

Montgomery County

Specification Download Acknowledgement



Invitation to Bid

MIRACLE CITY DAY CENTER

Project # 24-19

SPECS & PLANS

MONTGOMERY COUNTY COMMUNITY DEVELOPMENT

VENDORS MUST IMMEDIATELY RETURN THIS FORM BY EMAIL: purchasing@mctx.org

Vendor Responsibilities

- Vendors must download and complete any addenda
- Vendors must submit responses in accordance with requirements stated on cover of document
- Vendor must submit 1295 form with Bid/Proposal
Detailed information regarding 1295 can be found under item 49 in the attached Terms and Conditions.
Texas Ethics Commission website for 1295:
https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm

For completing the 1295:

Contract ID: 5153

Description: Project #24-19

Montgomery County will not be responsible for inaccurate or incomplete specifications and/or addenda pertaining to any bid/proposal that is received electronically.

Legal Name of Contracting Company

Contact Person

Complete Mailing Address

Telephone Number

Email Address

Signature

Date



GILBERT D. JALOMO, JR., CPPB
OFFICE OF COUNTY PURCHASING AGENT
MONTGOMERY COUNTY

501 N. Thompson
Suite 405
Conroe, Texas 77301

936.539.7980
FAX: 936.760.6976
www.mctx.org

April 4, 2024

INVITATION TO BID

Sealed bids one (1) original and one (1) copy will be received in the Office of the Montgomery County Purchasing Agent, Attn: Gilbert D. Jalomo, Jr., CPPB, 501 N. Thompson, Suite 405, Conroe, Texas 77301 until 2:00 p.m., April 24, 2024.

PROJECT #24-19
MIRACLE CITY DAY CENTER
MCCD

Prospective bidders may obtain specifications at the Office of the Montgomery County Purchasing Agent, 501 N. Thompson, Suite 405, Conroe, Texas 77301 any time after 8:00 a.m. on April 4, 2024. Specifications are also available via download at the Purchasing website: www.mctx.org.

Pre-bid meeting will be held on April 11, 2024 at 10:00 a.m. in person at 350 Foster Dr., Conroe, Texas 77301. Attendance of the pre-bid meeting is highly recommended.

All bids shall be submitted on the basis of lump sum pricing as provided in the bid specifications. Payment to successful bidder shall be net thirty (30) days after receipt of products, materials, services or invoices, whichever is later unless otherwise stated in specifications.

A Bid Bond from an approved surety company-holding permit from the State of Texas will be required. The Bid Bond must be in the amount of five percent (5%) of the total bid amount and must accompany each bid. If applicable, the successful bidder will be required to furnish a Performance Bond and Payment Bond, each in the amount of one hundred percent (100%) of the project.

This is a Federal Davis-Bacon required project for which a prevailing wage rate has been prescribed. Montgomery County is an Affirmative Action/Equal Opportunity Employer.

Montgomery County supports and encourages business opportunities for Historically Underutilized Business (HUB), Minority Owned Business (MBE), Women's Business Enterprises (WBEs) and Small and Disadvantaged Business.

The required Disadvantaged Business Enterprise (DBE) goals for this project are approximately 4% DBE firms if applicable. DBE firms must have the appropriate certification.

The project will be funded with Federal dollars and/or from Community Development Block Grant Program. Since the project is funded with Federal dollars and/or Community Development Block Grant Program, the vendor must be in compliance with the following requirements:

Policy- It is the policy of HUD Disadvantaged Business Enterprise (DBE) has the maximum opportunity to participate in the performance of contracts financed in whole or part with Federal Funds. The contractor agrees to ensure that DBE's have the maximum opportunity to participate in the performance of contracts and subcontracts financed in whole or in part with Federal funds. The contractor shall not discriminate on the basis of race, color, national origin, sex, creed, religion, ancestry, disability or other handicap, age, marital/family status with regard to public assistance in award and performance of contracts funded in whole or in part with Federal funds.

HUD Section 3.

Montgomery County is required to follow guidelines set forth in Title 24-Housing and Urban Development, Federal document 24 CFR 85 (Code of Federal Regulations). Certification of non-segregated facilities - 41 CFR Part 60-1.8.

Comply with Title VI of Civil Rights Act of 1964 (P.L. 90-352) as amended; Title VIII of the Civil Rights Act of 1968 as amended; the Fair Housing Act (P.L. 90-284); Section 504 of the Rehabilitation Act of 1973; the Americans with Disabilities Act of 1990; The Age of Discrimination Act of 1975; Executive Order 11063 as amended by Executive Order 12259; and with Executive Order 11246 as amended by Executive Orders 11375, 11478, 12106 and 12107.

Comply with any Federal Regulations issued pursuant to compliance with Section 504 of Rehabilitation Act of 1973 (29 U.S.C. 794), which prohibits discrimination against the handicapped in any Federal funded contract.

Comply with Affirmative Action and Executive Order 11246 of September 24, 1965. Compliance with the provisions of Section 3, the regulations set forth in 24 CFR 135, and all applicable rules and orders issued there under.

Comply with Hatch Act.

Comply with Buy America Preferences for Infrastructure Projects, 2 CFR Part 184.

Conflict of interest – comply with the provisions of 24 CFR 570.611.

Definitions – Disadvantaged Business Enterprises (DBE) means a small business concern (1) which is at least 51 percent owned by one or more socially and economically disadvantaged individuals, or in case of any publicly owned business, at least 52 percent of the stock of which is owned by one or more socially and economically disadvantaged individuals; and (2) whose management and daily economically disadvantaged individuals who own it, as certified.

The right is reserved, as the interest of Montgomery County Commissioners' Court may require rejecting any one or all bids and to waive any informality in bids received. All bids received after the above designated closing time will be returned unopened.

Vendors are responsible for monitoring the Office of the Montgomery County Purchasing Agent website at www.mctx.org for any Addenda, which may be issued.

For any questions relating to the specifications or the submission of this bid, contact Andreea Kovacs, Procurement Project Manager - Construction via email: Andreea.kovacs@mctx.org or by calling 936-539-7927.

Your consideration of this proposal is appreciated.

Sincerely,



Kelly Vidal, CPPO, CPPB, NIGP-CPP
Assistant County Purchasing Agent

Sealed lump sum General Contract Bids, addressed to the OWNER:

MONTGOMERY COUNTY PURCHASING
Attn: Gilbert Jalomo, Jr., CPPB, County Purchasing Agent
Project: Project# 24-19, **MIRACLE CITY DAY CENTER**
501 North Thompson, Suite 405
Conroe, Texas 77301

will be received until April 24, 2024 in the OFFICE OF THE COUNTY PURCHASING AGENT, for the Miracle City Day Center - MCCD, Project# 24-19, located in Conroe, Texas, and then publicly opened in the office of the Montgomery County Purchasing Agent.

A PRE-BID CONFERENCE WILL BE HELD AT 10:00 am on Thursday, April 11, 2024 IN PERSON AT 350 Foster Dr., Conroe, TEXAS 77301.

A Cashier's or Certified Check or Bidder's Bond payable to the order of the OWNER, in an amount not less than 5% of the greatest amount of proposal submitted must accompany the Contractors Bid. A Performance and Payment Bond, each in an amount not less than 100% of the Contract Sum, conditioned upon the faithful performance of the Contract, will be required.

General Documents, Drawings and Specifications (Construction Documents) for the Project are in the office of the Purchasing Agent. Any questions concerning the information contained in the Plans & Specifications shall be directed to the Procurement Project Manager - Construction, Andreea Kovacs via email at andreea.kovacs@mctx.org.

Sets of Construction Documents may be obtained from the office of the Montgomery County Purchasing Agent. **General Contract Bidders shall submit a completed Contractor's Qualification Statement (AIA Form A305) to Purchasing Agent at time of request for documents.**

All bids, whether mailed or delivered, must be in the hands of OWNER no later than the above specified time for said Project. All Bids shall be sealed and marked outside of envelope: **Miracle City Day Center - MCCD, Project# 24-19** with name and address of the Bidder.

No bid shall be withdrawn for ninety (90) days after opening of the bids without consent of Owner. Owner reserves the right to reject any or all bids; to accept or reject any Alternates; to accept any bid considered advantageous; and to waive any informality or irregularity in any bid which, in his judgement, is in his own best interest.

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BIDDING INFORMATION:

- a. Lump Sum General Contract Bids, for the **Miracle City Day Center - MCCD, Project# 24-19**, located in Conroe, Texas, will be received by OWNER and opened at the time, place and date designated in the ADVERTISEMENT FOR BIDS or latest Addendum thereto.
 - b. Each Bidder shall complete all the blank spaces on the Bid Form.
 - c. Submit Bids on the form provided by the Owner or on an exact copy thereof. Seal Bid in an enveloped addressed to OWNER and plainly mark outside of the envelope name of the contents, and the name and address of the Bidder.
 - d. If a Bidder submits his Bid by mail, he shall enclose the above described sealed envelope in a second envelope addressed to OWNER and have the bidder's return address in the upper left hand corner. The Officer whose duty it is to open the Bids will decide when the bid opening time is at hand and no Bid received thereafter will be considered. Owner and Architect will not be responsible for the premature opening of any Bid which is not properly addressed and identified.
1. TENTATIVE SCHEDULE OF EVENTS:
 - Release of Bid: April 4, 2024
 - Pre-Bid Meeting: April 11, 2024 at 10:00 am, 350 Foster Dr., Conroe, Tx. 77301
 - Deadline for Questions: April 16, 2024 by 2:00 pm.
 - Submission Due Date: April 24, 2024 by 2:00 pm.
 2. BID SECURITY: No bid will be considered unless it is accompanied by a certified or cashier's check or bidder's bond executed on the standard form acceptable to Owner, in either case, the amount shall be not less than 5% of the greatest amount of the bid (considering Alternates, if any). The bid security shall ensure the execution of the Contract and the furnishing of an acceptable Performance and Payment bond by the successful bidder within twenty (20) days after notification of award to such bidder, and that his bid will not be withdrawn within twenty (20) days after the date of opening of the bid without the consent of OWNER. The Performance and Payment bond shall be in the amount of 100% of the total Contract Sum, in form prescribed by Owner. A Contract with Owner, in form prescribed by Owner, shall be executed and delivered together with the said Performance and Payment bond of the successful bidder within twenty (20) days after receipt by such successful bidder of Notice of Acceptance of his proposal by Owner or Architect. The bid security in the form of certified or cashier's check will be returned to unsuccessful Bidders as soon as a contract award is made.
 3. BID FORM: Provided by Architect for Contractor's convenience. Bid shall be in duplicate and signed by a duly authorized official of the contracting firm. This Form must be tendered along with initialed copies of Montgomery County Purchasing Department Requirements.
 4. **EXAMINATION OF SITE AND CONSTRUCTION DOCUMENTS: Prior to submitting a Bid for this Project, each proposer shall have examined the site, compared it with the Drawings and Specifications, and satisfied himself as to the existing conditions under which he and his subcontractors will be required to work or that will affect the work under this Contract. No allowances will be made in behalf of Contractor or any Subcontractor, after the Contract has been signed, for any omission, error or negligence in determining these conditions.**
 5. TIME OF COMPLETION: Contractor shall state on the Bid Form the number of calendar days (construction time) he requires to substantially complete the work.
 6. INTERPRETATION OF BID PRICES: In case of a difference in written words and figures on Bid Form, the amount stated in written words shall govern.

7. DELIVERY OF BIDS: Bidder shall be responsible for mailing or delivering his Bid at the proper time and to the proper place. The mere fact that a Bid was mailed or dispatched will not be considered. Bidder is held responsible for determining that the Bid is actually received by Owner. Submitting a Bid or modification thereof by telephone or telegraph is not allowed.
8. PERFORMANCE AND PAYMENT BONDS: Performance bond is required for any bid \$100,000 or greater, Payment bond is required for any bid \$25,000 or above. Refer to Item 1 above, and Montgomery County Purchasing Department Requirements.
9. TAX EXEMPTION: TEXAS SALES AND USE TAXES: Owner is exempt from State and local sales and use taxes under Section 151.309 of the Texas Tax Code. This Contract is deemed to be a separated Contract for Texas tax purposes, and as such, Owner hereby issues its Texas Exemption for the purchase of any items qualifying for exemption under this Agreement. Contractor is to issue its Texas Resale Certificate to vendors and subcontractors for such items qualifying for this exemption and further, Contractor should state these items at cost.
10. ADDENDA AND INTERPRETATIONS:
 - a. No interpretation of the meaning of the Construction Documents (General Documents, Specifications and Drawings) will be made to any bidder orally. Requests for such interpretations shall be made in writing and addressed to Architect, and to be given consideration must be received at least (5) working days prior to date set for receiving bids. Any and all such interpretations or supplemental instructions will be issued in the form of written Addenda to the Construction Documents, which, if issued, will be furnished to all prospective bidders at the respective addresses furnished for such purposes, prior to date set for opening of bids. Failure of any bidder to receive any such Addendum or interpretation shall not relieve any bidder from any obligation under his bid as submitted. All Addenda so issued shall become part of the Contract Documents upon signing of the Agreement Between Owner and Contractor.
 - b. Contractors, subcontractors and materialmen bidding on this work are requested to direct their requests for clarification or amplification to the Drawings and Specifications covering all phases of the work, including architectural, mechanical, plumbing and electrical items, to the Procurement Project Manager - Construction, Andreea Kovacs, in writing, via email to Andreea.kovacs@mctx.org
Oral interpretation will not constitute authority to change the scope of work, workmanship or materials required for this project.
 - c. Request for approval to substitute materials, methods, or processes shall be made to Architect no later than (5) working days prior to date for submission of subcontract bids to general contractors, and if found acceptable, will be confirmed by an Addendum to the Construction Documents. Where proposed substitutions are **NOT** incorporated into the Construction Documents by Addendum **PRIOR TO** the Contract Bid Opening, all bids shall be held to have been made on the basis of materials, methods and processes required by the Construction Documents. CONTRACTOR NOTE: The terms "substitution", "equal" and similar wording as used herein shall be held to mean "a proposal to use **any** material, method, or process **other than** the materials, methods or processes as specified, as well as related work as noted on the Drawings".
11. PROJECT ESTIMATE: \$1.9M
12. CASH ALLOWANCES: NONE
13. USE OF LOCAL SUBCONTRACTORS AND SUPPLIERS: It is the intention of the County for local businesses to be given every consideration and opportunity to provide services and materials for this project. Contractors submitting bids for this project are encouraged to utilize local businesses wherever possible, but not to the extent where their participation will result in the Contractor's bid not being competitive.

14. TRASH REMOVAL: Contractor shall not allow trash to accumulate on the building site. Contractor shall be required to coordinate the location of his trash dumpster with the Owner's Representative.

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COMPLIANCE ACKNOWLEDGMENT. The undersigned acknowledges this Bid is based on **STRICT COMPLIANCE** with the Drawings and Specifications, as to items, materials, methods, etc., or **PRIOR APPROVED EQUALS ISSUED BY ADDENDA BEFORE PROPOSAL OPENING DATE.**

GENERAL.

It is understood that if accepted by Owner, this Bid becomes a part of the Contract Documents upon the signing of the Agreement, and failing to comply with any part of this Bid will be taken as failure of the Bidder to comply with the Contract Agreement and will be just cause for rejection of the Work.

If awarded the Contract for this Project, the undersigned shall submit to the Architect a list of subcontractors he proposes to employ **prior** to executing the subcontracts. It is also understood that OWNER reserves the right to reject any or all bids; to accept any bids considered advantageous; and to waive any informality or irregularity in any bids which, in his judgement, is in his own best interest. The undersigned certifies that the amounts contained in this Bid have been carefully checked and are submitted as correct and final.

The undersigned agrees that he will not withdraw this Bid for a period of ninety (90) days from the date hereof:
_____.

BID TO BE SUBMITTED IN DUPLICATE (one original and one copy).

NAME OF CONTRACTING FIRM

BY: _____
AUTHORIZED SIGNATURE

PRINTED/TYPED NAME & TITLE OF ABOVE

ADDRESS: _____

CITY STATE ZIP

TELEPHONE: (____) _____

FAX: (____) _____

STATE WHETHER **CORPORATION**
PARTNERSHIP or **INDIVIDUAL**

SEAL, IF CORPORATION

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BID PACKAGE CHECK LIST

Only items marked with an “X” are applicable to this bid.

Bidders should review the package thoroughly.

If additional information is needed, contact Montgomery County Purchasing Dept. at 936-539-7980.

Bidder must check each task as it is completed.

Include this form with the appropriate bid documents.

Required		✓	Required		✓
X	BID FORMS Must be completed and signed in ink. Failure to do so may cause response to be rejected.		X	GENERAL REQUIREMENTS AND TERMS Respondent should be familiar with all General Requirements and Terms.	
X	Contract		X	Israel Boycott Statement	
X	References		X	Conflict of Interest Questionnaire (CIQ)	
X	Vendor Information Form		X	Disclosure of Interested Parties (Form 1295)	
X	Build America Buy America Compliance Form and Contractor's Local Opportunity Plan				
X	Acknowledgement		X	Ethics Training * completed and Certificate of Completion included with proposal response *click on link to complete training	
X	W-9 submittal		X	SUBMITTING PROCEDURE	
X	Bidder/Offeror Self Certification			❖ Company Name	
X	Certification Regarding Lobbying			❖ Project Number	
X	Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion			❖ Opening Date	
X	Certificate of Independent Price Determination			❖ Project Title	
AFTER AWARD IS MADE, THE FOLLOWING DOCUMENTS MUST BE PROVIDED					
Check if you are prepared to provide these after award, as required.					
Required		✓	Required		✓
X	TEST REPORTS		X	SAFETY DATA SHEETS	
X	PERFORMANCE BOND REQUIREMENTS This Bond applies to bids that exceed \$100,000 as stated in the Montgomery County Terms and Conditions.		X	PAYMENT BOND REQUIREMENTS This Bond applies to bids that exceed \$25,000 as stated in the Montgomery County Terms and Conditions.	
INSURANCE INFORMATION					
Required		✓	Required		✓
X	WORKERS' COMPENSATION Check if you are prepared to provide this after award, as required, if applicable.		X	ACTIVE VENDOR Check here only if your company has conducted business with Montgomery County within the past year; AND all current insurance certificates are on file at this time.	
X	AUTOMOBILE LIABILITY Check if you are prepared to provide this after award, as required, if applicable.				
X	GENERAL AND PROFESSIONAL LIABILITY Check if you are prepared to provide this after award, as required, if applicable.				

It is the Respondent's responsibility to be thoroughly familiar with all Requirements and Specifications.

RESPONSE REQUIREMENTS

Bidders/Proposers shall fill out the following Bid/Proposal Form in its entirety. Failure to do so may result in disqualification.

- (1) BIDDERS/PROPOSERS MUST SUBMIT NUMBER OF COPIES SPECIFIED PER THE INVITATION TO BID/PROPOSE.
- (2) BIDDERS/PROPOSERS MUST FILL IN AND SIGN THE ATTACHED CONTRACT. IF MONTGOMERY COUNTY HAS A COPY OF BIDDER'S/PROPOSER'S ASSUMED NAME CERTIFICATE, DBA (DOING BUSINESS AS) CERTIFICATE, OR CORPORATE CERTIFICATE. IN ORDER FOR YOUR BID/PROPOSAL TO MEET MONTGOMERY COUNTY BID/PROPOSAL REQUIREMENTS, THE COUNTY MUST HAVE, IN OUR RECORDS, THE ABOVE MENTIONED CERTIFICATES.
- (3) NO BID/PROPOSAL WILL BE ACCEPTED AFTER THE SPECIFIED DUE DATE AND TIME.
- (4) PRICES WILL REMAIN FIRM FOR THE DURATION OF THIS CONTRACT. PRICES SHALL BE ALL INCLUSIVE. ANY PRICE NOT SHOWN ON THIS CONTRACT WILL NOT BE HONORED FOR PAYMENT WHEN SUBMITTED BY VENDOR.
- (5) MONTGOMERY COUNTY RETAINS THE RIGHT TO IMMEDIATELY CANCEL ANY AGREEMENT BETWEEN THE PARTIES HERETO, SHOULD GOODS, MATERIALS, OR SERVICES SUPPLIED BY THE BIDDER/PROPOSER NOT MEET SPECIFICATIONS.
- (6) MONTGOMERY COUNTY MAY REQUEST BIDDER/PROPOSER TO PROVIDE, BEFORE AWARD, CERTIFICATES OF INSURANCE RELATING TO THE FOLLOWING CATEGORIES OF INSURANCE, IF REQUIRED BY LAW:
 - A) WORKERS' COMPENSATION
 - B) COMPREHENSIVE GENERAL LIABILITY INSURANCE
 - C) AUTOMOBILE LIABILITY INSURANCE
- (7) VENDOR AWARDED CONTRACT SHALL BE REQUIRED TO SUBMIT A LIST OF ALL SUBCONTRACTORS.

THE COMMISSIONERS' COURT OF MONTGOMERY COUNTY RESERVES THE RIGHT TO AWARD THIS CONTRACT TO THE BIDDER/PROPOSER WHO PROVIDES THE LOWEST, BEST, AND MOST RESPONSIBLE BID/PROPOSAL, IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS. ALTERNATE BIDS/PROPOSALS WILL NOT BE ACCEPTED.

THE COMMISSIONERS' COURT FURTHER RESERVES THE RIGHT TO WAIVE ANY FORMALITY OR IRREGULARITY, TO REJECT ALL BIDS/PROPOSALS, OR REQUIRE NEW BIDS/PROPOSALS, IF IN THE BEST INTEREST OF THE COUNTY. BY LAW, MONTGOMERY COUNTY IS NOT OBLIGATED TO ACCEPT A NON-COMPLIANT LOW BID/PROPOSAL.

ALL MONTGOMERY COUNTY STANDARD TERMS AND CONDITIONS WILL APPLY UNLESS SPECIFICALLY ADDRESSED IN THIS INVITATION TO BID/PROPOSAL.

MONTGOMERY COUNTY RESERVES THE RIGHT TO MAKE AN AWARD ON AN "ALL OR NONE" BASIS.

Failure or inability to adhere to any of the preceding requirements may serve as the basis for disqualification.

SPECIAL NOTE

IF SUBCONTRACTORS ARE UTILIZED FOR ANY JOB ORDER, A LIST OF THE SUBCONTRACTORS, ALONG WITH NAME AND PHONE NUMBER, SHALL BE PROVIDED BY THE GENERAL CONTRACTOR AFTER THE AWARD OF THE CONTRACT AND PRIOR TO THE COMMENCEMENT OF WORK. THIS LIST SHALL BE DELIVERED TO THE FOLLOWING ADDRESS:

**MONTGOMERY COUNTY COMMUNITY DEVELOPMENT
501 N. THOMPSON, SUITE 200
CONROE, TEXAS 77301**

NOTICE TO ALL BIDDERS

Texas Department of Insurance – Division of Workers’ Compensation (DWC) has adopted amended Rule 28 TAC §110.110 required notices of coverage with all solicitations advertised after November 24, 2015.

The DWC has stated that it is aware that statutory requirements for Workers’ Compensation Insurance Coverage are not being met. Rule §110.110 is designed to achieve compliance from both Contractor and governmental entities. **This affects both of us on this project.**

Providing false or misleading certificates of coverage, failing to provide or maintain required coverage, or failing to report any change that materially affects the coverage, may subject the Contractor(s) or other persons providing services on this project to legal penalties. **This affects your Subcontractors.**

Please read carefully and prepare your Bid/Proposal in full compliance to DWC Rule §110.110. Failure to provide the required certificates, upon submission of a Bid/Proposal, could result in your Bid/Proposal being declared “Non-Responsive”.

According to DWC, “This rule does not create any duty or burden on anyone which the law does not establish.” **Therefore, the County should not experience any increase in cost because of the need to comply with the Texas Workers’ Compensation Laws.**

Gilbert Jalomo, Jr., CPPB
Purchasing Agent

CONTRACT

THE STATE OF _____ §

COUNTY OF _____ §

THIS AGREEMENT is made this _____ day of _____, 20____, by and between Montgomery County, Texas, a political subdivision of the State of Texas, hereinafter called, "County" and _____

_____, a, _____ whose principal place of business is located at _____, and is hereinafter called "Contractor."

WHEREAS, the County Commissioners' Court did on _____ award to Contractor a contract for supplying _____ in quantities and at the prices therein set out; and

WHEREAS, Contractor has agreed to provide services in conformity with the plans and specifications and to supply all necessary labor and materials at the prices set forth in the bid/proposal form submitted by Contractor and incorporated into this Agreement.

NOW THEREFORE be it agreed by County and contractor as follows:

1. The following documents attached hereto and accompanying this agreement are incorporated herein, and the provisions set forth therein shall become a part of this agreement:

- a. Notice to Bidders/Proposers
- b. Contractor's Bid/Proposal Form
- c. General Provisions and Attachments
- d. Special provisions
- e. Technical Provisions including all Plans, Specifications and Technical Requirements
- f. Contractor's Performance and Payment Bonds
- g. HUD Section 3 Contracting Policy and Procedure, where applicable
- h. All other documents included in the bid/proposal packet applicable to the services performed hereunder

2. It is expressly understood and agreed that County has available only the funds appropriated and certified by its County Auditor for the purpose of satisfying County's obligations under the terms and provisions of this Agreement; and, notwithstanding anything to the contrary or that may be construed to the contrary, the maximum liability of County is limited to said appropriated and certified funds. Should County, with or without cause, fail or refuse to pay Contractor any amounts alleged by Contractor to be due under this Agreement, or fail or refuse to appropriate funds as may be necessary to complete the contract work, then the sole and exclusive remedy of Contractor shall be to terminate this Agreement and take possession of any goods or materials not used in furtherance of the contract work or previously paid for by County and/or to seek compensation as provided by strict interpretation of the Agreement for labor, goods, materials and equipment used for purposes of the contract work prior to termination of the Agreement.

3. This Agreement, including all documents specifically incorporated herein, constitute the whole agreement between the Parties with respect to the subject matter hereof and supersedes all prior agreements. This Agreement shall not be amended or waived, in whole or in part, except in writing signed by both Parties.

Effective as of the date first written herein above.

CONTRACTOR

SIGNATURE: _____

PRINT NAME: _____

TITLE: _____

COMPANY: _____

(If this Contract is with a Corporation, it must be executed by an officer thereof and the seal of the Corporation impressed.)

MONTGOMERY COUNTY, TEXAS

BY: _____
COUNTY JUDGE

ATTEST:

COUNTY CLERK

AUDITOR'S CERTIFICATE

I do certify that funds are available in the amount of _____ to pay the obligation of County under and within the foregoing agreement.

SIGNED this _____ day of _____, 20____.

COUNTY AUDITOR

ACKNOWLEDGMENT*

CORPORATE

THE STATE OF _____ §

COUNTY OF _____ §

BEFORE ME, the undersigned authority, this day personally appeared _____, known to me to be the _____ of the _____ Corporation, who being by me first duly sworn, deposed and said that he/she had executed the above and foregoing Document in the capacity stated as the authorized act and deed of said Corporation.

NOTARY PUBLIC

Printed Name _____

Commission Expires: _____

PARTNERSHIP

THE STATE OF _____ §

COUNTY OF _____ §

BEFORE ME, the undersigned authority, this day personally appeared _____, a General Partner of the _____ Partnership, who being by me first duly sworn, deposed and said that he/she had executed the above and foregoing Document in the capacity stated as the authorized act and deed of said Partnership.

NOTARY PUBLIC

Printed Name: _____

Commission Expires: _____

ACKNOWLEDGMENT CONTINUED

INDIVIDUAL OR SOLE PROPRIETORSHIP

THE STATE OF _____ §

COUNTY OF _____ §

BEFORE ME, the undersigned authority, this day personally appeared _____, an individual doing business as _____, who being by me first duly sworn, deposed and said that he/she had executed the above and foregoing Document in the capacity stated and for the purposes and consideration set forth therein.

NOTARY PUBLIC

Printed Name _____

Commission Expires _____

***(EXECUTE APPROPRIATE ACKNOWLEDGMENT FOR CORPORATION, PARTNERSHIP OR INDIVIDUAL CONTRACTOR.)**

RESIDENCE CERTIFICATION

In accordance with Chapter 2252 of the Government Code, the following will apply. The pertinent portion has been extracted and is as follows:

Sec. 2252.001 DEFINITIONS

- (3) "Nonresident bidder" refers to a person who is not a resident.
- (4) "Resident bidder" refers to a person whose principal place of business is in this state, including a contractor whose ultimate parent company or majority owner has its principal place of business in this state.

Sec. 2252.002 AWARD OF CONTRACT TO NONRESIDENT BIDDER

A governmental entity may not award a governmental contract to a nonresident bidder unless the nonresident underbids the lowest bid submitted by a responsible resident bidder by an amount that is not less than the amount by which a resident bidder would be required to underbid the nonresident bidder to obtain a comparable contract in:

- (1) the state in which the nonresident's principal place of business is located; or
- (2) a state in which the nonresident is a resident manufacturer.

I certify that _____
COMPANY NAME

is a Resident Bidder as defined Government Code 2252 and our principal place of business is in _____
CITY AND STATE

Signature: _____
Print Name: _____
Title: _____

I certify that _____
COMPANY NAME

is a Nonresident Bidder as defined in Government Code 2252 and our principal place of business is in _____ (City and State)

Signature: _____
Print Name: _____
Title: _____

PAYMENT BOND

THE STATE OF _____ §

COUNTY OF _____ §

KNOW ALL MEN BY THESE PRESENTS:

THAT _____ of the City of _____, County of _____, and State of _____ as Principal, and _____, authorized under the Laws of the State of Texas to act as Surety on Bonds for Principals, are held and firmly bound unto the County Judge of Montgomery County, Texas, and his duly qualified successors in office, in the penal sum of _____ \$_____ for the payment whereof, the said Principal and Surety bind themselves and their heirs, administrators, executors, successors and assigns, jointly and severally, by these presents:

WHEREAS, the Principal has entered into a certain written Contract with the County, dated the ____ day of _____, 20_____, for construction of a Public Works Project, generally described as _____, which Contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION TO THIS OBLIGATION IS SUCH, that if the said Principal shall pay all claimants supplying labor and material to him or a subcontractor in the prosecution of the work provided for in said Contract, then this obligation shall be void; otherwise, it shall remain in full force and effect;

PROVIDED, HOWEVER, that this Bond is executed pursuant to the provisions of Chapter 2253 of the Texas Government Code, as amended, and all liabilities on this Bond shall be determined in accordance with the provisions of said chapter to the same extent as if it were copied at length herein.

Surety, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract, or to the work performed thereunder, or the Plans, Specifications or Drawings accompanying the same, shall in any way affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract, or to the work to be performed thereunder.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument this ____ day of _____, 20__.

PRINCIPAL

SURETY

BY: _____

BY: _____

TITLE: _____

TITLE: _____

ADDRESS: _____

ADDRESS: _____

PHONE NUMBER: _____

PHONE NUMBER: _____

EMAIL: _____

EMAIL: _____

The Name and Address of the Resident Agent of Surety is:

(Attach Power of Attorney evidencing Surety Signatory's authority to execute on behalf of Surety.)

PERFORMANCE BOND

THE STATE OF _____ §

COUNTY OF _____ §

KNOW ALL MEN BY THESE PRESENTS:

THAT _____ of the City of _____, County of _____, and State of _____ as Principal, and _____, authorized under the Laws of the State of Texas to act as Surety on Bonds for Principals, are held and firmly bound unto the County Judge of Montgomery County, Texas, and his duly qualified successors in office, in the penal sum of _____ \$ _____ for the payment whereof, the said Principal and Surety bind themselves and their heirs, administrators, executors, successors and assigns, jointly and severally, by these presents:

WHEREAS, the Principal has entered into a certain written Contract with the County, dated the ____ day of _____, 20_____, for construction of a Public Works Project, generally described as _____, which Contract is hereby referred to and made a part hereof as fully and to the same extent as if copied at length herein.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that if the said Principal shall in all respects duly and faithfully observe and perform all and singular the covenants, conditions, and agreements in and by said Contract agreed and covenanted by the Principal to be observed and performed according to the true intent and meaning of said Contract and the Plans and Specifications hereto annexed, and faithfully perform the work in accordance with the Plans and Specifications hereto annexed, then this obligation shall be void; otherwise, it shall remain in full force and effect;

PROVIDED, HOWEVER, that this Bond is executed pursuant to the provisions of Chapter 2253 of the Texas Government Code, as amended, and all liabilities on this Bond shall be determined in accordance with the provisions of said chapter to the same extent as if it were copied at length herein.

Surety, for value received, stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract, or to the work performed thereunder, or the Plans, Specifications or Drawings accompanying the same, shall in any way affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract, or to the work to be performed thereunder.

IN WITNESS WHEREOF, the said Principal and Surety have signed and sealed this instrument this ____ day of _____, 20____.

PRINCIPAL

SURETY

BY: _____

BY: _____

TITLE: _____

TITLE: _____

ADDRESS: _____

ADDRESS: _____

PHONE NUMBER: _____

PHONE NUMBER: _____

EMAIL: _____

EMAIL: _____

The Name and Address of the Resident Agent of Surety is:

(Attach Power of Attorney evidencing Surety Signatory's authority to execute on behalf of Surety.)

NON-COLLUSION AFFIDAVIT AND DEBARMENT CERTIFICATION

INDIVIDUAL DOING BUSINESS UNDER A CONTRACTOR NAME

The prequalified Bidder being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of "free competitive bidding" in connection with any Bid or contract, and that the prequalified Bidder intends to do the work with his own bonafide employees or subcontractors and will not submit a Bid for the benefit of another Contractor.

By submitting this non-collusion affidavit, the Contractor is certifying his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

SIGNATURE OF PREQUALIFIED BIDDER

Name of Prequalified Bidder

Print or type individual name

Trading and doing business as

Print or type Contractor name

Address as Prequalified

Witness

Signature of Prequalified Bidder, Individually

Print or type witness' name

Print or type signer's name

AFFIDAVIT MUST BE NOTARIZED

NOTARY SEAL

Subscribed and sworn to before me this the ____ day of _____ 20 ____.

Signature of Notary Public

of _____ County

State of _____

My Commission Expires: _____

NON-COLLUSION AFFIDAVIT AND DEBARMENT CERTIFICATION CONTINUED

CORPORATE ENTITIES DOING BUSINESS UNDER A CONTRACTOR NAME

The prequalified Bidder being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of "free competitive bidding" in connection with any Bid or contract, and that the prequalified Bidder intends to do the work with his own bonafide employees or subcontractors and will not submit a Bid for the benefit of another Contractor.

By submitting this non-collusion affidavit, the Contractor is certifying his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

SIGNATURE OF PREQUALIFIED BIDDER

Name of Prequalified Bidder

Print or type Corporate name

Trading and doing business as

Print or type Contractor name

Address as Prequalified

Witness

Signature of Prequalified Bidder, Individually

Print or type witness' name

Print or type signer's name

AFFIDAVIT MUST BE NOTARIZED

NOTARY SEAL

Subscribed and sworn to before me this the ____ day of _____ 20____.

Signature of Notary Public

of _____ County

State of _____

My Commission Expires: _____

CHANGE ORDER NO. _____

PURCHASE ORDER NO. _____

PROJECT: _____

CONTRACTOR: _____

Contractor is directed by County to make the following changes to the Contract Documents.

DESCRIPTION OF CHANGES: _____

ATTACHMENTS: (List Supporting Documents) _____

CHANGE IN CONTRACT PRICE

CHANGE IN CONTRACT TIME

1. Original price: \$ _____

Original Time: _____ Days

2. Total of prior change orders: \$ _____

Total of prior change orders: _____ Days

3. Total price prior to current change order: \$ _____

Total time prior to current change order: _____ Days

4. Total of current change order: \$ _____

Total of current change order: _____ Days

5. New price resulting from current change order: \$ _____

New time resulting from current change order: _____ Days

AGREED BY:

CONTRACTOR _____

CONTRACTOR NAME

SIGNATURE: _____

DATE: _____

TITLE: _____

APPROVED: _____

MONTGOMERY COUNTY CONTRACT REPRESENTATIVE

CONTRACTOR ACKNOWLEDGEMENT OF STORMWATER MANAGEMENT PROGRAM

I hereby acknowledge that I am aware of the Storm water Management Program and have been provided an opportunity to review, inspect, or provided a copy of the standard operating procedures developed by Montgomery County, in compliance with the TPDES General Permit No. TXR040000. I agree to comply with all applicable best management practices and standard operating procedures while conducting my services for Montgomery County. I agree to conduct all services in a manner that does not introduce illicit discharges of pollutants to streets, storm water inlets, drainage ditches or any portion of the drainage system.

The following materials and/or pollutant sources must not be discharged to the drainage system as a result of any services provided:

1. Grass clippings, leaves, mulch, rocks, sand, dirt or other waste materials resulting from landscaping activities (except those materials resulting from ditch mowing or maintenance activities);
2. Herbicides, pesticides and/or fertilizers (except those intended for aquatic use);
3. Detergents, fuels, solvents, oils and/or lubricants, other equipment and/or vehicle fluids;
4. Other hazardous materials, including paints, thinners, chemicals or related waste materials;
5. Uncontrolled dewatering discharges, equipment and/or vehicle wash water;
6. Sanitary waste, trash, debris, or other waste products;
7. Wastewater from wet saw machinery; and
8. Other pollutants that degrade water quality or pose a threat to human health or the environment

Furthermore, I agree to notify Montgomery County immediately of any issue caused by, or identified by

_____ (Contractor) that is believed to be an immediate threat to human health or the environment.

Name of Contractor

Signature of Authorized Representative

Title

Printed Name

Date

CONDITIONAL WAIVER AND RELEASE ON PROGRESS PAYMENT

Project _____

Job No. _____

On receipt by the signer of this document of a check from _____ (maker of check) in the sum of _____ (\$ _____) payable to (payee(s) of check) and when the check has been properly endorsed and has been paid by the bank on which it is drawn, this document becomes effective to release any mechanic’s lien right, any right arising from a payment bond that complies with a state or federal statute, any common law payment bond right, any claim for payment, and any rights under any similar ordinance, rule, or statute related to claim or payment rights for persons in the signer’s position that the signer has on the property of MONTGOMERY COUNTY (owner) located at _____ (location) to the following extent: _____ (job description).

This release covers a progress payment for all labor, services, equipment, and/or materials furnished to the property or to _____ (person with whom signer contracted) as indicated in the attached statement(s) or progress payment request(s), except for unpaid retention, pending modifications and changes, or other items furnished.

Before any recipient of this document relies on this document, the recipient should verify evidence of payment to the signer.

The signer warrants that the signer has already paid or will use the funds received from this progress payment to promptly pay in full all of the signer’s laborers, subcontractors, materialmen, and suppliers for all work, materials, equipment, or services provided for or to the above referenced project in regard to the attached statement(s) or progress payment request(s).

Date _____

_____ (Company name)

By _____ (Signature)

_____ (Title)

Sworn to and subscribed before me by on _____, 20 ____.

Notary Public in and for the State of Texas
My commission expires: _____

CONDITIONAL WAIVER AND RELEASE ON FINAL PAYMENT

Project _____

Job No. _____

On receipt by the signer of this document of a check from _____ (maker of check) in the sum of _____ (\$ _____) payable to (payee(s) of check) and when the check has been properly endorsed and has been paid by the bank on which it is drawn, this document becomes effective to release any mechanic's lien right, any right arising from a payment bond that complies with a state or federal statute, any common law payment bond right, any claim for payment, and any rights under any similar ordinance, rule, or statute related to claim or payment rights for persons in the signer's position that the signer has on the property of MONTGOMERY COUNTY (owner) located at _____ (location) to the following extent: _____ (job description).

This release covers a final payment for all labor, services, equipment, and/or materials furnished to the property or to _____ (person with whom signer contracted).

Before any recipient of this document relies on this document, the recipient should verify evidence of payment to the signer.

The signer warrants that the signer has already paid or will use the funds received from this final payment to promptly pay in full all of the signer's laborers, subcontractors, materialmen, and suppliers for all work, materials, equipment, or services provided for or to the above referenced project up to the date of this waiver and release.

Date _____

_____ (Company name)

By _____ (Signature)

_____ (Title)

Sworn to and subscribed before me by on _____, 20____.

Notary Public in and for the State of Texas
My commission expires: _____

HOUSING AND URBAN DEVELOPMENT (HUD) SECTION 3 CONTRACTING POLICY AND PROCEDURE

INTRODUCTION

The purpose of Section 3 of the Housing and Urban Development (HUD) Act of 1968 (12 U.S.C. 1701u) (Section 3) is to ensure that employment and other economic opportunities generated by certain HUD financial assistance shall, to the greatest extent feasible, and consistent with existing Federal, State, and local laws and regulations, be directed to low and very-low income individuals, especially recipients of government assistance for housing, and to business concerns which provide economic opportunities to low and very low income individuals. "Section 3" means Section 3 of the Housing and Urban Development Act of 1968, as amended 12 U.S.C. 1701u.

All Contractors who enter into HUD financed contracts with Montgomery County agree to comply with Section 3, when applicable (see "NOTICE OF SECTION 3 REQUIREMENTS" attached hereto).

This will include:

1. Submitting a list of all positions necessary to complete contract, name of employees who will fill those positions, names of all other employees.
2. Posting notices of any vacant positions, including training and/or apprenticeship positions, qualifications for positions, place where applications will be received and starting date of employment.
3. To the greatest extent possible, making available vacant positions, including training and/or apprenticeship positions, to Section 3 residents (all categories) in order to priority.
4. As positions are vacated during completion of contract, following guidelines enumerated in numbers 2 and 3 above.
5. Submitting Compliance Reports as required.
6. If notified of non-compliance, correcting non-compliance within allowable time period.

Failure to comply with these Section 3 requirements may lead to sanctions, which can include termination of the contract for default and suspension or debarment from future HUD-assisted contracts.

A business concern seeking to qualify for a Section 3 contracting preference shall certify or submit evidence that the business concern qualifies as a Section 3-business concern (see "CERTIFICATION FOR BUSINESS CONCERNS SEEKING HUD (SECTION 3) PREFERENCE" form attached). Section 3 business must also be able to demonstrate its ability to complete the contract. The ability to perform successfully under the terms and conditions of the proposed contract is required of all contractors and subcontractors subject to the procurement standards of 24 CFR 85.36, 24 CFR 85.36b(8).

Notice of Section 3 Requirements

The following Section 3 Requirements, based on the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (section 3), are incorporated herein and shall become a part of this agreement:

- A. The work to be performed under this contract is on a project assisted under a program providing direct Federal financial assistance from the Department of Housing and Urban Development and is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u. Section 3 requires that, to the greatest extent feasible, opportunities for training and employment be given to lower income residents of the area of the Section 3 covered project, and contracts for work in connection with the project be awarded to business concerns which are located in, or owned in substantial part by persons residing in the area of the Section 3 covered project.
- B. The parties to this contract will comply with the provisions of said Section 3 and the regulations issued pursuant thereto by the Secretary of Housing and Urban Development set forth in 24 Part CFR 135, and all applicable rules and orders of the Department issued thereunder prior to the execution of this contract. The parties to this contract certify and agree that they are under no contractual or other disability which would prevent them from complying with these requirements.
- C. The contractor will send to each labor organization or representative of workers with which he has a collective bargaining agreement or other contract or understanding, if any, a notice advising the said labor organization or worker's representative of his commitments under this section 3 clause and shall post copies of the notice in conspicuous places available to employees and applicants for employment or training.
- D. The contractor will include this section 3 clause in every subcontract for work in connection with the project and will, at the direction of the applicant for, or recipient of Federal financial assistance, take appropriate action pursuant to the subcontract upon a finding that the subcontractor is in violation of regulations issued by the Secretary of Housing and Urban Development, 24 CFR Part 135. The contractor will not subcontract with any subcontractor where it has notice or knowledge that the latter has been found in violation of regulations under 24 CFR Part 135 and will not let any subcontract unless the subcontractor has first provided it with a preliminary statement of ability to comply with the requirements of these regulations.
- E. Compliance with the provisions of section 3, the regulations set forth in 24 CFR Part 135, and all applicable rules and orders of the Department, issued thereunder prior to execution of the contract, shall be a condition of the Federal financial assistance provided to the project, binding upon the application or recipient, its contractors and subcontractors, its successors, and assigns to those sanctions specified by the grant or load agreement or contract through which Federal assistance is provided, and to such sanctions as are specified by 24 CFR Part 135.
- F. Noncompliance with HUD's regulations in 24 CFR Part 135 may result in sanctions, termination of this contract for default, and debarment or suspension from future HUD assisted contracts.
- G. With respect to work performed in connection with section 3 covered Indian housing assistance, section 7(b) of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450e) also applies to the work to be performed under this contract. Section 7(b) requires that to the greatest extent feasible (I) preference and opportunities for training and employment shall be given to Indians, and (ii) preference in the award of contracts and subcontracts shall be given to Indian organizations and Indian-owned Economic Enterprises. Parties to this contract that are subject to the provisions of section 3 and section 7(b) agree to comply with section 3 to the maximum extent feasible, but not in derogation's compliance with section 7(b).

Contracting Officer's Signature

Date

Title

**CERTIFICATION FOR BUSINESS CONCERNS
SEEKING HUD (SECTION 3) PREFERENCE IN CONTRACTING
AND DEMONSTRATION OF CAPABILITY**

Name of Business: _____
Address of Business: _____
Type of Business: Corporation Partnership Sole Proprietorship Joint Venture

Attached is the following documentation as evidence of status (circle all that apply and attach to bid/proposal):

For business entity as applicable:

- Copy of Articles of Incorporation
- Certificate of Good Standing
- Assumed Business Name Certificate
- Partnership Agreement
- List of owners/stockholders
- Corporation Annual Report
- % ownership of each
- Latest Board minutes appointing officers
- Organization chart with names and titles
- Additional documentation and brief function statement

For business claiming Section 3 status by subcontracting 25 percent of the dollar awarded to qualified Section 3 business:

List of subcontracted Section 3 businesses and subcontract amount

For business claiming Section 3 status, claiming at least 30 percent of their workforce are currently Section 3 residents or were Section 3 eligible residents within 3 years of date of first employment with the business:

- List of all current full-time employees
- List of employees claiming Section 3 status
- Evidence of Section 3 status less than 3 years from day of employment
- Evidence of ability to perform successfully under the terms and conditions of the proposed contract:
 - Current financial statement
 - Statement of ability to comply with public policy
 - List of owned equipment
 - List of all contracts for the past two years

Authorizing Name and Signature

Attested by: _____

(Corporate Seal)

Montgomery County Community Development

Section 3 Compliance Report

General Information

<u>Contractor:</u>	<u>Contract Amount: \$</u>
<u>Date:</u>	<u>Name of Person Completing Form:</u>

Project Information

(1) Does this contract exceed \$1000,000, including Subcontractors?						
<u>Yes.</u> Section 3 applies to contractors with contract or Subcontract exceeding \$1000,000. (Complete remainder of form with respect to your company and all subcontractors)						
<u>No.</u> Section 3 applies to Contractor only. (Complete remainder of form with respect to your company)						
(2) Indicate the efforts made to direct employment opportunities, to the greatest extent feasible, toward low and very low income persons, particularly those who are recipients of government assistance housing (<i>check all that apply</i>)						
<input type="checkbox"/> Attempted to recruit low-income residents through local advertising media, signs prominently displayed at the project site, contacting community organizations and public private agencies operating within Montgomery County, or similar methods.						
<input type="checkbox"/> Participated in a HUD program or other program which promotes the training or employment of Section 3 residents.						
<input type="checkbox"/> Participated in a HUD program or other program which promotes the award of contracts to business concerns which meet the definition of Section 3 business concerns.						
<input type="checkbox"/> Coordinated with Youth build Programs administered in the metropolitan area in which the Section 3 covered project is located.						
<input type="checkbox"/> Other. Describe:						
<i>The data reported in this section must be a compilation of information throughout the contract period pertaining to the contractor and all subcontractors.</i>						
<u>Job Category</u>	<u>Staff</u>		<u>New Hires/Trainees</u>	<u>Staff Hours</u>		
<u>Total # OF</u>	Employees	Employees = Section 3 Residents	New Hires/Trainees = Section 3 Residents	Hours for new hires = Section 3 Residents	Hours = Section 3 employees	Labor hours
<i>Professional</i>						

REFERENCES

References (Bank and Trade) with Addresses, Phone Numbers and Zip Codes:

- 1. _____
 - 2. _____
 - 3. _____
-
-

CONTRACTOR

By: _____
Name: _____
Title: _____
Phone: _____

VERIFICATION

THE STATE OF _____ §
COUNTY OF _____ §

Before me, the undersigned authority, on this day personally appeared _____, who being by me first duly sworn, deposed and said that he/she has executed the above and foregoing CONTRACTOR'S QUALIFICATION STATEMENT in the capacity stated, as the authorized act of Contractor and that every statement contained therein is within his/her personal knowledge and found to be true and correct.

Sworn to and signed before me this _____ day of _____, 20____.

Notary Public _____

Name: _____

Commission Expires: _____

SPECIAL PROVISION

PREVAILING WAGE RATE

This is a "Public Work Project" within the meaning of Chapter 2258, Texas Government Code. The Commissioners' Court of Montgomery County has ascertained that the rates set out in the Federal Davis Bacon Wage Determinations hereby constitute the general prevailing rate of "per diem" wages for the work classifications set out in such Schedule for the general locality of Montgomery County, Texas. Such Schedule sets forth the prevailing wage rate for each craft or type of worker, which includes, by definition, a laborer or mechanic considered necessary to perform the work.

A schedule of the current rates can be found in the link provided below.

The Contractor who is awarded a contract by a public body or a subcontractor of the contractor shall pay not less than the rates determined under Section 2258.022, Texas Government Code, to a worker employed by it in the execution of the contract. A contractor or subcontractor who violates this section shall pay to the state or a political subdivision of the state on whose behalf the contract is made, \$60.00 for each worker employed for each calendar day or part of the day that the worker is paid less than the wage rates stipulated in the contract. A public body awarding a contract shall specify this penalty in the contract. Such forfeiture shall be made in accordance with the provisions of Chapter 2258, Texas Government Code. A worker employed on a public works project by or on behalf of the state or a political subdivision of the state shall be paid (1) not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the work is performed; and (2) not less than the general prevailing rate of per diem wages for legal holiday and overtime work.

In accordance with Section 2258.024, Texas Government Code, the contractor and subcontractor shall keep a record showing: (1) the name and occupation of each worker employed by contractor or subcontractor in the construction of the public work; and (2) the actual per diem wages paid to each worker. The record shall be open at all reasonable hours to inspection by the officers and agents of the public body (i.e. Montgomery County, Texas).

<http://www.wdol.gov>

"General Decision Number: TX20240262 01/05/2024

Superseded General Decision Number: TX20230262

State: Texas

Construction Type: Building

County: Montgomery County in Texas.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

<p>If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:</p>	<ul style="list-style-type: none"> . Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$17.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2024.
<p>If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:</p>	<ul style="list-style-type: none"> . Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2024.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number Publication Date
 0 01/05/2024

ASBE0022-009 07/03/2023

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR (Duct, Pipe and Mechanical System Insulation)....	\$ 28.35	16.02

BOIL0074-003 07/01/2023

	Rates	Fringes
BOILERMAKER.....	\$ 37.00	24.64

ELEC0716-005 08/29/2023

	Rates	Fringes
ELECTRICIAN (Excludes Low Voltage Wiring and Installation of Alarms).....	\$ 34.50	10.41

ELEV0031-003 01/01/2023

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 49.15	37.335+a+b

FOOTNOTES:

A. 6% under 5 years based on regular hourly rate for all hours worked. 8% over 5 years based on regular hourly rate for all hours worked.

B. Holidays: New Year's Day; Memorial Day; Independence Day; Labor Day; Thanksgiving Day; Friday after Thanksgiving Day; Christmas Day; and Veterans Day.

ENGI0450-002 04/01/2014

	Rates	Fringes
POWER EQUIPMENT OPERATOR Cranes.....	\$ 34.85	9.85

IRON0084-011 06/01/2023

	Rates	Fringes
IRONWORKER, ORNAMENTAL.....	\$ 27.51	8.13

PLAS0783-001 04/01/2023

	Rates	Fringes
PLASTERER.....	\$ 31.34	10.30

PLUM0068-002 10/01/2023

	Rates	Fringes
PLUMBER.....	\$ 34.86	11.68

PLUM0211-002 10/01/2023

	Rates	Fringes
PIPEFITTER (HVAC Pipe Installation Only).....	\$ 38.31	12.61

 SHEE0054-003 04/01/2020

	Rates	Fringes
SHEET METAL WORKER (Excludes HVAC Duct and Unit Installation).....	\$ 29.70	13.85

 SUTX2014-038 07/21/2014

	Rates	Fringes
ACOUSTICAL CEILING MECHANIC.....	\$ 16.41 **	3.98
BRICKLAYER.....	\$ 19.86	0.00
CARPENTER (Batt Installation Only).....	\$ 14.87 **	0.73
CARPENTER, Excludes Acoustical Ceiling Installation, Batt Insulation, Drywall Hanging, Form Work, and Metal Stud Installation.....	\$ 18.81	2.10
CAULKER.....	\$ 15.36 **	0.00
CEMENT MASON/CONCRETE FINISHER...	\$ 13.37 **	0.00
DRYWALL FINISHER/TAPER.....	\$ 16.30 **	3.71
DRYWALL HANGER AND METAL STUD INSTALLER.....	\$ 17.45	3.96
ELECTRICIAN (Alarm Installation Only).....	\$ 17.97	3.37
ELECTRICIAN (Low Voltage Wiring Only).....	\$ 18.00	1.68
FLOOR LAYER: Carpet.....	\$ 20.00	0.00
FORM WORKER.....	\$ 13.13 **	0.00
GLAZIER.....	\$ 19.12	4.41
IRONWORKER, REINFORCING.....	\$ 12.10 **	0.00
IRONWORKER, STRUCTURAL.....	\$ 27.15	5.66
LABORER: Common or General.....	\$ 10.20 **	0.00
LABORER: Mason Tender - Brick...	\$ 13.37 **	0.00
LABORER: Mason Tender - Cement/Concrete.....	\$ 10.50 **	0.00
LABORER: Pipelayer.....	\$ 12.94 **	0.00

LABORER: Roof Tearoff.....	\$ 11.28 **	0.00
LABORER: Landscape and Irrigation.....	\$ 9.49 **	0.00
LATHER.....	\$ 19.73	0.00
OPERATOR: Backhoe/Excavator/Trackhoe.....	\$ 16.17 **	0.00
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 13.93 **	0.00
OPERATOR: Bulldozer.....	\$ 20.77	0.00
OPERATOR: Drill.....	\$ 16.22 **	0.34
OPERATOR: Forklift.....	\$ 15.64 **	0.00
OPERATOR: Grader/Blade.....	\$ 13.37 **	0.00
OPERATOR: Loader.....	\$ 13.55 **	0.94
OPERATOR: Mechanic.....	\$ 17.52	3.33
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 16.03 **	0.00
OPERATOR: Roller.....	\$ 16.00 **	0.00
PAINTER (Brush, Roller and Spray), Excludes Drywall Finishing/Taping.....	\$ 16.77 **	4.51
PIPEFITTER, Excludes HVAC Pipe Installation.....	\$ 26.73	11.13
ROOFER.....	\$ 15.40 **	0.00
SHEET METAL WORKER (HVAC Duct Installation Only).....	\$ 20.17	4.77
SHEET METAL WORKER (HVAC Unit Installation Only).....	\$ 19.67	2.24
SPRINKLER FITTER (Fire Sprinklers).....	\$ 22.17	9.70
TILE FINISHER.....	\$ 12.00 **	0.00
TILE SETTER.....	\$ 16.17 **	0.00
TRUCK DRIVER: 1/Single Axle Truck.....	\$ 14.95 **	5.23
TRUCK DRIVER: Dump Truck.....	\$ 12.39 **	1.18
TRUCK DRIVER: Flatbed Truck.....	\$ 19.65	8.57
TRUCK DRIVER: Semi-Trailer Truck.....	\$ 12.50 **	0.00
TRUCK DRIVER: Water Truck.....	\$ 12.00 **	4.11
WATERPROOFER.....	\$ 14.39 **	0.00

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$17.20) or 13658 (\$12.90). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing

the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described

in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

SECTION 1
MONTGOMERY COUNTY GENERAL PROVISIONS

1.0 DEFINITION OF TERMS

Whenever the following terms are used in these General provisions, Contract and Bond, the intent and meaning shall be interpreted as follows:

- 1.1. **Architect:** The owner's authorized representative to produce and interpret the plans and specifications and administer the contract for construction.
- 1.2. **Bid:** The written offer made by the offeror to furnish the materials or equipment or to perform the work or services bid.
- 1.3. **Bid Bond:** The deposit designated to be made by the bidder, which is to accompany his bid as a guaranty of good faith to enter into a written contract, and to be submitted as a bond if the contract is awarded to him.
- 1.4. **Commissioners' Court:** The Commissioners' Court of Montgomery County, Texas.
- 1.5. **Contract:** The written agreement between County and the Contractor covering the performance of work or services or the furnishing of materials, supplies, or equipment, as bid. The Contract shall include the Notice to Bidders, Contractor's Bid, the General Provisions, Special Provisions, Technical Provisions, including the Plans and Specifications, Contractor's Performance and Payment Bonds and all supplemental agreements, which are required to complete the performance of the work in a substantial and acceptable manner.
- 1.6. **Contractor:** The individual, company, business or corporation with whom a contract is made.
- 1.7. **County:** Montgomery County, Texas, a political subdivision of the State of Texas.
- 1.8. **County Auditor:** The County Auditor of Montgomery County, Texas.
- 1.9. **County Purchasing Agent:** The Purchasing Agent of Montgomery County, Texas.
- 1.10. **Inspector:** The authorized representative of Montgomery County assigned to make detailed inspection of any or all portions of the work and materials or equipment involved in this Contract.
- 1.11. **Payment Bond:** The guaranty given by Contractor to secure payment of all claims for labor or materials supplied in connection with the performance of the work.
- 1.12. **Performance Bond:** The guaranty given by Contractor to secure performance of the work in compliance with the Contract.
- 1.13. **Plans:** The officially approved plans, profiles, typical cross sections, working drawings, supplemental drawings, or exact reproductions thereof, which show the location, character, dimensions and details of the work or services to be performed or the materials or equipment to be furnished, which Plans are considered as a part of the Contract.
- 1.14. **Specifications:** The directions, provisions and requirements pertaining to the method and manner of performing the work or services or the quantities and qualities of materials, supplies or equipment to be furnished under the Contract.

SECTION 2
INSTRUCTIONS TO BIDDERS

2.0 BID DOCUMENTS

- A. Upon request, the Purchasing Agent shall furnish interested bidders with bid documents, including a contract, plans, specifications and a bid form. The bid documents will state the location and description of the proposed work.

The Bid Form may specify lump sum bidding or unit prices.

Where unit prices are requested, the Bid Form will include an appropriate estimate of the various quantities and kinds of work to be performed or materials to be furnished. Estimates of quantity will be used for comparison of bids only. Payment to the Contractor will be based upon actual quantities purchased.

- B. This Request of Bid as advertised will be considered an inclusion of the specifications and conditions.
- C. The term “Owner” as used throughout these documents will mean Montgomery County Commissioners Court, Texas.
- D. Bids will be submitted on the forms provided by Owner. All figures must be written in ink or typewritten. However, mistakes may be crossed out, corrections inserted adjacent thereto and initialed in ink by the person signing the bid.
- E. Formal advertised bids indicate date and time by which the bids must be received in the Purchasing Department. Bids received after that time will be returned unopened to the Offeror.
- F. The Offeror will note any exceptions to the conditions of this request for bid. If no exceptions are stated, it will be understood that all general and specific conditions will be complied with, without exception.
- G. Offerors may request withdrawal of a posted bid prior to the scheduled opening time, provided the request for withdrawal is submitted to the Purchasing Department in writing. Owner reserves the right to reject any and all bids by reason of this request.
- H. In the event there are inconsistencies between the general provisions and other terms or conditions contained herein, the former will take precedence.
- I. If it becomes necessary to revise any part of this request for bid, a written addendum will be issued and posted on the [Montgomery County Website](#). The Owner is not bound by any oral representations, clarifications, or changes made in the written specifications by Owner’s employees, unless such clarification of change is provided to offerors in written addendum form from the Owner. All bids will be awarded to the offeror that offers the best value for the Owner based on the published selection criteria contained herein.
- J. It is agreed that the successful offeror will not assign, transfer, convey or otherwise dispose of the contract or its right, title or interest in or to the same, or any part thereof, without previous written consent of Owner and any sureties.
- K. When an original and copies are required, if there are discrepancies between the original bid and copies, the original bid will prevail.
- L. Owner is exempt from State Retail Tax and Federal Excise Tax. The price bid must be net, exclusive of taxes.

- M. All offerors will comply with all Federal, State, and local laws relative to conducting business in Montgomery County. The laws of the State of Texas will govern as to the interpretation, validity, and effect of this bid, its award and any contract entered into.
- N. The successful offeror agrees by entering into this contract, to defend, indemnify and hold Owner harmless from any and all causes of action or claims of damages arising out of or related to offeror's performance under this contract.
- O. Advanced disclosures of any information to any particular offeror which gives that particular offeror any advantage over any other interested offeror in advance of the opening of bid, whether in response to advertising or an informal request for bid, made or permitted by a member of the governing body or an employee or representative thereof, will operate to void all bids of that particular solicitation or request.
- P. Minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, creed, sex, or national origin in consideration for an award.

2.1 EXAMINATION OF CONTRACT DOCUMENTS AND SITE

- A. It is the responsibility of each Offeror before submitting a Bid, to:
 - 1. examine the Contract Documents thoroughly,
 - 2. visit the site to become familiar with local conditions that may affect cost, progress, performance or furnishing of the Work,
 - 3. consider federal, state and local Laws and Regulations that may affect cost, progress, performance or furnishing of the Work,
 - 4. study and carefully correlate Offeror's observations with the Contract Documents,
 - 5. visit with local utilities, including cable companies, and other entities that may have underground or above-ground infrastructure in the work area for infrastructure location, and
 - 6. notify Owner's Representative of all conflicts, errors or discrepancies in the Contract Documents. The owner must be notified by the deadline for Questions and Substitutions.
- B. The submission of a bid will constitute an incontrovertible representation by Offeror that Offeror has complied with every requirement of this section, that without exception the Bid is premised upon performing and furnishing the Work required by the Contract Documents and such means, methods, techniques, sequences or procedures of construction as may be indicated in or required by the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work. No pleas of ignorance of conditions that may be encountered in their execution of the Work under this contract, that is a result of failure to make the necessary examinations and investigations herein above indicated, will be accepted as an excuse for the failure or omission on the part of the Contractor to fulfill in every detail all the requirements of the Contract Documents. In no event shall a claim for extra compensation or for an extension of time be allowed for failure to thoroughly examine all requirements of Contract Documents.

2.2 PREPARATION OF BID

- A. Submit on forms furnished herein.
- B. Fill the document out in ink or typewritten, without erasure, interlineation or changes.
- C. Bid in the name of the principal and if a co-partnership, give names of all parties.
- D. Give the bidder's complete address.
- E. If Bids are submitted by an agent, provide satisfactory evidence of agency authority.
- F. If requested on the Bid Form, indicate number of consecutive calendar days for construction Substantial Completion of Work.
- G. Fill in all bid prices in both words and figures.
- H. In case of inconsistency between portions of Bidding Documents or within Bidding Documents; bid and provide better quality or greater quantity of Work. Bring all inconsistencies to Owner's attention, prior to bidding, for Owner's interpretation.
- I. Submit the bid in a sealed envelope.
- J. Indicate on the outside of the envelope, the name of bidder, bidder's address, and name of Project for which a bid is submitted.
- K. If forwarded by mail, enclose a sealed envelope containing the Bid Form in another envelope addressed as indicated.
- L. One (1) original and one (1) copies of your firms bid should be submitted.
- M. There is no express or implied obligation for the Owner to reimburse Offerors for any expense incurred in preparing bids in response to this bid and the Owner will not reimburse responding offerors for these expenses, nor will the Owner pay any subsequent costs associated with the provision of any additional information or presentation, or to procure a contract for these services.

2.3 BASE BIDS

- A. General: Bid must include Base Bid.
- B. In event Alternate does not affect bidder's work, enter "No Change."
- C. Absence of any entry will be assumed to indicate zero price or time change.

2.4 CONTINGENCY ALLOWANCE

- A. Base Bid must include Contingency Allowance.
- B. Description of Contingency Allowance included in specifications.
- C. General: Bid must include all Unit Prices.
- D. Absence of any entry will be assumed to indicate zero price.
- E. Description of Unit Prices included in specifications.
- F. Order of Alternates: Owner reserves right to accept any or all Alternates if applicable.
- G. Description of Alternates must be included in specifications when applicable.

2.5 BID SECURITY

- A. Offerors must submit with their Bid a bid bond in the amount of five (5%) percent of the maximum amount of Bid Price payable without recourse to the Owner, from a surety company holding permit from the State of Texas to act as a surety, as a guarantee that Offeror will enter into a contract and

execute bond and guarantee forms within ten (10) days after notice of award of contract. Bids without acceptable bid bond, as stated above, may not be considered.

- B. Bid Security shall be in effect from the opening of the Bid and will be retained until an Offeror has executed the Construction Agreement and furnished the required contract security or more than ninety (90) calendar days from the date of opening of the Bid have lapsed. All Bids are irrevocable and cannot be withdrawn for ninety (90) calendar days following the date scheduled for the opening of the Bids.
- C. The Bid Security of the Successful Offeror will be retained until such Offeror has executed the Construction Agreement and furnished the required contract security, whereupon the Bid Security will be returned. If the Successful Offeror fails to execute and deliver the Construction Agreement and furnish the required contract security within ten (10) days after the Notice of Award, Owner may annul the Notice of Award and the Bid Security of that Offeror will be forfeited. The Bid Security of other Offerors whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until 5 days after the Construction Agreement is executed.

2.6 QUALIFICATIONS OF OFFERORS

- A. To demonstrate qualifications to perform the Work, each Offeror must submit all required documentation with your bid, submittal including, but not limited to, financial data, previous experience, present commitments and other such data as may be called for in the bid. Each Bid must contain evidence of the Offeror's qualifications to do business in the State of Texas or covenant to obtain such qualifications prior to award of the contract. In determining an Offeror's qualifications, the evaluation factors have been identified herein. Each offeror may be required to show that it has properly completed similar type work and that no claims are now pending against such work. No bid will be accepted from any offeror who is engaged in any work that would impair his ability to fully execute, perform or finance this work.

2.7 WITHDRAWAL OF BID

- A. Bids may be modified or withdrawn by an appropriate document duly executed, in the described manner that a Bid must be executed, and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.

2.8 IRREGULAR BID

- A. Bid is considered irregular and may be rejected for following reasons unless otherwise provided by law:
 - If Bid Form furnished is not used or is altered.
 - If there are unauthorized additions, conditional bids, or irregularities of any kind which may tend to make bid incomplete, indefinite, or ambiguous.
 - If bidder adds any provisions reserving right to accept or reject any award, or to enter into contract pursuant to an award.
 - If unit or lump sum prices contained in bid schedule are obviously unbalanced either in excess of, or below, reasonable cost analysis values.
 - If bidder fails to insert Unit Prices for every such item indicated.
 - If bidder fails to complete Bid Form and/or Qualification Documents where information is requested, so bid may be properly evaluated.
 - Failure to submit Bid Bond.

- B. Owner reserves right to reject any or all bids and to waive irregularities or informalities as may be in Owner's interest.
- C. Offerors may be disqualified and rejection of bids may be recommended to the Owner for any (but not limited to) of the following causes: 1) Evidence of collusion among proposers; 2) Lack of appropriate qualifications and experience relative to the size and scope of the work proposed; 3) Previous unsatisfactory performance; or 4) Previous failure to complete projects.

2.9 RECEIPT AND OPENING OF BIDS

- A. Montgomery County Commissioners' Court, (herein called the "Owner"), invites Bids for this project.
- B. Bids will be received at the place and time indicated in Advertisement for Bids.
- C. Bids received late will not be opened.
- D. Properly prepared Bids will be opened publicly and read aloud. A summary of the amounts of the base Bid Price and major alternates (if any) will be made available and read aloud to Offerors after the opening of Bids. A tabulation of the Bids Prices which are read will be available upon request as soon as it has been assembled and verified.
- E. The Owner considers all Bid information, documentation and supporting materials submitted in response to this Request for Bid to be non-confidential and/or non-proprietary in nature, and therefore, shall be subject to public disclosure under the Texas Public Information Act (Texas Government Code, Sec. 552.001, et seq.) after the award of the contract except for trade secrets and confidential information which the Offeror identifies as proprietary. Any material that is to be considered as CONFIDENTIAL/PROPRIETARY in nature must be clearly marked on each applicable page as such by the proposer. Marking your entire Bid CONFIDENTIAL/PROPRIETARY is not in conformance with the Texas Public Information Act.
- F. All required documents and form(s) shall be submitted by the time and place indicated in the Advertisement. One (1) original and one (1) copies shall be included. It shall be enclosed in an opaque sealed envelope, marked with the project title, name and address of the Offeror. The Bid shall be accompanied by the Bid Security and other required documents. If the Bid is sent through the mail or other delivery system the sealed envelope shall be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face of it. Each Offeror should, prior to submitting his Bid check the receipt of all Addenda or letters of clarification issued and acknowledge such receipt on the outside of the envelope containing his Bid.

2.10 ADDENDA

- A. All questions shall be submitted via email the Buyer stated in the specifications... All questions and answers will be posted on the [Montgomery County Website](#). Bidders are responsible for insuring all answers to questions are reviewed prior to bid submittal. Answers provided to posted questions address minor irregularities and are for clarification purposes only and do not revise or modify the specification requirements. Answers to questions that result in revisions to the specifications will be addressed by Addendum. No oral statement of any person shall modify or otherwise change, or affect the specifications.
- B. Bidder submitting request is responsible for prompt delivery of such requests.
- C. No oral interpretations will be made.
- D. Owner is not responsible for any other explanations or interpretations which anyone presumes to make.
- E. Interpretations or supplemental instructions will be in form of written addenda or clarification.

- F. Any addenda issued during the time allowed for the preparation of bids shall be covered in the bid and, in executing the contract; they shall become a part thereof. Failure of a Bidder to receive any addendum shall not release the Bidder from any obligations under his bid, provided said addendum was posted and distributed on [Montgomery County Website](#). Bidders are responsible for insuring all addendums are reviewed prior to bid submittal. All addenda will be issued through, and can be reviewed on, the [Montgomery County Website](#). Addenda will also be provided to Plan Rooms. Identify the receipt of any Addendums using the form provided in the specifications.
- G. Failure to receive such addendum does not relieve bidder from any obligation under bid as submitted.

2.11 USE OF LOCAL SUBCONTRACTORS AND SUPPLIERS

- A. It is the intention of the County that local businesses be given every consideration and opportunity to provide services and materials for this project. Contractors submitting bids for this project are encouraged to use local businesses wherever possible; however, not to the extent that their participation will result in the contractor's bid not being competitive.

2.12 DISCLOSURE OF CERTAIN RELATIONSHIPS

- A. Chapter 176 of the Texas Local Government Code requires that any vendor or person considering doing business with a local government entity disclose in the Questionnaire Form CIQ, the vendor or person's affiliation or business relationship that might cause a conflict of interest with a local government entity. By law, this questionnaire must be filed with the records administrator of Montgomery County no later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. See Section 176.006, Local Government Code. A person commits an offense if the person violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor. A copy of the new law is available at

<http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm>

The forms for reporting are available at <http://www.ethics.state.tx.us/forms/CIQ.pdf>.

By submitting a response to this request, the vendor represents that it is in compliance with the requirements of Chapter 176 of the Texas Local Government Code. If required, send completed forms to the Montgomery County Clerk's Office located at 210 West Davis, Conroe, TX 77301.

- B. DISCLOSURE OF INTERESTED PARTIES: In compliance with Section 2252.908 of the Texas Government Code, Montgomery County Commissioners Court may not enter into a contract with a business entity as a result of acceptance or award of this solicitation unless the business entity submits a disclosure of interested parties form as required by this statute. Notification will be given to the business entity recommended for award upon which the business entity will be required to submit the completed form prior to award. Publicly owned companies are exempt from the 1295 requirement.

A copy of this law is available at

<http://www.statutes.legis.state.tx.us/Docs/GV/htm/GV.2252.htm>. The on-line form is available at https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm. *The Definitions are included in Chapter 46, Ethics Commission Rules:*

<https://www.ethics.state.tx.us/tec/1295-Info.htm>.

2.13 CONFIDENTIALITY

- A. Any material requested to be considered as **CONFIDENTIAL** in nature must be placed in a separate envelope clearly marked **CONFIDENTIAL**; provided, such material will be treated as

confidential by Montgomery County only to the extent allowable in the Government Code, Chapter 552 of the Public Information Act and except where required by a Court with competent jurisdiction to release information. If items are not placed in an envelope and marked **CONFIDENTIAL**, Montgomery County will not be liable for disclosing the information.

2.14 SCANNED OR RE-TYPED RESPONSE

A. If in its response, offeror either electronically scans, re-types or in some way reproduces the County's published bid package, then in the event of any conflict between the terms and provisions of the County's published bid package, or any portion thereof, and the terms and provisions of the response made by offeror, the County's bid package **as published** shall control. Furthermore, if an alteration of any kind to the County's published bid package is only discovered after the contract is executed and is not being performed; the contract is subject to immediate cancellation.

2.15 DIGITAL FORMAT

A. If offeror obtained the bid specifications in digital format in order to prepare a response, **the bid must be submitted in hard copy** according to instructions contained in this bid package. If, in its bid response, offeror makes any changes whatsoever to the County's published bid specifications, the County's bid specifications **as published** shall control. Furthermore, if an alteration of any kind to the County's published bid package is only discovered after the contract is executed and is not being performed; the contract is subject to immediate cancellation.

2.16 CONTRACT RESTRICTIONS

A. Responders shall not contact any Montgomery County personnel, **to include all entities/persons contracted to do business with the County**, during the process, other than Gilbert D. Jalomo, Jr., CPPB, Purchasing Agent, without the express permission from the Office of the Montgomery County Purchasing Department. Any Responder who has made site visits, contacted personnel, or distributed any literature without authorization may be disqualified. The Purchasing Department may initiate discussion with Responders. Discussions may not be initiated by Responders. The Purchasing Department expects to conduct discussions with Responder personnel authorized to contractually obligate the Responder with an offer.

2.17 DEBARMENTS

A. Contractor certifies that at the time of submission of its bid, Contractor was not on the federal government's list of suspended, ineligible or debarred contractors and that Contractor has not been placed on this list between the time of its bid submission and the time of execution of the Contract. If Contractor is placed on this list during the term of the Contract, Contractor shall notify the Montgomery County Purchasing Agent. False certification or failure to notify may result in termination of the Contract for default.

2.18 PROHIBITION ON CONTRACTS WITH COMPANIES BOYCOTTING CERTAIN ENERGY COMPANIES:

Respondent/Bidder/Proposer represents and warrants that: (1) it does not, and will not for the duration of the contract, boycott energy companies or (2) the verification required by Section 2274.002 of the Texas Government Code does not apply to the contract. If circumstances relevant to this provision change during the course of the contract, Respondent/Bidder/Proposer shall promptly notify Montgomery County. [Per 87(R) S.B. 13 effective 9/1/21]

2.19 PROHIBITION ON CONTRACTS WITH COMPANIES THAT DISCRIMINATE AGAINST FIREARM AND AMMUNITION INDUSTRIES: Respondent/Bidder/Proposer verifies that: (1) it does not, and will not for the duration of the contract, have a practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association or (2) the verification required by 2274.002 of the Texas Government Code does not apply to the contract. If circumstances relevant to this provision change during the course of the contract, Respondent/Bidder/Proposer shall promptly notify Montgomery County. *[Per 87(R) S.B. 19 effective 9/1/21]*

2.20 MONTGOMERY COUNTY ETHICS TRAINING: In compliance with Chapter 161 of the Texas Local Government Code, vendors must complete this training at least once per year when doing business with Montgomery County, Texas.

Any vendor involved in a single procurement exceeding \$50,000.00 must complete training on the Montgomery County Code of Ethics. This training certificate must be completed and submitted with each bid or proposal, in response to a request for qualifications or proposals, or otherwise contracting with the county. The training must be completed by an officer, principal, or other person with the authority to bind the vendor. The Purchasing Department will confirm that each responder has completed the required training affidavit prior to considering a bid or proposal and shall disqualify responders that have not completed the training. This training requirement does not apply to emergency purchases.

Training can be found at

https://www.mctx.org/departments/departments_d - f/ethics_commission/online_training.php

SECTION 3

AWARD AND EXECUTION OF CONTRACT

3.0 AWARD OF CONTRACT

A. Award of the contract shall be made to the responsible bidder who submits the lowest and best bid, provided, however, county reserves the right to waive any formality or irregularity to make awards for a portion of the work only, to make awards to more than one bidder, to reject all bids or require new bids, if in the best interest of County. County shall execute the contract upon award of the bid.

3.1 RETURN OF BID BOND

A. The bid bond of the three lowest bidders will be retained until after award and execution of the Contract and delivery of all required Performance and Payment Bonds, whereupon, such bid bonds may be returned.

3.2 PERFORMANCE AND PAYMENT BONDS AND CERTIFICATES OF INSURANCE

A. The form of the required bonds is prescribed by County and accompanies these General Provisions. Specific insurance coverages are also required as prescribed herein. The bidder to whom an award is made shall, within twenty (20) days of the date of award, execute and deliver to the Purchasing Agent a Performance Bond and a Payment Bond, each in the full amount of the contract price, as well as Certificates of Insurance evidencing the prescribed coverages.

B. If the contract is for the construction of Public Works, including, but not limited to the construction, alteration, or repair of any public building, bridge, road or like improvement, and

the contract price shall exceed the sum of \$100,000.00, the successful bidder may be required to submit a **Performance Bond** conditioned upon the faithful performance of the work in accordance with the plans, specifications, and contract documents. County may, by special provision, require the submission of a performance bond for any other contract where the contract price shall exceed the sum of \$50,000.00. Commissioners' Court also has the option to require a performance bond for any other contract where the contract price is less than the sum of \$50,000.00. Where required, the performance bond shall be submitted by the successful bidder within twenty (20) days of the award of the bid. Performance bonds shall be in an amount equal to the contract price and must be executed by a corporate surety authorized to do business in the State of Texas.

- C. If the contract is for the construction of Public Works, including, but not limited to the construction, alteration or repair of any public building, bridge, road or like improvement, and contract price shall exceed the sum of \$25,000.00, the successful bidder shall be required to submit a **Payment Bond** for the protection of all claimants supplying labor or materials in connection with the prosecution of the work provided for in the contract. Where required, the payment bond shall be submitted by the successful bidder within twenty (20) days of the award of the bid. Payment bonds shall be in an amount equal to the contract price and must be executed by a corporate surety authorized to do business in the State of Texas.

3.3 FAILURE TO DELIVER BONDS OR CERTIFICATES OF INSURANCE

Should the bidder to whom the contract is awarded refuse or neglect to execute and deliver the required performance and payment bonds or Certificate of Insurance to the Purchasing Agent within twenty (20) days of the date of award, then the bid bond of such bidder shall be forfeited and all such funds secured thereby shall become the property of County as liquidated damages.

3.4 NOTICE TO PROCEED

- A. The contractor shall not begin the work until so authorized in writing by the representative of Montgomery County or by receipt of a purchase order indicating notice to proceed, and shall then commence prosecution of the work within seventy-two (72) hours of receipt of such notice to proceed, unless otherwise approved by Montgomery County.

3.5 ADDITIONAL PROVISIONS

- A. The general contractor shall assume the risk of costs increases and the effects of shortages or lack of availability of materials, energy, goods and labor, and neither the price nor schedule for performance and completion of the work shall be subject to adjustment should any of these risks arise.

SECTION 4 **INSURANCE AND INDEMNIFICATION**

4.0 CERTIFICATES OF INSURANCE

If awarded the project, contractor shall submit to County, Certificates of Insurance showing proof of the following coverages which shall be maintained by Contractor throughout the term of this agreement:

1. WORKER'S COMPENSATION – STATUTORY EMPLOYERS LIABILITY

- \$1,000,000 E.L. Each Accident
- \$1,000,000 E.L. Each Employee
- \$1,000,000 E.L. Disease Policy Limit

1. Comprehensive General Liability Insurance, including Contractor's protective liability:

- \$1,000,000 Each Occurrence
- \$2,000,000 General Aggregate (per project)
- \$2,000,000 Products/Completed Operations
- \$1,000,000 Personal Advertising & Injury
- \$ 100,000 Damage to Rented Premises
- \$ 5,000 Medical Expense (Any One Person)

With a special provision of a thirty (30) Day Notice of Cancellation for material change.

The policy shall specifically include:

- A. XCU Coverage (Explosion, Collapse, Underground or Tunneling Coverage)
- B. Completed Operations Coverage for a period of one (1) year from the date of final completion of the work
- C. Contractual Liability Coverage

2. Automobile Liability Insurance, including coverage for owned, non-owned and hired vehicles, with minimum limits of not less than \$1,000,000 Combined Single Limit (Bodily Injury including property damage)

County shall be included as an "Additional Insured" by endorsement to policies issued for coverages listed above in item 2 B and C. A "Waiver of Subrogation Endorsement" in favor of County shall be a part of each policy for coverage listed all sections above.

Contractor shall be responsible for any deductions or exclusions stated in the policy.

This insurance coverage must insure against claims of third parties who go upon or wander upon the work site at any time and suffer injury or property loss, or who suffer any injury or property loss as a result of the contractor's performance of the contract.

1.1 INDEMNIFICATION

A. CONTRACTOR SHALL INDEMNIFY AND SAVE HARMLESS COUNTY AND ITS OFFICIALS, OFFICERS, AND EMPLOYEES FROM ALL SUITS, ACTIONS OR CLAIMS OF ANY CHARACTER BROUGHT BECAUSE OF ANY INJURIES OR DAMAGE RECEIVED OR SUSTAINED BY ANY PERSON, PERSONS OR PROPERTY ON ACCOUNT OF THE OPERATIONS OF CONTRACTOR; OR ON ACCOUNT OF, OR IN CONSEQUENCE OF, ANY NEGLIGENCE IN SAFEGUARDING THE WORK; OR THROUGH USE OF DEFECTIVE MATERIALS IN CONSTRUCTING THE WORK; OR BECAUSE OF ANY ACT OR OMISSION, NEGLIGENCE, OR MISCONDUCT OF SAID CONTRACTOR; OR BECAUSE OF ANY ACT OR CLAIMS OR AMOUNTS RECOVERED FROM ANY INFRINGEMENTS OF PATENT, TRADEMARK, OR COPYRIGHT; OR FROM ANY CLAIMS OR AMOUNTS ARISING OR RECOVERED UNDER THE "WORKERS' COMPENSATION ACT" OR ANY OTHER LAW, ORDINANCE, ORDER, OR DECREE. MONEY DUE CONTRACTOR UNDER AND BY VIRTUE OF HIS CONTRACT, AS MAY BE CONSIDERED NECESSARY BY COUNTY FOR SUCH PURPOSE, MAY BE RETAINED FOR THE USE OF COUNTY, OR, IN CASE NO MONEY IS DUE, HIS SURETY MAY BE HELD UNTIL SUCH SUIT OR SUITS, ACTION OR ACTIONS, CLAIM OR CLAIMS FOR INJURIES OR DAMAGES AS AFORESAID SHALL HAVE BEEN SETTLED.

SECTION 5
PREVAILING WAGE RATE TO BE MAINTAINED

5.1 Establishment of Prevailing Wage Rate: This is a "Public Works Project" within the meaning of Chapter 2258, Vernon's Annotated Civil Statutes, Government Code. The Commissioners' Court of Montgomery County has ascertained that the rates set out in the Federal Davis Bacon Wage Determinations hereby constitute the general prevailing rate of "per diem" wages for the work classifications set out in such Schedule for the general locality of Montgomery County, Texas. Such Schedule sets forth the prevailing wage rate for each craft or type of worker, which includes, by definition, a laborer or mechanic considered necessary to perform the work.

2258.021 Right to be Paid Prevailing Wage Rates

- (a) A worker employed on a public work by or on behalf of the state or a political subdivision of the state shall be paid:
 - (1) not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the work is performed; and
 - (2) not less than the general prevailing rate of per diem wages for legal holiday and overtime work.
- (b) Subsection (a) does not apply to maintenance work.
- (c) A worker is employed on a public work for the purposes of this section if the worker is employed by a contractor or subcontractor in the execution of a contract for the public work with the state, a political subdivision of the state, or any officer or public body of the state or a political subdivision of the state.

5.2 Penalty:

2258.023 Prevailing Wage Rates to be Paid by Contractor and Subcontractor; Penalty

- (a) The contractor who is awarded a contract by a public body or a subcontractor of the contractor shall pay not less than the rates determined under Section 2258.022 to a worker employed by it in the execution of the contract.
- (b) A contractor or subcontractor who violates this section shall pay to the state or a political subdivision of the state on whose behalf the contract is made, \$60 for each worker employed for each calendar day or part of the day that the worker is paid less than the wage rates stipulated in the contract. A public body awarding a contract shall specify this penalty in the contract.
- (c) A contractor or subcontractor does not violate this section if a public body awarding a contract does not determine the prevailing wage rates and specify the rates in the contract as provided by Section 2258.022.
- (d) The public body shall use any money collected under this section to offset the costs incurred in the administration of this chapter.

- (e) A municipality is entitled to collect a penalty under this section only if the municipality has a population of more than 10,000.

2258.051 Duty of Public Body to Hear Complaints and Withhold Payment

A public body awarding a contract, and an agent or officer of the public body, shall:

- (1) take cognizance of complaints of all violations of this chapter committed in the execution of the contract; and
- (2) withhold money forfeited or required to be withheld under this chapter from the payments to the contractor under the contract, except that the public body may not withhold money from other than the final payment without a determination by the public body that there is good cause to believe that the contractor has violated this chapter.

Current prevailing wage rates are incorporated in the contract documents as attached.

- 5.3. **Maintenance of Payroll Records:** In accordance with Section 2258.024, Vernon’s Annotated Civil Statutes, Government Code, the contractor and subcontractor shall keep a record showing: (1) the name and occupation of each worker employed by the contractor or subcontractor in the construction of the public work; and (2) the actual per diem wages paid to each worker. The record shall be open at all reasonable hours to inspection by the officers and agents of the public body (i.e. Montgomery County, Texas).

SECTION 6
AUTHORITY OF ARCHITECT

6.0 AUTHORITY OF ARCHITECT

Architect shall be the representative for Montgomery County during the construction period and the Architect shall be the initial interpreter of the Contract documents, including all plans and specifications relating to the work. He shall evaluate the quality and acceptability of the materials furnished, work performed, the manner of performance and rate of progress of the work. He shall consult with Montgomery County and make recommendations relating to payment of Contract funds, the adjustment of Contract work or time and the partial or final acceptance of the work, provided, however, such Architect’s authority to act on behalf of Montgomery County shall be limited to that expressly granted herein. County shall issue all instructions to Contractor through Architect, and Contractor shall route all communication to County through Architect.

6.1 REJECTION OF DEFECTIVE WORK

- A. Architect will have the authority to disapprove or reject defective work and to require special inspection or testing of the work to determine its compliance with the Contract, Plans and Specifications, regardless of whether or not such work is fabricate, installed or completed.

6.2 CORRECTION OF DEFECTIVE WORK

- A. If required by Architect, Contractor shall promptly, as directed, either correct all defective work, whether or not fabricated, installed or completed, or, in the alternative, remove such work in its entirety and replace it with non-defective work. Contractor shall bear all direct, indirect and consequential costs of such correction or removal.

6.3 SITE INSPECTION

- A. Architect will make visits to the work site at appropriate intervals to observe the progress and quality of the work and to determine in general if the work is proceeding in accordance with the Contract Documents. However, Montgomery County shall not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the work. Montgomery County efforts shall be directed toward providing County a greater degree of confidence that the work conforms to the Contract, Plans and Specifications endeavoring to guard County against defects or deficiencies in the work.

6.4 TEMPORARY SUSPENSIONS OF WORK

- A. The Architect shall have the authority to suspend the work wholly or in part, for such period as they may deem necessary due to unsuitable weather or to such other conditions as are unfavorable for the prosecution of the work, or for such time as they may deem necessary due to the failure to make deliveries, or failure to perform any provisions of the Contract.

6.5 NO RESPONSIBILITY TO CONTRACTOR

- A. Neither authority to act hereunder or any decision made by Architect in good faith either to exercise or not to exercise such authority shall give rise to any duty or responsibility by Architect to Contractor or to any Subcontractor, supplier, material, men or surety.

SECTION 7
PROSECUTION OF THE WORK

7.0 INTENT OF PLANS AND SPECIFICATIONS

- A. The intent of the Plans and/or Specifications is to prescribe definite work or services to be undertaken, or materials, supplies, or equipment to be furnished by the Contractor. He shall furnish all items, materials, implements, machinery, equipment, tools, supplies, and labor necessary to the prosecution and completion of the Contract.

7.1 INTERPRETATION OF PLANS

- A. Precedence of the Contract Documents: The most recently issued Document takes precedence over previous issues of the same Document. The order of precedence is as follows with the highest authority listed first.

Modifications and Change Orders

- A. The Agreement
- B. Addenda
- C. Supplementary General Conditions
- D. General Conditions
- E. Specifications and Drawings. In the case of an inconsistency between Drawings and Specifications or within either document, the better quality and the greater quantity of work shall be provided unless otherwise directed by Montgomery County. Where there is a question concerning a dimension, drawings are not to be scaled. A request for information to Montgomery County shall be made for any necessary dimensions not clearly shown. Any errors related to or resulting from scaling the drawings shall be the Contractor's responsibility.

7.2 **SPECIAL PROVISIONS**

- A. Should any construction or work or conditions which are not covered by Standard Specifications be anticipated on any proposed work Special Provisions or other specifications for such work will be attached. Should any such Special Provisions conflict with these General Provisions, the Special Provisions shall govern.

7.3 **COOPERATION OF CONTRACTOR**

- A. The Contractor will be supplied copies of the Plans, Specifications, and Special Provisions and on the jobsite, all times; they shall have available one copy of each. The Contractor shall give the work his constant attention to facilitate the progress thereof and shall cooperate with Montgomery County in every way possible. The Contractor shall have on the Work Project at all times, regardless of how much of the work may be sublet, a competent and reliable English-speaking Superintendent, authorized to receive orders and to act for on their behalf.
- B. The Contractor shall give Montgomery County full opportunity to inspect the work at all stages and where there have been any work stoppages, he shall give Montgomery County at least twenty-four (24) hours' notice before resuming operations. Where any gas, water, or other utility installations will be affected by the work to be carried on by the Contractor, he shall see that ample notice is given to Montgomery County, operators, or persons in charge to the end so the prosecution of the work under his Contract shall not be delayed.

7.4 **MATERIALS AND WORKMANSHIP**

- A. The Contractor warrants to Montgomery County that all materials and equipment furnished under this Contract will be new unless otherwise specified, and that all work will be provided in accordance with the requirements of the Contract Documents and shall be new, good quality, free of faults, asbestos, and defects. All work not conforming to the requirements of the Contract Documents, and in conformance with the law, including substitutions or changes made by the Contractor or any subcontractor, material supplier or equipment supplier that have **not** been specifically identified (**PRIOR** to their being installed) by means of a Letter of Notice to Montgomery County and properly accepted and authorized by Montgomery County, shall be considered defective and not in agreement with the requirements of the Contract Documents, and shall be promptly corrected. Notation or listing of such substitutions or changes on shop drawings or other types of submittal **will not** be considered acceptable to Montgomery County whether or not such submittal has been reviewed. Notice must be specific and transmitted in letter form. If required by Montgomery County, Contractor shall furnish satisfactory evidence as to the kind and quality of substituted or changed materials and equipment actually provided.

7.5 **UNAUTHORIZED WORK**

- A. Work done without the lines and grade given, or shown on the Plans, or any extra work done or changes made without written authority on the prescribed Change Order Form will be considered unauthorized and at the expense of the Contractor and will not be measured or paid for by the County. At the option of the County, work so done may be ordered removed and replaced at the Contractor's expense.

7.6 **DETOURS**

- A. Detours and temporary structures necessary for public travel during the prosecution of the work will be indicated in the plans, or provided for in the specifications, and the cost will be included in the Bid's contract price. Any necessary detours or temporary structures not indicated in the plans or provided for in the specifications shall be at the expense of the Contractor. Increased maintenance costs incidental to re-routing traffic over an established road, street or highway

shall not be considered as a part of the cost of maintaining necessary detours to be paid by the Contractor.

- B. The Contractor shall provide, at his expense, means of ingress and egress for residents along any closed section of the work, and shall provide property owners a means of access to a public road.
- C. No bridge, culvert or drainage structure shall be closed until an adequate detour has been arranged and constructed. Suitable signs indicating “Road Closed” or “Detour” shall be erected by the Contractor, at no expense to the County.
- D. If, in the opinion of the Engineer, the contractor does not comply with the above requirements, such work as the Engineer may deem necessary to the comfort and safety of the traveling public may be performed and the charges therefore withheld from any money due to the contractor on this or any other contract.

7.7 BARRICADES, WARNING LIGHTS, AND SIGNS

- A. Prior to closing any section of the project to traffic, the Contractor shall furnish, erect, and maintain, at no expense to the County, suitable barricades, warning signs, flares, and red flags, as specified in the Plans or as directed by Montgomery County. At least three (3) flares or lights acceptable to Montgomery County shall be placed at each barricade, one (1) at or near each end, and one (1) near the center-line of the roadway. All lights shall be kept burning from sunset to sunrise.
- B. If, in the opinion of Montgomery County, the barricades are insufficient to prevent traffic entering upon the closed section, then the Contractor shall provide watchmen at points designated, for such periods as directed by Montgomery County.
- C. If, in the opinion of Montgomery County, the safety of local traffic entering the closed portions of the Project is endangered, the Contractor may direct to protect the work and safeguard traffic.
- D. Unless otherwise set forth in these Specifications, the Contractor shall receive no direct compensation for furnishing, erecting, and maintaining the necessary barricades, lights, flares, signs, or for any proper safety, convenience, and direction of traffic, during the period to final inspection and acceptance by the County.

7.8 LAWS TO BE OBSERVED

- A. The Contractor is assumed to have made himself familiar with and at all times shall observe and comply with all Federal, State, County, and City laws, ordinances, and regulations in any manner affecting the conduct of the work, and shall indemnify and save harmless the County and its representatives against any claim arising from the violation of any such laws, ordinances, or regulations, by the Contractor or by his employees.

7.9 PERMITS AND LICENSES

- A. The Contractor shall procure all permits and licenses, pay all charges and fees, and give all notices necessary and incidental to the due and lawful prosecution of work.

7.10 PATENTED DEVICES, MATERIALS, AND PROCESSES

- A. If the Contractor is required or desires to use any design, material, or process covered by letters, patent or copyright, he shall provide for such use by suitable legal agreement with the patentee or owner; and a copy of the agreement shall be filed with the County. If no such agreement is made or filed as noted, the Contractor and the surety shall indemnify and save harmless the County from any and all claims for infringement.

7.11 SANITARY PROVISIONS

- A. The Contractor shall provide and maintain in a neat, sanitary condition, at his expense, such accommodations for the use of his employees as may be necessary to comply with the requirements of any Federal, State, County, or City laws, ordinances or regulations.

7.12 PRESERVATION AND RESTORATION OF PROPERTY, TREES, AND MONUMENTS

- A. The Contractor shall be responsible for the preservation of all public and private property, trees, monuments, etcetera, along and adjacent to the roadway, and shall use every precaution necessary to prevent damage to pipes, conduits, and other underground structures, and shall protect carefully from disturbance or damage all land, monuments, and property marks. When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work or in consequence of the non-execution thereof on the part of the Contractor, he shall restore, at his own expense such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, rebuilding, or otherwise restoring same, or he shall make good such damage or injury in an acceptable manner, certain trees and shrubs growing within the right of way shall be preserved in good condition by the Contractor, at his expense when designated in the Specifications or by Montgomery County. The Contractor shall trim them to the extent and in the manner directed by Montgomery County to remove traffic hazards.

7.13 RESPONSIBILITY FOR DAMAGE OR CLAIMS

- A. The Contractor shall save harmless the County and all its representatives from all suits, actions, or claims of any character brought on account of any injuries or damages sustained by any person or property in consequence of any neglect in safeguarding the work, or through the use of unacceptable materials in the construction of the improvement, or on account of any act or omission by the Contractor. He shall not be released from said responsibility until the work of the contract has been completed and accepted, and so much of the money due the Contractor under and by virtue of his Contract may be retained by the County, or his surety may be held until such claims have been settled and suitable evidence to that effect is furnished to the County.
- B. The Contractor shall be responsible for all claims, suits or action brought by any party or person for any personal injury or property damage of any kind which is suffered by any entity or person on, about, or adjacent to the roadway and/or job site made the subject of this contract, during the pendency of the contract. Contractor's responsibility hereunder shall continue until the job is finally completed and the County releases and accepts the work as complete. Any claim not paid by the Contractor shall be deducted from retainage; however Contractor's responsibility is not limited merely to the amount of retainage held.

7.14 CONTRACTOR'S RESPONSIBILITY FOR WORK

- A. Until the acceptance of the work, it shall be under the charge and care of the Contractor. He shall take every necessary precaution against injury or damage to any part thereof by the action of the elements or from any cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, and make good, at his own expense, all injuries or damages to any portion of the work, before its completion and acceptance. The Contractor will be required to maintain the work in first class condition until final acceptance.

7.15 INSPECTION

- A. Inspectors shall be authorized to inspect all work done and all materials furnished. In cases of dispute arising between the Contractor and the Inspector as to materials furnished or the manner of performing the work, the Inspector shall have authority to reject materials or to suspend work until the question at issue can be referred to, and decided by, Montgomery County. The

Inspector shall not, however, be authorized to revoke, alter, enlarge, relax or release any requirements of these Specifications. He shall, in no case, act as foreman or perform other duties for the Contractor or interfere with the management of the work. Any advice which the Inspector may give the Contractor shall in no way be construed as binding Montgomery County or as releasing the Contractor from the fulfillment of the terms of the Contractor.

7.16 SUBLETTING OR ASSIGNMENT OF CONTRACT

- A. Before any work is sublet or assigned by the Contractor, he shall apply to Montgomery County in writing, giving a description of the work to be sublet, the name and address of the subcontractor, the amount, type, and condition of the equipment owned or leased by the subcontractor and available for the work, and the time required for completing the work. He shall also furnish Montgomery County a statement from the subcontractor that he understands the Plans and Specifications and is properly qualified to perform such work. No Subcontract will, in any way, affect the terms of the Contract between the County and the Contractor or relieve the Contractor of any of his obligations thereunder.

7.17 LIMITATIONS OF OPERATIONS

- A. The Contractor shall, at all times, conduct the work in such manner and sequence as will insure the least practicable interference with traffic. He shall have due regard to convenient detours. He shall not open up work to the prejudice of work already started and, in this feature of the prosecution of the work; he shall be governed by the orders of Montgomery County.

7.18 CHARACTER OF WORKMEN AND EQUIPMENT

- A. Any foreman or workman employed by the Contractor or by any subcontractor who, in the opinion of Montgomery County, does not perform his work in a proper and skillful manner or is disrespectful, intemperate, disorderly, or otherwise objectionable, shall, at the written request of Montgomery County, be forthwith discharged by the Contractor or subcontractor employing such foreman or workman, and said foreman or workman shall not be employed again on any portion of the work without the written consent of Montgomery County. Should the Contractor fail to remove such person or persons, or fail to furnish suitable and sufficient machinery, equipment, or force for the proper prosecution of the work, Montgomery County may withhold all estimates which are, or may become, due or may suspend the work until such orders are complied with. All Workmen engaged in special work or skilled work, or in any trade, shall have had sufficient experience in such work so as to properly and satisfactorily perform it and operate the equipment involved, and shall make due and proper effort to execute the work in the manner prescribed in these Specifications.

7.19 SUSPENSION OF WORK

- A. Montgomery County shall have the authority to suspend the work, wholly or in part, for such period as it may deem necessary, due to unsuitable weather or to such other conditions as are considered unfavorable for the suitable prosecution of the work, or for such time as he may deem necessary, due to the failure on the part of the Contractor to carry out orders given, failure to make deliveries, or failure to perform any provision of the Contract.

SECTION 8
ALTERATION OF CONTRACT

8.0 ALTERATION OF PRICE OR TIME

- A. No alteration of Contract, price, or time shall be made except by Change Order bearing the express written approval of County and executed prior to performance of any work or the provision of any materials contemplated by such Change Order. Claims for additional compensation for the performance of any work or the provision of any materials not covered by a Change Order will be denied.

8.1 FIELD ORDERS

- A. Montgomery County may authorize minor variations in the Work which do not involve an adjustment in Contract price or time and are consistent with the overall intent of the Contract documents. Such minor variations may be accomplished by a Field Order issued by Montgomery County. If Contractor believes a Field Order justifies a change in Contract time or price, he shall, within seventy-two (72) hours of receipt of such Field Order, prepare and submit to Montgomery County an appropriate Change Order. County's determination, with respect to such Change Order, shall be deemed final. Failure by Contractor to submit such claim within the period of time, and in the manner prescribed herein, shall be deemed a waiver by Contractor of any such claim.

8.2 CHANGE ORDERS

- A. Change Orders shall be executed by Montgomery County and shall apply only to alterations which are for work within the general scope of the Contract as originally executed. All Change Orders shall be prepared upon the prescribed form accompanying these General Requirements. Change Orders shall be required where the actual quantities of material or labor necessary for completion of the work exceeds the estimated quantities set forth in the Bid Specifications, or where acceptable completion of the work requires material or labor not provided for in the Bid Specifications or prior Change Order. Where Change Order work is covered by unit prices contained in Contractor Bid or in a prior Change Order not disputed by Contractor, then the value of such material or labor shall be determined by application of such previously established unit prices, and Contractor shall accept payment at such prices for the accepted quantities of work. Where Change Order work is not covered by previously established unit price, the value of any required materials or labor shall, if possible, be based upon mutual agreement between Montgomery County and Contractor, provided, however, Montgomery County reserves the right to require, and Contractor agrees to perform, such work in the absence of mutual agreement with the value thereof to be determined as Force Account work.

8.3 CHANGE IN THE WORK

- A. The **maximum** allowance for overhead and profit combined, included in the total cost of Montgomery County, shall be based on the following schedule:
- For Contractor, for any work performed by his own forces, 15% of the cost;
 - For each subcontractor involved, work performed by his own forces, 15% of the cost;
 - For Contractor, for work performed by his subcontractor, 5% of the amount due the subcontractor.

IN NO CASE SHALL THE RATES FOR CHANGES IN THE WORK SHOWN IN THE AWARDED BID EXCEED THOSE SHOWN ABOVE.

- B. **Cost** shall be limited to the following: Cost of material, including cost of delivery; cost of labor, including social security, old age and unemployment insurance (labor cost may include a pro-rata share of foremen's time only in case an extension of Contract Time is granted on account of the change); Workman's Compensation Insurance; and rental value of power tools and equipment.
- C. **Overhead** may include the following: Bond premiums, superintendence, wages of timekeepers, watchmen and clerks, small tools, general office expense, and incidental expenses not included in "Cost". If the net value of a change results in a credit from Contractor or subcontractor, the credit given shall be the net cost without overhead or profit. The cost as used herein shall include all items of labor, materials, and equipment.

8.4 EXTENSION OF CONTRACT TIME

- A. Change Orders resulting in additional difficulty or complexity of work shall include a commensurate extension of Contract time.

SECTION 9 **CONTRACT TIME AND DAMAGES FOR DELAY**

9.0 TIME OF COMPLETION

The number of working days allotted for completion of the work is set forth in the Contract Documents. The computation of working days shall begin with the first working day following the date of issuance of Notice to Proceed by Montgomery County. Contractor agrees to prosecute the work regularly, diligently, and at a rate of progress which will result in completion of the work within the time required.

9.1 WORKING DAY

Working Days will be charged Sunday through Saturday, including all Holidays, regardless of weather conditions, material availability, or other conditions not under the control of the Contractor.

9.2 LIQUIDATED DAMAGES

If Contractor shall fail or refuse to complete the work within the time allotted, or within any proper extension of such time granted by County, then Contractor shall pay to County for each calendar day that the work remains uncompleted a sum determined by application of the following schedule. It is expressly agreed that such sum constitutes liquidated damages only, and not penalties, and is fixed because of the impracticality and difficulty of ascertaining the actual damages which County may sustain. The parties expressly agree that such amounts may be retained by County from any money due, or to become due, to Contractor.

For Dollar Amount of Original Contract		Dollar Amount of Daily Contract Administration Liquidated Damages per Working Day
From More Than	To and Including	
5,000	10,000	25
10,000	50,000	50
50,000	100,000	100
100,000	250,000	150
250,000	500,000	250
500,000	750,000	325
OVER	750,000	400

SECTION 10
PAYMENT AND ACCEPTANCE

10.0 CONTRACT PRICE

- A. Contract price shall be determined by application of the appropriate lump sum pricing, unit pricing, or combination thereof, contained in Contractor's negotiated revision of the bid, as accepted by County. To the extent unit pricing is utilized, payment will be based upon the actual quantities purchased.
- B. Where unit pricing comprises a portion of the contract price, an initial contract price shall be determined, based upon application of such unit pricing to the estimate of quantities set forth in the Bid. Such initial contract price shall determine the application of the provisions herein related to performance and payment bonds.
- C. Where the Contract Price is \$25,000.00 or less, no portion of the Contract Price shall be paid to Contractor until final completion of the work. Where the Contract Price exceeds \$25,000.00, the provisions herein related to progress payments shall apply.

10.1 PROGRESS PAYMENTS

- A. Progress payments will be made monthly. Payment for that portion of the work, if any, for which lump sum pricing has been utilized shall be based upon actual percentage of completion of the work. Where unit pricing is applicable, payment shall be based upon the value of the work performed and materials complete and in place, in accordance with the Contract Document. Where Montgomery County shall deem such to be reasonably necessary to the prosecution of the work, such progress payments may also include payment for seventy-five (75%) percent of all acceptable materials delivered and stored on the work site, but not complete and in place.

10.2 APPLICATION FOR PAYMENT

- A. Contractor shall submit an Application for Payment form (AIA Form) to the County for work performed. Application will then be processed for payment in accordance with Texas Local Government Code, Section 113.064 (a). Such application shall be sworn and shall be supported by such data as County may require, substantiating Contractor's right to payment for work performed or materials complete and in place; provided, however, Montgomery County's determination as to the percentage of completion, amount of work performed, or materials complete and in place shall be deemed final.

10.3 RETAINAGE (IF APPLICABLE)

- A. From the total amount determined to be payable on each progress payment, retainage will be deducted by Montgomery County, and retained until final payment is made for all applicable construction projects, in accordance with Chapter 2252, Texas Government Code (as amended by H.B. No. 692, effective June 15, 2021) and other applicable laws.

Pursuant to Section 2252.032(b), Texas Government Code, except as provided by subsection (i) thereof, if the total value of the subject public works contract is less than \$5 million, County may not withhold retainage in an amount that exceeds 10 percent of the contract price and the rate of retainage may not exceed 10 percent for any item in a bid schedule or schedule of values for the project, including materials and equipment delivered on site to be installed; and if the total value of the subject public works contract is \$5 million or more, County may not withhold retainage in an amount that exceeds five percent of the contract price and the rate of retainage

may not exceed five percent for any item in a bid schedule or schedule of values for the project, including materials and equipment delivered on site to be installed.

Further it is acknowledged that pursuant to Section 2252.032(d), Texas Government Code, if, for the purpose of fulfilling an obligation of a prime contractor under a public works contract, the prime contractor enters into a subcontract:

- (1) the prime contractor may not withhold from a subcontractor a greater percentage of retainage than the percentage that may be withheld from the prime contractor by the County under the contract; and
- (2) a subcontractor who enters into a contract with another subcontractor to provide labor or materials under the contract may not withhold from that subcontractor a greater percentage of retainage than the percentage that may be withheld from the subcontractor as determined under Subdivision (1).

10.4 PRE-REQUISITES TO SUBSTANTIAL COMPLETION

A. GENERAL: Prior to requesting Montgomery County's inspection for of substantial completion (for either entire work or portions thereof), Contractor shall complete the following:

1. Include supporting documentation for completion as required by Contract Documents.
2. In the progress payment request, coincident with or first following day claimed, show either 100% completion for portion of work claimed 'substantially complete' or list incomplete items with value of incompleteness, and reasons for being incomplete.
3. Submit statement showing an accounting of all changes to the Contract Sum.
4. Advise County of pending insurance change-over requirements.
5. Obtain and submit releases enabling County's full and unrestricted use of the work and access to services and utilities, including (as required) occupancy permits, operating certificates, and similar releases.
6. Make final change-over of locks and transmit keys to County, and advise County's personnel of change-over in security provisions.
7. Complete start-up testing of systems and instruction of County's operating/maintenance personnel. Discontinue (or change over) and remove from project site temporary facilities and services, along with construction tools and facilities, mock-ups, and similar elements.
8. Complete final cleaning up requirements, including touch-up of marred surfaces.

B. INSPECTION PROCEDURES:

1. Prior to requesting inspection: Contractor or his superintendent shall make a careful inspection personally of all areas scheduled for completion or the building as a whole, assuring him that the work on that part of project or project as a whole is ready for substantial completion acceptance, and then notify, in writing, Montgomery County to make their inspection.
2. Initial Inspection: Upon receipt of Contractor's request, Montgomery County will either proceed with inspection or advise Contractor of prerequisites not fulfilled. Following initial inspection, Montgomery County will advise Contractor of work which must be performed prior to acceptance; and repeat inspection, if required, to assure that work has been completed.
3. Re-Inspection: In the event that an inspection is called for by the Contractor and upon arriving at jobsite, Montgomery County finds that substantial work is yet to be performed

and determines that the job is in fact not ready for substantial completion inspection or final acceptance as the case may be, Contractor may be held liable for:

- a) Time of Montgomery County representatives at jobsite for inspection work; and
 - b) Expenses of travel, lodging and other expenses connected with the inspection trip by Montgomery County representative(s) and consultants.
4. If, at the end of the 30 days granted to Contractor for completion of all items on the punch list, any items have not been completed, Montgomery County will notify Contractor, in writing, of the status of the punch list items. If Contractor has not finally completed said items, the County shall have the right to take Bids from appropriate subcontractors for the completion of such items and to pay for this work out of the monies retained for Final Completion, in addition to other remedies available by law.

10.5 PRE-REQUISITES TO FINAL ACCEPTANCE

- A. GENERAL: Prior to requesting Montgomery County's final inspection for final acceptance and final payment, Contractor shall complete the following and list known exceptions (if any) in request:
1. Submit final Payment Request with final releases and supporting documentation not previously submitted and accepted. Include Certificates of Insurance for products and completed operations as required.
 2. Submit updated final statement, accounting for additional (final) changes to Contract Sum.
 3. Submit copy of Montgomery County's final punch list of work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, endorsed and dated by Montgomery County.
 4. Submit Consent of Surety to final payment if project has been bonded.
 5. Submit Release of all liens.
 6. Submit final liquidated damages settlement statement, if requested.
 7. Revise and submit evidence of final, continuing insurance coverage complying with insurance requirements.
 8. Submit final corrections and modifications to as-built record drawings submitted at time of substantial completion.
 9. Submit specific warranties, workmanship/maintenance bonds, maintenance agreements, final certifications and similar documents as required by the Contract Documents.
 10. If required, submit As-Built drawings, maintenance manuals, damage, if required, property survey, and similar final record information.
 11. Deliver maintenance tools, spare parts, extra stocks of materials, and similar physical items required, to Montgomery County.
- B. RE-INSPECTION PROCEDURE: Upon receipt of Contractor's notice that work has been completed and is ready for final inspection, including substantial completion punch list items except incomplete items delayed because of known circumstances, Montgomery County will re-inspect work. Upon completion of inspection, Montgomery County will either finalize the project or advise Contractor of work not complete or obligations not fulfilled for final acceptance.

SECTION 11 **WARRANTIES**

11.0 WARRANTY

- A. In addition to all other warranties, either expressed or implied herein, Contractor warrants to County that materials and equipment furnished hereunder will be of good quality and new, unless otherwise required or permitted by the Contract Documents, and that the work will be free from defects and will conform to the requirements of the Contract Documents. Materials, equipment or work not conforming to these requirements shall be deemed defective.

11.1 CORRECTION PERIOD

- A. If within a one-year period or longer, as specified by Montgomery County following final acceptance, or such longer period of time as may be prescribed by any law, statute or regulation applicable to the terms hereof, any work is found to be defective, Contractor shall promptly, without cost to County and in accordance with Montgomery County's written instructions, either correct such defective work or remove it and replace it with acceptable work at no additional cost to the County. If Contractor does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk or loss or damage, County may have the defective work corrected, removed or replaced; and all direct, indirect or consequential costs of such correction, removal or replacement will be paid by Contractor in response to an invoice by the County or the County may deduct the appropriate amount from any amounts owed, in addition to other remedies available by law.

SECTION 12 **GENERAL**

12.0 TERMINATION

- A. If Contractor fails to begin the performance of his Contract within the time specified or fails to make deliveries to provide sufficient workmen and equipment or sufficient materials to insure the prompt completion, or performs the Contract unsuitably or neglects or refuses to remove materials, or fails to correct work rejected as defective or unsuitable, or discontinues the prosecution of the work, or if the Contractor becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or allows any final judgment to stand against him unsatisfied for a period of forty-eight (48) hours, or performs the Contract in an unacceptable manner, the Purchasing Agent shall give notice, in writing, to Contractor and his surety of such delay, neglect or default. If Contractor, within a period of five (5) days after such notice, does not proceed in accordance therewith, then the Commissioners' Court shall, upon written Certificate from the Purchasing Agent of the fact of such delay, neglect or default, and Contractor's failure to comply with such notice, have full power and authority, without violation of the Contract, to take the prosecution of the work out of the hands of Contractor and his surety, to appropriate and/or use any or all materials and equipment on the ground as may be suitable and acceptable, and to enter into an agreement for the completion of said Contract according to the terms and provisions thereof, or to use such other methods as, in the Purchasing Agent's opinion, shall be required for the completion of said Contract in an acceptable manner. All costs and charges incurred by County, together with the cost of completing the work, shall be deducted from any money due, or which may become due Contractor. In case the cost and expense so incurred by County shall be less than the sum which would have been completed by Contractor, then the amount will be retained as liquidated damages, the parties agreeing that the actual total

cost of delay is impracticable and difficult to ascertain. If such expense shall exceed the sum which would have been payable under the Contract, then Contractor and the surety shall be liable and shall pay to County the amount of said excess. During the term of the contract, County retains the right to immediately cancel any agreement between the parties hereto should goods, materials, or services supplied by Bidder not meet specifications. County also retains the right to cancel the contract due to budget restraints. In any case, with or without cause, County may terminate any agreement upon thirty (30) days written notice deposited in the United States mail.

12.1 COUNTY AS POLITICAL SUBDIVISION

- A. County is a political subdivision of the State of Texas and acts by and through its duly qualified Commissioners' Court. Notwithstanding any other provisions contained herein, the Commissioners' Court retains the sole and exclusive authority to approve all Change Orders and applications for payment, and to determine the final acceptance of the work. In addition, all Change Orders resulting in an increase in contract price shall be executed by the County Auditor, who shall certify the availability of funds sufficient to satisfy such additional obligation and determine which Change Orders shall be void and of no effect, in the absence of such certification.

12.2 FUND AVAILABILITY

- A. It is expressly understood and agreed that County has available the total maximum sum of funds hereinafter certified available by its County Auditor for the purpose of satisfying County's obligations under the terms and provisions of this agreement; that, notwithstanding anything to the contrary or that may be construed to the contrary, the liability of certified funds available from time to time for the purpose of satisfying County's obligations under the terms and provisions of this agreement. Should County, without cause, fail or refuse to pay Contractor any consideration due under this agreement or fail or refuse to appropriate such additional funds, if any, as may be required to complete the Contract work, then the sole and exclusive remedy of Contractor shall be to terminate this agreement and to take possession of any goods or materials not then complete and in place, and for which County has not previously paid the consideration established under this agreement.

12.3 TAX EXEMPTION

- A. County is exempt from the application of Limited Sales and Use Taxes under Texas Tax Code Ann. Section 151.309. Contractor will obtain for County any and all exemptions available from both State and Federal Excise Taxes. County shall provide Contractor with Certificates of Exemption, upon request.

12.4 RECORDS

- A. Contractor shall maintain records for one (1) year after project has been finalized and accepted by Commissioners' Court.

12.5 TEXAS LAW

- A. These General Provisions and the contract documents shall be governed and interpreted under the laws of the State of Texas and the exclusive venues of any claim or cause of action arising out of, or related to, the performance of the Contract shall be in Montgomery County, Texas.

12.6 FORCE MAJEURE

A. Definitions

In this Clause, "Event of Force Majeure" means an event beyond the control of the County and the Contractor, which prevents a Party from complying with any of its obligations under this Contract, including but not limited to:

1. an act of God (such as, but not limited to, fires, explosions, earthquakes, drought, and floods);
2. war, hostilities (whether war be declared or not), invasion, act of foreign enemies, or embargo;
3. rebellion, revolution, insurrection, or military or usurped power, or civil war;
4. contamination by radio-activity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuel, radio-active toxic explosive, or other hazardous properties of any explosive nuclear assembly or nuclear component of such assembly;
5. riot, commotion, strikes, go slows, lock outs or disorder, unless solely restricted to employees of the Contractor or of his Subcontractors; or
6. acts or threats of terrorism.

B. Consequences of a Force Majeure Event

Neither the County nor the Contractor shall be considered in breach of this Contract to the extent that performance of their respective obligations is prevented by an Event of Force Majeure that arises after the Effective Date. The Party (the "Affected Party") prevented from carrying out its obligations hereunder shall give notice to the other Party of an Event of Force Majeure upon it being foreseen by, or becoming known to, the Affected Party. If and to the extent that the Contractor is prevented from executing its obligations by the Event of Force Majeure, it shall endeavor to continue to perform its obligations under the Contract so far as reasonably practicable and in accordance with good operating practices. If and to the extent that the Contractor suffers a delay during the Construction Period as a result of the Event of Force Majeure, then it shall be entitled to a reasonable extension for the Time for Completion.

SECTION 13 **BID REQUIREMENTS**

13.0 BIDDING REQUIREMENTS

- A. Bidders must fill out the Bid Form in its entirety. Failure to do so may result in Bid disqualification.
- 1) **BIDDERS MUST FILL IN AND SIGN THE ATTACHED TWO (2) PAGE CONTRACT. IF MONTGOMERY COUNTY HAS A COPY OF BIDDER'S ASSUMED NAME CERTIFICATE, DBA (DOING BUSINESS AS) CERTIFICATE, OR CORPORATE CERTIFICATE, THEN BIDDER MAY DISREGARD THE SECTION TITLED AKNOWLEDGMENT. IN ORDER FOR YOUR BID TO MEET MONTGOMERY COUNTY BID REQUIREMENTS, THE COUNTY MUST HAVE IN OUR RECORDS THE ABOVE MENTIONED CERTIFICATES.**
 - 2) **NO BID WILL BE ACCEPTED AFTER THE SPECIFIED DUE DATE AND TIME.**
 - 3) **PRICES WILL REMAIN FIRM FOR THE DURATION OF THIS CONTRACT. PRICES SHALL BE ALL INCLUSIVE. ANY PRICE NOT SHOWN ON THIS CONTRACT WILL NOT BE HONORED FOR PAYMENT WHEN SUBMITTED BY VENDOR.**
- B. **THE COMMISSIONERS' COURT OF MONTOMGOMERY COUNTY RESERVES THE RIGHT TO AWARD THIS CONTRACT TO THE BIDDER(S) WHO PROVIDES THE LOWEST, BEST, AND MOST RESPONSIBLE BID, IN ACCORDANCE WITH**

THE LAWS OF THE STATE OF TEXAS. ALTERNATE BIDS WILL NOT BE ACCEPTED.

- C. ALL MONTGOMERY COUNTY STANDARD TERMS AND CONDITIONS WILL APPLY UNLESS SPECIFICALLY ADDRESSED IN THIS INVITATION TO BID.**
- D. MONTGOMERY COUNTY RESERVES THE RIGHT TO MAKE AN AWARD ON AN “ALL OR NONE” BASIS.**
- E. Failure or inability to adhere to any of the preceding requirements may serve as the basis for bid disqualification.**
- F. Contractor will be required to call for all utility locations, prior to performing any work as per Texas Utilities Code, Chapter 251, the Underground Facility Damage Prevention and Safety Act.**

SECTION 14

COMMUNITY DEVELOPMENT REQUIREMENTS

- Parties to this contract / subcontract will ensure only documented persons lawfully admitted for permanent residence to the United States or authorized under law to be employed are hired under the terms of the contract / subcontract. Any party convicted of violating this shall repay the public subsidy with interest, at a rate of 5% per annum, not later than the 120th day after the date that the Texas Department of Housing and Community Affairs notifies Montgomery County of the violation in accordance with House Bill 1196.
- No funds awarded under this contract/subcontract will be used for influencing any employee or agency, the outcome of any election, lobbying efforts, the defeat or passage of any legislation, hiring employees of or support any candidate for the legislative, executive, or judicial branches of government for Montgomery County, the State of Texas, or the United States.
- No person shall be excluded or denied benefits, access, or discriminated against in any manner for any program or activity associated with this contract/subcontract on the grounds of race, color, national origin, religion, sex, age or handicap
- Commitment of funds and/or site approval may occur only upon a satisfactory completion of an environmental review and approval of the Texas Department of Housing and Community Affairs release of funds. The project will be conditioned upon Montgomery County’s determination to proceed, modify, or cancel the project based on the environmental review results.
- Contracts or subcontracts will not be awarded to any party debarred, suspended, excluded or ineligible for participation in federal assistance programs at any time during the period of the contract/subcontract.
- Section 3 of the HUD Act requires that parties who contract/subcontract ensure that employment and other economic activities generated by HUD financial assistance shall, to the greatest extent feasible, be directed to low and very-low income persons, particularly those who are recipients of government assistance for housing, and to business concerns which provide economic opportunities to low and very-low income persons in accordance with 24 CFR 135.1.

CERTIFICATION OF NONSEGREGATED FACILITIES - 41 CFR PART 60-1.8

Notice to Prospective Federally Assisted Construction Contractors

1. A Certification of Non-segregated Facilities shall be submitted prior to the award of a federally assisted

construction contract exceeding \$10,000 which is not exempt from the provisions of the Equal Opportunity Clause.

2. Contractors receiving federally-assisted construction contract awards exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of the following notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed \$10,000 and are not exempt from the provisions of the Equal Opportunity Clause. NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001. **Notice to Prospective Subcontractors of Requirements for Certification of Non-Segregated Facilities**

1. A Certification of Non-segregated Facilities shall be submitted prior to the award of a subcontract exceeding \$10,000, which is not exempt from the provisions of the Equal Opportunity Clause.

2. Contractors receiving subcontract awards exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of this notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed \$10,000 and are not exempt from the provisions of the Equal Opportunity Clause. NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

CERTIFICATION OF NONSEGREGATED FACILITIES

The federally-assisted construction contractor certifies that she or he does not maintain or provide, for his employees, any segregated facilities at any of his establishments and that she or he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The federally-assisted construction contractor certifies that she or he will not maintain or provide, for his employees, segregated facilities at any of his establishments and that she or he will not permit his employees to perform their services at any location under his control where segregated facilities are maintained. The federally-assisted construction contractor agrees that a breach of this certification is a violation of the Equal Opportunity Clause in this contract.

As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms, and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directives or are, in fact, segregated on the basis of race, color, religion, or national origin because of habit, local custom, or any other reason. The federally-assisted construction contractor agrees that (except where she or he has obtained identical certifications from proposed subcontractors for specific time periods) she or he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause and that she or he will retain such certifications in his files.

SECTION 15

APPLICABLE LAWS AND REGULATIONS

(unless specifically waived by County in writing)

Per the Code of Federal Regulations, Title 2 C.F.R., § 200.326, contracts of the non-federal entity must contain the applicable provisions described in Appendix II to Part 200 – Contract Provisions for non-federal Entity Contracts Under Federal Awards.

If applicable for Federal Funding, the following will apply:

1. Remedies
 - a) Montgomery County may terminate this contract in whole or, from time to time, in part, for Montgomery County's convenience or because of the failure of the Contractor to fulfill the contract obligations. Montgomery County shall terminate by delivering to the Contractor a Notice of Termination specifying the nature, extent, and effective date of the termination. Upon receipt of the notice, the Contractor shall (1) immediately discontinue all services affected (unless the notice directs otherwise), and (2) deliver to Montgomery County all data, drawings, specifications, reports, estimates, summaries, and other information and materials accumulated in performing this contract, whether completed or in process.
 - b) If the termination is for the convenience of Montgomery County, the Contracting Officer shall make an equitable adjustment in the contract price but shall allow no anticipated profit on unperformed services.
 - c) If the termination is for failure of the Contractor to fulfill the contract obligations, Montgomery County may complete the work by contract or otherwise and the Contractor shall be liable for any additional cost incurred by the County.
 - d) If, after termination for failure to fulfill contract obligations, it is determined that the Contractor had not failed, the rights and obligations of the parties shall be the same as if the termination had been issued for the convenience of the County.
 - e) The rights and remedies of Montgomery County provided in this clause are in addition to any other rights and remedies provided by law or under this contract.

2. Dispute Resolution Upon County's determination of breach or default on the part of Provider, County shall give the Provider written notice of default and ten (10) days to cure, from the date of Provider's receipt of notice. If the breach is not timely remedied by Provider to the satisfaction and approval of County, default will be declared. Upon a declaration of breach of contract or default, County may exercise any and all of its rights afforded by law, including but not limited to those referenced in this Contract and/or Master Agreement provisions. In the event of litigation between the parties with respect to this Contract, or any aspect(s) thereof, subject to the INDEMNITY provision above, the losing party shall pay all costs and expenses incurred by the prevailing party in connection with such litigation, including reasonable attorneys' fees and costs. Any litigation or dispute resolution procedures shall take place at the type of Court or, if deemed appropriate by County, the local Dispute Resolution Center, that is designated and approved by County. IN NO EVENT DOES COUNTY WAIVE ANY IMMUNITY, DEFENSE OR LIABILITY CAP AVAILABLE TO IT BY LAW. Non-Appropriation: Notwithstanding anything to the contrary contained herein or in any other document, in the event funding is required outside of already available grant funds and if the Commissioners Court of Montgomery County fails to provide funding for this Contract during budget planning and adoption of the budget for the following fiscal year from the effective date of this Contract, County may terminate this Contract upon thirty (30) days written notice to Provider and/or Provider may terminate this Contract upon thirty (30) days written notice to County and such termination shall be Provider's sole remedy for County's nonappropriation of funds. The County's failure to provide funding for this Contract shall not be a default or breach under this Contract.

3. Termination for Convenience. This Agreement may be terminated by either Party, with or without cause, at any time during the initial term or any renewal or extension, upon thirty (30) days written notice to the other Party.

- LEAD-BASED PAINT

Section 302 of the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. Sec. 4831(b)) and the procedures established by the Department thereunder.

- ENVIRONMENTAL LAW AND AUTHORITIES

“Environmental Review Procedures for Recipients assuming HUD Environmental Responsibilities,” 24 CFR Part 58, and the laws and authorities specified at 24 CFR Sections 58.5 and 58.6.

- ACQUISITION/RELOCATION

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 U.S.C. Sec. 4601 et seq.), 24 CFR Part 42, and 24 CFR Section 570.606.

- FAITH-BASED ACTIVITIES

Executive Order 13279 of December 12, 2002 - Equal Protection of the Laws for Faith-Based and Community Organizations, and 24 CFR §200(j).

- COMPLIANCE WITH AIR AND WATER ACTS

a) In compliance with the Clean Air Act, as amended, 41 U.S.C. Sec. 7401 et.seq., and the regulations of the Environmental Protection Agency with respect thereto, the Contractor agrees that:

- 1) Any facility to be utilized in the performance of this Contract or any subcontract shall not be a facility listed on the EPA List of Violating Facilities pursuant to 40 CFR 15.20.
- 2) He will comply with all requirements of Section 114 of the Clean Air Act, as amended.
- 3) Materials utilized in the project shall be free of any hazardous materials, except as may be specifically provided for in these specifications.

b) If the Contractor encounters existing material on sites owned or controlled by Montgomery County or in material sources that are suspected by visual observation or smell to contain hazardous materials, the Contractor shall immediately notify the Architect and Montgomery County. Montgomery County will be responsible for testing, for removal or disposition of hazardous materials on sites owned or controlled by Montgomery County. Montgomery County may suspend the work, wholly or in part during the testing, removal or disposition of hazardous materials on sites owned or controlled by Montgomery County.

- JOB OFFICES

a) The Contractor and his subcontractors may maintain such office and storage facilities on the site as are necessary for the proper conduct of the work. These shall be located so as to cause no interference to any work to be performed on the site. Montgomery County shall be consulted with regard to locations.

b) Upon completion of the improvements, or as directed by Montgomery County, the Contractors shall remove all such temporary structure and facilities from the site, and leave the site of the work in the condition required by the Contract.

- PARTIAL USE OF SITE IMPROVEMENTS

Montgomery County may give notice to the Contractor and place in use those sections of the improvements which have been completed, inspected and be accepted as complying with the technical specifications and if in its opinion, each such section is reasonably safe, fit, and convenient for the use and accommodation for which it was intended, provided:

a) The use of such sections of the Improvements shall in no way impede the completion of the remainder of the work by the Contractor.

b) The Contractor shall not be responsible for any damages or maintenance costs due directly to the use of

such sections.

The period of guarantee stipulated in the Section 10 hereof shall not begin to run until the date of the final acceptance of all work which the Contractor is required to construct under this Contract.

§ 3703. Report of violations and withholding of amounts for unpaid wages and liquidated damages

(a) REPORTS OF INSPECTORS.—An officer or individual designated as an inspector of the work to be performed under a contract described in section 3701 of this title, or to aid in the enforcement or fulfillment of the contract, on observation or after investigation immediately shall report to the proper officer of the Federal Government, a territory of the United States, or the District of Columbia all violations of this chapter occurring in the performance of the work, together with the name of each laborer or mechanic who was required or permitted to work in violation of this chapter and the day the violation occurred.

(b) WITHHOLDING AMOUNTS.—

(1) DETERMINING AMOUNT.—The amount of unpaid wages and liquidated damages owing under this chapter shall be determined administratively.

(2) AMOUNT DIRECTED TO BE WITHHELD.—The officer or individual whose duty it is to approve the payment of money by the Government, territory, or District of Columbia in connection with the performance of the contract work shall direct the amount of—

(A) liquidated damages to be withheld for the use and benefit of the Government, territory, or District; and

(B) unpaid wages to be withheld for the use and benefit of the laborers and mechanics who were not compensated as required under this chapter.

(3) PAYMENT.—The Secretary of Labor shall pay the amount administratively determined to be due directly to the laborers and mechanics from amounts withheld on account of underpayments of wages if the amount withheld is adequate. If the amount withheld is not adequate, the Secretary of Labor shall pay an equitable proportion of the amount due.

(c) RIGHT OF ACTION AND INTERVENTION AGAINST CONTRACTORS AND SURETIES.—If the accrued payments withheld under the terms of the contract are insufficient to reimburse all the laborers and mechanics who have not been paid the wages required under this chapter, the laborers and mechanics, in the case of a department or agency of the Government, have the same right of action and intervention against the contractor and the contractor's sureties as is conferred by law on persons furnishing labor or materials. In those proceedings it is not a defense that the laborers and mechanics accepted or agreed to accept less than the required rate of wages or voluntarily made refunds.

(d) REVIEW PROCESS.—

(1) TIME LIMIT FOR APPEAL.—Within 60 days after an amount is withheld as liquidated damages, any contractor or subcontractor aggrieved by the withholding may appeal to the head of the agency of the Government or territory for which the contract work is done or which is providing financial assistance for the work, or to the Mayor of the District of Columbia in the case of liquidated damages withheld for the use and benefit of the District.

(2) REVIEW BY AGENCY HEAD OR MAYOR.—The agency head or Mayor may review the administrative determination of liquidated damages. The agency head or Mayor may issue a final order affirming the determination or may recommend to the Secretary of Labor that an appropriate adjustment in liquidated damages be made, or that the contractor or subcontractor be relieved of liability for the liquidated damages, if it is found that the amount is incorrect or that the contractor or subcontractor violated this chapter inadvertently, notwithstanding the exercise of due care by the contractor or subcontractor and the agents of the contractor or subcontractor.

(3) REVIEW BY SECRETARY.—The Secretary shall review all pertinent facts in the matter and may conduct any investigation the Secretary considers necessary in order to affirm or reject the recommendation. The decision of the Secretary is final.

(4) JUDICIAL ACTION.—A contractor or subcontractor aggrieved by a final order for the withholding of liquidated damages may file a claim in the United States Court of Federal Claims within 60 days after the final order. A final order of the agency head, Mayor, or Secretary is conclusive with respect to findings of fact if supported by substantial evidence.

(e) APPLICABILITY OF OTHER LAWS.—

(1) REORGANIZATION PLAN.—Reorganization Plan Numbered 14 of 1950 (eff. May 24, 1950, 64 Stat. 1267) applies to this chapter.

(2) SECTION 3145.—Section 3145 of this title applies to contractors and subcontractors referred to in section 3145 who are engaged in the performance of contracts subject to this chapter

§ 3704. Health and safety standards in building trades and construction industry

(a) CONDITION OF CONTRACTS.—

(1) IN GENERAL.—Each contract in an amount greater than \$100,000 that is entered into under legislation subject to Reorganization Plan Numbered 14 of 1950 (eff. May 24, 1950, 64 Stat. 1267) and is for construction, alteration, and repair, including painting and decorating, must provide that no contractor or subcontractor contracting for any part of the contract work shall require any laborer or mechanic employed in the performance of the contract to work in surroundings or under working conditions that are unsanitary, hazardous, or dangerous to health or safety, as established under construction safety and health standards the Secretary of Labor prescribes by regulation based on proceedings pursuant to section 553 of title 5, provided that the proceedings include a hearing similar in nature to that authorized by section 553 of title 5.

(2) CONSULTATION.—In formulating standards under this section, the Secretary shall consult with the Advisory Committee created by subsection (d).

(b) COMPLIANCE.—

(1) ACTIONS TO GAIN COMPLIANCE.—The Secretary may make inspections, hold hearings, issue orders, and make decisions based on findings of fact as the Secretary considers necessary to gain compliance with this section and any health and safety standard the Secretary prescribes under subsection (a). For those purposes the Secretary and the United States district courts have the authority and jurisdiction provided by sections 6506 and 6507 of title 41.

(2) REMEDY WHEN NONCOMPLIANCE FOUND.—When the Secretary, after an opportunity for an adjudicatory hearing by the Secretary, establishes noncompliance under this section of any condition of a contract described in—

(A) section 3701(b)(1)(B)(i) or (ii) of this title, the governmental agency for which the contract work is done may cancel the contract and make other contracts for the completion of the contract work, charging any additional cost to the original contractor; or

(B) section 3701(b)(1)(B)(iii) of this title, the governmental agency which is providing the financial guarantee, assistance, or insurance for the contract work may withhold the guarantee, assistance, or insurance attributable to the performance of the contract.

(3) NONAPPLICABILITY.—Section 3703 of this title does not apply to the enforcement of this section.

(c) REPEATED VIOLATIONS.—

(1) TRANSMITTAL OF NAMES OF REPEAT VIOLATORS TO COMPTROLLER GENERAL.—When the Secretary, after an opportunity for an agency hearing, decides on the record that, by repeated willful or grossly negligent violations of this chapter, a contractor or subcontractor has demonstrated that subsection (b) is not effective to protect the safety and health of the employees of the contractor or subcontractor, the Secretary shall make a finding to that effect and, not sooner than 30 days after giving notice of the finding to all interested persons, shall transmit the name of the contractor or subcontractor to the Comptroller General.

(2) BAN ON AWARDING CONTRACTS.—The Comptroller General shall distribute each name transmitted under paragraph (1) to all agencies of the Federal Government. Unless the Secretary otherwise recommends, the contractor, subcontractor, or any person in which the contractor or subcontractor has a substantial interest may not be awarded a contract subject to this section until three years have elapsed from the date the name is transmitted to the Comptroller General. The Secretary shall terminate the ban if, before the end of the three-year period, the Secretary, after affording interested persons due notice and an opportunity for a hearing, is satisfied that a contractor or subcontractor whose name was transmitted to the Comptroller General will comply responsibly with the requirements of this section. The Comptroller General shall inform all Government agencies after being informed of the Secretary's action.

(3) JUDICIAL REVIEW.—A person aggrieved by the Secretary's action under this subsection or subsection (b) may file with the appropriate United States court of appeals a petition for review of the Secretary's action within 60 days after receiving notice of the Secretary's action. The clerk of the court immediately shall send a copy of the petition to the Secretary. The Secretary then shall file with the court the record on which the action is based. The findings of fact by the Secretary, if supported by substantial evidence, are final. The court may enter a decree enforcing, modifying, modifying and enforcing, or setting aside any part of, the order of the Secretary or the appropriate Government agency. The judgment of the court may be reviewed by the Supreme Court as provided in section 1254 of title 28.

(d) ADVISORY COMMITTEE ON CONSTRUCTION SAFETY AND HEALTH.—

(1) ESTABLISHMENT.—There is an Advisory Committee on Construction Safety and Health in the Department of Labor.

(2) COMPOSITION.—The Committee is composed of nine members appointed by the Secretary, without regard to chapter 33 of title 5, as follows:

(A) Three members shall be individuals representative of contractors to whom this section applies.

(B) Three members shall be individuals representative of employees primarily in the building trades and construction industry engaged in carrying out contracts to which this section applies.

(C) Three members shall be public representatives who shall be selected on the basis of their professional and technical competence and experience in the construction health and safety field.

(3) CHAIRMAN.—The Secretary shall appoint one member as Chairman. (4) DUTIES.—The Committee shall advise the Secretary—

(A) in formulating construction safety and health standards and other regulations; and

(B) on policy matters arising in carrying out this section.

(5) EXPERTS AND CONSULTANTS.—The Secretary may appoint special advisory and technical experts or consultants as may be necessary to carry out the functions of the Committee.

(6) COMPENSATION AND EXPENSES.—Committee members are entitled to receive compensation at rates the Secretary fixes, but not more than \$100 a day, including travel time, when performing Committee business, and expenses under section 5703 of title 5.

§ 3705. Safety programs

The Secretary of Labor shall—

- (1) provide for the establishment and supervision of programs for the education and training of employers and employees in the recognition, avoidance, and prevention of unsafe working conditions in employment covered by this chapter; and
- (2) collect reports and data and consult with and advise employers as to the best means of preventing injuries

§ 3706. Limitations, variations, tolerances, and exemptions

The Secretary of Labor may provide reasonable limitations to, and may prescribe regulations allowing reasonable variations to, tolerances from, and exemptions from, this chapter that the Secretary may find necessary and proper in the public interest to prevent injustice or undue hardship or to avoid serious impairment of the conduct of Federal Government business.

§ 3707. Contractor certification or contract clause in acquisition of commercial items not required

In a contract to acquire a commercial product (as defined in section 103 of title 41) or a commercial service (as defined in section 103a of title 41), a certification by a contractor or a contract clause may not be required to implement a prohibition or requirement in this chapter.

§ 3708. Criminal penalties

A contractor or subcontractor having a duty to employ, direct, or control a laborer or mechanic employed in the performance of work contemplated by a contract to which this chapter applies that intentionally violates this chapter shall be fined under title 18, imprisoned for not more than six months, or both.

Further Compliance with the Contract Work Hours and Safety Standards Act

For contracts that are only subject to Contract Work hours and Safety Standards Act and are not subject to the other statutes in 29 C.F.R § 5.1 where an additional contract provision is required.

- (1) The contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid.
- (2) Records to be maintained under this provision shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the Department of Homeland Security, the Federal Emergency Management Agency, and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.”

4. Clean Air Act and the Federal Water Pollution Control Act (42 U.S.C. § 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. §1251-1387)

Clean Air Act

- (1) The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.
- (2) The Contractor agrees to report each violation to Montgomery County, Texas and understands, and agrees that Montgomery County, Texas will, in turn, report each violation as required to assure notification to the appropriate Environmental Protection Agency Regional Office.
- (3) The contractor agrees to include these requirements in each subcontract exceeding \$150,000 finance in whole or in part with Federal assistance provided by FEMA.

Federal Water Pollution Control Act

- (1) The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. §1251 et seq.
- (2) The Contractor agrees to report each violation to Montgomery County, Texas and understands, and agrees that Montgomery County, Texas will, in turn, report each violation as required to assure notification to the State of Texas General Land office, Federal Emergency Management Agency (FEMA), and the appropriate Environmental Protection Agency Regional Office.
- (3) The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA

5. Debarment and Suspension

- (1) This contract is a covered transaction for purposes of 2 C.F.R. part 180 and 2 C.F.R. part 3000. As such, the Contractor is required to verify that none of the Contractor, its principals (defined at 2 C.F.R. § 180.995) or affiliates (defined at 2 C.F.R. § 180.905), are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

- (2) The Contractor must comply with 2 C.F.R. 180, Subpart C and 2 C.F.R. part 3000, subpart C and must include the requirement to comply with these regulations in any lower tier covered transaction it enters into.
 - (3) The certification in this clause is a material representation of fact relied upon by Montgomery County. If it is later determined that the contractor did not comply with 2 C.F.R. part 180, subpart C and 2 C.F.R. part 3000, subpart C, in addition to remedies available to Montgomery County, the Federal Government may pursue available remedies, including, but not limited to, suspension and/or debarment.
 - (4) The bidder or respondent agrees to comply with the requirements of 2 C.F.R. part 180, subpart C and 2 C.F.R. part 3000, subpart C, while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or respondent further agrees to include a provision requiring such compliance in its lower tier covered transactions.
6. Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352 (as amended)
 Contractors who apply or bid for an award of \$100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used federally appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-federal funds that takes place in connection with obtaining any federal award. Such disclosures forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the federal awarding agency..
 Attached 44 C.F.R. part 18 Certification Regarding Lobbying to be submitted with each bid or offer exceeding \$100,000
7. Procurement of Recovered Materials (§200.323)
 (1) In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired –
 i. Competitively within a time frame providing for compliance with the contract performance schedule;
 ii. Meeting contract performance requirements; or
 iii. At a reasonable price.
 (2) Information about this requirement is available at EPA’s Comprehensive Procurement Guidelines web site, <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>
 (3) [The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act.](#)
8. Access to Records. The following access to records requirements apply to this contract:
 (1) The Contractor agrees to provide Montgomery County, Texas Office of Community Development, the Comptroller General of the United States or any of their authorized representatives access to any books, documents, papers and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts and transcriptions.
 (2) The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.
 (3) The contractor agrees to provide the any authorized representative access to construction or other work sites pertaining to the work being completed under the contract.
9. DHS Seal, Logo, and Flags
 The contractor shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval. The contractor shall include this provision in any subcontracts.
10. Compliance with Federal Law, Regulations, and Executive Orders.
 This is an acknowledgement that FEMA financial assistance will be used to fund all or a portion of the contract. The contractor will comply will all applicable federal law, regulations, executive orders, FEMA policies, procedures, and directives.
11. No Obligation by Federal Government.
 The Federal Government is not a party to this contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract.
12. Program Fraud and False or Fraudulent Statements or Related Acts
 The contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the contractor’s actions pertaining to this contract.
13. Prohibition on certain telecommunications and video surveillance services or equipment.
 CFR §200.216 prohibits expending federal loan or grant funds to procure or obtain certain telecommunications and video surveillance services or equipment. To the extent applicable and when required by Montgomery County, Texas, Vendor agrees

to provide such information or certification as may reasonably be requested by Montgomery County, Texas, to confirm whether any telecommunications or video surveillance services or equipment provided by Vendor is covered equipment or covered services under 2 CFR §200.216.

(a) Recipients and subrecipients are prohibited from obligating or expending loan or grant funds to:

- (1) Procure or obtain;
- (2) Extend or renew a contract to procure or obtain; or
- (3) Enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115–232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

(i) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

(ii) Telecommunications or video surveillance services provided by such entities or using such equipment.

(iii) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

(b) In implementing the prohibition under Public Law 115–232, section 889, subsection (f), paragraph (1), heads of executive agencies administering loan, grant, or subsidy programs shall prioritize available funding and technical support to assist affected businesses, institutions and organizations as is reasonably necessary for those affected entities to transition from covered communications equipment and services, to procure replacement equipment and services, and to ensure that communications service to users and customers is sustained.

CFR §200.216

(a) Costs incurred for telecommunications and video surveillance services or equipment such as phones, internet, video surveillance, cloud servers are allowable except for the following circumstances:

(b) Obligating or expending covered telecommunications and video surveillance services or equipment or services as described in § 200.216 to:

- (1) Procure or obtain, extend or renew a contract to procure or obtain;
- (2) Enter into a contract (or extend or renew a contract) to procure; or
- (3) Obtain the equipment, services, or systems.

(a) Definitions. As used in this clause, the terms backhaul; covered foreign country; covered telecommunications equipment or services; interconnection arrangements; roaming; substantial or essential component; and telecommunications equipment or services have the meaning as defined in FEMA Policy 405-143-1, Prohibitions on Expending FEMA Award Funds for Covered Telecommunications Equipment or Services (Interim), as used in this clause—

(b) Prohibitions.

(1) Section 889(b) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019, Pub. L. No. 115-232, and 2 C.F.R. § 200.216 prohibit the head of an executive agency on or after Aug. 13, 2020, from obligating or expending grant, cooperative agreement, loan, or loan guarantee funds on certain telecommunications products or from certain entities for national security reasons.

(2) Unless an exception in paragraph (c) of this clause applies, the contractor and its subcontractors may not use grant, cooperative agreement, loan, or loan guarantee funds from the Federal Emergency Management Agency to:

- i. Procure or obtain any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology of any system;
- ii. Enter into, extend, or renew a contract to procure or obtain any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology of any system;
- iii. Enter into, extend, or renew contracts with entities that use covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system; or
- iv. Provide, as part of its performance of this contract, subcontract, or other contractual instrument, any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system.

(c) Exceptions.

(1) This clause does not prohibit contractors from providing—

- i. A service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or
- ii. Telecommunications equipment that cannot route or redirect user data traffic or permit visibility into any user data or packets that such equipment transmits or otherwise handles.

- (2) By necessary implication and regulation, the prohibitions also do not apply to:
 - i. Covered telecommunications equipment or services that:
 - i. Are not used as a substantial or essential component of any system; and
 - ii. Are not used as critical technology of any system.
 - ii. Other telecommunications equipment or services that are not considered covered telecommunications equipment or services.

(d) Reporting requirement.

(1) In the event the contractor identifies covered telecommunications equipment or services used as a substantial or essential component of any system, or as critical technology as part of any system, during contract performance, or the contractor is notified of such by a subcontractor at any tier or by any other source, the contractor shall report the information in paragraph (d)(2) of this clause to the recipient or subrecipient, unless elsewhere in this contract are established procedures for reporting the information.

(2) The Contractor shall report the following information pursuant to paragraph (d)(1) of this clause:

- i. Within one business day from the date of such identification or notification: The contract number; the order number(s), if applicable; supplier name; supplier unique entity identifier (if known); supplier Commercial and Government Entity (CAGE) code (if known); brand; model number (original equipment manufacturer number, manufacturer part number, or wholesaler number); item description; and any readily available information about mitigation actions undertaken or recommended.
- ii. Within 10 business days of submitting the information in paragraph (d)(2)(i) of this clause: Any further available information about mitigation actions undertaken or recommended. In addition, the contractor shall describe the efforts it undertook to prevent use or submission of covered telecommunications equipment or services, and any additional efforts that will be incorporated to prevent future use or submission of covered telecommunications equipment or services.

(e) Subcontracts. The Contractor shall insert the substance of this clause, including this paragraph (e), in all subcontracts and other contractual instruments.

14. Right to inventions made under a contract or agreement:

If Montgomery County, Texas', Federal award meets the definition of "funding agreement" under 37 CFR 401.2(a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance or experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency. Vendor agrees to comply with the above requirements when applicable.

15. Domestic preferences for procurement (§200.322(a))

(a) As appropriate and to the extent consistent with law, the non-Federal entity should, to the greatest extent practicable under a Federal award, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). The requirements of this section must be included in all subawards including all contracts and purchase orders for work or products under this award.

(b) For purposes of this section:

(1) "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

(2) "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

(c) Federal agencies providing Federal financial assistance for infrastructure projects must implement the Buy America preferences set forth in 2 CFR part 184.

16. Profit as a separate element of price:

For purchases using federal funds in excess of the Simplified Acquisition Threshold, Montgomery County, Texas may be required to negotiate profit as a separate element of the price. See, 2 CFR 200.324(b). When required by Montgomery County, Texas, Vendor agrees to provide information and negotiate with Montgomery County, Texas regarding profit as a separate element of the price for a particular purchase.

17. Affirmative Socioeconomic Steps.

If subcontracts are to be let, the prime contractor is required to take all necessary steps identified in 2 C.F.R. §200.321(b)(1)-(5) to ensure that small and minority businesses, women's business enterprises, and labor surplus area firms are used when possible.

18. License and Delivery of Works Subject to Copyright and Data Rights

The Contractor grants to Montgomery County, Texas, a paid-up, royalty-free, nonexclusive, irrevocable, worldwide license in data first produced in the performance of this contract to reproduce, publish, or otherwise use, including prepare derivative works, distribute copies to the public, and perform publicly and display publicly such data. For data required by the contract but not first produced in the performance of this contract, the Contractor will identify such data and grant to Montgomery County, Texas or acquires on its behalf a license of the same scope as for data first produced in the performance of this contract. Data, as used herein, shall include any work subject to copyright under 17 U.S.C. § 102, for example, any written reports or literary works, software and/or source code, music, choreography, pictures or images, graphics, sculptures, videos, motion pictures or other audiovisual works, sound and/or video recordings, and architectural works. Upon or before the completion of this contract, the Contractor will deliver to Montgomery County, Texas data first produced in the performance of this contract and data required by the contract but not first produced in the performance of this contract in formats acceptable by Montgomery County, Texas.

19. Buy America Preferences for Infrastructure Projects, 2 C.F.R. Part 184

§ 184.2 Purpose and policy.

(a) Purpose. This part provides guidance to Federal awarding agencies on the implementation of the Buy America Preference applicable to Federal financial assistance set forth in part I of subtitle A, Buy America Sourcing Preferences, of the Build America, Buy America Act included in the Infrastructure Investment and Jobs Act (Pub. L. 117-58) at division G, title IX, subtitle A, part I, sections 70911 through 70917.

(b) Policy. The head of each Federal agency must ensure that none of the funds made available for a Federal award for an infrastructure project may be obligated unless all of the iron, steel, manufactured products, and construction materials incorporated into the project are produced in the United States. See section 70914(a) of the Build America Buy America Act.

§ 184.2 Applicability, effective date, and severability.

(a) Non-applicability of this part to existing Buy America Preferences. This part does not apply to a Buy America Preference meeting or exceeding the requirements of section 70914 of the Build America, Buy America Act applied by a Federal Awarding Agency to Federal awards for infrastructure projects before November 15, 2021.

(b) Effective date of this part. The effective date of this part is October 23, 2023. Except as provided in paragraph (c) of this section, this part applies to Federal awards obligated on or after its effective date. Awards obligated on or after May 14, 2022, the effective date of the Build America, Buy America Act, and before the effective date of this part, are instead subject to OMB Memorandum M-22-11.

(c) Modified effective date of this part for certain infrastructure projects. If an infrastructure project that has previously received a Federal award obligated on or after May 14, 2022, but before the effective date of this part receives an additional Federal award obligated within one year of the effective date of this part, the additional Federal award is subject to OMB Memorandum M-22-11. However, if significant design or planning changes are made to the infrastructure project, the Federal awarding agency may apply this part to the additional Federal award. Federal awards for an infrastructure project obligated after one year from the effective date of this part are subject to this part, regardless of whether this part applied to previous awards for the project.

(d) Severability. The provisions of this part are separate and severable from one another. OMB intends that if a provision of this part is held to be invalid or unenforceable as applied to a particular person or circumstance, the provision should be construed so as to continue to give the maximum effect permitted by law as applied to other persons not similarly situated or to dissimilar circumstances. If any provision is determined to be wholly invalid and unenforceable, it should be severed from the remaining provisions of this part, which should remain in effect.

§ 184.3 Definitions.

Acronyms used in this part have the same meaning as provided in 2 CFR 200.0. Terms not defined in this part have the same meaning as provided in 2 CFR 200.1. As used in this part:

Build America, Buy America Act means division G, title IX, subtitle A, parts I–II, sections 70901 through 70927 of the Infrastructure Investment and Jobs Act (Pub. L. 117–58).

Buy America Preference means the “domestic content procurement preference” set forth in section 70914 of the Build America, Buy America Act, which requires the head of each Federal agency to ensure that none of the funds made available for a Federal award for an infrastructure project may be obligated unless all of the iron, steel, manufactured products, and construction materials incorporated into the project are produced in the United States.

Component means an article, material, or supply, whether manufactured or unmanufactured, incorporated directly into: a manufactured product; or, where applicable, an iron or steel product.

Construction materials means articles, materials, or supplies that consist of only one of the items listed in paragraph (1) of this definition, except as provided in paragraph (2) of this definition. To the extent one of the items listed in paragraph (1) contains as inputs other items listed in paragraph (1), it is nonetheless a construction material.

(1) The listed items are:

- (i) Non-ferrous metals;
- (ii) Plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
- (iii) Glass (including optic glass);
- (iv) Fiber optic cable (including drop cable);
- (v) Optical fiber;
- (vi) Lumber;
- (vii) Engineered wood; and
- (viii) Drywall.

(2) Minor additions of articles, materials, supplies, or binding agents to a construction material do not change the categorization of the construction material.

Infrastructure project means any activity related to the construction, alteration, maintenance, or repair of infrastructure in the United States regardless of whether infrastructure is the primary purpose of the project. See also paragraphs (c) and (d) of § 184.4.

Iron or steel products means articles, materials, or supplies that consist wholly or predominantly of iron or steel or a combination of both.

Manufactured products means:

(1) Articles, materials, or supplies that have been:

- (i) Processed into a specific form and shape; or
- (ii) Combined with other articles, materials, or supplies to create a product with different properties than the individual articles, materials, or supplies.

(2) If an item is classified as an iron or steel product, a construction material, or a section 70917(c) material under § 184.4(e) and the definitions set forth in this section, then it is not a manufactured product. However, an article,

material, or supply classified as a manufactured product under § 184.4(e) and paragraph (1) of this definition may include components that are construction materials, iron or steel products, or section 70917(c) materials.

Manufacturer means the entity that performs the final manufacturing process that produces a manufactured product.

Predominantly of iron or steel or a combination of both means that the cost of the iron and steel content exceeds 50 percent of the total cost of all its components. The cost of iron and steel is the cost of the iron or steel mill products (such as bar, billet, slab, wire, plate, or sheet), castings, or forgings utilized in the manufacture of the product and a good faith estimate of the cost of iron or steel components.

Produced in the United States means:

(1) In the case of iron or steel products, all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.

(2) In the case of manufactured products:

(i) The product was manufactured in the United States; and

(ii) The cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product, unless another standard that meets or exceeds this standard has been established under applicable law or regulation for determining the minimum amount of domestic content of the manufactured product. See § 184.2(a). The costs of components of a manufactured product are determined according to § 184.5.

(3) In the case of construction materials, all manufacturing processes for the construction material occurred in the United States. See § 184.6 for more information on the meaning of “all manufacturing processes” for specific construction materials.

Section 70917(c) materials means cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives. See section 70917(c) of the Build America, Buy America Act.

§ 184.4 Applying the Buy America Preference to a Federal award.

(a) Applicability of Buy America Preference to infrastructure projects. The Buy America Preference applies to Federal awards where funds are appropriated or otherwise made available for infrastructure projects in the United States, regardless of whether infrastructure is the primary purpose of the Federal award.

(b) Including the Buy America Preference in Federal awards. All Federal awards with infrastructure projects must include the Buy America Preference in the terms and conditions. The Buy America Preference must be included in all subawards, contracts, and purchase orders for the work performed, or products supplied under the Federal award. The terms and conditions of a Federal award flow down to subawards to subrecipients unless a particular section of the terms and conditions of the Federal award specifically indicate otherwise.

(c) Infrastructure in general. Infrastructure encompasses public infrastructure projects in the United States, which includes, at a minimum, the structures, facilities, and equipment for roads, highways, and bridges; public transportation; dams, ports, harbors, and other maritime facilities; intercity passenger and freight railroads; freight and intermodal facilities; airports; water systems, including drinking water and wastewater systems; electrical transmission facilities and systems; utilities; broadband infrastructure; and buildings and real property; and structures, facilities, and equipment that generate, transport, and distribute energy including electric vehicle (EV) charging.

(d) Interpretation of infrastructure. The Federal awarding agency should interpret the term “infrastructure” broadly and consider the description provided in paragraph (c) of this section as illustrative and not exhaustive. When determining if a particular project of a type not listed in the description in paragraph (c) constitutes “infrastructure,” the Federal awarding agency should consider whether the project will serve a public function, including whether the project is publicly owned and operated, privately operated on behalf of the public, or is a place of public accommodation, as opposed to a project that is privately owned and not open to the public.

(e) Categorization of articles, materials, and supplies.

(1) An article, material, or supply should only be classified into one of the following categories:

- (i) Iron or steel products;
- (ii) Manufactured products;
- (iii) Construction materials; or
- (iv) Section 70917(c) materials.

(2) An article, material, or supply should not be considered to fall into multiple categories. In some cases, an article, material, or supply may not fall under any of the categories listed in paragraph (e)(1) of this section. The classification of an article, material, or supply as falling into one of the categories listed in paragraph (e)(1) must be made based on its status at the time it is brought to the work site for incorporation into an infrastructure project. In general, the work site is the location of the infrastructure project at which the iron, steel, manufactured products, and construction materials will be incorporated.

(f) Application of the Buy America Preference by category. An article, material, or supply incorporated into an infrastructure project must meet the Buy America Preference for only the single category in which it is classified.

§ 184.5 Determining the cost of components for manufactured products.

In determining whether the cost of components for manufactured products is greater than 55 percent of the total cost of all components, use the following instructions:

- (a) For components purchased by the manufacturer, the acquisition cost, including transportation costs to the place of incorporation into the manufactured product (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or
- (b) For components manufactured by the manufacturer, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (a) of this section, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the manufactured product.

§ 184.6 Construction material standards.

(a) The Buy America Preference applies to the following construction materials incorporated into infrastructure projects. Each construction material is followed by a standard for the material to be considered “produced in the United States.”

- (1) Non-ferrous metals. All manufacturing processes, from initial smelting or melting through final shaping, coating, and assembly, occurred in the United States.
- (2) Plastic and polymer-based products. All manufacturing processes, from initial combination of constituent plastic or polymer-based inputs, or, where applicable, constituent composite materials, until the item is in its final form, occurred in the United States.
- (3) Glass. All manufacturing processes, from initial batching and melting of raw materials through annealing, cooling, and cutting, occurred in the United States.
- (4) Fiber optic cable (including drop cable). All manufacturing processes, from the initial ribboning (if applicable), through buffering, fiber stranding and jacketing, occurred in the United States. All manufacturing processes also include the standards for glass and optical fiber, but not for non-ferrous metals, plastic and polymer-based products, or any others.
- (5) Optical fiber. All manufacturing processes, from the initial preform fabrication stage through the completion of the draw, occurred in the United States.
- (6) Lumber. All manufacturing processes, from initial debarking through treatment and planing, occurred in the United States.
- (7) Drywall. All manufacturing processes, from initial blending of mined or synthetic gypsum plaster and additives through cutting and drying of sandwiched panels, occurred in the United States.

(8) Engineered wood. All manufacturing processes from the initial combination of constituent materials until the wood product is in its final form, occurred in the United States.

(b) Except as specifically provided, only a single standard under paragraph (a) of this section should be applied to a single construction material.

§ 184.7 Federal awarding agency's issuance of a Buy America Preference waiver.

(a) Justification of waivers. A Federal awarding agency may waive the application of the Buy America Preference in any case in which it finds that:

(1) Applying the Buy America Preference would be inconsistent with the public interest (a “public interest waiver”);

(2) Types of iron, steel, manufactured products, or construction materials are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality (a “nonavailability waiver”); or

(3) The inclusion of iron, steel, manufactured products, or construction materials produced in the United States will increase the cost of the overall infrastructure project by more than 25 percent (an “unreasonable cost waiver”).

(b) Requesting a waiver. Recipients may request waivers from a Federal awarding agency if the recipient reasonably believes a waiver is justified under paragraph (a) of this section. A request from a recipient to waive the application of the Buy America Preference must be provided to the Federal awarding agency in writing. Federal awarding agencies must provide waiver request submission instructions and guidance on the format, contents, and supporting materials required for waiver requests from recipients.

(c) Before issuing a proposed waiver. Before issuing a proposed waiver, the Federal awarding agency must prepare a detailed written explanation for the proposed determination to issue the waiver based on a justification listed under paragraph (a) of this section, including for waivers requested by a recipient.

(d) Before issuing a final waiver. Before issuing a final waiver, the Federal awarding agency must:

(1) Make the proposed waiver and the detailed written explanation publicly available in an easily accessible location on a website designated by the Federal awarding agency and the Office of Management and Budget;

(2) Except as provided in paragraph (e) of this section, provide a period of not less than 15 calendar days for public comment on the proposed waiver; and

(3) Unless the Director of OMB provides otherwise, submit the waiver determination to the Made in America Office in OMB for final review pursuant to Executive Order 14005 and section 70923(b) of the Build America, Buy America Act.

(e) Waivers of general applicability. Waivers of general applicability mean waivers that apply generally across multiple Federal awards. A Federal agency must provide a period of not less than 30 days for public comment on a proposal to modify or renew a waiver of general applicability.

§ 184.8 Exemptions to the Buy America Preference.

(a) The Buy America Preference does not apply to expenditures for assistance authorized under section 402, 403, 404, 406, 408, or 502 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5170a, 5170b, 16 5170c, 5172, 5174, or 5192) relating to a major disaster or emergency declared by the President under section 401 or 501, respectively, of such Act (42 U.S.C. 5170, 5191) or pre and post disaster or emergency response expenditures.

(b) “Pre and post disaster or emergency response expenditures” consist of expenditures for financial assistance that are:

(1) Authorized by statutes other than the Stafford Act, 42 U.S.C. 5121 et seq.; and

(2) Made in anticipation of or response to an event or events that qualify as an “emergency” or “major disaster” within the meaning of the Stafford Act, 42 U.S.C. 5122(1), (2).

SECTION 16

FEDERAL LABOR STANDARDS PROVISIONS

Federal Labor Standards Provisions

TITLE 24 U.S. Department of Housing and Urban Development

§ 1.1 Purpose.

The purpose of this part 1 is to effectuate the provisions of title VI of the Civil Rights Act of 1964 (hereafter referred to as the Act) to the end that no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving Federal financial assistance from the Department of Housing and Urban Development.

§ 1.1 Purpose.

These regulations are to carry out the requirements of E.O. 11063 that all action necessary and appropriate be taken to prevent discrimination because of race, color, religion (creed), sex or national origin in the sale, rental, leasing or other disposition of residential property and related facilities or in the use or occupancy thereof where such property or facilities are owned or operated by the Federal Government, or provided with Federal assistance by the Department of Housing and Urban Development and in the lending practices with respect to residential property and related facilities of lending institutions insofar as such practices relate to loans insured, guaranteed or purchased by the Department. These regulations are intended to assure compliance with the established policy of the United States that the benefits under programs and activities of the Department which provide financial assistance, directly or indirectly, for the provision, rehabilitation, or operation of housing and related facilities are made available without discrimination based on race, color, religion (creed), sex or national origin. These regulations are also intended to assure compliance with the policy of this Department to administer its housing programs affirmatively, so as to achieve a condition in which individuals of similar income levels in the same housing market area have a like range of housing choices available to them regardless of their race, color, religion (creed), sex or national origin.

§ 107.60 Sanctions and penalties.

(a) Failure or refusal to comply with E.O. 11063 or the requirements of this part shall be proper basis for applying sanctions. Violations of title VIII of the Civil Rights Act of 1968 or a state or local fair housing law, with respect to activities covered by the Executive order, or of the regulations and requirements under E.O. 11063 of other Federal Departments and agencies may also result in the imposition of sanctions by this Department.(b) Such sanctions as are specified by E.O. 11063, the contract through which federal assistance is provided, and such sanctions as are specified by the rules or regulations of the Department governing the program under which federal assistance to the project is provided shall be applied in accordance with the relevant regulations. Actions that may be taken include: cancellation or termination, in whole or in part, of the contract or agreement; refusal to approve a lender or withdrawal of approval; or a determination of ineligibility, suspension, or debarment from any further assistance or contracts; provided, however, that sanctions of debarment, suspension, and ineligibility are subject to the Department's regulations under 2 CFR part 2424, and, further, that no sanction under section 302 (a), (b), and (c) of Executive Order 11063 shall be applied by the Assistant Secretary for Fair Housing and Equal Opportunity without the concurrence of the Secretary.(c) The Department shall use its good offices in order to promote the abandonment of discriminatory practices with regard to residential property and related facilities provided with assistance prior to the effective date of E.O. 11063 and take appropriate actions permitted by law including the institution of appropriate litigation to provide such equal housing opportunities.(d) In any case involving the failure of a lender to comply with the requirements of the

Executive order or this part, the Assistant Secretary for FH&EO shall notify the Federal financial regulatory agency having jurisdiction over the lender of the findings in the case.

CIVIL RIGHTS

Title VIII of the Civil Rights Act of 1968, "The Fair Housing Act of 1968" (42 U.S.C. Sec 3601 et seq.), as amended, and implementing regulations, and it will affirmatively further fair housing;

The Age Discrimination Act of 1975 (42 U.S.C. Sec. 6101 et seq.);

Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. Sec. 794.) and "Nondiscrimination Based on Handicap in Federally-Assisted Programs and Activities of the Department of Housing and Urban Development", 24 CFR Part 8. By signing this Contract, the Subrecipient understands and agrees that the activities funded shall be operated in accordance with 24 CFR Part 8; and the Architectural Barriers Act of 1968 (42 U.S.C. Sec. 4151 et seq.), including the use of a telecommunications device for deaf persons (TDDs) or equally effective communication system.

§ 60-1.4 Equal opportunity clause – the following equal opportunity requirements apply to the underlying contract.

- Race, Color, Creed, National Origin, Sex – In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. § 2000e, and Federal transit laws at 49 U.S.C. § 5332, the Contractor agrees to comply with all applicable equal employment opportunity requirements of U.S. Department of Labor (U.S. DOL) regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor," 41 C.F.R. Parts 60 et seq., (which implement Executive Order No. 11246, "Equal Employment Opportunity," as amended by Executive Order No. 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," 42 U.S.C. § 2000e note), and with any applicable Federal statutes, executive orders, regulations, and Federal policies that may in the future affect construction activities undertaken in the course of the Project. The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, creed, national origin, sex, or age. Such action shall include, but not be limited to, the following: employment upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.
- Age – In accordance with section 4 of the Age Discrimination in Employment Act of 1967, as amended, 29 U.S.C. § § 623 and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees to refrain from discrimination against present and prospective employees for reason of age.
- Disabilities – In accordance with section 102 of the Americans with Disabilities Act as amended, 42 U.S.C. § 12112, the Contractor agrees that it will comply with the requirements of the U.S. Equal Employment Opportunity Commission, "Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act," 29 C.F.R. Part 1630, pertaining to employment of persons with disabilities. Contractor further agrees to comply with, and that this contract is subject to, the requirements of Section 504 of the Rehabilitation Act of 1973, including any statutory provisions enacted later.

