

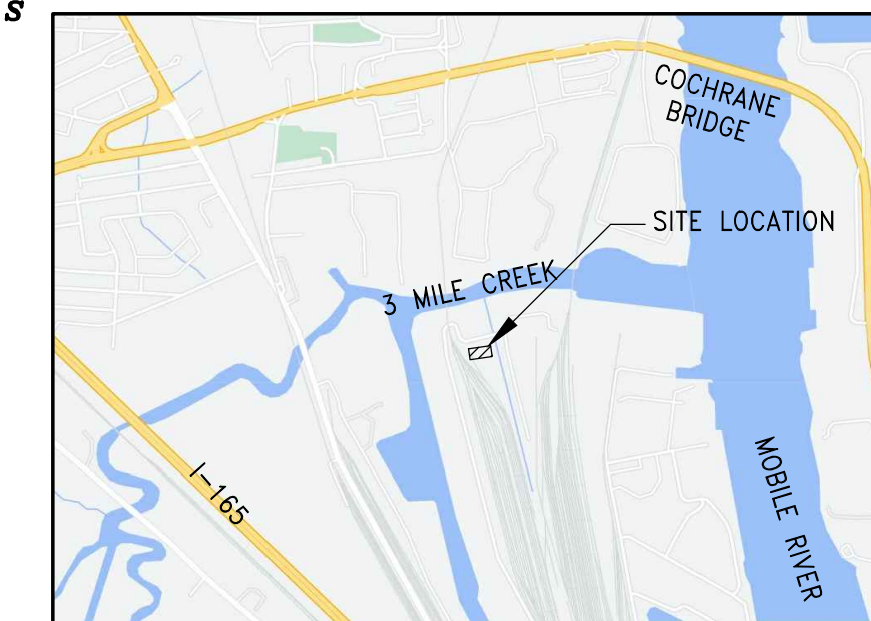
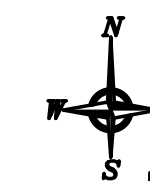


MOBILE, ALABAMA

KAY IVEY, GOVERNOR
JOHN C. DRISCOLL, DIRECTOR AND C.E.O

ALVIN K. HOPE II, 1st VICE CHAIR
DARYL H. DEWBERRY
TONY COCHRAN
CARL JAMISON

BEN C. STIMPSON, 2nd VICE CHAIR
DR. PATRICIA SIMS
HORACE HORN
THE HON. MERCERIA LUDGOOD



LOCATION MAP
N.T.S.

4146-C0	-	COVER SHEET
4146-BCS	-	BUILDING CODE SUMMARY
4146-G1	-	GENERAL NOTES
4146-G2	-	GENERAL NOTES
4146-G3	-	GENERAL NOTES
4146-GSS1	-	STAIR AND HAND RAIL DETAILS
4146-C1	-	EXISTING SITE PLAN
4146-C2	-	NEW SITE PLAN
4146-F1	-	FOUNDATION PLAN
4146-F1A	-	PILE PLAN
4146-F2	-	FOUNDATION PLAN
4146-F3	-	FOUNDATION PLAN
4146-LSP	-	NEW LIFE SAFETY PLAN
4146-S1	-	EXISTING AND DEMOLITION FLOOR PLAN
4146-S2	-	NEW FLOOR & REFLECTED CEILING PLAN
4146-S3	-	EXTERIOR ELEVATIONS
4146-S4	-	DOOR AND WINDOW SCHEDULE
4146-S5	-	BUILDING SECTIONS AND DETAILS
4146-S6	-	PLAN VIEW
4146-S7	-	ELEVATION VIEW
4146-S8	-	STRUCTURAL DETAILS
4146-S9	-	STRUCTURAL DETAILS
4146-S10	-	STAIR DETAILS
4146-S11	-	CONNECTION DETAILS
4146-S12	-	HVAC PLATFORM DETAILS
4146-S13	-	GENERATOR PLATFORM DETAILS
4146-S14	-	LADDER AND HANDRAIL DETAILS
4146-M1	-	OFFICE MECHANICAL PLAN
4146-M2	-	HVAC SCHEDULE & DETAILS
4146-M3	-	HVAC SPECIFICATIONS
4146-E1	-	NEW ELECTRICAL SITE PLAN
4146-E2	-	OFFICE ELECTRICAL LIGHTING PLAN
4146-E3	-	OFFICE ELECTRICAL LIGHTING CONTROL PLAN
4146-E4	-	OFFICE ELECTRICAL POWER PLAN
4146-E5	-	ELECTRICAL AC-ONE-RISER DIAGRAM
4146-E6	-	OFFICE ELECTRICAL POWER PLAN
4146-E7	-	ELECTRICAL SPECIFICATIONS
4146-P1	-	OFFICE PLUMBING PLAN
4146-P2	-	PLUMBING SPECIFICATIONS

*BCM PROJECT 05-0002-39 SHT 2 OF 5 1981

* FOR INFORMATION ONLY, ITS ACCURACY IS NOT GUARANTEED. THE CONTRACTOR IS SOLELY RESPONSIBLE TO VERIFY ALL LOCATIONS OF EQUIPMENT BEFORE BEGINNING WORK.

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[illegible]

COMMERCIAL PROJECT BUILDING CODE SUMMARY JANUARY, 2020

1. GENERAL INFORMATION

NAME OF PROJECT ASPA TERMINAL RAILWAY
PROJECT ADDRESS 126 INDUSTRIAL CANAL ROAD
PROPOSED USE MAINTENANCE SHOP
OWNER/AUTHORIZED AGENT ASPA
ADDRESS 250 NORTH WATER ST. MOBILE AL 36602
PHONE 251-433-7260 FAX E-MAIL Marcus.Coleman@alports.com
CONTRACTOR TBD
ADDRESS
PHONE FAX E-MAIL
STATE LICENSE NO

2. DESIGN PROFESSIONALS

ARCHITECTURAL E-MAIL
STRUCTURAL GARY D.E. COWLES E-MAIL gcowles@cmg-a.com
ELECTRICAL JAMES MEIGS E-MAIL jmeigs@cmg-a.com
FIRE ALARM TBD E-MAIL
PLUMBING JOHN D. GLOVER E-MAIL jglover@cmg-a.com
MECHANICAL JOHN D. GLOVER E-MAIL jglover@cmg-a.com
SPRINKLER-STANDPIPE E-MAIL
CIVIL E-MAIL
DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE
NAME GARY D.E. COWLES SIGNATURE

2.1 SPECIAL INSPECTIONS

A STATEMENT OF SPECIAL INSPECTIONS IS REQUIRED PER IBC SECTION 1704.3 AND SECTION 1704.5 AS A CONDITION OF PERMIT ISSUANCE. THE SCHEDULE SHALL INCLUDE ALL MATERIALS AND WORK NEEDING SPECIAL INSPECTIONS, THE INSPECTIONS TO BE PERFORMED AND THE NAMES OF INDIVIDUALS, APPROVED AGENCIES AND FIRMS CONDUCTING SUCH INSPECTIONS. IF NOT PROVIDED, EXPLAIN:

3. GENERAL CODE DATA

3.1 BUILDING AND FIRE CODES USED IN DESIGN (CHECK ALL THAT APPLY)
X 2018 INTERNATIONAL BUILDING CODE X 2017 NATIONAL ELECTRICAL CODE
X 2018 INTERNATIONAL MECHANICAL CODE X 2018 INTERNATIONAL PLUMBING CODE
2018 INTERNATIONAL FIRE CODE 2015 INTERNATIONAL ENERGY CONSERVATION CODE (ASHRAE 90.1 2013)
2018 INTERNATIONAL EXISTING BUILDING CODE 2013 MOBILE COUNTY COASTAL CONSTRUCTION SUPPLEMENT

3.2 CONSTRUCTION DESCRIPTION

NEW CONSTRUCTION RENOVATION (EXISTING BLDG.) TENANT BUILD-OUT
X ALTERATION X ADDITION UNOCCUPIED BUILDING

SCOPE OF WORK

BUILDING: PRE-ENGINEERED METAL BUILDING, GENERAL OFFICE AREA

MECHANICAL: NEW OFFICE SPLIT SYSTEM HEAT PUMP/AIR HANDLERS

ELECTRICAL: NEW POWER AND LIGHTING FOR BUILDING

PLUMBING: PLUMBING WATER SUPPLY, FIXTURES, PLUMBING RISER AND
FIXTURE DETAIL.

EXTERIOR WALL MATERIALS AND INSTALLATION DETAILS MUST COMPLY WITH SECTIONS 1404 & 1405.
PLEASE LIST THE SECTIONS THAT APPLY TO THE PROJECT:

EXISTING BUILDINGS AND RENOVATIONS:

THE BUILDING WILL REMAIN IN OPERATION DURING CONSTRUCTION: X YES; NO
IF YES, ADD PROVISIONS FOR RIGID SAFETY BARRIERS AND DUST BARRIERS TO PROTECT THE PUBLIC
DURING CONSTRUCTION IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF IBC CHAPTER 33.
IS THE WORK IN THIS BUILDING OR SPACE A CHANGE OF OCCUPANCY? YES; X NO
PROVIDE EVALUATION OF COMPLIANCE ALTERNATIVES IF REQUIRED.

CONSISTENCY OF DOCUMENTATION

VERIFY ALL SECTIONS AND DETAILS SHOWN ARE REFERENCED CORRECTLY TO THE CONSTRUCTION DOCUMENTS.
REQUIRE ALL MANUFACTURER'S RECOMMENDATIONS BE FOLLOWED AND AVAILABLE ON JOBSITE.
DELETE ANY NOTES, DETAILS, REFERENCES AND SPECIFICATIONS THAT ARE NOT APPLICABLE TO PROJECT.

4. BUILDING DATA

CONSTRUCTION TYPE IA IB IIA X IIB IIIA IIIB IV VA VB
MIXED CONSTRUCTION X NO YES CONSTRUCTION TYPES
SPRINKLERS X NO YES PARTIAL
SYSTEM TYPE 13 13R 13D
STANDPIPES X NO YES WET DRY CLASS COMBINED
BUILDING HEIGHT 22 FEET 2 NUMBER OF STORIES HEIGHT INCREASE (504)
MEZZANINE: X NO YES
HIGH RISE X NO YES
ATRIUM X NO YES
BASEMENT X NO YES

5. BUILDING OCCUPANCY CLASSIFICATION

HIGH HAZARD: NO SUBSTANCES LISTED IN SECTION 307 ARE TO BE STORED IN THE BUILDING EXCEPT AS NOTED:
HAZARDOUS SUBSTANCES: N/A
WITH PROVISIONS MADE PER CODE SECTION:
MIXED OCCUPANCY YES; X NO; SEPARATION REQUIRED: HOURS.
PLEASE IDENTIFY ANY EXCEPTIONS WHICH YOU ARE USING:
INCIDENTAL USE AREAS (508.2) YES; X NO
NON-SEPARATED MIXED OCCUPANCY (508.3): YES; X NO
THE REQUIRED TYPE OF CONSTRUCTION FOR THE BUILDING SHALL BE DETERMINED BY APPLYING THE MOST RESTRICTIVE HEIGHT AND AREA LIMITATIONS FOR THE APPLICABLE OCCUPANCIES TO THE ENTIRE BUILDING.
SEPARATED MIXED OCCUPANCY (508.4): YES; X NO
EACH PART OF THE BUILDING MUST BE INDIVIDUALLY CLASSIFIED AS TO USE AND BE SEPARATED FROM ADJACENT USES BY FIRE BARRIER WALLS AND /OR HORIZONTAL ASSEMBLIES PER TABLE 508.4. THE SUM OF THE RATIOS OF THE ACTUAL FLOOR AREA OF EACH USE DIVIDED BY THE ALLOWABLE FLOOR AREA FOR EACH USE SHALL NOT EXCEED 1.
INCIDENTAL USE AREAS (TABLE 509) YES; X NO

ALLOWABLE AREA AND HEIGHT (TABLE 503)

ALLOWABLE AREA
ALLOWABLE AREA PER FLOOR: 23,000 SQ. FT. / FLOOR
ACTUAL AREA PER FLOOR: 0 SQ. FT. / 1ST FLOOR
940 SQ. FT. / 2ND FLOOR

ATTACH AREA CALCULATIONS AND NOTE EXCEPTIONS PER SECTION 506 & FOR UNLIMITED AREAS IN SECTION 507.

ALLOWABLE HEIGHT
ALLOWABLE HEIGHT: 55 FEET
ACTUAL BUILDING HEIGHT: 22 FEET
ALLOWABLE NUMBER OF STORIES: 3 STORIES
ACTUAL NUMBER OF STORIES: 2 STORIES

BUILDING USE AND OCCUPANT LOAD

INCLUDE OCCUPANT LOAD CALCULATIONS FOR INSTITUTIONAL, ASSEMBLY, EDUCATIONAL, MULTISTORY PROJECTS, LARGE COMPLEX PROJECTS, AND MIXED OCCUPANCIES.
PLEASE NOTE THE USE, AREA AND OCCUPANT LOAD OF EACH AREA ON THE LIFE SAFETY PLAN.
BUILDING USE OFFICE
OCCUPANCY B
ALLOWABLE OCCUPANCY 104
OCCUPANT LOAD SIGNAGE IN ASSEMBLY PER 1004.9: YES NO N/A

FIRE PROTECTION REQUIREMENTS (TABLE 601)

BUILDING ELEMENT:	REQUIRED RATING	ASSEMBLY REFERENCE*
STRUCTURAL FRAME(COLUMNS, GIRDERS, TRUSSES):	0	
BEARING WALLS:		
EXTERIOR:	0	
INTERIOR:	0	
NON-BEARING WALLS:		
EXTERIOR:	0	
INTERIOR:	0	
FLOOR CONSTRUCTION (INCL. BEAMS AND JOISTS):	0	
ROOF CONSTRUCTION (INCL. BEAMS AND JOISTS):	0	

OTHER RATED ELEMENTS (REFERENCE THE NOTES BELOW)

ELEMENT	REQUIRED RATING	ASSEMBLY REFERENCE*
INTERIOR WALLS: BEARING:	0	
NON-BEARING:	0	
CEILING-FLOORS:	0	
BEAMS:	0	
COLUMNS:	0	
CEILING-ROOFS:	0	
SHAFTS-EXIT:	0	
SHAFTS-OTHER:	0	
CORRIDOR SEPARATION:	0	
OCCUPANCY SEPARATION:	0	
PARTY WALL OR FIRE WALL SEPARATION:	0	
SMOKE BARRIER SEPARATION:	0	
TENANT SEPARATIONS:	0	
OPENING PROTECTION FOR RATED DOORS:	0	

NOTES:

1. ALL FIRE RATED WALLS SHALL BE IDENTIFIED ON PLANS BY LINE TYPE, HATCHING, ETC.; SHOW LEGEND.
2. IDENTIFY CODE SECTION WHEN USING ANY SPECIAL EXCEPTIONS, ETC.
* REPRODUCE FULL UL OR OTHER APPROVED AGENCIES DETAILS AND SPECIFICATIONS FOR RATED ASSEMBLIES/PENETRATIONS ON DRAWINGS.(STATEMENT OF REQUIRED CONFORMITY INSUFFICIENT)

DRAFT/STOPPING

DRAFT/STOPPING IN FLOOR YES X NO
DRAFT/STOPPING IN ATTIC YES X NO
DISTANCE TO PROPERTY LINE FROM EXTERIOR WALL (TABLE 602)
(SITE PLAN AND LIFE SAFETY PLAN MUST ILLUSTRATE THIS INFORMATION)
FIRE SEPARATION DISTANCE: NORTH WALL: FT.; SOUTH WALL: FT.; EAST WALL: FT.; WEST WALL: FT.
FIRE RESISTANCE RATING: NORTH WALL: HRS.; SOUTH WALL: HRS.; EAST WALL: HRS.; WEST WALL: HRS.
LIFE SAFETY SYSTEMS IN CODE COMPLIANCE:
1008 EMERGENCY LIGHTING: X YES; NO; EXCEPTIONS:
1013 EXIT SIGNS: X YES; NO; EXCEPTIONS:
907 FIRE ALARM: YES; X NO; EXCEPTIONS:
1010.1.9 DOOR OPERATIONS: X YES; NO
1010.1.9.5 BOLT LOCKS: X YES; NO
1010.1.10 PANIC HARDWARE: X YES; NO; EXCEPTIONS:
SMOKE DETECTION SYSTEMS: YES; X NO; EXCEPTIONS:

EXIT REQUIREMENTS

EXIT ACCESS (1016 - 1021)
NUMBER OF EXITS REQUIRED: 2 NUMBER OF EXITS FURNISHED: 3
MEANS OF EGRESS WIDTH
UNITS OF EXIT REQUIRED: 20.8 INCHES UNITS OF EXIT WIDTH PROVIDED: 108 INCHES
STAIR WIDTH UNITS REQUIRED: 31.2 INCHES STAIR WIDTH UNITS PROVIDED: 144 INCHES
DIAGONAL RULE:
DESIGN COMPLIES WITH SECTION 1017: YES X NO

TRAVEL DISTANCE (TABLE 1017.2)

ALLOWABLE TRAVEL DISTANCE: 200 FT. ACTUAL TRAVEL DISTANCE (MAXIMUM): 96 FT.

SPACES WITH ONE MEANS OF EGRESS (TABLE 1006.2.1)

FOR BUILDINGS WITH ONE MEANS OF EGRESS, I HAVE CHECKED THE OCCUPANT LOAD AND THE COMMON PATH OF TRAVEL AGAINST THE REQUIREMENTS OF SECTION 1006: YES X NO

LIFE SAFETY PLAN

PROVIDE A LIFE SAFETY PLAN FOR ALL COMMERCIAL PROJECTS. AT A MINIMUM, THE LIFE SAFETY PLAN SHOULD ILLUSTRATE THE OCCUPANT LOADS FOR ALL AREAS, EXIT LOCATIONS, EXIT ACCESS, EXIT CAPACITY, MAXIMUM TRAVEL DISTANCE, EXIT LIGHTS, EMERGENCY LIGHTS, FIRE EXTINGUISHERS, FIRE RATED ASSEMBLIES, ASSEMBLY AREA SEATING LAYOUT AND EXIT DISCHARGE. SECOND EMERGENCY ESCAPE REQUIRED FOR RESIDENTIAL & INSTITUTIONAL-1 OCCUPANCIES PROVIDED PER 1026.

ACCESSIBILITY CHAPTER 11

DESIGN CONFORMS TO ICC/ANSI A117.1-2009: X YES NO, EXCEPTION:
(RESTROOM PLANS AND ELEVATIONS SHALL BE PROVIDED AT A MINIMUM 3/16" =1'-0" SCALE)
AN ACCESSIBLE ROUTE IS PROVIDED THROUGHOUT THIS BUILDING PER 1104 EXCEPT AS NOTED:

IS AN ACCESSIBLE ENTRANCES PROVIDED PER 1005: X YES NO, EXCEPTION:

STRUCTURAL DESIGN PARAMETERS

CLASSIFICATION OF BUILDING CATEGORY/USE GROUP II (I, II, III, IV)
ROOF LIVE LOAD: 20 PSF ATTIC LOAD: 0 PSF
MEZZANINE LOAD: 0 PSF FLOOR LOAD: 100 PSF
BUILDING EXPOSURE: C WIND SPEED 161 MPH (ASCE 7-10)
IMPORTANCE FACTOR: II
LOAD COMBINATIONS CONSIDERED AS PER 1605: X YES NO
BUILDING WILL BE DESIGNED AS: X AN ENCLOSED BUILDING AN UNENCLOSED BUILDING
METHOD OF DEBRIS PROTECTION TO GLAZED OPENINGS PER 1609.2: X
ASSUMED SOIL BEARING 1200 POUNDS / SQ. FT.; SOILS REPORT X YES NO.
PROVIDE A COMPONENTS AND CLADDING PRESSURE DIAGRAM ON THE CONSTRUCTION DOCUMENTS.

SPECIAL DETAILED REQUIREMENTS

THE DESIGN PROFESSIONAL SHALL COMPLY WITH ANY SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY. PLEASE INDICATE ALL CONDITIONS THAT APPLY:

402 COVERED MALL BUILDING	N/A
403 HIGH RISE BUILDINGS	N/A
404 ATRIUMS	N/A
405 UNDER GROUND BUILDINGS	N/A
406 MOTOR-VEHICLE RELATED OCCUPANCIES	N/A
407 GROUP I-2	N/A
408 GROUP I-3	N/A
409 MOTION PICTURE PROJECTION ROOMS	N/A
410 STAGES & PLATFORMS, ETC.	N/A
411 SPECIAL AMUSEMENT BUILDINGS	N/A
412 AIRCRAFT RELATED OCCUPANCIES	N/A
413 COMBUSTIBLE STORAGE	N/A
414 HAZARDOUS MATERIALS	N/A
415 HAZARDOUS OCCUPANCY GROUPS	N/A
416 APPLICATION OF FLAMMABLE FINISHES	N/A
417 DRYING ROOMS	N/A
418 ORGANIC COATINGS.	N/A
419 LIVE / WORK UNITS	N/A
420 GROUPS I-1, R-1, R-2, R-3	N/A
421 HYDROGEN CUTOFF ROOMS	N/A
422 AMBULATORY CARE FACILITIES	N/A
423 STORM SHELTERS	N/A
424 CHILDREN'S PLAY STRUCTURES	N/A

CONTRACTOR REQUIREMENTS

THE DESIGN PROFESSIONAL WILL NOTIFY THE CONTRACTOR OF HIS RESPONSIBILITY UNDER SECTION 1704.4.
THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE INSPECTION DEPARTMENT AND THE OWNER PRIOR TO COMMENCEMENT OF THE WORK STATING THAT THEY ARE AWARE OF THEIR RESPONSIBILITY CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS:
CONTRACTOR'S SIGNATURE AT TIME OF PERMITTING:

SAFETY GLAZING FOR HAZARDOUS LOCATIONS

THE REQUIRED LOCATIONS OF TEMPERED SAFETY GLASS SHALL BE IDENTIFIED ON THE CONSTRUCTION DOCUMENTS AS PER SECTION 2406 SAFETY GLAZING.
SAFETY GLASS LOCATIONS NOTED: X YES NO, EXCEPTION NO.

PRE-ENGINEERED BUILDINGS AND TRUSSES

COMPLETE STRUCTURAL PACKAGES MUST BE SUBMITTED PRIOR TO OBTAINING THE BUILDING PERMIT.
THE SUBMITTALS MUST BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF ALABAMA.

FIRE DEPARTMENT REQUIREMENTS

THE DESIGN PROFESSIONAL SHALL PROVIDE THE REQUIRED WATER SUPPLY FOR THE BUILDING. PLEASE INITIAL THE METHOD USED FOR DETERMINING THE REQUIRED WATER SUPPLY AS NOTED BELOW:
REQUIRED WATER SUPPLY 1750 GPM @ 20 PSI IFC METHOD USED
THE INSURANCE SERVICE OFFICE (ISO) METHOD; IOWA STATE UNIVERSITY (ISU) METHOD;
ILLINOIS INSTITUTE OF TECHNOLOGY (IIT) METHOD, OR THE INTERNATIONAL FIRE CODE (IFC).

PLUMBING FIXTURES

PROVIDE A TABLE ON THE CONSTRUCTION DOCUMENTS SHOWING THE NUMBER OF REQUIRED FIXTURES AND THE NUMBER OF FIXTURES PROVIDED PER TABLE 2902.1 - MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES. THE PLUMBING DRAWINGS MUST BE SUBMITTED AND APPROVED BY THE MOBILE COUNTY HEALTH DEPARTMENT WILL RELEASE THE PLUMBING PERMIT.
SEPARATE FACILITIES PROVIDED AS PER 2902.2: X YES NO, EXCEPTION NO.

ENERGY COMPLIANCE

THE CONTRACT DOCUMENTS MUST ILLUSTRATE COMPLIANCE WITH THE 2015 INTERNATIONAL ENERGY CONSERVATION CODE. THE CONTRACTOR MAY SUBMIT A CERTIFICATE OF COMPLIANCE AS PER THE IECC SECTION R403.1.1.

MECHANICAL REQUIREMENTS

COMPLIANCE WITH THE 2018 INTERNATIONAL MECHANICAL CODE IS REQUIRED.
PROVIDE A COMPLETE MECHANICAL SCOPE-OF-WORK AND VENTILATION CALCULATIONS.

THE FOLLOWING ITEMS SHOULD BE IDENTIFIED AND LOCATED ON PLANS:

ALL NEW AND EXISTING SUPPLY AND RETURN AIR DUCTWORK.
ALL NEW AND EXISTING EQUIPMENT TOGETHER WITH EQUIPMENT SCHEDULES.
RATED PARTITION AND FLOOR/ CEILING ASSEMBLY LOCATIONS AND INFORMATION.
CLOTHES DRYER VENT ROUTING AND MAKE-UP AIR INFORMATION.
CONDENSATE DRAIN ROUTING, DRAINING TO STORM, DRYWELL OR LANDSCAPED AREA.
ALL FIRE AND SMOKE DAMPER AND DETECTOR LOCATIONS AND INSTALLATION INFORMATION.
BATHROOM EXHAUST FANS, DUCT ROUTING AND CFM INFORMATION.
IF PLUMBING OR MECHANICAL EQUIPMENT IS INSTALLED ABOVE CEILING OR IN ATTIC SPACES,
A FIXED LADDER OR COMMERCIAL GRADE 300 LB. CAPACITY DISAPPEARING STAIRWAY SHALL BE REQUIRED

THE FOLLOWING DETAILS SHOULD BE PROVIDED:

TIE-DOWN DETAILS FOR ALL EQUIPMENT EXPOSED TO THE HIGH WIND LOADS.
KITCHEN EQUIPMENT LAYOUT AND EXHAUST HOOD ANCHOR DETAILS
UL INFORMATION FOR KITCHEN HOODS, GREASE EXHAUST AND PAINT SPRAY BOOTHS.
PAINT SPRAY BOOTH EXHAUST, MAKE UP AIR AND SEQUENCE OF OPERATIONS.

THE FOLLOWING MUST BE SIGNED AND SEALED BY AN ENGINEER:

MECHANICAL PLANS FOR BUILDINGS OF MORE THAN 2500 S.F.
ALL TYPE 1 (GREASE) EXHAUST HOOD DOCUMENTS

ELECTRICAL REQUIREMENTS

COMPLIANCE WITH THE 2017 NATIONAL ELECTRICAL CODE IS REQUIRED.
THE FOLLOWING ITEMS SHOULD BE IDENTIFIED AND LOCATED ON PLANS:

ELECTRICAL SERVICE, AND ALL ELECTRICAL PANELS,
ALL APPLIANCES AND EQUIPMENT.
ALL LUMINARIES AND OUTLETS (INCLUDING THOSE FOR HVAC).
ALL EQUIPMENT DISCONNECTING MEANS, TOGETHER WITH SIZES AND RATINGS.

ELECTRICAL EQUIPMENT SHOULD BE SPECIFIED WITH:

EQUIPMENT WORKING SPACE AND CLEARANCES SHOWN.
LABELLING BY A RECOGNIZED ELECTRICAL TESTING LABORATORY.

ELECTRICAL PANEL SCHEDULES SHOULD SHOW:

ALL LOADS, VOLTAGES, PHASES, AND BUS SIZES IN AMPERES.
PANELS SHOULD BE BALANCED AND SHOWN IN THE CIRCUIT DIRECTORY
CALCULATIONS FOR EACH PANEL FOR SERVICE, FEEDER AND BRANCH CIRCUITS.
ALL BRANCH CIRCUIT CONDUCTORS AND CONDUIT SIZES.

AMENDMENTS

PRIOR TO SUBMITTING THE CONSTRUCTION DOCUMENTS FOR REVIEW AND PERMITTING, THE DESIGN PROFESSIONAL SHOULD CONTACT THE MOBILE COUNTY INSPECTION DEPARTMENT TO OBTAIN A COPY OF THE MOST CURRENT AMENDMENTS ADOPTED BY THE MOBILE COUNTY COMMISSION.

B	ISSUED FOR BID	08/01/22	MAD	JDG
REV.	DESCRIPTION	DATE	BY	CHK'D

Cowles, Murphy, Glover
& ASSOCIATES
A Full Service Engineering Firm

PERFORMANCE • RELIABILITY • EXPERIENCE

457 St. Michael St., Mobile, AL 36602
13 Thrash Rd., LaGrange, GA 30241
11880 Cranston Dr. Ste 102, Arlington, TN 38002
Alabama (251) 433-1611
Georgia (706) 302-2831 Tennessee (901) 290-5444

PROJECT	TERMINAL RAILWAY OFFICE ADDITION/RENOVATION	TITLE	BUILDING CODE SUMMARY
	126 INDUSTRIAL CANAL ROAD MOBILE, ALABAMA	SCALE NTS	DRAWN BY CMG
		DATE 03/05/22	SHEET 22x34 REV. B
		JOB NO. 4146-22	CHECKED BY CMG
		DATE 06/10/22	DRAWING NUMBER 4146-BCS

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- NO PROVISION OF ANY REFERENCED STANDARD SPECIFICATION, MANUAL OR CODE (WHETHER OR NOT SPECIFICALLY INCORPORATED BY REFERENCE IN THE CONTRACT DOCUMENTS) SHALL BE EFFECTIVE TO CHANGE THE DUTIES AND RESPONSIBILITIES OF OWNER, CONTRACTOR, ENGINEER, SUPPLIER, OR ANY OF THEIR CONSULTANTS, AGENTS, OR EMPLOYEES FROM THOSE SET FORTH IN THE CONTRACT DOCUMENTS. NOR SHALL IT BE EFFECTIVE TO ASSIGN TO THE STRUCTURAL ENGINEER OF RECORD OR ANY OF THE STRUCTURAL ENGINEER OF RECORD'S CONSULTANTS, AGENTS, OR EMPLOYEES ANY DUTY OR AUTHORITY TO SUPERVISE OR DIRECT THE FURNISHING OR PERFORMANCE OF THE WORK OR ANY DUTY OR AUTHORITY TO UNDERTAKE RESPONSIBILITIES CONTRARY TO THE PROVISIONS OF THE CONTRACT DOCUMENTS.
2. CONTRACT DOCUMENTS INCLUDE, BUT ARE NOT LIMITED TO, THE STRUCTURAL DOCUMENTS (DRAWINGS AND SPECIFICATIONS), BUT DO NOT INCLUDE SHOP DRAWINGS, VENDOR DRAWINGS, OR MATERIAL PREPARED AND SUBMITTED BY THE CONTRACTOR.
3. REFERENCE TO STANDARD SPECIFICATIONS OF ANY TECHNICAL SOCIETY, ORGANIZATION, OR ASSOCIATION OR TO CODES OF LOCAL OR STATE AUTHORITIES, SHALL MEAN THE LATEST STANDARD, CODE, SPECIFICATION OR TENTATIVE SPECIFICATION ADOPTED AT THE DATE OF TAKING BIDS, UNLESS SPECIFICALLY STATED OTHERWISE.
4. CONTRACT DOCUMENTS SHALL GOVERN IN THE EVENT OF A CONFLICT WITH THE CODE OF PRACTICE OR SPECIFICATIONS OF ACI, PCI, AISC, SJI OR OTHER STANDARDS. WHERE A CONFLICT OCCURS WITHIN THE CONTRACT DOCUMENTS, THE STRICTEST REQUIREMENT SHALL GOVERN.
5. MATERIAL, WORKMANSHIP, AND DESIGN SHALL CONFORM TO THE REFERENCED BUILDING CODE.
6. CONTRACTOR SHALL COORDINATE THE STRUCTURAL DOCUMENTS WITH THE ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND CIVIL DOCUMENTS. ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY OR OMISSION. FOR DIMENSIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS SEE THE ARCHITECTURAL DRAWINGS.
7. CONTRACTOR SHALL OBTAIN AND COORDINATE EDGE OF SLAB DIMENSIONS, OPENING LOCATIONS AND DIMENSIONS, DEPRESSIONED SLAB LOCATIONS AND EXTENTS, SLAB SLOPES, CURB LOCATIONS, AND CMU WALL LOCATIONS. STRUCTURAL ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY OR OMISSION.
8. CONTRACTOR SHALL VERIFY EXISTING DIMENSIONS, ELEVATIONS, AND SITE CONDITIONS BEFORE STARTING WORK. ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY.
9. CONTRACTOR HAS SOLE RESPONSIBILITY FOR MEANS, METHODS, SAFETY, TECHNIQUES, SEQUENCES, AND PROCEDURES OF CONSTRUCTION.
10. THE STRUCTURE IS STABLE ONLY IN ITS COMPLETED FORM. TEMPORARY SUPPORTS REQUIRED FOR STABILITY DURING ALL INTERMEDIATE STAGES OF CONSTRUCTION SHALL BE DESIGNED, FURNISHED, AND INSTALLED BY THE CONTRACTOR. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTIBILITY ANALYSIS, AND ERECTION PROCEDURES, INCLUDING DESIGN AND ERECTION OF FALSEWORK, TEMPORARY BRACING, ETC.
11. CONTRACTOR HAS SOLE RESPONSIBILITY TO COMPLY WITH ALL OSHA REGULATIONS.
12. REPRODUCTION OF STRUCTURAL DRAWINGS FOR SHOP DRAWINGS IS NOT PERMITTED. ELECTRONIC DRAWING FILES WILL NOT BE PROVIDED TO THE CONTRACTOR.
13. SUBMIT SHOP DRAWINGS WHICH ADEQUATELY DEPICT THE STRUCTURAL ELEMENTS AND CONNECTIONS SHOWN IN THE CONTRACT DOCUMENTS. REVIEW OF SHOP DRAWINGS SHALL BE FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS REGARDING ARRANGEMENT AND SIZES OF MEMBERS AND THE CONTRACTOR'S INTERPRETATION OF THE DESIGN LOADS AND CONTRACT DOCUMENT DETAILS. REVIEW OF SUBMITTALS OR SHOP DRAWINGS BY THE STRUCTURAL ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY TO REVIEW AND CHECK ALL SUBMITTALS AND SHOP DRAWINGS BEFORE SUBMITTING TO THE STRUCTURAL ENGINEER. REVIEW OF SUBMITTALS OR SHOP DRAWINGS BY THE STRUCTURAL ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF FULL RESPONSIBILITY FOR COMPLIANCE WITH THE CONTRACT DOCUMENTS. CONTRACTOR REMAINS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATION OF SHOP DRAWINGS AS THEY PERTAIN TO MEMBER SIZES, DETAILS, AND DIMENSIONS SPECIFIED IN THE CONTRACT DOCUMENTS.
14. WHERE A SECTION OR DETAIL IS SHOWN OR DETAILED FOR ONE CONDITION, IT SHALL APPLY TO ALL SIMILAR AND LIKE CONDITIONS. DETAILS LABELED "TYPICAL" ON THE DRAWINGS APPLY TO ALL SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR. THE CONTRACTOR SHALL CONSIDER ALL OF THE CONTRACT DOCUMENTS IN DETERMINING SIMILAR AND LIKE CONDITIONS.
15. SIGNATURE AND REGISTRATION SEAL OF THE STRUCTURAL ENGINEER THAT MAY BE AFFIXED TO THESE DRAWINGS RELATES ONLY TO THE STRUCTURAL DESIGN OF THE PROJECT.

1. STRUCTURE IS DESIGNED IN ACCORDANCE WITH THE 2018 BUILDING CODE, WITH LATEST AMENDMENTS.
2. GRAVITY LOADS
 - 2.1 UNIFORM FLOOR LIVE LOADS (REDUCED AS ALLOWED BY THE BUILDING CODE):

WIND LOADS: SEE TABLE ON THIS SHEET

3. ESTIMATED DEFLECTIONS (IN INCHES) ARE AS FOLLOWS:

WHERE, L = SPAN LENGTH (IN INCHES) BETWEEN CENTERLINES OF SUPPORTS. FOR CANTILEVERS, L IS TWICE THE LENGTH OF THE CANTILEVER.)

4. SPECIAL INSPECTIONS:

4.1 THE FOLLOWING TYPES OF WORK REQUIRE SPECIAL INSPECTION: FOUNDATION ANCHORS & REINFORCING STEEL, STRUCTURAL STEEL, AND LIGHT GAUGE STEEL FRAMING.

1. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, PREFABRICATED, UNLESS NOTED OTHERWISE. NO FIELD BURNING ALLOWED.
2. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 AND HAVE MINIMUM SIDE AND END LAPS OF 12". CHAIRS TO BE PLACED 2'-0" O.C.. INDIVIDUAL CHAIRS SHOULD BE ABLE TO SUPPORT 200 LB. LOAD WITHOUT CRUSHING. WIRE MUST RETURN TO PROPER PLACEMENT AFTER BEING STEPPED ON.
3. SUBMIT SHOP DRAWINGS WHICH ADEQUATELY DEPICT THE REINFORCING BAR SIZES AND PLACEMENT. WRITTEN DESCRIPTION OF REINFORCEMENT WITHOUT ADEQUATE SECTIONS, ELEVATIONS, AND DETAILS IS NOT ACCEPTABLE.
4. PROVIDE DOWELS FROM FOUNDATIONS THE SAME SIZE AND NUMBER AS THE VERTICAL WALL OR COLUMN REINFORCING, UNLESS NOTED OTHERWISE.
5. PLACE REINFORCEMENT AS FOLLOWS, UNLESS NOTED OTHERWISE:
 - 5.1 CAST-IN-PLACE (NON POST-TENSIONED) CONCRETE REINFORCEMENT COVER

PERMANENTLY EXPOSED TO EARTH:
CAST AGAINST THE EARTH_____ 3" CLEAR

EXPOSED TO EARTH OR WEATHER:
FOR BARS LARGER THAN A NO. 5 BAR_____ 2" CLEAR
NO. 5 BARS OR SMALLER_____ 1-1/2" CLEAR
 - 5.2 MASONRY REINFORCING STEEL SHALL BE PLACED IN THE CENTER OF CMU CELLS, UNLESS NOTED OTHERWISE.
6. REINFORCEMENT SHALL BE SPLICED ONLY AT LOCATIONS SHOWN OR NOTED IN THE STRUCTURAL DOCUMENTS, EXCEPT REINFORCEMENT MARKED "CONTINUOUS" CAN BE SPLICED AT LOCATIONS DETERMINED BY CONTRACTOR. SPLICES AT OTHER LOCATIONS SHALL BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER. REINFORCING STEEL SPLICES SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:

CONCRETE REINFORCEMENT:	CLASS B TENSION LAP
MASONRY REINFORCEMENT:	48 BAR DIAMETERS
7. ADHESIVE FOR REINFORCING DOWELS IN EXISTING CONCRETE SHALL BE EITHER THE HIT HY150 INJECTION ADHESIVE SUPPLIED BY HILTI FASTENING SYSTEMS, THE EPOCH SYSTEM CERAMIC 6 EPOXY ADHESIVE SUPPLIED BY ITW RAMSET/RED HEAD, POWER-FAST EPOXY INJECTION GEL SUPPLIED BY POWERS FASTENING, OR APPROVED EQUAL. MINIMUM EMBEDMENT LENGTH SHALL BE 24 BAR DIAMETERS, UNLESS NOTED OTHERWISE.
8. REINFORCING STEEL SHALL BE FREE FROM GREASE, MUD, EXCESSIVE RUST OR OTHER COATINGS THAT WILL DESTROY OR REDUCE BOND STRENGTH. REINFORCING STEEL IN ALL FOOTINGS, WALLS, BOND BEAMS AND PILASTERS SHALL BE MADE WITH BENT BARS WITH A MINIMUM SPLICE LENGTH OF 48 BAR DIAMETERS. PROVIDE GALV. ANCHOR BOLTS SET IN CONCRETE FOR ANCHORING STEEL OR WOOD TO CONCRETE.

1. CONCRETE WORK SHALL CONFORM TO ACI 318 AND CRSI STANDARDS.
2. CONCRETE SHALL HAVE THE FOLLOWING MINIMUM SPECIFIED 28-DAY COMPRESSIVE STRENGTH:

ALL CONCRETE SHALL MEET ALL OF THE FOLLOWING REQUIREMENTS SPECIFIED.

CLASS "A" CONCRETE SHALL BE USED FOR ALL WORK INCLUDED IN THIS CONTRACT, AND
CLASS "AC" SHALL BE USED FOR PUMPING.
3. REFER TO ARCHITECTURAL DRAWINGS FOR MOLDS, GROOVES, ORNAMENTS, CLIPS OR GROUNDS REQUIRED TO BE ENCASED IN CONCRETE AND FOR LOCATION OF FLOOR FINISHES AND SLAB DEPRESSIONS.
4. CONSTRUCTION JOINT LOCATIONS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. NO HORIZONTAL CONSTRUCTION JOINTS ARE PERMITTED EXCEPT THOSE SHOWN ON THE STRUCTURAL DRAWINGS.
5. DEFECTIVE AREAS IN CONCRETE INCLUDING, BUT NOT LIMITED TO, HONEY-COMBING, SPALLS, AND CRACKS WITH WIDTHS EXCEEDING 0.01 INCH SHALL BE REPAIRED. EXTENT OF DEFECTIVE AREA TO BE DETERMINED BY THE STRUCTURAL ENGINEER.

