November 11, 2026

# Addendum No. 5

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| Project: | Fire Station No. 42 |
| Address: | XXXX Ranch Rd. 12<br>Wimberley, Texas 78676 |
| Client: | Hays County ESD #4/Wimberley Fire Rescue |
| Architect: | Martinez Architects |




martinez
ARCHITECTS

This Addendum forms a part of the Contract Documents and modifies the original Bidding Documents and/or prior Addenda as noted below. All conditions, requirements, materials and workmanship shall be satisfied as described in the Contract Documents unless specifically stated otherwise. This Addendum consists of the attached contract documents, specifications, and drawings as listed and described below, dated 11, 11, 2026.

## Revisions to Project Manual:

1. **00 73 00 – Supplementary Conditions**
    a. Revise contract duration from 365 calendar days to 425 calendar days in Section 8.4
    b. Add Professional Liability Coverage for Designated Design to Section 11.1
2. **08 71 00 – Door Hardware**
    a. Revise Door Hardware Groups
    b. Revise Door Hardware Index
3. **13 34 19 – Metal Building Systems**
    a. Add Whirlwind Steel and Red Dot Buildings to Section 2.01 Manufacturers

## Revisions to Architectural Construction Documents:

1. **G-501 – UL Assemblies**
    a. Add sheet in its entirety
2. **A-121 – PEMB Plan**
    a. Add Grid Line A.2
3. **A-122 – PEMB Plan**
    a. Add Grid Line A.2
    b. Revise Detail Names to “Building A” and “Building C”
4. **A-123 – PEMB Plan**
    a. Add Grid Line A.2
    b. Revise Detail name to “Building B”
5. **A-161 – Reflected Ceiling Plan**
    a. Add Soffit Panel to entry canopy
6. **A-315 – Alternate Wall Section**
    a. Add note “Pre Fin Mtl Soffit Panel mounted directly to structure” to Details A3 and A4
7. **A-541 – Interior Details**
    a. Add Detail Callout to Detail C4
    b. Add Detail A4
8. **A-601 – Door, Window, and Louver Schedule**
    a. Revise hardware sets

## Revisions to MEP Documents:

See attached narrative of changes



# ADDENDUM NARRATIVE

**Project Name:** Hays County ESD#4 Station #42 (EMEP#: 25018)
**Date:** November 11, 2026
**ADDENDUM No.:** 5

## (SPECIFICATIONS)

001. **23 37 23 – HVAC GRAVITY VENTILATORS**
- A. Added specification.

002. **26 05 26 – GROUNDING**
- A. Revised section 3.1.B

003. **26 27 26 – WIRING DEVICES**
- A. Removed Fire Rated Poke Thru section
- B. Revised section 2.4.B.
- C. Revised section 2.5

004. **26 32 13.16 – LIQUID PROPANE STANDBY GENERATING SYSTEM**
- A. Removed Remote Fuel Storage Tank section.
- B. Revised various sections.

## (SHEETS)

005. **MEP-201 – MEP SITE PLAN**
- A. Removed utility tap box.
- B. Removed electrical keyed note 7.
- C. Reassigned exterior lighting circuits to panel 'A1'.
- D. Added electrical keyed notes 13 and 14.
- E. Added conduit and pullbox for future flagpole light.
- F. Added conduit from vehicle gate to IT/Elec. Room.
- G. Revised electrical keyed note 1.

006. **MEP-301 – ENLARGED MEP PLAN**
- A. Revised electrical keyed note 1.
- B. Added contactor LC2 and assigned circuit.
- C. Added reference to civil note for fire tank.

007. **M-201 – MECHANICAL PLANS**

A. Added and applied notes for Deductive Alternate #1 scope of work.
B. Applied keyed note #35.
C. Revised FCU-5 return air duct dimension.
D. Added FCU-3 outdoor air supply duct dimension.

008. **M-501 – MECHANICAL SCHEDULES**

A. Revised Ductless Split System schedule: DS-T1 and associated condensing unit.
B. Revised HVLS Fan Schedule: BAF-1 & BAF-2 model.

009. **E-001 – ELECTRICAL SYMBOLS LEGEND**

A. Added four gang floor box symbol to sheet.
B. Revised Communications Symbols.

010. **E-101 – LIGHTING PLAN**

A. Added row of lights in apparatus bay.
B. Added 3 and 4-way light switches for lighting zone 'c' in apparatus bay.
C. Revised lighting keyed note 2.
D. Revised lighting keyed note 3 to capture alternate scope.
E. Added lighting keyed not 5 and 6 to capture alternate scope.
F. Added lighting general note 'K'.
G. Reassigned exterior lighting circuits to panel 'A1'.
H. Reassigned emergency lighting circuit to panel 'B'.
I. Added 3-way switch for corridor step lights.
J. Added lighting keyed note 7.
K. Added mounting heights for EM1 and EM2 light fixtures.
L. Added wall sconces outside of fitness overhead doors.

011. **E-201 – POWER PLAN – LEVEL ONE**

A. Relocated contactor from riser room to apparatus bay.
B. Reassigned contactor circuit to panel 'A1'.
C. Reassigned building signage circuits to panel 'A1'
D. Added electrical keyed note 24 to capture alternate scope.
E. Revised electrical keyed note 10 , 15 and 17.
F. Added electrical general note 'K'.
G. Revised symbol for floor box and added designation.

012. **E-202 – POWER PLAN - MEZZANINE**

A. Relocated electrical connections and receptacles dedicated for IT equipment to south wall of IT/Elec. Room.
B. Revised electrical keyed notes 9 and 10.

013. **E-300 – TECHNOLOGY ROUGH-IN PLAN**

A. Revised rough-in plan and keyed notes.
B. Added general notes.

014. **E-301 – ALERTING SYSTEM PLAN – LEVEL ONE**

A. Reissuing sheet for clarification.

015. **E-302 – ALERTING SYSTEM PLAN - MEZZANINE**

A. Reissuing sheet for clarification.

016. **EF-201 – FIRE ALARM PLAN – LEVEL ONE**

A. Added fire alarm keyed note 1 to capture alternate scope.

017. **E-401 – ELECTRICAL ONE-LINE DIAGRAM**

A. Removed utility tap box.
B. Revised electrical keyed note 11.
C. Listed generator model number.
D. Rerouted feeder for contactor LC1.
E. Added contactor LC2.
F. Added note 4 for feeder schedule.
G. Added floor box schedule to sheet.

018. **E-501 – LIGHTING SCHEDULES**

A. Revised light fixture model numbers, and descriptions.

019. **E-502 – ELECTRICAL PANEL SCHEDULES**

A. Panel 'A1' – Increased panel to 60 circuits.
B. Panel 'A1' – Added exterior lighting circuits to panel.
C. Panel 'A1' – Added contactor circuit to panel.
D. Panel 'A2' – added lighting circuit to panel.
E. Panel 'B' – added lighting circuit.
F. Panel 'R' – Removed exterior lighting and contactor circuits. Circuit breakers are indicated as single pole spares.
G. Added panel schedule general note.

020. **P-201 – PLUMBING PLANS**

A. Added and applied keyed note #25 for Deductive Alternate #1 scope or work.

021. **P-602 – PLUMBING DETAILS**

A. Removed fire surge tank detail and renumbered Hydromechanical Grease Interceptor detail as #1.

**END OF NARRATIVE**

**SECTION 00 73 00**
**SUPPLEMENTARY CONDITIONS**

## ARTICLE 1 GENERAL

**The following supplements modify the "General Conditions of the Contract for Construction", AIA Document A201, Seventeenth Edition, 2017. The portions of the General conditions not modified, supplemented or deleted by these Supplementary conditions shall remain in effect. As appropriate, for purposes of this Request for Proposal, the term "Bid" shall mean "Proposal" and the term "Bidder" shall mean "Offeror" wherever they appear in the Construction Documents.**

**1.1**

1.1.1 **BASIC DEFINITIONS**

1.1.2 **THE WORK**

Add the following sentence at the end of this paragraph:

It also includes all supplies, skill, supervision, transportation services and other facilities and things necessary, proper or incidental to the carrying out and completion of the terms of the contract and all other items of cost or value needed to produce, construct and fully complete the public work identified by the Contract Documents.

Add Subparagraphs 1.1.3 and 1.1.4 as follows:

1.1.3 **NAMES OF PARTIES**

The following definitions apply to parties named in the Contract Documents:

a. Owner: Hays County ESD #4
P.O. Box 1312
111 Green Acres Dr.
Wimberley, Texas 78676
Phone: (512) 847-3536

b. Architect: Martinez Architects, LP
900 Rockmead, Suite 250
Houston, TX 77339
Phone: (281) 800-1023

1.1.4 **BIDDING DOCUMENTS**

Bidding documents consist of all documents bound into or referenced in the Project Manual, the Drawings, and Addenda related thereto. The Project Manual contains the Bidding Requirements, Sample Forms, conditions of the Contract, the Specifications and a list of Drawings and Schedules, some of which are bound into the Project Manual (Other Drawings and Schedules are bound separately).

**1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENT**

Add subparagraph 1.2.1 as follows:

1.2.1 In the event of conflicts or discrepancies among the Contract Documents, interpretations will be based on the following priorities.

a. The Agreement.
b. Addenda, with those of later date having precedence over those of earlier date.
c. The Supplementary Conditions.
d. The General Conditions of the Contract for Construction.
e. Drawings and Specifications.

In the case of an inconsistency between the Drawings and Specifications or within either Document not clarified by an Addendum, the better quality or greater quantity of Work shall be included in the Bid. Clarifications of the inconsistency will be accomplished with the Contractor after award of Contract and, if necessary, an appropriate reduction in the Contract will be accomplished by Change Order.

1.2.2 Add Paragraph 1.3 as follows:

**1.3 MISCELLANEOUS OTHER DEFINITIONS**

1.3.1 **ABBREVIATIONS**

N.I.C. Not in Contract. Indicating work not required to be done by this Contractor under this agreement.

ACI AMERICAN CONCRETE INSTITUTE

ADA AMERICANS WITH DISABILITIES ACT OF 1990

ADAAG AMERICANS DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS & FACILITIES

AIA AMERICAN INSTITUTE OF ARCHITECTS

AIEE AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS

AISC AMERICAN INSTITUTE OF STEEL CONSTRUCTION

AISI AMERICAN IRON AND STEEL INSTITUTE

ANSI AMERICAN NATIONAL STANDARDS INSTITUTE

ASA AMERICAN STANDARDS ASSOCIATION

ASTM AMERICAN SOCIETY FOR TESTING MATERIALS

AWSC AMERICAN WELDING SOCIETY CODE

FS FEDERAL SPECIFICATION

NBS NATIONAL BUREAU OF STANDARDS

NEC NATIONAL ELECTRIC CODE

SPR SIMPLIFIED PRACTICE RECOMMENDATION

TAS TEXAS ACCESSIBILITY STANDARDS

UL UNDERWRITERS LABORATORIES, INC.

1.3.2 **ADDENDA, ADDENDUM**

Documents issued by the Architect prior to execution of the Owner Contractor Agreement that modify or clarify the Bidding Documents. All addenda become a part of the Contract Documents.

1.3.3 **ALTERNATE BID(S)**

A separate amount which, if accepted by the Owner, will be added to or deducted from the Base Bid. If accepted, the work that corresponds to the alternate bid will become part of the agreement between Owner and Contractor. Alternate bids shall remain valid for the same period of time as the Base Bid after receipt of bids, regardless if an Owner Contractor Agreement has been executed, unless indicated otherwise herein.

1.3.4 **APPROVED, APPROVED EQUIVALENT, APPROVED EQUAL, OR EQUAL**

The terms Approved, Approved Equivalent, Approved Equal, and Or Equal, relate to the substitution of products or systems approved in writing by the Architect. Refer to Paragraph 3.19, Substitution of Products and systems, for procedures which must be followed after award of contract. The substitution procedure process to be followed prior to receipt of bids is described in the Instructions to Bidders.

1.3.5 **BASE BID**

The Contractor's bid for the Work, not including any Alternates.

1.3.6 **CONTRACT TIME**

The period of time including Anticipated Weather Days, which is established in the Contract Documents for Substantial Completion of the Work. This period of time is subject to authorized

adjustments for Unanticipated Weather Days and other Calendar Day extensions of time as enumerated in the Contract Documents.

1.3.7 **DATE OF AGREEMENT**

The date the Owner formally awards a Contract for Construction of the Work. This date will be inserted in the first page of the Agreement Between Owner and Contractor and shall be referenced in Performance Bond and Payment Bond forms. See also Date of Commencement of Work.

1.3.8 **DATE OF COMMENCEMENT OF THE WORK**

The date indicated in the written Notice to Proceed delivered to the Contractor.

1.3.9 **DATE OF FINAL COMPLETION**

The end of construction. See AIA Document A201, paragraph 9.10

1.3.10 **DAY**

The following days are referenced in the documents:

a. Calendar Days: The days of the Gregorian Calendar. The Contract Time is established in Calendar Days. Extensions of time granted for Regular Work Days lost, if any, will be converted to Calendar Days.
b. Holidays: The days officially recognized by the construction industry in this area a holiday; normally limited to the observance days of New Year's Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day and the day after, and Christmas Day.
c. Regular Work Days: All calendar days except holidays, Saturdays, and Sundays. Requests for extensions of time shall be requested on the basis of Regular Work Days, and those days, if approved, will be converted to calendar days by multiplying by a factor of one and four-tenths (1.4).
d. Anticipated Weather Days: An allowance of Regular Work Days established as probable days lost due to weather delays; said allowance to be included in the Contractor's proposed Completion Time on his Bid Form.
e. Weather Days: Regular Work Days when rain, flooding, snow, unusually high winds, excessively wet grounds, or similar circumstances prevent progress on major portions of the Work. The Contractor will be entitled to an extension of the Contract Time for the net additional time, if any, which result from deducting the amount of Anticipated Weather Days from the total amount of Weather Days.
f. Net Weather Days: The difference in working days between Anticipated Weather Days and Weather Days.

1.3.11 **NOTICE TO PROCEED**

1.3.12 A notice that may be given by the Architect on behalf of the Owner to the Contractor that directs the Contractor to start the Work. It may also establish the Date of Commencement of the Work.

1.3.13 **PROVIDE**

Whenever the word "provide" is used in these documents, it shall mean the same as "furnish and install".

1.3.14 **PUNCH LIST**

**2.1 INFORMATION AND SERVICES REQUIRED OF THE OWNER**

Delete Subparagraph 2.2.5 in its entirety and replace it with the following:

2.1.1 The Contractor will be furnished electronic copies of Drawings and Project Manuals. Hardcopies will be furnished at the cost of reproduction, postage, and handling.

Add Paragraph 2.2 as following:

**2.2 OWNER'S LACK OF LIABILITY TO THIRD PARTY**

2.2.1 The Owner shall have the right to occupy or use without prejudice to the right of either party, any completed or largely completed portions of the project, notwithstanding the time completing the entire work or such portions may not have expired. Such occupancy and use shall not constitute acceptance of any work not in accordance with the Contract Documents.

2.2.2 Add Paragraph 2.3 as follows:

**2.3 OWNER'S RIGHT TO OCCUPY THE PROJECT**

2.3.1 The Owner shall have the right to occupy or use without prejudice to the right of either party, any completed or largely completed portions of the project, notwithstanding the time completing the entire work or such portions may not have expired. Such occupancy and use shall not constitute acceptance of any work not in accordance with the Contract Documents.

2.3.2 If such prior use delays the completion of the Project, the Contractor shall be entitled to extension of time, claim for which shall be made in writing with supporting data attached.

2.3.3 Refer to Article 11, Insurance and Bonds, regarding property insurance requirements in the event of such occupancy.

**ARTICLE 3 CONTRACTOR**

**3.1 GENERAL**

Add Subparagraph 3.1.4 as follows:

3.1.1 The Contractor must be fully qualified under any state or local licensing laws for Contractors in effect at the time and at the location of the work. The Contractor is responsible for determining all his subcontractors and prospective subcontractors are duly licensed in accordance with the law.

**3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR**

Add Subparagraphs 3.2.1, 3.2.2, 3.2.3 and 3.2.4 as follows:

3.2.1 The Contractor shall not be entitled to additional compensation for the "rework portion" of any additional work caused by his failure to carefully study and compare the contract documents prior to execution of the work.

3.2.2

3.2.3 If, in the opinion of the Architect, the Contractor does not make a reasonable effort to comply with the above requirements of the Contract Documents and this causes the Architect or his Consultants to expend an unreasonable amount of time in the discharge of duties imposed on him by the Contract Documents, then the Contractor shall bear the cost of compensation for the Architect's additional services made necessary by such failure. The Architect will give the Contractor prior notice of intent to bill for additional services related to Articles 3.2.5, 3.2.6, and 3.12 before additional services are performed.

3.2.4 If the Contractor has knowledge that any of the products or systems specified will perform in a manner that will limit the Contractor's ability to satisfactorily perform the work or to honor his Warranty, he shall promptly notify the Architect in writing, providing substantiation for his position. Any necessary changes, including substitutions of materials, shall be accomplished by appropriate Modification.

**3.3 SUPERVISION AND CONSTRUCTION PROCEDURES**

Add Subparagraph 3.3.1 as follows:

3.3.1 The Contractor is especially cautioned to coordinate the routing of mechanical and electrical items prior to commencing these operations.

**3.4 WARRANTY**

Add Subparagraphs 3.4.1, 3.4.2 and 3.4.3 as follows:

3.4.1 In the event of failure of a specified product, either during construction or the warranty period, the Contractor shall take appropriate measures with the manufacturer of the product to assure correction or replacement of the defective products.

3.4.2 Refer to General Contractor Guarantee and Subcontractor Guarantee forms included under Section 01 77 00, Construction Contract Close Out which will be required prior to final payment.

3.4.3 Approximately eleven months after Substantial Completion, the Contractor shall accompany the Owner and Architect on an end of the one-year Warranty period re-inspection of the Project. Additional deficiencies observed or reported shall be corrected by the Contractor.

**3.5 TAXES**

Add Subparagraph 3.5.1 as follows:

3.5.1 In accordance with Section 151.311 of the Texas Tax Code, the Owner is exempt from all sales tax on the purchase of tangible personal property under Section 151.309 of the Texas Tax Code. The Owner will issue certificates of Exemption from sales tax on tangible personal property furnished by the Contractor on this construction project. The Contractor shall issue Certificates of Resale to their subcontractors and suppliers in order to avoid payment of any sales tax on materials incorporated into this project. Failure of the Contractor to issue Certificates of Resale to the subcontractors and suppliers shall make the Contractor responsible for absorbing the tax. Refer to Section 151.311 of the Texas Tax Code for the definition of tangible personal property.

**3.6 PERMITS, FEES, AND NOTICES**

3.6.1 At Subparagraph 3.6.1, add the following subparagraphs:

a. The Owner shall pay directly to the governing authority the cost of all permanent property utility assessments, tap charges, and similar utility connection charges.
b. The Contractor shall be responsible for obtaining and paying for all City and County Building Permits, Inspection Fees and Plan Checking Fees; temporary utility charges, and water meter charges and any other similar fees assessed by jurisdictional authorities having control over this Project.
c. Fees payable to American Construction Investigations, LTD for document review relative to the Elimination of Architectural Barriers Act shall be paid by the Owner. Architect will submit the documents to American Construction Investigations, LTD for review and approval.

**3.7 ALLOWANCES**

Delete Paragraph 3.9 in its entirety. Refer to Section 01 21 00, Allowances.

**3.8 SUPERINTENDENT**

Add Subparagraph 3.8.1 as follows:

3.8.1 The Superintendent shall be satisfactory to the Owner and shall not be changed except with the consent of the Architect, unless the Superintendent leaves the employment of the Contractor. No increase in Contract Time or Contract Sum shall be allowed in the event the Owner or Architects object to any nominated superintendent.

3.8.2 The Superintendent shall remain on the project full time until Final Payment is issued.

**3.9 CONTRACTOR'S CONSTRUCTION SCHEDULES**

Add Subparagraph 3.9.1 as follows:

3.9.1 The Contractor shall submit to the Architect, with each monthly Application for Payment, a copy of the progress schedule updated to reflect the current status of the project. The Contractor shall take whatever action necessary to assure that the project completion schedule is met.

**3.10 DOCUMENTS AND SAMPLES AT THE SITE**

Add Subparagraph 3.10.1 as follows:

3.10.1 The Contractor shall post all Addenda on Construction Documents prior to commencing work in the site.

**3.11 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES**

At Subparagraph 3.11.3, add the following subparagraphs:

a. If, in the opinion of the Architect, the Shop Drawings, Product Data, Samples and similar submittals are incomplete, indicate an inadequate understanding of the work covered by the submittals, or indicate a lack of study and review by the Contractor prior to submittal to the Architect, the submittals will be returned, unchecked, to the Contractor for correction of these three deficiencies and subsequent resubmittal. Additional service charges as outlined in 3.2.6 may be charged by the Architect in this event.

b. The Architect will take no action on Shop Drawings, Product Data, and Samples that have not first been certified, by stamped, signed notation, as having been checked and approved by the Contractor for use in the Work, or that are not specifically required by the Contract Documents.

At Subparagraph 3.11.4, correct the work “approved” to read “accepted”.

At Subparagraph 3.11., correct “Architect’s approval” to read “Architect’s acceptance”.

At Subparagraph 3.11.6, correct “Architect’s approval” to read “architect’s acceptance” and add the following paragraph:

c. Deviation from the requirements of the Contract Documents indicated on Shop Drawings, Product Data, and Samples, does not constitute the required notification “in writing”.

Add Subparagraphs 3.12.7 and 3.12.8 as follows:

3.11.1 The Contractor shall submit complete Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents to the Architect at least 15 days prior to the date the Contractor needs the reviewed submittals returned. Where colors are to be selected by the Architect, submit all Samples in adequate time to allow the Architect to prepare a complete selection schedule. In general, all submittals requiring color selection shall be submitted to the Architect within four weeks of the date of the contract for construction.

3.11.2 The Contractor shall submit the number of copies of Shop Drawings, Product Data, Samples and similar submittals which the Contractor and his subcontractors need for their use plus two additional sets for the Architect and one additional set for each of the Architect’s consultants involved with the particular section of work. Where shop drawings are involved, submit two opaque prints of the shop drawing for the Architect plus one additional opaque print for each of the Architect’s consultants involved with the particular section of work. The shop drawings will be marked by the Architect and/or his consultants and returned to the Contractor for his use, distribution, correction or resubmittal as required. After final review and correction of the submittal, the Contractor shall send two corrected sets to the Architect, and one to the Architect’s consultants involved with the particular section of work.

**3.12 CLEAN UP**

Add Subparagraph 3.12.1 as follows:

3.12.1 Prior to the Architect’s inspection for Substantial Completion, the Contractor shall clean exterior and interior surfaces exposed to view; remove temporary labels, stains, and foreign substances; polish transparent and glossy surfaces; clean equipment and fixtures to a sanitary condition; replace air filters in mechanical equipment; clean roof, gutters, and downspouts; remove obstructions and flush debris from drainage systems; clean site; sweep paved areas and rake clean other surfaces; remove trash and surplus materials from the site.

**3.13 INDEMNIFICATION**

Delete Subparagraphs 3.13.1 and 3.13.2 in their entirety and replace them with the following:

3.13.1 To the fullest extent permitted by applicable law, Contractor shall and does indemnify, protect, defend and hold harmless the Owner, Architect and their respective officers, directors, trustees, shareholders, employees and agents (collectively the “Indemnitees”) from and against all claims, damages, losses, liens, causes of action, suits, judgments and expenses, including attorney fees, (A) of any nature, kind or description of any person or entity, including any governmental agency or authority, directly or indirectly arising out of, caused by, or resulting from (in whole or in part), (1) the Work performed hereunder, or any part thereof, or (2) any act or omission of Contractor,

any subcontractor, anyone directly or indirectly employed by them, or anyone that they control or exercise control over, including any of the foregoing caused in whole or in part by the negligence of any Indemnitee or (B) brought by or on behalf of any employee of Contractor or any Subcontractor (collectively the "Liabilities").

**THE CONTRACTOR'S OBLIGATION TO SO INDEMNIFY OWNER AND THE INDEMNITEES SHALL INCLUDE INDEMNIFICATION FOR ANY OF SUCH MATTERS CAUSED IN WHOLE OR IN PART BY THE CONCURRENT OR JOINT NEGLIGENCE OF OWNER OR ANY INDEMNITEE.**

Contractor shall promptly advise Owner in writing of any action, administrative or legal proceeding or investigation as to which this indemnification may apply, and Contractor, at Contractor's expense, shall assume on behalf of Owner (and other indemnitees) and conduct with due diligence and in good faith the defense thereof with counsel satisfactory to Owner; provided however, that Owner shall have right, at its option, to be represented therein by advisory counsel of its own selection and at its own expense. In the event of failure by Contractor to fully perform in accordance with this indemnification paragraph, Owner, at its option, and without relieving Contractor of its obligations hereunder, may so perform, but all costs and expenses so incurred by Owner in that event shall be reimbursed by Contractor to Owner, together with interest on the same from the date any such expense was paid by Owner until reimbursed by Contractor, at the rate of interest provided to be paid on judgments under the laws of the State of Texas. This indemnification shall not be limited to damages, compensation or benefits payable under insurance policies, workers' compensation acts, disability benefits acts or other employees' benefits acts.

3.13.2 It is understood and agreed that Subparagraph 3.18 above is subject to, and expressly limited by, the terms and conditions of TEX. CIV. PRACT. & REM. CODE ANN. 130.001-130.005 (Vernon Supp. 1989), as amended or modified, or any successor statute. Contractor shall not be obligated under Subparagraph 3.18 to indemnify or hold harmless Architect or any agent, servant of employee of Architect from liability or damage that:

a. is caused by or results from:
   (1) defects in plans, designs or specifications prepared, approved or used by the Architect; or
   (2) negligence of the Architect in the rendition or conduct of professional duties called for or arising out of the Contract Documents and the plans, designs or specifications that are a part of the Contract Documents; and
b. arises from:
   (1) personal injury or death;
   (2) property injury; or
   (3) any other expense that arises from personal injury, death or property injury.

3.13.3 It is agreed with respect to any legal limitations, now or hereafter in effect and affecting the validity or enforceability of the indemnification obligation under Paragraph 3.18, such legal limitations are made a part of the indemnification obligation and shall operate to amend the indemnification obligation to the minimum extent necessary to bring the provision into conformity with the requirements of such limitations, and as so modified, the indemnification obligation shall continue in full force and effect.

Add Paragraphs 3.14, 3.15, 3.16 and 3.2.17 as follows:

**3.14 SUBSTITUTIONS OF PRODUCTS AND SYSTEMS, "OR EQUAL" BRANDS**

3.14.1 The materials, products, and the systems covered by these specifications have been selected as a standard because of quality, particular suitability, or record of satisfactory performance. It is not intended to preclude the use of equivalent or better materials, products, or systems provided that same meets the requirements of the particular project and have been approved in an addendum as a substitution prior to the submission of bids. If prior written approval in an addendum has not been obtained, it will be assumed that the Bid is based upon the materials, products, and systems

described in the Bidding Documents and no substitutions will be permitted, except as provided hereinafter.

3.14.2 If, after award of contract, the Contractor or one of his Subcontractors or Suppliers determines that any of the products or systems specified will perform in a manner that will limit the Contractor's ability to satisfactorily perform the work or to honor the Warranty, the Contractor shall promptly notify the Architect, in writing, providing detailed substantiation for his position. Any changes deemed necessary by the Owner and Architect, including substitution of materials and change in Contract Sum, either upward or downward, if any shall be accompanied by appropriate Modification.

3.14.3 Substitution requests shall be submitted on the forms included herein and in accordance with the process established in Section 01 25 13 - Product Substitutions.

**3.15 RECORD DRAWINGS**

3.15.1 At the completion of the project, the Contractor shall submit one electronic file (AutoCAD & Adobe Acrobat newest version acceptable to the Owner) containing all of the drawings showing all changes made during bidding and construction and one set of opaque reproducibles printed from this "record set".

**3.16 PREVAILING WAGE RATE**

3.16.1 No employee used in this construction may be less than a minimum wage rate provided in Article 5159dm Vernon's Civil Statutes, Annotated, revised 1995 and The Texas Minimum Wage Act of 1970. Refer to Document 00 73 43 – Prevailing Wage Rates.

**3.17 ANTITRUST VIOLATIONS**

3.17.1 To permit the Owner to recover damages suffered in antitrust violations, the Owner-Contractor Agreement shall include the following wording, "Contractor hereby assigns to Owner any and all claims for overcharges associated with this Contract which arise under the antitrust laws of the United States, 15 U.S.C.A., Section 1 et. seq. (1973)". The Contractor shall include such provisions in agreements with Sub-Subcontractors and Suppliers.

**ARTICLE 4 ADMINISTRATION OF THE CONTRACT**

**4.1 CLAIMS AND DISPUTES**

4.1.1 Correct "21 days" to read "90 days".

4.1.2 Correct "21 days" to read "90 days".

**4.2 RESOLUTION OF CLAIMS AND DISPUTES**

Delete all references to arbitration.

Delete Subparagraph 4.4.6 in its entirety.

**4.3 MEDIATION**

4.3.1 Delete reference to "as a condition precedent to arbitration".

Delete Subparagraph 4.3.2 in its entirety and replace it with the following:

4.3.2 The parties shall endeavor to resolve their claims by mediation which, unless the parties mutually agree otherwise, shall in accordance with the Construction Industry Mediation Rules of the American Arbitration Association currently in effect. Request for mediation shall be filed in writing with the other party to the Contract. Mediation shall proceed in advance of legal or equitable proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order.

4.3.3 Delete Paragraph 4.6 in its entirety and all references to Arbitration.

**ARTICLE 5 SUBCONTRACTORS**

**5.1 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF WORK**

Delete Subparagraph 5.1.1 in its entirety and replace it with the following:

5.1.1 As soon as practicable after Award of the Contract, but no later than 10 days prior to the submittal date for the Contractor's first Application for Payment, the Contractor shall furnish the Owner and Architect, in writing, a list of the persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each of the principal portions of the Work. The list shall include the name, address, and telephone and fax numbers, and contact person for each Subcontractor and/or Supplier. The Architect will promptly reply to the Contractor in writing stating whether or not the Owner or Architect, after due investigation, has reasonable objection to any such proposed person or entity. Failure of the Owner or Architect to reply promptly shall constitute notice of no reasonable objection. Failure of the Contractor to submit the subject names in a timely manner will delay processing of the Contractor's Application for Payment.

At Subparagraph 5.2.4, add the following sentence:

Prior to such change the Contractor shall notify the Architect of his intent and reasons for such proposed changes.

**ARTICLE 7 CHANGES IN THE WORK**

**Add paragraph 7.1 as follows:**

**7.1 ALLOWABLE MARKUPS FOR CHANGES IN THE WORK**

7.1.1 In Subparagraphs 7.2.2, 7.3.3, and 7.3.6 the allowance for the combined overhead and profit included in the total cost to the Owner shall be based on the following schedule:

a. For the Contractor, for work preformed by the Contractor's own forces, a maximum total markup of 10 percent of the actual cost.
b. For the Contractor for Work performed by the Contractor's Subcontractor(s), 5 percent of the amount due the Subcontractor(s).
c. For each Subcontractor or Sub-subcontractor involved, for Work performed by that Subcontractor's or Sub-subcontractor's own forces, a maximum markup of 10 percent of the actual cost.
d. For each Subcontractor, for Work performed by the Subcontractor's Sub-subcontractors, 5 percent of the amount due the Sub-subcontractor.
e. Cost to which overhead and profit is to be applied shall be determined in accordance with Subparagraph 7.3.6.
f. In order to facilitate checking of quotations for extras or credits, all proposals of Contractors, Subcontractors, and Sub-subcontractors, (except those so minor that their propriety can be seen by inspection), shall be accompanied by complete and detailed work sheets showing itemization of costs including labor, materials, and other costs.

**ARTICLE 8 TIME**

**8.1 DEFINITIONS**

Delete subparagraph 8.1.1 in its entirety and replace it with the following:

8.1.1 Unless agreed otherwise, the date inserted on the Agreement form and the Date of Commencement of the Work shall be as follows:

a. The date inserted on the first page of the Agreement form will be the date the Owner formally awards the Contract. As soon as feasible after receipt of Bids, the Architect will present Agreement forms to the Contractor for his review and signature. The Contractor will be allowed a maximum of five (5) days from the date the prepared Agreements are presented to him to: 1) obtain the required bond forms and insurance certificates and, 2) return the executed Agreements and supporting documents to the Architect for transmittal to the Owner for his final review and execution.
b. The Date of Commencement of the Work: Refer to Subparagraph 1.6.8.

**8.2 PROGRESS AND COMPLETION**

Delete subsection 8.2.1; substitute the following:

8.2.1 Time is of the essence and completion of the Work must be within the time stated in the contract subject to such extensions as may be granted under Section 8.3. The Contractor agrees to commence work no later than ten days after date of issuance of the written Notice to Proceed and to substantially complete the project within the time stated in the contract.The Contract Time is the calendar days from date of written Notice to Proceed stated in the Contract, subject to such extensions as are authorized as stipulated in the Conditions of the Contract including these Supplementary Conditions.

**8.3 DELAYS AND EXTENSIONS OF TIME**

Delete Subparagraph 8.3.1 in its entirety and replace it with the following:

8.3.1 If the Contractor is delayed at any time in the progress of the work by any act of neglect of the Owner or the Architect, or by an employee of either, or of a separate contractor employed by the Owner, or by changes ordered in the Work, or by labor disputes, fire, unusual delays in deliveries, unavoidable casualties, Net Weather Days, or other causes beyond the Contractor's control, or by other causes which Architect determines may justify the delay, then the Contract Time shall be extended by Change Order for such reasonable time as the Architect and Owner may determine.

Add Subparagraphs 8.3.2, 8.3.3, 8.3.4 and 8.3.5 as follows:

8.3.2 Extensions of time granted for causes described herein will be granted on the basis of 1.4 Calendar Days extension for each Regular Working Day lost, except as modified by the provisions contained herein related to Anticipated Inclement Weather days.

8.3.3 Each Bidder shall include in his proposed Contract Time an allowance of Anticipated Inclement Weather Days in accordance with the following schedule:

Number of Anticipated Inclement Weather Days to be included in Bid Completion Time (These are regular working days).

| | | | |
|---|---|---|---|
| January – 5 | April – 4 | July – 4 | October – 3 |
| February – 3 | May – 5 | August – 5 | November – 3 |
| March – 2 | June – 6 | September – 5 | December - 4 |

8.3.4 Weather Days shall be as described in Subparagraph 1.6.11.6. If such situations occur in more than the number of Anticipated Inclement Weather Days included in the Bid Completion Time and if those additional days prevent the Contractor from performing critical portions of the scheduled Work, extensions of time caused by inclement weather may be requested as enumerated hereinafter.

8.3.5 At the beginning of each month, the Contractor shall submit a monthly status report showing 1) the scheduled number of Anticipated Inclement Weather Days for the particular month, 2) the actual Weather Days requested, and 3) the Net Weather Days (plus, minus, or no change). At times deemed appropriate by the Architect or when requested in writing by the Contractor, the Contract Time will be adjusted by Change Order if the total of Net Weather Days is substantially greater than 0. If the Contractor fails to submit said monthly status report, it will be assumed that none of the Anticipated Inclement Weather Days were used for that month and they shall accumulate for possible future offset against Net Weather Days; however, if at the end of the project all Anticipated Inclement Weather Days have not been used, the Contract Completion Time will not be reduced. An example of the monthly schedule to be submitted is as follows:

8.3.6

| Month | Anticipated | Weather Days (Regular)Actual Requested | Net |
|---|---|---|---|
| January | 3 | 8 | 5 |
| February | 4 | 0 | -4 |
| March | 4 | 2 | -2 |
| April | 2 | 2 | 0 |

| | | | |
|---|---|---|---|
| May | 5 | 7 | 2 |
| June | 6 | 10 | 4 |
| TOTALS | 24 | 29 | 5 |

Using this example (and assuming that all requested days were approved), there were 5 Net Weather Days (regular working days) for the first six months of the project and the extension of Contract Time would be 7 calendar days (5 working days x 1.4 = 7 calendar days).

Add paragraph 8.4 as follows:

**8.4 LIQUIDATED DAMAGES**

The work to be performed under this Contract shall begin upon receipt of the Notice to Proceed, and shall be substantially completed within 425 calendar days, or as stipulated in the Contract Documents, whichever is earlier, or by such dates thereafter as may be established by any written extensions granted under Article 8 of the General Conditions. The parties hereto agree that time is of the essence to this Contract, and that the pecuniary damages that would be suffered by the Owner, if the Contractor does not substantially complete all work called for in the Contract Documents by the specified date, are of their very nature difficult of ascertainment. It is therefore expressly agreed that as part of the consideration inducing the Owner to execute this Contract, that the Owner will deduct from any final payment made to the Contractor a sum equal to $1000.00 per day for each and every calendar day beyond the agreed date which the CONTRACTOR shall require for substantial completion of the work included in this Contract. It is also expressly agreed that if the CONTRACTOR does not complete all punch list items within 30 days of submitting the punch list, the OWNER will deduct from any final payment made to the CONTRACTOR an additional sum equal to $500.00 per day for each and every calendar day beyond the 30 days given to the CONTRACTOR to complete the punch list items. It is also expressly agreed between the parties that in its sole discretion, the OWNER may contact the CONTRACTOR'S bonding company in the event that the OWNER believes that its rights under the performance bond related to the Project may be invoked. It is further understood that the above-referenced sums per day are agreed upon by the parties as a fair estimate of the pecuniary damages that will be sustained by the Owner in the event that the work is not substantially completed within the agreed upon time or the punch list is not completed in a timely manner. These sums shall be considered as liquidated damages only, and in no sense shall be considered a penalty, said damage being caused by additional compensation to personnel, loss of interest on money, inconvenience, disruption of the facility function, moving costs, loss of building use, and other miscellaneous increased costs, all of which are difficult of exact ascertainment.

8.4.1 The Owner’s use of the Substantially Complete facilities shall not be disrupted or prohibited in any way. Failure to complete and close-out the Project within 45 days after the scheduled Substantial Completion date will result in liquidated damages being assessed in the amount of $500.00 per day. If the CONTRACTOR is delayed through no fault of the OWNER, and Substantial Completion is not achieved by the agreed contract completion date, the PROJECT close-out period of 45 days will not be extended by the number of days of delay past the actual Substantial Completion date and will remain based upon the agreed contract completion date. The CONTRACTOR will be assessed any liquidated damaged amount for each day past such date, and such liquidated damages will be deducted from the final payment to the CONTRACTOR.

**ARTICLE 9 PAYMENTS AND COMPLETION**

**9.1 SCHEDULE OF VALUES**

Add Subparagraph 9.1.1 as follows:

9.1.1 The Schedule of Value shall be prepared and submitted as stipulated in Section 01 32 16 - Construction Schedules.

**9.2 APPLICATIONS FOR PAYMENT**

Delete Subparagraph 9.2.1 in its entirety and replace it with the following:

9.2.1 Payments will be made on account of materials or equipment that are suitably stored at some off site location meeting the following conditions:

a. The location must be agreed to, in writing, by the Owner and Surety.
b. The location must be a bonded warehouse.
c. Surety must agree, in writing, to each request for payment.
d. The Contractor must bear the cost of the Owner's and Architect's expenses related to visiting the off-site location.

Payments for materials or equipment stored on or off the site shall be conditioned upon submission by the Contractor of bills of sale or such other procedures satisfactory to the Owner to establish the Owner's title to such materials or equipment or otherwise protect the Owner's interest, including applicable insurance (naming the Owner as insured) and transportation to the site for those materials and equipment stored off the site. Under no circumstances will the Owner reimburse the Contractor for down payments, deposits, or other advance payments for materials or equipment.

Add Subparagraph 9.3.4 as follows:

9.2.2 The Contractor shall submit requests for payment in quadruplicate, on or before the 15th day of each month, using AIA Document G702, Application and Certificate of Payment, as the cover sheet. Continuation sheets showing in detail the amounts requested, etc., shall be submitted using AIA Document G703, Continuation Sheet, or a computerized version of these documents previously approved for use. The information provided on the continuation sheets in the Description of the Work and Scheduled Values columns shall match the corresponding information shown on the approved Schedule of Values. All blank spaces on AIA Document G702, Application and Certificate of Payment, must be completed and the signatures of the Contractor and Notary Public shall be original on each form. By submitting his application for payment, the Contractor certifies that the individual signing the application is authorized to do so.

**9.3 PROGRESS PAYMENTS**

Delete Subparagraph 9.6.1 in its entirety and replace it with the following:

9.3.1 After the Architect has issued a Certificate for Payment, the Owner shall make progress payments in accordance with the following subparagraph which shall be inserted as Article 5, Progress Payments, in the Owner-Contractor Agreement, AIA Document A101, 2017 Edition.

Based upon the applications for payment and supporting documents submitted to the Architect by the Contractor and certification of the amount payable by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided in the Contract Documents for the period ending the last day of the month as follows:

a. Not later than twenty-five (25) days following the end of the period covered by the Application for Payment, ninety-five percent (95%) of the portion of the Contract sum properly allocable to labor, materials, and equipment incorporated in the Work and ninety-five (95%) of the portion of the Contract Sum properly allocable to materials and equipment suitably stored at the site or at some other location agreed upon in writing (subject to the conditions listed in Article 9.3.2 of the Supplementary Conditions to the Contract for Construction), for the period covered by the Application for Payment, less the aggregate of previous payments made by the Owner.
b. Upon Substantial Completion of the entire Work, a sum sufficient to increase the total payments to ninety-five percent (95%) of the Contract Sum, less such amounts as the Architect shall determine for all incomplete Work and unsettled claims as provided in the Contract Documents.

At Subparagraph 9.6.2, add the following sentence after the first sentence:

More specifically, if only five percent (5%) retainage is withheld by the Owner on payments to the Contractor, then the Contractor shall withhold only five percent (5%) retainage on payments to subcontractors; and subcontractors shall withhold only five percent (5%) retainage on payments to sub-subcontractors.

**9.4 FAILURE OF PAYMENT**

9.4.1 Delete “or awarded by arbitration”.

**9.5 SUBSTANTIAL COMPLETION**

Add the following to Subparagraph 9.8.1

9.5.1 The following items are a partial list of requirements, as applicable, to the Project, that must be completed prior to established Substantial Completion.

a. All fire alarm system components must be completed and demonstrated to the Owner.
b. Local fire marshal approval certificate must be delivered to Owner.
c. All exterior clean-up and landscaping must be complete.
d. All final interior clean-up must be complete.
e. All HVAC air and water balancing must be complete.
f. All Energy Management Systems must be complete and fully operational and demonstrated to the Owner.
g. All communications equipment, telephone system, security system and P.A. systems must be complete and demonstrated to the Owner.
h. All final lockset cores must be installed and all final Owner directed keying completed.
i. All room plaques and exterior signage must be complete.
j. All Owner demonstrations must be completed including kitchen equipment, HVAC equipment, plumbing equipment, lighting & sound system and electrical equipment.
k. A final Certificate of Occupancy must be signed by the Contractor and delivered to the Owner.
l. All operation and maintenance manuals are delivered and approved (“D-slant” ring binders in triplicate & CD electronic copy in pdf format categorized and filed according to specification number and product name) by Architect and/or Engineer.
m. All record drawings are delivered and approved.
n. All Material Safety Data Sheets are delivered and approved.

At Subparagraph 9.8.2, add the following sentence:

Should the Architect determine that the Contractor’s List of Items to be Completed or Corrected lacks sufficient detail or requires extensive supplementation, the list will be returned to the Contractor for revision, and the inspection for determining the Date of Substantial Completion will be delayed until the List submitted is a reasonable representation of the work to be done. The Architect, with the Owner’s consent, shall have the final authority to determine Substantial Completion.

Add Subparagraphs 9.5.2 and 9.5.3 as follows:

9.5.2 In order for the project or a major portion thereof to be considered substantially complete, the following conditions must be met:

a. All inspections by governmental authorities having jurisdiction over the project must have been finalized, any remedial work required by those authorities must have been completed, and Certificates of Occupancy and similar governmental approval forms must have been issued and copies delivered to the Owner and Architect.
b. All work, both interior and exterior, shall have been completed and cleaned except minor items which if completed after occupancy, will not, in the Owner’s opinion, cause interference to the Owner’s use of the building or any portion thereof. A significantly large number of items to be completed or corrected will preclude the Architect from issuing a Certificate of Substantial Completion. The Owner and Architect will be the sole judge of what constitutes a significantly large number of items.

9.5.3 After the date of Substantial Completion of the Project is evidenced by the Certificate of Substantial Completion, the Contractor will be allowed a period of thirty (30) days, unless extended by mutual agreement or provision of the Contract, within which to correct all deficiencies attached to the Certificate of Substantial Completion. Failure of the contractor to complete such corrections within the stipulated time will be reported to the Contractor’s surety. In this report, the Contractor and surety will be informed that, should correction remain incomplete for fifteen (15)

days, the Owner may initiate action to complete corrective work out of the remaining Contract funds in accordance with Article 14.2. Additional costs of the Owner, Architect, and other consultants incurred because of the Contractor's failure to complete the correction of deficiencies within 30 days after the date of Substantial Completion (unless extended by mutual agreement or provision of the Contract) will be deducted from the funds remaining to be paid to the Contractor.

a. Should corrective work following Substantial Completion require more than one re-inspection after notification by the Contractor that corrections are complete, the cost of subsequent inspections may also be deducted from the Contract funds remaining unpaid to the Contractor.

**9.6 FINAL COMPLETION AND FINAL PAYMENT**

At Subparagraph 9.10.2, add the following sentence:

Prior to final payment, the Contractor shall meet all of the requirements of Section 01 77 00, Construction Contract Close out.

Add Subparagraph 9.10.6 as follows:

9.6.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be paid by the Owner, to the Contractor, thirty-one (31) days after Substantial Completion of the work unless otherwise stipulated in the Certificate of Substantial Completion, provided the Work has been completed, the Contract fully performed, all of the requirements of Section 01 77 00, Construction Close Out are met, and the final Certificate for Payment has been issued by the Architect. The final payment will not be made until all of these conditions are met.

**ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY**

**10.1 HAZARDOUS MATERIALS**

Add Subparagraphs 10.1.1 and 10.1.2 as follows:

10.1.1 The use of any construction process or the installation of any materials containing the hazardous materials listed in paragraph 9.3 of Instructions to Bidders is strictly prohibited on this project.

10.1.2 As part of the construction contract close out process, and prior to receiving payment of any of the retainage, the Contractor and certain of his subcontractors shall submit notarized statements pertaining to the above referenced hazardous materials. Refer to Section 01 77 00, Construction Contract Close Out.

**ARTICLE 11 INSURANCE AND BONDS**

**11.1 CONTRACTOR'S LIABILITY INSURANCE**

At Subparagraph 11.1.1, add the following subparagraphs:

a. Liability insurance shall include all major divisions of coverage and be on a comprehensive basis including:
   (1) Premises Operations (including X, C, and U coverages)
   (2) Independent Contractors
   (3) Products and Completed Operations
   (4) Personal Injury Liability with Employee Exclusion delete
   (5) Contractual, including specified provision for Contractor's obligation under Paragraph 3.18
   (6) Owned, non-owned and hired vehicles
   (7) Broad Form Property Damage including Completed Operations
   (8) If the General Liability coverages are provided by a Commercial General Liability Policy on a claims-made basis, the policy date or Retroactive Date shall predate the Contract; the termination date of the policy or applicable extended reporting period shall be no earlier than the termination date of coverages required to be maintained after final payment, certified in accordance with Subparagraph 9.10.2.

At Subparagraph 11.1.2, delete the first sentence in its entirety and replace it with the following:

The insurance required by Subparagraph 11.1.1 shall be written for not less than the following limits or the limits required by law, whichever coverage is greater:

a. Workers' Compensation:
   (1) State: Texas - Statutory
   (2) Applicable Federal – Statutory
   (3) Employer's Liability
       $100,000 per Accident
       $500,000 per Disease, Policy Limit
       $100,000 per Disease, Each Employee

b. Commercial General Liability minimum insurance limits:
   General Liability
   (1) Bodily Injury and Property Damage Combined:
       $500,000 Each Occurrence
       $500,000 Aggregate
   (2) Damage to rented premises
       $100,000 each occurrence
   (3) Medical Expenses
       $10,000 any one person
   (4) Personal and Adv. Injury
       $500,000 each occurrence
       $500,000 aggregate
   (5) General Aggregate
       $1,000,000 aggregate
   (6) Products & Completed Operations
       $500,000 each occurrence
       $500,000 aggregate
       -Shall be maintained for at least one year after Substantial Completion and certificates shall be filed with the OWNER during this period.
       -Property Damage Liability Insurance shall provide X, C, and U coverage.
       -Broad Form Property Damage Coverage shall include Completed Operations.

c. OWNER'S and CONTRACTOR'S Protective Liability Insurance (OPLI):
   Naming the OWNER as the insured
   (1) $1,000,000 each occurrence
   (2) $1,000,000 aggregate

d. Professional Liability Coverage for DESIGNATED Design:
   (1) $1 million each occurence
   (2) $2 Million aggragate

11.1.1 Endorse to include officers and employees of OWNER, ARCHITECT, and ENGINEER

a. Written by the same insurance company as the Commercial General Liability policy
b. If this requirement is redundant, insurance broker must provide a letter that the General Liability policy will cover the same items that the OWNER Protective Liability Insurance would cover. A copy of the letter must be maintained with the contract documents.
c. Insurance Company Values and Size
   (1) Best rating of A or better required.
d. Cancellation Notice: 30-day cancellation notice required on all policies
e. Bonds
   (1) Payment Bond (100% of Contract amount for contracts $25,000 or over)
   (2) Performance Bond (100% of Contract amount for contracts $100,000 or over)

At Subparagraph 11.1.1, add the following sentence:

11.1.2 Proof of insurance shall be evidenced on 1) an original ACORD Certificate of Insurance 25-S (7/90) and 2) an original Supplemental Attachment for ACORD Certificate of Insurance 25-S (7/90), AIA Document G715-1991, each with an original signature of the Authorized

Representative. Policy exclusions and/or restrictions should be clearly explained on the Certificate or in an attached letter from the issuing agency. Blank areas on the Certificate should have "not covered" written across the printed areas when coverage is not provided.

Add Subparagraph 11.1.2 as follows:

11.1.3 Insurance shall be underwritten by a company rated not less than A in Best's latest published guide.

**11.2 OWNER'S LIABILITY INSURANCE**

Delete Subparagraphs 11.2.1 in its entirety and replace it with the following:

11.2.1 The Contractor shall be responsible for purchasing and maintaining Owner's Protective Liability Insurance naming the Owner as insured with the stated limit to be per occurrence as primary limit (combined single limit, irrespective of whether occurrence consists of personal injury, death, property damage, or combination thereof). The policy shall cover the work to be performed for the Owner by the Contractor and all subcontractors. The definition of insured in the policy shall be endorsed to include officers, employees of the Owner, while acting within the scope of employment or function for the Owner with respect to the work performed by the Contractor; the project architect and his consultants, as listed in the Bidding Documents, shall also be included as additional insureds. The policy shall be written with the same company as the Comprehensive General Liability policy.

Limits: $1,000,000

Add Subparagraph 11.2.2 as follows:

11.2.2 Refer to subparagraph 11.1.4 for additional requirements that apply to this paragraph also.

**11.3 PROJECT MANAGEMENT PROTECTIVE LIABILITY INSURANCE**

Delete paragraph 11.3 in its entirety.

**11.4 PROPERTY INSURANCE**

Delete Subparagraphs 11.4.1 through 11.4.10 in their entirety and replace them with the following:

11.4.1 The Contractor shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance in the amount of the initial Contract Sum as well as subsequent modifications thereto for the entire Work at the site on a replacement cost basis without voluntary deductibles. Such property insurance shall be maintained until final payment has been made as provided in Paragraph 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Paragraph 11.3 to be covered, whichever is earlier. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Work.

11.4.2 Property insurance shall be on an all-risk policy form and shall insure against the perils of fire and extended coverage and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, falsework, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's services and expenses required as a result of such insured loss. This insurance is not intended to cover machinery, tools or equipment owned or rented by the Contractor which are utilized in the performance of the Work but not incorporated into the permanent improvements. The Contractor shall, at the Contractor's own expense, provide insurance coverage for owned or rented machinery, tools or equipment. Coverage of other perils shall not be required unless otherwise provided in the Contract Documents.

11.4.3 The property insurance shall include an endorsement allowing Owner occupancy and the insurance shall not be altered on account of partial occupancy prior to final completion.

11.4.4 If the property insurance requires minimum deductibles and such deductibles are identified in the Contract Documents, the Contractor shall pay costs not covered because of such deductibles.

11.4.5 This property insurance shall cover portions of the Work stored off the site after written approval of the Owner at the value established in the approval, and also portions of the Work in transit.

11.4.6 Before any exposure to loss may occur, the Contractor shall file with the Owner a copy of each policy that includes insurance coverages required by this Paragraph 11.3. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire until at least thirty (30) days' prior written notice has been given to the Owner.

11.4.7 The Owner or Contractor waive all rights against 1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other and 2) the Architect, Architect's consultants, separate contractors described in Article 6, if any, and any of their subcontractors, sub-subcontractors, agents and employees, for damages caused by fire or other perils to the extent covered by property insurance obtained pursuant to this Paragraph 11.3 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described in Article 6, if any, and any of their subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

11.4.8 A loss under the Contractor's property insurance shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insured, as their interests may appear. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.

11.4.9 If required in writing by a party in interest, the owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Owner's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the Owner shall distribute in accordance with such agreement as the parties in interest may reach. If after such loss no other special agreement is made, replacement of damaged property shall be covered by appropriate Change Order.

11.4.10 The Owner as fiduciary shall have power to adjust and settle a loss with insurers.

**11.5 PERFORMANCE BOND AND PAYMENT BOND**

Add Subparagraphs 11.5.3, 11.5.4 and 11.5.5 as follows:

11.5.1 The Performance Bond Form and The Payment Bond Form included herein shall be executed and submitted to the Architect in duplicate prior to commencement of the work. The surety companies must be acceptable to the Owner and licensed admitted carriers in the State of Texas; and the companies must appear in a current Federal Treasury list as Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies.

11.5.2 Each bond shall be of penal sum equal to 100% of the Contract Sum and shall be compatible with the provisions of the governing authority. The Contractor shall file copies of each bond with the county clerk and furnish the Owner with a file receipt. The bonds shall remain in force throughout the warranty period of the contract. The Work will not be started until the bonds and issuing companies have been accepted as satisfactory by the Owner. The original bonds will be delivered to the Owner with an authorized power of attorney attached.

11.5.3 Claims must be sent to the Contractor and his Surety in accordance with Article 5160, Revised Civil Statutes. The Owner will furnish in accordance with such Article, a copy of the Payment Bond as provided therein to claimants upon request. All claimants are cautioned that no lien exists on the funds unpaid to the Contractor on such Contract, and that reliance on notices sent to the Owner may result in loss of their rights against the Contractor and/or his Surety. The Owner

is not responsible in any manner to a claimant for collection of unpaid bills, and accepts not such responsibility because of any representation by any agent or employee.

Add Paragraph 11.6 as follows:

**11.6 WORKER'S COMPENSATION INSURANCE COVERAGE**

11.6.1 Comply with the requirements of Rule 28, TAC §110.110, Reporting Requirements for Building or Construction Projects for Governmental Entities.

11.6.2 **DEFINITIONS:**

a. Certificate of coverage ("certificate"). A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement (TWCC-81, TWCC-82, TWCC-83, or TWCC-84), showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

b. Duration of the project – includes the time from the beginning of the work on the project until the contractor's/person's work on the project has been completed and accepted by the governmental entity.

c. Persons providing services on the project ("subcontractor" in §406.096) – includes all persons or entities performing all or part of the services the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractors, leasing companies, motor carriers, owner-operators, employees of any such entity which furnishes persons to provide services on the project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor transportation, or other service related to the project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply delivery, and delivery of portable toilets.

11.6.3 The Contractor shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the contractor providing services on the project, for the duration of the project.

11.6.4 The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract.

11.6.5 If the coverage period shown on the contractor's current certificate of coverage ends during the duration of the project, the contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.

11.6.6 The Contractor shall obtain from each person providing services on a project, and provide to the governmental entity:

a. A certificate of coverage, prior to that person beginning work on the projects, so the governmental entity will have on file certificates of coverage showing coverage for all persons providing services on the project; and

b. No later than seven days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.

11.6.7 The Contractor shall retain all required certificate of coverage for the duration of the project and for one year thereafter.

11.6.8 The Contractor shall notify the governmental entity in writing by certified mail or personal delivery, within 10 days after the Contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project.

11.6.9 The Contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Worker's Compensation, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.

11.6.10 The Contractor shall contractually require each person with whom it contracts to provide services on a project, to:

a. Provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all of its employees providing services on the project, for the duration of the project;
b. Provide to the Contractor, prior to the person beginning work on the project, a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project;
c. Provide the Contractor, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate ends during the duration of the project;
d. Obtain from each other person with whom it contracts, and provides to the Contractor:
   (1) a certificate of coverage, prior to the other person beginning work on the project; and
   (2) a new certificate of coverage, showing extension of coverage, prior to the end of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the project;
e. Retain all required certificates of coverage on file for the duration of the project and for one year thereafter;
f. Notify the governmental entity in writing by certificate mail or personal delivery, within 10 days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and
g. Contractually require each person with whom it contracts, to perform as required by paragraphs (1) – (7), with the certificates of coverage to be provided to the person for whom they are providing services.

11.6.11 By signing this contract or providing or causing to be provided a certificate of coverage, the contractor is representing to the governmental entity that all employees of the Contractor who will provide services on the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the Contractor to administrative penalties, criminal penalties, civil penalties, or other actions.

11.6.12 The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles the governmental entity to declare the contract void if the Contractor does not remedy the breach within ten days after receipt of notice of breach from the governmental entity.

**ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT**

**14.1 TERMINATION BY THE OWNER FOR CONVENIENCE**

At Subparagraph 14.1.2, delete the words "¼along with reasonable overhead and profit on the Work not executed".