(a) Government contracts. Except as otherwise provided, each contracting agency shall include the following equal opportunity clause contained in section 202 of the order in each of its Government contracts (and modifications thereof if not included in the original contract): During the performance of this contract, the contractor agrees as follows:(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national

origin.(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.(4) The contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.(7) In the event of the contractor's non-compliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.(8) The contractor will include the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase

order as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the contractor may request the United States to enter into such litigation to protect the interests of the United States.
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(b) Federally assisted construction contracts. (1) Except as otherwise provided, each administering agency shall require the inclusion of the following language as a condition of any grant, contract, loan, insurance, or guarantee involving federally assisted construction which is not exempt from the requirements of the equal opportunity clause: The applicant hereby agrees that it will incorporate or cause to be incorporated into any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 CFR Chapter 60, which is paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to a grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, the following equal opportunity clause:During the performance of this contract, the contractor agrees as follows:(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf

of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.(4) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.(5) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.(6) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.(7) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies

invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.(8) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

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Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States. The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract. The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance. The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering

agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.(2) [Reserved](c) Subcontracts. Each nonexempt prime contractor or subcontractor shall include the equal opportunity clause in each of its nonexempt subcontracts.(d) Inclusion of the equal opportunity clause by reference. The equal opportunity clause may be included by reference in all Government contracts and subcontracts, including Government bills of lading, transportation requests, contracts for deposit of Government funds, and contracts for issuing and paying U.S. savings bonds and notes, and such other contracts and subcontracts as the Director of OFCCP may designate.(e) Incorporation by operation of the order. By operation of the order, the equal opportunity clause shall be considered to be a part of every contract and subcontract required by the order and the regulations in this part to include such a clause whether or not it is physically incorporated in such contracts and whether or not the contract between the agency and the contractor is written.(f) Adaptation of language. Such necessary changes in language may be made in the equal opportunity clause as shall be appropriate to identify properly the parties and their undertakings.

Davis-Bacon Act and Copeland Anti-Kickback Act

Compliance with the Davis-Bacon Act

Contractor. For construction contracts in excess of \$2,000, contractor shall comply with the Davis-Bacon Act (40 U.S.C. §§ 3141-3144 and 3146-3148) as supplemented by Department of Labor regulations at 29 C.F.R. Part 5 as may be applicable. The contractor shall comply with 40 U.S.C. 3141-3144, and 3146-3148 and the requirements of 29 C.F.R. pt. 5 as applicable

The Project or Program to which the construction work covered by this contract pertains is being assisted by the United States of America and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

A. 1. (i) Minimum Wages. All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR Part 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(ii)(a) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage rate and fringe benefits therefore only when the following criteria have been met.

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(b) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives,

and HUD or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB control number 1215-0140).

(c) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140).

(d) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(b) or (c) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of an laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program. Provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1215-0140).

2. Withholding. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract, in the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

3. (i) Payrolls and basic records. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates or contributions or costs anticipated for bona fide fringe benefits or cash equivalents there of the types described in Section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR (a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1215-0140 and 1215-0017).

(ii)(a) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR Part 5.5(a)(3) (i). This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-0014-1), U. S. Government Printing Office,

Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. (Approved by the Office of Management and Budget under OMB Control Number 1215-0149).

(b) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be maintained under 29 CFR Part 5.5(a)(3)(i) and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(c) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph A.3.(ii)(b) of this section.

(d) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph A.3.(i) of this section available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR Part 5.12.

(4) Apprentices and Trainees.

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program

associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

5. Compliance with Copeland Act requirements.

- (1) Contractor. The contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this contract.
- (2) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as the FEMA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.
- (3) Breach. A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. § 5.12

6. Subcontracts. The contractor or subcontractor will insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as HUD or its designee may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR Part 5.5.

7. Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act Requirements. All rulings and interpretations of the David-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.

10. (i) Certification of Eligibility. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001. Additionally, U.S. Criminal Code, Section 1010, Title 18, U.S.C., "Federal Housing Administration transactions", provides in part "Whoever, for the purpose of ... influencing in any way the action of such Administration... makes, utters or publishes any statement, knowing the same to be false... shall be fined not more than \$5,000 or imprisoned not more than two years, or both."

11. Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic to whom the wage, salary, or other labor standards provisions of this Contract are applicable shall be discharged or in any other manner discriminated against by the Contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. Contract Work Hours and Safety Standards Act. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

Compliance with the Contract Work Hours and Safety Standards Act 40 U.S.C. § 3701-3708

(a) STANDARD WORKWEEK.—The wages of every laborer and mechanic employed by any con- Page 137 TITLE 40—PUBLIC BUILDINGS, PROPERTY, AND WORKS § 3703 tractor or subcontractor in the performance of work on a contract described in section 3701 of this title shall be computed on the basis of a standard workweek of 40 hours. Work in excess of the standard workweek is permitted subject to this section. For each workweek in which the laborer or mechanic is so

employed, wages include compensation, at a rate not less than one and one-half times the basic rate of pay, for all hours worked in excess of 40 hours in the workweek.

(b) A contract described in section 3701 of this title, and any other obligation of the Federal Government, a territory of the United States, or the District of Columbia in connection with that contract, must provide that -

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in subparagraph (1) of this paragraph, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of eight hours or in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in subparagraph (1) of this paragraph.

(3) Withholding for unpaid wages and liquidated damages. HUD or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor with the same prime contract, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (2) of this paragraph.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph (1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs (1) through (4) of this paragraph.

(c) LIQUIDATED DAMAGES.—Liquidated damages under subsection (b)(2)(B) shall be computed for each individual employed as a laborer or mechanic in violation of this chapter and shall be equal to \$10 for each calendar day on which the individual was required or permitted to work in excess of the standard workweek without payment of the overtime wages required by this chapter.

(d) AMOUNTS WITHHELD TO SATISFY LIABILITIES.—Subject to section 3703 of this title, Montgomery County may withhold, or have withheld, from money payable because of work performed by a contractor or subcontractor, amounts administratively determined to be necessary to satisfy the liabilities of the contractor or subcontractor for unpaid wages and liquidated damages as provided in this section.

C. Health and Safety

(1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health and safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The Contractor shall comply with all regulations issued by the Secretary of Labor pursuant to Title 29 Part 1926 (formerly part 1518) and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act (Public Law 91-54, 83 Stat.96).

(3) The Contractor shall include the provisions of this Article in every subcontract so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontract as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing success.

12. Title 29 – LABOR, PART 3 CONTRACTORS AND SUBCONTRACTOR ON PUBLIC BUILDING OR PUBLIC WORK FINANCED IN WHOLE OR IN PART BY LOANS OR GRANTS FROM THE UNITED STATES

§3.1 Purpose and scope.

This part prescribes “anti-kickback” regulations under section 2 of the Act of June 13, 1934, as amended (40 U.S.C. 276c), popularly known as the Copeland Act. This part applies to any contract which is subject to Federal wage standards and which is for the construction, prosecution, completion, or repair of public buildings, public works or buildings or works financed in whole or in part by loans or grants from the United States. The part is intended to aid in the enforcement of the minimum wage

provisions of the Davis-Bacon Act and the various statutes dealing with federally assisted construction that contain similar minimum wage provisions, including those provisions which are not subject to Reorganization Plan No. 14 (e.g., the College Housing Act of 1950, the Federal Water Pollution Control Act, and the Housing Act of 1959), and in the enforcement of the overtime provisions of the Contract Work Hours Standards Act whenever they are applicable to construction work. The part details the obligation of contractors and subcontractors relative to the weekly submission of statements regarding the wages paid on work covered thereby; sets forth the circumstances and procedures governing the making of payroll deductions from the wages of those employed on such work; and delineates the methods of payment permissible on such work.

§3.2 Definitions.

As used in the regulations in this part:

(a) The terms building or work generally include construction activity as distinguished from manufacturing, furnishing of materials, or servicing and maintenance work. The terms include, without limitation, buildings, structures, and improvements of all types, such as bridges, dams, plants, highways, parkways, streets, subways, tunnels, sewers, mains, powerlines, pumping stations, railways, airports, terminals, docks, piers, wharves, ways, lighthouses, buoys, jetties, breakwaters, levees, and canals; dredging, shoring, scaffolding, drilling, blasting, excavating, clearing, and landscaping. Unless conducted in connection with and at the site of such a building or work as is described in the foregoing sentence, the manufacture or furnishing of materials, articles, supplies, or equipment (whether or not a Federal or State agency acquires title to such materials, articles, supplies, or equipment during the course of the manufacture or furnishing, or owns the materials from which they are manufactured or furnished) is not a building or work within the meaning of the regulations in this part.

(b) The terms construction, prosecution, completion, or repair mean all types of work done on a particular building or work at the site thereof, including, without limitation, altering, remodeling, painting and decorating, the transporting of materials and supplies to or from the building or work by the employees of the construction contractor or construction subcontractor, and the manufacturing or furnishing of materials, articles, supplies, or equipment on the site of the building or work, by persons employed at the site by the contractor or subcontractor.

(c) The terms public building or public work include building or work for whose construction, prosecution, completion, or repair, as defined above, a Federal agency is a contracting party, regardless of whether title thereof is in a Federal agency.

(d) The term building or work financed in whole or in part by loans or grants from the United States includes building or work for whose construction, prosecution, completion, or repair, as defined above, payment or part payment is made directly or indirectly from funds provided by loans or grants by a Federal agency. The term includes building or work for which the Federal assistance granted is in the form of loan guarantees or insurance.

(e) Every person paid by a contractor or subcontractor in any manner for his labor in the construction, prosecution, completion, or repair of a public building or public work or building or work financed in whole or in part by loans or grants from the United States is employed and receiving wages, regardless of any contractual relationship alleged to exist between him and the real employer.

(f) The term any affiliated person includes a spouse, child, parent, or other close relative of the contractor or subcontractor; a partner or officer of the contractor or subcontractor; a corporation closely connected with the contractor or subcontractor as parent, subsidiary, or otherwise, and an officer or agent of such corporation.

(g) The term Federal agency means the United States, the District of Columbia, and all executive departments, independent establishments, administrative agencies, and instrumentalities of the United States and of the District of Columbia, including corporations, all or substantially all of the stock of which is beneficially owned by the United States, by the District of Columbia, or any of the foregoing departments, establishments, agencies, and instrumentalities.

[29 FR 97, Jan. 4, 1964, as amended at 38 FR 32575, Nov. 27, 1973]

§3.3 Weekly statement with respect to payment of wages.

(a) As used in this section, the term employee shall not apply to persons in classifications higher than that of laborer or mechanic and those who are the immediate supervisors of such employees.

(b) Each contractor or subcontractor engaged in the construction, prosecution, completion, or repair of any public building or public work, or building or work financed in whole or in part by loans or grants from the United States, shall furnish each week a statement with respect to the wages paid each of its employees engaged on work covered by this part 3 and part 5 of this title during the preceding weekly payroll period. This statement shall be executed by the contractor or subcontractor or by an authorized officer or employee of the contractor or subcontractor who supervises the payment of wages, and shall be on the back of Form WH 347, "Payroll (For Contractors Optional Use)" or on any form with identical wording. Copies of WH 347 may be obtained from the Government contracting or sponsoring agency or from the Wage and Hour Division Web site at <http://www.dol.gov/whd/forms/index.htm> or its successor site.

(c) The requirements of this section shall not apply to any contract of \$2,000 or less.

(d) Upon a written finding by the head of a Federal agency, the Secretary of Labor may provide reasonable limitations, variations, tolerances, and exemptions from the requirements of this section subject to such conditions as the Secretary of Labor may specify.

[29 FR 97, Jan. 4, 1964, as amended at 33 FR 10186, July 17, 1968; 47 FR 23679, May 28, 1982; 73 FR 77511, Dec. 19, 2008; 82 FR 2224, Jan. 9, 2017]

§3.4 Submission of weekly statements and the preservation and inspection of weekly payroll records.

(a) Each weekly statement required under §3.3 shall be delivered by the contractor or subcontractor, within seven days after the regular payment date of the payroll period, to a representative of a Federal or State agency in charge at the site of the building or work, or, if there is no representative of a Federal or State agency at the site of the building or work, the statement shall be mailed by the contractor or subcontractor, within such time, to a Federal or State agency contracting for or financing the

building or work. After such examination and check as may be made, such statement, or a copy thereof, shall be kept available, or shall be transmitted together with a report of any violation, in accordance with applicable procedures prescribed by the United States Department of Labor.

(b) Each contractor or subcontractor shall preserve his weekly payroll records for a period of three years from date of completion of the contract. The payroll records shall set out accurately and completely the name and address of each laborer and mechanic, his correct classification, rate of pay, daily and weekly number of hours worked, deductions made, and actual wages paid. Such payroll records shall be made available at all times for inspection by the contracting officer or his authorized representative, and by authorized representatives of the Department of Labor.

(Reporting and recordkeeping requirements in paragraph (b) have been approved by the Office of Management and Budget under control number 1235-0008)

[29 FR 97, Jan. 4, 1964, as amended at 47 FR 145, Jan. 5, 1982; 82 FR 2224, Jan. 9, 2017]

§3.5 Payroll deductions permissible without application to or approval of the Secretary of Labor.

Deductions made under the circumstances or in the situations described in the paragraphs of this section may be made without application to and approval of the Secretary of Labor:

- (a) Any deduction made in compliance with the requirements of Federal, State, or local law, such as Federal or State withholding income taxes and Federal social security taxes.
- (b) Any deduction of sums previously paid to the employee as a bona fide prepayment of wages when such prepayment is made without discount or interest. A bona fide prepayment of wages is considered to have been made only when cash or its equivalent has been advanced to the person employed in such manner as to give him complete freedom of disposition of the advanced funds.
- (c) Any deduction of amounts required by court process to be paid to another, unless the deduction is in favor of the contractor, subcontractor, or any affiliated person, or when collusion or collaboration exists.
- (d) Any deduction constituting a contribution on behalf of the person employed to funds established by the employer or representatives of employees, or both, for the purpose of providing either from principal or income, or both, medical or hospital care, pensions or annuities on retirement, death benefits, compensation for injuries, illness, accidents, sickness, or disability, or for insurance to provide any of the foregoing, or unemployment benefits, vacation pay, savings accounts, or similar payments for the benefit of employees, their families and dependents: Provided, however, That the following standards are met:
 - (1) The deduction is not otherwise prohibited by law;
 - (2) It is either:
 - (i) Voluntarily consented to by the employee in writing and in advance of the period in which the work is to be done and such consent is not a condition either for the obtaining of or for the continuation of employment, or
 - (ii) provided for in a bona fide collective bargaining agreement between the contractor or subcontractor and representatives of its employees;
 - (3) No profit or other benefit is otherwise obtained, directly or indirectly, by the contractor or subcontractor or any affiliated person in the form of commission, dividend, or otherwise; and
 - (4) The deductions shall serve the convenience and interest of the employee.
- (e) Any deduction contributing toward the purchase of United States Defense Stamps and Bonds when voluntarily authorized by the employee.
- (f) Any deduction requested by the employee to enable him to repay loans to or to purchase shares in credit unions organized and operated in accordance with Federal and State credit union statutes.
- (g) Any deduction voluntarily authorized by the employee for the making of contributions to governmental or quasigovernmental agencies, such as the American Red Cross.
- (h) Any deduction voluntarily authorized by the employee for the making of contributions to Community Chests, United Givers Funds, and similar charitable organizations.
- (i) Any deductions to pay regular union initiation fees and membership dues, not including fines or special assessments: Provided, however, That a collective bargaining agreement between the contractor or subcontractor and representatives of its employees provides for such deductions and the deductions are not otherwise prohibited by law.
- (j) Any deduction not more than for the "reasonable cost" of board, lodging, or other facilities meeting the requirements of section 3(m) of the Fair Labor Standards Act of 1938, as amended, and part 531 of this title. When such a deduction is made the additional records required under §516.25(a) of this title shall be kept.
- (k) Any deduction for the cost of safety equipment of nominal value purchased by the employee as his own property for his personal protection in his work, such as safety shoes, safety glasses, safety gloves, and hard hats, if such equipment is not required by law to be furnished by the employer, if such deduction is not violative of the Fair Labor Standards Act or prohibited by other law, if the cost on which the deduction is based does not exceed the actual cost to the employer where the equipment is purchased from him and does not include any direct or indirect monetary return to the employer where the equipment is purchased from a third person, and if the deduction is either:
 - (1) Voluntarily consented to by the employee in writing and in advance of the period in which the work is to be done and such consent is not a condition either for the obtaining of employment or its continuance; or
 - (2) Provided for in a bona fide collective bargaining agreement between the contractor or subcontractor and representatives of its employees.

[29 FR 97, Jan. 4, 1964, as amended at 36 FR 9770, May 28, 1971]

§3.6 Payroll deductions permissible with the approval of the Secretary of Labor.

Any contractor or subcontractor may apply to the Secretary of Labor for permission to make any deduction not permitted under §3.5. The Secretary may grant permission whenever he finds that:

- (a) The contractor, subcontractor, or any affiliated person does not make a profit or benefit directly or indirectly from the

deduction either in the form of a commission, dividend, or otherwise;

(b) The deduction is not otherwise prohibited by law;

(c) The deduction is either (1) voluntarily consented to by the employee in writing and in advance of the period in which the work is to be done and such consent is not a condition either for the obtaining of employment or its continuance, or (2) provided for in a bona fide collective bargaining agreement between the contractor or subcontractor and representatives of its employees; and

(d) The deduction serves the convenience and interest of the employee.

§3.7 Applications for the approval of the Secretary of Labor.

Any application for the making of payroll deductions under §3.6 shall comply with the requirements prescribed in the following paragraphs of this section:

(a) The application shall be in writing and shall be addressed to the Secretary of Labor.

(b) The application need not identify the contract or contracts under which the work in question is to be performed. Permission will be given for deductions on all current and future contracts of the applicant for a period of 1 year. A renewal of permission to make such payroll deduction will be granted upon the submission of an application which makes reference to the original application, recites the date of the Secretary of Labor's approval of such deductions, states affirmatively that there is continued compliance with the standards set forth in the provisions of §3.6, and specifies any conditions which have changed in regard to the payroll deductions.

(c) The application shall state affirmatively that there is compliance with the standards set forth in the provisions of §3.6. The affirmation shall be accompanied by a full statement of the facts indicating such compliance.

(d) The application shall include a description of the proposed deduction, the purpose to be served thereby, and the classes of laborers or mechanics from whose wages the proposed deduction would be made.

(e) The application shall state the name and business of any third person to whom any funds obtained from the proposed deductions are to be transmitted and the affiliation of such person, if any, with the applicant.

[29 FR 97, Jan. 4, 1964, as amended at 36 FR 9771, May 28, 1971]

§3.8 Action by the Secretary of Labor upon applications.

The Secretary of Labor shall decide whether or not the requested deduction is permissible under provisions of §3.6; and shall notify the applicant in writing of his decision.

§3.9 Prohibited payroll deductions.

Deductions not elsewhere provided for by this part and which are not found to be permissible under §3.6 are prohibited.

§3.10 Methods of payment of wages.

The payment of wages shall be by cash, negotiable instruments payable on demand, or the additional forms of compensation for which deductions are permissible under this part. No other methods of payment shall be recognized on work subject to the Copeland Act.

§3.11 Regulations part of contract.

All contracts made with respect to the construction, prosecution, completion, or repair of any public building or public work or building or work financed in whole or in part by loans or grants from the United States covered by the regulations in this part shall expressly bind the contractor or subcontractor to comply with such of the regulations in this part as may be applicable. In this regard, see §5.5(a) of this subtitle.

SECTION 17

CONTRACTOR’S LOCAL OPPORTUNITY PLAN

_____, agrees to implement the following specific affirmative action steps directed at increasing the utilization of lower income residents and businesses within Montgomery County.

- a. To ascertain from the Grant Recipient's CDBG program official the exact boundaries of the project area and where advantageous, seek the assistance of local officials in preparing and implementing the affirmative action plan.
- b. To attempt to recruit from within the city the necessary number of lower income residents through: local advertising media, signs placed at the proposed site for the project, and community organizations and public or private institutions operating within and servicing the project area such as Service Employment and Redevelopment (SER), Opportunities Industrialization Center (OIC), Urban League, Concentrated Employment Program, Hometown Plan, or the U.S. Employment Service.
- c. To maintain a list of all lower income residents who have applied either on their own or on referral from any source, and to employ such persons, if otherwise eligible and if a vacancy exists.
- d. To insert this plan in all bid documents and to require all bidders on subcontracts to submit an affirmative action plan including utilization goals and the specific steps planned to accomplish these goals.
- e. To insure that subcontracts (greater than \$10,000), which are typically let on a negotiated rather than a bid basis in areas other than the covered project area, are also let on a negotiated basis, whenever feasible, in a covered project area.
- f. To formally contact unions, subcontractors, and trade associations to secure their cooperation in this effort.
- g. To insure that all appropriate project area business concerns are notified of pending sub contractual opportunities.
- h. To maintain records, including copies of correspondence, memoranda, etc., which document that all of the above affirmative action steps have been taken.
- i. To appoint or recruit an executive official of the company or agency as Equal Opportunity Officer to coordinate the implementation of this plan.
- j. To maintain records concerning the amount and number of contracts, subcontracts, and purchases which contribute to objectives.
- k. To maintain records of all projected work force needs for all phases of the project by occupation, trade, skill level, and number of positions and to update these projections based on the extent to which hiring meets these Local Opportunity objectives.

As officers and representatives of _____, we the undersigned have read and fully agree to this Plan, and become a party to the full implementation of the program and its provisions.

Signature

Date

SECTION 18
PROJECT SIGN REQUIREMENTS

Public buildings, facilities, and centers constructed with Housing of Urban Development (HUD) assistance shall have permanent signage placed in a prominent visible public area with the wording provided below. The formatting of such signage will be at local discretion to best fit the architectural design of the facility constructed but should be legible from at least three (3) feet distance. The United States Department of Housing and Urban Development logos should be included on the sign.

Other construction projects, e.g., water transmission lines, sewer collection lines, drainage, roadways, housing rehabilitation, etc. utilizing United States Department of Housing and Urban Development funding shall have temporary signage erected in a prominent location at the construction project site or along a major thoroughfare within the locality as directed by the owner.

Project Sign Wording:

“This project is funded through a Community Development Block Grant funds From the U.S.
Department of Housing and Urban Development.”

End of Document

COUNTY PURCHASING AGENT

O qpv i qo gt { County, Texas

Gilbert D. Jalomo, Jr., CPPB
County Purchasing Agent

(; 58) 982/8; 28
Fax (; 58) 982/8; 98

Vendor Information

Federal ID # or S.S #		Dun and Bradstreet #
Type of Business	<input type="checkbox"/> Corporation/LLC <input type="checkbox"/> Sole Proprietor/Individual <input type="checkbox"/> Partnership <input type="checkbox"/> Tax Exempt Organization	
Legal Company Name	Year Business was Established _____	
Remittance Address		
City/State/Zip		
Physical Address		
City/State/Zip		
County	<input type="checkbox"/> O qpv i qo gt { County Other: _____	
Phone/Fax Number	Phone: _____	Fax: _____
Contact Person		
E-mail		
Special Notes		
The Company listed above is a (check all that apply and attached certificate).	<input type="checkbox"/> DBE-Disadvantaged Business Enterprise Certification # _____ <input type="checkbox"/> SBE-Small Business Enterprise Certification # _____ <input type="checkbox"/> HUB-Texas Historically Underutilized Business Certification # _____ <input type="checkbox"/> WBE-Women's Business Enterprise Certification # _____ <input type="checkbox"/> MBE-Minority Business Enterprise Certification # _____	
Company's gross annual receipts:	<input type="checkbox"/> < \$500,000 <input type="checkbox"/> \$500,000-\$4,999,999 <input type="checkbox"/> \$5,000,000-\$16,999,999 <input type="checkbox"/> \$17,000,000-\$22,399,999 <input type="checkbox"/> >\$22,400,000	
Eqo o qf kkgu (Please enter all that apply).		

PLEASE NOTE: W-9 needs to be attached in order to be entered into our system

ACKNOWLEDGMENT

CORPORATE

THE STATE OF _____ §

COUNTY OF _____ §

BEFORE ME, the undersigned authority, this day personally appeared _____, known to me to be the _____ of the _____ Corporation, who being by me first duly sworn, deposed and said that he/she had executed the above and foregoing Document in the capacity stated as the authorized act and deed of said Corporation.

NOTARY PUBLIC

Printed Name _____

Commission Expires: _____

PARTNERSHIP

THE STATE OF _____ §

COUNTY OF _____ §

BEFORE ME, the undersigned authority, this day personally appeared _____, a General Partner of the _____ Partnership, who being by me first duly sworn, deposed and said that he/she had executed the above and foregoing Document in the capacity stated as the authorized act and deed of said Partnership.

NOTARY PUBLIC

Printed Name: _____

Commission Expires: _____

ACKNOWLEDGMENT CONTINUED

INDIVIDUAL OR SOLE PROPRIETORSHIP

THE STATE OF _____ §

COUNTY OF _____ §

BEFORE ME, the undersigned authority, this day personally appeared _____, an individual doing business as _____, who being by me first duly sworn, deposed and said that he/she had executed the above and foregoing Document in the capacity stated and for the purposes and consideration set forth therein.

NOTARY PUBLIC

Printed Name _____

Commission Expires _____

***(EXECUTE APPROPRIATE ACKNOWLEDGMENT FOR CORPORATION, PARTNERSHIP OR INDIVIDUAL CONTRACTOR.)**

By signing the filled-out form, you:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income, and
4. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting, is correct. See *What is FATCA reporting*, later, for further information.

Note: If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

Definition of a U.S. person. For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

Special rules for partnerships. Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax under section 1446 on any foreign partners' share of effectively connected taxable income from such business. Further, in certain cases where a Form W-9 has not been received, the rules under section 1446 require a partnership to presume that a partner is a foreign person, and pay the section 1446 withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid section 1446 withholding on your share of partnership income.

In the cases below, the following person must give Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States.

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the entity;
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the trust; and
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust (other than a grantor trust) and not the beneficiaries of the trust.

Foreign person. If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person, do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Pub. 515, *Withholding of Tax on Nonresident Aliens and Foreign Entities*).

Nonresident alien who becomes a resident alien. Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a "saving clause." Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items.

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.
2. The treaty article addressing the income.
3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.
4. The type and amount of income that qualifies for the exemption from tax.
5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

Example. Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if his or her stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first protocol) and is relying on this exception to claim an exemption from tax on his or her scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

Backup Withholding

What is backup withholding? Persons making certain payments to you must under certain conditions withhold and pay to the IRS 24% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

Payments you receive will be subject to backup withholding if:

1. You do not furnish your TIN to the requester,
2. You do not certify your TIN when required (see the instructions for Part II for details),
3. The IRS tells the requester that you furnished an incorrect TIN,
4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or
5. You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code*, later, and the separate Instructions for the Requester of Form W-9 for more information.

Also see *Special rules for partnerships*, earlier.

What is FATCA Reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all United States account holders that are specified United States persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code*, later, and the Instructions for the Requester of Form W-9 for more information.

Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you no longer are tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account; for example, if the grantor of a grantor trust dies.

Penalties

Failure to furnish TIN. If you fail to furnish your correct TIN to a requester, you are subject to a penalty of \$50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

Civil penalty for false information with respect to withholding. If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a \$500 penalty.

Criminal penalty for falsifying information. Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

Misuse of TINs. If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

Specific Instructions

Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account (other than an account maintained by a foreign financial institution (FFI)), list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9. If you are providing Form W-9 to an FFI to document a joint account, each holder of the account that is a U.S. person must provide a Form W-9.

a. **Individual.** Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

Note: ITIN applicant: Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040/1040A/1040EZ you filed with your application.

b. **Sole proprietor or single-member LLC.** Enter your individual name as shown on your 1040/1040A/1040EZ on line 1. You may enter your business, trade, or "doing business as" (DBA) name on line 2.

c. **Partnership, LLC that is not a single-member LLC, C corporation, or S corporation.** Enter the entity's name as shown on the entity's tax return on line 1 and any business, trade, or DBA name on line 2.

d. **Other entities.** Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on line 2.

e. **Disregarded entity.** For U.S. federal tax purposes, an entity that is disregarded as an entity separate from its owner is treated as a "disregarded entity." See Regulations section 301.7701-2(c)(2)(iii). Enter the owner's name on line 1. The name of the entity entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner's name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity's name on line 2, "Business name/disregarded entity name." If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

Line 2

If you have a business name, trade name, DBA name, or disregarded entity name, you may enter it on line 2.

Line 3

Check the appropriate box on line 3 for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box on line 3.

IF the entity/person on line 1 is a(n) . . .	THEN check the box for . . .
• Corporation	Corporation
• Individual • Sole proprietorship, or • Single-member limited liability company (LLC) owned by an individual and disregarded for U.S. federal tax purposes.	Individual/sole proprietor or single-member LLC
• LLC treated as a partnership for U.S. federal tax purposes, • LLC that has filed Form 8832 or 2553 to be taxed as a corporation, or • LLC that is disregarded as an entity separate from its owner but the owner is another LLC that is not disregarded for U.S. federal tax purposes.	Limited liability company and enter the appropriate tax classification. (P= Partnership; C= C corporation; or S= S corporation)
• Partnership	Partnership
• Trust/estate	Trust/estate

Line 4, Exemptions

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space on line 4 any code(s) that may apply to you.

Exempt payee code.

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys' fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space in line 4.

- 1—An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2)
- 2—The United States or any of its agencies or instrumentalities
- 3—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities
- 4—A foreign government or any of its political subdivisions, agencies, or instrumentalities
- 5—A corporation
- 6—A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or possession
- 7—A futures commission merchant registered with the Commodity Futures Trading Commission
- 8—A real estate investment trust
- 9—An entity registered at all times during the tax year under the Investment Company Act of 1940
- 10—A common trust fund operated by a bank under section 584(a)
- 11—A financial institution
- 12—A middleman known in the investment community as a nominee or custodian
- 13—A trust exempt from tax under section 664 or described in section 4947

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

IF the payment is for . . .	THEN the payment is exempt for . . .
Interest and dividend payments	All exempt payees except for 7
Broker transactions	Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012.
Barter exchange transactions and patronage dividends	Exempt payees 1 through 4
Payments over \$600 required to be reported and direct sales over \$5,000 ¹	Generally, exempt payees 1 through 5 ²
Payments made in settlement of payment card or third party network transactions	Exempt payees 1 through 4

¹ See Form 1099-MISC, Miscellaneous Income, and its instructions.

² However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

Exemption from FATCA reporting code. The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) written or printed on the line for a FATCA exemption code.

A—An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37)

B—The United States or any of its agencies or instrumentalities

C—A state, the District of Columbia, a U.S. commonwealth or possession, or any of their political subdivisions or instrumentalities

D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i)

E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i)

F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state

G—A real estate investment trust

H—A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940

I—A common trust fund as defined in section 584(a)

J—A bank as defined in section 581

K—A broker

L—A trust exempt from tax under section 664 or described in section 4947(a)(1)

M—A tax exempt trust under a section 403(b) plan or section 457(g) plan

Note: You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

Line 5

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns. If this address differs from the one the requester already has on file, write NEW at the top. If a new address is provided, there is still a chance the old address will be used until the payor changes your address in their records.

Line 6

Enter your city, state, and ZIP code.

Part I. Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN.

If you are a single-member LLC that is disregarded as an entity separate from its owner, enter the owner's SSN (or EIN, if the owner has one). Do not enter the disregarded entity's EIN. If the LLC is classified as a corporation or partnership, enter the entity's EIN.

Note: See *What Name and Number To Give the Requester*, later, for further clarification of name and TIN combinations.

How to get a TIN. If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at www.SSA.gov. You may also get this form by calling 1-800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at www.irs.gov/Businesses and clicking on Employer Identification Number (EIN) under Starting a Business. Go to www.irs.gov/Forms to view, download, or print Form W-7 and/or Form SS-4. Or, you can go to www.irs.gov/OrderForms to place an order and have Form W-7 and/or SS-4 mailed to you within 10 business days.

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and write "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

Note: Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon.

Caution: A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if item 1, 4, or 5 below indicates otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee code*, earlier.

Signature requirements. Complete the certification as indicated in items 1 through 5 below.

1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983. You must give your correct TIN, but you do not have to sign the certification.

2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983. You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

3. Real estate transactions. You must sign the certification. You may cross out item 2 of the certification.

4. Other payments. You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), ABLE accounts (under section 529A), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions. You must give your correct TIN, but you do not have to sign the certification.

What Name and Number To Give the Requester

For this type of account:	Give name and SSN of:
1. Individual	The individual
2. Two or more individuals (joint account) other than an account maintained by an FFI	The actual owner of the account or, if combined funds, the first individual on the account ¹
3. Two or more U.S. persons (joint account maintained by an FFI)	Each holder of the account
4. Custodial account of a minor (Uniform Gift to Minors Act)	The minor ²
5. a. The usual revocable savings trust (grantor is also trustee)	The grantor-trustee ¹
b. So-called trust account that is not a legal or valid trust under state law	The actual owner ¹
6. Sole proprietorship or disregarded entity owned by an individual	The owner ³
7. Grantor trust filing under Optional Form 1099 Filing Method 1 (see Regulations section 1.671-4(b)(2)(i)(A))	The grantor [*]
For this type of account:	Give name and EIN of:
8. Disregarded entity not owned by an individual	The owner
9. A valid trust, estate, or pension trust	Legal entity ⁴
10. Corporation or LLC electing corporate status on Form 8832 or Form 2553	The corporation
11. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
12. Partnership or multi-member LLC	The partnership
13. A broker or registered nominee	The broker or nominee

For this type of account:	Give name and EIN of:
14. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity
15. Grantor trust filing under the Form 1041 Filing Method or the Optional Form 1099 Filing Method 2 (see Regulations section 1.671-4(b)(2)(i)(B))	The trust

¹ List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

² Circle the minor's name and furnish the minor's SSN.

³ You must show your individual name and you may also enter your business or DBA name on the "Business name/disregarded entity" name line. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

⁴ List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.) Also see *Special rules for partnerships*, earlier.

***Note:** The grantor also must provide a Form W-9 to trustee of trust.

Note: If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

Secure Your Tax Records From Identity Theft

Identity theft occurs when someone uses your personal information such as your name, SSN, or other identifying information, without your permission, to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN,
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity or credit report, contact the IRS Identity Theft Hotline at 1-800-908-4490 or submit Form 14039.

For more information, see Pub. 5027, Identity Theft Information for Taxpayers.

Victims of identity theft who are experiencing economic harm or a systemic problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 1-877-777-4778 or TTY/TDD 1-800-829-4059.

Protect yourself from suspicious emails or phishing schemes. Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to phishing@irs.gov. You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 1-800-366-4484. You can forward suspicious emails to the Federal Trade Commission at spam@uce.gov or report them at www.ftc.gov/complaint. You can contact the FTC at www.ftc.gov/idtheft or 877-IDTHEFT (877-438-4338). If you have been the victim of identity theft, see www.IdentityTheft.gov and Pub. 5027.

Visit www.irs.gov/IdentityTheft to learn more about identity theft and how to reduce your risk.

Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and possessions for use in administering their laws. The information also may be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payers must generally withhold a percentage of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to the payer. Certain penalties may also apply for providing false or fraudulent information.

BIDDER/OFFEROR SELF CERTIFICATION

- 1.) The Bidder/Offeror certifies that the manufactured good(s) furnished will meet or exceed the specifications, and/or that the services rendered will comply with the terms of the solicitation or contract.
- 2.) The Bidder/Offeror certifies that it has read all of the bid, proposal, or contract documents and agrees to abide by the terms, certifications, and conditions thereof.

Description of Commodity or Service: _____

SIGNATURE _____

NAME _____

TITLE _____

COMPANY _____

DATE _____

CERTIFICATION REGARDING LOBBYING

The Bidder/Offeror certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any persons for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding to any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying", in accordance with its instructions [as amended by "Government wide Guidance for New Restrictions on Lobbying," 61 Fed. Reg. 1413 (1/19/96). Note: language in paragraph (2) herein has been modified in accordance with Section 10 of the Lobbying Disclosure Act of 1995 (PL 104-65, to be codified at 2 U.S.C. 1601, *et seq.*)]
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance is placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transactions imposed by 31, U.S.C. 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

[Note: Pursuant to 31 U.S.C. 1352(c)(1)-(2)(A), any person who makes a prohibited expenditure or fails to file or amend a required certification or disclosure form shall be subject to a civil penalty of not less than \$10,000 for each such expenditure or failure.]

The Bidder/Offeror certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Bidder/Offeror understands and agrees that the provisions of 31 U.S.C. Section A 3801 *et seq.*, apply to this certification and disclosure, if any.

SIGNATURE _____ COMPANY _____

NAME & TITLE _____ DATE _____

CERTIFICATION
REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY
AND VOLUNTARY EXCLUSION FOR COVERED CONTRACTS

DEFINITIONS

Covered Contracts/Subcontract.

- (1) Any nonprocurement transaction which involves federal funds (regardless of amount and including such arrangements as subgrant and are between Montgomery County or its agents and another entity.
- (2) Any procurement contract for goods or services between a participant and a person, regardless of type, expected to equal or exceed the federal procurement small purchase threshold under a grant or subgrant.
- (3) Any procurement contract for goods or services between a participant and a person under a covered grant, subgrant, contract or subcontract, regardless of amount, under which that person will have a critical influence on or substantive control over that covered transaction:
 - a. Principal investigators.
 - b. Providers of audit services required by Montgomery County or federal funding source.
 - c. Researchers.

Debarment. An action taken by a debarring official in accordance with the most current applicable federal regulations to exclude a person from participating in covered contracts. A person so excluded is “debarred”.

Grant. An award of financial assistance, including cooperative agreements, in the form of money, or property in lieu of money, by the federal government to an eligible grantee.

Ineligible. Excluded from participation in federal nonprocurement programs pursuant to a determination of ineligibility under statutory, executive order, or regulatory authority, other than Executive Order 12549 and its agency implementing regulations; for example, excluded pursuant to the Davis-Bacon Act and its implement regulations, the equal employment opportunity acts and executive orders, or the environmental protection acts and executive orders. A person is ineligible where the determination of ineligibility affects such person’s eligibility to participate in more than one covered transaction.

Participant. Any person who submits a proposal for, enters into, or reasonably may be expected to enter into a covered contract. This term also includes any person who acts on behalf of or is authorized to commit a participant in a covered contract as an agent or representative of another participant.

Person. Any individual, corporation, partnership, association, unit of government, or legal entity, however organized, except: foreign governments or foreign governmental entities, public international organizations, foreign government owned (in whole or in part) or controlled entities, and entities consisting wholly or partially of foreign governments or foreign governmental entities.

Principal. Officer, director, owner, partner, key employee, or other person within a participant with primary management or supervisory responsibilities; or a person who has a critical influence on or substantive control over a covered contract whether or not the person is employed by the participant. Persons who have a critical influence on or substantive control over a covered transaction are:

- (1) Principal investigators.
- (2) Providers of audit services required by Montgomery County or federal funding source.
- (3) Researchers.

Proposal. A solicited or unsolicited bid, application, request, invitation to consider or similar communication by or on behalf of a person seeking to receive a covered contract.

Suspension. An action taken by a suspending official in accordance with the most current applicable federal regulations that immediately excludes a person from participating in covered contracts for a temporary period, pending completion of an investigation and such legal, debarment, or Program Fraud Civil Remedies Act proceedings as may ensue. A person so excluded is “suspended”.

Voluntary exclusion or voluntarily excluded. A status of nonparticipation or limited participation in covered transactions assumed by a person pursuant to the terms of a settlement.

CERTIFICATE OF INDEPENDENT PRICE DETERMINATION

The undersigned affirms he/she is duly authorized to submit this bid and execute a contract in accordance with the terms of this BID, that this bid has not been prepared in collusion with any other bidder, and that the contents of this bid have not been communicated to any other bidder prior to the official opening of this bid.

Signed By: _____ Title: _____

Typed or Printed Name: _____

Company Name: _____ Phone No.: _____

Mailing Address: _____
P.O. Box or Street City State/Zip

Employer Identification Number: _____

CORPORATE SEAL IF SUBMITTED BY A CORPORATION

Israel Boycott Statement Explanation

1. Prohibition on Investment in companies that boycott Israel

1.1 SECTION 1. Prohibition on contracts with companies boycotting Israel per Government Code 2271.001 Definitions:

(1) "Boycott Israel" has the meaning assigned by Section 808.001.

(2) "Company" has the meaning assigned by Section 808.001 except that the term does not include a sole proprietorship.

(3) "Governmental entity" has the meaning assigned by Government Code, Section 2271.002.

PROVISION REQUIRED IN CONTRACT. (a) This section applies only to a contract that:

(a)

(1) is between a governmental entity and a company with 10 or more full-time employees; and

(2) has a value of \$100,000 or more that is to be paid wholly or partly from public funds of the governmental agency.

(b) A governmental entity may not enter into a contract with a company for goods or services unless the contract contains a written verification from the company that it:

(1) does not boycott Israel; and

(2) will not boycott Israel during the term of the contract.

2. Prohibition on contracting with a company doing business with Iran, Sudan, or a foreign terrorist organization

2.1 Prohibition on contracts with certain companies per Government Code 2252.151

Definitions:

(1) "Company" has the meaning assigned by Section 806.001.

(2) "Foreign terrorist organization" means an organization designated as a foreign terrorist organization by the United States secretary of state as authorized by 8 U.S.C. Section 1189.

(3) "Governmental contract" means a contract awarded by a governmental entity for general construction, an improvement, a service, or a public works project for a purchase of supplies, materials, or equipment. The term includes a contract to obtain a professional or consulting service subject to Government Code, Chapter 2254.

(4) "Governmental entity" has the meaning assigned by Government Code, Section 2252.001.

2.2 Section 2252.152 - Contracts with companies engaged in business with Iran, Sudan, or foreign terrorist organization prohibited. A governmental entity may not enter into a governmental contract with a company that is identified on a list prepared and maintained under Section 806.051, 807.051, or 2252.153.

2.3 Section 2252.153 – Listed Companies. The comptroller shall prepare and maintain, and make available to each governmental entity, a list of companies known to have contracts with or provide supplies or services to a foreign terrorist organization.

Mandatory

Israel Boycott Statement

Date: _____

Name of Individual: _____

Title: _____

Business Name of Proponent: _____

County of Proponent: _____

Individual on oath swears that the following statements are true:

1. Individual has the authorization by Proponent to make this statement for Proponent.
2. Individual is fully aware of the facts stated in this statement.
3. Individual can read the English language.
4. In accordance with Texas Government Code Section 2271.002, this company does not boycott Israel and will not boycott Israel during the term of this contract.

Signature of Individual

Address

CONFLICT OF INTEREST QUESTIONNAIRE

For vendor doing business with local governmental entity

FORM CIQ

This questionnaire reflects changes made to the law by H.B. 23, 84th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code, by a vendor who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the vendor meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the vendor becomes aware of facts that require the statement to be filed. See Section 176.006(a-1), Local Government Code.

A vendor commits an offense if the vendor knowingly violates Section 176.006, Local Government Code. An offense under this section is a misdemeanor.

OFFICE USE ONLY

Date Received

1 Name of vendor who has a business relationship with local governmental entity.

2 Check this box if you are filing an update to a previously filed questionnaire. (The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date on which you became aware that the originally filed questionnaire was incomplete or inaccurate.)

3 Name of local government officer about whom the information is being disclosed.

Name of Officer

4 Describe each employment or other business relationship with the local government officer, or a family member of the officer, as described by Section 176.003(a)(2)(A). Also describe any family relationship with the local government officer. Complete subparts A and B for each employment or business relationship described. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer or a family member of the officer receiving or likely to receive taxable income, other than investment income, from the vendor?

Yes No

B. Is the vendor receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer or a family member of the officer AND the taxable income is not received from the local governmental entity?

Yes No

5 Describe each employment or business relationship that the vendor named in Section 1 maintains with a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership interest of one percent or more.

6 Check this box if the vendor has given the local government officer or a family member of the officer one or more gifts as described in Section 176.003(a)(2)(B), excluding gifts described in Section 176.003(a-1).

7

Signature of vendor doing business with the governmental entity

Date

CONFLICT OF INTEREST QUESTIONNAIRE

For vendor doing business with local governmental entity

A complete copy of Chapter 176 of the Local Government Code may be found at <http://www.statutes.legis.state.tx.us/Docs/LG/htm/LG.176.htm>. For easy reference, below are some of the sections cited on this form.

Local Government Code § 176.001(1-a): "Business relationship" means a connection between two or more parties based on commercial activity of one of the parties. The term does not include a connection based on:

- (A) a transaction that is subject to rate or fee regulation by a federal, state, or local governmental entity or an agency of a federal, state, or local governmental entity;
- (B) a transaction conducted at a price and subject to terms available to the public; or
- (C) a purchase or lease of goods or services from a person that is chartered by a state or federal agency and that is subject to regular examination by, and reporting to, that agency.

Local Government Code § 176.003(a)(2)(A) and (B):

(a) A local government officer shall file a conflicts disclosure statement with respect to a vendor if:

(2) the vendor:

(A) has an employment or other business relationship with the local government officer or a family member of the officer that results in the officer or family member receiving taxable income, other than investment income, that exceeds \$2,500 during the 12-month period preceding the date that the officer becomes aware that

(i) a contract between the local governmental entity and vendor has been executed;

or

(ii) the local governmental entity is considering entering into a contract with the vendor;

(B) has given to the local government officer or a family member of the officer one or more gifts that have an aggregate value of more than \$100 in the 12-month period preceding the date the officer becomes aware that:

(i) a contract between the local governmental entity and vendor has been executed; or

(ii) the local governmental entity is considering entering into a contract with the vendor.

Local Government Code § 176.006(a) and (a-1)

(a) A vendor shall file a completed conflict of interest questionnaire if the vendor has a business relationship with a local governmental entity and:

(1) has an employment or other business relationship with a local government officer of that local governmental entity, or a family member of the officer, described by Section 176.003(a)(2)(A);

(2) has given a local government officer of that local governmental entity, or a family member of the officer, one or more gifts with the aggregate value specified by Section 176.003(a)(2)(B), excluding any gift described by Section 176.003(a-1); or

(3) has a family relationship with a local government officer of that local governmental entity.

(a-1) The completed conflict of interest questionnaire must be filed with the appropriate records administrator not later than the seventh business day after the later of:

(1) the date that the vendor:

(A) begins discussions or negotiations to enter into a contract with the local governmental entity; or

(B) submits to the local governmental entity an application, response to a request for proposals or bids, correspondence, or another writing related to a potential contract with the local governmental entity; or

(2) the date the vendor becomes aware:

(A) of an employment or other business relationship with a local government officer, or a family member of the officer, described by Subsection (a);

(B) that the vendor has given one or more gifts described by Subsection (a); or

(C) of a family relationship with a local government officer.

Certificate of **Compliance** with Buy America Requirements

The bidder or offeror hereby certifies that it will comply with the requirements of [2 CFR Part 184](#).

Date _____

Signature _____

Company _____

Name _____

Title _____

Certificate of **Non-Compliance** with Buy America Requirements

The bidder or offeror hereby certifies that it cannot comply with the requirements of [2 CFR Part 184](#), but it may qualify for a waiver to the requirement pursuant to [2 CFR part 184.7](#).

Date _____

Signature _____

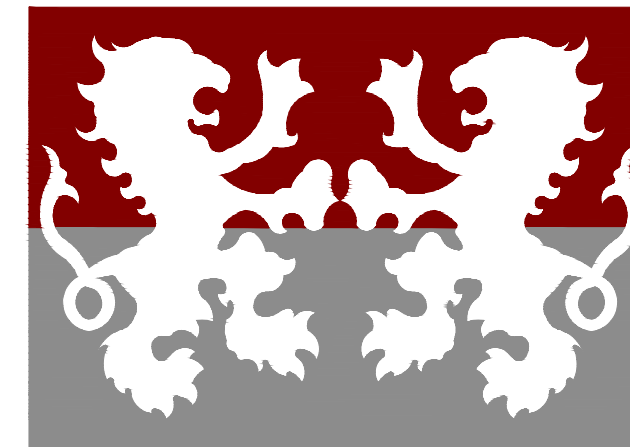
Company _____

Name _____

Title _____

MIRACLE CITY - DAY CENTER FOR COMPASSION UNITED

350 FOSTER DR., CONROE, TX 77301



LANCASTER+WYATT ARCHITECTS
10655 SIX PINES DRIVE, SUITE 290 THE WOODLANDS, TEXAS 77380
281-364-1666



OWNER
COMPASSION UNITED
350 FOSTER DR.
CONROE, TEXAS 77301
(936) 274-3799

CIVIL & MEP ENGINEER
QUEST ENGINEERING
1304 N. MAIN ST., STE #1
CONROE, TX 77301
(713) 252-3729

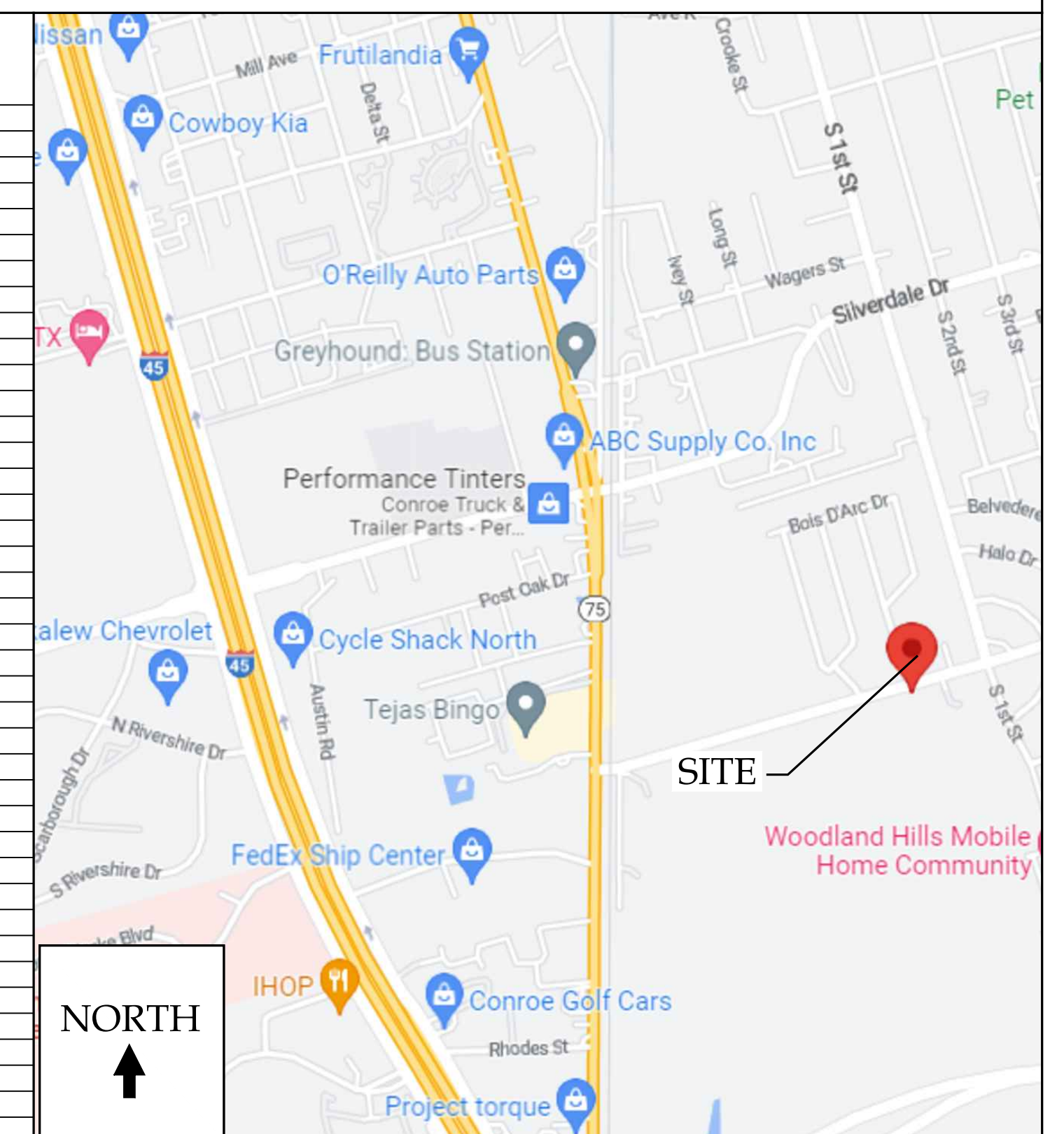
KITCHEN CONSULTANT
C & T DESIGN & EQUIPMENT CO. INC.
9555 BAYTHORNE DR., STE. 200
HOUSTON, TX 77041
(713) 682-6390

STRUCTURAL ENGINEER

INDEX OF DRAWINGS

CIVIL	ARCHITECTURAL	STRUCTURAL	MEP	FOOD SERVICE
C0.0 COVER SHEET	A0.0 COVERSHEET	S-1.1 FOUNDATION PLAN	E-1.1 POWER PLAN	FS1.0 EQUIPMENT FLOOR PLAN
C-1.0 DIMENSIONED SITE PLAN	A0.1 TAS - 1	S-1.2 FOUNDATION DETAILS & NOTES	E-1.2 POWER PLAN - MEZZANINE	FS3.0 PLUMBING ROUGH-IN PLAN
C-2.1 STORM WATER POLLUTION PREVENTION PLAN	A0.2 TAS - 2	S-2.1 STRUCTURAL	E-1.3 POWER PLAN	FS4.0 ELECTRICAL ROUGH-IN PLAN
C-2.2 STORM WATER POLLUTION PREVENTION DETAILS	A1.0 SITE PLAN	S-2.2 STRUCTURAL DETAILS	E-2.1 LIGHTING PLAN	FS5.0 HOOD SUBMITTAL
C-3.1 SITE UTILITY PLAN	A2.0 CODE PLAN	S-2.3 STRUCTURAL NOTES & SCHEDULES	E-2.2 LIGHTING PLAN	FS5.1 HOOD SUBMITTAL
C-3.2 SITE UTILITY DETAILS	A2.1 FLOOR PLAN		E-3.0 ELECTRICAL SCHEDULES	FS5.2 HOOD SUBMITTAL
C-4.1 SITE PAVING PLAN	A2.2 REFLECTED CEILING PLAN		E-4.0 ELECTRICAL SPECIFICATIONS	FS5.3 HOOD SUBMITTAL
C-4.2 PAVING DETAILS	A2.3 ENLARGED FLOOR PLANS		M-1.1 MECHANICAL PLAN	FS5.4 HOOD SUBMITTAL
C-5.0 DRAINAGE AREA MAP	A3.1 EXTERIOR ELEVATIONS		M-2.1 HVAC PLAN	FS5.5 HOOD SUBMITTAL
C-6.0 GRADING PLAN	A4.1 BUILDING SECTIONS		M-2.2 MECHANICAL PLAN - MEZZANINE	FS5.6 HOOD SUBMITTAL
C-7.0 ULTIMATE STORM WATER DETENTION BASIN & DETAILS	A4.2 BUILDING SECTIONS		M-3.0 MECHANICAL DETAILS	FS5.7 HOOD SUBMITTAL
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	A7.1 MISC. DETAILS		P-1.1 WASTE PLUMBING PLAN	
	A8.1 DOOR & WINDOW SCHEDULE		P-1.2 WASTE PLUMBING PLAN - LOFT	
	A8.2 WINDOW DETAILS		P-2.1 WASTE PLUMBING PLAN	
			P-3.1 NATURAL GAS PLAN	
			P-4.0 PLUMBING DETAILS	
			P-5.0 PLUMBING SCHEDULES	
			P-6.0 PLUMBING SPECIFICATIONS	

MAP



505 Handrails

505.1 General. Handrails provided along walking surfaces complying with 403, required at ramps complying with 405, and required at stairs complying with 504 shall comply with 505.

Advisory 505.1 General. Handrails are required on ramp runs with a rise greater than 6 inches (150 mm) (see 405.8) and on certain stairways (see 504). Handrails are not required on walking surfaces with running slopes less than 1:20. However, handrails are required to comply with 505 when they are provided on walking surfaces with running slopes less than 1:20 (see 403.6). Sections 505.2, 505.3, and 505.10 do not apply to handrails provided on walking surfaces with running slopes less than 1:20 as these sections only reference requirements for ramps and stairs.

505.2 Where Required. Handrails shall be provided on both sides of stairs and ramps.

505.3 Continuity. Handrails shall be continuous within the full length of each stair flight or ramp run. Inside handrails on wheelchair or doggie stairs and ramps shall be continuous between flights or runs.

505.4 Height. Top of gripping surfaces of handrails shall be 34 inches (865 mm) minimum and 38 inches (965 mm) maximum vertically above walking surfaces, stair nosings, and ramp surfaces. Handrails shall be at a consistent height above walking surfaces, stair nosings, and ramp surfaces.

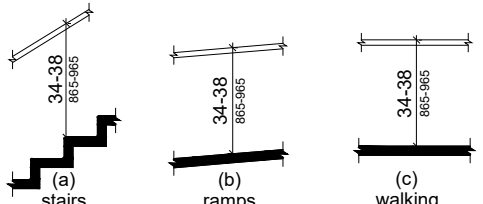


Figure 505.4 Handrail Height

505.5 Clearance. Clearance between handrail gripping surfaces and adjacent surfaces shall be 1 1/2 inches (38 mm) minimum.



Figure 505.5 Handrail Clearance

505.6 Gripping Surface. Handrail gripping surfaces shall be continuous along their length and shall not be obstructed along their top or sides. The bottoms of handrail gripping surfaces shall not be obstructed for more than 20 percent of their length. Where provided, horizontal projections shall occur 1 1/2 inches (38 mm) minimum below the bottom of the handrail gripping surface.

505.7.1 Circular Cross Section. Handrail gripping surfaces with a circular cross section shall have an outside diameter of 1 1/4 inches (30 mm) minimum and 2 inches (51 mm) maximum.

505.7.2 Non-Circular Cross Sections. Handrail gripping surfaces with a non-circular cross section shall have a perimeter dimension of 4 inches (100 mm) minimum and 6 1/4 inches (160 mm) maximum, and a cross-section dimension of 2 1/4 inches (57 mm) maximum.

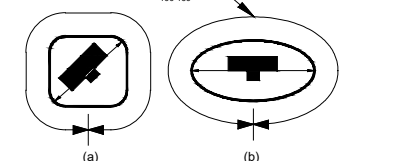


Figure 505.7.2 Handrail Non-Circular Cross Section

505.8 Surfaces. Handrail gripping surfaces and any surfaces adjacent to them shall be free of sharp or abrasive elements and shall have rounded edges.

505.9 Fittings. Handrails shall not rotate within their fittings. 505.

10 Hand Extensions. Handrail gripping surfaces shall extend beyond and in the same direction of stair flights and ramp runs in accordance with 505.10.

505.10.1 Top and Bottom Extension of Ramps. Ramp handrails shall extend horizontally above the landing for 12 inches (305 mm) minimum beyond the top and bottom of ramp runs. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent ramp run.

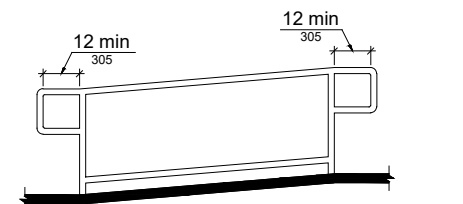


Figure 505.10.1 Top and Bottom Handrail Extension at Ramps

505.10.2 Top Extension of Stairs. At the top of a stair flight, handrails shall extend horizontally above the landing for 12 inches (305 mm) minimum beginning directly above the first riser nosing. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight.

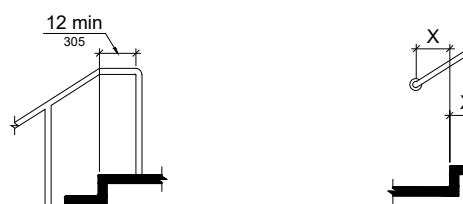


Figure 505.10.2 Top Handrail Extension of Stairs

505.10.3 Bottom Extension of Stairs. At the bottom of a stair flight, handrails shall extend at the slope of the stair flight for a horizontal distance of least equal to one tread depth beyond the last riser nosing. Extension shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight.

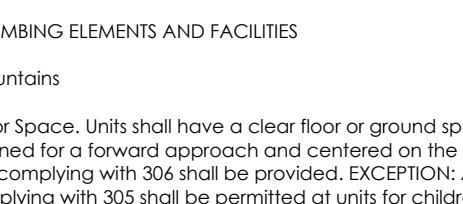


Figure 505.10.3 Bottom Handrail Extension of Stairs

CHAPTER 6: PLUMBING ELEMENTS AND FACILITIES

602 Drinking Fountains

602.2 Clear Floor Space. Units shall have a clear floor or ground space complying with 305 positioned for a forward approach and centered on the unit. Knee and toe clearance complying with 306 shall be provided. EXCEPTION: A parallel approach complying with 305 shall be permitted at units for children's use where the spout is 30 inches (760 mm) maximum above the finish floor or ground and is 3 1/2 inches (90 mm) maximum from the front edge of the unit, including bumpers.

602.3 Operable Parts. Operable parts shall comply with 309.

602.4 Spout Height. Spout outlets shall be 36 inches (915 mm) maximum above the finish floor or ground.

602.5 Spout Location. The spout shall be located 15 inches (380 mm) minimum from the vertical support and 5 inches (125 mm) maximum from the front edge of the unit, including bumpers.

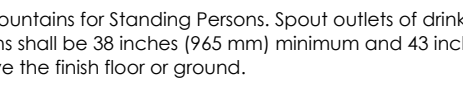


Figure 602.5 Drinking Fountain Spout Location

602.6 Water Flow. The spout shall provide a flow of water 4 inches (100 mm) high minimum and shall be located 5 inches (125 mm) maximum from the front of the unit. The angle of the water stream shall be measured horizontally relative to the front face of the unit. Where spouts are located less than 3 inches (75 mm) of the front of the unit, the angle of the water stream shall be 30 degrees maximum. Where spouts are located between 3 inches (75 mm) and 5 inches (125 mm) maximum from the front of the unit, the angle of the water stream shall be 15 degrees maximum.

602.7 Drinking Fountains for Standing Persons. Spout outlets of drinking fountains for standing persons shall be 36 inches (915 mm) minimum and 43 inches (1090 mm) maximum above the finish floor or ground.

603 Toilet and Bathing Rooms

603.2 Clearances. Clearances shall comply with 603.2.

603.2.1 Turning Space. Turning space complying with 304 shall be provided within the room.

603.2.2 Overlap. Required clear floor spaces, clearance of fixtures, and turning space shall be permitted to overlap.

603.2.3 Door Swing. Doors shall not swing into the clear floor space or clearance required for any fixture. Doors shall be permitted to swing into the required turning space.

603.3 Mirrors. Mirrors located above lavatories or countertops shall be installed with the bottom edge of the reflecting surface 40 inches (1015 mm) maximum above the finish floor or ground. Mirrors not located above lavatories or countertops shall be installed with the bottom edge of the reflecting surface 35 inches (890 mm) maximum above the finish floor or ground.

603.4 Coat Hooks and Shelves. Coat hooks shall be located within one of the reach ranges specified in 308. Shelves shall be located 40 inches (1015 mm) minimum and 48 inches (1220 mm) maximum above the finish floor.

604 Water Closets and Toilet Compartments

604.2 Location. The water closet shall be positioned with a wall or partition to the rear and to one side. The centerline of the water closet shall be 16 inches (405 mm) minimum to 18 inches (455 mm) maximum from the side wall or partition, except that the water closet shall be 17 inches (430 mm) minimum and 19 inches (485 mm) maximum from the side wall or partition in the ambulatory accessible toilet compartment specified in 604.8.2. Water closets shall be arranged for a left-hand or right-hand approach.

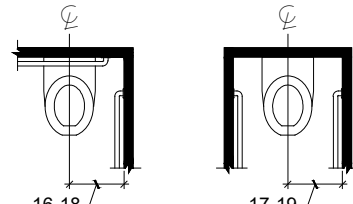


Figure 604.2 Water Closet Location

604.3.1 Size. Clearance around a water closet shall be 60 inches (1525 mm) minimum measured perpendicular from the side wall and 56 inches (1420 mm) minimum measured perpendicular from the rear wall.

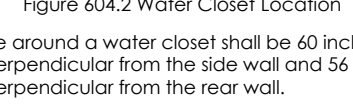


Figure 604.3.1 Size of Clearance around Water Closets

604.3.2 Overlap. The required clearance around the water closet shall be permitted to overlap the water closet, associated grab bars, dispensers, sanitary napkin disposal units, coat hooks, shelves, accessible routes, clear floor space and clearances required for other fixtures, and the turning space. No other fixtures or obstructions shall be located within the required water closet clearance.

604.4 Seats. The seat height of a water closet above the finish floor shall be 17 inches (430 mm) minimum and 19 inches (485 mm) maximum measured to the top of the seat. Seats shall not be sprung to return to a lifted position.

604.5 Grab Bars. Grab bars for water closets shall comply with 609. Grab bars shall be provided on the side wall closest to the water closet and on the rear wall.

604.5.1 Side Wall. The side wall grab bar shall be 42 inches (1065 mm) long minimum, located 12 inches (305 mm) maximum from the rear wall and extending 54 inches (1370 mm) minimum from the rear wall.

604.5.2 Rear Wall. The rear wall grab bar shall be 36 inches (915 mm) long minimum and extend from the centerline of the water closet 12 inches (305 mm) minimum on one side and 24 inches (610 mm) minimum on the other side.

604.6 Flush Controls. Flush controls shall be hand operated or automatic. Hand operated flush controls shall comply with 309. Flush controls shall be located on the open side of the water closet except in ambulatory accessible compartments complying with 604.8.2.

604.7 Dispensers. Toilet paper dispensers shall comply with 309.4 and shall be 7 inches (180 mm) minimum and 9 inches (230 mm) maximum in front of the water closet measured to the centerline of the dispenser. The outlet of the dispenser shall be 15 inches (380 mm) minimum and 48 inches (1220 mm) maximum above the finish floor and shall not be located behind grab bars. Dispensers shall not be of a type that controls delivery or that does not allow continuous paper flow.



Figure 604.7 Dispenser Outlet Location

604.8.1 Location. The water closet shall be located with a wall or partition to the rear and to one side. The centerline of the water closet shall be 12 inches (305 mm) minimum and 18 inches (455 mm) maximum from the side wall or partition, except that the water closet shall be 17 inches (430 mm) minimum and 19 inches (485 mm) maximum from the side wall or partition in the ambulatory accessible toilet compartment specified in 604.8.2. Compartments shall be arranged for left-hand or right-hand approach to the water closet.

604.8.2 Clearance. Clearance around a water closet shall comply with 604.3.

604.8.3 Height. The height of water closets shall be 11 inches (280 mm) minimum and 17 inches (430 mm) maximum measured to the top of the seat. Seats shall not be sprung to return to a lifted position.

604.8.4 Grab Bars. Grab bars for water closets shall comply with 604.5.

604.8.5 Flush Controls. Flush controls shall be hand operated or automatic. Hand operated flush controls shall comply with 309.2 and 309.4 and shall be installed 36 inches (915 mm) maximum above the finish floor. Flush controls shall be located on the open side of the water closet except in ambulatory accessible compartments complying with 604.8.2.

604.8.6 Dispensers. Toilet paper dispensers shall comply with 309.4 and shall be 7 inches (180 mm) minimum and 9 inches (230 mm) maximum in front of the water closet measured to the centerline of the dispenser. The outlet of the dispenser shall be 14 inches (355 mm) minimum and 19 inches (485 mm) maximum above the finish floor. There shall be a clearance of 1 1/2 inches (38 mm) minimum below the grab bar. Dispensers shall not be of a type that controls delivery or that does not allow continuous paper flow.

604.8.7 Toilet Compartments. Toilet compartments shall comply with 604.8.

605.2 Urinals. Urinals shall be the stall-type or the wall-hung type with the rim 17 inches (430 mm) maximum above the finish floor or ground. Urinals shall be 13 1/2 inches (345 mm) deep minimum measured from the outer face of the urinal rim to the back of the fixture.

605.2.1 Approach. Compartments shall be arranged for left-hand or right-hand approach to the water closet.

604.8.1.4 Toe Clearance. The front partition and at least one side partition shall provide a toe clearance of 9 inches (230 mm) minimum above the finish floor and 6 inches (150 mm) deep minimum beyond the compartment side face of the partition, exclusive of partition support members. Compartments for children's use shall provide a toe clearance of 12 inches (305 mm) minimum above the finish floor.

EXCEPTION: Toe clearance at the front partition is not required in a compartment greater than 62 inches (1575 mm) deep with a wall-hung water closet or 65 inches (1650 mm) deep with a floor-mounted water closet. Toe clearance at the side partition is not required in a compartment greater than 66 inches (1675 mm) wide. Toe clearance at the front partition is not required in a compartment for children's use that is greater than 65 inches (1650 mm) deep.

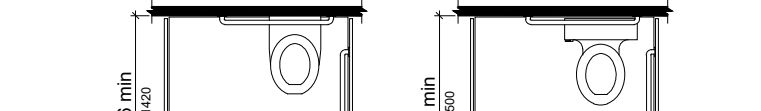


Figure 604.8.1.1 Size of Wheelchair Accessible Toilet Compartment

604.8.1.2 Doors. Toilet compartment doors, including door hardware, shall comply with 404 except that if the approach is to the latch side of the compartment door, clearance between the door side of the compartment and any obstruction shall be 42 inches (1065 mm) minimum. Doors shall be located in the front partition or in the side wall or partition farthest from the water closet. Where located in the front partition, the door opening shall be 4 inches (100 mm) maximum from the front partition. The door shall be self-closing. A door pull complying with 404.2.7 shall be placed on both sides of the door near the latch. Toilet compartment doors shall not swing into the minimum required compartment area.

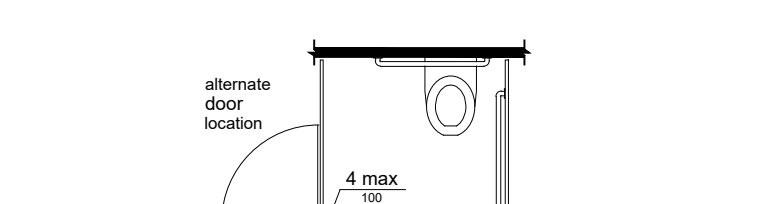


Figure 604.8.1.2 Wheelchair Accessible Toilet Compartment Doors

604.8.1.3 Approach. Compartments shall be arranged for left-hand or right-hand approach to the water closet.

604.8.1.4 Toe Clearance. The front partition and at least one side partition shall provide a toe clearance of 9 inches (230 mm) minimum above the finish floor and 6 inches (150 mm) deep minimum beyond the compartment side face of the partition, exclusive of partition support members. Compartments for children's use shall provide a toe clearance of 12 inches (305 mm) minimum above the finish floor.

EXCEPTION: Toe clearance at the front partition is not required in a compartment greater than 62 inches (1575 mm) deep with a wall-hung water closet or 65 inches (1650 mm) deep with a floor-mounted water closet. Toe clearance at the side partition is not required in a compartment greater than 66 inches (1675 mm) wide. Toe clearance at the front partition is not required in a compartment for children's use that is greater than 65 inches (1650 mm) deep.

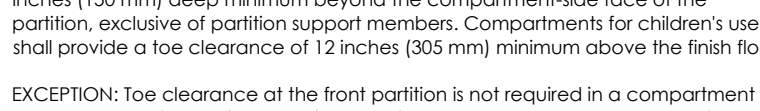


Figure 605.2 Height and Depth of Urinals

605.3 Clear Floor Space. A clear floor or ground space complying with 305 positioned for forward approach shall be provided. 605.4 Flush Controls. Flush controls shall be hand operated or automatic. Hand operated flush controls shall comply with 309.

606 Lavatories and Sinks 606.2 Clear Floor Space. A clear floor space complying with 305, positioned for a forward approach, and knee and toe clearance complying with 306 shall be provided.

606.3 Height. Lavatories and sinks shall be installed with the front of the higher of the rim or counter surface 34 inches (865 mm) maximum above the finish floor or ground.

606.4 Faucets. Controls for faucets shall comply with 309. Hand-operated metering faucets shall remain open for 10 seconds minimum.

606.5 Exposed Pipes and Surfaces. Water supply and drain pipes under lavatories and sinks shall be insulated or otherwise configured to protect against contact. There shall be no sharp or abrasive surfaces under lavatories and sinks.

CHAPTER 7: COMMUNICATION ELEMENTS AND FEATURES

702 Fire Alarm Systems

702.1 General. Fire alarm systems shall have permanently installed audible and visible alarm complying with NFPA 72 (1999 or 2002 edition) (incorporated by reference, see "Referenced Standards" in Chapter 1), except that the maximum allowable sound level of audible notification appliances complying with section 4.3.2.1 of NFPA 72 (1999 edition) shall have a sound level no more than 110 dB at the minimum hearing distance from the audible appliance. In addition, alarms in guest rooms required to provide communication features shall comply with sections 4.3 and 4.4 of NFPA 72 (1999 edition) or sections 7.4 and 7.5 of NFPA 72 (2002 edition).

703 Signs

703.1 General. Signs shall comply with 703. Where both visual and tactile characters are required, either one sign with both visual and tactile characters, or two separate signs, one with visual, and one with tactile characters, shall be provided.

703.2 Raised Characters. Raised characters shall comply with 703.2 and shall be duplicated in braille complying with 703.3. Raised characters shall be installed in accordance with 703.4.

703.2.1 Depth. Raised characters shall be 1/32 inch (0.8 mm) minimum above their background.

703.2.2 Case. Characters shall be uppercase.

703.2.3 Style. Characters shall be sans serif. Characters shall not be italic, oblique, or slanted. Characters shall be selected from fonts where the width of the uppercase letter "O" is 55 percent minimum and 110 percent maximum of the height of the uppercase letter "T".

703.2.5 Character Height. Character height measured vertically from the baseline of the character shall be 3/8 inch (9.5 mm) minimum and 2 inches (51 mm) maximum based on the height of the uppercase letter "T".

703.2.6 Stroke Thickness. Stroke thickness of the uppercase letter "T" shall be 15 percent maximum of the height of the character.

703.2.7 Character Spacing. Character spacing shall be measured between the two closest points of adjacent raised characters with a message, excluding word spaces. Where characters have rectangular cross sections, spacing between individual raised characters shall be 1/8 inch (3.2 mm) minimum and 4 times the raised character stroke width maximum. Where characters have other cross sections, spacing between individual raised characters shall be 1/16 inch (1.6 mm) minimum and 4 times the raised character stroke width maximum at the base of the cross sections, and 1/8 inch (3.2 mm) minimum and 4 times the raised character stroke width maximum at the top of the cross sections. Characters shall be separated from raised borders and decorative elements 3/8 inch (9.5 mm) minimum.

703.2.8 Line Spacing. Spacing between the baselines of separate lines of raised characters within a message shall be 135 percent minimum and 170 percent maximum of the raised character height.

703.3 Braille. Braille shall be contracted (Grade 2) and shall comply with 703.3 and 703.4.

703.3.1 Dimensions and Capitalization. Braille dots shall have a domed or rounded shape and shall comply with 703.3.1. The indicator of an uppercase letter or letters shall only be used before the first word of sentences, proper nouns and names, individual letters of the alphabet, initials, and acronyms.

704.1 General. Public telephones shall comply with 704. 704.2 Wheelchair Accessible Telephones. Wheelchair accessible telephones shall comply with 704.2, 704.2.1, Clear Floor or Ground Space. A clear floor or ground space complying with 305 shall be provided. The clear floor or ground space shall not be obstructed by bases, enclosures, or seats.

Advisory 704.2.1 Clear Floor or Ground Space. Because clear floor or ground space is required to be unobstructed, telephones, enclosures and related telephone book storage cannot encroach on the required clear floor or ground space and must comply with the provisions for protruding objects. (See Section 307).

704.2.1.1 Parallel Approach. Where a parallel approach is provided, the distance from the edge of the telephone enclosure to the face of the telephone unit shall be 10 inches (255 mm) maximum.

704.2.1.2 Forward Approach. Where a forward approach is provided, the distance from the front edge of a counter within the telephone enclosure to the face of the telephone unit shall be 20 inches (510 mm) maximum.

704.2.2 Operable Parts. Operable parts shall comply with 309. Telephones shall have push-button controls where such service is available.

704.2.3 Telephone Directories. Telephone directories, where provided, shall be located in accordance with 309.

704.2.4 Cord Length. The cord from the telephone to the handset shall be 29 inches (735 mm) long minimum.

704.3 Volume Control Telephones. Public telephones required to have volume controls shall be equipped with a receive volume control that provides a gain adjustable up to 20 dB minimum, not incremental volume control, provide at least one intermediate step of 12 dB of gain minimum. An automatic reset shall be provided.

704.4 Height. When in use, the touch surface of TTY keypads shall be 34 inches (865 mm) minimum above the finish floor.

704.5 TTY Shell. Public pay telephones required to accommodate portable TTYs shall be equipped with a shell and an electrical outlet within or adjacent to the telephone enclosure. The telephone handset shall be capable of being placed flush on the surface of the shell. The shell shall be capable of accommodating a TTY and shall have 6 inches (150 mm) minimum vertical clearance above the area where the TTY is to be placed.

705 Detectable Warnings

705.1 General. Detectable warnings shall consist of a surface of truncated domes and shall comply with 705.

705.1.1 Dome Size. Truncated domes in a detectable warning surface shall have a base diameter of 0.9 inch (23 mm) minimum and 1.4 inches (36 mm) maximum, a top diameter of 50 percent of the base diameter minimum to 65 percent of the base diameter maximum, and a height of 0.2 inch (5.1 mm).

705.1.2 Dome Spacing. Truncated domes in a detectable warning surface shall have a center-to-center spacing of 1.6 inches (41 mm) minimum and 2.4 inches (61 mm) maximum, and a base-to-base spacing of 0.65 inch (17 mm) minimum, measured between the most adjacent domes on a square grid.

705.1.3 Contrast. Detectable warning surfaces shall contrast visually with adjacent walking surfaces either light-on-dark, or dark-on-light.

705.2 Platform Edges. Detectable warning surfaces of platform boarding edges shall be 24 inches (610 mm) wide and shall extend the full length of the public use areas of the platform.

705.3 Visual Characters. Visual characters shall comply with 703.5.

705.3.1 Finish and Contrast. Characters and their background shall have a non-gloss finish. Characters shall contrast with their background with either light characters on a dark background or dark characters on a light background.

705.3.2 Case. Characters shall be uppercase or lowercase or a combination of both.

705.3.3 Style. Characters shall be conventional in form. Characters shall not be italic, oblique, script, highly decorative, or of other unusual forms.

705.3.4 Character Proportions. Characters shall be selected from fonts where the width of the uppercase letter "O" is 55 percent minimum and 110 percent maximum of the height of the uppercase letter "T".

705.3.5 Character Height. Minimum character height shall comply with Table 703.5.5. Viewing distance shall be measured as the horizontal distance between the character and an obstruction preventing further approach towards the sign. Character height shall be based on the uppercase letter "T".

705.3.6 Height from Finish Floor or Ground. Visual characters shall be 40 inches (1015 mm) minimum above the finish floor or ground.

705.3.7 Stroke Thickness. Stroke thickness of the uppercase letter "T" shall be 10 percent minimum and 30 percent maximum of the height of the character.

705.3.8 Character Spacing. Character spacing shall be measured between the two closest points of adjacent characters, excluding word spaces. Spacing between individual characters shall be 10 percent minimum and 35 percent maximum of character height.

705.3.9 Line Spacing. Spacing between the baselines of separate lines of characters within a message shall be 135 percent minimum and 170 percent maximum of the character height.

705.3.10 Line Spacing. Spacing between the baselines of separate lines of characters within a message shall be 135 percent minimum and 170 percent maximum of the character height.

705.3.11 Line Spacing. Spacing between the baselines of separate lines of characters within a message shall be 135 percent minimum and 170 percent maximum of the character height.

705.3.12 Line Spacing. Spacing between the baselines of separate lines of characters within a message shall be 135 percent minimum and 170 percent maximum of the character height.

705.3.13 Line Spacing. Spacing between the baselines of separate lines of characters within a message shall be 135 percent minimum and 170 percent maximum of the character height.

705.3.14 Line Spacing. Spacing between the baselines of separate lines of characters within a message shall be 135 percent minimum and 170 percent maximum of the character height.

705.3.15 Line Spacing. Spacing between the baselines of separate lines of characters within a message shall be 135 percent minimum and 170 percent maximum of the character height.

705.3.16 Line Spacing. Spacing between the baselines of separate lines of characters within a message shall be 135 percent minimum and 170 percent maximum of the character height.

705.3.17 Line Spacing. Spacing between the baselines of separate lines of characters within a message shall be 135 percent minimum and 170 percent maximum of the character height.

705.3.18 Line Spacing. Spacing between the baselines of separate lines of characters within a message shall be 135 percent minimum and 170 percent maximum of the character height.

705.3.19 Line Spacing. Spacing between the baselines of separate lines of characters within a message shall be 135 percent minimum and 170 percent maximum of the character height.

705.3.20 Line Spacing. Spacing between the baselines of separate lines of characters within a message shall be 135 percent minimum and 170 percent maximum of the character height.

705.3.21 Line Spacing. Spacing between the baselines of separate lines of characters within a message shall be 135 percent minimum and 170 percent maximum of the character height.

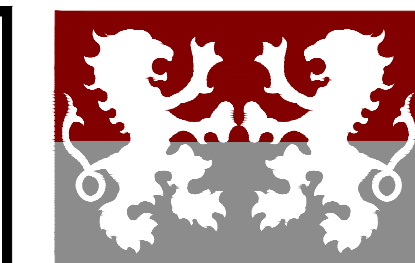
705.3.22 Line Spacing. Spacing between the baselines of separate lines of characters within a message shall be 135 percent minimum and 170 percent maximum of the character height.

705.3.23 Line Spacing. Spacing between the baselines of separate lines of characters within a message shall be 135 percent minimum and 170 percent maximum of the character height.

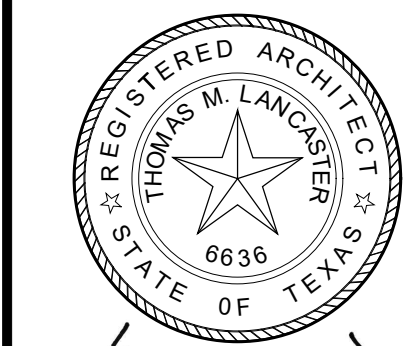
705.3.24 Line Spacing. Spacing between the baselines of separate lines of characters within a message shall be 135 percent minimum and 170 percent maximum of the character height.

705.3.25 Line Spacing. Spacing between the baselines of separate lines of characters within a message shall be 135 percent minimum and 170 percent maximum of the character height.

705.3.26 Line Spacing. Spacing between the baselines of separate lines of characters within a message shall be 135 percent minimum and 170 percent maximum of the character height.



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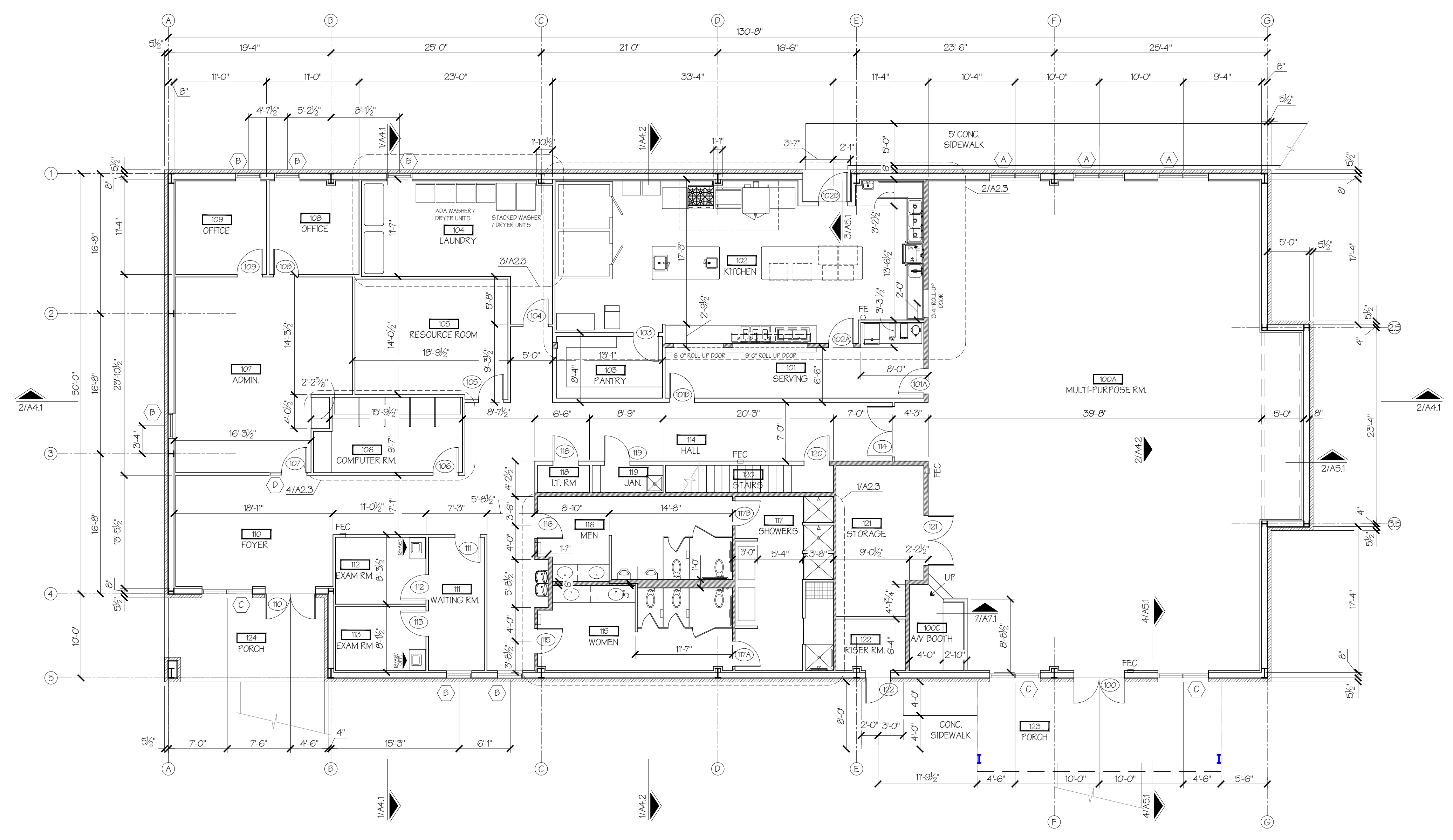
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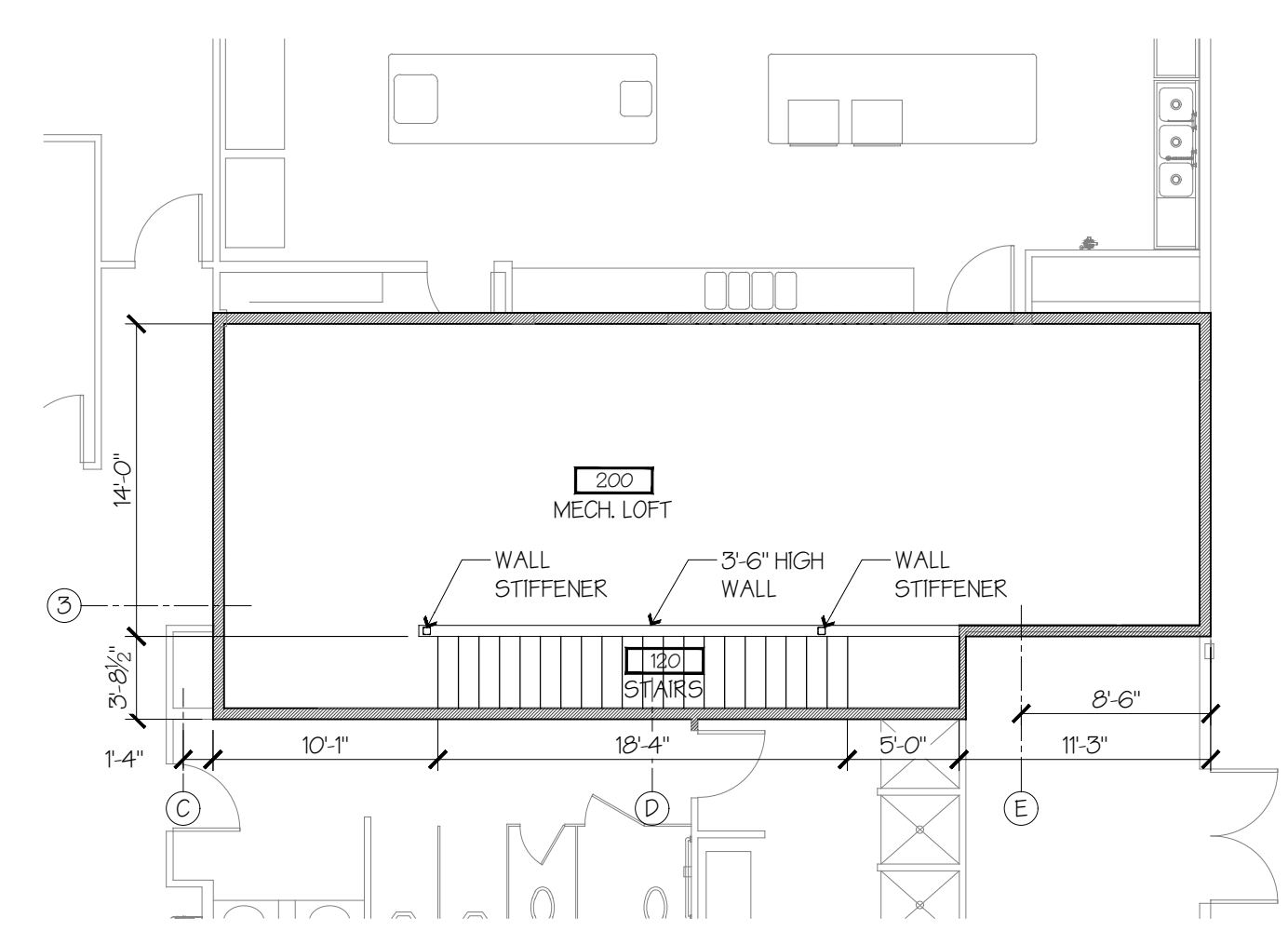
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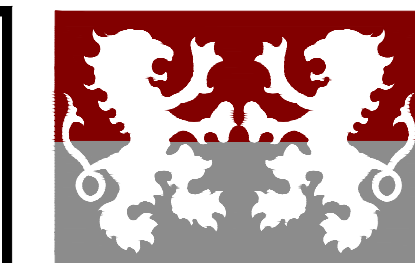
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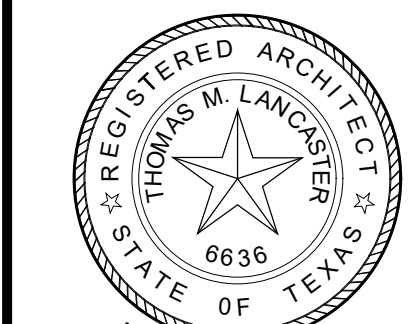
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OF ROOF



2 LOFT PLAN
SCALE: 1/8"=1'-0"
■ = WALLS TO UNDERSIDE
OF ROOF



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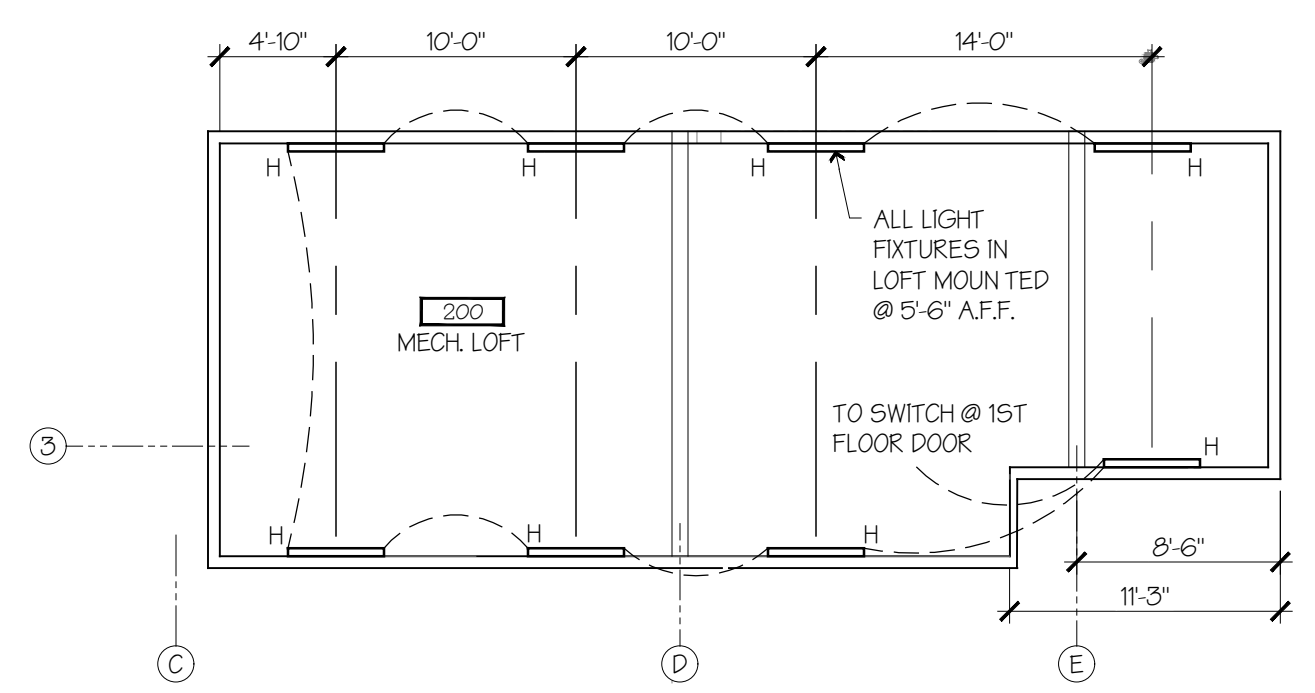
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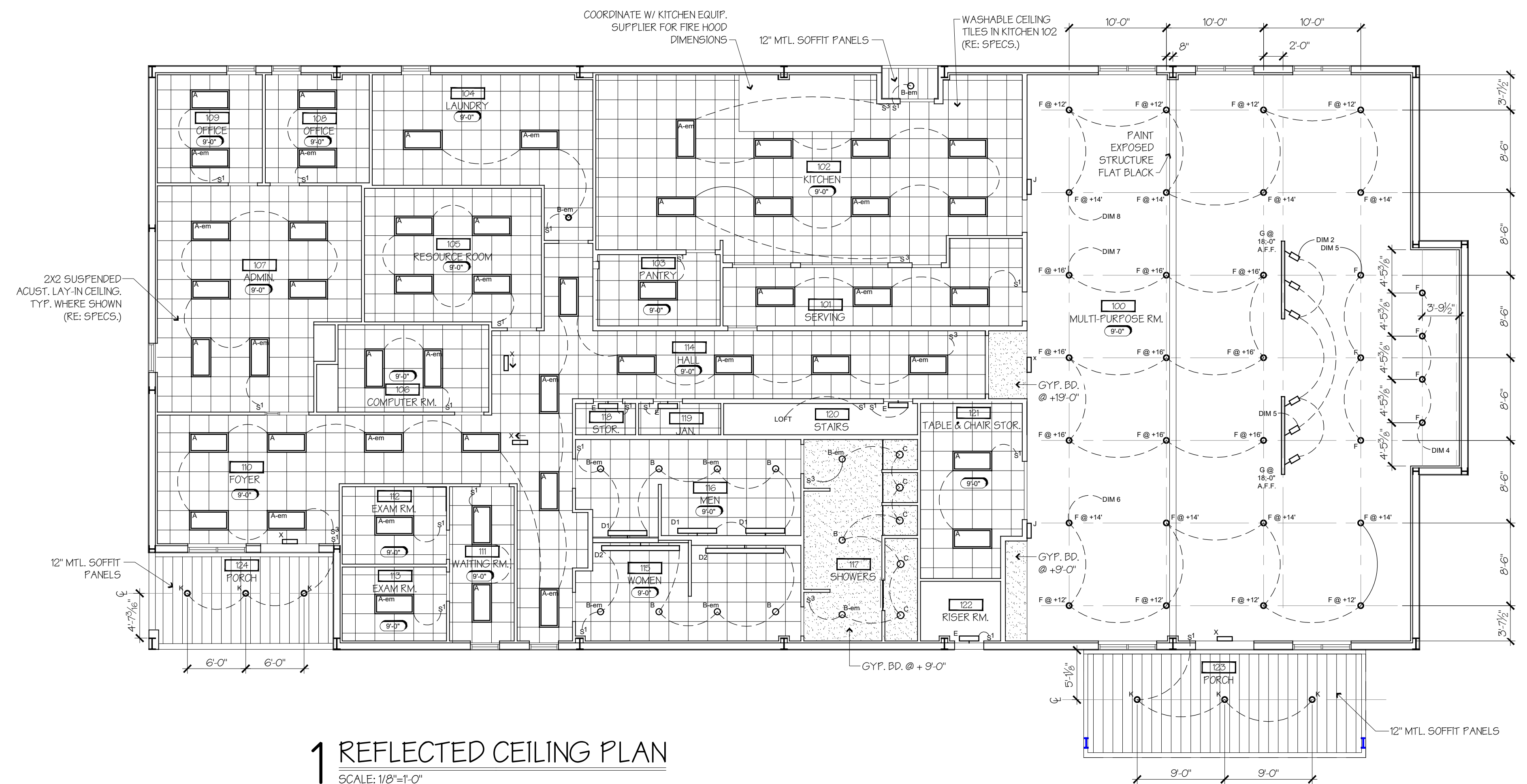
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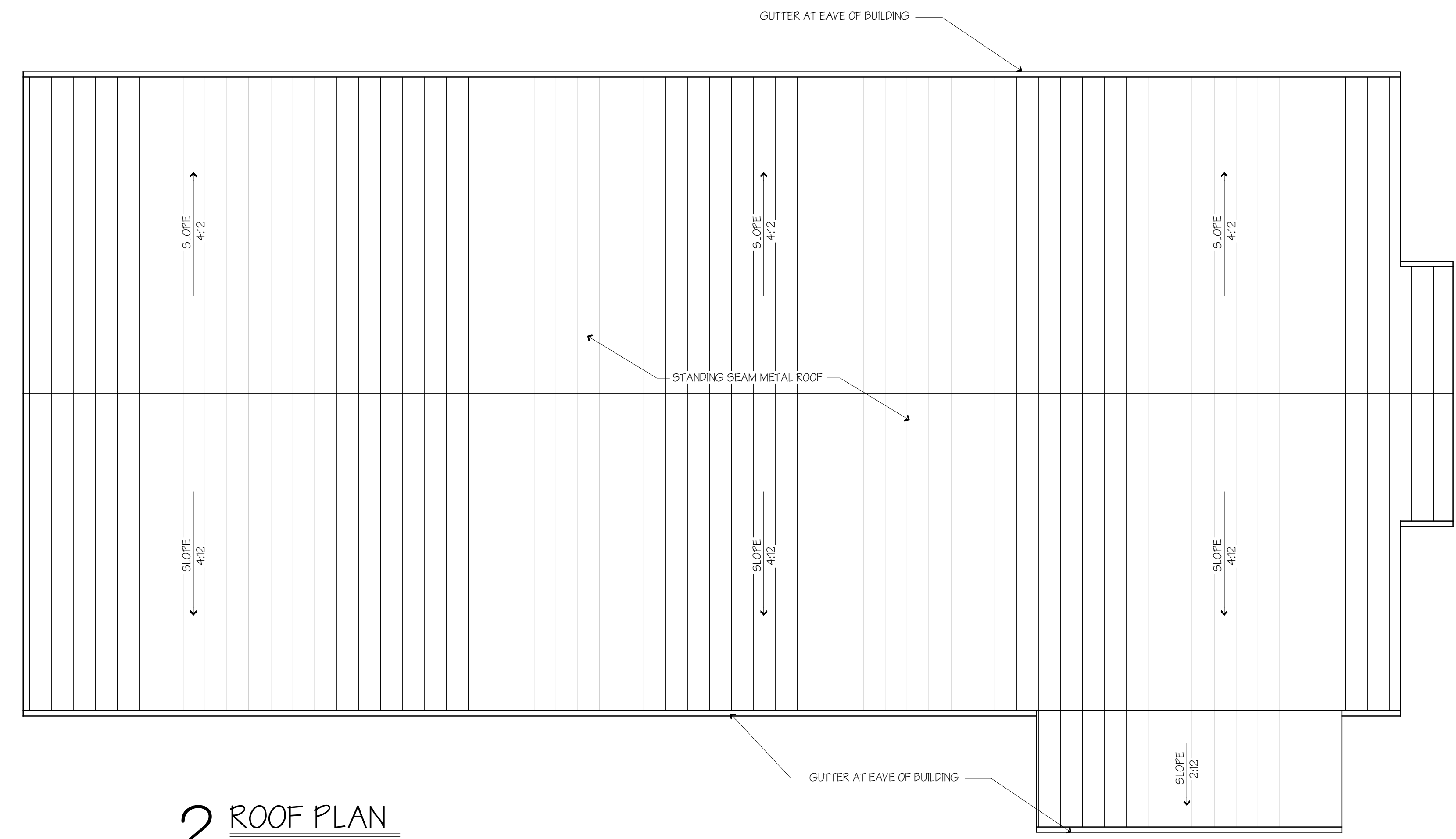


3 RCP MECH. LOFT
SCALE: 1/8"=1'-0"



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

Mark	Description	Manufacturer	Model #
A	2' X 4' lay-in LED troffer	Day-Brite	2TG74L835-4-FS-12F-UNV 120V 27.4W
A-em	2' X 4' lay-in LED troffer	Day-Brite	2TG74L835-4-FS-12F-UNV-EMLED 120V 27.4W
B	6" recessed LED downlight	Lithonia Lighting	LDN6-35-20-L06-AR-120V 35W
B-em	6" recessed LED downlight	Lithonia Lighting	LDN6-35-20-L06-AR-120-EL 120V 35W
C	Recessed shower light	Halo	SMD6R-6-935-WH-DN
D	148" wall-mount linear up/down	Eaton/Corelite	DWI-WD-5-L35-1-C-UNV-SU-WA-4-W 120V 45W
D2	96" wall-mount linear up/down	Eaton/Corelite	DWI-WD-5-L35-1-C-UNV-SU-WA-8-W 120V 45W
E	24" wall-mount strip	Lithonia Lighting	ZL1N-L24-1500LM-ST-120-35K-80CRI-WH 120V 15Wo
F	Pendant LED can light	Lithonia Lighting	LDN8CYL-35/50-L08-AR-LSS-MVOLT-EZ1-ACC180-DBL
G1	96" 2-circuit track	Juno	TU-8FT-BL (Provide with stem mounted track, 16' above floor)
G2	LED track fixture	Trac-Master	T263L-21W-G3-35K-80CRI-PDIM-FL-BL
H	48" LED strip light	Metalux	4-SNLED-LD5-46SL-LN-UNV-L835-CD1-U
H-em	48" LED strip light	Metalux	4-SNLED-LD5-46SL-LN-UNV-EL7W-L835-CD1-U
J	Emergency wall-mount	Sure-Lites	CU2-LED
K	Exterior wall-mount up-light	Cooper/Amatrix	ASYX-WM-S-2-OD-U-F-L35-1-UNV-W-R-STD
S	Pole-mounted area light	Lithonia Lighting	DSX1-LED-P2-40K-T5M-208-SPA-DDBXD 70W
S (pole)	Pole for area light	KW Industries	SSP25-4.0-7-BRZ-DM2180-BC
X	Exit light	Lithonia	EXR-LED-EL-M6-277



2 ROOF PLAN
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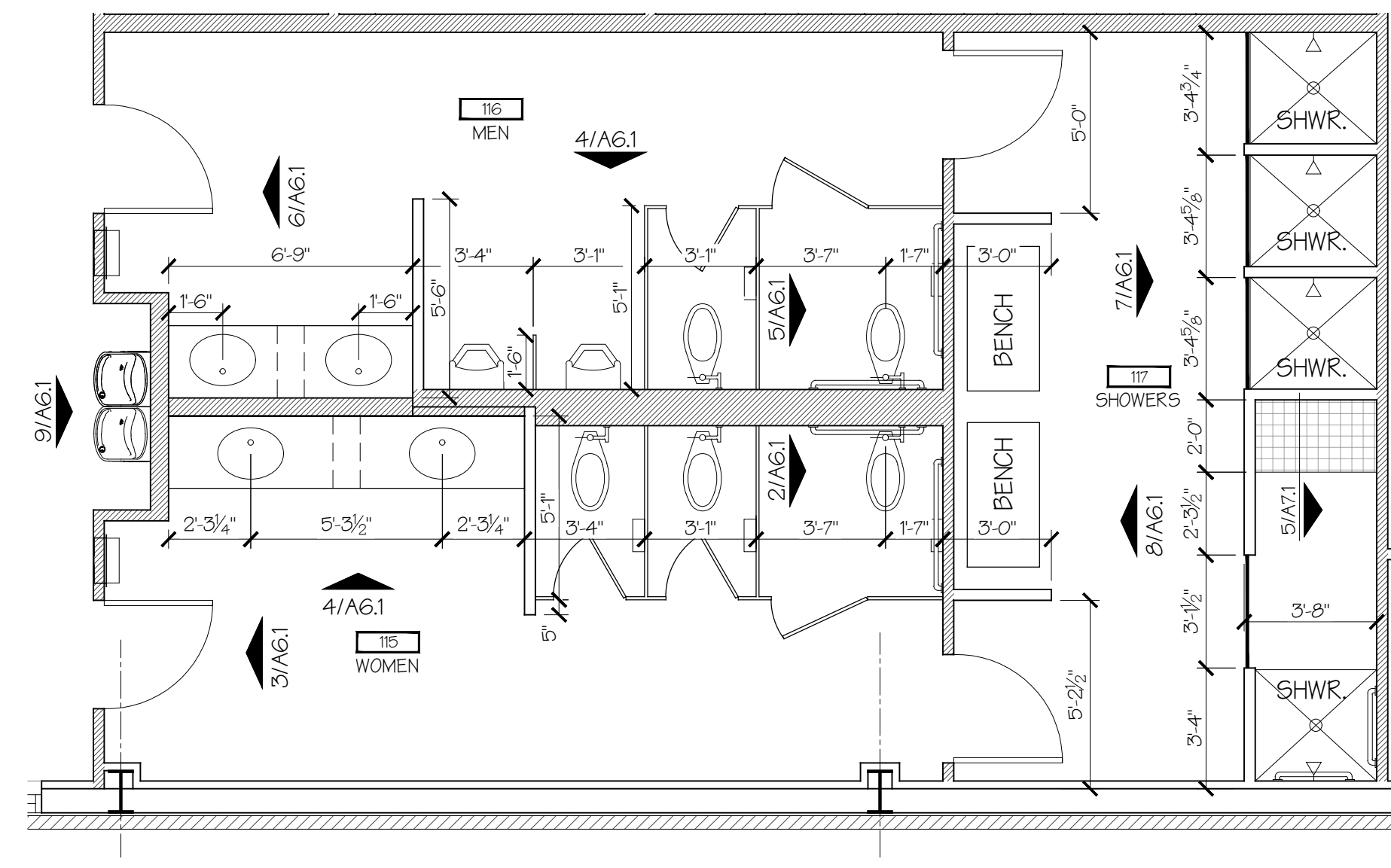
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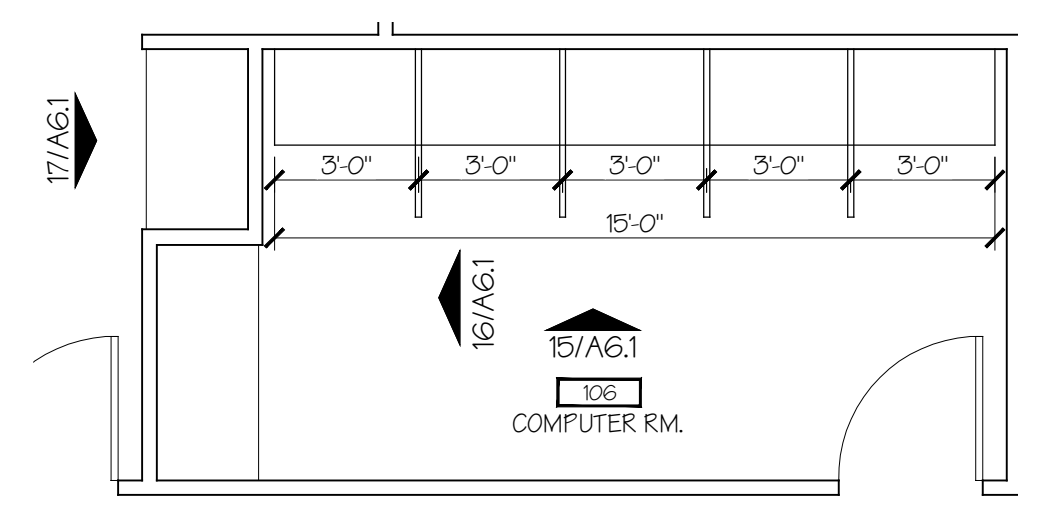
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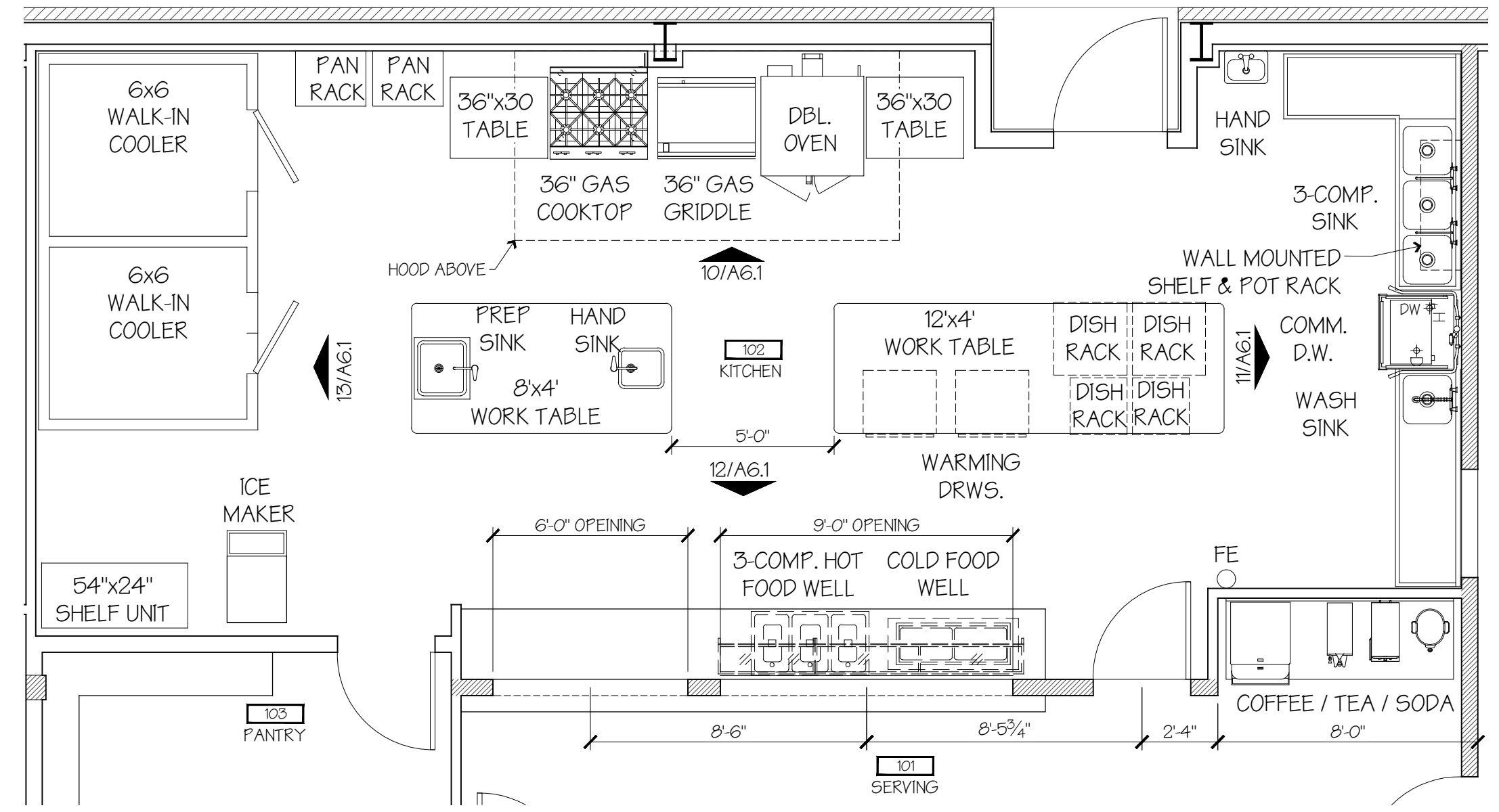
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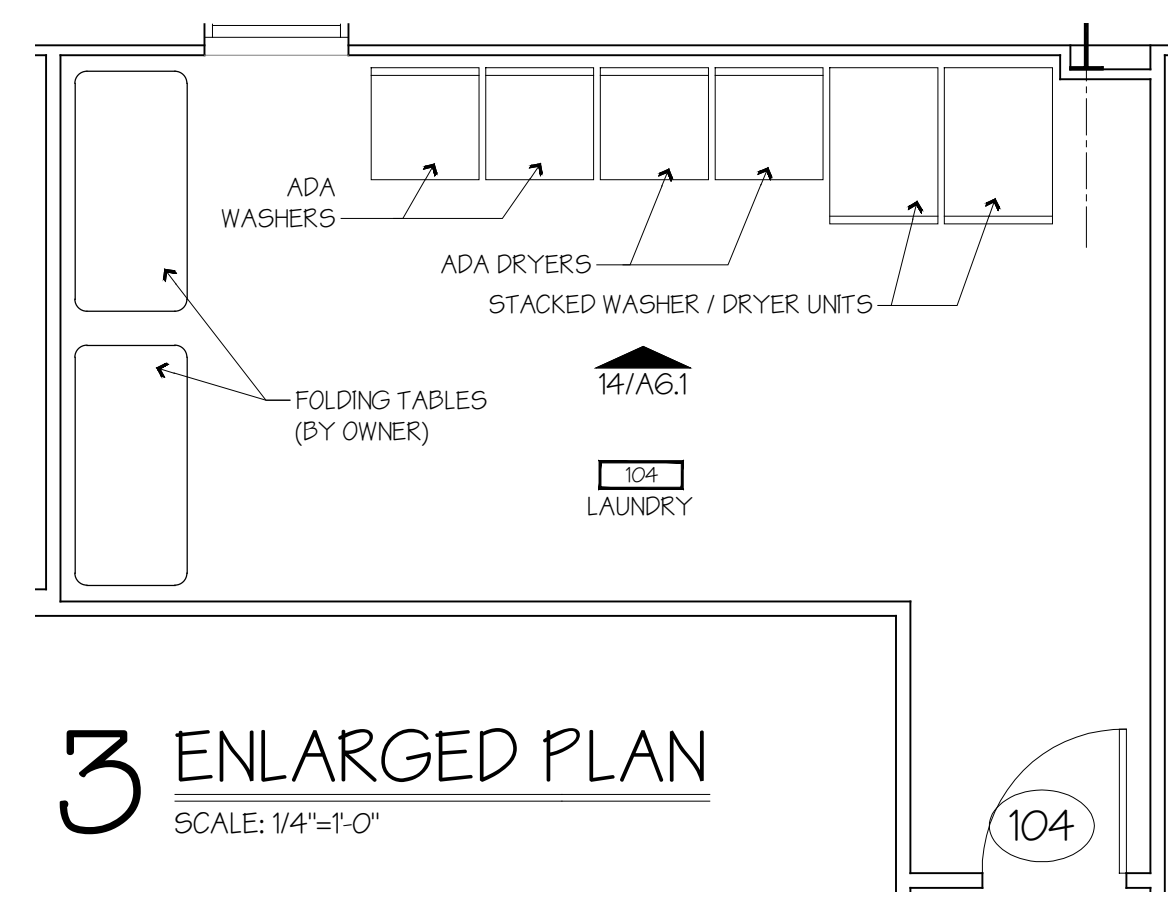
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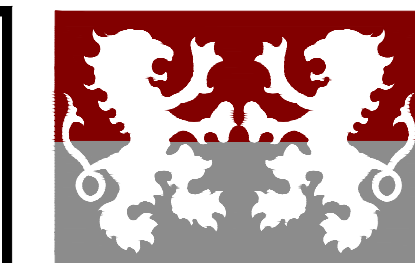
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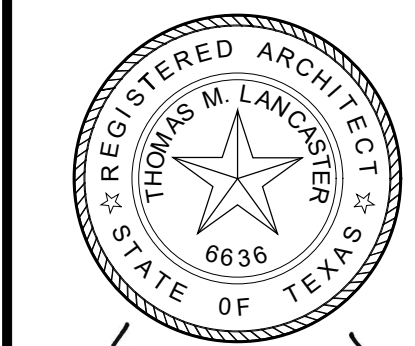
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3 ENLARGED PLAN
 SCALE: 1/4"=1'-0"



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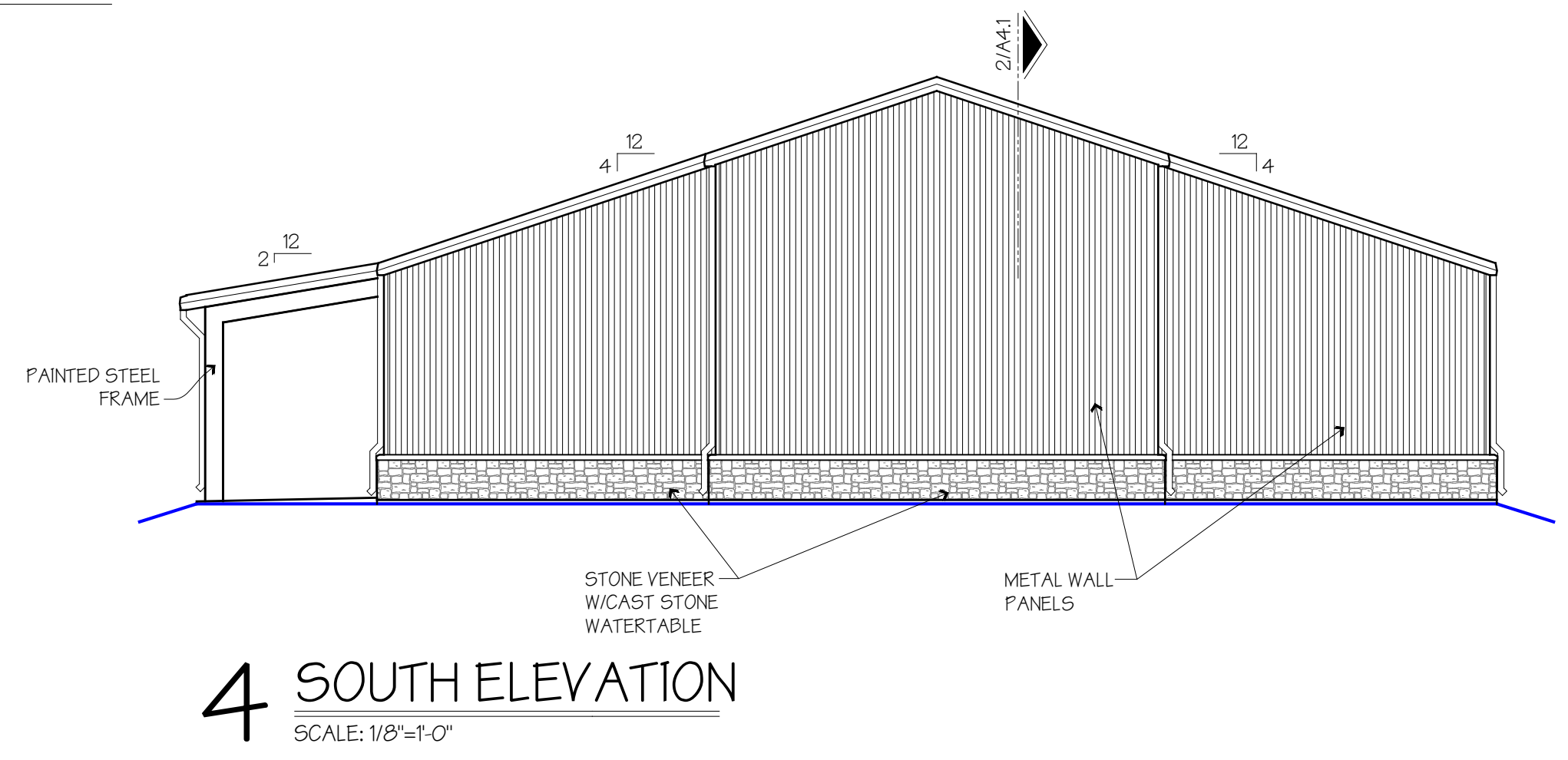
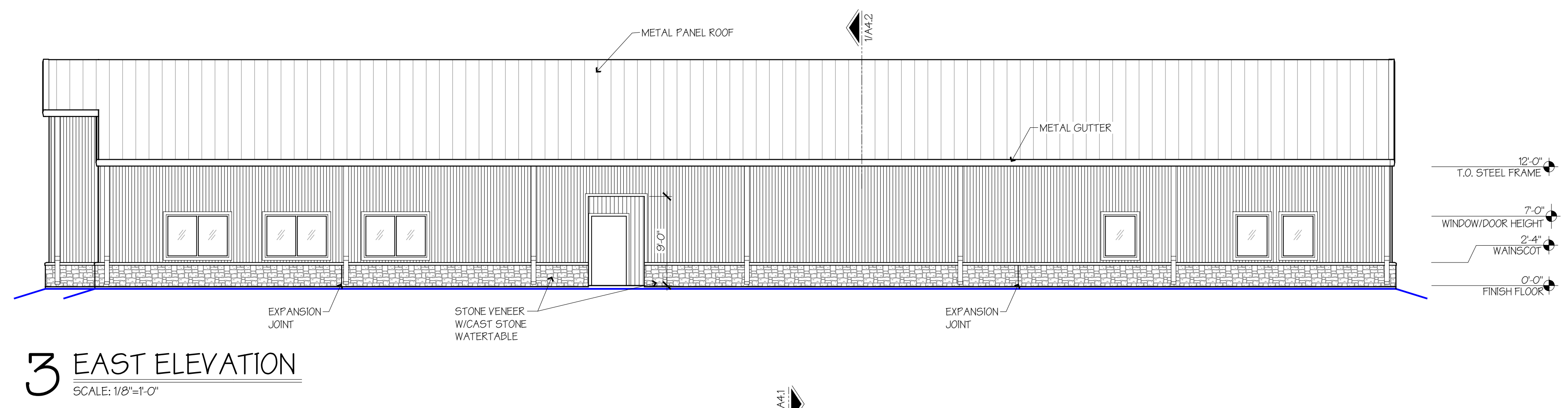
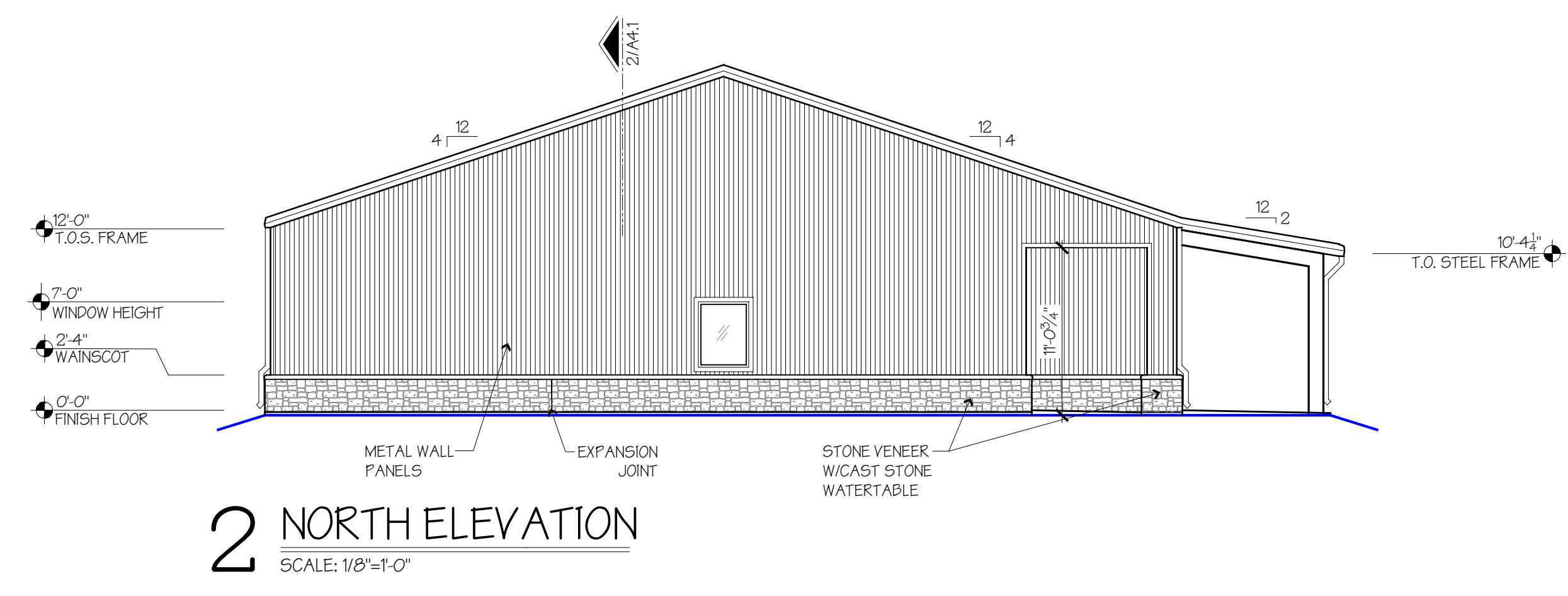
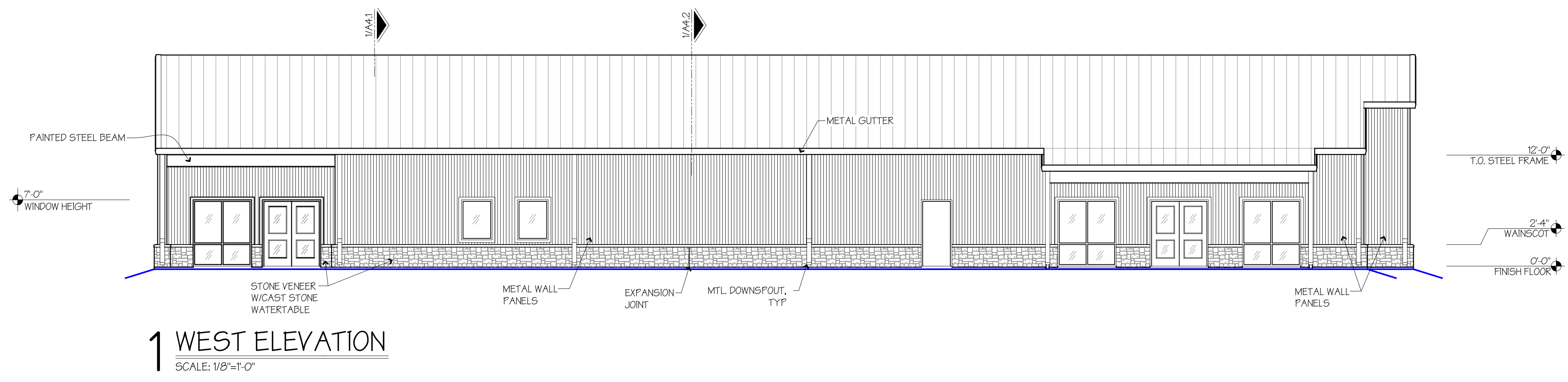
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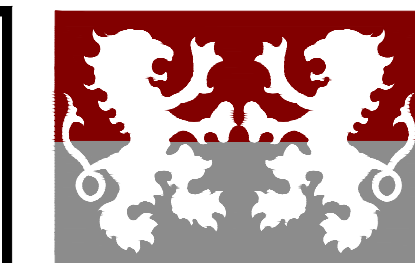
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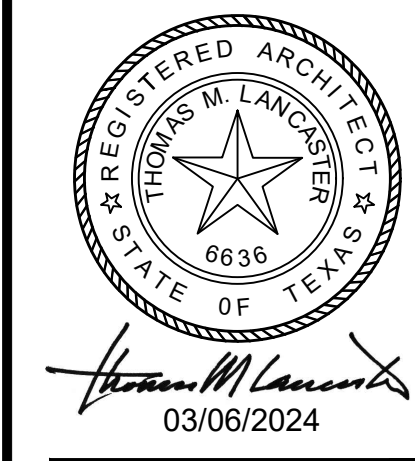
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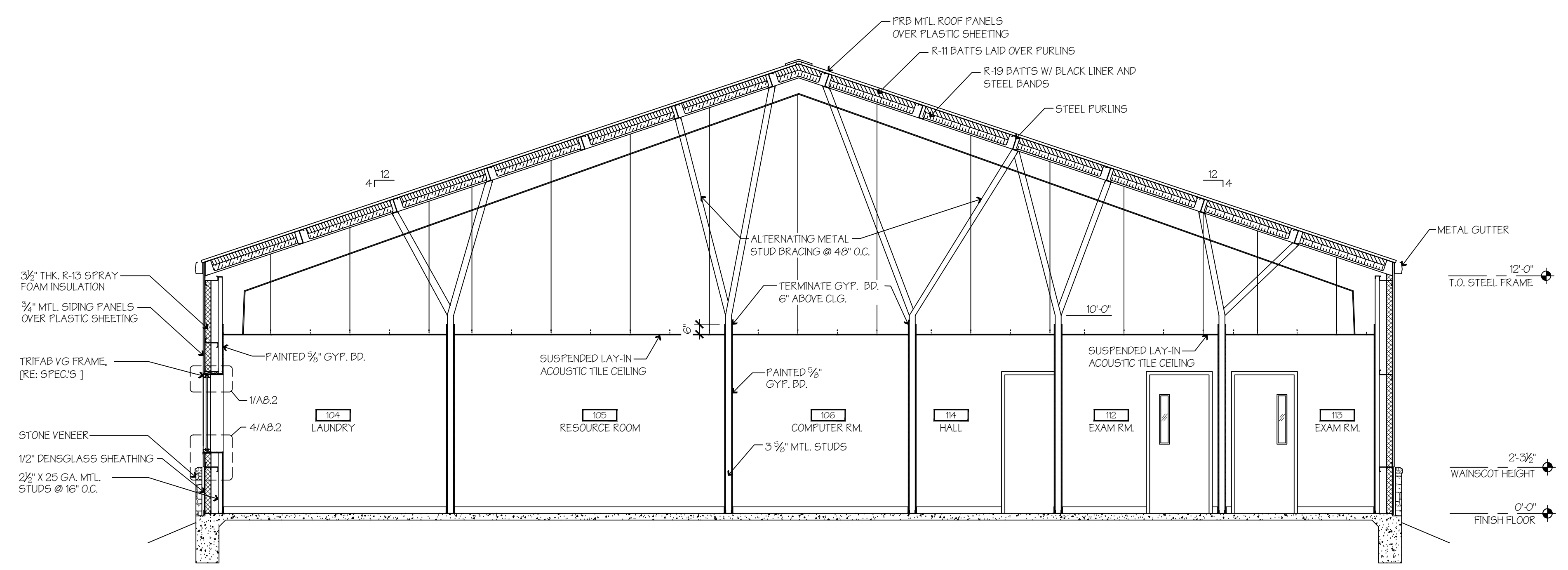


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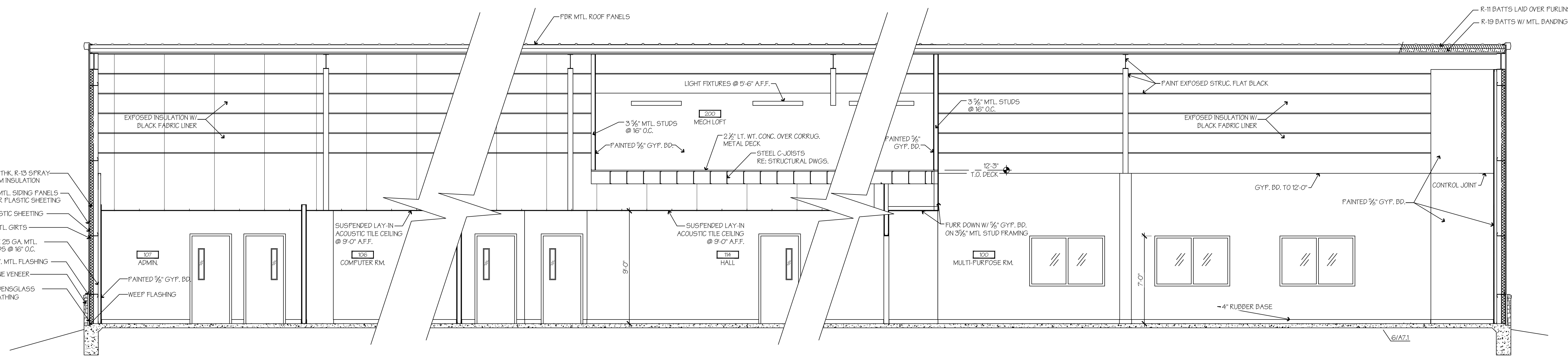
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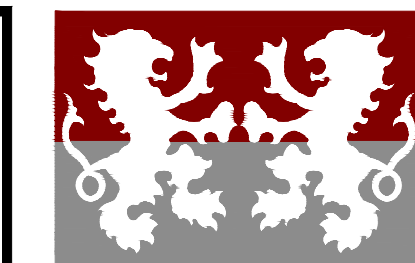
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2 BUILDING SECTION
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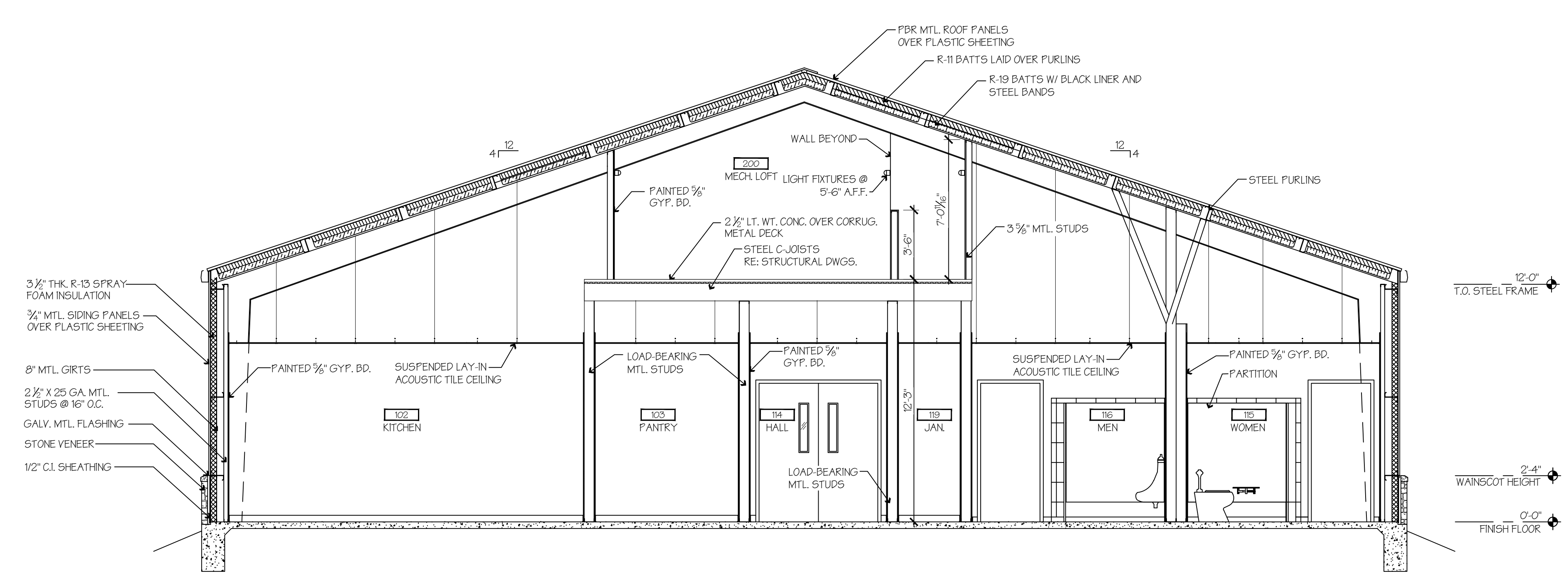
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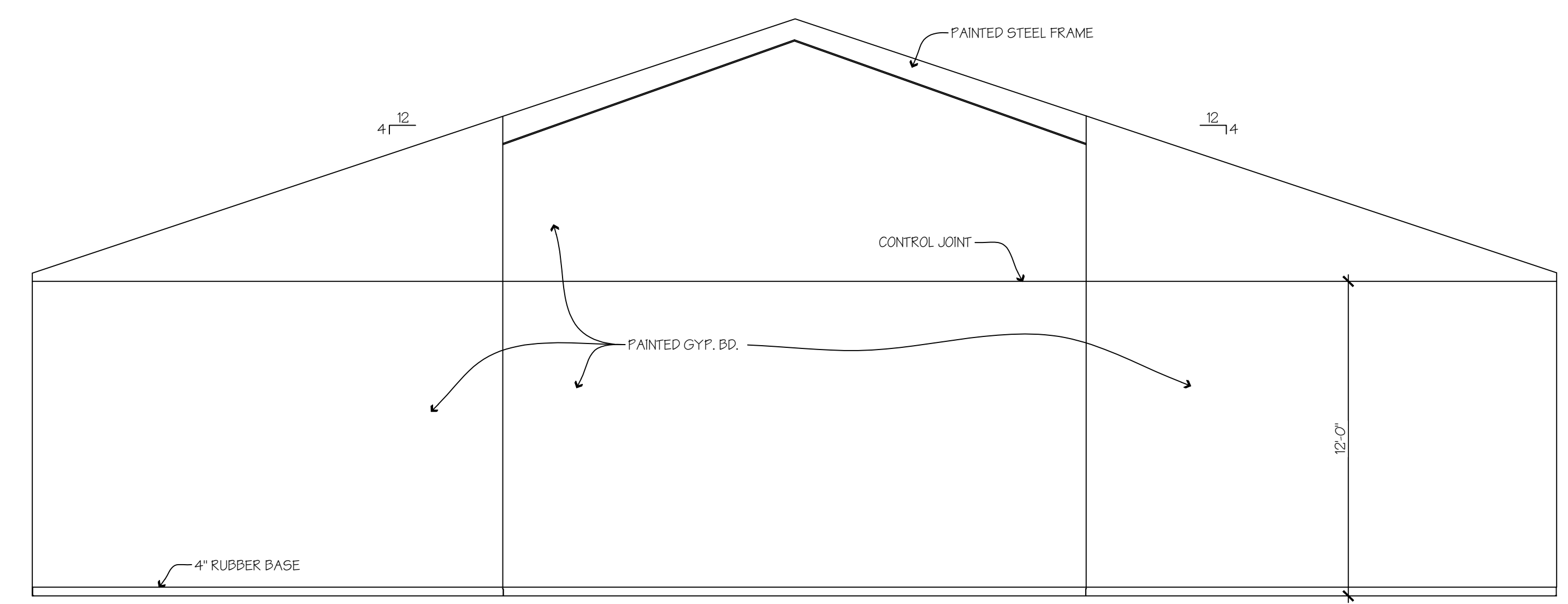
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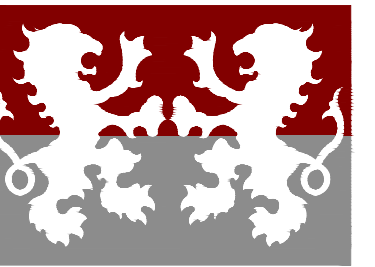
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1 BUILDING SECTION
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2 ELEVATION - SOUTH WALL OF MULTI-PURPOSE RM.
SCALE: 1/4"=1'-0"



LANCASTER

WYATT
ARCHITECTS

10655 SIX PINES DRIVE, SUITE 290
THE WOODLANDS, TX 77380
PHONE: 281 - 364 - 1666



Thomas M. Lancaster
03/06/2024

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CONSTRUCTION
UNLESS SEAL IS
SIGNED AND DATED
ABOVE.

MIRACLE CITY - DAY CENTER
350 FOSTER DRIVE, CONROE, TEXAS 77301

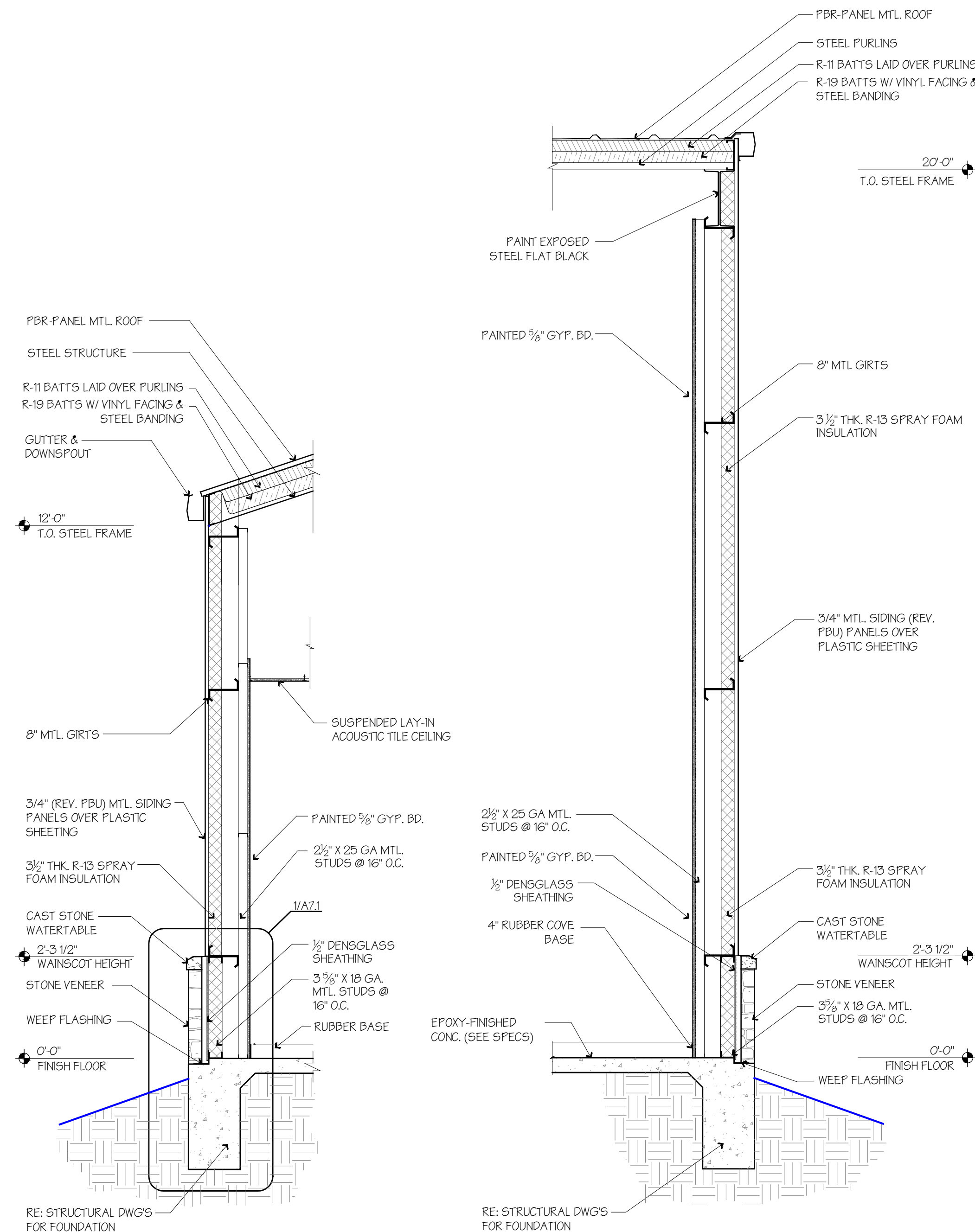
ISSUE RECORD

DRAWING DATE:
03/06/2024

COMMISSION:

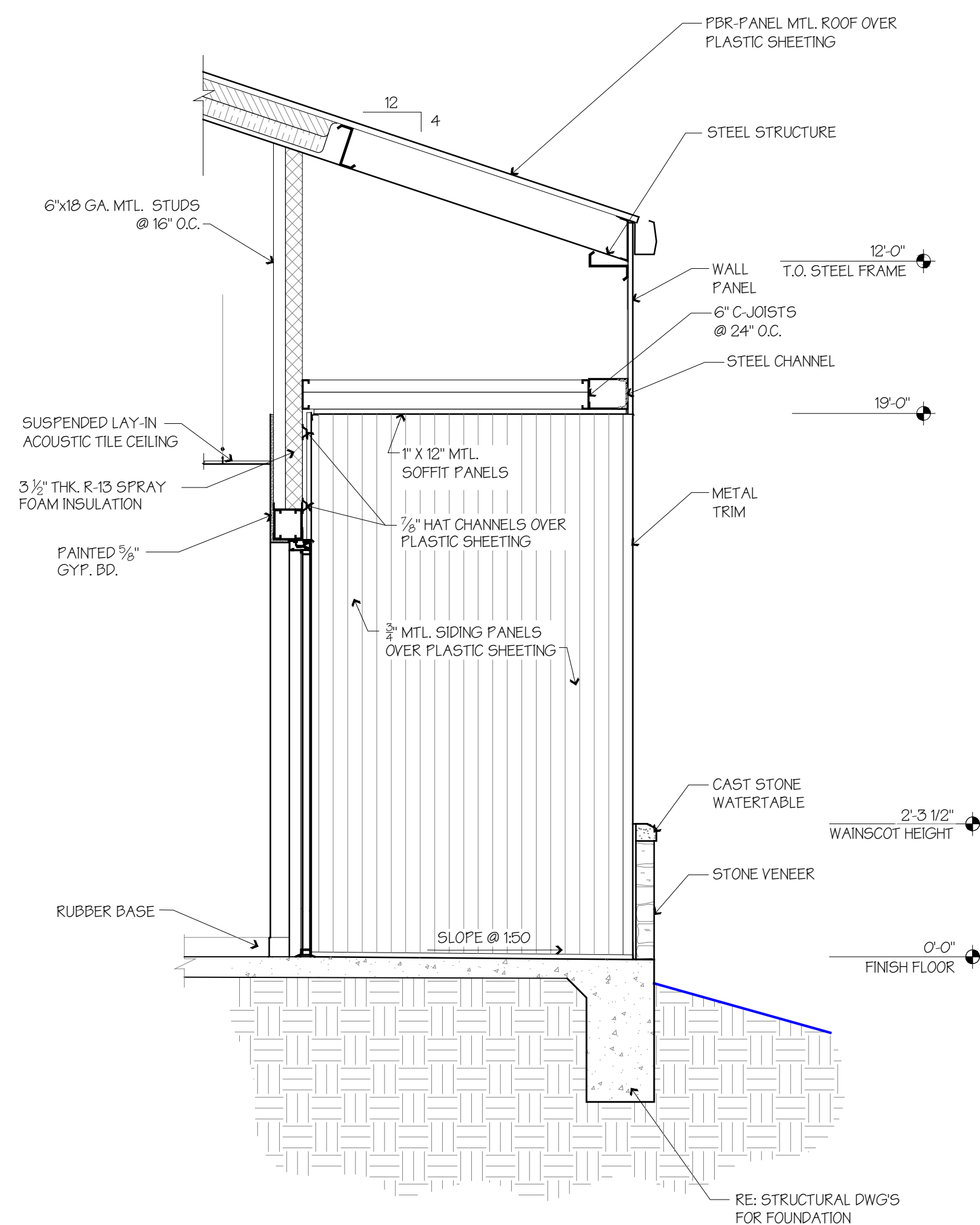
SHEET NO.

