONS THROUGH FIRE RATED CONSTRUCTION SHALL BE FIRE STOPPED AND SEALED TO MAINTAIN THE REQUIRED RATING.
26. CONTRACTOR TO MAINTAIN CONTEMPORANEOUSLY RECORDED "AS-BUILT" INFORMATION OF ALL WORK, WHICH SHALL BE MARKED IN COLOR ON THE DRAWINGS AND SPECIFICATIONS. A SCANNED PDF OF THE "AS-BUILT" DRAWINGS AND SPECIFICATIONS SHALL BE TURNED OVER TO THE OWNER'S REPRESENTATIVE PRIOR TO FINAL APPLICATION FOR PAYMENT. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
27. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION AND DUST COVERS ADJACENT TO OCCUPIED AREAS AS REQUIRED TO CONTAIN DUST AND DEBRIS WITHIN CONSTRUCTION AREA. BROOM CLEAN ALL AREAS, INLCUDING SIDEWALKS AND DRIVEWAYS EACH DAY. KEEP DIRT AND DUST TO A MINIMUM.
28. WORK SHALL BE EXECUTED IN A CAREFUL AND ORDERLY MANNER WITH THE LEAST POSSIBLE DISTURBANCE TO PUBLIC AND TO OCCUPANTS OF EXISTING BUILDING.
29. CLEAN ALL EXPOSED SURFACES AND NEW EQUIPMENT AFTER COMPLETION.

APPLICABLE CODES

ALL WORK PERFORMED UNDER THIS CONTRACT IS TO CONFORM TO THE FOLLOWING CODES AND REGULATIONS:

2022 CALIFORNIA BUILDING ADMINISTRATIVE CODE,
PART 1, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)

2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24, CCR BASED ON THE 2021 INTERNATIONAL BUILDING CODE (IBC) WITH 2021 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24, CCR BASED ON THE 2020 NATIONAL ELECTRICAL CODE (NEC) WITH 2020 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24, CCR BASED ON THE 2021 UNIFORM MECHANICAL CODE (UMC) WITH 2021 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24, CCR BASED ON THE 2021 UNIFORM PLUMBING CODE (UPC) WITH 2021 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA ENERGY EFFICIENCY STANDARDS (ENERGY CODE), PART 6, TITLE 24 CCR

2022 SAFETY CODE FOR ELEVATORS AND ESCALATORS
(ASME A17.1-2019)

2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24, CCR BASED ON THE 2021 INTERNATIONAL FIRE CODE (IFC) WITH 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA EXISTING BUILDING CODE, PART 10, TITLE 24 CCR
(2021 IEB CODE AND 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA GREEN BUILDING CODE (CALGreen), PART 11, TITLE 24, CCR

2022 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 CCR

TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

NFPA 13	INSTALLATION OF SPRINKLER SYSTEMS	2022 EDITION
NFPA 14	INSTALLATION OF STANDPIPE SYSTEMS	2019 EDITION
NFPA 17	STANDARD FOR DRY CHEMICAL EXTINGUISHING SYS.	2021 EDITION
NFPA 17A	STANDARD FOR WET CHEMICAL SYS.	2021 EDITION
NFPA 20	INSTALLATION OF STATIONARY PUMPS	2019 EDITION
NFPA 24	INSTALLATION OF PRIVATE FIRE MAINS	2019 EDITION
NFPA 72	NATIONAL FIRE ALARM AND SIGNALING CODE	2022 EDITION
NFPA 80	FIRE DOORS AND OTHER OPENING PROTECTIVES	2019 EDITION
NFPA 92	STANDARD FOR SMOKE CONTROL SYSTEMS	2018 EDITION
NFPA 253	CRITICAL RADIANT FLUX OF FLOOR COVERING SYS	2019 EDITION
NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEM	2018 EDITION

REFERENCE CODE SECTIONS FOR APPLICABLE STANDARDS - 2022 CBC CHAPTER 35 AND 2022 CFC CHAPTER 45

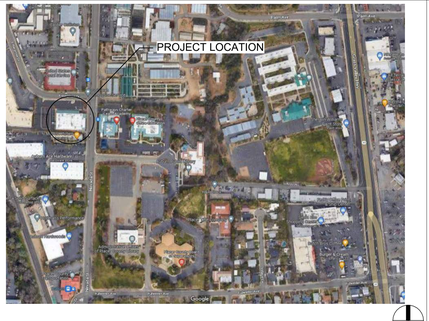
THE ABOVE CODES AND REGULATIONS REFER TO THE LATEST EDITION OR REVISION IN FORCE ON THE DATE OF THE CONTRACT, UNLESS OTHERWISE STATED. NOTHING ON THE DRAWINGS IS TO BE CONSTRUED AS REQUIRING OR PERMITTING WORK THAT IS CONTRARY TO THE LISTED CODES AND REGULATIONS, OR OTHER LOCAL, STATE OR FEDERAL CODES OR REGULATIONS WHICH MAY BE APPLICABLE.

COMPLIANCE WITH CFC CHAPTER 33, FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION, AND CBC CHAPTER 33, SAFETY DURING CONSTRUCTION WILL BE ENFORCED.

DEFERRED APPROVALS

1. FIRE SPRINKLERS

VICINITY MAP NO SCALE



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GOLDEN RIVER, CA 95670
CONTACT: BILL BEVIER

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2431 CAPITOL AVE
SACRAMENTO, CA 95816
CONTACT: JOHN THOMPSON

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M. NEILS ENGINEERING, INC. TEL. (916) 923-4400
100 HOWE AVENUE, SUITE 235N
SACRAMENTO, CA 95825
CONTACT: STUART LINDSAY

CIVIL
WARREN CONSULTING ENGINEERS, INC. TEL. (916) 985-1870
1117 WINDFIELD WAY, SUITE 110
EL DORADO HILLS, CA 95762
CONTACT: ANTHONY TASSANO

CODE SUMMARY

SITE

ZONING: M-1 / C-1
PARCEL NO.: APN 001-031-017-00

BUILDING

BUILDING AREA: 19,760 SF
OCCUPANCY: GROUPS B & S-1
CONSTRUCTION TYPE: V-B
FIRE PROTECTION: (E) AFSS
STORES: ONE STORY

SCOPE OF WORK

1. CONVERSION OF EXISTING OFFICE INTO SUPPLY STORAGE, SECURED VEHICLE PARKING, AND MAINTENANCE REPAIRS ROOM.
2. SECURED PARKING YARD ENCLOSURE FOR MAINTENANCE FLEET VEHICLES.

INDEX OF DRAWINGS

ARCHITECTURAL
A0.01 COVER SHEET
A0.02 SYMBOLS, LEGENDS AND ABBREVIATIONS
A0.03 CODE ANALYSIS, & ACCESS SITE PLAN & CODE ANALYSIS & EXIT PLAN
A1.01 SITE PLAN - DEMO & REMODEL
A2.01 OVERALL FIRST FLOOR PLAN - DEMO
A2.03 OVERALL FIRST FLOOR PLAN - REMODEL
A3.01 EXTERIOR ELEVATIONS
A3.30 INTERIOR ELEVATIONS
A6.01 OVERALL REFLECTED CEILING PLAN - DEMO
A6.02 OVERALL REFLECTED CEILING PLAN - REMODEL
A8.01 DETAILS - EXTERIOR
A9.01 DETAILS - WALL TYPES & FRAMING
A9.02 DETAILS - CEILING
A9.03 DETAILS - INTERIOR

STRUCTURAL
S1.0 GENERAL NOTES
S1.1 TYPICAL DETAILS
S2.1 FOUNDATION PLAN
S2.2 ROOFFRAMING PLAN

MECHANICAL / PLUMBING
M0.01 MECHANICAL LEGEND, NOTES AND SCHEDULES
M1.01 MECHANICAL OVERALL FIRST FLOOR PLAN - DEMO
M2.01 MECHANICAL OVERALL FIRST FLOOR PLAN - REMODEL
M5.01 MECHANICAL DETAILS
M5.02 MECHANICAL DETAILS
MP0.01 MECHANICAL AND PLUMBING SPECIFICATIONS
MP0.02 MECHANICAL AND PLUMBING SPECIFICATIONS
P0.01 PLUMBING LEGEND, NOTES AND SCHEDULES
P2.01 PLUMBING OVERALL FIRST FLOR PLAN - REMODEL
P5.01 PLUMBING DETAILS
T-24A TITLE 24 REPORTS
T-24B TITLE 24 REPORTS

ELECTRICAL
E0.01 ELECTRICAL SHEET INDEX, ABBREVIATIONS, SYMBOL LIST, AND NOTES
E0.02 LUMINAIRE SCHEDULES AND ELECTRICAL NOTES
E1.01 SITE PLAN - REMODEL - ELECTRICAL
E2.01 OVERALL FIRST FLOOR PLAN - DEMO - LIGHTING
E2.02 OVERALL FIRST FLOOR PLAN - REMODEL - LIGHTING
E3.01 OVERALL FIRST FLOOR PLAN - DEMO - ELECTRICAL
E3.02 OVERALL FIRST FLOOR PLAN - REMODEL - ELECTRICAL
E4.01 PARTIAL ONE-LINE DIAGRAM AND PANEL SCHEDULES
E5.01 ELECTRICAL DETAILS
E5.02 ELECTRICAL DETAILS
E6.01 TITLE 24 OUTDOOR LIGHTING COMPLIANCE FORMS
E6.02 TITLE 24 OUTDOOR LIGHTING COMPLIANCE FORMS

CIVIL
C0.0 CIVIL GENERAL NOTES AND ABBREVIATIONS
C0.1 TOPOGRAPHIC SURVEY
C1.1 DEMOLITION PLAN
C2.1 GRADING PLAN
C3.1 PAVING AND STRIPING PLAN
C4.1 EROSION CONTROL PLAN
C5.1 DETAILS AND SECTIONS

PCOE GOLD IN EDUCATION

Revisions

Delta	Date	Revisions	By

PLAN CHECK SET

CONSTRUCTION DOCUMENTS

AGENCY APPROVAL

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Project
ANNEX BUILDING ALTERATIONS

Sheet Title
COVER SHEET

Client Project Number:

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Drawn By:	GB
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Issue Date:	7/24/2023
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7/24/2023 6:48:31 PM C:\Revit_Locals\6014 PCOE 365 Nevada St._gbardales\CBLRS.rvt

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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ABBREVIATIONS

&	AND
@	AT
℄	CENTERLINE
Ø	DIAMETER
#	POUND OR NUMBER
A/C	AIR CONDITIONING
AC	ASPHALTIC CONCRETE
ACOUS	ACOUSTICAL
ACT	ACOUSTIC CEILING TILE
ADD	ADDITIONAL
ADJ	ADJACENT
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
ALUM	ALUMINUM
ANOD	ANODIZED
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
BITUM	BITUMINOUS
BD	BOARD
BLDG	BUILDING
BLKG	BLOCKING
BOT	BOTTOM
BTWN	BETWEEN
BUR	BUILT-UP ROOFING
CAB	CABINET
CB	CATCH BASIN
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
CG	CORNER GUARD
CJ	CONTROL JOINT
CLG	CEILING
CLO	CLOSET
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT
COL	COLUMN
COMP	COMPOSITION
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CORR	CORRIDOR
CT	CERAMIC TILE
CUST	CUSTODIAN
DBL	DOUBLE
DEMO	DEMOLITION
DEPT	DEPARTMENT
DF	DRINKING FOUNTAIN
DI	DRAIN OR DROP INLET
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DISP	DISPENSER
DIV	DIVISION
DN	DOWN
DS	DOWNSPOUT
DTL	DETAIL
DW	DISHWASHER
DWG	DRAWING
(E)	EXISTING
E	EAST
EA	EACH
EF	EXHAUST FAN
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
ENCL	ENCLOSURE
EQ	EQUAL
EQUIP	EQUIPMENT
EVA	EMERGENCY VEHICLE ACCESS
EWC	ELECTRICAL WATER COOLER
EXP	EXPANSION
EXT	EXTERIOR
FA	FIRE ALARM
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FIN	FINISH
FLR	FLOOR
FO	FACE OF
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOS	FACE OF STUD
FRP	FIBERGLASS REINFORCED PANEL
FT	FOOT OR FEET
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GSM	GALVANIZED WHEET METAL
GYP	GYPSUM
HB	HOSE BIB
HC	HOLLOW CORE
HD	HEAD
HDWR	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HR	HOUR
HT	HEIGHT
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
JAN	JANITOR
JT	JOINT
LAB	LABORATORY
LAM	LAMINATE
LAV	LAVATORY
LBS	POUNDS
LT	LIGHT
MAX	MAXIMUM
MB	MACHINE BOLT
MDF	MEDIUM DENSITY FIREBOARD
MECH	MECHANICAL
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MOD	MODULAR
MTD	MOUNTED
MTG	MOUNTING
MTL	METAL
MUL	MULLION
(N)	NEW
N/A	NOT APPLICABLE
N	NORTH
NIC	NOT IN CONTRACT
NO or #	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
O/	OVER
OC	ON CENTER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
OPP	OPPOSITE
PL	PLATE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLYWD	PLYWOOD
PR	PAIR
PTD	PAPER TOWEL DISPENSER
PVC	POLYVINYL CHLORIDE
(R)	RELOCATE
RB	RESILIENT OR RUBBER BASE
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REF	REFERENCE
REFR	REFRIGERATOR
REINF	REINFORCED
REQ	REQUIRED
RF	RESILIENT FLOORING
RM	ROOM
RO	ROUGH OPENING
RWL	RAIN WATER LEADER
S	SOUTH
SC	SOLID CORE
SCD	SEE CIVIL DRAWINGS
SCHED	SCHEDULE
SD	SOAP DISPENSER
SED	SEE ELECTRICAL DRAWINGS
SF	SQUARE FEET
SFPD	SEE FIRE PROTECTION DRAWINGS
SHT	SHEET
SIM	SIMILAR
SLD	SEE LANDSCAPE DRAWINGS
SMD	SEE MECHANICAL DRAWINGS
SMS	SHEET METAL SCREW
SND	SANITARY NAPKIN DISPENSER
SPD	SEE PLUMBING DRAWINGS
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
SSD	SEE STRUCTURAL DRAWINGS
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SUSP	SUSPEND
TEL	TELEPHONE
TEMP	TEMPORARY
THK	THICK
T.O.	TOP OF
TOC	TOP OF CURB
TOP	TOP OF PARAPET
TOS	TOP OF SLAB
TOW	TOP OF WALL
TPD	TOILET PAPER DISPENSER
TV	TELEVISION
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
W	WEST
w/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD
WH	WATER HEATER

SYMBOLS

GRID LINE

BUILDING ELEVATION
- ELEVATION IDENTIFICATION
- SHEET WHERE ELEVATION IS SHOWN

BUILDING OR WALL SECTION
- SECTION IDENTIFICATION
- SHEET WHERE SECTION IS SHOWN

DETAIL
- DETAIL IDENTIFICATION
- SHEET WHERE DETAIL IS SHOWN

INTERIOR ELEVATION(S)
- DETAIL NO. OF ELEVATION
- NO ARROWS MEAN ELEVATION NOT SHOWN
- SHEET WHERE ELEVATION IS SHOWN
- ELEVATION IDENTIFICATION

WORK POINT, CONTROL POINT OR DATUM POINT

REVISIONS
- REVISION NUMBER, SEE REVISION SCHEDULE ON TITLE BLOCK
- AREA OF REVISION

ROOM IDENTIFICATION
- ROOM NAME
- KAISER ROOM CODE NAME
- ROOM NUMBER
- CEILING HEIGHT (OTHER THAN EXISTING OR 8'-0" A.F.F.)

KEYNOTE TAG
- REFER TO KEYNOTE LIST LOCATED ON PLAN SHEETS

AREA OF NO WORK

DOOR TAG (SEE DOOR SCHEDULE)
- DOOR MARK
- HARDWARE GROUP

DOOR MARK

(E) DOOR TO REMAIN

(E) DOOR TO BE REMOVED

(N) DOOR & DOOR FRAME

WALL TAG

X# — WALL TYPE - REFER TO DRAWING SHEET A9.01

WINDOW TAG (SEE WINDOW SCHEDULE)
- WINDOW MARK

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HY Architects Project number: 6014

Facility

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365 NEVADA STREET
AUBURN, CA 95603

Project

ANNEX BUILDING ALTERATIONS

Sheet Title

SYMBOLS, LEGENDS AND ABBREVIATIONS

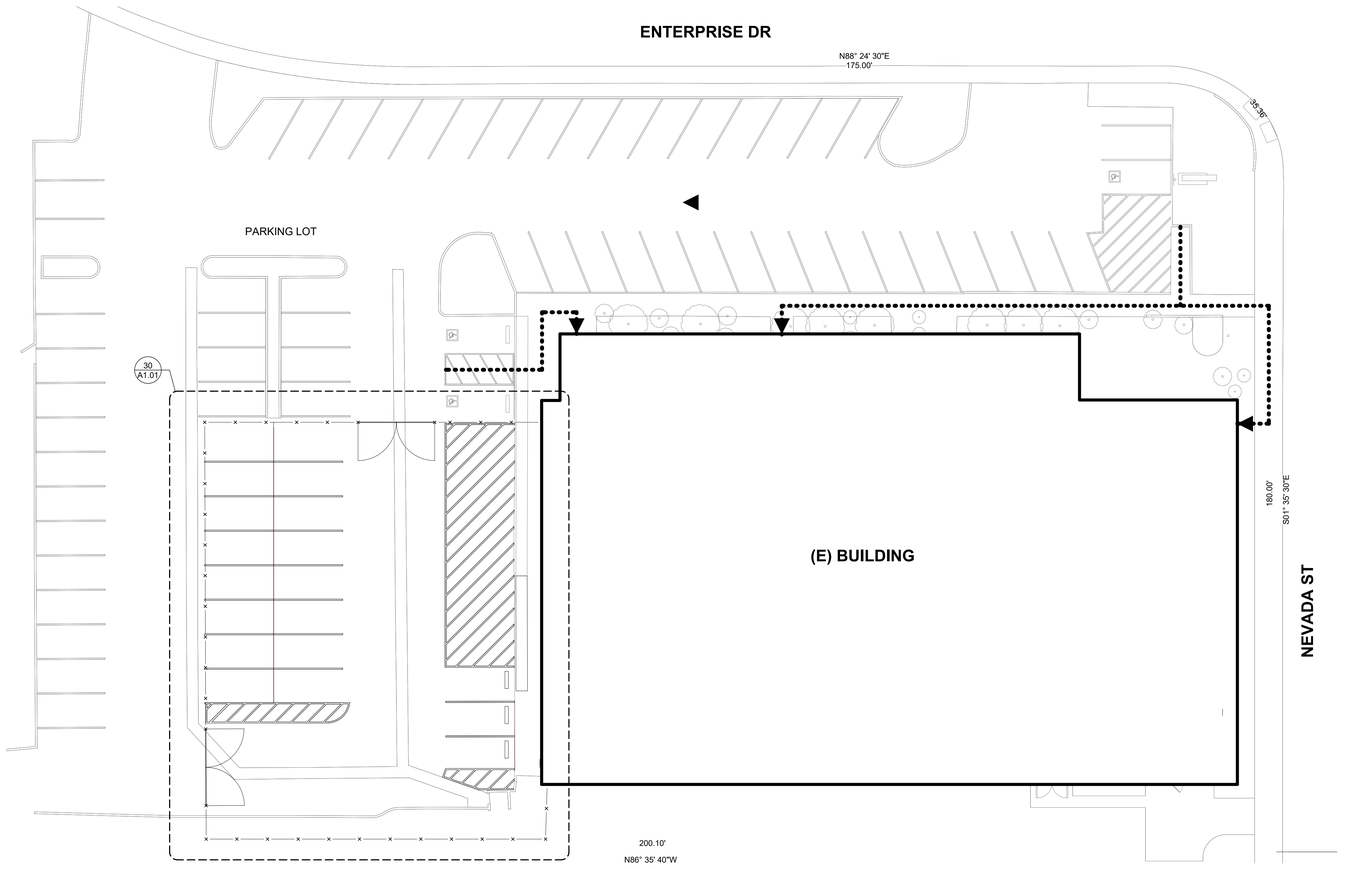
Client Project Number:

Scale:	AS NOTED	Sheet	A0.02
Drawn By:	GB		
Checked By:	HC		
Issue Date:	7/24/2023		
Revit Version:	2023	Sheet	of

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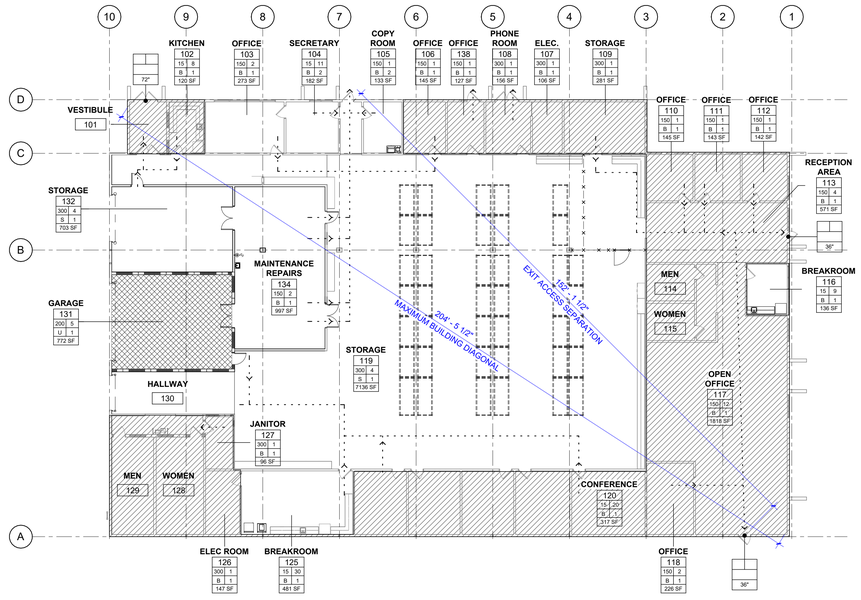
GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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23 CODE ANALYSIS & ACCESSIBILTY SITE PLAN

1/16" = 1'-0"



20 CODE ANALYSIS AND EXIT PLAN

1/16" = 1'-0"

GENERAL NOTES

1. NOTIFY ARCHITECT OF ANY IN THE FIELD DISCREPANCIES PRIOR TO START OF CONSTRUCTION.
2. ALL DIMENSIONS SHALL BE FACE OF STUD, UON. DIMENSIONS NOTED AS "CLR" REFER TO CLEAR DIMENSION FROM FACE OF FINISH.
3. REFER TO SG, S, M, P, E, & C SERIES SHEETS FOR ADDITIONAL INFORMATION.

CODE ANALYSIS

OCCUPANCY:	GROUP B / S-1 / U
CONSTRUCTION TYPE:	V-B
FIRE PROTECTION:	AUTOMATIC FIRE SPRINKLER SYSTEM
EXISTING STORIES:	1
ALLOWABLE STORIES:	3 (GROUP B) 2 (GROUP S-1) 2 (GROUP U)
ALLOWABLE AREA: (*S1 PER TABLE CBC 506.2)	36,000 SF (GROUP B) 36,000 SF (GROUP US-1) 22,000 SF (GROUP U)
MIXED-OCCUPANCY CALCULATIONS:	10880 / 36000 + 7823 / 36000 + 987 / 22000 = .30 + .22 + .04 = .56 < 1.0

EXIT TRAVEL DISTANCE

*CPET = COMMON PATH OF EGRESS TRAVEL
EATD = EXIT ACCESS TRAVEL DISTANCE

FROM BOARDROOM A
CPET1: 35' - 1" (< 100' - 0"); OK
TO EATD1: 0 (< 300' - 0"); OK

FROM BOARDROOM B
CPET2: 35' - 1" (< 100' - 0"); OK
TO EATD2: 0 (< 300' - 0"); OK

FROM PD BREAKOUT \ ROOM SMALL CLASSROOM
CPET3: 43' - 10" < 100'-0"; OK
TO EATD2: 27' - 11" (< 300' - 0"); OK
TO EATD3: 40' - 6" (< 300' - 0"); OK

FROM BREAKROOM
CPET3: 62' - 1" < 100'-0"; OK
TO EATD4: 5' - 8" (< 300' - 0"); OK
TO EATD3: 22' - 4" (< 300' - 0"); OK

CODE ANALYSIS LEGEND

ROOM TAG

ROOM NAME
100 — ROOM NUMBER
LOAD FACTOR — 100 | 48 — # OF OCCUPANTS
OCCUPANCY — E | 2 — # OF EXITS
2,000 SF — ROOM AREA

EXIT AND EXIT ACCESS

EXIT TAG
CAPACITY FACTOR
NUMBER OF OCCUPANTS SERVED
REQUIRED WIDTH OF DOOR
ACTUAL WIDTH OF DOOR

(#) PATH OF EGRESS W/ # OF OCCUPANTS

FEC RECESSED FIRE EXTINGUISHER CABINET

CPET (COMMON PATH OF EGRESS TRAVEL).
EATD (EXIT ACCESS TRAVEL DISTANCE).
MAX DIAGONAL DIMENSION OF AREA
EXIT FROM ACCESSIBLE PATH OF TRAVEL

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HY Architects Project number: 6014

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Project
ANNEX BUILDING ALTERATIONS

Sheet Title
CODE ANALYSIS, & ACCESS SITE PLAN & CODE ANALYSIS & EXIT PLAN

Client Project Number:

Scale:	AS NOTED
Drawn By:	GB
Checked By:	HC
Issue Date:	7/24/2023
Revit Version:	2023

Sheet
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DEMO KEYNOTES

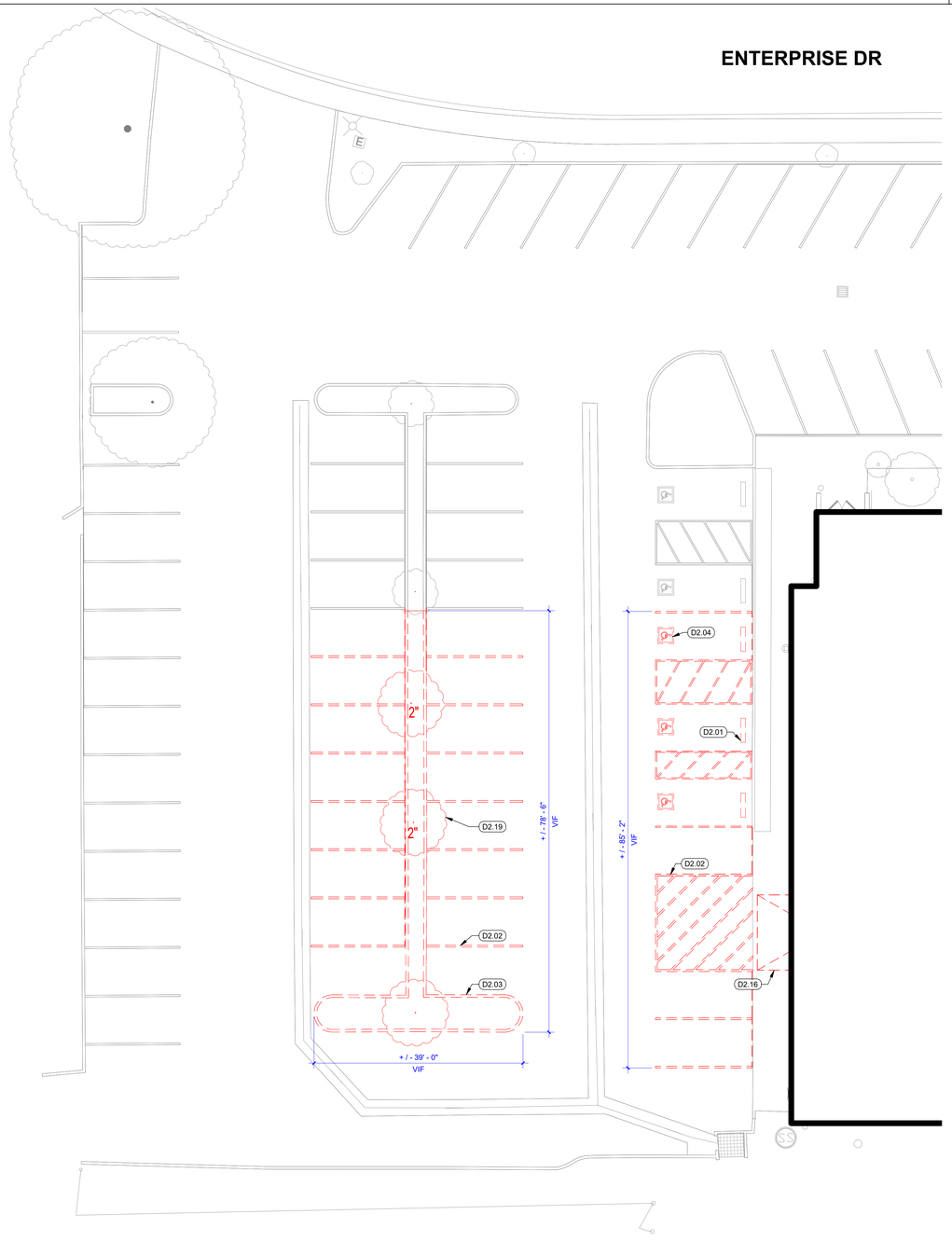
D2.01	REMOVE (E) WHEEL STOP
D2.02	REMOVE (E) 4" STRIPING, TYP
D2.03	REMOVE (E) CONCRETE CURB, SCD
D2.04	REMOVE (E) ACCESSIBLE PARKING SIGN
D2.16	REMOVE (E) CANOPY
D2.19	REMOVE (E) TREE, TYP

KEYNOTES

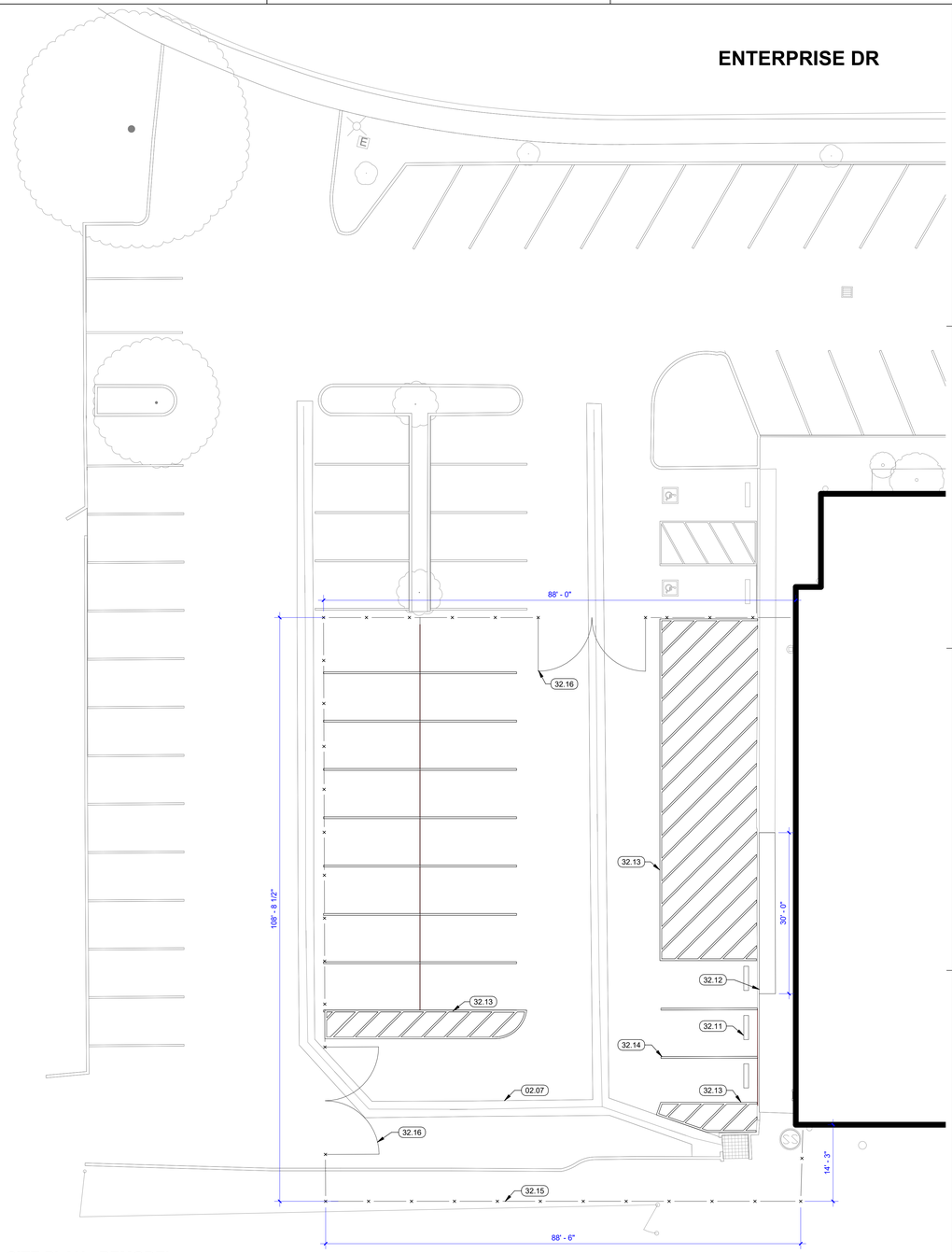
02.07	(E) WATER DRAINAGE SWALE
32.11	WHEEL STOP, SEE DETAIL 15/A8.01
32.12	TRUNCATED DOMES, SEE DETAIL 20/A8.01
32.13	4" DIAGONAL STRIPING, TYP. SEE DETAIL 14/A8.01
32.14	PARKING STALL, TYP
32.15	EXTERIOR SECURYTI FENCE, TYP. SEE DETAIL 10/A8.01
32.16	EXTERIOR SECURYTI GATE. SEE DETAIL 10/A8.01

GENERAL NOTES

1. NOTIFY ARCHITECT OF ANY IN THE FIELD DISCREPANCIES PRIOR TO START OF CONSTRUCTION.
2. LEGEND SYMBOLS ARE FOR REFERENCE ONLY AND DO NOT REPRESENT EXACT SHAPE OR DIMENSIONS OF EXISTING OR NEW CONDITIONS.
3. REFER TO CIVIL, LANSCAPE, STRUCTURAL, MECH/PLUMBING AND ELECTRICAL PLANS FOR ADDITIONAL SITE SCOPE OF WORK.



30 SITE PLAN - DEMO
3/32" = 1'-0"



15 SITE PLAN - REMODEL
3/32" = 1'-0"

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ANNEX BUILDING ALTERATIONS

Sheet Title

SITE PLAN - DEMO & REMODEL

Client Project Number:

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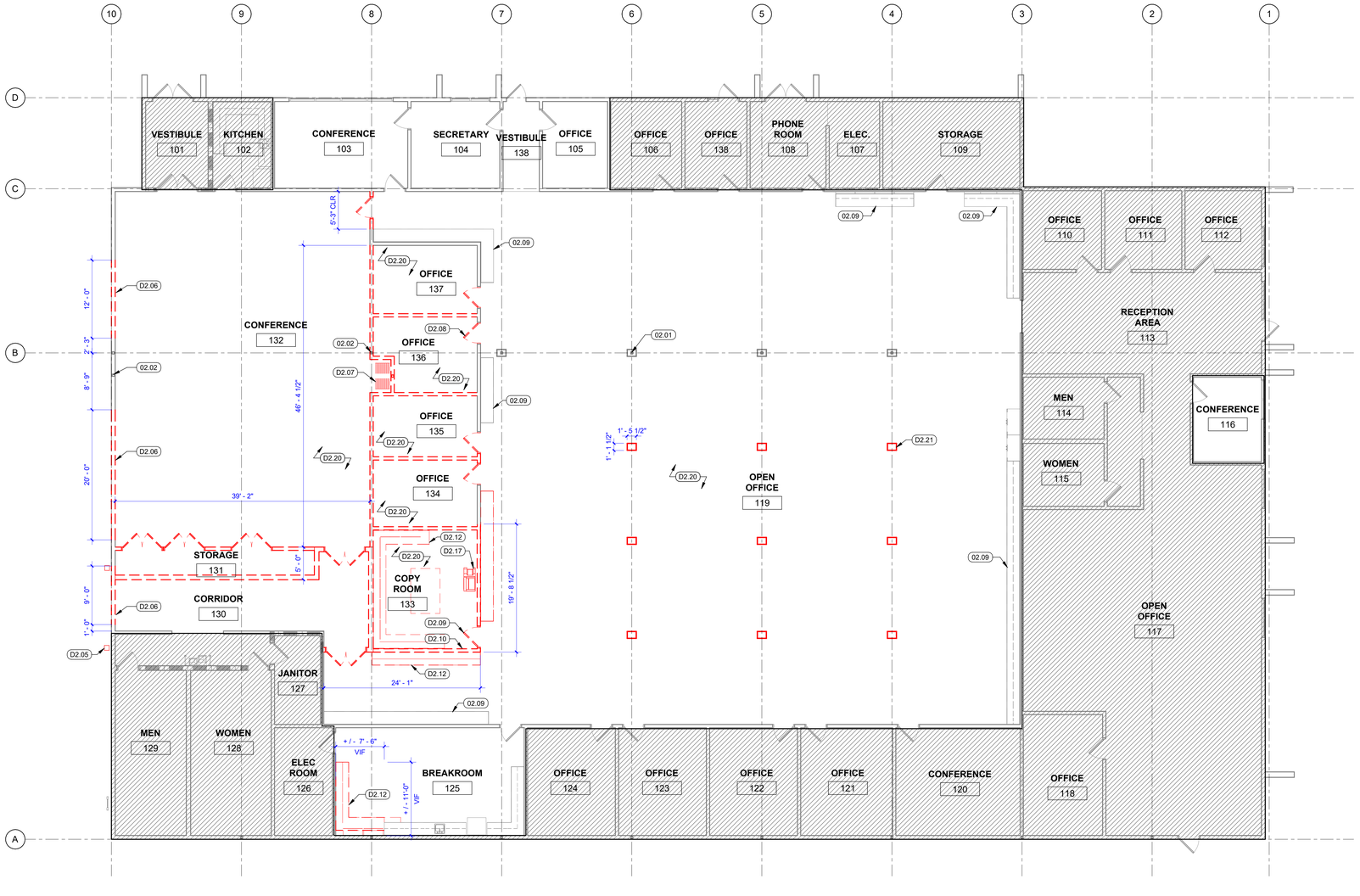
Sheet **A1.01**

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0 5' 50' GRAPHIC SCALES: 1/16" = 1'-0"
0 5' 25' 1/8" = 1'-0"
0 1' 12' 1/4" = 1'-0"
0 1' 6' 1/2" = 1'-0"
0 4' 3/4" = 1'-0"
0 1' 3' 1" = 1'-0"
0 2' 1 1/2" = 1'-0"
0 1' 3" = 1'-0"

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30 FIRST FLOOR DEMO PLAN
1/8" = 1'-0"

GENERAL NOTES

1. NOTIFY ARCHITECT OF ANY IN THE FIELD DISCREPANCIES PRIOR TO START OF CONSTRUCTION.
2. ALL DIMENSIONS SHALL BE FACE OF STUD, UON. DIMENSIONS NOTED AS "CLR" REFER TO CLEAR DIMENSION FROM FACE OF FINISH.
3. REFER TO SG, S, M, P, E, & C SERIES SHEETS FOR ADDITIONAL INFORMATION.

DEMO LEGEND

- AREA NOT IN SCOPE OF WORK
- EXISTING TO REMAIN, TYP
- REMOVE EXISTING, TYP

NOTE: FOR ANY PARTITION THAT IS NOT TAGGED ON THE PLAN, REFER TO ITS CORRESPONDING GRAPHIC IN THIS WALL LEGEND TO DETERMINE ITS TYPE

EXISTING WALL & PARTITION TYPES:

- (E) 1 HR. RATED FIRE PARTITION (CORRIDOR) W/ 20 MIN. PROTECTED OPENINGS.
- (E) NON- RATED FIRE- RESISTIVE PARTITION (W/ UNPROTECTED OPENINGS) AND/ OR EXTERIOR WALL TO REMAIN.

DEMO KEYNOTES

D2.05	REMOVE (E) COLUMN, TYP
D2.06	REMOVE PORTION OF (E) WALL FOR ROLL-UP DOOR
D2.07	REMOVE (E) FOLDING PARTITION
D2.08	REMOVE (E) DOOR AND FRAME, PREP FOR WALL INFILL
D2.09	REMOVE (E) DOOR, TYP
D2.10	REMOVE (E) FULL HEIGTH WALLS, TYP
D2.12	REMOVE (E) CASEWORK
D2.17	RELOCATE (E) COPIER/PRINTER TO ROOM 105
D2.20	REMOVE (E) CARPET
D2.21	REMOVE (E) DATA DROP COLUMN TO UNDERSIDE OF BEAM SOFFIT, TYP OF (9)

KEYNOTES

02.01	(E) COLUMN, TYP
02.02	(E) 4X4 HSS COLUMN, TYP
02.09	(E) CASEWORK

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ANNEX BUILDING ALTERATIONS

Sheet Title

OVERALL FIRST FLOOR PLAN - DEMO

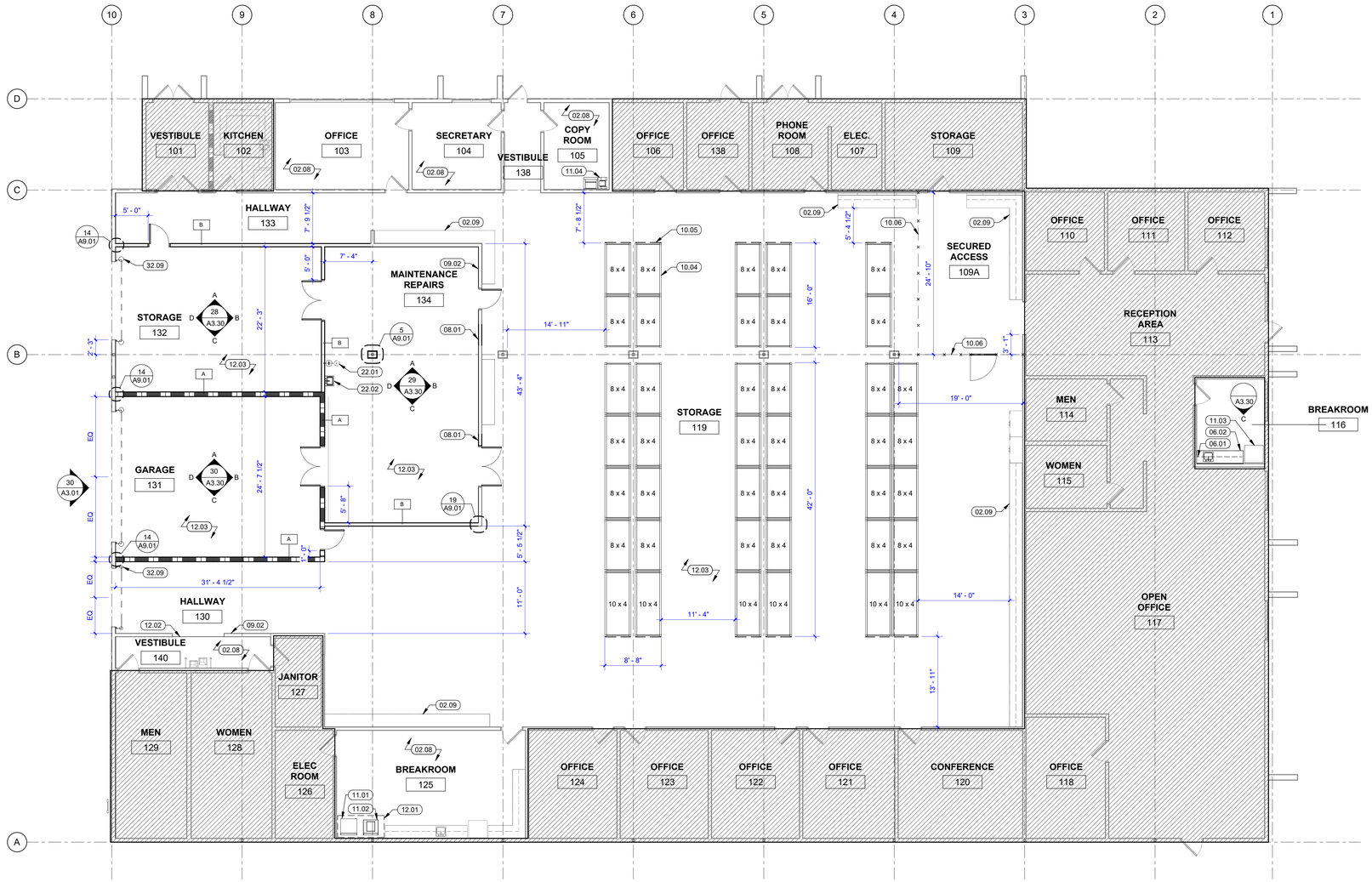
Client Project Number:

Scale:	AS NOTED	Sheet	A2.01
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Issue Date:	7/24/2023		
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30 FIRST FLOOR REMODEL PLAN Copy 1 Copy 1
1/8" = 1'-0"

GENERAL NOTES

1. NOTIFY ARCHITECT OF ANY IN THE FIELD DISCREPANCIES PRIOR TO START OF CONSTRUCTION.
2. ALL DIMENSIONS SHALL BE FACE OF STUD, UON. DIMENSIONS NOTED AS "CLR" REFER TO CLEAR DIMENSION FROM FACE OF FINISH.
3. REFER TO SG, S, M, P, E, & C SERIES SHEETS FOR ADDITIONAL INFORMATION.

DEMO LEGEND

- AREA NOT IN SCOPE OF WORK
- EXISTING TO REMAIN, TYP
- NEW WORK, TYP

NOTE: FOR ANY PARTITION THAT IS NOT TAGGED ON THE PLAN, REFER TO ITS CORRESPONDING GRAPHIC IN THIS WALL LEGEND TO DETERMINE ITS TYPE

EXISTING WALL & PARTITION TYPES:

- (E) 1 HR RATED FIRE PARTITION (CORRIDOR) W/ 20 MIN. PROTECTED OPENINGS.
- (E) NON- RATED FIRE- RESISTIVE PARTITION (W/ UNPROTECTED OPENINGS) AND/ OR EXTERIOR WALL TO REMAIN.

NEW WALL & PARTITION TYPES:

- A — 1 HR RATED CORRIDOR PARTITION W/ 20 MIN. PROTECTED OPENINGS, TYP UON, SEE 2/A9.01
- B — NON-RATED FIRE-RESISTIVE PARTITION W/ UNPROTECTED OPENINGS, TYP UON, SEE 7/A9.01

KEYNOTES

02.08	(E) VCT
02.09	(E) CASEWORK
06.01	UPPER CASEWORK W/ DUST SOFFIT W/ WOOD BLOCKING, SEE INT ELEVATIONS & INTERIOR DETAIL
06.02	CASEWORK W/ SOLID SURFACE COUNTERTOP W/ STAINLESS STEEL HANDWASHING FIXTURE, SEE INT ELEVATIONS & INTERIOR DETAILS
08.01	INFILL (E) DOOR OPENING, SEE DETAIL 30/A9.01
09.02	EXTEND WALL FINISH TO UNDER DECK, SIMILAR TO DETAIL 8.9/A9.01
10.04	TWO-SHELF PALLET RACK UNIT, TYP. SSD AND DETAIL 14/A9.03 FOR BASE PLATE
10.05	PALLET RACK NETTING
10.06	8'H WIRE MESH SECURITY BARRIER, SEE DETAIL 10/A9.03
11.01	LAUNDRY EQUIPMENT (DRYER), SED
11.02	LAUNDRY EQUIPMENT (WASHER), SPD
11.03	REFRIGERATOR, SED
11.04	(E) OFFICE EQUIPMENT (COPIER/PRINTER) REELOCATE TO ROOM 105
12.01	VCT FLOORING
12.02	FLOORING TRANSITION STRIP
12.03	SEALED CONCRETE FINISH
22.01	EMERGENCY EYEWASH/SHOWER EQUIPMENT, SPD
22.02	WALL SERVICE SINK, SPD
32.09	METAL BOLLARDS. SURFACE MOUNTED, SSD & SEE DETAIL 15/A9.02

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Project
ANNEX BUILDING ALTERATIONS

Sheet Title
OVERALL FIRST FLOOR PLAN - REMODEL

Client Project Number:

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Issue Date:	7/24/2023
Revit Version:	2023

Sheet **A2.03**
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DOOR AND FRAME SCHEDULE

LOCATION	DOOR MARK	DOOR					FRAME								SIGNAGE	
		NOMINAL SIZE		MATERIAL	DOOR TYPE	GLASS	MATERIAL	TYPE	GLASS	DETAILS (REF. DWG. A8.01 U.O.N.)			DOOR HARDWARE	FIRE RATING	REMARKS	TYPE	SIGN TEXT/ROOM
		WIDTH	HEIGHT							HEAD	JAMB	SILL					
	109A	4' - 0"	7' - 0"														
	130	9' - 0"	8' - 6"	STL	E	-	STL	-	-	6/A8.01	2/A8.01						
	131A	20' - 0"	8' - 6"	STL	E	-	STL	-	-	6/A8.01	2/A8.01						
	131B	3' - 0"	7' - 0"	HM	A		HM	1	-	1/A9.03	2/A9.03			45			
	131C	6' - 0"	7' - 0"	HM	C		HM	2	-	1/A9.03	2/A9.03			45			
	132A	12' - 0"	8' - 6"	STL	E		STL	-	-	6/A8.01	2/A8.01						
	132B	6' - 0"	7' - 0"	HM	C		HM	2	-	1/A9.03	2/A9.03						
	132C	3' - 0"	7' - 0"	HM	A		HM	1	-	1/A9.03	2/A9.03						
	134A	3' - 0"	7' - 0"	HM	B		HM	1	-	1/A9.03	2/A9.03						
	134B	6' - 0"	7' - 0"	HM	D		HM	2	-	1/A9.03	2/A9.03						
	SG01	20' - 0"	8' - 0"														
	SG02	20' - 0"	8' - 0"														

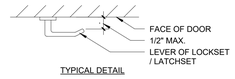
GENERAL DOOR NOTES

1. WHERE DIMENSIONS ARE NOT PROVIDED ON DWGS. OTHER THAN THE FLOOR PLANS TO LOCATE DOOR OPENINGS, APPLY THE FOLLOWING RULES, IN ORDER, TO DETERMINE THE LOCATION OF DOOR OPENINGS:



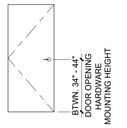
A. B.

2. SEE SPECIFICATIONS FOR HARDWARE GROUPS.
3. ALL NEW HARDWARE TO BE ADA COMPLIANT, INCLUDING LEVER ACTION DOOR KNOBS. ALL LEVER RETURNS. SHALL BE WITHIN 1/2" OF THE FACE OF DOORS AS SHOWN BELOW.



TYPICAL DETAIL

4. ADJUST DOOR CLOSER FOR MAXIMUM PUSH/PULL EFFORT TO OPERATE DOOR AS FOLLOWS: (EFFORT SHALL BE APPLIED AT RIGHT ANGLES TO CENTER PLANE OF DOOR):
   A. INTERIOR DOORS: NOT TO EXCEED 5 POUNDS.
   B. EXTERIOR DOORS: NOT TO EXCEED 5 POUNDS
   C. FIRE RATED DOORS: THE AUTHORITY HAVING JURISDICTION MAY INCREASE THE MAXIMUM EFFORT TO OPERATE FIRE DOORS IN ORDER TO ACHIEVE POSITIVE LATCHING, BUT NOT EXCEEDING THE 15 LBF MAX.
5. PAINT DOORS & FRAMES , TYPICAL, U.O.N.
6. ALL DOORS 1-3/4" THICK U.O.N.
7. DOOR HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERATING DEVICES SHALL BE INSTALLED BETWEEN 34" MIN AND 44" MAX ABOVE THE FINISHED FLOOR CBC 1008.1.9.2 CBC 1133B.2.5.2



8. DOOR HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERATING DEVICES ON ACCESSIBLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING OR TWISTING OF THE WRIST TO OPERATE. CBC 11B-309.4 AND CBC 1010.1.9.1
9. DOOR CLOSER SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO A POSITION OF 12 DEGREES FROM THE LATCH IS 5 SECONDS MINIMUM PER 11B-404.2.8.1.
10. ALL INTERIOR WOOD DOORS AT BLDG G TO BE STAINED AND HM FRAMES TO BE PAINTED.
11. ALL INTERIOR HM & WOOD DOORS AND FRAMES TO BE PAINTED .
12. ALL EXTERIOR HM DOORS IN HM FRAMES TO BE PAINTED
13. EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT EXCEPT AS SPECIFICALLY PERMITTED IN CBC 1010.1.9.
14. (E) INDICATES (E) DOOR HARDWARE TO REMAIN

DOOR & FRAME SCHEDULE REFERENCE GUIDE

1. DOOR MARK: — SPECIFIC NUMBER ASSIGNED TO INDIVIDUAL DOOR.
2. NOMINAL DOOR SIZE: — DESIGNATES NOMINAL WIDTH AND HEIGHT OF DOOR IN FEET AND INCHES. DOOR WIDTH IS GIVEN PER LEAF. REFER TO FLOOR PLAN FOR PAIRS OF DOORS. THICKNESS OF DOOR IS 3/4" THK., TYP. U.O.N.
1. DOOR MATERIAL: — INDICATES MATERIAL FROM WHICH DOOR IS CONSTRUCTED I.E., HM-HOLLOW METAL, WD-SOLID CORE WOOD, AL-ALUMINUM, FRP - SOLID CORE WOOD FINISHED W/ FRP, FG - FULL GLASS
2. DOOR DESCRIPTION: — DESCRIBE THE NUMBER OF LEAVES
3. DOOR TYPE: — ALPHANUMERICAL DESIGNATION OF DOOR TYPE AS SHOWN IN ELEVATION.
4. FRAME MATERIAL: — INDICATES MATERIAL FROM WHICH FRAME IS CONSTRUCTED, I.E., HM-HOLLOW METAL, WD-WOOD, AL-ALUMINUM, SST - STAINLESS STEEL, ETC.
5. FRAME TYPE: — NUMERICAL DESIGNATION OF FRAME TYPE AS SHOWN IN FRAME TYPE ELEVATION.
6. GLASS: — DESIGNATES TYPE OF GLASS TO BE USED IN FRAME, W.O., I.E., TG-TEMPERED GLASS, WG-WIRE GLASS, LAM-LAMINATED GLASS, ETC.
7. HARDWARE GROUP: — NUMERICAL DESIGNATION OF HARDWARE GROUPING. TO BE APPLIED TO DOOR. REFER TO SPECIFICATIONS FOR DESCRIPTION OF HARDWARE CONTAINED WITHIN GROUPING.
8. LOCK: — DESIGNATES DOORS THAT SHALL HAVE LOCK HARDWARE THAT WILL ALLOW ROOMS WITH AN OCCUPANCY OF FIVE OR MORE TO BE LOCKED FROM THE INSIDE, PURSUANT TO CBC 1010.1.11, WITH LOCKS THAT CONFORM TO THE SPECIFICATION AND REQUIREMENT FOUND IN CBC 1010.1.9
9. DOOR AND FRAME FIRE RATING: — DESIGNATES ALPHABETICAL FIRE RESISTANCE RATING CLASSIFICATION LABEL REQUIRED FOR DOOR AND FRAME WITH TIME PERIOD REQUIRED IN MINUTES.
10. REMARKS: — DESIGNATES OR REFERENCES SPECIAL, UNUSUAL OR ABSTRACT CONDITIONS WHICH EXIST AND ARE NOT COVERED IN SCHEDULE ITEMS 1 THRU 14. REFER TO REMARKS REFERENCE SCHEDULE FOR NUMERICAL DESIGNATION AND REMARKS LEGEND FOR SPECIFIC INFORMATION.
11. SIGNAGE: — DESIGNATES SIGNS ADJACENT TO DOORS. REFER TO SIGNAGE SCHEDULE FOR SIGN TYPE AND DETAILS.
12. SIGN TEXT: — INDICATES TEXT FOR ROOM IDENTIFICATION SIGNS, (E) INDICATES (E) TO REMAIN.

LEGEND

ALL DOORS ARE TO BE 1-3/4" THICK U.N.O.

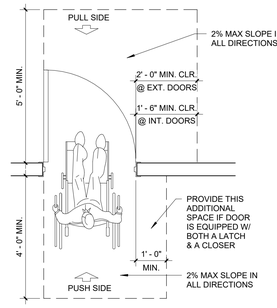
HM = HOLLOW METAL
WD = WOOD
ALUM = ALUMINUM
TRACK = ROLLER TRACK
T= THRESHOLD (ALL CLASSROOMS AND RESTROOMS)
L= GROUP E LOCKABLE DOORS FROM THE INSIDE DOORS MARKED SHALL MEET CBC 1010.1.11 WITH LOCKS THAT ALLOW ROOMS WITH AN OCCUPANCY OF FIVE OR MORE TO BE LOCKED FROM THE INSIDE

TEMP = TEMPERED GLASS
SF = STOREFRONT
STL = STEEL
INSUL = INSULATED

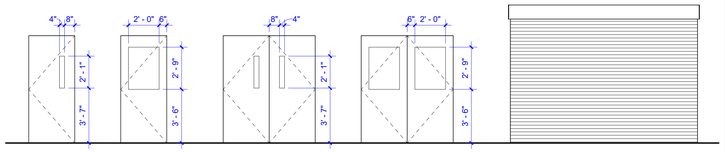
DOOR TAG



ACCESSIBLE DOOR CLEARANCE



DOOR TYPES



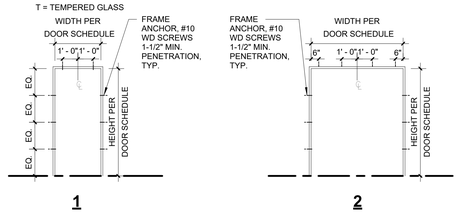
A SINGLE DOOR — **B** SINGLE DOOR — **C** DOUBLE DOOR — **D** DOUBLE DOOR — **E** ROLL-UP DOOR

DOOR FRAME TYPES

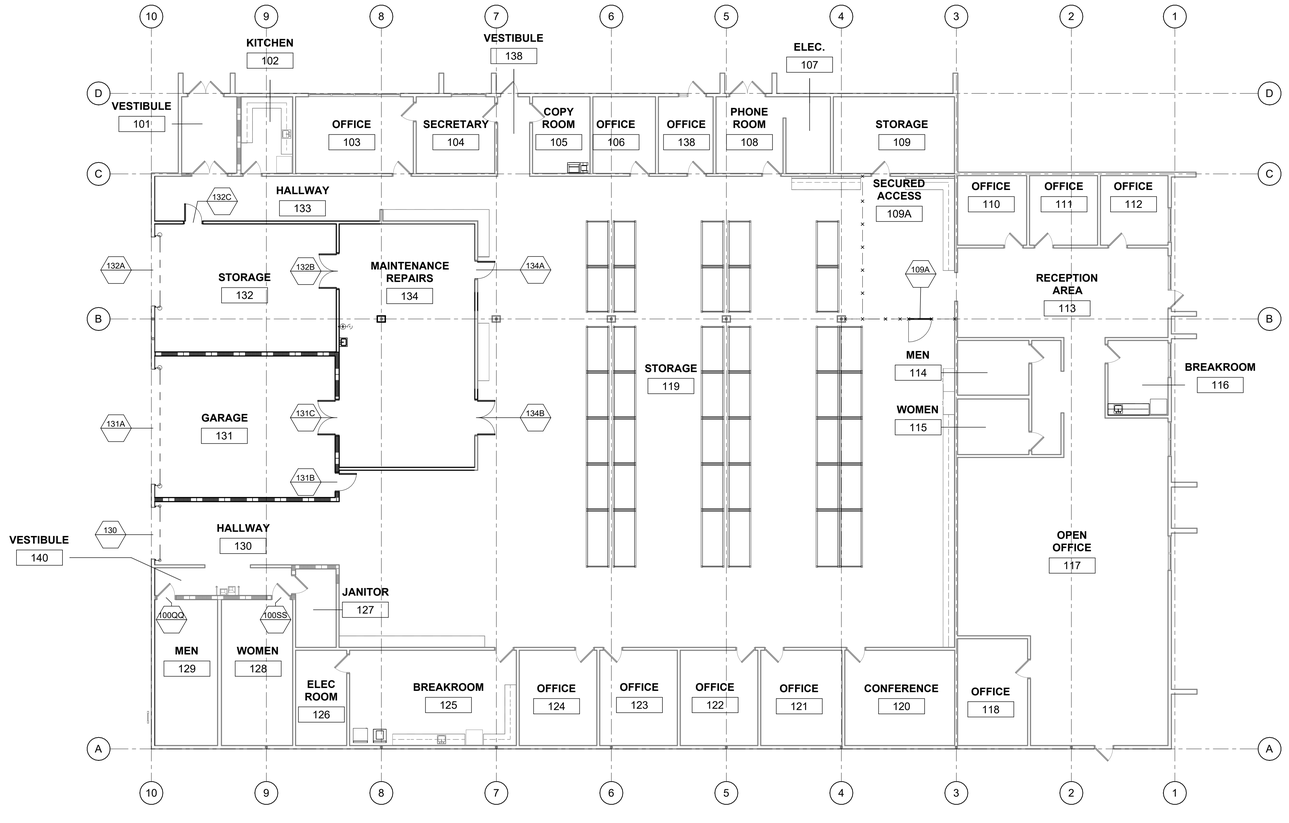


1 SINGLE DOOR — **2** DOUBLE DOOR

FRAME ANCHORAGE



1 SINGLE DOOR — **2** DOUBLE DOOR



20 FIRST FLOOR - DOOR PLAN
3/32" = 1'-0"

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HY Architects Project number: 6014

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365 NEVADA STREET
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Project
ANNEX BUILDING ALTERATIONS

Sheet Title
DOOR PLANS & DOOR SCHEDULE

Client Project Number:

Scale:	AS NOTED	Sheet	A2.10
Drawn By:	GB		
Checked By:	HC		
Issue Date:	7/24/2023		
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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

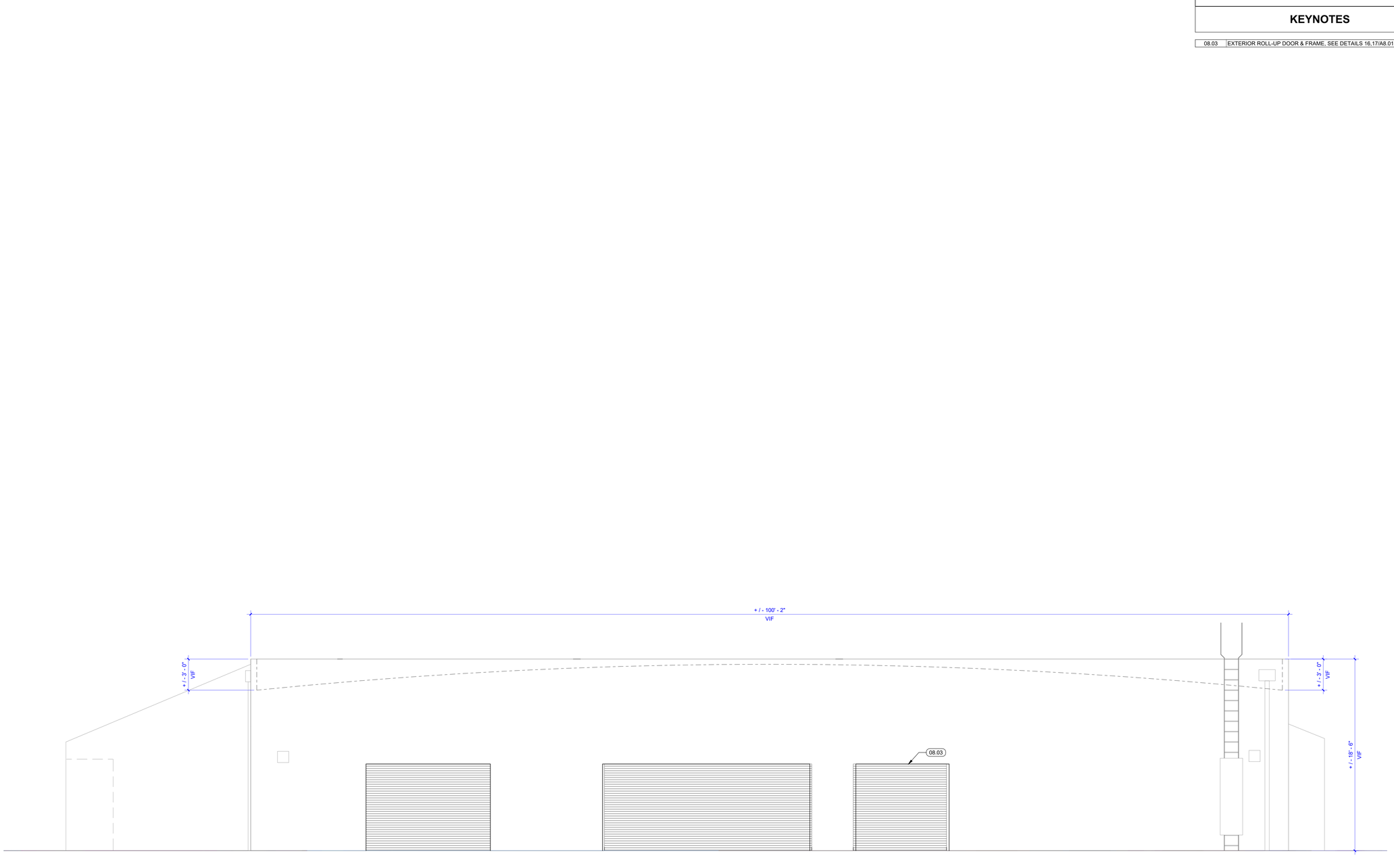
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GENERAL NOTES

1. REFER TO I1.00 FOR FINISH SYMBOLS LEGEND, GENERAL NOTES, & SCHEDULE.
2. REFER TO FF SERIES SHEETS FOR FURNITURE CODE DESCRIPTIONS & SPECIFICATIONS.
3. REFER TO Q SERIES SHEETS FOR EQUIPMENT, TOILET & LAVORATORY ACCESSORY CODE DESCRIPTIONS & SPECIFICATIONS.
4. REFER TO SG SERIES SHEETS FOR SIGNAGE CODE DESCRIPTION & SPECIFICATIONS.
5. K
6. FOR ADA COMPLIANT COUNTING HEIGHTS OF FURNITURE, EQUIPMENT, TOILET & LAVATORY ACCESSORIES REFER TO A9.XX.

KEYNOTES

08.03	EXTERIOR ROLL-UP DOOR & FRAME, SEE DETAILS 16.17/A8.01



30 **WEST ELEVATION**
1/4" = 1'-0"

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Project

ANNEX BUILDING ALTERATIONS

Sheet Title

EXTERIOR ELEVATIONS

Client Project Number:

Scale:	AS NOTED	Sheet	A3.01
Drawn By:	GB		
Checked By:	HC		
Issue Date:	7/24/2023		
Revit Version:	2023	Sheet	of

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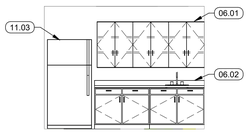
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KEYNOTES

06.01	UPPER CASEWORK W/ DUST SOFFIT W/ WOOD BLOCKING, SEE INT ELEVATIONS & INTERIOR DETAIL
06.02	CASEWORK W/ SOLID SURFACE COUNTERTOP W/ STAINLESS STEEL HANDWASHING FIXTURE, SEE INT ELEVATIONS & INTERIOR DETAILS
08.02	DOOR, FRAME & HARDWARE, SEE DETAILS 1.2/A9.01
08.03	EXTERIOR ROLL-UP DOOR & FRAME, SEE DETAILS 16,17/A8.01
09.01	WALL BASE, SEE FINISH SCHEDULE
11.03	REFRIGERATOR, SED
22.01	EMERGENCY EYEWASH/SHOWER EQUIPMENT, SPD
22.02	WALL SERVICE SINK, SPD

GENERAL NOTES

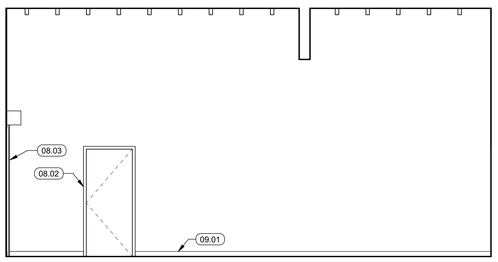
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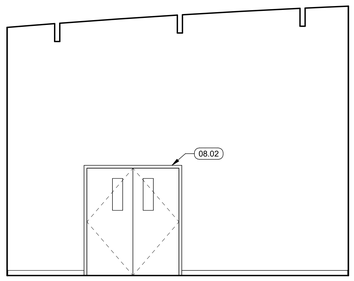
A

26 BREAKROOM

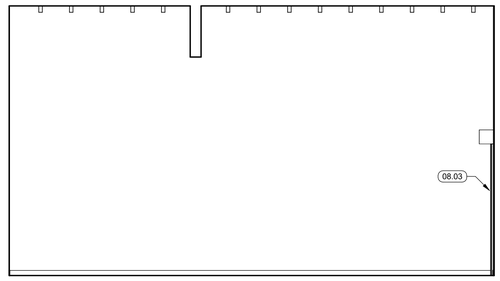
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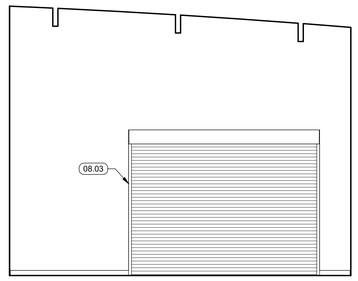
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B



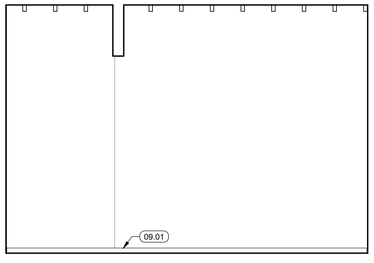
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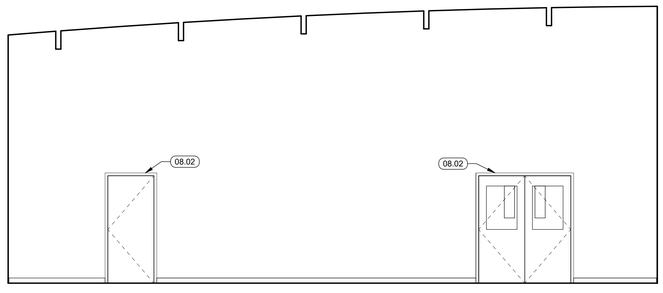
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28 STORAGE

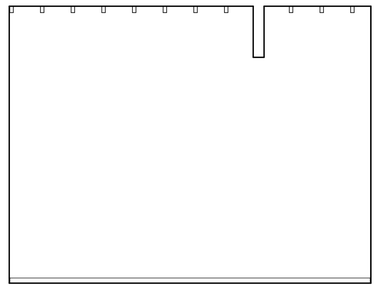
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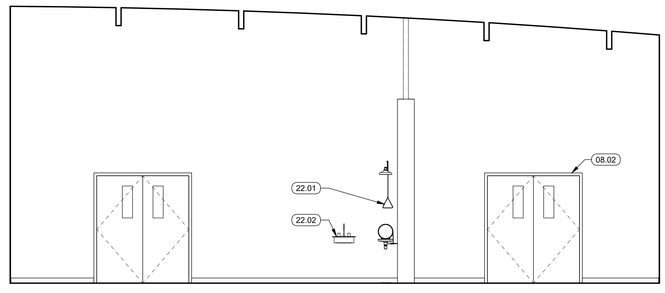
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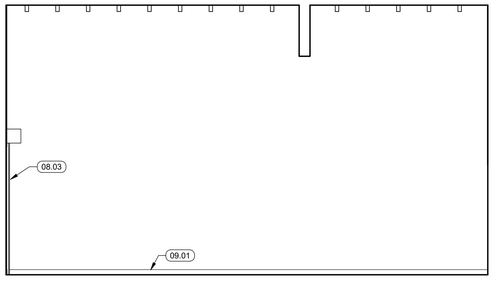
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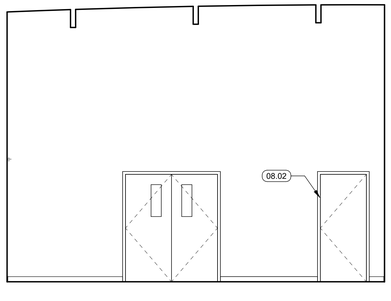
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29 MAINTENANCE REPAIRS

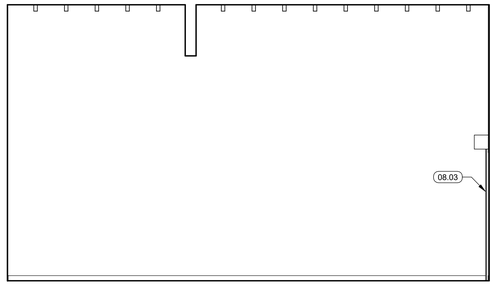
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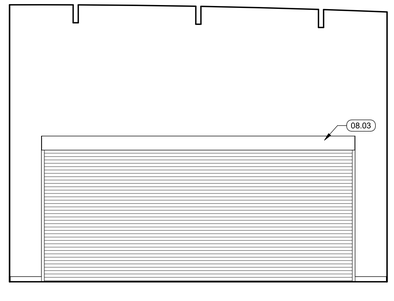
A



B



C



D

30 GARAGE

1/4" = 1'-0"

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HY Architects Project number: 6014

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ANNEX BUILDING ALTERATIONS

Sheet Title

INTERIOR ELEVATIONS

Client Project Number:

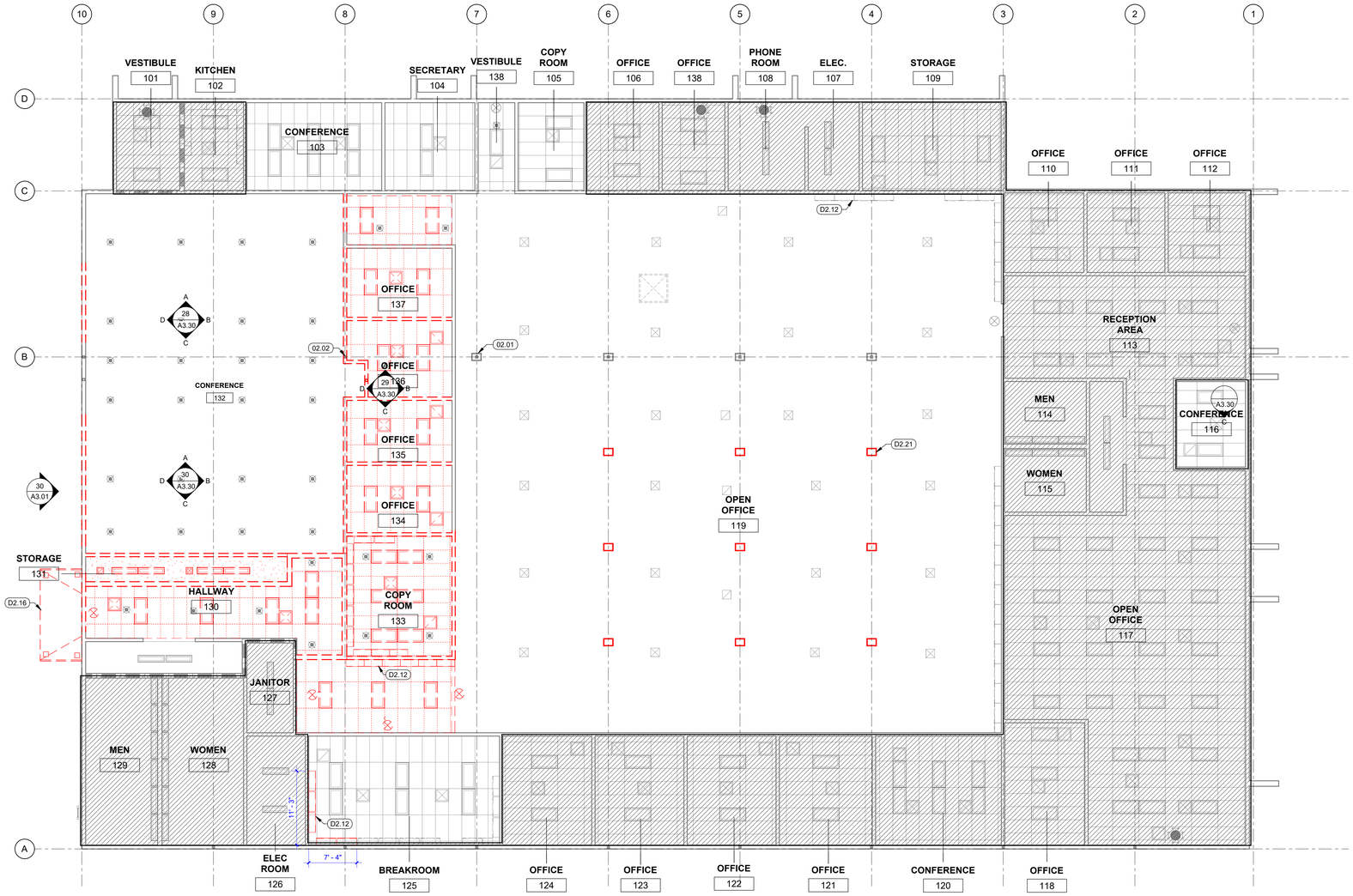
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30 FIRST LEVEL A.F.F.

1/8" = 1'-0"

GENERAL NOTES

1. NOTIFY ARCHITECT OF ANY IN THE FIELD DISCREPANCIES PRIOR TO INSTALLATION.
2. REFER TO I1.00 FOR FINISH SCHEDULE, SYMBOL LEGEND & GENERAL NOTES FOR CEILING FINISH & WINDOW TREATMENT TYPES PER LOCATION.
3. CEILING HEIGHT SHALL BE 8'-0" AFF, UON.
4. REFER TO Q, SG, S, M, P, E, SE, & F SERIES SHEETS FOR ADDITIONAL INFORMATION.

DEMO RCP LEGEND

- (E) 24" x 48" SUSPENDED ACOUSTICAL CEILING SYSTEM TO REMAIN, TYP
- (E) GYPSUM BOARD CEILING TO REMAIN, TYP
- DEMO (E) 24" x 48" SUSP. ACOUSTICAL CEILING SYSTEM, TYP
- DEMO (E) GYPSUM BOARD CEILING, TYP
- (E) 2 X 4 LIGHT FIXTURE TO REMAIN, TYP
- (E) LIGHT FIXTURE TO REMAIN, TYP
- DEMO (E) 2 X 4 LIGHT FIXTURE, TYP SED
- DEMO (E) 1 X 4 LIGHT FIXTURE, TYP SED
- (E) RETURN GRILLE TO REMAIN, TYP
- (E) EXHAUST DIFFUSER TO REMAIN, TYP
- (E) SUPPLY DIFFUSER TO REMAIN, TYP
- (E) ILLUMINATED DIRECTIONAL EXIT SIGN TO REMAIN, TYP
- DEMO (E) RETURN GRILLE, TYP SMD
- DEMO (E) EXHAUST DIFFUSER, TYP SMD
- DEMO (E) SUPPLY DIFFUSER, TYP SMD
- DEMO ILLUMINATED DIRECTIONAL EXIT SIGN, TYP SED
- (E) FIRE SPRINKLER TO REMAIN, UON TYP

DEMO KEYNOTES

D2.12	REMOVE (E) CASEWORK
D2.16	REMOVE (E) CANOPY
D2.21	REMOVE (E) DATA DROP COLUMN TO UNDERSIDE OF BEAM SOFFIT, TYP OF (9)

KEYNOTES

02.01	(E) COLUMN, TYP
02.02	(E) 4X4 HSS COLUMN, TYP

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Project

ANNEX BUILDING ALTERATIONS

Sheet Title

OVERALL REFLECTED CEILING PLAN - DEMO

Client Project Number:

Scale:	AS NOTED
Drawn By:	GB
Checked By:	HC
Issue Date:	7/24/2023
Revit Version:	2023

Sheet **A6.01**

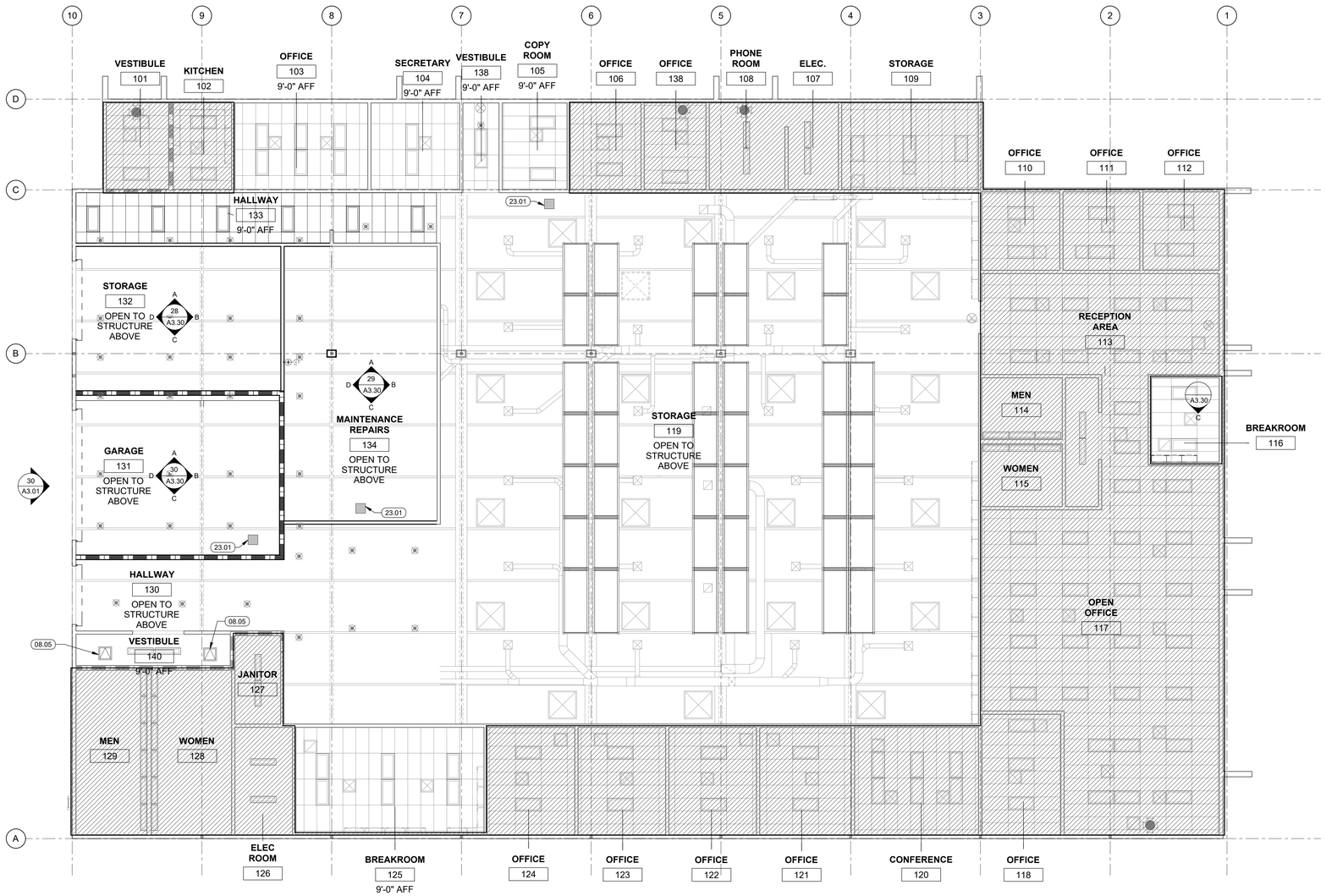
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30 REFLECTED CEILING PLANS
1/8" = 1'-0"

GENERAL NOTES

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2. REFER TO I1.00 FOR FINISH SCHEDULE, SYMBOL LEGEND & GENERAL NOTES FOR CEILING FINISH & WINDOW TREATMENT TYPES PER LOCATION.
3. CEILING HEIGHT SHALL BE 8'-0" AFF, UON.
4. REFER TO Q, SG, S, M, P, E, SE, & F SERIES SHEETS FOR ADDITIONAL INFORMATION.

RCP LEGEND

- (E) 24" x 48" SUSPENDED ACOUSTICAL CEILING SYSTEM TO REMAIN, TYP
- (E) GYPSUM BOARD CEILING TO REMAIN, TYP
- 24" x 48" SUSP. ACOUSTICAL CEILING SYSTEM, TYP. SEE SHEET A9,02 FOR DETAILS.
- GYPSUM BOARD CEILING, TYP
- (E) 2 X 4 LIGHT FIXTURE TO REMAIN, TYP
- (E) RECESSED LIGHT FIXTURE TO REMAIN, TYP
- 2 X 4 LIGHT FIXTURE, TYP SED
- 1 X 4 RECESSED LIGHT FIXTURE, TYP SED
- (E) RETURN GRILLE TO REMAIN, TYP
- (E) EXHAUST DIFFUSER TO REMAIN, TYP
- (E) SUPPLY DIFFUSER TO REMAIN, TYP
- (E) FIRE SPRINKLER TO REMAIN, TYP
- RETURN GRILLE, TYP SMD
- RETURN GRILLE, TYP SMD
- EXHAUST DIFFUSER, TYP SMD
- SUPPLY DIFFUSER, TYP SMD
- ILLUMINATED DIRECTIONAL EXIT SIGN, TYP SED
- (N) OR RELOCATE FIRE SPRINKLER, TYP

KEYNOTES

08.05	GYP CEILING ACCESS DOOR, SMD AND DETAIL 18/A9.02
23.01	ROOF EXHAUST FAN, SMD AND DETAIL 16/A8.01

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CONSTRUCTION DOCUMENTS

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HY Architects Project number: 6014

Facility

PLACER CO. OFFICES OF EDUCATION
365 NEVADA STREET
AUBURN, CA 95603

Project

ANNEX BUILDING ALTERATIONS

Sheet Title

OVERALL REFLECTED CEILING PLAN - REMODEL

Client Project Number:

Scale:	AS NOTED
Drawn By:	GB
Checked By:	HC
Issue Date:	7/24/2023
Revit Version:	2023

Sheet **A6.02**

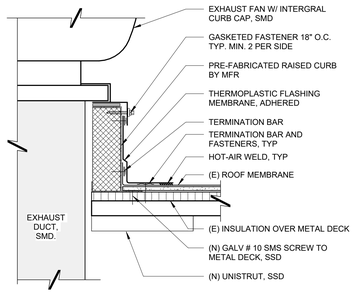
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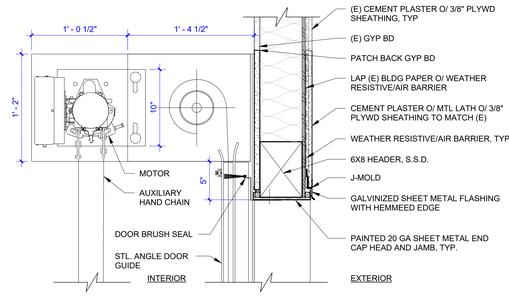
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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

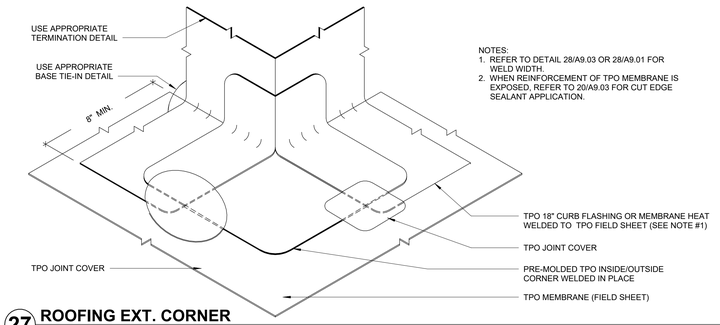
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16 CURB AT HOOD EXHAUST FAN
1 1/2" = 1'-0"

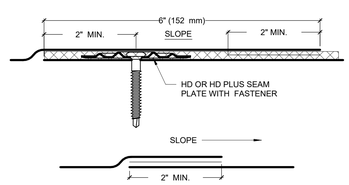


6 OVERHEAD COILING DOOR HEAD
1 1/2" = 1'-0"



NOTES:
1. REFER TO DETAIL 28/A9.03 OR 28/A9.01 FOR WELD WIDTH.
2. WHEN REINFORCEMENT OF TPO MEMBRANE IS EXPOSED, REFER TO 20/A9.03 FOR CUT EDGE SEALANT APPLICATION.

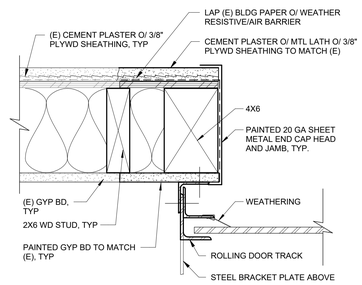
27 ROOFING EXT. CORNER
6" = 1'-0"



WHEN POLYESTER REINFORCEMENT OF TPO IS EXPOSED, APPLY CUT EDGE TREATMENT TO ENTIRE EXPOSED EDGE.

NOTES:
1. DETAIL IS LIMITED TO WALL TRANSITIONS. REFER TO DETAIL 28/A9.03 OR 28/A9.01 FOR WIDE WELD DETAIL.

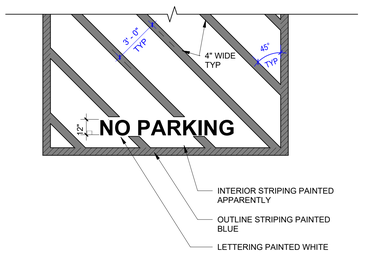
17 OVERLAP TRANSITION
6" = 1'-0"



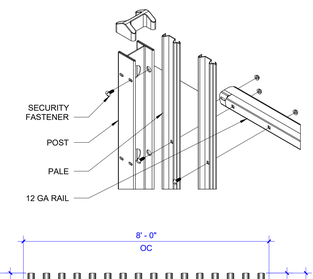
2 OVERHEAD COILING DOOR JAMB
3" = 1'-0"

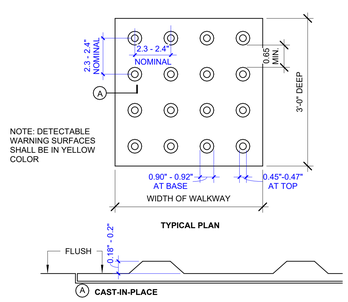
NOTES:
1. MAXIMUM 6" LONG FASTENERS. (NOTE: WOOD BLOCKING MAY BE SUBSTITUTED FOR INSULATION TO REDUCE FASTENER LENGTH REQUIREMENT).
2. BASE FLASHINGS AND TERMINATIONS NOT SHOWN FOR CLARITY. REFER TO APPROPRIATE TERMINATION & BASE TIE-IN DETAILS.

28 ROOFING AT EXT. CORNER
6" = 1'-0"

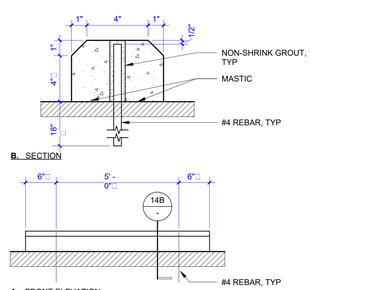


14 DIAGONAL STRIPING
1/4" = 1'-0"

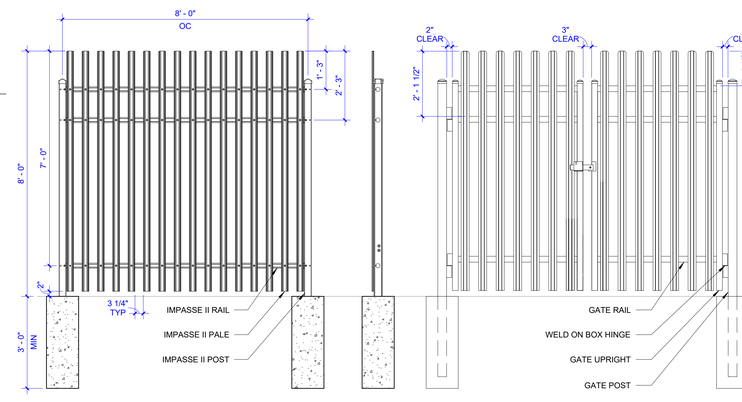




20 TRUNCATED DOMES
3" = 1'-0"



15 WHEEL STOP
3" = 1'-0"



10 SECURITY FENCE - IMPASSE II STRONGHOLD
1/2" = 1'-0"

PCOE GOLD IN EDUCATION

Revisions

Delta	Date	Revisions	By

PLAN CHECK SET

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365 NEVADA STREET
AUBURN, CA 95603

Project
ANNEX BUILDING ALTERATIONS

Sheet Title
DETAILS - EXTERIOR

Client Project Number:

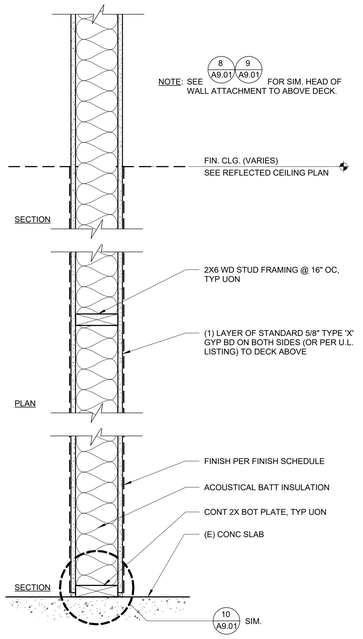
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Checked By:	HC
Issue Date:	7/24/2023
Revit Version:	2023

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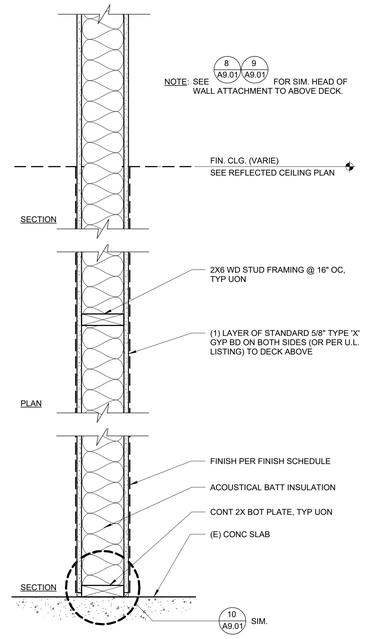
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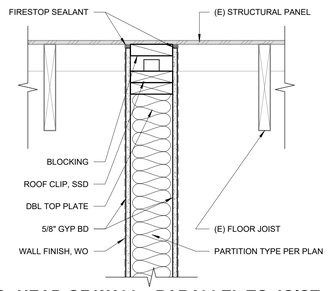
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7 TYPE 'A' - NONE- RATED PARTITION (FIRE-RESISTIVE)
1 1/2" = 1'-0"



2 TYPE 'A' - 1-HR FIRE PARTITION W/ 20 MIN OPENINGS
1 1/2" = 1'-0"



8 HEAD OF WALL - PARALLEL TO JOIST
1 1/2" = 1'-0"

A. SEE NEW WORK PLAN FOR EXTENT/LOCATION OF PARTITION TYPES.

B. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL REQUIREMENTS.

C. REFER TO TITLE SHEET FOR APPLICABLE CODES AND REFERENCED STANDARDS.

D. WHERE INTERIOR PARTITION ASSEMBLIES PROVIDE AN UNDERWRITERS LABORATORIES (U.L.) DESIGN NUMBER, USE THE MATERIALS, METHODS AND SYSTEMS DESCRIBED IN THE U.L. APPROVED DESIGN WITHOUT SUBSTITUTION. DO NOT USE GENERIC MATERIALS OR ASSUME GENERIC MATERIALS TO BE EQUIVALENT. WHERE U.L. APPROVED DESIGNS LIST SEVERAL ALTERNATIVE PRODUCTS, ANY OF THE PRODUCTS LISTED MAY BE USED.

E. PROVIDE CONTINUOUS SMOKE/FIRE RATED PARTITIONS/BARRIERS/WALLS FROM FLOOR SLAB TO UNDERSIDE OF STRUCTURAL FRAMING OR SLAB ABOVE, U.O.N.

F. WHERE INTERIOR PARTITIONS/BARRIERS/WALLS TERMINATE AT EXTERIOR WALLS, MAINTAIN SMOKE/FIRE RATING TO THE EXTERNAL FACE OF THE EXTERIOR WALL.

G. FURRED COLUMN CLOSURES SHALL NOT BE CONSIDERED PART OF THE FIRE RATED ASSEMBLY OF THE COLUMN, U.O.N.

H. INSTALL FRAMING COMPONENTS AND GYPSUM BOARD SQUARELY CUT TO FIT TIGHTLY AGAINST ABUTTING ELEMENT. FIT GYPSUM BOARD TIGHTLY AROUND STRUCTURAL SHAPES, DUCTS, PIPES, CONDUITS AND FITTINGS. SEAL ALL GAPS WITH ACOUSTICAL SEALANT AT NON-RATED PARTITIONS, AND FIRE STOP SYSTEMS AT RATED PARTITIONS.

I. SEPARATE OUTLET BOXES LOCATED ON OPPOSITE SIDES OF INTERIOR PARTITIONS BY A MINIMUM OF 24 INCHES.

J. PROVIDE MEMBRANE FIRE STOPPING PROTECTION AT OUTLET BOXES IN SMOKE/FIRE RATED PARTITIONS/BARRIERS/WALLS WHEN 1) AN OUTLET BOX EXCEEDS 16 SQ. INCHES IN AREA, OR 2) THE TOTAL AREA OF THE OUTLET BOXES EXCEEDS 100 SQ. INCHES WITHIN 100 SQ. FEET OF INTERIOR PARTITION AREA.

K. COORDINATE LOCATIONS OF BUILDING SYSTEMS, INFRASTRUCTURE AND OPENINGS TO MINIMIZE IMPACT ON INTERIOR PARTITION FRAMING. PROVIDE SUPPLEMENTAL FRAMING/BRIDGING/MODIFICATIONS REQUIRED FOR COORDINATION WITH SYSTEMS, INFRASTRUCTURE AND OPENINGS, AS APPROVED BY THE ARCHITECT.

L. COORDINATE LOCATIONS AND EXTENTS OF CONCEALED BACKING TO SUPPORT BUILDING SYSTEMS, INFRASTRUCTURE, EQUIPMENT AND FURNISHINGS. PROVIDE SUPPLEMENTAL FRAMING WHERE REQUIRED TO SUPPORT CONCEALED BACKING.

M. WHERE ITEMS PENETRATE FIRE RESISTIVE MEMBRANES AND SMOKE/FIRE RATED PARTITIONS/BARRIERS/WALLS, PROVIDED THROUGH PENETRATION FIRE STOPPING SYSTEMS WITH TIME RATINGS EQUIVALENT TO THE FIRE RATING OF THE PARTITION/BARRIER/WALL PENETRATED, AND WITH 'F' RATING EQUAL TO, OR GREATER THAN, THE FIRE RATING OF THE PARTITION/BARRIER/WALL PENETRATED.

N. SPLICES IN STUDS AND BRACES ARE NOT PERMITTED.

O. INSTALL CONTINUOUS METAL FRAMING AND BACKING TO FULLY SUPPORT EDGES OF GYPSUM BOARD.

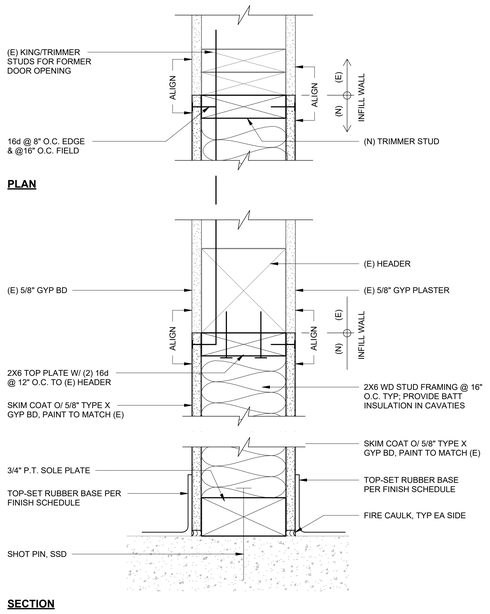
P. ALIGN FACE OF INTERIOR FINISHES WHERE CONSTRUCTION INVOLVES MORE THAN ONE FINISH AT CONTINUOUS WALL SURFACES, U.O.N.

Q. ACOUSTICAL SEALANT TO BE USED IN ALL INTERIOR PARTITIONS THAT ARE NOT FIRE RATED.

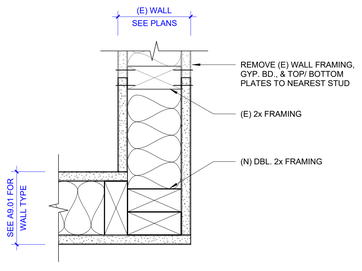
R. INSTALL SOUND ATTENUATION ACOUSTICAL BATTS IN ALL NON-RATED WALLS, UNLESS SHOWN OTHERWISE ON PLANS. SOUND INSULATION SHALL BE FULL HEIGHT OF GYPSUM WALLBOARD, U.O.N.

S. WHERE (E) SPRAY-APPLIED FIREPROOFING IS REQUIRED TO BE REMOVED IN ORDER TO CONSTRUCT HEAD OF WALLS (PER UL LISTINGS), CONTRACTOR TO PATCH & REPAIR FIREPROOFING, AS REQUIRED, TO RESTORE ORIGINAL THICKNESS AND REQUIRED FIRE RATING.

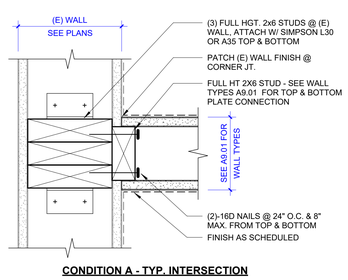
4 GENERAL INTERIOR PARTITION NOTES
1" = 1'-0"



30 DOOR INFILL AT EXISTING WOOD WALL
3" = 1'-0"

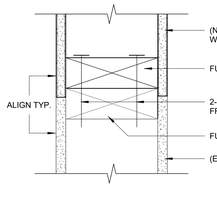


19 (E) WALL FRAMING @ (N) RATED WALL
3" = 1'-0"

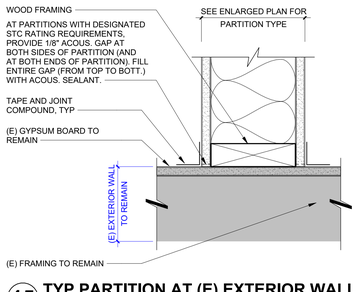


CONDITION A - TYP. INTERSECTION

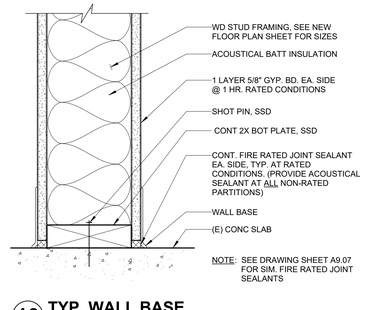
14 (N) WALL @ (E) WD. STUD WALL
3" = 1'-0"



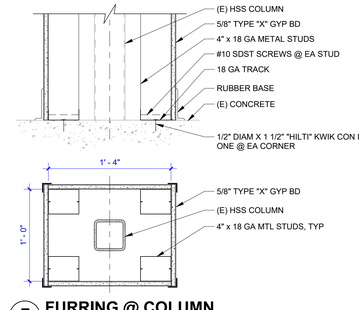
20 (N) TO (E) STUD WALL CONNECTION1
3" = 1'-0"



15 TYP PARTITION AT (E) EXTERIOR WALL
3" = 1'-0"



10 TYP. WALL BASE
3" = 1'-0"



5 FURRING @ COLUMN
1 1/2" = 1'-0"

PCOE GOLD IN EDUCATION

Revisions

Delta	Date	Revisions	By

PLAN CHECK SET

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AUBURN, CA 95603

Project

ANNEX BUILDING ALTERATIONS

Sheet Title

DETAILS - WALL TYPES & FRAMING

Client Project Number:

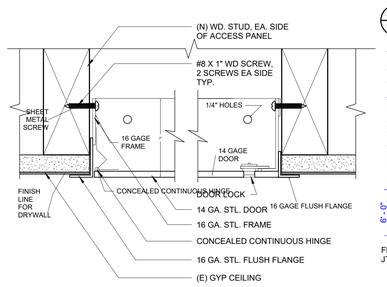
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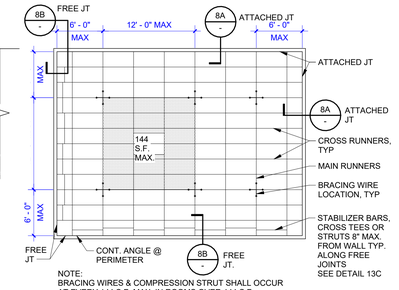
GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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18 ACCESS PANEL AT GYP CEILING

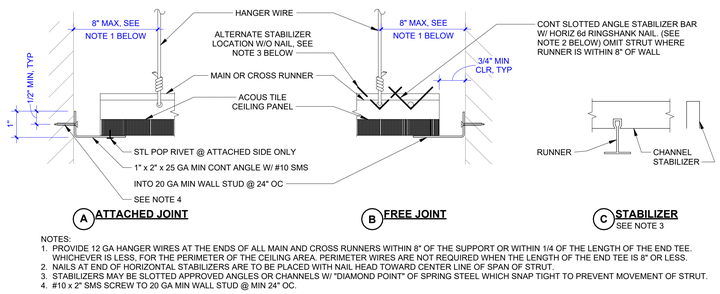
6" = 1'-0"



NOTE:
BRACING WIRES & COMPRESSION STRUT SHALL OCCUR AT EVERY 144 S.F. MAX. IN ROOMS OVER 144 S.F.

13 TYP CEILING PLAN

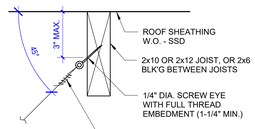
1/8" = 1'-0"



NOTES:
1. PROVIDE 12 GA HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN 8" OF THE SUPPORT OR WITHIN 1/4 OF THE LENGTH OF THE END TEE, WHICHEVER IS LESS, FOR THE PERIMETER OF THE CEILING AREA. PERIMETER WIRES ARE NOT REQUIRED WHEN THE LENGTH OF THE END TEE IS 8" OR LESS.
2. NAILS AT END OF HORIZONTAL STABILIZERS ARE TO BE PLACED WITH NAIL HEAD TOWARD CENTER LINE OF SPAN OF STRUT.
3. STABILIZERS MAY BE SLOTTED APPROVED ANGLES OR CHANNELS W/ "DIAMOND POINT" OF SPRING STEEL WHICH SNAP TIGHT TO PREVENT MOVEMENT OF STRUT.
4. #10 x 2" SMS SCREW TO 20 GA MIN WALL STUD @ MIN 24" OC.

8 CEILING PERIMETER CONNECTION

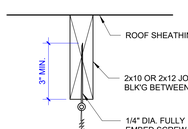
3" = 1'-0"



NOTE:
SPLAY WIRES PARALLEL TO JOISTS; SPLAY WIRES CANNOT BE PERPENDICULAR TO JOISTS

29 TYP SPLAY WIRE ATTACHMENT

1 1/2" = 1'-0"



24 TYP VERT WIRE ATTACHMENT

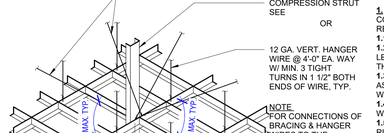
1 1/2" = 1'-0"



COMPRESSION STRUT:
UP TO 3'-0" USE 1-1/2"x1-1/2"x16 GA. ∠ ; FOR OVER 3'-0" TO 5'-0" USE 3"x3"x16 GA. ∠ ; FOR OVER 5'-0" TO 10'-0" USE P1001 UNISTRUT

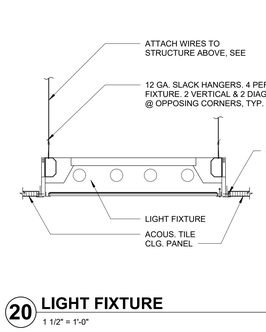
19 TYP. COMPRESSION STRUT

1 1/2" = 1'-0"



14 SUSP'D. CLG. BRACING ASSM.1

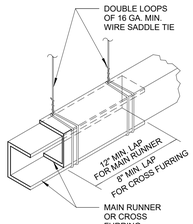
3" = 1'-0"



NOTE:
REUSE AS MANY (E) HANGER WIRES AS POSSIBLE

30 HANGER WIRE SPLICE GYP. BD.1

3" = 1'-0"

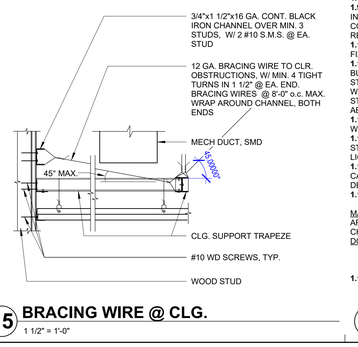


25 rv RUNNER SPLICE1

1 1/2" = 1'-0"

20 LIGHT FIXTURE

1 1/2" = 1'-0"



15 BRACING WIRE @ CLG.

1 1/2" = 1'-0"

10 TYPICAL ACOUSTICAL CEILING NOTES

1/4" = 1'-0"

PROVIDE METAL SUSPENSION SYSTEMS FOR LAY IN PANEL CEILINGS AS FOLLOW:

GENERAL: REQUIREMENTS FOR DESIGN AND INSTALLATION OF SUSPENDED ACOUSTICAL CEILING SYSTEMS ARE CONTAIN IN CBC 803.9.1.1, AND SHALL BE INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF ASTM C635 AND ASTM C636.

1. CEILING NOTES: THE FOLLOWING NOTES WILL BE ACCEPTABLE IN PLANS AND SPECIFICATIONS FOR CEILING SYSTEMS WHOSE TOTAL WEIGHT, INCLUDING AIR CONDITIONING/HEATING GRILLS AND LIGHT FIXTURES, DOES NOT EXCEED TWO (2) PSF. HEAVIER SYSTEMS, AND THOSE SUPPORTING LATERAL LOADS FROM PARTITIONS, WILL REQUIRE SPECIAL DESIGN DETAILS.

1.1 #12 GAGE (MIN.) HANGER WIRES MAY BE USED FOR UP TO AND INCLUDING 4 FT. BY 4 FT. GRID SPACING AND SHALL BE ATTACHED TO MAIN RUNNERS.

1.2 PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN EIGHT (8) INCHES OF THE SUPPORT OR WITHIN ONE-FOURTH (1/4) OF THE LENGTH OF THE END TEE, WHICHEVER IS LEAST, FOR THE PERIMETER OF THE CEILING AREA. END CONNECTIONS FOR RUNNERS WHICH ARE DESIGNED AND DETAILED TO RESIST THE APPLIED VERTICAL AND HORIZONTAL FORCES MAY BE USED IN LIEU OF THE #12 GAGE HANGER WIRES, SUBJECT TO LOCAL AGENCY'S REVIEW AND APPROVAL.

1.3 PROVIDE TRAPEZE OR OTHER SUPPLEMENTARY SUPPORT MEMBERS AT OBSTRUCTIONS TO TYPICAL HANGER SPACING. PROVIDE ADDITIONAL HANGERS, STRUTS OR BRACES AS REQUIRED AT ALL CEILING BREAKS, SOFFITS OR DISCONTINUOUS AREAS. HANGER WIRES THAT ARE MORE THAN 1 IN 6 OUT OF PLUMB ARE TO HAVE COUNTER-SLOPING WIRES.

1.4 CEILING GRID MEMBERS MAY BE ATTACHED TO NOT MORE THAN TWO (2) ADJACENT WALLS. CEILING GRID MEMBERS SHALL BE AT LEAST 1/2 INCH CLEAR OF OTHER WALLS. IF WALLS RUN DIAGONALLY TO CEILING GRID SYSTEM RUNNERS, ONE END OF MAIN AND CROSS RUNNERS SHOULD BE FREE, AND A MINIMUM OF 1/2 INCH CLEAR OF WALL.

1.5 AT THE PERIMETER OF THE CEILING AREA WHERE MAIN OR CROSS RUNNERS ARE NOT CONNECTED TO THE ADJACENT WALL, PROVIDE INTERCONNECTION BETWEEN THE RUNNERS AT THE FREE END TO PREVENT LATERAL SPREADING. A METAL STRUT OR A #16 GAGE WIRE WITH A POSITIVE MECHANICAL CONNECTION TO THE RUNNER MAY BE USED. WHERE THE PERPENDICULAR DISTANCE FROM THE WALL TO THE FIRST PARALLEL RUNNER IS 12 INCHES OR LESS, THIS INTERLOCK IS NOT REQUIRED.

1.6 PROVIDE BRACING ASSEMBLIES CONSISTING OF A COMPRESSION STRUT AND FOUR (4) #12 GAGE SPLAYED BRACING WIRES ORIENTED 90 DEGREES FROM EACH OTHER AT THE FOLLOWING SPACING:

1. PROVIDE BRACING ASSEMBLIES AT A SPACING NOT MORE THAN 12 FT. BY 12 FT. ON CENTER.
2. FOR ESSENTIAL SERVICES BUILDINGS, PLACE BRACING ASSEMBLIES NOT MORE THAN 8 FT. BY 12 FT. ON CENTER.
3. PROVIDE BRACING ASSEMBLIES AT LOCATIONS NOT MORE THAN ONE HALF (1/2) THE SPACINGS GIVEN IN ITEMS 1 & 2 ABOVE, FROM EACH PERIMETER WALL AND AT THE EDGE OF VERTICAL CEILING OFFSETS.
4. THE SLOPE OF THESE WIRES SHALL NOT EXCEED 45 DEGREES FROM THE PLANE OF THE CEILING AND SHALL BE TAUT. SPLICES IN BRACING WIRES ARE NOT TO BE PERMITTED WITHOUT SPECIAL LOCAL AGENCY'S APPROVAL.
5. SUSPENDED ACOUSTICAL CEILING SYSTEMS WITH A CEILING AREA OF 144 SQUARE FEET OR LESS, AND FIRE RATED SUSPENDED ACOUSTICAL CEILING SYSTEMS WITH A CEILING AREA OF 96 SQUARE FEET OR LESS, SURROUNDED BY WALLS WHICH CONNECT DIRECTLY TO THE STRUCTURE ABOVE, DO NOT REQUIRE BRACING ASSEMBLIES WHEN ATTACHED TO TWO ADJACENT WALLS.

1.7 FASTEN HANGER WIRES WITH NOT LESS THAN THREE (3) TIGHT TURNS. FASTEN BRACING WIRES WITH FOUR (4) TIGHT TURNS. MAKE ALL TIGHT TURNS WITHIN A DISTANCE OF 1-1/2 INCHES. HANGER OR BRACING WIRE ANCHORS TO THE STRUCTURE SHOULD BE INSTALLED IN SUCH A MANNER THAT THE DIRECTION OF THE ANCHOR ALIGNS AS CLOSELY AS POSSIBLE WITH THE DIRECTION OF THE WIRE.

NOTE: WIRE TURNS MADE BY MACHINE WHERE BOTH STRANDS HAVE BEEN DEFORMED OR BENT IN WRAPPING CAN WAIVE THE 1-1/2 INCH REQUIREMENT, BUT THE NUMBER OF TURNS SHOULD BE MAINTAINED, AND AS TIGHT AS POSSIBLE.

1.8 SEPARATE ALL CEILING HANGER AND BRACING WIRES AT LEAST SIX (6) INCHES FROM ALL UNBRACED DUCTS, PIPES, CONDUIT, ETC.

1.9 WHEN DRILLED-IN CONCRETE ANCHORS OR SHOT-IN ANCHORS ARE USED IN REINFORCED CONCRETE FOR HANGER WIRES, 1 OUT OF 10 MUST BE FIELD TESTED FOR 200 LBS. IN TENSION. WHEN DRILLED-IN CONCRETE ANCHORS ARE USED FOR BRACING WIRES, 1 OUT OF 2 MUST BE FIELD TESTED FOR 440 LBS. IN TENSION. SHOT-IN ANCHORS IN CONCRETE ARE NOT PERMITTED FOR BRACING WIRES. IF ANY SHOT-IN OR DRILLED-IN ANCHOR FAILS, SEE CBC, SECTION 1916A.8. NOTE: DRILLED-IN OR SHOT-IN ANCHORS REQUIRE SPECIAL LOCAL AGENCY'S APPROVAL PRIOR TO USE IN PRESTRESSED CONCRETE.

1.10 ATTACH ALL LIGHT FIXTURES AND CEILING MOUNTED AIR TERMINALS, TO THE CEILING GRID RUNNERS TO RESIST A HORIZONTAL FORCE EQUAL TO THE WEIGHT OF THE FIXTURES. SCREWS OR APPROVED FASTENERS ARE REQ'D.

1.11 FLUSH OR RECESSED LIGHT FIXTURES AND AIR TERMINALS, WEIGHING LESS THAN 56 LBS., MAY BE SUPPORTED DIRECTLY ON THE RUNNERS OF A HEAVY DUTY GRID SYSTEM BUT, IN ADDITION, THEY MUST HAVE A MINIMUM OF TWO (2) #12 GAGE SLACK SAFETY WIRES ATTACHED TO THE FIXTURE AT DIAGONAL CORNERS AND ANCHORED TO THE STRUCTURE ABOVE. ALL 4 FT. X 4 FT. LIGHT FIXTURES MUST HAVE SLACK SAFETY WIRES AT EACH CORNER. ALL FLUSH OR RECESSED LIGHT FIXTURES AND AIR TERMINALS WEIGHING 56 LBS. OR MORE MUST BE INDEPENDENTLY SUPPORTED BY NOT LESS THAN FOUR (4) TAUT #12 GAGE WIRES, EACH ATTACHED TO THE FIXTURE AND TO THE STRUCTURE ABOVE REGARDLESS OF THE TYPE OF CEILING GRID SYSTEM USED. THE FOUR (4) TAUT #12 GAGE WIRES, INCLUDING THEIR ATTACHMENT TO THE STRUCTURE ABOVE, MUST BE CAPABLE OF SUPPORTING FOUR (4) TIMES THE WEIGHT OF THE UNIT.

1.12 ALL FIXTURES AND AIR TERMINALS SUPPORTED ON INTERMEDIATE DUTY GRID SYSTEMS MUST BE INDEPENDENTLY SUPPORTED BY NOT LESS THAN FOUR (4) TAUT #12 GAGE WIRES EACH ATTACHED TO THE FIXTURE OR TERMINAL, AND TO THE STRUCTURE ABOVE.

1.13 SUPPORT SURFACE MOUNTED LIGHT FIXTURES BY AT LEAST TWO POSITIVE DEVICES WHICH SURROUND THE CEILING RUNNER AND WHICH ARE EACH SUPPORTED FROM THE STRUCTURE ABOVE BY A #12 GAGE WIRE. SPRING CLIPS OR CLAMPS THAT CONNECT ONLY TO THE RUNNER ARE NOT ACCEPTABLE. PROVIDE ADDITIONAL SUPPORTS WHEN LIGHT FIXTURES ARE 8 FT. OR LONGER.

1.14 SUPPORT PENDANT MOUNTED LIGHT FIXTURES DIRECTLY FROM THE STRUCTURE ABOVE WITH HANGER WIRES OR CABLES PASSING THROUGH EACH PENDANT HANGER AND CAPABLE OF SUPPORTING FOUR (4) TIMES THE WEIGHT OF THE FIXTURE. A BRACING ASSEMBLY, IS REQUIRED WHERE THE PENDANT HANGER PENETRATES THE CEILING. SPECIAL DETAILS ARE REQUIRED TO ATTACH THE PENDANT HANGER TO THE BRACING ASSEMBLY TO TRANSMIT HORIZONTAL FORCES.

1.15 CLASSIFICATION OF CEILING GRID IS HEAVY DUTY. COMPONENTS SHALL COMPLY W/ THE FOLLOWING SCHEDULE:

MANUFACTURER	MAIN RUNNER	CROSS RUNNER
ARMSTRONG	7301 7340 (1)	
CHICAGO METALLIC	200 1204 (2)	
DONN CORPORATION	DX26 DX424 (3)	

FOOTNOTES: (#)
(1) FOR 2 X 2 GRID USE 7324
(2) FOR 2 X 2 GRID USE 1226
(3) FOR 2 X 2 GRID USE DX216

MANUFACTURER'S CATALOG NO. OF DETAIL FOR RUNNER SPLICE - PER MANUFACTURER'S RECOMMENDATION .

1.16 ALTERNATE MANUFACTURERS AND SYSTEMS MUST BE SUBMITTED FOR REIVEW AND APPROVAL BY THE LOCAL AGENCY.

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Revisions

Delta	Date	Revisions	By

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CONSTRUCTION DOCUMENTS

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Project

ANNEX BUILDING ALTERATIONS

Sheet Title

DETAILS - CEILING

Client Project Number:

Scale:	AS NOTED
Drawn By:	GB
Checked By:	HC
Issue Date:	7/24/2023
Revit Version:	2023

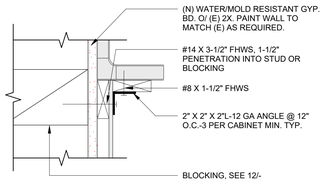
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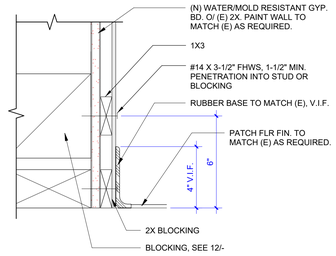
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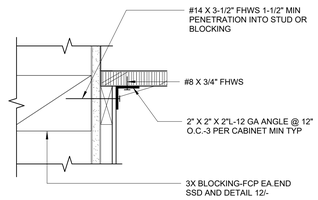
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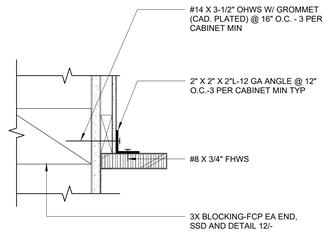
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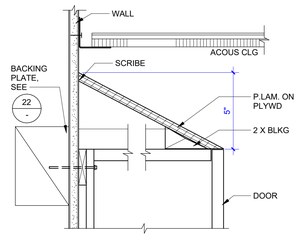


27 ANCHORAGE LOWER CABINET
3" = 1'-0"

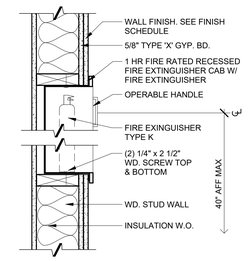




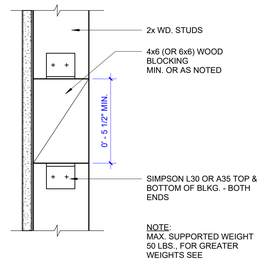
22 ANCHORAGE - UPPER CABINET
3" = 1'-0"



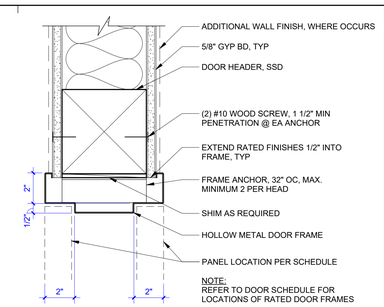
17 SLOPED DUST SOFFIT
3" = 1'-0"



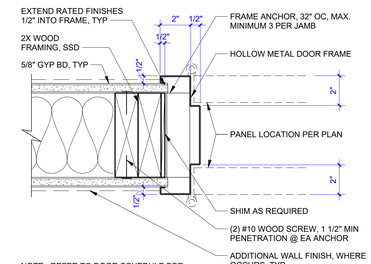
11 1-HR RATED RECESSED FIRE EXTINGUISH CABINET
1 1/2" = 1'-0"



12 TYPICAL BLOCKING
3" = 1'-0"

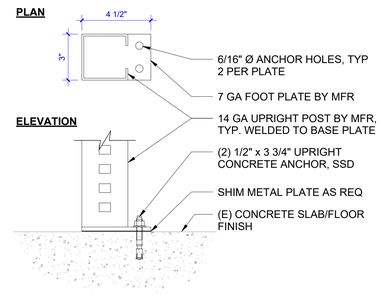


1 INTERIOR DOOR HEAD - WOOD
3" = 1'-0"

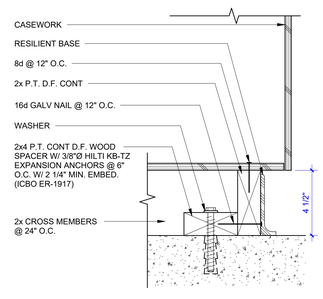


2 INTERIOR DOOR JAMB - WOOD
3" = 1'-0"

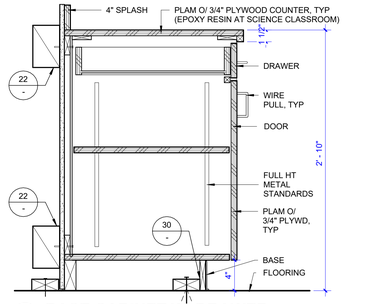
24 UPPER CABINET, TYP.
3" = 1'-0"



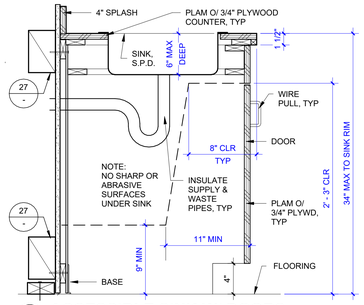
14 RACKS - MOUNTING
3" = 1'-0"



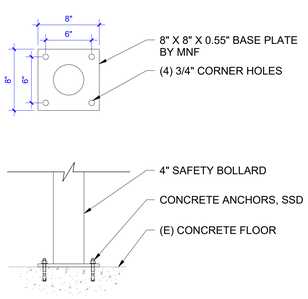
30 CABINET BASE ANCHOR
3" = 1'-0"



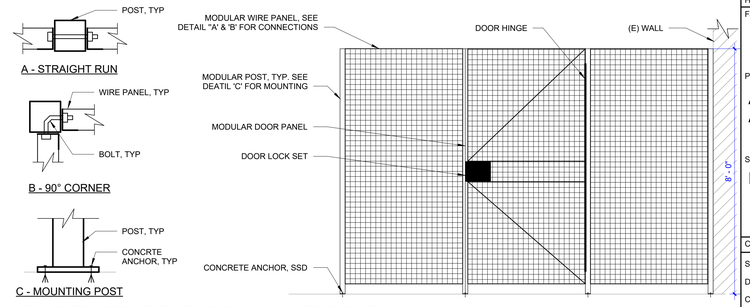
25 BASE CABINET W/ DRAWER
1 1/2" = 1'-0"



20 ACCESSIBLE SINK W/ DOORS
1 1/2" = 1'-0"



15 SAFETY BOLLARD - MOUNTING
1 1/2" = 1'-0"



10 WIRE SECURITY ROOM W/ HINGED DOOR
1/2" = 1'-0"

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Delta	Date	Revisions	By

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CONSTRUCTION DOCUMENTS

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Project
ANNEX BUILDING ALTERATIONS

Sheet Title
DETAILS - INTERIOR

Client Project Number:

Scale:	AS NOTED
Drawn By:	GB
Checked By:	HC
Issue Date:	7/24/2023
Revit Version:	2023

Sheet
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0 5' 50' | 0 5' 25' | 0 1' 12' | 0 1' 6' | 0 4' | 0 1' 3' | 0 2' | 0 1'

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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General

1. Interpretation of drawings & specifications
   - A) For convenience, specifications have been prepared for this project and are arranged in several sections, but such separation shall not be considered as the limits of the work required by any separate trade. The terms and conditions of such limitations are wholly between the contractor and his subcontractors.
   - B) In general, the working details will indicate dimensions, positions and kind of construction, and the specifications will indicate qualities and methods. Any work indicated on the working details mentioned but not in the specifications, or vice versa, shall be furnished as though fully set forth in both. Work not particularly detailed, marked, or specified, shall be the same as similar parts that are detailed, marked, or specified. If conflicts occur between drawings and specifications, the most expensive materials or methods will prevail.
   - C) Should an error appear in the working details or specifications or in work done by others affecting this work, the contractor shall notify the architect at once and in writing. If the Contractor proceeds with the work so affected without having given such written notice and without receiving the necessary approval, decision or instruction in writing from the owner, then he shall have no valid claim against the owner, for the cost of so proceeding and shall make good any resulting damage or defect. No verbal approval, decision, or instruction shall be valid or be the basis for any claim against the owner, its officers, employees or agents. The foregoing includes typical errors in the specifications or notational errors in the working details where the interpretation is doubtful or where the error is sufficiently apparent as to place a reasonably prudent contractor on notice that, should he elect to proceed, he is doing so at his own risk.
2. Construction shall conform to all applicable codes and regulations.
3. Shop Drawing Note:
   - A) Shop drawings shall be submitted in the form of one reproducible and two copies of each sheet.
   - B) The purpose of shop drawing submittals by the Contractor is to demonstrate to the Structural Engineer that he understands the design concept by indicating which materials he intends to furnish and install, and by detailing the fabrication and installation methods he intends to use.
   - C) Prior to fabrication, shop drawings shall be submitted for review to the Structural Engineer. Shop drawing submittals shall include, but are not necessarily limited to structural steel, reinforcing steel, glued laminated beams, and pre-fabricated wood roof framing items such as I-joists and trusses.
   - D) Prior to submission the Contractor shall review all submittals for conformance with the contract documents and shall stamp submittals as being "Reviewed for Conformance".
   - E) Shop drawing submittals processed by the Structural Engineer are not change orders.
   - F) Any detail on the shop drawing that deviates from the contract documents shall clearly be marked with the note "This is a Change".
   - G) Shop drawings or calculations submitted for review that require resubmittal for re-review shall be billed hourly for such time to the General Contractor. Re-review will not be processed without approval from the General Contractor for additional engineering review services.
4. Safety Note:
   - A) It is the Contractors responsibility to comply with the pertinent sections, as they apply to this project, of the "Construction Safety Orders" issued by the State of California latest edition, and all OSHA requirements.
   - B) The owner and the Structural Engineer do not accept any responsibility for the Contractor's failure to comply with these requirements.
   - C) The Contractor shall be responsible for adequate design and construction of all forms and shoring required.
5. The Contractor shall notify the Architect and Structural Engineer where a conflict or a discrepancy occurs between the structural drawings and any other portion of the contract documents or existing field conditions. Such notification shall be given in due time so as not to affect the construction schedule. In case of a conflict between structural drawings and specifications, the more restrictive condition shall take precedence unless written approval has been given for the least restrictive. Contractor shall verify all dimensions with architectural and structural drawings prior to commencing any work.
6. Where no specific detail is shown, the construction shall be identical or similar to that indicated for like cases of construction on this project. Should there be any question, contact the Architect and Structural Engineer prior to proceeding.
7. When construction attaches to an existing building, a complete set of drawings of the existing building shall be kept on the job site. Contractor to obtain these drawings from the owner.
8. Contractor shall provide an allowance equal to 2% of the bid for structural steel, misc. iron, light gauge framing, and reinforcing steel to be used at the discretion of the structural engineer. Unused amount to revert to the owner upon completion of the job.
9. Any substitutions for structural members, hardware, or details shall be reviewed by the Architect and Structural Engineer. Such review will be billed on a time and materials basis to the General Contractor with no guarantee that the substitution will be allowed.
10. Do not scale drawings. Contact the Architect or Structural Engineer for any dimensions not shown.
11. These drawings are not complete until reviewed and accepted by the local building official and signed by the owner and the Structural Engineer.
12. All drawings and written material appearing herein constitutes the original and unpublished work of the Structural Engineer and the same may not be duplicated, used or disclosed without written consent of the Structural Engineer.
13. The structure shown on these drawings is structurally sound only in its completed form. The stability of this structure depends on the diaphragms and the bracing members shown. The Contractor is to provide for the design and construction of shoring for all earth, forms, concrete, steel, wood, and masonry to resist gravity, earth, wind, seismic, and construction loads. Shoring shall remain in place until all diaphragms and lateral resisting elements are in place in their entirety. Construction materials shall be spread out if placed on framed floors or roofs. Load shall not exceed the design live load per square foot.

Design Criteria

1. Code: 2022 California Building Code (CBC)
2. Design Live Loads:

Area	Live Load	Remarks
Roof		
A) Flat to < 4:12	L_r = 20 psf	Reducible per code
B) 4:12 to < 12:12	L_r = 12-20 psf	Reducible per code
Floor	L = 0 psf	Reducible per code

3. Snow Design Parameters:

Ground Snow Load	P_g = N/A
Flat-Roof Snow Load	P_f = N/A
Snow Exposure Factor	C_e = N/A
Snow Load Importance Factor	I_s = N/A
Thermal Factor	C_t = N/A

4. Wind Design Parameters:

Basic Design Wind Speed (3-sec gust)	V = 95 mph
Nominal Design Wind speed (3-sec gust)	V_{asd} = 74 mph
Risk Category	II
Exposure Category	C
Internal Pressure Coefficient	±0.18
Analysis Method	Directional Procedure

Roof Pressures for Components & Cladding:

1. Wind Uplift loads (cones defined per ASCE 7-16 Fig. 30.3-2 thru 30.3-6):

A) Zone 1:	12 psf
B) Zone 2:	34 psf
C) Zone	50 psf

2. Discontinuity Distance: a = 7.2 ft

Wall Pressures for Components & Cladding:

Zone 4:	15.42 psf
Zone 5:	19.36 psf

5. Earthquake Design Parameters:

5.1. Seismic Importance Factor	I_e = 1.0
5.2. Risk Category	II
5.3. Soil Site Classification	'D'
5.4. Seismic Design Category	'D'
5.5. Mapped Spectral Response Accel	
A) Short period	S_s = 0.484g
B) 1-sec period	S_1 = 0.228g
5.6. Design Spectral Response Accel	
A) Short Period	S_{DS} = 0.456g
B) 1-sec period	S_{D1} = 0.326g
5.7. Seismic Force Resisting System	Wood Shearwalls
5.8. Seismic Base Shear	V = N/A
5.9. Seismic Response Coefficient	C_s = 0.07g
5.10 Response Modification Factor	R = 6.5
5.11. Component Amplification Factor	
A) Condenser	a_p = 2.5
B) Generator	a_p = 1.0
5.12 Component Response Modification Factor	
A) Condenser	R_p = 6.0
B) Generator	R_p = 2.5
5.13. Analysis Procedure	Equivalent Lateral Force

Demolition

1. Safety Notes:
   - A. It is the Contractor's responsibility to comply with the pertinent sections, as they apply to this project, of the "Construction Safety Orders" issued by the State of California, latest edition, and all OSHA requirements.
   - B. The Structural Engineer and Owner do not accept any responsibility for the Contractor's failure to comply with these requirements.
2. Shore or brace trusses, beams columns, and walls as required to maintain the stable integrity of the existing structure prior to demolition. It is the Contractor's sole responsibility to design and provide competent shoring and bracing for all loads imposed during and after demolition through completion of new construction.
3. All dimensions given to and of the existing structure are approximate. Verify by field measurements the dimensions of the existing structure. Where actual conditions deviate from the details shown on the drawings, notify the Structural Engineer for instructions prior to proceeding with work.
4. Demolition and removal of existing construction shall be made in such a manner as to avoid or minimize damage to adjacent construction.
5. Extent of demolition is to be as indicated on plans, sections and details. Demolition is to include removal and disposal construction.

Wood

1. All sawn lumber shall be Douglas Fir-Larch as graded by the West Coast Lumber Inspection Bureau (WCLIB) in accordance with Standard Grading Rules No. 17 typical unless noted otherwise. All members shall have a minimum grade of No. 1 except 2x4 and 2x6 wall studs, plates, and blocking may be No. 2.
2. All structural sheathing used for shear wall sheathing shall conform to the requirements for their type in DOC PS1, DOC PS2 or ANSI/APA PRP 210. Each panel or member shall be identified for grade, bond classification, and performance category by the trademarks of an approved testing and grading agency.
3. All foundation plates or sills on concrete slabs which are in direct contact with earth, and plates or sills on concrete or masonry foundations, shall be pressure treated.
4. All wood shall have a moisture content of not more than 19% when sheathing is applied.
5. 6" minimum clearance shall be maintained at all exterior walls between finish grade and bottom of wood walls.
6. Bearing and shearwalls shall have double top plates lapped at wall corners and intersections and plates shall be internalled with 3-16d at such locations. For plate splice details, see drawings.
7. Sill plate anchor bolts shall be installed with plate washers 3x3x0.229 between nut and plate.
8. Provide solid blocking between joists and rafters at all supports.
9. Provide blocking at all ceiling levels.
10. Joists under and parallel to partitions shall be doubled and nailed together.
11. Holes for bolts in wood shall be bored with a bit of the same nominal diameter as the bolt plus 1/16".
12. Holes for lag screws shall be bored as follows:
    - a. The clearance hole for the shank shall have the same diameter as the shank, and the same depth of penetration as the length of unthreaded shank.
    - b. The lead hole for the threaded portion shall have a diameter equal to 60% to 75% of the shank diameter and a length equal to at least the length of the threaded portion.
13. Lag screws and wood screws shall be screwed and not driven into place. Soap may be used to lubricate the screws.
14. All bolts and lag screws shall be provided with metal washers under heads and nuts which bear on wood. Applies also to inserted expanding fasteners, Red Head, etc.

Bolt Diameter	MI Washer	Steel Washer
5/8"ø	2¾"ø x 5/16"	3"x3"x¼"
¾"ø	3"ø x 5/16"	3"x3"x5/16"
7/8"ø	3½"ø x 7/16"	3½"x3½"x⅜"
1"ø	4"ø x ½"	3¾"x3¾"x⅜"

15. All bolts and lag screws shall be tightened at installation and retightened before closing in or at completion of job.
16. Lay all structural sheathing on roof and floors with face grain perpendicular to support typical unless noted otherwise. Use ply-clips at unsupported sheathing edges.
17. Connector hardware model number are those for Simpson Strong-Tie Company. All joist hangers shall be Simpson U series unless noted otherwise. Equivalent connectors with ICC acceptance may be submitted for review as an alternate.
18. Notify Structural Engineer after wall, floor, and roof sheathing nailing has been completed and a minimum of 48 hours prior to concealing sheathing.
19. Fasteners, nuts, and washers in contact with SBX/DOT and zinc borate treated wood in interior dry conditions may be carbon steel. Fasteners in other preservative-treated wood (Anchor bolts, nails, screws) shall be approved silicon bronze or copper, stainless steel or hot-dipped zinc-coated steel per CBC 2304.10.5.1 u.n.o.

Glued-Laminated Beams

1. Glued-laminated beams shall be manufactured from visually graded Western species and shall conform to the following combinations:
   simple span members: 24F-V4
   cantilever & continuous members: 24F-V8
2. Glued-laminated beams shall have the following minimum design values:
   Bending: F_{by} = 2,400 psi; F_{vx} = 265 psi; F_{cy} = 230 psi; E = 1,800,000 psi
   Axial: F_t = 1,100 psi; F_c = 1,650 psi; E = 1,700,000 psi
3. Camber all beams on 20000 ft. radius between supports (no camber at cantilevers), typical unless noted otherwise.
4. Each glued-laminated beam shall be stamped with the AITC quality control mark.
5. Each glued-laminated beam shall be fabricated with exterior glue and shall be assumed to be for exterior use.
6. Glued-laminated beams shall conform to Standard Specification for Structural glued-laminated timber AITC 117 latest edition.
7. Prior to fabrication, the Contractor shall submit shop drawings to the Architect and Structural Engineer for review.
8. For DSA jobs, manufacturer of all structural glued-laminated timber shall be continously inspected by an approved agency, per CBC section 1705A.5.4.

Nailing Schedule

1. All nails for structural work shall be common wire nails conforming to the following minimum sizes:
   8d 0.131"ø x 2½"
   10d 0.148"ø x 3"
   10d shorts 0.148"ø x 2⅝" plus thickness of shtg
   16d 0.162"ø x 3½"
   20d 0.192"ø x 4"
2. Provide nails at connections as indicated on the structural drawings. Where nails at connections are not indicated nail per nailing schedule in note 5.
3. Nailing not noted in schedule or on plans shall be a minimum of two nails at each contact. 8d nails for 1" material and 16d nails for 2" material.
4. Holes shall be pre-drilled where necessary to prevent splitting.
5. Nailing schedule:

Connection	Fastening	Location
1. Joist to sill or girder.	3-8d common (2½"x0.131") 3-3"x0.131" nails	toenail
2. Bridging to joist.	2-8d common (2½"x0.131") 2-3"x0.131" nails	toenail ea end
3. 1"x6" subfloor or less	2-8d common (2½"x0.131")	face nail
4. Plider than 1"x6" subfloor	3-8d common (2½"x0.131")	face nail
5. 2" subfloor to joist or girder	2-16d common (3½"x0.162")	blind & face nail
6. Sole plate to joist or blocking	16d (3½"x0.135") @ 16"cc 3"x0.131" nails @ 8"cc	typical face nail
Sole plate to joist or blocking at braced wall panel	3-16d (3½"x0.135") @ 16"cc 4-3"x0.131" nails @ 16"cc	braced wall panels
7. Top plate to stud.	2-16d common (3½"x0.162") 3-3"x0.131" nails	end nail
8. Stud to sole plate	4-8d common (2½"x0.131") 4-3"x0.131" nails 2-16d common (3½"x0.162") 3-3"x0.131" nails	toenail end nail
9. Double studs.	16d (3½"x0.135") @ 24"cc 3"x0.131" nail @ 8"cc	face nail
10. Double top plates.	16d (3½"x0.135") @ 16"cc 3"x0.131" nail @ 12"cc 8-16d common (3½"x0.162") 12-3"x0.131" nails	typical face nail lap splice
11. Blocking between joists or rafters to top plate.	3-8d common (2½"x0.131") 3-3"x0.131" nails	toenail
12. Rim joist to top plate	8d (2½"x0.131" @ 6"cc 3"x0.131" nail @ 6"cc	toenail
13. Top plates, laps and intersections.	2-16d common (3½"x0.162") 3-3"x0.131" nails	face nail
14. Cont. header, two pieces.	16d common (3½"x0.162")	16"cc along edge
15. Ceiling joists to plate.	3-8d common (2½"x0.131") 5-3"x0.131" nails	toenail
16. Continuous header to stud.	4-8d common (2½"x0.131")	toenail
17. Ceiling joists, laps over partitions, (Section 2308.10.4.1, Table 2308.10.4.1)	3-16d common (3½"x0.162") min. Table 2308.10.4.1 4-3"x0.131" nails	face nail
18. Ceiling joists to parallel rafters. (Section 2308.10.4.1, Table 2308.10.4.1)	3-16d common (3½"x0.162") min. Table 2308.10.4.1 4-3"x0.131" nails	face nail
19. Rafter to plate. (Section 2308.10.1, Table 2308.10.1)	3-8d common (2½"x0.131") 3-3"x0.131" nails	toenail
20. 1" diagonal brace to stud & plate.	2-8d common (2½"x0.131") 2-3"x0.131" nails	face nail
21. 1"x8" & wider sheathing to ea bearing.	3-8d common (2½"x0.131")	face nail
22. Built-up corner studs.	16d (3½"x0.162") @ 24"cc 3"x0.131" nail @ 16"cc	
23. Built-up girder & beams.	20d common (4"x0.192") @ 32"cc 3"x0.131" nail @ 24"cc 2-20d common (4"x0.192") 3-3"x0.131" nails	face nail at ends, staggered on opposite sides face nail @ ends and @ ea splice

Expansion Anchors-Concrete:

1. Use Hilti Kwik Bolt-TZ2 Expansion Anchors as manufactured by Hilti Inc., Tulsa Oklahoma. ICC-ES Report No. ESR-4266 reissued December 2021.
2. Installation of anchors shall be in accordance with the manufacturer's recommendations, ICC-ES Report, and these notes.
3. Special Inspection is required in accordance with the 2022 CBC Sections 1705A.1.1.3 and 1910A.5. Special Inspector must verify product, expiration date, concrete type and strength, anchor diameter and steel grade, compliance of drill bit, hole diameter and location, cleanliness of hole and anchor, and anchor embedment.
4. Each anchor type (loaded in either pullout or shear) shall be torque tested in accordance with CBC Section 1910A.5 to the appropriate test load shown in the table. If any anchor fails testing, all anchors of the same type not previously tested shall be tested until 20 consecutive anchors pass, then initial testing frequency may be resumed.
5. When installing anchors in existing concrete do not cut or damage existing reinforcing bars. Locate existing reinforcing bars with pachometer or x-ray if required.
6. The testing of the anchors shall be done by the Testing Laboratory and a report of the test results shall be submitted to the Building Dept. and Architect/Structural Engineer.
7. Anchors installed up into the bottom of metal deck with concrete fill shall be installed in the center of the low flute of the decking. The decking shall have a minimum thickness of 20 gauge. The minimum depth of embedment above the top of the deck shall be 1½". The effective depth of embedment is considered to be one-third of the metal deck height plus the depth of embedment above the top of the deck. There shall be a minimum concrete cover of 1" between the top surface of the concrete and the end of the bolt.