PROVIDE (1) SET OF CYLINDERS, (4) FROM EACH 50 CUBIC YARDS.

CLASS	MAX. WATER PER BAG OF CEMENT	MIN. CEMENT PER CUBIC YARD	MIN. COMPRESSIVE STRENGTH IN 28 DAYS	SLUMP RANGE
A	5.5	6.5	4,000 PSI	2"-4"
AC	6.0	8.0	4,000 PSI	5"-7"

1. FOUNDATION DESIGN IS BASED ON AN ALLOWABLE BEARING PRESSURE OF 1,200 PSF AND TIMBER PILE SUPPORTED COLUMN FOOTINGS. STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR SUBSURFACE CONDITIONS ENCOUNTERED IN THE FIELD DIFFERENT FROM THOSE ASSUMED FOR DESIGN.
2. GEOTECHNICAL/INSPECTION AGENCY SHALL CERTIFY THE BEARING MEDIUM.
3. DENSIFY BUILDING AREAS AND A MINIMUM OF 5'-0" OUTSIDE THE BUILDING PERIMETER USING A VIBRATORY ROLLER.
4. SOIL COMPACTION - 100% STANDARD PROCTOR DENSITY. ALL FILL SHALL BE COMPACTED IN 8" LOOSE LIFTS. COMPACTION TESTING SHALL BE PERFORMED ON EACH LIFT. ALL REPORTS SHALL BE SUBMITTED TO THE ENGINEER.
5. BACKFILL SHALL BE A SAND CLAY GRANULAR MATERIAL WITH LESS THAN 30% PASSING THE #200 SIEVE AND A LIQUID LIMIT OF LESS THAN 25.
6. ALL CONCRETE MUST CURE FOR A MINIMUM OF 7 DAYS BEFORE ANY LOAD IS PLACED ON CONCRETE. INSTALL CURING COMPOUND ON ALL EXPOSED CONCRETE SURFACES. CONCRETE SHALL BE CURED WITH MEMBRANE 30% SOLIDS COMPOUND, SPRAY APPLIED.
7. PROVIDE (1) SET OF CYLINDERS, (4) FROM EACH 50 CUBIC YARDS.
8. FOR SITE PREPARATION SEE SOUTHERN EARTH SCIENCES, GEOTECHNICAL REPORT PROJECT #: M22-264.

1. SEE ALSO SPECIFICATIONS. WHERE SPECIFICATIONS CONFLICT OR ARE DUPLICATED THE MORE RESTRICTIVE OF THE ENGINEERING SPECS SHALL GOVERN.
2. BUILDING DIMENSIONS SHALL BE AS SHOWN ON THE DRAWINGS AND SHALL BE DESIGNED AS FOLLOWS AND IN ACCORDANCE WITH THE 2018 BUILDING CODE:
 - A. DEAD LOAD OF STRUCTURE
 - B. WIND LOAD – 159 MPH (3 SECOND GUST) (RISK CATEGORY II) (EXPOSURE B)
 - C. ROOF LIVE LOAD = 20 PSF
 - D. COLLATERAL LOAD = 5 PSF
 - E. MAJOR STRUCTURAL COMPONENTS, INCLUDING RIGID FRAMES, BEAMS AND COLUMN WHICH SUPPORT A TRIBUTARY ROOF AREA GREATER THAN 600 SQUARE FEET SHALL BE DESIGNED ON THE BASIS OF A REDUCED LIVE LOAD IN ACCORDANCE WITH THE APPLICABLE CODE.
 - F. BUILDING SHALL BE CERTIFIED BY BUILDING MANUFACTURER FOR 159 MPH WIND LOAD. PLANS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY AN ALABAMA PROFESSIONAL ENGINEER.
3. DEFLECTIONS SHALL BE LIMITED AS FOLLOWS:

PRIMARY FRAMING	L/240 FOR LIVE LOAD H/180 FOR WIND LOAD
SECONDARY FRAMING	L/360 FOR ROOF DEAD LOAD + ROOF LIVE LOAD.
4. ROOF IS A PRE-FINISHED GALVALUME ROOF. COMPLETE AS PER MANUFACTURER'S STANDARDS. COLOR SHALL BE CHOSEN BY THE OWNER.
5. ALL ROOF PANEL FASTENERS SHALL BE "EXTENDED LIFE" WITH EITHER A ZINC/ALUMINUM/MANGANESE ALLOY CASTING OR A 302 STAINLESS STEEL CAP OVER THE CARBON STEEL HEAD AND STANDARD SEALING WASHER.
6. BUILDING TRIM SHALL BE IN ACCORDANCE WITH BUILDING MANUFACTURERS STANDARD. COLOR OF TRIM SHALL BE CHOSEN BY OWNER.
7. ALL STRUCTURAL STEEL SHALL RECEIVE A SHOP COAT OF BUILDING MANUFACTURER'S STANDARD SHOP PAINTING SYSTEM.
8. THE BUILDING SHALL BE INSULATED AS SHOWN ON THE DRAWINGS.
9. ALL ANCHOR BOLT SIZES AND LOCATIONS SHALL BE AS PER BUILDING MANUFACTURER'S CERTIFIED DRAWINGS.
10. D BRACING IN ROOF AND WALLS SHALL BE PROVIDED USING ROD TYPE X-BRACING OR WIND FRAMES.
11. ERECTION DRAWINGS AND SHOP DRAWINGS SHALL BE SUBMITTED TO THE OWNER FOR REVIEW PRIOR TO FABRICATION.

1. TIMBER PILES SHALL BE THE SIZE SHOWN ON THE DRAWINGS AND SHALL CONFORM TO ASTM 25. ALL PILES SHALL BE TREATED WITH 0.8 %/CF OF AWPA PRESERVATIVE FOR THE FULL LENGTH OF PILE.
2. THE CONTRACTOR SHALL BASE HIS BID ON THE QUANTITIES AND LENGTHS AS SHOWN ON THE CONTRACT DRAWINGS. IF ADDITIONAL PILE LENGTH IS REQUIRED, BASED ON DRIVING DURING INSTALLATION, THE CONTRACTOR SHALL ADD PILES AS REQUIRED AT THE BID UNIT PRICE PER FOOT.
3. PILES WILL BE MEASURED FOR PENETRATION ON THE BASIS OF LENGTHS ALONG THE AXIS OF THE PILE IN PLACE BELOW THE CUT-OFF ELEVATION. IF THE ENGINEER AUTHORIZED DRIVING TO STOP BEFORE A PILE REACHES THE SPECIFIED PENETRATION DEPTH, THE EXCESS CUT-OFF SHALL BE MEASURED AS THE DIFFERENCE BETWEEN THE SPECIFIED LENGTH AND THE ACTUAL LENGTH OF PILE DRIVEN BELOW CUT-OFF. MEASUREMENTS SHALL BE TO THE NEAREST 1/10 FT. THE COST TO CUT OFF PILES TO THE APPROPRIATE ELEVATION SHALL BE INCLUDED IN THE BID UNIT PRICE.
4. PILES SHALL BE DRIVEN ACCURATELY IN CORRECT LOCATIONS, TRUE TO LINE BOTH Laterally AND LONGITUDINALLY, AND TO VERTICAL, BATTER, AND SKEW LINES AS INDICATED ON THE DRAWINGS. A LATERAL DEVIATION FROM CORRECT LOCATION AT THE CUT-OFF ELEVATION SHALL NOT EXCEED 2" WITHOUT PULLING. A VARIATION IN SLOPE FROM THAT SPECIFIED OF NOT MORE THAN 1/4" PER FOOT WILL BE PERMITTED. THE CORRECT POSITION OF PILES AS TO LOCATION, PLUMBNESS, BATTER, AND SKEW SHALL BE MAINTAINED BY THE USE OF TEMPLATES AND JIGS TO SUPPORT PILES WITHOUT DAMAGE; THE DETAILS OF WHICH SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO DRIVING PILES. IN ADDITION TO DRIVING TEMPLATES, PLACING AND MAINTAINING PILES WITHIN ACCEPTABLE LIMITS SHALL BE THE CONTRACTOR'S COMPLETE RESPONSIBILITY. ANY PILE OUT OF POSITION SHALL BE PULLED AND REDRIVEN AS DIRECTED AT NO ADDITIONAL COST TO THE OWNER.
5. CONTRACTOR SHALL, TO THE BEST OF HIS ABILITY, MONITOR THE ADJACENT EXISTING STRUCTURES, UTILITIES, ETC. FOR ANY SIGNS OF DAMAGE DURING PILE INSTALLATION. THE EXISTING STRUCTURE SHALL BE MONITORED FOR MOVEMENT DURING DRIVING OPERATIONS.
6. THE CONTRACTOR SHALL USE A HAMMER OF A SIZE AND TYPE SUITABLE FOR THE DRIVING CONDITIONS TO BE ENCOUNTERED BUT IN NO CASE SHALL THE RAM WEIGHT BE LESS THAN 3,000 LBS. OR HAVE A RATED ENERGY OF LESS THAN 7,260 FT. LBS. THE HAMMER SHALL BE OPERATED AT ALL TIMES AT THE PRESSURE AND SPEED RECOMMENDED BY THE MANUFACTURER. BOILER OR COMPRESSOR CAPACITY SHALL BE SUFFICIENT TO OPERATE THE HAMMER CONTINUOUSLY AT FULL RATED SPEED. PILES SHALL BE PROTECTED DURING DRIVING BY A CUSHION AND CAP OF APPROVED DESIGN. PILE DRIVERS SHALL HAVE FIRMLY SUPPORTED LEADS EXTENDING TO THE LOWEST POINT THE HAMMER MUST REACH TO DRIVE THE PILES TO CUT-OFF ELEVATION WITHOUT THE USE OF A FOLLOWER. EACH PILE SHALL BE DRIVEN CONTINUOUSLY AND WITHOUT VOLUNTARY INTERRUPTION UNTIL THE REQUIRED DEPTH OF PENETRATION RATE PER BLOW HAS BEEN ATTAINED. DEVIATION FROM THIS PROCEDURE WILL BE PERMITTED ONLY IN CASE THE DRIVING IS STOPPED BY CAUSES WHICH COULD NOT REASONABLY HAVE BEEN ANTICIPATED. A PILE WHICH CANNOT BE DRIVEN TO THE REQUIRED DEPTH BECAUSE OF AN UNDERGROUND OBSTRUCTION SHALL BE PULLED AND REDRIVEN IF THE OBSTRUCTION CAN BE REMOVED OR PENETRATED OR THE PILE SHALL BE CUT-OFF WHICHEVER IS DIRECTED BY THE ENGINEER. A PILE WHICH HAS NOT REACHED THE REQUIRED PENETRATION RATE PER BLOW WHEN THE TIP HAS BEEN DRIVEN TO THE CUT-OFF ELEVATION SHALL BE DRIVEN TO A DEPTH SUFFICIENT TO DEVELOP THE REQUIRED PENETRATION RATE PER BLOW. A PILE WHICH HAS REACHED THE REQUIRED PENETRATION RATE PER BLOW AND THE TOP IS BELOW THE CUT-OFF ELEVATION SHALL BE PROVIDED TO THE ENGINEER FOR FOOTING MODIFICATIONS. THE PENETRATION PER BLOW WHICH IS USED AS AN INDICATION OF THE BEARING CAPACITY OF THE PILE IS DEPENDENT UPON THE TYPE OF DRIVING EQUIPMENT USED AND OTHER FACTORS, AND IT WILL IN EVERY CASE BE DETERMINED BY THE ENGINEER. PILES WHICH HAVE UPLIFTED AFTER DRIVING SHALL BE REDRIVEN TO GRADE AFTER CONCLUSION OF OTHER DRIVING ACTIVITY IN THAT GENERAL AREA. UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER, NO PILE SHALL BE DRIVEN WITHIN 100 FT. OF CONCRETE LESS THAN 7 DAYS OLD.
7. A PILE WHICH HAS NOT REACHED THE REQUIRED PENETRATION RATE PER BLOW WHEN THE TIP HAS BEEN DRIVEN TO THE CUT-OFF ELEVATION SHALL BE OVER DRIVEN AS DIRECTED TO A DEPTH SUFFICIENT TO DEVELOP THE REQUIRED PENETRATION RATE PER BLOW.
8. UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER, NO PILE SHALL BE DRIVEN WITHIN 100 FT. OF CONCRETE LESS THAN 7 DAYS OLD.
9. A STATIC LOAD TEST WILL NOT BE REQUIRED. PILING SHALL BE DRIVEN TO THE STATED LOADING REQUIREMENTS BASED ON BLOW COUNT OBSERVATION AND FOLLOWING THE FORMULA: $DR = (2*E)/(S+0.1)$
DR = SAFE BEARING VALUE IN TONS
S = AVERAGE PENETRATION PER BLOW IN INCHES(MINIMUM LAST 10-20 BLOWS)
E = ENERGY PER BLOW OF HAMMER IN FOOT-TONS (PRODUCT OF W*H FOR SINGLE-ACTING HAMMER)
W = WEIGHT OF STRIKING PARTS OF HAMMER IN TONS
H = HEIGHT OF FALL IN FEET
10. ALL PILES DAMAGED DURING HANDLING OR DRIVING SHALL BE REPLACED AT NO ADDITIONAL COST TO THE OWNER.

STRUCTURAL STEEL GENERAL NOTES

REFERENCE SPECIFICATIONS

- 1. STRUCTURAL STEEL WORK SHALL BE IN ACCORDANCE WITH AISC SPECIFICATIONS
- 2. STRUCTURAL STEEL DESIGN, FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS – ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN" (1989) AND "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" (1992).
- 3. HIGH STRENGTH BOLTING SHALL BE IN ACCORDANCE WITH AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 BOLTS OR A490 BOLTS" (1994).
- 4. ALL WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS AND IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY STANDARD D1.1, LATEST EDITION.

MATERIALS

- 8. STRUCTURAL STEEL "W", "WT" AND "S" SHAPES SHALL CONFORM TO ASTM A992, GRADE 50. ALL CHANNELS, ANGLES AND PLATES SHALL CONFORM TO ASTM A572 GR 50 UNLESS NOTED OTHERWISE OR APPROVED EQUAL.
- 9. HIGH STRENGTH BOLTS, NUTS AND HARDENED WASHERS SHALL CONFORM TO ASTM A325, ASTM A563 DH, AND ASTM F436 RESPECTIVELY. MACHINE BOLTS AND NUTS SHALL CONFORM TO ASTM A307, AND PLAIN WASHERS SHALL CONFORM TO ANSI B18.22.1. BOLTS, NUTS AND WASHERS SHALL BE HOT DIP GALVANIZED.
- 10. WELDING ELECTRODES USED FOR FIELD CONNECTIONS SHALL CONFORM TO AWS A5.1, CLASS E70XX UNLESS NOTED OTHERWISE ON THE DRAWINGS. WELDING ELECTRODES USED FOR SHOP CONNECTIONS SHALL CONFORM TO AWS A5.1 WITH A MINIMUM ELECTRODE TENSILE STRENGTH OF 70 KSI, UNLESS NOTED OTHERWISE ON THE DRAWINGS.

FABRICATION AND ERECTION

- 1. NO TEMPORARY ERECTION BOLTS OTHER THAN HIGH STRENGTH BOLTS SHALL BE USED DURING ERECTION OF THE MEMBERS REQUIRING HIGH STRENGTH BOLTS.
- 2. WHEN CONNECTIONS REQUIRE FIELD PREPARATION OF BOLT HOLES, THE HOLES SHALL BE DRILLED OR PUNCHED, AND THE DIAMETER OF THE BOLT HOLES SHALL BE 1/16 INCH GREATER THAN THE NOMINAL BOLT DIAMETER.
- 3. FIELD CORRECTING OF FABRICATED STEEL BY GAS CUTTING SHALL NOT BE PERMITTED ON MAJOR STRUCTURAL FRAMING MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER.
- 4. ALL ANGLE AND STRUCTURAL TEE BRACING SHALL HAVE 1/16 INCH DRAW PER 10 FEET OF LENGTH. MAXIMUM DRAW SHALL BE 3/16 INCH AND NO DEDUCTION SHALL BE MADE FOR LENGTHS LESS THAN 10 FEET.
- 5. FILLET WELD SIZES, IF NOT CALLED OUT ON THE DRAWINGS, SHALL BE 3/16 INCH MINIMUM UNLESS TABLE J2.4 OF AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS – ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN" REQUIRES A LARGER SIZE.
- 6. SLIP CRITICAL HIGH STRENGTH BOLTED CONNECTIONS SHALL BE INSTALLED AND TIGHTENED THROUGH THE USE OF "TURN-OF-THE-NUT" TIGHTENING AS PROVIDED IN THE AISC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS. ALL NON-SLIP CRITICAL BOLTS MAY BE TIGHTENED TO A "SNUG-TIGHT" CONDITION AS DEFINED BY AISC.
- 7. THE CONTRACTOR SHALL NOT CUT OR ALTER STRUCTURAL MEMBERS WITHOUT THE APPROVAL OF THE ENGINEER.
- 8. ERECTOR SHALL PROVIDE ALL TEMPORARY SHORING AND BRACING NEEDED FOR STABILITY UNTIL STRUCTURE IS COMPLETE.
- 9. PAINTED SURFACES THAT HAVE BEEN DAMAGED BY WELDING, CUTTING, BURNING, SHEARING OR OTHER DAMAGE INCURRED DURING TRANSIT OR ERECTION SHALL BE REPAIRED TO PROVIDE A FINISH IN ACCORDANCE WITH SPECIFICATIONS.

CONNECTIONS

- 1. BOLTED CONNECTIONS FOR SECONDARY STRUCTURAL MEMBERS (PURLINS, GIRTS, STAIR FRAMING, STAIR BRACING, TOE PLATE, HANDRAIL, LADDERS, ETC) SHALL BE BOLTED WITH HIGH STRENGTH BOLTS CONFORMING TO ASTM A325, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- 2. WHEN CONNECTION DETAILS ARE NOT SHOWN ON THE DRAWINGS, CONNECTIONS SHALL BE DESIGNED IN ACCORDANCE WITH AISC SPECIFICATIONS.
- 3. HIGH STRENGTH BOLT SIZES SHALL BE 3/4 INCH DIAMETER (UNO) EXCEPT THAT TOE PLATES, HANDRAIL AND LADDERS SHALL BE BOLTED WITH 5/8 INCH DIAMETER BOLTS.
- 4. FIELD CONNECTIONS SHALL BE MADE WITH GALVANIZED ASTM-A325 HIGH STRENGTH BOLTS, BEARING TYPE CONNECTIONS WITH THREADS EXCLUDED FROM SHEAR PLANE. CONNECTIONS SHALL BE MADE WITH 3/4" DIA. BOLTS UNLESS OTHERWISE NOTED.
- 5. ALL SHOP CONNECTIONS SHALL BE WELDED. BEAM CONNECTIONS SHALL USE TABLE III, CASE 1 WELD A, WITH TABLE II BOLTED CONNECTIONS. WELDING SHALL BE IN ACCORDANCE WITH AISC SPECIFICATIONS AND AWS D1.1 STRUCTURAL WELDING CODE USING E70XX ELECTRODES.
- 6. MINIMUM NUMBER OF BOLTS IN CONNECTIONS NOT OTHERWISE DETAILED.
DIAGONAL ANGLE BRACING – 3
OTHER BRACING – TO DEVELOP 50% OF MEMBER STRENGTH
BEAMS (WF & CHANNEL) – MAXIMUM NO. MEMBER WILL ACCOMMODATE.
- 7. ALL WELDED JOINTS SHALL BE WELDED CONTINUOUSLY. MINIMUM WELD SIZE SHALL BE 1/4" FILLET.
- 8. ALL ANCHOR BOLTS SHALL BE GALVANIZED.

DETAILS

- 1. HOLES FOR 5/8" BOLTS SHALL BE 11/16" DIA., HOLES FOR 3/4" BOLTS SHALL BE 13/16" DIA. AND FOR 1/2" BOLTS SHALL BE 5/8" DIA. UNLESS NOTED OTHERWISE.
- 2. BRACING MEMBERS MEETING AT A POINT SHALL HAVE THEIR GRAVITY AXIS MEETING AT ONE POINT IF PRACTICABLE. IF NOT, PROVISIONS SHALL BE MADE FOR BENDING STRESSES DUE TO ECCENTRICITY.
- 3. CLIP ANGLES AND GUSSET PLATES SHALL BE 3/8" THICK UNLESS NOTED OTHERWISE.
- 4. COLUMN BASES AND SPLICED ENDS SHALL BE MILLED OR SAW CUT TO PROVIDE FULL BEARING.
- 5. BRACING: ALL RECESSED DIMENSIONS (i.e. -6, -8 ETC.) ARE NOMINAL DIMENSIONS FOR MEMBER CLEARANCE ONLY. THE FABRICATOR AND DETAILER SHALL PROVIDE FOR CLEARANCE AT BOLTS, PLATES, AND ANY OTHER INTERFERENCES.

COATINGS

- 1. ALL STEEL SURFACES TO BE PAINTED SHALL BE BLAST CLEANED TO NEAR-WHITE CONDITION IN ACCORDANCE WITH SSPC-SP 10-82.
- 2. ALL STEEL SURFACES, EXCEPT MACHINED ITEMS, OR NOTED OTHERWISE, SHALL BE PAINTED. PAINTING SYSTEM AS FOLLOWS:
- 3. PRIME COAT – SHOP APPLIED. PRIME WITH ONE COAT OF INORGANIC ZINC WITH MIL DFT. CARBO ZINC 11 AS MANUFACTURED BY CARBOLINE, OR AN APPROVED EQUAL.
- 4. INTERMEDIATE COAT – SHOP APPLIED. ONE COAT OF EPOXY PRIMER WITH 3 TO MIL DFT. CARBOLINE 893
- 5. TOP COAT – SHOP APPLIED. TOP COAT IS ONE (1) COAT OF HIGH BUILD VINYL WITH 4 MIL DFT. POLYCLAD 134HS AS MANUFACTURED BY CARBOLINE, OR AN APPROVED EQUAL.

LIGHT GAUGE GALVANIZED METAL STUDS AND PURLINS:

- 1. DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH AISI "SPECIFICATION FOR THE DESIGN OF COLD FORMED STRUCTURAL MEMBERS" AND SHALL CONFORM TO ASTM A570, A611 AND/OR A446.
- 2. JOINTS AND CONNECTIONS SHALL BE MADE WITH SCREWS OR BOLTS. PROVIDE BRIDGING, BLOCKING AND ACCESSORIES AS RECOMMENDED BY LIGHT GAUGE STEEL MANUFACTURER.
- 3. ALL COLD-FORMED STEEL FRAMING, CONNECTORS ETC. SHALL RECEIVE A G-90 GALVANIZED COATING
- 4. 8" 12GA WALL C-GIRTS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:
A. DEPTH = 8 in
B. WIDTH = 3.0 in
C. RETURN = 0.625 in
D. GAUGE = 12
E. AREA = 1.47 in^2
F. Ix = 14.4 in^4
G. Sx = 3.59 in^3
H. Fy = 50 ksi
- 5. 10" 12GA C-PURLINS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES
A. DEPTH = 10 in
B. WIDTH = 3.0 in
C. RETURN = 0.625 in
D. GAUGE = 12
E. AREA = 1.68 in^2
F. Ix = 24.3 in^3
G. Sx = 4.86 in^3
H. Fy = 50 ksi
- 6. 3.625" 30MIL DRYWALL STUDS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES
A. DEPTH = 3.625 in
B. WIDTH = 1.25 in
C. THICKNESS = 30 MIL
D. AREA = 0.20 in^2
E. Ix = 0.398 in^3
F. Sx = 0.110 in^3
G. Fy = 33 ksi

WIND LOADING NOTES: (ASCE 7-16, ULTIMATE WIND LOADS)						
1. BASIC WIND VELOCITY 159 MPH						
2. RISK CATEGORY II.						
3. WIND EXPOSURE B, MEAN ROOF HEIGHT 20 FT						
4. INTERNAL PRESSURE COEFFICIENT +/-0.18						
5. CORNER DISTANCE, "A" = 3.0 FT						
MAIN FRAME WIND RESISTING SYSTEM (MWFRS)						
AREA		INTERIOR ZONE		END ZONE		
WALLS	WINDWARD	26.6 PSF		40.1 PSF		
	LEEWARD	INCLUDED IN WINDWARD		INCLUDED IN WINDWARD		
ROOF	WINDWARD	-33.6 PSF		-48.2 PSF		
	LEEWARD	-21.2 PSF		-27.4 PSF		
OVERHANG "PORCH"		-53.5 PSF		-68.3 PSF		
COMPONENTS AND CLADDING						
ROOF: (LOADING IN PSF)						
		ZONE 1 (INTERIOR)		ZONE 2 (EDGE)		ZONE 3 (CORNER)
TRIBUTARY AREA (ft²)		(+)	(-)	(+)	(-)	(+) (-)
10		18.5	45.5	18.5	76.4	18.5 114.9
20		17.4	44.4	17.4	68.2	17.4 95.2
100		16.0	41.7	16.0	49.4	16.0 49.3
WALLS: (LOADING IN PSF)						
		ZONE 4 (INTERIOR)		ZONE 5 (EDGE/CORNER)		
TRIBUTARY AREA (ft²)		(+)	(-)	(+)	(-)	
10		41.7	45.1	41.7	55.5	
20		39.8	43.3	39.8	51.9	
100		35.5	39.0	35.5	43.3	

B	ISSUED FOR BID	08/01/22	YTH	GDEC
REV.	DESCRIPTION	DATE	BY	CHK'D

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Georgia (706) 302-2831

Tennessee (901) 290-5444

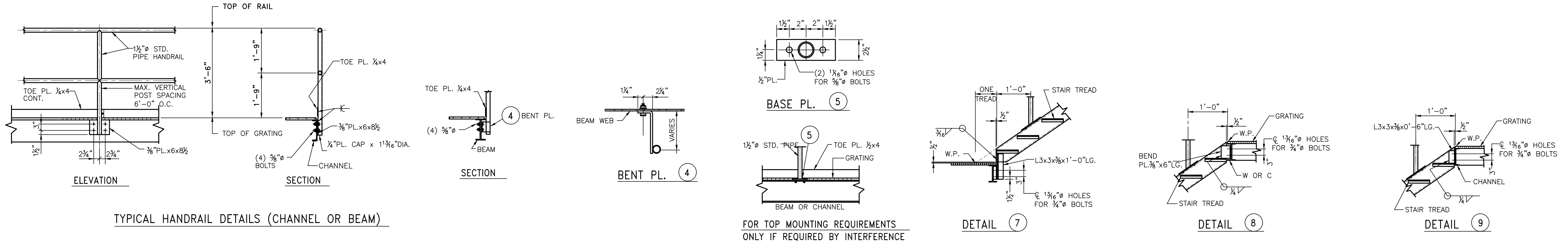
PROJECT

TERMINAL RAILWAY
OFFICE ADDITION/RENOVATION

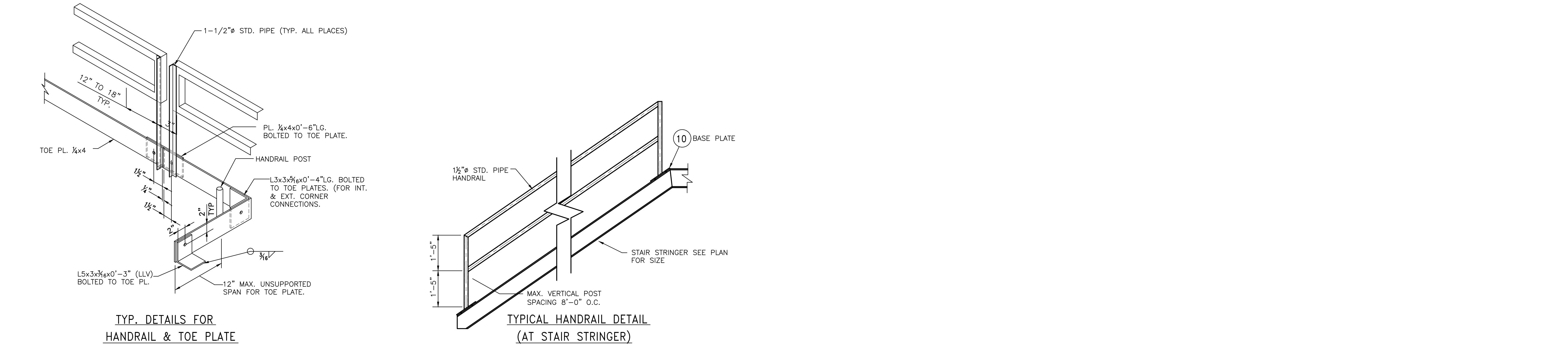
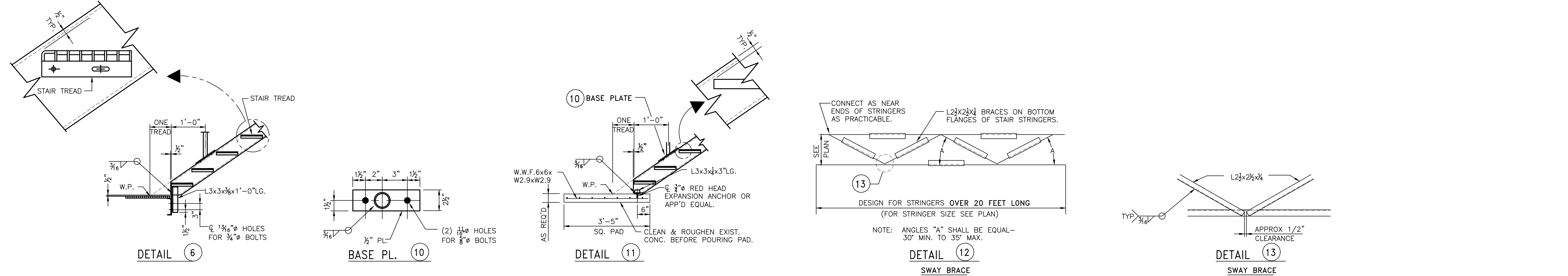
126 INDUSTRIAL CANAL ROAD
MOBILE, ALABAMA

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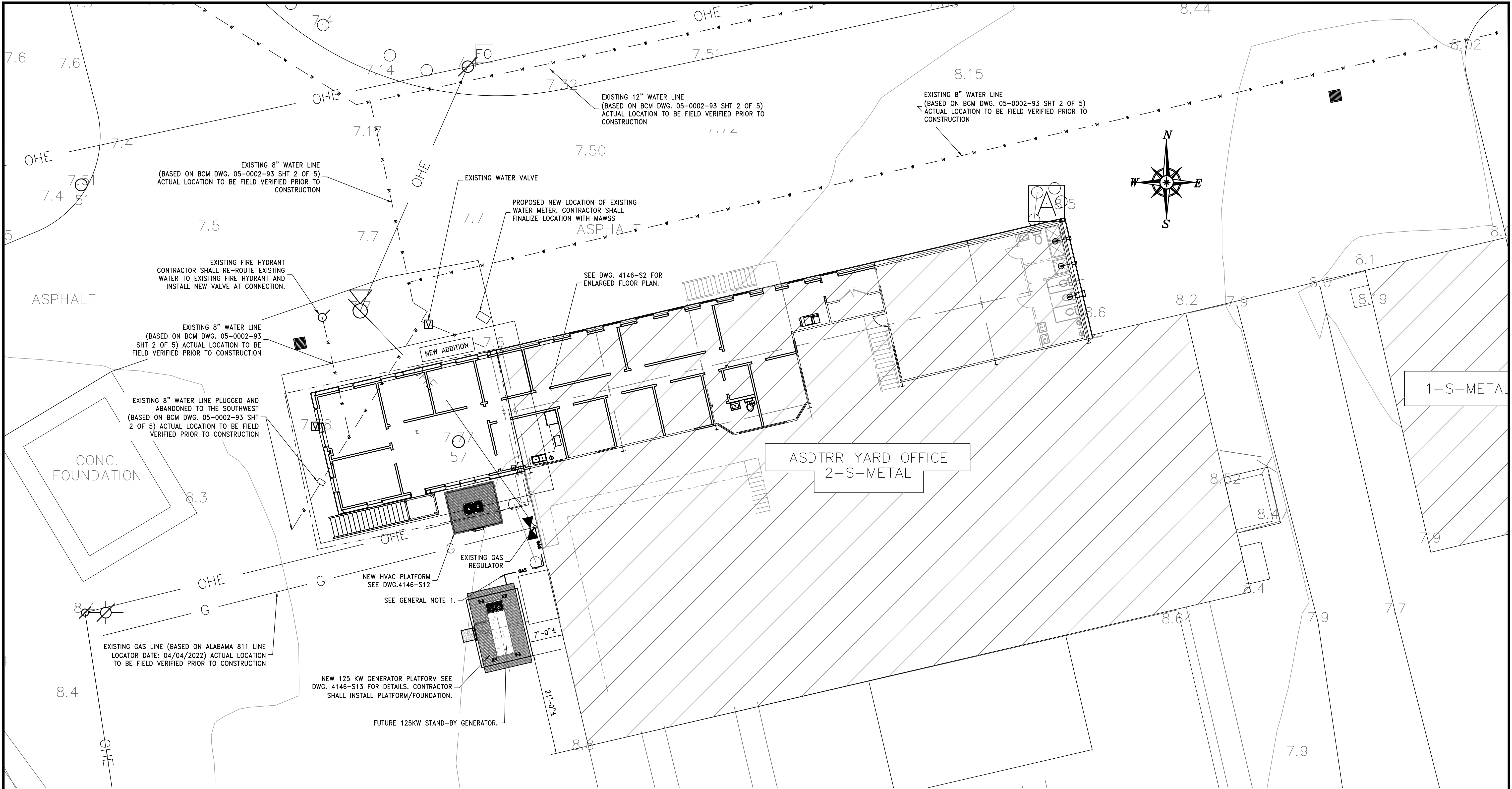
TITLE			
GENERAL NOTES			
SCALE	DRAWN BY	DATE	SHEET
AS NOTED	CMG	0/0/00	22x34 REV. B
JOB NO.	CHECKED BY	DATE	DRAWING NUMBER
4146-22	CMG	0/0/00	4146-G2



TYPICAL HANDRAIL DETAILS (CHANNEL OR BEAM)



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GENERAL NOTES:

1. CONTRACTOR SHALL ROUTE A NEW 1½"Ø SCH. 40 GALVANIZED STEEL ASTM 120 GAS LINE BELOW GRADE (24" MIN.) FROM THE EXISTING GAS SUPPLY TO THE NEAREST COLUMN AND STUB UP W/CAP FOR FUTURE CONNECTION. GENERATOR GAS SUPPLY: 1678 CFH @ 11 IN. H₂O.

UTILITY SITE NOTE:

SITE CONTRACTOR SHALL CONTACT ALABAMA 1 CALL AND HAVE ALL EXISTING UTILITIES LOCATED PRIOR TO EXCAVATION. ALL UTILITIES TO SERVE BUILDING SHALL BE COORDINATED WITH OWNER AND RESPECTIVE UTILITY COMPANY PRIOR TO COMMENCEMENT OF SITE WORK.

NEW SITE PLAN
1"=10'-0"

B	ISSUED FOR BID	08/01/22	JWM	GDEC
REV.	DESCRIPTION	DATE	BY	CHK'D

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Georgia (706) 302-2831 Tennessee (901) 290-5444

PROJECT

TERMINAL RAILWAY
OFFICE ADDITION/RENOVATION
126 INDUSTRIAL CANAL ROAD
MOBILE, ALABAMA

TITLE

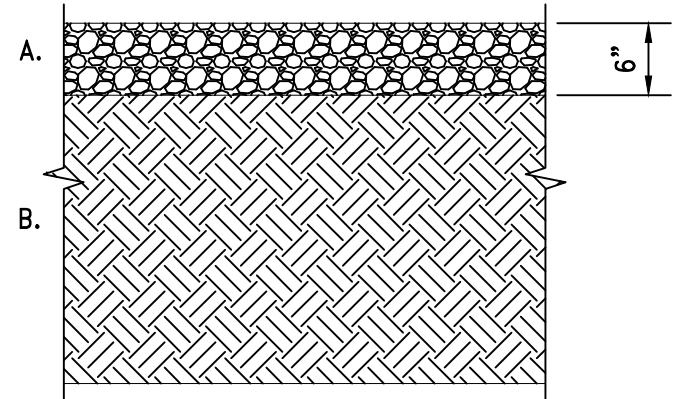
NEW SITE PLAN

SCALE	AS NOTED	DRAWN BY	CMG	DATE	03/05/22	SHEET	—	OF	—	22x34	REV.	B
JOB NO.	4146-22	CHECKED BY	CMG	DATE	06/06/22	DRAWING NUMBER	4146-C2					

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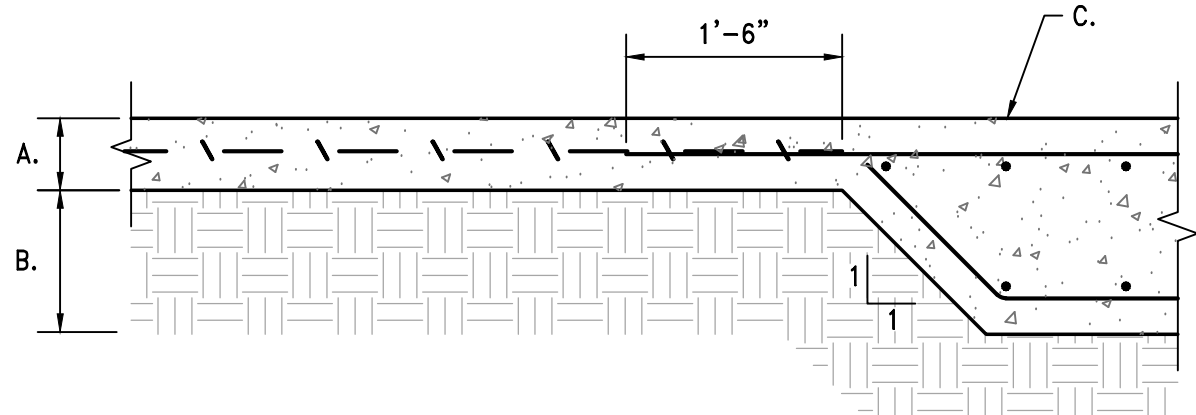
FOUNDATION SCHEDULE	
TYPE	NOTES
A	SEE DETAIL 1 ON DWG 4146-F2
B	SEE DETAIL 2 ON DWG 4146-F2
C	SEE DETAIL 3 ON DWG 4146-F2
D	SEE DETAIL 4 ON DWG 4146-F3
E	SEE DETAIL 5 ON DWG 4146-F3



CRUSHED STONE DETAIL
N.T.S.