A5.1

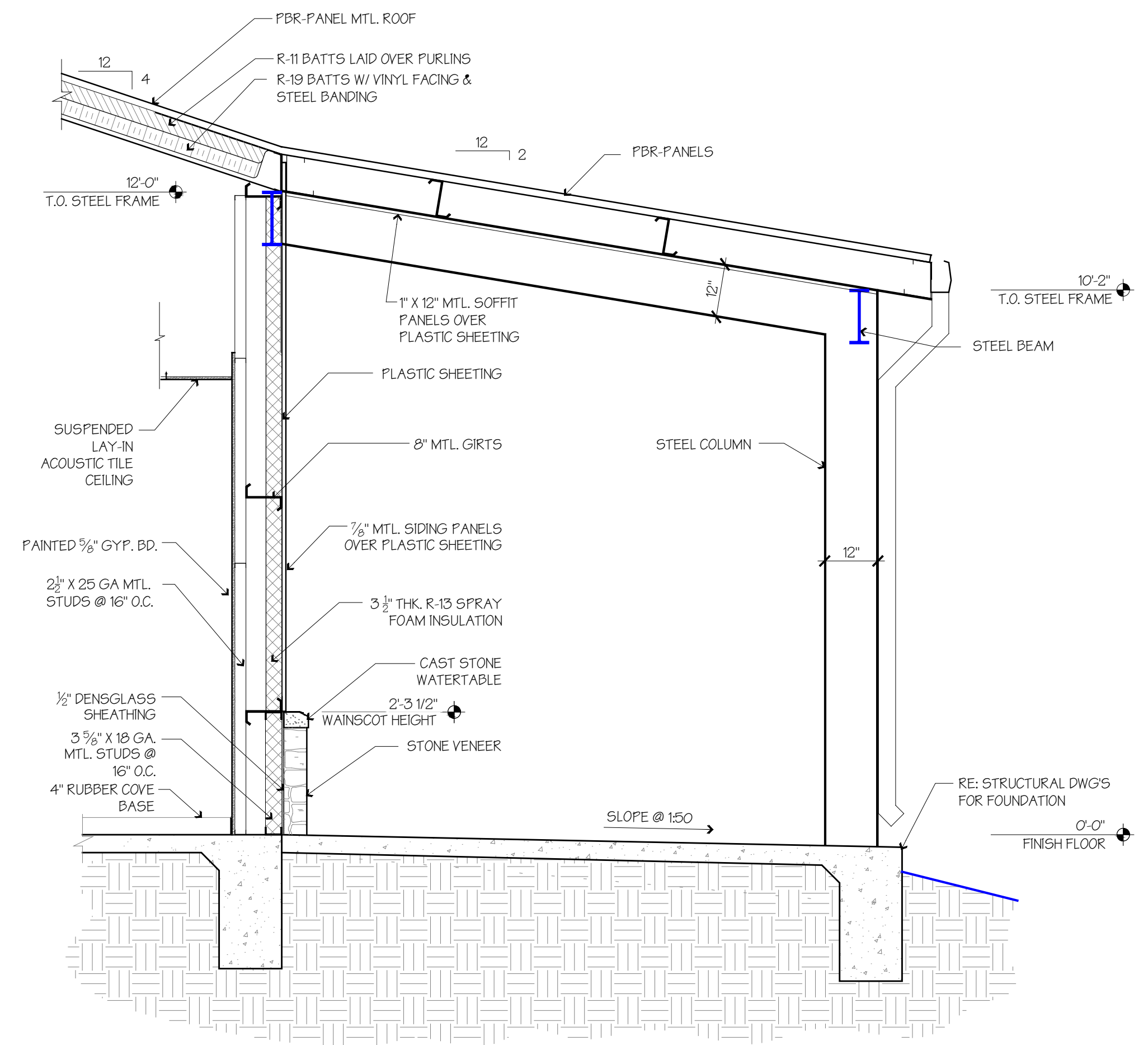


1 WALL SECTION @ EAVE
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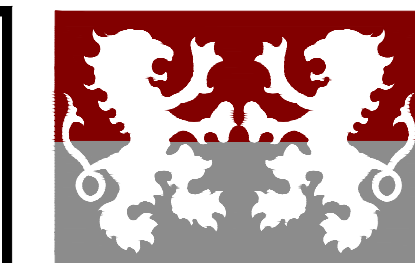
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SCALE: 1/2=1'-0"



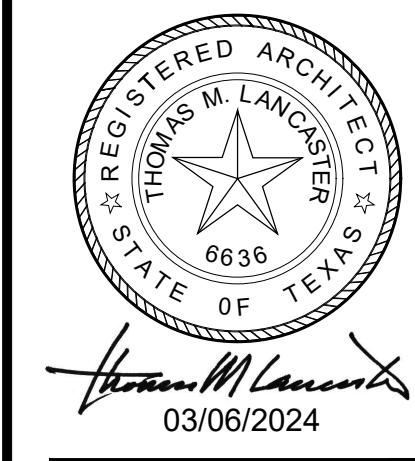
3 WALL SECTION @ DOOR 102B
SCALE: 1/2=1'-0"



4 WALL SECTION @ PORCH 123
SCALE: 1/2=1'-0"



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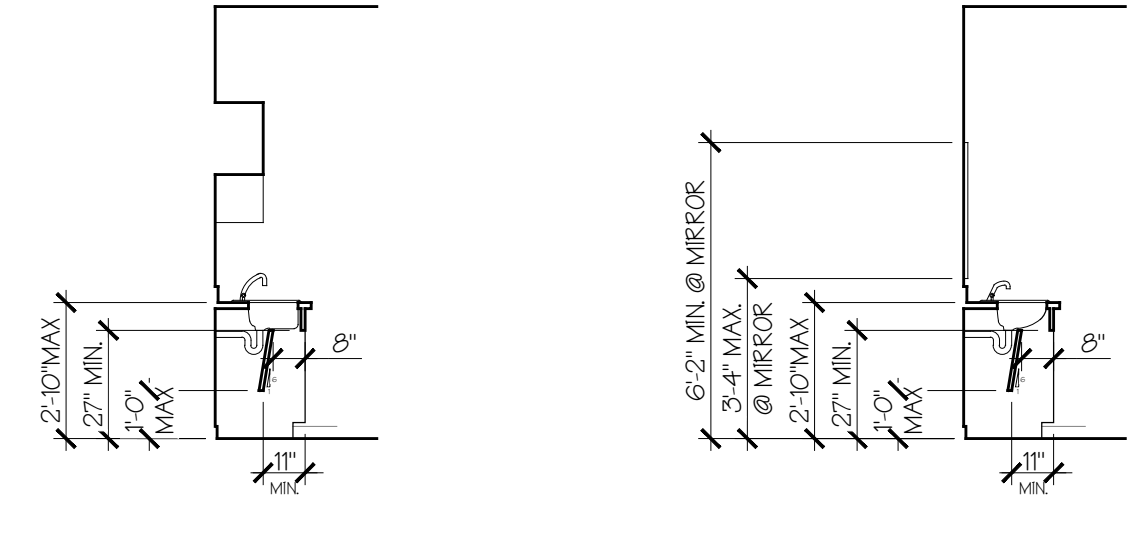
MIRACLE CITY - DAY CENTER
350 FOSTER DRIVE, CONROE, TEXAS 77301

ISSUE RECORD

DRAWING DATE:
03/06/2024

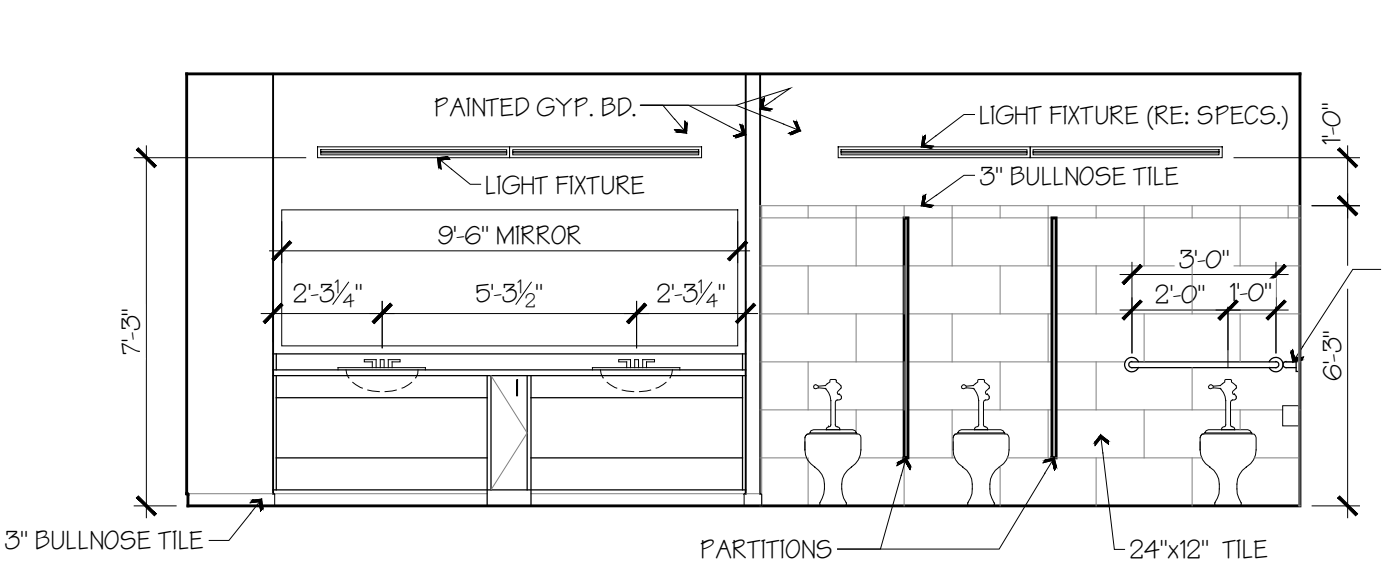
COMMISSION:

SHEET NO.
A6.1

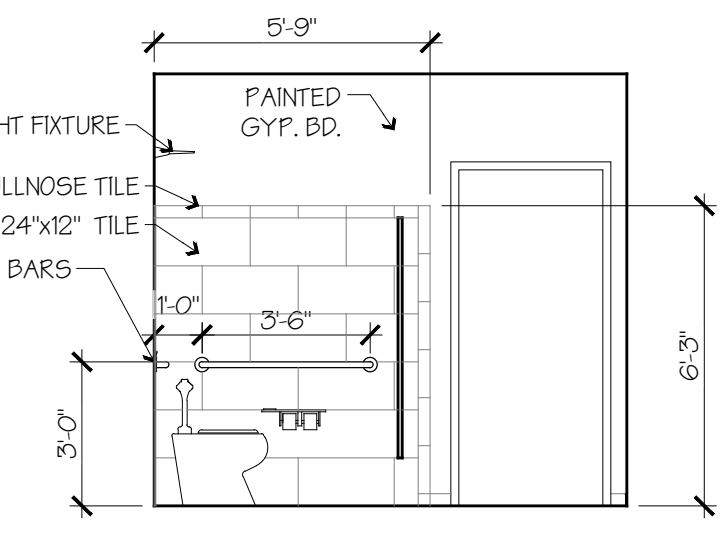


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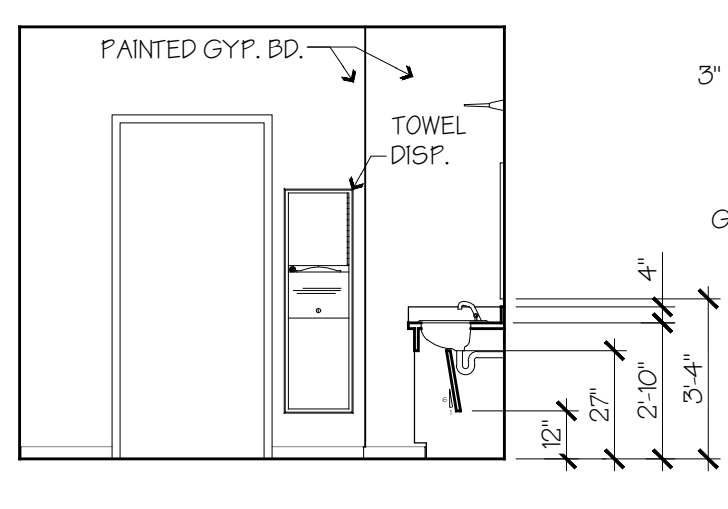
B ADA #2
SCALE: 1/4"=1'-0"



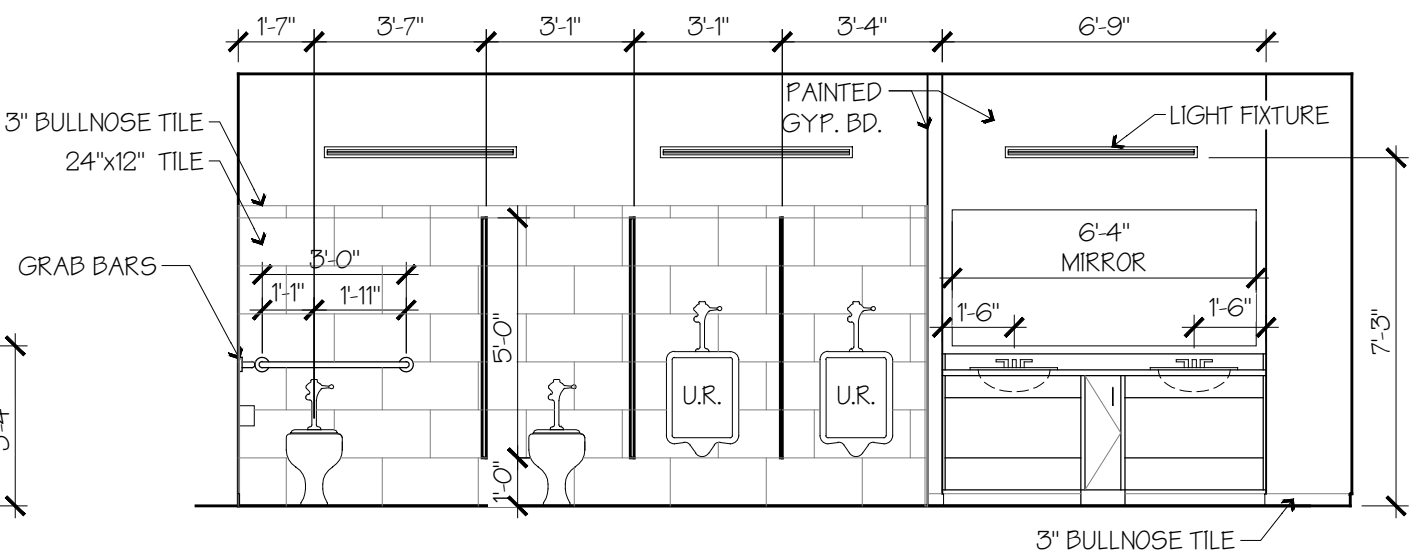
1 WOMENS R/R
SCALE: 1/4"=1'-0"



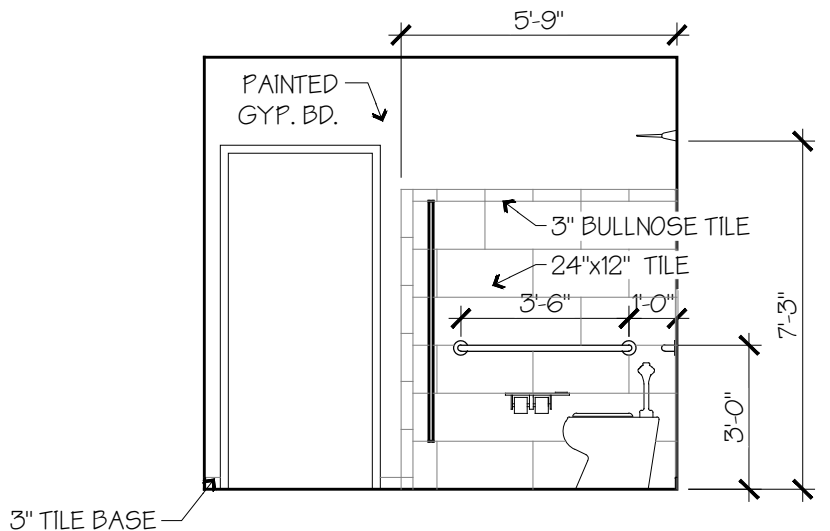
2 WOMENS R/R
SCALE: 1/4"=1'-0"



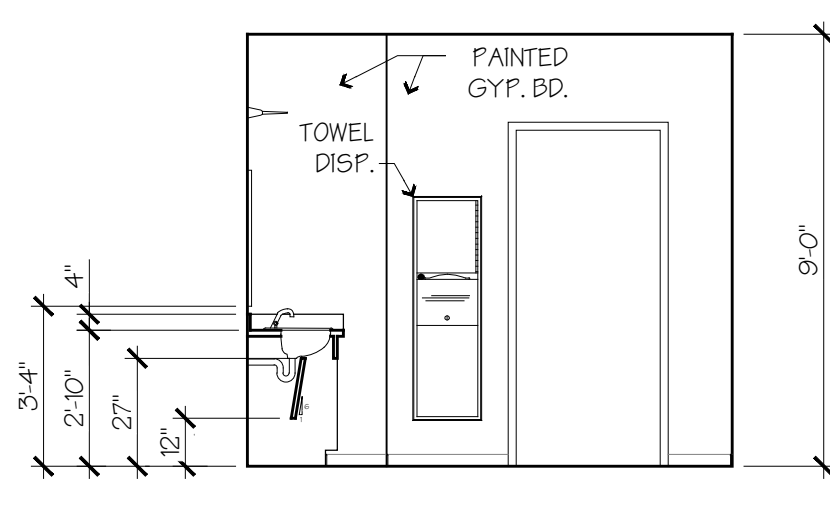
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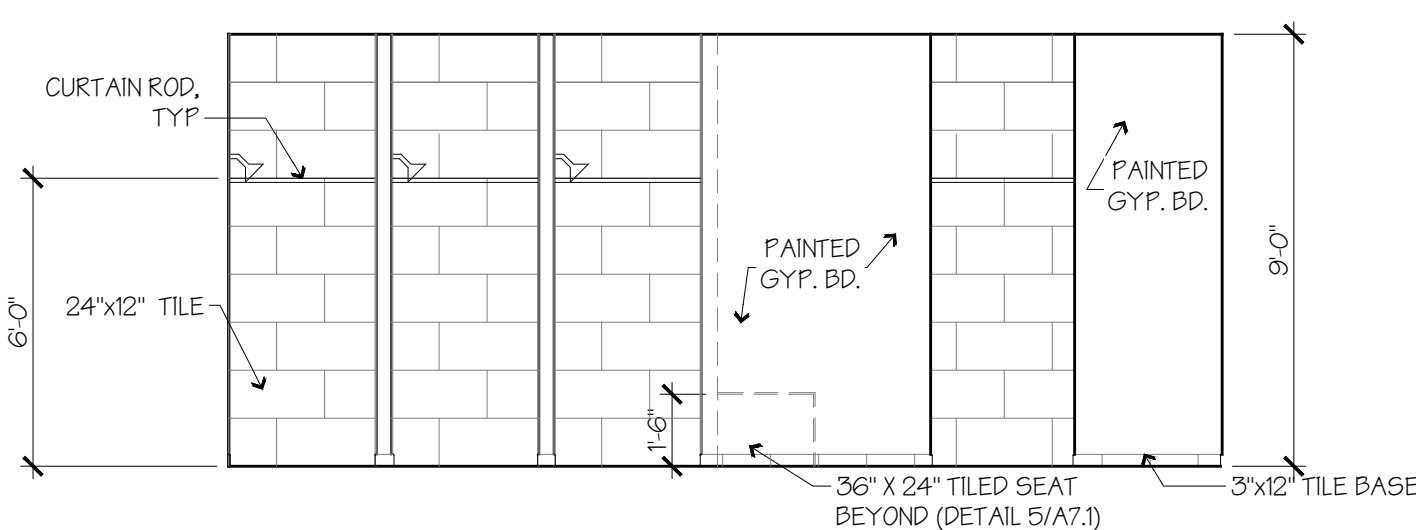
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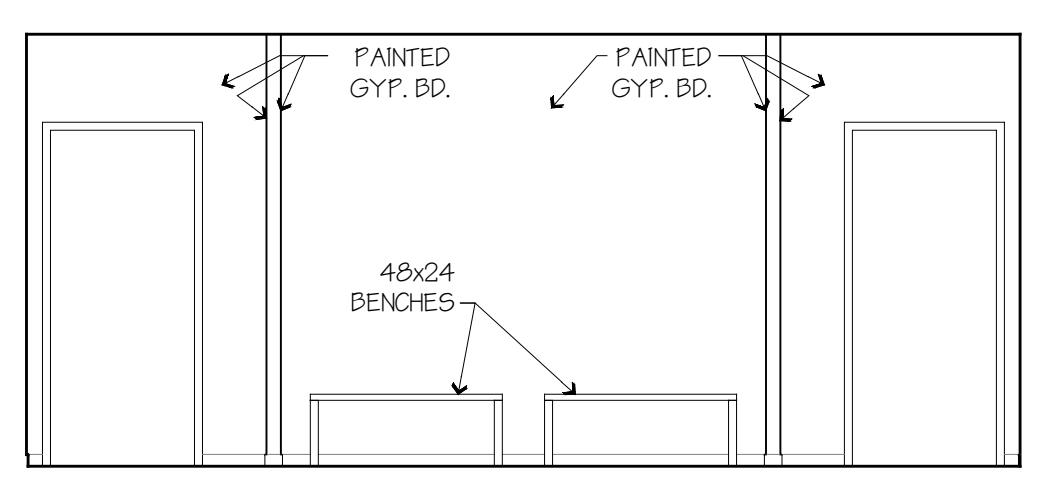
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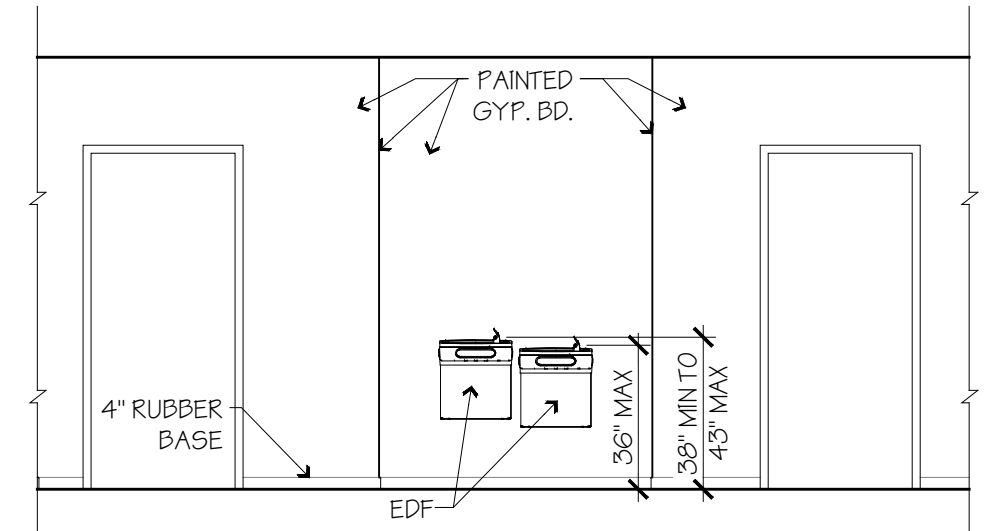
6 MENS R/R
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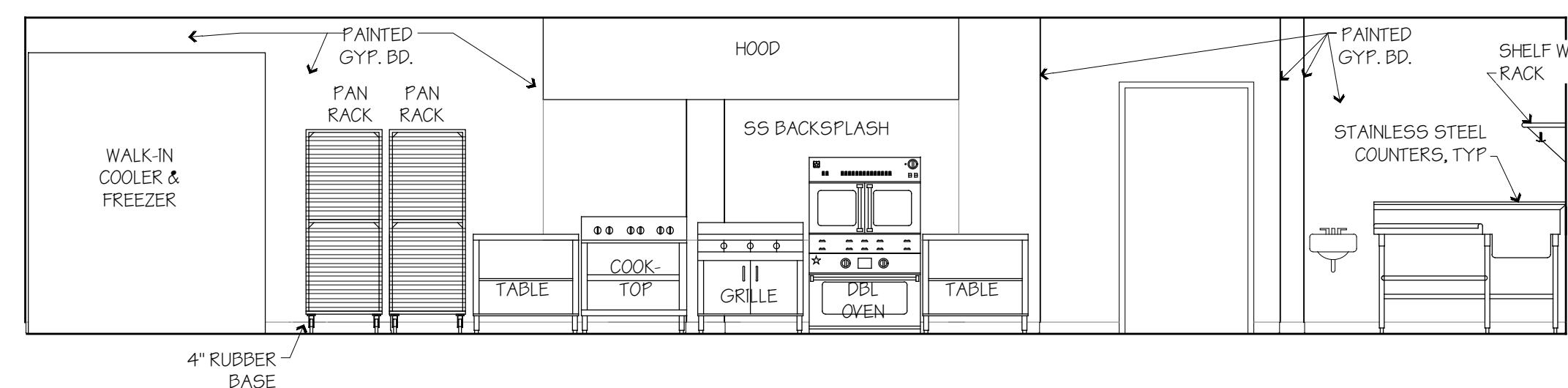
7 SHOWERS
SCALE: 1/4"=1'-0"



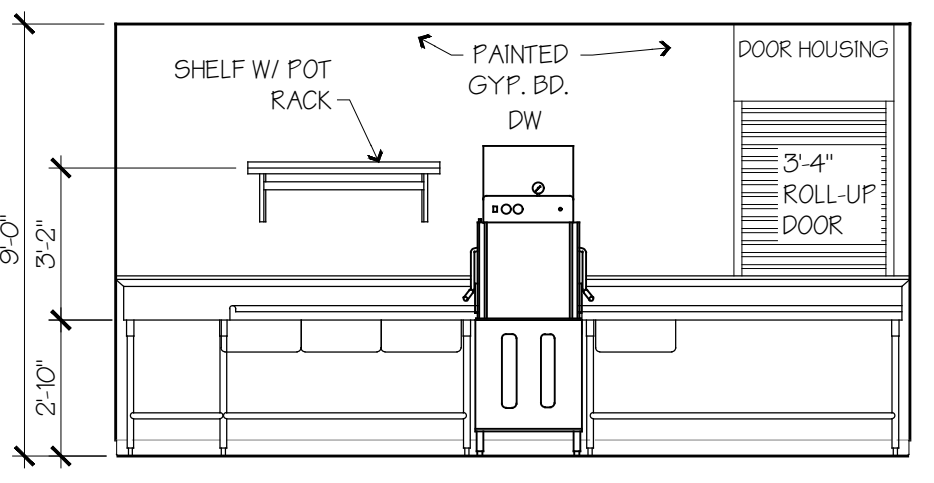
8 SHOWERS
SCALE: 1/4"=1'-0"



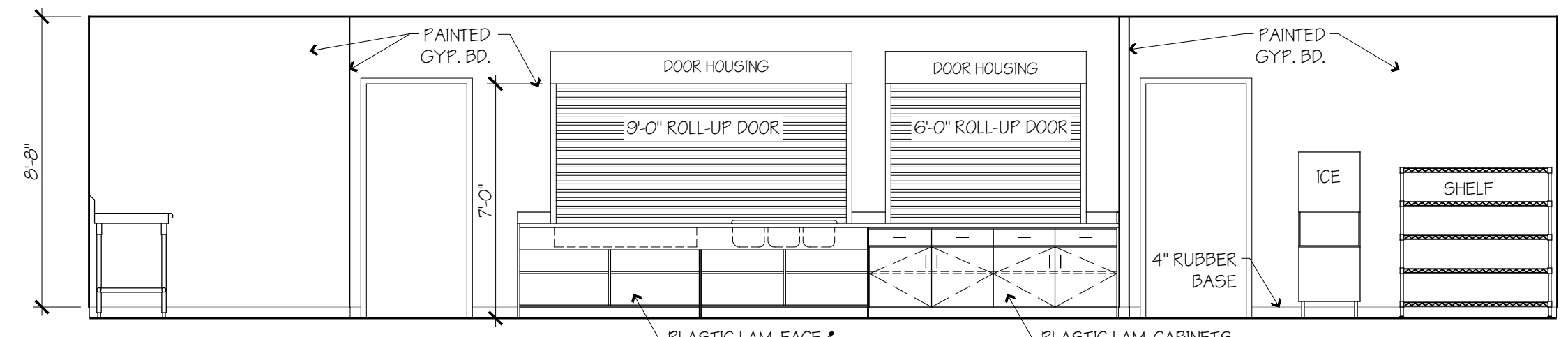
9 WATER FOUNTAIN
SCALE: 1/4"=1'-0"



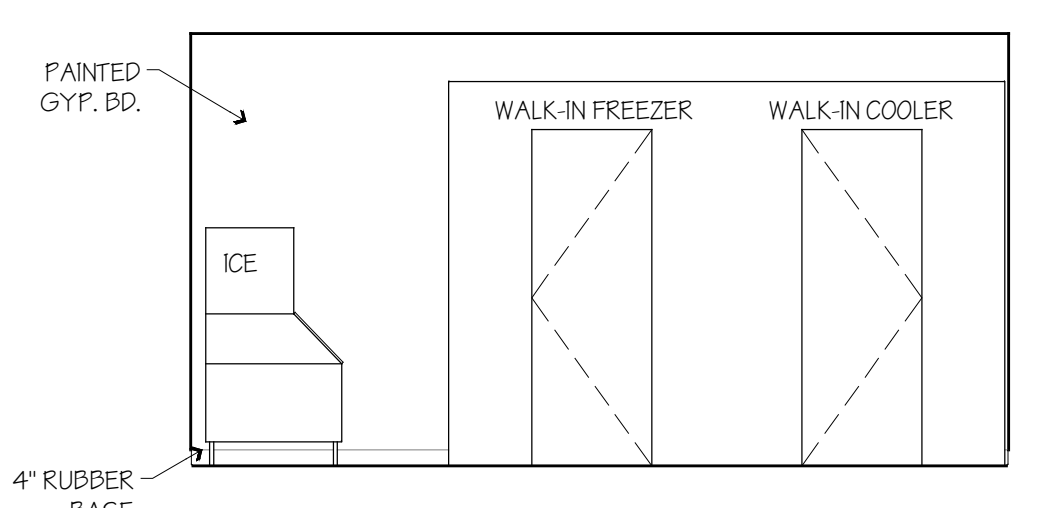
10 KITCHEN
SCALE: 1/4"=1'-0"



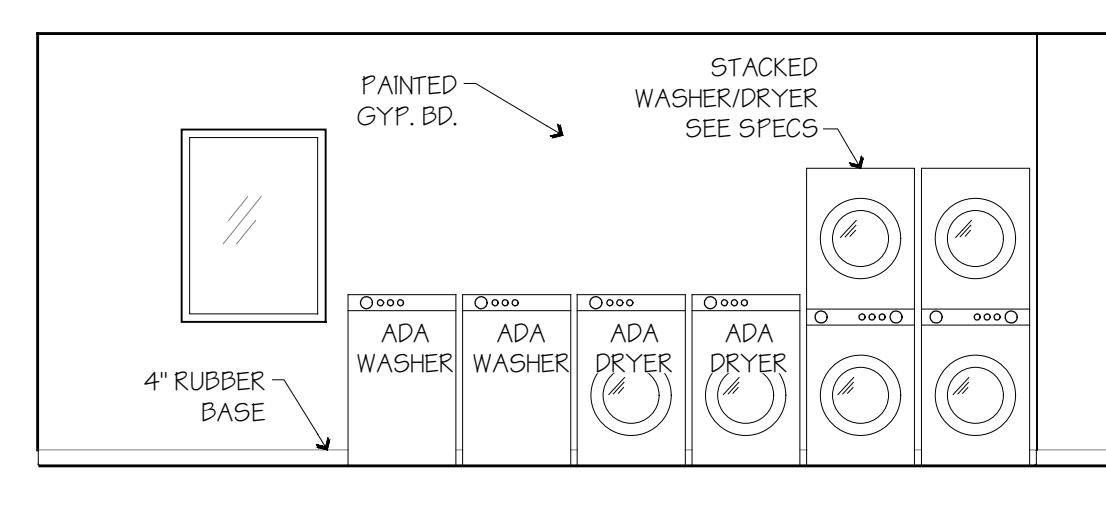
11 KITCHEN
SCALE: 1/4"=1'-0"



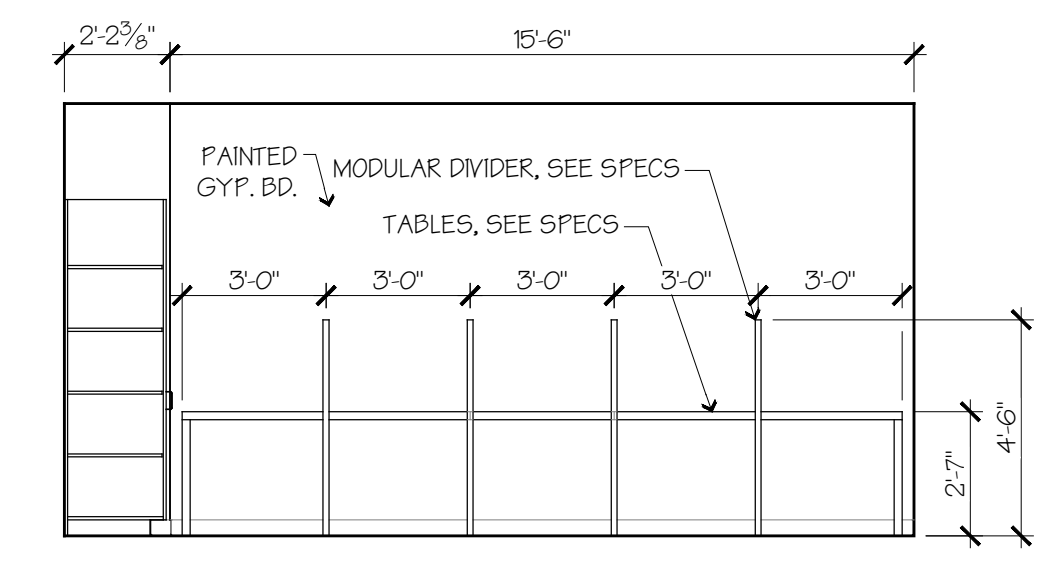
12 KITCHEN
SCALE: 1/4"=1'-0"



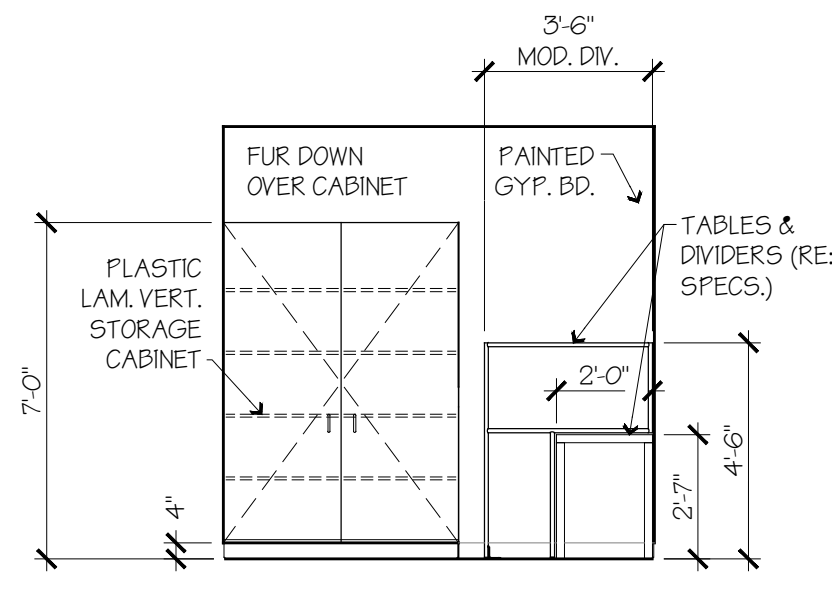
13 KITCHEN
SCALE: 1/4"=1'-0"



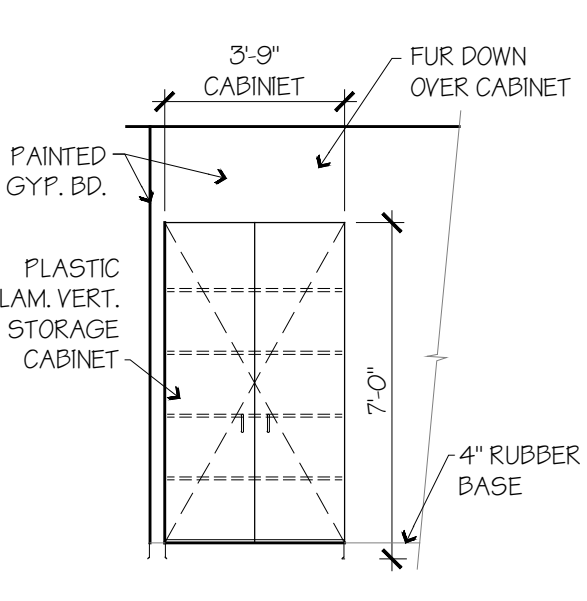
14 LAUNDRY
SCALE: 1/4"=1'-0"



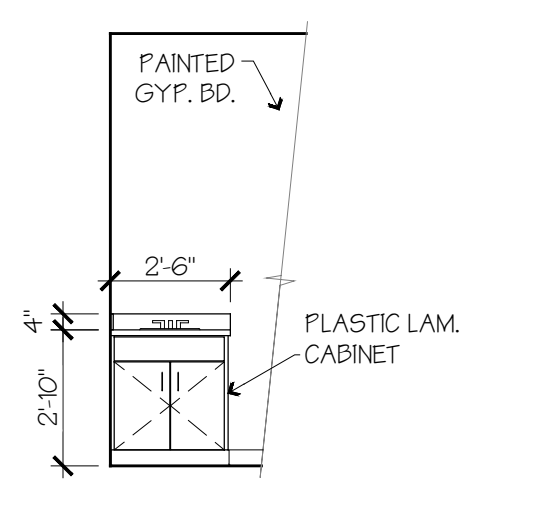
15 COMPUTER RM.
SCALE: 1/4"=1'-0"



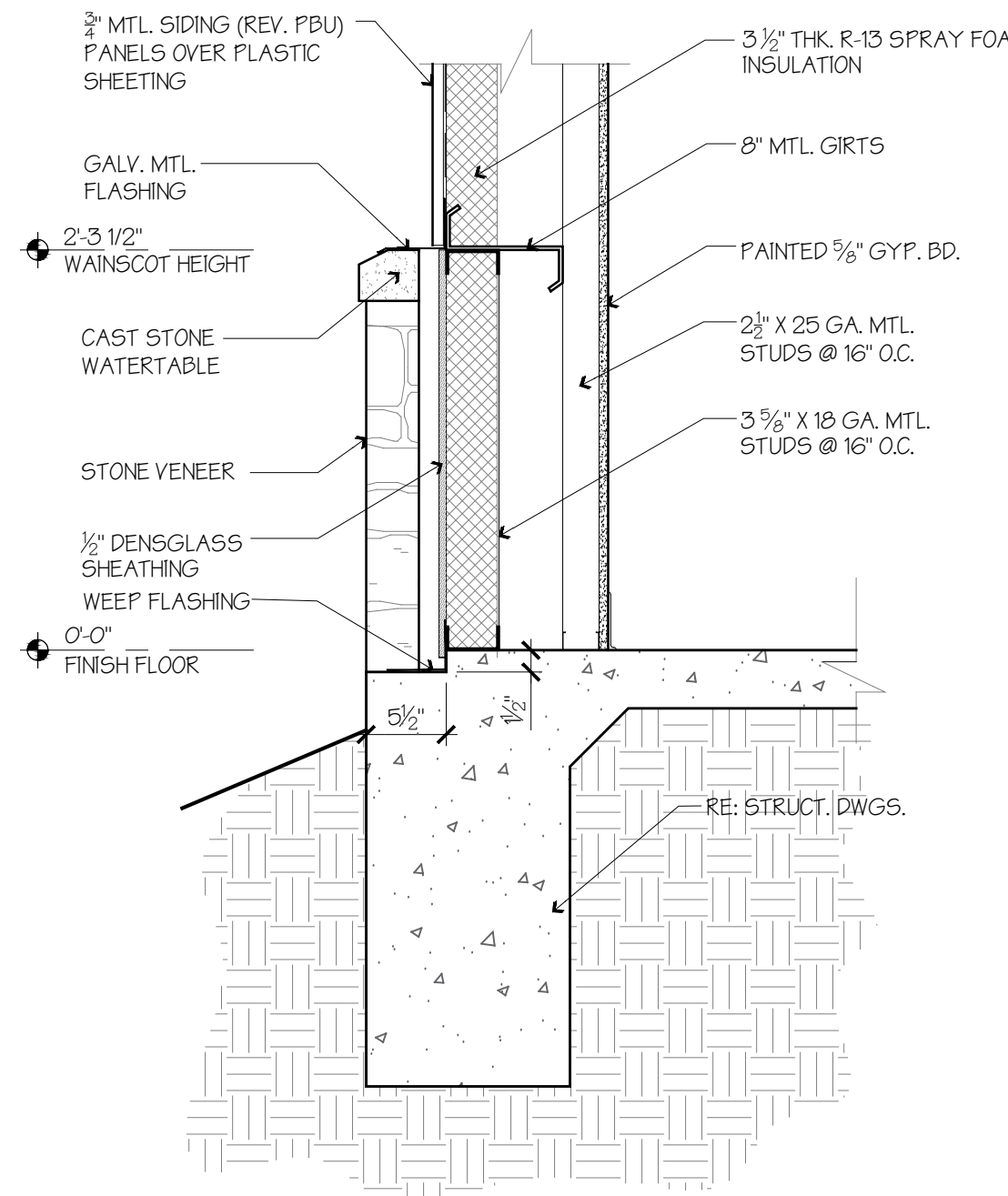
16 COMPUTER RM.
SCALE: 1/4"=1'-0"



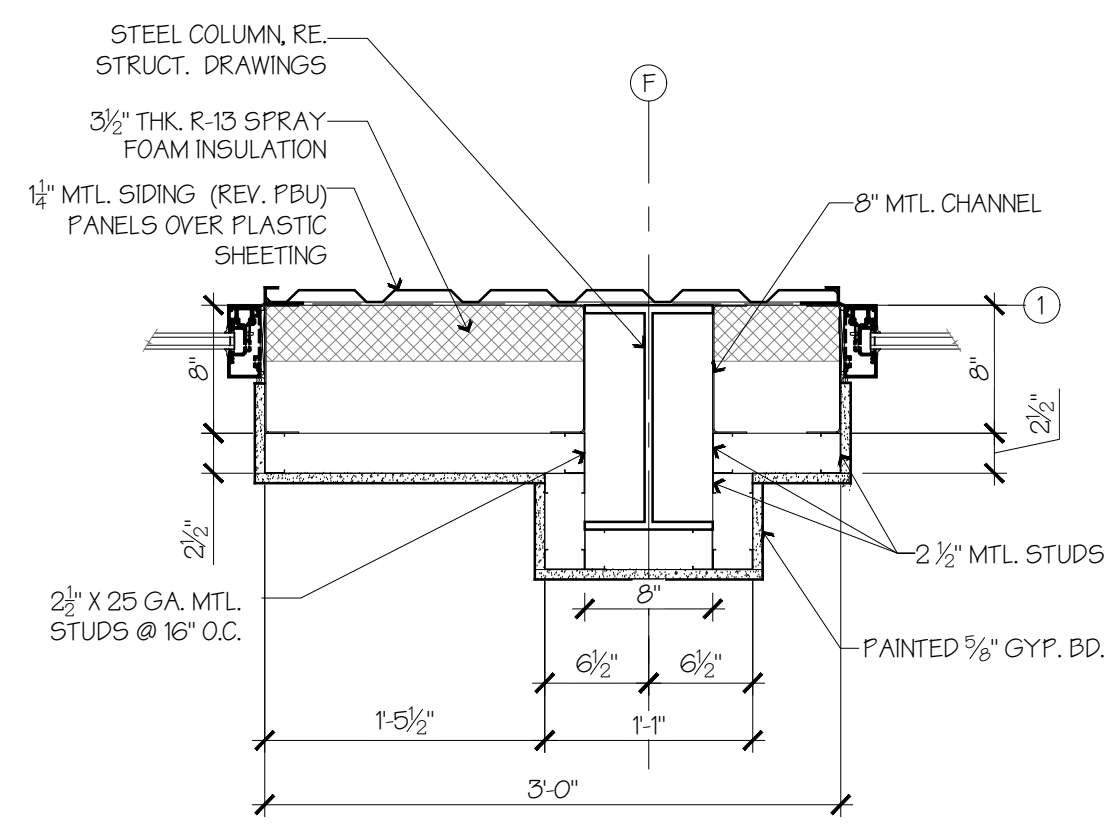
17 ADMIN
SCALE: 1/4"=1'-0"



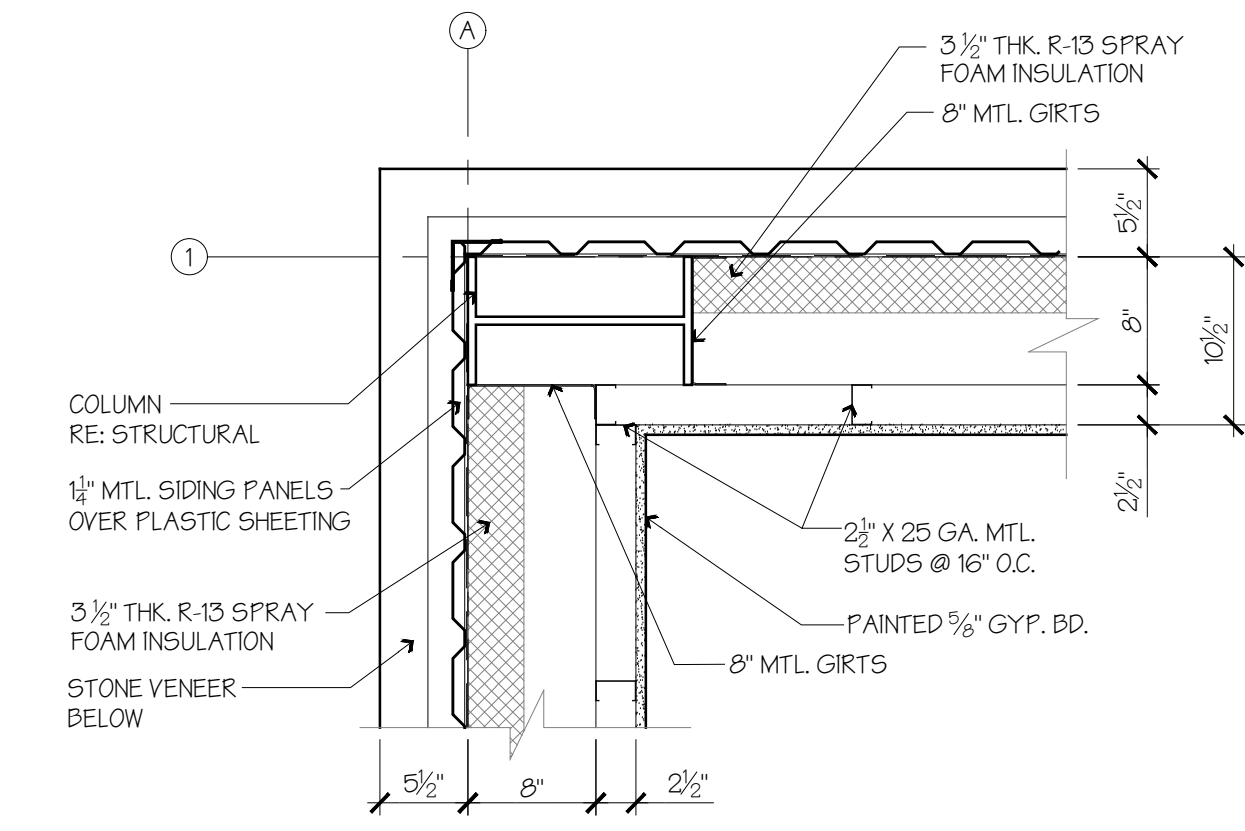
18 EXAM RM.
SCALE: 1/4"=1'-0"



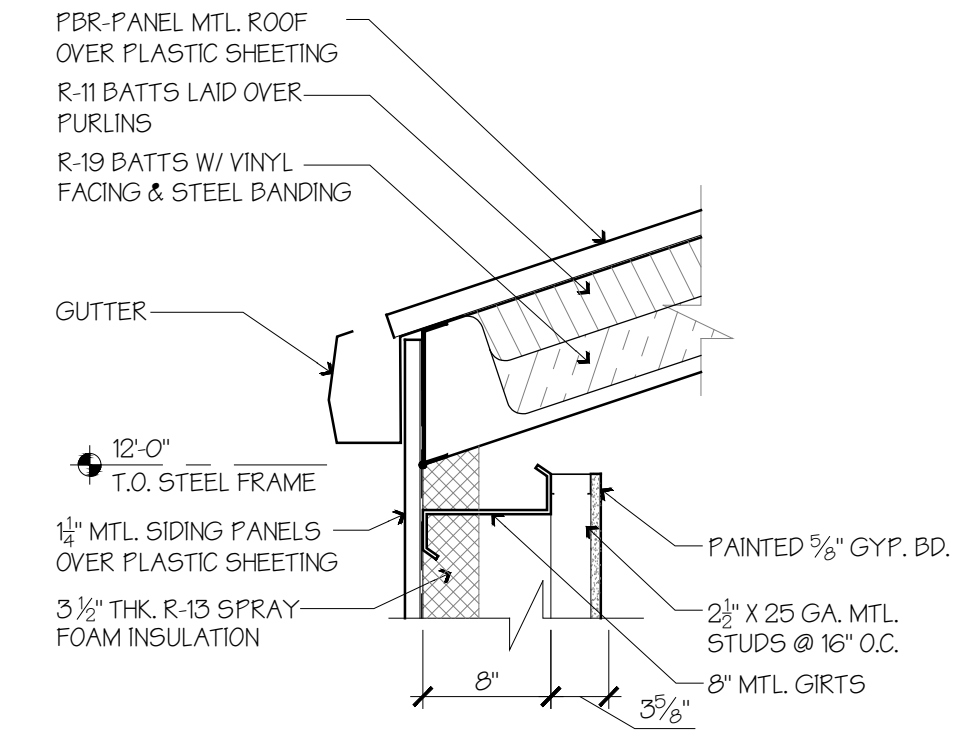
1 SECTION DETAIL
SCALE: 1"=1'-0"



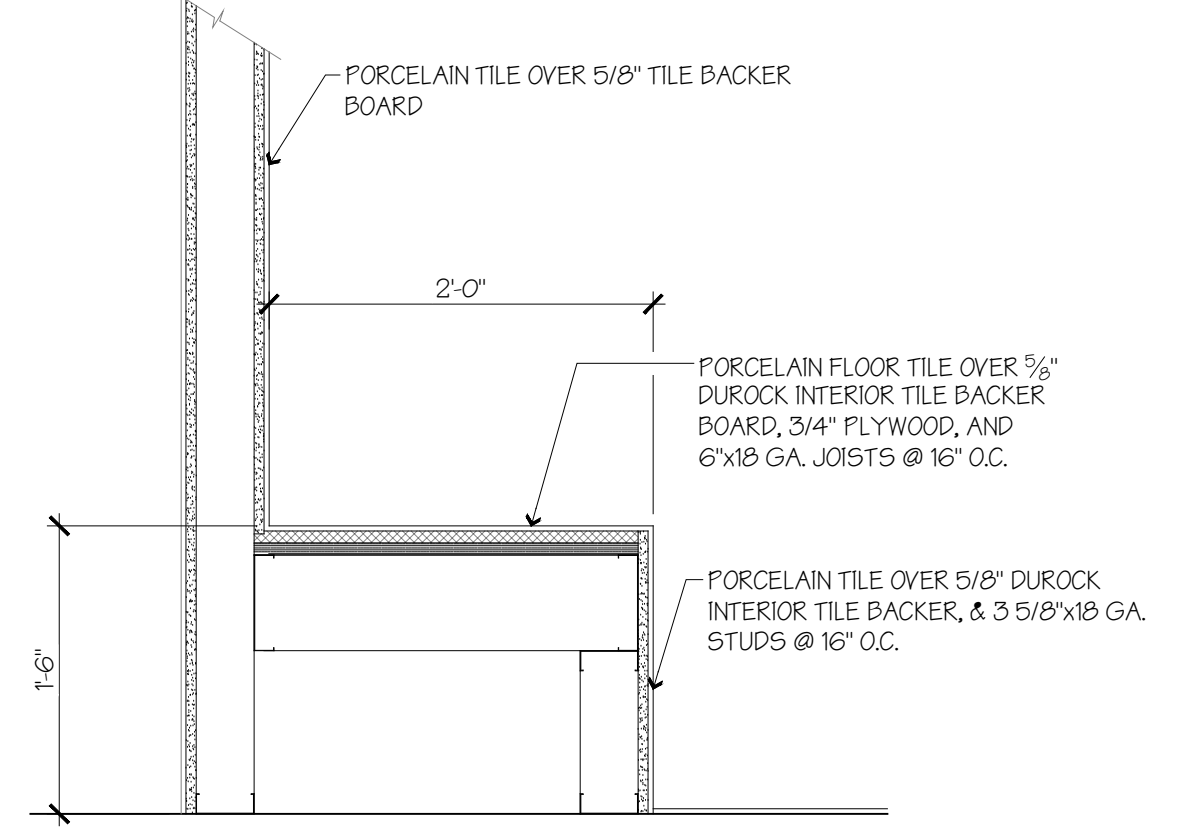
2 PLAN DETAIL
SCALE: 1"=1'-0"



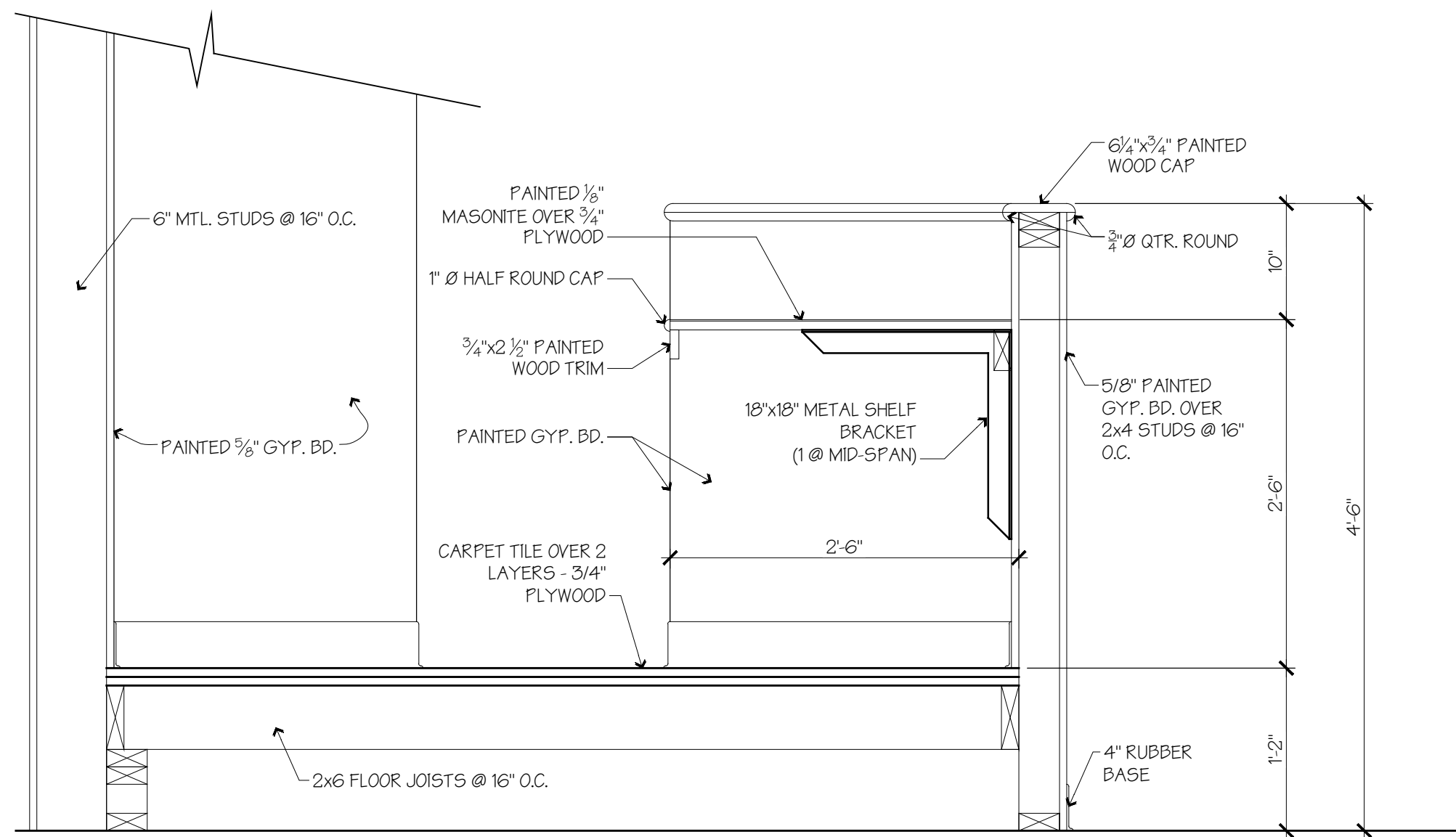
3 PLAN DETAIL
SCALE: 1"=1'-0"



4 SECTION DETAIL
SCALE: 1"=1'-0"



5 SECTION DETAIL
SCALE: 1"=1'-0"



7 SECTION @ AV BOOTH 100C
SCALE: 1"=1'-0"



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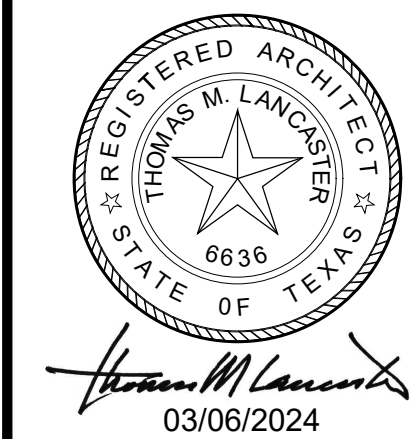
MIRACLE CITY - DAY CENTER
350 FOSTER DRIVE, CONROE, TEXAS 77301

ISSUE RECORD

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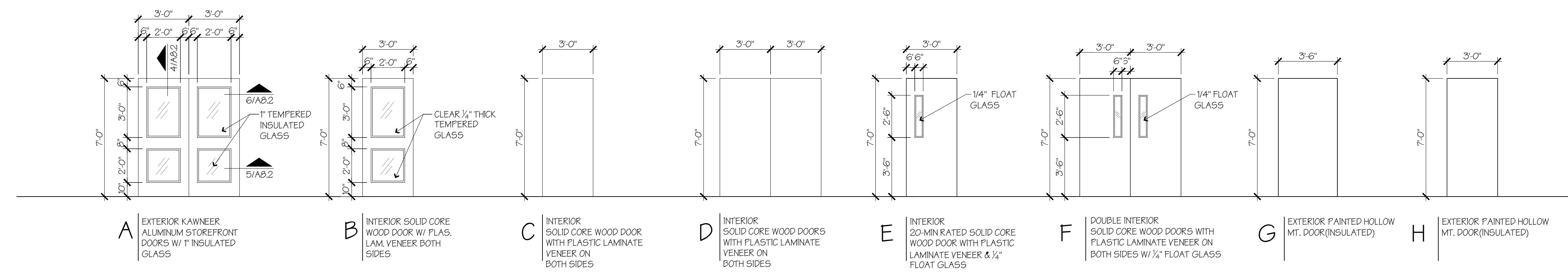
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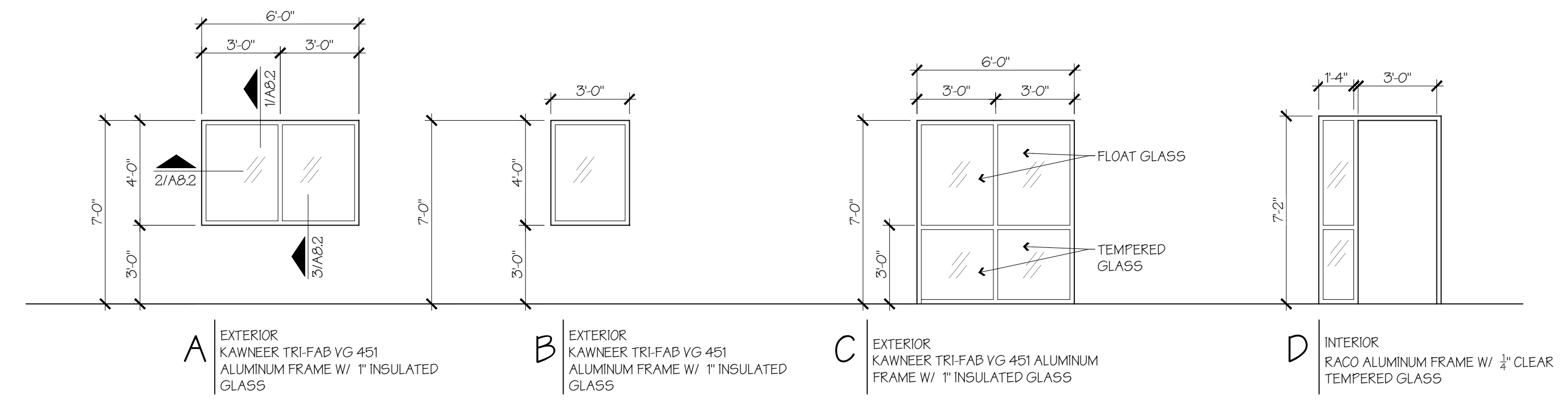
DOOR SCHEDULE

DOOR NUMBER	DOOR TYPE	FRAME TYPE	DOOR SIZE
FIRST FLOOR			
100	A	ALUM	FR. 3'-0" x 7'-0" x 1 3/4"
101A	E	RACO	3'-0" x 7'-0" x 1 3/4"
101B	E	RACO	3'-0" x 7'-0" x 1 3/4"
102A	E	RACO	3'-0" x 7'-0" x 1 3/4"
102B	G	STEEL	3'-6" x 7'-0" x 1 3/4"
103	C	RACO	3'-0" x 7'-0" x 1 3/4"
104	E	RACO	3'-0" x 7'-0" x 1 3/4"
105	E	RACO	3'-0" x 7'-0" x 1 3/4"
106	E	RACO	3'-0" x 7'-0" x 1 3/4"
107	B	RACO	3'-0" x 7'-0" x 1 3/4"
108	E	RACO	3'-0" x 7'-0" x 1 3/4"
109	E	RACO	3'-0" x 7'-0" x 1 3/4"
110	A	ALUM	3'-0" x 7'-0" x 1 3/4"
111	E	RACO	3'-0" x 7'-0" x 1 3/4"
112	E	RACO	3'-0" x 7'-0" x 1 3/4"
113	E	RACO	3'-0" x 7'-0" x 1 3/4"
114	F	RACO	FR. 3'-0" x 7'-0" x 1 3/4"
115	C	RACO	3'-0" x 7'-0" x 1 3/4"
116	C	RACO	3'-0" x 7'-0" x 1 3/4"
117A	C	RACO	3'-0" x 7'-0" x 1 3/4"
117B	C	RACO	3'-0" x 7'-0" x 1 3/4"
118	C	RACO	3'-0" x 7'-0" x 1 3/4"
119	C	RACO	3'-0" x 7'-0" x 1 3/4"
120	C	RACO	3'-0" x 7'-0" x 1 3/4"
121	D	RACO	3'-0" x 7'-0" x 1 3/4"
122	H	STEEL	3'-0" x 7'-0" x 1 3/4"



DOOR TYPES

SCALE: 1/4"=1'-0"



WINDOW TYPES

SCALE: 1/4"=1'-0"

FINISH SCHEDULE

ROOM #	Name	Floor	Base	West Walls	North Walls	East Walls	South Walls	Ceiling	COMMENTS
100A	Multi-purpose Rm.	Epoxy-finished conc.	4" rubber cove	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Exposed insulation & steel framing - painted	
100C	A/V Booth	Modular carpet	4" rubber cove	Painted gyp. bd.	Painted gyp. bd.	-	Painted gyp. bd.	Exposed insulation & steel framing - painted	
101	Serving	Epoxy-finished conc.	4" rubber cove	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Lay-in ceiling tiles	
102	Kitchen	Quarry tile	4" rubber cove	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Cleanable lay-in ceiling tiles	
103	Pantry	Quarry tile	4" rubber cove	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Lay-in ceiling tiles	
104	Laundry	Epoxy-finished conc.	4" rubber cove	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Lay-in ceiling tiles	
105	Resource Room	Epoxy-finished conc.	4" rubber cove	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Lay-in ceiling tiles	
106	Computer Rm.	Epoxy-finished conc.	4" rubber cove	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Lay-in ceiling tiles	
107	Admin.	Modular carpet	4" rubber cove	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Lay-in ceiling tiles	
108	Office	Modular carpet	4" rubber cove	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Lay-in ceiling tiles	
109	Office	Modular carpet	4" rubber cove	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Lay-in ceiling tiles	
110	Foyer	Epoxy-finished conc.	4" rubber cove	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Lay-in ceiling tiles	
111	Waiting Rm.	Epoxy-finished conc.	4" rubber cove	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Lay-in ceiling tiles	
112	Exam Rm.	Epoxy-finished conc.	4" rubber cove	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Lay-in ceiling tiles	
113	Exam Rm.	Epoxy-finished conc.	4" rubber cove	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Lay-in ceiling tiles	
114	Hall	Epoxy-finished conc.	4" rubber cove	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Lay-in ceiling tiles	
115	Women	Porcelain tile	Porcelain tile	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Lay-in ceiling tiles	
116	Men	Porcelain tile	Porcelain tile	& porcelain tile Painted gyp. bd.	& porcelain tile Painted gyp. bd.	& porcelain tile Painted gyp. bd.	& porcelain tile Painted gyp. bd.	Lay-in ceiling tiles	
117	Showers	Porcelain tile	Porcelain tile	& porcelain tile Painted gyp. bd.	& porcelain tile Painted gyp. bd.	& porcelain tile Painted gyp. bd.	& porcelain tile Painted gyp. bd.	Painted gyp. bd.	
118	I.T. Room	Epoxy-finished conc.	4" rubber cove	& porcelain tile Painted gyp. bd.	& porcelain tile Painted gyp. bd.	& porcelain tile Painted gyp. bd.	& porcelain tile Painted gyp. bd.	Lay-in ceiling tiles	
119	Janitor	Epoxy-finished conc.	Porcelain tile	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Painted gyp. bd.	Lay-in ceiling tiles	
120	Stair	Rubber treads/risers	4" rubber cove	& porcelain tile Painted gyp. bd.	& porcelain tile Painted gyp. bd.	& porcelain tile Painted gyp. bd.	& porcelain tile Painted gyp. bd.	None	
200	Mech. Loft	Plywood	None	Gyp. bd. taped & floated only	Gyp. bd. taped & floated only	Gyp. bd. taped & floated only	Gyp. bd. taped & floated only	None	

SPECIFICATIONS FOR:

**MIRACLE CITY
DAY CENTER**

CONROE, TEXAS

LANCASTER + WYATT



ARCHITECTS

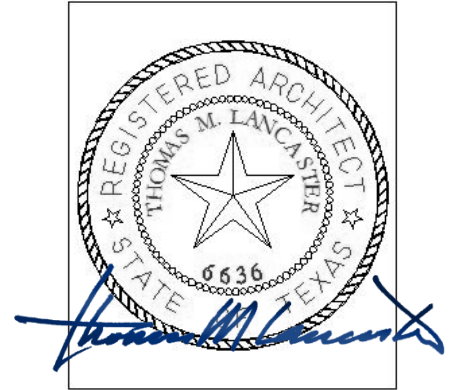


3/6/2024

Commission No. 2107

SPECIFICATIONS

**For the Construction of
Miracle City - Day Center
Conroe, Texas**



Owner: **Compassion United, Inc.**
350 Foster Drive
Conroe, Texas 77301
Tel. (936) 274-3799

Architect: **Lancaster + Wyatt Architects**
10655 Six Pines Dr., Suite 290
The Woodlands, Texas 77380
Tel. (281) 364-1666

**Civil & MEP Engineering
Consultant:** **Quest Engineering**
304 N. Main St., Suite 1
Conroe, TX 77301
Tel. (713) 252-3729

**Structural Engineering
Consultant:** **Integrity Structural Corp.**
12777 Jones Rd., Suite 388
Houston, TX 77070
Tel. (281) 894-7099

Date: March 6, 2024

Commission No. 2107

SPECIFICATIONS

**For the Construction of
Miracle City - Day Center
Conroe, Texas**



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Commission No. 2107

SPECIFICATIONS

For the Construction of
Miracle City - Day Center
Conroe, Texas



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DIVISION ONE - GENERAL REQUIREMENTS

SUMMARY OF WORK

PART ONE - GENERAL

1.1 DESCRIPTION

- A. This Contract shall include the furnishing of all materials, labor, tools, appliances, and facilities required to construct the Miracle City - Day Center, as specified or described herein.
- B. All Work shall be in accordance with the General Conditions, Supplementary Conditions, the General Requirements, the Drawings and Addenda or Revisions thereto, the Specifications and Addenda thereto, other conditions set forth in the Agreement between Owner and Contractor, and Change Orders issued subsequent to the Agreement.

1.2 LOCATION OF THE PROJECT

- A. 350 Foster Drive, Conroe, TX, 77301

1.3 COPIES FURNISHED AND OWNERSHIP OF CONTRACT DOCUMENTS

- A. Upon award of the Contract, the Contractor shall be furnished five (5) complete sets of the Drawings and Specifications by the Owner, or as otherwise agreed between Owner and Contractor.
- B. All Drawings and Specifications shall remain the property of the Work, except for one Contract Set each for Owner and Contractor.

1.4 DRAWINGS AND SPECIFICATIONS AT THE SITE

- A. Maintain one copy of all Drawings, Specifications, Addenda, approved Shop Drawings, Change Orders, and other pertinent documents at the site in good order, marked to record all changes made during construction.

END OF SECTION

DIVISION ONE - GENERAL REQUIREMENTS

COORDINATION

PART ONE - GENERAL

1.1 SUMMARY

- A. This Section shall not be interpreted to relieve Contractor of his sole responsibility for supervision and coordination of all construction procedures as provided herein and in Contract Conditions.
- B. **Contractor Requirements:**
 - 1) Be responsible for supervising and directing Work, using his best skill and attention.
 - 2) Be solely responsible for all construction means, methods, techniques, sequences and procedure, and coordination of all portions of Work under Contract.
 - 3) Be responsible for acts and omissions of his Employees, Subcontractors and their Agents and Employees.
- C. Contractor shall not be relieved from his obligation to perform Work complying with Contract Documents, either by activities of Architect in his administration of Contract or by inspections, tests, or approvals required to substantiate Contract compliance.
- D. Provisions of this Section are considered minimal for orderly and expeditious prosecution of Work. Complete in timely manner consistent with schedules set by the Contractor and agreed to by the Owner.
- E. **Related Sections:**
 - 1) **Section 01320:** Progress Schedules.
 - 2) **Section 01330:** Submittals and Substitutions.
 - 3) **Section 01450:** Testing Laboratory Services.
 - 4) **Section 01740:** Cleaning.
 - 5) **Section 01770:** Project Closeout.

1.2 ORDERING PRODUCTS

- A. Before ordering materials, equipment, custom or standard fabricated items, verify the following provisions.

DIVISION ONE- GENERAL REQUIREMENTS

COORDINATION

- 1) Each item complies with Contract Documents.
- 2) Each properly relates to Work already completed.
- 3) Shop Drawings or other submittals comply with "1." and "2." above.
- 4) Orders are placed; and delivery dates are established allowing orderly execution of Work on schedule and not allowing untimely delivery of critically sensitive products before project site conditions are satisfactory to receive them.

1.3 COORDINATION AMONG TRADES

- A. Initiate coordinating procedures before Work in field begins. Resolve scheduling, sequencing, interferences, and priorities of oncoming simultaneous Work among interested parties to achieve specified results, and to advance planned progress of project.
- B. Continue coordinating procedures by actively controlling project conditions as follows:
 - 1) Verify products of all trades are stored in orderly fashion under conditions complying with Manufacturer's instructions or specific requirements of relevant Specification Section whichever requirement is more stringent at planned locations.
 - 2) Verify compliance of environmental conditions before, during, and after execution of Work, with Manufacturer's instructions and specific requirements of relevant Sections of these Specifications.
 - 3) Verify adherence to specified tolerances as Work progresses.
 - 4) Inspect job conditions before one trade follows another in compliance with these Specifications.
 - a. Plan joint inspections involving interested parties.
 - b. Schedule inspections one week in advance, with notices sent to interested parties.
 - c. Review of job conditions, in part or in whole, by Architect in no way relieves Contractor of his obligation to provide various stages of Work as well as finished Work complying with Contract Documents.
 - d. Allowing Work to proceed over unsatisfactory conditions preventing execution of new Work as specified is prohibited.

DIVISION ONE - GENERAL REQUIREMENTS

COORDINATION

- C. **Make adjustments in planned procedures as changing job conditions require. Immediately advise all parties involved of required changes in construction schedule and planned procedure.**

1.4 COOPERATION WITH OTHER CONTRACTORS

- A. **This Contractor shall cooperate with other prime Contractors performing Work under separate Contracts.**
 - 1) **Share the site.**
 - 2) **Properly time and coordinate the Work so as to bring together, connect, and join the materials, finishes, grades, levels, mechanical, electrical, and plumbing Work shown on the Drawings and described herein.**
- B. **Other Contractors will be required to cooperate to the same end with the Contractor performing the Work of this Contract.**

1.5 SAFETY PROGRAM

- A. **Subcontractors shall implement requirements of and abide by the Contractor's established jobsite safety program.**

END OF SECTION

DIVISION ONE - GENERAL REQUIREMENTS

PROGRESS SCHEDULES

PART ONE - GENERAL

1.1 SUMMARY

A. Requirements:

- 1) **Contractor:** Prepare and submit to Architect estimated construction progress schedules for Work, with sub-schedules of related activities which are essential to its progress. Contractor may use his standard form, but a horizontal bar chart is suggested, including the following:
 - a. Horizontal bar for each trade or operation.
 - b. Horizontal time schedule, identifying first workday of each week.
 - c. Chronological order of beginning of each item of Work, and projected date for completion.
 - d. Complete sequence of construction by activity.
 - e. Percentage of completion for each item, as of date of current Application for Payment.
 - f. Minimum sheet size: 17"x11".
- 2) **Subcontractor:** Promptly after award of Contract, prepare and submit to Contractor estimated construction Progress Schedule for Work, with sub-schedules of related activities which are essential to its progress.
- 3) Submit revised Progress Schedule with monthly request for payment.

B. Related Sections:

- 1) Conditions of the Contract.
- 2) **Section 01330:** Submittals and Substitutions.
- 3) **Section 01770:** Project Closeout.

1.2 SCHEDULE CONTENT

A. Progress Schedule: Indicate the following:

- 1) Complete sequence of construction by activity.

DIVISION ONE - GENERAL REQUIREMENTS

PROGRESS SCHEDULES

- 2) Dates for beginning and completion of each element of construction.
 - 3) Projected percentage of completion for each item, as of first day of each month.
- B. **Submittals Schedule:** On shop drawings, product data, and samples, indicate the following:
- 1) Dates for Contractor's submittals.
 - 2) Dates approved submittals will be required from Architect.

1.3 SUBMISSIONS

- A. Submit initial schedules within 10 days after award of Contract. Architect will review schedules and return review copy within ten days after receipt. If required, resubmit within 7 days after return of review copy.
- B. Submit revised progress schedules with each monthly application for payment.

1.4 DISTRIBUTION

- A. Distribute copies of reviewed schedules to jobsite file, Subcontractors, and other concerned parties.
- B. Instruct recipients to report promptly to Contractor, in writing, any problems anticipated by projections shown in schedules.

END OF SECTION

DIVISION ONE - GENERAL REQUIREMENTS

SUBMITTALS AND SUBSTITUTIONS

PART ONE - GENERAL

1.1 DESCRIPTION

A. Work Included:

- 1) Wherever possible throughout the Contract Documents, the minimum acceptable quality of workmanship and materials has been defined by Manufacturer's name and catalog number, with reference to recognized industry and government standards, or description of required attributes and performance.
- 2) To ensure that the specified products are furnished and installed in accordance with design intent, procedures have been established for advance submittal of design data and for their review by the Architect.
- 3) Make all submittals required by the Contract Documents, and revise and resubmit as necessary to establish compliance with the specified requirements.

B. Related Work Described Elsewhere: Individual requirements for submittals are described in pertinent other Sections of these Specifications.

PART TWO - PRODUCTS

2.1 SCHEDULES AND REPORTS

A. Within 15 days after notification of the Owner's intent to proceed with award of the Contract, Contractor shall submit in duplicate:

- 1) The Schedule of Values, on AIA Document G703 in accordance with the requirements of the General Conditions, listing the value of the various portions of the Work.
- 2) The list of major Subcontractors on AIA Document G805.
- 3) Certificates of Insurance, AIA Document G705, in accordance with the requirements of the General Conditions.
- 4) Progress Schedules in accordance with Section 01320.

2.2 SHOP DRAWINGS

A. Make all Shop Drawings accurately to scale sufficiently large to show all pertinent aspects of the item and its method of connection to the Work.

DIVISION ONE - GENERAL REQUIREMENTS

SUBMITTALS AND SUBSTITUTIONS

- B. Where contents of submitted literature from Manufacturers include data not pertinent to the submittal, clearly indicate which portion of the contents is being submitted for review.
- C. Submit the number of copies which are required to be returned, plus two copies which will be retained by the Architect.

2.3 SAMPLES

- A. Samples shall be of the precise article proposed to be furnished.
- B. Unless otherwise specified, submit all samples in the quantity required to be returned, plus one which will be retained by the Architect.
- C. In situations specifically approved by the Architect, the Architect's retained sample may be used in the construction as one of the installed items.

2.4 COLORS AND PATTERNS

- A. Unless the precise color and pattern is specifically described in the Contract Documents, and whenever a choice of color or pattern is available in a specified product, submit accurate color and pattern charts to the Architect for review and selection.

2.5 SUBSTITUTIONS

- A. **Approval Required:**
 - 1) The Contract is based on the standards of quality established in the Contract Documents.
 - 2) Do not substitute materials or equipment unless such substitutions have been specifically approved for this Work by the Architect.
 - 3) The decision of the Architect shall be final.

PART THREE - EXECUTION

3.1 IDENTIFICATION OF SUBMITTALS

- A. Consecutively number all submittals and accompany each submittal with a letter of transmittal containing all pertinent information required for identification and checking.
- B. When material is resubmitted for any reason, transmit under a new letter of transmittal and with a new submittal number.

DIVISION ONE - GENERAL REQUIREMENTS

SUBMITTALS AND SUBSTITUTIONS3.2 COORDINATION OF SUBMITTALS

- A. **General:** Prior to submittal for approval, use all means necessary to fully coordinate all material including, but not necessarily limited to:
- 1) Determine and verify all interface conditions, catalog numbers, and similar data.
 - 2) Coordinate with other trades as required.
 - 3) Clearly indicate all deviations from requirements of the Contract Documents.
- B. **Grouping of Submittals:** Unless otherwise specified, make all submittals in groups containing all associated items to ensure that information is available for checking each item when it is received. Partial submittals may be rejected as not complying with the provisions of the Contract Documents and the Contractor shall be strictly liable for all delays so occasioned.

3.3 TIMING OF SUBMITTALS

- A. **General:** Make all submittals far enough in advance of scheduled dates for installation to provide all time required for reviews, for securing necessary approvals, for possible revisions and re-submittals, and for placing orders and securing delivery.
- B. **Architect's Review Time:** In scheduling, allow at least 10 calendar days for review by the Architect following his receipt of the submittal.
- C. **Delays:** Delays caused by tardiness in receipt of submittals will not be an acceptable basis for extension of the Contract completion date.

3.4 ARCHITECT'S REVIEW

- A. **General:** Review by the Architect shall not be construed as a complete check, but only that the general method of construction and detailing is satisfactory.
- B. **Authority to Proceed:** The notation "Reviewed, no exception noted" or "Reviewed, exceptions noted" authorize the Contractor to proceed with fabrication, purchase, or both, of the items so noted, subject to the revisions, if any, required by the Architect's review comments.
- C. **Revisions:** Make all revisions required by the Architect. If the Contractor considers any required revision to be a change, he shall notify the Architect as provided for under "Changes" in the General Conditions. Show each Drawing revision by number, date, and subject in a revision block on the Drawing. Make only those revisions directed or approved by the Architect.

DIVISION ONE - GENERAL REQUIREMENTS

SUBMITTALS AND SUBSTITUTIONS

- D. **Revisions after Approval:** When a submittal has been reviewed by the Architect, re-submittal for substitution of materials or equipment will not be considered unless accompanied by an acceptable explanation as to why the substitution is necessary.

END OF SECTION

DIVISION ONE - GENERAL REQUIREMENTS

TESTING LABORATORY SERVICES

PART ONE - GENERAL

1.1 TESTING LABORATORY

- A. The Owner shall select, engage and pay for the services of an independent testing laboratory to perform the services required under this Section of the Specifications. This in no way relieves the Contractor of his responsibility to fully comply with the Contract Documents.

- B. **Laboratory Shall:**
 - 1) Reject materials not conforming to applicable Specifications and notify the Owner and Contractor, immediately.

 - 2) Submit written test reports, promptly conveying applicable information for each test and inspection in the following quantities:

Architect -	1 copy
Structural Engineer -	1 copy
General Contractor -	1 copy
Owner -	1 copy

 - 3) Conduct test methods in accordance with requirements of these Specifications. Where test requirements are not specified, laboratory shall conduct tests and inspection in accordance with applicable ASTM Specifications, latest revisions thereto.

 - 4) Cooperate fully with the Architect and the Contractor; provide qualified inspection personnel promptly, when given proper notice; and acquaint Contractor with responsible person or persons within laboratory organization to whom notice is to be given.

 - 5) Review final concrete mix design before beginning of concrete operations, and report to the Owner's Representative and the Architect if proportions appear to be improper in any respect.

- C. **Contractor Shall:**
 - 1) Make available to laboratory samples of all materials specified to be tested, in quantities specified.

 - 2) Assist laboratory, as is necessary, in order to obtain samples at jobsites.

 - 3) Advise laboratory, in advance, as to sources of materials and instruct suppliers of these materials to cooperate with laboratory, as necessary, to achieve inspections.

DIVISION ONE - GENERAL REQUIREMENTS

TESTING LABORATORY SERVICES

- 4) Give notice to laboratory, approximately 24 hours in advance of operations requiring presence of laboratory personnel, to allow for completion of initial tests and assignments of personnel.

PART THREE - EXECUTION

3.1 CONCRETE PROGRESS TEST CYLINDERS

- A. During the progress of the concrete Work, all specimens and samples for testing shall be taken by laboratory testing personnel. Test shall be conducted in conformity with the procedures set forth in ASTM Specifications C31, latest revision and C39, latest revision.
 - 1) Each test shall consist of four specimens, two of which shall be broken at 7 days and the other two at 28 days for all concrete.
 - 2) At least one test set shall be made of each day's pouring per class of concrete.
 - 3) Additional tests shall be taken whenever any unusual circumstances in connection with the Work, in the opinion of the Architect, constitute cause for extra tests.
- B. **Core Tests:**
 - 1) If the average strength of the laboratory control cylinders should fall so low as to cause the Architect to so require, load or core tests shall be made on the structure to which the unsatisfactory test reports apply.
 - 2) Core tests, if required, shall be made in conformance with the procedure set forth in ASTM Specifications C42, latest revision.
 - 3) If the results of the load or core tests indicate, in the opinion of the Architect, that the strength of the structure is inadequate, structural replacement or strengthening as ordered by the Architect shall be provided by the Contractor at no cost to the Owner.

3.2 SLUMP TESTS

- A. Make test at the place of deposit and in accordance with ASTM C143, latest revision.
- B. Where 25 or more cubic yards of concrete are placed, and as necessary to maintain desired consistency of the concrete, a slump test shall be made.

DIVISION ONE - GENERAL REQUIREMENTS

TESTING LABORATORY SERVICES

- C. Not less than one such test shall be made for each 50 cubic yards of concrete placed in one operation.

3.3 SOIL COMPACTION TESTING

- A. Make field density tests on each compacted lift of the earth fill, backfill, and scarified virgin soil, if any, on sub-grades under foundations and floor slabs on grade, and under surrounding soil areas and paving areas, including proctor density laboratory control tests.
- B. Satisfactory results in compliance with these Specifications (Division Two) are to be obtained on each lift of backfill and on compacted granular fill prior to proceeding with the Work.

3.4 STEEL CONNECTIONS & WELDS

- A. Bolted connections shall be inspected by the Testing Laboratory in accordance with AISC Specifications for "Structural Joints Using ASTM A-325 or A-490 Bolts".
- B. Field welding shall be inspected and tested by the Fabricator during fabrication and by Testing Laboratory during erection of structural steel as follows:
 - 1) Certify all welders and make inspections and tests as required. Record types and locations of all defects found in the Work, and measures required and performed to correct such defects.
 - 2) In addition to visual inspection of all welds, magnetic particle, ultra-sonic and/or radiographic inspection shall be made of all welds so indicated on the Drawings. Magnetic particles inspection shall be made on the root pass and finished weld.
 - a. The method of magnetic particle inspection shall be in accordance with ASTM E109. Any type of crack or zone of incomplete fusion or penetration will not be acceptable.
 - b. Radiographic inspection technique and standards of acceptance shall be in accordance with AWS D1.1.
 - c. Ultra-sonic inspection shall be performed in accordance with AWS D1.1.
 - 3) Fabricator shall provide copies of all tests (4 copies) to the Architect for distribution to parties.

END OF SECTION

DIVISION ONE - GENERAL REQUIREMENTS

TEMPORARY FACILITIES

PART ONE - GENERAL

1.1 DESCRIPTION

A. **Work Included:** Temporary facilities required for this Work include, but are not necessarily limited to:

- 1) Temporary utilities such as water, electricity, heat and ventilation, and telephone.
- 2) Field offices and sheds.
- 3) Sanitary facilities.
- 4) Pumping, shoring, barricades and coverings.
- 5) Fencing of the construction area.
- 6) Storage of materials and site security.

B. **Related Work Described Elsewhere:**

- 1) Except that all equipment furnished by Subcontractors shall comply with all requirements of pertinent safety regulations, the ladders, planks, hoists, and similar items normally furnished by the individual trades in execution of their own portions of the Work are not part of this Section.
- 2) Permanent installation and hook-up of the various utility lines are described in the other pertinent Sections of these Specifications.

1.2 JOB CONDITIONS

A. Make all required connections to existing utility systems with minimum disruption to services in the existing utility systems. When disruption of the existing service is required, do not proceed without the Architect's approval and, when required, provide alternate temporary service.

PART TWO - PRODUCTS

2.1 UTILITIES

A. **General:** The Contractor shall make arrangements for and pay all costs of necessary utilities required during the construction period for the completion of this Work.

DIVISION ONE - GENERAL REQUIREMENTS

TEMPORARY FACILITIES

- B. **Water:** Furnish and install all necessary temporary water lines and water supply and, upon completion of the Work, remove all such temporary facilities.
- C. **Electricity:**
- 1) Furnish and install all necessary temporary wiring and, upon completion of the Work, remove all such temporary facility.
 - 2) Furnish and install area distribution boxes so located that the individual trades may use 100' maximum length extension cords to obtain adequate power and artificial lighting at all points where required for the Work, for inspection and for safety.
- D. **Temporary Lighting:** Provide the following minimum light levels for construction purposes:
- 1) **General Construction & Safety Lighting:** Five foot-candles.
 - 2) **Finishing Work & Testing:** 25 foot-candles.
- E. **Temporary Heat & Ventilation:**
- 1) Provide temporary heat in enclosed spaces to provide minimum temperatures of 40° F until time Finishing Work begins.
 - 2) After building is totally enclosed and installation of finishes begins, maintain spaces in temperature range of 60°F to 80°F at all times, except as may be required by product Manufacturers for proper product installation and performance. Maintain until date of substantial completion.
 - 3) Maintain relative humidity in normal range in enclosed spaces after building is enclosed and installation of finishes begins; except as may otherwise be required by product Manufacturers for proper product installation and performance.
 - 4) Provide reasonable ventilation to prevent accumulation of dust, fumes, or gasses; and to properly cure materials and disperse humidity.
- F. **Telephone:** Make all necessary arrangements and pay all costs for installation of telephone service to the Contractor's office at the site and for local service. Long distance and toll calls shall be paid for by the person making the call.
- G. **Utilities for Testing:** Normal quantities of utilities required to make final tests of completely installed permanent systems will be furnished.

DIVISION ONE - GENERAL REQUIREMENTS

TEMPORARY FACILITIES

2.2 FIELD OFFICES AND SHEDS

- A. Provide a field office building and sheds adequate in size and accommodation for all Contractor's construction office, supply and storage. Consult Architect regarding location.
- 1) The construction office shall have sufficient file space to accommodate a set of the Drawings and Specifications, Shop Drawings and correspondence concerning the project.
 - 2) The construction office shall be furnished with a desk, chairs, layout table and telephone, and adequate means of heating and cooling.
 - 3) The entire facility, including furniture, will remain the property of the Contractor and shall be removed from the site after completion of the Work, leaving the premises in clean and orderly condition.

2.3 SANITARY FACILITIES

Provide temporary sanitary facilities in the quantity required, for use of all personnel. Maintain in a neat and sanitary condition at all times, in compliance with the requirements of the city, state or other governmental agencies having jurisdiction in this regard.

2.4 ENCLOSURES

Furnish, install and maintain for the duration of construction all required scaffolds, tarpaulins, barricades, canopies, warning signs, steps, bridges, platforms, and other temporary construction necessary for proper completion of the Work in compliance with all safety and other regulations.

2.5 PROJECT SIGNS

Allow no signs or advertising of any kind on the job site except as specifically approved in advance by the Architect.

2.6 FENCING OF THE CONSTRUCTION AREA

General: Furnish and install a temporary fence around construction areas on the site, as shown on the Drawings, or as mutually agreed to by Owner and Contractor for protection of persons or property.

2.7 STORAGE OF MATERIALS & SITE SECURITY

DIVISION ONE - GENERAL REQUIREMENTS

TEMPORARY FACILITIES

- A. Provide and maintain adequate, substantial and watertight storage facilities for materials subject to damage by the weather.
- B. Determine with Architect or Owner suitable location for storage facilities.
- C. The Contractor, at his option and own expense, may erect a chain link security fence around the storage area.
- D. The Contractor shall establish and maintain rules for fire prevention and control, prohibit burning of trash at the site, and provide equipment for emergency fire-fighting.
- E. The Contractor, at his option and own expense, may provide a watchman, or other approved means, to maintain site security during construction. The Owner will not provide site security.

PART THREE - EXECUTION

- A. Maintain all temporary facilities and controls as long as needed for the safe and proper completion of the Work. Remove all such temporary facilities and controls as rapidly as progress of the Work will permit, or as directed by the Architect.

END OF SECTION

DIVISION ONE - GENERAL REQUIREMENTS

CLEANING

PART ONE - GENERAL

1.1 DESCRIPTION

- A. Contractor shall keep building and site in orderly condition at all times. Remove trash and debris as it accumulates, particularly waste from food and its containers.
- B. Comply with all requirements for cleaning up as described in various other Sections of these Specifications.

PART TWO - PRODUCTS

- A. Provide all required personnel, equipment and materials needed to maintain the specified standard of cleanliness.
- B. Use only cleaning materials and equipment which are compatible with the surface being cleaned, as recommended by the manufacturer of the material or as approved by the Architect.

PART THREE - EXECUTION

3.1 PROGRESS CLEANING

- A. **General:**
 - 1) At least twice each month, and more often if necessary, completely remove all scrap, debris, and waste material from the job site.
 - 2) Provide adequate storage for all items awaiting removal from the job site, observing all requirements for fire protection and protection of the ecology.
- B. **Site:**
 - 1) Daily inspect the site to verify that requirements of cleanliness are being met.
 - 2) Waste material including but not limited to concrete, cement slurries, mortar, lime and plaster and the like shall be limited to one area on the site to be designated by Architect and/or Owner.
 - 3) Before substantial completion such deposits shall be removed; and underlying earth restored to condition equal to that prior to such use.

DIVISION ONE - GENERAL REQUIREMENTS

CLEANING

C. Building:

- 1) On each Friday, inspect the building and pick up all scrap, debris, and waste material. Remove all such items to the place designated for their storage.
- 2) At the end of each workday, sweep all interior spaces clean. "Clean", for the purpose of this subparagraph, shall be interpreted as meaning free from dust and other material capable of being removed by use of reasonable effort and handheld broom.
- 3) As required preparatory to installation of succeeding materials, clean the structures or pertinent portions thereof to the degree of cleanliness recommended by the manufacturer of the succeeding material, using all equipment and materials required to achieve the required cleanliness.
- 4) Following the installation of finish floor materials, clean the finish floor daily (and more often, if necessary) while Work is being performed in the space in which finish materials have been installed. "Clean", for the purpose of this subparagraph, shall be interpreted as meaning free from all foreign material which, in the opinion of the Architect, may be injurious to the finish floor material.

3.2 FINAL CLEANING

- A. Definition: Except as otherwise specifically provided, "clean" (for the purpose of this Article) shall be interpreted as meaning the level of cleanliness generally provided by skilled cleaners using commercial quality building maintenance equipment and materials.
- B. General: Prior to completion of the Work, remove from the job site all tools, surplus materials, equipment, scrap, debris, and waste. Conduct final progress cleaning as described in Article 3.1 above.
- C. Site: Unless otherwise specifically directed by the Architect, broom clean all paved areas on the site and all public paved areas directly adjacent to the site. Completely remove all resultant debris.
- D. Structures:
 - 1) Exterior: Visually inspect all exterior surfaces and remove all traces of soil, waste material, smudges, and other foreign matter. Remove all traces of splashed materials from adjacent surfaces. If required to achieve a uniform degree of exterior cleanliness, hose down the exterior of the structure. In the event of stubborn stains not removable with water, the Architect may require light sand blasting or other cleaning at no additional cost to the Owner.

DIVISION ONE - GENERAL REQUIREMENTS

CLEANING

- 2) **Interior:** Visually inspect all interior surfaces and remove all traces of soil, waste material, smudges, and other foreign matter. Remove all traces of splashed materials from adjacent surfaces. Remove all paint droppings, spots, stains, and dirt from finished surfaces. Use only the specified cleaning materials and equipment.
 - 3) **Glass:** Clean all glass inside and outside.
 - 4) **Polished Surfaces:** To all surfaces requiring the routine application of buffed polish, apply the polish recommended by the Manufacturer of the material being polished.
- E. **Timing:** Schedule final cleaning as approved by the Architect to enable the Owner to accept a completely clean project.

3.3 CLEANING DURING OWNER'S OCCUPATION

- A. Should the Owner occupy the Work or any portion thereof prior to its completion by the Contractor and acceptance by the Owner, responsibilities for interim and final cleaning of the occupied spaces shall be as determined by the Architect in accordance with the General Conditions of the Contract.

END OF SECTION

DIVISION ONE - GENERAL REQUIREMENTS

PROJECT CLOSEOUT

PART ONE - GENERAL

1.1 DESCRIPTION

- A. To assist in calling attention to those procedures which the Contractor shall follow at the conclusion of the Work, this Section will define certain obligations which amplify the requirements of the General and Supplementary General Conditions.

PART TWO - REQUIREMENTS

2.1 MANUALS, INSTRUCTIONS AND KEYS

- A. Deliver to the Owner three (3) sets of printed or typewritten operating, servicing, maintenance and cleaning instructions and parts lists for all items installed hereunder; include equipment suppliers' and local representatives' names and addresses. Also deliver one neatly typed list of all paints used, giving location, manufacturer, type and color number for each product. The Owner will not accept this material in parts.
- B. Instruct Owner's representative in the operation of mechanical, electrical and other systems.
- C. Deliver keys to Owner with keying schedule; include all master and special keys and assist Owner's representative to deactivate construction keyed locks if used.
- D. Certificates of Inspection and Approvals: Collect and deliver to the Owner certificates of inspection, testing and approval as required by the General Conditions and other applicable authorities.
- E. Release of Liens: Deliver to Owner Releases of Liens signed by Contractor, all Subcontractors and material suppliers covering all work under the Contract, including all subcontractors, vendors, labor, materials, services, and suppliers, executed by an authorized officer and notarized.

2.2 GUARANTEES AND BONDS

- A. Have guarantees and bonds required on specific materials and workmanship as defined in the technical sections executed in the name of the Owner and delivered to the Owner prior to final payment.
- B. Specific requirements for warranties and guarantees are noted in various divisions of the technical specifications. Warranties and guarantees are required for, but not limited to the following:

DIVISION ONE - GENERAL REQUIREMENTS

PROJECT CLOSEOUT

- | | | |
|-----|--|----------|
| 1) | Termite Treatment | 5 years |
| 2) | Damp-proofing | 2 years |
| 3) | Sheetmetal & Flashing | 2 years |
| 4) | Caulking & Sealants | 2 years |
| 5) | Metal Doors & Windows | 2 years |
| 6) | Wood Solid Core Doors | Lifetime |
| 7) | Glazing | 2 years |
| 8) | Mirrors | 5 years |
| 9) | Louvers | 2 years |
| 10) | Mechanical Controls | 3 years |
| 11) | Compressors (parts only) | 5 years |
| 12) | Manufacturers warranties where called for in the Specifications. | |
| 13) | Contractor's 1-year general warranty and guarantee. | |

PART THREE - EXECUTION

3.1 PRE-FINAL INSPECTION

- A. When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected.
- B. Upon receipt of such a list from the Contractor, the Architect will schedule an inspection of the Work and prepare a similar "Punch List" of items remaining to be completed or corrected.
- C. Contractor will supply all ladders, tools, and equipment required to carry out the inspection.
- D. Contractor shall complete or correct items on the "Punch List" as soon as possible and notify the Architect that this has been accomplished.

DIVISION ONE - GENERAL REQUIREMENTS

PROJECT CLOSEOUT

3.2 FINAL INSPECTION

- A. Send written notice to the Owner when project is finally complete and the requirements of Part Two have been complied with.**
- B. Submit a final Application for Payment with all adjustments (3 copies).**
- C. Final inspection will be conducted within ten (10) days of receipt of written notice from the Contractor that the Work is ready for final inspection and acceptance, and after receipt of a final Application for Payment.**
- D. When the Work is found to be acceptable under the Contract Documents and the Contract fully performed, a final Certificate for Payment will be issued stating that to the best of the Architect's knowledge, information, and belief, and on the basis of his observations, the Work has been completed in accordance with the terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final certificate, is due and payable.**

END OF SECTION

DIVISION ONE - GENERAL REQUIREMENTS

PROJECT RECORD DOCUMENTS

PART ONE - GENERAL

1.1 DESCRIPTION

A. Work Included:

- 1) Throughout progress of the Work of this Contract, maintain an accurate record of all changes in the Contract Documents, as described in Article 3.1 of this Section.
- 2) Upon completion of the Work of this Contract, transfer the recorded changes to a set of Record Documents, as described in Article 3.2 of this Section.

B. Related Work Described Elsewhere:

- 1) Submittals: Section 01330.
- 2) Project Closeout: Section 01770.

1.2 QUALITY ASSURANCE

- A. Delegate the responsibility for maintenance of Record Documents to one person on the Contractor's staff as approved in advance by the Architect.
- B. Thoroughly coordinate all changes within the Record Documents, making adequate and proper entries on each page of Specifications and each sheet of Drawings and other Documents where such entry is required to properly show the change.
- C. Make all entries within 24 hours after receipt of information.

1.3 SUBMITTALS

- A. The Architect's approval of the current status of Record Documents will be a prerequisite to the Architect's approval of requests for progress payment and request for final payment under the Contract.
- B. Prior to submitting each request for progress payment, secure the Architect's approval of the Record Documents as currently maintained.
- C. Prior to submitting request for final payment, submit the final Record Documents to the Architect and secure his approval.

DIVISION ONE - GENERAL REQUIREMENTS

PROJECT RECORD DOCUMENTS

PART TWO - PRODUCTS

2.1 RECORD DOCUMENTS

- A. **Job Set:** Promptly following award of Contract, secure from the Architect, at no charge to the Contractor, one complete set of all Documents comprising the Contract.
- B. **Final Record Documents:** At the completion of the Contract, the Contractor will review the record set with the Architect and make necessary adjustments (including copying all information on a new set) as required. This set will be given to the Owner as the As-Built Set on Construction Drawings.

PART THREE - EXECUTION

3.1 MAINTENANCE OF JOB SET

- A. **Identification:** Immediately upon receipt of the job set described in Paragraph 2.1.A., identify each of the Documents with the title "RECORD DOCUMENTS - JOB SET."
- B. **Preservation:**
 - 1) Considering the Contract completion time, the probable number of occasions upon which the job set must be taken out for new entries and for examination, and the conditions under which these activities will be performed, devise a suitable method for protecting the job set.
 - 2) Do not use the job set for any purposes except entry of new data and for review by the Architect, until start of transfer of data to final Record Documents.
 - 3) Maintain the job set at the site of the Work.
- C. **Making Entries on Drawings:**
 - 1) Using an erasable colored pencil (not ink or indelible pencil), clearly describe the change by note and by graphic line, as required.
 - 2) Date all entries.
 - 3) Call attention to the entry by a "cloud" around the area or areas affected.

DIVISION ONE - GENERAL REQUIREMENTS

PROJECT RECORD DOCUMENTS

- 4) In the event of overlapping changes, different colors may be used for each of the changes.

D. Identify Entries on Drawings and Other Documents:

- 1) Where changes are caused by directives issued by the Architect, clearly indicate the change by note.
- 2) Where changes are caused by Contractor-originated proposals approved by the Architect, including inadvertent errors by the Contractor which have been accepted by the Architect, clearly indicate the change by note.

E. Conversion of Schematic Layout:

- 1) In most cases on the Drawings, arrangement of conduits and circuits, piping, ducts, and other similar items, is shown schematically and is not intended to portray precise physical layout. Final physical arrangement is as determined by the Contractor, subject to the Architect's approval. However, design of future modifications of the facility may require accurate information as to the final physical arrangement of items which are shown only schematically on the Drawings.
- 2) Show on the job set of Record Drawings the centerline of each run of items such as are described in Paragraph 3.1. E.
- 3) The Architect may waive the requirements for conversion of schematic data where, in the Architect's judgment, such conversion serves no beneficial purpose.

- F. Accuracy of Entries: Use necessary means to determine actual locations of the installed items.**

3.2 FINAL RECORD DOCUMENTS

- A. The purpose of the final Record Documents is to provide factual information regarding all aspects of the Work, both concealed and visible, to enable future modification of design to proceed without lengthy and expensive site measurements, investigation, and examination.
- B. Carefully review or transfer all change data shown on the job set of Record Drawings to a new set of prints coordinating the changes as required, and clearly indicating at each affected detail and other drawing the full description of all changes made during construction and the actual location of items described in Paragraph 3.1 E.

DIVISION ONE - GENERAL REQUIREMENTS

PROJECT RECORD DOCUMENTS

- C. If the Documents other than Drawings have been kept clean successfully during progress of the Work, and if entries have been sufficiently orderly thereon to the approval of the Architect, the job set of those Documents (other than Drawings) will be accepted by the Architect as final Record Documents for those Documents. If any such Document is not so approved by the Architect, secure a new copy of that Document from the Architect at the Architect's usual charge for reproduction; carefully transfer the change data to the new copy and to the approval of the Architect.**
- D. Submit the completed total set of Record Documents to the Architect as described in Paragraph 1.3 C. Participate in review meeting or meetings as required by the Architect, make all required changes in the Record Documents, and promptly deliver the final Record Documents to the Architect.**

3.3 CHANGES SUBSEQUENT TO ACCEPTANCE

- A. The Contractor shall have no responsibility for recording changes in the Work subsequent to acceptance of the Work by the Owner, except for changes resulting from replacements, repairs, and alterations made by the Contractor as part of his guarantee.**

END OF SECTION

DIVISION ONE - GENERAL REQUIREMENTS OPERATION AND MAINTENANCE DATA

PART ONE - GENERAL

1.1 DESCRIPTION

- A. **Furnish and deliver the operation and maintenance data described in this Section and in pertinent other Sections of these Specifications.**
- B. **Make all submittals in strict accordance with the provision of Section 01330.**
- C. **Required contents of submittals may also be amplified in the pertinent other Sections.**

1.2 SUBMITTALS

- A. **Final: Unless otherwise directed in the other pertinent Sections, or in writing by the Architect, submit three copies of the final Manual to the Architect prior to indoctrination of Owner's operation and maintenance personnel.**

PART TWO - EXECUTION

2.1 INSTRUCTION MANUALS

- A. **General: Where instruction manuals are required to be submitted under other Sections of these Specifications, prepare in accordance with the following:**
- B. **Format:**
 - 1) **Size: 8-1/2" x 11".**
 - 2) **Paper: White bond, at least 20-lb. weight.**
 - 3) **Text: Neatly typewritten.**
 - 4) **Drawings: 11" in height preferable; bind in with text; foldout acceptable; larger drawings acceptable, but fold to fit within the manual and provide a drawing pocket inside rear cover or bind in with text.**
 - 5) **Flysheets: Separate each portion of the manual with neatly prepared flysheets briefly describing contents of the ensuing portions; flysheets may be in color.**
 - 6) **Binding: Use heavy-duty plastic or cardboard covers with binding mechanism concealed inside the manual; 3-ring binders will be acceptable.**
 - 7) **Measurements: Show the U. S. measurements.**

DIVISION ONE - GENERAL REQUIREMENTS OPERATION AND MAINTENANCE DATA

- C. **Covers: Provide front and back covers for each manual, using durable material. Clearly identify the manual on or through the front cover with at least the following information:**

OPERATING AND MAINTENANCE INSTRUCTIONS

NAME OF PROJECT

ADDRESS OF PROJECT

NAME OF CONTRACTOR

GENERAL SUBJECT OF THIS MANUAL

SPACE FOR ARCHITECT'S APPROVAL AND DATE

- D. **Contents: Include at least the following:**

- 1) **Neatly typewritten index near the front of the manual, giving immediate information as to location within the manual of all emergency data regarding the installation.**
- 2) **Complete instructions regarding operation and maintenance of all equipment involved, including lubrication, disassembly, reassembly and nomenclature of all parts of the equipment.**
- 4) **Complete nomenclature and part numbers of all replaceable parts, name and address of nearest vendor, and all other pertinent data regarding procurement procedure.**
- 5) **Electrostatic copy of all guarantees and warranties issued.**
- 6) **Manufacturers' bulletins, cuts and descriptive data, where pertinent, clearly indicating the precise items included in this installation and deleting, or otherwise clearly indicating, all Manufacturers' data with which this installation is not concerned.**

END OF SECTION

DIVISION TWO - SITEWORK

SUBSURFACE INVESTIGATION

PART ONE - GENERAL

1.1 DESCRIPTION

- A. **General:** A soils investigation report, dated 12-13-2022, has been prepared for the site of this Work by Lone Star Geotechnical & Testing Laboratory, Inc., P.O. Box 60791, Houston, Texas 77205, tel: (281) 441-1462, hereinafter referred to as the Soil Engineer.
- B. **Availability:** A copy of the report is included within these Specifications.
- C. **Use of Data:**
 - 1) This report was obtained only for the Architect's use in design and is not a warranty of subsurface conditions.
 - 2) The Contractor should visit the site and acquaint himself with all existing conditions. Prior to signing a Contract with the Owner, the Contractor may make his own subsurface investigations to satisfy himself as to site and subsurface conditions, but all such investigations shall be performed only under time schedules and arrangements approved in advance by the Owner's Representative.

1.2 QUALITY ASSURANCE

- A. **Soil Engineer:** May be retained by the Owner to observe performance of Work in connection with excavating, trenching, filling, backfilling, and grading.
- B. **Adjustment of work:** Re-adjust all Work performed that does not meet technical or design requirements; but make no deviations from the Contract Documents without specific approval from the Owner's Representative.

END OF SECTION



LONE STAR GEOTECHNICAL & TESTING LABORATORY, INC.

P.O. BOX 60791 • HOUSTON, TEXAS 77205

(281) 441-1462 • FAX: (281) 441-2367

Texas Registered Engineering Firm F-2615

December 13, 2022

Jeff Swift
Compassion United
P. O. Box 2582
Conroe, Texas 77305

Re: Soil Foundation Investigation
Additional Buildings Miracle City Phase 2
on Foster Drive & Cypress Lane (Tract 5E)
Conroe, Montgomery County, Texas

Project No.: 2211-007
Report No.: 2211007-1

Dear Jeff,

We are pleased to submit this report on the soil foundation investigation made at the site referenced above.

This investigation reveals loose sand, underlain by stiff to hard, low to medium plasticity sandy clay, extending to the maximum explored depth. This soil is suitable for shallow foundations or drilled pier foundations with considerations as addressed in this report.

For a pier supported structure, it is recommended that the structural loads be supported on drilled piers founded at the 11-foot depth below existing grade and be proportioned for a safe bearing capacity of 4500 PSF for total dead and live loads. Parameters for shallow foundation system supported on continuous beams, such as such as a post-tensioned slab or a conventional slab, and spread/strip footings are also addressed in the report.

It has been a pleasure being of service to you on this project. If we may be of any further assistance, please call us.

Respectfully,

Laique Haider, P.E.; PMP



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SUBJECT: REPORT OF SOIL FOUNDATION INVESTIGATION
ADDITIONAL BUILDINGS MIRACLE CITY PHASE 2
ON FOSTER DRIVE & CYPRESS LANE (TRACT 5E)
CONROE, MONTGOMERY COUNTY, TEXAS

TO: JEFF SWIFT
COMPASSION UNITED
P. O. BOX 2582
CONROE, TEXAS 77305

SCOPE AND PURPOSE:

This report presents the results of the foundation investigation made recently at the subject site to determine the nature and condition of surface and sub-surface soils as affects the design of foundations. In particular, it was desirable to determine the safe soil bearing capacity for foundation systems, depth to water table where encountered and optimum type and depth of structural foundations. The investigation was made in accordance with your instructions.

PROCEDURES: FIELD

As requested, two (2) borings were made to a depth of 20 feet each, and 2 borings were made to a depth of 15 feet each, as shown on the Location of Test Borings plate - Figure 1. The borings were made with a truck mounted, LS-300 rotary drill rig using no drilling water in order to secure unaffected soil samples and reliable data on groundwater levels. Cohesive soil was sampled by pushing thin-walled Shelby tube samplers into the soil in accordance with ASTM Procedure D1587. The relative density of the sand was determined by noting the resistance to penetration of 2-inch split-spoon samplers driven by a 140 pound hammer dropping 30 inches per blow in conformance with ASTM Standard Procedure D-1586, the Standard Penetration Test. The borings were logged by a geotechnical engineering technician who noted the consistency, color, composition, and classification of the soil as encountered. The unconfined compressive strength of the cohesive soil was measured in the field by use of a Soiltest CI-700 Penetrometer.

The samples were examined and classified in accordance with the Unified Soil Classification System. They were then sealed to prevent moisture loss and transported to the laboratory for subsequent testing.

PROCEDURES: LABORATORY

The following tests were performed in the laboratory on the select samples to determine applicable engineering characteristics necessary to make the foundation design and construction recommendations.

Moisture Content/Density	ASTM D2216
Materials Finer than No. 200 Sieve	ASTM D1140
Unconfined Compressive Strength	ASTM D2166
Atterberg Limits	ASTM D4318

The final borings logs were prepared by a geotechnical engineer after examining the samples and reviewing the laboratory test results. The results of these tests are shown on the Boring Logs.

PROJECT DESCRIPTION AND AUTHORIZATION:

The project consists of a 1-story, steel frame, dining hall/day center, and three 1-story, wood frame buildings (crisis pregnancy home and women transition homes #1 & 2). Wall loads are not known at this time but are not expected to exceed 1.5 kips per foot. The pier/column loads are not known but are not expected to exceed 25 kips. Pavement shown on the site plan is not included in the scope of this investigation. The soil investigation was authorized by Jeff Swift with Compassion United, the owner.

GEOLOGY:

The surficial soil at this site is underlain by the Willis formation of the Pleistocene era. This formation consists of clays, silts, and sands and minor siliceous gravel. Deeply weathered and lateritic, indurated by clay and cemented by iron oxide locally, concretions of iron oxide numerous; non-calcareous, fluvial, with maximum formation thickness of 75 feet.

A fault study is beyond the scope of this report. For information on area faulting, it is recommended that a professional geologist be consulted.

SITE DESCRIPTION:

The site consists of a relatively level tract of land, fronting on Foster Drive at the southside of the intersection with Cypress Lane, and located in Conroe, Montgomery County, Texas. The site was drained at the time of the investigation. There are existing buildings on the project site.

VARIATIONS:

The recommendations contained in this report are based on data gained from the test borings, at the location shown on the Location of Test Borings plate - Figure 1 at the time of investigation; a reasonable extent of laboratory tests results, and professional interpretation and evaluation of this data in view of the project information provided to this firm. Should soil conditions differing from those described in this report be encountered at other locations in the course of construction, or should the design data change significantly, this firm should be notified immediately so that the conditions and their effect may be evaluated. It is recommended that a Geotechnical Engineer from this firm or elsewhere be retained to monitor the construction activities and ensure proper interpretation of this report.

SOIL STRATIGRAPHY:

The soil at the site consists of loose, grayish tan and tan, sand to a depth of 2-1/2 feet to 4 feet; underlain by stiff to hard, red, tan, light gray and reddish tan, low to medium plasticity sandy clay, with ferrous deposits, extending to the maximum explored depth of 20 feet. A detailed stratigraphy can be seen on the logs of borings.

Groundwater was not encountered, during the boring operations. However, it should be noted that ground water levels are subject to the influence of seasonal variations as well as other factors and should be checked prior to the initiation of any construction that could be affected.

ENGINEERING ANALYSIS:

Safe soil bearing pressures for cohesive formations are calculated from the depth and undrained shear strength of the soil determined by unconfined compression tests and field penetrometer values. Safe soil bearing pressures for cohesionless soils are determined from the values established by the Standard Penetration Test and interpretation of these values. A safety factor of two (2) is used for total dead and live load. A safety factor of three (3) is used for dead load and sustained live load.

Surficial soil is studied for the ease of compactability and manipulation in the field during construction. Also, should the site have poor soil or should drainage conditions be restricted, consideration is given to the alternatives for stabilization or removal and replacement of the surficial soil with select compactable soil.

Other tests are performed for building conditions in which certain characteristics of the soil are critical to the design of the structure. When long-term settlement analysis is required, consolidation tests are performed. Triaxial tests are performed to measure shear strength and pore pressure in sandier soil. Permeability tests are performed when the loss of fluids through the soil is critical. However, these are not considered critical tests for this project.

SITE PREPARATION:

It is recommended that the following procedures be implemented in preparation of the site for construction:

- 1) Strip the surface soil and any loose soils and organic materials to a minimum depth of 6 inches and remove all tree stumps, trash, debris, and other deleterious materials. Where trees are removed, the root system should be removed to a depth where the maximum root diameter size is less than 1/2 inch with a minimum depth of 2 feet.
- 2) The sand layer encountered should be stabilized with 5% Portland Cement or 10% Fly Ash (Class C), to a minimum depth of 2 feet, or it should be removed and replaced with compacted select fill, after positive proof-rolling of the underlying soil.
- 3) For slab-on-grade construction, a minimum of 12 inches of structural fill is recommended in the building areas. The elevation can be controlled by the removal of the surface soil or placement of compacted select fill. The structural fill material should be select soil consisting of sandy clay and/or silty clay free of any organics, trash, or other deleterious materials and with a liquid limit in the range of 25 to 40. The plasticity index (PI) should range from 10 to 20. The structural fill should be placed in 6 inch lifts and compacted to 95 percent of Standard Proctor Density, in conformance with the standard procedure, ASTM D 698, at or within 2 percent of optimum moisture. The building pads should extend a minimum of 4 feet beyond the periphery of the buildings and be sloped to drain away from the buildings. The compaction should be monitored by this firm or another approved geotechnical firm.
- 4) Establish positive drainage by sloping, cross drainage, and directing the runoff away from the building sites. This includes all roof drain downspouts after construction extending the outfall beyond the building pads. Exposed ground areas adjacent to the building pads should be sodded.
- 5) Any fill above existing grade should have the side sloped, no steeper than 3H:1V.

FOUNDATION CONSIDERATIONS:

1. Foundation Recommendations

A suitable foundation for any structure must satisfy two basic independent criteria with respect to the underlying foundation soils. The foundation must have an adequate factor of safety against the bearing capacity of the foundation soils, and the vertical movements of the foundation due to settlement or swelling of the foundation soils must be within tolerable limits of the structure.

Drilled Piers and Shallow Foundation are discussed below for the support of the proposed buildings. The near surface soils are relatively inactive sand and sandy clay soils with low shrink/swell potential. The magnitude of this vertical movement due to an increase in the moisture content of the subsoil, can be estimated by the Potential Vertical Rise (PVR) Test Method Tex 124-E, by TX DOT. Using the Tex 124-E method, the PVR was found to be 0.5 inch.

The soil conditions, found from the boring logs description and laboratory testing results, are suitable for the structure to be supported on drilled piers or shallow foundation, as discussed below. For a pier foundation design, drilled and under-reamed (bell bottom) piers are recommended for the support of the structural loads as addressed below. Parameters for slab-on-grade foundations, such as a post-tensioned slab with continuous beams or a conventional slab, and spread/strip footings are also included for the use of your designer. It is recommended that a Geotechnical Engineer be retained to monitor the foundation construction process.

The most suitable type of foundation is determined by review of the job requirements, the logs of borings, and the test results. The most suitable depth is selected as the minimum depth below the zone of seasonal moisture fluctuations affording reasonably uniform footing support, reasonably high strength subsoil, and adequate vertical clearance with physical features of the proposed structure.

1.1 Slab-On-Grade:

The soil conditions, found from the boring logs description and laboratory testing results, are suitable for the structure to be supported on a foundation system comprised of a post-tensioned slab or a conventional slab, with considerations as detailed in this report. Slab-On-Grade Foundation details are included in Section 1.2.1.

The following are Post-Tensioning Institute, Inc (PTI) parameters for the DESIGN OF POST-TENSIONED SLABS-ON-GROUND, 3rd Edition. For a design at a non-active site, the commonly used parameters are:

Thornwaite Index: 17, Soil Suction: pF: 3.4
Effective PI: 15, Climatic Index: 25
Em: 9 feet (center lift), 5.5 feet (edge lift)
Ym: 0.47 (Swell), 0.35 (Shrink)

1.2 Shallow Foundations

1.2.1 Slab-On-Grade Foundations:

After proper site preparation, continuous beams founded at the 2 foot depth below final grade, on the stabilized sand, to provide additional support for the slab-on-grade, should be proportioned for a safe bearing capacity of 1300 PSF. This value incorporates a safety factor of over 2. The structural columns should be supported on a thickened slab.

1.2.2 Spread/Strip Footing Foundations:

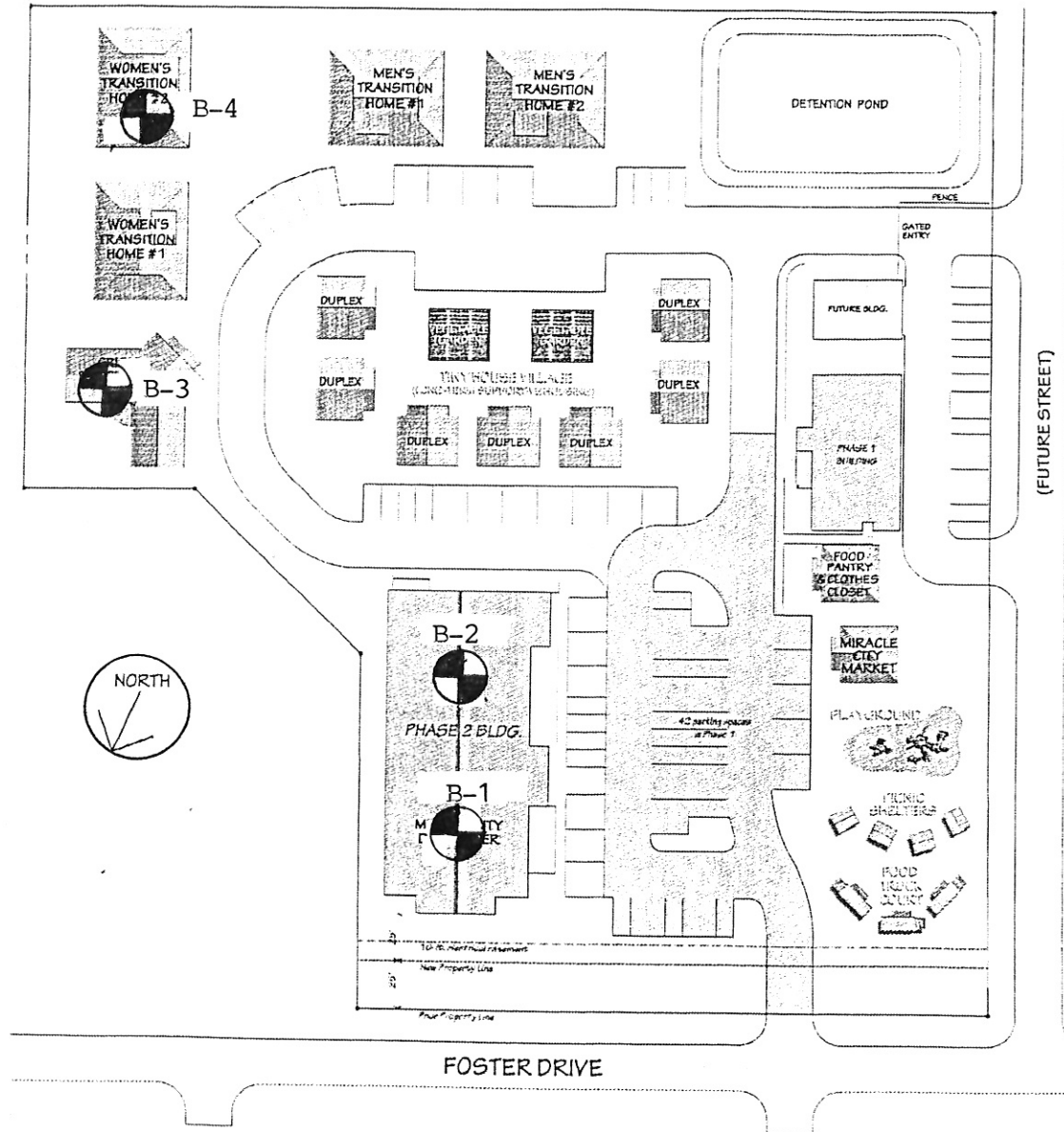
After proper site preparation, individual spread footings or continuous strip footings founded on the existing sandy clay stratum, at a minimum depth of 4 feet below existing grade, should be proportioned for a safe bearing capacity of 2000 PSF for total dead and live loads. This value incorporates a minimum safety factor of over 2.

1.3 Drilled Piers:

Drilled piers founded at a depth of 11 feet below existing grade should be proportioned for a safe bearing capacity of 4500 PSF for total dead and live loads incorporating a minimum safety factor of 2. For total dead and sustained live loads, the footings should be proportioned for a safe bearing capacity of 3000 PSF incorporating a minimum safety factor of 3. A shaft-bell ratio between 1:2 and 1:3 is recommended. If sloughing occurs, straight-sided piers with an increased diameter could be used. Casing and/or dewatering of the pier excavations may be required, especially during the rainy season. It is recommended that pilot borings be made to verify the integrity of the soil to the bearing depth.

Location of Borings

** NOT TO SCALE **



Project No.: 2211-007
Report No.: 2211007-1

Figure 1

LOG OF BORING

BORING NO: B-1

PROJECT: Buildings at 350 Foster Drive
 FOR: Compassion United

JOB NO: 2211-007
 BORING METHOD: Core
 AUGER: X
 WASH:
 GROUND ELEV: Existing

DATE: 11-26-2022
 DRILLER: DLT Drilling

Depth (Feet)	Sample Method	Water Levels	Penetrometer or Blow Count	Compressive Strength Tons/Sq. Ft.	Moisture Content (%)	Dry Density Lbs./Cu. Ft.	Liquid Limit %	Plasticity Index	Description
					11				Grayish tan sand(SM)
			4.5	1.4	9	106	22	8	Stiff, tan sandy clay(CL), with ferrous stains
-5-			4.5		9				...hard
			4.5		8				...reddish tan
-10-			4.5	2.4	12	112	31	15	...very stiff, reddish tan & light gray
-15-			4.5		15				...hard, red & light gray
-20-			3.2		16				...very stiff, red, tan & light gray
									Boring terminated at 20' No groundwater encountered

- Shelby Tube
- Standard Penetration Test
- No Recovery
- Initial Water Level
- Water Level After

LOG OF BORING

BORING NO: B-2

PROJECT: Buildings at 350 Foster Drive
 FOR: Compassion United

JOB NO: 2211-007
 BORING METHOD: Core
 AUGER: X
 WASH:
 GROUND ELEV: Existing

DATE: 11-26-2022
 DRILLER: DLT Drilling

Depth (feet)	Sample Method	Water Levels	Penetrometer or Blow Count	Compressive Strength Tons/Sq. Ft.	Moisture Content (%)	Dry Density lbs./Cu. Ft.	Liquid Limit %	Plasticity Index	Description
					12				Grayish tan sand(SM)
			9		12			NP	...loose Minus #200: 11%
-5			4.5		10		26	11	Hard, tan sandy clay(CL), with ferrous stains
			4.0		15				...reddish tan & light gray
			3.5		19				...very stiff, with ferrous deposits
-10									
			4.5	2.5	16	114	39	22	...red & light gray
-15									
			4.5		14				...hard
-20									
									Boring terminated at 20' No groundwater encountered

- Shelby Tube
- Standard Penetration Test
- No Recovery
- Initial Water Level
- Water Level After

LOG OF BORING
BORING NO: B-3

PROJECT: Buildings at 350 Foster Drive
 FOR: Compassion United
 DATE: 11-26-2022
 DRILLER: DLT Drilling

JOB NO: 2211-007
 BORING METHOD: Core
 AUGER: X
 WASH:
 GROUND ELEV: Existing

Depth (feet)	Sample Method	Water Levels	Penetrometer or Blow Count	Compressive Strength Tons/Sq. Ft.	Moisture Content (%)	Dry Density Lbs./Cu. Ft.	Liquid Limit %	Plasticity Index	<input type="checkbox"/> Shelby Tube <input checked="" type="checkbox"/> Standard Penetration Test <input checked="" type="checkbox"/> No Recovery <input type="checkbox"/> Initial Water Level <input type="checkbox"/> Water Level After
					15				Grayish tan sand(SM)
			9		6			NP	...loose, tan
- 5 -			4.5		10				Hard, tan sandy clay(CL), with ferrous deposits
			4.5		11				...reddish tan & light gray
- 10 -			4.5	1.6	15	116	29	13	...stiff
- 15 -			3.5		17				...very stiff, red & light gray
									Boring terminated at 15' No groundwater encountered

LOG OF BORING
BORING NO: B-4

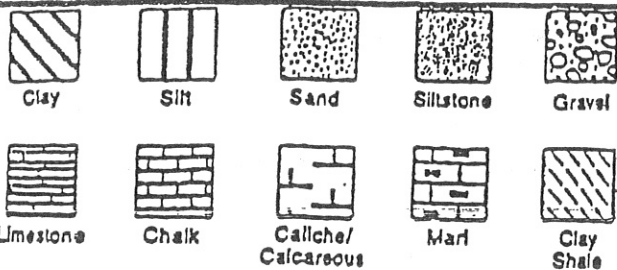
PROJECT: Buildings at 350 Foster Drive
FOR: Compassion United

JOB NO: 2211-007
BORING METHOD: Core
AUGER: X
WASH:
GROUND ELEV: Existing

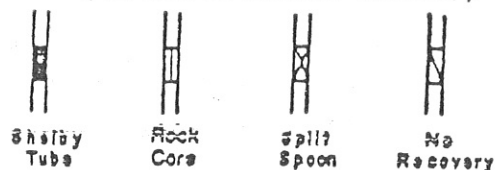
DATE: 11-26-2022
DRILLER: DLT Drilling

Depth (feet)	Sample Method	Water Levels	Penetrometer or Blow Count	Compressive Strength Tons/Sq. Ft.	Moisture Content (%)	Dry Density Lbs./Cu. Ft.	Liquid Limit %	Plasticity Index	<input type="checkbox"/> Shelby Tube <input checked="" type="checkbox"/> Standard Penetration Test <input type="checkbox"/> No Recovery <input type="checkbox"/> Initial Water Level <input type="checkbox"/> Water Level After
					14				Grayish tan sand(SM)
			8		7				...loose, tan
- 5 -			1.8		20		27	12	Stiff, tan sandy clay(CL), with ferrous stains
			4.5		15				...hard, reddish tan & light gray
- 10 -			4.5	2.5	16	111	42	24	...very stiff
- 15 -			4.5		14				...hard, red & light gray
									Boring terminated at 15' No groundwater encountered

SYMBOLS AND TERMS USED ON BORING LOGS



SAMPLER TYPES (SHOWN IN SAMPLES COLUMN)



TERMS DESCRIBING CONSISTENCY OR CONDITION

COARSE GRAINED SOILS (Major Portion Retained on No.200 Sieve): Includes (1) clean gravels and sands, and (2) silty or clayey gravels and sands. Condition is rated according to relative density, as determined by laboratory tests.

Descriptive Term	Standard Penetration, Resistance, Blows/Ft	Relative Density
Loose	0 - 10	0 to 40%
Medium dense	10 - 30	40 to 70%
Dense	30 - 50	70 to 100%

FINE GRAINED SOILS (Major portion passing No 200 sieve): Includes (1) inorganic and organic silts and clays, (2) gravelly, sandy, or silty clays, and (3) clayey silts. Consistency is rated according to shearing strength, as indicated by penetrometer readings or by unconfined compression tests.

DESCRIPTIVE TERM	UNCONFINED COMPRESSIVE STRENGTH TONS/Sq.Ft.
Very soft	less than 0.25
Soft	0.25 to 0.50
Firm	0.50 to 1.00
Stiff	1.00 to 2.00
Very Stiff	2.00 to 4.00
Hard	4.00 and higher

Note: Slickensided and fissured clays may have lower unconfined compressive strengths than shown above, because of planes of weakness or cracks in the soil. The consistency ratings of such soils are based on penetrometer readings.

TERMS CHARACTERIZING SOIL STRUCTURE

- Parting: - paper thin in size Seam: - 1/8"-3" thick Layer: - greater than 3"
- Slickensided** - having inclined planes of weakness that are slick and glossy in appearance.
- Fissured** - containing shrinkage cracks, frequently filled with fine sand or silt; usually more or less vertical.
- Laminated** - composed of thin layers of varying color and texture.
- Interbedded** - composed of alternate layers of different soil types.
- Calcareous** - containing appreciable quantities of calcium carbonate.
- Well graded** - having wide range in grain sizes and substantial amounts of all intermediate particle sizes.
- Poorly graded** - predominantly of one grain size, or having a range of sizes with some intermediate size missing.
- Flocculated** - pertaining to cohesive soils that exhibit a loose knit or flakey structure.

UNIFIED SOIL CLASSIFICATION SYSTEM

Major Divisions		Group Symbols	Typical Names	Field Identification Procedures (excluding particles larger than 3 in. and basing fractions on estimated weights)	Information Required for Describing Soils	Laboratory Classification Criteria
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Coarse-Grained Soils (More than half of material is larger than No. 200-sieve size.) Bands (More than half of coarse fraction is smaller than No. 4-sieve size.) (For visual classification, the 1/4-in. size may be used as equivalent to the No. 4-sieve size.) Clays (Little or no fines) Clays with Fines (Appreciable amount of fines)	Well-graded gravels, gravel-sand mixtures, little or no fines Poorly graded gravels, gravel-sand mixtures, little or no fines Silty gravels, gravel-sand-silt mixtures Clayey gravels, gravel-sand-clay mixtures Well-graded sands, gravelly sands, little or no fines Poorly graded sands, gravelly sands, little or no fines Silty sands, sand-silt mixtures Clayey sands, sand-clay mixtures	GW GP GM GC SW SP SM SC	Wide range in grain sizes and substantial amounts of all intermediate particle sizes Predominantly one size or a range of sizes with some intermediate sizes missing Nonplastic fines or fines with low plasticity (for identification procedures see ML below) Plastic fines (for identification procedures see CL below) Wide range in grain size and substantial amounts of all intermediate particle sizes Predominantly one size or a range of sizes with some intermediate sizes missing Nonplastic fines or fines with low plasticity (for identification procedures see ML below) Plastic fines (for identification procedures see CL below)	For undisturbed soils, add information on stratification, degree of compactness, cementation, moisture conditions, and drainage characteristics. Give typical names; indicate approximate percentages of sand and gravel; maximum silt; angularity, surface condition and hardness of the coarse grains; local or geologic name and other pertinent descriptive information; and symbol in parentheses. Example: Silty sand, gravelly; about 70% hard angular gravel; particles 1/2-in. maximum size; rounded and subangular sand grains coarse to fine; about 15% nonplastic fines with low dry strength; well compacted and moist in place; alluvial sand; (SM).	Determine percentages of gravel and sand from grain-size curves. Depending on percentage of fines (fraction smaller than No. 200-sieve size), coarse-grained soils are classified as follows: Less than 5% GW, GP, SW, SP More than 5% GM, GC, SM, SC 5% to 12% 12% to 15% 15% to 20% 20% to 30% 30% to 40% 40% to 50% 50% to 60% 60% to 70% 70% to 80% 80% to 90% 90% to 100%	$C_u = \frac{P_{60}}{P_{10}}$ (greater than 6) $C_c = \frac{(P_{25})^2}{P_{10} P_{75}}$ (between one and 3) Not meeting all gradation requirements for GW Atterberg limits below A-line or PI less than 4 Atterberg limits above A-line with PI greater than 7 $C_u = \frac{P_{60}}{P_{10}}$ (greater than 4) $C_c = \frac{(P_{25})^2}{P_{10} P_{75}}$ (between one and 3) Not meeting all gradation requirements for SW Atterberg limits below A-line or PI less than 4 Atterberg limits above A-line with PI greater than 7
Fine-Grained Soils (More than half of material is smaller than No. 200-sieve size.) (The No. 200-sieve size is about the smallest particle visible to the naked eye.)	Silt and Clays (Liquid limit less than 50) Silt and Clays (Liquid limit greater than 50)	ML CL OL MH CH OH PT	Organic silts and very fine sands, rock flour, silty or clayey fine sands, or clayey silts with slight plasticity Inorganic silts and organic silty clays of low plasticity Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts Inorganic clays of high plasticity, fat clays Organic clays of medium to high plasticity, organic silts Peat and other highly organic soils	Identify the fractions as given under field identification. Use grain-size curves in identifying the fractions as given under field identification. Give typical names; indicate degree and character of plasticity; amount and maximum size of coarse grains; color in wet conditions, odor if any, local or geologic name, and other pertinent descriptive information; and symbol in parentheses. For undisturbed soils add information on structure, stratification, consistency in undisturbed and remolded states, moisture and drainage conditions. Example: Clayey silt, brown, slightly plastic, numerous vertical root holes, firm and dry in place, loess, (ML).	Comparing soils at equal liquid limit, toughness and dry strength increase with increasing plasticity index. OH MH ML CL CH	Liquid Limit Plasticity Chart (for laboratory classification of fine-grained soils)

(1) Boundary classification: Soils possessing characteristics of two groups are designated by combinations of group symbols, for example, GC-CL, well-graded gravel-sand mixture with clay binder.

(2) All sieve sizes on this chart are U. S. standard.

Field Identification Procedures for Fine-Grained Soils or Fractions
These procedures are to be performed on the minus No. 40-sieve-size particles, approximately 1/64 in. For field classification purposes, screening is not intended; simply remove by hand the coarse particles that interfere with the tests.

Dilatancy (reaction to shaking)
After removing particles larger than No. 40-sieve size, prepare a pat of moist soil with a volume of about 1/2 cu. in. Add enough water if necessary to make the soil soft but not sticky.
Place the pat in the open palm of one hand and shake horizontally, striking vigorously against the other hand several times. A positive reaction consists of the appearance of water on the surface of the pat, which changes to a livery consistency and becomes glossy. When the sample is squeezed between the fingers, the water and gloss disappear from the surface, the pat stiffens, and finally it cracks or crumbles. The rapidity of appearance of water during shaking and of its disappearance during squeezing assist in identifying the character of the silts in a soil. Very fine clean sands give the quickest and most distinct reaction, whereas a plastic clay has no reaction. Inorganic silts, such as a typical rock flour, show a moderately quick reaction.

Dry Strength (crushing characteristics)
After removing particles larger than No. 40-sieve size, mold a pat of soil to the consistency of putty, adding water if necessary. Allow the pat to dry completely by oven, sun,

or air drying, and then test its strength by breaking and crumbling it between the fingers. This strength is a measure of the character and quantity of the colloidal fraction contained in the soil. The dry strength increases with increasing plasticity.
High dry strength is characteristic for clays of the CH group. A typical inorganic silt possesses only very slight dry strength. Silty fine sands and silts have about the same slight dry strength but can be distinguished by the feel when powdering the dried specimen. Fine sand feels gritty, whereas a typical silt has the smooth feel of flour. Toughness (consistency near plastic limit)
After removing particles larger than the No. 40-sieve size, a specimen of soil about 1/2-in. cube in size is molded to the consistency of putty. If too dry, water must be added, and if sticky, the specimen should be spread out in a thin layer and allowed to lose some moisture by evaporation. Then the specimen is rolled out by hand on a smooth surface or between the palms into a thread about 1/8 in. in diameter. The thread is then folded and revolved repeatedly. During this manipulation the moisture content is gradually reduced and the specimen stiffens, finally loses its plasticity, and crumbles when the plastic limit is reached.
After the thread crumbles, the pieces should be lumped together and a slight kneading action continued until the stiffer the lump when it finally crumbles, the more porous is the colloidal clay fraction in the soil. Weakness of the thread at the plastic limit and quick loss of coherence of the lump below the plastic limit indicate either inorganic clay or low plasticity or materials such as kaolin-type clays and organic clays which occur below the A-line. Highly organic clays have a very weak and spongy feel at the plastic limit.

Adopted by Corps of Engineers and Bureau of Reclamation, January, 1951.

DIVISION TWO - SITEWORK

SITE CLEARING

PART ONE - GENERAL

1.1 DESCRIPTION

- A. Provide labor, tools, and equipment required to clear the site of organic materials and obstructions to construction, and to haul away debris.

PART TWO - EXECUTION

2.1 CLEARING AND GRUBBING

- A. Remove surface growth from areas to be occupied by building, pavement, utility lines, walks, decks, and terraces.
- B. Remove obstacles and debris on or near the surface.
- C. Remove trees which are marked for removal.
- D. Remove any abandoned utility lines.

2.2 TREE PRUNING

- A. Only as required to prevent interference with construction.
- B. Performed by qualified personnel only.

2.3 STRIPPING

- A. After surface growth is removed, the entire area to be covered by buildings and pavement shall be stripped of topsoil and organic material to a depth of approximately 6". Tree trunks under the floor slab should be removed to a root size of less than 1/2".
 - 1) Remove all remaining vegetation and debris from the stripped topsoil.
 - 2) Stockpile usable topsoil removed from building site at a location selected by the Contractor and as approved by the Owner.
 - 3) Undercut isolated soft soils down to firm soils or to a minimum of 6" below ground surface.

DIVISION TWO - SITEWORK

SITE CLEARING

2.4 GRUBBING

- A. **Extent of Work:** Remove stumps, roots over 4" in diameter, and matted roots to the following depths:

Under footings - 18"

Under walks - 12"

Under roads - 18"

Under parking areas - 12"

Under lawn areas - 8"

Under fill - 12" (Where footings and roads will be constructed on fill, removal shall be to 18".)

2.5 REMOVING MATERIAL

- A. Unless otherwise specified, cleared and grubbed material become property of the Contractor, to be removed from the work site or disposed of in manner not to damage the Owner. Burning of cleared and grubbed material is not permitted.

END OF SECTION

DIVISION TWO - SITEWORK

EXCAVATING, FILLING & GRADING

PART ONE - GENERAL

1.1 DESCRIPTION

- A. Excavating, filling and grading for this Work includes, but is not necessarily limited to:
 - 1) Excavating for footings and foundations.
 - 2) Filling and backfilling to attain indicated grades.
 - 3) Trenching and trench backfilling.
 - 4) Rough and finish grading of the site.
 - 5) Furnishing and installing granular cushion under all concrete slabs on grade.
- B. Related Work Described Elsewhere:
 - 1) Testing Laboratory Services: Section 01450.
 - 2) Subsurface Investigation: Section 02210.
 - 3) Termite Control: Section 02360.

1.2 JOB CONDITIONS

- A. Dust Control:
 - 1) Thoroughly moisten all surfaces as required to prevent dust being a nuisance to the public, neighbors, and concurrent performance of other Work on the site.
- B. Protection:
 - 1) Use all means necessary to protect all materials of this Section before, during, and after installation and to protect all objects designated to remain.
 - 2) In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

DIVISION TWO - SITEWORK

EXCAVATING, FILLING & GRADING

PART TWO - PRODUCTS

2.1 FILL

- A. All on-site fill material shall be composed of an approved silty or sandy clay which is free from organic matter and other deleterious substance and has a natural plasticity index of between 8 and 20 and with a liquid limit not greater than 40. It shall contain no rocks or lumps larger than 2" in greatest dimension.
 - 1) All on-site material excavated under this Section which does not meet the above requirement shall be hauled away from the site.
- B. All imported fill material shall meet the requirements of Article 2.1A and, in addition, shall be predominately granular with a maximum particle size of 2" and a plasticity index of between 8 and 20.
- C. All fill material placed below and within 5' of the base of building foundations and/or slabs shall have a plasticity index of between 8 and 20.
- D. Granular cushion under interior floor slabs shall be clean bank run sand with particle size grading within the following limits:

2.2 TRENCH AND STRUCTURAL BACKFILL

- A. On-site fill material used for trench and structural backfill shall meet the requirements of Article 2.1A.
- B. Imported cohesionless material used for trench and structural backfill shall be free from organic substance and other deleterious matter, shall be subject to the approval of the Architect, and shall be in particle size grading within the following limits:
 - 1) Passing the Number Four Sieve: 100%.
 - 2) Passing the Number 200 Sieve: 3% maximum.

PART THREE - EXECUTION

3.1 GENERAL

- A. **Familiarization:** Prior to all Work of this Section, become thoroughly familiar with the site, the site conditions, and all portions of the Work falling within this Section.

DIVISION TWO - SITEWORK

EXCAVATING, FILLING & GRADING**B. Backfilling Prior to Approvals:**

- 1) Do not allow or cause any of the Work performed or installed to be covered up or enclosed by Work of this Section prior to all required inspections, tests, and approvals.
- 2) Should any of the Work be so enclosed or covered up before it has been approved, uncover all such Work at no additional cost to the Owner.
- 3) After the Work has been completely tested, inspected, and approved, make all repairs and replacements necessary to restore the Work to the condition in which it was found at the time of uncovering, all at no additional cost to the Owner.

3.2 FINISH ELEVATIONS AND LINES

- A. All work shall be laid out by a competent surveyor. The Contractor shall be responsible for all elevations and dimensions and shall verify actual site conditions.
- B. Establish benchmark and maintain it until completion of project.

3.3 EXCAVATING

- A. General: Strip vegetation and organic topsoil from building foundation area and areas to be paved to a minimum depth of 6". All tree stumps and root systems, if present, should be removed from these areas and backfilled with compacted fill.
- A. Other Areas: Excavate to grades shown on the Drawings, or as indicated in the Geotechnical Report. Where excavation grades are not shown on the Drawings, excavate as required to accommodate the installation and to provide positive drainage.
- B. Over-excavation: Backfill and compact all over-excavated areas as specified for fill below, and at no additional cost to the Owner.

3.4 PREPARATION OF SUBGRADE

- A. The subgrade areas should be proof-rolled with a loaded dump truck, heavy scraper, or similar pneumatic-tired equipment (minimum of 20 tons gross weight). The proof-rolling serves to compact surface soils and to detect any soft or loose zones. Any soils deflecting excessively under moving loads should be undercut to firm soils and re-compacted. Proof-rolling shall be performed under the direct supervision of the geotechnical engineering company's representative. Soft or unstable areas detected during proof-rolling should be scarified, adjusted in moisture content and re-compacted, or excavated and replaced with new compacted fill.

DIVISION TWO - SITEWORK

EXCAVATING, FILLING & GRADING

- B. **Scarifying:** Subsequent to proof-rolling and correcting all disturbed areas, the exposed subgrade shall be scarified to a minimum depth of 8" and adjusted in moisture content to the optimum value of the soil determined by the standard Proctor test procedure (ASTM D-698). The subgrade shall then be compacted to the requirements specified for structural fill in Paragraph 3.6 D below.
- C. **Leveling:** Remove all ruts, hummocks, and other uneven surfaces by surface grading prior to placement of fill.
- D. All surfaces under slabs and pavement areas shall be proof-rolled.

3.5 EXCESS WATER CONTROL

- A. **Unfavorable Weather:** Do not place, spread, or roll fill material during unfavorable weather conditions. Do not resume operations until moisture content and fill density as required by these Specifications.
- B. **Flooding:** Provide berms or channels to prevent flooding of subgrade. Promptly remove all water collecting in depressions.
- C. **Softened Subgrade:** Where soil has been softened or eroded by flooding or placement during unfavorable weather, remove all damaged areas and re-compact as specified for fill and compaction below.
- D. **Dewatering:**
 - 1) Provide and maintain at all times during construction, ample means and devices with which to remove promptly and dispose of all water from every source entering the excavations or other parts of the Work.
 - 2) Dewater by means which will ensure dry excavations and the preservation of the final lines and grades of bottoms of excavations.

3.6 FILL AND COMPACTION

- A. **Filling:** After subgrade compaction has been approved, spread approved fill material in layers not exceeding 8" in uncompacted thickness. Sufficient fill should be placed to bring the top of slab elevation to the level indicated on the Site Plan.
- B. **Moisture-Conditioning:** Water or aerate the fill material as necessary, and thoroughly mix to obtain a moisture content which will permit proper compaction. Moisture content at the time of compaction of subgrade should be within 12% of the Proctor optimum value.

DIVISION TWO - SITEWORK

EXCAVATING, FILLING & GRADING

- C. Compaction, General: Compact each soil layer to at least the specified minimum degree. Repeat compaction process until plan grade is attained.

- D. Degree of Compaction Requirements:
 - 1) Structural Fill: Densify all structural fill, including re-compacted existing fill and backfill, to a minimum degree of compaction of 95% of maximum dry density as determined by ASTM D-698 (Standard Proctor) at a moisture content of between zero and two percent of the optimum.

 - 2) Trenches in Building and Pavement Areas:
 - a. Building and pavement areas are defined, for the purpose of this paragraph, as extending a minimum of 5' beyond the building and/or pavement.

 - b. Compact cohesive backfill material to a minimum degree of compaction of 95%.

 - c. Compact the upper 6" of backfill in pavement areas to a minimum degree of 95%.

 - d. Densify cohesionless backfill material to a minimum relative density of 70% as determined by ASTM D2049.

 - e. Compact materials of a questionable cohesion to either a minimum degree of compaction of 90% or a minimum relative density of 70%, whichever results in the greater dry density.

3.7 GRADING

- A. General: Except as otherwise directed by the Architect, perform all rough and finish grading required to attain the elevations shown on the Drawings.

- B. Grading Tolerances:
 - 1) Rough Grade:
 - a. Building and Parking Areas: Plus-or-minus 0.1 foot.

 - 2) Finish Grade:
 - a. Granular Cushion Under Concrete Slabs: Plus or minus 0.1 foot.

 - b. Landscaped Areas: Plus-or-minus 0.08 foot.

DIVISION TWO - SITEWORK

EXCAVATING, FILLING & GRADING

C. Treatment after Completion of Grading:

- 1) After grading is completed, permit no further excavating, filling, or grading except with the approval of and inspection by the Architect.
- 2) Use all means necessary to prevent erosion of freshly graded areas during construction and until such time as permanent drainage and erosion control measures have been installed.

3.8 EXCAVATING FOR FOOTINGS

A. Preparation:

- 1) To minimize differential settlement, it is essential that earth surfaces upon which footings will be placed be compacted to the approval of the Architect and in accordance with the compaction requirements established in this Section of these Specifications.
- 2) Verify that all compaction is complete and approved prior to excavating for footings.

- B. Excavating: Excavate to the established lines and grades. Cut off bottom of trenches level; and remove all loose soil.**

3.9 PLACING GRANULAR CUSHION

- A. Carefully place the specified granular cushion in areas to receive concrete slabs on grade, uniformly attaining the thickness indicated on the Drawings, and providing all required transition planes.**

3.10 TRENCHING

A. General:

- 1) Perform all trenching required for the installation of items where the trenching is not specifically described in other Sections of these Specifications.
- 2) Make all trenches open vertical construction with sufficient width to provide free working space at both sides of the trench and around the installed item as required for caulking, joining, backfilling and compacting.

- B. Trench as required to provide the elevations shown on the Drawings. Where elevations are not shown on the Drawings, trench to sufficient depth to give a minimum of 18" of fill above the top of piping, measured from the adjacent finished grade.**

DIVISION TWO - SITEWORK

EXCAVATING, FILLING & GRADING

- C. Where trench excavation is inadvertently carried below proper elevations, backfill with approved material and then compact to provide a firm and unyielding subgrade and/or foundation at no additional cost to the Owner.
- D. **Trench Bracing:**
 - 1) Properly support all trenches in strict accordance with all pertinent rules and regulations.
 - 2) Brace, sheet, and support trench walls in such a manner that they will be safe and that the ground alongside the excavation will not slide or settle, and that all existing improvements of every kind, whether on public or private property, will be fully protected from damage.
 - 3) In the event of damage to such improvements, immediately make all repairs and replacements necessary at no additional cost to the Owner.
 - 4) Arrange bracing, sheeting, and shoring so as to not place stress on any portion of the completed Work until the general construction thereof has proceeded far enough to provide sufficient strength.
- E. Exercise care in the drawing and removal of sheeting, shoring, bracing and timbering to prevent collapse and caving of the excavation faces being supported.
- F. Control the stockpiling of trenched material in a manner to prevent water running into the excavations. Do not obstruct surface drainage; but provide means whereby storm and waste waters are diverted into existing gutters, other surface drains, or temporary drains.

3.11 FOUNDATION FOR PIPES

- A. **General:** Grade the trench bottoms to provide a smooth, firm, and stable foundation free from rock points throughout the length of the pipe.
- B. **Foundation Material:** Place a minimum of 6" of the specified cohesionless material in the bottom of the trench.
- C. **Subsurface Conditions:**
 - 1) In areas where soft, unstable materials are encountered at the surface upon which cohesionless material is to be placed, remove the unstable material and replace it with approved material. Make sufficient depth to develop a firm foundation for the item being installed.

DIVISION TWO - SITEWORK

EXCAVATING, FILLING & GRADING

- 2) If the need for such over-excavation has been occasioned by an act or failure to act on the part of the Contractor, make the over-excavation and replacement at no additional cost to the Owner.

D. Shaping:

- 1) At each joint in pipe, recess the bottom of the trench as required into the firm foundation in such a manner as to relieve the bell of the pipe of all load and to ensure continuous bearing of the pipe barrel on the firm foundation.
- 2) Accurately shape all pipe subgrade and fit the bottom of the trench to the pipe shape. Use a drag template shaped to conform to the outer surface of the pipe if other methods do not produce satisfactory results.

3.12 BEDDING FOR PIPES

- A. General: Place the specified cohesionless material in the trench, simultaneously on each side of the pipe for the full width of the trench, to a maximum depth of 3' and a minimum depth of 1' above the outside diameter of the pipe barrel.
- B. Densification
 - 1) Densify the bedding material after placing by thoroughly saturating with water and vibrating with jetting equipment and a concrete vibrator stinger, at maximum intervals of 2' along both sides of the pipe.
 - 2) Take special care to provide firm bedding support on the underside of the pipe and fittings for the full length of the pipe.

3.13 BACKFILL FOR PIPES

- A. Using On-Site Materials: After the pipe has been thoroughly bedded and covered, spread the on-site material in uniform lifts of not more than 8" in un-compacted thickness, and then compact as specified in this Section. Repeat the spreading and compacting procedure until adjacent grade level is attained.
- B. Using Imported Cohesionless Material: After the pipe has been thoroughly bedded and covered, fill the remaining portion of the trench with the specified cohesionless material, and densify as specified in this Section.

3.14 UTILITIES

- A. Support and protect existing sewers, water, gas, electric, telephone and similar utility lines encountered during excavation operations.

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DIVISION TWO - SITEWORK

EXCAVATING, FILLING & GRADING

- B. Immediately notify the proper authorities and cooperate therewith to facilitate their Work in providing additional protection or removal of such utility lines.

END OF SECTION

DIVISION TWO - SITEWORK

TERMITE CONTROL

PART ONE - GENERAL

1.1 DESCRIPTION

- A. Work Included: Treat soil under and around all slabs and beams of buildings to provide termite protection.

1.2 SUBMITTALS

- A. Submittals: Conform to procedures specified in Section 01330 - Submittals, and the requirements below.
 - 1) Literature: Submit three (3) copies of chemical formulation and Manufacturer's literature and instructions.
 - 2) Reference Procedure: "Approved Reference Procedure" of National Pest Control Association.
 - 3) Certificate: Certification that treatment conforms to referenced standards.
 - 4) Certifications: Submit copy of current state pest control license.

1.3 PROJECT CONDITIONS

- A. Inspection of Site: All areas to be treated shall be field inspected to determine soil composition. Dosage and type of termite control shall be selected to suit these conditions.
- B. Relation to Other Trades: It shall be the responsibility of this Subcontractor to coordinate and schedule the termite control application with the Earthwork, Excavation and Backfilling and Concrete Subcontractors so as to provide for a smooth and orderly progression of the Work.
- C. Delivery: Chemicals shall be delivered to jobsite just prior to intended use.
- D. Storage: Chemicals are toxic and are to be stored in such a manner as to be inaccessible to persons other than the Manufacturers licensed authorized applicators.
- E. Protection of Other Work: Completely protect other Work from damage due to these operations. Satisfactorily remove any smears on visible Work or replace the damaged Work.

1.4 QUALITY ASSURANCE

- A. Qualifications:

DIVISION TWO - SITEWORK

TERMITE CONTROL

- 1) **Application:** By applicator licensed for termite control by the Structures Pest Control Board of Texas.
- 2) **Toxicant Qualification:**
 - a. The chemicals used must be acceptable to the Division of Forest Insect Research of proprietary products registered with the Pesticide Regulation Section, Plant Pest Control Branch, Agricultural Research Service, USDA.
 - b. Contain Environmental Protection Agency (EPA) registration number.
- 3) **Standards:** Unless exceeded or modified by the requirements of this Specification or shown otherwise, conform to the following standards: National Pest Control Association, Approved Reference Procedure.

1.5 **GUARANTEE**

- A. **Duration:** The Subcontractor shall warrant the treated area against subterranean termite damage for a period of five (5) years commencing from date of completed application.
- B. **Re-treatment:** Upon receipt of notice from the Owner, the Subcontractor shall provide all materials and services necessary to re-treat any infected area including all costs of access, rodding, voiding, etc. without additional cost to the Owner during the life of the warranty.
- C. **Damage Repair:** The applicator shall repair any damage to the building or its contents as a result of subterranean termite damage during the warranty period. Liability shall be limited to repairs of building and contents up to \$100,000.
- D. **Warranty Renewal:** Owner shall have the option to renew the above warranty protection at current commercial rates at the expiration of the initial five (5) year period.

PART TWO - PRODUCTS

2.1 **MATERIALS**

- A. **Termiticides:** Submit manufacturer's label and Material Safety Data Sheet (MSDS) for termiticides proposed for use. Provide termiticides currently registered by the EPA or approved for such use by the appropriate agency of the host county. Select non-repellant termiticide for maximum effectiveness and duration after application. The selected termiticide shall be suitable for the soil and climatic conditions at the project site. Submit samples of the pesticides used in this work.

DIVISION TWO - SITEWORK

TERMITE CONTROL

PART THREE - EXECUTION

3.1 APPLICATION

- A. **General:** Treatment shall not begin until the subgrade preparation has been completed. Area to receive termite treatment shall be free of organic material, wood, construction debris, etc. which would act to bridge the protected area. The Subcontractor shall notify the General Contractor, in writing, of any area required to be cleared and shall not proceed with termite control application until area is in satisfactory condition to receive treatment.

- B. **Conditions:** Chemicals shall not be applied when ground is excessively wet. If concrete slabs are in place, voids, etc. are covered or capped prior to the application of termite control, this Subcontractor shall do all drilling, rodding, voiding required to insure proper application at no additional cost to the Owner.

- C. **Application Sequence:** Termite control shall be applied in two separate treatments.
 - 1) **First Treatment:** Applied to the entire interior and exterior perimeter of all foundation walls, around all piers, under floor piping, conduit, raceways, etc., both sides of all interior foundation walls and over the entire under-slab area. Exterior perimeter shall include all the area within 4' of the exterior building line, as well as the entire area under all slabs, walks, ramps, pads, etc., attached to the building. Where monolithic construction of concrete slab and grade beam occur, termite control shall be applied to the entire underside of the concrete slab and grade beam and along both sides of the grade beam. Special attention shall be directed to the treatment of any voids, joints, sleeves, etc. within the building perimeter to insure treatment of all critical termite entry points.

 - 2) **Second Treatment:** Applied after final grading has been completed, but prior to installation of paved areas abutting building. Treatment shall be applied to the exterior grade perimeter at a rate of 4 gallons per 10 lin. Ft. per 1 ft. of depth. Treatment shall be applied in any area where additional soil material has been deposited after application of first treatment (i.e. fill, aggregate base for pavement, topsoil, etc.) or where grade changes indicate termite treatment may have been disturbed.

- D. **Application Rate:** Termite control chemicals shall be applied in strict accordance with Manufacturer's printed instructions. Water additives must be carefully controlled to assure proper finished mix of the chemical compound. Uniform application of the chemical is essential. Chemicals must be formulated so that quantities can be applied evenly. Care shall be exercised to ensure the proper rate of application.

DIVISION TWO - SITEWORK

TERMITE CONTROL

3.2 CLEAN UP

- A. Remove all chemical containers and application equipment from jobsite upon completion of termite treatment. Empty drums shall be returned to drum re-conditioner or other approved manner of disposal and are not to be reused or disposed of on the site.

END OF SECTION

DIVISION TWO - SITEWORK

CONCRETE WALKS & EQUIPMENT PADS

PART ONE - GENERAL

1.1 DESCRIPTION

- A. Furnish all labor, materials and equipment necessary to complete the installation and finishing of all concrete sidewalks and concrete pads for mechanical equipment.
- B. **Related Work Described Elsewhere:**
 - 1) **Subgrade Preparation:** Section 02315.
 - 2) **Concrete Paving:** See Civil Drawings

1.2 PRODUCT HANDLING

- A. Mixing and transportation operations shall conform with ASTM C-54.
- B. No concrete which has been held longer than 1-1/2 hours in a mixer truck shall be used in the Work.

PART TWO PRODUCTS

2.1 MATERIALS

- A. **Formwork:** Forming lumber free from loose knots or similar defects.
- B. **Cement:** Type I, Portland Cement conforming to ASTM C-150.
- C. **Aggregates:** Clean, uncoated and free of any impurities that would diminish the concrete quality. Aggregates shall conform to ASTM C-33.
- D. **Sand:** Clean, sharp river sand.
- E. **Water:** Clean and free from injurious amounts of oil, acid, alkali, or organic matter and shall be potable.
- F. **Reinforcing for Sidewalks & Equipment Pads:** ASTM A-185; 6 x 6 x W1.4 x W1.4 welded wire fabric.
- G. **Admixtures:** Conform to ASTM C494; Type A for water-reducing and Type D for water-reducing/set-retarding.
- H. **Air Entraining Agent:** Comply with ASTM C-260.
- I. **Sidewalk Expansion Joints:** 1 x 4 Redwood with #4 steel dowels, 10" long, wrapped with felt one end, at 12" o. c.

DIVISION TWO - SITEWORK

CONCRETE WALKS & EQUIPMENT PADS

- J. **Joint Sealer:** Hot poured elastic type which conforms to ASTM D-1190.
- K. **Pre-cast Concrete Splash Blocks:** Pre-cast concrete splash blocks, 12"W x 24"L x 3"H, as manufactured by Macon Concrete Products (Tel: 1-800-397-9255), or equal. Provide one splash block at each downspout location.

2.2 CONCRETE MIXTURE

- A. Proportion concrete so as to include the minimum amounts of water to obtain a workable mix which will achieve a minimum compressive strength of 3000 psi at 28 days.
 - 1) **Maximum Aggregate Size:** 1" to 1-1/2".
 - 2) **Maximum Total Water:** 6-1/2 gallons per sack of cement.
 - 3) **Minimum Cement Content:** 5-94# sacks per cubic yard.
- B. Use transit-mixed concrete from an approved batching and mixing plant. Batch, mix, and transport concrete to site in accordance with provisions of ASTM C-94.

PART THREE - EXECUTION

3.1 COOPERATION WITH OTHER TRADES

- A. Carefully coordinate this Work with all other trades whose Work will affect; or be affected by Work under this Section.
- B. Where special toppings or finishes are to be installed, set top of slab elevations to allow for those materials.
- C. Be sure that all sleeves and conduit are in place before this Work commences.

3.2 INSPECTION

- A. Examine the areas and conditions under which Work of this Section will be installed. Correct conditions detrimental to proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.
- B. Ensure that the temperature will not drop below 40° F for the first 15 days after installation, and that a temperature above 33° F can be maintained for 30 days after installation.
- C. Subgrade shall be excavated to line, grade and cross-section so as to produce paving of the proper thickness, as indicated on the Drawings.

DIVISION TWO - SITEWORK

CONCRETE WALKS & EQUIPMENT PADS3.3 PREPARATION

- A. Subgrade shall be excavated 6" beyond the outside lines of the paving and shaped to line, grade and cross-section so as to produce the required thickness of material.
- B. Construct forms to slopes, lines and dimensions shown, plumb and straight, and sufficiently tight to prevent leakage.
- C. Place sand fill as described in Section 02315, 2" minimum thickness under sidewalks.
- D. Set reinforcing on wire type bar supports, tie bars at intersections, and maintain 1-1/2" clearance below top surface of concrete.
- E. Place concrete in the forms continuously, or as rapidly as practicable so that no concrete will be deposited against concrete which has hardened.

3.4 JOINTS

- A. Expansion joints and contraction joints shall be provided; and shall be constructed at right angles to the line of curbs.
- B. Construction Joints: Shall be made at locations indicated on the Drawings. Construction joints shall be made at other locations with the concurrence of the Architect.
- C. Expansion Joints:
 - 1) Expansion joints shall be formed by means of an approved, closed-cell, black, preformed, neoprene filler material, cut and shaped to the cross-section of the curb or paved surface and shall extend to within 3/4" to the top and face of the surface. The expansion joint material shall be held below the surface with a slightly tapered, dressed and oiled wood strip. After the concrete has set, the wood strip shall be removed; and the joint shall be filled with a joint sealing material as hereinafter specified. Expansion joints at least 3/4" in width shall be provided in curb sections at intervals not exceeding 40' and at all curb returns.
 - 2) Provide #4 x 18" dowels at 18" minimum o.c. at each joint wrapped with felt one side of the joints.
 - 3) Expansion joints at sidewalks shall be 1x4 Redwood and shall be placed where two lines of sidewalks intersect, where walks abut buildings, steps or curbs and at intervals indicated on Drawings (not more than 20'-0" intervals).
 - 4) Scoring: Provide scored lines on exterior concrete sidewalks at 5'-0" spacing unless otherwise indicated on the Drawings.

DIVISION TWO - SITEWORK

CONCRETE WALKS & EQUIPMENT PADS

- D. **Contraction Joints:** Shall be placed in concrete by means of an appropriate edging tool. The joint shall extend below the surface of the concrete by at least 3/4 of an inch. Contraction joints shall be provided in curb sections at intervals not to exceed 20' and equally spaced between expansion joints.

3.5 SEALING JOINTS

- A. Application of sealer shall be in strict accordance with the Manufacturer's Recommendations. The concrete at the joint shall be surface dry, and the atmospheric and pavement temperatures shall be above 50°F. at the time of application of the sealing materials. The joint opening shall be thoroughly cleaned of all foreign material before the sealing material is placed. All contact faces of the joint shall be cleaned to remove loose material. The sealing shall be done in such a manner that the material will not be spilled on the exposed surfaces of the concrete. Any excess material on the exposed surfaces of the concrete shall be removed.

3.6 FINISHES

- A. Screed to an even surface and finish with a float. Ensure that surfaces slope uniformly in accordance with finish grading shown on the Drawings. Provide a "belted" or light broom finish.

3.7 DEFECTIVE WORK

- A. All defective work shall be remedied upon the request of the Architect/Engineer or the Owner's Representative, whose instructions in such matters shall be strictly complied with.
- B. Curbs to be replaced shall be done in a minimum length of 10' with an expansion joint provided at each end.
- C. Sections of pavement shall be replaced with a minimum width of 2' and the length of the full distance between expansion joints.

END OF SECTION

DIVISION THREE - CONCRETE

CONCRETE FORMWORK

PART ONE - GENERAL

1.1 DESCRIPTION

- A. Provide formwork in accordance with the provisions of this Section for all cast-in-place concrete shown on the Drawings or required by other Sections of these Specifications.
- B. Provide all labor, materials, tools and equipment required for the proper erection of formwork in accordance with the provisions of this Section.
- C. Related Work Described Elsewhere:
 - 1) Excavating for Footings: Section 02315.
 - 2) Rough Carpentry: Section 06100.
 - 3) Concrete Walks & Equipment Pads: Section 02500.

1.2 QUALITY ASSURANCE

- A. Design of formwork is the Contractor's responsibility.
- B. Standards: Comply with all pertinent provisions of ACI 347.

1.3 SUBMITTALS

- A. Comply with pertinent provisions of Section 01330.
- B. Submit Manufacturers' data and installation instructions for proprietary materials including form coatings, ties and accessories, and manufactured form system if used.

PART TWO - PRODUCTS

2.1 FORM MATERIALS

- A. Construct formwork for exposed concrete surfaces with smooth faced undamaged plywood, fiberglass, metal, or other panel type material to provide continuous, straight, smooth as-cast surfaces. Furnish in largest practicable sizes to minimize number of joints.
- B. Provide form material with sufficient thickness to withstand pressure of newly placed concrete without bowing or deflection.

DIVISION THREE - CONCRETE

CONCRETE FORMWORK

2.2 FORM TIES

- A. Provide factory-fabricated, adjustable-length, removable or snap-off metal form ties, designed to prevent form deflection and to prevent spalling concrete surfaces upon removal.
- B. Provide ties so that the portion remaining within concrete after removal of exterior parts is at least 1-1/2" from the outer concrete surface. Provide form ties which will not leave a hole larger than 1" diameter in the concrete surface.

2.3 FORM COATINGS

- A. Provide commercial formulation form-coating compounds that will not bond with, stain, nor adversely affect concrete surfaces requiring bond or adhesion, nor impede the wetting of surfaces to be cured with water or curing compounds.

2.4 EARTH FORMS

- A. Side forms of footings and grade beams may be earth formed if earth is sufficiently firm to permit neat and accurate trimming and shaping to scheduled dimensions.
- B. If earth is not suitable, side forms shall be constructed at no additional cost to the Owner. Remove after concrete has attained initial set.

2.5 DESIGN OF FORMWORK

- A. Design, erect, support, brace, and maintain formwork so that it will safely support vertical and lateral loads that might be applied, until such loads can be supported by the concrete structure.
- B. Carry vertical and lateral loads to ground by formwork system and in-place construction that has attained adequate strength for that purpose.
- C. Construct formwork so that concrete members and structures are of correct size and shape; and are in proper alignment, elevation, and position.
- D. Design forms and false-work to include assumed values of live load, dead load, weight of moving equipment operated on formwork, concrete mix, height of concrete drop, vibrator frequency, ambient temperature, foundation pressures, stresses, lateral stability, and other factors pertinent to safety of structure during construction.

PART THREE - EXECUTION

3.1 FORM CONSTRUCTION

- A. General:

DIVISION THREE - CONCRETE

CONCRETE FORMWORK

- 1) Construct forms complying with ACI 347, to the exact sizes, shapes, lines, and dimensions shown, and as required to obtain accurate alignment, location, grades, level, and plumb work in finish structure.
- 2) Provide for openings, offsets, sinkages, keyways, recesses, moldings, reglets, chamfers, blocking, screeds, bulkheads, anchorages, inserts, and other features required.
- 3) Thoroughly clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before concrete is placed. Retighten forms immediately after concrete placement as required to eliminate mortar leaks.
- 4) Bottoms of earth forms for footings shall be level, clean and without fill. The sides shall be even and clean, and unless otherwise shown, shall be vertical.

3.2 FORM COATINGS

- A. Coat form contact surfaces with form-coating compound before reinforcement is placed. Do not allow excess form coating material to accumulate in the forms or to come into contact with surfaces which will be bonded to fresh concrete. Apply in accordance with Manufacturer's instructions.

3.3 INSTALLATION OF EMBEDDED ITEMS

- A. Set and build into the Work anchorage devices and other embedded items required for other Work that is attached to, or supported by, cast-in-place concrete.

3.4 REMOVAL OF FORMS

- A. Formwork not supporting concrete, such as sides of beams, columns, and similar parts of the Work, may be removed after cumulatively curing at not less than 50 degrees F. for 24 hours after placing concrete, provided concrete is sufficiently hard not to be damaged by form removal operation, and provided that curing and protection operations are maintained.

3.5 RE-USE OF FORMS

- A. Clean and repair surfaces of forms to be re-used in the Work. Split, frayed, delaminated or otherwise damaged form facing material will not be acceptable. Apply new form coating compound material to concrete contact surfaces as specified for new formwork. When forms are reused for successive concrete placement, thoroughly clean surfaces, remove fins and laitance, and tighten forms to close all joints. Align and secure joints to avoid off-sets.

END OF SECTION

DIVISION THREE - CONCRETE

CONCRETE REINFORCEMENT

PART ONE - GENERAL

1.1 DESCRIPTION

- A. **Work Included:** Provide complete, in place, all steel required for reinforcement of cast-in-place concrete as shown on the Drawings.
- B. **Related Work Described Elsewhere:**
 - 1) **Concrete Walks & Equipment Pads:** Section 02500.
 - 2) **Cast-In-Place Concrete:** Section 03300.

1.2 QUALITY ASSURANCE

- A. Comply with pertinent provisions of following standards except as herein modified:
 - 1) CRSI's "Manual of Standard Practice" for placing reinforcement
 - 2) ACI 318, "Building Code Requirements for Reinforced Concrete"

1.3 SUBMITTALS

- A. Comply with pertinent provisions of Section 01330.
- B. Submit complete Shop Drawings of all material proposed to be furnished and installed under this Section.
 - 1) Show bar schedules, stirrup spacing, diagrams of bent bars, and arrangement and assemblies.

1.4 PRODUCT HANDLING

- A. Deliver reinforcement to the job site bundled, tagged, and marked. Use metal tags indicating bar size, lengths, and other information corresponding to markings shown on placement diagrams.
- B. Store reinforcement at the job site in a manner to prevent damage and accumulation of dirt and excessive rust.

PART TWO - PRODUCTS

2.1 MATERIALS

- A. **Reinforcing Steel:** Comply with ASTM A-615, Grade 60 for No. 4 and larger bars; Grade 40 for No. 3 bars, or as otherwise noted on the Drawings.

DIVISION THREE - CONCRETE

CONCRETE REINFORCEMENT

- B. Welded Wire Fabric: Comply with ASTM A-185.**
 - 1) #3 bars at 16" o.c. each way, at slabs on grade, or as otherwise noted on the Structural Drawings (Structural Drawings shall prevail).
 - 2) 6 x 6 / W1.4 x W1.4 or as otherwise noted on the Structural Drawings (Structural Drawings shall prevail).
- C. Deformed Bar Anchors: Deformed Bar Anchors shall conform to "Specifications for Deformed Steel Wire for Concrete Reinforcement," ASTM A-496, with a minimum yield strength of 75,000 PSI.**
- D. Steel Tie Wire: Comply with ASTM A-82, 16-gauge black soft iron wire.**
- E. Chairs and other devices for supporting reinforcement in place.**
 - 1) Use wire bar type supports complying with CRSI recommendations, unless otherwise indicated. Do not use wood, brick, or other unacceptable material.
 - 2) For slabs on grade, use supports with sand plates or horizontal runners where base material will not support chair legs.

2.2 FABRICATION

- A. General: Fabricate reinforcing bars to conform to required shapes and dimensions, with fabrication tolerances complying with CRSI Manual. In case of fabricating errors, do not re-bend or straighten reinforcement in a manner that will injure or weaken the material.**
- B. Unacceptable Materials: Reinforcement with any of the following defects will not be permitted in the Work:**
 - 1) Bar lengths, depths, and bends exceeding specified fabrication tolerances.
 - 2) Bends or kinks not indicated on Drawings or final Shop Drawings.
 - 3) Bars with reduced cross-section due to excessive rusting or other cause.

PART THREE - EXECUTION

3.1 INSTALLATION

- A. Clean reinforcement to remove loose rust and mill scale, earth, and other materials which reduce or destroy bond with concrete.**

DIVISION THREE - CONCRETE

CONCRETE REINFORCEMENT

- B. Position, support, and secure reinforcement against displacement by formwork, construction, or concrete placement operations.**
- C. Locate and support reinforcing by metal chairs, spacers, and hangers to accomplish the purpose intended. Grade beam reinforcing shall be hung in position. Slab reinforcing shall be supported on chairs.**
- D. Arrange, space, and securely tie bars and bar supports together with 16-gauge wire to hold reinforcement accurately in position during concrete placement operations. Set wire ties so that twisted ends are directed away from exposed concrete surfaces.**
- E. All continuous reinforcement shall lap 36 bar diameters at splices, or as otherwise indicated on the Drawings.**
- F. Splice all top bar reinforcement at mid span, extend bottom bar reinforcement a minimum of one-foot past face of support.**
- G. Cast-in anchorages and nailer blocks, including bolts, for securing adjoining or collateral materials to concrete work, shall be accurately spaced, positioned and cast in the concrete.**
- H. Install welded wire fabric in as long lengths as practicable. Lap adjoining pieces at least one full mesh.**

3.2 CONCRETE PROTECTION FOR REINFORCEMENT

- A. Footings: 3".**
- B. Grade Beams: 3" from bottom, 2" from sides, 1-1/2" from top.**
- C. Slabs on Grade: 3/4" from top.**
- D. Others as shown on the Drawings.**

END OF SECTION

DIVISION THREE - CONCRETE

CAST-IN-PLACE CONCRETE

PART ONE - GENERAL

1.1 DESCRIPTION

- A. **Work Included:** All cast-in-place concrete, formwork, reinforcement, concrete materials, mixture design, placement procedures and finishes.
- B. **Related Work Described Elsewhere:**
 - 1) **Testing Laboratory Services:** Section 01450.
 - 2) **Dampproofing & Waterproofing:** Section 07110.
 - 3) **Termite Control:** Section 02360.

1.2 QUALITY ASSURANCE

- A. Do not begin concrete production until all mixes have been reviewed by the Architect.
- B. **Manufacturer Qualifications:** A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C-94/C-94M requirements for production facilities and equipment. Manufacturer shall be certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."
- C. **Welding Qualifications:** Qualify procedures and personnel according to AWS D1.4/D1.4M, "Structural welding Code – Reinforcing Steel."
- D. Comply with the following publications unless modified by requirements in the Contract Documents:
 - 1) ACI 301, "Specifications for Structural Concrete"
 - 2) ACI 117, "Specifications for Tolerances for Concrete Construction and Materials"
- E. **Concrete Testing Service:** Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixtures.

1.3 SUBMITTALS

- A. Concrete mix designs for each type of concrete to be used in the Work.
- B. Product data for each type of product indicated.
- C. Steel reinforcement shop drawings, indicating placement, fabrication, and bending.

DIVISION THREE - CONCRETE

CAST-IN-PLACE CONCRETE

1.4 PRODUCT HANDLING

- A. **Mixing and transportation operations shall conform to ASTM C-54.**
- B. **Mixing water shall not be added after leaving plant.**
- C. **No concrete which has been held longer than 1-1/2 hours in a mixer truck shall be used in the Work. When air temperature is between 85°F and 90°F, reduce mixing and delivery time to 75 minutes. When air temperature is above 90°F, reduce mixing and delivery time to 60 minutes.**

PART TWO - PRODUCTS

2.1 FORM FACING MATERIALS

- A. **Smooth-formed Finished Concrete: Form facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.**
- B. **Rough-formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.**

2.2 STEEL REINFORCEMENT

- A. **Reinforcing Bars: ASTM A-615/A-615M, Grade 60, deformed.**
- B. **Plain-steel Welded Wire Reinforcement: ASTM A-185/A-185M, plain, fabricated from as-drawn steel wire into flat sheets.**
- C. **Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or pre-cast concrete according to CRSI's "Manual of Standard Practice."**

2.3 CONCRETE MATERIALS

- A. **Cement: Portland Cement conforming to ASTM C-150, Type I, Type IA, Type III or Type IIIA gray. Supplement with the following:**
 - 1) **Fly Ash; ASTM C-618, Class F**
 - 2) **Ground granulated blast-furnace slag; ASTM C-989, Grade 100 or 120**
- B. **Normal-weight Aggregates: Clean, uncoated and free of any impurities that would diminish the concrete quality. Aggregates shall conform to ASTM C-33.**

DIVISION THREE - CONCRETE

CAST-IN-PLACE CONCRETE

- C. Sand: Clean, sharp river sand.
- D. Water: Clean and free from injurious amounts of oil, acid, alkali, or organic matter, and shall be potable. Conform to ASTM C-94/C-94M.

2.4 ADMIXTURES

- A. Air-Entraining Admixture: Conform to ASTM C-260.
- B. Chemical Admixtures:
 - 1) Water-Reducing: Conform to ASTM C-494/C-494M, Type A
 - 2) Retarding: Conform to ASTM C-494/C-494M, Type B
 - 3) Water-Reducing and Retarding: Conform to ASTM C-494/C-494M, Type D
 - 4) High-Range, Water-Reducing: Conform to ASTM C-494/C-494M, Type F
 - 5) High-Range, Water-Reducing and Retarding: Conform to ASTM C-494/C-494M, Type G
 - 6) Plasticizing and Retarding: ASTM C-1017/C-1017M, Type II
- C. Waterproofing Additive: Xypex Admix C-500 (2 - 3% by weight of Portland cement content), or equal, as manufactured by Xypex Chemical Corporation, 13731 Mayfield Place, Richmond, B.C., Canada V6V 2G9. Install at concrete slab areas below 0'-0".

2.5 UNDERSLAB MEMBRANE

- A. Under-slab Membrane: Refer to Section 07110 Dampproofing & Waterproofing.

2.6 CURING MATERIALS

- A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.
- B. Absorptive Cover: AASHTO M-182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. when dry.
- C. Moisture-Retaining Cover: ASTM C-171, polyethylene film or white burlap-polyethylene sheet.
- D. Water: Potable.

DIVISION THREE - CONCRETE

CAST-IN-PLACE CONCRETE

- E. Membrane-Forming Curing Compound at Areas where Floor Finishes are Scheduled: Clear, waterborne; ASTM C-309, Type 1, Class B, dissipating.
- F. Membrane-Forming Curing and Sealing Compound: Clear, solvent-borne, ASTM C-1315, Type 1, Class A; or waterborne, ASTM C-1315, Type 1, Class A.

2.7 CONCRETE SEALERS

- A. Exposed concrete floors at Multi-Purpose Rm. 100A, Serving 101, Laundry 104, Clothing Store 105, Computer Rm. 106, Foyer 110, Waiting Rm. 111, Exam Rm. 112, Exam Rm. 113, Hall 114, Storage 118, Janitor 119, and Storage 121: E-10 High Performance Epoxy Concrete Sealer (or equal), as distributed by ReUse Concrete Sealing Specialists, LLC., 16072 Foster St. Overland Park, KS. 66085 (800-997-3873)

2.8 CONCRETE MIXTURE AND STRENGTH

- A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301.
- B. Cementitious Materials: Use fly ash, pozzolan, ground granulated blast-furnace slag, and silica fume as needed to reduce the total amount of Portland cement, which would otherwise be used, by not less than 40 percent.
- C. Admixtures: Use according to manufacturer's written instructions.
 - 1) Use water-reducing, high-range water-reducing, or plasticizing admixture in concrete, as required, for placement and workability.
 - 2) Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
- D. Proportion normal-weight concrete mixture as follows:
 - 1) Minimum compressive strength (28 days): as shown on the Drawings.
 - 2) Maximum Water-Cementitious Materials Ratio: as shown on the Drawings.
 - 3) Slump Limit: as shown on the Drawings.
 - 4) Air Content: as shown on the Drawings. Do not allow air content of trowel-finished floors to exceed 3 percent.

2.9 FABRICATING REINFORCEMENT

- A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

DIVISION THREE - CONCRETE

CAST-IN-PLACE CONCRETE

2.10 CONCRETE MIXING

- A. **Ready-Mixed Concrete:** Measure, batch, mix and deliver concrete according to ASTM C-94/C-94M and ASTM C-1116/C-1116M; furnish batch ticket information.
 - 1) Mixing water shall not be added after leaving plant.
 - 2) No concrete which has been held longer than 1-1/2 hours in a mixer truck shall be used in the Work.

PART THREE – EXECUTION

3.1 FORMWORK

- A. Design, erect, shore, brace and maintain formwork according to ACI 301 to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied until structure can support such loads.
- B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation and position indicated, within tolerance limits of ACI 117.
- C. Chamfer exterior corners and edges of permanently exposed concrete.

3.2 EMBEDDED ITEMS

- A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instruction, and directions furnished with items to be embedded.
- B. **Embedded Pipes and Conduit:** Pipes and conduit may be embedded in slabs in accordance with ACI 503, and as follows: maximum size of pipe or steel conduit shall be 1/3 thickness of slab, spaced not less than 3 diameters center to center.

3.3 VAPOR RETARDERS

- A. Place, protect, and repair sheet vapor retarder according to ASTM E-1643 and manufacturer's written instructions. Lap joints 6 inches and seal with manufacturer's recommended tape.

3.4 STEEL REINFORCEMENT

- A. Comply with CRSI's "Manual of Standard Practice" for placing reinforcement. Do not cut or puncture vapor retarder. Repair damage and re-seal vapor retarder before placing concrete.

DIVISION THREE - CONCRETE

CAST-IN-PLACE CONCRETE3.5 JOINTS

- A. **General:** Construct joints true to line with faces perpendicular to surface plane of concrete.
- B. **Construction Joints:** Install construction joints so strength and appearance of concrete are not impaired, at location indicated, or as approved by Architect.
- C. **Contraction Joints in Slabs-on-Grade:** Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness, as follows:
 - 1) **Grooved Joints:** Form contraction joints after initial floating by grooving and finishing each edge of joint to a radius of 1/8". Repeat grooving of contraction joints after applying surface finishes. Eliminate groover tool marks on concrete surfaces.
 - 2) **Sawed Joints:** Form contraction joints with power saw equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8" wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface, and before concrete develops random contraction marks.
- D. **Isolation Joints in Slabs-on-Grade:** After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams and other locations, as indicated.
- E. **Waterstops:** Install in construction joints and at other joints indicated according to manufacturer's written instructions.

3.6 CONCRETE PLACEMENT

- A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete, and that required inspections have been performed.
- B. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed over concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation; and consolidate placed concrete with mechanical vibrating equipment according to ACI 301.
- C. Cold weather placement shall comply with ACI 306.1.
- D. Hot weather placement shall comply with ACI 301.

DIVISION THREE - CONCRETE

CAST-IN-PLACE CONCRETE3.7 FINISHING FORMED SURFACES

- A. **Smooth-Formed Finish:** At vertical concrete surfaces exposed to public view, repair and patch tie holes and defects. Remove fins and other projections that exceed specified limits on formed-surface irregularities. Not later than one day after form removal, moisten concrete surfaces and rub with carborundum brick or other abrasive until producing a uniform color and texture.

3.8 FINISHING FLOORS AND SLABS

- A. **General:** Comply with ACI 302.1R recommendations for screeding, re-straightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.
- B. **Float Finish:** Consolidate surface with power-driven floats or by hand-floating if area is small or inaccessible to power-driven floats. Re-straighten, cut down high spots, and fill low spots. Repeat float passes and re-straightening until surface is left with a uniform, smooth, granular texture.
- C. **Trowel Finish:** After applying float finish, apply first troweling and consolidate concrete by hand or power-driven trowel. Continue troweling passes and re-straighten until surface is free of trowel marks and has a smooth hard level finish. All floor slabs in areas scheduled for vinyl or carpet flooring, or where scheduled to remain exposed (including stained concrete), shall receive a troweled finish.
- 1) **Tolerance:** Finish and measure surface so gap at any point between concrete surface and an unlevelled, freestanding 10-foot long straightedge resting on two high spots and placed anywhere on the surface does not exceed 1/8".
- D. **Broom Finish:** Apply a broom finish to exterior concrete walks, steps, ramps and elsewhere as indicated.

3.9 PROTECTING AND CURING

- A. **General:** Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
- B. **Evaporation Retarder:** Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding and bull-floating or darbying concrete, but before float finishing.
- C. Cure concrete according to ACI 308.1 by one or a combination of the following methods:

DIVISION THREE - CONCRETE

CAST-IN-PLACE CONCRETE

- 1) **Moisture curing:** Keep surfaces continuously moist for not less than seven days.
- 2) **Moisture-Retaining Cover curing:** Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable widths, with sides and ends lapped at least 12 inches and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
- 3) **Curing Compound:** Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Re-coat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period. After curing period has elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound manufacturer unless manufacturer certifies curing compound will not interfere with bonding of floor covering or application of concrete stain used on Project.
- 4) **Curing and Sealing Compound:** Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller according to manufacturer's written instructions. Re-coat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

3.10 CONCRETE SURFACE REPAIRS

- A. **Defective Concrete:** Repair and patch defective areas when approved by the Architect. Remove and replace concrete that cannot be repaired and patched to Architect's approval.

END OF SECTION

DIVISION FOUR - MASONRY

MORTAR

PART ONE - GENERAL

1.1 DESCRIPTION

This Section covers mortar for Masonry Work.

1.2 RELATED WORK DESCRIBED ELSEWHERE

- A. Masonry Units: Section 04210.

1.3 SUBMITTALS

- A. Sample panels of face work masonry using sample mortars shall be laid up and permitted to dry, before approval of the mortar color to be used will be given.
- B. Mortar for the exterior masonry work shall match the approved mortar sample.

1.4 PRODUCT HANDLING

- A. Packaged materials shall be delivered and stored in original packages until ready for use.
- B. Store cementitious materials and aggregates in such a manner as to prevent deterioration or intrusion of foreign material.
- C. Packages or materials showing evidence of water or other damage shall be rejected.

PART TWO - PRODUCTS

2.1 MATERIALS

- A. Mortar materials for brick masonry shall conform generally to the requirements of ASTM C-270, Type N.
- B. Mortar Proportioning: One 94-pound sack of cement equals one cubic foot. The following proportions are by volume:

Type N Mortar:

One (1) part Portland Cement

One (1) part hydrated lime

Six (6) parts sand measured damp but loose.

- C. Mortar Colors: TXI, "White"

DIVISION FOUR - MASONRY

MORTAR

- D. Water shall be clean, fresh, potable water free from elements deleterious to Portland Cement Concrete.