**ARTICLE 15 CLAIMS AND DISPUTES**

**15.1 CLAIMS**

15.1.1 Correct "21 days" to read "90 days".

**15.2 MEDIATION**

Delete Subparagraph 15.3.2 in its entirety and replace it with the following:

15.2.1 The parties shall endeavor to resolve their claims by mediation which, unless the parties mutually agree otherwise, shall in accordance with the Construction Industry Mediation Rules of the

American Arbitration Association currently in effect. Request for mediation shall be filed in writing with the other party to the Contract. Mediation shall proceed in advance of legal or equitable proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order.

Delete Paragraph 15.4 in its entirety and all references to Arbitration.

**END OF SECTION 00 73 00**

| Door Numbers | HwSet# |
|---|---|
| 100A | C714A |
| 100B | C711A |
| 101A | 341 |
| 102A | 341 |
| 103A | 205H-C |
| 104A | 103 |
| 105A | 403 |
| 106A | 103 |
| 107A | 401 |
| 108A | 923 |
| 109A | C715A |
| 110A | C715A |
| 111A | 903 |
| 112A | 903 |
| 113A | 903 |
| 114A | 403 |
| 115A | C201 |
| 116A | 347 |
| 117A | 343 |
| 117B | 923 |
| 118A | 343 |
| 118B | 923 |
| 119A | 343 |
| 120A | 343 |
| 121A | 403 |
| 122A | 731 |
| 122B | C711CGR |
| 123A | 343 |
| 124A | 343 |
| 125A | 347 |
| 126A | 731 |
| 126B | C711GR |
| 126D | JK715X.1 |
| 127A | 347 |
| 128A | 343 |
| 129A | 343 |
| 130A | 343 |
| 131A | 343 |
| 132A | 343 |
| 133A | 343 |
| 134A | 347 |
| 135A | C715A |
| 135B | C715A |
| 136A | 902 |
| 137A | 501C |
| 138A | 401CG |
| 138N | 001 |

| Door Numbers | HwSet# |
|---|---|
| 139A | 001 |
| 139B | 001 |
| 139C | 001 |
| 139D | 001 |
| 139E | 001 |
| 139F | 001 |
| 139G | 001 |
| 139H | 001 |
| 139I | 001 |
| 139O | C715 |
| 139R | C715 |
| 145A | 203S |
| 147A | C201 |
| 149A | 201SW |
| 152A | 205W-C |

*150683 OPT0480723 VERSION 3*

HARDWARE GROUP NO. 001

| QTY | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|---|---|---|---|---|
| | NOTE | BALANCE OF HARDWARE BY DOOR MFR | | |

-COORDINATE HARDWARE REQUIREMENTS WITH DOOR MANUFACTURER PRIOR TO SUBMITTALS.

HARDWARE GROUP NO. 103

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|---|---|---|---|---|---|---|
| 3 | EA | HINGE | 5BB1 4.5 X 4.5 | | 652 | IVE |
| 1 | EA | OFFICE/ENTRY LOCK | L9050T 03A L583-363 | | 626 | SCH |
| 1 | EA | FSIC PERMANENT CORE | 23-030 | | 626 | SCH |
| 1 | EA | WALL STOP | WS406/407CCV | | 630 | IVE |
| 1 | EA | GASKETING | 488S PSA HEAD & JAMBS (USE SILENCERS @ NON-RATED DOORS) | | BK | ZER |

HARDWARE GROUP NO. 201SW

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|---|---|---|---|---|---|---|
| 3 | EA | HINGE | 5BB1HW 5 X 4.5 | | 652 | IVE |
| 1 | EA | STOREROOM LOCK | L9080T 03A | | 626 | SCH |
| 1 | EA | FSIC PERMANENT CORE | 23-030 | | 626 | SCH |
| 1 | EA | OVERHEAD STOP | 100S | | US32D | GLY |
| 1 | EA | SURFACE CLOSER | 4040XP RW/PA TBWMS X MTG BRKT, SPCR & PLATE AS REQ | | 689 | LCN |
| 1 | EA | KICK PLATE | 8400 10" X 2" LDW B-CS | | 630 | IVE |
| 1 | EA | GASKETING | 488S PSA HEAD & JAMBS (USE SILENCERS @ NON-RATED DOORS) | | BK | ZER |

HARDWARE GROUP NO. 203S

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|---|---|---|---|---|---|---|
| 3 | EA | HINGE | 5BB1 4.5 X 4.5 | | 652 | IVE |
| 1 | EA | STOREROOM LOCK | L9080T 03A | | 626 | SCH |
| 1 | EA | FSIC PERMANENT CORE | 23-030 | | 626 | SCH |
| 1 | EA | OVERHEAD STOP | 100S | | US32D | GLY |
| 1 | EA | GASKETING | 488S PSA HEAD & JAMBS (USE SILENCERS @ NON-RATED DOORS) | | BK | ZER |

HARDWARE GROUP NO. 205H-C

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|---|---|---|---|---|---|---|
| 3 | EA | HINGE | 5BB1HW 5 X 4.5 NRP | | 630 | IVE |
| 1 | EA | STOREROOM LOCK | L9080T 03A | | 626 | SCH |
| 1 | EA | FSIC PERMANENT CORE | 23-030 | | 626 | SCH |
| 1 | EA | OH STOP & HOLDER | 90H | | 630 | GLY |
| 1 | EA | KICK PLATE | 8400 10" X 2" LDW B-CS | | 630 | IVE |
| 1 | EA | RAIN DRIP | 142AA DOOR WIDTH + 4" (OMIT @ COVERED OPENINGS) | | AA | ZER |
| 1 | SET | GASKETING | 328AA HEAD & JAMBS | | AA | ZER |
| 1 | EA | DOOR SWEEP | 8198AA | | AA | ZER |
| 1 | EA | THRESHOLD | 65A | | A | ZER |

HARDWARE GROUP NO. 205W-C

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|---|---|---|---|---|---|---|
| 3 | EA | HINGE | 5BB1HW 5 X 4.5 NRP | | 630 | IVE |
| 1 | EA | STOREROOM LOCK | L9080T 03A | | 626 | SCH |
| 1 | EA | FSIC PERMANENT CORE | 23-030 | | 626 | SCH |
| 1 | EA | OH STOP | 90S | | 630 | GLY |
| 1 | EA | KICK PLATE | 8400 10" X 2" LDW B-CS | | 630 | IVE |
| 1 | EA | RAIN DRIP | 142AA DOOR WIDTH + 4" (OMIT @ COVERED OPENINGS) | | AA | ZER |
| 1 | SET | GASKETING | 328AA HEAD & JAMBS | | AA | ZER |
| 1 | EA | DOOR SWEEP | 8198AA | | AA | ZER |
| 1 | EA | THRESHOLD | 65A | | A | ZER |

HARDWARE GROUP NO. 341

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|---|---|---|---|---|---|---|
| 3 | EA | HINGE | 5BB1 4.5 X 4.5 | | 652 | IVE |
| 1 | EA | PRIVACY LOCK W/ OUTSIDE INDICATOR | L9040 03A L583-363 OS-OCC | | 626 | SCH |
| 1 | EA | SURFACE CLOSER | 4040XP RW/PA TBWMS X MTG BRKT, SPCR & PLATE AS REQ | | 689 | LCN |
| 1 | EA | KICK PLATE | 8400 10" X 2" LDW B-CS | | 630 | IVE |
| 1 | EA | WALL STOP | WS406/407CCV | | 630 | IVE |
| 1 | EA | GASKETING | 488S PSA HEAD & JAMBS (USE SILENCERS @ NON-RATED DOORS) | | BK | ZER |

-OCCUPIED/VACANT INDICATOR ON OUTSIDE OF DOOR.

HARDWARE GROUP NO. 343

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|---|---|---|---|---|---|---|
| 3 | EA | HINGE | 5BB1 4.5 X 4.5 | | 652 | IVE |
| 1 | EA | PRIVACY LOCK W/ OUTSIDE INDICATOR | L9040 03A L583-363 OS-OCC | | 626 | SCH |
| 1 | EA | WALL STOP | WS406/407CCV | | 630 | IVE |
| 1 | EA | GASKETING | 488S PSA HEAD & JAMBS (USE SILENCERS @ NON-RATED DOORS) | | BK | ZER |

-OCCUPIED/VACANT INDICATOR ON OUTSIDE OF DOOR.

HARDWARE GROUP NO. 347

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|---|---|---|---|---|---|---|
| 3 | EA | HINGE | 5BB1 4.5 X 4.5 | | 652 | IVE |
| 1 | EA | PRIVACY LOCK W/ OUTSIDE INDICATOR | L9040 03A L583-363 OS-OCC | | 626 | SCH |
| 1 | EA | OVERHEAD STOP | 100S | | US32D | GLY |
| 1 | EA | SURFACE CLOSER | 4040XP RW/PA TBWMS X MTG BRKT, SPCR & PLATE AS REQ | | 689 | LCN |
| 1 | EA | KICK PLATE | 8400 10" X 2" LDW B-CS | | 630 | IVE |
| 1 | EA | GASKETING | 488S PSA HEAD & JAMBS (USE SILENCERS @ NON-RATED DOORS) | | BK | ZER |

-OCCUPIED/VACANT INDICATOR ON OUTSIDE OF DOOR.

HARDWARE GROUP NO. 401

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|---|---|---|---|---|---|---|
| 3 | EA | HINGE | 5BB1 4.5 X 4.5 | | 652 | IVE |
| 1 | EA | PASSAGE SET | L9010 03A | | 626 | SCH |
| 1 | EA | SURFACE CLOSER | 4040XP RW/PA TBWMS X MTG BRKT, SPCR & PLATE AS REQ | | 689 | LCN |
| 1 | EA | KICK PLATE | 8400 10" X 2" LDW B-CS | | 630 | IVE |
| 1 | EA | WALL STOP | WS406/407CCV | | 630 | IVE |
| 1 | EA | GASKETING | 488S PSA HEAD & JAMBS (USE SILENCERS @ NON-RATED DOORS) | | BK | ZER |

HARDWARE GROUP NO. 401CG

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|---|---|---|---|---|---|---|
| 3 | EA | HINGE | 5BB1 4.5 X 4.5 | | 652 | IVE |
| 1 | EA | PASSAGE SET | L9010 03A | | 626 | SCH |
| 1 | EA | SURFACE CLOSER | 4040XP SCUSH TBWMS X MTG BRKT, SPCR & PLATE AS REQ | | 689 | LCN |
| 1 | EA | KICK PLATE | 8400 10" X 2" LDW B-CS | | 630 | IVE |
| 1 | EA | GASKETING | 488S PSA HEAD & JAMBS | | BK | ZER |
| 1 | EA | DOOR SWEEP | 39A | | A | ZER |
| 1 | EA | THRESHOLD | 544A | | A | ZER |

HARDWARE GROUP NO. 403

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|---|---|---|---|---|---|---|
| 3 | EA | HINGE | 5BB1 4.5 X 4.5 | | 652 | IVE |
| 1 | EA | PASSAGE SET | L9010 03A | | 626 | SCH |
| 1 | EA | WALL STOP | WS406/407CCV | | 630 | IVE |
| 1 | EA | GASKETING | 488S PSA HEAD & JAMBS (USE SILENCERS @ NON-RATED DOORS) | | BK | ZER |

HARDWARE GROUP NO. 501C

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|---|---|---|---|---|---|---|
| 3 | EA | HINGE | 5BB1 4.5 X 4.5 | | 652 | IVE |
| 1 | EA | CLASSROOM LOCK | L9070T 03A | | 626 | SCH |
| 1 | EA | FSIC PERMANENT CORE | 23-030 | | 626 | SCH |
| 1 | EA | SURFACE CLOSER | 4040XP SCUSH TBWMS X MTG BRKT, SPCR & PLATE AS REQ | | 689 | LCN |
| 1 | EA | KICK PLATE | 8400 10" X 2" LDW B-CS | | 630 | IVE |
| 1 | EA | GASKETING | 488S PSA HEAD & JAMBS (USE SILENCERS @ NON-RATED DOORS) | | BK | ZER |

HARDWARE GROUP NO. 731

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|---|---|---|---|---|---|---|
| 3 | EA | HINGE | 5BB1HW 4.5 X 4.5 | | 652 | IVE |
| 1 | EA | PANIC HARDWARE | 99-L-BE-03 | | 626 | VON |
| 1 | EA | SURFACE CLOSER | 4040XP RW/PA TBWMS X MTG BRKT, SPCR & PLATE AS REQ | | 689 | LCN |
| 1 | EA | KICK PLATE | 8400 10" X 2" LDW B-CS | | 630 | IVE |
| 1 | EA | WALL STOP | WS406/407CCV | | 630 | IVE |
| 3 | EA | SILENCER | SR64 | | GRY | IVE |

HARDWARE GROUP NO. 902

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|---|---|---|---|---|---|
| 2 | EA | BARN DOOR SLIDING HARDWARE | CCSF-993 | 630 | KNC |
| 2 | EA | LONG DOOR PULL | (1 SET) PR 9266F 12" (MOUNT BACK TO BACK) | 630 | IVE |

**HARDWARE SET IS A GUIDELINE**
-VERIFY AND COORDINATE ALL HARDWARE WITH DOOR/FRAME MANUFACTURER PRIOR TO SUBMITTALS.
-CONFIRM TRACK CAN SUPPORT DOOR WEIGHT AND SIZE.
-PROVIDE STOP IN TRACK TO KEEP DOOR 4" INTO OPENING WHEN IN FULLY OPEN POSITION.
-ENSURE 32" OF CLEAR WIDTH IS MAINTAINED IN OPENING.

HARDWARE GROUP NO. 903

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|---|---|---|---|---|---|
| 1 | EA | BARN DOOR SLIDING HARDWARE | CCSF-993 | 630 | KNC |
| 1 | EA | LONG DOOR PULL | (1 SET) PR 9266F 12" (MOUNT BACK TO BACK) | 630 | IVE |

**HARDWARE SET IS A GUIDELINE**
-VERIFY AND COORDINATE ALL HARDWARE WITH DOOR/FRAME MANUFACTURER PRIOR TO SUBMITTALS.
-CONFIRM TRACK CAN SUPPORT DOOR WEIGHT AND SIZE.
-PROVIDE STOP IN TRACK TO KEEP DOOR 4" INTO OPENING WHEN IN FULLY OPEN POSITION.
-ENSURE 32" OF CLEAR WIDTH IS MAINTAINED IN OPENING.

HARDWARE GROUP NO. 923

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|---|---|---|---|---|---|
| 1 | EA | POCKET DR FRAME | TYPE C (2-0 TO 3-0 & 6-8 TO 7-0) | | KNC |
| 1 | EA | RECTANGULAR FLUSH PULL W/ INDICATOR | CS2002-OI | US32D | ACC |

**HARDWARE SET IS A GUIDELINE**
-VERIFY AND COORDINATE ALL HARDWARE WITH DOOR/FRAME MANUFACTURER PRIOR TO SUBMITTALS.
-CONFIRM TRACK CAN SUPPORT DOOR WEIGHT AND SIZE.

-PROVIDE STOP IN TRACK TO KEEP DOOR 4" INTO OPENING WHEN IN FULLY OPEN POSITION.
-ENSURE 32" OF CLEAR WIDTH IS MAINTAINED IN OPENING.

HARDWARE GROUP NO. C201

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|---|---|---|---|---|---|---|
| 2 | EA | HINGE | 5BB1 4.5 X 4.5 | | 652 | IVE |
| 1 | EA | ELECTRIC HINGE | 5BB1 4.5 X 4.5 CON TW8 | | 652 | IVE |
| 1 | EA | EU MORTISE LOCK | L9092T EU 03A RX CON (FAIL SECURE) | | 626 | SCH |
| 1 | EA | FSIC PERMANENT CORE | 23-030 | | 626 | SCH |
| 1 | EA | SURFACE CLOSER | 4040XP RW/PA TBWMS X MTG BRKT, SPCR & PLATE AS REQ | | 689 | LCN |
| 1 | EA | KICK PLATE | 8400 10" X 2" LDW B-CS | | 630 | IVE |
| 1 | EA | WALL STOP | WS406/407CCV | | 630 | IVE |
| 1 | EA | GASKETING | 488S PSA HEAD & JAMBS (USE SILENCERS @ NON-RATED DOORS) | | BK | ZER |
| 1 | EA | WIRE HARNESS (IN DOOR) | CON-XXP LENGTH AS REQ | | | SCH |
| 1 | EA | WIRE HARNESS (TO POWER SUPPLY) | CON-6W - CONNECTION LEADS | | | SCH |
| 1 | EA | CREDENTIAL READER | BY SEC CONTRACTOR | | | UNK |
| 1 | EA | DOOR CONTACT | 679-05 TYPE AS REQ | | BLK | SCE |
| 1 | EA | POWER SUPPLY | PS902 900-2RS 120/240 VAC (OMIT 2RS BOARD WHERE NOT REQ) | | LGR | SCE |

-INGRESS BY THE CREDENTIAL READER OR KEY OVERRIDE.
-FREE EGRESS BY LEVER.
-COORDINATE POWER SUPPLY WITH SECURITY CONTRACTOR PRIOR TO SUBMITTALS.
-OMIT POWER SUPPLY WHERE PROVIDED BY SECURITY.

HARDWARE GROUP NO. C711A

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|---|---|---|---|---|---|---|
| 1 | EA | CONT. HINGE | 112XY EPT | | 628 | IVE |
| 1 | EA | POWER TRANSFER | EPT10 CON | | 689 | VON |
| 1 | EA | ELEC PANIC HARDWARE | RX-QEL-33A-NL-OP-CON | | 626 | VON |
| 1 | EA | RIM CYLINDER | 20-057 ICX W/KEYED CONST. CORE | | 626 | SCH |
| 1 | EA | FSIC PERMANENT CORE | 23-030 | | 626 | SCH |
| 1 | EA | 90 DEG OFFSET PULL | 8190-O 10" | | 630 | IVE |
| 1 | EA | SURFACE CLOSER | 4040XP RW/PA TBWMS X MTG BRKT, SPCR & PLATE AS REQ | | 689 | LCN |
| 1 | EA | WALL STOP | WS406/407CCV | | 630 | IVE |
| 1 | SET | SEAL | PERIMETER SEAL BY FRAME MFR | | | |
| 1 | EA | WIRE HARNESS (IN DOOR) | CON-XXP LENGTH AS REQ | | | SCH |
| 1 | EA | WIRE HARNESS (TO POWER SUPPLY) | CON-6W - CONNECTION LEADS | | | SCH |
| 1 | EA | CREDENTIAL READER | BY SEC CONTRACTOR | | | UNK |
| 1 | EA | DOOR CONTACT | 679-05 TYPE AS REQ | | BLK | SCE |
| 1 | EA | POWER SUPPLY | PS902 900-2RS 120/240 VAC (OMIT 2RS BOARD WHERE NOT REQ) | | | VON |

-INGRESS BY THE CREDENTIAL READER OR KEY OVERRIDE.
-FREE EGRESS BY THE PUSH PAD.
-COORDINATE POWER SUPPLY WITH SECURITY CONTRACTOR PRIOR TO SUBMITTALS.
-OMIT POWER SUPPLY WHERE PROVIDED BY SECURITY.

HARDWARE GROUP NO. C711CGR

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|---|---|---|---|---|---|---|
| 3 | EA | HINGE | 5BB1HW 4.5 X 4.5 | | 652 | IVE |
| 1 | EA | POWER TRANSFER | EPT10 CON | | 689 | VON |
| 1 | EA | ELEC FIRE EXIT HARDWARE | RX-QEL-99-L-NL-F-03-499F-CON 24 VDC | | 626 | VON |
| 1 | EA | RIM CYLINDER | 20-057 ICX W/KEYED CONST. CORE | | 626 | SCH |
| 1 | EA | FSIC PERMANENT CORE | 23-030 | | 626 | SCH |
| 1 | EA | SURFACE CLOSER | 4040XP SCUSH TBWMS X MTG BRKT, SPCR & PLATE AS REQ | | 689 | LCN |
| 1 | EA | KICK PLATE | 8400 10" X 2" LDW B-CS | | 630 | IVE |
| 1 | EA | GASKETING | 488S PSA HEAD & JAMBS | | BK | ZER |
| 1 | EA | DOOR SWEEP | 39A | | A | ZER |
| 1 | EA | THRESHOLD | 544A | | A | ZER |
| 1 | EA | WIRE HARNESS (IN DOOR) | CON-XXP LENGTH AS REQ | | | SCH |
| 1 | EA | WIRE HARNESS (TO POWER SUPPLY) | CON-6W - CONNECTION LEADS | | | SCH |
| 1 | EA | CREDENTIAL READER | BY SEC CONTRACTOR | | | UNK |
| 1 | EA | DOOR CONTACT | 679-05 TYPE AS REQ | | BLK | SCE |
| 1 | EA | POWER SUPPLY | PS902 900-FA 900-2RS 120/240 VAC (OMIT 2RS BOARD WHERE NOT REQ) | | | VON |

-INGRESS BY THE CREDENTIAL READER OR KEY OVERRIDE.
-FREE EGRESS BY THE PUSH PAD.
-WIRE THE ELECTRIFIED LATCH BOLT TO THE FIRE ALARM SYSTEM.
-THE ELECTRIFIED LATCH BOLT IS TO REMAIN IN THE EXTENDED POSITION UPON ACTIVATION OF THE FIRE ALARM SYSTEM, UNLESS MANUALLY RETRACTED BY THE PUSH PAD OR BY KEY OVERRIDE.
-COORDINATE POWER SUPPLY WITH SECURITY CONTRACTOR PRIOR TO SUBMITTALS.
-OMIT POWER SUPPLY WHERE PROVIDED BY SECURITY.

HARDWARE GROUP NO. C711GR

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|---|---|---|---|---|---|---|
| 3 | EA | HINGE | 5BB1HW 4.5 X 4.5 | | 652 | IVE |
| 1 | EA | POWER TRANSFER | EPT10 CON | | 689 | VON |
| 1 | EA | ELEC FIRE EXIT HARDWARE | RX-QEL-99-L-NL-F-03-499F-CON 24 VDC | | 626 | VON |
| 1 | EA | RIM CYLINDER | 20-057 ICX W/KEYED CONST. CORE | | 626 | SCH |
| 1 | EA | FSIC PERMANENT CORE | 23-030 | | 626 | SCH |
| 1 | EA | SURFACE CLOSER | 4040XP RW/PA TBWMS X MTG BRKT, SPCR & PLATE AS REQ | | 689 | LCN |
| 1 | EA | KICK PLATE | 8400 10" X 2" LDW B-CS | | 630 | IVE |
| 1 | EA | WALL STOP | WS406/407CCV | | 630 | IVE |
| 1 | EA | GASKETING | 488S PSA HEAD & JAMBS | | BK | ZER |
| 1 | EA | DOOR SWEEP | 39A | | A | ZER |
| 1 | EA | THRESHOLD | 544A | | A | ZER |
| 1 | EA | WIRE HARNESS (IN DOOR) | CON-XXP LENGTH AS REQ | | | SCH |
| 1 | EA | WIRE HARNESS (TO POWER SUPPLY) | CON-6W - CONNECTION LEADS | | | SCH |
| 1 | EA | CREDENTIAL READER | BY SEC CONTRACTOR | | | UNK |
| 1 | EA | DOOR CONTACT | 679-05 TYPE AS REQ | | BLK | SCE |
| 1 | EA | POWER SUPPLY | PS902 900-FA 900-2RS 120/240 VAC (OMIT 2RS BOARD WHERE NOT REQ) | | | VON |

-INGRESS BY THE CREDENTIAL READER OR KEY OVERRIDE.
-FREE EGRESS BY THE PUSH PAD.
-WIRE THE ELECTRIFIED LATCH BOLT TO THE FIRE ALARM SYSTEM.
-THE ELECTRIFIED LATCH BOLT IS TO REMAIN IN THE EXTENDED POSITION UPON ACTIVATION OF THE FIRE ALARM SYSTEM, UNLESS MANUALLY RETRACTED BY THE PUSH PAD OR BY KEY OVERRIDE.
-COORDINATE POWER SUPPLY WITH SECURITY CONTRACTOR PRIOR TO SUBMITTALS.
-OMIT POWER SUPPLY WHERE PROVIDED BY SECURITY.

HARDWARE GROUP NO. C714A

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|---|---|---|---|---|---|---|
| 2 | EA | CONT. HINGE | 112XY EPT | | 628 | IVE |
| 2 | EA | POWER TRANSFER | EPT10 CON | | 689 | VON |
| 1 | EA | ELEC PANIC HARDWARE | RX-QEL-3347A-EO-CON | | 626 | VON |
| 1 | EA | ELEC PANIC HARDWARE | RX-QEL-3347A-NL-OP-CON | | 626 | VON |
| 1 | EA | RIM CYLINDER | 20-057 ICX W/KEYED CONST. CORE | | 626 | SCH |
| 1 | EA | FSIC PERMANENT CORE | 23-030 | | 626 | SCH |
| 2 | EA | 90 DEG OFFSET PULL | 8190-O 10" | | 630 | IVE |
| 2 | EA | SURFACE CLOSER | 4040XP SCUSH TBWMS X MTG BRKT, SPCR & PLATE AS REQ | | 689 | LCN |
| 1 | EA | RAIN DRIP | 142AA DOOR WIDTH + 4" (OMIT @ COVERED OPENINGS) | | AA | ZER |
| 1 | SET | SEAL | PERIMETER SEAL BY FRAME MFR | | | |
| 1 | SET | ASTRAGAL | MEETING STILE SEAL BY DOOR MFR | | | |
| 2 | EA | DOOR SWEEP | 8198AA | | AA | ZER |
| 1 | EA | THRESHOLD | 65A | | A | ZER |
| 2 | EA | WIRE HARNESS (IN DOOR) | CON-XXP LENGTH AS REQ | | | SCH |
| 2 | EA | WIRE HARNESS (TO POWER SUPPLY) | CON-6W - CONNECTION LEADS | | | SCH |
| 1 | EA | CREDENTIAL READER | BY SEC CONTRACTOR | | | UNK |
| 2 | EA | DOOR CONTACT | 679-05 TYPE AS REQ | | BLK | SCE |
| 1 | EA | POWER SUPPLY | PS902 900-2RS 900-BBK 120/240 VAC (OMIT 2RS BOARD WHERE NOT REQ) | | | VON |

-INGRESS BY THE CREDENTIAL READER OR KEY OVERRIDE.
-FREE EGRESS BY THE PUSH PADS.
-COORDINATE POWER SUPPLY WITH SECURITY CONTRACTOR PRIOR TO SUBMITTALS.
-OMIT POWER SUPPLY WHERE PROVIDED BY SECURITY.

HARDWARE GROUP NO. C715

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|---|---|---|---|---|---|---|
| 3 | EA | HINGE | 5BB1HW 4.5 X 4.5 NRP | | 630 | IVE |
| 1 | EA | POWER TRANSFER | EPT10 CON | | 689 | VON |
| 1 | EA | ELEC PANIC HARDWARE | RX-QEL-99-NL-OP-110MD-CON 24 VDC | | 626 | VON |
| 1 | EA | RIM CYLINDER | 20-057 ICX W/KEYED CONST. CORE | | 626 | SCH |
| 1 | EA | FSIC PERMANENT CORE | 23-030 | | 626 | SCH |
| 1 | EA | 90 DEG OFFSET PULL | 8190-O 10" | | 630 | IVE |
| 1 | EA | SURFACE CLOSER | 4040XP SCUSH TBWMS X MTG BRKT, SPCR & PLATE AS REQ | | 689 | LCN |
| 1 | EA | KICK PLATE | 8400 10" X 2" LDW B-CS | | 630 | IVE |
| 1 | EA | RAIN DRIP | 142AA DOOR WIDTH + 4" (OMIT @ COVERED OPENINGS) | | AA | ZER |
| 1 | SET | GASKETING | 328AA HEAD & JAMBS | | AA | ZER |
| 1 | EA | DOOR SWEEP | 8198AA | | AA | ZER |
| 1 | EA | THRESHOLD | 65A | | A | ZER |
| 1 | EA | WIRE HARNESS (IN DOOR) | CON-XXP LENGTH AS REQ | | | SCH |
| 1 | EA | WIRE HARNESS (TO POWER SUPPLY) | CON-6W - CONNECTION LEADS | | | SCH |
| 1 | EA | CREDENTIAL READER | BY SEC CONTRACTOR | | | UNK |
| 1 | EA | DOOR CONTACT | 679-05 TYPE AS REQ | | BLK | SCE |
| 1 | EA | POWER SUPPLY | PS902 900-2RS 900-BBK 120/240 VAC (OMIT 2RS BOARD WHERE NOT REQ) | | | VON |

-INGRESS BY THE CREDENTIAL READER OR KEY OVERRIDE.
-FREE EGRESS BY THE PUSH PAD.
-COORDINATE POWER SUPPLY WITH SECURITY CONTRACTOR PRIOR TO SUBMITTALS.
-OMIT POWER SUPPLY WHERE PROVIDED BY SECURITY.

HARDWARE GROUP NO. C715A

| QTY | | DESCRIPTION | CATALOG NUMBER | | FINISH | MFR |
|---|---|---|---|---|---|---|
| 1 | EA | CONT. HINGE | 112XY EPT | | 628 | IVE |
| 1 | EA | POWER TRANSFER | EPT10 CON | | 689 | VON |
| 1 | EA | ELEC PANIC HARDWARE | RX-QEL-33A-NL-OP-CON | | 626 | VON |
| 1 | EA | RIM CYLINDER | 20-057 ICX W/KEYED CONST. CORE | | 626 | SCH |
| 1 | EA | FSIC PERMANENT CORE | 23-030 | | 626 | SCH |
| 1 | EA | 90 DEG OFFSET PULL | 8190-O 10" | | 630 | IVE |
| 1 | EA | SURFACE CLOSER | 4040XP SCUSH TBWMS X MTG BRKT, SPCR & PLATE AS REQ | | 689 | LCN |
| 1 | EA | RAIN DRIP | 142AA DOOR WIDTH + 4" (OMIT @ COVERED OPENINGS) | | AA | ZER |
| 1 | SET | SEAL | PERIMETER SEAL BY FRAME MFR | | | |
| 1 | EA | DOOR SWEEP | 8198AA | | AA | ZER |
| 1 | EA | THRESHOLD | 65A | | A | ZER |
| 1 | EA | WIRE HARNESS (IN DOOR) | CON-XXP LENGTH AS REQ | | | SCH |
| 1 | EA | WIRE HARNESS (TO POWER SUPPLY) | CON-6W - CONNECTION LEADS | | | SCH |
| 1 | EA | CREDENTIAL READER | BY SEC CONTRACTOR | | | UNK |
| 1 | EA | DOOR CONTACT | 679-05 TYPE AS REQ | | BLK | SCE |
| 1 | EA | POWER SUPPLY | PS902 900-2RS 900-BBK 120/240 VAC (OMIT 2RS BOARD WHERE NOT REQ) | | | VON |

-INGRESS BY THE CREDENTIAL READER OR KEY OVERRIDE.
-FREE EGRESS BY THE PUSH PAD.
-COORDINATE POWER SUPPLY WITH SECURITY CONTRACTOR PRIOR TO SUBMITTALS.
-OMIT POWER SUPPLY WHERE PROVIDED BY SECURITY.

HARDWARE GROUP NO. JK715X.1

| QTY | | DESCRIPTION | CATALOG NUMBER | FINISH | MFR |
|---|---|---|---|---|---|
| 1 | SET | GATE HINGE/CLOSER | MAMMOTH 180 HINGE & CLOSER W/DINO BOTTOM HINGE (SUPPORTS UP TO 330LBS) | | LOX |
| 1 | EA | PANIC HARDWARE | OUT-99-NL-WH-SNB | 626 | VON |
| 1 | EA | STANDALONE ELECTRONIC ACCESS PANIC DEVICE TRIM | ETDL-R-26D V99 | 626 | ALA |
| 1 | EA | RIM CYLINDER | 20-057 ICX W/KEYED CONST. CORE | 626 | SCH |
| 1 | EA | FSIC PERMANENT CORE | 23-030 | 626 | SCH |
| | | NOTE | BALANCE OF HARDWARE BY GATE MFR | | |
| 1 | EA | KNOX BOX | KNOX BOX | | KNO |

**HARDWARE SET IS A GUIDELINE**

-VERIFY AND COORDINATE ALL HARDWARE WITH DOOR/FRAME MANUFACTURER PRIOR TO SUBMITTALS.

-ALL REMAINING HARDWARE BY GATE MFR.

-1EA 3/4” MOUNTING PLATE FOR EXIT DEVICE.

-PROVIDE PLATE OR MESH ON GATE TO PREVENT INDIVIDUALS FROM REACHING IN AND OPENING THE GATE FROM SECURE SIDE.

-FREE EGRESS BY THE PUSH PAD.

**SECTION 23 37 23**

**HVAC GRAVITY VENTILATORS**

## PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

A. The requirements of the General Conditions and Supplementary Conditions apply to all work herein.

B. Section 23 02 00 - Basic Materials and Methods for HVAC shall be included as a part of this Section as though written in full in this document.

1.2 WORK INCLUDED

A. Hooded gravity ventilators.

B. Louvered penthouse gravity ventilators.

1.3 RELATED SECTIONS

A. Section 23 02 00 - Basic Materials and Methods for HVAC

B. Section 23 05 93 - Testing, Adjusting, And Balancing

C. Section 23 33 00 - Ductwork Accessories

1.4 REFERENCES

A. ASCE 7-10 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures.

B. ASCE 7-16 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures.

C. ASHRAE Std 90.1 I-P - Energy Standard for Buildings Except Low-Rise Residential Buildings.

D. ASTM E330/E330M - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.

E. FLA (FBC-B) - Florida Building Code: Building (7th Edition).

F. ICC (IBC) - International Building Code.

G. ICC (IECC) - International Energy Conservation Code.

H. ISO 9001 - Quality management systems -- Requirements.

I. Miami (APD) - Approved Products Directory; Miami-Dade County.

J. NFPA 90A - Standard for the Installation of Air-Conditioning and Ventilating Systems.

1.5 QUALITY ASSURANCE

A. Approved ISO 9001 compliant manufacturer listed in this section with minimum 10 years' experience in manufacture of similar products in successful use in similar applications.

B. Nationally Recognized Testing Laboratory Compliance (NRTL): Components shall be NRTL listed and labeled. The term "NRTL" shall be as defined in OSHA Regulation 1910.7.

C. High Wind models shall be analyzed and stamped by a state license P.E. to the ASCE 7-16 Standard which meets the ICC (IBC), FLA (FBC-B) and Miami (APD) codes.

D. Each High Wind model is subject to be certified by a Nationally Recognized Testing Laboratory to ASTM E330/E330M.

E. Shutoff dampers shall be provided as required by ASHRAE Std 90.1 I-P and ICC (IECC).

1.6 SUBMITTALS

A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections:

B. Product data for selected models, including specialties, accessories, and the following:

1. Dimensional drawings and product data on each ventilator.
2. Materials, gages and finishes, include color charts.
3. Dampers, including housings, linkages, and operators.
4. Full color paint samples.

C. Shop drawings from manufacturer detailing equipment assemblies and indicating dimensions, weights, required clearances, components, and location and size of field connections.

D. Coordination drawings, in accordance with Division 23, Section "Basic Materials and Methods", for roof penetration requirements and for reflected ceiling plans drawn accurately to scale and coordinating penetrations and units mounted above ceiling. Show the following:

1. Roof framing and support members relative to duct penetrations.
2. Ceiling suspension members.
3. Method of attaching hangers to building structure.
4. Size and location of initial access modules for acoustical tile.
5. Ceiling-mounted items including light fixtures, diffusers, grilles, speakers, sprinkler heads, access panels, and special moldings.

E. Wiring diagrams that detail power, signal, and control wiring. Differentiate between manufacturer installed wiring and field installed wiring.

F. Product certificates, signed by manufacturer, certifying that their products comply with specified requirements.

G. Maintenance data for inclusion in Operating and Maintenance Manual specified in Division 1 and Division 23, Section "Basic Materials and Methods".

H. Provide delegated design submittal for equipment anchorage as required in specification 23 02 00 – Part 1.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Fans shall be stored and handled in accordance with the unit manufacturer's instructions.

B. Lift and support units with the manufacturer`s designated lifting or supporting points.

C. Disassemble and reassemble units as required for movement into the final location following manufacturer`s written instructions.

D. Deliver fan units as a factory-assembled unit to the extent allowable by shipping limitations, with protective crating and covering.

1.8 OPERATIONS PERSONNEL TRAINING

A. Provide a training session for the owner's operations personnel. Training session shall be performed by a qualified person who is knowledgeable in the subject system/equipment. Submit a training agenda two (2) weeks prior to the proposed training session for review and approval. Training session shall include at the minimum:

1. Purpose of equipment.
2. Principle of how the equipment works.
3. Important parts and assemblies.
4. How the equipment achieves its purpose and necessary operating conditions.
5. Most likely failure modes, causes and corrections.
6. On site demonstration.

**PART 2 - PRODUCTS**

2.1 ACCEPTABLE MANUFACTURERS

A. Greenheck Fan Corporation

B. Loren Cook Company

C. Pennbarry

D. ACME

E. Twin City Fan and Blower

2.2 HOODED GRAVITY VENTILATORS

A. Hooded gravity ventilators shall be aluminum construction unless noted otherwise.

B. Hood shall be constructed of precision formed, arched panels with interlocking seams.

C. Vertical end panels shall be fully locked into hood end panels.

D. The aluminum base shall have continuously welded curb cap corners for maximum leak protection.

E. Internal reinforcement and bracing shall be provided as required.

F. Accessories: The following accessories are required.

1. Bird Screens: Removable ½ inch mesh, 16 gauge, aluminum wire.
2. Dampers: Gravity backdraft damper or motorized shutoff damper mounted in accessible location. Refer to 23 33 00 - Ductwork Accessories.
3. Roof Curbs: Prefabricated, minimum 12 inch high, heavy-gauge, galvanized steel; mitered and welded corners; 2 inch thick, rigid, fiberglass insulation adhered to inside walls; built-in cant and mounting flange for flat roof decks; and 2 inch wood nailer. Curb height shall be increased as required to maintain a minimum height of 8 inches above adjacent roofing surface. Size as required to suit roof opening and ventilator base. Roof curb shall match roof slope so that the curb is level.

## PART 3 - EXECUTION

3.1 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Refer to specification 23 02 00 – Part 1 for anchorage requirements for roof mounted equipment.

C. All items required for a complete and proper installation are not necessarily indicated on the plans or in the specifications. Provide all items required as per manufacturer's requirements.

D. Ensure roof openings are square, accurately aligned, correctly located, and in tolerance prior to installation.

E. Install the roof curb as required by the job conditions and as recommended by the manufacturer and install proper flashing and counterflashing. See details on the Drawings.

F. Set ventilators in place, taking care to protect the adjacent roofing, and make all ductwork connections.

G. Ventilator installation shall comply with NFPA 90A requirements.

**END OF SECTION**

# SECTION 26 05 26

# GROUNDING

## PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

A. The requirements of the General Conditions and Supplementary Conditions apply to all work herein.

1.2 SCOPE

A. WORK COMBINED WITH OTHER SECTIONS: Combine the work specified herein with the following Sections to form a single responsibility for the Work:

1. Electrical.
2. Basic materials and methods.

B. Provide electrical service, equipment and wiring device grounding as shown, scheduled and as specified.

C. The types of grounding include, but not limited to, the grounding bonding of all equipment devices, building steel piping, and as required by the National Electrical Code, Local Inspection Department and Power Company.

1.3 STANDARDS

A. National Electrical Code (NFPA-70)

B. Local municipal and State codes that have jurisdiction.

C. NECA

1.4 ACCEPTABLE MANUFACTURES

A. Provide grounding products manufactured by Copperweld and Cadweld.

1.5 SUBMITTALS

A. Shop drawings shall include, but not limited to the following:

1. Cut sheets of ground rods, clamps and connectors.
2. Grounding system diagram.

## PART 2 - PRODUCTS

2.1 GENERAL

A. Provide all materials required to construct a complete grounded electrical system.

B. GROUND RODS: Ground rods shall be 3/4" inch diameter by 10 feet long construction with copper jacket and a steel core.

C. CLAMPS: Ground clamps shall be copper except for steel or iron pipes in which the clamps shall be galvanized iron.

D. CONDUCTORS: Conductors shall be connected by means of an approved pressure connector or clamp.

**PART 3 - EXECUTION**

3.1 INSTALLATION

A. GENERAL: Install grounding system as shown and specified to ensure a properly grounded system.

B. SERVICE ENTRANCE GROUNDING SYSTEM: Provide a main bonding jumper between the neutral and ground bus of main disconnect. Route a separate grounding electrode conductor in conduit from each main gutter to the ground rod grid, incoming cold water piping system, and to the "lightning protection system" (250 - 106 of NEC) under ground bonding loop. Provide a bonding jumper around water meter. The grounding electrode conductor shall be stranded copper, 98% conductivity and shall be run continuous without splices or joints and installed at least 12" below grade.

C. BUILDING STEEL AND PIPING SYSTEM: Install a bonding jumper between building steel and metallic piping systems to bond them to the electrical grounding system.

D. NEUTRAL: The neutral shall be grounded only at the service entrance and other separately derived systems. The neutral shall be kept separate from the grounding system and shall not be used as a ground.

E. GROUNDING SEPARATELY DERIVED ALTERNATING CURRENT SYSTEM

1. STANDBY EMERGENCY GENERATOR: The generator neutral shall be bonded to the generator when a 4-pole switched neutral automatic transfer switch is specified.

F. GROUNDING CONDUCTOR: A grounding conductor and metallic conduit system shall bond all equipment served by the electrical system. Provide a flexible bonding jumper for isolated metallic piping and ductwork and around expansion fittings and joints.

G. CONDUIT GROUNDING BUSHING: Conduit terminating in equipment that has a ground bus such as switchboards, panelboards, etc., shall have grounding bushings installed. Ground each conduit by means of a grounding bushing and to the ground bus in the equipment.

H. MOTORS: The frame of all motors shall be grounded.

I. SPECIAL GROUNDING: Provide a #6 AWG copper grounding conductor for each telephone board, television system, etc. Terminate the grounding conductor on ground bus and to the building electrical grounding system. Refer to 800-40(d) and 820-40(d) of the NEC.

J. REMOTE PANELBOARDS: Provide a grounding electrode conductor all remote panels as required by the NEC and shown on drawings.

K. LIGHTING FIXTURES: Flexible fixture whips containing a green grounding conductor shall be used to connect light fixtures. Flexible fixture whips shall not exceed ten feet.

L. RECEPTACLES: All receptacles shall be grounded using the branch circuit grounding conductor. Receptacles shall use an approved grounding yoke.

3.2 TESTING

A. Perform a ground resistance test using a biddle analog or digital portable earth/ground resistance tester. The system resistance shall not exceed 5 Ohms. Provide additional electrodes as required (refer to 250-84 and 250-56 of the most current edition NEC). Test shall not be conducted following wet weather. Provide personal instruments to conduct these tests and submit certified test for review. Test shall be verified by Engineer.

**END OF SECTION**

# SECTION 26 27 26

# WIRING DEVICES

## PART 1 - GENERAL

1.1 SCOPE

A. Provide wiring devices as shown, scheduled, required and as specified.

B. The types of wiring devices required include:

1. Switches
2. Receptacles
3. Coverplates
4. Floor boxes

1.2 REFERENCE STANDARDS

A. FS W-C-596 - Connector, Electrical, Power, General Specification for.

B. FS W-S-896 - Switches, Toggle (Toggle and Lock), Flush Mounted (General Specification).

C. NEMA WD 1 - General Color Requirements for Wiring Devices.

D. NEMA WD 6 - Wiring Devices - Dimensional Specifications.

E. NFPA 70 - National Electrical Code.

F. UL 20 - General-Use Snap Switches.

G. UL 498 - Attachment Plugs and Receptacles.

H. UL 943 - Ground-Fault Circuit-Interrupters.

I. UL 1310 - Class 2 Power Units.

J. UL 1699 - Arc-Fault Circuit-Interrupters.

1.3 QUALITY ASSURANCE

A. All wiring devices shall comply with NEMA WD 1 and NEMA WD 6 as well as FS W-C-596 and FS W-S-896 as applicable.

B. All switches shall comply with UL 20 as applicable.

C. All receptacles shall comply with UL 498 as applicable.

D. All GFCI receptacles shall comply with UL 943.

E. All USB charging receptacles shall comply with UL 1310.

F. All AFCI receptacles shall comply with UL 1699.

1.4 ACCEPTABLE MANUFACTURERS

A. Hubbell

B. Leviton

C. Pass & Seymour

1.5 SUBMITTALS

A. Shop drawings shall include but not be limited to:

1. Cut sheets of all devices indicating NEMA configuration, rating, materials, color, and all accessories.
2. Cut sheets of all coverplates indicating materials, color and any engraving specified on drawing or in the specifications.

1.6 REQUIREMENTS OF REGULATORY AGENCIES WORK IN ACCORDANCE WITH

A. National Electric Code.

B. Local, municipal, or state codes that have jurisdiction.

**PART 2 - PRODUCTS**

2.1 MATERIALS AND COMPONENTS

A. GENERAL

1. Provide factory assemble wiring devices with the rating type and color as required and specified for the service indicated.
2. Provide matching one-piece multiple gang plates where switches are ganged.
3. Provide wall plates for each receptacle furnished.
4. Architect reserves the right to select wiring device styles and colors to match wall finish.
5. Wall plates shall be of same manufacturer as devices.

2.2 SWITCHES

A. Provide specification grade White toggle switches where indicated on the Drawings. Coordinate exact locations with architect.

1. Wall switches shall be 20 amp, 120-277 volt and shall be Hubbell, Leviton or P&S as follows:

| TOGGLE SWITCHES | HUBBELL | LEVITON | P&S |
|---|---|---|---|
| SINGLE POLE | HBL1221 | 1221-2 | PS20AC1 |
| DOUBLE POLE | HBL1222 | 1222-2 | PS20AC2 |

| | | | |
|---|---|---|---|
| THREE WAY | HBL1223 | 1223-2 | PS20AC3 |
| FOUR WAY | HBL1224 | 1224-2 | PS20AC4 |
| MOMENTARY CONTACT | HBL1557 | 1257 | 1251 |
| THREE POSITION, TWO CIRCUIT MAINTAINED CONTACT | HBL1385 | 1285 | 1225 |
| DISCONNECT SWITCH / INSTA HOT | HBL7810DS | MS303-DSS | 7803 |

2. Dwelling units shall use Hubbell CS115I, CS120I, P&S CS15AC1, and CS20AC1.
3. Dimmers: Provide Lutron DIVA or equal as shown on drawings. Wall box dimmers shall be sized to handle the load served. Provide phase dimmers to control LED lamps when 0-10 volt dimming drivers are not provided.
4. Light Handle Switches: Provide Hubbell HBL1221-IL, Leviton 1221-LHC, P&S PS20AC1-ISl lighted handles to switch emergency lights where noted on the drawings.

B. Provide specification grade White decora style rocker switches where indicated on the Drawings. Coordinate exact locations with architect.

1. Wall switches shall be 20 amp, 120-277 volt and shall be Hubbell Decorator Series, Leviton, Decora or Pass & Seymor Decorator, as follows:

| **ROCKER/DECORATOR SWITCHES** | **HUBBELL** | **LEVITON** | **P&S** |
|---|---|---|---|
| SINGLE POLE | DS120 | 5621-2 | 2621 |
| DOUBLE POLE | DS220 | 5622-2 | 2622 |
| THREE WAY | DS320 | 5623-2 | 2623 |
| FOUR WAY | DS420 | 5624-2 | 2624 |
| MOMENTARY CONTACT | HBL1557 | 1257 | 1251 |
| THREE POSITION, TWO CIRCUIT MAINTAINED CONTACT | HBL1385 | 1285 | 1225 |
| DISCONNECT SWITCH / INSTA HOT | HBL7810DS | MS303-DSS | 7803 |

2. Dimmers: Provide Lutron DIVA or equal where required. Wall Box dimmers shall be sized to handle the load. Provide Phase dimmers to control LED lamps when 0-10V drivers are not provided.
3. Light Handle Switches: Provide Leviton 5649-2 or P&S 2625 lighted handles to switch emergency lights where noted on the drawings.

## 2.3 RECEPTACLES

A. Provide specification grade White receptacles where indicated on the drawings. Coordinate exact location with architect.

1. Receptacles shall be Hubbell, Leviton or Pass & Seymour as follows:

| CONVENTIONAL RECEPTACLES | HUBBELL | LEVITON | P&S |
|---|---|---|---|
| HEAVY DUTY BRASS MOUNTING YOKE NEMA 5-20R DUPLEX | HBL5352 | 5362 | 5362 |
| HEAVY DUTY BRASS MOUNTING YOKE NEMA 5-20R SIMPLEX | HBL5361 | 5361 | 5361 |
| GFCI DUPLEX 20A, 125V SELF TESTING, FEED THRU CAPABLE, TAMPER RESISTANT FOR LOCATIONS REQUIRING TAMPER RESISTANT INSTALLATION OR AS INDICATED ON THE DRAWINGS | GFRST20 | GFTR2 | 2097TR |
| GFCI DUPLEX 20A, 125V SELF TESTING, FEED THRU CAPABLE, TAMPER/WEATHER RESISTANT FOR INSTALLATION IN DAMP/WET LOCATION OR AS INDICATED ON THE DRAWINGS | GFTWRST20 | GFWR2 | 2097TRWR |
| HEAVY DUTY TAMPER RESISTANT BRASS MOUNTING YOKE | HBL5362WTR | 5362-SG | --- |
| TAMPER RESISTANT 20A, 125V DUPLEX | BR20WHITR | 8300-SG | TR63-H |
| USB CHARGER TYPE DUPLEX 20A, 125V TAMPER RESISTANT, DUAL USB TYPE C PORTS MIN. OF 5A USB OUTPUT, TAMPER RESISTANT | USB20CPDW 5A OUTPUT | T5835-W 6A OUTPUT | 2TR20USBCC6W 6A OUTPUT |
| ARC FAULT CIRCUIT INTERRUPTER RECEPTACLES | AF20TRW | AFTR2-W | AF202TRW |
| GROUND FAULT CIRCUIT INTERRUPTER / ARC FAULT DUAL FUNCTION | AFGF20TR | AGTR2-W | AFGF202TR |

B. Provide specification grade, Decora type White receptacles where indicated on the drawings. Coordinate exact location with architect.

1. Receptacles shall be Hubbell, Leviton, or Pass & Seymour as follows:

| DECORATOR / DECORA RECEPTACLES | HUBBELL | LEVITON | P&S |
|---|---|---|---|
| DECORATOR DUPLEX 20A, 125V NEMA 5-15R SELF GROUNDING | DR20 | 16362 | 26342 |
| DECORATOR SIMPLEX 20A, 125V NEMA 5-15R SELF GROUNDING | --- | 1635 | 26361 |

| | | | |
|---|---|---|---|
| GFCI DUPLEX 20A, 125V SELF TESTING, FEED THRU CAPABLE, TAMPER RESISTANT FOR LOCATIONS REQUIRING TAMPER RESISTANT INSTALLATION OR AS INDICATED ON THE DRAWINGS | GFRST20 | GFTR2 | 2097TR |
| GFCI DUPLEX 20A, 125V SELF TESTING, FEED THRU CAPABLE, TAMPER/WEATHER RESISTANT FOR INSTALLATION IN DAMP/WET LOCATION OR AS INDICATED ON THE DRAWINGS | GFTWRST20 | GFWR2 | 2097TRWR |
| TAMPER RESISTANT DUPLEX 20A, 125V NEMA 5-20R | DR20WHITR | 16362-SG | TR26362 |
| USB CHARGER TYPE DUPLEX 20A, 125V TAMPER RESISTANT, DUAL USB TYPE C PORTS MIN. OF 5A USB OUTPUT, TAMPER RESISTANT | USB20CPDW 5A OUTPUT | T5835-W 6A OUTPUT | 2TR20USBCC6W 6A OUTPUT |
| ARC FAULT CIRCUIT INTERRUPTER RECEPTACLES | AF20TRW | AFTR2-W | AF202TRW |
| GROUND FAULT CIRCUIT INTERRUPTER / ARC FAULT DUAL FUNCTION | AFGF20TR | AGTR2-W | AFGF202TR |

TIMER SWITCHES

C. Intermatic spring wound countdown timer, 4 hour max. Locations indicated on lighting plan and site plan.

D. The time switch shall be rated for indoor and outdoor usage.

E. The time switch shall be single pole singe throw (SPST).

2.4 COVERPLATES

A. Furnish and install coverplates on all outlet boxes. Oversize (Jumbo) coverplates are not acceptable.

B. Coverplates shall be smooth nylon and 302/304 smooth stainless steel on backsplash and areas with tile.

C. Provide Hubbell WP Series, Bell, Carlon or Leviton NEMA 3R weatherproof coverplates on all exterior wiring devices. Enclosure shall be suitable for wet locations when in use.

D. Coverplates shall be Hubbell SS Series, Leviton, Pass & Seymour 302/304 smooth stainless steel on all receptacles 30 amps and larger.

E. Stainless steel device plates shall be provided at locations with tile or stone walls.

2.5 FLOOR BOXES

A. PVC floor boxes manufactured by Hubbell or equal shall be as follows:

1. Provide CFBS1R4CFB dual service cast iron body floor box with PVC riser. Provide CFBS1R4CUP adjustable mounting cup, S1R4SP2X2DUPLEX sub-plate for (1) Duplex and (2) RJ-45 Keystone jacks OR S1R4SP2X2STYLE for (1) GFCI duplex, USB or Surge Device & (2) Keystone jacks, OR S1R4SPQUAD sub-plate with (4) 20A simplex receptacles, single and dual circuit wiring capability. Provide with CFBS1R4CVR cover, Color to be chosen by Architect.

a. Maximum finished floor thickness (above top of box collar) with maximum adjustability is 1-1/2-inches at 5-inch, at 6-inches maximum adjustability is 1/2".

B. Floor boxes, recessed activation type, meet UL 514A scrub water requirements, shall be stamped steel with corrosion resistant finish, UL Listed for slab-on-grade installations, or stamped steel for above-grade installations as manufactured by Hubbell or equal by Wiremold RFB2-11 series and as indicated below:

1. Recessed Activation Slab above grade
   a. Two Gang: #CFB2G30 or CFB2G30R (provisions for round cover), capable of up to 2” entry per gang. Flush flange, Surface flange and Furniture Feed cover availability. Surface Type Covers shall not exceed 0.15” rise. Covers with provisions for cable egress, when in use, shall not exceed/extend past the 0.15” rise.
   b. Four Gang: #CFB4G30 or CFB4G30R (provisions for round cover), capable of up to 2” entry per gang. Flush flange, Surface flange availability. Cover shall not exceed 0.15” rise. Surface Type Covers shall not exceed 0.15” rise. Covers with provisions for cable egress, when in use, shall not exceed/extend past 0.15” rise.
2. Service Fittings
   a. Surface Style Rectangular for use with carpet, tile, VCT and other engineered floors, available with or without carpet insert and offer system’s furniture feed type cover providing (1) 1-inch and (1) 2-inch threaded openings
   b. Flush Style Rectangular for use with tile, finished concrete or Terrazzo floors, available with or without carpet insert and offer system’s furniture feed type cover providing (1) 1-inch and (1) 2-inch threaded openings
   c. Rectangular covers shall be powder coated in variety of common finishes, Aluminum, Black, Brass, Bronze and Satin Nickel.

**PART 3 - EXECUTION**

3.1 WIRING DEVICE MOUNTING HEIGHTS

A. Unless noted to the contrary on plans, or directed otherwise during the progress of the Work, wiring devices shall be set as follows:

1. Switches 42" above finished floor.
2. Wall mounted receptacles shall be installed vertically at 15 inches to the bottom outlet above finished floor unless otherwise noted or as required by local codes.
3. Wall telephone outlets shall be mounted 15 inches to the bottom above finished floor unless otherwise noted. Mount even with wall mounted receptacles.
4. At locations above counters, set devices at 6 inches above to the centerline counter tops, verify exact mounting height with the architect.

3.2 INSTALLATION (REFER TO 26 05 33 FOR OUTLET BOX SPECIFICATIONS).

A. Wall switches shall be set in a suitable steel box and shall be installed on the strike side of the door as finally hung, whether so indicated on the Drawings or not.

B. Receptacles shall be installed in a suitable steel box.

C. The Architect reserves the right to relocate wiring device up to a distance of 5 feet from the location shown, before rough-in, without additional cost.

D. Provide multi-gang device covers at locations where devices gang together.

E. Device locations are indicated schematically on the drawings along with the type and mounting height. Final locations and mounting heights shall be coordinated with the Architect on the jobsite, and with shop drawings of equipment; including equipment to be furnished and installed by the Owner. Devices installed in walls covered with vinyl, fabric wallpaper or other special finishes shall be coordinated and verified with the Architect on the job site.

F. Stranded wire termination to switches, receptacles, devices and miscellaneous control devices shall be with an approved solderless terminal if clamp type securing is not possible (i.e. Sta-Con crimp on fork tongue connectors; Burndy Type TP-F).

G. All 20A, 120V receptacles in food service areas shall be GFCI.

H. Provide GFCI circuit breakers for all drinking fountain branch circuits where GFCI receptacles are not indicated on plan.

I. Provide ARC Fault circuit interrupters (AFCI) as required to comply with article 210.12 of NFPA 70. This shall include but not be limited to dwelling units and dormitories. AFCI breakers may be used.

J. Provide ground fault circuit interrupter (GFCI)/ARC Fault circuit interrupter (AFCI) dual function receptacles to comply with articles 210.8, 210.12 and 406.4 of NFPA 70.

K. Contractor shall indicate the circuit serving each wiring device. Provide a typewritten label located on the inside face of the coverplate for all recessed mounted devices and on the outside of the coverplate on all surface mounted devices.