Normal Weight Concrete Anchors
f'c = 3000 psi
Hilti Kwik Bolt-TZ2 Expansion Anchors

Anchor Diameter	Embedment Effective/Nominal u.n.o.	Carbon Steel Anchors Installation Torque Torque Test Load (ft-lbs)	Stainless Steel Anchors Installation Torque Torque Test Load (ft-lbs)
⅜"	2" / 2½"	30	30
½"	3¼" / 3⅜"	50	40
⅝"	4" / 4½"	40	60
¾"	4⅞" / 5½"	110	125

Abbreviations

addl ..... Additional
alt ..... Alternate
AISC ..... American Institute of Steel Construction
APA ..... American Plywood Association
ASTM ..... American Society for Testing and Materials
AWS ..... American Welding Society
AB ..... Anchor bolt
& ..... And
arch ..... Architect/Architectural
@ ..... At
b.o. ..... Bottom of
bm ..... Beam
brg ..... Bearing
btr ..... Better
btwn ..... Between
blkg ..... Blocking
B.S. ..... Both sides
bott ..... Bottom
BN ..... Boundary nail
clg ..... Ceiling
CL ..... Center to center
℄ ..... Center line
clr ..... Clear
col ..... Column
CP ..... Complete Penetration
conc ..... Concrete
CMU ..... Concrete masonry unit
conn ..... Connection
CJ ..... Construction Joint
cont ..... Continuous
csk ..... Countersink
CTJ ..... Control Joint
DL ..... Dead Load
det ..... Detail
diag ..... Diagonal
dia ..... Diameter
do ..... Ditto
D.F. ..... Douglas Fir
dbl ..... Double
dn ..... Down
dwg ..... Drawing
ea ..... Each
E.F. ..... Each Face
embed. ..... Embedment
EN ..... Edge Nail
E.N. ..... Each Way
elev, el... Elevation
eq ..... Equal
equip ..... Equipment
(e) ..... Existing
E.J. ..... Expansion Joint
F'c ..... Face of Concrete
FB ..... Face of Block
FM ..... Face of Masonry
FP ..... Face of Plywood/Sheathing
FS ..... Face of Stud
fin ..... Finish
F.F. ..... Finish floor
F.G. ..... Finish grade
flr ..... Floor
ftg ..... Footing
fnd ..... Foundation
f.o. ..... Face of
frmg ..... Framing
galv ..... Galvanized
ga ..... Gauge
glb ..... Glued-laminated beam
g.l. ..... Grid Line
hgr ..... Hanger
hdr ..... Header
ht ..... Height
HSB ..... High strength bolt
HSS ..... Hollow Steel Section
hk ..... Hook
horiz ..... Horizontal
I.d. ..... Inside diameter
Int ..... Interior
Inv ..... Inverted
Jst ..... Joist
JH ..... Joist hanger
LS ..... Lag screw
lt. wt. ..... Light weight
LL ..... Live Load
LLH ..... Long leg horizontal
LLV ..... Long leg vertical
LVL ..... Laminated Veneer Lumber
MB ..... Machine bolt
mfr. ..... Manufacturer
max ..... Maximum
mech ..... Mechanical
MI ..... Malleable iron
min ..... Minimum
misc ..... Miscellaneous
mtl ..... Metal
N.I.C. ..... Not in contract
(n) ..... New
nts ..... Not to scale
..... Number or pounds
o/ ..... Over
oc ..... On center
ONJ ..... Open web joist
opng ..... Opening
oppt ..... Opposite
O.H. ..... Opposite Hand
o.d. ..... Outside diameter
PP ..... Partial penetration
pc ..... piece
℄ ..... Plate
ply, plywd ..... Plywood
pcf ..... Pounds per cubic foot
psf ..... Pounds per square foot
psi ..... Pounds per square inch
PAF ..... Powder Actuated Fasteners
PTDF ..... Pressure Treated Douglas Fir
r. rad ..... Radius
RDWD ..... Redwood
reinf ..... Reinforcing
req'd ..... Required
rt ..... Right
R.O. ..... Rough opening
ø ..... Round or diameter
sched ..... Schedule
S.A.D. ..... See architectural drawings
S.E.D. ..... See electrical drawings
S.M.D. ..... See mechanical drawings
SMS ..... Sheet Metal Screws
SDS ..... Simpson Strong-Drive Screw
SDSTS ..... Self drilling self tapping screw
SC ..... Shear Connector ¾"ø u.n.o.
shtg ..... Sheathing
sht ..... Sheet
SMS ..... Sheet metal screw
sim ..... Similar
s.o.g. ..... Slab on grade
□ ..... square
stagg ..... Staggered
std ..... Standard
stl ..... Steel
sstl ..... Stainless Steel
stfnr ..... Stiffener
struct ..... Structural
SP ..... structural plywood
SPEN ..... structural plywood edge nailing
symm ..... Symetrical
TN ..... Toe nail
t.t.b. ..... Top & bottom
t.o.c. ..... Top of concrete
t.o.f. ..... Top of framing
t.o.p. ..... Top of plate
t.o.s. ..... Top of Steel
t.o.w. ..... Top of Wall
T&G ..... Tongue & Groove
TS ..... Tube Steel
typ ..... Typical
u.n.o. ..... Unless noted otherwise
vert ..... Vertical
V.I.F. ..... Verify in field
w/ ..... With
w/in ..... Within
w/o ..... Without
WS ..... Wood screw
WP ..... Working point
WHS ..... Welded headed studs
WWF ..... Welded wire fabric
WCLIB ..... West Coast Lumber Inspection Bureau

Adhesive Anchors-Concrete

1. Where "Hilti" or "Simpson" post-installed adhesive anchors in concrete are called out on plan, the following Hilti or Simpson adhesive products shall be used, respectively. Substitutions between or for other products shall be approved by the engineer prior to use:
   - A. Hilti HIT-HY 200 Epoxy Adhesive as manufactured by Hilti, Inc. ICC Report No. ESR-3187 revised March 2023.
   - B. Simpson "SET-XP" Adhesive Anchors as manufactured by Simpson Strong-Tie, Inc. ICC-ES Report No. ESR-2508 reissued July 2023.
2. Installation, inspection & testing of anchors shall be in accordance with the manufacturer's recommendations, ICC-ES report and these notes.
3. Threaded rod anchors shall be F1554, Grade 36 u.n.o.
4. Continuous special inspection is required in accordance with CBC Section 1701. Special inspector must verify product, expiration date, concrete type and strength, anchor diameter and steel grade, compliance of drill bit, hole diameter and location, cleanliness of hole and anchor, adhesive application, and anchor embedment. See "Test and Inspections" section of plans for additional information.
5. Where pull-test loads are designated on plan, each anchor type (loaded in either pullout or shear) shall have 50% of the anchors (alternate in each group arrangement) tested in tension to the tension load shown. If any anchor fails testing, all anchors of the same type not previously tested shall be tested until 20 consecutive anchors pass, then initial testing frequency may be resumed. Where pull-test loads are not shown, pull-testing is not required.
6. The testing of the anchors shall be done by the Testing Laboratory and a report of the test results shall be submitted to the Building Dept. and the Architect/Structural Engineer. Testing shall occur after full epoxy cure time has elapsed (24 hours min). Where the number of anchors of a specific size and type exceed (20), the following testing procedure may be used. The first 40 anchors shall be tested as specified in note 5 above, then 10% of the additional anchors shall be tested. Any failure shall be handled in the same manner as specified in note 5 above.
7. When installing anchors in existing concrete do not cut or damage existing reinforcing bars. Locate existing reinforcing bars with pachometer or x-ray if required.

Simpson Titen HD

1. Use Simpson Titen HD Screw Anchors and Simpson Titen HD Rod Anchors as manufactured by the Simpson Strong-Tie Company Inc., Pleasanton California. ICC-ES Report No. ESR-2713 reissued September, 2022.
2. Installation of anchors shall be in accordance with the manufacturer's recommendations, ICC-ES Report, and these notes.
3. Periodic special inspection is required in accordance with the 2022 CBC and the ICC-ES Report. Special inspector must verify anchor type, concrete type and strength, concrete member thickness, hole dimensions, anchor spacing, edge distance, installation torque, maximum impact wrench torque rating, and adherence to the manufacturer's published instructions.
4. When installing anchors in existing concrete do not cut or damage existing reinforcing bars. Locate existing reinforcing bars with pachometer or x-ray if required.
5. Anchors installed up into the bottom of metal deck with concrete fill shall be installed in the center of the lower or upper flute of the decking with minimum flute dimensions as shown in the ICC-ES Report. The decking shall have a minimum thickness of 20 gauge. The minimum depth of concrete above the top of the deck shall be 1½" when installed in the lower flute and 3¼" when installed in the upper flute. There shall be a minimum concrete cover of ¾" between the top surface of the concrete and the end of the anchor.

Test and Inspections

1. Tests and Inspections shall be provided as required below and shall conform to the requirements of the 2022 CBC, Chapter 17.
2. All Test and Inspections shall be performed by a certified special inspector from an established Testing & Inspection Company, unless noted otherwise. Jobsite visits by the Structural Engineer do not constitute inspections and are not a substitute for special inspection.
3. The special inspector shall observe the work indicated for conformance with the approved construction documents.
4. The special inspector shall furnish inspection reports to the building department, the engineer or architect of record, and other designated persons. All discrepancies shall be brought to the immediate attention of the contractor for correction, then, if uncorrected, to the proper design authority and to the building department.
5. The special inspector shall submit a final signed report stating whether the work requiring special inspection was, to the best of the inspector's knowledge, in conformance with the approved construction documents and the applicable workmanship provisions of the 2022 CBC.
6. It is the contractor's sole responsibility to see that these tests and inspections are performed.
7. Required Tests and Inspections are indicated below with a solid filled rectangle "■".
8. Continuous notation indicates the full-time observation of work requiring special inspection by an approved special inspector who is present at the work area. Periodic notation indicates the intermittent observation of work.

Tests & Documentation/Certification Required
Note: Coordinate with building department Test & Inspection form.

- ☐ A. Compact Fill
- ☐ B. Concrete mix design, cement, aggregates & admixtures
- ☐ C. Concrete strength f'c test
- ☐ D. Reinforcing steel mill certification
- ☐ E. Structural steel mill certification
- ☐ F. Structural steel, cold formed steel, and anchor bolt sampling & testing (if not properly identified)
- ☐ G. Non-destructive weld test for all complete penetration groove welds by Ultrasonic testing or Radiography
- ☐ H. Masonry strength f'm
- ☐ I. Masonry mortar, grout proportion, aggregates, additives
- ■ J. Post installed anchors: Expansion / Epoxy Anchors
- ☐ K. High strength bolts, nuts and washers
- ☐ L. End-welded studs
- ☐ M. Buckling Restrained Brace (Load Test)
- ☐ N. Beam to column moment connection
- ☐ O. Veneer bond strength test
- ☐ P. Concrete prestressing tendons and anchorage
- ☐ Q. Shotcrete preconstruction test
- ☐ R. Shotcrete strength & core test
- ☐ S. Prefabricated items
- ☐ T. Test to support alternative designs
- ☐ U. Isolator unit prototype & production testing

Verification and Inspection	Continuous	Periodic
A. STEEL		
☐ 1. Material verification of high-strength bolts, nuts & washers	○	●
☐ 2. Inspection of high-strength bolting, bearing & typical connections	○	●
☐ 3. Inspection of Welding Structural Steel: (Field/shop)		
☐ Complete & partial penetration groove welds	●	○
☐ Multi-pass fillet welds	●	○
☐ Single-pass fillet welds > 5/16"	○	●
☐ Single-pass fillet welds ≤ 5/16"	○	●
☐ Floor and roof deck welds	○	●
☐ 4. Inspection of Steel Frame Joint Details for Compliance with Approved Construction Documents	○	●
☐ 5. Automatic end-weld stud shear connectors	○	●
B. CONCRETE		
☐ 1. Concrete Placement	●	○
☐ 2. Inspection of reinforcing steel & placement	○	●
☐ 3. Inspection of anchors cast in concrete	○	●
☐ 4. Precast concrete attachments & inserts	○	●
☐ 5. Erection of precast concrete members	○	●
C. WOOD		
☐ 1. Verify grade and thickness of sheathing	○	●
☐ 2. Verify nominal size of framing members at adjoining panel edges	○	●
☐ 3. Verify nail diameter and length, number of fastener lines, spacing between fasteners in each line and at edge margins	○	●
☐ 4. Verify positive connection of wood members supporting balcony or deck connections to exterior walls prior to concealment	○	●
D. MASONRY PLACEMENT & GROUTING	○	●
Note: refer to TMS 602-16 Tables 3 & 4		
☐ 1. Level 2 masonry inspection (Risk Categories I, II, III)		
☐ 2. Level 3 masonry inspection (Category IV, DSA, OSHPD)		
E. SOIL (by Geotechnical Engineer)		
☐ 1. Footing excavation	○	●
☐ 2. Pile/Pier foundation	●	○
☐ 3. Material verification below footing	○	●
☐ 4. Excavation verification to proper depth	○	●
☐ 5. Placement and compaction of controlled fill	●	○
☐ 6. Site preparation prior to placement of controlled fill	○	●
F. POST INSTALLED ANCHORS		
☐ 1. Expansion anchor installation	○	●
■ 2. Epoxy anchor installation	●	○

PCOE GOLD IN EDUCATION

Revisions

Delta	Date	Revisions	By

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REGISTERED PROFESSIONAL ENGINEER WILLIAM D. BEVIER No. 22171 STRUCTURAL STATE OF CALIFORNIA — NOT VALID FOR CONSTRUCTION UNLESS SIGNED

AGENCY APPROVAL

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HY Architects Project number: 6014

Facility
PLACER CO. OFFICES OF EDUCATION
365 NEVADA STREET
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Project
ANNEX BUILDING ALTERATIONS

Sheet Title
GENERAL NOTES

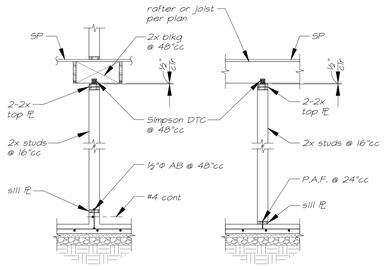
Client Project Number:

Scale:
Drawn By: KK
Checked By: TB
Issue Date:
Revit Version: 2023

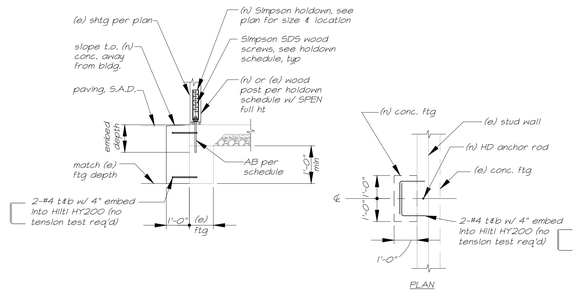
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S1.0
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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY

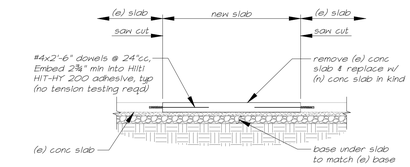


10 / S1.1 Non-Brg Partition Framing



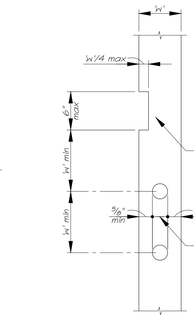
Holdown	Fastener	Wood Member Min. Thickness	AB	Embed Depth (in.)
HDU8	20-SDS ¼"x2½"	6x	⅞"Ø threaded rod (in Hilti HY 200)	8

11 / S1.1 Typical Holdown



12 / S1.1 Typical Slab Infill

Notes:
1. Expose (e) framing for structural inspection or dry rot conditions. Contractor shall not proceed w/ repairs until approval is received from Architect & DSA/Building Department.
2. Replace (e) decking and sheathing as shown on Arch drawings and where dry rot conditions are discovered in the field. Remove (e) material without cutting or otherwise damaging (e) rafters.
3. Nail T&G decking as follows: Nail 2x6 boards w/ 2-16d each bearing, Nail 2x8 boards w/ 3-16d each bearing
4. Replace (e) plywood sheathing as shown on Arch drawings and where dry rot scared sheathing or other damage is discovered in the field.
5. New plywood shall match existing in grade, thickness, and nailing. Minimum requirements are 15/32" 5 ply CD-X plywood w/ 8d @ 6"cc at panel edges, and 8d @ 12"cc in field.

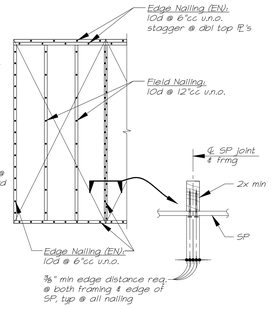


5 / S1.1 Notches & Holes in Studs

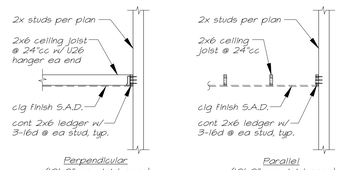
Edge Nailing (EN) as called for on plan & sections applies to edges of all SP sheets as follows:

At shearwalls:
1. Where SP contacts wall PL's & solid blkg over wall construction
2. At holdown studs/posts see detail on this sheet.

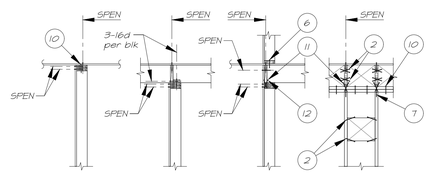
Notes:
1. Where nails are spaced @ 4"cc or less, nails shall be staggered & framing @ SP joints shall be 3x or larger.
2. Where 10d nails are spaced @ 3"cc or less, nails shall be 10d shorts. See Nailing Schedule on General Notes sheet.
3. Stagger SP joints where shear wall is more than one vertical panel in height.



6 / S1.1 Typical Shearwall Nailing

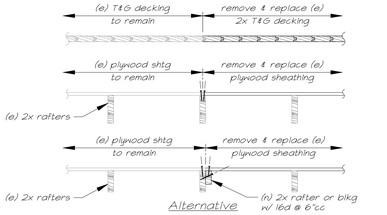


7 / S1.1 Typical Ceiling Framing

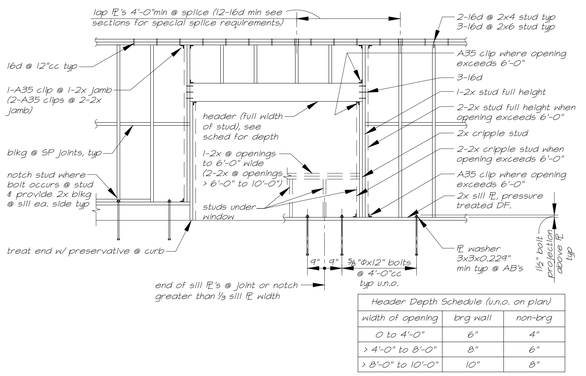


(#) Indicates the line number of Nailing Schedule on General Notes Sheet

8 / S1.1 Typical Nailing Examples

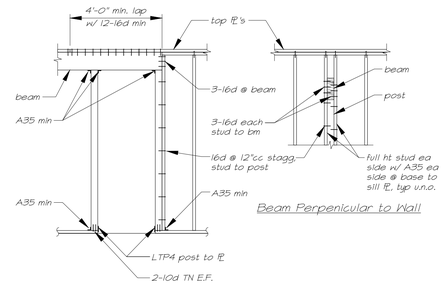


9 / S1.1 Typical Replacement of Decking & Sheathing



Header Depth Schedule (u.n.o. on plan)		
Width of opening	brg wall	non-brg
0 to 4'-0"	6"	4"
> 4'-0" to 8'-0"	8"	6"
> 8'-0" to 10'-0"	10"	8"

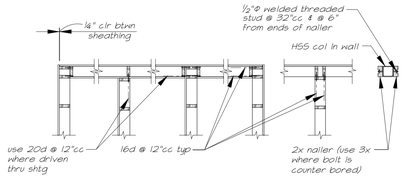
1 / S1.1 Typical Stud Wall & Opening Framing



Beam Perpendicular to Wall

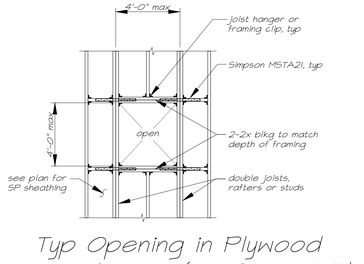
Beam Parallel to Wall

2 / S1.1 Post & Beam Connection



plan detail

3 / S1.1 Typ Stud Framing @ Corners



4 / S1.1 Typ Opening in Plywood Diaphragm (Roof or Wall)

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REGISTERED PROFESSIONAL ENGINEER — WILLIAM BEVIER — No. 2271 — STRUCTURAL — STATE OF CALIFORNIA — SELF-VOIDING — NOT VALID FOR CONSTRUCTION

Revisions

Delta	Date	Revisions	By

AGENCY APPROVAL

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HY Architects Project number: 6014

Facility

PLACER CO. OFFICES OF EDUCATION
365 NEVADA STREET
AUBURN, CA 95603

Project

ANNEX BUILDING ALTERATIONS

Sheet Title

TYPICAL DETAILS

Client Project Number:

Scale:
Drawn By: KK
Checked By: TB
Issue Date:
Revit Version: 2023

Sheet S1.1

Sheet of

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY

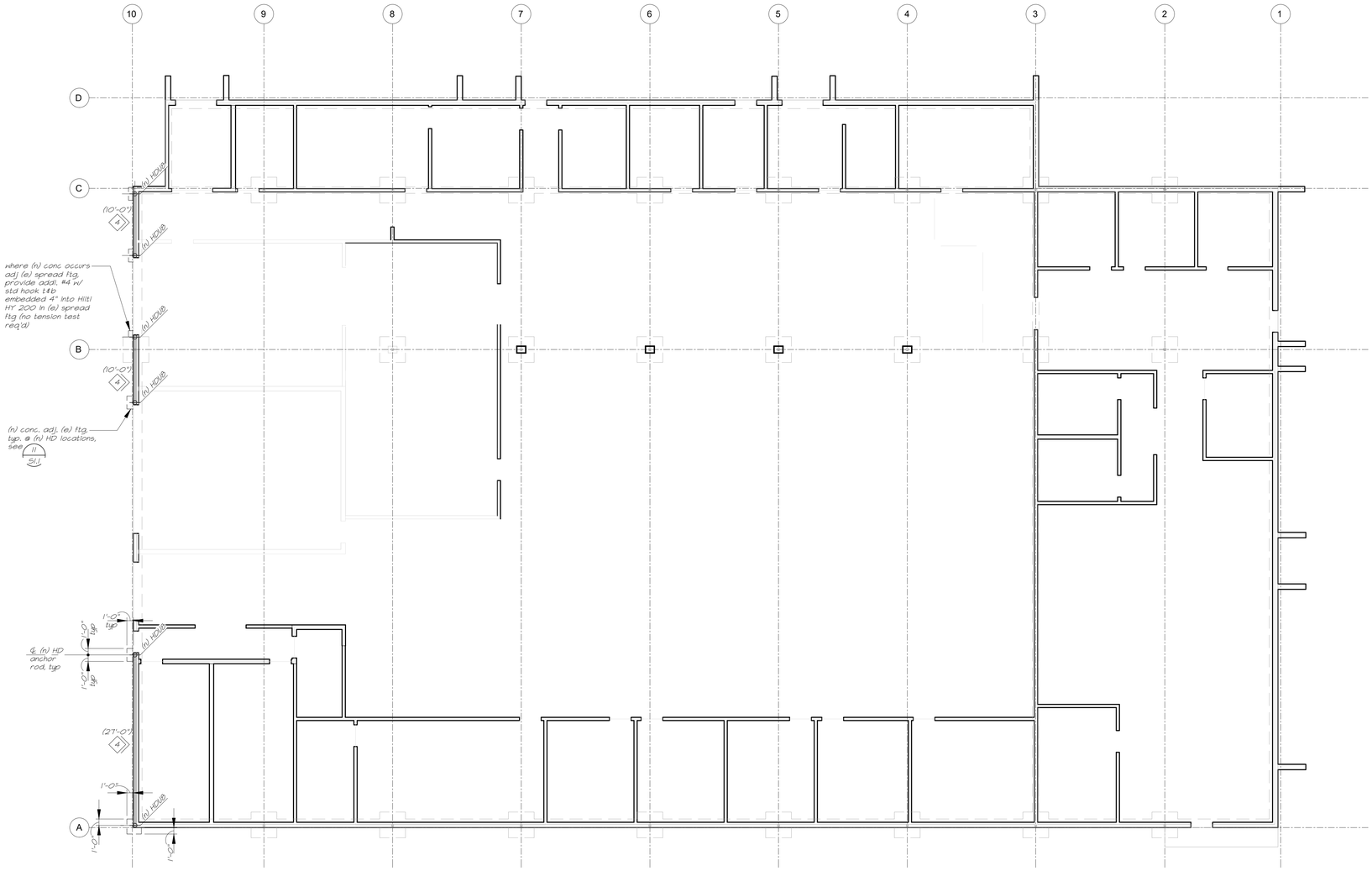
Foundation Notes

1. Verify all dimensions with architectural drawings. Notify Architect immediately of any discrepancies for resolution prior to proceeding.
2. Dimensions are to face of stud (FS) or ℄ col, typ. u.n.o.
3. Spread footings are centered on walls, posts and columns typical u.n.o.
4. Stud walls are 2x6 studs @ 16"cc typical u.n.o.
5. Walls shall have ⅝"ø anchor bolts with 9" embedment spaced @ 4'-0"cc minimum u.n.o., see shear wall schedule note #4 for replacement AB's.
6. Locate all holdowns in field. See architectural floor plans for locations of door and window openings and coordinate with such.
7. For typical wall framing see 5/S1.1
8. (X / (X'-X")) Indicates shearwall type and minimum length of wall to be sheathed. For sheathing, nailing, sill ℄ and anchor bolts see 1/S2.1
9. Indicates holdown, see plan for size and type. See 11/S1.1 for typical holdown details
10. Indicates (e) HSS column, size indicated on plan.
11. See 12/S1.1 @ trenching locations. S.A.D.
12. Refer to sheet S1.1 for typical non-bearing partition framing. S.A.D.

1/S2.1 Shearwall Schedule

Mark	Sheathing	Edge Nailing	Anchor Bolts
4	(e) ⅜" APA rated shtg	(e) 8d @ 4"cc	(e) ⅝"ø @ 32"cc

Notes
1. Symbol Nomenclature:
   - 4 — number indicates shearwall type per schedule above
   - (x'-x") — minimum required length of panel (actual length may be longer)
2. Field nailing to be 8d @ 12"cc typical.
3. Holdown bolts shall not be considered to replace (or act as) anchor bolts.
4. 2x PTDF mud sill typ. Replacement anchor bolts shall be ⅝"ø Titen HD w/ 8" min. embedment. Spaced anchor bolts @ 48"cc u.n.o. There shall be at least 2 bolts for each piece of sill and an anchor bolt not more than 9" and not less than 4½" from each end of each piece of sill.
5. For typical plywood shearwall nailing see 6/S1.1
6. The minimum edge distance for nails in the framing members and the plywood shall be ⅜" for 2" nominal framing members and ½" for 3" nominal framing members.
7. All nails to be common wire nails, typical u.n.o.
8. Foundation anchor bolts shall have a steel plate washer under each nut not less than 0.229"x3"x3" in size. The hole in the plate washer shall be permitted to be diagonally slotted with a width up to ⅝" larger than the bolt diameter and a slot length not to exceed 1¾", provided a standard cut washer is placed between the plate washer and the nut. The plate washer shall extend to within ½" of the edge of the bottom plate on the side with sheathing.
9. Shear material may be applied to either side of wall framing, typ u.n.o.



A/S2.1 Partial Existing Foundation Plan
1/8" = 1'-0"

North

Revisions

Delta	Date	Revisions	By

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Bevier Job No:23024

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HY Architects Project number: 6014

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AUBURN, CA 95603

Project
ANNEX BUILDING ALTERATIONS

Sheet Title
FOUNDATION PLAN

Client Project Number:

Scale:
Drawn By: KK
Checked By: TB
Issue Date:
Revit Version: 2023

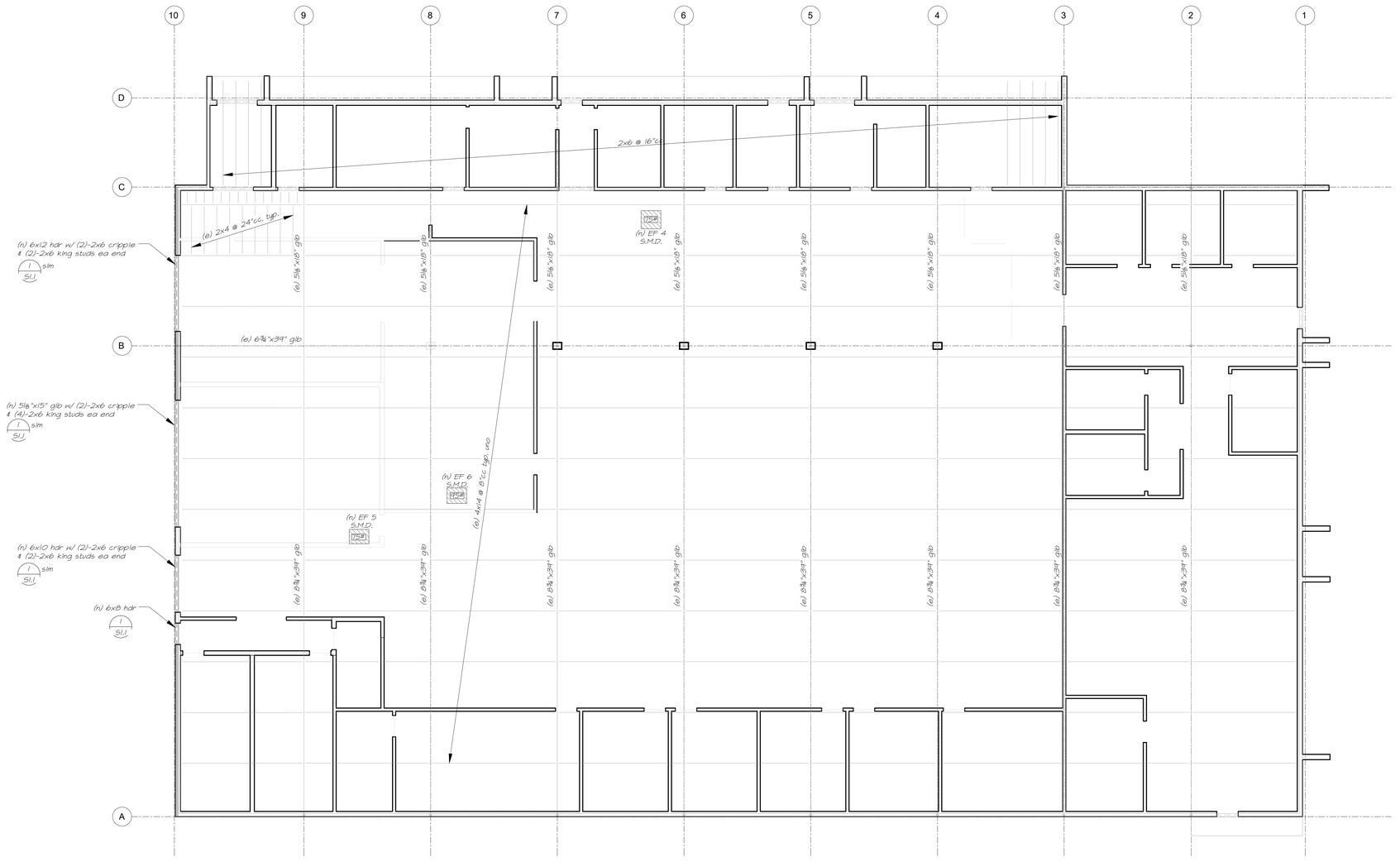
Sheet
S2.1
Sheet of

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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Roof Framing Notes

1. X Indicates (e) wood post.
2. Indicates (e) HSS column.
3. 1000# Indicates approximate location & weight of mechanical unit. Coordinate location with mechanical drawings. Provide blocking around new openings.
4. Indicates (n) shearwall. See foundation plan.



A S2.2 Partial Existing Roof Framing Plan
1/8" = 1'-0"

North

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Delta	Date	Revisions	By

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HY Architects Project number: 6014

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Project

ANNEX BUILDING ALTERATIONS

Sheet Title

ROOF FRAMING PLAN

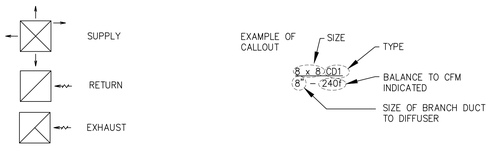
Client Project Number:

Scale:	Sheet S2.2
Drawn By: KK	
Checked By: TB	
Issue Date:	
Revit Version: 2023	Sheet of

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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DIFFUSER, REGISTER, & GRILLE SCHEDULE



SYMBOL	DESCRIPTION SHALL BE EQUAL TO:
CD1	CEILING DIFFUSER – 1 "TITUS" MODEL MCD, MODULAR CORE, STEEL CONSTRUCTION, FRAME TYPE 3 FOR T-BAR INSTALLATION. DIFFUSER, SIZE AND BLOW PATTERN AS INDICATED ON DRAWINGS. WHITE FINISH.
CD2	CEILING DIFFUSER – 2 "TITUS" MODEL MCD, MODULAR CORE, STEEL CONSTRUCTION, FRAME TYPE 1 FOR SURFACE MOUNTING. DIFFUSER, SIZE AND BLOW PATTERN AS INDICATED ON DRAWINGS. WHITE FINISH.
R1	RETURN REGISTER – 1 "TITUS" MODEL 50F, ½"x½"x1" EGG-CRATE GRID, ALUMINUM CONSTRUCTION, FRAME TYPE 3 FOR T-BAR INSTALLATION, WHITE PAINT, SIZE AS INDICATED ON DRAWINGS.
R2	RETURN REGISTER – 2 "TITUS" MODEL 50F, ½"x½"x1" EGG-CRATE GRID, ALUMINUM CONSTRUCTION, FRAME TYPE 1 FOR SURFACE MOUNTING, WHITE PAINT, SIZE AS INDICATED ON DRAWINGS.
ER1	EXHAUST REGISTER – 1 SAME AS R1
ER2	EXHAUST REGISTER – 2 SAME AS R2

COMPLIANCE NOTES

MECHANICAL AND PLUMBING EQUIPMENT SHALL CONFORM TO THE FOLLOWING AS STATED IN THE ENERGY EFFICIENCY STANDARDS, 2022.

1. BE CERTIFIED BY THE MANUFACTURER AS COMPLYING WITH THE EFFICIENCY REQUIREMENTS AS PRESCRIBED IN SECTIONS:

110.1 APPLIANCES REGULATED BY THE APPLIANCE EFFICIENCY STANDARDS:
110.2 HVAC EQUIPMENT EFFICIENCY AND PACKAGED CONTROLS:
110.3 SERVICE WATER HEATING EFFICIENCY AND CONTROLS:
110.4 POOL AND SPA HEATING EFFICIENCY AND CONTROLS:
110.5 RESTRICTIONS ON PILOT LIGHTS:

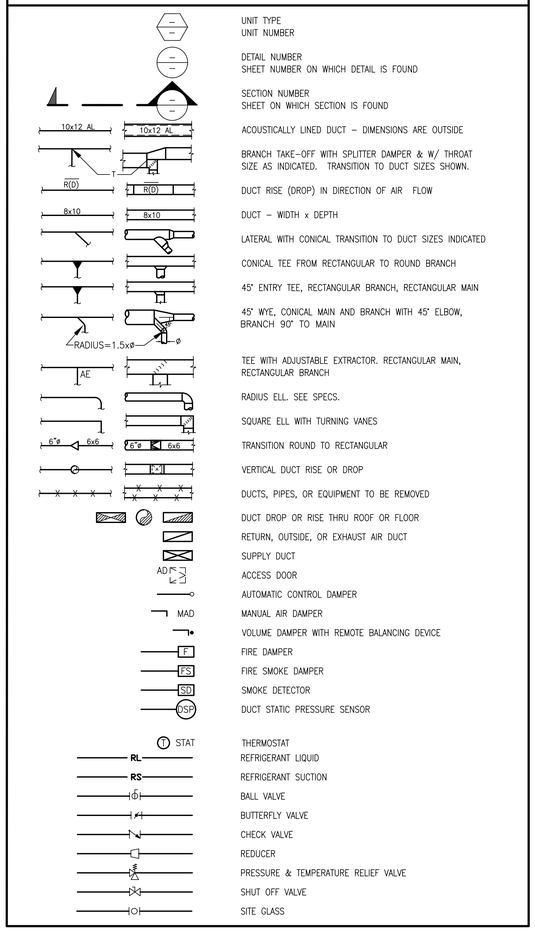
2. BE SPECIFIED AND INSTALLED IN ACCORDANCE WITH SECTIONS.

120.1 REQUIREMENTS FOR VENTILATION:
120.2 REQUIRED CONTROLS FOR HVAC SYSTEMS:
120.2 (H) DEMAND SHED CONTROLS.
120.2 (I) ECONOMIZER FAULT DETECTION & DIAGNOSTIC.
120.3 REQUIREMENTS FOR PIPE INSULATION:
120.4 REQUIREMENTS FOR DUCT INSULATION:

MECHANICAL ABBREVIATIONS

AAV	AUTOMATIC AIR VENT
ABV	ABOVE
AB.C, OH	ABOVE CEILING, OVERHEAD
AC	AIR CONDITIONING
AD	ACCESS DOOR
ADA	AMERICANS W/ DISABILITIES ACT
AE	AIR EXTRACTOR
AFF	ABOVE FINISHED FLOOR
AL	ACOUSTICALLY LINED
AHU	AIR HANDLING UNIT
APD	AIR PRESSURE DROP
BHP	BRAKE HORSEPOWER
BOD	BOTTOM OF DUCT
BR	BRANCH
BTU	BRITISH THERMAL UNIT
BTUH	BTU PER HOUR
CAV	CONSTANT AIR VOLUME
CD	CONDENSATE DRAIN
CFM, f	CUBIC FEET OF AIR PER MINUTE
CFS	CUBIC FEET PER SECOND
CL	CENTERLINE
CO	CLEANOUT
CONC.	CONCRETE
CONN.	CONNECT
CR	CONDENSATE RETURN (STEAM)
CS	CURRENT SENSOR
CU	CONDENSING UNIT
CU FT	CUBIC FEET
CU IN	CUBIC INCHES
CVB	CONSTANT VOLUME BOX
CW	COLD WATER
DB	DRY BULB
DF	DOUGLAS FIR
DIA, ø	DIAMETER
DSP	DUCT STATIC PRESSURE SENSOR
EA, OA, RA, SA	EXHAUST, OUTSIDE, RETURN & SUPPLY AIR
E.C.	ELECTRICAL CONTRACTOR
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
FA	FACE AREA (SQUARE FEET)
FC	FLEXIBLE CONNECTION
FLA	FULL LOAD AMPS
FPI	FINS PER INCH
FPM	FEET PER MINUTE
GALV.	GALVANIZED
GA	GAUGE
GC	GENERAL CONTRACTOR
HP	HORSE POWER
HWS	HOT WATER SUPPLY
HWR	HOT WATER RETURN
HZ	FREQUENCY (HERTZ)
LBS	POUNDS
LRA	LOCKED ROTOR AMPS
LWT	LEAVING WATER TEMPERATURE
MAV	MANUAL AIR VENT
MAX	MAXIMUM
MBH	BTU PER HOUR (THOUSAND)
MC	MECHANICAL CONTRACTOR
MIN	MINIMUM
MPS	MEDIUM PRESSURE STEAM
(N) (E)	NEW, EXISTING
N.C.	NORMALLY CLOSED
NEG	NEGATIVE
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OP	OPERATING
PH	PHASE
POC	POINT OF CONNECTION
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TREATED
PTDF	PRESSURE TREATED DOUGLAS FIR
P&TRV	PRESSURE & TEMPERATURE RELIEF VALVE
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
(R) (D)	RISE, DROP
RD, OFL	ROOF DRAIN, OVERFLOW
REF	ROOF EXHAUST FAN
REQ'D	REQUIRED
RL	REFRIGERANT LIQUID
RPM	REVOLUTIONS PER MINUTE
RS	REFRIGERANT SUCTION,
SM	SHEET METAL
SMS	SHEET METAL SCREWS
ST SMS	SELF TAPPING SHEET METAL SCREW
SOV	SHUT OFF VALVE
SS	STAINLESS STEEL
STL	STEEL
TA, FA	TO ABOVE, FROM ABOVE
TB, FB	TO BELOW, FROM BELOW
TBR	TO BE REMOVED
TCC	TEMPERATURE CONTROL CONTRACTOR
TCP	TEMPERATURE CONTROL PANEL
THK	THICK
TR	TO REMAIN
TSP	TOTAL STATIC PRESSURE
TV	TURNING VANES
TYP	TYPICAL
UG, UF	UNDERGROUND, UNDERFLOOR
UON	UNLESS OTHERWISE NOTED
UTR	UP THROUGH ROOF
VAC	VOLTS ALTERNATING CURRENT
VFD	VARIABLE FREQUENCY DRIVE
WB	WET BULB
WG	WATER GAUGE
WOG	WATER OIL GAS PRESSURE RATING
WP	WATER PRESSURE
WPD	WATER PRESSURE DROP
WT, AT	WATERTIGHT, AIRTIGHT

MECHANICAL LEGEND



(E) AIR CONDITIONING UNIT

SYMBOL	MANUFACTURER	MODEL	NOMINAL TONS	COOLING CAPACITY						FAN				OSA		HEATING CAPACITY			COMPRESSOR		CONDENSER	COMB. FAN	UNIT ELECTRICAL					MIN. UNIT DICONNECT SIZE		OPERATING WEIGHT LBS.	REMARKS
				TOTAL MBH	SENSIBLE MBH	EDB °F	EWB °F	AMB °F	SEER @ ARI	(E) CFM	(N) CFM	ESP IN WG	BHP	(E) CFM	(N) CFM	MBH INPUT	MBH OUTPUT	AFUE	RLA	LRA	FLA	FLA	VOLTS	PHASE	HZ	MCA	MOCP	FLA	LRA		
AC 1	CARRIER	48HJD006	5	56.6	43.7	81	64	100	13	1700	**1545**	0.75	0.77	460	**200**	72	59.2	82%	17	123	1.5	0.57	208	3	60	28.9	35	28	168	612	SEE BELOW
AC 2	CARRIER	48HJD004	3	34.3	25.2	86	66	100	13	1200	**1050**	0.51	0.34	540	**190**	72	59.2	82%	10.3	77	0.7	0.57	208	3	60	18.5	25	18	90	580	SEE BELOW
AC 3	CARRIER	48HJD005	4	47.6	34.5	86	66	100	13	1500	**1400**	0.50	0.75	600	**275**	72	59.2	82%	13.5	99	0.7	0.57	208	3	60	22.5	30	22	112	597	SEE BELOW
AC 4	CARRIER	48HJD012	10	103.1	90.8	80	63	100	–	3200	**3200**	0.7	3.7	700	**700**	180	147.6	82%	17.3	123	1.4	0.57	208	3	60	52.3	60	55	337	1320	SEE BELOW
AC 5	CARRIER	48HJD012	10	103.1	90.8	80	63	100	–	3200	**3200**	0.7	3.7	700	**700**	180	147.6	82%	17.3	123	1.4	0.57	208	3	60	52.3	60	55	337	1320	SEE BELOW
AC 6	CARRIER	48HJD005	4	47.6	34.5	84	65	100	13	1600	**1585**	0.5	0.75	700	**580**	72	59.2	82%	13.5	99	0.7	0.57	208	3	60	22.5	30	22	112	597	SEE BELOW
AC 9	CARRIER	48GS036	3	34.3	26.6	86	65	100	10	1200	**1200**	0.7	2	350	**350**	60	48.6	80%	10.9	78	1.6	0.8	208	3	60	18.8	25	–	–	400	SEE BELOW

(ORIGINAL DESIGN) PROVIDE:
A) 7 DAY PROGRAMMABLE THERMOSTAT, "HONEYWELL" T7300.
B) ROOF CURB.
C) DISPOSABLE FILTER.
D) ECONOMIZER W/ BAROMETRIC RELIEF.

NEW NOTES
1. REUSED (E)AC UNITS INFORMATION LISTED ABOVE ARE FROM RECORD DRAWINGS.
2. REBALANCE SUPPLY AND OUTSIDE AIR AIRFLOW OF EACH UNIT TO (N) VALUES.
3. REPLACE (E)DISPOSABLE FILTER W/(N)MERV 13 FILTERS

NEW ROOF EXHAUST FAN SCHEDULE

SYMBOL	MANUFACTURER	MODEL	CFM	ESP (IN. WG.)	SONES MAX.	ELECTRICAL				WEIGHT LBS	SERVES	CONTROL	REMARKS
						HP	BHP	VOLTS	PH				
EF 4	GREENHECK	G-097-A	250	0.75	9.9	1/4	0.13	120	1	75	COPY ROOM 105	INTERLOCK W/ (E) AC-1	SEE BELOW
EF 5	GREENHECK	G-099-A	1000	0.75	12.4	1/4	0.25	120	1	75	GARAGE 131	INTERLOCK W/ (E) AC-5	SEE BELOW
EF 6	GREENHECK	G-0140-B	1250	0.75	8.4	1/3	0.29	120	1	95	SHOP 134	BY WALL SWITCH	SEE BELOW

NOTES
1. PROVIDE COMPLETE W/ ROOF CURB AND BACKDRAFT DAMPER

APPLICABLE CODES

CODES:

ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE REGULATIONS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

A) STATE OF CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24, BUILDING STANDARDS:

2022 EDITION OF THE CALIFORNIA BUILDING CODE.
2022 EDITION OF THE CALIFORNIA ELECTRICAL CODE.
2022 EDITION OF THE CALIFORNIA MECHANICAL CODE.
2022 EDITION OF THE CALIFORNIA PLUMBING CODE.
2022 EDITION OF THE CALIFORNIA ENERGY CODE.

B) NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) LIFE SAFETY CODE, CR.

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Revisions

Delta	Date	Revisions	By

PLAN CHECK SET

CONSTRUCTION DOCUMENTS

AGENCY APPROVAL

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Email: office@turleymech.com

Project Engineer:	JT	Job Number:	23120
Project Manager:	JT	Plot Date: Jul 21, 2023 - 7:27pm	
Project Drafter:	-	Login: DFang	

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REGISTERED PROFESSIONAL ENGINEER — JASON W. THOMPSON — No. M-028563 Exp. 6/30/2025 — MECHANICAL — STATE OF CALIFORNIA

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HY Architects Project number: 6014

Facility

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365 NEVADA STREET
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Project

ANNEX BUILDING ALTERATIONS

Sheet Title

MECHANICAL LEGEND, NOTES AND SCHEDULES

Client Project Number:

Scale: AS NOTED
Drawn By: TURLEY
Checked By: TURLEY
Issue Date: 07/21/2023

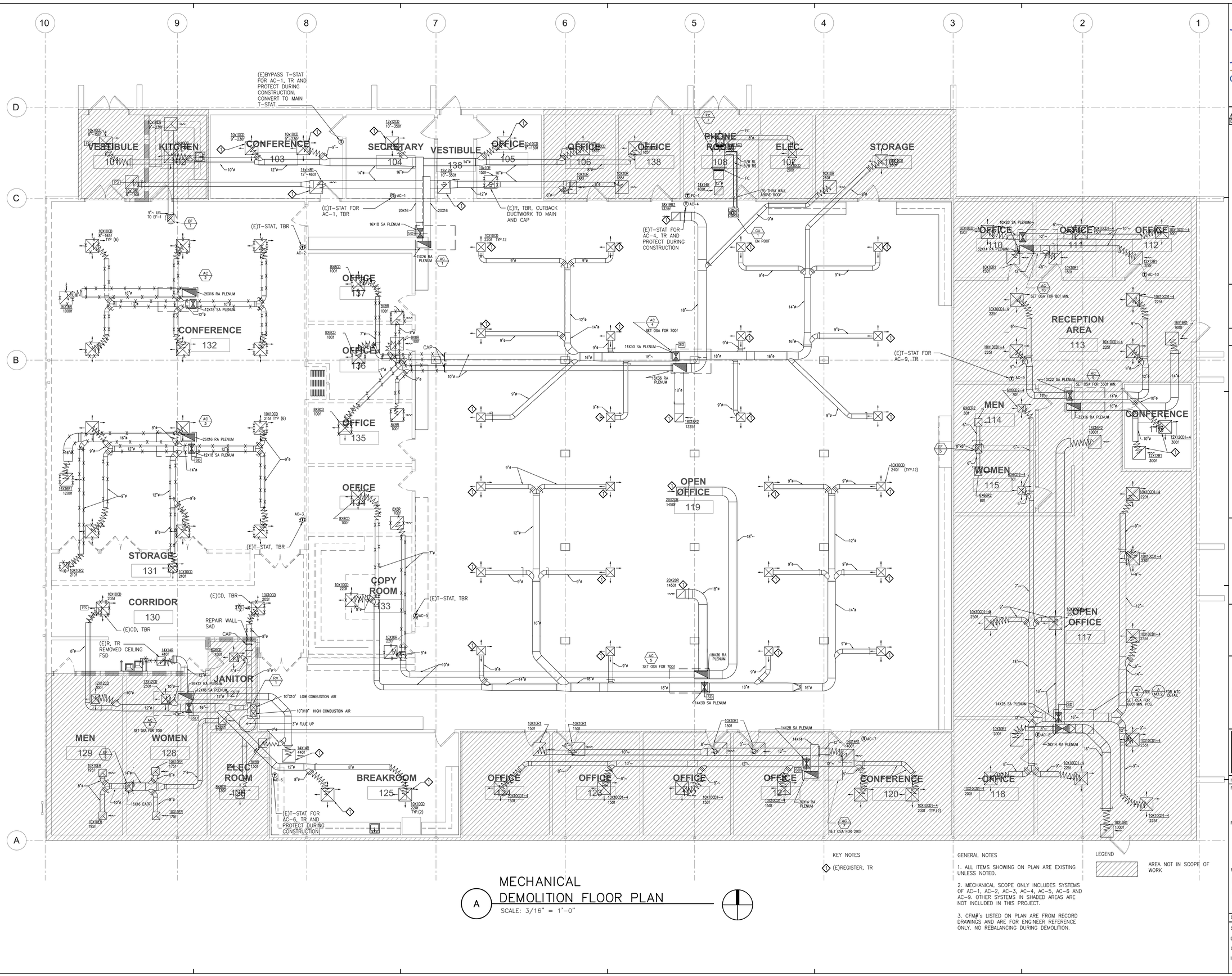
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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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MECHANICAL DEMOLITION FLOOR PLAN

A — SCALE: 3/16" = 1'-0"

KEY NOTES

1. (E)REGISTER, TR

GENERAL NOTES

1. ALL ITEMS SHOWING ON PLAN ARE EXISTING UNLESS NOTED.
2. MECHANICAL SCOPE ONLY INCLUDES SYSTEMS OF AC-1, AC-2, AC-3, AC-4, AC-5, AC-6 AND AC-9. OTHER SYSTEMS IN SHADED AREAS ARE NOT INCLUDED IN THIS PROJECT.
3. CFM#'s LISTED ON PLAN ARE FROM RECORD DRAWINGS AND ARE FOR ENGINEER REFERENCE ONLY. NO REBALANCING DURING DEMOLITION.

LEGEND

AREA NOT IN SCOPE OF WORK

PCOE
GOLD IN EDUCATION

Revisions

Delta	Date	Revisions	By

PLAN CHECK SET

CONSTRUCTION DOCUMENTS

AGENCY APPROVAL

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Project Engineer:	JT	Job Number:	23120
Project Manager:	JT	Plot Date: Jul 21, 2023 - 7:27pm	
Project Drafter:	-	Login: DTariq	

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ANNEX BUILDING ALTERATIONS

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MECHANICAL OVERALL FIRST FLOOR PLAN - DEMO

Client Project Number:

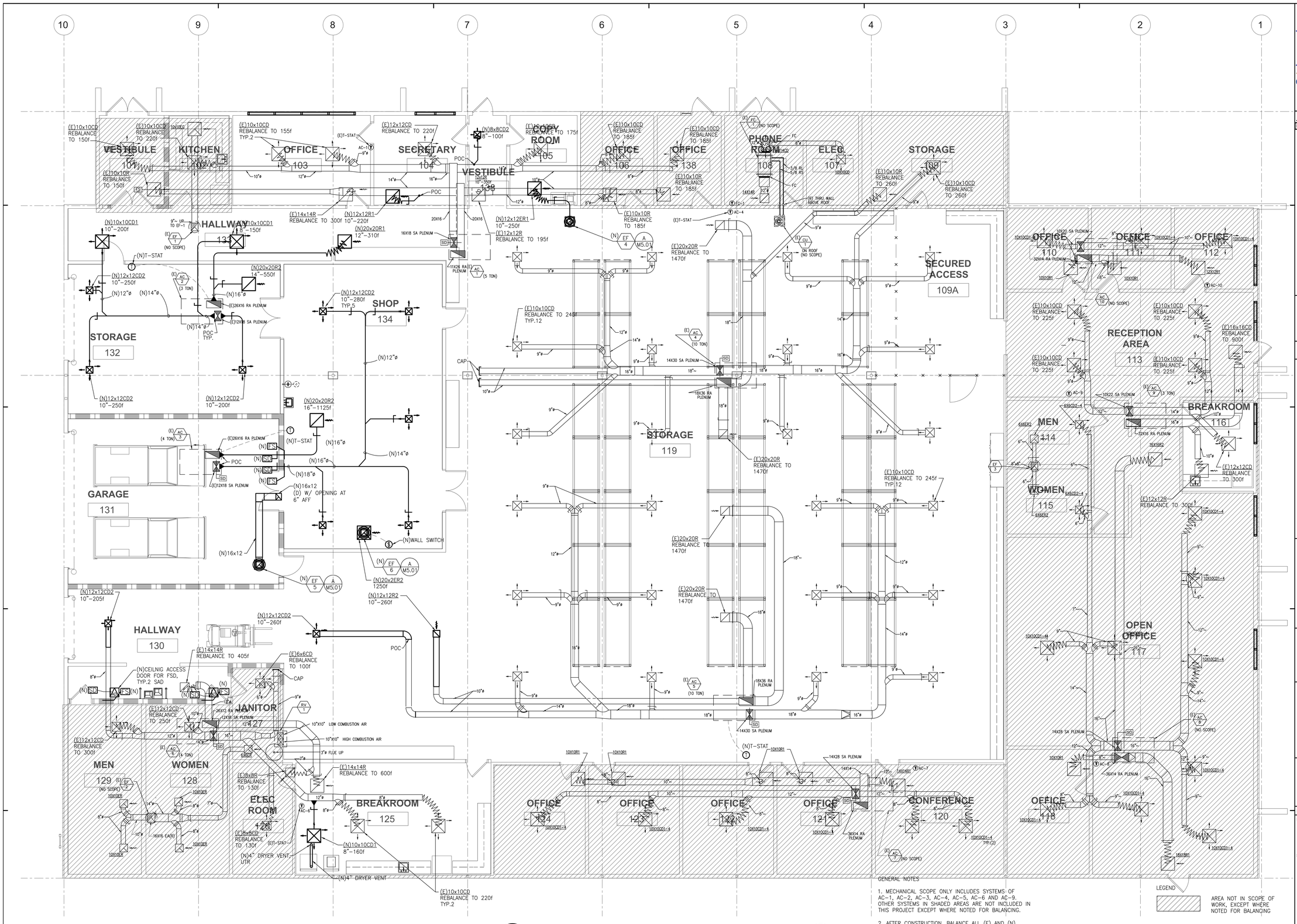
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Drawn By:	TURLEY
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Issue Date:	07/21/2023

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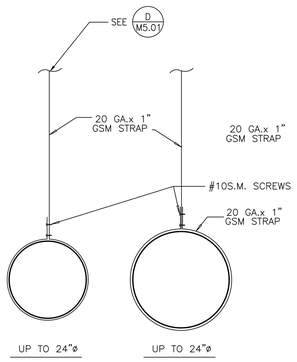
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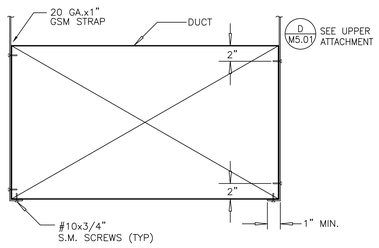
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10
9
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1
VESTIBULE 101
KITCHEN 102
OFFICE 103
SECRETARY 104
VESTIBULE 138
COPY ROOM 105
OFFICE 106
OFFICE 138
PHONE ROOM 108
ELEC. 107
STORAGE 109
SECURED ACCESS 109A
HALLWAY 135
STORAGE 132
SHOP 134
GARAGE 131
HALLWAY 130
JANITOR 127
MEN 129
WOMEN 128
ELEC ROOM 126
BREAKROOM 125
STORAGE 119
OFFICE 124
OFFICE 123
OFFICE 122
OFFICE 121
CONFERENCE 120
OFFICE 110
OFFICE 111
OFFICE 112
RECEPTION AREA 113
BREAKROOM 116
MEN 114
WOMEN 115
OFFICE 117
OFFICE 118
(E)10x10CD REBALANCE TO 150f
(E)10x10CD REBALANCE TO 220f
(E)10x10R REBALANCE TO 150f
(E)10x10CD REBALANCE TO 155f TYP.2
(E)12x12CD REBALANCE TO 220f
(N)8x8CD2 8"-100f
(E)10x10CD REBALANCE TO 175f
(E)10x10CD REBALANCE TO 185f
(E)10x10R REBALANCE TO 185f
(E)10x10CD REBALANCE TO 260f
(E)10x10R REBALANCE TO 260f
(N)10x10CD1 10"-200f
(N)10x10CD1 8"-150f
(N)12x12CD2 10"-250f
(N)20x20R1 12"-310f
(N)20x20R2 14"-550f
(N)12x12CD2 10"-280f TYP.5
(N)12x12CD2 10"-200f
(N)20x20R2 16"-1125f
(N)16x12 (D) W/ OPENING AT 6" AFF
(N)WALL SWITCH
(N)20x2ER2 125f
(N)12x12R2 10"-260f
(N)12x12CD2 10"-205f
(N)12x12CD2 10"-260f
(E)14x14R REBALANCE TO 405f
(E)6x6CD REBALANCE TO 100f
(N)CEILNIG ACCESS DOOR FOR FSD, TYP.2 SAD
(E)12x12CD REBALANCE TO 250f
(E)12x12CD REBALANCE TO 300f
(E)14x14R REBALANCE TO 600f
(E)8x8R REBALANCE TO 130f
(E)8x8CD REBALANCE TO 130f
(N)4" DRYER VENT UTR
(N)4" DRYER VENT
(N)10x10CD1 8"-160f
(E)10x10CD REBALANCE TO 220f TYP.2
(N)12x12R1 10"-220f
(N)12x12ER1 10"-250f
(E)12x12R REBALANCE TO 195f
(N)12x12R1 10"-350f
(E)14x14R REBALANCE TO 300f 10"-220f
(E)10x10R REBALANCE TO 185f
(E)20x20R REBALANCE TO 1470f
(E)10x10CD REBALANCE TO 245f TYP.12
(E)20x20R REBALANCE TO 1470f
(E)10x10CD REBALANCE TO 245f TYP.12
(E)12x12R REBALANCE TO 300f
(E)16x16CD REBALANCE TO 900f
(E)10x10CD REBALANCE TO 225f
(E)10x10CD REBALANCE TO 225f
(E)10x10CD REBALANCE TO 225f
(E)10x10CD REBALANCE TO 225f
(N)T-STAT
(E)T-STAT
(N)EF 4 A M5.01
(N)EF 6 A M5.01
(N)EF 5 A M5.01
(E)EF 1 (NO SCOPE)
(E)EF 2 (NO SCOPE)
(E)EF 3 (NO SCOPE)
(E)CU 1 ON ROOF (NO SCOPE)
(E)AC 1 (5 TON)
(E)AC 2 (3 TON)
(E)AC 3 (4 TON)
(E)AC 4 (10 TON)
(E)AC 5 (10 TON)
(E)AC 6 (4 TON)
(E)AC 7 (NO SCOPE)
(E)AC 8 (3 TON)
(E)AC 9 (3 TON)
(E)AC 10 (NO SCOPE)
(E)AC 11 (NO SCOPE)
(E)AC 12 (NO SCOPE)
(N)RV 1
(N)FC 1 (NO SCOPE)
(N)FC 2 (NO SCOPE)
(N)FC 3 (NO SCOPE)
(N)FC 4 (NO SCOPE)
(N)FC 5 (NO SCOPE)
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(N)FC 8 (NO SCOPE)
(N)FC 9 (NO SCOPE)
(N)FC 10 (NO SCOPE)
(N)FC

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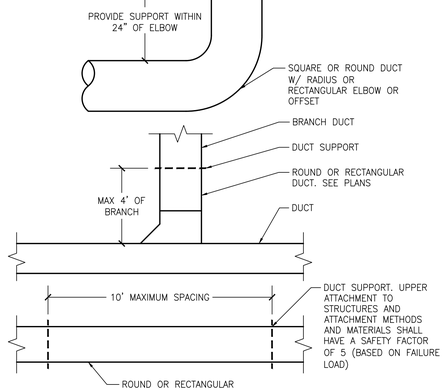
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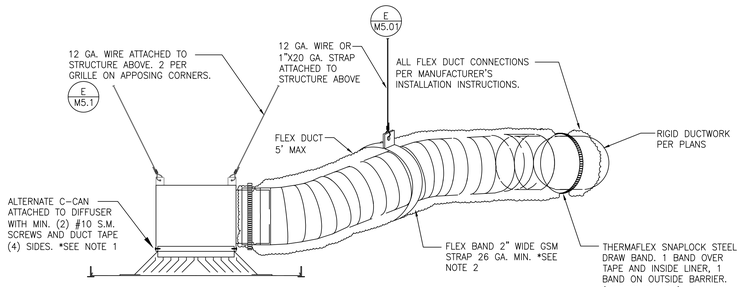


DUCT UP TO 20" WIDE OR LESS THAN 10 LBS/L.F.

F LOWER DUCT HANGER ATTACHMENT DETAILS
NO SCALE



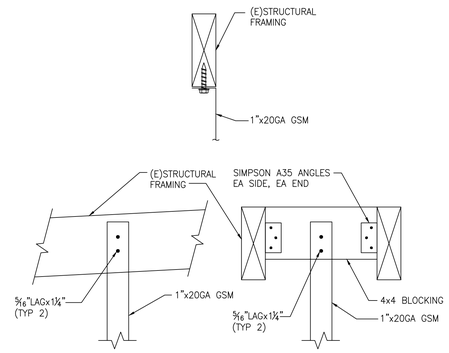
G DUCT SUPPORT LOCATION PLAN VIEW – TYP ALL DUCTING
NO SCALE



*NOTES:

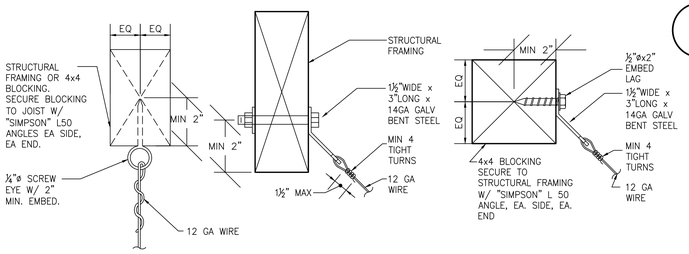
1. C-CAN WITH ROUND COLLAR IN SIDE OF PLENUM, TO BE USED ONLY WHERE SPACE LIMITATION WILL NOT ALLOW FOR FLEX DUCT TO MAKE A FULL RADIUS 90° BEND INTO TOP OF STANDARD C-CAN.
2. MAXIMUM HANGER SPACING 48" O.C. MAXIMUM SAG BETWEEN HANGERS IS 1/2" PER FOOT, 2" MAXIMUM.
3. SEE UPPER ATTACHMENT DETAILS FOR HANGER WIRE SUPPORT TO STRUCTURE.
4. RIGID DUCTING MAY BE USED IN LIEU OF FLEXIBLE DUCTING.

C ALTERNATE DIFFUSER/GRILLE MOUNTING DETAIL
NO SCALE

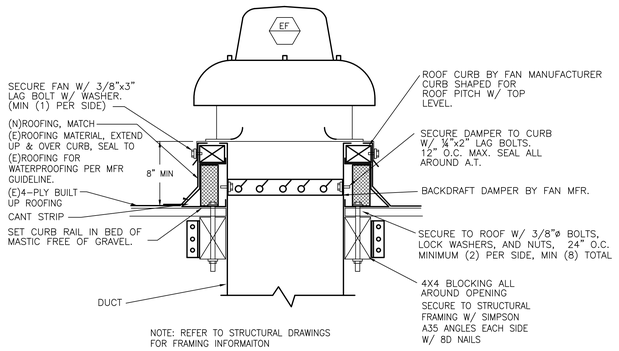


WOOD FRAMING ATTACHMENT DETAIL

D STRAP UPPER ATTACHMENT DETAIL
NO SCALE

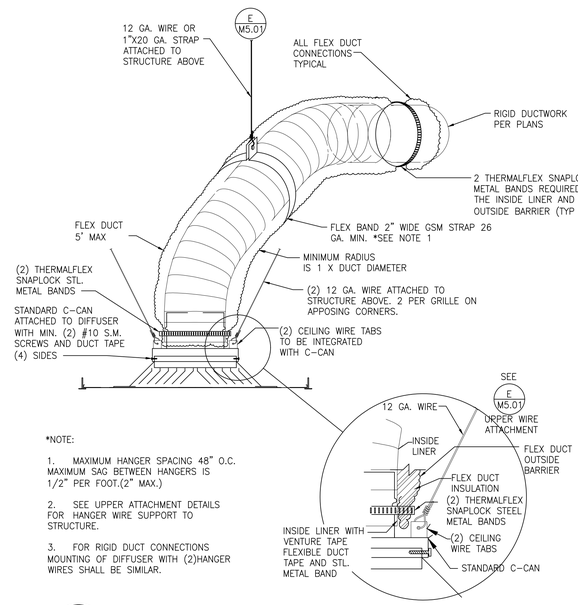


E SPLAY WIRE ATTACHMENT DETAIL
NO SCALE



NOTE: REFER TO STRUCTURAL DRAWINGS FOR FRAMING INFORMAITON

A ROOF EXHAUST FAN DETAIL
NO SCALE



*NOTE:

1. MAXIMUM HANGER SPACING 48" O.C. MAXIMUM SAG BETWEEN HANGERS IS 1/2" PER FOOT.(2" MAX.)
2. SEE UPPER ATTACHMENT DETAILS FOR HANGER WIRE SUPPORT TO STRUCTURE.
3. FOR RIGID DUCT CONNECTIONS MOUNTING OF DIFFUSER WITH (2)HANGER WIRES SHALL BE SIMILAR.

B DIFFUSER/GRILLE MOUNTING DETAIL
NO SCALE

PCOE GOLD IN EDUCATION

Revisions

Delta	Date	Revisions	By

PLAN CHECK SET

CONSTRUCTION DOCUMENTS

AGENCY APPROVAL

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Project Engineer:	JT	Job Number:	23130
Project Manager:	JT	Plot Date:	Jul 21, 2023 - 7:36pm
Project Drafter:	-	Login: GYang	

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REGISTERED PROFESSIONAL ENGINEER JOSEPH W. THOMPSON No. M-028567 Exp. 6/30/2025 MECHANICAL STATE OF CALIFORNIA

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HY Architects Project number: 6014

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Project

ANNEX BUILDING ALTERATIONS

Sheet Title

MECHANICAL DETAILS

Client Project Number:

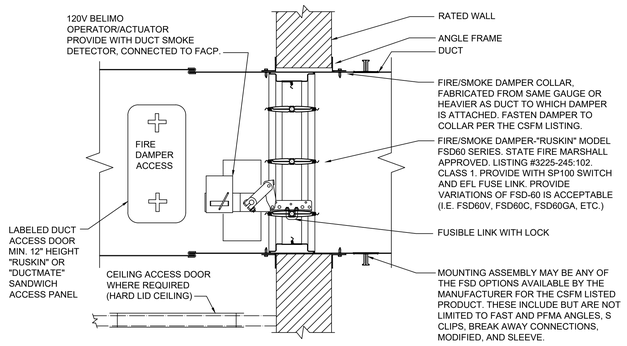
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Sheet **M5.01**

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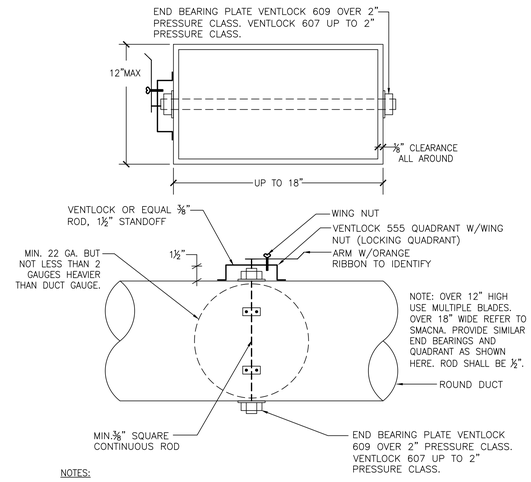


NOTES:

1. ALL FIRE/SMOKE DAMPERS SHALL BE INSTALLED IN STRICT CONFORMANCE WITH THE TERMS OF THE LISTING
2. FIRE/SMOKE DAMPER DETAIL FOR REFERENCE ONLY.
3. FIRE/SMOKE DAMPERS SHALL BE STATE FIRE MARSHALL APPROVED AND INSTALLED STRICTLY PER MANUFACTURERS PRINTED INSTRUCTIONS.
4. MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE MADE AVAILABLE TO THE INSPECTING AUTHORITIES.
5. DAMPER ACTUATOR & SMOKE DETECTOR SHALL BE INTERLOCKED WITH BUILDING ALARM SYSTEM. SEE ELECTRICAL DRAWINGS.
6. DAMPER SHALL CLOSE UPON LOSS OF POWER.
7. BALANCE CONTRACTOR TO TEST PRESSURE DIFFERENTIAL FOR PROJECTS WITH SAMPLE TUBE SMOKE DETECTORS. PROJECTS WITH TOTAL AREA DETECTION DO NOT REQUIRE PRESSURE VERIFICATION.
8. CLOSURE OF FSD SHALL CAUSE AIR MOVING EQUIPMENT TO SHUT DOWN. THE SMOKE ZONE IS THE ENTIRE FLOOR AND THEREFORE THE ENTIRE FLOOR AIR SYSTEMS SHUT DOWN. (EXHAUST FANS GREATER THAN 1500 CFM AND AC UNITS).
9. ACCESS POINT TO THE FIRE/SMOKE DAMPERS SHALL BE PERMANENTLY IDENTIFIED ON THE EXTERIOR BY A LABEL HAVING NOT LESS THAN 0.5" HIGH LETTERS READING "FIRE SMOKE DAMPER".

D FIRE SMOKE DAMPER DETAIL

NO SCALE

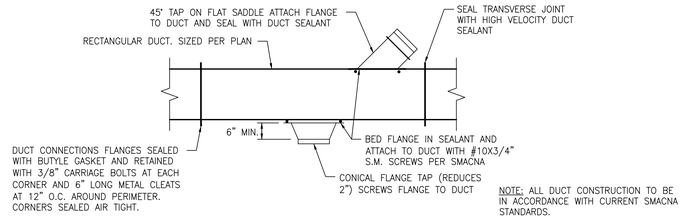


NOTES:

1. SEAL ALL JOINTS W/ A PERMANENT FLEXIBLE, HIGH PRESSURE DUCT SEALANT (UL 181 LISTED).
2. SYSTEM BUILT TO COMPLY W/ SMACNA LATEST REVISION. ITEMS LISTED ABOVE ARE MINIMUM REQUIREMENTS. PROVIDE ALL MATERIAL AND LABOR NECESSARY FOR COMPLETE WORKABLE SYSTEM.
3. SQUARE DAMPERS ARE ALSO REQUIRED AND SHALL MEET LATEST SMACNA STANDARDS. QUADRANTS SHALL HAVE STANDOFFS SIMILAR TO ONES SHOWN FOR ROUND DUCT.

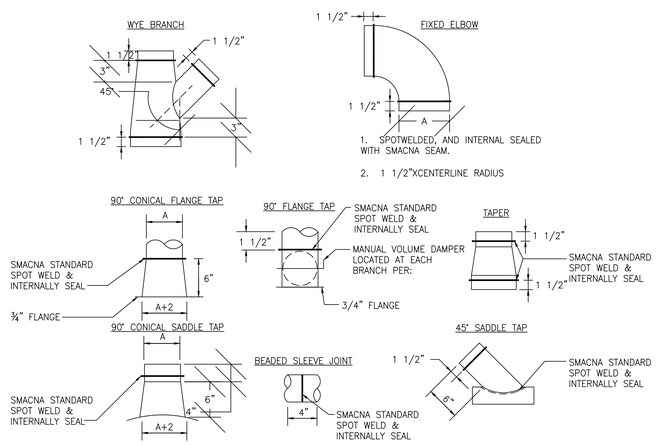
A TYPICAL BALANCE DAMPER

NO SCALE



NOTE: ALL DUCT CONSTRUCTION TO BE IN ACCORDANCE WITH CURRENT SMACNA STANDARDS.

B RECTANGULAR DUCT CONNECTION



C ROUND DUCT FITTINGS

PCOE GOLD IN EDUCATION

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PLAN CHECK SET

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AGENCY APPROVAL

Project Engineer:	JT	Job Number:	23130
Project Manager:	JT	Plot Date:	Jul 21, 2023 - 7:39pm
Project Drafter:	-	Login:	GYang

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ANNEX BUILDING ALTERATIONS

Sheet Title

MECHANICAL DETAILS

Client Project Number:

Scale:	AS NOTED
Drawn By:	TURLEY
Checked By:	TURLEY
Issue Date:	07/21/2023

Sheet **M5.02**

Sheet of

GRAPHIC SCALES: 1/16" = 1'-0" (0 5' 50') · 1/8" = 1'-0" (0 5' 25') · 1/4" = 1'-0" (0 1' 12') · 1/2" = 1'-0" (0 1' 6') · 3/4" = 1'-0" (0 1' 4') · 1" = 1'-0" (0 1' 3') · 1 1/2" = 1'-0" (0 1' 2') · 3" = 1'-0" (0 1')

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SECTION 15010- MECHANICAL WORK- GENERAL REQUIREMENTS

SECTION 15010 – MECHANICAL WORK – GENERAL REQUIREMENTS

CONDITIONS OF CONTRACT AND DIVISION 1 APPLY TO THIS SECTION.

PART 1 – GENERAL

1.01 INCLUSIONS:

A. THIS SECTION APPLIES FOR ALL DIVISION 15 MECHANICAL SECTIONS. ALL CONDITIONS AND MATERIALS ARE PERTINENT TO THE OTHER SECTIONS AS IF REPEATED IN THOSE SECTIONS.

B. FURNISH AND INSTALL ANY INCIDENTAL WORK NOT SHOWN OR SPECIFIED WHICH IS NECESSARY TO PROVIDE A COMPLETE AND WORKABLE SYSTEM.

1.02 DRAWINGS:

A. EXAMINE ALL DRAWINGS PRIOR TO BIDDING OF WORK AND REPORT ANY DISCREPANCIES IN WRITING TO THE ARCHITECT.

CONTRACTOR SHALL VISIT THE SITE OF WORK AND EXAMINE EXISTING CONDITIONS IN ORDER TO BECOME FAMILIAR WITH THE SCOPE. IF DIMENSIONS ARE SHOWN ON THE PLANS, THEY SHALL BE VERIFIED AT THE SITE. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. FAILURE TO EXAMINE THE SITE SHALL NOT CONSTITUTE BASIS FOR CLAIMS FOR ADDITIONAL WORK BECAUSE OF LACK OF KNOWLEDGE OR LOCATION OF HIDDEN CONDITIONS WHICH COULD AFFECT THE SCOPE.

B. DRAWINGS SHOWING LOCATION OF EQUIPMENT, PIPING, DUCTWORK, ETC., ARE DIAGRAMMATIC AND JOB CONDITIONS WILL NOT ALWAYS PERMIT THEIR INSTALLATION IN THE LOCATION SHOWN. THE MECHANICAL DRAWINGS SHOW THE GENERAL ARRANGEMENT OF ALL PIPING, DUCTWORK, EQUIPMENT, ETC., AND SHALL BE FOLLOWED AS CLOSELY AS EXISTING CONDITIONS, ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHER TRADES WILL PERMIT. THE ARCHITECTURAL AND STRUCTURAL DRAWINGS SHALL BE CONSIDERED A PART OF THIS WORK INSOFAR AS THESE DRAWINGS FURNISH THE CONTRACTOR WITH INFORMATION RELATING TO DESIGN AND CONSTRUCTION OF THE BUILDING. ARCHITECTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER MECHANICAL DRAWINGS. BECAUSE OF THE SMALL SCALE OF THE MECHANICAL DRAWING, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS AND ACCESSORIES WHICH MAY BE REQUIRED. THE CONTRACTOR SHALL INVESTIGATE THE STRUCTURAL AND FINISH CONDITIONS AFFECTING THE WORK AND SHALL ARRANGE HIS WORK ACCORDINGLY PROVIDING SUCH FITTINGS, VALVES AND ACCESSORIES AS MAY BE REQUIRED TO MEET CONDITIONS. WHEN JOB CONDITIONS DO NOT PERMIT INSTALLATION OF EQUIPMENT, PIPING, DUCTWORK, ETC., IN THE LOCATIONS SHOWN, IT SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION IMMEDIATELY AND THE RELOCATION DETERMINED IN A JOINT CONFERENCE. CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE RELOCATION OF ANY ITEMS WITHOUT FIRST OBTAINING THE ARCHITECT'S APPROVAL. CONTRACTOR SHALL REMOVE AND RELOCATE SUCH ITEMS AT HIS OWN EXPENSE IF SO DIRECTED BY THE ARCHITECT.

C. EXECUTE WORK MENTIONED IN THE SPECIFICATIONS AND NOT SHOWN ON THE DRAWINGS, OR VICE VERSA. THE SAME AS IF SPECIFICALLY MENTIONED IN BOTH.

1.03 CODES:

A. PROVIDE ALL WORK AND MATERIALS IN FULL ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE CALIFORNIA CODE OF REGULATIONS (CCR), TITLE 21, TITLE 22, AND TITLE 24, AS APPLICABLE, SAFETY ORDERS OF THE DIVISION OF INDUSTRIAL SAFETY, (CAL OSHA); THE CALIFORNIA ELECTRIC CODE; THE CALIFORNIA PLUMBING CODE; THE CALIFORNIA BUILDING CODE; CALIFORNIA MECHANICAL CODE; STATE FIRE MARSHAL; AND OTHER APPLICABLE LAWS OR REGULATIONS. NOTHING IN THESE PLANS OR SPECIFICATIONS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES. FURNISH WITHOUT EXTRA CHARGE, ANY ADDITIONAL MATERIAL AND LABOR REQUIRED TO COMPLY WITH THESE RULES AND REGULATIONS.

B. WHERE MATERIAL OR EQUIPMENT IS SPECIFIED TO CONFORM TO STANDARDS SUCH AS AMERICAN SOCIETY OF TESTING AND MATERIALS (ASTM), UNDERWRITERS' LABORATORIES, INC., (UL), AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) AND THE LIKE, IT SHALL BE ASSUMED THAT THE MOST RECENT EDITION OF THE STANDARD IN EFFECT AT THE TIME OF BID SHALL BE USED.

1.04 FEES AND PERMITS:

A. PROCURE AND PAY FOR ALL PERMITS AND LICENSES REQUIRED.

1.05 FRAMING, CUTTING AND PATCHING:

A. SPECIAL FRAMING, RECESSES, CHASES AND BACKING FOR WORK OF THIS SECTION, UNLESS SPECIFICALLY OTHERWISE IS COVERED UNDER OTHER SECTIONS. BE RESPONSIBLE FOR PROPER PLACEMENT OF ALL PIPE SLEEVES, HANGERS AND SUPPORTS AND LOCATION AND SIZING OF OPENINGS FOR WORK OF THIS SECTION.

1.06 SUBSTITUTIONS AND MATERIAL LIST:

A. PRODUCT NAMES ARE USED AS STANDARDS OF QUALITY, ITEMS FURNISHED AS STANDARD OR SPECIFIED EQUIPMENT SHALL BE FURNISHED ON ALL SUBSTITUTED EQUIPMENT AT NO EXTRA COST TO THE CONTRACT REGARDLESS OF DISPOSITION OF SUBMITTAL DATA; OTHER MATERIALS OR METHODS SHALL NOT BE USED UNLESS APPROVED IN WRITING BY THE ARCHITECT. THE BURDEN OF PROOF AS TO THE EQUALITY OF ANY PROPOSED MATERIAL SHALL BE UPON THE CONTRACTOR; ARCHITECT'S DECISION IS FINAL. ONLY ONE REQUEST FOR SUBSTITUTION SHALL BE CONSIDERED FOR EACH ITEM OF EQUIPMENT CAPACITIES SPECIFIED ARE MINIMUM ACCEPTABLE. SUBMITTALS WILL NOT BE ACCEPTED UNTIL COMPLIANCE WITH THE REQUIREMENTS OF CONTRACT DOCUMENTS HAS BEEN CONFIRMED BY THE CONTRACTOR.

B. UNLESS STIPULATED OTHERWISE IN GENERAL CONDITIONS AND DIVISION 1, SUBMIT A LIST OF 7 COPIES OF MATERIALS FOR APPROVAL WITHIN 30 DAYS AFTER THE AWARD OF THE CONTRACT. IT SHALL BE ACCOMPANIED BY SHOP DRAWINGS, PUMP PERFORMANCE CURVES, FAN CURVES, AND OTHER PERTINENT DATA, SHOWING THE SIZE AND CAPACITY OF THE PROPOSED MATERIALS. ALL MATERIALS TO BE USED, WHETHER SUBSTITUTIONS OR NOT, SHALL BE LISTED IN THE ORDER IN WHICH THEY APPEAR IN THE SPECIFICATIONS.

C. ANY MECHANICAL, ELECTRICAL, STRUCTURAL OR OTHER CHANGES REQUIRED FOR THE INSTALLATION OF ANY APPROVED SUBSTITUTED EQUIPMENT SHALL BE MADE TO THE SATISFACTION OF THE ARCHITECT AND WITHOUT ADDITIONAL COST TO THE OWNER. APPROVAL BY THE ARCHITECT OF THE SUBSTITUTED EQUIPMENT AND/OR DIMENSIONAL DRAWINGS DOES NOT WAIVE THESE REQUIREMENTS. UPON REQUEST, SUBMIT DRAWINGS OF MECHANICAL EQUIPMENT SPACES SHOWING SUBSTITUTED EQUIPMENT BEFORE INSTALLATION.

D. REVIEW OF MATERIAL SHALL NOT BE CONSTRUED AS AUTHORIZING ANY DEVIATIONS FROM THE SPECIFICATIONS UNLESS THE ATTENTION OF THE ARCHITECT HAS BEEN DIRECTED TO THE SPECIFIC DEVIATIONS.

E. FURNISH TO THE PROJECT REPRESENTATIVE, UPON REQUEST, COMPLETE INSTALLATION INSTRUCTIONS ON ALL MATERIALS AND EQUIPMENT BEFORE STARTING INSTALLATION OF SAME.

F. SUBMITTALS SHALL BEAR THE SPECIFICATION REFERENCE OR DRAWING LOCATION WHERE THEY ARE SPECIFIED. SUBMITTALS SHALL NOT BE ACCEPTED IN INCOMPLETE FORM. SUBMITTALS SHALL BE ORGANIZED INTO BOOKLETS FOR EACH SPECIFICATION SECTION AND SUBMITTED IN INDEXED LOOSE LEAF BINDERS WITH NOTATION WHEN IT IS A DEVIATION FROM THE SPECIFICATIONS.

G. HAVE FIRE DAMPER INSTALLATION INSTRUCTIONS AVAILABLE AT THE SITE DURING CONSTRUCTION FOR USE BY THE INSPECTOR.

1.07 SITE CONDITIONS:

A. INFORMATION ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS APPROXIMATE ONLY. DEVIATIONS FOUND NECESSARY DURING PROGRESS OF CONSTRUCTION TO CONFORM TO ACTUAL CONDITIONS, AS APPROVED BY THE ARCHITECT, SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGE CAUSED TO EXISTING SERVICES. PROMPTLY NOTIFY THE ARCHITECT IF SERVICES ARE FOUND WHICH ARE NOT SHOWN ON DRAWINGS.

1.08 GUARANTEE:

A. REPAIR OR REPLACE ANY DEFECTIVE WORK, MATERIALS OR PART WHICH MAY APPEAR WITHIN 1 YEAR OF THE DATE OF ACCEPTANCE. THIS SHALL INCLUDE DAMAGE BY LEAKS.

B. ON FAILURE TO COMPLY WITH THE ABOVE GUARANTEE WITHIN A REASONABLE LENGTH OF TIME AFTER NOTIFICATION IS GIVEN, THE ARCHITECT SHALL HAVE THE REPAIRS MADE AT THE CONTRACTOR'S EXPENSE.

1.09 MAINTENANCE AND OPERATING INSTRUCTIONS:

A. INSTRUCT THE OWNER'S AUTHORIZED REPRESENTATIVES IN OPERATION, ADJUSTMENT AND MAINTENANCE OF ALL MECHANICAL EQUIPMENT AND SYSTEMS. PROVIDE THREE COPIES OF CERTIFICATE SIGNED BY OWNER'S REPRESENTATIVES ATTESTING TO THEIR HAVING BEEN INSTRUCTED.

B. FURNISH THREE COMPLETE SETS OF OPERATING AND MAINTENANCE INSTRUCTIONS BOUND IN A HARDBACK BINDER AND INDEXED. START COMPILING THE DATA UPON APPROVAL OF LIST OF MATERIALS. FINAL OBSERVATION WILL NOT BE MADE UNTIL BOOKLETS ARE APPROVED BY ARCHITECT.

C. THESE SETS SHALL INCORPORATE THE FOLLOWING:

1. COMPLETE OPERATING INSTRUCTIONS FOR EACH ITEM OF HEATING, VENTILATING, AIR CONDITIONING AND PLUMBING EQUIPMENT.

2. TEST DATA AND AIR AND WATER BALANCING REPORTS AS SPECIFIED.

3. TYPEWRITTEN MAINTENANCE INSTRUCTIONS FOR EACH ITEM OF EQUIPMENT LISTING IN DETAIL THE LUBRICANT TO BE USED, FREQUENCY OF LUBRICATION, INSPECTIONS REQUIRED, ADJUSTMENT, ETC.

4. MANUFACTURER'S BULLETINS WITH PARTS NUMBERS, INSTRUCTIONS, ETC., FOR EACH ITEM OF EQUIPMENT, PROPERLY STRIPPED AND ASSEMBLED.

5. TEMPERATURE CONTROL DIAGRAMS AND LITERATURE.

6. A COMPLETE LIST OR SCHEDULE OF ALL MAJOR VALVES GIVING THE NUMBER OF THE VALVE, LOCATION AND THE ROOMS OR AREA CONTROLLED BY THE VALVE. IDENTIFY EACH VALVE WITH A PERMANENTLY ATTACHED METAL TAG STAMPED WITH NUMBER TO MATCH SCHEDULE. POST LIST IN FRAME UNDER PLASTIC ON WALL IN MECHANICAL ROOM OR WHERE DIRECTED.

1.10 SCHEDULE OF WORK:

A. ALL TEMPORARY CONNECTIONS REQUIRED TO MAINTAIN SERVICES, INCLUDING ADEQUATE HEAT AND COOLING, DURING THE COURSE OF THIS CONTRACT SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER. THE NORMAL FUNCTION OF THE BUILDING MUST NOT BE INTERRUPTED; NOTIFY THE OWNER SEVEN (7) DAYS IN ADVANCE BEFORE DISTURBING ANY SERVICE.

1.11 RECORD DRAWINGS:

A. UPON COMPLETION OF THE WORK AND AS A PRECEDENT TO FINAL PAYMENT, DELIVER TO THE ARCHITECT ORIGINALS OF ALL DRAWINGS SHOWING THE WORK EXACTLY AS INSTALLED. ALSO DELIVER TO THE ARCHITECT ONE COMPLETE SET OF REPRODUCIBLES OF ALL DRAWINGS SHOWING THE WORK EXACTLY AS INSTALLED. ALL RECORD DRAWINGS SHALL BE SIGNED BY THE CONTRACTOR VERIFYING THEIR ACCURACY.

1.12 DELIVERY AND STORAGE:

A. ALL EQUIPMENT, DUCTING AND PIPING DELIVERED TO SITE SHALL BE PROTECTED FROM THE WEATHER, HUMIDITY AND TEMPERATURE VARIATIONS, DIRT AND DUST AND OTHER CONTAMINANTS.

PART 2 – PRODUCTS

2.01 GENERAL:

A. MATERIALS OR EQUIPMENT OF THE SAME TYPE SHALL BE OF THE SAME BRAND WHEREVER AND AS MUCH AS POSSIBLE. MATERIALS SHALL BE NEW AND IN GOOD CONDITION.

2.02 ELECTRIC MOTORS:

A. SHALL BE ALLIS-CHALMERS, GENERAL ELECTRIC, GOULD, LINCOLN, OR EQUAL, SELECTED FOR QUIET OPERATION. FURNISH MOTORS WITH SPLASHPROOF OR WEATHERPROOF HOUSINGS, WHERE REQUIRED OR RECOMMENDED BY THE MANUFACTURER. MATCH THE NAMEPLATE VOLTAGE RATING WITH THE ELECTRICAL SERVICE SUPPLIED. CHECK ELECTRICAL DRAWINGS. PROVIDE A TRANSFORMER FOR EACH MOTOR NOT WOUND PARTICULARLY FOR SYSTEM VOLTAGE. THE MINIMUM EFFICIENCIES SHALL BE AS DEFINED BY IEEE 112 TEST METHOD B AND NEMA STANDARD MG1-112–53B.

2.03 MOTOR STARTERS:

A. FURNISH STARTERS WITH THE PROPER SIZE THERMAL OVERLOAD UNITS, AMBIENT COMPENSATED. PROVIDE 3–PHASE MOTOR STARTERS WITH 3–PHASE OVERLOADS. MAGNETIC STARTERS SHALL HAVE NON–OFF–AUTOMATIC SWITCHES AND CONTROL TRANSFORMERS FURNISHED INTEGRAL WITH THE STARTER WHEN STARTER IS SERVING AN AUTOMATICALLY CONTROLLED MOTOR. STARTERS SHALL BE SQUARE D., ALLEN BRADLEY, OR EQUAL, IN NEMA TYPE I ENCLOSURE INSIDE AND NEMA TYPE 3R OUTSIDE AS REQUIRED. MINIMUM STARTER SIZE SHALL BE 1.

2.04 VALVES AND FITTINGS:

A. VALVES: SHALL BE DEZURIK, CRANE, NIBCO, KENNEDY, OR EQUAL.

1. GATE VALVES THRU 2–1/2" –– CRANE #428, KENNEDY #427, NIBCO #T–595.

2. GATE VALVES 3" THRU 4" –– CRANE #460 OR #461, NIBCO #F–617.

3. GATE VALVES 5" AND LARGER ––DEMCO NE, DEZURIK #660 OR NORRIS 83.1O WITH THROTTLING HANDLE.

4. CHECK VALVES 2–1/2" AND SMALLER –– MUESSCO 2038P, CRANE #36, NIBCO #T–413.

5. CHECK VALVES 3" AND LARGER –– MUESSCO #105AP, CRANE #373.

6. GAS VALVES –– DEZURIK #225SIRS–49.

7. GAS COCKS AT APPLIANCES –– CONBRA CO. 50 SERIES.

8. GAS PRESSURE REGULATORS –– RELIANCE #1803 OR #2003, ROCKWELL OR EQUAL WITH INTERNAL RELIEF FOR LPG.

9. VALVES IN THE GROUND SHALL BE CRANE #2487–1/2–O, MUELLER #A–2380–21 OR EQUAL, AND SHALL BE INSTALLED IN CHRISTY CONCRETE PRODUCTS #F1 VALVE BOX WITH C210 C.I. LID, #1 BOOKS #1–RT BOX WITH #1–RT C.I. LID OR EQUAL. NUT OPERATED VALVES IN ALHAMBRA FOUNDRY CO. #A–3204 OR EQUAL ACCESS BOXES MARKED FOR SERVICE. PROVIDE A TEE HANDLE WRENCH FOR EACH SIZE. SET ACCESS BOXES IN 4" THICK CONCRETE PAD, TROWEL SMOOTH AND EDGE, SET FLUSH WITH GRADE. WATER SERVICE VALVE IN GROUND SHALL BE AWWA, 200 PSI, NUT OPERATED.

10. VALVES IN COPPER LINES SHALL BE FURNISHED WITH ADAPTERS FOR SOLDERED JOINT TYPE OF EQUAL QUALITY TO SCREW TYPE VALVES.

11. GAY GATE –– CRANE #459 THRU 2", #467 FOR 2–1/2" AND LARGER; DEMCO NE–H FOR 4" AND LARGER.

12. BALL VALVES – NIBCO S 580, NIBCO #T–560, 2" MAXIMUM, MINIMUM 400 PSI CWP.

13. BALANCE VALVES –– BELL & GOSSETT CIRCUIT SETTER PLUS, ARMSTRONG CBV, OR EQUAL.

14. PROVIDE GATE OR BALL VALVES ON INLET OF EACH WATER HEATER AND INLET AND OUTLET OF EACH PUMP WHETHER SHOWN OR NOT.

15. BUTTERFLY VALVES: KEYSTONE 100, CRANE MONARCH 2200 OR EQUAL, NIBCO LD–2000.

B. UNIONS AND FLANGES:

1. STEEL 2" AND SMALLER ––– 150# SCREWED BLACK OR GALVANIZED MALLEABLE IRON, MALTA PIPE, GROUND JOINT, BRASS–TO–IRON SEAT.

2. STEEL 2–1/2" AND LARGER ––– 150# BLACK FLANGE UNION, FLAT FACED, FULL GASKET.

3. COPPER OR BRASS PIPE OR TUBING 2" OR SMALLER ––– 150# CAST BRONZE GROUND JOINT, BRONZE–TO–BRONZE SEAT WITH COPPER–TO–COPPER END CONNECTIONS.

4. COPPER OR BRASS PIPE OR TUBING 2–1/2" AND LARGER ––– 150# BRASS FLANGE UNION, FLAT FACED, FULL GASKET.

5. GASKETS – HOT AND COLD WATER ––– GARLOCK STYLE 3200.

6. FLANGE BOLTS ––– OPEN–HEARTH BOLT STEEL, SQUARE HEADS WITH COLD PRESSED HEXAGONAL NUTS, CADMIUM PLATED IN GROUND. PROVIDE COPPER PLATED STEEL BOLTS AND NUTS OR BRASS BOLTS AND NUTS FOR BRASS FLANGES.

C. VALVE BOXES: PRECAST CONCRETE OR CAST IRON WITH CAST IRON LOCKING TYPE COVERS LETTERED TO SUIT SERVICE – BROOKS NO. 3–TL, CHRISTIE NO. B3, FRASER NO. 3, ALHAMBRA A–3004 OR A–3005, ALHAMBRA E–2202 OR E–2702, OR EQUAL WITH EXTENSIONS TO SUITE CONDITIONS. CAST IRON BOXES OF SCREW TYPE OR SLIP TYPE, SIMILAR TO THOSE SPECIFIED HEREIN, WILL BE ACCEPTABLE. USE ONLY CAST IRON BOXES IN TRAFFIC AREAS.

MINIMUM INSIDE DIMENSION OR DIAMETER OF BOX: 4" FOR VALVE SIZES 3" AND SMALLER AND 5" FOR VALVE SIZES 4" AND LARGER.

WHERE SEVERAL VALVES OR OTHER EQUIPMENT ARE GROUPED TOGETHER, PROVIDE LARGER BOXES OF RECTANGULAR "VAULT" TYPE ADEQUATELY SIZED FOR CONDITIONS AND SIMILAR IN CONSTRUCTION TO THOSE SPECIFIED ABOVE.

2.05 PIPE HANGERS AND SUPPORTS:

A. THE WORK COVERED UNDER THIS SECTION CONSISTS OF THE FURNISHING OF ALL NECESSARY LABOR, SUPERVISION, MATERIALS, EQUIPMENT, AND SERVICES TO COMPLETELY EXECUTE THE PIPE HANGER AND SUPPORTS AS DESCRIBED IN THIS SPECIFICATION.

B. REFERENCES:

1. MSS–SP58 –– MANUFACTURERS STANDARDIZATION SOCIETY: PIPE HANGERS AND SUPPORTS – MATERIALS, DESIGN, AND MANUFACTURE.

2. MSS–SP69 – MANUFACTURERS STANDARDIZATION SOCIETY: PIPE HANGERS AND SUPPORTS – SELECTION AND APPLICATION.

3. NFPA 13 – STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS.

4. ASTM A123 – SPECIFICATION FOR ZINC HOT–GALVANIZED COATINGS ON PRODUCTS FABRICATED FROM ROLLED, PRESSED, AND FORGED STEEL SHAPES, PLATES, BARS AND STRIP.

5. ASTM A653 G90 – SPECIFICATION FOR STEEL SHEET, ZINC–COATED BY THE HOT–DIP PROCESS.

6. ASTM B633 – SPECIFICATION FOR ELECTRODEPOSITED COATINGS OF ZINC ON IRON AND STEEL.

C. QUALITY ASSURANCE:

1. STEEL PIPE HANGERS AND SUPPORTS SHALL HAVE THE MANUFACTURERS NAME, PART NUMBER, AND APPLICABLE SIZE STAMPED IN THE PART ITSELF FOR IDENTIFICATION.

2. HANGERS AND SUPPORTS SHALL BE DESIGNED AND MANUFACTURED IN CONFORMANCE WITH MSS–SP58.

3. SUPPORTS FOR SPRINKLER PIPING SHALL BE IN CONFORMANCE WITH NFPA 13.

D. SUBMITTALS

1. SUBMIT PRODUCT DATA ON ALL HANGER AND SUPPORT PIECES. PRODUCT DATA TO INCLUDE, BUT LIMITED TO MATERIALS, FINISHES, APPROVALS, LOAD RATINGS, AND DIMENSIONAL INFORMATION.

E. ACCEPTABLE MANUFACTURERS

1. MANUFACTURER: SUBJECT TO COMPLIANCE WITH THESE SPECIFICATIONS, PIPE HANGER AND SUPPORT SYSTEMS SHALL BE AS MANUFACTURED BY TOLCO, INC., SUPERSTRUT, B–LINE, OR EQUAL.

F. PIPE HANGERS AND SUPPORTS

1. UNINSULATED PIPES 2 INCH AND SMALLER:

A. ADJUSTABLE STEEL SWIVEL RING (BAND TYPE) HANGER, TOLCO FIG. Z, FIG. 200.

B. ADJUSTABLE STEEL SWIVEL J–HANGER, TOLCO FIG. 3.

C. ADJUSTABLE STEEL CLEVIS HANGER, TOLCO FIG. 1, FIG 1LD.

2. UNINSULATED PIPES 2–1/2 INCH AND LARGER:

A. USTABLE STEEL CLEVIS HANGER TOLCO FIG. 1.

B. PIPE ROLL WITH SOCKETS, TOLCO FIG. 322.

C. ADJUSTABLE STEEL YOKE PIPE ROLL, TOLCO FIG. 324.

3. INSULATED PIPE – HOT PIPING:

A. 2 INCH AND SMALLER PIPES: USE ADJUSTABLE STEEL CLEVIS WITH GALVANIZED SHEET METAL SHIELD, TOLCO FIG. 1 WITH FIG. 220.

B. 2–1/2 INCH AND LARGER PIPES:

1) ADJUSTABLE STEEL YOKE PIPE ROLL WITH PIPE COVERING PROTECTION SADDLE, TOLCO FIG. 324 WIT FIG 260 THRU 265.

2) PIPE ROLL WITH SOCKETS WITH PIPE COVERING PROTECTION SADDLE, TOLCO FIG 322 WITH FIG 260 THRU 265.

G. PIPE CLAMPS: WHEN FLEXIBILITY IN THE HANGER ASSEMBLY IS REQUIRED TO ALLOW HORIZONTAL MOVEMENT, USE PIPE WITH WELDLESS EYE NUTS, TOLCO FIG. 4 OR FIG. 4H WITH FIG. 130. FOR INSULATED LINES USE BOLTED PIPE CLAMPS, TOLCO FIG. 5 WITH FIG.530.

H. MULTIPLE OR TRAPEZE HANGERS

1. TRAPEZE HANGERS SHALL BE CONSTRUCTED FROM 12 GAUGE ROLL FORMED STEEL CHANNEL, 1–5/8" X 1–5/8" MINIMUM, TOLSTRUT #12 STRUT OR STRONGER AS REQUIRED.

2. MOUNT PIPES TO STRUT CHANNEL TRAPEZE WITH TWO PIPE CLAMPS PER PIPE FOR OUTSIDE DIAMETER OF PIPE, TOLSTRUT FIG. EMTC, RIGID, O.D. OR UNIVERSAL PIPE CLAMPS AS REQUIRED.

3. FOR PIPES SUBJECT TO AXIAL MOVEMENT: STRUT MOUNTED ROLLER SUPPORT, TOLSTRUT FIG. ROL 12, 13, 14, 15 OR 16 AS REQUIRED. USE PIPE PROTECTION SHIELD OR SADDLES ON INSULATED LINES. TOLCO FIG. 220 OR FIG. 260–265.

I. VERTICAL SUPPORTS: STEEL RISER CLAMP SIZED TO FIT OUTSIDE DIAMETER OF PIPE, TOLCO FIG. 6.

J. COPPER TUBING SUPPORTS

1. HANGERS SHALL BE SIZED TO FIT COPPER TUBING OUTSIDE DIAMETERS.

A. ADJUSTABLE STEEL SWIVEL BAND HANGER, TOLCO FIG. 202.

B. MALLEABLE IRON RING HANGER, TOLCO FIG. 301CT.

C. ADJUSTABLE STEEL CLEVIS HANGER, TOLCO FIG. 81.

K. PLASTIC PIPE SUPPORTS: ADJUSTABLE BAND HANGER, PVC COATED WITH FLARED EDGES, TOLCO FIG. 203, V–BOTTOM SLEEVE HANGER WITH A "V" TROUGH SUPPORT, TOLCO FIG. 1V AND FIG. 1VT TO PROVIDE CONTINUOUS SUPPORT FOR FLEXIBLE PLASTIC PIPE.

L. SUPPLEMENTARY STRUCTURAL SUPPORTS: DESIGN AND FABRICATE SUPPORTS USING STRUCTURAL QUALITY STEEL BOLTED FRAMING MATERIALS AS MANUFACTURED BY TOLCO, INC. CHANNELS SHALL BE ROLL FORMED, 12 GAUGE STEEL, 1–5/8" X 1–5/8" OR GREATER AS REQUIRED BY LOADING CONDITIONS. SUBMIT DESIGNS FOR PIPE TUNNELS, PIPE GALLERIES, ETC., TO ENGINEER FOR APPROVAL. USE CLAMPS AND FITTINGS DESIGNED FOR USE WITH THE STRUT SYSTEM.

M. UPPER ATTACHMENTS

1. BEAM CLAMPS

A. BEAM CLAMPS SHALL BE USED WHERE PIPING IS TO BE SUSPENDED FROM BUILDING STEEL. CLAMP TYPE SHALL BE SELECTED ON THE BASIS OF LOAD TO BE SUPPORTED, AND LOAD CONFIGURATION.

B. C–CLAMPS SHALL HAVE LOCKNUTS AND CUP POINT SET SCREWS, TOLCO FIG. 64. REVERSIBLE TOP OR BOTTOM FLANGE C–CLAMPS SHALL BE USED WHEN ATTACHING A HANGER ROD TO THE TOP OF FLANGE OF STRUCTURAL SHAPES, TOLCO FIG. 65 AND FIG. 66. RETAINING STRAPS SHALL BE USED TO MAINTAIN THE CLAMPS POSITION ON THE BEAM WHERE REQUIRED.

C. CENTER LOADED BEAM CLAMPS SHALL BE USED WHERE SPECIFIED. STEEL CLAMPS SHALL BE TOLCO FIG. 62. MALLEABLE IRON OR FORGED STEEL BEAM CLAMPS WITH SWIVEL SHALL BE TOLCO FIG. 329.

2. CONCRETE INSERTS

A. CAST IN PLACE SPOT CONCRETE INSERTS SHALL BE USED WHERE APPLICABLE, EITHER STEEL OR MALLEABLE IRON BODY, TOLCO FIG. 310 OR FIG. 309. SPOT INSERTS SHALL ALLOW FOR LATERAL ADJUSTMENT AND HAVE MEANS FOR ATTACHMENT TO FORMS. SELECT INSERTS TO SUIT THREADED HANGER ROD SIZES, TOLCO FIG. 310N OR FIG. 309N.

B. CONTINUOUS CONCRETE INSERTS SHALL BE USED WHERE APPLICABLE. CHANNELS SHALL BE 12 GAUGE STEEL, COMPLETE WITH STRYOFOAM INSERTS AND END CAPS WITH NAIL HOLES FOR ATTACHMENT TO FORMS. THE CONTINUOUS CONCRETE INSERT SHALL HAVE A LOAD RATING OF 2,000 LBS./FT. IN CONCRETE, TOLSTRUT FIG. B–12 CONCT.

N. VIBRATION ISOLATION AND SUPPORTS

1. FOR REFRIGERATION, AIR CONDITIONING, HYDRAULIC, PNEUMATIC, AND OTHER VIBRATING SYSTEM APPLICATIONS, USE A CLAMP THAT HAS A VIBRATION DAMPENING INSERT AND A NYLON INSERTED LOCKNUT. FOR COPPER AND STEEL TUBING USE TOLSTRUT CUSHION CLAMP.

2. FOR LARGER TUBING OR PIPING SUBJECTED TO VIBRATION, USE NEOPRENE OR SPRING HANGERS AS REQUIRED, OR AS SPECIFIED ELSEWHERE.

3. FOR BASE MOUNTED EQUIPMENT USE VIBRATION PADS, MOLDED NEOPRENE MOUNTS, OR SPRING AS REQUIRED. REFER TO DRAWINGS FOR REQUIREMENTS.

N. ACCESSORIES

1. HANGER RODS SHALL BE THREADED BOTH ENDS, OR CONTINUOUS THREADED RODS OF CIRCULAR CROSS SECTION TOLCO FIG. 100 OR FIG. 103. USE ADJUSTING LOCKNUTS AT UPPER ATTACHMENTS AND HANGERS. NO WIRE, CHAIN, OR PERFORATED STRAPS ARE ALLOWED.

2. SHIELDS SHALL BE 18G7 GALVANIZED SHEET METAL, 12 INCH MINIMUM LENGTH, 18 GAUGE MINIMUM THICKNESS, DESIGNED TO MATCH OUTSIDE DIAMETER OF THE INSULATED PIPE, TOLCO FIG. 220.

P. INDOOR FINISHES

1. HANGERS AND CLAMPS FOR SUPPORT OF BARE COPPER PIPING SHALL BE COATED WITH COPPER COLORED EPOXY PAINT. ADDITIONAL PVC COATING OF THE EPOXY PAINTED HANGER SHALL BE USED WHERE NECESSARY.

2. HANGERS FOR OTHER THAN BARE COPPER PIPE SHALL BE ZINC PLATED IN ACCORDANCE WITH ASTM B633 – SC3.

3. STRUT CHANNELS SHALL BE PRE–GALVANIZED IN ACCORDANCE WITH ASTM A653 G90.

Q. OUTDOOR AREA FINISHES

1. HANGERS AND STRUT LOCATED OUTDOORS SHALL BE HOT DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123. ALL HANGER HARDWARE SHALL BE HOT DIP GALVANIZED. PLATED HARDWARE IS NOT ACCEPTABLE FOR OUTDOOR OR CORROSIVE USE.

2.06 SERVICE MARKERS:

A. 4" ROUND BY 30" LONG CONCRETE MARKER, HALEY MFG., CO., PENNSYLVANIA, OR EQUAL WITH ENGRAVED BRASS IDENTIFICATION PLATE

2.07 PIPE PROTECTION:

A. POLYETHYLENE COATING: EXTRUDED POLYETHYLENE COATING, X–TRU–COAT, OR FIELD WRAP 10 MIL RAYCHEM "THERMOFIT" POLYETHYLENE SLEEVE JOINTS, OR FIELD WRAP AS IN B.

B. TAPE WRAP: PRESSURE SENSITIVE POLYVINYL CHLORIDE TAPE, "TRANTEX" #A–10 OR V–20", "SCOTCHRAP #50", SUPERNOT 100, OR EQUAL, WITH CONTINUOUS IDENTIFICATION. TAPE SHALL BE A MINIMUM OF 20 MILS THICK FOR FITTINGS AND IRREGULAR SURFACES, 2 WRAPS, 50% OVERLAP, AT 10 MILS TOTAL THICKNESS. TAPE SHALL BE LAMINATED WITH A SUITABLE ADHESIVE, WITHIN AS RECOMMENDED BY THE MANUFACTURER FOR THE PIPE SIZE. WRAP 50"–0" OR LONGER SECTIONS OF PIPING WITH AN APPROVED WRAPPING MACHINE.

C. PABCO WRAP: PABCO SPECIFICATIONS #0–40–240K DOUBLE WRAP, IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS OR PVC AS IN B. LAP PIPE WRAP A MINIMUM OF 2" AND STAGGER THE LAPS EVENLY. ALL PABCO PIPE WRAPPING SHALL BE DONE BY THE MANUFACTURER'S AGENT AND NOT BY THE CONTRACTOR, EXCEPT THE FIELD JOINTS.

D. FIELD JOINTS AND FITTINGS: PABCO DOUBLE WRAP AND POLYVINYL CHLORIDE TAPE AS ABOVE. PROVIDE AT LEAST 2 THICKNESSES OF TAPE OVER THE JOINT AND EXTEND A MINIMUM OF 4" OVER ADJACENT PIPE COVERING. USE PRIMER AS RECOMMENDED BY ADJACENT COVERING THICKNESS. WIDTH OF TAPE ON FITTINGS SHALL NOT EXCEED 2". TAPE SHALL ADHERE EVENLY TO ALL SURFACES OF THE FITTINGS, WITHOUT AIR POCKETS.

2.08 ACCESS DOORS:

MILCOR, NEWMAN, OR EQUAL, WITH CONCEALED HINGES, SCREWDRIVER LOCKS, PRIME COATED WITH RUST INHIBITIVE PAINT, AND STYLE OF DOOR TO SUIT CEILING OR WALL CONSTRUCTION. ACCESS DOORS IN ACOUSTICAL TILE CEILINGS SHALL BE "SESAME" WITH TILE RECESS. DOORS SHALL BE 14 GAGE C.R. STEEL AND SHALL BE 22" X 30", 24" X 24" OR A

GRAPHIC SCALES: 1/16" = 1'-0" (0 5' 50') · 1/8" = 1'-0" (0 5' 25') · 1/4" = 1'-0" (0 1' 12') · 1/2" = 1'-0" (0 1' 6') · 3/4" = 1'-0" (0 1' 4') · 1" = 1'-0" (0 1' 3') · 1 1/2" = 1'-0" (0 2') · 3" = 1'-0" (0 1')

IF THIS SHEET IS NOT 30"x42" , IT IS
A REDUCED PRINT SCALE ACCORDINGLY

SECTION 15400 - PLUMBING AND UTILITIES

SECTION 15400 – PLUMBING AND UTILITIES

PART 1 – GENERAL

1.01 DESCRIPTION OF WORK:

A. THE REQUIREMENTS OF THE GENERAL CONDITIONS AND DIVISION 1 APPLY TO ALL WORK HEREUNDER; ALSO, APPLICABLE PROVISIONS OF SECTION 15010 MECHANICAL WORK – GENERAL REQUIREMENTS.

B. FURNISH AND INSTALL ALL PLUMBING WORK INDICATED ON THE DRAWINGS AND DESCRIBED HEREIN. ALSO, ANY INCIDENTAL WORK NOT SHOWN OR SPECIFIED NECESSARY TO PROVIDE THE COMPLETE SYSTEM.

1.02 SERVICES:

A. MAKE ALL ARRANGEMENTS FOR THE UTILITIES REQUIRED. PAY ALL COSTS INVOLVED IN OBTAINING THE SERVICES, INCLUDING GAS SERVICE AND METER, WATER METER AND ACCESS BOX, STREET WORK, IN LIEU FEES FOR SEWER, ETC.

B. VERIFY THE LOCATION OF ALL SERVICES. NO EXTRA COST SHALL BE ALLOWED IF SERVICES ARE NOT AS SHOWN.

C. DETERMINE STORM AND SANITARY SEWER ELEVATION AT POINT OF CONNECTION BEFORE INSTALLING ANY SEWER PIPING. NOTIFY ARCHITECT IMMEDIATELY IF INDICATED GRADES CANNOT BE MAINTAINED.

1.03 RECORD DRAWINGS:

A PRINT OF THE PLUMBING PLAN SHOWING UNDERGROUND PIPING WILL BE FURNISHED BY THE CONTRACTOR ON WHICH HE SHALL INDICATE THE LOCATIONS OF THE UNDERGROUND INSTALLATIONS AS THE WORK PROGRESSES. THIS SHALL BE RETURNED TO ARCHITECT AT COMPLETION OF JOB.

PART 2 – PRODUCTS

2.01 CLEANOUTS:

A. CLEANOUTS SHALL BE "T" OR "Y" BRANCHES OR TRAP HUBS OF SAME MATERIAL AS PIPE IN WHICH THEY ARE PLACED. CLEANOUTS IN CAST IRON LINES SHALL HAVE CAST IRON BODIES WITH BRASS PLUGS. CLEANOUTS IN FLOORS AND SIDEWALKS SHALL BE JOSAM 56010 OR 56030 FOR CERAMIC TILE FLOORS WITH NICKEL BRONZE COVERS. CLEANOUTS IN VERTICAL LINES SHALL BE JOSAM 58710. FURNISH CLEANOUTS AT ENDS OF BRANCH LINES, AT THE BASE OF VERTICAL LINES, AT CHANGES IN DIRECTION AND WHERE SHOWN OR REQUIRED TO FACILITATE CLEANING. A MAXIMUM SPACING OF 50 FEET SHALL BE PROVIDED FOR ALL CLEANOUTS INSTALLED IN CONCRETE SLAB OR CRAWL SPACE. CLEANOUTS SHALL BE OF THE SAME SIZE AS THE PIPE UP TO 4". CLEANOUTS SHALL CLEAR ALL OBSTRUCTIONS BY 18" MINIMUM. FURNISH TO OWNER ONE WRENCH FOR EACH SIZE AND TYPE OF CLEANOUT USED. PERMANENTLY IDENTIFY EXTERIOR CLEANOUTS: SS FOR SANITARY SEWER, SD FOR STORM DRAIN.

2.02 PIPE AND FITTINGS INSIDE BUILDING:

A. SEE GENERAL REQUIREMENTS, SECTION 15010, FOR DIELECTRIC FITTINGS AND PIPE PROTECTION. TERMINATE 5'-0" OUTSIDE THE BUILDING LINE OR WHERE MARKED.

B. SOIL, STORM, WASTE AND VENT PIPE UNDERGROUND AND TO 6" ABOVE GROUND: SERVICE WEIGHT CAST IRON SOIL PIPE AND FITTINGS, ASPHALTIC COATED, CONFORMING TO CAST IRON SOIL PIPE INSTITUTE STANDARD #301 ASTM A-888 OR ASTM A-74 AND SO STAMPED. JOINTS SHALL BE NO-HUB CONFORMING TO CAST IRON SOIL PIPE INSTITUTE STANDARD #310; TY-SEAL OR EQUAL WITH GASKETS CONFORMING TO ASTM C 564 AND ASTM A74. SUSPENDED PIPE WITH NO-HUB JOINTS SHALL HAVE A SWAYBRACE AT 20'-0" MAXIMUM SPACING.

C. WASTE AND VENT PIPE ABOVE GROUND FROM LAVATORIES OR SINKS, DRAINWATER LEADERS AND OVERFLOWS ABOVE THE FLOOR: CAST IRON SOIL PIPE AND FITTINGS WITH NO HUB JOINTS CONFORMING TO THE REQUIREMENTS OF CISPI STANDARD 301, ASTM A-888 OR ASTM A-74 FOR ALL PIPE AND FITTINGS. JOINTS SHALL CONFORM TO CISPI 310 AND SHALL BE COUPLINGS WITH CORROSION RESISTANT METAL SHIELD, CLAMP ASSEMBLY AND ELASTOMERIC SEALING SLEEVE. TYPE DRAINAGE TUBING AND FITTINGS IS ACCEPTABLE WHEN APPROVED. CONDENSATE DRAINS SHALL BE TYPE L OR TYPE DWV HARD COPPER, WITH LONG SWEEP ELBOWS AND CLEANOUT TEES AT EACH CHANGE IN DIRECTION. CONNECT CONDENSATE DRAINS TO AIR CONDITIONING UNITS WITH P-TRAP AND RUN TO AN APPROVED RECEPTOR AND DRY WELL.

D. WATER PIPE (HOT AND COLD WATER): TYPE L COPPER TUBING, HARD TEMPER, WITH WROUGHT COPPER FITTINGS. CAPPED OR PLUGGED OUTLETS SHALL BE SCHEDULE 40 SCREWED BRASS. PROVIDE FULL SOLDER CUP FITTINGS.

E. GAS PIPE: SCHEDULE 40 BLACK STEEL WITH MALLEABLE IRON SCREWED FITTINGS ABOVE GRADE; WELDED BELOW GRADE WITH CLASS 150 WELDING FITTINGS. CONNECT TO EACH ITEM OF GAS-FIRED EQUIPMENT WITH DRIP LEG AND VALVE. PROVIDE FLEX CONNECTION IN APPROVED SIZES WHERE APPLICABLE.

F. ACID WASTE AND VENT PIPE UNDERGROUND TO 6" ABOVEGROUND: OSR FUSEAL, ORION, OR ENFIELD FLAME-RETARDANT POLYPROPYLENE PIPE AND FITTINGS ASSEMBLED WITH FUSION JOINTS. INSTALLATION SHALL COMPLY WITH MANUFACTURER'S RECOMMENDATIONS. PVC IS ALLOWED WHEN ACCEPTABLE BY LOCAL JURISDICTION. OBTAIN APPROVAL FROM LOCAL JURISDICTION.

G. ACID WASTE AND VENT PIPE ABOVEGROUND: IN INACCESSIBLE SPACES OR WITHIN WALLS: OSR FUSEAL, PVDF, ORION, OR ENFIELD FLAME-RETARDANT POLYPROPYLENE PIPE AND FITTINGS ASSEMBLED WITH FUSION JOINTS. INSTALLATION SHALL COMPLY WITH MANUFACTURER'S RECOMMENDATIONS.

IN ACCESSIBLE AREAS: FUSEAL ENFIELD "ENFUSION", POLYPROPYLENE DRAINAGE PIPE AND FITTINGS, WITH MECHANICAL JOINTS.

F. WATER SERVICE PIPE: REFER TO 15500. PROVIDE CONCRETE THRUST BLOCK AT EACH CHANGE OF DIRECTION.

G. FURNACE HEAT EXCHANGER CONDENSATE PIPE: POLYETHYLENE FLEXIBLE TUBING, ASTM D3350 AND FITTINGS, FLAME RETARDANT. CONNECT TO FURNACE UNIT IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS. ENCASE ALL TUBING IN EMT CONDUIT.

2.03 PIPE AND FITTINGS OUTSIDE BUILDINGS:

A. SEE GENERAL REQUIREMENTS SECTION FOR DIELECTRIC FITTINGS AND PIPE CORROSIVE PROTECTION. CONNECT TO BUILDING SERVICES WHERE TERMINATED 5' OUTSIDE FOOTING LINE.

B. SANITARY AND STORM DRAIN PIPE: FIRST QUALITY, EXTRA STRENGTH, BELL AND SPIGOT CLAY SEWER PIPE ASTM #C-700-39 WITH FITTINGS CONFORMING TO ASTM C425-T, J-M PVC SEWER PIPE AND FITTINGS WITH RING-TITE JOINTS, ASTM D3034 SDR 35, OR SERVICE WEIGHT CAST IRON WHERE MARKED.

C. WATER PIPE IN GROUND 2" AND LARGER: SCHEDULE 40 GALVANIZED STEEL. FITTINGS SHALL BE THREADED GALVANIZED MALLEABLE IRON TO SIZES 4" AND SMALLER. J-M RING-TITE PVC, OR EQUAL, CONFORMING TO ASTM D2241-SDR21, CLASS 200 WITH RING-TITE FITTINGS OR DUCTILE IRON MECHANICAL JOINT COUPLINGS MAY BE USED BELOW GROUND AS ALLOWED BY LOCAL CODES OR TYPE K COPPER WITH WROUGHT COPPER FITTINGS AT THE CONTRACTORS OPTION. SIZES 1-1/2" AND SMALLER SHALL BE TYPE K COPPER TUBING, HARD TEMPER, WITH WROUGHT COPPER FITTINGS.

D. WATER SERVICE PIPING ABOVE GRADE:
CLASS 150 BELL AND SPIGOT DUCTILE CAST IRON WATER PIPE CONFORMING TO ANSI A21.6. PIPE SHALL BE LINED WITH A FACTORY-APPLIED 1/16" THICK CEMENT LINING WITH SMOOTH DENSE FINISH. FITTINGS SHALL CONFORM TO ANSI SPECIFICATION A21-10-1952, CLASS 250 PATTERN. FITTINGS SHALL BE LINED. PROVIDE CONCRETE THRUST BLOCK AT EACH CHANGE OF DIRECTION.

E. GAS PIPING ABOVEGROUND TO 18" BELOW GROUND:
SCHEDULE 40 BLACK STEEL WITH BEVELED ENDS FOR WELDING, WITH CLASS 150 WELDING FITTINGS. MITERING TO FORM ELBOWS OR TEES WILL NOT BE PERMITTED, WHERE BRANCH TEE CONNECTIONS OF WELDED PIPING ARE REQUIRED BONNEY "WELDOLET" FITTINGS MAY BE USED, IF THE BRANCH IS ONE-HALF OR THE DIAMETER OF THE MAIN OR LESS. PROVIDE GAS SERVICE SHUT-OFF VALVE ON DOWNSTREAM SIDE OF METER AND AT ENTRY TO EACH BUILDING CONSPICUOUSLY MARKED "GAS" WITH SIGN.

F. GAS PIPING UNDERGROUND:
FLEXCO FEC2406 POLYETHYLENE GAS DISTRIBUTION PIPE ASTM D2513 AND ASTM D2683 FITTINGS WITH FUSION WELDED JOINTS. PIPE SHALL BE LABELED FOR NATURAL GAS IN ACCORDANCE WITH CPC.

AT TRANSITION BETWEEN POLYETHYLENE AND STEEL PIPING BELOW GRADE, PROVIDE CENTRAL PLASTICS COMPANY, OR EQUAL, DOUBLE "O" SEAL TRANSITION FITTINGS. PROVIDE MINIMUM OF 30 INCHES OF HORIZONTAL STEEL PIPE AT ALL CONNECTIONS TO ABOVE GROUND PIPING.

2.04 WATER HEATER:

A. CONNECT TO THE HOT AND COLD WATER LINES WITH A GATE VALVE, CHECK VALVE, J.R. SMITH #5020 HYDROTROL, UNION IN THE COLD WATER LINE AND A 3/4" ASME STANDARD PRESSURE AND TEMPERATURE RELIEF VALVE AND UNION HOT WATER LINE AT THE HEATER. RELIEF VALVE DIP TUBE SHALL EXTEND TO WITHIN 2" OF TANK.

B. DIP TUBES, SUPPLY AND HOT WATER NIPPLES, SUPPLY WATER BAFFLES OR HEAT TRAPS USED IN THE CONSTRUCTION OF THE TANK SHALL BE MADE TO WITHSTAND A TEMPERATURE OF 400 DEGREES F. WITHOUT DETERIORATING IN ANY MANNER AND THE OUTSIDE OF THE TANK JACKET SO LABELED.

C. HEATER SHALL HAVE A GLASS LINED STEEL TANK.

D. GAS FIRED: AUTOMATIC GAS-FIRED WATER HEATER, OF THE SIZE AND CAPACITY AS SCHEDULED ON THE DRAWINGS; AGA LABELED; 100% SAFETY SHUT-OFF CONTROLS. PROVIDE DURAVENT OR METALBESTOS FLUE CONNECTION THROUGH THE ROOF AND A TYPE L BREIDENT TOP, FLASH WATERTIGHT AT ROOF.

E. ELECTRIC: UNDERWRITER LABELED AUTOMATIC ELECTRIC WATER HEATER OF THE SIZE AND TYPE SHOWN ON THE DRAWINGS WITH HIGH TEMPERATURE CUTOFF. HEATER SHALL BE ON THE APPROVED LIST OF THE STATE OF CALIFORNIA AND COMPLY WITH TITLE 24 ENERGY REQUIREMENTS.

2.05 FIXTURES AND TRIM:

A. DESIGNATIONS ARE AMERICAN STANDARD UNLESS NOTED. KOHLER, ELJER, ARE ACCEPTABLE IF EQUAL IN UTILITY, QUALITY AND APPEARANCE.

B. P-TRAPS FOR LAVATORIES AND SINKS SHALL BE 17-GAUGE CHROME PLATED BRASS, ADJUSTABLE. PROVIDE OFSTET P-TRAPS FOR HANDICAPPED SINKS IN ORDER TO MAINTAIN ADA CLEARANCES.

C. CONCEALED STOPS SHALL BE 1/2" SPEEDWAY SSR44, LOCK SHIELD VALVES. 3/4" STOPS SHALL BE DCK BROS. #3150-LK. EXPOSED STOPS AND SUPPLIES SHALL BE 1/2" SPEEDWAY #537124 FOR LAVS, 537120L FOR WATER CLOSETS WITH IPS INLET, LOCK SHIELD, LOOSE KEY.

D. INSULATE DOMESTIC WATER AND WASTE PIPING BELOW HANDICAPPED PLUMBING FIXTURES WITH MOLDED PIPE INSULATION FOR ENTIRE EXPOSED REMOVABLE INSULATION COVERS, HANDI LAV-GUARD OR EQUAL. CONFORM WITH ADA REQUIREMENTS.

E. INSTALL VALVE LEVER ON HANDICAP WATER CLOSETS ON WIDE SIDE OF FIXTURE.

F. OPERATING HANDLE OR VALVE FOR HANDICAPPED FIXTURES SHALL OPERATE WITH LESS THAN 5 POUNDS FORCE.

PART 3 – EXECUTION

3.01 SERVICES:

A. MAKE ALL ARRANGEMENTS FOR THE UTILITIES REQUIRED. PAY ALL COSTS INVOLVED IN OBTAINING THE SERVICES INCLUDING GAS SERVICE AND METER, WATER METER, PRESSURE REDUCING VALVE, ACCESS BOXES, STREET WORK.

B. VERIFY THE LOCATION OF ALL SERVICES. NO EXTRA COST SHALL BE ALLOWED IF SERVICES ARE NOT AS SHOWN.

3.02 RECORD DRAWINGS:

A. A PRINT OF THE PLUMBING PLAN SHOWING UNDERGROUND PIPING WILL BE FURNISHED TO THE CONTRACTOR ON WHICH HE SHALL INDICATE THE LOCATIONS OF THE UNDERGROUND INSTALLATIONS AS THE WORK PROGRESSES. THIS SHALL BE RETURNED TO THE ARCHITECT AT COMPLETION OF JOB.

3.03 DISINFECTION:

A. CLEAN AND DISINFECT: ALL HOT AND COLD WATER SYSTEMS CONNECTED TO DOMESTIC WATER SYSTEMS IN ACCORDANCE WITH APWA STANDARD C651-92 AND AS REQUIRED BY THE LOCAL BUILDING AND HEALTH DEPARTMENT CODES. THIS PROCEDURE SHALL BE PERFORMED BY A WATER TREATMENT COMPANY THAT HAS A CURRENT CAL-EPA LICENSE TO APPLY DISINFECTANT CHLORINE IN POTABLE WATER.

B. PRELIMINARY PREPARATION: PROVIDE A 1" SERVICE COCK OR VALVE CONNECTED TO SYSTEM AT A POINT WITHIN 2'-0" OF ITS JUNCTION WITH WATER SUPPLY LINE AND INSTALL DISINFECTING AGENT INTO SYSTEM THROUGH THIS COCK. WHEN PROJECT IS COMPLETE, WITH ALL FIXTURES CONNECTED AND OPERABLE AND READY FOR USE AND WHEN, BY TEST, SYSTEM IS PROVED TO BE FREE FROM LEAKS, IT SHALL BE THOROUGHLY FLUSHED BY FULLY OPENING EVERY FIXTURE AND ANY BRANCH EVERY FIXTURE UNTIL CLEAR WATER FLOWS FROM ALL OF THEM.

C. DISINFECTING AGENT: THE CHLORINE SHALL BE A REGISTERED PRODUCT WITH CAL-EPA FOR USE IN CALIFORNIA IN POTABLE WATER LINES, SUCH AS BACTICIDE, CAL-EPA REGISTRATION NO. 37962-20001.

D. DISINFECTING PROCEDURE: CHLORINE SOLUTION PUMP, 100 PSI RATING, MINIMUM TO THE 1" SERVICE COCK OR VALVE.

1. WITH SYSTEM COMPLETELY FULL OF WATER AND SUPPLY VALVE OPEN, APPLY CHLORINE FEED AT EVERY SYSTEM SO THAT A TRICKLE OF WATER FLOWS FROM EACH.

2. INJECT DISINFECTANT UNTIL AN ORTHOTOLIDIN TEST AT EACH OUTLET SHOWS A CHLORINE RESIDUAL CONCENTRATION OF AT LEAST 50 PARTS PER MILLION (P.P.M.).

3. CLOSE ALL OUTLETS AND VALVES, INCLUDING VALVE CONNECTING TO PUBLIC WATER SUPPLY LINE AND SERVICE COCK ON SOLUTION INJECTION CONNECTION. MAINTAIN CONDITION FOR 24 HOURS AND CHLORINE RESIDUAL OF 50 P.P.M. SHOULD BE RETAINED IN SYSTEM FOR THIS 24 HOUR PERIOD. IF, AFTER 24 HOURS, ORTHOTOLIDIN TESTS INDICATE THAT CHLORINE RESIDUAL CONCENTRATION HAS DECREASED BELOW 50 P.P.M. THEN DISINFECTION PROCEDURE MUST BE REPEATED UNTIL AN APPROVED RESULT IS OBTAINED.

4. WHEN THE ABOVE PROCEDURE HAS BEEN COMPLETED TO THE ARCHITECT'S SATISFACTION, FLUSH OUT ENTIRE SYSTEM WITH FRESH WATER UNTIL AN ORTHOTOLIDIN TEST AT ANY OUTLET SHOWS A RESIDUAL OF NOT MORE THAN 0.5 P.P.M.

5. WARNING SIGNS SHALL BE PROVIDED AT ALL OUTLETS WHILE CHLORINATING THE SYSTEM.

3.04 PIPING CONNECTION:

A MINIMUM GRADE ON DRAIN, VENT, AND WASTE PIPING SHALL BE 1/4" PER FOOT UNLESS NOTED, OR LATER APPROVED. VENT PIPING SHALL BE CONNECTED TO A SOIL OR WASTE LINE.

B. CONNECTIONS FROM STACKS OR HORIZONTAL WASTES TO WALL OR FLOOR FINISH FOR WASTES FROM LAVATORIES, URINALS, SINKS, AND DRINKING FOUNTAINS AND CONNECTION BETWEEN FLOOR DRAINS AND TRAPS SHALL BE IPS 85% RED BRASS PIPE.

C. SPECIAL EQUIPMENT:

1. CERTAIN ITEMS OF EQUIPMENT WILL BE FURNISHED AND SET IN PLACE UNDER A DIFFERENT SECTION OF SPECIFICATIONS; FURNISH ALL SERVICES AND SINK FITTINGS AND WASTE TRAP IF REQUIRED.

2. MAKE COLD AND HOT WATER, DRAIN, VENT, AND OTHER REQUIRED CONNECTIONS TO ALL THE EQUIPMENT. EACH WATER CONNECTION SHALL HAVE A VALVE AND UNION IN THE LINE, UNLESS NOTED OTHERWISE.

3. SIZES AND LOCATIONS OF CONNECTION TO SPECIAL EQUIPMENT ARE SHOWN FOR EQUIPMENT MADE BY CERTAIN MANUFACTURERS. SECURE ROUGH-IN DATA FROM THE MANUFACTURER FOR THE EQUIPMENT TO BE INSTALLED AND ROUGH-IN ACCORDINGLY. FINAL CONNECTIONS SHALL CONFORM TO THE MANUFACTURER'S DIRECTIONS FOR THE EQUIPMENT FURNISHED AT NO EXTRA COST TO THE OWNER.

D. TRAP PRIMERS: PROVIDE A TRAP PRIMER FOR EACH INDIRECT WASTE RECEPTACLE NOT RECEIVING DISCHARGE FROM A PLUMBING FIXTURE.

3.05 CLEANOUTS:

A. FURNISH CLEANOUTS AT ENDS OF BRANCH LINES, AT THE BASE OF VERTICAL LINES, AT CHANGES IN DIRECTION AND WHERE SHOWN OR REQUIRED TO FACILITATE CLEANING. A MAXIMUM SPACING OF 50 FEET INSIDE BUILDINGS, 100 FEET OUTSIDE, ALSO IN WASTE DROP FROM EACH SINK. CLEANOUT TO GRADE SHALL BE SET IN A 14" X 14" X 6" DEEP CONCRETE PAD, TROWEL SMOOTH AND EDGE; SET FLUSH WITH FINISHED GRADE. CLEANOUTS TO BE FULL SIZE OF LINE UP TO A MAXIMUM OF 6". CLEANOUTS SHALL CLEAR ALL OBSTRUCTIONS BY 18" MINIMUM. FURNISH TO OWNER ONE WRENCH FOR EACH SIZE AND TYPE OF CLEANOUT USED. PERMANENTLY IDENTIFY EXTERIOR CLEANOUTS: SS FOR SANITARY SEWER, SD FOR STORM DRAIN.

3.06 FIXTURES AND TRIM:

A. INSTALL ALL FIXTURES AT LOCATIONS SHOWN ON ARCHITECTURAL DRAWINGS. PROVIDE PROPER BACKING FOR HANGING BRACKETS AND HOLD DOWN SCREWS 2 X 6 BLOCKING SECURED WITH U.U.H. CLIPS OR CARRIERS AS SPECIFIED. GROUT VOIDS BETWEEN ALL FIXTURES AND ADJACENT SURFACES WITH CLEAR DOW SILICON SEALANT. INSTALL HOLD DOWN SCREWS AND WALL HUNG LAVATORIES.

B. ALL EXPOSED PIPING, BIBBBS, STOPS, FAUCETS, TRAPS, FLUSH VALVES AND OTHER TRIM FOR ALL FIXTURES SHALL BE CHROME PLATED INCLUDING PIPING INSIDE SINK CABINETS. PROVIDE HUBES RIM FOR ALL COUNTER TYPE SINKS AND LAVATORIES. ENAMELED WARE SHALL BE CAST IRON WITH ACID RESISTING ENAMEL.

C. PROVIDE 85% OR IPS RED BRASS PIPE, SECURELY ANCHORED TO BUILDING CONSTRUCTION FOR EACH CONNECTION TO FAUCETS, FLUSH VALVES, STOPS, HOSE BIBBS, ETC. EACH FIXTURE EXCEPT HOSE BIBBS, SHALL HAVE A STOP VALVE INSTALLED ON WATER SUPPLY LINES TO PERMIT REPAIRING WITHOUT SHUTTING OFF WATER MAINS.

D. INSTALLATION FOR HANDICAP ACCESSIBLE FIXTURES SHALL CONFORM TO CHAPTER 16 CALIFORNIA PLUMBING CODE, SECTION 1115 B CALIFORNIA BUILDING CODE, AND ADA REQUIREMENTS.

E. PROVIDE WATER BRANCHES AT SINGLE PLUMBING FIXTURES WITH AIR CHAMBERS AT 12" LONG AND OF SAME DIAMETER PIPE AS BRANCHES. WHERE TWO OR MORE FIXTURES ARE LOCATED IN A ROW OR BATTER, CONTINUE WATER SUPPLY HEADER EITHER FULL SIZE OF BRANCH LINE WITH AIR CHAMBER ONE PIPE SIZE LARGER THAN HEADER AND A MINIMUM 24" LONG INSTALLED ON END OF HEADER OR PLACE AIR CHAMBER AT EACH FIXTURE, OR PROVIDE WATER HAMMER ARRESTOR.

F. GAS PIPING BELOW COVERED WALKS AND WHERE NOTED ON DRAWINGS SHALL BE INSTALLED IN WATERTIGHT SCHEDULE 40 PVC CONDUIT. CONDUIT SHALL BE VENTED WHERE NOTED.

G. INSTALL RAINWATER LEADERS, OVERFLOW DRAINS AND ROOF DRAINS IN ACCORDANCE WITH THE ARCHITECTURAL DETAILS.

H. PROVIDE CHRISTY, BROOKS, OR EQUAL, CONCRETE PIT, WITH SIZE AS NOTED ON DRAWINGS, OR AS REQUIRED, FOR WATER METER AND DETECTOR CHECK VALVE.

I. PROVIDE SHUT OFF VALVE ON EACH GAS BRANCH LINE AT GAS METER.

J. PROVIDE EXPANSION JOINT IN GAS PIPING AT BUILDING SEISMIC JOINTS.

END OF SECTION

SECTION 15500 - AUTOMATIC FIRE PROTECTION SYSTEM

SECTION 15500 – AUTOMATIC FIRE PROTECTION SYSTEM

CONDITIONS OF THE CONTRACT AND DIVISION 1 APPLY TO THIS SECTION.

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS:

A. THE REQUIREMENTS OF THE GENERAL CONDITIONS AND DIVISION 1 APPLY TO ALL WORK HEREUNDER; ALSO APPLICABLE PROVISIONS OF SECTION 15010 MECHANICAL WORK – GENERAL REQUIREMENTS.

B. FURNISH AND INSTALL ALL PLUMBING WORK INDICATED ON THE DRAWINGS AND DESCRIBED HEREIN. ALSO, ANY INCIDENTAL WORK NOT SHOWN OR SPECIFIED NECESSARY TO PROVIDE THE COMPLETE SYSTEM.

1.02 SCOPE:

A. THE CONTRACTOR SHALL FURNISH ALL LABOR, DESIGN DRAWINGS, CALCULATIONS, MATERIALS, TOOLS AND EQUIPMENT TO INSTALL THE WET PIPE AUTOMATIC FIRE SPRINKLER SYSTEM AS HEREINAFTER DESCRIBED, READY FOR SERVICE TO THE ENTIRE SATISFACTION OF THE ARCHITECT. SYSTEM SHALL BE DESIGNED FOR THE OCCUPANCY AS DETERMINED BY NFPA. A HYDRAULIC CALCULATED SYSTEM WILL BE ACCEPTABLE.

B. IT IS THE INTENT OF THESE SPECIFICATIONS TO PROVIDE FOR COMPLETE AND OPERATING FIRE PROTECTION AUTOMATIC SPRINKLER SYSTEM IN FULL COMPLIANCE WITH THE STANDARDS OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) PAMPHLET NO. 13, LATEST EDITION, AND CBC STANDARD 38-1. THE WORK SHALL ALSO BE IN ACCORDANCE WITH ALL LOCAL OR STATE REQUIREMENTS WHICH APPLY.

1.03 DRAWINGS:

A. ALL AREAS ABOVE AND BELOW THE FINISHED CEILINGS, EXTERIOR EXPOSURE, STAIRWAYS, ROOMS, AREAWAYS, ENTRY, ETC., AND OTHER AREAS REQUIRING SPRINKLERS SHALL BE ADEQUATELY PROTECTED. THE CONTRACTOR SHALL THOROUGHLY EXAMINE ALL ARCHITECTURAL AND OTHER DRAWINGS AS REQUIRED TO SATISFY THIS REQUIREMENT.