PART THREE - EXECUTION

3.1 MIXING

- A. Mix cementitious materials and aggregate for at least three minutes with the maximum amount of water to produce a workable consistency in a mechanical batch mixer.
- B. Mortar that has stiffened because of evaporation of water from the mortar shall be re-tempered by adding water as frequently as needed to restore the required consistency. Place mortar in final position within 2-1/2 hours after mixing.

3.2 APPLICATION

- A. Mortar shall be applied as specified in the various Masonry Sections of these Specifications.

END OF SECTION

DIVISION FOUR - MASONRY

MASONRY ACCESSORIES

PART ONE - GENERAL

1.1 DESCRIPTION

- A. Work Included: Furnish all wall ties and reinforcing materials necessary to complete Masonry Work.

1.2 RELATED WORK DESCRIBED ELSEWHERE

- A. Masonry Units: Section 04210.

1.3 PRODUCT HANDLING

- A. Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the Work and material of all other trades.

PART TWO - PRODUCTS

2.1 MASONRY ACCESSORIES

- A. Wall ties at stone veneer: Hohmann & Barnard, Inc., #DW-10HS anchors, hot dipped galvanized, w/ 5-1/2" long (or as otherwise required) x 14 ga. mounting plate. Fasten ties with #10 x 1-1/2" self-tapping, hex head Climaseal screws with 9/16" EPDM washers.
- B. Mortar Mesh: Wall Defender, 10"H x 1" thick (or as required to fill cavity), as manufactured by Mortar Net Solutions.
- C. Expansion joint inserts: Extruded closed cell neoprene sponge.

PART THREE - EXECUTION

3.1 INSTALLATION

- A. Wall Ties: For exterior masonry veneer, wall ties shall be spaced at 16" o.c. (max.) horizontally and 16" o.c. (max.) vertically; or approximately 2 sq. ft. per tie, max.

END OF SECTION

DIVISION FOUR - MASONRY

MASONRY UNITS

PART ONE - GENERAL

1.1 DESCRIPTION

- A. Provide all labor, materials, equipment and appurtenant accessories necessary for or incidental to the execution of all Brick and CMU Masonry Work as indicated on the Drawings and as hereinafter specified.
- B. Install material furnished under other Sections.

1.2 RELATED WORK DESCRIBED ELSEWHERE

- A. Mortar: Section 04060.
- B. Masonry Accessories: Section 04080.
- C. Lintel Angles and Masonry Supports: Section 05500.

1.3 SUBMITTALS

- A. Mock-Ups:
 - 1) Prior to proceeding with the remainder of the Work of this Section, construct a mock-up of the brick and ground-face CMU veneer for the Architect's review and approval. The panel shall be a minimum of 4' high by 4' long.
 - 2) Upon the Architect's approval of the mock-ups, complete all required masonry construction in strict accordance with the standards reviewed and approved by the Architect in the mock-ups.

1.4 PRODUCT HANDLING

- A. Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the Work and materials of all other trades.
- B. In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

PART TWO - PRODUCTS

2.1 MATERIALS

- A. Stone veneer: Charcoal Lueder 4-6-8 full stone (87%) and White 4-6-8 full stone (13%), as distributed by Allstate Brick, 2930 Lincoln Dr., Houston, TX 77038. Tel. (281) 447-8564.

DIVISION FOUR - MASONRY

MASONRY UNITS

- B. Cast stone watertable units: As manufactured by Innovative Cast Stone, 405 Dr. MLK Drive South; Tel: (281) 541-5038. Conform to shapes and thicknesses indicated on the drawings. Color as selected by Architect from manufacturer's standard selection.

PART THREE – EXECUTION

3.1 INSPECTION

- A. Examine the areas and conditions under which work of this Section will be performed. Correct any conditions detrimental to the proper and timely completion of the work. Do not proceed until unsatisfactory conditions have been corrected.

3.2 COORDINATION

- A. Carefully work with all other trades to ensure proper and adequate coordination of the work of other trades with the work of this Section.

3.3 INSTALLATION

- A. General: Walls shall be plumb, level, and true to the lines and dimensions shown on the Drawings. Do not use chipped or broken units. If any such units are discovered in the finished wall, the Architect will require their removal and replacement with new units at no additional cost to the Owner. All cutting shall be by power saw, which shall be kept at the job site at all times while masonry work is in progress. No masonry shall be erected when temperature of outside air is below 45° F.
- B. Dampening: Masonry units having absorption rates, determined in accord with ASTM C-67, in excess of 0.025 oz./sq. in./min. shall be wetted sufficiently so that rate when laid does not exceed that amount.
- C. Laying Up:
- 1) All reinforcing to be installed in the masonry shall be set and securely built-in as part of the Masonry Work, in positions specified or designated by details in the Drawings.
 - 2) Keep masonry units damp when laid. Shove units into place (do not lay) in full mortar bed. Fill horizontal and vertical joints completely with mortar. Make vertical joints of same width, except small variations required to maintain bond.
 - 3) Lay masonry plumb, true to face plane with level, accurately spaced courses. Keep bond plumb throughout. Lay corners plumb and true.

DIVISION FOUR - MASONRY

MASONRY UNITS

- 4) Mortar joints shall be tooled for slightly concaved effect, unless otherwise directed by Architect.
 - 5) Provisions shall be made for all special units as may be required to form all corners, returns, openings and offsets and to maintain a proper bond throughout the length of all masonry walls.
 - 6) Install expansion joints, where indicated on the Drawings. Remove any mortar from space between masonry units at expansion joints.
- D. **Weep Holes in Facing:** Where exterior face work is supported on concrete grade beams, shelf angles, or by loose angle lintels over openings, form weep holes in mortar bed on which first course of masonry is to be built. Provide weep holes at 32" o.c., max., using pieces of sash cord embedded in the mortar. Pull out cord after mortar has set. Keep weep holes and area above flashing free of mortar droppings.
- E. **Penetrations:** Fit masonry closely around penetrating members but do not build them in solid unless so noted. Sleeves shall be built in solid.
- F. **Installation of Flashing:** Clean surface of masonry smooth and free from projections which might puncture or otherwise damage flashing material. Place flashing material on a bed of mortar or mastic. Cover flashing with mortar.
- G. **Protection:** Protect masonry construction from exposure to wind and sun when it is erected in an ambient air temperature of 99° F. or more in the shade and the relative humidity is less than 50%. At the end of each day's work and during shutdown, protect the top of walls exposed to weather with strong waterproof covering extending 2' down both sides and held securely in place. Adequately protect masonry work at visible corners and at doors and other openings against damage and discoloration. Protect sills and projecting courses. Remove protection at completion of job, or when directed.

3.4 POINTING AND CLEANING

- A. At the completion of the masonry work, any holes in mortar joints of exposed masonry surfaces shall be suitably enlarged and completely filled with mortar.
- B. Upon completion of all masonry work and after approval by the Architect, all exposed surfaces shall be wetted and then cleaned with a solution of Sure-Klean® 600 (or as otherwise recommended by stone supplier), applied with stiff fiber brushes.
- C. Immediately after cleaning, stone veneer shall be thoroughly rinsed down with clear water, leaving it clean, free of mortar smears, and with tight mortar joints throughout.

END OF SECTION

DIVISION FIVE - METALS

STRUCTURAL STEEL

PART ONE - GENERAL

1.1 DESCRIPTION

- A. **Work Included:** Furnish, fabricate, mark for erection identification, pack, crate, or otherwise properly prepare for shipment, and ship to the site all structural steel indicated on the Drawings, described in these Specifications, or otherwise required for proper completion of Work.
- B. The structural steel framework shall be engineered and fabricated by a company selected by the General Contractor. All components shall meet the requirements of the fabricator's specifications, or as otherwise specified herein.
- C. **Related Work Described Elsewhere:**
 - 1) **Structural Steel Erection:** Section 05121.

1.2 QUALITY ASSURANCE

- A. **Standards:** Comply with standards specified in this Section.
- B. **Qualifications of Welders:** Qualify welding processes and welding operators in accordance with AWS "Standard Qualification Procedure". Welders are to be qualified by AWS with up-to-date certification.
- C. Verify measurements in the field for Work fabricated to fit job conditions.

1.3 SUBMITTALS

- A. **General:** Comply with pertinent provisions of Section 01330.
- B. Prior to fabrication, prepare and submit Shop Drawings including complete details and schedules for fabrication and shop assembly of members.
 - 1) Include details of cuts, connections, camber, holes and other pertinent data.
 - 2) Indicate welds by AWS symbols, and show size length, and type of weld.
 - 3) Provide Setting Drawings, templates, and directions for installation of anchor bolts and other anchorages.
 - 4) Identify details by reference to sheet and detail number on the Drawings.

1.4 PRODUCT HANDLING

- A. Deliver all materials to the job site properly marked to identify erection location. Marking shall correspond to marking indicated on the Shop Drawings.

DIVISION FIVE - METALS

STRUCTURAL STEEL

- B. Store materials in a manner to maintain identification and to prevent damage.
- C. In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

PART TWO - PRODUCTS

2.1 MATERIALS

- A. Rolled Steel Shapes, Plates, & Bars: Conform to AISC "Specification for the Design, Fabrication and Erection of Structural Steel for Buildings", latest edition as amended; and ASTM Specification A36.
- B. Steel Tube Shapes: Conform to ASTM A500, Grade B.
- C. Anchor Bolts: Conform to ASTM A307 bolts with heavy hexagonal nuts, unless otherwise indicated.
- D. Electrodes for Welding: Conform to AWS Code, using ASTM A233 E-70 series electrodes.
- E. Unfinished Threaded Fasteners: Comply with ASTM A307, Grade A regular low-carbon steel bolts and nuts. Provide either hexagonal, or square heads and nuts, except use only hexagonal units for exposed connections.
- F. High Strength Threaded Fasteners: Heavy hexagonal structural bolts, heavy hexagon nuts, and hardened washers, shall be quenched and tempered medium-carbon steel bolts, nuts, and washers, complying with ASTM A325.
- G. See Structural Drawings for other general notes on steel placement and standards.

2.2 SHOP FABRICATION & ASSEMBLY

- A. Fabricate items of structural steel in accordance with AISC Specifications and as indicated on the approved Shop Drawings. Provide camber in structural members as shown.
- B. Properly mark and match-mark materials for field assembly and for identification as to erection location. Fabricate for delivery sequence which will expedite erection and minimize field handling of materials.
- C. Connections:
 - 1) Bolts and washers of all types and sizes required shall be provided for completion of all field erection.

DIVISION FIVE - METALS

STRUCTURAL STEEL

- 2) **High-Strength Bolted Construction:** Install high-strength threaded fasteners in accordance with AISC "Specifications for Structural Joints using ASTM A325 or A490 Bolts."
- 3) **Welded Construction:** Comply with AWS Code for procedures, appearance and quality of welds, and methods used in correcting welded Work.
- 4) Assemble and weld built-up sections by methods which will produce true alignment of axes without warp.

D. **Holes for Other Work:**

- 1) Provide holes required for securing other Work to structural steel framing, and for the passage of other Work through steel framing members, as shown on the final Shop Drawings. Provide threaded nuts welded to framing, and other specialty items as shown to receive other Work.
- 2) Cut, drill, or punch holes perpendicular to metal surfaces. Do not flame cut holes or enlarge holes by burning. Drill holes in bearing plates.

2.3 SHOP PAINTING

A. **General:**

- 1) Shop paint all structural steel work with fabricator's standard top quality primer.
- 2) Do not paint surfaces which are to be welded or high-strength bolted with friction-type connections.
- 3) Do not paint surfaces of columns or beams that have a galvanized finish.
- 4) Apply two coats of paint to surfaces which are inaccessible after assembly or erection. Change color of second coat to distinguish it from the first.

B. **Surface Preparation:** After inspection and before shipping, clean steel Work to be painted. Remove loose rust, loose mill scale, and splatter, slag, and flux deposits. Clean steel in accordance with Steel Structures Painting Council (SSPC): SP-2 "Hand Tool Cleaned" for all steel scheduled or specified to receive an alkyd-oil primer.

C. **Painting:** Immediately after surface preparation, apply structural steel primer paint in accordance with the Manufacturer's instructions and at a rate to provide a uniform dry film thickness. Use painting methods which will result in full coverage of joints, corners, edges, and all exposed surfaces.

DIVISION FIVE - METALS

STRUCTURAL STEEL

PART THREE - EXECUTION

3.1 FIELD FABRICATION & ASSEMBLY

- A. **General:** Comply with the AISC Specifications and Code of Standard Practice, and as herein specified.
- B. **Anchor Bolts:**
 - 1) Furnish anchor bolts and other connectors required for securing structural steel to foundations and other in-place Work.
 - 2) Furnish templates and other devices necessary for presetting bolts and other anchors to accurate locations.
 - 3) Refer to Division Three for anchor bolt installation requirements in concrete, and Division Four for masonry installation.
- C. Bases and bearing plates shall be shop-welded to columns and members attached to concrete and masonry. Install slide bearing plates and protect against damage in accordance with Manufacturer's written directions.
- D. **Splicing:** Splice members only where indicated unless splices not indicated would result in lower costs due to reduced shipping costs. Submit structural calculations signed by a Structural Engineer licensed where the fabricator is located, for all splices not indicated.
- E. **Gas-Cutting:** Do not use gas cutting torches for correcting fabrication errors in the structural framing. Cutting will be permitted only on secondary members as acceptable to the Architect. Finish gas-cut sections equal to a sheared appearance when gas-cutting is permitted.

3.2 SHOP QUALITY CONTROL

- A. **General:** The testing and inspection service shall perform the following when so directed by the Architect.
 - 1) Inspect high-strength bolted connections, visually inspect welded connections, perform required tests and inspections, and prepare test reports.
 - 2) Submit test reports in triplicate to the Architect.
 - 3) Review mill test reports, verify identity of steel with respect to mill test reports and, if found to comply with Specifications requirements, so certify to the Architect.

DIVISION FIVE - METALS

STRUCTURAL STEEL

- 4) If steel is not accompanied by test reports, or test reports fail to verify compliance, perform additional tests in compliance with procedures specified in the appropriate ASTM specifications and prepare test reports.
 - 5) Conduct and interpret the tests and state in each report whether the test specimens comply with the requirements.
 - 6) Inspect structural steel at the plant before shipment; however, the Architect reserves the right, at any time before final acceptance, to reject material not complying with specified requirements.
 - 7) Verify dry mill thickness of shop prime coat.
 - 8) Perform additional tests, at Contractor's expense, as may be necessary to reconfirm any noncompliance of the original Work, and as may be necessary to show compliance of corrected Work.
 - 9) **Shop Bolted Connections:** Inspect in accordance with AISC Specifications.
 - 10) **Shop Welding:** Inspect and test during fabrication of structural steel assemblies, as follows:
 - a. Certify welders and conduct inspections and tests as required. Record types and locations of all defects found in the Work. Record Work required and performed to correct deficiencies.
 - b. Perform visual inspection of all welds.
- B. **Access:** Provide access for the testing agency to places where Structural Steel Work is being fabricated or produced so that required inspection and testing can be accomplished.

END OF SECTION

DIVISION FIVE - METALS

COLD-FORMED METAL FRAMING

PART ONE - GENERAL

1.1 DESCRIPTION

- A. This section includes the following:
- 1) Exterior non-load-bearing wall framing
 - 2) Interior non-load-bearing wall framing

1.2 PERFORMANCE REQUIREMENTS

- A. **Structural Performance:** Provide cold-formed metal framing capable of withstanding design loads within limits and under conditions indicated below:
- 1) **Design Loads:**
 - a) **Dead Loads:** Weights of materials and construction
 - b) **Roof Loads:** 20 psf (excluding rooftop-mounted mechanical equipment)
 - c) **Wind Loads:** Basic wind speed (3-second gust) – 110 mph. Wind importance factor, I – 1.15. Wind exposure – B.
 - 2) **Deflection Limits:** Design framing systems to withstand design loads without deflections greater than the following:
 - a) **Exterior non load-bearing wall framing:** Horizontal deflection of L/480 of the wall height.
 - b) **Interior non-load bearing wall framing:** Horizontal deflection of L/360 of the wall height under horizontal load of 5 lbf/sq. ft.

1.3 SUBMITTALS

- A. **Product Data:** For each type of product and accessory indicated.
- B. **Shop Drawings:** Show layout, spacing, sizes, thicknesses and types of cold-formed metal framing. Indicate fastening and anchorage details, including mechanical fasteners.
- 1) For cold-formed metal framing indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

DIVISION FIVE - METALS

COLD-FORMED METAL FRAMING1.4 QUALITY ASSURANCE

- A. **Product Tests:** Mill certificates or data from a qualified independent testing agency indicating steel sheet complies with requirements.
- B. **Welding:** Qualify procedures and personnel according to AWS D1.3, "Structural Welding Code-Sheet Steel."
- C. **Fire-Test Response Characteristics:** Where indicated, provide cold-formed metal framing identical to that of assemblies tested for fire resistance per ASTM E-119 by a testing and inspecting agency acceptable to authorities having jurisdiction.
- D. **AISI Specifications and Standards:** Comply with AISI's "North American Specification for the Design of Cold-Formed Steel Structural Members" and "Standard for Cold-Formed Steel Framing-General Provisions."
 - 1) Comply with AISI's "Standard for Cold-Formed Steel Framing-Truss Design."
 - 2) Comply with AISI's "Standard for Cold-Formed Steel Framing-Header Design."

PART TWO – PRODUCTS2.1 MATERIALS

- A. **Steel sheet:** ASTM A-1003/A-1003M, Standard Grade, Type H, metallic coated, of grade and coating weight as follows:
 - 1) **Grade:** As required by structural performance, but not less than that shown on the drawings.
 - 2) **Coating:** G60 (Z180).

2.2 INTERIOR LOAD-BEARING & NON-LOAD BEARING FRAMING

- A. Metal stud walls shall be formed from steel that corresponds to the requirements of ASTM A446, Grade A, with a minimum yield of 33,000 psi, and having a G-60 galvanized coating. Center of flanges shall be knurled to prevent screw "ride" and to expedite attachment of gypsum wallboard and sheathing. Studs shall be punched to facilitate installation of pipes and conduit. Sizes shall be as follows:
 - 1) **Interior non-load-bearing partitions:** 2-1/2", 3-5/8" or 6" studs (as indicated on the drawings), with 1-1/4" flanges, 25 gauge minimum, or as otherwise indicated on the Drawings. Studs to be spaced at 16" o.c.

DIVISION FIVE - METALS

COLD-FORMED METAL FRAMING

- 2) **Bracing at non-load-bearing partitions:** 3-5/8", 25-gauge stud bracing at 4'-0" o.c. alternate directions to underside of structure, where indicated on the Drawings or recommended by steel stud manufacturer.
- 3) **Exterior studs at stone wainscot:** 3-5/8", 18-gauge studs at 16" o.c.
- 4) **Interior load-bearing partitions:** 6", w/ 1-3/8" flanges, 18-gauge minimum, or as otherwise indicated on the Drawings. Studs to be spaced at 16" o.c.

2.4 FRAMING ACCESSORIES

- A. Fabricate steel-framing accessories from steel sheet, ASTM A-1003/A-1003M, Structural Grade, Type H, metallic coated, of same grade and coating weight used for framing members, unless otherwise indicated.
- B. **Steel Shapes and Clips:** ASTM A-36/A-36M, zinc coated by hot-dip process according to ASTM A-123/A-123M.
- C. **Anchor Bolts:** ASTM F-1554, Grade 36, threaded carbon-steel hex-headed bolts hooked bolts and carbon-steel nuts; and flat, hardened-steel washers; zinc coated by hot-dip process according to ASTM A-153/A-153M, Class C.
- D. **Expansion Anchors:** Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with capability to sustain, without failure, a load of equal to 5 times design load, as determined by testing per ASTM E-488 conducted by a qualified independent testing agency.
- E. **Power-Actuated Anchors:** Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with capability to sustain, without failure, a load equal to 10 times design load, as determined by testing per ASTM E-1190 conducted by a qualified independent testing agency.
- F. **Mechanical Fasteners:** ASTM C-1513, corrosion resistant-coated, self-drilling, self-tapping steel drill screws. Head Type: Low-profile head beneath sheathing, manufacturer's standard elsewhere.

2.5 MISCELLANEOUS MATERIALS

- A. **Galvanizing Repair Paint:** SSPC-Paint 20, ASTM A-780.
- B. **Sealer Gaskets:** Closed-cell neoprene foam, 1/4-inch thick, selected from manufacturer's standard width to match width of bottom track or rim track members.

DIVISION FIVE - METALS

COLD-FORMED METAL FRAMING

PART THREE – EXECUTION

3.1 PREPARATION

- A. Install sealer gaskets to isolate the underside of wall bottom track or rim track and the top of foundation wall or slab at stud or joist locations.

3.2 INSTALLATION - GENERAL

- A. Install cold-formed metal framing according to AISI's "Standard for Cold-formed Steel Framing – General Provisions" and to manufacturer's written instructions unless more stringent requirements are indicated.
- B. Install cold-formed metal framing and accessories plumb, square, and true to line, and with connections securely fastened.
- C. Install framing members in one-piece lengths.
- D. Install temporary bracing and supports to secure framing and support loads comparable in intensity to those for which structure was designed. Maintain braces and supports in place, undisturbed, until entire integrated supporting structure has been completed and permanent connections to framing are secured.
- E. Install insulation specified in Section 07210 "Insulation" in built-up exterior framing members, such as headers, sills, boxed joists, and multiple studs at openings, that are inaccessible on completion of framing work.
- F. Fasten hole reinforcing plate over web penetrations that exceed size of manufacturer's standard punched openings.
- G. Erection Tolerances: Install cold-formed metal framing level, plumb, and true to line to a maximum allowable tolerance variation of 1/8 inch in 10 feet. Space individual framing members no more than plus or minus 1/8 inch from plan location. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing materials.

3.3 EXTERIOR NON-LOAD BEARING WALL INSTALLATION

- A. Install continuous tracks sized to match studs. Align tracks accurately and securely anchor to supporting structure as indicated.
- B. Fasten both flanges of studs to top and bottom track, unless otherwise indicated. Space studs as required by design, but not less than that shown on structural drawings.
- C. Set studs plumb, except as needed for diagonal bracing.

DIVISION FIVE - METALS

COLD-FORMED METAL FRAMING

- D. Install horizontal bridging in wall studs, spaced in rows indicated on Shop Drawings but not more than 48 inches apart. Fasten at each intersection.
- 1) **Top Bridging for Single Deflection Track:** Install horizontal bridging within 12 inches of single deflection track. Install a combination of flat, taut, steel sheet straps of width and thickness indicated and stud or stud-track solid blocking of width and thickness matching studs. Fasten to stud flanges and secure solid blocking to stud webs or flanges.
 - 2) **Cold-rolled steel channel bridging:** Weld or mechanically fasten to webs of punched studs.
 - 3) **Flat, taut, steel sheet strap bridging:** Fasten flat straps to stud flanges and secure solid blocking to stud webs or flanges.
 - 4) **Proprietary bridging:** Install according to manufacturer's written instructions.
- F. Install miscellaneous framing and connections, including stud kickers, web stiffeners, clip angles, continuous angles, anchors, fasteners, and stud girts, to provide complete and stable curtainwall framing system.

3.4 FIELD QUALITY CONTROL

- A. **Testing:** Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports.
- B. Filed and shop welds will be subjected to testing and inspecting.
- C. Remove and replace work where test results indicate that it does not comply with specified requirements.
- D. Additional testing and inspecting, at Contractor's expense will be performed to determine compliance of replaced or additional work with specified requirements.

3.6 REPAIRS AND PROTECTION

- A. **Galvanizing Repairs:** Prepare and repair damaged galvanized coatings on fabricated and installed cold-formed metal framing with galvanized repair paint according to ASTM A-780 and manufacturer's written instructions.
- B. Provide final protection and maintain conditions in a manner acceptable to manufacturer and installer that ensures the cold-formed metal framing is without damage or deterioration at time of Substantial Completion.

END OF SECTION

DIVISION FIVE - METALS

METAL FABRICATIONS

PART ONE - GENERAL

1.1 DESCRIPTION

- A. Provide all miscellaneous metal and metal fabrications, complete, in place, as shown on the Drawings, or as needed for a complete and proper installation and not specifically called for under other Sections of these Specifications.
- B. Related work described elsewhere:
 - 1) Anchor bolts installed under Division Three.

1.2 QUALITY ASSURANCE

- A. Qualifications of personnel: Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the Work of this Section.
- B. Welding: Perform all shop and field welding required in connection with the Work of this Section, adhering strictly to the current pertinent recommendations of the American Welding Society.

1.3 SUBMITTALS

- A. General: Comply with provisions of Section 01330.
- B. Submit Shop Drawings of all items proposed to be furnished and installed under this Section. Include plans, sections, elevations, and details as needed.
- C. Submit templates for anchor and bolt installation by other trades.

1.4 PRODUCT HANDLING

- A. Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the Work and materials of all other trades.
- B. In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

PART TWO - PRODUCTS

2.1 MATERIALS

- A. Rolled steel shapes, plates, and bars: ASTM A36.

DIVISION FIVE - METALS

METAL FABRICATIONS

- B. **Fasteners:** Shall be zinc coated for exterior use and where built into exterior walls. Fasteners for use with aluminum shall be aluminum, Type 304 stainless steel, or cadmium plated steel.
- C. Provide miscellaneous plates, anchors, hangers, dowels and other miscellaneous steel and iron shapes as required for framing, support, and embedment and anchoring to concrete and other structures.
- D. **Expansion bolts:** Rawl-driven, one piece, where indicated on the Drawings or required for proper installation.
- E. **Grout:** Non-shrink, non-ferrous, Embeco or equivalent.
- F. **Stair Handrails:** Furnish and install Schedule 40 steel pipe, 1-1/2" diameter, at stairways as detailed on the Drawings. Handrail brackets for stairs shall be cast malleable iron, J. G. Braun #4595, or equal. Radius-return ends of wall-mounted rails to walls. Fabricate rails smooth with no projections to prevent a hand from sliding along entire length.
- G. **Wall Stiffeners at half-wall at Mech. Loft 200:** As manufactured by NoFlex, 18627 Brookhurst St. #206, Fountain Valley, CA 92708 USA (800-720-1994). Provide #CE2W36, 38"H, 2" x 2" 14-gauge tube stiffeners, welded to 3/8" base plate.

2.3 COATINGS

- A. **Metal primer paint:**
 - 1) Factory primed shop coat except for material to be galvanized, and non-ferrous material.
 - 2) Field touch-up same as shop coat on factory primed material.
- B. **Galvanizing repair paint:** Use a high zinc dust content paint for re-galvanizing welds in galvanized steel, complying with MIL SPEC MIL-P-21035.
- C. **Galvanizing:** Provide a zinc coating for those items shown or specified to be galvanized as follows:
 - 1) ASTM A153 for galvanizing iron and steel hardware.
 - 2) ASTM A123 for galvanizing rolled, pressed, and forged steel shapes, plates, bars, and strip 1/8" thick and heavier.
 - 3) ASTM A386 for galvanizing assembled steel products.

DIVISION FIVE - METALS

METAL FABRICATIONS

2.4 FABRICATION

A. Workmanship:

- 1) Use materials of size and thickness shown or, if not shown, of required size and thickness to produce strength and durability in the finished product.
- 2) Work to dimensions shown or accepted on the Shop Drawings, using proven details of fabrication and support.
- 3) Use type of materials shown or specified for the various components of the Work.
- 4) Ease the exposed edges to a radius of approximately 1/32" unless otherwise shown.
- 5) Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing Work.
- 6) Weld corners and seams continuously, complying with AWS recommendations. At exposed connections, grind exposed welds smooth and flush; match and blend with adjoining surfaces.
- 7) Provide anchorage of the type shown. Coordinate with supporting structure. Fabricate and space the anchoring devices to provide adequate support for intended use.
- 8) Cut, reinforce, drill, and tap miscellaneous metal Work as indicated to receive finish hardware and similar items.

B. Miscellaneous framing and supports:

- 1) Fabricate miscellaneous units to sizes, shapes, and profiles shown; or, if not shown, of required dimensions to receive adjacent other Work to be retained by framing.
- 2) Fabricate the miscellaneous units from structural steel shapes, plates, and steel bars of welded construction with mitered joints for field connection, unless otherwise shown.
- 3) Galvanize miscellaneous frames and supports where indicated.

C. Shop painting:

- 1) Shop paint miscellaneous metal work, except aluminum and galvanized surfaces, unless specified otherwise.

DIVISION FIVE - METALS

METAL FABRICATIONS

- 2) Remove scale, rust, and other deleterious materials before applying shop coat.
- 3) Clean off heavy rust and loose mill scale in accordance with SSPC SP-2 or SSPC-SP-3.
- 4) Remove oil, grease, and similar contaminants in accordance with SSPC-SP-1.
- 5) Immediately after surface preparation, brush, or spray on primer in accordance with Manufacturer's recommendations, and at a rate to provide the recommended minimum dry film thickness.
- 6) Use painting methods which will result in full coverage of joints, corners, edges, and exposed surfaces.
- 7) Apply one shop coat to fabricated metal items.

PART THREE - EXECUTION

3.1 INSPECTION

- A. Examine the areas and conditions under which miscellaneous metal items are to be installed, and correct conditions detrimental to the proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. **Setting loose plates:**
 - 1) Clean concrete bearing surfaces of any bond-reducing materials; and roughen to improve bond to surfaces.
 - 2) Set loose leveling and bearing plates on wedges, or other adjustable devices.
 - 3) After the bearing members have been positioned and plumbed, tighten the anchor bolts. Do not remove wedges or shims; but if protruding, cut off flush with the edge of the bearing plate before packing with grout.
 - 4) Pack grout solidly between bearing surfaces and plates to ensure that no voids remain.
- B. **Fastening to in-place construction:** Provide anchorage devices and fasteners where necessary for securing miscellaneous metal fabrications to in-place construction including threaded fasteners for concrete inserts, toggle bolts, through-bolts, lag bolts, wood screws, and other connectors as required.

DIVISION FIVE - METALS

METAL FABRICATIONS

- C. **Cutting, fitting, and placement:**
- 1) Perform cutting, drilling, and fitting required for installation of miscellaneous metal fabrications.
 - 2) Set work accurately in location, alignment, and elevation, and make plumb, level, true, and free from rack, measured from established lines and levels.
 - 3) Provide temporary bracing or anchors in form work for items which are to be built into concrete or similar construction.
 - 4) Fit exposed connections accurately together to form tight hairline joints.
 - 5) Weld connections which are not to be left as exposed joints; but cannot be shop welded because of shipping size limitations.
 - 6) Grind exposed joints smooth, and touch-up shop paint coat. Do not weld, cut or abrade the surfaces of exterior units which have been hot-dip galvanized after fabrication and are intended for bolted or screwed field connections.
- D. **Field welding:** Comply with AWS Code for procedures of manual shielded metal-arc welding, appearance and quality of weld made, and methods of correcting welding Work.
- E. **Touch-up painting:** Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with same material as used for shop painting. Apply with brush or spray to provide minimum dry film thickness of 2.0 mils.
- F. Deliver anchor bolts for installation under Division Three and/or Division Four.

3.3 BOLTS, ANCHORS, CLIP ANGLES AND HANGERS

- A. Provide bolts, anchors, toggle bolts, expansion bolts and washers, as necessary to secure all work. Carefully examine Drawings and Specifications for requirements.
- B. Conform to types and sizes and spacing shown in the details, but if not shown, provide types and sizes conforming to the best practice for the class of work involved.
- C. All bolts shall have washers and nuts.
- D. Furnish all necessary anchors, bolts, inserts, etc., required for the attachment of woodwork to masonry, concrete, structural and miscellaneous steel.

Miracle City - Day Center

Section 05500-6

DIVISION FIVE - METALS

METAL FABRICATIONS

- E. Provide clip angles and hangers as detailed. Weld in place on steel and bolt to masonry and concrete.**

END OF SECTION

DIVISION SIX - WOOD & PLASTIC

ROUGH CARPENTRY

PART ONE - GENERAL

1.1 DESCRIPTION

- A. **Work Included:** Furnish and install all rough carpentry indicated on the Drawings or required for a complete and operable facility.
- B. **Related Work Described Elsewhere:**
 - 1) Erect concrete form work, as described in Section 03100.
 - 2) Gypsum sheathing: See section 09250.

1.2 QUALITY ASSURANCE

- A. Provide sufficient workmen and supervisors who shall be present at all times during execution of this portion of the Work, and who shall be thoroughly familiar with the type of construction involved and the materials and techniques involved.
- B. In accepting or rejecting rough carpentry work, the Architect will make no allowance for lack of skill on the part of workmen.

1.3 PRODUCT HANDLING

- A. Use all means necessary to protect lumber materials before, during, and after delivery to the job site, and to protect the installed Work and materials of all other trades.
- B. Deliver the materials to the job site and store in a safe area, protected against the weather, and shored up off the ground surface to ensure proper ventilation and drainage.
- C. Identify all framing lumber as to grades; and store all grades separately from each other.
- D. Protect all metal products with adequate waterproof outer wrappings.
- E. Use extreme care in the off-loading of lumber to prevent damage, splitting, and breaking of materials.
- F. In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

PART TWO - PRODUCTS

2.1 LUMBER

DIVISION SIX - WOOD & PLASTIC

ROUGH CARPENTRY

A. General:

- 1) American Softwood Lumber Standard PS20-70 shall apply.
- 2) Recommendation of the American Plywood Association (APA) shall apply.
- 3) Grade to standards of Southern Forest Products Association (SFPA); Southern Pine Inspection Bureau (SPIB); Western Wood Products Association (WWPA); West Coast Lumber Inspection Bureau (WCLB).
- 4) Lumber may be air dried and well-seasoned, or kiln dried, with a maximum moisture content of 12% for material 1" or less and 15% for material 1-1/8" to 2".

B. Lumber: Minimum F_b 1200 Southern Yellow Pine or Douglas Fir; free from sap wood, shakes, large knots and other defects; sized as shown on the Drawings; and grade marked as indicated.

- 1) Nailers and Furring: Standard or better.
- 2) Blocking: Number 2, S4S, Southern Yellow Pine.
- 3) Provide continuous treated wood nailers around doors and windows, where indicated on the Drawings.

2.2 PRESERVATIVE TREATMENT

- A. Waterborne Chromated Copper Arsenate (CCA), pressure applied to comply with American Wood Preservers' Association (AWPA) Standard C-2 (.25 lbs. of CCA/cu. ft. of wood). Mark each piece with AWPA symbol and treatment.
- B. Treat all lumber used for blocking, stripping, grounds, cants and miscellaneous wood items in contact with concrete slab, brick, exposed to weather or in locations indicated on the Drawings.

2.3 PLYWOOD

- A. Plywood floor at Mech. Loft 200: Georgia Pacific Sturd-I-Floor® sub-floor panels, 1½" thick, APA-rated, tongue & groove.
- B. Plywood deck at built-in shower seat at A/V Booth 100C and Showers 117: ¾" thick CD plywood.
- C. Telephone Board: ¾" thick CD plywood.

DIVISION SIX - WOOD & PLASTIC

ROUGH CARPENTRY

2.3 ROUGH HARDWARE

- A. **Steel Hardware:** ASTM A7 or A36 (use galvanized at exterior locations).
- B. **Power-Driven Pins:** "Ramset" or "Drive-It". Pin sizes recommended by the Manufacturer. Provide minimum concrete penetration of 1-1/8".
- C. **Lag Bolts:** Fed. Specification FF-B-561
- D. **Nails:** Common (except as noted), Fed. Spec. FF-N-1-1 (use galvanized at exterior locations)
- E. Screws and similar fastenings shall be cadmium or nickel plated.

PART THREE - EXECUTION

3.1 WORKMANSHIP

- A. **General:** All rough carpentry shall produce joints true, tight, and well nailed, with all members assembled in accordance with the Drawings and with all pertinent codes and regulations.
- B. **Selection of Lumber Pieces:**
 - 1) Carefully select all members. Select individual pieces so that knots and obvious defects will not interfere with proper nailing or making connections.
 - 2) Cut out and discard all defects which will render a piece unable to serve its intended function. Lumber may be rejected by the Architect, whether or not it has been installed, for excessive warp, twist, bow, crook, mildew, fungus, or mold, as well as for improper cutting and fitting.

3.2 FASTENING

- A. **Nailing:** Use common nails of sufficient size to provide penetration into the piece receiving the point of not less than 1/2 the length of the nail, except that 16d nails may be used to connect two pieces of two-inch nominal thickness.
- B. **Bolting:**
 - 1) Drill holes 1/16 inch larger in diameter than the bolts being used.
 - 2) Drill straight and true, from one side only.
 - 3) Bolt threads shall not bear on wood.

DIVISION SIX - WOOD & PLASTIC

ROUGH CARPENTRY

- 4) Use washers under all nuts, and under head and nut where both bear on wood.
- C. **Screws:** For lag screws and wood screws, pre-bore holes same diameter as root of thread; enlarge holes to shank diameter for length of shank.

3.3 CUTTING, FURRING AND BLOCKING

- A. Install 2x4 blocking between studs for secure attachment of handrail brackets, all toilet accessories, and other items which require solid backing.
- B. Provide necessary cutting, furring, and patching where shown on the Drawings, or where required to accommodate other trades.

END OF SECTION

DIVISION SIX - WOOD & PLASTIC

FINISH CARPENTRY

PART ONE - GENERAL

1.1 DESCRIPTION

- A. Furnish all labor, materials, equipment, and appurtenant accessories for furnishing, fabricating, and installing carpentry and millwork as indicated on the Drawings and specified herein.
- B. Install doors and frames furnished under Section 08100.
- C. Install wood casework and toilet partitions furnished under Sections 10155 and 12350.
- D. Install finished hardware furnished under Section 08700.
- E. Install toilet room accessories furnished under Section 10800.
- F. Install all other miscellaneous items as required by the nature of the item or as required herein.

1.2 QUALITY ASSURANCE

- A. Perform work in accordance with AWI Architectural Woodwork Quality Standards, Custom Grade and the WIC Manual of Millwork, Custom Grade.
- B. Company specializing in fabricating the products specified in this section shall have a minimum of three (3) years of documented experience.

1.3 PRODUCT HANDLING

- A. Use all means necessary to protect the materials of this Section before, during, and after installation, and to protect the Work and materials of all other trades.
- B. In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

PART TWO - PRODUCTS

2.1 FINISHED WOODWORK

- A. **Interior Painted Wood Trim:** Manufactured from paint grade poplar or B&B Western Ponderosa Pine. Refer to Drawings for profiles and locations.
 - 1) **Wood trim at A/V Booth 100C:** As detailed on the drawings.
- B. **Wood shelving at Janitor 119 and Pantry 103:** 3/4" AB INT-APA Fir plywood shelves with exposed edges banded in solid wood; 1 x 3 No. 2 S4S cleats back and ends.

DIVISION SIX - WOOD & PLASTIC

FINISH CARPENTRY

- 1) Install Everbilt #14826, 16" x 10" white heavy duty shelf brackets (or equal) at 48" o.c. for all shelving.
- C. **Countertop at A/V Booth 100C:** Provide 1/8" thick Masonite surface (painted).
- 1) Install Steel Design Solutions #TB18, 18" x 18" steel support bracket where shown.

PART THREE - EXECUTION

3.1 GENERAL

- A. Examine the areas and conditions under which Work of this Section will be performed. Correct conditions detrimental to the proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.
- B. Verify adequacy of substrates, blocking and support framing prior to installation.
- C. All workmen employed in the installation of finish and trim shall be experienced and competent in this class of Work; only the highest class of workmanship will be accepted.
- D. All millwork shall be primed, coated or sealed as required immediately upon delivery to the job. No warped material will be permitted to be installed.
- E. Install door and window frames plumb and level, straight and true, solidly wedged and secured to sub-frames; frame shall be continuous with mitered joints at corners.
- F. Install door and window frames plumb and level, straight and true, solidly wedged and secured to subframes; frame shall be continuous with mitered joints at corners.
- G. Install trim, moldings, and miscellaneous items of millwork with fine finishing nails and with glue where required.
 - 1) All exposed nails shall be set for putty.
 - 2) All corners shall be mitered, and all angles coped.

3.2 CABINETWORK

- A. Cabinetwork with countertops furnished under Section 12350 shall be installed where shown on the Drawings.
- B. Carefully coordinate this Work with requirements for built-in equipment to provide exact fit.

END OF SECTION

DIVISION SEVEN - THERMAL & MOISTURE PROTECTION

**DAMPPROOFING &
WATERPROOFING**

PART ONE - GENERAL

1.1 DESCRIPTION

- A. Provide all labor, materials, equipment and appurtenant accessories for damp-proofing Work indicated on the Drawings and specified herein.
- B. Install dampproofing under slabs on grade.
- C. **Related Work Described Elsewhere:**
 - 1) **Flashing:** Section 07620.

1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled personnel who are thoroughly trained and experienced in the necessary skills, completely familiar with the Manufacturer's recommended methods of application, and completely familiar with the specified requirements for this Work.
- B. Prior to start of installation of the Work of this Section, and during progress of that Work, secure a visit to the job site by an authorized representative of the Manufacturer of the dampproofing material, who shall inspect and shall certify:
 - 1) That the surfaces to which dampproofing were applied were in a condition suitable for that application.
 - 2) That the materials applied conform to the specified requirements.
 - 3) That the materials were applied in complete accordance with the Manufacturer's current recommendations.

1.3 SUBMITTALS

- A. Comply with the provisions of Section 01330.
- B. Upon completion of the Work of this Section, and as a condition of its acceptance, deliver to the Architect the certification required under Paragraph 1.2 B.
- C. Accompanying the certification, deliver to the Architect the Manufacturer's standard guarantee, signed by the applying firm and endorsed by the Manufacturer, stating that the dampproofing will remain intact and resist water for a period five years following date of application.

DIVISION SEVEN - THERMAL & MOISTURE PROTECTION

**DAMPPROOFING &
WATERPROOFING**

1.4 PRODUCT HANDLING

- A. Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the Work and installation materials of all other trades.
- B. In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

1.5 GUARANTEE

- A. Furnish written guarantee covering all dampproofing work under this Section against defects in materials and workmanship, including leakage, for a period of two years from date of final acceptance of the building; and further agreeing to repair or replace such conditions without additional compensation.

PART TWO - PRODUCTS

2.1 MATERIALS

- A. Underslab vapor retarder: Perminator Underslab Vapor Retarder, 15 mils thickness, as manufactured by W. R. Meadows, Inc., PO Box 338, Hampshire, Illinois 60140-0338, (800) 342-5976. System shall include 4" wide Perminator Tape for seams.
- B. Plastic sheet behind PBU wall panels: As recommended by spray foam Manufacturer.
- C. Concrete floor sealer: Scotch-Clad brand penetrating sealer #6000H.
- D. Base flashing at brick ledge and window/door heads: Air-Shield™ TWF, 40-mil self-adhered flexible flashing membrane, as manufactured by W. R. Meadows, Inc.
- E. Flashing at window/door jambs & sills: Air-Shield™, 40-mil self-adhered flexible flashing membrane, as manufactured by W. R. Meadows, Inc.
- F. Waterproof Barrier at shower stalls and shower seat in Shower 117: Roller-applied waterproofing shall be Laticrete Hydro Ban® with Laticrete Waterproofing/Anti-Fracture Fabric, or equal.

PART THREE - EXECUTION

3.1 UNDERSLAB VAPOR RETARDER

DIVISION SEVEN - THERMAL & MOISTURE PROTECTION

**DAMPPROOFING &
WATERPROOFING**

- A. After fill is in place, apply membrane under all concrete slabs, allowing film to extend completely down sides of beams. Smooth and secure film in place.
- B. Lap all joints a minimum of 8" in direction of concrete pour. Seal all joints with tape. Field splices shall be in accordance with Manufacturer's instructions.
- C. Care shall be taken during installation of film to avoid punctures and tears. Patch or seal all punctures prior to pouring of concrete.
- D. Cut accurately around all openings, pipes, conduits, etc., sealing with hot asphalt tape to ensure tight fit.

3.2 CONCRETE FLOOR SEALER

- A. Apply to bare concrete floors according to the Manufacturer's directions using a licensed applicator.

END OF SECTION

DIVISION SEVEN - THERMAL & MOISTURE PROTECTION BATT & FOAM INSULATION

PART ONE - GENERAL

1.1 DESCRIPTION

- A. **Furnish all labor, materials, equipment and appurtenant accessories necessary to or incidental to the completion of all building insulation Work shown on the Drawings and specified herein.**

1.2 PRODUCT HANDLING

- A. **Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the Work and materials of all other trades.**
- B. **Deliver materials to the job site, and store in a safe dry place with all labels intact and legible at time of installation.**
- C. **In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.**

1.3 SUBMITTALS

- A. **General: Comply with provisions of Section 01330.**

1.4 DELIVERY, STORAGE, AND HANDLING

- A. **Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying material name and manufacturer.**
- B. **Store materials in a clean, dry area indoors in accordance with manufacturer's instructions.**
- C. **Protect materials during handling and installation to prevent damage.**

PART TWO – PRODUCTS

2.1 THERMAL BATT INSULATION AT ROOFS

- A. **Therm-All High R Banding System, consisting of the following:**
 - 1) **Black Polyethylene fabric liner, held in place by metal banding.**
 - 2) **1" metal banding, installed perpendicular to roof purlins. Bands shall be installed at 8" from each side of main structural frames and spaced at maximum 48" o. c. between frames, or as otherwise recommended by insulation manufacturer.**

DIVISION SEVEN - THERMAL & MOISTURE PROTECTION BATT & FOAM INSULATION

- 3) **EcoTouch® Insulation for Certified R Metal Building, faced 6" thick, R-19 batts, laid on top of banding, snug between purlins. Facing of batts shall extend up and over purlins.**
- 4) **EcoTouch® Insulation for Certified R Metal Building, un-faced 3-1/2" thick, R-11 batts, laid over roof purlins.**
- 5) **Provide all required materials for a complete insulation system, including, but not limited to, fasteners, clips, adhesive, joint tape and patching tape.**

2.2 SPRAY FOAM INSULATION AT WALLS

- A. **Spray foam insulation: SES Easyseal .5TM, 0.5 lb. open-cell spray polyurethane foam insulation, or equal; 3-1/2" thick, R-13 (U-factor of 0.077)**
- B. **Vapor barrier / plastic sheeting: As recommended by spray foam manufacturer to protect adjacent and underlying surfaces.**
- C. **Provide all required materials for a complete insulation system, including, but not limited to, fasteners, clips, adhesive, joint tape, and patching tape.**

2.3 SOUND CONTROL BATTs

- A. **Mineral wool or glass fiber mats of uniform dimension and controlled density, without paper covering, meeting ASTM C-665, Type I, designed to trap, absorb and control sound transmission thru walls, 3-1/2" thickness.**

PART THREE - EXECUTION

3.1 GENERAL

- A. **Insulate all exterior walls and roofs enclosing air conditioned or heated spaces; finished or unfinished.**
- B. **Insulate all walls between air conditioned and non-air conditioned spaces.**

3.2 FOAM INSULATION

- A. **Vapor barrier shall be installed on exterior face of wall girts and roof purlins, prior to installation of spray foam insulation. Joints shall be taped.**
- B. **The polyurethane foam shall be sprayed within the manufacturer's guidelines for temperature, humidity, and other atmospheric conditions.**
- C. **The polyurethane foam shall be sprayed in minimum 1/2-inch thick passes (lifts) with the overall thickness to be as specified in Paragraph 2.1.**

DIVISION SEVEN - THERMAL & MOISTURE PROTECTION BATT & FOAM INSULATION

3.3 3-1/2" SOUND CONTROL BATTS

- A. **Install 3-1/2" sound control batts in all perimeter walls of restrooms, offices, classroom and conference room.**

- B. **Insure a snug fit between framing members. Cut around pipes and obstructions.**

END OF SECTION

DIVISION SEVEN - THERMAL & MOISTURE PROTECTION

ROOF & WALL PANELS

PART ONE - GENERAL

1.1 DESCRIPTION

- A. Provide all labor, materials, equipment, and appurtenant accessories to furnish and install metal building Manufacturer's metal wall and roof panels as shown on the Drawings.
- B. Related Work Described Elsewhere: Gutters and Downspouts: Section 07620

1.2 PRODUCT HANDLING

- A. Roof and siding panels should be stacked on edge or laid flat on a smooth, level surface. Edges and corners should be protected from bending or denting. To ensure optimum performance, store sheets under cover and keep dry prior to installing.

PART TWO - PRODUCTS

2.1 CORRUGATED WALL & ROOF PANELS

- A. Shall be as manufactured by MBCI, 14031 West Hardy, Houston, TX, 77060. Tel: (844) 327-1748.
- B. Exterior metal wall panels:
 - 1) Profile: Reverse PBU panels, 3/4" ht. x 36" width, 26-gauge
 - 2) Finish: Smooth finish, with Signature[®] 200 coating, color: "Charcoal Gray"
- C. Metal roof panels:
 - 1) Profile: PBR panels, 1-1/4" ht. x 36" width, 26-gauge
 - 2) Finish: Smooth finish, with Signature[®] 200 coating, color: "Polar White"
- D. Exterior porch ceilings and eave soffits (where indicated):
 - 1) Profile: Artisan series, 1" ht. x 12" width, 24-gauge
 - 2) Finish: Smooth finish, with Signature[®] 200 coating, color: "Polar White"
- E. Trim and Accessories: The following shall be provided by the metal building manufacturer. Corner trims, rake trims, eave trims, gutters and downspouts shall be provided with a smooth finish, Signature[®] 200 coating, color: "Polar White".

DIVISION SEVEN - THERMAL & MOISTURE PROTECTION

ROOF & WALL PANELS

- 1) Eave, eave spacer, rake, and soffit trims
 - 2) Outside and inside corner trims for wall panels
 - 3) Head, jamb, and sill trims for wall panels
 - 4) Roof jacks
 - 5) Outside and inside metal closures for roof panels
 - 6) Thermal blocks under metal roof panels
- E. **Fasteners:** Corrosion-resistant, as provided by metal building fabricator.
- F. **Foam Closures:** As provided by metal building fabricator.
- G. **Panel Sealants:** As recommended by panel manufacturer.

PART THREE - EXECUTION

3.1 INSTALLATION

- A. Install siding panels, roof panels, trim and accessories according to building fabricator's recommended procedures.
- B. **Exterior corrugated wall panels:** Installer shall check the alignment of the structural supports as well as the installation of the exterior sheathing (if any) for compliance with manufacturer's installation instructions. Alignment of structural supports exceeding tolerances defined in the AISC Code of Standard Practice shall be corrected prior to proceeding with the installation of the wall panel system. Corrections to exterior sheathing or vapor barriers, necessary to ensure specified performance shall be made prior to wall panel installation.
- C. **Roof panels:** Verify that installation may be made in accordance with approved shop drawings and manufacturer's instructions. This specifically includes verifying that secondary structural supports and/or decking are installed to meet UL and building code requirements. Coordinate with metal roof system manufacturer to insure that required clip spacings at eave, rake, ridge, and corner areas are accommodated. In event of discrepancy, notify the architect. Do not proceed with installation until discrepancies have been resolved.

3.2 INSTALLATION OF CORRUGATED METAL SIDING PANELS

- A. Install panels plumb, level, straight and parallel, conforming to design as indicated.

DIVISION SEVEN - THERMAL & MOISTURE PROTECTION

ROOF & WALL PANELS

- B. Where indicated, metal siding panels shall be installed over galvanized furring channels; spaced vertically as indicated on the Drawings.

3.3 INSTALLATION OF METAL ROOF PANELS

- A. Install standing seam roof so that it is weather tight, without waves, warps, buckles, fastening stresses or distortion, allowing for expansion and contraction.
- B. Install in accordance with manufacturer's instructions and shop drawings.
- C. Install panels plumb, level, straight and parallel, conforming to design as indicated.

3.4 CLEANING & PROTECTION

- A. Clean work in accordance with manufacturer's recommendations.
- B. Protect work against damage until final acceptance. Replace or repair to the satisfaction of the architect, any work that becomes damaged prior to final acceptance.

END OF SECTION

DIVISION SEVEN - THERMAL & MOISTURE PROTECTION FLASHING & SHEET METAL

PART ONE - GENERAL

1.1 DESCRIPTION

- A. Provide all labor, materials, equipment and appurtenant accessories to furnish and install all flashings, counter-flashings, sheet metal copings, gutters and downspouts, and other fabricated sheet metal items shown on the Drawings or specified herein, or otherwise required for a water tight building.
- B. Coordinate this Work with the installation of waterproofing, doors and windows, sheathing, masonry and roofing to insure smooth progress of the Work.
- C. Related Work Described Elsewhere:
 - 1) Metal Windows: Section 08500
 - 2) Roof & Wall Panels: Section 07450

1.2 REFERENCES

- A. ASTM A167 – Standard Specification for Stainless and Heat-Resisting Chromium Nickel Steel Plate.
- B. ASTM A361/A361M – Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process for Roofing and Siding.
- C. ASTM A446/A446M – Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, Structural (Physical) Quality.
- D. ASTM A526/A526M – Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, Commercial Quality.
- E. ASTM B32 – Standard Specification for Solder Metal.
- F. ASTM B101 – Standard Specification for Lead-Coated Copper Sheet and Strip for Building Construction.
- G. ASTM B209 – Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
- H. ASTM B370 – Standard Specification for Copper Sheet and Strip for Building Construction.
- I. ASTM B749 – Standard Specification for Lead and Lead-Alloy Strip, Sheet, and Plate Products.

DIVISION SEVEN - THERMAL & MOISTURE PROTECTION FLASHING & SHEET METAL

- J. **ASTM D226 – Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.**
- K. **ASTM D2178 – Standard Specification for Asphalt Glass Felt Used in Roofing and Waterproofing.**
- L. **ASTM D4586 – Standard Specification for Asphalt Roof Cement, Asbestos-Free.**
- M. **FS L-P 512 – Plastic Sheet (Sheeting), Polyethylene.**
- N. **FS TT-C-494 – Coating Compound, Bituminous, Solvent Type, Acid-Resistant.**
- O. **CDA (Copper Development Association) – Copper in Architecture – Handbook.**
- P. **SMACNA (Sheet Metal and Air Conditioning Contractors National Association) – Architectural Sheet Metal Manual.**

1.3 QUALITY ASSURANCE

- A. **Carefully examine surfaces to receive flashing and sheet metal work, notify Architect of defects, and see that necessary corrections are made before proceeding with Work. Commencing of Work indicates acceptance of surface.**
- B. **During construction, exercise care to prevent damage to sheet metal work. As soon as soldering is done, clean thoroughly. Repair damaged Work and remove debris.**
- C. **Installations not covered by definite Specifications or Details shall be made according to best practices for obtaining waterproof work.**

1.4 DISSIMILAR METAL CONTACT

- A. **Where one metal surface is in contact with surface of a dissimilar metal, paint surfaces with one coat of bitumastic paint or a type to prevent electrolysis and corrosion.**

1.5 DESIGN REQUIREMENTS

- A. **Sheet Metal Flashings: Conform to SMACNA “Architectural Sheet Metal Manual.” and the Copper Development Association “Copper in Architecture – Handbook.”**

1.6 SUBMITTALS

- A. **Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations and installation details.**

DIVISION SEVEN - THERMAL & MOISTURE PROTECTION FLASHING & SHEET METAL

1.7 DELIVERY AND PROTECTION

- A. **Stack material to prevent twisting, bending, and abrasion; and to provide ventilation. Slope metal sheets to ensure drainage.**

PART TWO - PRODUCTS

2.1 QUALITY

- A. **Standard commercial items may be used for flashing, trim, and reglets; provided all such items meet or exceed the quality standards specified herein.**

2.2 MATERIALS

- A. **Asphaltic Plastic Cement: Federal Specification SS-C-153, Type 1 asphalt base cement or cold set plastic cement.**
- B. **Galvanized Steel: ASTM A361/A361M, ASTM A446/A446M, Grade A, or ASTM A526/A526M, G90 zinc coating; 24 gauge steel.**
- C. **Pre-Finished Galvanized Sheet Steel: ASTM A361/A361M, ASTM 446/A446M, Grade A, or ASTM A526/A526M, G90 zinc coating; 26 gauge core steel, shop pre-coated with acrylic Kynar 500 baked enamel coating; color as selected from manufacturer's standard selection.**
- D. **Pre-Finished Aluminum Sheet: ASTM B209, .040 inches thick; acrylic Kynar 500 baked enamel coating; color as selected from manufacturer's standard selection.**
- E. **Flexible Wall Flashing: Grace Construction Products Perm-A-Barrier® Wall Flashing, 40 mil thickness at brick ledges, lintel angles, and openings in exterior wall where flashing is required.**
- F. **Plastic Cement: ASTM D4586, Type 1.**
- G. **Solder: ASTM B32, 50/50 type.**
- H. **Fasteners: Same material and finish as flashing metal, with soft neoprene washers.**
- I. **Sealant: Siliconized type as specified in Section 07920.**
- J. **Protective Backing Paint: Zinc molybdate alkyd.**
- K. **Primer: Zinc molybdate type.**

DIVISION SEVEN - THERMAL & MOISTURE PROTECTION FLASHING & SHEET METAL

- L. **Gutters & Downspouts:** As sized and provided by metal building fabricator. Color of gutters & downspouts as selected by Architect from manufacturer's standard colors.

- M. **Concrete Splash Blocks:** See Section 02500 Concrete Walks & Equipment Pads.

PART THREE - EXECUTION

3.1 INSPECTION

- A. Examine the areas and conditions under which the Work will be installed and correct conditions detrimental to proper and timely completion of the Work.

- B. Verify that roof openings, curbs, pipes, sleeves, ducts, and vents through roof are solidly set, reglets are in place, and nailing strips correctly located.

- C. Verify roofing termination and base flashings are in place, sealed, and secure.

3.2 INSTALLATION OF FLEXIBLE WALL FLASHING

- A. Install at window heads and sills, exterior wall louvers and at jamb locations indicated on the Drawings.

- B. Extend flashing up 8" on vertical surfaces.

- C. Fasten with appropriate fasteners to studs; with adhesives to flat surfaces.

- D. Seal all joints with adhesive.

3.3 INSTALLATION OF SHEET METAL

- A. Form all sheet metal accurately and to the dimensions and shapes required, finishing all molded and broken sections with true, sharp and straight lines and angles, and where intercepting other members, coping to an accurate fit, soldering securely.

- B. Form, fabricate, and install sheet metal so as to adequately provide for expansion and contraction in the finished Work.

- C. Conform to SMACNA "Architectural Sheet Metal Manual" standards for installing sheet metal flashings.

- D. **Weatherproofing:**
 - 1) Finish watertight and weather-tight where so required.

 - 2) Make all lock seam work flat and true to line, sweating full of solder.

DIVISION SEVEN - THERMAL & MOISTURE PROTECTION FLASHING & SHEET METAL

- 3) **Make all lock seams and lap seams, when soldered, at least 1/2" wide.**
- 4) **Where lap seams are not soldered, lap according to pitch but in no case less than 3".**
- 5) **Make all flat and lap seams in direction of flow.**

E. Joints:

- 1) **Join parts with rivets or sheet metal screws where necessary for strength or stiffness.**
- 2) **Provide suitable watertight expansion joints for all runs of more than 40', except where closer spacing is indicated on the Drawings or required for proper installation.**

F. Nailing:

- 1) **Whenever possible, secure metal by means of clips or cleats without nailing through the metal.**
- 2) **In general, space all nails, rivets, and screws not more than 8" apart, and where exposed to the weather, use lead washers.**
- 3) **For nailing into wood, use barbed roofing nails 1-1/4" long by 11 gauge.**

G. Embedment: Embed all metal in connection with roofs in a solid bed of sealant, using materials and methods approved in advance by the Architect.

H. Tinning: The edges of all sheet metal to be soldered shall be tinned with solder on both sides for a width of not less than 1-1/2".

I. Soldering:

- 1) **Done slowly with well heated coppers so as to thoroughly heat the sheet and completely sweat the solder through the full width of the seam.**
- 2) **Ample solder shall be used and the seam shall show at least one full inch of evenly flowed solder.**
- 3) **Seams on a slope steeper than 45° shall be soldered a second time.**

J. Soldering Coppers:

- 1) **Soldering shall be done with heavy soldering coppers of blunt design, properly tinned before using.**

DIVISION SEVEN - THERMAL & MOISTURE PROTECTION FLASHING & SHEET METAL

- 2) For flat seam work, gutters, etc., coppers shall weigh not less than 10 pounds per pair.

- K. Cross Folded Loose Seams: Where sheet metal is folded in one direction and then folded at right angles to the first fold, as for example the slip joints of base flashings, expansion joints and similar cross folded unsoldered loose joints, the folded portion of the sheet metal at the cross fold shall be slit and a patch shall be soldered over the slit to avoid binding at the cross fold.**

3.4 SEALANTS

- A. Location: Make the following Work watertight with sealant:**

- 1) Flush butt joints in sheet metal.
- 2) Slots into which sheet metal is inserted.
- 3) Joints between sheet metal and other Work.

- B. Method: Prepare the joint, prime it and apply sealant according to its Manufacturer's directions. Provide backup for sealant to form a bond break at the back of the joint. Finish sealant smooth and flush with the adjacent surfaces.**

3.5 TESTS

- A. Upon request of the Architect, Contractor shall demonstrate by hose or standing water that all flashing and sheet metal is completely watertight.**

END OF SECTION

DIVISION SEVEN - THERMAL & MOISTURE PROTECTION

PENETRATION SEALS

PART ONE - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division One of Specification Sections, apply to Work specified in this Section.

1.2 GENERAL DESCRIPTION OF THE WORK OF THIS SECTION

- A. Work, in general, includes furnishing and installing fire and smoke barrier penetration seals for openings in floors, walls, and other elements of construction.

1.3 RELATED WORK OF OTHER SECTIONS

- A. Concrete Work: Section 03300.
- B. Masonry Work: Division 4.
- C. Joint Sealers: Section 07920.
- D. Gypsum Board: Section 09250.

1.4 QUALITY ASSURANCE

- A. Applicator Qualifications: Two years' experience installing UL classified fire stopping materials.
- B. Performance: Materials shall have been tested to provide fire rating equal to that of the construction.

1.5 SUBMITTALS

- A. Shop Drawings:
 - 1) Submit Shop Drawings showing each condition requiring penetration seals in dictating proposed UL systems materials, anchorage, methods of installation, and actual adjacent construction.
 - 2) Submit a copy of UL illustration of each proposed system indicating manufacturer approved modifications.
- B. Manufacturer's Data: Submit copies of Manufacturer's specifications, recommendations, installation instructions, and maintenance data for each type of material required. Include letter indicating that each material complies with the requirements and is recommended for the applications shown.

DIVISION SEVEN - THERMAL & MOISTURE PROTECTION

PENETRATION SEALS

- C. **Applicator's Qualifications Statement:** List past projects indicating experience.

1.6 DELIVERY, STORAGE & HANDLING

- A. Deliver materials undamaged in Manufacturer's clearly labeled, unopened containers, identified with brand, type, grade, and UL label where applicable.
- B. Coordinate delivery with scheduled installation date to allow minimum storage time at site.
- C. Store materials in clean, dry, ventilated location. Protect from soiling, abuse and moisture. Follow Manufacturer's instructions.

1.7 PROJECT CONDITIONS

- A. **Existing Conditions:**

- 1) Verify existing conditions and substrates before starting Work. Correct unsatisfactory conditions before proceeding.
- 2) Proceed with installation only after penetrations of the substrate and supporting brackets have been installed.

- B. **Environmental Requirements:**

- 1) Furnish adequate ventilation if using solvent. Furnish forced air ventilation during installation if required by manufacturer; and keep flammable materials away from sparks or flame.
- 2) Provide masking and drip cloths to prevent contamination of adjacent surfaces by fire stopping materials.

1.8 GUARANTEE

- A. Submit copies of written guarantee agreeing to repair or replace joint sealers which fail in joint adhesion, cohesion, abrasion resistance, weather resistance, extrusion resistance, migration resistance, stain resistance, or general durability or appear to deteriorate in any other manner not clearly specified by submitted Manufacturer's data as an inherent quality of the material for the exposure indicated. The guarantee period shall be one year from date of substantial completion.

PART TWO - PRODUCTS

2.1 MATERIALS

DIVISION SEVEN - THERMAL & MOISTURE PROTECTION

PENETRATION SEALS

- A. **Foam closures at metal wall panels: HFP-5 Universal Closures, as manufactured by Houston Foam Plastics – 2019 Brooks Street, Houston, TX 77026 (713-224-3484); or as otherwise provided by metal building manufacturer.**
- B. **Metal inside and outside closures at metal roof panels: As provided or recommended by roof panel manufacturer.**

PART THREE - EXECUTION

3.1 PREPARATION

- A. **Clean surfaces to be in contact with penetration seal materials, of dirt, grease, oil, loose materials, rust, or other substances that may affect proper fitting, adhesion, or the required fire resistance.**

3.2 INSTALLATION

- A. **Install penetration seal materials in accordance with printed instructions of the UL Fire Resistance Directory and in accordance with Manufacturer's instructions.**
- B. **Seal holes or voids made by penetrations to ensure an effective smoke barrier.**
- C. **Where floor openings without penetrating items are more than 4" in width and subject to traffic or loading, install fire stopping materials capable of supporting same loading as floor.**

3.3 FIELD QUALITY CONTROL

- A. **Examine penetration sealed areas to ensure proper installation before concealing or enclosing areas.**
- B. **Keep areas of Work accessible until inspection by applicable code authorities.**
- C. **Perform under this Section patching and repairing of fire stopping caused by cutting or penetration by other trades.**

3.4 ADJUSTING AND CLEANING

- A. **Clean up spills of liquid components.**
- B. **Neatly cut and trim materials as required.**
- C. **Remove equipment, materials and debris, leaving area in undamaged, clean condition.**

DIVISION SEVEN - THERMAL & MOISTURE PROTECTION

PENETRATION SEALS3.5 SYSTEMS AND APPLICATION SCHEDULE

<u>Construction Condition (As Applicable)</u>	<u>UL Designation</u>
A. Metal Pipe or Conduit through Round Opening	49, 95, 138, 202, 319 & 321
B. Insulated Metal Pipe through Round Opening	91, 152 & 203
C. Metal Pipes or Conduits through Large Opening	49, 63, 93, 94, 137, 233, 234, 319 & 321
D. Busway through Rectangular Opening	97 & 99
E. Cables through Opening	33, 65, 140, 204 & 320
F. Cable Tray	66, 105 & 139
G. Glass Pipe through Opening	90, 212
H. Blank Opening	61, 62, 92, 102, 104, 318, 136, J900, B900C, U900J, U900L
I. Non-metallic (Plastic) Pipe or Conduit through Opening	64
J. Conduit through Gypsum Board Wall	147 & 322
K. Non-metallic (Plastic) Pipe or Conduit through Gypsum Board Wall	148
L. Cables through Gypsum Board Wall	149
M. Insulated Metal Pipe through Gypsum Board Wall	147
N. Conduit through Wood Construction	159 & 169
O. Non-metallic (Plastic) Pipe or Conduit through Wood Construction	160 & 167
P. Cables through Wood Construction	168

END OF SECTION

DIVISION SEVEN - THERMAL & MOISTURE PROTECTION

SEALANTS

PART ONE - GENERAL

1.1 DESCRIPTION

- A. Furnish and install all caulking and sealing required around the perimeter of openings, between dissimilar materials and all other caulking Work as shown on the Drawings or as specified herein, or as required by the nature of the job.
- B. Provide all caulking and sealing required between dissimilar materials and around the perimeter of frames, louvers, etc., set in openings. Check other Specification Sections to determine the extent of this Work specified to be done under those Sections. All caulking and sealing not specifically required to be done elsewhere shall be provided under this Section.

1.2 GUARANTEE

- A. This Contractor will be required, as part of his Contract, to furnish a written guarantee, warranting all caulking executed under this Contract against leakage, and all elastic caulking compound against hardening, cracking, or crumbling away, for a period of two (2) years from date of completion as evidenced by date of final payment, and binding himself to repair or replace, without additional compensation beyond the Contract amount, any and all caulking which leaks or becomes otherwise defective within that period.

1.3 RELATED MATERIALS

- A. Penetration Seals: Section 07840.

PART TWO - PRODUCTS

2.1 MATERIALS

- A. Sealant or Caulking Compound: Pecora GC-9, Synthacalk Sealant complying with Federal Specification TT-S-00230-C, Type II, color as selected by Architect.
- B. Primer: Pecora P75.
- C. Joint Filler: Fiber or sponge rubber as required for specific location. Shape and size shall be as required to fit openings.
- D. Sealant at Fiber Cement Panels: Refer to Section 07460.
- E. For Interior Joints (general): Polymerized butyl rubber and inert fillers (pigments), solvent-based with minimum 75% solids, non-sag consistency, tack-free time of 24 hours or less, paintable, non-staining, equal to Pecora BC-158.

DIVISION SEVEN - THERMAL & MOISTURE PROTECTION

SEALANTS

- F. **Acoustical Sealant:** Equal to USG Acoustical Sealant used at interior wall sill plates and around all cutouts in interior walls shown on Drawings to go to structure and having sound batts.
- G. **Expandable Foam Sealant:** Polyurethane foam kit manufactured by Insta-Foam Products, Inc., or equal.
- H. For laminated countertops and plumbing fixtures use silicone rubber-based one-part elastomeric sealant, compounded specifically for mildew resistance and recommended by Manufacturer for interior joints in wet areas (No. 786 Bathtub Caulk by Dow, or equal).
- I. **Sound Attenuating Tape:** Norseal V-710 foam tape by Norton.

PART THREE - EXECUTION

3.1 APPLICATION

- A. Porous materials adjacent to joint shall be protected by applying a two inch (2") wide continuous strip of masking tape next to the joint.
- B. Depth of joints shall be approximately equal to the width of the joint. Joints of greater depth shall be filled with joint filler. Notify the Architect immediately if there is any danger of the filler staining the adjacent material.
- C. Clean joint surfaces such as concrete with primer recommended by the Manufacturer of the compound. Cover surfaces for full depth of the joint. Let primer cure and dry.
- D. Pack joints over 3/4" deep or 1/4" wide with backing rod to within 3/4" of surface, and tamp firmly.
- E. Fill joints, using pressure gun with nozzle to fit into joints.
- F. Joints shall be filled solidly and smoothly without thin edges.
- G. All joints are to be finished with a beading tool and excess material removed; adjacent surfaces shall be cleaned immediately.

3.2 EXPANDABLE FOAM SEALANT

- A. Application in strict accordance with the Manufacturer's Specifications includes but is not limited to the following locations.
 - 1) Between window frames and rough opening.

DIVISION SEVEN - THERMAL & MOISTURE PROTECTION

SEALANTS

- 2) **Between door frame and rough opening.**
- 3) **Along base plate around perimeter of conditioned space.**
- 4) **Penetrations of top plate.**
- 5) **Penetrations of sheathing.**
- 6) **Penetrations of drywall.**
- 7) **Penetrations of exterior siding.**

END OF SECTION

DIVISION EIGHT - DOORS AND WINDOWS

DOORS AND FRAMES

PART ONE - GENERAL

1.1 SCOPE

- A. Includes all labor and materials required for furnishing and installing new wood and metal doors and frames as noted on the Plans and specified herein, including all appurtenant accessories necessary for their installation.
- B. Machine doors for hardware as required.

1.2 SHOP DRAWINGS

- A. Provide six (6) sets of detailed Shop Drawings for all Work specified in this Section.

1.3 WARRANTIES

- A. Furnish Manufacturer's written warranty on all doors specified herein.
 - 1) See Section 01770 – Project Closeout.

PART TWO - PRODUCTS

2.1 DOORS

- A. Doors shall conform to sizes, types, and designs shown on the Drawings and specified herein.
- B. Aluminum entrance doors (Type A): Equal to Kawneer, Series 350 Standard Entrance, medium stile aluminum doors, 1-3/4" thick, with Fluoropon painted finish (color to be selected by Architect), in sizes indicated on the Door Schedule. Doors to accommodate 1" thick insulating glass.
 - 1) Offset pivot hinges: Match door finish.
 - 2) Closers: Kawneer, concealed overhead type, with 105° hold-open for double doors.
 - 3) Locks (active leaf): See Hardware Schedule.
 - 4) Panic device: Kawneer, Paneline™ mid-panel, concealed rod device. Provide with Panic Guard Astragal for paired doors.
 - 5) Pull: Kawneer, type CO-12.
 - 6) Threshold: (As indicated in Section 08700, Hardware Schedule)

DIVISION EIGHT - DOORS AND WINDOWS**DOORS AND FRAMES**

- C. **Plastic laminate-faced wood doors (Types B, C, D, E, & F):** Equal to AMPCO Products, Inc., Series CPC 20 doors, 1-3/4" thick solid core, with .050" high pressure face laminate on both sides; edges stained to match. View panels (where indicated) shall have solid wood stops, stained or painted to match veneer selection. Laminate selection shall be as selected by Architect from Wilsonart (Woodgrains & Solids) or Formica (Woodgrains & Solid Colors).
- D. **Hollow metal flush doors (Types G & H):** Equal to Republic DM Series flush doors, non-rated, 18-gauge, polystyrene insulated core (R=2.8); factory primed, 1-3/4" thick.

2.2 FRAMES

- A. **Interior aluminum door frames:** RACO Interior Products, Inc., Classic Prestige aluminum frames, 1-1/2" x 4-7/8" throat depth (or as otherwise indicated on the Drawings). Factory pre-machine door frame jambs and prepare for hardware, with concealed reinforcement plates, drilled and tapped as required, and fastened within frame with concealed screws. Finish shall be factory-applied painted finish selected by Architect from manufacturer's standard colors.
- B. **Exterior aluminum entrance door frames:** See Section 08500 Metal Windows.
- C. **Metal frames at exterior hollow metal doors:** Equal to Republic MH-Drywall Series, mitered and welded corners, 16 ga., prepared for ASA Universal strike (where required), 4-1/2" x 4-1/2" template hinges, with 9-ga. steel reinforcement, projection welded to frame in six (6) places for maximum strength.

PART THREE - EXECUTION**3.1 WORKMANSHIP**

- A. Machine doors for hardware as required. Mortising by hand-chiseling methods is not acceptable.
- B. Install all doors to a true and plumb condition and make adjustments for proper operation.

3.2 INSTALLATION OF WOOD & ALUMINUM DOORS

- A. Prior to the installation of each door, carefully inspect the door to verify that the door is in sound condition, unblemished, without warp, twist, bow, or other attributes causing it to be rejected upon installation.
- B. Use extreme care in handling to prevent damage.

END OF SECTION

DIVISION EIGHT – DOORS & WINDOWS

ROLLING COUNTER DOORS

PART ONE - GENERAL

1.1 SUMMARY

- A. **Section Includes:** All rolling counter door assemblies indicated on the plans or shown on the Door Schedule.

1.2 SUBMITTALS

- A. **Reference Section 01330; submit the following items:**
 - 1) **Product Data.**
 - 2) **Shop Drawings:** Include special conditions not detailed in Product Data. Show interface with adjacent work.
 - 3) **Closeout Submittals:** Operation and Maintenance Manual.

1.3 DELIVERY STORAGE AND HANDLING

- A. **Follow manufacturer's instructions.**

1.4 WARRANTY

- A. **Warranties:** See Part Two – Products, for each door type.

PART TWO - PRODUCTS

2.1 ROLLING COUNTER DOORS AT KITCHEN 102

- A. **Manufacturer:** Overhead Door Company of Houston, 11533 S Main St, Houston, TX 77025; tel: (713) 667-1757.
- B. **Rolling Counter Doors (3 required):** Model #655, including the following features:
 - 1) **Mounting:** Face of wall
 - 2) **Sizes (excluding hood):** 50"H x 40"W, 50"H x 72"W, & 50"H x 108"W
 - 3) **Curtain:** Aluminum, clear anodized finish
 - 4) **Guides, frame & sill:** Stainless steel
 - 5) **Operation:** Push-up
 - 6) **Locking:** Provide cylinder lock

DIVISION EIGHT – DOORS & WINDOWS

ROLLING COUNTER DOORS

PART THREE - EXECUTION

3.1 EXAMINATION

- A. Examine substrates upon which work will be installed and verify conditions are in accordance with approved shop drawings. Coordinate with responsible entity to perform corrective work on unsatisfactory substrates. Commencement of work by installer is acceptance of substrate.

3.2 INSTALLATION & CLEANING

- A. Install door and operating equipment with necessary hardware, anchors, inserts, hangers and supports, following manufacturer's installation instructions.
- B. Following completion of installation, including related work by others, lubricate, test, and adjust doors for ease of operation, free from warp, twist, or distortion.
- C. Clean surfaces soiled by work as recommended by manufacturer.
- B. Instruct Owner's Representative in maintenance procedures.

END OF SECTION

DIVISION EIGHT - DOORS AND WINDOWS

METAL WINDOWS

PART ONE - GENERAL

1.1 DESCRIPTION

- A. Furnish and install all metal windows of the type and size shown.
- B. **Related Work Described Elsewhere:**
 - 1) **Sealants:** Section 07900.
 - 2) **Glass and Glazing:** Section 08800.

1.2 QUALITY ASSURANCE

- A. For fabrication and erection of the Work of this Section, use only those who are thoroughly trained and experienced and who are completely familiar with the specified requirements and the Manufacturer's recommended methods of installation.
- B. Prior to start of installation of the Work of this Section, the Manufacturer or his local representative shall certify that the windows installed under this Section meet all State and municipal requirements for wind loads, both positive and negative.

1.3 SUBMITTALS

- A. Comply with the provisions of Section 01330.
- B. Submit Shop Drawings of the entire installation, including samples of the specified finish for color selection.

1.4 PRODUCT HANDLING

- A. Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the Work and materials of all other trades.
- B. In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

PART TWO – PRODUCTS

2.1 MATERIALS

- A. **Aluminum Extrusions:**
 - 1) All aluminum sections shall be extruded aluminum alloy 6063-T5 and shall have a minimum ultimate tensile strength of 22,000 psi and yield of 16,000 psi.

DIVISION EIGHT - DOORS AND WINDOWS

METAL WINDOWS

- 2) The window frames shall be furnished complete with all glazing beads and anchors required for proper installation.
- 3) All sections shall be furnished with integral lips for concealment around glazing beads; provide snap-in type glazing beads, factory-fitted and attached, for single glazing. All welding shall be done by the Sigma Method and shall be concealed. All joints shall be factory sealed.
- 4) Size, shape and design of windows shall be as shown in the Window Schedule on the Drawings.

2.2 FRAME TYPES

- A. **Aluminum storefront windows (Types A, B & C):** Kawneer, Trifab VG 451® (or equal), 4-1/2" x 2" aluminum center-glazed system (for 1" insulating glass), with Fluropon painted finish (color to be selected by Architect).
- B. **Sidelight frame at interior door 107:** See Section 08100.

PART THREE - EXECUTION

3.1 FABRICATION

- A. Shop-fabricate all windows and frames into complete units in strict accordance with the approved Shop Drawings and the Manufacturer's recommendations. Verify all measurements at the jobsite prior to fabrication.
- B. Accurately miter and fit all members to hairline joints.
- C. Weld or mechanically fasten along entire line of contact on the unexposed side.
- D. Make provisions for drainage to the exterior face of the frames of exterior windows for any leakage of water occurring at section joints.

3.2 INSPECTION

- A. Prior to installation of the Work of this Section, carefully inspect the installed Work of all other trades and verify that all such Work is complete to the point where this installation may properly commence.

3.3 INSTALLATION

- A. Install all members with adequate provision for settling, and for expansion and contraction of the component materials without causing harmful buckling, opening of joints, undue stress on fasteners, breakage of glass, or other detrimental effects.

DIVISION EIGHT - DOORS AND WINDOWS

METAL WINDOWS

- B. Provide pressure equalization between bottom of horizontal frame members and the sub-sill.
- C. Firmly anchor all Work, using all anchoring devices required to ensure positive attachment for long life under hard use.
- D. **Glazing:** All glass for metal windows shall be retained in the frame by snap-in extruded aluminum glazing stops. Frame members and glazing stops shall provide pockets to accept continuous extruded resilient glazing materials.

3.4 PROTECTION

- A. Wherever aluminum is in contact with steel, concrete, or other material potentially creative of electrolytic action, provide all required permanent isolation of the aluminum by back-painting with first quality bituminous paint or by such other isolation as is approved in advance by the Architect.
- B. Protect all finished surfaces as necessary to prevent damage during progress of Work.

3.5 CLEANING UP

- A. Immediately prior to acceptance of the Work, remove all protective materials from the window frames and clean all exposed members.
- B. Do not use abrasives or harmful cleaning agents.
- C. Glass cleaning under Section 08800.

END OF SECTION

DIVISION EIGHT - DOORS AND WINDOWS

FINISH HARDWARE

PART ONE - GENERAL

1.1 DESCRIPTION

- A. Furnish and deliver to the job site all finish hardware selected by the Owner/Architect from the Hardware Allowance.
- B. **Related Work Described Elsewhere:**
 - 1) **Installation of Finish Hardware:** Section 06200.
 - 2) **Hardware for Storefront Entrance Doors (other than cylinder locks):** Section 08100.
 - 3) **Hardware for Plastic Laminate Casework:** Section 12350.

1.2 QUALITY ASSURANCE

- A. **Supplier Qualifications:** A recognized finish hardware supplier who has been furnishing hardware in the Project's vicinity for a period of not less than 2 years, and who is, or employs an experienced hardware consultant (AHC) who is available, at reasonable times during the course of the Work, for consultation about Project's hardware requirements, to Owner, Architect and Contractor. Supplier shall be responsible for detailing, scheduling and ordering of finish hardware. Detailing implies that the submitted schedule of hardware is correct and complete for the intended function and performance of the openings.
- B. **Coordination and Schedules:** Hardware units and usage specified in Part 2 of this Section and scheduled on the Drawings establish quality, quantity, function and finish required for each door opening. Review, coordinate and confirm that hardware specified for each opening is the proper function. In case of controversy, make appropriate notations of proposed changes from specified requirements on supplier's hardware schedule and request written clarification from the Architect prior to proceeding.
- C. **Hardware:** Free of defects, blemishes and excessive play. Obtain each kind of hardware (latch and locksets, exit devices, hinges and closers) from one manufacturer.
- D. **Fire-Rated Openings:** Provide door hardware for fire rated openings that comply with NFPA Standards No. 80 and requirements of authorities having jurisdiction. Provide only items of door hardware that are listed and tested by UL or Warnock Hersey for given type/size opening and degree of label. Provide proper latching hardware, door closers, approved-bearing hinges and seals whether listed in the Hardware Schedule or not. Hardware shall comply with standards UBC 702 (1997)

DIVISION EIGHT - DOORS AND WINDOWS

FINISH HARDWARE

and UL 10C. Where emergency exit devices are required on fire-rated doors (with supplementary marking on doors' UL labels indicating "Fire Door to be equipped with Fire Exit Hardware") provide UL label on exit devices indicating "Fire Exit Hardware".

1.3 SUBMITTALS

- A. Submit manufacturer's technical product data for each item of hardware. Submit hardware schedule in the manner and format indicated below. Coordinate hardware with doors, frames, and related work to ensure proper size thickness, hand, function, and finish of hardware. If requested by Architect, submit one sample of each type of exposed hardware unit, finished as required, and tagged with full description for coordination with schedule. Submit data and schedule at earliest possible date, particularly where acceptance of schedule must precede fabrication of other work (e. g. hollow metal frames) which is critical to the Project construction schedule.**
- 1. Type, style, function, size and finish of each hardware item.**
 - 2. Name and manufacturer of each item.**
 - 3. Fastenings and other pertinent information.**
 - 4. Hardware set location cross-referenced to both Drawing floor plan and door schedule indications.**
 - 5. Explanation of all abbreviations, symbols, and codes in schedule.**
 - 6. Mounting locations for hardware.**
 - 7) Door and frame sizes, and materials.**
- B. Coordinate keying instructions and keying information. Deliver keys and key control box to owner in person and obtain receipt (No exceptions). Provide 3 change keys per lock, 5 master keys, and 5 grand master keys, tagged and organized for Owner's use.**

1.4 PERFORMANCE REQUIREMENTS

- A. Furnish and install each finish hardware item to provide proper operation and required function of every unit without binding or failure.**

DIVISION EIGHT - DOORS AND WINDOWS

FINISH HARDWARE

1. **Interior Door Operating Force:** Adjust hardware operation at interior non-fire-rated doors to provide an opening force not greater than 5 lbs at a point 3" from latch, measured to leading edge of door.
2. **Exterior and Fire Rated Door Opening Force:** At exterior doors and fire-rated doors, adjust hardware opening force in small increments above the opening force required for interior non-fire-rated doors to close and latch the door.
3. **Closer Sweep Adjustment:** Adjust closer sweep period so that from a 70° open position, door will take at least 3 seconds to move to a point 3" from latch, measured to leading edge of door.

1.5 PRODUCT HANDLING

- A. Individually package each unit of finish hardware, complete with proper fastenings and appurtenances, clearly marked on the outside to indicate the contents and specific locations in the Work.
- B. Use all means necessary to protect materials of this Section before, during, and after delivery to the job site and to protect the Work and materials of all other trades.
- C. In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

1.6 PRODUCT CONDITIONS & COORDINATION

- A. Where exact types of hardware specified are not adaptable to finished shape or size of members requiring hardware, provide suitable types having as nearly as practical the same operation and quality as type specified, subject to Architect's approval.
- B. **Coordination:** Coordinate hardware with other work. Furnish hardware items of proper design for use on doors and frames of the thickness, profile, swing, security and similar requirements indicated, as necessary for proper installation and function, regardless of omissions or conflicts in the information on the Contract Documents. Furnish related trades with the following information:
 1. Location of embedded and attached items to concrete.
 2. Location of wall-mounted hardware, including wall stops.
 3. Location of finish floor materials and floor-mounted hardware.
 4. Locations for conduit and raceways as needed for electrical, electronic and electro-pneumatic hardware items. Fire/life-safety system interfacing. Point-to-point wiring diagrams plus riser diagrams to related trades.

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5. **Manufacturer templates to door and frame fabricators.**
- C. **Check Shop Drawings for doors and entrances to confirm that adequate provisions will be made for proper hardware installation. Do not order hardware until the submittal has been reviewed by the frame and door suppliers for compatibility with their products.**
- D. **Prior to submittal, carefully inspect existing conditions at each opening to verify finish hardware required to complete Work, including sizes, quantities, existing hardware scheduled for re-use, and sill condition material. If conflict or incompatibility between the specified/scheduled hardware and existing conditions, submit request for direction from Architect. Include date of jobsite visit in the submittal.**
 1. **Submittals prepared without thorough jobsite visit by qualified hardware expert will be rejected as non-compliant.**

1.7 WARRANTIES

- A. **Special warranties:**
 1. **Door Closers: Ten-year period**
 2. **Exit Devices: Three-year period**
 3. **Automatic Door Operators: Two-year period**
 4. **Locks and Cylinders: Three-year period**

1.8 MAINTENANCE

- A. **Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.**

PART TWO - PRODUCTS

2.1 GENERAL

- A. **Provide hardware manufactured to conform to published templates, generally prepared for machine screw installation. Do not provide hardware which has been prepared for self-tapping sheet metal screws. With each hardware item, furnish machine screws for installation into steel, and provide threaded-to-the-head wood screws for installation into wood; all purpose threads are not acceptable. Provide Phillips flat-head screws except as otherwise indicated. Finish exposed screws to**

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match the hardware finish. Provide concealed fasteners for hardware units which are exposed when the door is closed, except to the extent no standard units of the type specified are available with concealed fasteners. Provide through bolts for closer installation.

2.2 HARDWARE UNITS AND USAGE

- A. Units specified below establish the design, grade, function, finish, size, and other qualities required for the Project. Provide the following hardware units in the quantities specified and locations indicated on the Hardware Schedule. Provide US 26D finish unless otherwise specified. Refer to Door Schedule on Drawings for door sizes, fire ratings, frame types and other pertinent information.
1. **Butt Hinges:** Provide the following butt hinges produced by Hagar, or equivalent butt hinges produced by Ives, Bommer, or Stanley, as approved. Provide 1-1/2 pair per door leaf up to 7'-6" high and one additional hinge per leaf for each additional 2'-6" of door height.
 - a) Out-Swinging Exterior Doors, Except Storefront: Hagar BB1199 4.5 x 4.5 x NRP.
 - b) In-Swinging Exterior Doors: Hagar BB1199 4.5 x 4.5.
 - c) Out-Swinging Interior High Freq. Doors: Hagar BB1168 4.5 x 4.5 x NRP.
 - d) In-Swinging Interior High Freq. Doors: Hagar BB1168 4.5 x 4.5.
 - e) Out-Swinging Interior Avg. Freq. Doors: Hagar BB1279 4.5 x 4.5 x NRP.
 - f) In-Swinging Interior Avg. Freq. Doors: Hagar BB1279 4.5 x 4.5
 2. **Pivots:** Provide the following pivot sets produced by Ives or equivalent pivot sets by Rixson.
 - a) Pivots to be high strength forged bronze with top pivot housing with spring activated bronze retracting pin. Pivots to have tilt-on bearing and bearing pin.
 - b) Offset and intermediate pivots to be handed at the factory. Pivot set to support doors to 500 pounds with intermediate pivot to support 100 pounds. Centerline of pivots to be 3/4" from face of door, 3/4" from edge of door.

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3. **Surface-Mounted Door Closers:** Provide the following closers produced by Falcon. Adjust operation to complying with ADA requirements. Provide type of arm recommended by closer manufacturer for door conditions (use, door hand and swing) indicated.
 - a) Closers for fire-rated doors shall be provided with temperature stabilizing fluid that complies with standards UBC 7-2 (1997) and UL 10C.
 - b) Door closer shall have fully hydraulic, full rack and pinion action.
 - c) Closer on the exterior shall have 1-1/2" dia. piston.
 - d) Pressure relief valves are not acceptable for the exterior doors.
 - e) Hydraulic fluid shall be of a type requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to 10 degrees F.
 - f) Spring power shall be continuously adjustable over the full range of closer sizes; and allow for reduced opening force for the physically handicapped. Closers shall have separate adjustment for latch speed, general speed, and back check.
 - g) Closers to be installed to allow door swing as shown on plans. Doors swinging into exit corridors shall provide for corridor clear width as required by code. Where possible, mount closers on room side of door.
 - h) Door closers meeting this specification: Falcon SC71/SC81 Series.
4. **Heavy Duty Cylindrical Locks and latches:** as scheduled, fastened with through-bolts and threaded chassis hubs. Provide the following Falcon T Series x Quantum Lever. No substitution.
 - a) **Chassis:** Cold-rolled steel, handing field-changeable without disassembly.
 - b) **Latch bolts:** 1/2-inch throw.
 - c) **Strikes:** 16-gauge curved steel, bronze or brass with 1" deep box construction, lips of sufficient length to clear trim and project clothing.

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- d) **Lever Trim:** Locksets shall be provided standard with release feature so that when outside lever is locked, it is not rigid but will move freely without operating the latchbolt. Trim shall have individual heavy-duty springs behind the rose for lever return and to prevent lever sag. All levers shall be solid and meet the federal and state ADA requirements. Roses shall be a minimum of 3 ½" diameter.
- e) **Certifications:**
 - i. ANSI A156.2, Series 4000, Grade 1
 - ii. UL listed for 3-hour A labeled doors
- 5. **Mortise Locksets with integral deadbolts:**
 - a) Provide mortise locksets that comply with ANSI A156.13, Series 1000, Operational Grade 1 and Security Grade 2.
 - b) Provide mortise locksets that comply with UL10C and UBC 7-2 positive pressure requirements.
 - c) Latchbolts to have a standard 2-3/4" backset with a full 3/4" throw.
 - d) Latchbolts to be 2-piece anti-friction, manufactured from brass. Solid latchbolts and/or plastic anti-friction devices are not acceptable.
 - e) Deadbolts to have standard 1" throw with two hardened steel anti-saw roller pins.
 - f) Standard locksets to accommodate doors 1-3/4" to 2-1/4" thick.
 - g) Manufacture lock cases from heavy .090" zinc dichromate plated steel.
 - h) Hubs to be hardened steel.
 - i) Bind resistant trim with heavy duty through-bolted inserts to clamp trim on door, assuring proper alignment.
 - j) Lock trim to be designed to bottom-out on 1-3/4" doors to prevent door collapse.
 - k) Trim to be attached with 10-32 screws with thread sealant.

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- l) Adjustable lock front to be heavy gauge steel with reinforcing ribs.
 - m) Strikes to be manufactured with a curved lip and meet ANSI A115.1 for frame preparation.
 - n) Lock case to accept lever or knob trim without modifying the lock chassis.
 - o) Lock components to be manufactured of zinc dichromate plated steel.
 - p) Manufacturers utilizing plastic parts, spacers and/or bushings are not acceptable.
 - q) Levers to have independent rotation in both directions.
 - r) Spindles to be designed to “break-away” at a 600 inch pounds of force to prevent damage to lock chassis.
 - s) Acceptable Manufacturers: Falcon: MA Series with QG (Quantum-Gala) trim design. No substitution.
6. **Exit Devices:** Provide the following at the locations shown on the Door Schedule:
- a) ANSI 156.3, 2001 Grade 1, UL listed for panic and fire exit hardware.
 - b) All exit devices to be touch bar as specified.
 - c) Furnish roller strikes for all rim exit devices.
 - d) All mounting fasteners to be concealed. Devices to be non-handed or field reversible.
 - e) Furnish center case with heavy wrought and sintered parts and stamped cold roll steel chassis with a thickness of .090"
 - f) Device cover, stainless steel, 0.048" thick or brass, 0.050" thick.
 - g) Furnish stainless steel or brass touch pad cover on all exit devices.
 - h) Mechanism housing extruded aluminum with 0.080" thickness and extruded aluminum cover with 0.152" thickness.

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FINISH HARDWARE

- i) The end cap to be cast or forged material and is not to overlap the mechanism case.
 - j) Have no exposed rivets or screws on back of device that would be visible through a glass light.
 - k) At doors greater than 3'-0" (915mm) provide long bar exit devices; at doors greater than 7'-0" (2134mm) supply extension rods for required series.
 - l) 10 year manufacturer standard warranty.
 - m) Where lever trim is specified, levers to match locksets, latchsets and privacy sets.
 - n) Levers to be cast or forged brass.
 - o) Lever return springs to be compression type.
 - p) Pull type trim to be thru bolted to panic device center case with minimum four (4) No. 10 machine screws and one (1) 1/4-20 machine screw.
 - q) Trim shall meet ANSI/BHMA 156.3 Trim Security Test.
 - r) Vertical rod devices to be UL/cUL labeled for fire door applications without the use of bottom rod assemblies. Where bottom rods are required for security applications, device shall be UL/cUL labeled for fire door applications.
 - s) Fire exit devices mounted on labeled wood doors to be thru-bolt mounted in compliance with door manufacturer's requirements. Where special blocking has been specified in wood door specification, do not thru-bolt exit devices.
 - t) Exit devices meeting these requirements: Falcon 24/25 Series Exit Devices or equivalent by Von Duprin. Match existing (no substitutions).
7. **Kick Plates, Push Plates and Pulls:** Provide the following from Ives, or equivalent by Trimco:
- a) **Kick Plates:** 10" high x 2" less than door width x minimum .0538" thick (B3E).

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- b) **Mop Plates:** Shall be 4" high x 1" less than door width x minimum 0.0538" (1.3 mm) thick x B3E.
 - c) **Push/Pulls:** #8200 (6" x 16"), #8302 (6" x 16"); #8190-0; #9190-0.
8. **Stops, Flush Bolts, Dust Proof Strikes, & Silencers:** Provide the following at locations designated; IVES, or equivalent by Trimco.
- a) **Floor Stops:** Ives FS436, FS41
 - b) **Wall Stops:** Ives WS407
 - c) **Manual Flush Bolts:** One (1) set IVES FB458/FB358 x DP-1/DP-2 dustproof strike as required at each inactive leaf of a pair of doors (except when equipped with exit devices).
 - d) **Silencers:** IVES SR 64; three (3) per single leaf opening, two (2) per double leaf opening.
9. **Weatherstripping, Seals and Thresholds:** Provide at locations designated; National Guard Products or equivalent by Zero Weatherstripping or Pemko.

2.3 KEYING REQUIREMENTS

- A. Initiate and conduct meeting(s) with Owner to determine. Furnish Owner's written approval of the system. Provide construction key system in accordance with lock manufacturer's standard. Emboss keys "Do Not Duplicate" and key symbol.
- B. **Key System:** Match existing Falcon system. No substitution.
- C. **Permanent keys:** deliver only to Owner's representative.
- D. **Key Transcript (bitting list):** Supply to Owner upon completion.
- E. **Number of Keys:** Provide 3 change keys per lock, including emergency over-ride keys where needed, 5 master keys and 5 grand master keys tagged and organized for Owner's use. Provide 5 construction master keys for contractor's use. Provide control keys (2 each) for any interchangeable cores used on the project.
- F. **Key Control System:** Provide a Telkee (302) 678-7800 key control system, or equivalent by Lund Equipment Co., Inc., Cleveland, OH (Tel) 330-659-4800. Include envelopes, labels, tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal wall cabinet, all as recommended by system manufacturer, with capacity for 150% of the number of locks required for the Project. Hardware supplier to assist Owner

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FINISH HARDWARE

in setting up key control system. Organize keys by room, by master, grand master and key blanks, in key envelopes with neatly marked room numbers, as determined at key meeting.

PART THREE – EXECUTION

3.1 PREPARATION

- A. Mount hardware units at heights indicated in "Recommended Locations for Builders Hardware for Custom Steel Doors and Frames" by the Door and Hardware Institute, except as specifically indicated or required to comply with governing regulations and except as otherwise directed by Architect. Reinforce the attachment substrate for secure installation and adjust for proper operation. Provide clean, properly sized mortises and drilled holes for all mortised and surface applied finish hardware.

3.2 INSTALLATION

- A. General: Install each hardware item in compliance with the manufacturer's instructions and recommendations.
- B. Do not install surface-mounted items until finishes have been completed on the substrate. Before painters finish is applied, remove all finish hardware, except prime painted items. After finish coats are dry, permanently replace and readjust finish hardware for proper operation.
- C. Set units level, plumb and true to line and location.
- D. Cut and fit threshold and floor covers to profile of door frames, with mitered corners and hair-line joints. Join units with concealed welds or concealed mechanical joints. Cut smooth openings for bolts and similar items, if any. Screw thresholds to substrate with No. 10 or larger stainless steel screws.

3.3 ADJUSTMENT

- A. Adjust and check each operating item of hardware and each door, to ensure proper operation or function of every unit. Replace units which cannot be adjusted and lubricated to operate freely and smoothly as intended for the application made.
- B. Six-month hardware installation survey is to be performed by a certified "AHC" in the employ of the hardware supplier.

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FINISH HARDWARE

3.4 HARDWARE SCHEDULE

HARDWARE SET #1

DOOR NUMBERS: 100, 110

EACH PAIR OF DOORS TO HAVE:

1	EA	CYLINDER	900 SERIES FOR "G" KEYWAY	626	FAL
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See Section 08100 for balance of door hardware

HARDWARE SET #2

DOOR NUMBERS: 102A, 104, 105, 106, 107, 108, 109, 111

EACH SINGLE DOOR TO HAVE:

3	EA	HW HINGE	5BB1HW 4.5 X 4.5 NRP	652	IVE
1	EA	ENTRY LOCK	T501P6D QUA	626	FAL
1	EA	WALL STOP	WS407CCV	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE SET #3

DOOR NUMBERS: 118, 119, 120

EACH SINGLE DOOR TO HAVE:

3	EA	HW HINGE	5BB1HW 4.5 X 4.5 NRP	652	IVE
1	EA	ENTRY LOCK	T501P6D QUA	626	FAL
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE SET #4

DOOR NUMBERS: 115, 116

EACH SINGLE DOOR TO HAVE:

3	EA	HW HINGE	5BB1HW 4.5 X 4.5 NRP	652	IVE
1	EA	PUSH PLATE	8200 6" X 16"	630	IVE
1	EA	PULL PLATE	8303 10" / 6" X 16"	630	IVE
1	EA	KICK PLATE	8400 8" X 34"	630	IVE
1	EA	SURFACE CLOSER	SC81 REG or PA, as required	689	FAL
1	SET	SEALS	5050B	BRN	NGP
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE SET #5

DOOR NUMBERS: 102B, 122

EACH SINGLE DOOR TO HAVE:

3	EA	HW HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
1	EA	CLASSROOM DEADBOLT	D111P6	626	FAL
1	EA	PULL PLATE	8303 10" / 6" X 16"	630	IVE
1	EA	SURFACE CLOSER	SC81 REG or PA, as required	689	FAL
1	EA	FLOOR STOP*	FS18L	BLK	IVE
1	EA	DRIP CAP**	16A	CL	NGP
1	EA	SEALS	5050B	BRN	NGP
1	EA	DOOR SWEEP	101VA	CL	NGP
1	EA	THRESHOLD	896V	AL	NGP

* Floor stop not required at door 122

** Drip cap not required at door 102B

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FINISH HARDWARE

HARDWARE SET #6

DOOR NUMBERS: 101A, 101B, 103, 112, 113

EACH SINGLE DOOR TO HAVE:

3	EA	HW HINGE	5BB1HW 4.5 X 4.5 NRP	652	IVE
1	EA	PASSAGE SET	T101S QUA	626	FAL
1	EA	WALL STOP	WS407CCV	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE SET #7

DOOR NUMBERS: 121

EACH PAIR OF DOORS TO HAVE:

6	EA	HW HINGE	5BB1HW 4.5 X 4.5 NRP	652	IVE
1	EA	ENTRY LOCK	T501P6D QUA	626	FAL
2	EA	MANUAL FLUSH BOLT	FB458	626	IVE
1	EA	DUST PROOF STRIKE	DP2	626	IVE
2	EA	SILENCER	SR64	GRY	IVE

HARDWARE SET #8

DOOR NUMBERS: 117A, 117B

EACH SINGLE DOOR TO HAVE:

3	EA	HW HINGE	5BB1HW 4.5 X 4.5 NRP	652	IVE
1	EA	PUSH PLATE	8200 6" X 16"	630	IVE
1	EA	PULL PLATE	8303 10" / 6" X 16"	630	IVE
1	EA	KICK PLATE	8400 8" X 34"	630	IVE
1	EA	DEADBOLT LOCK	D131	626	FAL
1	EA	SURFACE CLOSER	SC81 REG or PA, as required	689	FAL
1	EA	WALL STOP	WS407CCV	630	IVE
1	SET	SEALS	5050B	BRN	NGP
3	EA	SILENCER	SR64	GRY	IVE

HARDWARE SET #9

DOOR NUMBERS: 114

EACH PAIR OF DOORS TO HAVE:

6	EA	HW HINGE	5BB1HW 4.5 X 4.5 NRP	630	IVE
1	EA	PANIC HARDWARE	25-V-L-510L AVA	626	FAL
1	EA	PANIC HARDWARE	25-V-L-510L AVA	626	FAL
1	EA	CYLINDER	900 SERIES X REQD LG X REQD CAM	626	FAL
2	EA	SURFACE CLOSER	SC81 SSHO	689	FAL
2	EA	WALL STOP	WS407CCV	630	IVE

Index of Manufacturer Abbreviations

NGP	National Guard Products
IVE	Ives
FAL	Falcon

END OF SECTION

DIVISION EIGHT - DOORS AND WINDOWS

GLAZING

PART ONE - GENERAL

1.1 DESCRIPTION

- A. Provide all glass and glazing, complete, in place, as shown on the Drawings, specified herein, or needed for a complete and proper installation.
- B. Related work described elsewhere:
 - 1) Doors and Frames: Sections 08100.
 - 2) Metal Windows: Section 08500.

1.2 GUARANTEE

- A. Mirrors: Provide a five-year guarantee against breakdown of silvering.
- B. Glazing: Furnish written guarantee that all glazing hereunder will be watertight and free from defects in glass and glazing materials and workmanship for a period of two years from date of final acceptance of the project. Contractor shall replace or repair, at no cost to the Owner, any Work failing to meet this guarantee.

1.3 PRODUCT HANDLING

- A. Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the Work and materials of all other trades.
- B. In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

PART TWO - PRODUCTS

2.1 GENERAL

- A. Glass used in glazing doors shall be tempered.
- B. Use tempered glass for glazing view panels in door types
- C. Glass used in factory glazing of doors and windows shall comply with the requirements of this Section.

2.2 GLASS

- A. Clear float glass at interior door view panels: 1/4" thick, complying with ASTM C 1036-85, where shown on the Drawings.

DIVISION EIGHT - DOORS AND WINDOWS

GLAZING

- B. **Tinted glass at exterior windows:** Vitro Architectural Glass, 1" thick insulating glass, consisting of 6mm Solarban®67 (2) Solarbronze + 1/2" air space + 6 mm clear glass, having a U-value of 0.29 and a SHGC of 0.22.
- C. **Tinted glass at aluminum entrance doors:** Same glass as in exterior windows, but interior and exterior panes shall be tempered, meeting the requirements of ANSI Standard Z97.1 for safety glazing materials, as shown on the Drawings.
- D. **Tinted glass at exterior aluminum doors:** Same as glass at exterior windows.

2.3 MIRRORS

- A. **Women 115 & Men 116:** LOF float or twin ground 1/4" thick clear plate glass, cut to conform to job measurements; electroplate copper backed.

2.4 GLAZING ACCESSORIES

- A. Provide all glazing accessories required to supplement those accessories which accompany the items to be glazed, and as needed to provide a complete installation, including glazing points, shims, Dallas clips, and mirror mastic.

PART THREE - EXECUTION

3.1 GENERAL

- A. Follow recommendation of Flat Glass Manufacturer's Association Glazing Manual for all glazing Work.

3.2 INSTALLATION

- A. **Mirrors:** Install unframed mirrors in a full bed of mastic, with Chrome J-mold clips at upper and lower edges.

3.3 CLEANING

- A. In addition to the requirements of Section 01740 of these Specifications, and prior to acceptance of the Work, thoroughly clean all glass and remove all labels, paint spots, putty, and other defacements.

END OF SECTION

DIVISION NINE - FINISHES

GYPSUM BOARD

PART ONE - GENERAL

1.1 DESCRIPTION

- A. Furnish all labor, materials, equipment and accessories necessary to complete all gypsum board walls and ceilings as shown on the Drawings and herein specified.
- B. Related Work Described Elsewhere:
 - 1) Rough Carpentry: Section 06100.
 - 2) Cold Formed Metal Framing: Section 09510

1.2 QUALITY ASSURANCE

- A. Products used in the Work of this Section shall be produced by Manufacturers regularly engaged in manufacture of similar items and with a history of successful production acceptable to the Architect.
- B. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the Work of this Section.

1.3 PRODUCT HANDLING

- A. Use all means necessary to protect materials of this Section before, during, and after installation and to protect installed Work and materials of all other trades.
- B. In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.
 - 1) Water damaged material shall not be used in the Work.
 - 2) Wallboard surfaces containing any substance that will bleed through final finish shall not be used.
- C. Deliver all materials to the job site in their original unopened containers with all labels intact and legible at time of use.
 - 1) Store all materials under cover, out of all weather and on platforms off the ground.
 - 2) Stack wallboard flat and avoid damage to edges, ends and surfaces.

DIVISION NINE - FINISHES

GYPSUM BOARD

PART TWO - PRODUCTS

2.1 MATERIALS

A. Interior Gypsum Panels:

- 1) USG Sheetrock Brand, 5/8" thickness on all walls and ceilings throughout where gypsum wallboard is indicated.
- 2) USG Sheetrock Brand, water resistant, 5/8" thick, on walls in toilet rooms, restrooms, and janitor's closets (except where wall tile is indicated).
- 3) DUROCK Interior Tile Backer Board (or equal), aggregated Portland cement board with vinyl-coated, woven glass-fiber mesh embedded in back and front surfaces, 5/8" thickness, on all walls to receive tile.

B. Fasteners:

- 1) To wood studs, joists or blocking: 1-1/4" Type W Bugle Head screws
- 2) To metal studs or furring channels: ASTM C1002, Type S12, Bugle Head self-tapping screws, as required by gauge of attachment substrate, conforming to GA-216.

C. Joint Tape:

- 1) USG Perf-A-Tape reinforcing tape.

D. Joint Compound:

- 1) USG Durabond 90 Joint Compound - 3 coat system at water resistant board or tile backer board.
- 2) USG Ready-Mixed Joint Compound (All Purpose) - 3 coat system at all other interior gypsum board applications.

E. Metal Accessories:

- 1) Corner Beads: Galvanized steel Dur-A-Bead #103.
- 2) Casing Beads: USG 200-A or 200-B galvanized metal trim.
- 3) Expansion Joints: USG control joint #093.

F. Exterior Sheathing behind Stone Veneer: DensGlass Sheathing, 1/2" thickness, as manufactured by Georgia-Pacific Gypsum LLC.

DIVISION NINE - FINISHES

GYPSUM BOARD

PART THREE - EXECUTION

3.1 INSTALLATION OF DRYWALL PANELS

- A. Examine stud partitions and ceiling joists to which wallboard is to be applied and have Carpentry Contractor remedy all defects.
- B. Apply wallboard at right angles to framing members, using boards of maximum practical length so that an absolute minimum of end joints occur.
 - 1) Locate joints at openings so that no end joint will align with edges of opening.
 - 2) Stagger end joints; and locate so that joints on opposite sides of partitions do not occur on same stud.
- C. Casing beads shall be installed where exposed wallboard abuts different material.
- D. Fastening:
 - 1) Nail or screw in accordance with Manufacturer's printed recommendations.
 - 2) Use double nailing method for exposed wallboard areas and areas which will receive wallpaper or vinyl wallcovering.
- E. Joint and Corner Finishing
 - 1) Where gypsum wallboard is to be exposed as finish, or will have wallcovering, apply thin layer of joint compound approximately 4" wide over joint.
 - 2) Center tape over joint and embed into the compound, leaving enough under tape to provide proper bond.
 - 3) Reinforce inside corner angles with tape and install metal corner beads at all exterior corners.
 - 4) All joints, fastener heads and dimples shall receive at least three coats of joint compound, properly feathered and sanded so as to completely hide taped joints.

END OF SECTION

DIVISION NINE - FINISHES

FLOOR & WALL TILE

PART ONE - GENERAL

1.1 DESCRIPTION

- A. Furnish all labor, materials, equipment and appurtenant accessories necessary for or incidental to the completion of all Tile Work, as noted on the Drawings and specified herein.

1.2 QUALITY ASSURANCE

- A. Products used in the Work of this Section shall be produced by Manufacturers regularly engaged in manufacture of similar items and with a history of successful production acceptable to the Architect.
- B. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the Work of this Section.
- C. All materials and workmanship shall be in accordance with the standard practice of the Ceramic Tile Industry by the Tile Council of America, Inc.

1.3 SUBMITTALS

- A. Comply with provisions of Section 01330.

1.4 PRODUCT HANDLING

- A. Deliver all materials to the job site in their original, unopened containers with all labels intact and legible at time of use. Store materials in a dry, covered area.
- B. Use all means necessary to protect materials of this Section before, during, and after installation and to protect installed Work and materials of all other trades.
- C. In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

PART TWO - PRODUCTS

2.1 GENERAL

- A. Tile products shall be standard grade, ceramic tile, and shall meet or exceed the Standard Grade Requirements of ANSI A137.1-1980.
- B. Supply all mosaic tile with back-mounted system for thin set application.

DIVISION NINE - FINISHES

FLOOR & WALL TILE

2.2 MATERIALS

- A. Tile at Women 115, Men 116, Showers 117, & Janitor 119:
- 1) Floor tile: American Olean, Theoretical color body porcelain tile, 2" x 2" x 1/4" thick mosaic tile. Color as selected by Architect.
 - 2) Wall tile: American Olean, Theoretical color body porcelain tile, 12" x 24" x 3/8" thick. Color as selected by Architect.
 - 3) Bullnose tile: American Olean, Theoretical color body porcelain tile, 3" x 12", #P43C9 bullnose. Color as selected by Architect.
- B. Floor tile at Kitchen 102 & Pantry 103: American Olean, QueStep™ Pavers, 6" x 6" x 1/2" quarry tile. Color as selected by Architect.
- C. Grout: Tex-Rite standard and designer series grouts, color as selected by Architect.
- D. Setting Bed for Thin-Set Tile (over concrete sub-floor): Reference TCA Method F113-latest edition, Latex - Portland Cement Mortar conforming with ANSI A118.4 and grout shall be Latex - Portland Cement Grout conforming to ANSI A118.6. Installation Specifications ANSI A108.5 for tile and ANSI A108.10 for grout.
- D. Setting Bed for Tile Walls: Reference TCA Method W242-latest edition, with organic adhesive ANSI A136.1, Type 1. Use Latex - Portland Cement Grout conforming to ANSI A118.6. Installation Specifications ANSI A108.4 for tile and ANSI A108.10 for grout.

PART THREE - EXECUTION

3.1 INSPECTION

- A. Prior to installation of the Work of this Section, carefully inspect the installed Work of all other trades, and substrates to receive tile, and verify that all such Work is complete to the point where this installation may properly commence.
- B. Report all unacceptable surfaces and do not tile such surfaces until they are leveled enough to meet the requirements of this Section.

3.2 INSTALLATION

- A. General:
- 1) Conform to applicable ANSI Specifications for mortar composition, mixing and tile setting techniques.

DIVISION NINE - FINISHES

FLOOR & WALL TILE

- 2) Lay out floors so that fields center in the areas and on architectural features, and wherever possible no tile is less than 1/2 full width.
- 3) Align all joints to give straight, uniform grout lines, parallel with walls and wall intersections.
- 4) Make joints between tile sheets same width as joints within sheets, so extent of each sheet is not apparent in finished work.

B. Base Tile:

- 1) Use adhesive and colored grout as selected.
- 2) Prepare and apply adhesive as directed by its Manufacturer, and press tile firmly into place.
- 3) Prepare and apply grout in accordance with Manufacturer's instructions. Rub grout into joints to cover setting material; tool to depth of tile cushion; and remove excess grout from tile face.

C. Floor Tile:

- 1) Clean slabs and sub-flooring of dust and debris.
- 2) If curing compound has been used, etch slab and/or apply bonding material as required for tight bond between slab and mortar.
- 3) Install cement setting bed as required to bring floors to elevations and levels required for setting of tile.
- 4) Apply 1/8" thickness of latex mortar and place tile before mortar takes set. Tap tile into mortar for strong bond.
- 5) Apply grout, tooling joint to depth of cushion, remove excess grout from tile. Do not use acid.

D. Base: Press base units firmly into mortar; adjust for proper alignment; and grout same as for floor.

E. Cure in accordance with printed recommendations of the mortar and grout Manufacturer.

3.3 CLEANING

A. Clean tile surfaces as thoroughly as possible on completion of grouting.

DIVISION NINE - FINISHES

FLOOR & WALL TILE

- B. Remove all grout haze, observing tile Manufacturer's recommendations as to use of acid and chemical cleaners.**
- C. Thoroughly rinse tile work with clean water before and after using chemical cleaners.**
- D. Polish surface of tile work with soft cloth.**

3.4 PROTECTION

- A. Apply to all clean, completed tile floors a protective coat of neutral cleaner solution, 1 part cleaner to 1 part water.**
- B. Cover all tile floors with heavy-duty non-staining construction paper, tape in place.**
- C. Prohibit all traffic from using newly tiled floors for at least three days.**
- D. Prior to final acceptance of tile work, remove paper and rinse protective coat of neutral cleaner from all tile surfaces.**

END OF SECTION

DIVISION NINE - FINISHES

SUSPENDED ACOUSTICAL CEILINGS

PART ONE - GENERAL

1.1 DESCRIPTION

- A. Furnish all labor, materials, equipment and appurtenant accessories necessary for or incidental to the installation of all suspended ceiling systems shown on the Drawings and specified herein.
- B. **Related Work Described Elsewhere:**
 - 1) **Lighting:** Division Sixteen.

1.2 QUALITY ASSURANCE

- A. Products used in the Work of this Section shall be produced by Manufacturers regularly engaged in manufacture of similar items and with a history of successful production acceptable to the Architect.
- B. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the Work of this Section.

1.3 SUBMITTALS

- A. Comply with the provision of Section 01330.
- B. Submit two each of the proposed ceiling tile, and two representative samples of the suspension system.

1.4 PRODUCT HANDLING

- A. Deliver the materials in their original unopened containers with all labels intact and legible at time of use. Store in strict accordance with manufacturer's recommendations.
- B. Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the Work and materials of all other trades.
- C. In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

PART TWO - PRODUCTS

2.1 SUSPENSION SYSTEMS

DIVISION NINE - FINISHES**SUSPENDED ACOUSTICAL CEILINGS**

- A. **General:** Main tees and cross tees shall be double-web hot dipped galvanized steel, and have exposed surfaces finished with Manufacturer's standard white baked on polyester coating. Furnish all necessary channel moldings, wall angles, spring clips, etc.
- B. **Typical grid (except as noted below):** Armstrong Prelude ML, 15/16" exposed tee grid, white, with wall angle, 24" x 24", where acoustical tile is indicated on the Drawings.
- C. **Grid at Clean Room™ tiles:** Armstrong Co-extruded Clean Room, 15/16" exposed tee grid, white, with wall angle, 24" x 24", where acoustical tile is indicated on the Drawings.

2.2 HANGERS

- A. Soft, annealed steel wire not less than 0.1620" nominal diameter, 12 gauge, conforming to Federal Spec. QQ-W-461, steel number 1010, 1008, or 1006, Class 1 zinc coating.

2.3 CEILING PANELS

- A. **Lay-in acoustical ceiling panels (typical except as noted below):** Armstrong Fissured #756, 24" x 24" x 5/8" lay-in tiles, white.
- B. **Lay-in ceiling panels at Kitchen 102:** Armstrong Clean Room™ FL Square Lay-in #1715, 24" x 24" x 3/4" lay-in mineral fiber panels, with white washable finish.

PART THREE - EXECUTION**3.1 INSPECTION**

- A. Examine the areas and conditions under which Work of this Section will be installed. Correct conditions detrimental to the proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.
- B. Do not begin installation of the Work of this Section until all wet Work such as plastering, concrete, and tile Work is completely dry.
- C. Install under standard occupancy conditions; 60°F to 85°F at not more than 80% R.H. in an enclosed building.

3.2 INSTALLATION

- A. Install suspension systems in accordance with the Manufacturer's recommendations.

DIVISION NINE - FINISHES

SUSPENDED ACOUSTICAL CEILINGS

B. Suspended Lay-In Grid System:

- 1) **Install main runners on 48" centers. Space wire hangers a minimum of 48" on center along main runners, and at each corner of light fixtures.**
- 2) **Place cross tees in the locking slots at 24" o.c.**
- 3) **Install wall molding at intersection of suspended ceiling and vertical surfaces.**
- 4) **Install acoustical panels and tiles true to alignment within a tolerance of one in 1000 and true to plane within a tolerance of one in 200.**
- 5) **Do not install acoustical panels or tiles until all components in the ceiling plenum are installed.**

- C. Cooperate with other trades in the installation of light fixtures, ceiling diffusers and grilles.**

END OF SECTION

DIVISION NINE - FINISHES

CARPET & RESILIENT FLOORING

PART ONE - GENERAL

1.1 DESCRIPTION

- A. Provide all labor, materials and equipment necessary to install modular carpet and luxury vinyl tile, where shown on the Drawings.

1.2 QUALITY ASSURANCE

- A. Products used in the Work of this Section shall be produced by Manufacturers regularly engaged in manufacture of similar items and with a history of successful production acceptable to the Architect.
- B. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the Work of this Section.

1.3 PRODUCT HANDLING

- A. Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the Work and materials of all other trades.
- B. In the event of damage, immediately make all repairs and replacements needed to the approval of the Architect and at no additional cost to the Owner.

PART TWO - PRODUCTS

2.1 MATERIALS

- A. Modular carpet (where indicated): Mannington Commercial, Palma 2 Collection, Portela patterned loop, 24" x 24" modular tiles, 21 oz./sq. yd., Antron® Legacy™ fiber system, with Infinity® 2 backing; color as selected by Architect.
- B. Rubber Stair Treads & Risers: Roppe #93 Textured Treads, with matching 7" risers. Color to be selected by Architect.
- C. Rubber Base: Roppe 4" cove base; color as selected by Architect.
- D. Transition Strips: Roppe #42 (concrete-to-carpet), color as selected by Architect.

PART THREE - EXECUTION

3.1 INSPECTION

DIVISION NINE - FINISHES

CARPET & RESILIENT FLOORING

- A. Examine the areas and conditions under which Work of this Section will be performed. Correct conditions detrimental to the proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.

3.2 SURFACE PREPARATION

- A. Immediately prior to installation of the Work of this Section, thoroughly clean and vacuum all floors scheduled to receive flooring specified herein, and remove all oil, grease, paint, varnish, hardeners, and other items which would adversely affect the carpet or pad.
- B. Make all substrata level and free from irregularities, grinding high spots and filling low spots as required.

3.3 INSTALLATION

- A. Modular carpet: Install according to Manufacturer's instructions, using adhesive recommended by manufacturer.
- B. In addition to the requirements of Section 01740, thoroughly clean all carpeted surfaces prior to final acceptance of the areas by the Owner.

3.4 PROTECTION

- A. Provide a heavy non-staining paper or plastic walkway as required over carpeting in the direction of foot traffic, maintaining intact until carpeted space is accepted by the Owner.

END OF SECTION

DIVISION NINE - FINISHES

PAINTING

PART ONE - GENERAL

1.1 DESCRIPTION

- A. Provide all labor, materials, tools, drop cloths, ladders, scaffolding, swing stages, and any other equipment required for the proper execution of this Work.
- B. This Work Includes:
 - 1) Touching up of shop applied prime coats.
 - 2) Preparation of surfaces to receive finishes.
 - 3) Priming and back-priming of finish carpentry.
 - 4) Painting, staining, or otherwise finishing of all surfaces, except as otherwise indicated.
 - 5) Painting of all air conditioning grilles and registers to match the color of the wall or ceiling finish in which such items are located.
 - 6) Painting of exposed structural steel (columns, beams, joists), decking, and interior piping and conduits exposed to view in painted areas.

1.2 SUBMITTALS

- A. Product Data:
 - 1) Submit complete list of products for use at least 30 days prior to beginning painting Work.
 - 2) Indicate Manufacturer, brand name, quality and type paint for each surface to be finished.
 - 3) Intent of Contractor to use products specified does not relieve him from responsibility of submitting product line.
- B. Color Samples: Submit two sets of color samples from Paint Manufacturer(s) proposed for use, for color selections by Architect.

1.3 DELIVERY, STORAGE & HANDLING

- A. Delivery:
 - 1) Deliver materials to project site ready-mixed in unbroken original containers bearing Manufacturer's brand and name.

DIVISION NINE - FINISHES

PAINTING

B. Storage & Handling:

- 1) Store materials in location acceptable to Architect.
- 2) Maintain neat, clean conditions in storage area; remove rags and other disposable materials at end of each day's Work.
- 3) Close containers at end of each day's Work. Leave no materials open.

1.4 PROJECT CONDITIONS

A. Environmental Requirements:

- 1) Comply with Manufacturer's recommendations regarding environmental conditions under which materials may be applied.
- 2) Application of materials in spaces where dust is being generated is prohibited.

B. Protection: Cover finished Work of other trades, surfaces not being painted concurrently, and pre-finished items.

C. Safety Precautions:

- 1) Provide temporary fire protection equipment in materials storage areas.
- 2) Prohibit smoking in storage area.

D. Cooperation with Other Trades:

- 1) Schedule and coordinate this Work with other trades; do not proceed until other Work and job conditions are proper to achieve satisfactory results.
- 2) Examine Specifications for various other trades; thoroughly familiarize with Work required in other Sections regarding painting.

PART TWO - PRODUCTS

2.1 PAINTING MATERIALS

A. Except as otherwise noted, products specified as standard of quality are manufactured by Sherwin Williams.

B. Products of the following Manufacturers which are similar in type and quality are acceptable for use, subject to approval of product list.

- 1) Sherwin Williams

DIVISION NINE - FINISHES

PAINTING

- 2) Pratt & Lambert
 - 3) Pittsburgh Paints
- C. Where products other than those of Manufacturer listed as standard of quality are specified in Painting Schedule, such products have been selected to achieve specific results. Substitutions will be allowed only in accordance with Section 01330.
- D. Provide products for all specified paints from a single Manufacturer; and all specified stains from a single Manufacturer, except items indicated in Article 2.1, Paragraph C.
- E. Miscellaneous Materials:
- 1) Paint Thinners and Tints: Products of same Manufacturer as paints or approved by him for use with his products.
 - 2) Shellac, Turpentine, Patching Compounds, and Similar Materials Required for Execution of Work: Pure, best quality products.
 - 3) Putty for use on painted woodwork shall be composed of dry whiting and Painter's Putty.
 - 4) Putty for use with stain or varnish finish shall be tinted to match finish color.

PART THREE - EXECUTION

3.1 PREPARATION

- A. Surfaces to Receive Finishes: Dry, free of debris, dust, or other deleterious materials.
- B. Lumber, Plywood & Veneered Surfaces:
- 1) Apply shellac, maximum four lb. cut, to knots, pitch and resinous sapwood prior to application of first paint coat; seal for stain coat in accord with Stain Manufacturer's recommendations.
 - 2) Surfaces to be Painted: Fill nail holes, cracks, joints, and defects with spackling compound. Apply after first coat of paint.
 - 3) Sand surfaces smooth, except where rough-sawn surfaces are indicated. Dust to remove debris.
 - 4) Treat mildewed surfaces with solution consisting of one quart hypochlorite bleach, one tablespoon laundry detergent, and three quarts water. Rinse and allow to dry prior to painting.

DIVISION NINE - FINISHES

PAINTING

C. Gypsum Board:

- 1) Fill narrow, shallow cracks and small holes with patching plaster or spackling compound. Allow to dry; sand smooth without raising nap of gypsum board paper.
- 2) Texture for wall surfaces designated to receive painted finish: Spray-on orange peel texture.

D. Galvanized Metal and Paint-grip Galvanized Metal: Wash with Xylol to remove grease, oil and contaminants; wipe dry with dry cloth.

E. Aluminum: Sand to remove oxides. Wash with Xylol to remove grease, oil and contaminants; wipe dry with dry cloth.

F. Ferrous Metals: Solvent clean with Xylol to remove grease, oil, and contaminants after preparing surfaces in accord with SSPC-SP-3, power tool clean. Wipe dry with dry cloth.

G. Shop Painted Metal: After solvent cleaning, retouch shop coat wherever it is marred.

3.2 APPLICATION

- A. Apply coating materials in accord with Manufacturer's approved product data to achieve specified dry film thickness.
- B. Apply coating only when moisture content of surfaces is within Manufacturer's recommended range.
- C. Apply paint materials using clean brushes, rollers, or spray equipment. Limit spraying of paints only to those materials recommended by Manufacturer to be sprayed with no loss of performance, durability, or color.
- D. Apply materials at rate not exceeding Manufacturer's recommendations for surface being coated, less than ten percent for losses.
- E. Comply with Manufacturer's product data for drying time between coats.
- F. Sand and dust between coats to remove defects visible from distance of 5'-0".
- G. Finish Coats: Smooth, free of brush marks, streaks, laps or pile-up of paint, skips, or missed areas.
- H. Make edges of coating adjoining other materials or colors sharp and clean without overlapping.

DIVISION NINE - FINISHES

PAINING

- I. Primer coats may be omitted for surfaces specified to receive factory applied primer if finish coats are compatible with primer. Substitute bond coat recommended by Paint Manufacturer for specified primer coat if finish coats are not compatible.
- J. Refinish entire surface of partition where portion of finish on gypsum board partitions is damaged or unacceptable.
- K. Seal tops and bottoms of interior doors with an oil-base prime coat only; side edges same as faces.
- L. Surfaces Not Requiring Painting:
 - 1) Pre-finished surfaces and items.
 - 2) Concealed ductwork, conduit, and piping.
 - 3) Copper, Bronze, Aluminum, Stainless Steel, or Chrome plated metal.
 - 4) Plastic surfaces.
 - 5) Finish hardware.
 - 6) Concrete slab or finish floor material.
 - 7) Brick or stone masonry.
 - 8) Finished acoustical ceilings.

3.3 SCHEDULES (based on Sherwin Williams Paints)

- A. Exterior:
 - 1) Ferrous metals (hollow metal doors & frames):

Primer: (1 coat) Sherwin Williams Kem Kromik Universal Primer B50 Series at 3.0 – 4.0 mils dry film thickness

Finish: (2 coats) Sherwin Williams Industrial Enamel Alkyd B54 Series at 2.0 – 4.0 mils dry film thickness, semi-gloss
 - 2) Galvanized metals:

Primer: (1 coat) Sherwin Williams Galvite HS Primer B50WZ30 at 3.0 – 4.5 mils dry film thickness

Finish: (2 coats) Sherwin Williams Industrial Enamel Alkyd B54 Series at 2.0 – 4.0 mils dry film thickness, semi-gloss

DIVISION NINE - FINISHES

PAINTING

3) Parking striping:

Primer/Finish: Sherwin Williams ProMar Alkyd Zone Marking Paint B29YZ0002 Series (color to match existing striping)

B. Interior:

1) Gypsum board walls (satin finish):

Primer: (1 coat) Sherwin Williams PrepRite 200 Latex Primer B28W200 Series at 1.1 mils dry film thickness

Finish: (2 coats) Sherwin Williams Emerald Designer Edition Latex Satin finish at 1.6 mils dry film thickness.

3) Gypsum board ceilings (flat):

Primer: (1 coat) Sherwin Williams PrepRite 200 Latex Primer B28W200 Series at 1.1 mils dry film thickness

Finish: (2 coats) Sherwin Williams ProMar 200 Latex Flat B30W200 Series at 1.6 mils dry film thickness.

4) Exposed shop-primed steel columns and purlins at Multi-Purpose Rm. 100:

Finish: (2 coats) Sherwin Williams Industrial Enamel Alkyd B54 Series at 2.0 - 4.0 mils dry film thickness.

5) Ferrous metals (handrails, guardrails, hollow metal door frames, etc.)

Primer: (1 coat) Sherwin Williams Kem Kromik Universal Primer B50 Series at 3.0 – 4.0 mils dry film thickness

Finish: (2 coats) Sherwin Williams ProMar Interior Alkyd Semi-Gloss B34W200 Series at 1.7 mils dry film thickness

6) Fixed wood shelving:

Primer: (1 coat) Sherwin Williams PrepRite Wall and Wood Primer B49W2 at 1.9 mils dry film thickness

Finish: (2 coats) Sherwin Williams Industrial Enamel Alkyd B54 Series at 2.0 – 4.0 mils dry film thickness

DIVISION NINE - FINISHES

PAINING

3.4 CLEANING

- A. Upon completion, remove all paint spots, smears, or discolorations from plumbing fixtures, glass, cabinet work, hardware, tile work, and other surfaces which might have suffered discoloration as a result of painting operations.

3.5 TOUCHING-UP

- A. Immediately prior to occupancy, the Painting Contractor shall touch-up and repaint any marred or damaged areas and shall leave the entire Work in a first class, acceptable condition.
- B. Remove all paint spots from windows, hardware, light fixtures, or adjacent Work.
- C. Painting Contractor shall remove all excess material and containers from the premises except that he shall leave one gallon of each color and type paint used, properly marked in a sealed container, with the Owner.

END OF SECTION

DIVISION TEN - SPECIALTIES

TOILET PARTITIONS

PART ONE - GENERAL

1.1 DESCRIPTION

- A. Provide toilet partitions and urinal screens, complete, in place, as shown on the Drawings, specified herein, and needed for a complete and proper installation.
- B. Related Work Described Elsewhere:
 - 1) Toilet Accessories: Section 10800.

1.2 WARRANTY

- A. Provide warranty against delamination, breakage or corrosion for 10 years from the date of receipt by the customer. If material is found defective during that period, the material shall be replaced free of charge. No credits or allowances shall be issued for any labor or expenses relating to the replacement of components covered under the warranty plan.

1.3 SUBMITTALS

- A. Comply with provisions of Section 01330.
- B. Submit Shop Drawings and sufficient dimensional data to enable proper coordination of installation of concealed items of support.

1.4 PRODUCT HANDLING

- A. Use all means necessary to protect materials of this Section before, during, and after installation and to protect Work and materials of all other trades.
- B. In the event of damage, immediately make all repairs and replacements necessary to the approval of the Architect and at no additional cost to the Owner.

PART TWO - PRODUCTS

2.1 TOILET PARTITIONS & SCREENS

- A. Toilet Partitions: Shall conform to layout and dimensions shown on the Drawings, and shall meet the following requirements:
 - 1) Shall be as manufactured by Accurate Partitions Corp., P.O. Box 287, Lyons, IL 60534.

DIVISION TEN - SPECIALTIES

TOILET PARTITIONS

- 2) Partitions shall be floor-anchored, overhead-braced, phenolic with black core; color as selected by Architect from manufacturer's full range of colors.
- 3) Doors and pilasters shall have a finished thickness of 3/4". Urinal screens shall be 1/2" thick.
- 4) Partitions shall be floor anchored with 1/4" x 1" stainless steel mounting bar attached to the top of the pilaster. Each mounting bar shall be secured to the floor member with 3/8" cadmium-plated bolts. The ceiling anchoring system shall be concealed by a type 304 stainless steel trim shoe with a #4 finish.
- 5) Provide stainless steel stirrup brackets with brushed finish. Secure all hardware to walls and pilasters with stainless steel tamper resistant fasteners. Panels shall be through bolted with tamper resistant barrel nuts and shoulder screws.

PART THREE - EXECUTION

3.1 PREPARATION FOR INSTALLATION

- A. Properly coordinate with all other trades as required to ensure adequate provision for anchorage of the Work of this Section and for proper interface with the Work of all other trades.
- B. Examine the areas and conditions under which Work of this Section will be installed. Correct conditions detrimental to the proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install the Work of this Section straight and plumb within a tolerance of one in 200 horizontally and one in 500 vertically, rigidly anchoring into position for long life under hard use.
- B. Provide a uniform vertical edge clearance for doors of approximately 3/16", resting open at approximately 30° when the latch is not engaged.
- C. Vertical gaps between panels, or panel and walls, shall not exceed 3/8".

END OF SECTION

DIVISION TEN - SPECIALTIES

GRAPHICS

PART ONE - GENERAL

1.1 DESCRIPTION

- A. Furnish all materials, labor, equipment, and appurtenant accessories necessary for complete installation of interior signage / nameplates.

PART TWO - PRODUCTS

2.1 MATERIALS

- A. **Interior sign systems:** Shall be engraved laminated plastic identification plates as manufactured by Lassiter Industries, 321 Century Plaza Drive, Houston, TX 77073, tel: (281) 781-8708.
- 1) **Plus 2 Series:** 6" x 8", meeting TAS requirements, colors as selected by Architect. Except where noted, provide text and tactile lettering.
 - a) **Text adjacent to doors 100 & 110:** EXIT (tactile only)
 - b) **Text adjacent to door 104:** LAUNDRY
 - c) **Text adjacent to door 105:** RESOURCE RM.
 - d) **Text adjacent to door 106:** COMPUTER RM.
 - e) **Text adjacent to door 107:** ADMIN. OFFICES
 - f) **Text adjacent to door 111:** WAITING RM.
 - g) **Text adjacent to door 112:** EXAM ROOM 1
 - h) **Text adjacent to door 113:** EXAM ROOM 2
 - i) **Text adjacent to door 115:** WOMEN (with pictogram for women)
 - j) **Text adjacent to door 116:** MEN (with pictogram for men)

PART THREE - EXECUTION

3.1 INSTALLATION

- A. Interior nameplates shall be installed on the wall adjacent to the latch side of the door or as otherwise directed by Architect. Mounting height shall be 60" above finish floor to the top of the nameplate. Distance from outside edge of door frame to nearest edge of nameplate shall be 4".

END OF SECTION

DIVISION TEN - SPECIALTIES

FIRE EXTINGUISHERS & CABINETS

PART ONE - GENERAL

1.1 DESCRIPTION

- A. **Furnish all labor, materials, equipment, and appurtenant accessories necessary for the installation of fire extinguishers, fire extinguisher cabinets, and mounting brackets as indicated on the Drawings and specified herein.**

1.2 SUBMITTALS

- A. **Shop Drawings: Submit shop drawings, including Manufacturer's literature, to Architect for approval prior to installation.**

PART TWO - PRODUCTS

2.1 MATERIALS

- A. **Cabinets: Larsen's Manufacturing Co., #FS-2409-6R, semi-recessed w/ 2-1/2" rolled edge, full glass door w/ clear tempered safety glass and Larsen-Loc®, or equal.**
- B. **Mounting brackets: Larsen's Manufacturing Co., type B-2, or equal.**
- C. **Extinguishers: 5 lb. ABC; MP Series, one at each cabinet or bracket.**

PART THREE - EXECUTION

3.1 INSTALLATION

- A. **Coordinate with other trades to make necessary preparation for installation of cabinets and accessories.**
- B. **Fastenings and mounting devices shall be concealed and of secure and durable nature.**
- C. **Install cabinets in the locations indicated "FEC" on the Drawings.**
- D. **Install mounting brackets in locations indicated "FE" on the Drawings.**
- E. **Mounting height shall be 48" above floor to centerline of handle.**

END OF SECTION

DIVISION TEN - SPECIALTIES

TOILET ACCESSORIES

PART ONE - GENERAL

1.1 SCOPE

- A. Furnish all labor, materials, equipment, and appurtenant accessories necessary for or incidental to the installation of all toilet accessories as indicated on the Drawings or specified herein.

1.2 SUBMITTALS

- A. General: Comply with provisions of Section 01330.

1.3 PRODUCT HANDLING

- A. Use all means necessary to protect the materials of this Section before, during and after installation, and to protect the work and materials of all other trades.
- B. In the event of damage, immediately make repairs and replacements necessary for approval of the Architect, and at no additional cost to the Owner.

PART TWO - PRODUCTS

2.1 MATERIALS

- A. Toilet paper holders: Bobrick #B-2840, two-roll dispenser with shelf, surface mounted; one (1) in each toilet stall.
- B. Grab bars at toilet stalls: Equal to Bobrick #B-5806 x 36 and #B-5806 x 42, satin finish; one (1) at each handicapped stall, with concealed anchors. Structural strength of grab bars, fasteners, and mounting devices to support a minimum weight of 250 lbs.
- C. Grab bars at shower stalls: Equal to Bobrick #B-5806 x 24, satin finish; two (2) at handicap shower stall, where indicated on the drawings.
- D. Combination towel dispenser/waste units at Women 115 & Men 116: Bobrick #B-3944; one (1) in each restroom, where indicated.
- E. Mirrors at Women 115 & Men 116: Refer to Section 08800 Glazing.
- F. Mop and broom holder: Bobrick #B-224, one (1) in Janitor 119.
- G. Benches at Showers 117: Global Industrial ADA Locker Room Bench #T9F269862, 48"W x 24"D x 17-1/4"H, two (2) required.
- H. Shower rods: Bobrick #B6107 x 36, 1" dia. stainless steel shower curtain rod with satin finish; four (4) required.

DIVISION TEN - SPECIALTIES

TOILET ACCESSORIES

- I. **Showers curtain and curtain hooks:** Bobrick #204-1 shower curtain hooks (7 per curtain) and #204-2, 42"W x 72"H curtain; four (4) required.

PART THREE - EXECUTION

3.1 INSTALLATION

- A. Cooperate with other trades in coordinating preparations for installation of all accessories.
- B. General Contractor shall provide solid blocking behind all surface mounted items.

END OF SECTION

DIVISION ELEVEN - EQUIPMENT

APPLIANCES

PART ONE - GENERAL

1.1 SCOPE

- A. **The work of this Section includes the furnishing and installation of electric appliances listed below; and all labor, tools and materials required for proper installation as shown on the Drawings and specified herein.**

1.2 SUBMITTALS

- A. **General: Comply with provisions of Section 01330.**

PART TWO – PRODUCTS

2.1 APPLIANCES

- A. **At Serving 101 & Kitchen 102: Refer to Food Service drawings for specifications.**
- B. **Stacking washer/dryer units at Laundry 104: Each stacking unit (2 required) to consist of:
 - 1) **Washer: Samsung #WF45T6000AW, 27" front-load, 4.5 cu. ft. washer with white finish. Provide with #SKK8K stacking kit.**
 - 2) **Dryer: Samsung #DVE45T6000W, 27" front-load, 7.5 cu. ft. electric dryer with white finish.****
- C. **ADA-compliant washers & dryers at Laundry 104 (2 ea. required):
 - 1) **Washer: Speed Queen #TC5003WN top-load washer, white finish.**
 - 2) **Dryer: Speed Queen #DC5003WE electric dryer, white finish.****

PART THREE – EXECUTION

3.1 INSTALLATION

- A. **Install all appliances in accordance with the Manufacturer's recommended procedures and instructions.**
- B. **Cooperate with other trades in coordinating necessary preparations for required power and plumbing to appliances.**

END OF SECTION

DIVISION TWELVE - FURNISHINGS

CASEWORK

PART ONE - GENERAL

1.1 DESCRIPTION

- A. **Furnish and install factory fabricated casework, including tables, modular divider panels, and plastic laminate clad cabinetry, as described in the Specifications and shown on the Drawings.**

1.2 RELATED WORK DESCRIBED ELSEWHERE

- A. **Plumbing Fixtures: Division Fifteen.**
- B. **Finish Carpentry: Section 06200.**

1.3 SUBMITTALS

- A. **Complete Shop Drawings showing construction of each unit, locations, dimensions, laminate selections, and hardware (name and number).**
- B. **Descriptive Manufacturer's brochures and Specifications.**

1.4 WARRANTY

- A. **Warrant the cabinetry work for one year against becoming unserviceable or objectionable in appearance as result of being defective or nonconforming.**

PART TWO - PRODUCTS

2.1 PLASTIC LAMINATE CABINETRY

- A. **Plastic Laminate (cabinet faces):**
 - 1) **Color: To be selected by Architect from Wilsonart or Formica laminates.**
 - 2) **Thickness: 1/32" for exterior vertical surfaces and interiors; 1/16" for countertops**
 - 3) **Interior sides, bottoms, shelves, backs, and intermediates shall be high pressure plastic laminate cabinet liner.**
 - 4) **Unexposed surfaces shall be faced with backer sheet.**
 - 5) **Adhesives: 100% waterproof, urea resin or PVC acetate as recommended by the Plastic Manufacturer.**

DIVISION TWELVE - FURNISHINGS

CASEWORK

- B. **Particle Board:** 3/4" thick industrial grade 45 PSI for cabinet bottoms, sides, shelving, dividers, doors, drawer fronts, and backs of wall hung cabinets. Provide solid wood edges at hinge locations.
- C. **Countertops & Splashes:** Where indicated, shall be 3/4" APA plywood; exposed surfaces covered with plastic laminate. Countertops shall have solid backed splashes; heights as indicated on Drawings.
- D. **Hardware:**
- 1) **Hinges:** Grass #3703, 110-degree, self-closing, nickel finish. Provide 2 hinges for doors 36" and under in height; 3 hinges for doors over 36" high.
 - 2) **Pulls at Plastic Laminate Doors and Drawer Fronts:** Door and drawer pulls shall be similar to Stanley 348235-3 1/2" wire pulls; satin chrome finish.
 - 3) **Drawer Slides:** Similar to Grant No. 328 capable of supporting 50 lbs. when extended.
 - 4) **Shelf Adjustment:** Adjustable on 1/2" centers; KV-255 with KV-256 clips. Drilled shelf supports on 2" centers optional.
- E. **Fabrication:**
- 1) **General:** Construct high pressure laminate panels in accordance with NEMA standards. Assemble cases with butt joints utilizing mechanical fasteners completely concealed when cabinet is assembled, resulting in a sturdy unit with clean lines and no rough exposed fastening devices, nails, or screws. No staples will be allowed.
 - 2) **Workmanship:** All parts shall be machined for accurate fit and assembled with appropriate fasteners resulting in level and plumb units without discernable tool marks. Modified special units shall be constructed with similar details.
 - 3) **Drawers:** Plastic laminate or wood fronts, blind dovetailed into hardwood drawer sides and back. Let-in plywood drawer bottoms into drawer fronts, sides, and backs. Seal drawer sides, backs, and bottoms with clear sealer.
 - 4) **Doors:** High pressure laminate over both sides of particle board core, as indicated on the Drawings.
 - 5) **Exposed Backs:** 1/2" board faced with plastic laminate cabinet liner on exposed interior, backed with balancing sheet. Provide 1/2" thick backs on wall-hung units. Let-in backs to cabinet bodies and air nail in place.
 - 6) **Shelves:** Surfaced top and bottom with plastic laminate. Self-edged or with T-mold.

DIVISION TWELVE - FURNISHINGS

CASEWORK

- 7) **Base:** All base cabinets shall have integral bases with unfinished toe-board for application of coved base by others.

2.2 TABLES & MODULAR DIVIDER PANELS

- A. **Tables at Computer Room 106:** As manufactured by Correll, Inc., P.O. Box 417, Charleston, AR 72933.
 - 1) #AWB2436TF-REC-15, 24" deep x 36" long folding table; one (1) required.
 - 2) #AWB2472TF-REC-15, 24" deep x 72" long folding table; two (2) required.
- B. **Modular dividers at Computer Room 106:** As manufactured by MergeWorks, 1732 Universal City Blvd., Universal City, TX 78148. Panels shall be: Notch Wall® #NW-42-54-24-AA-F-FRO (top) – FRO (bottom); four (4) required.

PART THREE - EXECUTION

3.1 INSTALLATION

- A. **Examine all grounds, stripping and blocking to secure cabinets. Do not install until all defects are corrected.**
- B. **Install cabinets plumb and level without distortion in strict accordance with Manufacturer's details and directions. Accurately scribe and closely fit all filler and trim strips to irregularities of adjacent surfaces.**

END OF SECTION



CITY OF CONROE ADOPTED CODES

The City of Conroe has adopted the 2009 International Codes with local amendments. In some cases, the State of Texas has adopted newer versions of certain codes and in those instances, The State adopted versions will govern.

Our local amendments can be found online at Municode, Chapter 14, Conroe Code of Ordinances. Recently the Texas Legislature passed H.B. 2439 which preempts some of our local amendments. Please contact the Building Official for specific questions related to H.B. 2439.

BUILDING:

- International Residential Code (IRC), 2009 Edition
International Building Code (IBC), 2009 Edition
International Existing Building Code (IEBC), 2009 Edition

ENERGY:

- International Energy Conservation Code, 2015 Edition (State Energy Conservation Office)

ELECTRIC:

- National Electrical Code, 2020 (Adopted by State of Texas).

MEP'S:

- International Plumbing Code, 2009 Edition
International Fuel Gas Code, 2009 Edition
International Mechanical Code, 2009

SWIMMING POOLS:

- International Swimming Pool and Spa Code, 2018 Edition (Adopted by State of Texas).

FIRE:

- International Fire Code, 2009 Edition.

ACCESSIBILITY:

- 2012 Texas Accessibility Standards

300 W. Davis/PO Box 3066, Conroe, TX 77305 permits@cityofconroe.org 936-522-3110 Page 1 | 1

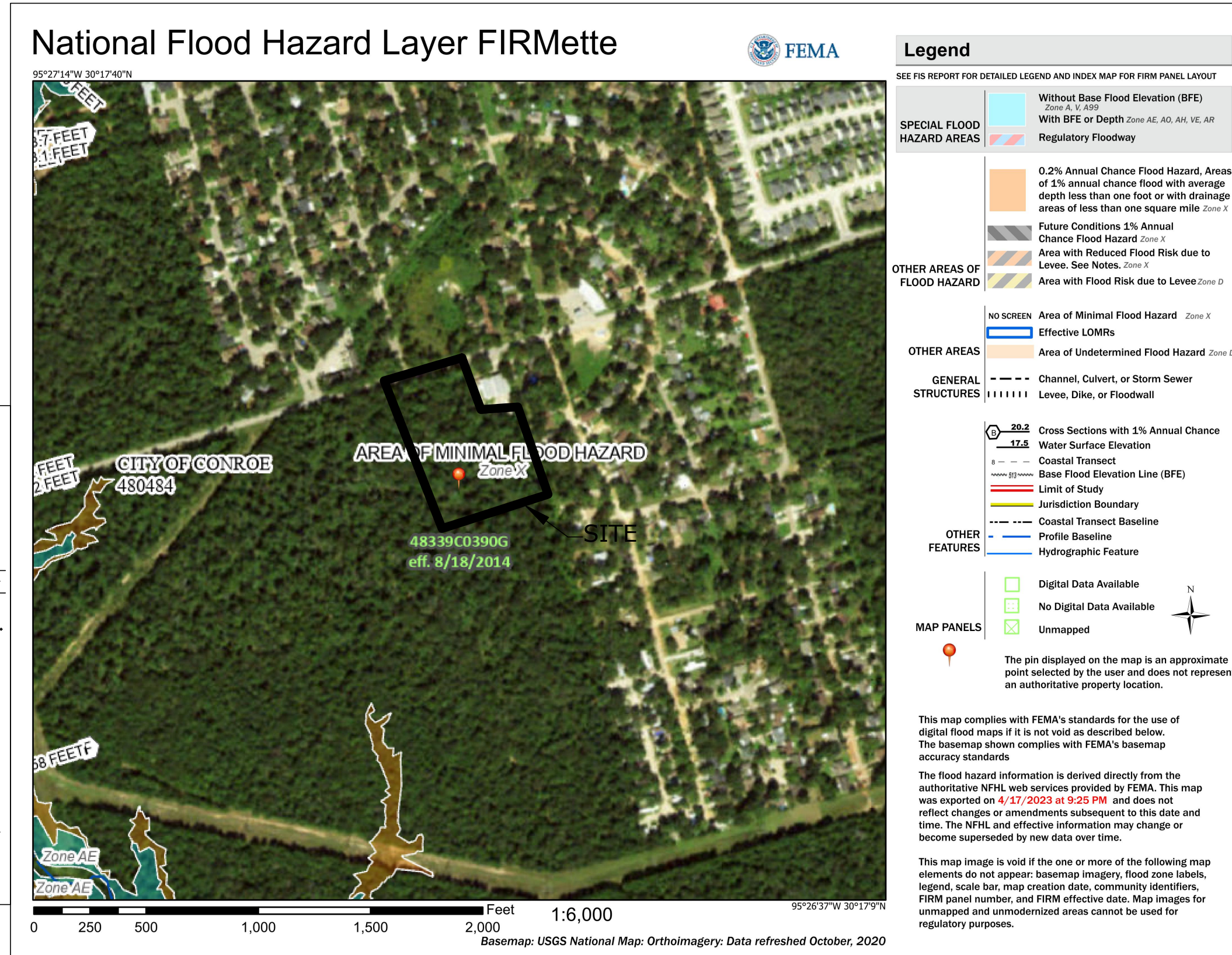
MIRACLE CITY
SITE PLANS FOR
DAY CENTER-364 FOSTER DRIVE
WOMEN'S TRANSITION HOUSE-374 FOSTER DRIVE
MEN'S TRANSITION HOUSE 378 FOSTER DRIVE
CONROE, TEXAS 77301
DAY CENTER TDLR REGISTRATION NO. TABS2024007145
TRANSITION HOUSES TDLR REGISTRATION NO. TABS2024005255

Table with TOPOGRAPHIC INFORMATION, No., Date, Revisions, and App. columns. Includes details about the survey and project approvals.

COVER SHEET
MIRACLE CITY
SITE PLANS-DAY CENTER & TRANSITION HOUSES
364, 374, 378 FOSTER DRIVE
CONROE, TEXAS 77301

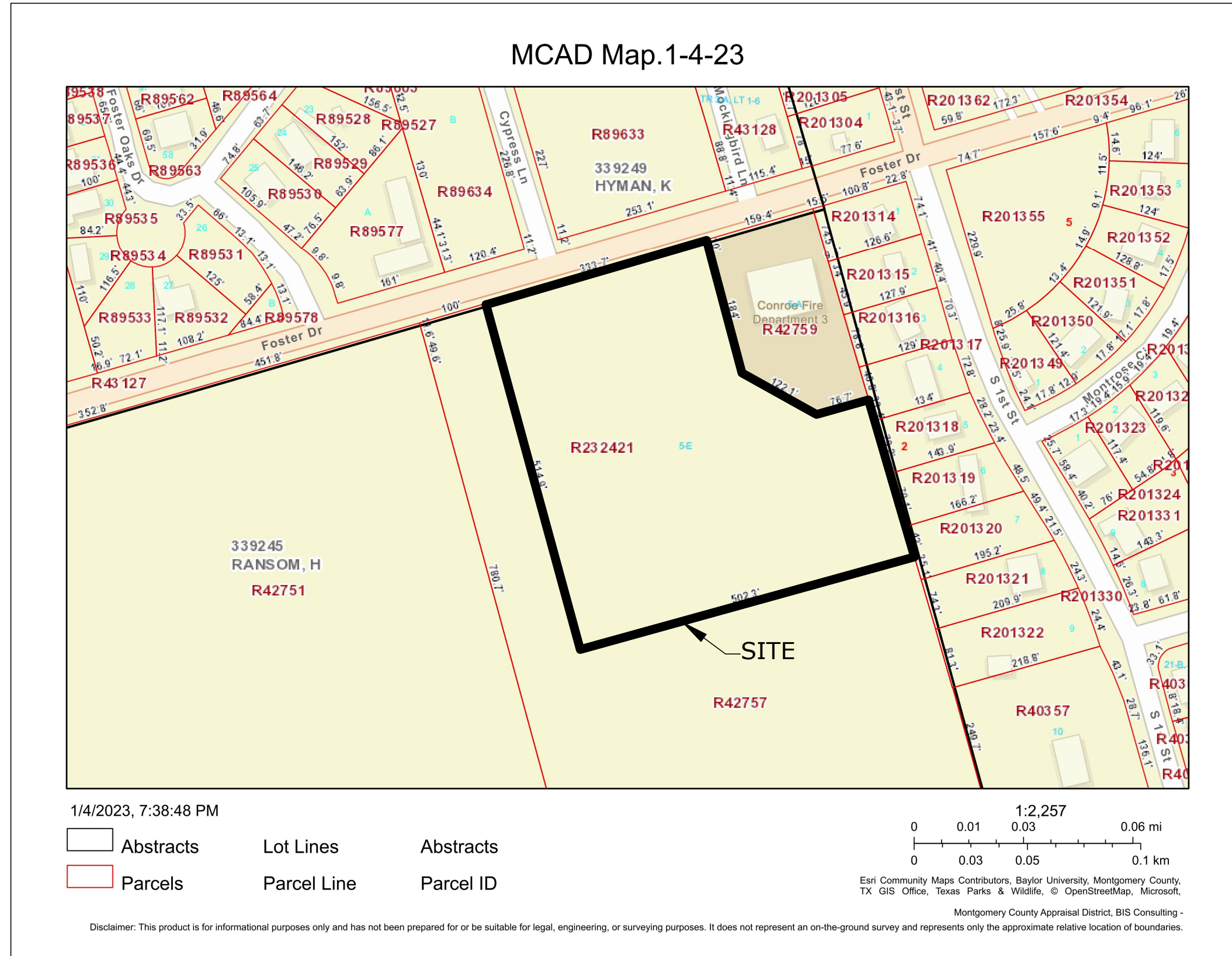
SITE PLAN WORK SCOPE - DAY CENTER
THE CONTRACTOR CONSTRUCTING THE SITE WORK SHOWN ON THESE DRAWINGS SHALL INCLUDE ALL OF THE SITE WORK AS A PART OF THE SCOPE OF WORK FOR THE DAY CENTER EXCEPT FOR THE TWO TRANSITION HOUSES SHOWN ON THE DRAWINGS WITH WATER AND SANITARY SEWER LINES CLOSER THAN FIVE- FEET TO THE BUILDINGS ALONG WITH SIDEWALKS WITHIN FIFTEEN FEET OF THE TWO TRANSITION HOUSES. THE SITE CLEARING SHALL BE DONE UNDER THE CLEARING PERMIT FOR THE ENTIRE SITE. EXCESS EXCAVATION CAN BE STOCKPILED ON THE TRANSITION HOUSE PAD SEGREGATED AS TO SOIL TYPES.

BIDDERS SHALL BREAK OUT THEIR BIDS FOR THE SITE PLANS FOR THE BASE BID AND FOR ALTERNATE BID 'A' AND DO NOT INCLUDE TRANSITION HOUSE BUILDINGS IN ANY OF THE BIDS. ALTERNATE BID 'A' WILL INCLUDE SITE PLAN PROVISIONS ONLY FOR THE TRANSITION HOUSES. THE TRANSITION HOUSE BUILDINGS WILL BE BY OTHERS IN THE FUTURE AND SHALL NOT BE INCLUDED IN ANY BIDS.



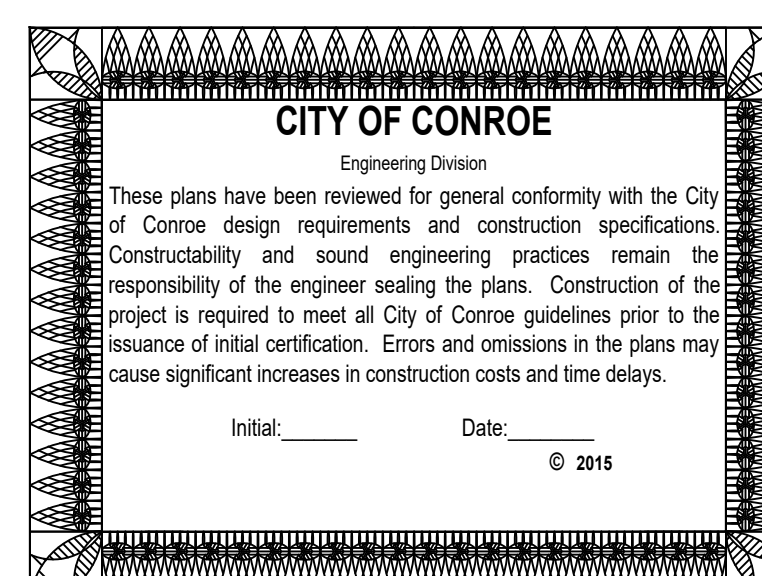
FEMA FLOOD PLAIN MAP

MIRACLE CITY BUILDING DRAWING LIST table with columns for DWG NO. and DRAWING DESCRIPTION, listing architectural, mechanical, and structural drawings.



MCAD MAP

MIRACLE CITY SITE DRAWING LIST table with columns for DWG NO. and DRAWING DESCRIPTION, listing site plan, utility, and grading drawings.



ENGINEERING BY: QUEST ENGINEERING
304 North Main Street #1
Conroe, Texas 77301
Phone: (713) 252-3729
rsaikowski@consolidated.net
© Ronald A Saikowski PE LEED AP 2024
TEXAS REGISTRATION NO. FOR ENGINEERING FIRM IS F-10574



I, RON A. SAIKOWSKI, P.E., AUTHORIZED THE PLACEMENT OF THIS SEAL ON THIS DRAWING FOR THE PURPOSE OF ISSUING THIS DOCUMENT AS SPECIFIED BELOW

Table with checkboxes for drawing status: Not For Construction, For Background Use Only, Preliminary, For Concept Approval, For Preliminary Bid Set, For Preliminary Approval, Check Set, Permit, For Final Approval, For Construction.

CONSTRUCTION SHALL NOT PROCEED UNTIL CONTRACTOR HAS OBTAINED ALL PERMITS AND INCORPORATED COMMENTS FROM TEXAS ACCESSIBILITY STANDARDS REVIEW AND PERMITTING ENTITIES IN WORK.

SHEET NO. C-0.0

811 Know what's below. Call before you dig. ONE-CALL NOTIFICATION SYSTEM CALL BEFORE YOU DIG!!! (713) 223-4567 (IN HOUSTON) (NEW STATEWIDE NUMBER OUTSIDE HOUSTON) 1-800-545-8005

LEGEND	
T.B.M.	TEMPORARY BENCH MARK
E.A.	EDGE OF ASPHALT
C.R.	CENTERLINE OF ROAD
H.B.	HIGH BANK ELEVATION
C.D.	CENTERLINE OF DITCH
(C.M.)	CONTROL MONUMENT
R.O.W.	RIGHT-OF-WAY
N.G.	NATURAL GROUND
	BENCH MARK
	PROPERTY CORNER
	WATER VALVE
	WATER METER
	FIRE HYDRANT
	CHAIN LINK FENCE
	OVERHEAD POWER LINES
	POWER POLE

PARKING SPACES:	
REGULAR	0
HANDICAP	0
TOTAL	0

BIDDERS SHALL BREAK OUT THEIR BIDS FOR THE SITE PLANS FOR THE BASE BID AND FOR ALTERNATE BID 'A' AND DO NOT INCLUDE TRANSITION HOUSE BUILDINGS IN ANY OF THE BIDS. ALTERNATE BID 'A' WILL INCLUDE SITE PLAN PROVISIONS ONLY FOR THE TRANSITION HOUSES THE TRANSITION HOUSE BUILDINGS WILL BE BY OTHERS IN THE FUTURE AND SHALL NOT BE INCLUDED IN ANY BIDS.

SUMMARY OF REQUIRED PARKING				
USE	ADDRESS	AREA (SF)	PARKING RATIO	REQUIRED PARKING
EXISTING BUILDING	350 FOSTER DRIVE	3,772	1/200 SF	19
DAY CENTER	364 FOSTER DRIVE	5,300	1/200 SF	27
MEN'S TRANSITION HOME	374 FOSTER DRIVE	3,200	1 PER 2 RESIDENTS	7
WOMEN'S TRANSITION HOME	378 FOSTER DRIVE	3,200	1 PER 2 RESIDENTS	7
TOTAL REQUIRED SPACES				60

PROVIDED PARKING	TOTALS
REGULAR	94
HANDICAPPED	6
TOTAL	100

SEVERAL SMALL BUSES TO TRANSPORT HOMELESS WILL USE SEVERAL PARKING SPACES

TOPOGRAPHIC INFORMATION SHOWN ON THESE DRAWINGS IS BASED ON A TOPOGRAPHIC SURVEY PREPARED BY MOON & ASSOCIATES UPDATED JANUARY 17, 2023.

THE SUBJECT SITE IS LOCATED IN ZONE X AS DETERMINED FROM FEMA FLOOD INSURANCED RATE MAP 48339 C 0390 G DATED AUGUST 18, 2014.

BEARINGS ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, TEXAS CENTRAL ZONE (TX-83)(2002 ADJUSTMENT) (FIPS 4203) PER BOUNDARY AND TOPOGRAPHIC SURVEY.

ELEVATIONS ARE BASED ON GPS OBSERVATION AND ADJUSTED TO NVAD'88, GEOID 128 DATUM AS PROVIDED BY NGS UPDATED ON SEPTEMBER 11, 2012 PER THE TOPOGRAPHIC SURVEY BY MOON & ASSOCIATES.

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SOILS WORK SHALL BE DONE IN ACCORDANCE WITH SOILS REPORTS PROVIDED BY LONE STAR GEOTECHNICAL & TESTING LABORATORY DATED OCTOBER 30, 2020 BEING REPORT NO. 20100008-1.

No.	Date	Revisions	App.
0	5/18/23	ISSUE FOR CONSTRUCTION	RAS

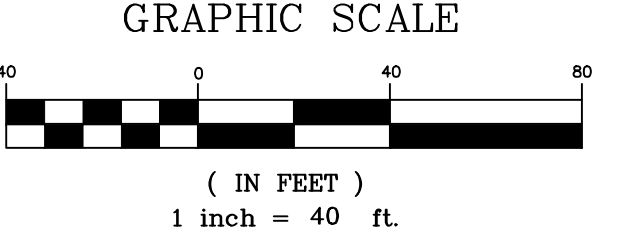
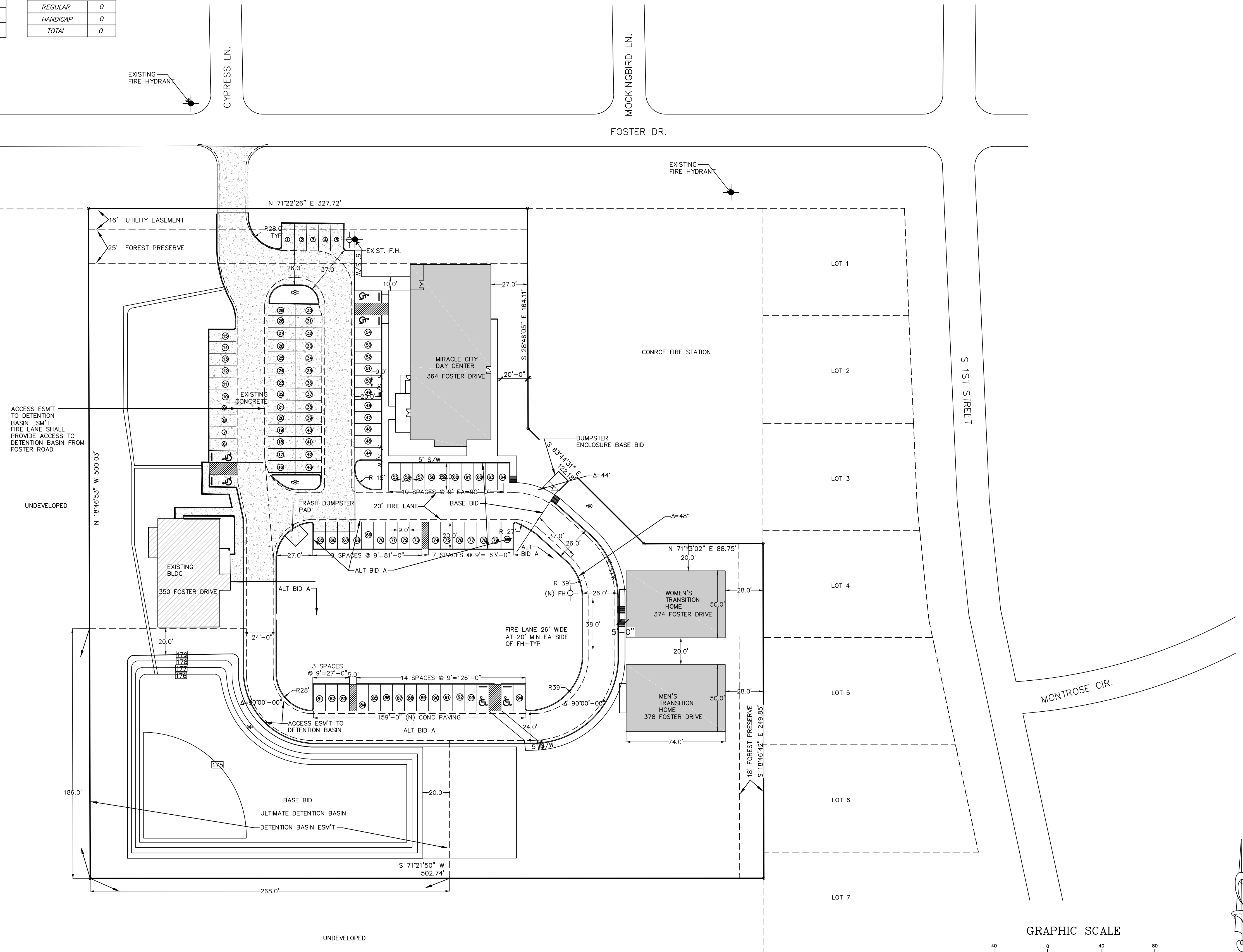
DIMENSIONED SITE PLAN

MIRACLE CITY

SITE PLANS-DAY CENTER & TRANSITION HOUSES

364, 374, 378 FOSTER DRIVE

CONROE, TEXAS 77301



CITY OF CONROE

Engineering Division

These plans have been reviewed for general conformity with the City of Conroe design requirements and construction specifications. Constructability and sound engineering practices remain the responsibility of the engineer sealing the plans. Construction of the project is required to meet all City of Conroe guidelines prior to the issuance of initial certification. Errors and omissions in the plans may cause significant increases in construction costs and time delays.