**END OF SECTION**

**SECTION 26 32 13.16**

**LIQUID PROPANE STANDBY GENERATING SYSTEM**

## PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

A. The requirements of the General Conditions and Supplementary Conditions apply to all work herein.

B. SCOPE

1. Provide a standby electric generating system manufactured by Kohler 350RZXD series electric set rated for continuous standby service at 240kW/300kVA at 0.8 power factor, 3-phase, 208Y/120 volts, 60 cycle. The system shall be a package of new and current equipment consisting of:
   a. A liquid propane vapor driven electric plant in a (outdoor sound attenuated weather-protective housing) to provide emergency electric power.
   b. Automatic transfer switch to provide automatic starting and stopping of the plant and switching of the emergency load.
   c. Mounted accessories as specified.
   d. Control wiring.
   e. Provide oversized alternator as specified.
   f. Load bank.

1.2 PERMITS, TEST INSPECTIONS

A. This system shall be completely built, tested and shipped by a manufacturer who has been regularly engaged in the production of such equipment for the past ten years and who has parts and service facilities locally available so that there is one source of supply and responsibility. The performance of the electric plant shall be certified by an independent testing laboratory as to the plant's full power rating and voltage and frequency regulation. The complete system shall bear a seal showing that it is prototype test supported.

1.3 REQUIREMENTS

A. Level 1 applications are legally required emergency systems.

B. The electric generating system must meet all requirements of NFPA 110 (latest edition) including design specifications, prototype tests, one-step full-load pickup, and installation acceptance. Engine-generator system to provide source of power for Level 1 applications.

1.4 STANDARDS

A. Equipment shall meet the latest versions of the following codes:

1. NFPA 30
2. NFPA 37

3. NFPA 54
4. NFPA 58
5. NFPA 70
6. NFPA 99
7. NFPA 101
8. NFPA 110
9. IEEE C62.41.1
10. IEEE 446
11. NEMA MG 1, ICS
12. ANSI
13. UL 1008
14. UL 2200
15. MIL-STD 461 C - Part 9, IEC 801.2, IEC 801.3, IEC 801.5, IEC 1000-4-2,3,6 - RFI and EMI Performance.
16. IFGC (edition adopted by AHJ)
17. Texas RRC LP-Gas Safety Rules

1.5 SUBMITTALS

A. Provide a specification compliance document noting any deviations to the specification. Document shall be a copy of the specification noting Comply, Deviate, or Exception to each section with detailed explanation for each deviation and exception.

B. Shop drawings shall include but not be limited to:

1. Catalog cut sheets with all equipment, accessories and devices including all ratings.
2. Interconnection wiring diagrams.
3. Complete bill of materials.
4. Certified performance tests.
5. Sizing report using manufacturer software confirming the engine and alternator complies with the size required to supply the connected load. Submit alternate generator if the proposed unit will not comply. **The generator shall be sized such that the maximum design load does not exceed 85% of its available rated capacity. All applicable capacity derating factors, including those associated with operation on liquid propane (LP) gas, shall be applied prior to determining the allowable maximum loading.**
6. Submit generator manufacturer fuel consumption and fuel inlet pressure requirements for operation on LP vapor at 25%, 50%, 75%, and 100% of rated load. Submit confirmation that the proposed generator is compatible with the Owner-furnished propane fuel supply system, including available fuel pressure and capacity at the generator connection point.

C. Operation and Maintenance Data

1. Submit under provisions of Division One.
2. Furnish three copies of the manuals and books listed below in substantial three-ring binders for each unit:

a. Operating Instructions: Describe and illustrate all switchgear controls and indicators and engine and general controls. Include instructions for operating transfer switch equipment under normal and emergency conditions when engine generator is running.
b. Parts Books: Illustrate and list all assemblies, subassemblies and components, except standard fastening hardware (nuts, bolts, washers, etc.).
c. Preventative Maintenance Instructions: Describe the daily, weekly, monthly, biannual and annual maintenance requirements and include a complete lubrication chart.
d. Routine Test Procedures: Describe procedures for engine, radiator, all electronic and electrical circuits, and the generator.
e. Troubleshooting Chart: Describe and list all troubles, probable causes, and suggested remedies.
f. Recommended Spare Parts List: List all consumables anticipated to be required during routine maintenance and testing. List special tools, maintenance materials and replacement parts.
g. Wiring Diagrams and Schematics: Show function of all electrical components.

1.6 DELIVERY, STORAGE AND HANDLING

A. Deliver, store, protect and handle products to site under provisions of Division One.

B. Accept units on site on skids. Inspect for damage.

C. Protect equipment from dirt and moisture by securely wrapping in heavy plastic.

1.7 ACCEPTABLE MANUFACTURERS

A. Provide products complying with these specifications and produced by the following:

1. Generator Manufacturer
   a. Rehlko
   b. Cummins
   c. CAT

2. Automatic Transfer Switches
   a. Rehlko
   b. ASCO
   c. Trystar

1.8 ACCEPTABLE SUPPLIERS

A. All equipment provided shall be supplied by an authorized distributor of the manufacturer who has been continuously engaged in the distribution of industrial grade power system products for a minimum of 15 years. The supplier shall provide initial start-up services, conduct field acceptance testing, and warranty service. The supplier shall be authorized to perform warranty service on all products provided.

B. The supplier shall maintain a minimum of 6 factory trained and qualified field technicians within 50 mile of the job site, a proper supply of spare parts for the supplied equipment, a shop with overhaul capabilities; and be able to provide 24 hour, 7 days per week, 365 days per year field service capability.

**PART 2 - PRODUCTS**

2.1 ENGINE

A. The engine shall be radiator cooled, liquid propane fueled, 4 cycle, V-8 cylinder. It shall have a total piston displacement of not less than 632 cubic inches and develop not less than the recommended brake horsepower at its operating speed. A radiator air discharge duct flange shall be provided for a connecting duct to allow all heated air and gases to be discharged out of the building, or enclosure, through one opening. The radiator cooling system shall be rated at 104 degrees F. ambient against an external restriction of 0.5 inch water column. Engine cooling air requirements shall not exceed recommended CFM.

B. The engine shall be of 1-piece cast alloy iron construction with cast alloy iron heads. Valves shall be overhead and free to rotate. Valves shall be hard chrome-cobalt alloy faced with replaceable valve seat inserts of solid chrome-cobalt alloy. The crankshaft shall be forged steel. Main bearings provided between all cylinders. The connecting rods shall be forged steel with connecting rod bearings. Provide full-flow, replaceable oil filter with bypass. Oil pressure gauge shall be included.

C. The engine shall be equipped with adjustable isochronous electronic governor with speed regulation 0.5 percent, no load to full load, main output circuit breaker, fuel carburetor system with automatic fuel shut-off, and a reusable air element air cleaner and LP-vapor fuel train.

D. Provide a 24-volt electrical system and electric starter.

E. 120 VAC thermostatically controlled water jacket heater system (1200 watts) shall be provided. Contractor shall install normal power to the heater.

F. Provide the following safety shutdown fault devices:

1. Low oil pressure
2. Over-speed
3. Over-crank
4. High temperature (with low water level)

G. Provide the following alarms:

1. Low engine temperature (indicating jacket heater malfunction)
2. Marginally high engine temperature
3. Marginally low oil pressure
4. Flashing light for control switch in "Stop" position.

H. Generator main circuit breaker shall be UL listed, set-mounted, factory connected, molded case type with electronic trip unit. Submittals shall demonstrate that the circuit breaker provides proper protection for the alternator by a comparison of the trip characteristic of the breaker with the thermal damage characteristic of the alternator. Field circuit breakers shall not be acceptable for generator overcurrent protection. (Lugs on breaker shall match "ATS" lugs). Provide ground fault alarm for breakers rated 1000 amps and larger to comply with Article 700.6 (D) of the National Electrical Code

I. Provide output breaker for load bank.

2.2 ALTERNATOR

A. Rating 240kW/300kVA at 0.8 power factor, 105 degrees Celsius, 208Y/120 volts, 60 Hz at 1800 rpm.

B. The alternator shall be a single bearing revolving field type, 2/3 pitch, 4-pole and shall be completely brushless. No commutator or commutator brushes shall be allowed. The main alternator and exciter shall be vacuum impregnated. The alternator shall be directly connected to the engine through a rigid coupling to insure permanent alignment. Voltage regulation shall be within plus or minus 1% of rated voltage, from no load to full load. Voltage recovery to rated voltage after acceptance of 100% of rated load in one step shall occur within 10 seconds. Provide a permanent magnet generator (PMG) excitation system. Motor starting capability shall be a minimum KVA recommended by manufacture. Rating for non-linear loads shall not be less than manufacturers recommended kW at 0.8 power factor. The generator set shall be capable of sustaining a minimum of 90% of rated no load voltage with the specified kVA load at near zero power factor applied to the generator set. The instantaneous voltage dip shall be less than 10% of rated voltage when full load and rated power factor are applied to the alternator. Stable or study-state operation is defined as operation with terminal voltage remaining constant within plus or minus 1% of rated voltage. Temperature rise shall be within rating as defined by NEMA MG 1-22.40. Radio interference reduction shall exceed requirements for general civilian or commercial applications with TIF less than 50 and wave form deviation less than 0.06 line to line.

C. Provide a 120-volt anti-condensation heater (minimum of 100 watts) to prevent condensation during non-operating periods. Heater shall be thermostatically controlled and rated for continuous use for the frame. Provide normal power to the heater.

D. Overload Rating: Capable of withstanding a three-phase load of 300% rated current for 10 seconds, 150% of rated current for 60 seconds and 105% rated current for 60 minutes with field set for normal rated load excitation, and capable of withstanding an overspeed of 125%.

E. Performance Criteria:

1. Wave form Deviation: Less than 5%.
2. Crest Factor: 1.41 +/- 0.07.
3. Form Factor: 1.11 +/- 0.05.
4. Total Harmonic Distortion: 5%.
5. Single Harmonic Distortion: 3%.
6. Telephone Interference Factor: 50% maximum.

7. Dynamic Balance: Less than 1 mil displacement peak to peak.

F. Enclosure: NEMA MG1, open drip proof.

G. Neutral Ground: As shown on drawings.

2.3 CONTROLS AND INSTRUMENTS

A. Provide comprehensive monitoring and control system integral to the Generator Set control to guard the electrical integrity of the alternator and power system. Provide single and 3-phase fault current regulation, so that downstream protective devices have the maximum current available to quickly clear fault conditions, without subjecting the alternator to potentially catastrophic failure conditions. Include provisions to either prevent over voltage due to single phase faults, or to shut down the generator set if line to neutral voltage on any phase exceeds 115% for more than 0.5 second. Acceptable methods are a 100% rated, 600 volt circuit breaker mounted in the generator enclosure. Provide size as indicated on drawings with handheld programmer or inherent protection provided by microprocessor-based AmpSentry protection. Submittals shall demonstrate that the protective device provides proper protection for the alternator by a comparison of the trip characteristic of the breaker with the thermal damage characteristic of the alternator. Field circuit breakers shall not be acceptable for generator overcurrent protection.

B. A Generator Control Panel mounted on top of the alternator shall contain the following:

1. Run-stop-remote switch
2. Charge rate ammeter
3. Oil Pressure Digital Readout
4. Coolant Temperature Digital Readout
5. Remote start-stop terminals
6. Running time meter
7. Full A.C. Digital Display (A.C. ammeter, A.C. voltage, phase selector switch, frequency meter, and voltage adjustment.) All parameters shall have a readout of not less than 2.5% accuracy.
8. Red alarm lights shall be provided for each fault and alarm condition.
9. Two sets of spare terminals shall be provided for customer selected faults.
10. An Emergency Shutdown contact shall be provided through which customer's push button or other momentary-closing switch contacts shall shutdown the generator set engine.
11. A fault reset switch contacts shall shutdown the generator set engine.
12. A fault reset switch shall be provided to clear fault indications and allow restarting of the engine after shutdown faults.
13. The control design shall be such that the fault indication shall remain until reset. The fault indicator memory shall not be dependent on the presence of either AC or DC voltage and shall retain the fault status memory even through complete removal and replacement of the starting batteries.
14. A battery warning that includes load testing the battery on each crank shall be provided.
15. The fault reset function shall operate only when the RUN-STOP-REMOTE switch is in the STOP position.

16. All devices for interconnection and compatibility with digital accuracy and response shall be provided. Digital panels shall comply with electromagnetic interference requirements of Minimum Standard 461C - Part 9, and IEC Standard 801.2, 801.3 and 801.4. indication of voltage level
17. Include a full wave rectified automatic digital voltage regulation system matched and prototype tested by the engine manufacturer with the governing system provided. It shall be immune from misoperation due to load-induced voltage waveform distortion and provide a pulse width modulated output to the alternator exciter. The voltage regulation system shall be equipped with three-phase RMS sensing and shall control buildup of AC generator voltage to provide a linear rise and limit overshoot. The system shall include a torque-matching characteristic, which shall reduce output voltage in proportion to frequency below an adjustable frequency threshold. Torque matching characteristic shall be adjustable for roll-off frequency and rate; and be capable of being curve-matched to the engine torque curve with adjustments in the field.
18. The automatic voltage regulator shall be temperature compensated, solid-state design and include overvoltage and overexcitation protection functions. The voltage regulator shall be equipped with three phase RMS sensing. The regulator shall control buildup of AC generator voltage to provide a linear rise and limit overshoot. Overvoltage protection shall sense the AC generator output voltage and (in the event of regulator failure or loss of reference), shut down regulator output on a sustained overvoltage of one (1) second duration. Overexcitation protection shall sense regulator output and shutdown regulator output if overloads exceed ten (10) seconds in duration. Both overvoltage and overexcitation protection shutdowns shall be latched, requiring the AC generator to be stopped for reset.
19. The regulator shall include an under frequency roll-off torque-matching characteristics, which shall reduce output voltage in proportion to frequency below a threshold of 58-59 Hz. The torque-matching characteristics shall include differential rate of frequency change compensation to use maximum available engine torque and provide optimal transient load response. Regulators which use a fixed volts per hertz characteristic are not acceptable.
20. An electronic governor system shall provide automatic isochronous frequency regulation. The governing system dynamic capabilities shall be controlled as a function of engine coolant temperature to provide fast, stable operation at varying engine operating temperature conditions.
21. All analog and digital metering shall be true-RMS indicating, and shall not be disrupted by non-linear load generated waveform distortion.
22. Digital metering set shall indicate generator RMS voltage and current, frequency, output current, output kW, kW-hours, and power factor. Generator output voltage shall be available in line-to-line neutral voltages and shall display all three phase voltages (line to neutral or line-to-line) simultaneously.
23. An under frequency sensing and protection system shall be provided which causes a shutdown of the generator set if true RMS frequency falls below 90% of rated frequency for more than 10 seconds.
24. The control system provided shall withstand the surge voltage produced by a 70A DC battery charging alternator operating at full load when the battery bank is disconnected. The test shall be successfully completed without tripping protective circuit breakers or blowing fuse protective devices.
25. All switches, lamps and meters shall be oil-tight and dust-tight and the enclosure door shall be gasketed.

26. All switches shall be provided with fully illuminated back-lit labels and all metering shall be individually lighted to allow for easy reading of functions in a completely dark room.
27. The field connections shall be made on permanently labeled terminal blocks, which are designed and tested by the manufacturer of the generator set to be suitable for use without wire termination lugs. Provisions shall be made for future addition of DIN-rail mounted components.
28. Control panel and interconnection enclosures shall be UL508 listed as a unit assembly.
29. Communications:
    a. Alarm Relay Mode: Provide Form C alarm contacts that can be individually linked to alarm or status outputs from the generator set to external devices.
30. Interface to Site Monitoring System: Provide necessary electronic components and wiring to interface with and communicate the analog and digital status information to an owner provided site monitoring system. Include in this contract all work required for translation of proprietary protocol required to achieve this interface, and all licensing or other fees associated with this interface. Provide ethernet connection for integrating into modbus protocol.

## 2.4 ELECTRIC PLANT MOUNTING

A. The plant shall be provided with shock or anti-vibration mounts with the plant. Provide Korfund LKD spring-type isolators or type EU pads. Vibration isolation may be integrally a part of the generator set to the skid package. The plant's integral base shall have forklift sockets. Battery rack shall be integral part of plant base.

## 2.5 ACCESSORIES

A. All accessories needed for the proper operation of each plant shall be furnished. These shall include, but not limited to, the following:

1. Critical rated side inlet silencers with installation attachments for mounting within the set housing, flexible exhaust connection.
2. Belt driven battery charging alternator.
3. Lead acid starting batteries
4. Battery cables.
5. Fully automatic 120 volt, 10 amp battery charger. Kohler or approved equal.
6. LP Gas (Vapor) Fuel Train consisting of:
    a. Manufacturer-approved fuel filter or strainer where required.
    b. Automatic fuel shutoff solenoid valve, compatible with the generator control system.
    c. Fuel pressure regulator(s) as required to provide the inlet pressure specified by the generator manufacturer under all operating conditions.
    d. UL Listed flexible fuel connector suitable for LP vapor service and compatible with the generator manufacturer's installation requirements.
    e. Manual fuel shutoff valve installed in an accessible location.
    f. Fuel pressure sensing and safety devices as required by the generator manufacturer.
    g. All fittings, valves, and accessories necessary for a complete LP-vapor fuel supply connection.

7. An oil drain valve with hose extension shall be provided for draining oil at the side of the plant.
8. Detailed operation and maintenance manuals with parts list.

## 2.6 REMOTE ALARM ANNUNCIATOR

A. Remote annunciator shall be provided for flush mounting at inside location remote from the generator set located by the fire alarm control remote annunciator panel in the front administration office area.

## 2.7 AUTOMATIC TRANSFER SWITCH

A. Scope

1. Provide open transition automatic transfer switches (ATS) with the number of poles, amperage, voltage and withstand current ratings as shown on the plans. Each automatic transfer switch shall consist of an inherently double throw power transfer switch unit and a control module interconnected to provide complete automatic operation.

B. Codes and Standards

1. UL 1008 - Standard for Automatic Transfer Switches
2. NFPA 70 - National Electrical Code
3. NFPA 99 - Essential Electrical Systems for Health Care Facilities
4. NFPA 110 - Emergency and Standby Power Systems

C. Acceptable Manufacturers

1. Relhko
2. ASCO
3. Trystar

D. Mechanically Held Transfer Switch

1. The transfer switch unit shall be electrically operated and mechanically held. The switch shall be mechanically interlocked to ensure only one of two possible positions, normal or emergency.
2. All main contacts shall be silver composition. Switches rated 600 amperes and above shall have segmented, blow-on construction and be protected by separate arcing contacts.
3. Inspection of all contacts shall be possible from the front of the switch without disassembly of operating linkages and without disconnection of power conductors. A manual operating handle shall be provided for maintenance purposes.
4. Designs utilizing components of molded-case circuit breakers, contactors, or parts thereof are not acceptable.

E. Microprocessor Control Panel

1. The control panel shall direct the operation of the transfer switch. The panel's sensing and logic shall be controlled by a built-in microprocessor.
2. Operator Panel. Each transfer switch shall be provided with a control panel to allow the operator to view the status and control operation of the transfer switch. The operator panel shall be a sealed membrane panel rated NEMA 3R/IP53 or better (regardless of enclosure rating) that is permanently labeled for switch and control functions. The operator panel shall communicate with the engine generator, including display of all engine and alternator data, and other transfer switch data in the power system. The operator panel shall allow starting and stopping of the generator set via the transfer switch operator panel in both test and emergency modes.

F. Enclosure

1. The ATS shall be furnished in a NEMA4 for exterior use.

G. Voltage and Frequency Sensing

1. The voltage of each phase of the normal source shall be monitored, with pickup adjustable from 85% to 100% of nominal, and dropout adjustable from 75% to 98% of pickup setting.
2. Single-phase voltage sensing of the emergency source shall be provided, with pickup voltage adjustable from 85% to 100% of nominal and independent frequency sensing with pickup adjustable from 90% to 100% of nominal.

H. Time Delays

1. A time delay shall be provided to override momentary normal source outages and delay all transfer and engine starting signals. Adjustable from 0 to 6 seconds.
2. A time delay shall be provided on transfer to emergency, adjustable from 0 to 5 minutes for controlled timing of transfer of loads to emergency.
3. A time delay shall be provided on retransfer to normal, adjustable from 0 to 30 minutes. Time delay shall be automatically bypassed if emergency source fails and normal source is acceptable.
4. A time delay shall be provided on shutdown of engine generator for cool down, adjustable from 0 to 60 minutes.

I. Additional Features

1. A set of DPDT gold-flashed contacts rated 10 amps, 32 VDC shall be provided for a low-voltage engine start signal.
2. A momentary-type test switch shall be provided to simulate a normal source failure.
3. One set of auxiliary contacts rated 10 amps, 250 VAC shall be provided.
4. Position indicating lights shall be provided.
5. An in-phase monitor or delayed transition shall be provided for motor load applications.
6. Provide a field-programmable control which shall periodically start and run the generator with or without transferring the load for a preset time period, then re-transfer and shut down the generator after a preset cool-down period.

J. Withstand and Closing Ratings

1. The ATS shall be UL listed in accordance with UL 1008 and be labeled in accordance with that standard's 3 cycle, long-time ratings. ATS's that are tested and labeled with specific breaker ratings only are acceptable. If current limiting fuses are utilized, provide current limiting fuses and disconnect switch mounted in or on Automatic Transfer Switch.

K. The ATS manufacturer shall maintain a national service organization of company-employed personnel located throughout the contiguous United States. The service center's personnel must be factory trained and must be on call 24 hours a day, 365 days a year.

2.8 LOAD BANK

A. Electrical Connection: Power source to load bank connection is 3-phase, 3-wire plus ground. Additional control wire connections for remote control as required.

B. Load Bank Rating:

1. Capacity: 90 kW, 1.0 p.f
2. Load Steps: 15 KW load step resolution
3. Voltage: 208 VAC, 3-ph., 3-W
4. Frequency: 60 Hertz
5. Air intake temperature: 155°F maximum (radiator air outflow)
6. Airflow requirements: Radiator air outflow
7. Duty Cycle: Continuous
8. Air temp. rise: 100°F, nominal
9. Air back pressure: 0.25 - 0.50" water column

C. Load Bank Design:

1. General: The load bank shall be a completely self-contained unit which includes all resistive load elements, load control devices, load element branch circuit fuse protection, main load bus and terminals, control terminals, system protection devices and enclosure of required type.
2. The load bank shall be the manufacturer's standard product that has been investigated, tested and listed by Underwriters Laboratories as a system for the purpose intended.
3. Enclosure: Type 3R, welded sheet steel, UL approved finish painted consisting of an epoxy primer and a polyurethane top coat, consisting of a power section, for installation and wiring of the load elements and a control section for installation and wiring of control components. The control section is to be physically and thermally isolated from both the hot load elements and the heated airflow. Mounting adapters suitable for the installation method selected shall be supplied with the load bank. The exhaust of the load bank shall be screened and, if installed outdoors, louvers shall be provided.

4. Load elements: Load elements shall be UL listed, labeled or recognized, Simplex Power Web Open wire, helically wound, chromium alloy, thermally derated to 60%. 5% tolerance, 2% balance. 0.995 p.f. element wire mechanically supported over entire length such that if a wire should break, the broken wire segments will not short to adjacent conductors or to ground. Load elements are individually serviceable and replaceable in the field without major disassembly of the load bank.
5. Load element short circuit protection: Branch circuit fuses, per each 50KW load branch circuit. Fuses shall be 200,000 A.I.C. current limiting type.
6. Load control: One magnetic contactor per each fused branch circuit.
7. Load bank power wiring shall be 150ºC insulated.
8. Main terminals: Plated bus bar with a hole pattern to accept customer supplied cable
9. Control wiring shall be 105ºC insulated.
10. Control power shall be derived internally from the main load bus. Control and protective circuits shall operate at 120V via control power transformer or line-neutral circuit and shall be fused.
11. System protection: The load bank shall include a comprehensive protection system to protect against overheating. The system shall function to disconnect the load elements from the power source and activate an alarm upon sensing a loss of cooling airflow, or an exhaust air temperature greater than 300°F.
12. Locate on top of generator enclosure.
13. Load bank shall automatically connect to the generator when the running load is less than 30% and automatically disconnect when the load exceeds 50%.

## 2.9 OUTDOOR SOUND ATTENUATED WEATHER-PROTECTIVE HOUSING

A. The generator set shall be provided with a factory-installed housing to allow the generator set to operate at full rated load in the ambient conditions previously specified. The enclosure shall reduce the sound level of the generator set while operating at full rated load to an maximum of 73 dBA, which shall be an eight-position average of any location 7 meters from the geometric center point of the generator set in a free field environment. Housing configuration and materials used may be of a suitable design which meets application needs, except that acoustical materials used shall be oil and water resistant. No foam materials shall be used unless they can be demonstrated to have the same durability and life as fiberglass. The acoustical housing shall match the standard footprint of the standard housing-ready generator set base. The enclosure shall include hinged doors for access to both sides of the engine and alternator, and the control equipment. Key-locking and pad lockable door latches shall be provided for all doors. Door hinges shall be stainless steel. The enclosure shall be provided with an exhaust silencer which is mounted inside of the enclosure and allows the generator set package to meet specified sound level requirements. Silencer and exhaust shall include a rain cap and rain shield. All sheet metal shall be primed for corrosion protection and finish painted with the manufacturer's standard color using a two-step electro coating paint process, or equal, meeting the performance requirements specified below. All surfaces of all metal parts shall be primed and painted. The painting process shall result in a coating which meets the following requirements:

1. Primer thickness, 0.5-2.0 mils. Top coat thickness, 0.8-1.2 mils.
2. Gloss, per ASTM D523, 80% plus or minus 5%. Gloss retention after one year shall exceed 50%.

3. Crosshatch adhesion, per ASTM D3359, 4B-5B.
4. Impact resistance, per ASTM D2794, 120-160 inch-pounds.
5. Salt spray, per ASTM B117, 1000+ hours.
6. Humidity, per ASTM D2247, 1000+ hours.
7. Water soak, per ASTM D2247, 1000+ hours.

B. Painting of hoses, clamps, wiring harnesses, and other non-metallic service parts shall not be acceptable. Fasteners used shall be corrosion resistant and designed to minimize marring of the painted surface when removed for normal installation or service work.

C. A 120 VAC heater with thermostat shall be provided within the generator set control panel to eliminate condensation. Contractor shall provide 120-volt, 20-amp circuit.

2.10 LIQUID PROPANE FUEL SUPPLY SYSTEM

A. The liquid propane (LP) storage tank shall be furnished by the Owner. The Contractor shall coordinate the generator's fuel supply requirements with the Owner-provided LP storage system.

B. The generator shall be designed and certified by the manufacturer for operation on LP vapor and shall be capable of producing the specified standby power output using the available LP fuel supply.

C. The Contractor shall submit the generator manufacturer's fuel requirements, including maximum fuel consumption in BTU/hr or cubic feet per hour, minimum and maximum allowable inlet fuel pressures, and required fuel flow rates under starting, transient loading, and full-load operating conditions.

D. The Contractor shall verify that the fuel pressure and available fuel supply capacity at the designated generator connection point are adequate for the proposed generator. Any discrepancies between the available fuel supply and the generator manufacturer's requirements shall be reported to the Engineer prior to installation.

E. Provide the generator manufacturer's required fuel train, including applicable pressure regulators, automatic fuel shutoff valves, manual isolation valves, flexible fuel connections, and associated accessories required for proper operation.

F. Fuel piping and connections furnished under this Section shall comply with applicable provisions of NFPA 54, NFPA 58, the Texas Railroad Commission LP-Gas Safety Rules, and the generator manufacturer's installation requirements.

G. Coordinate the location and requirements of the generator fuel connection with the Owner and the contractor responsible for installation of the LP fuel distribution system.

H. During field acceptance testing, verify that fuel pressure at the generator inlet remains within the manufacturer's specified operating range during engine starting, transient loading, and full-load operation.

## PART 3 - EXECUTION

3.1 INSTALLATION

A. Install generator and housing on a minimum 6-inch-high reinforced concrete housekeeping pad. Provide blockouts as required. Bolt the generator to the pad. The pad shall be designed by a structural engineer. Provide working clearances and operational air flow clearances as required by the manufacturer.

B. Provide all power wiring, control wiring, additional contacts and relays required for a complete installation. All conduits shall be in a two-hour enclosure. Underground conduits shall be concrete encased. The wall mounted dual rate battery shall be taken offline during the starting of the generator. The generator belt driven alternator shall charge the batteries when the generator is running.

C. Install generator set and transfer switches in accordance with manufacturer's instructions.

D. The generator shall be installed as a separately derived system. Contractor shall connect the generator neutral to a grounding electrode. Provide a bonding jumper from the ground bar to neutral.

E. Provide engraved plastic nameplates under the provisions of Section 26 02 00.

3.2 WARRANTY

A. The complete standby electric power system, including engine-generator set equipped with set exerciser, and running time meter, shall be warranted for a period of five years from the date of initial start-up. Multiple warranties for individual components (engine, alternator, controls, etc.) will not be acceptable. Satisfactory warranty documents must be provided. This warranty shall be as detailed in available written documents. In the judgement of the specifying authority, the manufacturer supplying the warranty for the complete system must have necessary financial strength and technical expertise with all components supplied to provide adequate warranty support. All items of the engine, generator, and controls that are warranted in the first year shall be covered for the full five-year term of the warranty. Warranty coverage shall include parts, labor, and travel for the full term of the warranty.

B. Extensions of warranty term up to 10 years from start-up and inclusion of comprehensive terms shall be available for one year after start-up.

3.3 TESTS

A. Factory production model tests: Before shipment of the equipment, the generator set shall be tested at an ISO 9001 Certified Facility under rated load and power factor for performance and proper functioning of control and interfacing circuits. Testing at unity power factory only (resistance banks only) is not acceptable, since kW output is affected by the higher generator efficiency at unity power factor, and the kVAR for motor starting and regulation loads is not correlatable between unity and rated power factor. Other tests shall include:

1. Single step load pickup per NFPA 110.

2. Transient response and steady state governing.
3. Safety Shutdowns.
4. Prototype tests in accordance with NFPA 110 level 1 have been done on a complete and functional set. Component level type tests will not substitute for this requirement.

B. The engineer shall be notified in advance of these tests and shall have the option of witnessing these tests. Certified copies of test results shall be forwarded to the engineer for review.

C. Field Test After Installation:

1. The complete installation shall be initially started and checked out for operational compliance by factory-trained representative(s) of the engine-generator set and transfer switch manufacturer. The engine lubrication oil and antifreeze, as recommended by the manufacturer for operation under environmental conditions specified, shall be provided by the engine-generator set supplier.
2. Upon completion of initial start-up and system checkout, the supplier of the generator set shall perform a field test, with the engineer notified in advance, to demonstrate load carrying capability, stability, voltage, and frequency. The engineer shall be present during the field test.
3. The generator shall be run for four hours continuously with all available facilities emergency load connected to its output; in addition, the generator set supplier must provide a portable load bank to supplement any existing load to enable full load testing. Load shall not exceed 50% of generator-set rating for first 1/2 hour during first initial run for proper engine break-in. Records shall be maintained throughout this period to record water temperature, oil pressure, ambient air temperature, voltage, current, frequency, kilowatts, and power factor. The above data shall be recorded at 15 minute intervals throughout the test. There shall be a 10 minute unloaded run at the conclusion of the test to allow engine to cool before shutdown. Three copies of the field test data shall be furnished to the engineer. The contractor shall make all necessary hook-ups to accomplish field tests and shall furnish all fuel necessary for field test and start-up.

## 3.4 OPERATIONS PERSONNEL TRAINING

A. Provide a training session for the owner's operations personnel. Training session shall be performed by a qualified person who is knowledgeable in the subject/equipment. Submit a training agenda two (2) weeks prior to the proposed training session for review and approval. Training session shall include at the minimum:

1. Purpose of equipment.
2. Principle of how the equipment works.
3. Important parts and assemblies.
4. How the equipment achieves its purpose and necessary operating conditions.
5. Most likely failure modes, causes and corrections.
6. On site demonstration.

**END OF SECTION**

**Design No. U419**
**BXUV.U419**
**Fire Resistance Ratings - ANSI/UL 263**

**Design/System/Construction/Assembly Usage Disclaimer**

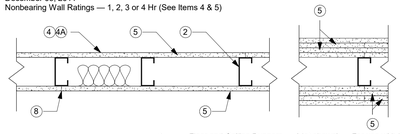
· Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Listed or Classified products, equipment, system, devices, and materials.
· Authorities Having Jurisdiction should be consulted before construction.
· Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
· When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
· Only products which bear UL's Mark are considered as Classified, Listed, or Recognized.

**Fire Resistance Ratings - ANSI/UL 263**

See General Information for Fire Resistance Ratings - ANSI/UL 263

**Design No. U419**

December 09, 2011
Nonbearing Wall Ratings — 1, 2, 3 or 4 Hr (See Items 4 & 5)




1. Floor and Ceiling Runners — (Not shown) — For use with Item 2 - Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min depth to accommodate stud size, with min 1-1/4 in. long legs,attached to floor and ceiling with fasteners 24 in. OC max.

1A. Framing Members* - Floor and Ceiling Runners — Not shown - In lieu of Item 1 — For use with Item 2A, proprietary channel shaped, min. 3-5/8 in. deep, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling with fasteners 24 in. OC max. Effective thickness is 0.034 in.

CLARKDIETRICH BUILDING SYSTEMS — UltraSTEEL®.

1B. Framing Members* - Floor and Ceiling Runners — (Not shown - In lieu of Item 1) — For use with Item 2A, proprietary channel shaped, min. 2-1/2 in. deep, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, attached to floor and ceiling fasteners 24 in. OC. max. Effective thickness is 0.034 in.
**CLARKDIETRICH BUILDING SYSTEMS** — UltraSTEEL®.

1C. **Framing Members* - Floor and Ceiling Runner** — Not shown - In lieu of Item 1 — For use with Item 2C, proprietary channel shaped runners, 3-5/8 in. deep attached to floor and ceiling with fasteners 24 in. OC max.

**CALIFORNIA EXPANDED METAL PRODUCTS CO** — Viper25™ Track

**CRACO MFG INC** — SmartTrack™

**MARINO/WARE, DIV OF WARE INDUSTRIES INC** — Viper25™ Track

**TELLING INDUSTRIES LLC** — Viper25™ Track

1D. **Framing Members* - Floor and Ceiling Runner** — Not shown - In lieu of Item 1 — For use with Item 2D, proprietary channel shaped runners, 1-1/4 in. wide by 3-5/8 in. deep fabricated from min 0.020 in. thick galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

**CALIFORNIA EXPANDED METAL PRODUCTS CO** — Viper20™ Track

**MARINO/WARE, DIV OF WARE INDUSTRIES INC** — Viper20™ Track

**TELLING INDUSTRIES LLC** — Viper20™ Track

1E. **Framing Members*— Floor and Ceiling Runners** — (Not shown) — In lieu of Item 1 - Channel shaped, attached to floor and ceiling with fasteners 24 in. OC. max.

**ALLSTEEL & GYPSUM PRODUCTS INC** — Type SUPREME Framing System

**CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV** — Type SUPREME Framing System

**QUAIL RUN BUILDING MATERIALS INC** — Type SUPREME Framing System

**SCAFCO STEEL STUD MANUFACTURING CO** — Type SUPREME Framing System

**STEEL CONSTRUCTION SYSTEMS INC** — Type SUPREME Framing System

**UNITED METAL PRODUCTS INC** — Type SUPREME Framing System

1F. **Floor and Ceiling Runners** — (Not shown)—For use with Item 2B- Channel shaped, fabricated from min 20 MSG
corrosion-protected or galv steel, min depth to accommodate stud size, with min 1 in. long legs, attached to floor and
ceiling with fasteners spaced max 24 in. OC.

1G. **Framing Members*— Floor and Ceiling Runners** — (Not shown, As an alternate to Item 1) — For use with Items
2F, 5F or 5G or 5I only, channel shaped, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel,
attached to floor and ceiling with fasteners 24 in. OC. max.

**CLARKDIETRICH BUILDING SYSTEMS** — CD ProTRAK

**DMFCWBS LLC** — ProTRAK

**MBA BUILDING SUPPLIES** — ProTRAK

**SOUTHEASTERN STUD & COMPONENTS INC** — ProTRAK

**TELLING INDUSTRIES LLC** — TRUE-TRACK™
1H. **Framing Members* - Floor and Ceiling Runner** — Not shown - In lieu of Item 1 — For use with Item 2G, proprietary channel shaped runners, minimum width to accommodate stud size, with 1- 1/8 in. long legs fabricated from min 0.015 in. (min bare metal thickness) galv steel, attached to floor and ceiling with fasteners spaced 24 in. OC max.

**SUPER STUD BUILDING PRODUCTS** — The Edge

**2. Steel Studs** — Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height.

2A. **Framing Members* - Steel Studs** — In lieu of Item 2 - Proprietary channel shaped studs, min. depth as indicated under Item 5, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height. Allowable use of studs is shown in the table below. For direct attachment of gypsum board only. Effective thickness is 0.034 in.

**CLARKDIETRICH BUILDING SYSTEMS** — UltraSTEEL®.

2B. **Steel Studs** — (As an alternate to Item 2, For use with Items 5B & 5E) Channel shaped, fabricated from min 20 MSG corrosion-protected or galv steel, 3-1/2 in. min depth, spaced a max of 16 in. OC. Studs friction-fit into floor and ceiling runners. Studs to be cut 5/8 to 3/4 in. less than assembly height.

2C. **Framing Members* - Steel Studs** — (As an alternate to Item 2, For use with Items 5C or 5I) - Proprietary channel shaped studs, 3-5/8 in. deep spaced a max of 24 in. OC. Studs to be cut 3/4 in less than the assembly height and installed with a ½ in. gap between the end of the stud and track at the bottom of the wall. For direct attachment of gypsum board only.

**CALIFORNIA EXPANDED METAL PRODUCTS CO** — Viper25™

**CRACO MFG INC** — SmartStud™

**MARINO/WARE, DIV OF WARE INDUSTRIES INC** — Viper25™

**TELLING INDUSTRIES LLC** — Viper25™

2D. **Framing Members* - Metal Studs** — Not shown - In lieu of Item 2 — For use with Item 1D, proprietary channel shaped steel studs, min depth as indicated under Item 5, spaced a max if 24 in. OC, fabricated from min 0.020 in. thick galv steel. Studs cut 3/8 in. to 3/4 in. less in lengths than assembly heights.

**CALIFORNIA EXPANDED METAL PRODUCTS CO** — Viper20™

**MARINO/WARE, DIV OF WARE INDUSTRIES INC** — Viper20™

**TELLING INDUSTRIES LLC** — Viper20™

2E. **Framing Members*— Steel Studs** — In lieu of Item 2 - For Use with Item 1E- Channel shaped studs, min depth as indicated under Item 5, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.

**ALLSTEEL & GYPSUM PRODUCTS INC** — Type SUPREME Framing System

**CONSOLIDATED FABRICATORS CORP, BUILDING PRODUCTS DIV** — Type SUPREME Framing System

**QUAIL RUN BUILDING MATERIALS INC** — Type SUPREME Framing System

**SCAFCO STEEL STUD MANUFACTURING CO** — Type SUPREME Framing System
**STEEL CONSTRUCTION SYSTEMS INC** — Type SUPREME Framing System

**UNITED METAL PRODUCTS INC** — Type SUPREME Framing System

2F. **Framing Members*— Steel Studs** — (Not shown, As an alternate to Item 2) —For use with Items 1G, 5F or 5G or 5I only, channel shaped studs, min depth as indicated under Item 5F, 5G or 5I, fabricated from min. 0.015 in. (min bare metal thickness) galvanized steel, spaced a max of 24 in. OC. Studs to be cut 3/4 in. less than assembly height.

**CLARKDIETRICH BUILDING SYSTEMS** — CD ProSTUD

**DMFCWBS LLC** — ProSTUD

**MBA BUILDING SUPPLIES** — ProSTUD

**SOUTHEASTERN STUD & COMPONENTS INC** — ProSTUD

**TELLING INDUSTRIES LLC** — TRUE-STUD™

2G. **Framing Members* - Metal Studs** — Not shown - In lieu of Item 2 — For use with Item 1H, proprietary channel shaped steel studs, minimum width indicated under Item 5, 1-1/4 in. deep fabricated from min 0.015 in. (min bare metal thickness) galvanized steel. Studs 3/8 in. to 3/4 in. less in lengths than assembly heights.

**SUPER STUD BUILDING PRODUCTS** — The Edge

3. **Wood Structural Panel Sheathing** — (Optional, For use with Item 5 Only.)- (Not Shown) - 4 ft wide, 7/16 in. thick oriented strand board (OSB) or 15/32 in. thick structural 1 sheathing (plywood) complying with DOC PS1 or PS2, or APA Standard PRP-108, manufactured with exterior glue, applied horizontally or vertically to the steel studs. Vertical joints centered on studs, and staggered one stud space from wallboard joints. Attached to studs with flat-head self-drilling tapping screws with a min. head diam. of 0.292 in. at maximum 6 in. OC. in the perimeter and 12 in. OC. in the field. When used, fastener lengths for gypsum panels increased by min. 1/2 in.

4. **Batts and Blankets*** — (Required as indicated under Item 5) — Mineral wool batts, friction fitted between studs and runners. Min nom thickness as indicated under Item 5. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies.

4A. **Batts and Blankets*** — (Optional) — Placed in stud cavities, any glass fiber or mineral wool insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies.

5. **Gypsum Board*** — Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. The thickness and number of layers for the 1 hr, 2 hr, 3 hr and 4 hr ratings are as follows:

**Gypsum Board Protection on Each Side of Wall**

| Rating Hr | Min Stud Depth, in. Items 2, 2D, 2E, 2G, and 2F | Min Stud Item 2A | No. of Layers & Thkns of Panels | Min Thkns of Insulaion |
|---|---|---|---|---|
| 1 | 3-1/2 | 3-5/8 | 1 layer, 5/8 in. | Optional |
| 1 | 2-1/2 | 3-5/8 | 1 layer, 1/2 in. | 1/2 in. |
| 1 | 1-5/8 | 3-5/8 | 1 layer, 3/4 in. | Optional |
| 2 | 1-5/8 | 2-1/2 | 2 layers, 1/2 in. | Optional |
| 2 | 1-5/8 | 2-1/2 | 2 layers, 5/8 in. | 3 in. |
| 2 | 3-1/2 | 3-5/8 | 1 layer, 3/4 in. | Optional |
| 3 | 1-5/8 | 2-1/2 | 3 layers, 1/2 in. | Optional |
| 3 | 1-5/8 | 2-1/2 | 2 layers, 3/4 in. | Optional |
| 3 | 1-5/8 | 2-1/2 | 3 layers, 5/8 in. | Optional |
| 4 | 1-5/8 | 2-1/2 | 4 layers, 5/8 in. | Optional |
| 4 | 1-5/8 | 2-1/2 | 4 layers, 1/2 in. | Optional |
| 4 | 2-1/2 | 2-1/2 | 2 layers, 3/4 in. | 2 in. I |

**CGC INC** — 1/2 in. thick Type C, IP-X2 or IPC-AR; WRC, 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX or WRC; 3/4 in. thick Types IP-X3 or ULTRACODE

**UNITED STATES GYPSUM CO** — 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type SCX, SGX, SHX, WRX, IPX1, AR, C, WRC, FRX-G, IP-AR, IP-X2, IPC-AR ; 3/4 in. thick Types IP-X3 or ULTRACODE

**USG MEXICO S A DE C V** — 1/2 in. thick Type C, IP-X2, IPC-AR or WRC; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, WRX, WRC or; 3/4 in. thick Types IP-X3 or ULTRACODE

When Item 7B, Steel Framing Members*, is used, Nonbearing Wall Rating is limited to 1 Hr. Min. stud depth is 3-1/2 in. min. thickness of insulation (Item 4) is 3 in., and two layers of gypsum board panels (1/2 in. or 5/8 in. thick) shall be attached to furring channels as described in Item 6. One layer of gypsum board panels (1/2 in. or 5/8 in. thick) attached to opposite side of stud without furring channels as described in Item 6.

5A. **Gypsum Board*** — (As an alternate to Item 5) — 5/8 in. thick, 24 to 54 in. wide, applied horizontally as the outer layer to one side of the assembly. Secured as described in Item 6.

**CGC INC** — Type SHX.

**UNITED STATES GYPSUM CO** — Type FRX-G, SHX.

**USG MEXICO S A DE C V** — Type SHX.

5B. **Gypsum Board*** — (Not Shown) - As an alternate to Item 5 when used as the base layer on one or both sides of wall when 5/8 in or ¼ in. thick products are specified. For direct attachment only to steel studs Item 2B, (not to be used with Item 3) - Nom 5/8 in. or ¼ in. may be used as alternate to all 5/8 in. or ¼ in. shown in Item 5, Wallboard Protection on Each Side of Wall table, Nom 5/8 in. or ½ in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Gypsum board secured to 20 MSG steel studs Item 2B with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and
12 in. OC in the field. To be used with Lead Batten Strips (see Item 11) or Lead Discs or Tabs (see Item 12).

**RAY-BAR ENGINEERING CORP** — Type RB-LBG

**5C. Gypsum Board*** — (For Use With Item 2C) Rating Limited to 1 Hour. 5/8 in. thick, 48 in. wide, Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. (Vertical Application) - The gypsum board is to be installed on each side of the studs with 1 in. long Type S coated steel screws spaced 8 in. OC starting 4 in. from the edge of the board at the vertical edges and 12 in. OC starting 6 in. from the edge of the board at the center of each board. Gypsum boards are to be secured to the top and bottom track with screws spaced 8 in. OC starting 4 in. from the board edge. Fasteners shall not penetrate through both the stud and the track at the same time. Vertical joints are to be centered over studs and staggered one stud cavity on opposite sides of studs. (Horizontal Application) - The gypsum board is to be installed on each side of the studs with 1 in. long Type S coated steel screws spaced 8 in. OC starting 4 in. from the edge of
the board at the vertical edges and 12 in. OC starting 6 in. from the edge of the board at the center of each board. Gypsum boards are to be secured to the top and bottom track with screws spaced 8 in. OC starting 4 in. from the board edge. Fasteners shall not penetrate through both the stud and the track at the same time. All horizontal joints are to be backed as outlined under section VI of Volume 1 in the Fire Resistive Directory.

**CGC INC** — Type SCX.

**UNITED STATES GYPSUM CO** — Type SCX, SGX.

**USG MEXICO S A DE C V** — Type SCX.

**5D. Gypsum Board*** — (As an alternate to Item 5) — 5/8 in. thick, 48 in. wide, applied vertically or horizontally. Secured as described in Item 6. For use with Items 1 and 2 only.

**UNITED STATES GYPSUM CO** — Type USGX.

5E. **Gypsum Board*** — (Not Shown) - (As an alternate to Item 5 when used as the base layer on one or both sides of wall when 1/2 in. or 5/8 in thick products are specified, For direct attachment only to steel studs Item 2B, not to be used with Item 3). Nominal 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 (or No. 6 by 1-1/4 in. long bugle head fine driller) steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field.

**NEW ENGLAND LEAD BURNING CO INC, DBA**

**NELCO** — Nelco

5F. **Gypsum Board*** — (As an alternate to Item 5) — For use with Items 1G and 2F and limited to 1 Hour Rating only, Gypsum panels with beveled, square or tapered edges, applied vertically, and fastened to the steel studs with 1 in. long Type S screws spaced 8 in. OC along vertical and bottom edges and 12 in. OC in the field. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Steel stud depth shall be a minimum 3-5/8 in.

**UNITED STATES GYPSUM CO** — 5/8 in. thick Type SCX, SGX.

5G. **Gypsum Board*** — (As an alternate to Item 5) — For use with Items 1G and 2F only, Gypsum panels with beveled, square or tapered edges, applied vertically or horizontally, as specified in the table below and fastened to the steel studs as described in Item 6. Vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Vertical joints in adjacent layers (multilayer systems) staggered one stud cavity. Horizontal joints need not be backed by steel
framing. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered. Horizontal edge joints and horizontal butt joints in adjacent layers (multilayer systems) staggered a min of 12 in. The thickness and number of layers for the 2 hr, 3 hr and 4 hr ratings are as follows:
Gypsum Board Protection on Each Side of Wall

| Rating Hr | Min Stud Depth, in. Items 2F | No. of Layers & Thkns of Panels | Min Thkns of Insulaion (Item 4) |
|---|---|---|---|
| 2 | 1-5/8 | 2 layers, 1/2 in. thick | Optional |
| 2 | 1-5/8 | 2 layers, 5/8 in. thick | Optional |
| 3 | 1-5/8 | 3 layers, 1/2 in. thick | Optional |
| 3 | 1-5/8 | 3 layers, 5/8 in. thick | Optional |
| 4 | 1-5/8 | 4 layers, 5/8 in. thick | Optional |
| 4 | 1-5/8 | 4 layers, 1/2 in. thick | Optional |

**CGC INC** — 1/2 in. thick Type C, IP-X2 or IPC-AR;, 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, or; 3/4 in. thick Types IP-X3 or ULTRACODE

**UNITED STATES GYPSUM CO** — 1/2 in. thick Type C, IP-X2, IPC-AR or; 5/8 in. thick Type SCX, SGX, SHX, IP-X1, AR, C, FRX-G, IP-AR, IP-X2, IPC-AR ; 3/4 in. thick Types IP-X3 or ULTRACODE

**USG MEXICO S A DE C V** — 1/2 in. thick Type C, IP-X2, IPC-AR or; 5/8 in. thick Type AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, or; 3/4 in. thick Types IP-X3 or ULTRACODE

5H. **Gypsum Board*** — (Not Shown) - As an alternate to Item 5 when used as the base layer on one or both sides of wall when 5/8 or 3/4 in thick products are specified. For direct attachment only to steel studs Item 2B, (not to be used with Item 3) - Nom 5/8 or 3/4 in. may be used as alternate to all 5/8 or 3/4 in. shown in Item 5, Wallboard Protection on Each Side of Wall table. Nom 5/8 or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Gypsum board secured to 20 MSG steel studs Item 2B with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. To be used with Lead Batten Strips (see Item 11A) or Lead Discs (see Item 12A).

**MAYCO INDUSTRIES INC** — Type X-Ray Shielded Gypsum

5I. **Gypsum Board*** — (As an alternate to Item 5) - Nom. 5/8 in. thick gypsum panels with beveled, square or tapered edges installed as described in Item 5. Steel stud minimum depth shall be as indicated in Item 5.

**CGC INC** — Type ULX

**UNITED STATES GYPSUM CO** — Type ULX

**USG MEXICO S A DE C V** — Type ULX

6. **Fasteners** — (Not shown) — For use with Items 2 and 2F - Type S or S-12 steel screws used to attach panels to studs (Item 2) or furring channels (Item 7). **Single layer systems:** 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 8 in. OC when panels are applied horizontally, or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically. **Two layer systems:** First layer- 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC with screws offset 8 in. from first layer. **Three-layer systems:** First layer- 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 3/4 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in., 5/8 in. thick panels or 2-5/8 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below. **Four-layer systems:** First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in. thick panels or 3 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below.

6A. **Fasteners** — (Not shown) —For use with Item 2A - Type S or S-12 steel screws used to attach panels to studs (Item 2A). **Single layer systems:** 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 8-1/2 in. OC with additional screws 1 in. and 2-1/2 in. from edges of the board when panels are horizontally. or 8 in. OC along vertical and bottom edges and 12 in. OC in the field when panels are applied vertically. **Two layer systems applied vertically:** First layer- 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC with screws offset 8 in. from first layer. **Two layer systems applied horizontally:** First layer- 1 in. long for 1/2 and 5/8 in. thick panels or 1-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC starting 8 in. from each edge of the board with an additional screw placed 1-1/4 in. from each edge of the board. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels or 2-1/4 in. long for 3/4 in. thick panels, spaced 16 in. OC starting 8 in. from each edge of the board with an additional screw placed 1-1/4 in. from each edge of the board with screws offset 8 in. from first layer. **Three-layer systems:** First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in., 5/8 in. thick panels or 2-5/8 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below. For all layers, an additional screw shall be placed 1-1/4 in. from each edge of the board. **Four-layer systems:** First layer- 1 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Second layer- 1-5/8 in. long for 1/2 in., 5/8 in. thick panels, spaced 24 in. OC. Third layer- 2-1/4 in. long for 1/2 in. thick panels or 2-5/8 in. long for 5/8 in. thick panels, spaced 24 in. OC. Fourth layer- 2-5/8 in. long for 1/2 in. thick panels or 3 in. long for 5/8 in. thick panels, spaced 12 in. OC. Screws offset min 6 in. from layer below. For all layers, an additional screw shall be placed 1-1/4 in. from each edge of the board.

7. **Furring Channels** — (Optional, not shown, for single or double layer systems) — Resilient furring channels fabricated from min 25 MSG corrosion-protected steel, spaced vertically a max of 24 in. OC. Flange portion attached to each intersecting stud with 1/2 in. long Type S-12 steel screws. Not for use with Item 5A and 5E.

7A. **Framing Members*** — (Not Shown) — (Optional on one or both sides, not shown, for single or double layer systems) - As an alternate to Item 7, furring channels and Steel Framing Members as described below:

a. **Furring Channels** — Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A and 5E.

b. **Steel Framing Members*** — Used to attach furring channels (Item 7Aa) to studs (Item 2). Clips spaced max. 48 in. OC. RSIC-1 clips secured to studs with No. 8 x 1-1/2 in. minimum selfdrilling,S-12 steel screw through the center grommet. RSIC-V clips secured to studs with No. 8 x 9/16 in. minimum self-drilling, S-12 steel screw through the center hole. Furring channels are friction fitted into clips.

**PAC INTERNATIONAL INC** — Types RSIC-1, RSIC-V.

7B. **Framing Members*** — (Optional, Not Shown) — As an alternate to Item 7, for single or double layer systems, furring channels and Steel Framing Members on only one side of studs as described below:

a. **Furring Channels** — Formed of No. 25 MSG galv steel, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Batts and Blankets placed in stud cavity as described in Item 5. Two layers of gypsum board attached to furring channels as described in Item 5. Not for use with Item 5A and 5E.

b. **Steel Framing Members*** — Used to attach furring channels (Item 7Ba) to one side of studs (Item 2) only. Clips spaced 48 in. OC., and secured to studs with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips.

**KINETICS NOISE CONTROL INC** — Type Isomax

7C. **Framing Members*** — Optional - Not Shown - Used as an alternate method to attach resilient channels (Item 7). Clips attached at each intersection of the resilient channel and the steel studs (Item 2). Resilient channels are friction fitted into clips, and then clips are secured to the steel stud with min. 1 in. long Type S-12 steel screws through the center hole of the clip and the resilient channel flange.
**KEENE BUILDING PRODUCTS CO INC** — Type RC Assurance.

7D. **Framing Members*** — (Not Shown) — (Optional on one or both sides, not shown, for single or double layer systems) - As an alternate to Item 7, furring channels and Steel Framing Members as described below:

a. **Furring Channels** — Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board attached to furring channels as described in Item 6. Not for use with Item 5A and 5E.

b. **Steel Framing Members*** — Used to attach furring channels (Item 7Aa) to studs (Item 2). Clips spaced max. 48 in. OC. GENIECLIPS secured to studs with No. 8 x 1-1/2 in. minimum selfdrilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.

**PLITEQ INC** — Type GENIECLIP

8. **Joint Tape and Compound** — Vinyl or casein, dry or premixed joint compound applied in two coats to joints and screw heads of outer layers. Paper tape, nom 2 in. wide, embedded in first layer of compound over all joints of outer layer panels. Paper tape and joint compound may be omitted when gypsum panels are supplied with a square edge.

9. **Siding, Brick or Stucco** — (Optional, not shown) — Aluminum, vinyl or steel siding, brick veneer or stucco, meeting the requirements of local code agencies, installed over gypsum panels. Brick veneer attached to studs with corrugated metal wall ties attached to each stud with steel screws, not more than each sixth course of brick.

10. **Caulking and Sealants*** — (Optional, not shown) — A bead of acoustical sealant applied around the partition perimeter for sound control.

**UNITED STATES GYPSUM CO** — Type AS

11. **Lead Batten Strips** — (Not Shown, For Use With Item 5B) - Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5B) and optional at remaining stud locations. Required behind
vertical joints.

11A. **Lead Batten Strips** — (Not Shown, For Use With Item 5H) Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.0625 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 6) and optional at remaining stud locations.

12. **Lead Discs or Tabs** — (Not Shown, For Use With Item 5B) - Used in lieu of or in addition to the lead batten strips (Item 11) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 5B) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".
12A. Lead Discs — (Not Shown, for use with Item 5H) Max 5/16 in. diam by max 0.0625 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.9% meeting the Federal Specification QQ-L201f, Grade "C".

13. Lead Batten Strips — (Not Shown, For Use With Item 5E) Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.142 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 5E) and optional at remaining stud locations.
14. Lead Tabs — (Not Shown, For Use With Item 5E) 2 in. wide, 5 in. long with a max thickness of 0.142 in. Tabs friction-fit around front face of stud, the stud folded back flange, and the back face of the stud. Tabs required at each location where a screw (that secures the gypsum boards, Item 5E) will penetrate the steel stud. Lead tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead tabs may be held in place with standard adhesive tape if necessary.

*Bearing the UL Classification Mark

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Listed and covered under UL's Follow-Up Service. Always look for the Mark on the product.