B. THE NUMBER OF HEADS INDICATED ON THE DRAWINGS SHALL NOT BE REDUCED. PROVIDE ANY ADDITIONAL HEADS REQUIRED TO OBTAIN APPROVALS.

1.04 APPLICABLE SPECIFICATIONS: THE FOLLOWING PUBLICATIONS FOR A PART OF THIS SPECIFICATION:

A. GENERAL: PER REQUIREMENTS IN 15010.

B. UNDERWRITERS' LABORATORIES, INC., (UL) PUBLICATIONS: LIST OF INSPECTED FIRE PROTECTION EQUIPMENT AND MATERIALS.

C. NATIONAL FIRE PROTECTION ASSOCIATION PAMPHLETS: STANDARD OF THE NFPA FOR THE INSTALLATION OF SPRINKLER EQUIPMENT.

1.05 SUPERVISION:

A. KEEP A COMPETENT SUPERINTENDENT ON THE JOB WHO SHALL COORDINATE THE ACTIVITIES OF THE CRAFTS AND MAINTAIN THE PROGRESS OF THE WORK TO THE SATISFACTION OF THE ARCHITECT.

1.06 SITE CONDITIONS:

A. VERIFY ALL DIMENSIONS AT THE BUILDING SITE AND CHECK EXISTING CONDITIONS BEFORE BEGINNING WORK. MAKE CHANGES WHICH ARE NECESSARY TO INSTALL THE WORK IN HARMONY WITH OTHER CRAFTS, THEY SHALL BE FIRST APPROVED BY THE ARCHITECT.

1.07 REGULATIONS:

A. ALL WORK SHALL BE INSTALLED IN STRICT CONFORMITY WITH CALIFORNIA BUILDING CODE (CBC), CALIFORNIA PLUMBING CODE (CPC), AND ALL CALIFORNIA ELECTRIC CODES (CEC), ALL INDUSTRIAL SAFETY ORDERS, CALIFORNIA MECHANICAL CODE (CMC), NATIONAL FIRE CODE (NFC), AND ANY OTHER LAWS AND REGULATIONS OF LEGALLY CONSTITUTED AUTHORITIES HAVING JURISDICTION.

1.08 FEES AND PERMITS:

A. TAKE OUT ALL PERMITS AND PAY ALL FEES AND CHARGES OF ANY KIND REQUIRED IN CONNECTION WITH THIS WORK.

1.09 TEMPORARY CONNECTIONS:

A. ALL TEMPORARY CONNECTIONS REQUIRED TO MAINTAIN SERVICES DURING THE COURSE OF THIS CONTRACT SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER. THE NORMAL FUNCTION OF THE BUILDING MUST NOT BE INTERRUPTED; NOTIFY THE OWNER SEVEN DAYS IN ADVANCE BEFORE DISTURBING ANY SERVICE.

1.10 QUALITY ASSURANCE:

A. QUALIFICATIONS OF INSTALLER: UNLESS THE CONTRACTOR HAS SUBSTANTIAL PREVIOUS EXPERIENCE WITH THE CLASS OF WORK, THE SYSTEM SHALL BE INSTALLED BY A SUBCONTRACTOR WHO SPECIALIZES IN THIS WORK.

1.11 SUBMITTALS:

A. SHOP DRAWINGS AND PRODUCT DATA:

1. SUBMIT IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 01340.

2. SUBMIT SHOP DRAWINGS SHOWING THE LOCATION OF ALL SPRINKLER HEADS, PIPING, BRACING, HANGERS AND ANCHORS AND ALL NECESSARY WORKING DRAWINGS SHOWING COMPLETE DETAILS OF PIPING WITHIN THE BUILDING. DRAWINGS SHALL BE SUBMITTED FOR REVIEW PRIOR TO COMMENCEMENT OF ANY WORK. THE DRAWINGS SHALL BE REVIEWED, STAMPED AND APPROVED BY THE OFFICE OF THE STATE FIRE MARSHAL AND/OR THE AUTHORITY HAVING JURISDICTION AFTER REVIEW BY THE ENGINEER.

B. OPERATIONS AND MAINTENANCE DATA:

1. SUBMIT IN ACCORDANCE WITH THE REQUIREMENTS OF DIVISION 1.

C. INSTALLATION DRAWINGS: THE CONTRACTOR SHALL PREPARE INSTALLATION DRAWINGS FOR ALL PIPING AND SYSTEMS, AND SHALL COORDINATE THEM WITH THE ARCHITECTURAL REFLECTED CEILING PLANS AND WITH DRAWINGS FOR WORK OF OTHER TRADES. THE CONTRACTOR SHALL OBTAIN TRANSPARENCIES OF REFLECTED CEILING PLANS FROM THE ENGINEER AND SHALL SHOW ALL HEAD LOCATIONS THEREON, AND SHALL SUBMIT THESE DRAWINGS WITH SPRINKLER LAYOUT DRAWINGS, TO THE ENGINEER FOR REVIEW. THE CONTRACTOR SHALL THEN SUBMIT THESE DRAWINGS TO THE AUTHORITY HAVING JURISDICTION, AND OBTAIN THEIR APPROVALS. AFTER SUCH APPROVALS ARE OBTAINED, FURNISH FOUR SETS OF APPROVED INSTALLATION DRAWINGS TO THE ENGINEER.

PART 2 – PRODUCTS

2.01 GENERAL:

A. THE EQUIPMENT TO BE FURNISHED UNDER THIS SPECIFICATION SHALL BE ESSENTIALLY THE STANDARD PRODUCT OF THE MANUFACTURER. WHERE TWO OR MORE UNITS OF THE SAME CLASS OF EQUIPMENT ARE REQUIRED, THESE UNITS SHALL BE PRODUCTS OF A SINGLE MANUFACTURER. THE CONTRACTOR SHALL THOROUGHLY EXAMINE ALL ARCHITECTURAL AND OTHER DRAWINGS AS REQUIRED TO SATISFY THIS REQUIREMENT.

2.02 MATERIALS:

A. UNLESS OTHERWISE SHOWN ON THE DRAWINGS, SPECIFIED, OR DIRECTED BY THE ARCHITECT, ALL MATERIALS AND EQUIPMENT USED IN THE INSTALLATION OF THE SPRINKLER SYSTEMS SHALL BE LISTED AS APPROVED BY THE UL AND SHALL BE THE LATEST DESIGN OF THE MANUFACTURER. THE FOLLOWING MATERIALS SHALL CONFORM TO THE MORE SPECIFIC SPECIFICATIONS AND OTHER REQUIREMENTS SPECIFIED BELOW. ALL MATERIALS SHALL BE REVIEWED BY THE ARCHITECT PRIOR TO INSTALLATION.

B. WET SPRINKLER PIPE ABOVE GRADE SHALL BE SCHEDULE 40 BLACK STEEL, ASTM A-53, PIPE WITH UL APPROVED CAST IRON SCREWED SPRINKLER FITTINGS. UL APPROVED GROOVED FITTINGS AND COUPLINGS AT THE CONTRACTOR'S OPTION.

C. PIPE BELOW GRADE TO 12" ABOVE SHALL BE J.M BLUE BRUT PVC CLASS 100, C900, PIPE AND FITTINGS, UL LABELED, MAY BE USED. UNDERGROUND, OUTSIDE THE BUILDING IF ALLOWED BY LOCAL CODES. PIPING BELOW THE BUILDING TO 5' ABOVE FINISHED FLOOR (WITHIN FIVE FEE OUTSIDE THE BUILDING FOOTPRINT) SHALL BE DUCTILE IRON PIPE WITH MECHANICAL RESTRAINT JOINTS IN ACCORDANCE WITH THE LOCAL JURISDICTION.

D. SPRINKLER HEADS:

1. IN GENERAL: PENDANT OR UPRIGHT HEADS, EXPOSED PATTERN ON EXPOSED PIPING; FUSING ELEMENT TEMPERATURE RATINGS PER NFPA PAMPHLET NO. 13 REQUIREMENTS.

2. IN AREAS WITH SUSPENDED CEILINGS: SEMI-RECESSED STYLE HEADS, WITH INTERNAL ESCUTCHEON, CHROME PLATED FINISH WITHIN FINISH; FUSING ELEMENT TEMPERATURE RATINGS PER NFPA 13 REQUIREMENTS.

3. SIDEWALL: HORIZONTAL SIDE WALL; STAIN-CHROME FINISH WITH CHROME ESCUTCHEON; VIKING MODEL C4, CENTRAL MODEL H OR HF.

4. WIRE GUARDS: FACTORY-FABRICATED; CLAMP-ON TYPE.

5. HEADS IN EQUIPMENT ROOMS, STORAGE ROOMS AND ELECTRICAL ROOMS SHALL BE FURNISHED WITH CHROME-PLATED WIRE GUARDS. HEADS IN UNFINISHED SPACES SUCH AS MECHANICAL ROOMS MAY BE BRONZE FINISH.

6. SPARE HEADS: THE CONTRACTOR SHALL FURNISH SPARE HEADS EQUAL TO ONE P

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY

PLUMBING FIXTURE SCHEDULE

ESH-1 EMERGENCY EYE WASH & SHOWER:
GUARDIAN MODEL G1902BC, STAINLESS EYEWASH W/STAINLESS BOWL COVER, 1¼" NPT WATER CONNECTION, 1½" NPT WASTE CONNECTION, 20_30 GPM, ANSI COMPLIANT. 1¼" OUTLET, 1" INLETS, G3800 TEMPERING VALVE (5 PSI DROP MAX @ 20 GPM), SET WATER TEMPERATURE TO 70°F.

S-1 SINK-1:
ELKAY MODEL ESSB2520C, WALL SERVICE SINK, 304 STAINLESS STEEL, LK173 CI PTRAP, LK940BR03L2H FAUCET W/VACUUM BREAKER, 25" LENGTHX19 ½" WIDTH OVERALL.

S-2 SINK-2 (KITCHEN SINK):
"JUST" MODEL US-ADA-1818-A, 18"x18"x5¾" DEEP. COUNTER MOUNTED, SELF RIMMING,18GA STAINLESS STEEL SINK, PROVIDE WITH GRID DRAIN. "CHICAGO FAUCET" MODEL 786-CNBAE25ABCP. GOOSENECK, DECK MOUNTED, WRIST BLADE MANUAL FAUCET. 1.5GPM NON-AERATING LAMINAR FLOW. PROVIDE SUPPLIES, STOPS AND 17GA CHROME PLATED P-TRAP.

WB-1 WASHER BOX-1:
"GUY GRAY" MODEL B200, GALVANIZED BODY, 2" DRAIN CONNECTION, ½"HW AND CW CONNECTION W/ STOP VALVES, PROVIDE P-TRAP. INSTALL ON WALL PER MANUFACTURE'S REQUIREMENTS.

PLUMBING ABBREVIATIONS

ABV	ABOVE
ABC, OH	ABOVE CEILING, OVERHEAD
AD	ACCESS DOOR
ADA	AMERICANS WITH DISABILITIES ACT
AFF	ABOVE FINISHED FLOOR
AIP	ABANDON IN PLACE
BR	BRANCH
CL	CENTERLINE
CO	CLEANOUT
CW	COLD WATER
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RETURN
DIA, ø	DIAMETER
FC	FLEXIBLE CONNECTION
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FSR	FIRE SPRINKLER RISER
GCO	GRADE CLEANOUT
HW	HOT WATER
HWR	HOT WATER RETURN
I.E.	INVERT ELEVATION
(N) (E)	NEW, EXISTING
NIC	NOT IN CONTRACT
POC	POINT OF CONNECTION
P, TRV	PRESSURE & TEMPERATURE RELIEF VALVE
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
(R) (D)	RISE, DROP
RD, OFL	ROOF DRAIN, OVERFLOW
RI	ROUGH-IN
RO	RUN-OUT
SMS	SHEET METAL SCREWS
SOV	SHUT OFF VALVE
TA, FA	TO ABOVE, FROM ABOVE
TB, FB	TO BELOW, FROM BELOW
TBR	TO BE REMOVED
TP	TRAP PRIMER
UG, UF	UNDERGROUND, UNDERFLOOR
UON	UNLESS OTHERWISE NOTED
UTR	UP THROUGH ROOF
V, VR, VTR	VENT, VENT RISER, VENT THRU ROOF
WT	WATERTIGHT
WCO	WALL CLEANOUT

APPLICABLE CODES

ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE REGULATIONS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

A) STATE OF CALIFORNIA CODE OF REGULATIONS (CCR) TITLE 24,

2022 EDITION OF THE CALIFORNIA BUILDING CODE.
2022 EDITION OF THE CALIFORNIA ELECTRICAL CODE.
2022 EDITION OF THE CALIFORNIA FIRE CODE.
2022 EDITION OF THE CALIFORNIA MECHANICAL CODE.
2022 EDITION OF THE CALIFORNIA PLUMBING CODE.

B) NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) LIFE SAFETY CODE

PLUMBING FIXTURE CONNECTION SCHEDULE

FIXTURE NAME	SYMBOL	VENT	WASTE		COLD WATER		HOT WATER	
			BR	RI	BR	RI	BR	RI
SINK	JS	2"	3"	3"	¾"	¾"	¾"	¾"
EMERGENCY SHOWER	ESH	1½"	2"	2"	1½"	1¼"	¾"	¾"
WASHER BOX	WB	1½"	2"	2"	¾"	¾"	¾"	¾"

PLUMBING LEGEND

- COLD WATER LINE
- CD — CONDENSATE DRAIN
- F — FIRE SERVICE LINE
- G — GAS
- HOT WATER LINE
- HOT WATER RETURN
- LPG — LIQUID PETROLEUM GAS
- OFL — OVERFLOW
- PIPING OR EQUIPMENT TO BE REMOVED
- RWL — RAINWATER LEADER
- RISE OR DROP IN DIRECTION OF FLOW
- SANITARY SOIL OR WASTE LINE
- SCD — SECONDARY CONDENSATE DRAIN LINE
- TP — TRAP PRIMER LINE
- VENT
- CLEANOUT & WALL CLEANOUT
- FIRE DEPARTMENT CONNECTION
- FLOOR/ GRADE CLEAN OUT
- FLOOR DRAIN
- HOSE BIBB/ WALL HYDRANT
- TRAP
- TRAP PRIMER
- BALANCING VALVE
- BALL VALVE
- BUTTERFLY VALVE
- CHECK VALVE
- FLEXIBLE CONNECTION
- GATE VALVE
- SHUT OFF COCK
- PRESSURE GAUGE
- PRESSURE REDUCING VALVE
- REDUCER
- PRESSURE & TEMPERATURE RELIEF VALVE
- SHUT OFF VALVE
- STRAINER
- STRAINER & DRAIN VALVE WITH HOSE FITTING
- SOLENOID VALVE
- THERMOMETER
- UNION
- MA — MEDICAL AIR
- PA — PLANT COMPRESSED AIR
- N — NITROGEN LINE
- ND — NITROUS OXIDE
- OX — OXYGEN LINE
- VV — VACUUM LINE

COMPLIANCE NOTES

MECHANICAL AND PLUMBING EQUIPMENT SHALL CONFORM TO THE FOLLOWING AS STATED IN THE ENERGY EFFICIENCY STANDARDS, 2022.

1. BE CERTIFIED BY THE MANUFACTURER AS COMPLYING WITH THE EFFICIENCY REQUIREMENTS AS PRESCRIBED IN SECTIONS:
   - 110.1 APPLIANCES REGULATED BY THE APPLIANCE EFFICIENCY STANDARDS:
   - 110.2 HVAC EQUIPMENT EFFICIENCY AND PACKAGED CONTROLS:
   - 110.3 SERVICE WATER HEATING EFFICIENCY AND CONTROLS:
   - 110.4 POOL AND SPA HEATING EFFICIENCY AND CONTROLS:
   - 110.5 RESTRICTIONS ON PILOT LIGHTS:
2. BE SPECIFIED AND INSTALLED IN ACCORDANCE WITH SECTIONS.
   - 120.1 REQUIREMENTS FOR VENTILATION:
   - 120.2 REQUIRED CONTROLS FOR HVAC SYSTEMS:
     - 102.2 (H) DEMAND SHED CONTROLS.
     - 120.2 (I) ECONOMIZER FAULT DETECTION & DIAGNOSTIC.
   - 120.3 REQUIREMENTS FOR PIPE INSULATION:
   - 120.4 REQUIREMENTS FOR DUCT INSULATION:
   - 120.5 REQUIREMENTS FOR MECHANICAL SYSTEMS
   - 120.8 BUILDING COMMISSIONING
   - 120.9 REQUIREMENTS FOR COMMERCIAL BOILERS

PIPING MATERIAL SCHEDULE

SYSTEM	LOCATION	MATERIAL		MATERIAL	
		MATERIAL	TEST METHOD	MATERIAL	TEST METHOD
WASTE & VENT	ABOVE SLAB	STANDARD WEIGHT COATED CAST IRON PIPE	CISPI 301, ASTM A888	PLAIN END NO-HUB WITH NEOPRENE GASKET & STAINLESS STEEL COUPLING	ASTM A74, ASTM C564
WASTE & VENT	BELOW SLAB	PVC-DWV PIPE, SCHEDULE 40 THICKNESS	ASTM D1784 ASTM D1785	SOLVENT WELD	ASTM D2665 ASTM D2564
DOMESTIC CW & HW	ABOVE SLAB	TYPE "L" HARD TEMPER SEAMLESS COPPER	ASTM B88	WROUGHT COPPER FITTINGS WITH 95/5 TIN-SILVER SOLDERED JOINTS	ANSI B16.22
CONDENSATE DRAIN	ABOVE SLAB	TYPE "M" HARD TEMPER SEAMLESS COPPER	ASTM B88	WROUGHT COPPER FITTINGS WITH 95/5 TIN-SILVER SOLDERED JOINTS	ANSI B16.22
NATURAL GAS	ABOVE SLAB	SCHEDULE 40 BLACK STEEL PIPE	ASTM A120	150 PSI BLACK MALLEABLE IRON SCREWED FITTINGS	ANSI B16.3 ANSI B16.8

NOTES:
1. PRIME AND PAINT ALL GAS PIPING (BY OTHERS).
2. ALL CAST IRON PIPE SHALL BE AMERICAN MADE AND TESTED, NO IMPORTED PIPE IS ACCEPTABLE. TYLER PIPE, AB&I FOUNDRY OR CHARLOTTE PIPE.
3. COPPER FITTINGS ALLOWED: PROPRESS BY VIEGA, ASME B16.51, IAPMO LISTED, LEAD FREE.
4. GAS PIPE FITTINGS ALLOWED: MEGAPRESS G, ASME B31, IAPMO LISTED. FOR USE WITH CARBON STEEL.

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Revisions

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Project Manager:	JT	Plot Date:	Jul 21, 2023 - 7:26pm
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HY Architects Project number: 6014

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Project
ANNEX BUILDING ALTERATIONS

Sheet Title
PLUMBING LEGEND, NOTES AND SCHEDULES

Client Project Number:

Scale:	AS NOTED
Drawn By:	TURLEY
Checked By:	TURLEY
Issue Date:	07/21/2023

Sheet
P0.01
Sheet of

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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10 9 8 7 6 5 4 3 2 1

D C B A

VESTIBULE 101 | KITCHEN 102 | OFFICE 103 | SECRETARY 104 | VESTIBULE 138 | COPY ROOM 105 | OFFICE 106 | OFFICE 138 | PHONE ROOM 108 | ELEC. 107 | STORAGE 109

HALLWAY 133 | SHOP 134 | STORAGE 132 | GARAGE 131 | HALLWAY 130 | MEN 129 | WOMEN 128 | ELEC ROOM 126 | JANITOR 127 | BREAKROOM 125 | STORAGE 119 | OFFICE 124 | OFFICE 123 | OFFICE 122 | OFFICE 121 | CONFERENCE 120 | OFFICE 118

SECURED ACCESS 109A

OFFICE 110 | OFFICE 111 | OFFICE 112 | RECEPTION AREA 113 | BREAKROOM 116 | MEN 114 | WOMEN 115 | OPEN OFFICE 117

KS-1 | IB-1 | (E)1½"V(R) | (E)HB | (E)3"CW | (E)6" FIRE | (E)FSR | (N)3"CW | (E)2"CW | (E)4"SS | POC | (E)HW&HWR. RAISE AS NEEDED TO AVOID (N) ROLL UP DOOR

AC 1 612 LBS 72 MBH | AC 2 580 LBS 72 MBH | AC 3 597 LBS 72 MBH | AC 4 1320 LBS 180 MBH | AC 5 1320 LBS 180 MBH | AC 6 597 LBS 72 MBH (E) | AC 7 580 LBS 72 MBH | AC 8 702 LBS 72 MBH | AC 9 400 LBS 60 MBH | AC 10 369 LBS 40 MBH

1½"VTR MIN. 10' FROM OA INTAKES | (N)UL PENETRATION | 4"FCO | (N)S-1 | (N)¾"HW TO SINK AND ESH MIXING VALVE | (E)1"G | (E)1"CD | (N)UL PENETRATION | (N)1½"CW | (N)BALL VALVE | FREEZE LINE TO MAKE POC SO AS NOT TO SHUT DOWN WATER DURING OCCUPIED AREAS. TYP. | (E)2"CW | (E)BALANCE VALVE | (E)KITCHEN SINK, TR | (N)¾"H&CW (N)1½"V | (E)1½"VTR | (N)WASHER | (N)WCO | (N)WB-1 | (N)2"SS IN WALL ¼"/LF SLOPE POC IN WALL TO (E)2"SS | (E)½"CW TO ICE MAKER BOX | (E)2"SS | (E)8"SS | CONNECT (N)4"SS TO (E) 4"SS

(N)S-2 | (E)¾"CW | (N)WCO. | (N)2"W | (N)2"V | POC, FIELD VERIFY EXACT LOCATION, (N)2"V CONNECT TO (E)2"V | (N)¾"HW | (N)½"HWR | (N)BALANCE VALVE, SET AT 0.5GPM | 3/4"HW | 1/2"HWR | SOV ABOVE CEILING

A PLUMBING REMODEL FLOOR PLAN

SCALE: 3/16" = 1'-0"

GENERAL NOTES

1. FREEZE WATER LINES AT POC WHERE NECESSARY TO REDUCE SHUT DOWN PERIOD.
2. SAWCUT AND REFILL SLAB FLOOR FOR NEW WASTER PIPING. DETAIL SEE ARCHITECTURAL OR STRUCTURAL DETAILS.
3. PROVIDE NEW UL PENETRATION AT EXISTING PIPING THRU NEW RATED WALL.

LEGEND

AREA NOT IN SCOPE OF WORK UNLESS NOTED FOR (N)PIPE ROUTING

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Delta	Date	Revisions	By

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Project Manager:	JT	Plot Date: Jul 21, 2023 - 7:29pm	
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HY Architects Project number: 6014

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Project

ANNEX BUILDING ALTERATIONS

Sheet Title

PLUMBING OVERALL FIRST FLOOR PLAN - REMODEL

Client Project Number:

Scale:	AS NOTED
Drawn By:	TURLEY
Checked By:	TURLEY
Issue Date:	07/21/2023

Sheet **P2.01**

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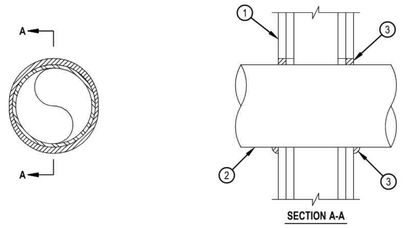
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WL 1290

System No. W-L-1290

F Rating — 1 and 2 Hr (See Item 1)
T Rating — 0 Hr
L Rating (Without Movement) at Ambient — Less than 1 CFM/Sq Ft
L Rating (Without Movement) at 400°F — Less than 1 CFM/Sq Ft
M Rating (Movement) — See Table 1

Classified by Underwriters Laboratories, Inc. to UL 1479 and CAN/ULC-S115



SECTION A-A

1. Wall Assembly — The 1 or 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features.
   A. Studs — Wall framing shall consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC. For M Rating, steel studs to be min 3-5/8 in. (92 mm) wide.
   B. Gypsum Board* — Nom 5/8 in. (16 mm) thick, 4 ft (1.2 m) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Design in the Fire Resistance Directory. Max diam of opening is 5 in. (127 mm). For M Rating, max diam of opening is 4-3/8 in. (111 mm).
   The hourly F and T Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed. The M Rating is applicable only to 1 hr rated walls.
2. Through Penetrant — One metallic pipe, conduit or tubing installed concentrically or eccentrically within the firestop system. Pipe, conduit or tube to be rigidly supported on both sides of wall assembly. The annular space between the pipe or tube and periphery of the opening shall be min 0 in (point contact) to max 1/2 in. (13 mm). As an option, for through penetrant types 2A, 2B and 2C only in nom diameters not exceeding 4 in. (102 mm), the penetrant can be installed with continuous point contact. As an option, for 1 hr F Rating, the annular space between pipe and opening can be max 1 in. (25 mm) for Item 2A penetrant in 2 in. (51 mm) diam (or smaller). The following types and sizes of metallic pipes, conduit or tube may be used:
   A. Steel Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 (or heavier) steel pipe.
   B. Iron Pipe — Nom 4 in. (102 mm) diam (or smaller) cast or ductile iron pipe.
   C. Conduit — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing (EMT) or steel conduit.
   D. Copper Tube — Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tube.
   E. Copper Pipe — Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.

Hilti Firestop Systems

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Page: 1 of 2

WL 1290

System No. W-L-1290

3. Fill, Void or Cavity Material*-Sealant — Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. At the point contact and continuous point contact locations between pipe and wall, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the pipe/wall interface.
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP606 Flexible Firestop Sealant

The M Rating for the firestop system is dependent on the variables as noted in the Table 1 below.

Table 1

Movement Direction	Penetrant Item	Nominal Penetrant Diameter	Annular Space	Movement	Sealant Depth	F Rating	L Rating
Y	2A	2 in.	Max 1 in.	5%	5/8 in.	1 hr.	N/A
Z	2A	2 in.	1 in.	0.25 in.	5/8 in.	1 hr.	N/A

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

Hilti Firestop Systems

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Page: 2 of 2

E UL PENETRATION UNINSULATED THRU RATED WALL
NO SCALE

PIPE SUPPORT SCHEDULE

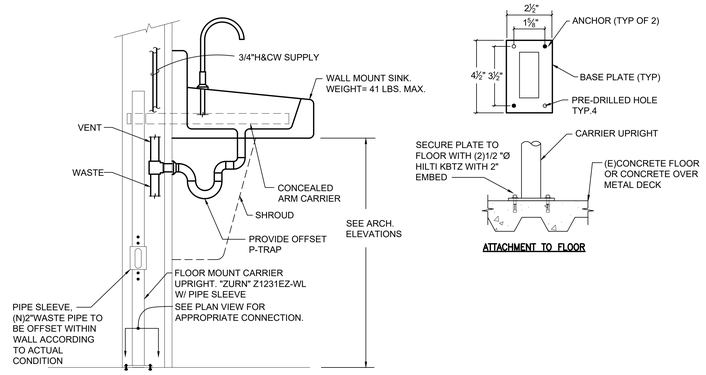
HORIZONTAL STEEL PIPE

NOMINAL PIPE SIZE	ROD DIAMETER	MAX. SPACING
½ – 1¼	⅜	7'0"
1½	⅜	9'0"
2	⅜	10'0"
2½	½	11'0"
3	½	12'0"
4	⅝	12'0"

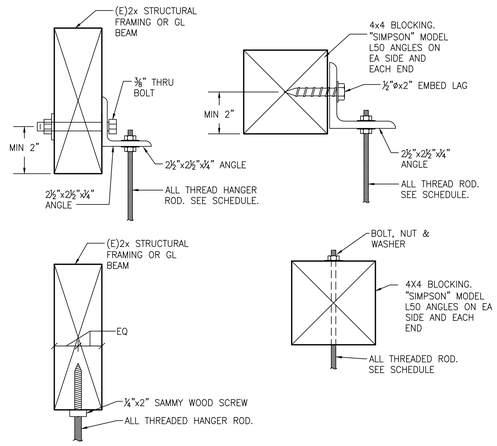
HORIZONTAL COPPER PIPE

NOMINAL PIPE SIZE	ROD DIAMETER	MAXIMUM SPACING
½ –¾	⅜	5'0"
1	⅜	6'0"
1¼	⅜	6'0"
1½	⅜	6'0"
2	⅜	8'0"
2½	½	9'0"
3	½	10'0"

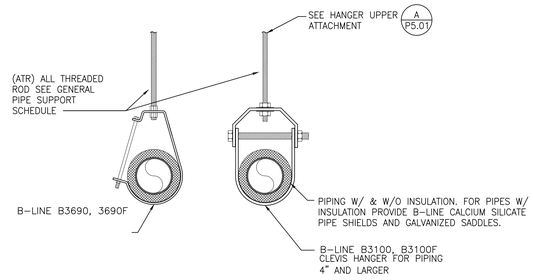
NOTES:
1. PROVIDE MEANS OF PREVENTING DISSIMILAR METAL CONTACT SUCH AS FELT OR NON ADHESIVE ISOLATION TAPE. GALVANIZED FELT ISOLATORS SIZED FOR COPPER TUBING MAY ALSO BE USED, TOLCO FIG.83.
2. SUPPORT HORIZONTAL CAST IRON ADJACENT TO EACH HUB, WITH 5 FEET MAXIMUM SPACING BETWEEN HANGERS.
3. INSTALL HANGERS TO PROVIDE A MINIMUM OF ½ INCH SPACE BETWEEN FINISHED COVERING AND ADJACENT WORK.
4. HANGERS SHALL BE INSTALLED WITHIN 18" OF EACH HORIZONTAL ELBOW.



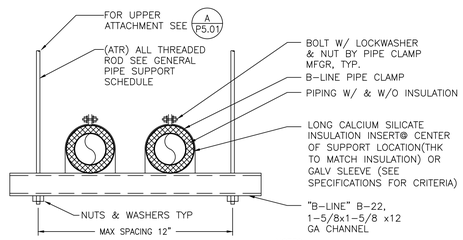
D WALL HUNG SINK/LAV SUPPORT
NO SCALE



A HANGER ROD UPPER ATTACHMENT DETAIL
NO SCALE



B PIPE HANGER DETAIL
NO SCALE



TRAPEZE PIPE SUPPORT

NOTES:

1. MAX WEIGHT SUPPORTED BY A SINGLE TRAPEZE SHALL NOT EXCEED 100 LBS.

2. MAX SPACING BETWEEN TRAPEZE SUPPORT SHALL NOT EXCEED MAX SPACING REQUIREMENT FOR EACH PIPE (SEE GENERAL PIPE SUPPORT SCHEDULE) AND SHALL NOT EXCEED 10 FT.

C GRAVITY TRAPEZE PIPE SUPPORT DETAIL
NO SCALE

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Delta	Date	Revisions	By

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HY Architects Project number: 6014

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Project
ANNEX BUILDING ALTERATIONS

Sheet Title
PLUMBING DETAILS

Client Project Number:

Scale:	AS NOTED
Drawn By:	TURLEY
Checked By:	TURLEY
Issue Date:	07/21/2023

Sheet
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STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: PCOE ANNEX BUILDING ALTERATIONS	Report Page:	(Page 7 of 13)
365 Nevada St. Auburn, CA 95603	Date Prepared:	2023-07-14T04:46:46-04:00

J. VENTILATION AND INDOOR AIR QUALITY

Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Exh. Vent per 120.1(c)4 & 160.2(c)4 Required Min CFM	Exh. Vent per 120.1(c)4 & 160.2(c)4 Provided per Design CFM	DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)[3][6] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
Hallway 130, Vestibule 140	Corridor	470			70.5			DCV	NA: Area < 150ft² or design occupancy < 10 people
								Occ Sensor	NA: Not required space type
Breakroom 125	Break room	460			230			DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
Men 129, Women 130	Toilet (public) - cont. exh.	590	10		88.5	500	550	DCV	NA: Area < 150ft² or design occupancy < 10 people
								Occ Sensor	NA: Not required space type
Janitor 127	Janitor closet	100			15	100	110	DCV	NA: Area < 150ft² or design occupancy < 10 people
								Occ Sensor	NA: Not required space type
Elec Room 126	All others	140			21			DCV	NA: Area < 150ft² or design occupancy < 10 people
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				425	18	Ventilation for this System Complies?		Yes
04		05			06			07	
System Name	AC-8	System Design OA CFM Airflow[1]		350	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2]	
								Provided	
08	09	10	11	12	13	14	15	16	

Generated Date/Time: | Documentation Software: Energy Code Ace
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance | Report Version: 2022.0.000 | Schema Version: rev 20220101 | Compliance ID: 120651-0723-0002 | Report Generated: 2023-07-14 01:46:52

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: PCOE ANNEX BUILDING ALTERATIONS	Report Page:	(Page 4 of 13)
365 Nevada St. Auburn, CA 95603	Date Prepared:	2023-07-14T04:46:46-04:00

J. VENTILATION AND INDOOR AIR QUALITY

Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Exh. Vent per 120.1(c)4 & 160.2(c)4 Required Min CFM	Exh. Vent per 120.1(c)4 & 160.2(c)4 Provided per Design CFM	DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)[3][6] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
Vestibule 101, 138	Corridor	200			30			DCV	NA: Area < 150ft² or design occupancy < 10 people
								Occ Sensor	NA: Not required space type
Kitchen 102	Kitchen (cooking)	115			17.25	80.5	230	DCV	NA: Area < 150ft² or design occupancy < 10 people
								Occ Sensor	NA: Not required space type
Office 103, 106, 138, Secretary 104	Office space	720			108			DCV	NA: Area < 150ft² or design occupancy < 10 people
								Occ Sensor	NA: Not required space type
Copy Room 105	Copy/ printing room	130			19.5	65	250	DCV	NA: Area < 150ft² or design occupancy < 10 people
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				174.75	18	Ventilation for this System Complies?		Yes
04		05			06			07	
System Name	AC-2	System Design OA CFM Airflow[1]		190	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2]	
								Provided	

Generated Date/Time: | Documentation Software: Energy Code Ace
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance | Report Version: 2022.0.000 | Schema Version: rev 20220101 | Compliance ID: 120651-0723-0002 | Report Generated: 2023-07-14 01:46:52

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
This document is used to demonstrate compliance for mechanical systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, or 141.0(b)2 for alterations.		
Project Name: PCOE ANNEX BUILDING ALTERATIONS	Report Page:	(Page 1 of 13)
Project Address: 365 Nevada St. Auburn, CA 95603	Date Prepared:	2023-07-14T04:46:46-04:00

A. GENERAL INFORMATION

01	Project Location (city)	Auburn	04	Total Conditioned Floor Area	8340
02	Climate Zone	11	05	Total Unconditioned Floor Area	775
03	Occupancy Types Within Project:		06	# of Stories (Habitable Above Grade)	0

● Retail ● Warehouse

B. PROJECT SCOPE

This table includes mechanical systems or components that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.4, 170.2(b) or 141.0(b)2 and 180.2(b)2 for alterations.

01	02	03
Air System(s)	Wet System Components	Dry System Components
☐ Heating Air System	☐ Water Economizer	☐ Air Economizer
☐ Cooling Air System	☐ Pumps	☐ Electric Resistance Heat
Mechanical Controls	☐ System Piping	☐ Fan Systems
☐ Mechanical Controls (existing to remain, altered or new)	☐ Cooling Towers	☒ Ductwork (existing to remain, altered or new)
	☐ Chillers	☒ Ventilation
	☐ Boilers	☐ Zonal Systems/ Terminal Boxes

Generated Date/Time: | Documentation Software: Energy Code Ace
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance | Report Version: 2022.0.000 | Schema Version: rev 20220101 | Compliance ID: 120651-0723-0002 | Report Generated: 2023-07-14 01:46:52

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: PCOE ANNEX BUILDING ALTERATIONS	Report Page:	(Page 8 of 13)
365 Nevada St. Auburn, CA 95603	Date Prepared:	2023-07-14T04:46:46-04:00

J. VENTILATION AND INDOOR AIR QUALITY

Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Exh. Vent per 120.1(c)4 & 160.2(c)4 Required Min CFM	Exh. Vent per 120.1(c)4 & 160.2(c)4 Provided per Design CFM	DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)[3][6] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
Breakroom 116	Break room	135			67.5			DCV	NA: Area < 150ft² or design occupancy < 10 people
								Occ Sensor	NA: Not required space type
Reception Area 113	Reception area	570			85.5			DCV	NA: Area < 150ft² or design occupancy < 10 people
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				153	18	Ventilation for this System Complies?		Yes
04		05			06			07	
System Name	EF-5	System Design OA CFM Airflow[1]		0	System Design Transfer Air CFM		1000	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2]	
								NA: Not system type specified in footnote 2	
08	09	10	11	12	13	14	15	16	
Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)[3] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		

Generated Date/Time: | Documentation Software: Energy Code Ace
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance | Report Version: 2022.0.000 | Schema Version: rev 20220101 | Compliance ID: 120651-0723-0002 | Report Generated: 2023-07-14 01:46:52

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: PCOE ANNEX BUILDING ALTERATIONS	Report Page:	(Page 5 of 13)
365 Nevada St. Auburn, CA 95603	Date Prepared:	2023-07-14T04:46:46-04:00

J. VENTILATION AND INDOOR AIR QUALITY

08	09	10	11	12	13	14	15	16	
Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)[3][6] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		
Hallway 133	Corridor	120			18			DCV	NA: Area < 150ft² or design occupancy < 10 people
								Occ Sensor	NA: Not required space type
Storage 132	Warehouse	695			104.25			DCV	NA: Area < 150ft² or design occupancy < 10 people
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				122.25	18	Ventilation for this System Complies?		Yes
04		05			06			07	
System Name	AC-3	System Design OA CFM Airflow[1]		275	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2]	
								Provided	
08	09	10	11	12	13	14	15	16	
Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)[3] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		

Generated Date/Time: | Documentation Software: Energy Code Ace
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance | Report Version: 2022.0.000 | Schema Version: rev 20220101 | Compliance ID: 120651-0723-0002 | Report Generated: 2023-07-14 01:46:52

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: PCOE ANNEX BUILDING ALTERATIONS	Report Page:	(Page 2 of 13)
365 Nevada St. Auburn, CA 95603	Date Prepared:	2023-07-14T04:46:46-04:00

C. COMPLIANCE RESULTS

Table C will indicate if the project data input into the compliance document is compliant with mechanical requirements. This table is not editable by the user. If this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D., or the table indicated as not compliant for guidance.

01		02		03		04	05		06		07		08	09
System Summary 110.1, 110.2, 140.4, 170.2(c)	AND	Pumps 140.4(k), 170.2(c)4I	AND	Fans/ Economizers 140.4(c), 140.4(e), 170.2(c)	AND	System Controls 110.2, 120.2, 140.4(f), 170.2(c)	Ventilation 120.1, 160.2	AND	Terminal Box Controls 140.4(d), 170.2(c)4B	AND	Distribution 120.3, 140.4(l), 160.2, 160.3	AND	Cooling Towers 110.2(e)2	Compliance Results
(See Table F)		(See Table G)		(See Table H)		(See Table I)	(See Table J)		(See Table K)		(See Table L)		(See Table M)	
	AND		AND		AND		Yes	AND		AND	Yes	AND		COMPLIES with Exceptional Conditions
Mandatory Measures Compliance (See Table Q for Details)							COMPLIES							

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

Transfer air is being used in at least one zone to meet minimum ventilation requirements. See Table J for details. Transfer air must be designed per §120.1(e) for air classification and recirculation limitations and be documented within construction documents.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

F. HVAC SYSTEM SUMMARY (DRY & WET SYSTEMS)

This section does not apply to this project.

Generated Date/Time: | Documentation Software: Energy Code Ace
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance | Report Version: 2022.0.000 | Schema Version: rev 20220101 | Compliance ID: 120651-0723-0002 | Report Generated: 2023-07-14 01:46:52

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: PCOE ANNEX BUILDING ALTERATIONS	Report Page:	(Page 9 of 13)
365 Nevada St. Auburn, CA 95603	Date Prepared:	2023-07-14T04:46:46-04:00

J. VENTILATION AND INDOOR AIR QUALITY

Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Exh. Vent per 120.1(c)4 & 160.2(c)4 Required Min CFM	Exh. Vent per 120.1(c)4 & 160.2(c)4 Provided per Design CFM	DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)[3][6] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
Garage 131	Parking Garage	775			116.25	581.25	1000	DCV	NA: Area < 150ft² or design occupancy < 10 people
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				116.25	18	Ventilation for this System Complies?		Yes

[1] *FOOTNOTES: System CFM should include both mechanical and natural ventilation for the zone/system*

[2] *Air filtration requirements apply to the following three system types per 120.1(c)1A: space conditioning systems utilizing ducts to supply air to occupiable space; supply-only ventilation systems providing outside air to occupiable space; supply side of balanced ventilation systems including heat recovery and energy recovery ventilation systems providing outside air to occupiable space.*

[3] *Uniform Mechanical Code may have more stringent ventilation requirements; the most stringent code requirement takes precedence.*

[4] *See Standards Tables 120.1-A and 120.1-B.*

[5] *For lecture halls with fixed seating, the expected number of occupants shall be determined in accordance with the California Building Code.*

[6] *120.2(e)3 requires systems serving rooms that are required by 130.1(c) to have lighting occupancy sensing controls to also have occupancy sensing zone controls for ventilation. Examples of spaces which require lighting occupancy sensors include offices 250ft² or smaller, multipurpose rooms less than 1,000 ft², classrooms, conference rooms, restrooms, aisles and open areas in warehouses, library book stack aisles, corridors, stairwells, parking garages, and loading and unloading zones, unless excepted by 130.1(c).*

K. TERMINAL BOX CONTROLS

This section does not apply to this project.

L. DISTRIBUTION (DUCTWORK and PIPING)

This table is used to show compliance with mandatory pipe insulation requirements found in 120.3 and mandatory requirements found in 120.4(g) for duct sealing.

01	☐	Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather shall be installed with a cover suitable for outdoor service. Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space shall have a Class I or Class II vapor retarder. All penetrations and joints of which shall be sealed.

Duct Leakage Testing

The answers to the questions below apply to the following duct systems:	AC-1, 2, 3, 4, 5, 6, 9	**NR/ Common Use:** Duct leakage testing shall not exceed 15% per NA7.5.3 required for these systems?	No

Generated Date/Time: | Documentation Software: Energy Code Ace
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance | Report Version: 2022.0.000 | Schema Version: rev 20220101 | Compliance ID: 120651-0723-0002 | Report Generated: 2023-07-14 01:46:52

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: PCOE ANNEX BUILDING ALTERATIONS	Report Page:	(Page 6 of 13)
365 Nevada St. Auburn, CA 95603	Date Prepared:	2023-07-14T04:46:46-04:00

J. VENTILATION AND INDOOR AIR QUALITY

Space Name or Item Tag	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Exh. Vent per 120.1(c)4 & 160.2(c)4 Required Min CFM	Exh. Vent per 120.1(c)4 & 160.2(c)4 Provided per Design CFM	DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)[3][6] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
Shop 134	Retail sales	1000			250			DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				250	18	Ventilation for this System Complies?		Yes
04		05			06			07	
System Name	AC-4/5	System Design OA CFM Airflow[1]		1400	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2]	
								Provided	
08	09	10	11	12	13	14	15	16	
Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)[3] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		
Storage 109, 119	Warehouse	7780			1167			DCV	NA: Not required per §120.1(d)3
								Occ Sensor	NA: Not required space type
17	Total System Required Min OA CFM				1167	18	Ventilation for this System Complies?		Yes
04		05			06			07	
System Name	AC-6	System Design OA CFM Airflow[1]		580	System Design Transfer Air CFM		0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2]	
								Provided	
08	09	10	11	12	13	14	15	16	
Space Name or Item Tag	Mechanical Ventilation Required per 120.1(c)[3] & 160.2(c)3					Exh. Vent per 120.1(c)4 & 160.2(c)4		DCV or Sensor Controls per 120.1(d)3, 120.1(d)5, and 120.1(e)[3] 160.2(c)5D 160.2(c)5E 160.2(c)5D	
	Occupancy Type[4]	Conditioned Floor Area (ft²)	# of Shower heads/ toilets	# of people[5]	Required Min OA CFM	Required Min CFM	Provided per Design CFM		

Generated Date/Time: | Documentation Software: Energy Code Ace
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance | Report Version: 2022.0.000 | Schema Version: rev 20220101 | Compliance ID: 120651-0723-0002 | Report Generated: 2023-07-14 01:46:52

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: PCOE ANNEX BUILDING ALTERATIONS	Report Page:	(Page 3 of 13)
365 Nevada St. Auburn, CA 95603	Date Prepared:	2023-07-14T04:46:46-04:00

G. PUMPS

This section does not apply to this project.

H. FAN SYSTEMS & AIR ECONOMIZERS

This section does not apply to this project.

I. SYSTEM CONTROLS

This section does not apply to this project.

J. VENTILATION AND INDOOR AIR QUALITY

This table is used to demonstrate compliance with mandatory ventilation requirements in 120.1 120.2(e)3B 140.4(p) and 140.4(q) for all nonresidential and hotel/motel and d:t24refnolink/}160.2, 160.3(a)3D, 170.2(a)4N, 170.2(a)4O for high-rise residential occupancies. For alterations, only ventilation systems being altered within the scope of the permit application need to be documented in this table. In lieu of this table, the required outdoor ventilation rates and airflows may be shown on the plans or the calculations can be presented in a spreadsheet.

01	☐	Check the box if the project is showing ventilation calculations on the plans, or attaching the calculations instead of completing this table.
02	☒	Check this box if the project included Nonresidential, Hotel/Motel Spaces or Multifamily Common Use Spaces
	☐	
03	☐	Check the box if the project is using natural ventilation in any nonresidential or hotel/motel spaces to meet required ventilation rates per 120.1(c)2.

Nonresidential and Hotel/ Motel Multifamily Common Use Ventilation Systems

04		05			06		07
System Name	AC-1	System Design OA CFM Airflow[1]		200	System Design Transfer Air CFM	0	Air Filtration per 120.1(c) 141.0(b)2 and 160.2(c)21[2]
							Provided
08	09	10	11	12	13	14	15	16

Generated Date/Time: | Documentation Software: Energy Code Ace
CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance | Report Version: 2022.0.000 | Schema Version: rev 20220101 | Compliance ID: 120651-0723-0002 | Report Generated: 2023-07-14 01:46:52

PCOE
GOLD IN EDUCATION

Revisions

Delta	Date	Revisions	By

PLAN CHECK SET
CONSTRUCTION DOCUMENTS

AGENCY APPROVAL

TURLEY & ASSOCIATES | MECHANICAL ENGINEERING GROUP, INC.
2431 Capitol Avenue, Sacramento, CA 95816
(916) 325-1065
FAX: (916) 325-1075
Email: office@turleymech.com

Project Engineer:	JT	Job Number:	23130
Project Manager:	JT	Plot Date:	Jul 21, 2023 - 7:28pm
Project Drafter:	-	Login:	DTang

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REGISTERED PROFESSIONAL ENGINEER — JOSEPH W. TRONCONE — No. M-026853 Exp. 6/30/2025 — MECHANICAL — STATE OF CALIFORNIA

HIBSER YAMAUCHI Architects, Inc.
4602 2nd Street, Suite 3
Davis, CA 95618
530.758.1270 tel | 530.758.4789 fax

HY Architects Project number: 6014

Facility
PLACER CO. OFFICES OF EDUCATION
365 NEVADA STREET
AUBURN, CA 95603

Project
ANNEX BUILDING ALTERATIONS

Sheet Title
TITLE 24 REPORTS

Client Project Number:

Scale: AS NOTED
Drawn By: TURLEY
Checked By: TURLEY
Issue Date: 07/21/2023

Sheet
T-24A
Sheet of

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: PCOE ANNEX BUILDING ALTERATIONS	**Report Page:**	**(Page 13 of 13)**
Project Address: 365 Nevada St. Auburn, CA 95603	**Date Prepared:**	2023-07-14T04:46:46-04:00

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Guang Yang	Documentation Author Signature:
Company: Turley & Associates	Signature Date: 2023-07-14
Address: 2431 Capitol Ave	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Sacramento, CA 95816	Phone: 916.325.1065

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: John W. Thompson	Responsible Designer Signature:
Company: Turley & Associates	Date Signed: 2023-07-14
Address: 2431 Capitol Ave	License: M-28557
City/State/Zip: Sacramento, CA 95816	Phone: 916.325.1065

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: PCOE ANNEX BUILDING ALTERATIONS	**Report Page:**	**(Page 10 of 13)**
365 Nevada St. Auburn, CA 95603	**Date Prepared:**	2023-07-14T04:46:46-04:00

L. DISTRIBUTION (DUCTWORK and PIPING)

		Dwelling Units: Total duct leakage of duct system shall not exceed 15% or duct system to outside shall not exceed 10% per RA3.1.4 required for systems?	---
		Duct leakage testing per CMC Section 603.10.1 required for these systems?	No
11	No	The scope of the project includes only duct systems serving healthcare facilities	
12	Yes	Duct system provides conditioned air to an occupiable space for a constant volume, single zone, space-conditioning system.	
13	Yes	The space conditioning system serves less than 5,000 ft² of conditioned floor area.	
14	No	The combined surface area of the ducts is more than 25% of the total surface area of the entire duct system:	
15	No	The scope of the project includes extending an existing duct system, which is constructed, insulated or sealed with asbestos.	
16	No	The scope of the project includes an existing duct system that is documented to have been previously sealed as confirmed through field verification and diagnostic testing in accordance with procedures in the Reference Nonresidential Appendix NA2.	
17	Yes	All Ductwork and plenums with pressure class ratings shall be constructed to Seal Class A	
18	Yes	All ductwork is an extension of an existing duct system	
19	No	Ductwork serving individual dwelling unit	
20	No	< 25 ft of new or replacement space conditioning ducts installed	
21	R-4.2	Dust Insulation R-value	
22	Yes	Ductwork Existing To Remain	
23	No	Duct System Connected To Altered Space Conditioning System	

M. COOLING TOWERS

This section does not apply to this project.

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance | Generated Date/Time: | Documentation Software: Energy Code Ace
Report Version: 2022.0.000 | Compliance ID: 120651-0723-0002
Schema Version: rev 20220101 | Report Generated: 2023-07-14 01:46:52

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: PCOE ANNEX BUILDING ALTERATIONS	**Report Page:**	**(Page 11 of 13)**
365 Nevada St. Auburn, CA 95603	**Date Prepared:**	2023-07-14T04:46:46-04:00

N. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Form/Title
NRCI-MCH-01-E - Must be submitted for all buildings

O. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, please explain why in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Form/Title	Systems/Spaces To Be Field Verified
NRCA-MCH-02-A - Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH-02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap.	AC-1; AC-2; AC-3; AC-4/5; AC-6; AC-8; EF-5

P. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

There are no NRCV forms required for this project.

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance | Generated Date/Time: | Documentation Software: Energy Code Ace
Report Version: 2022.0.000 | Compliance ID: 120651-0723-0002
Schema Version: rev 20220101 | Report Generated: 2023-07-14 01:46:52

STATE OF CALIFORNIA
Mechanical Systems
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE		NRCC-MCH-E
Project Name: PCOE ANNEX BUILDING ALTERATIONS	**Report Page:**	**(Page 12 of 13)**
365 Nevada St. Auburn, CA 95603	**Date Prepared:**	2023-07-14T04:46:46-04:00

Q. MANDATORY MEASURES DOCUMENTATION LOCATION

This table is used to indicate where mandatory measures are documented in the plan set or construction documentation.

01		02
Compliance with Mandatory Measures documented through MCH Mandatory Measures Note Block	No	Plan sheet or construction document location
03		04
Mandatory Measure		**Plan sheet or construction document location**
Duct Insulation per 120.4		T-24
The air duct and plenum system is designed per 120.4(a)-(f)		T-24
Kitchen range hoods shall be rated for sound in accordance with Section 7.2 of ASHRAE 62.2		N/A

CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance | Generated Date/Time: | Documentation Software: Energy Code Ace
Report Version: 2022.0.000 | Compliance ID: 120651-0723-0002
Schema Version: rev 20220101 | Report Generated: 2023-07-14 01:46:52

PCOE
GOLD IN EDUCATION

Revisions

Delta	Date	Revisions	By

PLAN CHECK SET

CONSTRUCTION DOCUMENTS

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Project Engineer:	JT	Job Number:	23130
Project Manager:	JT	Plot Date: Jul 21, 2023 - 7:28pm	
Project Drafter:	-	Login: GYang	

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REGISTERED PROFESSIONAL ENGINEER — JOHN W. THOMPSON — No. M-028557 Exp. 6/30/2025 — MECHANICAL — STATE OF CALIFORNIA

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Project

ANNEX BUILDING ALTERATIONS

Sheet Title

TITLE 24 REPORTS

Client Project Number:

Scale: AS NOTED
Drawn By: TURLEY
Checked By: TURLEY
Issue Date: 07/21/2023

Sheet **T-24B**

Sheet of

GRAPHIC SCALES: 1/16" = 1'-0" (0, 5', 50') | 1/8" = 1'-0" (0, 5', 25') | 1/4" = 1'-0" (0, 1', 12') | 1/2" = 1'-0" (0, 1', 6') | 3/4" = 1'-0" (0, 4') | 1" = 1'-0" (0, 1', 3') | 1 1/2" = 1'-0" (0, 2') | 3" = 1'-0" (0, 1')

IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY

UNAUTHORIZED CHANGES & USES: All changes to these plans will not be responsible for, or liable for unauthorized changes to or uses to these plans. M. Neils Engineering, Inc. preparing these plans must be in writing and must be approved by M. Neils Engineering, Inc.

Jul 21, 2023 – 10:51am, / kerlo

ABBREVIATIONS

A	AMPERES
AC	ALTERNATING CURRENT
AF	AUTO FAUCET / AUTO FLUSH
A.F.F.	ABOVE FINISHED FLOOR
A.I.C.	AMPERE INTERRUPTING CAPACITY
AMP	AMPERE
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
C.	CONDUIT
C.B.	CIRCUIT BREAKER
CKT	CIRCUIT
C.O.	CONDUIT ONLY, WITH PULL WIRE
C.T.	CURRENT TRANSFORMER
DC	DIRECT CURRENT
(E)	EXISTING
EL	EVENING LIGHT
EM	EMERGENCY
(ER)	EXISTING RELOCATED
EMT	ELECTRICAL METALLIC CONDUIT
(F)	FUTURE
FACP	FIRE ALARM CONTROL PANEL
FAPS	FIRE ALARM POWER SUPPLY
FATC	FIRE ALARM TERMINAL CABINET
GA.	GAUGE
GND	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
HP	HORSEPOWER
A.	HERTZ (CYCLES/SEC)
Isc	SHORT CIRCUIT AMPERES
ISO	ISOLATED
K	THOUSAND
KVA	KILO VOLT AMPERE
KW	KILO WATT
LM	LUMENS
LT.	LIGHT
LV	LOW VOLTAGE
MAX.	MAXIMUM
MDF	MAIN DISTRIBUTION FRAME
MFR.	MANUFACTURER
MIN.	MINIMUM
MTD.	MOUNTED
N	NEUTRAL
(N)	NEW
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NL	NIGHT LIGHT
NM	NON-METALLIC CABLE
PFB	PROVISIONS FOR FUTURE CIRCUIT BREAKER
PH	PHASE
(R)	REMOVE
(RE)	RELOCATE EXISTING
RCPT.	RECEPTACLE
S.M.S	SHEET METAL SCREW
SWBD	SWITCHBOARD
SYS	SYSTEM
TV	TELEVISION
TYP.	TYPICAL
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
V	VOLT
VA	VOLT-AMPERES
W	WIRE, WATT
WP	WEATHER PROTECTED
XFMR	TRANSFORMER

** UNDERGROUND DIGGING CAUTION **

USE EXTREME CAUTION WHEN DIGGING TO AVOID BURIED UTILITY CABLES, CONDUITS, AND PIPING. CALL "UNDERGROUND SERVICE ALERT" (U.S.A.):

811 or 1-800-642-2444

TWO WORKING DAYS BEFORE DIGGING TO VERIFY UNDERGROUND UTILITIES.

GROUND PENETRATION RADAR (GPR)

AREA CONTAINS EXISTING POWER AND SINGLE CONDUITS/CONDUCTORS AND THE LOCATIONS ARE UNKNOWN. THE CONTRACTOR SHALL USE GROUND PENETRATING RADAR (GPR) TO IDENTIFY UNDERGROUND INFRASTRUCTURE (CONDUITS AND PIPES) AND HAND DIG AROUND EXISTING UNDERGROUND INFRASTRUCTURE (CONDUITS AND PIPES).

ELECTRICAL SYMBOL LIST

- LUMINAIRE - CEILING RECESSED MOUNTED (LETTER "a" DENOTES SWITCH FUNCTION, NUMBER "2" DENOTES CIRCUIT NUMBER - TYPICAL FOR ALL LUMINAIRES UNLESS NOTED OTHERWISE).
- LUMINAIRE - WALL MOUNTED
- WALL MOUNTED EXIT LUMINAIRE. ARROW SIGNIFIES DIRECTION, TYPICAL.
- WALL MOUNTED LOW LEVEL EXIT LUMINAIRE MOUNTED ADJACENT TO DOOR WITH CLOSEST EDGE OF SIGN MOUNTED WITHIN 4 INCHES OF DOOR FRAME. BOTTOM OF SIGN SHALL BE MOUNTED NOT LESS THAN 6 INCHES OR MORE THAN 8 INCHES ABOVE FINISHED FLOOR.
- CEILING OR PENDANT MOUNTED EXIT LUMINAIRE. ARROW SIGNIFIES DIRECTION, TYPICAL.
- CEILING OR PENDANT MOUNTED EXIT LUMINAIRE.
- ENCLOSED LUMINAIRE - SURFACE MOUNTED
- SUSPENDED LINEAR FIXTURE
- ENCLOSED LUMINAIRE - CEILING RECESSED
- EMERGENCY ENCLOSED LUMINAIRE
- ONE-ARM BRACKET LUMINAIRE, WITH POLE AND BASE
- SWITCH, +45" A.F.F. - "a,b" LETTER DENOTES MULTI-SWITCH FUNCTION, TYPICAL FOR ALL SWITCHES, MOTION SENSORS AND DAYLIGHT SENSORS UNLESS NOTED OTHERWISE. "K" DENOTES SINGLE POLE TOGGLE SWITCH.
- DIMMER SWITCH - SIZE AS NOTED ON PLAN
- OCCUPANCY SENSOR SWITCH WITH MANUAL OVERRIDE - WALL MOUNTED AT +45" A.F.F. UNLESS NOTED OTHERWISE
- OCCUPANCY AREA SENSOR SWITCH - CEILING MOUNTED OS = OCCUPANCY SENSOR; PC = PHOTOCELL; DL = DAYLIGHT
- JUNCTION BOX - SIZE AS REQUIRED BY CODE
- +XX" ABC-# DUPLEX CONVENIENCE OUTLET - NEMA 5-20R +18" A.F.F. TYPICAL FOR ALL CONVENIENCE OUTLETS, UNLESS NOTED OTHERWISE (OUTLETS ABOVE COUNTER MOUNTED HORIZONTALLY AT +44" A.F.F. UNO, "+XX" INDICATES MOUNTING HEIGHT OTHER THAN 18", "ABC-#" INDICATES PANEL AND CIRCUIT NUMBER - TYPICAL FOR ALL OUTLETS UNLESS NOTED OTHERWISE).
- GFCI DUPLEX CONVENIENCE OUTLET - NEMA 5-20R
- QUADPLEX CONVENIENCE OUTLET - NEMA 5-20R
- GFCI QUAD CONVENIENCE OUTLET - NEMA 5-20R
- SPECIAL RECEPTACLE AS SHOWN ON PLANS
- QUADPLEX CONVENIENCE OUTLET - NEMA 5-20R: (1) UNCONTROLLED DUPLEX RECEPTACLE, AND (1) CONTROLLED DUPLEX RECEPTACLE WITH A PERMANENT MARKING TO DIFFERENTIATE FROM THE UNCONTROLLED RECEPTACLES
- DIVIDED METAL POWER POLE, FLOOR TO CEILING WITH ONE COMPARTMENT FOR POWER CONDUCTORS AND DUPLEX RECEPTACLE, THE OTHER COMPARTMENT FOR VOICE DATA CABLING, COMPLETE WITH ALL MOUNTING HARDWARE.
- IN-FLOOR MULTI-SERVICE BOX WITH FLUSH ACCESSIBLE LID, 2 DUPLEX RECEPTACLES (POWER), DATA OUTLETS. REFER TO PLAN FOR SPECIFIC REQUIREMENTS.
- FLOOR MOUNTED DUPLEX CONVENIENCE OUTLET - NEMA 5-20R
- IN WALL DEVICE BOX WITH DESIGNATED AV AND POWER OUTLETS.
- 4-11/16" SQUARE BOX FOR DATA OUTLET - FLUSH IN WALL +18" A.F.F. PROVIDE 1" CONDUIT STUB.
- (4) DATA OUTLET - FLUSH IN WALL +18" A.F.F. WHERE CONDUIT IS USED, 1" CONDUIT WITH A 4-11/16" SQUARE BOX 2-1/8" DEEP SHALL BE PLACED TO EACH COMMUNICATIONS OUTLET LOCATION. PROVIDE 1" CONDUIT STUB.
- CR 4-SQUARE OUTLET BOX MOUNTED AT 45" A.F.F. UNLESS NOTED. PROVIDE 1/2" CONDUIT STUB. SEE NOTE 6.
- K 4-SQUARE OUTLET BOX +45" AFF UNLESS NOTED. PROVIDE 3/4" CONDUIT STUB. SEE NOTE 6.
- SECURITY SYSTEM ELECTRONIC DOOR STRIKE. PROVIDE 1/2" CONDUIT STUB. SEE NOTE 6.
- PB 4-SQUARE OUTLET BOX MOUNTED + 45" A.F.F. UNLESS NOTED. PROVIDE 1/2" CONDUIT STUB. SEE NOTE 6.
- AP FUTURE WIRELESS ANTENNA CEILING MOUNTED ON SURFACE.
- ELECTRIC VEHICLE CAR CHARGER. SINGLE OR DUAL CHARGER PER PLAN.
- FIRE ALARM MANUAL PULL STATION, +45" A.F.F.
- FIRE ALARM MECHANICAL DUCT DETECTOR - COORDINATE LOCATION WITH HVAC DRAWINGS AND CONTRACTOR.
- FIRE ALARM AUDIO / VISUAL DEVICE, +80"
- FS FIRE SPRINKLER RISER FLOW SWITCH
- TS FIRE SPRINKLER RISER TAMPER SWITCH
- F/S FIRE/SMOKE DAMPER PROVIDED BY OTHER DIVISION, CONNECTION BY ELECTRICAL. SEE MECHANICAL PLANS
- PANELBOARD - SURFACE MOUNTED
- PANELBOARD - FLUSH MOUNTED
- EXISTING PANELBOARD - SURFACE MOUNTED
- EXISTING PANELBOARD - FLUSH MOUNTED
- TERMINAL CABINET
- SWITCHBOARD, DISTRIBUTION PANEL, OR MOTOR CONTROL CENTER
- EQUIPMENT DISCONNECT SWITCH - EXTERNALLY OPERATED, FUSED WITH FUSE SIZE TO MATCH EQUIPMENT NAMEPLATE.
- EQUIPMENT DISCONNECT SWITCH - EXTERNALLY OPERATED, NON-FUSIBLE
- EQUIPMENT CIRCUIT BREAKER DISCONNECT - EXTERNALLY OPERATED
- COMBINATION MOTOR STARTER WITH CIRCUIT BREAKER DISCONNECT - EXTERNALLY OPERATED
- EQUIPMENT CONTROLLER
- $_{OL} TOGGLE TYPE MOTOR RATED DISCONNECT SWITCH WITH OVERLOAD PROTECTION
- EQUIPMENT MOTOR POWER CONNECTIONS PART OF ELECTRICAL WORK
- EQ 1 MECHANICAL EQUIPMENT DESIGNATION - SEE MECHANICAL PLANS
- EXISTING CONDUIT AND WIRING
- EXISTING CONDUIT TO BE REMOVED OR ABANDONED, REMOVE WIRES. COORDINATE WITH OWNER.
- CONDUIT RUN CONCEALED IN CEILINGS OR WALLS. NUMBER OF HASH MARKS DENOTES QUANTITY OF WIRES. CURVED HASH MARK DENOTES QUANTITY OF #12 GREEN GROUND WIRES. CONDUCTORS OTHER THAN #12 ARE INDICATED ON PLANS. NO HASH MARKS DENOTES 2 #12 AWG AND 1 #12 GREEN GROUND IN 1/2" CONDUIT. TYPICAL FOR ALL CONDUITS.
- FLEXIBLE CONDUIT CONCEALED. NUMBER OF HASH MARKS DENOTES QUANTITY OF WIRES. CURVED HASH MARK DENOTES QUANTITY OF #12 GREEN GROUND WIRES. CONDUCTORS OTHER THAN #12 ARE INDICATED ON PLANS. NO HASH MARKS DENOTES 2 #12 AWG AND 1 #12 GREEN GROUND IN 1/2" MINIMUM DIAMETER CONDUIT.
- CONDUIT RUN UNDERFLOOR OR UNDERGROUND MINIMUM 1" DIAMETER.
- CONDUIT HOMERUN TO PANELBOARD, SWITCHBOARD OR TERMINAL CABINET
- CONDUIT TURNED AND RISED UP
- CONDUIT TURNED AND DROPPED DOWN
- CONDUIT WITH CAP
- CONDUIT STUB WITH INSULATED BUSHING
- 1 DRAWING SHEET NUMBERED NOTE DESIGNATION - APPLIES TO NUMBERED NOTE ON SAME SHEET
- 1 KITCHEN EQUIPMENT DESIGNATION - APPLIES TO KITCHEN EQUIPMENT SCHEDULE ON SAME SHEET
- 1 / E1 DRAWING PLAN OR DETAIL DESIGNATION - "1" OR "A" DENOTES PLAN OR DETAIL NUMBER, "E-1" DENOTES SHEET NUMBER
- T ELECTRICAL TRANSFORMER. RATING PER SPECIFICATIONS.
- PB# ELECTRICAL PULL BOX. "PB#" INDICATES SIZE CORRESPONDING TO PULL BOX SCHEDULE.

SYMBOL LIST NOTES:

1. "ABC-#" INDICATES PANEL AND CIRCUIT NUMBER.
2. MINIMUM CONDUCTOR SIZE FOR 120V BRANCH CIRCUITS SHALL BE #12 AWG. AT A MINIMUM ALL BRANCH CIRCUITS SHALL CONTAIN 3/4"C, 2#12 AWG AND 1#12 GND UNLESS OTHERWISE INDICATED.
3. EXISTING ELECTRICAL EQUIPMENT, OUTLETS, AND DEVICES ARE SHOWN THE SAME AS NEW, EXCEPT LIGHTLY AND ACCOMPANIED BY (E). SUCH ELECTRICAL EQUIPMENT, OUTLETS, AND DEVICES ARE TO REMAIN AS IS, UNLESS OTHERWISE NOTED ON PLAN OR SPECIFICATION.
4. ELECTRICAL OUTLET BOXES MOUNTED ON OPPOSITE SIDES OF FIRE-RATED WALLS OR PARTITIONS SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24 INCHES PER CBC, WHETHER SHOWN ON THE PLANS OR NOT.
5. VERIFY ON SITE THAT ALL PANELBOARDS HAVE MINIMUM WORKING SPACES PER CODE AND THAT THE DEDICATED PANELBOARD SPACES ARE CLEAR OF ALL DUCTS, PIPING AND EQUIPMENT FOREIGN TO THE PANEL BOARDS. NOTIFY THE ENGINEER FOR CORRECTIVE ACTION IN THE EVENT THAT FOREIGN OBJECTS IMPEDE THE DEDICATED PANELBOARD AREAS.
6. WHERE CONDUIT STUB IS INDICATED, PROVIDE CONDUIT WITH BUSHING AT THE END OF CONDUIT AND PULL ROPE INTO ACCESSIBLE CEILING AREA.

ELECTRICAL SHEET INDEX

No. OF SHEETS	DRAWING No.	DRAWING DESCRIPTIONS
1	E0.01	ELECTRICAL SHEET INDEX, ABBREVIATIONS, SYMBOL LIST, AND NOTES
2	E0.02	LUMINAIRE SCHEDULE AND ELECTRICAL NOTES
3	E1.01	SITE PLAN - REMODEL - ELECTRICAL
4	E2.01	OVERALL FIRST FLOOR PLAN - DEMOLITION - LIGHTING
5	E2.02	OVERALL FIRST FLOOR PLAN - REMODEL - LIGHTING
6	E3.01	OVERALL FIRST FLOOR PLAN - DEMOLITION - ELECTRICAL
7	E3.02	OVERALL FIRST FLOOR PLAN - REMODEL - ELECTRICAL
8	E4.01	PARTIAL ONE LINE POWER DIAGRAM, PANEL SCHEDULES, AND LOAD CALCULATIONS
9	E5.01	ELECTRICAL DETAILS
10	E5.02	ELECTRICAL DETAILS
11	E6.01	TITLE 24 INDOOR LIGHTING COMPLIANCE FORMS
12	E6.02	TITLE 24 OUTDOOR LIGHTING COMPLIANCE FORMS

PCOE GOLD IN EDUCATION

Revisions

Delta	Date	Revisions	By

PLAN CHECK SET

CONSTRUCTION DOCUMENTS

AGENCY APPROVAL

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PROJECT MGR: Y. Van Zanten

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REGISTERED PROFESSIONAL ENGINEER — YVETTE J. VAN ZANTEN — No. E15483 Exp. 6/30/25 — ELECTRICAL — STATE OF CALIFORNIA

07/21/2023

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Project

ANNEX BUILDING ALTERATIONS

Sheet Title

ELECTRICAL SHEET INDEX, ABBREVIATIONS, SYMBOL LIST, AND NOTES

Client Project Number:

Scale:	AS NOTED
Drawn By:	KL
Checked By:	YVZ
Issue Date:	
Revit Version:	2023

Sheet **E0.01**

Sheet 1 of 10

GRAPHIC SCALES: 0 5' 50' 1/16" = 1'-0" | 0 5' 25' 1/8" = 1'-0" | 0 1' 12' 1/4" = 1'-0" | 0 1' 6' 1/2" = 1'-0" | 0 4' 3/4" = 1'-0" | 0 1' 3' 1" = 1'-0" | 0 2' 1 1/2" = 1'-0" | 0 1' 3" = 1'-0"

IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY

APPLICABLE CODES AND REGULATIONS

THE FOLLOWING ARE THE ENFORCEABLE CODES FOR FACILITIES UNDER THE AUTHORITY OF THE ALFRED E. ALQUIST HOSPITAL FACILITIES SEISMIC SAFETY ACT OF 1983:

2022 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE (PART 1, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)).

2022 CALIFORNIA BUILDING CODE - PART 2, TITLE 24, CCR (2021 IBC AND 2022 CALIFORNIA AMENDMENTS).

2022 CALIFORNIA ELECTRICAL CODE - PART 3, TITLE 24, CCR (2020 NEC AND 2022 CALIFORNIA AMENDMENTS).

2022 CALIFORNIA MECHANICAL CODE - PART 4, TITLE 24, CCR (2021 UMC AND 2022 CALIFORNIA AMENDMENTS).

2022 CALIFORNIA PLUMBING CODE - PART 5, TITLE 24, CCR (2021 UPC AND 2022 CALIFORNIA AMENDMENTS).

2022 CALIFORNIA FIRE CODE - PART 9, TITLE 24, CCR (2021 IFC AND 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE - PART 11, TITLE 24

2015 N.F.P.A. 101 LIFE SAFETY CODE

2016 N.F.P.A. 72 NATIONAL FIRE ALARM CODE

2016 EDITION TITLE 19, CALIFORNIA CODE OF REGULATIONS, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.

TITLE 8, CALIFORNIA CODE OF REGULATIONS, INDUSTRIAL STANDARDS.

TITLE 22, CALIFORNIA CODE OF REGULATIONS, SOCIAL SECURITY DIVISIONS 5, 7.

THE DEPARTMENT OF HEALTHCARE ACCESS AND INFORMATION (HCAI) REGULATIONS.

OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA).

FACTORY MUTUAL SYSTEM (FM) REQUIREMENTS.

ALL APPLICABLE STATE AND LOCAL CODES AND REGULATIONS

DEMOLITION GENERAL NOTES

1. INFORMATION SHOWN RELATIVE TO EXISTING CONDITIONS IS BASED UPON AVAILABLE RECORDS AND DATA. THEREFORE, IT SHALL BE REGARDED AS AN APPROXIMATION ONLY. CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT. PRIOR TO SUBMITTING BID AND/OR BEFORE START OF ANY ELECTRICAL WORK, INSPECT ALL EXISTING LOCATIONS AND CONDITIONS AND ASCERTAIN WORK REQUIRED TO CLEAR PROJECT AREA OF ALL EXISTING ELECTRICAL ITEMS NOT BEING REUSED OR EXISTING TO REMAIN AS IS. REPORT ALL DISCREPANCIES AND COORDINATE ALL DEMOLITION WORK WITH THE OWNER'S REPRESENTATIVE. MAINTAIN SERVICE TO EXISTING ELECTRICAL EQUIPMENT IN AREAS ADJACENT TO REMODEL AREA, UNLESS OTHERWISE NOTED.
2. PROTECT ALL EXISTING ELECTRICAL EQUIPMENT ON EXISTING WALLS AND CEILINGS NOT REQUIRED TO BE DEMOLISHED UNLESS OTHERWISE NOTED. DELIVER ALL EXISTING ELECTRICAL EQUIPMENT IN REMODELED AREAS, THAT ARE REMOVED AND NOT REUSED ELSEWHERE, AND ARE DEEMED TO BE SALVAGEABLE IN THE JUDGMENT OF THE CONTRACTOR AND OWNER'S REPRESENTATIVE, TO THE OWNER. DELIVER ALL SALVAGED ELECTRICAL EQUIPMENT AND OTHER ITEMS TO A LOCATION DESIGNATED BY THE OWNER'S REPRESENTATIVE. REMOVE FROM SITE, ALL OTHER ELECTRICAL EQUIPMENT, HARDWARE, AND OTHER ITEMS THAT ARE DEEMED UNSALVAGEABLE BY CONTRACTOR AND THE OWNER'S REPRESENTATIVE.
3. CUT, PATCH AND MATCH IN ALL AREAS AFFECTED BY REMOVAL OF ELECTRICAL EQUIPMENT AND DEVICES.
4. CAUSE AS LITTLE INTERFERENCE OR INTERRUPTION OF EXISTING UTILITIES AND SERVICES. SCHEDULE ANY POWER OR OTHER UTILITY SHUTDOWN WITH THE OWNER'S REPRESENTATIVE. SHUTDOWNS WHICH MAY BE REQUIRED SHALL BE PRESENTED IN WRITING TO THE OWNER'S REPRESENTATIVE FOR APPROVAL TWO WEEKS PRIOR TO COMMENCEMEMENT OF WORK. SHUTDOWN WORK SHALL BE PERFORMED ON OVERTIME HOURS IF SO DIRECTED BY OWNER'S REPRESENTATIVE.
5. DISCONNECT AND REMOVE ALL EXISTING ELECTRICAL EQUIPMENT, FIXTURES, OUTLETS, DEVICES, CONDUIT, WIRING AND OTHER ELECTRICAL ITEMS, WHETHER SHOWN OR NOT, FROM EXISTING CEILINGS AND WALLS WHICH ARE TO BE DEMOLISHED. MAINTAIN CIRCUIT CONTINUITY TO ALL EXISTING REMAINING DEVICES, UNLESS OTHERWISE NOTED.
6. COORDINATE WITH OTHER TRADES AND PROMPTLY TRANSMIT ALL INFORMATION REQUIRED BY THEM. COORDINATE THE SEQUENCE OF DEMOLITION WITH OTHER TRADES TO ENSURE THAT ALL WORK PROCEEDS WITH A MINIMUM OF INTERFERENCE AND DELAY.
7. RELOCATE ALL CONDUITS THAT ARE TO REMAIN IN SERVICE WHICH ARE IN A LOCATION TO CONFLICT WITH NEW WORK.
8. WHEREVER EXISTING ELECTRICAL DEVICES, PANELS, CONDUITS, CABLES, AND OTHER ITEMS, CONFLICT WITH REMODEL WORK, WHETHER SHOWN OR NOT, RELOCATE THESE ITEMS TO COORDINATE WITH NEW CONSTRUCTION.
9. REUSE EXISTING CONDUITS AND WIRING WHEREVER POSSIBLE UNLESS OTHERWISE NOTED TO BE REMOVED.
10. PROVIDE PROTECTIVE COVERING OVER EXISTING EQUIPMENT WHEN INSTALLING ALL NEW WORK.
11. DISPOSAL OF BALLASTS: DISPOSE OR RECYCLE ALL EXISTING BALLASTS PROPERLY ACCORDING TO ENVIRONMENTAL PROTECTION AGENCY (EPA) AND RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) STANDARDS. INCLUDE ALL COSTS FOR DISPOSAL OR RECYCLING IN BID PROPOSAL. A CURRENT LIST OF BALLAST RECYCLERS CAN BE OBTAINED THROUGH https://www.epa.gov/pcbs/list-approved-polychlorinated-biphenyl-pcb-commercial-storage-and-disposal-facilities. COMMERCIAL STORAGE FACILITIES OR LANDFILL FACILITIES AS MEANS OF DISPOSAL IS NOT ALLOWED.
12. ASBESTOS REMOVAL: IN THE EVENT ASBESTOS IS FOUND TO BE PRESENT IN AREAS CONFLICTING WITH ELECTRICAL WORK, BEFORE CONTINUATION OF WORK IN THOSE AREAS, NOTIFY THE OWNER'S REPRESENTATIVE FOR THE REMOVAL OF SUCH HAZARDOUS MATERIAL BY A CERTIFIED ASBESTOS CONTRACTOR.
13. CIRCUIT NUMBERS AND CIRCUITING BASED UPON AS-BUILTS. ACTUAL CONDITION MAY VARY. TRACE AND VERIFY ALL CIRCUITS SHOWN ARE AVAILABLE FOR DEMOLITION AND REUSE DURING THE REMODEL PHASE. DOCUMENT ALL CHANGES ON AS-BUILT DRAWINGS.

BRANCH CIRCUIT VOLTAGE DROP TABLE

VOLTAGE DROP VALUES NOT EXCEEDING 2% FOR FEEDERS HAVE BEEN SHOWN ON THE ONE LINE DIAGRAM. IN LIEU OF VOLTAGE DROP CALCULATIONS FOR EACH BRANCH CIRCUIT IN SCOPE OF WORK, THE GENERAL DESIGN STANDARD BELOW HAS BEEN FOLLOWED TO ENSURE A VOLTAGE DROP OF 3% IS NOT EXCEEDED. WHERE THE CIRCUIT LOAD OR CIRCUIT LENGTH LISTED HAS BEEN EXCEEDED, A DETAILED VOLTAGE DROP CALCULATION FOR THAT CIRCUIT HAS BEEN PROVIDED WITH THE TITLE 24 COMPLIANCE DOCUMENTATION.

VOLTAGE	MAXIMUM CIRCUIT LOAD FOR 20 AMP CIRCUIT BREAKER	CONDUCTOR SIZE	MAXIMUM BRANCH CIRCUIT LENGTH
120 VOLT	9 AMPS (1.08 KVA)	#8 AWG	285 FEET
		#10 AWG	180 FEET
		#12 AWG	115 FEET
	12 AMPS (1.44 KVA)	#8 AWG	210 FEET
		#10 AWG	135 FEET
		#12 AWG	85 FEET
	16 AMPS (1.92 KVA)	#8 AWG	130 FEET
		#10 AWG	85 FEET
		#12 AWG	55 FEET
208 VOLT	9 AMPS (1.87 KVA)	#8 AWG	440 FEET
		#10 AWG	285 FEET
		#12 AWG	170 FEET
	12 AMPS (2.49 KVA)	#8 AWG	330 FEET
		#10 AWG	215 FEET
		#12 AWG	130 FEET
	16 AMPS (3.33 KVA)	#8 AWG	250 FEET
		#10 AWG	160 FEET
		#12 AWG	95 FEET
277 VOLT	9 AMPS (2.49 KVA)	#8 AWG	660 FEET
		#10 AWG	420 FEET
		#12 AWG	270 FEET
	12 AMPS (3.32 KVA)	#8 AWG	495 FEET
		#10 AWG	315 FEET
		#12 AWG	200 FEET
	16 AMPS (4.43 KVA)	#8 AWG	370 FEET
		#10 AWG	235 FEET
		#12 AWG	150 FEET
480 VOLT	9 AMPS (2.49 KVA)	#8 AWG	1320 FEET
		#10 AWG	840 FEET
		#12 AWG	540 FEET
	12 AMPS (3.32 KVA)	#8 AWG	980 FEET
		#10 AWG	620 FEET
		#12 AWG	400 FEET
	16 AMPS (4.43 KVA)	#8 AWG	740 FEET
		#10 AWG	460 FEET
		#12 AWG	300 FEET

LUMINAIRE SCHEDULE

TYPE	MANUFACTURER CATALOG NO.	VOLTAGE DESCRIPTION	LIGHT SOURCE (LED, WATTS, LUMENS, COLOR TEMPERATURE, CRI, R9 IF AVAILABLE)	MOUNTING	REMARK NOTE No.
A	FLUXWERX NB2-24-D-35-E1-M	UNV 120-277V 2X4 LED	LED, 47W, 5246LM, 4000K, 80CRI	T-BAR CEILING LAY-IN	1
B1	WILLIAMS GS-2-L120-8-35-DIM	UNV 120-277V 2X2 LED	LED, 85W, 12210LM, 3500K, 80CRI	SUSPENDED	1 3 4
C1	LITHONIA DSX0 LED-P4-35K-80CRI-T1S-MVOLT-SPA-PIR	MVOLT (120-277V) SINGLE HEAD POLE MOUNT LED	LED, 93W, 11396LM, 3500K, 80CRI	POLE MOUNT	5
D	STONCO LPW32-70-NW-G3-3-277-BL-IMRI3-PCB	277V LED WALLPACK	LED, 70W, 8248LM, 4000K, 70CRI	EXTERIOR WALL MOUNT	2
X	WILLIAMS EXIT / CA - G - AF - WHT - EM	EXIT LIGHT	LED, 3.6W	UNIVERSAL MOUNT	
X1	CHLORIDE BY SIGNIFY CLU3-N-W	120-277V 4" EMERGENCY LED LUMINAIRE	LED, 6.6W, 5000K	WALL MOUNTED	1 6

LUMINAIRE SCHEDULE REMARK NOTES:

1. PROVIDE WITH SELF TESTING, SELF DIAGNOSTIC BATTERY PACK TO MAINTAIN ILLUMINATION FOR A MINIMUM OF 90 MINUTES PER CBC TO PROVIDE FULL LUMEN OUTPUT, WHERE INDICATED AS EM. BATTERY PACK OPTION PROVIDED BY MANUFACTURER FOR LUMINAIRES ON EMERGENCY POWER.
2. MOTION SENSOR "IMRI3" PROVIDED BY STONCO. REPLACEMENT WALLPACK LUMINAIRES TO BE MOUNTED AT SAME HEIGHT AS EXISTING.
3. LUMINAIRES TO HANG EQUAL TO EXISTING DUCT WORK, AT 11'.
4. CONTROLS TO BE WATTSTOPPER DLM SYSTEM AND SHALL MEET TITLE 24 REQUIREMENTS.
5. INSTALL NEW LED POLE HEAD LUMINAIRE ON NEW POLE WITH CONCRETE BASE. MOUNTING HEIGHT AT 14'.
6. BRANCH CIRCUIT TO TIE INTO SAME BRANCH CIRCUIT SERVING NORMAL LIGHTING.

GENERAL NOTE:

REFER TO PLAN FOR LOCATION, AND SWITCH FUNCTION. REFER TO TITLE 24 FOR LUMINAIRE QUANTITIES.

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ANNEX BUILDING ALTERATIONS

Sheet Title

LUMINAIRE SCHEDULE AND ELECTRICAL NOTES

Client Project Number:

Scale:	AS NOTED
Drawn By:	KL
Checked By:	YVZ
Issue Date:	
Revit Version:	2023

Sheet **E0.02**

Sheet 1 of 10

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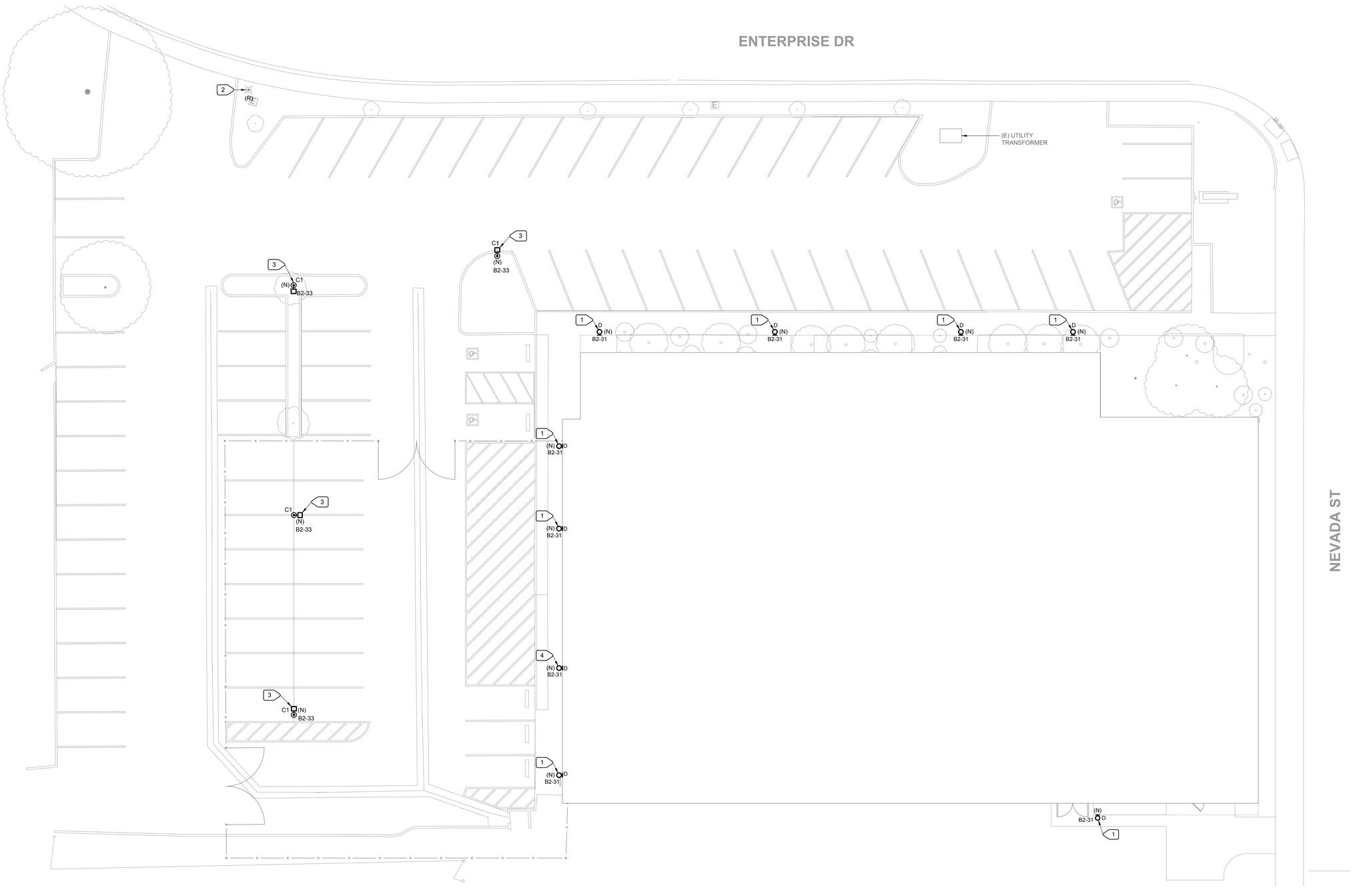
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NUMBERED NOTES

1. REMOVE EXISTING WALL PACKS AND PROVIDE NEW LED WALL PACK LUMINAIRES. MOTION SENSOR INTEGRAL WITH EXTERIOR LUMINAIRE.
2. REMOVE EXISTING POLE LIGHTING.
3. PROVIDE NEW LED SINGLE HEAD, NEW 4" SQUARE POLE AND BASE. MOTION SENSOR INTEGRAL WITH EXTERIOR LUMINAIRE.
4. PROVIDE NEW LED WALL PACK LUMINAIRE. MOUNTING HEIGHT TO MATCH THE EXISTING. MOTION SENSOR INTEGRAL WITH EXTERIOR LUMINAIRE. EXTEND EXISTING CIRCUIT TO NEW LOCATION.



1 SITE PLAN - REMODEL - ELECTRICAL (E1.01)

SCALE : 3/32" = 1'-0"

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NUMBERED NOTES

1. DISCONNECT AND REMOVE EXISTING LUMINAIRE AND LUMINARE CONTROLS. REMOVE EXISTING CONDUCTORS AND CONDUIT COMPLETE TO SOURCE. TYPICAL IN ROOMS 130 THROUGH 137.
2. DISCONNECT AND REMOVE EXISTING EXIT LIGHT. REMOVE EXISTING CONDUCTORS AND CONDUIT COMPLETE TO SOURCE.



1 / E2.01 OVERALL FIRST FLOOR PLAN - DEMO - LIGHTING

SCALE : 1/8" = 1'-0"

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ANNEX BUILDING ALTERATIONS

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OVERALL FIRST FLOOR PLAN - DEMO - LIGHTING

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Drawn By:	KL		
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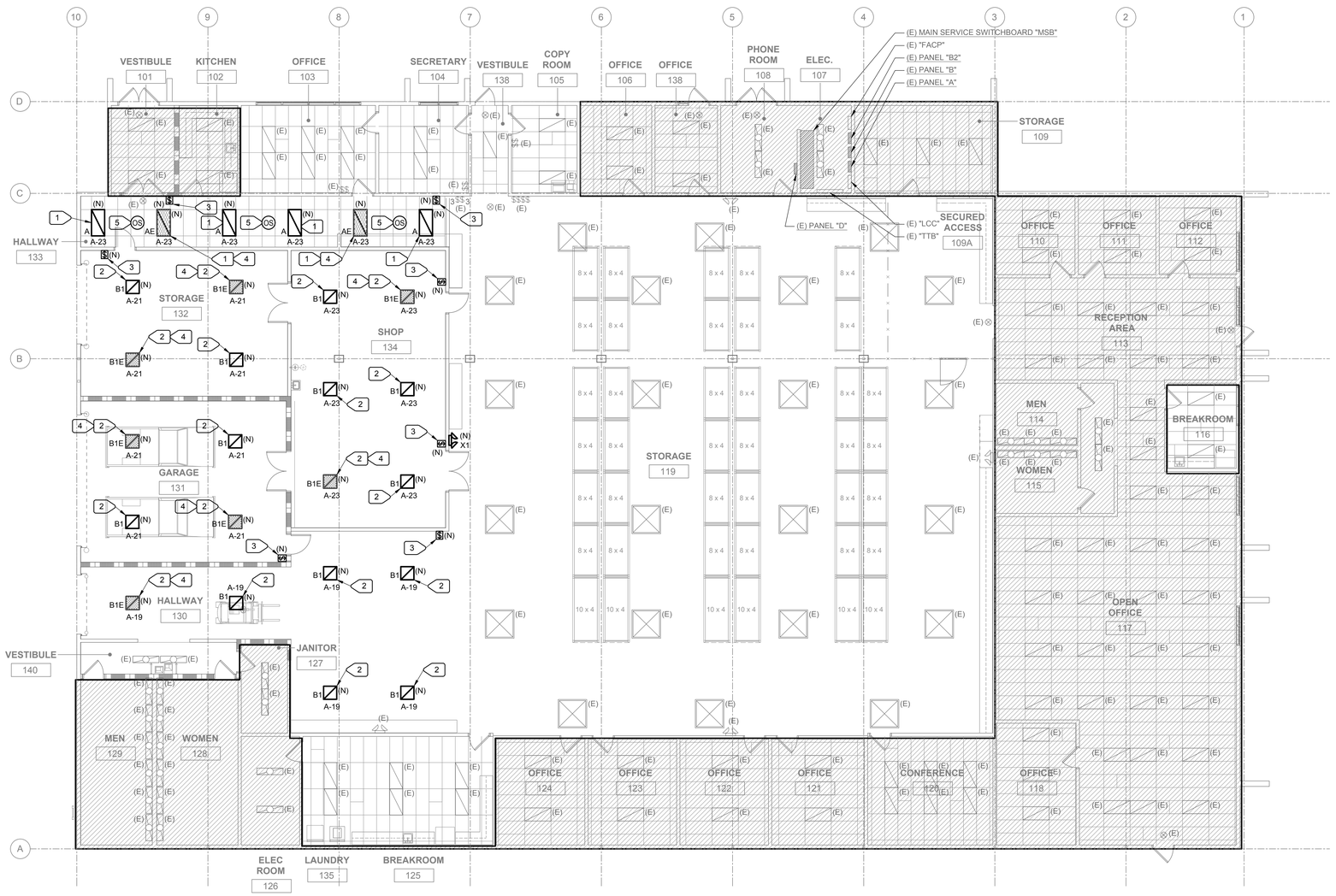
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GENERAL NOTES

1. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH CIRCUIT, FOR MEANS TO SHUT-OFF EACH CIRCUIT INDIVIDUALLY.
2. LIGHTING CONDUCTORS SHALL BE #10 AWG THWN.
3. CIRCUIT ALL EMERGENCY LIGHTS/EXIT SIGNS AHEAD OF LOCAL SWITCHING.

NUMBERED NOTES

1. PROVIDE NEW LED LIGHTING. CIRCUITS TO PANEL "A" TO BE REUSED.
2. PROVIDE NEW LED LUMINAIRES WITH INTEGRAL OCCUPANCY SENSOR. LIGHTING TO BE TO FED FROM EXISTING PANEL "A".
3. PROVIDE NEW MULTI-FUNCTIONAL DIMMING SWITCH WITH ONE ZONE OF DIMMING.
4. INTERNAL BATTERY PROVIDED BY LUMINAIRE MANUFACTURER. ON LOSS OF POWER. LIGHTING TO BE 100% ON.
5. PROVIDE NEW OCCUPANCY SENSORS. AVOID MOUNTING SENSORS CLOSE TO AIR VENTS (PIR SENSORS SHOULD NOT BE WITHIN 4FT OF AN AIR VENT. ULTRONIC SENSORS SHOULD NOT BE WITHIN 6FT OF AN AIR VENT), TYPICAL. INSTALL PER MANUFACTURER'S REQUIREMENTS.



1 E2.02 OVERALL FIRST FLOOR PLAN - REMODEL - LIGHTING

SCALE : 1/8" = 1'-0"

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OVERALL FIRST FLOOR PLAN - REMODEL - LIGHTING

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Scale:	AS NOTED	Sheet	E2.02
Drawn By:	KL		
Checked By:	YVZ		
Issue Date:			
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GENERAL NOTES

1. OWNER IS RESPONSIBLE FOR REMOVAL AND RELOCATION OF ALL A/V ITEMS IN EXISTING CONFERENCE ROOM 132.

NUMBERED NOTES

1. DISCONNECT AND REMOVE EXISTING RECEPTACLE. REMOVE EXISTING CONDUCTORS AND CONDUIT BACK TO LAST DEVICE. TYPICAL.
2. DISCONNECT AND REMOVE EXISTING DATA OUTLET. REMOVE EXISTING CABLES AND CONDUIT BACK TO SOURCE. TYPICAL.
3. DISCONNECT EXISTING POWER FOR MODULAR FURNITURE. REMOVE EXISTING CONDUCTORS BACK TO SOURCE. PROVIDE BLANK COVER PLATE ON EXISTING JUNCTION BOX. REMOVE EXPOSED CONDUIT.
4. DISCONNECT EXISTING TELEPHONE/DATA FOR MODULAR FURNITURE. REMOVE EXISTING CABLES BACK TO SOURCE. PROVIDE BLANK COVER PLATE ON EXISTING JUNCTION BOX. REMOVE EXPOSED CONDUIT.
5. DISCONNECT AND REMOVE RECEPTACLE AND DATA OUTLETS IN FLOOR BOX. REMOVE ELECTRICAL CONDUCTORS AND DATA CABLES BACK TO SOURCE. COORDINATE REMOVAL OF FLOOR BOX WITH ARCHITECT.
6. DISCONNECT EXISTING A/V DEVICE. REMOVE EXISTING CABLES BACK TO A/V RACK.
7. DISCONNECT EXISTING CAMERA. REMOVE EXISTING CABLES BACK TO A/V RACK.
8. DISCONNECT AND REMOVE EXISTING CEILING RECEPTACLE AND DATA OUTLET. REMOVE ELECTRICAL CONDUCTORS AND DATA CABLES BACK TO SOURCE.
9. DISCONNECT EXISTING A/V RACK. REMOVE ASSOCIATED RECEPTACLES AND DATA OUTLETS. REMOVE ELECTRICAL CONDUCTORS AND DATA CABLES BACK TO SOURCE.



1 E3.01 OVERALL FIRST FLOOR PLAN - DEMO - ELECTRICAL

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OVERALL FIRST FLOOR PLAN - DEMO - ELECTRICAL

Client Project Number:

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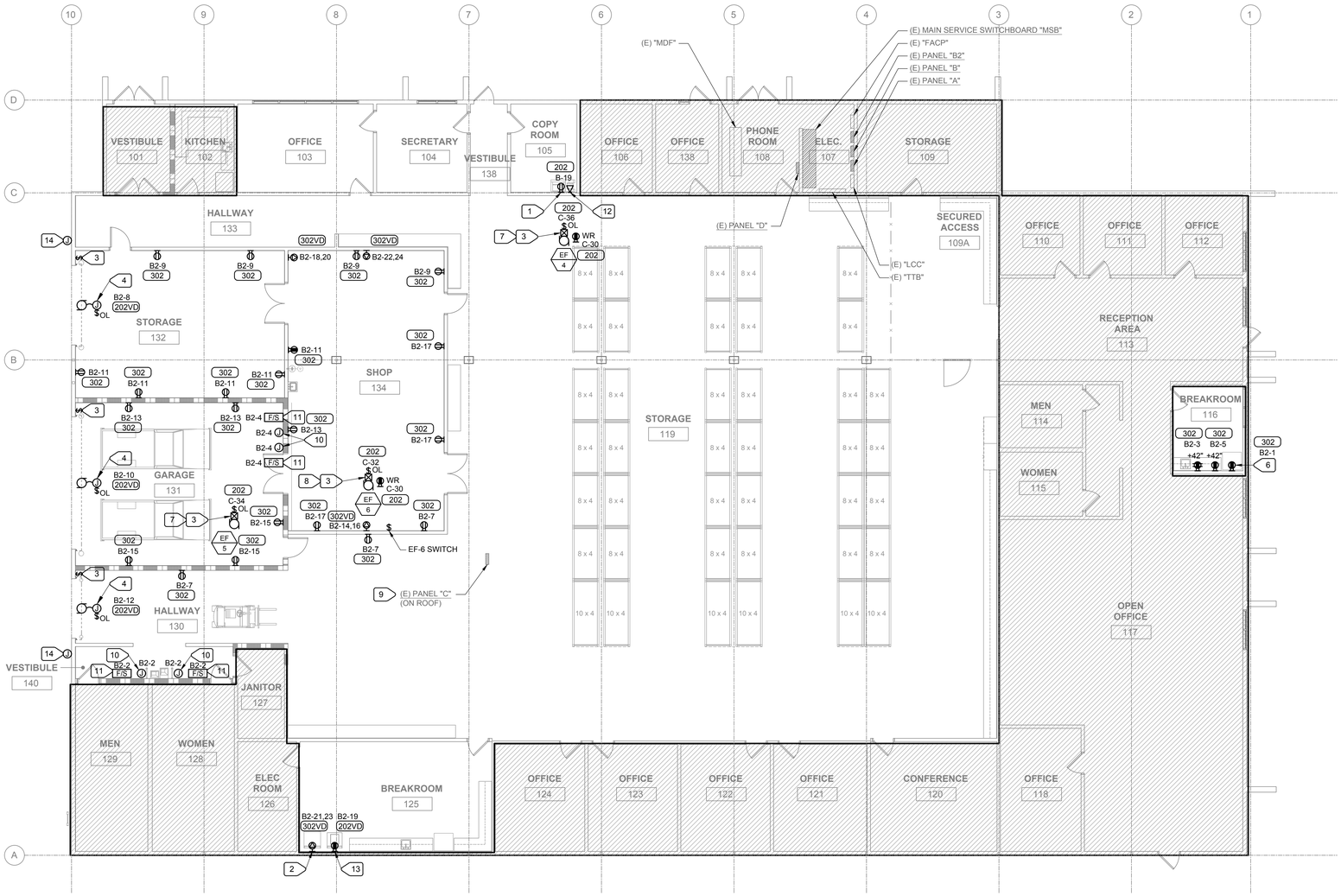
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FEEDER SCHEDULE

TAG	DESCRIPTION
202	3/4" C., 2 #12, AND 1 #12 GND.
302	3/4" C., 2 #10, AND 1 #10 GND.
202VD	1"C., 2 #8, AND 1 #10 GND.
302VD	1" C., 2 #6, AND 1 #10 GND.

NUMBERED NOTES

1. PROVIDE DEDICATED CIRCUIT FOR PRINTER/COPIER.
2. LOCATE FOR DRYER. VERIFY EXACT REQUIREMENTS WITH EQUIPMENT PROVIDED BY OWNER.
3. PROVIDE UP, DOWN, STOP SWITCH FOR ROLL-UP DOOR WITH SECURITY INTERLOCK. CONNECT TO INPUT ON ACCESS PANEL PER MANUFACTURER'S REQUIREMENTS.
4. PROVIDE POWER AND CONTROLS FOR ROLL-UP DOOR PER MANUFACTURER'S REQUIREMENTS.
5. PROVIDE UP, DOWN, STOP SWITCH FOR ROLL-UP DOOR. CONNECT PER MANUFACTURER'S REQUIREMENTS.
6. LOCATE FOR REFRIGERATOR.
7. CIRCUIT VIA MECHANICAL INTERLOCK. COORDINATE WITH MECHANICAL.
8. DOWN TO SWITCH IN SHOP.
9. PROVIDE NEW CIRCUIT BREAKERS AS SHOWN ON PANEL SCHEDULE ON SHEET E4.01.
10. LOCATE FOR AND CONNECT POWER FOR DUCT SMOKE DETECTORS. COORDINATE WITH MECHANICAL.
11. LOCATE FOR AND CONNECT POWER FOR FIRE SMOKE DAMPERS. COORDINATE WITH MECHANICAL.
12. PROVIDE 1/2" C., WITH (2) CAT6 CABLES TO MDF.
13. LOCATE FOR WASHER. VERIFY EXACT REQUIREMENTS WITH EQUIPMENT PROVIDED.
14. LOCATE FOR 4 SQUARE BOX FOR SECURITY CAMERA. PROVIDE 3/4" CONDUIT WITH (1) CAT6 CABLE TO MDF. VERIFY EXACT LOCATION WITH PCOE I.T. DEPARTMENT.



1 / E3.02 OVERALL FIRST FLOOR PLAN - REMODEL - ELECTRICAL

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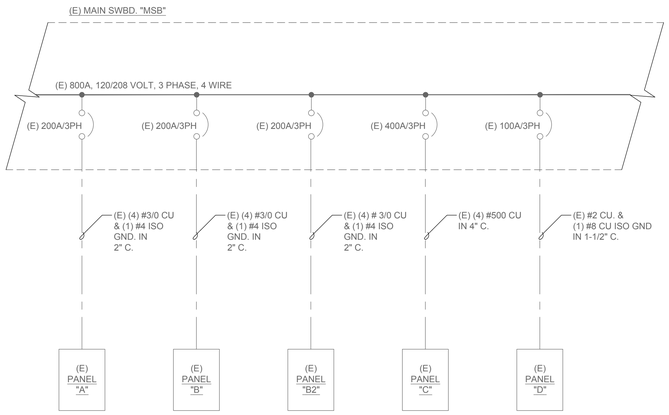
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1 / E4.01 PARTIAL ONE LINE POWER DIAGRAM

NO SCALE

EXISTING PANEL "C" SCHEDULE

POWER SOURCE: EXISTING MAIN SWITCHBOARD — LOCATION: ROOF
SYSTEM: NORMAL BRANCH

TYPE: | BUS: 400 AMPS | MLO | VOLTAGE: 208Y/120 VOLT, 3 PHASE, 4 WIRES | MOUNTING: SURFACE PANEL TYPE NEMA 3R | REMARKS: 10k AIC MIN. SYMM.

LOAD SERVED	kVA	CB	CKT	PHASE	CKT	CB	kVA	LOAD SERVED
	3.5		1	A	2		2.2	
AC-1	3.5	45/3	3	B	4	30/3	2.2	AC-2
	3.5		5	C	6		2.2	
	2.7		7	A	8		6.3	
AC-3	2.7	30/3	9	B	10	60/3	6.3	AC-4
	2.7		11	C	12		6.3	
	6.3		13	A	14		2.7	
AC-5	6.3	60/3	15	B	16	40/3	2.7	AC-6
	6.3		17	C	18		2.7	
	2.2		19	A	20		3.9	
AC-7	2.2	30/3	21	B	22	50/3	3.9	AC-8
	2.2		23	C	24		3.9	
	2.3		25	A	26	25/2	1.5	AC-10
AC-9	2.3	30/3	27	B	28		1.5	
	2.3		29	C	30	**20/1 [2]**	**0.4**	**ROOF RCPT**
DUCT DETECTORS	0.1	20/1 [1]	31	A	32	**20/1 [2]**	**0.9**	**EF-6**
ROOF RCPT	1.1	20/1	33	B	34	**20/1 [2]**	**0.7**	**EF-5**
SPACE		PFB	35	C	36	**20/1 [2]**	**0.7**	**EF-4**
SPACE		PFB	37	A	38	PFB		SPACE
SPACE		PFB	39	B	40	PFB		SPACE
SPACE		PFB	41	C	42	PFB		SPACE

NOTES:
[1] RED LOCK-ON TAB

[2] PROVIDE NEW CIRCUIT BREAKER TO MATCH MANUFACTURER, EXISTING TYPE AND AIC RATING. PROVIDE COMPLETE WITH HARDWARE.

CONNECTED LOAD
PHASE A= 34.6 kVA
PHASE B= 35.4 kVA
PHASE C= 33.2 kVA
TOTAL = 103.1 kVA
TOTAL = 286.4 Amperes

EXISTING PANEL "A" SCHEDULE

POWER SOURCE: EXISTING MAIN SWITCHBOARD "MSB" — LOCATION: ELECTRICAL ROOM
SYSTEM: NORMAL BRANCH

TYPE: | BUS: 200 AMPS | MLO | VOLTAGE: 208Y/120 VOLT, 3 PHASE, 4 WIRES | MOUNTING: SURFACE PANEL TYPE NEMA 1 | REMARKS:

LOAD SERVED	kVA	CB	CKT	PHASE	CKT	CB	kVA	LOAD SERVED
EXIT / EMERG LTG	1.5	20/1	1	A	2	20/1	1.7	OPEN OFFICE LTG
STOR / OFFICE LTG	0.8	20/1	3	B	4	20/1	1.7	OPEN OFFICE LTG
RECEP LTG	1.7	20/1	5	C	6	20/1	1.7	OPEN OFFICE LTG
OPEN OFFICE LTG	1.9	20/1	7	A	8	20/1	1.7	OPEN OFFICE LTG
OFFICE LTG	1.8	20/1	9	B	10	20/1	1.4	OPEN OFFICE LTG
CONF / OFFICE LIGHITNG	1.8	20/1	11	C	12	20/1	1.4	OPEN OFFICE LTG
CONF / OFFICE LIGHITNG	1.8	20/1	13	A	14	20/1	0.1	OPEN OFFICE LTG
MISC LTG	1.6	20/1	15	B	16	20/1	0.1	OPEN OFFICE LTG
OFFICE LTG	1.8	20/1	17	C	18	20/1	0.1	LTG CONTROL
HALLWAY 130 LTG	**1.1**	20/1	19	A	20	20/1		**SPARE**
GARAGE 131,STORAGE 132	**1.4**	20/1	21	B	22	20/1		**SPARE**
SHOP 134,HALLWAY 133	**1.3**	20/1	23	C	24	20/1		**SPARE**
SPARE		20/1	25	A	26	20/1		**SPARE**
SPARE		20/1	27	B	28	20/1		**SPARE**
SPARE		20/1	29	C	30	20/1		**SPARE**
SPARE		20/1	31	A	32	20/1		**SPARE**
SPARE		20/1	33	B	34	20/1		**SPARE**
SPARE		20/1	35	C	36	20/1		**SPARE**
SPARE		20/1	37	A	38	20/1		**SPARE**
SPARE		20/1	39	B	40	20/1		**SPARE**
SPARE		20/1	41	C	42	20/1		**SPARE**

NOTES:

CONNECTED LOAD
PHASE A= 9.8 kVA
PHASE B= 8.8 kVA
PHASE C= 9.8 kVA
TOTAL = 28.4 kVA
TOTAL = 78.9 Amperes

EXISTING PANEL "B" SCHEDULE

POWER SOURCE: EXISTING MAIN SWITCHBOARD "MSB" — LOCATION: ELECTRICAL ROOM
SYSTEM: NORMAL BRANCH

TYPE: | BUS: 200 AMPS | MLO | VOLTAGE: 208Y/120 VOLT, 3 PHASE, 4 WIRES | MOUNTING: SURFACE PANEL TYPE NEMA 1 | REMARKS:

LOAD SERVED	kVA	CB	CKT	PHASE	CKT	CB	kVA	LOAD SERVED
KITCHEN REC.	1.2	20/1	1	A	2	20/1	1.4	OFFICE REC.
KITCHEN REC.	1.2	20/1	3	B	4	20/1	1.4	OFFICE / CONF. REC.
KITCHEN REC.	1.2	20/1	5	C	6	20/1	1.4	OFFICE / OPEN OFF REC.
KITCHEN DISP/REF	1.5	20/1	7	A	8	20/1	0.9	OPEN OFF/MISC. REC.
CONT. MISC. REC.	1.3	20/1	9	B	10	20/1	1.4	OPEN OFF/RECEPT. REC.
WAITING/OFFICE REC.	1.4	20/1	11	C	12	20/1	1.3	OFFICE REC.
SPARE		20/1	13	A	14	20/1	1.3	STORAGE / MISC. REC.
OFFICE REC.	1.4	20/1	15	B	16	20/1	0.4	TTB REC.
SPARE		20/1	17	C	18	20/1	1.4	CONF. / OFFICE REC.
COPIER - RM 105	1.5	20/1	19	A	20	20/1	1.0	OFFICE REC.
SPARE		20/1	21	B	22	20/1	1.0	OFFICE REC.
SPARE		20/1	23	C	24	20/1	1.0	OFFICE REC.
CORRIDOR . MISC. REC.	1.3	20/1	25	A	26	20/1	1.0	OFFICE REC.
BREAK RM. DISP/REF	1.5	20/1	27	B	28	20/1	1.0	OFFICE REC.
SHUNT TRIP	0.1	20/1	29	C	30	20/1	1.0	OFFICE REC.
BREAK RM. REC.	1.2	20/1	31	A	32	20/1	1.0	OFFICE REC.
BREAK RM. REC.	1.2	20/1	33	B	34	20/1	1.0	OFFICE REC.
BREAK RM. REC.	1.2	20/1	35	C	36	20/1	0.1	IRRIGATION CONTROL
BREAK RM. REC.	1.2	20/1	37	A	38	20/1	0.1	FACP / FSD
BREAK RM. REC.	1.2	20/1	39	B	40	20/1	1.0	RR RECEPT
BREAK RM. REC.	1.2	20/1	41	C	42	20/1	1.0	RR RECEPT

NOTES:

CONNECTED LOAD
PHASE A= 14.6 kVA
PHASE B= 15.0 kVA
PHASE C= 12.3 kVA
TOTAL = 41.9 kVA
TOTAL = 116.4 Amperes

EXISTING PANEL "B2" SCHEDULE

POWER SOURCE: EXISTING MAIN SWITCHBOARD "MSB" — LOCATION: ELECTRICAL ROOM
SYSTEM: NORMAL BRANCH

TYPE: | BUS: 225 AMPS | MLO | VOLTAGE: 208Y/120 VOLT, 3 PHASE, 4 WIRES | MOUNTING: SURFACE PANEL TYPE NEMA 1 | REMARKS:

LOAD SERVED	kVA	CB	CKT	PHASE	CKT	CB	kVA	LOAD SERVED
REFRIGERATOR - RM 116	**1.2**	20/1	1	A	2	20/1 **[1]**	**0.5**	**FSD/DUCT DETECTOR**
COUNTER RCPT - RM 116	**0.2**	20/1	3	B	4	20/1 **[1]**	0.5	**FSD/DUCT DETECTOR**
COUNTER RCPT - RM 116	**0.2**	20/1	5	C	6	20/1		**SPARE**
RCPTS - RM 134, 130	**0.5**	20/1	7	A	8	20/1	**1.5**	**ROLL-UP DOOR-RM 132**
RCPTS - RM 132, 134	**0.7**	20/1	9	B	10	**25/1 [2]**	**2.1**	**ROLL-UP DOOR-RM 131**
RCPTS - RM 131, 132	**0.7**	20/1	11	C	12	20/1	**1.5**	**ROLL-UP DOOR-RM 130**
RCPTS - RM 134, 131	**0.5**	20/1	13	A	14		**1.6**	**TWISTLOCK RCPT**
RCPTS - RM 131	**0.5**	20/1	15	B	16	**30/2 [2]**	**1.6**	
RCPTS - RM 134	**0.5**	20/1	17	C	18		**1.6**	**TWISTLOCK RCPT**
WASHER	**1.2**	20/1	19	A	20	**30/2 [2]**	**1.6**	
	2.3		21	B	22		**1.6**	**TWISTLOCK RCPT**
DRYER	**2.3**	**30/2 [2]**	23	C	24	**30/2 [2]**	**1.6**	
EF - 3	0.9	20/1	25	A	26	20/1	1.5	OFFICE PRINTERS
EF - 1,2	0.6	20/1	27	B	28	20/1	1.0	SCREEN PROJECTOR
SCREEN PROJECTOR	1.0	20/1	29	C	30	20/1	1.5	OFFICE PRINTERS
BLDG. LTG.	1.8	20/1	31	A	32	20/1	1.5	OFFICE PRINTERS
I.T. RACK RCPTS	0.2	20/1	33	B	34	20/1	1.5	OFFICE PRINTERS
I.T. RACK RCPTS	0.2	20/1	35	C	36	20/1	1.5	OFFICE PRINTERS
CONF. RM. CEILING RCPTS	1.3	20/1	37	A	38	20/1	1.5	OFFICE PRINTERS
CONF. RM. FLR. RCPTS	1.1	20/1	39	B	40	20/1	1.5	OFFICE PRINTERS
ASTRONOMICAL TS-2	0.6	20/1	41	C	42	20/1	1.5	OFFICE PRINTERS

NOTES:
[1] PROVIDE HANDLE LOCK-ON DEVICE. PAINT BREAKER HANDLE RED.

[2] PROVIDE NEW CIRCUIT BREAKER TO MATCH MANUFACTURER AND AIC RATING. PROVIDE COMPLETE WITH HARDWARE.

CONNECTED LOAD
PHASE A= 17.2 kVA
PHASE B= 15.4 kVA
PHASE C= 14.7 kVA
TOTAL = 47.3 kVA
TOTAL = 131.4 Amperes

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Revisions

Delta	Date	Revisions	By

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CONSTRUCTION DOCUMENTS

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PROJECT MGR: Y. Van Zanten

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Project

ANNEX BUILDING ALTERATIONS

Sheet Title

PARTIAL ONE-LINE DIAGRAM AND PANEL SCHEDULES

Client Project Number:

Scale: AS NOTED
Drawn By: KL
Checked By: YVZ
Issue Date:
Revit Version: 2023

Sheet **E4.01**

Sheet 1 of 10

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

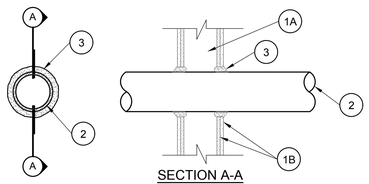
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U.L. FIRE STOP SYSTEM # WL1001

F RATINGS-1, 2, 3 AND 4 HR (SEE ITEMS 2 AND 3)
T RATINGS-0, 1, 2, 3 AND 4 HR (SEE ITEM 3)
L RATING AT AMBIENT-LESS THAN 1 CFM/SQ FT (SEE ITEM 3)
L RATING AT 400 F-LESS THAN 1 CFM/SQ FT (SEE ITEM 3)



SECTION A-A

GENERAL NOTE:

"THROUGH PENETRATION FIRE STOP SYSTEM" DETAIL IS FOR REFERENCE ONLY. PENETRATIONS THROUGH FIRE-RATED FLOORS AND WALLS SHALL BE PROTECTED IN ACCORDANCE WITH CBC SECTION 714.3.1. SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS AND APPROVED LISTING. MANUFACTURER'S INSTALLATION INSTRUCTIONS AND APPROVED LISTING SHALL BE PROVIDED FOR REVIEW BY INSPECTION AUTHORITIES. SUBSTITUTIONS OF OR REVISIONS OR ADDITIONS TO APPROVED SYSTEMS SHALL BE SUBMITTED TO THE INSPECTOR OF RECORD AND THE STATE FIRE MARSHAL FOR FIELD REVIEW AND APPROVAL.

DETAIL KEY NOTES:

1. WALL ASSEMBLY - THE 1, 2, 3 OR 4 HOUR RATED GYPSUM WALLBOARD/STUD ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES WALL OR PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:

   A. STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS (MAXIMUM 2 HOUR FIRE RATED ASSEMBLIES) OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOMINAL 2 BY 4 INCH LUMBER SPACED 16 INCHES ON CENTER WITH NOMINAL 2 BY 4 INCH LUMBER END PLATES AND CROSS BRACES. STEEL STUDS TO BE MINIMUM 3-5/8 INCH WIDE BY 1-3/8 INCH DEEP CHANNELS SPACED MAXIMUM 24 INCH ON CENTER.

   B. GYPSUM BOARD* - NOMINAL 1/2 OR 5/8 INCH THICK, 4 FEET WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAXIMUM OPENING IS 13-1/2 INCHES.

2. PIPE OR CONDUIT - NOMINAL 12 INCH DIAMETER (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE, NOMINAL 12 INCH DIAMETER (OR SMALLER) STEEL CONDUIT, NOMINAL 4 INCH DIAMETER (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR TYPE L (OR HEAVIER) COPPER TUBING OR NOMINAL 1 INCH DIAMETER (OR SMALLER) FLEXIBLE STEEL CONDUIT. WHEN COPPER PIPE OR FLEXIBLE STEEL CONDUIT IS USED, MAXIMUM F RATING OF FIRESTOP SYSTEM (ITEM #3) IS 2 H. STEEL PIPES OR CONDUITS LARGER THAN NOMINAL 4 INCH DIAMETER MAY ONLY BE USED IN WALLS CONSTRUCTED USING STEEL CHANNEL STUDS. A MAXIMUM OF ONE PIPE OR CONDUIT IS PERMITTED IN THE FIRESTOP SYSTEM. PIPE OR CONDUIT TO BE INSTALLED NEAR CENTER OF STUD CAVITY WIDTH AND TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY.

3. FILL, VOID OR CAVITY MATERIAL* - CAULK FILL MATERIAL INSTALLED TO COMPLETELY FILL ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND GYPSUM WALLBOARD AND WITH A MINIMUM 1/4 INCH DIAMETER BEAD OF CAULK APPLIED TO PERIMETER OF PIPE OR CONDUIT AT ITS EGRESS FROM WALL. CAULK INSTALL SYMMETRICALLY ON BOTH SIDES OF WALL ASSEMBLY. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS SHOWN IN THE FOLLOWING TABLE. THE HOURLY RATING OF FIRESTOP SYSTEM IS DEPENDANT UPON THE TYPE OR SIZE OF THE PIPE OR CONDUIT AND THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED AS TABULATED BELOW.

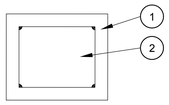
MAX PIPE OR CONDUIT DIAM, (INCH)	ANNULAR SPACE	F RATING, HR	T RATING HR
1	0 TO 3/16	1 OR 2	0+, 1 OR 2
1	1/4 TO 1/2	3 OR 4	3 OR 4
4	0 TO 1/4	1 OR 2	0
6	1/4 TO 1/2	3 OR 4	0
12	3/16 TO 3/8	1 OR 2	0

+WHEN COPPER PIPE IS USED, T RATING IS 0 H.
MINNESOTA MINING AND MFG. CO. TYPE CP-25 WB+.

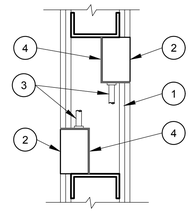
* BEARING THE UL CLASSIFICATION MARK

1 E5.01 FIRE-RATED STUD WALL CONDUIT PENETRATION DETAIL

NO SCALE

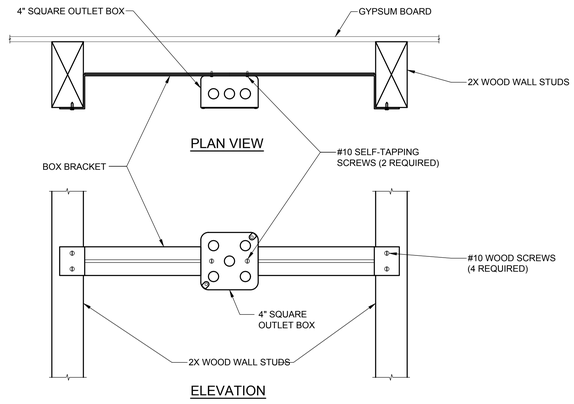


1. RATED GYPSUM WALL BOARD ASSEMBLY.
2. NOMINAL 4" X 4" SQUARE FLUSH DEVICE U.L. LISTED METALLIC OUTLET BOX.
3. CONDUIT LEADING TO ELECTRICAL BOX.
4. SPECSEAL PUTTY PAD. COMPLETELY COVER EXTERIOR SURFACES OF BOTH BOXES WITHIN THE STUD CAVITY WITH AN ADDITIONAL 1/4" OF PUTTY FORMED AROUND THE END OF EACH ELECTRICAL METALLIC TUBE OR CONDUIT AT ITS CONNECTION TO THE BOXES. WHEN MOLDABLE PUTTY PAD OUTLET BOX PROTECTIVE MATERIAL IS USED AS DIRECTED, THE HORIZONTAL SEPARATION BETWEEN OUTLET BOXES ON OPPOSITE SIDES OF THE WALL MAY BE LESS THAN 24" PROVIDED THAT THE BOXES ARE NOT INSTALLED BACK-TO-BACK.



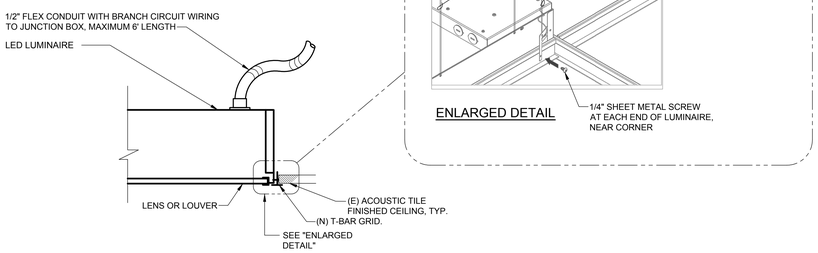
2 E5.01 1 OR 2 HOUR RATED FIRESTOP FOR METALLIC ELECTRICAL OUTLET BOXES USING SPECSEAL PUTTY PADS

NO SCALE



4 E5.01 BOX SUPPORT (BETWEEN STUDS)

NO SCALE

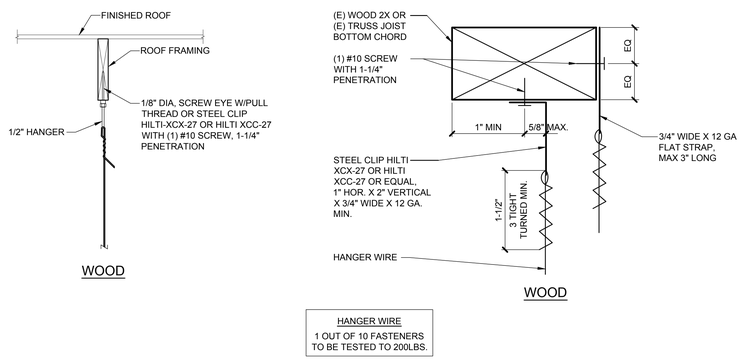


3 E5.01 CONDUIT ON ROOF DETAIL

NO SCALE

5 E5.01 LAY-IN LUMINAIRE MOUNTING DETAIL

NO SCALE (T-BAR CEILING)



HANGER WIRE
1 OUT OF 10 FASTENERS TO BE TESTED TO 200LBS.

6 E5.01 HANGER WIRE CONNECTION DETAIL

NO SCALE (WIRELESS ANTENNAS OR PLENUM CABLE)

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PROJECT MGR: Y. Van Zanten

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07/21/2023

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HY Architects Project number: 6014

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Project
ANNEX BUILDING ALTERATIONS

Sheet Title
ELECTRICAL DETAILS

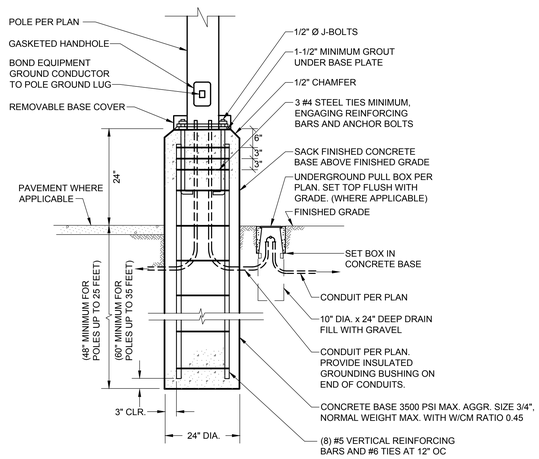
Client Project Number:

Scale: AS NOTED
Drawn By: KL
Checked By: YVZ
Issue Date:
Revit Version: 2023

Sheet
E5.01
Sheet 1 of 10

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

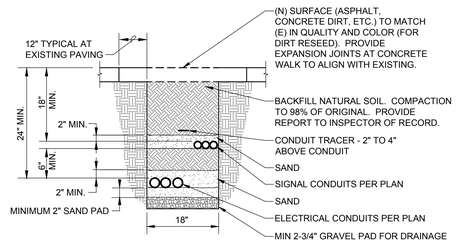
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(CALCULATED DIMENSIONS AND MATERIALS BASED ON 100 MPH WIND)

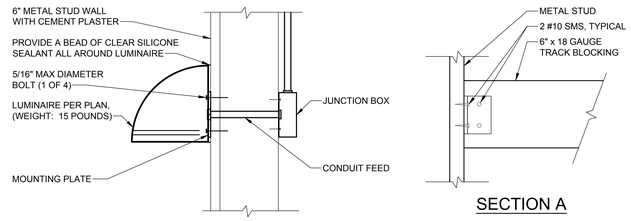
1 / E5.02 — POLE BASE MOUNTING DETAIL

NO SCALE



2 / E5.02 — CONDUIT TRENCHING DETAIL

NO SCALE



SECTION A

3 / E5.02 — WALL SCONCE MOUNTING DETAIL

NO SCALE — METAL STUD WALL WITH CEMENT PLASTER

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PROJECT MGR: Y. Van Zanten

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07/21/2023

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Project

ANNEX BUILDING ALTERATIONS

Sheet Title

ELECTRICAL DETAILS

Client Project Number:

Scale:	AS NOTED
Drawn By:	KL
Checked By:	YVZ
Issue Date:	
Revit Version:	2023

Sheet **E5.02**

Sheet 1 of 10

0 5' 50' GRAPHIC SCALES: 1/16" = 1'-0"
0 5' 25' 1/8" = 1'-0"
0 1' 12' 1/4" = 1'-0"
0 1' 6' 1/2" = 1'-0"
0 4' 3/4" = 1'-0"
0 1' 3' 1" = 1'-0"
0 2' 1 1/2" = 1'-0"
0 1' 3" = 1'-0"
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STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-LTI-E**

This document is used to demonstrate compliance with requirements in 110.9, 110.12(c), 130.0, 130.1, 140.6 and 141.0(b)2 for indoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e) and 180.2(b)4 for indoor lighting scopes using the prescriptive path for multifamily occupancies. Multifamily includes dormitory and senior living facilities.

Project Name: PCOE Placer Administration Annex Building- Facility Modernization — **Report Page:** (Page 1 of 8)
Project Address: 365 Nevada Street, Auburn, CA 95603 — **Date Prepared:** 2023-07-21T11:16:57-04:00

A. GENERAL INFORMATION

01	Project Location (city)	Auburn	04	Total Conditioned Floor Area (ft²)	5,330
02	Climate Zone	11	05	Total Unconditioned Floor Area (ft²)	0
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	0

● Commercial Industrial

B. PROJECT SCOPE

This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.6 / 170.2(e) or 141.0(b)2 / 180.2(b)4 for alterations.

Scope of Work	Conditioned Spaces		Unconditioned Spaces	
01	02	03	04	05
My Project Consists of (check all that apply):	Calculation Method	Area (ft²)	Calculation Method	Area (ft²)
☐ New Lighting System	N/A	0	N/A	0
☐ New Lighting System - Parking Garage	N/A	0	N/A	0
☒ Altered Lighting System	Area Category Method	5330	N/A	0
Total Area of Work (ft²)	5330			

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-LTI-E**
Project Name: PCOE Placer Administration Annex Building- Facility Modernization — **Report Page:** (Page 2 of 8)
Date Prepared: 2023-07-21T11:16:57-04:00

C. COMPLIANCE RESULTS

If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per 140.6(b)1 / 170.2(e)	Allowed Lighting Power per 140.6(b) / 170.2(e) (Watts)						Adjusted Lighting Power per 140.6(a) / 170.2(e) (Watts)				Compliance Results
	01	02	03	04	05		06	07		08	09
	Complete Building 140.6(c)1	Area Category 140.6(c)2 / 170.2(e)4	Area Category Additional 140.6(c)2G / 170.2(e)4Av (+)	Tailored 140.6(c)3 / 170.2(e)4B (+)	**Total Allowed** (Watts)		Total Designed (Watts)	Adjustments PAF Lighting Control Credits 140.6(a)2 / 170.2(e)1B (-)		**Total Adjusted** (Watts) *Includes Adjustments	**05 must be >= 08 140.6 / 170.2(e)**
	(See Table I)	(See Table I)	(See Table J)	(See Table K)			(See Table F)	(See Table P)			
Conditioned		2,007.1			2,007.1	≥	1,982		=	1982	COMPLIES
Unconditioned						≥			=		
Controls Compliance (See Table H for Details)											COMPLIES
Rated Power Reduction Compliance (See Table Q for Details)											

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-LTI-E**
Project Name: PCOE Placer Administration Annex Building- Facility Modernization — **Report Page:** (Page 3 of 8)
Date Prepared: 2023-07-21T11:16:57-04:00

F. INDOOR LIGHTING FIXTURE SCHEDULE

This table includes all planned permanent and portable lighting other than dwelling unit/ hotel/ motel room lighting. Multifamily dwelling unit and hotel/motel room lighting is documented in Table T. If using Table T to document lighting in multifamily common use areas providing shared provisions for living, eating, cooking or sanitation, those luminaires are not included here.

Designed Wattage: Conditioned Spaces

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change[1]	Watts per luminaire[2]	How is Wattage determined	Total Number of Luminaires	Excluded per 140.6(a)3 / 170.2(e)2C	Design Watts	Field Inspector	
									Pass	Fail
A	2X4 LED	No	NA	47	Mfr. Spec	6	No	282	☐	☐
B1	2x2 LED	No	NA	85	Mfr. Spec	20	No	1,700	☐	☐
Total Designed Watts: CONDITIONED SPACES								1,982		

[1]*FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per 140.6(a)4B / 170.2(e)2D is adjusted to be 75% /80% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.*

[2]*Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b). Wattage used must be the maximum rated for the luminaire, not the lamp.*

G. MODULAR LIGHTING SYSTEMS

This section does not apply to this project.

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

This table includes lighting controls for conditioned and unconditioned spaces.

Building Level Controls

01	02	03	
		Field Inspector	
		Pass	Fail
Mandatory Demand Response 110.12(c)	Shut-off controls 130.1(c) / 160.5(b)4C		
NA < 4,000W subject to multilevel	See Area/Space Level Controls	☐	☐

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-LTI-E**
Project Name: PCOE Placer Administration Annex Building- Facility Modernization — **Report Page:** (Page 4 of 8)
Date Prepared: 2023-07-21T11:16:57-04:00

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

Area Level Controls

04	05	06	07	08	09	10	11	12	
Area Description	Complete Building or Area Category Primary Function Area	Manual Area Controls 130.1(a) / 160.5(b)4A	Multi-Level Controls 130.1(b) / 160.5(b)4B	Shut-Off Controls 130.1(c) // 160.5(b)4C	Primary/Skylit Daylighting 130.1(d) / 160.5(b)4D	Secondary Daylighting 130.1(d) / 160.5(b)4D	Interlocked Systems 140.6(a)1/ 170.2(e)2A	Field Inspector	
								Pass	Fail
Corridor/Hallway 133	Corridor	Readily Accessible	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
Storage 132	Commercial Industrial Storage Area	Readily Accessible	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
Shop 134	General Commercial Industrial Work Area High Bay	Readily Accessible	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
Garage 131	General Commercial Industrial Work Area High Bay	Readily Accessible	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
Hallway 130	Corridor	Readily Accessible	Dimmer	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
					13				
					Plan Sheet Showing Daylit Zones:				

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Each area complying using the Complete Building or Area Category Methods per 140.6(b) are included in this table. Column 06 indicates if additional lighting power allowances per 140.6(c) or adjustments per 140.6(a) are being used .

Conditioned Spaces

01	02	03	04	05	06	
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowance / Adjustment	
					Area Category	PAF
Corridor/Hallway 133	Corridor	0.4	399	159.6	No	No

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-LTI-E**
Project Name: PCOE Placer Administration Annex Building- Facility Modernization — **Report Page:** (Page 5 of 8)
Date Prepared: 2023-07-21T11:16:57-04:00

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Storage 132	Commercial Industrial Storage Area	0.4	682	272.8	No	No
Shop 134	General Commercial Industrial Work Area High Bay	0.65	966	627.9	No	No
Garage 131	General Commercial Industrial Work Area High Bay	0.65	744	483.6	No	No
Hallway 130	Corridor	0.4	1,158	463.2	No	No
		TOTALS:	3,949	2,007.1	See Tables J, or P for detail	

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This section does not apply to this project.

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This section does not apply to this project.

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This section does not apply to this project.

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED DECORATIVE /SPECIAL EFFECTS

This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This section does not apply to this project.

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-LTI-E**
Project Name: PCOE Placer Administration Annex Building- Facility Modernization — **Report Page:** (Page 6 of 8)
Date Prepared: 2023-07-21T11:16:57-04:00

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

This section does not apply to this project.

Q. RATED POWER REDUCTION COMPLIANCE FOR ONE-FOR-ONE ALTERATIONS

This section does not apply to this project.

R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS

This section does not apply to this project.

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This section does not apply to this project.

T. DWELLING UNIT LIGHTING

This section does not apply to this project.

U. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selections have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-LTI-E - Must be submitted for all buildings

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-LTI-E**
Project Name: PCOE Placer Administration Annex Building- Facility Modernization — **Report Page:** (Page 7 of 8)
Date Prepared: 2023-07-21T11:16:57-04:00

V. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selections have been changed by the permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and any with "-A" in the form name must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Form/Title	Systems/Spaces To Be Field Verified
NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	Corridor/Hallway 133; Storage 132; Shop 134; Garage 131; Hallway 130

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE — **NRCC-LTI-E**
Project Name: PCOE Placer Administration Annex Building- Facility Modernization — **Report Page:** (Page 8 of 8)
Project Address: — **Date Prepared:** 2023-07-21T11:16:57-04:00

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Yvette J Van Zanten	Documentation Author Signature:
Company: M. Neils Engineering, Inc.	Signature Date:
Address: 100 Howe Avenue, Suite 235N	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Sacramento, CA 95825	Phone: 916.923.4400

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Yvette J Van Zanten	Responsible Designer Signature:
Company: M. Neils Engineering, Inc.	Date Signed:
Address: 100 Howe Avenue, Suite 235N	License: E15483
City/State/Zip: Sacramento, CA 95825	Phone: 916.923.4400

PCOE
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Revisions

Delta	Date	Revisions	By

PLAN CHECK SET
CONSTRUCTION DOCUMENTS

AGENCY APPROVAL

M. NEILS ENGINEERING, INC.
Electrical Engineers | Lighting Designers
100 Howe Ave , Suite 235N
Sacramento, CA 95825-8217
www.mneilsengineering.com
Tel: (916) 923-4400
PROJECT #: 23044.21
PROJECT MGR: Y. Van Zanten

This document is the property of the Owner and is not to be used without his written permission

REGISTERED PROFESSIONAL ENGINEER — YVETTE J. VAN ZANTEN — No. E15483 Exp. 6/30/25 — ELECTRICAL — STATE OF CALIFORNIA
07/21/2023

HIBSER YAMAUCHI Architects, Inc.
4602 2nd Street, Suite 3
Davis, CA 95618
530.758.1270 tel | 530.758.4789 fax
HY Architects Project number: 6014

Facility
PLACER CO. OFFICES OF EDUCATION
365 NEVADA STREET
AUBURN, CA 95603

Project
ANNEX BUILDING ALTERATIONS

Sheet Title
TITLE 24 INDOOR LIGHTING COMPLIANCE FORMS

Client Project Number:

Scale: AS NOTED
Drawn By: KL
Checked By: YVZ
Issue Date:
Revit Version: 2023

Sheet
E6.01
Sheet 1 of 10

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY

STATE OF CALIFORNIA
Outdoor Lighting CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
This document is used to demonstrate compliance with requirements in 110.9, 130.0, 130.2, 140.7, and 141.0(b)2L for outdoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e)6, 180.1(a) and 180.2(b)4Bv for outdoor lighting scopes using the prescriptive path for multifamily and mixed-use occupancies. Multifamily includes dormitory and senior living facilities.	
Project Name: PCOE Placer Administration Annex Building- Facility Modernization	**Report Page:** (Page 1 of 8)
Project Address: 365 Nevada Street, Auburn, CA 95603	**Date Prepared:** 2023-07-21T11:18:27-04:00

A. GENERAL INFORMATION

01	Project Location (city)	Auburn	04	Total Illuminated Hardscape Area (ft²)	38570
02	Climate Zone	11			
03	Outdoor Lighting Zone per Title 24 Part 1 10.114 or as designated by Authority Having Jurisdiction (AHJ):				
☐	LZ-0: Very Low - Undeveloped Parkland	☒ LZ-2: Moderate - Urban Clusters	☐ LZ-4: High - Must be reviewed by CA Energy Commission for Approval		
☐	LZ-1: Low - Rural Areas	☐ LZ-3: Moderately High - Urban Areas			
05	Occupancy Types within Project				
● Commercial Industrial					

B. PROJECT SCOPE

This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv for alterations.

My Project Consists of:

01	02		
☒	New Lighting System	Must Comply with Allowances from 140.7 / 170.2(e)6	
☐	Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)?	○ Yes ○ No
03		04	05
% of Existing Luminaires Being Altered[1]		Sum Total of Luminaires Being Added or Altered	Calculation Method
☐ < 10%	☐ >= 10% and < 50% ☐ >= 50%		

Please proceed to Table F. Outdoor Lighting Fixture Schedule to define the project's luminaires.

[1] *FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.*

STATE OF CALIFORNIA
Outdoor Lighting CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: PCOE Placer Administration Annex Building- Facility Modernization	**Report Page:** (Page 2 of 8)
	Date Prepared: 2023-07-21T11:18:27-04:00

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through N. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

Calculations of Total Allowed Lighting Power (Watts) 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv												Compliance Results		
01		02		03		04		05		06		07		08	09
General Hardscape Allowance 140.7(d)1 / 170.2(e)6 (See Table I)	+	Per Application 140.7(d)2 / 170.2(e)6 (See Table J)	+	Sales Frontage 140.7(d)2 (See Table K)	+	Ornamental 140.7(d)2 / 170.2(e)6 (See Table L)	+	Per Specific Area 140.7(d)2 / 170.2(e)6 (See Table M)	OR	Existing Power Allowance 141.0(b)2L / 180.2(b)4Bv (See Table N)	=	**Total Allowed** (Watts)	≥	**Total Actual** (Watts)	**07 must be >= 08**
1,065.13	+	---	+	---	+	---	+	---	OR	---	=	1,065.13	≥	1,002	COMPLIES
Shielding Compliance (See Table G for Details)															COMPLIES
Controls Compliance (See Table H for Details)															COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

STATE OF CALIFORNIA
Outdoor Lighting CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: PCOE Placer Administration Annex Building- Facility Modernization	**Report Page:** (Page 3 of 8)
	Date Prepared: 2023-07-21T11:18:27-04:00

F. OUTDOOR LIGHTING FIXTURE SCHEDULE

For new or altered lighting systems demonstrating compliance with 140.7 / 170.2(e)6 all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per 141.0(b)2L only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included). Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

Designed Wattage:

01	02		03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description		Watts per luminaire[1, 2]	How is Wattage determined	Total Number Luminaires[2]	Luminaire Status[3]	Excluded per 140.7(a) / 170.2(e)6A	Design Watts	Cutoff Req. > 6,200 initial lumen output 130.2(b) / 160.5(c)1[4]	Field Inspector	
										Pass	Fail
C1	SINGLE HEAD POLE MOUNT LED	☐ Linear	93	Mfr. Spec	4	New	☐	372	Provided	☐	☐
D	LED WALLPACK	☐ Linear	70	Mfr. Spec	9	New	☐	630	Provided	☐	☐
							Total Design Watts:	1002			

* NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
EX: Luminaire is lighting a statue; EXCEPTION 2 to 130.2(b)

[1] *FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b)*
[2] *For linear luminaires, wattage should be indicated as W/ft instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.*
[3] *Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.*
[4] *Compliance with mandatory shielding requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by 130.2(b)/ 160.5(c)*

STATE OF CALIFORNIA
Outdoor Lighting CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: PCOE Placer Administration Annex Building- Facility Modernization	**Report Page:** (Page 4 of 8)
	Date Prepared: 2023-07-21T11:18:27-04:00

G. SHIELDING REQUIREMENTS (BUG)

This table includes fixtures of >=6,200 initial lumens indicated on Table F as needing to comply with Shielding Requirements. Maximum lumens can be found in Title 24, Part 11, Section 5.106.8.