Initial: _____ Date: _____

© 2015

ENGINEERING BY:
QUEST ENGINEERING
 304 North Main Street #1
 Conroe, Texas 77301
 Phone: (713) 252-3729
 rsaikowski@consolidated.net
 © Ronald A Saikowski PE LEED AP 2024
 TEXAS REGISTRATION NO. FOR ENGINEERING FIRM IS F-10574



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<input type="checkbox"/>	For Preliminary Approval
<input type="checkbox"/>	Check Set
<input type="checkbox"/>	Permit
<input type="checkbox"/>	For Final Approval
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0	5/18/23	ISSUE FOR CONSTRUCTION	RAS

NOTES – STORM WATER POLLUTION PREVENTION PLAN

1. CONTRACTOR SHALL COMPLY WITH ALL PROVISIONS OF GENERAL PERMIT FROM TEXAS COMMISSION ON ENVIRONMENTAL QUALITY ON STORM WATER DISCHARGES DURING CONSTRUCTION.
2. CONTRACTOR IS RESPONSIBLE FOR SUBMITTING "NOTICE OF INTENT" AND "NOTICE OF TERMINATION" FOR THE GENERAL CONTRACTOR, HIS SUB-CONTRACTORS, AND THE OWNER.
3. CONCRETE WASHOUT FROM CONCRETE TRUCKS SHALL BE IN AREA SHOWN ON THE DRAWINGS AND SHALL BE USED AS RIP RAP ON OTHER PROJECTS.
4. CONTRACTOR SHALL CLEAR & GRUB TREES WITHIN LIMITS OF CONSTRUCTION FOR THE BUILDING, UNDERGROUND UTILITIES, DRAINAGE CHANNEL, DRAINAGE MITIGATION AREA, AND PAVING WITH SUCH TREES, ROOTS, AND ORGANIC MATERIAL CHIPPED AND DISPOSED PROPERLY OFFSITE. ALL WORK SHALL BE DONE IN ACCORDANCE WITH TREE CLEARING PERMIT.
5. CONTRACTOR SHALL GRASS ALL NON-PAVED, IMPACTED AREAS OUTSIDE OF SPECIFIED PLANTING AREAS ON THE LANDSCAPING PLANS IN ACCORDANCE WITH THE HYDRO-MULCHING REQUIREMENTS OF THE TEXAS DEPARTMENT OF TRANSPORTATION USING TWO TONS OF CELLULOSE FIBER PER ACRE WITH THE END RESULT BEING A SUITABLE STAND OF GRASS. CONTRACTOR SHALL WATER AND MOW AS REQUIRED FOR SUCH GRASS TO ESTABLISH A SUITABLE STAND OF GRASS IN ACCORDANCE WITH TEXAS DEPARTMENT OF TRANSPORTATION STANDARDS.
6. AFTER IMPACTED AREAS HAVE BEEN GRASSED, THE CONTACTOR SHALL PROVIDE ADDITIONAL EROSION PROTECTION FOR DRAINAGE SWALES USING STRAW MATT FOR THE FULL WIDTH OF THE SWALE.
7. INSTALL STRAW MATTS IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS PINNING SUCH MATTS TO GRASSED AREAS ON SLOPES OF DETENTION BASIN AND DRAINAGE CHANNELS.
8. CONTRACTOR SHALL PROTECT ALL TREES, LANDSCAPING, UTILITIES, AND FACILITIES WITHIN THE PROPERTY OUTSIDE OF THE ACTUAL AREAS OF CONSTRUCTION. SUCH IMPACTED AREAS SHALL BE RESTORED TO THE SATISFACTION OF THE OWNER AND THE CITY.
9. CONTRACTOR SHALL PROVIDE SUITABLE SANITARY FACILITIES ON THE PROPERTY FOR THE USE BY CONSTRUCTION WORKERS.
10. CONTRACTOR SHALL COORDINATE WITH OWNER AS TO STAGING AREAS, MATERIALS STORAGE, AND HOURS OF OPERATION SO AS NOT TO IMPACT OWNER'S ACTIVITIES.
11. CONTRACTOR IS SOLELY RESPONSIBLE FOR SAFETY DURING CONSTRUCTION.
12. CONTRACTOR IS SOLELY RESPONSIBLE FOR SECURITY AND PROTECTION OF HIS WORK DURING CONSTRUCTION.

ENSURE RSF IS AROUND ALL DISTURBED AREA.

THIS SITE REQUIRES A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND A SMALL CONSTRUCTION SITE NOTICE TO BE POSTED ONSITE.

INSTALL STAGE 1 INLET PROTECTION BARRIER WHEN STORM SEWER IS INSTALLED. REMOVE STAGE 1 INLET PROTECTION BARRIER WHEN INLET IS COMPLETE. INSTALL STAGE 2 PROTECTION WHEN STAGE 1 INLET PROTECTION BARRIER IS REMOVED. STAGE 2 INLET PROTECTION BARRIER CONSISTS OF TWO FULL WRAPS OF DRAINAGE GEOTEXTILE WRAPPED FULLY AROUND GRATE.

SEE SHT C-2.2 FOR SWPPP DETAILS

LEGEND

	EXISTING GRAVEL DRIVE
	BUILDING
	BUILDING CANOPY
	REINFORCED SILT FENCE
	EXISTING CONTOUR
	CONSTRUCTION ACCESS
	EXISTING DOWNHILL STORM FLOW
	INLET PROTECTION BARRIER
	CONCRETE TRUCK WASHOUT PIT

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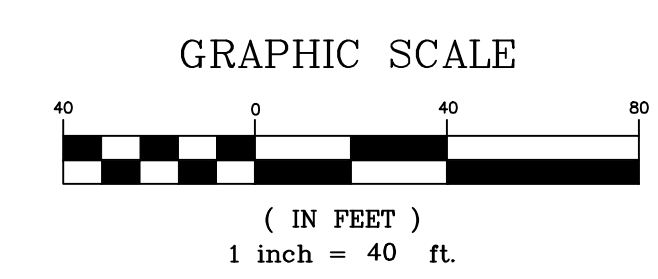
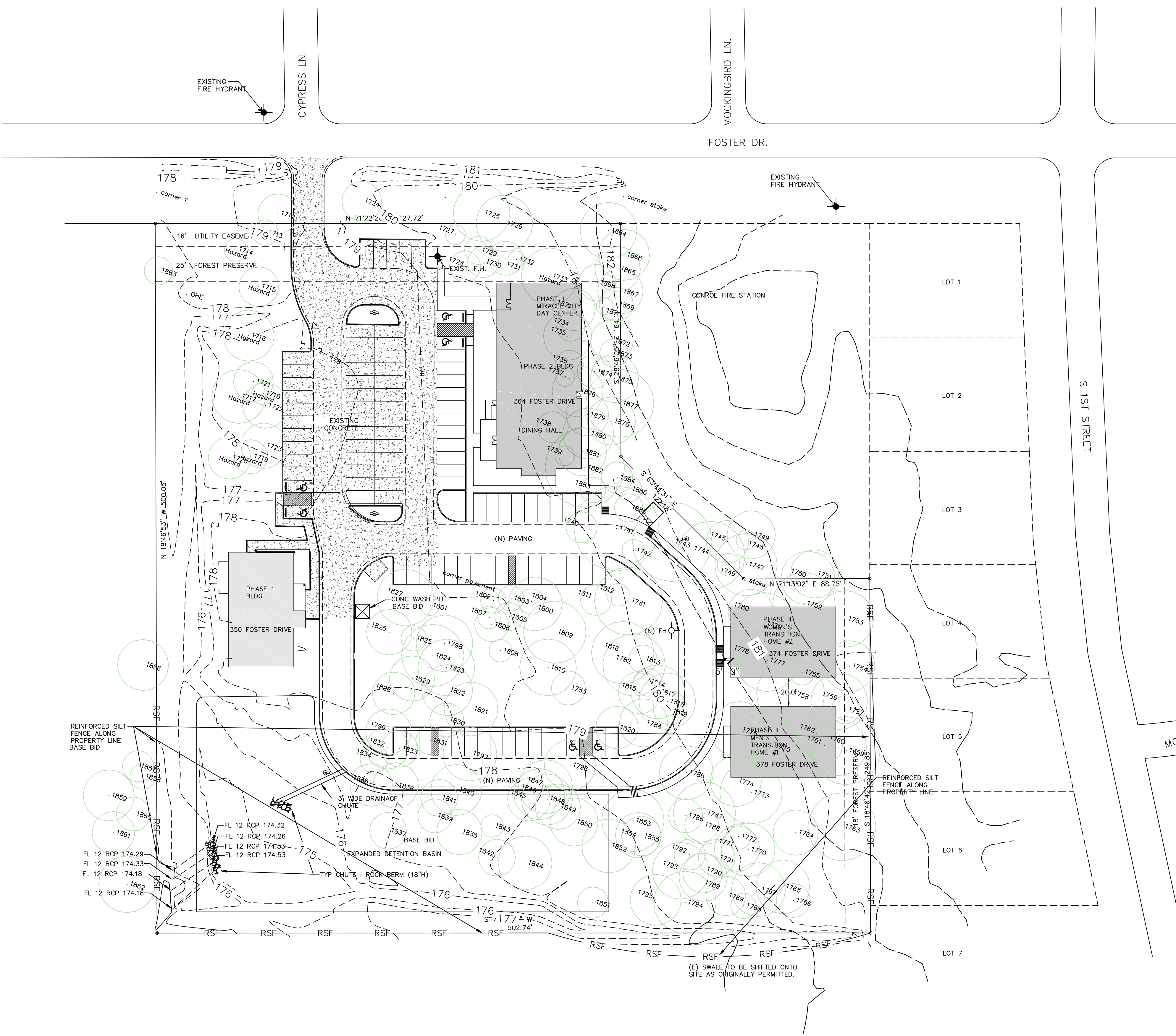
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CITY OF CONROE
Engineering Division

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Initial: _____ Date: _____

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STORM WATER POLLUTION PREVENTION PLAN

MIRACLE CITY

SITE PLANS-DAY CENTER & TRANSITION HOUSES

364, 374, 378 FOSTER DRIVE

CONROE, TEXAS 77301

ENGINEERING BY:
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TEXAS REGISTRATION NO. FOR ENGINEERING FIRM IS F-10574

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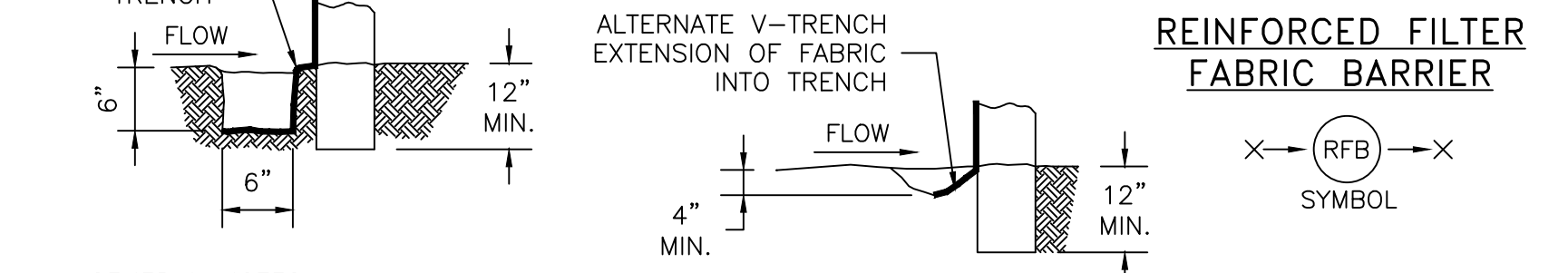
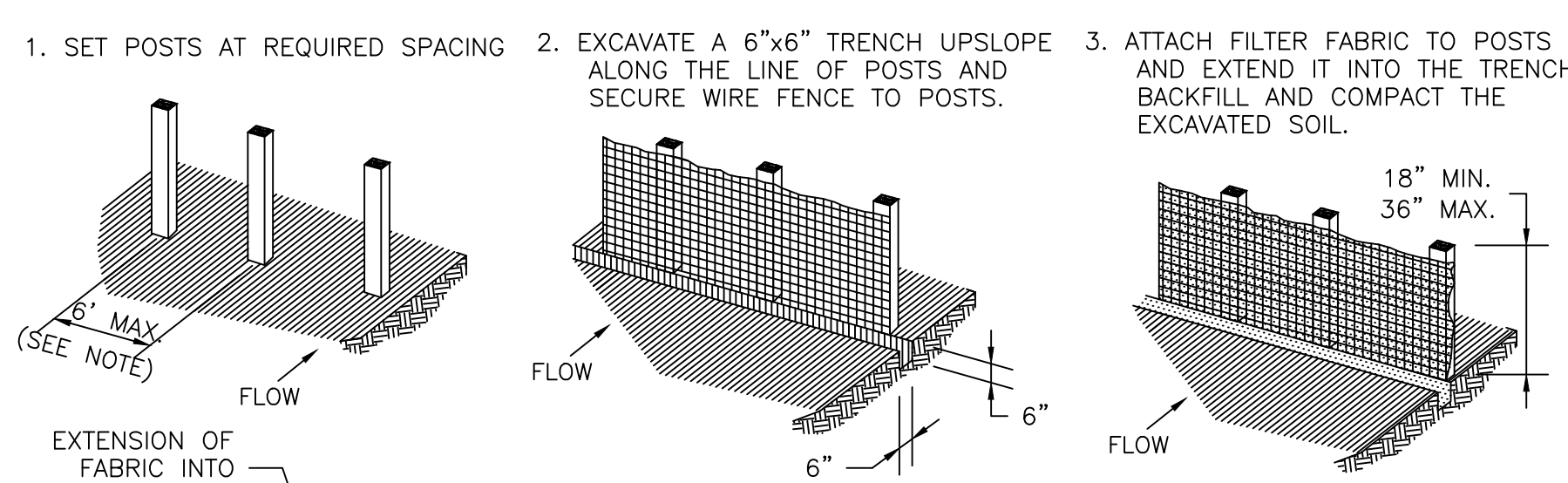
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<input type="checkbox"/>	For Final Approval
<input type="checkbox"/>	For Construction

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No.	Date	Revisions	App.
0	5/18/23	ISSUE FOR CONSTRUCTION	RAS
			RAS

STORM WATER POLLUTION PREVENTION DETAILS

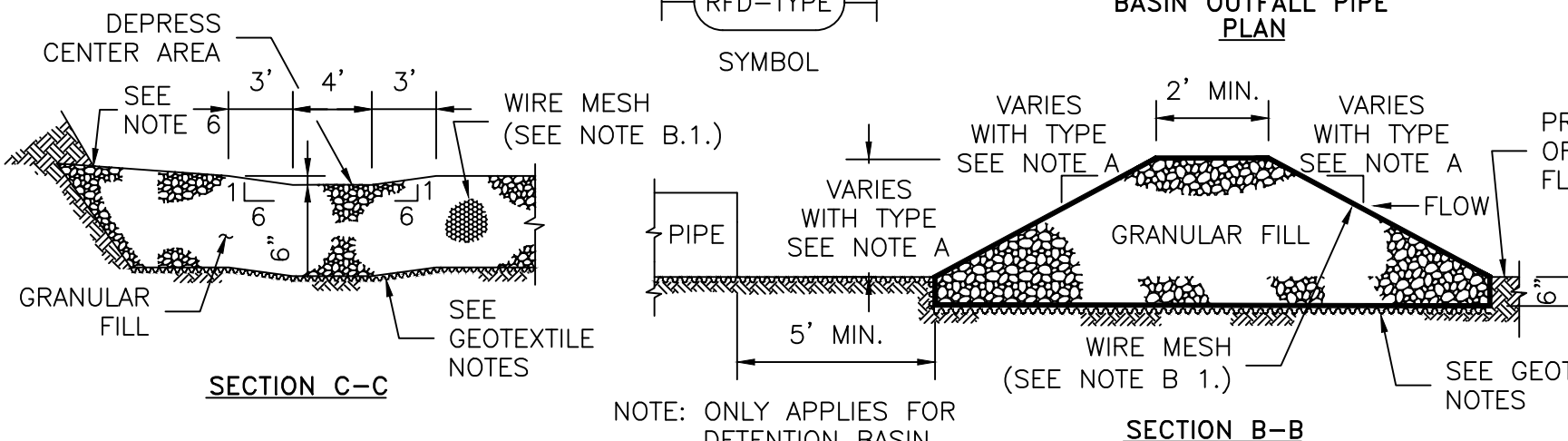
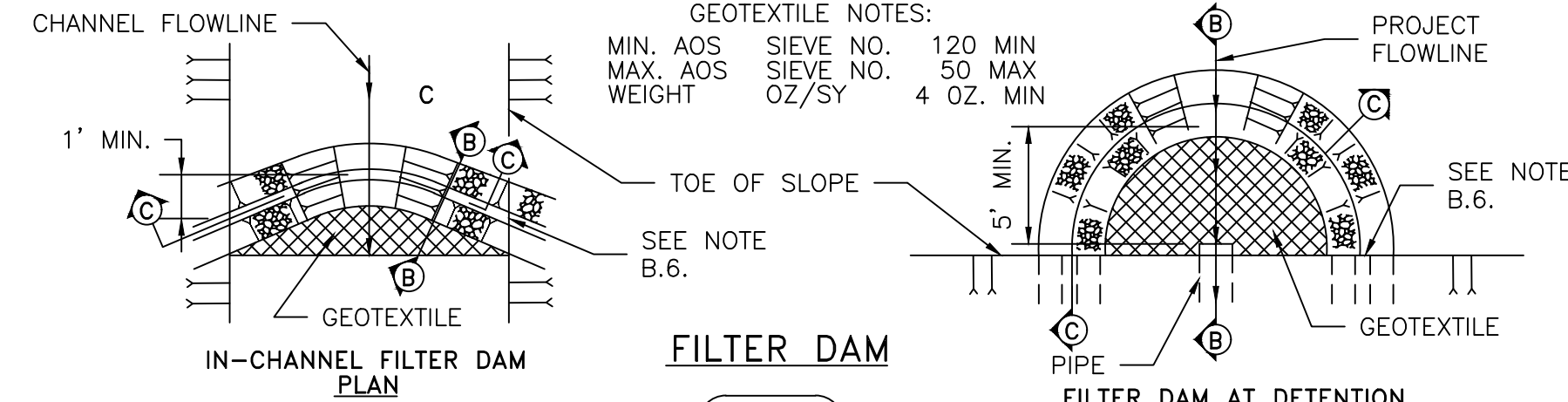
MIRACLE CITY SITE PLANS-DAY CENTER & TRANSITION HOUSES 364, 374, 378 FOSTER DRIVE CONROE, TEXAS 77301



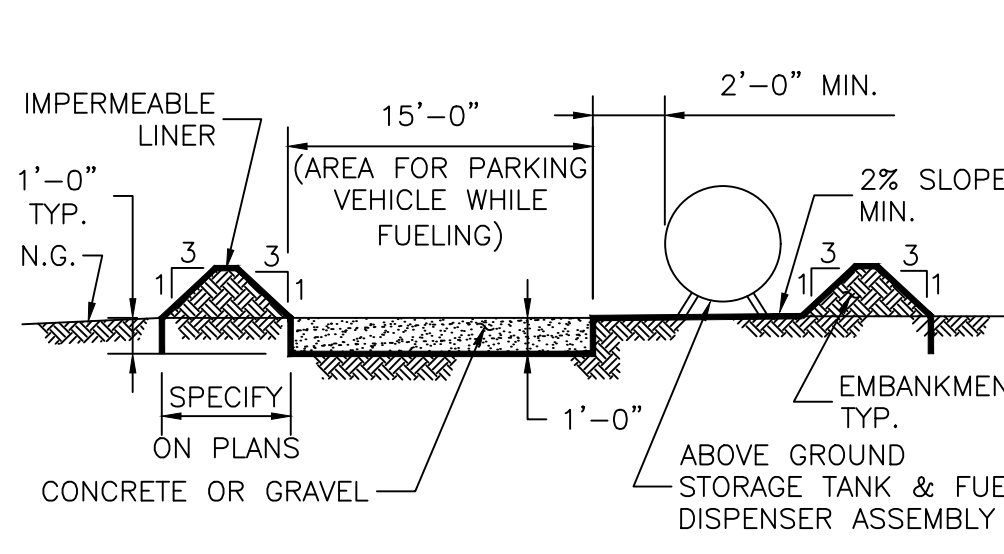
REINFORCED FILTER FABRIC BARRIER

GENERAL NOTES:

- SECURELY FASTEN MESH FENCING TO POSTS WITH STAPLES OR TIE WIRES.
- SECURELY FASTEN FILTER FABRIC TO MESH FENCING.
- WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER, OVERLAP 6 INCHES AT A POST, FOLD TOGETHER, AND ATTACH TO A POST.
- REMOVE SEDIMENT DEPOSITS WHEN SILT REACHES ONE-THIRD OF THE HEIGHT OF THE FENCE IN DEPTH.



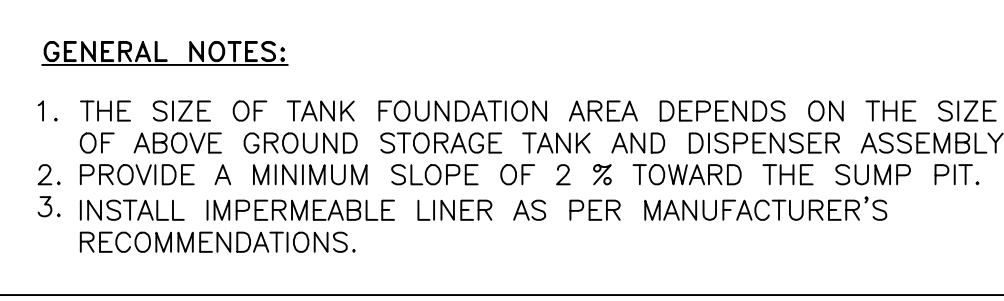
- A. TYPES OF FILTER DAMS**
- TYPE 1 (NON-REINFORCED)**
 - HEIGHT - 18-24 INCHES. MEASURE VERTICALLY FROM EXISTING GROUND TO TOP OF FILTER DAM.
 - TOP WIDTH - 2 FEET (MINIMUM)
 - SLOPES - 2:1 (MAXIMUM).
 - TYPE 2 (REINFORCED)**
 - HEIGHT - 18-36 INCHES. MEASURE VERTICALLY FROM EXISTING GROUND TO TOP OF FILTER DAM.
 - TOP WIDTH - 2 FEET (MINIMUM).
 - SLOPES - 2:1 (MAXIMUM).
 - TYPE 3 (REINFORCED)**
 - HEIGHT - 36-48 INCHES. MEASURE VERTICALLY FROM EXISTING GROUND TO TOP OF FILTER DAM.
 - TOP WIDTH - 2 FEET (MINIMUM).
 - SLOPES - 3:1 (MAXIMUM).
 - TYPE 4 (GABION)**
 - HEIGHT - 30 INCHES (MINIMUM). MEASURE VERTICALLY FROM EXISTING GROUND TO TOP OF FILTER DAM.
 - TOP WIDTH - 2 FEET (MINIMUM).
 - TYPE 5.** AS SHOWN ON THE PLANS.
- B. CONSTRUCT FILTER DAMS ACCORDING TO THE FOLLOWING CRITERIA UNLESS SHOWN OTHERWISE ON THE PLANS.**
- TYPE 2 AND 3 FILTER DAMS: SECURE WITH 20 GAUGE GALVANIZED WOVEN WIRE MESH WITH 1 INCH DIAMETER HEXAGONAL OPENINGS.
 - PLACE GRANULAR FILL ON THE WIRE MESH TO HEIGHT AND SLOPES SHOWN ON PLANS OR AS SPECIFIED BY THE ENGINEER.
 - 3-5 INCHES FOR ROCK FILTER DAM TYPES 1, 2 AND 4.
 - 4-8 INCHES FOR ROCK FILTER DAM TYPE REFER TO GRANULAR FILL IN SPECIFICATION SECTION No. 02378 RIPRAP AND GRANULAR FILL.
 - FOLD WIRE MESH AT UPSTREAM SIDE OVER GRANULAR FILL AND TIGHTLY SECURED TO ITSELF ON THE DOWNSTREAM SIDE USING WIRE TIES OR HOG RINGS.
 - IN STREAMS: SECURE OR STAKE MESH TO STREAM BED PRIOR TO AGGREGATE PLACEMENT.
 - SEE HOFOD SPECIFICATION SECTION NO. 02364-FILTER DAMS.
 - EMBED ONE FOOT MINIMUM INTO SLOPE AND RAISE ONE FOOT HIGHER THAN CENTER OF DEPRESSED AREA AT SLOPE.



ABOVE GROUND TEMP. VEHICLE & EQUIPMENT FUELING AREA WITH TANK

GENERAL NOTES:

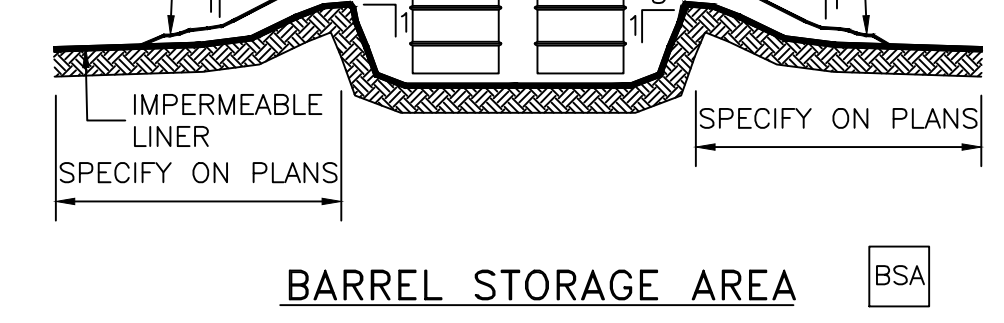
- THE SIZE OF TANK FOUNDATION AREA DEPENDS ON THE SIZE OF ABOVE GROUND STORAGE TANK AND DISPENSER ASSEMBLY.
- PROVIDE A MINIMUM SLOPE OF 2% TOWARD THE SUMP PIT.
- INSTALL IMPERMEABLE LINER AS PER MANUFACTURER'S RECOMMENDATIONS.



BARREL STORAGE AREA

GENERAL NOTES:

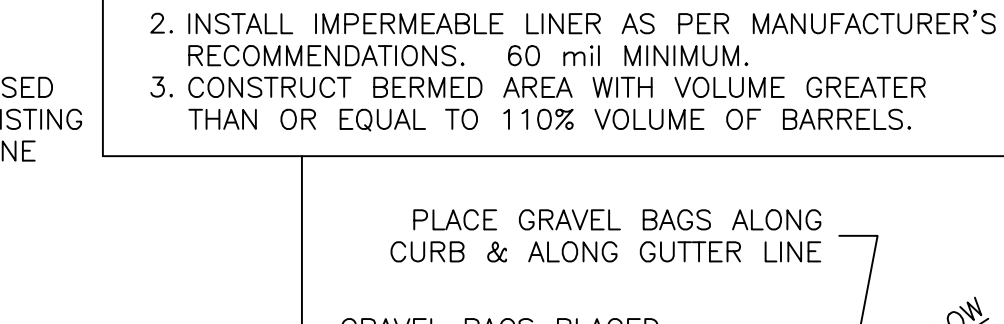
- ALTERNATIVELY, STORE BARRELS IN AN ENCLOSED BUILDING OR SHED.
- INSTALL IMPERMEABLE LINER AS PER MANUFACTURER'S RECOMMENDATIONS. 60 mil MINIMUM.
- CONSTRUCT BERMED AREA WITH VOLUME GREATER THAN OR EQUAL TO 110% VOLUME OF BARRELS.



INLET PROTECTION BARRIERS FOR STAGE I INLETS

GENERAL NOTES:

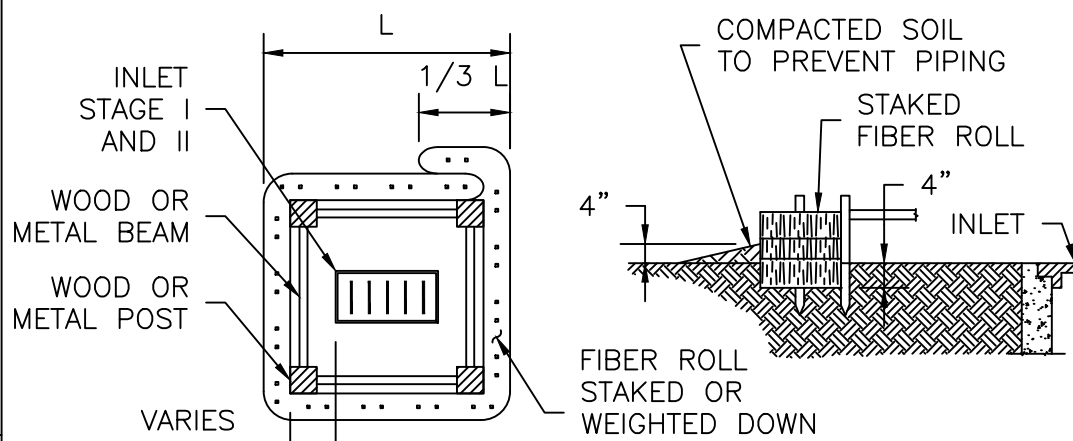
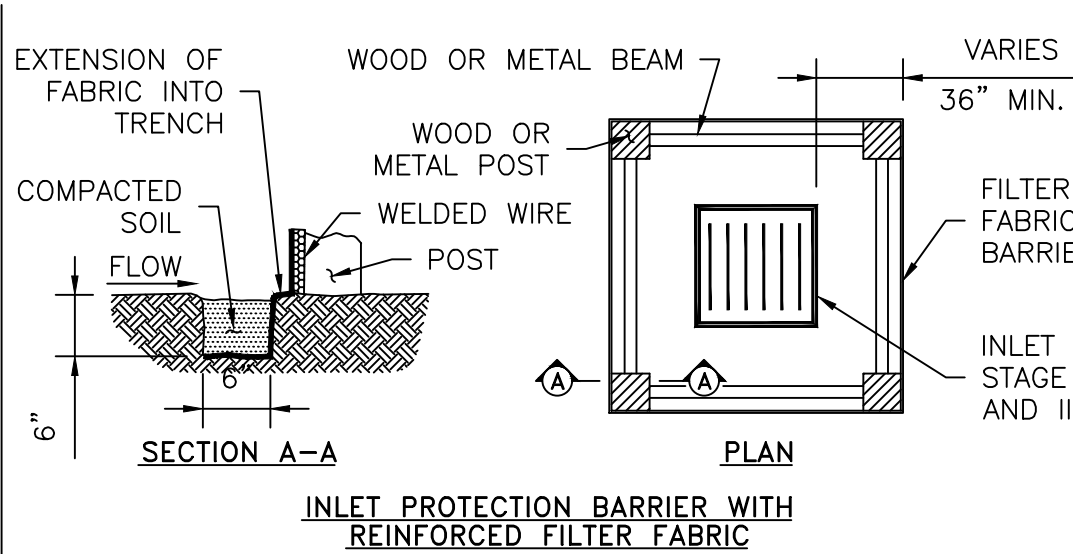
- POST A SIGN READING "CONCRETE WASHOUT PIT" NEXT TO THE PIT.
- VERBALLY INSTRUCT THE CONCRETE TRUCK DRIVERS WHERE THE PIT IS AND TO WASHOUT THEIR TRUCKS IN THE PIT AND NOWHERE ELSE.
- UPON THE CONCRETE SETTING UP (CURING, DRYING OUT), THE CONCRETE WASTE SHALL BE REMOVED FROM THE PROJECT SITE AND DISPOSED OF PROPERLY BY THE CONTRACTOR. AFTER REMOVAL OF THE CONCRETE WASTE, THE WASHOUT PIT SHALL BE FILLED WITH CLEAN FILL MATERIAL AND COMPACTED TO IN-SITU CONDITIONS, OR AS DIRECTED BY THE PROJECT SPECIFICATIONS.
- CONCRETE WASHOUT PITS SHALL NOT BE LOCATED DIRECTLY ADJACENT TO, NOR AT ANY TIME DRAIN INTO THE STORM SEWER SYSTEM OR ANY OTHER SWALE, DITCH, OR WATERWAY.
- CONSTRUCT ENTRY ROAD AND BOTTOM OF WASHOUT AREA TO SUPPORT EXPECTED LOADINGS FROM TRUCKS EQUIPMENT.



INLET PROTECTION BARRIERS FOR STAGE II INLETS

GENERAL NOTES:

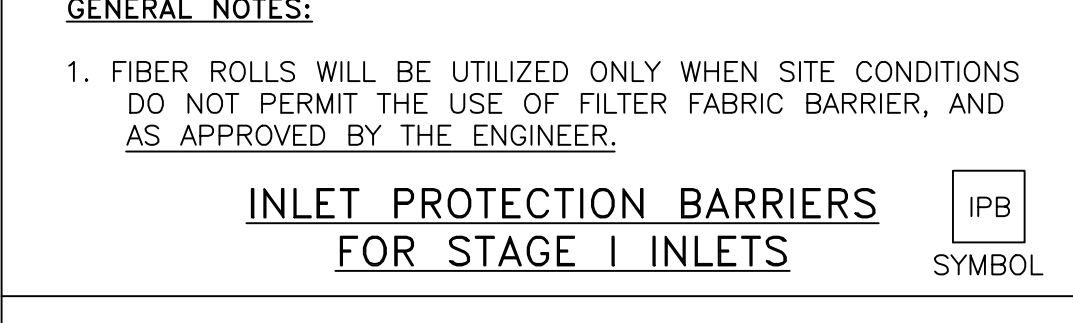
- REMOVE SEDIMENT DEPOSIT WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-THIRD THE HEIGHT OF THE BARRIER.
- GRAVEL BAGS SHALL NOT BLOCK THROAT OF INLET UNLESS DIRECTED BY ENGINEER.



INLET PROTECTION BARRIERS FOR STAGE I INLETS

GENERAL NOTES:

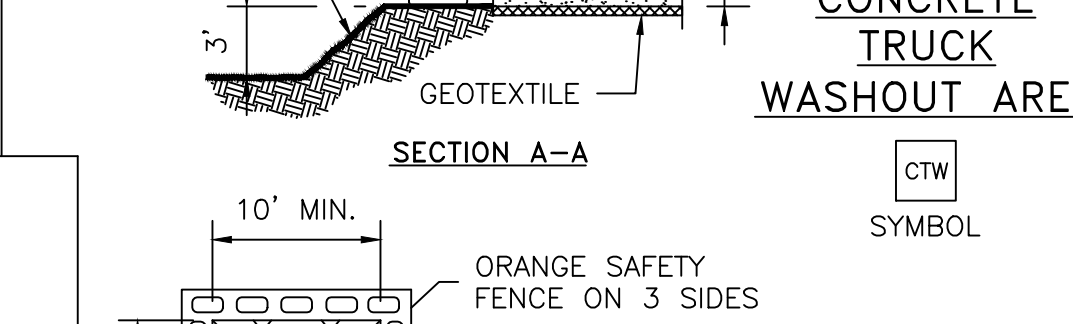
- FIBER ROLLS WILL BE UTILIZED ONLY WHEN SITE CONDITIONS DO NOT PERMIT THE USE OF FILTER FABRIC BARRIER, AND AS APPROVED BY THE ENGINEER.



CONCRETE TRUCK WASHOUT AREA

GENERAL NOTES:

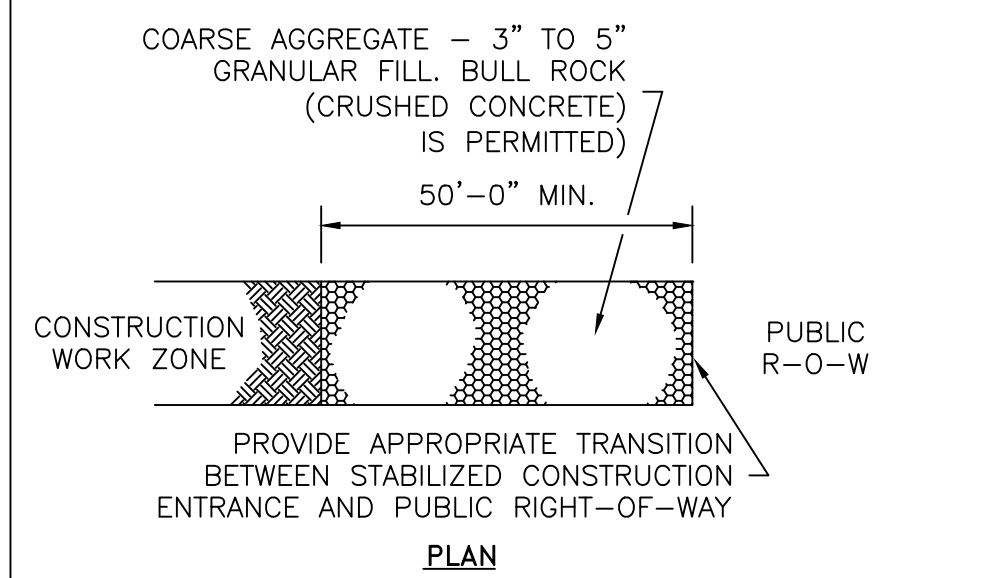
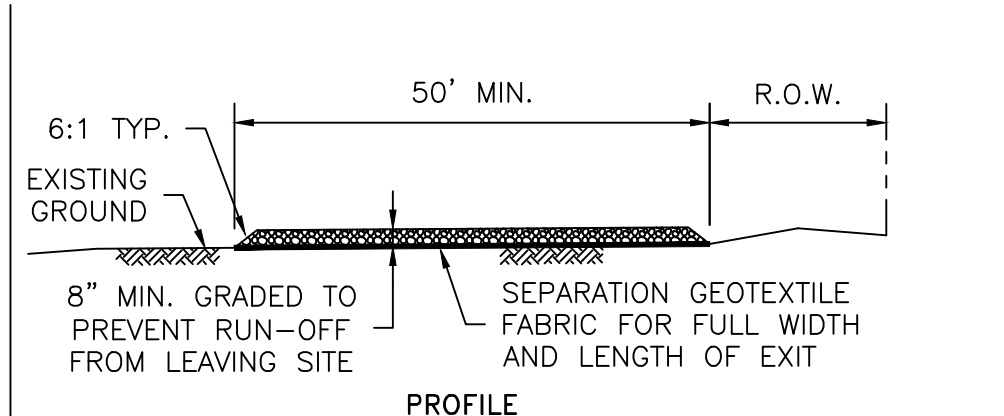
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- CONSTRUCT ENTRY ROAD AND BOTTOM OF WASHOUT AREA TO SUPPORT EXPECTED LOADINGS FROM TRUCKS EQUIPMENT.



CONCRETE WASHOUT PIT

GENERAL NOTES:

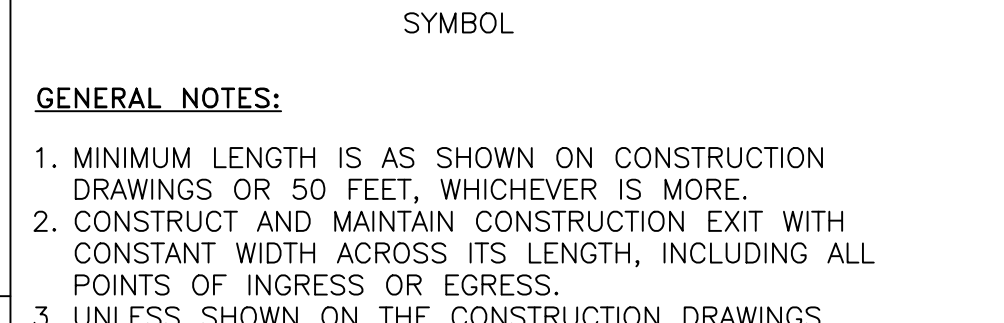
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STABILIZED CONSTRUCTION ACCESS

GENERAL NOTES:

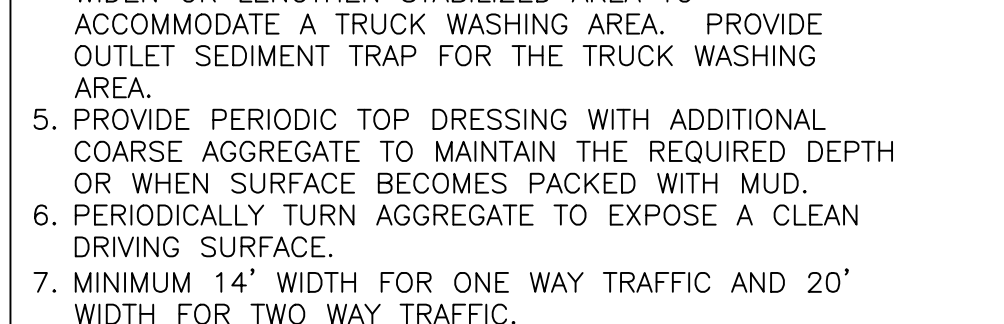
- MINIMUM LENGTH IS AS SHOWN ON CONSTRUCTION DRAWINGS OR 50 FEET, WHICHEVER IS MORE.
- CONSTRUCT AND MAINTAIN CONSTRUCTION EXIT WITH CONSTANT WIDTH ACROSS ITS LENGTH, INCLUDING ALL POINTS OF INGRESS OR EGRESS.
- UNLESS SHOWN ON THE CONSTRUCTION DRAWINGS, STABILIZATION FOR OTHER AREAS WILL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION EXIT.
- WHEN SHOWN ON THE CONSTRUCTION DRAWINGS, WIDEN OR LENGTHEN STABILIZED AREA TO ACCOMMODATE A TRUCK WASHING AREA. PROVIDE OUTLET SEDIMENT TRAP FOR THE TRUCK WASHING AREA.
- PROVIDE PERIODIC TOP DRESSING WITH ADDITIONAL COARSE AGGREGATE TO MAINTAIN THE REQUIRED DEPTH OR WHEN SURFACE BECOMES PACKED WITH MUD.
- PERIODICALLY TURN AGGREGATE TO EXPOSE A CLEAN DRIVING SURFACE.
- MINIMUM 14" WIDTH FOR ONE WAY TRAFFIC AND 20" WIDTH FOR TWO WAY TRAFFIC.



CONCRETE WASHOUT PIT

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QUEST ENGINEERING
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Conroe, Texas 77301
Phone: (713) 252-3729
rsaikowski@consolidated.net
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TEXAS REGISTRATION NO. FOR ENGINEERING FIRM IS F-10574



I, RON A. SAIKOWSKI, P.E., AUTHORIZED THE PLACEMENT OF THIS SEAL ON THIS DRAWING FOR THE PURPOSE OF ISSUING THIS DOCUMENT AS SPECIFIED BELOW

Not For Construction	
For Background Use Only	
Preliminary	
For Concept Approval	
Preliminary Bid Set	
For Preliminary Approval	
Check Set	
Permit	
For Final Approval	
For Construction	

NOTE:
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CITY OF CONROE
Engineering Division

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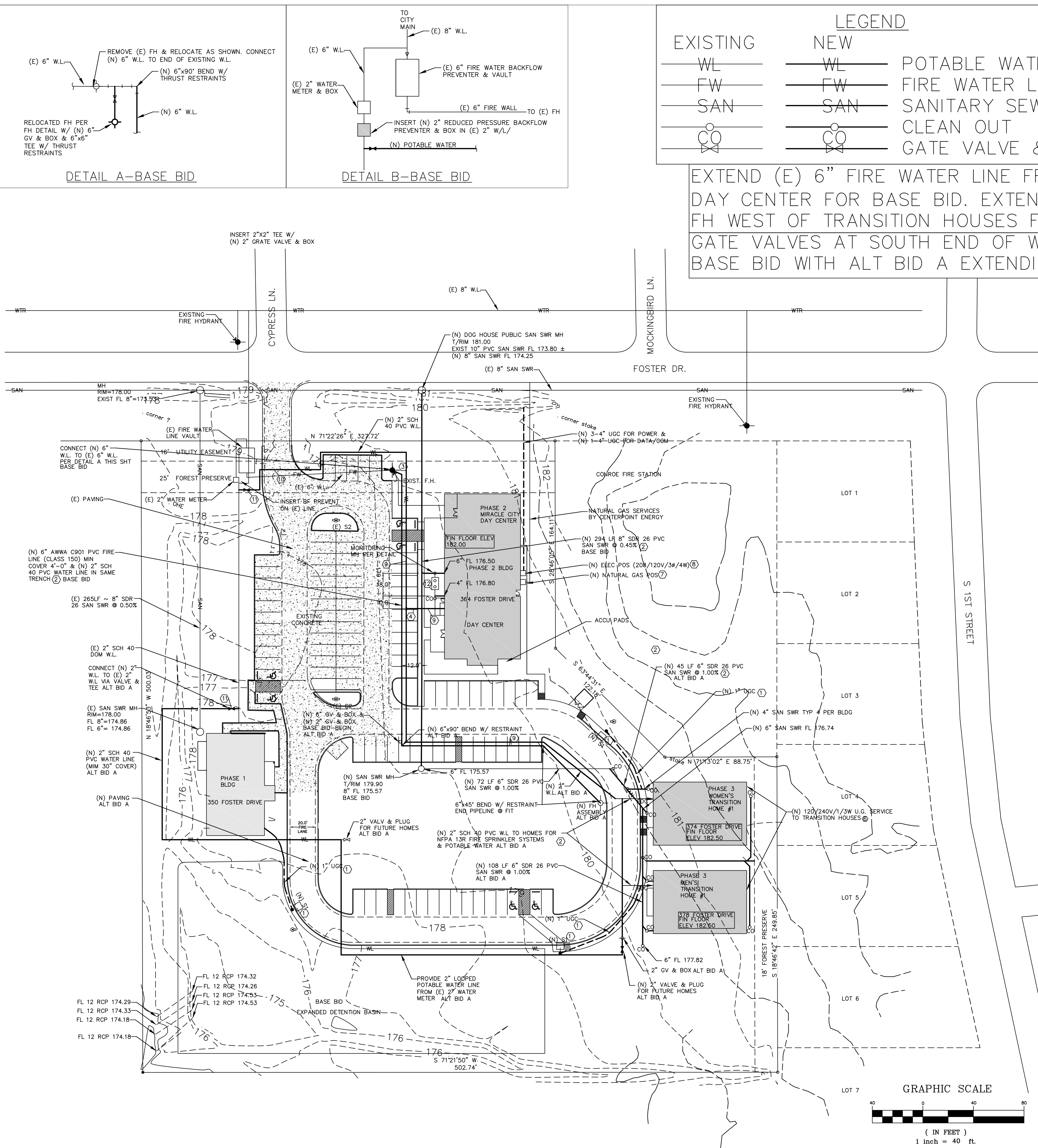
Initial: _____ Date: _____

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KEYED NOTES - SITE UTILITY PLAN	
MARK	DESCRIPTION
1	PROVIDE ONE-INCH SCHEDULE 40 PVC UNDERGROUND ELECTRICAL CONDUITS WITH MINIMUM 24-INCHES OF COVER FROM LIGHT POLE TO DESIGNATED STRUCTURE. SEE ELECTRICAL PLANS FOR LIGHT POLE DETAIL AND LIGHT FIXTURE SCHEDULE.
2	BED UTILITY LINES IN ACCORDANCE WITH DETAILS SHOWN ON THE UTILITY DETAIL PLANS AND BACKFILL ABOVE SUCH UTILITY LINE BEDDING WITH CEMENT-STABILIZED SAND UNDER ALL PAVING INCLUDING SIDEWALKS AND EXTENDING TO ONE FOOT BEYOND PAVING EDGE. BACKFILL IN GRASSED AREAS WITH SOIL BACKFILL IN EIGHT-INCH LOOSE LIFTS AND COMPACT TO AT LEAST 95% STANDARD PROCTOR DENSITY IN ACCORDANCE WITH SOILS REPORT.
3	TURN OFF EXISTING FIRE WATER AT VAULT TO REMOVE EXISTING FIRE HYDRANT TO INSERT NEW 6" X 90-DEGREE BEND WITH THRUST RESTRAINT AND A 6" X 6" TEE FO EXISTING HYDRANT TO BE LOCATED WEST OF NEW 6" FIRE LINE WITHOUT A VALVE. INSTALL THE RELOCATED FIRE HYDRANT IN ACCORDANCE WITH FIRE HYDRANT DETAILS WITH THRUST RESTRAINTS AND DRAIN EXCEPT NO SHUT-OFF VALVE IS REQUIRED. SHUT-OFF VALVE FOR THE FIRE SYSTEM IS IN THE FIRE LINE VAULT ON THE WEST SIDE OF THE EXISTING ENTRY DRIVE. SCHEDULE WORK SO FIRE LINE SYSTEM HAS MINIMUM DOWN TIME. COORDINATE SUCH WORK WITH CONROE FIRE DEPARTMENT. SEE DETAIL A THIS SHEET.
4	ROUTE 4-INCH FIRE WATER LINE CONSISTING OF AWWA C901 - CLASS 150 TO RISER ROOM IN DAY CENTER FOR NFPA 13R FIRE SPRINKLER SYSTEM. PRIOR TO CONSTRUCTION, CONFIRM LINE SIZE WITH FIRE CONTRACTOR.
5	ROUTE 2-INCH FIRE WATER LINE CONSISTING OF SCHEDULE 40 PVC TO EACH TRANSITION HOUSE FOR NFPA 13R FIRE SPRINKLER SYSTEM TO SERVE EACH HOUSE. COORDINATE LOCATION AND SIZE OF EACH TRANSITION HOUSE FIRE LINE WITH FIRE SPRINKLER CONTRACTOR. PROVIDE FIRE DEPARTMENT CONNECTION AT EACH TRANSITION HOUSE. FIRE SPRINKLER CONNECTION PER IFC.
6	COORDINATE WITH ENTERGY FOR LOCATION OF 120/240 VOLT SINGLE PHASE POWER TO EACH TRANSITION HOUSE.
7	CONTRACTOR SHALL COORDINATE WITH CENTERPOINT ENERGY TO BRING NATURAL GAS TO BUILDING. COSTS FOR SUCH GAS LINE EXTENSION SHALL BE PAID BY OWNER.
8	CONTRACTOR SHALL COORDINATE WITH ENTERGY TO BRING POWER TO THE DAY CENTER VIA UNDERGROUND LINES. CONTRACTOR SHALL INSTALL SUCH UNDERGROUND/POLE STAND-OFF CONDUITS WITH PUL STRINGS INCLUDING ONE SPARE CONDUIT IN ACCORDANCE WITH ENTERGY REQUIREMENTS. ENTERGY TO PROVIDE CONDUCTORS IN CONDUITS FROM TRANSFORMER TO JUNCTION BOX ON BUILDING.
9	INSTALL TWO INCH WATER LINE IN SAME TRENCH AS SIX-INCH FIRE WATER LINE. THERE SHALL BE NO INTERCONNECTIONS BETWEEN SUCH LINES.
10	CONTRACTOR SHALL LOCATE EXISTING UNDERDRIVE AND EXTEND TWO-INCH SCHEDULE 40 PVC WATER LINE IN CASING UNDER DRIVE.
11	PROVIDE A TWO-INCH TAP WITH TWO-INCH GATE VALVE TO CONNECT TO EXISTING TWO-INCH WATER LINE. PROVIDE METER BOX FLUSH WITH GROUND FOR SUCH GATE VALVE CONNECTION. PROVIDE SUCH METER BOX PER CITY OF CONROE STANDARDS FOR ALL SUCH NEW GATE VALVES ON POTABLE WATER LINE.
12	INSTALL 1, 500 GALLON GREASE TRAP IN ACCORDANCE WITH CITY AND MANUFACTURER'S REQUIREMENTS. PROVIDE MINIMUM SIX-INCH CEMENT-STABILIZED SAND BOTTOM BEDDING AND TWO FEET SIDE BEDDING ALONG ALL SIDES AND ABOVE GREASE TRAP TOP TO SIX-INCH BELOW FINISH GRADE. ADJUST MANHOLE ACCESS TO GRADE. CONNECT FOUR-INCH GREASE WASTE TO GREASE TRAP AND FOUR INCH OUTLET TO MONITORING MANHOLE. PROVIDE TWO-INCH VENT TO BUILDING VENT SYSTEM BELOW GROUND.

PRESERVE TREES IN STRICT ACCORDANCE WITH CLEARING PERMIT.

BIDDERS SHALL BREAK OUT THEIR BIDS FOR THE SITE PLANS FOR THE BASE BID AND FOR ALTERNATE BID 'A' AND DO NOT INCLUDE TRANSITION HOUSE BUILDINGS IN ANY OF THE BIDS. ALTERNATE BID 'A' WILL INCLUDE SITE PLAN PROVISIONS ONLY FOR THE TRANSITION HOUSES THE TRANSITION HOUSE BUILDINGS WILL BE BY OTHERS IN THE FUTURE AND SHALL NOT BE INCLUDED IN ANY BIDS.



LEGEND	
EXISTING WL	NEW WL
EXISTING FW	NEW FW
EXISTING SAN	NEW SAN
EXISTING GVB	NEW GVB
EXISTING GVB	NEW GVB

POTABLE WATER LINE
FIRE WATER LINE
SANITARY SEWER
CLEAN OUT
GATE VALVE & BOX

EXTEND (E) 6" FIRE WATER LINE FROM (E) FH TO DAY CENTER FOR BASE BID. EXTEND 6" W.L. TO (N) FH WEST OF TRANSITION HOUSES FOR ALT BID A GATE VALVES AT SOUTH END OF WATER LINES END BASE BID WITH ALT BID A EXTENDING THEREAFTER.

SEE SHT C-3.2 FOR SITE UTILITIES

No.	Date	Revisions	App.
0	5/18/23	ISSUE FOR CONSTRUCTION	RAS
1	10/12/23	ADDRESS CITY COMMENTS	RAS

SITE UTILITY PLAN

MIRACLE CITY

SITE PLANS-DAY CENTER & TRANSITION HOUSES

364, 374, 378 FOSTER DRIVE

CONROE, TEXAS 77301

TOPOGRAPHIC INFORMATION SHOWN ON THESE DRAWINGS IS BASED ON A TOPOGRAPHIC SURVEY PREPARED BY MOON & ASSOCIATES UPDATED JANUARY 17, 2023.

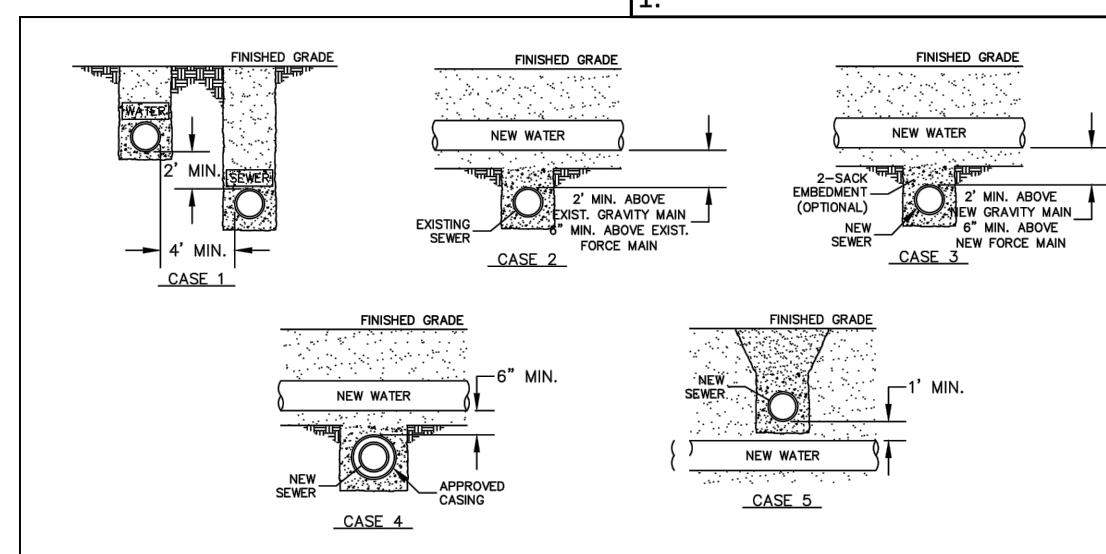
THE SUBJECT SITE IS LOCATED IN ZONE X AS DETERMINED FROM FEMA FLOOD INSURANCED RATE MAP 48339 C 0390 G DATED AUGUST 18, 2014.

BEARINGS ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, TEXAS CENTRAL ZONE (TX-83)(2002 ADJUSTMENT) (FIPS 4203) PER BOUNDARY AND TOPOGRAPHIC SURVEY.

ELEVATIONS ARE BASED ON GPS OBSERVATION AND ADJUSTED TO NVAD'88, GEOID 128 DATUM AS PROVIDED BY NGS UPDATED ON SEPTEMBER 11, 2012 PER THE TOPOGRAPHIC SURVEY BY MOON & ASSOCIATES.

BENCHMARK IS CONTROL #1 BEING A 3-INCH BRASS DISK SET IN CONCRETE COLUMN NEAR THE NORTHWEST CORNER OF THE SUBJECT SITE ALONG FOSTER DRIVE, BEING ELEVATION 178.10 PER THE TOPOGRAPHIC SURVEY BY MOON & ASSOCIATES.

SOILS WORK SHALL BE DONE IN ACCORDANCE WITH SOILS REPORTS PROVIDED BY LONE STAR GEOTECHNICAL & TESTING LABORATORY DATED OCTOBER 30, 2020 BEING REPORT NO. 20100008-1.



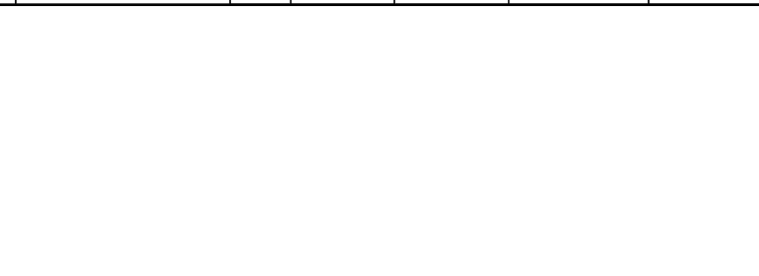
GENERAL NOTES:

- NEW OR EXISTING POTABLE WATER AND SANITARY SEWER MAINS.
- SEPARATION DISTANCES SHALL FOLLOW TEXAS COMMISSION ON ENVIRONMENTAL QUALITY STANDARD REQUIREMENTS.

CONSTRUCTION KEY NOTES:

- UNDER EXISTING DRIVE OR FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED. SEPARATION SHALL BE DETERMINED ACCORDING TO THE FOLLOWING CONDITIONS:
 - CASE 1: GRAVITY SANITARY SEWER MAIN OR FORCE MAIN PARALLEL TO POTABLE WATER MAIN (PER TCEQ 5206.440(A)(1)(2)).
 - LOCATION: WATER ABOVE SEWER OR FORCE MAIN.
 - SEWER MATERIALS: SCHEDULE 40 GRAVITY SANITARY SEWER OR 8" SCH 40 FORCE MAIN TO BE USED IF NOT LEAKING IF LEAKAGE MUST BE REPAIRED TO 150 PSI OR 100 PSI (SEE GRAVITY MAIN OR FORCE MAIN REQUIREMENTS PER CASE 3 REQUIREMENTS).
 - SEPARATE TRENCHES SHALL BE USED.
- NEW POTABLE WATER MAIN CROSSING EXISTING GRAVITY SANITARY SEWER MAIN OR EXISTING FORCE MAIN (PER TCEQ 5206.440(A)(1)(2)).
- LOCATION: WATER ABOVE SEWER OR FORCE MAIN.
- SEWER MATERIALS: SCHEDULE 40 GRAVITY SANITARY SEWER OR 8" SCH 40 FORCE MAIN TO BE USED IF NOT LEAKING IF LEAKAGE MUST BE REPAIRED TO 150 PSI OR 100 PSI (SEE GRAVITY MAIN OR FORCE MAIN REQUIREMENTS PER CASE 3 REQUIREMENTS).
- CENTER ONE SEGMENT OF WATER PIPE OVER SEWER MAIN OR FORCE MAIN.
- MINIMUM PIPE SEGMENT LENGTH FOR WATER PIPE SHALL BE 18 FEET LONG.

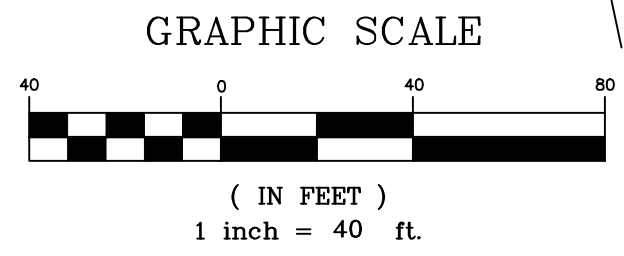
DEPARTMENT OF ENGINEERING & MAPPING/ENGINEERING DIVISION CITY OF HUNTSVILLE, TEXAS	CITY OF HUNTSVILLE STANDARD DETAILS SEPARATION DISTANCE SANITARY SEWER AND POTABLE WATER
NAME: SEPARATION DISTANCE CATEGORY: WATER DRAWN DATE: 06/08/2018 DRAWN BY: DAC SCALE: N.T.S. APPROVED BY: MMC	REVISIONS: REV. 0 ISSUER: MAM DATE: 07/31/2018 APPROVER: [Signature] SHEET 1 OF 1 W-61



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Initial: _____ Date: 3/15/24

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Conroe, Texas 77301
Phone: (713) 252-3729
rsaikowski@consolidated.net
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TEXAS REGISTRATION NO. FOR ENGINEERING FIRM IS F-10574

I, RON A. SAIKOWSKI, P.E., AUTHORIZED THE PLACEMENT OF THIS SEAL ON THIS DRAWING FOR THE PURPOSE OF ISSUING THIS DOCUMENT AS SPECIFIED BELOW

Not For Construction
For Background Use Only
Preliminary
For Concept Approval
Preliminary Bid Set
For Preliminary Approval
Check Set
Permit
For Final Approval
For Construction

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SHEET NO.
C-3.1

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- ### FIRE LANE NOTES
- ALL FIRE LANES SHALL BE AT LEAST 20-FOOT WIDE AND MARKED WITH PAVING MARKINGS AND/OR SIGNAGE ON BOTH SIDES OF FIRE LANES IN ACCORDANCE WITH DETAILS.
 - ALL GATES SHALL BE AT LEAST 20-FOOT WIDTH AS TO CLEARANCE AND HAVE KNOX BOXES.
 - PROVIDE A MINIMUM WIDTH OF 26-FOOT FOR FIRE LANES ADJACENT TO FIRE HYDRANTS.
 - PROVIDE MINIMUM VERTICAL CLEARANCE OF 13'-6" ALONG ALL SECTIONS OF FIRE LANES.
 - FIRE LANES SHALL NOT EXCEED 8% IN GRADE ALONG ALL SECTIONS OF FIRE LANES.
 - FOR GROSS AREA OF 62,000 SQUARE FEET OF BUILDINGS WITHIN THE SITE, PROVIDE AT LEAST TWO POINTS OF ENTRY TO SITE FROM PUBLIC ROADS.
 - MINIMUM INSIDE TURNING RADIUS SHALL BE AT LEAST 28-FOOT IN RADIUS WITH OUTSIDE TURNING RADIUS BEING AT LEAST 48-FOOT IN RADIUS.

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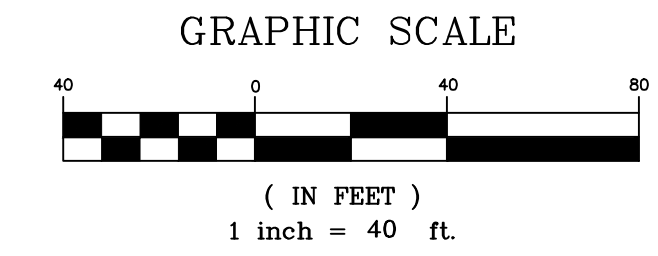
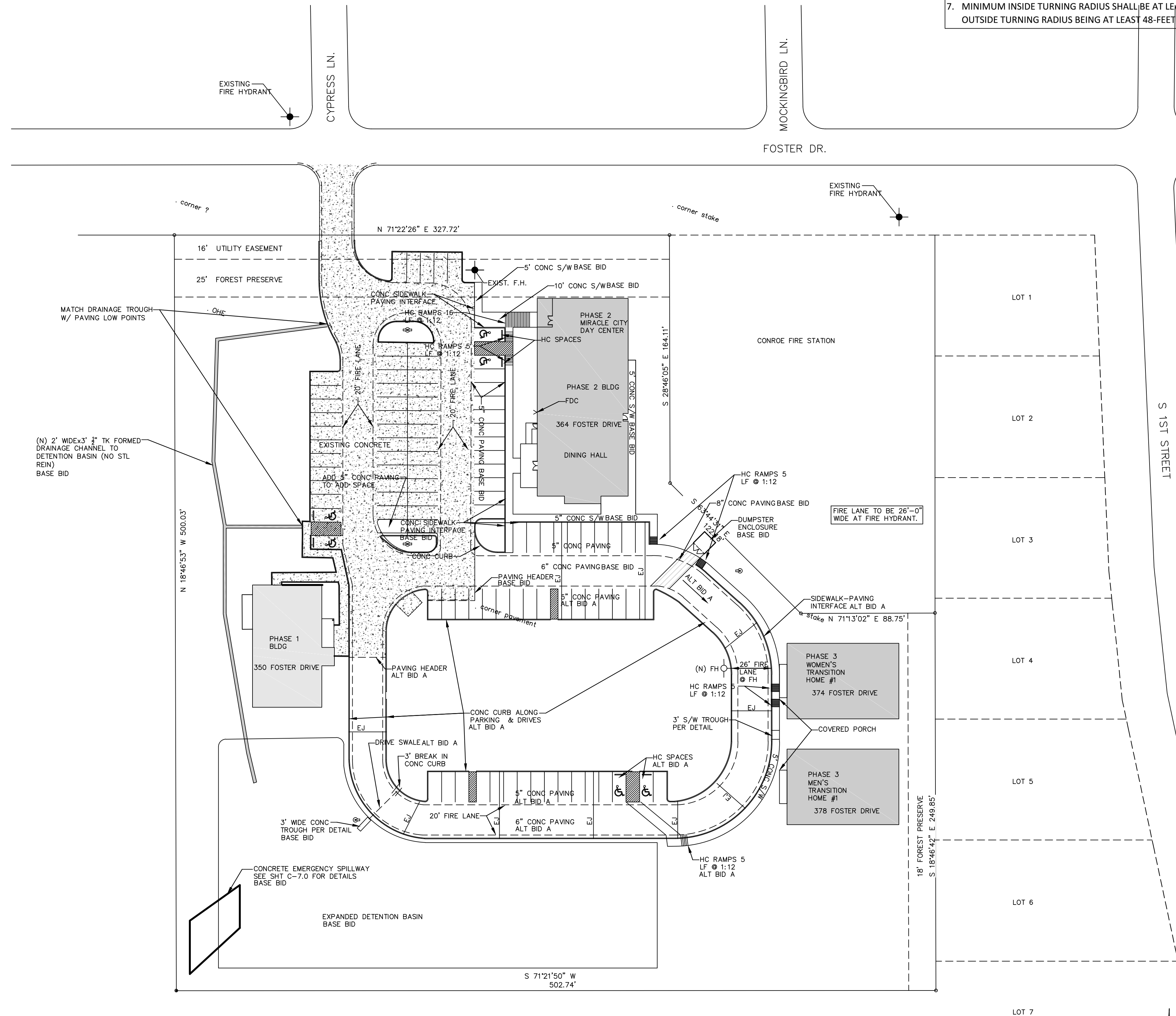
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No.	Date	Revisions	App.
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1	10/12/23	ADDRESS CITY COMMENTS	RAS

SITE PAVING PLAN

MIRACLE CITY MIRACLE CITY CENTER & TRANSITION HOUSES

364, 374, 378 FOSTER DRIVE CONROE, TEXAS 77301



CITY OF CONROE
Engineering Division

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TEXAS REGISTRATION NO. FOR ENGINEERING FIRM IS F-10574



I, RON A. SAIKOWSKI, P.E., AUTHORIZED THE PLACEMENT OF THIS SEAL ON THIS DRAWING FOR THE PURPOSE OF ISSUING THIS DOCUMENT AS SPECIFIED BELOW

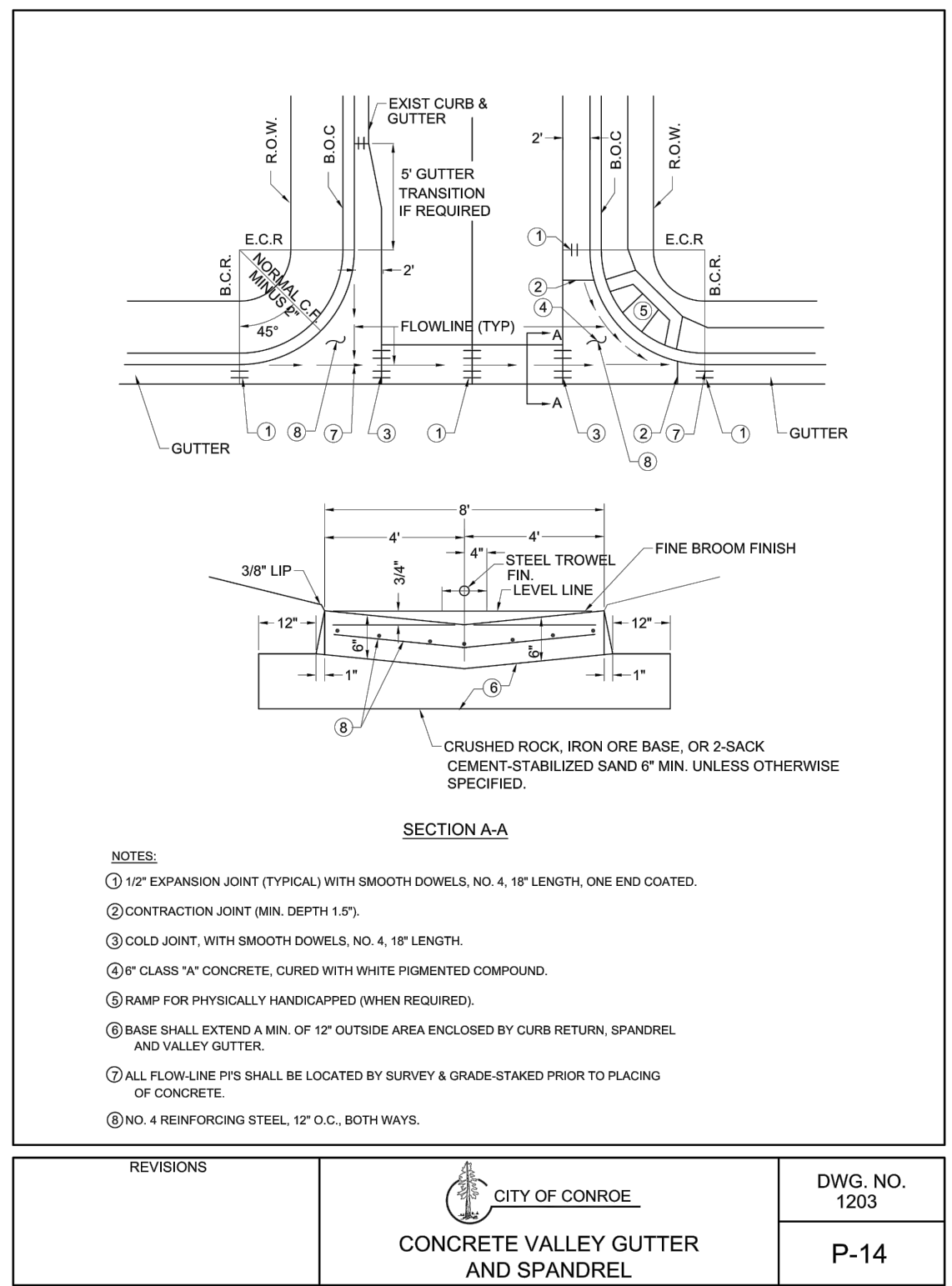
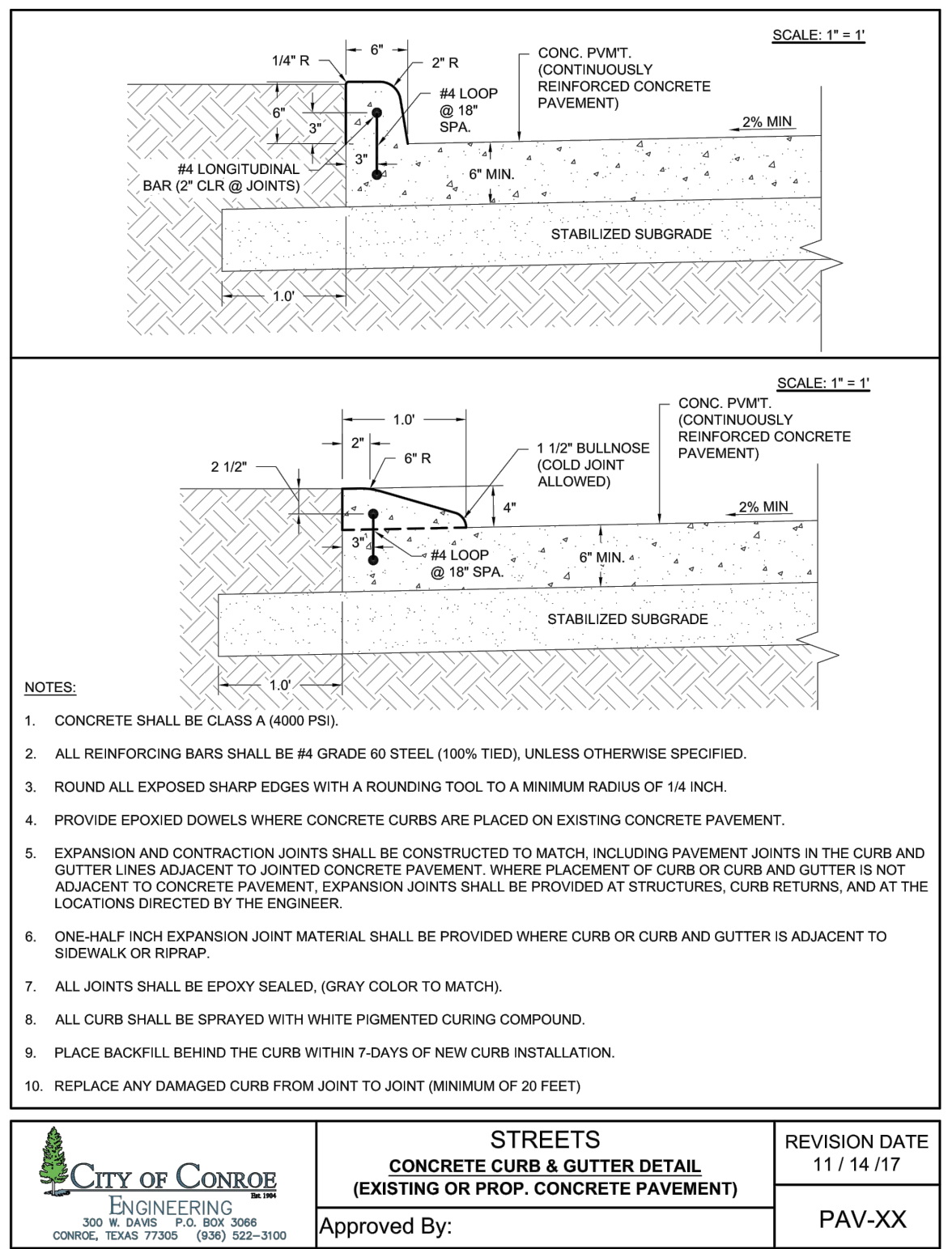
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<input type="checkbox"/>	For Concept Approval
<input type="checkbox"/>	Preliminary Bid Set
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<input type="checkbox"/>	Check Set
<input checked="" type="checkbox"/>	Permit
<input type="checkbox"/>	For Final Approval
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NOTE:
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SHEET NO.
C-4.1

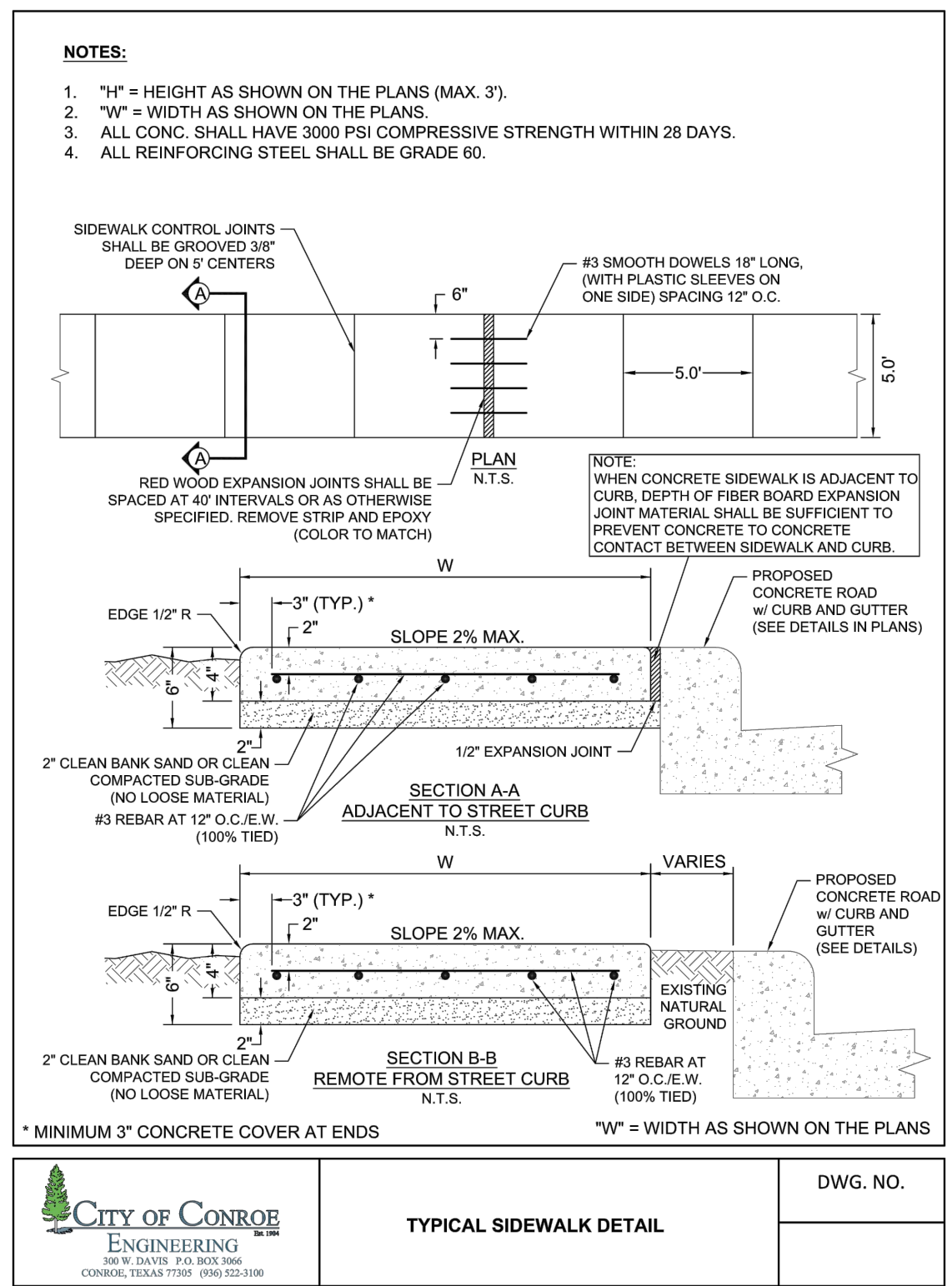
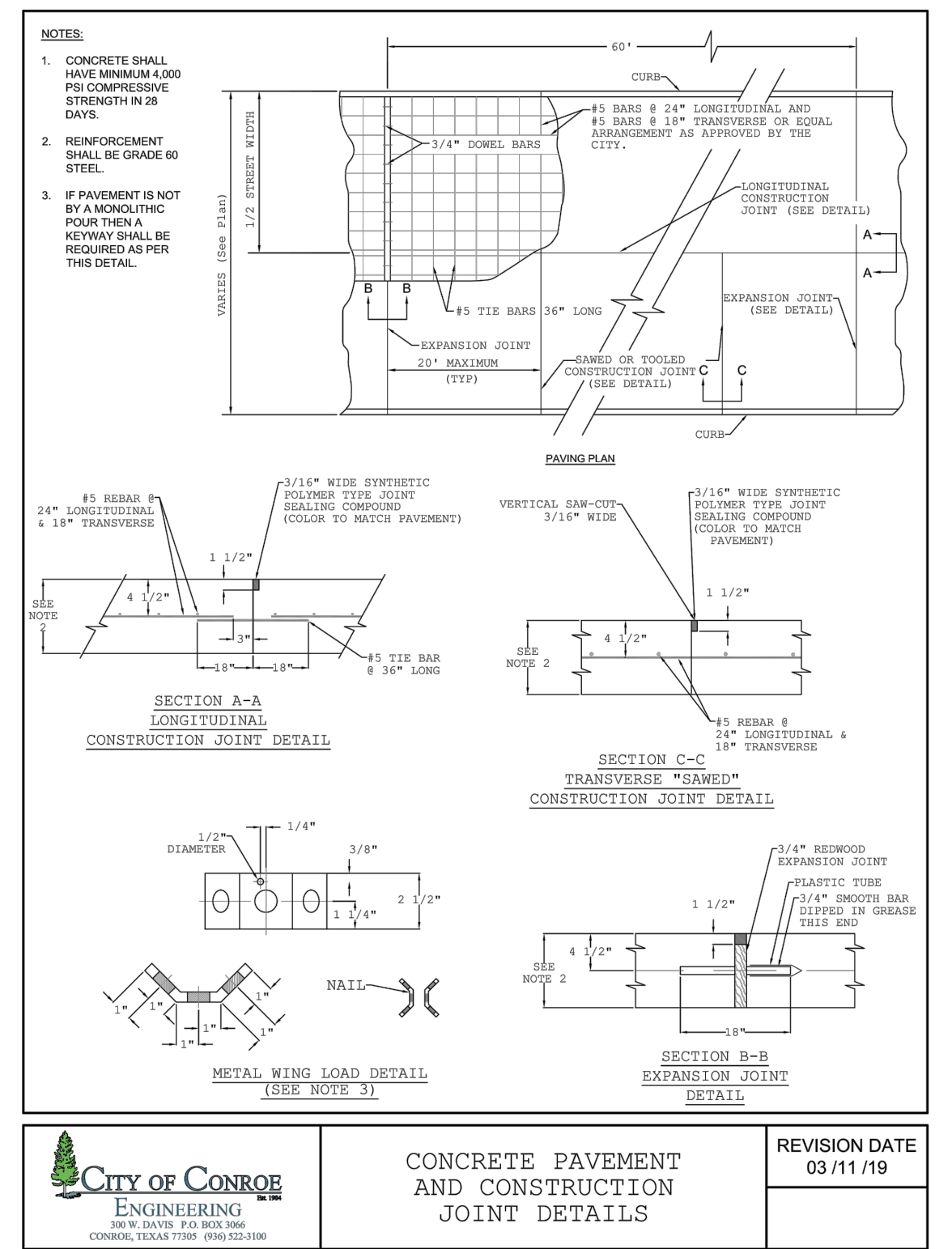
No.	Date	Revisions	App.
0	5/18/23	ISSUE FOR CONSTRUCTION	RAS
1	10/12/23	ADDRESS CITY COMMENTS	RAS

PAVING DETAILS
MIRACLE CITY
SITE PLANS-DAY CENTER & TRANSITION HOUSES
364, 374, 378 FOSTER DRIVE
CONROE, TEXAS 77301



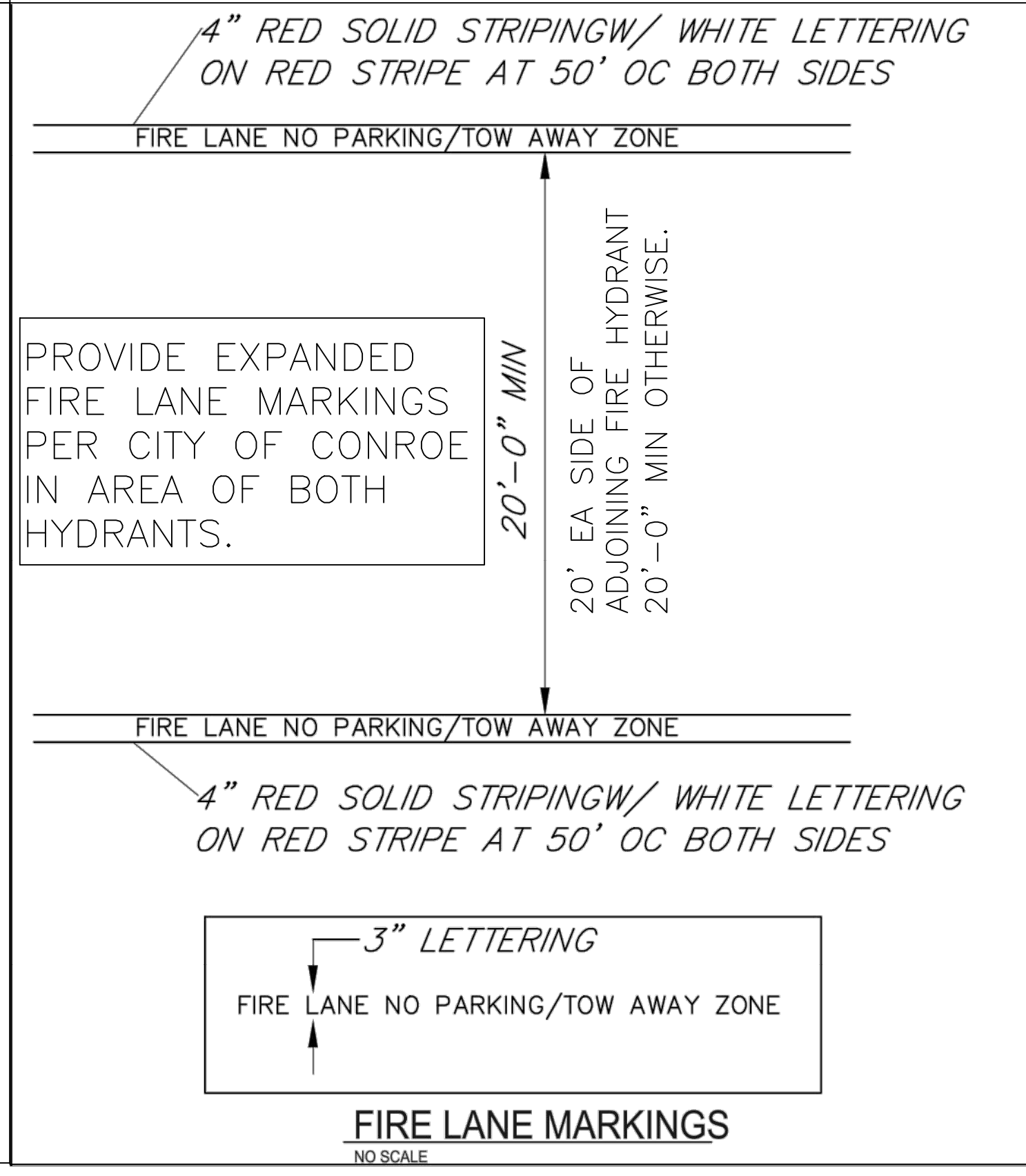
	STREETS CONCRETE CURB & GUTTER DETAIL (EXISTING OR PROP. CONCRETE PAVEMENT)	REVISION DATE 11 / 14 / 17
	Approved By: _____	PAV-XX

REVISIONS		DWG. NO. 1203
		CONCRETE VALLEY GUTTER AND SPANDREL



	CONCRETE PAVEMENT AND CONSTRUCTION JOINT DETAILS	REVISION DATE 03 / 11 / 19

	TYPICAL SIDEWALK DETAIL	DWG. NO.



CITY OF CONROE
 Engineering Division

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Initial: _____ Date: _____

© 2015

ENGINEERING BY:
QUEST ENGINEERING
 304 North Main Street #1
 Conroe, Texas 77301
 Phone: (713) 252-3729
 rsaikowski@consolidated.net
 © Ronald A Saikowski PE LEED AP 2024
 TEXAS REGISTRATION NO. FOR ENGINEERING FIRM IS F-10574



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BIDDERS SHALL BREAK OUT THEIR BIDS FOR THE SITE PLANS FOR THE BASE BID AND FOR ALTERNATE BID 'A' AND DO NOT INCLUDE TRANSITION HOUSE BUILDINGS IN ANY OF THE BIDS. ALTERNATE BID 'A' WILL INCLUDE SITE PLAN PROVISIONS ONLY FOR THE TRANSITION HOUSES THE TRANSITION HOUSE BUILDINGS WILL BE BY OTHERS IN THE FUTURE AND SHALL NOT BE INCLUDED IN ANY BIDS.

LEGEND	
	48.5' EXISTING CONTOUR
	PROPOSED CONTOUR
	EXISTING DOWNHILL STORM FLOW
	PROPOSED DOWNHILL STORM FLOW
	PROPOSED DRAINAGE SWALE W/ FLOW DIRECTION
	DRAINAGE LIMITS
	DRAINAGE AREA MARK
	DRAINAGE AREA IN ACRES

SOILS IN SITE ARE CONROE LOAMY SANDS WHICH ARE HYDROLOGIC GROUP B SOILS PER SOIL CONSERVATION SERVICE.

TOPOGRAPHIC INFORMATION SHOWN ON THESE DRAWINGS IS BASED ON A TOPOGRAPHIC SURVEY PREPARED BY MOON & ASSOCIATES UPDATED JANUARY 17, 2023.

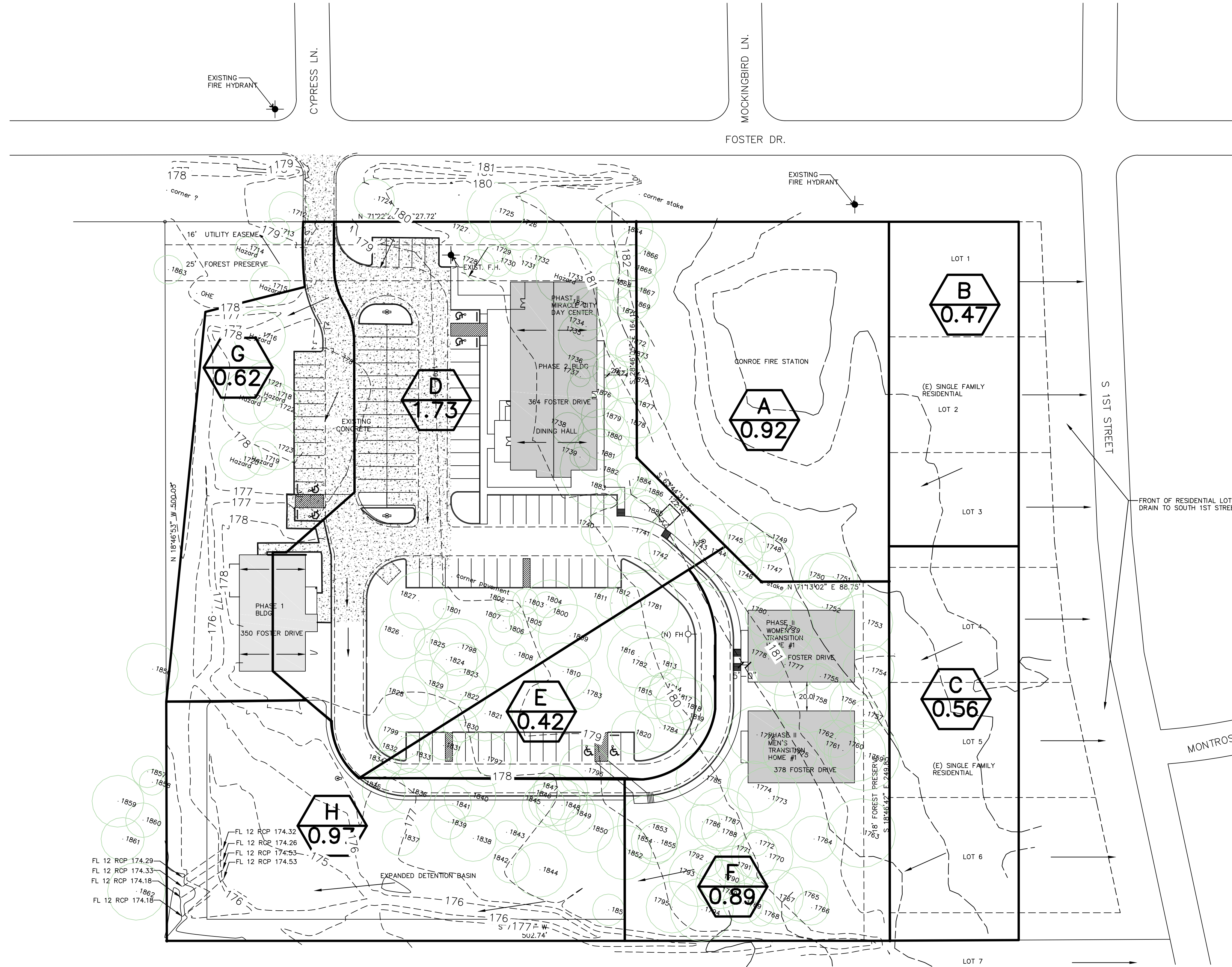
THE SUBJECT SITE IS LOCATED IN ZONE X AS DETERMINED FROM FEMA FLOOD INSURANCE RATE MAP 48339 C 0390 G DATED AUGUST 18, 2014.

BEARINGS ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, TEXAS CENTRAL ZONE (TX-83)(2002 ADJUSTMENT) (FIPS 4203) PER BOUNDARY AND TOPOGRAPHIC SURVEY.

ELEVATIONS ARE BASED ON GPS OBSERVATION AND ADJUSTED TO NVAD'88, GEOID 128 DATUM AS PROVIDED BY NGS UPDATED ON SEPTEMBER 11, 2012 PER THE TOPOGRAPHIC SURVEY BY MOON & ASSOCIATES.

BENCHMARK IS CONTROL #1 BEING A 3-INCH BRASS DISK SET IN CONCRETE COLUMN NEAR THE NORTHWEST CORNER OF THE SUBJECT SITE ALONG FOSTER DRIVE, BEING ELEVATION 178.10 PER THE TOPOGRAPHIC SURVEY BY MOON & ASSOCIATES.

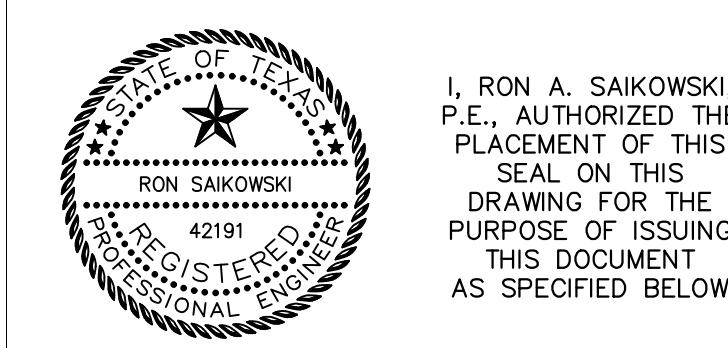
SOILS WORK SHALL BE DONE IN ACCORDANCE WITH SOILS REPORTS PROVIDED BY LONE STAR GEOTECHNICAL & TESTING LABORATORY DATED OCTOBER 30, 2020 BEING REPORT NO. 20100008-1.



DRAINAGE AREA MAP

MIRACLE CITY SITE PLANS-DAY CENTER & TRANSITION HOUSES 364, 374, 378 FOSTER DRIVE CONROE, TEXAS 77301

ENGINEERING BY:
QUEST ENGINEERING
 304 North Main Street #1
 Conroe, Texas 77301
 Phone: (713) 252-3729
 saikowski@consolidated.net
 © Ronald A Saikowski PE LEED AP 2024
 TEXAS REGISTRATION NO. FOR ENGINEERING FIRM IS F-10574

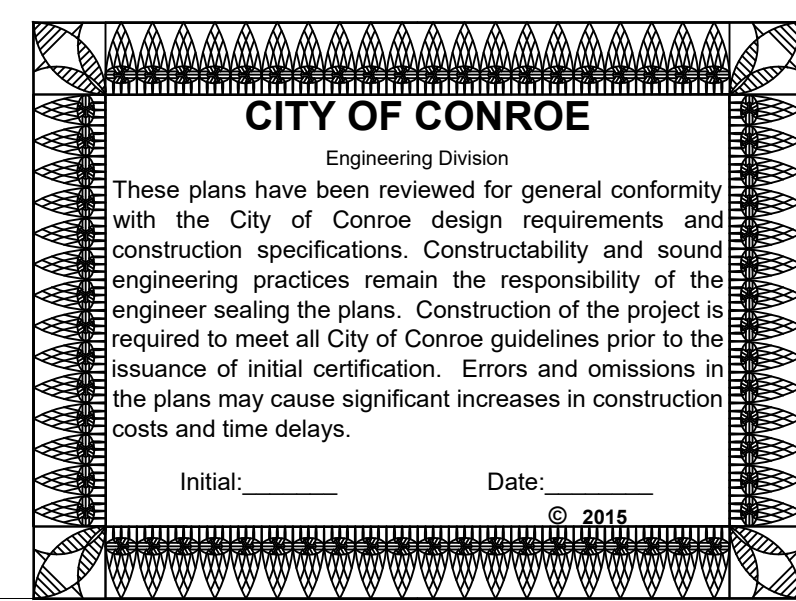
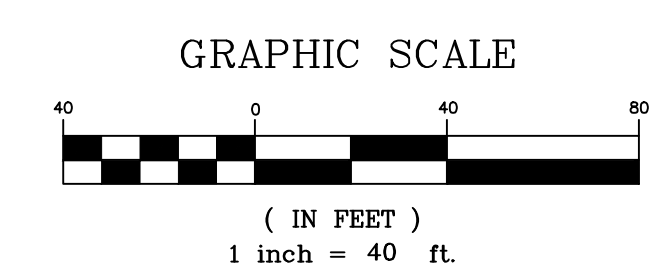


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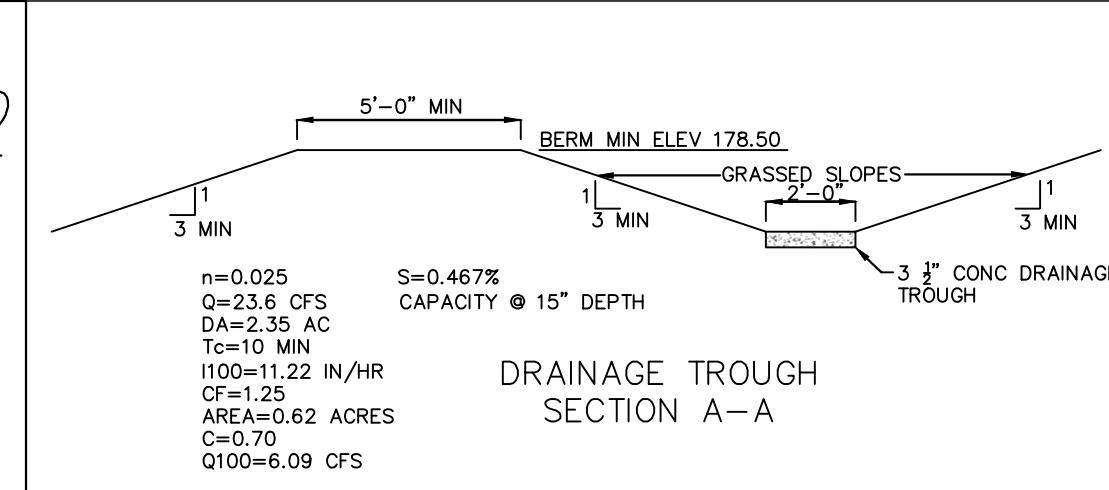
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SHEET NO.
C-5.0



- FL 12 RCP 174.29
- FL 12 RCP 174.26
- FL 12 RCP 174.33
- FL 12 RCP 174.18
- FL 12 RCP 174.16

BIDDERS SHALL BREAK OUT THEIR BIDS FOR THE SITE PLANS FOR THE BASE BID AND FOR ALTERNATE BID 'A' AND DO NOT INCLUDE TRANSITION HOUSE BUILDINGS IN ANY OF THE BIDS. ALTERNATE BID 'A' WILL INCLUDE SITE PLAN PROVISIONS ONLY FOR THE TRANSITION HOUSES THE TRANSITION HOUSE BUILDINGS WILL BE BY OTHERS IN THE FUTURE AND SHALL NOT BE INCLUDED IN ANY BIDS.



LEGEND	
---	EXISTING CONTOUR
---	PROPOSED CONTOUR
---	EXISTING DOWNHILL STORM FLOW
---	PROPOSED DOWNHILL STORM FLOW
---	PROPOSED DRAINAGE SWALE W/ FLOW DIRECTION
---	DRAINAGE LIMITS
TP	TOP OF PAVING
TC	TOP OF CURB
FF	FINISH FLOOR ELEVATION
---	CONCRETE TROUGH
---	BASIN BERM

No.	Date	Revisions	App.
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1	10/12/23	ADDRESS CITY COMMENTS	RAS

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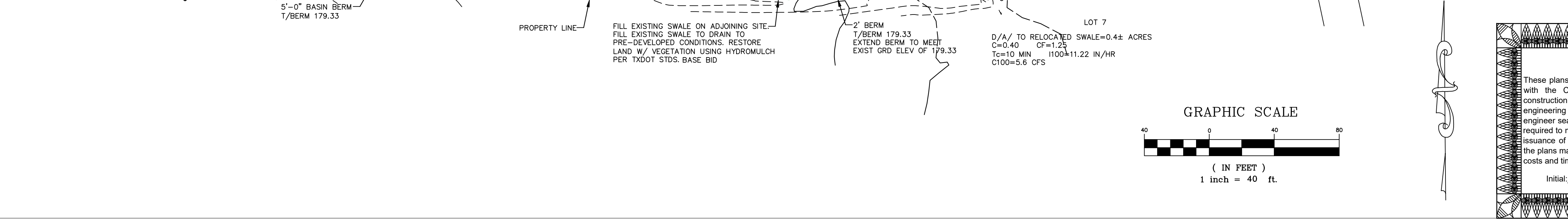
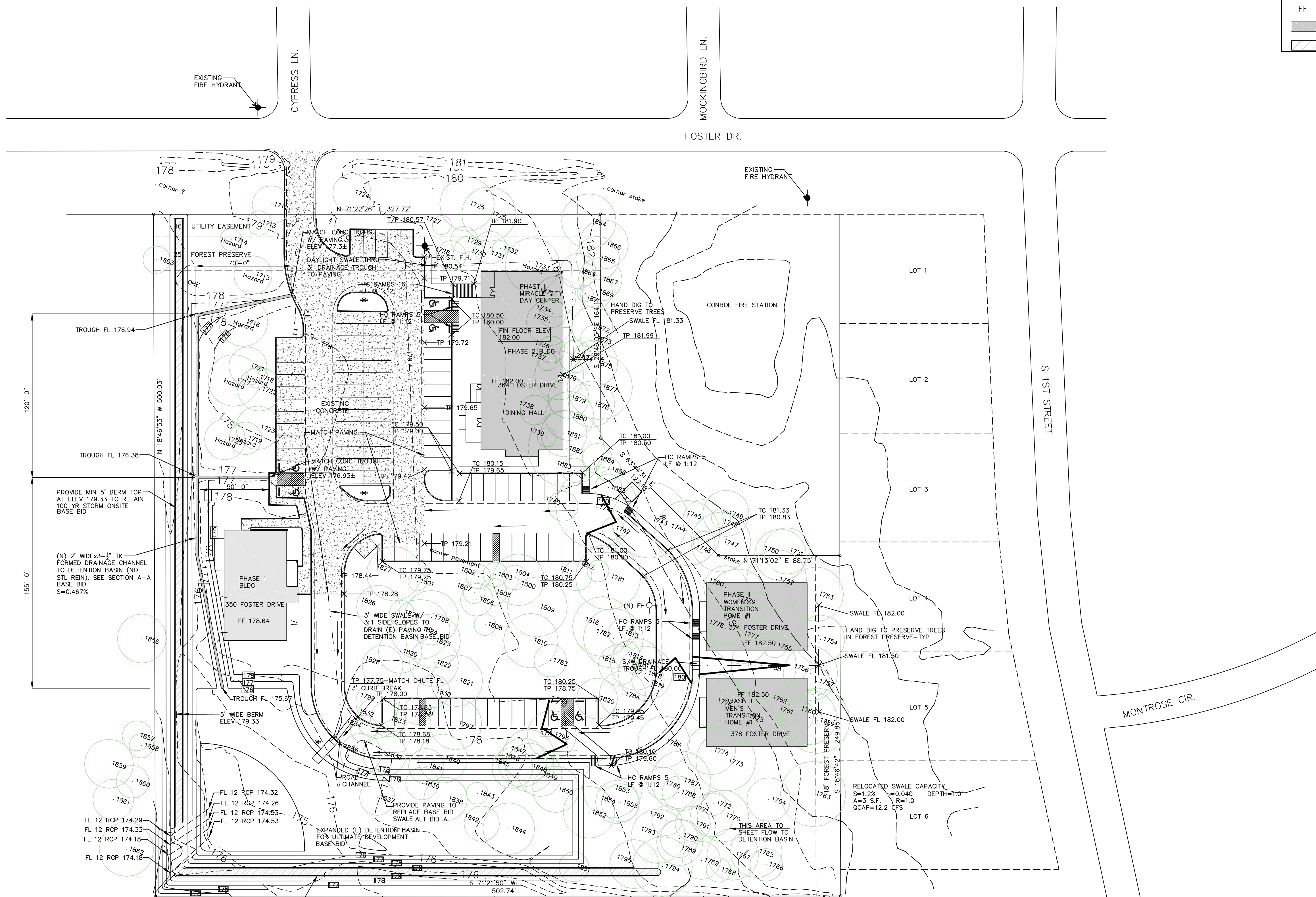
GRADING PLAN

MIRACLE CITY MIRACLE CITY MIRACLE CITY

MIRACLE CITY MIRACLE CITY MIRACLE CITY

MIRACLE CITY MIRACLE CITY MIRACLE CITY

MIRACLE CITY MIRACLE CITY MIRACLE CITY



ENGINEERING BY:
QUEST ENGINEERING
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Conroe, Texas 77301
Phone: (713) 252-3729
rsaikowski@consolidated.net
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TEXAS REGISTRATION NO. FOR ENGINEERING FIRM IS F-10574



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3/15/24

CITY OF CONROE
Engineering Division

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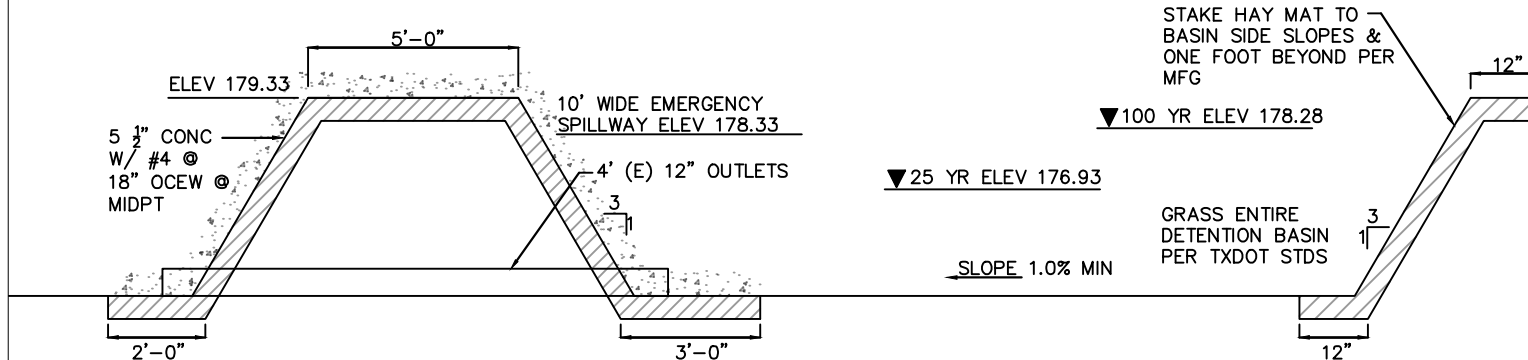
Initial: _____ Date: _____

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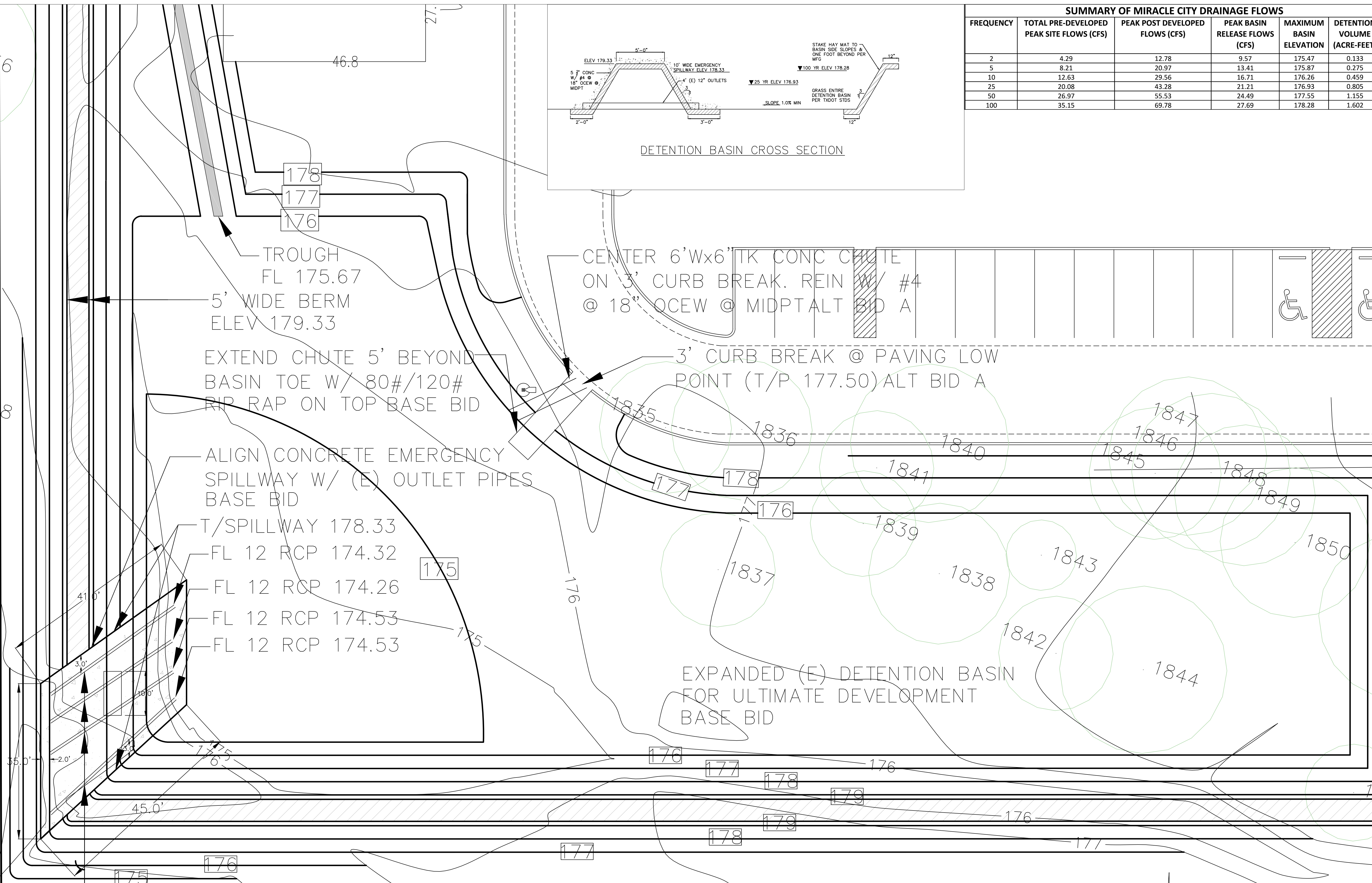
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SUMMARY OF MIRACLE CITY DRAINAGE FLOWS					
FREQUENCY	TOTAL PRE-DEVELOPED PEAK SITE FLOWS (CFS)	PEAK POST DEVELOPED FLOWS (CFS)	PEAK BASIN RELEASE FLOWS (CFS)	MAXIMUM BASIN ELEVATION	DETENTION VOLUME (ACRE-FEET)
2	4.29	12.78	9.57	175.47	0.133
5	8.21	20.97	13.41	175.87	0.275
10	12.63	29.56	16.71	176.26	0.459
25	20.08	43.28	21.21	176.93	0.805
50	26.97	55.53	24.49	177.55	1.155
100	35.15	69.78	27.69	178.28	1.602

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DETENTION BASIN CROSS SECTION



178
177
176

TROUGH
FL 175.67

5' WIDE BERM
ELEV 179.33

EXTEND CHUTE 5' BEYOND
BASIN TOE W/ 80#/120#
RIP RAP ON TOP BASE BID

ALIGN CONCRETE EMERGENCY
SPILLWAY W/ (E) OUTLET PIPES
BASE BID

T/SPILLWAY 178.33

FL 12 RCP 174.32

FL 12 RCP 174.26

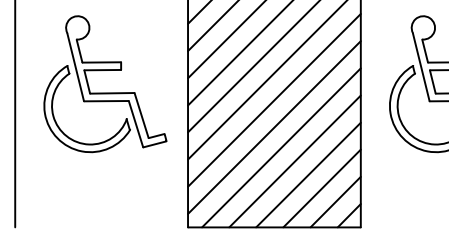
FL 12 RCP 174.53

FL 12 RCP 174.53

CENTER 6'Wx6' TK CONC CHUTE
ON 3' CURB BREAK. REIN W/ #4
@ 18" OCEW @ MIDPT ALT BID A

3' CURB BREAK @ PAVING LOW
POINT (T/P 177.50) ALT BID A

EXPANDED (E) DETENTION BASIN
FOR ULTIMATE DEVELOPMENT
BASE BID



ULTIMATE STORM WATER DETENTION BASIN &
 DETAILS

MIRACLE CITY
 SITE PLANS-DAY CENTER & TRANSITION HOUSES
 364, 374, 378 FOSTER DRIVE
 CONROE, TEXAS 77301

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Initial: *RS* Date: 3/15/24

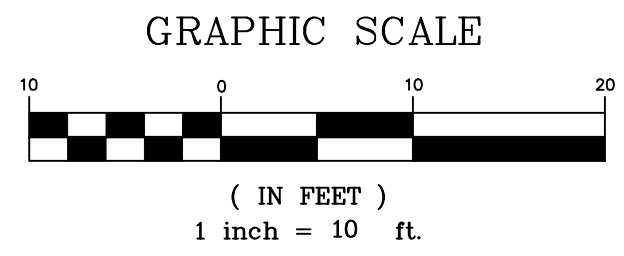
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SHEET NO.
C-7.0



S 71°21'50" W
 502.74'

4 (E) 12" RCP OUTLETS

No.	Date	Revisions	App.
0	5/18/23	ISSUE FOR CONSTRUCTION	RAS

GENERAL CONSTRUCTION NOTES

- CONSTRUCTION SHALL MEET OR EXCEED REQUIREMENTS OF THE CITY OF CONROE AND TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) AS CURRENTLY AMENDED.
- WHERE CONFLICTS ARISE BETWEEN THE CITY OF CONROE RULES, AS GIVEN IN CITY DOCUMENTS AND FEDERAL STATE OF TEXAS (TCEQ) OR, MONTGOMERY DESIGN RULES AND SPECIFICATIONS, CITY OF CONROE RULES SHALL GOVERN. TCEQ RULES WILL BE FOLLOWED WHEN NO LATEST EDITION OF TCEQ RULES GOVERNING THIS PROJECT.
- ALL WORK IS SUBJECT TO INSPECTION BY THE CITY OF CONROE, TXDOT, TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ), TEXAS DEPARTMENT OF PUBLIC TRANSPORTATION (TXDOT), AND MONTGOMERY COUNTY.
- CHANGES TO PLANS AFTER SIGNATURE WILL REQUIRE REVIEW AND UPDATE OF SIGNATURES. THE DESIGN ENGINEER, NOT THE CONTRACTOR SHALL RESUBMIT SUCH CHANGES.
- A CONTRACTOR SHALL MAKE SURE THAT ALL PLAN SIGNATURE AND LETTERS OF AVAILABILITY HAVE CURRENT DATES AS OF START OF CONSTRUCTION. IF CONSTRUCTION DOES NOT BEGIN WITHIN 1 YEAR AFTER PLANS ARE SIGNED, PLANS MUST BE RESIGNED AND LETTERS OF AVAILABILITY MUST BE UPDATED.
- ALL WORK SHALL BE COMPLETED TO THE SATISFACTION OF THE CITY OF CONROE, TXDOT, TCEQ, AND THE ENGINEER.
- CONTRACTOR SHALL NOTIFY RON SAIKOWSKI (ENGINEER) (TELEPHONE NUMBER 713-252-3729) FOURTY-EIGHT (48) HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- THESE PLANS PREPARED BY RON SAIKOWSKI DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONTRACTOR OR ITS EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE REGISTERED ENGINEER(S) HEREON DOES NOT EXTEND TO ANY SUCH SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED IN THESE PLANS. THE CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS, INCLUDING THE PLANS AND SPECIFICATIONS REQUIRED BY THE HOUSE BILLS 652 AND 655 ENACTED BY THE TEXAS LEGISLATURE REGULAR SESSION AND CURRENT OSHA STANDARDS FOR TRENCH SAFETY, DESIGN OF TRENCH SAFETY SYSTEMS, SEALED BY AN EXECUTION OF A CONTRACT FOR THIS WORK.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD BEFORE COMMENCING WORK. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPORT ANY DISCREPANCIES TO OWNER IN A TIMELY MANNER.
- CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THE DRAWINGS. CONTRACTOR SHALL NOTIFY TEXAS ONE CALL (TELEPHONE NUMBER 713-223-4567) AT LEAST FORTY-EIGHT (48) HOURS BEFORE PROCEEDING WITH ANY EXCAVATION.
- CONTRACTOR SHALL CONFINE ALL WORK EFFORTS WITHIN THE DESIGNATED AREA UNLESS SPECIFICALLY AUTHORIZED BY THE OWNER. EXTREME CARE SHOULD BE EXERCISED NEAR ADJACENT PROPERTY TO PROTECT ANY EXISTING TREES, FENCES, LANDSCAPING AND OTHER EXISTING FEATURES.

- ALL EXISTING UNDERGROUND UTILITIES ARE NOT GUARANTEED TO BE COMPLETED OR DEFINITE, BUT WERE OBTAINED FROM THE BEST INFORMATION AVAILABLE. CONTRACTOR HAS SOLE RESPONSIBILITY FOR THE FIELD VERIFICATION OF ALL EXISTING FACILITIES SHOWN ON DRAWINGS. CONTRACTOR SHALL COORDINATE ALL CONFLICTS WITH THE APPROPRIATE GOVERNING AGENCY.
- THE LOCATION OF CONSOLIDATED COMMUNICATIONS, ENTEX, AND ENTERGY POWER COMPANY UTILITIES ARE SHOWN IN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL REQUEST THE EXACT LOCATION OF THESE BY CALLING THE UTILITY COORDINATING COMMITTEE AT (713) 223-4567 OR TOLL FREE 1-800-245-4545 AT LEAST FORTY-EIGHT (48) HOURS BEFORE COMMENCING WORK. THE CONTRACTOR IF FULLY RESPONSIBLE FOR ONLY AND ALL DAMAGES WHICH OCCUR DUE TO HIS FAILURE TO REQUEST THE LOCATION AND PRESERVATION OF THESE UNDERGROUND FACILITIES.
- TEXAS LAW ARTICLE 1436C, PROHIBITS ALL ACTIVITIES IN WHICH PERSONS OR EQUIPMENT MAY COME WITHIN 6 FEET OF ENERGIZED OVERHEAD POWER LINES AND FEDERAL REGULATION, TITLE 29 PART 1910. 190(I) AND PART 1926.440(A) (15) REQUIRE A MINIMUM CLEARANCE OF 20 FEET FROM THESE FACILITIES. THE ABOVE LAWS CARRY BOTH CRIMINAL AND CIVIL LIABILITIES WITH CONTRACTORS AND OWNERS BEING LEGALLY RESPONSIBLE FOR THE SAFETY OF WORKERS UNDER THESE LAWS. IF YOU OR YOUR COMPANY MUST WORK NEAR OVERHEAD POWER LINES CALL THE LOCAL POWER COMPANY FOR LINES TO BE DE-ENERGIZED AND/OR MOVED AT YOUR EXPENSE.
- TRENCH SAFETY SYSTEMS SHALL BE IN ACCORDANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATIONS STANDARDS FOR TRENCH SAFETY THAT WILL BE IN EFFECT DURING THE PERIOD OF CONSTRUCTION OF THE PROJECT. CONTRACTOR'S ATTENTION IS DIRECTED TO THE REQUIREMENTS OF OCCUPATIONAL SAFETY AND HEALTH STANDARDS: EXCAVATION: PROPOSED RULE (29 CFR PART 1926) AS PUBLISHED IN THE FEDERAL REGISTER VOLUME 52 NO.72. SECTIONS 1926-650 THROUGH 1926-653 AND DATED WEDNESDAY, APRIL 15, 1987 AND TO APPLICABLE STATE ORDINANCES. ALSO REFER TO NOTE 8.
- ALL NECESSARY QUALITY CONTROL OF TESTING OF MATERIALS AND PAVING SHALL BE CONDITION OF THE ROAD AND/OR RIGHT-OF-WAY. UPON COMPLETION OF JOB, SHALL BE AS GOOD AS OR BETTER THAN THE CONDITION PRIOR TO STARTING WORK.
- ALL CONSTRUCTION NOTES THAT APPEAR ON THIS SET OF CONSTRUCTION DOCUMENTS SHALL BE PART OF THE CONSTRUCTION SPECIFICATIONS.
- TOP OF MANHOLES, INLETS AND CLEANOUTS SHALL CONFORM TO FINISHED GRADE AND PER CITY OF CONROE REQUIREMENTS.
- GRADES SHALL VARY UNIFORMLY BETWEEN SPOT ELEVATIONS SHOWN.
- SHOULD THE CONTRACTOR FIND ANY DISCREPANCY OR OMISSIONS FROM THE PLANS, HE SHALL NOTIFY THE ENGINEER AT ONCE TO OBTAIN CLARIFICATION PRIOR TO STARTING CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL EXISTING UNDERGROUND UTILITIES.
- ALL BEDDING FOR SEWERS SHALL BE AS PER REQUIRED SPECIFICATIONS AND DETAILS.

- ALL SEWER TRENCHES UNDER OR WITHIN ONE FOOT OF PROPOSED AND/OR FUTURE PAVEMENT OR CURB SHALL BE BACKFILLED WITH 1 1/2 SACKS OF CEMENT PER TON CEMENT-STABILIZED SAND TO A POINT ONE FOOT BELOW PAVEMENT SUBGRADE. THE REMAINING BACKFILL SHALL BE MADE WITH COMPACTED SUITABLE MATERIAL.
- WHEN REQUIRED BY TRENCH CONDITIONS, THE USE OF DEWATERING SYSTEMS IS TO BE REQUESTED BY THE CONTRACTOR AND APPROVED BY THE OWNER.
- CONTRACTOR SHALL REMOVE ALL MUD, DIRT AND DEBRIS DEPOSITED OR DROPPED ON EXISTING PAVEMENT DUE TO HIS CONSTRUCTION ACTIVITY DAILY.
- ALL TRAFFIC CONTROL AND WARNING SIGNS SHALL BE IN ACCORDANCE WITH TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- CONTRACTOR SHALL PROTECT ALL TREES ADJACENT TO WORK AREA. NO TREES SHALL BE REMOVED WITHOUT PERMISSION OF OWNER AND A PERMIT FROM THE CITY OF CONROE.
- CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT ROOT SYSTEMS OF SHRUBS, PLANTS AND TREES ALONG THE AREA OF EXCAVATION.
- THE CONTRACTOR SHALL COMPLY WITH THE LATEST EDITION OF OSHA REGULATIONS AND THE STATE OF TEXAS LAWS CONCERNING EXCAVATION.
- ALL SOILS WORK SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE SOILS REPORTS AND AMENDMENTS AS PREPARED BY LONE STAR TESTING LABORATORIES DATED JANUARY 8, 2013 (PROJECT NO. 1212-017) FOR THIS SITE.
- CONTRACTOR SHALL INCORPORATE ALL REQUIREMENTS OF ALL EASEMENT OWNERS WITHIN PROJECT LIMITS.
- ALL EARTHWORK SHALL BE DONE IN COMPLIANCE WITH THE SOILS REPORT PREPARED BY LONE STAR TESTING LABORATORIES DATED OCTOBER 30, 2020 (REPORT NO. 20100008-1.

UNDERGROUND FACILITIES EXIST IN THE AREA OF THIS PROJECT.

DO NOT BEGIN CONSTRUCTION UNTIL THESE FACILITIES HAVE BEEN LOCATED AND STAKED. TO HAVE THESE UNDERGROUND FACILITIES STAKED CALL THE UTILITY COORDINATING COMMITTEE AT (713) 223-4567, OR TOLL FREE 1-800-669-8344, AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO ANY CONSTRUCTION.

THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES.

SUDDENLINK AND CONSOLIDATED COMMUNICATIONS

- LOCATIONS OF CABLE COMPANY FACILITIES ARE SHOWN IN AN APPROXIMATE WAY ON DRAWINGS; DETERMINE EXACT LOCATION BEFORE COMMENCING WORK. TAKE RESPONSIBILITY FOR DAMAGES COVERED BY FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES.

THE CONTRACTOR SHALL CONTACT THE CABLE COMPANIES A MINIMUM OF FORTY-EIGHT (48) HOURS PRIOR TO CONSTRUCTION TO HAVE UNDERGROUND LINES FIELD LOCATED.

REIMBURSE CABLE COMPANIES FOR ALL COSTS ASSOCIATED WITH WORK PERFORMED BY CABLE COMPANIES FOR BRACING, SUPPORTING AND EXPOSING BURIED CABLES.

HAND DIG WITH IN EIGHTEEN INCHES (18") OF UNDERGROUND CONDUIT CABLE SYSTEMS OR MANHOLES. NOTIFY THE CABLE COMPANIES OF CONSTRUCTION WITHIN FIVE (5) FEET OF THE CABLE COMPANY'S MANHOLES.

COORDINATE ANY CONFLICT WITH THE CABLE COMPANY'S REPRESENTATIVES AND PROVIDE NECESSARY SUPPORT.

- ALL EXISTING LANDSCAPING, SIDEWALKS, FENCES, UTILITIES AND OTHER EXISTING FACILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED TO THE ORIGINAL OR BETTER CONDITION BY THE CONTRACTOR AT HIS EXPENSE.
- THERE WILL BE NO SEPARATE PAYMENT FOR WORK SHOWN ON THESE PLANS UNLESS SPECIFICALLY ESTABLISHED IN THE CONTRACT DOCUMENTS.
- CONTRACTOR TO BE RESPONSIBLE FOR CONTROL STAKING AND FOR ALL CONSTRUCTION STAKING, SUPERVISED BY A LICENSED SURVEYOR IN THE STATE OF TEXAS. SURVEYOR MUST CARRY ERRORS AND OMISSIONS INSURANCE. INCLUDE THE COST FOR SURVEY WORK IN OTHER ITEMS.
- ALL UNSATISFACTORY AND/OR WASTE MATERIALS INCLUDING VEGETATION, ROOTS, CONCRETE AND DEBRIS SHALL BE HAULED OFF SITE AND DISPOSED OF BY THE CONTRACTOR. INCLUDE COST OF THIS WORK, INCLUDING HAUL, IN OTHER ITEMS OF THIS PROJECT.
- CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AT ALL TIMES DURING CONSTRUCTION OF PROPOSED FACILITIES. ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE OWNING AUTHORITY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PURCHASING WATER NEEDED FOR CONSTRUCTION OR TESTING. THE PURCHASE OF WATER FOR CONSTRUCTION OR TESTING WILL BE CONSIDERED INCIDENTAL TO THE VARIOUS OTHER ITEMS OF WORK.
- ALL EXISTING UNDERGROUND UTILITIES ARE NOT GUARANTEED TO BE COMPLETE OR DEFINITE BUT WERE OBTAINED FROM INFORMATION AVAILABLE. CONTRACTOR IS SOLELY RESPONSIBILITY FOR FIELD VERIFICATION OF ALL EXISTING FACILITIES SHOWN ON DRAWINGS. CONTRACTOR SHALL COORDINATE ALL CONFLICTS WITH THE APPROPRIATE GOVERNING AGENCIES. NO SEPARATE PAY.
- ALL UTILITY TRENCHES TO BE BACKFILLED TO NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR COMPACTION TEST (ASTM D 698).
- MAINTAIN A MINIMUM OF 12 INCHES OF CLEARANCE BETWEEN ALL UTILITIES UNLESS SHOW OTHERWISE ON THE PLANS.
- CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY DAMAGES, MADE DURING CONSTRUCTION, TO EXISTING WASTEWATER LINES, WATER LINES STORM DRAINAGE LINES, PAVING AND TRAFFIC SIGNAL CONDUITS. THE CONTRACTOR SHALL BE RESPONSIBLE TO REPLACE OR REPAIR TO CITY OF CONROE STANDARDS OR TO THEIR ORIGINAL CONDITION; WHICHEVER IS BETTER, BY THE CONTRACTOR AT HIS EXPENSE.
- CONDITION OF THE ROAD AND RIGHT OF WAY, UPON COMPLETION OF THE JOB, SHALL BE AS GOOD AS OR BETTER THAN THE CONDITION PRIOR TO STARTING WORK.
- CONTRACTOR SHALL REMOVE ANY DEBRIS THAT MAY BE FOUND WITHIN THE WORK SITE. ENGINEER SHALL IDENTIFY SAID DEBRIS AND CONTRACTOR SHALL DISPOSE OF SAME OFFSITE.
- CONTRACTOR SHALL NOT LEAVE UNCOVERED HOLES IN PAVEMENT AT THE END OF THE DAY AND SHALL NOT LEAVE STEEL PLATES IN PLACE FOR MORE THAN 14 DAYS.
- CONTRACTOR TO PROVIDE FLAGMEN AND TRAFFIC CONTROL DEVICES TO MAINTAIN THE PROPER FLOW OF TRAFFIC AROUND THE CONSTRUCTION SITE.

- BACKFILL: AFTER THE PIPES ARE BEDDED AS SPECIFIED, BACKFILL MATERIAL SHALL BE DEPOSITED IN 6-INCH MAXIMUM THICKNESS LAYERS AND COMPACTED WITH SUITABLE MECHANICAL TAMPERS TO THE DENSITY REQUIRED.
- CONTRACTOR SHALL COORDINATE STORM, SANITARY SEWER AND WATER LINE CONSTRUCTION WITH OTHERS UNDERGROUND LINES TO AVOID CONFLICTS.
- CLEARING AND STRIPPING: STRIP SURFACE OF SITE UNDER BUILDING AREAS, UNDER PAVED AREAS TO BE COVERED WITH THE SITE IMPROVMENTS TO A DEPTH OF AT LEAST 6 INCHES BUT SUFFICIENT TO CLEAR GRASS, ROOTS AND DEBRIS. STRIP SURFACE OF SITE AREAS THAT ARE TO BE LEFT OPEN BUT WILL BE COVERED WITH FILL, TO A DEPTH OF 4 INCHES.
- GRUBBING: REMOVE STUMPS, ROOTS OVER 3 INCHES IN DIAMETER AND MATTED ROOTS WITHIN THE LIMITS OF CLEARING TO THE FOLLOWING DEPTH:
UNDER BUILDING-18 INCHES
UNDER WALK- 12 INCHES
UNDER ROADS- 18 INCHES
UNDER PARKING AREAS-12 INCHES
UNDER LAWN AREAS-8 INCHES
- FILLS: PRIOR TO PLACING ANY FILL, ALL CLEARING AND GRUBBING OPERATIONS SHALL HAVE BEEN COMPLETED ON THE AREAS WHERE THE FILL IS TO BE PLACED, STUMP HOLES OR OTHER SMALL EXCAVATIONS IN THE LIMITS OF THE EMBARKMENT SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND THOROUGHLY TAMPED BY APPROVED METHODS. THE FILL MATERIAL SHALL HAVE A PLASTICITY INDEX OF NOT GREATER THAN 14. FILL SHALL BE CONSTRUCTED IN UNIFORM LAYERS NOT TO EXCEED 8 INCHES THICKNESS LOOSE MEASURE, EACH LAYER SHALL EXTEND ACROSS THE ENTIRE FILL AREA AND SHALL BE COMPACTED TO AT LEAST 95% STANDARD PROCTOR DENSITY WITH OPTIMUM MOISTURE CONTENT AT PLUS, OR MINUS 2% OF OPTIMUM MOISTURE CONTENT UNLESS DIRECTED OTHERWISE BY SOILS ENGINEER. FILL MATERIAL, DEPOSITED IN PLACE BY MEANS OF SCRAPERS, DUMP TRUCKS, OR SIMILAR EQUIPMENT SHALL BE THOROUGHLY BROKEN UP BEFORE BEING SPREAD INTO UNIFORM LAYERS.
- ALL SANITARY AND STORM SEWER LINES ARE TO BE LAID AT TRUE AND ACCURATE GRADES WITH GOOD BEDDING AND BACKFILL TO ASSURE AGAINST FUTURE SETTLING OF LINES RESULTING IN POOR DRAINAGE AND EVENTUAL STOPPAGE DUE TO DEBRIS SETTLEMENT.
- CONTRACTOR SHALL COORDINATE INTERNAL AND EXTERNAL BUILDING PLUMBING FOR PROPER PLACEMENT AND CONNECTIONS.
- CONTRACTOR SHALL VERIFY LOCATION OF UNDERGROUND UTILITY LINES AND SHALL NOTIFY THE FOLLOWING AGENCIES FORTY-EIGHT (48) HOURS PRIOR TO EXCAVATING NEAR FACILITIES
TEXAS ONE CALL SYSTEM AT 1-800-245-4545
LONE STAR NOTIFICATION CENTER AT 713-223-4567
TEXAS EXCAVATION SAFETY SYSTEM INC. AT 1-800-344-8377
CENTRAL TEXAS AT 713-540-4191
- CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND ALL REGULATIONS OF UTILITY COMPANIES CONCERNING SAFETY AND HEALTH PRACTICES.

CENTERPOINT ENTEX

CAUTION: UNDERGROUND GAS FACILITIES

LOCATIONS OF ENTEX MAIN LINE S (TO INCLUDE UNIT GAS TRANSMISSION AND/OR INDUSTRIAL GAS SUPPLY CORPORATION WHERE APPLICABLE) ARE SHOWN IN APPROXIMATE LOCATION ONLY. SERVICE LINES ARE USUALLY NOT SHOWN. THE CONTRACTOR SHALL CONTACT THE UTILITY COORDINATING COMMITTEE AT (713) 223-4567 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE MAIN AND SERVICE LINES FIELD LOCATED.

WHEN ENTEX ENERGY PIPE LINE MARKINGS ARE NOT VISIBLE, CALL (713) 967-8037 (7:00A.M. TO 4:30P.M.) FOR STATUS OF LINE LOCATION REQUEST BEFORE EXCAVATION BEGINS.

WHEN EXCAVATING WITHIN EIGHTEEN INCHES (18") OF THE INDICATED LOCATION OF ENTEX ENERGY FACILITIES, OF EXCAVATION MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES. WHEN ENTEX ENERGY FACILITIES ARE EXPOSED, SUFFICIENT SUPPORT MUST BE PROVIDED TO THE FACILITIES TO PREVENT EXCESSIVE STRESS ON THE PIPING. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES.

ENTERGY

WARNING: OVERHEAD ELECTRICAL FACILITIES

OVERHEAD LINES MAY EXIST ON THE PROPERTY. WE HAVE NOT ATTEMPTED TO MARK THOSE LINES SINCE THEY ARE CLEARLY VISIBLE, BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752 HEALTH AND SAFETY CODE, FORBIDS ALL ACTIVITIES IN WHICH PERSONS OR THINGS MAY COME WITHIN SIX (6) FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES. PARTIES RESPONSIBLE FOR THE WORKS, INCLUDING CONTRACTORS, ARE LEGALLY RESPONSIBLE FOR THE SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH CRIMINAL AND CIVIL LIABILITY. TO ARRANGE FOR LINES TO BE TURNED OFF OR REMOVED CALL ENTERGY AT 1 (800) ENT-ERGY FOR SUCH COORDINATION.

OTHER OVERHEAD FACILITIES MAY EXIST AND CARE SHOULD BE TAKEN TO PREVENT DAMAGE TO THE FACILITIES. ALL DAMAGE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

CAUTION:
UNDERGROUND FACILITIES

SITE NOTES
MIRACLE CITY
SITE PLANS-DAY CENTER & TRANSITION HOUSES
364, 374, 378 FOSTER DRIVE
CONROE, TEXAS 77301

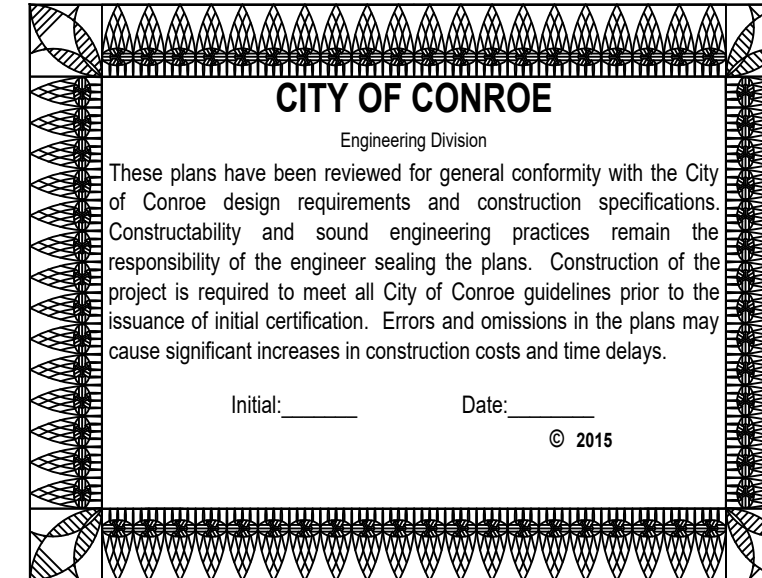
ENGINEERING BY:
QUEST ENGINEERING
 304 North Main Street #1
 Conroe, Texas 77301
 Phone: (713) 252-3729
 rsaikowski@consolidated.net
 © Ronald A Saikowski PE LEED AP 2024
 TEXAS REGISTRATION NO. FOR ENGINEERING FIRM IS F-10574



I, RON A. SAIKOWSKI, P.E., AUTHORIZED THE PLACEMENT OF THIS SEAL ON THIS DRAWING FOR THE PURPOSE OF ISSUING THIS DOCUMENT AS SPECIFIED BELOW

RAS
3/15/23

<input type="checkbox"/> Not For Construction
<input type="checkbox"/> For Background Use Only
<input type="checkbox"/> Preliminary
<input type="checkbox"/> For Concept Approval
<input type="checkbox"/> Preliminary Bid Set
<input type="checkbox"/> For Preliminary Approval
<input type="checkbox"/> Check Set
<input checked="" type="checkbox"/> Permit
<input checked="" type="checkbox"/> For Final Approval
<input checked="" type="checkbox"/> For Construction



NOTE:
 CONSTRUCTION SHALL NOT PROCEED UNTIL CONTRACTOR HAS OBTAINED ALL PERMITS AND INCORPORATED COMMENTS FROM TEXAS ACCESSIBILITY STANDARDS REVIEW AND PERMITTING ENTITIES IN WORK.

SHEET NO.
C-8.0

No.	Date	Revisions	App.
0	5/18/23	ISSUE FOR CONSTRUCTION	RAS
			RAS

CITY NOTES
MIRACLE CITY
SITE PLANS-DAY CENTER & TRANSITION HOUSES
364, 374, 378 FOSTER DRIVE
CONROE, TEXAS 77301

ENGINEERING BY:
QUEST ENGINEERING
 304 North Main Street #1
 Conroe, Texas 77301
 Phone: (713) 252-3729
 rsaikowski@consolidated.net
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 TEXAS REGISTRATION NO. FOR ENGINEERING FIRM IS F-10574

I, RON A. SAIKOWSKI,
 P.E., AUTHORIZED THE
 SEAL ON THIS
 DRAWING FOR THE
 PURPOSE OF ISSUING
 THIS DOCUMENT AS
 SPECIFIED BELOW

SHEET NO.
C-9.0

- WATER MAINS SHALL BE BLUE PVC, CLASS 150 OR BETTER CONFORMING TO ANMA C900, ANMA C905 OR ANMA C909, UNLESS OTHERWISE SPECIFIED. PIPE JOINTS SHALL BE INTERFACED, SEAL OR RESTRAINED TYPE CONFORMING TO ASTM D1119 WITH GASKETS CONFORMING TO ASTM F477. ALL WATER PIPES SHALL HAVE ANSI/NSF 61 CERTIFICATION.
- FITTINGS SHALL BE DUCTILE IRON CONFORMING TO ANSI/ANMA C153/A21.53 FOR COMPACT FITTINGS AND ANSI/ANMA C110/A21.10 FOR FULL BODY FITTINGS. ALL FITTINGS SHALL BE CONCRETE-METAL LINED INSIDE AND COATED WITH AN ASPHALTIC MATERIAL OUTSIDE IN ACCORDANCE WITH ANSI/ANMA C104/A21.4. MECHANICAL JOINT FITTINGS AND ACCESSORIES SHALL BE MADE TO MEET ALL APPLICABLE REQUIREMENTS OF ANSI/ANMA C110/A21.10, 3" THROUGH 48" AND ANSI/ANMA C111/A21.11. MEGALUM OR APPROVED EQUAL RESTRAINTS SHALL BE USED FOR ALL MECHANICAL JOINT FITTINGS. COMPACT FITTINGS ARE ACCEPTABLE, EXCEPT FOR TIEES, WHICH MUST BE FULL BODY TYPE.
- PIPE BEDDING AND BACKFILL SHALL BE IN ACCORDANCE WITH THE CITY OF CONROE STANDARD DETAILS.
- WATERLINES OF 16 INCH OR SMALLER DIAMETER SHALL HAVE A MINIMUM COVER OF FOUR FEET (4'). DEPTH OF COVER SHALL BE NO GREATER THAN SEVEN FEET (7') EXCEPT FOR CROSSINGS UNDER CREEK, ROADWAYS, RAILROADS, OR AS APPROVED BY THE CITY ENGINEER.
- WATERLINES OF 16 INCH AND LARGER DIAMETER SHALL HAVE A MINIMUM COVER OF FIVE FEET (5'). DEPTH OF COVER SHALL BE NO GREATER THAN SEVEN FEET (7') EXCEPT FOR CROSSINGS UNDER CREEK, ROADWAYS, RAILROADS, OR AS APPROVED BY THE CITY ENGINEER.
- ALL GATE VALVES SHALL BE RESILIENT WEDE TYPE, NON-RISING STEM (OPEN-LEFT) AND CONFORMING TO ANMA C515. VALVE BOX SHALL BE CAST IRON TYPE-A WITH "WATER" OR "W" MARKED ON LID.
- ALL WATER MAINS AND SERVICE LATERALS SHALL BE INSTALLED WITH #14 AWG TRACER WIRE, ATTACH TO THE PIPE AT A 3'O'CLOCK POSITION USING TAPE OR WIRES AND HAVE A CONTINUITY TEST PERFORMED BEFORE ACCEPTANCE BY THE CITY OF CONROE.
- ALL WATER MAINS SHALL BE HYDROSTATICALLY TESTED IN ACCORDANCE WITH ANMA C605 FOR PVC OR ANMA C600 FOR DI PIPE AS REQUIRED IN 30 TAC 5 290.44 (A).
- PRIOR TO BACTERIOLOGICAL TESTING, ALL WATER PIPING SHALL BE TESTED AND DISINFECTED PER ANMA C651 AND APPROVED PRIOR TO USE.
- THE CONTRACTOR SHALL OBTAIN ALL PERMITS BEFORE THE INSTALLATION OF THE SERVICE LINES, WATER METERS BOXES, COMBINATION METER VAULTS, FIRE SPRINKLER AND / OR IRRIGATION LINES.
- WHEN THE SERVICE LATERAL AND LARGER METER VAULT ASSEMBLY ARE REQUIRED, THE CONTRACTOR SHALL CONTACT THE CITY OF CONROE TO SCHEDULE FOR EACH OF THE FOLLOWING: TAP INSTALLATION, INSPECTION AND LOADING OF METER VAULT.
- THE CONTRACTOR SHALL MAINTAIN A MINIMUM SEPARATION DISTANCE BETWEEN WATERLINE AND SANITARY SEWER LINES AS PROTECTED BY TCRQ 4290.44 (c).
- THE INSTALLATION OF ALL WATER LINES SHALL EXTEND ALONG THE ENTIRE LENGTH OF THE PROPERTY TO BE SERVED. WATER LINES THAT DEAD END SHALL EXTEND TO THE PROJECT LIMITS AND END WITH A BLOW-OFF VALVE AND BOX ASSEMBLY OR A GATE VALVE AND FISH WYTHEM FOR FUTURE EXTENSION.
- STEEL CASING SHALL BE REQUIRED FOR ALL THROUGHFARE AND COLLECTOR ROADWAYS, AS WELL AS, CREEK CROSSINGS ON WATER MAINS, THE STEEL CASING SHALL HAVE A MINIMUM WALL THICKNESS OF 0.375 INCHES, ROLLED STEEL TYPE; SPIRAL WILL NOT BE ALLOWED.
- CEMENT STABILIZED SAND (CSS) SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 100 PSI IN 48 HOURS.

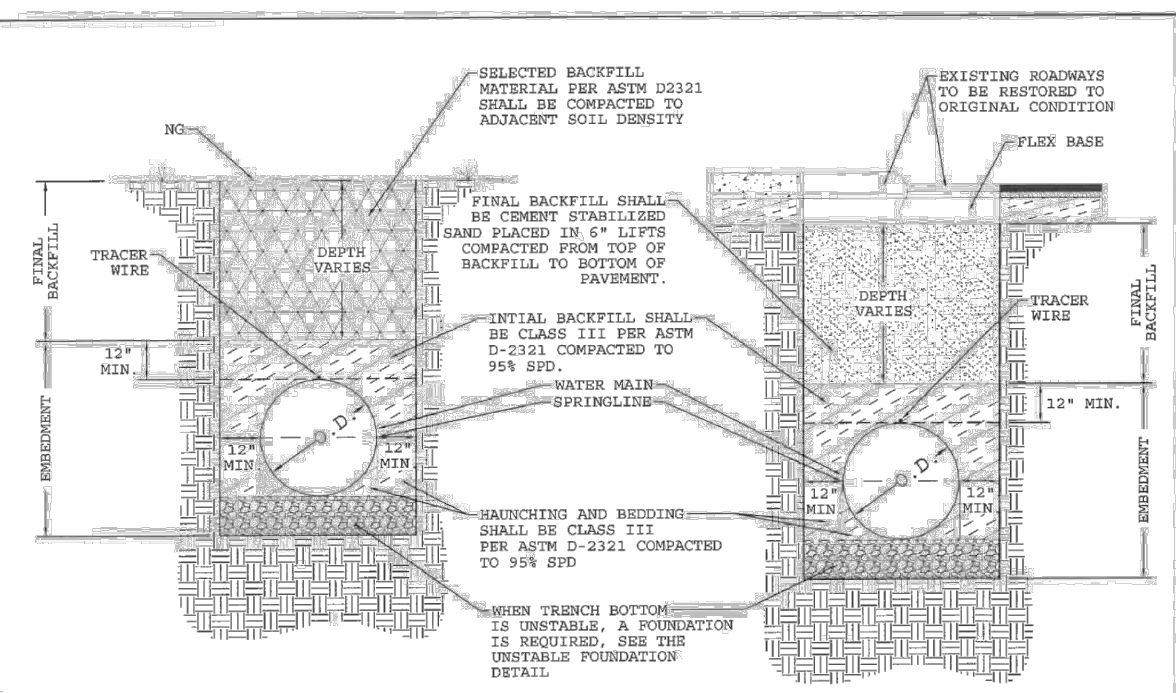
CITY OF CONROE
ENGINEERING
300 N DAVIS P.O. BOX 3066
CONROE, TEXAS 77308 (832) 523-3300

WATER MAIN CONSTRUCTION NOTES
 Revision Date 06/16/2021
 Approved By: *[Signature]* WTR-01

- CONSTRUCTION AND INSTALLATION OF GRAVITY SANITARY SEWER PIPES AND FORCE MAINS BY THE TRENCHLESS TECHNOLOGY METHOD SHALL MEET ASTM, ANSI, AND ANMA STANDARDS. IF THERE IS A CONFLICT IN STANDARDS THE MOST STRINGENT SHALL GOVERN.
- CONSTRUCTION AND INSTALLATION OF GRAVITY SANITARY SEWER PIPES AND FORCE MAINS BY THE OPEN CUT TRENCH METHOD SHALL BE IN ACCORDANCE WITH THE LATEST CITY OF CONROE AND TCRQ SPECIFICATIONS. THE MOST STRINGENT SHALL GOVERN.
- ALL SANITARY SEWER MANHOLES SHALL BE PRE-CAST CONCRETE UNLESS OTHERWISE SPECIFIED. MAN-HECK TO BE USED IN JOINTS. NO BRICK MANHOLES SHALL BE ALLOWED. FOR PVC PIPE, USE MANHOLE WATER STOP GASKET AND CLAMP ASSEMBLY AT MANHOLE CONNECTION. SANITARY SEWER MANHOLE RIMS SHALL BE 3" INCHES ABOVE NATURAL GROUND. BACKFILL SHALL BE ADDED AND SLOPED AWAY FROM THE MANHOLE RIM FOR DRAINAGE PURPOSES.
- ALL NEW PRECAST CONCRETE SANITARY SEWER MANHOLES ARE TO BE COATED INSIDE WITH A FACTORY APPLIED HIGH BUILD EPOXY OR POLYUREA COATING, PER MANUFACTURER SPECIFICATIONS.
- WHEN THE SANITARY SEWER MANHOLE LIES WITHIN THE 100 YEAR FLOODPLAIN, THE MANHOLE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF CONROE STANDARD SEALED AND VENTED MANHOLE DETAIL.
- MANHOLE FRAME AND COVER SHALL BE 32" EAST JORDAN IRONWORKS V-1420 FRAME AND COVER (OR APPROVED EQUAL) WITH THE CITY OF CONROE SANITARY SEWER LOGS EMBEDDED IN LID UNLESS OTHERWISE SPECIFIED.
- ALL CONNECTIONS TO SANITARY SEWER MANHOLES SHALL BE CORED AND BOOTED.
- SANITARY SEWER MAIN SHALL BE GREEN PVC PER 24, IN ACCORDANCE WITH ASTM SPECIFICATIONS D-3034, FOR 6" THROUGH 15" AND ASTM F-678 FOR 18" THROUGH 21".
- FORCE MAINS SHALL BE GREEN PVC CLASS 150 CONFORMING TO ANMA C900 WITH PUSH ON GASKETS CONFORMING TO ASTM F477. HDPE FORCE MAINS SHALL BE F44710 D11 (125 PSI MINIMUM) WITH FUSION JOINTS AND CONFORMING TO ANMA C905.
- STEEL CASING SHALL BE REQUIRED FOR ALL THROUGHFARE AND COLLECTOR ROADWAYS, CREEK CROSSINGS AND AT ENGINEERING REPRESENTATIVE'S DISCRETION FOR ALL SANITARY SEWER LINES AND FORCE MAINS. THE STEEL CASING SHALL HAVE A MINIMUM WALL THICKNESS OF 0.375 INCHES, ROLLED STEEL TYPE; SPIRAL WILL NOT BE ALLOWED.
- SEPARATION DISTANCES BETWEEN ALL SANITARY SEWER LINES AND WATER MAINS SHALL BE GOVERNED BY TCRQ "TEXAS COMMISSION OF ENVIRONMENTAL QUALITY" CHAPTER 290.
- SANITARY SERVICE LATERALS ARE INSTALLED AT A MINIMUM SLOPE OF 1.00% OR GREATER.
- ALL SANITARY SEWER LINES, SERVICE LATERALS AND FORCE MAINS SHALL BE INSTALLED WITH #14 AWG TRACER WIRE, ATTACHED TO THE PIPE AT A 3'O'CLOCK POSITION USING TAPE OR WIRES AND HAVE A CONTINUITY TEST PERFORMED BEFORE ACCEPTANCE BY THE CITY OF CONROE.
- METALLIC UNDERGROUND MARKING TAPE SHALL BE LAID 12" ABOVE ALL SANITARY SEWER LINES, SERVICE LATERALS AND FORCE MAINS. MARKING TAPE SHALL BE LABELED, "PRESSURIZED WASTEWATER BELOW FOR FORCE MAINS AND "SANITARY SEWER BELOW" FOR SANITARY SEWER. PIPES CONTINUOUSLY REPAIRED WITH LETTER SIZING 1 1/2 INCHES.
- NO SEWER PIPE SHALL BE LAID ON AN UNSTABLE FOUNDATION. IF UNSTABLE FOUNDATION IS FOUND THEN DETAIL SW-13 SHALL BE REQUIRED. NO PIPE SHALL BE COVERED WITHOUT A CITY INSPECTOR'S APPROVAL.
- BACKFILL AND BEDDING FOR SANITARY SEWER LINES AND FORCE MAINS MUST MEET ALL MINIMUM REQUIREMENTS OF ASTM D-2321 AND MUST BE IN ACCORDANCE WITH CITY OF CONROE BEDDING AND TRENCH DETAIL SW-12.
- CEMENT STABILIZED SAND (CSS) SHALL BE 100 PSI WITHIN 48 HOURS.

CITY OF CONROE
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SANITARY SEWER CONSTRUCTION NOTES 1 OF 2
 Revision Date 03/01/2018
 Approved By: *[Signature]* SWR-01A



CITY OF CONROE
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CONROE, TEXAS 77308 (832) 523-3300

WATER MAIN BEDDING AND TRENCH DETAIL
 Revision Date 03/11/2019
 Approved By: *[Signature]* WTR-02

- TESTING OF THE GRAVITY SANITARY SEWER PIPES AND FORCE MAINS SHALL BE PER CITY OF CONROE DESIGN MANUAL AND TCRQ SPECIFICATIONS WITH THE MOST STRINGENT, SHALL GOVERN.
- A DEFLECTION TEST SHALL BE REQUIRED AFTER THE BACKFILL HAS BEEN IN PLACE A MINIMUM OF 30 DAYS. THIS TEST SHALL BE DONE BY FILLING A SAND LINE WITH AN ATTACHED MANHOLE FROM MANHOLE TO MANHOLE. THE MANHOLE SHALL HAVE AN OUTSIDE DIAMETER THAT IS AT LEAST 90% OF THE ORIGINAL INSIDE DIAMETER OF THE PIPE. MANHOLES TO BE MANUFACTURED WITH A MINIMUM OF SEVEN (7) RUNNERS, WITH EACH RUNNER BEING A MINIMUM OF 3 INCHES LONG. ANY PIPE NOT PASSING THIS TEST SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL POLLING DEVICES.
- THE TOTAL INFILTRATION / EXFILTRATION MUST NOT EXCEED 50 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER 24 HOURS AT A MINIMUM TEST HEAD OF TWO (2) FEET ABOVE THE CROWN OF A PIPE AT AN UPSTREAM MANHOLE, OR AT LEAST TWO (2) FEET ABOVE RECEIVING GROUNDWATER LEVEL, WHICHEVER IS GREATER. OR AN AIR TEST SHALL BE REQUIRED PER 30 TAC 5 217-57(A) (1) AND CONFORMING TO ASTM C924 OR F1417 WELCHVEE APPLIES.
- CONTRACTOR / OWNER SHALL KEEP RECORD OF LOCATION OF ALL STACKS, STUBS, SEWER LEADS, THROUGHOUT ENTIRETY OF THE PROJECT. THE "RECORD" (AS-BUILT) DRAWINGS MUST SHOW THE EXACT LOCATION AND BE SUBMITTED BACK TO THE CITY OF CONROE, UPON COMPLETION OF THE JOB FOR FINAL ACCEPTANCE.

CITY OF CONROE
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SANITARY SEWER CONSTRUCTION NOTES 2 OF 2
 Revision Date 03/01/2018
 Approved By: *[Signature]* SWR-01B

- THE FOLLOWING NOTES OR PHRASES ARE SPECIFIC TO PAVING IMPROVEMENTS AND SHALL BE INCLUDED IN ALL SETS OF CONSTRUCTION DRAWINGS CONTAINING ANY PAVING IMPROVEMENTS. THE PLAN AND PROFILE SHEETS MAY IDENTIFY AND REFERENCE THE NOTES OR PHRASES IN THE PLAN VIEW BY NOTE NUMBER OF THE SPECIFIC TREATMENT REQUIRED.
- IF PROPOSED SIDEWALK BASE WITH 3" NON TYPE "D" HOT MIX ASPHALTIC CONCRETE SURFACING, FOR URBAN ESTATES ONLY, SEMI-RIGID BASE MAY BE 8" INCH CRUSHED LIMESTONE, OR 6" INCH HOT MIX ASPHALTIC CONCRETE.
 - EXPOSE 15 INCHES OF REINFORCING STEEL AT ALL PROPOSED SAWED JOINTS. IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS PER NOTE #4.
 - REQUIRED A ONE (1) INCH REDWOOD EXPANSION BOARD OR PRE-MOLDED NON-EXTENDING JOINT BETWEEN SIDEWALK AND BACK OF CURB.
 - HORIZONTAL DOWELS SHALL BE NO. 6 BARS, 24 INCHES LONG, DRILLED AND EMBEDDED 8 INCHES INTO THE CENTER OF THE EXISTING SLAB WITH "PO R/C" OR EQUAL. DOWELS SHALL BE 4 INCHES CENTER TO CENTER UNLESS OTHERWISE SPECIFIED.
 - WHEN PROPOSED PAVEMENT ENDS AT A CONSTRUCTION JOINT LEAVE 16 INCHES OF REINFORCING STEEL EXPOSED BEYOND PAVEMENT, COAT WITH ASPHALT, AND WRAP WITH BURLAP FOR FUTURE PAVEMENT TIE-IN. AT EXPANSION JOINTS, EXTEND DOWELS 8 INCHES, COAT AND WRAP SAME AS CONSTRUCTION JOINTS.
 - CONTINUOUS REINFORCED CONCRETE PAVEMENT, WHEN SPECIFIED SHALL BE PER TxDOT STANDARD DETAILS.
 - WHEREVER A SIDEWALK IS REQUIRED BY CITY ORDINANCE, PROVIDE WHEELCHAIR RAMP AND/OR SIDEWALK DETAILS.
 - ADJUST EXISTING MANHOLE FRAMES AND COVERS TO FIT NEW GRADE.
 - ADJUST EXISTING WATER VALVE BOXES TO NEW PAVING GRADE. REPLACE ALL MISSING OR DAMAGED VALVE BOXES AND COVERS.
 - PLACE WHITE OR YELLOW PLASTIC MARKER OR PAINT AS SHOWN BY THE UNIFORM TRAFFIC MANUAL FOR PAVEMENT MARKINGS.
 - PROVIDE A CONCRETE PAVING HEADER AT THE END OF THE PAVEMENT.
 - T. C. INDICATES TOP OF CURB ELEVATION AND T. P. INDICATES TOP OF PAVEMENT ELEVATION.
 - CURB RADIUS AT STREET INTERSECTIONS TO BE 24.00 FEET TO BACK OF CURB WITH A MINIMUM OF ONE (1) PERCENT GRADE UNLESS OTHERWISE NOTED.
 - GUIDELINES SET FORTH IN THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" WILL BE OBSERVED.
 - TRANSVERSE EXPANSION JOINTS SHALL BE INSTALLED AT ALL RADIUS RETURNS AND AT A MAXIMUM SPACING OF 60 FOOT INTERVALS.
 - CONTRACTOR WILL USE CONTINUOUS LONGITUDINAL REINFORCING BARS IN CURBS.
 - CYLINDER COMPRESSION TEST OR BEAM FLEXURAL TEST SHALL BE REQUIRED. TWO SAMPLES SHALL BE TAKEN EACH 100 CUBIC YARDS OF CONCRETE POURED. FOR SMALLER QUANTITIES, TWO SAMPLES SHALL BE TAKEN REGARDLESS OF THE AMOUNT OF CONCRETE POURED EACH DAY. CONCRETE SHALL HAVE 5 BAGS CEMENT PER CUBIC YARD AND A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI IN 28 DAYS OR A MINIMUM FLEXURAL STRENGTH OF 600 PSI IN 28 DAYS. NO TRAFFIC SHALL BE ALLOWED ON CONCRETE FOR 28 DAYS. IF EXTRA TESTS ARE MADE 70% OF THE 28 DAY STRENGTH IS ASHED BY THE CITY ENGINEER AT A MINIMUM FLOW TRAFFIC ON THE PAVEMENT IF IT DEEMS NECESSARY.
 - PRIOR TO PLAN APPROVAL, A CERTIFIED LAB SHALL DETERMINE THE PERCENTAGE OF CEMENT CONTENT FOR SUBGRADE STABILIZATION IN SANDY SOILS WITH 0% LESS THAN 15% TO OBTAIN A COMPRESSIVE STRENGTH OF 400 PSI IN 28 DAYS. THE LAB SHALL ALSO DETERMINE THE PERCENTAGE OF LIME CONTENT FOR SARGRADE STABILIZATION IN CLAY SOILS WITH A P.I. GREATER THAN 20.
 - A CONCRETE MIX DESIGN IN THE CERTIFIED LAB SHALL BE SUBMITTED TO AND APPROVED BY THE CITY ENGINEER BEFORE ANY CONCRETE IS POURED.

CITY OF CONROE
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CONROE, TEXAS 77308 (832) 523-3300

STANDARD CITY OF CONROE PAVING CONSTRUCTION NOTES

- A MINIMUM OF TWO (2) COMPACT TESTS SHALL BE PERFORMED A MAXIMUM DISTANCE OF 500 FEET, AND FOR EACH 20' OF MAXIMUM THICK LAYERS OF FILL. IN AREAS WHERE NO FILL IS REQUIRED, TWO (2) SAMPLES SHALL BE TAKEN AT A MAXIMUM DISTANCE OF 500 FEET. ADDITIONAL TESTING SHALL BE PERFORMED IF SEEN NECESSARY BY THE ENGINEER. NO ADDITIONAL LAYERS OF FILL SHALL BE MADE WITHOUT HAVING THE LABS WRITTEN APPROVAL OF COMPLETED LAYERS. PROOF ROLLING SHALL BE REQUIRED BY THE INSPECTOR ON EACH LAYER PLACED AND ANY "PUMPING" AREAS SHALL BE IMMEDIATELY AND REPLACED OR STABILIZED AND RE-COMPACTED TO A PASSING DENSITY.
- CONSTRUCTION OF ITEMS THAT ARE NOT SPECIFICALLY ADDRESSED TO BE IN ACCORDANCE WITH THE TxDOT SPECIFICATIONS (LATEST REVISION).
- RIGHT-OF-WAY SHALL BE SLOPED FROM THE PROPERLY TO THE TOP OF CURBS AND HYDROMALCHER OR SODDED BEFORE FINAL ACCEPTANCE BY THE CITY TO CONTROL EROSION INTO THE STREET AND STORM SEWER.
- MEMBRANE CURING TYPE 2, WHITE PIGMENTED CONFORMING TO DMS-460, SHALL BE USED FOR CURING ALL CONCRETE SURFACES IMMEDIATELY AFTER FINISHING OF SURFACES AND SHALL BE IN ACCORDANCE WITH TxDOT ITEM 360.
- MATERIAL USED FOR FILL SHALL BE IDENTIFIED BY A LAB TO HAVE A PLASTICITY INDEX BETWEEN 10 AND 20. FORMS SHALL BE SET TO THE PROPER GRADE AND PROPERLY SUPPORTED SO THAT NO SETTLEMENT OCCURS WITH THE PAVING ACTIVITIES.
- ALL CONCRETE SHALL BE VIBRATED BY MECHANICAL MEANS TO INSURE PROPER COMPACTION AND NO HONEY COMBS. CONCRETE SHALL NOT BE PLACED WHEN THE TEMPERATURE IS BELOW 40° F AND FALLING, BUT MAY BE PLACED WHEN TEMPERATURE IS ABOVE 30° F AND RISING. THE TEMPERATURE SHALL BE TAKEN IN THE SHADE AND AWAY FROM ARTIFICIAL HEAT.
- THE CONTRACTOR SHALL ERECT AND MAINTAIN BARRICADES TO ADEQUATELY PROTECT THE PAVEMENT. THE CONTRACTOR SHALL HAVE PERSONNEL ON SITE UNTIL THE PAVEMENT HAS REACHED SUFFICIENT STRENGTH AS NOT TO BE DAMAGED BY ANIMALS OR FOOT TRAFFIC.
- JOINT SEALING MATERIAL SHALL BE A NOT FURRED RUBBER TYPE AND SHALL MEET THE REQUIREMENTS IN ACCORDANCE WITH DMS-610. THIS WILL NOT BE ALLOWED.
- JOINTS SHALL BE CLEANED OF ALL SCALE, DIRT, DUST, CURING COMPOUND, AND CONCRETE TO THE WIDTH AND DEPTH OF THE JOINT AND SHALL BE DRY BEFORE SEALING IS PERFORMED.
- REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615 GRADE 60, GRADE 40 ONLY FOR THIS REQUIRING MEMORO. REINFORCING STEEL SHALL BE SUPPORTED ON CHAIRS STRONG ENOUGH TO HOLD IT IN PLACE AND BE TIED.