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Landscape
Evergreen Landscape Group

Structural
Matrix Structural

MEP
Emerald MEP

Technology
Imagine IT

Alerting
WestNET

# STATION #42

Hays County ESD #4
xxxxx
Wimberley, TX 78676

PROJECT No: **MA 25016**
DATE: **20-OCT-2026**

ISSUE

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| 9 | ADDENDUM 5 | 11-NOV-2026 |

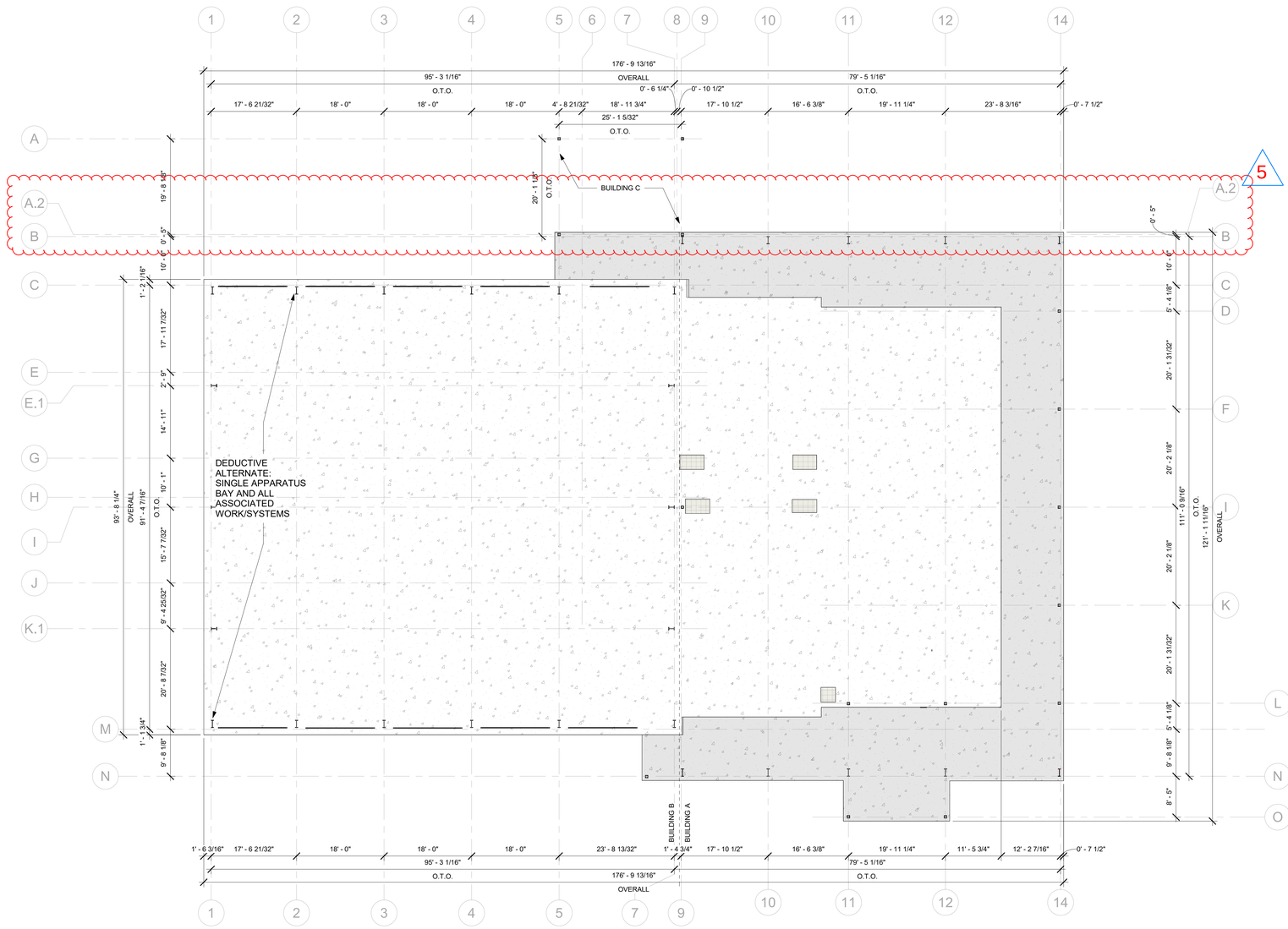
5

UL ASSEMBLIES

**G-501**

## PEMB PLAN NOTES

A. PEMB COLUMNS SHALL NOT INTERFERE WITH WINDOW AND/OR DOOR SWINGS, FF&E (AS SHOWN), OR ADA CLEARANCES.
B. TO REDUCE THE SIZE OF COLUMN FOOTPRINTS, ALL COLUMNS SHALL BE "SLIM PROFILE" WHENEVER POSSIBLE.
C. ALL EXPOSED STRUCTURAL MEMBERS SHALL BE PAINTED (PT-4 U.N.O.).
D. WRAP ALL COLUMNS WITH METAL FRAMING AND GYPSUM WALL BOARD AS DEPICTED IN THE PLANS.
   a. APPARATUS BAY COLUMNS DO NOT REQUIRE COLUMN WRAPS.
   b. PROVIDE MOISTURE-RESISTANT GYPSUM, AS NEEDED.




A1 OVERALL PEMB FLOOR PLAN
SCALE: 3/32" = 1'-0"

PROJECT NORTH

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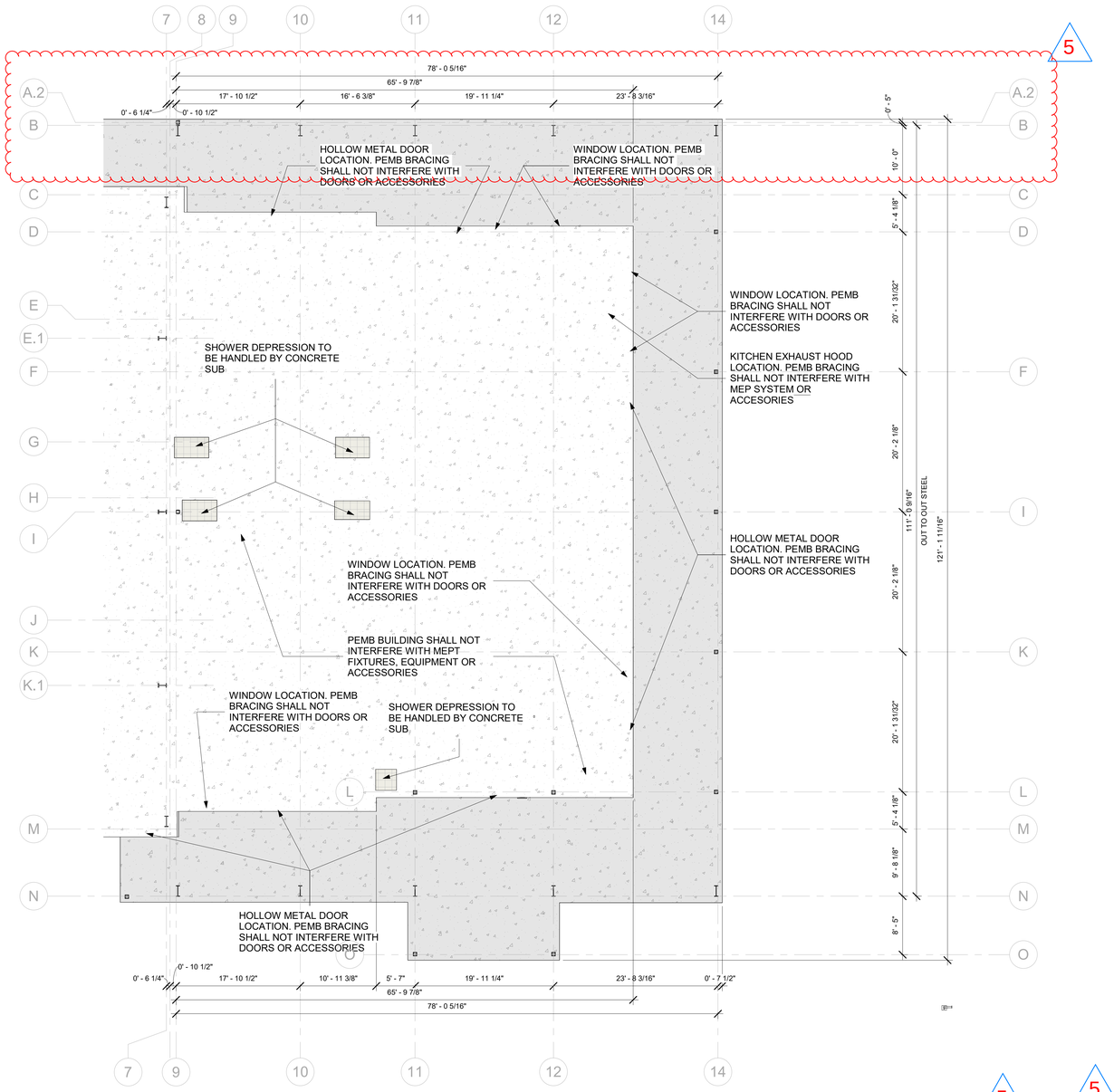
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| 3 | 75% CD | 06-APR-2026 |
| 4 | 98% CD | 04-MAY-2026 |
| 5 | IFP | 01-JUN-2026 |
| 6 | IFB | 20-OCT-2026 |
| 8 | ADDENDUM 4 | 4-NOV-2026 |
| 9 | ADDENDUM 5 | 11-NOV-2026 |

OVERALL PEMB PLAN

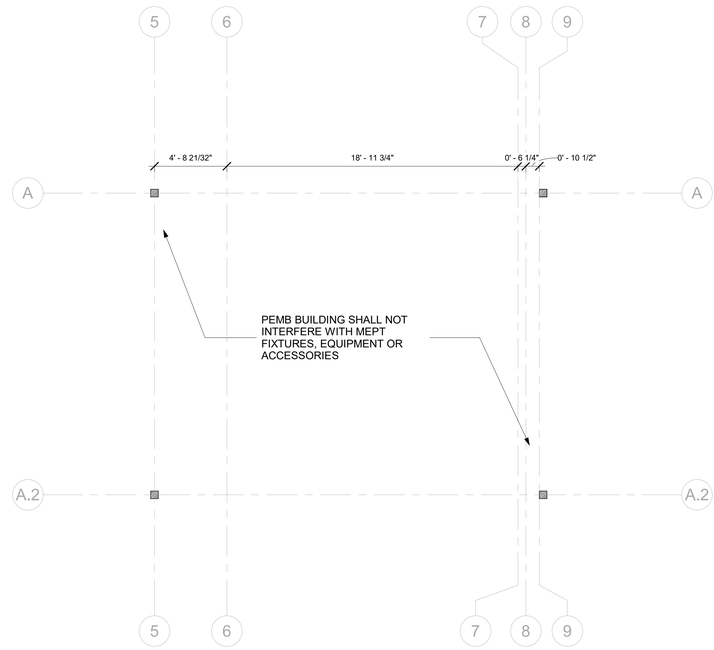
**A-121**

## PEMB PLAN NOTES

A. PEMB COLUMNS SHALL NOT INTERFERE WITH WINDOW AND/OR DOOR SWINGS, FF&E (AS SHOWN), OR ADA CLEARANCES.
B. TO REDUCE THE SIZE OF COLUMN FOOTPRINTS, ALL COLUMNS SHALL BE "SLIM PROFILE" WHENEVER POSSIBLE.
C. ALL EXPOSED STRUCTURAL MEMBERS SHALL BE PAINTED (PT-4 U.N.O.).
D. WRAP ALL COLUMNS WITH METAL FRAMING AND GYPSUM WALL BOARD AS DEPICTED IN THE PLANS.
   a. APPARATUS BAY COLUMNS DO NOT REQUIRE COLUMN WRAPS.
   b. PROVIDE MOISTURE-RESISTANT GYPSUM, AS NEEDED.




A1 BUILDING A
SCALE: 1/8" = 1'-0"




A4 BUILDING C
SCALE: 1/4" = 1'-0"

PROJECT NORTH

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Evergreen Landscape Group

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Matrix Structural

MEP
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PROJECT No: MA 25016
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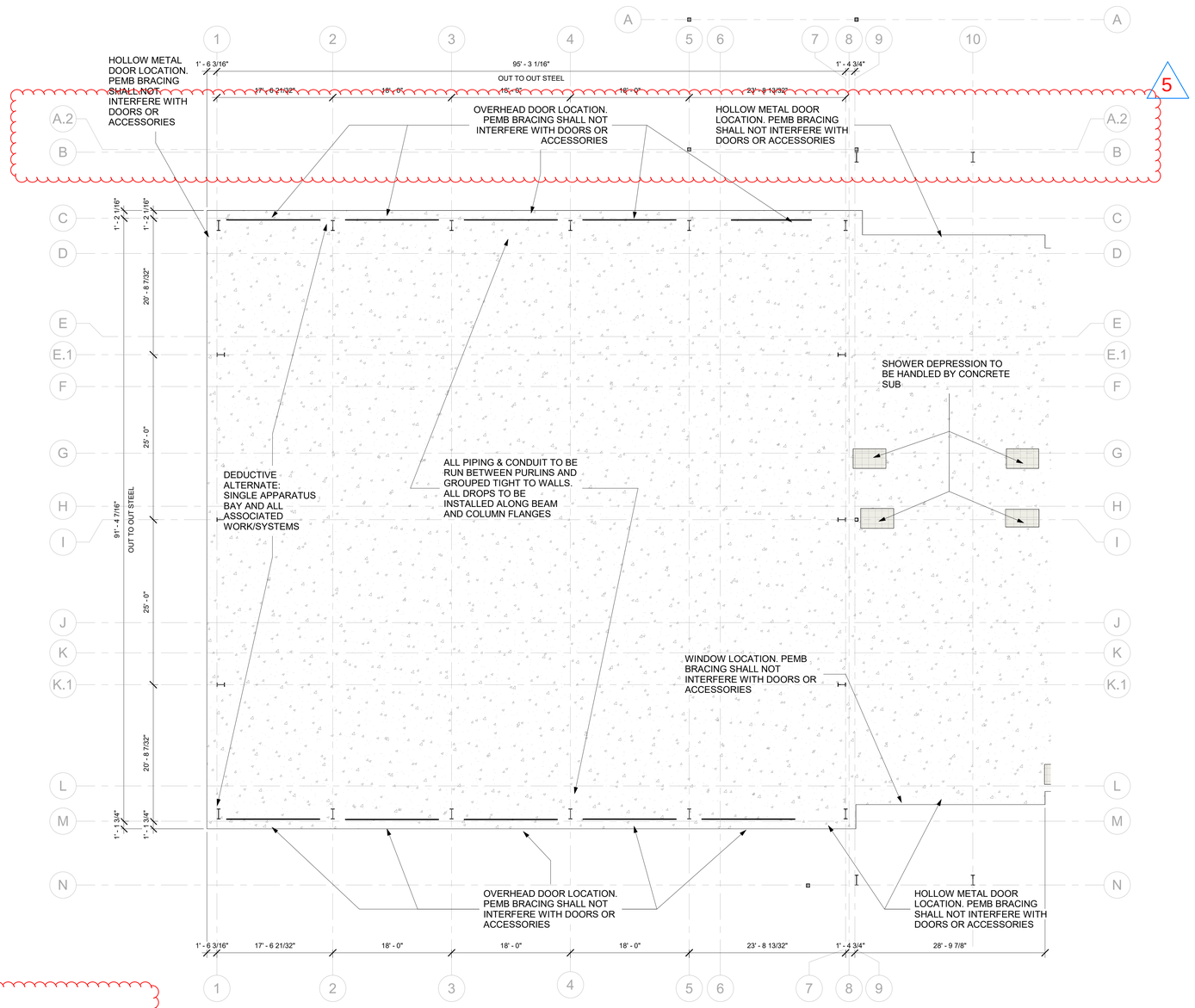
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| 5 | IFP | 01-JUN-2026 |
| 6 | IFB | 20-OCT-2026 |
| 9 | ADDENDUM 5 | 11-NOV-2026 |

PEMB PLAN A

A-122

## PEMB PLAN NOTES

A. PEMB COLUMNS SHALL NOT INTERFERE WITH WINDOW AND/OR DOOR SWINGS, FF&E (AS SHOWN), OR ADA CLEARANCES.
B. TO REDUCE THE SIZE OF COLUMN FOOTPRINTS, ALL COLUMNS SHALL BE "SLIM PROFILE" WHENEVER POSSIBLE.
C. ALL EXPOSED STRUCTURAL MEMBERS SHALL BE PAINTED (PT-4 U.N.O.).
D. WRAP ALL COLUMNS WITH METAL FRAMING AND GYPSUM WALL BOARD AS DEPICTED IN THE PLANS.
   a. APPARATUS BAY COLUMNS DO NOT REQUIRE COLUMN WRAPS.
   b. PROVIDE MOISTURE-RESISTANT GYPSUM, AS NEEDED.




5 A1 BUILDING B
SCALE: 1/8" = 1'-0"

PROJECT NORTH

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Wimberley, TX 78676

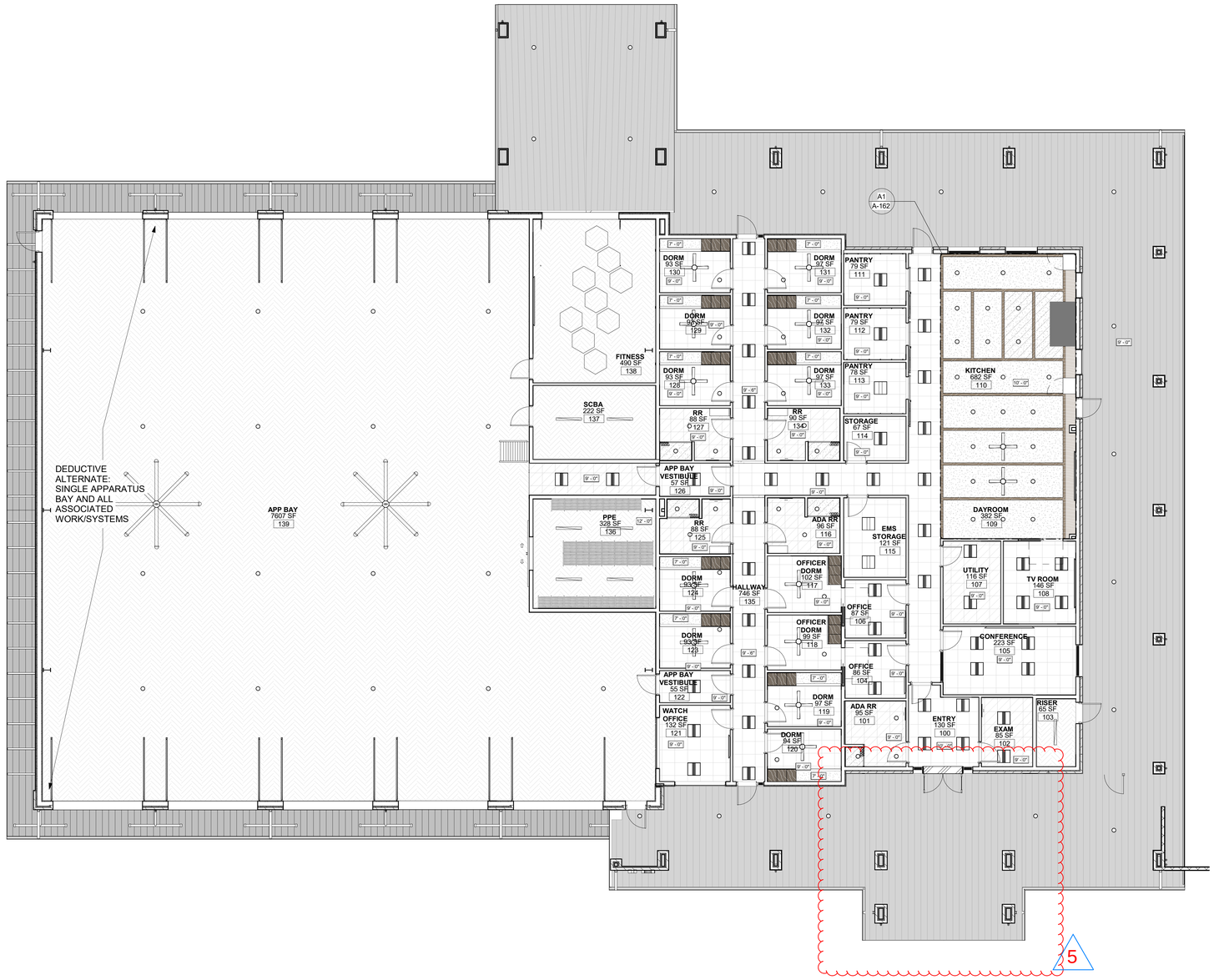
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DATE: **20-OCT-2026**

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| 6 | IFB | 20-OCT-2026 |
| 8 | ADDENDUM 4 | 4-NOV-2026 |
| 9 | ADDENDUM 5 | 11-NOV-2026 |

PEMB PLAN B

**A-123**




A1 OVERALL REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"

PROJECT NORTH

## GENERAL NOTES

A. SEE SHEET A-141 FOR PARTITION TYPES.
B. ALL CEILING SHALL BE 9'-0" A.F.F. UNLESS NOTED OTHERWISE.
C. REFERENCE TECHNOLOGY & MEP PLANS & SPECS FOR ELEC. FIXTURES & MECH. EQUIPMENT.
D. G.C. SHALL COORDINATE FIXTURE LOCATIONS & ALL DISCREPANCIES WITH ARCHITECT PRIOR TO INSTALLATION.
E. FRAME GYP. BD. FURRDOWNS w/ 3-5/8" MTL. STUDS @ 16" O.C., BRACED TO WALL AND ROOF STRUCTURE.
F. MILDEW RESISTANT CEILINGS IN ALL RESTROOMS, UTILITY, & OPERATIONS SPACES.
G. PAINT ALL EXPOSED STRUCTURE (PT-4) U.N.O.

## LEGEND

- 10'-6" — CEILING HEIGHT A.F.F.
- LIGHT FIXTURES (RE: ELECTRICAL)
- 2'X2' LAY-IN ACOUSTICAL PANELS
- 2'X2' LAY-IN MILDEW-RESISTANT ACOUSTICAL PANELS
- 5/8" TYPE X GYPSUM BOARD OR 1/2" HIGH STRENGTH CEILING BOARD
- 5/8" MILDEW-RESISTANT GYPSUM BOARD
- PRE-FINISHED MTL. SOFFIT PANELS
- EXPOSED CEILING
- FAUX WOOD BEAMS
- INSULATED METAL PANEL
- FAUX WOOD CEILING

## KEYNOTES (#)

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Wimberley, TX 78676

PROJECT No: MA 25016
DATE: 20-OCT-2026

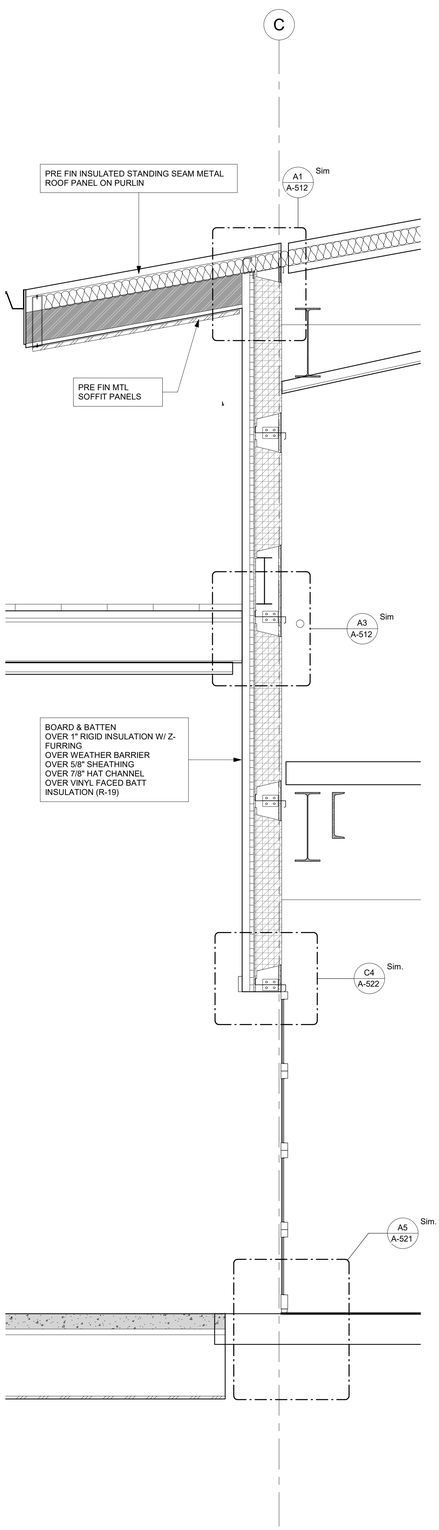
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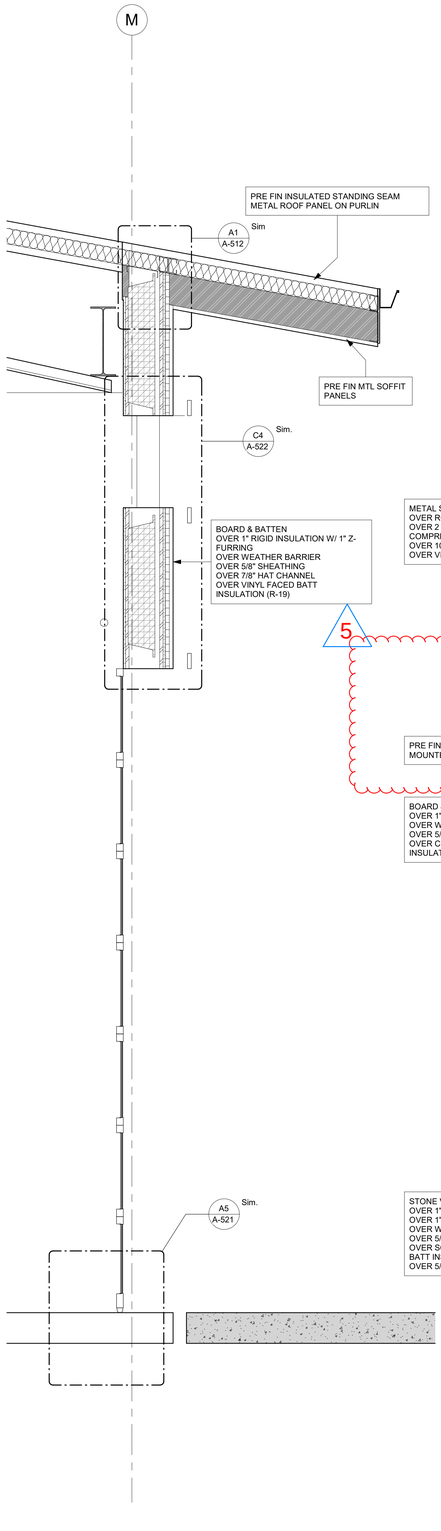
OVERALL REFLECTED CEILING PLAN

A-161

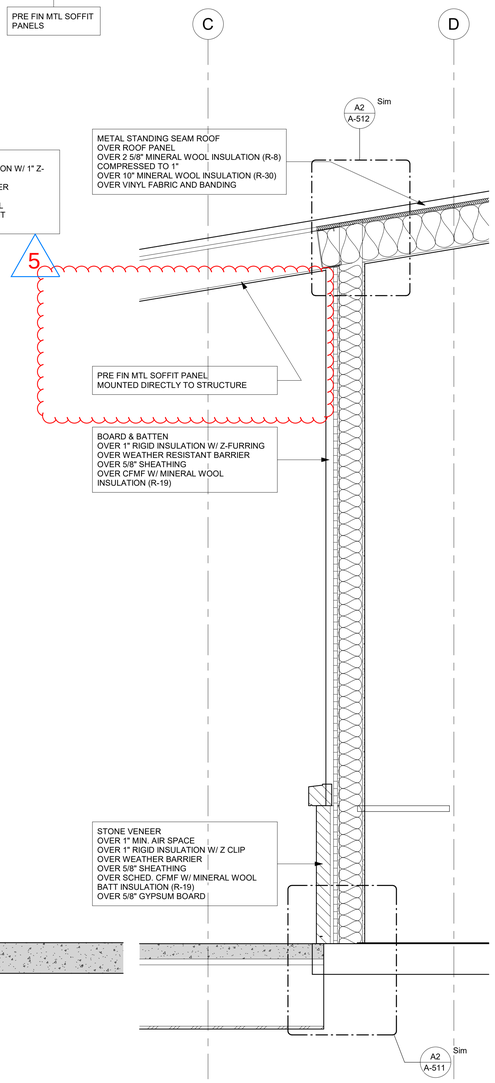
**THE ALTERNATE EXTERIOR MATERIAL SECTIONS AND ELEVATIONS ARE PRELIMINARY ONLY. IF THE ALTERNATE IS CHOSEN ALL DRAWINGS RELATED TO THE EXTERIOR ASSEMBLY WILL BE UPDATED ACCORDINGLY**



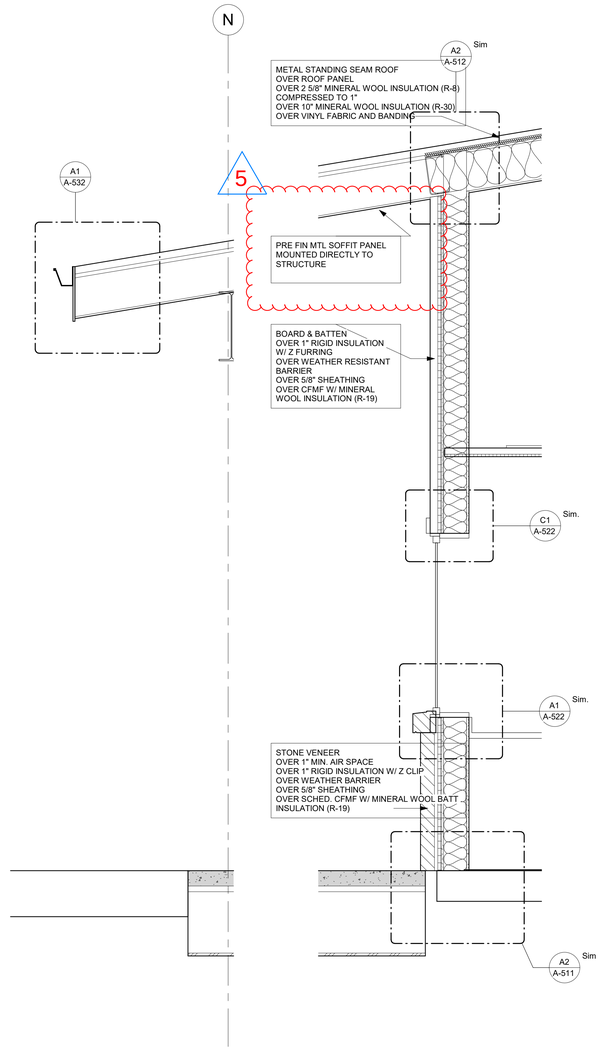

A1 BUILDING SECTION 1 - Callout 1
SCALE: 3/4" = 1'-0"




A2 BUILDING SECTION 1 - Callout 2
SCALE: 3/4" = 1'-0"

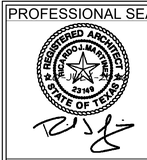



A3 BUILDING SECTION 2 - Callout 1
SCALE: 3/4" = 1'-0"




A4 Section 47 - Callout 1
SCALE: 3/4" = 1'-0"

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Civil
Hill Country Civil

Landscape
Evergreen Landscape Group

Structural
Matrix Structural

MEP
Emerald MEP

Technology
Imagine IT

Alerting
WestNET

# STATION #42

Hays County ESD #4
xxxxx
Wimberley, TX 78676

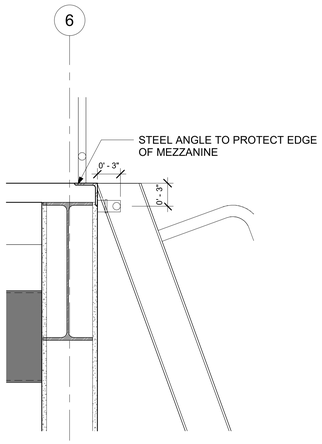
PROJECT No: **MA 25016**
DATE: **20-JULY-2026**

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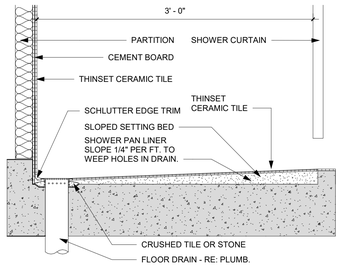
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| 6 | IFB | 20- OCT-2026 |
| 7 | ADDENDUM #5 | 11-NOV-2026 |

ALT. WALL SECTIONS

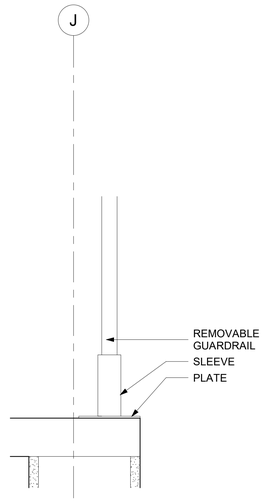
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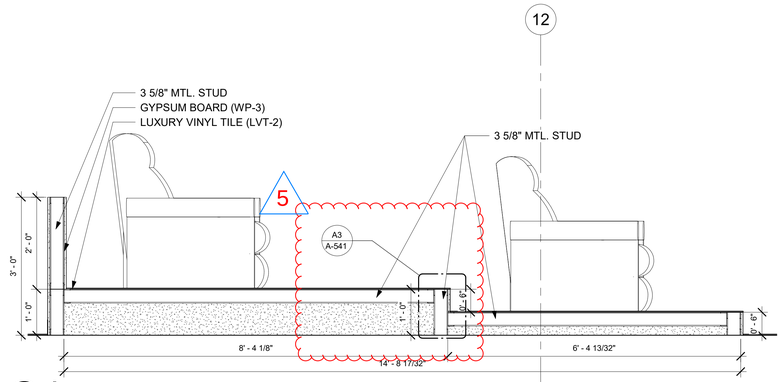

C1 APP BAY LADDER MEZZANINE EDGE DETAIL
SCALE: 1 1/2" = 1'-0"



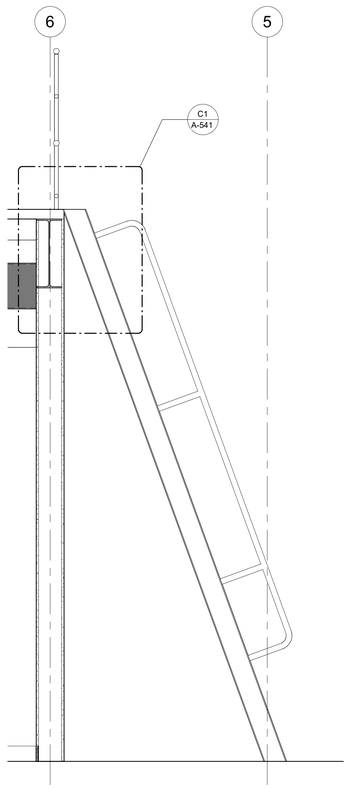

C2 SHOWER
SCALE: 1 1/2" = 1'-0"



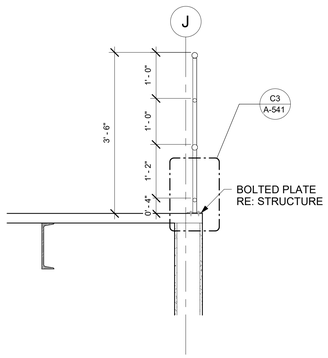

C3 REMOVABLE GUARDRAIL BASE
SCALE: 3" = 1'-0"



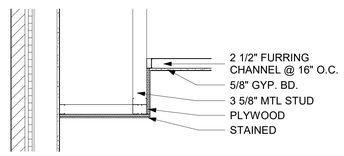

C4 RAISED PLATFORM SEATING DETAIL
SCALE: 3/4" = 1'-0"



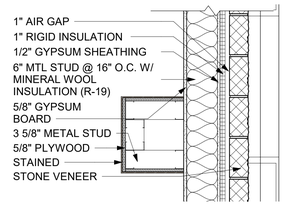

A1 APP BAY LADDER
SCALE: 3/4" = 1'-0"



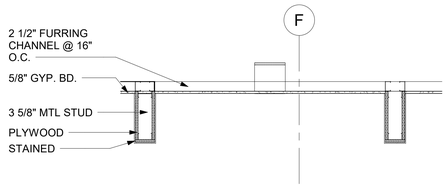

B2 MEZZANINE EDGE
SCALE: 3/4" = 1'-0"



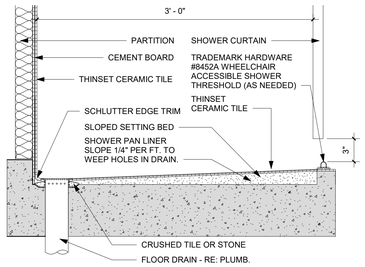

B3 FAUX WOOD BEAM FUR DOWN
SCALE: 3/4" = 1'-0"



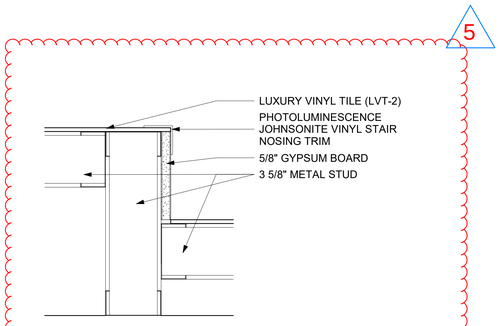

B4 FAUX WOOD COLUMN PLAN DETAIL
SCALE: 1" = 1'-0"



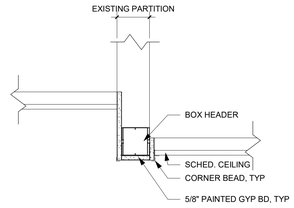

B5 FAUX WOOD INTERIOR BEAM
SCALE: 3/4" = 1'-0"




A2 ADA SHOWER CURB
SCALE: 1 1/2" = 1'-0"




A3 RAISED PLATFORM EDGE DETAIL
SCALE: 3" = 1'-0"




A5 CEILING FUR-DOWN
SCALE: 1 1/2" = 1'-0"

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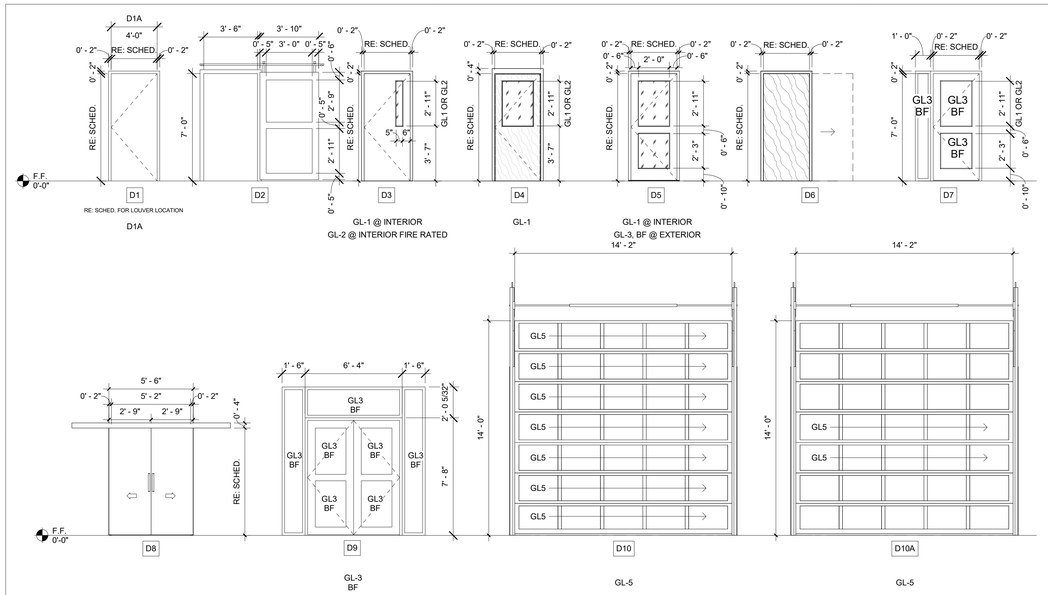
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| 9 | ADDENDUM 5 | 11-NOV-2026 |

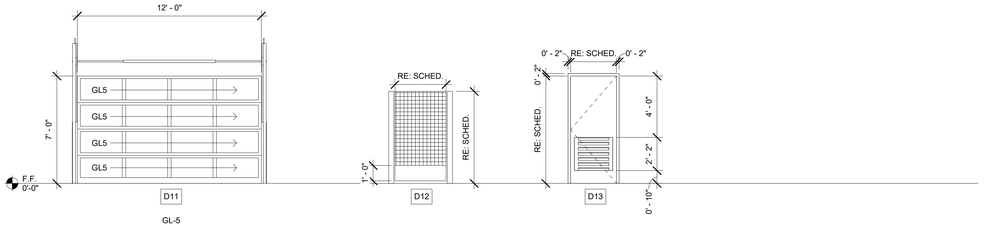
INTERIOR DETAILS

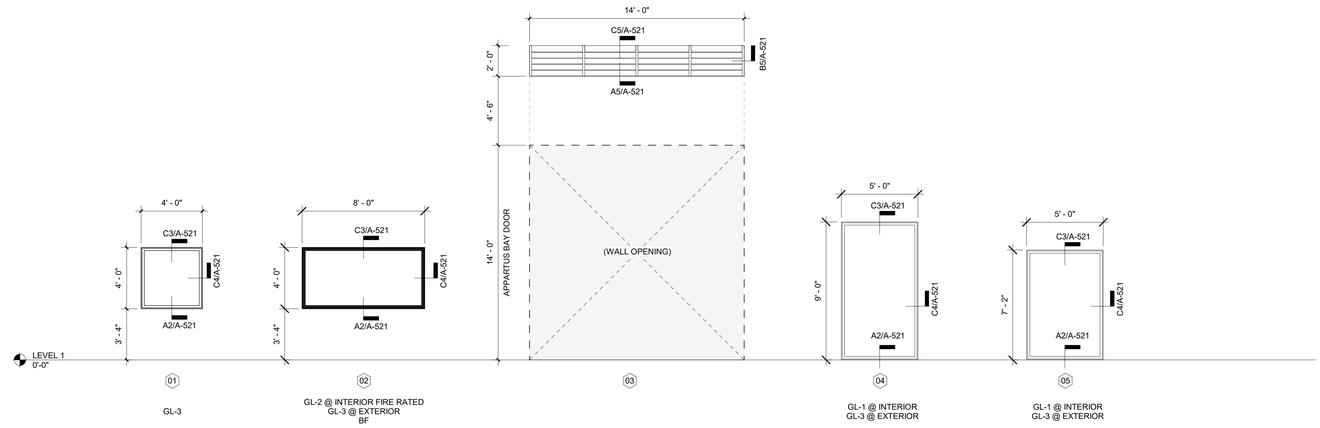
**A-541**










## NOTES

1. ALL HOLLOW METAL DOOR FRAMES WILL BE PAINTED.
2. RE: SHEET A-521 & A-522 FOR DOOR & WINDOW DETAILS.
3. RE: SPEC. FOR DOOR HARDWARE.
4. RE: FLOOR PLANS FOR DOOR SWING INFORMATION
5. ALL INTERIOR WOOD DOORS TO RECEIVE PLASTIC LAMINATE FINISH U.N.O. REFER TO DOOR SCHEDULE.
6. ALL EXTERIOR DOORS TO BE FLUSH DOORS.
7. G.C. TO COORDINATE THE INSTALLATION OF PROXIMITY DEVICES. ALL AREAS SHOWN TO BE ROUGHED IN WITH ELECTRICAL AS PART OF BASE BID. COORDINATE REQUIREMENTS WITH PROXIMITY DEVICE VENDOR.
8. STOREFRONT DOORS TO BE WIDE STYLE DOOR TO ACCOMODATE PANIC DEVICE INSTALLATION. COORDINATE WITH CONTRACTOR PRIOR TO FABRICATION.
9. ALL DOORS SHALL HAVE THICKNESS OF 1-3/4" U.N.O.
10. G.C. SHALL COORDINATE STRUCTURAL REQUIREMENTS W/ THE OVERHEAD DOOR SUB-CONTRACTOR PRIOR TO CONSTRUCTION.
11. G.C. SHALL COORDINATE ALL DOOR FINISHES W/ ARCHITECT
12. G.C. SHALL PROVIDE ARCHITECT PHYSICAL SAMPLES OF ALL DOOR FINISHES FOR FINAL APPROVAL
13. PROVIDE KICKPLATES AT ALL EXTERIOR, HIGH TRAFFIC, AND OPERATIONS DOORS. (REPAIR, SCBA, GEAR STORAGE, ETC.)

## GLAZING LEGEND

GL1: 1/4" CLEAR GLASS (TEMPERED)
GL2: 1/4" CLEAR GLASS (FIRE RATED)
GL3: 1" TINTED INSULATED GLASS (TEMPERED)
GL4: 1" TINTED INSULATED GLASS (FIRE RATED)
GL5: 1/4" CLEAR ACRYLIC
BF: ONE-WAY BALLISTIC FILM

## DOOR SCHEDULE

| DOOR TAG | DOOR TYPE | SIZE W | SIZE H | DOOR CONSTRUCTION | | DETAILS | | | FIRE RATING | HARDWARE SET | DOOR REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | DOOR PANEL | DOOR FRAME | JAMB | SILL | HEAD | | | |
| 100A | D9 | 6' - 0" | 7' - 6" | ALUM | ALUM | | | | - | C714A | CARD READER, PANIC BAR, KEYED |
| 100B | D4 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | C711A | CARD READER, PANIC BAR |
| 101A | D1 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 341 | |
| 102A | D1 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 341 | |
| 103A | D1 | 3' - 0" | 7' - 0" | HOLLOW METAL | HOLLOW METAL | | | | - | 205H-C | KEYED, KNOX, |
| 104A | D4 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 103 | KEYED |
| 105A | D5 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 403 | |
| 106A | D4 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 103 | KEYED |
| 107A | D1 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 401 | |
| 108A | D6 | 3' - 6" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 923 | |
| 109A | D5 | 3' - 0" | 7' - 0" | ALUM | ALUM | | | | - | C715A | CARD READER, PANIC BAR, KEYED |
| 110A | D5 | 3' - 0" | 7' - 0" | ALUM | ALUM | | | | - | C715A | CARD READER, PANIC BAR, KEYED |
| 111A | D2 | 3' - 6" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 903 | |
| 112A | D2 | 3' - 6" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 903 | |
| 113A | D2 | 3' - 6" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 903 | |
| 114A | D1 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 403 | |
| 115A | D1 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | C201 | CARD READER, KEYED |
| 116A | D1 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 347 | |
| 117A | D1 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 343 | |
| 117B | D6 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 923 | |
| 118A | D1 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 343 | |
| 118B | D6 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 923 | |
| 119A | D1 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 343 | |
| 120A | D1 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 343 | |
| 121A | D4 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 403 | |
| 122A | D3 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 731 | PANIC BAR |
| 122B | D3 | 3' - 0" | 7' - 0" | HOLLOW METAL+GLAZING | HOLLOW METAL | | | | 20 MIN | C711CGR | CARD READER, PANIC BAR, KEYED |
| 123A | D1 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 343 | |
| 124A | D1 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 343 | |
| 125A | D1 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 347 | |
| 126A | D3 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 731 | PANIC BAR |
| 126B | D3 | 3' - 0" | 7' - 0" | HOLLOW METAL+GLAZING | HOLLOW METAL | | | | 20 MIN | C711GR | CARD READER, PANIC BAR, KEYED |
| 126D | D12 | 3' - 0" | 6' - 0" | | | | | | - | JK715X.1 | KNOX, PANIC BAR, KICK PLATE |
| 127A | D1 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 347 | |
| 128A | D1 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 343 | |
| 129A | D1 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 343 | |
| 130A | D1 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 343 | |
| 131A | D1 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 343 | |
| 132A | D1 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 343 | |
| 133A | D1 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 343 | |
| 134A | D1 | 3' - 0" | 7' - 0" | P-LAM ON WOOD | HOLLOW METAL | | | | - | 347 | |
| 135A | D7 | 3' - 0" | 7' - 0" | ALUM | ALUM | | | | - | C715A | CARD READER, PANIC BAR, KEYED |
| 135B | D7 | 3' - 0" | 7' - 0" | ALUM | ALUM | | | | - | C715A | CARD READER, PANIC BAR, KEYED |
| 136A | D8 | 10' - 4" | 7' - 4" | HOLLOW METAL | HOLLOW METAL | | | | - | 902 | |
| 137A | D13 | 3' - 0" | 7' - 0" | HOLLOW METAL | HOLLOW METAL | | | | - | 501C | |
| 138A | D3 | 3' - 0" | 7' - 0" | HOLLOW METAL+GLAZING | HOLLOW METAL | | | | - | 401CG | |
| 138N | D11 | 12' -0" | 07' -0" | | | | | | - | 001 | |
| 139A | D10 | 14' -0" | 14' -0" | | | | | | - | 001 | |
| 139B | D10 | 14' -0" | 14' -0" | | | | | | - | | |
| 139C | D10 | 14' -0" | 14' -0" | | | | | | - | 001 | |
| 139D | D10 | 14' -0" | 14' -0" | | | | | | - | 001 | |
| 139E | D10 | 14' -0" | 14' -0" | | | | | | - | 001 | |
| 139F | D10A | 14' -0" | 14' -0" | | | | | | - | 001 | |
| 139G | D10A | 14' -0" | 14' -0" | | | | | | - | 001 | |
| 139H | D10A | 14' -0" | 14' -0" | | | | | | - | 001 | |
| 139I | D10A | 14' -0" | 14' -0" | | | | | | - | 001 | |
| 138J | D1 | 3' - 0" | 7' - 0" | HOLLOW METAL | HOLLOW METAL | | | | - | C715 | CARD READER, PANIC BAR, KEYED |
| 139K | D1 | 3' - 0" | 7' - 0" | HOLLOW METAL | HOLLOW METAL | | | | - | C715 | CARD READER, PANIC BAR, KEYED |
| 145A | D1 | 3' - 0" | 7' - 0" | HOLLOW METAL | HOLLOW METAL | | | | - | 203S | KEYED |
| 147A | D1 | 3' - 0" | 7' - 0" | HOLLOW METAL | HOLLOW METAL | | | | - | C201 | CARD READER, KEYED |
| 149A | D1A | 4' - 0" | 7' - 0" | HOLLOW METAL | HOLLOW METAL | | | | 20 MIN | 201SW | KEYED |
| 152A | D1A | 4' - 0" | 7' - 0" | HOLLOW METAL | HOLLOW METAL | | | | - | 205W-C | KEYED, STORAGE FUNCTION |

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Wimberley, TX 78676

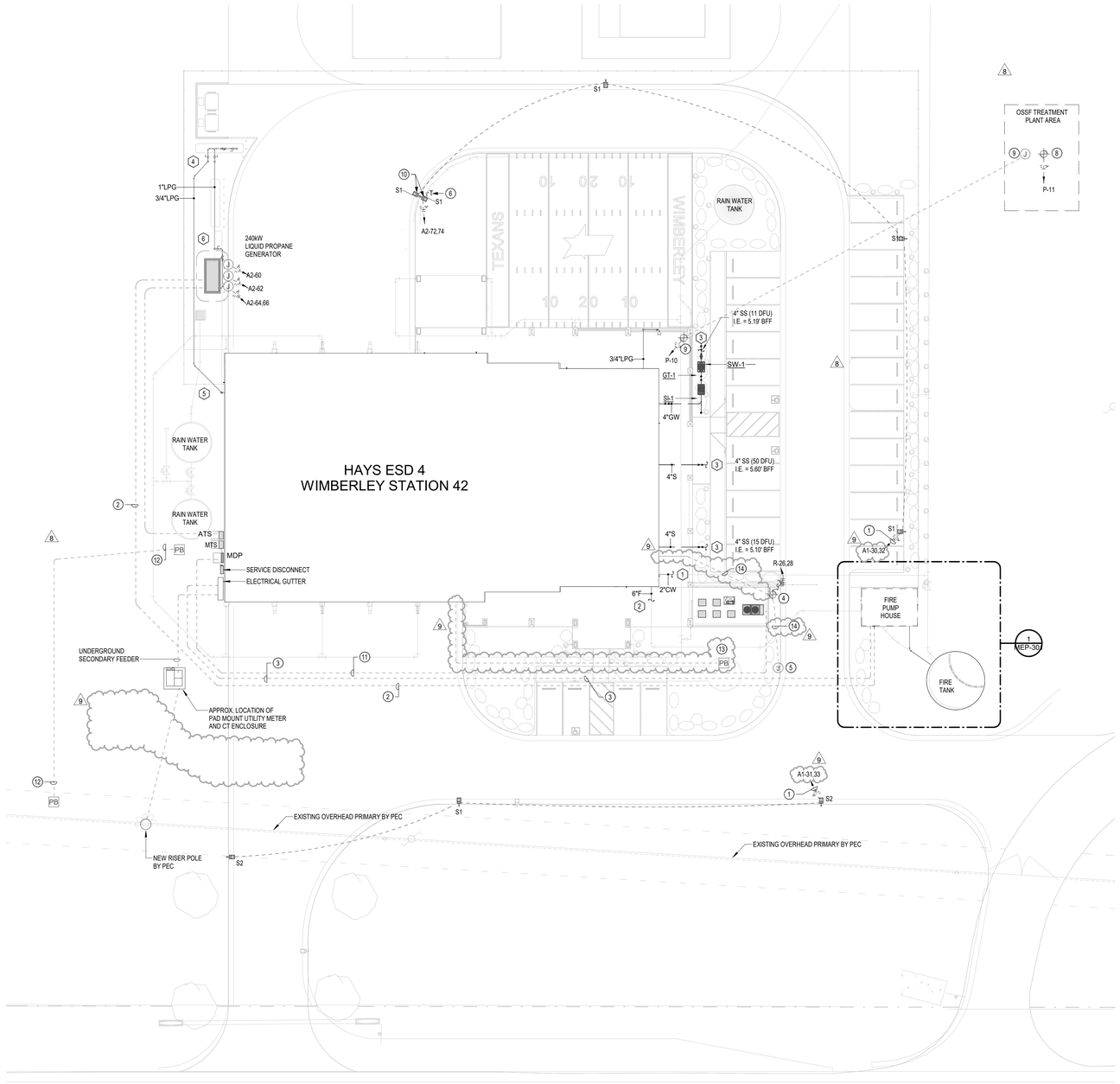
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| 9 | ADDENDUM 5 | 11-NOV-2026 |

DOOR, WINDOW & LOUVER SCHEDULES

**A-601**




## 1 MEP SITE PLAN

1" = 20'-0"

## PLUMBING KEYED NOTES:

1. DOMESTIC WATER SERVICE, SIZE AND PEAK FLOW RATE AS NOTED. REFER TO CIVIL SITE UTILITY PLANS FOR CONTINUATION.
2. FIRE PROTECTION WATER ENTRY FROM FIRE PUMP, SIZE AS NOTED. COORDINATE WITH FINAL TANK, FIRE PUMP, AND FIRE SPRINKLER DESIGN PROVIDED BY FIRE PROTECTION ENGINEER HIRED BY CONTRACTOR.
3. SANITARY BUILDING DRAIN, SIZE AS NOTED. REFER TO CIVIL SITE UTILITY PLANS FOR CONTINUATION.
4. PROPANE TANK TO BE OWNER PROVIDED THROUGH WIMBERLEY HYDRO GAS. COORDINATE CONCRETE PAD REQUIREMENTS AND INSTALLATION. REFER TO PLUMBING GAS RISER.
5. LP GAS SERVICE TO BUILDING. REFER TO PLUMBING GAS RISER.
6. LP GAS SERVICE TO GENERATOR. REFER TO PLUMBING GAS RISER.

## GENERAL FIRE PROTECTION NOTES:

A. PRELIMINARY FIRE TANK CAPACITY ESTIMATED TO BE 55,000 GALLONS. FIRE PROTECTION ENGINEER SHALL COORDINATE FINAL STORAGE REQUIREMENTS WITH AHJ (HAYS COUNTY FIRE MARSHAL) IN ACCORDANCE WITH NFPA 22 AND NFPA 1142.

B. INITIAL WATER FILL FOR FIRE TANK TO BE SUPPLIED BY WATER HAUL PROVIDER CONTRACTED BY OWNER. COORDINATE AGREEMENTS FOR PERMITTING AND FILL DATE WITH OWNER.

C. FIRE PROTECTION ENGINEER, HIRED BY CONTRACTOR, SHALL PROVIDE FULL DESIGN FOR COMPLETE FIRE PROTECTION SYSTEM SERVING BUILDING AND SITE: FIRE SPRINKLER SYSTEM, FIRE LINES, FIRE TANK, HYDRANT, FIRE PUMP, AND JOCKEY PUMP. COORDINATE FINAL ELECTRICAL REQUIREMENTS WITH DIVISION 26.

## ELECTRICAL KEYED NOTES

1. EXTERIOR LIGHTING CIRCUIT SHALL BE ROUTED THROUGH CONTACTOR 'LC1' AND BE PHOTOCELL CONTROLLED.
2. UNDERGROUND EMERGENCY FIRE PUMP FEEDER SHALL BE UPSIZED TO 200AMPS TO ACCOUNT FOR VOLTAGE DROP. PROVIDE WITH EQUIPMENT GROUNDING CONDUCTOR. CONDUIT SHALL BE SIZED BASED ON FEEDER SCHEDULE.
3. UNDERGROUND FIRE PUMP SERVICE LATERAL SHALL BE UPSIZED TO 150AMPS TO ACCOUNT FOR VOLTAGE DROP. OMIT GROUND WIRE. CONDUIT SHALL BE SIZED BASED ON FEEDER SCHEDULE.
4. PROVIDE ELECTRICAL CONNECTION AND DISCONNECT FOR MOTORIZED GATE OPERATOR. PROVIDE ADDITIONAL RACEWAY FOR SENSOR LOOP, AND ANY ADDITIONAL CONTROL ROUGH-IN REQUIREMENTS INDICATED BY GATE SHOP DRAWINGS.
5. PROVIDE SPARE CONDUIT WITH PULL STRING AND ROUGH-IN TO CARD READER PEDESTAL. FIELD COORDINATE EXACT LOCATION.
6. LIGHT FIXTURE FACING FIELD SHALL BE CONTROLLED BY SPRING WOUND TIMER SWITCH. TIMER SWITCH SHALL BE MOUNTED TO POLE AND BE PROVIDED WITH WEATHERPROOF COVER.
7. NOT USED.
8. PROVIDE 120V ELECTRICAL CONNECTION OSSF AUDIO / VISUAL ALARM. COORDINATE ALL WIRING BETWEEN ALARM AND OSSF EQUIPMENT WITH INSTALLER.
9. PROVIDE 1" CONDUIT FROM AIR DIFFUSER TO OSSF BLOWER / COMPRESSOR. LOCATE BLOWER / COMPRESSOR WITHIN 50FT OF TREATMENT PLANT PER OSSF DETAIL. FINAL LOCATION OF BLOWER / COMPRESSOR SHALL BE FIELD COORDINATED.
10. (2) SINGLE HEAD POLE LIGHTS SHALL BE CIRCUITED SEPARATELY.
11. UNDERGROUND FEEDER TO PANEL 'R' SHALL BE UPSIZED TO 300AMPS TO ACCOUNT FOR VOLTAGE DROP. PROVIDE WITH EQUIPMENT GROUNDING CONDUCTOR. CONDUIT SHALL BE SIZED BASED ON FEEDER SCHEDULE.
12. PROVIDE (2) 2" CONDUIT WITH PULL STRING FOR INCOMING DATA. FINAL INCOMING SERVICE LOCATION AND ENTRY INTO BUILDING SHALL BE COORDINATED WITH TECHNOLOGY INSTALLER. FOR CONTINUATION TO IT/ELEC. ROOM TERMINATION POINT REFER ELECTRICAL AND TECHNOLOGY PLANS.
13. PROVIDE EMPTY 1" CONDUIT WITH PULL STRING FROM PANEL 'A1' FOR FUTURE FLAGPOLE LIGHT. FLAG POLE SHALL BE OWNER PROVIDED AND OWNER INSTALLED. CAP AND STAKE IN IN-GROUND PULLBOX. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO INSTALLATION.
14. 2" CONDUIT FROM IT/ELEC ROOM TO GATE CONTROLLER, AND 2" CONDUIT FROM GATE CONTROLLER BOX TO KEYPAD PEDESTAL.