01	02	03	04	05	06	07	08	09	10	11	12	
		Backlight Rating[2]			Uplight Rating[2]			Glare Rating (Lumens)[2]			Field Inspector	
Name or Item Tag	Complete Luminaire Description	Mounting Height[1]	Max Allowable Backlight Rating[3]	Backlight Rating Per Design	Lighting type	Max Allowable Uplight Rating[3]	Uplight Rating Per Design	Mounting Height[1]	Max Allowable Glare Rating[3]	Glare Rating Per Design	Pass	Fail
C1	SINGLE HEAD POLE MOUNT LED	Back hemisphere is 1 - 2 MH from prop line	B3	B1	Area Lighting	U0	U0	> 2 MH from property line	G2	G2	☐	☐
D	LED WALLPACK	2 MH from property line	No Limit	B1	Area Lighting	U0	U0	> 2 MH from property line	G2	G2	☐	☐

[1] *FOOTNOTES: Mounting Height is labeled MH in this table.*
[2] *Authority Having Jurisdiction may ask for Luminaire cut sheets or other documentation to confirm luminaire type, uplight ratings and glare ratings used for compliance per 130.2(b)/ 160.5(c)*
[3] *BUG ratings with a lower number than the 'Max Allowable' are compliant. Ex. If Max Allowable is Bug Rating B4, then B0, B1, B2 and B3 are all compliant.*

STATE OF CALIFORNIA
Outdoor Lighting CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: PCOE Placer Administration Annex Building- Facility Modernization	**Report Page:** (Page 5 of 8)
	Date Prepared: 2023-07-21T11:18:27-04:00

H. OUTDOOR LIGHTING CONTROLS

This table demonstrates compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application.
Outdoor lighting for nonresidential buildings, parking garages and common service areas in multifamily buildings must be documented separately from outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit

Mandatory Controls for Nonresidential Occupancies, Parking Garages & Common Areas in Multifamily Buildings

01	02	03	04	05	
				Field Inspector	
Area Description	Shut-Off 130.2(c)1 / 160.5(c)	Auto-Schedule 130.2(c)2 / 160.5(c)	Motion Sensor 130.2(c)3 / 160.5(c)	Pass	Fail
Building Parking Lot Lighting : "C1"	Astronomical Timer	Provided	Provided	☐	☐
Building Parking Lot Lighting : "D"	Astronomical Timer	Provided	Provided	☐	☐

[1] *FOOTNOTE: Text has been abbreviated, please refer to Table 160.5-A to confirm compliance with the specific light source technologies listed.*
[2] *Authority having jurisdiction may ask for cutsheets or other documentation to confirm compliance of light source.*
[3] *Recessed luminaires marked for use in fire-rated installations, and recessed luminaires installed in non-insulated ceilings are excepted from ii and iii.*

STATE OF CALIFORNIA
Outdoor Lighting CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: PCOE Placer Administration Annex Building- Facility Modernization	**Report Page:** (Page 6 of 8)
	Date Prepared: 2023-07-21T11:18:27-04:00

I. LIGHTING POWER ALLOWANCE (per 140.7 / 170.2(e))

This table includes areas using allowance calculations per 140.7 / 170.2(e). General Hardscape Allowance is per Table 140.7-A/Table 170.2-R while "Use it or lose it" Allowances are per Table 140.7-B /Table 170.2-S. Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance.
Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

01				
	"Use it or lose it" Allowance (select all that apply) (select all that apply)			
☒ General Hardscape Allowance Table I (below)	☐ Per Application Table J	☐ Sales Frontage Table K	☐ Ornamental Table L	☐ Per Specific Area Table M

Calculated General Hardscape Lighting Power Allowance per Table 140.7-A for Nonresidential & Hotel/Motel

02	03	04	05	06	07	08	09
	Area Wattage Allowance (AWA)			Linear Wattage Allowance (LWA)			
Area Description	Illuminated Area (ft²)	Allowed Density (W/ft²)	Area Allowance (Watts)	Perimeter Length (lf)	Allowed Density (W/lf)	Linear Allowance (Watts)	Total General AWA + LWA (Watts)
Building Parking Lot Lighting	38570	0.019	732.83	882	0.15	132.3	865.13
					Initial Wattage Allowance for Entire Site (Watts):		200
					Instances of Initial Wattage Allowance (LZ 0 only)[1]		
					Total General Hardscape Allowance (Watts):		1065.13

J. LIGHTING ALLOWANCE: PER APPLICATION

This section does not apply to this project.

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This section does not apply to this project.

L. LIGHTING ALLOWANCE: ORNAMENTAL

This section does not apply to this project.

STATE OF CALIFORNIA
Outdoor Lighting CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: PCOE Placer Administration Annex Building- Facility Modernization	**Report Page:** (Page 7 of 8)
	Date Prepared: 2023-07-21T11:18:27-04:00

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This section does not apply to this project.

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This section does not apply to this project.

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-LTO-E - Must be submitted for all buildings

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Form/Title	Systems/Spaces To Be Field Verified
NRCA-LTO-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls are added to <= 20 luminaires.	Building Parking Lot Lighting : "C1"; Building Parking Lot Lighting : "D"

STATE OF CALIFORNIA
Outdoor Lighting CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: PCOE Placer Administration Annex Building- Facility Modernization	**Report Page:** (Page 8 of 8)
Project Address:	**Date Prepared:** 2023-07-21T11:18:27-04:00

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name:	Documentation Author Signature:
Yvette J Van Zanten	
Company: M. Neils Engineering, Inc.	Signature Date:
Address: 100 Howe Avenue, Suite 235N	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Sacramento, CA 95825	Phone: 916.923.4400

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name:	Responsible Designer Signature:
Yvette J Van Zanten	
Company: M. Neils Engineering, Inc.	Date Signed:
Address: 100 Howe Avenue, Suite 235N	License: E15483
City/State/Zip: Sacramento, CA 95825	Phone: 916.923.4400

UNAUTHORIZED CHANGES & USES: M. Neils Engineering, Inc. preparing these plans will not be responsible for, or liable for unauthorized changes to or uses to these plans. All changes to these plans must be in writing and must be approved by M. Neils Engineering, Inc.
Jul 21, 2023 – 10:52am. / kerlo

PCOE GOLD IN EDUCATION

Revisions

Delta	Date	Revisions	By

PLAN CHECK SET

CONSTRUCTION DOCUMENTS

AGENCY APPROVAL

M. NEILS ENGINEERING, INC.
Electrical Engineers | Lighting Designers
100 Howe Ave., Suite 235N
Sacramento, CA 95825-8217
www.mneilsengineering.com
Tel: (916) 923-4400
PROJECT #: 23044.21
PROJECT MGR: Y. Van Zanten

This document is the property of the Owner and is not to be used without his written permission

REGISTERED PROFESSIONAL ENGINEER — YVETTE J. VAN ZANTEN — No. E15483 Exp. 6/30/25 — ELECTRICAL — STATE OF CALIFORNIA

07/21/2023

HIBSER YAMAUCHI Architects, Inc.
4602 2nd Street, Suite 3
Davis, CA 95618
530.758.1270 tel | 530.758.4789 fax

HY Architects Project number: 6014

Facility

PLACER CO. OFFICES OF EDUCATION
365 NEVADA STREET
AUBURN, CA 95603

Project

ANNEX BUILDING ALTERATIONS

Sheet Title

TITLE 24 OUTDOOR LIGHTING COMPLIANCE FORMS

Client Project Number:

Scale: AS NOTED	Sheet
Drawn By: KL	**E6.02**
Checked By: YVZ	
Issue Date:	
Revit Version: 2023	Sheet 1 of 10

Site Improvements @ 360 Nevada Street in Auburn, CA

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

IF THIS SHEET IS NOT 30"x42" , IT IS A REDUCED PRINT SCALE ACCORDINGLY

PLACER COUNTY OFFICE OF EDUCATION

PLACER COUNTRY OFFICE OF EDUCATION

SITE IMPROVEMENTS

360 NEVADA STREET, AUBURN, CA 95603

ABBREVIATIONS

&	AND
@	AT
℄	CENTERLINE
Ø	DIAMETER
#	POUND OR NUMBER
A/C	AIR CONDITIONING
AC	ASPHALTIC CONCRETE
ACOUS	ACOUSTICAL
ACT	ACOUSTIC CEILING TILE
ADD	ADDITIONAL
ADJ	ADJACENT
AFF	ABOVE FINISHED FLOOR
ALS	ASSISTED LISTENING SYSTEM
ALT	ALTERNATE
ALUM	ALUMINIUM
ANOD	ANODIZED
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
BITUM	BITUMINOUS
BD	BOARD
BLDG	BUILDING
BLKG	BLOCKING
BOT	BOTTOM
BTWN	BETWEEN
BUR	BUILT-UP ROOFING
CAB	CABINET
CB	CATCH BASIN
CFCI	CONTRACTOR FURNISHED CONTRACTOR INSTALLED
CG	CORNER GUARD
CJ	CONTROL JOINT
CLG	CEILING
CLO	CLOSET
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT
COL	COLUMN
COMP	COMPOSITION
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CORR	CORRIDOR
CT	CERAMIC TILE
CUST	CUSTODIAN
DBL	DOUBLE
DEMO	DEMOLITION
DEPT	DEPARTMENT
DF	DRINKING FOUNTAIN
DI	DRAIN OR DROP INLET
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DISP	DISPENSER
DIV	DIVISION
DN	DOWN
DS	DOWNSPOUT
DTL	DETAIL
DW	DISHWASHER
DWG	DRAWING
(E)	EXISTING
E	EAST
EA	EACH
EF	EXHAUST FAN
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
ENCL	ENCLOSURE
EQ	EQUAL
EQUIP	EQUIPMENT
EVA	EMERGENCY VEHICLE ACCESS
EWC	ELECTRICAL WATER COOLER
EXP	EXPANSION
EXT	EXTERIOR
FA	FIRE ALARM
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH FLOOR
FIN	FINISH
FLR	FLOOR
FO	FACE OF
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOS	FACE OF STUD
FRP	FIBERGLASS REINFORCED PANEL
FT	FOOT OR FEET
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GSM	GALVANIZED WHEET METAL
GYP	GYPSUM
HB	HOSE BIB
HC	HOLLOW CORE
HD	HEAD
HDWR	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HR	HOUR
HT	HEIGHT
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
JAN	JANITOR
JT	JOINT
LAB	LABORATORY
LAM	LAMINATE
LAV	LAVATORY
LBS	POUNDS
LT	LIGHT
MAX	MAXIMUM
MB	MACHINE BOLT
MDF	MEDIUM DENSITY FIREBOARD
MECH	MECHANICAL
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MOD	MODULAR
MTD	MOUNTED
MTG	MOUNTING
MTL	METAL
MUL	MULLION
(N)	NEW
N/A	NOT APPLICABLE
N	NORTH
NIC	NOT IN CONTRACT
NO or #	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
O/	OVER
OC	ON CENTER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
OPP	OPPOSITE
PL	PLATE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLYWD	PLYWOOD
PR	PAIR
PTD	PAPER TOWEL DISPENSER
PVC	POLYVINYL CHLORIDE
(R)	RELOCATE
RB	RESILIENT OR RUBBER BASE
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REF	REFERENCE
REFR	REFRIGERATOR
REINF	REINFORCED
REQ	REQUIRED
RF	RESILIENT FLOORING
RM	ROOM
RO	ROUGH OPENING
RWL	RAIN WATER LEADER
S	SOUTH
SC	SOLID CORE
SCD	SEE CIVIL DRAWINGS
SCHED	SCHEDULE
SD	SOAP DISPENSER
SED	SEE ELECTRICAL DRAWINGS
SF	SQUARE FEET
SFPD	SEE FIRE PROTECTION DRAWINGS
SHT	SHEET
SIM	SIMILAR
SLD	SEE LANDSCAPE DRAWINGS
SMD	SEE MECHANICAL DRAWINGS
SMS	SHEET METAL SCREW
SND	SANITARY NAPKIN DISPENSER
SPD	SEE PLUMBING DRAWINGS
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
SSD	SEE STRUCTURAL DRAWINGS
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SUSP	SUSPEND
TEL	TELEPHONE
TEMP	TEMPORARY
THK	THICK
T.O.	TOP OF
TOC	TOP OF CURB
TOP	TOP OF PARAPET
TOS	TOP OF SLAB
TOW	TOP OF WALL
TPD	TOILET PAPER DISPENSER
TV	TELEVISION
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
W	WEST
w/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD
WH	WATER HEATER

GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF GOVERNING CODES LISTED IN "APPLICABLE CODES" AND ALL GOVERNING LOCAL CODES AND REGULATIONS.
2. THE OWNER / ARCHITECT HAVE OBTAINED APPROVAL OF THE PRIMARY AUTHORITY HAVING JURISDICTION (DSA, OSHPD, CITY BUILDING PERMIT). CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL OTHER REQUIRED PERMITS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
3. UNLESS STATED OTHERWISE IN THE SPECIFICATIONS, SPECIAL INSPECTION IS REQUIRED FOR SHOP AND FIELD STRUCTURAL WELDING.
4. WHERE INCORPORATED IN THE CONSTRUCTION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN COPIES OF OSHPD OR DSA PRE-APPROVALS FOR PRE-APPROVED ITEMS OR SYSTEMS INCORPORATED INTO THE CONSTRUCTION AND DISTRIBUTE TO OWNER'S REPRESENTATIVE, ARCHITECT AND INSPECTOR.
5. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO FURNISH AND AND INSTALL ALL MATERIALS AND WORK DESCRIBED, DEPICTED OR DETAILED WITHIN THESE DOCUMENTS REGARDLESS OF THE LOCATION OF THAT MATERIAL OR WORK WITHIN THE DOCUMENTS OR OMISSION (WHETHER DELIBERATE OR ACCIDENTAL) OF THAT MATERIAL OR WORK BY A SUBCONTRACTOR ON HIS/HER BID.
6. THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL CONSIDER THESE DOCUMENTS IN THEIR ENTIRETY. DISCREPANCIES OR CONTRADICTIONS BETWEEN PORTIONS OF THESE DOCUMENTS MUST BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AT LEAST 72 HOURS PRIOR TO BID OPENING FOR CLARIFICATION. OTHERWISE, THE MOST RESTRICTIVE REQUIREMENT SHALL BE IN FORCE AT NO ADDITIONAL COST TO THE OWNER.
7. THE CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR THE SAFETY OF ALL PERSONS ON OR ABOUT THE CONSTRUCTION SITE, IN ACCORDANCE WITH APPLICABLE LAWS AND CODES. CONTRACTOR ESTABLISH PROCEDURES TO ASSURE ALL PERSONS ENTERING A POSSIBLY HAZARDOUS AREA, INCLUDING WORKERS, SUBCONTRACTORS, OTHER CONTRACTORS, VISTORS, AND OTHERS ARE AWARE OF APPROPRIATE / REQUIRED SAFETY PROCEDURES. COMPLY WITH LOCAL, STATE, AND FEDERAL SAFETY STANDARDS, INCLUDING OSHA REQUIREMENTS AND WITH THE SAFETY PROVISIONS OF THE LATEST MANUAL OF ACCIDENT PREVENTION PUBLISHED BY THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA.
8. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING TEMPORARY FENCING AND GATES, SIGNAGE, SECURITY LIGHTING OR OTHER SECURITY AND CONTROL MEASURES NECESSARY TO PROVIDE FOR THE SAFETY OF THE PUBLIC AND FACILITY USERS UNTIL THE COMPLETION OF THE WORK.
9. THE CONTRACTOR IS RESPONSIBLE TO FOR PROTECTION OF ADJACENT PROPERTY AND SHALL REPAIR AND / OR REPLACE ALL PROPERTY DAMAGED DURING THE COURSE ON THE WORK.
10. THE CONTRACTOR SHALL LIMIT HIS / HER ACTIVITY TO THE AREA DESCRIBED WITHIN THE DOCUMENTS UNLESS OTHERWISE PERMITTED BY THE OWNER'S REPRESENTATIVE.
11. THE CONTRACTOR IS RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF ANY ITEMS DAMAGED OR DISTURBED DURING THE COURSE OF THE WORK. INSTALLATION SHALL MATCH EXISTING IN KIND, QUALITY, AND PERFORMANCE.
12. WHERE EXISTING CONSTRUCTION AND FINIISES ARE CUT, DAMAGED, OR REMODELED, PATCH WITH MATERIALS TO MATCH IN KIND, QUALITY, PERFORMANCE CHARACTERISTICS, AND APPEARANCE.
13. ALL DIMENSIONS ARE TO FACE OF STUD, UNLESS OTHERWISE NOTED. DIMENSIONS NOTED AS "CLR" MEAN CLEAR DIMENSION TO FACE OF FINISH. VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES FOUND.
14. VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS. NOTIFY ARCHITECT OF ANY DISCREPANCIES FOUND. VERIFY DIMENSIONS OF ALL OWNER-FURNISHED ITEMS, INCLUDING FURNITURE AND EQUIPMENT, TO ENSURE PROPER COORDINATION WITH CONSTRUCTION.
15. ALL ITEMS IN THESE DRAWINGS ARE NEW UNLESS OTHERWISE NOTED.
16. ALL UTILITIES REQUIRED FOR THE CONTINUOUS OPERATION OF ALL OCCUPIED EXISTING FACILITIES SHALL BE MAINTAINED IN SERVICE AT ALL TIMES. ANY SHUT DOWNS FOR NEW CONNECTIONS MUST BE COORDINATED WITH THE OWNER'S REPRESENTATIVE TWO WEEKS PRIOR TO THE REQUESTED SHUT DOWN.
17. COORDINATION WITH OTHER CONTRACTS: IF ANY PART OF THIS CONTRACTOR'S WORK DEPENDS UPON THE WORK OF A SEPARATE CONTRACTOR, THIS CONTRACTOR SHALL INSPECT SUCH OTHER WORK AND PROMPTLY REPORT IN WRITING TO THE OWNER'S REPRESENTATIVE ANY DEFECTS IN SUCH OTHER WORK THAT RENDER IT UNSUITABLE TO RECEIVE THE WORK OF THIS CONTRACTOR. FAILURE OF THIS CONTRACTOR TO SO INSPECT AND REPORT SHALL CONSTITUTE AN ACCEPTANCE OF THE OTHER CONTRACTOR'S WORK, EXCEPT AS TO DEFECTS WHICH MAY DEVELOP IN OTHER CONTRACTOR'S WORK AFTER EXECUTION OF THIS CONTRACTOR'S WORK.
18. COORDINATION OF SCHEDULE: PORTIONS OF THIS WORK MAY BE REQUIRED TO BE COMPLETED ON SCHEDULE IN ORDER TO AVOID DELAY TO OTHER CONTRACTORS OR OWNERS OPERATIONS. CONTRACTOR SHALL STRICTLY ADHER TO ESTABLISHED COMPLETION DATES AS DESIGNATED IN THE SPECIFICATIONS AND COORDINATE WORK SCHEDULE WITH THE OWNER'S REPRESENTATIVE AND OTHER CONTRACTORS. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND LIQUIDATED DAMAGES.
19. SCHEDULE ALL WORK WITH THE OWNER'S REPRESENTATIVE, INCLUDING CONSTRUCTION ACCESS AND STORAGE, AND WORK OUTSIDE THE "EXTENT OF WORK" SET FORTH IN THESE DOCUMENTS. THE CONSTRUCTION SCHEDULE SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO THE START OF CONSTRUCTION.
20. CONSTRUCTION PROCEDURES SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO THE START OF CONSTRUCTION.
21. DEMOLITION IS NOT NECESSARILY LIMITED TO ONLY WHAT IS SHOWN ON THIS OR OTHER DRAWINGS OR AS OUTLINED IN THE SPECIFICATIONS. THE INTENT IS TO INDICATE GENERAL SCOPE OF DEMOLITION REQUIRED. CONTRACTOR SHALL INCLUDE ALL MISCELLANEOUS DEMOLITON, CUTTING AND PATCHING REQUIRED TO COMPLETE THE PROJECT IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.
22. ALL ITEMS IDENTIFIED TO BE SALVAGED SHALL BE DELIVERED IN GOOD CONDITION TO A PLACE OF STORAGE AS DIRECTED BY THE OWNER'S REPRESENTATIVE. ALL OTHER ITEMS MUST BE DISPOSED OF OFF-SITE IN A LEGAL MANNER.
23. ARCHITECT IS NOT RESPONSIBLE FOR THE DISCOVERY, PRESENCE, HANDLING, REMOVAL OR DISPOSAL OF, OR EXPOSURE OF PERSONS TO, HAZARDOUS MATERIALS OR TOXIC SUBSTANCES IN ANY FORM AT THE PROJECT SITE. TO THE EXTENT THESE DOCUMENTS RELATE TO SUCH ISSUES, ARCHITECT'S PARTICIPATION IS SOLELY ADMINISTRATIVE WITHOUT ANY RESPONSIBILITY FOR THE CONTENT OR EXECUTION OF SUCH DOCUMENTS.
24. DETAIL DRAWINGS WITH REFERENCES TO FIRE-RATED ASSEMBLIES OR CONSTRUCTION WHICH HAVE BEEN TESTED BY UNDERWRITERS LABORATORIES, THE CALIFORNIA BUILDING CODE OR ANY OTHER APPROVED TESTING AGENCY, SHALL BE CONSTRUED TO INCLUDE ALL WORK AND PROCEDURES CONTAINED IN THE REFERENCED ASSEMBLY DESCRIPTION..
25. ALL PIPE AND DUCT PENETRATIONS THROUGH FIRE RATED CONSTRUCTION SHALL BE FIRE STOPPED AND SEALED TO MAINTAIN THE REQUIRED RATING.
26. CONTRACTOR TO MAINTAIN CONTEMPORANEOUSLY RECORDED "AS-BUILT" INFORMATION OF ALL WORK, WHICH SHALL BE MARKED IN COLOR ON THE DRAWINGS AND SPECIFICATIONS. A SCANNED PDF OF THE "AS-BUILT" DRAWINGS AND SPECIFICATIONS SHALL BE TURNED OVER TO THE OWNER'S REPRESENTATIVE PRIOR TO FINAL APPLICATION FOR PAYMENT. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
27. CONTRACTOR SHALL PROVIDE TEMPORARY PROTECTION AND DUST COVERS ADJACENT TO OCCUPIED AREAS AS REQUIRED TO CONTAIN DUST AND DEBRIS WITHIN CONSTRUCTION AREA. BROOM CLEAN ALL AREAS, INLCUDING SIDEWALKS AND DRIVEWAYS EACH DAY. KEEP DIRT AND DUST TO A MINIMUM.
28. WORK SHALL BE EXECUTED IN A CAREFUL AND ORDERLY MANNER WITH THE LEAST POSSIBLE DISTURBANCE TO PUBLIC AND TO OCCUPANTS OF EXISTING BUILDING.
29. CLEAN ALL EXPOSED SURFACES AND NEW EQUIPMENT AFTER COMPLETION.

APPLICABLE CODES

ALL WORK PERFORMED UNDER THIS CONTRACT IS TO CONFORM TO THE FOLLOWING CODES AND REGULATIONS:

2022 CALIFORNIA BUILDING ADMINISTRATIVE CODE,
PART 1, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)

2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24, CCR BASED ON THE 2021 INTERNATIONAL BUILDING CODE (IBC) WITH 2021 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24, CCR BASED ON THE 2020 NATIONAL ELECTRICAL CODE (NEC) WITH 2020 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24, CCR BASED ON THE 2021 UNIFORM MECHANICAL CODE (UMC) WITH 2021 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24, CCR BASED ON THE 2021 UNIFORM PLUMBING CODE (UPC) WITH 2021 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA ENERGY EFFICIENCY STANDARDS (ENERGY CODE), PART 6, TITLE 24 CCR

2022 SAFETY CODE FOR ELEVATORS AND ESCALATORS
(ASME A17.1-2019)

2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24, CCR BASED ON THE 2021 INTERNATIONAL FIRE CODE (IFC) WITH 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA EXISTING BUILDING CODE, PART 10, TITLE 24 CCR
(2021 IEB CODE AND 2022 CALIFORNIA AMENDMENTS)

2022 CALIFORNIA GREEN BUILDING CODE (CALGreen), PART 11, TITLE 24, CCR

2022 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 CCR

TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

2010 ADA STANDARDS FOR ACCESSIBLE DESIGN

NFPA 13	INSTALLATION OF SPRINKLER SYSTEMS	2022 EDITION
NFPA 14	INSTALLATION OF STANDPIPE SYSTEMS	2019 EDITION
NFPA 17	STANDARD FOR DRY CHEMICAL EXTINGUISHING SYS.	2021 EDITION
NFPA 17A	STANDARD FOR WET CHEMICAL SYS.	2021 EDITION
NFPA 20	INSTALLATION OF STATIONARY PUMPS	2019 EDITION
NFPA 24	INSTALLATION OF PRIVATE FIRE MAINS	2019 EDITION
NFPA 72	NATIONAL FIRE ALARM AND SIGNALING CODE	2022 EDITION
NFPA 80	FIRE DOORS AND OTHER OPENING PROTECTIVES	2019 EDITION
NFPA 92	STANDARD FOR SMOKE CONTROL SYSTEMS	2018 EDITION
NFPA 253	CRITICAL RADIANT FLUX OF FLOOR COVERING SYS	2019 EDITION
NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEM	2018 EDITION

REFERENCE CODE SECTIONS FOR APPLICABLE STANDARDS - 2022 CBC CHAPTER 35 AND 2022 CFC CHAPTER 45

THE ABOVE CODES AND REGULATIONS REFER TO THE LATEST EDITION OR REVISION IN FORCE ON THE DATE OF THE CONTRACT, UNLESS OTHERWISE STATED. NOTHING ON THE DRAWINGS IS TO BE CONSTRUED AS REQUIRING OR PERMITTING WORK THAT IS CONTRARY TO THE LISTED CODES AND REGULATIONS, OR OTHER LOCAL, STATE OR FEDERAL CODES OR REGULATIONS WHICH MAY BE APPLICABLE.

COMPLIANCE WITH CFC CHAPTER 33, FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION, AND CBC CHAPTER 33, SAFETY DURING CONSTRUCTION WILL BE ENFORCED.

SYMBOLS

GRID LINE

BUILDING ELEVATION
ELEVATION IDENTIFICATION
SHEET WHERE ELEVATION IS SHOWN

BUILDING OR WALL SECTION
SECTION IDENTIFICATION
SHEET WHERE SECTION IS SHOWN

DETAIL
DETAIL IDENTIFICATION
SHEET WHERE DETAIL IS SHOWN

INTERIOR ELEVATION(S)
DETAIL NO. OF ELEVATION
NO ARROWS MEAN ELEVATION NOT SHOWN
SHEET WHERE ELEVATION IS SHOWN
ELEVATION IDENTIFICATION

WORK POINT, CONTROL POINT OR DATUM POINT

REVISIONS
REVISION NUMBER, SEE REVISION SCHEDULE ON TITLE BLOCK
AREA OF REVISION

ROOM IDENTIFICATION
ROOM NAME
KAISER ROOM CODE NAME
ROOM NUMBER
CEILING HEIGHT (OTHER THAN EXISTING OR 8'-0" A.F.F.)

KEYNOTE TAG
REFER TO KEYNOTE LIST LOCATED ON PLAN SHEETS

AREA OF NO WORK

DOOR TAG (SEE DOOR SCHEDULE)
DOOR MARK
HARDWARE GROUP

DOOR MARK

(E) DOOR TO REMAIN

(E) DOOR TO BE REMOVED

(N) DOOR & DOOR FRAME

WALL TAG
WALL TYPE - REFER TO DRAWING SHEET A9.01

WINDOW TAG
WINDOW MARK (SEE WINDOW SCHEDULE)

OWNER

PLACER COUNTY OFFICE OF EDUCATION

360 NEVADA STREET,
AUBURN, CA 95603 TEL. (530) 889-5920
CONTACT: MARTIN FREGOSO

CONSULTANTS

ARCHITECT

HIBSER YAMAUCHI ARCHITECTS, INC. TEL. (530) 758-1270
4206 2ND STREET, SUITE 3 FAX (530) 758-4789
DAVIS, CA 95618
CONTACT: HOWARD CHO

CIVIL

WARREN CONSULTING ENGINEERS, INC. TEL. (916) 985-1870
1117 WINDFIELD WAY, SUITE 110
EL DORADO HILLS, CA 95762
CONTACT: ANTHONY J. TASSANO

LANDSCAPE

MTW GROUP TEL. (916) 369-3990
LANDSCAPE ARCHITECTURE AND PLANNING
2707 K STREET, SUITE 201
SACRAMENTO, CA 95816
CONTACT: PETER D. LARIMER

SCOPE OF WORK

SITE IMPROBEMENTS AT OUTDOOR AREA NORTH OF BUILDING INCLUDING, BUT NOT LIMITED TO:

- MINOR GRADING
- LANDSCAPING
- SHADE STRUCTURES (OFCI)
- WALKWAY ACCESS UPGRADES

DEFERRED APPROVALS

NONE

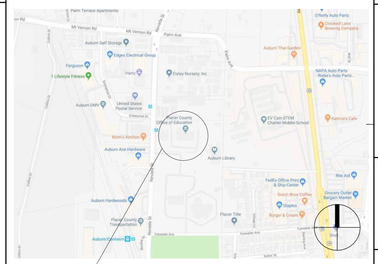
INDEX OF DRAWINGS

ARCHITECTURAL
A0.01 TITLE SHEET
A1.01 OVERAL SITE PLAN
A1.02 SITE PLAN - DEMO
A1.03 SITE PLAN - REMODEL

CIVIL
C0.0 CIVIL GENERAL NOTES AND ABBREVIATIONS
C0.1 TOPOGRAPHIC SURVEY
C1.1 DEMOLITION PLAN
C2.1 GRADING PLAN
C3.1 PAVING AND STRIPING PLAN
C4.1 EROSION CONTROL PLAN
C5.1 DETAILS AND SECTIONS

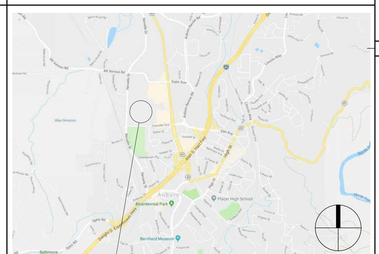
LANDSCAPE
LD.1 IRRIGATION DEMOLITION PLAN
L1.1 SITE PLAN
L2.1 LANDSCAPE TREE PLANTING PLAN AND SHRUBS/TURF PLANTING PLAN
L3.1 LANDSCAPE IRRIGATION PLAN
L4.1 LANDSCAPE PLATING DETAILS
L4.2 LANDSCAPE IRRIGATION DETAILS
L5.1 LANDSCAPE IRRIGATION SCHEDULE AND WATER USE CALCULATIONS

LOCATION MAP



364 NEVADA STREET, AUBURN, CA 95603

VICINITY MAP NO SCALE



PROJECT SITE

Revisions

Delta	Date	Revisions	By

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CONSTRUCTION DOCUMENTS

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530.758.1270 tel ¦ 530.758.4789 fax

HY Architects Project number: 6014

Facility
PLACER COUNTRY OFFICE OF EDUCATION
360 NEVADA STREET,
AUBURN, CA 95603

Project
SITE IMPROVEMENTS

Sheet Title
TITLE SHEET

Client Project Number:

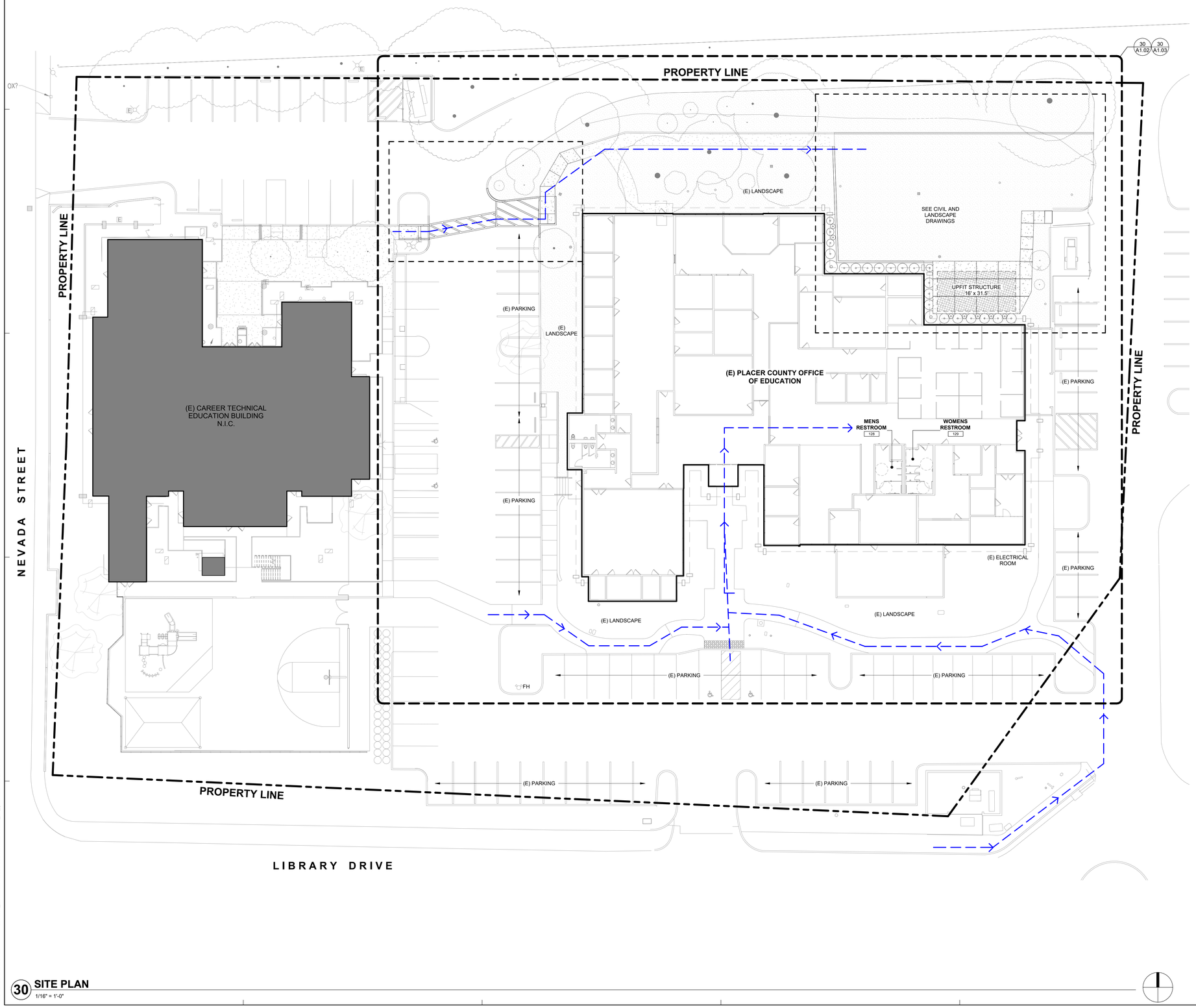
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GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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30 SITE PLAN
1/16" = 1'-0"

GENERAL NOTES

1. CONTRACTOR TO ORGANIZE AND STORE CONSTRUCTION ACTIVITES OUT OF EMERGENCY VEHICLE ACCESS AT ALL TIMES.

2. CONTRACTOR TO VERIFY ALL BARRIERS HAVE BEEN REMOVED AND COMPLIANCE WITH CBC 11B.

ACCESSIBLE PATH OF TRAVEL

ACCESSIBLE PATH OF TRAVEL AS INDICATED ON PLANS IS A BARRIER FREE ACCESS ROUTE WITHOUT ANY ABRUPT LEVEL CHANGES EXCEEDING 1/2" IF BEVELED AT 1:2 MAXIMUM SLOPE OR VERTICAL LEVEL CHANGES NOT EXCEEDING 1/4 " MAXIMUM AND AT LEAST 48" IN WIDTH. SURFACE IS STABLE, FIRM AND SLIP RESISTANT. CROSS SLOPE DOES NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 5% UNLESS OTHERWISE INDICATED. ACCESSIBLE PATH OF TRAVEL SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80 " MINIMUM AND PROTRUDING OBJECTS GREATER THAN 4 " PROJECTION FROM WALL ABOVE 27 " AND LESS THAN 80". ARCHITECT SHALL VERIFY THAT THERE ARE NO BARRIERS IN THE PATH OF TRAVEL.

LEGEND

ACCESSIBLE PATH OF TRAVEL

AREA OF WORK, SCD & SLD

EXISTING, TYP

PCOE
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Project
SITE IMPROVEMENTS

Sheet Title
OVERAL SITE PLAN

Client Project Number:

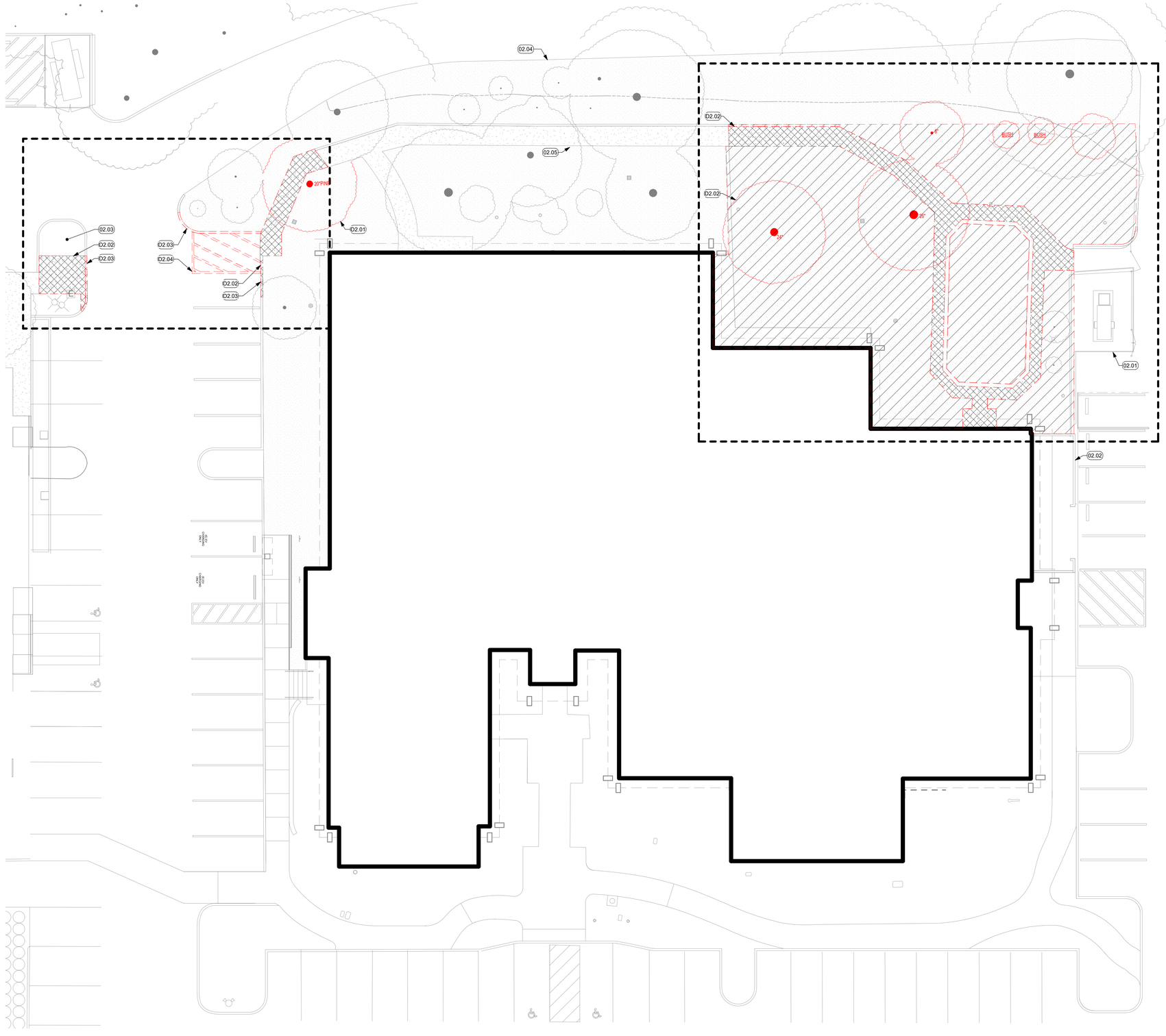
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30 **DEMO LANDSCAPE PLAN**
3/32" = 1'-0"

GENERAL NOTES

1. CONTRACTOR TO ORGANIZE AND STORE CONSTRUCTION ACTIVITES OUT OF EMERGENCY VEHICLE ACCESS AT ALL TIMES.

2. CONTRACTOR TO VERIFY ALL BARRIERS HAVE BEEN REMOVED AND COMPLIANCE WITH CBC 11B.

LEGEND

EXISTING, TYP

REMOVE EXISTING, TYP

AREA OF WORK, SCD & SLD

DEMO KEYNOTES

D2.01	REMOVE (E) TREES, SCD AND SLD
D2.02	REMOVE (E) CONCRETE WALKWAY, SCD AND SLD
D2.03	REMOVE (E) CURB, SCD AND SLD
D2.04	REMOVE (E) STRIPING, SCD AND SLD

KEYNOTES

02.01	(E) TRANSFORMER & ENCLOSURE
02.02	(E) EXTERIOR ENCLOSURE
02.03	(E) PLANTING
02.04	(E) LANDSCAPE
02.05	(E) CONCRETE WALKWAY

PCOE
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CONSTRUCTION DOCUMENTS

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Project
SITE IMPROVEMENTS

Sheet Title
SITE PLAN - DEMO

Client Project Number:

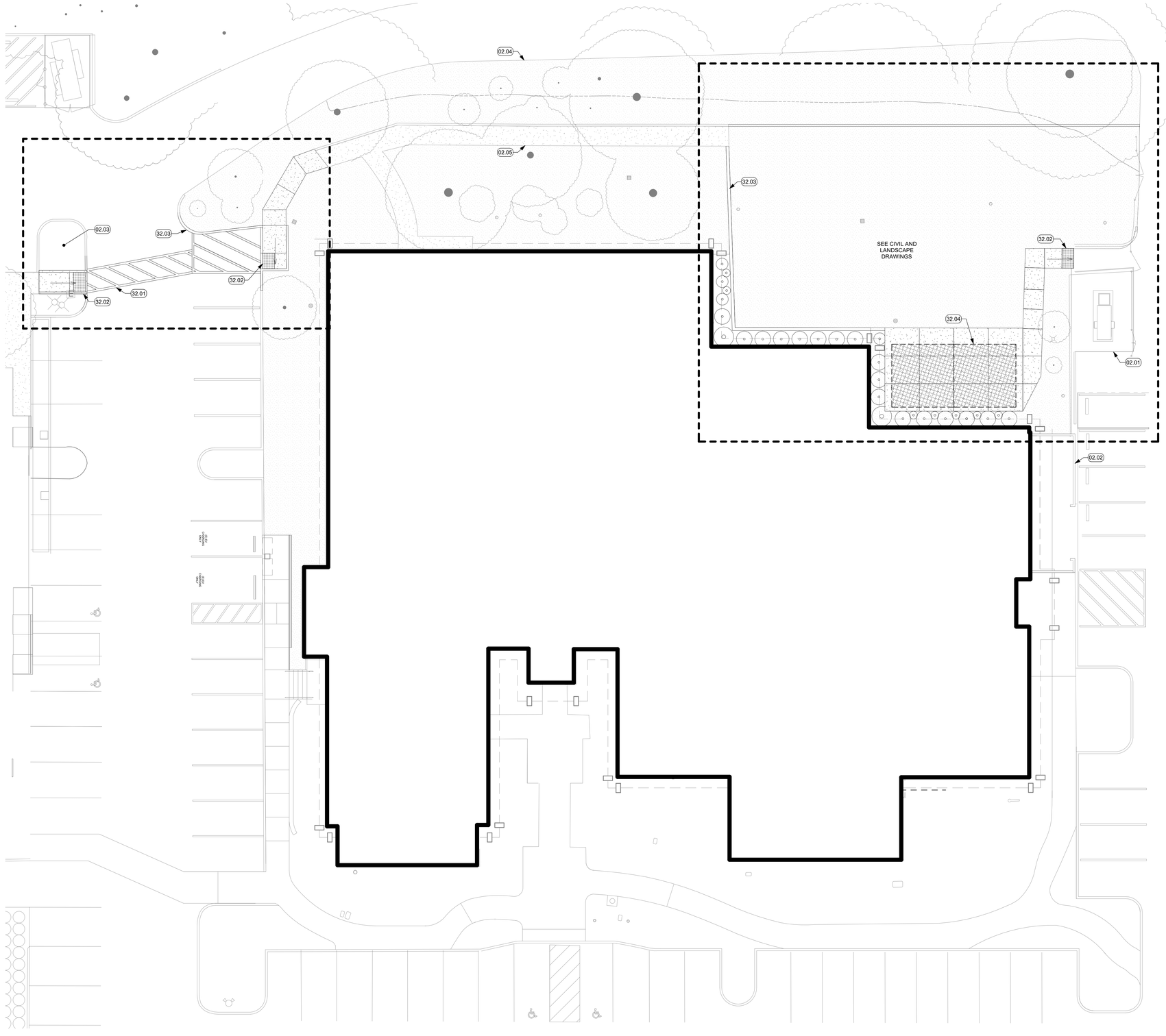
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30 NEW LANDSCAPE PLAN
3/32" = 1'-0"

GENERAL NOTES

1. CONTRACTOR TO ORGANIZE AND STORE CONSTRUCTION ACTIVITES OUT OF EMERGENCY VEHICLE ACCESS AT ALL TIMES.

2. CONTRACTOR TO VERIFY ALL BARRIERS HAVE BEEN REMOVED AND COMPLIANCE WITH CBC 11B.

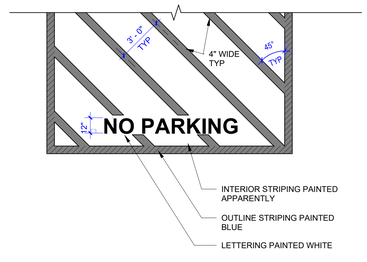
LEGEND

AREA OF WORK, SCD & SLD

EXISTING, TYP

KEYNOTES

02.01	(E) TRANSFORMER & ENCLOSURE
02.02	(E) EXTERIOR ENCLOSURE
02.03	(E) PLANTING
02.04	(E) LANDSCAPE
02.05	(E) CONCRETE WALKWAY
32.01	4" DIAGONAL STRIPING, TYP. SEE DETAIL 5/A1.03
32.02	CURB RAMP, SCD & SLD
32.03	CONCRETE CURB, SCD & SLD
32.04	OUTDOOR SHADE STRUCTURE (OFCI), SLD



5 ACCESS AISLE - TYPICAL
1/4" = 1'-0"

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Facility

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AUBURN, CA 95603

Project

SITE IMPROVEMENTS

Sheet Title

SITE PLAN - REMODEL

Client Project Number:

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Revit Version:	2023

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GRAPHIC SCALES: 1/16" = 1'-0" (0 5' 50') · 1/8" = 1'-0" (0 5' 25') · 1/4" = 1'-0" (0 1' 12') · 1/2" = 1'-0" (0 1' 6') · 3/4" = 1'-0" (0 4') · 1" = 1'-0" (0 1' 3') · 1 1/2" = 1'-0" (0 2') · 3" = 1'-0" (0 1')

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CIVIL ABBREVIATIONS AND LEGEND

ABBREVIATIONS

NOTE: NOT ALL ABBREVIATIONS MAY BE USED ON THESE PLANS.

AB	AGGREGATE BASE
AC	ASPHALTIC CONCRETE
AD	AREA DRAIN
APN	ASSESSOR'S PARCEL NUMBER
ARV	AIR RELEASE VALVE
ASB	AGGREGATE SUB-BASE
BO	BLOW-OFF VALVE
BV	BUTTERFLY VALVE
BW	BACK OF WALK
C/L	CENTERLINE
CB	CATCH BASIN
CL	CLASS
CMP	CORRUGATED METAL PIPE
CATV	CABLE TELEVISION
CO	CLEANOUT
COMM	COMMUNICATION
CONC.	CONCRETE
CONST.	CONSTRUCT
CR	CURB RETURN
CS	CONCRETE SURFACE
DC	DOUBLE CHECK VALVE
DDC	DOUBLE DETECTOR CHECK VALVE
DG	DECOMPOSED GRANITE
DI	DROP INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DWG	DRAWING
DS	DOWNSPOUT
E	ELECTRIC
EP	EDGE OF PAVEMENT
ESMT	EASEMENT
EX	EXISTING
FS	FIRE SERVICE LINE
FDC	FIRE DEPARTMENT CONNECTION
FL	FLOWLINE
FM	SANITARY SEWER FORCE MAIN
FF	FINISHED FLOOR ELEVATION
FH	FIRE HYDRANT
G	GAS
GR	GRATE ELEVATION
GRD	GRADE ELEVATION
GV	GATE VALVE
HB	HOSE BIBB
HBD	HEADER BOARD
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HP	HIGH POINT
INV	PIPE INVERT ELEVATION
JP	JOINT UTILITY POLE
LF	LINEAL FEET
LIP	LIP OF GUTTER
LT	LEFT
MS	MOWSTRIP
NTS	NOT TO SCALE
OH	OVERHEAD
PCC	PORTLAND CEMENT CONCRETE
PD	PLANTER DRAIN
PIV	POST INDICATOR VALVE
P/L	PROPERTY LINE
PP	POWER POLE
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
R	RADIUS
RIM	MANHOLE RIM ELEVATION (SOLID COVER)
RP	REDUCED PRESSURE BACKFLOW PREVENTER
RW	RIGHT OF WAY
SCH	SCHEDULE
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SG	SUBGRADE ELEVATION
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
STD	STANDARD
S/W	SIDEWALK
T	TELEPHONE
TC	TOP OF CURB
TD	TRENCH DRAIN
TDCB	TRENCH DRAIN CATCH BASIN
TP	TELEPHONE POLE
TR	TOP OF RAMP ELEVATION
TRW	TOP OF RETAINING WALL
TSW	TOP OF SEAT WALL
TW	TOP OF WALK ELEVATION
U	UTILITY
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
VCP	VITRIFIED CLAY PIPE
W	WATER
W/	WITH
W/O	WITHOUT
WV	WATER VALVE

LEGEND

NOTE: NOT ALL SYMBOLS MAY BE USED ON THESE PLANS.

PROPOSED GRADING & DRAINAGE SYMBOLS:

- 8" SD — STORM DRAIN LINE (SIZE AND FLOW SHOWN)
- STORM DRAIN MANHOLE (SDMH)
- CATCH BASIN (CB)
- DROP INLET (DI)
- AREA DRAIN (AD)
- PLANTER DRAIN (PD) OR FLOOR DRAIN (FD)
- CO — STORM DRAIN CLEANOUT
- 99.99 — ELEVATION
- FF=100.00 — FINISHED FLOOR ELEVATION
- PAD=99.33 — BUILDING PAD ELEVATION
- CONCRETE SIDEWALK
- GRADED DIRECTION FOR DRAINAGE FLOW
- SWALE
- SLOPE
- TREE TO BE REMOVED
- RETAINING WALL

PROPOSED SANITARY SEWER SYMBOLS:

- 6" SS — SANITARY SEWER LINE (SIZE AND FLOW SHOWN)
- SANITARY SEWER MANHOLE (SSMH)
- CO — SEWER CLEANOUT FLUSHER BRANCH

PROPOSED WATER SYMBOLS:

- 8" W — WATER LINE & SIZE
- 8" FS — FIRE LINE & SIZE
- 8" DW — DOMESTIC WATER LINE & SIZE
- 8" RW — RECLAIMED WATER LINE & SIZE
- 8" IRR — IRRIGATION SERVICE LINE & SIZE
- 8" NP — NON POTABLE WATER LINE & SIZE
- 8" SP — FIRE SPRINKLER SERVICE LINE & SIZE
- GATE VALVE
- M — WATER METER
- FH — FIRE HYDRANT ASSEMBLY
- FDC — FIRE DEPARTMENT CONNECTION
- DC — DETECTOR CHECK VALVE
- DDC — DOUBLE DETECTOR CHECK VALVE
- RP — REDUCED PRESSURE BACKFLOW PREVENTER
- BUTTERFLY VALVE
- 1" — AIR RELEASE VALVE + SIZE
- 1" — BLOW-OFF VALVE + SIZE
- PIV — POST INDICATOR VALVE

DEMOLITION GENERAL NOTES

1. IN THE EVENT THAT ANY UNUSUAL CONDITIONS NOT COVERED BY THE CONSTRUCTION DOCUMENTS ARE ENCOUNTERED DURING GRADING OPERATIONS THE ARCHITECT SHALL BE IMMEDIATELY NOTIFIED FOR DIRECTIONS.
2. NO BURNING OR BLASTING SHALL BE PERMITTED.
3. ADDITIONAL DEMOLITION INFORMATION MAY BE SHOWN ON THE GRADING, DRAINAGE, AND UTILITY PLANS, AND THOSE PLANS PREPARED BY OTHER DISCIPLINES FOR THIS PROJECT.
4. ALL DEMOLISHED ITEMS SHALL BE DISPOSED OF OFFSITE AT A SUITABLE, LEGAL, DUMP SITE OR OTHER FACILITY.
5. ALL DISPOSED OF MATERIALS SHALL BE RECYCLED IF POSSIBLE.
6. THE TYPES, LOCATIONS, SIZES AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES AS SHOWN IN THESE PLANS WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, EXTENT, SIZES, LOCATIONS, AND DEPTHS OF SUCH UNDERGROUND UTILITIES. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL KNOWN UNDERGROUND UTILITIES. HOWEVER, WARREN CONSULTING ENGINEERS CAN ASSUME NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF ITS DELINEATION OF SUCH UNDERGROUND UTILITIES, NOR FOR THE EXISTENCE OF OTHER BURIED OBJECTS OR UTILITIES WHICH MAY BE ENCOUNTERED BUT WHICH ARE NOT SHOWN ON THESE DRAWINGS. THE CONTRACTOR OR ANY SUBCONTRACTOR FOR THIS CONTRACT SHALL NOTIFY THE DISTRICT TWO (2) WORKING DAYS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK IN ORDER TO VERIFY TO THE GREATEST EXTENT POSSIBLE THE EXISTING UTILITY LINES, CONFLICTS AND PROPOSED UTILITY CONNECTION POINTS.
7. THE SCHOOL DISTRICT SHALL HAVE SALVAGE RIGHTS TO ANY DEMOLISHED ITEMS SHOWN HEREON. THE CONTRACTOR SHALL GIVE THE DISTRICT NOTICE 7 DAYS PRIOR TO THE START OF DEMOLITION. THE DISTRICT SHALL MOVE ANY RETAINED ITEMS OUT OF THE CONTRACTORS WORK AREA, UNLESS ANOTHER ARRANGEMENT IS MADE WITH THE CONTRACTOR. ANY REMAINING ITEMS BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE. ANY ITEMS NOT SHOWN FOR REMOVAL SHALL REMAIN AND SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION TO A REASONABLE EXTEND.
8. EXISTING UTILITY STRUCTURES IN AREAS OF NEW PAVING SHALL BE REMOVED AND REPLACED WITH NEW BOX/COVER AT NEW GRADE UNLESS SPECIFICALLY NOTED OTHERWISE.
9. ITEMS OUTSIDE THE LIMITS OF DEMOLITION SHALL REMAIN AND BE PROTECTED FROM DAMAGE DURING CONSTRUCTION.
10. EXISTING UTILITY STRUCTURES AND PIPING NOT SHOWN ON DEMOLITION PLAN TO BE REMOVED SHALL REMAIN AND BE PROTECTED.

UTILITY VERIFICATION NOTE

PRIOR TO THE START OF CONSTRUCTION, VERIFY AND POTHOLE ALL UTILITY POINTS OF CONNECTION FOR LOCATION, DEPTH, AND SIZE. IF CONFLICT IS FOUND, CONTACT THE ENGINEER IMMEDIATELY FOR DIRECTION.

IRRIGATION DEMOLITION NOTE

WITHIN LANDSCAPE AREAS TO BE DEMOLISHED THERE MAY BE EXISTING IRRIGATION LINES NOT SHOWN ON THIS PLAN. CONTRACTOR SHALL REMOVE LATERAL LINES AND HEADS ENCOUNTERED. MAIN LINES AND CONTROL WIRES MAY ONLY BE REMOVED PROVIDED THAT ROUTING IS KNOWN AND REMOVAL WILL NOT DEACTIVATE AN IRRIGATION SYSTEMS INTENDED TO REMAIN. IF CONFLICT IS FOUND, CONTACT THE ENGINEER FOR DIRECTION.

GENERAL NOTES:

Know what's below. Call before you dig. 811

1. THE TYPES, LOCATIONS, SIZES, AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE PLANS WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, EXTENT, SIZES, LOCATIONS AND DEPTHS OF SUCH UNDERGROUND UTILITIES. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL KNOWN UNDERGROUND UTILITIES. HOWEVER, WARREN CONSULTING ENGINEERS CAN ASSUME NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF ITS DELINEATION OF SUCH UNDERGROUND UTILITIES, NOR FOR THE EXISTENCE OF OTHER BURIED OBJECTS OR UTILITIES WHICH MAY BE ENCOUNTERED BUT WHICH ARE NOT SHOWN ON THESE PLANS. THE CONTRACTOR OR ANY SUBCONTRACTOR FOR THIS CONTRACT SHALL NOTIFY MEMBERS OF UNDERGROUND SERVICE ALERT (USA) TWO (2) WORKING DAYS IN ADVANCE OF PERFORMING ANY EXCAVATION WORK BY CALLING TOLL FREE 1-800-227-2600, OR 811.
2. WARREN CONSULTING ENGINEERS, INC. (WCE) ASSUMES NO RESPONSIBILITY FOR ERRORS IN PHYSICAL LOCATION OF IMPROVEMENTS, HORIZONTAL OR VERTICAL, IF STAKED BY OTHERS. IN ADDITION, ANY SUCH ERRORS IN PHYSICAL LOCATION MAY AFFECT THE INTENDED DESIGN OF SUCH IMPROVEMENTS AND WCE CANNOT BE HELD RESPONSIBLE FOR SUCH CONDITIONS WHICH ARE A RESULT OF ERRORS IN SURVEYING, OR IMPROPER CONSTRUCTION.
3. IF SUBSURFACE CULTURAL RESOURCES, REMAINS, AND/OR ARTIFACTS ARE UNCOVERED DURING PROJECT CONSTRUCTION, ALL WORK IN THE VICINITY SHALL BE STOPPED UNTIL SUCH ITEMS CAN BE ASSESSED BY AN APPROPRIATE MEMBER OF THE COUNTY ENVIRONMENTAL IMPACT SECTION STAFF.
4. CONTRACTOR AGREES THAT HE/SHE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND SHALL NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.
5. THE CONTRACTOR SHALL OBTAIN AN EXCAVATION PERMIT FROM THE STATE OF CALIFORNIA DEPARTMENT OF INDUSTRIAL SAFETY FOR ALL EXCAVATIONS OF 5 FEET OR MORE IN DEPTH.
6. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE ALL NECESSARY PRE-BID AND PRE-CONSTRUCTION SITE INSPECTION, AND/OR OBSERVATIONS ON THE SITE TO PRE-DETERMINE ALL HIS/HER MEANS AND METHODS NECESSARY TO COMPLETE THE IMPROVEMENTS SHOWN ON THESE PLANS AND PER THE PROJECT SPECIFICATIONS. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE, AND INCLUDE IN HIS/HER CONTRACT, ALL MEANS AND METHODS NECESSARY TO PERFORM A COMPLETE AND ACCEPTABLE JOB.
7. WHERE IMPROVEMENTS LIE WITHIN AN EXISTING DEVELOPED AREA, CONTRACTOR SHALL USE CAUTION WHEN ACCESSING THE SITE THROUGH THESE EXISTING IMPROVEMENTS. IT IS THE CONTRACTORS RESPONSIBILITY TO PROTECT ANY SUCH EXISTING IMPROVEMENTS OUTSIDE THE PROJECT BOUNDARY, OR EXISTING IMPROVEMENTS WITHIN THE BOUNDARY WHICH ARE TO REMAIN. PROPER PRECAUTIONS SHALL BE PROVIDED AND MAINTAINED THROUGHOUT CONSTRUCTION. ANY DAMAGE SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER.
8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO KEEP DETAILED RECORDS OF MINOR CHANGES OR ADJUSTMENTS MADE DURING CONSTRUCTION (WHICH WERE NOT FORMALLY ISSUED). UPON PROJECT COMPLETION, THESE RECORDS AND/OR INFORMATION SHALL BE PROVIDED TO THE OWNER AND WARREN CONSULTING ENGINEERS, INC. UNLESS AN OFFICIAL "AS-BUILT" SET OF PLANS IS A REQUIREMENT OF THE CONTRACT. IF AS-BUILT PLANS ARE A REQUIREMENT OF THE CONTRACT, REFER TO SPECIFICATIONS FOR AS-BUILT DELIVERABLE REQUIREMENTS.
9. IN VEHICULAR PATHWAYS, EXISTING ASPHALTIC AND/OR CONCRETE SURFACES SHALL BE CUT TO A NEAT AND STRAIGHT LINE, PARALLEL OR PERPENDICULAR TO THE VEHICULAR TRAVELED PATH. THIS IS TYPICALLY THE ROADWAY CENTERLINE, BUT MAY VARY. THAT SAWCUT EDGE SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION SO A CLEAN EDGE REMAINS FOR PATCH BACK.. IF EDGE IS DAMAGED, A NEW SAW CUT WILL BE REQUIRED. THE EXPOSED EDGE SHALL BE "TACKED" WITH EMULSION PRIOR TO PAVING.
10. NO BURNING OR BLASTING SHALL BE ALLOWED ONSITE UNLESS SPECIFICALLY ADDRESSED ON PLANS, OR SPECIFICALLY APPROVED AND COORDINATED WITH THE ARCHITECT, ENGINEER, AND LOCAL AGENCY OR OTHER ADMINISTRATIVE AUTHORITY.
11. SUBGRADE AND RESULTING FINISHED GRADE SHALL BE CONSTRUCTED SMOOTH AND UNIFORM BETWEEN SPOT ELEVATIONS, CONTOURS OR OTHER STRUCTURE ELEVATIONS SHOWN ON GRADING OR OTHER PLANS. NO MOUNDS, RUTS, DEPRESSIONS OR OTHER GRADING DEFICIENCIES WILL BE ALLOWED UNLESS SPECIFICALLY SHOWN ON PLANS.
12. ON NEW WATER SYSTEMS, SERVICE LATERALS SHALL BE MADE USING APPROPRIATE "TEE" AND "WYE" FITTINGS. SADDLE TAPS WILL ONLY BE ALLOWED WHEN MAKING CONNECTIONS TO EXISTING WATER MAINS.
13. CURING COMPOUND SHALL BE APPLIED IN A CONTINUOUS SOLID WET FLOWING COAT. ANY "SPOTTY" APPLICATIONS SHALL BE RECOATED IMMEDIATELY. APPLICATION SHALL BE INSPECTED BY PROJECT INSPECTOR DURING APPLICATION.
14. EMBEDMENT OF FEATURES IN CONCRETE PAVING, CURBS, OR WALLS, SUCH AS SQUARE OR ROUND TUBING, POSTS, OR COLUMNS, STEEL BOLTED PLATES, OR OTHER STRUCTURES, SHALL REQUIRE ADDITIONAL SCORE OR EXPANSION JOINTS TO PREVENT UNCONTROLLED CRACKING. THOSE ADDITIONAL JOINTS MAY OR MAY NOT BE SPECIFICALLY SHOWN ON PLANS BUT SHALL BE PROVIDED BY THE CONTRACTOR.
15. EMBEDMENT OF FEATURES IN CONCRETE PAVING, CURBS, OR WALLS, SUCH AS SQUARE OR ROUND TUBING, POSTS, OR COLUMNS, STEEL BOLTED PLATES, OR OTHER STRUCTURES, SHALL REQUIRE A MINOR ADJUSTMENT OF REBAR WITHIN CONCRETE TO ALLOW FOR SUCH STRUCTURE. THAT REBAR ADJUSTMENT MAY NOT BE SPECIFICALLY SHOWN ON PLANS.
16. NO MORE THAN 1 GALLON OF WATER PER YARD OF CONCRETE CAN BE ADDED TO THE TRUCK AFTER ARRIVAL TO PROJECT SITE. THE ADDITION OF WATER CAN ONLY BE ADDED UNDER THE SUPERVISION OF THE CONCRETE INSPECTOR OR LABORATORY TECHNICIAN.
17. WHEN PUMPING CONCRETE FOR PLACEMENT, ABSOLUTELY NO WATER IS TO BE ADDED TO PUMP HOPPER. ANY WATER ADDED TO HOPPER WILL BE REASON FOR CONCRETE REJECTION AT THE CONTRACTORS EXPENSE.
18. ALL CONTRACTION/CONSTRUCTION JOINTS "CJ" SHALL BE 1/4 THE SLAB THICKNESS DEEP, BUT NO LESS THAN 1" FOR CONTROLLING OF CRACKING. CONTRACTOR SHALL EXERCISE CAUTION WHEN FINAL TROWELING OF CONCRETE SO AS NOT TO FILL IN THESE JOINTS WITH CONCRETE CREAM. ANY CRACKS OUTSIDE OF JOINTS WHICH WERE CONSTRUCTED LESS THAN 1" DEEP, SHALL BE CAUSE FOR CONCRETE SLAB(S) TO BE REMOVED AND REPLACE AT CONTRACTORS EXPENSE.
19. ANY SCREED BOARDS SET WITHIN CONCRETE SLABS SHALL BE AN "OVERHEAD SCREED" SO THERE IS NO INTERFERENCE WITH THE PLACEMENT AND ALIGNMENT OF SLAB REINFORCING.
20. 3-1/2" FELT JOINTS WILL NOT BE ACCEPTED. PROVIDE A FULL 4" FELT JOINT FOR 4" SLAB CONSTRUCTION, AND A 6" FELT JOINT FOR A 6" SLAB SLAB CONSTRUCTION.
21. SHOULD ANY SHRINKAGE CRACKS OCCUR OUTSIDE OF EITHER THE EXPANSION JOINTS OR CRACK CONTROL JOINTS, THEN THE CONCRETE SLAB SHALL BE SAWCUT AT THE NEAREST JOINTS ON EACH SIDE OF THE CRACK AND THE CONCRETE SECTION SHALL BE, REMOVED AND REPLACED. NEW CONCRETE SHALL BE DOWELED INTO EXISTING CONCRETE PER DRAWING DETAIL.
22. ALL AREAS DISTURBED BY GRADING OPERATIONS WHETHER SHOWN ON THE DRAWINGS OR NOT SHALL BE HYDRO SEEDED UNLESS OTHERWISE NOTED. HYDRO SEEDING SHALL CONFORM TO LOCAL CITY/COUNTY STANDARDS.
23. REPAIR OR PATCHING OF GALVANIZED METALS, SUCH AS AFTER WELDING GALVANIZED COMPONENTS, SHALL BE MADE USING A ZINC COMPOSITION "HOT STICK" APPLICATION PER ASTM A 780-01. GALVANIZING PAINTS WILL NOT BE ALLOWED.

GENERAL PAVING SURFACE NOTES:

1. PROVIDE EQUIVALENT OF MEDIUM BROOM FINISH AT SLOPES UP TO 5.99%, TYPICAL. PROVIDE EQUIVALENT OF HEAVY BROOM FINISH AT SLOPES 6% AND GREATER. REFER TO SPECIFICATIONS.
2. ALL NEW PEDESTRIAN WALKWAYS (NON-RAMP) SHALL BE SLOPED NO GREATER THAN 2.0%, AND NO LESS THAN 1.0% IN ANY DIRECTION, UNLESS SPECIFICALLY LABELED OTHERWISE. ALL CONCRETE SHALL MEET THE FOLLOWING SLOPE REQUIREMENTS:
   - NO GREATER THAN 5% SLOPE IN THE DIRECTION OF TRAVEL.
   - NO GREATER THAN 2% SLOPE CROSSING THE DIRECTION OF TRAVEL.
   - NO GREATER THAN 2% SLOPE IN ANY DIRECTION IN COURTYARD OR PLAZA AREAS.

CIVIL SHEET INDEX

C0.0 CIVIL GENERAL NOTES AND ABBREVIATIONS
C0.1 TOPOGRAPHIC SURVEY
C1.1 DEMOLITION PLAN
C2.1 GRADING PLAN
C3.1 PAVING AND STRIPING PLAN
C4.1 EROSION CONTROL PLAN
C5.1 DETAILS AND SECTIONS

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REGISTERED PROFESSIONAL ENGINEER — ANTHONY J. TASSANO — NO. C74696 — STATE OF CALIFORNIA

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Project
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Sheet Title
CIVIL GENERAL NOTES AND ABBREVIATIONS

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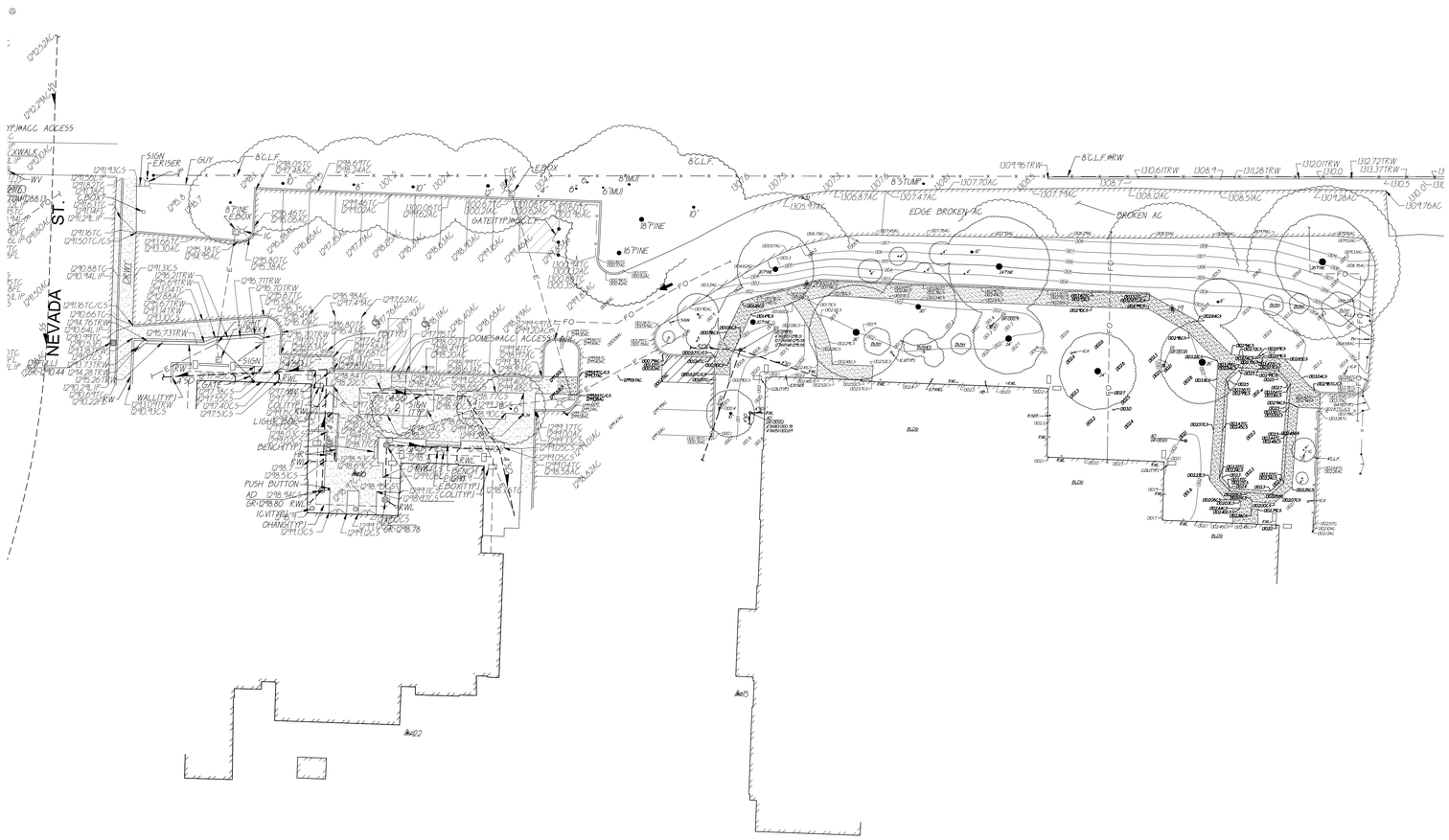
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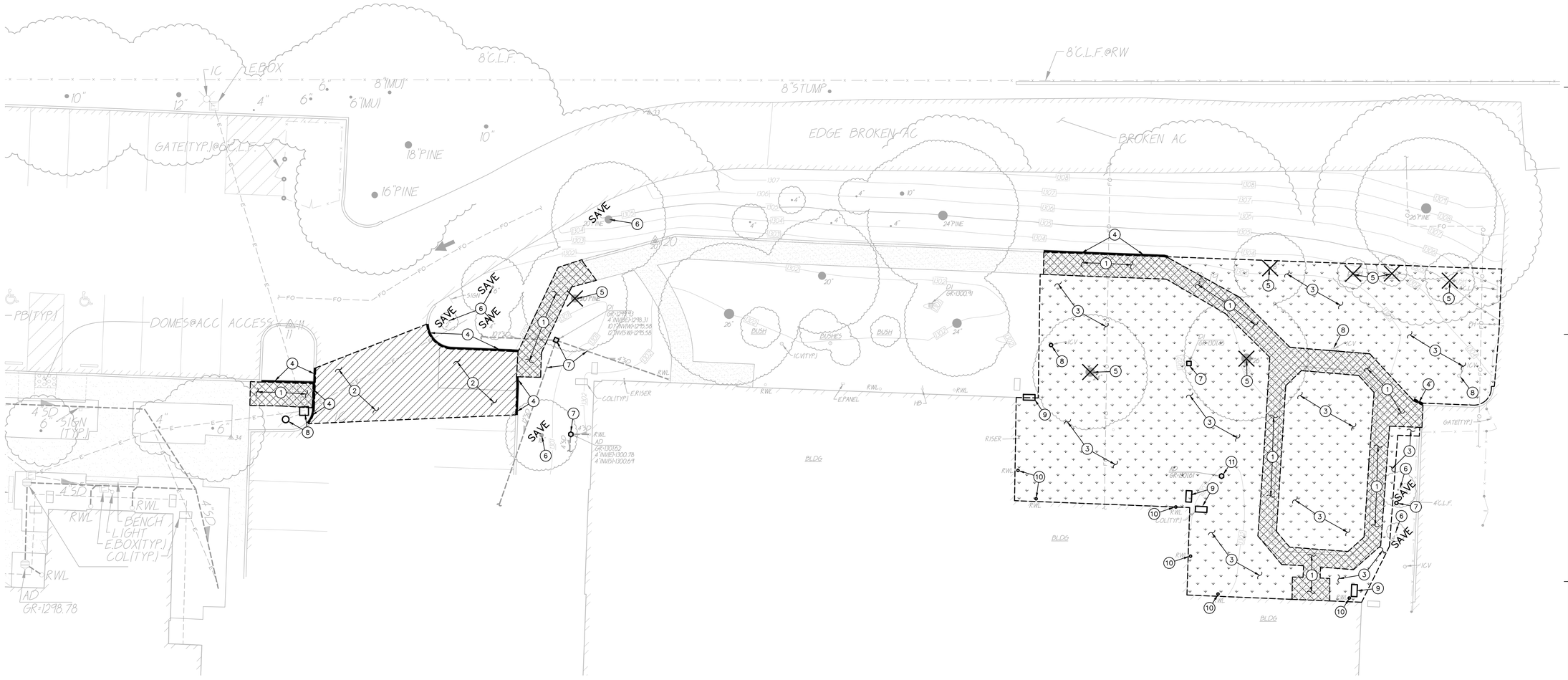
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NEVADA ST.
EDGE BROKEN AC
BROKEN AC
DOME@ALC ACCESS
BENCH(TYP)
LIGHT POLE
PUSH BUTTON
SIGN
GATE(TYP)
EBOX
EXISTING BUILDING
EXISTING BUILDING
EXISTING BUILDING

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DEMOLITION GENERAL NOTES

1. REFER TO ARCHITECTURAL, LANDSCAPE, ELECTRICAL AND PLUMBING PLANS FOR ADDITIONAL DEMOLITION ITEMS.
2. IN THE EVENT THAT ANY UNUSUAL CONDITIONS NOT COVERED BY THE GEOTECHNICAL INVESTIGATION REPORT OR ARE ENCOUNTERED DURING GRADING OPERATIONS THE GEOTECHNICAL ENGINEER AND THE ARCHITECT SHALL BE IMMEDIATELY NOTIFIED FOR DIRECTIONS.
3. ADDITIONAL DEMOLITION INFORMATION MAY BE SHOWN ON THE GRADING, DRAINAGE, AND UTILITY PLANS, AND THOSE PLANS PREPARED BY OTHER DISCIPLINES FOR THIS PROJECT.
4. ALL DEMOLISHED ITEMS SHALL BE DISPOSED OF OFFSITE AT A SUITABLE, LEGAL, DUMP SITE OR OTHER FACILITY.
5. ALL DISPOSED OF MATERIALS SHALL BE RECYCLED IF POSSIBLE.
6. THE SCHOOL DISTRICT SHALL HAVE SALVAGE RIGHTS TO ANY DEMOLISHED ITEMS SHOWN HEREON. THE CONTRACTOR SHALL GIVE THE DISTRICT NOTICE 7 DAYS PRIOR TO THE START OF DEMOLITION. THE DISTRICT SHALL MOVE ANY RETAINED ITEMS OUT OF THE CONTRACTORS WORK AREA, UNLESS ANOTHER ARRANGEMENT IS MADE WITH THE CONTRACTOR. ANY REMAINING ITEMS BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE. ANY ITEMS NOT SHOWN FOR REMOVAL SHALL REMAIN AND SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION TO A REASONABLE EXTENT.
7. EXISTING UTILITY STRUCTURES IN AREAS OF NEW PAVING SHALL BE REMOVED AND REPLACED WITH NEW BOX/COVER AT NEW GRADE UNLESS SPECIFICALLY NOTED OTHERWISE.
8. ITEMS OUTSIDE THE LIMITS OF DEMOLITION SHALL REMAIN AND BE PROTECTED FROM DAMAGE DURING CONSTRUCTION.
9. EXISTING UTILITY STRUCTURES AND PIPING NOT SHOWN ON DEMOLITION PLAN TO BE REMOVED SHALL REMAIN AND BE PROTECTED.
10. SAWCUTS AND SUBSEQUENT PATCH BACK OF CONCRETE WALKS, SHALL BE TO THE EXISTING CONCRETE JOINT BEYOND THE NEAREST LOCATION OF DEMOLITION AS SHOWN. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE, SHOW AND COORDINATE WITH EXISTING JOINTS, HOWEVER IF FIELD CONDITIONS ARE OTHERWISE, IT IS UNDERSTOOD TO REMOVE AND PATCH BACK TO THE NEAREST JOINTS BEYOND DEMOLITION.
11. PRIOR TO THE START OF CONSTRUCTION, VERIFY AND POTHOLE ALL UTILITY POINTS OF CONNECTION FOR LOCATION, DEPTH, AND SIZE. IF CONFLICT IS FOUND, CONTACT THE ENGINEER IMMEDIATELY FOR DIRECTION.
12. WITHIN LANDSCAPE AREAS TO BE DEMOLISHED THERE MAY BE EXISTING IRRIGATION LINES NOT SHOWN ON THIS PLAN. CONTRACTOR SHALL REMOVE LATERAL LINES AND HEADS ENCOUNTERED. MAIN LINES AND CONTROL WIRES MAY ONLY BE REMOVED PROVIDED THAT ROUTING IS KNOWN AND REMOVAL WILL NOT DEACTIVATE AN IRRIGATION SYSTEMS INTENDED TO REMAIN. IF CONFLICT IS FOUND, CONTACT THE ENGINEER FOR DIRECTION.
13. COORDINATE REMOVAL OF LANDSCAPE ITEMS WITH LANDSCAPE PLANS.

DEMOLITION NOTES

1. SAWCUT, REMOVE AND DISPOSE OF EXISTING CONCRETE PAVING AND ASSOCIATED AGGREGATE BASE. SAWCUT SHALL BE A NEAT STRAIGHT LINE, MAINTAIN CLEAN, STRAIGHT CUT EDGE UNTIL NEW PAVING IS PLACED.
2. SAWCUT, REMOVE AND DISPOSE OF EXISTING ASPHALT PAVING AND ASSOCIATED AGGREGATE BASE. SAWCUT SHALL BE A NEAT STRAIGHT LINE, MAINTAIN CLEAN, STRAIGHT CUT EDGE UNTIL NEW PAVING IS PLACED.
3. REMOVE AND DISPOSE OF EXISTING LANDSCAPING,TURF AND ASSOCIATED IRRIGATION PIPING/SPRINKLERS WITHIN AREAS OF WORK. CUT AND CAP ANY MAINLINES NEAR WHERE THEY ENTER THE BOUNDARY OF THE PROJECT. MARK ALL CAPPED LINES WITH AN IRRIGATION VALVE BOX. ALL EXISTING IRRIGATION AREAS OUTSIDE THE PROJECT WORK AREA SHALL BE PRESERVED AND OPERATIONAL INTEGRITY SHALL BE MAINTAINED WITH PROPER SPRINKLER COVERAGE TO TURF AREAS TO REMAIN.
4. REMOVE AND DISPOSE OF EXISTING CONCRETE CURB TO EXTENT SHOWN.
5. REMOVE TREE, TRUNK AND ASSOCIATED ROOTS.
6. PROTECT EXISTING TREE IN PLACE.
7. PROTECT EXISTING DRAIN INLET AND ASSOCIATED STORM DRAIN PIPE IN PLACE.
8. PROTECT EXISTING UTILITIES IN PLACE.
9. PROTECT EXISTING COLUMNS IN PLACE.
10. PROTECT EXISTING DOWNSPOUTS IN PLACE.
11. REMOVE AND DISPOSE OF EXISTING AREA DRAIN. RECONNECT ADJOINING PIPES AT DRAIN. PROVIDE ALL FITTINGS NECESSARY.

GRAPHIC SCALE

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HY Architects Project number: 5924

Facility

PLACER COUNTY OFFICE OF EDUCATION
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Project

SITE IMPROVEMENTS

Sheet Title

DEMOLITION PLAN

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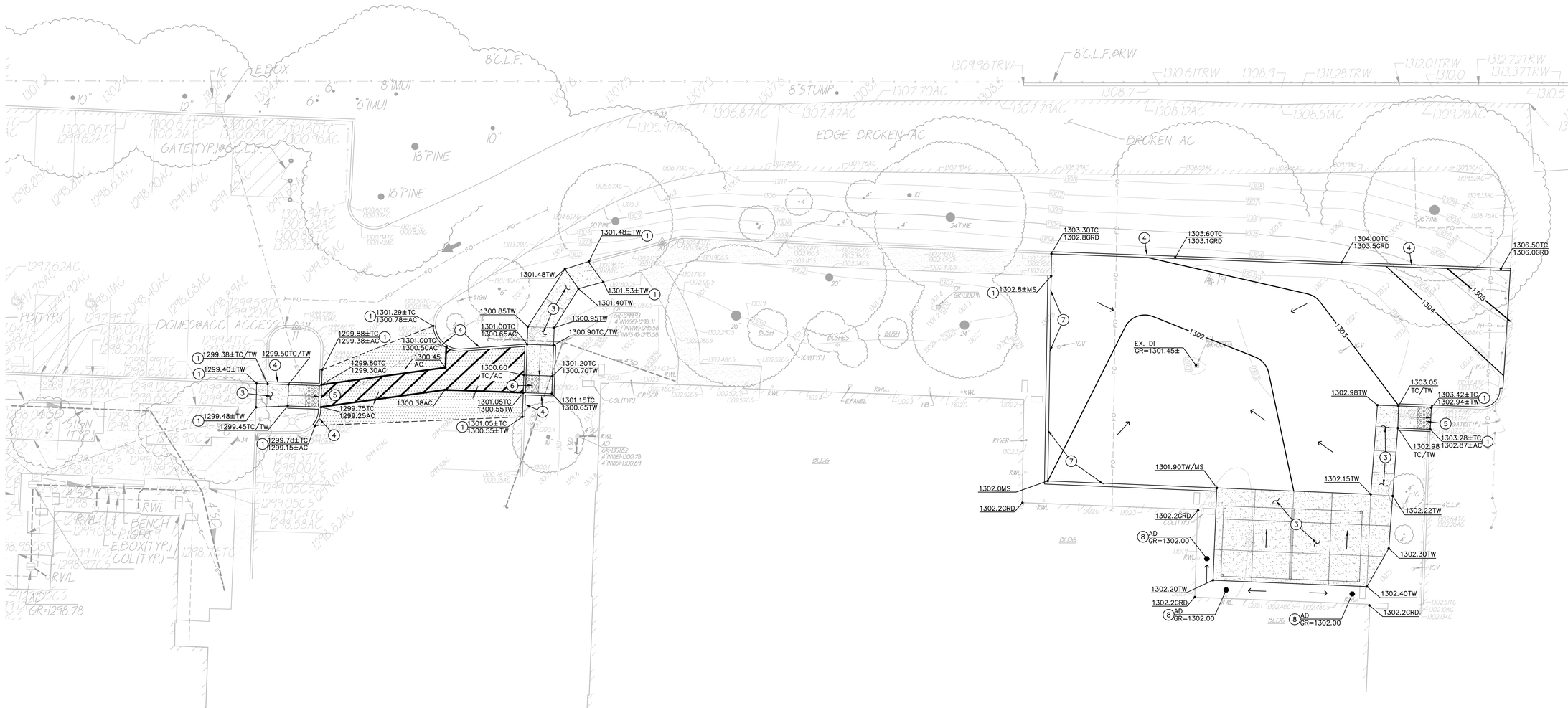
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SUBGRADE PREPARATION

1. FOLLOWING SITE DEMOLITION ACTIVITIES:

   EXCAVATE DOWN TO ROUGH SUBGRADE ELEVATION, SCARIFY THE EXISTING SOILS TO A MINIMUM DEPTH OF 8 INCHES, MOISTURE CONDITION TO THE OPTIMUM MOISTURE CONTENT AND COMPACT TO AT LEAST 90 PERCENT OF THE MAXIMUM DRY DENSITY DETERMINED BY THE ASTM D1557 TEST METHOD. UPPER 8 INCHES OF SUBGRADE BENEATH ASPHALT PAVEMENT SHALL BE COMPACTED TO 95 PERCENT.

GRADING NOTES

1. MATCH EXISTING GRADE/ELEVATION.
2. GRADE UNIFORMLY TO INLET/SWALE.
3. CONSTRUCT CONCRETE SIDEWALK PER (1, C5.1)
4. CONSTRUCT CONCRETE CURB PER (2, C5.1)
5. CONSTRUCT TYPE 1 CURB RAMP PER (4, C5.1)
6. CONSTRUCT TYPE 2 CURB RAMP PER (5, C5.1)
7. CONSTRUCT CONCRETE MOW STRIP. SEE LANDSCAPE PLANS.
8. CONSTRUCT AREA DRAIN. CONNECT TO EXISTING STORM DRAIN THAT IS SERVICING DOWNSPOUT. PROVIDE ALL FITTINGS NECESSARY TO MAKE CONNECTION. (6, C5.1)

GRAPHIC SCALE

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Project

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Sheet Title

GRADING PLAN

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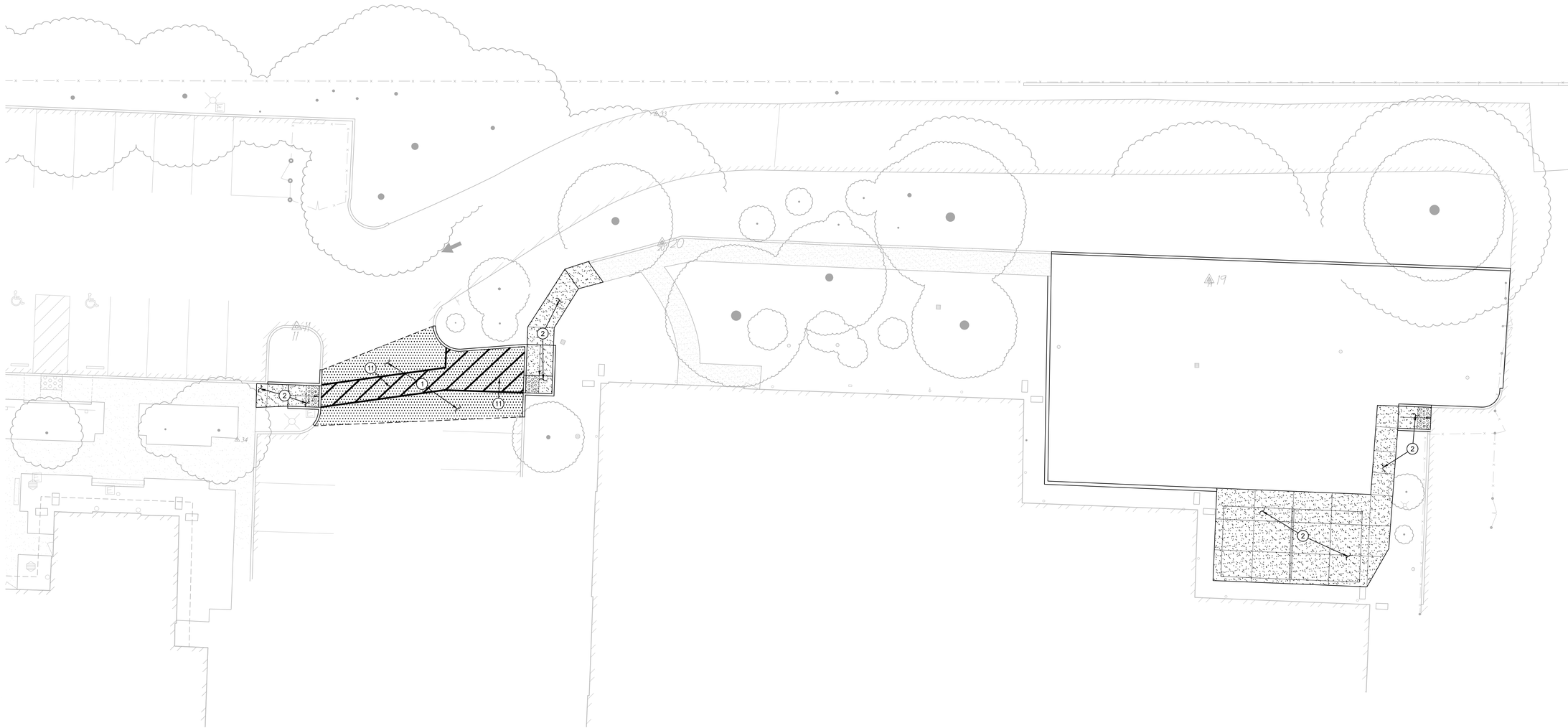
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PAVING GENERAL NOTES:

1. AGGREGATE BASE SHALL MEET CALTRANS SPECIFICATIONS FOR CLASS II AGGREGATE BASE.
2. ALL AGGREGATE BASE SHALL BE MOISTURE CONDITIONED TO, OR SLIGHTLY ABOVE, OPTIMUM MOISTURE CONTENT AND COMPACTED TO 95% RELATIVE COMPACTION.
3. RECYCLED ASPHALT MAY BE USED AS CONCRETE AND ASPHALT BASE MATERIAL PROVIDED IT MEETS CALTRANS SPECIFICATIONS FOR CLASS II AB.
4. PAVEMENT SUBGRADE PREPARATION, I.E. SCARIFICATION, MOISTURE CONDITIONING, AND COMPACTION SHALL BE PERFORMED AFTER;
   A. POT HOLING ALL EXISTING UTILITIES.
   B. THE INSTALLATION OF UNDERGROUND UTILITIES AND TRENCHES BACKFILLED IN ACCORDANCE WITH THESE PLANS.
6. ALL AREAS DISTURBED BY GRADING, DEMOLITION, OR CONSTRUCTION ACCESS, WHICH ARE NOT SURFACED BY THIS SET OF PLANS, OR LANDSCAPE PLANS, SHALL BE RESTORED.
7. REFER TO GRADING PLANS FOR CURBS, CURB GUTTERS, VALLEY GUTTERS, AND OTHER CONCRETE STRUCTURES AND PAVING FEATURES NOT SPECIFICALLY NOTED ON THIS PLAN.
8. ADJUST TO FINISH GRADE ALL BOXES, FRAMES, COVERS SLEEVES, POST HOLES, GRATES, ETC. FOUND IN NEW ASPHALT OR CONCRETE PAVING AREAS, WHICH ARE NOT NOTED FOR REMOVAL. REPLACE PER PLAN.

PAVING LEGEND

(1) TYPE 1 PAVING
PLACE 3" AC OVER 12" CLASS II AB ON SUBGRADE COMPACTED PER SPECIFICATIONS. PLACE TWO (2) APPLICATIONS OF SEAL COAT ON NEW PAVING

(2) TYPE 2 PAVING
PLACE 5" PCC WITH #4 REBAR @ 24" O.C.E.W. OVER 4" CLASS II AB ON SUBGRADE COMPACTED PER SPECIFICATIONS.

STRIPING LEGEND

11. PROVIDE 4" WIDE, WHITE, DIAGONAL STRIPING @ 36" O.C.

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PAVING AND STRIPING PLAN

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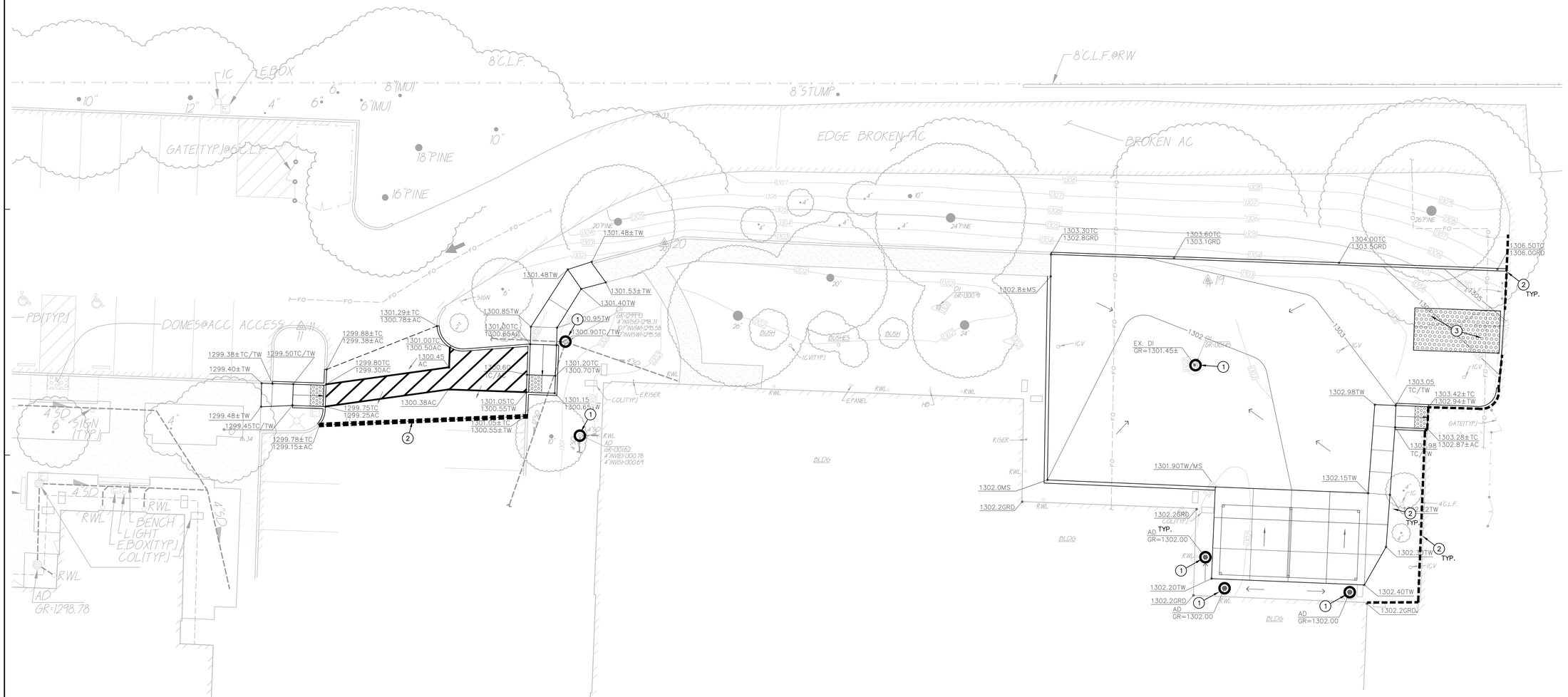
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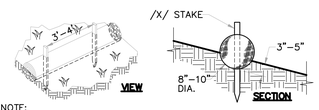
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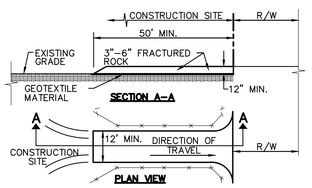
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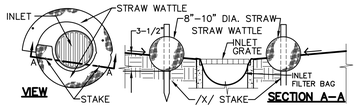
NOTE:
STRAW ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3"-5" DEEP, DUG ON CONTOUR. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL.

1 / C4.1 STRAW WATTLES — NO SCALE



NOTES:
1. STABILIZED CONSTRUCTION SITE ACCESS SHALL BE CONSTRUCTED OF 3"-6" ANGULAR ROCK MATERIAL CONFORMING TO SECTION 26 OF STATE SPECIFICATIONS PLACED OVER A CLASS 2 NON-WOVEN GEOTEXTILE MATERIAL. ROCK SHALL BE PLACED TO A MINIMUM THICKNESS OF SIX INCHES. THE METHOD OF PLACING, SPREADING AND COMPACTING ROCK SHALL CONFORM TO SECTION 26 OF THE STATE SPECIFICATIONS.
2. LENGTH OF SITE ACCESS SHALL BE A MINIMUM LENGTH OF FIFTY FEET. WIDTH SHALL BE A MINIMUM WIDTH OF TWELVE FEET OR AS NECESSARY TO COVER ALL VEHICULAR INGRESS AND EGRESS.
3. THE SITE ACCESS SHALL BE KEPT IN GOOD CONDITION BY OCCASIONAL TOP DRESSING.

2 / C4.1 STABILIZED CONSTRUCTION SITE ACCESS — NO SCALE



NOTE: STRAW WATTLE INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE WATTLE IN A TRENCH, 3-1/2" DEEP, DUG ON CONTOUR. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL.

3 / C4.1 STRAW WATTLE INLET FILTER — NO SCALE

EROSION CONTROL NOTES

1. CONTRACTOR SHALL PROVIDE STRAW WATTLE BARRIER AND FILTER BAG AT ALL INLETS (NEW AND/OR EXIST.) IN AREAS OF WORK, OR AS REQUIRED BY SPECS. (3 / C4.1)
2. CONTRACTOR SHALL PROVIDE STRAW WATTLES AT PERIMETER OF SITE AND IN AREAS REQUIRED BY SPECS. (1 / C4.1)
3. CONTRACTOR SHALL PROVIDE STABILIZED CONSTRUCTION SITE ACCESS PER DETAIL AT LOCATION REQUIRED FOR CONSTRUCTION ACTIVITIES. (2 / C4.1)
4. CONTRACTOR SHALL MAINTAIN ALL STRAW WATTLES AND OTHER STORM WATER POLLUTION PREVENTION DEVICES THROUGHOUT CONSTRUCTION. REMOVE ALL POLLUTION PREVENTION DEVICES AT THE END OF CONSTRUCTION AS REQUIRED.
5. PRIOR TO PLACEMENT OF LANDSCAPING AND/OR FINISHED GROUND SEEDING, REMOVE TEMPORARY EROSION CONTROL MEASURES.
6. CONTRACTOR SHALL PROVIDE AND MAINTAIN FILTER BAGS AT ALL INLETS.

GRAPHIC SCALE
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Project
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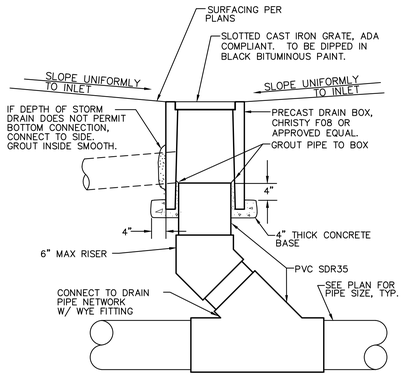
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EROSION CONTROL PLAN

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Sheet	C4.1
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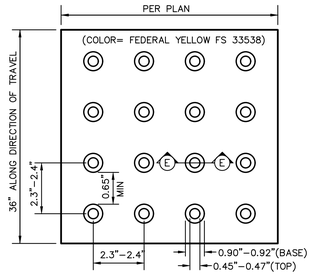
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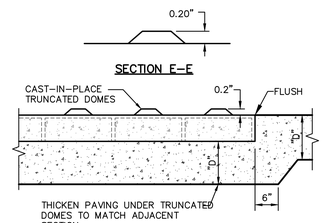
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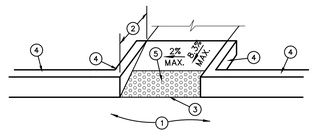


6 / C5.1 AREA DRAIN — NO SCALE





3 / C5.1 TRUNCATED DOMES — NO SCALE

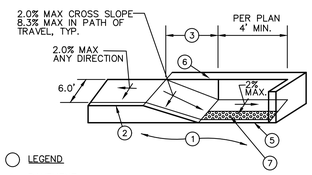


LEGEND

1. PAVEMENT.
2. 8.3% (1:12) MAXIMUM SLOPE, 2.0% MAX CROSS SLOPE.
3. TRANSITION SHALL BE FLUSH AND FREE OF ABRUPT CHANGE PER CALIFORNIA BUILDING CODE, TITLE 24, SECTION 11B–503.
4. 6" WIDE RETAINING CURB, HEIGHT TO BE DETERMINED BY PROJECTED BACK OF WALK GRADE AT EACH END OF CURB RETURN AND BACK OF LANDING SURFACE.
5. PLACE 36" WIDE PREFABRICATED CAST IN PLACE DETECTABLE WARNING TILE BY ARMOR–TILE OR APPROVED EQUAL. DETECTABLE WARNINGS AT CURB RAMPS SHALL EXTEND 36 INCHES IN THE DIRECTION OF TRAVEL. DETECTABLE WARNINGS SHALL EXTEND THE FULL WIDTH OF THE RAMP RUN LESS 2 INCHES MAXIMUM ON EACH SIDE, EXCLUDING ANY FLARED SIDES. DETECTABLE WARNINGS SHALL BE LOCATED SO THE EDGE NEAREST THE CURB IS 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FROM THE LINE AT THE FACE OF THE CURB MARKING THE TRANSITION BETWEEN THE CURB AND THE GUTTER OR STREET.

3 / C5.1

4 / C5.1 ACCESSIBLE CURB RAMP #1 — NO SCALE

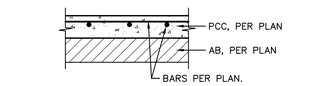


LEGEND

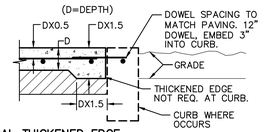
1. PAVEMENT.
2. TOP FACE OF CURB, STANDARD 6" HIGH.
3. 8.3% (1:12) MAXIMUM SLOPE, 2.0% MAX CROSS SLOPE.
4. SCORE MARK, 6" BACK OF CURB.
5. TRANSITION SHALL BE FLUSH AND FREE OF ABRUPT CHANGE PER CALIFORNIA BUILDING CODE, TITLE 24, SECTION 11B–503.
6. 6" WIDE RETAINING CURB, HEIGHT TO BE DETERMINED BY PROJECTED BACK OF WALK GRADE AT EACH END OF CURB RETURN AND BACK OF LANDING SURFACE.
7. PLACE 36" WIDE PREFABRICATED CAST IN PLACE DETECTABLE WARNING TILE BY ARMOR–TILE OR APPROVED EQUAL. DETECTABLE WARNINGS AT CURB RAMPS SHALL EXTEND 36 INCHES IN THE DIRECTION OF TRAVEL. DETECTABLE WARNINGS SHALL EXTEND THE FULL WIDTH OF THE RAMP RUN LESS 2 INCHES MAXIMUM ON EACH SIDE, EXCLUDING ANY FLARED SIDES. DETECTABLE WARNINGS SHALL BE LOCATED SO THE EDGE NEAREST THE CURB IS 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FROM THE LINE AT THE FACE OF THE CURB MARKING THE TRANSITION BETWEEN THE CURB AND THE GUTTER OR STREET.

3 / C5.1

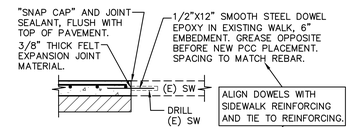
5 / C5.1 ACCESSIBLE CURB RAMP #2 — NO SCALE



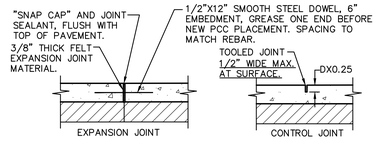
TYPICAL SECTION



TYPICAL THICKENED EDGE



CONNECTION TO (E) CONCRETE

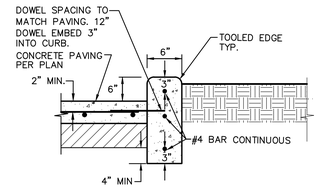


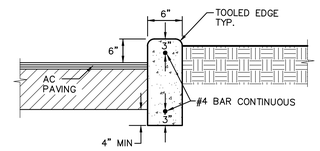
TYPICAL JOINTS

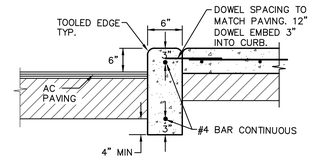
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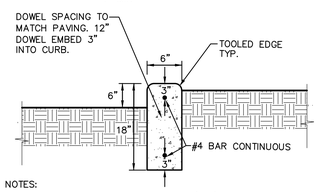
1. PROVIDE FELT EXPANSION JOINTS AT 20 FEET O.C. MAX. SEE PLAN FOR LAYOUT.
2. PROVIDE CONTROL JOINTS AT 10 FEET O.C. MAX. SEE PLAN FOR LAYOUT.
3. EXPANSION OR CONTROL JOINTS SHALL NOT EXCEED 1/2" IN SURFACE WIDTH.

1 / C5.1 CONCRETE SIDEWALK — NO SCALE









NOTES:

1. PROVIDE FELT EXPANSION JOINTS (E.J.) AT 60 FEET O.C. MAXIMUM PROVIDE CONTROL JOINTS AT 10 FEET O.C. MAXIMUM, EXCEPT WHEN PLACING ADJACENT TO CONCRETE WALKS THE EXPANSION JOINTS SHALL ALIGN WITH THE EXPANSION JOINTS SHOWN FOR THE CONCRETE WALKS.
2. AT E.J. USE 1/2"X24" SMOOTH DOWELS, ALIGN WITH REBAR, GREASE 1/2 THE LENGTH BEFORE CONCRETE PLACEMENT.

2 / C5.1 CONCRETE CURB — NO SCALE

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Revisions			
Delta	Date	Revisions	By

PLAN CHECK SET

ISSUE DATE: 07/21/23 BY: AT

ANTHONY J. TASSANO NO. C74698 REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA

WCE
WARREN CONSULTING ENGINEERS, INC.
1117 WINDFIELD WAY, SUITE 110
EL DORADO HILLS, CA 95762 | (916) 985-1870

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Architect/Engineer Of Record:

HY HIBSER YAMAUCHI Architects, Inc.
4602 2nd Street, Suite 3
Davis, CA 95618
530.758.1270 tel | 530.758.4789 fax

HY Architects Project number: 5924

Facility

PLACER COUNTY OFFICE OF EDUCATION
360 NEVADA STREET, AUBURN, CA 95603

Project

SITE IMPROVEMENTS

Sheet Title

DETAILS AND SECTIONS

Client Project Number: Client Proj.

Scale:
Drawn By: AT
Checked By: AT
Issue Date: 7/24/23
Revit Version: 2023

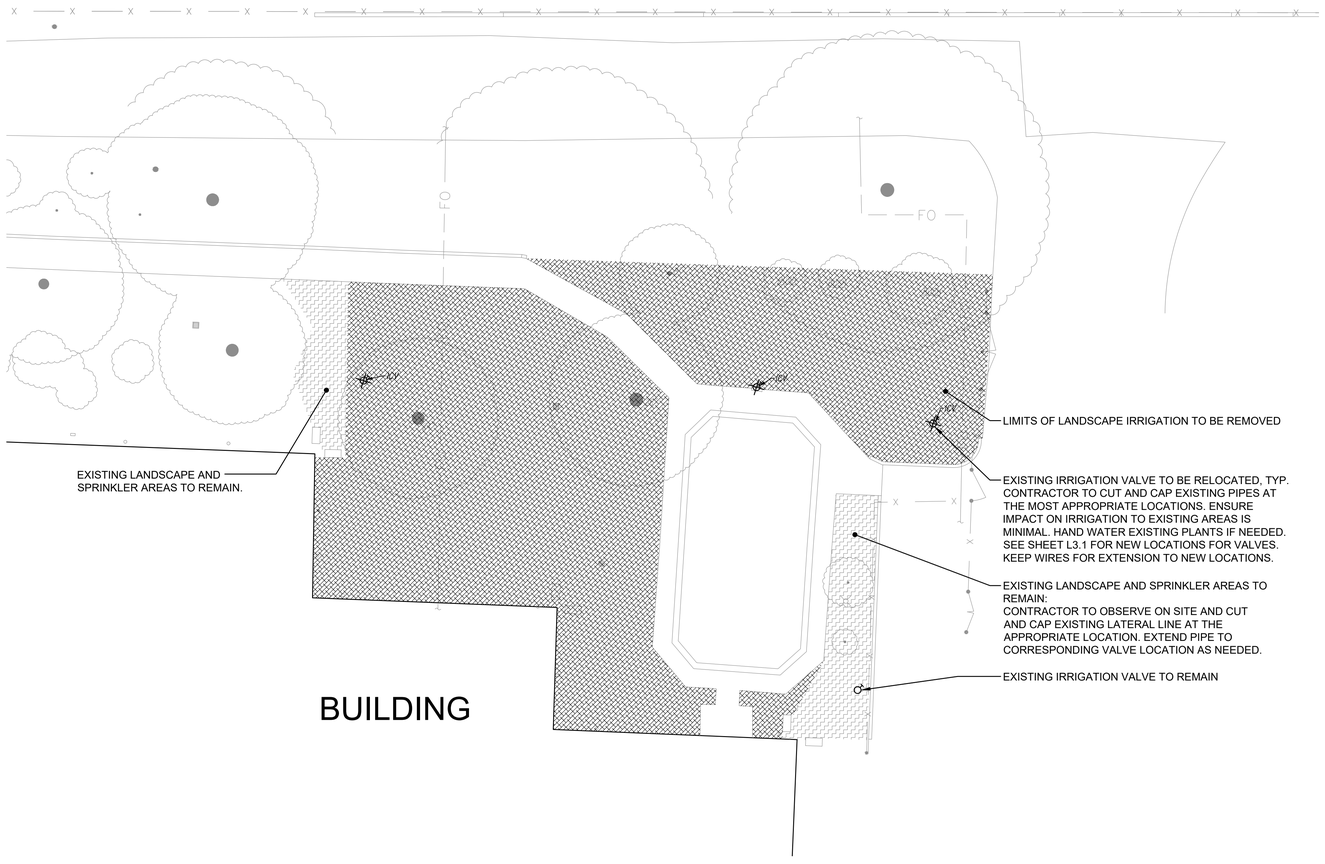
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C5.1

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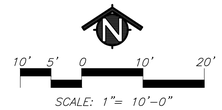


KEY — IRRIGATION DEMOLITION LEGEND

- EXISTING TREE TO REMAIN
  SEE CIVIL'S PLANS FOR TREES TO BE REMOVED.
- LIMITS OF LANDSCAPE IRRIGATION TO BE REMOVED
- EXISTING LANDSCAPE AND SPRINKLER AREAS TO REMAIN
- EXISTING AUTOMATIC CONTROL VALVE TO REMAIN
- EXISTING AUTOMATIC CONTROL VALVE TO BE RELOCATED

PRE-CONSTRUCTION SPRINKLER IRRIGATION NOTES

1. PRIOR TO START OF CONSTRUCTION CONTRACTOR REQUIRED TO CONTACT:
   NAME, TITLE: PETER LARIMER, MTW GROUP
   PHONE NUMBER: (916)369-3990
   TO SET UP A MEETING ON SITE TO OPERATE THE EXISTING SPRINKLER IRRIGATION SYSTEM AND DISCUSS THE MODIFICATIONS THAT ARE TO BE MADE TO THE EXISTING SYSTEM TO ACCOMMODATE FOR THE NEW CONSTRUCTION.
2. CONTRACTOR TO OPERATE AND PROGRAM EXISTING SPRINKLER IRRIGATION SYSTEM THAT IS TO REMAIN IN ORDER TO PROVIDE WATER TO THE EXISTING LANDSCAPE TO REMAIN.
3. CONTRACTOR TO REMOVE ALL EXISTING PIPE AND SPRINKLER HEADS WHEN THEY ARE IN NEW PLANTING AREAS.
4. CONTRACTOR TO RESTORE AND REPAIR ANY EXISTING SPRINKLER IRRIGATION SYSTEM OR EXISTING LANDSCAPE WHICH IS IN AREAS TO REMAIN THAT IS DAMAGED BY NEW WORK.
5. ALL WORK TO EXISTING SPRINKLER IRRIGATION SYSTEM TO BE COMPLETED PRIOR TO SITE DEMOLITION.



Revisions

Date	Revisions	By

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ISSUE DATE: 7/21/23 BY: BG

22-43

MTW group
LANDSCAPE ARCHITECTURE AND PLANNING
2707 K Street, Suite 201
Sacramento, CA 95816
916 369-3990

Peter D. Larimer C-5284

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Architect/Engineer Of Record:

HIBSER YAMAUCHI Architects, Inc.
4602 2nd Street, Suite 3
Davis, CA 95618
530.758.1270 tel ; 530.758.4789 fax

HY Architects Project number: 5791

Facility

PLACER COUNTY OFFICE OF EDUCATION
360 NEVADA STREET, AUBURN, CA 95603

Project

SITE IMPROVEMENTS

Sheet Title

IRRIGATION DEMOLITION PLAN

Client Project Number: 6014.000

Scale: As indicated
Drawn By: SL
Checked By: PL
Issue Date: 7/24/23
Revit Version: 2023

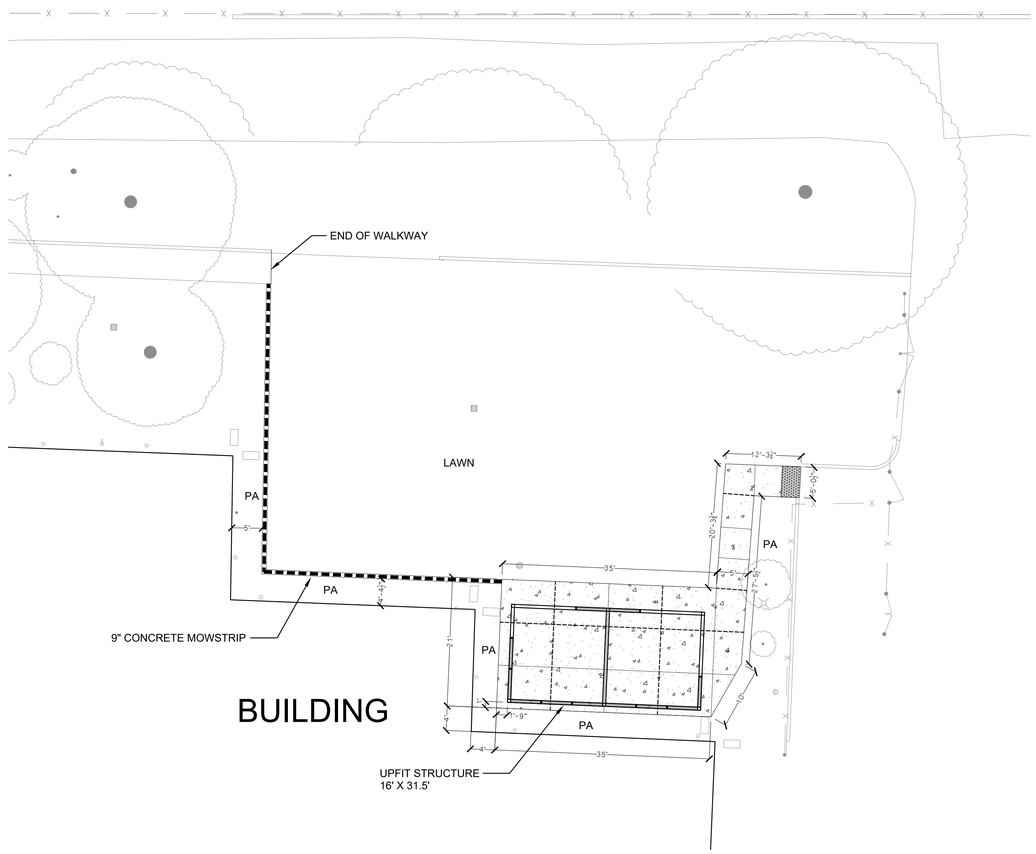
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KEY | SITE LEGEND

SCORE JOINT
SEE CIVIL SHEETS
EXPANSION JOINT
SEE CIVIL SHEETS

CONCRETE MOWSTRIP
SEE DETAIL L4.1-5.

PA

DENOTES PLANTER AREA

SHADE STRUCTURES (OFCI):

MANUFACTURER: LANDSCAPE FORMS
PRODUCT: UPFIT ADAPTIVE OUTDOOR STRUCTURE
TOTAL SIZE: 16'X31.5'
CONTACT: NATHAN DAMRATOWSKI
(269)337-1247
NATHAND@LANDSCAPEFORMS.COM
CONTRACTOR TO POUR FOOTINGS FOR POSTS AND USE CERTIFIED UPFIT INSTALLER FOR STRUCTURE INSTALLATION. FOOTINGS TO BE INSTALLED 4-6" BELOW TOP OF CONCRETE

EXISTING TREES/SHRUBS TO REMAIN

10' 5' 0 10' 20'
SCALE: 1"= 10'-0"

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Revisions

Date	Revisions	By

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ISSUE DATE: 7/21/23 BY: BG

22-43

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2707 K Street, Suite 201
Sacramento, CA 95816
916 369-3990

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Project
SITE IMPROVEMENTS

Sheet Title
SITE PLAN

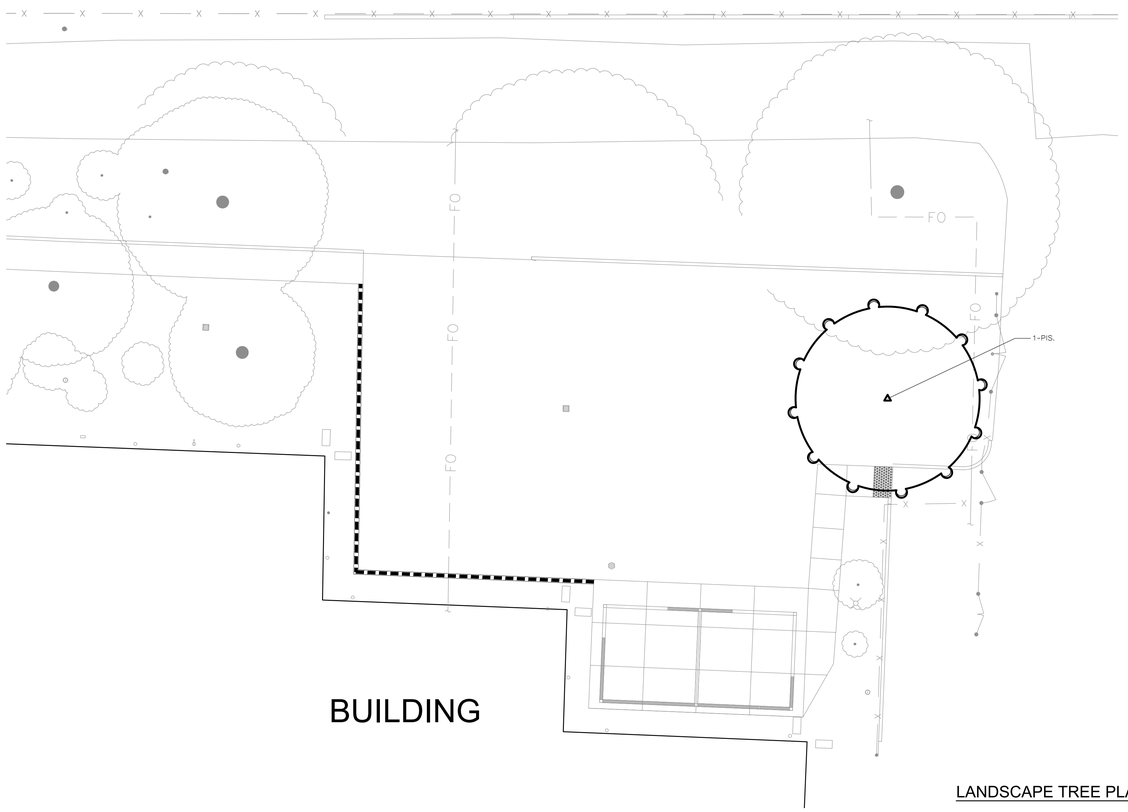
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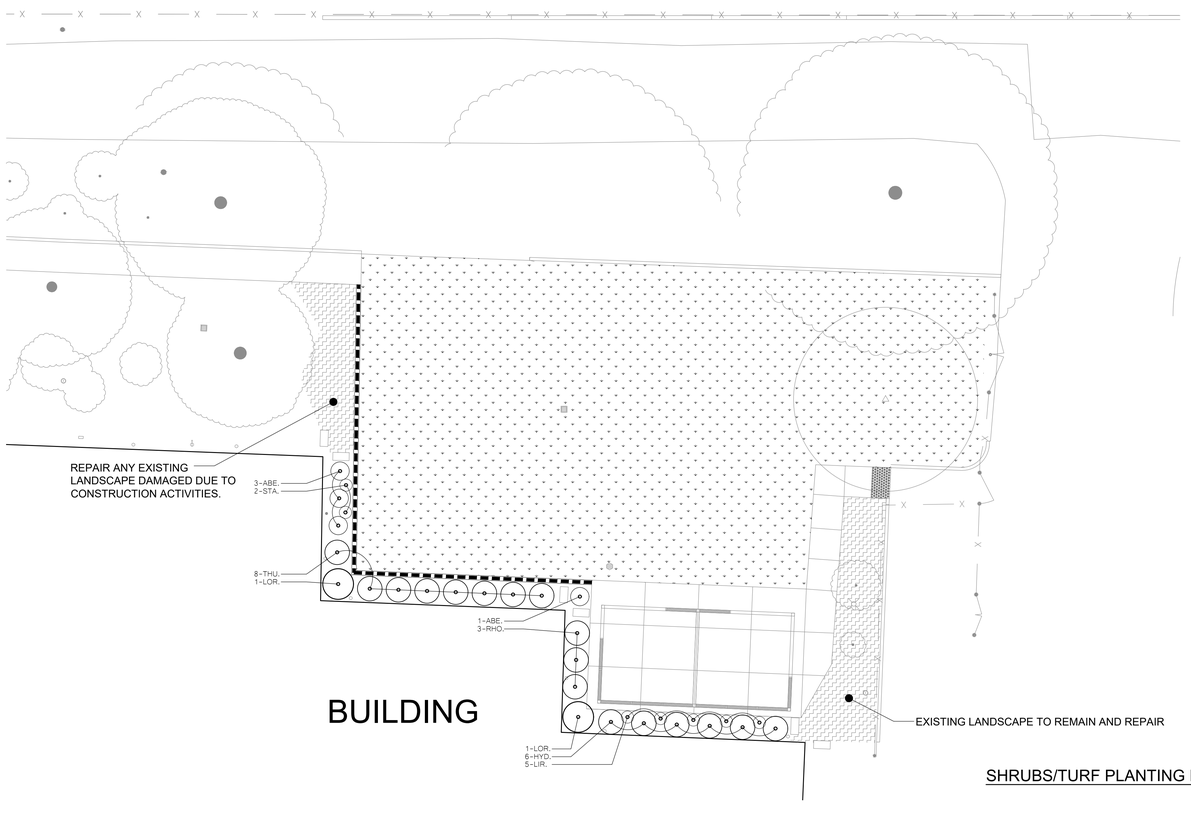
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LANDSCAPE TREE PLANTING PLAN



SHRUBS/TURF PLANTING PLAN

KEY | LANDSCAPE LEGEND

- TREES
- SHRUBS
- LAWN (SOD)
- EXISTING LANDSCAPE TO REMAIN — REPAIR LANDSCAPE WHEREVER NECESSARY.
- CONCRETE MOWSTRIP
- PLANT QUANTITY (7 - AAA.)
- PLANT KEY
- EXISTING TREES TO REMAIN

PLANT MATERIAL LIST

SIZE	QTY.	KEY	BOTANICAL NAME ... COMMON NAME	WATER USE
			TREES:	
24" BOX	1	PIS.	PISTACIA CHINENSE ... CHINESE PISTACHE	LOW
			SHRUBS:	
5 G.C.	4	ABE.	ABELIA GRANDIFLORA 'SHERWOODII' ... GLOSSY ABELIA	MEDIUM
5 G.C.	6	HYD.	HYDRANGEA SERRATA ... HYDRANGEA	MEDIUM
5 G.C.	5	LIR.	LIRIOPE MUSCARI ... LILYTURF	MEDIUM
5 G.C.	2	LOR.	LOROPETALUM CHINENSE ... FRINGE FLOWER	MEDIUM
5 G.C.	3	RHO.	RHODODENDRON 'CONLEP' ... AZALEA AUTUMN TWIST	MEDIUM
1 G.C.	2	STA.	STACHYS BYZENITA ... LAB'S EARS	LOW
5 G.C.	8	THU.	THUJA OCCIDENTALIS 'DEGROOT'S SPIRE' ... DEGROOT'S SPIRE ARBORVITAE	MEDIUM

GENERAL LANDSCAPE REQUIREMENTS/NOTES

1. NO PLANTING SHALL BE STARTED UNTIL SPRINKLER IRRIGATION SYSTEM HAS BEEN TESTED BY CONTRACTOR IN PRESENCE OF OWNER'S REPRESENTATIVE AND NOTED DEFICIENCIES CORRECTED.
2. NO PLANTING SHALL BE STARTED UNTIL SOIL PREPARATION AND FINISH GRADING OPERATIONS HAVE BEEN COMPLETED AND APPROVED BY THE OWNER'S REPRESENTATIVE.
3. QUANTITIES SHOWN ON PLANT MATERIAL LIST ARE APPROXIMATE. PROVIDE QUANTITIES INDICATED ON LANDSCAPE PLAN.
4. PLANT MATERIAL IS SUBJECT TO APPROVAL OF OWNER'S REPRESENTATIVE.
5. SEE SHEET L4.2 FOR PLANTING INSTALLATION DETAILS.

ENVIRONMENTAL REQUIREMENTS:

GENERAL: PROCEED WITH WORK IN ORDERLY AND TIMELY MANNER TO COMPLETE INSTALLATION OF LANDSCAPING WITHIN CONTRACT LIMITS.

PROTECTION:

EXISTING CONSTRUCTION: EXECUTE WORK IN AN ORDERLY AND CAREFUL MANNER TO PROTECT NEW CONCRETE WALKS, WORK OF OTHER TRADES, AND OTHER IMPROVEMENTS.

EXISTING UTILITIES: DETERMINE LOCATION OF UNDERGROUND UTILITIES AND PERFORM WORK IN A MANNER WHICH WILL AVOID POSSIBLE DAMAGE. HAND EXCAVATE, AS REQUIRED, TO MINIMIZE POSSIBILITY OF DAMAGE TO UNDERGROUND UTILITIES. MAINTAIN GRADE STAKES SET BY OTHERS UNTIL REMOVAL IS MUTUALLY AGREED UPON BY ALL PARTIES CONCERNED. BE RESPONSIBLE FOR PROTECTION OF EXISTING UTILITIES WITHIN CONSTRUCTION AREA; REPAIR DAMAGE TO UTILITIES THAT OCCUR AS A RESULT OF OPERATIONS OF THIS WORK.

LANDSCAPING: PROTECT LANDSCAPE WORK AND MATERIALS FROM DAMAGE DUE TO LANDSCAPE OPERATIONS, OPERATIONS BY OTHER CONTRACTORS AND TRADES AND TRESPASSERS. MAINTAIN PROTECTION DURING INSTALLATION AND MAINTENANCE PERIODS. TREAT, REPAIR OR REPLACE DAMAGED LANDSCAPE WORK AS DIRECTED AT NO ADDITIONAL COST TO CONTRACT.

ADVERSE CONDITIONS: WHEN CONDITIONS DETRIMENTAL TO SOD OR PLANT GROWTH ARE ENCOUNTERED, SUCH AS RUBBLE FILL, ADVERSE DRAINAGE CONDITIONS, OR OBSTRUCTIONS, NOTIFY OWNER'S REPRESENTATIVE BEFORE STARTING WORK.

PLANTING AND TURF INSTALLATION SEASONS AND CONDITIONS

NO WORK SHALL BE DONE WHEN GROUND IS FROZEN, SNOW COVERED, TOO WET OR IN AN OTHERWISE UNSUITABLE CONDITION FOR AMENDING SOIL, FINISH GRADING OR PLANTING.

SOIL TESTING/SOIL IMPROVEMENT:

SEE SPECIFICATIONS 32 90 00, SECTION 3.02 SOIL TESTING AND SECTION 3.03 PREPARATION.

SOIL PERCOLATION

EXCAVATE 10 PLANTING PITS IN RANDOM AREAS OF SITE. FILL EXCAVATED PLANTING PITS WITH WATER TO 1/2 DEPTH OF PIT. PITS SHOULD DRAIN WITHIN 4 HOURS. IF PLANTING PITS DO NOT DRAIN, NOTIFY INSPECTOR IMMEDIATELY. PLANTING SHALL NOT BE STARTED UNTIL OWNER'S REPRESENTATIVE HAS RESOLVED A METHOD TO REMEDY DRAINAGE ISSUE.

PLANT MATERIAL STANDARDS

PLANTS SHALL BE IN ACCORDANCE WITH AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) ANSI Z60.1- AMERICAN STANDARD FOR NURSERY STOCK, EXCEPT AS OTHERWISE STATED IN SPECIFICATIONS OR SHOWN ON DRAWINGS. WHERE DRAWINGS OR SPECIFICATIONS ARE IN CONFLICT WITH ANSI Z60.1, DRAWINGS AND SPECIFICATIONS SHALL PREVAIL. PRUNE, THIN OUT AND SHAPE TREES IN ACCORDANCE WITH ANSI STANDARD HORTICULTURAL PRACTICE. PRUNE TREES TO RETAIN REQUIRED HEIGHT AND SPREAD. UNLESS OTHERWISE DIRECTED BY LANDSCAPE ARCHITECT, DO NOT CUT TREE LEADERS, AND REMOVE ONLY INJURED OR DEAD BRANCHES FROM FLOWERING TREES.

EXISTING LANDSCAPE AND SPRINKLER IRRIGATION SYSTEM

WORK LIMITS OF THIS PROJECT EXTEND INTO AREAS THAT WERE PREVIOUSLY DEVELOPED UNDER OTHER CONTRACTS. PRIOR TO START OF WORK, CONTRACTOR SHALL MEET WITH OWNER'S REPRESENTATIVE TO LOCATE ALL CONNECTIONS CALLED FOR ON DRAWINGS. WORK LIMITS/FENCING SHALL BE LAID OUT BY CONTRACTOR AND VERIFIED BY OWNER'S REPRESENTATIVE. FENCE TO BE INSTALLED AND IRRIGATION SYSTEM SHALL BE TESTED WITH CONTRACTOR, INSPECTOR, AND OWNER'S REPRESENTATIVE PRESENT. DEFICIENCIES SHALL BE NOTED AT THIS TIME AND ARE THE RESPONSIBILITY OF OWNER. AT COMPLETION OF WORK, SYSTEM WILL AGAIN BE TESTED, DEFICIENCIES NOTED AT THIS TIME THAT WERE NOT NOTED PREVIOUSLY WILL BE RESPONSIBILITY OF CONTRACTOR. EXISTING LANDSCAPE THAT HAS BEEN DAMAGED DUE TO CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITION BY CONTRACTOR AT NO ADDITIONAL COST TO OWNER. PRIOR TO MAKING ANY CONNECTION TO MAIN LINE, CONTRACTOR SHALL NOTIFY OWNER 1 WEEK IN ADVANCE SO ADJUSTMENTS TO EXISTING WATERING PROGRAMS CAN BE MADE.

10' 5' 0 10' 20'

SCALE: 1"= 10'-0"

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Revisions

Date	Revisions	By

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22-43

MTW group
LANDSCAPE ARCHITECTURE AND PLANNING
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Peter D. Larimer C-5284

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Facility

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360 NEVADA STREET, AUBURN, CA 95603

Project

SITE IMPROVEMENTS

Sheet Title

LANDSCAPE TREE PLANTING PLAN AND SHRUBS/TURF PLANTING PLAN

Client Project Number: 6014.000

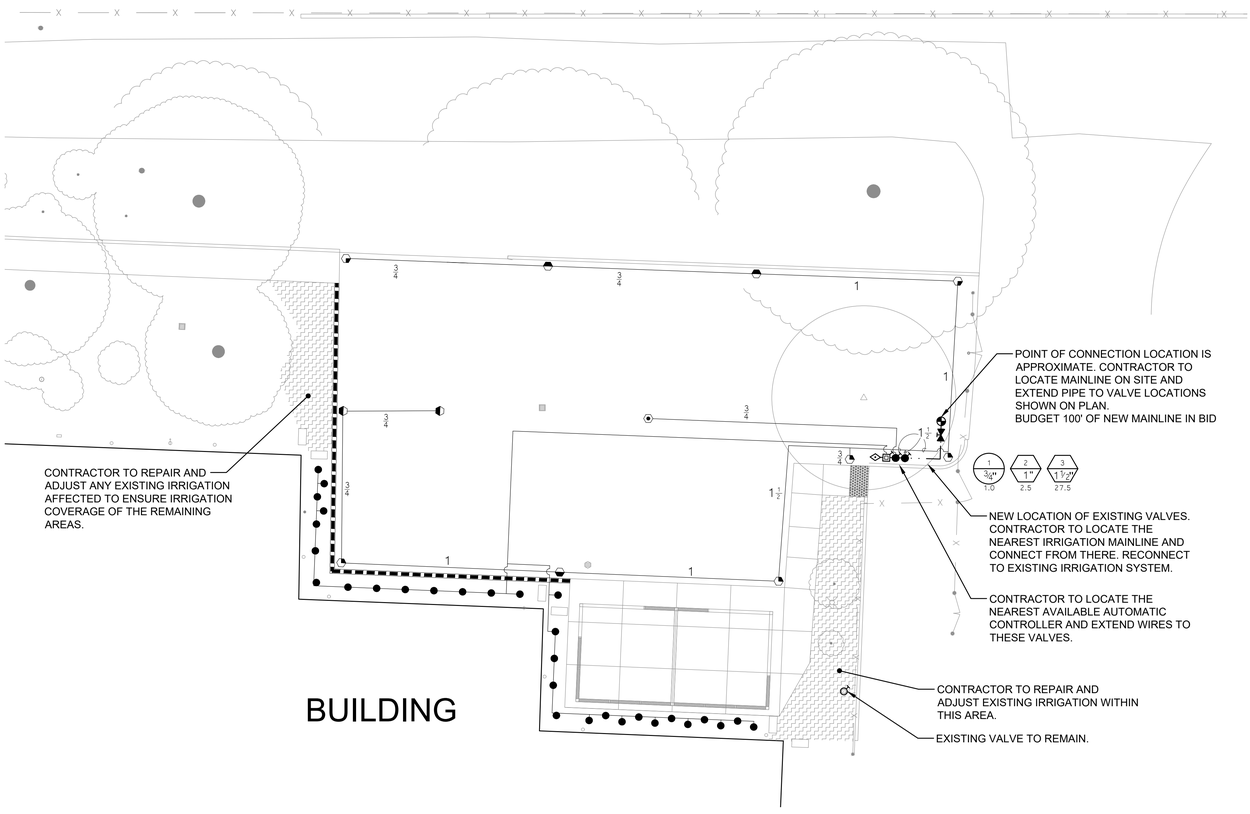
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Sheet L2.1

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KEY — SPRINKLER IRRIGATION LEGEND

POINT OF CONNECTION:
IRRIGATION SYSTEM OPERATING WATER PRESSURE: 45 PSI
MAXIMUM FLOW IS 30 GPM
EXISTING WATER PRESSURE IS UNKNOWN. CONTRACTOR TO TEST PRESSURE ON SITE. INFORM THE LANDSCAPE ARCHITECT IF THE SITE HAS INSUFFICIENT WATER PRESSURE TO RUN THE PROPOSED IRRIGATION SYSTEM.

CONTRACTOR SHALL LOCATE EXISTING MAINLINE ON SITE. CONNECT AT THIS POINT AND EXTEND AS INDICATED ON DRAWINGS.

GATE VALVE:
TYPE:
LEEMCO LGT SERIES STAINLESS STEEL THREADED WITH A NON-RISING STEM AND HANDWHEEL.

GATE VALVE INSTALLLED IN A VALVE BOX WITH TOP OF BOX SET FLUSH TO FINISH GRADE.
GATE VALVE TO BE LINE SIZE.

PRESSURE MAIN LINE:
TYPE:
1 1/2" SIZE: ASTM D1785, PVC SCHEDULE 40.

TRENCH DEPTH:
IN PLANTED AREAS: 24" MINIMUM COVER.
UNDER PAVED AREAS: 24" MINIMUM COVER.
PVC SCHEDULE 40 SLEEVES ARE REQUIRED FOR ALL PIPING UNDER PAVEMENT.

LATERAL LINE:
TYPE:
ASTM D1785, PVC SCHEDULE 40, SOLVENT WELD ALL UNSIZED PIPE SHALL BE 3/4" SIZE.
TRENCH DEPTH:
IN PLANTED AREAS:
ROTOR HEADS: - 18" MINIMUM COVER.
BUBBLER HEADS: - 12" MINIMUM COVER.
UNDER PAVED AREAS: 24" MINIMUM COVER.
PVC SCHEDULE 40 SLEEVES ARE REQUIRED FOR ALL PIPING UNDER PAVEMENT.

AUTOMATIC CONTROL VALVE:
TORO P220-27 SERIES WITH EZREG PRESSURE REGULATOR.

EXISTING AUTOMATIC CONTROL VALVE:

QUICK COUPLER VALVE:
RAINBIRD 44NP OR APPROVED EQUAL.
VALVES SHALL HAVE LOCKING RUBBER COVERS, INSTALLED IN VALVE BOXES. TOP OF VALVE BOX SHALL HAVE BOLT DOWN LID AND TOP SET LEVEL TO FINISH GRADE.

LAWN POP-UP ROTOR HEADS (REGULATE AT 45 PSI):
FULL CIRCLE
HUNTER: PGP-04-CV-2.5

HALF CIRCLE
HUNTER: PGP-04-CV-2.5

QUARTER CIRCLE
HUNTER: PGP-04-CV-2.5

SHRUB BUBBLER:
HUNTER HEB-20 EMITTER WITH SCREEN CV.

AUTOMATIC DRIP IRRIGATION VALVE/FILTER/PRESSURE REGULATOR:
TORO DRIP ZONE VALVE KIT 700DK-075-LF.