CITY OF CONROE
ENGINEERING
300 N DAVIS P.O. BOX 3066
CONROE, TEXAS 77308 (832) 523-3300

STANDARD CITY OF CONROE PAVING CONSTRUCTION NOTES (CONTINUED)

- MATERIALS, CONSTRUCTION AND TESTING TO BE IN ACCORDANCE WITH THE CITY OF CONROE ORDINANCES AND SPECIFICATIONS, LATEST PRINTING AND AMENDMENTS THERE TO.
- ALL EXISTING UNDERGROUND UTILITIES ARE NOT GUARANTEED TO BE COMPLETED OR DEFINITE, BUT WHEN OBTAINED FROM THE BEST INFORMATION AVAILABLE, CONTRACTOR HAS SOLE RESPONSIBILITY FOR FIELD VERIFICATION OF ALL EXISTING UTILITIES AS SHOWN ON DRAWINGS. CONTRACTOR SHALL COORDINATE ALL CONFLICTS WITH THE APPROPRIATE GOVERNING AGENCY.
- THE LOCATION OF ALL UNDERGROUND UTILITIES, ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL REQUEST THE EXACT LOCATION OF THESE UTILITIES BY CALLING THE RESPECTIVE UTILITY COMPANY AT LEAST 48 HOURS BEFORE COMMENCING WORK. AT THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH OCCURS DUE TO HIS FAILURE TO REQUEST THE LOCATION AND PRESERVATION OF THESE UNDERGROUND UTILITIES. B) ANY DAMAGE TO EXISTING FACILITIES INCURRED AS A RESULT OF CONSTRUCTION OPERATIONS WILL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.
- TEXAS LAW ARTICLE 1492C, PROHIBITS ALL ACTIVITIES IN WHICH PERSONS OR EQUIPMENT MAY COME WITHIN 6 FEET OF ENERGIZED OVERHEAD POWER LINES. FEDERAL REGULATION, TITLE 29 PART 1910.331(A) AND PART 1926.401 (A)(1) REQUIRE A MINIMUM CLEARANCE OF 10 FEET FROM THESE FACILITIES. THE ABOVE LAWS CARRY BOTH CRIMINAL AND CIVIL LIABILITIES. WITH CONTRACTORS AND OWNERS BEING LEGALLY RESPONSIBLE FOR THE SAFETY OF WORKERS UNDER THESE LAWS. IF EITHER THE CONTRACTOR OR THE OWNER MUST WORK NEAR ENERGIZED OVERHEAD POWER LINES, CALL THE POWER COMPANY FOR THE LINES TO BE DE-ENERGIZED AND/OR MOVED AT THEIR EXPENSE.
- CONSTRUCTION SHALL COMPLY WITH THE LATEST OSHA REGULATIONS AND STATE OF TEXAS LAW CONCERNING TRENCHING AND SHORING. CONTRACTOR SHALL PROVIDE A TRENCH SAFETY SYSTEM TO MEET, AS A MINIMUM, THE REQUIREMENTS OF OSHA SAFETY AND HEALTH REGULATION, PART 1926, SUB-PART P AS PUBLISHED IN THE FEDERAL REGISTER, VOLUME 54, NO. 206 DATED OCTOBER 31, 1989, AND CITY OF CONROE ORDINANCE NUMBER 1033-87, AND LATEST REVISIONS.
- DETAILS PREPARED BY THE CITY OF CONROE DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONTRACTOR OR ITS EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS, INCLUDING THE PLANS AND SPECIFICATIONS REQUIRED BY CHAPTER 766, SUBCHAPTER "C" OF THE TEXAS HEALTH AND SAFETY CODE.
- ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE PROJECT ENGINEER. ALL CONSTRUCTION RUNOFF SHALL COMPLY WITH WATER MANAGEMENT FOR CONSTRUCTION ACTIVITIES AND THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) REQUIREMENTS.
- EXISTING PAVEMENT, CURBS, SIDEWALKS AND DRIVEWAYS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED TO CITY OF CONROE STANDARDS. ALL ASPHALT AND CONCRETE DAMAGED DURING CONSTRUCTION SHALL BE BACKFILLED WITH CEMENT STABILIZED SAND (CSS) AND RETURNED TO EXISTING CONDITIONS. ALL STATE AND COUNTY HIGHWAY PAVEMENTS AND SIDEWALKS SHALL BE REPAIRED ACCORDING TO THE RULES, REGULATIONS AND REQUIREMENTS FOR APPROVAL AND ACCEPTANCE BY SAO AGENCIES. SEE CITY OF CONROE "DESIGN MANUAL FOR WATER MAINS, SANITARY SEWER, STORM DRAINAGE AND STREET PAVING".
- EXISTING ROADS AND/OR RIGHT-OF-WAYS DISTURBED DURING CONSTRUCTION SHALL BE AS GOOD OR BETTER THAN THE CONDITION PRIOR TO STARTING THE WORK, UPON COMPLETION OF THE PROJECT.
- ALL SAWCUTS OF EXISTING PAVED SURFACES SHALL BE FULL DEPTH SAWCUTS.
- AFTER ALL DISTURBED AREAS WITHIN THE CONSTRUCTION LIMITS HAVE BEEN COMPLETED TO THE LINES, GRADES, AND CROSS-SECTIONS SHOWN ON THE PLANS, HYDROMALCHING AND OR SOLID SODDING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS IN ORDER TO ESTABLISH ADEQUATE VEGETATION COVERAGE TO ELIMINATE EROSION. IF NO ACTIVITY HAS BEEN PERFORMED WITHIN THE DISTURBED CONSTRUCTION AREAS FOR 14 DAYS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE AREAS FROM EROSION. IF NO PROVISION FOR PLANTING OR SODDING IS SHOWN ON THE PLANS OR SPECIFICATIONS, THE MINIMUM REQUIREMENT FOR THIS ITEM WILL BE IN ACCORDANCE WITH THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND STREET PAVING.
- CONTRACTOR / OWNER ARE TO OBTAIN ALL APPLICABLE PERMITS REQUIRED BY GOVERNING AUTHORITIES AT THEIR EXPENSE PRIOR TO COMMENCEMENT OF WORK.
- CONTRACTOR / OWNER SHALL GIVE 48 HOURS NOTICE TO ALL AUTHORIZED AGENCIES IN CHARGE OF PRIVATE AND PUBLIC UTILITIES PRIOR TO COMMENCEMENT OF WORK WITHIN THE CITY OF CONROE AUTHORIZED AGENCIES RIGHT-OF-WAYS OR EASEMENTS.

CITY OF CONROE
ENGINEERING
300 N DAVIS P.O. BOX 3066
CONROE, TEXAS 77308 (832) 523-3300

STANDARD CITY OF CONROE GENERAL CONSTRUCTION NOTES

- CONTRACTOR / OWNER SHALL COVER ANY OPEN EXCAVATIONS WITH ANCHORED STEEL PLATES DURING NON-WORKING HOURS, ALONG EXISTING ROADWAYS AND TRAFFIC AREAS.
- CONTRACTOR / OWNER SHALL PROVIDE ADEQUATE FLAGMEN, SIGNING, STOPPING AND WARNING TRAFFIC CONTROL DEVICES, DURING CONSTRUCTION IN ACCORDANCE WITH THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL". CONTRACTOR SHALL MAINTAIN AT LEAST ONE LANE OF TRAFFIC OPEN IN EACH DIRECTION DURING WORKING HOURS OR PROVIDE ALL WEATHER DETOURS AROUND CONSTRUCTION SITE, PROVIDE PUBLIC NOTIFICATION, AND USE UNIFORMED POLICE OFFICERS TO CONTROL TRAFFIC, ESPECIALLY IN HEAVY TRAFFIC LOCATIONS.
- CONTRACTOR / OWNER SHALL ERECT AND MAINTAIN BARRICADES TO ADEQUATELY PROTECT THE PAVEMENT, SIDEWALKS, DRIVEWAY, ROADWAY, AND PARKING LOTS FROM DAMAGE CAUSED BY ANIMALS OR FOOT TRAFFIC. THE CONTRACTOR SHALL HAVE PERSONNEL ON SITE UNTIL THE PAVEMENT HAS REACHED SUFFICIENT STRENGTH WHILE PAVEMENT IS CURING AND UNTIL REACHED 70% STRENGTH.
- CONTRACTOR / OWNER SHALL BE RESPONSIBLE ON A DAILY BASIS FOR REMOVING MUD, DIRT, AND DEBRIS DEPOSITED ON EXISTING PAVEMENT DUE TO CONSTRUCTION ACTIVITY. ALL EXISTING STREETS AND ADJACENT PAVEMENT AREAS IMPACTED BY CONSTRUCTION ACTIVITY SHALL BE CLEANED USING A STREET SWEEPER. THIS ACTIVITY SHALL BE INCIDENTAL TO ALL OTHER ITEMS.
- THE CONTRACTOR / OWNER SHALL BE RESPONSIBLE FOR THE COORDINATION OF THEIR CONSTRUCTION ACTIVITIES WITH THE UTILITY COMPANIES AS TO THE RELOCATION OF THEIR FACILITIES, IF NEEDED.
- THE CONTRACTOR / OWNER SHALL REMOVE ALL NON-PERMANENT SIGNS FROM THE R.O.W. AND/OR EASEMENT LIMITS, AND RETURN THEM TO THE SIGN OWNERS FOR THEM TO HAVE PLACED AT THEIR EXPENSE ON PROPERTY OTHER THAN THAT STATED ABOVE UNLESS OTHERWISE SPECIFIED.
- THE CONTRACTOR / OWNER SHALL DETERMINE THE EXACT LOCATION AND DEPTHS OF ALL EXISTING UTILITIES BEFORE COMMENCING ANY WORK, AND SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGES CAUSED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ALL UNDERGROUND UTILITIES. THE LOCATION OF EXISTING UTILITIES ON THESE PLANS ARE SHOWN IN AN APPROXIMATE LOCATION ONLY.
- THE CONTRACTOR / OWNER SHALL BE RESPONSIBLE FOR RELOCATING OR REPLACING ALL EXISTING FENCES INSIDE THE WORK ZONE, TO EXISTING OR BETTER CONDITION, EXCEPT FOR THOSE THAT FALL WITHIN ROAD RIGHT-OF-WAY, IN WHICH THE FENCE SHALL BE RELOCATED OR REPLACED TO A DISTANCE OF ONE (1) FOOT OUTSIDE THAT RIGHT-OF-WAY.
- THE CONTRACTOR / OWNER IS RESPONSIBLE FOR RELOCATING ALL EXISTING IRRIGATION OUTSIDE OF THE RIGHT-OF-WAY AND/OR EASEMENT UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- ALL EQUIPMENT SHALL BE REMOVED FROM THE PROJECT SITE ONCE THE PROJECT IS COMPLETED, AS WELL AS, ALL REMAINING DEBRIS WITHIN PROJECT SHALL BE REMOVED AND PROPERLY DISPOSED OF AT AN APPROVED DISPOSAL SITE.

CITY OF CONROE
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300 N DAVIS P.O. BOX 3066
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STANDARD CITY OF CONROE GENERAL CONSTRUCTION NOTES (CONTINUED)

CITY OF CONROE
ENGINEERING
300 N DAVIS P.O. BOX 3066
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WATER MAIN BEDDING AND TRENCH DETAIL
 Revision Date 03/11/2019
 Approved By: *[Signature]* WTR-02

CITY OF CONROE
ENGINEERING
300 N DAVIS P.O. BOX 3066
CONROE, TEXAS 77308 (832) 523-3300

SANITARY SEWER CONSTRUCTION NOTES 2 OF 2
 Revision Date 03/01/2018
 Approved By: *[Signature]* SWR-01B

CITY OF CONROE
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300 N DAVIS P.O. BOX 3066
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STANDARD CITY OF CONROE PAVING CONSTRUCTION NOTES (CONTINUED)

CITY OF CONROE
ENGINEERING
300 N DAVIS P.O. BOX 3066
CONROE, TEXAS 77308 (832) 523-3300

STANDARD CITY OF CONROE GENERAL CONSTRUCTION NOTES (CONTINUED)

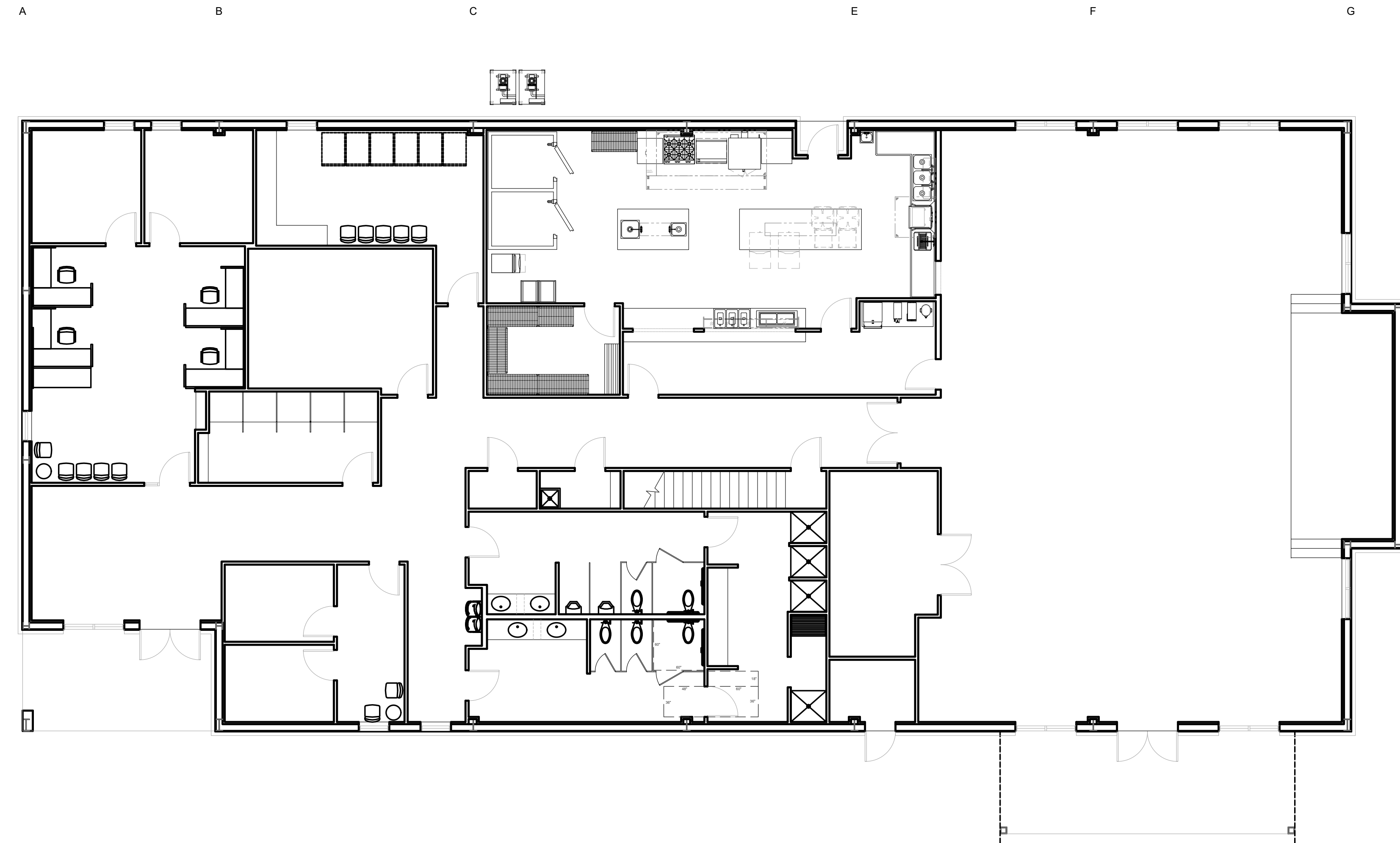
"COMPASSION UNITED"

350 FOSTER DR.
CONROE, TX 77301

Preliminary

DRAWING INDEX

FS0.0	COVER SHEET
FS1.0	EQUIPMENT FLOOR PLAN
FS2.0	NOT USED
FS3.0	PLUMBING ROUGH-INS
FS4.0	ELECTRICAL ROUGH-INS
FS5.0-FS5.7	HOOD SUBMITTAL
FS6.0	ELEVATIONS
FS7.0-FS7.5	VENDOR SUBMITTAL



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DRAWN BY:	DATE:	
J.A.K.	11/02/23	
REVISIONS		
NO.	DATE	DESCRIPTION

C & T DESIGN & EQUIPMENT CO., INC.
9555 BAYTHORNE DR. SUITE 200, HOUSTON, TX 77041
PHONE: 713-682-6390
DESIGN & SALES TO ALL TYPES OF FOOD SERVICE OPERATIONS
SCALE: 1/4"=1'-0"
FOODSERVICE EQUIPMENT COVER SHEET

PROJECT MANAGER
E-MAIL ADDRESS
MATT CLARK
mclark@c-t-design.com

COMPASSION UNITED
350 FOSTER DR.
CONROE, TX 77301



JOB NO. _____

SHEET NUMBER
FS0.0

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DRAWN BY: J.A.K. DATE: 11/02/23
 REVISIONS
 NO. DATE DESCRIPTION

C & T DESIGN & EQUIPMENT CO., INC.
 9555 BAYTHORNE DR. SUITE 200, HOUSTON, TX 77041
 PHONE: 713-682-6390
 DESIGN & SALES TO ALL TYPES OF FOOD SERVICE OPERATIONS
FOODSERVICE EQUIPMENT FLOOR PLAN
 SCALE: 1/4"=1'-0"

PROJECT MANAGER
 E-MAIL ADDRESS
 MATT CLARK
 mclark@c-t-design.com

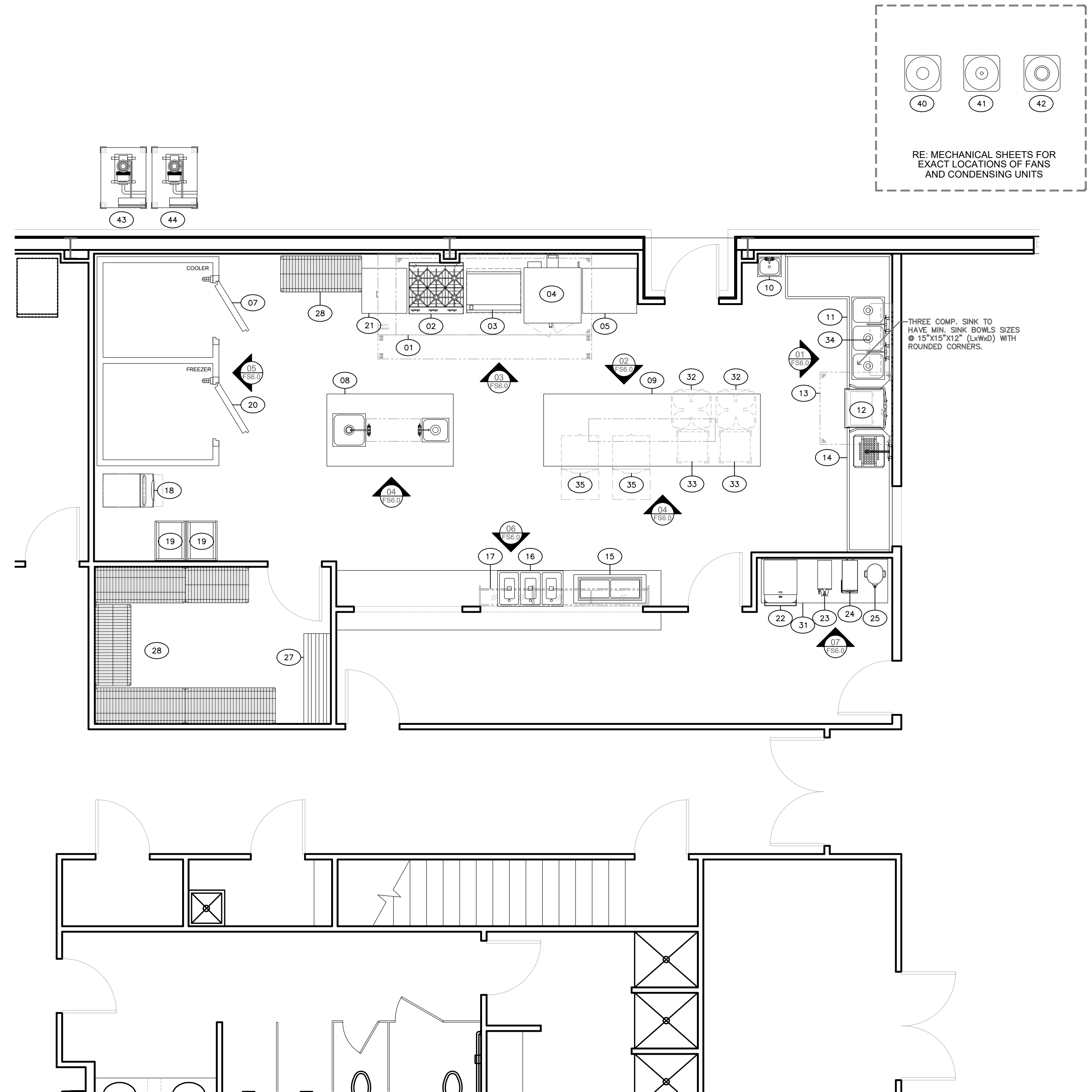
COMPASSION UNITED
 350 FOSTER DR.
 CONROE, TX 77301



JOB NO. _____

SHEET NUMBER
FS1.0

EQUIPMENT SCHEDULE					
ITEM NO	QTY	EQUIPMENT CATEGORY	MANUFACTURER	MODEL NUMBER	EQUIPMENT REMARKS
01	1	EXHAUST HOOD	CAPTIVE AIRE	CUSTOM	-
02	1	RANGE, RESTAURANT, GAS	VULCAN	36S-6B-N	-
03	1	GRIDDLE, GAS	VULCAN	VCRG36T	2ES-3036 STAND W/ CASTERS
04	1	CONVECTION OVEN	SOUTHBEND	SLGB/12SC	-
05	1	TABLE, WORK, W/UNDERSHELF	AERO MANUFACTURING	2TS-3036	-
07	1	WALK-IN COOLER	ARCTIC	CUSTOM	-
08	1	WORK TABLE W/ SINKS	ADVANCE TABCO	TSS-487	ODS-15-36 DOUBLE OVERSHELF
09	1	WORK TABLE	ADVANCE TABCO	TSS-4812	ODS-15-84 DOUBLE OVERSHELF
10	1	HAND SINK	KROWNE	HS-10	-
11	1	THREE COMP SINK DISHTABLE	CUSTOM FABRICATION	CUSTOM	-
12	1	WAREWASHER	CHAMPION INDUSTRIES	DH2000	-
13	1	CONDENSATE HOOD	CAPTIVE AIRE	CUSTOM	-
14	1	SOILED DISHTABLE	ADVANCE TABCO	DTS-S30-84R	-
15	1	DROP-IN, COLD WELL	HATCO	CWB-S2	-
16	1	HOT WELLS	HATCO	HWBI-3D	-
17	1	SNEEZE GUARD	CUSTOM FABRICATION	CUSTOM	-
18	1	ICE MAKER	MANITOWOC	IDP0320A	D-420 BIN
19	2	RACK, PAN	NEW AGE INDUSTRIAL	1331	-
20	1	WALK-IN FREEZER	ARCTIC	CUSTOM	-
21	1	TABLE, WORK, W/UNDERSHELF	AERO MANUFACTURING	2TS-3030	-
22	1	SODA DISPENSER	BY VENDOR	-	BY VENDOR
23	1	COFFEE MAKER	SINGLE	23050.0007	-
24	1	TEA MAKER	TB3Q 29"	36700.0013	-
25	1	BEVERAGE DISPENSER	TDO-5	33000.0023	-
26	-	SPARE NUMBER	-	-	-
27	1	DUNNAGE RACK	WINHOLT	ALSQ-5-1220	-
28	1LOT	DRY STORAGE SHELVING	OLYMPIC	J2454K	-
29	-	SPARE NUMBER	-	-	-
30	-	SPARE NUMBER	-	-	-
31	1	ENCLOSED BASE BEVERAGE TABLE	ADVANCE TABCO	EHK-SS-307M-X	-
32	2	DISHRACK DOLLY	METRO	PCD11	-
33	2	DISHRACK DOLLY	METRO	D2020N	-
34	1	POT RACK, WALL MOUNT	ADVANCE TABCO	PS-15-48	-
35	2	WARMER, DRAWER TYPE	ALTO-SHAAM	500-2D	-
40	1	EXHAUST FAN	CAPTIVE AIRE	-	-
41	1	CONDENSATE FAN	CAPTIVE AIRE	-	-
42	1	SUPPLY FAN	CAPTIVE AIRE	-	-
43	1	WALK-IN COOLER CONDENSING UNIT	ARCTIC	CUSTOM	-
44	1	WALK-IN FREEZER CONDENSING UNIT	ARCTIC	CUSTOM	-



RE: MECHANICAL SHEETS FOR EXACT LOCATIONS OF FANS AND CONDENSING UNITS

THREE COMP. SINK TO HAVE MIN. SINK BOWLS SIZES @ 15"X15"X12" (LxWxD) WITH ROUNDED CORNERS.

FOODSERVICE EQUIPMENT FLOOR PLAN
 SCALE: 1/4"=1'-0"

WALK-IN NOTES & CALCULATIONS					
- WALK-IN COOLER/FREEZER PANELS TO BE HOUSTON CODE CLASS 1 MEETING CITY OF HOUSTON REQUIREMENTS FOR SMOKE TOXICITY AND FLAME SPREAD.					
- WALK-IN COOLER/FREEZER CONDENSING UNIT TO MEET UNIFORM MECHANICAL CODE SECTION 1104 - REQUIREMENTS FOR REFRIGERANT AND REFRIGERATION SYSTEM USE.					
TABLE 11-A REFRIGERANT GROUPS AND ALLOWABLE QUANTITIES:					
REFRIGERANT	ALLOWABLE POUNDS / 1000 CUBIC FEET	COMPARTMENT CUBIC FOOTAGE	ALLOWABLE POUNDS FOR THIS APPLICATION	SYSTEM POUNDS	COMPRESSOR HORSEPOWER
R-404A COOLER	16.9 POUNDS	236 ft³	4.0 POUNDS	3.5 POUNDS	0.75 HP
R-404A FREEZER	16.9 POUNDS	229 ft³	3.9 POUNDS	3.0 POUNDS	2.5 HP

COOLER NOTE

- WALK-IN COOLER(S) AND/OR FREEZER(S) AND COMPONENTS SHALL BE CERTIFIED BY INDEPENDENT TESTING LABORATORIES FOR COMPLIANCE WITH THE CODE REQUIREMENTS FOR FLAME SPREAD, SMOKE DEVELOPEMENT, TOXICITY AND SANITATION.
- WALK-IN COOLER(S) AND/OR FREEZER(S) AND COMPONENTS SHALL CARRY THE NSF MARK TO CERTIFY THEY MEET THE REQUIREMENTS OF NSF STANDARD #7.

UNDERWRITERS LABORATORIES Inc.

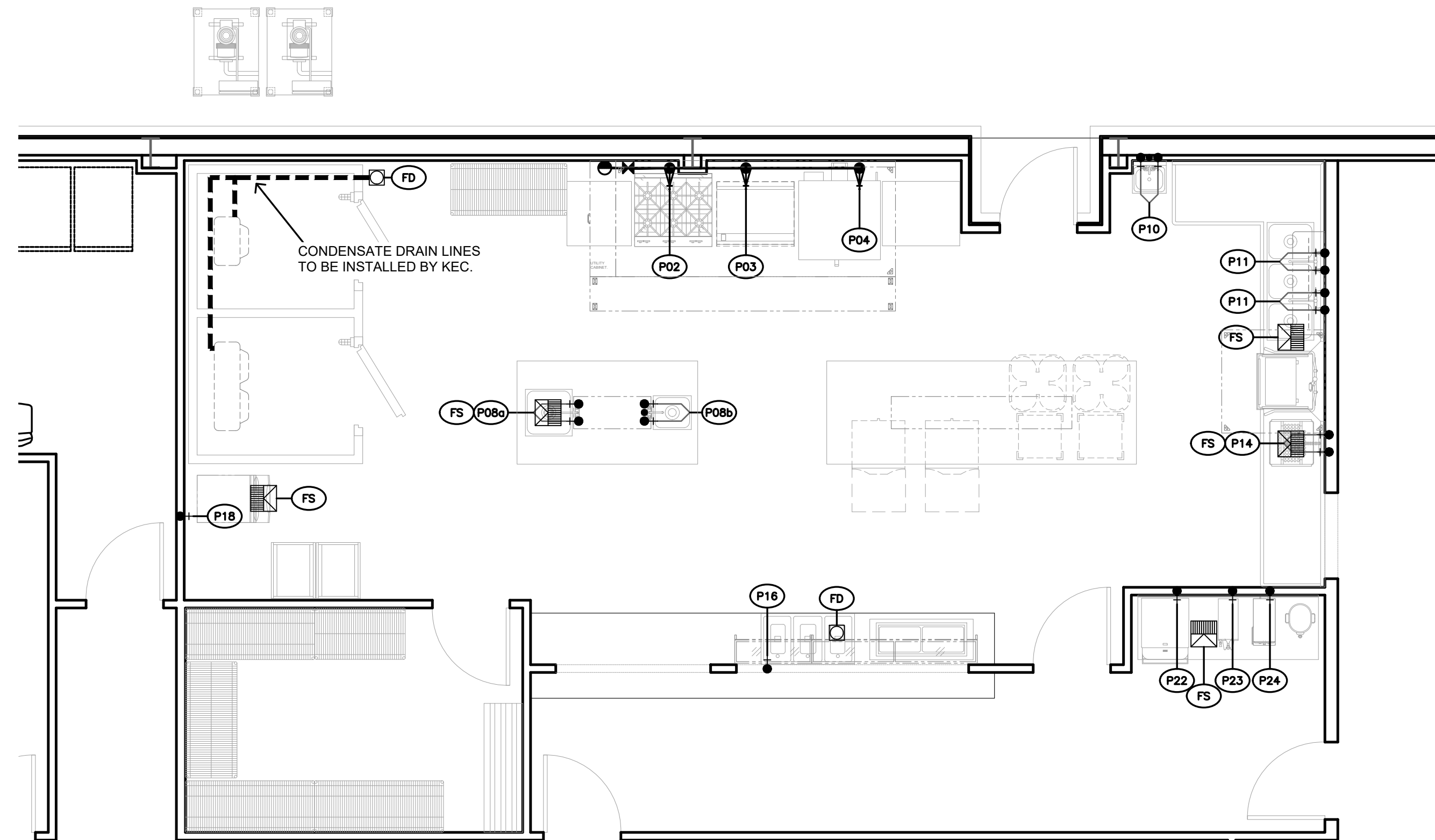
CLASSIFIED BUILDING UNIT

IF88

SURFACE BURNING CHARACTERISTICS

4" CORE MATERIAL	4" THICK UNPAINTED ALUMINUM	4" THICK UNPAINTED GALVANIZED STEEL OR STAINLESS STEEL PANEL
FLAME SPREAD	25	20
SMOKE DEVELOPEMENT	250	400
		25 OVER 500

- HEALTH DEPARTMENT NOTES**
- ALL NEW EXHAUST HOODS WILL BE CONSTRUCTED AS PER THE FOLLOWING STANDARDS: NSF, UL AND NFPA-96. ALL NEW HOODS TO BEAR UL CLASSIFIED LABEL WITHOUT DAMPERS IN EXHAUST VENT COLLARS. HOODS ARE DESIGNED TO MEET OR EXCEED 50 FPM CAPTURE VELOCITY AT THE COOKING SURFACE EDGE AND HAVE 6" MINIMUM OVERHANG AT ALL EXPOSED COOKING AREAS.
 - ALL COOKING EQUIPMENT UNDER EXHAUST HOODS ARE EITHER ON CASTERS WITH FLEXIBLE UTILITY QUICK DISCONNECTS OR FIXED ON STAINLESS STEEL LEGS AND SEALED TO WALLS WITH CLEAR SILICONE SEALANT.
 - ICE MACHINES TO BE HELD 6" OFF WALL. IF VACUUM BREAKER IS REQUIRED BY CODES IT WILL BE FURNISHED BY PLUMBING CONTRACTOR.
 - HOT FOOD WELLS AND STEAM TABLES ARE FILLED WITH WATER BY COUNTER TOP FAUCETS OR ADJACENT SINK FAUCETS.
 - CABINETS OR COUNTERS WITH EXPOSED FOOD OR CLEAN UTENSILS WILL BE PROVIDED WITH DOORS OR NO OPEN SHELVING BELOW 18" ABOVE FLOOR.
 - THE HOODS AND EXHAUST DUCT SYSTEMS WILL BE PROVIDED WITH AN AUTOMATIC FIRE EXTINGUISHING SYSTEM.
 - ALL REFRIGERATION EQUIPMENT SHALL HAVE THERMOMETERS WHICH ARE EASILY READABLE, IN PROPER WORKING CONDITION, AND ACCURATE WITHIN A RANGE OF PLUS OR MINUS TWO DEGREES.
 - COUNTER TOP EQUIPMENT NOT READILY MOVABLE, WEIGHING OVER 80 POUNDS WILL BE PROVIDED WITH LEGS OR FEET AT LEAST 4" HIGH.
 - ALL CHEMICAL SANITIZER KITS FOR THREE (3) COMPARTMENT SINKS WILL BE FURNISHED BY THE CHEMICAL SUPPLIER.
 - ALL CHEMICAL INJECTION SYSTEMS MUST BE INSTALLED DOWNSTREAM FROM A VACUUM BREAKER OR AIR GAP TO PREVENT POSSIBLE BACK SIPHONAGE OF THE CHEMICALS INTO THE WATER LINE SYSTEM.
 - ALL CUTTING BOARDS AND WORK SURFACES SHALL BE OF NON-WOOD CONSTRUCTION.
 - ALL FOOD SERVICE AND RELATED EQUIPMENT SHALL BE INSTALLED IN CONFORMITY WITH NSF STANDARDS.
 - AN AISLE SPACE OF 36" MINIMUM OR MORE SHALL BE PROVIDED WITHIN ALL WORK AND STORAGE AREAS.
 - BACK SPLASHES OF EQUIPMENT SHALL BE INSTALLED A MINIMUM OF 3" FROM WALLS OR SEALED TO WALLS.
 - VACUUM BREAKERS WHEN USED TO BE A MINIMUM OF 6" ABOVE THE FLOOD LEVEL RIM WITH NO SHUT-OFF DEVICES BEYOND THE DISCHARGE OF THE VACUUM BREAKER.
 - NO OVERSHELVES TO BE PROVIDED OVER COOKING EQUIPMENT.
 - PROVIDE A MINIMUM OF 50 FOOT CANDLES OF LIGHTING IN ALL FOOD PRODUCTION AND SERVING AREAS AND INCLUDING WALK-IN BOXES. LIGHTING TO BE SCHEDULED OVER EXPOSED FOOD AND UTENSIL AREAS.
 - HAND WASHING FACILITIES ARE REQUIRED FOR FOOD PREPERATION, SERVING, OR UTENSIL WASHING AREAS AND WILL BE SHOWN ON THE FLOOR PLAN.
 - SNEEZE GUARD PROTECTION WHERE APPLICABLE WILL BE PROVIDED FOR EXPOSED, UNWRAPPED FOOD AT SUCH AREAS AS SALAD BARS, BUFFETS AND CAFETERIA COUNTERS.
 - FOODSERVICE EQUIPMENT DESIGN AND INSTALLATION SHALL BE IN COMPLIANCE WITH APPLICABLE BUILDING AND HEALTH CODES.
 - ALL WALLS, CEILINGS AND FLOORS WITHIN THE FOOD PREPERATION AREAS SHALL BE CONSTRUCTED WITH SMOOTH, NON-ABSORBENT AND EASILY CLEANABLE MATERIALS.
 - ARTIFICIAL LIGHTING FIXTURES OVER FOOD PREPERATION AREAS SHALL HAVE PROTECTIVE SHIELDING. FIFTY (50) FOOT-CANDLES SHALL BE PROVIDED TO ALL WORK SURFACES AND AT LEAST THIRTY (30) FOOT-CANDLES SHALL BE PROVIDED TO OTHER SURFACES IN FOOD PREPERATION, WAREWASHING AND HAND WASHING AREAS.
 - AREA OVER WALK-IN COOLER SHALL BE ENCLOSED TO FINISHED CEILING.
 - ALL POISONOUS OR TOXIC MATERIALS SHALL BE STORED IN CABINETS OR IN SIMILAR PHYSICALLY SEPARATED COMPARTMENTS SPECIFICALLY USED FOR THIS PURPOSE.
 - MOP SINK TO BE LOCATED IN THE VICINITY OF KITCHEN.
 - UTENSIL CLEANING AND SANITIZING SHALL BE ACCOMPLISHED IN THREE COMPARTMENT SINK WITH MINIMUM BOWL SIZE OF 15"x15"x12" DEEP w/INTERNAL ROUNDED CORNERS.
 - MACHINE CLEANING AND SANITIZING SHALL BE ACCOMPLISHED IN DISHWASHING MACHINE UTILIZING 180°F RINSE CYCLE WATER TEMPRATUR OR BY CHEMICAL SANITIZATION.



FOODSERVICE EQUIPMENT
PLUMBING ROUGH-IN PLAN
SCALE: 1/4" = 1'-0"

PLUMBING SCHEDULE												
ITEM	EQUIPMENT CATEGORY	QTY	LOCATION	COLD WATER SIZE	COLD WATER AFF	HOT WATER SIZE	HOT WATER AFF	DIRECT DRAIN SIZE	DIRECT DRAIN AFF	GAS SIZE	MBTUH	PLUMBING REMARKS
FD	FLOOR DRAIN	2	FLOOR	-	-	-	-	3	0	-	-	-
FS	FLOOR SINK	5	FLOOR	-	-	-	-	3	0	-	-	-
P02	RANGE	1	HEADER	-	-	-	-	-	-	3/4	215	-
P03	GRIDDLE, GAS	1	HEADER	-	-	-	-	-	-	3/4	75	BTC;
P04	CONVECTION OVEN	1	HEADER	-	-	-	-	-	-	3/4	72.000	BTC;
P08a	WORK TABLE SINK	1	FLOOR	1/2	5	1/2	5	-	-	-	-	BTC; DRAIN TO FS
P08b	WORK TABLE HAND SINK	1	FLOOR	1/2	5	1/2	5	1 1/2	0	-	-	BTC;
P10	HAND SINK	1	WALL	1/2	24	1/2	24	1 1/2	20	-	-	BTC;
P11	THREE COMP SINK DISHTABLE	2	WALL	1/2	12	1/2	12	-	-	-	-	BTC; DRAIN TO FS
P14	SOILED DISHTABLE	1	WALL	1/2	24	1/2	24	-	-	-	-	BTC; DRAIN TO FS
P16	HOT WELLS	1	WALL	1/2	24	-	-	-	-	-	-	BTC; DRAIN TO FD
P18	ICE MAKER	1	WALL	1/2	60	-	-	-	-	-	-	BTC; DRAIN TO FS
P22	SODA DISPENSER	1	WALL	1/2	48	-	-	-	-	-	-	BTC;
P23	COFFEE MAKER	1	WALL	1/2	48	-	-	-	-	-	-	BTC;
P24	TEA MAKER	1	WALL	1/2	48	-	-	-	-	-	-	BTC;

* NOTE: HAND SINKS MOUNTED & CONNECTED BY PLUMBING CONTRACTOR.
WATER FILTERS FOR ICE MACHINES MOUNTED & CONNECTED BY PLUMBING CONTRACTOR.
FLOOR TROUGHES INSTALLED & CONNECTED BY PLUMBING CONTRACTOR.
ALL QUICK CONNECT GAS HOSES SUPPLIED BY K.E.C. & INSTALLED BY PLUMBING CONTRACTOR.

PLUMBING LEGEND	
	HW HOT WATER WITH SERVICE STOP
	CW COLD WATER WITH SERVICE STOP
	HCW HOT & COLD WATER WITH SERVICE STOP
	HCW HOT & COLD WATER WITH SERVICE STOP & DRAIN
	FD FLOOR DRAIN
	FFD FLOOR DRAIN WITH FUNNEL
	FS FLOOR SINK WITH HALF GRATE
	DR DRAIN
	G GAS MAIN
	GAS ROUGH IN WITH VALVE
	EVC EXHAUST VENT CONNECTION
	SVC SUPPLY VENT CONNECTION
	AFF ABOVE FINISHED FLOOR
	BTC BRANCH TO EQUIPMENT

PLUMBING NOTES	
<p>THE PLUMBING CONNECTIONS INDICATED ARE FOR THE EQUIPMENT SHOWN ON THIS PLAN. ALL OTHER PLUMBING REQUIREMENTS (BATHROOMS, MOP SINKS, GENERAL FLOOR DRAINS, ETC.) ARE NOT SHOWN ON THIS PLAN.</p> <p>ALL DIMENSIONS ARE FROM COLUMN CENTERLINES AND/OR FINISHED WALLS. ALL DIMENSIONS ARE TO THE CENTERLINES OF ROUGH-INS.</p> <p>THE FOLLOWING WORK IS TO BE PERFORMED BY DIVISION 15 - MECHANICAL:</p> <ul style="list-style-type: none"> - PROVIDE ALL ROUGHING-IN AND CONNECTIONS TO FOODSERVICE EQUIPMENT. - INSTALL ALL ACCESSORIES AND FITTINGS PROVIDED LOOSE WITH FOODSERVICE EQUIPMENT - PROVIDE ALL VALVES, TRAPS, WATER AND PRESSURE REGULATORS, REDUCING VALVES, PIPING RUNS, SHOCK ABSORBERS, GREASE INTERCEPTORS, ETC. IN ORDER TO CONNECT FOODSERVICE EQUIPMENT TO BUILDING UTILITIES. - FLUSH OUT ALL PIPING AND DRAINAGE SYSTEMS PRIOR TO CONNECTION OF FOODSERVICE EQUIPMENT. - PROVIDE AND INSTALL SPRINKLER SYSTEM, IF REQUIRED. - PROVIDE AND INSTALL WATER SOFTENERS, FILTERS AND TREATMENT SYSTEMS. - INSULATE 180°F HOT WATER FROM BOOSTER HEATER TO DISHWASHER INLET. - INSTALL FIRE SUPPRESSION MECHANICAL GAS VALVE IN A VISIBLE AND ACCESSIBLE LOCATION. - PROVIDE GAS PRESSURE OF 4" TO 6" W.C. AT COOKING EQUIPMENT. - PROVIDE CONDUIT FOR REFRIGERATION LINES. - HVAC CONTRACTOR TO HANG HOOD, PROVIDE AND INSTALL ALL DUCT WORK, EXHAUST AND SUPPLY FANS, CURBS, ROOF JACKS AND ROOF PENETRATIONS. - HVAC CONTRACTOR TO PROVIDE AIR BALANCING. - PROVIDE PROPER VENTILATION TO REFRIGERATION MECHINERY ROOM (MAX. 90°F), DRY STORAGE ROOMS (MAX. 75°F) AND WAREWASH ROOM. 	

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ALL PLUMBING AND ELECTRICAL CONNECTIONS, CARPENTRY, MASONRY WORK SHALL NOT BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND EQUIPMENT.

DRAWN BY:	DATE:	
J.A.K.	11/02/23	
REVISIONS		
NO.	DATE	DESCRIPTION

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DESIGN & SALES TO ALL TYPES OF FOOD SERVICE OPERATIONS
SCALE: 1/4" = 1'-0"
FOODSERVICE PLUMBING ROUGH-IN PLAN

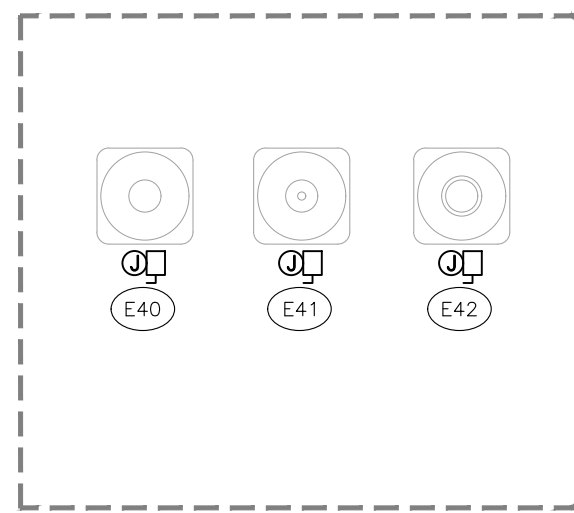
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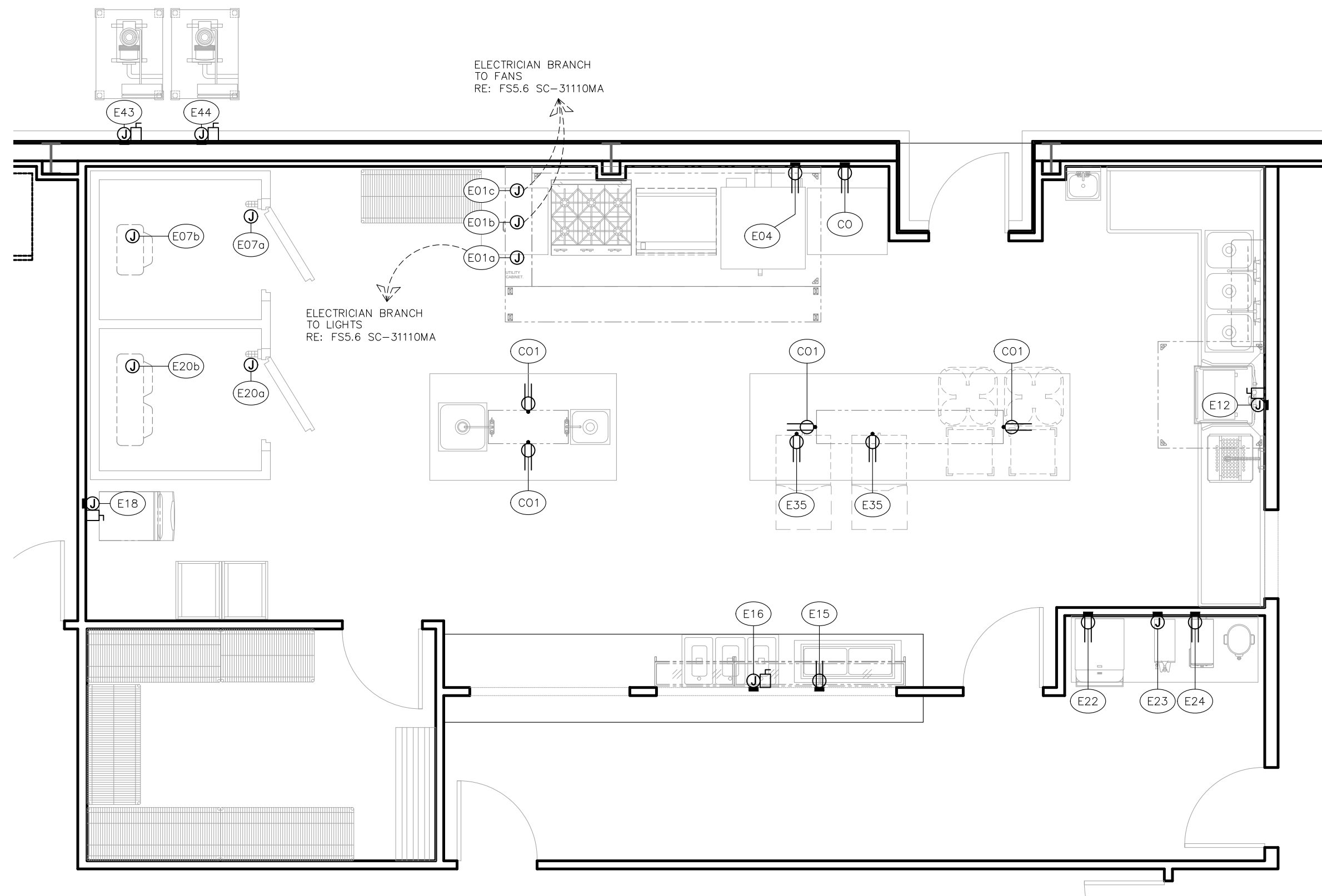
JOB NO. _____

SHEET NUMBER
FS3.0



RE: HOOD SUBMITTAL SHEETS FS5.0-FS5.7 FOR ADDITIONAL HOOD DETAILS

NOTE: FAN & CONDENSER LOCATIONS ON ROOF NEED TO BE PROPERLY SPACED FOR ADEQUATE AIR FLOW. COORDINATE WITH ARCHITECTURAL ENGINEER FOR PLACEMENT.



A FOODSERVICE EQUIPMENT ELECTRICAL ROUGH-IN PLAN
SCALE: 1/4" = 1'-0"

ELECTRICAL SCHEDULE										
ITEM	QTY	EQUIPMENT CATEGORY	VOLTS	AMPS	PHASE	ELECTRICAL AFF	LOCATION	DIRECT CONNECTION	NEMA	ELECTRICAL REMARKS
CO	1	CONVENIENCE OUTLET	120	15.0	1	48	WALL	-	5-15P	MAX 3 PER CIRCUIT
C01	4	CONVENIENCE OUTLET	120	15.0	1	36	FLOOR	-	5-15P	PEDISTAL RECEPTACLE; THRU TABLE
E01a	1	HOOD LIGHT CONTROLS	120	15.0	1	105	DFA	X	-	BTC; RE: HOOD SUBMITTAL FS5.0
E01b	1	HOOD CONTROLS	208	5.6	3	105	DFA	X	-	BTC; RE: HOOD SUBMITTAL FS5.0
E01c	1	HOOD CONTROLS	208	5.5	3	105	DFA	X	-	BTC; RE: HOOD SUBMITTAL FS5.0
E04	1	CONVECTION OVEN	120	7.9	1	48	WALL	-	5-15P	-
E07a	1	WALK-IN COOLER LIGHTS	120	2.0	1	108	DFA	X	-	BTC; RE: VENDOR SUBMITTAL FS7.0
E07b	1	WALK-IN COOLER EVAPORATOR	115	15.0	1	108	DFA	X	-	BTC; RE: VENDOR SUBMITTAL FS7.0
E12	1	WAREWASHER	208	65.0	1	62	WALL	X	-	BTC;
E15	1	DROP-IN, COLD WELL	120	6.7	1	24	WALL	-	5-15P	-
E16	1	HOT WELLS	208	17.4	1	24	WALL	X	-	BTC;
E18	1	ICE MAKER	115	10.8	1	60	WALL	X	-	BTC;
E20a	1	WALK-IN FREEZER LIGHTS	120	2.0	1	108	DFA	X	-	BTC; RE: VENDOR SUBMITTAL FS7.0
E20b	1	WALK-IN FREEZER EVAPORATOR	208	15.0	1	108	DFA	X	-	BTC; RE: VENDOR SUBMITTAL FS7.0
E22	1	SODA DISPENSER	120	10.0	1	48	WALL	X	-	VERIFY W/ VENDOR
E23	1	COFFEE MAKER	120	18.3	1	48	WALL	X	-	BTC;
E24	1	TEA MAKER	120	14.4	1	48	WALL	-	5-15P	-
E35	2	WARMER, DRAWER TYPE	120	5.3	1	5	FLOOR	-	5-15P	PEDISTAL RECEPTACLE
E40	1	EXHAUST FAN	208	4.5	3	VERIFY	VERIFY	X	-	BTC; RE: HOOD SUBMITTAL FS5.0
E41	1	CONDENSATE FAN	115	6.3	1	VERIFY	VERIFY	X	-	BTC; RE: HOOD SUBMITTAL FS5.0
E42	1	SUPPLY FAN	208	4.5	3	VERIFY	VERIFY	X	-	BTC; RE: HOOD SUBMITTAL FS5.0
E43	1	WALK-IN COOLER CONDENSING UNIT	208	15.0	1	48	WALL	X	-	BTC; RE: VENDOR SUBMITTAL FS7.0
E44	1	WALK-IN FREEZER CONDENSING UNIT	208	35.0	1	48	WALL	X	-	BTC; RE: VENDOR SUBMITTAL FS7.0

*

* INDICATES CIRCUIT TO HAVE SHUNT TRIP INTERCONNECTED TO FIRE SUPPRESSION SYSTEM MICROSWITCH TO BE SHUT DOWN IN CASE OF FIRE.

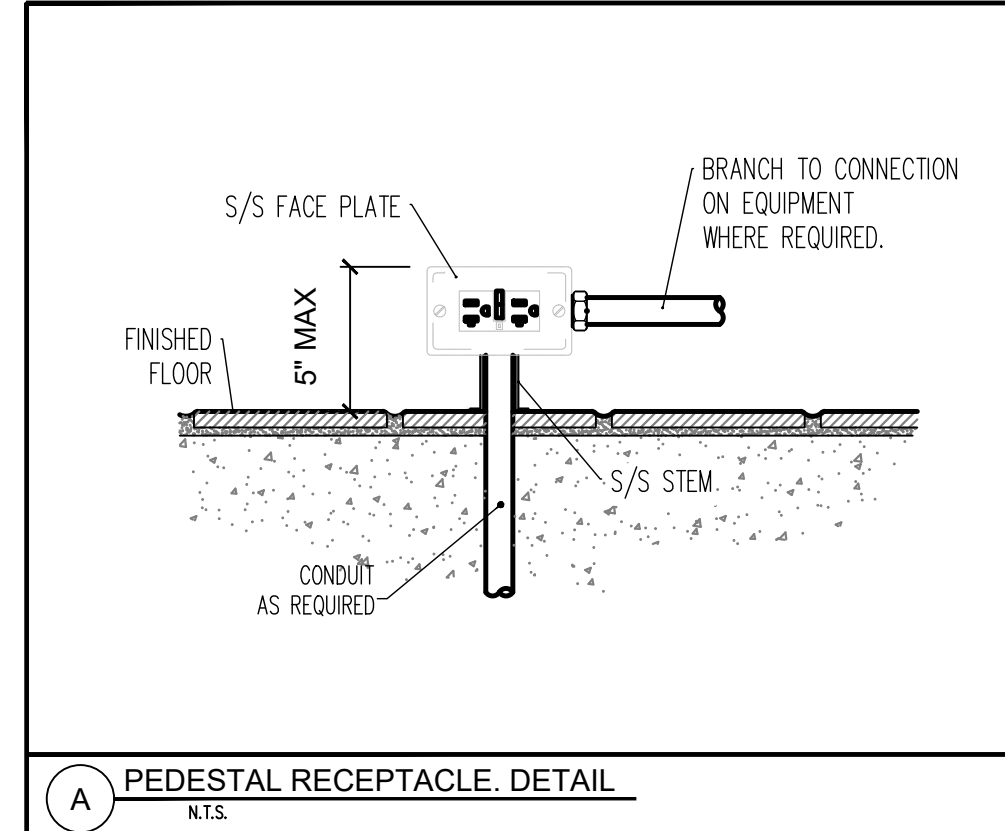
→ NOTE: ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR MAKING ALL FINAL AND INTERMEDIATE CONNECTIONS TO EQUIPMENT. ALL COMPONENTS SHIPPED LOOSE WITH EQUIPMENT WHICH REQUIRE ELECT. CONNECTION IS TO BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY. ELECTRIC CONTRACTOR IS TO COORDINATE SHEETS FS5.0-FS5.7 TO ENSURE PROPER CIRCUITRY & WIRING IS SUPPLIED FOR THE EXHAUST HOOD SYSTEM. THE K.E.C. SHALL NOT BE RESPONSIBLE FOR ANY WIRING OR CONNECTIONS TO FOODSERVICE EQUIPMENT, INCLUDING CONTROL WIRING OR FIRE ALARM WIRING.

ELECTRICAL LEGEND		
	DR	DUPLEX RECEPTACLE
	DR	DUPLEX RECEPTACLE IN WALL
	PMR	PEDISTAL MOUNT DUPLEX RECEPTACLE
	SR	SINGLE RECEPTACLE
	SR	SINGLE RECEPTACLE IN WALL
	PMR	PEDISTAL MOUNT SINGLE RECEPTACLE
	JB	JUNCTION BOX
	JB	JUNCTION BOX IN WALL
	PMR	PEDISTAL MOUNT JUNCTION BOX
	DCR	DROP CORD RECEPTACLE
	CS	CONDUIT STUB
		LIGHT FIXTURE
	MC	MOTOR CONTROL SWITCH
	SW	SWITCH (TOGGLE)
	AFF	ABOVE FINISHED FLOOR BRANCH TO CONNECTION
	BTC	BRANCH TO CONNECTION

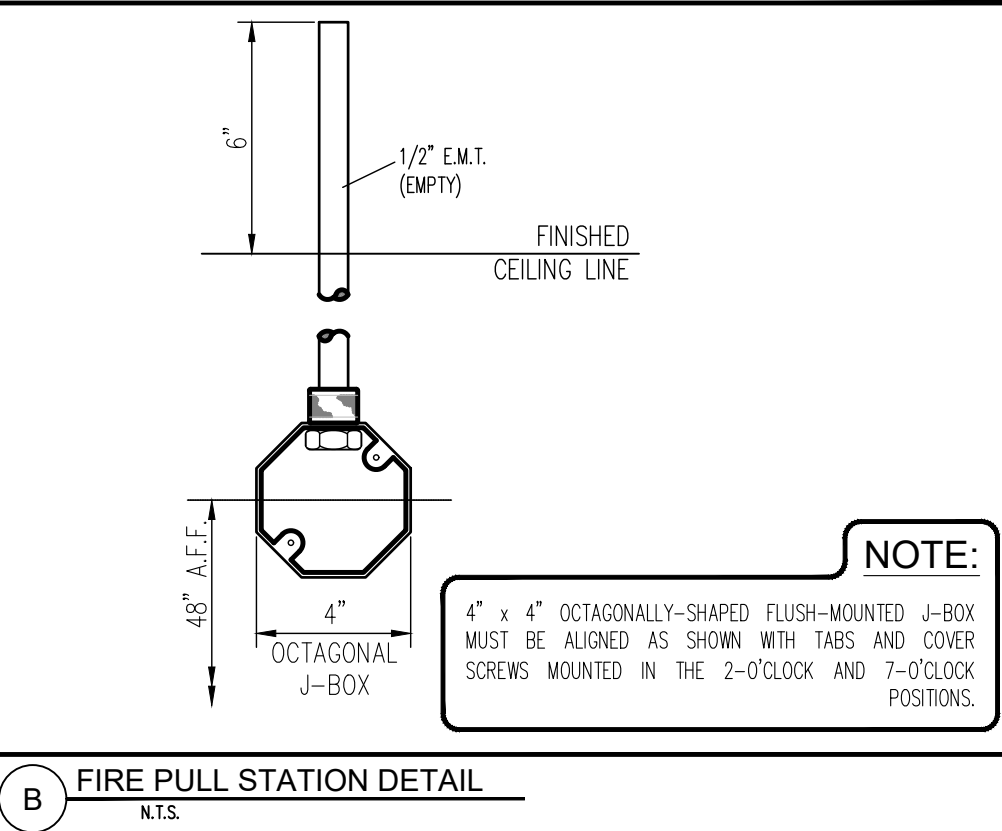
ELECTRICAL NOTES

THE FOLLOWING WORK IS TO BE PERFORMED BY THE ELECTRICAL CONTRACTOR:

- ROUGHING-IN AND FINAL CONNECTIONS OF ELECTRICAL SYSTEMS TO FOODSERVICE EQUIPMENT.
- COMMUNICATION SYSTEMS, CLOCKS AND STAFF TIME CLOCKS IN FOODSERVICE AREA.
- CONDUIT AND WIRING FROM DISPOSER SWITCH TO TIME DELAY, MAGNETIC STARTER, MOTOR AND SOLENOID VALVES: ALL BELOW COUNTER TOP.
- WALL SWITCH FOR LIGHT FIXTURES IN EXHAUST HOODS.
- WALL SWITCH FOR FAN MOTOR FOR EXHAUST HOOD'S SYSTEM.
- WIRING TO AND INSTALLATION OF ACCESSORIES (IF ANY) WHICH ARE FURNISHED STANDARD WITH FOODSERVICE EQUIPMENT.
- EMERGENCY LIGHTING AND/OR POWER SYSTEMS.
- ALL DISCONNECT SWITCHES AS REQUIRED. (NEMA 4, WATERPROOF SUGGESTED).
- SPECIAL NOTE: ANSUL FIRE SUPPRESSION SYSTEM IS TO BE CONNECTED TO CORRESPONDING SHUNT TRIP BREAKERS FOR SHUT DOWN OF COOKING EQUIPMENT BELOW VENTILATOR DURING FIRE - IN ADDITION, THE SUPPRESSION SYSTEM SHALL BE REQUIRED TO BE INTERCONNECTED WITH MECHANICAL GAS SHUT OFF DURING FIRE.
- ** DIVISION 16 TO PROVIDE [] EMPTY CONDUIT FROM OCTAGONAL JB IN WALL AT 54" AFF UP THRU WALL TO 6" ABOVE CEILING AND EXIT WALL - FOR FIRE SYSTEM REMOTE PULL.



A PEDESTAL RECEPTACLE DETAIL
N.T.S.



B FIRE PULL STATION DETAIL
N.T.S.

NOTE:
4" x 4" OCTAGONALLY-SHAPED FLUSH-MOUNTED J-BOX MUST BE ALIGNED AS SHOWN WITH TABS AND COVER SCREWS MOUNTED IN THE 2-O'CLOCK AND 7-O'CLOCK POSITIONS.

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DRAWN BY: DATE:
J.A.K. 11/02/23

REVISIONS		
NO.	DATE	DESCRIPTION

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PHONE: 713-682-6390
DESIGN & SALES TO ALL TYPES OF FOOD SERVICE OPERATIONS

SCALE: 1/4" = 1'-0"

FOODSERVICE ELECTRICAL ROUGH-IN PLAN

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E-MAIL ADDRESS
MATT CLARK
mclark@c-t-design.com

COMPASSION UNITED
350 FOSTER DR.
CONROE, TX 77301



JOB NO. _____

SHEET NUMBER
FS4.0

HOOD INFORMATION - JOB#5936202

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM				TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG				
										WIDTH	LENG	HEIGHT	DIA			CFM	VEL	SP	END TO END	ROW
1	1	5424 T-ND-2-PSP-F	THERMOTEK	10' 10"	600 DEG	I	HEAVY	225	2435			4"	16"	2435	1744	-0.431"	1948	430 SS WHERE EXPOSED	ALONE	ALONE
2	13	4824 T-VHB-G	THERMOTEK	4' 0"	700 DEG	II	N/A	150	600			4"	10"	600	1100	-0.090"	0	430 SS 100%	ALONE	ALONE

HOOD INFORMATION

HOOD NO	TAG	TYPE	FILTER(S)				LIGHT(S)				UTILITY CABINET(S)				FIRE SYSTEM PIPING	HOOD HANGING WEIGHT	
			QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY	TYPE	WIRE GUARD	LOCATION	SIZE	TYPE	SIZE	ELECTRICAL MODEL #			SWITCHES QUANTITY
1	1	SS BAFFLE WITH HANDLES	8	20"	16"	30%	4	L55 SERIES E26	NO	LEFT	12"x54"x24"	TANK FS	4.0/4.0	SC-311110MA	1 LIGHT 1 FAN	YES	877 LBS
2	13						0									NO	185 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1	1	FIELD WRAPPER 18.00" HIGH FRONT, LEFT, RIGHT. BACKSPLASH 80.00" HIGH X 142.00" LONG 430 SS VERTICAL.
2	13	FIELD WRAPPER 18.00" HIGH FRONT, LEFT, RIGHT.

PERFORATED SUPPLY PLENUM(S)

HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S)				
							WIDTH	LENG	DIA	CFM	SP
1	1	Front	142"	16"	6"	MUA	12"	20"		648	0.224"
						MUA	12"	20"		648	0.224"
						MUA	12"	20"		648	0.224"

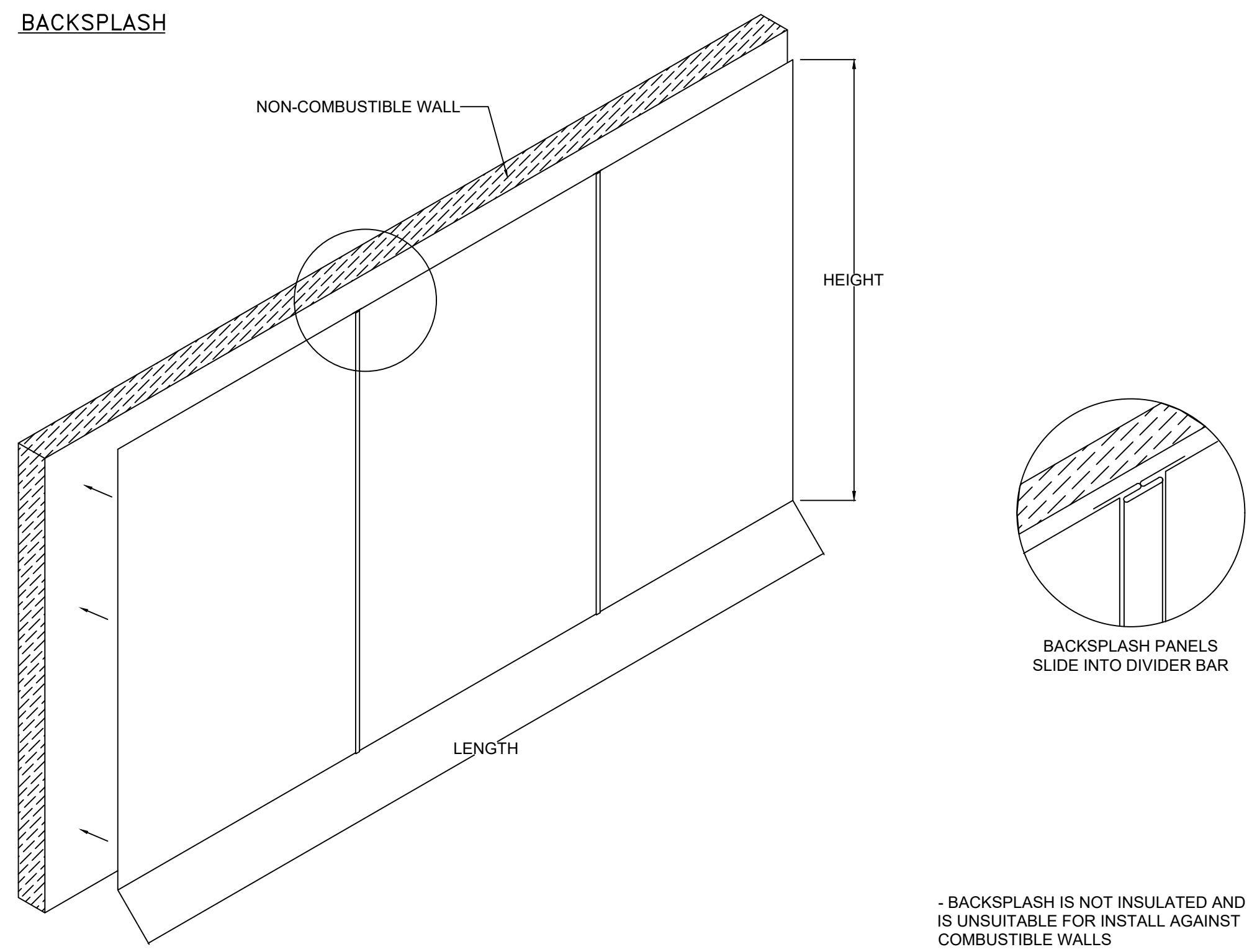
FIRE SYSTEM INFORMATION - JOB#5936202

FIRE SYSTEM NO	TAG	TYPE	SIZE	FLOW POINTS	INSTALLATION	
					SYSTEM	LOCATION ON HOOD
1		TANK FS	4.0/4.0	27	FIRE CABINET LEFT	LEFT, HOOD 1

GAS VALVE(S)

FIRE SYSTEM NO	TAG	TYPE	SIZE	SUPPLIED BY
1		SC ELECTRICAL	2.000	THERMOTEK

BACKSPLASH



- BACKSPLASH IS NOT INSULATED AND IS UNSUITABLE FOR INSTALL AGAINST COMBUSTIBLE WALLS

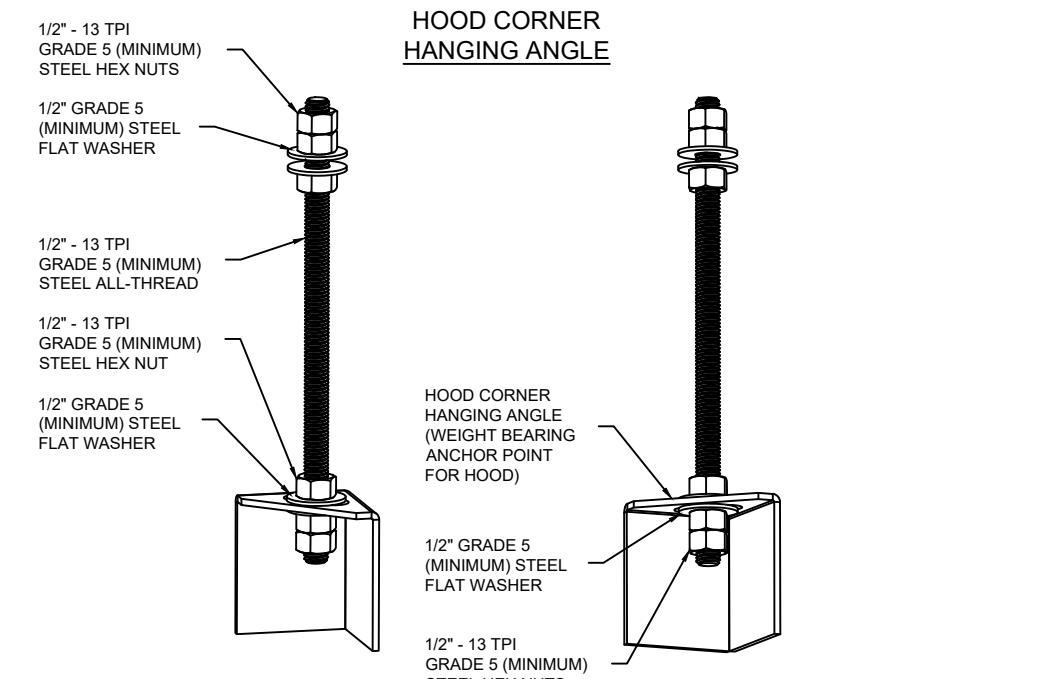
CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH:

- NFPA #96
- B.O.C.A. #93-16
- ICBO. 34416
- SBCO. PST & EST NO. 93137
- E.T.L. LISTED 3054804-001
- LOS ANGELES RR#8080
- E.T.L. IS LISTED TO ULC STANDARDS



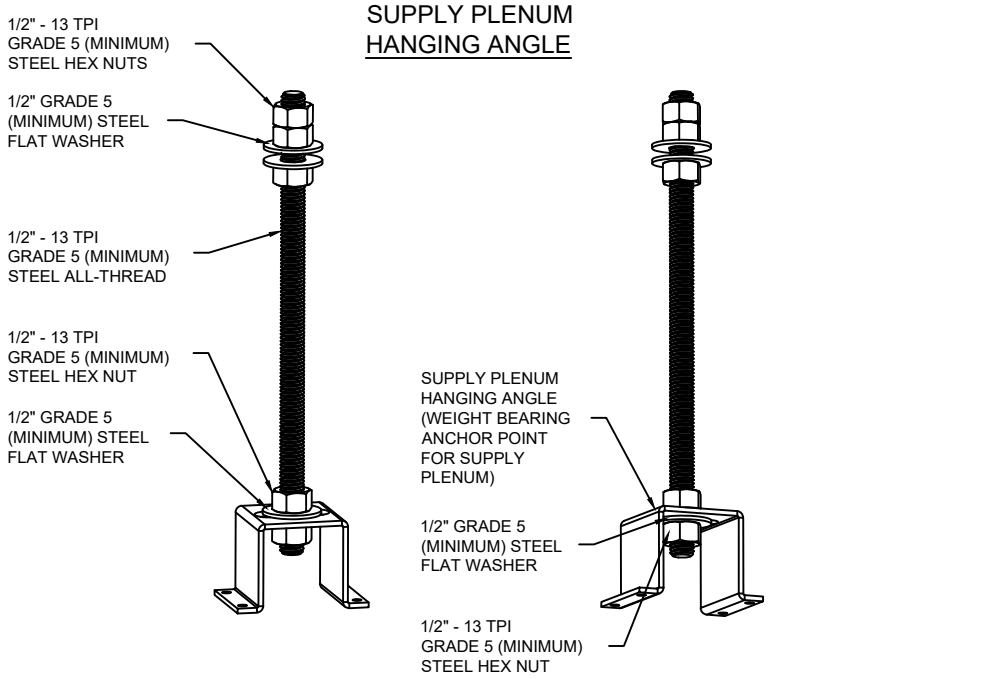
KITCHEN EXHAUST HOOD REQUIREMENTS

- KITCHEN TYPE I EXHAUST HOODS SHALL BE UL LISTED (SEE UL LISTING DESCRIPTION)
- JOINTS AND SEAMS ON EXHAUST HOODS SHALL BE WELDED LIQUID-TIGHT
- EXHAUST FAN MOTOR SHALL BE LOCATED OUTSIDE OF THE EXHAUST DUCT. EXHAUST DISCHARGE MUST TERMINATE AT LEAST 40 INCHES ABOVE THE HIGHEST POINT OF THE SURFACE OF THE ROOF MEETS THE DUCT
- MAKE UP AIR FANS MUST BE ELECTRICALLY INTERLOCKED WITH THE HOOD EXHAUST
- ALL OUTSIDE AIR INTAKES SHALL BE LOCATED A MINIMUM OF 10 FEET AWAY FROM THE EXHAUST DUCT TERMINATION
- FOR LISTED HOODS, A 6 INCH OVERHANG MINIMUM IS REQUIRED ON ALL SIDES OF COOKING APPLIANCES
- GREASE TROUGH SHALL BE SLOPED TO REMOVABLE GREASE CUP (1 GALLON MAX)
- CLEARANCES TO COMBUSTIBLE MATERIALS SHALL BE OBSERVED FOR THE FOLLOWING:
18" OR
2-HOUR RATED DUCT W. DESIGN LISTING INFORMATION, OR
9 IN. OR 3 IN. FOLLOWING NFPA 96 GUIDELINES (1-32.1), OR
AS ALLOWED BY HOOD'S LISTING
- EXHAUST HOOD METAL SHALL BE A MINIMUM OF 18 GA. ALUMINIZED STEEL AND 20 GA STAINLESS STEEL
- DISTANCE FROM THE FLOOR TO THE BOTTOM OF THE HOOD (FOR CANOPY STYLE) SHALL BE 78"-84"
- DISTANCE FROM THE COOKING SURFACE TO THE BOTTOM OF THE FILTER SHALL BE GREATER THAN 18" (SEE DETAIL DRAWING)
- CLEANOUTS ON THE EXHAUST DUCT SHALL BE PROVIDED AT ALL CHANGES OF DIRECTION AND 20 FOOT INTERVALS ON HORIZONTAL RUNS
- CLEANOUTS ON THE EXHAUST DUCT SHALL HAVE A MINIMUM DIMENSION OF 12"
- AN AUTOMATIC SUPPRESSION SYSTEM COMPLYING WITH UL300 SHALL BE INSTALLED IN THE KITCHEN EXHAUST SYSTEM
- IF A FIRE ALARM IS PROVIDED, THE AUTOMATIC SUPPRESSION SYSTEM MUST BE INTERLOCKED WITH THE FIRE ALARM SYSTEM
- ACTIVATION OF THE FIRE SYSTEM SHALL AUTOMATICALLY SHUT OFF ALL FUEL AND HEAT COMPONENTS TO ALL EQUIPMENT UNDER THE HOOD
- MANUAL ACTIVATION OF THE SUPPRESSION SYSTEM SHALL BE LOCATED AT LEAST 10' BUT NOT MORE THAN 20' AWAY FROM THE EXHAUST HOOD, IN THE PATH OF EGRESS
- KITCHEN EXHAUST SYSTEMS SHALL BE PROVIDED FOR ALL COMMERCIAL COOKING APPLIANCES. DOMESTIC COOKING APPLIANCES USED FOR COMMERCIAL PURPOSES SHALL ALSO BE PROVIDED WITH A COMMERCIAL EXHAUST HOOD



ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD, SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH HOOD HANGING ANGLES AND ABOVE CEILING ANCHORS. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.



ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD, SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION ABOVE CEILING ANCHORS. SINGLE HEX NUT BENEATH HANGING ANGLE IS ACCEPTABLE FOR PSP HANGING ANGLES. MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.

HANGING ANGLES WILL BE LOCATED IN THE FOLLOWING LOCATIONS FOR WALL CANOPIES

HOOD STYLE	DIM FROM REAR	DIM FROM FRONT (24" High Hood)	DIM FROM FRONT (30" High Hood)
Wall Exhaust Only	4.166"	2.25"	2.25"
Wall Exhaust Only With MUA		2.25"	2.25"
Back Shelf Exhaust Only	4.166"	2.25"	2.25"
Back Shelf Exhaust Only With MUA		2.25"	2.25"
Condensate	2.25"	2.25"	

HANGING ANGLE LOCATIONS

REVISIONS

DESCRIPTION	DATE:

www.thermotek.com

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Houston Office
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DRAWN BY: J.A.K. DATE: 11/02/23

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NO.	DATE	DESCRIPTION

C & T DESIGN & EQUIPMENT CO., INC.
9555 BAYTHORNE DR. SUITE 200, HOUSTON, TX 77041
PHONE: 713-682-6390
DESIGN & SALES TO ALL TYPES OF FOOD SERVICE OPERATIONS
SCALE: 1/4" = 1'-0"
HOOD SUBMITTAL

PROJECT MANAGER
E-MAIL ADDRESS
MATT CLARK
mclark@c-t-design.com

COMPASSION UNITED
350 FOSTER DR.
CONROE, TX 77301



JOB NO. _____

SHEET NUMBER
FS5.0

Compassion United
Houston, TX, 77002

DATE: 4/4/2023
DWG.#: 5936202
DRAWN BY: GV-46
SCALE: 3/4" = 1'-0"
MASTER DRAWING

SHEET NO. 1

REV. 4:11/02/23

EXHAUST FAN INFORMATION - JOB#5936202

FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	WEIGHT (LBS)	SONES
1	KEF-1	1	TH-SIF15DD	THERMOTEK	2435	1.100	1722	TEFC,PREMIUM	1.500	0.8590	3	208	4.5	263	15.6
2	KEF-13	1	TH-SIF11DD-SS	THERMOTEK	600	0.750	1493	TEAO-ECM	0.500	0.2960	1	115	6.3	161	9.1

MUA FAN INFORMATION - JOB#5936202

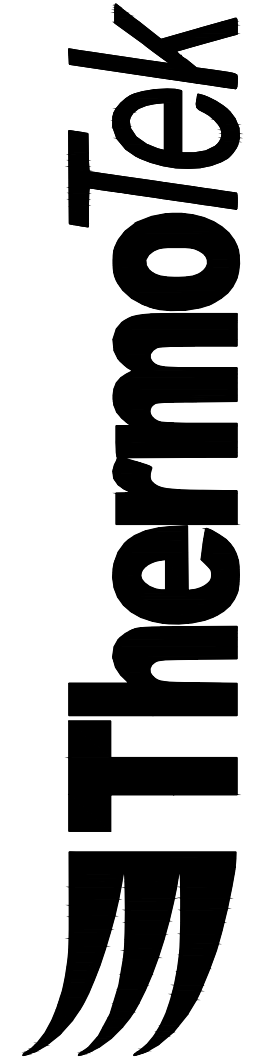
FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	BLOWER	HOUSING	MIN CFM	DESIGN CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	MCA	MOCP	WEIGHT (LBS)	SONES
3	KSF	1	T-A1-15D	15MF-1-MOD	A1	-	1948	0.600	1880	ODP,PREMIUM	1.500	1.1060	3	208	4.4	5.5A	15A	369	24.8

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	KEF-1	1	SIF 15- SS LOW SP STRAIGHT DISCHARGE- SQUARE TO ROUND DISCHARGE ADAPTER
		1	SIF15 - INLET - STANDARD 16" DUCT CONNECTION
		1	SIF - HORIZONTAL OVERHEAD MOUNT - PRE-INSTALLED MOUNTS (11-36)
		1	HANGING SPRING VIBRATION ISOLATORS (SET OF 4), FOR INDOOR OR OUTDOOR USE WITH SQUARE INLINE FANS (HSA125)
		1	FIRE STAT (360 DEGREE) MOUNTED IN EXHAUST FAN. FOR SIF FANS, MOUNT STAT ON BACK POST OPPOSITE THE DISCONNECT, ABOVE THE COOLING TUBE
		1	2 YEAR PARTS WARRANTY
2	KEF-13	1	SIF 11- SS LOW SP STRAIGHT DISCHARGE- SQUARE TO ROUND DISCHARGE ADAPTER
		1	SIF11 - INLET - STANDARD 12" DUCT CONNECTION
		1	SIF - HORIZONTAL OVERHEAD MOUNT - PRE-INSTALLED MOUNTS (11-36)
		1	ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL -RTC- (TELCO MOTOR), CCW ROTATION
		1	HANGING SPRING VIBRATION ISOLATORS (SET OF 4), FOR INDOOR OR OUTDOOR USE WITH SQUARE INLINE FANS (HSA125)
		1	I 15-BDD DAMPER
3	KSF	1	2 YEAR PARTS WARRANTY
		1	INSULATION OPTION FOR VBANK FILTER SECTION
		1	GRAVITY BACKDRAFT DAMPER FOR SIZE 1 HOUSING
3	KSF	1	A1 INDOOR HANGING OPTION - INCLUDES 2 HSA125 HANGING SPRING ISOLATORS PER UNI-STRUT
		1	2 YEAR PARTS WARRANTY

FAN ACCESSORIES

FAN UNIT NO	TAG	EXHAUST				SUPPLY			
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT	
1	KEF-1								
2	KEF-13		YES						
3	KSF				YES	YES			



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Compassion United
Houston, TX, 77002

COMPASSION UNITED
350 FOSTER DR.
CONROE, TX 77301

DATE: 4/4/2023
DWG.#: 5936202
DRAWN BY: GV-46
SCALE: 3/4" = 1'-0"
MASTER DRAWING

PROJECT MANAGER
E-MAIL ADDRESS
MATT CLARK
mclark@c-ldesign.com

SHEET NO.
3

JOB NO. _____
SHEET NUMBER
FS5.2

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DRAWN BY: J.A.K. **DATE:** 11/02/23

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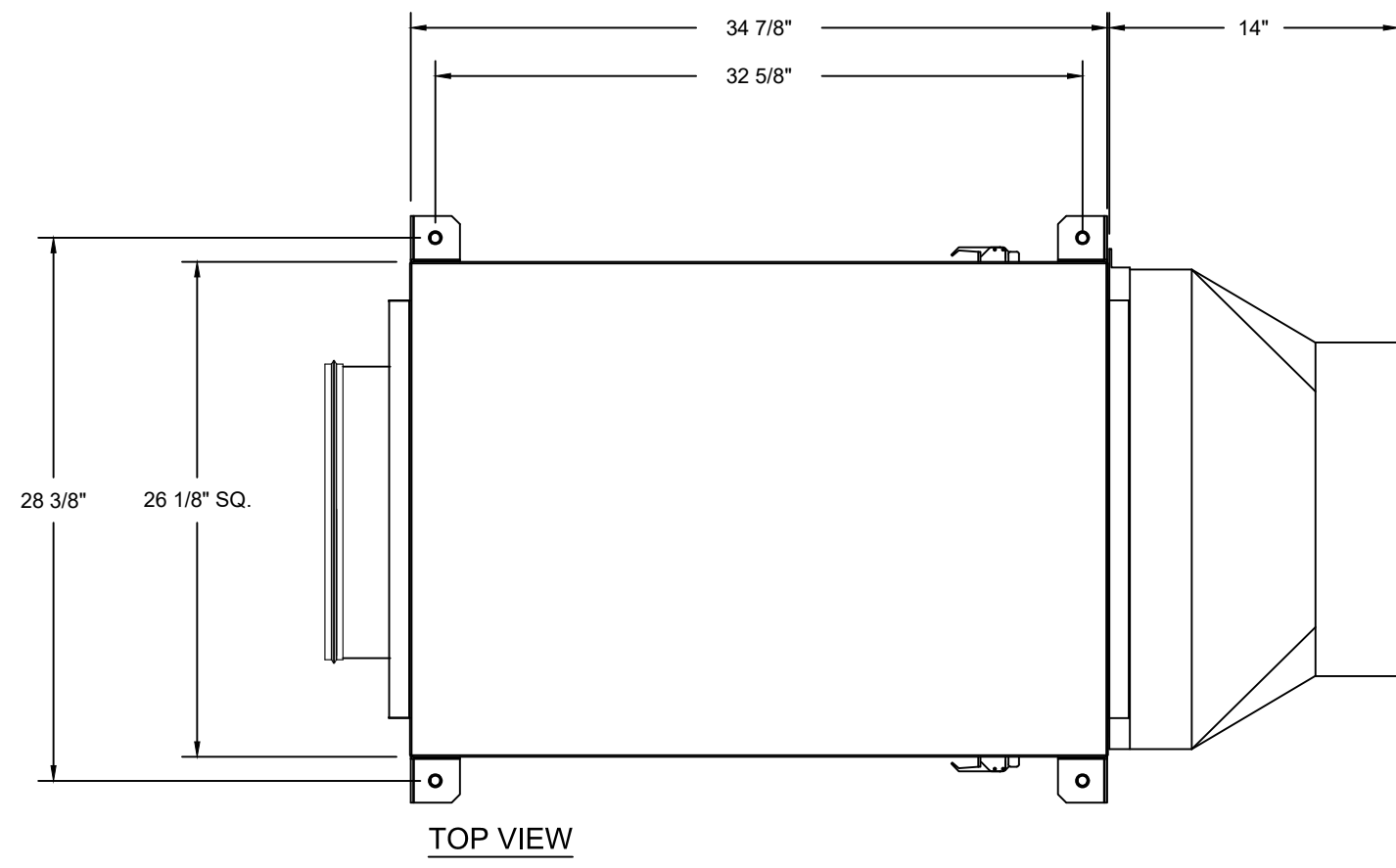
COMPASSION UNITED
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CONROE, TX 77301



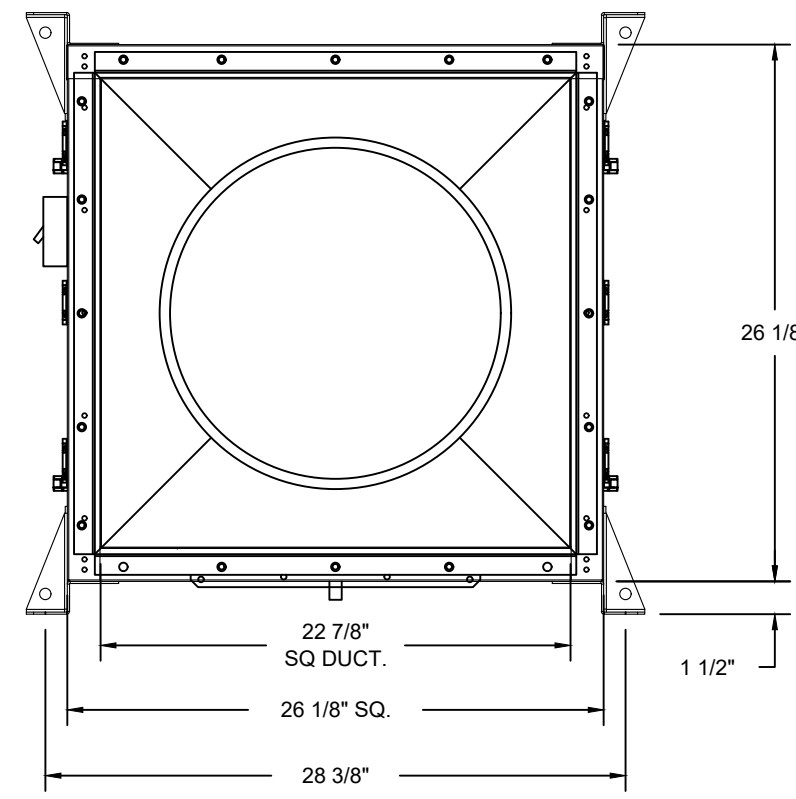
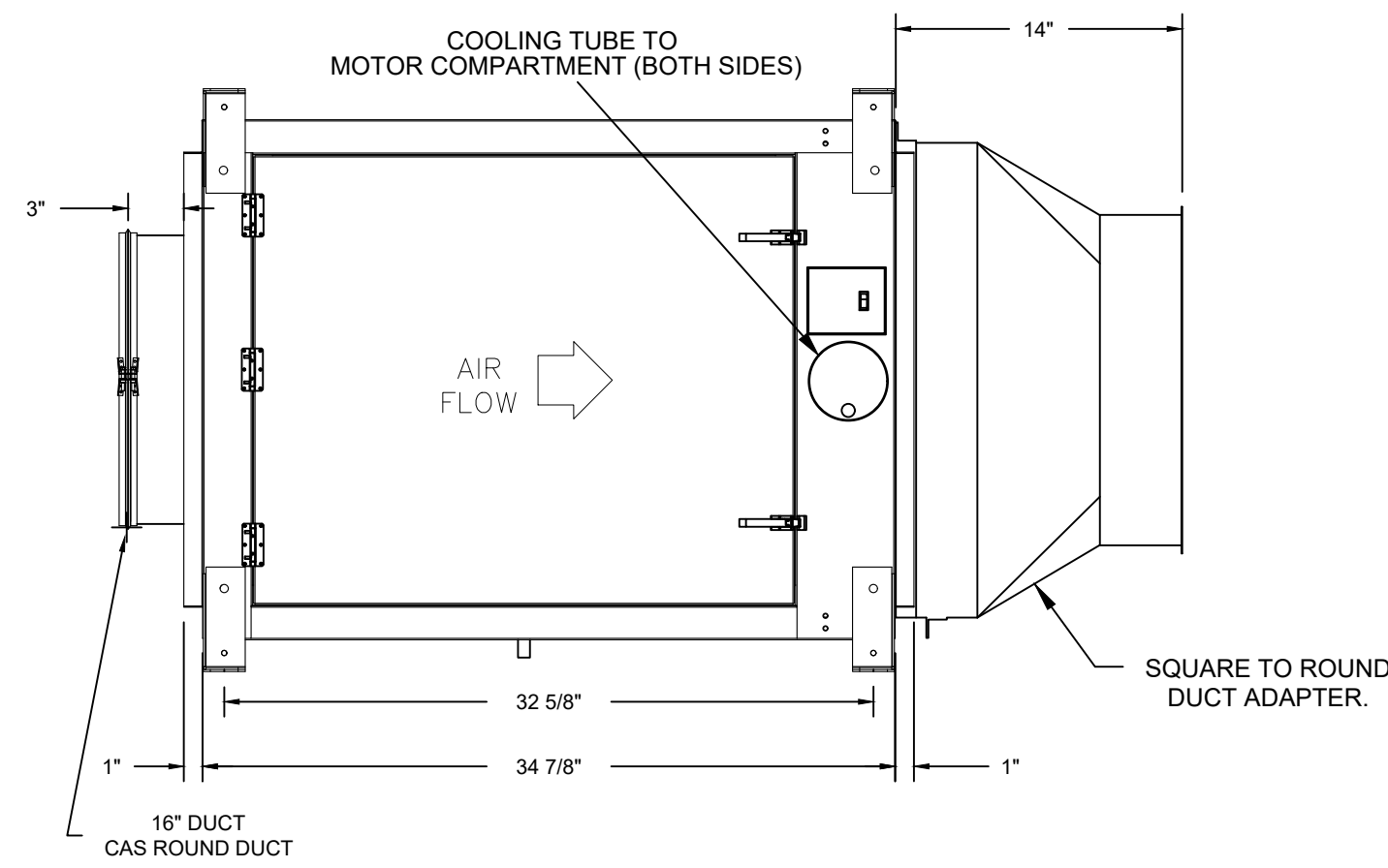
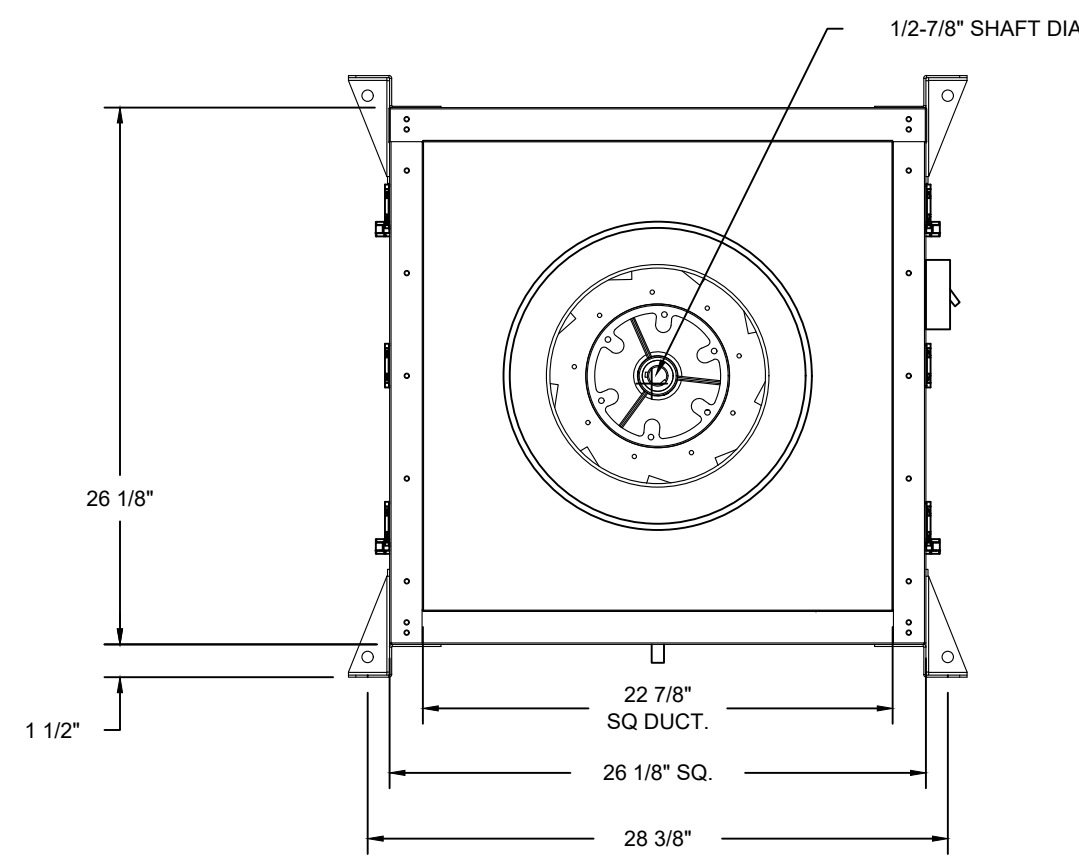
JOB NO. _____

SHEET NUMBER
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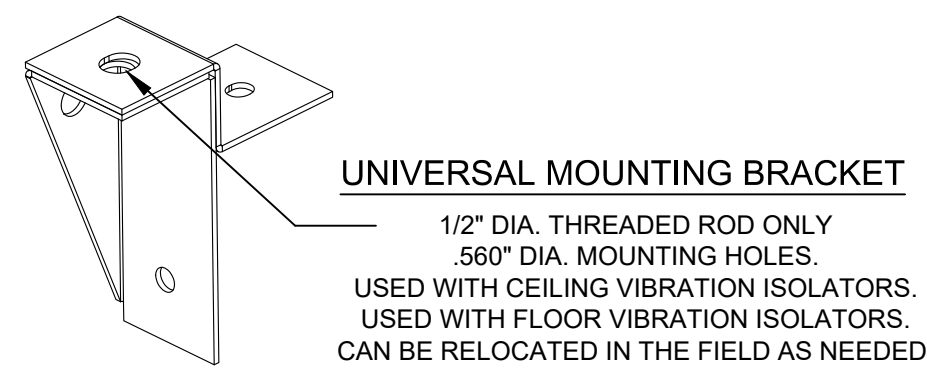
FAN #1 TH-SIF150D-HESS-UL762 - EXHAUST FAN (KEF-1)



TOP VIEW



NOTES:
 - DWXFRISER USED WHEN CONNECTING TO STANDARD DUCT.
 - DWXFRISERS ARE INSTALLED ON THE INTAKE AND/OR DISCHARGE SIDES.



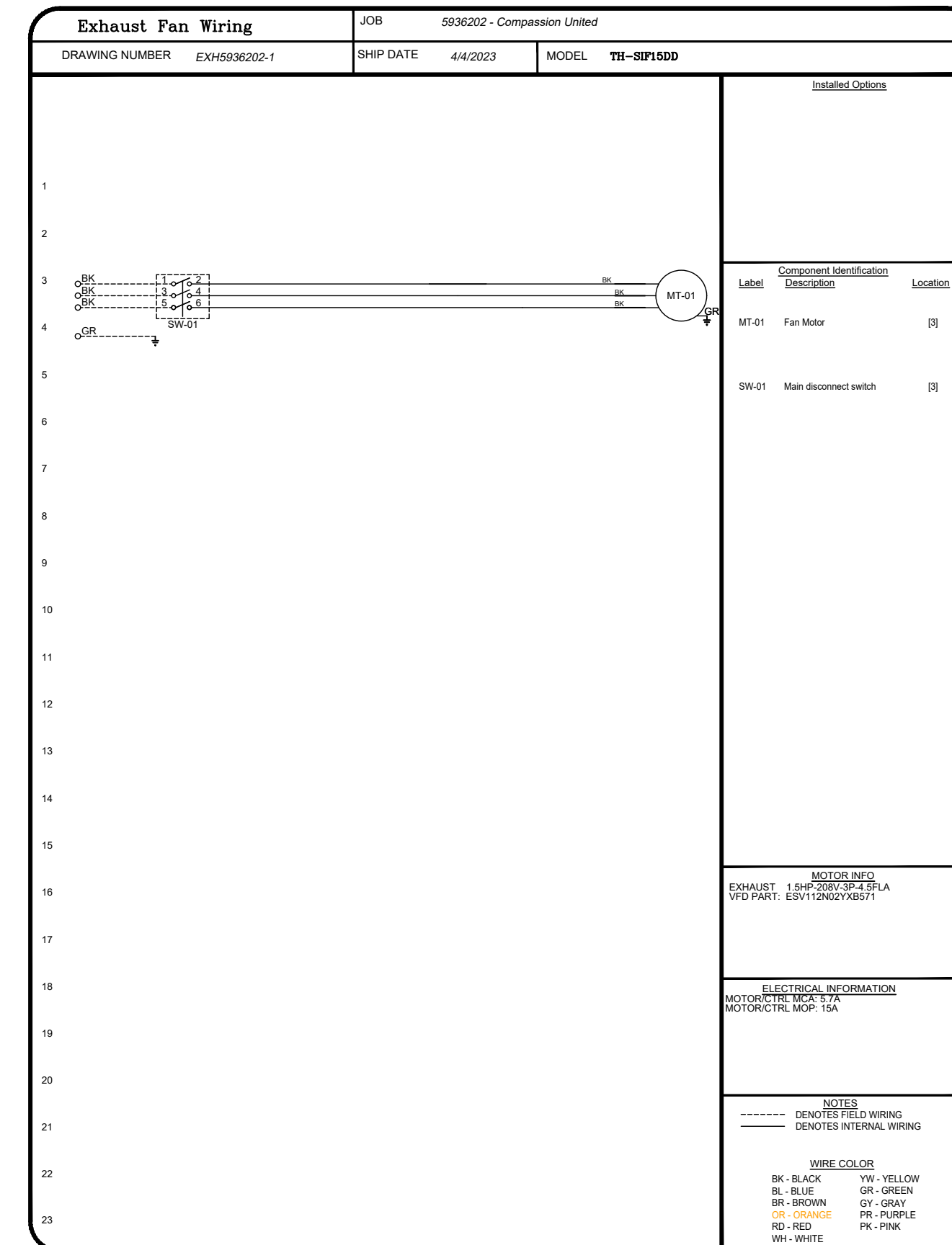
UNIVERSAL MOUNTING BRACKET
 1/2" DIA. THREADED ROD ONLY
 .560" DIA. MOUNTING HOLES.
 USED WITH CEILING VIBRATION ISOLATORS.
 USED WITH FLOOR VIBRATION ISOLATORS.
 CAN BE RELOCATED IN THE FIELD AS NEEDED.

FEATURES:

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- TWO ACCESS DOORS FOR EASY ACCESS.
- BACKWARD INCLINED NON-OVERLOADING WHEELS.
- UL762 LISTING.
- AMCA AIR & SOUND CERTIFIED.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- NEMA 3R SAFETY DISCONNECT SWITCH.
- DRAIN MUST BE CONNECTED TO OPTIONAL GREASE BOX OR TO GREASE RESERVOIR (RECOMMENDED).

OPTIONS

- SIF 15-SS LOW SF STRAIGHT DISCHARGE- SQUARE TO ROUND DISCHARGE ADAPTER
- SIF 15 - INLET - STANDARD 16" DUCT CONNECTION
- SIF - HORIZONTAL OVERHEAD MOUNT - PRE-INSTALLED MOUNTS (11-36)
- HANGING SPRING VIBRATION ISOLATORS (SET OF 4) FOR INDOOR OR OUTDOOR USE WITH SQUARE INLINE FANS (HSA125)
- FIRE STAT (360 DEGREE) MOUNTED IN EXHAUST FAN FOR SIF FANS. MOUNT STAT ON BACK POST OPPOSITE THE DISCONNECT, ABOVE THE COOLING TUBE.
- 2 YEAR PARTS WARRANTY.



REVISIONS	
DESCRIPTION	DATE

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J.A.K.	11/02/23	
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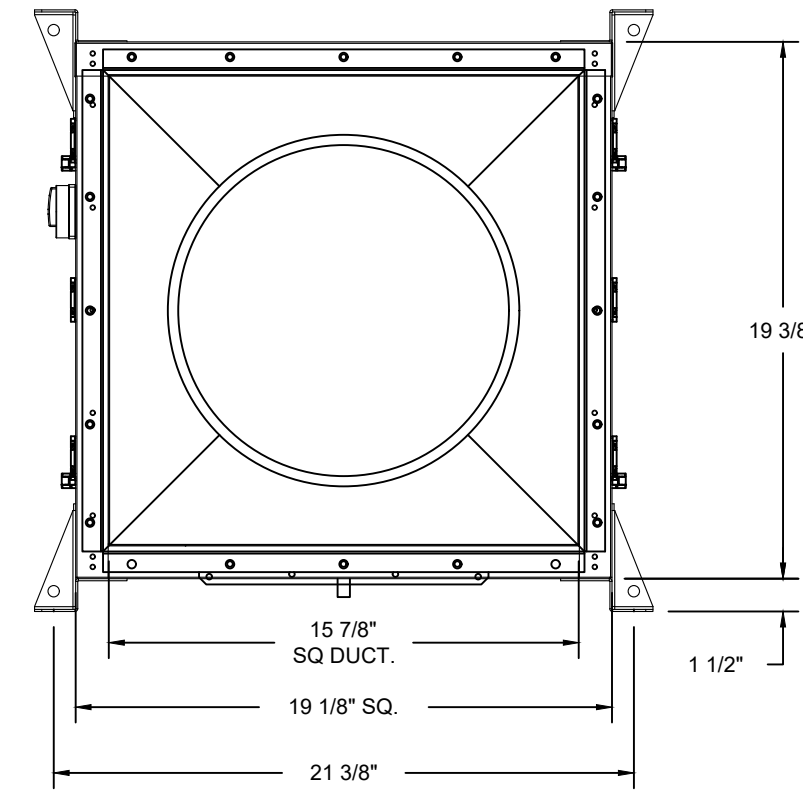
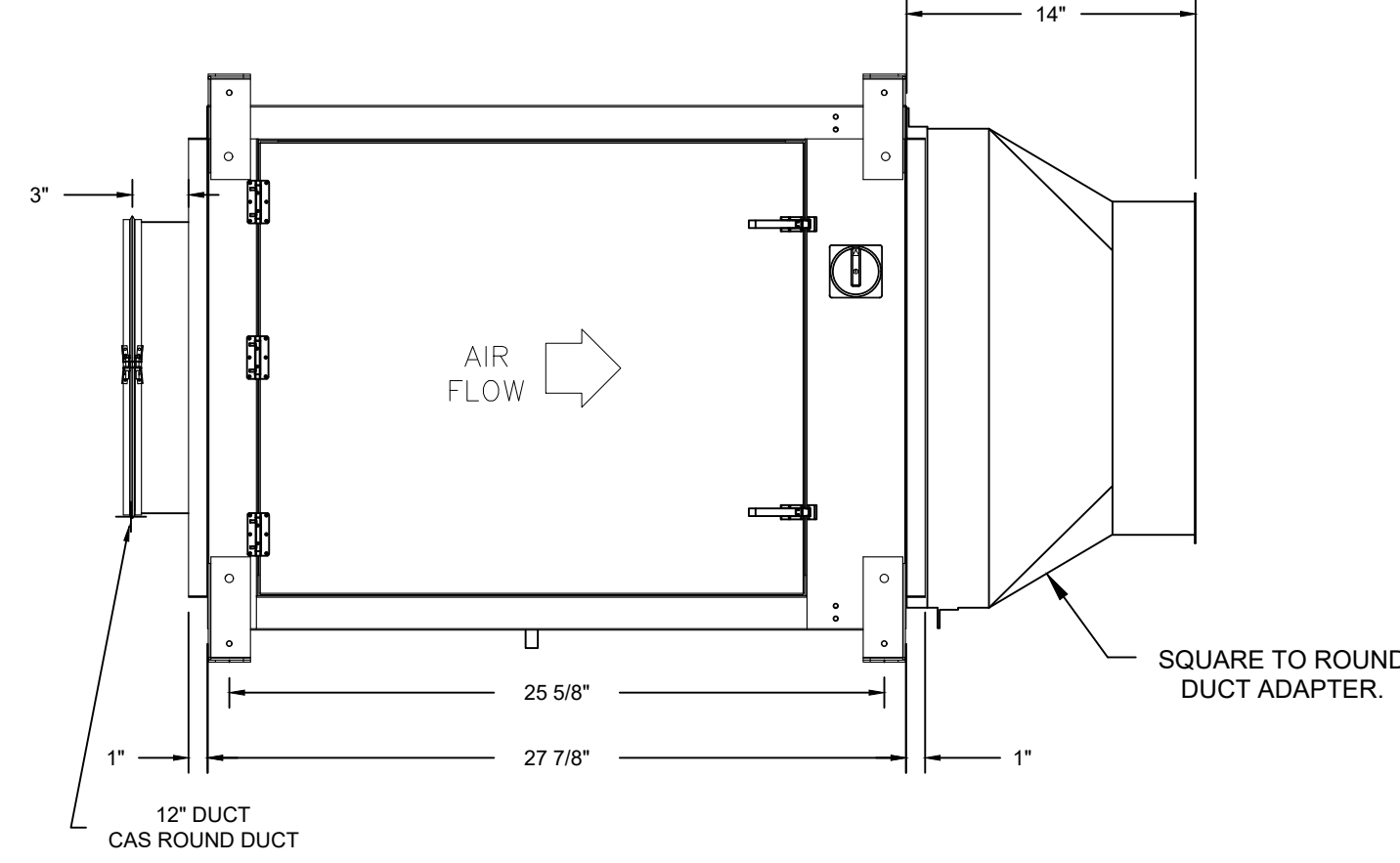
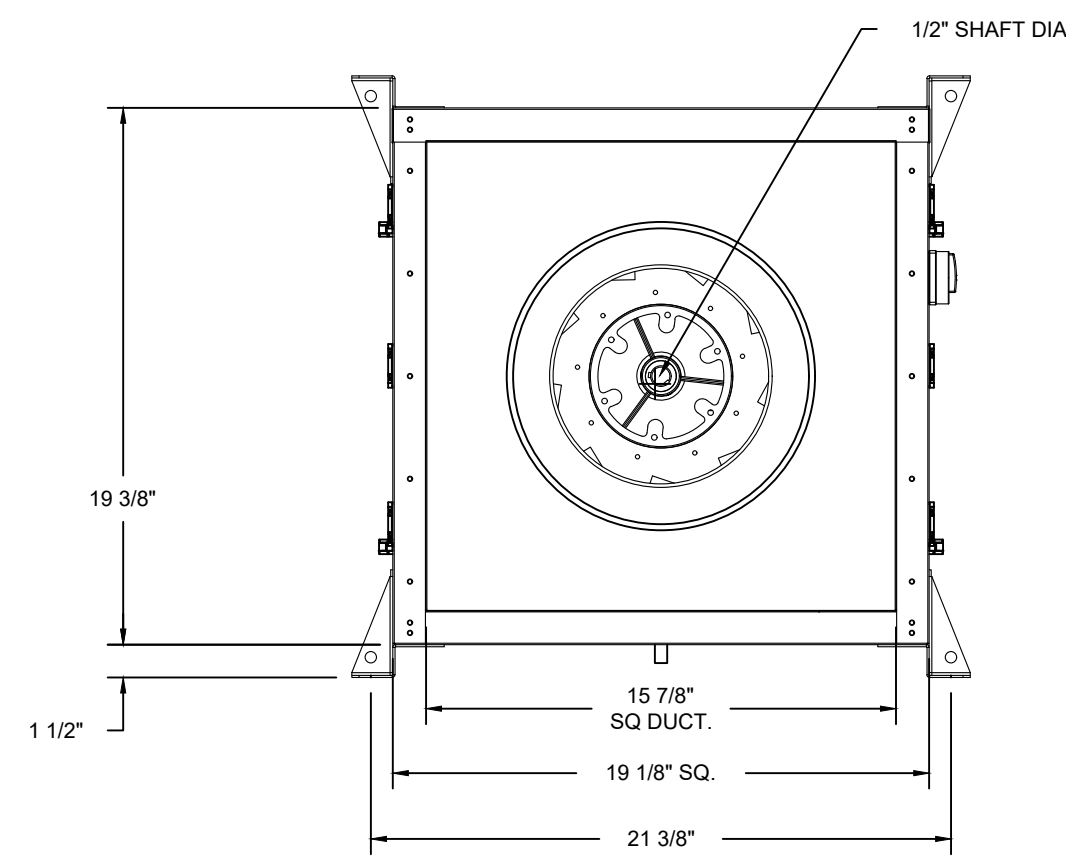
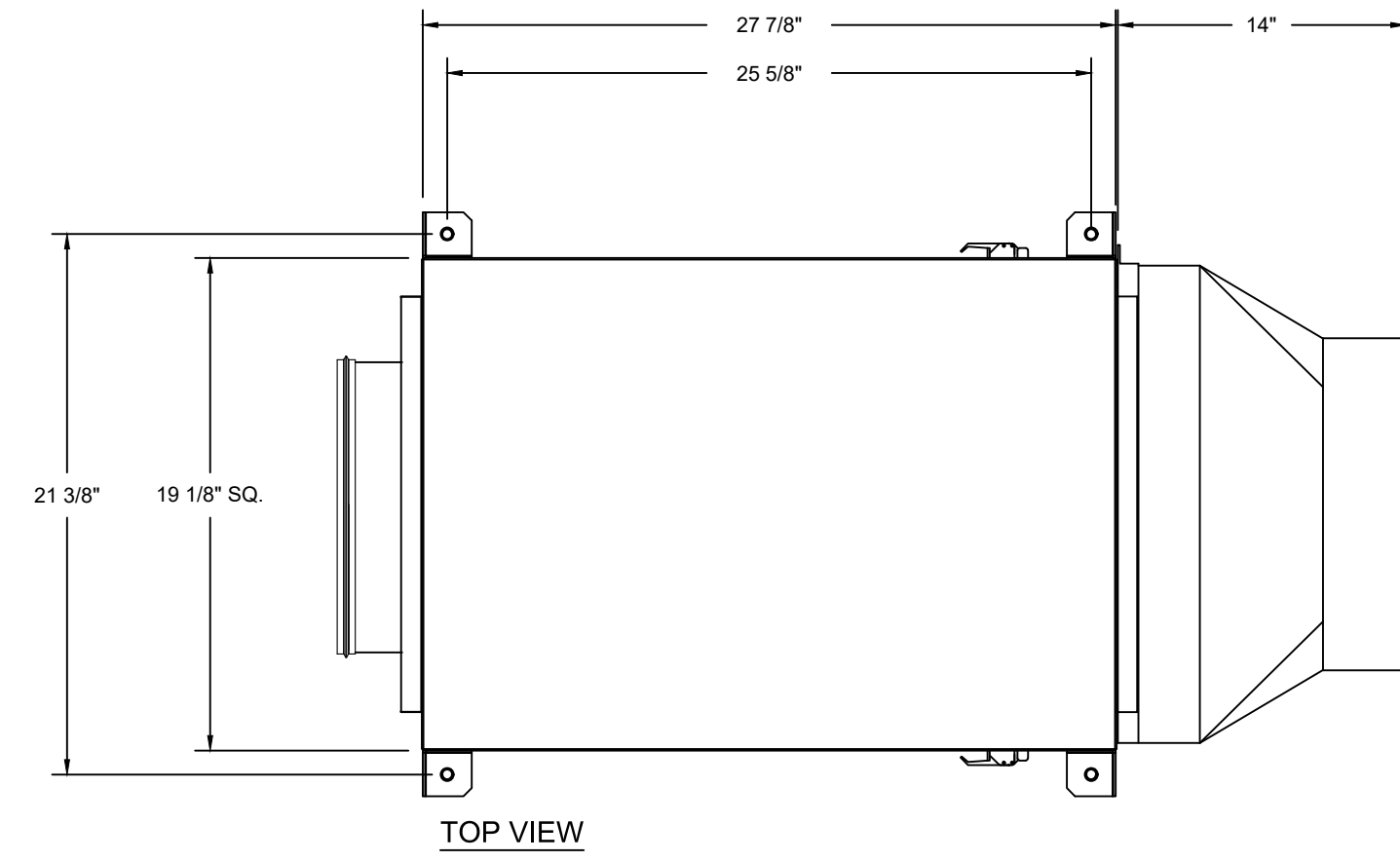
DATE: 4/4/2023
 DWG.#: 5936202
 DRAWN BY: GV-46
 SCALE: 3/4" = 1'-0"
 MASTER DRAWING



SHEET NO.
 4

JOB NO. _____
 SHEET NUMBER
FS5.3

FAN #2 TH-SIF110D-SS - EXHAUST FAN (KEF-13)

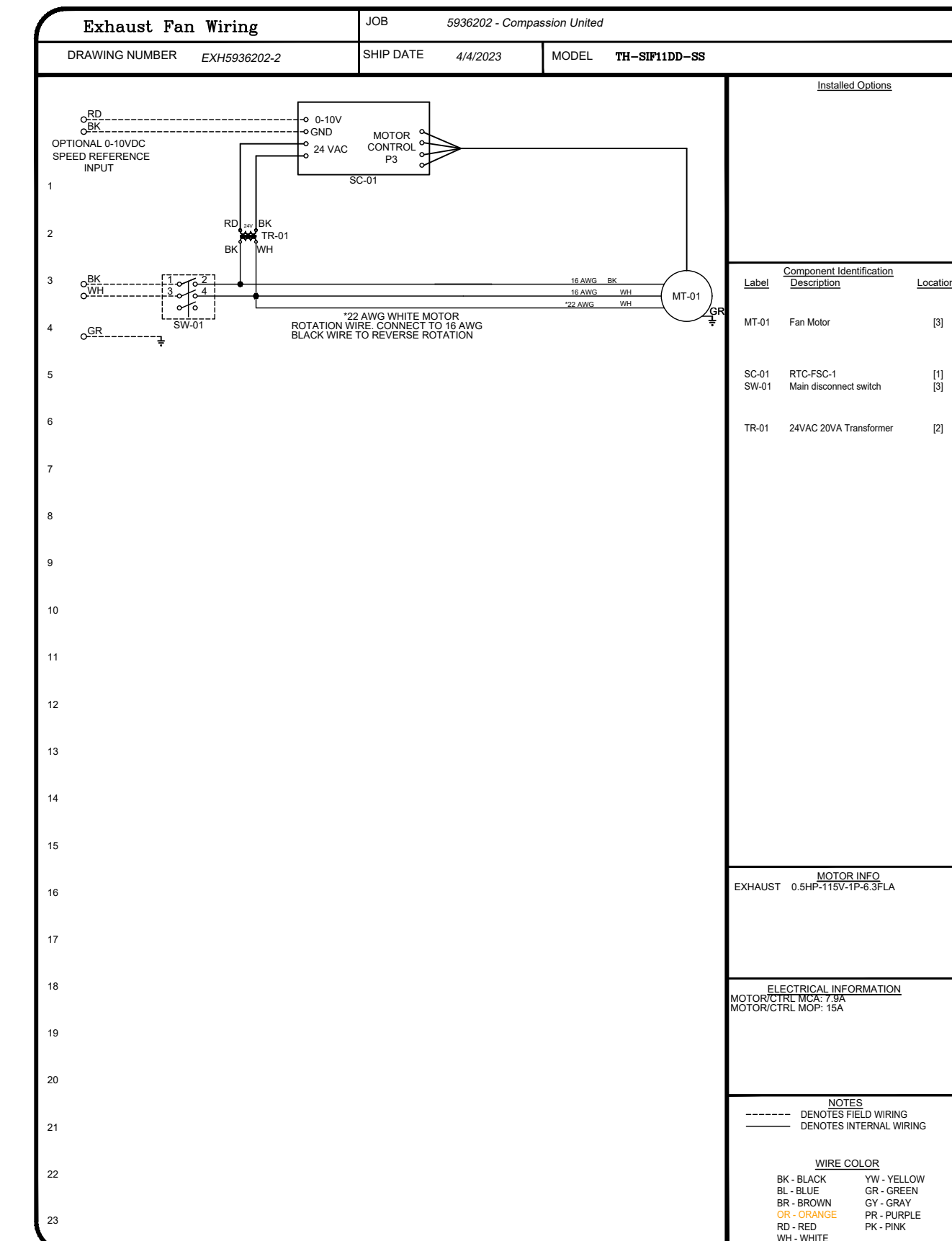


FEATURES:

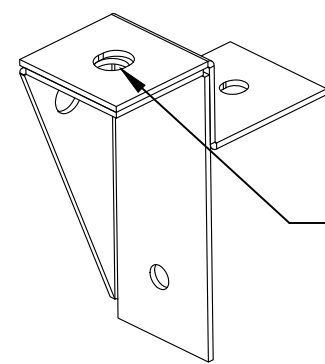
- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- TWO ACCESS DOORS FOR EASY ACCESS.
- BACKWARD INCLINED NON-OVERLOADING WHEELS.
- UL705 LISTING.
- AMCA AIR & SOUND CERTIFIED.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- 2" NPT THREADED DRAIN CENTERED IN BASE (SS MODELS).

OPTIONS

- SIF 11-SS LOW SP STRAIGHT DISCHARGE- SQUARE TO ROUND DISCHARGE ADAPTER.
- SIF11- INLET - STANDARD 12" DUCT CONNECTION.
- SIF - HORIZONTAL OVERHEAD MOUNT - PRE-INSTALLED MOUNTS (11-36).
- ECM WIRING PACKAGE - MANUAL OR 0-10VDC REFERENCE SPEED CONTROL.
- RTC- (TELCO MOTOR), CCW ROTATION.
- HANGING SPRING VIBRATION ISOLATORS (SET OF 4) FOR INDOOR OR OUTDOOR USE WITH SQUARE INLINE FANS (HSA125).
- I 15-BDD DAMPER.
- 2 YEAR PARTS WARRANTY.



NOTES:
 - DWXXFRISER USED WHEN CONNECTING TO STANDARD DUCT.
 - DWXXFRISERS ARE INSTALLED ON THE INTAKE AND/OR DISCHARGE SIDES.



UNIVERSAL MOUNTING BRACKET
 1/2" DIA. THREADED ROD ONLY
 5/60" DIA. MOUNTING HOLES.
 USED WITH CEILING VIBRATION ISOLATORS.
 USED WITH FLOOR VIBRATION ISOLATORS.
 CAN BE RELOCATED IN THE FIELD AS NEEDED.

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DRAWN BY: J.A.K. **DATE:** 11/02/23

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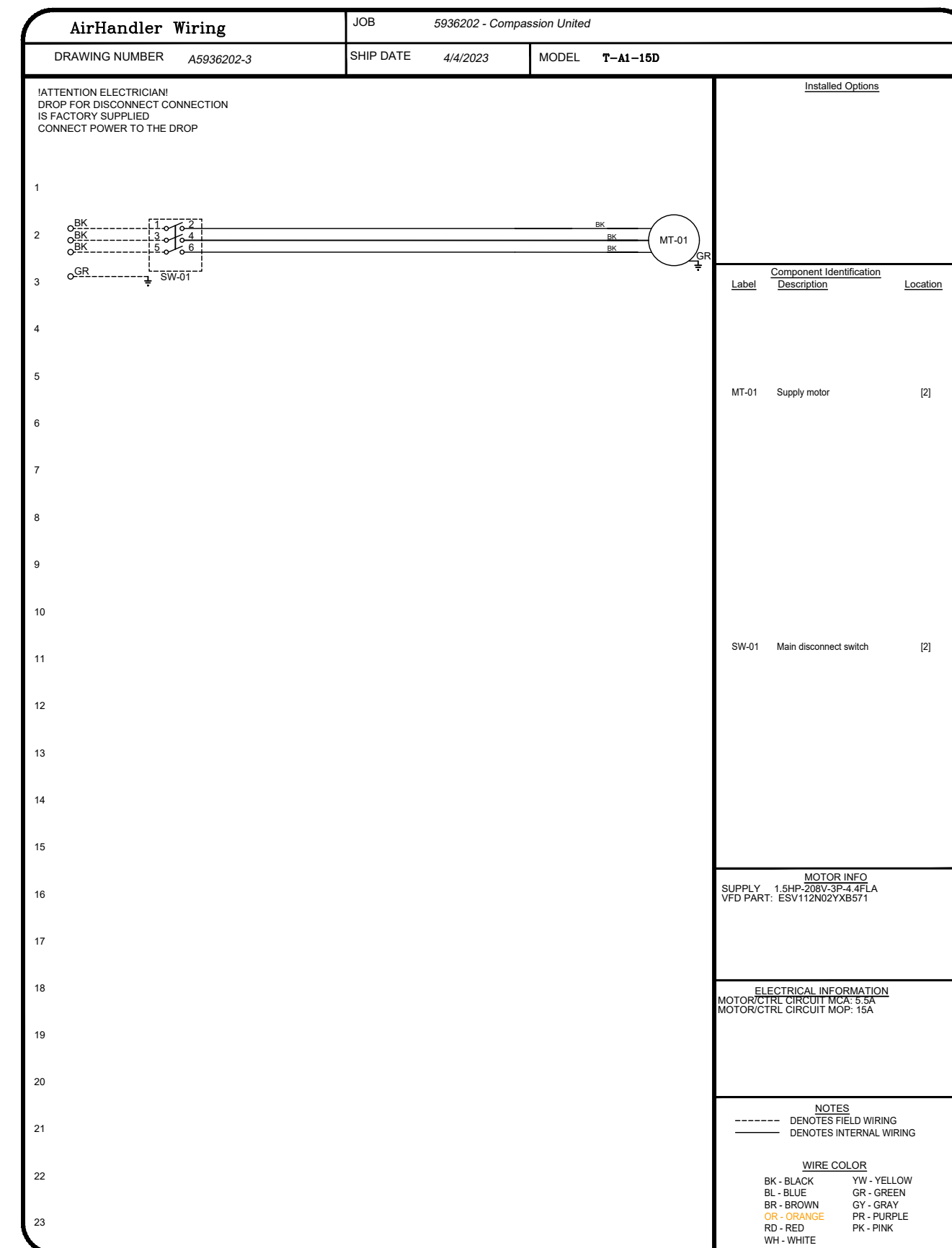
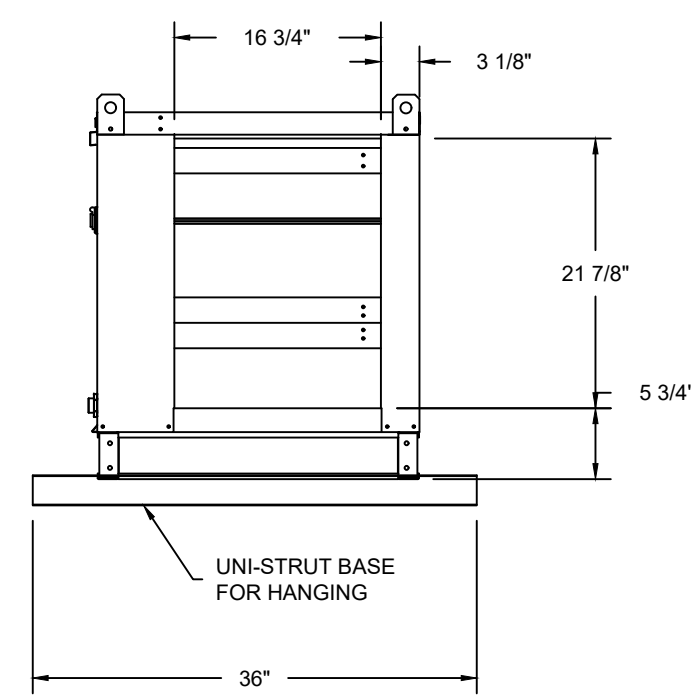
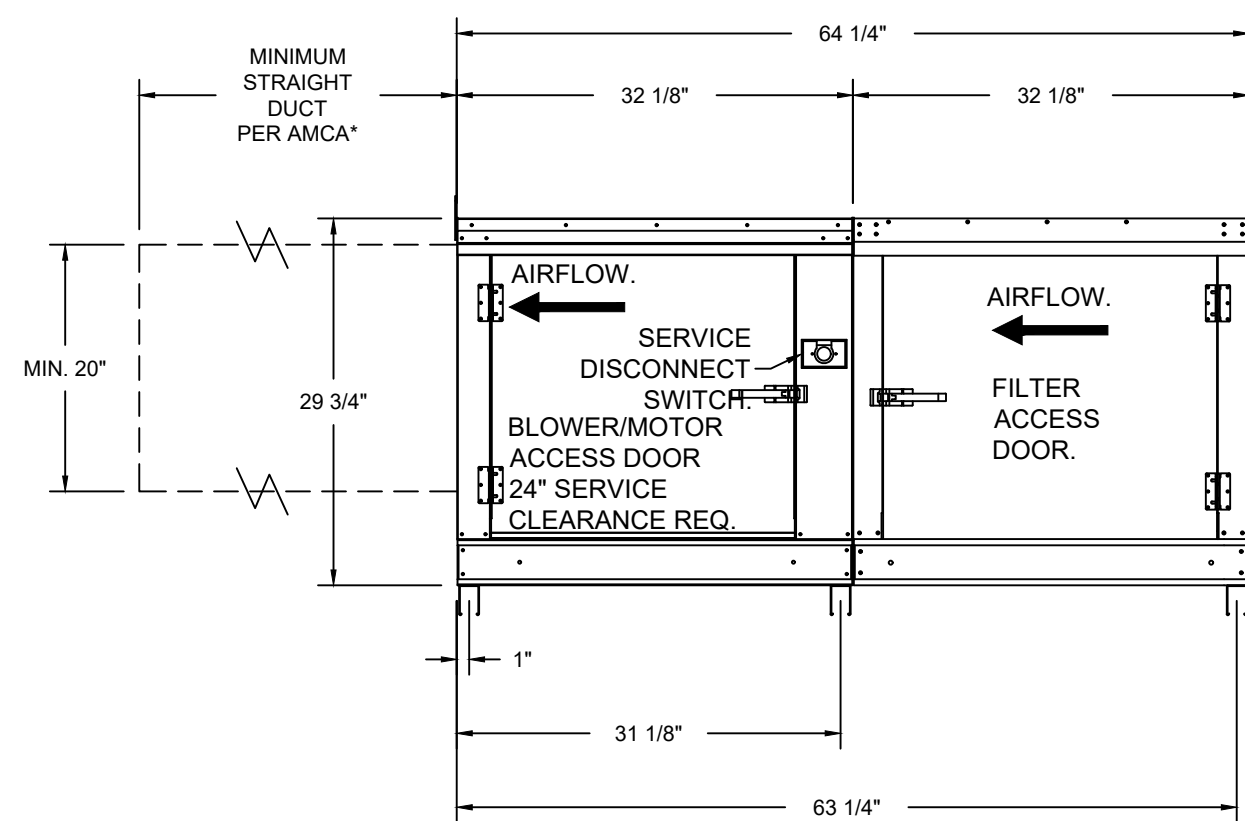
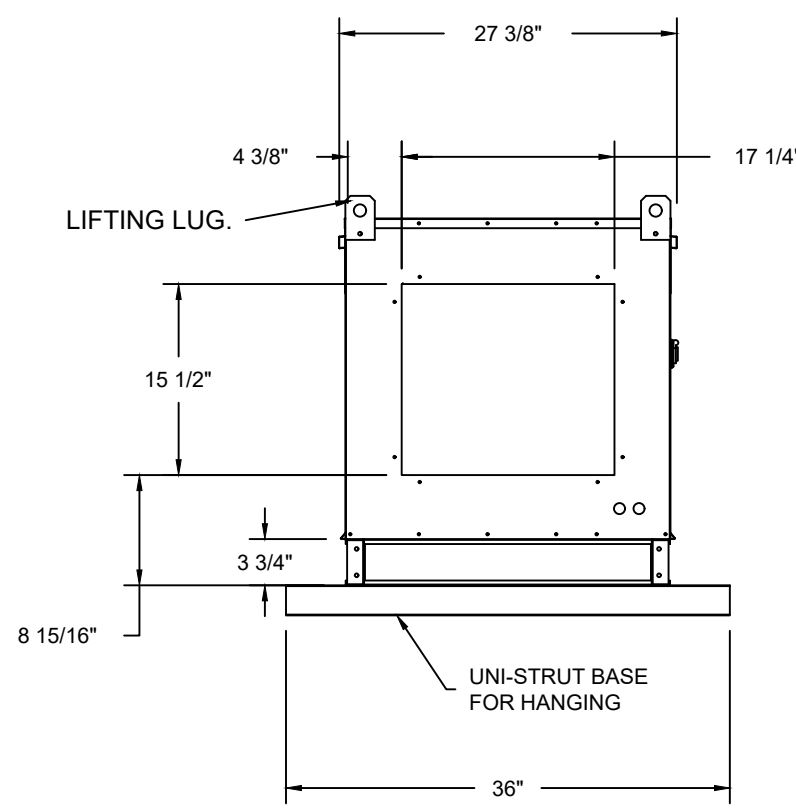
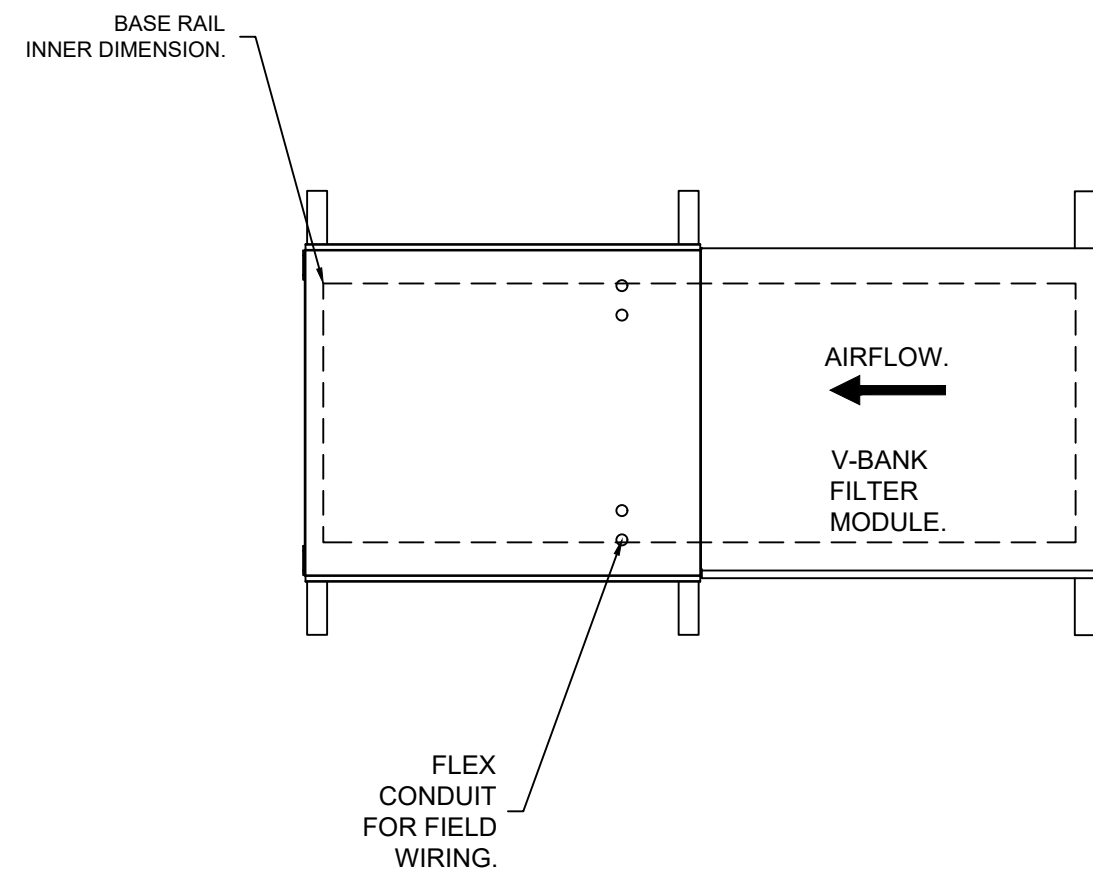
DATE: 4/4/2023
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DRAWN BY: GV-46
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MASTER DRAWING

SHEET NO.
 5

JOB NO. _____
SHEET NUMBER
FS5.4

- FAN #3 T-A1-15D - SUPPLY FAN (KSF)
1. UNTEMPERED SUPPLY UNIT WITH 15" MIXED FLOW DIRECT DRIVE FAN IN SIZE #1 HOUSING.
 2. V-BANK EZ FILTERS - INDOOR.
 3. SIDE DISCHARGE - AIR FLOW RIGHT -> LEFT.
 4. "INSULATION" FOR V-BANK INTAKE OPTION.
 5. GRAVITY BACK DRAFT DAMPER, 16" WIDE X 18" HIGH, STANDARD GALVANIZED CONSTRUCTION, 1 1/4" REAR FLANGE, FOR SIZE 1 UNTEMPERED FAN HOUSING (5181).
 6. INDOOR HANGING CRADLE FOR THE SIZE 1 UNTEMPERED UNIT. 2 HSA125 HANGING ISOLATORS PER UNI-STRUT INCLUDED.
 7. HINGED DOUBLE WALL INSULATED DOOR ASSEMBLY (BURNER/BLOWER SECTION).
 8. 2 YEAR PARTS WARRANTY.

*NOTE: SUPPLY DUCT MUST BE INSTALLED TO MEET SMACNA STANDARDS. A MINIMUM STRAIGHT DUCT LENGTH MUST BE MAINTAINED DOWNSTREAM OF UNIT DISCHARGE AS OUTLINED IN AMCA PUBLICATION 201. WHEN USING RECTANGULAR DUCTWORK, ELBOWS MUST BE RADIUS THROAT, RADIUS BACK WITH TURNING VANES. FLEXIBLE DUCTWORK AND SQUARE THROAT/SQUARE BACK ELBOWS SHOULD NOT BE USED. ANY TRANSITION AND/OR TURNS IN THE DUCTWORK WILL CAUSE SYSTEM EFFECT. SYSTEM EFFECT WILL DRASTICALLY INCREASE STATIC PRESSURE AND REDUCE AIRFLOW. DO NOT RELY ON UNIT TO SUPPORT DUCT IN ANY WAY. FAILURE TO PROPERLY SIZE DUCTWORK MAY CAUSE SYSTEM EFFECTS AND REDUCE PERFORMANCE OF THE EQUIPMENT. SUGGESTED STRAIGHT DUCT SIZE IS 20" X 20".



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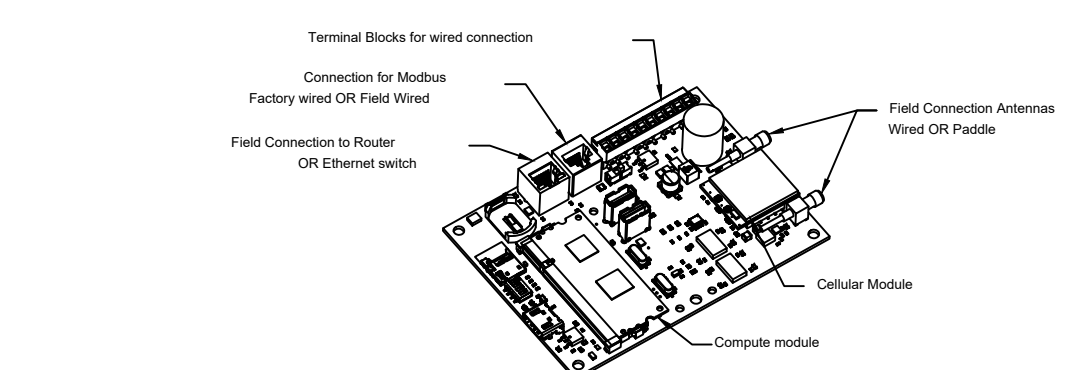
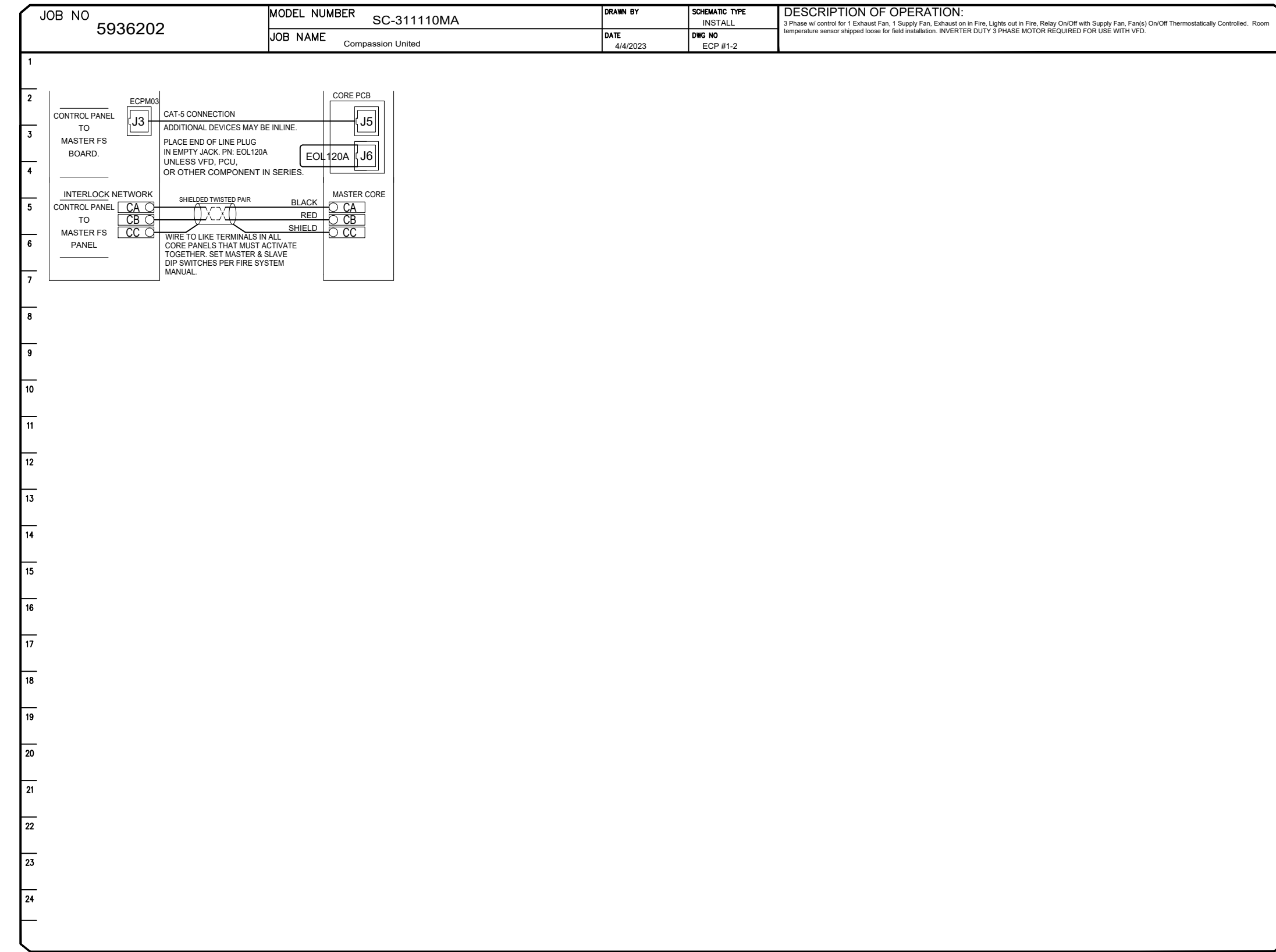
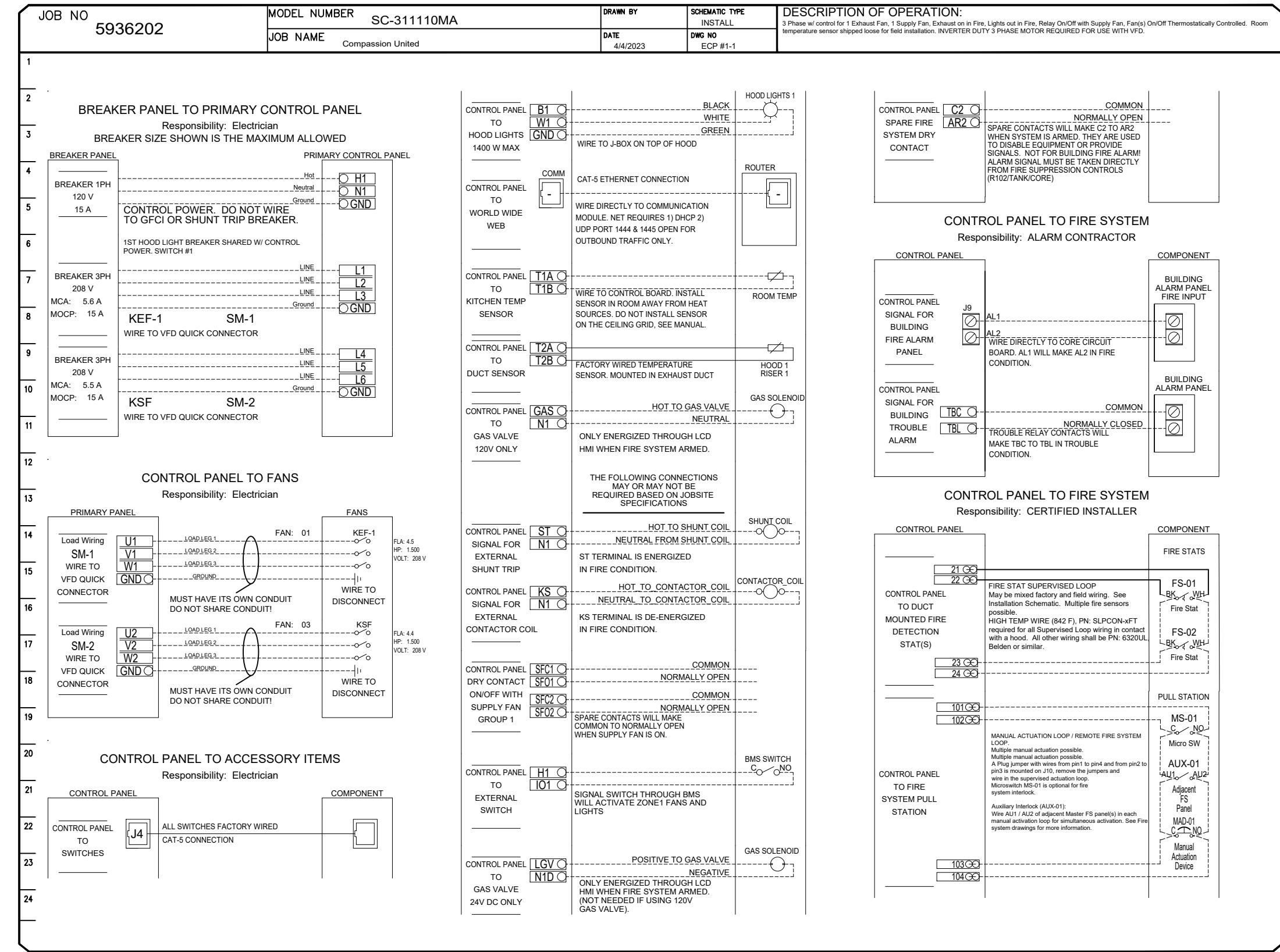


SHEET NO.
 6

JOB NO. _____
 SHEET NUMBER
FS5.5

ELECTRICAL PACKAGE - JOB#5936202

NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	HP	VOLT	FLA	
1		SC-31110MA	UTILITY CABINET LEFT	UTILITY CABINET LEFT	1 LIGHT	SMART CONTROLS THERMOSTATIC CONTROL W/ RELAY ON/OFF WITH SUPPLY	KEF-1	EXHAUST	3	1,500	208	4.5
				HOOD # 1	1 FAN		KSF	SUPPLY	3	1,500	208	4.4



CASlink Monitor and Control

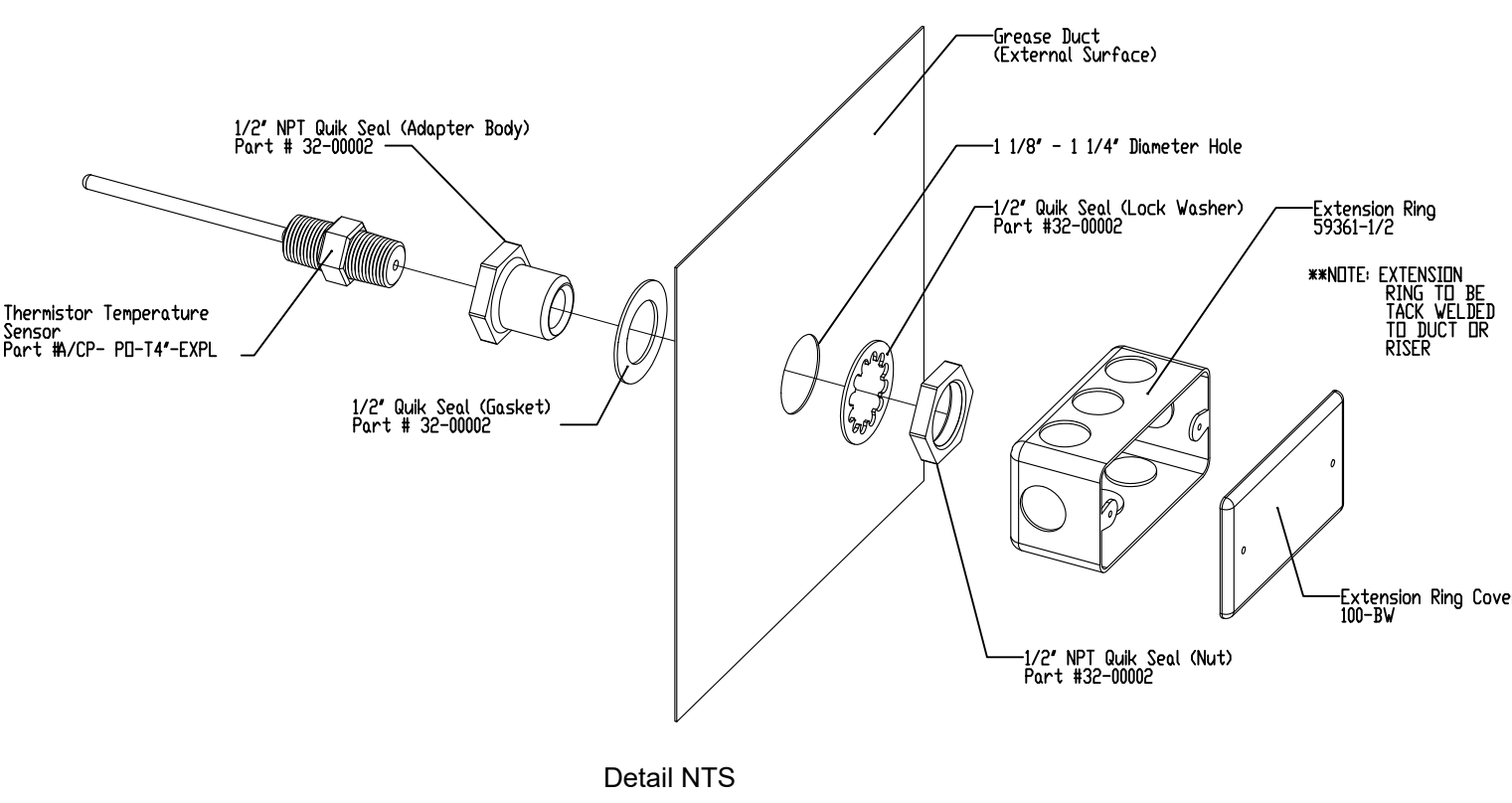
- Hood control panel to support communications to cloud-based Building Management System.
- Hood Control Panel to allow cloud-based Building Management System to monitor real time parameters outlined as MONITOR in the points list.
- Hood Control Panel to allow cloud-based Building Management System to control parameters outlined as CONTROL in the points list.
- Hood Control Panel to allow cloud-based Building Management System to implement SYSTEM ECONOMIZER control strategies for fully integrated Building Management.

MONITORING AND CONTROL POINTS LIST

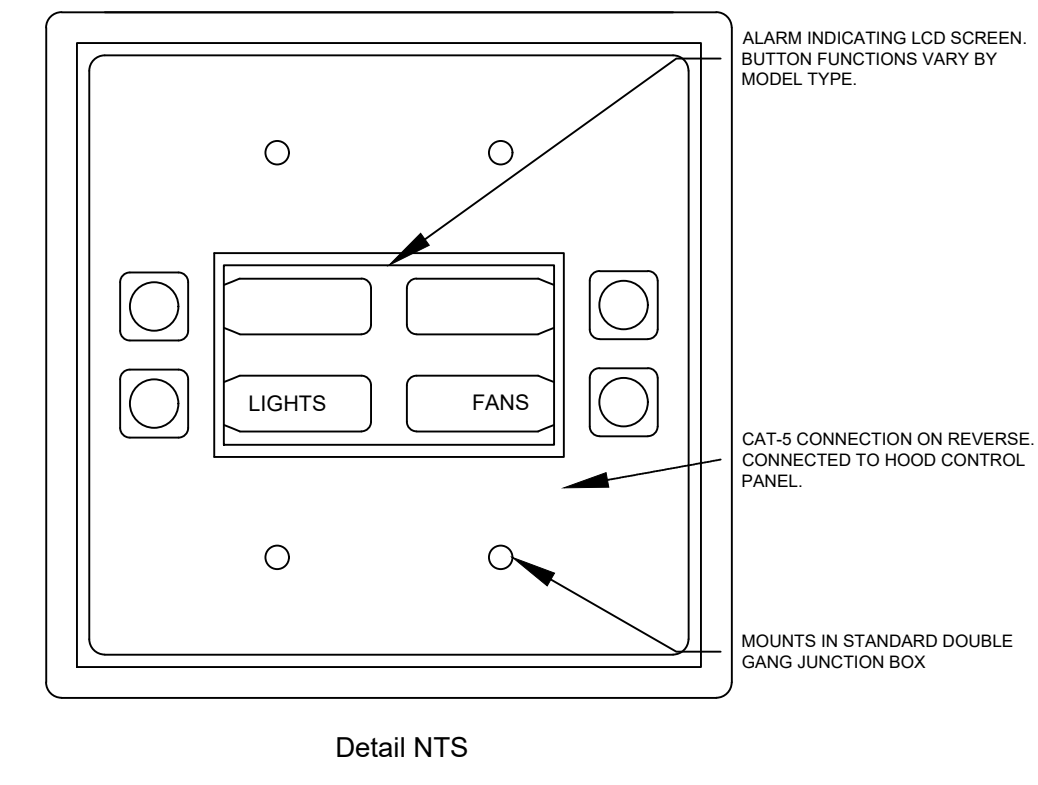
DCV Packages	Function	SC Packages	Function
Room Temperature	MONITOR	Room Temperature(s)	MONITOR
Duct Temperature(s)	MONITOR	Duct Temperature(s)	MONITOR
MHA Discharge Temperature	MONITOR	MHA Discharge Temperature	MONITOR
Kitchen RTU Discharge Temperature	MONITOR	Kitchen RTU Discharge Temperature	MONITOR
Fan Speed	MONITOR	Controller Faults	MONITOR
Fan Amperage	MONITOR	Fan Status	MONITOR
Fan Power	MONITOR	PCU Faults	MONITOR
YFD Faults	MONITOR	PCU Filter Clog Percentages	MONITOR
Controller Faults	MONITOR	Fire Condition	MONITOR
Fan Faults	MONITOR	Fire Status	MONITOR
Fan Status	MONITOR	CORE Fire System	MONITOR
PCU Faults	MONITOR	Building Pressures	MONITOR
PCU Filter Clog Percentages	MONITOR	Fans Button(s)	MONITOR & CONTROL
Fire Condition	MONITOR	Lights Button(s)	MONITOR & CONTROL
CORE Fire System	MONITOR	Wash Button	MONITOR & CONTROL
Building Pressures	MONITOR		
Prog Time Button	MONITOR & CONTROL		
Fans Button	MONITOR & CONTROL		
Lights Button	MONITOR & CONTROL		
Wash Button	MONITOR & CONTROL		

DUCT THERMISTOR SENSOR INSTALLATION

NOTE: Thermistor has 2 wires that connect to control cabinet



ELECTRICAL PACKAGE INTERFACE



REVISIONS

NO.	DESCRIPTION	DATE
1		
2		
3		
4		

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PHONE: 713-682-6390
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3		
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mclark@c-t-design.com

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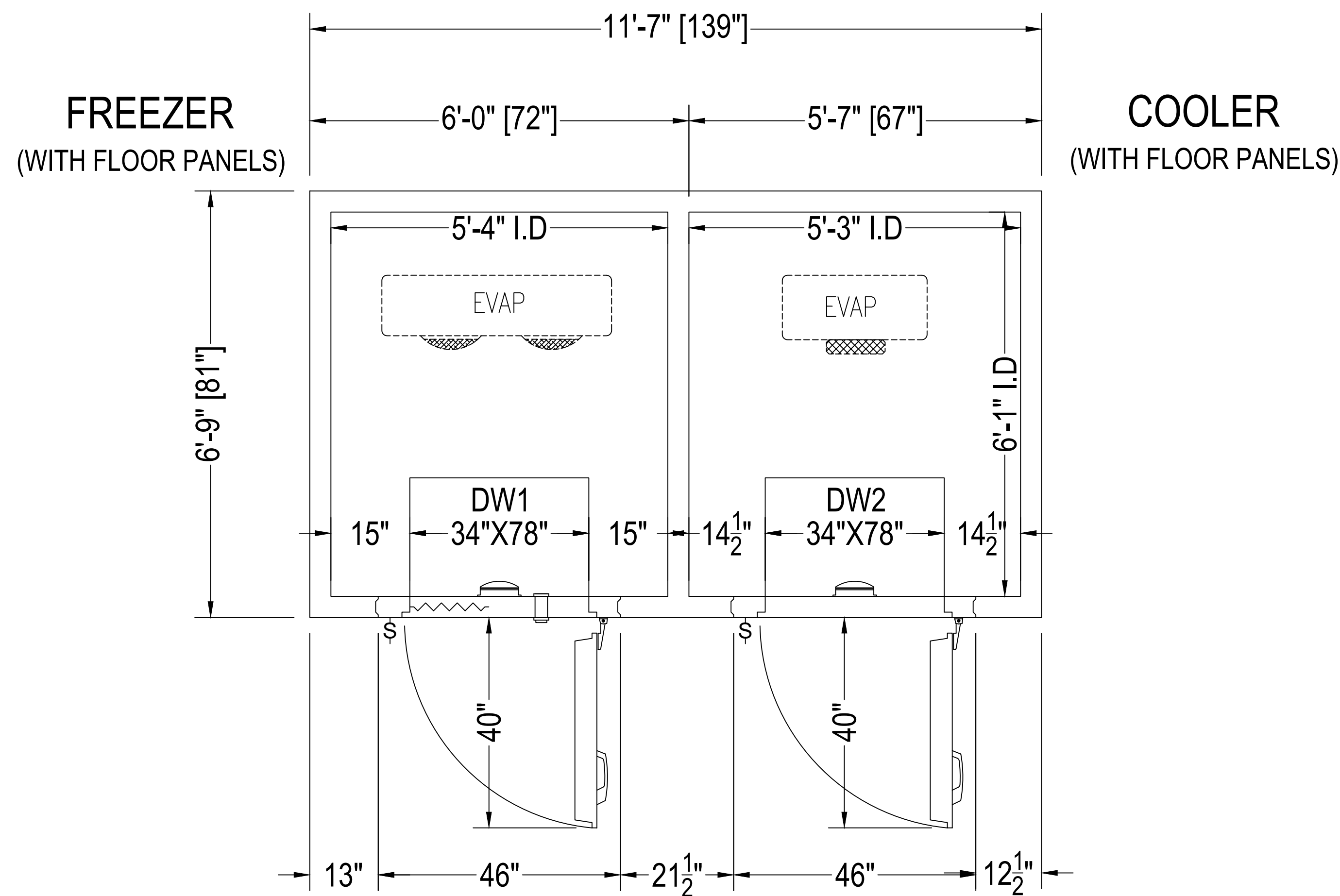
Compassion United
Houston, TX, 77002

DATE: 4/4/2023
DWG.#: 5936202
DRAWN BY: GV-46
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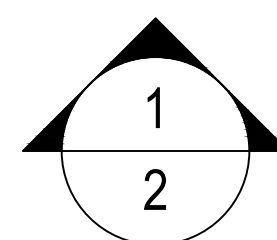
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REV. 4:11/02/23



1 PLAN VIEW
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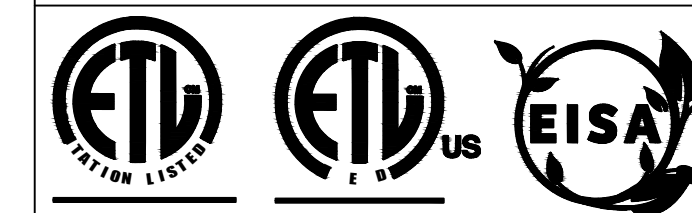


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5	####
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Project Name: COMPASSION UNITED		P.O#: P.O	
Drawn By: ST	Checked By: JS	DRW No: FS7.0	REV# 0
Scale: As Shown		Created: 10/30/2023	
		Sheet No: 1	
Vendor: Compassion United Foodservice			

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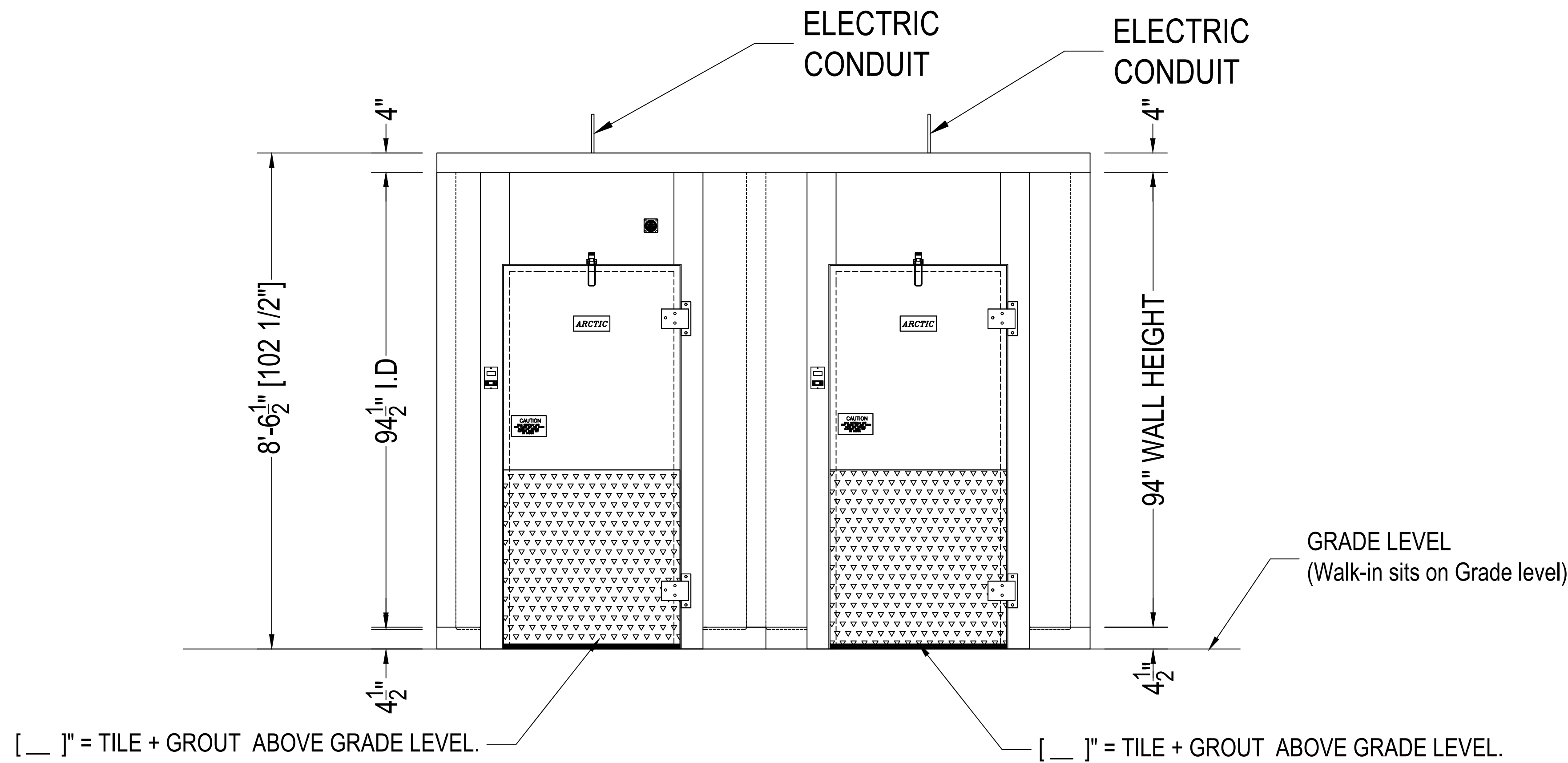
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PANEL CONSTRUCTION: TYPE II, CLASS I URETHANE CORE / FOAMED IN PLACE / URETHANE HARDRAIL PERIMETER

PANEL FINISHES	DOOR DESCRIPTION
<p>INSULATION - WALL - 4"</p> <p>WALL INTERIOR: ACRYLUME OR G90 GALVANIZED - 26 GA - STUCCO EMBOSSED</p> <p>WALL EXTERIOR: ACRYLUME OR G90 GALVANIZED - 26 GA - STUCCO EMBOSSED</p> <p>INSULATION - CEILING - 4"</p> <p>CEILING INTERIOR: ACRYLUME OR G90 GALVANIZED - 26 GA - STUCCO EMBOSSED</p> <p>CEILING EXTERIOR: ACRYLUME OR G90 GALVANIZED - 26 GA - STUCCO EMBOSSED</p> <p>INSULATION - FLOOR - 4" - STANDARD</p> <p>FLOOR INTERIOR: ALUMINUM -.063" - SMOOTH - NSF</p> <p>FLOOR EXTERIOR: ACRYLUME OR G90 GALVANIZED - 26 GA - STUCCO EMBOSSED</p>	<p>FREEZER DOOR:</p> <p>INTERIOR FINISH: ACRYLUME OR G90 GALVANIZED - 26 GA - STUCCO EMBOSSED</p> <p>EXTERIOR FINISH: ACRYLUME OR G90 GALVANIZED - 26 GA - STUCCO EMBOSSED</p> <p>COOLER DOOR:</p> <p>INTERIOR FINISH: ACRYLUME OR G90 GALVANIZED - 26 GA - STUCCO EMBOSSED</p> <p>EXTERIOR FINISH: ACRYLUME OR G90 GALVANIZED - 26 GA - STUCCO EMBOSSED</p>

DOOR ACCESSORIES:

HINGE 1255 - CAM LIFT - BRUSHED CHROME (SPRING KIT ON TOP HINGE)

HANDLE 1229C - KEY LOCK - BRUSHED CHROME

DIAMOND TREAD KICKPLATE - 36" HIGH - INT/EXT

DOOR CLOSER 1094 - W/HOOK - BRUSHED CHROME

CONDUIT THROUGH TOP OF DOOR (PER DOOR)

LIGHT 1804LG - VAPOR PROOF W/ NIGHT LIGHT

HEATED PRESSURE RELIEF PORT 1825 - 115V FREEZER ONLY

HEATER - DOOR FRAME FREEZER ONLY

THERMOSTAT - PEPI-B FREEZER ONLY

WALK-IN ACCESSORIES	MIL-I-24172A(SH) TYPE II, CLASS I URETHANE CORE
<p>(2) - EA 34" INTERIOR RAMP</p> <p>(2) - EA AIR CURTAIN, PLASTIC STRIP (UP TO 41" X 80" DOOR)</p> <p>(4) - EA LED 4' LIGHT FIXTURE</p> <p>(20) - FT TRIM STRIP, 3" X 3", 3" IN KINK, 3" IN KINK, MATCHING EXTERIOR FINISH</p> <p>(19) - FT CLOSURE PANEL, STANDARD, <=13" GAP, MATCHING EXTERIOR FINISH</p>	<p>*U.L. 723 - UL Solutions</p> <p>FLAME SPREAD: 20</p> <p>SMOKE DEVELOPED: 140 - 300</p> <p>THICKNESS: 6 IN. Thick Max</p> <p>ASTM D-1929-91:</p> <p>Min. Self-Ignition Temp.: 490C° (914F°)</p> <p>Min. Flash-Ignition Temp.: 390C° (734F°)</p>

NOTE: SEE LAST PAGE FOR DETAILS

GENERAL NOTES

FLOOR MUST BE LEVEL WITHIN 3/16" PER 10', SMOOTH, AND CLEAR OF OBSTRUCTIONS PRIOR TO INSTALLING WALK-IN PANELS.

A 2" MINIMUM GAP ALL AROUND WALK-IN IS REQUIRED FOR PROPER AIR CIRCULATION. HIGH HUMIDITY ENVIRONMENTS MAY REQUIRE FORCED VENTILATION IN GAP TO PREVENT CONDENSATION.

FLOOR PANELS (WHEN PROVIDED) ARE DESIGNED TO WITHSTAND A 1200 POUND PER SQUARE FOOT STATIONARY LOAD. DAMAGE DUE TO FORKLIFTS, PALLET JACKS, CARTS, OR ANY TYPE OF ROLLING TRAFFIC IS NOT COVERED BY WARRANTY.

STANDARD PANELS HAVE A STUCCO-EMBOSSED FINISH (TEXTURE) THAT HELPS REDUCE IRREGULARITIES IN THE PANEL SURFACE. ON REQUEST WE WILL PROVIDE A NON-TEXTURED (SMOOTH FINISH). SMOOTH FINISH PANELS TYPICALLY EXPERIENCE WRINKLING AND OTHER FLATNESS IMPERFECTIONS SUCH AS OIL-CANNING WHICH IS NOT COVERED BY WARRANTY.

WALK-IN ROOF IS NOT DESIGNED FOR FOOT TRAFFIC OR STORAGE. SNOW/ICE LOADS (OUTDOOR BOXES): TO AVOID CEILING FAILURE/COLLAPSE DUE TO SNOW OR ICE (NOT COVERED BY PANEL WARRANTY), SNOW OR ICE ACCUMULATION OF MORE THAN 3" MUST BE CAREFULLY REMOVED IN A MANNER WHICH DOES NOT CAUSE DAMAGE OR TEAR THE MEMBRANE ROOF COVER.

FOR QUARRY TILE OR CONCRETE FLOORS, THE METAL FACING MAY BE SUSCEPTIBLE TO STAINING DUE TO MOISTURE CREATED BY HYDRATION OF CONCRETE-TYPE MATERIALS. EACH ROOM MUST BE PROPERLY VENTILATED AND SPECIAL PRECAUTIONS TAKEN WHEN USING MURIATIC ACID DUE TO ITS EFFECTS ON ALUMINUM, GALVANIZED STEEL, AND STAINLESS STEEL.

METAL SURFACE MUST BE PROTECTED FROM LIME AND CONCRETE RELATED COMPONENTS. PROTECTION OF ONE OF THE FOLLOWING TYPES MUST BE APPLIED BETWEEN THE CONCRETE AND METAL SURFACES: LIQUID TAR BRUSHED OR SPRAYED ABOVE THE CONCRETE LINE, HEAVY EPOXY PAINT, 6 MIL POLYETHYLENE, OR A DOUBLE LAYER OF 30 LB ASPHALT IMPREGNATED ROOFING PAPER.