GENERAL NOTES:

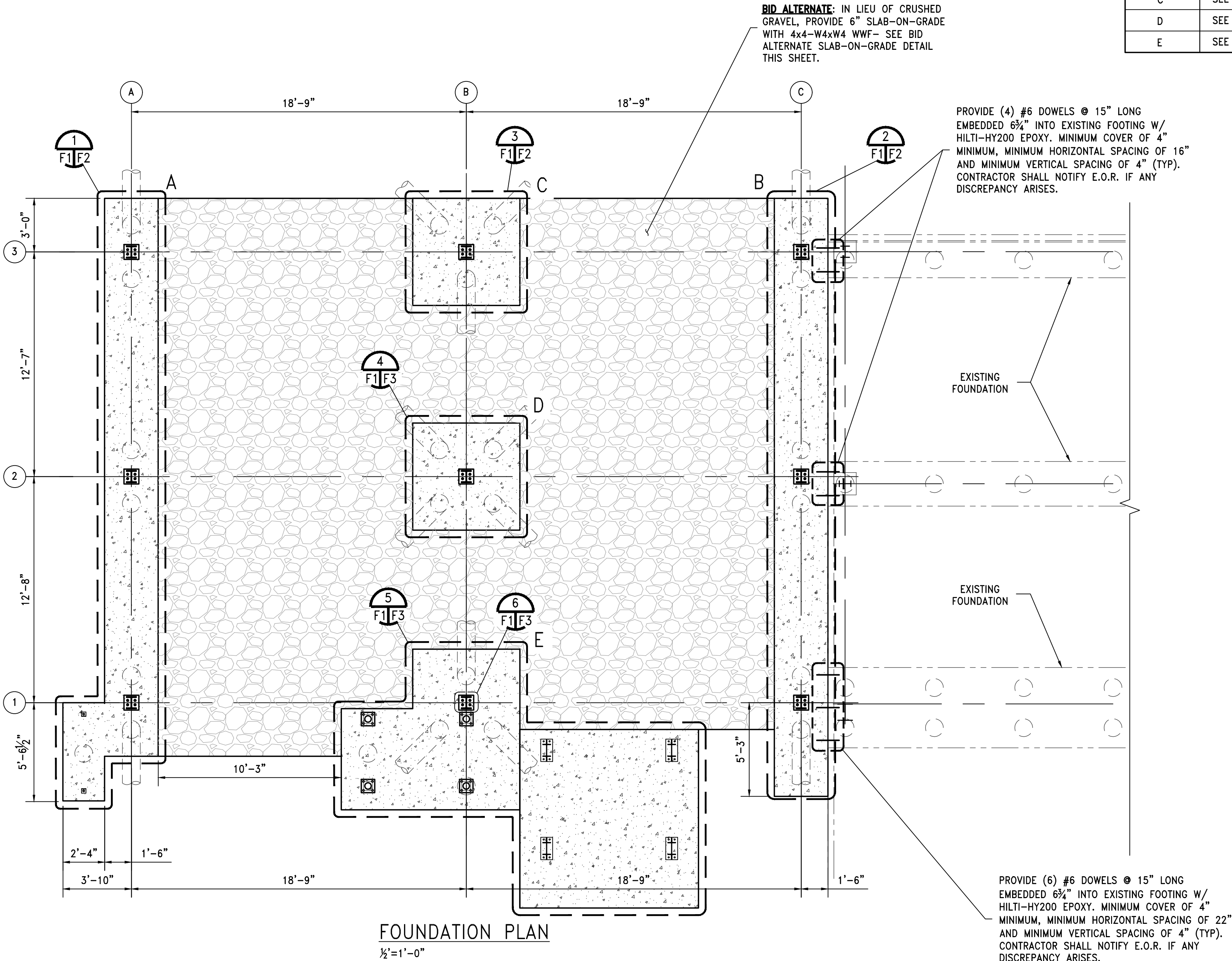
- A. 6 INCHES 301A-020: CRUSHED AGGREGATE BASE, TYPE B, PLANT MIXED
B. IN-SITU SOIL



BID ALTERNATE SLAB-ON-GRADE DETAIL
N.T.S.

GENERAL NOTES:

- A. 6" SLAB-ON-GRADE W/ 4x4-W4xW4 WWF (MIN. 3" CLEAR COVER)
B. IN-SITU SOIL
C. TYPICAL FOOTING WITH ADDITIONAL TURNDOWN WHERE SLAB IS PRESENT. EXTEND TOP MAT OF REBAR 1'-6" INTO SLAB.



LEGEND

- [Pattern] = EXISTING CONCRETE
[Pattern] = NEW CONCRETE
[Pattern] = NEW CRUSHED STONE

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REV.	DESCRIPTION	DATE	BY	CHK'D
B	ISSUED FOR BID	08/01/22	YTH	GDEC

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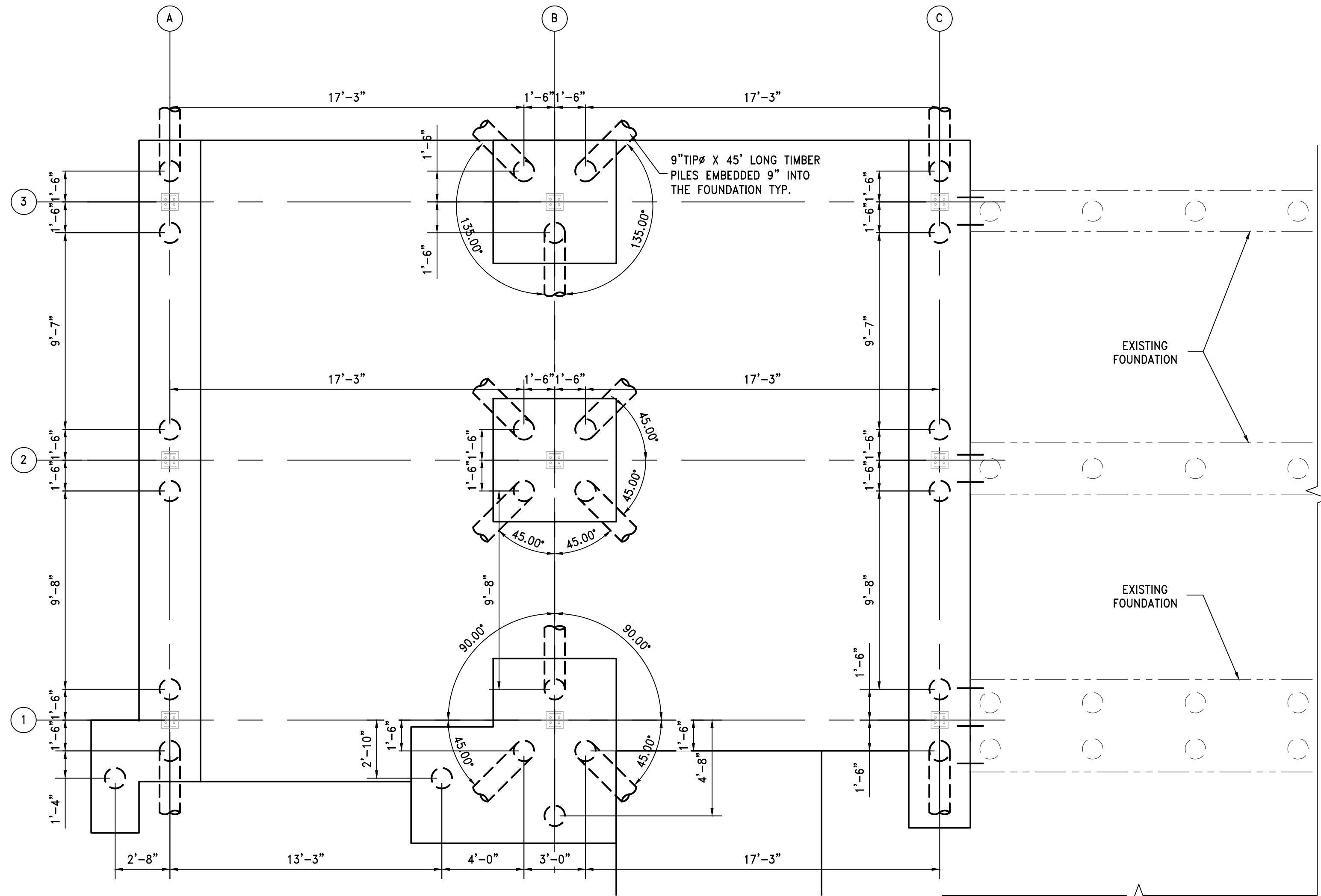
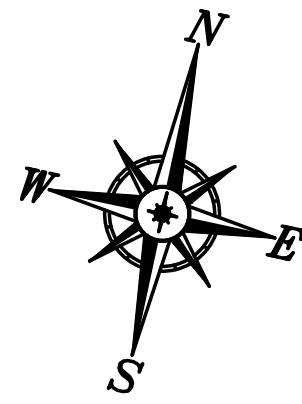
PROJECT

TERMINAL RAILWAY
OFFICE ADDITION/RENOVATION
126 INDUSTRIAL CANAL ROAD
MOBILE, ALABAMA

TITLE


FOUNDATION PLAN


SCALE	DRAWN BY	DATE	SHEET	REV.
AS NOTED	JWM	04/07/22	22x34	B
JOB NO.	CHECKED BY	DATE	DRAWING NUMBER	
4146-22	GDEC	04/07/22	4146-F1	



PILE PLAN
1/2"=1'-0"

LEGEND

 = EXISTING CONCRETE

 = NEW CONCRETE

B	ISSUED FOR BID	08/01/22	VTH	GDEC
REV.	DESCRIPTION	DATE	BY	CHK'D

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PROJECT

TERMINAL RAILWAY
OFFICE ADDITION/RENOVATION

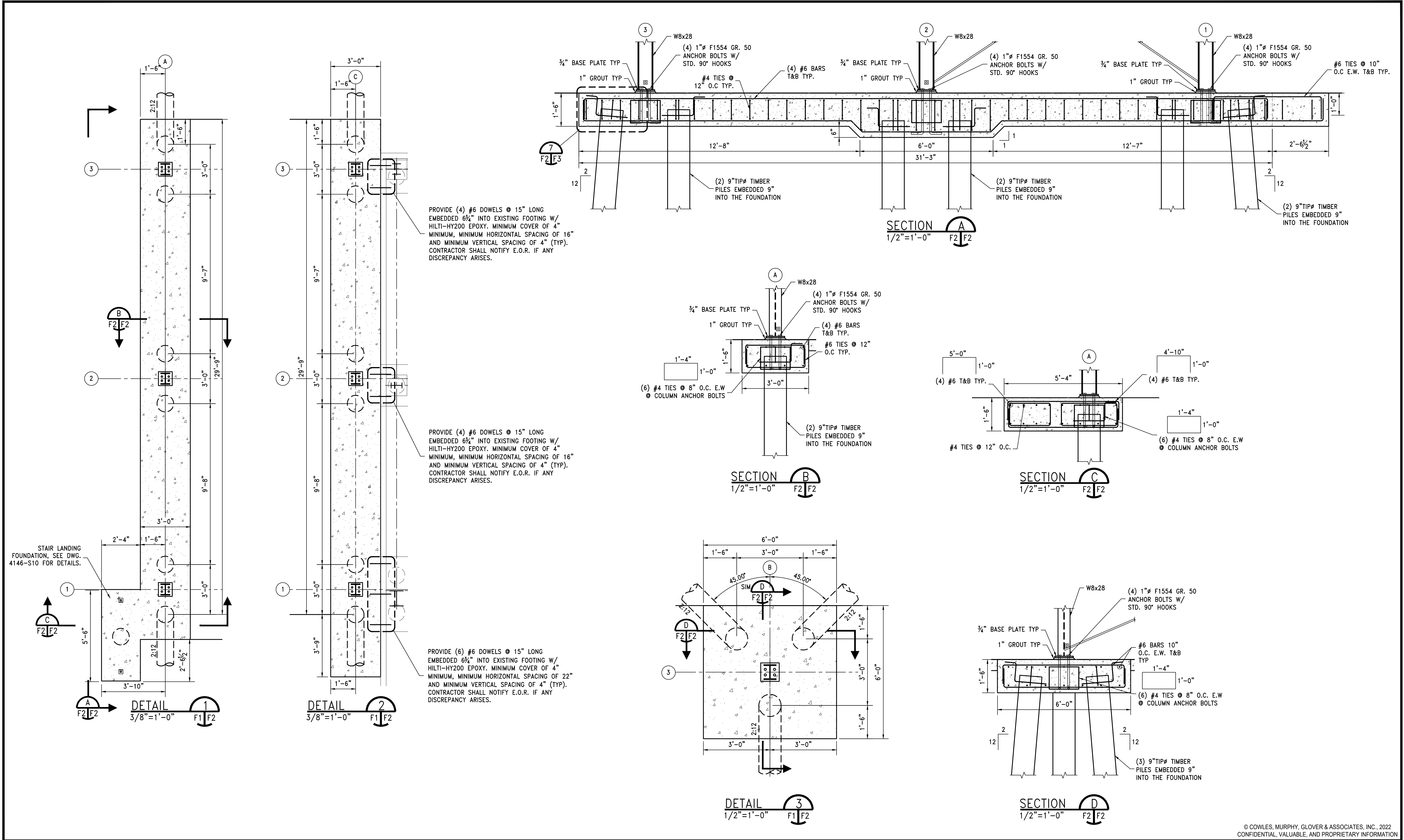
126 INDUSTRIAL CANAL ROAD
MOBILE, ALABAMA

TITLE

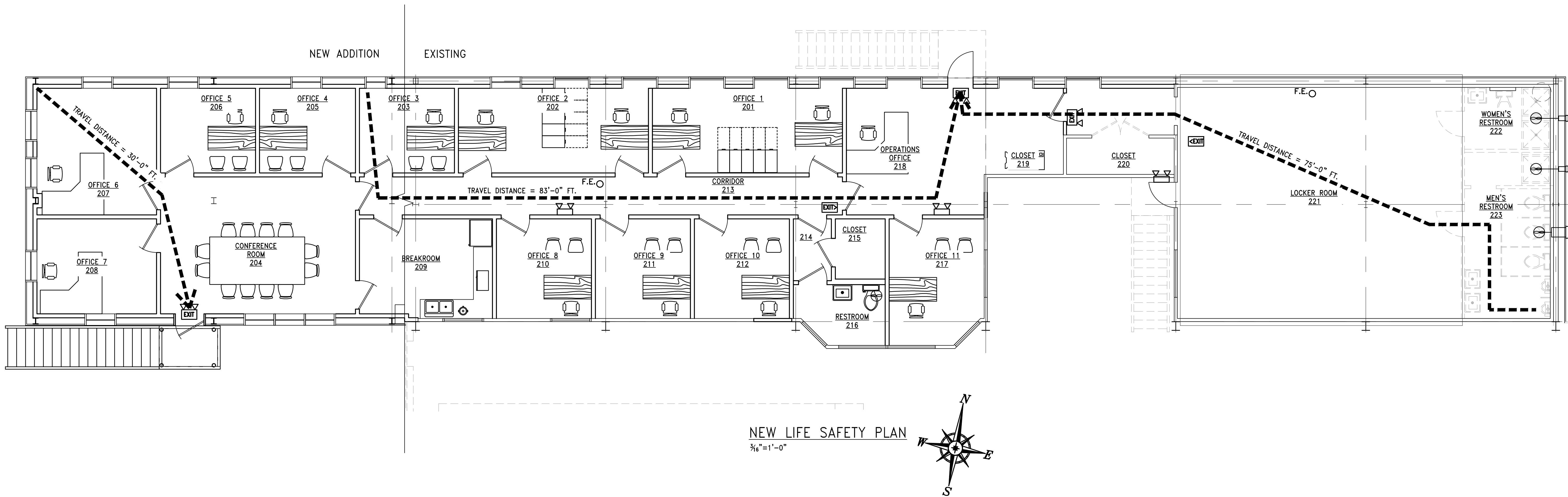
PILE PLAN

SCALE AS NOTED	DRAWN BY JWM	DATE 04/07/22	SHEET — OF — 22x34	REV. B
JOB NO. 4146-22	CHECKED BY GDEC	DATE 04/07/22	DRAWING NUMBER 4146-F1A	

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					Cowles, Murphy, Glover & ASSOCIATES <i>A Full Service Engineering Firm</i>		457 St. Michael St., Mobile, AL 36602 13 Thrash Rd., LaGrange, GA 30241 11880 Cranston Dr. Ste 102, Arlington, TN 38002 Alabama (251) 433-1611 Georgia (706) 302-2831 Tennessee (901) 290-5444	PROJECT TERMINAL RAILWAY OFFICE ADDITION/RENOVATION 126 INDUSTRIAL CANAL ROAD MOBILE, ALABAMA	TITLE FOUNDATION PLAN	SCALE AS NOTED DRAWN BY JWM DATE 04/07/22 SHEET <u> </u> OF <u> </u> 22x34 REV. B			
REV.	DESCRIPTION	DATE	BY	CHK'D	PERFORMANCE • RELIABILITY • EXPERIENCE					JOB NO. 4146-22	CHECKED BY GDEC	DATE 04/07/22	DRAWING NUMBER 4146-F2



F.E.○	WALL MOUNTED FIRE EXTINGUISHER (USE TYPE 2-A:20-B:C IN ALL AREAS) MAX. SPACING 75', MIN. 2
☒E	EMERGENCY LIGHTS WITH BATTERY BACKUP. SEE DWG. 4146-E3 FOR LIGHTING SPECIFICATIONS
EXIT	ILLUMINATED EXIT SIGN HARD WIRED TO ELECTRICAL SYSTEM WITH BATTERY BACKUP.
□	EMERGENCY LIGHTING FIXTURE UNIT HARD WIRED TO ELECTRICAL SYSTEM WITH BATTERY BACKUP

MAXIMUM TRAVEL DISTANCE 83'-0"

B	ISSUED FOR BID	08/01/22	JWM	JDG
REV.	DESCRIPTION	DATE	BY	CHK'D

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& ASSOCIATES
A Full Service Engineering Firm

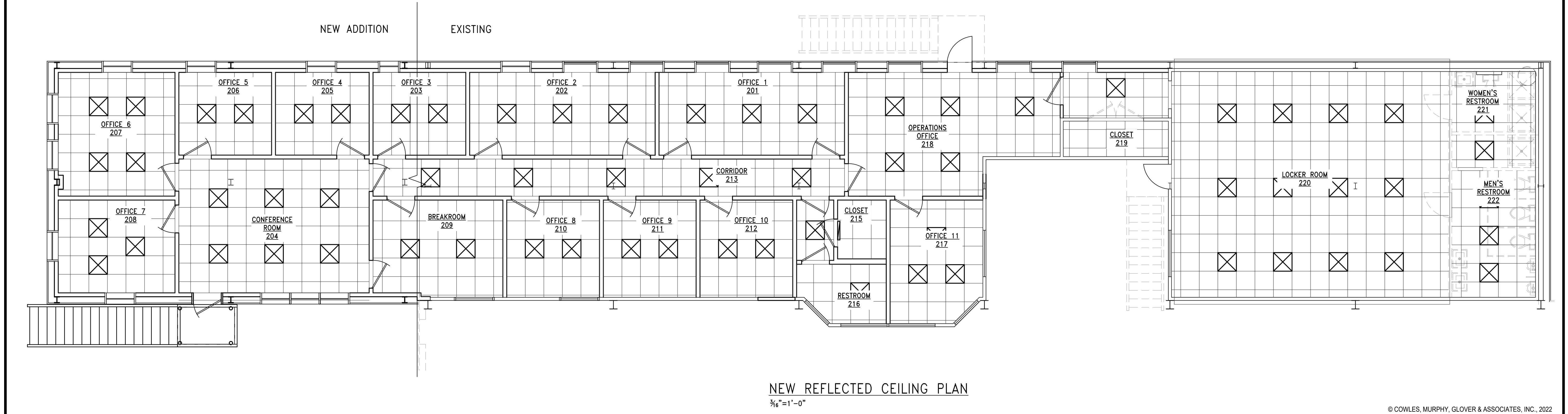
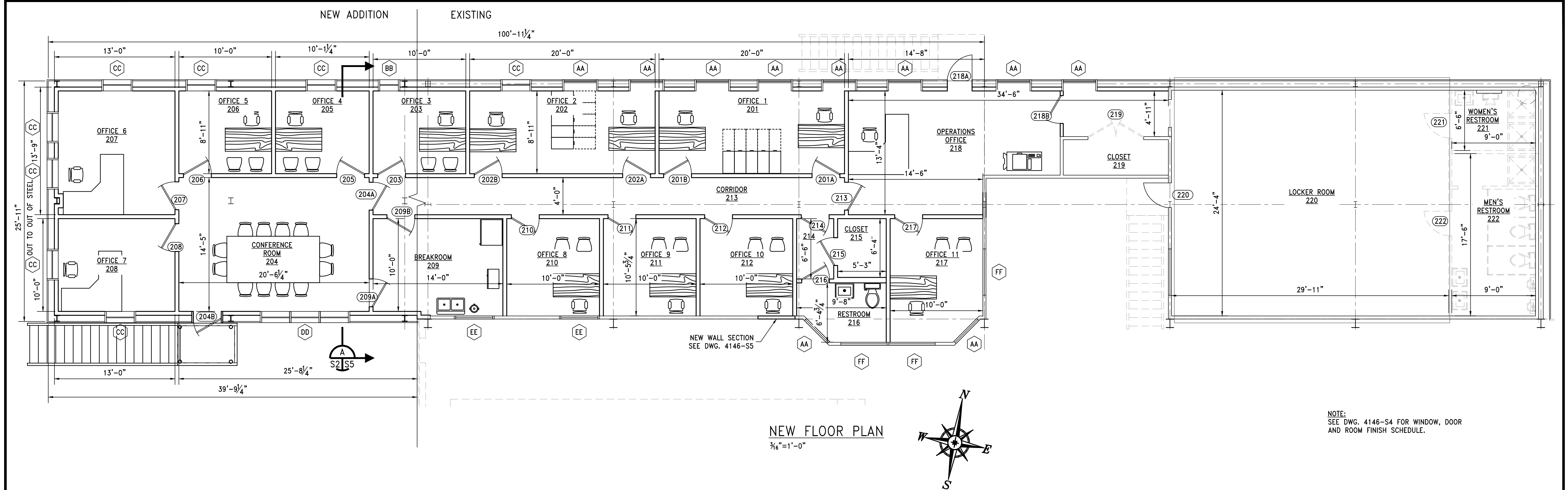
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Georgia (706) 302-2831 Tennessee (901) 290-5444

PROJECT

TERMINAL RAILWAY
OFFICE ADDITION/RENOVATION
126 INDUSTRIAL CANAL ROAD
MOBILE, ALABAMA

NEW LIFE SAFETY PLAN				
SCALE 3/16"=1'-0"	DRAWN BY JWM	DATE 05/25/22	SHEET — OF —	22x34 REV. B
JOB NO. 4146-22	CHECKED BY JDG	DATE 05/31/22	DRAWING NUMBER 4146-LSP	



B	ISSUED FOR BID	08/01/22	JWM	GDEC
REV.	DESCRIPTION	DATE	BY	CHK'D

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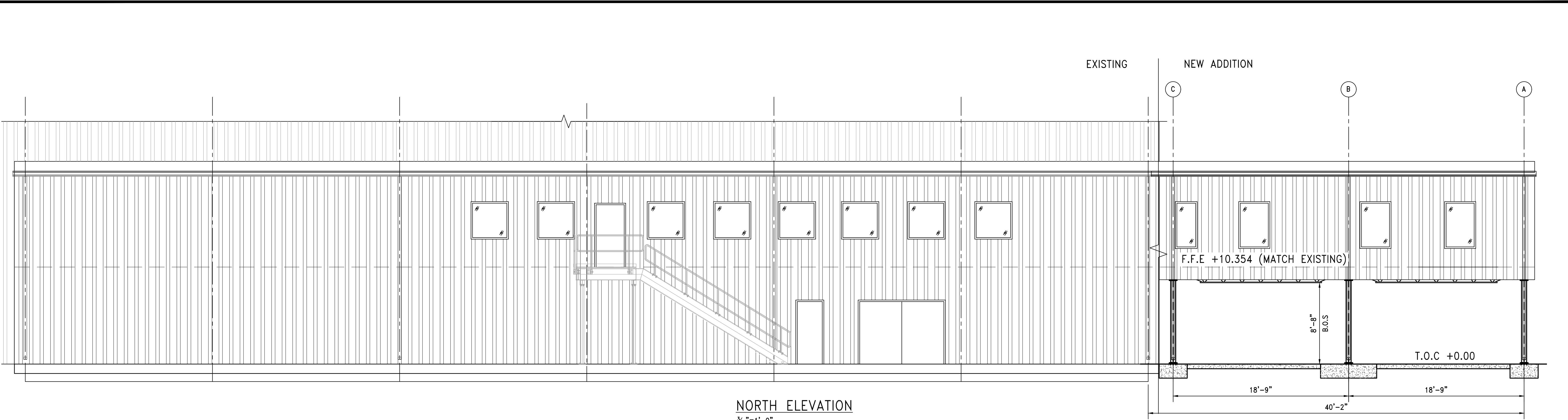
PROJECT

TERMINAL RAILWAY
OFFICE ADDITION/RENOVATION

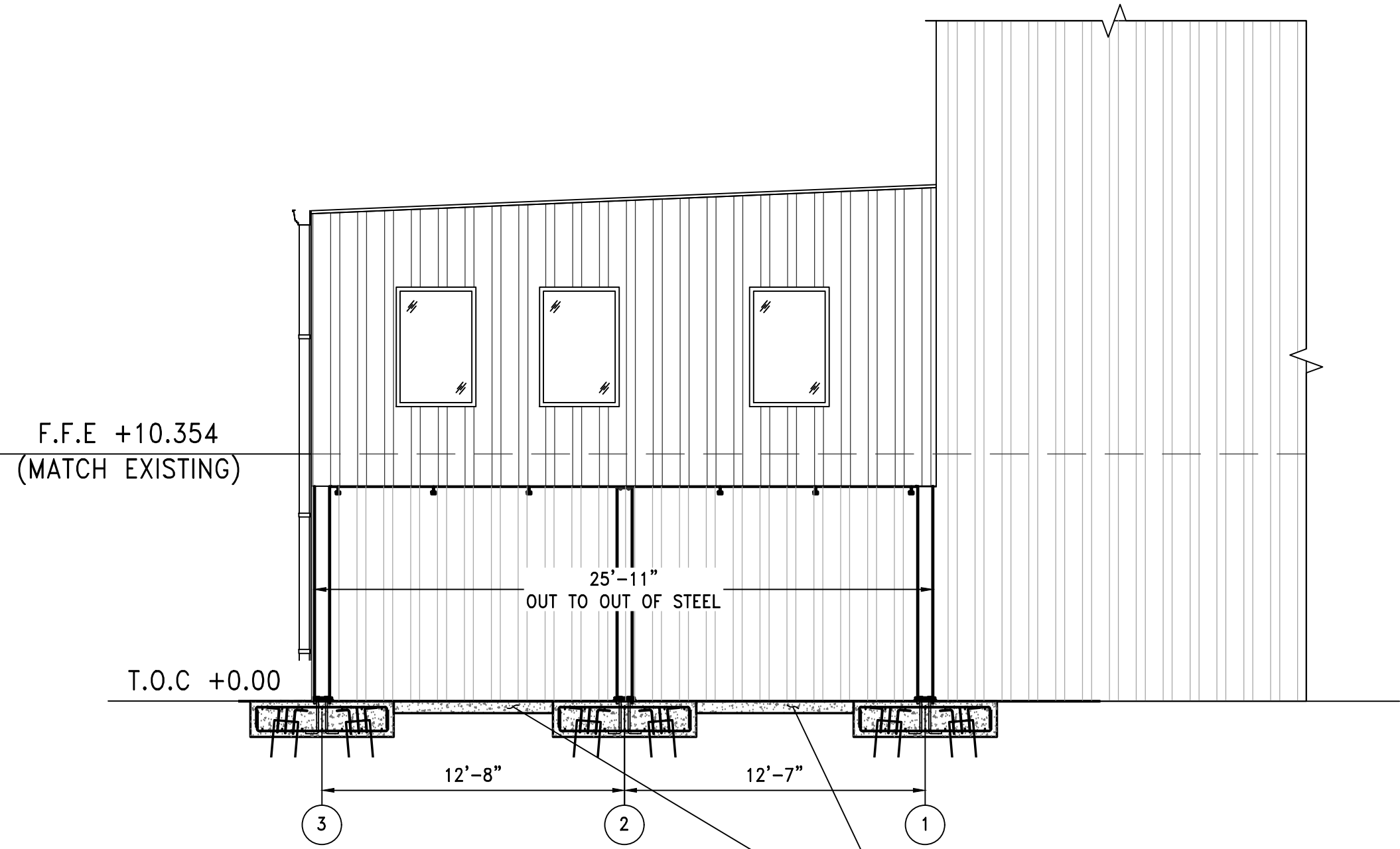
126 INDUSTRIAL CANAL ROAD
MOBILE, ALABAMA

TITLE				
NEW FLOOR & REFLECTED CEILING PLAN				
SCALE	DRAWN BY	DATE	SHEET	22x34 REV.
AS NOTED	JWM	05/25/22	— OF —	B
JOB NO.	CHECKED BY	DATE	DRAWING NUMBER	
4146-22	JDG	05/31/22	4146-S2	

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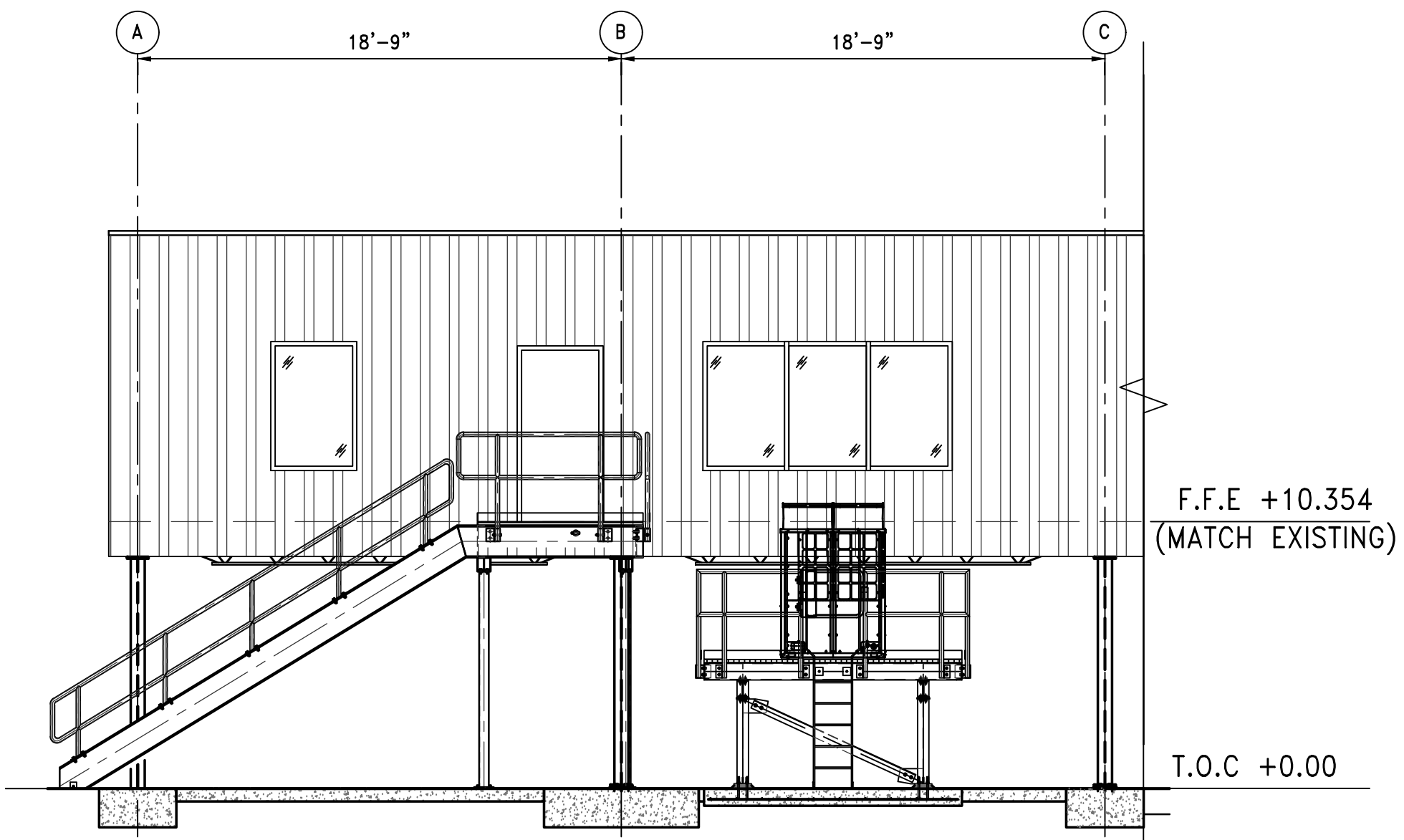


NORTH ELEVATION
3/16"=1'-0"



WEST ELEVATION
3/16"=1'-0"

BID ALTERNATE: IN LIEU OF CRUSHED GRAVEL, PROVIDE 6" SLAB-ON-GRADE WITH 4x4-W4xW4 WWF- SEE BID ALTERNATE SLAB-ON-GRADE DETAIL ON DWG. 4146-F1.



SOUTH ELEVATION
3/16"=1'-0"

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B	ISSUED FOR BID	08/01/22	JWM	GDEC
REV.	DESCRIPTION	DATE	BY	CHK'D

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Georgia (706) 302-2831 Tennessee (901) 290-5444

PROJECT
**TERMINAL RAILWAY
OFFICE ADDITION/RENOVATION**
**126 INDUSTRIAL CANAL ROAD
MOBILE, ALABAMA**

TITLE EXTERIOR ELEVATIONS				
SCALE AS NOTED	DRAWN BY JWM	DATE 05/31/22	SHEET — OF — 22x34	REV. B
JOB NO. 4146-22	CHECKED BY JDG	DATE 05/31/22	DRAWING NUMBER 4146-S3	

ROOM FINISH SCHEDULE									
ROOM		FLOOR	BASE	WALL			CEILING		REMARKS
				N	S	E	W	MAT'L	
201	OFFICE 1	VCT	VB	2	1	1	1	LI	8'
202	OFFICE 2	VCT	VB	2	1	1	1	LI	8'
203	OFFICE 3	VCT	VB	2	1	1	1	LI	8'
204	CONFERENCE ROOM	VCT	VB	1	2	1	1	LI	8'
205	OFFICE 4	VCT	VB	2	1	1	1	LI	8'
206	OFFICE 5	VCT	VB	2	1	1	1	LI	8'
207	OFFICE 6	VCT	VB	2	1	1	2	LI	8'
208	OFFICE 7	VCT	VB	1	2	1	2	LI	8'
209	BREAKROOM	VCT	VB	1	2	1	1	LI	8'
210	OFFICE 8	VCT	VB	1	2	1	1	LI	8'
211	OFFICE 9	VCT	VB	1	2	1	1	LI	8'
212	OFFICE 10	VCT	VB	1	2	1	1	LI	8'
213	CORRIDOR	VCT	VB	1	1	1	1	LI	8'
214	CORRIDOR	VCT	VB	1	1	1	1	LI	8'
215	CLOSET	VCT	VB	1	1	1	1	LI	8'
216	RESTROOM	VCT	CB	3	3	3	3	LI	8'
217	OFFICE 11	VCT	VB	1	2	2	1	LI	8'
218	OPERATIONS OFFICE	VCT	VB	2	1	1	1	LI	8'
219	CLOSET	EX	EX	4	4	4	4	LI	8'
220	CLOSET	EX	EX	4	4	4	4	LI	8'
221	LOCKER ROOM	EX	EX	4	4	4	4	LI	8'
222	WOMEN'S RESTROOM	EX	EX	4	4	4	4	LI	8'
223	MEN'S RESTROOM	EX	EX	4	4	4	4	LI	8'

ROOM FINISH SCHEDULE

KEY NOTES

WALLS:

1.

3½" METAL STUD WALL FRAMING WITH ⅝" PAINTED GYPSUM WITH 3½" BATT INSULATION

2.

3½" METAL STUD WALL FRAMING WITH ⅝" PAINTED GYPSUM WITH SPRAY FOAM INSULATION

3.

3½" METAL STUD WALL FRAMING WITH ⅝" MOISTURE RESISTANT PAINTED GYPSUM WITH 3½" BATT INSULATION AND ¼" FRP 4'-0" HIGH WITH 3" OF BATT INSULATION

4.

EXISTING WALLS TO REMAIN

FLOORING:

VCT

VINYL COMPOSITION TILE

EX

EXISTING TO REMAIN

CEILING:

LI

ARMSTRONG TILE #1728 FINE FISSURED 2'X2'X⅝" MINERAL BOARD, WHITE, SQUARE EDGE DETAIL, 6¼" BATT INSULATION.

BASE:

CB

6" HIGH CERAMIC BASE

VB

VINYL BASE

EX

EXISTING TO REMAIN

DOOR #	RATING	DOOR SIZE	DOOR MATERIAL	FRAME MATERIAL	HARDWARE	REMARKS
201A	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	IR GLASS-SEE DOOR TYPE "B"
201B	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	IR GLASS-SEE DOOR TYPE "B"
202A	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	IR GLASS-SEE DOOR TYPE "B"
202B	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	IR GLASS-SEE DOOR TYPE "B"
203	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	IR GLASS-SEE DOOR TYPE "B"
204A	NONE	3'-0" x 7'-0"	SCWD	METAL	DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES	IR GLASS-SEE DOOR TYPE "C"
204B	60 PSF	3'-0" x 7'-0"	METAL DOOR WITH POLY CORE	METAL	ENTRY LOCKSET W/ DEADBOLT, DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES, VINYL DOOR SEAL, NEOPRENE SWEEP, SADDLE THRESHOLD	CT/IR GLASS-SEE DOOR TYPE "A"
205	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	IR GLASS-SEE DOOR TYPE "B"
206	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	IR GLASS-SEE DOOR TYPE "B"
207	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	IR GLASS-SEE DOOR TYPE "B"
208	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	IR GLASS-SEE DOOR TYPE "B"
209A	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	IR GLASS-SEE DOOR TYPE "B"
209B	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	IR GLASS-SEE DOOR TYPE "B"
210	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	IR GLASS-SEE DOOR TYPE "B"
211	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	IR GLASS-SEE DOOR TYPE "B"
212	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	IR GLASS-SEE DOOR TYPE "B"
213	NONE	3'-0" x 7'-0"	SCWD	METAL	DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES	IR GLASS-SEE DOOR TYPE "C"
214	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES	IR GLASS-SEE DOOR TYPE "B"
215	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	IR GLASS-SEE DOOR TYPE "B"
216	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	SEE DOOR TYPE "D"
217	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	IR GLASS-SEE DOOR TYPE "C"
218A	60 PSF	2'-8" x 7'-0"	METAL DOOR WITH POLY CORE	METAL	EXISTING DOOR & HARDWARE TO REMAIN	EXISTING DOOR & HARDWARE TO REMAIN
218B	NONE	3'-0" x 7'-0"	SCWD	METAL	PRIVACY LOCK SET, 1½ PAIR S.S. BUTT HINGES	IR GLASS-SEE DOOR TYPE "C"
219	NONE	6'-0" x 7'-0"	SCWD	METAL	EXISTING DOOR & HARDWARE TO REMAIN	EXISTING DOOR & HARDWARE TO REMAIN
220	60 PSF	2'-8" x 7'-0"	METAL DOOR WITH POLY CORE	METAL	EXISTING DOOR & HARDWARE TO REMAIN	EXISTING DOOR & HARDWARE TO REMAIN
221	NONE	2'-8" x 7'-0"	SCWD	METAL	DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES	EXISTING DOOR & HARDWARE TO REMAIN
222	NONE	2'-8" x 7'-0"	SCWD	METAL	DOOR CLOSER, 1½ PAIR S.S. BUTT HINGES	EXISTING DOOR & HARDWARE TO REMAIN

NOTE:
-ALL EXTERIOR GLASS TO BE CLEAR TEMPERED, IMPACT RESISTANT, MEETING WIND REQUIREMENT OF 161 MPH.
-ALL EXTERIOR DOORS SHALL BE AIR TIGHT AND WEATHER TIGHT. (DOORS SHALL PERMIT LESS THAN 0.01 CU.FT./MIN. OF OUTSIDE AIR)

WINDOW SCHEDULE NOTES:

1.

CLEAR TEMPERED
2.

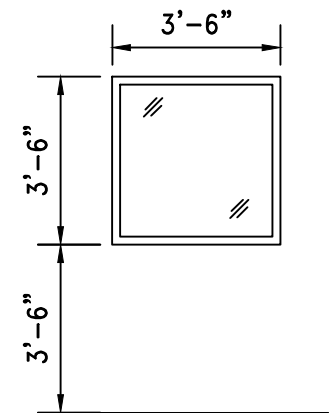
IMPACT RESISTANT: 161 WIND REQUIREMENT MIN.
3.

VINYL FRAME FIXED
4.

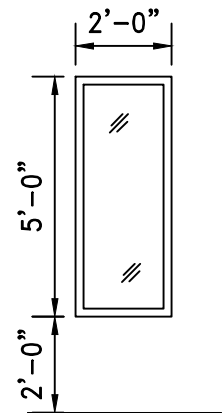
U-FACTOR: 1.250
5.

SHGC: 0.82
6.

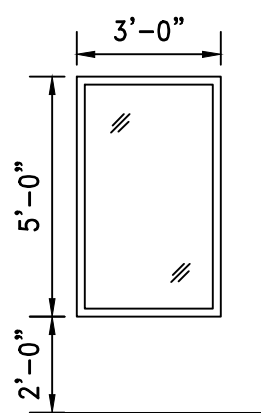
WINDOW TYPE AA, EE, AND FF ARE REPLACING EXISTING. CONTRACTOR SHALL VERIFY DIMENSIONS PRIOR TO PLACING ORDER.