A2 — 3/4" — 0.0 — INDICATES CONTROL VALVE AND STATION NUMBER
A1 — 1" — 0.00 — INDICATES CONTROL VALVE SIZE
INDICATES GALLONS PER MINUTE

SPRINKLER IRRIGATION NOTES

1. COMPOSITE BASE SHEET: PROPOSED IMPROVEMENTS SHOWN ON DRAWINGS ARE SUPERIMPOSED ON A COMPOSITE BASE SHEET. THE COMPOSITE BASE SHEET IS A COMPILATION OF ARCHITECTURAL, ENGINEERING, AND OTHER DATA THAT IS PROVIDED. THE LANDSCAPE ARCHITECT SHALL NOT BE HELD LIABLE FOR CHANGES, INACCURACIES, OMISSIONS, OR ERRORS PERTAINING TO THE COMPOSITE BASE SHEET. CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING THESE DOCUMENTS. ANY DISCREPANCIES NEED TO BE BROUGHT TO THE ATTENTION OF THE DESIGN TEAM AND RESOLVED PRIOR TO CONTINUATION OF WORK.
2. DESIGN PRESSURE SHOWN ON PLANS HAS BEEN FURNISHED BY WATER COMPANY OR WATER DISTRICT SERVING SITE. VERIFY PRESSURE ON-SITE PRIOR TO THE INSTALLATION OF ANY SPRINKLER IRRIGATION EQUIPMENT. IF THERE IS A DISCREPANCY, NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY IN WRITING SO ADJUSTMENTS CAN BE MADE BY LANDSCAPE ARCHITECT. FAILURE TO REPORT DISCREPANCIES AND CONTINUANCE OF WORK WILL RESULT IN ALL RE-DESIGN COSTS BEING CHARGED TO CONTRACTOR.
3. DETERMINE LOCATION OF UNDERGROUND UTILITIES. DAMAGE CAUSED BY INSTALLATION OF THIS WORK SHALL BE REPAIRED TO SATISFACTION OF GOVERNING AGENCY OR OWNER AT NO ADDITIONAL COST TO THE CONTRACT.
4. SPRINKLER OVER SPRAY SHALL NOT BE ALLOWED ON PUBLIC SIDEWALKS, BUILDING WALLS OR FENCES. MINIMUM OVERSPRAY MAY OCCUR IN PARKING AREAS. USE ADJUSTABLE NOZZLES WHENEVER POSSIBLE TO CONTROL SPRINKLER OVERSPRAY.
5. ALL LOCAL CODES AND ORDINANCES SHALL BE COMPLIED WITH. IF THERE IS A CONFLICT, NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY.
6. TESTING:
   A. PRESSURE TEST ALL UNDERGROUND PIPING AS FOLLOWS:
      SYSTEMS WITH BOOSTER PUMP:
      MAIN LINE - AT 100 PSI FOR 4 HOURS.
      LATERAL LINES - AT 100 PSI FOR 2 HOURS.
      SYSTEMS WITH OUT BOOSTER PUMP:
      MAIN LINE - AT STATIC PSI FOR 4 HOURS.
      LATERAL LINES - AT STATIC PSI FOR 2 HOURS.
   B. COVERAGE TEST: NOTE: PRIOR TO REQUESTING COVERAGE TEST, INSURE ALL HEADS ARE SET PLUMB, NOZZLES ARE ADJUSTED PROPERLY AND SYSTEM HAS BEEN CHECKED FOR AUTOMATION. REQUEST OWNER'S REPRESENTATIVES PRESENCE ON-SITE WHEN SPRINKLER SYSTEM IS COMPLETELY INSTALLED AND FULLY AUTOMATIC. PROVIDE ADEQUATE PERSONNEL AT THIS MEETING TO ADJUST AND FINE TUNE SYSTEM TO SATISFACTION OF OWNER'S REPRESENTATIVE.
7. LAYOUT ALL WORK PRIOR TO TRENCHING OPERATIONS TO DETERMINE IF MINOR MODIFICATIONS OR ADJUSTMENTS WILL BE REQUIRED.
8. INSTALL ALL SPRINKLER HEADS PERPENDICULAR TO SLOPES OR GRADE.
9. CONTROL WIRE SHALL BE UF-14, COLOR FOR LEAD AND WHITE FOR COMMON. SPLICES SHALL BE PERMITTED AT VALVE BOX LOCATIONS ONLY.
10. COORDINATE ALL WORK WITH OTHER TRADES SO PROGRESS OF WORK IS NOT INTERRUPTED AND CAN BE COMPLETED IN A TIMELY MANNER.
11. NO PLANTING SHALL BE STARTED UNTIL ALL SPRINKLER WORK HAS BEEN TESTED AND APPROVED IN PRESENCE OF OWNER'S REPRESENTATIVE.
12. FOR SPRINKLER IRRIGATION INSTALLATION DETAILS, SEE SHEET NO. L4.3.

10' 5' 0 10' 20'
SCALE: 1"= 10'-0"

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Revisions

Date	Revisions	By

PLAN CHECK SET
ISSUE DATE: 7/21/23 BY: BG

22-43

MTW group
LANDSCAPE ARCHITECTURE AND PLANNING
2707 K Street, Suite 201
Sacramento, CA 95816
916 369-3990

LICENSED LANDSCAPE ARCHITECT — 2294 — 6/30/24 — STATE OF CALIFORNIA

Peter D. Larimer C-5284

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Architect/Engineer Of Record:

HY Architects Project number: 5791

Facility
PLACER COUNTY OFFICE OF EDUCATION
360 NEVADA STREET, AUBURN, CA 95603

Project
SITE IMPROVEMENTS

Sheet Title
LANDSCAPE IRRIGATION PLAN

Client Project Number: 6014.000

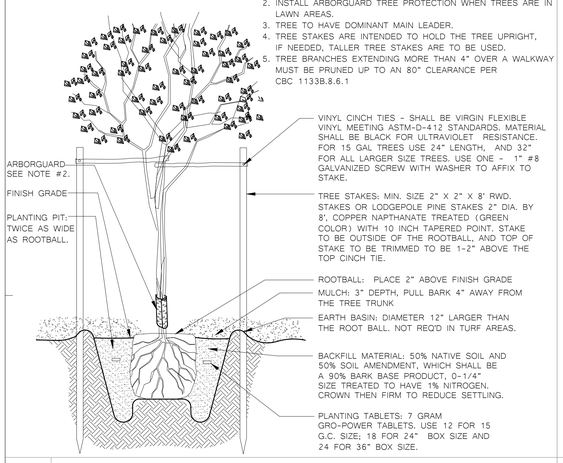
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Drawn By: SL
Checked By: PL
Issue Date: 7/24/23
Revit Version: 2023

Sheet
L3.1
Sheet of

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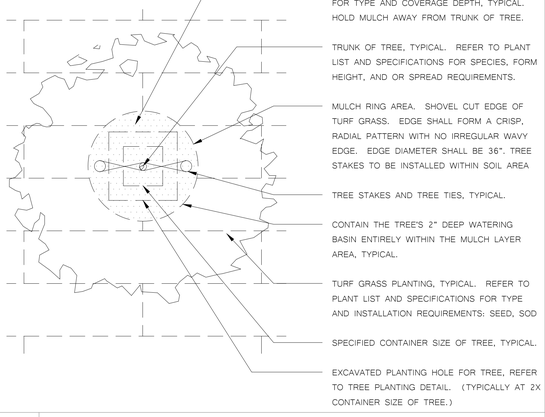
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NOTES:
1. VITAMIN B-1: SUPERTHRIVE, LIQUINOX START OR EQUAL. APPLY AS PER MANUFACTURER'S INSTRUCTIONS WITH THE SECOND WATERING OF THE BASIN.
2. INSTALL ARBORGUARD TREE PROTECTION WHEN TREES ARE IN LAWN AREAS.
3. TREE TO HAVE DOMINANT MAIN LEADER.
4. TREE STAKES ARE INTENDED TO HOLD THE TREE UPRIGHT, IF NEEDED, TALLER TREE STAKES ARE TO BE USED.
5. TREE BRANCHES EXTENDING MORE THAN 4" OVER A WALKWAY MUST BE PRUNED UP TO AN 80" CLEARANCE PER CBC 1133B.8.6.1



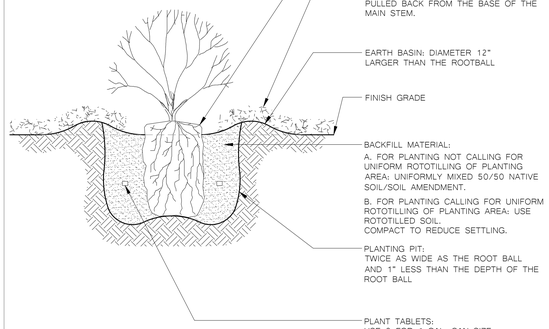
1 TREE PLANTING AND STAKING DETAIL

NOTES:
1. IF SOD IS NOT USED, CONTRACTOR SHALL REMOVE AN 36" ROUND AREA OF LAWN TO CREATE A "MULCH RING".
2. THE "MULCH RING" TO BE CENTERED ON THE TREE TRUNK AND THE TREE STAKES TO BE INSTALLED WITHIN THE "MULCH RING"



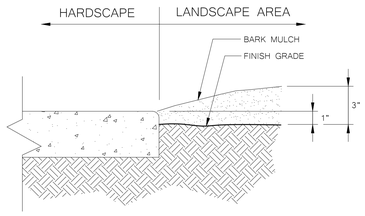
2 TREE MULCH RING IN TURF GRASS

NOTE: VITAMIN B-1 SUPERTHRIVE LIQUINOX OR EQUAL. APPLY AS PER MANUFACTURE'S INSTRUCTIONS WITH SECOND WATERING OF THE BASIN.



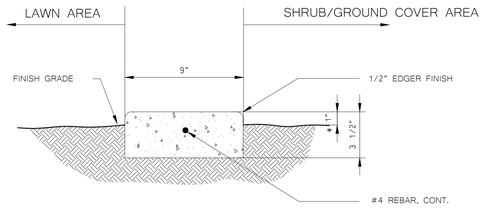
3 SHRUB PLANTING DETAIL

NOTES:
1. FINISH GRADE OF SOIL TO BE 1" BELOW ADJACENT HARDSCAPE FOR BOTH LAWN AREAS AND PLANTER BED AREAS
2. BARK MULCH DEPTH DOES NOT DICTATE THE ELEVATION OF THE FINISH GRADE
3. BARK MULCH TO BE FEATHERED DOWN TO 1" DEPTH, 12" FROM EDGE OF HARDSCAPE



4 LANDSCAPE GRADE ADJACENT TO HARDSCAPE DETAIL

NOTES:
1. USE 1/2" FELT EXPANSION JOINT MATERIAL AT ALL CHANGES OF DIRECTIONS AND AT 10' O.C.
2. WHEN SURFACE DRAINAGE IS INTENDED TO FLOW TOWARD AND ACROSS MOWSTRIP, SOIL SURFACE SHALL BE FLUSH WITH TOP OF MOWSTRIP. UNLESS OTHERWISE NOTED SOIL SHALL BE 1" BELOW TOP OF MOWSTRIP.
3. ALL CONCRETE SHALL BE 5 SACK MIX, 2800 PSI AT 28 DAYS AFTER POUR.
4. FINISH SHALL BE FINE BROOM.



5 9" CONCRETE MOWSTRIP DETAIL

Revisions

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HY Architects Project number: 5791

Facility

PLACER COUNTY OFFICE OF EDUCATION
360 NEVADA STREET, AUBURN, CA 95603

Project

SITE IMPROVEMENTS

Sheet Title

LANDSCAPE PLANTING DETAILS

Client Project Number: 6014.000

Scale: As indicated
Drawn By: SL
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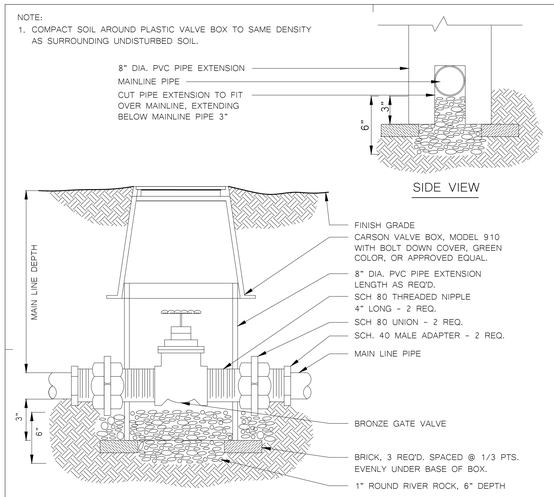
Sheet L4.1

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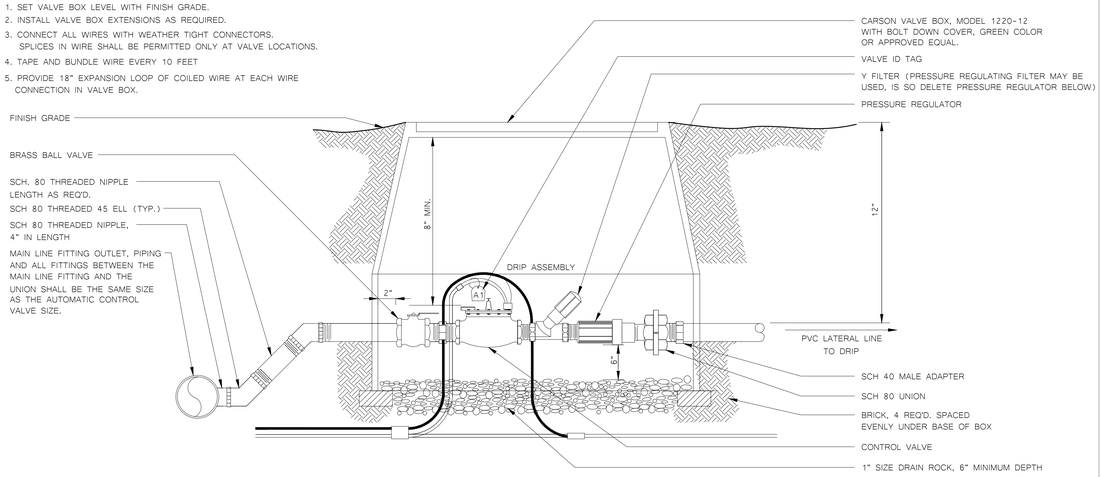
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NOTE:
1. COMPACT SOIL AROUND PLASTIC VALVE BOX TO SAME DENSITY AS SURROUNDING UNDISTURBED SOIL.

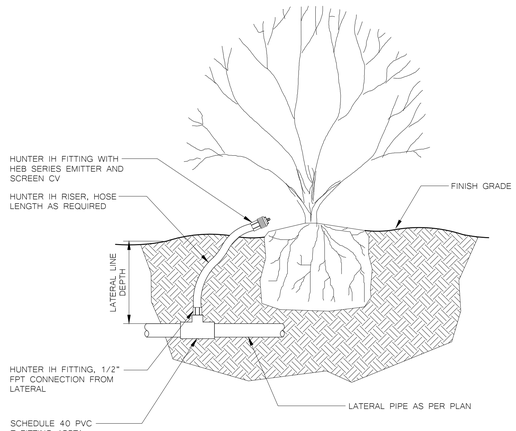


1 GATE VALVE DETAIL, 3" SIZE AND SMALLER

NOTES:
1. SET VALVE BOX LEVEL WITH FINISH GRADE.
2. INSTALL VALVE BOX EXTENSIONS AS REQUIRED.
3. CONNECT ALL WIRES WITH WEATHER TIGHT CONNECTORS. SPLICES IN WIRE SHALL BE PERMITTED ONLY AT VALVE LOCATIONS.
4. TAPE AND BUNDLE WIRE EVERY 10 FEET
5. PROVIDE 18" EXPANSION LOOP OF COILED WIRE AT EACH WIRE CONNECTION IN VALVE BOX.

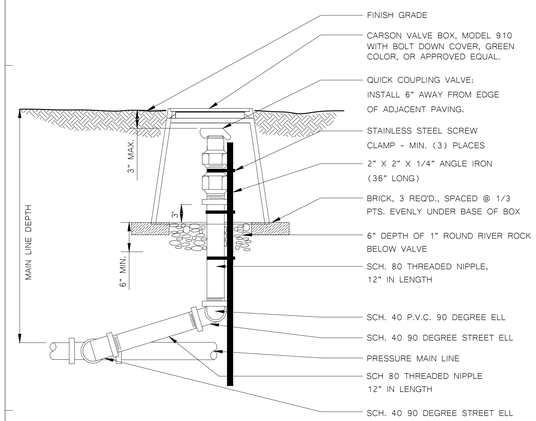


2 PRESSURE REGULATOR DRIP IRRIGATION VALVE DETAIL



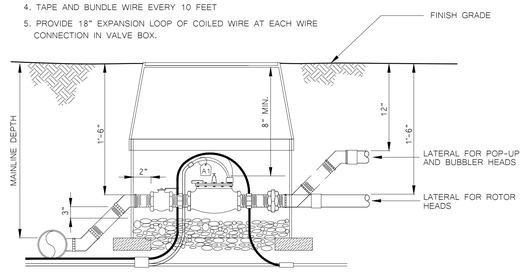
3 SHRUB BUBBLER DETAIL

NOTES:
1. INSTALL VALVE BOXES SO THAT THE TOP OF THE BOX IS FLUSH WITH THE TOP OF ADJACENT SURFACE.
2. USE TEFLON TAPE ON ALL THREADED CONNECTIONS.



4 QUICK COUPLING VALVE DETAIL

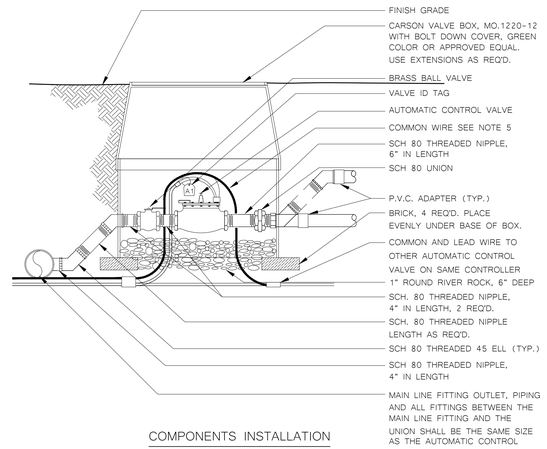
NOTES:
1. SET VALVE BOX LEVEL WITH FINISH GRADE.
2. INSTALL VALVE BOX EXTENSIONS AS REQUIRED.
3. CONNECT ALL WIRES WITH WEATHER TIGHT CONNECTORS. SPLICES IN WIRE SHALL BE PERMITTED ONLY AT VALVE LOCATIONS.
4. TAPE AND BUNDLE WIRE EVERY 10 FEET
5. PROVIDE 18" EXPANSION LOOP OF COILED WIRE AT EACH WIRE CONNECTION IN VALVE BOX.



6. FOR VALVES WITH PRESSURE REGULATION FEATURE, SET VALVE PRESSURE AS PER MANUFACTURERS RECOMMENDATIONS TO THE PRESSURE AS FOLLOWS:

POP-UP SPRAY HEADS:	30 PSI
INTERMEDIATE POP-UP ROTOR HEADS:	50 PSI
POP-UP ROTOR HEADS:	70 PSI
BUBBLER HEADS:	30 PSI

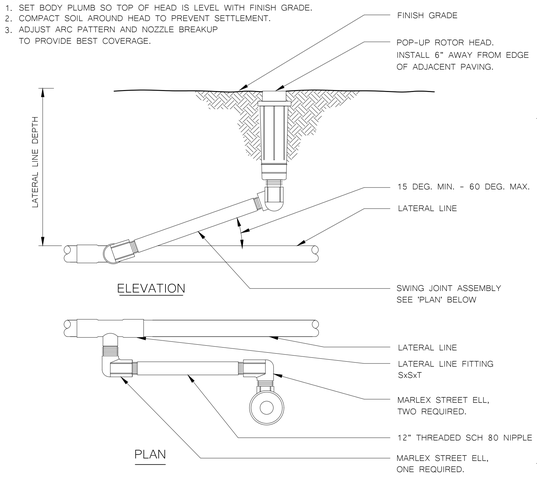
VALVE BOX, SETTINGS, AND CLEARANCES



COMPONENTS INSTALLATION

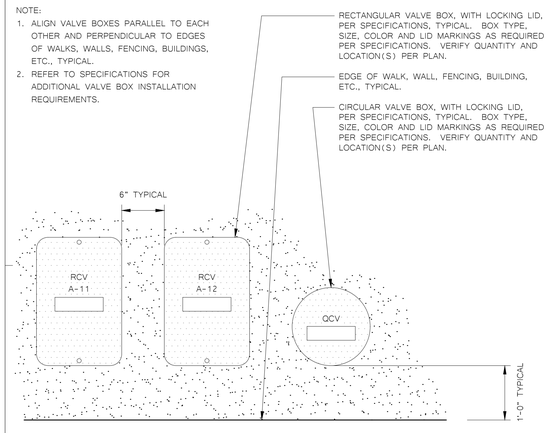
5 AUTOMATIC CONTROL VALVE/BALL VALVE DETAIL

NOTES:
1. SET BODY PLUMB SO TOP OF HEAD IS LEVEL WITH FINISH GRADE.
2. COMPACT SOIL AROUND HEAD TO PREVENT SETTLEMENT.
3. ADJUST ARC PATTERN AND NOZZLE BREAKUP TO PROVIDE BEST COVERAGE.



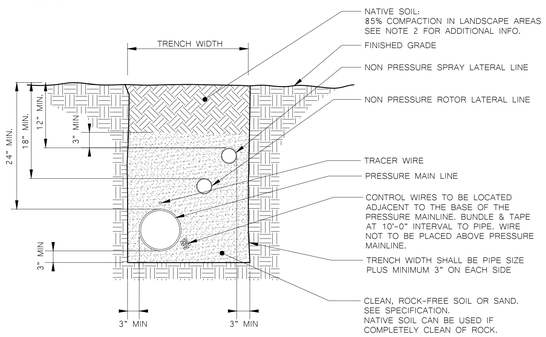
6 POP-UP ROTOR HEAD DETAIL

NOTE:
1. ALIGN VALVE BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGES OF WALKS, WALLS, FENCING, BUILDINGS, ETC., TYPICAL.
2. REFER TO SPECIFICATIONS FOR ADDITIONAL VALVE BOX INSTALLATION REQUIREMENTS.



7 TYPICAL VALVE BOX LAYOUT

NOTES:
1. REFER TO SPECIFICATIONS AND PLAN SHEETS FOR MORE INFORMATION.
2. WHEN TRENCHES ARE LOCATED UNDER PAVEMENT, COMPACTION RATE FOR THE BACKFILL SHALL COMPLY WITH THE COMPACTION RATES REQUIRED FOR THOSE PAVING SECTIONS.
3. PIPES TO HAVE A MINIMUM OF 6" HORIZONTAL SEPARATION WHEN PLACED IN THE SAME TRENCH ALONG WITH A MINIMUM OF 6" VERTICAL SEPARATION BETWEEN PIPES.



8 PIPE TRENCH DETAIL

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LANDSCAPE ARCHITECTURE AND PLANNING
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PROFESSIONAL LANDSCAPE ARCHITECT PAUL LARIMER No. 5284 6/30/24 STATE OF CALIFORNIA

Peter D. Larimer C-5284

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HY Architects Project number: 5791

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360 NEVADA STREET, AUBURN, CA 95603

Project
SITE IMPROVEMENTS

Sheet Title
LANDSCAPE IRRIGATION DETAILS

Client Project Number: 6014.000

Scale: As indicated
Drawn By: SL
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Sheet
L4.2
Sheet of

GRAPHIC SCALES: 1/16" = 1'-0" | 1/8" = 1'-0" | 1/4" = 1'-0" | 1/2" = 1'-0" | 3/4" = 1'-0" | 1" = 1'-0" | 1 1/2" = 1'-0" | 3" = 1'-0"

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IRRIGATION SCHEDULE TABLE

| STATION #/HYDROZONE | PLANT WATER USE TYPE | PLANT FACTOR (PF) | IRRIGATION TYPE | FLOW (GPM) | PRECIP. RATE (PR) INCH/HR | IRRIGATION EFFICIENCY (IE) | SOIL TYPE | ROOT DEPTH | SLOPE | EXPOSURE | MAINTENANCE PERIOD (X/Y Z GAL) | | |

Technical Specifications

SPECIFICATIONS
Table of Contents

DIVISION 1 - GENERAL REQUIREMENTS

Section 01 30 00 Administrative Requirements
Section 01 31 16 Multiple Contract Coordination
Section 01 31 19 Project Meetings
Section 01 32 26 Construction Progress Reporting
Section 01 33 00 Submittal Procedures
Section 01 33 23 Shop Drawings, Product Data, and Samples
Section 01 35 16 Alteration Project Procedures
Section 01 35 23 Site Standards

Section 01 45 00 Quality Control
Section 01 45 29 Testing Laboratory Services
Section 01 50 00 Temporary Construction Facilities and Controls
Section 01 57 13 Erosion Control
Section 01 62 00 Product Options and Substitutions
Section 01 73 29 Cutting and Patching
Section 01 74 00 Cleaning and Waste Management
Section 01 75 16 Startup Procedures
Section 01 77 00 Closeout Procedures
Section 01 78 36 Warranties
Section 01 78 39 Project Record Documents
Section 01 87 00 Material and Equipment

DIVISION 2 - EXISTING CONDITIONS

Section 02 40 00 Site Demolition[1]
Section 02 41 00 Site Demolition[2, 3]
Section 02 41 20 Cutting and Patching[1, 2]

DIVISION 3 - CONCRETE

DIVISION 4 - MASONRY

DIVISION 5 - METAL WORK

DIVISION 6 - WOOD AND PLASTIC

Section 06 10 00 Rough Carpentry[2]

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

Section 07 21 16 Building Insulation[1, 2]

Section 07 62 00 Sheet Metal Flashing and Trim[1, 2]
Section 07 84 00 Firestopping[1, 2]
Section 07 92 00 Joint Sealers[1, 2]

DIVISION 8 - DOORS AND WINDOWS

Section 08 11 16 Interior Aluminum Door Frames & Glazing Frames[1]
Section 08 13 13 Hollow Metal Doors and Frames[1, 2]
Section 08 14 16 Flush Wood Doors[1, 2]

DIVISION 9 - FINISHES

Section 09 29 00 Gypsum Board[1, 2]
Section 09 91 00 Painting[1, 2]
Section 09 97 23 Concrete Sealer[2]

DIVISION 10 - SPECIALTIES

Section 10 22 26 Operable Partitions[1]
Section 10 26 00 Wall and Corner Guards[1, 2]
Section 10 44 00 Fire Extinguishers and Cabinets[1, 2]

DIVISION 11 - EQUIPMENT

DIVISION 12 - FURNISHINGS

DIVISION 13 - SPECIAL CONSTRUCTION

DIVISION 14 - CONVEYING SYSTEMS

DIVISION 26 - ELECTRICAL

Section 26 00 00 Electrical Specifications[1, 2]

DIVISION 27 - COMMUNICATIONS

DIVISION 31 - EARTHWORK

Section 31 00 00 Earthwork[2, 3]
Section 31 10 00 Site Clearing[1]
Section 31 20 00 Earth Moving[1]

DIVISION 32 - EXTERIOR IMPROVEMENTS

Section 32 11 00 Pavement Base Course[1]
Section 32 12 00 Asphalt Paving[2, 3]
Section 32 13 18 Cement and Concrete for Exterior Improvements[1]
Section 32 16 00 Site Concrete[2, 3]
Section 32 17 23 Pavement Markings[1, 2]
Section 32 33 00 Site Furnishings[1]
Section 32 80 00 Irrigation[1, 3]
Section 32 90 00 Landscaping[1, 3]

DIVISION 33 – SITE UTILITIES

Section 33 21 00 Utility Trenching and Backfill[1]
Section 33 41 00 Storm Utility Drainage Piping[1]
Section 33 46 00 Subdrainage[1]

Note: Unless otherwise noted, the sections above are applicable to ALL projects for the purposes of this bid.

[1] *Section applicable to '1400 Stanford Ranch' project site only.*

[2] *Section applicable to '365 Nevada Street' project site only.*

[3] *Section applicable to '360 Nevada Street' project site only.*

SECTION 01 30 00
Administrative Requirements

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Project Management and Coordination: Project Coordination, Mechanical and Electrical Coordination, Project Meetings.

B. Construction Progress Documentation: Construction Progress Schedule, Construction Photographs, Two-week Look Ahead Schedule.

C. Submittal Procedures: Shop Drawings, Product Data, Samples, Source Quality Control Reports, Deferred Approval Items, Finishes Materials Schedule, Coordinated Drawings.

1.2 PROJECT COORDINATION

A. Coordinate scheduling, submittals, and Work of various Sections of Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.

B. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate Work of various Sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.

C. Coordinate space requirements and installation of mechanical and electrical Work that are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with line of building. Utilize spaces efficiently to maximize accessibility for other installation, for maintenance, and for repairs.

D. In locations where several elements of mechanical and electrical Work must be sequenced and positioned with precision in order to fit into available space, prepare coordination drawings showing the actual conditions required for the installation. Prepare coordination drawings prior to purchasing, fabricating or installing any of the elements required to be coordinated.

E. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within construction. Coordinate locations of fixtures and outlets with finish elements.

F. Coordinate completion and clean-up of Work of separate sections in preparation for Substantial Completion and for any portions of Work designated for Owner's occupancy.

G. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

1.3 PRECONSTRUCTION MEETING

A. Architect will schedule meeting after Notice of Award.

B. Attendance Required: Architect, Prime Contractors, Major Subcontractors, and key Owner personnel.

C. Agenda:

1. Contract Agreement:

a. Transmit signed originals of the Agreement to the Owner.

b. Transmit Attachment Certifications to the Owner.

c. Transmit Performance and Payment Bonds to the Owner.

d. Transmit Certificates of Insurance to the Owner.

e. Review General and Supplementary Conditions.

2. Receive documentation from Contractor:

a. Construction Progress Schedule.

b. Schedule of Values.

c. List of Subcontractors with addresses and phone numbers.

d. List of Submittals and estimated date of submittal.

3. Project Administration:

a. Application for Payment, Lien Release, Record Drawings.

b. Change Order Requests, Change Orders, Request For Proposals, Construction Change Directive Instruction Bulletins. Preparation of Change Orders by Architect according to 2016 California Administrative Code, Code of Regulations Title 24 Part 1, Section 7-153.

c. Submittals

d. Deferred Approval Submittals

e. Substitution procedures.

f. Site Meetings.

g. Testing Laboratory.

h. Verified Reports.

4. Special Owner Conditions:

a. Temporary Facilities.

b. Owner Occupancy.

c. Work by Owner.

d. Access to Site - Owner Contact.

5. Construction Process:

a. Contractor shall discuss overview of construction.

b. Contractor shall identify items to be selected by Architect/Owner and date selections must be made.

c. Contractor shall review special requirements for equipment, safety, and noise.

D. Architect will record minutes and distribute copies within seven days after meeting to participants and those affected by decisions made.

1.4 PROGRESS MEETINGS

A. Architect Owner's Representative will schedule and administer meetings throughout progress of Work as needed.

B. Architect Owner's Representative will make arrangement for meetings, prepare agenda with copies for participants, and preside at meetings.

C. Attendance Required: Project Coordinator, Prime Contractors, Major Subcontractors and Suppliers, Project Inspector, key Owner personnel and Architect as appropriate to agenda topics for each meeting.

D. Agenda:

1. Review minutes of previous meetings.

2. Review of Work progress.

3. Field observations, problems, and decisions.

4. Identification of problems that impede planned progress.

5. Review of submittals schedule and status of submittals.

6. Maintenance of Construction Progress Schedule.

7. Corrective measures to regain projected schedules.

8. Maintenance of quality and work standards.

9. Effect of proposed changes on progress schedule and coordination.

10. Other business relating to Work.

11. Deferred Approval submittals and timelines.

12. Review of Mockup Assembly.

E. Architect will record minutes and distribute copies within seven days after meeting to participants, and those affected by decisions made.

1.5 PRE-INSTALLATION MEETING

A. When required in individual Specification Sections, convene pre-installation meeting before starting Work of Section.

B. Require attendance of parties directly affecting, or affected by, Work of specific Section.

C. Notify Architect four days in advance of meeting date.

D. Prepare agenda and preside at meeting:

1. Review conditions of installation, preparation and installation procedures.

2. Review coordination with related Work.

E. Contractor shall record minutes and distribute copies within three days after meeting to participants, Architect and those affected by decisions made.

1.6 SUBMITTAL PROCEDURES

A. General Contractor shall transmit separate request for EACH Section submittal directly to Architect.

1. Include job number as it appears on Contract Documents.

2. Include local review authority approval number, if applicable.

3. Information to included, but not limited to:

a. Product Data Sheets

b. Safety Data Sheets

c. Fabrication Guidelines

d. Installation Guidelines

e. Product Warranties

f. Shop Drawings, including:

1. Fabrication Details.

2. Types per location.

4. Submittals for all items requiring color selection must be received before any will be approved.

5. Refer to associated and related individual specification sections for additional requirements.

B. Sequentially number transmittal forms. Re-submittals shall have original number with alphabetic suffix.

C. Identify Project, Contractor, Subcontractor or supplier; pertinent Drawing sheet and detail number(s), and Specification Section number, as appropriate.

1. Provide name telephone number of individual who may be contacted for further information.

D. Apply Contractor's dated stamp with Contractor's original signature or initials affixed thereto, certifying that review, verification of products required field dimensions, adjacent construction Work, and coordination of information is according to requirements of Work and Contract Documents. Stamped signatures or initials are not acceptable.

E. Schedule submittals to expedite Project. Coordinate submission of related items.

1. Make submittals according to Construction Schedule and adequate enough in advance of scheduled dates of installation to provide required time for reviews for securing necessary approvals for possible revision and re-submittal and for placing orders and securing delivery.

2. Schedule submittals such that related materials and assemblies that support or are affected by the submitted materials are either submitted simultaneously or in order of installation sequence such that impacts and coordination can be evaluated as part of the review.

3. Late submittals, not in accordance with the "Schedule for Submission of Shop Drawings, Product Data and Samples" and the Construction Schedule, will not be considered an acceptable reason for initiating a substitution requests caused by late ordering and procurement of materials.

F. Identify variations from Contract Documents and Product or system limitations that is detrimental to performance of completed Work.

G. Substitutions: Submit only as approved per Section 01 62 00 Product Options and Substitutions, state effect of approved substitution on construction schedule, and changes required in other work or products.

H. Owner-Directed Substitution Approval: Substitution submittals specifically directed by Owner to be approved by the Architect for this project shall pertain to a specific item only. The Architect's stamped approval of Owner-Directed Substitution does not constitute approval for any other item, other projects or parts of project. A Change Order shall be prepared to effect the Owner's authorization of Owner-Directed Substitution.

I. Provide space for Contractor and Architect review stamps.

J. Revise and resubmit submittals in their entirety, identify changes made since previous submittal.

K. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.

L. Determine and verify field dimensions and conditions, materials, catalog numbers and similar data.

M. Coordinate as required with all trades and all public agencies involved.

N. Unless otherwise specifically authorized by Architect, make submittals in groups containing associated items within the same Section. Architect may reject partial submittals as not complying with provisions of this Section.

O. Where individual Sections require structural calculations, prepare submittal under direction of qualified California Licensed Structural Engineer and shall bear the Engineer's stamp and signature.

P. Submittals for Deferred Approved Items, refer to listed items in this Section and the specific requirements therein in addition to requirements above.

1.7 CONSTRUCTION PROGRESS SCHEDULE

A. Submit Preliminary Construction Progress Schedule in duplicate within 15 calendar days after Notice to Proceed for Architect's review:

1. Schedule shall reflect amount of time stipulated in Agreement.

2. If the Contractor proposes an earlier completion dated than stipulated in the Agreement, Change Order will be issued reflecting revised completion date at no change in Contract Sum.

B. Revise and resubmit as required.

C. Scheduling may utilize programs including: Microsoft Project Schedule, Primavera Project Planner (P3), Primavera SureTrack Project Manager, Meridian Project Systems or similar programs addressing the requirements.

D. Submit computer generated network analysis diagram using Critical Path Method, generally as outlined in Associated General Contractors of America (AGC) publication "Construction Planning and Scheduling", 2011 Edition.

E. Indicate complete sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Indicate early and late start, early and late finish, float dates and duration. Ownership of float time is shared commodity, not for exclusive use by either party. Use float time to make up Work behind schedule until float time is depleted. Submittals returned in less time than allowed by contract, shall be used to reduce Contractor time extension requests.

F. Indicate Milestones and target date and their activities including completion dates.

G. No Time extensions will be granted nor delay damages paid until a delay occurs that impacts the schedule consumes all available float or contingency time available, and extends the work beyond the contract completion date.

H. Indicate estimated percentage of completion for each item of Work at each submission.

I. Schedule for Submission of Shop Drawings, Product Data and Samples: Incorporate "Schedule for Submission of Shop Drawings, Product Data and Samples" in Construction Progress Schedule. This schedule shall include submittal dates required for shop drawings, product data, samples and product delivery dates, including Deferred Approval Items and including those items furnished by Owner. Provide time in schedule for Architect's review of submittals according to Contract Timetable. Allow 21 calendar days for submittals requiring consultant's review. Allow 30 calendar days for review submittals of Section 08 71 00 Door Hardware and Section 08 13 13 Hollow Metal Doors and Frames.

J. Submit revised schedules with each Application for Payment identifying changes since previous version.

K. As a minimum allow 15 calendar days in schedule for final inspections before final acceptance. Include time to correct punch list items prior to final acceptance.

1.8 COORDINATED DRAWINGS

A. Submit drawings that indicate routing, locations sizes, types and number of components in concealed spaces where potential conflict may occur between structures, mechanical, electrical, Automatic Fire Sprinkler System (AFSS), communications and ceiling suspension systems.

B. Indicate locations of ceiling penetrations and surface-mounted items. Provide cross sections at areas to indicate proper support of ceilings and non-interference with work of other Sections of specifications. Cross sections shall indicate coordination required and proposed solutions for routing of elements where potential conflict exists. Reproduction of Architect's reflected ceiling plan is not acceptable.

C. Drawings shall be based on field measurements, shop drawings and product data.

D. Conflicts shall be brought to Architect's attention immediately.

E. Submit to Architect, in writing requests for clarification or interpretations that will affect intent and/or scope of Contract Documents.

F. Coordinated drawings shall indicate each class of Work in affected area. Drawing or written submittal shall include Contractor's recommendations for solution of any potential conflicts as well as recommendations tendered by any Work of any Section of Specifications which may be affected thereby.

G. Submit coordinated drawings in scale of not less than 1/8" = 1'-0" with necessary sections and profiles at an appropriate, clearly readable enlarged scale. Submit coordinated drawings as one electronic (CD) copy and one bond (hard) Copy.

H. Architect will review submittals, make appropriate notations and comments to ensure solution meets intent of Contract Documents and then return to Contractor for implementation.

I. Contractor shall be responsible for proper coordination of Work of Sections of Specifications in execution of coordinated drawings. Installation of materials, components or equipment under one Section of Specifications without full and complete, agreement, knowledge and consent by fabricators of adjacent or otherwise related or affected Work will not be approved.

J. It shall be incumbent upon Contractor that fabricators of Work involved in execution of coordinated drawings be informed, consulted and advised in

sufficient advance time to arrive at solutions where no extension of contract time for extra cost to Owner will be approved due to Contractor's negligence in expeditious, timely submittal of coordinated drawings.

1.9 SHOP DRAWINGS

A. Within 15 days from Notice to Proceed, submit to Architect for review and acceptance, "Schedule, for Submission of Shop Drawings, Product Data and Samples" (Submission Schedule) listing required submittals and review dates. Schedule shall allow sufficient time for checking by Architect Incorporate Submission Schedule in Construction Progress Schedule. Days: Calendar Days:

1. Additionally, submit all Shop Drawings, Product Data and Samples according to the following guidelines. Guidelines are provided to allow Architect and Engineers adequate time for review and is· not intended to dictate contractor's means and methods:

   a. Contract of 180 to 270 days: Submit within 45 days from Notice to Proceed. Allow Architect 21 days to respond. Re-submittals: allow Contractor 10 days, and Architect 15 days to respond.

   b. Contract of 270 to 360 days: Submit within 60 days from Notice to Proceed. Allow Architect 21 days to respond. Re-submittals: allow Contractor 10 days, and Architect 15 days to respond.

   c. Contract of 360 to 450 day: Submit within 60 days from Notice to Proceed. Allow Architect 21 days to respond. Re-submittals: allow Contractor 15 days and Architect 21 days to respond.

   d. Contract of 450 days and longer: Contractor to schedule submittals. Architect shall have no less than 30 days to respond. Re-submittals: allow Contractor 15 days and Architect 21 days to respond.

B. Submit newly prepared information, drawn to accurate scale. Highlight, encircle or otherwise indicate deviations from Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to Project will not be approved as shop drawings.

C. Shop drawings shall include fabrications and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. include following information:

1. Dimensions

2. Identification of products and materials included.

3. Compliance with specified standards.

4. Notation of coordination requirements.

5. Notation of dimensions established by field measurement.

D. Sheet Size: Except for templates, patterns and similar full-size drawings, submit shop drawings on sheets at least 8-1/2" x 11", but not larger than 30" x 42".

E. Contractor shall review, stamp with his approval as herein required, and submit with reasonable promptness and in orderly sequence, according to Submittal Schedule, all shop drawings required by Contract Documents or subsequently by Architect as covered by modifications. Shop drawings shall be, properly identified. At time of submission Contractor shall inform Architect in writing and with highlighted annotation on shop drawings of any deviation in shop drawings from requirements of Contract Documents.

F. Stamp: Each page of shop drawings shall bear Contractor's stamp, which shall signify Contractor's representation that he has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated information contained in shop drawings. Each stamp shall be accompanied by wet signature or initial of employee of Contractor who may be contacted for information. Stamped signatures or initials are not acceptable.

G. Method of Review: Make initial submittal of five (5) prints or bond copies and one (1) 20lb xerographic bond (reproducible) of shop drawings. Comments or corrections will be noted on reproducible and returned to Contractor, who shall identify all changes made since previous submittal and resubmit in same manner. When reviewed, reproducible will be stamped and returned to Contractor who shall make distribution of copies as required.

H. Processing Time

1. Allow enough time for submittal review, including time for re-submittals, as follows:

a. Time for review shall commence on Architects receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including re-submittals. .

b. In accordance with the Schedule for Submission of Shop Drawings, Product Data and Samples. Review of each submittal for conformance with design concept of Project and with information given In Contract Documents. Architect's favorable review of a. separate item shall not indicate acceptance of assembly in which that item functions. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.

c. Submittals requiring Consultants' Review: Where review of submittals by Architect's consultants is required, allow minimum 21 calendar days for review of each submittal. Allow minimum 30 calendar days for review submittals of Section 08 71 00 Door Hardware and Section 08 13 13 Hollow Metal Doors and Frames.

I. Re-submittal Review: In accordance with the Schedule for Submission of Shop Drawings, Product Data and Samples for each re-submittal.

J. Submittal of shop drawings to Architect shall be made by Contractor with dated transmittal form or letter, and not by subcontractors or suppliers.

K. Architect's review of shop drawings shall not relieve Contractor of responsibility for any deviation from requirements of Contract Documents unless Contractor has informed Architect in writing of such deviation at time of submission and Architect has given written acceptance to specific deviation, nor shall Architect's favorable review relieve Contractor from responsibility for errors or omissions in shop drawings.

L. No portion of Work requiring shop drawings shall be commenced until shop drawings have been returned with favorable review by Architect.

M. At Contractor's option, he may request and if Architect approves use Architect's computer-generated drawings in electronic format with costs incurred by this requests payable to Architect. Contractor's request must be in writing with list of drawings requested and CAD format required. Contractor assumes all liability for accuracy of shop drawings if he opts to use Architects drawings. Software for CAD formats requested by Contractor not currently available to Architect will be provided by Contractor at his own expense. Complete Cad Drawing Request Form at the end of this Section for request.

1. Engineers' Drawings, CAD engineers' drawings are available only at discretion of the Engineer.

1.10 PRODUCT DATA

A. Submit within time required by Shop Drawings.

B. Submit six (6) copies. Four (4) copies will be retained by Architect.

C. Mark each copy to identify applicable products, models, options and other data. Supplement manufacturers' standard data to provide information unique to this Project.

D. After review, distribute and provide copies for Record Documents.

1.11 SAMPLES

A. Submit within time required by Shop Drawings.

B. Submit samples to illustrate functional and aesthetic characteristics of product with integral parts and attachment devices. Coordinate sample submittals for interfacing Work.

C. Submit samples of finishes from the full range of manufacturers' standard colors, textures and patterns for Architect selections, or in custom colors selected.

D. Include identification on each sample with full Project information.

E. Submit minimum of three (3) samples or as, specified in Individual Sections of Specifications, two (2) of which will be retained by Architect.

F. Reviewed samples which may be used in the Work are indicated Sections of the Specifications, two (2) of which will be retained by the Architect.

G. Selection or rejection of samples will be determined by Architect in writing.

H. Colors: Materials that are visually related to other finishes require that subcontractors submit their samples before normally scheduled in order that color selection can be made for other items that are scheduled to be ordered earlier in construction schedule. Complete submittal of color charts and color samples shall be made before' related colors will be selected Architect. Contractor shall be responsible to coordinate submittal schedules so as not to delay Work.

1.12 FINISHES MATERIALS SCHEDULE

A. Submit in accordance with Submittal Procedures.

B. Submit Schedule verifying lead times of materials and products as noted in Finish Schedule.

1.13 MANUFACTURER'S INSTRUCTIONS

A. When specified in individual Specification Sections, submit manufacturer's printed instruction for delivery, storage, assembly, installation, start-up, adjusting and finishing in quantities specified for product data.

B. Identify conflicts between manufacturer's instructions and contract documents.

1.14 MANUFACTURER'S CERTIFICATIONS

A. When specified in individual Specification Sections, submit manufacturer's certificate to Architect for review in quantities specified for product data.

B. Indicate that material or product conforms to or exceeds specified requirements.

Submit supporting reference data, affidavits and certifications as appropriate.

C. Certificates may be recent or previous test results on material or product, but must be acceptable to Architect.

1.15 SPECIAL PROCEDURES - ACCELERATION OF THE WORK

A. If, in judgment of Architect or Owner, it becomes necessary at any time to accelerate Work or portion thereof, Contractor, when ordered or directed by Architect or Owner, shall deploy workers in such portions of Project where directed to enable others to properly engage and carry on their work.

1. If circumstances require that entire Work or portion thereof be completed at date earlier than Contract Completion Date as adjusted by change orders, Contractor, when ordered or directed by Owner or Architect, shall increase his forces, equipment, hours of work, and/or number of shifts and shall expedite delivery of materials to meet the altered completion date or dates ordered or directed. Any increase in cost to Contractor in compliance with such orders or directives will be adjusted in accordance with Contact Documents.

B. If, in judgment of Architect or Owner, Work is behind schedule and rate of placement-of work is inadequate to regain scheduled progress so as to ensure timely completion of Work or separable portion thereof, Contractor, when so informed by Architect or Owner, shall immediately take action to increase rate of Work placement.

1. This shall be accomplished by anyone or combination of following or other suitable measures:

a. An increase in working forces.

b. An increase in equipment or tools.

c. An increase in hours of work or number of shifts.

d. Expediting delivery of materials.

2. Contractor shall, within ten (10) calendar days after being so informed, notify Architect of specific measures taken and/or planned to increase rate of progress together with estimate of when scheduled progress will be regained. Should plan of action be deemed inadequate by Architect or Owner, Contractor will take additional steps or make adjustments as necessary to his plan of action until it meets with Architect's or Owner's approval.

3. Acceleration of Work will continue until scheduled progress is regained. Scheduled progress shall be established from latest revised approved·

progress schedule for Project.

4. Timely completion will be understood as Contract Completion Date as revised by all-time extensions granted at time acceleration is undertaken.

5. Contractor shall not be entitled to additional compensation for additional effort he applies to Work under terms of this sub-paragraph.

C. Any directive or order to accelerate Work will be in writing. Any directive or order terminating accelerated Work will be in writing.

1.16 DEFERRED APPROVAL ITEMS

A. In accordance with 2016 California Code of Regulations Title 24, Part 1, California Administrative Code, Section 7-126 Part 1, where certain items, equipment or portions of their installation cannot be fully detailed or structurally calculated before selection of specific manufacturer, items or portions thereof may be indicated in Documents or herein as "Deferred Approval Items".

B. Items noted or listed in Contract Documents as "Deferred Approval" shall not be fabricated or installed until they have been approved by governing authority.

C. Submittals for approval shall be submitted within 30 days after Notice to Proceed to Architect for his review and signature before submitting to governing authority.

D. For Deferred Approval Items provided by the Contractor, Contractor shall be responsible for providing details, structural calculations, stamps and signatures and other necessary data or material as required in the affected section and herein, and complete installation of items and equipment without extra cost to Owner.

E. It should be noted no fixed time frame can be established for agency's approval. However, Contractor shall be responsible for time delays caused by his own late scheduling or incomplete drawings for deferred items.

1.17 SPECIAL TESTING

A. As required by State Fire Marshal Directive dated April 8, 1986, fire or smoke dampers shall be tested for specified performance in presence of Project Inspector. In event of unsatisfactory performance of any damper unit shall be replaced .or repaired and retested in presence of Project Inspector at no cost to Owner.

B. Not more than one tenth of fire or smoke dampers in construction up to one hour rated shall be tested for specified performance in presence of representative of State Fire Marshal's Office. Representative will witness activation of fire dampers in 2-hour or greater fire rated construction. In event of

unsatisfactory performance of any damper unit shall be replaced or repaired and re-tested in presence of Fire Marshal at no cost to Owner. Random selection of dampers requiring testing shall be as directed by Fire Marshal. Contractor shall be responsible for scheduling and coordinating damper testing procedures.

1.18 TWO-WEEK LOOK AHEAD SCHEDULE

A. Submit a Two Week Look Ahead Schedule at each progress meeting which shall contain the following:

1. Be plotted in bar chart or time scale logic format and be of such size that all activity numbers and descriptions are clearly legible.

2. Be sorted by sub-contractor responsibility, actual start, early start and total float.

3. Include activity ID, description and float for each activity.

4. Include all activities, completed, in progress and scheduled to start within the time frame of the date minus one week to the data date plus two weeks.

5. Schedule shall be updated and provided at each regular progress meeting for review and comparison to approved project schedule status.

PART 2 - PRODUCTS

2.1 MOTOR HORSEPOWER -MECHANICAL AND ELECTRICAL COORDINATION

A. In general, motors larger than 1/2 Hp shall be three phase, motors 1/2 Hp or less shall be single phase.

B. Voltage and phase of motors as scheduled on electrical drawings shall take precedence in case of conflict between mechanical and electrical drawings or requirements 2.01 A., above.

C. Under Work of Divisions 21, 22, and 23 shall include coordination of mechanical equipment with requirements of Division 26 before ordering:

1. If motor horsepowers are changed under Work of Divisions 21, 22, and 23 additional electrical cost of change shall be responsibility of Divisions 21, 22, and 23. Increase or decrease motor horsepower from that specified shall not be made without written approval from Architect.

2.2 PRODUCTS FOR PATCHING AND EXTENDING WORK

A. New Materials: As specified in product sections; match existing products and Work for patching and extending Work.

B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing Work as standard.

C. Patching shall extend to point where patching is not evident unless directed otherwise by the Architect.

PART 3 - EXECUTION

Not used

CAD DRAWING REQUEST FORM

Date: Job Number:
Project: Project Architect:

We _____
Contractor

Request the following listed CAD file Sheet Numbers for use in the execution of our Work under the Contract Documents of the subject project, and hereby assume all and sole responsibility of field verification and coordination with the Work of associated trades.

The Contractor further agrees, to the fullest extent permitted by law, to indemnify and hold harmless the Architect, its officers, directors, employees and subconsultants (collectively, Architect) against any damages, liabilities or costs, including reasonable attorneys' fees and defense costs, arising from or allegedly arising from or in any way connected with the unauthorized reuse or modification of the electronic flies by the Contractor or any person or entity that acquires or obtains the electronic files from or through the Contractor without the written authorization of the Architect.

Sheet No.	Dated	Sheet Title
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Signed: _____

Title: _____

Requested File Format
□DWG (Auto CAD, 2017)
□RVT (Revit, 2017)

Requested File Deliverable
□CD Rom
□E-MAIL (Zipped Files)

_____
Contractor's E-mail address

Signed: _____

Title: _____

Company: _____

Address: _____

Telephone: _____

Total payment enclosed herewith at the rate of $50.00 per sheet for Shop Drawings or As-Built Drawings: $_____ (checks made payable to Hibser Yamauchi Architects, Inc.). Drawing files available within 7 days from date of receipt of request.

Contact: Hibser Yamauchi Architects, Inc.
4602 2nd Street
Davis, CA 94618
Tel. (530) 758-1270/ Fax: (530) 758-4789
*Note: Requested Consultant Engineer's Drawings may be available at the discretion of the Consultant.

END SECTION

SECTION 01 31 16
Multiple Contract Coordination

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Requirements for coordination of mechanical and electrical items.

B. Comply with requirements of Section 01 31 19 Project Meetings.

C. Prepare enlarged mechanical/electrical coordination Drawings as specified in Section 01 31 19.

1.2 QUALITY ASSURANCE

A. Mechanical/Electrical Coordinator: In addition to the Project Coordinator, provide a full time mechanical/electrical coordinator, experienced in administrative and supervisory coordination of mechanical and electrical Work of the type required for this Project:

1. The mechanical/electrical coordinator is required to act as the specialized coordinator of interfaces within mechanical and electrical Work and with other Work.

2. "Interface" is defined to include:

a. Scheduling and sequencing of mechanical/electrical Work.

b. Sharing of access to Work spaces.

c. Integration of Work placed into limited spaces available for mechanical/electrical installations.

d. Protection of each trade's Work by other trades.

e. Cutting and patching.

f. Tolerances.

g. Compatibility as a basis of selection.

h. Preparation of mechanical/electrical coordination drawings.

i. Inspections.

j. Systems commissioning.

k. Tests.

l. Utilization of mechanical/electrical temporary facilities.

B. Responsibility: Unless otherwise indicated, items requiring starting devices, power connection, and control wiring shall be set in place and wired in accordance with the Contract Documents.

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

Not used

END OF SECTION

SECTION 01 31 19
Project Meetings

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Coordination.

B. Field engineering.

C. Preconstruction conference.

D. Progress meetings.

E. Pre-installation conferences.

F. Post construction dedication.

1.2 COORDINATION

A. Coordinate scheduling, submittals, and Work of the various Sections of Specifications to assure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.

B. Prior to commencement of a particular type or kind of Work examine relevant information, Contract Documents, and subsequent data issued to the Project.

C. Verify that utility requirement characteristics of operating equipment are compatible with building utilities. Coordinate Work of various Sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.

D. Coordinate space requirements and installation of mechanical and electrical Work which are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with line of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

E. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.

F. In locations where several elements of mechanical and electrical Work must be sequenced and positioned with precision in order to fit into available space, prepare coordination drawings showing the actual conditions required for the installation. Prepare coordination drawings prior to purchasing, fabricating or

installing any of the elements required to be coordinated.

G. Closing up of walls, partitions or furred spaces, backfilling and other covering up operations shall not proceed until all enclosed or covered Work and inspections have been completed. Verify before proceeding.

H. Coordinate completion and cleanup of Work of separate Sections in preparation for completion and for portions of Work designated for Owner's occupancy.

I. After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

J. Coordinate all utility company work in accordance with the General Conditions.

1.3 FIELD ENGINEERING

A. Contractor shall employ a Land Surveyor registered in the State of California and acceptable to the Architect.

B. Control datum for survey is that established by Owner provided survey. Contractor shall locate and protect survey control and reference points.

C. Replace dislocated survey control points based on original survey control.

D. Provide field engineering services. Establish elevations, lines, and levels, utilizing recognized engineering survey practices.

E. Upon completion of Work, submit certificate, signed by the Land Surveyor, that elevations and locations of Work are in conformance with Contract Documents. Record deviations on Record Drawings.

1.4 PRECONSTRUCTION CONFERENCE

A. The Construction Manager or Project Engineer will schedule a conference immediately after receipt of fully executed Contract Documents prior to project mobilization.

B. Mandatory Attendance: Construction Manager, Project Engineer, Inspector of Record, Architect, Contractor, Contractor's Project Manager, and Contractor's Job/Project Superintendent.

C. Optional Attendance: Architect's consultants, subcontractors, and utility company representatives.

D. Architect and Construction Manager will preside at conference, and Architect will review and approve minutes prior to distribution of copies.

E. Agenda:

1. Execution of Owner-Contractor Agreement.

2. Issue Notice to Proceed.

3. Submission of executed bonds and insurance certificates.

4. Distribution of Contract Documents.

5. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.

6. Designation of responsible personnel representing the parties.

7. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.

8. Scheduling.

1.5 PROGRESS MEETINGS

A. Construction Manager will schedule and administer meetings throughout progress of the Work at a minimum of once per week.

B. Construction Manager or Project Engineer will make arrangements for meetings, prepare agenda, preside at meetings, record minutes (Field Reports), and distribute copies. Architect will review and approve all minutes prior to distribution.

C. Attendance Required: Job Superintendent, Construction Manager, Project Engineer, Inspector of Record, Architect, and subcontractors and suppliers as appropriate to agenda topics for each meeting.

D. Agenda:

1. Review minutes of previous meetings. (Field Reports)

2. Review of Work progress.

3. Field observations, problems, and decisions.

4. Identification of problems, which impede planned progress.

5. Review of submittals schedule and status of submittals.

6. Review of off-site fabrication and delivery schedules.

7. Maintenance of construction schedule.

8. Corrective measures to regain projected schedules.

9. Planned progress during succeeding Work period.

10. Coordination of projected progress.

11. Maintenance of quality and Work standards.

12. Effect of proposed changes on progress schedule and coordination.

13. Other business relating to Work.

1.6 PRE-INSTALLATION CONFERENCES

A. When required in individual Specification Section, Contractor shall convene a pre-installation conference prior to commencing Work of the Section. Refer to individual Specification Section for timing requirements of conference.

B. Require attendance of parties directly affecting, or affected by, Work of the specific Section.

C. Notify Architect four (4) days in advance of meeting date.

D. Pre-installation conference to coincide with regularly scheduled progress meeting wherever possible.

E. Architect shall prepare agenda, preside at conference, record minutes, and distribute copies within two (2) days after conference to participants.

F. Review Contract Documents, conditions of installation, preparation and installation procedures, and coordination with related Work and manufacturer's recommendations.

G. Pre-installation Schedule: As a minimum, Work being installed under the following Sections will require pre-installation conferences. Contractor shall review the technical Specifications and add all additional requirements for pre-installation meetings contained in those Sections.

Delete non-applicable Sections.

1. Section 02 41 16 Structure Demolition.

2. Section 02 41 19 Selective Demolition .

3. Section 03 60 00 Grouting.

4. Section 05 12 00 Structural Steel Framing.

5. Section 07 13 00 Sheet Membrane Waterproofing.
6. Section 07 52 00 Modified Bituminous Roofing.
7. Section 09 67 02 Urethane Mortar Floor.
8. Section 09 67 01 Fluid-Applied Epoxy Flooring.
9. Section 14 24 23 Hydraulic Elevators.
10. Section 14 42 00 Wheelchair Lift.
11. Section 23 30 00 HVAC Air Distribution.
12. Section 26 05 00 Common Work Results for Electrical.
13. Section 27 00 00 Communications.

1.7 POST CONSTRUCTION DEDICATION

A. Attendance Required: Project Superintendent, Project Manager, major subcontractors, Owner, and Architect.

B. Preparation prior to Dedication:

1. Assist Owner in operation of mechanical systems.
2. Verify operation and adjust controls for communication systems.
3. Assist Owner in operation of lighting systems.

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

Not used

END OF SECTION

SECTION 01 32 26
Construction Progress Reporting

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Requirements for job site reports.

1.2 COORDINATION

A. Coordinate both the procedural timing and the listing (naming and sequencing) of reports/activities required by provisions of this Section and other Sections, to afford consistency and logical coordination between submitted reports or lists.

B. Maintain coordination and correlation between separate reports by updating at monthly or shorter time intervals.

C. Make appropriate distribution of each report and updated report to entities involved in the work including Architect and [Owner][District].

D. Provide close coordination of progress schedule, equipment delivery schedule, schedule of values, listing of subcontracts, schedule of submittals, progress reports, and payment requests.

1.3 REPORTS

A. Daily Reports: Prepare a daily report at the end of each working day on forms furnished by the [Owner][District]. Record information regarding that day's events at the site. Complete (typewritten) all categories on the attached form.

B. Weekly Reports: Prepare a weekly report on the last working day of each week, recording the past week's events, progress, and problems and the next week's planned activities. Complete (typewritten) all categories on the attached form.

C. Report Submittal: Collect all the week's daily reports and the weekly report on the last working day of the week and transmit one copy to the [Owner][District] and one copy to the Architect.

D. Forms: Sample copies of the forms for daily and weekly reports are included at the end of this Section. Contractor's forms with equivalent data will be considered for approval by Architect and [Owner][District], upon Contractor's request.

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

Not used

DAILY REPORT

Facility:

Project: _____ Project No. _____

Date: _____ Temperature: _____

Weather: _____ Report No. _____

Status of Construction:

Staffing:

Items Required of Architect/Engineer:

Items Required of Owner:

Signature: _____

WEEKLY REPORT

Facility:

Project: _____ Project No. _____

Date: _____ Report No. _____

Work Accomplished During Past Week:

Work to be Accomplished Next Week:

Status of Construction Schedule:

Critical Items Needed from District or Architect/Engineer:

Potential Problems or Delays:

Days Lost in Past Week:

Summary and Comments:

Signature _____

END OF SECTION

SECTION 01 33 00
Submittal Procedures

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Submittal procedures.

B. Proposed products list.

C. Shop Drawings.

D. Product Data.

E. Samples.

F. Manufacturers' instructions.

G. Manufacturers' certificates.

H. Deferred approval requirements.

I. Submittal schedule.

1.2 SUBMITTAL PROCEDURES

A. Transmit each submittal in conformance with requirements of this Section.

B. Sequentially number the transmittal forms. Resubmittals to have original number with an alphabetic suffix. Architect will not review more than 1 resubmittal for a specified product.

C. Identify Project and Architect's project number, Contractor, subcontractor or supplier; pertinent Drawing sheet and detail number(s), and Specification Section number, as appropriate.

D. Apply Contractor's stamp, signed or initialed certifying that review, verification of products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents. Submittals without Contractor's stamp and signature will be returned without review. Incomplete submittals will be returned without review.

E. Schedule submittals to expedite the Project, and deliver to Architect. Schedule shall include all items requiring color selection to be simultaneously submitted.

F. Make submittals in groups containing associated and related items to make sure

that information is available for checking each item when it is received.

1. Information to included, but not limited to:

    a. Product Data Sheets

    b. Safety Data Sheets

    c. Fabrication Guidelines

    d. Installation Guidelines

    e. Product Warranties

    f. Shop Drawings, including:

        1. Fabrication Details.

        2. Types per location.

2. Submittals for all items requiring color selection must be received before any will be approved.

3. Refer to associated and related individual specification sections for additional requirements.

G. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received.

H. Make submittals far enough in advance of scheduled dates for installation to provide time for review and possible revisions and resubmission prior to approval and subsequent placement of orders.

I. No extension of Contract Time will be authorized because of failure to transmit submittals to the Architect sufficiently in advance of the Work to permit processing.

J. Identify variations from Contract Documents and product or system limitations which may be detrimental to successful performance of the completed Work.

K. Provide space for Contractor and Architect review stamps.

L. Revise and resubmit submittals as required, identify all changes made since previous submittal.

M. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.

N. Submittals not requested will not be recognized or processed. Submittals not requested will be returned without review.

1.3 PROPOSED PRODUCTS LIST

A. Within 10 calendar days after date of Notice to Proceed, submit complete list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.

B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.4 SHOP DRAWINGS

A. Submit one transparency and blue-line prints of each Shop Drawing in accordance with the submittal list. Review comments will be shown on the transparency and Contractor may make and distribute such copies as are required for his purposes. Provisions may be made for electronic transmittal at the Owner's option.

B. After review, distribute in accordance with procedures specified above and for Record Documents described in Section 01 77 00 Closeout Procedures.

C. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not a Shop Drawing.

D. Do not use or allow others to use Shop Drawings which have been submitted and have been rejected.

1.5 PRODUCT DATA

A. When specified in individual Specification Sections, submit copies of data for each product which Contractor requires. Provide for four copies to be retained by Architect.

B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information unique to this Project.

C. After review, distribute in accordance with procedures specified above and provide copies for Record Documents described in Section 01 77 00 Closeout Procedures.

1.6 SAMPLES

A. Submit Samples to illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate Sample submittals for interfacing Work.

B. Where specific colors or patterns are not indicated, provide materials and products specified in the full range of color, texture and pattern for selection by Architect. Range shall include standard stocked color/texture/pattern, standard color/texture/pattern not stocked, but available from manufacturer, and special color/ texture/pattern available from manufacturer as advertised in Product Data and brochures. Unless otherwise indicated in individual Specification Sections, Architect may select from any range at no additional cost to Owner.

C. Include identification on each Sample, with full Project information.

D. Submit the number of Samples which Contractor requires, plus one which will be retained by Architect and one by the Owner.

E. Reviewed Samples which may be used in the Work are indicated in individual Specification Sections.

1.7 MANUFACTURER'S INSTRUCTIONS

A. When specified in individual Specification Sections, submit manufacturers' printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, in quantities specified for Product Data.

B. Identify conflicts between manufacturers' instructions and Contract Documents.

1.8 MANUFACTURER'S CERTIFICATES

A. When specified in individual Specification Sections, submit manufacturers' certificate to Architect for review, in quantities specified for Product Data.

B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference date, affidavits, and certifications as appropriate.

C. Certificates may be recent or previous test results on material or product, but must be acceptable to Architect.

1.9 MOCK-UP

A. Where indicated, provide mock-ups as required. Mock-ups shall be prepared per the Specifications and shall accurately and reasonably represent the quality of construction the Contractor will provide. If the mock-up or portions thereof do not adequately represent the quality of the Work specified, the Contractor shall modify the mock-up as needed.

B. Once completed to the Architect's satisfaction, the mock-up shall serve as the standard of quality for the Work.

C. All mock-ups, at the Owner's option, shall remain the property of the Owner. If not required by the Owner, Contractor shall remove and dispose of the mock-

up.

D. Where indicated, on-site mock-ups, if accepted, may be integrated into the Work.

1.10 DEFERRED APPROVAL REQUIREMENTS

A. Installation of deferred approval items shall not be started until detailed plans, specifications, and engineering calculations have been accepted and signed by the Architect or Engineer in general responsible charge of design and signed by a California registered Architect or professional Engineer who has been delegated responsibility covering the Work shown on a particular plan or specification and approved by the Authority Having Jurisdiction. Deferred approval items for this Project are the following items:

1. Elevator guide rails and support brackets.

2. Climbing structure.

3. Safety surfacing and transfer point at existing play structure.

4. [_____.]

B. Deferred approval drawings and specifications become part of the approved Contract Documents for the Project when they are submitted to and approved by the Authority Having Jurisdiction.

C. Submit 1 transparency and 3 blue-line or full size copies of each drawing or number of copies noted in the schedule below.

D. Submit 6 copies of calculations, Product Data and test reports or number of copies noted in the schedule below.

E. Identify and specify all supports, fasteners, spacing, penetrations, etc., for each of the deferred approval items, including calculations for each and all fasteners.

F. Submit documents to Architect for review prior to forwarding to the Authority Having Jurisdiction.

G. Documents shall bear the stamp and signature of the Structural, Mechanical, or Electrical Engineer licensed in the State of California who is responsible for the Work shown on the documents.

H. Architect will forward submittal to Project Structural, Mechanical, and Electrical Engineers.

I. Review of Architect, and Structural, Mechanical, and Electrical Engineers is only for conformance with design concept shown on the documents.

J. After review by Architect/Engineers forward submittal to the Authority Having Jurisdiction for approval.

K. Respond to review comments made by the Authority Having Jurisdiction and revise and resubmit submittal to the Authority Having Jurisdiction for final approval.

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

3.1 SUBMITTAL SCHEDULE

Edit the following to suit each Project.

SUBMITTAL LIST					
SPEC. SECTION	TITLE	MOCK-UP	**SAMPLE	CATALOG SHEET	*REPORT, SCHEDULE, OR SHOP DRAWING
01 11 09	Contract Considerations		4	6	4 + 1
01 73 29	Cutting and Patching		4		
01 33 00	Submittals Procedures		N/A	N/A	N/A
01 32 16	Construction Schedule – Network				2 + 1
01312	Construction Schedule - Bar				2 + 1
01 45 00	Quality Control				2 + 0
01 45 29	Testing Laboratory Services				2 + 0
01 62 00	Product Options and Substitutions				6 + 0
01 77 00	Closeout Procedures			2	0 + 1
02 41 19	Minor Demolition for Remodeling				4 + 1
31 10 00	Site Clearing		0	0	0
31 20 00	Earthwork		4	6	4 + 1
02311	Finish Grading		4	6	4 + 1
02312	Rough Grading		4	6	4 + 1
02316	Backfilling		4	6	4 + 1
02319	Excavation		0	0	0
02321	Trenching		4	6	4 + 1
02473	Drilled Caissons			6	4 + 1

SUBMITTAL LIST					
SPEC. SECTION	TITLE	MOCK-UP	**SAMPLE	CATALOG SHEET	*REPORT, SCHEDULE, OR SHOP DRAWING
32 18 17	Playground Safety Surfaces		4	6	4 + 1
05 53 00	Grating and Floor Plates		4	6	4 + 1
07 95 13	Expansion Join Covers		4	6	4 + 1
06 10 00	Rough Carpentry			6	4 + 1
06151	Wood Chord Metal Joists				4 + 1
06 18 00	Glue-Laminated Construction			6	4 + 1
06195	Prefabricated Wood I Joists			6	4 + 1
06 20 00	Finish Carpentry		4	6	4 + 1
06 41 15	Custom Wood Casework	1	4		4 + 1
06 41 16	Laminate Clad Wood Casework		4		4 + 1
07 11 13	Bituminous Dampproofing			6	
07 12 00	Built-Up Bituminous Waterproofing		4	6	4 + 1
07 19 00	Water Repellents			6	
07 21 16	Batt Insulation			6	
07 22 16	Roof and Deck Insulation			6	4 + 1
07 22 13	Nailable Insulated Sheathing			6	
07 46 46	Fiber Cement Siding		4	6	
07 52 00	Modified Bituminous Roofing		1	6	
07 61 00	Sheet Metal Roofing		4	6	4 + 1
07 62 00	Sheet Metal Flashing and Trim		4	6	4 + 1
07 71 23	Gutters and Downspouts			6	4 + 1
07 72 33	Roof Hatches			6	
07 81 00	Applied Fireproofing			6	
07 84 00	Firestopping			6	
07 92 00	Joint Sealers		4	6	
08 11 13	Standard Steel Doors and Frames		1	6	4 + 1
08 14 16	Flush Wood Doors		4	6	4 + 1
08 16 13	Fiberglass Reinforced Polyester (FRP) Doors in Aluminum		1	6	4 + 1
08 31 00	Access Doors			6	
08 33 23	Overhead Coiling Doors			6	4 + 1
08 41 12	Aluminum Entrances and Storefronts		4	6	4 + 1
08 51 13	Aluminum Windows		4	6	4 + 1
08 42 43	Manual Sliding ICU-Type Doors	1	4	6	4 + 1
08 62 00	Unit Skylights			6	4 + 1

08 71 00	Door Hardware			6	4 + 1
08 80 00	Glazing		4	6	
08 45 00	Translucent Wall and Roof Assemblies			6	4 + 1
09 22 16	Metal Stud Framing System			6	4 + 1
09 24 00	Portland Cement Plaster		4	6	
09 29 00	Gypsum Board		4	6	
09 77 23	Tackable Wallboard Systems		4	6	4 + 1
09 28 13	Cementitious Backing Board for Special Coatings	(See Also 09 67 01)	4		
09 30 13	Ceramic Wall Tile Finish		4	6	4 + 1
09 51 00	Suspended Acoustical Ceilings		4	6	
09 51 53	Adhesive Applied Acoustical Ceilings		4	6	
09 53 33	Fiber Reinforced Plastic Panels		4	6	
09 64 53	Cushioned Wood Flooring		4	6	4 + 1
09 65 16	Resilient Sheet Flooring		4	6	
09 68 00	Carpeting		4	6	
09 67 01	Fluid-Applied Epoxy Flooring		4	6	
09 67 02	Urethane Mortar Flooring	1	4	6	
09 91 00	Painting		4	6	
09 72 16	Wall Coverings		4	6	
10 11 00	Visual Display Surfaces		4	6	
10 21 13	Phenolic Toilet Compartments		4	6	
08 91 00	Metal Wall Louvers		4	6	4 + 1
10 75 00	Flag Poles		4	6	4 + 1
10 14 00	Signage		4	6	4 + 1
10 51 13	Metal Lockers		4	6	4 + 1
10 44 00	Fire Extinguishers and Cabinets			6	4 + 1
10 22 26	Operable Partitions		4	6	4 + 1
10 28 00	Toilet and Bath Accessories			6	
11 00 00	Miscellaneous Equipment			6	
11 61 43	Stage Curtains		4	6	
11 13 13	Dock Bumpers			6	4 + 1
11 40 00	Food Service Equipment		4	6	6 + 1
12514	Sunshades		4	6	4 + 1
13 34 23	Modular Relocatable Buildings			6	4 + 1
13125	Prefabricated Modular Relocatable Restrooms			6	4 + 1
05 51 00	Prefabricated Steps and Ramps			6	4 + 1
13851	Fire Alarm System			6	4 + 1
14 24 23	Hydraulic Elevators - Passenger		4	6	4 + 1
14 42 00	Wheelchair Lifts		4	6	4 + 1
15400	Plumbing			7	4 + 1

15600	Automatic Fire Sprinklers			6	4 + 1
23 30 00	Heating, Ventilating, and Air Conditioning		4	7	4 + 1
26 05 00	Basic Electrical Materials and Methods			6	4 + 1
26 05 26	Grounding and Bonding			6	4 + 1
16071	Seismic Controls for Electrical Work			6	4 + 1
16120	Conductors and Cables				4 + 1
26 05 33	Raceways and Boxes			6	
26 27 26	Wiring Devices		1	6	4 + 1
16145	Lighting Control Devices			6	
26 28 16	Enclosed Switches and Circuit Breakers			6	
16441	Switchboards			6	4 + 1
16442	Panelboards			6	4 + 1
16461	Dry Type Transformers (600 V and Less)			6	4 + 1
16491	Fuses			6	
16511	Interior Lighting			6	
16521	Exterior Lighting			6	4 + 1
17000	General Technology Requirements		2	5	4 + 1
17160	Horizontal Cabling			6	
17400	Integrated Audio Video Systems		2	5	4 + 1
17410	Basic Materials and Methods				
17420	Integrated Systems and Equipment				
17450	Portable and Loose Equipment				
17640	Telecommunications Grounding Protection			5	4 + 1
17730	Audio Systems			5	4 + 1
17930	Access Control Systems			5	4 + 1
17940	Surveillance Systems			5	4 + 1
17960	Intrusion Systems			5	4 + 1

* Indicates four (4) prints and one (1) transparency to be submitted.

** Samples are generally required for Architect's "color and material board" or for testing lab. To expedite approval, Contractor shall expedite the submittal of these items. Color board items will not be approved until all such items are received. Refer to Testing Laboratory Services, Section 01 45 29, Tests and Inspections List and other Sections for further requirements.

END OF SECTION

SECTION 01 33 23
Shop Drawings, Product Data, and Samples

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes

1. Definitions.
2. Shop Drawings.
3. Product Data.
4. Samples.

B. Related Sections

1. Section 01 33 00 Submittal Procedures.

1.2 DEFINITIONS

A. Manufactured: Standard units, usually mass-produced.

B. Fabricated: Specifically assembled or made out of selected materials to meet design requirements.

C. Shop Drawings: Documents establishing the actual detail of manufactured or fabricated items, indicating relation to adjoining work, identifying what work is performed at the project site, and amplifying design details of mechanical and electrical equipment in proper relation to physical spaces in the structure.

D. Product Data: Manufacturer's standard drawings, descriptive literature, catalogs, brochures, performance and test data, wiring and control diagrams, installation/application instructions, other drawings and descriptive data pertaining to specified products.

1.3 SHOP DRAWINGS

A. Submit under provisions of Section 01 33 00.

B. Reproductions of Contract Drawings, Specifications, or portions thereof must not be used for shop drawing submittals.

C. Present information in clear and thorough manner.

D. Identify details by reference to Drawing and detail, schedule, or room numbers

shown and specified.

1.4 PRODUCT DATA

A. Submit under provisions of Section 01 33 00.

B. Clearly mark each copy to identify pertinent products and models.

1. Modify to delete inapplicable information.

2. Supplement standard information as required.

C. Indicate performance characteristics and capacities.

D. Show dimensions and clearances required.

E. Show wiring, piping diagrams, and controls.

1.5 SAMPLES

A. Submit under provisions of Section 01 33 00.

B. Submit samples of sufficient size to illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.

C. Submit samples of finishes from the full range of manufacturer's standard colors, custom colors when specified, textures and patterns for selection.

D. Include identification on each sample with full project information.

E. Reviewed samples which may be used in the Work are indicated in individual Sections.

1. Only samples marked "No Exception Taken" may be incorporated into the Work.

2. Samples that were intended to be incorporated into the Work will be returned, together with a written notice designating the sample with the appropriate review status and indicating errors discovered on review.

3. Other samples will not be returned, but the same notice will be given, and such notice must be considered a return of the sample.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION

SECTION 01 35 16
Alteration Project Procedures

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Products and installation for patching and extending Work.

B. Transition and adjustments.

C. Repair of damaged surfaces, finishes, and cleaning.

D. [Alteration of asbestos containing material:]

1. [Contractor shall assume that all drywall systems in all buildings contain asbestos unless specifically stated otherwise. All cutting Work, and possibly all patching Work, through any drywall system will require coordination with the abatement subcontractor and with the site Environmental Consultant.]

2. [Any Contractor or subcontractor who is patching an asbestos-containing substrate shall have, at a minimum, OSHA 16-hour awareness training and shall follow all the personal protective equipment requirements and all monitoring requirements outlined therein.]

3. [If any Contractor or subcontractor impacts more than 100 square feet of asbestos containing material, they must be registered with the Department of Safety and Health (DOSH) as an abatement contractor.]

4. [Prior to making any cuts through any substrate at the interior or exterior of any building, Contractor shall ensure that all trades refer to the hazardous materials drawings in order to determine where asbestos materials are located. All ceramic tile, structural steel, and painted and varnished surfaces should be assumed to be lead-containing.]

PART 2 - PRODUCTS

2.1 PRODUCTS FOR PATCHING AND EXTENDING WORK

A. New Materials: As specified in product Sections; match existing products and Work for patching and extending Work.

B. Type and Quality of Existing Products: Determine by inspection and testing products where necessary, referring to existing Work as a standard.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that demolition is complete, and areas are ready for installation of new Work.

B. Beginning of restoration Work means acceptance of existing conditions.

3.2 PREPARATION

A. Cut, move, or remove items as necessary for access to alterations and renovation Work. Replace and restore at completion. Contractor shall assume that all drywall systems are asbestos-containing and shall coordinate all penetrations through those systems with the abatement subcontractor.

B. Contractor shall also refer subcontractors to the hazardous materials abatement drawings prior to making any other penetrations through any other substrate.

C. All painted and/or varnished surfaces (including ceramic tiles) shall be assumed to be lead-containing. Any trade or subcontractor impacting painted surfaces shall follow the requirements outlined in the OSHA lead standards as well as the specific requirements outlined in the Contract Documents.

D. Remove unsuitable material not marked for salvage, such as rotted wood, corroded metals, and deteriorated masonry and concrete. Replace materials as specified for finished Work.

E. Remove debris and abandoned items from area and from concealed spaces.

F. Prepare surface and remove surface finishes to provide for proper installation of new Work and finishes. All surface preparation Work shall be completed by subcontractors who are either OSHA Asbestos 16-hour trained (as applicable) and are following the OSHA Lead in Construction Standard.

G. Close openings in exterior surfaces to protect existing Work from weather and extremes of temperature and humidity.

3.3 INSTALLATION

A. Coordinate Work of alterations and renovations to expedite completion and to accommodate Owner occupancy.

B. Remove, cut, and patch Work in a manner to minimize damage and to provide a means of restoring products and finishes to [original] [specified] condition. Prior to any cutting Work, the hazardous materials abatement drawings must be consulted to verify the locations of asbestos containing materials.

C. Refinish visible existing surfaces to remain in renovated rooms and spaces, to specified condition for each material, with a neat transition to adjacent finishes. Contractor shall assume that all drywall systems contain asbestos (unless otherwise noted on the hazardous materials drawings). If drywall refinishing Work requires sanding in order to achieve the desired finish, then the Work must be conducted by those who have received asbestos operations and maintenance training (OSHA 16-hour O&M training).

D. Install products as specified in individual Sections.

3.4 TRANSITIONS

A. Where new Work abuts or aligns with existing, perform a smooth and even transition. Patched Work shall match existing adjacent Work in texture and appearance. Contractor shall assume that all drywall and ceiling systems contain asbestos. If drywall refinishing Work requires sanding in order to achieve the desired finish, then the Work must be conducted by those who have received asbestos operations and maintenance training (OSHA 16-hour O&M training).

B. When finished surfaces are cut so that a smooth transition with new Work is not possible, request instructions from Architect.

3.5 ADJUSTMENTS

A. Where removal of partitions or walls results in adjacent spaces becoming one, rework floors, walls, and ceilings to a smooth plane without breaks, steps, or bulkheads. Contractor shall assume that all drywall wall systems contain asbestos. If drywall refinishing Work requires sanding in order to achieve the desired finish, then the Work must be conducted by those who have received asbestos operations and maintenance training (OSHA 16 hour O&M training).

B. Where a change of plane of 1/8" or more occurs, request instructions from Architect.

C. Trim existing doors as necessary to clear new floor finish. Refinish trim as required.

D. Fit Work at penetrations of surfaces as specified in Section 01 73 29 Cutting and Patching.

3.6 REPAIR OF DAMAGED SURFACES

A. Patch or replace portions of existing surfaces which are damaged, lifted, discolored, or showing other imperfections.

B. Repair substrate prior to patching finish.

3.7 FINISHES

A. Finish surfaces as specified in individual product Sections.

B. Finish patches to produce uniform finish and texture over entire area. When finish cannot be matched, refinish entire surface to nearest intersections. Contractor shall assume that all drywall wall systems contain asbestos. If drywall refinishing Work requires sanding in order to achieve the desired finish, then the Work must be conducted by those who have received asbestos operations and maintenance training (OSHA 16-hour O&M training).

END OF SECTION

SECTION 01 35 23
Site Standards

PART 1 - GENERAL

1.1 RELATED DOCUMENTS AND PROVISIONS

A. All Contract Documents shall be reviewed for applicable provisions related to the provisions in this Section, including without limitation:

1. General Conditions, including without limitation, Site Access, Conditions, and Regulations.

2. Special Conditions.

3. Drug-Free Workplace Certifications.

4. Criminal Background Investigation/Fingerprinting Certifications.

5. Construction Facilities and Temporary Controls.

1.2 REQUIREMENTS OF Owner

A. Drug-Free [Facilities][Schools]:

1. All building sites and other Owner's Facilities have been declared "Drug-Free Zones."

2. No drugs, alcohol, and/or smoking are allowed at any time in any buildings and/or grounds on Owner's property. No students, staff, visitors, or Contractor's personnel are to use drugs on these sites.

3. The Contractor may designate a smoking area outside of Owner's property within the public right-of-way, provided that this area remains quiet and unobtrusive to adjacent neighbors. This smoking area shall be kept clean at all times.

4. The Site shall be posted: "Non-Smoking Area" in a highly visible location.

B. Language: Unacceptable and/or loud language will not be tolerated, "Cat calls" or other derogatory language toward [students or] public will not be allowed.

C. Disturbing the Peace (Noise and Lighting):

1. Contractor shall observe the noise ordinance of the site at all times including, without limitation, all applicable local, city, and/or state laws, ordinances, and/or regulations regarding noise and allowable noise levels.

2. The use of radios, etc., shall be controlled to keep all sound at a level that cannot be heard beyond the immediate area of use.

3. If portable lights are used after dark, all light must be located so as not to direct light into neighboring property.

D. Traffic:

1. Driving on the site shall be limited to periods when students and public are not present. If driving or deliveries must be made during the school hours, two (2) or more ground guides shall lead the vehicle across the area of travel. In no case shall driving take place across playgrounds or other pedestrian paths during recess, lunch, and/or class period changes. The speed limit on the site shall be five miles per hour (maximum) or less if conditions require.

2. All paths of travel for deliveries, including without limitation, material, equipment, and supply deliveries, shall be reviewed and approved by Owner in advance. Any damage will be repaired to the pre-damaged condition by the Contractor.

3. The Owner shall designate a construction entry/exit to the site. If Contractor requests, the Owner determines it is required, and to the extent possible, the Owner shall designate a staging area so as not to interfere with the normal functioning of school facilities. Location of gates and fencing shall be approved in advance with the Owner and installed and maintained at Contractor's expense.

4. In the event the construction entry/exit adjoins, intersects, or is in close proximity to an avoidable path of travel used by students, staff, parents, district services or deliveries, the Contractor shall present a traffic control plan for review by the Owner. The Contractor shall post proper and necessary signage in accordance with the prevailing safety standards to assure safe egress. At the request of the Owner the Contractor shall provide traffic control personnel to mitigate unsafe conditions. The cost of such personnel shall be at no additional cost to the Owner.

5. Parking areas shall be reviewed and approved by the Owner in advance. No parking shall occur under the drip line of trees or in areas that could otherwise be damaged.

6. Contractor shall comply with all provisions in the Specifications regarding traffic control and access roads including, without limitation, the provisions in Construction Facilities and Temporary Controls Section.

E. Constant Enforcement:

1. All of the above shall be observed and complied with by the Contractor and

all workers on the job site. Failure to follow these directives could result in individual(s) being suspended or removed from the work force at the discretion of the Owner.

2. The same rules and regulations shall apply equally to delivery personnel, inspectors, consultants, and other visitors to the site.

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

Not used

END OF SECTION

SECTION 01 45 00
Quality Control

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Quality assurance and control of installation.

B. Tolerances.

C. Field samples.

D. Mock-up.

E. Manufacturers' field services and reports.

F. Observation and supervision.

G. Testing agencies.

H. Tests and inspections.

1.2 QUALITY ASSURANCE/CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

B. Comply fully with manufacturers' instructions, including each step in sequence.

C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.

D. Comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

E. Perform Work by persons qualified to produce workmanship of specified quality.

F. Comply with journeyman/apprentice ratios as applicable and as required by the Owner's findings.

G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement.

1.3 TOLERANCES

A. Monitor tolerance control of installed products to produce acceptable Work. Do

not permit tolerances to accumulate.

B. Comply with manufacturer's tolerances. Should manufacturer's tolerance conflict with Contract Documents, request clarification from Architect before proceeding.

C. Adjust products to appropriate dimensions; position before securing products in place.

1.4 FIELD SAMPLES

A. Install field samples at the site as required by individual Specifications Sections for review.

B. Acceptable samples represent a quality level for the Work.

C. Where field sample is specified in individual Sections to be removed, clear area after field sample has been accepted by Architect.

1.5 MOCK-UP

A. Tests will be performed under provisions identified in this Section and identified in the respective product Specification Sections.

B. Assemble and erect specified items, with specified attachment and anchorage devices, flashings, seals and finishes.

C. Where mock-up is specified in individual Sections to be removed, clear area after mock-up has been accepted by Architect.

1.6 MANUFACTURERS' FIELD SERVICES AND REPORTS

A. Provide if individual Specification Sections require material or product suppliers or manufacturers to provide qualified staff personnel to observe the tests and/or mock-up as applicable, and initiate corrective instructions when necessary.

B. Individuals shall report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

C. Submit report in duplicate within 15 days of observation to Architect for review.

1.7 OBSERVATION AND SUPERVISION

Edit this section for healthcare vs school. Use Project Inspector for schools and Inspector of Record for Healthcare projects.

A. The Owner and Architect or their appointed representatives will review the Work

and the Contractor shall provide facilities and access to the Work at all times as required to facilitate this review. Administration by the Architect and any consulting structural engineer will be in accordance with applicable regulations, including, without limitation, CCR, Part 1, Title 24, [Section 4-341 School Projects][Section 7-141 Healthcare OSHPD].

B. One or more [Project Inspector][Inspector of Record](s) approved by Authority Having Jurisdiction and employed by or in contract with the Owner, referred to hereinafter as [Project Inspector][Inspector of Record], will observe the Work in accordance with CCR, Par 1, Title 24, [Sections 4-333(b) and 4-342 School Projects][Section 7-144(a)(b)(c) and 7-145(a) Healthcare OSHPD]:

1. The [Project Inspector][Inspector of Record] shall have access to the Work wherever it is in preparation or progress for ascertaining that the Work is in accordance with the Contract Documents and all applicable code sections. The Contractor shall provide facilities and access as required and shall provide assistance for sampling or measuring materials.

2. The [Project Inspector][Inspector of Record] will notify the Owner and Architect and call the attention of the Contractor to any observed failure of Work or material to conform the Contract Documents.

3. The [Project Inspector][Inspector of Record] shall observe and monitor all testing and inspection activities required.

C. The Contract shall conform with all applicable laws as indicated in the Contract Documents, including, without limitation, to CCR, Part 1, Title 24, [Section 4-343] [Section 7-143 Healthcare]. The Contractor shall supervise and direct the Work and maintain a competent superintendent on the job who is authorized to act in all matters pertaining to the Work. The Contractor's superintendent shall also inspect all materials, as they arrive, for compliance with the Contract Documents. Contractor shall reject defective Work or materials immediately upon delivery or failure of the Work or material to comply with the Contract Documents. The Contractor shall submit verified reports as indicated in the Contract Documents, including, without limitation, the Specifications and as required by Part 1, Title 24, [Section 4-336 School][Section 7-151Healthcare OSHPD] .

1.8 TESTING AGENCIES

A. Testing agencies and tests shall be in conformance with the Contract Documents and the requirements of Part 1, Title 24, [Section 4-335] [Section 7-149 Healthcare].

B. Testing and Inspection Agencies Qualifications: A testing and inspection agency must have a minimum of 5 years continuing experience preceding date of these Contract Documents, and be qualified in accordance with the following

American Society for Testing and Materials (ASTM) publications:

1. ASTM E 699-16 Standard Specification for Agencies Involving in Testing, Quality Assurance, and Evaluating of Manufactured Building Component.

C. Testing and inspection of construction materials and workmanship shall be performed by a qualified laboratory, referred to herein as the "Testing Laboratory". The Testing Laboratory shall be under direction of an engineer registered in the State of California, shall conform to requirements of ASTM E329, and shall be employed by or in contract with the Owner.

D. Testing Equipment: Calibrate at intervals with devices of an accuracy traceable to either National Bureau of Standards or accepted values of natural physical constants.

1.9 TESTS AND INSPECTIONS

A. The Contractor shall be responsible for notifying the Owner and [Project Inspector][Inspector of Record] of all required tests and inspections. Contractor shall notify the Owner and [Project Inspector][Inspector of Record] forty-eight (48) hours in advance of performing any Work requiring testing or inspection.

B. The Contractor shall provide access to Work to be tested and furnish incidental labor, equipment, and facilities to facilitate all inspections and tests.

C. The Owner will pay for the first inspections and tests required by the "CCR", and other inspections or tests that the Owner and/or the Architect may direct to have made, including but not limited to the following principal items:

1. Tests and observations for earthwork and paving.

2. Tests for concrete mix designs, including tests of trial batches.

3. Tests and inspections for structural steel Work.

4. Field tests for framing lumber moisture content.

5. Additional tests directed by the Owner that establish that materials and installation comply with the Contract Documents.

6. Test and observation of welding and expansion anchors.

7. Factory observation of components and assembly of modular prefabricated structures and buildings.

D. The Owner may, at its discretion, pay and back charge the Contractor for:

1. Retests or reinspections, if required, and tests or inspections required due to Contractor error or lack of required identifications of material.

2. Uncovering of Work in accordance with Contract Documents.

3. Testing done on weekends, holidays, and overtime will be chargeable to the Contractor for the overtime position.

4. Testing done off site.

E. Testing and inspection reports and certifications.

1. The Testing Agency shall send test and special inspection reports to each of the following entities listed below. Reports shall clearly state whether material met the requirements of the approved construction documents.

a. The Owner.

b. The Construction Manager, if any.

c. The Architect.

d. The Consulting Engineer, if any.

e. Other Engineers on the Project, as appropriate.

f. [Project Inspector][Inspector of Record].

g. The Contractor.

Edit items 2 and 3. If OSHPD, delete #2.

2. When the test or inspection is one required by the CCR, a copy of the report shall be provided to the Authority Having Jurisdiction.

3. Reports are no longer sent to HCAI; HCAI field staff will review reports in the IOR's records as needed.

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.

B. Verify that existing substrate is capable of structural support or attachment of

new Work being applied or attached.

C. Examine and verify specific conditions described in individual Specification Sections.

D. Verify that utility services are available, of the correct characteristics, and in the correct locations.

3.2 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance.

B. Seal cracks or openings of substrate prior to applying next material or substance.

C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

END OF SECTION

SECTION 01 45 29
Testing Laboratory Services

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Selection and payment.

B. Contractor submittals.

C. Laboratory responsibilities.

D. Laboratory reports.

E. Limits on testing laboratory authority.

F. Contractor responsibilities.

G. Schedule of inspections and tests.

1.2 REFERENCES

A. ASTM D3740-19 - Standard Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.

B. ASTM E329-20 - Standard Specification for Agencies Engaged in Construction Inspection, Test, or Special Inspection.

C. CBC - California Building Code.

D. Title 24, Part 2, of the California Code of Regulations.

E. OSHPD - Office of Statewide Health Planning & Development.

1.3 OBSERVATIONS AND SUPERVISION

A. The Owner and Architect or their appointed representatives will review the Work and the Contractor shall provide facilities and access to the Work at all times as required to facilitate this review. Administration by the Architect and any consulting structural engineer will be in accordance with applicable regulations, including, without limitation, CCR, Part 1, Title 24, Section 7-141.

B. One or more Project Inspector(s) approved by OSPHD and employed by or in contract with the Owner, referred to hereinafter as the "Inspection", will observe the work in accordance with CCR, Part 1, Title 24, Sections 7-144(a)(b)(c), 7-145(a):

1. The Project Inspector shall have access to the tests wherever it is in preparation or progress for ascertaining that the tests is in accordance with the Contract Documents and all applicable code sections. The Contractor shall provide facilities and access as required and shall provide assistance for sampling or measuring materials.

2. The Project Inspector will notify the Owner and Architect and call the attention of the Contractor to any observed failure of tests or material to conform to Contract Documents.

3. The Project Inspector shall observe and monitor all testing and inspection activities required.

Delete "Section 4-343" below for non-school projects.

C. The Contractor shall conform with all applicable laws as indicated in the Contract Documents, including, without limitation, to CCR, Part 1, Title 24. The Contractor shall supervise and direct the Work and maintain a competent superintendent on the job who is authorized to act in all matters pertaining to the Work. The Contractor's superintendent shall also inspect all materials, as they arrive, for compliance with the Contract Documents. Contractor shall reject defective Work or materials immediately upon delivery or failure of the Work or material to comply with the Contract Documents. The Contractor shall submit verified reports as indicated in the Contract Documents, including, without limitation, the Specifications and as required by Part 1, Title 24, Section 7-151.

1.4 TESTS AND INSPECTIONS

A. The Contractor shall be responsible for notifying the Owner and Project Inspector of all required tests and inspections. Contractor shall notify the Owner and Project Inspector forty-eight (48) hours in advance of performing any Work requiring testing or inspection.

B. The Contractor shall provide access to Work to be tested and furnish incidental labor, equipment, and facilities to facilitate all inspections and tests.

C. The Owner will pay for first inspections and tests required by the "CCRs", and other inspections or tests that the Owner and/or the Architect may direct to have made, including, but not limited to, the following principal items:

1. Tests and observations for earthwork and paving.

2. Tests for concrete mix designs, including tests of trial batches.

3. Tests and inspections for structural steel capitalize Work.

4. Field tests for framing lumber moisture content.

5. Additional tests directed by the Owner that establish that materials and installation comply with the Contract Documents.

6. Test and observation of welding and expansion anchors.

7. Factory observation of components and assembly of modular prefabrication structures and buildings.

D. The Owner may, at its discretion, pay and back charge the Contractor for:

1. Retests or reinspections, if required, and tests or inspection required due to test failures Contractor error or lack of required identifications of material.

2. Uncovering of Work in accordance with Contract Documents.

3. Testing done on weekends, holidays, and overtime will be chargeable to the Contractor for the overtime portion.

4. Testing done off site.

E. Testing and inspection reports and certifications:

1. The Testing Agency shall send test and special inspection reports to each of the following entities listed below. Reports shall clearly state whether material met the requirements of the approved construction documents.

a. The Owner.

b. The Construction Manager, if any.

c. The Architect.

d. The Consulting Engineer, if any.

e. Other Engineers on the Project, as appropriate.

f. [The Project Inspector.][The Inspector of Record.]

g. The Contractor.

2. When the test or inspection is one required by the CCR, a copy of the report shall be provided to the authority having jurisdiction.

1.5 SELECTION AND PAYMENT

A. Owner will employ and pay for services of an independent testing laboratory to perform specified inspection and testing as specified by Owner's testing laboratory.

B. Owner's employment of testing laboratory shall in no way relieve Contractor of obligation to perform Work in accordance with requirements of Contract Documents.

1.6 OWNER'S TESTING LABORATORY RESPONSIBILITIES

A. Test samples of mixes submitted by Inspector.

B. Provide qualified personnel at site. Cooperate with Architect and Contractor in performance of services.

C. Perform specified inspection, sampling, and testing of products in accordance with specified standards.

D. Ascertain compliance of materials and mixes with requirements of Contract Documents.

E. Promptly notify Architect and Contractor of observed irregularities or non-conformance of Work or products.

F. Perform additional inspections and tests required by Architect.

G. Attend preconstruction conferences and progress meetings when requested by Architect.

1.7 LABORATORY REPORTS

A. After each inspection and test, Owner shall then submit one copy of laboratory report to Contractor. Laboratory shall submit copies of the report per the requirements of Section 01 33 00 Submittal Procedures. Reports of test results of materials and inspections found not to be in compliance with the requirements of the Contract Documents shall be forwarded immediately.

B. Verification of Test Reports: Each testing agency shall submit in accordance with Section 01 33 00 Submittal Procedures, a verified report covering all of the tests which were required to be made by that agency during the progress of the project. Such report shall be furnished each time that Work on the Project is suspended, covering the tests up to that time and at the completion of the Project, covering all tests.

1.8 LIMITS ON TESTING LABORATORY AUTHORITY

A. Laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.

B. Laboratory may not approve or accept any portion of the Work.

C. Laboratory may not assume any duties of Contractor.

D. Laboratory has no authority to stop the Work.

1.9 CONTRACTOR RESPONSIBILITIES

A. Submit proposed items for testing as required herein and/or as defined in Section 01 45 00 Quality Control to Architect for review in accordance with applicable Specifications.

B. Cooperate with laboratory personnel, and provide access to the Work and to manufacturer's facilities.

C. Notify Architect, Owner's Representative, and testing laboratory 48 hours prior to expected time for operations requiring inspection and testing services:

1. When tests or inspections cannot be performed after such notice, reimburse Owner for laboratory personnel and travel expenses incurred due to the Contractor's negligence.

2. The Contractor shall notify the Owner's representative a sufficient time in advance of the manufacture of material to be supplied by him under the Contract Documents, which must by terms of the Contract be tested, in order that the Owner may arrange for the testing of same at the source of supply.

3. Any material shipped by the Contractor from the source of supply prior to having satisfactorily passed such testing and inspection or prior to the receipt of notice from said representative that such testing and inspection will not be required shall not be incorporated in the job.

D. Should additional inspections, sampling and testing be required by the testing laboratory when initial tests indicate Contractor's Work and/or materials does not comply with Contract Documents, services shall be paid for by the Owner and may be backcharged to the Contractor.

1.10 SCHEDULE OF INSPECTIONS AND TESTS BY OWNER'S TESTING LABORATORY

The testing agency shall perform tests and inspections per Authority Having Jurisdiction approved "Tests and Inspections" list as well as for the following in conformance with the (CBC) California Building Code (International Building Code with State of California Amendments), Title 24, Part 2, of the California Code of Regulations. [Furnish copies of Product Data and Test Reports as required. Furnish facilities for storage and curing of test samples.]:

1. General Requirements (Chapter 17A):

a. Special Inspections - 1701A.

b. Nondestructive Testing - 1704A.

c. Prefabricated Construction -1709A.

2. Foundations (Chapter 18 and 33):

   a. Compacted fill material 1804.6

   b. Earth fill compaction - 3304.1.

3. Concrete (Chapter 19A):

   a. Materials:

      1. Portland Cement Tests - 1903A.2.

      2. Concrete Aggregates - 1903A.5.

      3. Reinforcing Bars - 1903A.8, 1905A.1.5., 1908A.4

      4. Prestressing Steel & Anchorage – 1901A.3, 1910A.3, 1910A.5.

   b. Concrete Quality:

      1. Proportions of Concrete - 1904A.1, 1904A.2, 1905A.1, 1905A.2, 1905A.3, 1905A.4, 1905A.5.

      2. Strength Tests of Concrete - 1908A.10

      3. Splitting Tensile Tests - 1905A.1.8

   c. Concrete Inspection:

      1. Job Site Inspection - 1901A.6, 1903A.2.

      2. Reinforcing Bar Welding Inspection – 1903A.8

   d. Anchors in Concrete:

      1. Drilled-In-Expansion Bolts or Epoxy-Type Anchors in Concrete – 1910A.3, 1911A.2.

4. Masonry (Chapter 21A):

   a. Materials:

      1. Masonry Units - 2103A.1

      2. Portland Cement - 1910A.1.

      3. Mortar & Grout Aggregates - 2103A.2, 2103A.3

4. Reinforcing Bars - 2103A.4

b. Masonry Quality:

1. Portland Cement Tests - 1910A.1
2. Mortar & Grout Tests - 2105A.3
3. Masonry Prism Tests - 2105A.5
4. Masonry Core Tests -2105A.4
5. Masonry Unit Tests - 2105A.6
6. Reinforcing Bar Tests – 1910A.2

c. Masonry Inspection:

1. Reinforced Masonry – 2103A.4
2. Reinforcing Bar Welding Inspection – 2107A.3, 2108A.3

5. Structural Steel (Chapter 22A):

a. Materials:

1. Structural Steel - 2203A.2, 2231A.1.
2. Material Identification - 2203A.

b. Inspection and Tests of Structural Steel:

1. Tests of H.S. Bolts, Nuts, Washers - 2204A.2, 2213A.1
2. Tests of End Welded Studs - 2204A.1, 2213A.2
3. Shop Fabrication Inspection - 2231A.4.
4. High Strength Bolt Inspection - 1705A.2
5. Welding Inspection - 1705A.2, 2204A.1
6. Nelson Stud Welding - 2231A.3.
7. Non-destructive Weld Testing - 1703A.

6. Wood (Chapter 23):

a. Materials:

1. Lumber and Plywood Grading – 2303.1.1

7. Roof Covering (Chapter 15):

    a. Materials:

        1. Roof Tile Tests – 1505.1, 1506.3

8. Aluminum (Chapter 20):

    a. Materials:

        1. Alloys – 2002.1.

    b. Inspection.

        1. Welding – 2003

B. Plumbing: Testing as specified in plumbing specifications including, but not limited to: sterilization, soil waste and vent, water piping, source of water, pressure, gas piping, downspouts and storm drains.

C. Automatic Fire Sprinklers (where applicable): Testing as specified in plumbing specifications shall include, but not be limited to, hydrostatic pressure.

D. Heating, Ventilating and Air Conditioning: Testing as specified in HVAC specifications shall include, but not be limited to: Ductwork tests, cooling tower tests, boiler tests, controls testing, piping tests, water and air systems, and test and balance of heating and air conditioning systems.

E. Electrical: Testing as specified in Electrical Specifications, including, but not limited to, equipment testing, all electrical system operations, grounding system and checking insulation after cable is pulled.

1.11 PROJECT INSPECTOR'S ACCESS TO SITE

A. A Project Inspector employed by the Owner in accordance with the requirement of State of California Code of Regulations Title 24, Part 1 will be assigned to the Work. His duties are specifically defined in Section 4 342 of Title 24, Part 1, and as indicated in the General Conditions.

B. The Owner and the Construction Manager shall at all times have access for the purpose of inspection to all parts of the Work and to the shops wherein the Work is in preparation, and the Contractor shall at all times maintain proper facilities and provide safe access for such inspection.

C. The Work of construction in all stages of progress shall be subject to the personal continuous observation of the Project Inspector. He shall have free access to any or all parts of the Work at any time. The Contractor shall furnish the Project Inspector reasonable facilities for obtaining such information as may be necessary to keep him fully informed respecting the progress and manner of

the Work and the character of the materials. Inspection of the Work shall not relieve the Contractor from any obligation to fulfill this Contract. The presence of a Project Inspector shall in no way change, mitigate or alleviate the responsibility of the Contractor.

D. The Project Inspector is not authorized to change, revoke, alter, enlarge or decrease in any way any requirement of the Contract Documents, Drawings, Specifications or subsequent Change Orders.

E. Whenever there is insufficient evidence of compliance with any of the provisions of Title 24, Part 2 of the California Code of Regulations or evidence that any material or construction does not conform to the requirements of Title 24, Part 2 of the California Code of Regulations, the Authority Having Jurisdiction may require tests as proof of compliance. Test methods shall be as specified herein or by other recognized and accepted test methods determined by the AHJ. All tests shall be performed by a testing laboratory accepted by the AHJ.

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

Not used

END OF SECTION

SECTION 01 50 00
Temporary Construction Facilities and Controls

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Temporary Utilities: Electricity, lighting, heat, ventilation, telephone service, water, and sanitary facilities.

B. Temporary Controls: Barriers, enclosures, fencing, water, erosion, pollution, noise and fire protection control.

C. Construction Facilities: Access roads, parking, progress cleaning, temporary signage, and temporary buildings.

1.2 TEMPORARY ELECTRICITY

A. Provide and pay for power service required from utility source, or connect to existing power service at location as directed by the Owner's Representative. Power consumption shall not disrupt Owner's need for continuous service. If separately metered, Contractor will pay for cost of energy used. Exercise measures to conserve energy.

B. Provide power outlets for construction operations, with branch wiring and distribution boxes. Provide flexible power cords as required.

C. Provide main service disconnect and over current protection at convenient location.

D. Permanent convenience receptacles may be utilized during construction, if approved by the Owner's Representative.

1.3 TEMPORARY LIGHTING

A. Provide and maintain lighting for construction operations.

B. Provide and maintain lighting to exterior staging and storage areas after dark for security purposes.

C. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required.

D. Maintain lighting and provide routine repairs.

E. Permanent building lighting may be utilized during construction, if approved by the Owner's Representative.

1.4 TEMPORARY HEAT

A. Provide and pay for heat devices and heat as required to maintain specified conditions for construction operations.

B. Do not use permanent equipment for temporary heating purposes.

C. Maintain minimum ambient temperature of 50°F in areas where construction is in progress, unless indicated otherwise in Specifications.

1.5 TEMPORARY VENTILATION

A. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

1.6 TELEPHONE SERVICE

A. Provide, maintain and pay for telephone service to field office and Owner's/Project Inspector's field office at time of project mobilization. Project Inspector's office shall have separate telephone lines.

B. Provide, maintain and pay for facsimile machine in field office. Provide separate dedicated telephone line for machine.

1.7 TEMPORARY WATER SERVICE

A. Provide, maintain and pay for suitable quality water service required for construction operations.

B. Connect to existing water source for construction operations. If metered, Contractor will pay cost of water used. Exercise measures to conserve water. Water consumption shall not disrupt Owner's need for continuous service.

C. Extend branch piping with outlets located so water is available by hoses with threaded connections.

1.8 TEMPORARY SANITARY FACILITIES

A. Provide and maintain required temporary chemical type toilet facilities and enclosures. Temporary sanitary facilities shall not be located outside of the temporary construction barriers and shall be securely anchored to grade and fully enclosed behind fencing.

B. Existing sanitary facilities shall not be used by Contractor's personnel.

1.9 BARRIERS

A. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations.

B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing buildings.

C. Provide protection for plant life and trees designated to remain and for soft and hardscape areas adjacent to work, replace damaged materials in kind.

D. Protect non-owned vehicular traffic, stored materials, site and structures from damage.

1.10 FENCING

A. Construction: Commercial grade chain link fence.

B. Provide 6 foot high fence around construction site; equip with vehicular and pedestrian gates with locks. Post fences and gates with "no trespassing" signs.

1.11 WATER CONTROL

A. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.

B. Provide water barriers as required to protect site from running water.

1.12 STORM WATER POLLUTION PREVENTION PLAN

A. Conform to Best Management Practices for Contractor Activities and Disposal Alternatives as defined in Sections 3 and 4 of the Construction Activity Handbook published by the Storm Water Quality Task Force, and per Section 01 57 23.

B. Plan and execute construction by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sedimentation.

C. Minimize amount of bare soil exposed at one time.

D. Provide temporary measures such as berms, dikes, and drains, to prevent water flow.

E. Construct fill and waste areas by selective placement to avoid erosive surface silts or clays.

F. Coordinate construction activities with control procedures established in the Storm Water Pollution Prevention Plan (SWPPP) if applicable.

1.13 TEMPORARY FIRE PROTECTION

A. Maintain temporary fire protection facilities of the types needed until permanent facilities are installed.

B. Comply with NFPA 10 "Standard for Portable Fire Extinguishers" and NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations".

C. Store combustible materials in containers in fire-safe locations.

D. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways, and other access routes.

E. Provide supervision of welding operations, combustion-type temporary heating units, and similar sources of fire ignition.

1.14 NOISE CONTROL

A. Provide methods, means, and facilities to minimize noise produced by construction operations.

1.15 POLLUTION CONTROL

A. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.

1.16 EXTERIOR ENCLOSURES

A. Provide temporary weather-tight closure of exterior openings to accommodate acceptable working conditions and protection for materials, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification Sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

1.17 INTERIOR ENCLOSURES

A. Provide temporary barriers as required to separate work areas from Owner-occupied areas, to prevent penetration of dust and moisture into Owner-occupied areas, and to prevent damage to existing materials and equipment.

1.18 SECURITY

A. Provide security and facilities to protect Work, and existing facilities and Owner's operations from unauthorized entry, vandalism, or theft.

B. Coordinate with Owner's security program.

1.19 ACCESS ROADS

A. Construct and maintain temporary roads accessing public thoroughfares to serve construction area. Extend and relocate as Work progress requires. Provide detours necessary for unimpeded traffic flow.

B. Stabilize temporary vehicle transportation routes and construction entrances to prevent erosion and control dust immediately after grading in accordance with best management practice techniques defined in Chapter 5 of the Construction Activity Handbook published by the Storm Water Quality Task Force.

C. Maintain stabilization techniques as Work progresses.

D. Provide and maintain access to fire hydrants, free of obstructions.

E. Designated existing on-site routes shall be used for construction traffic.

F. Provide traffic control where school traffic and/or any persons, vehicles, or equipment crosses any routes used.

1.20 PARKING

A. Arrange for adequate surface parking areas to accommodate construction personnel.

B. Stabilize temporary surface parking areas immediately after grading to prevent erosion and control dust in accordance with Best Management practice techniques defined in Chapter 5 of the Construction Activity Handbook published by the storm Water Quality Task Force, if applicable.

C. Maintain stabilization techniques as Work progresses.

D. Do not allow vehicle parking on undesignated areas of existing pavement.

1.21 PROGRESS CLEANING

A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.

C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.

D. Remove waste materials, debris, and rubbish from site periodically and dispose

off-site.

1.22 PROJECT IDENTIFICATION

A. Provide 8' x 4' project sign of MDO surface exterior grade plywood and wood frame construction, painted, with exhibit lettering by professional sign painter to Owner's design and colors. Sign support assembly shall be configured to accept one additional 8' x 4' funding sign provided by Contractor below the project sign.

B. List title of Project, names of Owner, Master Architect and Bond Team Manager, and include logos as provided by the Owner.

C. Erect on site at location as indicated or as directed. No other signs are allowed except those required by law.

D. Sign shall remain in place through construction and be removed only after dedication of the Project.

1.23 FIELD OFFICES

A. Office: Weather-tight, with lighting, electrical outlets, heating, cooling and ventilating equipment, and equipped with sturdy furniture drawing rack and drawing display table.

B. Maintain daily janitorial service for offices. Maintain approach to office free of mud and water.

C. Provide space for Project meetings, with table and chairs to accommodate a minimum of 8 persons.

D. Provide separate private office, minimum of 240 square feet, similarly equipped and furnished, for use by the Architect, Owner, and Owner's Representatives. Permanent facilities shall not be used for field offices.

E. Provide electronic data connections to Owner website.

1.24 STORAGE AREAS AND SHEDS

A. Size to storage requirements for products of individual Sections. Allow for access and orderly provision for maintenance and for inspection of products.

1.25 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

A. Remove temporary above grade or buried utilities, equipment, facilities, materials, prior to Final Inspection.

B. Remove underground installations to a minimum depth of 2'. Grade site as indicated.

C. Clean and repair damage caused by installation or use of temporary Work.

D. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

Not used

END OF SECTION

SECTION 01 57 13
EROSION CONTROL

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. General: Provide all materials, equipment and labor necessary to furnish and install BMPs and required maintenance as shown on the Drawings and on the Storm Water Pollution Prevention Plan.

B. Storm Water Pollution Prevention: The Contractor shall provide the following, but not limited to:

1. Cut and fill operations.
2. Temporary stockpiles.
3. Vehicle and equipment storage, maintenance and fueling operations.
4. Concrete, plaster, mortar and paint disposal.
5. Dust control.
6. Tracking of dirt, mud on off-site streets.
7. Pipe flushing.
8. Appropriate Erosion Controls

1.2 QUALITY ASSURANCE

A. General: Comply with governing codes and regulations.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Straw Wattles: Shall be new manufactured straw roles in compliance with state requirements for sediment control.

B. Filter Bag: Shall be as required by local jurisdiction.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Straw Wattles: Shall be installed per the drawings and/or as required by the SWPPP.

B. Filter Bags: Shall be installed as required by manufactures requirements.

3.2 MAINTENANCE AND REMOVAL:

A. General: Maintain and repair existing and new erosion control facilities throughout the construction period. Remove silt build up at straw wattles and/or silt fences as needed. Repair damage to earth slopes and banks. Erosion control measures shall be left in place until final paving and landscaping are complete.

B. Monitoring: Contractor shall provide all site monitoring and recommendations to meet current NPDES requirements during construction.

C. Cleaning: Keep area clean of debris.

D. Remove erosion control measures prior to placing finish landscaping.

END OF SECTION

SECTION 01 62 00
Product Options and Substitutions

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Product options.

B. Substitutions.

1.2 DEFINITIONS

A. Requests for changes in products, materials, or equipment required by Contract Documents proposed by the Contractor prior to and after award of the Contract are considered requests for substitutions. Contractor must refer to the Instructions to Bidders and the General Conditions for limitations on when requests for substitution(s) are permitted on this Project. The following are not considered substitutions:

1. Revisions to Contract Documents requested by the Owner or Architect.

2. Specified options of products, materials, and equipment included in Contract Documents.

B. Whenever in the Specifications any material, process, or article is indicated or specified by grade, patent, or proprietary name, or by name of manufacturer, that Specification shall be used for the purpose of facilitating the description of that material, process, or article desired, and shall be assumed to be followed by the words "or approved equal," except when the product is designated to match others in use on a particular public improvement whether completed or in the course of completion.

1.3 PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only: Any product meeting those standards or description may be used.

B. Products Specified by Naming One or More Manufacturers with or without Provision for Substitution: Provide products of manufacturers named and meeting Specifications, with substitution of products or manufacturers only when submitted under provisions of this Section.

1.4 LIMITATIONS ON SUBSTITUTIONS SUBMITTED PRIOR TO THE RECEIPT OF BIDS

A. The bid shall be based upon the standards of quality established by those items of equipment and/or materials which are specifically identified in the Contract

Documents.

B. Architect may consider requests for substitutions of specified equipment and/or materials only prior to bid and only when requests are received by Architect within the time indicated in the Instructions to Bidders.

C. Consideration by Architect of a substitution request will be made only if request is made in strict conformance with provisions of this Section.

D. Burden of proof of merit of requested substitution is the responsibility of the entity requesting the substitution.

E. It is the sole responsibility of the entity requesting the substitution to establish proper content of submittal for requests for substitutions. Incomplete submittals will be rejected.

F. Architect's decision on substitution requests are final and do not require documentation or justification.

G. When substitution is not accepted, provide specified product.

H. Substitute products shall not be included within the bid without written acceptance by Addendum.

1.5 LIMITATIONS ON SUBSTITUTIONS

A. Owner will not consider any substitution requests submitted after the bids are opened. All requests for substitutions shall be submitted prior to the date the bids are opened and in compliance with the provisions stated herein in the Contract Documents.

B. The Contract is based upon the standards of quality established by those items of equipment and/or materials which are specifically identified in the Contract Documents.

C. Consideration by Architect will be made only if request is made in strict conformance with provisions of this Section.

1.6 REGULATORY REQUIREMENTS

A. It shall be the responsibility of the entity requesting the substitution to obtain all regulatory approvals required for proposed substitutions.

B. All regulatory approvals shall be obtained for proposed substitutions prior to submittal of substitution request to Architect.

C. All costs incurred by the Owner in obtaining regulatory approvals for proposed substitutions to include the costs of the Architect and any authority having

jurisdiction over the project shall be reimbursed to the Owner. Costs of these services shall be reimbursed regardless of final acceptance or rejection of substitution.

D. Substitutions of materials or procedures which affect the health, safety and welfare of the public shall have prior approval of Authority Having Jurisdiction.

1.7 SUBSTITUTION REPRESENTATION

A. In submitting a request for substitution, the entity requesting the substitution makes the representation that he or she:

1. Has investigated the proposed substitution and has determined that it meets or exceeds the quality level of the specified product.

2. Has determined that all components of the proposed substitution are identical and fully interchangeable with the product name and number specified.

3. Will provide the same warranty or guarantee for the substitution as for the specified product.

4. Will coordinate installation and make changes to other Work which may be required for the Work to be completed with no additional cost to the Owner.

5. Waives claims for additional cost or time extension which may subsequently become apparent.

6. Will reimburse Owner for the cost of Architect's review or redesign services associated with substitution request, including reviews by agencies having jurisdiction. Additional time required for Architect or agency reviews shall not be construed as construction delay.

B. Maximum of 2 substitutions may be proposed.

C. If specified product is no longer available, Contractor shall provide proof from the specified manufacturer indicating the product is not available.

1.8 SUBMITTAL PROCEDURE

A. Submit six copies of each request.

B. Submit request with Architect's Substitution Request Form. Form may be obtained at the office of the Architect. Substitution requests received without request form will be returned unreviewed.

C. Limit each request to one proposed substitution.

D. Request to include sufficient data so that direct comparison of proposed substitution can be made.

E. Provide complete documentation for each request. Documentation shall include the following information, as appropriate, as a minimum:

1. Statement of cause for substitution request.

2. Identify product by Specification Section and Article Number.

3. Provide manufacturer's name, address, and phone number. List fabricators, suppliers, and installers as appropriate.

4. List similar projects where proposed substitution has been used, dates of installation and names of Architect and Owner.

5. List availability of maintenance services and replacement materials.

6. Documented or confirmation of regulatory approval.

7. Product Data, including drawings and descriptions of products.

8. Fabrication and installation procedures.

9. Samples of proposed substitutions.

10. Itemized comparison of significant qualities of the proposed substitution with those of the product specified. Significant qualities may include size, weight, durability, performance requirements and visual effects.

11. Coordination information, including a list of changes or modifications needed to other items of Work that will become necessary to accommodate proposed substitution.

12. Statement on the substitutions effect on the construction schedule.

13. Cost information including a proposal of the net reduction in cost to the Contract Sum if the proposed bid substitution is accepted.

14. Certification that the substitution is equal to or better in every respect to that required by the Contract Documents and that substitution will perform adequately in the application intended.

15. Waiver of right to additional payment or time that may subsequently become necessary because of failure of substitution to perform adequately.

F. Inadequate warranty, vagueness of submittal, failure to meet specified requirements, or submittal of insufficient data will be cause for rejection of substitution request.

1.9 ARCHITECT'S REVIEW

A. The Architect will accept or reject proposed substitution within a reasonable amount of time.

B. If a decision on a substitution cannot be made prior to the date set for bid opening, the product specified shall be used.

C. There shall be no claim for additional time for review of proposed substitutions.

D. Final acceptance of a substitution submitted prior to the date established for the receipt of bids will be in the form of an addendum.

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

Not used

END OF SECTION

Notice of Request for Substitution

Substitution Request No.:_____

In accordance with the Conditions of the Contract and the provisions of Section 01 62 00, we hereby submit for consideration, this Notice of Request for Substitution for the following material, product, thing, or service:

_____ _____ _____
Section Paragraph Specified Item

Proposed Substitution: _____

The following supporting information is attached:
[ ] Product Data including model numbers and descriptions.
[ ] Certified test results attesting to equivalence.
[ ] Product/material samples.
[ ] Other:

_____

Reason for proposed substitution:
[ ] Specified or indicated item is unavailable.
[ ] Significant cost reduction. Actual dollar savings to the Client if substitution is accepted: $_____
[ ] Significant quality difference without cost change.
[ ] Other: _____

Submitted and Certified By:

CONTRACTOR:

_____ _____
Signature Date

_____ _____
Name (Print) Title

_____
Firm Name

_____ _____
Address Phone

_____ _____
City, State, Zip FAX

Received:_____ _____ _____
Date Architect of Record Representative

[ ] Recommended: _____ _____ HY Architects, Inc.
[ ] Rejected: Date Architect of Record

[ ] Approved: _____ _____
[ ] Rejected: Date Client Project Manager

END OF SECTION

SECTION 01 73 29
Cutting and Patching

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Requirements and limitations for cutting and patching of Work.

B. Alteration of asbestos-containing material:

1. Contractor shall assume that all drywall systems in all buildings contain asbestos unless specifically stated otherwise. All cutting Work, and possibly all patching Work, through any drywall system will require coordination with the abatement subcontractor and with the site Environmental Consultant.

2. Any subcontractor who is patching an asbestos-containing substrate shall have, at a minimum, OSHA 16-hour awareness training and shall follow all the personal protective equipment requirements and all monitoring requirements outlined therein.

3. If any subcontractor impacts more than 100 square feet of asbestos-containing material, they must be registered with the Department of Safety and Health (DOSH) as an abatement subcontractor.

4. Prior to making any cuts through any substrate at the interior or exterior of any building, Contractor shall ensure that all trades refer to the hazardous materials drawings in order to determine where asbestos materials are located. All ceramic tile, structural steel, and painted and varnished surfaces should be assumed to be lead-containing.

1.2 SUBMITTALS

A. Submit written request in advance of cutting or alteration which affects:

1. Structural integrity of any element of Project.

2. Integrity of weather-exposed or moisture-resistant element.

3. Efficiency, maintenance, or safety of any operational element.

4. Visual qualities of sight-exposed elements.

5. Work of Owner or separate contractor.

B. Include in request:

1. Identification of Project.

2. Location and description of affected Work.

3. Necessity for cutting or alteration.

4. Description of proposed Work, and Products to be used.

5. Alternatives to cutting and patching.

6. Effect on Work of Owner or separate contractor.

7. Written permission of affected separate contractor.

8. Date and time Work will be executed.

1.3 DESIGN CRITERIA

A. Patching shall achieve security, strength, and weather protection, as applicable, and shall preserve continuity of existing fire ratings.

B. Patching shall successfully duplicate undisturbed adjacent finishes, colors, textures, and profiles. Where there is dispute as to whether duplication is successful or has been achieved to a reasonable degree, the Architect's judgment shall be final.

C. Patching may be temporary if it is to be eventually replaced in a subsequent phase of Work.

1.4 CUTTING AND PATCHING

A. Structural Work: Do not cut-and-patch structural Work in a manner resulting in a reduction of load carrying capacity or load/deflection ration. Submit proposal and request and obtain Engineer's approval before proceeding with cut-and-patch of new and/or existing structural Work.

B. Operational/Safety Limitations: Do not cut-and-patch operational elements and safety components in a manner resulting in reduction of fire rating of any assembly, decreased performance, shortened useful life, or increased maintenance. The Contractor shall be responsible for the location of all existing utilities and coordinate all Work to avoid any interruption of service to adjacent properties and/or to other facility operations without proper notification.

C. Visual/Quality Limitations: Do not cut-and-patch Work exposed to view, such as plaster, in a manner resulting in noticeable reduction of visual qualities and similar qualities, as judged by Architect. (Exterior and interior).

D. Additional Requirements: In addition to Contract requirements, upon written instructions to Architect:

1. Uncover work to provide for Architect's observation of covered Work.

2. Remove samples of installed materials for testing.

E. Limitation on Approvals: Architect's and/or Engineer's approval to proceed with cutting-and-patching does not waive right to later require removal/replacement of Work found to be cut and patched in an unsatisfactory manner, as judged by Architect and Engineer.

PAYMENT FOR INCURRED COSTS

The costs caused by ill-timed or defective Work, or Work not conforming to Contract Documents, including costs for additional service of Architect and Engineer, shall be paid by the party responsible for ill-timed, rejected or non-conforming Work.

PART 2 - PRODUCTS

2.1 MATERIAL

A. Primary Products: Those required for original installation.

B. Substitutions: Under provisions of Section 01 62 00.

C. Existing Materials: Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.

D. If identical materials are unavailable or cannot be used, use materials that visually match the original.

PART 3 - EXECUTION

3.1 GENERAL

A. Execute cutting, fitting, and patching to complete Work, and to:

1. Fit the several parts together, to integrate with other Work.

2. Uncover work to install ill-timed Work.

3. Remove and replace defective and non-conforming Work.

4. Remove samples of installed work for testing.

5. Provide openings in elements of Work for penetrations of mechanical/electrical Work.

3.2 EXAMINATION

A. Inspect existing conditions prior to commencing Work, including elements subject to damage or movement during cutting and patching. Verify compatibility with and suitability of substrates and finishes to accept the new Work.

B. After uncovering existing Work, inspect conditions affecting performance of Work.

C. Do not cut and patch any piping, conduit, or equipment supports or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.

D. Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in the Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

E. Beginning of cutting or patching means acceptance of existing conditions.

3.3 PREPARATION

A. Provide temporary supports to ensure structural integrity of the Work. Provide devices and methods to protect other portions of Project from damage.

B. Provide protection from elements for areas which may be exposed by uncovering Work.

C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

D. Existing Services: Where existing services are required to be removed, relocated, or abandoned, bypass such services before cutting to avoid interruption of services to occupied areas.

3.4 CUTTING AND PATCHING

A. Execute cutting, fitting, and patching to complete Work.

B. Fit products together, to integrate with other Work.

C. Uncover work to install ill-timed Work.

D. Remove and replace defective or non-conforming Work.

E. Remove samples of installed Work for testing when requested.

F. Provide openings in the Work for penetration of mechanical and electrical Work.

G. Cut rigid materials using saw or drill. Pneumatic tools are not allowed without prior approval.

3.5 PERFORMANCE

A. Execute Work by methods to avoid damage to other Work, and which will provide appropriate surfaces to receive patching and finishing.

B. Employ skilled and experienced installer to perform cutting and patching.

C. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.

D. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load deflection ratio.

E. Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.

F. Restore work with new products in accordance with requirements of Contract Documents.

G. Fit Work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

H. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal all voids with fire-rated material, to full thickness of the penetrated element.

I. Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.

END OF SECTION

SECTION 01 74 00
Cleaning and Waste Management

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Cleaning at completion of the Work.

B. Interior dust control.

1.2 QUALITY CONTROL

A. Conduct cleaning and disposal operations to comply with codes, ordinances, regulations, and antipollution laws.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Use only those cleaning materials which will neither create hazards to health or property nor damage surfaces.

B. Use only those cleaning materials and methods recommended by manufacturer of the surface material to be cleaned.

C. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

PART 3 - EXECUTION

3.1 INTERIOR DUST CONTROL

A. Clean interior spaces prior to the start of finish painting, and continue cleaning on an as-needed basis until painting is finished.

B. Schedule operations so that no dust and other contaminants resulting from cleaning process will fall on wet or newly coated surfaces.

C. [Plan must comply with the requirements outlined in Section 5.408.1 of the 2019 California Green Building Standards Code. (CAL Green).]

3.2 FINAL CLEANING

A. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight-exposed interior and exterior surfaces, including fixtures, equipment, etc.

B. All scars, stains, paint marks, tags, and labels (except required labels) shall be removed. Paint work and equipment shall be cleaned and touched up as required.

C. Clean and polish hardware and light fixtures.

D. Glass, both interior and exterior, and mirrors shall be cleaned by a professional window washer.

E. Ventilating Systems: Clean permanent filters, and replace disposable filters if units have been operated during construction.

F. Broom-clean and wash down exterior paved surfaces.

G. Vacuum-clean all floors. Carpeting shall be vacuumed and professionally cleaned, if required, to remove soil and visible stains.

H. Clean interior and exterior surfaces of all casework.

I. Immediately prior to final completion or Owner occupancy, conduct an inspection of sight-exposed interior and exterior surfaces, equipment, fixtures, etc., and all work areas to verify that the entire Work is clean.

J. Clean, strip, and seal all flooring products per manufacturer's specifications and requirements prior to installation of furniture and equipment.

END OF SECTION

SECTION 01 75 16
Startup Procedures

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Coordinate schedule for start-up and commissioning of various equipment and systems, including HVAC, plumbing, electrical power, communications, and alarm systems.

B. Notify Architect and Owner seven days prior to start-up of each item.

C. Contractor shall submit written notice to advise Owner where the start-up of equipment and systems establishes beginning of warranty period.

D. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, or other conditions which may cause damage.

E. Verify that tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.

F. Verify wiring and support components for equipment are complete and tested.

G. Execute start-up under supervision of responsible manufacturer's representative and Contractor's personnel in accordance with manufacturer's instructions.

H. When specified in individual Specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up and to supervise placing equipment or system in operation.

I. Submit a written report that equipment or system has been properly installed and is functioning correctly.

1.2 REFERENCES

A. American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE): ASHRAE Guideline 1-1996, HVAC Commissioning Process.

1.3 SUBMITTALS

A. Submit Commissioning Plan describing extent of field tests and procedures and proposed testing schedule.

B. Submit Training Plan describing extent of plan, expected duration of training,

personnel involved, and schedule at least 30 days prior to start of formal maintenance training sessions.

C. Tool Lists: Identify tools, equipment on which tools are used, reason tools required, source, price, and delivery.

1.4 QUALITY ASSURANCE

A. Contractor Responsibilities:

1. The following documentation shall be accessible in the Contractor's office during building systems commissioning.

a. Project Drawings and Specifications, authorized revisions, approved Shop Drawings and Submittals, Test and Balance Reports, and equipment start-up and certification reports.

b. Records of required code authority inspections, and documentation sign-offs.

c. Project operation and maintenance manuals.

B. Special Requirement for HVAC Systems: Complete interim commissioning of HVAC systems during initial season operation and follow-up commissioning of required HVAC systems during additional season operation.

1.5 DEMONSTRATION AND INSTRUCTIONS

A. Demonstrate operation and maintenance of products to Owner's personnel at mutually agreeable time two weeks prior to date of Substantial Completion. Fully instruct designated personnel in the operation, as specified in individual specification sections.

B. Demonstrate Project equipment by a qualified representative who is knowledgeable about the Project.

C. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.

D. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled times at designated locations.

E. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

1.6 TESTING, ADJUSTING, AND BALANCING

A. Contractor shall appoint, employ, and pay for services of an independent firm to perform testing, adjusting, and balancing.

B. The independent firm shall perform services specified in Division 23.

C. Reports shall Be submitted by the independent firm to the Architect indicating observations and results of tests and indicating compliance or noncompliance with specified requirements and with the requirements of the Contract Documents.

D. Provide all necessary equipment, utilities, material, data, and personnel for commissioning.

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

Not used

END OF SECTION

SECTION 01 77 00
Closeout Procedures

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Closeout procedures.

B. Final cleaning.

C. Adjusting.

D. Demonstration and Instructions.

E. Project Record Documents.

F. Operation and maintenance data.

G. Warranties.

H. Spare parts and maintenance materials.

1.2 CLOSEOUT PROCEDURES

A. Request Architect's observation of rough-ins when walls and ceilings are still open for observation. Give Architect at least 48 hours notice. Architect will prepare punch list of unsatisfactory Work.

B. When Work is substantially complete, submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is substantially complete in accordance with Contract Documents and ready for Architect's inspection. Certificate shall include evidence that equipment and systems have been tested in the presence of the Architect and manufacturer's representatives, where applicable. Substantial Completion shall be defined as 95% completion of all Work, including 100% completion of the following: air balance report and submittal, final testing of fire alarm by Local Fire Inspector/Consultant/Owner's Representative, mechanical utility commissioning with Owner's Representative, final electrical testing by IOR/testing laboratory, all finishes, painting (except touch-up), cleaning of Project area (including window washing).

C. Provide submittals to Architect that are required by governing or other authorities.

D. Punch List:

1. Contractor shall correct all punch list items within twenty days of delivery of

the punch list, but no later than the final completion date.

2. Prior to submission of its request for final payment, Contractor shall certify that a completed set of Project Record Documents has been submitted to the Architect for final review.

E. Final Inspection:

1. Within seven days after notice by the Contractor of completion of punch list work, the Architect will conduct the final inspection with the Owner and the Contractor.

2. Items found not resolved may be cause for back charge of additional time for Architect to re-visit the site for final verification.

F. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.

G. Submit affidavit of payment of debts and claims, AIA Document G706.

H. Submit affidavit of release of liens, AIA Document G706A.

I. Submit consent of Contractor's surety to final payment, AIA Document G707.

1.3 REINSPECTION FEES

A. Architect (and his consultants, if required) will perform 1 observation of rough-ins, and 1 observation of Work that is substantially complete. When punch list items have been completed, Architect will observe to verify.

B. Should the Architect and his Consultants have to perform re-inspections and punch list due to failure of the Work to comply with the status of completion claimed by the Contractor; Owner will deduct the amount of compensation for such re-inspections and punch lists from the final payment to the Contractor.

1.4 FINAL ADJUSMENT OF ACCOUNTS

A. Submit a final statement of accounting to the Architect.

B. Statement shall reflect all adjustments to the Contract Sum:

1. The original Contract Sum.

2. Additions and Deductions Resulting From:

a. Previous Change Orders.

b. Deductions for uncorrected Work.

c. Penalties and bonuses.

d. Deductions for liquidated damages.

e. Deductions for re-inspection payment.

f. Other adjustments.

3. Total Contract Sum, as adjusted.

4. Previous payments.

5. Sum Remaining Due: Architect will prepare a final Change Order, reflecting approved adjustments to the Contract Sum, which were not previously made by Change Order.

1.5 FINAL APPLICATION FOR PAYMENT

A. Contractor shall submit the final Application for Payment in accordance with procedures and requirements stated in the General Conditions.

1.6 RELATED REQUIREMENTS

A. As a condition precedent to final acceptance of the Project, the Contractor shall provide spare/loose parts, maintenance materials and operation manuals as required by various Sections of the Specifications.

1. Parts and materials shall be packaged so as to preclude damage in normal handling and storage.

2. Packages shall be labeled with full description of contents and Project name.

3. Place packaged parts and materials at location directed by Owner's representative.

4. Maintenance and Operation Manuals: Provide permanent quality manual of maintenance and operation for all materials requiring operation or for which manufacturer, supplier, or installer recommend maintenance (i.e., floor coverings, roofing, operating mechanisms, electrical devices, paint, etc.). Manuals shall contain manufacturer's instructions and recommendations for proper operation and maintenance. Where applicable, include parts list, sources of parts, service and program for frequency of maintenance. Five sets required, bound in 3-ring binders, shall be provided by Contractor.

5. Prior to turning over any operations manuals or spare/loose parts, accompanied by a CD-ROM, Contractor shall submit for approval and,

upon approval, shall maintain a master log of required manuals and parts, including description, Specification reference, responsibility designation, anticipated and actual delivery dates, delivery acknowledgement, etc.

B. The General Conditions cover the Contractor's responsibility to remedy defects due to faulty workmanship and materials which appear within one year from the date of recording of the Notice of Acceptance.

C. Special warranties are required by various Sections of the Specifications. Assemble written warranties, label and submit to the Architect for review and transmittal to the Owner.

1. Equipment warranties shall be written in the manufacturer's standard form and shall be countersigned by the subcontractor or supplier and the Contractor.

2. All other warranties shall be written on the subcontractor's or supplier's letterhead and shall be countersigned by the Contractor.

3. Bind warranties and bonds in heavy-duty five sets of commercial quality, durable 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2" by 11" paper. Identify each binder on the front and the spine with the typed or printed title "WARRANTIES AND BONDS", the Project title or name and the name of the Contractor. The CD-ROM shall be included in the binder side pocket.

4. When operating and maintenance manuals are required for warranted construction, provide additional copies of each warranty, as necessary, for inclusion in each required manual.

1.7 FINAL CLEANING

A. Execute final cleaning prior to final inspection. Work includes sweeping, brushing, and other general cleaning of completed Work and removal of debris, surplus material, and tools not in active use, scaffolding and other equipment no longer needed.

B. Clean interior and exterior glass and surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.

C. Clean equipment and fixtures to a sanitary condition.

D. Replace filters of operating equipment.

E. Clean debris from roofs, gutters, downspouts, and drainage systems.

F. Clean site; sweep paved areas, rake clean landscaped surfaces.

G. Remove waste and surplus materials, rubbish, and construction facilities from the site.

H. Refer to Section 01 74 00 for additional requirements.

1.8 FIRE PROTECTION

A. Store volatile/hazardous waste in covered metal containers and remove from premises daily in a manner which complies with all ordinances, regulations, and laws regarding hazardous materials.

1.9 POLLUTION CONTROL

A. Conduct clean-up and disposal operations to comply with codes, ordinances regulations, and anti-pollution laws.

1.10 ADJUSTING

A. Adjust operating products and equipment to ensure smooth and unhindered operation.

1.11 DEMONSTRATION AND INSTRUCTIONS

A. Demonstrate operation and maintenance of products to Owner's personnel two weeks prior to date of final inspection.

B. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.

C. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.

D. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at agreed-upon times, at equipment location.

E. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

1.12 PROJECT RECORD DOCUMENTS

A. Maintain on site, one set of the following Record Documents; record actual revisions to the Work in contrasting color.

1. Contract Drawings.

2. Specifications.

3. Addenda.

4. Change Orders and other Modifications to the Contract.

5. Reviewed Shop Drawings, Product Data, and Samples.

B. Store Record Documents separate from documents used for construction, in a clean, dry environment and maintain sets in good order.

C. Record information concurrent with construction progress.

D. Specifications: Legibly mark and record at each Section in contrasting color ink, description of actual products installed, including the following:

1. Manufacturer's name and product model and number.

2. Changes made by Addenda and Modifications.

E. Contract Drawings and Shop Drawings: Legibly mark each item in contrasting color ink to record actual construction including:

1. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.

2. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.

3. Field changes of dimension and detail, identified by RFI or Change Order.

4. Details not on original Contract Drawings.

F. After final inspection is requested, Contractor shall submit Record Documents to the Architect for review. Contractor shall make such revisions or corrections as may be necessary for the Drawings and Specifications to be a true, complete, and accurate record of the Work.

1. Accompany submittal with transmittal in duplicate, containing:

a. Date.

b. Project title and number.

c. Contractor's name and address.

d. Title and number of each Record Document.

e. Signature of Contractor or his authorized representative.

G. Submit documents to Architect for final Application for Payment. Inadequate or incomplete Record Documents may be used as cause for withholding payment.

1.13 RECORD DRAWINGS

A. Architect will provide Contractor with one set of reproducible sepia plans of the original Contract Drawings.

B. Contractor shall maintain one set of marked-up prints kept at each job-site and updated each month, or as otherwise agreed, shall transfer changes and information indicated on the marked-up blue line prints to the reproducible drawings. Contractor shall submit to the Architect one set of blue line prints showing all changes incorporated into the Work since the preceding monthly submittal. The Record Drawings shall be available at the Project Site.

C. Label and date each Record Drawing "RECORD DOCUMENT" in legibly printed letters.

D. Deviations in construction, especially pipe and conduit locations and deviations caused by Change Orders, Field Clarifications, Requests for Clarification and Addenda shall be accurately and legibly recorded.

E. Locations and changes shall be done in a neat, legible manner and, where applicable, indicated by drawing a "cloud" around the changed or addition information.

1.14 RECORD DRAWING INFORMATION

A. Record the following information:

1. Locations of Work buried under or outside each building, such as plumbing and electrical lines and conduits.

2. Actual numbering of each electrical circuit.

3. Locations of significant Work concealed inside each building whose general locations are changed from those shown on the Contract.

4. Locations of all items, not necessarily concealed, which vary from the Contract Documents.

5. Installed location of all cathodic protection anodes.

6. Deviations from the sizes, locations, and other features of installations shown in the Contract Documents.

7. Locations of underground Work, points of connection with existing utilities, changes in direction, valves, manholes, catch basins, capped stub-outs,

invert elevations, etc.

8. Sufficient information to locate Work concealed in each building with reasonable ease and accuracy. In some instances, this may be by dimension, in others; it may be in relation to the spaces in the building near which it was installed.

1.15 OPERATION AND MAINTENANCE DATA

A. Provide Data For:

1. Fire alarm system.

2. Mechanical equipment and controls.

3. Energy management system.

4. Electrical system.

5. Security and communication systems.

B. Submit prior to final inspection, bound in 8-1/2" x 11" text pages, three-ring, D-size binders with durable vinyl covers plus one CD-ROM for all equipment in the above categories.

C. Prepare binder covers with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of Project, and subject matter of binder when multiple binders are required.

D. Internally subdivide the binder contents using permanent page dividers with laminated plastic tabs, logically organized in Parts as described below.

E. Part 1: Directory, listing names, addresses, and telephone numbers of Architect, engineers, Contractor, subcontractors, and major equipment suppliers.

F. Part 2: Operation and maintenance instructions, arranged by Specification Section. For each category, identify names, addresses, and telephone numbers of subcontractors and suppliers. Identify the following:

1. Significant design criteria.

2. List of equipment.

3. Parts list for each component.

4. Operating instructions.

5. Maintenance instructions for equipment and systems.

6. Maintenance instructions for finishes, including recommended cleaning methods and materials.

G. Part 3: Project documents and certificates, including the following:

1. Shop Drawings and Product Data.

2. Air and water balance reports.

3. Certificates.

4. Photocopies of warranties.

1.16 WARRANTIES

A. Provide duplicate notarized copies.

B. Execute and assemble documents from subcontractors, suppliers, and manufacturers, including items furnished by Owner.

C. Provide Table of Contents and assemble in binder with durable plastic cover.

D. Submit prior to final Application for Payment.

E. For items of Work delayed beyond date of Completion, provide updated submittal within ten days after acceptance, listing date of acceptance as start of warranty period.

F. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of warranty on the Work that incorporates the products.

G. Manufacturer's letter of intent to furnish products and services beyond the warranty period where indicated.

H. Manufacturer's disclaimer and limitations on product warranties do not relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with Contractor.

I. When correcting failed or damaged warranted construction, remove and replace construction that has been damaged as a result of such failure or must be removed and replaced to provide access for correction of warranted construction.

J. When Work covered by warranty has failed and has been corrected, reinstate warranty by written endorsement. Reinstated warranty shall be equal to original warranty with equitable adjustment for depreciation.

K. Upon determination that Work covered by warranty has failed, replace or repair Work to an acceptable condition complying with requirements of the Contract

Documents.

1.17 SPARE PARTS AND MAINTENANCE MATERIALS

A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual Specification Sections.

B. Deliver to Project Site and place in location as directed.

C. Obtain signed receipt for delivery of materials and submit prior to application for final payment.

PART 2 - PRODUCTS

2.1 CLEANING MATERIALS

A. Use only those cleaning materials which will not create disruptive fumes or hazards to health or property and which will not damage surfaces.

B. Use only cleaning materials and methods recommended by manufacturer of surface to be cleaned and by cleaning agent material manufacturer. Repair or replace surfaces damaged due to use of improper cleaners and techniques.