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DATE: _____

REFRIGERATION SPECIFICATIONS															
ITEM	QTY	HP	MANUFACTURE	MODEL	REFRIG	V/P/H	MCA	FANS	CONNECTION		DIMENSIONS(IN)			WEIGHT LBS	BTUH
									INLET	SUCTION	LENGTH	DEEP	HEIGHT		
SCROLL,REMOTE PREASSEMBLED, ECONET,AIR-COOLED,35°,OUTDOOR															
1	1	3/4	RUSSELL C/U	RFO080M4SDANT	R448/449	208/230/1/60	15		3/8	5/8	26-1/4	28-1/4	18-3/4	195	7398
2	1		RUSSELL COIL	RL6A052ADARE		208/230/1/60 EC	15.0	1	3/8	5/8	27 1/8	12 1/2	16 3/4	44	
ACCESSORIES (1)COMPRESSOR STAND U.L 72L X 24W W/18 LEGS															
SCROLL,REMOTE PREASSEMBLED, ECONET,AIR-COOLED,-10°F,OUTDOOR															
3	1	2-1/2	RUSSELL C/U	RFO250L4SDANT	R448/449	208/230/1/60	35.0		3/8	7/8	38 1/4	28 1/4	21 1/4	240	6416
4	1		RUSSELL COIL	RL6E066DDARE		208/230/1/60 EC	15.0	2	3/8	7/8	43 5/8	12 1/2	16 3/4	52	
ACCESSORIES (1)COMPRESSOR STAND U.L 72L X 24W W/18 LEGS															
NOTE: A LICENSED REFRIGERATION INSTALLER MUST DECIDE PLACEMENT OF EVAPORATOR(S) BASE ON SITE CONDITIONS,															
EVAPORATOR PLACEMENT ON DRAWING SHOULD BE USED FOR REFERENCE ONLY,															
DETAILED REFRIGERATION SPECIFICATIONS ARE AVAILABLE UPON REQUEST															



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Intertek CONFORMS TO UL STD 471

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J.A.K.	11/02/23	
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SCALE: 1/4"=1'-0"

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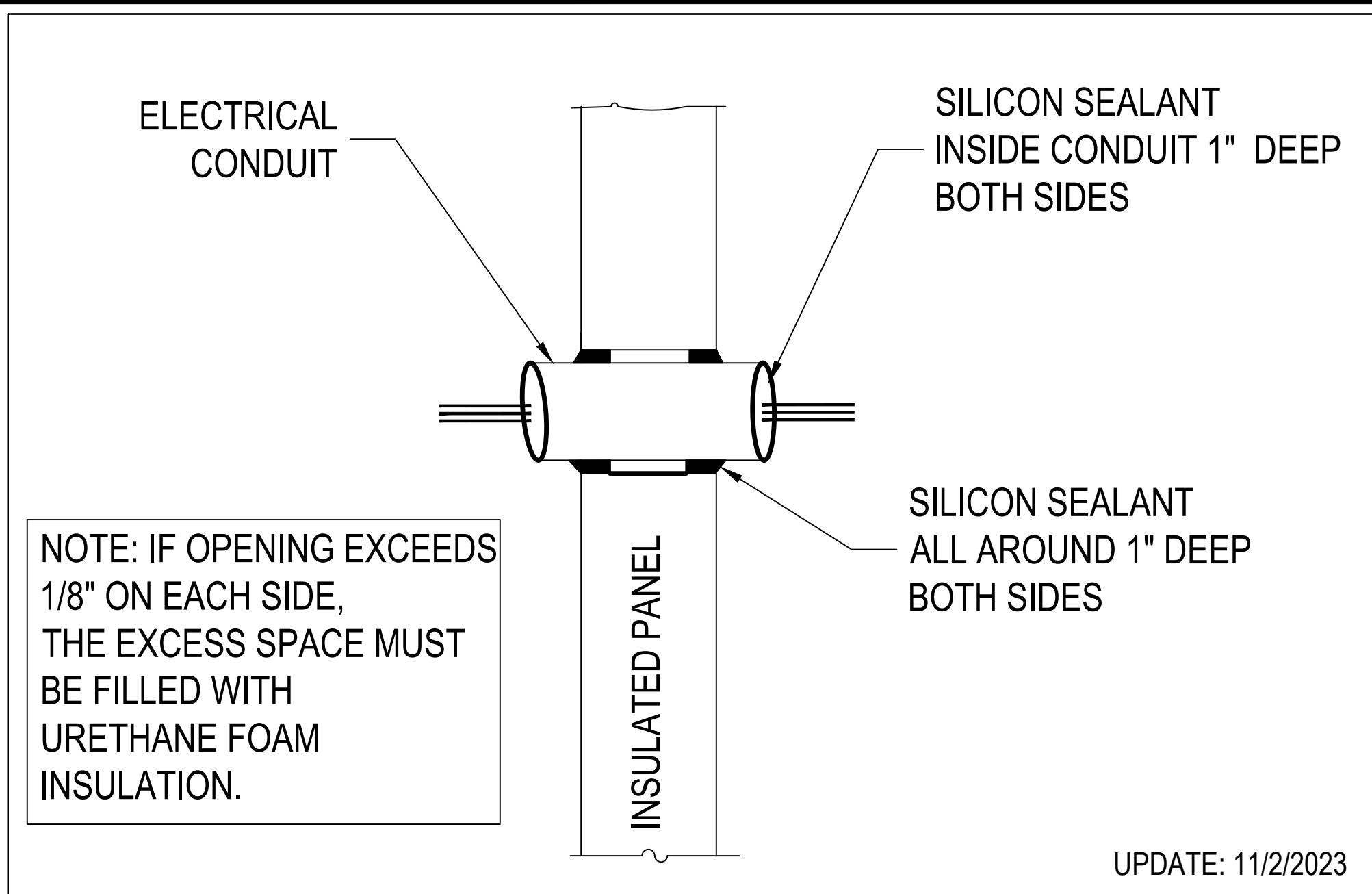
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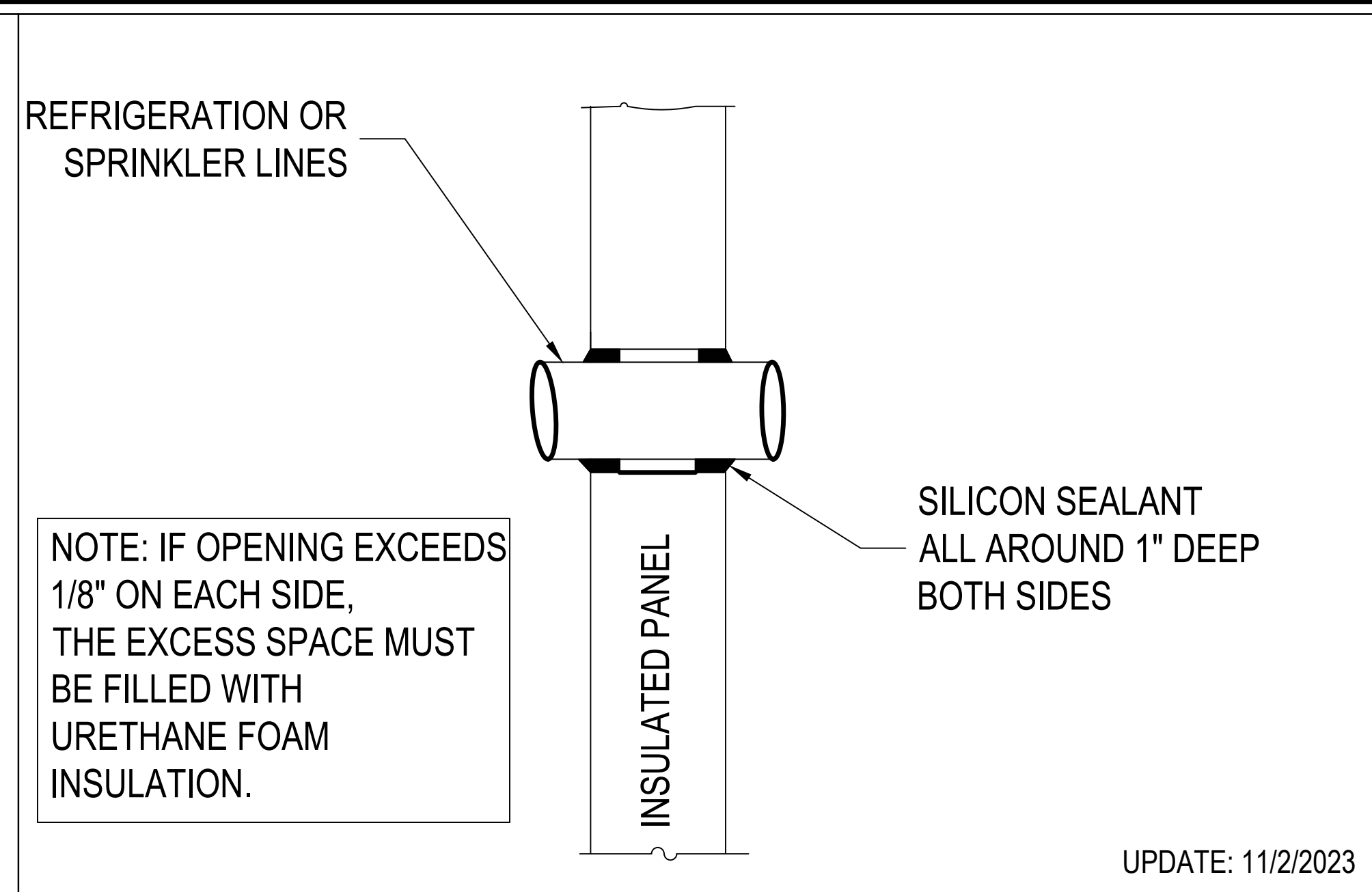
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NOTE: IF OPENING EXCEEDS 1/8" ON EACH SIDE, THE EXCESS SPACE MUST BE FILLED WITH URETHANE FOAM INSULATION.

UPDATE: 11/2/2023

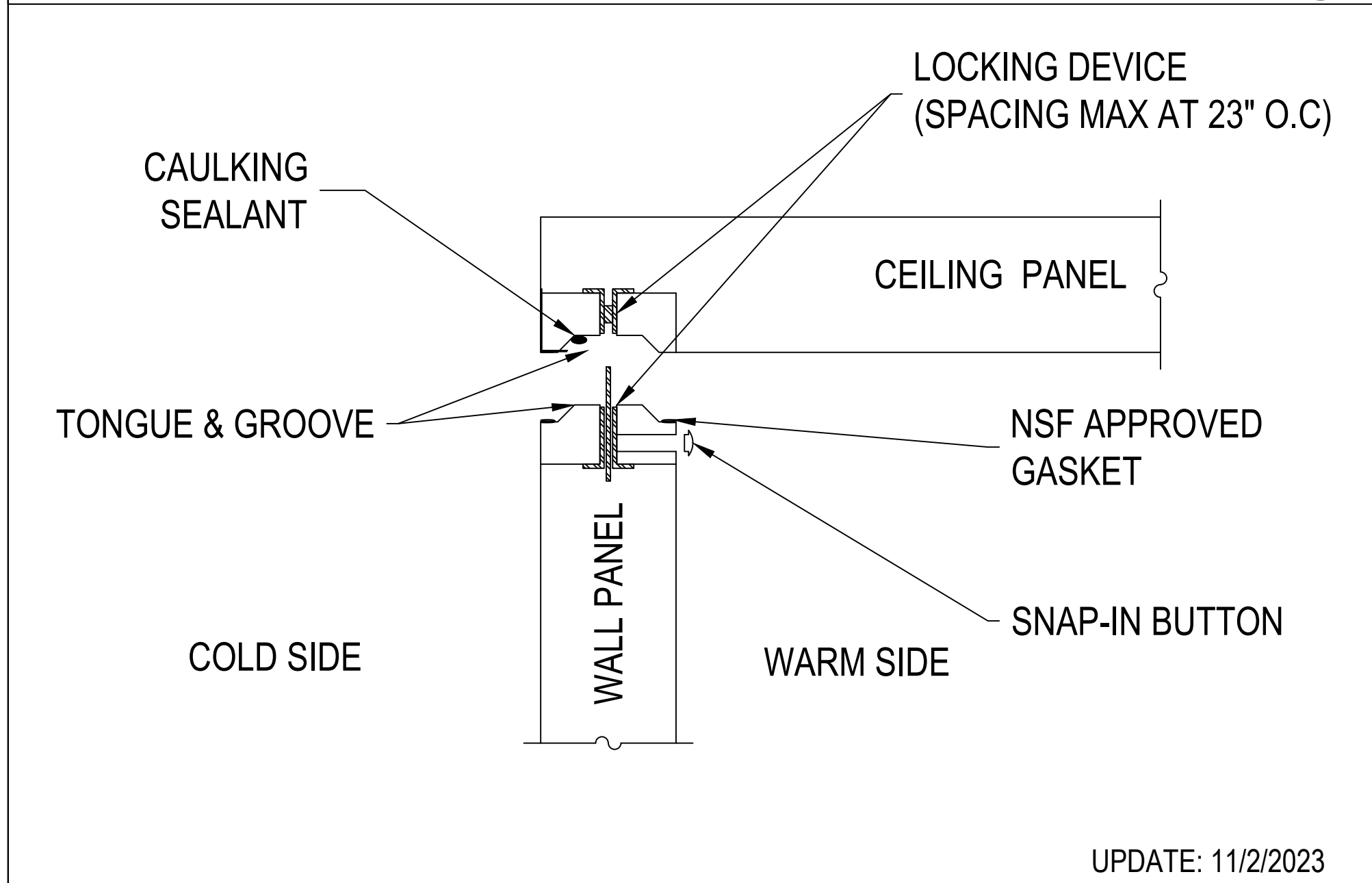


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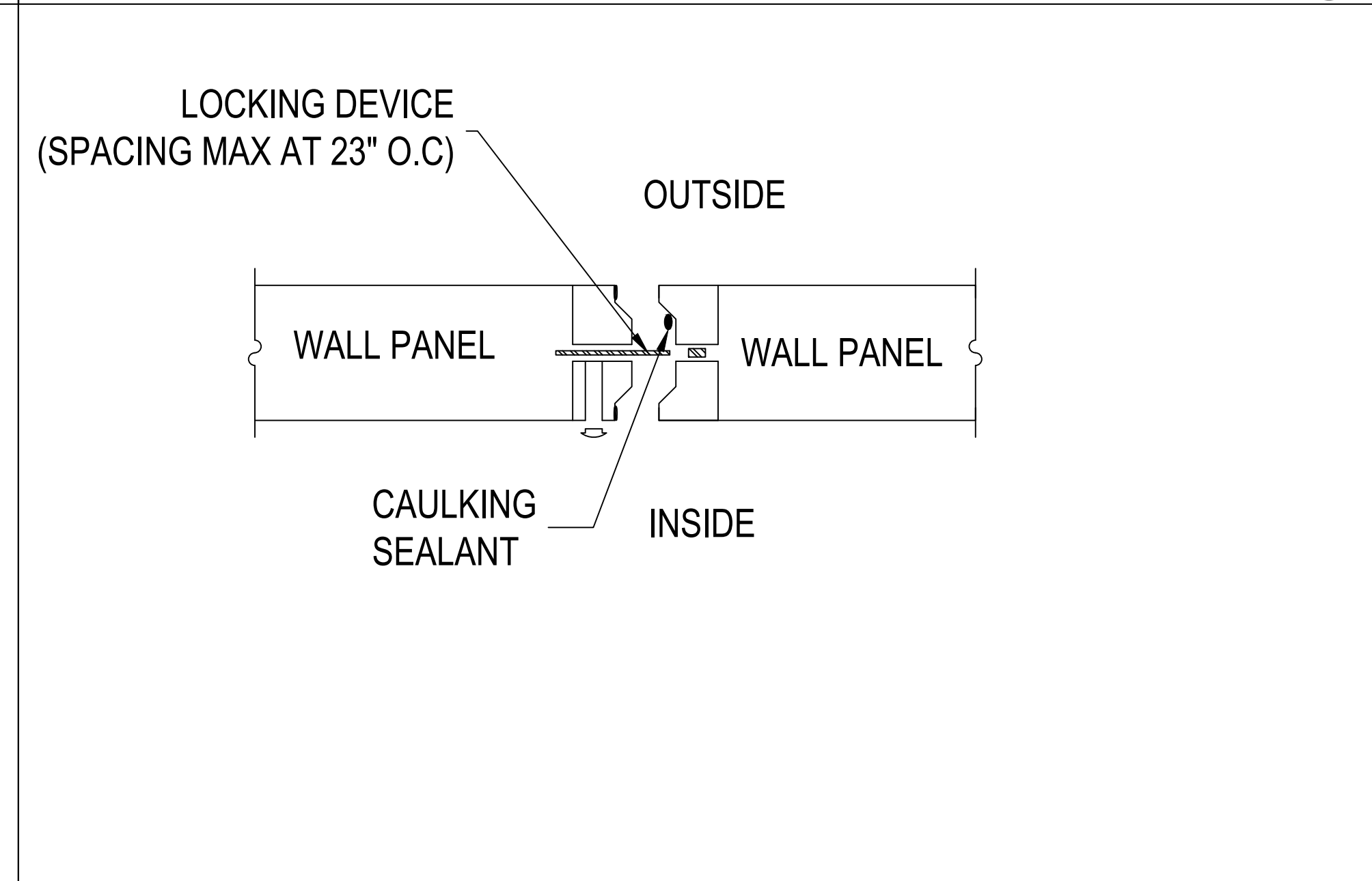
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ELECTRICAL CONDUIT PENETRATION ①

REFRIGERATION OR SPRINKLER LINES PENETRATION ②

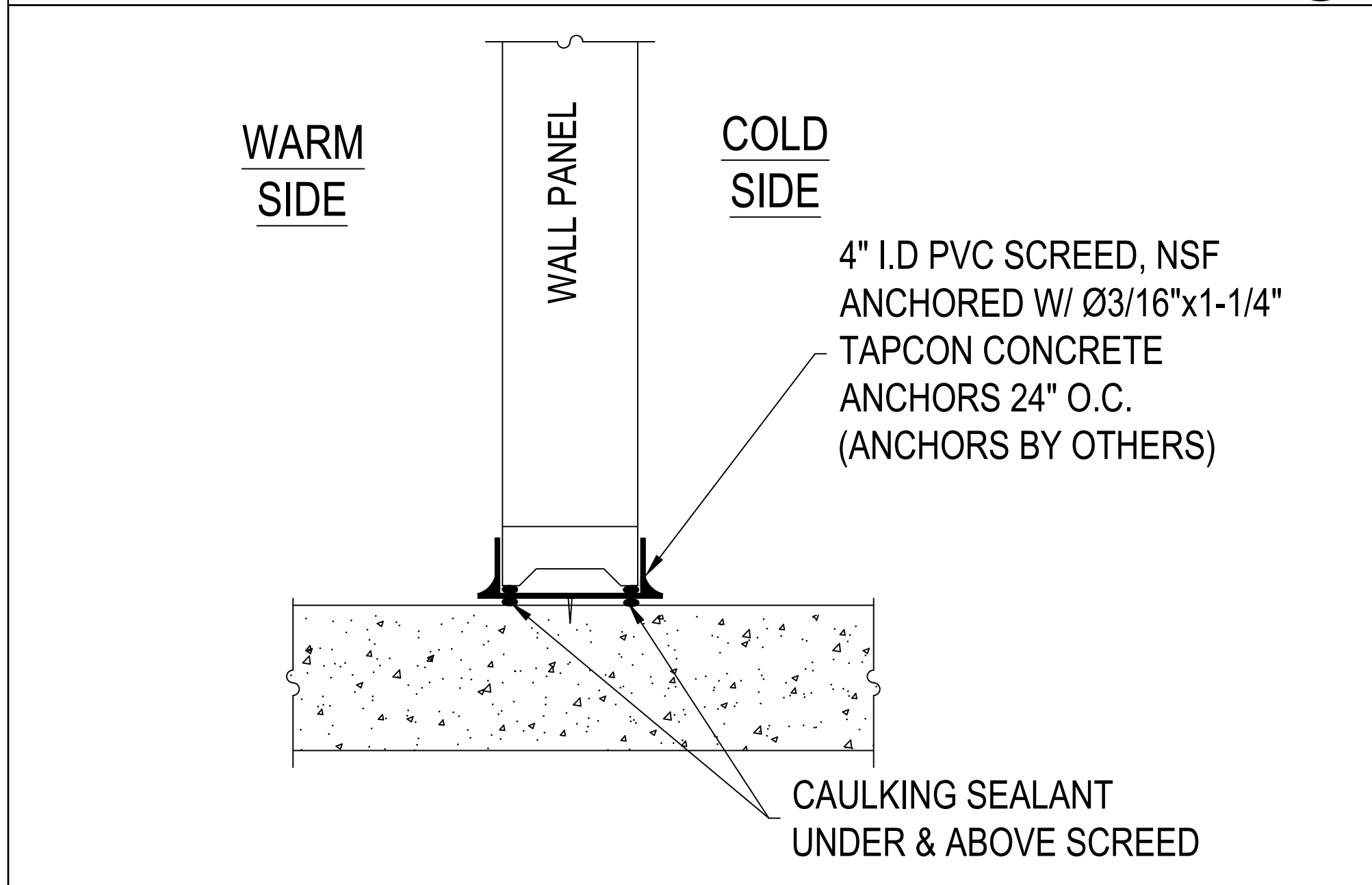


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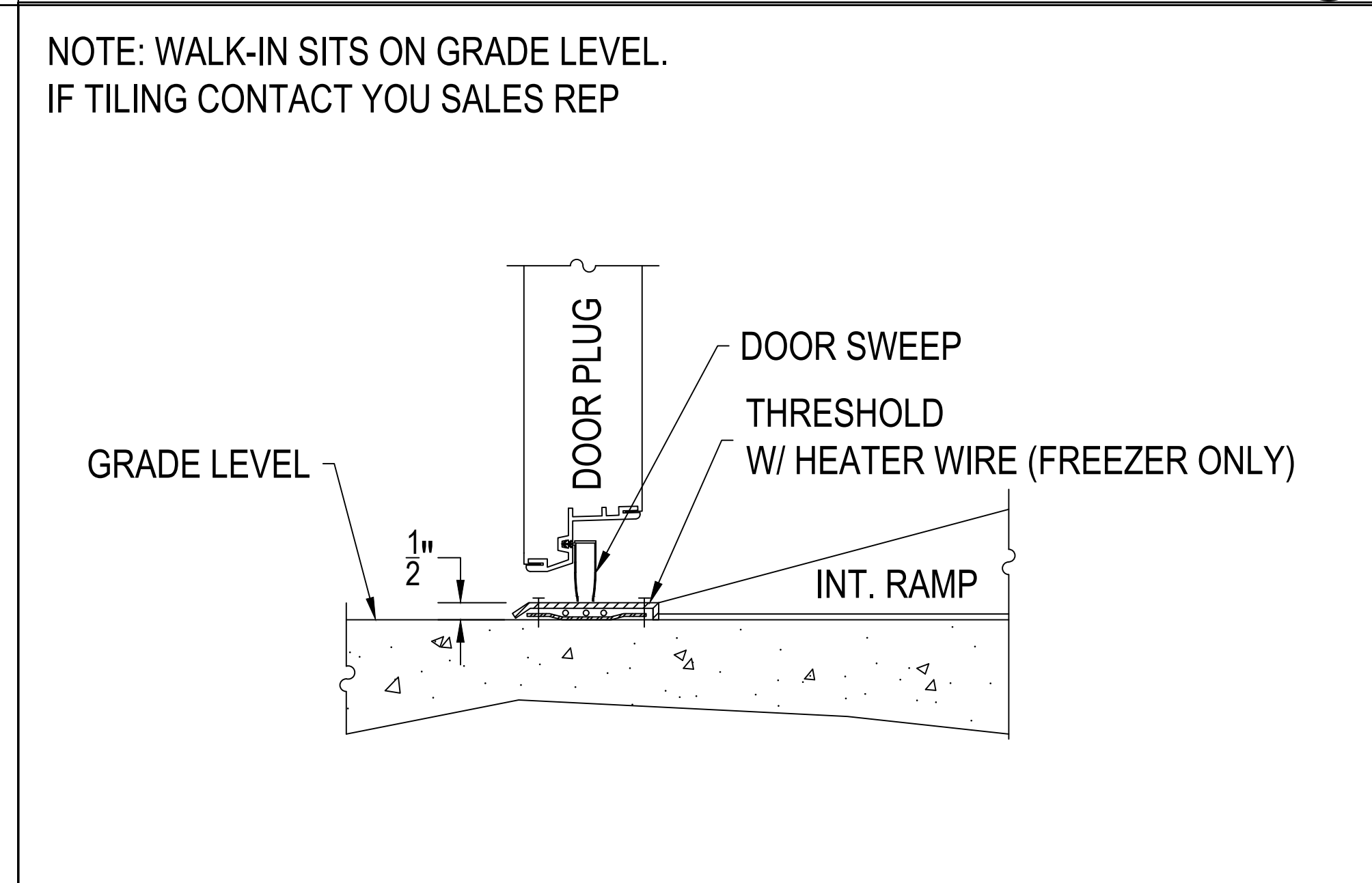


WALL PANEL TO CEILING CONNECTION ③

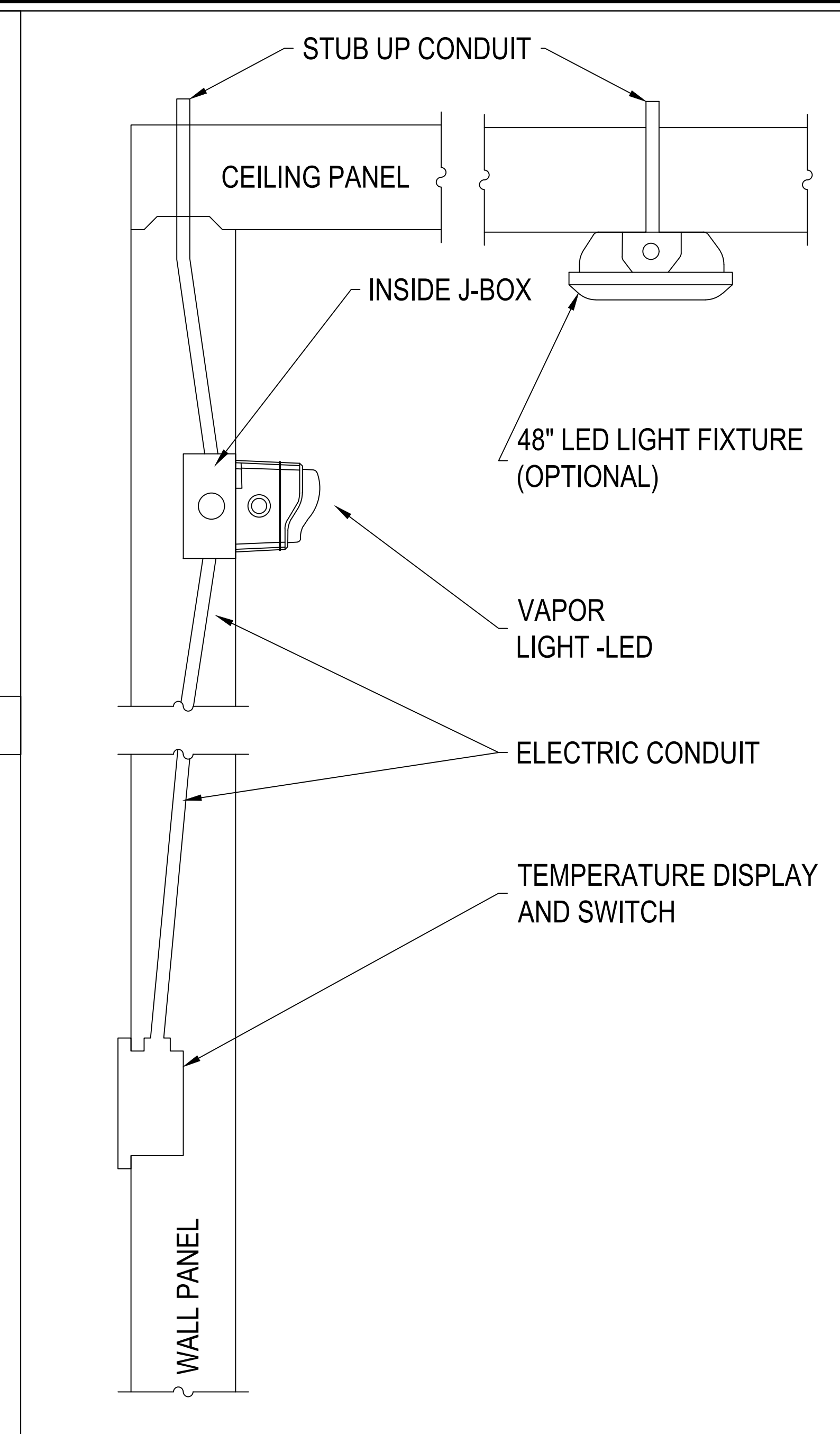
WALL TO WALL CONNECTION ④



NO FLOOR - 4" I.D PVC SCREED - NSF ⑤



DOOR PLUG DETAIL FOR INTERIOR RAMP ⑥



DOOR DETAIL STUB UP CONDUIT ⑦

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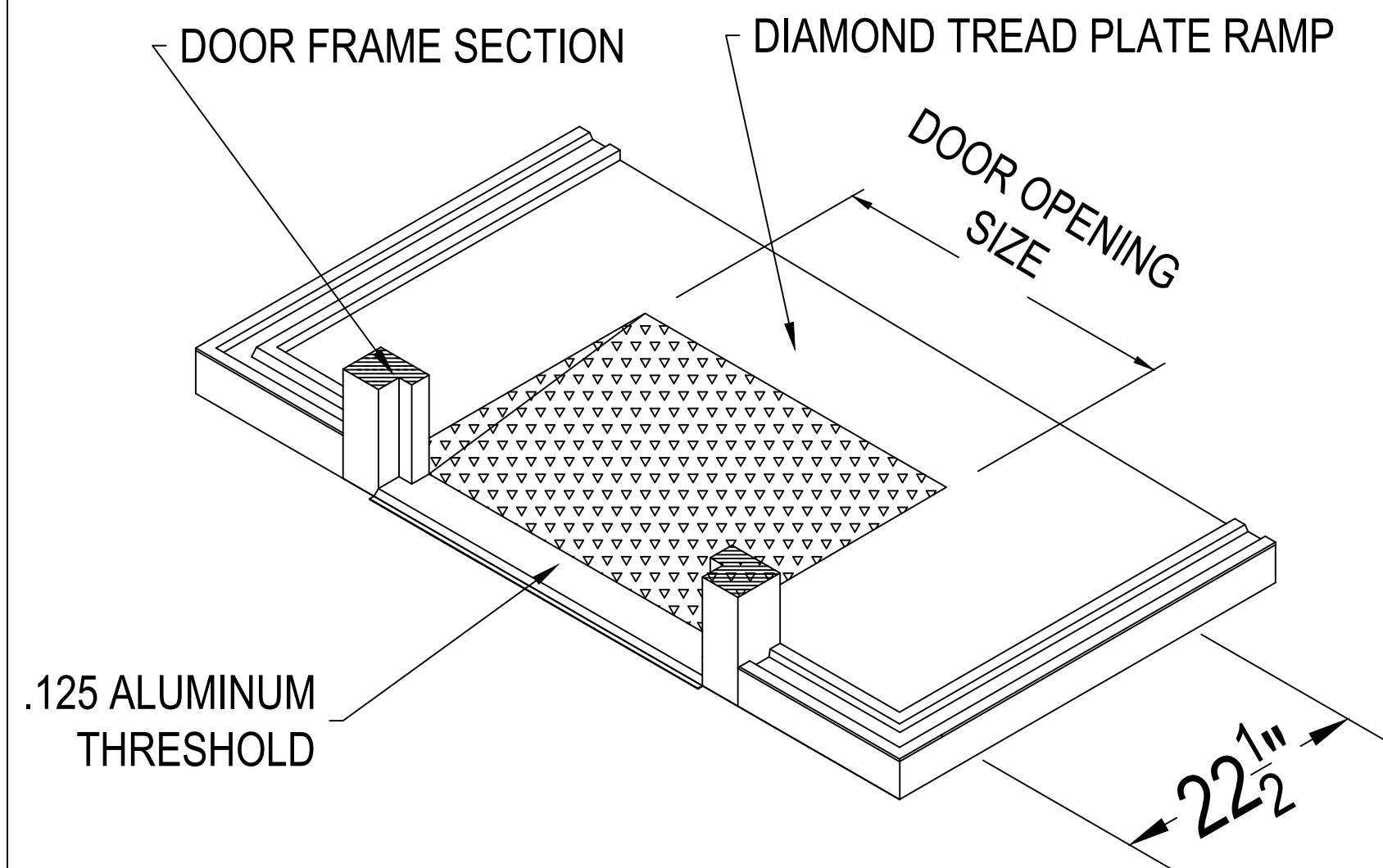
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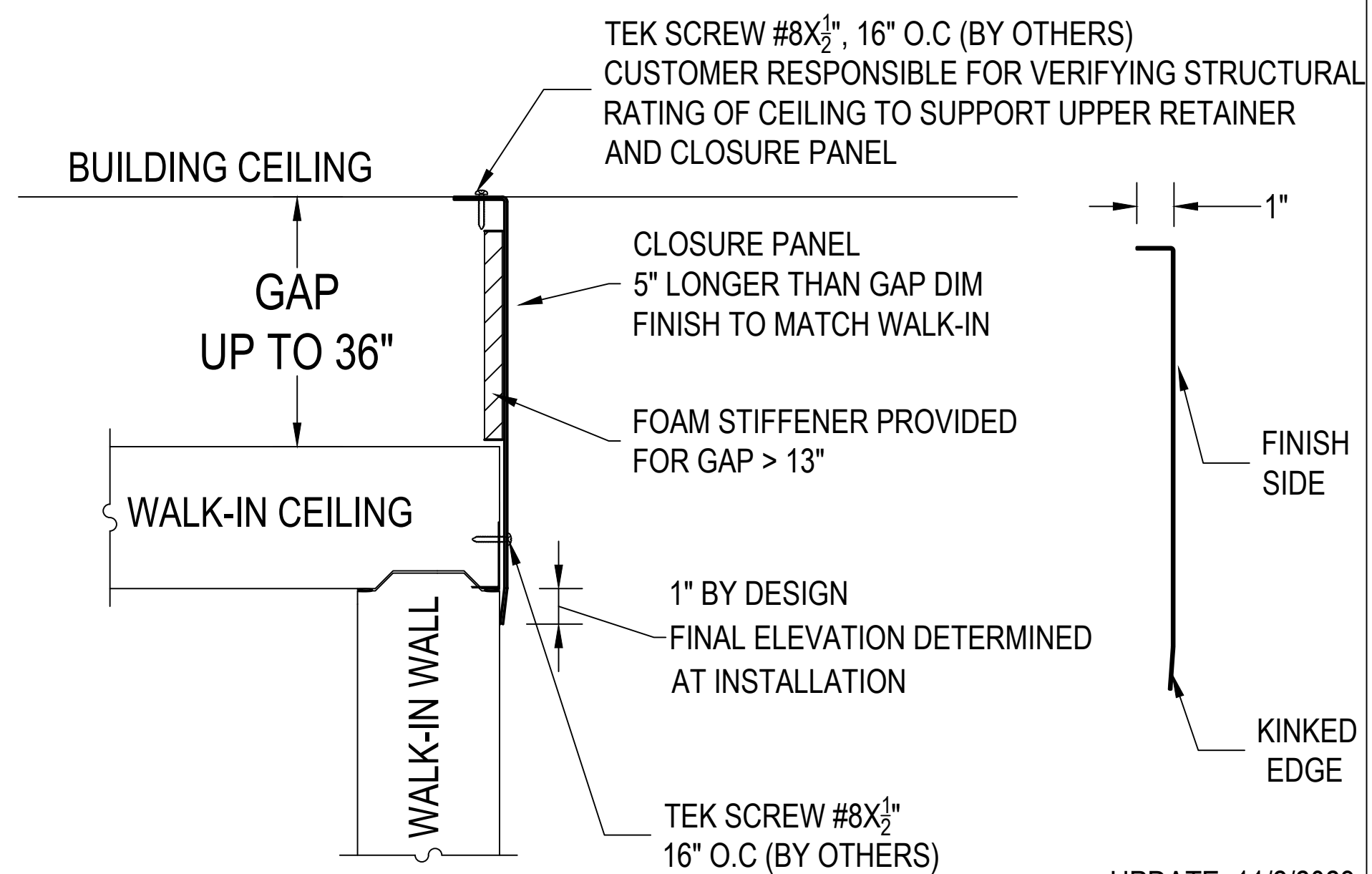
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INTERIOR RAMP DETAIL

8



STANDARD CLOSURE PANELS DETAIL

9

UPDATE: 11/2/2023

10

11

12

13

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Project Name: COMPASSION UNITED			P.O#: P.O
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 MATT CLARK
 mclark@c-t-design.com

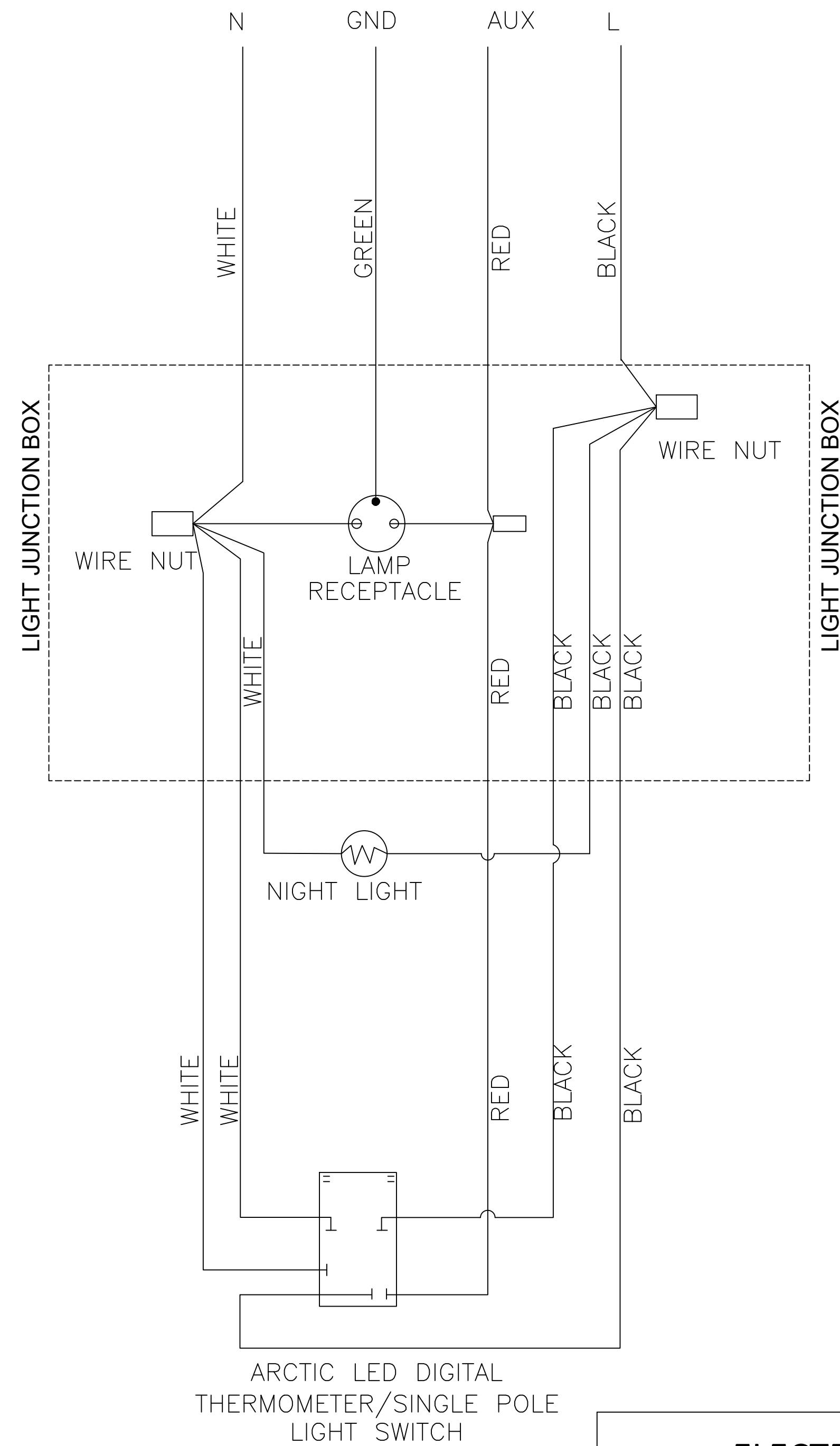
COMPASSION UNITED
 350 FOSTER DR.
 CONROE, TX 77301



JOB NO. _____

SHEET NUMBER
FS7.4

Field Connection
120V / 60V / 1PH
15 Amp Circuit Required

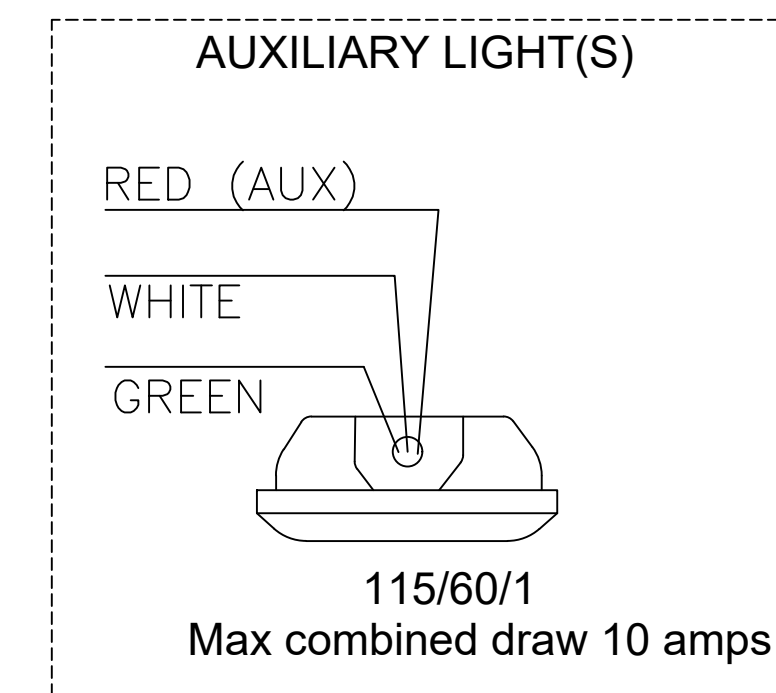
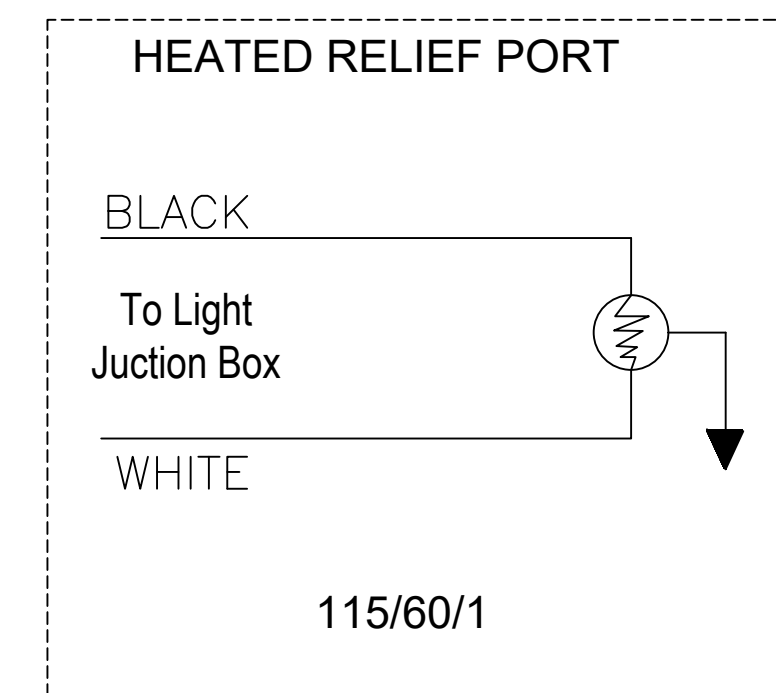
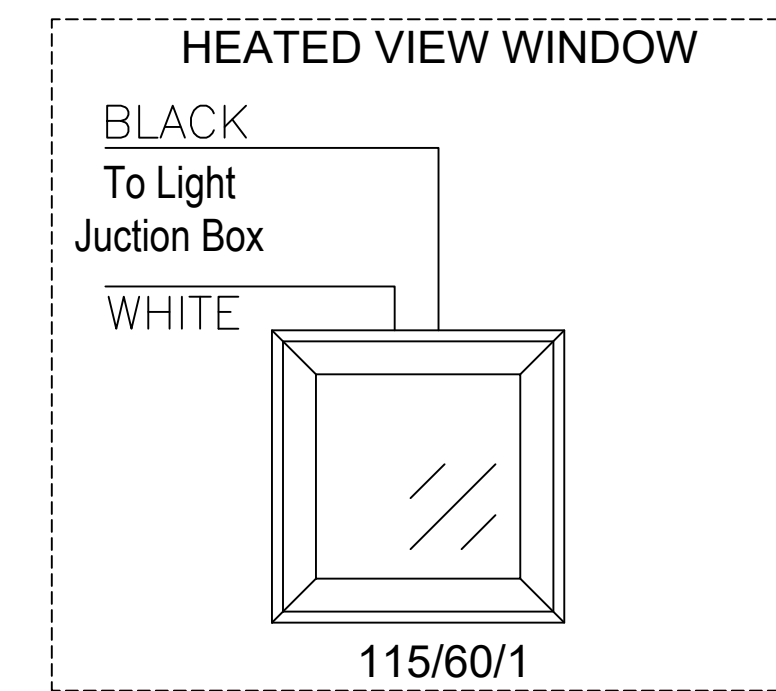
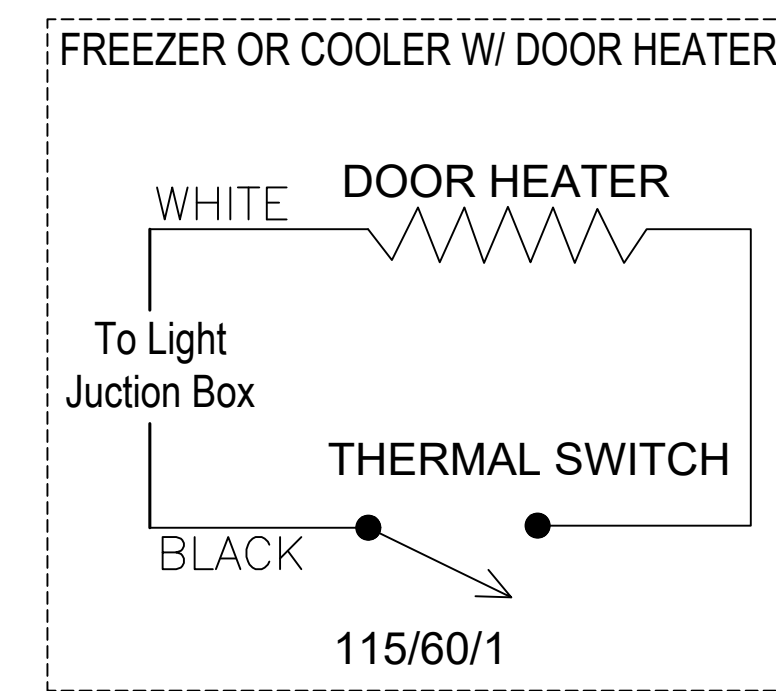


ELECTRICIAN MUST PROVIDE SEAL-OFFS ON THE WARM SIDE OF ALL INCOMING CONDUIT LINES TO PREVENT CONDENSATION FROM FORMING INSIDE THE CONDUIT. (SEE DETAILS PAGE)

This is a 120VAC, 15 amp circuit auxiliary lights max combined draw 10 amps

Manufacturer	Model
Keil (Component Hardware)	LED48X754
Kason	1802, 1802NL, 1803, 1804, 1806, 1807, 1808,
	1808NM, 1808FM, 1809, 1810EZ Series,
	1810LX, 1810LC, 1820
MaxLite	LSV Series, JJ Series
Osram Sylvania	30099 Series
Various	UL Listed 120VAC, no greater than 60 watts

ADDITIONAL CONNECTIONS
FREEZER **OPTIONAL**



NOTE: Door Heater, Thermal Switch and Heated Relief Port included on Freezers only. Door Heater and Thermal Switch optional on Coolers

NOTE: If Auxiliary Lights are not powered from the Door Circuit, the Red Aux Wire from the Door Circuit must be capped off or removed by Qualified Electrician

SINGLE POLE WIRING DIAGRAM FOR ARCTIC LED DIG THERMOMETER

NOTE: DOOR MUST BE DISCONNECTED FROM ELECTRICAL SUPPLY FOR INSTALLATION AND ADJUSTMENTS.
 NOTE: CONDUIT PENETRATIONS MUST BE SEALED INTERNALLY AND EXTERNALLY WHERE THEY ENTER THE WALK-IN BOX.

Update: 11/2/23

THIS WALK-IN COOLER OR FREEZER HAS BEEN MADE IN THE U.S.A. AND IS DESIGNED TO BE USED IN THE U.S.A. ONLY. IT IS NOT TO BE USED IN OTHER COUNTRIES WITHOUT THE EXPRESS WRITTEN PERMISSION OF ARCTIC EQUIPMENT CO., INC. THE PREPARATION OF THIS WALK-IN COOLER OR FREEZER HAS BEEN MADE IN THE U.S.A. AND IS DESIGNED TO BE USED IN THE U.S.A. ONLY. IT IS NOT TO BE USED IN OTHER COUNTRIES WITHOUT THE EXPRESS WRITTEN PERMISSION OF ARCTIC EQUIPMENT CO., INC.

ALL PLUMBING AND ELECTRICAL CONNECTIONS, CARPENTRY, MASONRY WORK SHALL NOT BE THE RESPONSIBILITY OF THE CONTRACTOR BUT SHALL BE THE RESPONSIBILITY OF THE RESPECTIVE TRADES.

DRAWN BY: J.A.K. DATE: 11/02/23

NO.	DATE	DESCRIPTION

C & T DESIGN & EQUIPMENT CO., INC.
 9555 BAYTHORNE DR. SUITE 200, HOUSTON, TX 77041
 PHONE: 713-682-6390
 DESIGN & SALES TO ALL TYPES OF FOOD SERVICE OPERATIONS
 WALK-IN VENDOR SUBMITTAL SCALE: 1/4"=1'-0"

PROJECT MANAGER
 E-MAIL ADDRESS
 MATT CLARK
 mclark@c-t-design.com

COMPASSION UNITED
 350 FOSTER DR.
 CONROE, TX 77301



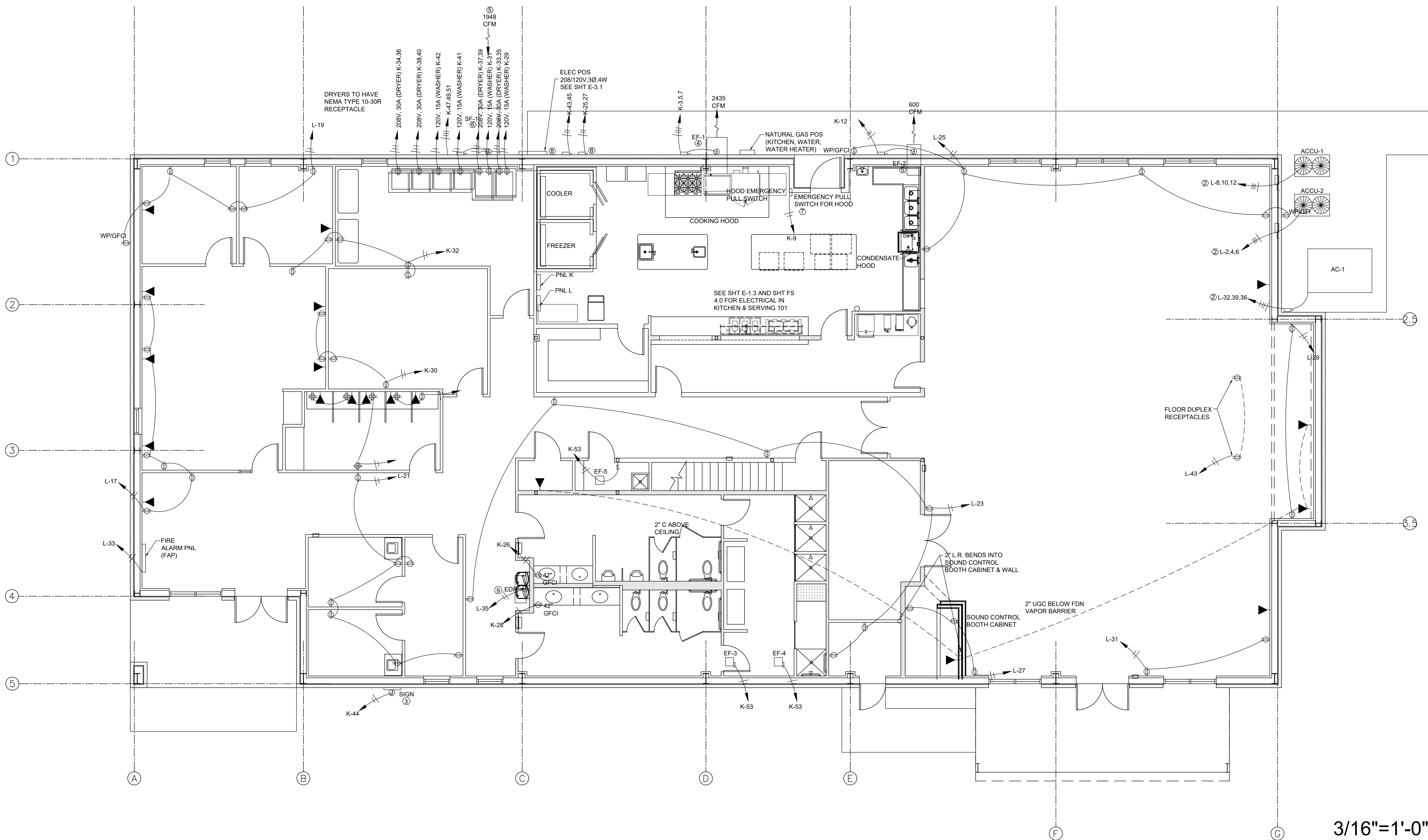
JOB NO. _____

SHEET NUMBER
FS7.5

KEYED NOTES - POWER	
MARK	DESCRIPTION
1	ROUTE INDIVIDUAL ONE-INCH SCHEDULE 40 PVC CONDUITS FOR POWER AND DATA/COM FROM ISLANDS BELOW VAPOR BARRIER TO ADJOINING WALL FOR EACH INDIVIDUAL CIRCUIT. CONCEAL ALL CONDUITS.
2	PROVIDE 100 AMP, THREE-POLE DISCONNECT SWITCH WITH SOLID NEUTRAL FOR EACH AIR CONDITIONING UNIT IN NEMA 3R ENCLOSURE AT 42-INCHES ABOVE GROUND.
3	PROVIDE WEATHER-PROOF JUNCTION BOX WITHIN BUILDING WALL FOR LIGHTED SIGN TO BE TURN ON/OFF VIA PHOTO-ELECTRIC CELL FOR SIGN ILLUMINATION FROM DUSK TO DAWN. SIGN LOCATION TO BE DETERMINED BY OWNER.
4	PROVIDE 30 AM THREE POLE, SOLID NEUTRAL DISCONNECT SWITCH IN NEMA 3R ENCLOSURE NEAR KITCHEN FAN EXHAUST AT 42" ABOVE FINISH FLOOR.
5	PROVIDE 30 AM TWO POLE, SOLID NEUTRAL DISCONNECT SWITCH IN NEMA 3R ENCLOSURE NEAR KITCHEN SUPPLY FAN AT 42" ABOVE FINISH FLOOR.
6	PROVIDE 60 AM THREE POLE SWITCH, SOLID NEUTRAL IN NEMA 1 ENCLOSURE FOR EACH AIR HANDLER UNIT AT 42" ABOVE MEZZANINE FLOOR.
7	PROVIDE EMERGENCY PULL SWITCH FOR COOKING HOOD TO TURN OFF SUPPLY FAN AND ALL ELECTRICAL EQUIPMENT UNDER COOKING HOOD AND ENERGIZE ANSUL SYSTEM IN ACCORDANCE WITH CODES AND COOKING HOOD MANUFACTURER'S REQUIREMENTS.
8	PROVIDE 30 AMP DISCONNECT SWITCH AT 42" AFF FOR COOLER/FREEZER CONDENSERS.
9	PROVIDE SIMPLEX RECEPTACLE WITH GFCI BREAKER PROVIDED FOR ELECTRIC DRINKING FOUNTAIN IN CONCEALED LOCATION.

DATA/COM J-BOX BOX SIZE/LOCATION W/ 1" CONDUIT W/ PULL STRING TO 6" ABOVE CEILING. PROVIDE GROMMETS @ EA END OF CONDUIT

No.	Date	Revisions	App.
0	12/4/23	ISSUE FOR CONSTRUCTION	RAS



POWER PLAN
MIRACLE CITY
364 FOSTER DRIVE
CONROE, TEXAS 77301

ENGINEERING BY:
QUEST ENGINEERING
 304 North Main Street #1
 Conroe, Texas 77301
 Phone: (713) 252-3729
 rsaikowski@consolidated.net
 © Ronald A Saikowski PE LEED AP 2024
 TEXAS REGISTRATION NO. FOR ENGINEERING FIRM IS F-10574



I, RON A. SAIKOWSKI, P.E., AUTHORIZED THE PLACEMENT OF THIS SEAL ON THIS DRAWING FOR THE PURPOSE OF ISSUING THIS DOCUMENT AS SPECIFIED BELOW

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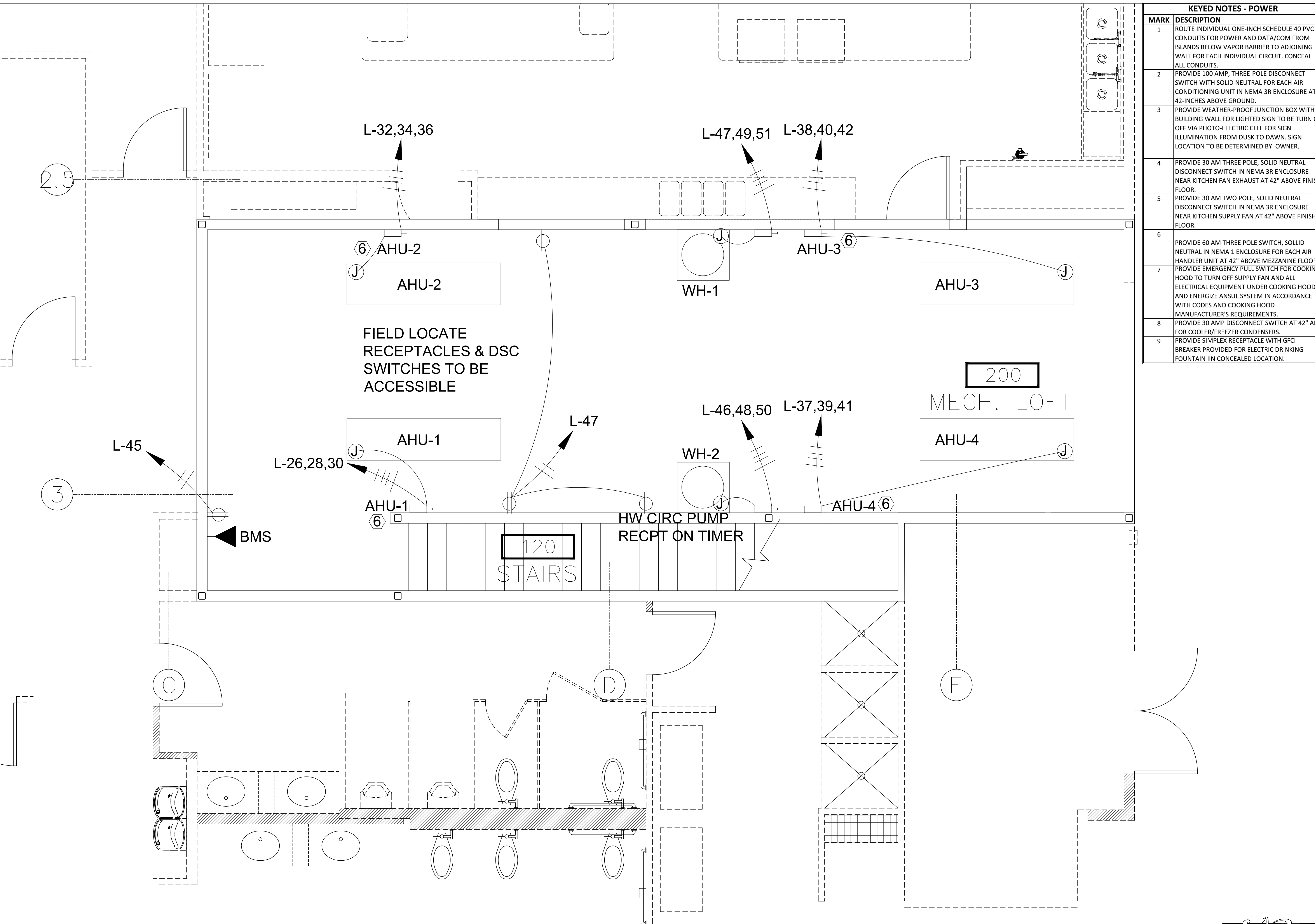
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3/16"=1'-0"

SHEET NO.
E-1.1

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POWER PLAN-MEZZANINE
MIRACLE CITY
364 FOSTER DRIVE
CONROE, TEXAS 77301



ENGINEERING BY:
QUEST ENGINEERING
 304 North Main Street #1
 Conroe, Texas 77301
 Phone: (713) 252-3729
 rsaikowski@consolidated.net
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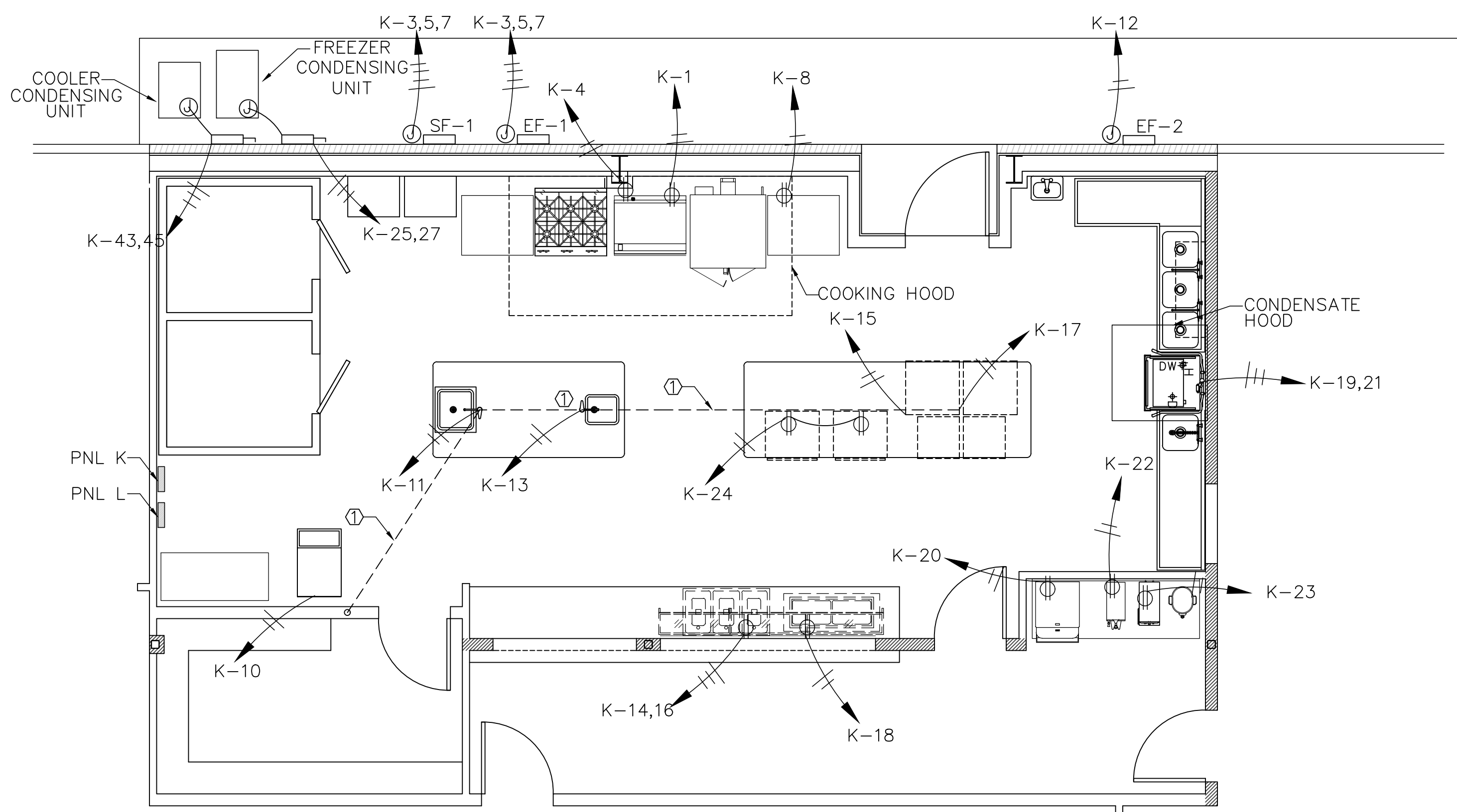
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ELECTRICAL SCHEDULE											
ITEM	QTY	EQUIPMENT CATEGORY	VOLTS	AMPS	PHASE	ELECTRICAL AFF	LOCATION	DIRECT CONNECTION	NEMA	ELECTRICAL REMARKS	
CO	1	CONVENIENCE OUTLET	120	15.0	1	48	WALL	-	5-15P	MAX 3 PER CIRCUIT	
CO1	4	CONVENIENCE OUTLET	120	15.0	1	66	DFA	-	5-15P	DROP CORD RECEPTACLE	
EO1A	1	HOOD LIGHT CONTROLS	120	15.0	1	105	DFA	X	-	BTC; RE: HOOD SUBMITTAL FS5.0	
EO1B	1	HOOD CONTROLS	208	5.6	3	105	DFA	X	-	BTC; RE: HOOD SUBMITTAL FS5.0	
EO1C	1	HOOD CONTROLS	208	5.5	3	105	DFA	X	-	BTC; RE: HOOD SUBMITTAL FS5.0	
E04	1	CONVECTION OVEN	120	7.9	1	48	WALL	-	5-15P	-	
E07	1	REACH-IN REFRIGERATOR	115	2.3	1	66	WALL	-	5-15P	-	
E12	1	WAREWASHER	208	65.0	1	62	WALL	X	-	BTC;	
E15	1	DROP-IN, COLD WELL	120	6.7	1	24	WALL	-	5-15P	-	
E16	1	HOT WELLS	208	17.4	1	24	WALL	X	-	BTC;	
E18	1	ICE MAKER	115	10.8	1	60	WALL	X	-	BTC;	
E20	1	REACH-IN FREEZER	115	10.5	1	66	WALL	-	5-15P	-	
E22	1	SODA DISPENSER	120	10.0	1	48	WALL	X	-	VERIFY W/ VENDOR	
E23	1	COFFEE MAKER	120	18.3	1	48	WALL	X	-	BTC;	
E24	1	TEA MAKER	120	14.4	1	48	WALL	-	5-15P	-	
E35	2	WARMER, DRAWER TYPE	120	5.3	1	5	FLOOR	-	5-15P	PEDISTAL RECEPTACLE	
E40	1	EXHAUST FAN	208	4.5	3	VERIFY	VERIFY	X	-	BTC; RE: HOOD SUBMITTAL FS5.0	
E41	1	CONDENSATE FAN	115	6.3	1	VERIFY	VERIFY	X	-	BTC; RE: HOOD SUBMITTAL FS5.0	
E42	1	SUPPLY FAN	208	4.5	3	VERIFY	VERIFY	X	-	BTC; RE: HOOD SUBMITTAL FS5.0	



FOODSERVICE EQUIPMENT ELECTRICAL ROUGH-IN PLAN

* INDICATES CIRCUIT TO HAVE SHUNT TRIP INTERCONNECTED TO FIRE SUPPRESSION SYSTEM MICROSWITCH TO BE SHUT DOWN IN CASE OF FIRE.

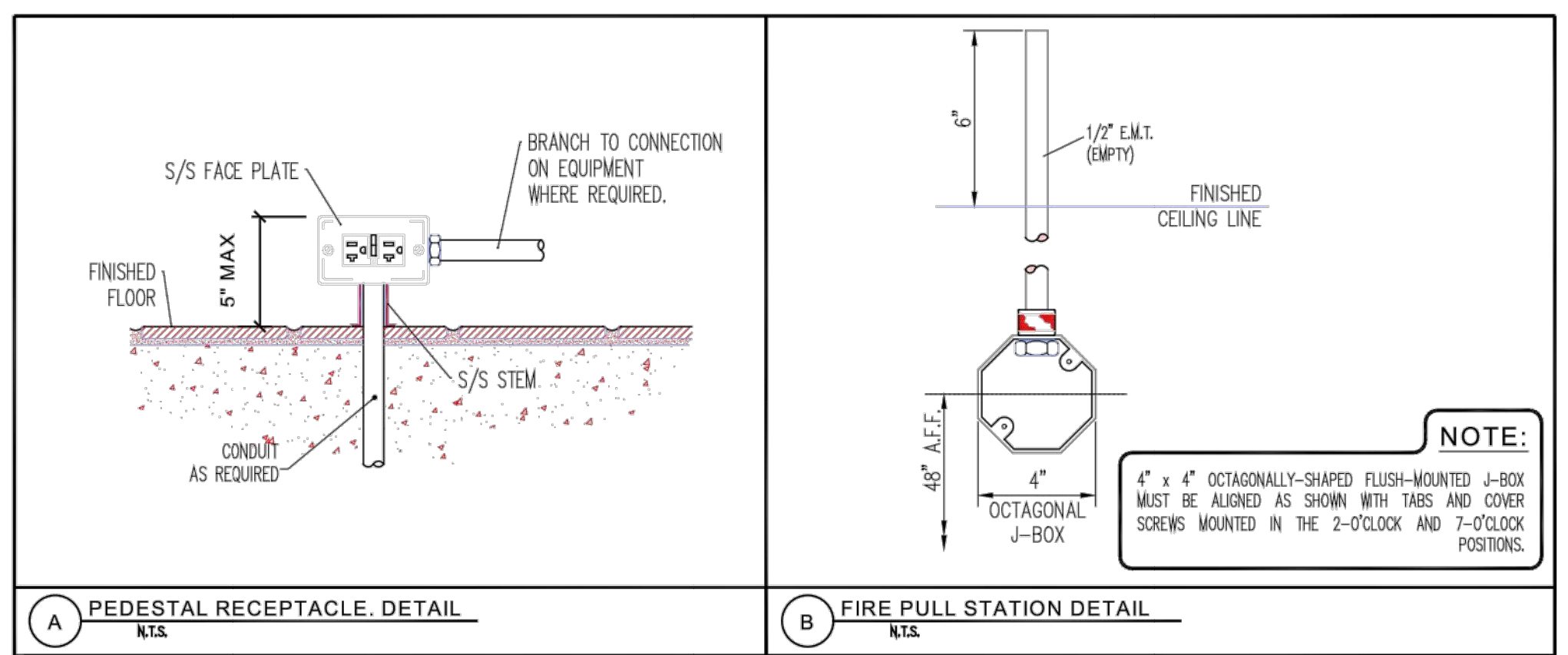
→ NOTE: ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR MAKING ALL FINAL AND INTERMEDIATE CONNECTIONS TO EQUIPMENT. ALL COMPONENTS SHIPPED LOOSE WITH EQUIPMENT WHICH REQUIRE ELECT. CONNECTION IS TO BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY. ELECTRIC CONTRACTOR IS TO COORDINATE SHEETS FS5.0-FS5.7 TO ENSURE PROPER CIRCUITRY & WIRING IS SUPPLIED FOR THE EXHAUST HOOD SYSTEM. THE K.E.C. SHALL NOT BE RESPONSIBLE FOR ANY WIRING OR CONNECTIONS TO FOODSERVICE EQUIPMENT, INCLUDING CONTROL WIRING OR FIRE ALARM WIRING.

ELECTRICAL LEGEND	
	DR DUPLEX RECEPTACLE
	DR DUPLEX RECEPTACLE IN WALL
	PMR PEDESTAL MOUNT DUPLEX RECEPTACLE
	SR SINGLE RECEPTACLE
	SR SINGLE RECEPTACLE IN WALL
	SR PEDESTAL MOUNT SINGLE RECEPTACLE
	JB JUNCTION BOX
	JB JUNCTION BOX IN WALL
	JB PEDESTAL MOUNT JUNCTION BOX
	DCR DROP CORD RECEPTACLE
	CS CONDUIT STUB
	LF LIGHT FIXTURE
	MC MOTOR CONTROL SWITCH
	SW SWITCH (TOGGLE)
	AFF ABOVE FINISHED FLOOR
	BTC BRANCH TO CONNECTION

ELECTRICAL NOTES

THE FOLLOWING WORK IS TO BE PERFORMED BY THE ELECTRICAL CONTRACTOR:

- ROUGHING-IN AND FINAL CONNECTIONS OF ELECTRICAL SYSTEMS TO FOODSERVICE EQUIPMENT.
- COMMUNICATION SYSTEMS, CLOCKS AND STAFF TIME CLOCKS IN FOODSERVICE AREA.
- CONDUIT AND WIRING FROM DISPOSER SWITCH TO TIME DELAY, MAGNETIC STARTER, MOTOR AND SOLENOID VALVES: ALL BELOW COUNTER TOP.
- WALL SWITCH FOR LIGHT FIXTURES IN EXHAUST HOODS.
- WALL SWITCH FOR FAN MOTOR FOR EXHAUST HOOD'S SYSTEM.
- WIRING TO AND INSTALLATION OF ACCESSORIES (IF ANY) WHICH ARE FURNISHED STANDARD WITH FOODSERVICE EQUIPMENT.
- EMERGENCY LIGHTING AND/OR POWER SYSTEMS.
- ALL DISCONNECT SWITCHES AS REQUIRED, (NEMA 4, WATERPROOF SUGGESTED).
- SPECIAL NOTE: ANSUL FIRE SUPPRESSION SYSTEM IS TO BE CONNECTED TO CORRESPONDING SHUNT TRIP BREAKERS FOR SHUT DOWN OF COOKING EQUIPMENT BELOW VENTILATOR DURING FIRE - IN ADDITION, THE SUPPRESSION SYSTEM SHALL BE REQUIRED TO BE INTERCONNECTED WITH MECHANICAL GAS SHUT OFF DURING FIRE.
- ** DIVISION 16 TO PROVIDE 1" EMPTY CONDUIT FROM OCTAGONAL JB IN WALL AT 54" AFF UP THRU WALL TO 8" ABOVE CEILING AND EXIT WALL - FOR FIRE SYSTEM REMOTE PULL.



POWER PLAN
MIRACLE CITY-DAY CENTER
364 FOSTER DRIVE
CONROE, TEXAS 77301

ENGINEERING BY:
QUEST ENGINEERING
 304 North Main Street #1
 Conroe, Texas 77301
 Phone: (713) 252-3729
 rsaikowski@consolidated.net
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 TEXAS REGISTRATION NO. FOR ENGINEERING FIRM IS F-10574



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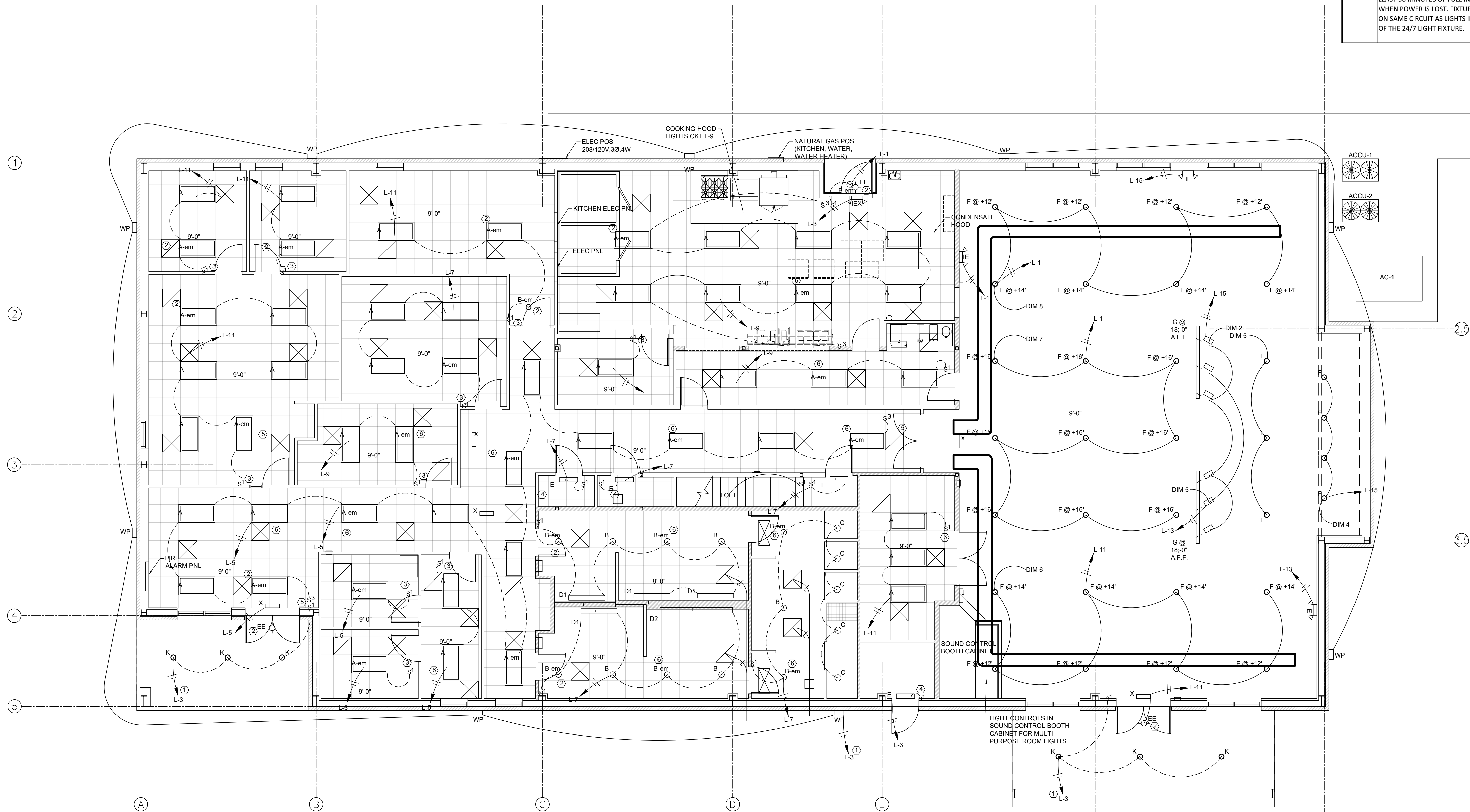
Light Fixture Schedule – Compassion United – Phase 3 Day Center

Mark	Description	Manufacturer	Model #
A	2' X 4' lay-in LED troffer	Day-Brite	ZTG74L835-4-FS-12F-UNV 120V 27.4W
A-em	2' X 4' lay-in LED troffer	Day-Brite	ZTG74L835-4-FS-12F-UNV-EMLED 120V 27.4W
B	6" recessed LED downlight	Lithonia Lighting	LDN6-35-20-L06-AR-120V 35W
B-em	6" recessed LED downlight	Lithonia Lighting	LDN6-35-20-L06-AR-120-EL 120V 35W
C	Recessed shower light	Halo	SMD6R-6-935-WH-DN
D1	48" wall-mount linear up/down	Eaton/Corelite	DWI-WD-5-L35-1-C-UNV-SU-WA-4-W 120V 45W
D2	96" wall-mount linear up/down	Eaton/Corelite	DWI-WD-5-L35-1-C-UNV-SU-WA-8-W 120V 45W
E	24" wall-mount strip	Lithonia Lighting	ZL1N-L24-1500LM-FST-120-35K-80CRI-WH 120V 15Wo
F	Pendant LED can light	Lithonia Lighting	LDN8CYL-35/50-LO8-AR-L5-MVOLT-EZ1-ACC180-DBL
G1	96" 2-circuit track	Junco	TU-8FT-BL (Provide with stem mounted track, 16" above floor)
G2	LED track fixture	Trac-Master	T263L-21W-G3-35K-80CRI-PDIM-FL-BL
H	48" LED strip light	Metalux	4-SNLED-LD5-46SL-LN-UNV-L835-CD1-U
H-em	48" LED strip light	Metalux	4-SNLED-LD5-46SL-LN-UNV-EL7W-L835-CD1-U
J	Emergency wall-mount	Sure-Lites	CU2-LED
K	Exterior wall-mount up-light	Cooper/Ametrix	ASYX-WM-S-2-OD-U-F-L35-1-UNV-W-R-STD
S1	Pole-mounted area light	Lithonia Lighting	DSX1-LED-P2-40K-T2M-208-SPA-DDBXD
S1 (pole)	Pole for area light	Lithonia Lighting	SSS-25-4G-DM19AS-DDBXD
S2	Pole-mounted area light	Lithonia Lighting	DSX1-LED-P2-40K-T5M-208-SPA-DDBXD
S2 (pole)	Pole for area light	KW Industries	SSS-25-4G-DM28AS-DDBXD
X	Exit light	Lithonia	EXR-LED-EL-M6-277

KEYED NOTES - LIGHTING PLAN

MARK	DESCRIPTION
1	EXTERIOR LIGHTS AND SIGN ARE ON AT DUSK AND OFF AT DAWN AS CONTROLLED BY PHOTO-ELECTRIC CELL.
2	PROVIDE EXTERIOR ADJUSTABLE WEATHERPROOF LIGHT FIXTURE CONNECTED TO INTERIOR EMERGENCY
3	LIGHTS SHALL B3 CONTROLLED ON-OFF VIA MOTION DETECTOR SWITCH WITH PROGRAMMABLE DURATION ENERGIZED.
4	LIGHT SHALL CONTROLLED ON-OFF VIA SWITCH SINCE THIS SINGLE LIGHT IS EXEMPT FROM LIGHT CONTROLS PER IECC.
5	LIGHTS SHALL BE TURNED ON-OFF VIA SWITCH SINCE LIGHTS IN THIS ROOM ARE FOR EGRESS TO BUILDING EXTERIOR AND IS AN EXCEPTION TO THE IECC.
6	THIS LIGHT FIXTURE SHALL BE ON 24/7 AND HAVE EMERGENCY BATTERY TO PROVIDE AT LEAST 90 MINUTES OF FULL INTENSITY LIGHT WHEN POWER IS LOST. FIXTURE SHALL BE ON SAME CIRCUIT AS LIGHTS IN THE AREA OF THE 24/7 LIGHT FIXTURE.

No.	Date	Revisions	App.
0	12/4/23	ISSUE FOR CONSTRUCTION	RAS



LIGHTING PLAN

**MIRACLE CITY
364 FOSTER DRIVE
CONROE, TEXAS 77301**

ENGINEERING BY:
QUEST ENGINEERING
304 North Main Street #1
Conroe, Texas 77301
Phone: (713) 252-3729
rsaikowski@consolidated.net
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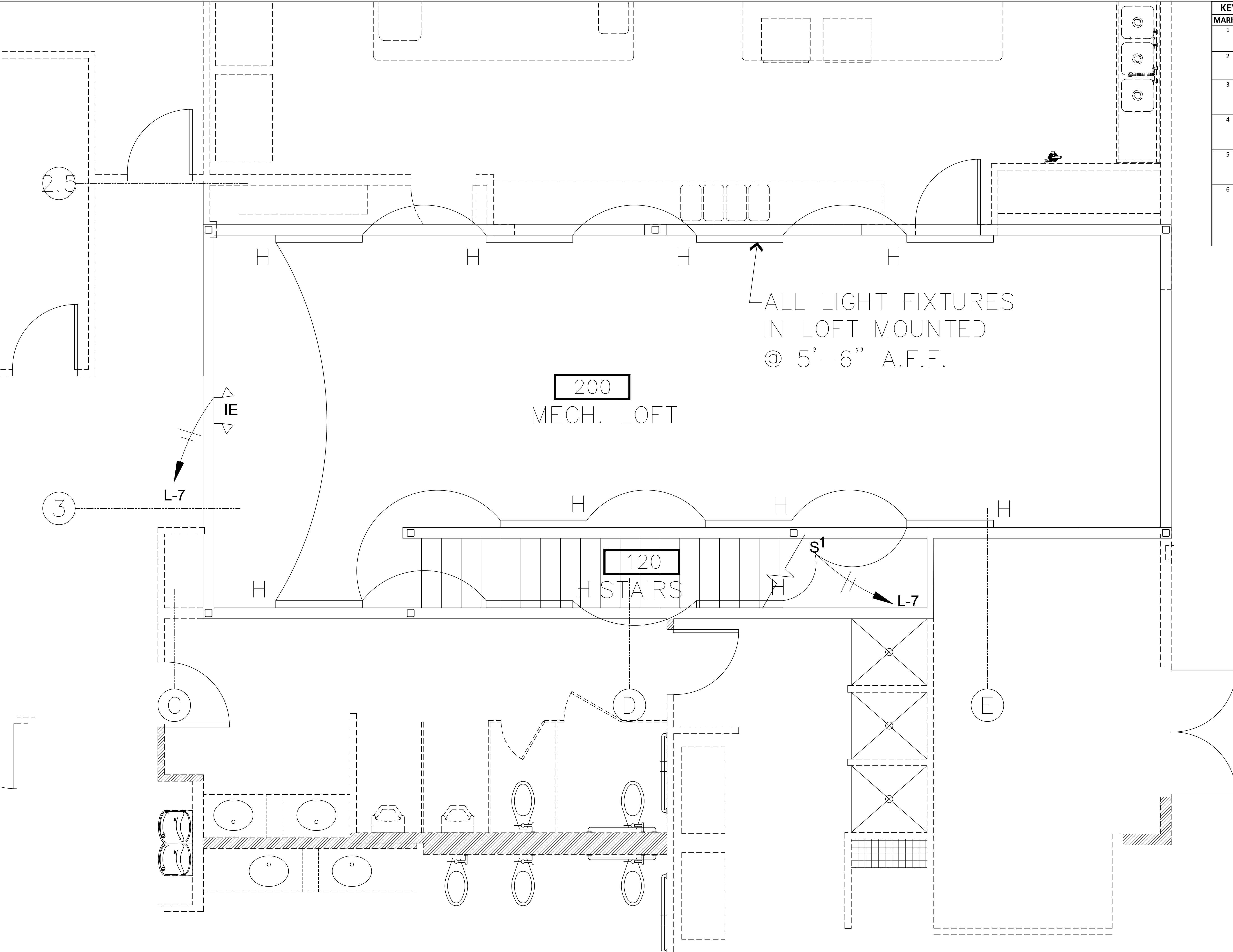
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4	LIGHT SHALL CONTROLLED ON-OFF VIA SWITCH SINCE THIS SINGLE LIGHT IS EXEMPT FROM LIGHT CONTROLS PER IECC.				
5	LIGHTS SHALL BE TURNED ON-OFF VIA SWITCH SINCE LIGHTS IN THIS ROOM ARE FOR EGRESS TO BUILDING EXTERIOR AND IS AN EXCEPTION TO THE IECC.				
6	THIS LIGHT FIXTURE SHALL BE ON 24/7 AND HAVE EMERGENCY BATTERY TO PROVIDE AT LEAST 90 MINUTES OF FULL INTENSITY LIGHT WHEN POWER IS LOST. FIXTURE SHALL BE ON SAME CIRCUIT AS LIGHTS IN THE AREA OF THE 24/7 LIGHT FIXTURE.				

LIGHTING PLAN
MIRACLE CITY
364 FOSTER DRIVE
CONROE, TEXAS 77301



ALL LIGHT FIXTURES
 IN LOFT MOUNTED
 @ 5'-6" A.F.F.

200
 MECH. LOFT

120
 STAIRS

ENGINEERING BY:
QUEST ENGINEERING
 304 North Main Street #1
 Conroe, Texas 77301
 Phone: (713) 252-3729
 rsaikowski@consolidated.net
 © Ronald A Saikowski PE LEED AP 2024
 TEXAS REGISTRATION NO. FOR ENGINEERING FIRM IS F-10574



I, RON A. SAIKOWSKI,
 P.E., AUTHORIZED THE
 SEAL ON THIS
 DRAWING FOR THE
 PURPOSE OF ISSUING
 THIS DOCUMENT
 AS SPECIFIED BELOW

RAS
 3/15/24

<input type="checkbox"/>	Not For Construction
<input type="checkbox"/>	For Background Use Only
<input type="checkbox"/>	Preliminary
<input type="checkbox"/>	For Concept Approval
<input type="checkbox"/>	Preliminary Bid Set
<input type="checkbox"/>	For Preliminary Approval
<input type="checkbox"/>	Check Set
<input type="checkbox"/>	Permit
<input type="checkbox"/>	For Final Approval
<input checked="" type="checkbox"/>	For Construction

NOTE:
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 CONTRACTOR HAS OBTAINED ALL PERMITS AND
 INCORPORATED COMMENTS FROM TEXAS ACCESSIBILITY
 STANDARDS REVIEW AND PERMITTING ENTITIES IN WORK.

1"=1'-0"

SHEET NO.
E-2.2

PANELBOARD SCHEDULE NO. L		LOCATION KITCHEN		NEMA ENCL / TYPE 1		ISOLATED					
MAIN BREAKER SIZE 400 AMPS		BUS SIZE 400 AMPS		GROUND BUS REQUIRED Y		GND. REQ'D N					
PANEL VOLTAGE 208/120		FEEDER WIRE SIZE 2 SETS #3/0		MINIMUM A.I.C. CAPACITY 22,000		AMPS					
LOAD	AMPS / PHASE			BR	WR	AMPS / PHASE			LOAD		
	A	B	C			A	B	C			
LIGHTS	10.0			12	20	1	2	70	4	58.0	ACCU-1
EXTERIOR LIGHTS		11.0		12	20	3	4	3P	4	58.0	ACCU-1
LIGHTS			10.0	12	20	5	6	70	4	58.0	ACCU-1
LIGHTS	11.0			12	20	7	8	70	4	58.0	ACCU-2
LIGHTS		11.0		12	20	9	10	3P	4	58.0	ACCU-2
LIGHTS			11.0	12	20	11	12	70	4	58.0	ACCU-2
LIGHTS	10.0			12	20	13	14	35	8	34.0	AHU-1
LIGHTS		10.0		12	20	15	16	3P	8	34.0	AHU-1
RECEPTACLES			9.0	12	20	17	18	35	8	34.0	AHU-1
RECEPTACLES	9.0			12	20	19	20	35	8	34.0	AHU-2
RECEPTACLES		10.5		12	20	21	22	3P	8	34.0	AHU-2
RECEPTACLES			9.0	12	20	23	24	35	8	34.0	AHU-2
RECEPTACLES	9.0			12	20	25	26	35	8	34.0	AHU-3
AV RECEPTACLES		6.0		12	20	27	28	3P	8	34.0	AHU-3
AV RECEPTACLES			6.0	12	20	29	30	35	8	34.0	AHU-3
AV RECEPTACLES	6.0			12	20	31	32	70	4	66.1	AC-1
FAP		3.0		12	20	33	34	3P	4	66.1	AC-1
EDF RECEPTACLE			3.0	12	20	35	36	70	4	66.1	AC-1
AHU-4	34.0			8	35	37	38				
AHU-4		34.0		8	3P	39	40				
AHU-4			34.0	8	35	41	42				
PLATFORM FLOOR RECEPTACLES	6.0			12	20	43	44				
BUILDING MANAGEMENT SYSTEM		6.0		12	20	45	46				
WH-1			34.2	8	40	47	48				
WH-1	34.2			8	3P	49	50				
WH-1		34.2		8	40	51	52				
				8	40	53	54				
TOTAL PHASE A	89.0						373.1			284.1	AMPS
TOTAL PHASE B		85.5					369.6			284.1	AMPS
TOTAL PHASE C			82.0				366.1			284.1	AMPS
TOTAL LOAD AMPS											AMPS

PROVIDE VOLTAGE SURGE SUPPRESSOR ON MAIN BUSS INSIDE PANELBOARD

PANELBOARD SCHEDULE NO. K		LOCATION KITCHEN		NEMA ENCL / TYPE 1		ISOLATED					
MAIN BREAKER SIZE 300 AMPS		BUS SIZE 400 AMPS		GROUND BUS REQUIRED Y		GND. REQ'D N					
PANEL VOLTAGE 208/120		FEEDER WIRE SIZE 350 KCMIL		MINIMUM A.I.C. CAPACITY 22,000		AMPS					
LOAD	AMPS / PHASE			BR	WR	AMPS / PHASE			LOAD		
	A	B	C			A	B	C			
KITCHEN RECEPTACLE	16.0			12	20	1	2	20	12	10.5	REACH-IN FREEZER
COOKING HOOD EXHAUST FAN (EF-1)		5.0		12	15	3	4	20	12	7.9	CONVECTION OVEN
COOKING HOOD EXHAUST FAN (EF-1)			5.0	12	3P	5	6	20	12	7.9	CONVECTION OVEN
COOKING HOOD EXHAUST FAN (EF-1)	5.0			12	15	7	8	20	12	2.3	EMERGENCY SYSTEM FOR HOOD
COOKING HOOD CONTROLS		8.0		12	20	9	10	20	12	10.5	ICE MAKER
KITCHEN RECEPTACLE			16.0	12	20	11	12	20	12	6.3	CONDENSATE FAN (EF-2)
KITCHEN RECEPTACLE	16.0			12	20	13	14	30	10	17.4	HOT WELLS
KITCHEN RECEPTACLE		16.0		12	20	15	16	2P	10	17.4	HOT WELLS
KITCHEN RECEPTACLE			16.0	12	20	17	18	20	12	6.7	DROP-IN COLD WELL
WARE WASHER	65.0			4	80	19	20	20	12	10.0	SODA DISPENSER
WARE WASHER		65.0		4	2P	21	22	20	12	18.3	COFFEE MAKER
TEA MAKER		14.4		12	20	23	24	20	12	5.3	WARMER
WALK-IN COOLER	15.0			12	15	25	26	20	12	16.0	RESTROOM RECEPTACLE
WALK-IN COOLER		15.0		12	2P	27	28	20	12	16.0	RESTROOM RECEPTACLE
WASHER		8.0		12	20	29	30	20	12	6.0	RECEPTACLES
WASHER	8.0			12	20	31	32	20	12	7.5	RECEPTACLES
DRYER		24.0		10	30	33	34	30	10	24.0	DRYER
DRYER			24.0	10	2P	35	36	2P	10	24.0	DRYER
DRYER	24.0			10	30	37	38	30	10	24.0	DRYER
DRYER		24.0		10	2P	39	40	2P	10	24.0	DRYER
WASHER		8.0		12	20	41	42	20	12	8.0	WASHER
WALK-IN FREEZER	20.4			10	35	43	44	20	12	16.0	SIGN
WALK-IN FREEZER		20.4		10	2P	45	46	50	6	41.6	WH-2
COOKING HOOD SUPPLY FAN (SF-1)		5.5		12	15	47	48	3P	6	41.6	WH-2
COOKING HOOD SUPPLY FAN (SF-1)	5.5			12	3P	49	50	50	6	41.6	WH-2
COOKING HOOD SUPPLY FAN (SF-1)		5.5		12	15	51	52	20	10	14.0	SITE LIGHTS
EF-3, 4, 5			9.0	12	20	53	54				
TOTAL PHASE A	149.0						236.7			87.7	AMPS
TOTAL PHASE B		157.0					275.1			118.1	AMPS
TOTAL PHASE C			91.4				155.6			64.2	AMPS
TOTAL LOAD AMPS											AMPS

PROVIDE VOLTAGE SURGE SUPPRESSOR ON MAIN BUSS INSIDE PANELBOARD

MIRACLE CITY DAY CENTER LOAD ANALYSIS

208 V, 3P, 4 W

BUILDING AREA = 7,150 SQ. FT.

CONTINUOUS LOADS		LOAD	NEUTRAL
EXTERIOR LIGHTING			
SIGNS	1	x 1,980 VA ⁽¹⁾ x 125% ⁽²⁾	2,475 VA
BUILDING EXTERIOR	15	x 60 VA x 125% ⁽²⁾	1,125 VA
WATER HEATER	1	WH x 12,300 VA Each	12,300 VA
WATER HEATER	1	WH x 15,000 VA Each	15,000 VA
INTERIOR LIGHTING			
OFFICE	3.5	VA/S.F. ⁽³⁾ x 7,150 S.F. x 100% ⁽⁴⁾ x 125% ⁽²⁾	31,281 VA
HVAC	36	TN x 3,200 VA/TN x 125%	144,000 VA
EXHAUST FANS			6,000 VA
KITCHEN CIRCUITS			35,640 VA
25% LARGEST MOTOR ⁽⁷⁾	18	x 1,980 VA-EA x 100%	1,000 VA
SUB-TOTAL CONTINUOUS LOAD			248,821 VA
NON-CONTINUOUS LOADS			
RECEPTACLES	95	RECEPTACLES x 180 VA Each ⁽⁸⁾	17,100 VA
1st 10,000 VA @ 100% ⁽⁸⁾			10,000 VA
REMAINDER @ 50% ⁽⁸⁾			3,550 VA
SUB-TOTAL NON-CONTINUOUS LOADS			13,550 VA
TOTAL LOAD			262,371 VA
PROVIDE 800 AMP SERVICE			729.1 A

NOTES:
⁽¹⁾NEC 220.14(F)
⁽²⁾NEC 220.18
⁽³⁾TABLE 220.12 NEC
⁽⁴⁾TABLE 220.42 NEC
⁽⁵⁾NEC 220.14(I)
⁽⁶⁾TABLE 220.44 NEC
⁽⁷⁾NEC 220.18 (A)

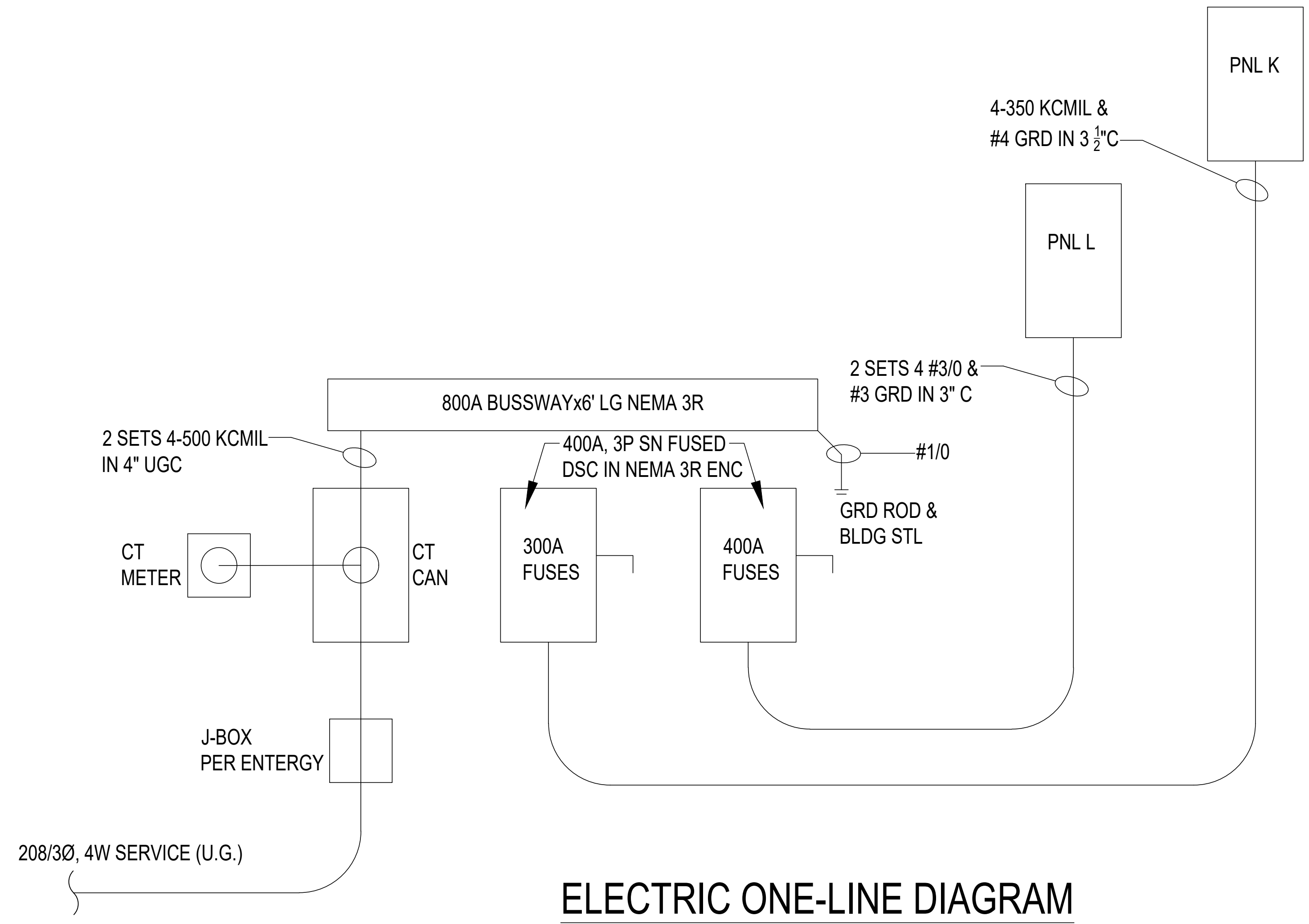
NOTES ASSOCIATED WITH ONE-LINE DIAGRAM

- PROVIDE 3" HIGH LAMINATED PLASTIC LABELS IDENTIFYING EACH PANELBOARD, MDP, AND DISCONNECT SPECIFYING "DO NOT STORE ANYTHING WITHIN 3' OF THIS PANEL" ON EACH ENCLOSURE DOOR, LABELS TO BE RED WITH WHITE LETTERING.
- PROVIDE LAMINATED TYPED DESCRIPTION OF EACH PANELBOARD CIRCUIT BREAKER AND AFFIX TO INSIDE OF PANEL DOOR.
- DO NOT USE PANELBOARD ENCLOSURE AS WIREWAY OR SPLICE CONDUCTORS IN SUCH ENCLOSURES.
- PROVIDE LAMINATED PLASTIC LAYOUT OF AS-BUILT ELECTRICAL DISTRIBUTION SYSTEM AND MOUNT ON WALL IN EACH ELECTRICAL ROOM.
- PAINT EXPOSED FUSED DISCONNECTS, PANELBOARD, WIREWAYS AND CONDUITS TO MATCH BUILDING. GET ARCHITECT'S WRITTEN APPROVAL OF PAINT COLOR.
- CONTRACTOR SHALL CONTACT THE ELECTRIC UTILITY COMPANY TO VERIFY ALL DETAILS OF NEW SERVICE AND IS RESPONSIBLE FOR ANY FEES.
- CONTRACTOR IS RESPONSIBLE FOR A COMPLETE AND OPERATIONAL SYSTEM IN COMPLIANCE WITH NEC, ALL STATE AND LOCAL CODES.
- GROUND FUSED DISCONNECTS, PANELBOARDS, AND WIREWAYS PER NEC ARTICLE 250
 (A) TO BUILDING FOUNDATION USING EXOTHERMIC WELDS TO #4 X 20' LG REBAR IN 1ST FLOOR FOUNDATION,
 (B) TO WATER PIPING SYSTEM USING MECHANICAL CLAMPS AND
 (C) TO 1" X 10' LG GROUND RODS VIA MECHANICAL CLAMPS
 (D) TO BUILDING STEEL
- ALL CONDUCTORS SHALL BE COPPER PER TECHNICAL SPECIFICATIONS RATED AT 75°C, UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL NOT INSTALL MORE THAN THREE CURRENT CONDUCTORS IN A SINGLE CONDUIT AS DEFINED IN NEC 310 UNLESS APPROVED IN WRITING BY THE ENGINEER.

No.	Date	Revisions	App.
0	12/4/23	ISSUE FOR CONSTRUCTION	RAS

ELECTRICAL SCHEDULES

MIRACLE CITY
364 FOSTER DRIVE
CONROE, TEXAS 77301



ELECTRIC ONE-LINE DIAGRAM

ENGINEERING BY:
QUEST ENGINEERING
 304 North Main Street #1
 Conroe, Texas 77301
 Phone: (713) 252-3729
 rsaikowski@consolidated.net
 © Ronald A Saikowski PE LEED AP 2024
 TEXAS REGISTRATION NO. FOR ENGINEERING FIRM IS F-10574



I, RON A. SAIKOWSKI, P.E., AUTHORIZED THE PLACEMENT OF THIS SEAL ON THIS DRAWING FOR THE PURPOSE OF ISSUING THIS DOCUMENT AS SPECIFIED BELOW

<input type="checkbox"/>	Not For Construction
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<input type="checkbox"/>	For Concept Approval
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NOTE:
 CONSTRUCTION SHALL NOT PROCEED UNTIL CONTRACTOR HAS OBTAINED ALL PERMITS AND INCORPORATED COMMENTS FROM TEXAS ACCESSIBILITY STANDARDS REVIEW AND PERMITTING ENTITIES IN WORK.

ELECTRICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS

PART 1 – GENERAL

A. SCOPE

1.Furnish and install a completely wired and operational electrical system as shown on the drawings and specified herein, including but not limited to, these major items.

- a. Lighting fixtures as indicated and specified on the plans.
- b. Electrical panels, controls, service, disconnects, conduit, wiring, etc., for all outlets and equipment.
- c. Telephone outlets and conduit as indicated.
- d. Conduit and outlets for alarm, computer, and security systems as indicated.
- e. Control wiring for electrical systems.

2.Provide permits and inspections as required.

B. CODES, REGULATIONS AND STANDARDS

1.The installation shall comply with applicable local and state codes and ordinances, with the regulations of the latest edition of the National Electric Code and with the requirements of the power and telephone companies furnishing services to this installation.

- 2.The following industry standards, specifications and codes are minimum requirements:
 - a. NEMA—The National Electrical Manufacturers' Association Standards.
 - b. NEC—The National Electrical Code.
 - c. UL—Underwriter Laboratories Incorporated Standards.
 - d. ANSI—American National Standards Institute.
 - e. IEEE—Institute of Electrical and Electronics Engineers.
 - f. NESC—National Electrical Safety Code.
 - g. IECC—International Energy Conservation Code
 - h. TAS—Texas Accessibility Standards.
 - i. UL—Underwriters Laboratories.

C. INSPECTION OF SITE

1.Prior to submitting a bid for electrical work, the Contractor shall visit the site of the proposed construction and shall thoroughly acquaint himself with existing utilities, and working conditions to be encountered, etc. Allowance will not be made for noncompliance with this condition after bidding.

D. GENERAL WORKMANSHIP

1.All work shall be executed and finished in a practical manner and shall present a neat and workmanlike appearance when completed.

2.All work must be acceptable to the Owner. Where detailed method of installing the work is not specified or indicated, install work as directed by the Owner.

E. STORAGE AND HANDLING OF MATERIAL

- 1.Deliver materials and equipment to the project in the manufacturer's original, unopened, labeled containers. Protect against moisture, tampering, or damage from improper handling or storage. Contractor shall protect and be responsible for any damage to work or materials until final acceptance by the Owner, and shall make good without cost to the Owner, any damage or loss that may occur during this period.
- 2.Arrange for timely delivery of materials and equipment to the job site in order to minimize the length of time between delivery and installation.
- 3.Cover and protect any material which may be affected by the weather while in transit or stored at the project site. Any material found defective or not installed in accordance with the contract documents may be rejected by the Engineer.
- 4.No electrical work shall be installed in areas where other trade's work might cause physical damage to wires, conduit, equipment, boxes or fittings until the other trade's work has been completed. Any equipment or materials which become damaged shall be removed and replaced at no extra cost to the Owner.

F. CLEANUP

1.Keep the premises free from accumulation of waste materials, or rubbish caused by work under this division of the specifications. At the completion of the work, remove all surplus materials, tools, etc., and leave the premises "broom-clean".

G. EXCAVATION AND BACKFILL

- 1.Perform all excavation and backfilling required for work performed under this division of the specifications. Trench bottoms shall be graded true and free from stones or soft spots. Use excavated materials for backfill unless off site materials are deemed necessary by the Architect. Trenching and backfilling for electrical and telephone utility services to be provided, shall be completed by this Contractor in accordance with utility company requirements.
- 2.Verify location of existing underground utilities prior to trenching. Contact utilities & local utility coordinating committee prior to work in accordance with Texas law.

H. DRAWINGS

1.The drawings indicate the general arrangement and locations of the electrical work. Data presented on these drawings are as accurate as planning can determine, but field verification of all dimensions, locations, levels, etc., to suit field conditions is required. Review all architectural, structural, plumbing and mechanical drawings and adjust all work to meet the requirements of conditions shown.

The architectural drawings shall take precedence over all other drawings. Discrepancies between different plans, or between drawings and specifications, or regulations and codes governing the installation shall be brought to the attention of the engineer in writing before the date of bid opening. If discrepancies are not reported, the contractor shall bid the greater quantity or better quality, and appropriate adjustments will be made after contract award. Contractor shall be responsible to field measure and confirm mounting heights and location of electrical equipment with respect to counters, etc. Do not scale dimensions off the electrical drawings. Use actual building dimensions.

2.In all cases, switches controlling lighting are to be located on the strike side of doors. Locations indicated for switches and outlets are approximate. Owner may make minor relocations at no additional charge. Locate switches and receptacles in accordance with TAS.

3.Provide record drawings at the completion of this project.

4.Upon completion of the work under these drawings and specifications, the Contractor shall provide the Owner with a complete set of marked-up electrical drawings showing the "as-built" condition of the work. Blue line prints of the drawings required will be furnished by the Owner, for this purpose.

5.All operating instructions, parts lists and spare parts for material and equipment furnished and/or installed by the Contractor shall be turned over to the Owner (three copies).

I. CUTTING AND FITTING

1.Perform the cutting, fitting, repairing and finishing of the work necessary for the installation of the equipment of this Section. However, no cutting of the work of other trades or of any structural member shall be done without the consent of the Architect.

J. COOPERATION WITH OTHER CONTRACTORS

1.Cooperate with the other trades so that the installation of the electrical outlets and equipment will be properly coordinated. Conduit, fixtures, and other equipment locations shall be checked with the other trades to avoid conflict with the piping, ductwork, steel, beams, or other obstructions.

2.Carefully check the locations of the outlet boxes and determine that they have not been disturbed during the installation of materials of other trades.

K. MECHANICAL AND ELECTRICAL COORDINATION

1.Any device which carries the full load current of the electrically driven machinery, as opposed to the control of instrumentation current in the holding coil, is a power circuit and is the responsibility of the electrical contractor. Control or instrumentation circuits connecting holding coils to the automatic temperature control system are the responsibility of the Mechanical Contractor.

2.The power circuit is defined as all devices necessary to operate, and as required by code to protect and service the unit, including branch circuit protective devices, disconnects, either fused or unfused, magnetic motor starters with running three leg overload and single phasing protection, magnetic controllers, etc.

3.The control or instrumentation circuit is defined as all devices necessary to interface the electrical power circuit with the automatic temperature control system including conduit, boxes, conduit fittings, conductors, electric-pneumatic switches,pneumatic-electric switches, electrical and pneumatic relays,pneumatic tubing, etc.

4.The electrical contractor shall be responsible to provide a 120V duplex receptacle within 25 feet of all roof-mounted equipment, per NEC 210-63.

L. GUARANTEE & TESTING

1.Guarantee all material furnished and all workmanship performed for a period of one year from the date of final acceptance of the work. Any defects developing within this period, traceable to material furnished as a part of this Section or workmanship performed hereunder, shall be made good at no expense to the Owner.

2.System shall be tested for proper operation. If tests show that work is defective, contractor shall make corrections as necessary at no cost to the owner.

M. SHOP DRAWINGS AND APPROVALS

1.The items specified herein and on drawings are used as a standard of quality. Any material of equal quality and aesthetic value will be given consideration as a substitute for the materials specified. No approval will be given to a specific catalog number, model or type of equipment, prior to bidding. After bidding, the decision of the Architect and/or Engineer, determining equal materials, will be final.

2.The Contractor shall submit six (6) identical bound sets of shop drawings on the following items:

- a. Lighting fixture cuts and performance data.
- b. Outline drawings and data sheets of each panelboard and switchboard.
- c. Data sheets of all wiring devices and fuses.
- d. Data sheets on generator, ATS and associated components.

3.Submit items at one time in a neat and orderly manner within 15 days of award of contract. Delays or cost associated with not turning the submittals in within the 15 days, shall be the responsibility of the Electrical Contractor. Partial submittals will not be acceptable.

4.Where materials and equipment are specified or indicated by the name of the manufacturer or by accepted trade designation, substitution will be considered. Where two (2) or more items are furnished under the same specification, they shall be of the same manufacturer and be identical and interchangeable.

N. SUBSTITUTIONS

1.Prior to proposing any substitute item, Contractor shall satisfy himself that the item proposed is, in fact, equal to that specified, that such item will fit into the space allocated, that such item affords comparable ease of operation, maintenance and service, that the appearance, longevity, capacity and suitability are comparable, and that by reason of cost savings, reduced construction time, or similar demonstrable benefit, the substitution of such item will be in the Owner's interest.

2.The burden of proof of equality of a proposed substitution for a specified item shall be upon the Contractor. Contractor shall support its request with sufficient test data and other means to permit the Owner to make a fair and equitable decision on the merits of the proposed substitution. Any item by a manufacturer other than those specified, or of brand name or model number will be considered a substitution. Owner will be the sole judge of whether or not the substitution is equal in quality, utility, and economy to that specified.

3.Approval of a substitution shall not relieve Contractor from responsibility for compliance with all requirements of the Contract. Contractor shall bear the expense for any changes in other parts of this work or other work caused by the proposed substitution.

O. LABELING

1.Provide engraved name plates on switchboards, panel boards, disconnect switches, motor control centers, transformers, etc., indicating equipment designated (or designation of equipment served) and voltage.

P. HOUSEKEEPING PADS

1.Provide 4 inch high concrete equipment pads beneath freestanding switchboards, motor control centers, transformers, etc.

Q. MATERIALS

1.All materials shall be new and of quality as specified on the plans or specifications and must carry the Underwriter's Laboratories approval covering the purpose for which they are used, in addition to meeting all requirements of the current applicable codes and regulations.

2.Contractor shall be responsible for replacing equipment which is damaged due to incorrect field wiring provided under this section or factory wiring in equipment provided under this section

PART 2 – PRODUCTS AND EXECUTION

A. CONDUIT

1.All wiring shall be installed in listed metallic conduit except as permitted below. RGS may be used in all areas. IMC may be used in indoor locations not in contact with earth. EMT may be used in or around locations not in contact with earth, not in concrete slabs or walls and not subject to damage. PVC may be used in or below concrete and direct buried in earth. Flexible steel conduit shall be used for indoor final connections to mechanical equipment not to exceed 36", and recessed removable fluorescent light fixtures not to exceed 72". Liquid-tight flexible steel conduit shall be for outdoor final connections to equipment not to exceed 36".

2.Where the conduit enters outlet boxes, fixtures or cabinets, firmly fasten by double lock nuts and bushings. Firmly fasten conduit to the building construction. Run exposed conduit parallel to the building lines, supported by appropriate hangers (Unistrut, T&B or Appleton).

3.Cover metallic conduit in contact with earth or fill with polyethylene tape spiral wrapped, 1/2" lapped to provide double thickness. Tape shall be Scotch No. 50 tape. Conduit and ducts not under buildings and feeder ducts shall be installed per NEC 300-5, except that the bends in conduit larger than 1" in diameter shall be made with galvanized steel conduit treated as noted above. Make joints with compound to be watertight.

4.Conduit sizes shall be as required by Code and as indicated or specified. No conduit smaller than one half inch trade size shall be used.

5.All empty conduit systems shall have a 200 pound test pull cord installed to facilitate installation of future wire.

6.Penetration through floor slabs where subject to damage shall be wrapped in rigid steel. Schedule 40 PVC elbows and penetrations may be used in slab on grade where penetrations occur in protected areas (walls, electrical rooms, etc.).

7.Conduits and outlets shall be concealed within the building structure, except that conduit and lighting feeder conduits may be run exposed in certain areas as indicated on the drawings. Conduit shown to be installed in cabinets, counters, and casework shall be run as directed by the Architect.

L. GUARANTEE & TESTING

1.Guarantee all material furnished and all workmanship performed for a period of one year from the date of final acceptance of the work. Any defects developing within this period, traceable to material furnished as a part of this Section or workmanship performed hereunder, shall be made good at no expense to the Owner.

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N. SUBSTITUTIONS

1.Prior to proposing any substitute item, Contractor shall satisfy himself that the item proposed is, in fact, equal to that specified, that such item will fit into the space allocated, that such item affords comparable ease of operation, maintenance and service, that the appearance, longevity, capacity and suitability are comparable, and that by reason of cost savings, reduced construction time, or similar demonstrable benefit, the substitution of such item will be in the Owner's interest.

2.The burden of proof of equality of a proposed substitution for a specified item shall be upon the Contractor. Contractor shall support its request with sufficient test data and other means to permit the Owner to make a fair and equitable decision on the merits of the proposed substitution. Any item by a manufacturer other than those specified, or of brand name or model number will be considered a substitution. Owner will be the sole judge of whether or not the substitution is equal in quality, utility, and economy to that specified.

3.Approval of a substitution shall not relieve Contractor from responsibility for compliance with all requirements of the Contract. Contractor shall bear the expense for any changes in other parts of this work or other work caused by the proposed substitution.

O. LABELING

1.Provide engraved name plates on switchboards, panel boards, disconnect switches, motor control centers, transformers, etc., indicating equipment designated (or designation of equipment served) and voltage.

P. HOUSEKEEPING PADS

1.Provide 4 inch high concrete equipment pads beneath freestanding switchboards, motor control centers, transformers, etc.

Q. MATERIALS

1.All materials shall be new and of quality as specified on the plans or specifications and must carry the Underwriter's Laboratories approval covering the purpose for which they are used, in addition to meeting all requirements of the current applicable codes and regulations.

2.Contractor shall be responsible for replacing equipment which is damaged due to incorrect field wiring provided under this section or factory wiring in equipment provided under this section

F. LIGHTING FIXTURES

1.Coordinate with other trades the final location of fixtures shown diagrammatically on the drawings in order to avoid interferences. Relocate fixtures as required as part of the work under this Division if new location is within 5-foot radius of location shown. Support recessed fixtures from ceiling structural support. All fixtures to bear the UL label.

2.Provide all lighting fixtures, wired and connected. The drawings indicate the fixtures for each location. Provide lamps for all fixtures. The lamps shall be by the same manufacturer. Verify ceiling construction before ordering recessed units. Provide plaster frames and hangers as required.

3.Adjustable fixtures shall be located and properly aimed as directed by the Architect and to function best.

4.Fixtures recessed in "T-Bar" ceiling shall be installed in accordance with manufacturers requirements.

5.All outdoor fixtures shall be UL labeled for wet or damp location as defined by NEC article 100.

G. LAMPS

1.Incandescent – Rated 120–volts, inside frosted, extended service. General Electric, Westinghouse or Sylvania.

2.Fluorescent

- a. 2 Foot length – F17–T8–SP34/41.
- b. 4 Foot length – F32–T8–SP35.

3. High Pressure Sodium

- a. 250-Watt – Clear, "Superior Performer" General Electric, Catalog No. Lu250/S.
- b. 400-Watt – Clear, base up, General Electric Catalog No. Lu400.

4. Metal Halide

- a. 175 watt
- b. 400 watt

H. BALLASTS

1.Fluorescent

a. Electronic, high power factor, T8 rapid start series designed for lamps indicated at full light output, with less than 20-percent total Harmonic distortion and A sound rating.

b. Electromagnetic (as allowed in fixture schedule), energy savings, encapsulated, and labeled with certified ballast manufacturer certification.

c. Compact fluorescent, electronic, fully encapsulated, 90-percent minimum, power factor, 20 HZ or higher operation frequency, less than 5-percent flicker, lamp current crest factor of 1.7 or less. Transient protection shall comply with IEEE (62.41) for category A1 locations. Interference shall comply with 47 CFR, Chapter 1, Part 18, subpart C for limitations on electromagnetic and radio frequency interference for nonconsumer equipment.

d. Outdoor fixtures shall have electronic ballasts rated for 0 degrees F starting temperature.

2.High-intensity Discharge Lamp Ballasts

a. Ballasts shall comply with ANSI CB2.4, shall be constant voltage auto transformer high power factor type. Open circuit operation will no reduce average life of Ballast.

b. The ballast shall be designed for an ambient operating temperature of 104° F. and shall start at minus 22 degrees F.

c. Refer to fixture schedule for number of lamps, voltage, fixture options, etc.

d. Auxiliary, Instant-on Quartz System – Automatically switches quartz lamp on when fixture is initially energized and when momentary power outages occur. Automatically turns quartz lamp off when high-intensity-discharge lamp reaches approximately 60 percent light output.

I. SAFETY SWITCHES

1.Safety switches, unless otherwise indicated on the drawings, shall be general duty type, 250 volt, heavy duty type, 600 volt of the number of poles required. Wire terminations shall be listed as suitable for 75 degrees C. Safety switches for air conditioning use shall be of the fusible type where recommended by equipment manufacturer. Fusible switches shall accept class "R" fuses only and will reject all other types. The switch size, number of poles and voltage rating shall be as required by code and as indicated on the drawings. Where outside the building, the switches shall be type NEMA 3R weatherproof. All switches shall be lockable.

2.Provide dymo-type tag inside cover of each fusible switch, indicating size and type of fuses provided.

3.Label all safety switches with a laminated plastic tag (minimum 1" high letters).

4.All safety switches shall be in immediate view of the equipment it protects at heights in accordance with TAS as appropriate.

J. FUSES

1.Fuses shall be dual element time delay type, as manufactured by Bussman Mfg. Company, or as indicated or required by the equipment supplied.

2.Provide two (2) sets of three (3) spare fuses for each size and type provided on this project. Install fuses in a hinged door, sheet metal storage cabinet equipped with clips or cubicles, each marked with the size and type of fuse stored therein. Provide nameplate "Spare Fuses." Install in locations as directed by owner.

ACCEPTABLE FUSE EQUIVALENTS					
UL CLASS.	VOLTS	DESCRIPTION	BUSSMAN	SHAWMUT	LITTLEFUSE
RK1	250	TIME DELAY	LPN–RK	A2D–R	LLNRK
RK1(A)	600	TIME DELAY	LPS–RK	A6D–R	LLSRK
RK5	250	TIME DELAY	FRN–R	TR–R	FLNR
RK5(A)	600	TIME DELAY	FRS–R	TRS–R	FLSR
L	600	TIME DELAY	KRP–C	–	KLP–C
L(A)	600	TIME DELAY	KLU	A4BY	KLLU
L(B)	600	FAST ACTING	KTU	–	–
K1	250	FAST ACTING	KWS–R	–	–
K1(A)	600	FAST ACTING	KWN–R	–	–
J	600	FAST ACTING	JKS	A4J	JLS
T	250	VERY FAST ACTING	JJN	A3T	JJLN
T(A)	600	VERY FAST ACTING	JJS	–	JJLS

K. SERVICE ENTRANCE

1.The service entrance equipment size, voltage and rating shall be as indicated on the drawings. Equipment shall carry the UL Label and shall conform to the power company regulations.

2.Contractor is responsible to verify and confirm that equipment submitted shall fit within the allotted space requirements shown on the plans. If any space or size discrepancies are anticipated it is the Contractor's responsibility to notify the Engineer prior to submittal. Once the submittals have been approved, it is the Contractor's responsibility to install the equipment within the allotted space at no additional cost to the owner. Service entrance equipment shall be manufactured by Square D Company, General Electric, or approved equal.

L. TRANSFORMERS (IF INDICATED ON SINGLE LINE)

1.Transformers shall be dry type with copper windings. See drawings for rating, temperature rise, KVA rating, voltage and "delta" – "wye" configuration requirements.

M. PANELBOARDS

1.Circuit breaker type as indicated on drawings. Unless indicated otherwise, all panels shall have panelboard type construction with bolt-on circuit breakers. Panels indicated as loadcenters shall have plug-on circuit breakers. Manufacturers shall be General Electric, Square D, Westinghouse or approved equal with voltage, sizes and ratings as indicated on drawings. All panelboards in the facility shall be by the same Manufacturer.

2.The circuit breakers shall be operable in any position and be removable from the front of the panelboard without disturbing the adjacent units. Branch breakers shall be of such design that combination of single-pole, double-pole and three-pole breakers can be assembled on the same panel. Each branch circuit shall be clearly numbered. Branch and main terminals shall be of the solderless type. Handle ties to form multi-pole breakers are not acceptable.

3.Wire termination for panelboards, loadcenters and circuit breakers shall be listed as suitable for 75° C.

4.Provide a typewritten laminated circuit index behind clear plastic cover on inside of door. Information shall include room and type of load served. All circuit breakers shall be identified, including spares. Index card frame shall be metal, secured to door.

5.Where panelboards are installed flush with the walls, extend empty conduits from the panelboard to an accessible space above or below. Provide 1" (minimum size) conduit for every three single spare circuit breakers or spare or equivalent multi-pole arrangement, or fraction thereof, but not less than two conduits for each Panelboard.

6.Provide laminated plastic tag (minimum 1/2" high letters) in front of each panelboard cover. Label each panelboard as to voltage.

7.Do not utilize panelboards as wireways & junction boxes.

N. SYSTEM GROUNDING

1.Grounding shall comply with requirements of Article 250. All exposed noncurrent-carrying metallic parts of electrical equipment, metallic raceway systems, metallic cable armor, grounding conductor of nonmetallic sheathed cables, grounding conductor in nonmetallic raceways, and grounded conductors of the wiring system shall be grounded.

2.The grounded conductor (neutral) of the wiring system shall be connected to the system grounding conductor at a single place in each system by removable bonding jumpers, sized according to the applicable provisions of the National Electrical Code. The grounded conductor (neutral) to the grounding conductor connection shall be located in the enclosure for the system's overcurrent protection or where otherwise indicated on the plans or specifications.

3.Ground bus separate from the neutral bus shall be provided in all switchboards and panelboards. Ground bus shall be retorgued (checked) prior to energizing equipment per manufacturer's recommendations.

4.Ground buses and neutral buses in all distribution panels, switchboards, panelboards and those provided in any equipment shall be isolated except where required to be connected as specified above for the service entrance and in transformer terminal compartments.

5.When indicated on the drawings, equipment grounding conductors shall be extended from the ground bus in the distribution equipment to the receptacle, fixture or device lugs where they are provided. When not provided, they shall be connected to equipment enclosures. The connections shall be arranged such that removal of the receptacle, the equipment ground conductors, or the ground jumpers from ground busing shall not affect the ground system.

6.Raceways may not be used as a grounding conductor for power and lighting circuits. Every conduit supplying power and lighting circuits shall have a separate code sized green ground wire installed in the conduit to insure a continuous grounding path.

7.In inaccessible locations make connections by exothermic weld process.

8.In accessible locations, connections shall be made with approved bolted bronze grounding devices.

O. EQUIPMENT CONNECTIONS

1.All motors shall be wired to conform with manufacturer's recommendations and with applicable codes. Furnish necessary materials, such as wire, conduit, fittings, etc. required to connect motor. However, motors, controls, etc. shall be furnished by the supplier of the driven equipment. Equipment location and sizes with the trade supplying the motor before installing the conduit or outlets.

2.Use copper wire for motor connections.

3.Provide laminated plastic tag (minimum 1/2" high letters) on each piece of equipment located in a manner to be visible & not impact maintenance or operation.

P. TELEPHONE & SPECIAL SYSTEM

1.Telephone outlets shall consist of two gang boxes with mud ring boxes mounted 18" above the floor unless otherwise indicated. Connect to telephone terminal board with separate 1" conduit unless otherwise shown on drawings. Provide a terminal mounting board for the service cable.

2.Provide isolated #6 AWG copper ground wire from equipment backboard to building service ground.

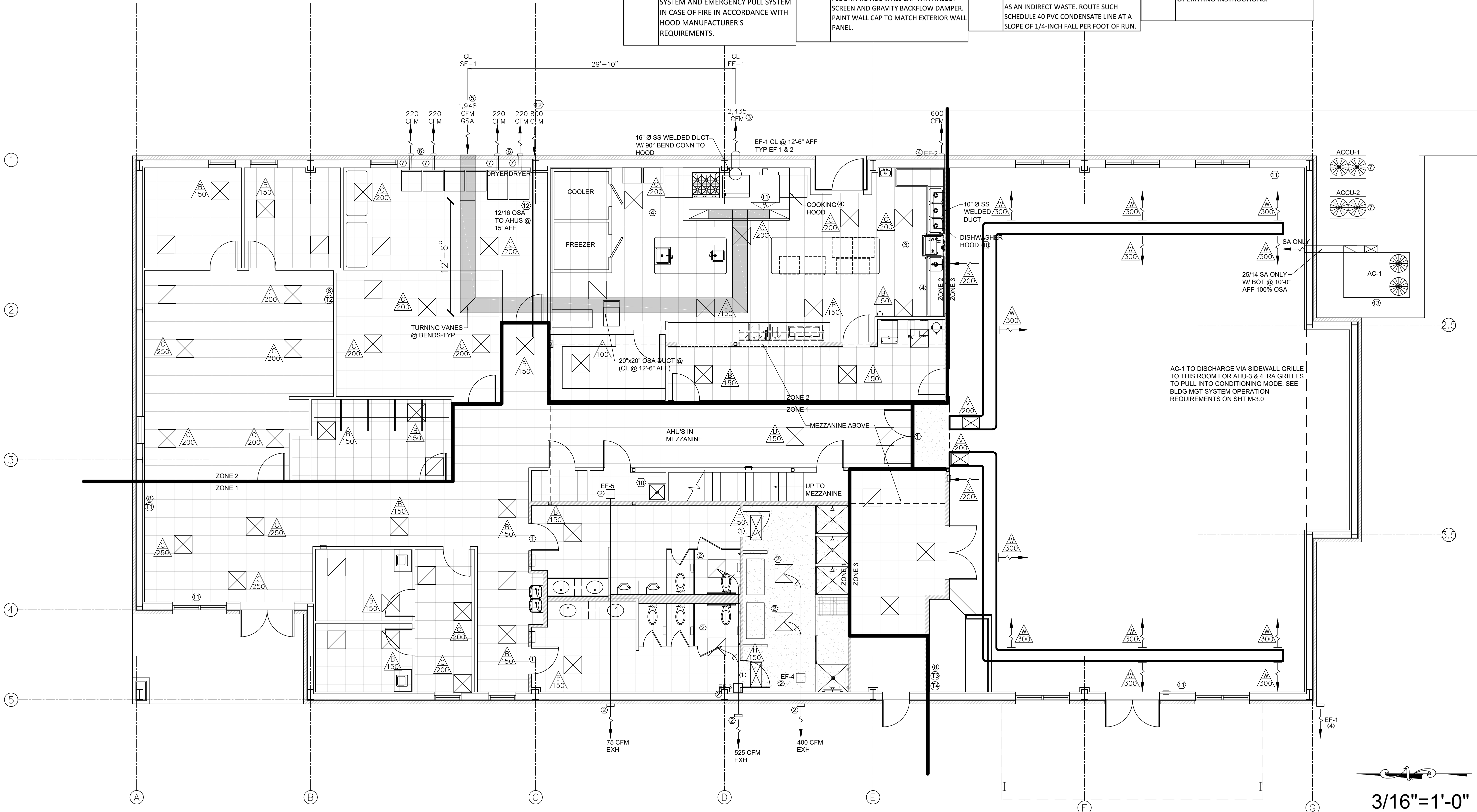
Q. LIGHTING CONTROL

1.Furnish and install 24/7 time switches with battery backup, photocells and contactors (minimum 20 amp rating) required for lighting control indicated on the drawings.

KEYED NOTES - MECHANICAL	
MARK	DESCRIPTION
1	UNDERCUT DOOR BY 3/4-INCH FOR AIR FLOW UNDER DOOR
2	INSTALL EXHAUST FANS WITH GRILLS IN CEILING TO DISCHARGE VIA AIR FLOW DAMPER THRU EXTERIOR WALL VIA WATER-TIGHT, WEATHER-PROOF PENETRATION TO DISCHARGE TO A WALL CAP WITH GRAVITY DAMPER AND INSECT SCREEN. PAINT WALL CAP TO MATCH WALL. INSTALL EXHAUST FANS IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS. EXHAUST FANS SHALL BE ON 24/7 PROGRAMMABLE TIMERS TO RUN WHILE BUILDING IS OCCUPIED.
3	INSTALL COOKING HOOD IN STRICT ACCORDANCE WITH COOKING HOOD MANUFACTURER'S REQUIREMENTS. PROVIDED WELDED STAINLESS STEEL DUCT FROM COOKING HOOD TO EXHAUST FAN (EF-1) WITH GREASE POTS. COORDINATE WITH BUILDING MANUFACTURER TO SUPPORT HOOD LOADS. PROVIDE FIRE SUPPRESSION SYSTEM AND EMERGENCY PULL SYSTEM IN CASE OF FIRE IN ACCORDANCE WITH HOOD MANUFACTURER'S REQUIREMENTS.
4	INSTALL DISHWASHER CONDENSING UNIT EXHAUST FAN (EF-2) IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS. SUPPORT SUCH EXHAUST FAN OFF BUILDING WITH DUCT PENETRATION THRU BUILDING EXTERIOR WALL TO BE WATER TIGHT. COORDINATE SUCH REQUIREMENTS WITH BUILDING MANUFACTURER INCLUDING BEING ABLE TO WITHSTAND 100 MPH WIND. PROVIDE ONE-INCH CONDENSATE DRAIN FROM HOOD TO NEARBY FLOOR SINK, CONCEALING SUCH LINE WHEN POSSIBLE.
5	INSTALL COOKING HOOD SUPPLY FAN (SF-1) IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS. SUPPORT SUCH SUPPLY FAN AND FILTER ASSEMBLY OFF BUILDING WITH DUCT PENETRATION THRU BUILDING EXTERIOR WALL TO BE WATER TIGHT. COORDINATE SUCH REQUIREMENTS WITH BUILDING MANUFACTURER INCLUDING BEING ABLE TO WITHSTAND 100 MPH WIND.
6	INSTALL DRYER VENTS IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS WITH WATER-TIGHT, SEALED EXTERIOR PENETRATION AT SIX-INCHES ABOVE FINISH FLOOR. PROVIDE WALL CAP WITH INSECT SCREEN AND GRAVITY BACKFLOW DAMPER. PAINT WALL CAP TO MATCH EXTERIOR WALL PANEL.
7	INSTALL AIR CONDITIONING CONDENSING UNITS (ACCU) ON CONCRETE PAD IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS INCLUDING CLEARANCES. PROVIDE WEATHER-PROOF, WATER-TIGHT REFRIGERANT LINES/ELECTRICAL WALL PENETRATION FOR EACH ACCU TO CONNECT TO EACH AIR HANDLER UNIT IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS. CONCEAL ALL SUCH LINES WITHIN WALLS AND ABOVE CEILING.
8	INSTALL AIR HANDLER UNIT (AHU) IN MEZZANINE ON 3/4-INCH EXTERIOR PLYWOOD MEZZANINE DECK IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS INCLUDING CLEARANCES. PROVIDE INSULATED SECONDARY CONDENSATE PAN WITH TWO-INCH LIP WITH CONDENSATE LINE AND FLOAT SWITCH TO DE-ACTIVATE AIR HANDLER UNIT IF SECONDARY CONDENSATE PAN IS 50% FULL. SUCH INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
9	EXTEND INSULATED ONE-INCH PRIMARY CONDENSATE DRAIN TO NEARBY FLOOR SINK AS AN INDIRECT WASTE. ROUTE SUCH SCHEDULE 40 PVC CONDENSATE LINE AT A SLOPE OF 1/4-INCH FALL PER FOOT OF RUN.
10	EXTEND INSULATED ONE-INCH SECONDARY DRAIN FROM AHU DRAIN PAN TO MOP SINK ON FIRST FLOOR AND TERMINATE AS AN INDIRECT WASTE LINE. LABEL EACH SECONDARY CONDENSATE DRAIN AS TO AHU LABEL. ROUTE SUCH SCHEDULE 40 PVD CONDENSATE LINES AT A SLOPE OF 1/4-INCH FALL PER FOOT OF RUN. CONCEAL SUCH CONDENSATE LINES ABOVE CEILING AND WITHIN WALLS.
11	PROVIDE EXTERIOR ENVELOPE IN ACCORDANCE WITH IECC REQUIREMENTS. ENVELOPE SHALL BE LEAK-PROOF. TEST BUILDING ENVELOPE FOR BUILDING LEAKS AND REPAIR AS REQUIRED TO SATISFY IECC REQUIREMENTS.
12	INSTALL FILTERED OUTSIDE AIR FROM BUILDING REAR WALL TO RETURN AIR DUCT FOR EACH AIR HANDLER UNIT. PROVIDE A MANUAL DAMPER TO ADJUST AIR FLOW TO SPECIFIED FLOW NEAR AHU. PROVIDE A MOTORIZED DAMPER ON OUTSIDE AIR DUCT TO OPEN AND CLOSE THE OUTSIDE AIR DUCT IN CONJUNCTION WITH THE AHU EITHER COOLING AND/OR HEATING. SEE BUILDING MANAGEMENT SYSTEM (BMS) OPERATING INSTRUCTIONS.
13	INSTALL UNITARY DX SYSTEM (AC-1) WITH GAS RE-HEAT IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS. ANCHOR SUCH EQUIPMENT TO WITHSTAND 100 MPH WIND IN ACCORDANCE WITH BUILDING CODES. PROVIDE WATER-TIGHT WEATHER PROOF DUCT PENETRATIONS FOR SUPPLY AND RETURN AIR DUCTS THROUGH BUILDING WALL. OPERATE SUCH AC-1 BASED ON INFORMATION FROM BUILDING MAINTENANCE SYSTEM TO BE INSTALLED INSIDE AIR CONDITIONING MEZZANINE ROOM. ROUTE TWO-INCH PRIMARY DRAIN TO HUB DRAIN CONNECTED TO SANITARY SEWER. PROVIDE WATER-TIGHT EXTERIOR DUCT SHROUD AROUND INSULATED SUPPLY AND RETURN AIR DUCTS. SUPPORT SUCH DUCTS AS REQUIRED TO WITHSTAND 100 MPH WIND IN ACCORDANCE WITH BUILDING CODES.

No.	Date	Revisions	App.
0	12/4/23	ISSUE FOR CONSTRUCTION	RAS

MECHANICAL PLAN
MIRACLE CITY DAY CENTER
364 FOSTER DRIVE
CONROE, TEXAS 77301



ENGINEERING BY:
QUEST ENGINEERING
 304 North Main Street #1
 Conroe, Texas 77301
 Phone: (713) 252-3729
 rsaikowski@consolidated.net
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 TEXAS REGISTRATION NO. FOR ENGINEERING FIRM IS F-10574

I, RON A. SAIKOWSKI,
 P.E., AUTHORIZED THE
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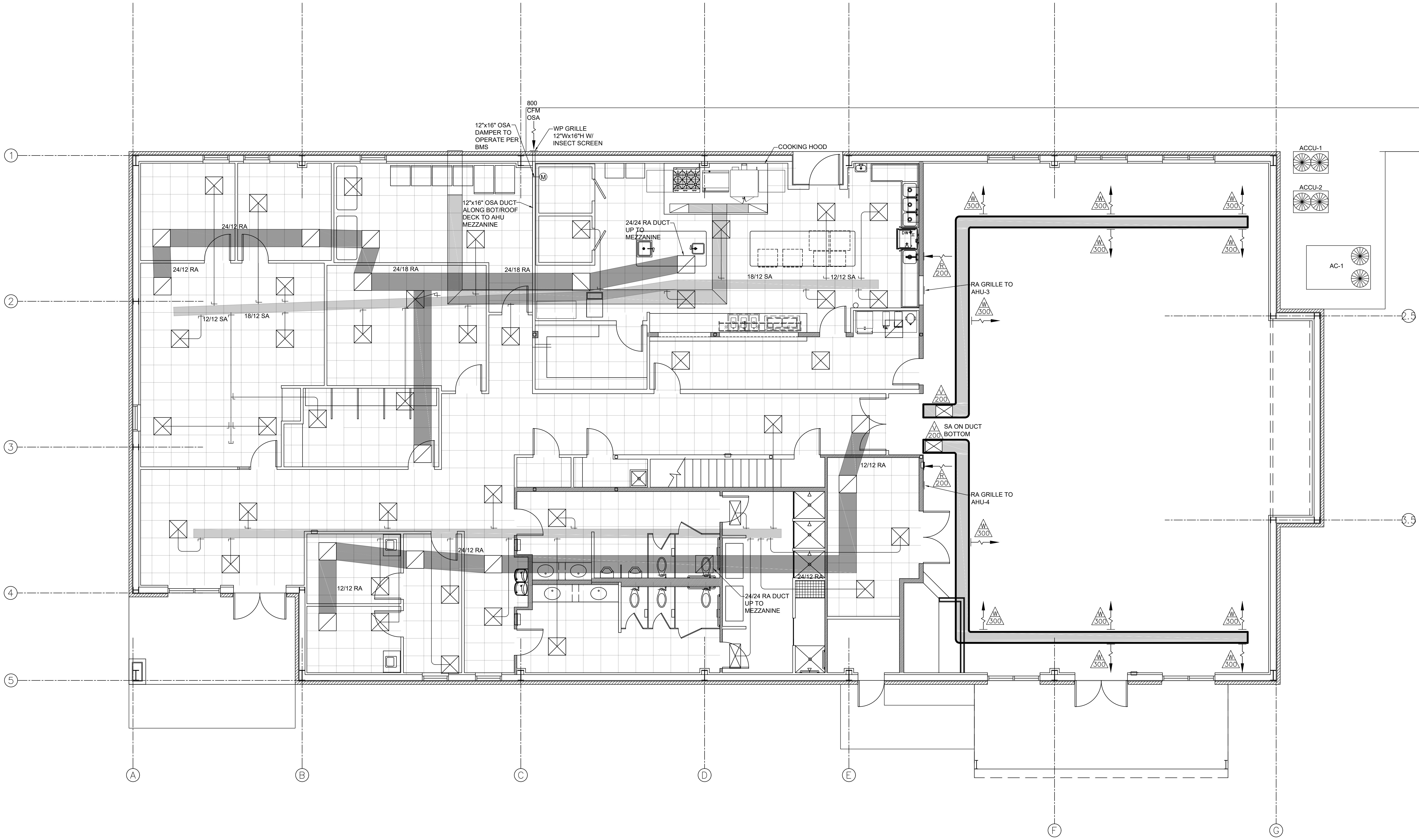
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SHEET NO.
M-1.1

3/16"=1'-0"

LEGEND	
	RETURN AIR DUCT
	SUPPLY AIR DUCT

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HVAC PLAN

MIRACLE CITY DAY CENTER
364 FOSTER DRIVE
CONROE, TEXAS 77301

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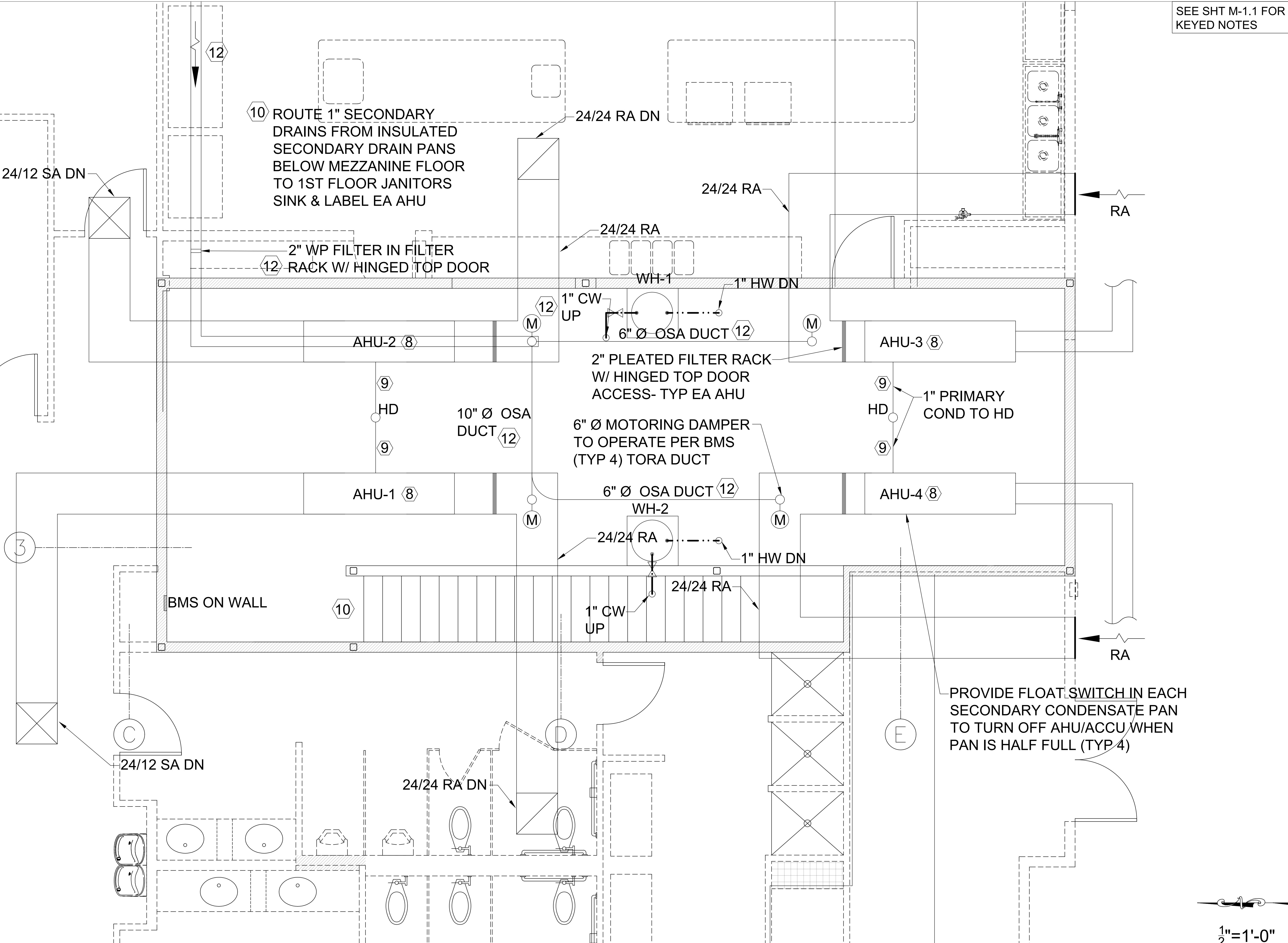
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3/16"=1'-0"

SHEET NO.
M-2.1

SEE SHT M-1.1 FOR
KEYED NOTES

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10 ROUTE 1" SECONDARY DRAINS FROM INSULATED SECONDARY DRAIN PANS BELOW MEZZANINE FLOOR TO 1ST FLOOR JANITORS SINK & LABEL EA AHU

12 2" WP FILTER IN FILTER RACK W/ HINGED TOP DOOR

8 AHU-2

9 HD

12 10" Ø OSA DUCT

8 AHU-1

12 6" Ø OSA DUCT

WH-2

8 AHU-4

BMS ON WALL

10

1" CW UP

24/24 RA

1" HW DN

RA

PROVIDE FLOAT SWITCH IN EACH SECONDARY CONDENSATE PAN TO TURN OFF AHU/ACCU WHEN PAN IS HALF FULL (TYP 4)

24/12 SA DN

24/24 RA DN

1" = 1'-0"

MECHANICAL PLAN-MEZZANINE

MIRACLE CITY
364 FOSTER DRIVE
CONROE, TEXAS 77301

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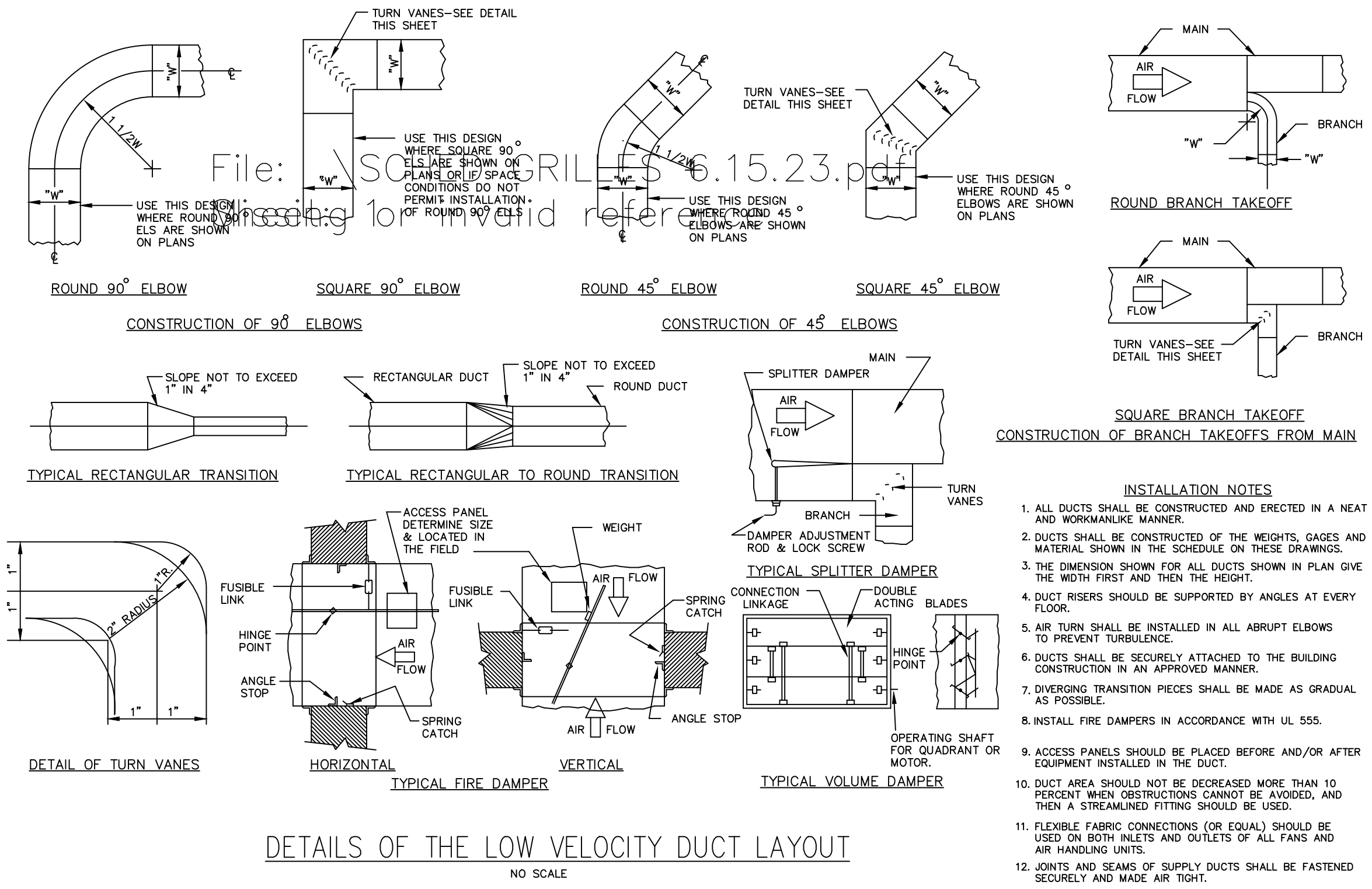
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BUILDING MANAGEMENT SYSTEM (BMS)

THE BUILDING MANAGEMENT SYSTEM SHALL CONTROL THE HEATING, VENTILATING, AND AIR CONDITIONING SYSTEMS OF THIS BUILDING AS FOLLOWS:

1. THE AIR HANDLERS' RETURN AIR DUCTS SHALL HAVE TEMPERATURE/HUMIDITY SENSORS IN THE RETURN AIR DUCTS OF EACH AIR HANDLER UNIT(AHU) TO SENSE THE TEMPERATURE AND HUMIDITY OF THE AIR AND REPORT TO THE BMS WHILE EACH AHU BLOWER IS OPERATING.
2. THE AHU BLOWER SHALL BE PROGRAMMED FOR EACH ZONE TO BLOW CONTINUOUSLY WHILE THAT ZONE IS OCCUPIED.
3. THE BMS SHALL DIRECT THE HEAT PUMPS FOR EACH AHU TO PROVIDE HEATING AND COOLING AS REQUIRED BY THE SET POINTS SPECIFIED IN THE BMS BY THE OWNER.
4. THE MOTORIZED DAMPER FOR EACH INDIVIDUAL AHU SHALL BE OPENED TO THE SPECIFIED LEVELS FOR OUTSIDE AIR TO ENTER THE SYSTEM WHEN EACH AHU IS EITHER COOLING OR HEATING THE AIR.
5. THE UNITARY DX SYSTEM WITH GAS RE-HEAT (AC-1) SHALL HAVE A VARIABLE SPEED BLOWER AND VARIABLE GAS RE-HEAT AS REQUIRED FOR ADDING OUTSIDE AIR AS REQUIRED FOR BALANCING THE EXHAUST AIR WITH OUTSIDE AIR. AC-1 SHALL SUPPLY AIR INTO THE MULTI-PURPOSE ROOM WITH RETURN AIR FROM THE MULTI-PURPOSE ROOM TO AC-1. AN OUTSIDE MODULATING DAMPER SHALL PROVIDE OUTSIDE AIR INTO THE AC-1 TO BE CONDITIONED AS DIRECTED BY THE BMS.
6. THE KITCHEN SUPPLY FAN (SF-1) AND KITCHEN EXHAUST FANS (EF-1 & 2), EACH LAUNDRY DRYER EXHAUST, AND EACH RESTROOM EXHAUST FAN SHALL PROVIDE INPUT TO THE BMS VIA ON-OFF SIGNAL IN ORDER FOR THE BMS TO DIRECT THE AC-1 OUTSIDE AIR FLOWS. WHEN NECESSARY, THE BMS SHALL OVERRIDE THE OUTSIDE AIR DAMPERS TO EACH AHU TO PROVIDE OUTSIDE AIR TO EACH AHU AT THE SPECIFIED LEVELS IN THE SUMMARY OF AIR FLOWS.
7. AIR FLOWS SHALL BE BALANCED TO WITHIN 10% OF SPECIFIED VALUES PRIOR TO PROJECT CULMINATION.
8. EACH AHU AND AC-1 SHALL HAVE A SMOKE DETECTOR WITH CONNECTION TO THE FIRE ALARM SYSTEM AND BMS. THE BMS SHALL SHUT DOWN ALL AHU'S AND AC-1 IF ANY OF THE SMOKE DETECTORS DETECTS SMOKE. THE FIRE ALARM SYSTEM SHALL SEND AN ALARM IN ACCORDANCE WITH THE FIRE ALARM SYSTEM DESIGN.
9. SYSTEM SHALL HAVE INTERNET CAPABILITY TO SEND ALARM(S) TO DESIGNATED EMAILS AS ESTABLISHED BY THE OWNER.
10. THE SYSTEM SHALL HAVE SCREEN ICONS DEPICTING THE STATUS OF EACH BLOWER IN THE AHU'S AND AC-1 ALONG WITH TEMPERATURE AND HUMIDITY OF EACH RETURN AIR DUCT SENSOR IN THE AHU'S AND AC-1.
11. THE BMS SHALL HAVE A PRESSURE SENSOR IN EACH OF THE FOUR AHU ZONES' CONDITIONED AREAS TO SIGNAL IF ANY OF THE FOUR AHU ZONES ARE EXPERIENCING PRESSURES WHICH SIGNIFY AN INADEQUATE OUTSIDE AIR FLOW THROUGH THE CONDITIONING SYSTEMS. THE BMS SHOULD SOUND AN ALARM TO THE BMS.
12. EACH OF THE FILTER SYSTEMS FOR THE FOUR AHU'S AND THE AC-1 SYSTEM SHALL HAVE A PRESSURE DIFFERENTIAL SYSTEM UPSTREAM AND DOWNSTREAM OF EACH AIR FILTER TO NOTIFY THE BMS OF A REQUIRED FILTER CHANGE.
13. THE BMS WILL NOT BE REQUIRED TO CONTROL INTERIOR AND EXTERIOR LIGHTING DUE TO THE VARIABILITY OF OCCUPANCY. EXTERIOR LIGHTING WILL BE CONTROLLED BY A PHOTO-ELECTRIC CELL.
14. BMS SHALL MEET REQUIREMENTS OF INTERNATIONAL ENERGY CONSERVATION CODE AND CITY OF CONROE REQUIREMENTS.
15. BMS EQUIPMENT SHALL INCLUDE ALL SENSORS, CONNECTIONS, PROGRAMMING AND TOUCH-SCREEN COMPUTER WITH 14-INCH COLOR MONITOR AND UNINTERRUPTED POWER SUPPLY FOR MINIMUM OF 90 MINUTES OF POWER ALONG WITH RE-BOOTABLE SYSTEM CAPABILITIES.

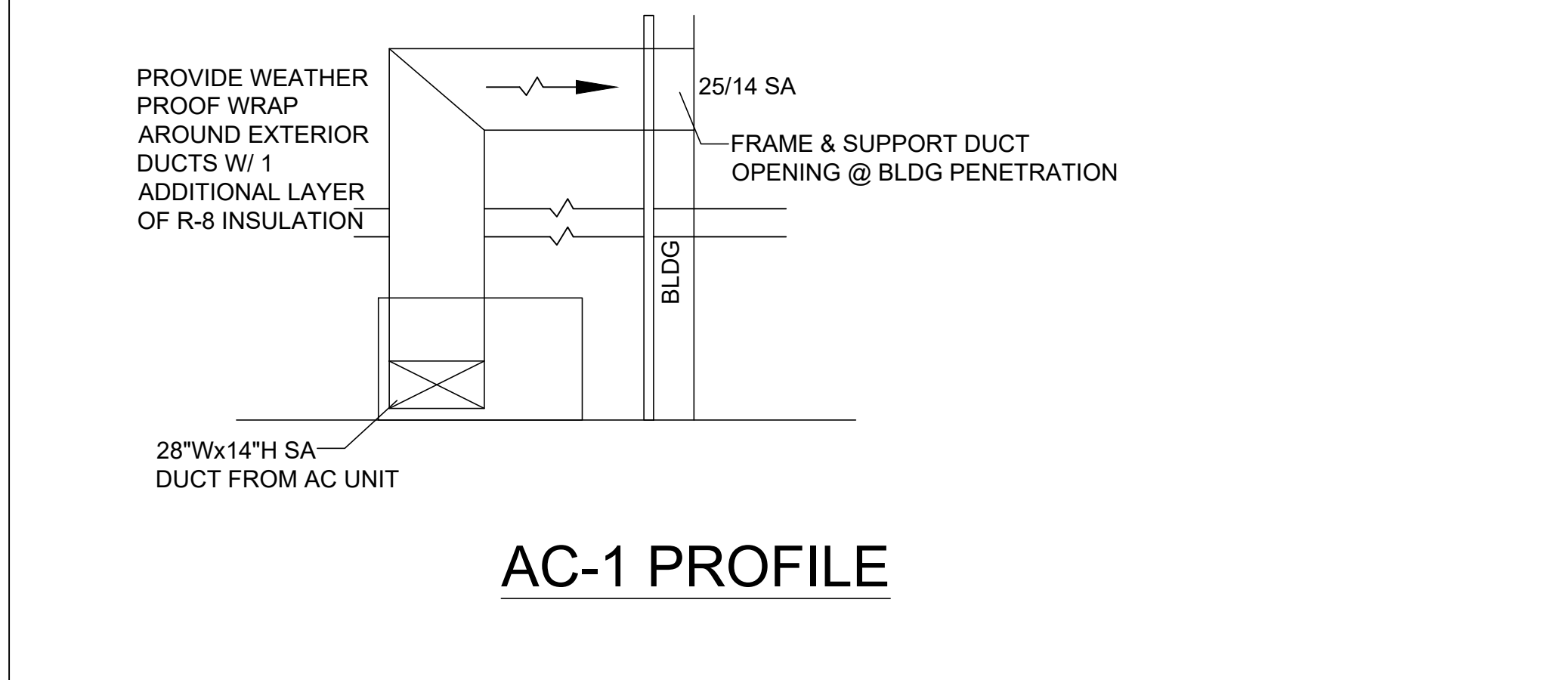


SCHEDULE OF GRILLES

MARK	MANUFACTURER	MODEL	USE	LOCATION	MAX CFM	NC	SIZE	DUCT SIZE
A	TITUS	TMS-AA	SUPPLY	RCP CEILING	70		24X24	6" DIA
B	TITUS	TMS-AA	SUPPLY	RCP CEILING	150		24X24	6" DIA
C	TITUS	TMS-AA	SUPPLY	RCP CEILING	250	16	24X24	8" DIA
D	TITUS	TMS-AA	SUPPLY	RCP CEILING	350	16	24X24	10" DIA
E	TITUS	TMS-AA	SUPPLY	RCP CEILING	450	13	24X24	12" DIA
G	TITUS	272-RS	SUPPLY	GYPBOARD CEILING	70		8 X 6	6" DIA
H	TITUS	272-RS	SUPPLY	GYPBOARD CEILING	150		10 X 6	8" DIA
J	TITUS	272-RS	SUPPLY	GYPBOARD CEILING	250	16	12 X 6	10" DIA
K	TITUS	272-RS	SUPPLY	GYPBOARD CEILING	350	19	12 X 8	12" DIA
L	TITUS	272-RS	SUPPLY	GYPBOARD WALL	70		8 X 6	6" DIA
M	RUSKIN	ET125	EXHAUST	GYPBOARD WALL	350		12" H X 18" W	
N	TITUS	272-RS	SUPPLY	GYPBOARD WALL	250	16	12 X 6	10" DIA
P	TITUS	272-RS	SUPPLY	GYPBOARD WALL	350	19	12 X 8	12" DIA
R	TITUS	PXP-AA	RETURN	RCP RETURN			24X24	
RR	TITUS	350RSF-SS	RETURN	WALL RETURN	3000	22	36" W X 24" H	36 X 24
T	TITUS	TBD-80	SUPPLY	LINEAR CEILING	150	21	5"LG x 1-1.5" SLOT	8"
V	TITUS	TBD-80	SUPPLY	LINEAR CEILING	250	21	5"LG x 2-1.5" SLOT	10"
W	TITUS	TBD-80	SUPPLY	LINEAR CEILING	350	20	5"LG x 3-1.5" SLOT	12"
XT	TITUS	5300-FS	SUPPLY	SPIRAL DUCT	250	18	16 X 4	
XG	TITUS	5300-FS	SUPPLY	SPIRAL DUCT	370	16	32 X 6	
FD	RUSKIN	D1BD2	FIRE DAMPER	DUCT				MATCH DUCT

NOTES

1. PROVIDE ADAPTERS AS REQUIRED FOR TRANSITIONING DUCTS TO GRILLES
2. COORDINATE GRILLE COLORS WITH ARCHITECTS
3. PROVIDE MANUAL DAMPERS ACCESSIBLE ON BRANCH DUCT TO CALIBRATE AIR FLOWS TO THOSE SHOWN ON THE PLANS.



THICKNESS & REINFORCING SCHEDULE - * LOW PRESSURE DUCTWORK

*NOTE: LOW PRESSURE DUCTWORK SHALL BE DUCTWORK IN WHICH THE PRESSURE DOES NOT EXCEED 2" WATER GAUGE.

GREATEST DUCT	STEEL DUCTS U.S. STANDARD GAUGE	ALUMINUM DUCTS B & S GAUGE	LONGITUDINAL SEAM	TRANSVERSE JOINT SMALLEST DIMENSION	TRANSVERSE JOINT GREATEST DIMENSION	REINFORCING (ALL DUCTS 16" THRU 54" SHALL BE CROSSBROKEN)
12" OR LESS	26	24(0.020)	PITTSBURGH OR ACOME LOCK	DRIVE SLIP OR POCKET LOCK OR BAR SLIP	PLAIN "S" SLIP OR POCKET LOCK OR BAR SLIP	NONE REQUIRED
13" THRU 18"	24	22(0.025)	PITTSBURGH OR ACOME LOCK	DRIVE SLIP OR POCKET LOCK OR BAR SLIP	PLAIN "S" SLIP OR POCKET LOCK OR BAR SLIP	NONE REQUIRED
19" THRU 30"	24	22(0.025)	PITTSBURGH OR ACOME LOCK	HEMMED "S" SLIP OR BAR SLIP OR DRIVE SLIP OR 1" POCKET LOCK	HEMMED "S" SLIP OR BAR SLIP OR DRIVE SLIP OR 1" POCKET LOCK	IF TRANSVERSE JOINTS ARE LOCATED 4"-0" OR LESS ON CENTER NO REINFORCING IF ON 8"-0" CENTERS REINFORCE WITH 1"x1"x1/8" ANGLES AT 4 FT. O.C. FASTENED ON 8" CENTERS
31" THRU 42"	22	20(0.032)	PITTSBURGH OR ACOME LOCK	DRIVE SLIP 1/8" OR LESS BAR SLIP REINFORCED BAR SLIP OR POCKET LOCK	BAR SLIP OR REINFORCED BAR SLIP OR POCKET LOCK	IF TRANSVERSE JOINTS ARE LOCATED 4"-0" OR LESS ON CENTER NO REINFORCING IF ON 8"-0" CENTERS REINFORCE WITH 1"x1"x1/8" ANGLES AT 4 FT. O.C. FASTENED ON 8" CENTERS

ANGLES TO BE THE SAME SIZE AS REQUIRED REINFORCING ANGLES

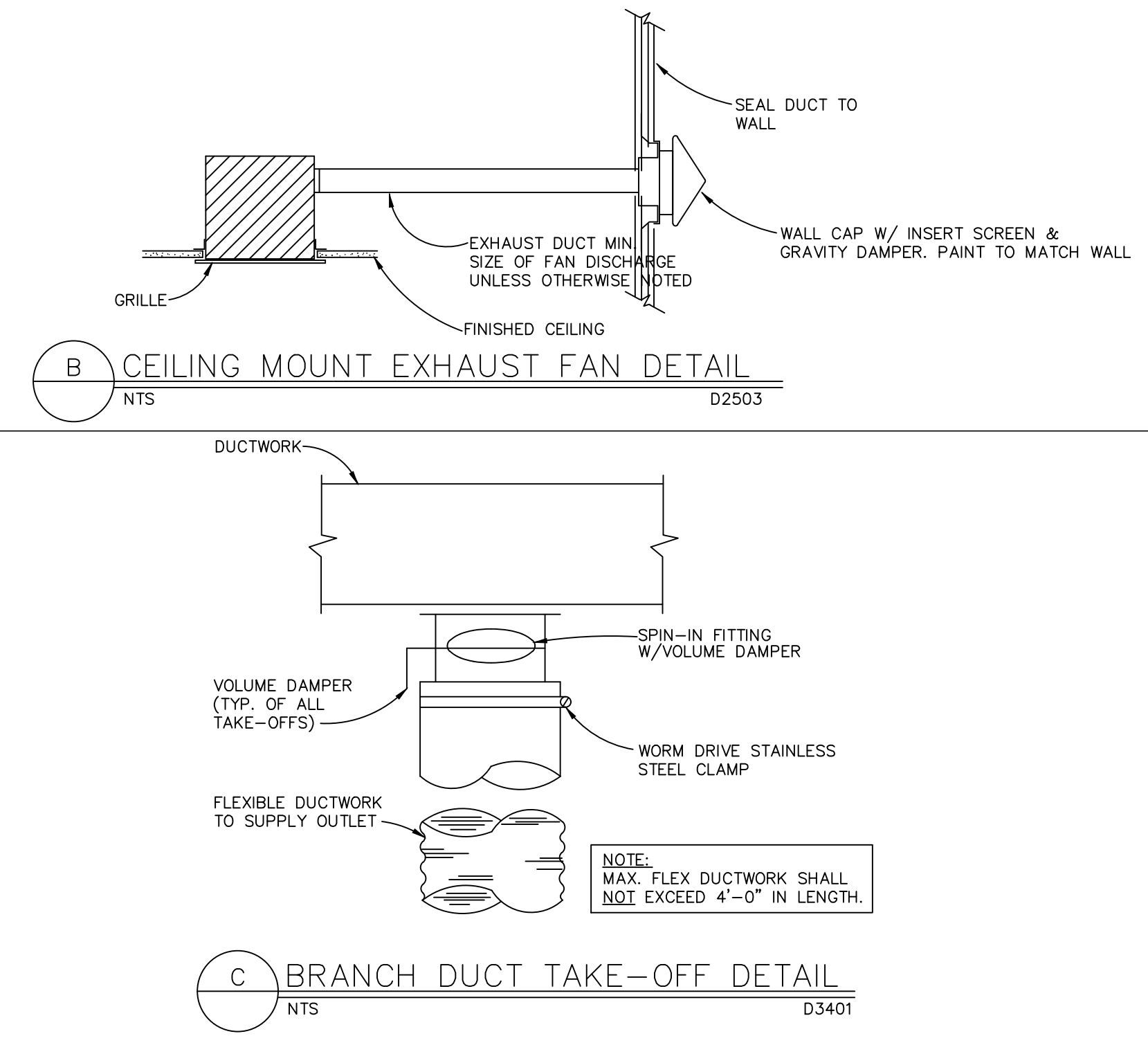
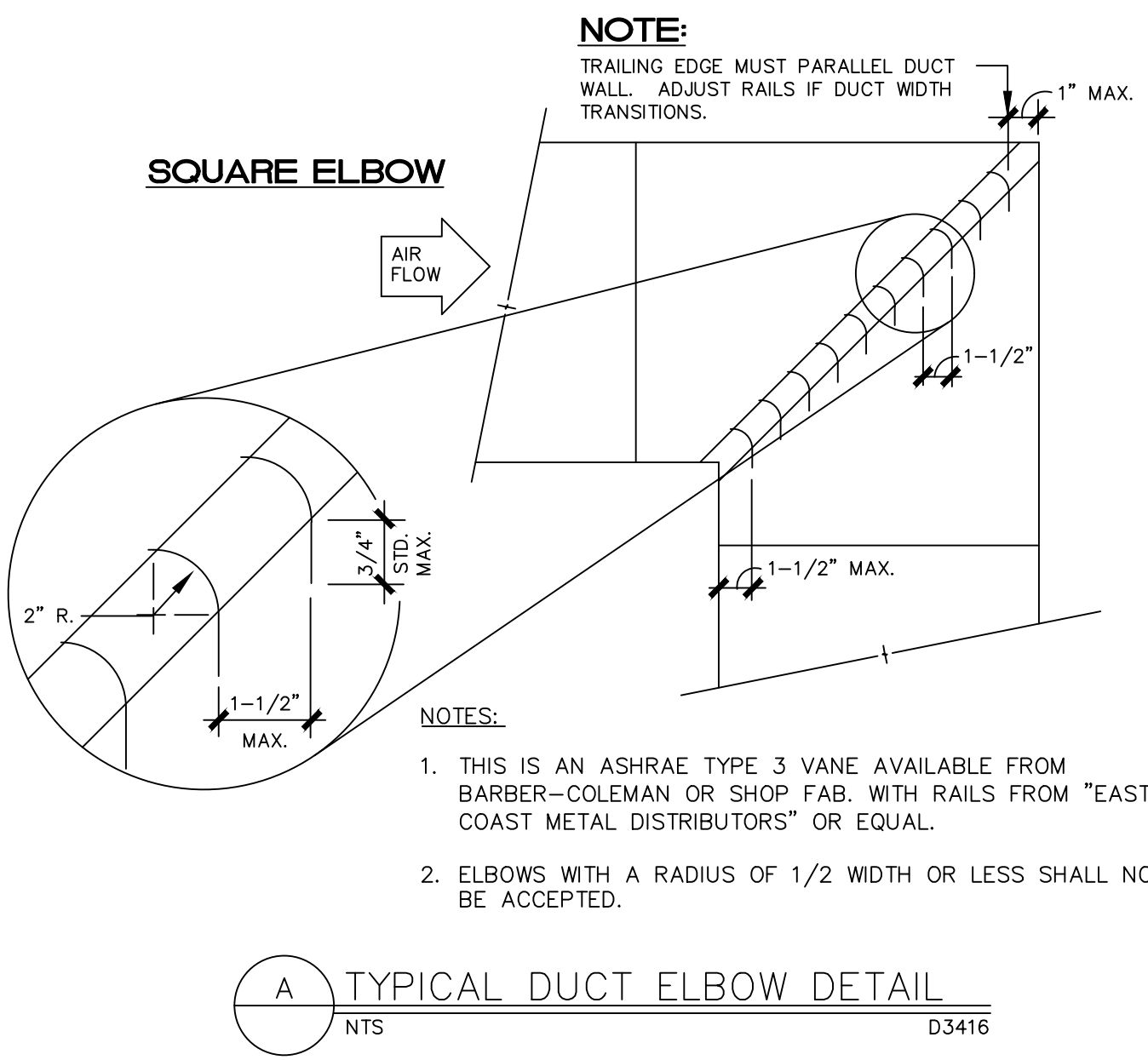
ANGLES TO BE THE SAME SIZE AS REQUIRED REINFORCING ANGLES

DUCT CONSTRUCTION MINIMUM SHEET METAL THICKNESSES

MAXIMUM SIZE (INCHES)	RECTANGULAR DUCTS	
	STEEL (MINIMUM THICKNESS, NOMINAL)	ALUMINUM (MINIMUM THICKNESS, NOMINAL)
THROUGH 12	0.022 INCH (26 GAGE, GALV.)	0.020 INCH (NO. 24 B&S GAGE)
13 THROUGH 30	0.028 INCH (24 GAGE, GALV.)	0.025 INCH (NO. 22 B&S GAGE)
31 THROUGH 54	0.034 INCH (22 GAGE, GALV.)	0.032 INCH (NO. 20 B&S GAGE)

MAXIMUM SIZE (INCHES)	ROUND DUCTS	
	SPIRAL SEAM DUCT (MINIMUM THICKNESS, NOMINAL)	LONGITUDINAL SEAM DUCT (MINIMUM THICKNESS, NOMINAL)
THROUGH 12	0.019 INCH (28 GAGE, GALV.)	0.022 INCH (26 GAGE, GALV.)
13 THROUGH 18	0.022 INCH (26 GAGE, GALV.)	0.028 INCH (24 GAGE, GALV.)