EMERALD MEP
TX FIRM No. F-24826
PROJECT No. 25018

PROFESSIONAL SEAL

STATE OF TEXAS
M. JACQUELINE CHANG
124987
LICENSED
PROFESSIONAL ENGINEER
2026-11-11

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DESIGN TEAM

Architectural
Martinez Architects

Civil
Hill Country Civil

Landscape
Evergreen Landscape Group

Structural
Matrix Structural

MEP
Emerald MEP

Technology
Imagine IT

Alerting
WestNET

# STATION #42

Hays County ESD #4

Wimberley, TX 78676

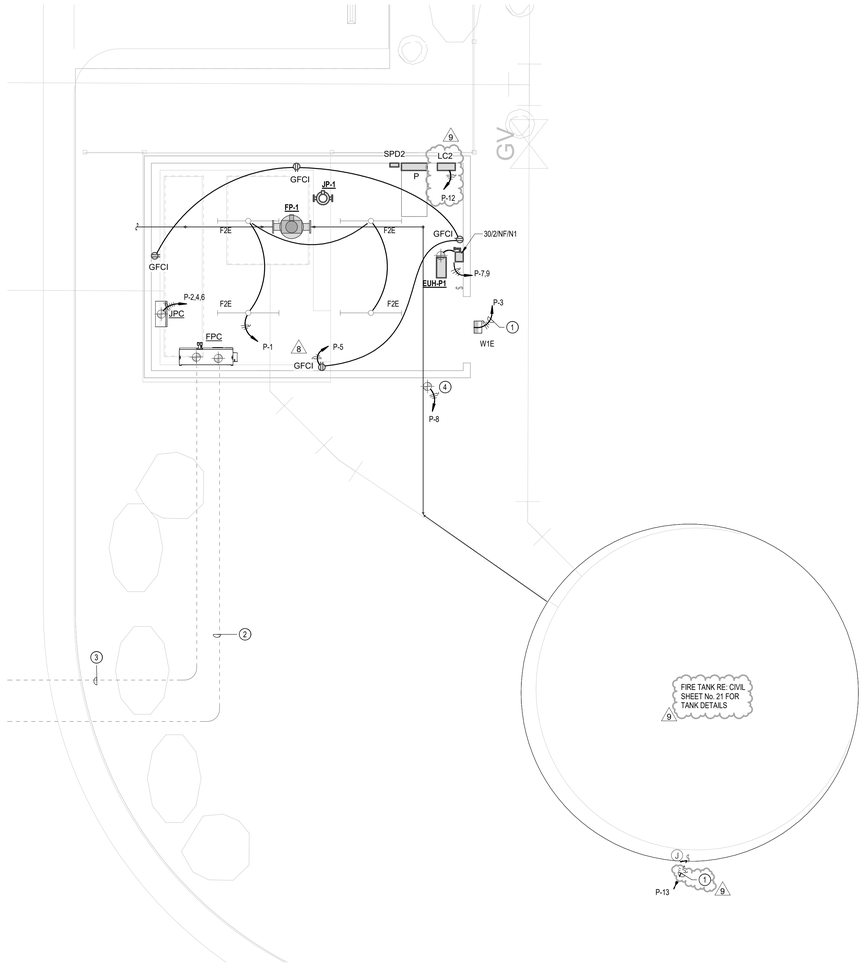
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ISSUE

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| 2 | 50% CD | 23-FEB-2026 |
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| 4 | 98% CD | 04-MAY-2026 |
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| 8 | ADDENDUM#4 | 04-NOV-2026 |
| 9 | ADDENDUM#5 | 11-NOV-2026 |

MEP SITE PLAN

**MEP-201**




## 1 MEP SITE PLAN - ENLARGED

1/4" = 1'-0"

## ELECTRICAL KEYED NOTES

1. CIRCUIT SHALL BE THROUGH CONTACTOR 'LC2' AND PHOTOCELL CONTROLLED. (9)
2. UNDERGROUND EMERGENCY FIRE PUMP FEEDER SHALL BE UPSIZED TO 200AMPS TO ACCOUNT FOR VOLTAGE DROP. PROVIDE WITH EQUIPMENT GROUNDING CONDUCTOR. CONDUIT SHALL BE SIZED BASED ON FEEDER SCHEDULE. (8)
3. UNDERGROUND FIRE PUMP SERVICE LATERAL SHALL BE UPSIZED TO 150AMPS TO ACCOUNT FOR VOLTAGE DROP. OMIT GROUND WIRE. CONDUIT SHALL BE SIZED BASED ON FEEDER SCHEDULE.
4. PROVIDE 120V ELECTRICAL CONNECTION FOR TRACE HEAT WIRING FOR FIRE WATER PIPING. EXACT LENGTH SHALL BE COORDINATED IN FIELD.
5. DEDICATED RECEPTACLE FOR OWNER PROVIDED HEATER. COORDINATE FINAL ROUGH-IN LOCATION WITH ARCHITECT / OWNER.

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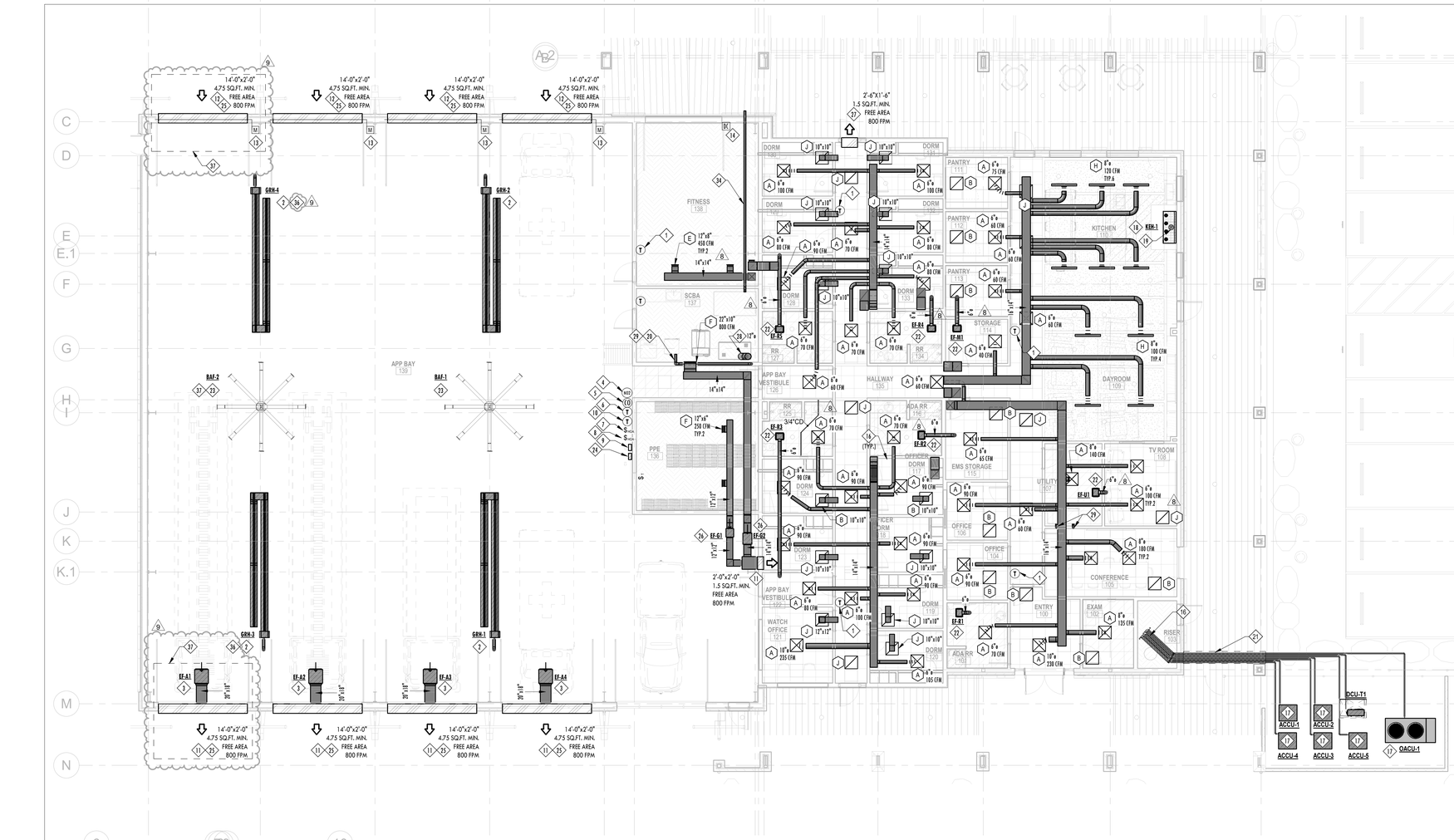
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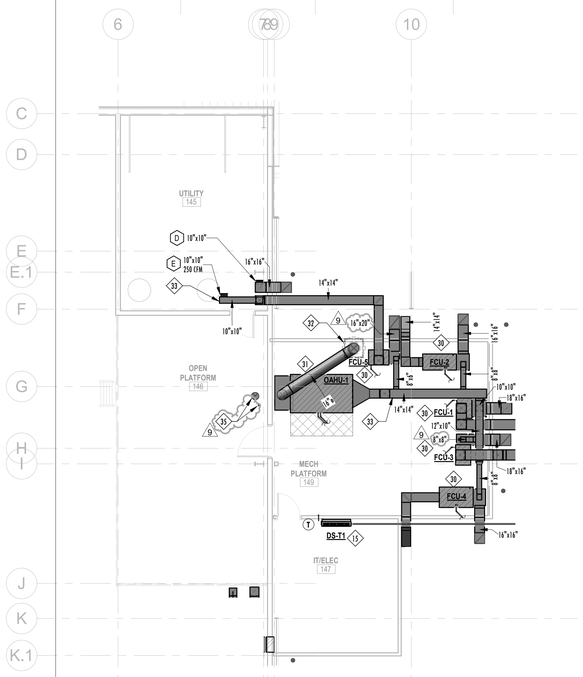
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ENLARGED MEP PLAN

**MEP-301**




## 1 MECHANICAL PLAN - LEVEL ONE
1/8" = 1'-0"




## 2 MECHANICAL PLAN - MEZZANINE
1/8" = 1'-0"

## MECHANICAL KEYED NOTES:

1. PROVIDE AND LOCATE THERMOSTAT AS SHOWN. MOUNT AT SAME ELEVATION AS LIGHT SWITCHES. COORDINATE EXACT LOCATION WITH ARCHITECT.
2. PROVIDE GAS RADIANT HEATER AT APPROXIMATE LOCATION. SUSPEND HEATER FROM STRUCTURE AT ELEVATION ABOVE OVERHEAD DOOR RAILING. COORDINATE EXACT LOCATION WITH OTHER TRADES TO AVOID CONFLICTS. ROUTE 5" ROUND FLUE FROM HEATER UP THROUGH ROOF AND TERMINATE 3'-0" (MIN.) ABOVE ROOF WITH ROOF CAP. SLOPE OF FLUE SHALL NOT BE MORE THAN 45° FROM VERTICAL. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
3. PROVIDE INLINE EXHAUST FAN AS SCHEDULED, SUSPENDED FROM STRUCTURE ABOVE, AT APPROXIMATE LOCATION. INSTALL PER MANUFACTURER'S SPECIFICATION. COORDINATE EXACT LOCATION WITH ARCHITECT. PROVIDE TRANSITIONS AS REQUIRED. COVER INLET OF FAN WITH HARDWARE CLOTH.
4. PROVIDE NO2 (NITROGEN DIOXIDE) DETECTOR, AIRTEST MODEL 'TR-3210', AT 1'-0" ABOVE FINISHED FLOOR. EXHAUST FANS (EF-A1 & EF-A3) SHALL ENERGIZE UPON DETECTION OF NO2 AT CONCENTRATION OF 1 PPM. VISUAL AND AUDIBLE ALARM SHALL SIGNAL UPON NO2 CONCENTRATION OF 3 PPM. INSTALL AND CALIBRATE PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE WITH CALIBRATION GAS KIT AND GUARD. CALIBRATION TO BE PERFORMED ANNUALLY.
5. PROVIDE CO (CARBON MONOXIDE) DETECTOR, AIRTEST MODEL 'TR-2000', AT 5'-0" ABOVE FINISHED FLOOR. EXHAUST FANS (EF-A1 & EF-A3) SHALL ENERGIZE UPON DETECTION OF CO AT CONCENTRATION OF 50 PPM. VISUAL AND AUDIBLE ALARM SHALL SIGNAL UPON DETECTION OF CO AT CONCENTRATION OF 100 PPM. INSTALL AND CALIBRATE PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE WITH CALIBRATION GAS KIT AND GUARD. CALIBRATION TO BE PERFORMED ANNUALLY.
6. PROVIDE THERMOSTAT FOR EXHAUST FANS (EF-A2 & EF-A4) AT APPROXIMATE LOCATION SHOWN AT SAME ELEVATION AS LIGHT SWITCHES. COORDINATE WITH ARCHITECT PRIOR TO CONSTRUCTION TO AVOID CONFLICT.
7. PROVIDE HOA (HAND/OFF/AUTO) SWITCH FOR EXHAUST FANS (EF-A2 & EF-A4) AT APPROXIMATE LOCATION SHOWN AT SAME ELEVATION AS LIGHT SWITCHES. FANS (EF-A2 & EF-A4) SHALL ENERGIZE ON 'AUTO' POSITION UPON DETECTION OF CO/NO2 CONCENTRATIONS ABOVE ASSOCIATED HIGH LIMITS OR WHEN TEMPERATURE EXCEEDS 85°F (ADJ.).
8. PROVIDE HOA (HAND/OFF/AUTO) SWITCH FOR EXHAUST FANS (EF-A1 & EF-A3) AT APPROXIMATE LOCATION SHOWN AT SAME ELEVATION AS LIGHT SWITCHES. FANS (EF-A1 & EF-A3) SHALL RUN (LOW SPEED) CONTINUOUSLY ON 'AUTO' POSITION, AND INCREASE TO FULL SPEED UPON DETECTION OF CO/NO2 CONCENTRATIONS ABOVE ASSOCIATED HIGH LIMITS OR WHEN SIGNAL IS PROVIDED BY ALERTING SYSTEM. FAN SHALL RUN FOR 15 MINUTES (ADJ.) UPON ACTIVATION BY ALERTING SYSTEM.
9. PROVIDE GAS DETECTION SYSTEM CONTROLLER AIRTEST MODEL CT-2100 AND INSTALL ABOVE CO SENSOR. PROVIDE 120-VOLT TO 24-VOLT (LOW VOLTAGE) TRANSFORMER AS NEEDED FOR POWER.
10. TIE GAS UNIT HEATERS (GUH-1-4) TOGETHER AND LOCATE THERMOSTAT ON WALL AS SHOWN. MOUNT AT SAME ELEVATION AS LIGHT SWITCHES THERMOSTAT SHALL ENERGIZE HEATER TO MAINTAIN TEMPERATURE AT 60°F (ADJUSTABLE).
11. PROVIDE RUSKIN HZ700 EXHAUST AIR LOUVER WITH DIMENSIONS AND FREE AREA AS INDICATED. EXHAUST LOUVER SHALL BE PROVIDED WITH A MINIMUM OF 18" DEEP PLENUM, FULL SIZE IN WIDTH AND HEIGHT OF LOUVER UNLESS NOTED OTHERWISE. UNUSED PORTIONS OF LOUVER SHALL BE COVERED WITH RUSKIN BLANK-OFF PANELS. COORDINATE LOUVER AND PANEL FINISHES WITH ARCHITECT.
12. PROVIDE RUSKIN HZ700 INTAKE AIR LOUVER WITH A FREE AREA AS INDICATED. COORDINATE EXACT LOUVER DIMENSIONS, LOCATION, AND FINISH WITH ARCHITECT. INTAKE LOUVER SHALL BE PROVIDED WITH A MINIMUM OF 18" DEEP PLENUM, FULL SIZE IN WIDTH AND HEIGHT OF LOUVER UNLESS NOTED OTHERWISE. INTAKE LOUVER SHALL BE INSTALLED A MINIMUM OF 10'-0" FROM EXHAUST OUT OF BUILDING. UNUSED PORTIONS OF LOUVER SHALL BE COVERED WITH RUSKIN BLANK-OFF PANELS. COORDINATE LOUVER AND PANEL FINISHES WITH ARCHITECT.
13. INTERLOCK MOTORIZED DAMPER WITH ASSOCIATED EXHAUST FANS SUCH THAT DAMPER SHALL BE OPEN WHEN FANS ARE ENERGIZED AND SHUT WHEN FANS ARE DE-ENERGIZED.
14. PROVIDE DOOR CONTACT FOR OVERHEAD DOOR. INTERLOCK WITH ASSOCIATED FAN COIL UNIT TO DISABLE UNIT WHEN DOOR IS OPEN AND ENABLE UNIT WHEN DOOR IS CLOSED.
15. PROVIDE NEW DUCTLESS FAN COIL UNIT AS SCHEDULED. MOUNT ABOVE DOOR HEIGHT FROM WALL STRUCTURE. PROVIDE ALL CLEARANCES AND ACCESS AS RECOMMENDED BY MANUFACTURER. ROUTE 3/4"Ø CONDENSATE TO LAVATORY Y-TAIL PIECE, COORDINATE WITH DIVISION 22.
16. ROUTE REFRIGERANT PIPING THROUGH FOUNDATION PIPE CORRIDOR INTO BUILDING, UP ABOVE CEILING HEIGHT, TO ASSOCIATED INDOOR UNIT. PROVIDE DIRECT ROUTE TO ASSOCIATED INDOOR UNIT, UTILIZING MINIMUM AMOUNT OF ELBOWS AND NOT EXCEEDING MANUFACTURER'S MAXIMUM LINE LENGTHS. SIZE LINES PER MANUFACTURER'S RECOMMENDATIONS.
17. PROVIDE OUTDOOR CONDENSING UNIT WITH CONCRETE HOUSEKEEPING PAD THAT EXTENDS 6" FROM UNIT ON ALL SIDES. INSTALL PER MANUFACTURER'S RECOMMENDATIONS, PROVIDE REQUIRED CLEARANCES.
18. PROVIDE CAPTIVEAIRE WRH-48 UL507 HOOD WITH INTEGRAL EXHAUST FAN AND CORE FIRE SUPPRESSION. PROVIDE WITH FULL HEIGHT (TOP OF HOOD TO CEILING) STAINLESS STEEL WRAPPER . COORDINATE FINAL CORE NOZZLE QUANTITIES AND LOCATIONS WITH ASSOCIATED KITCHEN RANGE PURCHASED BY CONTRACTOR/OWNER AND CAPTIVEAIRE. COORDINATE GAS VALVE INSTALLATION, POWER REQUIREMENTS, AND ROUGH-INS NEEDED FOR EQUIPMENT AND ALL ACCESSORIES (PULL STATION, POWER, ETC.) WITH OTHER TRADES PRIOR TO WALLS CLOSING.
19. CONNECT 10"Ø RIGID DOMESTIC RANGE HOOD EXHAUST DUCT, SIZED TO MATCH HOOD CONNECTION, TO HOOD AND DUCT TO ROOF CAP; PROVIDE TRANSITIONS AS REQUIRED. PROVIDE ROOF CAP BY FAMCO 'AVEBA' OR EQUIVALENT. WRAP DUCT AND LOUVER PLENUM WITH 3M 2-HR RATED FIRE WRAP (MODEL 615+ OR APPROVED EQUAL). INSTALL PER RANGE HOOD MANUFACTURER'S RECOMMENDATIONS.
20. PROVIDE FANTECH MODEL 'DBF-110' BOOSTER FAN AND LINT TRAP MODEL 'DBLT'. COORDINATE FINAL ROUTING WITH STRUCTURE. PROVIDE TRANSITIONS AS REQUIRED.
21. ROUTE REFRIGERANT PIPING THROUGH FOUNDATION PIPE CORRIDOR INTO RISER, AVOIDING P-TRAP BENDS. PIPE CORRIDOR SHALL BE PROVIDED WITH REMOVABLE PANELS, RE: ARCHITECTURE.
22. PROVIDE CEILING MOUNTED EXHAUST FAN AT APPROXIMATE LOCATION SHOWN, SUSPEND FROM STRUCTURE ABOVE. TIE INTO DEDICATED WALL SWITCH (COORDINATE WITH ELECTRICAL CONTRACTOR). ROUTE EXHAUST DUCT TO GREENHECK ROOF CAP. MAINTAIN 10'-0" MINIMUM DISTANCE FROM HVAC INTAKE AND/OR BUILDING OPENINGS.
23. PROVIDE HVLS FAN AS SCHEDULED AND INDICATED ON PLANS. THE FAN BLADES MUST BE A MINIMUM DISTANCE OF 3' IN ANY DIRECTION FROM ANY OBSTACLES (CEILING DECK, MAJOR STRUCTURAL OBSTRUCTIONS, LIGHT GRID). COORDINATE HVLS FAN INSTALLATION WITH GARAGE DOORS, HEATERS, LIGHTS AND OTHER BUILDING COMPONENTS. TIE HVLS FAN TO FIRE ALARM SYSTEMS RELAY TO DISABLE HVLS IF ALARM IS ACTIVATED.
24. PROVIDE WIRED BAF 'BAFCON' CONTROLLER AT APPROXIMATE LOCATION. COORDINATE FINAL LOCATION WITH ARCHITECT AND OTHER TRADES.
25. LOUVER SHALL SPAN ENTIRE WIDTH (14'-0") OF APPARATUS BAY DOOR AND HEIGHT (2'-0") PER ARCHITECTURAL. PROVIDE LOUVER IN SECTIONS AS DETAILED BY ARCHITECTURAL ELEVATIONS. COORDINATE FINAL LOUVER DIMENSIONS WITH ARCHITECT, ARCHITECTURAL PLANS/DETAILS/ELEVATIONS, BUILDING STRUCTURE, AND APPARATUS BAY DOOR FRAMING. FREE AREA INDICATED IS FOR ACTIVE PORTION (UTILIZED FOR VENTILATION) OF LOUVER.
26. PROVIDE INLINE EXHAUST FAN AS SCHEDULED, SUSPENDED FROM STRUCTURE ABOVE, AT APPROXIMATE LOCATION. INSTALL PER MANUFACTURER'S SPECIFICATION. PROVIDE TRANSITIONS AT INLET AND OUTLET AS REQUIRED TO MAKE DUCTWORK CONNECTIONS. MAINTAIN 10'-0" MINIMUM DISTANCE FROM HVAC INTAKE AND/OR BUILDING OPENINGS.
27. PROVIDE RUSKIN HZ700 RELIEF AIR LOUVER WITH DIMENSIONS AND FREE AREA AS INDICATED. RELIEF LOUVER SHALL BE PROVIDED WITH A MINIMUM OF 18" DEEP PLENUM, FULL SIZE IN WIDTH AND HEIGHT OF LOUVER UNLESS NOTED OTHERWISE. PROVIDE WITH BAROMETRIC DAMPER. PLENUM SHALL BE EXTENDED AS NEEDED FOR INSTALLATION OF RELIEF DAMPER. COORDINATE LOUVER FINISH WITH ARCHITECT.
28. PROVIDE RIGID METAL EXHAUST DUCT, CONNECT TO DRYER CABINET EXHAUST OPENING AND ROUTE TO WALL CAP. PROVIDE INSECT SCREEN AND TRANSITIONS AS REQUIRED. INSTALL PER DRYER CABINET MANUFACTURER'S RECOMMENDATIONS.
29. ROUTE 4"Ø RIGID METAL DRYER EXHAUST DUCT UP THROUGH ROOF. PROVIDE TRANSITIONS AS REQUIRED. TERMINATE THROUGH ROOF TO GOOSE NECK. (8)
30. PROVIDE NEW FAN COIL UNIT AS SCHEDULED; SUPPORT FROM FLOOR STRUCTURE. PROVIDE FIELD FABRICATED FULL-SIZED MIXING PLENUM BOX AT INTAKE END AND FLEXIBLE CONNECTION AT UNIT DISCHARGE. PROVIDE ALL CLEARANCES AND ACCESS AS RECOMMENDED BY MANUFACTURER. ROUTE 5" FLUE UP THROUGH ROOF. PROVIDE 3/4"Ø CONDENSATE AND ROUTE TO FLOOR DRAIN.
31. PROVIDE NEW HORIZONTAL OUTDOOR AIR HANDLING UNIT AS SCHEDULED; SUPPORT FROM FLOOR STRUCTURE. PROVIDE FIELD FABRICATED FULL-SIZED PLENUM BOX AT INTAKE END AND FLEXIBLE CONNECTION AT UNIT DISCHARGE. PROVIDE ALL CLEARANCES AND ACCESS AS RECOMMENDED BY MANUFACTURER. PROVIDE 3/4"Ø CONDENSATE AND ROUTE TO NEAREST FLOOR DRAIN.
32. PROVIDE 18" DIAMETER GRAVITY INTAKE HOOD, GREENHECK MODEL 'GRSI-18' OR EQUAL. PROVIDE AND COORDINATE FACTORY FINISH COLOR WITH ARCHITECT. PROVIDE WITH 14" HIGH INSULATED ROOF CURB DIMENSIONED FOR SLOPE OF ROOF. COORDINATE FINAL LOCATION WITH STRUCTURE AND OTHER TRADES TO PROVIDE 10' MINIMUM DISTANCE FROM EXHAUST/VENT OPENINGS.
33. ROUTE DUCT HIGH UP ABOVE DOOR OPENING ELEVATION.
34. PROVIDE SCBA COMPRESSOR AIR INTAKE, SIZE AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS. COORDINATE FINAL ELEVATION AND LOCATION WITH OWNER.
35. DRYER EXHAUST DUCTS UP THROUGH ROOF. MOUNT TIGHT TO WALL AND METAL STRUCTURE, PROVIDE WALL SUPPORTS AS NEEDED TO OFFSET STRUCTURAL CONFLICTS. COORDINATE WITH METAL BUILDING MANUFACTURER.
36. (8) UNDER BASE-BID: INSTALL IN LOCATION INDICATED ON PLAN.
UNDER DEDUCTIVE ALTERNATE #1: RELOCATE EQUIPMENT AND ASSOCIATED, POWER, GAS, VENTS, AND ASSOCIATED ACCESSORIES TO GRID LINE 3. COORDINATE WITH AFFECTED TRADES (STRUCTURAL, ROOFING, ELECTRICAL, PLUMBING, ETC.)
37. (9) PROVIDE UNDER BASE-BID & REMOVE UNDER DEDUCTIVE ALTERNATE #1. COORDINATE WITH AFFECTED TRADES.

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MECHANICAL PLANS

**M-201**

## FAN COIL UNIT SCHEDULE (GAS HEAT)

| MARK | SERVES | FAN | | | | COOLING | | | | | HEATING (LP GAS) | | | | ELECTRICAL | | | | MANUFACTURER | MODEL | WEIGHT | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | SA CFM | OA CFM | FAN HP | ESP (IN-WG) | EAT°F (DB/WB) | LAT°F (DB/WB) | SENS MBH | TOTAL MBH | REFR. TYPE | HTG EAT°F | HTG LAT°F | HTG INPUT MBH | HTG MBH | VOLTAGE | PHASE | MCA | MOCP | | | | |
| FCU-1 | KITCHEN/DAY RM | 1475 CFM | 400 CFM | 0.75 | 0.7 | 75 / 63 | 54.2 / 52.9 | 44 | 52 | R-454B | 64 °F | 90 °F | 80 | 48 | 208 V | 1 | 9 A | 15 A | BOSCH | RL18080C16MPS1 + CTM48C5CFS1 | 300.00 lb | ALL |
| FCU-2 | DORMS | 1200 CFM | 200 CFM | 0.75 | 0.7 | 74 / 62 | 54.0 / 51.9 | 30 | 41 | R-454B | 64 °F | 90 °F | 80 | 48 | 208 V | 1 | 9 A | 15 A | BOSCH | RL18060C16MPS1 + CTM42C5CES1 | 300.00 lb | ALL |
| FCU-3 | ENTRY / OFFICES | 1500 CFM | 200 CFM | 0.75 | 0.7 | 75 / 63 | 54.2 / 52.9 | 40 | 48 | R-454B | 64 °F | 90 °F | 80 | 48 | 208 V | 1 | 9 A | 15 A | BOSCH | RL18080C16MPS1 + CTM48C5CFS1 | 300.00 lb | ALL |
| FCU-4 | DORMS | 1200 CFM | 200 CFM | 0.75 | 0.7 | 75 / 63 | 54.2 / 52.9 | 30 | 41 | R-454B | 64 °F | 90 °F | 80 | 48 | 208 V | 1 | 9 A | 15 A | BOSCH | RL18060C16MPS1 + CTM42C5CES1 | 300.00 lb | ALL |
| FCU-5 | FITNESS | 1450 CFM | 50 CFM | 0.75 | 0.7 | 75 / 63 | 54.2 / 52.9 | 40 | 48 | R-454B | 64 °F | 90 °F | 80 | 48 | 208 V | 1 | 9 A | 15 A | BOSCH | RL18080C16MPS1 + CTM48C5CFS1 | 300.00 lb | ALL |

FAN COIL UNIT SCHEDULE NOTES:
1. EXTERNAL STATIC PRESSURE DOES NOT ACCOUNT FOR LOSSES DUE TO COIL(S), FILTERS, HOUSING, NOR ACCESSORIES.
2. PROVIDE UNIT WITH VERTICAL DISCHARGE AND FIELD FABRICATED MIXING PLENUM BOX.
3. PROVIDE FILTERS W.I.L MINIMUM EFFICIENCY OF MERV 8.
4. PROVIDE 1" FOAM INSULATION.
5. PROVIDE WITH LP GAS KIT.
6. PROVIDE TIME DELAY RELAY FOR EACH FAN COIL UNIT TO ALLOW START UP OF UNITS IN 30 SECOND INTERVALS AFTER POWER LOSS EVENT.
7. PROVIDE RELAY TO FIRE ALARM SYSTEM. RELAY SHALL SHUT OFF UNIT UPON FIRE ALARM ACTIVATION.

## CONDENSING UNIT SCHEDULE

| MARK | SERVES | COOLING | | NO. OF STAGES | SEER2 (AHRI) | ELECTRICAL | | | | MANUFACTURER | MODEL | WEIGHT | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TOTAL MBH | REFR. TYPE | | | VOLTAGE | PHASE | MCA | MOCP | | | | |
| ACCU-1 | FCU-1 | 48 | R454B | 2 | 13.75 | 208 V | 1 | 29.3 A | 50 A | BOSCH | RC348E2S11 | 300.00 lb | ALL |
| ACCU-2 | FCU-2 | 36 | R454B | 2 | 14 | 208 V | 1 | 19.2 A | 30 A | BOSCH | RC342E2S11 | 300.00 lb | ALL |
| ACCU-3 | FCU-3 | 48 | R454B | 2 | 13.75 | 208 V | 1 | 29.0 A | 50 A | BOSCH | RC348E2S11 | 300.00 lb | ALL |
| ACCU-4 | FCU-4 | 48 | R454B | 2 | 14 | 208 V | 1 | 19.2 A | 30 A | BOSCH | RC348E2S11 | 300.00 lb | ALL |
| ACCU-5 | FCU-5 | 48 | R454B | 2 | 13.75 | 208 V | 1 | 29.0 A | 50 A | BOSCH | RC348E2S11 | 300.00 lb | ALL |

CONDENSING UNIT SCHEDULE NOTES:
1. PROVIDE WITH WEATHERPROOF DISCONNECT SWITCH. COORDINATE WITH DIVISION 26.
2. ROUTE AND SIZE REFRIGERANT PIPING IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
3. PROVIDE SUCTION PRESSURE TRANSDUCER.
4. INSTALL AND PROVIDE ALL CLEARANCES REQUIRED PER MANUFACTURER'S RECOMMENDATIONS.
5. PROVIDE TIME DELAY RELAY FOR EACH CONDENSING UNIT TO ALLOW START UP OF UNITS IN 10 SECOND INTERVALS AFTER POWER LOSS EVENT.
6. PROVIDE 2 STAGE COMPRESSORS, 5 YEAR PARTS (INCLUDING COMPRESSOR) AND LABOR WARRANTY.

## 100% OUTSIDE AIR HANDLING UNIT SCHEDULE

| MARK | SERVES | FAN | | | | COOLING | | | | | HOT GAS REHEAT CAPACITY (MBH) | HGRH LAT°F | HEATING | | | | ELECTRICAL | | | | MANUFACTURER | MODEL | WEIGHT (LBS) | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | SA CFM | OA CFM | FAN ECM HP | ESP (IN-WG) | EAT°F (DB/WB) | LAT°F (DB/WB) | SENS MBH | TOTAL MBH | REFR. TYPE | | | HTG EAT°F | HTG LAT°F | HTG KW | HTG STAGES | VOLTAGE | PHASE | MCA | MOCP | | | | |
| OAHU-1 | OA | 1000 CFM | 1000 CFM | 1 | 0.7 | 98 / 85 | 51.9 / 51.7 | 47 | 116 | R-454B | 22.8 | 75 / 61 | 35 °F | 68 °F | 10.5 kW | 2 | 208 V | 3 | 43.0 A | 45 A | AAON | H3-CRB | 1020.00 lb | ALL |

100%OAHU & CONDENSING UNIT SCHEDULE NOTES:
1. EXTERNAL STATIC PRESSURE DOES NOT ACCOUNT FOR LOSSES DUE TO COIL(S), FILTERS, HOUSING, NOR ACCESSORIES.
2. PROVIDE UNIT WITH MODULATING HOT GAS REHEAT COIL.
3. PROVIDE UNIT WITH FACTORY HAIL GUARDS, HINGED PANELS, AND 1" INSULATED 18" ROOF CURB.
4. PROVIDE 65K SHORT CIRCUIT CURRENT RATING, FACTORY MOUNTED REFRIGERANT LEAK DETECTION.
5. UNIT MANUFACTURER TO PROVIDE DEDICATED TOUCH SCREEN CONTROLLER. CONTROLLER SHALL BE ABLE TO STAGE THE COMPRESSOR TO MEET 52°F (ADJ.) COIL LEAVING AIR TEMPERATURE. UNIT SHALL BE PROVIDED WITH MODULATING HOT GAS REHEAT COIL. CONTROLLER SHALL BE ABLE TO REHEAT LEAVING AIR TEMPERATURE TO 75°F (ADJ.).
6. PROVIDE DIRECT DRIVE ECM SUPPLY FAN WITH FACTOR INSTALLED AND WIRED CONDENSATE OVERFLOW SWITCH.
7. PROVIDE 2" DOUBLE WALL R-16 FOAM INJECTION INSULATION
8. PROVIDE FACTORY INSTALLED PHASE/VOLTAGE MONITOR.
9. PROVIDE WITH 2" MERV 8 AND 4" MERV 13 FILTERS.
10. PROVIDE TIME DELAY RELAY FOR EACH FAN COIL UNIT TO ALLOW START UP OF UNITS IN 30 SECOND INTERVALS AFTER POWER LOSS EVENT.
11. PROVIDE RELAY TO FIRE ALARM SYSTEM. RELAY SHALL SHUT OFF UNIT UPON FIRE ALARM ACTIVATION.
12. PROVIDE ECM CONDENSER FAN WITH HEAD PRESSURE CONTROL.
13. PROVIDE 10%-100% VARIABLE CAPACITY SCROLL COMPRESSORS, 5 YEAR PARTS (INCLUDING COMPRESSOR) AND LABOR WARRANTY.

## 100% OA CONDENSING UNIT SCHEDULE

| MARK | SERVES | COOLING | | | | ELECTRICAL | | | | MANUFACTURER | MODEL | WEIGHT | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TOTAL MBH | REFR. TYPE | NO. OF STAGES | ISMRE2 | VOLTAGE | PHASE | MCA | MOCP | | | | |
| OACU-1 | OAHU-1 | 116.8 | R454B | 2 | 6.2 | 208 V | 3 | 42 A | 50 A | AAON | CFA-011 | 1100.0 lb | ALL |

## DUCTLESS SPLIT SYSTEM SCHEDULE

| MARK | SERVES | INDOOR UNIT | | | | OUTDOOR UNIT | | | | | | MANUFACTURER | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | FAN CAPACITY (CFM) | COOLING CAPACITY (BTU) | MCA | MODEL | MARK | MCA | MOCP | SEER (AHRI) | VOLTS, PH, HZ | MODEL NUMBER | | |
| DS-T1 | IT | 635-705-775 | 30000 | Power From Outdoor | PKA-AK30NL | DCU-T1 | 22.0 A | 30 A | 17 | 208/230, 1, 60 | PUY-AH30NL | Mitsubishi Electric | ALL |

9

DUCTLESS SPLIT SYSTEM SCHEDULE NOTES:
1. PROVIDE WITH SINGLE POINT POWER CONNECTION TO INCLUDE CONDENSING UNIT AND REMOTE THERMOSTAT. INDOOR UNIT SHALL BE POWERED FROM OUTDOOR UNIT.
2. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
3. REFRIGERANT LINES TO BE SIZED BY MANUFACTURER.
4. PROVIDE LITTLE GIANT CONDENSATE PUMP MODEL VCMA-15ULS.
5. PROVIDE TIME DELAY RELAY FOR THE CONDENSING UNIT TO ALLOW START UP OF UNITS 30 SECONDS AFTER POWER LOSS EVENT.

## AIR TERMINAL SCHEDULE

| MARK | MANUFACTURER | MODEL | TYPE COMMENTS | DESCRIPTION |
|---|---|---|---|---|
| A | TITUS | TMS-AA | 24"X24" LOUVERED FACE SUPPLY AIR DIFFUSER | 24"X24" FACE, ALUMINUM CONSTRUCTION WITH FRAME FOR ASSOCIATED CEILING TYPE. |
| B | TITUS | PAR-AA | 24"X24" PERFORATED FACE RETURN/EXHAUST AIR GRILLE | 24"x24" FACE, ALUMINUM CONSTRUCTION WITH FRAME FOR ASSOCIATE CEILING TYPE. PROVIDE 22"x22" NECK UNLESS OTHERWISE NOTED. PROVIDE O.B.D. FOR DUCTED EXHAUST. |
| D | TITUS | 350FL | SIDEWALL RETURN AIR GRILLE | ALUMINUM CONSTRUCTION WITH FRAME FOR SURFACE MOUNT. 3/4" BLADE SPACING, 35° DEFLECTION WITH BLADES PARALLEL TO LONG DIMENSION. PROVIDE O.B.D. FOR DUCTED EXHAUST. |
| E | TITUS | 300FL | SIDEWALL SUPPLY AIR GRILLE | ALUMINUM CONSTRUCTION WITH FRAME FOR SURFACE MOUNT. 3/4" BLADE SPACING, DOUBLE DEFLECTION WITH FRONT BLADES PARALLEL TO LONG DIMENSION. PROVIDE O.B.D. |
| F | TITUS | 350FL | SIDEWALL RETURN AIR GRILLE | ALUMINUM CONSTRUCTION WITH FRAME FOR SURFACE MOUNT. 3/4" BLADE SPACING, 35° DEFLECTION WITH BLADES PARALLEL TO LONG DIMENSION. PROVIDE O.B.D. FOR DUCTED EXHAUST. |
| H | TITUS | FL-10-HT | HIGH THROW SUPPLY AIR FLOW BAR | ALUMINUM CONSTRUCTION; PROVIDE PATTERN CONTROLLERS ENTIRE LENGTH OF SLOT; PROVIDE 4 FT EXTERNALLY INSULATED PLENUM; CONNECT PLENUM TO NECK OF SLOT DIFFUSER; PROVIDE ROUND INLET SIZED AS INDICATED ON PLAN; PROVIDE BORDER TYPE 22. PROVIDE REMOTE DAMPER OPERATOR WHEN LOCATED ABOVE INACCESSIBLE CEILINGS. |
| J | TITUS | 45F | 24"X24" SITE PROOF EGGCRATE RETURN AIR GRILLE | 24"x24" FACE, EGGCRATE CORE AT 45°F DEFLECTION ANGLE, ALUMINUM CONSTRUCTION WITH FRAME FOR ASSOCIATED CEILING TYPE. PROVIDE 22"x22" NECK UNLESS OTHERWISE NOTED. PROVIDE WITH RETURN AIR BOOT AT GRILLE. |

AIR TERMINAL SCHEDULE NOTES:
1. INSULATE BACK-PAN OF ALL DEVICES.
2. PROVIDE FRAME TO MATCH CEILING TYPE INDICATED ON ARCHITECT'S REFLECTED CEILING PLAN.
3. PAINT INTERIOR SURFACES OF DUCTWORK VISIBLE FROM FACE OF RETURN AIR GRILLED FLAT BLACK.
4. REFER TO ARCHITECTURAL DRAWINGS FOR FINISH.
5. REFER TO MECHANICAL PLAN FOR NECK SIZES.

## GAS RADIANT HEATER SCHEDULE

| MARK | SERVES | HEAT GAIN (LOW FIRE) | HEAT GAIN (HIGH FIRE) | GAS TYPE | VOLTAGE | MCA | PHASE | MANUFACTURER | MODEL | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| GRH-1 | APPARATUS BAY | 50000.0 Btu/h | 65000.0 Btu/h | LP GAS | 120 V | 5 A | 1 | Detroit Radiant Products Company | HL3-40-65 | ALL |
| GRH-2 | APPARATUS BAY | 50000.0 Btu/h | 65000.0 Btu/h | LP GAS | 120 V | 5 A | 1 | Detroit Radiant Products Company | HL3-40-65 | ALL |
| GRH-3 | APPARATUS BAY | 50000.0 Btu/h | 65000.0 Btu/h | LP GAS | 120 V | 5 A | 1 | Detroit Radiant Products Company | HL3-40-65 | ALL |
| GRH-4 | APPARATUS BAY | 50000.0 Btu/h | 65000.0 Btu/h | LP GAS | 120 V | 5 A | 1 | Detroit Radiant Products Company | HL3-40-65 | ALL |

GAS RADIANT HEATER SCHEDULE NOTES:
1. PROVIDE 120-VOLT WALL-MOUNTED 3-POSITION SWITCH WITH LOCKING COVER, LOW VOLTAGE CONTROL TRANSFORMER, UNIVERSAL WALL AND CEILING MOUNTED BRACKET, AUTOMATIC RESET THERMAL CUT-OUT, AND DISCONNECT SWITCH.
2. PROVIDE WITH TWO-STAGE HEATING.
3. PROVIDE WITH OUTDOOR COMBUSTION AIR INLET KIT.
4. PROVIDE WITH EXHAUST VENT KIT.

## HVLS FAN SCHEDULE

| MARK | SERVES | DIAMETER | WEIGHT (LBS) | MAX SPEED (RPM) | INPUT POWER (V/PH/HZ) | BREAKER (AMPS) | MOTOR HP | MANUFACTURER | MODEL | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| BAF-1 | APPARATUS BAY | 14'-0" | 300 | 118 RPM | 208 / 3 / 60 | 20A | 1.9 HP | Big Ass Fans | Powerfoil X4.0 | ALL |
| BAF-2 | APPARATUS BAY | 14'-0" | 300 | 118 RPM | 208 / 3 / 60 | 20A | 1.9 HP | Big Ass Fans | Powerfoil X4.0 | ALL |

9

HVLS FAN SCHEDULE NOTES:
1. FAN SHALL BE INTERLOCKED WITH WIRED WALL CONTROLLER.
2. PROVIDE FAN WITH BRACING AS NECESSARY TO PREVENT SWAYING.
3. WEIGHT DOES NOT INCLUDE MOUNT OR EXTENSION TUBE.
4. VERIFY EXTENSION TUBE LENGTH AND MOUNTING BRACKET WITH MANUFACTURER PRIOR TO ORDERING.
5. BOTTOM OF FANS SHALL BE AT LEAST 2'-0" AWAY, IN ALL DIRECTIONS, FROM POSSIBLE OBSTRUCTIONS.
6. FANS SHALL NOT BE MOUNTED WITHIN 2*DIAMETER OF EXHAUST OR RETURN AIR INTAKES, AND SHALL NOT BE IN DIRECT LINE OF HVAC EQUIPMENT DISCHARGE .
7. EXTENSION TUBES 4'-0" OR LONGER SHALL BE INSTALLED WITH GUY WIRES IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION REQUIREMENTS.
8. FAN SHALL BE AT SAME ELEVATION OR HIGHER THAN GAS HEATERS AND OUTSIDE THE MINIMUM CLEARANCE TO COMBUSTIBLES.
9. PROVIDE WITH AIRFOIL FINISH.
10. PROVIDE FAN WITH LIGHTING KIT (120-277V, 220 W, 4200K).

## INLINE FAN SCHEDULE

| MARK | SERVES | DESCRIPTION | CFM | FAN RPM | FAN HP | VOLTAGE | PHASE | MANUFACTURER | MODEL | WEIGHT | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| EF-A1 | APPARATUS BAY | Direct Drive Inline | 3875 CFM | 1300 | 2.00 | 208 V | 1 | Greenheck | SQ-160-VG | 200.00 lb | 1 |
| EF-A2 | APPARATUS BAY | Direct Drive Inline | 3875 CFM | 1300 | 2.00 | 208 V | 1 | Greenheck | SQ-160-VG | 200.00 lb | 1 |
| EF-A3 | APPARATUS BAY | Direct Drive Inline | 3875 CFM | 1300 | 2.00 | 208 V | 1 | Greenheck | SQ-160-VG | 200.00 lb | 1 |
| EF-A4 | APPARATUS BAY | Direct Drive Inline | 3875 CFM | 1300 | 2.00 | 208 V | 1 | Greenheck | SQ-160-VG | 200.00 lb | 1 |
| EF-G1 | PPE | Direct Drive Inline | 500 CFM | 1725 | 0.17 | 115 V | 1 | Greenheck | SQ-95-VG | 60.00 lb | 1, 2 |
| EF-G2 | CASCADE | Direct Drive Inline | 800 CFM | 1725 | 0.25 | 115 V | 1 | Greenheck | SQ-100-VG | 60.00 lb | 1, 3 |

INLINE FAN SCHEDULE NOTES:
1. PROVIDE FAN WITH MOTOR RATED TOGGLE SWITCH AND BACKDRAFT DAMPER.
2. INTERLOCK FAN TO WALL TIMER SWITCH LOCATED NEAR LIGHT SWITCH IN ASSOCIATED ROOM. COORDINATE WITH DIVISION 26.
3. FAN SHALL BE INTERLOCKED WITH WALL MOUNTED THERMOSTAT TO ENERGIZE WHEN SPACE TEMPERATURE REACHES 80°F (ADJ.).

## CEILING EXHAUST FAN SCHEDULE

| MARK | SERVES | DESCRIPTION | CFM | FAN RPM | WATTS | VOLTAGE | PHASE | MANUFACTURER | MODEL | WEIGHT | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| EF-M1 | RESTROOM | Ceiling Exhaust Fan | 100 CFM | 960 | 12 W | 115 V | 1 | Greenheck | SP-A90-130-VG | 12.00 lb | 1, 2 |
| EF-R1 | RESTROOM | Ceiling Exhaust Fan | 100 CFM | 960 | 12 W | 115 V | 1 | Greenheck | SP-A90-130-VG | 12.00 lb | 1, 2 |
| EF-R2 | RESTROOM | Ceiling Exhaust Fan | 100 CFM | 960 | 12 W | 115 V | 1 | Greenheck | SP-A90-130-VG | 12.00 lb | 1, 2 |
| EF-R3 | RESTROOM | Ceiling Exhaust Fan | 100 CFM | 960 | 12 W | 115 V | 1 | Greenheck | SP-A90-130-VG | 12.00 lb | 1, 2 |
| EF-R4 | RESTROOM | Ceiling Exhaust Fan | 100 CFM | 960 | 12 W | 115 V | 1 | Greenheck | SP-A90-130-VG | 12.00 lb | 1, 2 |
| EF-R5 | RESTROOM | Ceiling Exhaust Fan | 100 CFM | 960 | 12 W | 115 V | 1 | Greenheck | SP-A90-130-VG | 12.00 lb | 1, 2 |
| EF-U1 | RESTROOM | Ceiling Exhaust Fan | 100 CFM | 960 | 12 W | 115 V | 1 | Greenheck | SP-A90-130-VG | 12.00 lb | 1, 2 |

CEILING FAN SCHEDULE NOTES:
1. PROVIDE FAN WITH MOTOR RATED TOGGLE SWITCH, BACKDRAFT DAMPER, AND GREENHECK 'RCC-7' ROOF CAP AND ROOF CURB.
2. INTERLOCK FAN TO WALL SWITCH LOCATED NEAR LIGHT SWITCH IN ASSOCIATED ROOM. COORDINATE WITH DIVISION 26.

## ELECTRIC UNIT HEATER SCHEDULE

| MARK | SERVES | CAPACITY (KW) | VOLTAGE | PHASE | WEIGHT | MANUFACTURER | MODEL | COMMENTS |
|---|---|---|---|---|---|---|---|---|
| EUH-P1 | GEAR | 5 | 208 V | 1 | 60.00 lb | QMARK | MUH | ALL |

EUH SCHEDULE NOTES:
1. PROVIDE WALL-MOUNTED THERMOSTAT, LOW VOLTAGE CONTROL TRANSFORMER, UNIVERSAL WALL AND CEILING MOUNTED BRACKET, AUTOMATIC RESET THERMAL CUT-OUT, ADJUSTABLE DISCHARGE LOUVER, REMOTE SUMMER FAN SWITCH, FAN DELAY, AND DISCONNECT SWITCH.
2. PROVIDE ALL CLEARANCES AS RECOMMENDED BY MANUFACTURER.

EMERALD MEP
TX FIRM No. F-24826
PROJECT No. 25018

PROFESSIONAL SEAL

STATE OF TEXAS
M. JACQUELINE CHANG
124987
LICENSED
PROFESSIONAL ENGINEER
2026-11-11

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Martinez Architects

Civil
Hill Country Civil

Landscape
Evergreen Landscape Group

Structural
Matrix Structural

MEP
Emerald MEP

Technology
Imagine IT

Alerting
WestNET

# STATION #42

Hays County ESD #4
Wimberley, TX 78676

PROJECT No: **MA 25016**
DATE: **20-OCT-2026**

ISSUE

| | | |
|---|---|---|
| 1 | 100% DD | 06-JAN-2026 |
| 2 | 50% CD | 23-FEB-2026 |
| 3 | 75% CD | 06-APR-2026 |
| 4 | 98% CD | 04-MAY-2026 |
| 5 | IFP | 01-JUN-2026 |
| 6 | IFB | 20-OCT-2026 |
| 9 | ADDENDUM#5 | 11-NOV-2026 |

MECHANICAL SCHEDULES

**M-501**

# ABBREVIATIONS

## A

| | |
|---|---|
| A | AMPERES |
| ABV | ABOVE |
| A/C | AIR CONDITIONING |
| AC | ALTERNATING CURRENT, AIR COMPRESSOR, ABOVE COUNTER |
| ACC | AIR COOLED CHILLER |
| ACCU | AIR COOLED CONDENSING UNIT |
| AD | ACCESS DOOR |
| ADA | AMERICANS WITH DISABILITIES ACT |
| AF | AMPERE FUSE, AMPERE FRAME |
| AFC | ABOVE FINISHED CEILING |
| AFF | ABOVE FINISHED FLOOR |
| AHU | AIR HANDLING UNIT |
| AIC | AMPERE INTERRUPT CAPACITY |
| AL | ALUMINUM |
| AMP | AMPLIFIER |
| ANN | ANNUNCIATOR |
| AP | ACCESS PANEL, ALARM PANEL |
| ARCH | ARCHITECT, ARCHITECTURAL |
| AT | AMPERE TRIP RATING |
| ATS | AUTOMATIC TRANSFER SWITCH |
| AVG. | AVERAGE |
| AUX. | AUXILIARY |
| AWG. | AMERICAN WIRE GAUGE |

## B

| | |
|---|---|
| BAS | BUILDING AUTOMATION SYSTEM |
| BC | BELOW COUNTER |
| BKR | BREAKER |
| BLDG. | BUILDING |

## C

| | |
|---|---|
| C | CONDUIT, CELSIUS |
| CWP | CONDENSER WATER PUMP |
| CH | CHILLER |
| CHP | CHILLED WATER PUMP |
| CIRC | CIRCULATING |
| CKT | CIRCUIT |
| CLG. | CEILING |
| CMU | CONCRETE MASONRY UNIT |
| COL. | COLUMN |
| CONC | CONCRETE |
| CONT. | CONTINUOUS,CONTINUATION |
| CP. | CIRCULATING PUMP |
| CR | CARD READER, CORD REEL |
| CT | CURRENT TRANSFORMER, COOLING TOWER |
| CTR | CENTER |
| CU | COPPER |

## D

| | |
|---|---|
| DC | DIRECT CURRENT |
| DDC | DIRECT DIGITAL CONTROL |
| DTL | DETAIL |
| DIM | DIMENSION |
| DISC | DISCONNECT |
| DP | DISTRIBUTION PANEL |
| DR | DROPPED RECEPTACLE |
| DS | DAYLIGHT SENSOR |
| DW | DISHWASHER |
| DWG | DRAWING |

## E

| | |
|---|---|
| (E) | EXISTING |
| EA | EACH |
| EC | ELECTRICAL CONTRACTOR |
| E.C. | EMPTY CONDUIT |
| EDF | ELECTRIC DRINKING FOUNTAIN |
| EF | EXHAUST FAN |
| ELEC. | ELECTRICAL |
| ELEV. | ELEVATOR |
| EMCS | ENERGY MANAGEMENT AND CONTROLS SYSTEM |
| EMERG | EMERGENCY |
| EMS | ENERGY MANAGEMENT SYSTEM |
| EPO | EMERGENCY POWER OFF |
| EQUIP | EQUIPMENT |
| (ER) | EXISTING TO REMAIN |
| ELH | ELECTRIC UNIT HEATER |
| EWH | ELECTRIC WATER HEATER |
| EXH | EXHAUST |

## F

| | |
|---|---|
| F | FAHRENHEIT, FAN, FIRE |
| FA | FIRE ALARM |
| FACP | FIRE ALARM CONTROL PANEL |
| FCU | FAN COIL UNIT |
| FF | FURNITURE FEED |
| FIXT | FIXTURE |
| FLA | FULL LOAD AMPS |
| FLEX | FLEXIBLE |
| FLR | FLOOR |
| FP | FIRE PUMP, FAN POWERED |
| FPTB | FAN POWERED TERMINAL BOX |
| FS | FUSED SWITCH, FLOW SWITCH |
| FSD | MOTORIZED FIRE SMOKE DAMPER |
| FT | FOOT, FEET |
| FTL | FEED-THRU LUGS |

## G

| | |
|---|---|
| GC | GENERAL CONTRACTOR |
| GEN | GENERATOR |
| GFCI | GROUND FAULT CIRCUIT INTERRUPTER |
| GND | GROUND |
| GTD | GENERATOR TRANSFER DEVICE |
| GUH | GAS UNIT HEATER |

## H

| | |
|---|---|
| HD | ELECTRIC HAND DRYER |
| HORIZ | HORIZONTAL |
| HP | HORSEPOWER |
| HTR | HEATER |
| HVAC | HEATING, VENTILATING, AND AIR CONDITIONING |
| HWB | HOT WATER BOILER |
| HWC | HOT WATER CIRCULATOR |
| HWP | HEATING WATER PUMP |

## I

| | |
|---|---|
| IG | ISOLATED GROUND |
| IN | INCH |
| INT | INTERNAL, INTERIOR |

## J

| | |
|---|---|
| JB | JUNCTION BOX |
| JP | JOCKEY PUMP |

## K

| | |
|---|---|
| KEC | KITCHEN EQUIPMENT CONTRACTOR |
| kVA | KILOVOLT- AMPS |
| kW | KILOWATT |
| kWH | KILOWATT-HOUR |

## L

| | |
|---|---|
| LED | LIGHT EMITTING DIODE |
| LRA | LOCKED ROTOR AMPS |
| LTG | LIGHTING |
| LV | LOW VOLTAGE TRANSFORMER |

## M

| | |
|---|---|
| M | METER |
| MAX. | MAXIMUM |
| MC | METAL CLAD CABLE |
| MCA | MINIMUM CIRCUIT AMPS |
| MCB | MAIN CIRCUIT BREAKER |
| MCC | MOTOR CONTROL CENTER |
| MD | MOTORIZED DAMPER |
| MDP | MAIN DISTRIBUTION PANEL |
| MECH. | MECHANICAL |
| MFR | MANUFACTURER |
| MIN. | MINIMUM. |
| MLO | MAIN LUGS ONLY |
| MOCP | MAXIMUM OVER CURRENT PROTECTION |
| MSB | MAIN SWITCHBOARD |
| MTD | MOUNTED |

## N

| | |
|---|---|
| N3R | NEMA 3R ENCLOSURE |
| N4X | NEMA 4X ENCLOSURE |
| NEC | NATIONAL ELECTRICAL CODE |
| NEMA | NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION |
| NF | NON-FUSED |
| NFPA | NATIONAL FIRE PROTECTION ASSOCIATION |
| NFS | NON-FUSED SWITCH |
| NIC | NOT IN CONTRACT |
| NL | NIGHT LIGHT |
| NO. | NUMBER |
| NTS | NOT TO SCALE |

## O

| | |
|---|---|
| OAF | OUTSIDE AIR FAN |
| OAHU | OUTSIDE AIR HANDLING UNIT |
| OC | ON CENTER |
| OHE | OVERHEAD ELECTRICAL |

## P

| | |
|---|---|
| P | POLE, PUMP |
| PB | PUSHBUTTON |
| PC | PHOTOCELL |
| PH | PHASE |
| PLBG | PLUMBING |
| PNL | PANEL |
| POS | POINT OF SALE |
| PP | POWER POLE |
| PS | PHOTOSENSOR |
| PVC | POLYVINYL CHLORIDE |
| PWR | POWER |

## Q

| | |
|---|---|
| QTY | QUANTITY |

## R

| | |
|---|---|
| R | EXISTING TO BE REMOVED |
| RC | RECONNECT EXISTING DEVICE TO CIRCUIT INDICATED |
| RCP | REFLECTED CEILING PLAN |
| RCPT | RECEPTACLE |
| RE | REFERENCE, REFER |
| REC | RECEPTACLE |
| REF | REFRIGERATOR |
| REL | EXISTING TO BE RELOCATED |
| REL/EX | NEW LOCATION OF RELOCATED EQUIPMENT |
| REQD | REQUIRED |
| REV | REVISION, REVISE |
| RLA | RUNNING LOAD AMPS |
| RTU | ROOFTOP UNIT |

## S

| | |
|---|---|
| SAF | SUPPLY AIR FAN |
| SCHED | SCHEDULE |
| SEC | SECONDARY |
| SECT | SECTION |
| SF | SQUARE FEET |
| SHT | SHEET |
| SIM | SIMILAR |
| SPEC | SPECIFICATION |
| SPD | SURGE PROTECTION DEVICE |
| SQ. | SQUARE |
| SRF | SMOKE REMOVAL FAN |
| ST | SHUNT TRIP |
| STD | STANDARD |
| STL | STEEL |
| SURF | SURFACE |
| SWBD | SWITCHBOARD |

## T

| | |
|---|---|
| TEL | TELEPHONE |
| TL | TWIST-LOCK |
| TP | TAMPER PROOF DEVICE |
| TV | TELEVISION |
| TYP | TYPICAL |

## U

| | |
|---|---|
| UG | UNDERGROUND |
| UH | UNIT HEATER |
| UL | UNDERWRITERS LABORATORIES, INC. |
| UNO | UNLESS NOTED OTHERWISE |
| UPS | UNINTERRUPTABLE POWER SYSTEM |

## V

| | |
|---|---|
| V | VOLT |
| VA | VOLT-AMPERE |
| VAV | VARIABLE AIR VOLUME |
| VC | VOLUME CONTROL |
| VFD | VARIABLE FREQUENCY DRIVE |

## W

| | |
|---|---|
| W | WATT, WIRE, WIDTH |
| WG | WIREGUARD |
| W/ | WITH |
| W/O | WITHOUT |
| WP | WEATHERPROOF |

## X

| | |
|---|---|
| XFMR | TRANSFORMER |

## Z

| | |
|---|---|
| Z | ZONE |

# MOTORS AND CONTROLS

- MOTOR RATED SWITCH WITH THERMAL OVERLOADS
- SINGLE OR THREE PHASE MOTOR NUMBER INDICATES HORSE POWER
- DISCONNECT (SAFETY) SWITCH "200/3/150" DENOTES AMPERES/POLE/FUSE, "NF" DENOTES NON-FUSED "N3R" DENOTES NEMA 3R
- MOTOR STARTER FURNISHED BY DIVISION 23 AND INSTALLED BY DIVISION 26.
- COMBINATION DISCONNECT (SAFETY) SWITCH AND MOTOR STARTER, "30/3/15/HO" DENOTES AMPERES/POLES/FUSE/ STARTER SIZE, "NF" DENOTES NON-FUSED. FURNISHED BY DIVISION 23 AND INSTALLED BY DIVISION 26.
- VFD — VARIABLE FREQUENCY DRIVE PROVIDED BY DIVISION 23 AND INSTALLED BY DIVISION 26.
- EPO — EMERGENCY POWER OFF BUTTON.