PART 3 - EXECUTION

3.1 CLEAN-UP DURING CONSTRUCTION

A. Execute daily cleaning to keep Work, site and adjacent properties free from accumulations of waste materials, rubbish and windblown debris resulting from construction operations.

B. Provide on-site containers for the collection of waste materials, debris, and rubbish.

C. Remove waste materials, debris and rubbish from the site daily or dispose of in approved container on-site.

3.2 DUST CONTROL

A. Clean interior spaces prior to the start of finish painting and continue cleaning on an as-needed basis until painting is finished.

B. Schedule operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly-coated surfaces

C. Vacuum clean interior building areas when ready to receive finish painting and continue vacuum cleaning on an as-needed basis until building is ready for acceptance and occupancy.

D. Lower waste materials in a controlled manner with as few handlings as possible; do not drop or throw materials from heights.

E. Conform to City, County, and State dust control regulations.

3.3 GENERAL CLEANING REQUIRMENTS

A. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight-exposed interior and exterior surfaces.

B. Wash and shine glazing mirrors.

C. Polish glossy surfaces to a clear shine.

D. Clean glass; remove labels, fingerprints, grease, dirt stains, spots, marks, and other foreign materials from exposed exterior and interior surfaces.

E. Clean hardware, plumbing fixtures, and chrome and storefront systems; remove paint spots, asphalt and smears from surfaces; clean fixtures and wash concrete and tile floors.

F. Comply with all special cleaning, waxing and finishing instructions contained in Contract Documents.

G. Restore existing improvements, inside or outside property, which were disturbed, damaged or destroyed as a result of Work under this Contract.

H. Restore and replace damaged material conforming to original colors, textures, lines, grades, shapes and kind, except as otherwise required. Labor, material and methods used in restoring improvements shall conform to directions obtained from Architect before commencing Work.

3.4 FINAL CLEANING

A. Use experienced workmen and professional cleaners for final cleaning.

B. Legally dispose of waste materials, debris and rubbish off the site.

C. Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials, from exposed and semi-exposed surfaces.

D. Repair, patch and touch-up marred surfaces to specified finish, to match adjacent surfaces.

E. Vacuum clean all interior spaces including inside cabinets. Broom clean paved surfaces. Rake clean other surfaces of grounds.

F. Broom and water clean paved surfaces and walks. Rake clean other surfaces and grounds.

G. Maintain cleaning until building or portion thereof, is accepted and occupied by Owner.

H. At completion of construction and just prior to final acceptance or occupancy, conduct final inspection exposed interior and exterior surfaces.

3.5 VENTILATING SYSTEM CLEANING

A. Clean permanent filters and replace disposable filters if units were operated during construction.

B. Clean ducts, blowers and coils if units were operated during construction.

END OF SECTION

SECTION 01 78 36
Warranties

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Requirements for Project warranties and guarantees.

1.2 DEFINITIONS

A. Standard Product Warranties: Preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the Owner.

B. Special Warranties: Written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the Owner.

1.3 GENERAL REQUIREMENTS

A. Guarantees between Contractor and manufacturers and between Contractor and suppliers shall not affect warranties between Contractor and Owner.

B. Contractor shall not be held responsible for defects due to misuse, negligence, willful damage, improper maintenance, or accident caused by others nor shall he be responsible for defective parts whose replacement is necessitated by failure of Owner's maintenance forces properly to clean and service them, provided that Contractor has furnished complete operating and maintenance instructions to Owner.

C. In addition to other requirements specified:

1. Compile specified service and maintenance contracts.

2. Coexecute submittals when so specified.

3. Review submittals to verify compliance with Contract Documents.

4. Submit to Architect for review and transmittal to Owner.

D. In case of items remaining uncompleted after date of Substantial Completion, the warranty period shall run from the date of acceptance of such items.

E. Special warranties applicable to definite parts of the Work and as specifically stipulated in the separate Sections of the Specifications or other Contract Documents shall be subject to the terms of this Section during the first year of the

life of such warranty.

F. If repairs or changes are required in connection with the warranted Work within any warranty period, the Contractor shall, promptly upon receipt of notice from the Owner or Architect and without expense to the Owner, comply with the following:

1. Place in satisfactory condition, in every particular, all of such warranted Work, and correct all defects therein.

2. Make good damage to the buildings or site which is the result of the cause for said repairs and changes.

3. Make good any Work, including the equipment and contents of said buildings or site, disturbed in fulfilling any such warranty.

G. The Owner may, at its sole discretion, after the Contractor has received seven days' written notice, repair or cause to be repaired special equipment which has been furnished and installed and which may be damaged and the repair of which is included in the provision of any warranty.

1. However, where special equipment is involved which, because of its inherent nature, may suffer further damage or cause loss to the Owner owing to the 7-day delay, the Owner may, after notice, cause such equipment to be repaired.

2. The cost of such repairs shall be recoverable from the Contractor to the amount of the cost to the Owner for the completion of such repairs and the reconditioning of the equipment to its exact state prior to damage.

H. If repairs or changes are required in connection with warranted Work within any warranty period and notice thereof is given within such period, the warranty shall continue as to Work requiring repair or change until the things herein required to be done are completed, and the termination of the warranty period shall not apply thereto.

I. In case of Work performed by subcontractors and where special warranties are required, warranties addressed to and in favor of the Owner shall be secured from said subcontractors.

J. No provision in the Contract Documents nor in any special or general warranty shall be held to limit, as to time or scope of liability, the Contractor's liability for defects or the liability of his sureties to less than the legal limit of liability under laws having jurisdiction.

K. The delivery of any warranties shall not relieve the Contractor from any obligation assumed under any other provision of the Contract Documents.

L. The obligation of the Contractor under this Section shall survive the termination of the Contract.

1.4 FORM OF WARRANTY

A. Submit the following written warranty for special warranties and warranties in excess of one year, typed on subcontractor's letterhead, when required by a Specification Section:

WRITTEN WARRANTY FOR

_____

We hereby warrant that _____ which we have provided in _____ has been completed in accordance with Specification Section _____ and Contract Documents requirements.

We agree to repair or replace any or all of our Work, together with any other adjacent Work which may be displaced or damaged by so doing, which may prove to be either patently defective in its workmanship or materials within the period of time prescribed by law or latently defective in its workmanship or materials within a period of ____ year(s) from date established in the Certificate of Substantial Completion of above-named structure, ordinary wear and tear and unusual abuse or neglect excepted.

We also agree to repair any and all damages resulting from such defects.

In the event of our failure to comply with above-mentioned conditions within a reasonable time but in no case longer than 7 calendar days after being notified in writing by the Owner, we collectively and separately do hereby authorize the Owner to have said defective Work and damages repaired or replaced and made good at our expense and will honor and pay the costs and charges therefore upon demand.

SIGNED _____
(Subcontractor's name, address, license number, and date of signing)

COUNTERSIGNED _____
(Contractor's name, address, license number, and date of signing)

1.5 SUBMITTAL REQUIREMENTS

A. Assemble warranties, bonds, and service and maintenance contracts executed by each of the respective manufacturers, suppliers, and subcontractors.

B. Number of Original Signed Copies Required: Two each.

C. Contents:

1. Neatly typed, in orderly sequence.

2. Provide complete information for each item including:

a. Product or Work item.

b. Firm name with name of principal, address, and telephone number.

c. Scope.

d. Date of beginning of warranty, bond, or service and maintenance contract.

e. Duration of warranty, bond, or service and maintenance contract.

3. Provide the following information for Owner's personnel:

a. Proper procedure in case of failure.

b. Circumstances which might affect the validity of warranty or bond.

4. Contractor's name, name of responsible principal, address, and telephone number.

1.6 FORM OF SUBMITTAL

A. Prepare in duplicate packets.

B. Format:

1. Size: 8-1/2" x 11" sheets punched for three-ring binder. Fold larger sheets to fit into binders.

2. Cover: Identify each packet with typed or printed title, "WARRANTIES" and list the title of Project and name of Contractor.

C. Binders: Commercial quality, three ring, "View" type, with durable and cleanable plastic covers.

1.7 TIME OF SUBMITTALS

A. Within 30 days after date of Substantial Completion, prior to final request for payment.

B. For items of Work, where acceptance is delayed materially beyond the date of Substantial Completion, provide updated submittal within 30 days after acceptance listing the date of acceptance as the start of the warranty period.

1.8 SUBMITTALS REQUIRED

A. Submit special warranties, bonds, and service and maintenance contracts specified in the individual Sections.

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

Not used

END OF SECTION

SECTION 01 78 39
Project Record Documents

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Maintain the following at the site for the Owner:

1. One record copy of Contract Drawings, Specifications, Addenda, Change Orders, and other modifications marked currently to record changes made during construction.

2. One record copy of reviewed Shop Drawings, Product Data, and Samples.

3. RFI Log.

4. Addenda Log.

5. Submittal Log.

6. Inspection Log.

B. Documents shall be kept in an approved location, maintained in a clean, dry, legible condition, and shall not be used for construction purposes.

C. The Contractor shall advise the Architect of changes and deviations made during construction.

D. Make documents available at all times for review by Architect and Owner.

E. Comply with related requirements of the Agreement and General Conditions and individual Specification Sections.

1.2 RECORDING

A. Label each document "PROJECT RECORD."

B. Do not permanently conceal any Work until required information has been recorded.

C. Drawings:

1. Make day-to-day changes and notations on a specially designated complete set of blue-line or black-line prints as the work proceeds.

2. Markings and notations shall be neatly and accurately made using nonfading, clear, permanent markings. Use contrasting colors for different

disciplines of Work and where required for clarity.

3. Drawings shall be marked to indicate:

    a. Measured depths of various elements of foundation in relation to survey or other approved datum.

    b. Measured horizontal and vertical locations of underground utilities and appurtenances referenced to permanent surface improvements.

    c. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of structure.

    d. Variations in layout of buildings and improvements, including grading, steps, retaining walls, and similar features.

    e. Field changes of dimensions and detail.

    f. Changes made by Change Order or Construction Change Directive.

    g. Significant details not shown on the original Contract Drawings.

4. Upon completion of the Work, all changes and notations shall be neatly and accurately transferred by the Contractor to a complete set of reproducible vellum transparencies of the Drawings as originally issued for construction obtained from the Architect at Owner's cost.

    a. Where the Architect's Drawings are not of sufficient size and detail, the Contractor shall furnish his own drawings for incorporation of details and dimensions.

    b. Each sheet of Record Drawing transparencies shall be signed and certified by the Contractor as to their correctness and turned over to the Architect.

5. Record Drawings are specifically required for the following Work:

    a. Electrical (include exterior lighting, sound, fire, and all other related Work).

    b. Plumbing.

    c. Storm, sanitary, and site drainage.

    d. Irrigation.

    e. Fire sprinkler and hydrant system.

    f. HVAC.

D. Specifications:

1. On a specially designed complete set of the Project Manual, legibly mark each Specification Section to record:

a. Manufacturer, trade name, catalog number, color designation (if applicable), and supplier of each product and item of equipment actually installed.

b. Changes made by Addendum, Change Order, or Construction Change Directive.

c. Other matters not originally specified.

d. Where selection of manufacturers is offered, indicate which manufacturer's product was installed.

2. The Architect will furnish a Project Manual as originally issued for construction for markup.

E. "Project Record" set of Drawings and Specifications shall be kept at the Project site at all times for review by the Architect and Owner.

1.3 INTERIM REVIEW

A. Project Record Documents are subject to review at time of review of payment request.

B. If Record Documents are not properly maintained, Owner may withhold all or a portion of payment to Contractor.

1.4 SUBMITTALS

A. At completion of Work under the Contract, deliver Record Documents to Architect.

B. Partial submittals are not acceptable, unless requested by Architect.

C. Submit documents to Architect prior to claim for final Application for Payment.

D. Accompany submittal with transmittal letter, in duplicate, containing:

1. Date.

2. Title of Project.

3. Contractor's name and address.

4. Title of each Record Document.

5. Certification that each document, as submitted, is complete and accurate.
6. Signature of Contractor or his authorized representative.

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

Not used

END OF SECTION

SECTION 01 87 00
Material and Equipment

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Products.

B. Owner-furnished items.

C. Transportation and handling.

D. Storage and protection.

E. Damage and restoration.

1.2 PRODUCTS

A. Products: New material, machinery, components, equipment, fixtures, and systems forming the Work. Does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components if designated for reuse.

B. Provide interchangeable components of the same manufacturer, for similar components.

C. Provide products that comply with the Contract Documents that are undamaged and are unused at the time of installation.

D. Provide products complete with all accessories, trim, finish, safety guards and other devices and detail needed for a complete installation and for the intended use and effect.

E. Where products are specified by name or by manufacturer provide the product or manufacturer specified. No substitutions will be permitted unless made under the provisions of Section 01 62 00 Product Options and Substitutions.

F. Where Specifications only describe a product or assembly by listing exact characteristics required, provide a product or assembly that provides the characteristics.

G. Where Specifications only require compliance with performance requirements, provide products that comply with those requirements.

H. Where the Specifications only require compliance with an imposed code, standard or regulation, provide a product that complies with the standards,

codes or regulations specified.

I. Where Specifications require review and acceptance of a Sample, the Architect's decision will be final on whether a proposed product Sample is acceptable or not.

J. Do not use materials and equipment removed from existing premises, unless as specifically directed.

1.3 TRANSPORTATION AND HANDLING

A. Transport and handle products in accordance with manufacturer's instructions.

B. Schedule delivery to minimize long-term storage at site to prevent overcrowding of construction spaces.

C. Coordinate production and delivery of Owner-furnished items, where applicable.

D. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other losses.

E. Promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged. Notify Owner of any items received under Owner purchase, if applicable.

F. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

1.4 STORAGE

A. Store products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weather-tight, climate controlled enclosures.

B. For exterior storage of fabricated products, place on sloped supports, above ground.

C. Provide off-site storage when site does not permit on-site storage.

D. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation.

E. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.

F. Provide equipment and personnel to store products by methods to prevent

soiling, disfigurement, or damage.

G. Arrange storage of products to permit access for inspection. Periodically inspect to assure products are undamaged and are maintained under specified conditions.

H. Prevent the discharge of pollutants to storm water from storage of materials on-site using best management practice techniques defined in Chapter 4 of the Construction Activity Handbook published by the Storm Water Quality Task Force.

1.5 PROTECTION

A. Protect installed Work and provide special protection where specified in individual Specification Sections.

B. Provide temporary and removable protection for installed products. Control activity in immediate Work area to minimize damage.

C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.

D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects.

E. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

F. Prohibit traffic from landscaped areas.

1.6 DAMAGE AND RESTORATIONS

A. Damage to existing or new Work, whether accidental or not, shall be restored or replaced as specified or directed by Architect.

B. Restoration shall be equal to structural performance of original Work.

C. Finish shall match appearance of existing adjacent Work.

D. Work not properly restored or where not capable of being restored shall be removed and replaced.

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

Not used

END OF SECTION

SECTION 02 40 00
Site Demolition

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Demolition of existing site work.

1.2 STANDARD AND INDUSTRY SPECIFICATIONS

A. Application portions of following standards and specifications apply to this Work.

1. CBC Standards.

2. OSHA Safety Health Standard 29 CFR 1910.

3. California Code of Regulations, Title 24, Part 2 (CCR Title 24).

4. ANSI A10.6, (1990) Demolition Operations.

5. Comply with rules and regulations of State of California, California Administrative Code, Title 8, Industrial Relations, Chapter 4, Subchapter 4, “Construction Safety Order”.

6. Comply with applicable local and state agencies having jurisdiction.

7. Comply with governing EPA notification regulations.

1.3 GENERAL REQUIREMENTS

A. Provide labor, material and equipment required for demolishing, cutting, removing, and disposing of existing construction as designated or required.

B. Coordinate work with capping or sealing of existing utilities.

C. Do not begin demolition until authorization is received. Remove rubbish and debris from the Project site; do not allow accumulations inside or outside the buildings or on Project site. Store materials that cannot be removed daily in areas specified. Demolition and removal of materials containing asbestos will be done by others.

D. Contractor shall provide a Storm Water Pollution Prevention Plan for the Regional Water Quality Control Board.

1.4 SUBMITTALS

A. Submit under provisions of Section Division 01

1. Required Documents:

a. Demolition Plan: Submit proposed demolition and removal procedures for approval before work is started.

b. Submit all permits and certificates required for the Project, for record purposes.

c. Submit proposed dust control measures.

d. Submit proposed noise control measures.

e. Work Schedules: Submit a proposed schedule of Work items to be performed, and a description of how the Work is to be accomplished, for the Architect's review.

f. Submit report of inspections conducted with the Owner's Representative and Architect both before and after performing Work.

B. Required Data: Demolition plan shall include procedures for coordination with other Work in progress, a disconnection schedule of utility services, a detailed description of methods and equipment to be used for each operation and of the sequence of operations.

1.5 REGULATORY AND SAFETY REQUIREMENTS

A. Comply with Federal, State, and local hauling and disposal regulations. In addition to the requirements of the "Contract Clauses", safety requirements shall conform with ANSI A10.6.

B. Notifications: Furnish timely notification of demolition and renovation projects to Federal, State, regional, and local authorities in accordance with 40 CFR 61-SUBPART M. Notify the local air pollution control district/agency (BAAQMD) and the Architect in writing 10 days prior to the commencement of Work in accordance with 40 CFR 61-SUBPART M.

C. Ten working days prior to commencement of Work, complete and submit Notification of Demolition and Renovation forms to State authorities and Architect in accordance with 40 CFR 61-SUBPART M.

1.6 DUST AND DEBRIS CONTROL

A. Prevent the spread of dust and debris and avoid the creation of a nuisance or hazard in the surrounding area. Do not use water if it results in hazardous or objectionable conditions such as, but not limited to, ice, flooding, or pollution.

B. If known or suspected hazardous materials are encountered during operations, stop operations immediately and notify the Owner's Representative.

1.7 PROTECTION

A. Traffic Control Signs:

1. Where pedestrian and driver safety is endangered in the area of removal Work, use traffic barricades with flashing lights. Notify the Architect prior to beginning such Work.

2. Traffic Circulation: Ensure minimum interference without roads, streets, driveways, sidewalks, and adjacent facilities.

    a. Do not close or obstruct public thoroughfares without first obtaining the required permit or permission of the responsible public jurisdiction.

B. Existing Construction: Protect existing construction which is to remain in place or to be reused. Repair items which are to remain and which are damaged during performance of the Work to their original condition, or replace with new.

C. Trees: Protect trees to remain, see Architectural Drawings.

D. Facilities: The existing school facilities are to remain in operation during the construction period. Protect remaining electrical and mechanical services and utilities. Where removal of existing utilities and pavement is specified or indicated, provide approved barricades, temporary covering of exposed areas, and temporary services or connections for electrical and mechanical utilities.

E. Protection: Provide barricades or temporary fencing to define the construction area and separate it from the existing school facilities. Erect and maintain temporary bracing, shoring, lights, barricades, and guards necessary to protect public, the Owner's employees, finishes, improvements to remain, and adjoining property from damage, all in accordance with applicable regulations.

1.8 BURNING

A. Burning will not be permitted.

1.9 SCHEDULING

A. Coordinate with the Owner in scheduling noisy or dirty Work or heavy equipment use.

B. Schedule Work at the Owner's convenience to cause minimal interference with the Owner's normal operations.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas affected by Work of this Section and verify following:

1. Disconnection of utilities as required.

2. That utilities serving occupied portions of buildings will not be disturbed.

3. Removal by the Owner of the Owner's personal property, movable furniture and equipment items not designated for relocation.

B. Where existing conditions conflict with representations of the Contract Documents, notify the Architect and obtain clarification. Do not perform work affecting the conflicting conditions until clarification of the conflict is received.

3.2 PREPARATION

A. Verify that the area to be demolished or removed has been vacated, or adequate space has been made available to perform the Work.

B. Arrange for and verify termination of utility services, including removal of meters and capping of lines.

C. Lay out cutting Work at Job Site and coordinate with related Work for which cutting is required.

3.3 EXISTING FACILITIES TO BE REMOVED

A. Paving, Slabs, and Sidewalks: Remove concrete paving and asphalt concrete paving and slabs including aggregate base to subgrade.

B. Concrete: Saw concrete along straight lines to a depth of not less than 2 inches. Make each cut in walls perpendicular to the face and in alignment with the cut in the opposite face. Break out the remainder of the concrete. At locations where the broken face cannot be concealed, grind smooth or saw cut entirely through the concrete.

C. Patching: Where removals leave holes and damaged surfaces exposed in the finished Work, fill, patch and repair these holes and damaged surfaces to match adjacent finished surfaces. Where new Work is to be applied to existing surfaces, perform removals and patching in a manner to produce surfaces suitable for receiving new Work. Finished surfaces of patched area shall be flush with the adjacent existing surface and shall match the existing adjacent surface as closely as possible in texture and finish.

3.4 DISPOSITION OF MATERIAL

A. Title to Materials: Except where specified in other Sections, all materials and equipment removed, and not reused, shall become the property of the Contractor and shall be removed in their entirety from the Project site and legally disposed of. Title to materials resulting from demolition, and materials and equipment to be removed, is vested in the Contractor upon approval by the Owner of the Contractor's demolition and removal procedures, and authorization by the Owner to begin demolition. The Owner will not be responsible for the condition or loss of, or damage to, such property after Contract award. Materials and equipment shall not be viewed by prospective purchasers or sold on the site.

B. All removal of debris from the site, including removal of inventory to off-site storage,

is part of this Contract and shall be done by Contractor's employees and not others.

3.5 CLEANUP

A. Debris and Rubbish: Remove and transport debris and rubbish in a manner that will prevent spillage on pavements, streets or adjacent areas. Clean up spillage from pavements, streets and adjacent areas.

3.6 FIELD QUALITY CONTROL

A. The Owner's Representative and Architect will accompany the Contractor before and after performance of Work to observe physical condition of existing structures or improvements involved.

END OF SECTION

SECTION 02 41 00
SITE DEMOLITION

PART 1 - GENERAL

1.1 INCLUSION OF OTHER CONTRACT DOCUMENTS

A. The General Conditions, Supplementary Conditions and Division 1 are fully applicable to this Section, as if repeated herein.

1.2 RELATED WORK SPECIFIED ELSEWHERE

A. Section 015000, Construction Facilities and Temporary Controls.

B. Section 015713, Erosion Control

C. Section 310000, Earthwork.

1.3 REGULATORY REQUIREMENTS

A. Conform to applicable jurisdictional authority regulations and codes for disposal of debris.

B. Coordinate clearing Work with utility companies.

C. Maintain emergency access ways at all times.

D. Contractor shall comply with all applicable laws and ordinances regarding hazardous materials, including contaminated soils, hazardous material transformers, and similar materials or components.

1.4 SUBMITTALS:

A. Schedule: Submit a detailed sequence of demolition and removal work, including dates for shutoff, capping, and continuance of utility services.

B. Procedures: Submit written procedures documenting the proposed methods to be used to control dust and noise.

1.5 EXISTING CONDITIONS

A. Contractor shall acquaint himself with all site conditions. If unknown active utilities are encountered during work, notify Architect promptly for instructions. Failure to notify will make Contractor liable for damage to these utilities arising from Contractor's operations subsequent to discovery of such unknown active utilities.

B. Conduct demolition to minimize interference with adjacent structures or items to remain. Maintain protected egress and access at all times.

1.6 PROTECTION

A. Adequate protection measures shall be provided to protect workmen and passers-by on and off the site. Adjacent property shall be fully protected throughout the operations. Blasting will not be permitted. Prevent damage to adjoining improvements and properties both above and below grade. Restore such improvements to original condition should damage occur. Replace trees and shrubs outside building area disturbed by operations.

B. In accordance with generally accepted construction practices, the Contractor shall be solely and completely responsible for working conditions at the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and shall not be limited to normal working hours.

C. Safety Precautions Prevent damage to existing elements identified to remain or to be salvaged, and prevent injury to the public and workmen engaged on site. Demolish roofs, walls and other building elements in such manner that demolished materials fall within foundation lines of building. Do not allow demolition debris to accumulate on site. Pull down hazardous work at end of each day; do not leave standing or hanging overnight, or over weekends.

1. Protect existing items which are not indicated to be altered. Protect utilities designated to remain from damage.
2. Protect trees, plant growth, and features designated to remain as final landscaping as shown on drawings.
3. Protect bench marks from damage or displacement.

D. Trees: Carefully protect existing trees that are to remain. Provide temporary irrigation as necessary to maintain health of trees.

E. Fire Safety: The contractor shall conform to chapter 33 of the California Fire Code (CFC), "Fire Safety During Construction and Demolition", at all times during the construction process. A copy of this chapter can be provided.

F. Any construction review of the Contractor's performance conducted by the Geotechnical Engineer is not intended to include review of the adequacy of the Contractor's safety measures, in, on, or near the construction site.

G. Surface Drainage: Provide for surface drainage during period of construction in manner to avoid creating nuisance to adjacent areas. The contractor shall make a reasonable effort on a daily basis to keep all excavations and the site free from water during entire progress of work, regardless of cause, source, or nature of water.

H. Adjacent streets and sidewalks shall be kept free of mud, dirt or similar nuisances resulting from earthwork operations.

I. The site and adjacent influenced areas shall be watered as required to suppress dust nuisance. Dust control measures shall be in accordance with the local jurisdiction.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine conditions of work in place before beginning work; report defects.

B. Report existence of hazardous materials or unsafe structural conditions.

3.2 PREPARATION

A. Scheduling:

1. General: Coordinate and schedule demolition work as required by the Owner and as necessary to facilitate construction progress.

B. Hazardous Materials:

1. General: Identify chemicals, gases, explosives, acids, flammables, or other dangerous materials before proceeding with demolition operations, and notify such jurisdictional agencies as may be required. Collect and legally dispose of such materials at official disposal locations away from the site.
2. Asbestos: If asbestos or materials containing asbestos are encountered, stop work immediately and contact the Owner. Do not proceed with demolition until directed by Owner.

C. Utility and Service Termination

1. Locate and identify existing utility, service and irrigation system components affected by work of this contract. Review existing record drawings, conduct site investigations, contact Underground Service Alert and other qualified cable/pipe/line locator services, and implement all other means necessary to define the location of underground systems.
2. Prior to beginning any demolition, properly disconnect all water, gas and electrical power supply at appropriate disconnect locations. Obtain all necessary releases and approvals from serving utility companies.
3. Prior to demolition or disconnect, obtain Owners approval that such system does not impact facilities or systems beyond the extent of this contract.
4. Mark location of disconnected systems. Identify and indicate stub-out locations on Project Record Documents.

D. Verify that existing plant life and features designated to remain are tagged or identified.

1. The Architect will mark the features, trees, and shrubs to remain within the construction area. Contractor shall not commence clearing and grubbing

operations until authorized by the Owner and all protective measures are in place.

E. Coordinate the time and duration of all system disconnects with Owner.

3.3 DEMOLITION

A. General Requirements

1. Clear areas required for access to site and execution of Work, including pavements, structures, foundations, vegetation, trash and debris.
2. Coordinate with Owner the time of day and route to remove demolished materials from premises.
3. Remove demolished materials from site as work progresses. Upon completion of work, leave areas of work in clean condition.
4. Remove all buried debris, rubble, trash, or other material not deemed suitable by the Geotechnical Engineer.
5. Fill all voids or excavations resulting from clearing, demolition, or removal of vegetation with specified fill material.

B. Fixture and Equipment Removal:

1. Remove existing fixtures and equipment as identified and shown on drawings and required by Architect.
2. Verify all service connections to fixtures and equipment designated for removal have been properly disconnected.
3. Remove all conductors from conduit at all abandoned circuits.

3.4 UTILITY AND BUILDING SERVICES REMOVAL AND RE-INSTALLATION

A. Where crossing paths and potential points of interference with existing utility services are shown or can be reasonably inferred from surface conditions or evidence of subsurface systems, such as meter boxes, vaults, relief vents, cleanouts and similar components.

1. Review all contract documents showing crossing paths and potential points of interference.
2. Pot-hole or determine by other means the accurate depth and location of such utilities.
3. Incorporate all costs required to complete work under this contract, including additional trenching, re-routing of existing and new utilities, and all means necessary to construct work under this contract.
4. No additional cost to the Owner will be allowed for work necessary to accommodate utility conflicts where such crossing paths are shown on contract drawings or can be reasonably inferred from surface conditions or components.

B. Remove all conductors from conduit at all abandoned electrical circuits.

C. Seal off ends of all piping, drains and other components as directed by Architect and serving utility.

D. Where necessary to maintain service to existing utility and building systems, relocate or redirect all conduit and conductors, piping, drains, and associated system components.

1. Re-circuit all electrical as required.
2. Re-circuit all landscape irrigation valving and control systems as required.
3. Temporarily terminate landscape system components in approved boxes or with approved caps, suitable for re-connection or extension.
4. Extend or otherwise modify all site drainage systems, including catch basins, drain inlets and piping. Fine grade to maintain proper drainage flow pattern to drains.

E. Demolish structure in an orderly and careful manner.

1. Use of explosives prohibited.

3.5 SITE PAVEMENT REMOVAL

A. Remove sidewalk and curb where required for new construction as specified and as indicated on the Drawings.

1. Remove all paving by saw-cutting.
2. Remove concrete paving and curbing at locations shown on drawings. Locate closest adjacent expansion or weakened plane joint to define start of removal or saw-cutting.

B. Remove asphalt concrete paving areas where required for new construction as specified and as indicated on the Drawings.

1. Remove all paving by saw-cutting.
2. Remove paving assembly as required to expose subgrade.

3.6 LANDSCAPE AND IRRIGATION SYSTEMS DEMOLITION AND RENOVATION

A. Clearing, grubbing, and planting demolition.

1. Remove grass and grass roots to a minimum depth of two inches below existing grade.
2. Remove all shrubs, plants and other vegetation within the area of the work unless designated to remain. Grub and remove all roots of all vegetation to a depth of 24 inches below existing grade.
3. Remove only those trees which are specifically designated for removal, or as shown on the drawings, within the construction area. Remove all stumps. Remove root ball and root systems larger than 1 inch in diameter to a depth of two feet below existing or finished grades, whichever is lower and a minimum of five feet beyond the edge of paving, structure, wall or walkway.
4. Hand cut existing tree roots over 1 inch in diameter as necessary for trenching or other new construction, apply multiple coats of emulsified asphalt sealant especially made for horticultural use on cut or damaged plant tissues to cut faces and adjacent surfaces. Cover exposed roots with wet burlap to prevent roots from dying out until backfilling is complete.

5. Disking and mixing of vegetation, trash, debris, and other deleterious materials with surface soils prior to grading is not permitted.
6. Remove all buried debris, organic material, rubble, trash, or other material not deemed suitable by the Geotechnical Engineer.
7. Fill all voids or excavations resulting from clearing, demolition, or removal of vegetation with fill material in compliance with Section 310000.
8. Selected equipment of such sizes and capacities that the existing environment is disturbed as little as possible, and to afford ease of mobility within limited and relatively confined work areas. Make every effort to preserve the topography in its natural state.
9. Keep drains, catch basins, surface drainage courses and related drainage system components clear of debris and construction materials.
10. Remove irrigation piping and appurtenances as necessary within area of work, unless noted otherwise to remain. Replace irrigation piping and appurtenances to irrigate new and/or existing landscaping. Contractor shall be responsible for temporary landscape irrigation until such time that irrigation system is restored and operational.

3.7 DISPOSAL

Demolished materials become property of the Contractor and shall be removed from premises, except those items specifically listed to be retained by Owner.

A. Dispose of all demolished material, trash, debris, and other materials not used in the work in accordance with the regulations of jurisdictional authority.

B. It is recommended that all materials that are of a recyclable nature, be transported to a suitable legal recycling facility instead of a dump or refuse facility (unless they are one-in-the same).

C. Burning and Burying of Materials: NOT ALLOWED.

D. Haul Routes:

1. Obtain permits as required by jurisdictional agencies. Establish haul routes in advance; post flagmen for the safety of the public and workmen.
2. Keep streets free of mud, rubbish, etc.; assume responsibility for damage resulting from hauling operations; hold Owner free of liability in connection therewith.

E. Remove demolished materials and debris from site on a daily basis.

3.8 CLEANING

A. Upon completion of work of this Section promptly remove from the working area all scraps, debris.

B. Clean excess material from surface of all remaining paved surfaces and utility structures.

C. Power wash all concrete surfaces to remove stains, dried mud, tire marks, and rust spots.

END OF SECTION

SECTION 02 41 20
Cutting and Patching

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Requirements and limitations for cutting and patching of Work.

1.2 SUBMITTALS

A. Submit written request in advance of cutting or alteration which affects:

1. Structural integrity of any element of Project.
2. Efficiency, maintenance, or safety of any operational element.
3. Visual qualities of sight-exposed elements.
4. Work of PCOE or separate contractor.

B. Include in request:

1. Identification of Project.
2. Location and description of affected Work.
3. Necessity for cutting or alteration.
4. Description of proposed Work, and Products to be used.
5. Alternatives to cutting and patching.
6. Effect on Work of PCOE or separate contractor.
7. Written permission of affected separate contractor.
8. Date and time Work will be executed.

1.3 DESIGN CRITERIA

A. Patching shall achieve security, strength, and weather protection, as applicable, and shall preserve continuity of existing fire ratings.

B. Patching shall successfully duplicate undisturbed adjacent finishes, colors, textures, and profiles. Where there is dispute as to whether duplication is

successful or has been achieved to a reasonable degree, the Architect's judgment shall be final.

C. Patching may be temporary if it is to be eventually replaced in a subsequent phase of Work.

1.4 CUTTING AND PATCHING

A. Structural Work: Do not cut-and-patch structural Work in a manner resulting in a reduction of load-carrying capacity or load/deflection ration. Submit proposal and request and obtain Engineer's approval before proceeding with cut-and-patch of new and/or existing structural Work.

B. Operational/Safety Limitations: Do not cut-and-patch operational elements and safety components in a manner resulting in reduction of fire rating of any assembly, decreased performance, shortened useful life, or increased maintenance. The Contractor shall be responsible for the location of all existing utilities and coordinate all Work to avoid any interruption of service to adjacent properties and/or to other facility operations without proper notification.

C. Visual/Quality Limitations: Do not cut-and-patch Work exposed to view, such as plaster, in a manner resulting in noticeable reduction of visual qualities and similar qualities, as judged by Architect. (Exterior and interior).

D. Additional Requirements: In addition to Contract requirements, upon written instructions by Architect:

1. Uncover work to provide for Architect's observation of covered Work.

2. Remove samples of installed materials for testing.

E. Limitation on Approvals: Architect's and/or Engineer's approval to proceed with cutting-and-patching does not waive right to later require removal/replacement of Work found to be cut and patched in an unsatisfactory manner, as judged by Architect and Engineer.

1.5 PAYMENT FOR INCURRED COSTS

A. The costs caused by ill-timed or defective Work, or Work not conforming to Contract Documents, including costs for additional service of Architect and Engineer, shall be paid by the party responsible for ill-timed, rejected or non-conforming Work.

PART 2 - PRODUCTS

2.1 MATERIAL

A. Primary Products: Those required for original installation.

B. Substitutions: Under provisions of Division 01

C. Existing Materials: Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.

D. If identical materials are unavailable or cannot be used, use materials that visually match the original.

PART 3 - EXECUTION

3.1 GENERAL

A. Execute cutting, fitting, and patching to complete Work, and to:

1. Fit the several parts together, to integrate with other Work.

2. Uncover work to install ill-timed Work.

3. Remove and replace defective and non-conforming Work.

4. Remove samples of installed work for testing.

5. Provide openings in elements of Work for penetrations of mechanical/electrical Work.

3.2 EXAMINATION

A. Inspect existing conditions prior to commencing Work, including elements subject to damage or movement during cutting and patching. Verify compatibility with and suitability of substrates and finishes to accept the new Work.

B. After uncovering existing Work, inspect conditions affecting performance of Work.

C. Do not cut and patch any piping, conduit, or equipment supports or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.

D. Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in the Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

E. Beginning of cutting or patching means acceptance of existing conditions.

3.3 PREPARATION

A. Provide temporary supports to ensure structural integrity of the Work. Provide devices and methods to protect other portions of Project from damage.

B. Provide protection from elements for areas which may be exposed by uncovering Work.

C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

D. Existing Services: Where existing services are required to be removed, relocated, or abandoned, bypass such services before cutting to avoid interruption of services to occupied areas.

3.4 CUTTING AND PATCHING

A. Execute cutting, fitting, and patching to complete Work.

B. Fit products together, to integrate with other Work.

C. Uncover work to install ill-timed Work.

D. Remove and replace defective or non-conforming Work.

E. Remove samples of installed Work for testing when requested.

F. Provide openings in the Work for penetration of mechanical and electrical Work where occurs.

G. Cut rigid materials using saw or drill. Pneumatic tools are not allowed without prior approval.

3.5 PERFORMANCE

A. Execute Work by methods to avoid damage to other Work, and which will provide appropriate surfaces to receive patching and finishing.

B. Employ skilled and experienced installer to perform cutting and patching.

C. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.

D. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.

E. Do not cut and patch operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.

F. Restore work with new products in accordance with requirements of Contract Documents.

G. Fit Work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

H. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal all voids with fire-rated material, to full thickness of the penetrated element.

I. Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.

END OF SECTION

SECTION 06 10 00
Rough Carpentry

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. All lumber framing, rough hardware and blocking as indicated.

1.2 REFERENCES

A. Published Specifications, standards, tests, or recommended methods of trade, industry, or governmental organizations apply to Work in this Section where cited by abbreviations noted below (latest editions apply).

1. California Code of Regulations. Title 24, also known as California Building Code (CBC), with amendments.

2. APA - American Plywood Association, "Product Guide: Performance Rated Panels".

3. PS - United States Product Standard, PS-1 Series of "Construction and Industrial Plywood".

4. UL - Underwriters' Laboratories, Inc.

5. WCLIB - West Coast Lumber Inspection Bureau, "Standard Grading Rules No. 17".

6. Pacific Lumber Inspection Bureau, "Western Lumber Grading Rules", Standard No. 17, 2018

7. AWPA - American Wood Preservers Association Standards.

8. ASTM - American Society of Testing and Materials.

1.3 SUBMITTALS

A. Submit under provisions of Section 01 33 00.

B. Shop Drawings of all specially fabricated rough hardware.

C. Certificates of compliance with standards specified.

1.4 DELIVERY, STORAGE AND HANDLING

A. Provide proper facilities for handling and storage of materials to prevent damage to edges, ends, and surfaces.

B. Keep materials dry. Where necessary, stack materials off ground on level flat forms, fully protected from weather.

1.5 JOB CONDITIONS

A. Environmental Requirements: Maintain uniform moisture content of lumber at not more than 19% before, during, and after installation.

B. Sequencing, Scheduling: Coordinate details with other Work supporting, adjoining or fastening to rough carpentry Work.

PART 2 - PRODUCTS

2.1 MATERIAL

A. Rough Carpentry:

1. Sills on Concrete: Foundation grade Redwood or pressure-treated Douglas Fir.

2. Lumber (Wood Framing): Meet requirements of following minimum grades.

Item	Grade
Studs	D.F. No. 2
Plates	D.F. No. 2
Beams	D.F. No. 1
Joists	D.F. No. 2
Posts	D.F. No. 1
Blocking	D.F. No. 2

B. Plywood: Provide thickness, grade, and panel identification index shown on Drawings.

C. Rough Hardware: All exterior hardware shall be hot-dipped galvanized steel:

1. Nails: Common wire, typical.

2. Powder Driven Fasteners: Hilti Fastening Systems: Impex Tool Corporation; or approved equal. Tempered steel pins with special corrosion-resistant finish. Provide guide washers to accurately control penetration, maximum 3/4". Accomplish fastening by low-velocity piston-driven powder-actuated tool.

3. Expansion Bolts: Red Head, Trubolt: “Wedge Type”; Hilti; "Kwik-Bolt III" or approved equal. Reverse cone, self-wedging, expansion type, Tightening of nut or increased tension on bolt shank shall act to force wedges outward to

create positive increased resistance to withdrawal.

4. Metal Timber Framing Connectors: Simpson Company or approved equal. Fabricate from hot-dipped galvanized steel. Connectors shall be at least 16 gauge material, 1/8" plate materials where welded, unless otherwise shown or specified, punched for nailing. Nails and nailing shall conform to the manufacturer's instructions, with a nail provided for each punched hole.

5. Miscellaneous Hardware: Provide all common screws, bolts, fastenings, washers and nuts required to complete rough carpentry Work.

2.2 TREATMENTS

A. Fire-Retardant Treatment: Koppers Co., Inc.'s "FirePro, FlamePro", or approved equal.

B. Preservative Treatment: Furnish in accordance with AWPA.

2.3 FABRICATION

A. Preparation:

1. Verify measurements at job site.

2. Verify details and dimensions of equipment and fixtures integral with finish carpentry for proper fit and accurate alignment.

3. Coordinate details with other Work supporting, adjoining, or fastening to casework.

B. Lumber:

1. Air- or kiln-dry to maximum 19% moisture content prior to shipment. Stack and air-dry to maximum 15% in field prior to installation.

2. Furnish surfaced four sides, S4S, unless otherwise noted.

3. Size shall conform with rules of governing standard. Sizes shown are nominal unless otherwise noted.

C. Wood Treatments:

1. Preservative Treatment:

a. Treat lumber and plywood sheathing exposed to weather.

b. Lumber: Treat in accordance with AWPA Book of Standards.

c. Plywood: Treat in accordance with AWPA Book of Standards.

d. After treatment and prior to shipping, air- or kiln-dry lumber to maximum 19% moisture content. Air-dry in field to maximum 15% prior to installation.

2.4 QUALITY CONTROL

A. Lumber shall bear grade-trademark or be accompanied by certificate of compliance of appropriate grading agency.

B. Plywood shall bear APA grade-trademark.

C. Air-dry all framing lumber to a maximum of 15% moisture content prior to installing.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas to receive rough carpentry Work and verify following:

1. Completion of installation of building components to receive rough carpentry Work.

2. That surfaces are satisfactory to receive Work.

3. That spacing, direction, and details of supports are correct to accommodate installation of blocking, backing, stripping, furring and nailers.

4. That all anchor bolts and holdown bolts are properly installed.

3.2 INSTALLATION

A. Cutting: Perform all cutting, boring, and similar Work required.

B. Studs, Joists, Beams, and Posts: Install all members true to line. No wood shingle shims are permitted. Place joists with crown up; maximum 1/4" crown permitted.

C. Nail joints in accordance with applicable requirements of the CBC Table 2304.10.1 unless otherwise shown or specified. Predrill where nails tend to split wood.

D. Bolt holes to be 1/16" oversize. Threads shall not bear on wood. Use standard malleable iron washers against wood. Carriage bolts require washers under the nut only.

E. Provide blocking, grounds, nailers, stripping, and backing as shown and as

required to secure other Work.

F. Maintain 1/8" gap between all plywood panel edges.

G. Do not utilize plywood sheets having a width smaller than 2'-0".

H. Plywood flooring shall be field glued with adhesives meeting APA specification AFG-01 applied in accordance with the manufacturers' recommendations. Apply continuous line of glue on joists and in groove of tongue and groove panels.

I. Where wood is cut, sawed, planed, bored or marred after preservative or fire-retardant treatment, apply two heavy brush coats of same material used in treatment.

J. Nail heads shall be driven flush with plywood surface. Overdriven nails (nails which fracture the outer ply layer) shall be replaced one for one.

K. Wood Screws or Lag Screws: Screws shall be screwed and not driven into place. Screw holes shall be predrilled to the same diameter and depth of shank. Holes for threaded portion shall be predrilled less than or equal to the diameter of the root of the thread. Provide standard cut washers under head of lag screws.

L. Sills under bearing, exterior and shear walls shall be bedded on 1/2" minimum drypack or grout to obtain continuous bearing.

3.3 CLEANING AND ADJUSTING

A. Remove damaged or otherwise disfigured portions and replace with new prior to the Owner's acceptance.

B. Wash finished Work in strict accordance with product manufacturer's directions and ensure that washed surfaces do not differ from clean unwashed surfaces. Any difference will be considered unsatisfactory Work.

3.4 FIELD QUALITY CONTROL

A. The Owner's Testing Agency shall:

1. Inspect erected timber framing as required to establish conformity of Work with Drawings.

2. Inspect all bolted connections.

3. Inspect all timber connectors for compliance with CBC Chapter 23.

4. Inspect roof diaphragm nailing for nail size, spacing and penetration at plywood panel edges, and special nailing at collector and drag members.

5. Inspect shear wall nailing for nail size, spacing and penetration at plywood panel edges, and nailing at holdown posts.

END OF SECTION

SECTION 07 21 16
Building Insulation

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Batt sound insulation in interior walls and partitions.

1.2 REFERENCES

A. ASTM C665 - Standard Specification for Mineral Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.

B. ASTM C1320 – Standard Practice for Installation of Mineral Fiber Batt and Blanket Thermal Insulation for Light Frame Construction.

C. CCR - California Code of Regulations.

D. CBC - California Building Code.

E. Business and Professions Code.

1.3 PERFORMANCE REQUIREMENTS

A. Materials of this Section shall provide continuity of thermal and moisture barrier at building enclosure elements.

B. Materials of this Section shall provide continuity of sound control where indicated or scheduled.

1.4 REGULATORY REQUIREMENTS

A. Installation of insulation may only commence if insulation meets mandatory manufacturer certification to the California Energy Commission required by Title 24, Part 6, of the California Code of Regulations (CCR) that insulation complies with CRC Title 20, Division 2, Chapter 4, Article 3 of the Standards for Insulating Materials.

B. Insulation materials shall be certified in compliance with Business and Professions Code/ Division 8/ Chapter 3/ Article 7/ Section 19165.

C. Insulation manufacturer shall be licensed by the California Department of Consumer Affairs, Bureau of Home Furnishing and Thermal Insulation according to Business and Professions Code/ Division 8/ Chapter 3/ Article 7/ Section 19059.7.

1.5 SUBMITTALS

A. Submit under provisions of Section 01 33 00.

B. Submit Product Data for each type of insulation specified.

C. Submit manufacturer's certification that materials meet or exceed specified regulatory requirements.

PART 2 - PRODUCTS

2.1 MANUFACTURERS - INSULATION MATERIALS

A. CertainTeed Corp., www.certainteed.com

B. Johns Manville Corp., www.jm.com

C. Owens-Corning Corp., www.owenscorning.com

2.2 MATERIALS

A. Batt Sound Insulation: ASTM C665 preformed glass fiber batt, Type I unfaced, with flame spread of 25 or less, and a smoke density of less than 450 when tested in accordance with UL 723. Provide [R-11, 3-1/2" minimum thickness.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that substrate, adjacent materials, and insulation are dry and ready to receive insulation.

B. Do not install until building is fully enclosed to weather.

3.2 INSTALLATION

A. Install insulation in accordance with insulation manufacturer's instructions and ASTM C739, C1149 and C1320. Cut "blow-in" holes only where specifically needed.

B. Install batt sound insulation in interior walls and where indicated or scheduled.

C. Trim insulation neatly to fit spaces.

D. Friction fit sound insulation between studs as required to completely fill space

between the wall finishes.

E. Remove all unused insulation and related products and dispose of correctly.

END OF SECTION

SECTION 07 62 00
Sheet Metal Flashing and Trim

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Pre-coated coping and cap flashings.

B. Counterflashings at piping penetrations, vent pipes, and conduits.

C. Counterflashings over bituminous base flashings.

D. Counterflashings at roof mounted equipment, curbs and supports.

E. Flexible sheet flashing.

F. Manufactured reglets.

1.2 REFERENCES

Contractor's work shall comply with the following standards as applicable.

Manufactured items are to be fabricated to these same standards.

The following standards (and publications) are applicable to the extent referenced in the text. The most recent of these standards is implied, unless otherwise stated.

A. ASTM A653 - Standard Specification for Steel Sheet, Zinc-Coated, (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

B. ASTM A755 - Standard Specification for Steel Sheet, Metallic Coated by the Hot-Dip Process and Prepainted by the Coil-Coating Process for Exterior Exposed Building Products.

C. ASTM A924 - Standard Specification for General Requirements for Steel Sheet, Metallic-Coated (Galvanized) by the Hot-Dip Process.

D. ASTM B32 - Standard Specification for Solder Metal.

E. ASTM B101 - Standard Specifications for Lead-Coated Copper Sheet and Strip for Building Construction.

F. ASTM D226 - Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.

G. ASTM D4586 - Standard Specification for Asphalt Roof Cement, Asbestos Free.

H. SMACNA - Architectural Sheet Metal Manual.

1.3 SYSTEM DESCRIPTION

A. Work of this Section is to physically protect [membrane roofing,] [pre-formed metal roofing] [and] [base flashings,] from damage that would permit water leakage to building interior.

1.4 QUALITY ASSURANCE

A. Applicator: Company specializing in sheet metal flashing Work with five years minimum experience.

B. Perform Work in accordance with SMACNA standard details and requirements.

1.5 SUBMITTALS

A. Submit under provisions of Section 01 33 00.

B. Submit Shop Drawings of sheet metal items indicating profiles, jointing, terminations, sill pans and installation details. Indicate type and spacing of fasteners.

C. Submittal of specific plates from the SMACNA Architectural Sheet Metal Manual constitutes acceptable documentation of installation details.

D. Submit Product Data for pre-coated galvanized steel and flashing accessories.

E. Submit two 4" square Samples illustrating metal finish color for pre-coated steel.

1.6 STORAGE AND HANDLING

A. Store products under provisions of Section 01 87 00.

B. Stack preformed material to prevent twisting, bending, or abrasion, and to provide ventilation.

C. Prevent contact with materials during storage which may cause discoloration, staining, or damage.

1.7 WARRANTY

A. Provide manufacturer's 20-year warranty against defective materials and finish.

B. Provide installer's 2-year warranty coverage for water tightness and integrity of seals.

PART 2 - PRODUCTS

2.1 SHEET MATERIALS

A. Pre-Coated Galvanized Steel: ASTM A755 on zinc-coated galvanized substrate, ASTM A653, Grade 33, G90 zinc coating in accordance with ASTM A924; 0.0299" thick core steel, factory pre-coated with "Kynar 500" or "Hylar 5000" coating of color to be selected by Architect.

2.2 ACCESSORIES

A. Lead-Coated Copper: ASTM B101, Temper H00 and H01, cold-rolled copper sheet, coated both sides with lead weighing not less than 12 pounds per 100 square feet or more than 15 pounds per 100 square feet total weight of copper sheet with lead applied to both sides.

B. Fastener: Galvanized steel or stainless steel with soft neoprene washers at exposed fasteners. [Finish exposed fasteners shall match pre-coated metal.]

C. Underlayment: ASTM D266; No. 30 asphalt-saturated roofing felt.

D. Metal Primer: As specified in Section 09 91 00.

E. Protective Backing Paint: Zinc chromate alkyd.

F. Slip Sheet: 0.05 psf, rosin-sized building paper.

G. Sealant: As specified in Section 07 92 00.

H. Bedding Compound: Rubber-asphalt type.

I. Plastic Cement: ASTM D4586, Type I.

J. Metal Flashing System: Two piece pre-coated galvanized steel similar to Springlok Flashing System, manufactured by Fry Reglet, type as indicated. Include fabricated end closures and mitered corners.

K. Solder for Lead-Coated Copper: ASTM B32, Grade SN 60% tin, 40% lead.

L. Solder for Zinc: ASTM B32; 50/50 tin/lead type, with rosin flux.

M. Self-Adhesive Flexible Sheet Flashing: 40-mil-thick composite of polyethylene film and self-adhesive rubberized asphalt with embossed slip-resistant surface; "Ice and Water Shield" by W.R. Grace or approved equal.

N. Manufactured Reglets: Two piece pre-coated galvanized steel, spring-action type similar to "Springlock Flashing System" or approved equal, manufactured by Fry Reglet, type as indicated. Include fabricated end closures and mitered corners.

Finish: Manufacturer's gray epoxy primer; exposed portions shall be field finish painted as specified in Section 09 91 00.

O. Fabricated Galvanized Sill Pans. Shop fabricate sill pans from 24 ga, fully soldered and watertight as per the drawings. Protect underside of pans sitting atop concrete surfaces with continuous layer of self-adhered flashing.

2.3 FABRICATION

A. Form sections true to shape, accurate in size, square, and free from distortion or defects.

B. Fabricate concealed cleats of galvanized steel, ASTM A653, Grade 33, G90 zinc coating, 0.0478" thickness, interlockable with sheet.

C. Fabricate exposed cleats and coverplates of same material as sheet, interlockable with sheet.

D. Form pieces in longest practical lengths.

E. Hem exposed edges on underside 1/2". Miter and seam corners.

F. Form material with flat lock seam.

G. Solder and seal metal joints. After soldering, remove flux. Wipe and wash solder joints clean.

H. Fabricate corners from one piece with minimum 18" long legs; seam for rigidity, seal with sealant.

I. Fabricate vertical faces with bottom edge formed outward 1/4" and hemmed to form drip.

J. Fabricate flashings to allow toe to extend 4" over [bituminous base flashings] [roofing surface]. Return and brake edges.

K. Fabricate vent pipe and roof penetration flashings of non lead-bearing material with clamping ring and storm collar.

2.4 FINISH

A. Shop prepare and prime exposed ferrous metal surfaces.

B. Back-paint concealed metal surfaces with protective backing paint to a minimum dry film thickness of 15 mil.

C. Site paint exposed to view metal surfaces under provisions of Section 09 91 00.

D. "Kynar 500" or "Hylar 5000" factory pre-coated finish with 0.2 mil baked on

primer and 0.8 mil baked on topcoat for a 1.0 mil dry film thickness. Finish shall be warrantied for a minimum of 20 years against all defects.

PART 3 - EXECUTION

3.1 INSPECTION

A. Verify roof openings, curbs, pipes, sleeves, ducts, or vents through roof are solidly set, cant strips and reglets are in place, and nailing strips located.

B. Verify membrane termination and base flashings are in place, sealed, and secure.

C. Contractor to confirm that site conditions and substrates are ready for sheet metal work to commence. If not, make suitable repairs or adjustments to the work. Beginning of installation means acceptance of existing conditions.

3.2 PREPARATION

A. Field measure site conditions prior to fabricating Work.

B. Install starter and edge strips, and cleats before starting installation.

C. Install surface-mounted reglets true to line and level. Seal top with sealant.

D. Install underlayment with protective slip sheet over parapets, caps, copings, gravel stops and curbs.

3.3 INSTALLATION

A. Conform to indicated details on the Drawings and the recommendations included in the SMACNA Architectural Sheet Metal Manual.

B. Provide for thermal expansion of exposed sheet metal Work. Space movement joints at 10' on center maximum with no joints within 2' of corners. Attach members with clips to permit movement without damage, or provide slotted or oversize holes with washers.

C. Form expansion joints of intermeshing hooked flanges filled with sealant.

D. Insert flashings into reglets to form tight fit. Secure in place with lead wedges at maximum 12" on center. Pack remaining spaces with lead wool. Seal flashings into reglets with sealant.

E. Secure flashings in place using concealed fasteners. Use exposed fasteners only where indicated.

F. Lap, lock, seam and seal all joints. Make lock seam Work flat and true to line, and sweat full of solder, except where installed to permit expansion and contraction. Lap flat lock seams, and lap seams where soldered according to pitch, but in no case less than 3". Make seams in direction of flow.

G. Apply plastic cement compound between metal flashings and felt flashings. Apply bituminous coating between dissimilar metals where occurs.

H. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.

I. Roof-Penetration, Vent Pipe Flashing: Turn lead flashing down inside vent piping. Clamp flashing to other pipes penetrating roof except for vent piping. Seal with elastomeric sealant.

J. Solder metal joints watertight for full metal surface contact. After soldering, wash metal clean with neutralizing solution and rinse with water.

K. Seal metal joints watertight and weathertight throughout.

3.4 FIELD QUALITY CONTROL

A. Conform to SMACNA Architectural Sheet Metal Manual.

B. Field observation will involve surveillance of Work during installation to ascertain compliance with specified requirements.

3.5 CLEANING AND ADJUSTMENT

A. Leave Work clean and free of stains, scrap and debris.

B. Repair and replace damaged Work.

END OF SECTION

SECTION 07 84 00
Firestopping

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Penetrations through fire-resistance-rated floor and roof construction including both empty openings and openings containing cables, pipes, ducts, conduits, and other penetrating items.

B. Penetrations through fire-resistance-rated walls and partitions including both empty openings and openings containing cables, pipes, ducts, conduits, and other penetrating items.

C. Penetrations through smoke barriers and construction enclosing compartmentalized areas involving both empty openings and openings containing penetrating items.

D. Sealant joints in fire-resistance-rated construction.

E. Fireproof firestopping and firesafing materials and accessories.

F. Openings between exterior curtainwall and edge of floor slabs.

G. Opening between top tracks of walls and connecting floor or roof assemblies.

H. Openings at each floor level in shafts and stairwells.

1.2 REFERENCES

A. ASTM E814 - Standard Test Method for Fire Tests of Penetration Firestop Systems

B. ASTM E1399 - Standard Test Method of Cyclic Movement and Measuring the Minimum and Maximum Joint Widths of Architectural Joint Systems

C. ASTM E1966 - Standard Test Method for Fire-Resistive Joint Systems

D. ASTM E2307 - Standard Test Method of Determining Fire Resistance of Perimeter Fire Barriers Using Intermediate-Scale, Multi-story Test Apparatus.

E. ASTM C920 – Standard Specification for Elastomeric Joint Sealants.

F. ASTM C1193 – Standard Guide for Use of Joint Sealants.

G. ASTM E84 – Standard Test Method for Surface Burning Characteristics of Building Materials.

H. ASTM E119 – Standard Test Method for Fire Tests of Building Construction and Materials.

I. UL - Fire Hazard Classifications.

J. UL 1479 – Standard for Fire Tests of Penetration Firestops.

K. Asbestos Hazardous Emergency Response Act (AHERA), Asbestos - Containing Materials in Schools Rule (40 CFR Part 763, Subpart E).

1.3 DEFINITION

A. Firestopping (Firesafing): A sealing or stuffing material or assembly placed in spaces between building materials to arrest the movement of smoke, heat, gases, or fire through wall or floor openings.

1.4 SYSTEM DESCRIPTION

A. F-Rated Through-Penetration Firestop Systems: F-ratings as required according to UL 1479, but not less than that equaling or exceeding fire resistance rating of assembly penetrated where the following conditions exist:

1. Penetrations larger than 4" nominal pipe size or 16 square inches in overall cross-sectional area.

B. T-Rated Through-Penetration Firestop Systems: T-ratings, in addition to F-ratings, as required according to UL 1479, where the following conditions exist:

1. Through-penetrations of fire-rated walls above corridor ceilings which are not part of a fire-resistive assembly.

2. Through-penetrations of fire-rated walls below any ceiling.

3. Penetrations larger than 4" nominal pipe size or 16 square inches in overall cross-sectional area.

C. Penetrations not larger than 4" nominal pipe size or 16 square inches in overall cross-sectional area shall have the annular space between the penetrating item and the wall/floor assembly filled with a material which will prevent passage of flame and hot gases sufficient to ignite cotton waste when subjected to ASTM E119 under a minimum positive pressure differential of 0.01" water column for the time period at least equal to the fire resistance rating of the wall/floor assembly.

D. Surface Burning: ASTM E84 with a flame spread/smoke developed rating of 25/450.

E. Firestop all interruptions and terminations of fire-rated assemblies.

F. For piping penetrations for plumbing and wet-pipe sprinkler systems, provide moisture-resistant through-penetration firestop systems.

G. For floor penetrations with annular spaces exceeding 4" or more in width and exposed to possible loading and traffic, provide firestop systems capable of supporting the floor loads involved either by installing floor plates or by other means.

H. For penetrations involving insulated piping, provide through-penetration firestop systems not requiring removal of insulation.

1.5 SUBMITTALS

A. Submit under provisions of Section 01 33 00.

B. Submit manufacturer's Shop Drawings for each type of firestop or smoke seal required by the Project. Shop Drawings shall indicate the detailing of all necessary anchorages, reinforcements and fastenings required.

C. Product Data: Provide product characteristics, performance and limitation criteria.

D. Manufacturer's Installation Instructions: Indicate preparation and installation instructions.

E. Certification: Submit firestopping manufacturer's certification that products supplied comply with local regulations controlling use of volatile organic compounds (VOCs) and are nontoxic to building occupants.

1.6 QUALITY ASSURANCE

A. Through-penetration firestop systems shall correspond to through-penetration firestop system designations listed in the UL Fire Resistance Directory.

B. Firestopping and smoke seal Work shall be performed by an installer trained or approved by the firestop or smoke seal manufacturer. Equipment used shall be in accordance with firestop or smoke seal manufacturer's written installation instructions.

1.7 REGULATORY REQUIREMENTS

A. Conform to Title 24, Part 2 and UL requirements for fire-resistance ratings and surface-burning characteristics.

B. Firestopping products shall contain no detectable asbestos as determined by Asbestos-Containing Materials in Schools Rule (40 CFR Part 763, Subpart E).

1.8 SEQUENCING AND SCHEDULING

A. Coordinate Work with related trades.

B. Coordinate construction of openings and penetrating items to ensure that through-penetration firestop systems are installed in accordance with manufacturer's instructions and regulatory requirements.

C. Do not cover up installations that will become concealed behind other construction until Owner's Representative and authorities having jurisdiction, if required, have examined each installation.

1.9 ENVIRONMENTAL REQUIREMENTS

A. Do not apply materials when temperature of substrate material and ambient air is below 60°F.

B. Maintain this minimum temperature before, during, and for 3 days after installation of materials.

1.10 DELIVERY, STORAGE AND HANDLING

A. Deliver all materials in original unopened packages fully identified with manufacturer's name, trade name and UL label:

1. Leave seals unbroken and labels intact until time of use.

2. Remove from job site any rejected or damaged packages found unsuitable for use.

B. Store materials in a dry place, off of the ground or floor, and away from other material subject to sweating or attraction of moisture or dampness.

C. Provide ventilation in areas to receive solvent cured materials.

PART 2 - PRODUCTS

2.1 FIRESTOPPING, GENERAL

A. Provide firestopping components that are compatible with each other, substrates of openings, and items penetrating firestopping.

B. Provide accessories for each firestopping system that are needed to comply with designated fire-resistance-rated systems specified by firestopping manufacturer.

2.2 ACCEPTABLE MANUFACTURERS

A. Hilti, "Construction Chemicals", (909) 864-2294., www.hilti.com

B. Minnesota Mining and Mfg. Co., (213) 726-6321.

C. Tremco, (800) 551-7085.

D. United States Gypsum Co., (800) 964-4874.

E. Bio Fireshield, Inc.

F. Dow-Corning Corp., www.dow.com

G. International Protective Coatings (IPC.), www.international-pc.com

H. Substitutions: Under provisions of Section 01 62 00.

2.3 FILL MATERIALS

A. General: Firestopping and smoke seal materials shall be asbestos free:

1. The F rating must be a minimum of 1 hour, but not less than the fire resistance rating of the assembly being penetrated, when tested per ASTM E84.

2. Materials being applied in openings between elements of differing fire ratings shall conform to the most restrictive rating.

3. Fire tests shall be conducted with a minimum positive pressure differential of 0.03" of water column.

4. Material shall be noncombustible, with flame spread of 25 or less, and smoke development of 50 or less, when tested in accordance with ASTM E84.

B. Firestop or Smoke Seal Mortar: Single-component Portland cement fly ash mortar, requiring no special supports or anchoring devices to pass water hose stream tests.

C. Intumescent:

1. Wrap: Single-component, elastomeric sheet with aluminum foil on one side.

2. Calk: Water-based latex calk per UL1479.

D. Vinyl Compound: Vinyl-based powder product mixed on site with water to produce a paintable compound with flame-spread and smoke-developed rating of 0 per ASTM E84.

E. Silicone Foam: Two-component, silicone based liquid elastomer that, when

mixed, expands and cures in place to produce a flexible nonshrinking foam.

F. Firestop or Smoke Seal Sleeve: Prefabricated device used around plastic pipes in fire-rated floors and walls. The sleeve shall be made of a steel collar lined with an intumescent material.

G. Fiber Stuffing: Mineral fiber stuffing with a minimum density of 3.5 lbs./cu ft.

H. Mineral fiber board, mineral fiber matting, and mineral fiber putty-forming and damming materials shall be used to contain the fluid material mixture prior to and during filling of penetrations and voids:

1. Fire tested and functionally approved forming materials may be left in place to become an integral part of the formed penetration seal.

2. Combustible forming and damming materials may be used for containment during installation of materials only, and must be removed from the final completed penetration seal system.

I. Provide primers as required which conform to manufacturer's recommendations for various substrates and conditions.

2.4 JOINT SEALANTS

A. Manufacturer's standard chemically-curing elastomeric sealant that complies with ASTM C920.

B. Provide selections from manufacturer's full range of colors.

C. [Single-Component,] [Multiple-Component,] Neutral Curing Silicone Sealant: Type S; Grade NS; Class 25; exposure-related use NT; and joint substrate related uses M, G, A, and O, as applicable to substrate assembly condition.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that site conditions are suitable for installation of products.

B. Verify openings are ready to receive the Work of this Section.

C. Notify the Contractor in writing, with copy to Architect, of conditions detrimental to the timely completion of the Work.

D. Do not proceed with Work until all unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean substrate surfaces of dirt, dust, grease, oil, loose material, or other matter which may affect bond of firestopping material.

B. Remove laitance and form release agents from concrete.

C. Remove incompatible materials which may affect bond.

D. Install backing materials to arrest liquid material leakage.

3.3 APPLICATION OF THROUGH-PENETRATION FIRESTOPS

A. Install material at walls or partition openings which contain penetrating sleeves, piping, ductwork, conduit and other items requiring firestopping.

B. Comply with through-penetration firestop manufacturer's installation instructions and Drawings pertaining to products and applications required.

C. Install forming materials and other accessories of types required to support fill materials during their application and in the position needed to produce shapes and depths required to achieve fire ratings.

D. After installing fill materials, remove combustible forming materials and other accessories not indicated as permanent components of firestop system.

E. Apply primer and materials in accordance with manufacturer's instructions.

F. Apply firestopping material in sufficient thickness to achieve rating.

G. Install firestops or smoke seals with sufficient pressure to properly fill and seal openings to ensure an effective smoke seal.

H. Install fire-resistant filler in openings where indicated:

1. Dam bottom of vertical openings and one side of horizontal openings with temporary containment forms or, where required to achieve fire-resistance ratings, provide permanent mineral composition board forms.

2. On horizontal penetrations, provide partial face containment forms where required for material displacement.

3. Allow installed fillers to cure, and remove temporary forms; trim ragged edges with sharp knife; inspect and fill voids with additional filler to form uniform thickness of filler.

3.4 APPLICATION OF FIRE-RESISTIVE JOINT SEALANT

A. Comply with ASTM C1193 and manufacturer's installation instructions and Drawings pertaining to products and applications required.

B. Install joint fillers to provide support and at a position required to produce depth to joint widths that allow development of fire-resistance rating required.

C. Install sealant to completely fill recesses provided. Install sealant at same time as joint filler.

D. Tool non-sag sealants after application to form smooth uniform bead to configuration required to produce fire-resistance rating.

E. Spillage: Do not allow sealants to overflow or spill onto adjoining surfaces, or to migrate into voids of adjoining surfaces. Clean adjoining surfaces by whatever means may be necessary to eliminate evidence of spillage.

F. Recess exposed edges of gaskets and exposed joint fillers slightly behind adjoining surfaces, unless otherwise shown, so that compressed units will not protrude from joints.

G. Tool or trowel exposed surfaces. Remove excess firestop or smoke seal material promptly as Work progresses and upon completion.

H. Apply firestop or smoke seal material at penetrations of insulated piping after the insulation is installed:

1. The material used shall have been tested for compatibility and rating in conjunction with the use of the insulation material being used.

2. Calcium silicate, or other pipe insulation, may be substituted for fiberglass pipe insulation through the sleeve, if the insulation is part of an assembly which meets the requirements specified for firestopping or smoke sealing.

I. Firestopping or smoke sealing materials for filling voids in floors having openings of 4" or greater, shall be installed to support the same load as the floor system, unless the area is protected by a permanent barrier preventing loading or traffic on the firestopped or smoke sealed area.

3.5 FIELD QUALITY CONTROL

A. Do not cover up installations that will become concealed behind other construction until Owner's Representative and authorities having jurisdiction, if required, have examined each installation.

B. Where deficiencies are found, repair or replace firestopping to required condition.

3.6 CLEANING

A. Clean Work under provisions of Section 01 77 00.

B. Clean adjacent surfaces of firestopping materials.

3.7 CURING AND PROTECTION OF FINISHED WORK

A. Cure firestopping and smoke seal materials in compliance with manufacturer's instructions and recommendations.

B. Installer shall advise Contractor of procedures required for protection of firestopping and smoke seals during remaining construction period.

C. Protect finished Work under provisions of Section 01 87 00.

D. Protect adjacent surfaces from damage by material installation.

END OF SECTION

SECTION 07 92 00
Joint Sealers

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Preparing sealant substrate surfaces.

B. Sealant and backing.

1.2 SUMMARY OF SEALANT LOCATIONS

A. Joints in Horizontal Surfaces:

1. Expansion and isolation joints in cast-in-place concrete slabs.
2. Expansion and isolation joints in masonry paving.
3. Joints in precast concrete paving units.
4. Joints in stone paving units.
5. Control and expansion joints in ceramic and quarry tile.
6. Control and expansion joints in soffits, ceilings and overhead surfaces.
7. Joints on underside of precast beams and planks.
8. Perimeter joints in exterior openings.
9. Joints between ceiling surfaces and frames for doors and windows.
10. Joints in flashing and sheet metal.
11. Perimeter joints of toilet fixtures.
12. Acoustical isolation joints between head and sill of walls and floor and ceiling surfaces.
13. Joints between countertops and wall surfaces.
14. Joints in skylights and framing.
15. Joints between thresholds and floors.
16. Isolation joints in plaster soffits and ceilings.
17. Joints between dissimilar materials and those listed above.

18. Other joints as indicated.

B. Joints in Vertical Surfaces:

1. Expansion and isolation joints in cast-in-place concrete.
2. Expansion and isolation joints in masonry.
3. Joints in precast concrete.
4. Expansion and isolation joints in stonework.
5. Control and expansion joints in ceramic and quarry tile.
6. Perimeter joints in exterior openings.
7. Joints in flashing and sheet metal.
8. Perimeter joints of toilet fixtures.
9. Acoustical isolation joints of walls.
10. Joints between cabinets and walls.
11. Joints between wall surfaces and door and window frames.
12. Joints in skylights and framing.
13. Isolation joints in plaster walls.
14. Joints between dissimilar materials and those listed above.
15. Other joints as indicated.

1.3 REFERENCES

A. ASTM C834 - Standard Specification for Latex Sealing.

B. ASTM C919 - Standard Practices for Use of Sealants in Acoustical Applications.

C. ASTM C920 – Standard Specification for Elastomeric Joint Sealants.

D. ASTM C1193 - Standard Guide for Use of Joint Sealants.

E. ASTM D217 – Standard Test Methods for Cone Penetration of Lubricating Grease.

F. ASTM D1056 – Standard Specification for Flexible Cellular Materials - Sponge or Expanded Rubber.

G. SWRI - (Sealant, Waterproofing and Restoration Institute) - Sealant and Caulking Guide Specification.

1.4 SUBMITTALS

A. Submit under provisions of Section 01 33 00.

B. Submit Product Data indicating sealant chemical characteristics, performance criteria, limitations, and color availability.

C. Submit two 4" long Samples illustrating colors selected.

1.5 QUALITY ASSURANCE

A. Manufacturer: Company specializing in manufacturing the products specified in this Section with minimum five years documented experience.

B. Applicator: Company specializing in applying the Work of this Section with minimum three years documented experience, approved by sealant manufacturer.

C. Conform to Sealant, Waterproofing, and Restoration Institute (SWRI) requirements for materials and installation.

D. Perform Work in accordance with ASTM C1193.

E. Perform acoustical sealant application work to provide maximum STC values in accordance with ASTM C919.

1.6 ENVIRONMENTAL REQUIREMENTS

A. Do not install solvent curing sealants in enclosed building spaces.

B. Do not install sealant when temperature is less than 40°F.

C. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.

1.7 WARRANTY

A. Provide sealant manufacturer's 5 year warranty against defects in materials.

B. Include coverage for installed sealants and accessories which fail to achieve air and water seal and exhibit loss of adhesion or cohesion or do not cure.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers and products are listed for each sealant type.

B. Substitutions: Under provisions of Section 01 62 00.

2.2 SEALANTS

A. Type A - Acrylic Latex: One-part, non-sag, mildew resistant acrylic emulsion compound complying with ASTM C834, Type S, Grade NS, formulated to be paintable:

1. Tremco Inc., Acrylic Latex Caulk “Tremflex 834/TremPro 655”, www.tremosealants.com

2. Bostik Construction Products Division, www.bostik-us.com

3. Pecora Corporation, "Pecora AC-20"., www.pecora.com

B. Type B - Butyl Sealant: One-part, non-sag solvent-release-curing sealant complying with FS TT-S-001657 for Type 1 and formulated with a minimum of 75% solids:

1. Tremco Inc., Tremco "Bitul Sealant"., www.tremosealants.com

2. Bostik Construction Products Division, www.bostik-us.com

3. Pecora Corporation, "~~BC-158~~"., www.pecora.com

C. Type C - Silicone Sealant: One-part nonacid-curing silicone sealant complying with ASTM C920, Type S, Grade NS, Class 25:

1. Dow Corning Corp., “Dowsil 790 Silicone Building Sealant”., www.dow.com

2. General Electric Co., "SCS2000 Silpruf Sealant"., siliconeforbuilding.com

3. Tremco, Inc., "Spectrem® 1"., www.tremosealants.com

4. Pecora Corp., "Pecora 864NST" or "Pecora 890NST"., www.pecora.com

D. Type D - Neutral-Curing Silicone Sealant: One part medium modulus neutral-curing silicone sealant complying with ASTM C920, Type S, Grade NS, Class 25:

1. Dow Corning Corp., Dowsil 795 Silicone Building Sealant., www.dow.com.

2. General Electric Co., " SSG4000 Ultraglaze Sealant"., siliconeforbuilding.com

3. Tremco, Inc., " Spectrem® 3"., www.tremosealants.com

4. Pecora Corp., "Pecora 895NST"., www.pecora.com

E. Type E - One-Part Mildew-Resistant Silicone Sealant: Complying with ASTM C920, Type S, Grade NS, Class 25:

1. Dow Corning Corp., Dowsil 786 Silicone Sealant., www.dow.com.

2. General Electric Co., " SCS1700 Sanitary"., siliconeforbuilding.com

3. Tremco, Inc., " Proglaze®" White., www.tremosealants.com

4. Pecora Corp., "~~863~~" or "Pecora 898NST" White., www.pecora.com

F. Type F - Multi-Part Pourable Sealant: Complying with ASTM C920, Type M, Grade P, Class 25. Shore A hardness +40:

1. Tremco, Inc.

2. Pecora Corp., "Pecora DynaTred" or "Pecora Urexpan NR-200"., www.pecora.com

3. Sika Corporation, "Sikaflex 2C NS EZ Mix"., usa.sika.com

4. W.R. Meadows, "Pourthane NS/SL"., www.wrmeadows.com

G. Type G - Acoustical Sealant: Nondrying, nonhardening permanently flexible conforming to ASTM D217:

1. Pecora Corp., "Pecora BA-98" Acoustical Sealant., www.pecora.com

2. Tremco, Inc., "Tremco Acoustical Sealant"., www.tremosealants.com

3. United States Gypsum Co., "Sheetrock® Acoustical Sealant"., www.usg.com

H. Type H - Sound and Fire Protective Rated Moldable Putty Pads as wall opening protective materials when code required in fire-rated walls:

1. Tremco, Inc., TREMstop® MP "Firestopping Putty Pads"., www.tremosealants.com

2. 3M Inc., "3M Fire Barrier Moldable Putty Pads MPP+", www.3m.com

3. Hilti Co., CP 617 Firestop Putty Pad"., www.hilti.com

2.3 ACCESSORIES

A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.

B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.

C. Joint Backing: ASTM D1056; round, closed cell polyethylene foam rod; oversized 30% to 50% larger than joint width.

D. Bond Breaker: Pressure-sensitive tape recommended by sealant manufacturer to suit application.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that joint openings are ready to receive Work and field measurements are as shown on Drawings and recommended by the manufacturer.

B. Beginning of installation means installer accepts existing substrate.

3.2 PREPARATION

A. Clean and prime joints in accordance with manufacturer's instructions. Prime if recommended by manufacturer.

B. Remove loose materials and foreign matter which might impair adhesion of sealant.

C. Verify that joint backing and release tapes are compatible with sealant.

D. Perform preparation in accordance with ASTM C1193.

E. Protect elements surrounding the Work of this Section from damage or disfiguration.

3.3 INSTALLATION

A. Install sealant in accordance with manufacturer's instructions.

B. Measure joint dimensions and size materials to achieve required width/depth ratios.

C. Install joint backing to achieve a neck dimension no greater than 1/3 the joint width.

D. Install bond breaker where joint backing is not used.

E. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.

F. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.

G. Tool joints concave unless otherwise detailed.

3.4 CLEANING AND REPAIRING

A. Clean work under provisions of Section 01 77 00.

B. Clean adjacent soiled surfaces.

C. Repair or replace defaced or disfigured finishes caused by Work of this Section.

3.5 PROTECTION OF FINISHED WORK

A. Protect sealants until cured.

3.6 SCHEDULE

Type	Location	Color
Type A - Acrylic Latex Cure	All interior joints otherwise Scheduled	To match adjacent surfaces
Type B - Butyl	Under thresholds	Black
Type C - One-Part Nonacid Curing Silicone	Exterior door, entrance, & window frames. [Exterior & Interior vertical joints in concrete masonry] [metal flashing]	[Black] [Bronze] [Aluminum] [Stone] [Grey] [ ] [to match adjacent material]
Type D - Neutral Curing Silicone	Joints within [glazed curtain wall system] [skylight framing system] [aluminum entrance system] glass and glazing	[Translucent] [White] [Black] [Aluminum] [Bronze]
Type E - Mildew-Resistant Silicone	Interior joints in ceramic tile and plumbing fixtures	[White] [Translucent] [Almond]
Type F - Multi-part Pourable Urethane	Exterior & interior joints in horizontal surfaces of concrete; between metal & concrete masonry and mortar	[Black] [Limestone] [Stone] [To match adjacent material]
Type G - Acoustical Sealant	In sound rated walls between stud track/runner and adjacent construction. Between outlet	[White] [Translucent]

	boxes and gypsum board.	
Type H - Sound and Fire Protective Rated Moldable Putty Pads	At fire-rated wall opening when code required, such as electric boxes. In sound rated walls at electrical boxes.	Red

END OF SECTION

SECTION 08 11 16
Interior Aluminum Door Frames & Glazing Frames

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. Pre-finished aluminum door frames for interior use.

2. Pre-finished aluminum window frames for interior use.

3. Pre-finished aluminum framing systems for interior use.

B. Related Documents: The Conditions of the Contract and Division 1 apply to this section as fully as if repeated herein.

C. Related Sections:

1. Section 08 14 16 “Flush Wood Doors.”

2. Section 08 71 00 “Door Hardware.”

3. Section 08 80 00 “Glazing.”

1.2 ACTION SUBMITTALS

A. Submit under provisions of Section 01 33 23.

B. Product data: Manufacturer’s fabrication and installation instructions.

1. Include information on factory finish, glazing gaskets, accessories and other required components.

C. Shop drawings: Submit schedule indicating opening numbers, frame types, dimensions, swings and hardware requirements.

1. Include elevations and details indicating frame types, profiles, conditions at openings, methods and locations of anchoring, glazing requirements, hardware locations and reinforcements for hardware.

D. Samples: Submit the following:

1. Full range of manufacturer’s standard finishes for the University Representative’s selection.

2. Where normal color variations are expected, include additional samples to

show range of such variation.

E. Instructions: Provide copies of manufacturer's data for fabrication and installation of aluminum door frames.

1.3 QUALITY ASSURANCE

A. Single Source Responsibility: Provide aluminum frames and accessories produced by a single manufacturer for each type of product indicated.

B. Manufacturer's qualifications: Company specializing in the manufacturing of door frame systems with a minimum of 10 years of documented experience on a comparable sized project.

1.4 DELIVERY, STORAGE AND HANDLING

A. Deliver frames and doors in cartons to provide protection during transit and storage at project site.

B. Inspect frames and doors upon delivery for damage.

1. Repair minor damage to pre-finished products by means as recommended by the manufacturer.

2. Replace frames that cannot be satisfactorily repaired.

C. Store frames at the project site under cover and as near as possible to the final installation location. Do not use covering material that will cause discoloration of aluminum finish.

1.5 ENVIRONMENTAL REQUIREMENTS

A. Do not begin installation of the frames or doors until the area of work has been completely enclosed and the interior is protected from the elements.

B. Maintain temperature and humidity in areas of installation within reasonable limits, as close as possible to final occupancy. If necessary, provide temperature control and ventilation to maintain required environmental conditions.

1.6 WARRANTY

A. Warrant against defects in manufacturing of materials for a period of 2 years from date of Substantial Completion.

B. arrant framing finish against defects, including cracking, flaking, blistering, peeling and excessive fading, chalking and non-uniformity in color for a period of 5 years.

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. Basis-of-Design Manufacturer:

1. Wilson Partitions; www.wilsonpartitions.com; or equal.

B. Substitutions: Comply with provisions of Section 01 25 00 "Substitution Procedures."

2.2 MATERIALS

A. Aluminum: Controlled alloy billets meeting requirements of ASTM B221, 6063 T5 alloy, to assure compliance with tight dimensional tolerances and maintain color uniformity.

2.3 EXTRUDED ALUMINIUM FRAMES

A. Snap-On Trim Profile: Provide frames with the following characteristics:

1. Rectilinear design.

2. 2. Trim: 1-1/2".

3. Series 375: 3-3/4" throat.

4. Series 487: 4-7/8" throat.

5. Accepts 1/4" and 1/2" Glass.

2.4 FABRICATION

A. Pre-machine jambs and prepare for hardware, with concealed reinforcement plates, drilled and tapped as required, and fastened within the frame.

B. Provide corner reinforcements and alignment clips for precise butt or mitered connections.

C. Fabricate all components to allow secure installation without exposed fasteners.

D. Manufacturer shall pre-cut and ship all frame materials knock-down.

E. FINISHES

F. Factory finish extruded frame components so that any part exposed to view upon completion of installation will be uniform in finish and color.

G. Clear Anodic Coating (AC-2): Comply with AAMA 611.

1. Commercial, AAM12C22A21 anodized coating, less than 0.04 mil minimum thick.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine project conditions and verify that the work of this section may properly commence. Do not proceed with the installation until unsatisfactory conditions have been corrected.

B. Verify that the wall thickness does not exceed manufacturer's recommended tolerances of specified frame throat size.

3.2 INSTALLATION

A. Comply with frame manufacturer's printed installation instructions and approved shop drawings. Strictly adhere to maintaining specified wall thickness to insure dimension does not exceed frame throat size specified. Installation not to be attempted in areas where the wall thickness exceeds the tolerance of the specified throat size.

B. Install frames plumb and square, securely anchored to substrates with fasteners recommended by frame manufacturer.

1. Use concealed installation clips to assure that splices and connections are tightly butted and properly aligned.

2. Secure clips to main structural extrusion components and not to snap-in or trim members.

3. Do not use screws or other fasteners that will be exposed to view when installation is complete.

3.3 ADJUSTING AND CLEANING

A. Clean exposed frames promptly after installation, using cleaning methods recommended by frame manufacturer.

B. Touch up marred areas so that touch-up is not visible from a distance of 4 feet. Remove and replace frames that cannot be satisfactorily adjusted.

3.4 PROTECTION

A. Provide protection required to assure that frames will be without damage or deterioration `upon substantial completion of the project.

END OF SECTION

SECTION 08 13 13
Hollow Metal Doors and Frames

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Related Sections:

1. Section 08 71 00 Door Hardware.

2. Section 08 80 00 Glazing; for glass view panels in hollow metal doors.

3. Section 09 91 00 Painting; for field painting hollow metal doors and frames.

B. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.

1. ANSI/SDI A250.3 – Test Procedure and Acceptance Criteria for Factory Applied Finish Coatings for Steel Doors and Frames

2. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames and Anchors.

3. ANSI/SDI A250.6 - Recommended Practice for Hardware Reinforcing on Standard Steel Doors and Frames.

4. ANSI/SDI A250.8 - Standard Steel Doors and Frames.

5. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames.

6. ANSI/SDI A250.11 - Recommended Erection Instructions for Steel Frames.

7. ASTM A653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

8. ASTM A924 - Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.

9. ASTM A1008 - Standard Specification for Steel Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability, Required Hardness, Solution Hardened, and Bake Hardenable.

10. ASTM E90 – Standard Test Method for Laboratory Measurement of AirBorne Sound Transmission Loss of Building Partitions and Elements

11. ASTM E330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.

12. ANSI/BHMA A156.15 - Closer Holder, Electromagnetic and Electromechanical.

13. ANSI/NFPA 80 - Standard for Fire Doors and Fire Windows; National Fire Protection Association.

14. ANSI/NFPA 105: Standard for the Installation of Smoke Door Assemblies.

15. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; National Fire Protection Association.

16. SDI-117 - Manufacturing Tolerances Standard Steel Doors and Frames.

17. UL 10C - Positive Pressure Fire Tests of Door Assemblies.

18. UL 1784 - Standard for Air Leakage Tests of Door Assemblies.

19. California Building Code and amendments.

1.3 DELIVERY, STORAGE, AND HANDLING

A. Deliver hollow metal work palletized, wrapped, or crated to provide protection during transit and Project site storage. Do not use non-vented plastic.

B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.

C. Store hollow metal work under cover at Project site. Place in stacks of five units maximum in a vertical position with heads up, spaced by blocking, on minimum 4" high wood blocking. Do not store in a manner that traps excess humidity.

1. Provide minimum 1/4" space between each stacked door to permit air circulation. Door and frames to be stacked in a vertical upright position.

1.4 PROJECT CONDITIONS

A. Field Measurements: Verify actual dimensions of openings by field measurements before fabrication.

1.5 COORDINATION

A. Coordinate installation of anchorages for hollow metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.

1.6 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace doors that fail in materials or workmanship within specified warranty period.

B. Warranty includes installation and finishing that may be required due to repair or replacement of defective doors.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. CECO Door Products., www.cecodoor.com
2. Curries Company., www.curries.com
3. Security Metal Products.
4. Steelcraft., www.steelcraft.com

2.2 MATERIALS

A. Cold-Rolled Steel Sheet: ASTM A1008/ A1008M, Commercial Steel (CS), Type B; suitable for exposed applications.

B. Metallic-Coated Steel Sheet: ASTM A653/ A653M, Commercial Steel (CS), Type B; with minimum G60 (Z180) or A60 (ZF180) metallic coating.

C. Frame Anchors: ASTM A653/ A653M, Commercial Steel (CS), Commercial Steel (CS), Type B; with minimum G60 (Z180) or A60 (ZF180) metallic coating.

2.3 ENERGY EFFICIENCY HOLLOW METAL DOORS

A. General: Provide 1-3/4" doors of design specified, not less than thickness indicated; fabricated with smooth surfaces, without visible joints or seams on exposed faces unless otherwise indicated. Comply with ANSI/SDI A250.8 and ANSI/NAAMM HMMA 867.

B. Interior Doors: Face sheets fabricated of commercial quality cold rolled steel. Provide doors complying with requirements indicated below by referencing ANSI/SDI A250.8 for level and model and ANSI/SDI A250.4 for physical performance level:

1. Design: Flush panel.

2. Core Construction: Steel stiffened laminated core with fiberglass filler with no stiffener face welds, in compliance with HMMA 867 "Laminated Core".

a. Provide 22 gauge steel-stiffeners at 6" on-center internally welded at 5" on center to integral core assembly, No stiffener face welding is permitted.

b. Acoustical sound transmission rating shall be no less than STC 38 complying with ASTM E90 and must be visible on factory applied labels.

3. Level/Model: Level 2 and Physical Performance Level A (Heavy Duty), Minimum 18 gauge (0.042" - 1.1-mm) thick steel, Model 2.

4. Vertical Edges: Vertical edges to be mechanically interlocked with hairline seam. Beveled Lock Edge, 1/8" in 2" (3 mm in 50 mm).

5. Top and Bottom Edges: Reinforce tops and bottoms of doors with a continuous steel channel not less than 16 gauge, extending the full width of the door and welded to the face sheet. Doors with an inverted top channel to include a steel closure channel, screw attached, with the web of the channel flush with the face sheets of the door. Plastic or composite channel fillers are not acceptable.

6. Hinge Reinforcement: Minimum 7 gauge (3/16") plate 1-1/4" x 9".

7. Hardware Reinforcements: Fabricate according to ANSI/SDI A250.6 with reinforcing plates from same material as door face sheets.

C. Manufacturers Basis of Design:

1. CECO Door Products Trio-E/Trio Series., www.cecodoor.com

2. Curries Company, “777E Series Trio-E”, www.curries.com

2.4 STANDARD HOLLOW METAL FRAMES

A. General: Comply with ANSI/SDI A250.8 and with details indicated for type and

profile.

B. Interior Frames: Fabricated from cold-rolled steel sheet that complies with ASTM A1008/ A1008M.

1. Fabricate frames with mitered or coped corners.

2. Fabricate frames with "closed and tight" miter seams continuously welded on face, finished smooth with no visible seam unless otherwise indicated.

3. Frames for Level 2 Steel Doors: Minimum 16 gauge (0.053" - 1.3-mm) thick steel sheet.

4. Frames for Level 3 Steel Doors (up to 48" in width): Minimum 16 gauge (0.053" - 1.3-mm) thick steel sheet.]

5. Frames for Level 3 Steel Doors (48" and up in width): Minimum 14 gauge (0.067" - 1.7-mm) thick steel sheet.]

6. Frames for Wood Doors: Minimum 16 gauge (0.053" - 1.3-mm) thick steel sheet.

7. Frames for Borrowed Lights: Minimum 16 gauge (0.053" - 1.3-mm) thick steel sheet.

8. Manufacturers Basis of Design:

a. CECO Door Products BQ/~~BU~~/DQ/DU Series (Drywall Profile).

b. CECO Door Products SQ/SU/SR/ Series (Masonry Profile).

c. Curries Company C/CM/CG Series (Drywall Profile).

d. Curries Company M/G Series (Masonry Profile).

C. Fire rated frames: Fabricate frames in accordance with NFPA 80, listed and labeled by a qualified testing agency, for fire-protection ratings indicated.

D. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 Table 4 with reinforcement plates from same material as frames.

2.5 FRAME ANCHORS

A. Jamb Anchors:

1. Masonry Type: Adjustable strap-and-stirrup or T-shaped anchors to suit frame size, formed from A60 metallic coated material, not less than 0.042" thick, with corrugated or perforated straps not less than 2" wide by 10" long; or wire anchors not less than 0.177" thick.

2. Stud Wall Type: Designed to engauge stud and not less than 0.042" thick.

3. Windstorm Opening Anchors: Types as tested and required for indicated wall types to meet specified wind load design criteria.

4. FEMA 361 Storm Shelter Anchors: Masonry T-shaped, wire masonry type, or existing opening type anchors.

B. Floor Anchors: Floor anchors to be provided at each jamb, formed from A60 metallic coated material, not less than 0.042" thick.

C. Mortar Guards: Formed from same material as frames, not less than 0.016" thick.

2.6 LIGHT OPENINGS AND GLAZING

A. Stops and Moldings: Provide stops and moldings around glazed lites where indicated. Form corners of stops and moldings with butted or mitered hairline joints at fabricator's shop. Fixed and removable stops to allow multiple glazed lites each to be removed independently. Coordinate frame rabbet widths between fixed and removable stops with the type of glazing and installation indicated.

B. Moldings for Glazed Lites in Doors and Loose Stops for Glazed Lites in Frames: Minimum 20 gauge thick, fabricated from same material as door face sheet in which they are installed.

C. Fixed Frame Moldings: Formed integral with hollow metal frames, a minimum of 5/8" (16 mm) high unless otherwise indicated. Provide fixed frame moldings and stops on outside of exterior and on secure side of interior doors and frames

D. Preformed Metal Frames for Light Openings: Manufacturer's standard frame formed of 0.048" thick, cold rolled steel sheet; with baked enamel or powder coated finish; and approved for use in doors of fire protection rating indicated. Match pre-finished door paint color where applicable.

E. Glazing: Comply with requirements in Section 08 80 00 Glazing and with the hollow metal door manufacturer's written instructions.

F. Factory Glazing: Factory install glazing in doors as indicated. Doors with factory installed glass to include all of the required glazing material.

2.7 ACCESSORIES

A. Mullions and Transom Bars: Join to adjacent members by welding or rigid mechanical anchors.

B. Grout Guards: Formed from same material as frames, not less than 0.016"

thick.

2.8 FABRICATION

A. Fabricate hollow metal work to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for thickness of metal. Where practical, fit and assemble units in manufacturer's plant. When shipping limitations so dictate, frames for large openings are to be fabricated in sections for splicing or splining in the field by others.

B. Tolerances: Fabricate hollow metal work to tolerances indicated in ANSI/SDI A250.8.

C. Hollow Metal Doors:

1. Glazed Lites: Factory cut openings in doors with applied trim or kits to fit. Factory install glazing where indicated.

2. Astragals: Provide overlapping astragals as noted in door hardware sets in Division 08 Section "Door Hardware" on one leaf of pairs of doors where required by NFPA 80 for fire-performance rating or where indicated. Extend minimum 3/4" beyond edge of door on which astragal is mounted.

3. Continuous Hinge Reinforcement: Provide welded continuous 12 gauge strap for continuous hinges specified in hardware sets in Section 08 71 00 Door Hardware.

D. Hollow Metal Frames:

1. Shipping Limitations: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.

2. Welded Frames: Weld flush face joints continuously; grind, fill, dress, and make smooth, flush, and invisible.

   a. Welded frames are to be provided with two steel spreaders temporarily attached to the bottom of both jambs to serve as a brace during shipping and handling. Spreader bars are for bracing only and are not to be used to size the frame opening.

3. Sidelight and Transom Bar Frames: Provide closed tubular members with no visible face seams or joints, fabricated from same material as door frame. Fasten members at crossings and to jambs by butt welding.

4. High Frequency Hinge Reinforcement: Provide high frequency hinge reinforcements at door openings 48" and wider with mortise butt type hinges at top hinge locations.

5. Continuous Hinge Reinforcement: Provide welded continuous 12 gauge straps for continuous hinges specified in hardware sets in Division 08 Section "Door Hardware".

6. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated for removable stops, provide security screws at exterior locations.

7. Mortar Guards: Provide guard boxes at back of hardware mortises in frames at all hinges and strike preps regardless of grouting requirements.

8. Floor Anchors: Weld anchors to bottom of jambs and mullions with at least four spot welds per anchor.

9. Jamb Anchors: Provide number and spacing of anchors as follows:

    a. Masonry Type: Locate anchors not more than 18" from top and bottom of frame. Space anchors not more than 32" o.c. and as follows:

        1. Two anchors per jamb up to 60" high.

        2. Three anchors per jamb from 60" to 90" high.

        3. Four anchors per jamb from 90" to 120" high.

        4. Four anchors per jamb plus 1 additional anchor per jamb for each 24" or fraction thereof above 120" high.

    b. Stud Wall Type: Locate anchors not more than 18" from top and bottom of frame. Space anchors not more than 32" o.c. and as follows:

        1. Three anchors per jamb up to 60" high.

        2. Four anchors per jamb from 60" to 90" high.

        3. Five anchors per jamb from 90" to 96" high.

        4. Five anchors per jamb plus 1 additional anchor per jamb for each 24" or fraction thereof above 96" high.

        5. Two anchors per head for frames above 42" wide and mounted in metal stud partitions.

10. Door Silencers: Except on weatherstripped or gasketed doors, drill stops to receive door silencers. Silencers to be supplied by frame manufacturer regardless if specified in Division 08 Section "Door Hardware".

E. Hardware Preparation: Factory prepare hollow metal work to receive template mortised hardware; include cutouts, reinforcement, mortising, drilling, and

tapping according to the Door Hardware Schedule and templates furnished as specified in Division 08 71 00 "Door Hardware."

1. Locate hardware as indicated, or if not indicated, according to ANSI/SDI A250.8.

2. Reinforce doors and frames to receive non-template, mortised and surface mounted door hardware.

3. Comply with applicable requirements in ANSI/SDI A250.6 and ANSI/DHI A115 Series specifications for preparation of hollow metal work for hardware.

4. Coordinate locations of conduit and wiring boxes for electrical connections with Division 26 Sections.

2.9 STEEL FINISHES

A. Prime Finishes: Doors and frames to be cleaned, and chemically treated to insure maximum finish paint adhesion. Surfaces of the door and frame exposed to view to receive a factory applied coat of rust inhibiting shop primer.

1. Shop Primer: Manufacturer's standard, fast-curing, lead and chromate free primer complying with ANSI/SDI A250.10 acceptance criteria; recommended by primer manufacturer for substrate; and compatible with substrate and field-applied coatings.

B. Factory Pre-Finished: Factory apply electrostatic paint finish to doors and frames in accordance with ANSI/SDI A250.3 test procedure acceptance criteria for steel doors and frames with factory applied finished coatings.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. General Contractor to verify the accuracy of dimensions given to the steel door and frame manufacturer for existing openings or existing frames (strike height, hinge spacing, hinge back set, etc.).

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Remove welded in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces.

B. Prior to installation, adjust and securely brace welded hollow metal frames for squareness, alignment, twist, and plumbness.

C. Tolerances shall comply with SDI-117 "Manufacturing Tolerances Standard Steel Doors and Frames."

D. Drill and tap doors and frames to receive non-template, mortised, and surface-mounted door hardware.

3.3 INSTALLATION

A. General: Install hollow metal work plumb, rigid, properly aligned, and securely fastened in place; comply with Drawings and manufacturer's written instructions.

B. Hollow Metal Frames: Install hollow metal frames of size and profile indicated. Comply with ANSI/SDI A250.11 and NFPA 80 at fire rated openings.

1. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete and frames properly set and secured, remove temporary braces, leaving surfaces smooth and undamaged. Shim as necessary to comply with installation tolerances.

2. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor, and secure with post-installed expansion anchors.

3. Grout Requirements: Do not grout head of frames unless reinforcing has been installed in head of frame. Do not grout vertical or horizontal closed mullion members.

C. Hollow Metal Doors: Fit hollow metal doors accurately in frames, within clearances specified below. Shim as necessary.

1. Non-Fire-Rated Standard Steel Doors:

a. Jambs and Head: 1/8" ± 1/16".

b. Between Edges of Pairs of Doors: 1/8" ± 1/16".

c. Between Bottom of Door and Top of Threshold: Maximum 3/8".

d. Between Bottom of Door and Top of Finish Floor (No Threshold): Maximum 3/4".

2. Fire-Rated Doors: Install doors with clearances according to NFPA 80.

D. Field Glazing: Comply with installation requirements in Section 08 80 00 Glazing and with hollow metal manufacturer's written instructions.

3.4 ADJUSTING AND CLEANING

A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow metal work that is warped, bowed, or otherwise unacceptable.

B. Remove grout and other bonding material from hollow metal work immediately after installation.

C. Prime-Coat and Painted Finish Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat, or painted finishes, and apply touchup of compatible air drying, rust-inhibitive primer, zinc rich primer (exterior and galvanized openings) or finish paint.

END OF SECTION

SECTION 08 14 16
Flush Wood Doors

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Wood doors, fire-rated and non-rated.

B. Glass lite frames.

C. Door louvers.

1.2 REFERENCES

~~A.~~ WDMA Architectural Door Standards

B. NFPA 80 - Fire Doors and Windows.

C. CBC - California Building Code.

D. UL 10C - Fire Tests of Door Assemblies.

E. WI - Woodwork Institute: Manual of Millwork.

1.3 QUALITY ASSURANCE

A. Conform to requirements of WI Manual of Millwork, Section 12 and 13, Premium Grade except where otherwise indicated.

B. Issue a WI Certified Compliance Certificate prior to delivery of doors certifying that doors meet all requirements of WI Grade specified.

C. After completion issue a WI Certified Compliance Certificate for Installation.

1.4 REGULATORY REQUIREMENTS

A. Conform to CBC for fire-rated doors.

B. Fire Door Construction: Conform to UL 10C.

C. Installed Doors: Conform to NFPA 80 for fire-rated class indicated on Drawings.

1.5 SUBMITTALS

A. Submit under provisions of Section 01 33 00.

B. Shop Drawings shall bear the WI Certified Compliance Label on the first page of each set. Indicate door elevations, stile and rail reinforcement, internal blocking for hardware attachment, and cutouts for glazing and louvers.

C. Submit two Samples 12" x 12" in size illustrating each species and finish specified.

1.6 DELIVERY, STORAGE, AND PROTECTION

A. Protect products under provisions of Section 01 87 00.

B. Package, deliver, and store doors in accordance with WI requirements as set forth in Technical Bulletin 419-R.

1.7 WARRANTY

A. Provide manufacturer's standard lifetime warranty under provisions of Section 01 77 00 for solid core doors.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS, FLUSH FACED DOORS and FRAMES

A. Eggers Industries, Inc., www.vtindustries.com

B. Marshfield Door Systems, Inc., architectural.masonite.com

C. Algoma Hardwoods, Inc.

D. Frames: Anemostat or equal., anemostat.com

E. Substitutions: Under provisions of Section 01 62 00.

2.2 DOOR AND FRAME CONSTRUCTION

A. Solid Non-rated Core: Solid wood block, framed block glued, or solid particleboard.

B. Solid, Special Function Core: Labeled fire performance type.

C. Construction: 5-ply, with face veneer applied vertically over wood veneer cross banding.

D. Flush Interior Door Veneer: Birch for paint grade and [_____] species to match adjacent wood or simulated wood finishes; plain sliced with book matched grain, for transparent clear or stain finish to match existing adjacent doors. Satin sheen. Color as selected by Architect to match other doors on site.

E. Rated Wood Frames: Manufacturer's standard 20 minute labeled frames, species to match door, U.O.N. installed in accordance with manufacturer's installation instructions. Fire rated frames shall be machined for hardware at factory.

2.3 GLASS LITE FRAMES

A. 20 Ga. Cold rolled steel

2.4 ADHESIVES

A. Interior Doors: WI Type I.

2.5 FABRICATION

A. Fabricate non-rated wood doors to requirements of WI Manual of Millwork, Section 12 and 13, in the WI Grade specified.

B. Fabricate fire rated doors per manufacturer's standard construction, and labeling agency requirements.

C. Premachine doors for finish hardware.

D. For fire rated doors with mineral cores, provide solid wood blocks for hardware reinforcement at lock edge, mid-height push bar, and at top of door for closer.

E. For fire-rated doors with mineral cores, provide solid wood blocking for thru-bolted hardware.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install doors in accordance with WI Manual of Millwork Sections 12 and 13 and WI Technical Bulletin 420-R.

B. Conform to WI requirements for fit tolerances.

C. Coordinate installation of glass and glazing.

D. Install door louvers.

E. Adjust doors for smooth and balanced movements.

F. Install fire doors in accordance with NFPA 80.

3.2 INSTALLATION TOLERANCES

A. Edge clearance for swinging doors shall not exceed the following:

1.	Between door and frame at head and jamb	1/8"
2.	Between edge of pair of doors	1/8"
3.	At door sill with threshold	3/8"
4.	At door bottom and surface of nominal floor covering per NFPA 80 and at doors requiring an undercut as indicated on Drawings.	5/8"

B. Frame installation tolerance shall not exceed the following:

1.	Squareness	±1/16"
2.	Alignment	±1/16"
3.	Plumbness	±1/16"
4.	Diagonal Distortion	±1/32"

END OF SECTION

SECTION 09 29 00
Gypsum Board

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Gypsum board.

B. Taped and sanded joint treatment.

C. Surface primer.

D. Texture finish.

E. Level 5 finish, if indicated.

F. Resilient furring channels.

G. Metal channel ceiling framing.

1.2 REFERENCES

A. ASTM C11 - Standard Terminology Relating to Gypsum and Related Building Materials and Systems.

B. ASTM C475 – Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.

C. ASTM C641 – Standard Test Method for Iron Staining Materials in Lightweight Concrete Aggregates.

D. ASTM C645 – Standard Specification for Nonstructural Steel Framing Members.

E. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached GypsumPanel Products.

F. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board.

G. ASTM C919 – Standard Practice for Use of Sealants in Acoustical Applications.

H. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs.

I. ASTM C1396 - Standard Specification for Gypsum Board.

J. ASTM E90 – Standard Test Method for Laboratory Measurement of Airborne

Sound transmission Loss of Building Partitions and Elements.

K. GA-214-2015 – Recommended Levels of Finish Gypsum Board ,Glass Mat & Fiber-Reinforced Gypsum Panels

L. GA-216 - Application and Finishing of Gypsum Panel Products.

M. GA-600 - Fire Resistance and Sound Control Design Manual.

N. CBC - California Building Code.

O. UL - Underwriters Laboratories.

1.3 QUALITY ASSURANCE

A. Applicator: Company specializing in gypsum board systems, with five years documented experience.

1.4 REGULATORY REQUIREMENTS

A. Conform to CBC, Chapter 7, and UL and GA requirements for fire-rated assemblies.

1.5 ACOUSTICAL PERFORMANCE

A. Acoustical attenuation for interior partitions, where indicated, shall be STC rating in accordance with ASTM E90.

1.6 DEFINITIONS

A. Refer to ASTM C11 for definitions of terms related to gypsum board assemblies.

1.7 FIELD SAMPLES

A. Provide field samples under provisions of Section 01 33 00.

B. On wall and ceiling surface duplicate specified texture finish on at least 100 square feet of surface area.

C. Provide complete finish including surface primer.

D. Simulate finished lighting conditions for review of field sample.

E. After surface texture is accepted, the accepted surface will remain as part of the Work and will be used to evaluate subsequent applications of finish texture.

1.8 SUBMITTALS

A. Submit under provisions of Section 01 33 00.

B. Provide Product Data for all items specified.

C. Submit 12" square Samples of each texture finish specified.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Georgia Pacific Corp., www.gp.com

B. National Gypsum Company., www.nationalgypsum.com

C. United States Gypsum Co., www.usg.com

D. Substitutions: Under provisions of Section 01 62 00.

2.2 FRAMING MATERIALS

A. Metal Furring: ASTM C645, hat-shaped, 7/8" deep, .0329" thick.

B. Resilient Furring Channel: Manufacturer's standard product designed to reduce sound transmission, complying with ASTM C645 for material, finish and widths of face and fastening flange; 1/2" deep x .0179" thick asymmetric - shaped channel with face connected to single flange by slotted leg (web).

C. Furring Channel: ASTM C754, 1-1/2" x .475 lbs. per foot.

D. Fasteners: ASTM C1002.

E. Hanger Wire: ASTM A641, Class 1 coating (galvanized) soft temper, 9 gauge.

F. Tie Wire: ASTM A641, Class 1 coating (galvanized) soft temper, 16 and 18 gauge.

G. Adhesive: ASTM C557.

2.3 GYPSUM BOARD MATERIALS

A. Standard Gypsum Board: ASTM C1396; 5/8" thick unless otherwise indicated, maximum permissible length; ends square cut, tapered and beveled edges.

B. Fire Rated Gypsum Board: ASTM C1396; fire resistive type, UL rated; 5/8" thick unless otherwise indicated, maximum permissible length; ends square cut,

tapered and beveled edges.

C. Moisture-Resistant Gypsum Board: 5/8" thick unless otherwise indicated, maximum permissible length; ends square cut, tapered and beveled edges.

1. Do not use moisture resistant board on ceilings or soffits.

2.4 ACCESSORIES

A. Acoustical Sealant: Non-hardening, non-skinning, for use in conjunction with gypsum board.

1. "Sheetrock® Brand Acoustical Sealant", manufactured by United States Gypsum Company.

2. "BA-98 Acoustical Sealant", manufactured by Pecora Corporation.

3. "Tremco Acoustical Sealant", manufactured by Tremco, Inc.

B. Fire-Rated Sealant: As specified in Section 07 84 00.

C. Corner Beads: Metal, hot dip galvanized.

D. Edge Trim: GA 216; Type LC bead, unless otherwise indicated.

E. Control Joints: Roll-formed zinc, USG No. 093, or approved equal.

F. Spot Grout: ASTM C475, setting-type joint compound.

G. Joint Materials: ASTM C475; reinforcing tape, joint compound, adhesive, water, and fasteners. Use tapes and compound recommended by gypsum board manufacturer for the use intended. Use ready mixed, drying type compounds. Use taping compound for embedding tape and first coat over fasteners and flanges of corner beads and trim. Use topping compound for fill and finish coats.

H. Primer: Flat latex basecoat paint equivalent to "First Coat" manufactured by United States Gypsum Company.

I. Other Textures: To match existing.

J. Membrane: ASTM D226; No. 15 asphalt saturated roofing felt.

K. Adhesive for Application Over Hard Surfaces: Mastic glue as recommended by the gypsum board manufacturer for the specific substrate.

PART 3 - EXECUTION

3.1 INSPECTION

A. Verify that site conditions are ready to receive Work.

B. Beginning of installation means acceptance of substrate.

3.2 CEILING FRAMING INSTALLATION

A. Install in accordance with ASTM C754 and CBC, Chapter 25.

B. Coordinate locations of hangers with other Work.

C. Install ceiling framing independent of walls and columns.

D. Space 9 gauge hanger wires at 3' on center along 1-1/2" furring channels and within 6" of end of furring channel.

E. Install 1-1/2" furring channels at 4' on center and within 6" of parallel walls. Provide 1" clearance between end of channels and abutting walls.

F. Position furring channels for proper ceiling height, level, and secure with hanger wire saddle-tied along channel.

G. At channel splices, interlock flanges, overlap ends 12" and secure each end with double-strand of 16 gauge tie wire.

H. Erect metal furring at right angles to 1-1/2" furring channels. Space metal furring 16" on center.

I. Install metal furring within 6" of parallel walls. Provide 1" clearance between end of furring and abutting wall.

J. Secure metal furring to furring channel with clips or saddle tie with double strand of 18 gauge tie wire.

K. At splices of metal furring nest furring at least 8" and securely wire-tie each end with double strand of 16 gauge tie-wire.

L. Reinforce openings in ceiling suspension system which interrupt main furring channels or metal furring with lateral channel bracing. Extend bracing minimum 24" past each end of openings.

3.3 GYPSUM BOARD INSTALLATION

A. Install gypsum board in accordance with ASTM C840 and manufacturer's instructions.

B. Erect single layer standard gypsum board in most economical direction, with ends and edges occurring over firm bearing except those ends and edges which

are perpendicular to framing.

C. Erect single layer fire rated gypsum board vertically, with edges and ends occurring over firm bearing except those ends and edges which are perpendicular to framing members. Comply with required UL, CBC, or GA fire rated assembly.

D. Erect double layer gypsum board with standard gypsum board for first layer placed in most economical direction with second layer placed parallel to face layer with adhesive and supplementary fasteners. Off-set joints of second layer from joints of first layer by at least 12".

E. Erect double layer fire-rated gypsum board in accordance with required UL, CBC, or GA fire rated assembly.

F. Use screws when fastening gypsum board to metal furring.

G. Use screws when fastening gypsum board to wood furring or framing except where nails are required for UL or CBC fire-rated assembly.

H. Install firestop sealant at wall penetrations and terminations in accordance with required UL, CBC, or GA fire-rated assembly in accordance with Section 07 84 00.

I. Treat cut edges and holes in moisture-resistant gypsum board with sealant.

J. Place corner beads at external corners. Use longest practical length. Place edge trim where gypsum board abuts dissimilar materials.

K. Spot grout metal door frames. Apply spot grout at each jamb anchor clip just before inserting board into frame.

3.4 CURVED PARTITIONS

A. Install panels horizontally and unbroken across curved surface.

B. Wet gypsum panels on surface that will become compressed.

C. On convex side of partition, begin installation at one end of curved surface and fasten panels to studs as they are wrapped around curve.

D. On concave side of partition, start fastening panels at center of curve and work outward to panel ends.

E. Allow wetted panels to dry before applying joint treatment.

3.5 EXTERIOR SOFFIT AND CEILING INSTALLATION

A. Apply gypsum soffit board panels perpendicular to supports with end joints staggered and located over supports.

B. Install panels with 1/4" space where panels abut other construction penetrations.

C. Fasten with corrosion-resistant screws.

3.6 JOINT TREATMENT

A. Tape, fill, and sand joints, edges, and corners in accordance with GA 214.

B. Feather successive coats a minimum of 2" onto adjoining surfaces for each coat.

C. Where fire-resistance rating is required, detail of joint treatment shall meet fire-rating requirement.

D. Level 1 Treatment:

1. All joints and angles shall have tape embedded in joint compound.

2. Surface shall be free of excess joint compound.

3. Tool marks and ridges are acceptable.

4. Use for plenum areas above ceiling, in areas that are generally concealed and other areas not normally open to view.

E. Level 2 Treatment:

1. All joints and angles shall have tape embedded in joint compound and one separate coat of joint compound shall be applied over all fastener heads and accessories.

2. Surface shall be free of excess joint compound.

3. Tool marks and ridges are acceptable.

4. Use where surface is substrate to ceramic tile, acoustic tile, or tackable wallboard system.

F. Level 3 Treatment:

1. Not used.

G. Level 4 Treatment:

1. All joints and angles shall have tape embedded in joint compound with three separate coats of topping compound applied over all joints, angles, fasteners, and accessories.

2. All compound shall be smooth and free of tool marks and ridges.

3. Sand lightly between coats, taking care not to roughen face paper.

4. Use for all surfaces that are scheduled to receive a textured and painted finish, except areas of food service and preparation, or a surface applied wallcovering.

5. Where patching skip-trowel, knock-down or other finishes, match existing to the greatest extent possible.

H. Level 5 Treatment:

1. All joints and angles shall have tape embedded in joint compound with three separate coats of topping compound applied over all joints, fasteners, and accessories.

2. Apply a thin skim coat of topping compound over entire surface.

3. All compounds shall be smooth and free of tool marks and ridges.

4. Sand lightly between coats.

3.7 FINISHING

A. Roller apply surface primer to all gypsum board surfaces scheduled to receive a painted and textured finish prior to application of paint or texture finish.

B. Spray apply textured finish to all surfaces scheduled to receive a paint finish except surfaces of food service and preparation areas.

C. Trowel-apply patch-to-match textures to match existing.

D. Remove any overspray of texture finish from door frames, windows, and other adjoining construction.

3.8 TOLERANCES

A. Maximum Variation from True Flatness: 1/8" in 10' in any direction.

3.9 SCHEDULE

A. Existing Construction: Patch-to-match, or if exceeds 30% of existing wall, strip and replace to the nearest surface break and treat this area as new construction.

Room Type	Wallboard System	Finish Type	Notes

Typical Surfaces (Classrooms, corridors, office/work areas)	5/8", Type X	Match existing	
Wet Areas (Other than gang Restrooms or see 08 22 00 if cement Plaster.)	5/8", Type MR	Level 5 or coordinate with final surface	If tile, substrate is specified elsewhere.
Gang Restrooms (See 09 31 00)			
Fire-Rated Underlayment	5/8", Type X	Tape joints only	Use only in conjunction with a finish surface overlay system

B. New Construction: Note: New construction may be over wood or metal frame construction.

Room Type	Wallboard System	Finish Type	Notes
Typical Surfaces (Classrooms, corridors, office/work areas)	5/8", Type X	Level 5	All surfaces Accent surfaces only, such as soffits.
Wet Areas	5/8", Type MR	Level 5 or coordinate with final surface	Coordinate finish with final surface treatment
Shaft Walls	Shaft wall system to suit		Finish outside per above, if exposed
High Abuse Areas (Gymnasiums, workout areas,	5/8" high impact fire-shield 2000		Finish per above.

shops.)			
Gang Restrooms	(See 09 31 00)		
Fire-Rated Underlayment	5/8", Type X	Tape joints only	Use only in conjunction with a finish surface overlay system

END OF SECTION

SECTION 09 91 00
Painting

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Surface preparation.

B. Products and application.

C. Surface finish schedule.

D. Patch to match existing.

1.2 REFERENCES

A. ASTM D16 - Definitions of Terms Relating to Paint, Varnish, Lacquer, and Related Products.

B. ASTM D2016 - Test Method for Moisture Content of Wood.

1.3 SYSTEM DESCRIPTION

A. Preparation of all surfaces to receive final finish.

B. Painting and finishing Work of this Section using coating systems of materials including primers, sealers, fillers, and other applied materials whether used as prime, intermediate, or finish coats.

C. Surface preparation, priming, and finish coats specified in this Section are in addition to shop-priming and surface treatment specified under other Sections.

D. Painting and finishing all exterior and interior surfaces of materials including structural, mechanical, and electrical Work on site, in building spaces, and above or on the roof.

E. Paint exposed surfaces except where a surface or material is specifically indicated not to be painted or is to remain natural. Where an item or surface is not specifically mentioned, paint the same as similar adjacent materials or surfaces.

1.4 DEFINITIONS

A. Conform to ASTM D16 for interpretation of terms used in this Section.

1.5 QUALITY ASSURANCE

A. Product Manufacturer: Company specializing in manufacturing quality paint and finish products with five years experience.

B. Applicator: Company specializing in commercial painting and finishing with five years documented experience.

C. Regulatory Requirements: Comply with applicable codes and regulations of governmental agencies having jurisdiction including those having jurisdiction over airborne emissions and industrial waste disposal. Where those requirements conflict with this specification, comply with the more stringent provisions. Comply with the current applicable regulations of the California Air Resources Board (CARB) and the Environmental Protection Agency (EPA).

D. Coats: The number of coats specified is the minimum number acceptable. If full coverage is not obtained with the specified number of coats, apply such additional coats as are necessary to produce the required finish.

E. Employ coats and undercoats for all types of finishes in strict accordance with the recommendations of the paint manufacturer.

F. Provide primers and undercoat paint produced by the same manufacturer as the finish coat.

1.6 SUBMITTALS

A. Submit under provisions of Section 01 33 00.

B. Provide manufacturer's technical information and instructions for application of each material proposed for use by catalog number.

C. List each material by catalog number and cross-reference specific coating with specified finish system.

D. Provide manufacturer's certification that products proposed meet or exceed specified materials.

E. Submit two 8-1/2" x 11" Samples of each paint color and texture applied to cardboard. Resubmit Samples until acceptable color, sheen and texture is obtained.

F. On same species and quality of wood to be installed, submit two 4" x 8" Samples showing system to be used.

G. Provide product data, MSDS, and other official literature from manufacturer identifying that the INTERIOR APPLIED products meet the testing requirements and threshold limits of the State of California Department of Health Services (DHS) Standard Practice for the Testing of Volatile Organic Compounds. Such products shall be identified by a 3rd party certification program listing low-

emitting material products. Contractor to clearly highlight, circle and call out on the product literature, identifying how the product complies.

1.7 FIELD SAMPLES

A. Provide field samples under provisions of Section 01 33 00.

B. On wall surfaces and other exterior and interior components, duplicate specified finishes on at least 100 square feet of surface area.

C. Provide full-coat finishes until required coverage, sheen, color and texture are obtained.

D. Simulate finished lighting conditions for review of field samples.

E. After finishes are accepted, the accepted surface may remain as part of the Work and will be used to evaluate subsequent coating systems applications of a similar nature.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Deliver the products to site and store and protect under provisions of Section 01 87 00.

B. Deliver products to site in sealed and labeled containers; inspect to verify acceptance.

C. Container labeling to include manufacturer's name, type of paint, brand name, brand code, coverage, surface preparation, drying time, cleanup, color designation, and instructions for mixing and reducing. Paint containers not displaying product identification will not be acceptable.

D. Store paint materials at minimum ambient temperature of 45°F and a maximum of 90°F, in well ventilated area, unless required otherwise by manufacturer's instructions.

E. Take precautionary measures to prevent fire hazards and spontaneous combustion.

1.9 ENVIRONMENTAL REQUIREMENTS

A. Provide continuous ventilation and heating facilities to maintain surface and ambient temperatures above 45°F for 24 hours before, during, and 48 hours after application of finishes, unless required otherwise by manufacturer's instructions.

B. Do not apply exterior coatings during rain or snow, or when relative humidity is above 50%, unless required otherwise by manufacturer's instructions.

C. Minimum Application Temperatures for Latex Paints: 45°F for interiors; 50°F for exterior; unless required otherwise by manufacturer's instructions.

D. Minimum Application Temperature for Varnish and Urethane Finishes: 65°F for interior or exterior, unless required otherwise by manufacturer's instructions.

E. Provide lighting level of 80 foot-candles measured mid-height at substrate surface.

1.10 EXTRA STOCK

A. Provide a ten gallon container of each finish paint color to Owner for touchup.

B. Label each container with color, texture, and room locations in addition to the manufacturer's label.

1.11 QUALITY ASSURANCE

A. Product Manufacturer: Company specializing in manufacturing quality paint and finish products with five years experience.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Unless specifically identified otherwise, product designations are those of the Dunn-Edwards Corporation, (800) 537-4098 and shall serve as the standard for kind, quality, and function.

B. Subject to compliance with requirements, other manufacturers offering equivalent products are:

1. Benjamin Moore Paints.

2. Frazee Paint (McCloskey, Ameron).

3. ICI Paint Stores.

4. Kelly-Moore Paint Company.

5. Pittsburgh Paints.

6. Sherwin Williams.

7. Spectra-Tone Paint Corp.

8. Tnemec Company, Inc.

9. Vista Paint Corporation.

10. Substitutions: Under provisions of Section 01 62 00.

2.2 MATERIALS

A. Ready mixed, except field catalyzed coatings. Process pigments to a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating.

B. Good flow and brushing properties; capable of drying or curing free of streaks or sags.

C. Accessory Materials: Linseed oil, shella, turpentine, paint thinners and other materials not specifically indicated but required to achieve the finishes specified, of commercial quality.

D. INTERIOR APPLIED Paint shall be low-emitting and must meet the testing requirements and threshold limits of the State of California Department of Health Services (DHS) Standard Practice for the Testing of Volatile Organic Compounds. Such products shall be identified by a 3rd party certification program listing low-emitting material.

2.3 FINISHES

A. Refer to schedule at end of Section for surface finish schedule.

PART 3 - EXECUTION

3.1 INSPECTION

A. Verify that surfaces are ready to receive Work as instructed by the product manufacturer.

B. Examine surfaces to be finished prior to commencement of Work. Report any condition that may potentially affect proper application.

C. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:

1. Plaster and Gypsum Wallboard: 12%.

2. Masonry, Concrete, and Concrete Unit Masonry: 12A%.

3. Interior Located Wood: 15%, measured in accordance with ASTM D2016.

4. Exterior Located Wood: 15%, measured in accordance with ASTM D2016.

D. Beginning of installation means acceptance of existing surfaces.

3.2 SURFACE PREPARATION

A. Remove electrical plates, hardware, light fixture trim, and fittings prior to preparing surfaces or finishing.

B. Correct minor defects and clean surfaces which affect Work of this Section.

C. Shellac and seal marks which may bleed through surface finishes.

D. Impervious Surfaces: Remove mildew by scrubbing with solution of tri-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.

E. Aluminum Surfaces: Remove surface contamination by steam or high pressure water. Remove oxidation with acid etch and solvent washing. Apply etching primer immediately following cleaning.

F. Insulated Coverings: Remove dirt, grease, and oil from canvas and cotton.

G. Concrete Floors: Remove contamination, acid etch, and rinse floors with clear water. Verify required acid-alkali balance is achieved. Allow to dry.

H. Gypsum Board: Repair all voids, nicks, cracks and dents with patching materials and finish flush with adjacent surface. Latex fill minor defects. Spot prime defects after repair.

I. Galvanized Surfaces: Remove surface contamination and oils and wash with solvent. Pretreat with phosphoric acid etch or vinyl wash. Apply coat of etching primer the same day as pretreatment is applied.

J. Concrete and Unit Masonry: Remove dirt, loose mortar, scale, salt or alkali powder, and other foreign matter. Remove oil and grease with a solution of tri-sodium phosphate; rinse well and allow to dry. Remove stains caused by weathering of corroding metals with a solution of sodium metasilicate after thoroughly wetting with water. Allow to dry.

K. Plaster: Fill hairline cracks, small holes, and imperfections with latex patching plaster. Make smooth and flush with adjacent surfaces. Wash and neutralize high alkali surfaces.

L. Uncoated Steel and Iron: Remove grease, scale, dirt, and rust. Where heavy coatings of scale are evident, remove by wire brushing or sandblasting; clean by washing with solvent. Apply a treatment of phosphoric acid solution, ensuring weld joints, bolts, and nuts are similarly cleaned. Spot prime paint after repairs.

M. Shop Primed Steel: Sand and scrape to remove loose primer and rust. Feather

edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces.

N. Interior Wood: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats.

O. Exterior Wood: Remove dust, grit, and foreign matter. Seal knots, pitch streaks, and sappy sections. Fill nail holes with tinted exterior caulking compound after prime coat has been applied.

P. Glue-Laminated Beams: Prior to finishing, wash surfaces with solvent, remove grease and dirt.

Q. Wood Doors: Seal top and bottom edges with 2 coats of spar varnish sealer.

3.3 PROTECTION OF ADJACENT WORK

A. Protect elements surrounding the Work of this Section from damage or disfiguration.

B. Repair damage to other surfaces caused by Work of this Section.

C. Furnish drop cloths, shields, and protective methods to prevent spray or droppings from disfiguring other surfaces.

D. Remove empty paint containers from site.

3.4 WORK NOT TO BE PAINTED

A. Painting is not required on surfaces in concealed and inaccessible areas such as furred spaces, foundation spaces, utility tunnels, pipe spaces and duct shafts.

B. Do not paint metal surfaces such as stainless steel, chromium plate, brass, bronze, and similar finished metal surfaces.

C. Do not paint anodized aluminum or other surfaces which are specified to be factory pre-finished.

D. Do not paint sandblasted or architecturally finished concrete surfaces.

E. Do not paint over Underwriters Laboratories, Factory Mutual or other code-required labels or identifications.

3.5 APPLICATION

A. Apply products in accordance with manufacturer's instructions.

B. Do not apply finishes to surfaces that are not dry.

C. Apply each coat to uniform finish.

D. Apply each coat of paint slightly darker than preceding coat unless otherwise approved.

E. Sand lightly between coats to achieve required finish.

F. Allow applied coat to dry before next coat is applied.

G. The number of coats specified is the minimum that shall be applied. Apply additional coats when undercoats, stains or other conditions show through final paint coat, until paint film is of uniform finish, color and appearance.

H. Where clear finishes are required, tint fillers to match wood. Work fillers into the grain before set. Wipe excess from surface.

I. Prime back surfaces of interior and exterior woodwork with primer paint.

J. Prime back surfaces of interior woodwork scheduled to receive stain or varnish finish with gloss varnish reduced 25% with mineral spirits.

K. Paint mill finished door seals to match door or frame.

L. Paint primed steel glazing stops in doors to match door or frame.

M. Cloudiness, spotting, lap marks, brush marks, runs, sags, spikes and other surface imperfections will not be acceptable.

N. Where spray application is used, apply each coat of the required thickness. Do not double back to build up film thickness of two coats in one pass.

O. Where roller application is used, roll and redistribute paint to an even and fine texture. Leave no evidence of roller laps, irregularity of texture, skid marks, or other surface imperfections.

P. For painting of exterior patchwork, paint to the nearest surface break.

3.6 FINISHING MECHANICAL AND ELECTRICAL EQUIPMENT

A. Paint shop primed equipment. Do not paint shop prefinished items.

B. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.

C. Prime and paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, except where items are prefinished.

D. Replace identification markings on mechanical or electrical equipment when painted accidentally.

E. Paint both sides and edges of plywood backboards for electrical and telephone equipment before installing equipment.

F. Replace electrical plates, hardware, light fixture trim, and fittings removed prior to finishing.

G. Paint grilles, registers, and diffusers which do not match color of adjacent surface.

H. Paint all mechanical and electrical equipment, vents, fans, and the like occurring on roof.

I. Do not paint moving parts of operating units; mechanical or electrical parts such as valve operators; linkages; sensing devices; and motor shafts.

J. Do not paint over labels or equipment identification markings.

K. Do not paint mechanical room specialties such as compressors, boilers, pumps, control panels, etc.

L. Do not paint switch plates, light fixtures, and fixture lenses.

3.7 CLEANING

A. As Work proceeds, promptly remove paint where spilled, splashed, or spattered.

B. During progress of Work maintain premises free of unnecessary accumulation of tools, equipment, surplus materials, and debris.

C. Collect cotton waste, cloths, and material which may constitute a fire hazard, place in closed metal containers and remove daily from site.

3.8 PROTECTION OF COMPLETED WORK

A. Protect finished installation under provisions of Section 01 87 00.

B. Erect barriers and post warning signs. Maintain in place until coatings are fully dry.

C. Confirm that no dust generating activities will occur following application of coatings.

3.9 PATCHING

A. After completion of painting in any one room or area, repair surfaces damaged

by other trades.

B. Touch-up or re-finish as required to produce intended appearance.

3.10 FIELD QUALITY CONTROL

A. Field inspection and testing will be performed under provisions of Section 01 45 29.

B. The Owner reserves the right to invoke the following test procedure at any time and as often as the Owner deems necessary.

C. The Owner will engage the services of an independent testing agency to sample paint material being used.

D. Samples of material delivered to the Project will be taken, identified, sealed, and certified in the presence of the Contractor.

E. The testing agency will perform appropriate quantitive materials analysis and other characteristic testing of materials as required by the Owner.

F. If test results show materials being used and their installation do not comply with specified requirements or manufacturer's recommendations, the Contractor may be directed to stop painting, remove noncomplying paint, pay for testing and repaint surfaces to acceptable condition.

3.11 COLOR SCHEDULE

A. Paint and finish colors shall be custom color, mixed and formulated to meet color as specified by Architect.

B. Interior Colors: 10 interior paint colors to be selected and located by Architect.

C. Exterior Colors: 4 exterior paint colors to be selected and located by Architect.

D. Access doors, registers, exposed piping, electrical conduit and mechanical/electrical panels if not stainless steel; generally the same color as adjacent walls.

E. Exterior and interior steel doors, frames and trim; match adjacent existing door frames.

F. Doors: Match adjacent existing door paint or varnish.

G. Interior and Exterior Steel Fabrications, if not Stainless Steel: Match existing or adjacent walls.

3.12 SCHEDULE - EXTERIOR SURFACES

A. The following Dunn-Edwards (Kelly Moore in red) paint systems or Architect approved equal shall be used:

1. Wood-Painted (Flat Acrylic) - Exterior Trim and Exposed Wood Framing

1st coat: W708 EZ Prime KM 255 AcryShield wood Primer
2nd coat: W701V Evershield KM 1200 Premium professional 100% Acrylic Flat
3rd coat: W701V Evershield KM 1200 Premium professional 100% Acrylic Flat

2. Wood-Painted (Semi-Gloss Acrylic)

1st coat: W708 EZ Prime KM 255 AcryShield wood Primer
2nd coat: W901V Permasheen KM 1215 Premium Professional 100% Acrylic S/G
3rd coat: W901V Permasheen KM 1215 Premium Professional 100% Acrylic S/G

3. Wood-Painted (Gloss Alkyd)

1st coat: W708 EZ Prime KM 265 Water-Alkyd Professional Primer
2nd coat: W960V Permagloss KM 1980 Professional Waterborne Urethane Modified Alkyd Gloss
3rd coat: W960V Permagloss KM 1980 Professional Waterborne Urethane Modified Alkyd Gloss

4. Wood - Semi-Transparent

1st coat: WPT3 "OKON Weatherpro" Storm System 2

5. Concrete (Flat Acrylic) - Exposed concrete indicated on drawings to be painted

1st coat: W709 Eff-Stop KM 255 AcryShield Masonry Primer
2nd coat: W701V Evershield KM 1200 Premium Professional 100% Acrylic Flat
3rd coat: W701V Evershield KM 1200 Premium Professional 100% Acrylic Flat

6. Concrete Masonry Units (Flat Acrylic)

Fill coat: W305 Blocfil KM 521 Color Shield Prime and Fill
1st coat: W701V Evershield KM 1200 Premium professional 100% Acrylic Flat
2nd coat: W701V Evershield KM 1200 Premium professional 100% Acrylic Flat

7. Cement Plaster (Flat Elastomeric)

1st coat: Enduraseal W360 KM 98 Multi-Seal
2nd coat: Endurawall W370 KM 1128 Kel-Seal
3rd coat: Eudurawall W370 KM 1128 Kel-Seal

8. Steel-Primed or Unprimed (Flat Acrylic)

1st coat: 43-5 Corrobar Rust-Oleum CV740 Primer
2nd coat: W-701V Evershield KM 1200 Premium professional 100% Acrylic Flat
3rd coat: W-701V Evershield KM 1200 Premium professional 100% Acrylic Flat

9. Steel-Primed or Unprimed (Semi-Gloss Acrylic)

1st coat: 43-5 Corrobar Rust-Oleum CV740 Primer
2nd coat: W901V Permasheen KM 1215 Premium Professional 100% Acrylic S/G
3rd coat: W901V Permasheen KM 1215 Premium Professional 100% Acrylic S/G

10. Steel-Primed or Unprimed (Gloss-Alkyd)

1st coat: 43-5 Corrobar KM 265 Water-Alkyd Professional Primer
2nd coat: 10 Syn-Lustro KM 1980 Professional Waterborne Urethane Modified Alkyd Gloss
3rd coat: 10 Syn-Lustro KM 1980 Professional Waterborne Urethane Modified Alkyd Gloss

11. Steel-Galvanized (Flat Acrylic)

1st coat: GE 123 Galva Etch, Etching Liquid Krud Kutter Metal and Etch
2nd coat: 43-7 Galv-Alum KM 5725 DTM Primer
3rd coat: W701V Evershield KM 1200 Premium Professional 100% Acrylic Flat
4th coat W701V Evershield KM 1200 Premium Professional 100% Acrylic Flat

12. Steel-Galvanized (Semi-Gloss - Acrylic)

Prep: GE 123 Galva Etch, Etching Liquid Krud Kutter Metal and Etch
1st coat: 43-7 Galv-Alum KM 5725 DTM Primer
2nd coat: W901V Permasheen KM 1215 Premium Professional 100% Acrylic S/G
3rd coat W901V Permasheen KM 1215 Premium Professional 100% Acrylic S/G

13. Steel-Galvanized (Gloss - Alkyd)

Prep: GE 123 Galva Etch, Etching Liquid Krud Kutter Metal and Etch
1st coat: 43-7 Galv-Alum KM 5725 DTM Primer
2nd coat: 10 Syn-Lustro KM 1980 Professional Waterborne Urethane Modified Alkyd Gloss
3rd coat 10 Syn-Lustro KM 1980 Professional Waterborne Urethane Modified Alkyd Gloss

Pavement Marking –Refer to Section 32 12 16 & Section 32 13 13 KM 1272 Zone Marking

3.13 SCHEDULE - INTERIOR SURFACES

A. The following Dunn-Edwards paint systems or Architect approved equal shall be used:

1. Wood-Painted (Semi-Gloss Alkyd) - Wood Trim

1st coat: W707 Unikote KM 265 Water-Alkyd Professional Primer
2nd coat: W901V Permasheen KM 1930 Professional Waterborne Urethane Modified Alkyd S/G
3rd coat: W901V Permasheen KM 1980 KM Professional Waterborne Urethane Modified Alkyd S/G

2. Wood-Painted (Gloss Alkyd)

1st coat: W707 Unikote KM 265 Water-Alkyd Professional Primer
2nd coat: W960V Permagloss KM 1980 Professional Waterborne Urethane Modified Alkyd Gloss
3rd coat: W960V Permagloss KM 1980 Professional Waterborne Urethane Modified Alkyd Gloss

3. Glue-Laminated Wood and Wood Timber Members (Satin-Flat Varnish)

1st coat: V-QYB Series Stainseal Old Masters Master Armor
2nd coat: MC80-2025 McCloskey Old Masters Master Armor
3rd coat: MC80-0007 McCloskey Old Masters Master Armor

4. Wood - Transparent (Stain - Semi-Gloss Varnish)

1st coat: V-QYB Series Stainseal Old Masters Master Armor
Filler coat (Open grain wood only): Jasco Paste Wood Filler Old Masters Wood Filler
2nd coat: MC80-2025 McCloskey Old Masters Master Armor
3rd coat: MC80-6702 McCloskey Old Masters Master Armor

4th coat: MC80-6702 McCloskey N/A

5. Wood - Transparent (Stain-Semi-Gloss Lacquer)
1st coat: V-QYB Series Wood Stain Old Masters Wiping Stain
2nd coat: V-NRS1620 (Sanding Sealer) Old Masters Master Armor
3rd coat: V-NRF1626 LUSTER-LAC (Lacquer) Old Masters Master Armor
4th coat: V-NRF1626 LUSTER-LAC (Lacquer) Old Masters Master Armor

6. Concrete (Flat-Latex)
1st coat: W709 Eff-Stop KM 247 AcryShield Masonry Primer
2nd coat: W401V Decovel KM 1005 Premium Professional Flat
3rd coat: W401V Decovel KM 1005 Premium Professional Flat

7. Concrete (Semi Gloss Latex)
1st coat: W709 Eff-Stop KM 247 AcryShield Masonry Primer
2nd coat: W450V Decoglo KM 1050 Premium Professional S/G
3rd coat: W450V Decoglo KM 1050 Premium Professional S/G

8. Concrete Floors - Sealed (Low Sheen Epoxy Acrylic)
1st coat: Tuff Floor W-810 AllFlor 530XX
2nd coat: Tuff Floor W-810 AllFlor 530XX

9. Concrete Block (Flat-Latex)
1st coat: W305 Blocfil KM 521 Color Shield Prime and Fill
2nd coat: W401V Decovel KM 1005 Premium Professional Flat
3rd coat: W401V Decovel KM 1005 Premium Professional Flat

10. Concrete Block (Semi Gloss-Latex)
1st coat: W305 Blocfil KM 521 Color Shield Prime and Fill
2nd coat: W450V Decoglo KM 1050 Premium Professional S/G
3rd coat: W450V Decoglo KM 1050 Premium Professional S/G

11. Concrete Block (Semi Gloss-Epoxy)
1st coat: W305 Blockfiller Tru-Glaze WB 4015 Filler
2nd coat: 9100 Series RUST-OLEUM Tru-Glaze WB Epoxy 4426 S/G
3rd coat: 9100 Series RUST-OLEUM Tru-Glaze WB Epoxy 4426 S/G

12. Steel - Primed or Unprimed (Flat-Latex) - Exposed Duct Work
1st coat: 43-5 Corrobar (or Touch up) KM 5725 DTM Primer/Finish
2nd coat: W401V Decovel KM 5725 DTM Primer/Finish
3rd coat: W401V Decovel KM 5725 DTM Primer/Finish

13. Steel - Primed or Unprimed (Semi-Gloss-Alkyd) - Steel Doors/Frames
1st coat: 43-5 Corrobar (or touch up) KM 265 Water-Alkyd Professional Primer
2nd coat: 9 Syn-Lustro Semi-Gloss KM 1930 Professional Waterborne Urethane Modified Alkyd S/G
3rd coat: 9 Syn-Lustro Semi-Gloss KM 1930 Professional Waterborne Urethane Modified Alkyd S/G

14. Steel - Primed or Unprimed (Gloss-Alkyd)
1st coat: 43-5 Corrobar (or touch up) KM 265 Water-Alkyd Professional Primer
2nd coat: 10 Syn-Lustro Gloss KM 1980 Professional Waterborne Urethane Modified Alkyd Gloss
3rd coat: 10 Syn-Lustro Gloss KM 1980 Professional Waterborne Urethane Modified Alkyd Gloss

15. Steel - Galvanized (Flat-Latex) - Exposed Duct Work

1st coat: 43-7 Galv-Alum KM 5725 DTM Primer/Finish
2nd coat: W401V Decovel KM 5725 DTM Primer/Finish
3rd coat: W401V Decovel KM 5725 DTM Primer/Finish

16. Steel - Galvanized (Semi-Gloss - Alkyd) - Steel Handrails
1st coat: 43-7 Galv-Alum KM 5725 DTM Primer
2nd coat: 9 Syn-Lustro Semi-Gloss KM 1930 Professional Waterborne Urethane Modified Alkyd S/G
3rd coat: 9 Syn-Lustro Semi-Gloss KM 1930 Professional Waterborne Urethane Modified Alkyd S/G

17. Steel - Galvanized (Gloss - Alkyd)
1st coat: 43-7 Galv-Alum KM 5725 DTM Primer
2nd coat: 10 Syn-Lustro Gloss KM 1980 Professional Waterborne Urethane Modified Alkyd Gloss
3rd coat: 10 Syn-Lustro Gloss KM 1980 Professional Waterborne Urethane Modified Alkyd Gloss

18. Gypsum Board (Flat - Latex)
1st coat: W101V PVA KM 971 AcryPlex PVA/Sealer
2nd coat: W401V Decovel KM 1005 Premium Professional Flat
3rd coat: W401V Decovel KM 1005 Premium Professional Flat

19. Gypsum Board (Eggshell-Acrylic) - Gypsum Board Walls and Ceilings
1st coat: W101V PVA KM 971 AcryPlex PVA/Sealer
2nd coat: W440V Decosheen KM 1010 Premium Professional Eggshell
3rd coat: W440V Decosheen KM 1010 Premium Professional Eggshell

20. Gypsum Board (Semi-Gloss -Acrylic) - Kitchenette areas; all Interior Wood Trim
1st coat: W101V PVA KM 971 AcryPlex PVA/Sealer
2nd coat: W901V Permasheen KM 1685 Dura-Poxy S/G
3rd coat: W901V Permasheen KM 1685 Dura-Poxy S/G

21. Gypsum Board (Gloss -Acrylic)
1st coat: W101V PVA KM 971 AcryPlex PVA/Sealer
2nd coat: W960V Permagloss KM 1680 Dura-Poxy Gloss
3rd coat: W960V Permagloss KM 1680 Dura-Poxy Gloss

22. Gypsum Board (Gloss -Epoxy)
1st coat: W102 Proseal Tru-Glaze 4030 Epoxy Primer
2nd coat: 9100 Series RUSTOLEUM Tru-Glaze 4428 WB Epoxy Gloss
3rd coat: 9100 Series RUSTOLEUM Tru-Glaze 4428 WB Epoxy Gloss

23. Plaster (Flat-Latex)
1st coat: W709 Eff-Stop KM 247 AcryShield Primer
2nd coat: W401V Decovel KM 1005 Premium Professional Flat

24. Plaster (Eggshell-Acrylic)
1st coat: W709 Eff-Stop KM 247 AcryShield Primer
2nd coat: W440V Decosheen KM 1010 Premium Professional Eggshell
3rd coat: W440V Decosheen KM 1010 Premium Professional Eggshell

25. Plaster (Semi Gloss-Latex) - Wet Areas U.O.N.
1st coat: W709 Eff-Stop KM 247 AcryShield Primer
2nd coat: W450V Decoglo KM 1050 Premium Professional S/G
3rd coat: W450V Decoglo KM 1050 Premium Professional S/G

26. Plaster (Semi Gloss-Acrylic)
1st coat: W709 Eff-Stop KM 247 AcryShield Primer
2nd coat: W901V Permagloss KM 1685 Dura-Poxy S/G
3rd coat: W901V Permagloss KM 1685 Dura-Poxy S/G
27. Plaster (Gloss-Alkyd)
1st coat: W709 Eff-Stop KM 247 AcryShield Primer
2nd coat: W960V Permagloss KM 1680 Dura-Poxy Gloss
3rd coat: W960V Permagloss KM 1680 Dura-Poxy Gloss
28. Plaster (Gloss-Epoxy)
1st coat: 9100 Series RUSTOLEUM Tru-Glaze 4030 Epoxy Primer
2nd coat: 9100 Series RUSTOLEUM Tru-Glaze 4428 WB Epoxy Gloss
3rd coat: 9100 Series RUSTOLEUM Tru-Glaze 4428 WB Epoxy Gloss
29. Acoustic Panels (Flat Poly Vinyl Acetate)
1st coat: W615 AcoustiKote KM 485 Commercial
2nd coat: W615 AcoustiKote KM 485 Commercial

END OF SECTION

SECTION 09 97 23
Concrete Sealer

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. High-performance sealer for interior concrete slabs.