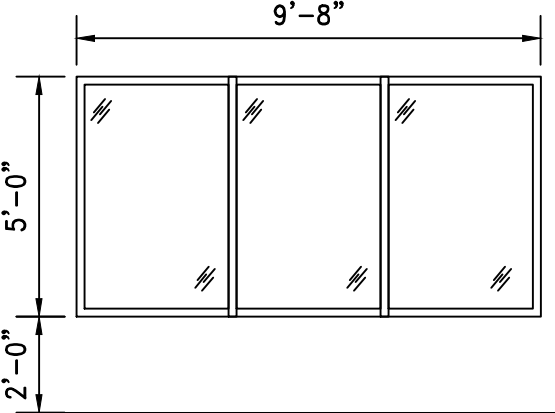
STOREFRONT KAWNEER IR 501
CLEAR INSULATED-LOW-E #2
HURRICANE RESISTANT
GLAZING. **SEE NOTE 6.**



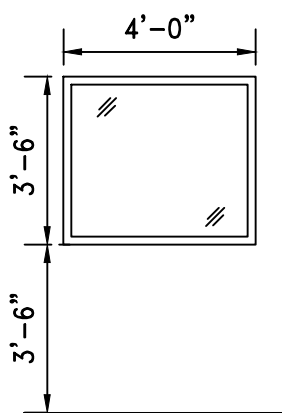
STOREFRONT KAWNEER IR 501
CLEAR INSULATED-LOW-E #2
HURRICANE RESISTANT GLAZING



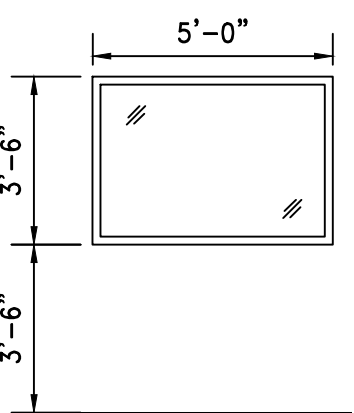
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CLEAR INSULATED-LOW-E #2
HURRICANE RESISTANT GLAZING



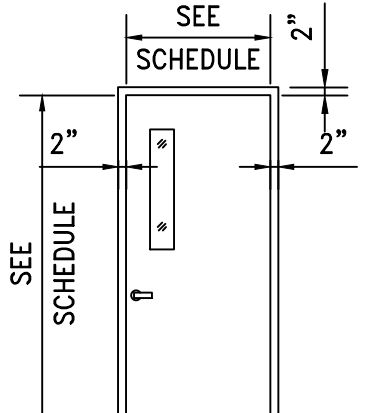
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CLEAR INSULATED-LOW-E #2
HURRICANE RESISTANT GLAZING



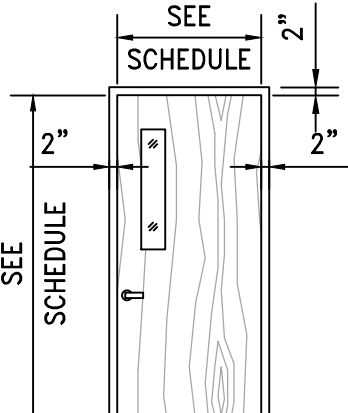
STOREFRONT KAWNEER IR 501
CLEAR INSULATED-LOW-E #2
HURRICANE RESISTANT
GLAZING. **SEE NOTE 6.**



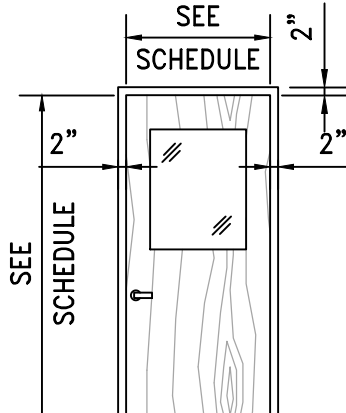
STOREFRONT KAWNEER IR 501
CLEAR INSULATED-LOW-E #2
HURRICANE RESISTANT
GLAZING. **SEE NOTE 6.**



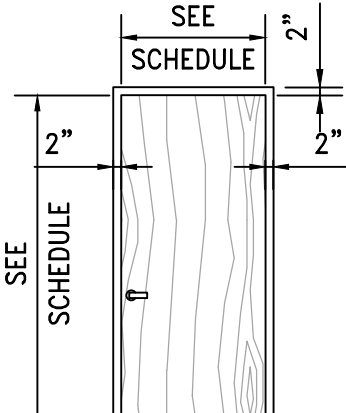
HOLLOW METAL DOOR WITH
POLYSTYRENE CORE AND IR
TOP WINDOW (6"W x 30"H)



SOLID CORE WOOD
DOOR IR TOP WINDOW
(6"W x 30"H)



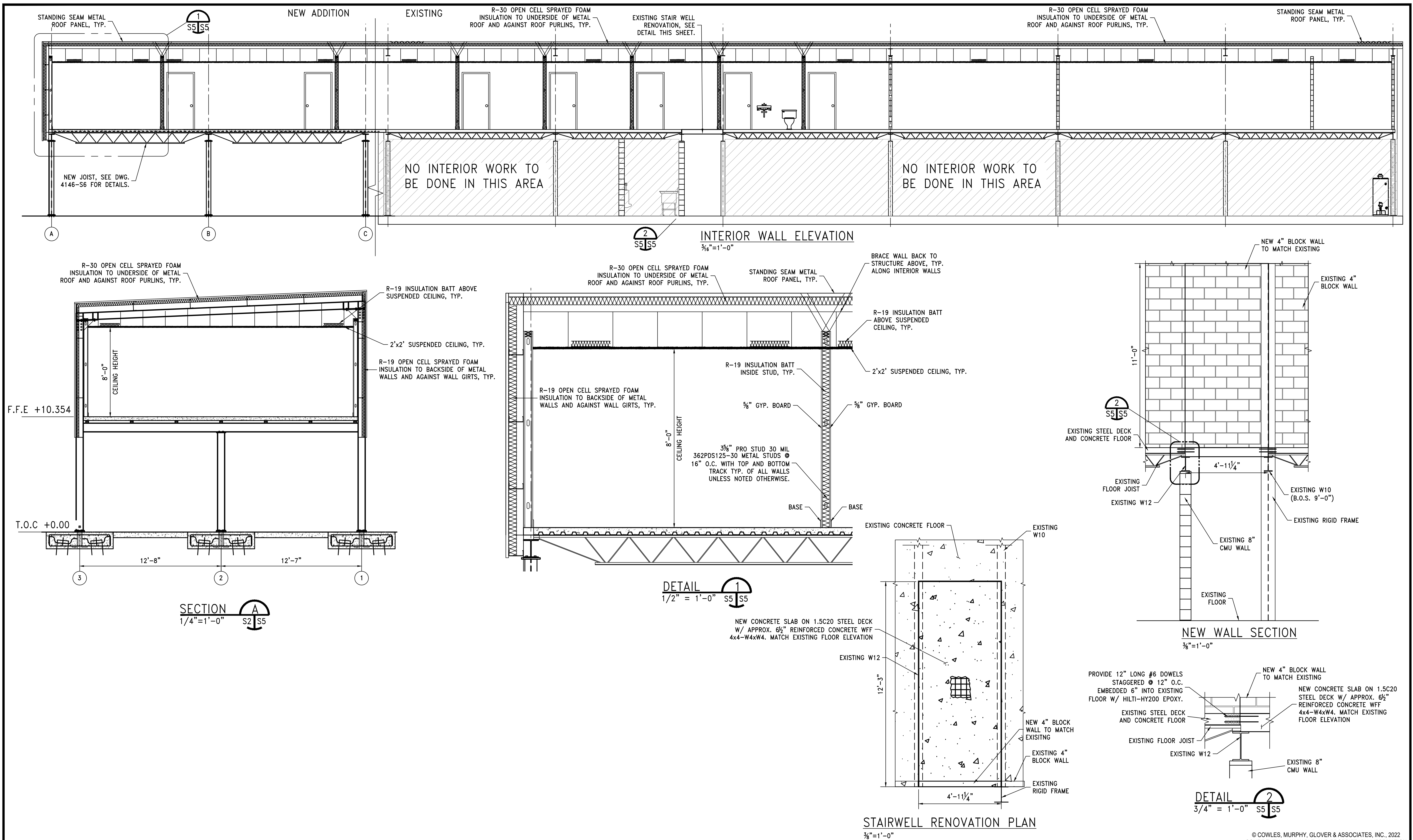
SOLID CORE WOOD
DOOR IR HALF GLASS
WINDOW



SOLID CORE
WOOD DOOR

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					<div><div>Cowles, Murphy, Glover & ASSOCIATES <i>A Full Service Engineering Firm</i></div><div>PERFORMANCE • RELIABILITY • EXPERIENCE</div></div>	<div>457 St. Michael St., Mobile, AL 36602 13 Thrash Rd., LaGrange, GA 30241 11880 Cranston Dr. Ste 102, Arlington, TN 38002 Alabama (251) 433-1611 Georgia (706) 302-2831 Tennessee (901) 290-5444</div>	PROJECT		TERMINAL RAILWAY			TITLE						
OFFICE ADDITION/RENOVATION		DOOR AND WINDOW SCHEDULE																
B		ISSUED FOR BID		08/01/22			JWM	GDEC	SCALE			DRAWN BY		DATE	SHEET	22x34	REV.	
REV.		DESCRIPTION		DATE			BY	CHK'D	AS NOTED			JWM		05/31/22	— of —		B	
									JOB NO.			CHECKED BY		DATE	DRAWING NUMBER			
							4146-22		JDG		05/31/22	4146-S4						



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REV.	DESCRIPTION	DATE	BY	CHK'D

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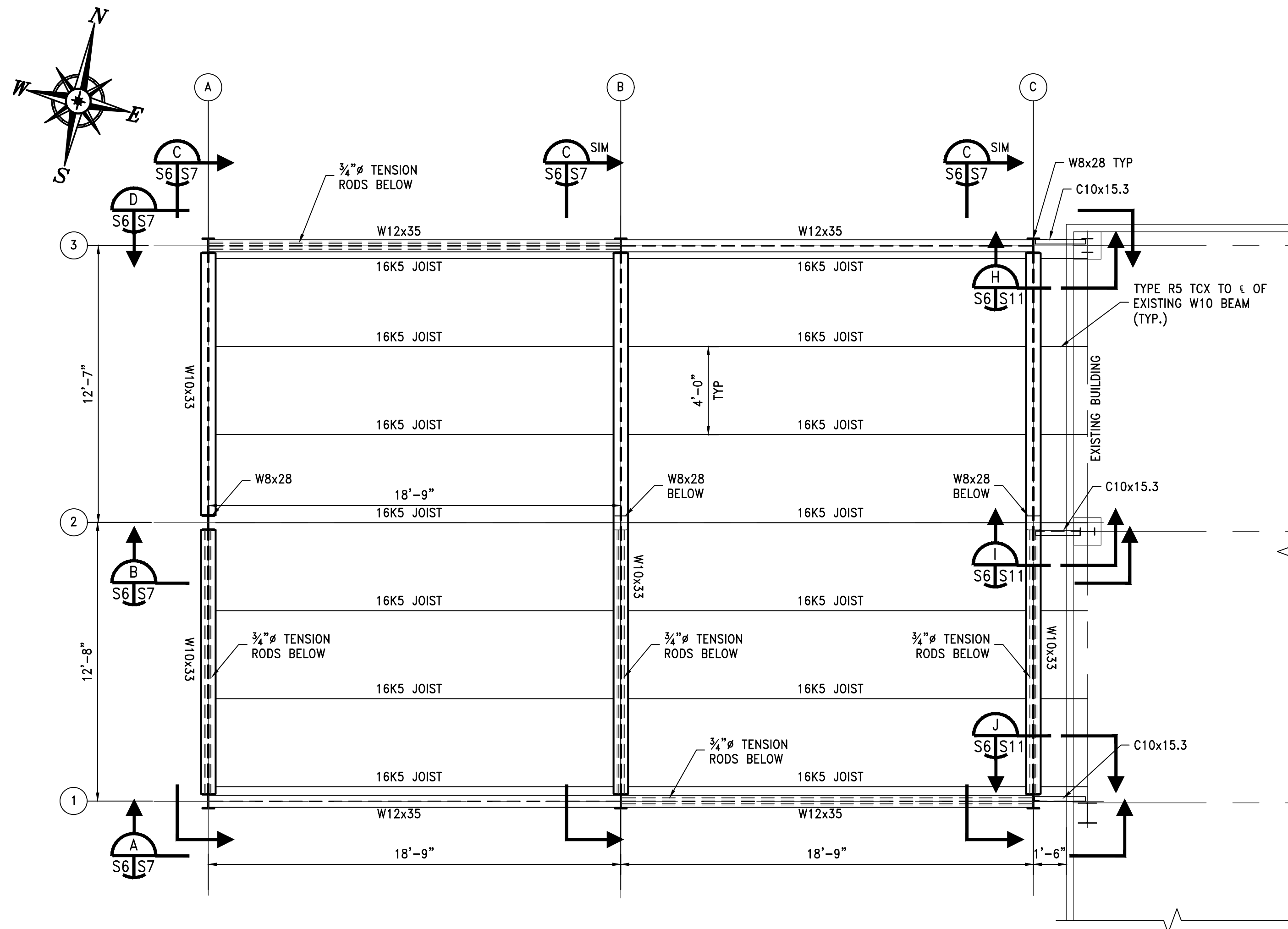
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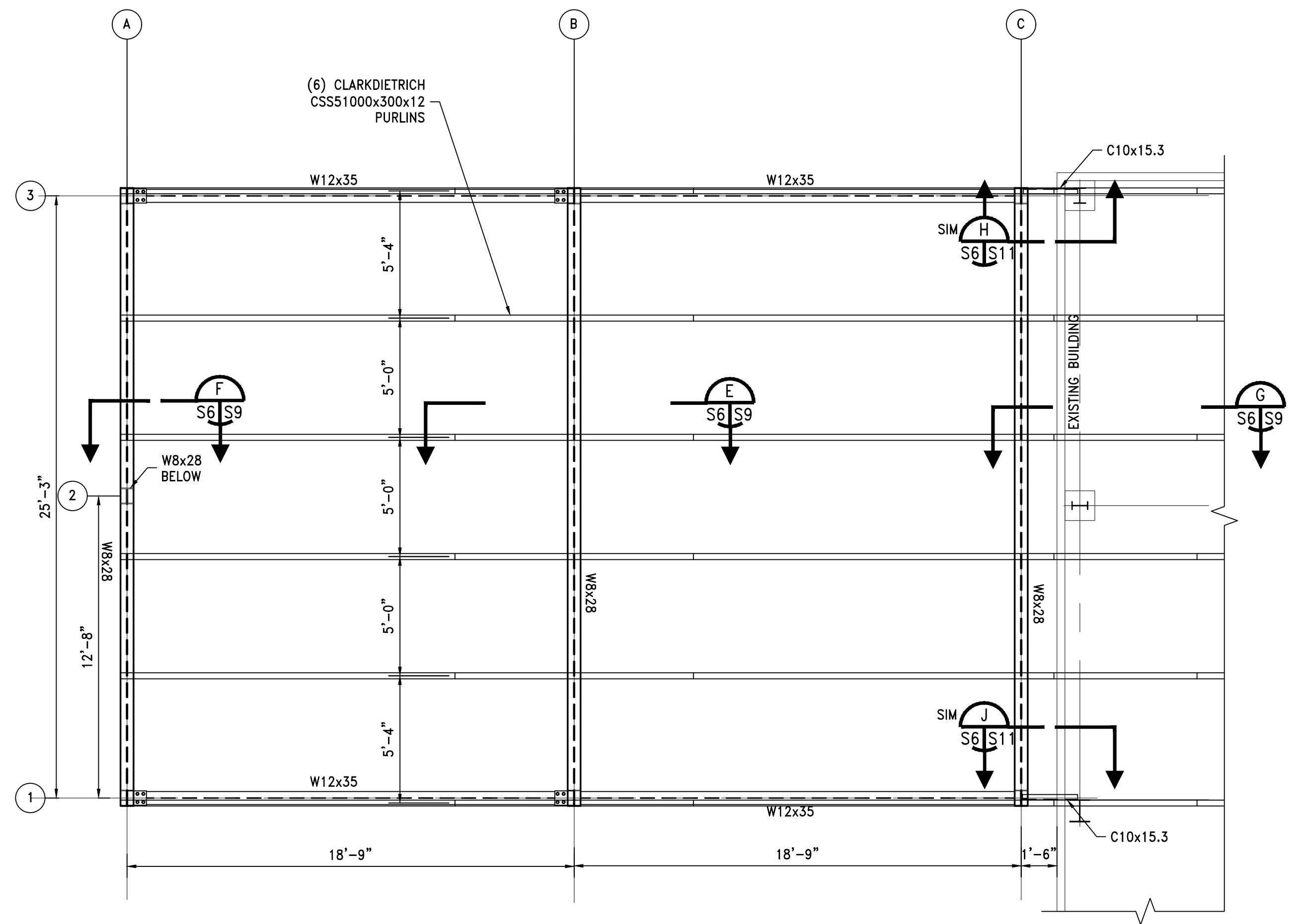
PROJECT
**TERMINAL RAILWAY
OFFICE ADDITION/RENOVATION**
126 INDUSTRIAL CANAL ROAD
MOBILE, ALABAMA

TITLE	BUILDING SECTIONS AND DETAILS									
SCALE	AS NOTED	DRAWN BY	JWM	DATE	05/31/22	SHEET	— of —	22x34	REV.	B
JOB NO.	4146-22	CHECKED BY	JDG	DATE	05/31/22	DRAWING NUMBER	4146-S5			

Z:\1100-4199\4146-ASPA TRR Office Expansion\Design\4146-S5.dwg, 8/1/2022 3:44:23 PM, DWG To PDF.pc3, 1:1



OFFICE FLOOR STRUCTURAL PLAN VIEW
1/4"=1'-0"



ROOF STRUCTURAL PLAN VIEW
1/4"=1'-0"

NOTE:
CONTRACTOR SHALL VERIFY ROOF PURLIN SPACING AND
SHALL NOTIFY E.O.R. IF ANY DISCREPANCY ARISES.

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REV.	DESCRIPTION	DATE	BY	CHK'D

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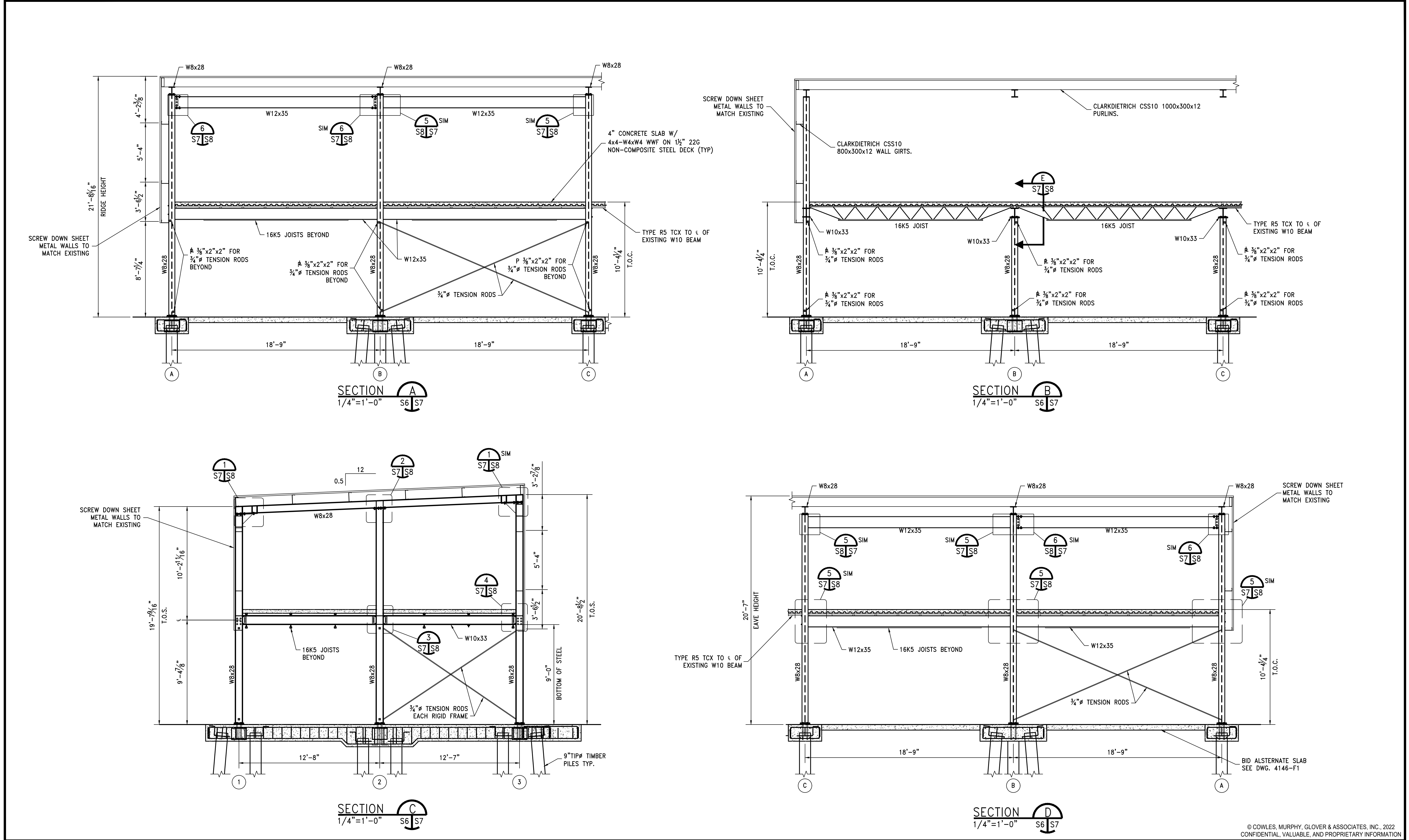
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PROJECT

TERMINAL RAILWAY
OFFICE ADDITION/RENOVATION

126 INDUSTRIAL CANAL ROAD
MOBILE, ALABAMA

TITLE				
PLAN VIEW				
SCALE	AS NOTED	DRAWN BY	JWM	DATE
				04/07/22
JOB NO.	4146-22	CHECKED BY	GDEC	DATE
				04/07/22
		SHEET		22x34 REV. B
		DRAWING NUMBER		4146-S6



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PROJECT

**TERMINAL RAILWAY
OFFICE ADDITION/RENOVATION**

126 INDUSTRIAL CANAL ROAD
MOBILE, ALABAMA

TITLE

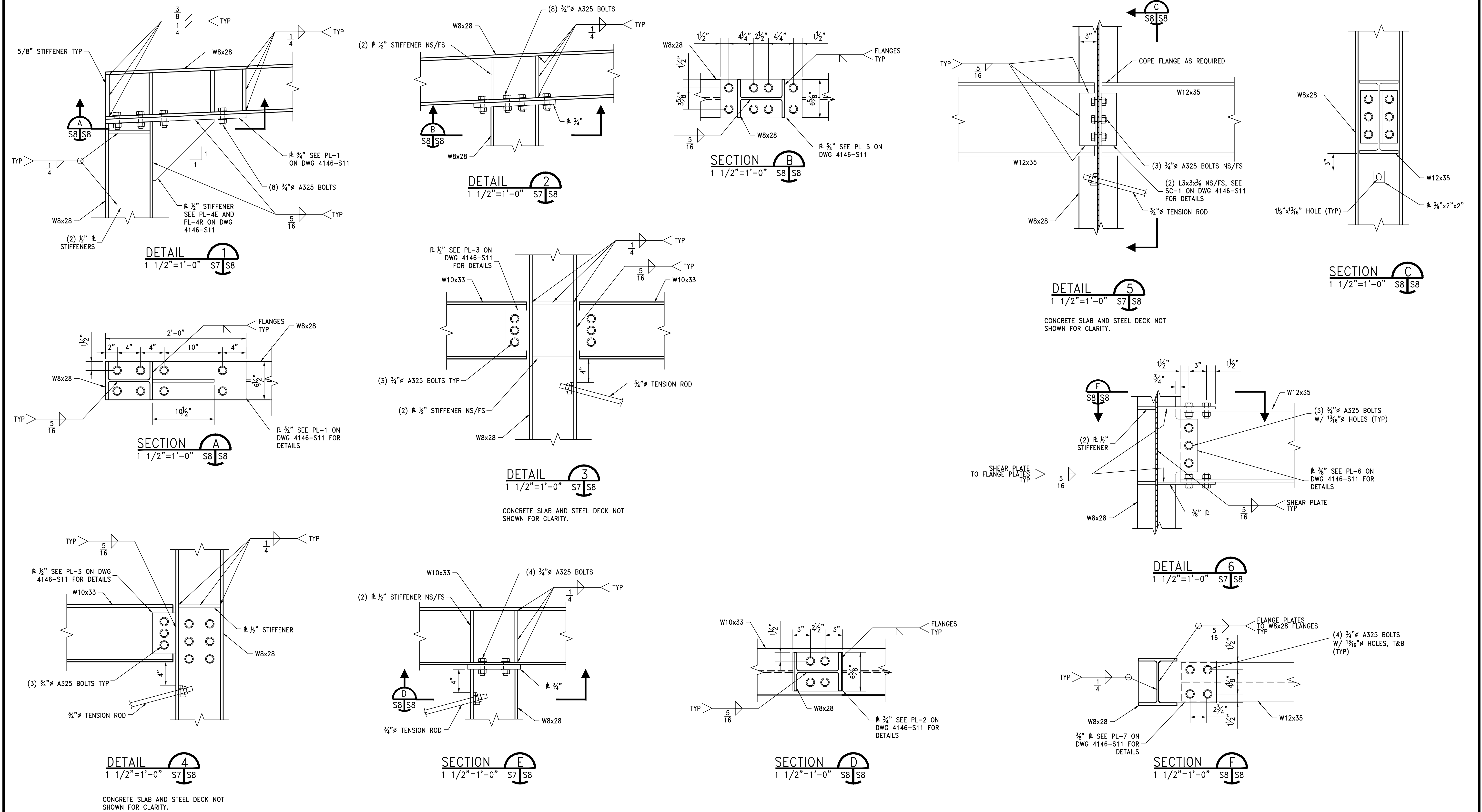
ELEVATION VIEW

SCALE AS NOTED
JOB NO. 4146-22

DRAWN BY JWM
CHECKED BY GDEC

DATE 04/07/22

SHEET OF 22x34 REV. **B**
DRAWING NUMBER **4146-S7**



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REV.	DESCRIPTION	DATE	BY	CHK'D

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Tennessee (901) 290-5444

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TERMINAL RAILWAY
OFFICE ADDITION/RENOVATION

126 INDUSTRIAL CANAL ROAD
MOBILE, ALABAMA

TITLE

STRUCTURAL DETAILS

SCALE AS NOTED

DRAWN BY JWM

DATE 04/07/22

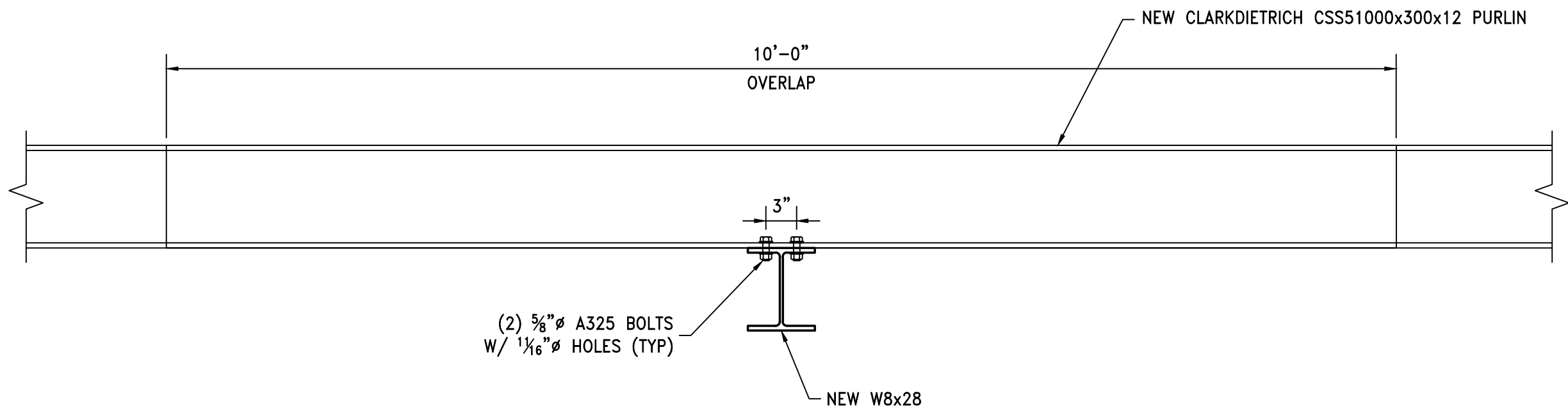
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JOB NO. 4146-22

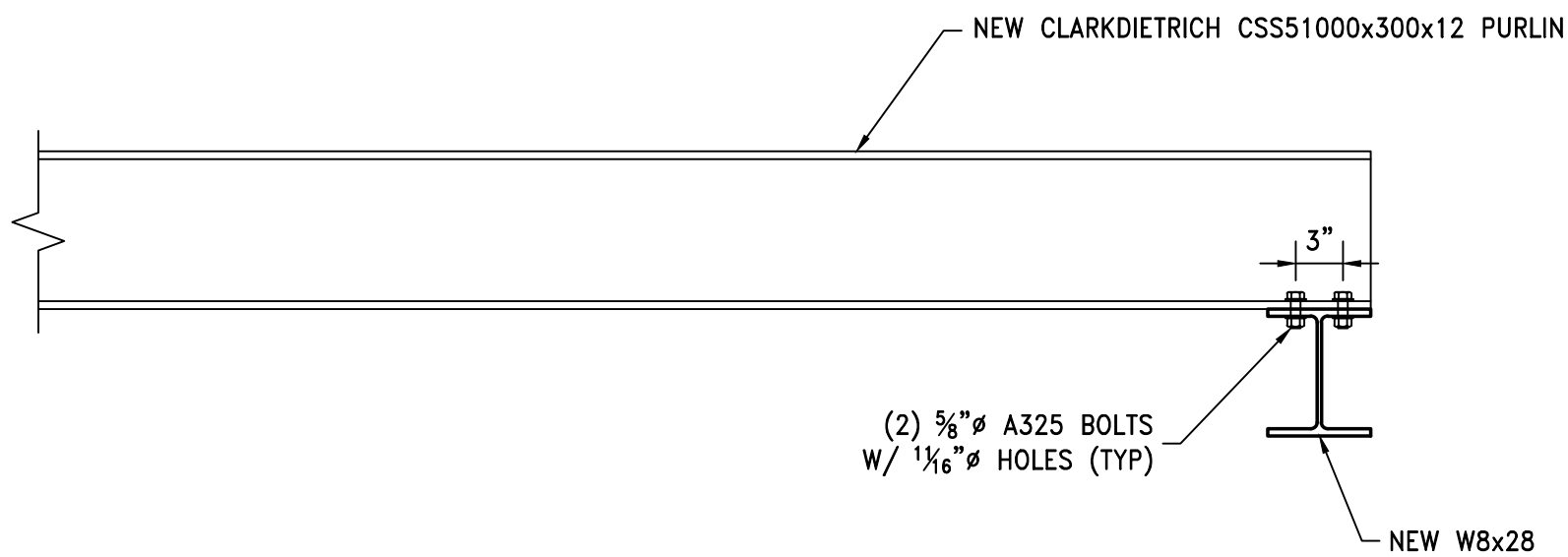
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DATE 04/07/22

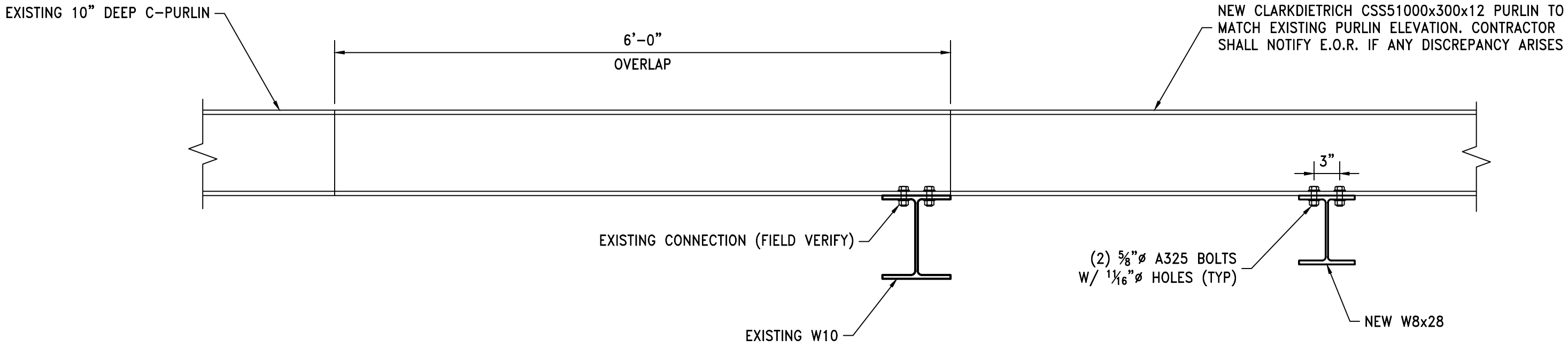
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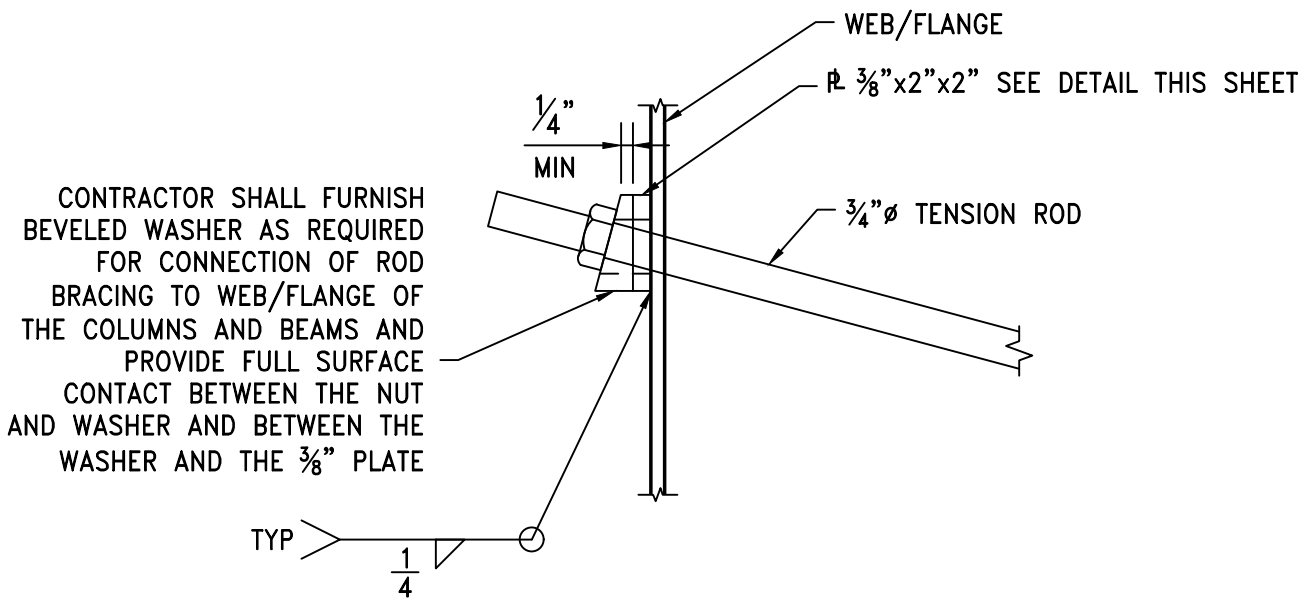
SECTION E
1"=1'-0" S6 S9



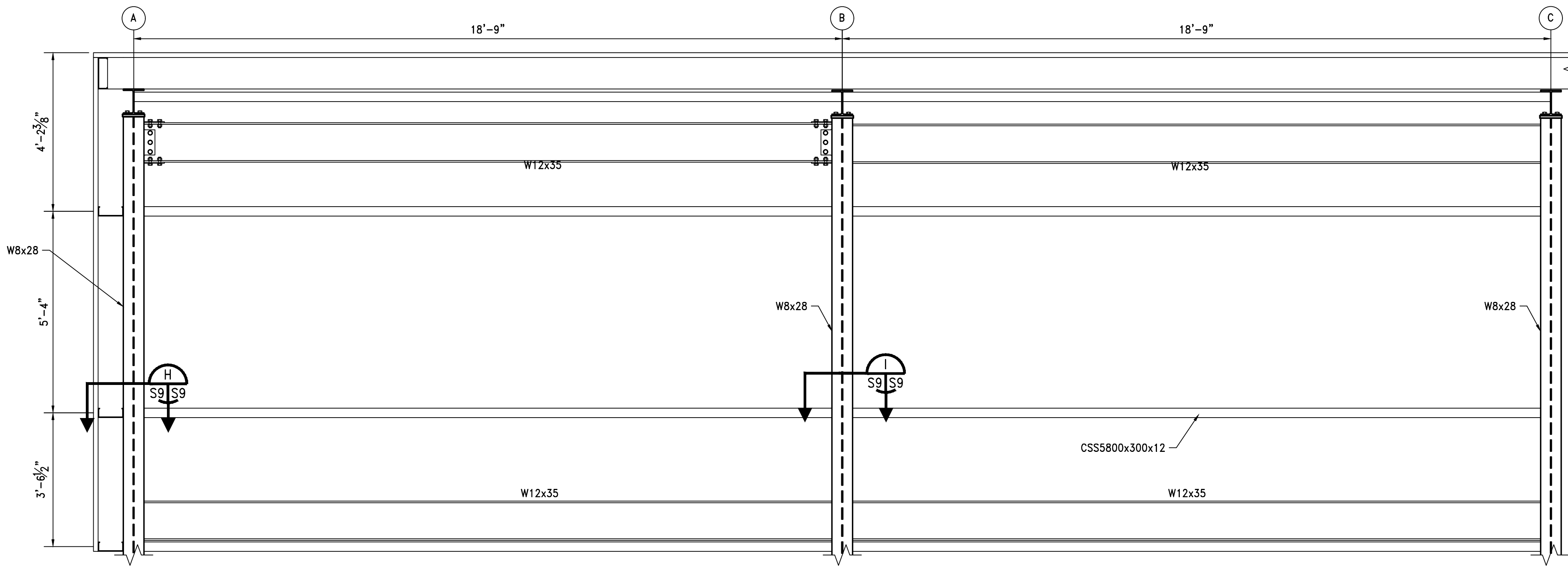
SECTION F
1"=1'-0" S6 S9



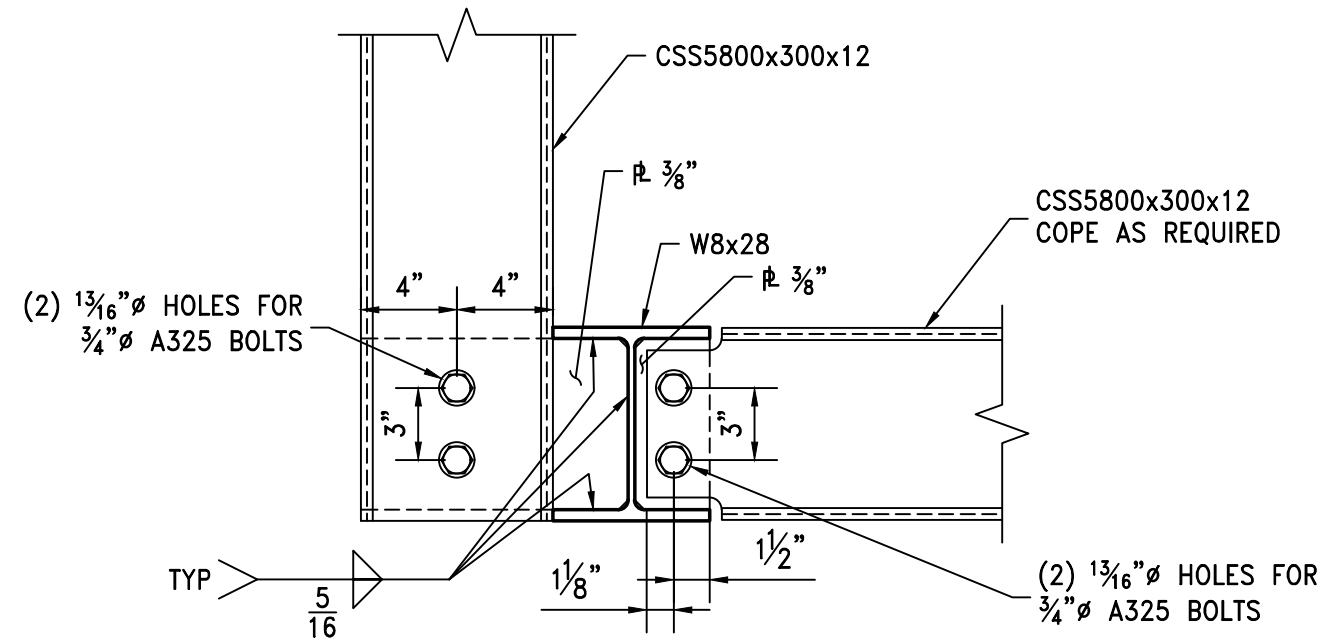
SECTION G
1"=1'-0" S6 S9



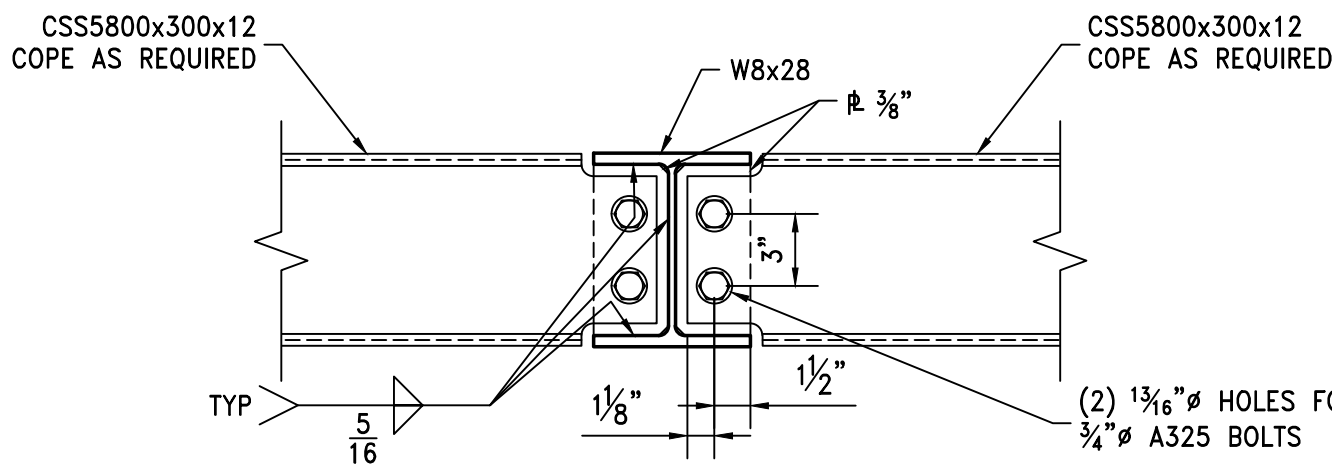
TYPICAL TENSION ROD CONNECTION
3"=1'-0"