MAXIMUM SIZE (INCHES)	FITTINGS	
	STEEL (MINIMUM THICKNESS, NOMINAL)	ALUMINUM (MINIMUM THICKNESS, NOMINAL)
THROUGH 12	0.022 INCH (26 GAGE, GALV.)	0.020 INCH (NO. 24 B&S GAGE)
13 THROUGH 18	0.028 INCH (24 GAGE, GALV.)	0.025 INCH (NO. 22 B&S GAGE)



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MECHANICAL DETAILS
MIRACLE CITY
364 FOSTER DRIVE
CONROE, TEXAS 77301

ENGINEERING BY:
QUEST ENGINEERING
 304 North Main Street #1
 Conroe, Texas 77301
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 rsaikowski@consolidated.net
 © Ronald A Saikowski PE LEED AP 2024
 TEXAS REGISTRATION NO. FOR ENGINEERING FIRM IS F-10574



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NOTE:
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SUMMARY OF AIR FLOWS (CFM)				
UNIT	SUPPLY	RETURN	OUTSIDE	EXHAUST
AHU-1	2,000	1,800	200	
AHU-2	2,000	1,800	200	
AHU-3	2,000	1,800	200	
AHU-4	2,000	1,800	200	
AC-1	4,000	1,600	2,400	
SF-1			1,948	
DRYERS				880
EF-1				2,435
EF-2				600
EF-3				75
EF-4				525
EF-5				400
TOTALS	12,000	8,800	5,148	4,915

NORMAL OUTSIDE AIR FLOW = 800 CFM
 PROVIDE OUTSIDE AIR FLOW AT RATE OF 15 CFM PER PERSON
 THIS EQUATES TO 53 PEOPLE AT NORMAL CONDITIONS
 BUILDING MANAGEMENT SYSTEM TO STAGE AIR FLOWS FOR AC-1
 WITH AC-1 AT MAXIMUM OSA FLOW, TOTAL OSA = 3,200 CFM
 AT 3,200 CFM, THIS EQUATES TO 213 PERSONS AT OSA RATE
 OF 15 CFM PER PERSON.

SUMMARY OF AIR HANDLER UNITS (AHU)													
ZONE	MARK	MANUFACTURER	MODEL NO.	SUPPLY AIR FLOW (CFM)	OUTSIDE AIR (CFM)	BLOWER MOTOR (HP)	TOTAL COOLING (MBTUH)	VOLTAGE	ELECTRIC DUCT HEAT	UNIT MCA	MOC	DIMENSIONS	WEIGHT
1	AHU-1	VTS	AVS020-R-MFCV	2,000	200	1.5	60	208/3	6.0 KW	34 A	35 A	87"X24-1/2"X23-3/8"	455 LBS.
2	AHU-2	VTS	AVS020-R-MFCV	2,000	200	1.5	60	208/3	6.0 KW	34 A	35 A	87"X24-1/2"X23-3/8"	455 LBS.
3	AHU-3	VTS	AVS020-R-MFCV	2,000	200	1.5	60	208/3	6.0 KW	34 A	35 A	87"X24-1/2"X23-3/8"	455 LBS.
4	AHU-4	VTS	AVS020-R-MFCV	2,000	200	1.5	60	208/3	6.0 KW	34 A	35 A	87"X24-1/2"X23-3/8"	455 LBS.

1. MAXIMUM OVER-CURRENT PROTECTION (MOC) SHALL SERVE AHU AND ELECTRIC DUCT HEAT WITH FUSES PROVIDED FOR AHU AND DUCT HEAT SIZED AS REQUIRED BY MANUFACTURER.
2. PROVIDE MERV 8 FILTERS FOR RETURN AIR. PROVIDE PRESSURE DIFFERENTIAL SENSORS FOR EACH AHU TO REPORT TO BUILDING MANAGEMENT SYSTEM.
3. BLOWERS SHALL OPERATE CONTINUOUSLY WHILE BUILDING IS IN USE AS PROGRAMMED IN BUILDING MANAGEMENT SYSTEM.
4. PROVIDE GALVANIZED STEEL UNIT ON PLYWOOD MEZZANINE DECKG ALONG WITH 304 STAINLESS STEEL INSULATED CONDENSATE DRIP PAN.
5. PROVIDE BELT DRIVE FANS WITH ADJUSTABLE SHEAVES FOR AIR BALANCING.
6. PROVIDE SENSORS IN EACH RETURN AIR DUCT UPSTREAM OF OUTSIDE AIR SUPPLY WITH CONTROLS BY BUILDING MANAGEMENT SYSTEM.
7. MAINTAIN CLEARANCES AROUND EACH UNIT FOR MAINTENANCE AND OPERATIONS.

SUMMARY OF DUCT REQUIREMENTS					
DUCT USE	MARK	VAPOR BARRIER	EXTERIOR INSULATION	INTERIOR LINING	PRESSURE RATING (INCHES SP)
SUPPLY	SA	YES	R-8	NO	PLUS 2 TO ZERO
RETURN	RA	YES	R-8	ONE-INCH THICK	NEGATIVE 2 TO ZERO
OUTSIDE	OSA	YES	R-8	NO	NEGATIVE 2 TO ZERO
EXHAUST	EXH	NO	NO	NO	PLUS 2 TO ZERO

DUCTS ON EXTERIOR OF BUILDING SHALL SHALL TWO SEPARATE WRAPS OF R-8 INSULATION WITH WATER -PROOF EXTERIOR DUCT COVERING.

SUMMARY OF AIR CONDITIONING CONDENSING UNITS (ACCU)										
MARK	PAIRS WITH	MANUFACTURER	MODEL NO.	EER	REFRIGERANT	VOLTAGE	MCA	MOC	UNIT WEIGHT	DIMENSIONS
ACCU-1	AHU-1 & 2	HITACHI	HVAHP144B32S	10.9	410A	208/3	58 A	70 A	723 LBS.	48" X30" X 30"
ACCU-2	AHU-3 & 4	HITACHI	HVAHP144B32S	10.9	410A	208/3	58 A	70 A	723 LBS.	48" X30" X 30"

NOTES

1. PROVIDE HAIL GUARDS AND NEOPRENE VIBRATION PADS FOR EACH ACCU
2. BOLT EACH ACCU TO CONCRETE SLAB AT SAME ELEVATION AS BUILDING FINISH FLOOR ELEVATION.
3. PROVIDE INSULATED REFRIGERANT LINES IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS. ROUTE REFRIGERANT LINES CONCEALED WITHIN WALLS AND ABOVE CEILINGS WHERE POSSIBLE.
4. MAINTAIN CLEARANCES AROUND EACH UNIT FOR MAINTENANCE AND OPERATIONS.
5. BUILDING MANAGEMENT SYSTEMS TO CONTROL ON AND OFF FOR CONDENSING SYSTEM/HEAT PUMP.
6. PROVIDE HITACHI DXF-096A1072 REFRIGERANT CONTROLLER FOR EACH AIR HANDLER UNIT.
7. PROVIDE SNOW HOOD FOR OUTSIDE UNIT.

SCHEDULE OF GRILLES									
MARK	MANUFACTURER	MODEL	USE	LOCATION	MAX CFM	NC	SIZE	DUCT SIZE	
A	TITUS	TMS-AA	SUPPLY	RCP CEILING	70		24X24	6" DIA	
B	TITUS	TMS-AA	SUPPLY	RCP CEILING	150		24X24	6" DIA	
C	TITUS	TMS-AA	SUPPLY	RCP CEILING	250	16	24X24	8" DIA	
D	TITUS	TMS-AA	SUPPLY	RCP CEILING	350	16	24X24	10" DIA	
E	TITUS	TMS-AA	SUPPLY	RCP CEILING	450	13	24X24	12" DIA	
G	TITUS	272-RS	SUPPLY	GYPBOARD CEILING	70		8 X 6	6" DIA	
H	TITUS	272-RS	SUPPLY	GYPBOARD CEILING	150		10 X 6	8" DIA	
J	TITUS	272-RS	SUPPLY	GYPBOARD CEILING	250	16	12 X 6	10" DIA	
K	TITUS	272-RS	SUPPLY	GYPBOARD CEILING	350	19	12 X 8	12" DIA	
L	TITUS	272-RS	SUPPLY	GYPBOARD WALL	70		8 X 6	6" DIA	
N	TITUS	272-RS	SUPPLY	GYPBOARD WALL	250	16	12 X 6	10" DIA	
P	TITUS	272-RS	SUPPLY	GYPBOARD WALL	350	19	12 X 8	12" DIA	
R	TITUS	PXP-AA	RETURN	RCP RETURN			24X24		
RR	TITUS	350RSF-SS	RETURN	WALL RETURN	3000	22	36" W X 24" H	36 X 24	

- NOTES
1. PROVIDE ADAPTERS AS REQUIRED FOR TRANSITIONING DUCTS TO GRILLES
 2. COORDINATE GRILLE COLORS WITH ARCHITECTS
 3. PROVIDE MANUAL DAMPERS ACCESSIBLE ON BRANCH DUCT TO CALIBRATE AIR FLOWS TO THOSE SHOWN ON THE PLANS.

SUMMARY OF UNITARY AIR CONDITIONING UNITS (AC)														
MARK	MANUFACTURER	MODEL NO.	GROSS COOLING CAPACITY	EER	GAS RE-HEAT CAPACITY	REFRIGERANT	BLOWER (HP)	SUPPLY AIR (CFM)	OUTSIDE MAX AIR (CFM)	ELECTRIC HEAT	AIR FLOW	POWER	MINIMUM CIRCUIT AMPACITY	HACR SIZE
AC-1	FRASER-JOHNSTON	48HCED17B2R08B3K16	142.6 MBTUH	12.0	YES	R-410A	3	4,000	2,400	18.0 KW	HORIZONTAL	208/3	66.1 A	70 A

NOTES

1. PROVIDE HAIL/VANDAL GUARDS FOR EACH UNIT.
2. BLOWERS SHALL OPERATE CONTINUOUSLY WHILE BUILDING IS IN USE WITH DIRECTION FROM BUILDING MANAGEMENT SYSTEM.
3. MAINTAIN CLEARANCES AROUND EACH UNIT FOR MAINTENANCE AND OPERATIONS.
4. AIR CONDITIONING SYSTEMS, INCLUDING EXHAUST FANS, ARE OPERATED BY A BUILDING MANAGEMENT SYSTEM IN ACCORDANCE WITH IECC.
5. PROVIDE A TEMPERATURE/HUMIDISTAT IN THE RETURN AIR DUCT WITH CONTROLS LINKED TO BUILDING MANAGEMENT SYSTEM IN ACCORDANCE WITH IECC.
6. BOLT UNITARY SYSTEM TO CONCRETE SLAB TO RESIST 100 MPH WIND IN ACCORDANCE WITH BUILDING CODE.
7. PROVIDE GAS RE-HEAT CAPACITY OF 59.4 MBTUH WITH SENSIBLE CAPACITY OF 15.6 MBTUH
8. PROVIDE DRY BULB LOW LEAK ECONOMIZER WITH BAROMETRIC RELIEF AND HOODS WITH ECONOMIZER FAULT DETECTION AND DIAGNOSTICS.

SUMMARY OF EXHAUST FANS									
MARK	LOCATION	TYPE	MANUFACTURER	MODEL NO.	Power	VOLTAGE	AIR FLOW	S.P.	NOTES
EF-1	KITCHEN	WALL	THERMOTEK	THS1F115DD	1.5 HP	208/3	2,435	0.25"	1, 2, 3, 4,
EF-2	KITCHEN	WALL	THERMOTEK	THS1F115SS	0.5 JP	120/1	600	0.25"	1, 2, 3, 4,
EF-3	JANITOR CLOSET	CEILING	PENN BARRY	ZEPHYR ZT	48 W	120/1	75	0.25"	1, 2, 3, 4,
EF-4	RESTROOM	INLINE	PENN BARRY	REX12V	1/6 HP	120/1	525	0.40"	1, 2, 3, 4,
EF-5	RESTROOM	INLINE	PENN BARRY	REX12V	1/6 HP	120/1	400	0.50"	1, 2, 3, 4,

- NOTES
1. SUPPORT EXHAUST FAN FROM BUILDING STRUCTURE (MINIMUM 2 JOISTS) VIA 1/4" ALL THREAD RODS.
 2. PROVIDE DUCT ADAPTERS TO CONNECT TO ROUND EXHAUST DUCT VIA FLEXIBLE CONNECTOR.
 3. CONTROL EXHAUST FAN VIA CONVENTIONAL WALL SWITCH. EXHAUST FANS SHALL HAVE INPUT ON-OFF TO BUILDING MANAGEMENT SYSTEM.
 4. PROVIDE GALVANIZED GRAVITY WALL SHUTTER, WALL SLEEVE WITH INSECT SCREEN, ADJUSTING FLOW DAMPER, & WALL CAP. PAINT TO MATCH ADJOINING SURFACES.

MECHANICAL SCHEDULES

**MIRACLE CITY
364 FOSTER DRIVE
CONROE, TEXAS 77301**

ENGINEERING BY:
QUEST ENGINEERING
 304 North Main Street #1
 Conroe, Texas 77301
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SECTION 15000 MECHANICAL SYSTEMS DESCRIPTIONS

A. PROJECT INCLUDES

1. Plumbing Systems and Specialties: Refer to individual specification sections following for detailed requirements.

- Domestic water service and distribution.
- Sanitary waste and vents.

2. Ventilation Systems: Refer to individual specification sections following for detailed requirements.

- Fans.
- Ducts.

3. HVAC Control Systems: Refer to individual specification sections following for detailed requirements.

- Electric control systems.

4. Design Conditions:

- Summer Outdoor Conditions: 100 degrees F dry bulb, ASHRAE 1 percentile; 78 degrees F wet bulb, ASHRAE 1 percentile.
- Winter Outdoor Conditions: 27 degrees F dry bulb, ASHRAE 99 percentile.
- Summer Indoor Conditions: 74 degrees plus or minus 5 degrees; 50 percent relative humidity plus or minus 5 percent.
- Winter Indoor Conditions: 72 degrees plus or minus 5 degrees; 50 percent relative humidity plus or minus 5 percent.

B. PRODUCTS

Systems, products, and standards are listed in individual specification sections which follow.

SECTION 15050 BASIC MECHANICAL MATERIALS

A. PROJECT INCLUDES

1. Basic mechanical materials including valves, pipe expansion joints, meters and gages, supports and anchors, motors, mechanical identification, and vibration control.

B. PRODUCTS

1. Pipe, Fittings, and Specialties: Refer to individual piping systems specifications for materials and installation requirements.

2. Valves: General duty valves cast iron, bronze, and brass, fabricated to comply with Manufacturers Standardization Society (MSS) classification listed. Gate, globe, ball, butterfly, and plug valves for shutoff duty, globe, ball, and plug valves for throttling duty.

- Gate Valves, 2-Inch and Smaller for Domestic Hot and Cold Water: MSS SP-80, Class 125 or 150 based on system pressure, cast bronze, threaded or solder ends based on service.
- Gate Valves, 2-Inch and Smaller for Heating Hot Water: MSS SP-80, Class 150, cast bronze, threaded or solder ends based on service.
- Gate Valves, 2-1/2-Inch and Larger: MSS SP-70, Class 125, iron body, flanged ends.
- Plug Valves, 2-Inch and Smaller: Rated at 150 psi WOG, bronze body, threaded ends.
- Plug Valves, 2-1/2-Inch and Larger: MSS SP-78, rated at 175 psi WOG, semi-steel body, flanged ends.
- Globe Valves, 2-Inch and Smaller: MSS SP-80, Class 125 or 150 based on system pressure, cast bronze, threaded or solder ends based on service.
- Globe Valves, 2-1/2-Inch and Larger: MSS SP-85, Class 125, iron body, flanged ends.
- Butterfly Valves: 2-1/2-Inch and Larger: MSS SP-67, rated at 200 psi, cast iron body, flat replaceable sleeve, stainless steel stem, lug or wafer type based on service.
- Swing Check Valves, 2-Inch and Smaller: MSS SP-80, Class 125 or 150 based on system pressure, cast-iron body and cap, threaded or solder ends based on service.
- Swing Check Valves, 2-1/2-Inch and Larger: MSS SP-71, Class 125 (Class 175 FM for fire protection piping systems), cast iron body and cap, flanged ends.
- Wafer Check Valves: Class 250, cast-iron body, to open with one foot differential pressure.
- Lift Check Valves, 2-Inch and Smaller: Class 125, cast-bronze body and cap, threaded ends.

3. Expansion Joints for Piping Systems: Joints shall provide 200 percent absorption capacity of piping expansion between anchors.

- Packless expansion joints.
- Slip joints.
- Flexible ball pipe joints.
- Mechanical grooved fittings.
- Fabricated expansion loops.

4. Meters and Gages: Temperature and indicator ranges for services required. Accuracy of thermometers plus or minus 1 percent.

- Mercury-In-Glass Thermometers: Die-cast, aluminum finished, glass front, mercury filled tube with magnifying lens.
- Direct-Mount Filled-System Dial Thermometers: Vapor actuated, universal angle, drawn steel or cast aluminum case with glass lens.
- Bimetal Dial Thermometers: Direct mounted, bimetal, universal angle type with stainless steel case, glass lens.
- Dial-Type Insertion Thermometers: Bimetal, stainless steel case and stem.
- Thermometer Wells: Brass or stainless steel, pressure rated to match piping system design pressure.
- Pressure Gages: General use, ASME B40.1, Grade A, phosphor bronze bourdon-tube type, drawn steel or brass case, glass lens.
- Pressure Gage Accessories: Brass tubing straight coil syphon; brass snubber with disc suitable for fluid served and rated pressure.
- Window-Type Flow Meters: Designed for installation on hydronic piping, measure flow directly in gpm, bronze body and impact tube, integral self-closing valve with indicator valve, plus or minus 5 percent accuracy.

5. Supports and Anchors: Hangers and Support Components: MSS SP-58, pipe and equipment hangers and supports including clamps, hanger-rod attachments, saddles and shields, spring hangers, pipe alignment guides, and anchors.

6. Motors: NEMA MG 1 motors with phase, frequency rating, voltage rating, and capacity suitable for use.

7. Mechanical Identification: ASME A13.1 as applicable, color coded, of the following types: Standard stencils, snap-on plastic pipe markers, pressure-sensitive pipe markers, plastic duct markers, plastic tape, valve tags, valve tag fasteners, access panel markers, valve schedule markers, engraved plastic laminate signs, plastic equipment markers, plasticized tags suitable for use.

8. Vibration Control: Fiberglass pads and shapes, neoprene pads, vibration isolation springs, pad-type isolators, plate-type isolators, double-plate-type isolators, threaded double-plate-type isolators, all-directional anchors, neoprene mountings, free standing spring isolators, housed spring isolators, vertically-restrained spring isolators, earthquake-resistant spring isolators, seismic snubbers, thrust restrainers, equipment rails, fabricated equipment bases, inertia base frames, roof-curt isolators, isolation hangers, riser isolators, flexible pipe connectors suitable for use.

SECTION 15250 MECHANICAL INSULATION

A. PROJECT INCLUDES

1. Pipe insulation, equipment insulation, and external duct and plenum insulation.

B. PRODUCTS

1. Mechanical Insulation Types:

- Pipe Insulation:
 - Glass fiber Cellular glass Flexible elastomeric cellular type with a conductivity not exceeding 0.27 Btu per inch per hour square feet degree Fahrenheit. Provide minimum one-inch thickness for hot water

and refrigerant piping of 1.5 inch diameter or less. Provide 1.5 inch thickness for refrigerant piping and two-inch thickness for hot water piping for pipes larger than 1.5 inches.

- Phenolic Foam (closed cell) meeting ASTM D2867 having a conductivity not exceeding 0.17 Btu per inch per hour square feet degree Fahrenheit. Provide minimum 0.75 inch thickness for water and refrigerant lines of 1.5 inch diameter or less and 1.00 insulation for pipes larger than 1.5 inches diameter.
- Equipment Insulation: Glass fiber Cellular glass Flexible elastomeric cellular type (1" thick).
- Duct and Plenum Insulation: Glass fiber type. Type II. Provide a minimum of R-5 insulation (1.5 inches thick) when located in unconditioned space and a minimum of R-8 insulation (2.0 inches thick) when located outside the Building Envelope. Phenolic Foam (closed cell) meeting ASTM C-1126, Grade 1 with a conductivity not exceeding 0.13 Btu per inch per hour square feet degree Fahrenheit. Provide a minimum of R-5 insulation (0.75 inches thick) when located in unconditioned space and a minimum of R-8 insulation (1.0 inches thick) when located outside the Building Envelope.

2. Mechanical Insulation Materials:

- Glass Fiber Insulation: Inorganic glass fibers bonded with thermosetting resin; board type, ASTM C 612, Class 2, semi-rigid jacketed board; blanket type, ASTM C 553, Type II, Class F-1, jacketed flexible blankets; preformed pipe insulation, ASTM C 547, Class 1, rigid pipe insulation, jacketed with vapor barrier.
 - Cellular Glass Insulation: Inorganic, foamed or cellulated glass, annealed, rigid, hermetically sealed cells, incombustible, ASTM C 921, Type I facing; blocks, ASTM C 552, Type I; boards, ASTM C 552, Type IV, preformed pipe, ASTM C 552, Type II, Class 2 (jacketed); special shapes, ASTM C 552, Type III.
 - Flexible Elastomeric Cellular Insulation: Flexible expanded closed-cell structure with smooth skin on both sides; tubular materials, ASTM C 534, Type I; sheet materials, ASTM C 534, Type II.
 - Phenolic Foam (closed cell) meeting ASTM D 2856 with temperature limits from 40°F to 212°F. Flame spread shall be less than 25 and smoke development less than 50 per ASTM E84.
 - Fire Performance: Type suitable for service.
- Vapor Barrier: All insulation on chilled water, brine, and refrigerant line and air conditioning duct insulation incorporate a fully sealed ASJ vapor barrier. Insulation Accessories: Insulating cements, adhesives, jackets, glass cloth and tape, bands, wire, and sealing compounds suitable for service and exposure. Load bearing inserts provided at all piping and duct supports within insulation. Standards - HVAC equipment insulation to meet NAIMA standards and International Energy Code.

SECTION 15850 AIR HANDLING

A. PROJECT INCLUDES

1. Fans, ventilators, air handling units, and air filters for building mechanical systems.

B. PRODUCTS

- Centrifugal Fans:
 - Centrifugal Fans for Indoor Installations: Belt-driven with housing, wheel, fan shaft, bearings, motor and disconnect switch, drive assembly, support structure.
 - Tubular Centrifugal Fans: Tubular inline, belt driven with housing, wheel, outlet guide vanes, fan shaft, bearings, drive assembly, motor, mounting brackets, accessories.
 - Inline Centrifugal Fans: Inline, belt driven with housing, wheel, outlet guide vanes, fan shaft, bearings, drive assembly, motor and disconnect switch, mounting brackets, accessories.
- Axial Fans:
 - Propeller Axial Fans: Belt-driven or direct-drive propeller fan with fan blades, hub, housing, orifice ring, motor, drive, accessories.
 - Vaneaxial Axial Fans: Belt-driven or direct drive, variable pitch or adjustable pitch, vaneaxial fan with fan wheel and housing, straightening vane section, factory-mounted motor, inlet cone section, accessories.
- Central Station Air-Handling Units:
 - Constant-Volume, Central-Station-Air Handling Units for Indoor Installations: ARI 430, NFPA 90A; blow-through type.
 - Components: Motors, coils, dampers, filters
 - Air Filters:
 - Air Filters: ASHRAE 52, ARI 850, NFPA 90A, 90B.
 - Replaceable (Throwaway) Panel Filters: Flat panels, interlaced glass fiber media, cardboard frame, 20 gage galvanized steel duct holding frame.
 - Front and Rear Access Filter Frames: Aluminum framing members, prefilters, sealers.
 - Disc Service Housings: 16 gage galvanized steel side-service housings, prefilters, access doors, sealers.

SECTION 15890 AIR DISTRIBUTION

A. PROJECT INCLUDES

1. Air distributions systems including ductwork, duct systems, HVAC casings, duct accessories, air outlets and inlets, and air terminals.

B. QUALITY ASSURANCE

1. Compliance: NFPA 90A, 96 and International Energy Code.

C. PRODUCTS

- Metal Ductwork:
 - Types: Rectangular, round, and flat-oval metal ducts and plenums for HVAC systems in pressure classes from Minus 2 inches to plus 10 inches water gage.
 - Galvanized Sheet Steel: Lock-forming quality, ASTM A 527 G90.
 - PVC-Coated Galvanized Steel: UL 181 Class 1, lock-forming quality, ASTM A 527 G90.
 - Carbon Steel Sheets: ASTM A 366, cold-rolled sheets.
 - Stainless Steel: ASTM A 480, Type 316, with No. 4 finish if exposed, No. 1 finish for concealed ducts.
- Aluminum Sheets: ASTM B 209, Alloy 3003-H14, sheet form, bright finish if exposed, mill finish for concealed ducts.
- Duct Liner: NFPA 90A, TIMA AHC-101, ASTM C 1071, Type II with coated surface to prevent erosion of fibers thickness to meet NAIMA standards and International Energy Code.
- Sealing Materials: Joint and seam sealants, tapes and mastics.
- Firestopping: Fire-resistant sealant.
- Hangers and Supports: Concrete inserts, powder actuated fasteners, structural steel fasteners suitable for use; galvanized sheet steel hangers; duct attachments; trapeze and riser supports.
- Fabrication: SMACNA HVAC Duct construction Standards.
- Fibrous Glass Duct Systems:
 - Types: Round fibrous glass ducts for HVAC systems in pressure classes from minus 2 inches to plus 2 inches water gage.
 - Fibrous Glass Ducts Materials: Fiberglass bonded with thermosetting resin; fire-resistant reinforced foil-scrim-kraft barrier facing; air side erosion prevention surface. Meet NAIMA standards and International Energy Code.
 - Reinforcement: Channel and tie rod reinforcement.
 - Closure: Tape and glass fabric.
- Supports and Hangers: Concrete inserts, powder-actuated fasteners, structural steel fasteners suitable for use; galvanized sheet steel, hanger wire, and channel hanger materials.

3. HVAC Casings:

- Types: Field-erected sheet metal casings used as equipment enclosures and plenums.
- Low Pressure Casings: Aluminum.
- High Pressure Casings: Aluminum.

- Plenum Equipment Casings: Double-wall insulated, pressurized type, galvanized steel exterior shell, solid or perforated galvanized steel interior shell.
- Duct Liner: ASTM C 1071, Type II, with liner adhesive, mechanical fasteners, duct sealant, duct cement with thickness to meet International Energy Code.
- Duct Accessories:
 - Backdraft Dampers: Extruded aluminum frame, blades, blade seals, and axdes.

b. Manual Volume Control Dampers: Extruded aluminum standard volume, low-leakage volume, and high-performance volume control dampers; galvanized steel jackshaft; damper control hardware

- Fire Dampers: UL 555 with galvanized steel frame, mounting sleeve, blades, horizontal dampers, fusible link.
- Ceiling Fire Dampers: UL listed and labeled galvanized steel frame, volume control adjustment; replaceable fusible link.
- Smoke Dampers: UL 555 and UL 555S, galvanized steel frame, blades and mounting sleeve, replaceable fusible link.

f. Actuators: Damper motors for smooth modulating or 2-position action.

g. Duct Silencers: Factory-fabricated rectangular and round units; acoustic fill.

h. Turning Vanes: Manufactured and acoustic turning vanes.

i. Duct-Mounted Access Doors and Panels: j. Flexible Connectors: UL 161, Class 1, flame-retardant or noncombustible fabrics.

k. Flexible Ducts: UL 181, Class 1, uninsulated and insulated types.

l. Accessory Hardware: Instrument test holes, splitter damper accessories, flexible duct clamps, adhesives.

5. Air Outlets and Inlets:

- Ceiling Air Diffusers: Diffuser faces, mountings, patterns, dampers, accessories, and finishes suitable for service, use, and location.
- Wall Registers and Grilles: Materials, faces, patterns, dampers, accessories, and finishes suitable for service, use, and location as selected.

SECTION 15970 HVAC CONTROL SYSTEMS

A. PROJECT INCLUDES

1. Electric temperature control systems used for building HVAC systems.

B. PRODUCTS

- Electric Control System Components:
 - Thermostats: Room thermostats, remote-bulb thermostats, fire protection thermostats, low-temperature protection thermostats.
 - Clocks: 7 day, 24 hour type with power backup.
 - Sensors: Electronic temperature and relative humidity sensors.
 - Controllers: Step controllers for control sequencing; electronic controllers; fan speed controllers; electric heat current controllers.
- Meet International Energy Code.

INSTALLATION

1. Drawing shows general location of thermostats. Coordinate with Architect and Owner as to exact locations to avoid conflicts with Owner-hung wall features.

SECTION 15990 TESTING, ADJUSTING, AND BALANCING

PART 1 GENERAL

1.1 DESCRIPTION

A. The Contractor shall furnish all labor, equipment and services necessary for and incidental to Air and Water Systems Testing and Balancing.

B. Include an extended warranty of one year after final acceptance by Owner, during which time the Owner may request a recheck, or resetting of any outlet, coil or device listed in the test report. Provide technicians to assist in making any test or adjustment required.

C. The Contractor shall procure the services of an independent testing and balancing agency, with previous consent of the Owner or the Owner's Representative. The Testing and Balancing Agency shall specialize in testing and balancing of heating, ventilating, air-moving equipment, air-conditioning system and hydronic systems. The Testing agency shall provide proof of having successfully completed at least five projects of similar size and scope, and shall be a certified member of the Associated Air Balance Council and/or National Environmental Balancing Bureau and/or Testing Adjusting and Balancing Bureau (TABB), unless otherwise approved. The Mechanical Contractor shall award the test and balance contract to the selected agency as soon as possible after approval of the agency by the Owner or the Owner's Representative.

D. Testing and Balancing shall not begin until the systems have been completed and are in full working order. Submit four (4) copies of data for the testing and balancing work for review by the Owner or Owner's representative.

1.2 REFERENCES

- AABC - National standards for Total System Balance.
- ADC - Test code for Grilles, Registers, and Diffusers.
- ASHRAE 111 - Practices for Measurement, Testing, Adjusting, and Balancing of Building Heating, Ventilation, Air-conditioning, and Refrigeration Systems.
- NEBB - Procedural Standards for Testing, Adjusting, and Balancing.
- SMACNA - HVAC Systems Testing, Adjusting, and Balancing.
- TABB - International Standards for Environmental Systems Balance

1.3 SUBMITALS

- Submit name of testing, adjusting and balancing agency for approval within 30 days after award of Contract.
- Field Reports: Indicate deficiencies in systems that would prevent proper testing, adjusting, and balancing of systems and equipment to achieve specified performance.
- Submit draft copies of report for review prior to final acceptance of Project. Provide final copies for Architect/Engineer and for inclusion in operating and maintenance manuals.
- Provide reports in soft cover, letter size, binder manuals, complete with index page and indexing tabs, with cover identification at front and side. Include set of reduced drawings with air outlets and equipment identified to correspond with data sheets, and indicating thermostat locations.

1.4 QUALITY INSURANCE

- Perform total system balance in accordance with AABC National Standards for Field Measurement and Instrumentation, Total System Balance or NEBB Standards - Procedural Standards for Testing, Adjusting, and Balancing of Environmental Systems or Testing Adjusting and Balancing Bureau (TABB)-National Standards for Environmental Systems Balance.
- Maintain one copy of applicable standards on site.

1.5 QUALIFICATIONS

A. Agency: Company specializing in the testing, adjusting, and balancing of systems specified in this Section with minimum three years experience.

PART 2 PRODUCTS

A. Replacement of adjustable pulleys, additional balancing dampers, additional fan belts, pressure taps and fitting, hydronic balancing valves and any other devices or equipment required to effect proper testing, adjusting and balancing shall be provided by the Contractor at no additional cost to the Owner.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that systems are complete and operable before commencing work. Ensure the following conditions:

- Systems are started and operating in a safe and normal condition.
- Temperature control systems are installed complete and operable.
- Proper thermal overload protection is in place for electrical equipment.
- Final filters are clean and in place. If required, install temporary media in addition to final filters.
- Duct systems are clean of debris.
- Fans are rotating correctly.
- Fine and volume dampers are in place and open.

- Air coil fins are cleaned and combed.
- Access doors are closed and duct end caps are in place.
- Air outlets are installed and connected.
- Duct system leakage is minimized.
- Hydronic systems are flushed, filled and vented.
- Pumps are rotating correctly.
- Proper strainer baskets are clean and in place.
- Service and balance valves are open.

B. Submit field reports. Report defects and deficiencies noted during performance of services, which prevent system balance.

C. Beginning of work means acceptance of existing conditions.

3.2 INSTALLATION TOLERANCES

A. Air Handling Systems: Adjust to within plus or minus 10 percent of design for supply systems and plus or minus 10 percent of design for return and exhaust systems.

B. Air Outlets and Inlets: Adjust total to within plus 10 percent and minus 10 percent of design to space. Adjust outlets and inlets in space to within plus or minus 10 percent of design.

C. Hydronic Systems: Adjust to within plus or minus 10 percent of design.

3.3 ADJUSTING - GENERAL

A. Ensure recorded data represents actual measured or observed conditions.

B. Permanently mark setting of valves, dampers, and other adjustment devices allowing setting to be restored. Set and lock memory stops.

C. After adjustment, take measurement to verify balance has not been disrupted or that such disruption has been rectified.

D. Leave systems in proper working order, replacing belt guards, closing access doors, closing doors to electrical switch boxes, and restoring thermostats to specified settings.

E. At final inspection, recheck random selections of data recorded in report. Recheck points or areas as selected and witnessed by the Owner.

F. Check and adjust systems approximately six months after final acceptance and submit report.

3.2 AIR SYSTEMS PROCEDURE

A. Test and adjust fan RPM to design requirements.

B. Test and record motor full load nameplate rating and actual ampere draw.

C. Test and record system static pressures, fan suction and discharge.

D. Adjust all main supply and return air duct to proper design CFM.

E. Test and adjust each diffuser, grille and register. Reading and tests of diffusers, grilles and registers shall include design velocity (FPM) and as adjusted velocity, design CFM and adjusted CFM.

F. Test and record outside, mixed air and discharge temperatures (D.B. for heating cycle, D.B. and W.B. for cooling cycle).

G. In coordination with the ATC contractor, set adjustments of automatically operated dampers to operate as specified, indicated and/or noted.

H. Test and adjust air handling and distribution systems to provide required or design supply, return, outside and exhaust air quantities.

I. Make air quantity measurements in ducts by Pitot tube traverse of entire cross sectional area of duct.

J. Measure air quantities at air inlets and outlets.

K. Adjust distribution system to obtain uniform space temperatures free from objectionable drafts and noise.

L. Use volume control devices to regulate air quantities only to extend that adjustments do not create objectionable air motion or sound levels. Effect volume control by duct internal devices such as dampers and splitters.

M. Vary total system air quantities by adjustment of fan speeds. Provide drive changes required. Vary branch air quantities by damper regulation.

N. Provide system schematic with required and actual air quantities recorded at each outlet or inlet.

O. Measure static air pressure conditions on air supply units, including filter and coil pressure drops, and total pressure across the fan. Make allowances for 50 percent loading of filters.

P. Adjust outside air automatic dampers, outside air, return air and exhaust dampers for design conditions.

Q. Measure temperature conditions across air, return air, and exhaust dampers to check leakage.

R. Where modulating dampers are provided, take measurement and balance at extreme conditions.

S. Measure and record pressure differentials between designated spaces such as Operating Rooms, Sterilizer Rooms, Medical Gas Tank Rooms, Red Bag Storage Rooms, etc.

3.3 WATER SYSTEM PROCEDURE

A. Prepare itemized equipment schedules, listing all heating and/or cooling elements and equipment in the systems to be balanced. List in order on equipment schedules, by pump or zone according to the design, all heating or cooling elements all zone balancing valves circuit pump and ending with the last items of equipment or transfer element in the respective zone or circuit. Include on the schedule sheet column titles listing the location, type of element or apparatus, design conditions and measured conditions. Prepare individual pump report sheets for each zone or circuit.

B. Adjust water systems to provide required or design quantities.

C. Use calibrated Venturi tubes, orifices, or other metered fitting and pressure gages to determine flow rates for system balance. Where flow-metering devices are not installed, bale flow balance in temperature difference across various heat transfer elements in the system.

D. Adjust systems to provide specified pressure drops and flows through heat transfer elements prior to thermal testing. Perform balancing by measurement of temperature differential in conjunction with air balancing.

E. Effect system balance with automatic control valves fully open to heat transfer elements.

F. Effect adjustment of water distribution systems by means of balancing cocks, valves, and fittings. Do not use service or shut-off valves for balancing unless indexed for balance point.

G. Test pumps and adjust flow. Record the following on pumps report sheets: (a) suction and discharge pressure, (b) running amps and brake horsepower of pump motor under full flow and no flow conditions, (c) pressure drop across pump in feet of water and total GMP pump is handling under full flow conditions.

H. Where available pump capacity is less than total flow requirements or individual system parts, full flow in one part may be stimulated by temporary restriction of flow to other parts.

3.4 REQUIRED REPORTS TO BE SUBMITTED

A. Report Forms

- Title Page
 - Name of Testing, Adjusting, and Balancing Agency
 - Address of Testing, Adjusting, and Balancing Agency
 - Telephone number of Testing, Adjusting, and Balancing Agency
- Project Name
- Project location
- Project Architect
- Project Engineer
- Project Contractor
- Project altitude
- Report date

2. Summary Comments:

- Design versus final performance
- Notable characteristics of system
- Description of systems operation sequence
- Summary of outdoor and exhaust flows to indicate of building pressurization
- Nomenclature used throughout report
- Test conditions

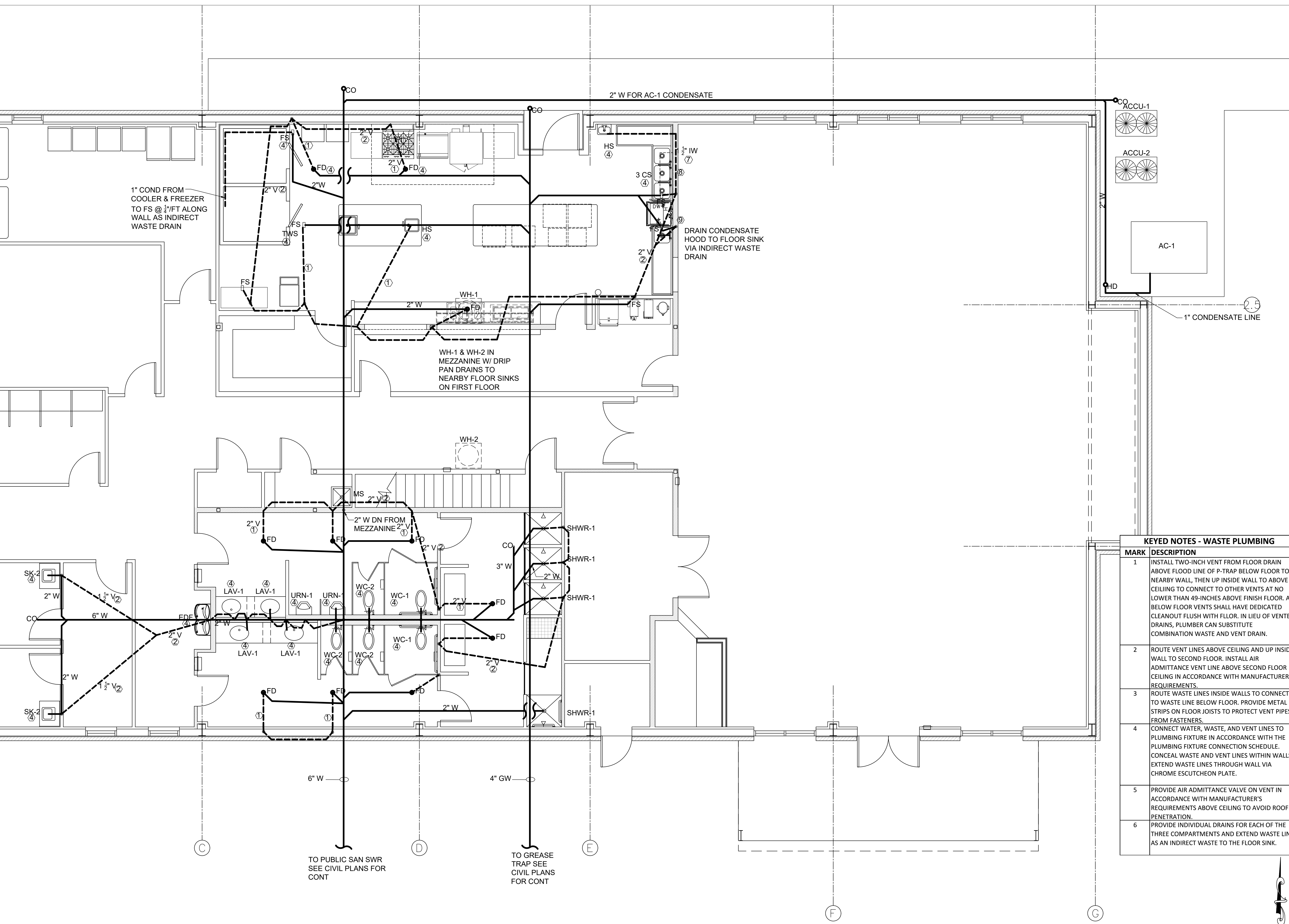
- Instrument List:
 - Instrument
 - Manufacturer
 - Model Number
 - Serial number
 - Range
 - Calibration date

- Electric Motors:
 - Manufacturer
 - Model/Frame
 - HP/BHP
 - Phase, voltage, amperage, nameplate, actual, no load
 - RPM
 - Service factor
 - Starter size, rating, heater elements
 - Sheave Make/Size/Bore

- V-Belt Drive:
 - Identification/location
 - Required driven RPM
 - Driven sheave, diameter and RPM
 - Belt, size and quantity
 - Motor sheave diameter and RPM
 - Center to center distance, maximum, minimum and actual

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WASTE PLUMBING PLAN
MIRACLE CITY DAY CENTER
364 FOSTER DRIVE
CONROE, TEXAS 77301



KEYED NOTES - WASTE PLUMBING	
MARK	DESCRIPTION
1	INSTALL TWO-INCH VENT FROM FLOOR DRAIN ABOVE FLOOD LINE OF P-TRAP BELOW FLOOR TO NEARBY WALL, THEN UP INSIDE WALL TO ABOVE CEILING TO CONNECT TO OTHER VENTS AT NO LOWER THAN 49-INCHES ABOVE FINISH FLOOR. ALL BELOW FLOOR VENTS SHALL HAVE DEDICATED CLEANOUT FLUSH WITH FLOOR. IN LIEU OF VENTED DRAINS, PLUMBER CAN SUBSTITUTE COMBINATION WASTE AND VENT DRAIN.
2	ROUTE VENT LINES ABOVE CEILING AND UP INSIDE WALL TO SECOND FLOOR. INSTALL AIR ADMITTANCE VENT LINE ABOVE SECOND FLOOR CEILING IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
3	ROUTE WASTE LINES INSIDE WALLS TO CONNECT TO WASTE LINE BELOW FLOOR. PROVIDE METAL STRIPS ON FLOOR JOISTS TO PROTECT VENT PIPES FROM FASTENERS.
4	CONNECT WATER, WASTE, AND VENT LINES TO PLUMBING FIXTURE IN ACCORDANCE WITH THE PLUMBING FIXTURE CONNECTION SCHEDULE. CONCEAL WASTE AND VENT LINES WITHIN WALLS. EXTEND WASTE LINES THROUGH WALL VIA CHROME ESCUTCHEON PLATE.
5	PROVIDE AIR ADMITTANCE VALVE ON VENT IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS ABOVE CEILING TO AVOID ROOF PENETRATION.
6	PROVIDE INDIVIDUAL DRAINS FOR EACH OF THE THREE COMPARTMENTS AND EXTEND WASTE LINE AS AN INDIRECT WASTE TO THE FLOOR SINK.

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 Conroe, Texas 77301
 Phone: (713) 252-3729
 rsaikowski@consolidated.net
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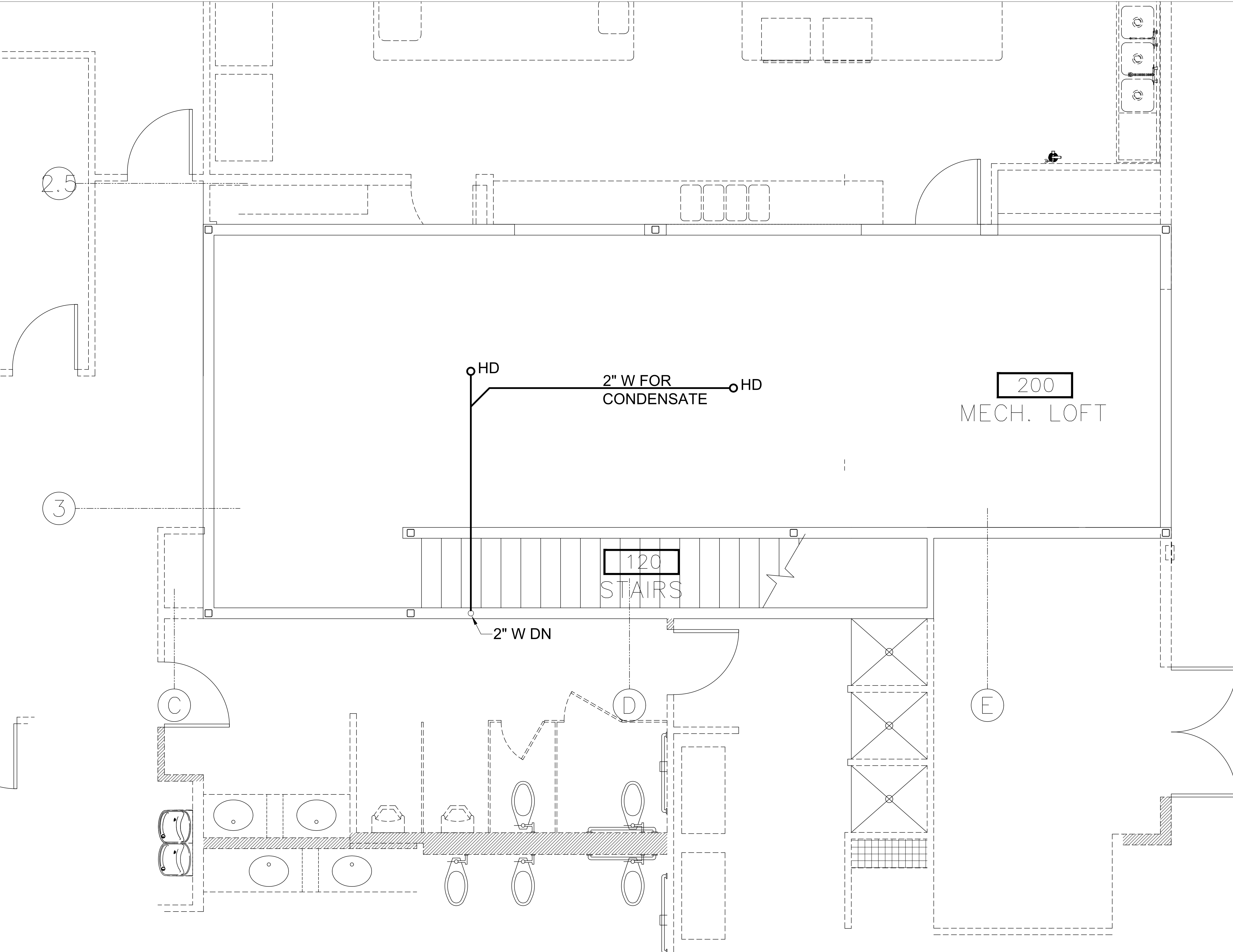
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WASTE PLUMBING PLAN LOFT

**MIRACLE CITY
364 FOSTER DRIVE
CONROE, TEXAS 77301**



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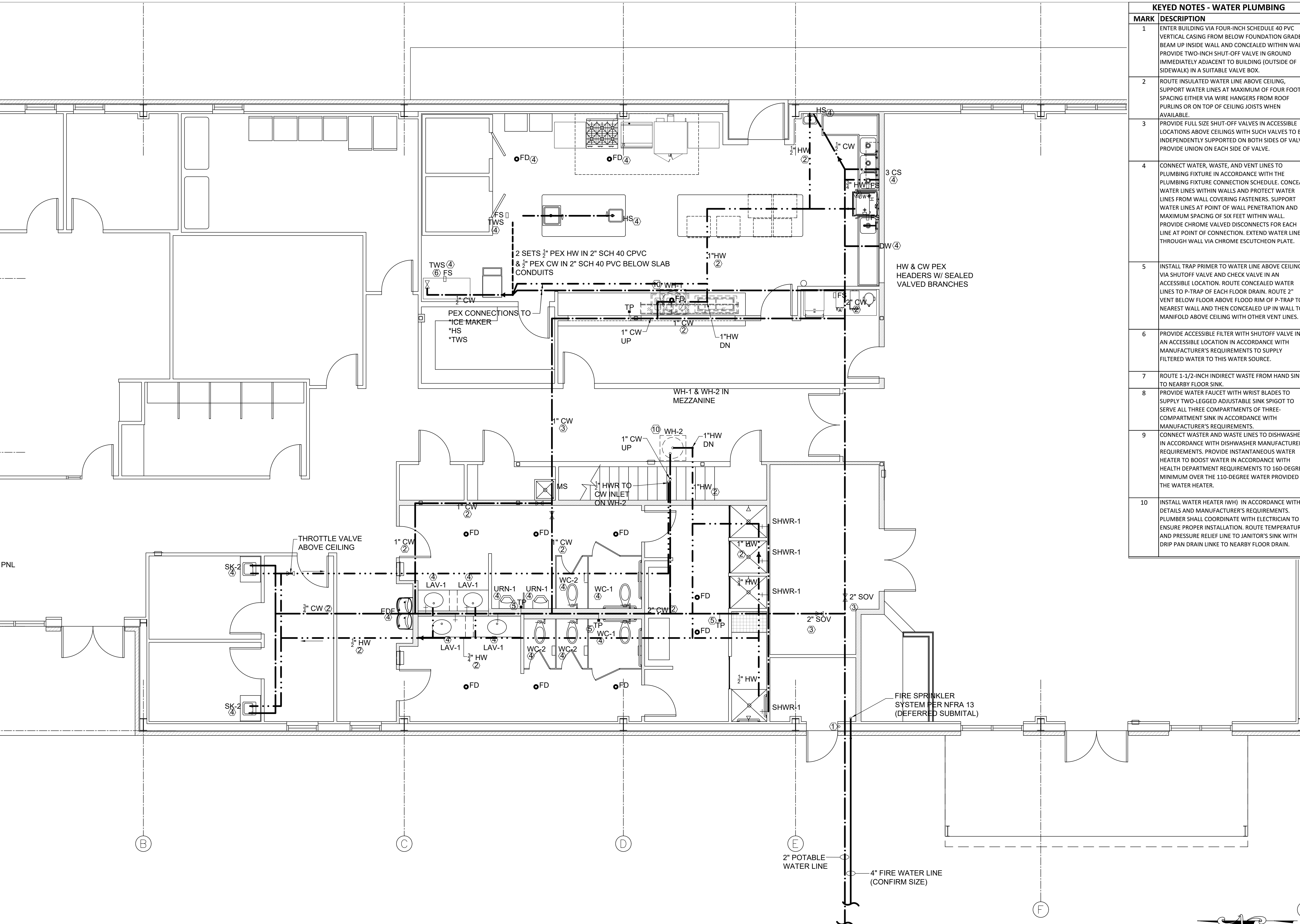
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SHEET NO.
P-1.2

KEYED NOTES - WATER PLUMBING			
MARK	DESCRIPTION	No.	Date
1	ENTER BUILDING VIA FOUR-INCH SCHEDULE 40 PVC VERTICAL CASING FROM BELOW FOUNDATION GRADE BEAM UP INSIDE WALL AND CONCEALED WITHIN WALL. PROVIDE TWO-INCH SHUT-OFF VALVE IN GROUND IMMEDIATELY ADJACENT TO BUILDING (OUTSIDE OF SIDEWALK) IN A SUITABLE VALVE BOX.	0	12/4/23
2	ROUTE INSULATED WATER LINE ABOVE CEILING, SUPPORT WATER LINES AT MAXIMUM OF FOUR FOOT SPACING EITHER VIA WIRE HANGERS FROM ROOF PURLINS OR ON TOP OF CEILING JOISTS WHEN AVAILABLE.		
3	PROVIDE FULL SIZE SHUT-OFF VALVES IN ACCESSIBLE LOCATIONS ABOVE CEILINGS WITH SUCH VALVES TO BE INDEPENDENTLY SUPPORTED ON BOTH SIDES OF VALVE. PROVIDE UNION ON EACH SIDE OF VALVE.		
4	CONNECT WATER, WASTE, AND VENT LINES TO PLUMBING FIXTURE IN ACCORDANCE WITH THE PLUMBING FIXTURE CONNECTION SCHEDULE. CONCEAL WATER LINES WITHIN WALLS AND PROTECT WATER LINES FROM WALL COVERING FASTENERS. SUPPORT WATER LINES AT POINT OF WALL PENETRATION AND MAXIMUM SPACING OF SIX FEET WITHIN WALL. PROVIDE CHROME VALVED DISCONNECTS FOR EACH LINE AT POINT OF CONNECTION. EXTEND WATER LINES THROUGH WALL VIA CHROME ESCUTCHEON PLATE.		
5	INSTALL TRAP PRIMER TO WATER LINE ABOVE CEILING VIA SHUTOFF VALVE AND CHECK VALVE IN AN ACCESSIBLE LOCATION. ROUTE CONCEALED WATER LINES TO P-TRAP OF EACH FLOOR DRAIN. ROUTE 2" VENT BELOW FLOOR ABOVE FLOOR RIM OF P-TRAP TO NEAREST WALL AND THEN CONCEALED UP IN WALL TO MANIFOLD ABOVE CEILING WITH OTHER VENT LINES.		
6	PROVIDE ACCESSIBLE FILTER WITH SHUTOFF VALVE IN AN ACCESSIBLE LOCATION IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS TO SUPPLY FILTERED WATER TO THIS WATER SOURCE.		
7	ROUTE 1-1/2-INCH INDIRECT WASTE FROM HAND SINK TO NEARBY FLOOR SINK.		
8	PROVIDE WATER FAUCET WITH WRIST BLADES TO SUPPLY TWO-LEGGED ADJUSTABLE SINK SPIGOT TO SERVE ALL THREE COMPARTMENTS OF THREE-COMPARTMENT SINK IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.		
9	CONNECT WASTER AND WASTE LINES TO DISHWASHER IN ACCORDANCE WITH DISHWASHER MANUFACTURER'S REQUIREMENTS. PROVIDE INSTANTANEOUS WATER HEATER TO BOOST WATER IN ACCORDANCE WITH HEALTH DEPARTMENT REQUIREMENTS TO 160-DEGREE MINIMUM OVER THE 110-DEGREE WATER PROVIDED BY THE WATER HEATER.		
10	INSTALL WATER HEATER (WH) IN ACCORDANCE WITH DETAILS AND MANUFACTURER'S REQUIREMENTS. PLUMBER SHALL COORDINATE WITH ELECTRICIAN TO ENSURE PROPER INSTALLATION. ROUTE TEMPERATURE AND PRESSURE RELIEF LINE TO JANITOR'S SINK WITH DRIP PAN DRAIN LINKE TO NEARBY FLOOR DRAIN.		

WATER PLUMBING PLAN
MIRACLE CITY DAY CENTER
364 FOSTER DRIVE
CONROE, TEXAS 77301



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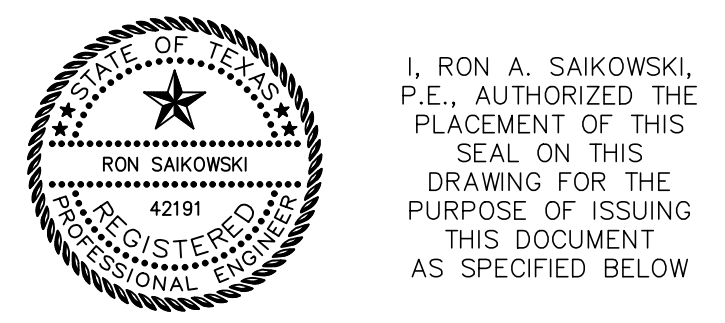
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NATURAL GAS PLAN
MIRACLE CITY DAY CENTER
364 FOSTER DRIVE
CONROE, TEXAS 77301

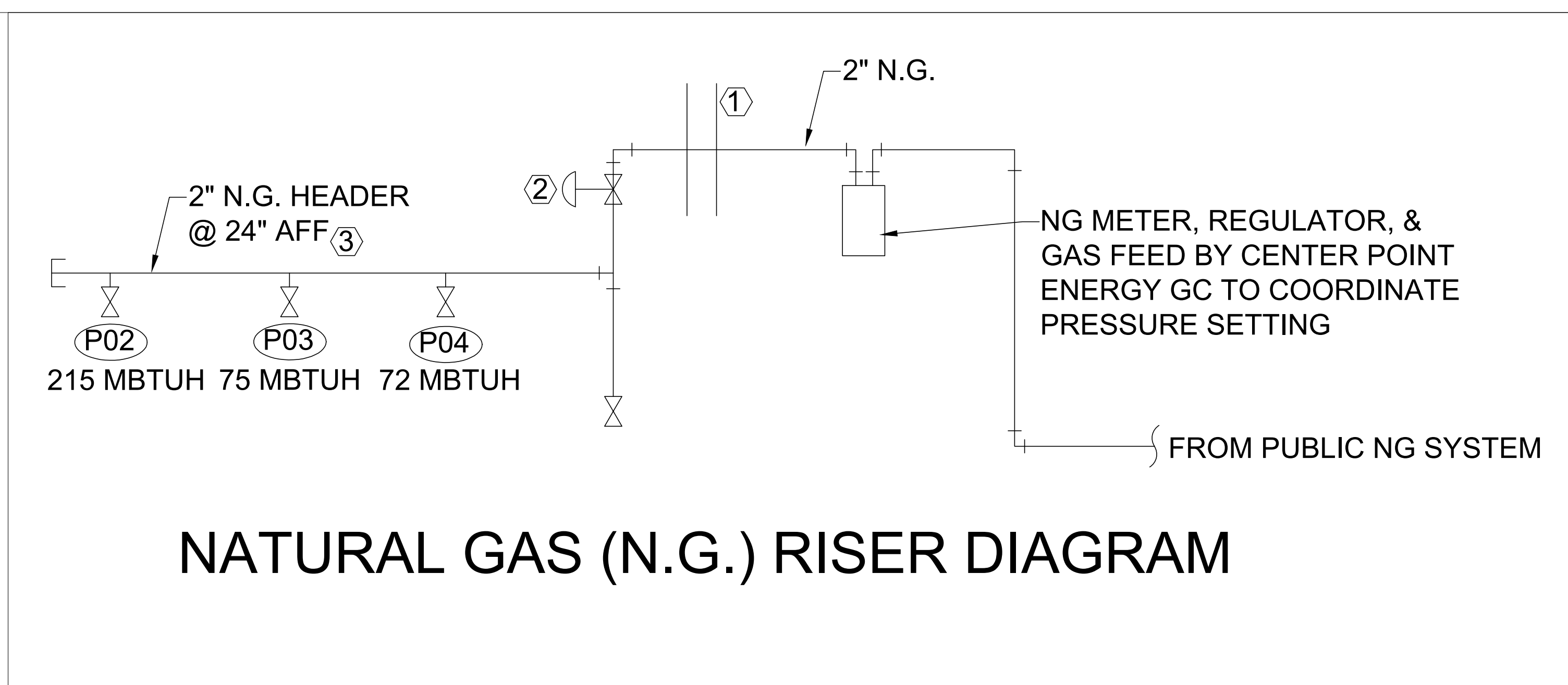
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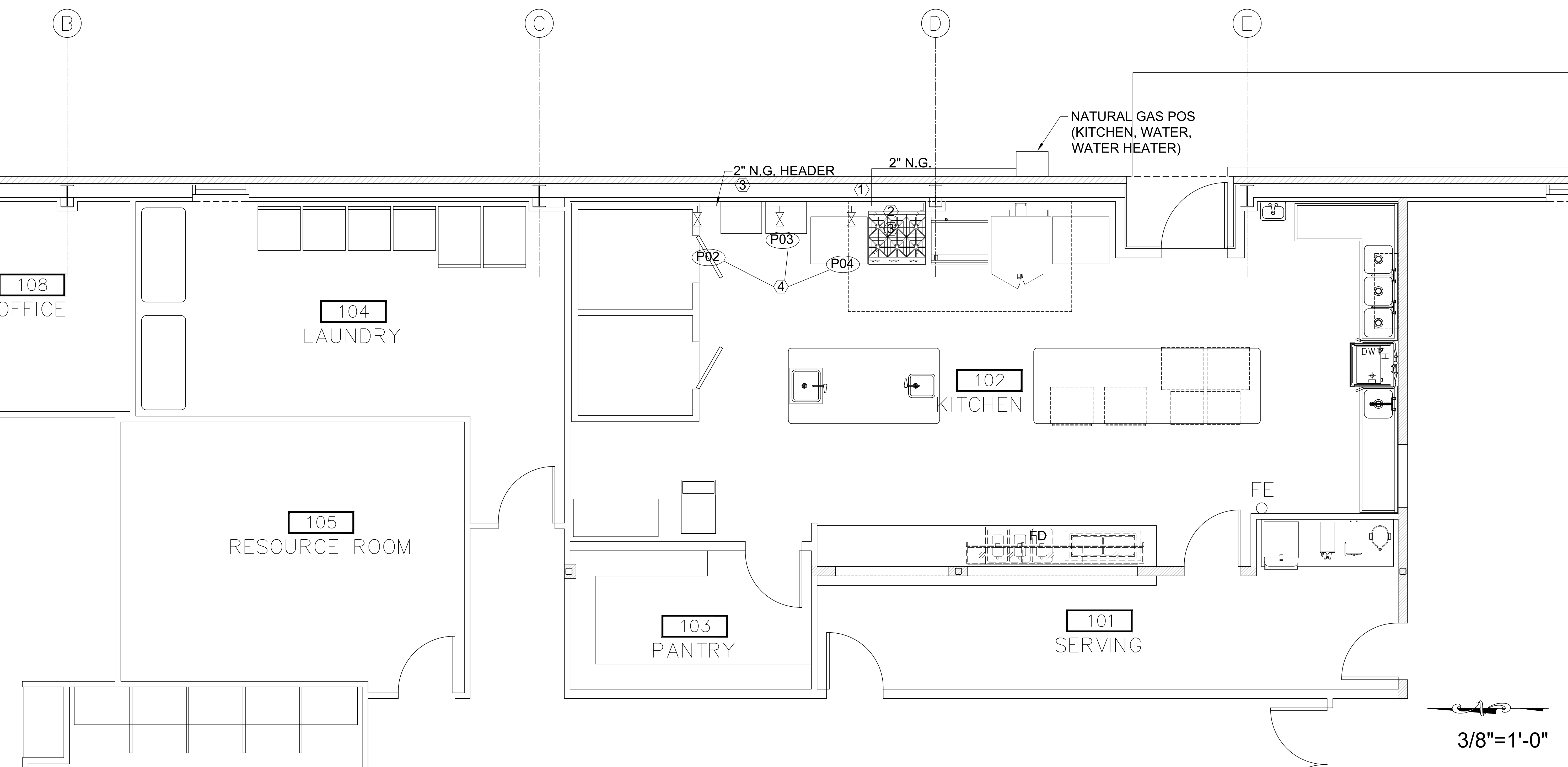
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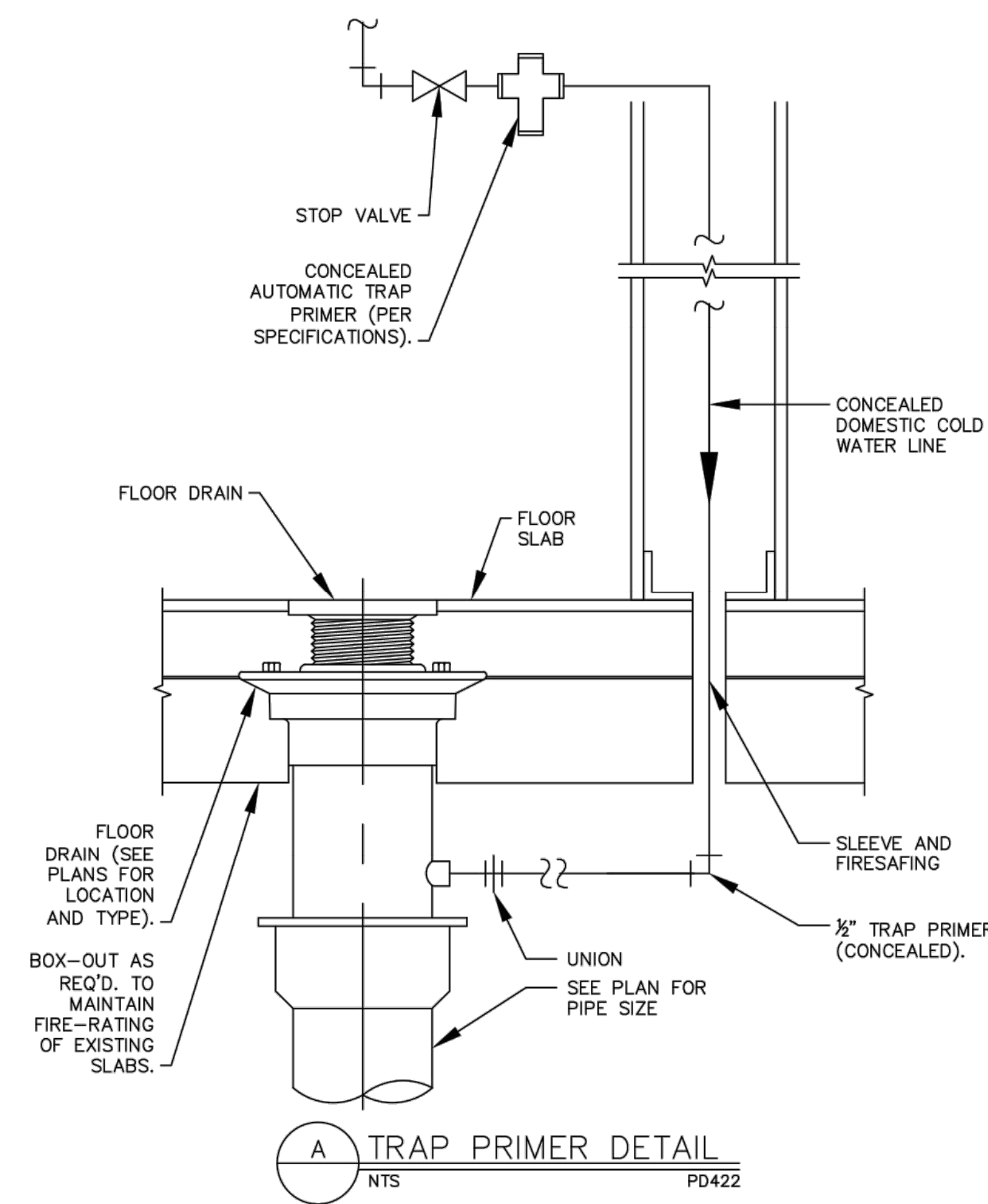
SUMMARY OF NATURAL GAS APPLIANCES			
MARK	ITEM	MBTUH	CONNECTION SIZE
P02	RANGE	215	3/4"
P03	GRIDDLE	75	3/4"
P04	CONVECTION OVEN	72	3/4"



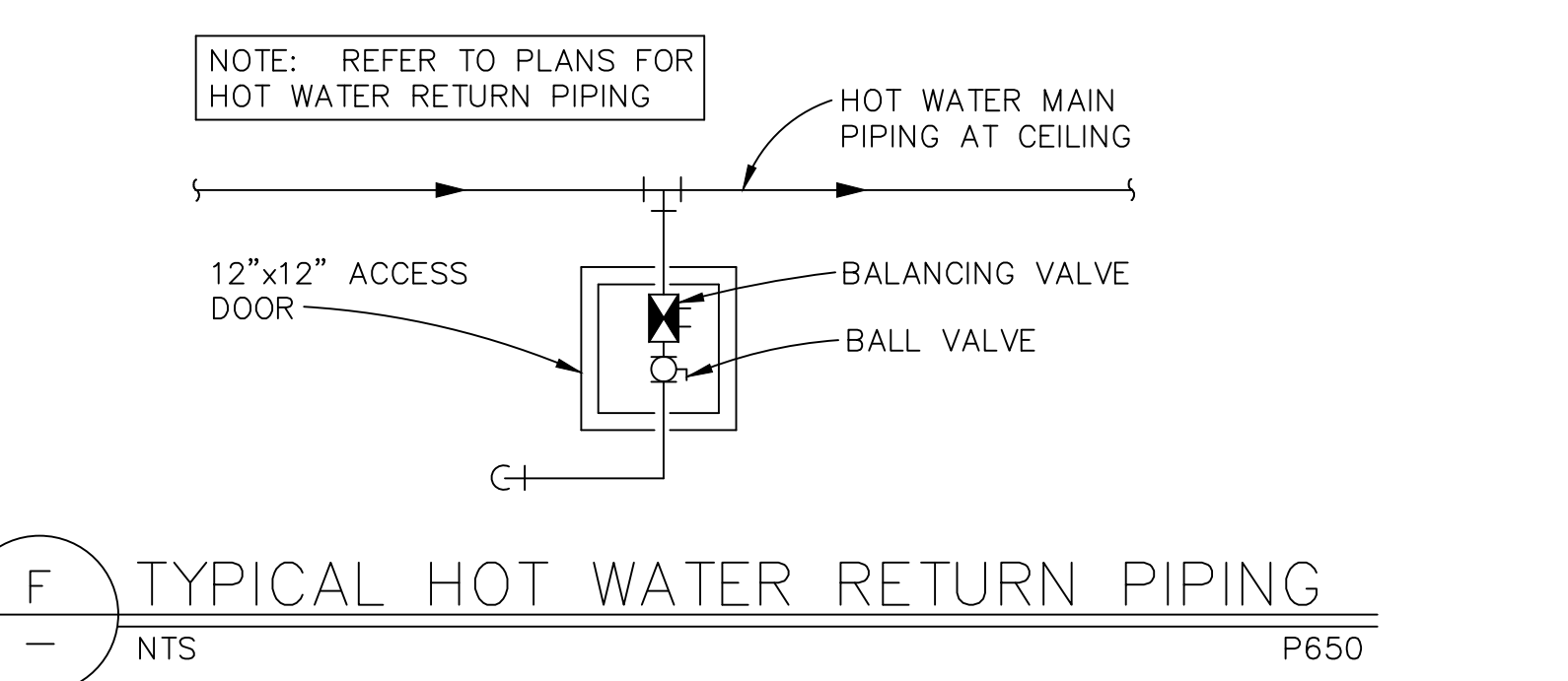
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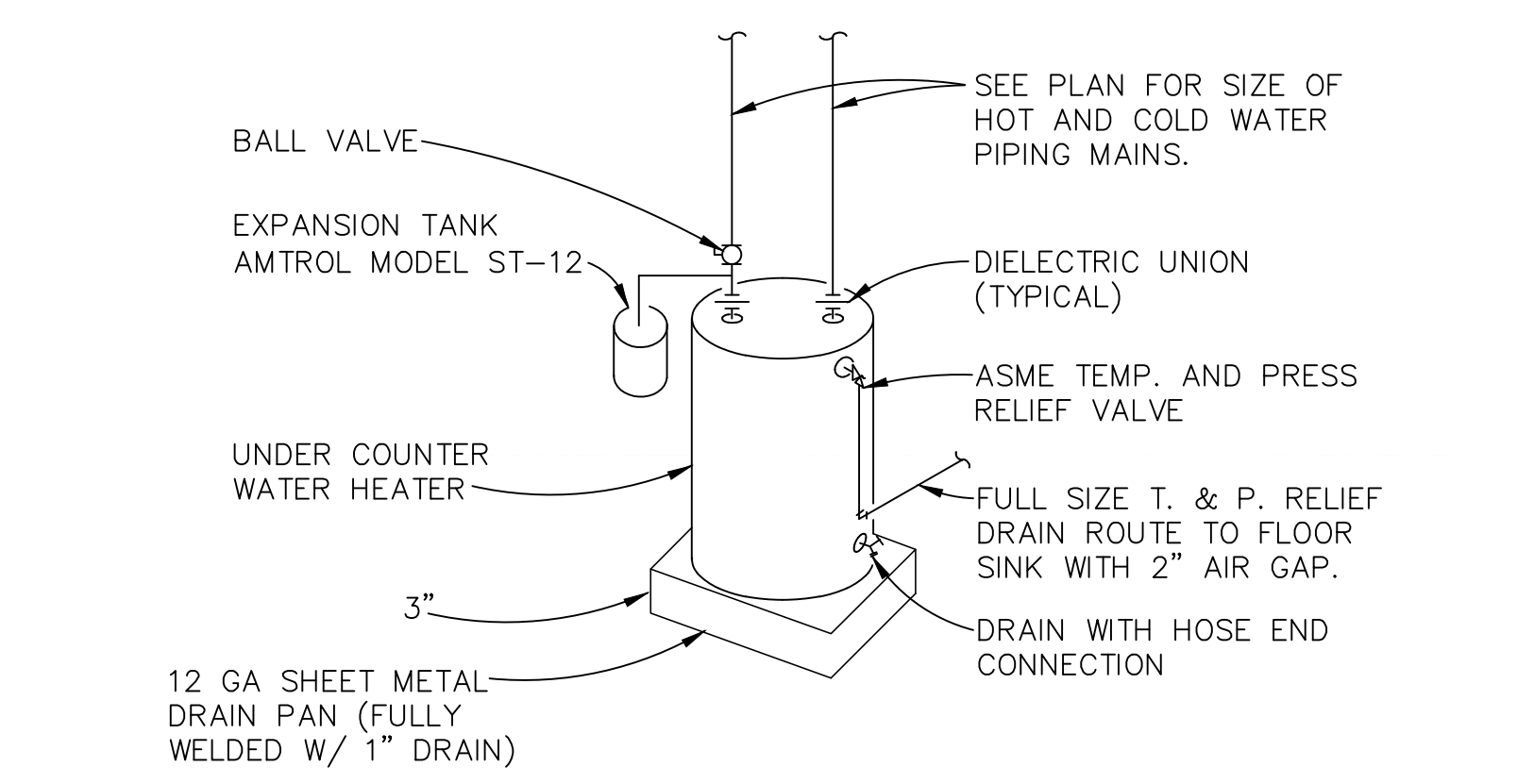
PLUMBING DETAILS
MIRACLE CITY DAY CENTER
364 FOSTER DRIVE
CONROE, TEXAS 77301



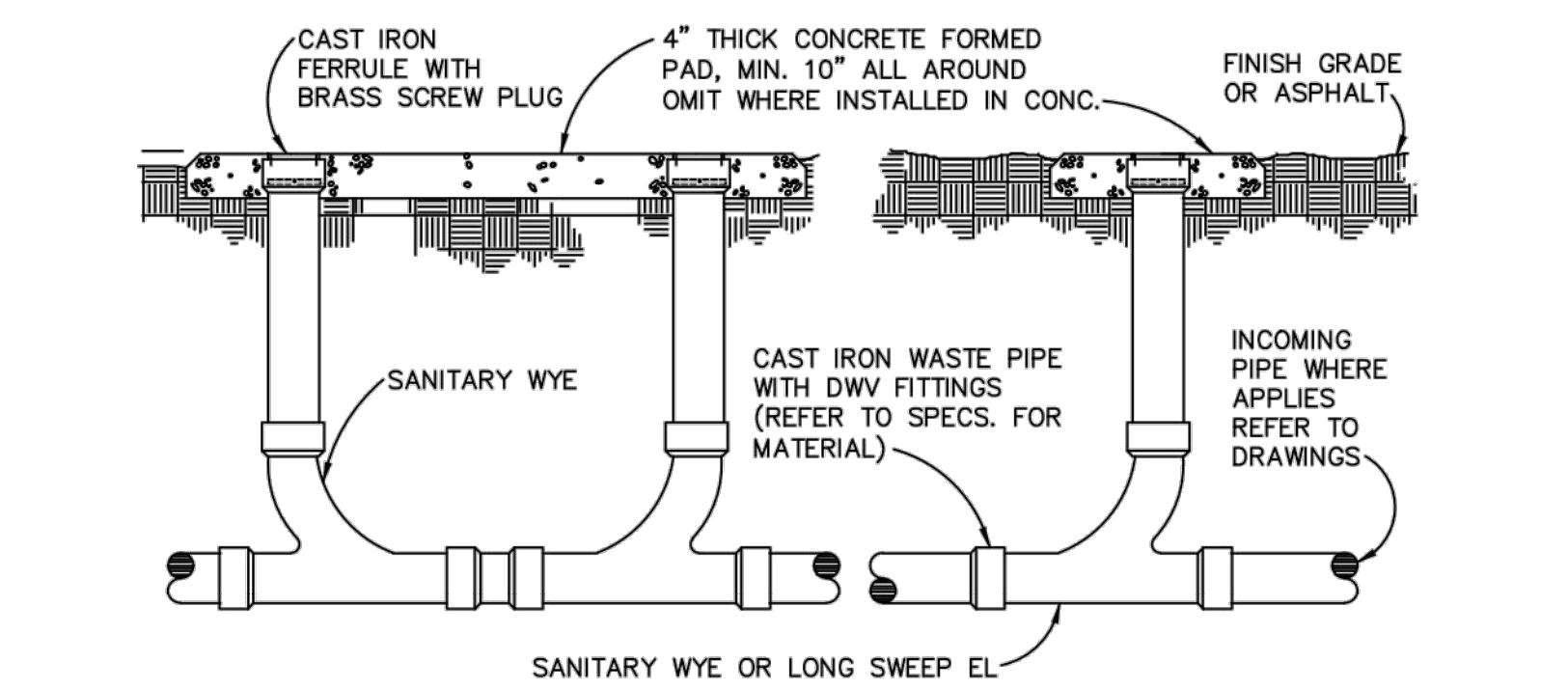
A TRAP PRIMER DETAIL
NTS PD422



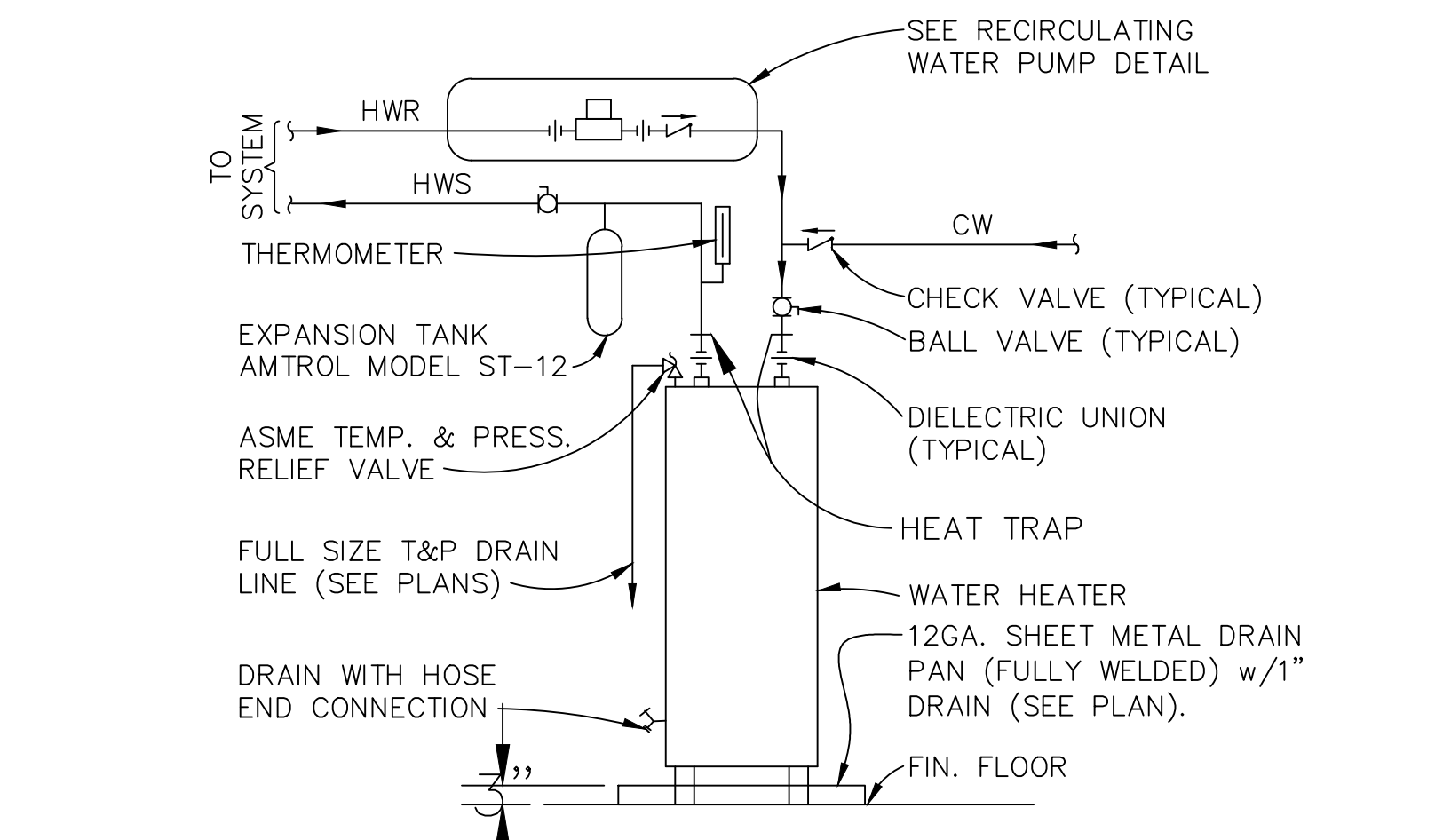
F TYPICAL HOT WATER RETURN PIPING
NTS P650



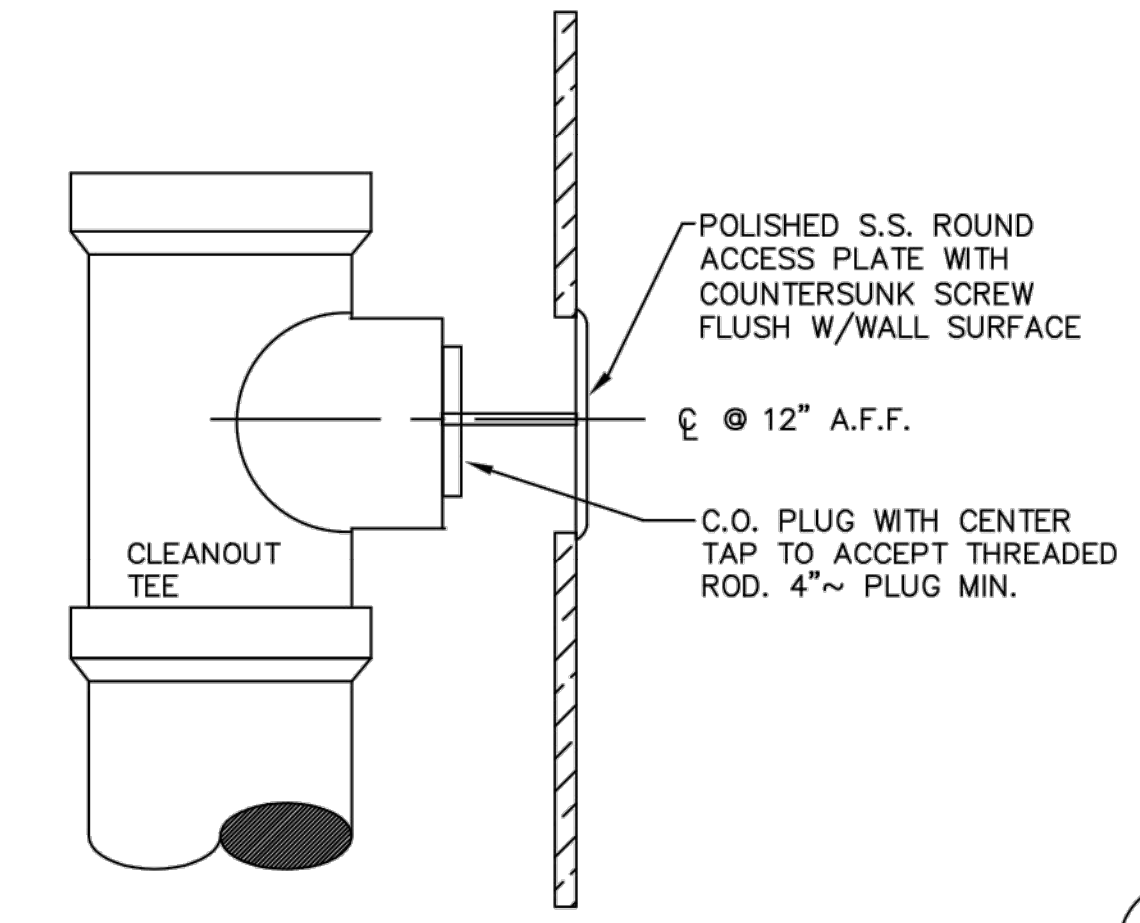
B UNDER COUNTER WATER HEATER DETAIL
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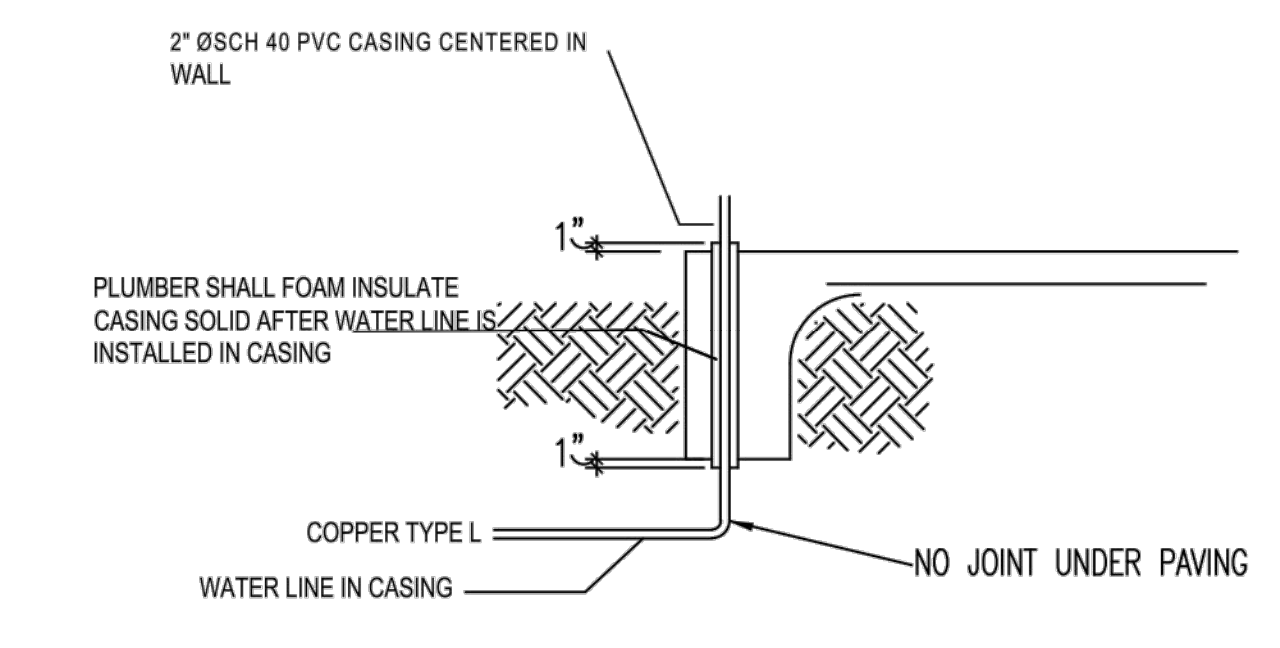
C SURFACE CLEANOUT DETAILS
NTS PD701



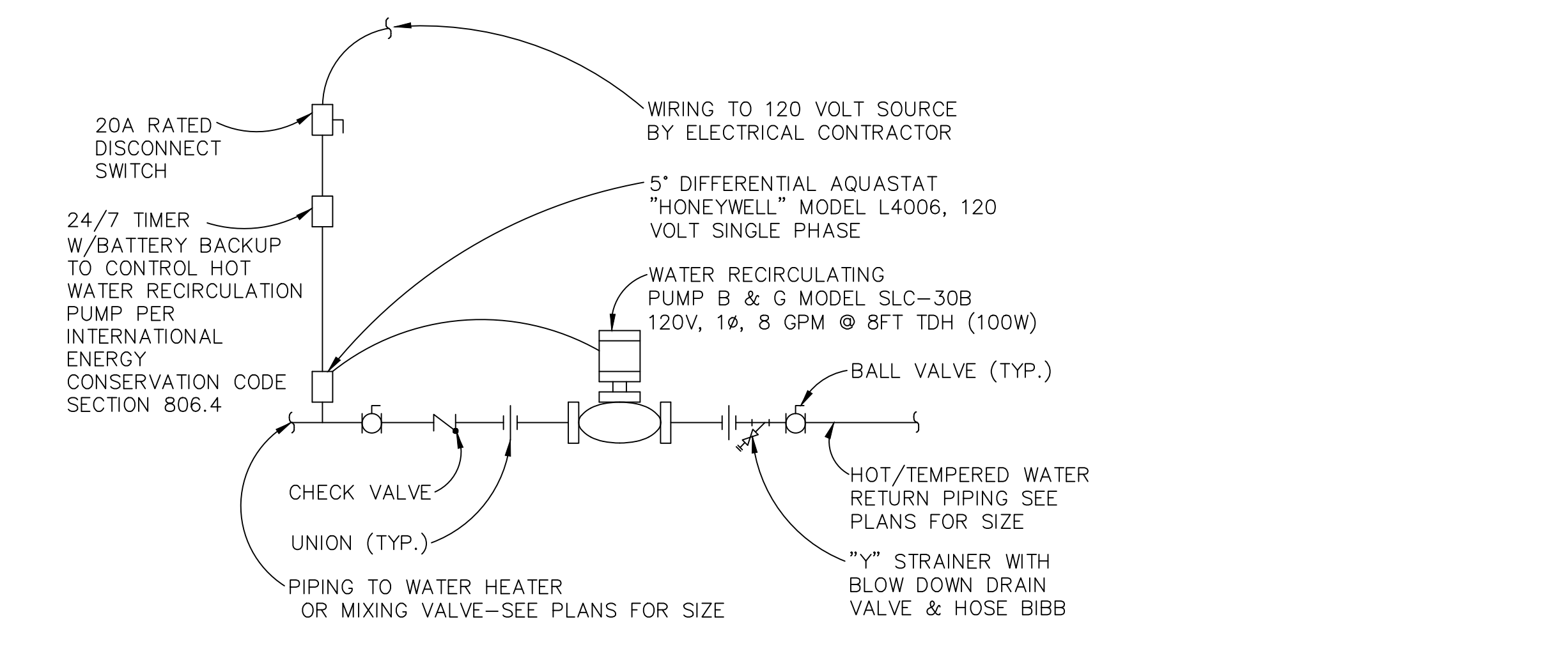
G ELECTRIC WATER HEATER DETAIL
NTS PD501



D WALL CLEANOUT DETAIL
NTS PD703



E WATER LINE ENTRY
NO SCALE



H RECIRCULATING PUMP DETAIL
NTS PD430

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 TEXAS REGISTRATION NO. FOR ENGINEERING FIRM IS F-10574

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FIXTURE CONNECTION SCHEDULE

Mark	Fixture	Trap Size	Waste	Vent	Cold Water	Hot Water*	Max. Flow	Remarks
LAV-1	Lavatory	1-1/4	2	1-1/2	1/2	1/2	0.5 GPM	Provide tempered wter
WC-1	Water Closet	Integral	4	2	1	--	1.6 GPF	Flush type
HB	Hose Bibb	--	--	--	1/2	--		Provide backflow preventer
SHWR	Shower	1-1/2	1-1/2	1-1/2	1/2	1/2	1.5 GPM	Provide tempered wter
KS-1	Kitchen Sink	1-1/2	1-1/2	1-1/2	1/2	1/2	1.5 GPM	Provide tempered wter
IMC-1	Ice Make Connection				1/2			
WMC-1	Washing Machine Connection	2	2	1-1/2	1/2	1/2		
FD	Floor Drain	2	2	2	1/2			Provide Trap Primer
MS	Mop Sink	2	2	1-1/2	3/4	3/4		Provide tempered water
DW	Dishwasher				1/2	1/2		Provide Indirect Waste to Floor Sink
SK-2	Clinic Sink	1-1/4	2	1-1/2	1/2	1/2	0.5 GPM	Provide tempered wter
3CS	Three Compartment Sink		2		1	1	3.0 GPM	Provide indirect Wase to FS
URN-1	Urinal	1-1/4	2	1-1/2	1			

* Hot Water shall be supplied at temperature not greater than 110 degrees F.

PLUMBING FIXTURE SCHEDULE

Mark	Description	Manufacturer	Model	Color
FCO	Interior Surface Cleanout	Sioux Chief	851-64iN	Brass
FD	Floor Drain with trap primer	Sioux Chief	VT 863-63BR	Brass
LAV-1	24" X 18" X 7-1/8" Dop-in Porclean Sink with front overflow	American Std. American Std. McGuire McGuire McGuire	0329.004. Sink 7075200 Faucet w/ wrist blades 1555A Strainer 8872 P-Trap 2165LK Supplies	White
CO	Exterior Surface Cleanout	Sioux Chief	851-64i	
WC-1	Water Closet with Sensor Activated automatic flush valve (f-1) and open seat (Handicapped)	American Std. American Std.	Madera 3461.528 elongated seat & cover 5905.100	White White
WC-2	Water Closet with Sensor Activated automatic flush valve (f-1) and open seat	American Std. American Std.	Madera 3461.528 elongated seat & cover 5905.100	White White
F-1	Battery-powered, Sensor -Activated Electronic Flush Valve (0.125 GPF)	American Std.	Selectronic 6063.013.002	Polished Chrome
URN-1	Wall-mounted Urinal with concealed wall brackets wand Type F-2 Flush Valve. Meet Tx Accessibility Standards for seat mounting height. See Architectural Drawings for details.	Kohler	K-5244-ER	White
3CS	3 Compartment Sink constructed of 16 Ga. Stainless steel with three compartments, no drainboards, 9" high backsplash with raised rolled edges with 16" wide x 20" front to back x 14" deep compartments with rounded corners with 3-1/2" drains with basket strainers, 1-5/8" glavanized legs with adjustable feet, 2" divider between tubs, faucets for hot and cold water with wrist blade handles, and rotary drain outlets.	Elkay	14-3c16x20-0x	Stainless Steel
WCO	Wall Cleanout with Smooth Stainless Steel Cover Plate	Zurn	Z-1441	Stainless Steel
HB	Hose Bibb	Zurn	Z1350	Chrome
SHWR	64' x 35" x 74.5" high ADA Roll-in Shower with ADAAG accessories including Grab Bars, folding Shower Seat, weighed Shower Curtain & Rod, slide bar with handheld shower nozzle & hose, pressure balance valve, and caulkless Drain.	Freedom	APF6037BF3P	White
TP	Trap Primer with Vacuum Breaker and Distributor As Needed	Sioux Chief	695-01	
WHA	Water Hammer Arrestor with 3/4" Shut-off Valve	Sioux Chief	653-B	
MS	Molded stone Mop Service Basin (24" x 24" x 12"), stainless steel caps on all curbs, faucet with pail hook with vacuum breaker and integral stops and 3/4-inch hose threads on spout, 3" cast iron drain, hose & mop bracket with mop, and stainless steel flashing from sink up to 6' aff and 12" beyond sink edges.	Fiat Moen	MSB-2424 Model 8230	
KS-1	Stainless Steel Double Compartment Sink (25" x 19" x 6-5/16") with Single Handle Kitchen Faucet	Elkay Mainline	Model D2519 11E-CP	Stainless Steel Chrome
WMC	Washing Machine Connection Box	Oatey	Quadtro	White
CO	Exterior Surface Cleanout	Sioux Chief	851-64i	
IMC	Ice Maker Connection (8-1/4" x 5-5/8" x 3-1/2" Galvanized Steel) with chrome shutoff valve	Guy Grey	88158	Galvanized Steel
SK-2	14" X 15" X 5-3/16" Stainless Steel Drop-in Sink with Goose Neck faucet with wing blade Handles and strainer with sink stopper	Dayton Elkay	D11515 LKD20888C	Stainless Steel Chrome

PLUMBING LINE SCHEDULE

Mark	Description	Material	Insulation (Meet Energy Code)	Remarks
CD	Condensate Drain Line	Sch. 40 PVC	1" Neoprene	Primary & Secondary
CW	Cold Water	Sch. 40 PVC	1" Neoprene	
V	Vent	Sch. 40 PVC	None	Use Rubber-tight Boot for roof penetration. Use Soils Pipe for last eight feet.
W	Domestic Waste	Sch. 40 PVC	None	
GW	Grease Waste	Sch. 40 PVC	None	
HW	Hot Water	Sch. 40 CPVC	1" Neoprene	Insulation per IECC

WATER HEATER SCHEDULE

Mark	Manufacturer	Model	KW	VOLTAGE	AMPS	Tank
WH-1	A. O. SMITH	DSE-65	12.3	208/3	34.2	65 Gallons
WH-2	A. O. SMITH	DSE-80	15.0	208/3	41.6	80 Gallons

NOTES

- Provide disconnect switch for water heater within 5'

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SECTION 15250 PLUMBING INSULATION

A. PROJECT INCLUDES

- 1. Pipe insulation and equipment insulation.

B. PRODUCTS

1. Mechanical Insulation Types:

a. Pipe Insulation:

- 1) Glass fiber Cellular glass Flexible elastomeric cellular type with a conductivity not exceeding 0.27 Btu per inch per hour square feet degree Fahrenheit. Provide minimum one-inch thickness for hot water and refrigerant piping of 1.5 inch diameter or less. Provide 1.5 inch thickness for refrigerant piping and two-inch thickness for hot water piping for pipes larger than 1.5 inches.
- 2) Phenolic Foam (closed cell) meeting ASTM D2967 having a conductivity not exceeding 0.17 Btu per inch per hour square feet degree Fahrenheit. Provide minimum 0.75 inch thickness for water and refrigerant lines of 1.5 inch diameter or less and 1.00 insulation for pipes larger than 1.5 inches diameter.

2. Plumbing Insulation Materials:

- a. Glass Fiber Insulation: Inorganic glass fibers bonded with thermosetting resin; board type, ASTM C 612, Class 2, semi-rigid jacketed board; blanket type, ASTM C 553, Type II, Class F-1, jacketed flexible blankets; preformed pipe insulation, ASTM C 547, Class 1, rigid pipe insulation, jacketed with vapor barrier.
 - b. Cellular Glass Insulation: Inorganic, foamed or cellulated glass, annealed, rigid, hermetically sealed cells, incombustible, ASTM C 921, Type I facing; blocks, ASTM C 552, Type I; boards, ASTM C 552, Type IV, preformed pipe, ASTM C 552, Type II, Class 2 (jacketed), special shapes, ASTM C 552, Type III.
 - c. Flexible Elastomeric Cellular Insulation: Flexible expanded closed-cell structure with smooth skin on both sides; tubular materials, ASTM C 534, Type I; sheet materials, ASTM C 534, Type II.
 - d. Phenolic Foam (closed cell) meeting ASTM D 2856 with temperature limits from 40 F to 212 F. Flame spread shall be less than 25 and smoke development less than 50 per ASTM E84.
 - e. Fire Performance: Type suitable for service.
- Vapor Barrier: All insulation on chilled water, brine, and refrigerant line and air conditioning duct insulation incorporate a fully sealed ASJ vapor barrier. Insulation Accessories: Insulating cements, adhesives, jackets, glass cloth and tape, bands, wire, and sealing compounds suitable for service and exposure. Load bearing inserts provided at all piping and duct supports within insulation. Standards - HVAC equipment insulation to meet NAIMA standards and International Energy Code.

SECTION 15400 PLUMBING

PART 1 GENERAL

1.1 SUMMARY

- A. Pipe and pipe fittings, valves.
- B. Plumbing Specialties: Roof and floor drains, interceptors, cleanouts, backflow preventers, water hammer arrestors, thermostatic mixing valves, hose bibs/hydrants.
- C. Plumbing Fixtures.
- D. Plumbing Equipment.

1.2 SUBMITTALS

- A. Operating and Maintenance Instructions: For project closeout include manufacturers literature and parts lists.

PART 2 PRODUCTS

2.1 SANITARY SEWER PIPING, BURIED BEYOND BUILDING

- A. Cast Iron Pipe: ASTM A74, service weight with neoprene gaskets or lead and oakum joints.
- B. PVC Pipe: ASTM D3034, SDR 35, with elastomeric gaskets.

2.2 SANITARY SEWER PIPING, BURIED AND ABOVE GRADE

- A. Cast Iron Pipe: ASTM A74, service weight, with neoprene gaskets or lead and oakum joints.
- B. Cast Iron Pipe: CISPI 301, hubless, service weight, with neoprene gaskets and stainless steel clamps.
- C. PVC Pipe: ASTM D2729 with solvent weld joints.

2.3 WATER PIPING, BURIED BEYOND BUILDING

- A. Ductile Iron Pipe: AWWA C151, Class S1 with ductile iron fittings push-on rubber gasket joints.
- B. Copper Tubing: ASTM B42, annealed with wrought copper fittings and compression fit joints.
- C. PVC Pipe: AWWA C900, Class 150.

2.4 WATER PIPING, BURIED UNDER BUILDING

- A. Copper Tubing: ASTM B42, annealed without fittings.
- B. Ductile Iron Pipe: AWWA C151 with ductile iron fittings rubber gasket joints and 3/4 inch (19 mm) diameter rods.

2.5 WATER PIPING, ABOVE GRADE

- A. Copper Tubing: ASTM B88(ASM B88M), Type K hard drawn, with cast brass or wrought copper fittings and Grade 95TA solder joints.
- B. Galvanized Steel Pipe (Cold Water Only Sizes 4 Inch (100 mm) and Larger): ASTM A53 Schedule 40 with cast iron fittings and grooved mechanical couplings.
- C. CPVC Pipe: ASTM D2846 with CPVC fittings and solvent weld joints.

2.6 STORM WATER PIPING, BURIED BEYOND BUILDING

- A. Ductile Iron Pipe: AWWA C151, Class S1 with push-on neoprene gasket joints.
- B. Concrete Pipe: ASTM C76 with rubber gaskets.
- C. PVC Pipe: ASTM D3034, SDR 21 with elastomeric gaskets.

2.6 STORM WATER PIPING, BURIED AND ABOVE GRADE

- A. Ductile Iron Pipe: AWWA C151, Class S1 with neoprene gasket joints and two 3/4 inch (19 mm) restraining rods at each joint.
- B. Cast Iron Pipe: CISPI 301, hubless, service weight with neoprene gaskets and stainless steel clamps.
- C. Copper Pipe: ASTM B306, type DWV with cast bronze or wrought copper fittings and Grade 50B solder joints.
- D. Steel Pipe ASTM A 53, Schedule 40 galvanized with victaulic joints.
- E. PVC Pipe: ASTM D2665 or D3034 with solvent weld joints.

2.7 NATURAL GAS PIPING, BURIED

- A. Steel Pipe: ASTM A53, Schedule 40 black with polyethylene jacket and welded joints.
- B. Polyethylene Pipe: ASTM D2513, SDR 11.5, with socket type fittings and fusion welded joints.

2.8 NATURAL GAS PIPING, ABOVE GRADE

- A. Steel Pipe: ASTM A53, Schedule 40 black, with malleable iron or forged steel fittings, screwed or welded.
- B. Copper Tubing: ASTM B88(ASM B88M), Type K, annealed with wrought copper fittings and compression joints.

2.9 FUEL OIL PIPING, BURIED

- A. Steel Pipe: ASTM A53, Schedule 40 black, polyethylene jacket and welded joints.

2.10 FUEL OIL PIPING, ABOVE GROUND

- A. Copper Tubing: ASTM B88(ASM B88M), Type M, hard drawn with cast brass or wrought copper fittings and Grade 95TA solder joints.
- B. Steel Pipe: ASTM A53, Schedule 40 black with malleable iron or forged steel fittings and screwed or welded joints.

2.11 FLANGES, UNIONS, AND COUPLINGS

- A. Pipe Size 3 Inches (80 mm) and Under: Malleable iron unions for threaded ferrous piping; bronze unions for soldered copper pipe joints.

- B. Pipe Size Over 1 Inch (25 mm): Forged steel flanges for ferrous piping; bronze flanges for copper piping; neoprene gaskets.
- C. Grooved and Shouldered Pipe End Couplings: Malleable iron housing; "C" shape composition sealing gasket; steel bolts, nuts, and washers.
- D. Dielectric Connections: Union with galvanized or plated steel threaded end, copper solder end, water impervious isolation barrier.

2.12 GATE VALVES

- A. Up to 3 Inches (80 mm): Bronze body, rising stem and handwheel, inside screw, solid wedge, solder or threaded ends.
- B. Over 3 Inches (80 mm): Iron body, bronze trim, rising stem, handwheel, OS&Y, solid wedge, flanged or grooved ends.

2.13 GLOBE VALVES

- A. Up to 3 Inches (80 mm): Bronze body, bronze trim, handwheel, teflon disc, solder or threaded ends.
- B. Over 3 Inches (80 mm): Iron body, bronze trim, handwheel, OS&Y, plug-type disc, flanged ends.

2.14 BALL VALVES

- A. Manufacturers: Up to 4 Inches (100 mm): Bronze two piece body, chrome plated ball, regular port, teflon seats and stuffing box ring, lever handle, solder or threaded ends.

2.15 GAS COCKS

- A. Up to 2 Inches (50 mm): Bronze body, bronze tapered plug, non-lubricated, teflon packing, threaded ends.
- B. Over 2 Inches (50 mm): Cast iron body and plug, pressure lubricated, teflon packing, flanged or grooved ends.

2.16 BUTTERFLY VALVES

- A. Manufacturers: Over 1-1/2 inches (40 mm): Cast or ductile iron body, aluminum bronze disc, resilient replaceable seat, extended neck, 10 position lever handle, waler, lug, or grooved ends.

2.17 SWING CHECK VALVES

- A. Up to 3 Inches (80 mm): Bronze body and cap, bronze swing disc, solder or threaded ends.
- B. Over 3 Inches (80 mm): Iron body, bronze swing disc, renewable disc and seat, flanged or grooved ends.

2.18 SPRING LOADED CHECK VALVES

- A. Iron body, bronze trim, spring loaded, bronze disc, rubber seals, water ends.

2.19 WATER PRESSURE REDUCING VALVES

- A. Up to 2 Inches (50 mm): Bronze body, stainless steel and thermoplastic internal parts, fabric reinforced diaphragm, strainer, [threaded and single union] [double union] ends.
- B. Over 2 Inches (50 mm): Cast iron body, bronze fitted, elastomeric diaphragm and seat disc, flanged.

2.20 RELIEF VALVES

- A. Bronze body, teflon seat, steel stem and springs, automatic, direct pressure actuated, capacities ASME certified and labelled.

2.21 STRAINERS

- A. Size 2 inch (50 mm) and Under: Screwed brass or iron body, Y pattern with stainless steel perforated screen.
- B. Size 1-1/2 inch (40 mm) to 4 inch (100 mm): Flanged iron body, Y pattern with stainless steel perforated screen.
- C. Size 5 inch (125 mm) and Larger: Flanged iron body, basket pattern with stainless steel perforated screen.

2.22 ROOF DRAINS

A. Roof Drains:

- (1) Lacquered cast iron body with sump:
 - (a) Strainer: Removable metal dome.
 - (b) Accessories: Coordinate with roofing type.

Membrane flange and membrane clamp with integral gravel stop.

- (2) Adjustable under deck clamp.
- (3) Roof sump receiver.
- (4) Waterproofing flange.
- (5) Controlled flow weir.
- (6) Levelling frame.
- (7) Adjustable extension sleeve for roof insulation.
- (8) Perforated or slotted ballast guard extension for inverted roof.
- (9) Perforated stainless steel ballast guard extension.
- B. Parapet Drains: Lacquered cast iron body with flashing clamp collar and nickel bronze flush grate.
- C. Roof Overflow Drains: Lacquered cast iron body and clamp collar and bottom clamp ring; pipe extended above flood elevation.

2.23 FLOOR DRAINS

- A. Lacquered cast iron two piece body with double drainage flange, weep holes, and round, adjustable nickel-bronze strainer with polished bronze funnel type strainer. See Drawings for details.

2.24 CLEANOUTS

- A. Lacquered cast iron body with anchor flange, reversible clamping collar, and adjustable nickel-bronze round scored cover in service areas and square depressed cover to accept floor finish in finished floor areas.

2.25 BACKFLOW PREVENTERS

- A. Reduced Pressure Backflow Preventers: ASSE 1013; bronze body with bronze internal parts and stainless steel springs, two independently operating, spring loaded check valves; pressure relief valve located between check valves; third check valve that opens under back pressure in case of diaphragm failure; non-threaded vent outlet; assembled with two gate valves, strainer, and four test cocks.
- B. Double Check Valve Assemblies: ASSE 1012; Bronze body with corrosion resistant internal parts and stainless steel springs; two independently operating check valves with intermediate atmospheric vent.

2.26 WATER HAMMER ARRESTORS

- A. Stainless steel construction, bellows type To PDI WH-201, precharged suitable for operation in temperature range -100 to 300 degrees F (-73 to 149 degrees C) and maximum 250 psi (1700 kPa) working pressure.

2.27 THERMOSTATIC MIXING VALVES

- A. Capacity to satisfy peak demands at 45 psi (310 kPa) differential, with check valve, volume control shut-off valve on outlet, stem type thermometer on outlet, strainer stop check on inlet, mounted in lockable cabinet of 16 gage (1.5 mm) prime coated steel.

2.28 HOSE BIBS/HYDRANTS

- A. Interior Hose Bibs: Bronze or brass, replaceable hexagonal disc, hose thread spout, chrome plated with vacuum breaker.
- B. Wall Hydrant: Non-freeze, self-draining type with polished bronze lockable recessed box hose thread spout, removable key, and vacuum breaker.

2.29 FLUSH VALVE WATER CLOSETS

- A. Bowl: Floor mounted vitreous china closet with elongated rim, 1-1/2 inch(38 mm) spud, china bolt caps; maximum 1.6 gallon(6 L) flush volume.
- B. Flush Valve: Exposed chrome plated, diaphragm type with oscillating handle, escutcheon, seat bumper, integral screwdriver stop and vacuum breaker.
- C. Seat: Solid white plastic, open front, extended back, self-sustaining hinge, brass bolts, without cover.

2.30 TANK TYPE WATER CLOSETS

- A. Bowl: Floor mounted vitreous china, reverse trap, close-coupled closet combination with regular rim, insulated vitreous china closet tank with fittings and lever flushing valve, chrome plated bolt caps; maximum 1.6 gallon(6 L) flush volume.
- B. Seat: Solid white plastic, open front and cover, brass bolts.

2.44 SUMP PUMPS

- A. Type: Vertical centrifugal, direct connected, simplex submersible arrangement.
- B. Construction: Cast iron volute casing with Cast iron, open non-clog, impeller keyed to stainless steel shaft, cast iron pedestal, oil lubricated bronze sleeve bearings, flexible coupling to vertical, solid shaft ball bearing electric motor.
- C. Sump: Steel cover plate with steel curb frame for grouting into concrete sump with inspection opening and cover, and alarm fittings.
- D. Controls (Simplex): Float switch and separate pressure switch high level alarm with alarm bell.

2.45 SUBMERSIBLE PUMPS

- A. Type: Completely submersible vertical centrifugal.
- B. Construction: Cast iron pump body and oil filled motor chamber, cast iron open non-clog impeller, stainless steel shaft.
- C. Controls: Oil resistant power cord with integral diaphragm level controls with separate high level alarm with alarm bell.

PART 3 EXECUTION

3.1 EXAMINATION AND PREPARATION

- A. Manufacturers: Up to 4 Inches (100 mm): Bevel plain end ferrous pipe.
- B. Remove scale and dirt, on inside and outside piping before assembly.
- C. Prepare piping connections to equipment with flanges or unions.
- D. Coordinate cutting or forming of roof or floor construction to receive drains to required invert elevations.
- E. Review millwork shop drawings. Confirm location and size of fixtures and openings before rough-in and installation.
- F. Verify adjacent construction is ready to receive rough-in work of this Section.

3.2 INSTALLATION

- A. Install Work in accordance with written manufacturer's instructions.
- B. Provide dielectric connections wherever joining dissimilar metals.
- C. Install piping to conserve building space and not interfere with use of space. Group piping whenever practical at common elevations.ste
- D. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment.
- E. Provide clearance for installation of insulation and access to valves and fittings.
- F. Slope water piping and arrange to drain to low points.
- G. Install bell and spigot pipe with bell end upstream.
- H. Install specialties in accordance with manufacturer's instructions.
- I. Extend cleanouts to finished floor or wall surface. Lubricate threaded cleanout plugs with mixture of graphite and linseed oil. Ensure clearance at cleanout for rodding of drainage system.
- J. Install water hammer arrestors complete with accessible isolation valve.
- K. Install each fixture with chrome plated rigid or flexible supplies with screwdriver stops, reducers, and escutcheons.
- L. Adjust stops or valves for intended water flow rate to fixtures without splashing, noise, or overflow.
- M. Install water heaters in accordance with manufacturer's instructions and to NSF, NFPA, and UL requirements. Coordinate with plumbing piping and related gas venting and electrical work to achieve operating system.
- N. Install tanks in accordance with manufacturer's instructions.
- O. Provide support for tanks, independent of building structural framing members.
- P. Clean and flush tanks after installation. Seal until pipe connections are made.
- Q. On tanks, provide drain at water inlet and outlet, thermometer with range of 40 to 200 degrees F (4 to 93 degrees C), and ASME pressure relief valve suitable for maximum working pressure.
- R. Provide air cock and drain connection on horizontal pump casings.
- S. Provide line sized gate valve and strainer on suction and line sized soft seated check valve and globe valve on discharge.

3.3 APPLICATION

- A. Use grooved mechanical couplings and fasteners, and dielectric connections only in accessible locations.
- B. Install unions downstream of valves and at equipment or apparatus connections.
- C. Install brass male adapters each side of valves in copper piped system. Sweat solder adapters to pipe.
- D. Install ball valves for shut-off and to isolate equipment, part of systems, or vertical risers.
- E. Install ball valves for throttling, bypass, or manual flow control services.
- F. Provide spring loaded check valves on discharge of water pumps.

3.4 DISINFECTION OF DOMESTIC WATER PIPING SYSTEM

- A. Prior to starting work, verify system is complete, passes 8 hour pressure test at 100 psi with no leakage, flushed and clean. Ensure PH of water to be treated is between 7.4 and 7.6 by adding alkali (caustic soda or soda ash) or acid (hydrochloric).
- B. Inject disinfectant, free chlorine in liquid, powder, tablet or gas form, throughout system to obtain 50 to 80 mg/L residual. Bleed water from outlets to ensure distribution.
- C. Maintain disinfectant in system for 24 hours. If final disinfectant residual tests less than 25 mg/L, repeat treatment.
- pmen
- D. Flush disinfectant from system and discharge in safe manner so as not to affect downstream facilities. Take samples no sooner than 24 hours after flushing, and analyze in accordance with AWWA C601.

3.5 SERVICE CONNECTIONS

- A. Provide new sanitary and storm sewer services. Before commencing work check invert elevations required for sewer connections, confirm inverts and ensure that these can be properly connected with slope for drainage and cover to avoid freezing.
- B. Provide new water service complete with water meter with by-pass valves. Provide sleeve in wall for service main and supported at wall, calked and made watertight.
- C. Provide new gas service complete with gas meter and regulators. Gas service distribution piping to have initial minimum pressure of 7 inch wg (1.7 kPa) unless specified otherwise. Provide regulators on each line serving gravity type appliances, sized in accordance with equipment.

3.6 SCHEDULES

- A. See Construction Drawings for Schedules.

PLUMBING SPECIFICATIONS
MIRACLE CITY DAY CENTER
364 FOSTER DRIVE
CONROE, TEXAS 77301

ENGINEERING BY:
QUEST ENGINEERING
304 North Main Street #1
Conroe, Texas 77301
Phone: (713) 252-3729
rsaikowski@consolidated.net
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TEXAS REGISTRATION NO. FOR ENGINEERING FIRM IS F-10574



RAS
3/15/24

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SHEET NO.

P-6.0

No.	Date	Revisions	App.
0	12/4/23	ISSUE FOR CONSTRUCTION	RAS

FOUNDATION DETAILS & NOTES

MIRACLE CITY
364 FOSTER DRIVE
CONROE, TEXAS 77301

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SHEET NO.

S-1.2

GENERAL

- THE STRUCTURAL DESIGN IS IN ACCORDANCE WITH THE 2015 INTERNATIONAL BUILDING CODE AND THE CITY OF HUNTSVILLE BUILDING CODE AMENDMENTS.
- THE LOADS THAT HAVE BEEN USED IN THE STRUCTURAL DESIGN INCLUDE THE FOLLOWING
 - LIVE LOADS:
 - FLAT ROOF.....20PSF
 - SLOPED ROOF.....16PSF
 - WIND LOADS:
 - WIND PRESSURES IN ALL DIRECTIONS HAVE BEEN CALCULATED IN ACCORDANCE WITH CODE PROVISIONS OF THE BUILDING CODE FOR A BASIC WIND SPEED OF 100MPH EXPOSURE B IMPORTANCE FACTOR=1.15. ALLOWABLE STRESSES HAVE BEEN INCREASED BY 1/3 FOR LOADING COMBINATIONS INCLUDING WIND PRESSURES.
 - ROOF DEAD LOADS:
 - STRUCTURAL MEMBERS.....SELF WEIGHT
 - TYPICAL CEILING AND MEP (INCLUDING SPRINKLERS).....7.5 PSF
- OTHER DEAD LOADS HAVE BEEN CALCULATED TO INCLUDE THE ACTUAL WEIGHT OF ALL WORK SHOWN ON THE STRUCTURAL, MECHANICAL, ELECTRICAL AND ARCHITECTURAL DRAWINGS. NO OTHER EQUIPMENT SHALL BE PLACED ON OR HUNG FROM THE ROOF SYSTEM WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER. ROOF-MOUNTED HVAC UNITS SHALL BE PLACED WITHIN THE DESIGNATED AREAS SHOWN ON THE FRAMING PLANS.
- COMPLETE SHOP DRAWINGS FOR THE STRUCTURAL WORK SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO COMMENCEMENT OF STEEL FABRICATION, IN ACCORDANCE WITH THE SPECIFICATIONS. SUCH REVIEW BY THE ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF FULL RESPONSIBILITY FOR CORRECT FABRICATION, DELIVERY, ERECTION, AND CONSTRUCTION OF THE WORK IN COMPLIANCE WITH THESE DRAWINGS.
- ANY DEVIATION FROM, ADDITION TO, SUBSTITUTION FOR, OR MODIFICATION TO THE

STRUCTURE OR ANY PART OF THE STRUCTURE DETAILED ON THESE DRAWINGS SHALL BE SUBMITTED IN WRITING TO THE ENGINEER FOR REVIEW PRIOR TO SUCH FABRICATION. SHOP DRAWINGS THAT ARE SUBMITTED FOR REVIEW DO NOT CONSTITUTE "IN WRITING".

- THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS FOR ELEVATIONS NOT SHOWN AND FOR EXACT LOCATIONS OF ALL ARCHITECTURAL DETAILS. THE SECTIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO COMPLETION OF THE SHOP DRAWINGS.
- THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS AT THE SITE AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES BETWEEN THE ACTUAL CONDITIONS AND IN FORMATION SHOWN ON THE DRAWINGS BEFORE PROCEEDING WITH THE WORK.
- PRINCIPAL OPENINGS ARE SHOWN ON THE STRUCTURAL DRAWINGS, CONTRACTOR SHALL REFER TO ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR SLEEVES, CURVES, INSERTS AND OTHER OPENINGS NOT SHOWN. THE CONTRACTOR SHALL PROVIDE FOR ALL OPENINGS, WHETHER SHOWN ON THE STRUCTURAL DRAWINGS OR NOT. SIZE AND LOCATION OF ALL OPENINGS SHALL BE VERIFIED BY THE CONTRACTOR. ANY DEVIATION FROM OPENINGS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR APPROVAL PRIOR TO CONSTRUCTION.
- THE STRUCTURAL DRAWINGS ARE NOT TO BE SCALED FOR DETERMINATION OF QUANTITIES, LENGTH, OR FIT OF MATERIALS.
- THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISH STRUCTURE. THEY DO NOT INDICATE METHODS OF CONSTRUCTION UNLESS SO STATED OR NOTED. THE CONTRACTOR SHALL PROVIDE MEASURES NECESSARY TO PROTECT THE WORKMEN, OTHER PERSONS, AND THE STRUCTURES (EXISTING AND NEW) DURING CONSTRUCTION.
- THE CONTRACTOR SHALL PROVIDE TEMPORARY ERECTION BRACING AND SHORING OF ALL STRUCTURAL WORK AS REQUIRED FOR STABILITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONDITION WHICH, IN HIS OPINION, MIGHT ENDANGER THE STABILITY OF THE STRUCTURE OR CAUSE DISTRESS IN THE STRUCTURE.
- CONSTRUCTION MATERIALS SHALL NOT BE STORED ON FLOORS OR ROOFS IN EXCESS OF THE DESIGN LIVE LOADS WHICH ARE INDICATED ON THE DRAWINGS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENFORCE THIS REQUIREMENT. IMPACT SHALL BE AVOIDED WHEN PLACING MATERIALS ON FLOOR OR ROOFS.

- OWNER SHALL RETAIN THE SERVICES OF A MATERIALS/GEOTECHNICAL ENGINEER FOR SAMPLING AND TESTING. CONTRACTOR SHALL COORDINATE TO ENSURE SAMPLING AND TESTING ARE DONE ON A TIMELY BASIS.
- ANY MATERIAL TESTS WHICH FAIL SHALL CAUSE THE RELATED MATERIALS TO BE REJECTED, REMOVED, REPLACED, AND RE-TESTED UNTIL SUITABLE.

FOUNDATION AND SLAB ON GRADE

- SUBSURFACE INFORMATION AND FOUNDATION DESIGN ARE BASED ON A REPORT PREPARED BY LONE STAR GEOTECHNICAL & TESTING LABORATORY, INC DATED DECEMBER 13, 2022 (REPORT 2211007-1). THE CONTRACTOR SHALL PERFORM EXCAVATIONS, FOOTING CONSTRUCTION, AND PREPARATION OF THE SUBGRADE UNDER THE SLAB ON GRADE IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT AND THE PROJECT SPECIFICATIONS.
- REFER TO THE PROJECT SPECIFICATIONS FOR ALL INFORMATION CONCERNING FOUNDATION CONSTRUCTION. THE CONTRACTOR SHALL PERFORM EXCAVATIONS, FOOTING CONSTRUCTION, AND PREPARATION OF THE SUBGRADE UNDER THE SLAB ON GRADE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
- FOOTINGS SHALL BE EXCAVATED, CLEANED, AND REINFORCED, AND THE CONCRETE SHALL BE PLACED ON THE SAME DAY.
- FOUNDATION CONDITIONS NOTED DURING CONSTRUCTION, WHICH DIFFER FROM THOSE DESCRIBED IN THE GEOTECHNICAL REPORT SHALL BE REPORTED TO THE ENGINEER, GEOTECHNICAL ENGINEER AND RONALD A. SAIKOWSKI PE LEED AP CFM BEFORE FURTHER CONSTRUCTION IS ATTEMPTED.
- GENERAL CONTRACTOR SHALL NOTIFY RONALD A. SAIKOWSKI PE LEED AP CFM (TELEPHONE 713-252-3729) AT LEAST 48 HOURS PRIOR TO PLACEMENT OF CONCRETE IN THE FOOTINGS.
- THE SITE SHALL BE STRIPPED OF TOPSOIL AND MISCELLANEOUS FILL MATERIALS. THE SUBGRADE SHOULD BE PROOF-ROLLED UNDER THE INSPECTION OF THE GEOTECHNICAL ENGINEER TO EVIDENCE ANY SOFT SPOTS THAT SHOULD BE EXCAVATED TO FIRM SOIL. THE SUBGRADE SHOULD BE SCARIFIED TO A DEPTH OF 6 INCHES AND MOISTURE-CONDITIONED TO ABOVE OPTIMUM. THE SOIL SHOULD BE COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR DENSITY TEST (ASTM D-698). THE MOISTURE CONTENT SHOULD BE WITHIN + 3% OF OPTIMUM.

- THE BUILDING SUBGRADE SHALL BE PROPERLY COMPACTED AND PROOF-ROLLED AND SHALL BE FREE OF STANDING WATER, MUD, ORGANIC MATERIALS, AND FROZEN SOIL.
- A VAPOR BARRIER WITH A PERFORMANCE EQUIVALENT TO A 10 MIL STEGOWRAP SHALL BE PLACED BENEATH THE SLAB ON GRADE.
- SLABS ON GRADE SHALL HAVE CONSTRUCTION JOINTS OR CRACK CONTROL JOINTS AT EACH COLUMN LINE IN EACH DIRECTION. ADDITIONAL CRACK CONTROL JOINTS SHALL BE PROVIDED, SUCH THAT NO AREA BOUNDED BY CONSTRUCTION AND/OR CRACK CONTROL JOINTS CONTAINS MORE THAN 450 SQUARE FEET OF SLAB AREA. THE SPACING OF THE JOINTS SHALL NOT EXCEED 36 TIMES THE SLAB THICKNESS, AND THE RESULTING ASPECT RATIO OF THE DIMENSIONS OF SLAB AREA SHALL NOT EXCEED 1.5 TO 1. CRACK CONTROL JOINTS SHALL BE MADE USING A "SOFT-CUT" CONSTRUCTION SAW AS SOON AS THE SLAB WILL SUPPORT THE WEIGHT OF THE SAW AND OPERATOR WITHOUT DISTURBING THE FINAL FINISH. THE CRACK CONTROL JOINTS SHALL BE CUT A MAXIMUM WIDTH OF 1/8 INCH AND A MINIMUM DEPTH OF 1/3 THE SLAB THICKNESS. REFER TO THE DRAWINGS FOR INFORMATION ON THE CONTROL JOINTS, CONSTRUCTION JOINTS, REINFORCEMENT DETAILS AND JOINT SEALANT DETAILS.
- THE FOUNDATION FOR THE STRUCTURE HAS BEEN DESIGNED FOR THE FOLLOWING ALLOWABLE SOIL BEARING PRESSURES IN ACCORDANCE WITH THE ABOVE GEOTECHNICAL REPORT:

	PIERS	GRADE BEAM
SUSTAINED LOAD	4,200 PSF	2,000 PSF
TOTAL LOAD	6,400 PSF	3,600 PSF
- PLACE REINFORCING IN APPROVED PIERS AND PLACE CONCRETE IMMEDIATELY AFTER APPROVAL, USING A TREMIE.

CONCRETE

- CONCRETE IN THE FOLLOWING AREAS SHALL HAVE NATURAL SAND FINE AGGREGATE AND NORMAL WEIGHT COARSE AGGREGATES CONFORMING TO ASTM C-33, TYPE 1 PORTLAND CEMENT CONFORMING TO ASTM C-150, AND SHALL HAVE THE FOLLOWING MINIMUM COMPRESSIVE STRENGTH (FC) AT 28 DAYS*

	PIERS	GRADE BEAM
SUSTAINED LOAD	4,200 PSF	2,000 PSF
TOTAL LOAD	6,400 PSF	3,600 PSF

USE	MINIMUM COMPRESSIVE STRENGTH
PIERS	3,000 PSI
GRADE BEAMS	4,000 PSI
SLABS ON GRADE	4,000 PSI

MAXIMUM AGGREGATE SHALL BE THE SMALLER OF 1" OR 50% CONCRETE COVER PER ITEM 6 OF THIS SECTION.

- FLY ASH MAY BE USED AS A POZZOLAN TO REPLACE A PORTION OF THE PORTLAND CEMENT IN A CONCRETE MIX, SUBJECT TO THE APPROVAL OF THE GENERAL CONTRACTOR AND THE STRUCTURAL ENGINEER. FLY ASH, WHEN USED, SHALL CONFORM TO ASTM C-618, TYPE C OR F. CONCRETE MIXES USING FLY ASH SHALL BE PROPORTIONED TO ACCOUNT FOR THE PROPERTIES OF THE SPECIFIC FLY ASH USED AND TO ACCOUNT FOR THE SPECIFIC PROPERTIES OF THE FLY ASH CONCRETE THUS RESULTING. THE RATIO OF THE AMOUNT OF THE FLY ASH TO THE TOTAL AMOUNT OF FLY ASH AND CEMENT IN THE MIX SHALL NOT EXCEED 25 PERCENT.
- GROUT FOR BASE PLATES SHALL BE NON-SHRINKABLE, NON-METALLIC CONFORMING TO ASTM C-827, AND SHALL HAVE A SPECIFIED COMPRESSIVE STRENGTH AT 28 DAYS OF 5,000 PSI. PRE-GROUTING OF BASE PLATES WILL NOT BE PERMITTED.
- DETAILING OF CONCRETE REINFORCEMENT BARS AND ACCESSORIES SHALL CONFORM TO THE RECOMMENDATIONS OF ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" AND ACI SP-66 "DETAILING MANUAL". PLACING OF REINFORCING BARS SHALL CONFORM TO THE RECOMMENDATIONS OF ACI 315R "MANUAL OF ENGINEERING AND PLACING DRAWINGS FOR REINFORCED CONCRETE STRUCTURES" AND CSI "MANUAL OF STANDARD PRACTICE."
- MIXING, TRANSPORTING AND PLACING OF CONCRETE SHALL CONFORM TO ACI 301.
- MINIMUM CONCRETE COVER PROTECTION FOR REINFORCEMENT BARS SHALL BE AS FOLLOWS* (SEE ACI 318 SECTION 7.7 FOR CONDITIONS NOT NOTED)

CONCRETE EXPOSED TO WEATHER	
#5 BARS AND SMALLER	1-1/2 INCHES
ALL OTHER BARS	2 INCHES

CONCRETE CAST AGAINST EARTH	3 INCHES GRADE BEAMS:
TOP	1-1/2 INCHES
BOARD FORMED SIDES	2 INCHES
EARTH FORMED SIDES	3 INCHES
BOTTOM	3 INCHES

SLABS ON GRADE	
SINGLE LAYER OR TOP LAYER	2 INCHES
BOTTOM LAYER CAST AGAINST SOIL	3 INCHES
BOTTOM LAYER NOT CAST AGAINST SOIL	2 INCHES
BEAMS	1-1/2 INCHES

PROVIDE STANDARD BAR CHAIRS AND SPACERS AS REQUIRED TO MAINTAIN CONCRETE PROTECTION SPECIFIED.

- CONCRETE REINFORCEMENT BARS SHALL CONFORM TO ASTM A-615, GRADE 60.
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185. FABRIC SHALL BE SUPPLIED IN FLAT SHEETS. FABRIC SHALL BE LAPPED TWO MESH AT SPLICES.
- REINFORCEMENT BARS SHALL NOT BE TACK WELDED, WELDED, HEATED, OR CUT UNLESS INDICATED ON THE CONTRACT DOCUMENTS OR APPROVED IN WRITING BY THE STRUCTURAL ENGINEER.
- WELDING OF REINFORCEMENT BARS, WHEN ACCEPTED BY THE STRUCTURAL ENGINEER SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STANDARD D1.4. ELECTRODES FOR SHOP AND FIELD WELDING OF REINFORCEMENT BARS SHALL CONFORM TO ASTM A223, CLASS E90XX.
- HORIZONTAL FOOTING AND HORIZONTAL WALL REINFORCEMENT SHALL BE CONTINUOUS AND SHALL HAVE 90-DEGREE BENDS AND EXTENSIONS, OR CORNER BARS OF EQUIVALENT SIZE LAPPED 36 BAR DIAMETERS, AT CORNERS AND INTERSECTIONS.
- HORIZONTAL JOINTS WILL NOT BE PERMITTED IN CONCRETE CONSTRUCTION EXCEPT AS SHOWN ON THE CONTRACT DOCUMENTS. VERTICAL JOINTS MAY OCCUR AT CENTER OF SPANS AT LOCATIONS APPROVED IN WRITING BY STRUCTURAL ENGINEER.
- CONSTRUCTION JOINTS BETWEEN PIERS AND PIER CAPS, FOOTINGS AND WALLS OR COLUMNS, OR WALLS, COLUMNS, BEAMS, AND THE FLOOR SYSTEM THEY SUPPORT SHALL BE PREPARED BY ROUGHENING THE CONTACT SURFACE TO A FULL AMPLITUDE OF

APPROXIMATELY 1/4 INCH LEAVING THE CONTACT SURFACE CLEAN AND FREE OF LAITANCE.

- PROVIDE TWO NO. 4 REINFORCEMENT BARS X 8'-0" AT RE-ENTRANT CORNERS OF SLAB ON GRADE AT POUR STRIPS AND COLUMN BLOCK-OUTS. PLACE BARS CENTERED IN THE SLAB AND DIAGONAL TO THE CORNER WITH 1" CLEARANCE FROM THE SLAB AT THE CORNER.
- CONTRACTOR SHALL SUBMIT MIX DESIGNS TO THE ENGINEER WITH A MINIMUM FIVE-SACK CEMENT DESIGN MIX FOR ALL CONCRETE EXCEPT PIERS.
- CONCRETE SHALL HAVE MAXIMUM SLUMPS AS FOLLOWS:

USE	MAXIMUM SLUMP
PIERS	7"
GRADE BEAMS	6"
SLAB ON GRADE	6"
- SAMPLE AND TEST CONCRETE AT LEAST ONCE FOR EVERY 75 CUBIC YARDS OR PORTION THEREOF FOR SLUMP AND THREE CYLINDERS FOR COMPRESSIVE STRENGTH AT 7 DAYS, 28 DAYS AND RESERVE. PROTECT CONCRETE CYLINDERS.

CONCRETE CAST AGAINST EARTH

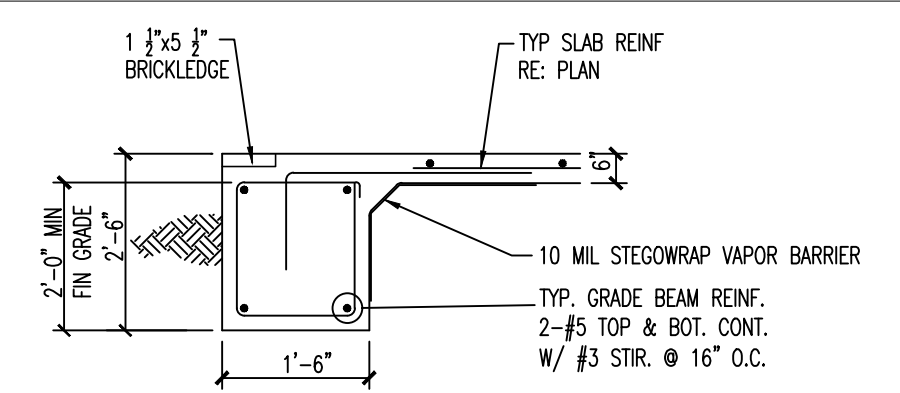
CONCRETE CAST AGAINST EARTH	3 INCHES GRADE BEAMS:
TOP	1-1/2 INCHES
BOARD FORMED SIDES	2 INCHES
EARTH FORMED SIDES	3 INCHES
BOTTOM	3 INCHES

SLABS ON GRADE

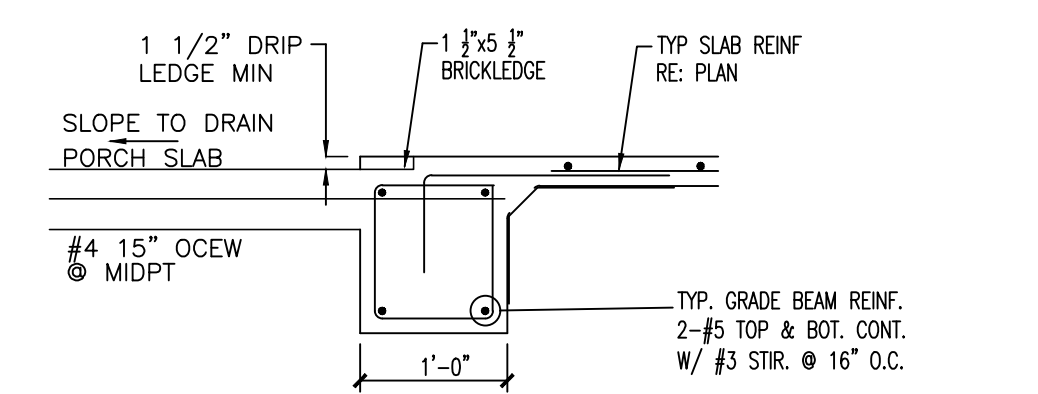
SLABS ON GRADE	
SINGLE LAYER OR TOP LAYER	2 INCHES
BOTTOM LAYER CAST AGAINST SOIL	3 INCHES
BOTTOM LAYER NOT CAST AGAINST SOIL	2 INCHES
BEAMS	1-1/2 INCHES

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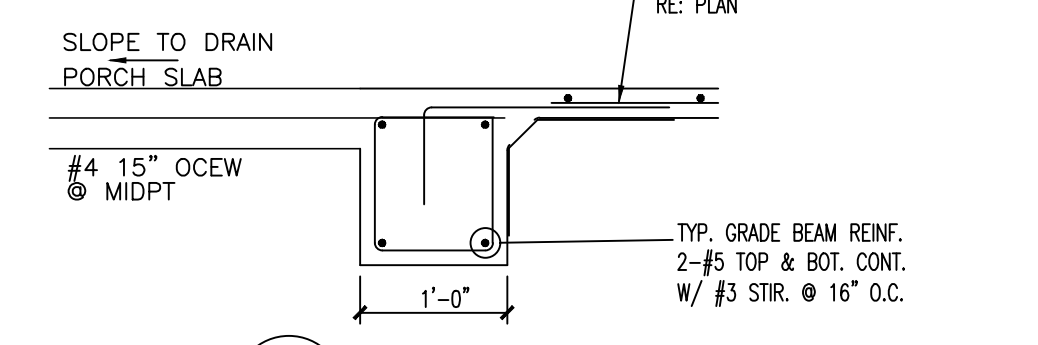
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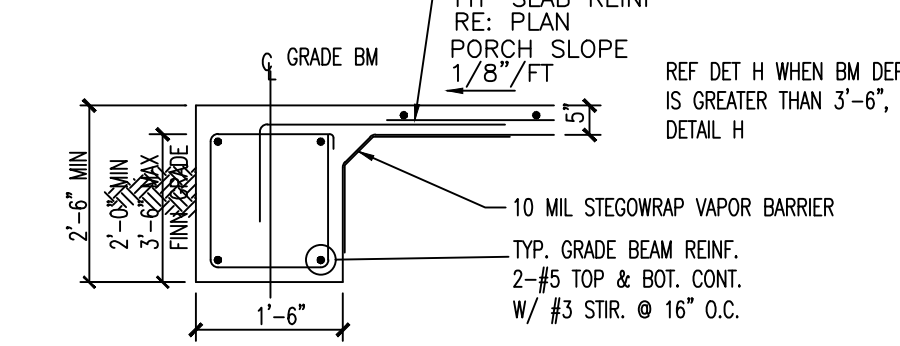
A EXTERIOR BEAM
NO SCALE



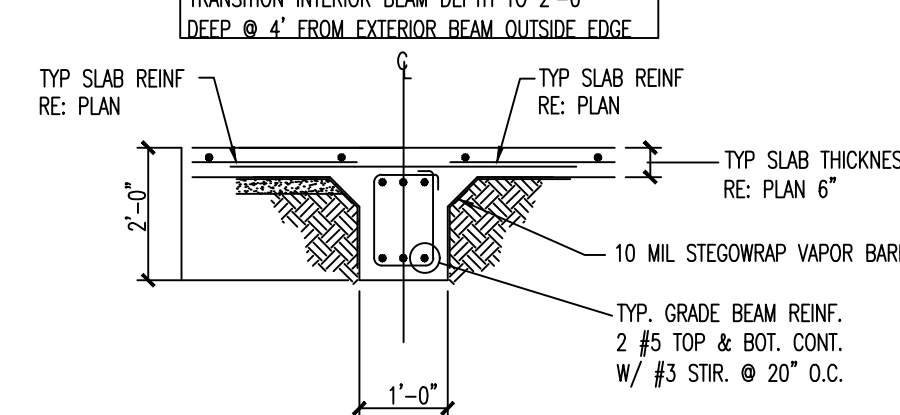
B GRADE BEAM AT PORCH
NO SCALE



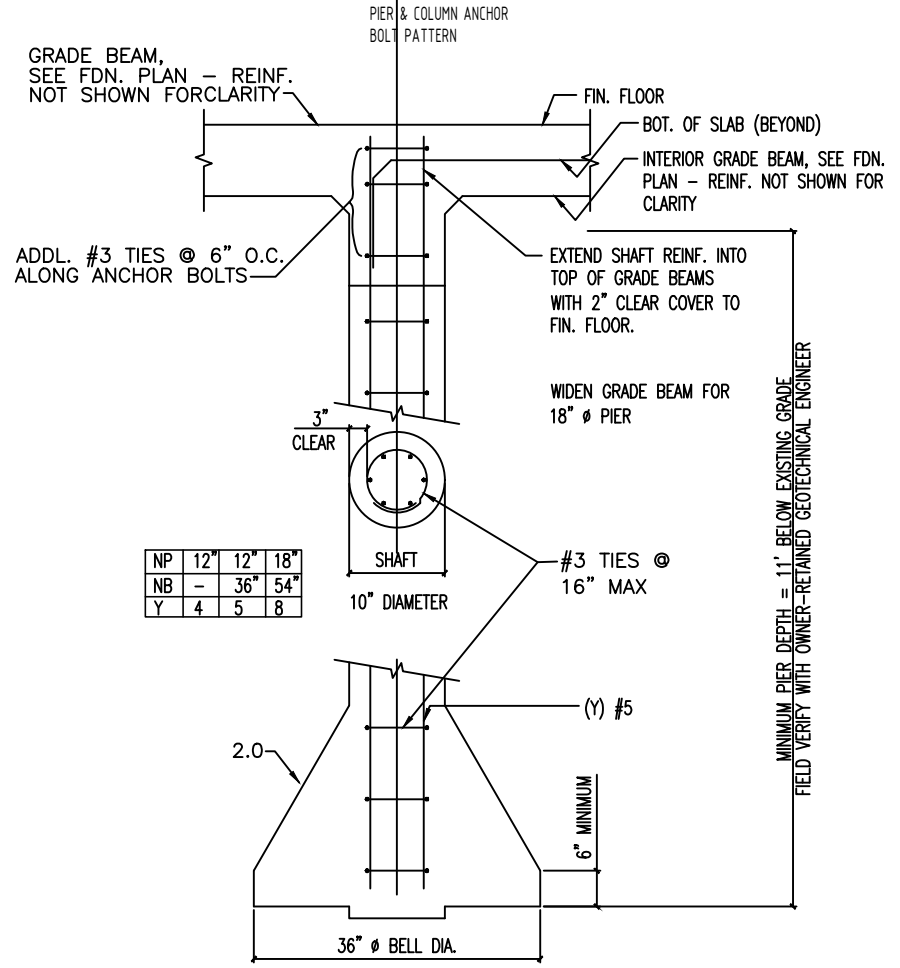
C GRADE BEAM AT PORCH DOOR
NO SCALE



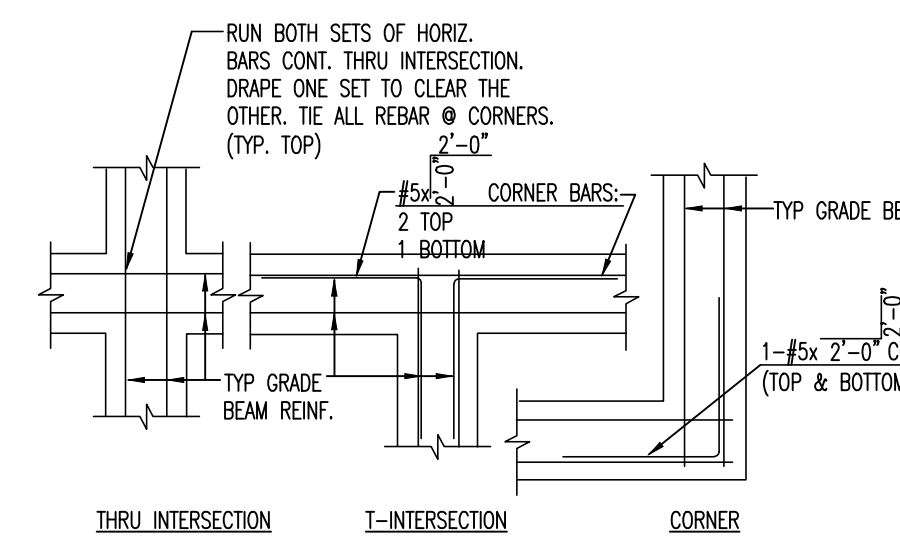
D EXTERIOR BEAM ALONG PORCH EDGE
NO SCALE



E INTERIOR BEAM
NO SCALE



F BELLED PIER DETAIL
NO SCALE



G INTERIOR / EXTERIOR BEAM INTERSECTION
NO SCALE

SEE SHT S-2.2 FOR DETAILS & S-2.3 FOR NOTES & SCHEDULES

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BRACE WALL CORNERS W/ DIAGONAL TRACK ABOVE CEILING W/ 3-#8 TEK @ EA END-TYP

PROVIDE CONT TRACK @ JOIST ENDS-TYP

PROVIDE SECOND WALL ABOVE LOWER WALL WITH LOWER WALLING TERMINATING AT BOTTOM OF MEZZANINE WITH WALL TRACK. EXTEND HIGHER WALL W/ STITCHED TRACK (#8 TEK @ 16" OC ALT) WITH UPPER WALL TO BOTTOM OF ROOF & BRACE WALL TOP TO ROOF STRUCTURE.

HEADER

HEADER

C8x16 FA @ 12" OCEW W/ 22 GA METAL PAN @ 2 1/2" MIN LIGHTWEIGHT CONC W/ 8x8 8/8 GA WWF @ MIDPT.

SUPPORT MEZZANINE ON HD2 WALL TO EXTEND FROM MEZZANINE TO BOTTOM OF ROOF & BRACE OFF ROOF STRUCTURE.

BRACE WALLS W/ EACH OTHER @ MAX 10' CENTER W/ TRACK ABOVE CEILING W/ 3-#8 TEK @ EA END-TYP

PRE-FABRICATED METAL STAIRS TO MEZZANINE

PROVIDE SECOND WALL ABOVE LOWER WALL WITH LOWER WALLING TERMINATING AT BOTTOM OF MEZZANINE WITH WALL TRACK. EXTEND HIGHER WALL W/ STITCHED TRACK (#8 TEK @ 16" OC ALT) WITH UPPER WALL TO BOTTOM OF ROOF & BRACE WALL TOP TO ROOF STRUCTURE.

STRUCTURAL

MIRACLE CITY
 MEN'S TRANSITION HOUSE-378 FOSTER DRIVE
 WOMEN'S TRANSITION HOUSE-374 FOSTER DRIVE
 CONROE, TEXAS 77301

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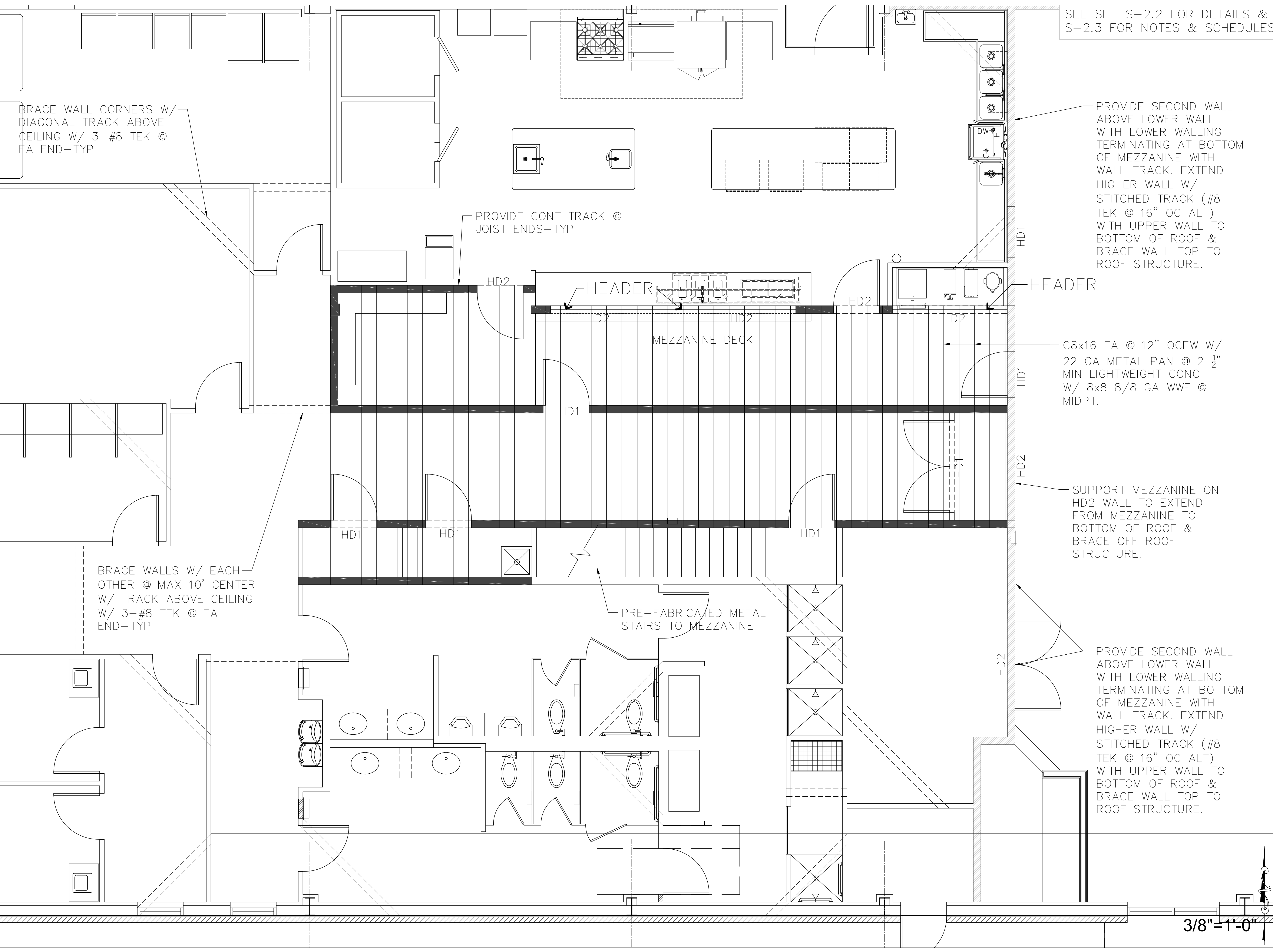
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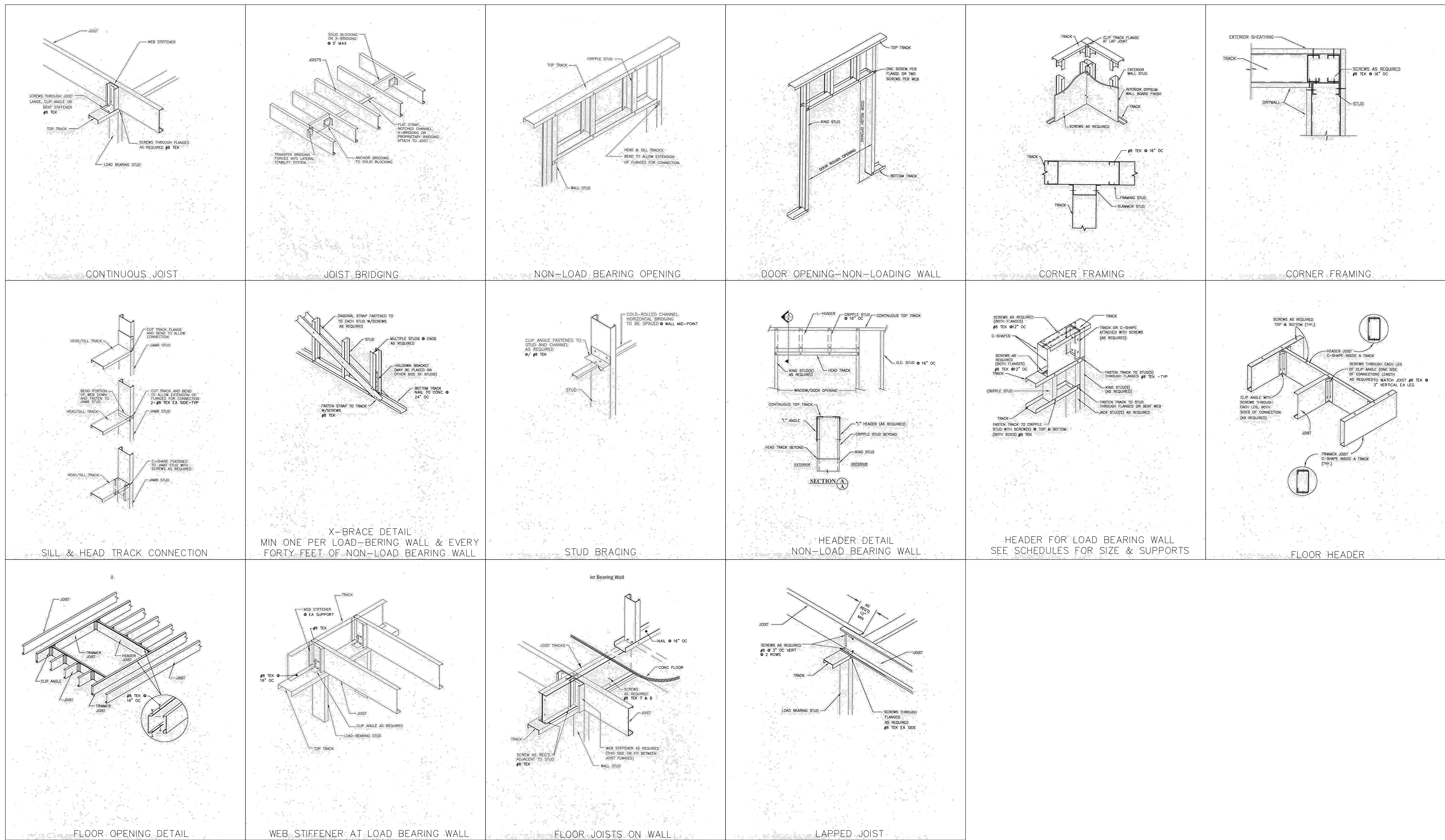
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SHEET NO.
S-2.1

3/8"=1'-0"



No.	Date	Revisions	App.
			RAS



STRUCTURAL DETAILS

MIRACLE CITY
 MEN'S TRANSITION HOUSE-378 FOSTER DRIVE
 WOMEN'S TRANSITION HOUSE-374 FOSTER DRIVE
 CONROE, TEXAS 77301

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3/8"=1'-0"

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			RAS

GENERAL NOTES:

1. THE FOLLOWING SPECIFICATIONS ARE AN OUTLINE OF MINIMUM MATERIAL REQUIREMENTS AND THEIR APPLICATION. MANUFACTURER SPECIFICATION AND LOCAL CODE REQUIREMENTS, WHEN IN EXCESS OF MINIMUM SPECIFICATION, SHALL CONTROL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW AND SUBMIT ALL SHOP DRAWINGS AND REPORT ALL DOCUMENT DISCREPANCIES TO THE STRUCTURAL ENGINEER PRIOR TO FABRICATION OR ERECTION.

2. THESE DRAWINGS REPRESENT STRUCTURAL COMPONENTS IN THEIR FINAL AND FINISHED STATE. CONSTRUCTION PROCEDURES, METHODS, SAFETY PRECAUTIONS AND MECHANICAL REQUIREMENTS USED TO ERECT THEM ARE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR OR SUBCONTRACTOR DOING THE WORK.

3. REFERENCE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION ON OPENINGS, & MECHANICAL AND PLUMBING EQUIPMENT.

COLD FORMED STEEL NOTES:

1. COLD-FORMED STEEL FRAMING AND ACCESSORIES SHALL BE OF THE TYPE, SIZE, GAGE AND SPACING SHOWN ON THE STRUCTURAL DRAWINGS, AND SHALL BE MANUFACTURED BY A MEMBER OF THE STEEL STUD MANUFACTURERS ASSOCIATION (SSMA).

2. ALL STUDS, TRACK, BRIDGING, AND ACCESSORIES SHALL BE FORMED FROM STEEL MEETING THE REQUIREMENTS OF ASTM A1003 WITH A MINIMUM YIELD STRENGTH OF 50 KSI (12, 14, AND 16 GAGE) OR 33 KSI (18 AND 20 GAGE). STUDS SHALL HAVE LATERAL BRIDGING AT 48" O.C., MAXIMUM, USING 1-1/2" x 16 GAGE U-CHANNEL WITH 1-1/2" x 1-1/2" x 16 GAGE CLIP ANGLES FASTENED WITH (2) #10 TEKS EACH LEG.

3. ALL STUDS, TRACK, BRIDGING, AND ACCESSORIES SHALL HAVE A GALVANIZED COATING MEETING THE REQUIREMENTS OF ASTM A653.

4. ERECTION DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO FABRICATION. SUBMITTAL DRAWINGS SHALL CLEARLY SHOW ALL PROPOSED MEMBERS AND CONNECTIONS.

6. ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS AND ANGLE-CUT, AS REQUIRED, FOR SKEWED FIT AGAINST ABUTTING MEMBERS.

7. AXIALLY LOADED STUDS SHALL BE INSTALLED IN A MANNER SUCH THAT THEIR ENDS ARE BEARING AGAINST THE INSIDE OF RUNNER WEB PRIOR TO ATTACHMENT. SPLICES IN AXIALLY LOADED STUDS ARE PROHIBITED.

8. COMPONENTS SHALL BE ATTACHED WITH GALVANIZED, SELF-DRILLING SCREWS WITH APPROPRIATE DRILL POINT AND THREAD PITCH FOR THICKNESS OF ADJOINING MATERIALS. WELDING IS PROHIBITED WITHOUT PRIOR WRITTEN PERMISSION FROM THE STRUCTURAL ENGINEER.

9. BOTTOM TRACKS SHALL BE SECURELY ANCHORED TO THE SUPPORTING STRUCTURE AS DETAILED. ANY PROPOSED SUBSTITUTION SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO INSTALLATION.

10. ABUTTING LENGTHS OF RUNNER SHALL EACH BE SECURELY ANCHORED TO A COMMON SPLICED STRUCTURAL ELEMENT.

11. STUDS SHALL BE PLUMBED, ALIGNED AND SECURELY ATTACHED TO FLANGES OF BOTH UPPER AND LOWER TRACK

12. DOOR HEADERS SHALL BE BUILT-UP BOX SECTIONS USING 6" x 2-1/2" x14 GA STUDS EACH FACE AND 6" x 1-1/4" x 14 GA TRACK TOP AND BOTTOM. MAXIMUM SPAN SHALL NOT EXCEED 4'-0", UNLESS NOTED OTHERWISE.

DECK NOTES:

1. METAL DECK SPECIFICATION METAL DECK SHALL BE TEMPERED COLD ROLLED STEEL, SHEET FORMED TO A CORRUGATED RIB PATTERN OF VULCRAFT TYPE 1.5B22 OR EQUAL. THE STEEL SHALL CONFORM TO ASTM A 446, GRADE E ZINC COATING CONFORMING TO ASTM A 525, G 60 COATING CLASS FOR GALVANIZED MATERIAL.

2. PROVIDE METAL DECK SUPPORT AT ALL BUILDING CORNERS, SKEWED BUILDING LINES WHERE SUPPORTING STRUCTURE BEARS PERPENDICULAR AND AROUND ALL FRAMED OPENINGS WITH <4X4X1/4 UNLESS NOTED OTHERWISE. INSTALL 6" WIDE X 12 GA. SHEET METAL COVER PLATES IN VALLEYS, RIDGES OR WHERE DECK CHANGES DIRECTION. SPOT WELD IN PLACE AT 12" O.C. MAXIMUM. CONTRACTOR TO COORDINATE WITH STEEL DECK SUPPLIER TO PROVIDE ALL NECESSARY DECK SUPPORTS REQUIRED TO ADEQUATELY SUPPORT THE METAL DECK.

3. WELD DECK TO STEEL SUPPORTS USING MANUFACTURER'S RECOMMENDED PATTERN AND SPACING OR FMRC CLASS 1-90 SPECIFICATIONS. (1-90 CONTROLS) OR PROVIDE #8 TEK SCREWS AT 16-INCHES ON CENTER AT ALL JOISTS AND STITCH LAPS AT 12-INCHES ON CENTER.

STRUCTURAL NOTES & SCHEDULES

MIRACLE CITY
 MEN'S TRANSITION HOUSE-378 FOSTER DRIVE
 WOMEN'S TRANSITION HOUSE-374 FOSTER DRIVE
 CONROE, TEXAS 77301

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 TEXAS REGISTRATION NO. FOR ENGINEERING FIRM IS F-10574



I, RON A. SAIKOWSKI, P.E., AUTHORIZED THE PLACEMENT OF THIS SEAL ON THIS DRAWING FOR THE PURPOSE OF ISSUING THIS DOCUMENT AS SPECIFIED BELOW

RAS 3/15/24

<input type="checkbox"/>	Not For Construction
<input type="checkbox"/>	For Background Use Only
<input type="checkbox"/>	Preliminary
<input type="checkbox"/>	For Concept Approval
<input type="checkbox"/>	Preliminary Bid Set
<input type="checkbox"/>	For Preliminary Approval
<input type="checkbox"/>	Check Set
<input checked="" type="checkbox"/>	Permit
<input checked="" type="checkbox"/>	For Final Approval
<input checked="" type="checkbox"/>	For Construction

NOTE:
 CONSTRUCTION SHALL NOT PROCEED UNTIL CONTRACTOR HAS OBTAINED ALL PERMITS AND INCORPORATED COMMENTS FROM TEXAS ACCESSIBILITY STANDARDS REVIEW AND PERMITTING ENTITIES IN WORK.

SHEET NO.

S-2.3