# RECEPTACLES AND OUTLETS

ALL RECEPTACLES SHALL BE MOUNTED 18" ABOVE FINISHED FLOOR TO CENTER OF DEVICE UNLESS NOTED OTHERWISE.

- SIMPLEX WALL RECEPTACLE, NEMA 5-20R, 20A, 125V.
- DUPLEX WALL RECEPTACLE, NEMA 5-20R, 20A, 125V.
  - "GFCI" DENOTES GROUND FAULT INTERRUPTER,
  - "WP" DENOTES WEATHERPROOF,
  - "IG" DENOTES ISOLATED GROUND,
  - "TP" DENOTES SAFETY TYPE, (TAMPER PROOF)
  - "DR" DENOTES DROPPED RECEPTACLE,
  - "USB" DENOTES RECEPTACLE WITH UNIVERSAL SERIAL BUS,
  - "AC" DENOTES ABOVE COUNTER MOUNTING, SEE
  - "UC" DENOTES UNDER COUNTER MOUNTING, SEE
  - "H" DENOTES HORIZONTALLY ORIENTED RECEPTACLE, SEE ARCHITECTURAL PLANS FOR EXACT MOUNTING HEIGHT.
- FOURPLEX (DOUBLE DUPLEX) WALL RECEPTACLE. NEMA 5-20R, 20A, 125V.
- SPECIAL RECEPTACLE, NEMA CONFIGURATION AS NOTED.
- JUNCTION BOX
  - "MD" DENOTES MOTOR DAMPER,
  - "CR" DENOTES CORD REEL,
  - "D" DENOTES DROP CORD RECEPTACLE,
- DUPLEX RECEPTACLE WITH HOMERUN
- DIRECT CONNECTION TO EQUIPMENT
- P — PULL BOX (OVER 4" SQUARE)
- TWO-GANG FLOOR OUTLET
- THREE-GANG FLOOR OUTLET
- 9 — FOUR-GANG FLOOR OUTLET
- TWO-GANG CEILING OUTLET
- D R / P — FLUSH ELECTRICAL FLOOR OUTLET. "P" DENOTES POKE-THRU. "D" INDICATES DUPLEX RECEPTACLE. "R" INDICATES RED RECEPTACLE ON EMERGENCY POWER. REFER TO FLOOR BOX SCHEDULE, FIRE RATED POKE-THROUGH SCHEDULE AND KEYED NOTES.

# LIGHTING

LETTER(S) DENOTE TYPE- SEE LIGHTING FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION.

- 2' X 4' LIGHTING FIXTURE.
- 2' X 2' LIGHTING FIXTURE.
- 1' X 4' LIGHTING FIXTURE.
- STRIP LIGHTING FIXTURES.
- ROUND DOWNLIGHT FIXTURE.
- SQUARE DOWNLIGHT FIXTURE.
- WALL MOUNTED LIGHTING FIXTURE.
- CEILING MOUNTED EXIT SIGN; ARROWS AS INDICATED. SHADED AREA DENOTES FACE.
- WALL MOUNTED EXIT SIGN; ARROWS AS INDICATED. SHADED AREA DENOTES FACE.
- EMERGENCY WALL MOUNTED LIGHTING FIXTURE. BATTERY OPERATED UNLESS NOTED OTHERWISE.
- SITE LIGHTING FIXTURE.
- POST-TOP FIXTURE/ACORN FIXTURE BRACKET ARM INDICATES WALL MOUNT WITH ARM
- EMERGENCY LIGHT FIXTURE WITH BATTERY PACK. PROVIDE WITH UNSWITCHED HOT FOR LOSS OF VOLTAGE AND CHARGING (SAME CIRCUIT AS NORMAL POWER LIGHTING). FIXTURES SHALL BE WIRED IN A MANNER AS TO ALLOW SWITCHING OF FIXTURES WITHOUT DISCHARGING THE EMERGENCY BATTERY. BATTERY PACK IS TO ONLY OPERATE IN THE EVENT OF A POWER OUTAGE.
- EM CIRCUIT — LIGHT FIXTURE ON EMERGENCY BRANCH CIRCUIT, CIRCUIT NUMBER ADJACENT TO FIXTURE INDICATES EMERGENCY CIRCUIT CONNECTED TO FIXTURE. PROVIDE UNSWITCHED HOT, NEUTRAL AND GROUND FOR ALL EMERGENCY LIGHTING ORIGINATING FROM THE EMERGENCY CIRCUIT SHOWN.
- NL — EMERGENCY "NIGHT LIGHT" LIGHT FIXTURE. LIGHT FIXTURE IS UNSWITCHED AND INTENDED FOR 24 HOUR OPERATION. FEED VIA UNSWITCHED HOT.

# RACEWAYS AND WIRING

- CAP AND STAKE
- CONDUIT CONCEALED IN WALL OR CEILING
- CONDUIT UNDERSLAB OR UNDERGROUND
- EM — EMERGENCY CONDUIT
- OHE — OVERHEAD ELECTRIC PRIMARY UTILITY POWER LINE
- CONDUIT TURNED UP
- CONDUIT TURNED DOWN
- 1LA-2,4 — HOMERUN TO PANEL WITH CIRCUIT NUMBER(S) AS INDICATED.
- PARTIAL CIRCUIT HOMERUN TO PANEL. (ON)1LA-6
- XX — "OHE" DENOTES OVERHEAD ELECTRICAL LINE. "UGE" DENOTES UNDERGROUND ELECTRICAL LINE.

# ELECTRICAL EQUIPMENT

- DISTRIBUTION PANEL
- MSB — SWITCHBOARD, MAIN DISTRIBUTION PANEL OR MOTOR CONTROL CENTER
- PANELBOARD (FLUSH/SURFACE MOUNT)
- FLOOR MOUNTED DRY-TYPE TRANSFORMER
- SUSPENDED OR WALL MOUNTED TRANSFORMER
- ATS — AUTOMATIC TRANSFER SWITCH

# COMMUNICATIONS

ALL OUTLET BOXES SHALL BE MOUNTED 18" ABOVE FINISHED FLOOR TO CENTER OF DEVICE UNLESS NOTED OTHERWISE.

- TV — TV ROUGH-IN: 3-GANG RECESSED TV BOX, CONTAINING 1 DUPLEX RECEPTACLE, 1 GANG FOR AV, 1 GANG FOR DELTA.
- TECHNOLOGY ROUGH-IN: LOCATION OF A NEW TECHNOLOGY WALL OUTLET, PROVIDE DUAL GANG BACK BOX. REFERENCE TECHNOLOGY SHEET FOR CONTENT.
- # — TECHNOLOGY ROUGH-IN: LOCATIONS OF (#) QUANTITY OF A NEW TECHNOLOGY WALL OUTLETS, PROVIDE DUAL GANG BACK BOXES PER QUANTITY INDICATED. REFERENCE TECHNOLOGY SHEET FOR CONTENT.
- 9 / CB — SCHOOL INTERCOMMUNICATION SYSTEM CALL-IN. PUSH BUTTON
- BELL, BUZZER OR CHIME AT 80+ A.F.F.
- VC — VOLUME CONTROL - WALL MOUNTED

# ONE LINE AND RISER DIAGRAMS

- TRANSFORMER, TYPE AND RATINGS AS NOTED
- M — DIGITAL METER
- M — ELECTRICAL METER
- SPD — SURGE PROTECTION DEVICE

# MISCELLANEOUS

- F — SHADED SYMBOLS INDICATE EXISTING DEVICES TO REMAIN, UNLESS OTHERWISE NOTED.
- INDICATES WALL-MOUNTED WHEN ATTACHED TO ANY SYMBOL
- EX.X — DRAWING NOTE REFERENCE
- LC — LIGHTING CONTACTOR
- TS — TIME SWITCH
- PC — PHOTOCELL
- TC — TIMECLOCK

# FIRE ALARM

- W — WATER FLOW SWITCH
- SP — SUPERVISORY SWITCH
- S / # — SMOKE DETECTOR - "S" INDICATES IN INTEGRAL SOUNDER BASE; "D" INDICATES DUCT TYPE; "#" INDICATES 120 VOLT RESIDENTIAL TYPE
- H — HEAT DETECTOR
- S — FIRE ALARM SPEAKER STROBE / CEILING MOUNTED
- S — FIRE ALARM SPEAKER STROBE / WALL MOUNTED
- S — FIRE ALARM SPEAKER / CEILING MOUNT.
- S — FIRE ALARM SPEAKER / WALL MOUNTED
- DH — MAGNETIC DOOR HOLDER
- F — FIRE ALARM PULL STATION +42" AFF
- AUDIO VISUAL FIRE ALARM HORN STROBE +80" AFF- 15/75cd U.N.O.
- VISUAL FIRE ALARM (STROBE) CEILING MOUNT - 15/75cd U.N.O.
- VISUAL FIRE ALARM (STROBE) WALL MOUNT +80" AFF- 15/75cd U.N.O.
- AUDIO FIRE ALARM HORN +80" AFF
- FACP — FIRE ALARM CONTROL PANEL
- ANN — REMOTE FIRE ALARM ANNUNCIATOR PANEL
- RPS — REMOTE POWER SUPPLY FOR AUDIO/VISUAL FIRE ALARM DEVICES.
- FSD — FIRE SMOKE DAMPER

# SWITCHES & LIGHTING CONTROL DEVICES

ALL SWITCH TYPES AND SENSORS TYPES FOUND ON 'LIGHTING CONTROL DEVICE SCHEDULE' LOCATED ON ELECTRICAL SCHEDULES SHEETS

SWITCH ANNOTATION AS FOLLOWS:

- $ / a,b,c — TYPE, PER SCHEDULE; NO TYPE INDICATES SINGLE POLE TOGGLE SWITCH
- SWITCH LEGS, PER PLAN, SHOWN HERE AS 3 (a,b,c)

OCCUPANCY SENSOR ANNOTATION, AS FOLLOWS:

- OCx — OCCUPANCY / VACANCE SENSOR 'x' INDICATES TYPE, PER SCHEDULE
- CEILING SENSOR
- WITH BRACKET INDICATES WALL / CORNER MOUNT

LIGHT SENSOR ANNOTATION, AS FOLLOWS:

- PC — DIGITAL PHOTOSENSOR
- DS — DAYLIGHT HARVESTING SENSOR

# DRAWING/DETAIL REFERENCE KEY

RE: 1 / E3-2 — REFER TO DRAWING/DETAIL NUMBER; SHEET NUMBER

EMERALD MEP
TX FIRM No. F-24826
PROJECT No. 25018

PROFESSIONAL SEAL

STATE OF TEXAS — M. JACQUELINE CHANG — 124987 — LICENSED PROFESSIONAL ENGINEER — 2026-11-11

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Landscape — Evergreen Landscape Group
Structural — Matrix Structural
MEP — Emerald MEP
Technology — Imagine IT
Alerting — WestNET

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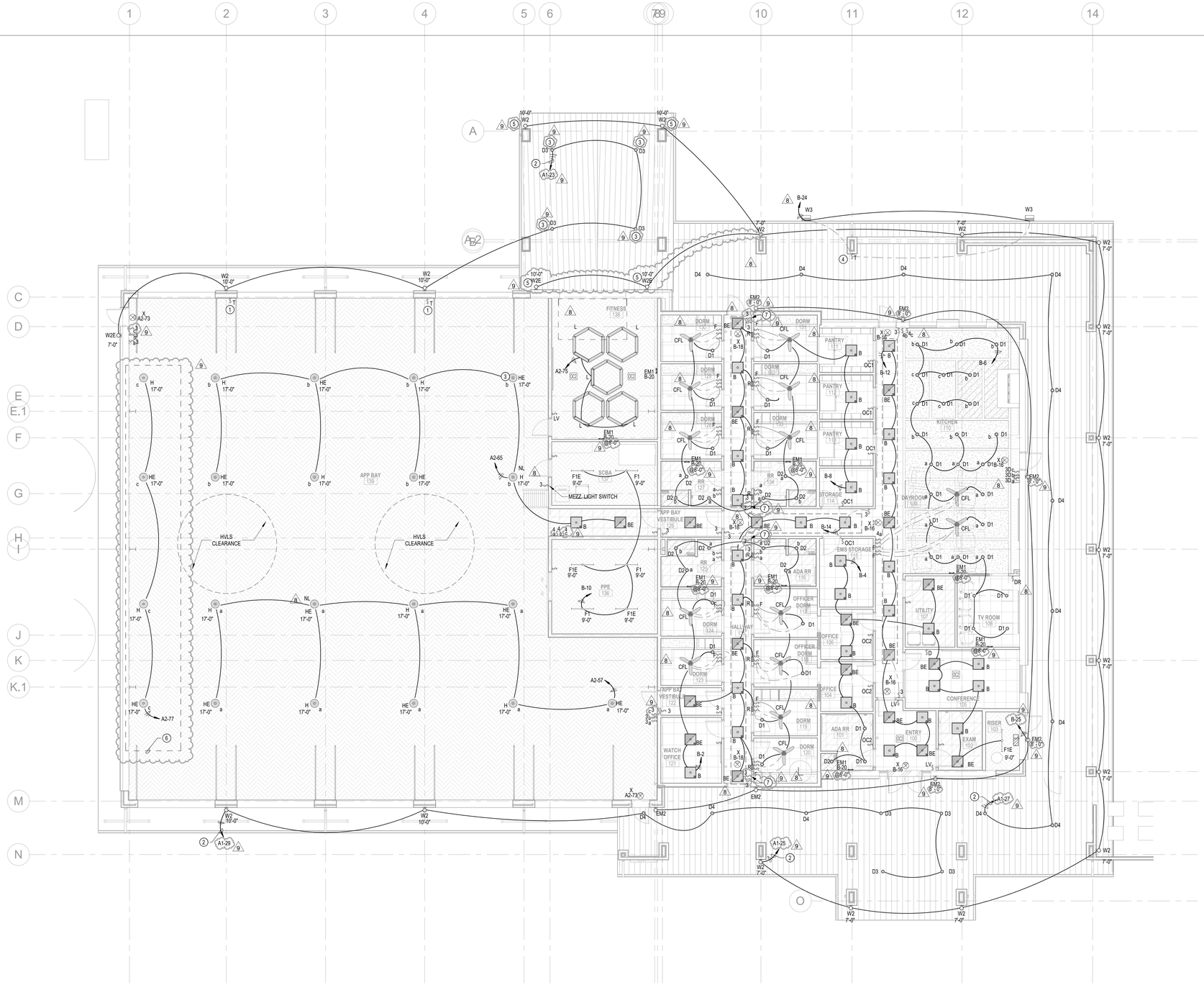
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ELECTRICAL SYMBOLS LEGEND

**E-001**




## 1 LIGHTING PLAN - LEVEL ONE

1/8" = 1'-0"

LIGHTING GENERAL NOTES APPLY TO ALL LIGHTING PLANS

## LIGHTING GENERAL NOTES

A. LIGHTING CONTROL DEVICES SHALL BE PROVIDED IN ACCORDANCE WITH PERFORMANCE DESCRIPTION INDICATED IN THE LIGHTING CONTROL DEVICE SCHEDULE FOUND ON SCHEDULE SHEETS.

B. MULTIPLE SWITCHES SHOWN TOGETHER SHALL BE GANGED UNDER A COMMON COVER PLATE.

C. PROVIDE LABELING OF ALL CONTROL DEVICES, SWITCH PACKS, LIGHT FIXTURES, JUNCTION BOXES, ETC IN ACCORDANCE WITH ELECTRICAL SPECIFICATIONS.

D. LIGHTING FIXTURE LOCATIONS SHOWN TAKE PRECEDENT IN CEILING LOCATION TO ALL OTHER TRADES. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ENSURING OTHER TRADES DO NOT IMPACT SPACING AND/OR OVERLAYMENT OF OTHER DEVICES WHERE LIGHT FIXTURES MUST BE INSTALLED.

E. REFERENCE SYMBOLS LEGEND FOR LIGHT SWITCH DEVICE NOMENCLATURE AND SWITCH-LEG ASSOCIATIONS.

F. ALL 2X2, 2X4 FIXTURES INSTALLED IN SUSPENDED GRID CEILING SHALL BE PROVIDED WITH (2) SECONDARY SUPPORT WIRES ANCHORED DIRECTLY TO STRUCTURE.

G. PROVIDE ALL EMERGENCY LIGHT FIXTURES WITH UNSWITCHED HOT LEG AS DEFINED IN NEC 700.12.

H. ROUTE AN UNSWITCHED HOT LEG TO ALL LIGHT FIXTURES DESIGNATED AS EMERGENCY FIXTURES. HOT LEG SHALL ORIGINATE FROM CIRCUIT SERVING NORMAL LIGHTING FIXTURES IN THAT SPACE. UNSWITCHED HOT LEG SHALL CONNECT TO THE NORMAL POWER SENSING LUG ON THE EMERGENCY BATTERY PACK.

I. PROVIDE UN-SWITCHED CIRCUIT TO ALL EXIT SIGNS.

J. CONDUIT AND JUNCTION BOXES IN AREAS WITH EXPOSED STRUCTURE SHALL BE INSTALLED TIGHT TO STRUCTURE (OVERHEAD, WALLS, COLUMNS, ETC.).

9 K. PROVIDE DECORA STYLE SWITCHES IN ALL RESTROOMS, DORM ROOMS AND IN DAYROOM. REFER TO SPECIFICATIONS FOR MODEL NUMBER.

## LIGHTING KEYED NOTES

1. SPRING WOUND TIMER SWITCH FOR FLOOD LIGHTS SHOWN ON MEZZANINE PLAN.
2. EXTERIOR LIGHTING CIRCUIT SHALL BE ROUTED THROUGH CONTACTOR LC1 AND BE PHOTOCELL CONTROLLED.
3. BID ALTERNATE #1: EXTEND LIGHTING CIRCUIT AND PROVIDE LIGHT FIXTURE FOR CANOPY. (9, 8)
4. SPRING WOUND TIMER SWITCH FOR FIELD LIGHTS.
5. BASE BID: INSTALL LIGHT FIXTURE AT EXTERIOR WALL. BID ALTERNATE #1: INSTALL LIGHT FIXTURE AT COLUMN.
6. PROVIDE SCOPE OF WORK WITHIN BOUNDARY UNDER BASE-BID & REMOVE UNDER DEDUCTIVE ALTERNATE #1. COORDINATE WITH AFFECTED TRADES.
7. 3-WAY SWITCH FOR CORRIDOR STEP LIGHTING. (9)

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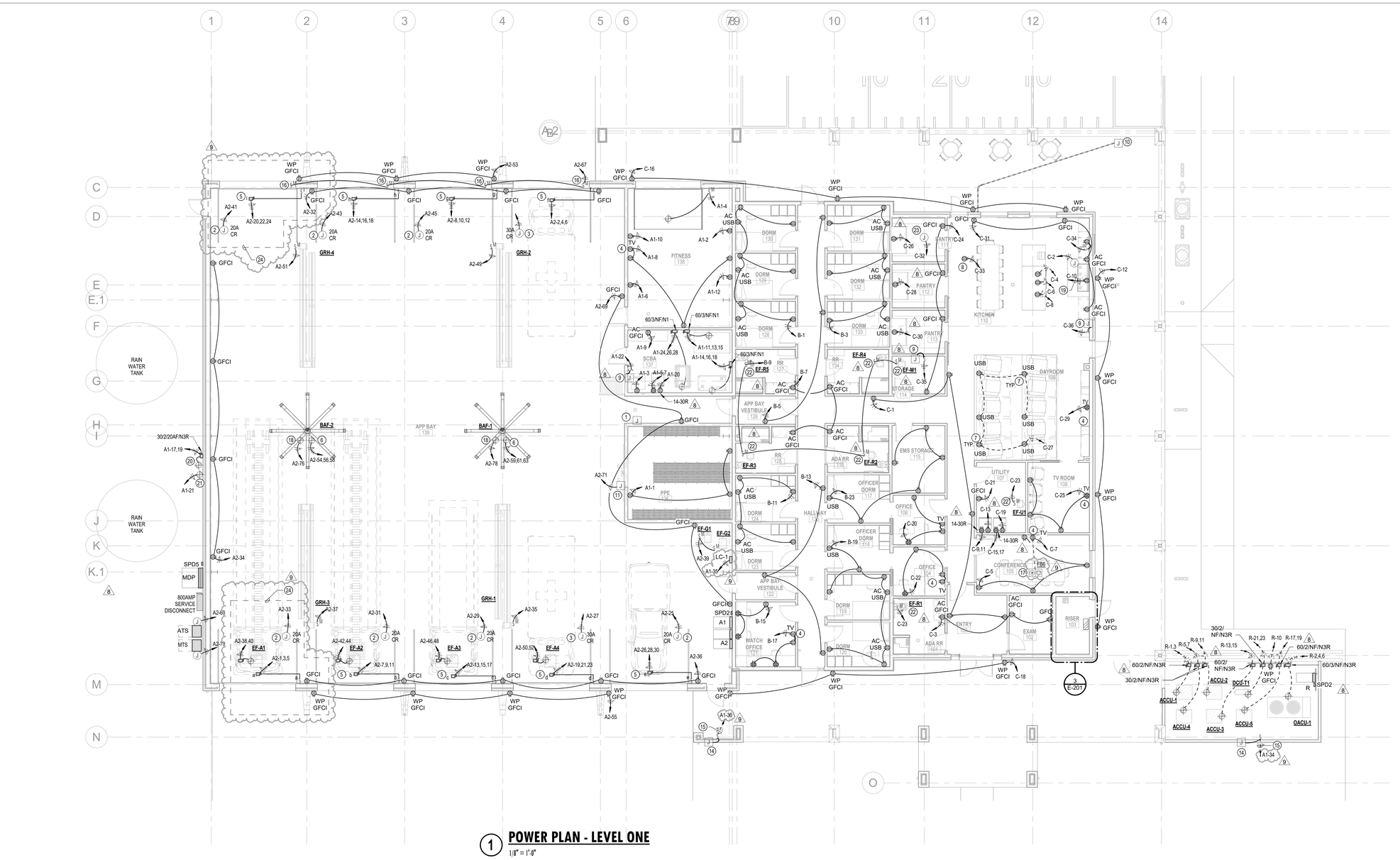
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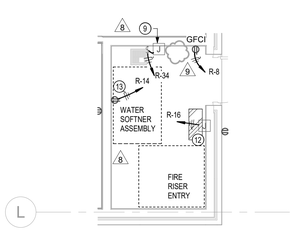
LIGHTING PLAN - LEVEL ONE

**E-101**




## 1 POWER PLAN - LEVEL ONE

1/8" = 1'-0"




## 3 POWER PLAN - RISER ROOM

1/4" = 1'-0"

ELECTRICAL GENERAL NOTES APPLY TO ALL POWER PLANS

## ELECTRICAL GENERAL NOTES

A. ELECTRICAL DEVICES SHOWN ARE NOT EXACT. ALL DEVICE LOCATIONS SHALL BE VERIFIED WITH ARCHITECTURAL MILLWORK, CASEWORK, AND GENERAL ELEVATION VIEWS.

B. ELECTRICAL CONTRACTOR SHALL PROVIDE CONDUIT, OUTLET BOXES, JUNCTION BOXES FOR ALL TECHNOLOGY, LOW VOLTAGE, ACCESS CONTROL SECURITY, SURVEILLANCE, AND OTHER DIVISION 27/28 SCOPE. REFER TO DIVISION 27/28 DRAWINGS AND SPECIFICATIONS FOR ALL WORK REQUIRED. OMISSION OF THIS SCOPE FROM DIV 26 SCOPE OF WORK IS PROHIBITED.

C. HVAC AND PLUMBING EQUIPMENT LOCATIONS ARE NOT EXACT, AND THE EXACT POINT OF CONNECTION TO EQUIPMENT MAY VARY. COORDINATE EXACT ROUGH-IN REQUIREMENTS IN FIELD AND WITH FINAL SUBMITTALS FOR ALL DIV. 21/22/23 EQUIPMENT.

D. PROVIDE LABELING OF ALL DEVICES, CONDUIT, PANELS, AND JUNCTION BOXES IN ACCORDANCE WITH ELECTRICAL SPECIFICATIONS.

E. MINIMIZE ROOF PENETRATIONS. WHERE ABLE, ROUTE ALL CONDUIT FOR ROOF MOUNTED EQUIPMENT THROUGH ROOF CURB. CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATING NECESSARY WATER PROOFING AROUND ROOF PENETRATIONS WITH ROOFING INSTALLER.

F. ALL RECEPTACLES LOCATED IN RESTROOMS, JANITOR CLOSETS, MECHANICAL ROOMS, SERVING ELECTRIC DRINKING FOUNTAINS, OR LOCATED WITHIN 6' OF A SINK, LOCATED ABOVE A WET COUNTERTOP OR IN A KITCHEN OR COFFEE BAR SHALL BE GFCI. FEED-THRU GFCI/GFI IS PROHIBITED, ALL GFCI/GFI DEVICES SHALL BE PROVIDED WITH INDIVIDUAL TEST/RESET FEATURES.

G. MULTI-WIRE HOME RUNS SHALL NOT BE ALLOWED. PROVIDE DEDICATED NEUTRALS FOR ALL CIRCUITS. SHARING CONDUIT IS PERMISSIBLE WHERE TOTAL CONDUCTOR AMPACITY DERATING HAS BEEN PERFORMED BY ELECTRICAL CONTRACTOR. THE NEUTRAL IS CONSIDERED CURRENT-CARRYING.

H. ALL RECEPTACLES SHALL BE TAMPER RESISTANT TYPE. CONTRACTOR MAY PROVIDE NON-TAMPER-RESISTANT RECEPTACLES WHERE NOT REQUIRED PER CURRENT NEC ARTICLE 406.

I. LABEL ALL CIRCUITS AT ALL JUNCTION BOXES AND OUTLETS (AS DEFINED BY NEC) WITH TYPE-WRITTEN LABEL IDENTIFYING CIRCUIT ON THE BACK OF DEVICE COVER PLATES OR ON COVER OF JUNCTION BOX. IF A BOX HAS MULTIPLE CIRCUITS WITHIN, LABEL ALL CIRCUITS.

J. CONDUIT AND JUNCTION BOXES IN AREAS WITH EXPOSED STRUCTURE SHALL BE INSTALLED TIGHT TO STRUCTURE (OVERHEAD, WALLS, COLUMNS, ETC.).

K. WIRE SIZES INDICATED ON PLANS ARE FOR COPPER CONDUCTORS. BASE-BID SHALL ALLOW ALUMINUM CONDUCTORS FOR BRANCH FEEDERS 100A AND LARGER. UNDER BID ALTERNATE #7 PROVIDE ONLY COPPER CONDUCTORS.

## ELECTRICAL KEYED NOTES

1. BAY DOOR CONTROL SWITCH BANK LOCATION. COORDINATE EXACT LOCATION WITH ARCHITECT AND DOOR INSTALLER PRIOR TO ROUGH-IN.
2. PROVIDE RETRACTABLE POWER CORD REEL WITH 120V, 20A RECEPTACLE AND 30FT CABLE FURNISHED WITH PIVOT BASE. PROVIDE DUPLEX RECEPTACLE AT CORE REEL BASE. FIELD COORDINATE EXACT LOCATION CABLE LENGTH, AND ADDITIONAL REQUIREMENTS WITH ARCHITECT / OWNER PRIOR TO ROUGH-IN. PROVIDE WITH QUICK RELEASE PLUG. REFER TO ELECTRICAL DETAIL.
3. PROVIDE RETRACTABLE POWER CORD REEL WITH 120V, 30A RECEPTACLE AND 30FT CABLE FURNISHED WITH PIVOT BASE. PROVIDE DUPLEX RECEPTACLE AT COR REEL BASE. FIELD COORDINATE EXACT LOCATION CABLE LENGTH, AND ADDITIONAL REQUIREMENTS WITH ARCHITECT / OWNER PRIOR TO ROUGH-IN. PROVIDE WITH QUICK RELEASE PLUG. REFER TO ELECTRICAL DETAIL.
4. PROVIDE RECEPTACLE FOR TV. COORDINATE EXACT MOUNTING HEIGHT AND LOCATION WITH ARCHITECT.
5. PROVIDE ELECTRICAL CONNECTION FOR APPARATUS BAY DOOR CONTROLLER. FIELD COORDINATE EXACT LOCATION, CONTROL WIRING QUANTITIES AND ADDITIONAL REQUIREMENTS WITH DOOR INSTALLER PRIOR TO ROUGH-IN. ROUTE (1) 3/4" CONDUIT WITH CONTROL WIRE TO ASSOCIATED OPEN/CLOSE SWITCH.
6. ELECTRICAL CONNECTION FOR HVLS FAN . COORDINATE INSTALLATION WITH DIVISION 23. PROVIDE CONDUIT FOR LOW VOLTAGE CABLING TO FAN CONTROL SWITCH. CONTROL SWITCH SHALL BE PROVIDED WITH EQUIPMENT.
7. COMBINATION 20AMP / USB-C DUPLEX RECEPTACLE PER SPECIFICATIONS. COORDINATE ROUGH-IN HEIGHT WITH MILLWORK INSTALLER.
8. DEDICATED RECEPTACLE FOR ALERTING SYSTEM ACD. REFER TO WESTNET DRAWINGS FOR FURTHER INFORMATION. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT WITH ALERTING SYSTEM INSTALLER PRIOR TO ROUGH-IN..
9. PROVIDE 120V ELECTRICAL CONNECTION AND DISCONNECT FOR ELECTRIC TRAP PRIMER. COORDINATE ALL ELECTRICAL WIRING AND FINAL LOCATION WITH DIVISION 22 INSTALLER. .
10. ROUTE EMPTY CONDUIT TO IN-GRADE PULL BOX FOR FUTURE USE. PROVIDE WITH PULLSTRING. COORDINATE ROUTING OF UNDERGROUND CONDUIT TO PANEL 'C' LOCATION. COORDINATE EXACT TERMINATION POINT WITH OWNER PRIOR TO INSTALLATION.
11. PROVIDE 120V ELECTRICAL CONNECTION FOR GAS DETECTION DEVICE. COORDINATE MOUNTING HEIGHT AND ROUGH-IN LOCATION WITH DIVISION 23.
12. PROVIDE 120V ELECTRICAL CONNECTION FOR NITROGEN GAS GENERATOR. COORDINATE MOUNTING HEIGHT AND ROUGH-IN LOCATION WITH DIVISION.
13. PROVIDE 120V ELECTRICAL CONNECTION FOR WATER SOFTENER ASSEMBLY. COORDINATE MOUNTING HEIGHT AND ROUGH-IN LOCATION WITH DIVISION 22.
14. PROVIDE 120V ELECTRICAL CONNECTION FOR BUILDING SIGNAGE. COORDINATE ROUGH-IN AND DISCONNECT LOCATION WITH SIGNAGE INSTALLER.
15. ROUTE CIRCUIT THROUGH LIGHTING CONTACTOR 'LC1' AND BE PHOTOCELL CONTROLLED.
16. PROVIDE 120V ELECTRICAL CONNECTION FOR MOTORIZED DAMPER. COORDINATE ALL WIRING WITH DIVISION 23.
17. RECESSED ACTIVATED 2-GANG FLOORBOX PER SCHEDULE. FIELD COORDINATE FINAL ROUTING OF CONDUITS TO NEAREST WALL.
18. PROVIDE 120V ELECTRICAL CONNECTION FOR HVLS FAN. PROVIDE CONTROL WIRE TO LIGHT WALL CONTROLLER. LOCATION OF WALL CONTROLLER SHALL BE FIELD COORDINATED.
19. PROVIDE NORMALLY CLOSED RELAY FOR GAS RANGE CIRCUIT SHUT OFF. RELAY SHALL BE TIED INTO ALERTING SYSTEM APPLIANCE CONTROL DEVICE (ACD) AND SHALL DISCONNECT CIRCUIT WHEN ACD SHUT OFF IS ACTIVATED. COORDINATE ALL CONNECTIONS BETWEEN ACD AND APPLIANCE WITH ALERTING SYSTEM INSTALLER.
20. PROVIDE ELECTRICAL CONNECTION FOR RAIN TANK PUMP CONTROLLER. FIELD COORDINATE PUMP LOCATION AND FINAL ELECTRICAL REQUIREMENTS WITH RAIN TANK PROVIDER PRIOR TO ROUGH-IN.
21. PROVIDE 120V ELECTRICAL CONNECTION FOR PUMP ENCLOSURE HEATER. COORDINATE FINAL ELECTRICAL REQUIREMENTS WITH RAIN TANK PROVIDER PRIOR TO ROUGH-IN.
22. EXHAUST FAN SHALL BE CONTROLLED BY DEDICATED ON/OFF SWITCH. SWITCH SHALL BE LOCATED NEXT TO LIGHT SWITCH(ES) SERVING SPACE.
23. PROVIDE 120V ELECTRICAL CONNECTION FOR REDHAT GAS SHUT OFF VALVE. COORDINATE ROUGH-IN LOCATION AND ALL WIRING BETWEEN SHUT OFF VALVE AND APPLIANCE CONTROL DEVICE WITH ALERTING SYSTEM INSTALLER.
24. PROVIDE SCOPE OF WORK WITHIN BOUNDARY UNDER BASE-BID & REMOVE UNDER DEDUCTIVE ALTERNATE #1. COORDINATE WITH AFFECTED TRADES.

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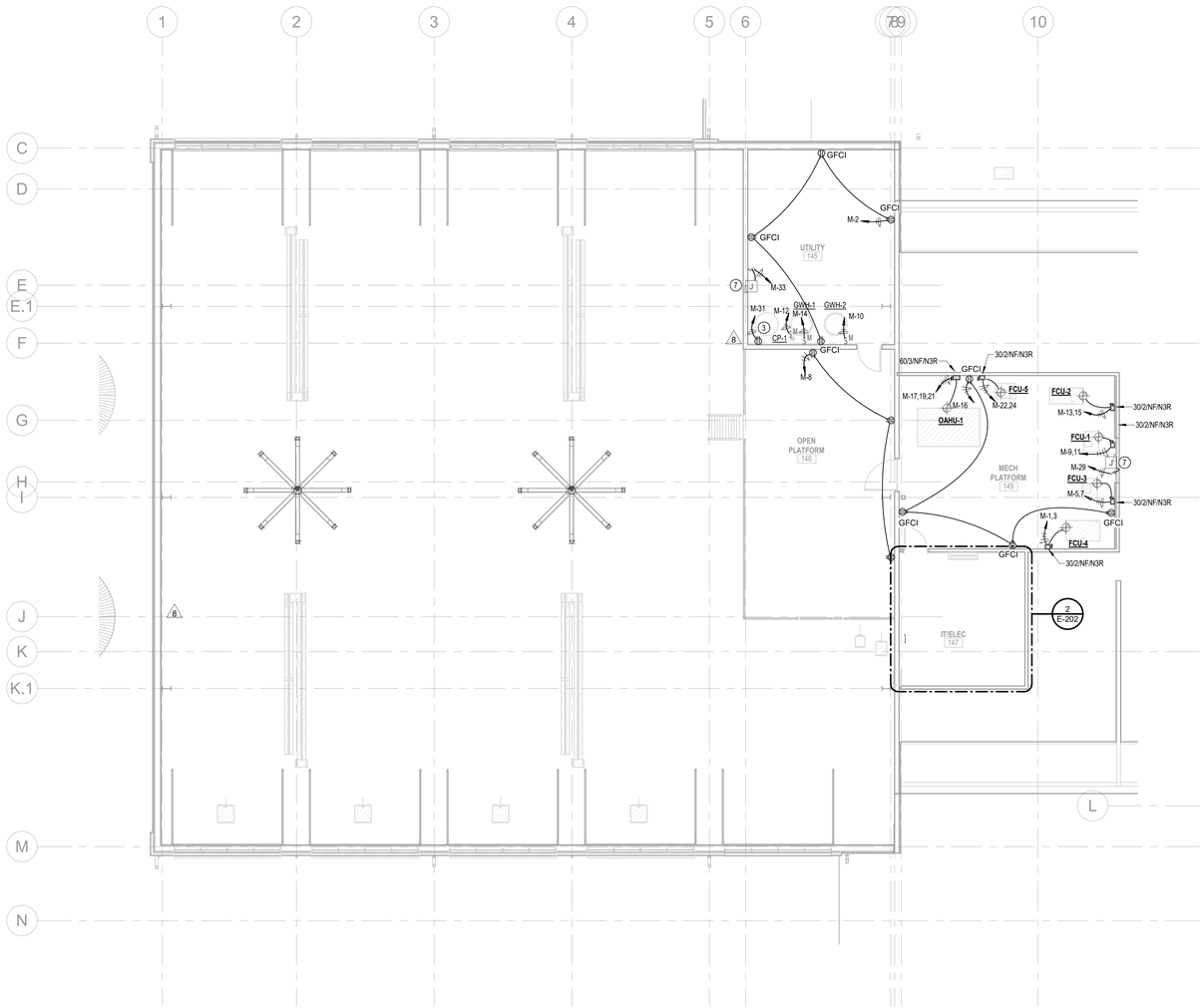
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POWER PLAN - LEVEL ONE

**E-201**




## 1 POWER PLAN - MEZZANINE

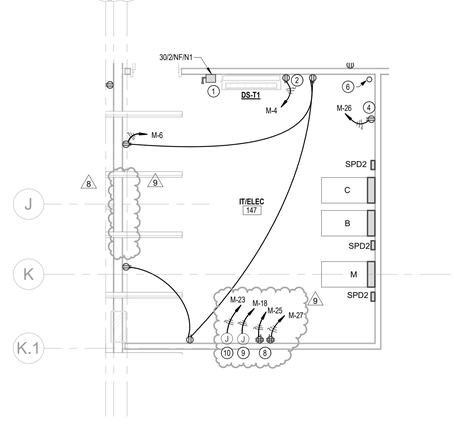
1/8" = 1'-0"

## ELECTRICAL GENERAL NOTES

A. REFER TO SHEET E-201 FOR ELECTRICAL GENERAL NOTES

## ELECTRICAL KEYED NOTES

1. DUCTELESS UNIT SHALL RECEIVE POWER FROM ASSOCIATED OUTDOOR CONDENSER. COORDINATE CONTROL AND ELECTRICAL WIRING CONNECTIONS BETWEEN THE TWO UNITS WITH DIVISION 23 INSTALLER.
2. PROVIDE RECEPTACLE HIGH ON WALL FOR DUCTLESS UNIT CONDENSER PUMP. COORDINATE ROUGH-IN LOCATION WITH DIVISION 23 INSTALLER.
3. 120V ELECTRICAL CONNECTION FOR OWNER PROVIDED AIR COMPRESSOR. COORDINATE FINAL LOCATION WITH OWNER PRIOR TO ROUGH-IN.
4. DEDICATED RECEPTACLE FOR ALERTING SYSTEM POWER MODULE AND UPS. REFER TO WESTNET DRAWINGS FOR FURTHER INFORMATION. COORDINATE FINAL LOCATION AND MOUNTING HEIGHT WITH ALERTING SYSTEM INSTALLER PRIOR TO ROUGH-IN.
5. NOT USED.
6. 2" EMPTY CONDUIT WITH PULL STRING UP TO ROOF FOR FUTURE ANTENNA. CONDUIT SHALL BE CAPPED ABOVE ROOF. COORDINATE EXACT PENETRATION LOCATION WITH ARCHITECT / OWNER. PROVIDE GROUND BAR WITH A DEDICATED GROUND WIRE TO MAIN GROUND BUS.
7. PROVIDE 120V ELECTRICAL CONNECTION AND DISCONNECT FOR ELECTRIC TRAP PRIMER. COORDINATE ALL ELECTRICAL WIRING AND FINAL LOCATION WITH DIVISION 22 INSTALLER.
8. DEDICATED RECEPTACLES FOR IT RACK EQUIPMENT COORDINATE EXACT LOCATIONS WITH TECHNOLOGY INSTALLER PRIOR TO ROUGH-IN.
9. 120V ELECTRICAL CONNECTION FOR SECURITY PANEL. COORDINATE EXACT LOCATION WITH SECURITY INSTALLER PRIOR TO ROUGH-IN.
10. 120V ELECTRICAL CONNECTION FOR ACCESS CONTROL PANEL. COORDINATE EXACT LOCATION WITH SECURITY INSTALLER PRIOR TO ROUGH-IN.




## 2 POWER PLAN - ENLARGED IT AND ELEC. ROOM

1/4" = 1'-0"

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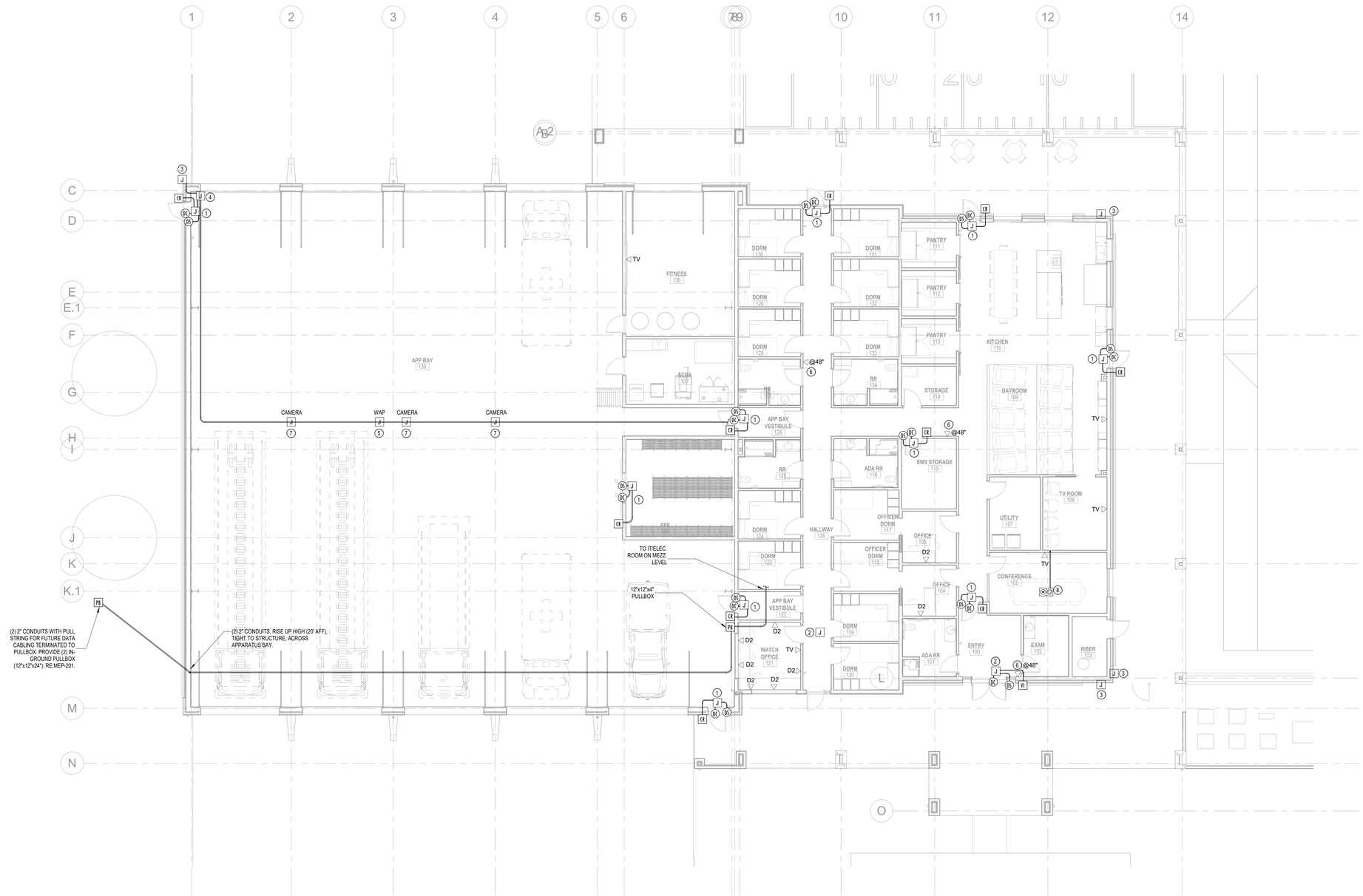
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ISSUE

| # | | |
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| 8 | ADDENDUM#4 | 04-NOV-2026 |
| 9 | ADDENDUM#5 | 11-NOV-2026 |

POWER PLAN - MEZZANINE

**E-202**




## 1 TECHNOLOGY ROUGH-IN PLAN

1/8" = 1'-0"

## TECHNOLOGY GENERAL NOTES:

A. PROVIDE A MINIMUM OF 1" CONDUIT FROM JUNCTION/BACK BOX, ROUTE UP WITHIN CONCEALED SPACES, AND ELBOW OVER TO ACCESSIBLE LOCATION ABOVE CEILING FOR ALL TECHNOLOGY/AV/SECURITY ROUGH-INS UNLESS INDICATED OTHERWISE. COORDINATE ALL ROUGH-IN LOCATIONS (PLACEMENT, HEIGHT, TERMINATIONS), SIZES, AND CONDUIT ROUTING WITH OWNER'S SECURITY INSTALLER AND OTHER TRADES PRIOR TO INSTALLATION. ALL CABLE TERMINATIONS SHALL BE MADE BY TECHNOLOGY/SECURITY INSTALLER HIRED BY OWNER.

## TECHNOLOGY ROUGH-IN KEYED NOTES

1. PROVIDE (1) 12"Wx12"Hx6"D MAIN JUNCTION BOX ABOVE CEILING AND (1) SINGLE-GANG JUNCTION BOX WITH SINGLE GANG PLASTER RING FOR CARD READER LOCATED AT EXTERIOR/UNRESTRICTED SIDE OF WALL. PROVIDE (1) 1" EMT CONDUIT FROM ACCESSIBLE CEILING ON SECURE SIDE OF DOOR INTO MAIN JUNCTION BOX ABOVE CEILING. PROVIDE (3) 3/4" EMT CONDUITS, EACH FROM MAIN JBOX TO: CARD READER JBOX, ELECTRIC DOOR STRIKE (DOWN DOOR FRAME), AND DOOR CONTACT. COORDINATE ALL ROUGH-IN LOCATIONS (PLACEMENT, HEIGHT, TERMINATIONS), SIZES, AND CONDUIT ROUTING WITH OWNER'S SECURITY INSTALLER AND OTHER TRADES PRIOR TO INSTALLATION. ALL CABLE TERMINATIONS SHALL BE MADE BY SECURITY INSTALLER HIRED BY OWNER.
2. PROVIDE (1) 12"Wx12"Hx6"D MAIN JUNCTION BOX ABOVE INTERIOR CEILING AND (1) SINGLE-GANG JUNCTION BOXES FOR INTERCOM LOCATED AT EXTERIOR WALL. PROVIDE (1) 1" EMT CONDUIT FROM ACCESSIBLE CEILING ON SECURE SIDE OF DOOR INTO MAIN JUNCTION BOX ABOVE CEILING. PROVIDE (3) 3/4" EMT CONDUITS, EACH FROM MAIN JBOX TO: INTERCOM J-BOX, ELECTRIC DOOR STRIKE (DOWN DOOR FRAME), AND DOOR CONTACT. COORDINATE ALL ROUGH-IN LOCATIONS (PLACEMENT, HEIGHT, TERMINATIONS), SIZES, AND CONDUIT ROUTING WITH OWNER'S SECURITY INSTALLER AND OTHER TRADES PRIOR TO INSTALLATION. ALL CABLE TERMINATIONS SHALL BE MADE BY SECURITY INSTALLER HIRED BY OWNER.
3. INSTALL JUNCTION BOX, PROVIDED BY OWNER'S SECURITY INSTALLER, ON EXTERIOR WALL FOR CAMERA. PROVIDE 3/4" CONDUIT FROM ACCESSIBLE SPACE ABOVE CEILING TO JUNCTION BOX (EXTERIOR WALL). COORDINATE EXACT ROUGH-IN LOCATION (POSITION, HEIGHT, TERMINATIONS), AND CONDUIT ROUTING WITH OWNER'S SECURITY INSTALLER AND OTHER TRADES PRIOR TO INSTALLATION.
4. PROVIDE JUNCTION BOX FOR SECURITY PATHWAYS. PROVIDE (2) 3/4" CONDUITS FROM JUNCTION BOX; (1) TO EXTERIOR CAMERA J-BOX AND (1) TO DOOR SECURITY J-BOX. COORDINATE EXACT ROUGH-IN LOCATION AND MOUNTING HEIGHT WITH OWNER'S SECURITY CONSULTANT/INSTALLER.
5. PROVIDE SURFACE MOUNTED JUNCTION BOX MOUNTED TO STRUCTURE AND (1) 3/4" CONDUIT FOR WIRELESS ACCESS POINT DEVICE. CONDUIT SHALL BE ROUTED BACK TO IT / ELEC. ROOM.
6. DATA DROP FOR TELEPHONE JACK.
7. PROVIDE (4) DOUBLE GANG JUNCTION BOXES, INLINE ON ONE CONTINUOUS TRUNK RUN (1-1/2" CONDUIT), SURFACE MOUNTED TO STRUCTURE; EXTEND 1-1/2" CONDUIT TO SECURITY J-BOX AS INDICATED ON PLAN. ROUTE 1-1/2" CONDUIT TO IT / ELEC. ROOM SECURITY PANEL. COORDINATE EXACT TERMINATION LOCATION WITH OWNER'S SECURITY CONSULTANT/INSTALLER.
8. PROVIDE (1) 1-1/2" CONDUIT FROM FLOOR BOX TO TV J-BOX ON WALL. COORDINATE FINAL LOCATIONS WITH OWNER'S TECHNOLOGY INSTALLER.

EMERALD MEP
TX FIRM No. F-24826
PROJECT No. 25018

PROFESSIONAL SEAL

STATE OF TEXAS
M. JACQUELINE CHANG
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2026-11-11

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DESIGN TEAM

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Civil
Hill Country Civil

Landscape
Evergreen Landscape Group

Structural
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MEP
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Technology
Imagine IT

Alerting
WestNET

# STATION #42

Hays County ESD #4

Wimberley, TX 78676

PROJECT No: **MA 25016**
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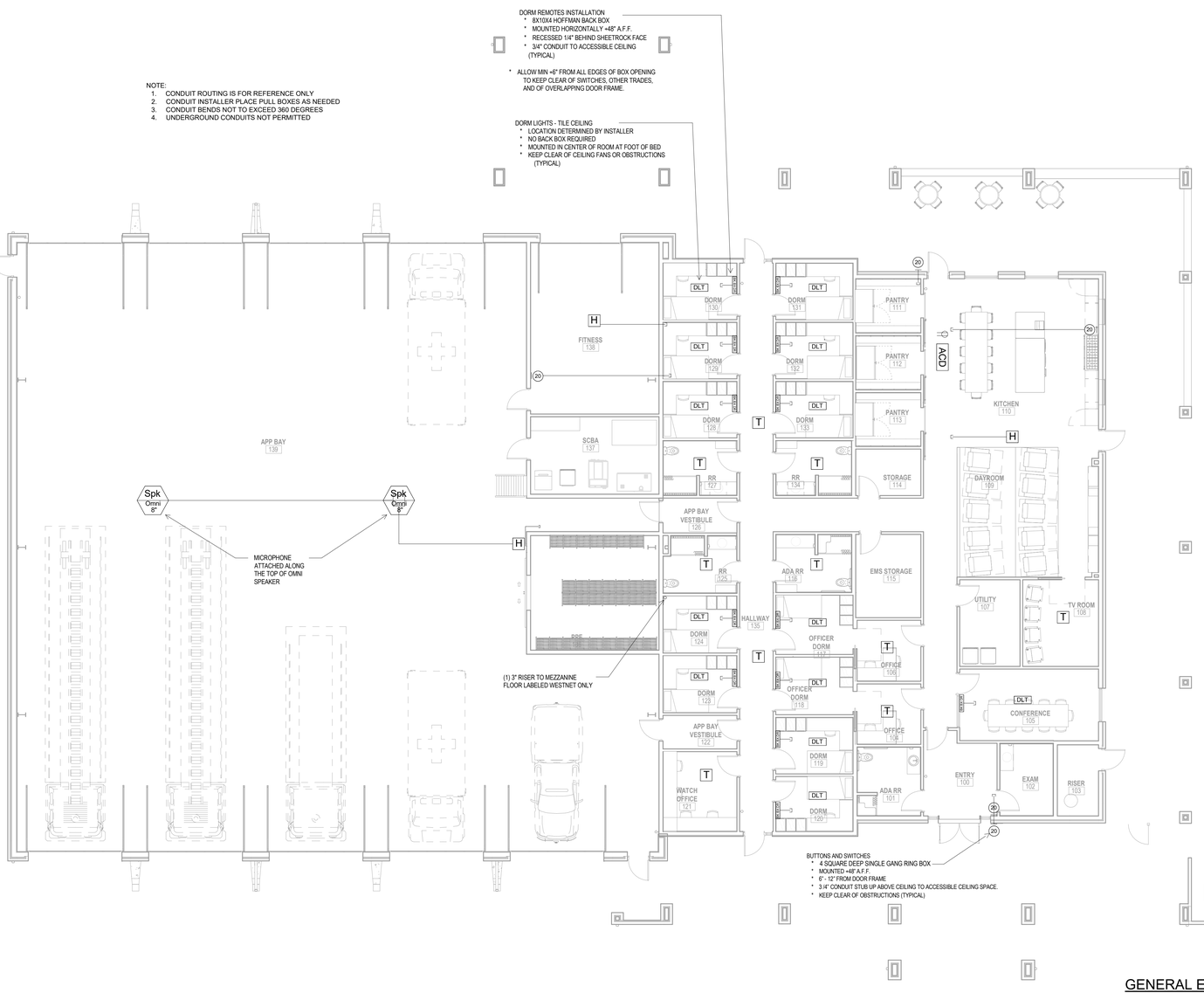
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8

TECHNOLOGY ROUGH-IN PLAN

**E-300**

9




## ALERT SYSTEM - 1ST FLOOR CONDUIT LAYOUT PLAN

SCALE: N.T.S.