SOUTH WALL GIRT DETAIL
1/2"=1'-0"



SECTION H
1 1/2"=1'-0" S9 S9



SECTION I
1 1/2"=1'-0" S9 S9

REV.	DESCRIPTION	DATE	BY	CHK'D
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PROJECT

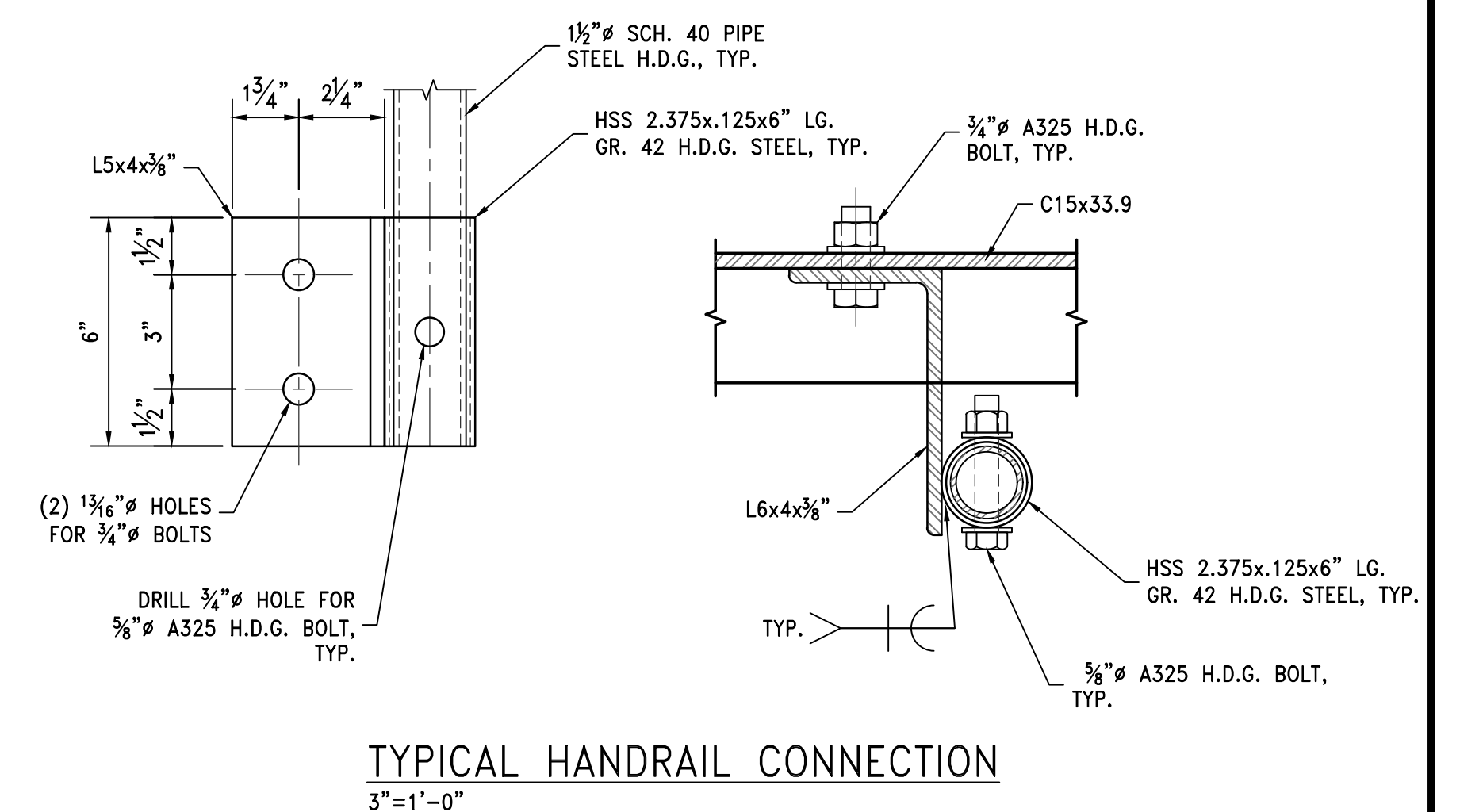
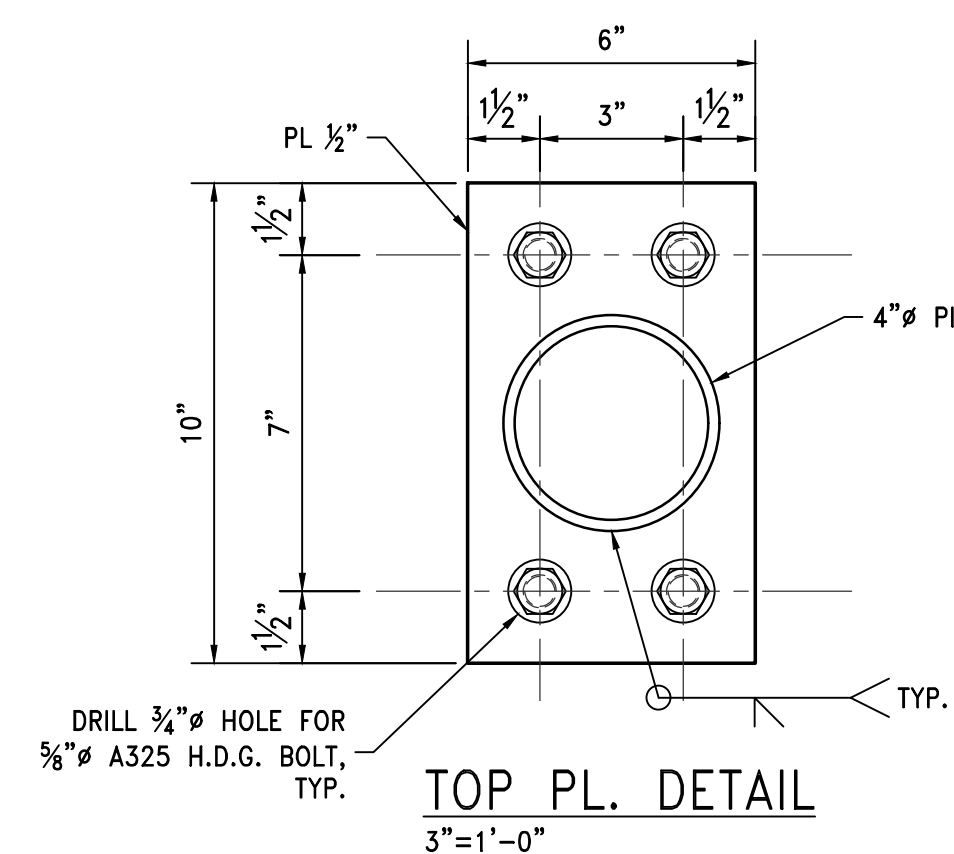
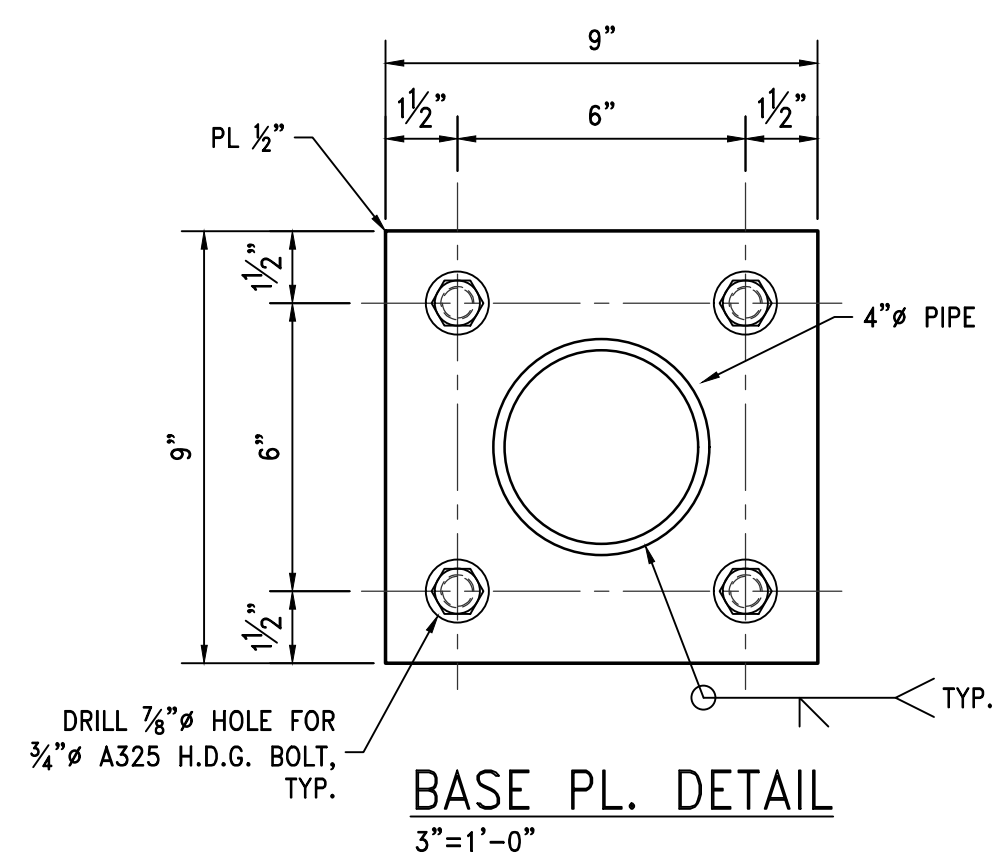
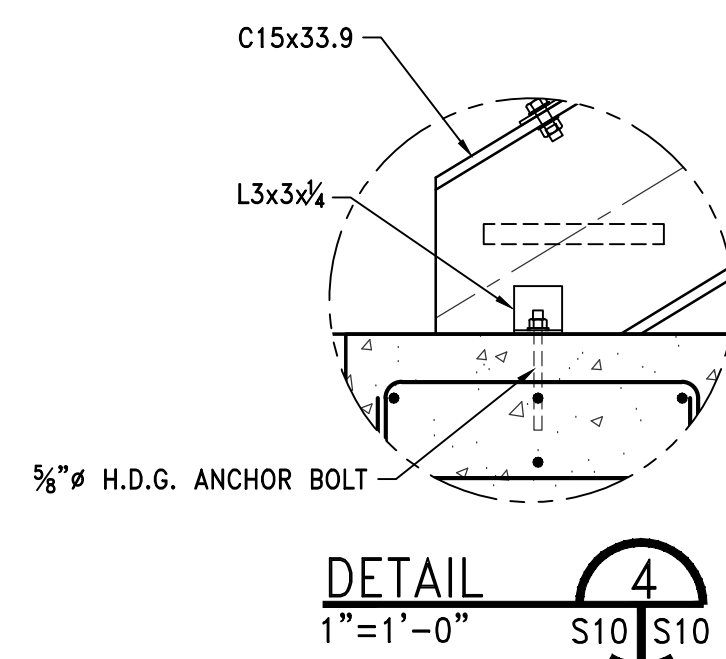
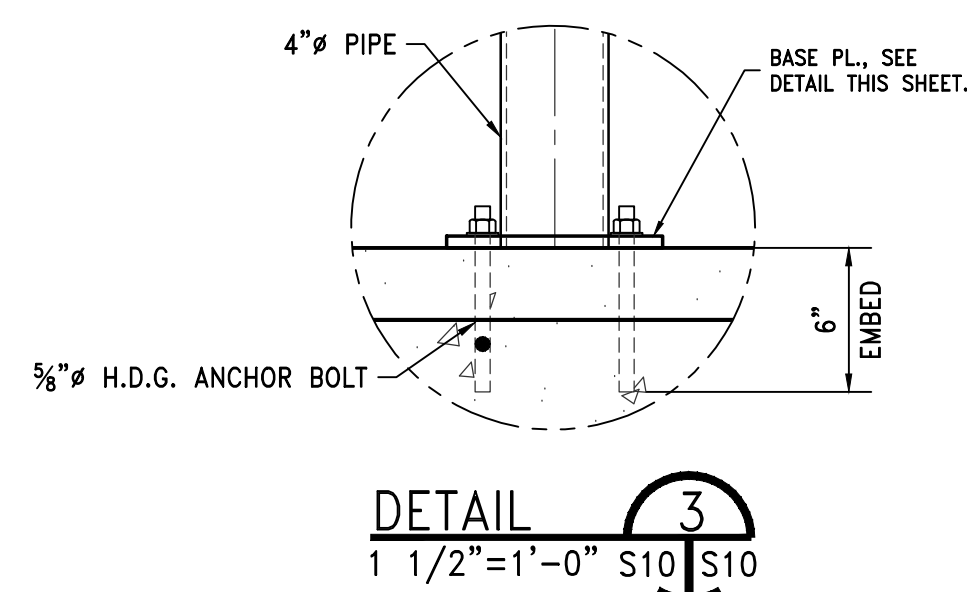
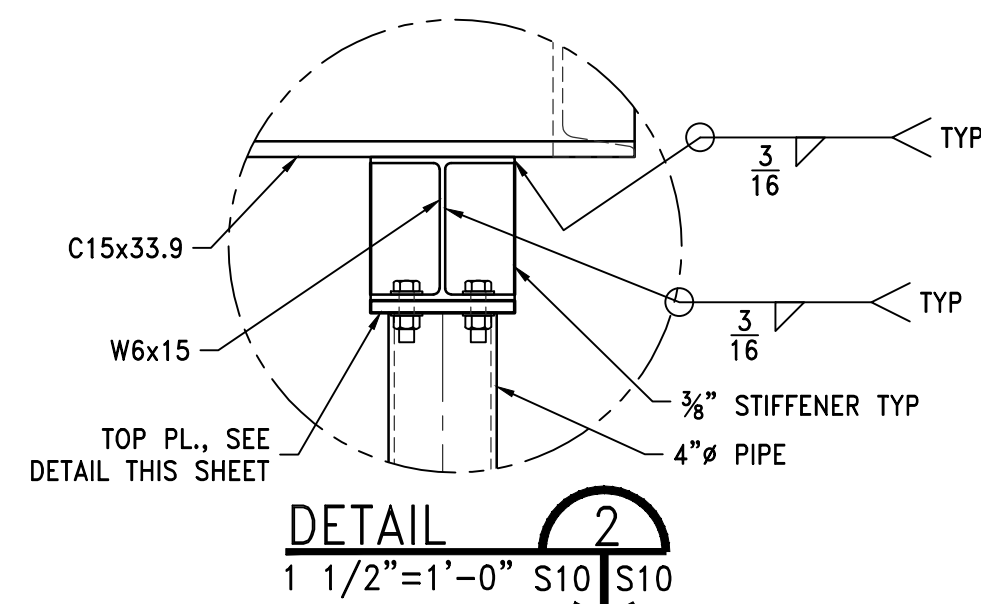
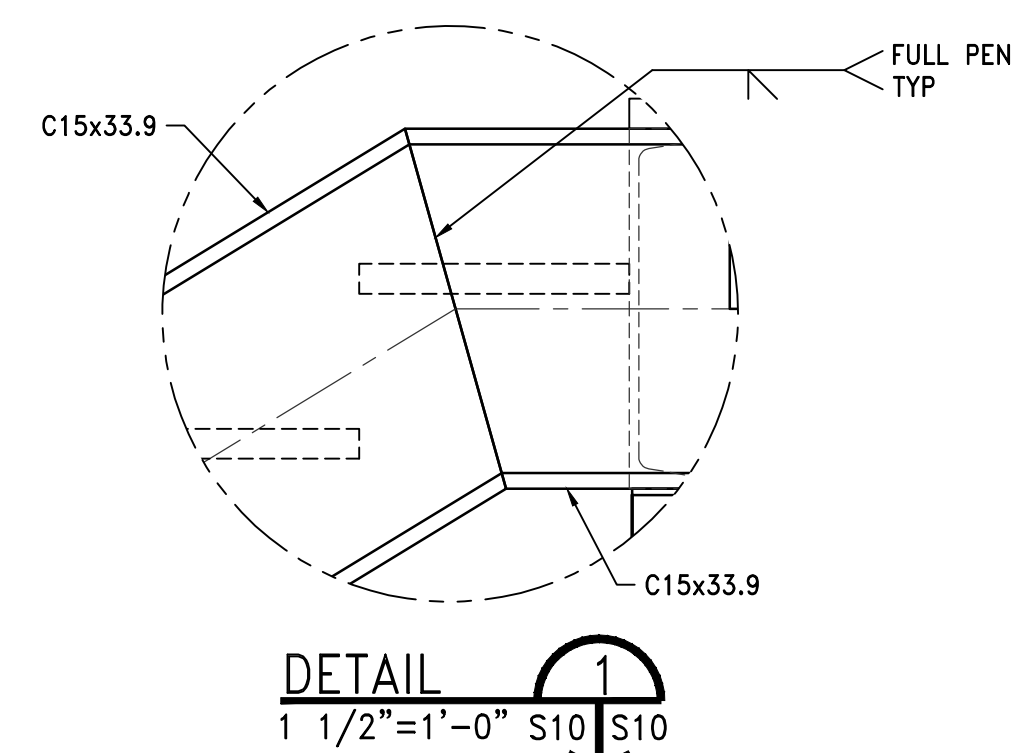
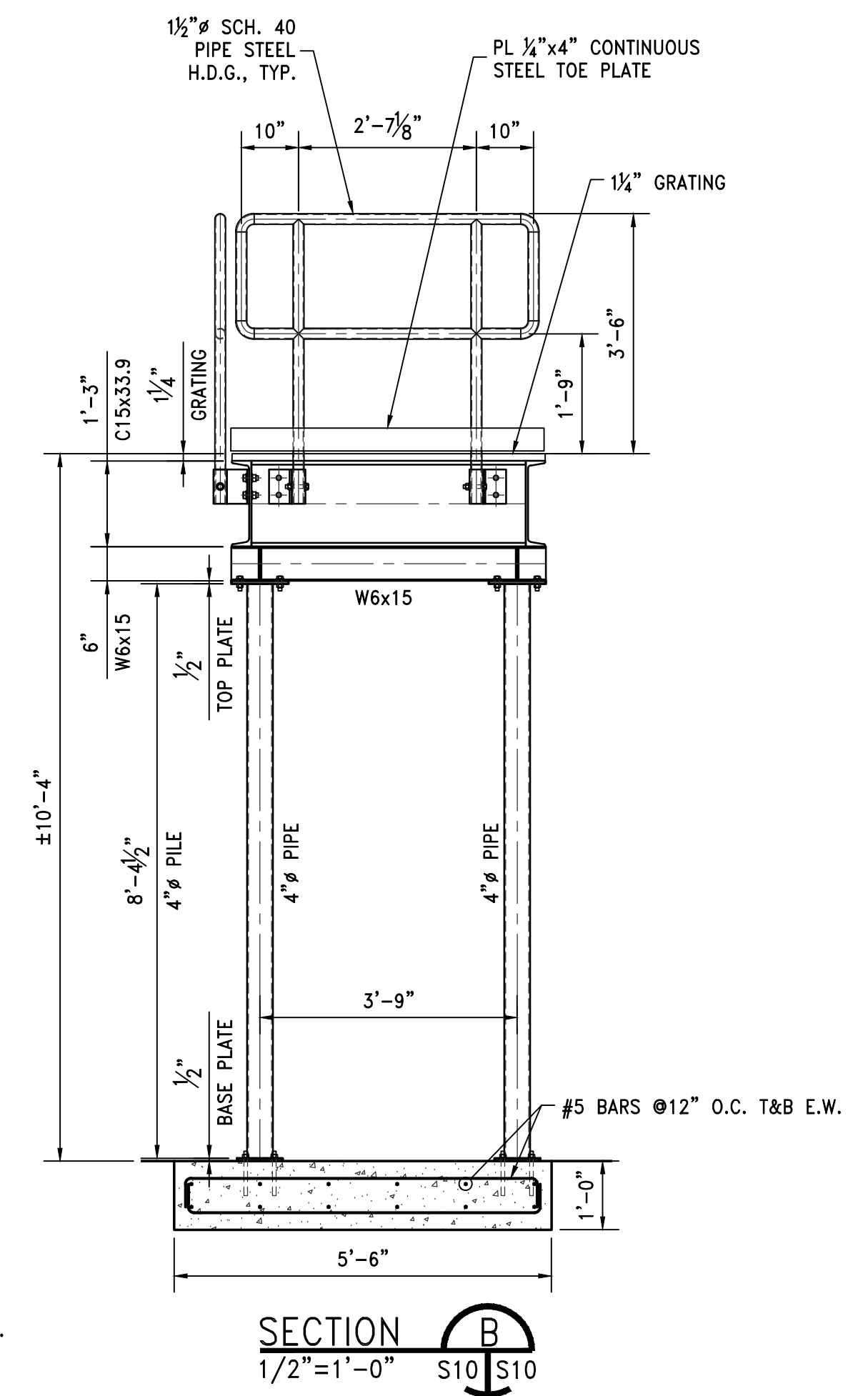
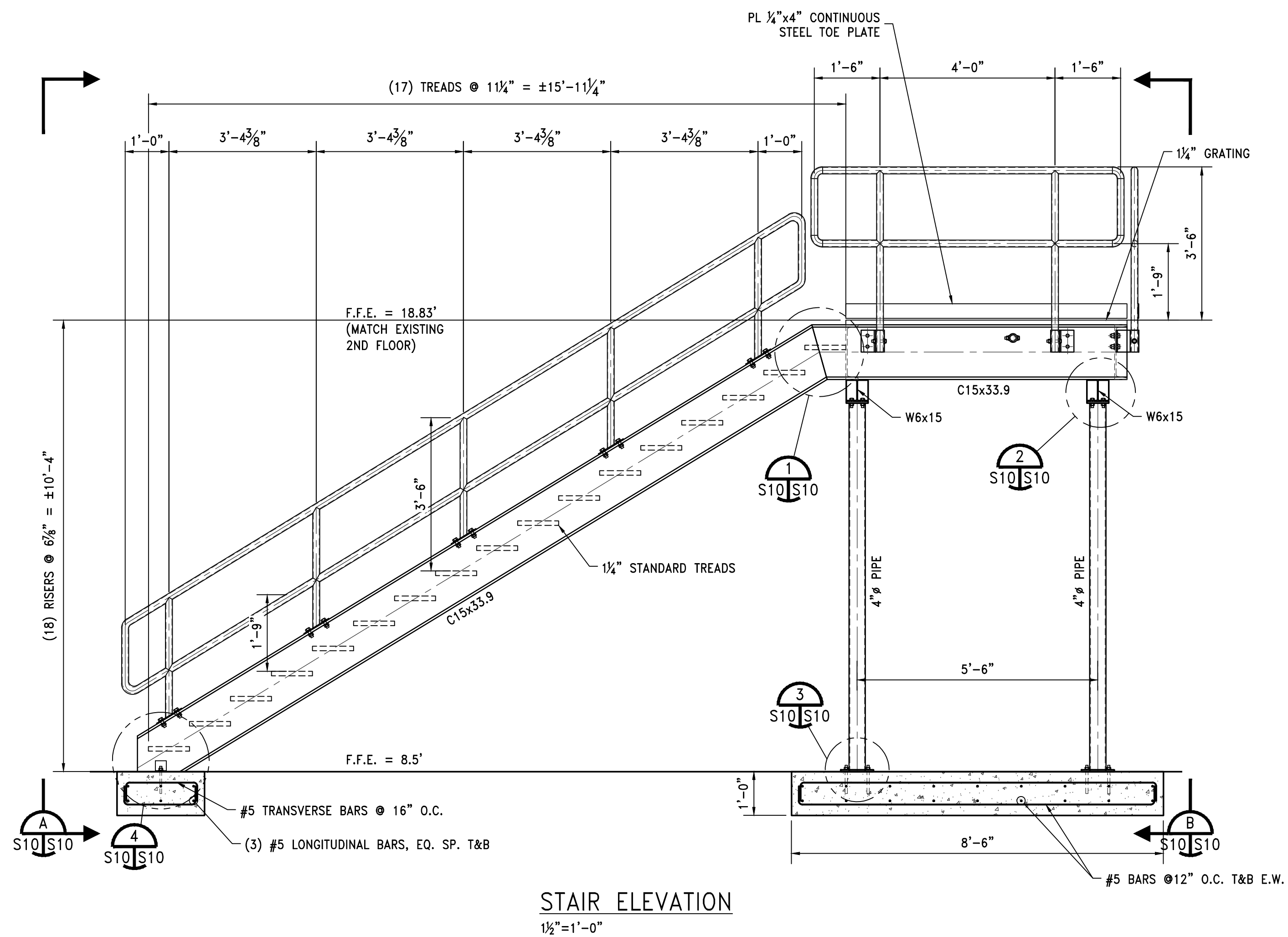
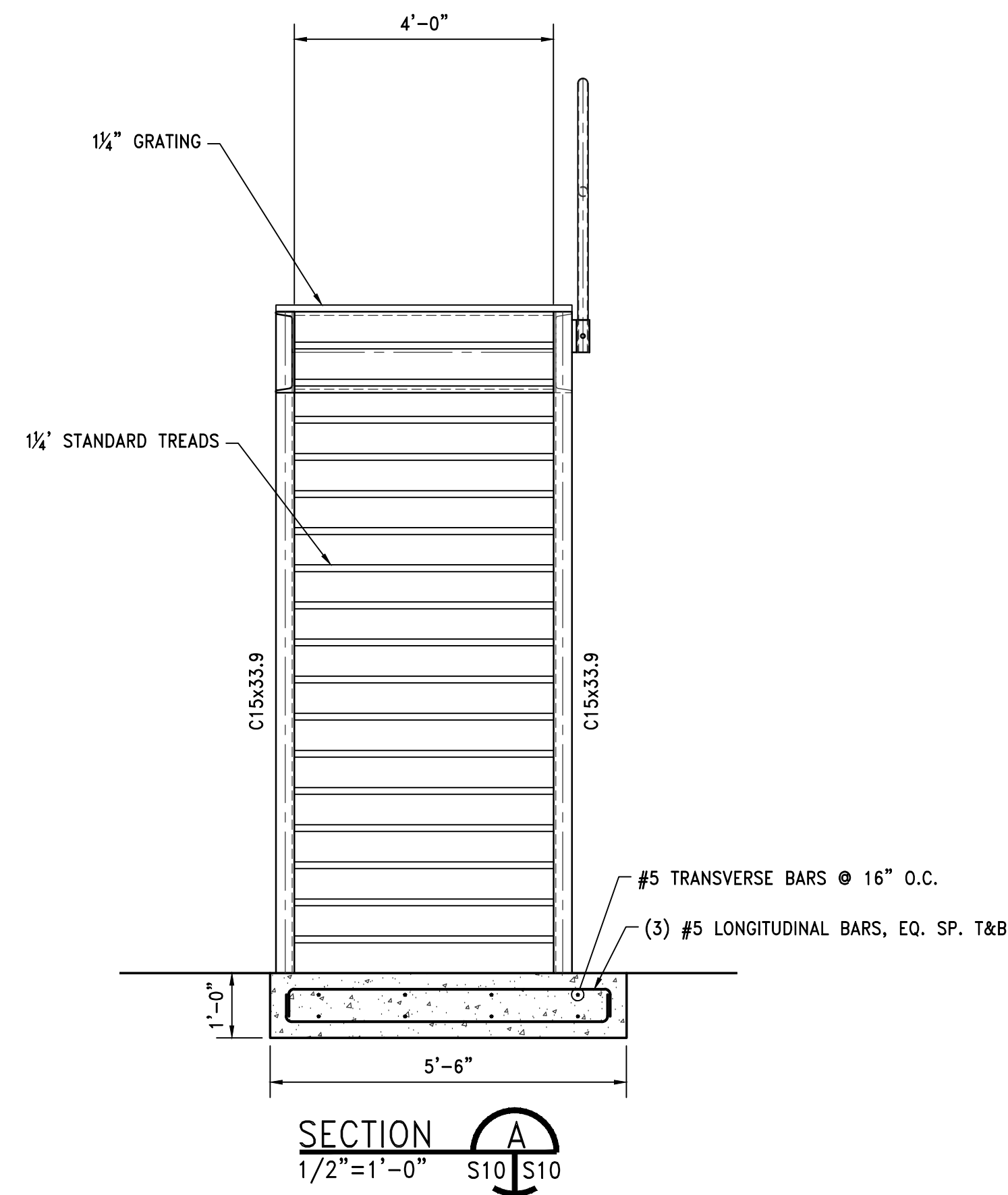
TERMINAL RAILWAY
OFFICE ADDITION/RENOVATION
126 INDUSTRIAL CANAL ROAD
MOBILE, ALABAMA

TITLE

STRUCTURAL DETAILS

SCALE	DRAWN BY	DATE	SHEET	22x34 REV.
AS NOTED	JWM	04/07/22	— OF —	B
JOB NO.	CHECKED BY	DATE	DRAWING NUMBER	
4146-22	GDEC	04/07/22	4146-S9	

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REV.	DESCRIPTION	DATE	BY	CHK'D	

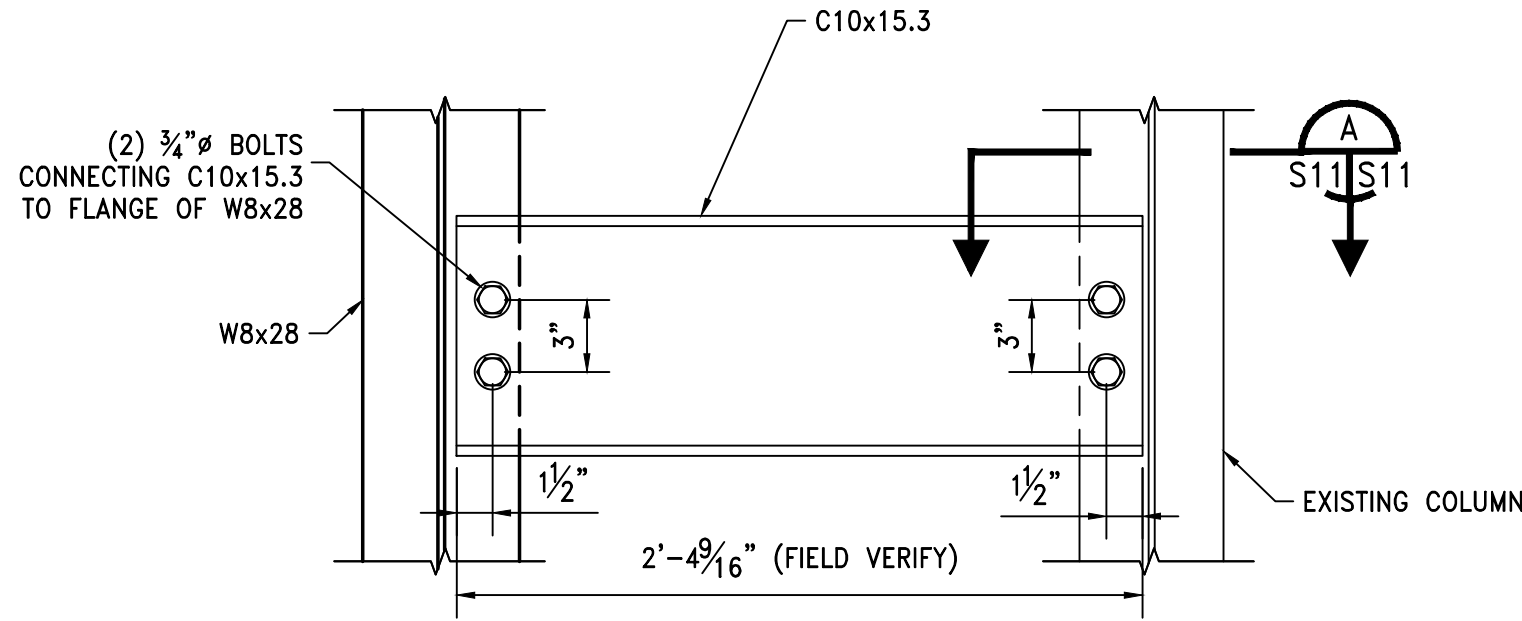
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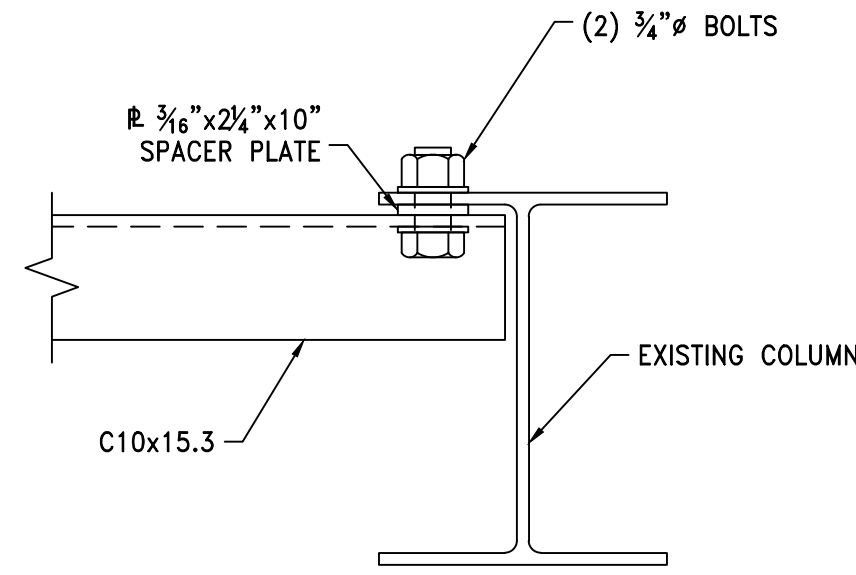
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TERMINAL RAILWAY
OFFICE ADDITION/RENOVATION
126 INDUSTRIAL CANAL ROAD
MOBILE, ALABAMA

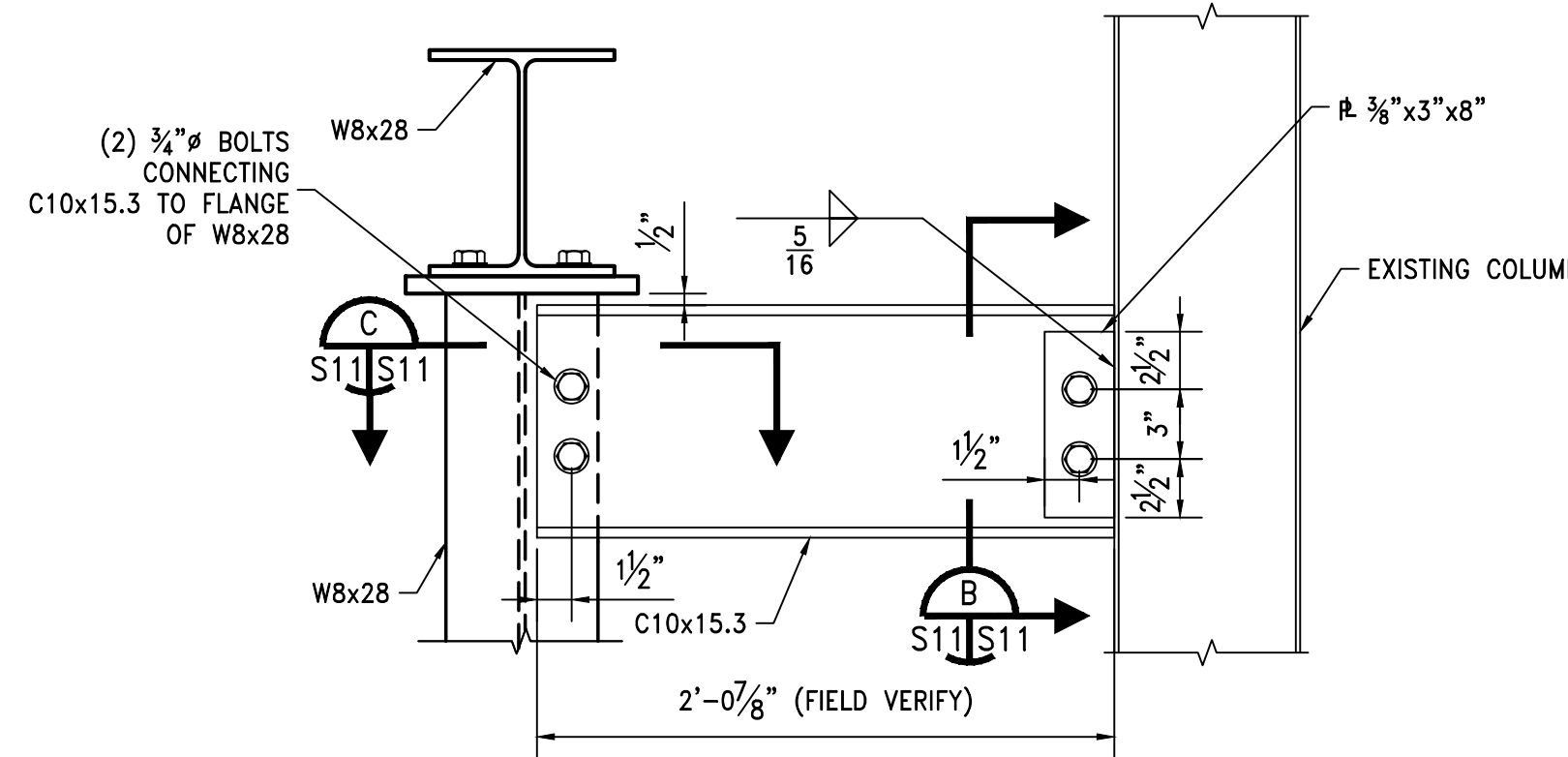
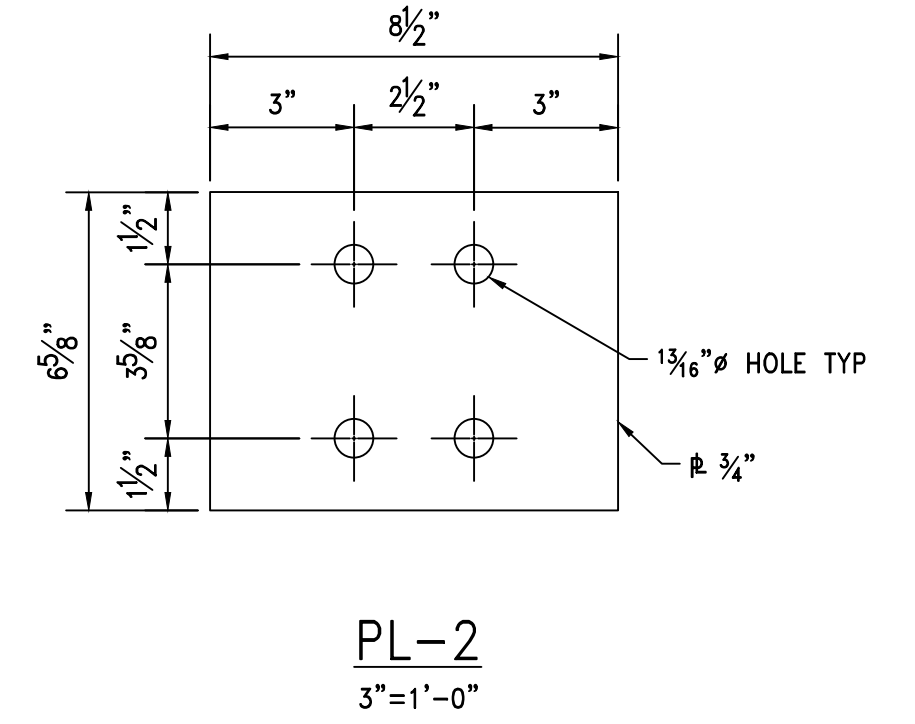
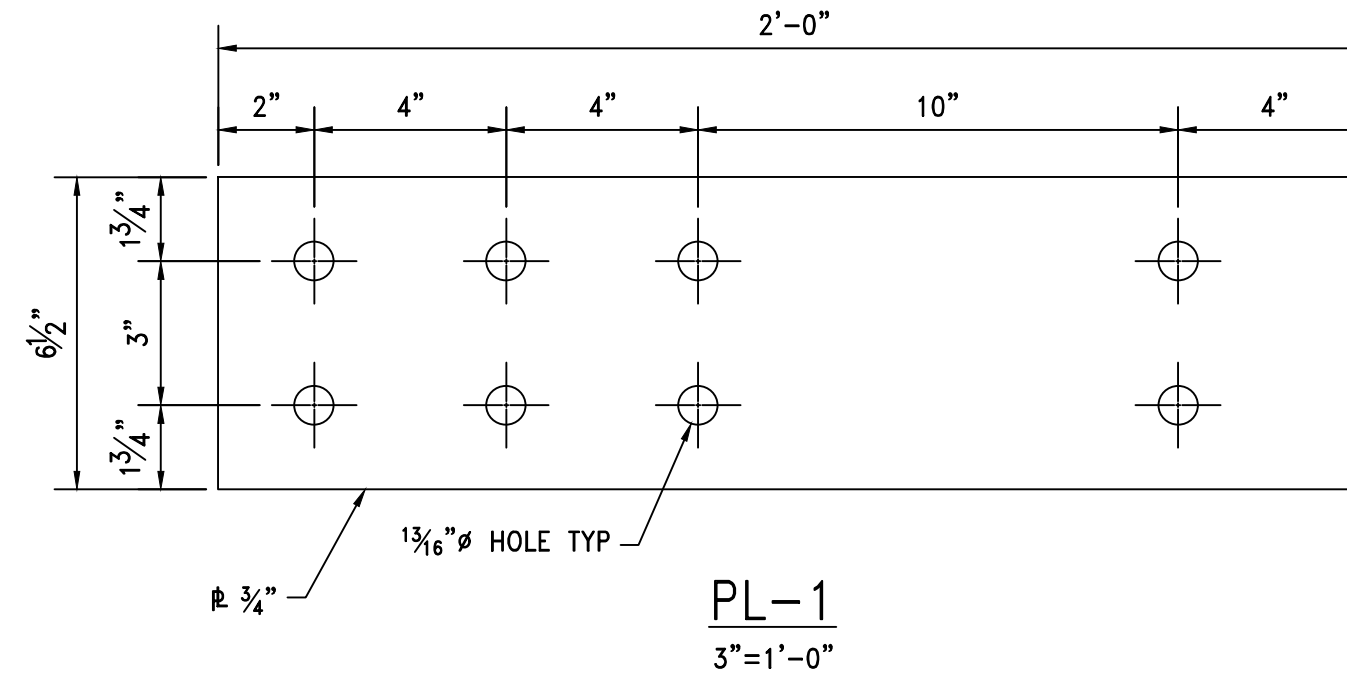
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SCALE				DRAWN BY				DATE				SHEET				22x34				REV.	
AS NOTED				JWM				04/07/22				<div><div></div></div> OF <div><div></div></div>								B	
JOB NO.				CHECKED BY				DATE				DRAWING NUMBER									
4146-22				GDEC				04/07/22				4146-S10									