1.2 SYSTEM DESCRIPTION

A. Liquid-applied, proprietary penetrating treatment for concrete slab surfaces. System shall protect sealed areas against unsightly oil, chemical and grease stains, in addition to damage caused by moisture intrusion. Clear, water-repellant, non-membrane-forming.

1.3 SUBMITTALS

A. Submit under provisions of Section 01 33 00.

B. Product Data: Submit manufacturer's technical bulletins for each product.

C. Provide protection plan for surrounding areas and for surfaces not to be coated.

1.4 QUALITY ASSURANCE

A. Qualifications:

1. Manufacturer Qualifications: Company with a minimum of 15 years experience in manufacturing of specified products and systems.

2. Applicator Qualifications: Company with a minimum of 2 years experience in application of specified products and systems on projects of similar size and scope, which is acceptable to product manufacturer.

B. Field Sample:

1. Install field sample, as directed by Architect.

a. Provide mock-up of at least 100 square feet. To allow for evaluation of slip resistance and appearance.

b. Apply material in accordance with manufacturer's suggested application procedures.

2. Do not alter, move, or destroy field sample until Work is completed and

approved by Architect.

3. Obtain Architect's written approval of field sample before start of material application, including approval of aesthetics, color, texture, and appearance.

1.5 DELIVERY, STORAGE AND HANDLING

A. Comply with manufacturer's ordering instructions and lead-time requirements to avoid construction delays.

B. Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.

1.6 PROJECT CONDITIONS

A. Environmental Requirements:

1. Minimum application temperature shall be 40° and rising.

2. Do not apply in rain or when rain is expected within 24 hours. Do not apply above 90°F or below 40°F or when temperatures are expected to fall below 40°F within 24 hours.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. BASF Building Systems, telephone (800) 433-9517; "

B. Tamms Industries "Chemstop WB."

C. Substitutions: Under provisions of Section 01 62 00.

2.2 MATERIALS

A. Water-based, VOC-compliant, silane liquid.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that substrate, adjacent materials, are clean and dry and ready for installation.

3.2 SURFACE PREPARATION

A. Ensure substrates are sound and free of dust, dirt, laitance, paints, oils, grease, curing compounds, or any other contaminants.

B. Verify that no residue from curing compounds or membrane forming sealers is present on or within surface to be treated.

1. Test of penetrability by applying droplets of potable water and observing absorption. If water is not absorbed within 30 minutes, contamination is present and must be removed. Contact sealer manufacturer's technical service for recommendations.

C. Verify that substrate has properly cured. If efflorescence is present, mechanically remove it before proceeding. For extreme cases where this is not adequate, contact sealer manufacturer's technical service.

1. Concrete shall have minimum compressive strength of 3,000 lbs. per square foot and be cured for minimum of 28 days or to 80% of design strength.

3.3 APPLICATION

A. Apply line stripping prior to application of sealer.

B. Complete all surface repairs, and/or joint filling procedures prior to application of sealer. Allow appropriate cure time for repair materials and joint fillers.

C. Apply with spray equipment, (low pressure), manual or drum type, to match approved field sample mock-up.

D. Coverage rate will vary based on porosity of concrete; minimum 200 square feet per gallon, maximum 100 square feet per gallon. Use mock-up to determine coverage rate.

E. Allow minimum twenty four hours drying time before exposing slab to liquids.

3.4 CLEAN UP

A. Clean tools and equipment with warm water as soon as possible after using.

B. Remove spills and remove sealer from surfaces not required to receive sealer.

END OF SECTION

SECTION 10 22 26
Operable Partitions

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Manually operated, paired panel operable partitions.

B. Ceiling track and operating hardware.

C. Shop-applied vinyl surface finish.

1.2 REFERENCES

A. ASTM International

1. ASTM E557 Standard Practice for Architectural Application and Installation of Operable Partitions.

2. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.

3. ASTM E84 - Surface Burning Characteristics of Building Materials.

4. ASTM E413 - Classification for Rating Sound Insulation

B. Health Product Declaration Collaborative

1. Health Product Declaration Open Standard v2.1

C. International Standards Organization

1. ISO 14021 - Environmental Labels and Declarations - Self-Declared Environmental Claims (Type II Environmental Labeling).

2. ISO 14025:2011-10, Environmental Labels and Declarations - Type III Environmental Declarations - Principles and Procedures.

3. ISO 14040:2009-11, Environmental Management - Life Cycle Assessment - Principles and Framework.

4. ISO 14044:2006-10, Environmental Management - Life Cycle Assessment - Requirements and Guidelines.

5. ISO 21930 – Sustainability in Buildings and Civil Engineering Works — Core Rules for Environmental Product Declarations of Construction Products and Services.

D. Other Standards

1. ADA – Americans with Disabilities Act.

1.3 PERFORMANCE REQUIREMENTS

A. Sound Transmission Coefficient (STC): ASTM E90, STC of 52 or better, tested on panel size of 100 square feet.

B. Surface Burning of Vinyl Fabric Finish: ASTM E84; flame/smoke rating of 15/20.

C. Install partition system track capable of supporting imposed loads, with maximum deflection of 1/360 of span.

1.4 SUBMITTALS

A. Submit under provisions of Division 01

B. Product Data: Material descriptions, construction details, finishes, installation details, and operating instructions for each type of operable partition, component, and accessory specified.

C. Shop Drawings: Show location and extent of operable partitions. Include plans, elevations, sections, details, attachments to other construction, and accessories. Indicate dimensions, weights, conditions at openings, and at storage areas, and required installation, storage, and operating clearances. Indicate location and installation requirements for hardware and track, including floor tolerances required and direction of travel. Indicate blocking to be provided by others.

D. Setting Drawings: Show imbedded items and cutouts required in other work, including support beam punching template.

E. Samples: Color samples demonstrating full range of finishes available by Manufacturer as indicated. Verification samples will be available in same thickness, texture, and material indicated for the work

F. Reports: Provide a complete and unedited written sound test report indicating glass thickness and spacing in test specimen matches product as submitted.

G. Create spaces that are healthy for occupants.

1. Furnish products and materials with Health Product Declaration (HPD), Manufacturer Inventory, or other material health disclosure documentation. Products without an HPD or other disclosure documentation are not acceptable.

H. Furnish materials that generate the least amount of pollution.

1. Furnish products and materials that have third party verified environmental product declarations (EPD's). Consider products and materials that have optimized environmental performance (reduced life cycle impacts). Products without an EPD or other disclosure documentation are not acceptable.

I. Buy American: Operable partition to be manufactured in the United States in compliance with applicable U.S. Federal Trade Commission (FTC) and U.S. Customs Service and Border Protections regulations and be labeled "Made in America".

1.5 OPERATION AND MAINTENANCE DATA

A. Submit under provisions of Division 01

B. Include recommended cleaning methods, cleaning materials, and stain removal methods.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who is certified in writing by the operable partition manufacturer, as qualified to install the manufacturer's partition systems for work similar in material, design, and extent to that indicated for this Project.

B. Acoustical Performance: Test operable partitions in an independent acoustical laboratory in accordance with ASTM E90 test procedure and classified in accordance with ASTM E413 to attain no less than the STC rating specified. Provide a complete and unedited written test report by the testing laboratory upon request.

C. Preparation of the opening shall conform to the criteria set forth per ASTM E557 Standard Practice for Architectural Application and Installation of Operable Partitions.

D. The operable wall must be manufactured by a certified ISO-9001-2015 company or an equivalent quality control system.

1.7 FIELD MEASUREMENTS

A. Verify that field measurements are as shown on Shop Drawings.

1.8 WARRANTY

A. Provide written warranty by manufacturer of operable partitions agreeing to repair or replace any components with manufacturing defects.

B. Warranty period: Three (3) years.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Subject to compliance with requirements, provide products by the following:

1. Modernfold, Inc.

2. Substitutions: Under provisions of Division 01

B. Panels to be manufactured in the U.S.A.

C. Products: Subject to compliance with the requirements, provide the following product:

1. Basis of Design: Acousti-Seal Encore™ – Paired Panel: Manually operated paired panel operable partition.

2. Or approved equal.

2.2 OPERATION

A. Acousti-Seal Encore™ – Paired Panel: Series of paired flat panels hinged together in pairs, manually operated, top supported with operable floor seals and automatic top seals.

B. Final Closure:

1. Horizontally expanding panel edge with removable crank.

2.3 PANEL CONSTRUCTION

A. Nominal 4-1/4-inch (108 mm) thick panels in manufacturer's standard 51-inch (1295 mm) widths. All panel horizontal and vertical framing members fabricated from minimum 16-gage formed steel with overlapped and welded corners for rigidity. Top channel is reinforced to support suspension system components. Frame is designed so that full vertical edges of panels are of formed steel and provide concealed protection of the edges of the panel skin.

B. Panel Skin Options:

1. Roll-formed steel wrapping around panel edge. Panel skins shall be lock formed and welded directly to the frame for unitized construction. Acoustical ratings of panels with this construction:

a. 52 STC - 21-gage steel

C. Hinges for Panels, Pass Doors, and Pocket Doors shall be (select one):

1. Full leaf butt hinges, attached directly to panel frame with welded hinge anchor plates within panel to further support hinge mounting to frame. Lifetime warranty on hinges. Hinges mounted into panel edge or vertical astragal are not acceptable.

2. Concealed laminated hinge with antifriction segments mounted between each heat-treated link. Hinge to be attached directly to panel frame. Welded internal hinge bracket shall support the hinge and allow for adjustment of hinge plates. Concealed hinges mounted into panel edge or vertical astragal are not acceptable.

D. Panel Trim: No vertical or horizontal trim required or allowed on edges of panels; minimal groove appearance at panel joints.

E. Panel Weight:

1. Steel Skin:

a. 52 STC – 8.2 lbs./square foot

2.4 PANEL FINISHES

A. Panel face finish shall be:

1. Reinforced vinyl with woven backing weighing not less than 20 ounces (567 g) per lineal yard.

2. Reinforced heavy-duty vinyl with woven backing weighing not less than 30 ounces (850 g) per lineal yard.

3. Acoustical, non-woven needle punch carpet, with fused fibers to prevent unraveling or fray of material.

B. Panel trim: No exposed panel trim required or allowed; seals and hardware to be of one color.

1. Natural Choice

2.5 SOUND SEALS

A. Vertical Interlocking Sound Seals between panels: Roll-formed steel astragals, with tongue and groove configuration in each panel edge. Rigid plastic or aluminum astragals are not acceptable.

B. Horizontal Top Seals shall be Modernfold SureSet™ automatic operable top seals, manually operated operable top seals not required or permitted.

C. Horizontal Bottom Seals shall be Modernfold SureSet™ bottom seal:

1. SA2 - Automatic bottom seals providing nominal 2-inch (51 mm) operating clearance with an operating range of +1/2-inch (13 mm) to –1-1/2-inch (38 mm) which automatically drop as panels are positioned, without the need for tools or cranks. Extended seal shall exert nominal 120 pounds (54 kg) downward force to the floor throughout operating range.

2.6 SUSPENSION SYSTEM

A. #14 Suspension System

1. Suspension Tracks: Minimum 7-gage, 0.18-inch (4.57mm) roll-formed steel. Track shall be supported by adjustable steel hanger brackets connected to structural support pairs of 1/2-inch (13 mm) diameter threaded rods. Brackets must support the load bearing surface of the track.

a. Exposed track soffit: Steel, removable for service and maintenance, attached to track bracket without exposed fasteners, and pre-painted off-white.

2. Carriers: One all-steel trolley with steel-tired ball bearing wheels per panel (except hinged panels). Non-steel tires are not acceptable.

3. Warranty period: Twenty (20) years.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that field conditions are acceptable and are ready to receive Work.

B. Confirm track supports are laterally braced and will permit track to be level within 1/4 inch of required position and parallel to the floor surface.

C. Beginning of installation means Installer accepts existing conditions.

3.2 INSTALLATION

A. Install partition in accordance with approved Shop Drawings, manufacturer's instructions and ASTM E557.

B. Install operable partitions and accessories after other finishing operations, including painting have been completed.

C. Match operable partitions by installing panels from marked packages in numbered sequence indicated on Shop Drawings.

D. Broken, cracked, chipped, deformed or unmatched panels are not acceptable.

E. Fit and align partition assembly level and plumb.

3.3 ADJUSTING

A. Adjust partition assembly to provide smooth operation from folded to extended position.

B. Visually inspect partition in extended position for light leaks to identify a potential acoustic leak. Adjust to achieve light seal.

3.4 CLEANING

A. Clean Work under provisions of Division 01

B. Clean finish surfaces and partition accessories.

3.5 DEMONSTRATION

A. Demonstrate proper operation and maintenance procedures to Owner's representative.

B. Provide Operation and Maintenance Manual to Owner's representative.

END OF SECTION

SECTION 10 26 00
Wall and Corner Guards

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Resilient edge and corner guards and resilient bumper guards and associated accessory items.

1.2 SUBMITTALS

A. Submit under provisions of Section 01 33 00.

B. Product Data: Submit manufacturer's literature describing products.

C. Shop Drawings: Large scale showing layout, construction, mounting heights, profiles, and anchorage.

1.3 DELIVERY, STORAGE, AND HANDLING

A. Comply with requirements of Section 01 87 00.

B. Deliver, store, and handle packaged materials in original containers with seals unbroken and labels intact until time of use.

C. Unload materials carefully and store on clean concrete surface or raised platform in safe, dry area. Do not dump on ground. Materials should be stored flat.

1.4 PROJECT CONDITIONS

A. Schedule installation of items to occur after application of exposed finishes.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Construction Specialties CS Group, "Acrovyn", Orange, CA 92865 (800) 233.8493, (714) 921.6000; Contact- McQuarrie & Associates, Sharol McQuarrie (415) 495 4475.

B. Substitutions: Under provisions of Section 01 62 00.

2.2 MATERIALS

A. Corner Guards: Engineered PETG guards consisting of a continuous aluminum retainer with snap-on cover. Color matched end caps shall be provided for both partial and full height applications. Attachment hardware shall be appropriate

for wall construction.

1. Model SM-20N and SSM-20 Series - 90° and 135° surface mounted corner guard with 2" and 3" legs, 1" radius cover and aluminum retainer.

2. Fire Performance Characteristics: Flame spread, 25 or less; smoke developed, 450 or less.

3. Aluminum Retainer: Extruded aluminum, minimum strength and durability as specified in ASTM B221.

4. Corner Guard End Caps: High impact injection molded plastic closure caps. Provide to terminate ends of corner guards. Color shall match corner guards.

5. Color: As selected by Architect from manufacturer's full range of colors. See finish schedule.

B. Resilient Bumper Guard Accessories:

1. Model SCR-48 - 6" high surface mounted, 1-1/2" aluminum retainer.

2. High impact injection-molded plastic end caps and outside corners.

3. Fire Performance Characteristics: Flame spread, 25 or less; smoke developed, 450 or less.

4. Color: See finish schedule

C. Handrails: Surface mounted assembly consisting of a continuous extruded aluminum retainer with snap-on cover and integral shock absorbing cushions where indicated. Color-matched mounting brackets shall be spaced as indicated on installation instructions. Color-matched end caps and corners shall be attached to allow post installation adjustment. Attachment hardware shall be appropriate for wall construction.

a. Model P-OAA 6" high combination handrail/bumper guard configuration with patented quick-lock bracket.

b. Fire Performance Characteristics: Flame spread, 25 or less; smoke developed, 450 or less.

D. Wall Protection: Wall panels shall be manufactured of 0.040" thick rigid sheet.

a. Fire Performance Characteristics: Flame spread, 25 or less; smoke developed, 450 or less.

b. Color: See finish schedule

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas to receive items and verify following:

1. That dimensions are correct to receive items.

2. That adjacent or adjoining surfaces are clean, dry, reasonably smooth, and free from defects.

3. Absence of other conditions that will adversely affect installation.

B. Do not start Work until unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Coordinate as required with installation of exposed finishes and other related Work.

3.3 INSTALLATION

A. General Requirements: Install items in accordance with approved manufacturer's recommendation and approved Shop Drawings.

B. Resilient Corner Guards:

1. Attach retainer clips at 18" centers and closure caps at top and bottom of each guard; fasten through finish wall surface to studs.

2. Snap guards into place; ensure hairline joints at caps with gaps not greater than 1/16".

C. Resilient Bumper Guards:

1. Attach retainer clips with retainer cushion at 24" centers.

2. Attach end caps with concealed fasteners.

3. Snap guards into place: ensure hairline joints with end caps.

D. Install items plumb, true, rigid, and neatly trimmed out. Corner guards shall run from top of base to finished ceiling, unless otherwise indicated.

E. Protect dissimilar metals and materials from contact with each other or with other materials which cause corrosive action.

3.4 CLEANING AND PROTECTION

1. Comply with requirements of Section 01 74 00.

2. Protect Work from damage to surface, profile, and shape.

3. Completely remove protective items prior to final acceptance.

4. Replace damaged items.

END OF SECTION

SECTION 10 44 00
Fire Extinguishers and Cabinets

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Fire extinguishers.

B. Non-rated and fire-rated cabinets.

C. Accessories.

1.2 REFERENCES

A. ASTM E814 – Standard Test Method for Fire Tests of Penetration Firestop Systems.

B. NFPA 10 – Standard for Portable Fire Extinguishers.

C. Warnock Hersey - Fire Test and Certification.

1.3 QUALITY ASSURANCE

A. Conform to CFC Chapter 9 requirements for fire extinguishers.

1.4 SUBMITTALS

A. Submit under provisions of Section 01 33 00.

B. Shop Drawings: Include physical dimensions, operational features, color and finish, mounting and anchorage details, rough-in measurements, location, and details.

C. Submit manufacturer's installation instructions.

1.5 OPERATION AND MAINTENANCE DATA

A. Submit manufacturer's operation and maintenance data under provisions of Section 01 77 00.

B. Include test, refill or recharge schedules, procedures, and re-certification requirements.

1.6 ENVIRONMENTAL REQUIREMENTS

A. Do not install extinguishers when ambient temperatures may cause freezing.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Activar Construction Products Group, Inc., www.activarcpg.com,

B. Larsen's Mfg. Co., www.larsensmfg.com

C. Potter-Roemer, Inc., www.potterroemer.com

D. Strategic Technology Institute, www.sti-usa.com

E. Substitutions: Under provisions of Section 01 62 00.

2.2 EXTINGUISHERS

A. Dry Chemical Type: Equivalent to J.L. Industries "Cosmic" Model 5E, ANSI/UL299, ANSI/UL711 with valid certification tag attached.

2.3 CABINETS

A. Fully-Recessed Non-Rated Cabinets: Equivalent to Activar/J.L. Industries "Ambassador Series" Model No. 1815 with full glazed doors, clear acrylic glazing.

B. Semi-Recessed Non-Rated Cabinets: Equivalent to J.L. Industries "Ambassador Series" Model No. 1812 with full glazed doors, clear acrylic glazing.

C. Surface-Mounted Non-Rated Cabinets: Equivalent to J.L. Industries "Ambassador Series" Model No. with full glazed doors, clear acrylic glazing.

D. Fire-Rated Cabinets: Equivalent to J.L. Industries "Amassador Series" Model No., 1815 with full glazed doors, clear wire glass. Cabinet shall be fabricated according to ASTM E814 and shall be listed and labeled by Warnock-Hersey for one and two hour fire-rated wall systems.

2.4 FABRICATION

A. Form body of cabinet with tight inside corners and seams.

B. Fabricate body of fire-rated cabinet of double-wall construction filled with a 5/8" thick layer of protective fire barrier insulation.

C. Predrill holes for anchorage.

D. Form perimeter trim by welding, filling, and grinding smooth.

E. Hinge doors for 180° opening with continuous piano hinge. Provide nylon catch.

F. Glaze doors with resilient channel gasket glazing.

2.5 ACCESSORIES

A. Steel Cable Theft Device: Model STI 6200 as manufactured by STI Inc.

2.6 FINISHES

A. Extinguisher: Red enamel.

B. Cabinet, Trim and Door: Electrostatic white powder coat finish.

PART 3 - EXECUTION

3.1 INSPECTION

A. Verify that rough openings for cabinet are correctly sized and located.

B. Beginning of installation means acceptance of existing conditions.

3.2 INSTALLATION

A. Install cabinets plumb and level in wall openings.

B. Secure rigidly in place in accordance with manufacturer's instructions.

C. Install fire-rated cabinets in strict conformance with manufacturer's instructions and listing requirements of Warnock-Hersey.

D. Attach steel cable theft device to each extinguisher. Locate inside cabinet.

3.3 SCHEDULE

A. Provide fire-rated cabinets at all recessed locations in 1 or 2 hour fire-rated walls. See Drawings for locations and wall ratings. Provide recessed non-rated cabinets at all other non-rated wall locations.

B. Provide Activar/J.L. Industries "Cosmic" Model 5E at all locations unless noted otherwise.

C. Provide Activar/J.L. Industries "Cosmic" Model 5 at Kitchen where indicated, within 30'-0" of stove in the path of travel.

END OF SECTION

SECTION 26 00 00

Electrical Specifications

PART 1 - GENERAL

1.1 REQUIREMENTS

A. The requirements of Division 1 are a part of and apply to all work in this Section.

B. The intent of the drawings and specifications is to construct the tenant fitout in accordance with Title 24, California Code of Regulations (CCR). Should any conditions develop not covered by the contract documents wherein the finished work will not comply with said Title 24, California Code of Regulations, a change order proposal detailing and specifying the required work shall be submitted to and approved by the Authority Having Jurisdiction (AHJ) before start of any work.

1.2 DESCRIPTION

A. Provide all equipment and materials for a complete electrical system as described herein and as shown on the plans.

B. Provide the following electrical system upgrades:

1. Removal of existing electrical wiring systems in remodel areas.
2. Removal and replacement of the lighting systems and controls.
3. Installation of new electrical conduit, outlets, and wiring.
4. Installation of new data conduit, patch panels, outlets and wiring.
5. Installation of new audio visual system in the boardroom.
6. Addition to existing access system – new card readers.
7. Electrical connections for equipment.
8. Adjustment and cleaning.
9. Testing and start-up.

1.3 WORK INCLUDED

A. This Section describes the requirements for the electric work.

B. The drawings represent the graphic pictorial portions of the work. The work (meaning all materials, construction methods, and services necessary to complete the total construction project) shall be included in the contractor's bid. The work,

including dimensions, quality, and workmanship, shall be the responsibility of the contractor.

1.4 CODE COMPLIANCE

A. Perform all work in accordance with the following codes:

1. California Electrical Code (CEC) which adopts, with 2022 amendments, the National Fire Protection Association NFPA No. 70-2020, National Electrical Code (NEC), and the California Code of Regulations, Title 24 State Building Standards, Part 3, Basic Electrical Regulations.
2. California Building Code (CBC) which adopts, with 2022 amendments, the 2021 International Building Code (IBC) and the California Code of Regulations, Title 24, Part 2.
3. California Fire Code (CFC) which adopts, with 2022 amendments, the 2015 International Fire Code (IFC), and the California Code of Regulations Title 24, Part 9.
4. 2016 edition Title 19, California Code of Regulations, Public Safety, State Fire Marshal Regulations.
5. Occupational Safety and Health Act (OSHA).
6. State of California, Title 24, State Building Standards, Part 6, California Energy Code, 2022 edition.
7. All applicable state local codes and regulations

1.5 PERMITS, FEES AND INSPECTIONS

A. Obtain all permits which are required for the work.

B. Obtain approvals from Inspector of Record prior to final inspection by area inspector and observation by Owner's Representative.

C. Advise Engineer, one week prior to covering any work. This shall include backfilling underground conduit, patching or pouring slabs with embedded conduit, or applying skin to both sides of a wall or a hard ceiling.

1.6 STANDARDS

A. Comply with the current applicable standards of the listed agencies (e.g. Underwriters Laboratories, Inc. (UL)) for the electrical materials procured and installed. Ensure that the listing is applicable to the way the electrical material will be used. For example, if wire is solely UL listed as Machine Tool Wires and Cables per UL 1063 it shall not be used for wiring in a building.

B. Underwriters Laboratories, Inc. (UL): Provide a UL label or evidence of UL listing for all electrical material and equipment, unless the material is of a type for which a label or listing service is not provided.

C. National Electrical Manufacturer's Association (NEMA).

D. American National Standards Institute (ANSI).

E. American Society for Testing Materials (ASTM).

F. Insulated Power Cable Engineers Association.

G. Factory Mutual (FM) Requirements.

1.7 SUBMITTALS

A. Provide sufficient information to verify compliance with the contract documents for all material and equipment to be provided under this contract. This includes, but not limited to, the UL listing, manufacturer, model number, ratings (voltage, phase, ampacity, power consumption, short circuit interruption capacity, power, temperature, conductor temperature rating allowed to be terminated on equipment, etc.), structural support information (size, dimensions, weight, center of gravity), NEMA type, accessories, lay outs, installation requirements including clearances, features, usage, gauge, materials it is made from, wire range for terminations, photometrics, compliance statement with applicable codes and standards such as Title 24, California Energy Code, test reports, listings with California Fire Marshal, etc. The manufacturer shall provide documentation describing installation requirements, specifications, operation and maintenance instructions of proposed equipment or systems (e.g., equipment manuals). Submit manufacturer data, shop drawings, and Equipment Manuals for items listed below:

1. Manufacturers Data:
   a. Power Distribution Equipment (e.g., disconnects)
   b. Electrical Basic Materials (e.g., conduit, boxes, receptacles, fittings, supports, anchors, firestop material)
   c. Lighting Fixtures including LED Drivers and lamps.
   d. Lighting Control Equipment including proof that it complies with the requirements of Title 24 of the California Energy Code.
   e. Data cabling, patch panels, enclosures, jacks/outlets.
   f. Cabling, power supply, card readers.
   g. Audio Visual outlets and cabling.
2. Shop Drawings:
   a. Access System

b. Data System
c. Audio Visual System
d. Custom or Non-Stock Equipment.

3. Equipment Manuals for the following Systems or Equipment (Lighting Control System, Access System, Data System, Other)
   a. Furnish 1 electronic copy of Equipment Manual(s) to the Engineer prior to equipment/system purchase for review.
   b. Equipment Manuals shall include:
      1) Installation Instructions
      2) Operating instructions
      3) Maintenance instructions
      4) Wiring, Layout, Schematic and other pertinent drawings
      5) Specifications
      6) Spare parts list

1.8 MATERIALS AND SUBSTITUTIONS

A. Materials

1. All material and equipment shall be UL listed, labeled, or certified for intended use by a National Recognized Testing Laboratory (NRTL) as recognized by the U.S. Department of Labor, and OSHA, if such listing is available for that type of material or equipment. Material and equipment shall bear the listing sticker in an accessible location.
2. Provide new material of the quality specified and satisfactory to the Engineer.
3. Provide major equipment from a manufacturer who has, for a period of not less than five years, been a successful manufacturer of similar equipment to that specified. The manufacturer shall provide documentation describing installation requirements, specifications, operation and maintenance instructions of proposed equipment or systems (e.g., equipment manuals).
4. Provide major equipment from a manufacturer who has, for a period of not less than five years, been in the successful manufacture of similar equipment to that specified. The manufacturer shall provide documentation describing installation requirements, specifications, operation and maintenance instructions of proposed equipment or systems (e.g., equipment manuals).

B. Substitutions:

1. The equipment included in the Contract Documents is used to establish standards of quality, utility, and appearance. Equipment which in the opinion

of the Engineer is equal in quality, utility, and appearance will be approved as substitutions to that specified.

2. Products that are specified by manufacturer, trade name or catalog number establish a standard of quality and do not prohibit the use of equal products of other manufacturers provided they are approved by the Engineer prior to bidding.
3. Where items are noted as "or equal", a product of equal design, construction and performance will be considered.
4. Any item proposed as a substitute shall be accompanied by drawings and/or data giving sizes, capacities, all pertinent test data, catalog cut sheets, product information, and all other necessary information required to substantiate that the product is equal or exceeds that specified.
5. Substitutions shall be equal, in the opinion of the Engineer, to the specified equipment. The burden of proof of such shall rest with the Contractor. When the Engineer in writing accepts a substitution, it is with the understanding that the Contractor guaranteed the substituted equipment to be equal to the one specified and dimensioned to fit within the construction. Approved substitutions shall not relieve the Contractor of responsibilities for the proper execution of the work, or from any provisions of the Plans or Specifications.
6. Only one substitution will be considered for each product specified.
7. The Contractor shall be responsible for all expenses in connection with the substitution materials, process, and equipment, including the effect of his/her substitution on him/her, his/her subcontractor's or other Contractor's work. No substitution shall be permitted without written authorization of the Engineer. Any assumptions on the acceptability of a proposed substitution prior to acceptance by the Engineer are at the sole risk of the Contractor.

1.9 DRAWINGS AND SPECIFICATIONS

A. Data given herein and on the plans are as exact as could be practically secured, but their absolute accuracy is not guaranteed. Plans and specifications are for the assistance and guidance of the Contractor and exact locations, distances, levels, obstructions, existing conditions and other data will be governed by the structures.

B. Clarification of plans and specifications for the purpose of facilitating construction, but not involving additional labor and materials, may be prepared during construction by the Engineer. Said revised plans and specifications shall become a part of the contract. The Contractor shall conform to the revised plans and specifications at no additional cost to the Owner.

C. Layouts of equipment, accessories, and wiring systems are diagrammatic but shall be followed as closely as possible. Examine architectural, structural, mechanical and other drawings, noting all conditions that may affect this work. Report conflicting conditions to the Engineer for adjustment before proceeding with the work. Should the Contractor proceed with work without proper authorization or without reporting the matter, he does so, at his own risk. If the Engineer determines that corrections are needed because of the contractor's actions, they shall be made as directed by the Engineer at the Contractor's expense.

D. The right is reserved to make minor changes in locations of equipment and wiring systems shown, providing the change is ordered before conduit runs and/or work directly connected to same is installed and no extra materials are required.

1.10 SUPERVISION

A. Provide adequate and competent supervision. Maintain complete control of the project execution and complete liability for the materials and work until the project is completed and accepted by the Owner. Provide the project supervisor's name and project telephone number to the Engineer prior to starting work.

1.11 MANUFACTURER'S INSTRUCTION

A. Follow the manufacturer's instructions when specific installation or connection details are not indicated or specified on the contract documents.

B. Notify the Engineer of conflicts between the manufacturer's instructions and installation or connection details prior to the installation of materials.

1.12 WORKMANSHIP

A. Firmly and permanently secure in place all electrical equipment to the structure so that it is level, plumb, true with the structure and other equipment, and installed such that it will resist seismic movement. Perform all installations in accordance applicable codes, standards (e.g., UL standards), manufacturer's instructions, drawings and specifications and with the methods recommended by the National Electrical Contractors' Standard of Installation. Notify the Engineer of any conflicts between the drawings and specifications and the above prior to the installation of materials.

B. Cause as little interference or interruption of existing utilities and services as possible. Schedule any power or other utility shutdown with the construction coordinator. Shutdowns which may be required shall be presented to the Owner's Representative for approval two weeks prior to commencement of work. Shutdown work shall be performed on overtime hours if so directed by the Owner.

C. All UL listed, NRTL, or other listed equipment shall be installed as per listing or labeling (i.e., maximum fuse size means fuse protection required).

1.13 RECORD DRAWINGS

A. The contractor shall maintain at the job site office an up to date as-built drawing set showing actual installation of electrical systems and equipment. This set shall contain approved changes and shall be kept clean, up to date and in good condition.

B. Use this set of drawings for no other purpose.

C. Where any material, equipment, or system components are installed differently from that shown, indicate differences clearly and neatly using ink or indelible pencil.

D. At project completion, submit record set of full size drawings and four copies all marked to show final as-built conditions. These shall be turned over to the Owner's Representative upon completion.

1.14 PROTECTION

A. Protect all equipment and materials required for the performance of this work from damage by the elements, vandalism, or theft during construction.

B. Do not subject the work and materials of other trades to damage during execution of the work in this division of the specifications.

C. Before any cutting, burning, heating or other work that will emit smoke, dust or other products of combustion that may set off the fire alarm system, the contractor shall request a fire alarm system shutdown from the project Inspector and/or Owner's Representative. This request shall be made at least three days prior to the date the shutdown is required. If the contractor ignores this requirement and triggers the fire alarm system, the contractor(s) shall be responsible for all false alarm charges from the fire department. The prime contractor shall be responsible for instructing all contractors of this requirement before they are permitted on the job site. If the job site has a portable fire alarm system installed for the construction period the contractor shall be responsible for turning the system on and off each working day.

1.15 COORDINATION WITH OTHER TRADES

A. Coordinate with other trades and promptly transmit all information required by them. Coordinate the sequence of construction with other trades to ensure that all work proceeds with a minimum of interference and delay.

1.16 EXAMINATION OF SITE

A. Examine the site prior to bid to determine existing site conditions, which may affect the work. No allowance will be allowed for any extra work required due to a failure to recognize or negligence to discover conditions prior to bid.

1.17 IDENTIFICATION

A. Install nameplates on electrical equipment including:

1. Circuit breakers, disconnect switches and starters whether provided under this Division or some other.
2. Lighting control panels.
3. Light switches for which the control functions are not evident.
4. Audio Visual outlets.
5. Where it is not obvious which piece of equipment is powered from a particular disconnect switch, provide nameplates for both disconnect switch and the powered equipment.

B. Describe item, control function or sequence of operation on each nameplate.

C. Fabricate nameplates of laminated phenolic plastic, black front and back with white core. Bevel edges. Engrave through outer layer to produce white letters and numerals. For control pilot devices, engraved metallic plates, filled with enamel, are acceptable. Fasten nameplates to equipment with no. 4 Phillips, round head, cadmium steel, self tapping screws. Use 1/8-inch letters on circuit breakers, switches and other control devices, and 1/4-inch letters on panelboards, switchboards and other major electrical equipment.

1. Equipment identification is to indicate the following:
   a. Equipment ID abbreviation.
   b. Voltage, phase and wires.
   c. Normal or other system.
   d. Power source.
2. Provide Brother P-Touch labels on receptacles, light switches and junction boxes to indicate the following:
   a. Power system branch
   b. Panel ID
   c. Circuit numbers

Example:

"Panel LA-6"

3. Provide Brothers P-Touch labels with black on clear labeling tape in all electrical and signal junction boxes covers above ceilings in all systems. (i.e., electrical circuit and voltage; data; intercom; clock system).

1.18 TESTS

A. Take precaution during the testing period to ensure the safety of personnel and equipment.

B. Component Tests:

1. Grounding systems, for resistance to earth. Provide additional grounding electrodes, if separately derived system ground resistance exceeds 5 ohms.
2. Lighting circuits, for resistance to ground.
3. Power feeders, for resistance to ground.
4. Check the phase rotation. Verify it is consistent with the facility. Verify it is per the manufacturer's requirements (e.g., some uninterruptible power systems require ABC phase rotation) Verify it is the direction required for the proper machine rotational direction. Notify the Engineer of inconsistencies.
5. Check voltages ensuring that they are within specification for all equipment supplied as part of the scope of work.
6. Check circuit breakers for loose connections and proper operation. Adjust trip settings as required by Engineer.
7. Prior to energizing equipment, check the insulation resistance of feeders sized larger than #2 AWG with a 1000 volt dc "Megger". Minimum insulation resistance values shall not be less than 50 mega ohms.

C. Functional Tests:

1. Perform all tests suggested by the equipment manufacturers.
2. Verify that everything installed as part of the scope of work functions properly. Verify that any work performed did not adversely affect existing systems or equipment (e.g., that after removing a device from a branch circuit that the remaining existing branch circuit continuity was maintained).

1.19 DEMONSTRATIONS

A. After testing and final inspection, demonstrate the proper operation of all equipment and systems installed as part of the scope of work to the Engineer and Owner.

B. Arrange a date for this demonstration with Owner.

C. Instruct Owner's personnel in operation, adjustment and maintenance of equipment and systems.

1.20 GUARANTEE

A. Guarantee the electrical work against defects in work or materials for one year after filing of Notice of Completion.

B. Undertake repairs within 24 hours after notice from the Owner.

C. If the operation of the electrical system fails to conform to Division 26 requirements or approved submittals, the Owner may operate the electrical system without liability to Owner. Repair or replace defective or unsatisfactory equipment or systems.

PART 2 - PRODUCTS

2.1 RACEWAYS

A. Rigid Steel Conduit:

1. ANSI C80.1, minimum size 3/4 inch.
2. Threaded fittings, galvanized.
3. Locknuts, 3/4 inch to 1-1/2 inch, heavy nut steel.
4. Locknuts, 1-1/2 inch and larger, malleable iron.
5. Insulated bushings, malleable iron with plastic or nylon insert, OZ IBC threaded series, Raco 113x and 112x series, Appleton "GIB" series or equal.
6. Three piece conduit couplings, malleable iron, T & B Erickson, Appleton EC series, OZ 4 series, or equal.

B. Electrical Metallic Tubing (EMT):

1. Rolled steel ANSI C80.3.
2. Fittings, rain tight compression gland, steel, plated with zinc or cadmium for wet locations and set-screw steel for dry locations.
   a. Couplings:
      1) Compression type: OZ 6050S series, Raco 291x and 296x series, Appleton 6000SR series, or equal. (No Compression type for Kaiser)
      2) Set-screw type: OZ 5050S series, Raco 202x and 215x series, Appleton 5000S series, or equal.
   b. Connectors, insulated throat:

1) Compression type: OZ 7050ST series, Raco 291x and 296x series, Appleton 7000SRT series, or equal. (No Compression type for Kaiser)
2) Set-screw type: OZ 4050ST series, Raco 212x and 216x series, Appleton 4000ST series, or equal.

c. Adapter, EMT to rigid steel, zinc or cadmium plated malleable iron, OZ, T & B, Efcor, or equal.

3. Maximum size, 2 inch, except for Telecommunications, 4 inch.

C. Flexible Metal Conduit:

1. Fabricate from galvanized steel strip, minimum size 1/2 inch.
2. Connectors, T & B "Tite Bite", with insulated throat, or equal.
3. Length, no greater than 18 inches except connections to light fixtures in suspended ceilings or conduit fished into existing walls may be a maximum of 6 feet. Allow slack for movement of connected equipment. Support as required.

D. Liquid-tight Flexible Metal Conduit:

1. Fabricate from galvanized steel strip, jacketed with PVC, minimum size 1/2 inch.
2. Straight connectors, cadmium plated steel or malleable iron, insulated throat and neoprene sealing ring, OZ "4Q T" series, T & B "5330" series, Raco 351x and 252x series, or equal.
3. Angle connectors, cadmium plated steel or malleable iron, insulated throat and neoprene sealing ring, OZ, T & B, Raco, or equal, comparable to straight connectors.
4. Hardware, cadmium plated steel.
5. Length, no greater than 18 inches. Allow slack for movement of connected equipment.

2.2 SUPPORTING DEVICES

A. Conduit Supports:

1. Wet locations:
   a. One hole galvanized malleable iron strap with galvanized malleable or cast iron clamp back, OZ/Gedney Type 14-G.
2. Dry locations:
   a. Galvanized steel straps, OZ/Gedney Type 5-S and 14-S, T & B, Appleton equivalent, or equal.

3. Plumbers perforated strap is not acceptable.
4. Hanger Rod, 3/8 inch, minimum galvanized all thread rod. (Slick rods not allowed).

B. Conduit Racks:
1. Framing Channel, steel, Kindorf, Unistrut, B-Line, or equal.
2. Channel and hardware shall be hot-dip or electro-galvanized, except that channel used indoors in dry locations may be painted.
3. Channels attached to building or structure surfaces, 14 gauge, 1-5/8 inch wide by 13/16 inch deep. Other channels, 12 gauge minimum, 1-5/8 inches wide by 1-5/8 inches deep, minimum.
4. Construct racks to limit deflection to 1/360 of span.
5. Load on trapeze, rod type hangers, concrete inserts and beam clamps, not to exceed 700 pounds per hanger. Provide rigid frames if load exceeds 700 pounds per hanger.

C. Anchor Methods:
1. Hollow masonry, toggle bolts or spider type expansion anchors.
2. Solid masonry, malleable iron expansion anchors or preset inserts.
3. Metal surfaces, machine screws, bolts or welded studs.
4. Wood surfaces, wood screws, lag bolts.
5. Concrete surfaces, self-drilling anchors or powder driven studs.
6. Raceway and fixtures shall not be supported solely from gypsum board ceilings.

D. Distribution Pathways to Individual Data Outlets:
1. Provide one "shared" system of J-hook-supports above corridor ceilings (or other equally accessible areas) for installation of cabling.
2. The shared J-hook supports will consist of Stiffy Comfort Cradle supports for cabling and for other low voltage building system support.
3. Where this document refers to J-hooks for the support of cabling, they are defined as supports for Category 6 copper, fiber optic, innerduct, and low-voltage cabling. This type of support enforces the practice of "placing" rather than "pulling" cables. See below for acceptable construction engineered attachment solutions ("Stiffy Comfort Cradle" series):
   a. Main runs: 3-1/2" in size Stiffy Comfort Cradle for multi-hook assembly, in a all threaded rod support, see details on construction documents,
   b. Single run: 1" minimum in size Stiffy Comfort Cradle.

c. Color blue for I.T. cable, white for security, yellow for other low voltage.

4. Single run (individual) branch cables will be supported by cable installers using existing supports or support with new single cable supports, hung from #12 cables anchored by shot pin clips from metal deck. Provide supports at 5 feet-0 inches maximum intervals from the point it leaves the main cable runs to the conduit stub. Provide individual cable supports as manufactured by construction engineered attachment solutions ("Stiffy Comfort Cradle" series), wide base cable supports.
5. Attach main J-hook supports securely to wood/metal studs or structural wood/metal deck above by 3/8" all threaded rods, slip rods not allowed. Install rods firmly and securely to structure or deck. Spring only, swivel mounting, or pressure only clamps not allowed.
6. Space j-hook supports 4 feet-0 inches on center if hung from structural deck above.
7. Provide a clearance around J-hook cable path with a minimum radius of 18 inches.
8. Provide sleeves through rated walls. EZ Path (4 inches x 4 inches x 14 inches long) color blue for it cable, white for security, yellow for other low voltage, and orange for fire alarm. Provide color EZ Paths as manufactured by STI. Sleeves shall be placed higher than 8'-0" above finished floor. Install per manufacturer's instructions and UL details. Refer to plan for location, quantities, and size. Obtain approval of Kaiser IT for exact location. Install and align EZ Paths with main J-hooks, and align with ladder rack layout in telecommunication rooms.
9. Route main J-hook paths so that no outlet is more than 30 feet horizontally from a J-hook support. Wherever possible, route J-hooks parallel or perpendicular to interior partition lines.
10. Where the routing path must cross inaccessible ceilings, provide conduit to accommodate the equivalent number of cables. Where inaccessible ceilings exist and installation of main J-hooks and EZ-Paths are not feasible, provide equal number of 4" conduit sleeve to match number of J-hooks on run. Provide insulated bushings at both ends of conduit. Provide (2) nylon pull ropes in each, and tie at both ends. Label both ends to indicate ending point. Do not exceed 180 degrees total bends. Provide large radius bends, 10 times the radius of conduit, or sweeps. Terminate perpendicular to walls or structure.
11. In areas where no ceiling exists, stub conduit to accessible ceiling area, or homerun to telecommunications room. Exposed cable is not allowed in these areas where exposed to physical damage, dirt, grease, fumes or chemicals.

12. In new construction or in areas where wall finishes must be removed for other reasons, or in areas with gypsum board ceilings, provide 4 inch square, deep box, two-gang ring, and 1 inch conduit stubbed out to the closest accessible ceiling space.

13. For the addition or relocation of outlets in existing construction where wall finishes will not be removed, provide "ring and string" consisting of two-gang ring and a pull string from the outlet, up through the wall and top track and into the accessible ceiling space. Provide a grommet at the top track penetration to protect the cable pull. In fire rated walls provide an enclosed "remodel" outlet box in addition to the ring noted above. In walls containing thermal or acoustical insulation, do not allow the installation of the pull string to displace the insulation.

14. Bundle and tag the cabling for each system with 3/4" Velcro plenum rated straps. Nylon Zip ties are not allowed for bundling purposes.

2.3 OUTLET, PULL, AND JUNCTION BOXES

A. Construction: Deep drawn or fabricated interlocked flat pieces with welded tabs, electrogalvanized sheet steel with electrogalvanized hardware. Do not use sectional or gangable boxes.

B. Size: To accommodate the required number and sizes of conduits, wires, splices and devices but not smaller than the size indicated or specified.

C. Plaster Ring: Provide flush with wall or ceiling finish, except where otherwise indicated or specified.

D. Device Boxes: For single switches and receptacles, provide boxes not less than 4 inches square by 1-1/2 inches deep. For 2 devices, provide boxes not less than 4-11/16 inches square by 1-1/2 inches deep.

E. Telecommunications Boxes: No less than 4-11/16 inches square by 2-1/8 inches deep.

F. Special Mounting: In cabinets, tile, concrete block, brick, stone, wood or similar material, provide rectangular boxes with square corners and straight sides. For single devices, provide boxes 4 inches high by 2-1/2 inches wide by 3-3/8 inches deep. For 2 or more devices, provide multi-gang, non-sectional box with tile or masonry ring.

G. Lighting Fixtures: 4 inches octagon by 2-1/8 inches deep, minimum. Fit boxes for surface or pendant mounted fixtures with 3/8 inch malleable iron fixture stud.

H. Cast Metal (Wet or damp locations):

1. Box: Malleable iron.
2. Cover: Gasketed, weatherproof, malleable iron, with stainless steel screws.
3. Hubs: Threaded.
4. Lugs (Cast Mounting) Manufacturers:
   a. Crouse-Hinds; Type FS or FD.
   b. Appleton; Type FS or FD.
   c. Or equal.
   d. FS or FD.
   e. Or equal.

2.4 PULL AND JUNCTION BOXES OVER 300 CUBIC INCHES

A. General: For all pull and junction boxes over 300 cubic inches, provide code gauge, sheet steel boxes which meet NEMA 1 standards for panelboard and terminal cabinet box construction, with screw type covers.

B. Ground Lug: Weld, before finish is applied, a grounding pad drilled for two bolted grounding lugs or two ground studs on the box interior.

C. Finish: Apply rust inhibiting prime coat and 2 coats of baked enamel, standard factory grey.

D. Hardware: Cadmium plated steel screws.

2.5 WIRE AND CABLE

A. Conductor: Insulated copper, individual conductors, 98 percent conductivity.
   1. Power conductors, #12 AWG, minimum to 750 MCM, stranded.
   2. Control conductors #14 AWG, minimum to #10 AWG, stranded.

B. Insulation:
   1. Rated 600 volts and 90 degree Celsius as follows:

Item	Size (AWG)	Insulation Type
Above Grade	#14 to #4/0	THWN-2 (Okonite for #12-10, or Equal

Item	Size (AWG)	Insulation Type
Below Grade (any portion of run)	All sizes	XHHW-2
Fixture Taps (dry & damp	#12	THHN

2.6 WIRE CONNECTIONS

A. Connect wire to binding post screw, stud, bolt or bus as follows:

1. #10 AWG and smaller conductors, compression type, nylon, self insulated grip spade lugs, T & B "Sta Kon", 3M Scotchlock MNG, Panduit "Pan Term", or equal.
2. #8 AWG to #750 MCM copper conductors, solderless copper lug type connectors, with hex head or allen type compression set screws with configuration to suit application, T & B "Locktite", Burndy "QA", OZ Type "XL" or "XLH", or equal. Use two screw lugs for wire #4/0 and larger.

B. Splice wire as follows:

1. #10 AWG and smaller conductors, twist on solderless, insulated spring connectors, 3M "Scotchloks", T & B "Piggys" or equal..

C. Size, install and tighten wire terminal and splice connectors in accordance with manufacturer's recommendations.

2.7 TAPE

A. Wire Splices: Vinyl plastic electrical tape, 8.5 mil and 4.0 mil, Scotch 33.

B. Conduit Wrapping: 10 mil vinyl wrapping tape, Minnesota Mining and Manufacturing Company (3M) Scotchwrap 50, Plymoth 4611, or equal.

2.8 WIRING ACCESSORIES

A. Identify conductors with self-adhesive vinyl cloth markers, sized to fit the conductor insulation, with machine printed black marking, W.H. Brady, Thomas and Betts, or equal.

B. Wire Ties:

1. Nylon, adjustable, and self-locking.

2.9 WIRING DEVICES

A. Provide UL listed, specification grade, wiring devices for the voltage and current ratings specified. Devices shall be UL listed as Fed. Spec. compliant and bear the UL Fed. Spec. logo, with means for back and side wiring, color selected by the Owner Representative or color to match existing area. Provide grounding type receptacles unless otherwise noted. In existing facilities, match the colors and/or other means of identifying the existing wiring devices in the area or in the facility.

B. Identify each device with panelboard and circuit number. i.e., "A-15" indicated panel "A" circuit breaker "15". Provide clear P-Touch labels with black lettering for indoor wiring devices. Phenolic laminated engraved labels for all outdoors installations.

Provide 120 volt decora style duplex receptacles which meet Federal Specification W-C-596 as listed and bear the UL Fed. Spec logo.

	HUBBELL	PASS & SEYMOUR	LEVITON
NEMA 5-20R w/USB A and USB C	USB20AC	TR20USBAC6	T5833
NEMA 5-20R duplex	DR20	26352	TDR20-01
NEMA 5-20R duplex GFCI	GFTRST20	2097T	GFPL1
NEMA L5-20R twist lock	HBL2310	L520-R	2310
NEMA L6-30R twist lock	HBL2620	L630-R	2620

C. Provide receptacles other than 120 volt duplex, and duplex w/USB-A and USB-C port, as indicated.

D. Listed manufacturers establish a standard of quality. Substitutions will be considered in accordance with this specification.

E. Wall Plates: Nylon, single or multiple gang.

2.10 DISCONNECT SWITCHES, FUSED AND NON-FUSED

A. Where indicated, provide horsepower rated disconnect switches, pad-lockable in the open position. The current rating of non-fused switches shall be greater than or

equal to the overcurrent protection upsteam of the switch. The horsepower rating shall be determined in accordance with the CEC.

B. Three Phase Switches:

1. Fused or non fused, as indicated, 600 VAC, heavy duty type safety switches, mounted in NEMA 1 general purpose enclosures in dry locations and NEMA 3R rain-tight enclosures in damp or wet locations, Cutler Hammer "DH", General Electric "TH", Square D "3110" or equal.
2. Clearly indicate on the switch enclosure the "on" and "off" positions.
3. Mechanisms, quick make, quick break. 100% load make and load break rated.
4. Door interlock, defeatable to facilitate access into the switch enclosure with the switch in the closed position.
5. Equip fusible switches with Class R fuse rejection clips.

C. Single Phase Switches: [for 208-volt single phase equipment only]

1. Fused or non fused, as indicated, 250 VAC, general duty type safety switches, mounted in NEMA 1 general purpose enclosures in dry locations and NEMA 3R rain-tight enclosures in damp or wet locations, Cutler Hammer "DG", General Electric "Spec-Setter TG", Square D "Class 3130" or equal.
2. Clearly indicate on the switch enclosure the "on" and "off" positions.
3. Mechanisms, quick make, quick break.
4. Door interlock, defeatable to facilitate access into the switch enclosure with the switch in the closed position.
5. Equip fusible switches with Class R fuse rejection clips.

2.11 FUSES

A. General: Provide UL Class L or Class RK-1 current limiting, time delay, fuses where indicated, rated to 200,000 amperes symmetrical interrupting capacity.

B. Class L Fuses: Over 600 A, Ferraz-Shawmut "A4BY", or equal.

C. Class RK1 Fuses: Up to 600 A. Ferraz-Shawmut A2D or A6D depending on voltage, or equal.

2.12 CIRCUIT BREAKERS

A. Provide bolted-type thermal magnetic, molded case, with inverse time current overload, and instantaneous magnetic trips, trip-free and trip-indicating all poles

of multi-pole device shall operate simultaneously during open, close and trip operations. Provide circuit breakers indicated with voltage and interrupting capacity not less than existing.

2.13 LIGHTING FIXTURE - LED LUMINAIRES:

A. General: Provide fixtures as indicated, factory wired, ready for field connection

B. Provide recessed fixtures with complete mounting hardware and trims to suit the type of ceiling in which they are installed. Provide access to drivers and lighting source in recessed fixtures through the lensed door or fixture opening, without requiring removal of fixture.

C. Components: UL 8750 recognized or listed as applicable.

D. Tested in accordance with IES LM-79 and IES LM-80.

E. LED Estimated Useful Life: Minimum of 50,000 hours at 70 percent lumen maintenance, calculated based on IES LM-80 test data.

F. 75CRI minimum outdoor lighting, 90 CRI minimum indoor.

G. Kelvin temperature as specified.

2.14 EMERGENCY LIGHTING UNITS

A. Description: Emergency lighting units complying with NFPA 101 and all applicable state and local codes and listed and labeled as complying with UL 924.

B. Shall be designated LED luminaires used for general lighting during normal power presence.

C. Operation: Upon interruption of normal power source or brownout condition exceeding 20 percent voltage drop from nominal, solid-state control automatically switches designated emergency luminaire to integral battery power for minimum of 90 minutes of rated emergency illumination, and automatically recharges battery upon restoration of normal power source.

D. Battery:

1. Size battery to supply all connected lamps, including emergency remote heads where indicated.

E. Diagnostics: Provide power status indicator light and accessible integral test switch to manually activate emergency operation.

F. Provide low-voltage disconnect to prevent battery damage from deep discharge.

G. Self-Diagnostics: Provide units that self-monitor functionality and automatically perform testing required by NFPA 101 where indicated; provide indicator light(s) to report test and diagnostic status.

2.15 EXIT SIGNS

A. Description: Internally illuminated exit signs with LEDs unless otherwise indicated; complying with NFPA 101 and all applicable state and local codes, and listed and labeled as complying with UL 924.

1. Number of Faces: Single or double as indicated or as required for the installed location.

2. Directional Arrows: As indicated or as required for the installed location.

B. Self-Powered Exit Signs:

1. Operation: Upon interruption of normal power source or brownout condition exceeding 20 percent voltage drop from nominal, solid-state control automatically switches connected lamps to integral battery power for minimum of 90 minutes of rated emergency illumination, and automatically recharges battery upon restoration of normal power source.

2. Battery: Sealed maintenance-free nickel cadmium unless otherwise indicated.

3. Diagnostics: Provide power status indicator light and accessible integral test switch to manually activate emergency operation.

4. Self-Diagnostics: Provide units that self-monitor functionality and automatically perform testing required by NFPA 101 where indicated; provide indicator light(s) to report test and diagnostic status.

2.16 LIGHTING CONTROL DEVICES

A. Lighting control devices are existing.

PART 3 - EXECUTION

3.1 RACEWAY SYSTEMS

A. Install all wiring in raceways. Install raceway systems, including conduits, hangers and support channels parallel or perpendicular to structural members. Coordinate location of raceway systems with other Divisions prior to commencing installation.

B. Rigid Steel Conduit: Suitable for use in all locations. For underground installations tape wrap conduit completely with tape suitable for underground installations, double lap of Calpico 10 mil or equal.

C. Electrical Metallic Tubing: Suitable for use in concealed dry locations, not in concrete, masonry, or underground, or suitable exposed, minimum 8 feet above finished floor. Use 4-inch conduit sleeves to penetrate technology equipment room floors vertically projecting 6 inches above finished floor without a bend. Provide insulated bushings at both ends of conduit.

D. Flexible Metal Conduit: Suitable for connection of recessed lighting fixtures or other devices requiring flexible connections in dry locations.

E. Flexible Metal Conduit may be fished into existing walls as allowed by the CEC. Length shall not exceed 6'-0".

F. Liquid Tight Flexible Metal Conduit: Suitable for connection of equipment in damp or wet locations.

G. Clean and mandrel all under floor raceways before wire is installed.

H. Conduit Supports:

1. Support all conduits at intervals not to exceed 10 feet.
2. Support individual conduits with conduit hangers or clamp back and nest back, if required for entrance into the equipment.
3. Support multiple conduits, 2 or more in parallel, with framing channel and pipe clamps.
4. Spring steel fasteners may be used to fasten electrical metallic tubing to individual all threaded rod, not hanger wires, specifically used for hanging up to 1" conduit, nothing else.
5. Support all electrical equipment located in the ceiling space in accordance with CBC. Sections 1613A, and 1614A. Firmly attach items weighing less than 20 pounds to main cross runners. Two 12-gauge support wires to the ceiling system hangers or structure shall be included for items from 20 and 56 pounds. Directly support items over 56 pounds from the structure above with approved hangers.
6. Fire stop penetrations of conduits and sleeves, in walls requiring protected openings. Provide fire stop material which is a tested assembly approved by the California State Fire Marshal.
7. Cut ends of framing channel installed outdoors or in wet locations shall be painted with zinc rich paint.

I. Conduit Bends:

1. Electrical conduits: Provide no more than (3) 90 degree conduit bends or the equivalent number of smaller radius bends in any conduit run between boxes or equipment.
2. Telecommunications conduits: provide no more than (2) 90 degree bends or the equivalent number of smaller radius bend in any conduit run between boxes or stub, with radius 10 times the diameter of the conduit.
3. Length of run: 400 feet maximum, less 100 feet for each equivalent 90 degree bend.
4. Fabricate bends and offsets with a hickey or conduit bender designed specifically for use with the type of conduit to be bent, or use factory made bend.

3.2 BOXES AND CABINETS

A. Place outlet boxes in a location as close to that shown on the plans as possible. Coordinate location of boxes with other Divisions.

B. Install wall mounted outlet boxes so that the distance from the centerline of the box to finished floor is as listed or indicated on plan:

1. Receptacles, + 1 foot-6 inches (18″)
2. Switches, + 3 feet-9 inches (45″)

C. Install junction boxes with covers accessible after installation. Do not install junction boxes flush with finish walls or ceilings unless specifically approved by the Engineer.

D. Attach surface boxes with:

1. Steel or malleable iron expansion anchors in concrete or solid masonry.
2. Wood screws in wood.
3. Toggle bolts in hollow walls or masonry.
4. Machine screws, bolts or welded studs in steel.

E. Attach flush boxes with adjustable bar type hangers screw fastened to two studs and on both sides of the box.

F. For all surface mounted boxes or cabinets mounted-in wet or damp locations provide weatherproof enclosures and at least 1/4-inch air space between box and mounting surface, per CEC 312.2.

3.3 INSULATED CONDUCTORS AND CABLE

A. Exercise extreme care when pulling conductors and cable into conduits to avoid kinking, twisting, nicking or scratching of the insulation or the placement of extreme stress on the conductors or cable. When required, utilize UL approved pulling compounds to assist in pulling conductors.

B. Color code conductors by phase sequence A-B-C when looking into the front of the equipment from left-to-right, top to bottom or front-to-back. Provide conductors with the appropriate phase color or mark conductors with a minimum of 6 inches of phase tape on ends connected to terminals. Phase code conductors as listed:

Voltage	Phase A	Phase B	Phase C	Neutral	Ground
120/208	Black	Red	Blue	White	Green

C. Identify each conductor with its respective circuit number at each box or terminal.

D. Connections:

1. Utilize twist-on solderless connectors for splicing receptacle and lighting circuits #10 AWG wire size and smaller.
2. Splices and taps will not be permitted for other than receptacle and lighting circuits, or for wire larger than #10.
3. Terminate conductors at motors with bolted connections, insulated with plastic tape.

3.4 WIRING DEVICES

A. Connect wiring devices to circuits indicated using side or back wiring terminals.

B. Connect green grounding pigtail from receptacles to outlet box with screw.

C. Install wiring devices flush with the device plate fronts.

D. Align plates plumb with wall, and cover opening, without use of "jumbo" plates.

E. Install receptacles with grounding terminal up.

3.5 DISCONNECT SWITCHES

A. Install disconnect switches where indicated. Provide all mounting hardware and accessories.

B. Provide a flexible connection from the disconnect switch to the motor unless otherwise indicated.

C. Attach disconnect switches with specified anchors.

D. Phase tape and identify circuit numbers as specified.

E. Install fuses where indicated.

3.6 GROUNDING

A. Permanently and effectively ground all raceway systems, supports, cabinets, control equipment, motor frames, lighting fixtures and other utilization apparatus.

B. Provide a ground wire in each conduit carrying circuits operating at 100 Volts or higher bonded at each end to equipment. Size as shown on the drawings or per CEC.

3.7 ELECTRICAL WORK FOR EQUIPMENT

A. Provide all connections to equipment requiring electrical supply.

B. Review Division 23 requirements for additional work required.

3.8 LIGHTING FIXTURES

A. Install lighting fixtures complete, ready for operation.

B. Secure fixtures to the structure by means of brackets, flanges and other mounting hardware suited for the fixtures and type of installation.

C. Connect recessed fixtures with flexible metal conduit and fixture tap wire.

D. Secure surface mounted fixtures with a minimum of (2) 1/4 inch bolts into substantial structure (not just into a gypsum board ceiling), or as detailed.

E. Secure recessed troffer type fixtures with a minimum of (2) #12 AWG hanger wires, independent of ceiling hangers and secured to T-bar with suitable clips.

F. Clean lighting fixtures prior to final acceptance.

3.9 LIGHTING CONTROL DEVICES

A. Existing.

END OF SECTION

SECTION 31 00 00
EARTHWORK

PART 1 - GENERAL

1.1 INCLUSION OF OTHER CONTRACT DOCUMENTS

A. The General Conditions, Supplementary Conditions and Division 1 are fully applicable to this Section, as if repeated herein.

1.2 RELATED WORK SPECIFIED ELSEWHERE

A. Section 015713, Erosion Control

B. Section 321200, Asphalt Concrete Paving.

C. Section 321600, Site Concrete.

1.3 QUALITY ASSURANCE

A. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.

B. All materials, components, assemblies, workmanship and installation are to be observed by the Owner's Inspector of Record. Work not so inspected is subject to uncovering and replacement.

C. The representatives of the Owner's testing lab will not act as supervisor of construction, nor will they direct construction operations. Neither the presence of the Owner's testing lab representatives nor the testing by the Owner's testing lab shall excuse the contractors or subcontractors for defects discovered in their work during or following completion of the project. Correcting of inadequate compaction or moisture content is the sole responsibility of the contractor.

D. Tests (See Part 3 for Compaction Testing).

E. Contractor shall be solely responsible for all subgrades built. Failures resulting from inadequate compaction or moisture content are the responsibility of the contractor. Contractor shall be solely responsible for any and all repairs.

1.4 SUBMITTALS

A. Refer to Section 013300.

B. Manufacturer's Data: Submit list and complete descriptive data of all products proposed for use. Include manufacturer's specifications, published warranty or guarantee, installation instructions, and maintenance instructions.

1.5 WARRANTY

A. Refer to General Conditions and Section 017836.

1.6 REFERENCES AND STANDARDS

A. General: Site survey, included in the drawings, was prepared by Warren Consulting Engineers and is the basis for data regarding current conditions. While the survey is deemed generally accurate, there exists discrepancies and variations due to elapsed time, weather, etc. Existing dirt grades may vary 0.2 ft. from that shown.

B. Site Visitation: All bidders interfacing with existing conditions shall visit the site prior to bid to verify general conditions of improvements. Discrepancies must be reported prior to the bid for clarification.

C. ANSI/ASTM D698-00 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 lb (2.49 Kg) Rammer and 12 inch (304.8 mm) Drop.

D. ANSI/ASTM D1557-02E1 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10 lb. (4.54 Kg) Rammer and 18 inch (457 mm) Drop.

E. ANSI/ASTM D 3017-05 Test Methods for Moisture Content of Soils and Soil-Aggregate Mixture by Nuclear Methods (Shallow Depth).

F. ANSI/ASTM D 422-63(2007)E2 Test Method for Particle Size Analysis of Soil.

G. ANSI/ASTM D 4318-05 Test Method for Liquid Limit, Plastic Limit, and Plasticity Limit.

H. CALTRANS Standard Specifications Section 17.

I. CAL-OSHA, Title 8, Section 1590 (e).
C. CAL-OSHA, Title 8, Section 1590 (e).

D. Any work within the street, highway or right-of-way shall be performed in accordance with the requirement of the governmental agencies having jurisdiction, and shall not begin until all of those governing authorities have been notified.

1.7 DELIVERY, STORAGE AND HANDLING

A. Transport, store and handle in strict accord with the local jurisdiction.

B. Make delivery to job when notified by Contractor verifying that the job is ready to receive the work of this Section and that arrangements have been made to properly store, handle and protect such materials and work.

1.8 PROJECT CONDITIONS

A. Existing civil, mechanical and electrical improvements are shown on respective site plans to the extent known. Should the Contractor encounter any deviation between actual conditions and those shown, he is to immediately notify the Architect before continuing work.

B. Excavation dewatering may be necessary. Contractor shall provide any and all tools, equipment and labor necessary for excavation dewatering no matter what the source. Dewatering shall be continuous until all site utilities are installed and backfilled.

1.9 EXISTING SITE CONDITIONS

A. Contractor shall acquaint himself with all site conditions. If unknown active utilities are encountered during work, notify Architect promptly for instructions. Failure to notify will make Contractor liable for damage to these utilities arising from Contractor's operations subsequent to discovery of such unknown active utilities.

1.10 ON SITE UTILITY VERIFICATION AND REPAIR PROCEDURES

A. Underground Utility Locating:

1. The contractor shall hire an Underground Utility Locating Service to locate existing underground utility pathways in areas affected by the scope of work for excavation.
2. Contractor must use an underground utility locator service with a minimum of 3 years' experience. The equipment operator must have demonstrated experience.
3. The Underground Utility Locator Service must have the use of equipment with the ability to locate by means of inductive clamping, induction, inductive metal detection, conductive coupling, or TransOnde (Radio detection) to generate signals, passive locating (free scoping) for "hot" electric, and metal detector.
4. The Underground Utility Locator Service must be able to locate existing utilities at a depth of at least 72".
5. The Underground Utility Locator Service must be able to locate but are not limited to locating the following types of utility pathways:
   a) All conduit pathways containing 110 volt or greater 50-60Hz electrical wire.
   b) All conduit pathways containing an active cable TV system.
   c) All conduit pathways containing wire or conductor in which a signal can be attached and generated without damaging or triggering the existing systems.
   d) All empty conduit pathways or pipe in which a signal probe or sonde (miniature transmitter) can be inserted.
   e) All conduit pathways containing non-conductive cables or wires in which a signal probe or sonde (miniature transmitter) can be inserted.
   f) All plastic and other nonconductive water lines in which a TransOnde Radio detection) or other "transmitter" can be applied to create a low frequency pressure waive (signal) without damaging or triggering the existing systems.
   g) All copper or steel waterlines and plastic or steel gas lines
6. All markings made by the Underground Utility Locator Service or other shall be clear and visible.
7. The contractor shall maintain all markings made by Underground Utility Locator Service or other throughout the entire length of the project.
8. The Underground Utility Locator Service shall provide the contractor with two sets of maps showing the location of utilities and average depth. They will be referenced to permanent buildings. Contractor will deliver one copy to the district at no additional charge.
9. Contractor is responsible to contact Underground Service Alert (U.S.A. 800/227-2600) and receive clearance prior to any excavation operations.

10. Contractor shall inform the (Owner) no later than five (5) days prior to the date scheduled for the utility locator service to be on site.

1.11 PROTECTION

A. Adequate protection measures shall be provided to protect workmen and passers-by on and off the site. Adjacent property shall be fully protected throughout the operations. Blasting will not be permitted. Prevent damage to adjoining improvements and properties both above and below grade. Restore such improvements to original condition should damage occur. Replace trees and shrubs outside building area disturbed by operations.

B. In accordance with generally accepted construction practices, the Contractor shall be solely and completely responsible for working conditions at the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and shall not be limited to normal working hours.

C. Any construction review of the Contractor's performance conducted by the Geotechnical Engineer is not intended to include review of the adequacy of the Contractor's safety measures, in, on, or near the construction site.

D. Provide shoring, sheeting, sheet piles and or bracing to prevent caving, erosion or gullying of sides of excavation.

E. Surface Drainage: Provide for surface drainage during period of construction in manner to avoid creating nuisance to adjacent areas. The contractor shall make a reasonable effort on a daily basis to keep all excavations and the site free from water during entire progress of work, regardless of cause, source, or nature of water.

F. Adjacent streets and sidewalks shall be kept free of mud, dirt or similar nuisances resulting from earthwork operations.

G. The site and adjacent influenced areas shall be watered as required to suppress dust nuisance. Dust control measures shall be in accordance with the local jurisdiction.

1.12 SEASONAL LIMITS

A. No fill material shall be placed, spread or rolled during unfavorable weather conditions. When work is interrupted by rains, fill operations shall not be resumed until field tests indicate that moisture content and density of fill are satisfactory.

B. Excessively wet fill material shall be bladed and aerated per section 3.08, B.

1.13 TESTING

A. General: Refer to Section 014500 – Quality Requirements.

B. Geotechnical Engineer: Owner is retaining a Geotechnical Engineer to determine compliance of fill with Specifications, and to direct adjustments in fill operations. Costs of Geotechnical Engineer will be borne by Owner; except those costs incurred for re-tests or re-inspection will be paid by Owner and back charged to Contractor.
1. If Contractor elects to process or mine onsite materials for use as Suitable Fill,

Aggregate Sub Base, Aggregate Base, Rock, Crushed Rock or sand the cost of all testing of this material shall be paid for by the Contractor.

2. Testing of import fill for compliance with Department of Toxic Substance Control (DTSC) shall be paid for by the Contractor.

1.14 ARCHEOLOGICAL AND CULTURAL RESOURCES

A. If archeological or cultural resources are discovered during the Work, the Contractor must cease all construction operations in the vicinity of the discovery until a qualified archeologist can assess the value of these resources and make recommendations to the State Historic Preservation Officer. Archeological and cultural resources include artifacts, large amounts of bone, shell, or flaked stone, and other evidence of human activity. If the State Historic Preservation Officer or the Owner directs that work be temporarily ceased at the location of an archeological or cultural find, the Contractor must temporarily suspend work at the location.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Engineered Fill Materials: All fill shall be of approved local materials supplemented by imported fill if necessary. "Approved" local materials are defined as local soils tested and approved by Geotechnical Engineer free from debris, and concentrations of clay and organics; and contain rocks no larger than 3-inches in greatest dimension. The soil and rock should be thoroughly blended so that all rock is surrounded by soil. This may require mixing of the soil and rock with a dozer prior to placement and compaction. Clods, rocks, hard lumps or cobbles exceeding 3-inches in final size shall not be allowed in the upper 12 inches of any fill. Native clay or clayey soils will not be permitted within the upper 12 inches of building pad areas or paved areas.

B. Imported Engineered Fill Material: Imported fill may be required to complete work. Proposed import fill material shall meet the above requirements; shall be similar to the native soils. Import fill shall meet the above requirements; shall have plasticity index of 15 or less; an Expansion Index of 20 or less; be free of particles greater than 3-inches in largest dimension; be free of contaminants and have corrosion characteristics within the acceptable limits. <u>All import fill material shall be tested and approved by Soils Engineer prior to transportation to the site.</u>

C. Water: Furnish all required water for construction purposes, including compaction and dust control. Water shall be potable.

D. Aggregate Base: Provide Class 2 3/4" Aggregate Base conforming to standard gradation as specified in Cal Trans Standard Specifications, Section 26,-1.02A.

PART 3 - EXECUTION

3.1 INSPECTION LAYOUT AND PREPARATION

A. Prior to installation of the work of this Section, carefully inspect and verify by field measurements that installed work of all other trades is complete to the point where this installation may properly commence

B. Layout all work, establish grades, locate existing underground utilities, set markers and stakes, setup and maintain barricades and protection facilities; all prior to beginning actual earthwork operations. Layout and staking shall be done by a licensed Land Surveyor or Professional Civil Engineer.

C. Verify that specified items may be installed in accordance with the approved design.

D. In event of discrepancy, immediately notify Owner and the Architect. Do not proceed in discrepant areas until discrepancies have been fully resolved.

3.2 PERFORMANCE

A. GENERAL:

1. General: Do all grading, excavating and cutting necessary to conform finish grade and contours as shown. All cuts shall be made to true surface of subgrade.
2. Archaeological Artifacts: Should any artifacts of possible historic interest be encountered during earthwork operations, halt all work in area of discovery and immediately contact the Architect for notification of appropriate authorities.
3. Degree of Compaction: Percentage of maximum density, hereinafter specified as degree of compaction required, means density equivalent to that percentage of maximum dry density determined by ASTM D1557 Compaction Test method, and such expressed percentage thereof will be minimum acceptable compaction for specified work.
4. Moisture Content: Moisture content shall be as noted below and as called for on the plans. Moisture content shall be maintained until subgrade is covered by surfacing materials.

3.3 DEMOLITION, DISPOSAL AND DISPOSITION OF UNDESIRABLE MAN-MADE FEATURES

A. All other obstructions, such as abandoned utility lines, septic tanks, concrete foundations, and the like shall be removed from site. Excavations resulting from these removal activities shall be cleaned of all loose materials, dish shaped, and widened as necessary to permit access for compaction equipment. Areas exposed by any required over-excavation should be scarified to a depth of 8", moisture-conditioned to the optimum moisture content, and recompacted to at least 90% of the maximum dry density.

3.4 TESTING AND OBSERVATION

A. All grading and earthwork operations shall be observed by the Geotechnical Engineer or his representative, serving as the representative of the Owner.

B. Field compaction tests shall be made by the Geotechnical Engineer or his representative. If moisture content and/or compaction are not satisfactory, Contractor will be required to change equipment or procedure or both, as required to obtain specified moisture or compaction. Notify Geotechnical Engineer at least 48 hours in advance of any filling operation.

C. Earthwork shall not be performed without the notification or approval of the Geotechnical Engineer or his representative. The Contractor shall notify the Geotechnical Engineer at least two (2) working days prior to commencement of any aspect of the site earthwork.

D. If the Contractor should fail to meet the compaction or design requirements embodied in this document and on the applicable plans, he shall make the necessary readjustments until all work is deemed satisfactory, as determined by the Geotechnical Engineer or Architect/Engineer.

E. After each rain event Geotechnical Engineer shall test fill material for optimum moisture. Do not place any fill material until desired moisture is achieved.

3.5 CLEARING AND GRUBBING

A. Prior to grading, remove all debris off-site. Remove trees and brush including the root systems. Holes resulting from tree and brush removal should be prepared and backfilled in accordance with paragraphs 3.07, 3.08, 3.09, and 3.10. This may require deepening and/or widening the holes to adequately remove disturbed soil and provide room for compaction equipment. Strip the surface of all organics. Stripping's meeting the requirements of Section 329000 may be used in landscape areas only.

3.6 CUTTING

A. Do all cutting necessary to bring finish grade to elevations shown on Drawings.

B. When excavation through roots is necessary, cut roots by hand.

C. Carefully excavate around existing utilities to avoid unnecessary damage. The contractor shall anticipate and perform hand work near existing utilities as shown on the survey, without additional claims or cost.

3.7 SUBGRADE PREPARATION

A. Grade compact and finish all subgrades within a tolerance of 0.10' of grades as indicated on Drawings and so as not to pool water. Subgrade within building pads and concrete walks shall be within 0.05' of grades indicated.

B. After clearing, grubbing and cutting, existing surface shall be scarified to a depth of at least 8", until surface is free from ruts, hummocks or other uneven features and uniform and free from large clods. Moisture condition to optimum moisture content and recompact to at least 90% of the maximum dry density as determined by ASTM Test Method D1557. If the existing soils are at a water content higher than specified, the contractor shall provide multiple daily aerations by ripping, blading, and/or disking to dry the soils to a moisture content where the specified degree of compaction can be achieved. After seven consecutive working days of daily aerations, and the moisture content of the soil remains higher than specified, the contractor shall notify the architect. If the existing soils have a moisture content lower than specified, the contractor shall scarify, rip, water and blade existing soil to achieve specified moisture content. The contractor shall make proper allowance in schedule and methods to complete this work.

C. Subgrade in areas to receive landscaping shall be compacted to 90%.

D. Where Contractor over-excavates building pads through error, resulting excavation shall be recompacted as engineered fill at Contractor's expense.

3.8 PLACING, SPREADING AND COMPACTING FILL MATERIAL IN PAVEMENT AREAS

A. Selected fill material shall be placed in layers which, when compacted, shall not exceed 6 inches in compacted thickness. Each layer shall be spread evenly and thoroughly mixed to insure uniformity in moisture content.

B. Selected fill material shall be moisture-conditioned to specified moisture content. Selected fill material shall be unfrozen. When moisture content of fill material is below that specified, add water until proper moisture content is achieved. When moisture content is above that specified, aerate by blading or other methods mentioned in 3.08 B until moisture content is satisfactory.

C. After each layer has been placed, mixed and spread evenly, it shall be thoroughly compacted to a minimum of 90% as determined by the ASTM D1557 Compaction Test. Compact each layer over its entire area until desired density has been obtained.

D. Recompaction of Fill in Trenches and Compaction of Fill Adjacent to Walls: Where trenches must be excavated, backfill with material excavated. Place in lifts that when compacted do not exceed 6", moisture conditioned to optimum moisture content, and compact to a minimum of 90% relative compaction in paved areas, and to 90% relative compaction in landscape areas.

E. Jetting of fill materials will not be allowed.

3.9 FINAL SUBGRADE COMPACTION

A. Concrete Flatwork: Upper 8" of all final subgrades shall be uniformly compacted at specified moisture content to at least 90% of maximum dry density, as determined by ASTM D1557 Compaction Test, regardless of whether final subgrade elevation is attained by filling, excavation, or is left at existing grade. After acceptance of final compaction test, contractor shall maintain the required moisture content of subgrade until concrete flatwork is placed.

B. Asphalt Paved: Upper 8" of all final subgrades supporting pavement sections shall be brought to specified moisture content and shall be uniformly compacted to not less than 95% of maximum dry density, regardless of whether final subgrade elevation is attained by filling, excavation, or is left at existing grade. After acceptance of final compaction test, contractor shall maintain the required moisture content of subgrade until concrete flatwork is placed.

C. Other Fill and Backfill: Upper 12" of all other final subgrades or finish grades shall be compacted to 90% of maximum dry density.

D. Gravel Fill: Do not place compacted gravel fill until after underground work and foundations are in place. Compact gravel fill with vibratory plate or similar equipment to preclude settlement.

3.10 PLACING, SPREADING, AND COMPACTION OF LANDSCAPE BACKFILL MATERIALS

A. All landscaped areas shall receive topsoil. After subgrade under landscape area has been scarified and brought to 90% maximum dry density, top soil shall be placed evenly to depth of 12" at 85% of maximum dry density.

B. Project Inspector must verify that materials are uniformly spread to minimum depth specified.

3.11 SLOPE CONSTRUCTION

A. Cut slopes shall be constructed to no steeper than 2:1 (horizontal:vertical). Fill slopes shall be constructed to no steeper than 2:1 (horizontal:vertical). Prior to placement of fill on an existing slope the existing slope shall be benched. The benches shall be in a ratio of 2 horizontal to 1 vertical. The face of the fill slopes shall be compacted as the fill is placed, or the slope may be overbuilt and then cut back to the design grade. Compaction by track walking will not be allowed.

3.12 FINISH GRADING

A. At completion of project, site shall be finished graded, as indicated on Drawings. Finish grades shall be "flat graded" to grades shown on the drawing. Mounding of finish grades will not be allowed unless otherwise directed on the landscape drawings. Tolerances for finish grades in drainage swales shall be +-0.05'. Tie in new and existing finish grades. Leave all landscaped areas in finish condition for lawn seeding. Landscaped planters shall be graded uniformly from edge of planter to inlets. If sod is used for turf areas the finish grade on which it is placed shall be lowered to allow for sod thickness.

3.15 SURPLUS MATERIAL

A. Excavated material not required for grading or backfill shall be removed from site at contractor's expense.

3.16 CLEANING

A. Refer to Section 017400.

B. Remove from fill all vegetation, wood, form lumber, casual lumber, and shavings, in contact with ground; buried wood will not be permitted in any fill.

END OF SECTION

SECTION 31 10 00
Site clearing

PART 1 - General

1.1 SECTION INCLUDES

A. Removal of existing trees and vegetation

B. Clearing vegetation, debris, trash and other materials within limits indicated

C. Grubbing of vegetation within limits indicated

D. Stripping of topsoil within limits indicated

E. Removing above-grade site improvements within limits indicated

F. Disconnecting, capping or sealing, and abandoning site utilities in place

G. Disconnecting, capping or sealing, and removing site utilities

H. Disposing of objectionable material

1.2 RELATED SECTIONS

A. Section 31 20 00, Earth Moving

B. Section 32 12 16, Asphalt Paving

C. Section 32 13 13, Concrete Pavement

1.3 RELATED DOCUMENTS

A. Geotechnical Report.

B. ANSI A300: Industry Standards for Tree Care Practices

C. Applicable Publications

1. "Trees and Building Sites," official publication of the International Society of Arboriculture.

2. "Arboriculture," the care of trees and shrubs by Dr. Richard Harris.

1.4 DEFINITIONS

A. ANSI: American National Standards Institute

B. CAL-OSHA: California Occupational Safety and Health Administration

C. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches in diameter; and free of weeds, roots, and other deleterious materials.

1.5 SUBMITTALS

A. Follow submittal procedure outlined in Section 01 10 00, Supplemental General Requirements.

B. Photographs or videotape, sufficiently detailed, of existing conditions of trees and plantings, adjoining construction, and site improvements that might be misconstrued as damage caused by site clearing.

1.6 QUALITY ASSURANCE

A. Do not remove or prune trees without first securing a permit from the appropriate agency.

B. Prune to the standards of the International Society of Arborists and to ANSI A300.

1.7 PROJECT CONDITIONS

A. Except for materials indicated to be stockpiled or to remain the Owner's property, cleared materials are the Contractor's property. Remove cleared materials from site and dispose of in lawful manner.

B. Salvageable Improvements: Carefully remove items indicated to be salvaged and store where indicated on plans or where designated by the Owner's Representative. Avoid damaging materials designated for salvage.

C. Unidentified Materials;

1. If unidentified materials are discovered, including hazardous materials that will require additional removal other than is required by the Contract Documents, immediately report the discovery to the Owner's Representative.

2. If necessary, the Owner's Representative will arrange for any testing or analysis of the discovered materials and will provide instructions regarding the removal and disposal of the unidentified materials.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. Backfill excavations resulting from demolition operations with on-site or import materials conforming to engineered fill defined in Section 31 20 00, Earth Moving.

PART 3 - EXECUTION

3.1 PREPARATION

A. Protect and maintain benchmarks and survey control points during construction.

B. Locate and clearly flag trees and vegetation to remain or to be relocated.

C. Protect existing site improvements to remain during construction.

3.2 TREE REMOVAL

A. Remove trees designated for removal prior to the construction of new improvements in the vicinity:

1. When demolishing trees indicated to be removed within areas for new pavement or hardscape, remove tree, stump to a depth of two (2) feet below finish grade, and all roots located in the top twelve (12) inches of soil. Remove wood chips created from grinding process down to remaining stump then refill void and re-compact to 80% relative compaction. Use import soil as indicated in specifications for this purpose. Import soil and compaction in future paved areas shall be in accordance with Section 32 12 16, Asphalt Paving and Section 32 13 13, Concrete Pavement.

2. When demolishing trees indicated to be removed within new landscaped areas, removal shall be done in one of the following ways:

    a. For trees located in accessible areas, remove tree and grind stump to four (4) inches below finish grade. Backfill the void and re-compact to 80% relative compaction. Use import soil as indicated in specifications for this purpose. Do not remove existing roots.

    b. For trees located in inaccessible areas, cut stump flush with finish grade, and cover with 3 inches of bark mulch. Do not grind the stump and do not remove existing roots.

B. Perform tree removal work in a safe and proper manner, adhering to CAL-OSHA tree work protection standards and ANSI A300 Standards.

C. All trees to be demolished shall be removed in such a way as to not damage branches, trunks, or root systems of adjacent trees.

3.3 RESTORATION

A. Restore damaged improvements to their original condition, as acceptable to the Owner's Representative.

B. Repair or replace trees and vegetation indicated to remain that are damaged by construction operations, as directed by the Owner's Representative.

1. Employ a qualified arborist, licensed in jurisdiction where the Project is located, to submit details of proposed repairs and to repair damage to trees and shrubs.

2. Replace trees that cannot be repaired and restored to full-growth status, as determined by the Owner's Representative.

3.4 UTILITIES

A. Locate, identify, disconnect, and seal or cap off utilities indicated to be removed or abandoned.

B. Arrange to shut off indicated utilities with utility companies or verify that utilities have been shut off.

C. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner's Representative or others unless authorized in writing by the Owner's representative, and then only after arranging to provide temporary utility services according to requirements indicated.

D. Coordinate utility interruptions with utility company affected.

E. Do not proceed with utility interruptions without the permission of the Owner's Representative and utility company affected. Notify Owner's Representative and utility company affected two working days prior to utility interruptions.

F. Excavate and remove underground utilities that are indicated to be removed.

G. Fill abandoned piping with cement slurry.

H. Securely close ends of abandoned piping with tight fitting plug or cement slurry minimum 6 inches thick.

3.5 CLEARING AND GRUBBING

A. Areas to be graded shall be cleared of existing vegetation, rubbish, existing structures, and debris.

B. Remove obstructions, shrubs, grass, and other vegetation to permit installation of new construction. Removal includes digging out stumps and obstructions and grubbing roots.

C. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.

D. Use only hand methods for grubbing within drip line of remaining trees.

3.6 SITE STRIPPING

A. Strippings and spoils shall be disposed at an off-site location, per geotechnical recommendations.

B. Remove vegetation before stripping soil.

C. Surface soils that contain organic matter should be stripped. In general, the depth of required stripping will be relatively shallow (i.e. less than 2 inches); deeper stripping and grubbing may be required to remove isolated concentrations of organic matter or roots.

D. Remove trash, debris, weeds, roots, and other waste materials.

E. Stockpile soil materials designated to remain on site at a location approved by the Owner's Representative at a location away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust.

F. Do not stockpile soil within drip line of remaining trees.

3.7 SITE IMPROVEMENTS

A. Remove existing above- and below-grade improvements as indicated and as necessary to facilitate new construction.

3.8 BACKFILL

A. Place and compact material in excavations and depressions remaining after site clearing in accordance with Section 31 20 00, Earth Moving.

3.9 DISPOSAL

A. Remove surplus soil material, unsuitable soil, obstructions, demolished materials, and waste materials, including trash and debris, and legally dispose of them off the Owner's property.

END OF SECTION

SECTION 31 20 00
Earth Moving

PART 1 - General

1.1 SECTION INCLUDES

A. Excavation and/or embankment from existing ground to subgrade, including soil sterilant, for roadways, driveways, parking areas, building pads, walks, paths, or trails and any other site improvements called for on the Plans.

1.2 SECTION EXCLUDES

A. Earthwork related to underground utility installation shall be performed in accordance with Sections 31 21 00, Utility Trenching and Backfill.

1.3 RELATED SECTIONS

A. Section 01 10 00, Supplemental General Requirements

B. Section 01 50 50, Erosion Control

C. Section 31 10 00, Site Clearing

D. Section 31 23 19, Dewatering

E. Section 33 46 00, Subdrainage

1.4 RELATED DOCUMENTS

A. Geotechnical Report

B. ASTM

1. D1557, Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort

2. D1586, Method for Penetration Tests and Split-Barrel Sampling of Soils

3. D2487, Classification of Soils for Engineering Purposes

4. D3740, Practice for Evaluation of Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.

5. D4318. Test Method for Liquid Limit, Plastic Limit and Plasticity Index of Soils

6. E329, Specification for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction

7. E548, Guide for General Criteria Used for Evaluating Laboratory Competence

C. California Building Code, California Code of Regulations, Title 24, Part 2, Chapter 18, Soils and Foundations, and Chapter 33, Safeguards During Construction

D. Caltrans Standard Specifications, 2015

1. Section 17, General

2. Section 19, Earthwork

E. CAL/OSHA, Title 8.

1.5 DEFINITIONS

A. Borrow: Approved soil material imported from off-site for use as Structural Fill or Backfill.

B. Excavation: Removal of material encountered above subgrade elevations.

1. Authorized Over-Excavation: Excavation below subgrade elevations or beyond indicated horizontal dimensions as shown on plans or authorized by the Geotechnical Engineer.

2. Unauthorized Over-Excavation: Excavation below subgrade elevations or beyond indicated horizontal dimensions without authorization by the Geotechnical Engineer. Unauthorized excavation shall be without additional compensation.

C. Geotechnical Testing Agency: An independent testing agency qualified according to ASTM E329 to conduct soil materials and rock definition testing, as documented according to ASTM D3740 and ASTM E548.

D. Structural Backfill: Soil materials approved by the Geotechnical Engineer and used to fill excavations resulting from removal of existing below grade facilities, including trees.

E. Structural Fill: Soil materials approved by the Geotechnical Engineer and used to raise existing grades.

F. Rock: Rock material in beds, ledges, unstratified masses, and conglomerate deposits and boulders of rock material ¾ cubic yards or more in volume that

when tested by an independent geotechnical testing agency, according to ASTM D1586, exceeds a standard penetration resistance of 100 blows/2 inches.

G. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below grade.

H. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, base or topsoil materials.

I. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches in diameter; and free of weeds, roots, and other deleterious materials.

J. Unsuitable Material: Any soil material that is not suitable for a specific use on the Project. The Geotechnical Engineer will determine if a soil material is unsuitable.

K. Relative Compaction: In-place dry density of soil expressed as percentage of maximum dry density of same materials, as determined by laboratory test procedure ASTM D1557.

L. Utilities: onsite underground pipes, conduits, ducts and cables.

1.6 SUBMITTALS

A. Follow submittal procedure outlined in Section 01 10 00, Supplemental General Requirements.

B. Samples:

1. If required by the Geotechnical Engineer, provide 20 pound samples, sealed in airtight containers, tagged with source locations and suppliers of each proposed soil material from on-site or borrow sources, 72 hours prior to use. Do not import materials to the Project without written approval of the Geotechnical Engineer.

2. Provide materials from same source throughout work. Change of source requires approval of the Geotechnical Engineer.

C. Material Test Reports: Provide, from a qualified testing agency, the following test results showing compliance with the project requirements:

D. Classification according to ASTM D2487 of each onsite or borrow soil material proposed for fill and backfill.

1. Laboratory compaction curve in conformance with ASTM D1557 for each onsite or borrow soil material proposed for fill and backfill.

1.7 QUALITY ASSURANCE

A. Provide an independent testing agency qualified according to ASTM E329 to conduct soil materials and rock definition testing, as documented according to ASTM D3740 and ASTM E548.

B. Conform all work and materials to the recommendations or requirements of the Geotechnical Report and meet the approval of the Geotechnical Engineer.

C. Conform all work in accordance with Caltrans Standard Specification Section 17, General and Section 19, Earthwork.

D. Percentage of compaction specified shall be the minimum acceptable. The percentage represents the ratio of the dry density of the compacted material to the maximum dry density of the material as determined by the procedure set forth in ASTM D1557.

E. Perform excavation, filling, compaction and related earthwork under the observation of the Geotechnical Engineer. Materials placed without approval of the Geotechnical Engineer will be presumed to be defective and, at the discretion of the Geotechnical Engineer, shall be removed and replaced at no cost to the Owner. Notify the Geotechnical Engineer at least 24 hours prior to commencement of earthwork and at least 48 hours prior to testing.

F. The Geotechnical Engineer will perform observations and tests required to enable him to form an opinion of the acceptability of the Project earthwork. Correct earthwork that, in the opinion of the Geotechnical Engineer, does not meet the requirements of these Technical Specifications and the Geotechnical Report.

G. Upon completion of the construction work, certify that all compacted fills and foundations are in place at the correct locations, and have been constructed in accordance with sound construction practice. In addition, certify that the materials used are of the types, quality and quantity required by these Technical Specifications and the Geotechnical Report. The Contractor shall be responsible for the stability of all fills and backfills constructed by his forces and shall replace portions that in the opinion of the Geotechnical Engineer have been displaced or are otherwise unsatisfactory due to the Contractor's operations.

H. Finish subgrade tolerance at completion of grading:

1. Building and paved areas: ±0.05 feet

2. Other areas: ±0.10 feet

1.8 PROJECT CONDITIONS

A. Promptly notify the Owner's Representative of surface or subsurface conditions differing from those disclosed in the Geotechnical Report. First notify the Owner's Representative verbally to permit verification and extent of condition and then in writing. No claim for conditions differing from those anticipated in the Contract Documents and disclosed in the Geotechnical Report will be allowed unless the Contractor has notified the Owner's Representative in writing of differing conditions prior to the Contractor starting work on affected items.

B. Protect open excavations, trenches, and the like with fences, covers and railings to maintain safe pedestrian and vehicular traffic passage.

C. Prevent erosion of freshly-graded areas during construction and until such time as permanent drainage and erosion control measures have been installed in accordance with Section 01 50 50, Erosion Control.

D. Temporarily stock-pile fill material in an orderly and safe manner and in a location approved by the Owner's Representative.

E. Environmental Requirements: When unfavorable weather conditions necessitate interrupting earthwork operation, areas shall be prepared by compaction of surface and grading to avoid collection of water. Provide adequate temporary drainage to prevent erosion. After interruption, compaction specified in last layer shall be re-established before resuming work.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. General: On-site soils are considered suitable for use as fill provided the materials are placed in accordance with Geotechnical Recommendations. Highly expansive soils shall not be used as select structural fill, or used as backfill for trenches located within hardscape areas.

B. Imported fill soils, if required, should be predominantly granular in nature, and should be free of organics, debris, or rocks over 3 inches in size, and shall be approved by the Geotechnical Engineer before importing to the site. Imported non-expansive soils shall have a Plasticity Index less than 15 as determined by ASTM D4318, an R-value of at least 20, and fines content between 15 and 65 percent. Import fill shall be considered non-hazardous per Department of Toxic Substances Control guidelines (DTSC, 2017) and non-corrosive per Caltrans Corrosion Guidelines (Caltrans, 2015).

2.2 SOIL STERILANT

A. Commercial chemical for weed control, registered by EPA. Provide granular, liquid or wet-able powder form.

PART 3 - EXECUTION

3.1 GENERAL

A. Perform work in accordance with Caltrans Standard Specification Section 19, Earthwork, as modified by the Contract Documents.

B. Placement and compaction of material by flooding, ponding, or jetting will not be permitted.

C. The use of explosives will not be permitted.

D. Grading and earthwork operations shall be observed and tested by a representative of the Geotechnical Engineer for conformance with the project plans/specifications and the geotechnical recommendations. This work includes site preparation, selection of satisfactory materials, and placement and compaction of the subgrades and fills. Sufficient notification prior to commencement of earthwork is essential to make certain that the work will be properly observed.

3.2 CONTROL OF WATER AND DEWATERING

A. Comply with Section 31 23 19, Dewatering, if dewatering is necessary.

B. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding the site and surrounding area. Provide dewatering equipment necessary to drain and keep excavations and site free from water.

C. Dewater during backfilling operation so that groundwater is maintained a least 1 foot below level of compaction effort.

D. Obtain the Geotechnical Engineer's approval for proposed control of water and dewatering methods.

E. Protect subgrades from softening, undermining, washout and damage by rain or water accumulation.

F. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations.

G. Maintain dewatering system in place until dewatering is no longer required.

3.3 WET WEATHER CONDITIONS

A. Do not prepare subgrade, place or compact soil materials if subgrade or materials are above optimum moisture content.

B. If the Geotechnical Engineer allows work to continue during wet weather conditions, conform to supplemental recommendations provided by the Geotechnical Engineer.

3.4 BRACING AND SHORING

A. Conform to California and Federal OSHA requirements.

B. Place and maintain such bracing and shoring as may be required to support the sides of the excavations for the proper protection of workmen; to facilitate the work; to prevent damage to the facility being constructed; and to prevent damage to adjacent structures or facilities. Remove all bracing and shoring upon completion of the work.

C. Be solely responsible for all bracing and shoring and, if requested by the Owner's Representative, submit details and calculations to the Owner's Representative. The Owner's Representative may forward the submittal to the Geotechnical Engineer, the Consulting Engineer and/or the California Division of Industrial Safety for their review. The Contractor's submittal shall include the basic design, assumed soils conditions and estimation of forces to be resisted, together with plans and specifications of the materials and methods to be used, and shall be prepared by a civil engineer or structural engineer registered in California. No excavations related to the proposed facility shall precede a response to the submittal by the Owner's Representative.

D. Be solely responsible for installing and extracting the sheathing in a manner which will not disturb the position or operation of the facility being constructed or adjacent utilities and facilities.

3.5 TOPSOIL STRIPPING

A. Remove topsoil in accordance with Section 31 10 00, Site Clearing.

3.6 EXCAVATION

A. Excavate earth and rock to lines and grades shown on plans and to the neat dimensions indicated on the plans, required herein or as required to satisfactorily compact backfill.

B. Remove and dispose of large rocks, pieces of concrete and other obstructions encountered during excavation.

C. Excavation through buried concrete and other unknown obstructions will require specialized techniques for demolition and removal.

D. Where forming is required, excavate only as much material as necessary to permit placing and removing forms.

E. Provide supports, shoring and sheet piles required to support the sides of excavations or for protection of adjacent existing improvements.

3.7 GRADING

A. Uniformly grade the Project to the elevations shown on plans

B. Finish ditches, gutters and swales to the sections, lines and grades indicated and to permit proper surface drainage.

C. Round tops and bottoms of slopes as indicated or to blend with existing contours.

3.8 SUBGRADE PREPARATION

A. Subgrade Preparation: Prior to backfilling depressions created by the removal of old foundations and utility lines, scarify the bottom of the excavation to an approximate depth of 8 inches and uniformly moisture condition the scarified surfaces to a moisture content that is at least 2 percent over optimum. Compact the scarified surfaces to a minimum of 90 percent relative compaction at above optimum moisture content.

B. Over-excavate any remaining soft (pumping) areas down to firm soil and backfill the area.

C. Subgrade shall be maintained in a moist, but not wet, condition by periodically sprinkling water prior to the placement of additional fill or installation of roads. Subgrade that has been permitted to dry out and loosen or develop desiccation cracking should be scarified, moisture conditioned, and re-compacted as recommended above.

D. Install underground utilities and service connections prior to final preparation of subgrade and placement of base materials for final surface facilities. Extend services so that final surface facilities are not disturbed when service connections are made.

E. Prepare subgrades under the structural section of paved areas, curbs, gutters, walks, structures, other surface facilities and areas to receive structural fill.

F. Protect utilities from damage during compaction of subgrades and until placement of final pavements or other surface facilities.

G. Obtain the Geotechnical Engineer's approval of subgrades prior to placing pavement structural section.

3.9 KEYWAYS AND BENCHES

A. Provide keyways as indicated for fill slopes steeper than 6 horizontal to 1 vertical. Extend keyway 5 feet minimum into competent, undisturbed soil or 3 feet minimum into competent, undisturbed rock as directed by the Geotechnical Engineer.

B. Place subsurface drains in bottom of keyway in accordance with Section 33 46 00, Subdrainage.

C. Bench subgrade as indicated above toe of fill.

D. Place subsurface drains at benches every 20 vertical feet or as directed by the Geotechnical Engineer.

3.10 LOT FINISH GRADING

A. Blade finish lots to lines and grades indicated.

3.11 FILL PLACEMENT AND COMPACTION

A. Place fill in uniformly moisture conditioned and compacted lifts not exceeding 8 inches in loose thickness. Each lift should be thoroughly moisture conditioned and compacted to 90 percent before successive fill layers are placed.

B. In order to achieve satisfactory compaction in the subgrade and fill soils, it may be necessary to adjust the soil moisture content at the time of soil compaction per geotechnical recommendations. This may require that water be added and thoroughly mixed into any soils which are too dry or that scarification and aeration be performed in any soils which are too wet.

C. Obtain the Geotechnical Engineer's approval of surface to receive structural fill prior to placement of structural fill material.

D. Place structural fill on prepared subgrade.

E. Do not drop fill on structures. Do not backfill around, against or upon concrete or masonry structures until structure has attained sufficient strength to withstand loads imposed and the horizontal structural system had been installed.

F. Do not compact by ponding, flooding or jetting.

G. Perform compaction using rollers, pneumatic or vibratory compactors or other equipment and mechanical methods approved by the Geotechnical Engineer.

H. Compaction requirements (unless specified otherwise by the Geotechnical Engineer):

1. Compact structural fills less than 5 feet thick to 90 percent compaction.

2. Compact structural fill 5 feet thick or greater to 95 percent compaction.

3. Compact the upper 6 inches of subgrade soils beneath pavements, curbs and gutters to 95 percent compaction. Extend compaction 5 feet beyond pavement edges unless specified otherwise by the Geotechnical Engineer.

4. Compact the upper 6 inches of subgrade soils under walks, structures and areas to receive structural fill to 90 percent compaction.

3.12 SOIL STERILIZATION

A. Apply soil sterilant to areas indicated, such as beneath asphalt concrete pavement, brick pavement, concrete pavement and at grade concrete slabs, including sidewalks, curbs and gutters. Also where indicated apply soil sterilant below expansion and control joints and at areas where pipes, ducts or other features penetrate slabs.

B. Apply soil sterilant uniformly and at the rates recommended by the manufacturer.

C. Apply soil sterilant to prepared subgrade, or after installation of aggregate base as recommended by the manufacturer.

3.13 DISPOSAL

A. Lawfully dispose of all unsuitable and excess or surplus material off-site at no cost to the Owner.

END OF SECTION 31 20 00

SECTION 32 11 00
Pavement base course

PART 1 - General

1.1 SECTION INCLUDES

A. Aggregate subbase

B. Aggregate base

C. Cement treated base

D. Lime stabilization

1.2 RELATED SECTIONS

A. Section 01 10 00, Supplemental General Requirements

B. Section 01 50 50, Erosion Control

C. Section 31 20 00, Earth Moving

1.3 RELATED DOCUMENTS

A. Geotechnical Report

B. ASTM:

1. D1557, Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort

2. D3740, Practice for Evaluation of Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction

3. E329, Specification for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction

4. E548, Guide for General Criteria Used for Evaluating Laboratory Competence

C. Caltrans Standard Specifications, 2015

1. Section 24, Stabilized Soils

2. Section 25, Aggregate Subbases

3. Section 26, Aggregate Bases

4. Section 27, Cement Treated Bases

1.4 DEFINITIONS

A. Geotechnical Testing Agency: An independent testing agency qualified according to ASTM E329 to conduct soil materials and rock definition testing, as documented according to ASTM D3740 and ASTM E548.

B. Rock: Rock material in beds, ledges, unstratified masses, and conglomerate deposits and boulders of rock material ¾ cubic yards or more in volume that when tested by an independent geotechnical testing agency, according to ASTM D1586, exceeds a standard penetration resistance of 100 blows/2 inches.

C. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man made stationary features constructed above or below grade.

D. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, base or topsoil materials. Perform work in accordance with Section 31 20 00, Earth Moving.

1.5 SUBMITTALS

A. Follow submittal procedure outlined in Section 01 10 00, Supplemental General Requirements.

B. Submit material certificates signed by the material producer and the Contractor, certifying that that each material item complies with, or exceeds the specified requirements.

1.6 QUALITY ASSURANCE

A. Conform all work and materials to the recommendations or requirements of the Geotechnical Report and meet the approval of the Geotechnical Engineer.

B. Percentage of compaction specified shall be the minimum acceptable. The percentage represents the ratio of the dry density of the compacted material to the maximum dry density of the material as determined by the procedure set forth in ASTM D1557.

C. Perform installation of base materials under the observation of the Geotechnical Engineer. Materials placed without approval of the Geotechnical Engineer will be presumed to be defective and, at the discretion of the Geotechnical Engineer, shall be removed and replaced at no cost to the Owner. Notify the Geotechnical Engineer at least 24 hours prior to commencement of base material installation and at least 48 hours prior to testing.

D. Do not mix or place cement treated base when the temperature is below is below 36 degrees F or when the ground is frozen.

E. Finish surface of material to be stabilized prior to lime treatment shall be in accordance with Caltrans Standard Specification Section 24, Stabilized Soils.

F. Finish surface of the stabilized material after lime treatment shall be in accordance with Caltrans Standard Specifications Section 24, Stabilized Soils.

G. Finish surface of cement treated base shall be in accordance with Caltrans Standard Specification Section 27, Cement Treated Bases.

H. Do not project the finish surface of aggregate subbase above the design subgrade.

I. Finish grade tolerance at completion of base installation: +0.05 feet

1.7 PROJECT CONDITIONS

A. Protect open excavations, trenches, and the like with fences, covers and railings to maintain safe pedestrian and vehicular traffic passage.

B. Temporarily stockpile material in an orderly and safe manner and in a location approved by the Owner.

C. Provide dust and noise control in accordance with Section 01 10 00, Supplemental General Requirements.

PART 2 - PRODUCTS

2.1 AGGREGATE SUBBASE

A. Material: Class 2 in accordance with Caltrans Standard Specification Section 25, Aggregate Subbases.

2.2 AGGREGATE BASE

A. Material: Class 2, ¾ inch maximum in accordance with Caltrans Standard Specification Section 26, Aggregate Bases.

2.3 CEMENT TREATED BASE

A. Material: Class A or B maximum in accordance with Caltrans Standard Specification Section 27, Cement Treated Bases.

2.4 LIME STABILIZED SOILS

A. Material: In accordance with Caltrans Standard Specification Section 24-2, Lime Stabilized Soil.

PART 3 - EXECUTION

3.1 GENERAL

A. Placement and compaction of material by flooding, ponding, or jetting will not be permitted.

3.2 WET WEATHER CONDITIONS

A. Do not place or compact subgrade if above optimum moisture content.

B. If the Geotechnical Engineer allows work to continue during wet weather conditions, conform to supplemental recommendations provided by the Geotechnical Engineer.

3.3 AGGREGATE SUBBASE

A. Spreading and Compacting: In accordance with Caltrans Standard Specification Section 25-1.03D, Spreading and 25-1.03E, Compacting.

3.4 AGGREGATE BASE

A. Watering, Spreading and Compacting: In accordance with Caltrans Standard Specification Section 26-1.03D, Spreading and 26-1.03E, Compacting.

3.5 CEMENT TREATED BASE

A. Proportioning and Mixing Plant-Mixed: In accordance with Caltrans Standard Specification Section 27-1.03D.

3.6 LIME STABILIZATION

A. Lime stabilization shall conform to Caltrans Standard Specification Section 24, Stabilized Soils, and the following:

1. Add lime in the amount specified by the Geotechnical Engineer.

2. Lime treat subgrade soils from back of curb to back of curb to a depth specified by the Geotechnical Engineer.

3. Mix in two mixing periods, both with the tines lowered to the same depth. Both mixing periods shall be monitored and verified by the Geotechnical Engineer. The second mixing shall occur at about 24 hours after the initial mixing.

4. Compact and grade the lime mixed subgrade immediately after the second mixing.

5. Compact the lime treated subgrade to 93 percent as determined by ASTM D1557.

6. After application of the curing seal, do not allow traffic on the lime treated material for a period of 7 days in lieu of the 3 days specified in Caltrans Standard Specifications, Section 24.

7. Proof-roll the stabilized subgrade after compacting to confirm that a non-yielding surface has been achieved. Yielding areas, if any, shall be mitigated. Mitigation could consist of over-excavation, utilization of stabilization fabric, or chemical treatment. Each case shall be addressed individually in the field by the Geotechnical Engineer.

3.7 DISPOSAL

A. Lawfully dispose of all unsuitable and excess or surplus material off-site at no cost to the Owner.

END OF SECTION 32 11 00

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SECTION 32 12 00
ASPHALT CONCRETE PAVING

PART 1 - GENERAL

1.1 INCLUSION OF OTHER CONTRACT DOCUMENTS

A. The General Conditions, Supplementary Conditions and Division 1 are fully applicable to this Section, as if repeated herein.

1.2 RELATED WORK SPECIFIED ELSEWHERE

A. Section 310000, Earthwork.

1.3 QUALITY ASSURANCE

A. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.

B. All materials, components, assemblies, workmanship and installation are to be observed by the Owner's Inspector of Record. Work not so inspected is subject to uncovering and replacement.

C. The representatives of the Owner's testing lab will not act as supervisor of construction, nor will they direct construction operations. Neither the presence of the Owner's testing lab representatives nor the testing by the Owner's testing lab shall excuse the contractors or subcontractors for defects discovered in their work during or following completion of the project. Correcting inadequate compaction is the sole responsibility of the contractor.

D. Contractor shall provide verification that asphalt mix temperature meets the requirements of this specification at time of application.

E. Contractor shall be solely responsible for all subgrades built. Any repairs resulting from inadequate compaction are the responsibility of the contractor.

F. Sieve analysis from testing laboratories identifying rock/sand percentages within the asphalt mix shall have a testing date within 90 days of contract signing.

G. Sieve analysis from a testing laboratory identifying rock/sand percentages within the class 2 aggregate base rock shall have a testing date within 90 days of contract signing.

1.4 SUBMITTALS

A. Refer to Section 013300.

B. Manufacturer's Data: Submit list and complete descriptive data of all products proposed for use. Include manufacturer's specifications, published warranty or guarantee, installation instructions, and maintenance instructions.

1.5 WARRANTY

A. Refer to General Conditions and Section 017836.

1.6 REFERENCES AND STANDARDS

A. ANSI/ASTM D698-00 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 lb (2.49 Kg) Rammer and 12 inch (304.8 mm) Drop.

B. ANSI/ASTM D1556-00 - Test Method for Density of Soil in Place by the Sand-Cone Method.

C. ANSI/ASTM D1557-02 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10 lb. (4.54 Kg) Rammer and 18 inch (457 mm) Drop.

D. ANSI/ASTM D 3017-05 Test Methods for Moisture Content of Soils and Soil-Aggregate Mixture by Nuclear Methods (Shallow Depth).

E. ANSI/ASTM D 4318-05 Test Method for Liquid Limit, Plastic Limit, and Plasticity Limit.

F. CALTRANS Standard Specifications.

G. CAL-OSHA, Title 8, Section 1590 (e).

H. Any work within the street, highway or right-of-way shall be performed in accordance with the requirement of the governmental agencies having jurisdiction, and shall not begin until all of those governing authorities have been notified.

1.7 DELIVERY, STORAGE AND HANDLING

A. Transport, store and handle in strict accord with the local jurisdiction.

B. Make delivery to job when notified by Contractor verifying that the job is ready to receive the work of this Section and that arrangements have been made to properly store, handle and protect such materials and work.

1.8 PROJECT CONDITIONS

A. Environmental Requirements:
   1. Base Course: Do not lay base course on muddy subgrade, during wet weather, or when atmospheric temperature is below 40 degrees F.
   2. Asphalt Surfacing: Do not apply asphaltic surfacing on wet base, during wet weather, or when atmospheric temperature is below 50 degrees F.

1.9 EXISTING SITE CONDITIONS

A. Contractor shall acquaint himself with all site conditions. If unknown active utilities are encountered during work, notify Architect promptly for instructions. Failure to notify will make Contractor liable for damage to these utilities arising from Contractor's operations

subsequent to discovery of such unknown active utilities.

1.10 PROTECTION

A. Adequate protection measures shall be provided to protect workmen and passers-by on and off the site. Adjacent property shall be fully protected throughout the operations. Blasting will not be permitted. Prevent damage to adjoining improvements and properties both above and below grade. Restore such improvements to original condition should damage occur. Replace trees and shrubs outside building area disturbed by operations.

B. In accordance with generally accepted construction practices, the Contractor shall be solely and completely responsible for working conditions at the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and shall not be limited to normal working hours.

C. Any construction review of the Contractor's performance conducted by the owner's representative is not intended to include review of the adequacy of the Contractor's safety measures, in, on, or near the construction site.

D. Surface Drainage: Provide for surface drainage during period of construction in manner to avoid creating nuisance to adjacent areas. The contractor shall make a reasonable effort on a daily basis to keep all excavations and the site free from water during entire progress of work, regardless of cause, source, or nature of water.

E. Adjacent streets and sidewalks shall be kept free of mud, dirt or similar nuisances resulting from earthwork operations.

F. The site and adjacent influenced areas shall be watered as required to suppress dust nuisance. Dust control measures shall be in accordance with the local jurisdiction.

1.11 SEASONAL LIMITS

A. No fill material shall be placed, spread or rolled during unfavorable weather conditions. When work is interrupted by rains, fill operations shall not be resumed until field tests indicate that moisture content and density of fill are satisfactory.

1.12 TESTING

A. General: Refer to Section 014000 – Quality Requirements.

B. Geotechnical Engineer: Owner is retaining a Geotechnical Engineer to determine compliance of fill with Specifications, and to direct adjustments in fill operations. Costs of Geotechnical Engineer will be borne by Owner; except those costs incurred for re-tests or re-inspection will be paid by Owner and backcharged to Contractor.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Sterilant: Soil sterilizer shall be CIBA GEIGY's Pramatol 25-E, Treflan EC or Thompson-Hayward Casoron.

1. Soil sterilizer shall be applied in strict accordance with manufacturer's instructions.

B. Base Course Aggregate: State Specifications, Section 26, Class 2 aggregate base (3/4" max.).

C. Asphalt Binder: Steam-refined paving asphalt conforming to State Specifications, Section 92, viscosity grade PG 64-10. Asphalt binder additives for WMA per Caltrans approved list of manufacturer's.

D. Liquid Asphalt Tack Coat: Per CALTRANS section 94.

E. Surface Course Aggregate: Mineral aggregates for Type "B" asphalt concrete, conforming to State Specifications 39-2.02, Type B, ½" maximum, medium grading. 3/8" maximum grading at Playcourt.

F. Seal Coat: shall be a pre-mixed asphalt emulsion blended with select fillers and fibers such as:
1. "Park-Top No. 302", Western Colloid Products.
2. "OverKote", Reed and Gram.
3. "Drivewalk", Conoco Oil.

G. Pavement Marking: Colors as directed by Architect. Colors of painted traffic stripes and pavement markings must comply with ASTM D 6628.

1. Waterborne traffic line - colors white, yellow and red, State specification PTWB-01R3.
2. Waterborne traffic line for the international symbol of accessibility and other curb markings – blue, red and green, Federal specification TT-P-1952F.

H. Precast Concrete Bumpers: 3000 psi at 28 day minimum strength; 48" length unless otherwise indicated; provide with steel dowel anchors and concrete epoxy.

I. Pavement Epoxy; K-Lite; Ktepx-590; Ennis Epoxy HPS2 or an approved equal.

J. Crack Filler;
1. Cracks up to ½": QPR model CAR08, 10oz asphalt crack filler; Star STA-FLEX Trowel Grade crack filler or approved equal.
2. Cracks ¼" – 1": "Docal 1100 Viscolastic, distributed by Conoco, Inc., Elk Grove, CA, (916) 685-9253, or approved equal.
3. Cracks greater than 1": Hot Mix, Topeka.

K. Reclaimed Asphalt Paugment (RAP). HMA Type A or Type B may be produced using RAP providing it does not exceed 15% of the aggregate blend.

2.2 MIXES

A. General: Plant mixed conforming to State Specifications, Section 39, Type B, ½"

maximum, medium grading. 3/8" maximum grading shall be used at hardcourt.

B. Temperature of Hot Mix Asphalt: Not less than 275 degrees F nor more than 325 degrees F when added to aggregate.

C. Temperature of Hot Mix Aggregate: Not less than 250 degrees F nor more than 325 degrees F when asphalt is added.

D. Temperature of Hot Mix Asphalt Concrete: Asphalt shall be not less than 285 degrees at time of application, nor more than 350 degrees. Asphalt not meeting the required temperature shall not be used.

E. Temperature of Warm Mix Asphalt: Mixing and placement; Per the approved manufactures heat range recommendations for mixing and placement.

PART 3 - EXECUTION

3.1 EXAMINATION OF CONDITIONS

A. Conditions of Work in Place: Subsurfaces which are to receive materials specified under this Section shall be carefully examined before beginning work hereunder, and any defects therein shall be reported, in writing, to the Architect. Work shall not be started until such defects have been corrected. Starting of work shall imply acceptance of conditions as they exist.

3.2 PREPARATION

A. Sub-Grade: Clean, shape and compact to hard surface free from elevations or depressions exceeding 0.05' in 10' from true plan. Compact per Section 310000. Compaction and moisture content shall be verified immediately prior to placement of aggregate base. Proof roll subbase in presence of geotechnical engineer prior to placement of aggregate base.

B. Cleaning: Existing surfaces and new surface shall be clean of all dirt, sand, oil or grease. All cracks shall be cleaned and free of all debris and vegetation. Hose down entire area with a strong jet of water to remove all debris.

3.3 INSTALLATION

A. Asphalt Paving:

1. Base Course: Install in accord with State Specifications, Section 26. Compact to relative compaction of not less than 95%, ASTM D1557. The material shall be deposited on the subgrade in such a manner as to provide a uniform section of material within five percent tolerance of the predetermined required depth. Deposition will be by spreader box or bottom dump truck to prevent segregation of the material. The material so deposited on the subgrade shall have sufficient moisture which, in the opinion of the Architect is adequate to prevent excessive segregation. It shall then be immediately spread to its planned grade and cross

section. Undue segregation of material, excessive drifting or spotting of material will not be permitted. If in the opinion of the site geotechnical engineer, the material is unsuitably segregated, it shall be removed or completely reworked to provide the desired uniformity of the material.

a. Moisture content and compaction of base material shall be tested immediately prior to placement of asphalt paving.

2. Sterilant: Apply specified material at manufacturer's recommended rate. Applicator of sterilant material shall be responsible for determining location of all planter areas. Apply specified material over entire base course area just prior to application of asphalt. Follow manufacturer's printed directions.
3. Liquid Asphalt Tack Coat: Apply as "tack coat" to all vertical surfaces of existing paving, curbs, walks, and construction joints in surfacing against which paving is to be placed.
4. Asphalt Concrete Surface Course:
   a. Comply with State Specifications, 39-6 except as modified below.
      1) Final gradation shall be smooth, uniform and free of ruts, humps, depressions or irregularities, with a minimum density of 91% of the theoretical maximum specific gravity determined by California Test Method #309. Maximum variation 1/8 inch in 10' when measured with steel straightedge in any one direction. Test paved areas for proper drainage by applying water to cover area. Correct portions that do not drain properly by patching with plant mix. In no case shall accessible parking spaces or loading and unloading areas exceed 2% slope in any direction.
      2) Asphalt material shall be delivered to the project site in a covered condition to maintain acceptable temperature. Onsite inspector shall verify temperature of asphalt upon truck arrival to the site.
5. Placement and adjustment of Frames, Covers, Boxes and Grates: The Contractor shall set and adjust to finish grade all proposed and existing frames, covers, boxes, and grates of all manholes, drop inlets, drain boxes, valves, cleanouts, electrical boxes and other appurtenant structures prior to placement of asphaltic concrete.
6. Water Testing: All paved areas shall be water tested, to check drainage, in the presence of the project inspector prior to placement of seal coat. The surface of asphalt paving shall not vary more than 1/8 inch above or below the grade established on the plans. If variations in grade are present, they will be corrected by overlaying paving and/or pavement removal and replacement as directed by the Architect.
7. Patching: Cut existing paving square and plumb at all edges to be joined by new paving. In trenches; grind existing asphalt on each side of trench 3" wide x ½ the depth of the section. Apply tact coat to vertical surfaces before installing new work. Warp carefully to flush surface, with seal over joints, and feather edge. Sawcut, remove and patch existing paving where cutting is necessary for installation of piping or conduits under Divisions 2, 15 and 16.

B. Seal Coat:

1. Seal coat shall be applied no sooner than 30 days from time of asphalt placement, no exceptions.
2. Surface Preparation: surface and cracks shall be clean of all dirt, sand, oil or grease. All cracks shall be filled to a level condition after curing. Make multiple fill

applications until a level condition is achieved. Failure to do so will be the reason for rejection. Hose down entire area with a strong jet of water to remove all debris. Remove soft, loose, or otherwise damaged areas of asphalt concrete to full depth of damage and replace with compacted hot mix asphalt concrete as specified herein. Minor holes and imperfections may be patched using hot mix asphalt or mastic using sand/SS-1-H. Use wire brush for removal of oil and grease; prime with shellac or synthetic resin as recommended by manufacturer of pavement sealer material.

3. Seal Coat Seal Application: Thoroughly mix materials and apply in the presence of the onsite inspector. Failure to do so will be cause for rejection. Apply in accordance with manufacturer's written instructions.
   a. The minimum application rate for each applied coat shall be 30gals per 1000 sq. ft. Two coats of sealcoat will be required.
   b. Clean-Up and Precautions: As recommended by pavement sealer material manufacturer.

C. Pavement Marking: pavement markings shall be done only after the seal coat has thoroughly dried. Existing surfaces to be striped with traffic paint shall be cleaned of dust, dirt, grime, oil, rust or other contaminants which will impair the quality of work or interfere with proper bond of paint coats. Surfaces shall be thoroughly cleaned by whatever means necessary that will satisfactorily accomplish the purpose without damage to asphalt concrete. Provide measured layouts, temporary markings, templates, and other means necessary to provide required marking. Prepare and apply paint in accordance with manufacturer's instructions; paint shall be applied by spray and shall achieve complete coverage free from voids and thin spots. Where indicated on the Drawings, paint parking stall strips, lettering, arrows, accessible symbols, playfield markings, etc. on asphalt concrete paving. Paint strips shall be 4 inches wide (except otherwise indicated) and applied with two (2) coats of herein specified Traffic Line Paint; white (except as otherwise specified or indicated).

1. Paints shall be delivered to the site in unopened containers.
   a. Paint shall not be diluted, or watered down.
   b. Paint shall be applied in 10-12 wet mil thickness (4-6 mil dried). Each coat thickness shall be verified by the project inspector.
2. International Accessible Symbol: Symbol shall be white figures on a blue background. Blue shall be equal to color No. 15090 in Fed. Std. 595c. Lines and symbols shall be accurately formed and true to line and form; lines shall be straight and uniform in width. Painted edges shall be clean cut and free from raggedness, and corners shall be cut sharp and square. Tolerances: Apply striping within a tolerance 1/2 inch in 50 feet. Apply markings and striping to widths indicated with a tolerance of 1/4 inch on straight sections and 1/2 inch on curved sections.

D. Colors: As directed by Architect

E. Precast Concrete Bumpers: Install in location where shown, using steel rebar dowels, and epoxy.

3.4 DEFECTIVE ASPHALT;

Defective asphalt is as described below.

A. Exposed rock pockets on the finished surface that lack the # 8- #200 fines that is required per the sieve analysis.

B. Asphalt not placed to the design grades.

C. Asphalt that ponds water.

D. Asphalt that was compacted below the minimum required temperature and is cracked.

E. Asphalt that fails to meet the minimum compaction requirements.

F. Asphalt that lacks the minimum thickness required per plan.

G. New asphalt contaminated by a petroleum product, or spilled paint.

H. Asphalt that has depressions, cracks, scored divits from dumpster wheels, heavy equipment use, heavy construction products,

I. Asphalt placed on pumping, unstable sub-grades.

3.5 CLEANING

A. Refer to Section 017400.

B. Upon completion of work of this Section promptly remove from the working area all scraps, debris and surplus material of this Section.

C. Clean excess material from surface of all concrete walks and utility structures.

END OF SECTION

SECTION 32 13 18
Cement and concrete for exterior improvements

PART 1 - General

1.1 SECTION INCLUDES

A. Materials for portland cement concrete

B. Aggregate and aggregate grading for portland cement concrete

C. Water for portland cement concrete

D. Admixtures for portland cement concrete

E. Proportioning for portland cement concrete

F. Mixing and transporting portland cement concrete

G. Formwork for cast in place portland cement concrete

H. Embedded materials for portland cement concrete

I. Steel reinforcement for portland cement concrete

J. Placing and finishing portland cement concrete

K. Curing portland cement concrete

L. Protecting portland cement concrete

1.2 RELATED SECTIONS

A. Section 32 12 16, Asphalt Paving

B. Section 32 13 13, Concrete Pavement

1.3 RELATED DOCUMENTS

A. ASTM Standards

1. A615, Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement

2. A1064, Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete

3. C94, Standard Specification for Ready-mixed Concrete

4. C150, Standard Specification for Portland Cement

5. C260, Standard Specification for Air-Entraining Admixtures for Concrete

6. C309, Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete

7. C494, Standard Specification for Chemical Admixtures for Concrete.

8. C618, Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for use in Portland Cement

9. C1017, Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete

10. D1557, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort

11. D1751, Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)

B. Caltrans Standard Specifications, 2018

1. Section 51: Concrete Structures

2. Section 73: Concrete Curbs and Sidewalks

3. Section 90: Concrete

1.4 DEFINITIONS

A. ASTM: American Society for Testing and Materials

1.5 SUBMITTALS

A. Concrete Mix Design: Have all concrete mixes designed by a testing laboratory and approved by the Consulting Engineer. Conform all mixes to the applicable building code requirement, regardless of other minimum requirements listed herein or on the Plans. Submit mix designs for review before use. Show proportions and specific gravities of cement, fine and coarse aggregate, and water and gradation of combined aggregates.

B. Reinforcing Steel Shop-Drawings

1.6 QUALITY ASSURANCE

A. Concrete shall be subject to quality assurance in accordance with Section 90 of the Caltrans Standard Specifications.

1. Slump tests: Have available, at job site, equipment required to perform slump tests. Make one slump test for each cylinder sample, from same concrete batch. Allowable maximum slump shall be 4 inches for walls and 3 inches for slabs on grade and other work.

B. Certifications:

1. Provide Owner's Representative at the time of delivery with certificates of compliance signed by both Contractor and Supplier containing the following statements:

a. Materials contained comply with the requirements of the Contract Documents in all respects.

b. Proportions and mixing comply with the design mix approved by the Consulting Engineer. Design mix shall have been field tested in accordance with the herein requirements of the Caltrans Standard Specifications and produces the required compressive strength under like conditions.

c. Statement of type and amount of any admixtures.

2. Provide Owner's Representative, at time of delivery, with certified delivery ticket stating volume of concrete delivered and time of mixing, or time of load-out in case of transit mixers.

1.7 DESIGNATION

A. General: Whenever the 28 day compressive strength is designated herein or on the Plans is 3,600 psi or greater, the concrete shall considered to be designated by compressive strength. The 28 day compressive strength shown herein or on the plans which are less than 3,600 psi are shown for design information only and are not considered a requirement for acceptance of the concrete. Whenever the concrete is designated by class or as minor concrete herein or on the Plans, the concrete shall contain the cement per cubic yard shown in Section 90-2 of the Caltrans Standard Specifications.

B. Unless specified otherwise herein or on the Plans, portland cement concrete for curbs, gutters, sidewalks and their appurtenances such as island paving, curb ramps and driveways, shall be minor concrete as specified in Section 90-2 of the Caltrans Standard Specifications.

PART 2 - PRODUCTS

2.1 PORTLAND CEMENT

A. General: Type II or Type V cement conforming to the requirements of ASTM C150. Contractor may substitute pozzolan for portland cement in amounts up to 15% of the required mix unless high early strength concrete is specified. Pozzolan shall consist of Class F Fly Ash meeting the requirements of ASTM C618.

B. Color: Provide a coloring equivalent to ¼ pound of lampblack per cubic yard. Add to the concrete at the central mixing plant.

2.2 AGGREGATE AND AGGREGATE GRADATION

A. General: Fine and coarse aggregates shall be ¾ inch maximum size; clean and crushed aggregate free of materials which may cause staining. Aggregates shall conform to the requirements of section 90-1.02C of the Caltrans Standard Specifications.

B. Aggregate Size and Gradation: Conform to the requirements of section 90-1.02C(4)(d) of the Caltrans Standard Specifications for 1 inch maximum combined aggregate.

2.3 WATER

A. General: Water shall be clean, free from injurious amounts of oil, alkali, organic matter, or other deleterious material, and not detrimental to concrete per ASTM C94. Water shall conform to the requirements of section 90-1.02D of the Caltrans Standard Specifications, for mixing and curing portland cement concrete and for washing aggregates.

2.4 CHEMICAL ADMIXTURES

A. Provide admixtures certified by manufacturer to be compatible with other admixtures and to contain no more than 0.1 percent water-soluble chloride ions by mass of cementitious material. Admixtures shall conform to the requirements of section 90-1.02E of the Caltrans Standard Specifications and as noted herein or on the Plans.

1. Air-Entraining Admixture: ASTM C260/C260M

2. Water-Reducing Admixture: ASTM C494/C494M, Type A

3. Retarding Admixture: ASTM C494/C494M, Type B

4. Water-Reducing and Retarding Admixture: ASTM C494/C494M, Type D

5. High-Range, Water-Reducing Admixture: ASTM C494/C494M, Type F

6. High-Range, Water-Reducing and Retarding Admixture: ASTM C494/C494M, Type G

7. Plasticizing and Retarding Admixture: ASTM C1017/C1017M, Type II

2.5 CLASSIFICATION OF PORTLAND CEMENT CONCRETE

A. Unless specified otherwise herein or on the Plans, portland cement concrete for the following items shall be designated as follows:

1. Curbs, Gutters, and Sidewalks: Minor concrete.

2. Cast in Place Concrete Pipe: The concrete shall consist of a minimum of 564 pounds of portland cement per cubic yard of concrete.

3. Thrust Blocks: The concrete shall have a minimum compressive strength of 3,000 psi.

4. Sign and Fence Footings: The concrete shall consist of a minimum of 376 pounds of portland cement per cubic yard of concrete.

5. Water, Storm, and Sanitary Structures: The concrete shall consist of a minimum of 564 pounds of portland cement per cubic yard of concrete.

2.6 EXPANSION JOINT MATERIAL

A. Material for expansion joints in portland cement concrete improvements shall be premolded expansion joint fillers conforming to the requirements of ASTM D1751. Expansion joint material shall be shaped to fit the cross section of the concrete prior to being placed. Suppliers certificates showing conformance with this specification shall be delivered with each shipment of materials delivered to the job site. Unless specified otherwise herein or on the Plans, expansion joint thickness shall be as follows:

1. Concrete Slope Protection, Gutter Lining, Ditch Lining and Channel Lining: ½ inch

2. Structures: As indicated

2.7 REINFORCEMENT AND DOWELS

A. Bar reinforcement for concrete improvements shall be deformed steel bars of the size or sizes called for on the plans conforming to the requirements of ASTM A615 for Grade 60 bars. Size and shape for bar reinforcement shall conform to the details shown or called for on the Plans. Substitution of wire mesh reinforcement for reinforcing bars will not be allowed.

B. Slip dowels, where noted or called for on the Plans or detail drawings shall be smooth billet-steel bars as designated and conforming to the requirements of ASTM A615 for Grade 60 bars. Ends of bars inserted in new work shall be covered with a cardboard tube sealed with cork; no grease or oil shall be used.

C. Mesh for reinforcement for concrete improvements shall be cold drawn steel wire mesh of the size and spacing called for on the plans conforming to the

requirements of ASTM A1064. Size and extent of mesh reinforcement shall conform to the details shown or called for on the plans.

D. Tie wire for reinforcement shall be eighteen (18) gauge or heavier, black, annealed conforming to the requirements of ASTM A1064.

E. Suppliers certificates showing conformance with this specification shall be delivered with each shipment of materials delivered to the job site.

2.8 CURING AND SEALING MATERIALS

A. Curing Compounds:

1. Concrete surface repellent-vertical and/or flatwork: Repello surface treatment, invisible chemical treatment barrier system.

2. Curing and sealing-exterior: Colorcure concrete cureseal manufactured by L.M. Scofield Company or equal. Color-matched, water-based curing and sealing compound that complies with ASTM C309.

3. Color Conditioned Decorative Portland Cement Concrete: LITHOCHROME colorwax manufactured by L.M. Scofield Company or equal. Color-matched, water-based curing and sealing compound that complies with ASTM C309.

2.9 FORMS

A. Conform to the requirements of Section 73-1.03C and Section 90-1.03B(5) of the Caltrans Standard Specifications.

B. Tolerance: Not to deviate more than ¼ inch in 10 feet in grade and alignment.

2.10 PRECAST CONCRETE STRUCTURES

A. Conform to the following Sections of Caltrans Standard Specifications:

1. 51-7, Minor Structures

2. 70-5.02, Flared End Sections

2.11 CONCRETE VEHICULAR PAVEMENT

A. General: See Section 32 13 13, Concrete Pavement.

PART 3 - EXECUTION

3.1 STRUCTURAL EXCAVATION

A. Structural excavation may be either by hand, or by machine and shall be neat to the line and dimension shown or called for on the plans. Excavation shall be sufficient width to provide adequate space for working therein, and comply with CAL-OSHA requirements.

B. Where an excavation has been constructed below the design grade, refill the excavation to the bottom of the excavation grade with approved material and compact in place to 95% of the maximum dry density as determined by ASTM D1557.

C. Remove surplus excavation material remaining upon completion of the work from the job site, or condition it to optimum moisture content and compact it as fill or backfill on the site.

3.2 BRACING AND SHORING

A. Conform to California and Federal OSHA requirements.

B. Place and maintain such bracing and shoring as may be required to support the sides of the excavations for the proper protection of workmen; to facilitate the work; to prevent damage to the facility being constructed; and to prevent damage to adjacent structures or facilities. Remove all bracing and shoring upon completion of the work.

C. Be solely responsible for all bracing and shoring and, if requested by the Owner's Representative, submit details and calculations to the Owner's Representative. The Owner's Representative may forward the submittal to the Consulting Engineer for their review. The Contractor's submittal shall include the basic design, assumed soils conditions and estimation of forces to be resisted, together with plans and specifications of the materials and methods to be used, and shall be prepared by a civil engineer or structural engineer registered in California. No excavations related to the proposed facility shall precede a response to the submittal by the Owner's Representative.

D. Be solely responsible for installing and extracting the sheathing in a manner which will not disturb the position or operation of the facility being constructed or adjacent utilities and facilities.

3.3 PLACING CONCRETE FORMS

A. Form concrete improvements with a smooth and true upper edge. Side of the form with a smooth finish shall be placed next to concrete. Construct forms rigid enough to withstand the pressure of the fresh concrete to be placed without any distortion.

B. Thoroughly clean all forms prior to placement and coat forms with an approved form oil in sufficient quantity to prevent adherence of concrete prior to placing concrete.

C. Carefully set forms to the alignment and grade established and conform to the required dimensions. Rigidly hold forms in place by stakes set at satisfactory intervals. Provide sufficient clamps, spreaders and braces to insure the rigidity of the forms.

D. Provide forms for back and face of curbs, lip of gutters and edge of walks, valley gutters or other surface slabs that are equal to the full depth of the concrete as shown, noted or called for on the Plans. On curves and curb returns provide composite forms made from benders or thin planks of sufficient ply to ensure rigidity of the form.

3.4 PLACING STEEL REINFORCEMENT

A. Bars shall be free of mortar, oil, dirt, excessive mill scale and scabby rust and other coatings of any character that would destroy or reduce the bond. All bending shall be done cold, to the shapes shown on the plans. The length of lapped splices shall be as follows:

1. Reinforcing bars No. 8, or smaller, shall be lapped at least 45 bar diameters of the smaller bar joined, and reinforced bars Nos. 9, 10, and 11 shall be lapped at least 60 bar diameters of the smaller bars joined, except when otherwise shown on the plans.

2. Splice locations shall be made as indicated on the plans.

B. Accurately place reinforcement as shown on the plans and hold firmly and securely in position by wiring at intersections and splices, and by providing precast mortar blocks or ferrous metal chairs, spacers, metal hangers, supporting wires, and other approved devices of sufficient strength to resist

crushing under applied loads. Provide supports and ties of such strength and density to permit walking on reinforcing without undue displacement.

C. Place reinforcing to provide the following minimum concrete cover:

1. Surfaces exposed to water: 4 inches.

2. Surfaces poured against earth: 3 inches.

3. Formed surfaces exposed to earth or weather: 2 inches.

4. Slabs, walls, not exposed to weather or earth: 1 inch.

D. Minimum spacing, center of parallel bars shall be two and one half (2 ½) times the diameter of the larger sized bar. Accurately tie reinforcing securely in place prior to pouring concrete. Placing of dowels or other reinforcing in the wet concrete is not permitted.

3.5 MIXING AND TRANSPORTING PORTLAND CEMENT CONCRETE

A. Transit mix concrete in accordance with the requirements of ASTM Designation C94. Transit mix for not less than ten (10) minutes total, not less than three (3) minutes of which shall be on the site just prior to pouring. Mix continuous with no interruptions from the time the truck is filled until the time it is emptied. Place concrete within one hour of the time water is first added unless authorized otherwise by the Owner's Representative.

B. Do not hand mix concrete for use in concrete structures.

3.6 PLACING PORTLAND CEMENT CONCRETE

A. Thoroughly wet subgrade when concrete is placed directly on soil. Remove all standing water prior to placing concrete.

B. Do not place concrete until the subgrade and the forms have been approved.

C. Convey concrete from mixer to final location as rapidly as possible by methods that prevent separation of the ingredients. Deposit concrete as nearly as possible in final position to avoid re-handling.

D. Place and solidify concrete in forms without segregation by means of mechanical vibration or by other means as approved by the Owner's Representative.

Continue vibration until the material is sufficiently consolidated and absent of all voids without causing segregation of material. The use of vibrators for extensive shifting of fresh concrete will not be permitted.

E. Concrete in certain locations may be pumped into place upon prior approval by the Owner's Representative. When this procedure requires redesign of the mix, such redesign shall be submitted for approval in the same manner as herein specified for approval of design mixes.

3.7 PLACING ACCESSORY MATERIALS

A. Place water stops and other items required to be embedded in of portland cement concrete structures at locations shown or required in accordance with Section 51-2.04 of the Caltrans Standard Specifications unless otherwise specifically noted or called for on the Plans.

B. Curing Compounds:

1. Regular Portland Cement Concrete: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.

2. Color Conditioned Decorative Portland Cement Concrete: Apply in accordance with the manufacturer's written instructions.

3.8 FORM REMOVAL

A. Remove forms without damage to the concrete. Remove all shores and braces below the ground surface, before backfilling.

B. Do not backfill against concrete until the concrete has developed sufficient strength to prevent damage.

C. Leave forms for cast-in-place walls in place at least 72 hours after pouring.

D. Leave edge forms in place at least 24 hours after pouring.

3.9 FIELD QUALITY CONTROL

A. Finish subgrade for concrete improvements shall be subject to approval prior to placement of forms.

B. No concrete shall be placed prior to approval of forms.

C. Concrete improvements constructed shall not contain "bird baths" or pond water and shall be smooth and ridge free.

D. Conform the finish grade and cross section of concrete improvements to the design grades and cross sections.

E. Variation of concrete improvements from design grade and cross section as shown or called for on the plans shall not exceed the tolerances ACI 117 and as follows:

1. Elevation: ¼ inch.

2. Thickness: Plus 3/8 inch, minus 1/4 inch.

3. Surface: Gap below 10 foot long, unleveled straightedge not to exceed 1/4 inch.

4. Lateral Alignment and Spacing of Tie Bars and Dowels: 1 inch.

5. Vertical Alignment of Tie Bars and Dowels: 1/4 inch.

6. Alignment of Tie-Bar End Relative to Line Perpendicular to Pavement Edge: 1/2 inch.

7. Alignment of Dowel-Bar End Relative to Line Perpendicular to Pavement Edge: Length of dowel 1/4 inch per 12 inches.

8. Joint Spacing: 3 inches, unless otherwise indicated.

9. Contraction Joint Depth: Plus 1/4 inch, no minus.

10. Joint Width: Plus 1/8 inch, no minus.

3.10 RESTORATION OF EXISTING IMPROVEMENTS

A. Replace in kind all pavement or other improvements removed or damaged due to the installation of concrete improvements.

B. Remove, landscaping or plantings damaged or disturbed due to the installation of concrete improvements. Replace in kind.

END OF SECTION 32 13 18

SECTION 32 16 00
SITE CONCRETE

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. The Section describes the requirements for providing portland cement concrete paving, including accessibility ramps, sidewalks, accessible routes of travel, vehicular travel, drain structures, sewer structures, thrust blocks and for other non-structural or non-vehicular applications.

1.2 INCLUSION OF OTHER CONTRACT DOCUMENTS

A. The General Conditions, Supplementary Conditions and Division 1 are fully applicable to this Section, as if repeated herein.

1.3 RELATED WORK SPECIFIED ELSEWHERE

A. Section 310000, Earthwork.

1.4 QUALITY ASSURANCE

A. Use only new materials and products.

B. Use materials and products of one manufacturer whenever possible.

C. All materials, components, assemblies, workmanship and installation are to be observed by the Owner's Inspector of Record. Work not so inspected is subject to uncovering and replacement.

D. Sieve analysis from testing laboratories identifying rock/sand percentages within the concrete mix; or class 2 aggregate base shall have the current project name and project location identified on the report. Outdated analytical reports greater than 90 days old will not be accepted

1.5 SUBMITTALS

A. Refer to Section 133300.

B. Manufacturer's Data: Submit list and complete descriptive data of all products proposed for use. Include manufacturer's specifications, published warranty or guarantee, installation instructions, and maintenance instructions.

C. Materials list: Submit to the Architect a complete list of all materials proposed to be used in this portion of the work. Submitted items should include but are not limited to sand, gravel, admixtures, surface treatments, coloring agents, sealers, fibers, cast-in-place accessories, forming and curing products and concrete mix designs.