## STATION ALERTING

SYMBOL LEGEND

| | |
|---|---|
| MCU | MASTER CONTROL UNIT |
| DLSP | DATA LINE SURGE PROTECTOR |
| TIM | TELEPHONE INTERFACE MODULE |
| CR | CONTROL REMOTE |
| RIU | RADIO ISOLATION UNIT |
| AUX | AUXILLIARY MODULE |
| PM UPS | POWER MODULE WITH UPS-BLACK (DEDICATED 120V CIRCUIT REQUIRED, INDIVIDUAL BREAKER RECOMMENDED) |
| BK BX ASLF | CUSTOM BACKBOX PROVIDED BY WESTNET |
| BK BX DR | DORM REMOTE BACKBOX PROVIDED WESTNET |
| DLT | DORM LITE ACOUSTIC CEILING MOUNT KIT |
| H | 8x10x4 HOFFMAN BACKBOX |
| T | ACOUSTIC CEILING KIT |
| J | JBOX |
| 4S | 4" SQUARE BOX |
| — | LOCATION OF DEVICE WALL MOUNTED |

## GENERAL NOTES

| | |
|---|---|
| 1 | DEVICES ARE TYPICAL AND FOR REFERENCE ONLY. |
| 2 | ALL BACK BOXES & CONDUITS ARE TO BE FLUSH MOUNTED UNLESS OTHERWISE SPECIFIED FOR NEW CONSTRUCTION. |
| 3 | DEVICES LOCATED IN ACOUSTICAL CEILINGS DO NOT REQUIRE BACKBOXES |
| 4 | DEVICES LOCATED IN ACOUSTICAL CEILINGS REQUIRE ACOUSTICAL WESTNET MOUNTING KIT (SSATKIT-A) |
| 5 | DEVICES ONLY LOCATED IN SHEETROCK OR EXPOSED CEILINGS REQUIRE HOFFMAN BRAND 8X10X4 BACKBOX |
| 6 | DEVICES ONLY LOCATED IN SHEETROCK OR EXPOSED CEILINGS REQUIRE APPROPRIATE WESTNET MOUNTING KIT (SURFACE MOUNT OR FLUSH MOUNT) FOR NEW CONSTRUCTION. |
| 7 | LOCATIONS OF DEVICES DETERMINED AT INSTALLATION BY INSTALLER FOR NEW CONSTRUCTION. |
| 8 | SEE ARCHITECTURAL SPECIFICATION FOR ALL ROUGH-IN AND INSTALLATION DETAILS FOR NEW CONSTRUCTION. |
| 9 | INSTALLER TO VERIFY WALL AND CEILING TYPE TO DETERMINE NEED FOR FLUSH OR SURFACE MOUNT INSTALLATION OF EQUIPMENT SPECIFIED FOR NEW CONSTRUCTION. |
| 10 | ALL WIRING AND DEVICES TO BE INSTALLED BY WESTNET. |
| 11 | ALL PENETRATION TO EXTERIOR DEVICES MUST BE WEATHERPROOF AND FIRE CAULKED FOR CONSTRUCTION BY OTHERS. |
| 12 | DEVICES LOCATED IN BATHROOM/SHOWER AREAS MUST BE VISIBLE FROM SHOWERS. INSTALLER TO FIELD VERIFY DEVICE LOCATION. (TYPICAL) |
| 13 | ALL DEVICES MUST BE KEPT CLEAR OF OBSTRUCTIONS & CEILING FAN BLADES. |
| 14 | IN ACOUSTICAL CEILING (T-BAR), WIRE CABLING IS FREE WIRE (NOT IN CONDUIT). |
| 15 | IN GYPSUM BOARD CEILING (SHEET ROCK / HARD LID), WIRE CABLING IN IN 3/4" CONDUIT UNLESS CONDUIT SIZE OTHERWISE NOTED. |
| 16 | IN EXPOSED AREAS ONLY 8X10X4 HOFFMAN BACK BOX MOUNTED AT +10'-0" A.F.F. MAX. WITH OPEN FACE DOWN IN CENTER OF ROOM WITH 3/4" CONDUIT TO ACCESSIBLE CEILING SPACE; KEEP CLEAR OF OBSTRUCTIONS. |
| 17 | A 5 OHM EARTH GROUND MUST BE CONNECTED TO THE RADIO ISOLATION UNIT IN THE COMMUNICATION RACK. |
| 18 | THE RADIO RECEIVING THE DISPATCH INFORMATION SHALL BE LOCATED WITHIN 6'-0" FT. OF THE RADIO ISOLATION UNIT. |
| 19 | INSTALLER TO PROVIDE ONE ADDITIONAL UNCONNECTED BLUE CAT5 CABLE WITH RJ45 CONNECTORS ON BOTH ENDS BETWEEN THE MCU LOCATION AND EACH ALERTING END POINT FOR NETWORK CONNECTIVITY. |
| 20 | All BUTTONS AND SWITCHES<br>* 4 SQUARE DEEP SINGLE GANG RING BOX<br>* MOUNTED +48" A.F.F.<br>* 6" - 12" FROM DOOR FRAME<br>* 3 /4" CONDUIT STUB UP ABOVE CEILING TO ACCESSIBLE CEILING SPACE.<br>* KEEP CLEAR OF OBSTRUCTIONS (TYPICAL)<br>*3/4" CONDUIT TO MCU LOCATION |

## GENERAL ELECTRICAL NOTES

A. ELECTRICAL CONTRACTOR SHALL PROVIDE CONDUIT, OUTLET BOXES, JUNCTION BOXES FOR ALL ALERTING SYSTEM SCOPE OF WORK. REFER TO WESTNET ALERTING SYSTEM DRAWINGS AND SPECIFICATIONS FOR ALL WORK REQUIRED. OMISSION OF THIS SCOPE FROM DIV 26 SCOPE OF WORK IS PROHIBITED.

B. ALERTING SYSTEM CONDUIT PLAN (SHEET AS3.1) PROVIDED FOR REFERENCE AND INITIAL COORDINATION. DEVICES SHOWN ARE NOT EXACT. ALL DEVICE LOCATIONS SHALL BE VERIFIED WITH FINAL ALERTING SYSTEM DOCUMENTS. ARCHITECTURAL MILLWORK, CASEWORK, AND GENERAL ELEVATION VIEWS.

C. LABEL ALL CIRCUITS AT ALL JUNCTION BOXES AND OUTLETS (AS DEFINED BY NEC) WITH TYPE-WRITTEN LABEL IDENTIFYING CIRCUIT ON THE BACK OF THE DEVICE COVER PLATES OR ON COVER OF JUNCTION BOX. IF A BOX HAS MULTIPLE CIRCUITS WITHIN, LABEL ALL CIRCUITS.

D. PROVIDE FIRE CAULK & SEAL FOR ALL FIRE-RATED PENETRATIONS.

E. PROVIDE 1-1/2" (MINIMUM UNLESS INDICATED OTHERWISE) EMPTY CONDUIT FOR SPECIALTY SYSTEMS WITH PULLSTRING BACK TO I.T. ROOM. COORDINATE LOCATION OF SPECIALTY DEVICES WITH ARCHITECT PRIOR TO INSTALLATION.

F. CONDUIT AND JUNCTION BOXES IN AREAS WITH EXPOSED STRUCTURE SHALL BE INSTALLED TIGHT TO STRUCTURE (OVERHEAD, WALLS, COLUMNS, ETC.), UNLESS INDICATED OTHERWISE ON STATION ALERTING PLANS, .

### WESTNET IN SYSTEM LAYOUT REVIEW

PROJECT: HAYS FIRE STATION # 42

DEPARTMENT: WIMBERLEY, TX

DATE SUBMITTED:

☐ Approved subject to notations and corrections as indicated.

____ Re-submit corrected Layout for our approval.

____ Re-submittal of Layout not required.

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EMERALD MEP

TX FIRM No. F-24826
PROJECT No. 25018

PROFESSIONAL SEAL

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Hays County ESD #4

Wimberley, TX 78676

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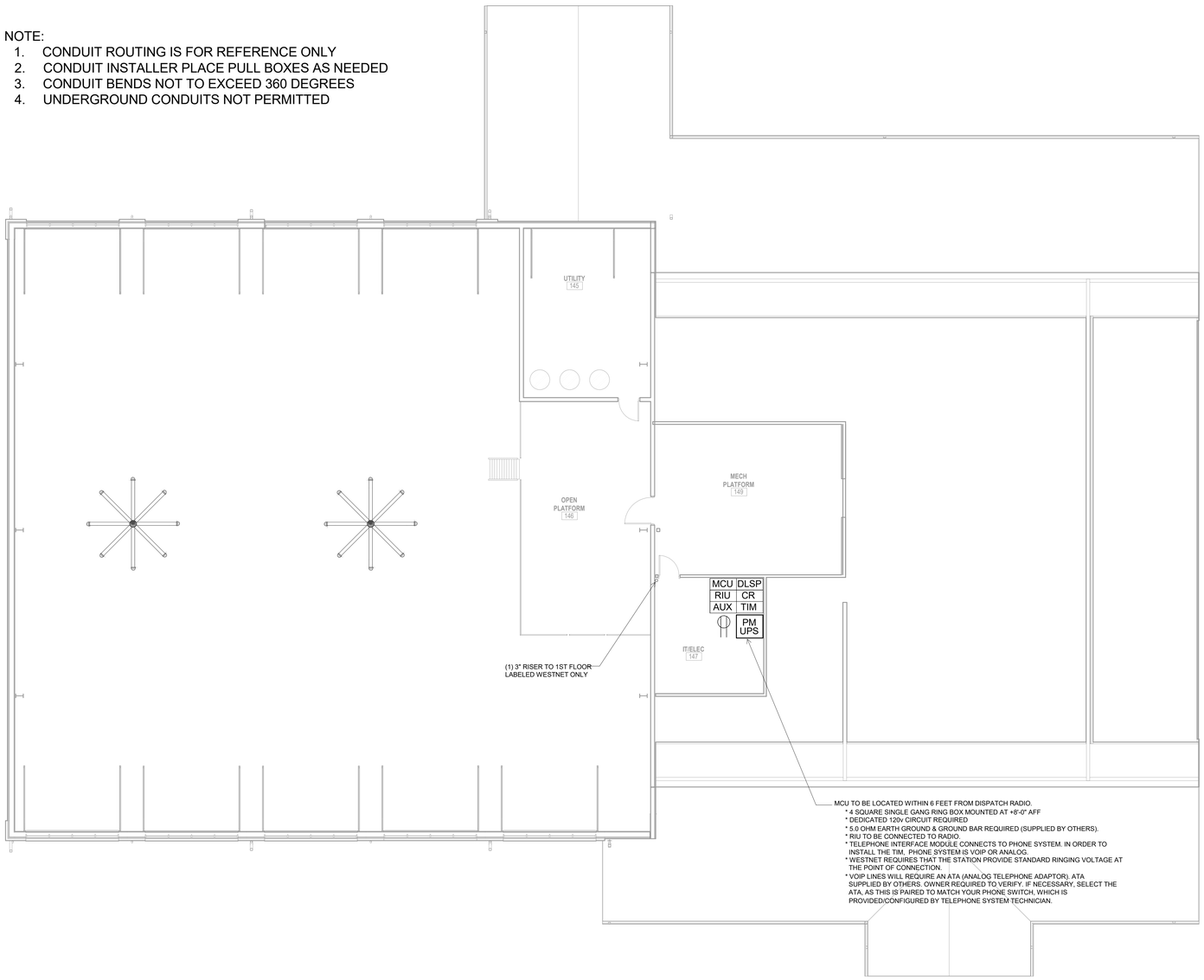
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ALERTING SYSTEM PLAN - LEVEL ONE

9

**E-301**

NOTE:
1. CONDUIT ROUTING IS FOR REFERENCE ONLY
2. CONDUIT INSTALLER PLACE PULL BOXES AS NEEDED
3. CONDUIT BENDS NOT TO EXCEED 360 DEGREES
4. UNDERGROUND CONDUITS NOT PERMITTED




## ALERT SYSTEM - MEZZANINE CONDUIT LAYOUT PLAN

SCALE: N.T.S.

## STATION ALERTING

SYMBOL LEGEND

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**WESTNET IN SYSTEM LAYOUT REVIEW**

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DEPARTMENT: WIMBERLEY, TX

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PROJECT No. 25018


PROFESSIONAL SEAL

STATE OF TEXAS
M. JACQUELINE CHANG
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LICENSED
PROFESSIONAL ENGINEER
2026-11-11

LOGO/CONTACT


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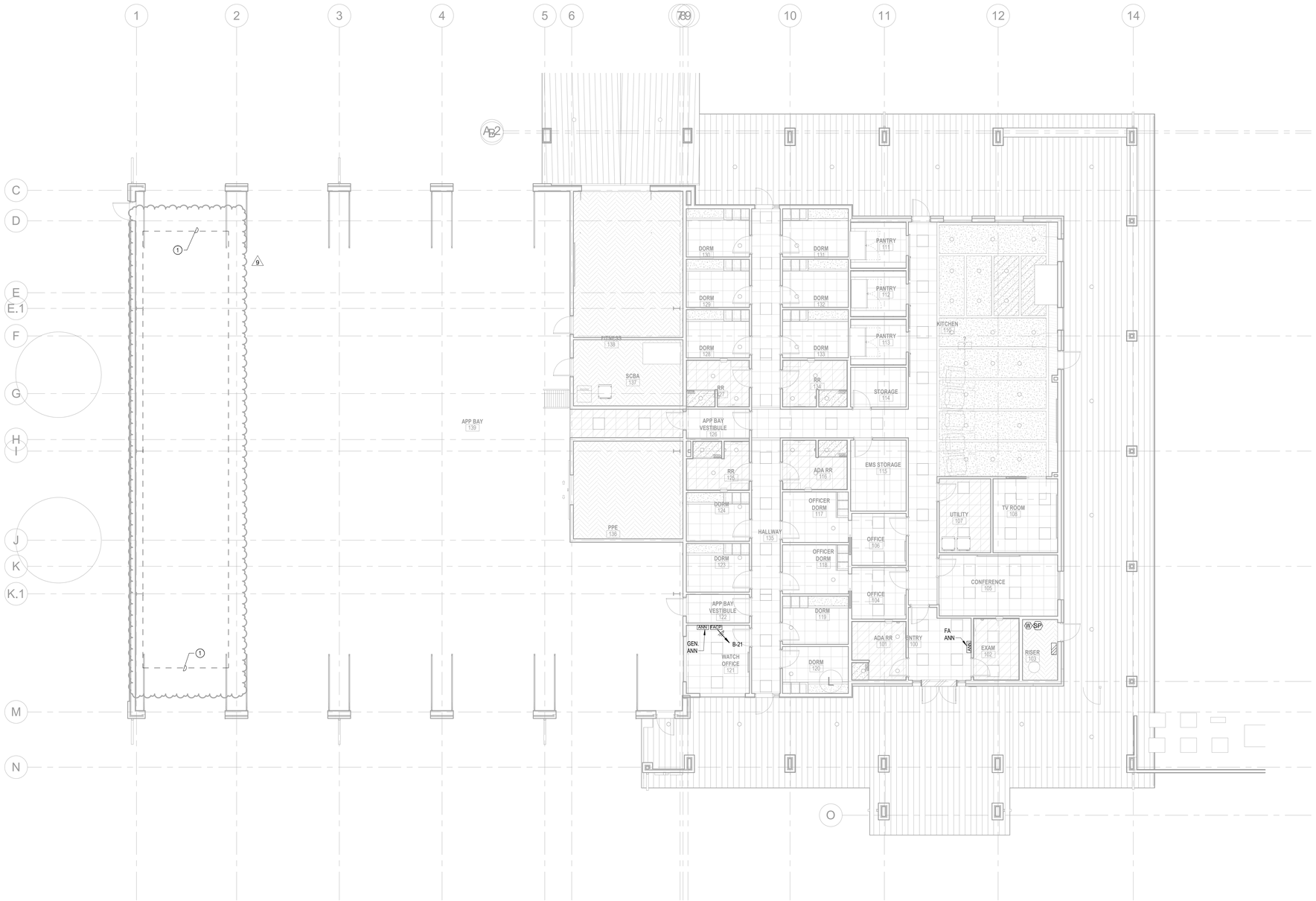
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ALERTING SYSTEM PLAN - MEZZANINE

9

**E-302**




## 1 FIRE ALARM PLAN - LEVEL ONE

1/8" = 1'-0"

## FIRE ALARM GENERAL NOTES

A. COMPLETE FIRE ALARM SYSTEM SHALL BE PROVIDED AS DELEGATED DESIGN IN ACCORDANCE WITH THE PERFORMANCE SPECIFICATION.

B. CONTRACTOR SHALL PROVIDE ADDITIONAL DEVICES AS REQUIRED BY FIRE ALARM SHOP DRAWINGS TO MEET CODE-MINIMUM DEVICE COVERAGE.

C. ALL CEILING MOUNTED DEVICES SHALL BE CENTERED IN THE CEILING TILE.

D. ALL FIRE ALARM VISUAL AND AUDIO/VISUAL DEVICES SHALL BE CONFIGURED TO PROVIDE CANDELA RATINGS IN ACCORDANCE WITH ADA & NFPA COVERAGES.

E. ALL VISUAL FIRE ALARM DEVICES SHALL BE 75 CD UNLESS NOTED OTHERWISE.

F. ALL WIRING FOR DEVICES IN EXPOSED STRUCTURE AREAS SHALL BE ROUTED WITHIN CONDUIT. NO WIRING SHALL BE ROUTED EXPOSED.

G. ELECTRICAL CONTRACTOR SHALL PROVIDE CONDUIT PATHWAYS FOR FIRE ALARM PLENUM CONDUCTORS WHERE REQUIRED TO TRANSIT HARD CEILING AREAS. CONDUIT RACEWAYS SHALL ALLOW ACCESS TO CONDUIT AT EACH END IN ACCESSIBLE LOCATIONS ABOVE CEILINGS.

## FIRE ALARM KEYED NOTES

9

1. PROVIDE SCOPE OF WORK WITHIN BOUNDARY UNDER BASE-BID & REMOVE UNDER DEDUCTIVE ALTERNATE #1. COORDINATE WITH AFFECTED TRADES.

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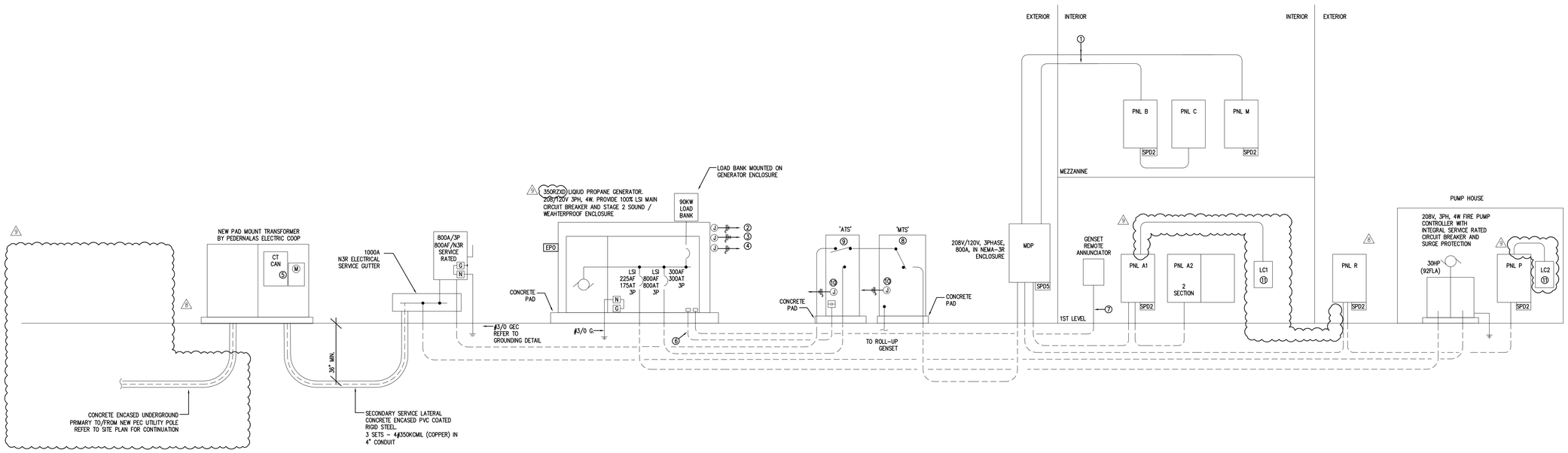
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FIRE ALARM PLAN - LEVEL ONE

**EF-201**




# ELECTRICAL ONE-LINE DIAGRAM

NOTE TO SCALE

## FEEDER SCHEDULE

| COPPER CONDUCTORS | | | | ALUMINUM CONDUCTORS | | |
|---|---|---|---|---|---|---|
| AMPERAGE | SETS | CONDUCTOR SIZE | CONDUIT (INCHES) | SETS | CONDUCTOR SIZE | CONDUIT (INCHES) |
| 30A | 1 | 4#10, 1#10 G. | 3/4"C | N/A | N/A | N/A |
| 40A | 1 | 4#8, 1#10 G. | 1"C | N/A | N/A | N/A |
| 50A | 1 | 4#8, 1#10 G. | 1"C | N/A | N/A | N/A |
| 60A | 1 | 4#6, 1#10 G. | 1"C | N/A | N/A | N/A |
| 70A | 1 | 4#4, 1#8 G. | 1 1/4"C | N/A | N/A | N/A |
| 80A | 1 | 4#4, 1#8 G. | 1 1/4"C | N/A | N/A | N/A |
| 90A | 1 | 4#3, 1#8 G. | 1 1/4"C | N/A | N/A | N/A |
| 100A | 1 | 4#3, 1#8 G. | 1 1/4"C | 1 | 4#1, 1#6 G. | 1 1/2"C |
| 125A | 1 | 4#1, 1#6 G. | 1 1/2"C | 1 | 4#2/0, 1#4 G. | 2"C |
| 150A | 1 | 4#1/0, 1#6 G. | 1 1/2"C | 1 | 4#3/0, 1#4 G. | 2"C |
| 175A | 1 | 4#2/0, 1#6 G. | 2"C | 1 | 4#4/0, 1#4 G. | 2 1/2"C |
| 200A | 1 | 4#3/0, 1#6 G. | 2"C | 1 | 4#250KCMIL, 1#4 G. | 2 1/2"C |
| 225A | 1 | 4#4/0, 1#4 G. | 2 1/2"C | 1 | 4#300KCMIL, 1#2 G. | 3"C |
| 250A | 1 | 4#250KCMIL, 1#4 G. | 2 1/2"C | 1 | 4#350KCMIL, 1#2 G. | 3"C |
| 300A | 1 | 4#350KCMIL, 1#4 G. | 3"C | 1 | 4#500KCMIL, 1#2 G. | 4"C |
| 350A | 1 | 4#500KCMIL, 1#3 G. | 3 1/2"C | 2 | 4#4/0, 1#1 G. | 2 1/2"C |
| 400A | 1 | 4#600KCMIL, 1#3 G. | 4"C | 2 | 4#250KCMIL, 1#1 G. | 2 1/2"C |
| 450A | 2 | 4#4/0, 1#2 G. | 2 1/2"C | 2 | 4#300KCMIL, 1#1/0 G. | 3"C |
| 500A | 2 | 4#250KCMIL, 1#2G. | 2 1/2"C | 2 | 4#350KCMIL, 1#1/0 G. | 3"C |
| 600A | 2 | 4#350KCMIL, 1#1G. | 3"C | 2 | 4#500KCMIL, 1#2/0 G. | 4"C |
| 700A | 2 | 4#500KCMIL, 1#1/0G. | 4"C | 3 | 4#350KCMIL, 1#3/0 G. | 3"C |
| 800A | 3 | 4#350KCMIL, 1#1/0G. | 4"C | 3 | 4#400KCMIL, 1#3/0 G. | 3 1/2"C |
| 1000A | 3 | 4#500KCMIL, 1#1/2G. | 4"C | 4 | 4#350KCMIL, 1#4 G. | 3"C |

FEEDER SCHEDULE NOTES:

1. ALUMINUM CONDUCTORS SHALL BE COMPRESSION TYPE CONDUCTORS AND SHALL USE PENETROX WITH COMPRESSION TERMINATION FITTINGS.
2. ELECTRICAL CONTRACTOR SHALL PROVIDE THE NUMBER OF LUGS AND PROPER LUG SIZES TO ACCEPT CONDUCTOR SIZES SHOWN.
3. GROUND NOT REQUIRED FOR SERVICE LATERAL.
4. WIRE SIZES INDICATED ON PLANS ARE FOR COPPER CONDUCTORS. BASE BID SHALL ALLOW ALUMINUM CONDUCTORS FOR BRANCH FEEDERS 100A AND LARGER. UNDER BID ALTERNATE #7 PROVIDE ONLY COPPER CONDUCTORS. (9)

**Load Analysis - Wimberley FS #42**
208 / 120, 3 -PHASE, 4 -WIRE

Date: 10/20/2026

| DESCRIPTION | | | | | | | NEC | KVA |
|---|---|---|---|---|---|---|---|---|
| LIGHTING: | | | | | | | | |
| INTERIOR = | | 16,981 | S.F. | X | 1.30 | W/S.F | 220.12 | 22.1 |
| EXTERIOR = | | 3,829 | VA | | | | | 4.8 |
| POWER: | | | | | | | | |
| RECEPTACLES = | | 16,981 | S.F. | X | 3 VA/SF | 50943 VA | 220.44 | |
| First | 10,000 V.A. | | X | 100% | | 10000 VA | | 10.0 |
| Remaining | 40943 V.A. | | X | 50% | | 20472 VA | | 20.5 |
| | | | | QTY: | 9 | | | |
| OVERHEAD DOORS (1.5HP)= | | 1,335 | VA | | | | | 12.0 |
| MISCELLANEOUS= | | 32,880 | VA | | | | | 32.9 |
| KITCHEN = | | 4,200 | VA | | | | 220.56 | 2.7 |
| WASHER EXTRACTOR (5HP) = | | 6,317 | VA | | | | | 6.3 |
| DRYING CABINET = | | 7,220 | VA | | | | | 7.2 |
| SCBA (10HP) | | 13,124 | VA | | | | | 13.1 |
| HVAC: | | | | | | | | |
| COOLING = | | 53,329 | VA | | | | | 53.3 |
| HEATING = | | 17,300 | VA | | | | | 0.0 |
| FANS = | | 16,440 | VA | | | | | 16.4 |
| PLUMBING: | | | | | | | | |
| WATER HEATER = | | 500 | VA | | | | | 0.5 |
| DRINKING FOUNTAIN = | | 500 | VA | | | | | 0.5 |
| CIRCULATING PUMP = | | 500 | VA | | | | | 0.5 |
| PUMPS: | | | | | | | | |
| FIRE PUMP = | | 30 | HP | | 92 F.L.A. | | | 33.2 |
| JOCKEY PUMP = | | 5 | HP | | 17.5 F.L.A. | | | 12.6 |
| 25% OF LARGEST MOTOR = | | 8,300 | VA | | | | | 8.3 |
| FUTURE BUILDING = | | 57,760 | VA | | | | | 57.8 |
| | | | | | | | TOTAL = | 314.7 |
| | | | | | | | FIRE PUMP: | 33.2 |
| | | | | | | | SERVICE CUTTER: | 281.5 |
| | | | | | | | TOTAL AMPS: | 873.7 |
| SQUARE FOOTAGE 16,981 | | | | | | | SERVICE SIZE: | 1000.0 |
| | | | | | | | SPARE AMPACITY: | 126.3 |

## ONE-LINE DIAGRAM GENERAL NOTES:

A. MANUFACTURER OF ELECTRICAL GEAR SHALL PROVIDE A COORDINATION STUDY FOR THE ENTIRE ELECTRICAL SYSTEM IN ORDER TO SET BREAKERS. REFER TO SPECIFICATIONS. MANUFACTURER SHALL ALSO PROVIDE A FAULT CIRCUIT STUDY FOR THE ENTIRE ELECTRICAL SYSTEM IN ORDER TO SELECT INTERRUPTING RATINGS OF ALL CIRCUIT BREAKERS, DISTRIBUTION PANELBOARDS, PANELBOARDS, ETC. A FULLY RATED SYSTEM SHALL BE USED. CONTRACTOR SHALL SUBMIT STUDIES FOR REVIEW BEFORE SUBMITTING ELECTRICAL DISTRIBUTION EQUIPMENT FOR REVIEW. REFER TO SPECIFICATION SECTION 26 05 73.

B. ALL CONDUCTORS SHALL BE COPPER UNLESS OTHERWISE SCHEDULED.

C. CONTRACTOR SHALL INSTALL FEEDERS BASED ON THE OVERCURRENT DEVICE RATING UNLESS OTHERWISE NOTED. CONTRACTOR SHALL REFER TO THE FEEDER SCHEDULE TO OBTAIN AND INSTALL THE FEEDERS REQUIRED.

D. SERVICE EQUIPMENT SHALL BE LEGIBLY MARKED IN THE FIELD WITH THE MAXIMUM AVAILABLE FAULT CURRENT AT THE TIME OF INSTALLATION AND CALCULATION. THE LABEL SHALL BE 2" X 3" IN SIZE AND SHALL BE BLUE LETTERING ON A CONTRASTING BACKGROUND. THIS LABEL SHALL ALSO INCLUDE THE DATE OF THE CALCULATION.

E. PRIOR TO INSTALLATION OF UNDERGROUND FEEDERS, THE ELECTRICAL CONTRACTOR SHALL SUBMIT AN UNDERGROUND ROUTING PLAN TO THE ENGINEER OF RECORD., INDICATING THE EXACT ROUTING PATH FOR ALL UNDERGROUND CONDUIT. INDICATE STUB-UP LOCATIONS, SIZE AND QUANTITY OF CONDUIT. ALL ELECTRICAL PANELS AND EQUIPMENT SHALL BE SHOWN ON THIS PLAN FOR REFERENCE OF CONDUIT TERMINATION.

F. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AND CONDUIT AS REQUIRED BY CENTERPOINT ENERGY FOR METERING PURPOSES.

## ONE-LINE DIAGRAM KEYED NOTES:

1. CONDUIT SHALL BE ROUTED AS HIGH AS POSSIBLE ACROSS APPARATUS BAY TO PANEL LOCATION. COORDINATE ROUTING WITH OTHER TRADES.
2. 120V JUNCTION BOX CONNECTION TO GENERATOR'S ALTERNATOR STRIP HEATER. FIELD COORDINATE EXACT LOCATION AND ADDITIONAL MANUFACTURER'S REQUIREMENTS WITH GENERATOR INSTALLER PRIOR TO ROUGH-IN.
3. 208V/1P JUNCTION BOX CONNECTION TO GENERATOR'S COOLANT HEATER. FIELD COORDINATE EXACT LOCATION AND ADDITIONAL MANUFACTURER'S REQUIREMENTS WITH GENERATOR INSTALLER PRIOR TO ROUGH-IN.
4. 120V JUNCTION BOX CONNECTION FOR GENERATOR BATTERY CHARGER. FIELD COORDINATE EXACT LOCATION AND ADDITIONAL MANUFACTURER'S REQUIREMENTS WITH GENERATOR INSTALLER PRIOR TO ROUGH-IN.
5. CONTRACTOR SHALL PROVIDE METER AND CT ENCLOSURE. UTILITY EQUIPMENT SHALL BE MOUNTED TO PAD MOUNT TRANSFORMER PER PEC STANDARDS. (8)
6. PROVIDE 1" EMPTY CONDUIT WITH PULL STRING TO 'ATS' FOR GENERATOR CONTROLS.
7. PROVIDE 1" EMPTY CONDUIT WITH PULL STRING TO GENERATOR ANNUNCIATOR. REFER TO POWER PLANS FOR LOCATION.
8. 800AMP, 4P, 4W MANUAL TRANSFER SWITCH 'MTS' WITH 65,000 AIC RATING. PROVIDE WITH NEMA 3R ENCLOSURE. 'MTS' SHALL BE PROVIDED WITH INTEGRAL QUICK CONNECTIONS. (8)
9. 800AMP, 4P, 4W AUTOMATIC TRANSFER SWITCH 'ATS' WITH 65,000 AIC RATING. PROVIDE WITH NEMA 3R ENCLOSURE. (8)
10. 120V JUNCTION BOX CONNECTION TO TRANSFER SWITCH ANTI-CONDENSATE STRIP HEATER. FIELD COORDINATE EXACT LOCATION AND ADDITIONAL MANUFACTURER'S REQUIREMENTS WITH GENERATOR INSTALLER PRIOR TO ROUGH-IN. REFER TO MEP SITE PLAN FOR ASSIGNED CIRCUIT.
11. PROVIDE LIGHTING CONTACTOR NEAR ASSOCIATED PANEL SERVING EXTERIOR LIGHT FIXTURES. REFER TO POWER, LIGHTING AND MEP SITE PLANS FOR CIRCUITS TIED TO CONTACTOR. (8) (9)

## SURGE PROTECTION DEVICE (SPD) SCHEDULE

| MARK | MANUFACTURER | MODEL # | VOLTAGE | PER MODE/PHASE RATING | PHASE | BREAKER SIZE | STT TIER GUIDE CABLE SIZE |
|---|---|---|---|---|---|---|---|
| SPD2 | SOUTHERN TIER TECHNOLOGIES | T45120Y100AWAJ2S | 208/120V | 100/200kA | 3 | 30A/3P | 5 #10, 3/4" C. |
| SPD5 | SOUTHERN TIER TECHNOLOGIES | T45120Y125ALAM1C | 208/120V | 125/250kA | 3 | 60A/3P | 5 #6, 1 1/2" C. |

*ALL T45 SERIES SPD ENCLOSURES INSTALLED IN FOOD SERVICE AREAS (IE. KITCHENS, SNACK BARS, FOOD LABS, CULINARY ARTS ROOMS AND LIFE SKILLS ROOMS) SHALL BE RECESSED IN THE WALL. PROVIDE RECESSED WALL KIT #RKSS.

## FLOOR BOX SCHEDULE (9)

| ID | MANUFACTURER | #GANGS / OPENING DIMENSION | FLOOR BOX MODEL # | KNOCK OUTS | PLATE(S) MODEL# | COVER MODEL# | COVER FINISH | DESCRIPTION |
|---|---|---|---|---|---|---|---|---|
| FB6 | HUBBELL | 2 GANG / 6" ROUND | CFB2G30RCR | (2) REMOVEABLE KNOCK OUT PLATES, 1 PER GANG (1/2" TO 2") | (1) FBMPREC (DECORA) (1)FBMPSKS (KEYSTONE) | CFBS1R6CVR | STAINLESS STEEL | 2 GANG, 16 GAUGE GALVANIZED SHEET METAL FLOOR BOX WITH FUSION BONDED EPOXY COATING FOR SLAB ON GRADE INSTALLATIONS WITH (1) DECORA PLATE FOR POWER RECEPTACLE, (1) SIX OPENING KEYSTONE PLATE FOR DATA AND 7.5" ROUND 0.15" THICK CAST ALUMINUM COVER PLATE. 3" MINIMUM POUR DEPTH. PROVIDE 2" ZINC CONDUIT HUB #CFSHUB2 WHEN 2" CONDUIT CONNECTION IS REQUIRED. |

EMERALD MEP
TX FIRM No. F-24826
PROJECT No. 25018

PROFESSIONAL SEAL

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Landscape
Evergreen Landscape Group

Structural
Matrix Structural

MEP
Emerald MEP

Technology
Imagine IT

Alerting
WestNET

**STATION #42**
Hays County ESD #4
Wimberley, TX 78676

PROJECT No: **MA 25016**
DATE: **20-OCT-2026**

ISSUE (8)

| | | |
|---|---|---|
| 1 | 100% DD | 06-JAN-2026 |
| 2 | 50% CD | 23-FEB-2026 |
| 3 | 75% CD | 06-APR-2026 |
| 4 | 98% CD | 04-MAY-2026 |
| 5 | IFP | 01-JUN-2026 |
| 6 | IFB | 20-OCT-2026 |
| 8 | ADDENDUM#4 | 04-NOV-2026 |
| 9 | ADDENDUM#5 | 11-NOV-2026 |

ELECTRICAL ONE-LINE DIAGRAM

**E-401**

# STANDARD SEQUENCE OF OPERATIONS

| ROOM TYPE | OCCUPANCY SENSOR: AUTO ON | OCCUPANCY SENSOR: MANUAL ON (VACANCY) | OCCUPANCY SENSOR: AUTO OFF (20MIN MAX) | OCCUPANCY SENSOR: PARTIAL OFF AT NORMAL HOURS | OCCUPANCY SENSOR: AUTO OFF AFTER HOURS (30MIN MAX) | TIME SWITCH: TIME ON | TIME SWITCH: TIME OFF | TIME SWITCH: ASTRONOMIC OR PHOTOCELL ON/OFF | LT REDUCT: AUTO STEP CONTROL WITH OFF | LT REDUCT: AUTO CONTINUOUS DIM WITH OFF | MANUAL CONTROL: MANUAL BI-LEVEL REDUCTION CONTROL | MANUAL CONTROL: MANUAL CONTINUOUS DIM CONTROL | MANUAL CONTROL: MANUAL ON/OFF SWITCH | MANUAL DIMMER SWITCH | DISPLAY, ACCENT, TASK CONTROL | SEQUENCE OF OPERATION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Entry | 100% | • | 20 MIN | | | | | | • | | • | | | | | Auto On 100%. Occupancy sensor Auto Off; Manual control. |
| Conference Room | 50% | • | 20 MIN | | | | | | • | | • | | • | | | Auto On 50%; Occupancy sensor Auto Off; Manual control and ≥50% light reduction with two on/off controls; use dimmer switch. |
| Pantry | 50% | | 20 MIN | | | | | | • | | • | | | | | Auto On 50%; Occupancy sensor Auto Off; Manual control and ≥50% light reduction with two on/off controls. |
| ADA Restroom | 100% | | 20 MIN | | | | | | | | • | | | | | Auto On 100%. Occupancy sensor Auto Off; Manual control. |
| Storage Room | 50% | | 20 MIN | | | | | | • | | • | | | | | Auto On 50%; Occupancy sensor Auto Off; Manual control and ≥50% light reduction with two on/off controls. |
| Fitness Room | 50% | • | 20 MIN | | | | | | • | | • | | | | | Auto On 50%; Occupancy sensor Auto Off; Manual control and ≥50% light reduction with two on/off controls. |
| Building Façade / Landscape / Flag Pole | | | | | | DAWN | DUSK | • | | | | | | | | Dusk Auto On with astro time switch or photocell; Dawn Auto Off with astro time switch or photocell. |
| Parking / Site Lighting | | | | | | DAWN | DUSK | • | | | | | | | | Dusk Auto On with astro time switch or photocell; Dawn Auto Off with astro time switch or photocell. |

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•= Designation for code compliant default control design.

## LIGHTING FIXTURE SCHEDULE

| TYPE | MANUFACTURE | MODEL | MOUNTING | NO. OF LAMPS | LAMPS | VOLTAGE | WATTAGE | 9 DESCRIPTION |
|---|---|---|---|---|---|---|---|---|
| B | METALUX | 22CBRK-31-UNV-L840-CD1-U | RECESSED | 1 | 4K LED | 120 V | 27 VA | 2X2 LED TROFFER PANEL FIXTURE |
| BE | METALUX | 22CBRK-31-UNV-L840-CD1-U-CBRK-EBP14WLNS | RECESSED | 1 | 4K LED | 120 V | 27 VA | SAME AS 'B1' EXCEPT WITH BATTERY BACK UP |
| CFL | HUNTER | ANISTEN 44IN FINISH (52490) | CEILING | 1 | LED | 120 V | 28 VA | CEILING FAN WITH LIGHT KIT |
| D1 | HALO | HSICAT-5125BKBB | RECESSED | 1 | 4K LED | 120 V | 17 VA | 6" CAN HOUSING. FIXTURE SHALL UTILIZE E26 SOCKET ADAPTOR. PROVIDE WITH 4000K LED BULB |
| D2 | HALO | HSICAT-5145WH | RECESSED | 1 | 4K LED | 120 V | 17 VA | 6" CAN HOUSING. FIXTURE SHALL UTILIZE E26 SOCKET ADAPTOR. PROVIDE WITH 4000K LED BULB |
| D3 | HALO | HSICAT-5165BK | RECESSED | 1 | 27K LED | 120 V | 17 VA | 6" CAN HOUSING. PROVIDE WITH ADJUSTABLE GIMBAL TRIM. FIXTURE SHALL UTILIZE E26 SOCKET ADAPTOR. PROVIDE WITH 2700K LED BULB |
| D4 | HALO | HSICAT-5145WH 9 | RECESSED | 1 | 27K LED | 120 V | 17 VA | 6" CAN HOUSING. FIXTURE SHALL UTILIZE E26 SOCKET ADAPTOR. PROVIDE WITH 2700K LED BULB |
| EM1 | SURE-LITES | AP2SQLED-1-BK | WALL | 1 | LED | 120 V | 2 VA | NORMALLY OFF. EMERGENCY LIGHT, TWO SQUARE LED HEADS |
| EM2 | EVENLITE | WLEM-BK-CT 9 | WALL | 1 | LED | 120 V | 2 VA | NORMALLY OFF. EMERGENCY ONLY LIGHT FIXTURE |
| F1 | METALUX | 4SNX-5TSL-FDL-UNV-L940-CD-1-U / AYC-CHAIN/SET-BLK-U | SUSPENDED | 1 | 4K LED | 120 V | 40 VA | 4FT LED STRIP FIXTURE. PROVIDE WITH SUSPENSION KIT |
| F1E | METALUX | 4SNX-5TSL-FDL-UNV-L940-CD-1-1-ELW-U / AYC-CHAIN/SET-BLK-U | SUSPENDED | 1 | 4K LED | 120 V | 40 VA | SAME AS 'F1' EXCEPT WITH BATTERY BACK UP |
| F2E | METALUX | 4SNX-5TSL-FDL-UNV-L940-CD-1-BLK-U-EL14W | SURFACE | 1 | 4K LED | 120 V | 40 VA | 4FT LED STRIP FIXTURE WITH BATTERY BACK UP |
| H | METALUX | EZBY-1830C3-MV-BLK-LOW-4000K | SUSPENDED | 1 | 4K LED | 120 V | 152 VA | 13" ROUND HIGH BAY FIXTURE |
| HE | METALUX | EZBY-1830C3-MV-BLK-LOW-4000K / EBP-RM40R | SUSPENDED | 1 | 4K LED | 120 V | 152 VA | SAME AS 'H' EXCEPT WITH REMOTE BATTERY BACK UP |
| L | NULITE | RR4-D-FRF-13-L-40-UNV-D-WLX-1-1-BK-HEX(36") 9 | SURFACE | 1 | 4K LED | 120 V | 58 VA | 36" SURFACE MOUNT HEX FIXTURE |
| R | WAC | W-LED101-30-WT | RECESSED | 1 | 30K LED | 120 V | 10 VA | DORM CORRIDOR STEP LIGHTS |
| S1 | MCGRAW-EDISON | GALN-SB4B-727-U-T4FT-BK-L/HSS-SB 9 | POLE | 1 | 27K LED | 208 V | 147 VA | SINGLE FIXTURE HEAD POLE LIGHT WITH HOUSE SIDE SHIELD. PROVIDE WITH KW INDUSTRIES ROUND STRAIGHT POLE WITH BASE COVER #RSP20-4-7-BLACK-DM10-BC |
| S2 | MCGRAW-EDISON | GALN-SB4B-727-U-T2-BK-L/HSS-SB 9 9 | POLE | 1 | 27K LED | 208 V | 147 VA | SINGLE FIXTURE HEAD POLE LIGHT WITH HOUSE SIDE SHIELD. PROVIDE WITH KW INDUSTRIES ROUND STRAIGHT POLE WITH BASE COVER #RSP20-4-7-BLACK-DM10-BC |
| W1E | MCGRAW-EDISON | GKO-PE1B-727-U-T3-BK-CBP-PBHSS 9 | WALL | 1 | 27K LED | 120 V | 48 VA | WALL PACK FIXTURE WITH BATTERY BACK UP, HOUSE SIDE SHIELD 9 |
| W2 | FC LIGHTING | FCC400R-14-WM-UNV-927-10L-BKE-25-LD-CV | WALL | 1 | 27K LED | 120 V | 12 VA | DECORATIVE WALL SCONCE |
| W2E | FC LIGHTING | FCC400R-14-WM-UNV-927-10L-BKE-25-LD-CV/BBUR | WALL | 1 | 27K LED | 120 V | 12 VA | SAME AS 'W2' EXCEPT WITH REMOTE BATTERY PACK |
| W3 | LUMARK | NHRS50USBK - NHRS0-SK-BK | WALL | 1 | LED | 120 V | 24 VA | WALL MOUNT LED FLOOD LIGHT WITH SLIPFITTER KIT |
| X | EVENLITE | SOVII-AC-G-1C-BK-RC-UC-OPTIONS | CEILING | 1 | LED | 120 V | 5 VA | CLEAR LED EXIT SIGN WITH RED LETTERING. EXIT SIGNS IN APPARATUS BAY SHALL BE WALL MOUNTED |

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LIGHTING SCHEDULES NOTE:
1. FOR ALL LIGHTING INQUIRES CONTACT MICHELLE CRUZ AT PETERSON, SCHARCK AND ASSOCIATES (PSA) - MCRUZ@PSALIGHTING.COM
8 2. PROVIDE KW INDUSTRIES ROUND STRAIGHT POLE WITH BASE COVER #RSP20-4-7-BLACK-DM2180-BC FOR TWIN HEAD TYPE 'S1' FIXTURE. REFER TO SITE PLAN FOR LOCATION.

## LIGHTING CONTROLS DEVICE SCHEDULE

| TYPE | DESCRIPTION | COMMENTS |
|---|---|---|
| S $S^3$ $S^4$ | LINE VOLTAGE SWITCH. | '3' INDICATES THREE WAY SWITCHING. '4' INDICATES FOUR WAY SWITCHING. |
| 8 $S^{3D}$ | LINE VOLTAGE DIMMER WITH 3-WAY SWITCH | 3-WAY DIMMER FOR USE IN DAYROOM / KITCHEN AREA. PROVIDE ON/OFF, SLIDE DIMMER COMBINATION. COORDINATE DIMMING TYPE WITH FINAL FIXTURE AND LAMP SELECTION TO ENSURE COMPATIBILITY |
| $S^{DR}$ | LINE VOLTAGE DIMMER SWITCH | DIMMER FOR USE IN TV ROOM. PROVIDE ON/OFF, SLIDE DIMMER COMBINATION. COORDINATE DIMMING TYPE WITH FINAL FIXTURE AND LAMP SELECTION TO ENSURE COMPATIBILITY |
| $S^{MC}$ | LINE VOLTAGE MOMENTARY CONTACT SWITCH. | |
| $S^{T}$ | LINE VOTAGE SPRING WOUND TIMER SWITCH. | RATED FOR 120/277VAC.<br>USER PROGRAMMABLE FOR 0MIN-4HR TIME-OUT SETTINGS. |
| $S^{OC1}$ | LINE VOLTAGE WALL MOUNT DUAL TECHNOLOGY OCCUPANCY SENSOR | SENSOR SHALL BE SET TO VACANCY MODE |
| $S^{OC2}$ | LINE VOLTAGE WALL MOUNT DUAL TECHNOLOGY OCCUPANCY SENSOR | SENSOR SHALL BE SET TO OCCUPANCY MODE |
| $S^{LV}$ | LOW VOLTAGE MANUAL CONTROL. | CONNECT TO POWER PACK OR ROOM CONTROLLER IF OCCUPANCY SENSORS ARE INDICATED ON PLAN. PROVIDE MULTI-BUTTON SWITCH AS REQUIRED PER SWITCH LEGS SHOWN ON PLANS. |
| $S^{D}$ | LOW VOLTAGE SWITCH WITH 0-10V DIMMER | PROVIDE MULTI-BUTTON SWITCH AS REQUIRED PER SWITCH LEGS SHOWN ON PLANS. PROVIDE POWER PACKS OR ROOM CONTROLLERS AS REQUIRED. |
| OC1 | CEILING MOUNTED DUAL TECH OCCUPANCY SENSOR. | SET TO VACANCY MODE. PROVIDE POWER PACKS AS NEEDED. |
| OC2 | CEILING MOUNTED DUAL TECH OCCUPANCY SENSOR. | SET TO OCCUPANCY MODE. PROVIDE POWER PACKS AS REQUIRED. |

NOTES:
1. GREENGATE IS THE BASIS OF DESIGN.
2. THE LIGHTING CONTROLS SCHEDULED ARE THE BASIS OF DESIGN. IT IS NOT INTENDED TO LIMIT COMPETITION FROM EQUAL MANUFACTURERS. ALL BIDDERS SHALL SUBMIT THEIR PROPOSED LIGHTING CONTROLS IN SUBMITTAL FORM A MINIMUM OF 10 BUSINESS DAYS PRIOR TO BID DATE FOR REVIEW. APPROVED LIGHTING CONTROL SYSTEMS WILL BE ISSUED IN AN ADDENDUM.

EMERALD MEP
TX FIRM No. F-24826
PROJECT No. 25018

PROFESSIONAL SEAL

STATE OF TEXAS
M. JACQUELINE CHANG
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2026-11-11

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Hill Country Civil

Landscape
Evergreen Landscape Group

Structural
Matrix Structural

MEP
Emerald MEP

Technology
Imagine IT

Alerting
WestNET

# STATION #42

Hays County ESD #4

Wimberley, TX 78676

PROJECT No: **MA 25016**
DATE: **20-OCT-2026**

ISSUE 8

| | | |
|---|---|---|
| 1 | 100% DD | 06-JAN-2026 |
| 2 | 50% CD | 23-FEB-2026 |
| 3 | 75% CD | 06-APR-2026 |
| 4 | 98% CD | 04-MAY-2026 |
| 5 | IFP | 01-JUN-2026 |
| 6 | IFB | 20-OCT-2026 |
| 8 | ADDENDUM#4 | 04-NOV-2026 |
| 9 | ADDENDUM#5 | 11-NOV-2026 |

LIGHTING SCHEDULES

**E-501**

## Panelboard MDP

42000 AIC Rating; X New; Existing

120/208 Wye Volt, 3 Phase, 4 Wire; 1 Section; Type 3R -Nema Rating | Mains Type: MCB | 800 A MCB; 800 A BUS (Copper); ISO. GRND. BUS | X Single; Double; Feed - Thru | Mounting: X Surface; Flush

| Note | Load... | Type | Description | Wire | CB | CKT | CKT | CB | Wire | Description | Type | Load... | N... |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 90700 VA | Spare; L; R; SP; ... | A1 | 600 | 400 A | 1 | 2 | 200 A | 3/0 | B | Spare; L; R; SP; ... | 42790 VA | |
| | | | | | | 3 | 4 | | | | | | |
| | | | | | | 5 | 6 | | | | | | |
| | 17655 VA | Spare; L; R; SP;... | M | 1/0 | 150 A | 7 | 8 | 225 A | 350 | R | Spare; L; R; SP;... | 58732 VA | |
| | | | | | | 9 | 10 | | | | | | |
| | | | | | | 11 | 12 | | | | | | |
| | 0 VA | -- | Spare | | 20 A | 13 | 14 | -- | | Space | -- | 0 VA | |
| | 0 VA | -- | Spare | | 20 A | 15 | 16 | -- | | Space | -- | 0 VA | |
| | 0 VA | -- | Spare | | 20 A | 17 | 18 | -- | | Space | -- | 0 VA | |
| | 0 VA | -- | Spare | | 20 A | 19 | 20 | -- | | Space | -- | 0 VA | |
| | 0 VA | -- | Spare | | 20 A | 21 | 22 | -- | | Space | -- | 0 VA | |
| | 0 VA | -- | Spare | | 20 A | 23 | 24 | -- | | Space | -- | 0 VA | |
| | 57760 VA | SP | FUTURE BUILDING | 3/0 | 200 A | 25 | 26 | 60 A | 6 | SPD5 | SP | 0 VA | |
| | | | | | | 27 | 28 | | | | | | |
| | | | | | | 29 | 30 | | | | | | |

| N.E.C. (2020) | Load Type | Conn. | Fct. | Diversity | N.E.C. (2020) | Load Type | Conn. | Fct. | Diversity |
|---|---|---|---|---|---|---|---|---|---|
| 220.44 | (R)Receptacle | 51906 VA | 59.63% | 30953 VA | 210.20(a) | (L)Lighting | 8052 VA | 125.00% | 10065 VA |
| 220.56 | (K)Kitchen | 5700 VA | 65.00% | 3705 VA | | (EL)Ext. Ltg. | 3429 VA | 125.00% | 4286 VA |
| 220.60 | (C)Cooling | 53329 VA | 100.00% | 53329 VA | 620.14 | (E)Elevators | | | |
| 220.60 | (H)Heating | 17300 VA | 100.00% | 0 VA | | (WH)Wat. Htr. | | | |
| 220.60 | (F)Fans | 16440 VA | 100.00% | 16440 VA | 220.5 | (MT)Lrg. Motor | | | |
| | (M)Misc. | 68981 VA | 100.00% | 68981 VA | | (SP)Sub Pnl. | 57760 VA | 100.00% | 57760 VA |

Total Connected Load: 282897 VA VA = 785 A
Total Load (Diversified): 245519 VA VA = 681 A
Location of Panel: EXTERIOR

## Panelboard A1

22000 AIC Rating; X New; Existing

120/208 Wye Volt, 3 Phase, 4 Wire; 1 Section; Type 3R -Nema Rating | Mains Type: MCB | 400 A MCB; 400 A BUS (Copper); ISO. GRND. BUS | X Single; Double; Feed - Thru | Mounting: X Surface; Flush

| NOTE | LOAD (VA) | TYPE | DESCRIPTION | WIRE | CB | CKT | CKT | CB | WIRE | DESCRIPTION | TYPE | LOAD (VA) | NOTE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 540 VA | R | R - PPE | 12 | 20 A | 1 | 2 | 20 A | 12 | R - EXERCISE MACHINE | R | 180 VA | |
| 1 | 180 VA | R | R - ICE MACHINE | 12 | 20 A | 3 | 4 | 20 A | 12 | FITNESS ROLL UP DOOR | M | 1680 VA | |
| | 2000 VA | R | R - DRYER | 10 | 30 A | 5 | 6 | 20 A | 12 | R - EXERCISE MACHINE | R | 180 VA | |
| | | | | | | 7 | 8 | 20 A | 12 | R - FITNESS | R | 720 VA | |
| | 180 VA | R | R - SCBA | 12 | 20 A | 9 | 10 | 20 A | 12 | R - EXERCISE MACHINE | R | 180 VA | |
| | 11624 VA | M | SCBA | 6 | 60 A | 11 | 12 | 20 A | 12 | R - EXERCISE MACHINE | R | 180 VA | |
| | | | | | | 13 | 14 | 35 A | 8 | DRYING CABINET | M | 9000 VA | |
| | | | | | | 15 | 16 | | | | | | |
| | 3415 VA | M | PUMP CONTROLLER | 12 | 20 A | 17 | 18 | | | | | | |
| | | | | | | 19 | 20 | 20 A | 12 | R - WASHER | R | 180 VA | 1 |
| | 900 VA | H | PUMP HEATER | 12 | 20 A | 21 | 22 | 20 A | 12 | ELEC. TRAP PRIMER | M | 180 VA | |
| | 104 VA | EL | L - EXT CANOPY | 12 | 20 A | 23 | 24 | 35 A | 8 | EXTRACTOR | M | 6317 VA | |
| | 192 VA | EL | L - EXT. WALL | 12 | 20 A | 25 | 26 | | | | | | |
| | 170 VA | EL | L - EXT. CANOPY | 12 | 20 A | 27 | 28 | | | | | | |
| | 143 VA | EL | L - EXTERIOR | 12 | 20 A | 29 | 30 | 20 A | 12 | L - SITE LIGHTING | EL | 588 VA | |
| | 441 VA | EL | L - SITE LIGHTING | 12 | 20 A | 31 | 32 | | | | | | |
| | | | | | | 33 | 34 | 20 A | 12 | L - BLDG. SIGNAGE | EL | 500 VA | |
| | 900 VA | M | CONTACTOR | 12 | 20 A | 35 | 36 | 20 A | 12 | L - BLDG. SIGNAGE | EL | 500 VA | |
| | 49526 VA | Spare; L; R; F; E... | A2 | 4/0 | 225 A | 37 | 38 | 30 A | 10 | SPD2 | SP | 0 VA | |
| | | | | | | 39 | 40 | | | | | | |
| | | | | | | 41 | 42 | | | | | | |
| | 0 VA | -- | FUTURE FLAGPOLE LIGHT | 12 | 20 A | 43 | 44 | -- | 12 | Space | -- | 0 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 45 | 46 | -- | 12 | Space | -- | 0 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 47 | 48 | -- | 12 | Space | -- | 0 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 49 | 50 | -- | 12 | Space | -- | 0 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 51 | 52 | -- | 12 | Space | -- | 0 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 53 | 54 | -- | 12 | Space | -- | 0 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 55 | 56 | -- | 12 | Space | -- | 0 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 57 | 58 | -- | 12 | Space | -- | 0 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 59 | 60 | -- | 12 | Space | -- | 0 VA | |

| N.E.C. (2020) | Load Type | Conn. | Fct. | Diversity | N.E.C.(2020) | Load Type | Conn. | Fct. | Diversity |
|---|---|---|---|---|---|---|---|---|---|
| 220.44 | (R)Receptacle | 14140 VA | 85.36% | 12070 VA | 210.20(a) | (L)Lighting | 3928 VA | 125.00% | 4910 VA |
| 220.56 | (K)Kitchen | | | | | (EL)Ext. Ltg. | 2785 VA | 125.00% | 3481 VA |
| 220.60 | (C)Cooling | | | 0 VA | 620.14 | (E)Elevators | | | |
| 220.60 | (H)Heating | 900 VA | 100.00% | 900 VA | | (WH)Wat. Htr. | | | |
| 220.60 | (F)Fans | 16356 VA | 100.00% | 16356 VA | 220.5 | (MT)Lrg. Motor | | | |
| | (M)Misc. | 52591 VA | 100.00% | 52591 VA | | (SP)Sub Pnl. | 0 VA | Not Computed | 0 VA |