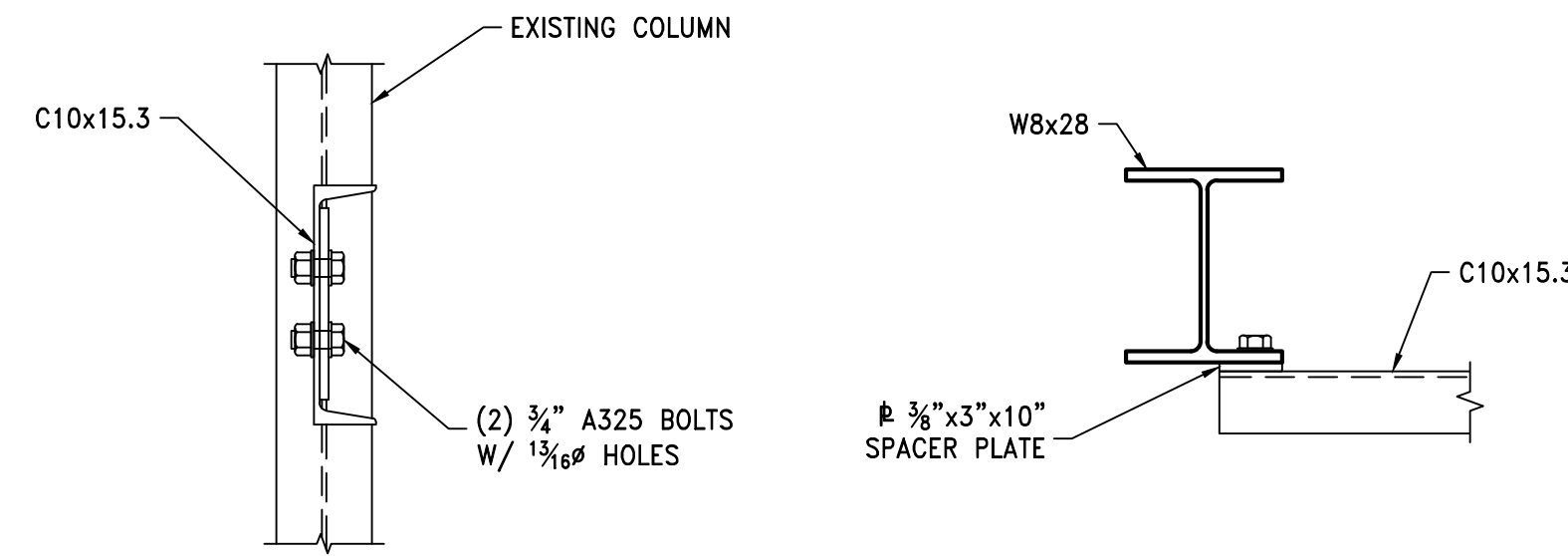
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1 1/2"=1'-0" S6 S11



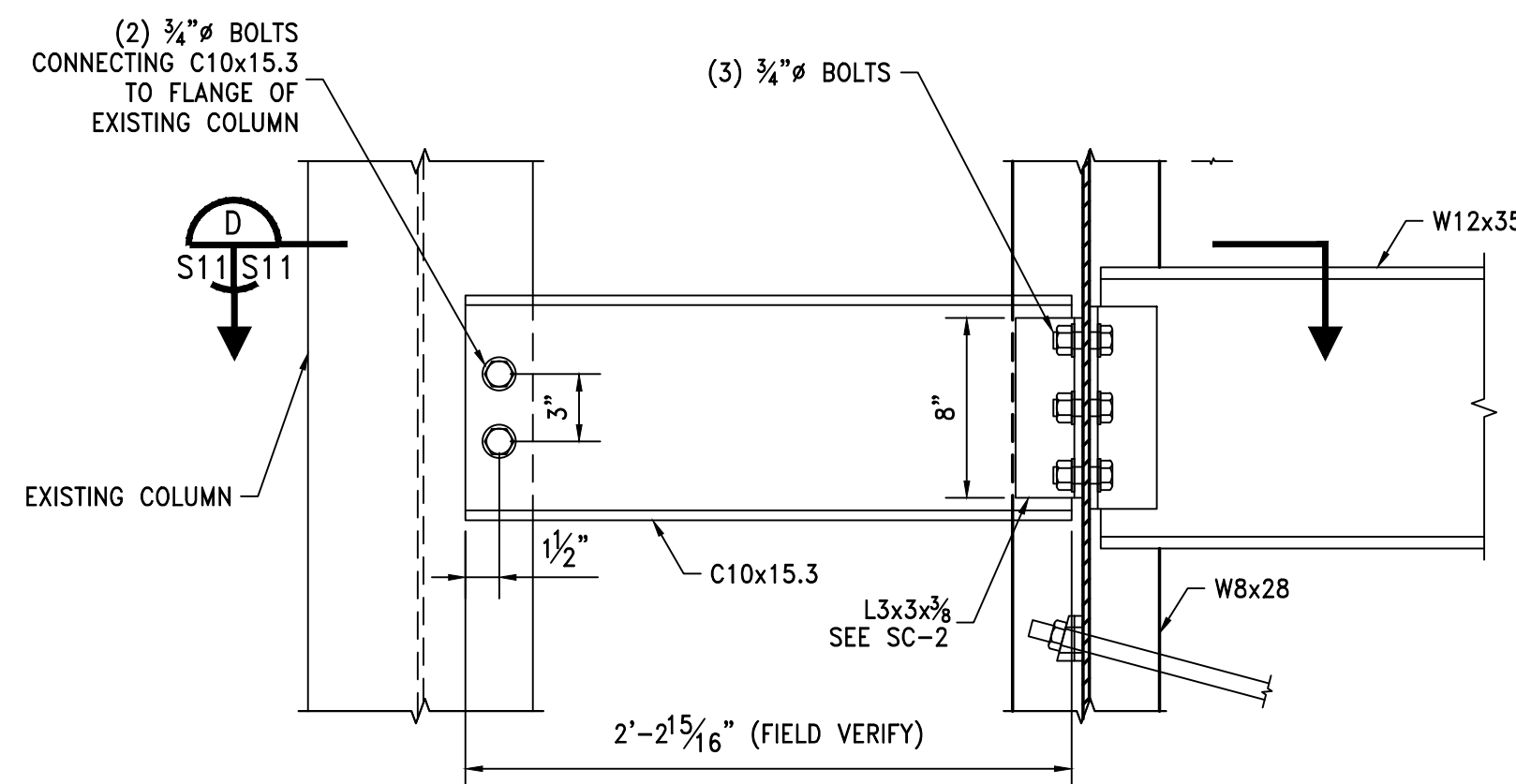
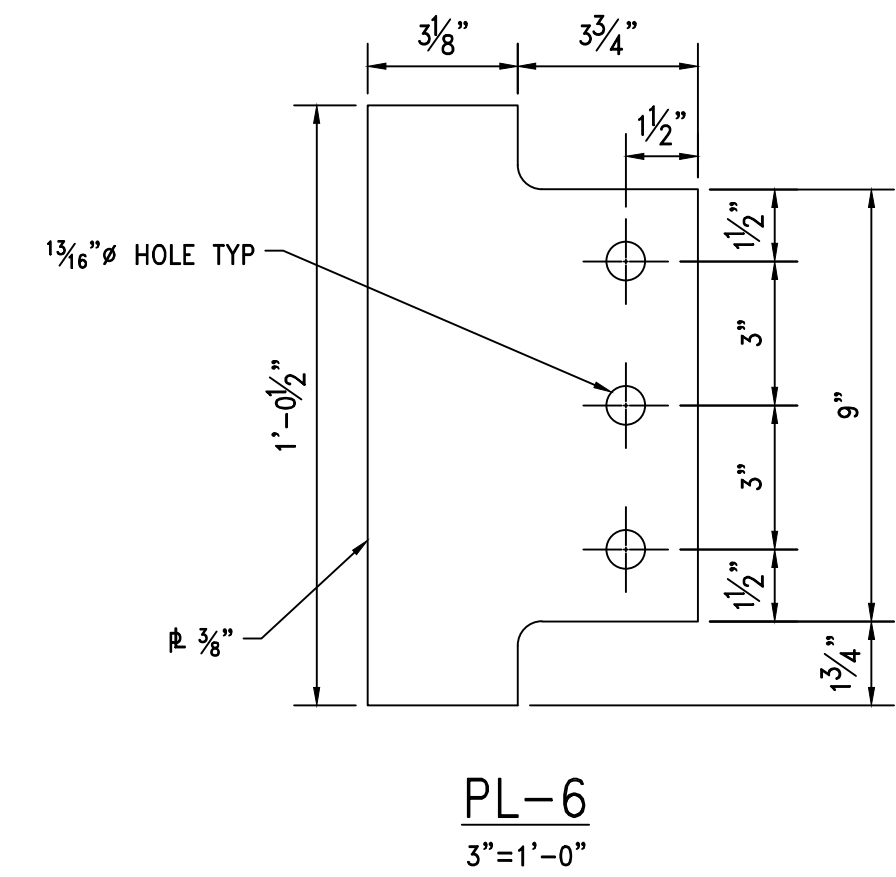
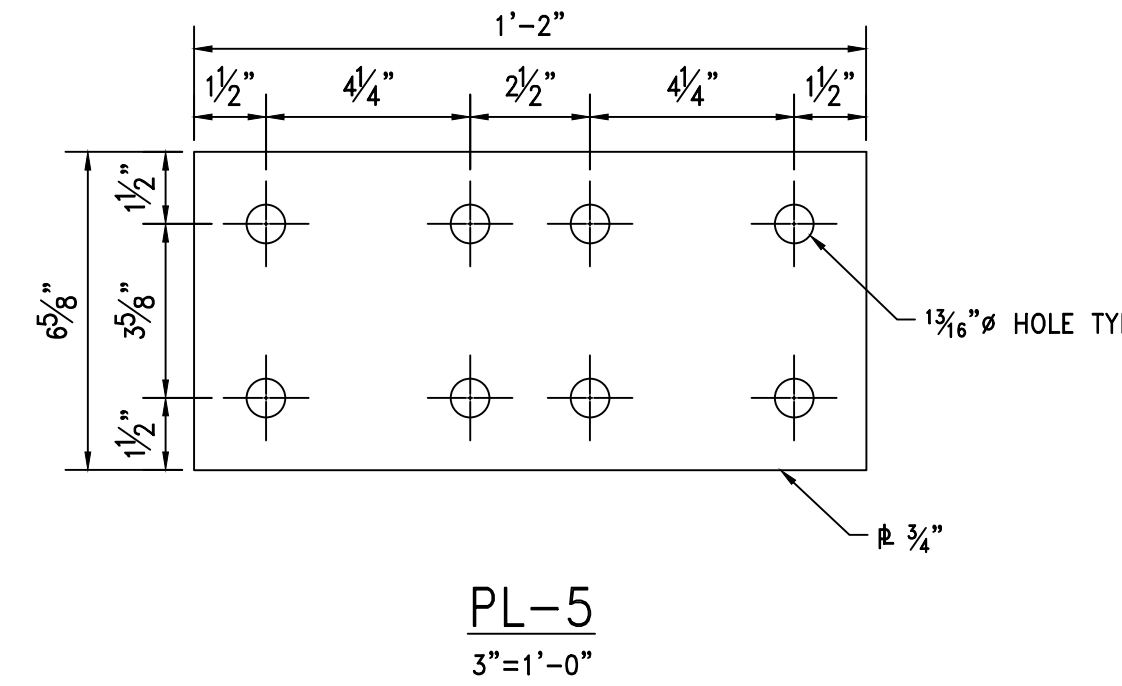
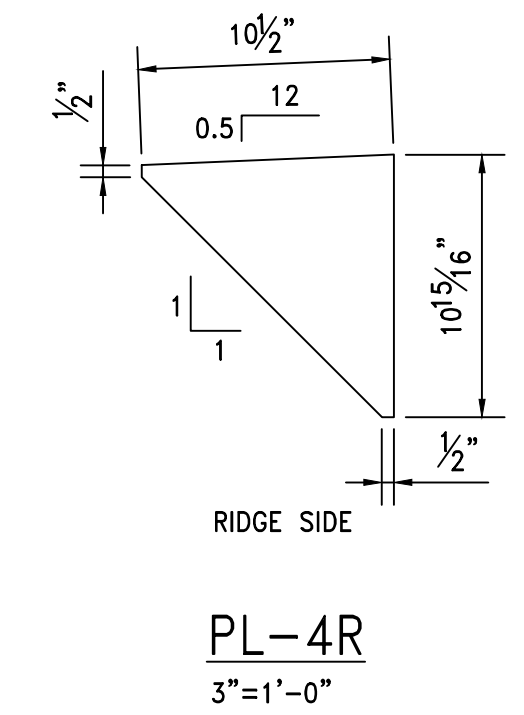
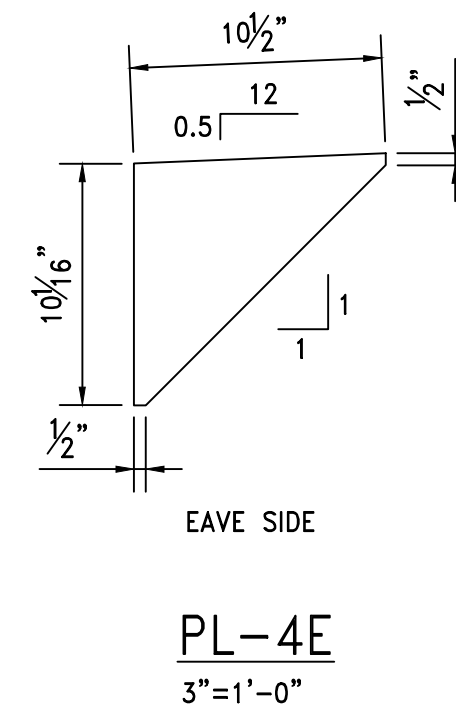
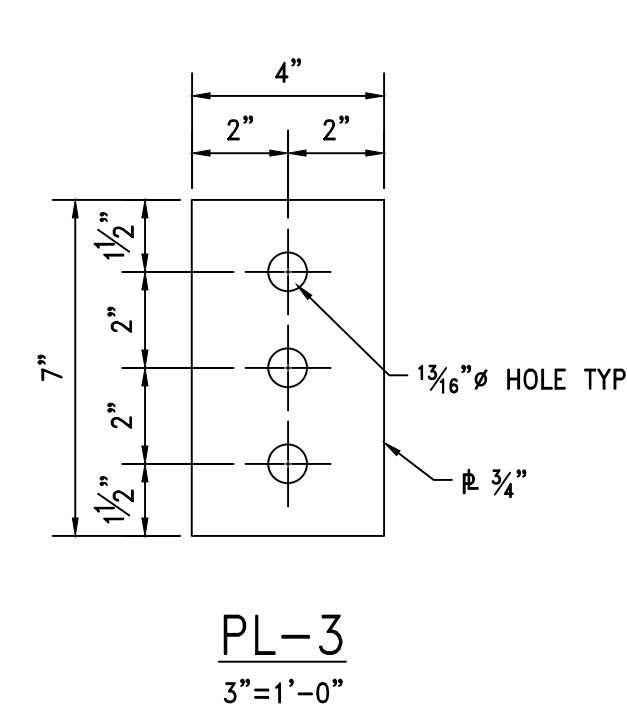
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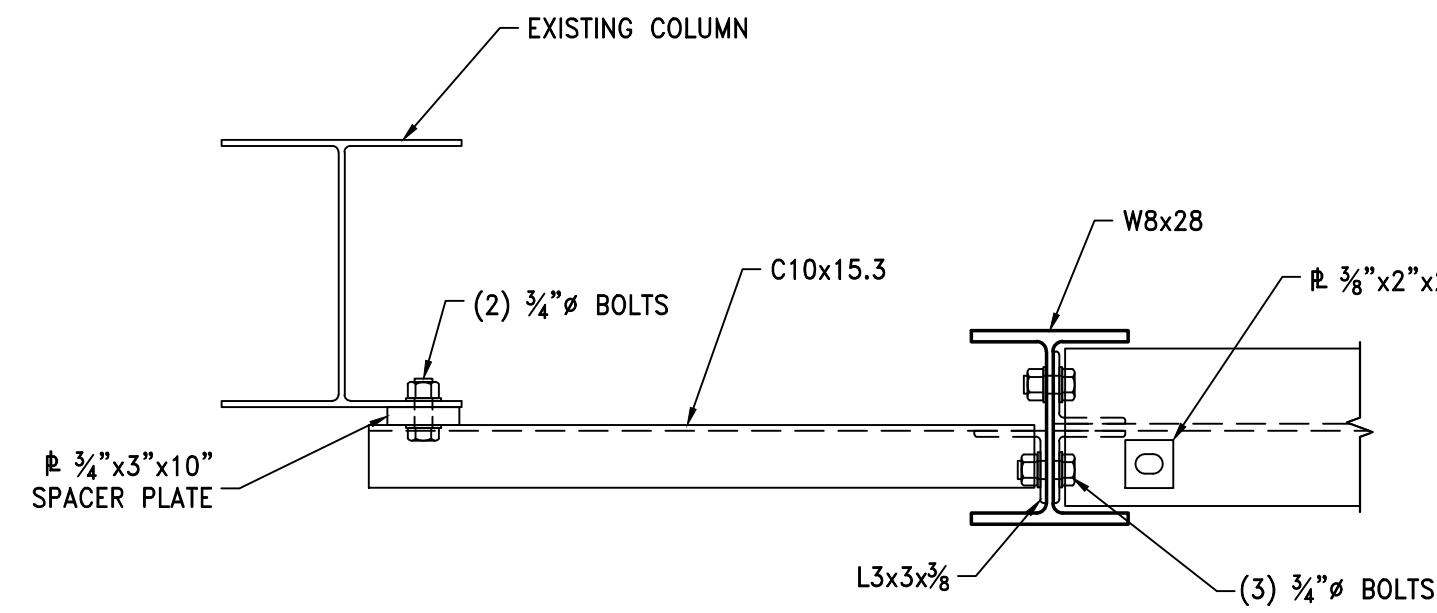
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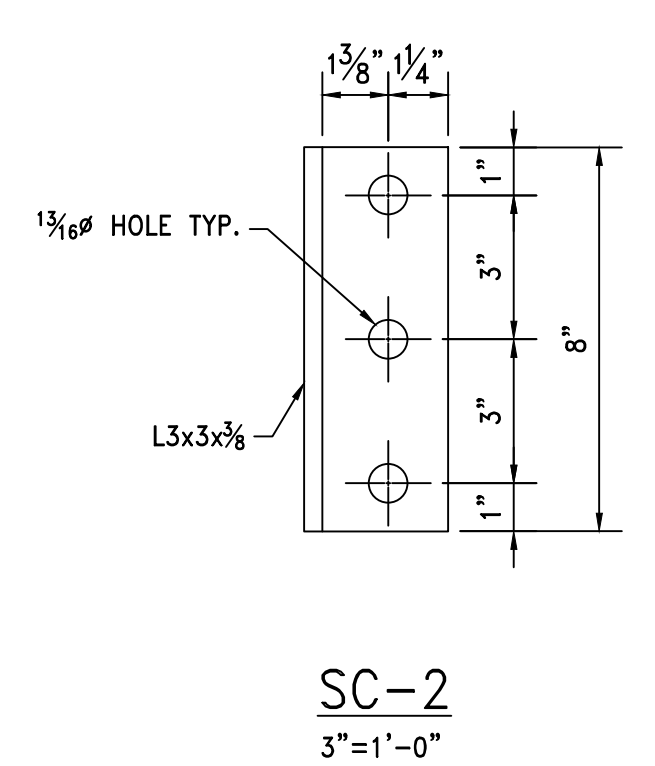
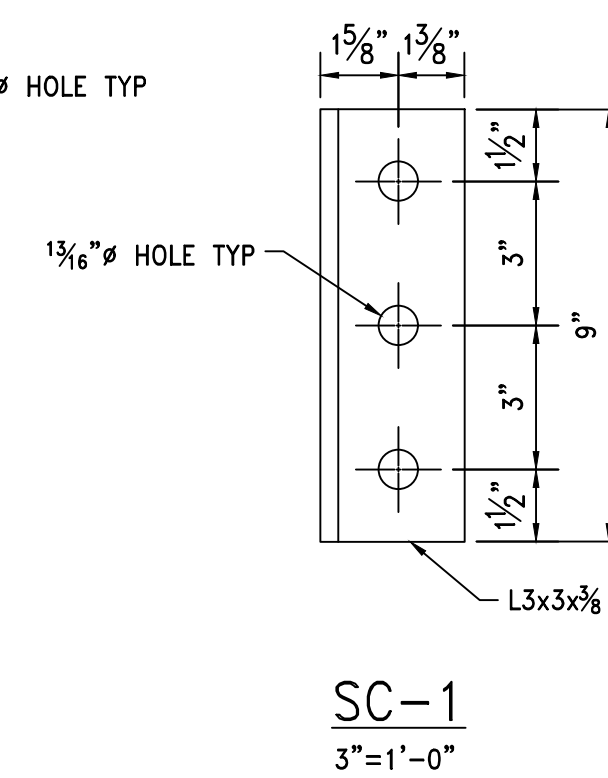
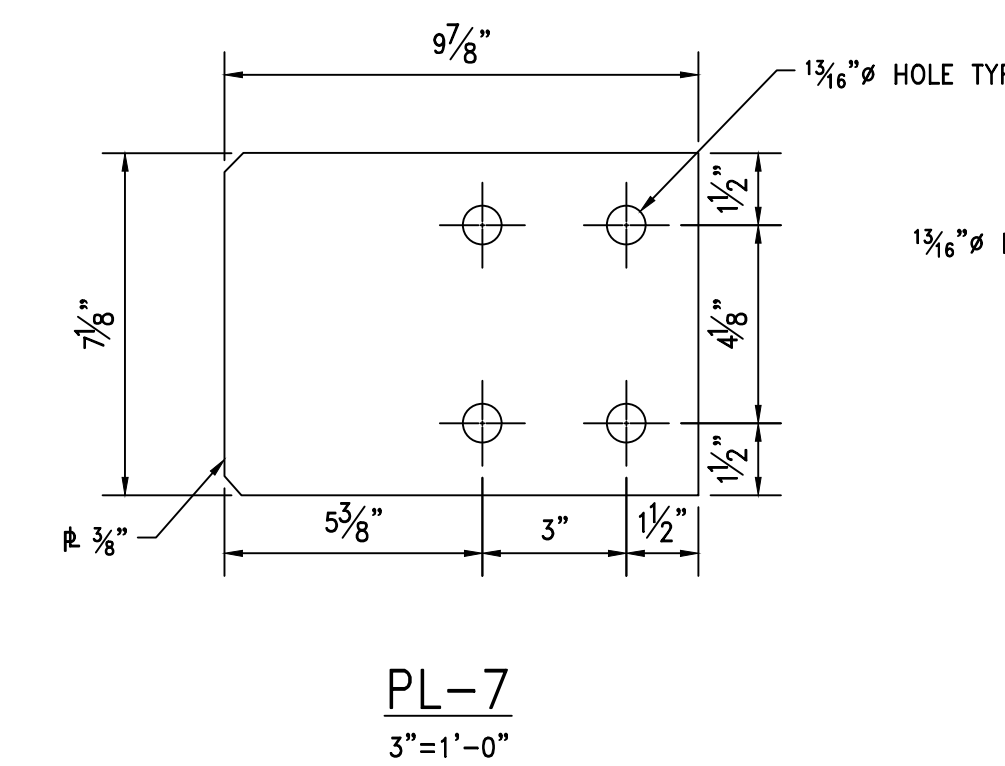
SECTION C
1 1/2"=1'-0" S11 S11