D. With concrete submittal, provide documented history of mix design performance.

1.6 WARRANTY

A. Refer to General Conditions.

1.7 REFERENCES AND STANDARDS

A. California Building Code, 2019 edition.

B. ACI Standards, ACI 211.1, ACI 318-14, ACI 302, IR-04, ACI 301-16, ACI 305R-10, ACI 306R-16, ACI 308-16.

C. ASTM C-94, Specification for Ready-Mixed Concrete.

D. Concrete Reinforcing Steel Institute (CRSI) Manual of Standard Practice (latest edition).

E. ASTM – American Society for Testing and Materials.

1.8 DELIVERY, STORAGE AND HANDLING

A. Deliver undamaged products to job in manufacturer's sealed containers and/or original bundles with tags and labels intact.

B. Store materials in protected, dry conditions off of ground and in areas so as to not interfere with the progress of the work.

C. Transport, store and handle in strict accord with the manufacturer's written recommendations.

D. Make delivery to job when notified by Contractor verifying that the job is ready to receive the work of this Section and that arrangements have been made to properly store, handle and protect such materials and work.

E. Store cement in weather tight building, permitting easy inspection and identification. Protect from dampness. Lumpy or stale cement will be rejected.

F. Aggregates: Prevent excessive segregation, or contamination with other materials or other sizes of aggregate. Use only one supply source for each aggregate stock pile.

1.9 TESTING

A. General: Refer to Section 014000 – Quality Requirements.

B. Cement and Reinforcing shall be tested in accordance with CBC Section 1910A. Testing of reinforcing may be waived in accordance with Section 1910A.2 when approved by the Structural Engineer and DSA.

1.10 ADEQUACY AND INSPECTION

A. Design, erect, support, brace and maintain formwork and shoring to safely support all vertical and lateral loads that might be applied until such loads can be carried by concrete.

B. Notify Inspector, Architect and DSA at least 48 hours prior to placing of concrete.

1.11 PROTECTION

A. Finish surfaces shall be protected at all times from concrete pour. Inspect forming against such work and establish tight leak-proof seal before concrete is poured. Finish work damaged, defaced or vandalized during the course of construction shall be replaced by

contractor at contractor expense.

1.12 FIELD MEASUREMENTS

A. Make and be responsible for all field dimensions necessary for proper fitting, slopes and completion of work. Report discrepancies to Architect before proceeding.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Cement: Portland cement, ASTM C150, Type II, per ACI 318-14 Section 26.4.

B. Concrete Aggregates: Normal weight aggregates shall conform to ASTM C33, except as modified by this section. Combined grading shall meet limits of ASTM C33. Lightweight aggregate shall conform to ASTM C330, suitably processed, washed and screened, and shall consist of durable particles without adherent coatings.

C. Water: Clean and free from deleterious amounts of acids, alkalis, scale, or organic materials and per ACI 318-14 Section 26.4.1.3.1.

D. Fly Ash: Western Fly Ash, conforming to ASTM C618 for Class N or Class F materials (Class C is not permitted). Not more than 15% (by mass) may be substituted for portland cement.

E. Water Reducing Admixture: Admixture to improve placing, reduce water cement ratio, and ultimate shrinkage may be used. Provide WRDA 64 by Grace Construction Products or approved equal. Admixture shall conform to ASTM C494 and ACI 318-14 Section 26.4.1.4.19(a). Such admixture must receive prior approval by the Architect, Structural Engineer, and the Testing Lab, and shall be included in original design mix.

F. Air-entraining Admixture: Daravair 1000 by Grace Construction Products or approved equal. Admixture must conform to ASTM C260 and ACI 318-14, section 26.4.1.4.

G. Surface Retarder (for exposed aggregate finishes): Rugasol-S by Sika Corporation or approved equal.

H. Form Coating: Material which will leave no residue on concrete surface that will interfere with surface coating, as approved by the Architect.

I. Reinforcement Bars: New billet steel deformed bars conforming to requirements of ASTM A615 or ASTM A706; Grade 60. Dowels for installation through expansion joints or construction joints to existing sidewalks or concrete features shall be smooth or shall be sleeved on one end for slippage.

J. Reinforcing supports: Galvanized metal chairs or spacers or metal hangers, accurately placed 3'-0" O.C.E.W. Staggered and each support securely fastened to steel reinforcement in place. Bottom bars in footings may be supported with 3" concrete blocks with embedded wire ties. Concrete supports without wire ties will not be allowed.

K. Truncated Domes: Vitrified Polymer Composite (VPC), Cast-In-Place Detectable/Tactile Warning Surface Tiles; "Armor-Tile", "Access Tile Tactile Systems", or approved equal. Tiles shall comply with Americans with Disabilities Act and the California Code of Regulations (CCR) Title 24, Part 2, Chapter 11B (dome spacing shall be 2.35"). Install tiles as recommended by manufacturer.

1. Color: As selected by the Architect.

L. Curing Compound (for exterior slabs only): Burke Aqua Resin Cure by Burke by Edoco, 1100 Clear by W.R. Meadows or accepted equal. Water based membrane-forming concrete curing compound meeting ASTM C 309 and C1315.

M. Concrete Bonding Agent: Weld-Crete by Larson Products Corp., Daraweld C by Grace Construction Products or accepted equal.

N. Patching Mortar: Meadow-Crete GPS, one-component, trowel applied, polymer enhanced, shrinkage-compensated, fiber reinforced, cementitious repair mortar for horizontal, vertical and overhead applications as manufactured by W.R. Meadows or accepted equal.

O. Non-shrink Grout: Masterflow 713 Plus by Master Builders or approved equal. Premixed,non-metallic, no chlorides, non-staining and non-shrinking per CRD-C621, Corps of Engineers Specification and ASTM C 1107, Grades B and C.

P. Aggregate Base: Class 2 AB per Caltrans specification section 26-1.02A.

Q. Expansion Joint Material: Preformed 3/8" fiber material, full depth of concrete section, with bituminous binder manufactured for use as concrete expansion joint material, as accepted by the Architect.

R. Joint sealant for expansion joints: Single component silicone sealant, Type S, ASTM D5893.

1. Reference Standard: ASTM C920, Grade P, Class 25, Use T.
2. Dow Corning 890-SL (self-leveling) Silicone, or accepted equal.
3. Dow Corning 888-NS (non-sagging) Silicone, at slopes exceeding 5%. May not be used at asphalt surfaces.
4. Color: Custom color as selected by Architect.

S. Pre- Formed plastic Expansion Joint; W.R. Meadows 3/8" "Snap Cap", Tex-Trude expansion joint cap, or an approved equal.

T. Adhesive Anchoring (Epoxy): Hilty HIT-HY 200 Safe Set, or approved equal.

2.2 CONCRETE DESIGN AND CLASS

A. Class "B": Concrete shall have 1" max. size aggregate, shall have 3000 psi min. at 28 day strength with a maximum water to cementitious ratio no greater than 0.50. Use for exterior slabs, including walks, vehicular paved surfaces, manhole bases, poured-in-place drop inlets, curbs, valley gutters, curb & gutter and other concrete of like nature.

B. Slump Limits: Provide concrete, at point of final discharge, of proper consistency determined by Test Method ASTM C143 with a slumps of 4" plus or minus 1".

C. Mix Design: All concrete used in this work will be designed for strength in accordance with provisions of ASI 318-14 Section 26.4. Should the Contractor desire to pump concrete, a modified mix design will need to be submitted for review. Fly ash may be used in concrete to improve workability in amounts up to 15% of the total cementitious weight.

D. Air Entrainment; Per the Local Jurisdiction minimum requirements, or 3% minimum.

2.3 MIXING OF CONCRETE

A. Conform to requirements of CBC, Chapter 19A.

B. All concrete shall be mixed until there is uniform distribution of material and mass is uniform and homogenous; mixer must be discharged completely before the mixer is recharged.

C. Concrete shall be Ready-mixed Concrete: Mix and deliver in accordance with the requirements set forth in ASTM C94 and ACI 301. Batch Plant inspection may be waived in accordance with CBC Section 1705A.3.3.1, when approved by Structural Engineer and DSA.

1. Approved Testing Laboratory shall check the first batching at the start of the work and furnish mix proportions to the Licensed Weighmaster.
2. Licensed Weighmaster to positively identify materials as to quantity and to certify to each load by ticket.
3. Ticket shall be transmitted to Project Inspector by truck driver with load identified thereon. Project Inspector will not accept load without load ticket identifying mix and will keep daily record of pours, identifying each truck, its load and time of receipt and will transmit two copies of record to DSA.
4. At end of project, Weighmaster shall furnish affidavit to DSA on form satisfactory to DSA, certifying that all concrete furnished conforms in every particular and to proportions established by mix designs.
5. Placement of concrete shall occur as rapidly as possible after batching and in a manner which will assure that the required quality of the concrete is maintained. In no case may concrete be placed more than 90 minutes from batch time.
6. Water may be added to the mix only if neither the maximum permissible water-cement ratio nor the maximum slump is exceeded. In no case shall more than 10 gallons of water shall be added to a full 9 yard load, or 1 gal. per yard on remaining concrete within the drum providing load tag indicates at time of mixing at plant will allow for additional water.

2.4 MATERIALS TESTING

A. Testing of concrete shall be performed per article 3.12 of this specification.

2.5 EQUIPMENT

A. Handling and mixing of concrete: Project Inspector may order removal of any equipment which in his opinion is insufficient or in any way unsuitable.

PART 3 - EXECUTION

3.1 APPROVAL OF FORMS AND REINFORCEMENTS

A. Forms and reinforcements are subject to approval by the Project Inspector. Before placing concrete, clean tools, equipment and remove all debris from areas to receive concrete. Clean all reinforcing and other embedded items off all coatings oil, and mud that may impair bond with concrete.

B. All reinforcing steel shall be adequately supported by approved devices on centers close enough to prevent any sagging.

C. All reinforcing bar lap splices shall be staggered a minimum of 5 ft.

D. Additional reinforcing steel shall be placed around all utility boxes, valve boxes, manhole frames and covers that are located within the concrete placements.

1. The bars shall be placed so that there will be a minimum of 1 ½" clearance and a maximum of 3" clearance. The reinforcing steel shall be placed mid-depth of concrete slab.

E. At all right angles or intersections of concrete walks, additional 2'x2' #5, 90 degree bars shall be added at all inside corners for additional crack control. The bars shall be placed 2" from concrete forms and supports at mid-depth of slab.

3.2 PROTECTION

A. Protect work and materials of this Section prior to and during installation, and protect the installed work and materials of other trades.

B. In the event of damage, make all repairs and replacements necessary to the approval of the Architect at no additional cost to the Owner.

C. Sub-Grade in vehicular concrete paved areas: Subgrade shall be clean, shaped and compact to hard surface free from elevations or depressions exceeding 0.05' in 10' from true plan. Compact per Section 310000. Compaction and moisture content shall be verified immediately prior to placement of concrete. Proof roll subbase in presence of geotechnical engineer prior to placement of aggregate base.

3.3 CLEANING

A. Reinforcement and all other embedded items at time of placing concrete to be free of rust, dirt oil or any other coatings that would impair bond to concrete.

B. Remove all wood chips, sawdust, dirt, loose concrete and other debris just before concrete is to be poured. Use compressed air for inaccessible areas. Remove all standing water from excavations.

3.4 FORMING

A. Form material shall be straight, true, sound and able to withstand deformation due to loading and effects of moist curing. Materials which have warped or delaminated, or require more than minor patching of contact surfaces, shall not be reused.

B. Build forms to shapes, lines, grades and dimensions indicated. Construct form work to maintain tolerances required by ACI 301. Forms shall be substantial, tight to prevent leakage of concrete, and properly braced and tied together to maintain position and shape. Butt joints tightly and locate on solid backing. Chamfer corners where indicated. Form bevels, grooves and recesses to neat, straight lines. Construct forms for easy removal without hammering, wedging or prying against concrete.

C. Space clamps, ties, hangers and other form accessories so that working capacities are not exceeded by loads imposed from concrete or concreting operations.

D. Build openings into vertical forms at regular intervals if necessary to facilitate concrete placement, and at bottoms of forms to permit cleaning and inspection.

E. Build in securely braced temporary bulkheads, keyed as required, at planned locations of construction joints.

F. Slope tie-wires downward to outside of wall.

G. Brace, anchor and support all cast-in items to prevent displacement or distortion.

H. During and immediately after concrete placing, tighten forms, posts and shores. Readjust to maintain grades, levels and camber.

I. Concrete paving, Curbs, Curb and Gutters, Ramps:
   1. Expansion Joints: Install at locations indicated, and so that maximum distance between joints is 20' for exterior concrete unless otherwise shown. Expansion joint material shall be full depth of concrete section. Recess for backer rod and sealant where required. Expansion joints shall not exceed ¼ inch depth measured from finish surface to top of felt or sealant, and ½ inch width.
   2. Curbs, Valley Gutter, and Curb & Gutter: Install expansion joints at 60' on center, except when placing adjacent to concrete walks, the expansion joints shall align with the expansion joints shown for the concrete walks. Expansion joint material shall be full depth of concrete section. Recess for backer rod and sealant will be required.
   3. Isolation Joints: 3/8" felt between walls and exterior slabs or walks so that paved areas are isolated from all vertical features, unless specifically noted otherwise on plans.
   4. Exterior Concrete Paving: Install expansion joints at 20' on center maximum, both directions, unless shown otherwise on plans.
   5. Ramps; whether shown or not all ramps shall have control joints and expansion joints.
      a. Control joints on ramps shall be aligned and be placed in between with the vertical posts for the handrails. The curbs, if required shall have control joints that align with the handrail posts.
      b. Expansion joints shall be placed at the upper, intermediate, and bottom landings.

3.5 FORM COATING

A. Before placement of reinforcing steel, coat faces of all forms to prevent absorption of moisture from concrete and to facilitate removal of forms. Apply specified material in conformance with manufacturer's written directions.

B. Before re-using form material, inspect, clean thoroughly and recoat.

C. Seal all cut edges.

3.6 INSTALLATION

A. General: Reinforcement shall be accurately placed at locations indicated on the drawings within required tolerances and providing required clearances. Reinforcement shall be secured prior to placement of concrete such that tolerances and clearances are maintained. Coverage shall be in accordance with Section 1907A.7 of the CBC. Keep a person on the job to maintain position of reinforcing as concrete is placed. Reinforcement must be in place before concreting is begun. Install dowels as shown on drawings. Give notice whenever pipes, conduits, sleeves, and other construction interferes with placement; obtain method of procedure to resolve interferences. All expansion and construction joints in concrete shall have dowels of size and spacing as shown, or as approved by Architect.

B. Placing Tolerances:

1. Per ACI 301 or CRSI/WCRSI Recommended Practice for Placing Reinforcing Bars, unless otherwise shown.
2. Clear distance between parallel bars in a layer shall be no less than 1", the maximum bar diameter not 1 ½ times the maximum size of coarse aggregate.

C. Splices:

1. General: Unless otherwise shown on drawings, splice top reinforcing at midspan between supports, splice bottom reinforcing at supports and stagger splices at adjacent splices 5 foot minimum. Bar laps shall be wired together. Reinforcing steel laps shall be as follows:
   a. Lap splices in concrete: Lap splice lengths shall not be less than 62 bar diameter for No. 5 bar, 56" minimum for No. 6 bars. No. 4 bar shall have a minimum of 24" splice. 93 bar diameters for No. 7 bars and larger.
   b. All splices shall be staggered at 5 feet minimum.

3.7 INSPECTION

A. Approval of reinforcing steel, after installation, must be received from Inspector 48 hrs. in advance of beginning of concrete placement operations.

B. Slope of concrete forms and finish condition shall be checked with a two foot (2') digital level.

3.8 PLACING OF CONCRETE

A. Adjacent finish surfaces shall be protected at all times during the concrete pour and finishing. Verify that all formwork is tight and leak-proof before concrete is poured. Finish work defaced during the concrete pour and finishing shall be replaced at no extra cost to the owner.

B. Transport concrete from mixer to place of final deposit as rapidly as practicable by methods which will prevent separation or loss of ingredients. Deposit as close as practicable in final position to avoid re-handling or flowing. Partially hardened concrete must not be deposited in work. Concrete shall not be wheeled directly on top of reinforcing steel.

C. Placing: Once started, continue concrete pour continuously until section is complete between predetermined construction joints. Prevent splashing of concrete onto adjacent forms or reinforcement and remove such accumulation of hardened or partially hardened concrete from forms or reinforcement before work proceeds in that area. Free fall of concrete shall not to exceed 4'-0" in height. If necessary, provide lower openings in forms to inject concrete and to reduce fall height.

D. Remove form spreaders as placing of concrete progresses.

E. Place footings as monolithic and in one continuous pour.

F. Keep excavations free of standing water, but moisture condition sub-grade before concrete placement.

G. Compacting: All concrete shall be compacted by mechanical vibrators. Concrete shall be thoroughly worked around reinforcement and embedded fixtures and into corners of

forms. Vibrating shall not be applied to concrete which has already begun to initially set nor shall it be continued so long as to cause segregation of materials.

H. Grout under column bearing plates: Dry pack with specified Non-shrink Grout, as recommended by manufacturer. Use as little water as practicable. Ram grout solid into place.

I. Concrete Flatwork:

1. All flatwork shall be formed and finished to required line and grades. Flatwork shall be true and flat with a maximum tolerance of 1/8" in 10' for flatness. Flatwork which is not flat and are outside of the maximum specified tolerances shall be made level by the Contractor at no additional expense to the Owner.
2. Thoroughly water and soak the flatwork subgrade as required to achieve required moisture content prior to the concrete pour. Provide damming as required to keep water within the formed area and to allow for proper saturation of the subgrade.
3. Concrete vibrator shall be used to assist concrete placement. Contractor shall have spare concrete vibrator on site during concrete placement.

J. Placing in hot weather: Comply with ACI 305R-10. Concrete shall not exceed 85 degrees F at time of placement. Concrete shall be delivered, placed and finished in a sufficiently short period of time to avoid surface dry checking. Concrete shall be kept wet continuously after tempering until implementation of curing compound procedure in accordance with this specification.

K. Placing in cold weather: Comply with ACI 306R-16. Protect from frost or freezing. No antifreeze admixtures are permitted. When deposited concrete during freezing or near-freezing weather, mix shall have temperature of at least 50 degrees F but not more than 90 degrees F. Concrete shall be maintained at temperature of at least 50 degrees F for not less than 72 hours after placing or until it has thoroughly hardened. Provide necessary thermal coverings for any flat work exposed to freezing temperatures.

L. Horizontal construction joint: Keep exposed concrete face of construction joints continuously moist from time of initial set until placing of concrete; thoroughly clean contact surface by chipping entire surface not earlier than 5 days after initial pour to expose clean hard aggregate solidly embedded, or by approved method that will assure equal bond, such as green cutting. If contact surface becomes contaminated with soil, sawdust or other foreign matter, clean entire surface and re-chip entire surface to assure proper adhesion.

3.9 CONCRETE FINISHES

A. Concrete Slab Finishing: Finish slab as required by ACI 302.1R. Use manual screeds, vibrating screeds to place concrete level and smooth. Use "jitterbugs" or other special tools designed for the purpose of forcing the course aggregate below the surface leaving a thick layer of mortar 1 inch in thickness. Surface shall be free from trowel marks, depressions, ridges or other blemishes. Tolerance for flatness shall be 1/8" in 10'. Provide final finish as follows:

1. Flatwork, medium broom finish: Typical finish to be used at all exterior walks and stairs.
2. Ramps, heavy broom finish: Concrete surfaces with slope greater than 5% including all ramps. Brooming direction shall run perpendicular to slope to form non-slip surface
3. Under no circumstances can water be added to the top surface of freshly placed concrete.

B. Curb Finishing: Steel trowel.

C. Joints and Edges: Mark-off exposed joints, where indicated, with ¼" radius x 1" deep jointer or edging tool. Joints to be clean, cut straight, parallel or square with respect to concrete walk edge. Tool all edges of exposed expansion and contraction joints, walk edges, and wherever concrete walk adjoins other material or vertical surfaces.
   1. The expansion joints shall be full depth as shown in the plan details. Failure to do so will result in non-compliance and shall be immediately machine cut by the contractor at his expense.

3.10 CURING

A. Cured Concrete in Forms: Keep forms and top on concrete between forms continuously wet until removal of forms, 7 days minimum. Maintain exposed concrete in a continuous wet condition for 14 days following removal of forms.

B. Flatwork/Variable Height Curbs, Curb and gutter, Valley Gutter: Cure utilizing Curing Compound. If applicable, the Contractor shall verify that the approved Curing Compound is compatible with the approved colorant system. Upon completion of job, wash clean per manufacturer's recommendations.

   1. Curing compound shall be applied in a wet puddling application. Spotty applications shall be reason for rejection and possibly concrete removal and replacement at the contractor's expense with no compensation from the owner.

C. No Curing Compound shall be applied to areas scheduled to receive resilient track surface including, curbs, ramps, run ways, etc.

3.11 DEFECTIVE CONCRETE

A. Determination of defective concrete shall be made by the Architect or Engineer. His opinion shall be final in identifying areas to be replaced, repaired or patched.

B. The Owner reserves the right to survey the flatwork, if it is determined to be outside of the maximum tolerance for flatness. If the flatwork is found to be out of tolerance, then the Contractor will be required to replace concrete. The Contractor will be responsible for reimbursing the Owner for any surveying costs incurred. Determination of flatwork flatness, surveying and any remedial work must be completed far enough in advance so that the project schedule is maintained, delays are avoided and the new flatwork or flatwork repairs are properly cured.

C. As directed by Architect, cut out and replace defective concrete. All defective concrete shall be removed from the site. No patching is to be done until surfaces have been examined by Architect and permission to begin patching has been provided.

D. Permission to patch any area shall not be considered waiver of right, by the Owner, to require removal of defective work, if patching does not, in opinion of Architect, satisfactorily restore quality and appearance of surface.

E. Defective concrete is:

   1. Concrete that does not match the approved mix design for the given installation type.
   2. Concrete not meeting specified 28-day strength.

3. Concrete which contains rock pockets, voids, spalls, transverse cracks, exposed reinforcing, or other such defects which adversely affect strength, durability or appearance.
4. Concrete which is incorrectly formed, out of alignment or not plumb or level.
5. Concrete containing embedded wood or debris.
6. Concrete having large or excessive patched voids which were not completed under Architect's direction.
7. Concrete not containing required embedded items.
8. Excessive Shrinkage, Traverse cracking, Crazing, Curling; or Defective Finish. Remove and replace if repair to an acceptable condition is not feasible.
9. Concrete that is unsuitable for placement or has set in truck drum for longer than 90 minutes from the time it was batched.
10. Expansion joint felt that is not isolating the full depth of the concrete section, and recessed as required for backer rod and sealant where required.
11. Concrete that is excessively wet or excessively dry and will not meet the minimum or maximum slump required per mix design.
12. Finished concrete with oil stains from equipment use, and or rust spots that cannot be removed.
13. Control joints (weakened planed joints) that do not meet the required minimum depth shown on the drawings.

F. Patching: Install specified Patching Mortar per manufacturer's recommendations. REPAIRS TO DEFECTIVE CONCRETE WHICH AFFECT THE STRENGTH OF ANY STRUCTURAL CONCRETE MEMBER OR COMPONENT ARE SUBJECT TO APPROVAL BY THE ARCHITECT AND DSA.

3.12 CONCRETE TESTING

A. Comply with CBC Section 1903A, 1905A.1.16, 1910A and 1705A.3 and as specified in B. below. Costs of tests will be borne by the Owner.

B. Four identical cylinder samples for strength tests of each class of concrete placed each day shall be taken not less than once a day, or not less than once for each 50 cubic yards of concrete, or not less than once for each 2,000 square feet of surface area for slabs or walls. In addition, samples for strength tests for each class of concrete shall be taken for seven-day tests at the beginning of the concrete work or whenever the mix or aggregate is changed.

C. Strength tests will be conducted by the Testing Lab on one cylinder at seven (7) days and two cylinders at twenty-eight (28) days. The fourth remaining cylinder will be available for testing at fifty-six (56) days if the 28-day cylinder test results do not meet the required design strength.

D. On a given project, if the total volume of concrete is such that the frequency of testing required by paragraph B. above would provide less than five strength tests for a given class of concrete, tests shall be made from at least five randomly selected batches or from each batch if fewer than five batches are used.

E. Cost of retests and coring due to low strength or defective concrete will be paid by Owner and back-charged to the Contractor.

F. Each truck shall be tested for slump before concrete is placed.

3.13 REMOVAL OF FORMS

A. Remove without damage to concrete surfaces.

B. Sequence and timing of form removal shall insure complete safety of concrete structure.

C. Forms shall remain in place for not less than the following periods of time. These periods represent cumulative number of days during which temperature of air in contact with concrete is 60 degrees F and above.

1. Vertical forms of foundations, walls and all other forms not covered below: 5 days.
2. Slab edge screeds or forms: 7 days.
3. Concrete columns and beam soffits: 28 days.

D. Concrete shall not be subjected to superimposed loads (structure or construction equipment) until it has attained its full design strength and not for a period of at least 21 days after placing. Concrete systems shall not be subjected to construction loads in excess of design loads.

3.14 CLEANING

A. Refer to Section 017400.

B. Upon completion of work of this Section promptly remove from the working area all scraps, debris and surplus material of this Section.

C. Clean excess material from surface of all concrete walks and utility structures.

D. Power wash all concrete surfaces to remove stains, dried mud, tire marks, and rust spots.

END OF SECTION

SECTION 32 17 23
Pavement Markings

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Materials and equipment for completion of pavement markings on existing paving.

1.2 REFERENCES

A. California Department of Transportation (CDT): "Standard Specifications," latest edition.

1.3 QUALITY ASSURANCE

A. Regulatory Requirements: Paint shall comply with the regulations of the California Air Resources Board applicable to the geographic area where the Project is located.

B. Specifications, standards, tests and recommended methods cited in the CDT "Standard Specifications" shall determine quantity and quality of materials and methods, unless specifically designated otherwise.

1.4 SUBMITTALS

A. Submit under provisions of Section 01 33 00.

B. Product Data: Manufacturer's product description brochures and application instructions.

1.5 PROJECT CONDITIONS

A. Striping shall not be applied at temperatures below 50°F, or if pavement surfaces are wet.

PART 2 - PRODUCTS

2.1 PAVEMENT STRIPPING PAINT

A. Vinyl emulsion type, [white]color, except handicapped parking spaces, provide blue color.

B. Stripping Products:

1. "Vin-L-Strip," manufactured by Dunn-Edwards.

2. "Traffic Line Paint," manufactured by Sherwin Williams.

3. 11-10"Traffic & Zone Marking Paint," manufactured by Sinclair.

4. Substitutions: Under provisions of Section 01 62 00.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Follow manufacturer's printed instructions and details shown.

B. Paint symbols, stripes, and arrows to dimensions and alignment shown, in accordance with manufacturer's recommendations.

3.2 APPLICATION

A. Surfaces to be painted shall be clean and dry prior to painting.

1. Ample time shall be allowed between the asphalt pavement seal coat and the initial painting application.

2. Usual drying time of pavement seal coat is approximately 3 to 4 days, depending on weather conditions.

3. Minimum drying time between paint applications shall be approximately 20 minutes.

B. Types of Traffic Paint Markings:

1. White:

a. Edge Lines, Regular Parking Stalls, and Compact Parking Stalls: Solid 4" line.

b. Loading zone curbs.

2. Blue:

a. Accessible Parking Stalls: Solid 4" lines.

b. Accessible Curb.

c. 3' square International Symbol of Accessibility on pavement in each

accessible parking space.

3. Red: No-parking curb.

4. Yellow: Commercial parking curb.

C. Rates of application shall be in accordance with manufacturer's recommendations.

1. Surfaces shall have traffic paint applied in two applications.

a. First or priming coat shall be in light applications to seal pavement.

b. Second heavier coat shall be a wearing surface. Glass beads shall be applied at a rate of 5 pounds per gallon of paint in second coat.

D. Alignment of striping shall be laid out accurately. Lines which do not conform to the alignment as set forth on the Drawings or which have a wavy appearance shall be removed and replaced by the Contractor at no additional cost to Owner.

E. [Place concrete wheel stops at parking stalls as indicated. Anchor permanently in place with two steel rods in each wheel stop.]

3.3 REMOVAL OF STRIPES

A. All stripes and pavement markings not in conformance with the proposed striping plan shall be removed by sandblasting.

1. Painting out with black paint will not be allowed, unless specifically indicated on the Drawings.

2. In slurry seal and asphalt concrete overlay areas, painted stripes and markings need not be removed prior to sealing or overlay operations.

B. After removal of paint, apply fog seal coat of SS-1h emulsified asphalt per Section 94 of the CDT "Standard Specifications" to all asphalt surfaces affected by the removal operations.

1. Fog seal coats shall be given ample time to dry prior to initial painting application.

END OF SECTION

SECTION 32 33 00
SITE FURNISHINGS

PART 1 - General

1.1 SUMMARY

A. Section Includes:

1. Trash receptacles.

2. Benches

1.2 RELATED REQUIREMENTS

A. Section 01 6116, Volatile Organic Compound (VOC) Restrictions; for VOC limits pertaining to adhesives, sealants, fillers, primers, and coatings.

B. Section 01 8113, Sustainable Design Requirements, for CAL-Green general requirements and procedures.

C. Section 32 1600, Site Concrete.

1.3 REFERENCES AND STANDARDS

A. California Building Code (CBC), edition as noted on the Drawings, as adopted by the California Division of the State Architect (DSA).

B. California Green Building Standards Code (CAL Green), edition as noted on the Drawings, as adopted by the California Division of the State Architect (DSA).

C. ASTM International (ASTM):

1. A36/A36M: Standard Specification for Carbon Structural Steel.

2. A787/A787M: Standard Specification for Electric-Resistance-Welded Metallic-Coated Carbon Steel Mechanical Tubing.

3. C150/C150M: Standard Specification for Portland Cement.

1.4 ADMINISTRATIVE REQUIREMENTS

A. Submittal Procedures:

1. Action Submittals and Informational Submittals shall be submitted in accordance with Section 01 3300, Submittal Procedures.

2. Closeout Submittals shall be submitted in accordance with Section 01 7700, Closeout Procedures.

3. Sustainable Design Submittals shall comply with the additional requirements of Section 01 8113, Sustainable Design Requirements.

B. Coordination:

1. Contractor shall be responsible for the proper installation of all accessories embedded in concrete and for the provision of connections, holes, openings, and similar work necessary to the execution of the work of the trades.

1.5 ACTION SUBMITTALS

A. Order all manufactured items within 15 days of award of contract so items will be on hand as construction progresses. Show proof of ordering and, if desired, request progress payment for the material cost at this time.

B. Shop Drawings:

1. Horizontal and vertical layout of site furnishings applicable to the respective furnishings item.

C. Product Data: Manufacturer's literature, specifications, installation instructions, maintenance instructions, and footing instructions as applicable for proposed products.

D. Samples:

1. Finishes and integral colors for selection.

2. Manufacturer's full range of colors for Architect's selection.

1.6 INFORMATIONAL SUBMITTALS

A. Qualification Data: For installer.

B. Sustainable Design:

1. General:

a. Submit information necessary to establish and document compliance with the California Green Building Standards Code.

b. Sustainable design submittals are in addition to other submittals.

2. The following information shall be provided:

a. Paints and Coatings: Evidence of compliance that products meet maximum VOC content limits specified in Section 01 6116.

C. Sample of manufacturer's warranty.

1.7 CLOSEOUT SUBMITTALS

A. Warranty/Guarantee: Submit executed warranty and Subcontractor's guarantee.

1.8 QUALITY ASSURANCE

A. Installer Qualifications: Engage experienced subcontractors, with minimum 5 years of experience installing site furnishings similar in material, design, and extent to each type indicated for this Project and with a record of successful in-service performance.

B. Single-Source Responsibility: Use materials and products of one manufacturer whenever possible.

C. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.

D. Materials, components, assemblies, workmanship and installation are to be observed by the Owner's Project Inspector. Work not so inspected is subject to uncovering and replacement.

1.9 DELIVERY, STORAGE AND HANDLING

A. Site furnishings shall be delivered in good condition in original unopened packages with labels intact and unloaded at job site in such a manner that no damage occurs to the product during hauling, handling or unloading at the job site.

B. Store materials in protected, dry conditions off of ground and in areas so as to not interfere with the progress of the Work.

C. Transport, store and handle in strict accordance with the manufacturer's written instructions and recommendations.

1.10 FIELD CONDITIONS

A. Make and be responsible for field dimensions necessary for proper fitting and completion of work. Report discrepancies to Architect before proceeding.

1.11 WARRANTY

A. Manufacturer: In addition to the Contractor's and Subcontractor's Guarantee, furnish Owner with manufacturer's fully executed written warranties against defects in materials and workmanship as available and for the following for the period noted:

PART 2 - PRODUCTS

2.1 DESIGN AND PERFORMANCE CRITERIA

A. Sustainable Design:

1. VOC emissions for field-applied paints and coatings must comply with limits specified in Section 01 6116.

2.2 TRASH RECEPTACLE

2.3 BENCH

PART 3 - EXECUTION

3.1 EXAMINATION

A. Prior to installation of the work of this Section, carefully examine and verify that installed work of other trades is complete to the point where this installation may properly commence.

B. Verify that specified items may be installed in accordance with the approved design.

C. Do not proceed with installation until conditions for installation are satisfactory.

3.2 INSTALLATION

A. General:

1. Installation shall be in strict conformance with referenced standards, the manufacturer's written directions, as shown on the Drawings and as herein specified.

2. Furnish anchors, bolts, and appurtenances required as provided or recommended by manufacturer for installation to ensure proper fit and accurate placements.

B. Locate equipment furnishing as indicated on the Drawings. If not shown, locate in accordance with shop drawings and as approved by Architect.

C. Install site furnishings level, plumb, true, and securely anchored and positioned at locations indicated on the Drawings.

D. Cover all exposed fasteners with integral cover plates or applied vandal-proof covers, so there are no rough or protruding edges which can cause injury.

3.3 CLEANING AND ADJUSTING

A. Upon completion of installation, remove manufacturer's temporary labels and marks of identification.

B. Thoroughly wash surfaces and remove foreign material.

C. Galvanized metal that is cut, damaged, or modified after fabrication shall be immediately painted with zinc-rich paint to prevent rusting.

D. Leave entire work in neat, orderly, clean and acceptable condition.

3.4 PROTECTION

A. Protect work and materials of this Section prior to and during installation and protect the installed work and materials of other trades.

B. Exposed finishes shall be free from scratches, dents, permanent discolorations and other defects in workmanship or material.

C. In the event of damage, make repairs or replace damaged items to the approval of the Architect at no additional cost to the Owner.

END OF SECTION

SECTION 32 80 00
IRRIGATION

PART 1 - GENERAL

Construction Documents and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification sections, apply to this section.

1.1 DESCRIPTION

A. Scope of Work: Furnish all labor, materials, tools, equipment, and transportation required to perform and complete the installation of an automatic sprinkler irrigation system, including all piping, sprinkler heads, controls, connections, testing, etc. as shown on the Drawings and as specified herein. The water source for this project is potable water [non-potable water].

B. Utilize and accept as standards manufacturer's recommendations and/or installation details for any information not specifically detailed on the Drawings.

1.2 RELATED SECTIONS

A. SUBMITTAL PROCEDURES: Section 01 33 00.

B. CLOSEOUT PROCEDURES: Section 01 77 00.

C. EARTH MOVING: Section 31 20 00.

D. SITE CONCRETE: Section 32 13 18.

E. LANDSCAPING: Section 32 90 00.

1.3 GUARANTEE

A. Guarantee all workmanship and materials hereunder against defective workmanship and materials, including damage by leaks and settlement of irrigation trenches, for the duration specified in Division 01 of these Specifications. (The Contractor is not responsible for vandalism or theft after date of final acceptance.)

1.4 QUALITY CONTROL

A. Qualifications of Contractor: Work must be completed by a licensed Landscape

Contractor. Provide proof of five years of continuous experience in landscaping and irrigation of projects of similar size (+\- 20% of the construction cost) and scope for education campuses. Contractor to have a minimum of two projects either completed or in construction in the last five years.

B. Work Force: Ensure that an experienced foreman is present at all times during installation. Keep the same foreman and workers on the job from commencement to completion.

C. Reviews: Specifically request reviews of all items listed below in "Inspection Requirements" prior to progressing to the next level of work.

D. Certification: Ensure that the contractor installing the Central Control System is trained and certified in the installation of the Central Control System. The training and certification must have been completed within two years prior to the installation date.

E. Standards:

1. Provide work and material in full accordance with the rules and regulations of the California Electric Code; the California Plumbing Code; and other applicable state or local laws or regulations.

2. Furnish, without extra charge, additional material and labor required to comply with these rules and regulations, though the work may not be specifically indicated in the Specifications or Drawings.

3. Where the Specification requirements exceed those of the above-mentioned codes and regulations, comply with the requirements in the Specifications.

F. Delivery, Storage, and Handling:

1. Use all means necessary to protect irrigation system materials before, during, and after installation and to protect related work and material.

2. Handle plastic pipe carefully, especially protecting it from prolonged exposure to sunlight. Store pipe on beds that are the full length of the pipe, and keep pipe flat and off the ground with blocks.

G. Comply with the requirements of Section 01 77 00 – CLOSEOUT PROCEDURES.

1.5 INSPECTION REQUIREMENTS

A. Request and hold a pre-construction meeting prior to beginning the work of this Section. Parties required to be in attendance are the Landscape Contractor, Project Inspector, Owner's Representative, and the Landscape Architect.

B. Prior to commencement of the work of this Section, obtain written verification from the project Civil Engineer that the rough grade in landscape areas is in conformance with Section 31 20 00 – EARTH MOVING.

C. Obtain verification from Project Inspector for the following at the appropriate times during construction and prior to further progression of work in this Section:

1. Pressure testing of all mainlines and lateral lines (See "Hydrostatic Tests – Open Trench" in Part 3.14 of this Section),

2. Trench depth,

3. Sleeves under pavement,

4. Flushing of all mainlines and lateral lines,

5. Backfill and pipe bedding,

6. Layout of heads,

7. Installation of subsurface inline drip tubing (with Landscape Architect),

8. Operation of system and coverage adjustments (with Landscape Architect) after system is fully automated and operational, backfill of trenching is completed, and surface has been restored to original grades.

D. In case of failure to obtain any verification by the Project Inspector as required above, remove and replace work as necessary to obtain the verification at no additional cost to the Owner.

1.6 SUBMITTALS AND SUBSTITUTIONS

A. Comply with requirements of Section 01 33 00 – SUBMITTAL PROCEDURES.

B. Product names are used as standards; provide proof as to equality of any proposed material and do not use other materials or methods unless approved in writing by the Owner's Representative. Submit no more than one request for substitution for each item. The decision of the Owner's Representative is final.

C. Use equipment capacities specified herein as the minimum acceptable standards.

D. List materials in the order in which they appear in Specifications; include

substitutions. Submit the list for approval by the Owner's Representative.

E. Make any mechanical, electrical, or other changes required for installation of any approved, substituted equipment to satisfaction of Owner's Representative and without additional cost to Owner. Approval by Owner's Representative of substituted equipment and/or dimensional drawing does not waive these requirements.

F. Do not construe approval of material as authorization for any deviations from Specifications unless attention of Owner's Representative has been directed to specified deviations.

1.7 PROJECT CONDITIONS, AND PROTECTION

A. Information on Drawings relative to existing conditions is approximate. During progress of construction, make deviations necessary to conform to actual conditions, as approved by Owner's Representative, without additional cost to Owner. Accept responsibility for any damage caused to existing services. Promptly notify Owner's Representative if services are found which are not shown on Drawings.

B. Protect existing trees-to-remain as specified in "Existing Tree Protection" in Part 3.02 of this Section.

C. Protect existing utilities within construction area. Repair damages to utility lines that occur as a result of operations of this work.

D. Verify dimensions at building site and check existing conditions before beginning work. Make changes necessary to install work in harmony with other crafts after receiving approval by Owner's Representative.

1.8 MAINTENANCE AND OPERATING INSTRUCTIONS

A. Furnish three complete sets of operating maintenance instructions bound in a hardback binder and indexed. Start compiling data upon approval of list of materials. Do not request final inspection until booklets are approved by Owner's Representative.

B. Incorporate the following information in these sets:

1. Complete operating instructions for each item of irrigation equipment.

2. Typewritten maintenance instructions for each item of irrigation equipment.

3. Manufacturer's bulletins which explain installation, service, replacement parts, and maintenance.

4. Service telephone numbers and/or addresses posted in an appropriate place as designated by Owner's Representative.

1.9 RECORD DRAWINGS

Upon completion of work, and as a precedent to final payment, deliver to Owner's Representative one complete set of reproducible originals of Drawings showing work exactly as installed. (See "Record Drawings" in Part 3.17 of this Section)

PART 2 - PRODUCTS

2.1 GENERAL

Use materials as specified; any deviation from the Specifications must first be approved by the Owner's Representative in writing. All material containers or certificates shall be clearly marked by manufacturer as to contents for inspection.

2.2 MATERIALS

A. Automatic Controller: Existing.

B. Automatic Control Valves: As indicated on Drawings.

C. Gate Valve: As indicated on Drawings.

D. Pipe and Fittings:

1. PVC pipe: As indicated on Drawings.

2. PVC fittings three-inch (3") size and smaller: High impact, standard weight, Schedule 40, molded PVC as manufactured by George Fischer, Lasco, Spears, or approved equal.

3. PVC fittings four-inch (4") size and larger: High impact, standard weight, Class 200 gasketed, molded PVC as manufactured by George Fischer, Lasco, Spears, or approved equal.

4. All plastic pipe and fittings: Continuously and permanently marked with manufacturer's name, type of material, IPS size, schedule, NSF approval, and code number.

5. Threaded PVC pipe and nipples: IPS Schedule 80 when necessary to use threaded connections to gauges, valves, or control valves. Threaded adapters may be used in place of nipples when making pipe to valve connections.

6. Use 45-degree fittings for changes in depth of pipe, and at transition from main line to automatic control valves.

7. Piping above ground: Schedule 40 galvanized steel with cast-iron fittings.

8. Piping used for electrical purposes to be Schedule 40 PVC Rigid Nonmetallic Conduit electrical conduit.

E. PVC Primer: Weld-On P-70 Purple Primer or approved equal.

F. PVC Glue: Weld-On 711 Gray heavy bodied PVC Cement or approved equal.

G. PVC Glue for connections to Flexible PVC: Weld-On 795 Blue Flex PVC Cement or approved equal.

H. Sprinkler Heads: As indicated on Drawings.

I. Quick Coupler Valves: As indicated on Drawings.

J. Sleeves: As indicated on Drawings.

K. All Valve Boxes and Covers: Manufactured, green [purple] with "Irrigation – Non-Potable" permanently embossed on cover. Carson, Rainbird or approved equal.

L. Automatic Sprinkler Control Wire:

1. Connections between remote control valves and controller: UF-14 direct burial polyethylene (PE) insulated wire, Paige Electric P7079D or approved equal. Common wire to be white, and lead wire to be colored. If multiple controllers are used, a different color is to be used for each controller's lead wire. (Use red for the first controller). Spare wires are to be yellow.

2. UL Listed waterproof sealing pack for wire connections: 3M DBR/Y-6, or approved equal.

3. Provide adequate working space around electrical equipment in compliance with local codes and ordinances.

4. Electrical, other than low voltage, such as power wiring, conduit, fuses, thermal overloads and disconnect switches, is included under Division 26 of these Specifications.

M. Trace Wire:

1. Direct burial #12 AWG Solid, steel core soft drawn tracer wire, 250# average tensile break load, 30 mil high molecular-high density polyethylene jacket complying with ASTM-D-1248, 30-volt rating. Color shall be green.

2. Connectors: UL Listed waterproof sealing pack for wire connections: 3M DBR/Y-6, or approved equal.

N. Unions And Flanges:

1. Steel unions and flanges two inches (2″) and smaller: 150 lb. screwed black (brass to iron seat) or galvanized malleable iron (ground joint).

2. Steel unions and flanges two and one-half inches (2 ½″) and larger: 150 lb. black flange union, flat-faced, full gasket.

3. Gaskets: One-sixteenth inch (1/16″) thick rubber Garlock No. 122, Johns-Manville or approved equal.

4. Flange Bolts: Open-hearth bolt steel, square heads with cold pressed hexagonal nuts, cadmium plated in ground. Provide copper-plated steel bolts and nuts or brass bolts and nuts for brass flanges.

O. Valve Identification Tags: Christy's irrigation ID tags, standard yellow color or approved equal.

P. Sand for Trench Backfill: Natural sand, free of roots, bark, sticks, rags, or other extraneous material.

PART 3 - EXECUTION

3.1 SITE CONDITIONS

Locations of existing utilities and other improvements shown on the Drawings are approximate. Verify existing conditions and, should any utilities be encountered that are not indicated on the plans, notify the Owner's Representative immediately. Accept responsibility for any damages caused to existing services.

3.2 PREPARATION

A. Scheduling: Notify the Project Inspector prior to commencing and/or continuing the work of this Section. Remove and replace, at no cost to Owner, any work required as a result of failure to give the appropriate notification.

B. Examination: Examine conditions of work in place before beginning work; report defects.

C. Measurements: Take field measurements; report variance between plan and field dimensions.

D. Protection: Maintain warning signs, shoring and barricades as required. Prevent injury to, or defacement of, existing improvements. At no additional cost to Owner, repair or replace items damaged by installation operations.

E. Existing Tree Protection:

1. Avoid unnecessary root disturbance, compaction of soils within drip line, or limb breakage.

2. Do not store material or dispose of any material other than clean water within the drip line.

3. Provide adequate irrigation during construction.

4. Replace any tree damaged during construction with a tree of equal size and value at no additional cost to Owner.

5. Adjust trench locations in field to minimize damage to existing elements and plant roots of trees-to-remain at no additional cost to Owner.

F. Surface Preparation: Prior to beginning sprinkler irrigation work, complete placement of topsoil as specified in Section 31 20 00 – EARTH MOVING. Notify Project Inspector of irregularities if any.

3.3 AUTOMATIC CONTROLLER

A. Connect automatic control valves to controller(s) in sequence as shown on Drawings.

B. Install all exposed wires to a minimum of twenty-four inches (24") beyond controller within a UL approved rigid conduit.

3.4 GRADING

Install all irrigation features to their finished grade and at depths indicated. Complete and /or accommodate all rough grading and/or finish grading before commencing with trenching.

3.5 LAYOUT

A. Lay out work as accurately as possible to Drawings. Drawings are generally diagrammatic to extent that swing joint offsets and fittings are not shown. Record all changes on the Record Drawings.

B. Do not willfully install the irrigation system as shown on Drawings when it is obvious, in the field, that obstructions or other discrepancies exist which may not have been considered in the design. Notify Owner's Representative of discrepancies before proceeding.

3.6 EXCAVATING AND TRENCHING

A. General: Perform excavations as required for installation of work included under this Section, including shoring of earth banks to prevent cave-ins. Restore surfaces, existing underground installations, etc., damaged or cut as result of this work to their original condition and in a manner approved by the Landscape Architect.

B. Width:

1. Make trenches wide enough to allow a minimum of six inches (6") between parallel pipelines and three inches (3") between side of pipe and side of trench. Do not allow stacking of pipe within trench.

2. Allow a minimum clearance of twelve inches (12") in any direction from parallel pipes of other trades.

C. Preparation of Excavations: Remove rubbish and rocks from trenches. Bed pipe on a minimum of three inches (3") of clean, rock-free soil to provide a firm, uniform bearing for entire length of pipeline. Cover pipe with a minimum of three inches (3") of clean, rock-free soil. If clean, rock-free soil is not available, use sand for pipe bedding and three inches (3") of backfill above the pipe. The remainder of the trench backfill material can be native soil. Do not allow wedging or blocking of pipe.

D. Minimum depth of cover: Unless shown otherwise, provide the following minimums:

1. Mainline: twenty-four inches (24") cover.

2. Lateral line: twelve inches (12") cover.

E. Conflicts with other trades:

1. Hand-excavate trenches where potential conflict with other underground utilities exist.

2. Where other utilities interfere with irrigation trenching and piping work, adjust the trench depth as instructed by Owner's Representative.

3.7 BACKFILL AND COMPACTING

A. General: Do not begin until hydrostatic tests are completed. When system is operating and after required tests and inspections have been made, backfill trenches under paving areas to the compaction rate specified in Section 31 20 00 – EARTH MOVING.

B. Place backfill in six-inch (6") layers and compact with an acceptable mechanical compactor.

1. Compact backfill material in landscape areas to eighty-five percent (85%) maximum dry density of the soil.

2. If settlement occurs along trenches, make adjustments in pipes, valves, and sprinkler heads, soil, sod or paving as necessary to bring the system, soil, sod or paving to the proper level or the permanent grade, without additional cost to the Owner.

C. Excess Soil: Remove all rocks, debris, and excess soil that results from sprinkler irrigation trenching operations, landscape planting, and soil preparation operations off site at no additional cost to the Owner. If soil meets topsoil requirements in Section 31 20 00 – EARTH MOVING, it may be used for finish grading.

D. Finishing: Dress-off areas to eliminate construction scars.

3.8 CONTROL WIRES

A. General: Install control wires beneath sprinkler main line whenever possible; tape wires to mainline pipe. Provide one spare wire for each controller.

B. Slack Wire: Provide eighteen inches (18") of slack wire for each wire connected to automatic control valve. Slack wire shall be coiled and left in the valve box. Tape wires in bundles every ten feet (10'); do not tape wires in sleeves.

C. Expansion and Contraction: Snake wire in trench to allow for contraction of wire.

D. Wire Passing Under Existing or Future Paving or Construction: Encase in PVC Schedule 40 or galvanized steel conduit extending at least twelve inches (12") beyond edges of paving or construction.

E. Wire Connections: Install wire connections in a waterproof sealing pack.

F. Wire Splicing: Permit splicing only on runs exceeding 500 feet. Locate all splices within valve boxes.

G. Wire Termination: Install wire in a valve box with eighteen inches (18″) of slack wire coiled and individually capped with approved waterproof sealing pack.

H. Spare Wire: Install two (2) spare wires along each wire path. If there is more than one wire path from the controller, the contractor to install two (2) spare wires per path. Provide eighteen inches (18″) of slack wire at each automatic control valve.

3.9 TRACE WIRE

A. General: Install trace wire above sprinkler main line whenever possible; tape wire to mainline pipe at 10' intervals to ensure the wire remains adjacent to the pipe.

B. Wire Connections: Install wire connections in a waterproof sealing pack.

C. Trace wire access points shall be accessible at all automatic control valves.

D. At all mainline end caps, a minimum of six feet (6') of tracer wire shall be coiled and secured to the cap for future connections. The end of the tracer wire shall be spliced to the wire of a six-pound zinc anode and is to be buried at the same elevation as the irrigation mainline.

E. Testing: The contractor shall perform a continuity test on all trace wires in the presence of the client. If the trace wire is found to be not continuous after testing, Contractor shall repair or replace the failed segment of the wire.

3.10 FLUSHING LINES

Thoroughly flush lines prior to installing valves, performing hydrostatic testing, or installing sprinklers. Divert water to prevent washouts.

3.11 AUTOMATIC CONTROL AND QUICK COUPLER VALVES

A. Install where shown and where practical; place no closer than twelve inches (12″) to walk edges, building walls, or fences. Refer to detail for example.

B. Thoroughly flush mainline before installing valve.

C. Install valves in ground cover areas where possible.

3.12 PIPING

A. General: Install in conformance with reference standards, manufacturer's written directions, as shown on Drawings and as herein specified.

B. Workmanship:

1. General: Install sprinkler irrigation equipment in planted areas throughout the site.

2. Coordination: Organize location of sleeves with other trades as required.

C. Pipe Line Assembly:

1. General:

a. Cutting: Cut pipe square; remove rough edges or burrs.

b. Solvent-welded Connections: Use materials and methods recommended by the pipe manufacturer.

c. Primer to be used on PVC fittings only. No Primer to be used on Flexible PVC tubing.

d. Brushes: Use non-synthetic brushes to apply solvents and primer.

e. Cleaning: Clean pipe and fittings of dirt, moisture, and debris prior to applying solvent or primer.

f. Assembly: Allow pipe to be assembled and welded on the surface or in the trench.

g. Expansion and Contraction: Snake pipe from side to side of trench to allow for expansion and contraction.

h. Location: Locate pipes as shown on Drawings except where existing supply valves, utilities or obstructions prohibit or where slight changes are approved to better suit field conditions.

2. Elastomeric Seal (Gasket) Joints:

a. General: Assemble in strict conformance with the pipe manufacturer's instruction.

b. Rubber Rings: Use rubber rings specific for water service systems.

c. Cleaning: Thoroughly clean ring and groove of dirt, moisture and debris using a clean, dry cloth. Do not use solvents, lubricants, cleaning fluids or other material for cleaning.

d. Seating: Properly seat ring in groove.

e. Spigot: General: Clean spigot-end of pipe as in "Cleaning" above prior to applying lubricant recommended by pipe manufacturer. Insert spigot into bell and seat to full depth required.

3. Connections:

    a. Threaded Plastic Pipe Connection:

        1.) Use Teflon tape or pipe joint compound.

        2.) When assembling to threaded pipe, take up joint no more than one full turn beyond hand-tight.

    b. Metal Valves and Plastic Pipe: Use threaded plastic male adapters.

    c. Metal to Metal Connections:

        1.) Use specific joint compound or gasket material for type of joint made. Where pipe of dissimilar metals are connected, use dielectric fittings.

        2.) Where assembling, do not allow more than three full threads to show when joint is made up.

    d. Where assembling soft metal (brass or copper) or plastic pipe, use strap-type friction wrench only; do not use a metal-jawed wrench.

    e. Threading:

        1.) Do not permit the use of field-threading of plastic pipe or fittings. Use only factory-formed threads.

        2.) Use factory-made nipples wherever possible. Permit the use of field-cut threads in metallic pipe only where absolutely necessary. When field-threading, cut threads accurately on axis with sharp dies.

        3.) Use pipe joint compound for all threaded joints. Apply compound to male thread only.

4. Sleeves and conduits:

    a. Use sleeves of adequate size to accommodate retrieval for repair of wiring or piping and extend a minimum of twelve inches (12") beyond edges of walls or paving.

    b. Provide removable, non-decaying plug at end of sleeve to prevent entrance of soil.

5. Unions: Locate unions for easy removal of equipment or valve.

6. Joint Restraints: Install per manufacturer's recommendations.

7. Capping: Plug or seal opening as lines are installed to prevent entrance materials that would obstruct pipe. Leave in place until removal is necessary for completion of installation.

D. Drip Irrigation Tubing: Install as per Drawings.

3.13 SPRINKLER HEADS

A. Sprinkler heads: Locate as shown on the Drawings except where existing conditions prohibit, or slight changes are approved to achieve as good or better coverage under the same conditions. Do not allow sprinkler head spacing to exceed the maximum shown on the Drawings. Plumb heads.

B. Handling, Assembly of Pipe, Fittings, and Accessories: Allow only skilled tradesmen to handle and assemble pipe, fittings and equipment. Keep interior of pipes, fittings and accessories clean at all times. Close ends of pipe immediately after installation; leave closure in place until removal is necessary for completion of installation. Do not permit bending of pipe.

C. Flushing: Remove end heads and operate system at full pressure until all rust, scale, and sand is removed. Divert water to prevent ponding or damage to finished work.

D. Coverage: Accept responsibility for full and complete coverage of irrigated areas to satisfaction of Landscape Architect and make necessary adjustments to better suit field conditions at no additional costs to Owner.

3.14 FIELD QUALITY CONTROL

A. Visual Inspection: Verify that all pipe is homogenous throughout and free from visual cracks, holes, or foreign materials. Inspect each length of pipe. All materials are subject to impact test at the discretion of the Landscape Architect.

B. Hydrostatic Tests – Open Trench:

1. Center-load piping with a small amount of backfill to prevent arching or slipping under pressure.

2. Request the presence of the Project Inspector in writing at least forty-eight hours in advance of testing.

3. At no additional cost to Owner, test in the presence of the Project Inspector.

4. Apply continuous static water pressure of 100 psi when welded plastic joints have cured at least twenty-four hours, and with the risers capped, as follows: test main lines and submains for four hours; test lateral lines for two hours.

5. Repair leaks resulting from tests; and repeat tests.

6. Test to determine that all sprinkler heads function according to manufacturer's data and give full coverage according to intent of Drawings. Replace any sprinklers not functioning as specified with ones that do, or otherwise correct system to provide satisfactory performance.

C. Continuity Testing: Test locating device and control wires for continuity prior to and after back-filling operations.

3.15 CLEAN-UP

Remove debris resulting from work of this Section.

3.16 ADJUSTMENTS AND MAINTENANCE

A. Adjusting System: Prior to acceptance, satisfactorily adjust and regulate entire system. Set watering schedule on controller appropriate to types of plants and season of year. Adjust remote control valves to operate sprinkler heads at optimum performance based on pressure and simultaneous demands through supply lines.

B. System Layout: Provide reduced prints of Record Document irrigation plans, laminated in four (4) mil. plastic, of size to fit controller door. Enlarge remote-control valve designations as necessary for legibility. Color-code areas covered by each station. Affix plans to inside of controller door.

C. Instructions: Upon completion of work, instruct maintenance personnel on operation and maintenance procedures for entire system.

D. Flow Charts: Record and prepare an accurate flow-rate chart for each automatic control valve.

3.17 RECORD DRAWINGS

A. Regularly update plans of the system and any changes made to the system throughout the project. Record all changes on this plan before trenches are back-filled.

B. Record the as-built information on reproducible plans provided by the Architect. Complete and submit the Record Drawings to the Architect before applying for payment for work installed.

C. As-built drawings are to be completed electronically with a pdf editing software or computer aided drafting software. As-built drawing done by hand will not be accepted for final submittal.

D. Show the following on the Record Drawings accurately to scale and dimensioned from two permanent points of reference:

1. Distance of mainline from nearby hardscape.

2. Location of automatic control valves, quick couplers, and gate valves.

3. Location and size of all sleeves.

4. Location of automatic control wires and spares.

3.18 OPERATION MANUALS

Deliver two complete sets of manufacturer's warranties, Contractor guarantees, instruction sheets, parts lists and operation manuals to the Architect before requesting final acceptance of the project. Do not request final inspection until the sets are approved.

END OF SECTION

SECTION 32 90 00
LANDSCAPING

PART 1 – General

1.1 DESCRIPTION

A. Scope of Work: Furnish all labor, materials, tools, equipment, and transportation required to perform and complete the following work as specified herein:

1. Soil Preparation and Fertilization
2. Planting
3. Weed Control
4. Mulch
5. Clean-up
6. Landscape Maintenance Period
7. Guarantee

B. Work not included in this Section: Landscape elements such as concrete walks, fencing, outdoor lighting, rough grading, and clearing are not a part of this Section unless shown on the landscape Drawings.

C. Construction Documents and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specifications sections, apply to this section.

1.2 RELATED SECTIONS

A. SUBMITTAL PROCEDURES: Section 01 33 00.

B. CLOSEOUT PROCEDURES: Section 01 77 00.

C. EARTH MOVING: Section 31 20 00.

D. IRRIGATION: Section 32 80 00.

1.3 GUARANTEE

A. The guarantee period for lawn and plant material shall be the duration of the landscape maintenance period, from commencement until final acceptance of the work of this Section. See Division 01 for other applicable guarantee requirements.

B. During the guarantee period, repair and/or replace plants and lawn not in satisfactory growing condition, as determined by Owner's Representative, without additional cost to Owner. Plants are to be replaced as per "Landscape Maintenance" in Part 3.9 of this Section, using plants of the same kind and size specified in plant list.

1.4 QUALITY CONTROL

A. Qualifications: Work must be completed by a licensed Landscape Contractor. Provide proof of five years of continuous experience in landscaping and irrigation of projects of similar size (+\- 20% of the construction cost) and scope for education campuses. Contractor to have a minimum of two projects either completed or in construction in the last five years.

B. Work Force: Ensure that an experienced foreman is present at all times during installation. Keep the same foreman and workers on the job from commencement to completion.

C. Reviews: Specifically request reviews of all items listed below in "Inspection Requirements" prior to progressing to the next level of work. The Owner's Representative reserves the right to inspect and reject material, both at place of growth and at site, before and/or after planting, for compliance with requirements for name, variety, size and quality.

D. Reference Standards: Meet or exceed Federal, State and County laws requiring inspection of all plants and planting materials for plant disease and insect control.

E. Delivery, Storage, and Handling:

1. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of conformance with state and federal laws if applicable.

2. Bulk Materials:

a. Do not dump or store bulk materials near structures, utilities, walkways or pavements, or on existing turf areas or plants.

b. Provide erosion-control measures to prevent erosion or displacement of

bulk materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.

c. Accompany each delivery of bulk fertilizers and soil amendments with appropriate certificates.

F. Plant Material:

1. Conform to the current edition of Horticultural Standards for quality of Number 1 grade nursery stock as adopted by the American Association of Nurserymen. Conform to sizes specified on plant legend. Select plants which have a natural shape and appearance.

2. Select only plants that are true to name, and tag one of each bundle or lot with the name of the plant in accordance with the standards of practice of the American Association of Nurserymen. In all cases, botanical names shall take precedence over common names.

3. Tag each plant of a patented variety with the variety and identification number, where applicable, as it is delivered to the job site.

4. Select only plants which have been nursery-grown in accordance with good horticultural practices and which have been grown under climatic conditions similar to those in the locality of the project for at least one year.

5. Select only plants which are typical of their species or variety; have normal habits of growth; are sound, healthy, vigorous, well-branched and densely-foliated when in leaf; are free of disease, insect pests, eggs or larvae; and have a healthy and well-developed root system.

6. Select only container stock that has been grown in the containers in which delivered for at least six (6) months, but not over two (2) years. Provide samples to show that there are no root-bound conditions.

7. Do not use plants that are severely pruned or headed-back to meet size requirements.

8. Do not plant container-grown plants that have cracked or broken balls of earth when taken from the container. Remove canned stock carefully from cans after containers have been cut on two sides with tin snips or other approved cutter.

9. Coordinate a time for the Landscape Architect to inspect the plants upon their delivery to the project site.

10. At any time prior to final acceptance, be prepared to replace any plants that are rejected by the Owner's Representative because of physical damage to the plant.

11. Do not remove container-grown stock from containers before time of planting.

12. Be prepared to replace plants which are rejected by the Owner's Representative for the following reasons:

    a. Trunk bark damage caused by sunburn,

    b. Trunk bark wounds caused by rubbing stakes or ties,

    c. Trunk bark damage caused by ties that have girdled the tree,

    d. Tree head development that is lopsided and not symmetrical in form,

    e. Tree branches that cross or touch,

    f. Tree branches with double leaders (unless multi-trunk trees are specified).

13. Stake shrubs with one-inch by one-inch by eighteen-inch (1"x1"x18") stakes in such manner that the stakes are not visible, and tie to upright position if they lean and/or are not growing in a vertical position.

14. Furnish quantities necessary to complete the work as shown on the Drawings and, if necessary, make up for any discrepancies in the quantities given in the Plant List at no additional cost to Owner.

G. Comply with the requirements of Section 01 77 00 – CLOSEOUT PROCEDURES.

1.5 INSPECTION REQUIREMENTS

A. Landscape Architect reserves the right to examine and reject plant material both at place of growth and at site, before and after planting, for compliance with requirements of name, variety, size, and quality.

B. Request and hold a pre-construction meeting prior to beginning the work of this Section. Parties required to be in attendance are the Landscape Contractor, Project Inspector, Owner's Representative, and Landscape Architect.

C. Obtain verification from Project Inspector for the following at the appropriate times during construction and prior to further progression of work in this Section:

1. Rough grading is to tolerances specified in Section 31 20 00 – EARTH MOVING.

2. The placement of landscape backfill material is as specified in this Section.

3. Prior to the commencement of the work specified in this Section, the coverage

and operation of the sprinkler irrigation system are as specified in Section 32 80 00 - IRRIGATION.

4. The soil amendment does not include any metal fragments. (Obtain a letter from the manufacturer stating that the material submitted for use on this project has no metal or foreign objects. Submit this letter as part of the Data Sheet submittal package [see "Submittals and Substitutions" in this Section])

5. Required Test: For each load of soil amendment delivered to the site, spread at least two cubic yards (2 cy) of material onto a paved surface approximately two inches (2") deep. Pass a magnetic rake over the material in two directions. If any metal is found, test the entire load in the same manner. Perform all testing in the presence of the Project Inspector.

6. Soil amendments, fertilizer, and bark mulch have been delivered to the site by the supplier, the invoices from the supplier indicate the project name and quantities delivered, and the Project Inspector has received copies of all such documents.

7. Prior to planting, amendments and conditioners have been incorporated as per pre-planting recommendations, and planting areas have been made ready to receive planting.

D. In case of failure to obtain any verification by the Project Inspector as required above, remove and replace work as necessary to obtain the verification at no additional cost to the Owner.

E. Beginning of Maintenance Period: Verify all work is complete, then request and hold a meeting to include the Landscape Architect, Project Inspector, Architect and Owner's Representative for authorization to begin the landscape maintenance period.

F. End of Maintenance: Verify that all work is complete and acceptable, and that the maintenance has been completed per specifications; and continue to provide landscape maintenance until the Owner's Representative has accepted the work.

1.6 SUBMITTALS AND SUBSTITUTIONS

A. See Section 01 33 00 – SUBMITTAL PROCEDURES for additional requirements.

B. Plant Material: Within fifteen (15) days after award of contract, locate plant materials required for construction. Ensure that trees and shrubs are contract-grown from a certified nursery. Notify Owner's Representative of plant material "tied off" for review at selected nursery. If specified material is not obtainable, submit the following to Owner's Representative: proof of non-availability, proposal for use of equivalent material, photographs of alternative choices of plant material. Include clear, written description of type, size, condition, and general character of plant material.

C. Data Sheets: Provide product data for each type of landscape material indicated in the Drawings and Specifications.

D. Samples: Submit samples of the following materials to Landscape Architect for approval:

1. Soil amendment: (3) one-quart zip-locked plastic bags.

2. Bark Mulch: (3) one-quart zip-locked plastic bags.

3. Imported Topsoil: (3) one-quart zip-locked plastic bags. (if needed)

E. Provide soils analysis reports prepared by a qualified soils laboratory in compliance with the Soil Testing Requirements under "Soil Testing" in Part 3.02 of this Section.

F. Prior to planting, submit copies of all trucking or packaging tags for all soil amendment, fertilizer and other additives to Landscape Architect so the quantities can be verified.

1.7 PROTECTION AND CLEAN-UP

A. Provide protection for persons and property throughout progress of work. Use temporary barricades as required. Proceed with work in such manner as to minimize spread of dust and flying particles and to provide safe working conditions for personnel. Store materials and equipment where directed.

B. Existing Construction: Execute work in an orderly and careful manner to protect paving, work of other trades, and other improvements.

C. Existing Utilities: Provide protection for existing utilities within construction area. At no additional cost to Owner, repair any damages to utility lines that occur as a result of this work.

D. Landscaping: Protect landscape work and materials from damage due to landscape operations, operations by other contractors and trades, and trespassers. Maintain protection during installation and maintenance periods.

E. Paving: Maintain cleanliness of paving areas and other public areas used by equipment, and immediately remove spillage; remove rubbish, debris, and other material resulting from landscaping work, leaving site in a safe and clean condition.

1.8 PLANTING SCHEDULE / ENVIRONMENTAL REQUIREMENTS

A. Install, establish, and maintain all lawn areas for a minimum of ninety (90) days prior to date of substantial completion. Coordinate schedule with other work and

overall project schedule. Failure to install lawn areas by this date shall result in assessment of liquidated damages.

B. Proceed with work in an orderly and timely manner to complete installation of landscaping within contract limits.

C. Planting Season Limits: Do not plant when grounds are wet or temperature is below 25° F. Do not proceed with any soil preparation and fertilization if all planting cannot be completed within Planting Season Limit.

1.9 LANDSCAPE MAINTENANCE PERIOD REQUIREMENTS

A. Beginning of Landscape Maintenance Period:

1. General: Landscape Maintenance Period does not begin until all work is installed, as determined by Landscape Architect, in writing.

2. On-site Inspection: When all work is complete, request and hold a meeting to include the Landscape Architect, Project Inspector, Architect and Owner's Representative who must together authorize and determine the start date for the landscape maintenance period. Coordinate and give notice of the date and time of the on-site meeting to all parties at least forty-eight (48) hours in advance.

3. Acceptability: In cases where the lawn has reached adequate fullness and germination in some areas but not all, and authorization has not been given to begin the maintenance period, proceed with mowing, trimming, spraying, etc., as necessary prior to the beginning of the maintenance period.

B. Duration of Landscape Maintenance Period:

The Landscape Maintenance Period shall continue for a minimum of ninety (90) calendar days. During this time, continuously maintain all areas involved until final acceptance of the work by the Owner's Representative. See Landscape Maintenance Period procedure in Part 3.9 of this Section.

C. Final Acceptance of the Landscape Maintenance Period:

Request the final inspection forty-eight (48) hours in advance. If items require attention, hold on-site meetings until Landscape Architect can certify, in writing, and in concurrence with the Owner's Representative, the successful completion of the Landscape Maintenance Period.

1.10 RECORD DRAWINGS

Upon completion of work, and as a precedent to final payment, deliver to Owner's

Representative one complete set of reproducible originals of Drawings showing work exactly as installed.

PART 2 - PRODUCTS

2.1 GENERAL

Use material in new and perfect condition as specified. Any deviations or substitutions from the Specification and Drawings must first be approved by Owner's Representative in writing prior to use.

2.2 SOIL PREPARATION MATERIALS

A. Topsoil: Fertile; friable; natural loam surface soil; reasonably free of subsoil, clay lumps, brush, weeds and other litter; and free of roots, stumps, stones/rocks, and other extraneous or toxic matter harmful to plant growth.

B. Soil Amendment: One-percent nitrogen-impregnated bark product with a ninety-percent (90%) bark base and zero to one-quarter inch (0-1/4") particle size, or approved equivalent. Do not spread until testing requirements have been satisfied.

C. Fertilizer/Soil Conditioner: Gro-Power Plus or approved equal.

D. Fertilizer for Trees and Shrubs: Seven-gram Gro-Power Planting Tablets (12-8-8 NPK) or approved equal.

E. Vitamin B-1: "Superthrive", "Liquinox Start", "Cal-Liquid", or approved equal.

2.3 MISCELLANEOUS LANDSCAPE MATERIALS

A. Bark Mulch: Untreated, shredded cedar.

B. Tree-staking System: As indicated on Drawings.

C. Pre-Emergent Weed Control: Oxadiazon, "Treeflan", "Ronstar 2G", "Surflan" (Elano Products Company), or approved equal.

D. Header Boards: As indicated on Drawings.

E. Root Barrier: As indicated on Drawings.

2.4 PLANT MATERIAL:

A. Nursery Plant Stock:

1. As indicated on Drawings. Do not remove container-grown stock from containers until planting time. Plants shall be true to name.

2. Healthy, shapely, well-rooted, not pot-bound, free from insect pests or plant diseases and properly "hardened off" before planting. Replace plants that are not alive or are not in satisfactory growing condition, as determined by the Landscape Architect, without additional cost to Owner. The Landscape Architect may reject plants before and/or after planting.

3. Labeled. Label at least one tree and one shrub of each species with a securely-attached, waterproof tag bearing legible designation of botanical and common name.

PART 3 - EXECUTION

3.1 SITE CONDITIONS

A. Examine the site, verify grade elevations, and observe conditions under which work is to be performed. Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to the Owner's Representative.

B. Proceed with complete landscape work as rapidly as portions of the site become available, working within seasonal limitations for each kind of landscape work required.

C. Determine location of underground utilities and perform work in a manner which will avoid possible damage. Hand-excavate, as required, to minimize possibility of damage to underground utilities. Maintain grade stakes set by others until removal is mutually agreed upon by parties concerned.

D. When conditions detrimental to sod or plant growth are encountered, such as rubble fill, adverse drainage condition, or other obstructions, notify the Owner's Representative before planting.

3.2 SOIL TESTING

A. Coordinate soil testing in an expeditious and timely manner as required for on-site topsoil materials. Contract with a soil laboratory and include cost of sampling and testing in contract price. Take one (1) sample for every 5,000 square feet of landscape area up to a maximum of six (6) samples under the direction of and in the presence of the Owner's Representative.

B. Submit each sample, according to the quantity of soil required by testing laboratory, to a competent laboratory approved by the Owner's Representative.

C. Provide analysis of soil samples for pH, salinity, ammonia, phosphate, potassium, calcium, magnesium, boron, and sodium levels. Provide appraisal of chemical properties, including particle size determination, and recommendations for types

and quantities of amendments and fertilizers.

3.3 PREPARATION

A. Clearing of Vegetation:

1. If live perennial weeds exist on site at the beginning of work, spray with a non-selective systemic contact herbicide as recommended and applied by an approved licensed landscape pest control advisor and applicator. Leave sprayed plants intact for at least 15 days.

2. Clear and remove existing weeds by mowing or grubbing off all plant parts at least one-quarter inch (¼") inch below surface of soil over entire areas to be planted.

B. Soil preparation:

1. Loosen soil in all planting areas, and on slopes flatter than 3:1 gradient, to a depth of six to eight inches (6" - 8") below finish grade. All debris, foreign matter, and stones shall be removed prior to the placing of any fertilizers or conditioners. Soil preparation is for all shrub planting beds, lawn hydroseeded areas and sodded lawn areas.

2. Conduct the required soil tests and instruct the lab to include a minimum of the following soil improvements in the recommendation on the soils report.

a. Soil Amendment: Two cubic yards (2 cy) per 1,000 square feet.

b. Gro-Power Plus: One hundred fifty pounds (150 lbs) per 1,000 square feet.

c. If the lab recommends less than six cubic yards (6 cy) of soil amendment, the excess bid amount shall be applied to the cost of any additional recommended soil improvements, or returned to the Owner as a credit

3. Apply amendments as follows, using rates recommended by the soils testing laboratory (the rates of amendments shown below are for bidding purposes only):

a. Fertilizer/Soil Conditioner: Broadcast 150 pounds of Gro Power Plus per 1,000 square feet in all planting areas and rototill to a depth of six to eight inches (6" - 8"). Remove from the site any rock and debris brought to the surface by cultivations.

b. Apply soil amendment to all planting areas at the rate of six cubic yards

(6 cy) per 1,000 sf and rototill into the top six to eight inches (6" – 8").

4. Upon completion of finish grading, request a review and obtain approval of Landscape Architect prior to commencement of planting or hydroseeding.

C. Finish Grading for all Planting areas

1. Refer to Earthwork Specification Section for Rough Grading.

2. Grade to elevations and contours shown on Drawings. Fill low spots with landscape backfill material and grade to surface drain in manner indicated on Drawings.

3. Finish-grade so that the entire area within the contract lines has a natural and pleasing appearance as specified and as directed by Landscape Architect.

4. Flag the sprinkler heads and valve markers.

D. Planting Pits for Trees:

1. Excavate pits with vertical sides and with bottom of excavation slightly raised at center to provide proper drainage.

2. Set container-grown stock in center of pit on earth pedestal. Separate roots and/or prune roots as directed by Landscape Architect. In hot weather, pre-wet pit. Loosen outside roots from sides and bottom of root ball. When set, place additional backfill around base and sides of root ball. Work each layer to settle backfill and eliminate voids and air pockets. Water after placing final layer of backfill.

3. Loosen hard subsoil in bottom of excavation. Extend excavation as required to insure proper drainage from plant pits.

4. Fill excavated planting pits with water to half the depth of pit. Pits should drain within four hours (4 hrs). If planting pits do not drain, notify Project Inspector immediately. Do not proceed with planting until Landscape Architect has resolved a method to provide drainage.

E. Planting Pits for Shrubs/Groundcover:

1. Excavate pits and trenches with vertical sides and with bottom of excavation slightly raised at center to provide proper drainage.

2. Loosen hard subsoil in bottom of excavation. Extend excavation as required to insure proper drainage from plant pits.

3. Fill excavated planting pits with water to half the depth of pit. Pits should drain within four hours (4 hrs). If planting pits do not drain, notify Project Inspector immediately. Do not proceed with planting until Landscape

Architect has resolved a method to provide drainage.

3.4 ROOT BARRIER INSTALLATION

A. Root barriers location are specifically shown on the plan. If a tree is moved during construction to a location where root barrier is not shown on the plan, the following minimum requirements are to be met:

1. Install root barrier where trees are planted within sixty inches (60") of paving or other hardscape elements, such as walls, curbs, and walkways.

2. Install root barrier continuously for a distance of five feet (5') in each direction from the tree trunk, for a total distance of ten feet (10') per tree. If trees are spaced closer, use a single continuous piece of root barrier.

B. Align root barrier vertically and run it linearly along and adjacent to the paving or other hardscape elements to be protected from invasive roots.

C. Position top of root barrier just below the top of adjacent hardscape element but above finish grade of the soil so that is visible.

D. If there are concrete spoils or overpour that is impeding the root barrier from being installed directly adjacent to the hardscape element, the contractor is to remove the extra concrete in a manner that does not damage the integrity of the hardscape element.

E. Do not distort or bend root barrier during construction activities.

F. Do not install root barrier surrounding the root ball of tree.

3.5 PLANTING

A. Trees, Shrubs, and Groundcover:

1. Lay out individual tree and shrub locations and areas for multiple plantings. Stake the locations, outline the areas, and secure the Owner's Representative's acceptance before beginning the planting work. Make minor adjustments as requested.

2. Scarify root ball prior to planting. Plant in holes twice the diameter of the root ball and to a depth equal to the container's height. Place the shrub and/or groundcover so the top of the root ball is one inch (1") higher than the surrounding grade; place the tree so that the crown of the trunk is two inches (2") higher than the surrounding grade. Set container-grown stock in center of pit. In hot weather, pre-wet the pit. When set, place additional backfill around base and sides of root ball. Work each layer to settle backfill and eliminate voids and air pockets. Thoroughly compact lower half of backfill in plant pit. See staking or guying detail. Water after planting. Provide a berm

or watering basin for each tree. Add Vitamin B-1, in the proper solution as recommended by the manufacturer, to the second watering of the basin.

3. Place fertilizer planting tablets in root zone and alongside each plant. Follow manufacturer's instructions for number of tablets to use for each container size.

4. See Drawings for additional information.

5. Grooming and Staking of Trees:

   a. Prune, thin-out and shape trees in accordance with standard horticultural practice. Prune trees to retain required height and spread. Unless otherwise directed by Landscape Architect, do not cut tree leaders, and remove only injured or dead branches from flowering trees.

   b. Paint cuts over one-half inch (½") in size with standard tree paint or compound, covering exposed, living tissue. Use paint that is waterproof, antiseptic, adhesive, elastic and free of kerosene, coal tar, creosote, and other substances harmful to plants. Do not use shellac.

   c. Stake or guy trees immediately after planting, as indicated on Drawings.

6. Grooming of Shrubs:

   a. Prune, thin-out and shape shrubs in accordance with standard horticultural practice. Prune shrubs to retain natural character and to accomplish their use in landscape design. The required plant size is its size after pruning.

   b. Remove and replace excessively pruned or malformed new plants resulting from improper pruning.

B. Request review by the Landscape Architect after locating, but prior to planting all trees. Under the direction of the Landscape Architect, make slight adjustments to plant material location as necessary to reflect original intention of Drawings.

3.6 WEED CONTROL

Apply pre-emergent weed control to all planting areas (except lawn) after completion of all planting and one complete watering. Follow manufacturer's directions. To prevent washing away of weed control, do not over-water after its application. Do not allow any weed control into lawn areas. Treat any existing noxious weeds, such as Johnson grass, with Roundup in successive treatments until all roots are destroyed, then remove all grass and roots. Notify Owner's Representative of time of installation for verification of application.

3.7 BARK MULCH

Apply mulch at the rate of three inches (3") deep to all planting areas, exclusive of lawn, after the planting and weed control are completed. Twelve inches (12") from planter edges, taper full depth of mulch to meet adjacent grades. Do not place mulch within three inches (3") of trunk or stems.

3.8 CLEAN-UP

A. During construction, keep the site free of rubbish and debris, and clean up the site promptly when notified to do so. Take care to prevent spillage on streets from hauling and immediately clean up any such spillage and/or debris deposited on streets due to the work of this Section.

B. During all phases of the construction work, take all precautions to abate dust nuisance by clean-up, sweeping, sprinkling with water, or other means as necessary.

3.9 LANDSCAPE MAINTENANCE

A. The Landscape Maintenance Period will begin when all the Landscape Maintenance Period Requirements have been met (See Part 1 of these Specifications).

B. Cleaning: Maintain cleanliness on paving areas and other public areas used by equipment and immediately remove all spillage. Remove from project site all rubbish and debris found thereon and all material and debris resulting from landscaping work, leaving the site in a safe and clean condition.

C. Maintenance:

1. Sprinkler Irrigation System:

a. Check system weekly for proper operation. Flush lateral lines out after removing last sprinkler head or two at each end of lateral. Adjust all heads as necessary for unimpeded coverage.

b. Set and program automatic controllers for seasonal water requirements. Provide the Owner's Representative with keys to the controllers and instructions on how to turn off system in case of emergency.

c. Repair all damages to sprinkler irrigation system as part of the contract work. Make repairs within one watering period or one week, whichever is the least amount of time.

2. Trees and Shrubs:

a. Water enough that moisture penetrates throughout root zone and only as

frequently as necessary to maintain healthy growth.

b. Construct and/or remove water basins around each plant, depending on the time of the year and as directed.

c. Do not prune unless directed by the Landscape Architect.

d. Re-stake and re-tie trees as needed and as directed by the Landscape Architect. Do not allow tops of tree stakes to protrude into head of tree.

e. Replace any dead, dying or vandalized plant material on a weekly basis throughout the Landscape Maintenance Period.

3. Insecticide and Herbicide Application:

a. If needed, control weeds with selective herbicides and sprays. In areas where crabgrass has infested the lawn, apply pre-emergent herbicides such as Dacthal by Amvac, Balan, or Betasan by Gowan for control prior to crabgrass germination. Control insect pests if necessary.

b. Use only a licensed Pest Control Operator to apply herbicides and sprays and to maintain a log for applications indicating material, timing, and rate.

4. Pre-scheduled On-site Meetings: Hold regularly-scheduled (monthly or bimonthly as determined by the Landscape Architect) on-site meetings with the Landscape Architect, Project Inspector and Owner's Representative. Dates and times will be jointly agreed upon.

5. Request, forty-eight hours (48 hrs.) in advance, on-site visits by the Landscape Architect to determine the end of the Landscape Maintenance Period.

END OF SECTION

SECTION 31 21 00
Utility trenching and backfill

PART 1 - General

1.1 SECTION INCLUDES

A. Excavation, bedding, and backfill for underground storm drain, sanitary sewer, and water piping, underground HVAC piping, electrical conduit, telephone conduit, gas piping, cable TV conduit, etc., and associated structures.

B. Provide labor, material, equipment, and services necessary to complete the backfilling and compacting as necessary for this project. Section includes, but is not limited to:

1. Select Backfill Material

2. Aggregate Base

3. Detectable Tape

4. Trench Excavation

5. Pipe Bedding

6. Trench Backfill

7. Trench Surfacing

C. This section excludes drainage fill material and placement around subdrains. See Section 33 46 00 – Subdrainage.

1.2 RELATED SECTIONS

A. Section 31 10 00 – Site Clearing

B. Section 31 20 00 – Earthwork Moving

C. Section 31 23 19 - Dewatering

D. Section 33 10 00 – Water System

E. Section 33 30 00 – Sanitary Sewer System

F. Section 33 41 00 – Storm Utility Drainage Piping

G. Section 33 46 00 – Subdrainage

1.3 RELATED DOCUMENTS

A. Geotechnical Report: [Insert Report Title, Company, and Report Date].

B. ASTM

1. D1557, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort.

2. D2321, Standard Practice for Underground Installation of Thermoplastic Pipe for Sewer and Other Gravity-Flow Applications.

C. California Administrative Code, Title 24, Part 2 - Basic Building Regulations, Chapter 24, Excavations, Foundations, and Retaining Walls.

D. Caltrans Standard Specifications, 2015

1. Section 19, Earthwork

2. Section 26, Aggregate Bases

3. Section 68, Subsurface Drains

4. Section 96, Geosynthetics

E. CAL/OSHA, Title 8

1.4 DEFINITIONS

A. AC: Asphalt Concrete

B. ASTM: American Society for Testing and Materials

C. Base: The layer placed between the subgrade and surface pavement in a paving system.

D. Bedding: Material from bottom of trench to bottom of pipe

E. CDF: Controlled Density Fill

F. DIP: Ductile Iron Pipe

G. Engineered Fill:

1. Soil or soil-rock material approved by the Owner and transported to the site by the Contractor in order to raise grades or to backfill excavations.

2. Contractor shall provide sufficient tests, and a written statement that all materials brought onto the project site comply with specification requirements.

H. Excavation: Consists of the removal of material encountered to subgrade elevations

I. Initial Backfill: Material from bottom of pipe to 12 inches above top of pipe

J. PCC: Portland Cement Concrete

K. RCP: Reinforced Concrete Pipe

L. Relative Compaction: In-place dry density of soil expressed as percentage of maximum dry density of same materials, as determined by laboratory test procedure ASTM D1557.

M. Springline of Pipe: Imaginary line on surface of pipe at a vertical distance of ½ the outside diameter measured from the top or bottom of the pipe.

N. Subgrade: The uppermost surface of an excavation or the top surface of a fill or backfill immediately below base.

O. Subsequent Backfill: Material from 12 inches above top of pipe to subgrade of surface material or subgrade of surface facility or to finish grade.

P. Trench Excavation: Removal of material encountered above subgrade elevations and within horizontal trench dimensions.

1. Authorized Trench Over-Excavation: Excavation below trench subgrade elevations or beyond indicated horizontal trench dimensions as shown on plans or authorized by the Geotechnical Engineer.

2. Unauthorized Trench Over-Excavation: Excavation below trench subgrade elevations or beyond indicated horizontal trench dimensions without authorization by the Geotechnical Engineer. Unauthorized excavation shall be without additional compensation.

Q. Utility Structures:

1. Storm drainage manholes, catch basins, drop inlets, curb inlets, vaults, etc.

2. Sanitary sewer manholes, vaults, etc.

3. Water vaults, etc.

1.5 SUBMITTALS

A. Follow submittal procedures outlined in Section 01 10 00 – Supplemental General Requirements.

B. Test Reports: Submit the following report for import material directly to the Owner from the Contractor's testing services:

1. Compaction test reports for aggregate base.

C. Samples:

1. If required by the Geotechnical Engineer, provide 20-pound samples of all imported trench bedding and backfill material sealed in airtight containers, tagged with source locations and suppliers of each proposed material. Do not import materials to Project without written approval of the Geotechnical Engineer and the Owner.

2. Provide materials from same source throughout work. Change of source requires approval of the Geotechnical Engineer and the Owner.

1.6 QUALITY ASSURANCE

A. Conform all work and materials to the recommendations or requirements of the Geotechnical Report and meet the approval of the Geotechnical Engineer.

B. Conform all work to the appropriate portion(s) of the Caltrans Standard Specifications, Section 19, Earthwork.

C. Percentage of compaction specified shall be the minimum acceptable. The percentage represents the ratio of the dry density of the compacted material to the maximum dry density of the material as determined by the procedure set forth in ASTM D 1557.

D. The Geotechnical Engineer will perform observations and tests required to enable him to form an opinion of the acceptability of the trench backfill. Correct the trench backfill that, in the opinion of the Geotechnical Engineer, does not meet the requirements of these Technical Specifications and the Geotechnical Report.

1.7 PROJECT CONDITIONS

A. Promptly notify the Owner of surface or subsurface conditions differing from those disclosed in the Geotechnical Report. First notify the Owner verbally to permit verification and extent of condition and then in writing. No claim for conditions differing from those anticipated in the Contract Documents and disclosed in the Geotechnical Report will be allowed unless Contractor has notified the Owner in writing of differing conditions prior to contractor starting work on affected items.

B. Barricade open excavations and post with warning lights.

1. Operate warning lights and barricades as required.

2. Protect structures, utilities, sidewalks, pavements, and other facilities immediately adjacent to excavations, from damages caused by settlement, lateral movement, undermining, washout, and other hazards.

3. Protect open, trenches, and utility structure excavations with fences, covers and railings to maintain safe pedestrian and vehicular traffic passage.

C. Stockpile on-site and imported backfill material temporarily in an orderly and safe manner.

D. Provide dust and noise control in conformance with Section 01 10 00 Supplemental General Requirements.

E. Environmental Requirements:

1. Protect existing storm drainage system from silt and debris resulting from construction activities. If contamination occurs, remove contamination at no cost to the District.

2. Protect existing streams, ditches and storm drain inlets during work on this project.

F. Protection of Subgrade: Do not allow equipment to pump or rut subgrade, stripped areas, footing excavations, or other areas prepared for project.

G. Transport all excess soils materials by legally approved methods to disposal areas.

1. Coordinate with the Engineer.

2. Any additional fill requirements shall be the responsibility of the Contractor.

1.8 EXISTING UTILITIES

A. Locate existing underground utilities in the areas of work. For utilities that are to remain in place, provide adequate means of protection during excavation operations.

1. Locating of existing underground utilities shall include but not be limited to pot-holing prior to the start of construction.

B. Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, consult Owner and/or utility agency immediately for directions.

1. Cooperate with the Owner and public and private utility companies in keeping their respective services and facilities in operation.

2. Repair damaged utilities to the satisfaction of the agency with jurisdiction.

C. Do not interrupt existing utilities serving facilities occupied and used by the Owner or others, except when permitted in writing by the Owner and then only after acceptable temporary utility services have been provided.

PART 2 - PRODUCTS

2.1 GENERAL

A. Import materials will be subject to approval of the Geotechnical Engineer.

B. For approval of imported fill material, notify the Owner at least 7 days in advance of intention to import material.

2.2 PIPE BEDDING AND INITIAL BACKFILL

A. ASTM D2321, Class IA, IB or II.

1. Clean and free of clay, silt or organic matter.

B. Permeable Material: In accordance with Section 68-2.02F of Caltrans Standard Specifications, Class 1, Type A or Class 2.

C. Class 2 Aggregate Base: In accordance with Section 26 of Caltrans Standard Specifications, ¾ inch maximum.

D. Sand: In accordance with Section 19-3.02F of Caltrans Standard Specifications.

2.3 SELECT BACKFILL

A. Select backfill material shall be gravel, free of clay or organic matter and shall conform to the following gradation:

Sieve Size	Percentage Passing
1 inch	100
¾ inch	90 – 100
No. 4	35 – 60
No. 200	2 - 9

B. For gas pipe and fuel piping select backfill shall be clean, graded building sand conforming to the following gradation:

Sieve Size	Percentage Passing
No. 4	100
No. 200	0 -5

2.4 WARNING TAPE

A. Polyethylene plastic and metallic core or metallic-faced, acid- and alkali-resistant, polyethylene plastic warning tape manufactured specifically for warning

and identification of buried utility lines. Provide tape on rolls, 3 inch minimum width, color coded as specified below for the intended utility with warning and identification imprinted in bold black letters continuously over the entire tape length. Warning and identification to read, "CAUTION, BURIED (intended service) LINE BELOW" or similar wording. Color and printing shall be permanent, unaffected by moisture or soil.

1. Warning Tape Color Codes

    a. Red: Electric

    b. Yellow: Gas, Oil; Dangerous Materials

    c. Orange: Telephone and Other Communications

    d. Blue: Water Systems

    e. Green: Sewer Systems

    f. White: Steam Systems

    g. Gray: Compressed Air

2. Warning Tape for Metallic Piping: Acid and alkali-resistant polyethylene plastic tape conforming to the width, color, and printing requirements specified above. Minimum thickness of tape shall be 0.003 inch. Tape shall have a minimum strength of 1500 psi lengthwise, and 1250 psi crosswise, with a maximum 350 percent elongation.

3. Detectable Warning Tape for Non-Metallic Piping: Polyethylene plastic tape conforming to the width, color, and printing requirements specified above. Minimum thickness of the tape shall be 0.004 inch. Tape shall have a minimum strength of 1500 psi lengthwise and 1250 psi crosswise. Tape shall be manufactured with integral wires, foil backing, or other means of enabling detection by a metal detector when tape is buried up to 3 feet deep. Encase metallic element of the tape in a protective jacket or provide with other means of corrosion protection.

2.5 DETECTION WIRE FOR NON-METALLIC PIPING

A. Detection wire shall be insulated single strand, solid copper with a minimum of 12 AWG.

2.6 SUBSEQUENT BACKFILL

A. Conform to on-site or imported structural backfill in Section 31 20 00, Earth Moving.

2.7 CONTROLLED DENSITY FILL (CDF) (IN TRENCHES)

A. Provide non-structural CDF, from bottom of trench to finish subgrade of subbase or base material, that can be excavated by hand and produce unconfined compressive 28-day strengths from 50-psi to a maximum of 150-psi. Provide aggregate no larger than 3/8 inch top size. The 3/8 inch aggregate shall not comprise more than 30% of the total aggregate content.

B. Cement: Conform to the standards as set forth in ASTM C150, Type II Cement.

C. Fly Ash: Conform to the standards as set forth in ASTM C618, for Class F pozzolan. Do not inhibit the entrainment of air with the fly ash.

D. Air Entraining Agent: Conform to the standards as set forth in ASTM C260.

E. Aggregates need not meet the standards as set forth in ASTM C33. Any aggregate, producing performances characteristics described herein will be accepted for consideration. The amount of material passing a #200 sieve shall not exceed 12% and no plastic fines shall be present.

F. Provide CDF that is a mixture of cement, Class F pozzolan, aggregate, air entraining agent and water. CDF shall be batched by a ready mixed concrete plant and delivered to the job site by means of transit mixing trucks.

G. The Contractor shall determine the actual mix proportions of the controlled density fill to meet job site conditions, minimum and maximum strengths, and unit weight. Entrained air content shall be a minimum of 4.0%. The actual entrained air content shall be established for each job with the materials and aggregates to be used to meet the placing and unit weight requirements. Entrained air content may be as high as 20% for fluidity requirements.

H. Mix design shall meet the Geotechnical Engineer's approval.

2.8 CONCRETE STRUCTURE BEDDING AND BACKFILL

A. Precast Structures: Same materials to the same heights as specified for pipe bedding and backfill, or other material approved by the Geotechnical Engineer.

B. Poured-in-Place Structures:

1. Bedding: Bedding shall meet the approval of the Geotechnical Engineer. In general, bedding is not required, pour bases against undisturbed native earth in cut areas and against engineered fill compacted to 90% relative compaction in embankment areas.

2. Side Backfill: On-site or imported structural fill meeting the requirements given in Section 31 20 00, Earth Moving.

2.9 GEOSYNTHETICS

A. Filter Fabric:

1. Filter Fabric: Section 96-1.02 of Caltrans Standard Specifications.

2. Mirafi 140N, Mirafi Inc., or approved equal.

PART 3 - EXECUTION

3.1 GENERAL

A. Comply with the recommendations of the Geotechnical Engineer.

B. Protect existing trees to remain. No grading is permitted under the drip line of protected trees.

C. Excavations for appurtenant structures, such as, but not limited to, manholes, transition structures, junction structure, vaults, valve boxes, catch basins, thrust blocks, and boring pits, shall be deemed to be in the category of trench excavation.

D. Unless otherwise indicated in the Plans, all excavation for pipelines shall be open cut.

E. Prior to commencement of work, become thoroughly familiar with site conditions.

F. In the event discrepancies are found, immediately notify the Owner in writing, indicating the nature and extent of differing conditions.

G. Backfill excavations as promptly as work permits.

H. Do not place engineered fill or backfill until rubbish and deleterious materials have been removed and areas have been approved by the Owner.

I. Place acceptable soil material in layers to required subgrade elevations, for each area classification listed below.

J. In excavations, use satisfactory excavated or borrow material.

K. Under grassed areas, use satisfactory excavated or borrow material.

3.2 SITE PREPARATION

A. Protect structures, utilities, sidewalks, pavements, and other facilities, which are to remain, from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.

B. Protect existing storm drainage system from silt and debris resulting from construction activities. If contamination occurs, remove contamination at no cost to the Owner.

3.3 EXISTING UTILITIES

A. Identity the location of existing utilities.

1. Prior to trenching, the Contractor shall excavate at locations specifically indicated on the Plans, if any, and where new lines cross other utilities of uncertain depth and determine the elevation of the utility in question to ensure that the new line will clear the potential obstruction.

2. The Contractor shall contact Underground Service Alert (USA) at 1-800-227-2600 for assistance in locating existing utilities.

3. If, after the excavation, a crossing utility does present an obstruction, then the line and grade of the new line will be adjusted as directed by the Owner to clear the utility.

B. Protect all existing utilities to remain in operation.

C. Movement of construction machinery and equipment over existing pipes and utilities during construction shall be at Contractor's risk.

D. Excavation made with power-driven equipment is not permitted within 2 feet of any known utility or subsurface structure.

1. Use hand or light equipment for excavating immediately adjacent to known utilities or for excavations exposing a utility or buried structure.

2. Start hand or light equipment excavation on each side of the indicated obstruction and continue until the obstruction is uncovered or until clearance for the new grade is assured.

3. Support uncovered lines or other existing work affected by excavation until approval for backfill is obtained.

4. Report damage of utility line or subsurface structures immediately to the Owner.

E. Backfill trenches resulting from utility removal in lifts of 8 inches maximum.

3.4 TRENCH EXCAVATION

A. General

1. Excavation shall include removal of all water and materials that interfere with construction. The Contractor shall remove any water which may be encountered in the trench by pumping or other methods during the pipe laying, bedding and backfill operations. Material shall be sufficiently dry to permit approved jointing.

2. Excavation shall include the construction and maintenance of bridges required for vehicular and pedestrian traffic, support for adjoining utilities.

3. The Contractor shall be responsible to safely direct vehicular and pedestrian traffic through or around his/her work area at all times.

4. The Contractor shall relocate, reconstruct, replace or repair, at his/her own expense, all improvements which are in the line of construction or which may be damaged, removed, disrupted or otherwise disturbed by the Contractor.

B. Existing Paving and Concrete:

1. Existing pavement over trench shall be sawcut, removed, and hauled away from the job. Existing pavement shall be neatly sawcut along the limits of excavations.

2. Existing concrete over the trench shall be sawcut to a full depth in straight lines, at a minimum distance of 12 inches beyond the edge of the trench, either parallel to the curb or a right angles to the alignment of the sidewalk.

3. Boards or other suitable material shall be placed under equipment outrigging to prevent damage to paved surfaces.

C. Trench Width:

1. The maximum allowable trench widths at the top of the all pipe materials outside diameter of barrel pipe plus 18 inches. shall be as follows:

   a. The maximum trench width shall be inclusive of all shoring.

   b. If the maximum trench width is exceeded, the State's representative may direct the Contractor to encase or cradle the pipe in concrete at no additional charge.

2. For pipes 3 inch diameter and larger, the free working space on each side of the pipe barrel shall not be less than 6 inches.

D. Excavation Width at Springline of Pipe:

1. Up to a nominal pipe diameter of 24 inches: Minimum of twice the outside pipe diameter, or as otherwise allowed or required by the Geotechnical Engineer.

2. Nominal pipe diameter of 30 inches through 36 inches: Minimum of the outside pipe diameter plus 2 feet, or as otherwise allowed or required by the Geotechnical Engineer.

3. Nominal pipe diameter of 42 inches through 60 inches: Minimum of the outside pipe diameter plus 3 feet, or as otherwise allowed or required by the Geotechnical Engineer.

E. Open Trench:

1. The maximum length of open trench shall be 300 feet or the distance necessary to accommodate the amount of pipe installed in a single day, whichever is greater. No trench shall be left open at the end of the day.

2. Provisions for trench crossings and free access shall be made at all street crossings, driveways, water gate valves, and fire hydrants.

3. Excavate by hand or machine. For gravity systems begin excavation at the outlet end and proceed upstream. Excavate sides of the trench parallel and equal distant from the centerline of the pipe. Hand trim excavation. Remove loose matter.

4. Excavation Depth for Bedding: Minimum of 6 inches below bottom of pipe or as otherwise allowed or required by the Geotechnical Engineer, except that bedding is not required for nominal pipe diameters of 2 inches or less.

5. Over-Excavations: Backfill trenches that have been excavated below bedding design subgrade, with approved bedding material.

6. Where forming is required, excavate only as much material as necessary to permit placing and removal of forms.

7. Grade bottom of trench to provide uniform thickness of bedding material and to provide uniform bearing and support for pipe along entire length. Remove stones to avoid point bearing.

F. Excavated Material:

1. All excavated material not required for backfill shall be immediately removed and properly disposed of in a legal manner by the Contractor.

2. Material excavated in streets and roadways shall be laid alongside the trench no closer than 2 feet from the trench edge and kept trimmed to minimize inconvenience to public traffic.

3. Provisions shall be made whereby all storm and wastewater can flow uninterrupted in gutters or drainage channels.

3.5 CONTROL OF WATER AND DEWATERING

A. Contractor attention is directed to Section 31 23 19, Dewatering.

B. Be solely responsible for dewatering trenches and excavations and subsequent control of ground and surface water. Provide and maintain such pumps or other equipment as may be necessary to control ground water and seepage to the satisfaction of the Geotechnical Engineer and the Owner until backfilling is completed.

C. Dewater during backfilling operation so that groundwater is maintained a least one foot below level of compaction effort.

D. Obtain the Geotechnical Engineer's approval for proposed control of water and dewatering methods.

E. Reroute surface water runoff away from open trenches and excavations. Do not allow water to accumulate in trenches and excavations.

F. Maintain dewatering system in place until dewatering is no longer required.

3.6 BRACING AND SHORING

A. Conform to California and Federal OSHA requirements.

B. Place and maintain such bracing and shoring as may be required to support the sides of the excavations for the proper protection of workmen; to facilitate the work; to prevent damage to the pipes and appurtenances being constructed; and to prevent damage to adjacent structures or facilities. Remove all bracing and shoring upon completion of the work.

C. Be solely responsible for all bracing and shoring and, if requested by the Owner, submit details and calculations to the Owner. The Owner may forward the submittal to the Geotechnical Engineer, the Consulting Engineer and/or the California Division of Industrial Safety for their review. The Contractor's submittal shall include the basic design, assumed soils conditions and estimation of forces to be resisted, together with plans and specifications of the materials and methods to be used, and shall be prepared by a civil engineer or structural engineer registered in California. No excavations in trench section or around structures shall precede a response to the submittal by the Owner.

D. Be solely responsible for installing and extracting the sheathing in a manner which will not disturb the line, grade, or backfill compaction or operation of the utility being installed or adjacent utilities and facilities.

3.7 PIPE BEDDING

A. Obtain approval of bedding material from the Geotechnical Engineer.

B. Accurately shape bedding material to the line and grade called for on the Plans. Carefully place and compact bedding material to the elevation of the bottom of the pipe in layers not exceeding 8 inches in loose thickness. Compact bedding material at optimum water content to 90% relative compaction unless specified otherwise on the Plans or by the Geotechnical Engineer. Compact by pneumatic tampers or other mechanical means approved by the Geotechnical Engineer. Jetting or ponding of bedding material will not be permitted.

C. Stabilization of Trench Bottom: When the trench bottom is unstable due to wet or spongy foundation, trench bottom shall be stabilized with gravel or crushed rock. The State's inspector will determine the suitability of the trench bottom and the amount of gravel or crushed rock needed to stabilize a soft foundation. Soft material shall be removed and replaced with gravel or crushed rock as necessary.

D. Placement of Bedding Material: The trench bottom shall be cleaned to remove all loose native material prior to placing select backfill material. Sufficient select backfill material shall be placed in trench and tamped to bring trench bottom up to grade of the bottom of pipe. The relative compaction of tamped material shall be not less than 90 percent. It is the intention of these requirements to provide uniform bearing under the full length of pipe to a minimum width of 60 percent of the external diameter.

3.8 BACKFILLING

A. Initial Backfill:

1. Obtain approval of backfill material from Geotechnical Engineer.

2. Bring initial backfill up simultaneously on both sides of the pipe, so as to prevent any displacement of the pipe from its true alignment. Carefully place and compact initial backfill material to an elevation of 12 inches above the top of the pipe in layers not exceeding 8 inches in loose thickness. Compact bedding material at optimum water content to 90% relative compaction unless specified otherwise on the Plans or by the Geotechnical Engineer. Compact by pneumatic tampers or other mechanical means approved by the Geotechnical Engineer. Jetting or ponding of initial backfill material will not be permitted.

B. Pipe Detection: In trenches containing pressurized plastic pipes, tracer wire shall be placed directly above the pipe and shall be connected to all valves, existing exposed tracer wires, and other appurtenances as appropriate.

C. Installation of Tracer Wire:

1. Install a continuous length of tracer wire for the full length of each run of nonmetallic pipe.

2. Attach wire to top of pipe in such manner that it will not be displaced during construction operations.

3. Form a mechanically and electrically continuous line throughout the pipeline, extending to the nearest valve or other pipeline appurtenance. Extend the wire up the outside of the valve box/riser and cut a hole that is 8 inches from the top, extend a 12 inch wire lead to the inside of the box. At other pipeline appurtenances, terminate the 12 inch wire lead inside the enclosure.

4. Splice wire with a splicing device consisting of and electro-tin plated seamless copper sleeve conductor. Install as recommended by the manufacturer. Wrap splices and damaged insulation with electrician's tape.

D. Installation of Warning Tape

1. Install tape approximately 1 foot above and along the centerline of the pipe.

2. Where tape is not continuous lap tape ends a minimum of 2 feet.

E. Subsequent Backfill:

1. Above the level of initial backfill, the trench shall be backfilled with non-expansive native material from trench excavation or with imported select backfill material (Contractor's option). Subsequent backfill shall be free of vegetable matter, stones or lumps exceeding 3 inches in greatest dimension, and other unsatisfactory material.

2. Bring subsequent backfill to subgrade or finish grade as indicated. Carefully place and compact subsequent backfill material to the proper elevation in layers not exceeding 8 inches in loose thickness. Compact bedding material at optimum water content to 90% relative compaction, except that the upper

36 inches in areas subject to vehicular traffic shall be compacted to at least 95% relative compaction, unless specified otherwise on the Plans or by the Geotechnical Engineer. Compact by pneumatic tampers or other mechanical means approved by the Geotechnical Engineer. Jetting or ponding of subsequent backfill material will not be permitted.

F. Do not use compaction equipment or methods that produce horizontal or vertical earth pressures that may cause excessive pipe displacement or damage the pipe. Jetting of trench backfill is not permitted.

G. Utility backfill shall be inspected and tested by the Geotechnical Engineer during placement. Cooperate with the Geotechnical Engineer and provide working space for such tests in operations. Backfill not compacted in accordance with these specifications shall be re-compacted or removed as necessary and replaced to meet the specified requirements, to the satisfaction of the Geotechnical Engineer and the Owner prior to proceeding with the Project.

H. Compaction testing shall be in accordance with California Test Method ASTM D1556 or D1557.

3.9 CLEANUP

A. Upon completion of utility earthwork all lines, manholes catch basins, inlets, water meter boxes and other structures shall be thoroughly cleaned of dirt, rubbish, debris and obstructions of any kind to the satisfaction of the Owner.

END OF SECTION

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SECTION 33 41 00
Storm utility drainage piping

PART 1 - General

1.1 SECTION INCLUDES

A. Roadway and/or site storm drainage system up to five feet of any on-site building

A. Section 31 21 00, Utility Trenching and Backfill

B. Section 32 13 18, Cement and Concrete for Exterior Improvements

1.3 RELATED DOCUMENTS

A. AASHTO

1. M199: Precast Reinforced Concrete Manhole Sections

2. M252: Corrugated Polyethylene Drainage Pipe

3. M294: Corrugated Polyethylene Pipe, 12 to 604 inch Diameter

B. ASTM

1. A74: Cast Iron Soil Pipe and Fittings

2. A615: Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement

3. C143: Standard Test Method for Slump of Hydraulic-Cement Concrete

4. C443: Joints for Concrete Pipe and Manholes, Using Rubber Gaskets

5. C478: Circular Precast Reinforced Concrete Manhole Sections

6. C564: Rubber Gaskets for Cast Iron Soil Pipe and Fittings

7. C923: Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals

8. C1173: Flexible Transition Couplings for Underground Piping Systems

9. D1785: Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120

10. D2321: Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity Flow Applications

11. D2564: Solvent Cements for Poly(Vinyl Chloride) (PVC) Plastic Piping Systems

12. D3034: Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings

13. D4101: Propylene Injection and Extrusion Materials

14. F477: Elastomeric Seals (Gaskets) for Joining Plastic Pipe

15. F656: Primers for Use in Solvent Cement Joints of Poly(Vinyl Chloride) (PVC) Plastic Pipe and Fittings

16. F679: Poly(Vinyl Chloride) (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings

17. F1336: Poly(Vinyl Chloride) (PVC) Gasket Sewer Fittings

C. AWWA

1. C104: Cement-Mortar Lining for Ductile-Iron Pipe and Fittings

2. C105: Polyethylene Encasement for Ductile-Iron Pipe Systems

3. C110: Ductile-Iron and Gray-Iron Fittings, 3 In. Through 48 In. for Water

4. C111: Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings

5. C115: Flanged Ductile-Iron Pipe With Ductile-Iron or Gray-Iron Threaded Flanges

6. C116: Protective Fusion-Bonded Coatings for the Interior and Exterior Surfaces of Ductile-Iron and Gray-Iron Fittings

7. C150: Thickness design of Ductile Iron Pipe

8. C151: Ductile-Iron Pipe, Centrifugally Cast

9. C153: Ductile-Iron Compact Fittings

10. C219: Bolted, Sleeve-type Couplings for Plain-End Pipe

11. M41: Ductile Iron Pipe and Fittings

D. Caltrans Standard Specifications, 2015

1. Section 51, Concrete Structures

2. Section 52, Reinforcement

3. Section 65, Concrete Pipe

4. Section 66, Corrugated Metal Pipe

5. Section 70, Miscellaneous Drainage Facilities

6. Section 72, Slope Protection

7. Section 75, Miscellaneous Metal

8. Section 90, Concrete

E. Caltrans Standard Plans, 2015

1. Plan D94A: Metal and Plastic Flared End Sections

2. Plan D94B: Concrete Flared End Sections

3. Plan D97A: Corrugated Metal Pipe Coupling Details No. 1, Annular Coupling Band Bar and Strap and Angle Connection

4. Plan D97C: Corrugated Metal Pipe Coupling Details No. 3, Helical and Universal Couplers

5. Plan D97D: Corrugated Metal Pipe Coupling Details No. 4, Hugger Coupling Bands

6. Plan D97E: Corrugated Metal Pipe Coupling Details No. 5, Standard Joint

7. Plan D97F: Corrugated Metal Pipe Coupling Details No. 6, Positive Joint

8. Plan D97G: Corrugated Metal Pipe Coupling Details No. 7, Downdrain

9. Plan D98A: Slotted Corrugated Steel Pipe Drain Details

10. Plan D98B: Slotted Corrugated Steel Pipe Drain Details

1.4 DEFINITIONS

A. AASHTO: American Association of State Highway and Transportation Officials

B. ASTM: American Society for Testing Materials

C. AWWA: American Water Works Association

D. CMP: Corrugated metal pipe

E. DIP: Ductile iron pipe

F. HDPE: High-density polyethylene

G. NPS: Nominal pipe size

H. PE: Polyethylene

I. PVC: Polyvinyl Chloride

J. RCP: Reinforced concrete pipe

1.5 SUBMITTALS

A. Follow submittal procedure outlined in Section 01 10 00, Supplemental General Requirements.

B. Product data for the following:

1. Piping materials and fittings

2. Special pipe couplings

3. Joint sealants

4. Plastic area drains

5. Cleanout plugs or caps

6. Precast concrete catch basins, inlets, curb inlets, junction structures and area drains, including frames and grates

7. Precast clean out boxes and box covers

C. Shop drawings: Include plans, elevations, details and attachments for the following:

1. Precast concrete manholes, frames and covers

D. Design Mix Reports and Calculations: For each class of cast in place concrete

E. Field Test Reports: Indicate and interpret test results for compliance with performance.

1.6 DELIVERY, STORAGE AND HANDLING

A. Delivery and Storage

1. Piping: Inspect materials delivered to site for damage; store with minimum of handling. Store materials on site in enclosures or under protective coverings. Store plastic piping and jointing materials and rubber gaskets under cover out of direct sunlight. Do not store materials directly on the ground. Keep inside of pipes and fittings free of dirt and debris.

2. Metal Items: Check upon arrival; identify and segregate as to types, functions, and sizes. Store off the ground in a manner affording easy accessibility and not causing excessive rusting or coating with grease or other objectionable materials.

B. Handling

1. Handle pipe, fittings, and other accessories in such manner as to ensure delivery to the trench in sound undamaged condition. When handling lined pipe, take special care not to damage linings of pipe and fittings; if lining is damaged, make satisfactory repairs. Carry, do not drag, pipe to trench.

2. Handle precast concrete pipe, manholes and other precast structures according to manufacturer's written instructions.

3. Protect imported bedding and backfill material from contamination by other materials.

PART 2 - PRODUCTS

2.1 PVC PIPE, 4 INCH AND LARGER

A. Pipe

1. 4 inch through 15 inch: ASTM D3034, SDR 35

2. 18 inch through 36 inch: ASTM F679, T-1 wall

B. Bell and spigot joints

C. Fittings:

1. 4 inch through 27 inch: ASTM F1336

2. 30 inch through 36 inch: ASTM D3034, SDR 35

D. Joint Gasket: Elastomeric seal, ASTM F477

E. Special Pipe Coupling: ASTM C 1173. Rubber or elastomeric sleeve and band assembly fabricated to match outside diameters of pipes to be joined

2.2 REINFORCED CONCRETE PIPE

A. Designated by Class, rubber gasketed joints, Type II or V cement

1. Circular Reinforced Concrete Pipe: Caltrans Standard Specification Section 65-2.02C(2). Class III

B. Rubber Gasketed Joints: Caltrans Standard Specification Section 65-2.02F

C. Special Pipe Couplings: Portland cement collar as indicated

2.3 PIPE ANCHORS

A. General: Location, configuration bearing area, etc. as indicated

B. Portland Cement Concrete: Section 32 13 18, Cement and Concrete for Exterior Improvements

2.4 PIPE CLEANOUTS

A. Piping: Same as storm drain line if possible

B. Top Plug or Cap: Same material as piping if possible. Plug or cap to be secure but removable, threaded or non-threaded.

C. Box Size: As required to provide access and allow easy removal and reinstallation of cap

D. Box Types

1. Non-Traffic Areas: Portland cement concrete box and box cover, light duty

2. Traffic Areas: Portland cement concrete box and box cover or steel or cast iron cover, heavy duty, both box and cover to be rated for AASHTO H20 loading

E. Box Cover Markings: "S.D.," unless otherwise specified

F. Available Manufacturers: Subject to compliance with requirements, box manufacturers offering products that may be incorporated into the Project include, but are not limited to the following:

1. Associated Concrete Products, Inc.

2. Brooks Products Inc.

3. OldCastle Precast/Christy Concrete Products, Inc.

2.5 AREA DRAINS

A. Grate and Riser: Area drain shall be as manufactured by Nyloplast or approved equal. Riser shall be constructed of 6 inch PVC SDR 35 piping per paragraph 2.1(A) of this section and connected to area drain by a gasket joint. Riser shall be vertical except as otherwise noted in the plans. Riser may include a reducer if necessary to make connection to the storm drain line.

B. Elevation and Grading: Area Drain rim elevation shall be set and area around area drain shall be graded to drain away from any adjacent structures, walks, or roadways and towards area drain.

2.6 CURB INLETS, CATCH BASINS, DROP INLETS, JUNCTION STRUCTURES, AREA DRAINS, ETC.

A. General: Size, shape, configuration, depth, etc. of structure and frame, grate, or cover shall be as indicated.

B. Portland Cement Concrete and Reinforcing: Section 32 13 18, Cement and Concrete for Exterior Improvements.

C. Precast Structure: Rate for AASHTO H20 loading in traffic areas.

D. Steps: ASTM C 478 or AASHTO M199. Manufacture from deformed, ½ inch steel reinforcement rod complying with ASTM A615 and encased in polypropylene complying with ASTM D4101. Include pattern designed to prevent lateral slippage off step. Acceptable manufacturer is Hanson Concrete Products, (Milpitas, CA) (Tel 408-262-1091).

E. Frames, Grates and Covers: Caltrans Standard Specification Section 75-1.02, 75-1.02.B and 75-2

1. Galvanize steel frames, grates and covers

2. Grates and covers shall be non-rocking

3. Rate for AASHTO H20 loading in traffic areas

2.7 MANHOLES

A. Manholes shall be pre-cast concrete of the size and shape shown on the Plans and shall conform to ASTM C478. Equivalent poured-in-place structures may be used at the Contractor's option. Concrete shall consist of Caltrans Type I/II cement. Rate for AASHTO H20 loading in traffic areas.

B. All interior concrete surfaces shall be coated with "Xypex Crystalline" or approved equivalent. Use of a water-resistant admix is acceptable, at Contractor option.

C. Frames and Covers: As indicated and in accordance with Caltrans Standard Specification Section 75-2.02B. Manhole covers shall have the words "STORM DRAIN" in letters not less than 2 inches cast into the cover. The clear opening for all manhole covers shall be 24 inches.

D. Frames and lids for manholes shall be match-marked in pairs before delivery to the job site. The lids shall fit into their frames without rocking.

E. Reinforcing Bars: Reinforcing bars shall be of intermediate grade billet steel conforming to ASTM A615 and shall be of the size shown on the Standard Details or in the Plans. Bars shall be of the round deformed type, free from injurious seams, flaws, or cracks, and shall be cleaned of all rust, dirt, grease and loose scales.

F. Portland Cement Concrete: Concrete for manhole bases, inlets, and other concrete structures shall conform to the requirements of Caltrans Standard Specifications Section 90 and as herein specified. The concrete shall be Class "A" containing six (6) sacks of portland cement per cubic yard of concrete. The grading of the combined aggregate shall conform with the CDT requirements of the three-quarter inch maximum. The consistency of the fresh aggregate shall be such that the slump does not exceed four inches, as determined by ASTM C143. The concrete shall have a minimum design compressive strength of 3,000 psi after 28 days.

G. Steps: ASTM C478 or AASHTO M199. Manufacture from deformed, ½ inch steel reinforcement rod complying with ASTM A615 and encased in polypropylene complying with ASTM D4101. Include pattern designed to prevent lateral slippage off step. Acceptable manufacturer is Hanson Concrete Products, or approved equal.

2.8 JOINT SEALANT FOR PRECAST STRUCTURES AND MANHOLES

A. Mortar: Caltrans Standard Specification Section 51-1.02F

1. Use to seal around pipes at connections to structures and manholes. Also use to seal joints between precast sections of structures and manholes.

B. Gaskets: Preformed flexible rubber or plastic gasket

1. Rubber Gaskets: ASTM C443

2. Plastic Gaskets: Federal Specification SS-S-00210 (GSA-FSS), Type I, Rope Form; or alternate standard which may exist. Acceptable material is "Ram-Nek," as manufactured by Henry Company, or approved equal.

2.9 PIPE TO STRUCTURE CONNECTOR/SEAL

A. A flexible pipe to manhole connector shall be used for all pipe penetrations to pre-cast and/or cast-in-place concrete structures.

1. The seal shall provide a flexible, positive, watertight connection between pipe and concrete wastewater structures. The connector shall assure that a seal is made between (1) the connector and the structure wall, and (2) between the connector and the pipe. The seal between the connector and the manhole wall shall be made by casting the connector integrally with the structure wall during the manufacturing process in such a manner that it will not pull out during coupling. The seal between connector and pipe will be made by way of a stainless steel take down band compressing the gasket against the outside diameter of the pipe.

2. The connector shall be molded from materials whose physical/chemical properties meet or exceed the physical/chemical resistant properties outlined in ASTM C923. The connector and stainless steel hardware shall meet or exceed the performance requirements proscribed in ASTM C923.

3. The connector shall be of size specifically designed for the pipe material being used and shall be installed in accordance with recommendations of the manufacturer.

4. Connectors shall be Z-LOK or G3 connectors manufactured by A-LOK Products Inc. or approved equivalent.

PART 3 - EXECUTION

3.1 PIPE INSTALLATION

A. General: Install pipe, fittings, and appurtenances utilizing best practices, manufacturer's instructions, and in accordance with Section 6 and 7 of ASTM D 2321 for plastic pipe, Caltrans Standard Specification Section 65-2.03 for reinforced concrete pipe, Caltrans Standard Specification Section 66-1.03 for corrugated metal pipe, and chapter 11.3.3 of AWWA M41 for cast iron and ductile iron pipe.

B. Pipe Depth and Trench Configuration: Conform to typical trench section(s) indicated.

C. Excavation, Bedding, Backfill, and Compaction: Section 31 21 00, Utility Trenching and Backfill

D. Handling: Carefully handle during loading, hauling, unloading and placing operations to avoid breakage or damage. Use strap type slings for lifting and placing; no chains or hooks will be permitted. Comply with the manufacturer's recommendations.

E. Laying: Before lowering pipe into the trench, remove all stakes, debris, loose rock and other hard materials from the bottom of the trench. Lay accurately in conformance with lines and grades indicated. Start laying the pipeline at the low end and proceed upstream. Lay bell and spigot pipe with the bell end facing upstream. Lay pipe on a bed prepared by handwork, dug true to grade. Furnish firm bearing for pipe throughout its entire length with bell holes provided at the ends of each pipe length of sufficient size to permit making up the particular type of joint being used. Adjust pipe to line and grade by scraping away or filling and tamping material under the body of the pipe for the entire pipe length and not by blocking or wedging. After final positioning, hold pipe in place in trench with backfill material placed equally on both sides of the pipe at as many locations as required to hold the pipe section in place.

F. Curved Alignment: When necessary to conform to the alignment specifically indicated, lay pipe on a curved alignment by means of asymmetrical closure of joints or bending of the pipe barrel. Use shorter lengths of pipe than the standard length if necessary to achieve curvature specified. Do not exceed the recommendations of the pipe manufacture for deflections at the joints or pipe bending.

G. Closure: Close open ends of pipes and appurtenance at the end of each day's work or when work is not in progress.

3.2 SPECIAL PIPE COUPLINGS

A. General: Use where required to join piping and no other appropriate method is specified. Do not use instead of specified joining methods.

B. Installation: Manufacturers' instructions

3.3 INSTALLATION OF CURB INLETS, CATCH BASINS, DROP INLETS, JUNCTION STRUCTURES, AREA DRAINS, ETC. AND MANHOLES

A. Excavation, Bedding, Backfill, and Compaction: Section 31 21 00, Utility Trenching and Backfill

B. Poured in Place Structures: Install as indicated and Caltrans Standard Specification Section 51.

1. Shape bottoms to convey flows as indicated.

C. Precast Structures: Install as indicated.

1. Seal all joints and pipe entrances and exits.

2. Place concrete in bottom and shape to convey flows as indicated.

3.4 POLYMER-CONCRETE TRENCH DRAIN INSTALLATION

A. Excavation, Bedding, Backfill, and Compaction: Section 31 21 00, Utility Trenching and Backfill

B. Install: As indicated and in accordance with the manufacturer's instructions.

3.5 SLOPE PROTECTION PLACEMENT

A. Rock Slope Protection: Caltrans Standard Specification Section 72-2.03 and as indicated.

1. Use Method B Placement unless otherwise indicated.

B. Concrete/Shotcrete Slope Protection: Caltrans Standard Specification Section 72-5.03

C. Concreted-Rock Slope Protection: Caltrans Standard Specification Section 72-3.03

1. Use Method B Placement unless otherwise indicated.

D. Sacked Concrete Slope Protection

1. Detailed configuration: As indicated

2. Use one cubic foot of concrete per sack.

3. Locate headers and stretchers as indicated.

4. Headers: Folded end to bank

5. Stretchers: Folded ends are not to be adjacent.

6. Place no more than four vertical courses until initial set has taken place in first course.

3.6 CONCRETE/SHOTCRETE DITCH LINING PLACEMENT

A. Concrete/Shotcrete Slope Protection: Caltrans Standard Specification Section 72-5.03

3.7 POURED-IN-PLACE CONCRETE

A. Concrete shall be mixed in accordance with applicable provisions of Section 90 of Caltrans Standard Specifications.

B. Construction of concrete structures shall conform to applicable provisions of Section 51 of the Caltrans Standards Specifications. Unless otherwise noted herein or in the Plans, exposed surfaces of structures shall be Class 1 surface finish.

C. Curing shall conform to applicable portions in Section 90 of Caltrans Standard Specifications. No pigment shall be used in curing compounds. All work shall be subject to inspection. No concrete shall be placed until the Project Manager has approved the forms and reinforcement.

D. Concrete shall not be cropped freely where reinforcing bars will cause segregation, nor shall it be dropped freely more than six feet. Spouts, elephant trunks, or other approved means shall be used to prevent segregation.

3.8 PIPELINE FLUSHING

A. Newly constructed storm drain pipes shall be flushed with water to clean. A metal screen shall be used to collect and remove any rock, silt and other debris that is flushed out during cleaning.

3.9 DEFLECTION TESTING

A. Upon completion of work, perform a deflection test on entire length of installed plastic pipeline. Completed work includes superimposed loads adjacent to and over the pipeline, such as compacted backfill and earthwork, and does not include paving, concrete curbs and gutters, sidewalks, walkways, and landscaping.

B. Under external loads, deflection of pipe in the installed pipeline shall not exceed 4.5 percent of the average inside diameter of pipe.

C. Determine whether the allowable deflection has been exceeded by use of a pull-through device or a deflection-measuring device.

D. Pull-Through Device:

1. Provide a spherical, spheroidal, or elliptical ball, a cylinder, or circular sections fused to a common shaft.

    a. Circular sections shall be so spaced on the shaft that distance from external faces of front and back sections will equal or exceed diameter of the circular section.

    b. Pull-through device may also be of a design approved by the Uni-Bell Plastic Pipe Association, provided that the device meets the applicable requirements specified in this paragraph, including those for diameter of the device.

2. Ball, cylinder, or circular sections shall conform to the following:

    a. A diameter, or minor diameter as applicable, of 95 percent of the average inside diameter of the pipe; tolerance of plus 0.5 percent will be permitted.

b. A homogeneous material throughout, with a density greater than 1.0 as related to water at 39.2 degrees F, and a surface Brinell hardness of not less than 150.

c. Center bored and through bolted with a ¼ inch minimum diameter steel shaft having a yield strength of not less than 70,000 pounds per square inch, with eyes or loops at each end for attaching pulling cables.

d. Each eye or loop shall be suitably backed with a flange or heavy washer such that a pull exerted on opposite end of shaft will produce compression throughout remote end.

3. Pull-Through Device:

a. Pass the pull-through device through each run of pipe, either by pulling it through or flushing it through with water.

b. If the device fails to pass freely through a pipe run, replace pipe which has the excessive deflection and completely retest in same manner and under same conditions as specified.

E. Deflection measuring Device:

1. Sensitive to 1.0 percent of the diameter of the pipe being tested and accurate to 1.0 percent of the indicated dimension.

2. Obtain approval of deflection measuring device prior to use.

F. Deflection Measuring Device Procedure:

1. Measure deflections through each run of installed pipe.

2. If deflection readings in excess of 4.5 percent of average inside diameter of pipe are obtained, retest pipe by a run from the opposite direction.

3. If retest continues to show a deflection in excess of 4.5 percent of average inside diameter of pipe, remove pipe which has excessive deflections, replace with new pipe, and completely retest in same manner and under same conditions.

G. Warranty Period Test: Pipe found to have a deflection of greater than 5 percent of average inside diameter when deflection test is performed just prior to end of

1 year warranty period shall be replaced with new pipe and tested as specified for leakage and deflection.

3.10 CLEANING

A. Thoroughly clean storm drain lines, manholes, catch basins, field inlets, culverts, and similar structures, of dirt, debris, and obstructions of any kind.

3.11 TELEVISION INSPECTION

A. After completion of the pipe installation, service connections, flushing and cleaning, and prior to placement of pavement, the drain line shall be televised with a color closed-circuit television with tilt-head camera recorded in DVD format. The original disc and log sheets shall be provided to the Owner for review.

B. The following observations from television inspections will be considered defects in the construction of sewer pipelines and will require correction prior to placement of pavement:

1. Low spot (1 inch or greater - mainlines only)
2. Joint separations (3/4 inch or greater opening between pipe sections)
3. Cocked joints present in straight runs or on the wrong side of pipe curves.
4. Chips in pipe ends
5. Cracked or damaged pipe
6. Dropped joints
7. Infiltration
8. Debris or other foreign objects
9. Other obvious deficiencies
10. Irregular condition without logical explanation

END OF SECTION

SECTION 33 46 00
Subdrainage

PART 1 - General

1.1 SECTION INCLUDES

A. Subdrains in trenches and subdrains or prefabricated composite drainage panels at walls or foundations

B. Bioretention and biofiltration areas for storm water treatment

1.2 RELATED SECTIONS

A. Section 31 23 33, Utility Trenching and Backfill

B. Section 33 41 00, Storm Utility Drainage Piping

1.3 RELATED DOCUMENTS

A. Geotechnical Report: [Insert Report Title, Company, and Report Date].

B. AASHTO

1. M288: Standard Specification for Geotextiles Used for Subsurface Drainage Purposes

C. ASTM

1. C1173: Standard Specification for Flexible Transition Couplings for Underground Piping Systems

2. D448: Standard Classification for Sizes of Aggregate for Road and Bridge Construction

3. D1621: Standard Test Method for Compressive Properties of Rigid Cellular Plastics

4. D1785: Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120

5. D2321: Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications

6. D2564: Standard Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems

7. D2729: Standard Specification for Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings

8. D3034: Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings

9. D4716: Standard Test Method for Determining the (In-Plane) Flow Rate per Unit Width and Hydraulic Transmissivity of a Geosynthetic Using a Constant Head

10. F477: Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe

11. F656: Standard Specification for Primers for Use in Solvent Cement Joints of Poly(Vinyl Chloride) (PVC) Plastic Pipe and Fittings

12. F1336: Standard Specification for Poly(Vinyl Chloride) (PVC) Gasket Sewer Fittings

D. Caltrans Standard Specifications, 2015

1. Section 68-Subsurface Drains

2. Section 96-Geosynthetics

1.4 DEFINITIONS

A. AASHTO: American Association of State Highway and Transportation Officials

B. ASTM: American Society for Testing and Materials

C. PVC: Polyvinyl Chloride

1.5 SUBMITTALS

A. Follow submittal procedure in accordance with Section 01 10 00, Supplemental General Requirements.

B. Product data for the following:

1. Perforated pipe and fittings

2. Solid pipe and fittings

3. Prefabricated composite drainage panels

4. Geotextile fabrics

5. Cleanout plugs or caps

6. Precast clean out boxes and box covers

7. Drainage bubblers

8. Biofiltration soil material

C. Samples:

1. Drainage Fill

1.6 DELIVERY, STORAGE AND HANDLING

A. Do not store plastic structures, pipe, and fittings in direct sunlight.

B. Protect pipe, pipe-fittings, and seals from dirt and damage.

C. Protect permeable material from contamination by other materials.

PART 2 - PRODUCTS

2.1 PERFORATED WALL AND SOLID WALL PIPE

A. PVC pipe and Fittings Smaller than 4-inch:

1. Pipe: ASTM D1785, Schedule 40. Solvent cement joints

2. Solvent Cement: ASTM D2564. Include primer according to ASTM F656.

3. Perforation Size, Location, and Spacing: ASTM D2729

B. PVC Pipe and Fittings 4-inch through 15-inch:

1. Pipe: ASTMD3034, SDR 26. Bell and spigot joints

2. Perforation Size, Location, and Spacing: ASTM D2729

3. Fittings: ASTM F1336

4. Joint Gasket: Elastomeric seal, ASTM F477

2.2 SPECIAL PIPE COUPLINGS

A. Description: ASTM C1173. Rubber or elastomeric sleeve and stainless steel band assembly fabricated to match outside diameters of pipes to be joined.

2.3 CLEANOUTS

A. Piping: Same as subdrain pipe without perforations.

B. Top Plug or Cap: Same material as piping if possible. Plug or cap to be secure but removable, threaded or non-threaded.

1. Size box to provide access and allow easy removal and reinstallation of plug or cap.

2. Types:

a. Non-Traffic Areas: Portland cement concrete box and box cover, light duty.

b. Traffic Areas: Portland cement concrete box and box cover or steel or cast iron cover, heavy duty, both box and cover to be rated for AASHTO H20 loading.

C. Cover Markings: "STORM DRAIN" unless otherwise specified.

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Project include, but are not limited to, the following:

a. Associated Concrete Products, Inc.,

b. Brooks Products Inc.,

c. Christy Concrete Products, Inc., or approved equal

2.4 PREFABRICATED COMPOSITE DRAINAGE PANELS

A. Description: Prefabricated composite panels, 36 to 60 inches wide and manufactured with geotextile facing laminated to molded drainage core

B. Drainage Core: Three-dimensional, non-biodegradable, molded Polypropylene or Polystyrene

1. Minimum Compressive Strength: 10,000-lbf./sq. ft. when tested according to ASTM D1621

2. Minimum Flow Rate: 2.8 gpm per foot at hydraulic gradient of 0.05 and compressive stress of 25 psig when tested according to ASTM D4716

C. Geotextile: Non-woven needle-punched geotextile, manufactured for subsurface drainage, made from polyolefins or polyesters; with elongation greater than 50

percent; complying with the following properties determined according to AASHTO M288

1. Survivability Class: 1

2. Apparent Opening Size: No. 70 sieve maximum

3. Permittivity: 0.5 per second, minimum

D. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Project include, but are not limited to, the following:

1. American Wick Drain Corporation

2. Tencate Geosynthetics/Mirafi Inc.

3. Multi-Flow (Prinsburg, MN) (Tel. 800-978-8007)

4. Phillips Fibers Corporation, or approved equal

2.5 BIORETENTION OR BIOFILTRATION TREATMENT SOIL

A. Soil specification shall meet requirements of local agency having authority or sustainability requirements for projects achieving environmental goals.

1. For projects located within the jurisdiction of the Municipal Regional Stormwater Permit (MRP), treatment soil shall conform to requirements in Appendix L of the MRP. Contractor shall provide submittal information verifying conformance to MRP standard.

2.6 DRAINAGE FILL MATERIAL

A. Permeable Material: Conform to Section 68-2.02F(3) of Caltrans Standard Specifications, Class 2.

B. Washed, evenly graded mixture of crushed stone, or crushed or uncrushed gravel, ASTM D 448, coarse aggregate, Sieve No. 57, with 100 percent passing 1-1/2-inch sieve and not more than 5 percent passing No. 8 sieve

2.7 GEOSYNTHETICS

A. When required, use filter fabric for encasing permeable material around subdrains.

1. Caltrans Filter Fabric: Section 96-1.02B of Caltrans Standard Specifications,

2. Mirafi 140N (by Tencate Geosynthetics/Mirafi Inc.), or approved equal.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine surfaces and areas for suitable conditions where subdrainage systems are to be installed.

B. Install only after unsatisfactory conditions have been corrected.

3.2 PIPING APPLICATIONS

A. Refer to Plans for location, size, and material designation for individual subdrains.

3.3 INSTALLATION OF PERFORATED PORTIONS OF SUBDRAINS

A. Excavation: Section 6 of ASTM D2321 and as indicated.

B. Subdrain Bedding: Place supporting layer of drainage fill over compacted subgrade to compacted depth indicated. If drainage fill requires encasement in filter fabric, lay filter fabric in trench and overlap trench sides before installing drainage fill.

C. Piping Installation: Install pipe in accordance with Section 7 of ASTM D2321. Install piping beginning at low point of system, true to grades and alignment indicated, with unbroken continuity of invert. Excavate recesses for bottoms of bell ends of pipe. Lay pipe with bells facing upslope and with spigot end centered fully into adjacent bell. Bed piping with full pipe bearing in drainage fill material. Lay perforated pipe with perforations down. Install gaskets, seals, sleeves, and couplings in accordance with manufacturers written instructions. Use increasers, reducers, and couplings made for different sizes of materials of pipes and fittings being connected. Reduction of pipe size in direction of flow is prohibited.

D. Initial Subdrain Backfill: After installing drainage piping, add drainage fill up to top of pipe to perform tests.

E. Testing Subdrain: After installing drainage fill to top of pipe, test drain piping with water to ensure free flow before backfilling with drainage fill. Remove obstructions, replace damaged components, and repeat test until results are satisfactory.

F. Subsequent Subdrain Backfill: After satisfactory testing, cover piping with drainage fill to width and height indicated. Place drainage fill in layers not exceeding 3 inches in loose depth; compact each layer placed. If filter fabric is required complete the filter fabric encasement by bringing fabric to top and closing the encasement.

G. Fill to Grade: Place native fill material over compacted drainage fill to thickness indicated. Place material in loose-depth layers not exceeding 6 inches. Thoroughly compact each layer. Fill to finish elevations.

3.4 INSTALLATION OF NON-PERFORATED PORTIONS OF SUBDRAINS

A. Conform to Sections 31 23 33, Utility Trenching and Backfill and 33 41 00, Storm Utility Drainage Pipe.

3.5 INSTALLATION OF RAIN GARDENS, BIORETENTION OR BIOFILTRATION TREATMENT AREAS

A. The Contractor shall excavate rain gardens / treatment areas to the elevations and dimensions specified on the plans. Level surface of area of top of treatment soil shown on the plans shall govern actual length and width dimensions if shown on the plans. In-situ soils shall not be further compacted.

B. Direct the use of heavy equipment and construction traffic around rain gardens so as to avoid compaction, to the extent possible.

C. After initial site grading, the Contractor shall provide temporary protection from curb cuts and other potential inflow entrances so that runoff drainage does not enter the rain gardens during construction and installation.

1. Treatment areas / rain gardens may be used as sediment settling facilities during mass excavation and commensurate construction activities.

2. Prior to commencing work in rain gardens, the Contractor shall remove and properly dispose of all accumulated sediments.

D. Excavated soils shall be placed with stockpiled fill and properly disposed and stabilized by the Contractor.

E. Subdrain installation:

1. Subdrain shall be installed as indicated on the plans at an elevation within the drain rock layer shown on the construction details and connected to the overflow or outfall structure at the invert elevation shown on the plans.

2. For connections of the perforated drain pipes to storm drainage structures, appropriately sized holes shall be cut in the structures at the correct invert elevation specified by the Project Designer or authorized representative. The connections shall be sealed sediment-tight and secured in place with mortar or other approved joint sealant compatible with subdrain pipe materials.

3. Drain rock layer shall be approved Class II Permeable Material. Crushed rock or aggregate base cannot be used within the treatment area, in, around or under the drain rock layer.

4. Care shall be exercised to prevent natural or fill soils from intermixing with the drain rock surrounding the underdrain. All contaminated drain rock shall be removed and replaced with uncontaminated Class II permeable material.

5. Attach subdrain piping to overflow structure.

6. Install cleanouts at the ends of the subdrains. Install screw-on end caps set flush with the finished top of treatment soil.

F. Overflow drain structure:

1. Install overflow structure at the elevation and location specified on the plans. Attach subdrain piping to overflow structure. Attach solid pipe from overflow structure outfall storm drain system at elevation and slope indicated on the plans.

2. Rim elevation of overflow structure must be set above the elevation of the top of treatment soil by the amount indicated on the plans, typically 6 inches. Contractor shall verify that the rim elevation of the overflow structure is also a minimum of 2 inches below the lowest elevation of the treatment area perimeter so that storm flows will reach the overflow rim before the top of the treatment area perimeter.

3. The overflow structure shall have an open bottom filled with drain rock if indicated on the plans. This should be installed where the overflow structure has a sump condition (subdrains lower than the outfall invert elevation). The overflow structure shall be installed such that the bottom of the structure is set a minimum of 6-inches below the undisturbed bottom of the treatment area. Drain rock in the overflow sump shall be installed up to the invert of the lowest pipe connected to the structure.

G. Filter media soil backfill

1. Filter soil of the approved specification shall be installed to the elevation indicated on the plans. Care should be taken to ensure that the soil is not compacted and that no equipment is driven on the backfill. Walking on the backfill should be limited to what is absolutely necessary.

H. Planting soil, plantings, and mulch shall be installed per the plans. Non-floating bark / mulch shall be used, if indicated, to prevent removal of material and clogging of the overflow.

I. Testing of the treatment area should be conducted once the filter media is installed and all storm drain piping is connected. The area should allow an infiltration rate well above 5 inches/ hour to ensure that the treatment area will continue to function at 5 inches/ hour over the lifetime of the treatment area.

3.6 PREFABRICATED COMPOSITE DRAINAGE PANELS

A. Coordinate placement with other drainage materials.

B. Install prefabricated drainage panels in accordance with manufacturer's instructions.

C. Place perforated drainage pipe at base of footing and attach to composite drainage panels in accordance with the manufacturer's instructions.

3.7 JOINING PIPE

A. Join PVC pipe and fittings with elastomeric seals according to ASTM D2321 or solvent cement.

B. Special pipe couplings: Join piping made of different materials and dimensions with special couplings made for this application. Use couplings that are compatible with and that fit both pipe materials and dimensions.

3.8 CLEANOUT INSTALLATION

A. Cleanout piping to be the same size as the subdrain piping to which it is attached.

B. Install cleanouts from subdrainage piping to grade. Locate cleanouts at beginning of piping run, at changes in direction, and other locations indicated.

C. Do not allow cleanout box to bear on cleanout riser.

3.9 CLEANING

A. Clear interior of installed piping and structures of dirt and other superfluous material as work progresses. Maintain swab or drag in piping and pull past each joint as it is completed. Place plugs in ends of uncompleted pipe at end of each day or when work stops.

3.10 RETAINING WALL DRAINAGE

A. Unless otherwise specified, drain system should consist of a minimum of 12 inches thick free-draining granular materials containing less than five percent fines passing a No. 200 sieve placed adjacent to the wall. Free-draining granular material should be graded to prevent the intrusion of fines or encapsulated in a suitable filter fabric. As an alternative, a prefabricated

drainage structure, such as geo-composite, or approved equivalent, may be used as a substitute for the granular backfill adjacent to the wall.

B. Drainage system consisting of either weep holes or perforated drain lines (minimum 4 inch diameter placed near the base of the wall) should be used to intercept and discharge water which would tend to saturate the backfill. Where used, drain lines should be embedded in a uniformly graded filter material and provided with adequate clean-outs for periodic maintenance.

C. An impervious soil should be used in the upper one foot layer of backfill to reduce the potential for water infiltration.

END OF SECTION