Total Connected Load: 90700 VA VA = 252 A
Total Load (Diversified): 90308 VA VA = 251 A
Location of Panel: APP BAY 139

## Panelboard A2

22000 AIC Rating; X New; Existing

120/208 Wye Volt, 3 Phase, 4 Wire; 2 Section; Type 3R -Nema Rating | Mains Type: MCB | 225 A MCB; 225 A BUS (Copper); ISO. GRND. BUS | Single; X Double; Feed - Thru | Mounting: X Surface; Flush

| Note | Load... | Type | Description | Wire | CB | CKT | CKT | CB | Wire | Description | Type | Load... | N... |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1335 VA | M | OVERHEAD DOOR | 12 | 15 A | 1 | 2 | 15 A | 12 | OVERHEAD DOOR | M | 1335 VA | |
| | | | | | | 3 | 4 | | | | | | |
| | | | | | | 5 | 6 | | | | | | |
| | 1335 VA | M | OVERHEAD DOOR | 12 | 15 A | 7 | 8 | 15 A | 12 | OVERHEAD DOOR | M | 1335 VA | |
| | | | | | | 9 | 10 | | | | | | |
| | | | | | | 11 | 12 | | | | | | |
| | 1335 VA | M | OVERHEAD DOOR | 12 | 15 A | 13 | 14 | 15 A | 12 | OVERHEAD DOOR | M | 1335 VA | |
| | | | | | | 15 | 16 | | | | | | |
| | | | | | | 17 | 18 | | | | | | |
| | 1335 VA | M | OVERHEAD DOOR | 12 | 15 A | 19 | 20 | 15 A | 12 | OVERHEAD DOOR | M | 1335 VA | |
| | | | | | | 21 | 22 | | | | | | |
| | | | | | | 23 | 24 | | | | | | |
| | 500 VA | R | 20A CORD REEL | 10 | 20 A | 25 | 26 | 15 A | 12 | OVERHEAD DOOR | M | 1335 VA | |
| | 900 VA | R | 30A CORD REEL | 10 | 30 A | 27 | 28 | | | | | | |
| | 500 VA | R | 20A CORD REEL | 10 | 20 A | 29 | 30 | | | | | | |
| | 500 VA | R | 20A CORD REEL | 10 | 20 A | 31 | 32 | 20 A | 12 | R - APPARATUS BAY | R | 720 VA | |
| | 500 VA | R | 20A CORD REEL | 10 | 20 A | 33 | 34 | 20 A | 12 | R - APPARATUS BAY | R | 720 VA | |
| | 225 VA | M | GRH-1 | 12 | 15 A | 35 | 36 | 20 A | 12 | R - APPARATUS BAY | R | 900 VA | |
| | 225 VA | M | GRH-3 | 12 | 15 A | 37 | 38 | 25 A | 12 | EF-A1 | F | 2496 VA | |
| | 1392 VA | F | EF-G1, G2 | 12 | 15 A | 39 | 40 | | | | | | |
| | 500 VA | R | 20A CORD REEL | 10 | 20 A | 41 | 42 | 25 A | 12 | EF-A2 | F | 2496 VA | |
| | 500 VA | R | 20A CORD REEL | 10 | 20 A | 43 | 44 | | | | | | |
| | 500 VA | R | 20A CORD REEL | 10 | 20 A | 45 | 46 | 25 A | 12 | EF-A3 | F | 2496 VA | |
| | 900 VA | R | 30A CORD REEL | 10 | 30 A | 47 | 48 | | | | | | |
| | 225 VA | M | GRH-2 | 12 | 15 A | 49 | 50 | 25 A | 12 | EF-A4 | F | 2496 VA | |
| | 225 VA | M | GRH-4 | 12 | 15 A | 51 | 52 | | | | | | |
| | 540 VA | R | R - EXTERIOR | 12 | 20 A | 53 | 54 | 20 A | 12 | BAF-2 | F | 2490 VA | |
| | 720 VA | R | R - EXTERIOR | 12 | 20 A | 55 | 56 | | | | | | |
| | 1368 VA | L | L - APPARATUS BAY | 12 | 20 A | 57 | 58 | | | | | | |
| | 2490 VA | F | BAF-1 | 12 | 20 A | 59 | 60 | 20 A | 12 | GEN. STRIP HEATER | M | 1000 VA | |
| | | | | | | 61 | 62 | 20 A | 12 | GEN. BATT. CHARGER | M | 1000 VA | |
| | | | | | | 63 | 64 | 20 A | 12 | GEN. COOLANT HEATER | M | 2000 VA | |
| | 1270 VA | L | L - APPARATUS BAY | 12 | 20 A | 65 | 66 | | | | | | |
| | 200 VA | M | MOTORIZED DAMPERS | 12 | 20 A | 67 | 68 | 20 A | 12 | ATS HEATER | M | 1000 VA | |
| | 720 VA | R | R - APPARATUS BAY | 12 | 20 A | 69 | 70 | 20 A | 12 | MTS HEATER | M | 1000 VA | |
| | 360 VA | M | GAS DETECTION DEVICE | 12 | 20 A | 71 | 72 | 20 A | 12 | L - FIELD POLE LIGHT | EL | 147 VA | |
| | 10 VA | L | L - EXIT SIGNS | 12 | 20 A | 73 | 74 | | | | | | |
| | 232 VA | L | L - FITNESS ROOM | 12 | 20 A | 75 | 76 | 20 A | 12 | BAF-2 LIGHT | L | 220 VA | |
| | 608 VA | L | L - APPARATUS BAY | 12 | 20 A | 77 | 78 | 20 A | 12 | BAF-1 LIGHT | L | 220 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 79 | 80 | -- | | Space | -- | 0 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 81 | 82 | -- | | Space | -- | 0 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 83 | 84 | -- | | Space | -- | 0 VA | |

| N.E.C. (2020) | Load Type | Conn. | Fct. | Diversity | N.E.C. (2020) | Load Type | Conn. | Fct. | Diversity |
|---|---|---|---|---|---|---|---|---|---|
| 220.44 | (R)Receptacle | 9620 VA | 100.00% | 9620 VA | 210.20(a) | (L)Lighting | 3928 VA | 125.00% | 4910 VA |
| 220.56 | (K)Kitchen | | | | | (EL)Ext. Ltg. | 147 VA | 125.00% | 184 VA |
| 220.60 | (C)Cooling | | | 0 VA | 620.14 | (E)Elevators | | | |
| 220.60 | (H)Heating | | | 0 VA | | (WH)Wat. Htr. | | | |
| 220.60 | (F)Fans | 16356 VA | 100.00% | 16356 VA | 220.5 | (MT)Lrg. Motor | | | |
| | (M)Misc. | 19475 VA | 100.00% | 19475 VA | | (SP)Sub Pnl. | | | |

Total Connected Load: 49526 VA VA = 137 A
Total Load (Diversified): 50545 VA VA = 140 A
Location of Panel: APP BAY 139

## Panelboard B

22000 AIC Rating; X New; Existing

120/208 Wye Volt, 3 Phase, 4 Wire; 1 Section; Type 1 -Nema Rating | Mains Type: MCB | 200 A MCB; 225 A BUS (Copper); ISO. GRND. BUS | X Single; Double; Feed - Thru | Mounting: X Surface; Flush

| NOTE | LOAD (VA) | TYPE | DESCRIPTION | WIRE | CB | CKT | CKT | CB | WIRE | DESCRIPTION | TYPE | LOAD (VA) | NOTE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1620 VA | R | R - DORMS | 12 | 20 A | 1 | 2 | 20 A | 12 | L - DORMS / OFFICES | L | 426 VA | |
| | 1620 VA | R | R - DORMS | 12 | 20 A | 3 | 4 | 20 A | 12 | L - OFFICES / STORAGE | L | 469 VA | |
| | 540 VA | R | R - HALLWAY | 12 | 20 A | 5 | 6 | 20 A | 12 | L - DAYROOM / KITCHEN | L | 498 VA | |
| | 720 VA | R | R - RR | 12 | 20 A | 7 | 8 | 20 A | 12 | L - DORMS / PANTRY | L | 480 VA | |
| | 60 VA | F | EF-R#, EF M1 | 12 | 15 A | 9 | 10 | 20 A | 12 | L - PPE / SCBA / FITNESS | L | 240 VA | |
| | 1080 VA | R | R - DORMS | 12 | 20 A | 11 | 12 | 20 A | 12 | L - ENTRY / HALLWAY | L | 324 VA | |
| | 540 VA | R | R - HALLWAY | 12 | 20 A | 13 | 14 | 20 A | 12 | L - HALLWAY | L | 495 VA | |
| | 900 VA | R | R - WATCH OFFICE | 12 | 20 A | 15 | 16 | 20 A | 12 | L - EXIT SIGNS | L | 25 VA | |
| | 1080 VA | R | R - WATCH OFFICE | 12 | 20 A | 17 | 18 | 20 A | 12 | L - EXIT SIGNS | L | 15 VA | |
| | 1440 VA | R | R - DORMS | 12 | 20 A | 19 | 20 | 20 A | 12 | L - EGRESS | L | 18 VA | |
| 2 | 500 VA | M | FACP | 12 | 20 A | 21 | 22 | 20 A | 12 | L - TASK FLOOD LIGHTS | EL | 48 VA | |
| | 1080 VA | R | R - STORAGE / DORM | 12 | 20 A | 23 | 24 | 20 A | 12 | L - FIELD LIGHTS | EL | 48 VA | |
| | 14 VA | L | L - EMERGENCY | 12 | 20 A | 25 | 26 | -- | 12 | Space | -- | 0 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 27 | 28 | -- | 12 | Space | -- | 0 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 29 | 30 | -- | 12 | Space | -- | 0 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 31 | 32 | -- | 12 | Space | -- | 0 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 33 | 34 | -- | 12 | Space | -- | 0 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 35 | 36 | -- | 12 | Space | -- | 0 VA | |
| | 28510 VA | Spare; R; SP; ... | C | 3 | 100 A | 37 | 38 | 30 A | 10 | SPD2 | SP | 0 VA | |
| | | | | | | 39 | 40 | | | | | | |
| | | | | | | 41 | 42 | | | | | | |

| N.E.C. (2020) | Load Type | Conn. | Fct. | Diversity | N.E.C.(2020) | Load Type | Conn. | Fct. | Diversity |
|---|---|---|---|---|---|---|---|---|---|
| 220.44 | (R)Receptacle | 32546 VA | 65.36% | 21273 VA | 210.20(a) | (L)Lighting | 3004 VA | 125.00% | 3755 VA |
| 220.56 | (K)Kitchen | 5700 VA | 65.00% | 3705 VA | | (EL)Ext. Ltg. | 96 VA | 125.00% | 120 VA |
| 220.60 | (C)Cooling | | | 0 VA | 620.14 | (E)Elevators | | | |
| 220.60 | (H)Heating | | | 0 VA | | (WH)Wat. Htr. | | | |
| 220.60 | (F)Fans | 84 VA | 100.00% | 84 VA | 220.5 | (MT)Lrg. Motor | | | |
| | (M)Misc. | 1360 VA | 100.00% | 1360 VA | | (SP)Sub Pnl. | 0 VA | Not Computed | 0 VA |

Total Connected Load: 42790 VA VA = 119 A
Total Load (Diversified): 30297 VA VA = 84 A
Location of Panel: IT/ELEC 147

## Panelboard C

22000 AIC Rating; X New; Existing

120/208 Wye Volt, 3 Phase, 4 Wire; 1 Section; Type 1 -Nema Rating | Mains Type: MLO | 0 A MCB; 225 A BUS (Copper); ISO. GRND. BUS | X Single; Double; Feed - Thru | Mounting: X Surface; Flush

| NOTE | LOAD (VA) | TYPE | DESCRIPTION | WIRE | CB | CKT | CKT | CB | WIRE | DESCRIPTION | TYPE | LOAD (VA) | NOTE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 900 VA | R | R - ENTRY / HALLWAY | 12 | 20 A | 1 | 2 | 20 A | 12 | RANGE HOOD | K | 900 VA | |
| | 540 VA | R | R - EXAM /RR | 12 | 20 A | 3 | 4 | 20 A | 12 | R - ICE MACHINE | K | 600 VA | 1 |
| | 720 VA | R | R - CONFERENCE | 12 | 20 A | 5 | 6 | 20 A | 12 | R - DISH WASHER | K | 900 VA | 1 |
| | 540 VA | R | R - CONFERENCE | 12 | 20 A | 7 | 8 | 20 A | 12 | R - DISH WASHER | K | 900 VA | 1 |
| | 4333 VA | R | R - DRYER | 10 | 30 A | 9 | 10 | 20 A | 12 | R - RANGE | K | 180 VA | |
| | | | | | | 11 | 12 | 20 A | 12 | R - EXTERIOR | R | 720 VA | |
| 1 | 1500 VA | R | R - WASHER | 12 | 20 A | 13 | 14 | 20 A | 12 | PATIO (FUTURE) | M | 0 VA | |
| | 4333 VA | R | R - DRYER | 10 | 30 A | 15 | 16 | 20 A | 12 | R - EXTERIOR | R | 720 VA | |
| | | | | | | 17 | 18 | 20 A | 12 | R - EXTERIOR | R | 540 VA | |
| 1 | 1500 VA | R | R - WASHER | 12 | 20 A | 19 | 20 | 20 A | 12 | R - OFFICE | R | 900 VA | |
| | 180 VA | R | R - UTILITY | 12 | 20 A | 21 | 22 | 20 A | 12 | R - OFFICE | R | 900 VA | |
| | 24 VA | F | EF-R1, EF-U1 | 12 | 15 A | 23 | 24 | 20 A | 12 | R - PANTRY / STORAGE | R | 720 VA | |
| | 900 VA | R | R - TV ROOM | 12 | 20 A | 25 | 26 | 20 A | 12 | R - FRDIGE | R | 180 VA | 1 |
| | 1080 VA | R | R - DAYROOM | 12 | 20 A | 27 | 28 | 20 A | 12 | R - FRIDGE | R | 180 VA | 1 |
| | 360 VA | R | R - DAYROOM TV | 12 | 20 A | 29 | 30 | 20 A | 12 | R - FRIDGE | R | 180 VA | 1 |
| | 720 VA | K | R - KITCHEN | 12 | 20 A | 31 | 32 | 20 A | 12 | GAS SHUT OFF VALVE | M | 500 VA | |
| | 600 VA | K | ALERTING SYSTEM ACD | 12 | 20 A | 33 | 34 | 20 A | 12 | GARBAGE DISPOSAL | K | 900 VA | |
| | 180 VA | M | ELEC. TRAP PRIMER | 12 | 20 A | 35 | 36 | 20 A | 12 | ELEC. TRAP PRIMER | M | 180 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 37 | 38 | 30 A | 10 | SPD2 | SP | 0 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 39 | 40 | | | | | | |
| | 0 VA | -- | Spare | 12 | 20 A | 41 | 42 | | | | | | |

| N.E.C. (2020) | Load Type | Conn. | Fct. | Diversity | N.E.C.(2020) | Load Type | Conn. | Fct. | Diversity |
|---|---|---|---|---|---|---|---|---|---|
| 220.44 | (R)Receptacle | 21926 VA | 72.80% | 15963 VA | 210.20(a) | (L)Lighting | | | |
| 220.56 | (K)Kitchen | 5700 VA | 65.00% | 3705 VA | | (EL)Ext. Ltg. | | | |
| 220.60 | (C)Cooling | | | 0 VA | 620.14 | (E)Elevators | | | |
| 220.60 | (H)Heating | | | 0 VA | | (WH)Wat. Htr. | | | |
| 220.60 | (F)Fans | 24 VA | 100.00% | 24 VA | 220.5 | (MT)Lrg. Motor | | | |
| | (M)Misc. | 860 VA | 100.00% | 860 VA | | (SP)Sub Pnl. | 0 VA | Not Computed | 0 VA |

Total Connected Load: 28510 VA VA = 79 A
Total Load (Diversified): 20552 VA VA = 57 A
Location of Panel: IT/ELEC 147

## Panelboard P

22000 AIC Rating; X New; Existing

120/208 Wye Volt, 3 Phase, 4 Wire; 1 Section; Type 3R -Nema Rating | Mains Type: MCB | 100 A MCB; 225 A BUS (Copper); ISO. GRND. BUS | X Single; Double; Feed - Thru | Mounting: X Surface; Flush

| NOTE | LOAD (VA) | TYPE | DESCRIPTION | WIRE | CB | CKT | CKT | CB | WIRE | DESCRIPTION | TYPE | LOAD (VA) | NOTE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 160 VA | L | L - PUMP HOUSE | 12 | 20 A | 1 | 2 | 15 A | 12 | JOCKEY PUMP | M | 902 VA | |
| | 48 VA | EL | L - PUMP HOUSE EXTERIOR | 12 | 20 A | 3 | 4 | | | | | | |
| | 720 VA | R | R- PUMP HOUSE | 12 | 20 A | 5 | 6 | | | | | | |
| | 5000 VA | H | EUH-P1 | 10 | 30 A | 7 | 8 | 20 A | 12 | HEAT TRACE | H | 900 VA | |
| | | | | | | 9 | 10 | 20 A | 12 | OSSF BLOWER /... | M | 9133 VA | |
| | 180 VA | M | OSSF PUMP ALARM | 12 | 20 A | 11 | 12 | 20 A | 12 | Spare | -- | 0 VA | |
| | 500 VA | EL | L - TANK SIGNAGE | 12 | 20 A | 13 | 14 | 20 A | 12 | Spare | -- | 0 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 15 | 16 | 20 A | 12 | Spare | -- | 0 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 17 | 18 | 20 A | 12 | Spare | -- | 0 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 19 | 20 | 20 A | 12 | Spare | -- | 0 VA | |
| | 0 VA | -- | Space | 12 | -- | 21 | 22 | -- | 12 | Space | -- | 0 VA | |
| | 0 VA | -- | Space | 12 | -- | 23 | 24 | -- | 12 | Space | -- | 0 VA | |
| | 0 VA | -- | Space | 12 | -- | 25 | 26 | 30 A | 10 | SPD2 | SP | 0 VA | |
| | 0 VA | -- | Space | 12 | -- | 27 | 28 | | | | | | |
| | 0 VA | -- | Space | 12 | -- | 29 | 30 | | | | | | |

| N.E.C. (2020) | Load Type | Conn. | Fct. | Diversity | N.E.C.(2020) | Load Type | Conn. | Fct. | Diversity |
|---|---|---|---|---|---|---|---|---|---|
| 220.44 | (R)Receptacle | 720 VA | 100.00% | 720 VA | 210.20(a) | (L)Lighting | 160 VA | 125.00% | 200 VA |
| 220.56 | (K)Kitchen | | | | | (EL)Ext. Ltg. | 548 VA | 125.00% | 685 VA |
| 220.60 | (C)Cooling | | | 0 VA | 620.14 | (E)Elevators | | | |
| 220.60 | (H)Heating | 5900 VA | 100.00% | 5900 VA | | (WH)Wat. Htr. | | | |
| 220.60 | (F)Fans | | | | 220.5 | (MT)Lrg. Motor | | | |
| | (M)Misc. | 10215 VA | 100.00% | 10215 VA | | (SP)Sub Pnl. | 0 VA | Not Computed | 0 VA |

Total Connected Load: 17543 VA VA = 49 A
Total Load (Diversified): 17720 VA VA = 49 A
Location of Panel: PUMPHOUSE 152

## PANEL GENERAL NOTES

A. WIRE SIZES INDICATED ON PLANS ARE FOR COPPER CONDUCTORS. BASE-BID SHALL ALLOW ALUMINUM CONDUCTORS FOR BRANCH FEEDERS 100A AND LARGER. UNDER BID ALTERNATE #7 PROVIDE ONLY COPPER CONDUCTORS.

## PANEL SCHEDULE NOTES

1. PROVIDE CIRCUIT BREAKER WITH GFCI PROTECTION.
2. PROVIDE CIRCUIT BREAKER WITH LOCKING HANDLE DEVICE.

## Panelboard M

22000 AIC Rating; X New; Existing

120/208 Wye Volt, 3 Phase, 4 Wire; 1 Section; Type 1 -Nema Rating | Mains Type: MCB | 150 A MCB; 225 A BUS (Copper); ISO. GRND. BUS | X Single; Double; Feed - Thru | Mounting: X Surface; Flush

| NOTE | LOAD (VA) | TYPE | DESCRIPTION | WIRE | CB | CKT | CKT | CB | WIRE | DESCRIPTION | TYPE | LOAD (VA) | NOTE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1872 VA | C | FCU-4 | 12 | 15 A | 1 | 2 | 20 A | 12 | R - UTILITY | R | 720 VA | |
| | | | | | | 3 | 4 | 20 A | 12 | CONDENSATE PUMP | R | 180 VA | |
| | 1872 VA | C | FCU-3 | 12 | 15 A | 5 | 6 | 20 A | 12 | R - IT/ELEC. | R | 720 VA | |
| | | | | | | 7 | 8 | 20 A | 12 | R - OPEN PLATFORM | R | 540 VA | |
| | 1872 VA | C | FCU-1 | 12 | 15 A | 9 | 10 | 15 A | 12 | GWH-2 | M | 225 VA | |
| | | | | | | 11 | 12 | 15 A | 12 | CP-1 | M | 225 VA | |
| | 1872 VA | C | FCU-2 | 12 | 15 A | 13 | 14 | 15 A | 12 | GWH-1 | M | 225 VA | |
| | | | | | | 15 | 16 | 20 A | 12 | R - MEZZ. PLATFORM | R | 720 VA | |
| | 10500 VA | H | OAHU-1 | 8 | 45 A | 17 | 18 | 20 A | 12 | SECURITY PANEL | M | 600 VA | |
| | | | | | | 19 | 20 | 20 A | 12 | L - MEZZANINE | L | 960 VA | |
| | | | | | | 21 | 22 | 20 A | 12 | FCU-5 | C | 1872 VA | |
| | 600 VA | M | ACCESS CONTROL PANEL | 12 | 20 A | 23 | 24 | | | | | | |
| | 360 VA | R | R - IT RACK | 12 | 20 A | 25 | 26 | 20 A | 12 | ALERTING SYSTEM UPS | R | 180 VA | |
| | 360 VA | R | R - IT RACK | 12 | 20 A | 27 | 28 | -- | 12 | Space | -- | 0 VA | |
| | 180 VA | M | ELEC. TRAP PRIMER | 12 | 20 A | 29 | 30 | -- | 12 | Space | -- | 0 VA | |
| | 180 VA | R | AIR COMPRESSOR | 12 | 20 A | 31 | 32 | -- | 12 | Space | -- | 0 VA | |
| | 180 VA | M | ELEC. TRAP PRIMER | 12 | 20 A | 33 | 34 | -- | 12 | Space | -- | 0 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 35 | 36 | -- | 12 | Space | -- | 0 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 37 | 38 | 30 A | 10 | SPD2 | SP | 0 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 39 | 40 | | | | | | |
| | 0 VA | -- | Spare | 12 | 20 A | 41 | 42 | | | | | | |

| N.E.C. (2020) | Load Type | Conn. | Fct. | Diversity | N.E.C.(2020) | Load Type | Conn. | Fct. | Diversity |
|---|---|---|---|---|---|---|---|---|---|
| 220.44 | (R)Receptacle | 3960 VA | 100.00% | 3960 VA | 210.20(a) | (L)Lighting | 960 VA | 125.00% | 1200 VA |
| 220.56 | (K)Kitchen | | | | | (EL)Ext. Ltg. | | | |
| 220.60 | (C)Cooling | 9360 VA | 100.00% | 0 VA | 620.14 | (E)Elevators | | | |
| 220.60 | (H)Heating | 10500 VA | 100.00% | 10500 VA | | (WH)Wat. Htr. | | | |
| 220.60 | (F)Fans | | | | 220.5 | (MT)Lrg. Motor | | | |
| | (M)Misc. | 2235 VA | 100.00% | 2235 VA | | (SP)Sub Pnl. | 0 VA | Not Computed | 0 VA |

Total Connected Load: 27015 VA VA = 75 A
Total Load (Diversified): 17895 VA VA = 50 A
Location of Panel: IT/ELEC 147

## Panelboard R

22000 AIC Rating; X New; Existing

120/208 Wye Volt, 3 Phase, 4 Wire; 1 Section; Type 3R -Nema Rating | Mains Type: MCB | 225 A MCB; 225 A BUS (Copper); ISO. GRND. BUS | X Single; Double; Feed - Thru | Mounting: X Surface; Flush

| Note | Load... | Type | Description | Wire | CB | CKT | CKT | CB | Wire | Description | Type | Load... | N... |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6094 VA | C | ACCU-1 | 8 | 50 A | 1 | 2 | 50 A | 8 | OACU-1 | C | 14079 VA | |
| | | | | | | 3 | 4 | | | | | | |
| | 3994 VA | C | ACCU-4 | 10 | 30 A | 5 | 6 | | | | | | |
| | | | | | | 7 | 8 | 20 A | 12 | R - RISER | R | 180 VA | |
| | 3994 VA | C | ACCU-2 | 10 | 30 A | 9 | 10 | 20 A | 12 | R - MECH. YARD | R | 180 VA | |
| | | | | | | 11 | 12 | 20 A | 12 | Spare | -- | 0 VA | |
| | 6032 VA | C | ACCU-3 | 8 | 50 A | 13 | 14 | 20 A | 12 | R - WATER SOFTNER | R | 180 VA | |
| | | | | | | 15 | 16 | 20 A | 12 | NITRO. GEN. | M | 600 VA | |
| | 6032 VA | C | ACCU-5 | 8 | 50 A | 17 | 18 | 20 A | 12 | Spare | -- | 0 VA | |
| | | | | | | 19 | 20 | 20 A | 12 | Spare | -- | 0 VA | |
| | 3744 VA | C | DCU-T1 / DSCU-3 | 10 | 30 A | 21 | 22 | 20 A | 12 | Spare | -- | 0 VA | |
| | | | | | | 23 | 24 | 20 A | 12 | Spare | -- | 0 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 25 | 26 | 20 A | 12 | VEHICLE GATE | M | 1800 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 27 | 28 | | | | | | |
| | 0 VA | -- | Spare | 12 | 20 A | 29 | 30 | 20 A | 12 | Spare | -- | 0 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 31 | 32 | 20 A | 12 | Spare | -- | 0 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 33 | 34 | 20 A | 12 | ELEC. TRAP PRIMER | M | 180 VA | |
| | 0 VA | -- | Spare | 12 | 20 A | 35 | 36 | -- | 12 | Space | -- | 0 VA | |
| | 17543 VA | Spare; L; R; SP;... | P | 1/0 | 100 A | 37 | 38 | 30 A | 10 | SPD2 | SP | 0 VA | |
| | | | | | | 39 | 40 | | | | | | |
| | | | | | | 41 | 42 | | | | | | |

| N.E.C. (2020) | Load Type | Conn. | Fct. | Diversity | N.E.C. (2020) | Load Type | Conn. | Fct. | Diversity |
|---|---|---|---|---|---|---|---|---|---|
| 220.44 | (R)Receptacle | 1260 VA | 100.00% | 1260 VA | 210.20(a) | (L)Lighting | 160 VA | 125.00% | 200 VA |
| 220.56 | (K)Kitchen | | | | | (EL)Ext. Ltg. | 548 VA | 125.00% | 685 VA |
| 220.60 | (C)Cooling | 43969 VA | 100.00% | 43969 VA | 620.14 | (E)Elevators | | | |
| 220.60 | (H)Heating | 5900 VA | 100.00% | 0 VA | | (WH)Wat. Htr. | | | |
| 220.60 | (F)Fans | | | | 220.5 | (MT)Lrg. Motor | | | |
| | (M)Misc. | 12795 VA | 100.00% | 12795 VA | | (SP)Sub Pnl. | 0 VA | Not Computed | 0 VA |

Total Connected Load: 64632 VA VA = 179 A
Total Load (Diversified): 58909 VA VA = 164 A
Location of Panel:

EMERALD MEP
TX FIRM No. F-24826
PROJECT No. 25018

PROFESSIONAL SEAL

STATE OF TEXAS
M. JACQUELINE CHANG
124987
LICENSED PROFESSIONAL ENGINEER
2026-11-11

LOGO/CONTACT

Martinez Architect, LP
900 Rockmead, Suite 250
Houston, Texas 77339
281.346.7371

DESIGN TEAM

Architectural
Martinez Architects

Civil
Hill Country Civil

Landscape
Evergreen Landscape Group

Structural
Matrix Structural

MEP
Emerald MEP

Technology
Imagine IT

Alerting
WestNET

# STATION #42

Hays County ESD #4
Wimberley, TX 78676

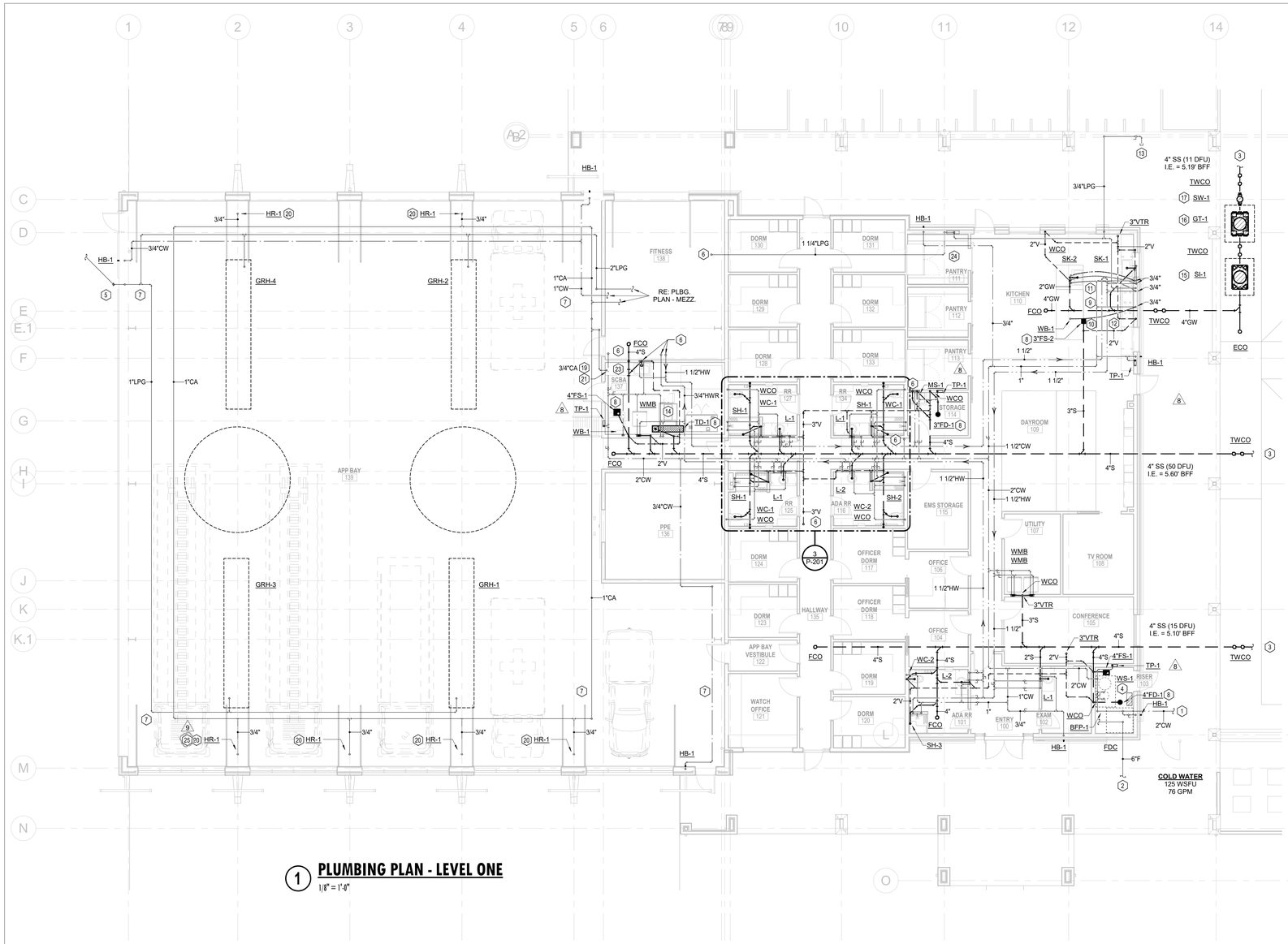
PROJECT No: MA 25016
DATE: 20-OCT-2026

ISSUE #

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| 2 | 50% CD | 23-FEB-2026 |
| 3 | 75% CD | 06-APR-2026 |
| 4 | 98% CD | 04-MAY-2026 |
| 5 | IFP | 01-JUN-2026 |
| 6 | IFB | 20-OCT-2026 |
| 8 | ADDENDUM#4 | 04-NOV-2026 |
| 9 | ADDENDUM#5 | 11-NOV-2026 |

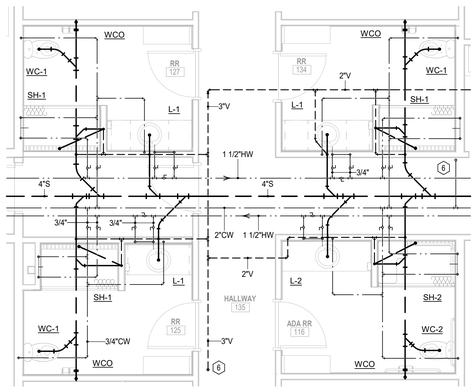
ELECTRICAL PANEL SCHEDULES

E-502



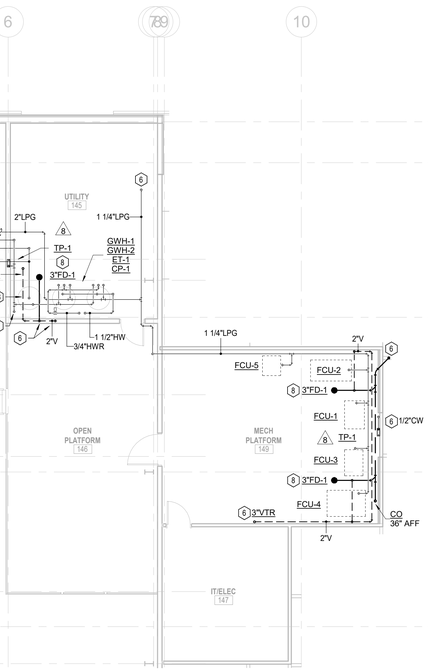

## 1 PLUMBING PLAN - LEVEL ONE

1/8" = 1'-0"




## 3 ENLARGED RESTROOM PLAN

1/4" = 1'-0"




## 2 PLUMBING PLAN - MEZZANINE

1/8" = 1'-0"

## PLUMBING KEYED NOTES:

1. DOMESTIC WATER SERVICE, SIZE AND PEAK FLOW RATE AS NOTED. REFER TO CIVIL SITE UTILITY PLANS FOR CONTINUATION.
2. FIRE PROTECTION WATER SERVICE, SIZE AS NOTED. REFER TO CIVIL SITE UTILITY PLANS AND FIRE SPRINKLER CONTRACTOR FOR CONTINUATION.
3. SANITARY BUILDING DRAIN, SIZE AS NOTED. REFER TO CIVIL SITE UTILITY PLANS FOR CONTINUATION.
4. WALL MOUNTED NITROGEN SUPERVISORY GAS GENERATOR FOR DRY PIPE SYSTEM. COORDINATE FINAL ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
5. LP GAS SERVICE TO BUILDING. SIZE AS NOTED. REFER TO PLUMBING RISERS.
6. PLUMBING PIPE (DWV, WATER, AIR, OR GAS) CONTINUES TO / FROM LEVEL ABOVE / BELOW. SIZE AND TYPE AS NOTED. COORDINATE EXACT ROUTING WITH THE WORK OF OTHER TRADES. REFER TO PLUMBING SYMBOLS LEGEND.
7. ROUTE PIPING AS HIGH AS POSSIBLE. SECURE TO BUILDING. COORDINATE ROUTING WITH STRUCTURE AND THE WORK OF OTHER TRADES.
8. SUPPLY TRAP PRIMER CONNECTION TO DRAIN. REFER TO PLUMBING SCHEDULES, AND COORDINATE EXACT ROUTING WITH THE WORK OF OTHER TRADES.
9. DISHWASHER(S): PROVIDE HOT WATER SUPPLY AND STOP, AIR GAP FITTING, AND WASTE CONNECTION. REFER TO PLUMBING DETAILS.
10. UNDERCOUNTER ICE MAKER.
11. ISLAND FIXTURE INSTALLATIONS. PROVIDE SINK(S) WITH ISLAND FIXTURE VENTING. REFER TO PLUMBING DETAIL. ROUTE CW AND HW BELOW FLOOR FOR SERVICE TO ISLAND FIXTURES. SIZE AS NOTED. REFER TO PLUMBING PIPE MATERIAL SCHEDULE AND PROJECT SPECIFICATIONS.
12. OVEN / RANGE. REFER TO PLUMBING RISER.
13. OUTDOOR GRILL. ROUTE GAS TO OUTDOOR GAS GRILL. COORDINATE EXACT ROUTING WITH THE WORK OF OTHER TRADES. REFER TO PLUMBING RISERS AND PLUMBING DETAILS.
14. WASHER-EXTRACTOR. PROVIDE 1" CW AND HW SUPPLY LINES, HOSE FAUCETS, WATER HAMMER ARRESTORS, CONNECTIONS, DUAL CHECK VALVES, AND ALL RELATED COMPONENTS NECESSARY FOR A COMPLETE INSTALLATION ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
15. SOLIDS INTERCEPTOR (SI-1) BY SCHIER, MODEL SI-50 FURNISHED FOR BELOW-GRADE INSTALLATION WITH ADJUSTABLE COVER ADAPTER, AND TRAFFIC RATED 24" CAST IRON COVER (T24-GI). INSTALL RISER AND ANY ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION. PROVIDE SOLIDS INTERCEPTOR IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION RECOMMENDATIONS AND LOCAL REQUIREMENTS. REFER TO PLUMBING DETAILS.
16. GREASE INTERCEPTOR (GT-1) BY SCHIER, MODEL GB-75 FURNISHED FOR BELOW-GRADE INSTALLATION WITH ADJUSTABLE COVER ADAPTER, AND TRAFFIC RATED 24" CAST IRON COVER (T24-GI). INSTALL RISER AND ANY ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION. PROVIDE GREASE INTERCEPTOR IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION RECOMMENDATIONS AND LOCAL REQUIREMENTS. REFER TO PLUMBING DETAILS.
17. SAMPLE WELL (SW-1) BY SCHIER, MODEL SV10 FURNISHED FOR BELOW-GRADE INSTALLATION. INSTALL RISER AND ANY ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION. PROVIDE SAMPLE WELL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND LOCAL REQUIREMENTS. REFER TO PLUMBING DETAILS.
18. AIR COMPRESSOR SYSTEM. OWNER FURNISHED AND INSTALLED.
19. AIR OUTLET / DROP. ROUTE COMPRESSED AIR PIPING FOR AIR OUTLET / DROP. SIZE AS NOTED. COORDINATE EXACT ROUTING WITH THE WORK OF OTHER TRADES AND EXACT LOCATION WITH OWNER AND ARCHITECT. SECURE PIPE TO WALL. PROVIDE VALVE AND QUICK CONNECT. REFER TO PLUMBING SCHEDULES AND PLUMBING DETAILS.
20. AIR HOSE REEL. AIR PIPING TO HR-1. SIZE AS NOTED. COORDINATE WITH ARCHITECT/OWNER FOR EXACT LOCATION. REFER TO PLUMBING DETAILS.
21. AIR OUTLET / DROP TO BE ABOVE COUNTER.
22. REFER TO PLUMBING PLAN - LEVEL ONE.
23. PROVIDE 3/4" CW AND HW SUPPLY AND STOPS, AND 2" DRAIN CONNECTION STUB OUT AT WALL. CAP AND SECURE FOR FUTURE USE. COORDINATE WITH ARCH AND OWNER FOR EXACT LOCATION.
24. PROVIDE ASCO REDHAT GAS SHUT-OFF VALVES AS RECOMMENDED BY WESTNET STATION ALERTING SYSTEMS. PROVIDE WITH NEMA 1 ENCLOSURE, SIZED FOR INSTALLATION OF BOTH VALVES AND ASSOCIATED FITTINGS AND APPURTENANCES. COORDINATE POWER REQUIREMENTS AND CONTROL INTEGRATION WITH ELECTRICAL CONTRACTOR AND STATION ALERTING INSTALLER.

9 25. PROVIDE IN BASE-BID AND REMOVE IN DEDUCTIVE ALTERNATE #1.

## PLUMBING GENERAL NOTES:

A. PLUMBING PIPING SHALL BE INSTALLED TIGHT TO STRUCTURE (OVERHEAD, WALLS, COLUMNS, ETC.) IN AREAS WITH EXPOSED STRUCTURE.

B. REFER TO MEP SITE PLAN FOR UTILITY CONNECTIONS.

C. COORDINATE ROUTING OF ALL PIPING WITH STRUCTURAL ELEMENTS INCLUDING THE FOUNDATION, FOOTINGS, AND GRADE BEAMS PRIOR TO INSTALLATION.

EMERALD MEP
TX FIRM No. F-24826
PROJECT No. 25018

PROFESSIONAL SEAL

STATE OF TEXAS
M. JACQUELINE CHANG
124987
LICENSED
PROFESSIONAL ENGINEER
2026-11-11

LOGO/CONTACT

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281.346.7371

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Architectural
Martinez Architects

Civil
Hill Country Civil

Landscape
Evergreen Landscape Group

Structural
Matrix Structural

MEP
Emerald MEP

Technology
Imagine IT

Alerting
WestNET

# STATION #42

Hays County ESD #4

Wimberley, TX 78676

PROJECT No: MA 25016
DATE: 20-OCT-2026

ISSUE

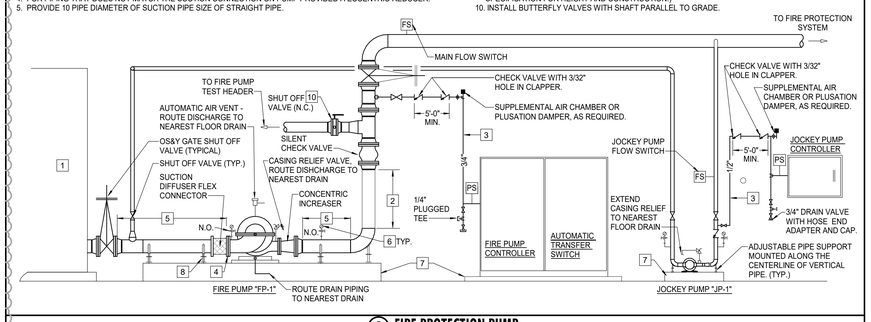
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| 2 | 50% CD | 23-FEB-2026 |
| 3 | 75% CD | 06-APR-2026 |
| 4 | 98% CD | 04-MAY-2026 |
| 5 | IFP | 01-JUN-2026 |
| 6 | IFB | 20-OCT-2026 |
| 8 | ADDENDUM#4 | 04-NOV-2026 |
| 9 | ADDENDUM#5 | 11-NOV-2026 |

PLUMBING PLANS

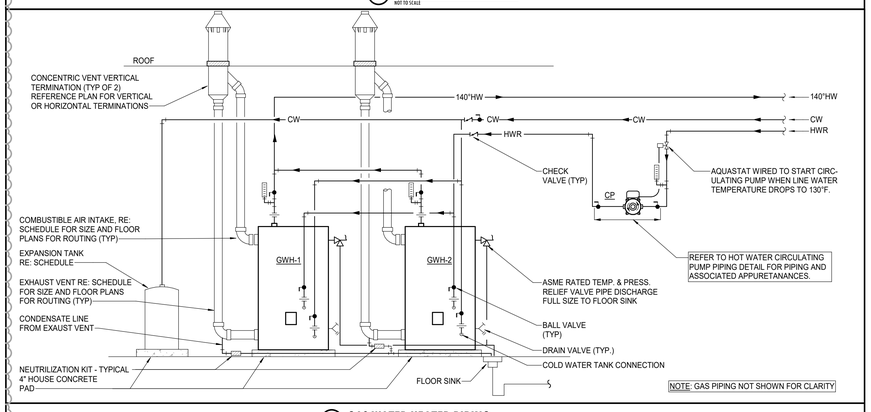
P-201

**KEYED NOTES:**

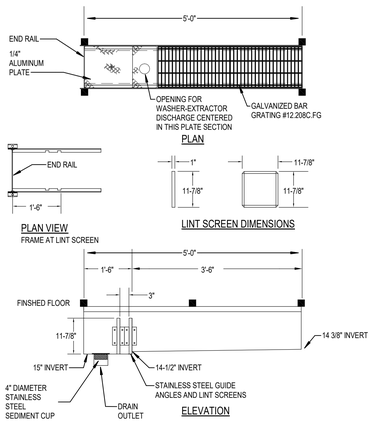
1. COMBINATION FIRE/DOMESTIC WATER BREAK TANK PROVIDED BY THE DIVISION 22 CONTRACTOR
2. MINIMUM FOUR (4) DIAMETERS.
3. SENSING PIPING AND FITTINGS FROM CONTROLLERS TO FIRE PROTECTION PIPING SHALL BE COPPER OR STAINLESS STEEL.
4. FOR PIPING THAT DOES NOT MATCH THE SUCTION CONNECTION ON PUMP PROVIDED A ECCENTRIC REDUCER.
5. PROVIDE 10 PIPE DIAMETER OF SUCTION PIPE SIZE OF STRAIGHT PIPE.
6. GUAGE AND GUAGE COCK.
7. CONCRETE PAD (RE: SPECIFICATION FOR CONSTRUCTION AND HEIGHT)
8. ADJUSTABLE PIPE SADDLE SUPPORT.
9. MOUNT JOCKEY PUMP ON RUBBER IN SHEAR ON ISOLATION PADS ON CONCRETE PAD (RE: SPECIFICATION FOR HEIGHT AND CONSTRUCTION.)
10. INSTALL BUTTERFLY VALVES WITH SHAFT PARALLEL TO GRADE.




## 2 FIRE PROTECTION PUMP
NOT TO SCALE




## 3 GAS WATER HEATER PIPING
NOT TO SCALE



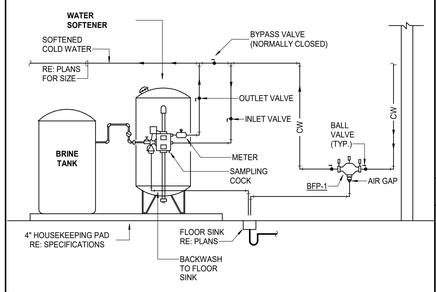

NOTE:

WASHING MACHINE TRENCH DRAIN / LINT TROUGH, 12" CAST IN PLACE WITH PRE-SLOPED EPS FORMERS, GALVANIZED FRAME AND BAR GRATES, STAINLESS STEEL ANGLE AND FILTER SCREENS. SYSTEM IS BASED ON AN OVERALL 5'-0" LONG TRENCH (MINIMUM), LENGTH MAY EXCEED THIS AND ADJUSTMENTS MUST BE MADE AS REQUIRED. REFER TO PLUMBING PLANS AND SCHEDULES AND MANUFACTURER PRODUCT DATA.

**ABT, INC. (SYSTEM ID SERIES): TS12-12-208C-FG-F21G**

## 5 COMM. WASHER TRENCH DRAIN (TD-1)
NOT TO SCALE

9

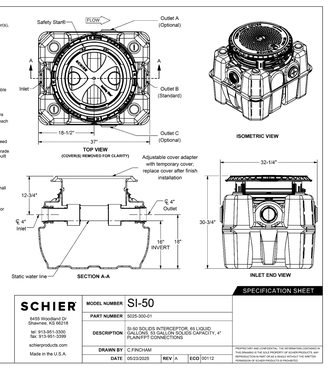



## 4 WATER SOFTENING SYSTEM (WS-1)
NOT TO SCALE

**SPECIFICATION NOTES**
(1) 4" FPT inlet/outlet with 4" plain end fittings
(2) Unit weight: 78 lbs. For wet weight, add 542 lbs. For traffic-rated cover(s), add 90 lbs per cover. For pedestrian cover(s), add 7 lbs per cover.
(3) Maximum operating temperature: 150° F continuous
(4) Liquid Capacity: 65 gal
Grease Capacity: 50 lbs
Solids Capacity: 50 gal
(5) For gravity drainage applications only
(6) Do not use for pressure applications
(7) Cover placement allows full access to tank for proper maintenance
(8) Vent not required unless per local code
(9) Engineered inlet and outlet diffusers with inspection ports are removable to inspect / clean piping
(10) Integral air relief / Anti-siphon / Sampling access
(11) Cover adapters provide an adjustable height range of 5"
(12) Designed for below-grade, above-grade, indoor or outdoor installations
(13) Safety Sta® (450 lbs load capacity) is an access restrictor built into each cover adapter to prevent accidental entry into tanks

**ENGINEER SPECIFICATION GUIDE**
Schier Bitty Cube® solids interceptor model SI-50 shall be lifetime guaranteed and molded from a corrosion resistant, rotational polyethylene with minimum 3/8" uniform wall thickness. Interceptor shall be furnished for above or below-grade installation with adjustable cover adapter, Safety Sta® access restrictor built into each cover adapter, and three outlet options.

**COVERS SOLD SEPARATELY**
This unit is provided with temporary cover(s) intended for the duration of grease interceptor installation. Purchase one of the following finish covers.
- T24-DI (8044-000-01): Traffic-rated (AASHTO H-20) cast iron cover shall provide watertgas-tight seal and have a minimum of 16,000 lbs load capacity. For outdoor installation.
- P24-DI (8045-000-01): Pedestrian-rated poly cover shall provide watertgas-tight seal and have a minimum of 2,000 lbs load capacity. For indoor installation.




SPECIFICATION SHEET

| | |
|---|---|
| SCHIER | 6455 Woodland Dr Shawnee, KS 66218 tel: 913-951-3300 fax: 913-951-3399 schierproducts.com Made in the U.S.A. |
| MODEL NUMBER | SI-50 |
| PART NUMBER | 5035-300-01 |
| DESCRIPTION | SI-50 SOLIDS INTERCEPTOR, 65 LIQUID GALLONS, 50 GALLON SOLIDS CAPACITY, 4" PLAIN/FPT CONNECTIONS |
| DRAWN BY | C.FINCHAM |
| DATE | 05/23/2025 |
| REV | A |
| ECO | 00112 |

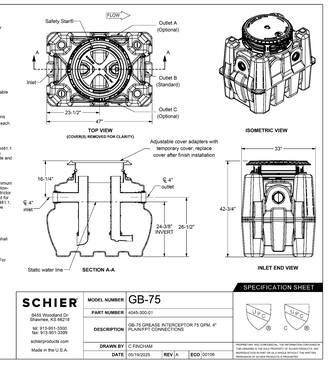
PROPRIETARY AND CONFIDENTIAL. THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SCHIER PRODUCTS, INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SCHIER PRODUCTS IS PROHIBITED.

**SPECIFICATION NOTES**
(1) 4" FPT inlet/outlet with 4" plain end fittings
(2) Unit weight: 125 lbs. For wet weight, add 1,043 lbs. For traffic-rated cover(s), add 90 lbs per cover. For pedestrian cover(s), add 7 lbs per cover.
(3) Maximum operating temperature: 150° F continuous
(4) Liquid Capacity: 125 gal
Grease Capacity (75 GPM ): 861 lbs (118 gal)
Solids Capacity: 31 gal
(5) For gravity drainage applications only
(6) Do not use for pressure applications
(7) Cover placement allows full access to tank for proper maintenance
(8) Vent not required unless per local code
(9) Engineered inlet and outlet diffusers with inspection ports are removable to inspect / clean piping
(10) Integral air relief / Anti-siphon / Sampling access
(11) Cover adapters provide an adjustable height range of 5"
(12) Designed for below-grade, above-grade, indoor or outdoor installations
(13) Safety Sta® (450 lbs load capacity) is an access restrictor built into each cover adapter to prevent accidental entry into tanks

**CERTIFIED PERFORMANCE**
Great Basin® hydromechanical grease interceptors are third party certified to meet the requirements of ASME A112.14.3 (Type D) and CSA B481.1 grease interceptor standards and greatly exceed requirements for grease separation and storage. They are compliant to the Uniform Plumbing Code and the International Plumbing Code.

**ENGINEER SPECIFICATION GUIDE**
Schier Bitty Cube® solids interceptor model GB-75 shall be lifetime guaranteed and molded from a corrosion resistant, rotational polyethylene with minimum 3/8" uniform wall thickness. Interceptor shall be furnished for above or below-grade installation with adjustable cover adapter, Safety Sta® access restrictor built into each cover adapter, and three outlet options. The unit is certified for hydromechanical performance to ASME A112.14.3 (Type D) and CSA B481.1. Interceptor flow rate shall be 75 GPM. Interceptor grease capacity shall be 861 lbs.

**COVERS SOLD SEPARATELY**
This unit is provided with temporary cover(s) intended for the duration of grease interceptor installation. Purchase one of the following finish covers.
- T24-DI (8044-000-01): Traffic-rated (AASHTO H-20) cast iron cover shall provide watertgas-tight seal and have a minimum of 16,000 lbs load capacity. For outdoor installation.
- P24-DI (8045-000-01): Pedestrian-rated poly cover shall provide watertgas-tight seal and have a minimum of 2,000 lbs load capacity. For indoor installation.




SPECIFICATION SHEET

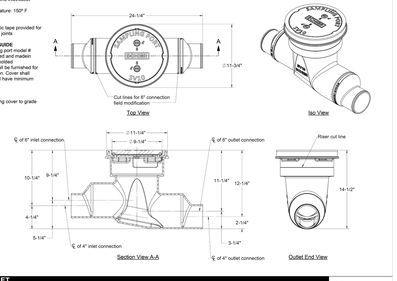
| | |
|---|---|
| SCHIER | 6455 Woodland Dr Shawnee, KS 66218 tel: 913-951-3300 fax: 913-951-3399 schierproducts.com Made in the U.S.A. |
| MODEL NUMBER | GB-75 |
| PART NUMBER | 4045-300-01 |
| DESCRIPTION | GB-75 GREASE INTERCEPTOR 75 GPM, 4" PLAIN/FPT CONNECTIONS |
| DRAWN BY | C.FINCHAM |
| DATE | 09/19/2025 |
| REV | A |
| ECO | 00106 |

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**NOTES**
1. 4" plain end inlet/outlet
2. Field modifiable to 6" plain end inlet/outlet
3. Unit weight - 9 lbs.
4. Maximum operating temperature: 150° F continuous
5. Offset connections
6. 2 rolls of 33' x 2" butyl mastic tape provided for sealing build-your-own riser joints

**ENGINEER SPECIFICATION GUIDE**
Schier Sewer Views™ sampling port model # SV10 shall be lifetime guaranteed and madein USA of seamless, rotationally-molded polyethylene. Sampling port shall be furnished for above or below-grade installation. Sampling port shall provide watertgas-tight seal and have minimum 16,000 lbs. load capacity.

**ACCESSORIES:**
- Field Cut Risers for extending cover to grade




SPECIFICATION SHEET

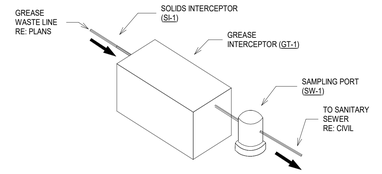
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| MODEL NUMBER: | SV10 |
| PART NUMBER: | 8065-001-01 |
| DESCRIPTION: | SV10 SEWER VIEWER SAMPLING PORT, 4" CONNECTIONS (FIELD MODIFIABLE TO 6"), POLYETHELINE COVER: |
| DWG BY: | B.BROWN |
| DATE: | 6/6/2022 |
| REV: | - |
| ECO: | - |

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| GREASE INTERCEPTOR CALCULATION HYDROMECHANICAL INTERCEPTOR SIZING USING GRAVITY FLOW RATES | | | | |
|---|---|---|---|---|
| **FIXTURE** | **DIMENSIONS** | **QTY** | **CU IN** | **FLOW RATE** |
| SINK (SK-1) | 33" X 22" X 09" | 1 | 6,534 | 11 GPM |
| SINK (SK-2) | 33" X 22" X 06" | 1 | 4,356 | 10 GPM |
| DISHWASHER | 5 GALLON | 2 | 2,310 | 5 GPM |
| ICE MACHINE | N/A | 1 | N/A | 0.5 GPM |
| | | | **TOTAL** | **27 GPM** |

FIXTURE FLOW RATE: (CU IN / 231) = GAL X 0.75 / 2 MIN = 2 MIN FLOW RATE




## 1 HYDROMECHANICAL GREASE INTERCEPTOR
NOT TO SCALE

8

9

EMERALD MEP
TX FIRM No. F-24826
PROJECT No. 25018

PROFESSIONAL SEAL

STATE OF TEXAS
M. JACQUELINE CHANG
124987
LICENSED
PROFESSIONAL ENGINEER
2026-11-11

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Evergreen Landscape Group

Structural
Matrix Structural

MEP
Emerald MEP

Technology
Imagine IT

Alerting
WestNET

# STATION #42

Hays County ESD #4

Wimberley, TX 78676

PROJECT No: **MA 25016**
DATE: **20-OCT-2026**

ISSUE

| # | | |
|---|---|---|
| 1 | 100% DD | 06-JAN-2026 |
| 2 | 50% CD | 23-FEB-2026 |
| 3 | 75% CD | 06-APR-2026 |
| 4 | 98% CD | 04-MAY-2026 |
| 5 | IFP | 01-JUN-2026 |
| 6 | IFB | 20-OCT-2026 |
| 8 | ADDENDUM#4 | 04-NOV-2026 |
| 9 | ADDENDUM#5 | 11-NOV-2026 |

PLUMBING DETAILS

**P-602**