SECTION D
1 1/2"=1'-0" S6 S11



SECTION E
1 1/2"=1'-0" S11 S11



REV.	DESCRIPTION	DATE	BY	CHK'D
B	ISSUED FOR BID	08/01/22	JWM	GDEC

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PROJECT

**TERMINAL RAILWAY
OFFICE ADDITION/RENOVATION**

**126 INDUSTRIAL CANAL ROAD
MOBILE, ALABAMA**

TITLE

CONNECTION DETAILS

SCALE AS NOTED

JOB NO. 4146-22

DRAWN BY JWM

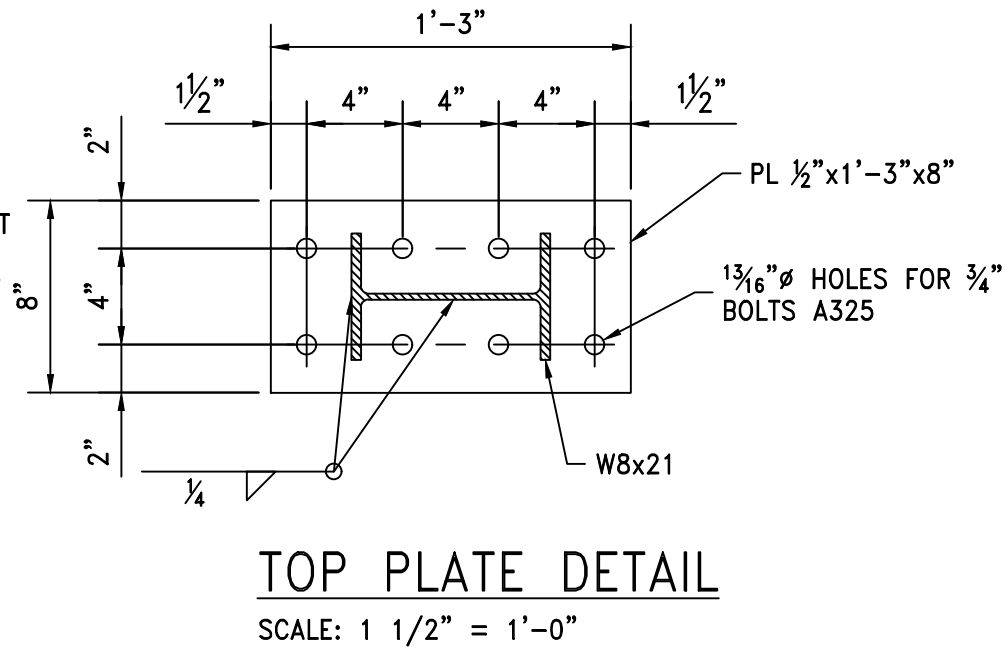
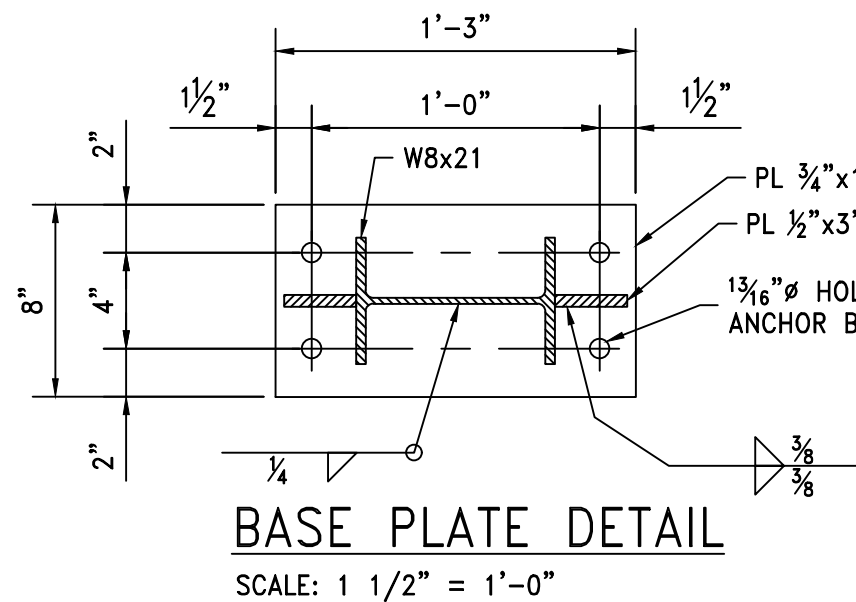
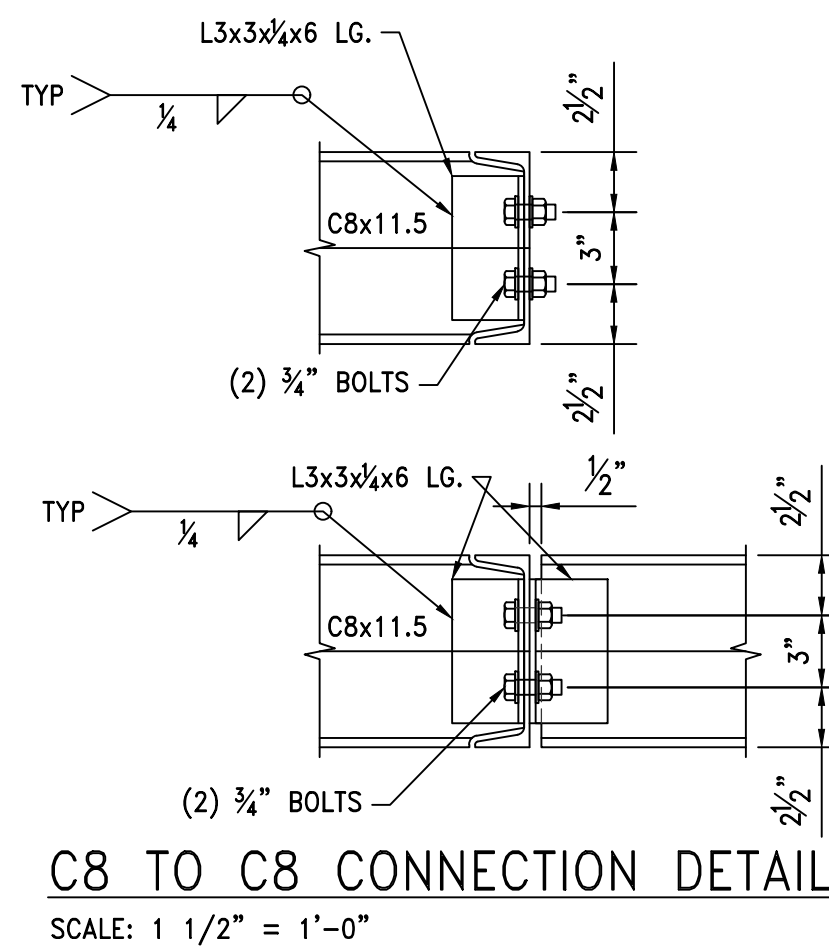
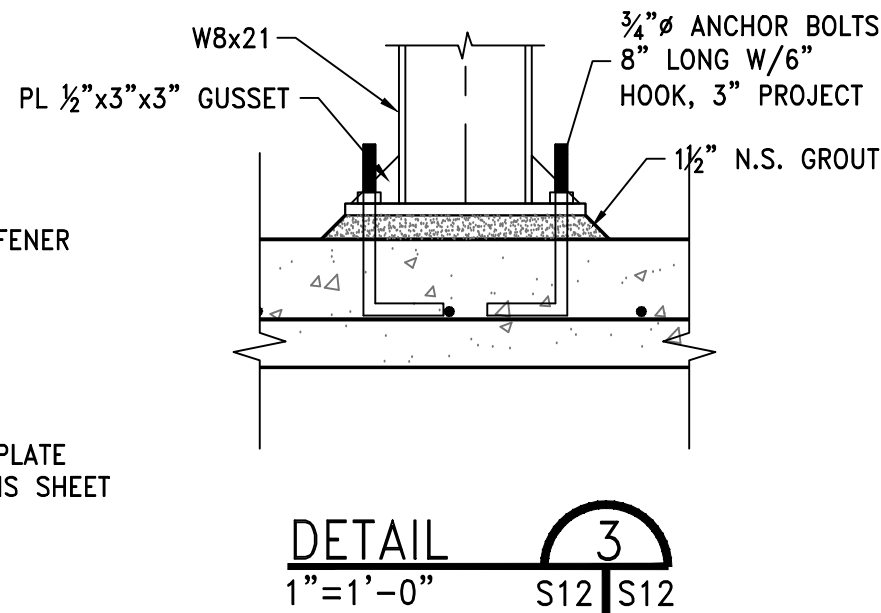
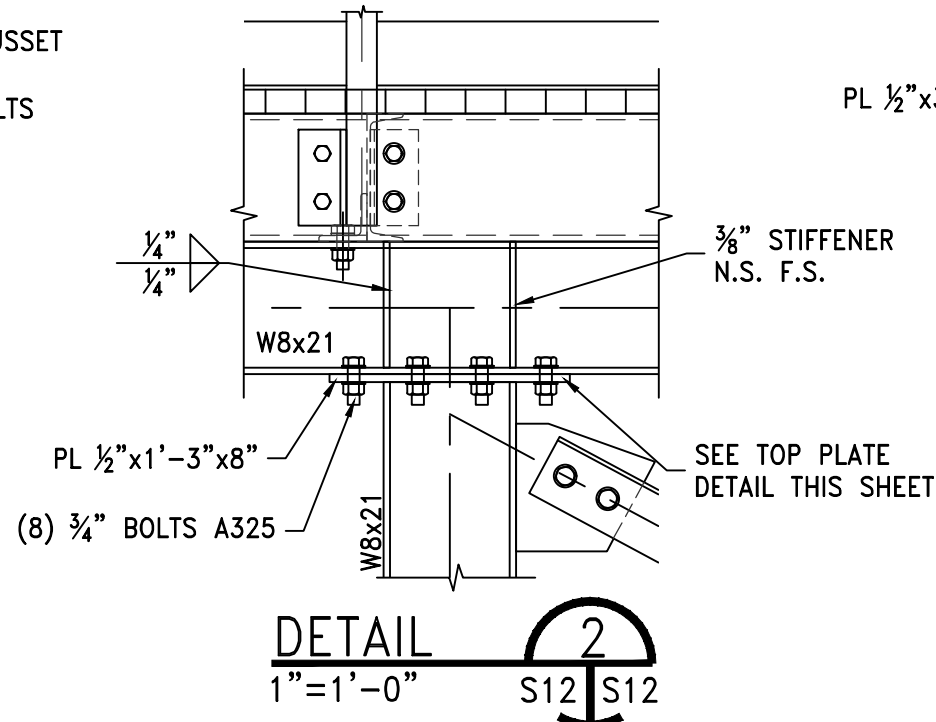
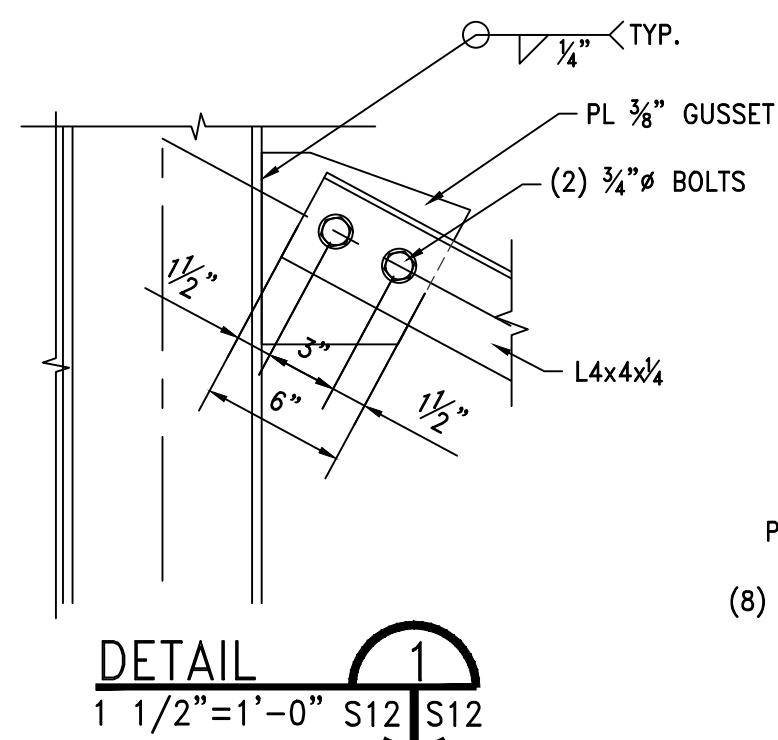
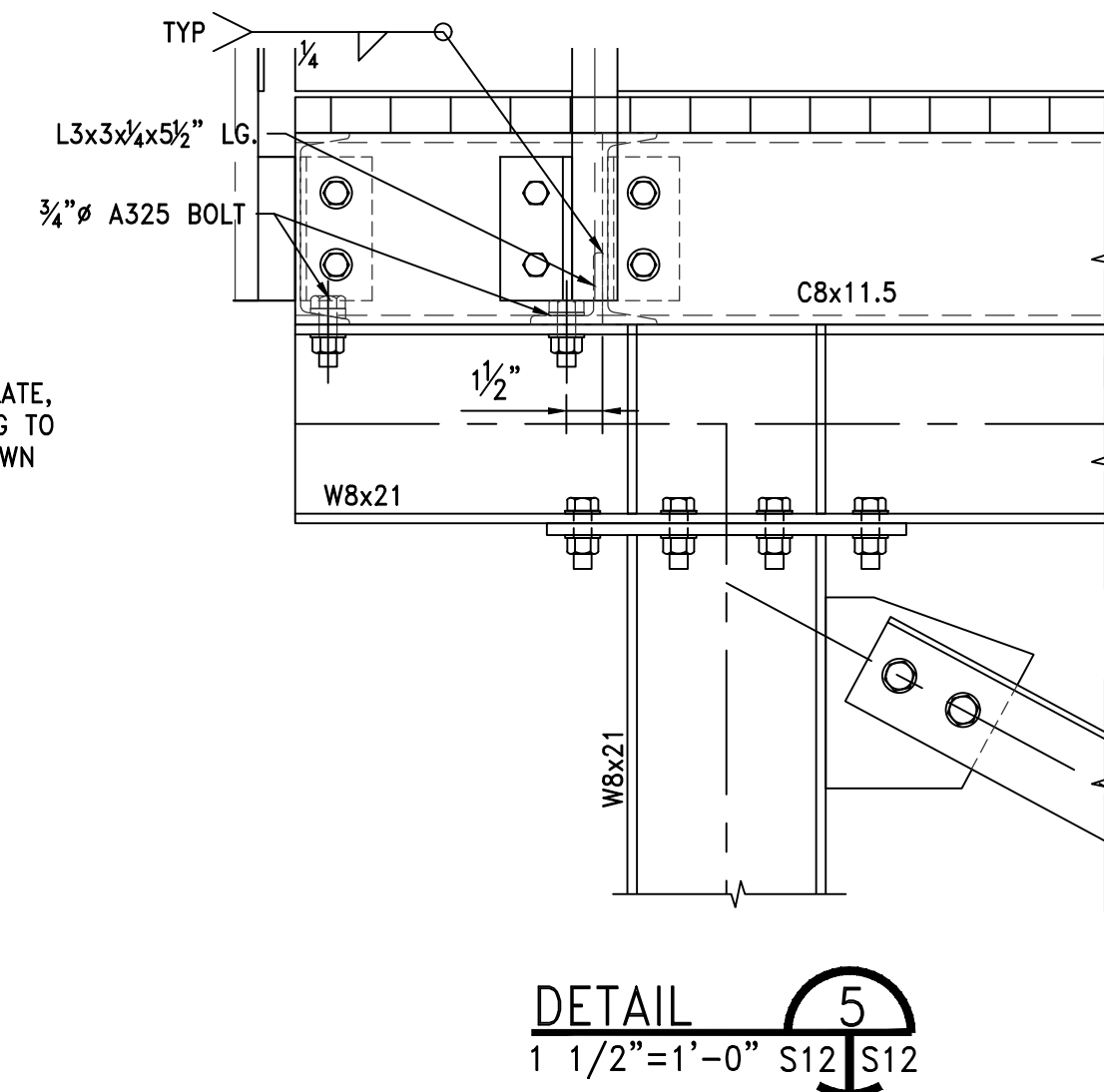
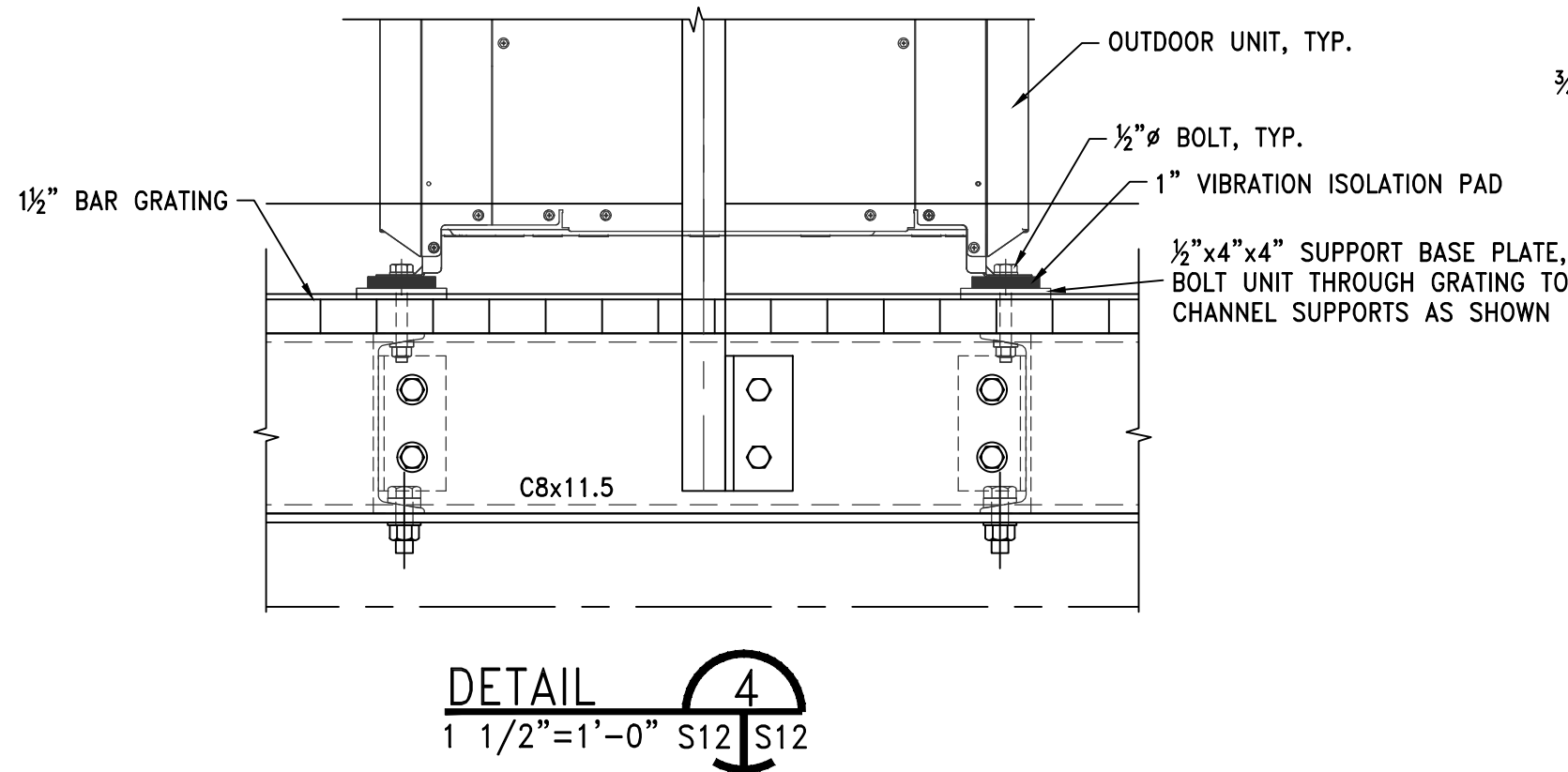
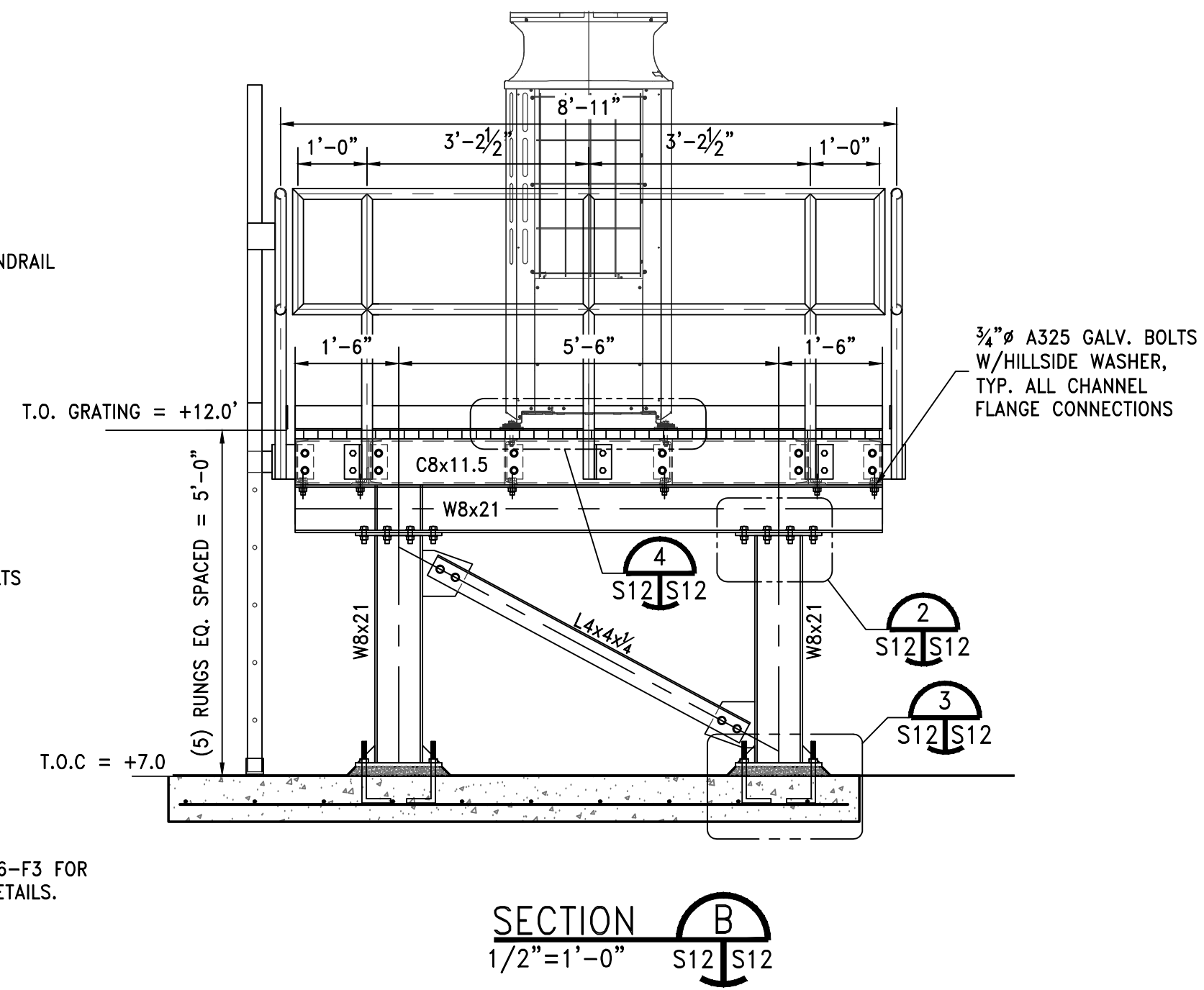
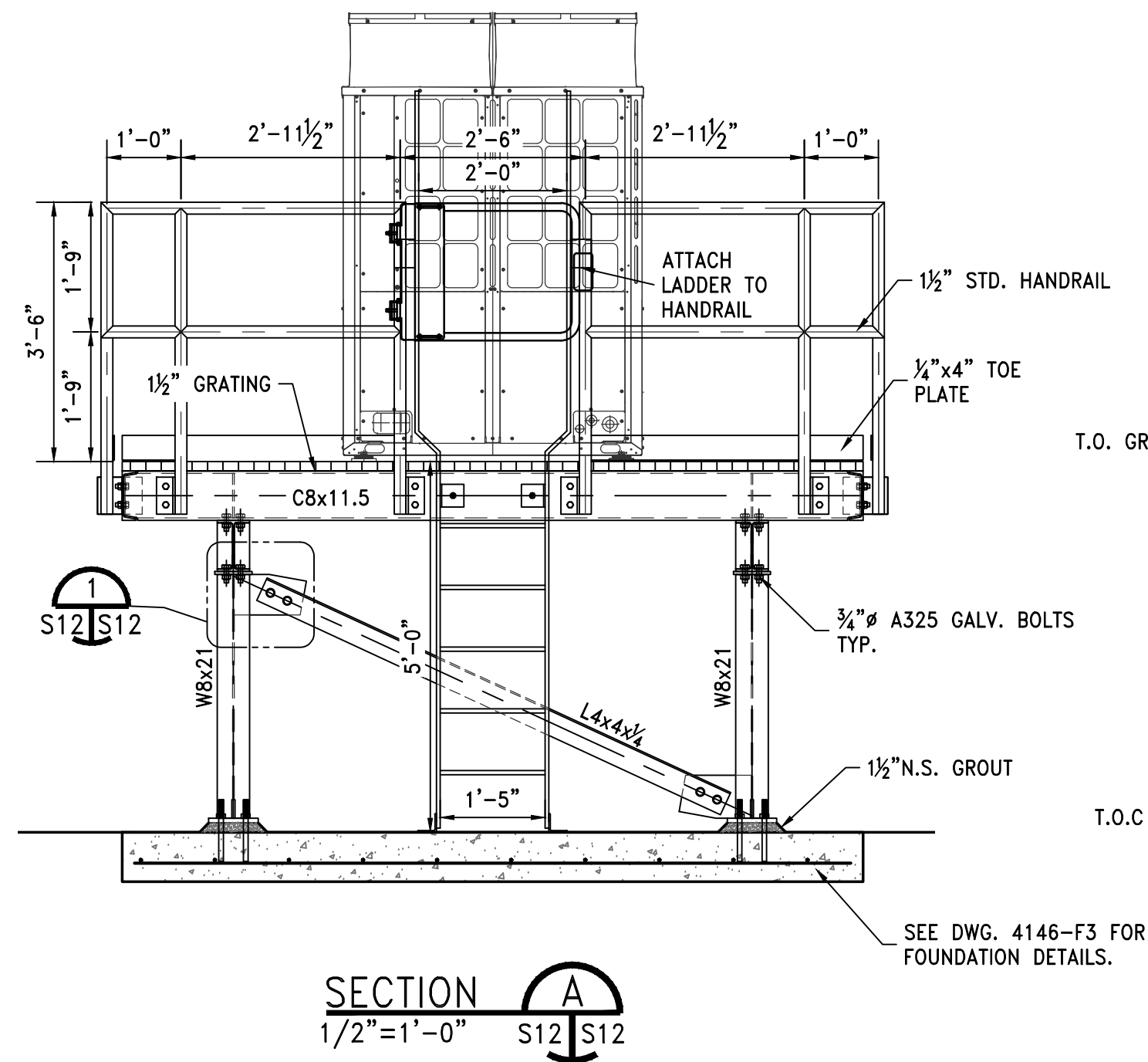
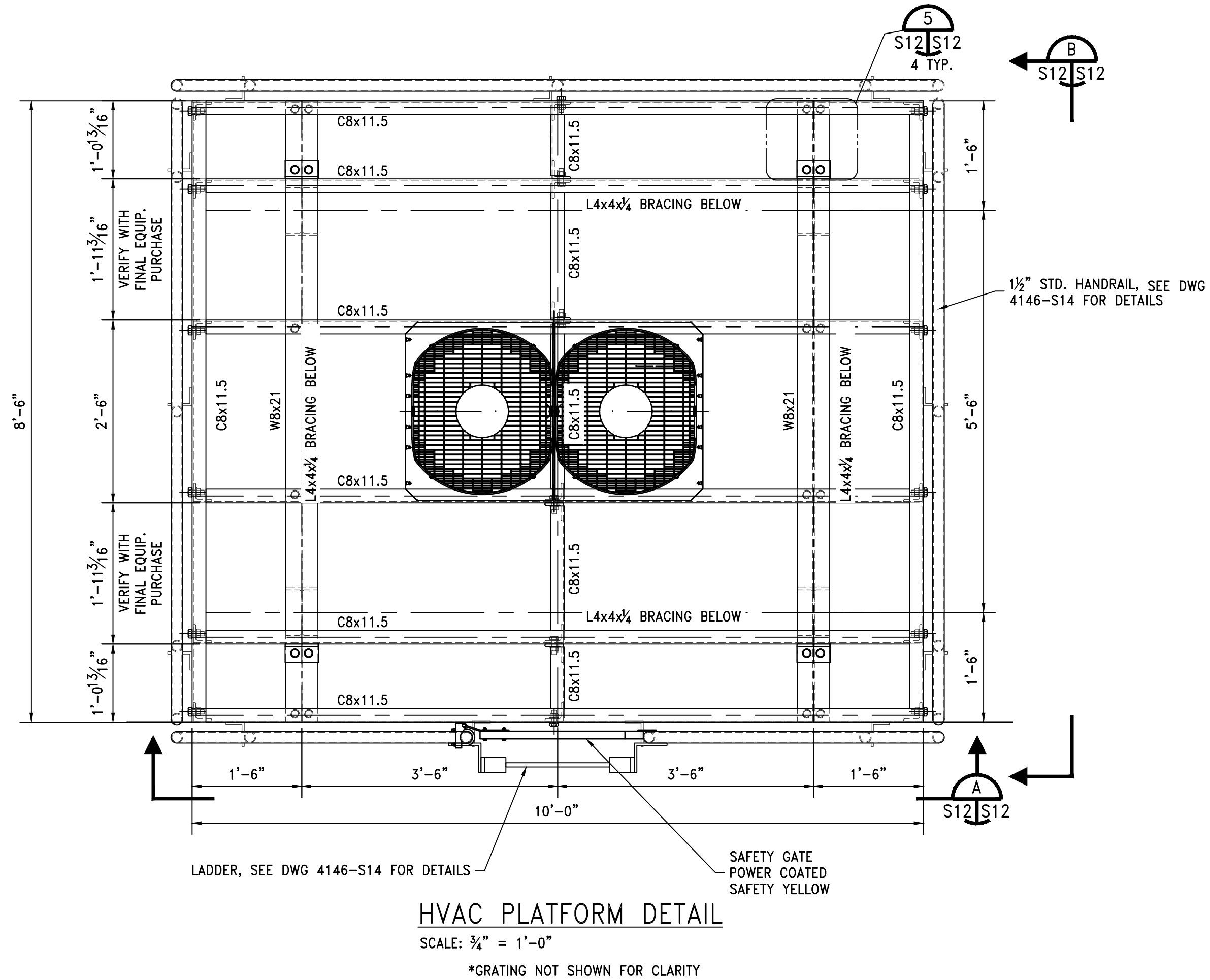
CHECKED BY GDEC

DATE 05/25/22

DATE 05/25/22

SHEET — OF — 22x34 REV. **B**

DRAWING NUMBER **4146-S11**



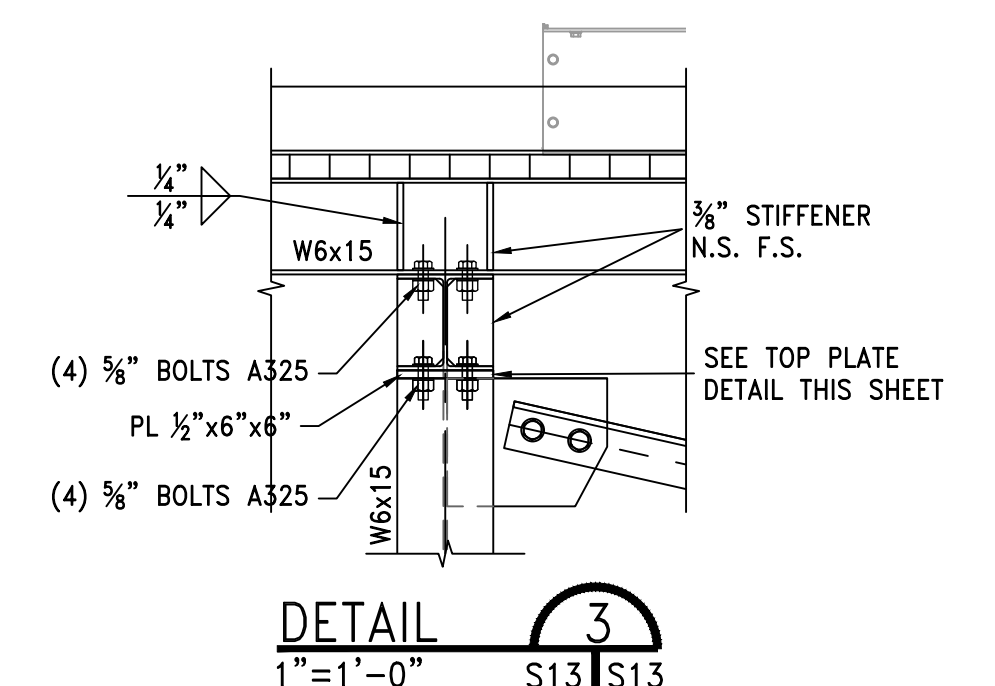
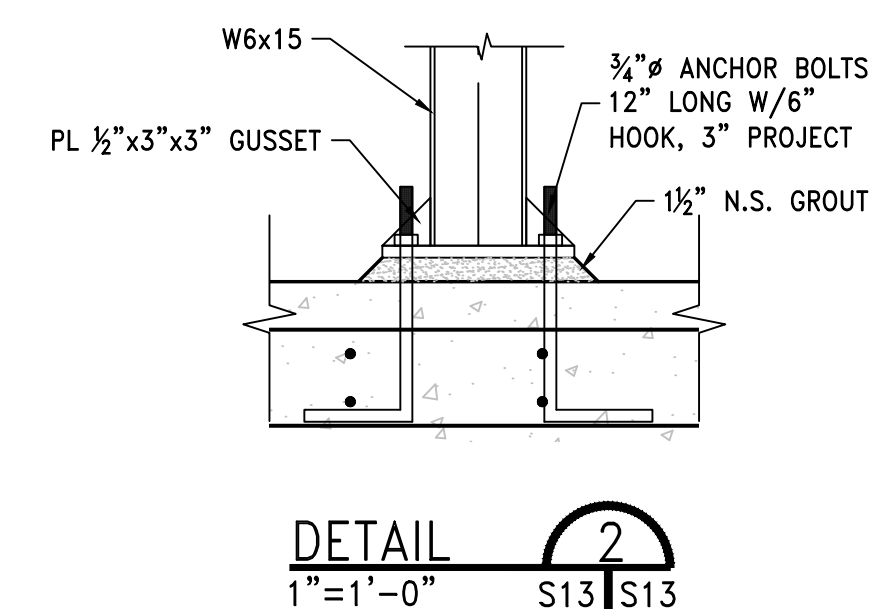
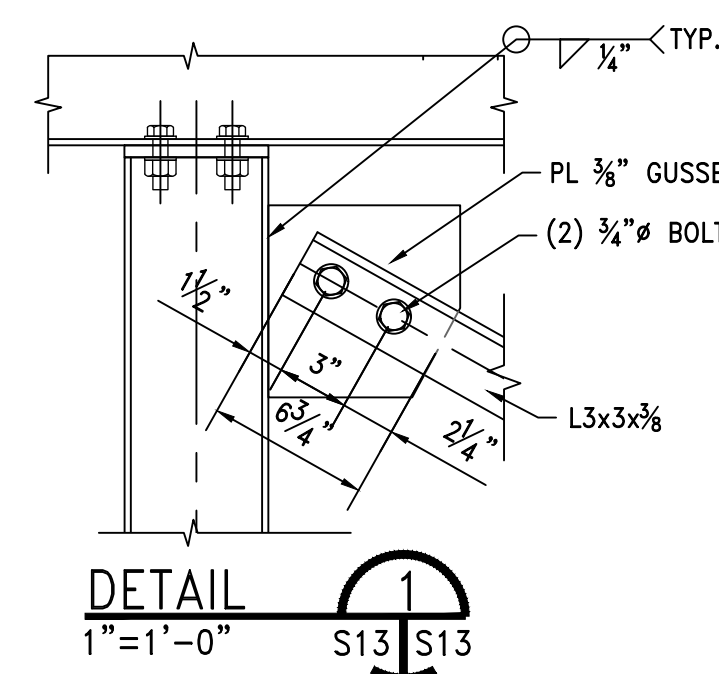
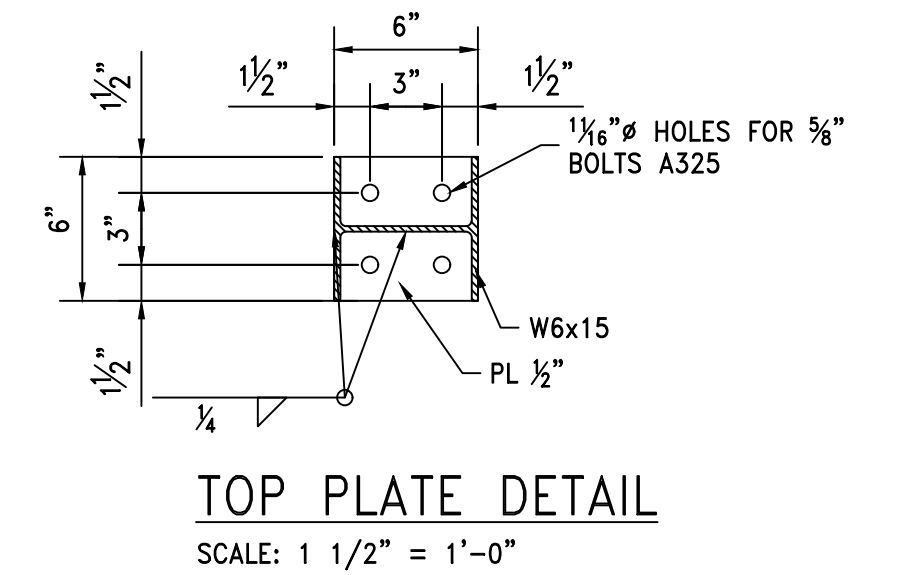
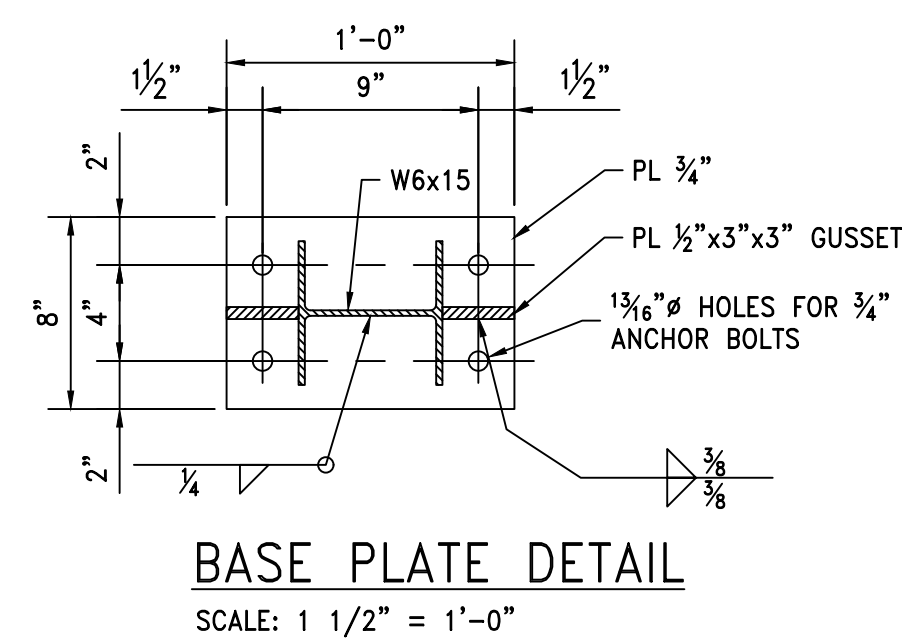
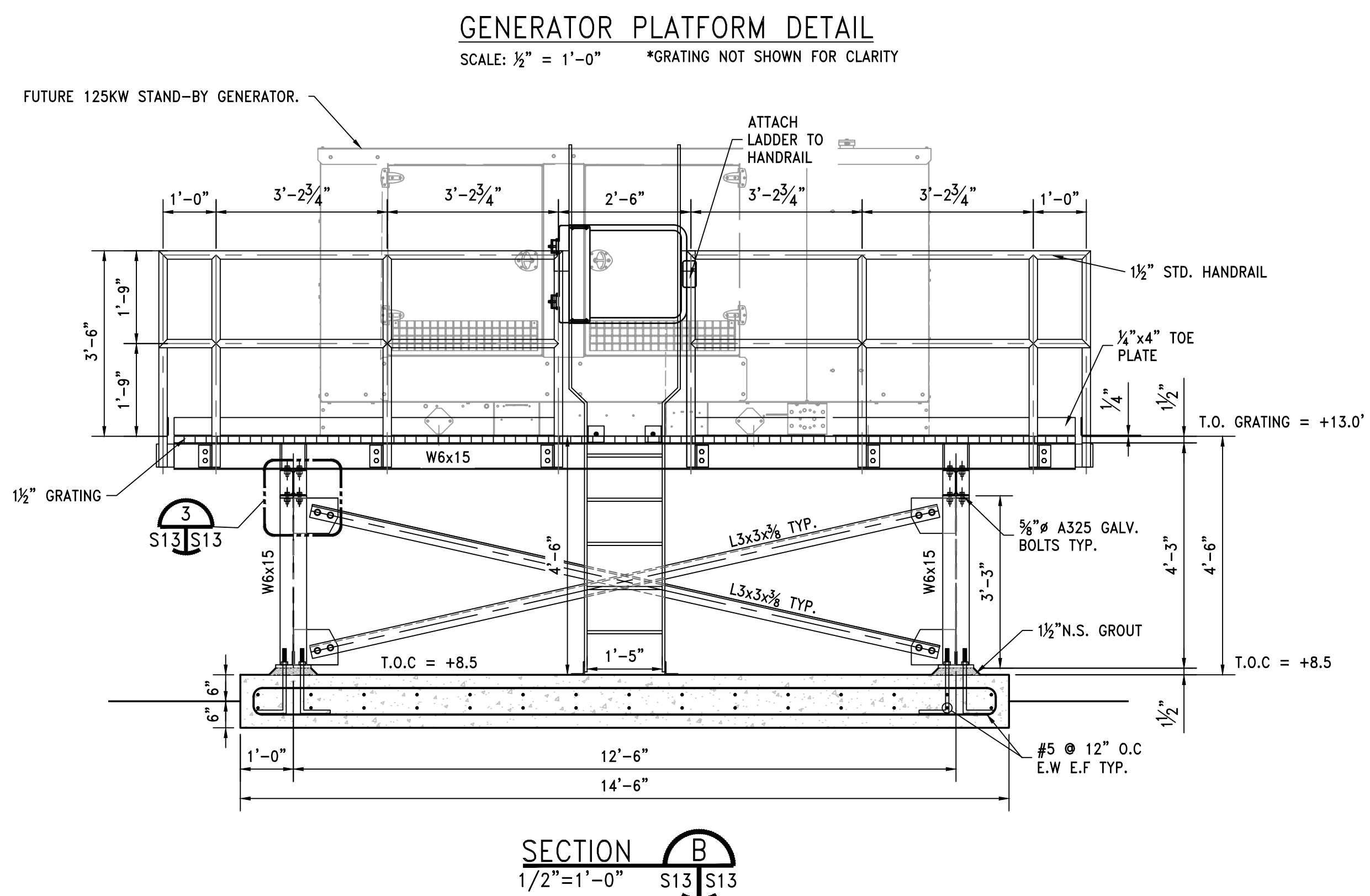
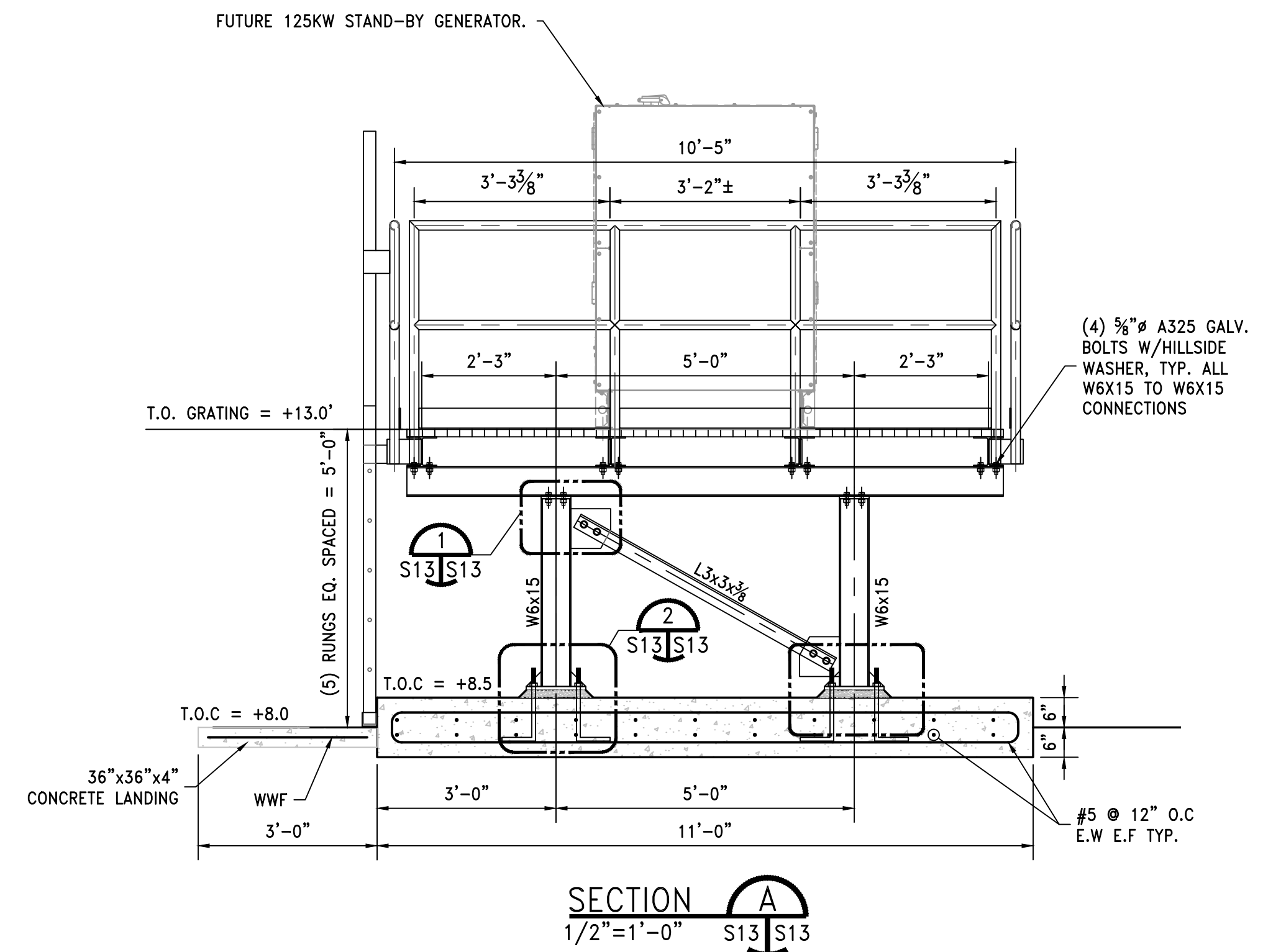
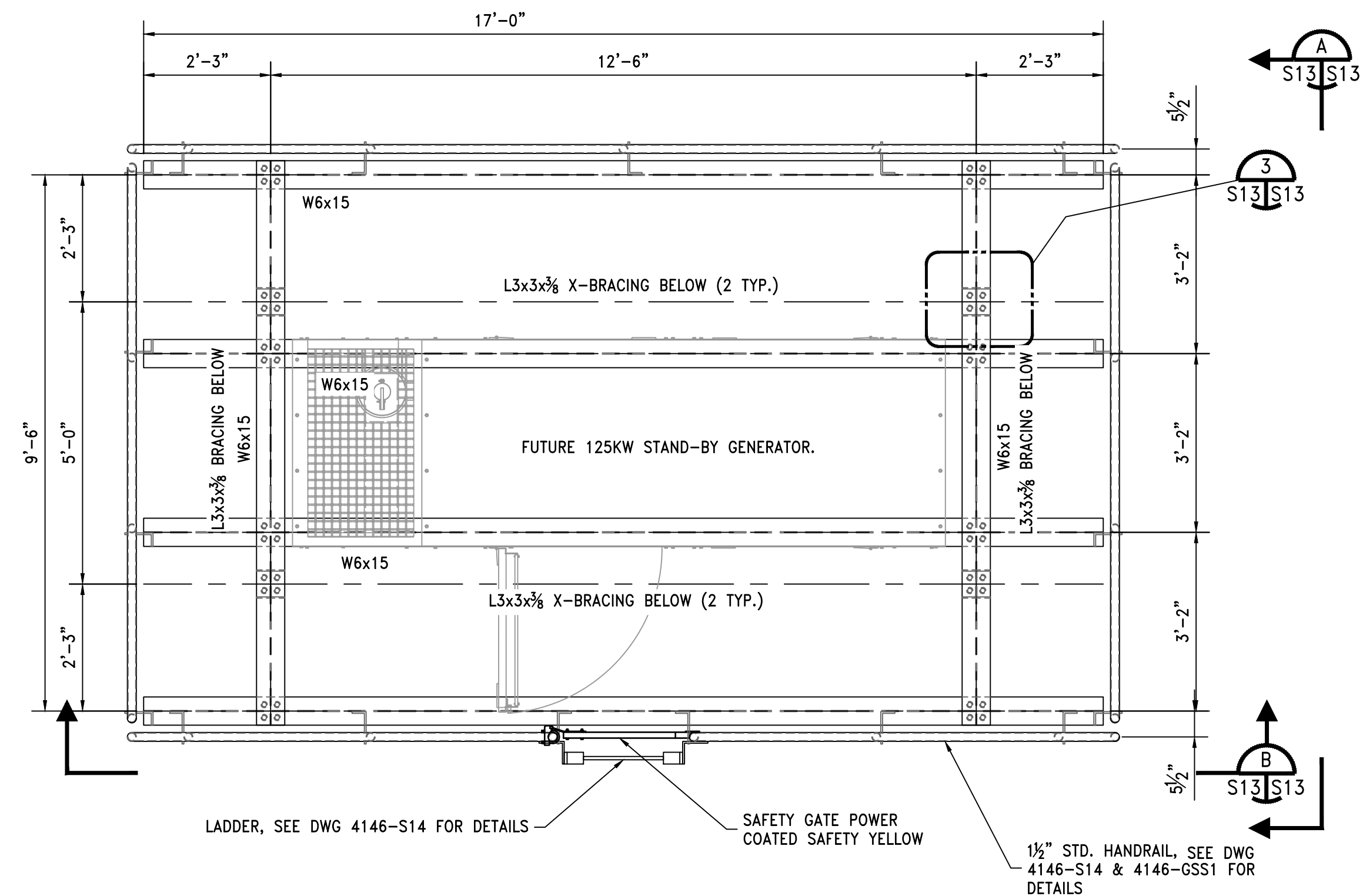
REV.	DESCRIPTION	DATE	BY	CHK'D
B	ISSUED FOR BID	08/01/22	JWM	GDEC

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PROJECT
**TERMINAL RAILWAY
 OFFICE ADDITION/RENOVATION**
**126 INDUSTRIAL CANAL ROAD
 MOBILE, ALABAMA**

TITLE HVAC PLATFORM DETAILS			
SCALE AS NOTED	DRAWN BY JWM	DATE 05/25/22	SHEET — OF — 22x34 REV. B
JOB NO. 4146-22	CHECKED BY GDEC	DATE 05/25/22	DRAWING NUMBER 4146-S12



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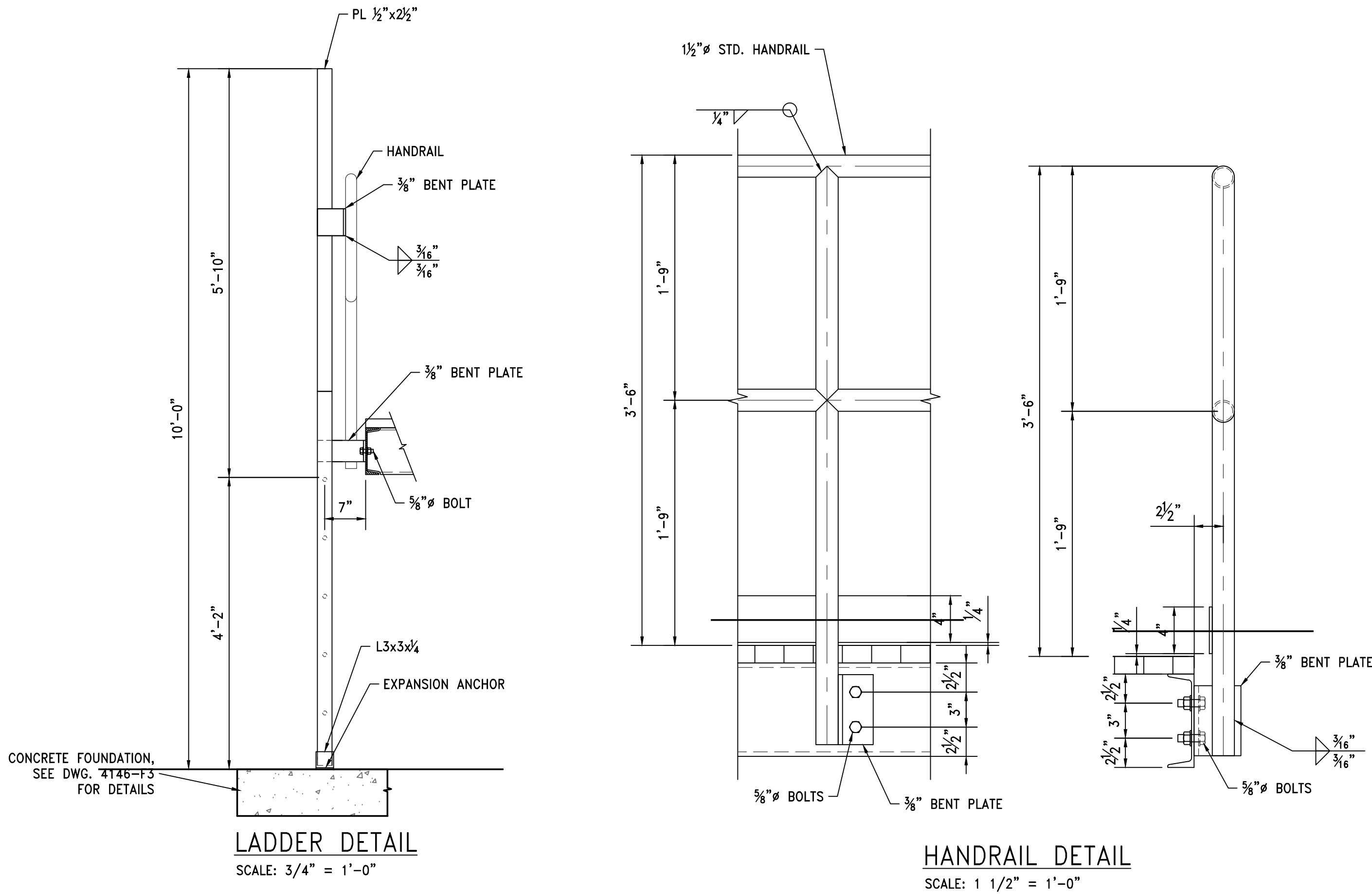
B	ISSUED FOR BID	08/01/22	JWM	GDEC
REV.	DESCRIPTION	DATE	BY	CHK'D

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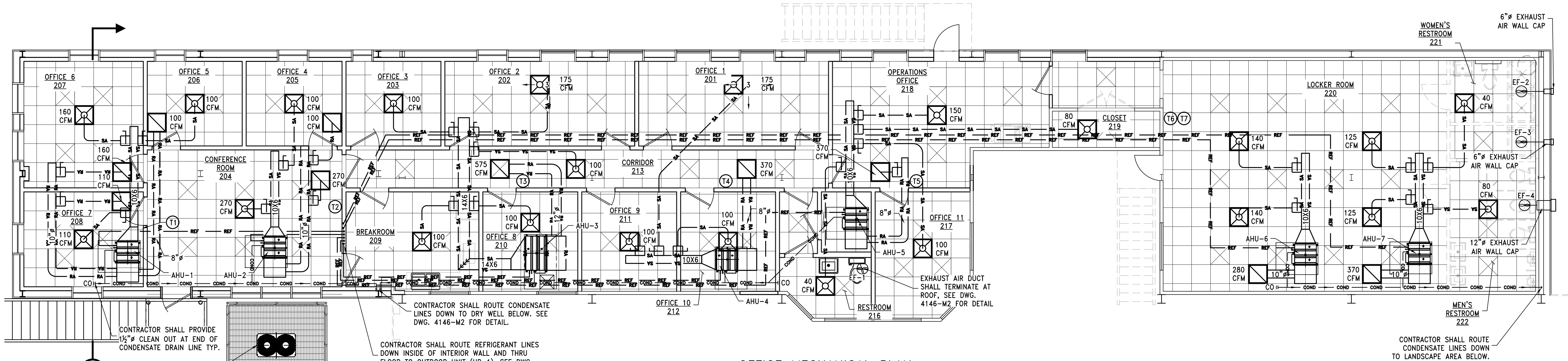
PROJECT	TERMINAL RAILWAY OFFICE ADDITION/RENOVATION		TITLE		GENERATOR PLATFORM DETAIL							
	2	126 INDUSTRIAL CANAL ROAD MOBILE, ALABAMA	SCALE	AS NOTED	DRAWN BY	JWM	DATE	05/25/22	SHEET	22x34	REV.	B
			JOB NO.	4146-22	CHECKED BY	GDEC	DATE	05/25/22	DRAWING NUMBER	4146-S13		



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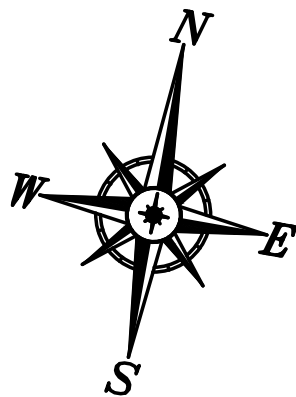
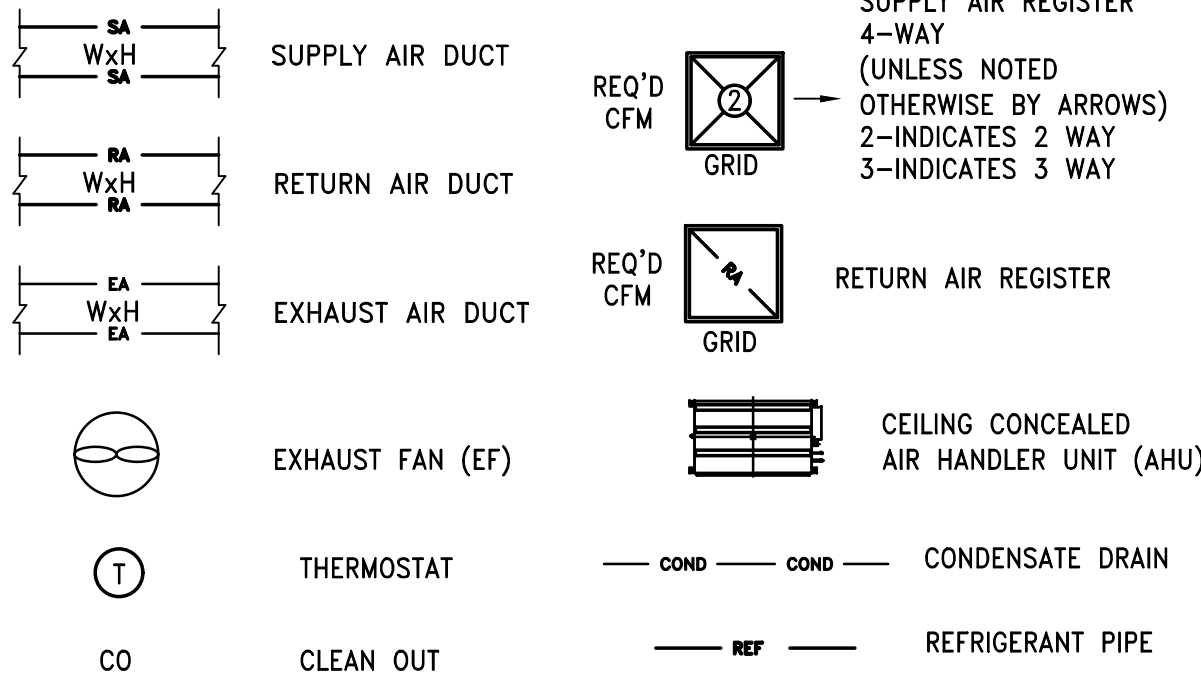
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OFFICE MECHANICAL PLAN

SCALE: 3/8"=1'-0"

LEGEND

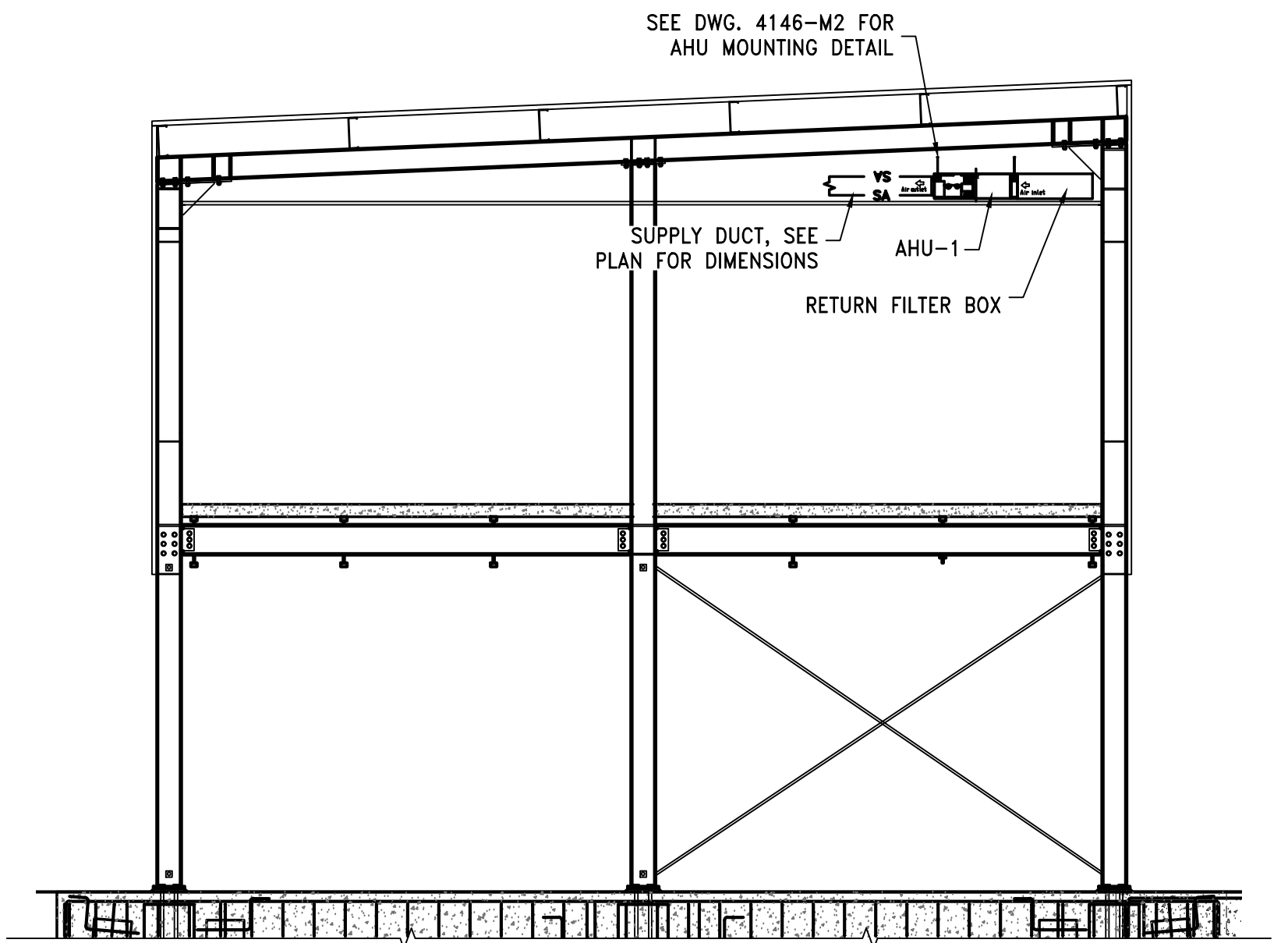


BRANCH DUCT SCHEDULE			
CFM	AIR DEVICE SIZE	DUCT CONNECTION SIZE	REMARKS
40	6" X 6"	6"ø	SUPPLY
50	6" X 6"	6"ø	SUPPLY
75	6" X 6"	6"ø	SUPPLY
80	6" X 6"	6"ø	SUPPLY
100	6" X 6"	6"ø	SUPPLY
110	6" X 6"	6"ø	SUPPLY
125	6" X 6"	6"ø	SUPPLY
140	6" X 6"	6"ø	SUPPLY
150	6" X 6"	6"ø	SUPPLY
175	9" X 9"	8"ø	SUPPLY
200	9" X 9"	8"ø	SUPPLY
225	9" X 9"	8"ø	SUPPLY
250	9" X 9"	8"ø	SUPPLY
0-125	8" X 8"	8"ø	RETURN
126-250	12" X 12"	8"ø	RETURN
251-450	12" X 12"	10"ø	RETURN
451-800	16" X 16"	12" X 12"	RETURN
801-1100	18" X 18"	14" X 14"	RETURN
1101-1500	20" X 20"	16" X 16"	RETURN
1501-2000	22" X 22"	18" X 18"	RETURN

* - DUCT SIZE AS SHOWN IN SCHEDULE UNLESS NOTED ON PLAN.

NOTES: (SEE DWG. 4146-M3 FOR ADDITIONAL SPECIFICATIONS)

- ALL MECHANICAL WORK SHALL BE IN ACCORDANCE WITH INTERNATIONAL MECHANICAL CODES, 2018.
- AIR FLOW (SUPPLY & RETURN) ARE 1000 FPM & 800 FPM. FLOW RATE BASED ON 7 AIR CHANGES PER HOUR.
- MAIN DUCTWORK SHALL BE GALVANIZED SHEET METAL PER SMACNA STANDARDS. DUCT SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS. ALL DUCTWORK SHALL BE ROUTED ABOVE SUSPENDED CEILING.
- ALL DUCTWORK SHALL BE FABRICATED AND INSTALLED PER SMACNA STANDARDS. DUCTWORK SHALL INCLUDE BALANCING DAMPER AT EACH SUPPLY/RETURN AND TURNING VANES AS SHOWN AND ALL 90° TURNS BOTH VERTICAL AND HORIZONTAL.
- EXHAUST FANS SHALL BE VENTED TO THE OUTSIDE OF BUILDING. CONNECT FAN TO LIGHT SWITCH. SEE DWG 4146-M2 FOR EXHAUST FAN SCHEDULE.
- SEE DWG. 4146-M2 FOR SYSTEM SCHEDULES. APPROVED MANUFACTURER ARE TRANE CITYMULTI-MITSUBISHI, DAIKIN, AND PANASONIC. SUBMIT A VALUE ENGINEERED ANALYSIS FOR OTHERS MANUFACTURERS WITH BID FOR CONSIDERATION.
- ALL CONTROL WIRING AND INTERFACES WITH ANCILLARY EQUIPMENT BY CONTRACTOR. AIR HANDLERS SHALL BE CONTROLLED USING A SEVEN DAY PROGRAMMABLE THERMOSTAT CONTROLLER WITH LOCKABLE CLEAR BOX COVER.
- CONTRACTOR SHALL FURNISH AND INSTALL ALL UNITS SHALL HAVE INTEGRAL CONTROLLERS WITH OVERLOAD PROTECTION AND DISCONNECT FUNCTIONS PER N.E.C.
- CONTRACTOR SHALL ROUTE CONDENSATE AND DRAIN LINES TO NEAREST LANDSCAPED AREA, VIA 1-1/2"ø DRAIN. AIR HANDLER UNITS SHALL BE PROVIDED WITH DRAIN PAN LEVEL SENSORS. DRAIN PAN LEVEL SENSORS SHALL SHUT OFF UNIT TO PREVENT DRAIN PAN OVERFLOW.
- HEAT PUMP (HP-1) MOUNTED ON PLATFORM, SEE DWG.4146-S12. SECURE UNIT TO PLATFORM AT EACH CORNER WITH MECHANICAL FASTENERS. REFRIGERANT PIPING SHALL BE ROUTED BELOW GRADE IN 6" PVC SCH. 40 CONDUIT AND BE EXTENDED TO TURN UP AT THE NEAREST COLUMN AND UP TO THE RESPECTIVE UNIT FOR CONNECTION. SEAL BOTH ENDS OF UNDER GROUND CONDUIT TO BE WEATHER AND RODENT PROOF.



SECTION A-A
1/4"=1'-0"

REV.	DESCRIPTION	DATE	BY	CHK'D
B	ISSUED FOR BID	08/01/22	MAD	JDG

Cowles, Murphy, Glover & ASSOCIATES
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PROJECT

TERMINAL RAILWAY
OFFICE ADDITION/RENOVATION
126 INDUSTRIAL CANAL ROAD
MOBILE, ALABAMA

TITLE

OFFICE MECHANICAL PLAN

SCALE AS NOTED	DRAWN BY MAD	DATE 03/30/22	SHEET 22x34 REV. B
JOB NO. 4146-22	CHECKED BY JDG	DATE 06/06/22	DRAWING NUMBER 4146-M1

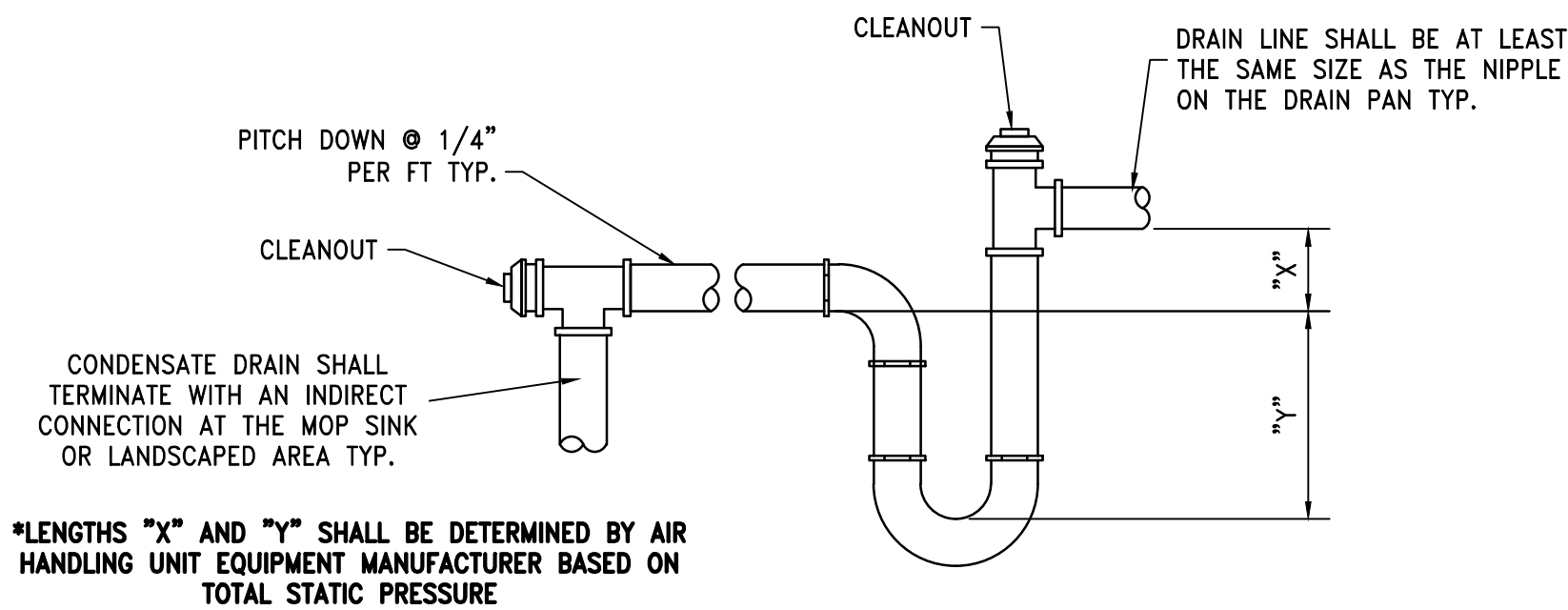
VRF AHU SYSTEM SCHEDULE																		
MARK AHU #	AHU DATA		COOLING CAPACITY @ ARI STANDARD CONDITIONS					HEATING CAPACITY @ ARI STANDARD CONDITIONS				AHU MCA/CB	ELECTRICAL DATA			PIPE DIA. LIQUID/GAS	APPROX. PIPE LENGTH FT.	REMARKS
	TOTAL CFM	ESP	EDB °F	EWB °F	AMBIENT °F	TOTAL BTU/HR	SENSIBLE BTU/HR	TOTAL BTU/HR	EDB °F	EWB °F	VOLTS		Hz	PHASE				
1	370	0.2"	80	67	95	12,000	9,600	13,500	47	43	0.67/15	208	60	1	¼ / ½	50	CITYMULTI TPEFYP012MS140C	
2	370	0.2"	80	67	95	12,000	9,600	13,500	47	43	0.67/15	208	60	1	¼ / ½	30	CITYMULTI TPEFYP012MS140C	
3	575	0.14"	80	67	95	24,000	19,200	27,000	47	43	1.17/15	208	60	1	¾ / ¾	50	CITYMULTI TPEFYP024MS140C	
4	370	0.2"	80	67	95	12,000	9,600	13,500	47	43	0.67/15	208	60	1	¼ / ½	70	CITYMULTI TPEFYP012MS140C	
5	370	0.2"	80	67	95	12,000	9,600	13,500	47	43	0.67/15	208	60	1	¼ / ½	80	CITYMULTI TPEFYP012MS140C	
6	280	0.14"	80	67	95	12,000	9,600	13,500	47	43	0.67/15	208	60	1	¼ / ½	135	CITYMULTI TPEFYP012MS140C	
7	370	0.2"	80	67	95	12,000	9,600	13,500	47	43	0.67/15	208	60	1	¼ / ½	150	CITYMULTI TPEFYP012MS140C	

OUTDOOR VRF HEAT PUMP SCHEDULE														
MARK HP #	MIN. EER DUCTED/ NON-DUCTED	COOLING CAPACITY ② AHRI STANDARD CONDITIONS				HEATING CAPACITY ② AHRI STANDARD CONDITIONS				HP MCA/CB	ELECTRICAL DATA			REMARKS
		EDB °F	EWB °F	AMBIENT °F	TOTAL BTU/HR	TOTAL BTU/HR	EDB °F	EWB °F	VOLTS		Hz	PHASE		
1	13.8/15.1	80	67	95	96,000	108,000	47	43	40/50	208	60	3	MITSUBISHI ELECTRIC TUHYP0963AN40A	

NOTES:
1. OUTDOOR COILS MUST BE COATED WITH AN ANTI-CORROSION COATING EXCEEDING ASTM B117 SALT SPRAY TEST FOR A MINIMUM OF 10,000 HOURS.

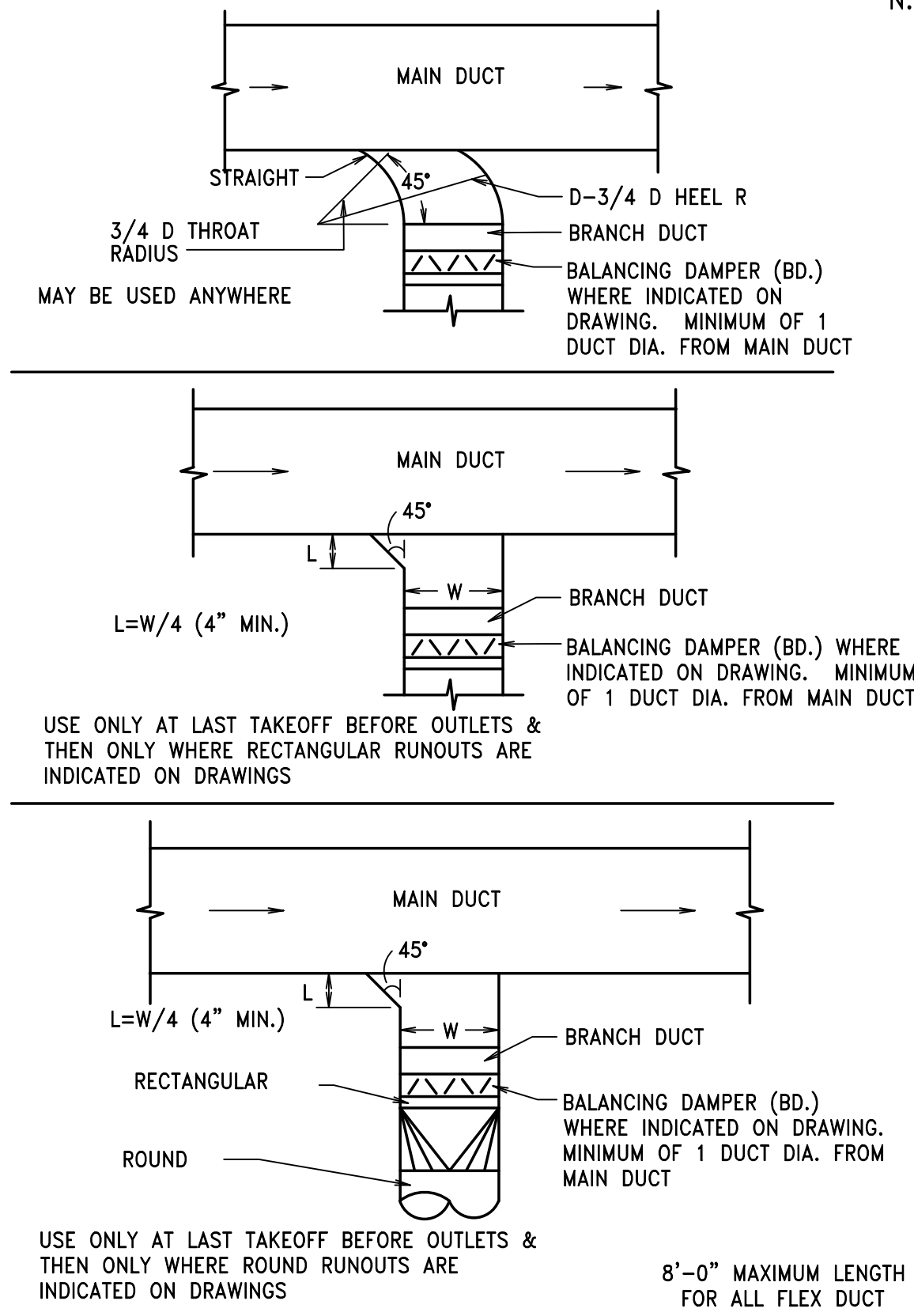
EXHAUST FAN SCHEDULE			
MARK	CFM	V/A	REMARKS
EF-1	70	120/1.1	TWIN CITY T100
EF-2	170	120/1.8	TWIN CITY T200
EF-3	50	120/1.1	TWIN CITY T100
EF-4	350	120/2.6	TWIN CITY T400

NOTES:
1. EXHAUST FANS SHALL BE TWIN CITY OR ENGINEER APPROVED EQUAL
2. EXHAUST FANS SHALL BE EQUIP WITH UNIT MOUNTED SPEED CONTROLLER

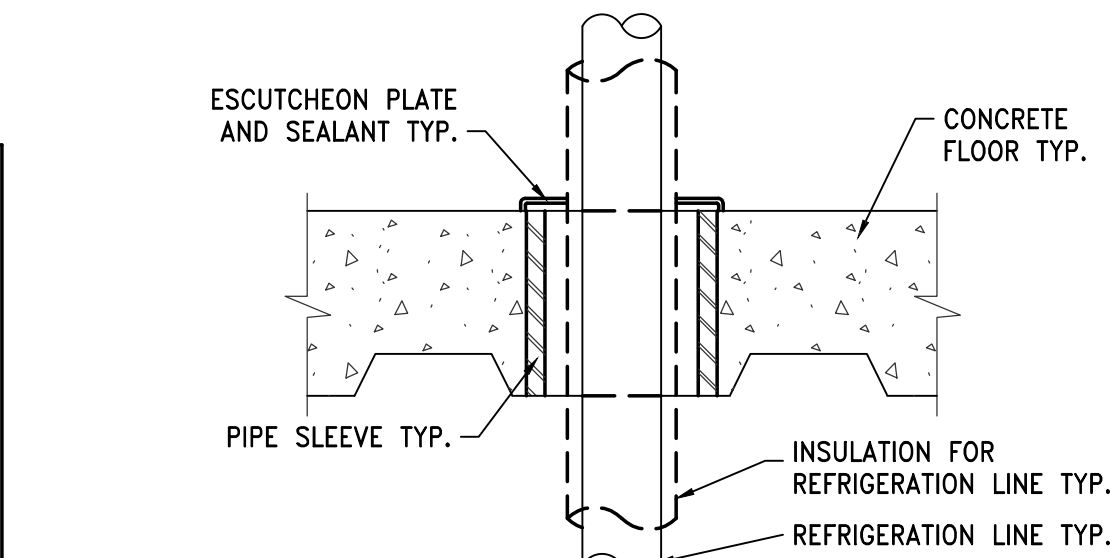


*SEE DWG. M3 FOR CONDENSATE PIPING INSULATION SPECIFICATIONS

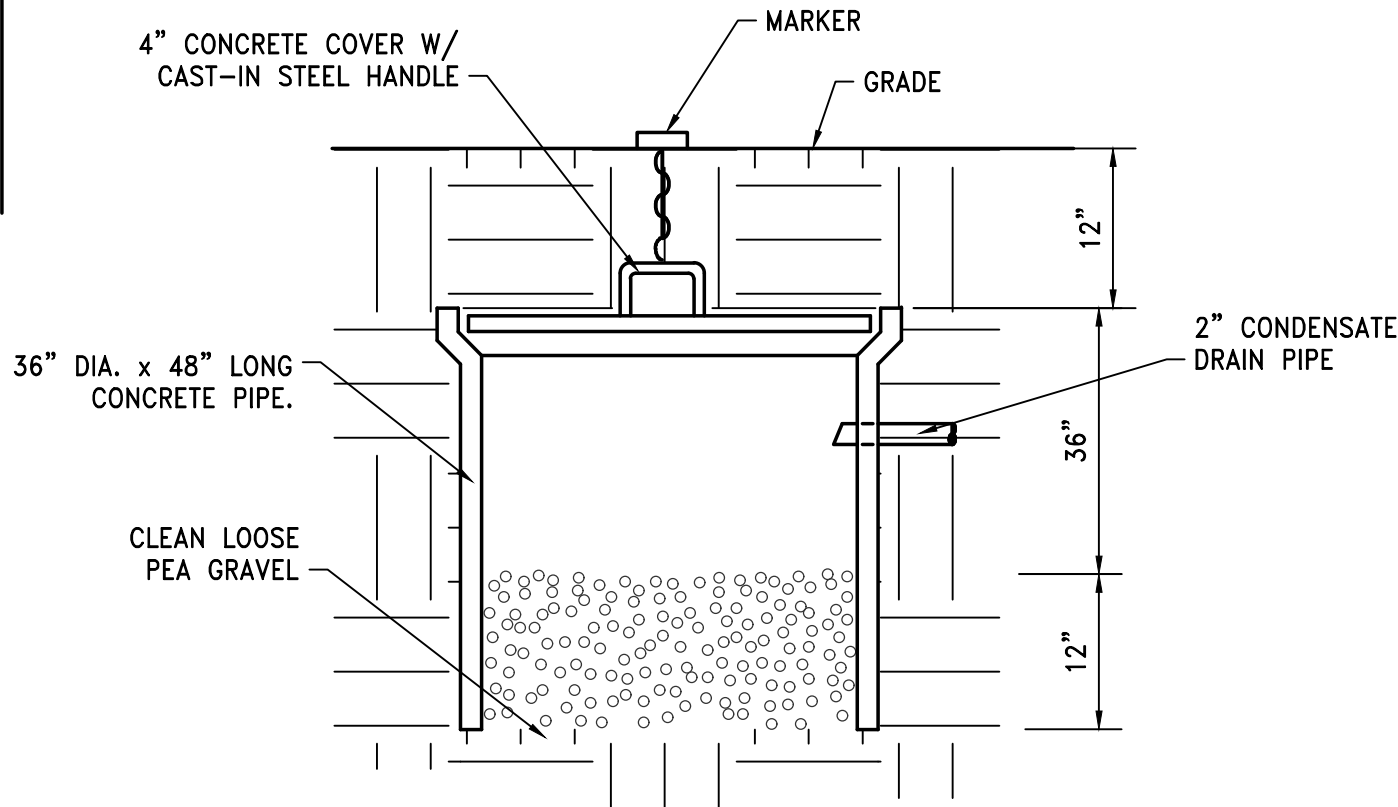
CONDENSATE TRAP DETAIL
NOT TO SCALE



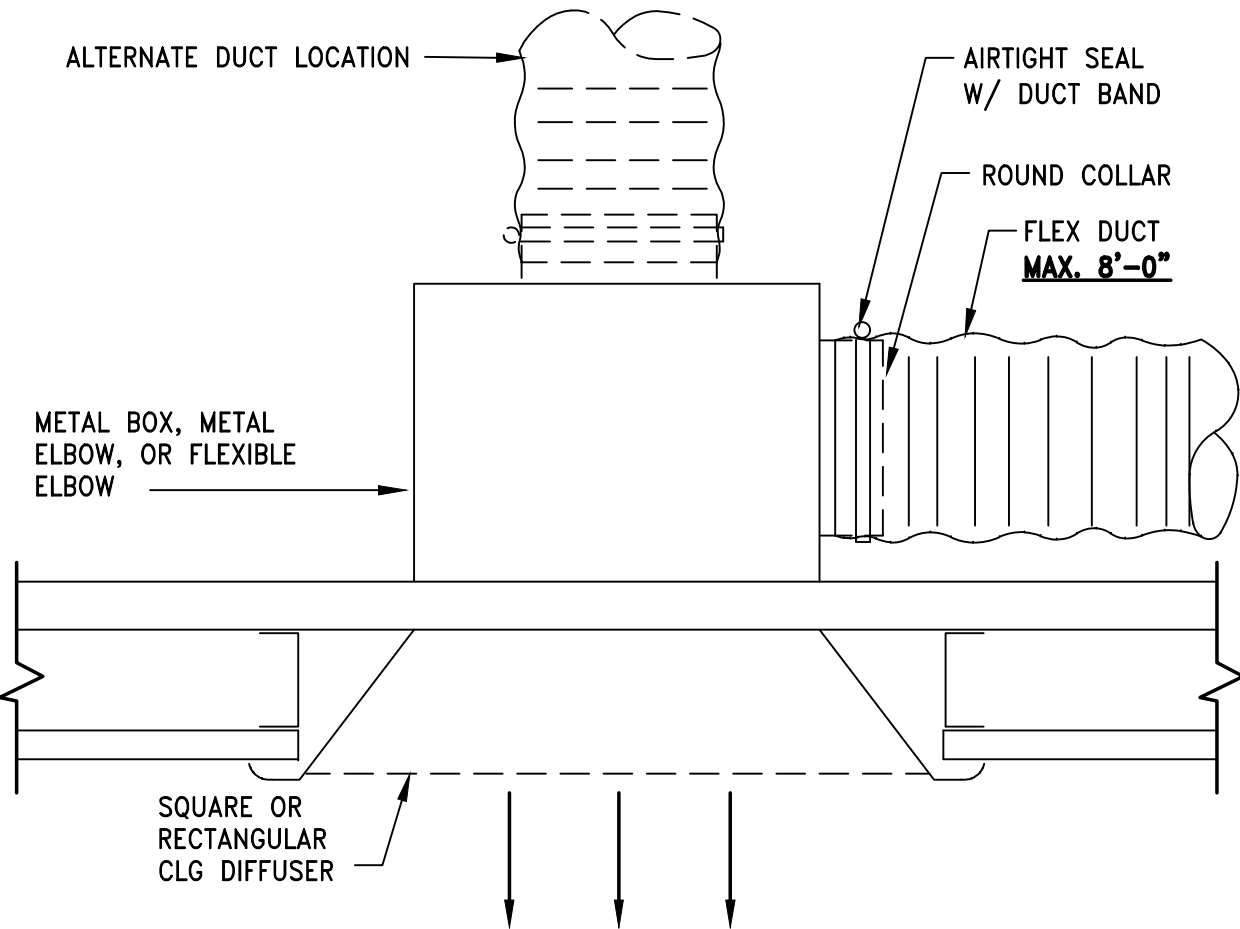
TYPICAL BRANCH CONNECTION
N.T.S.



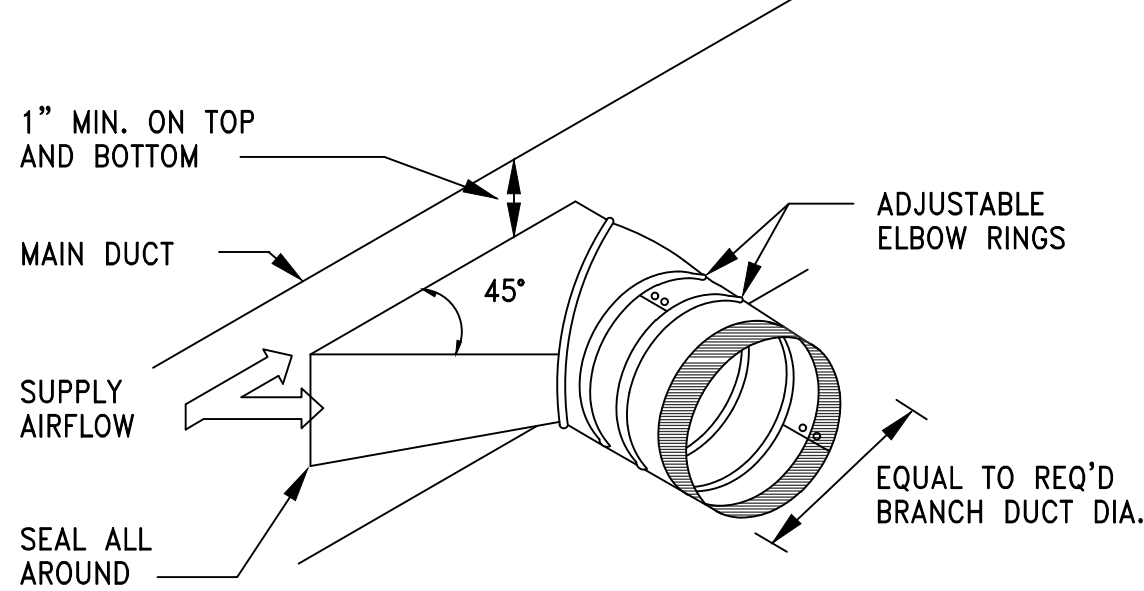
FLOOR PIPE PENETRATION DETAIL
N.T.S.



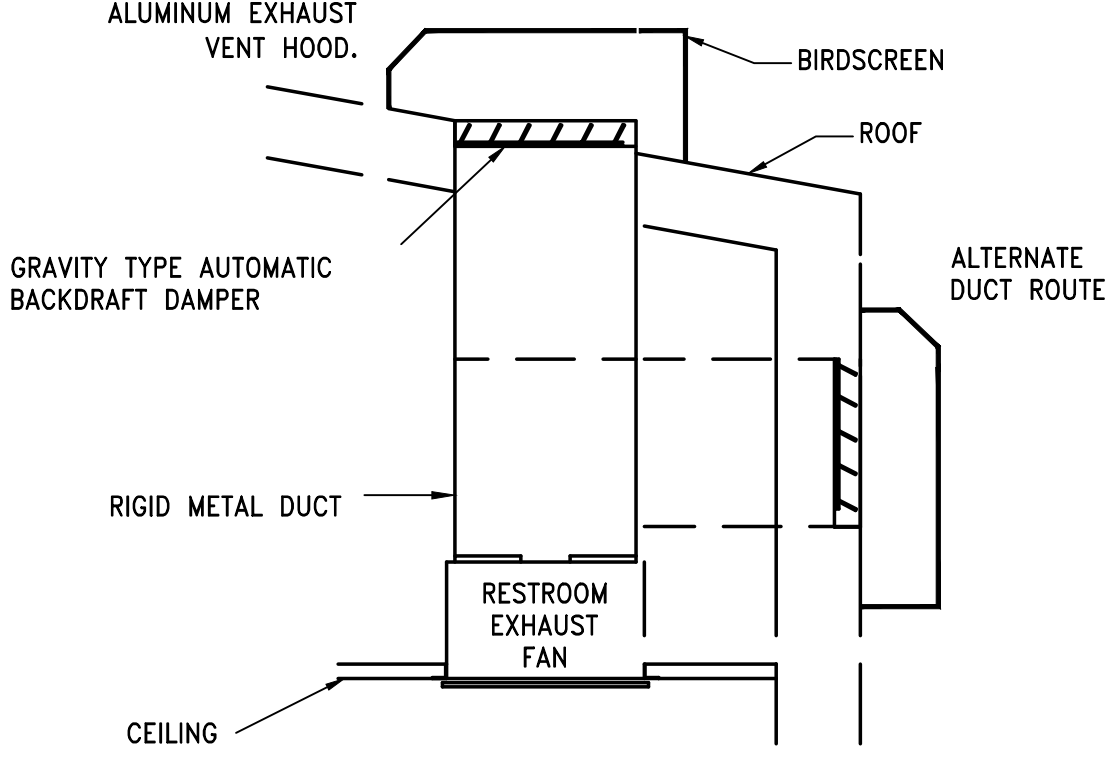
DRY WELL DETAIL
N.T.S.



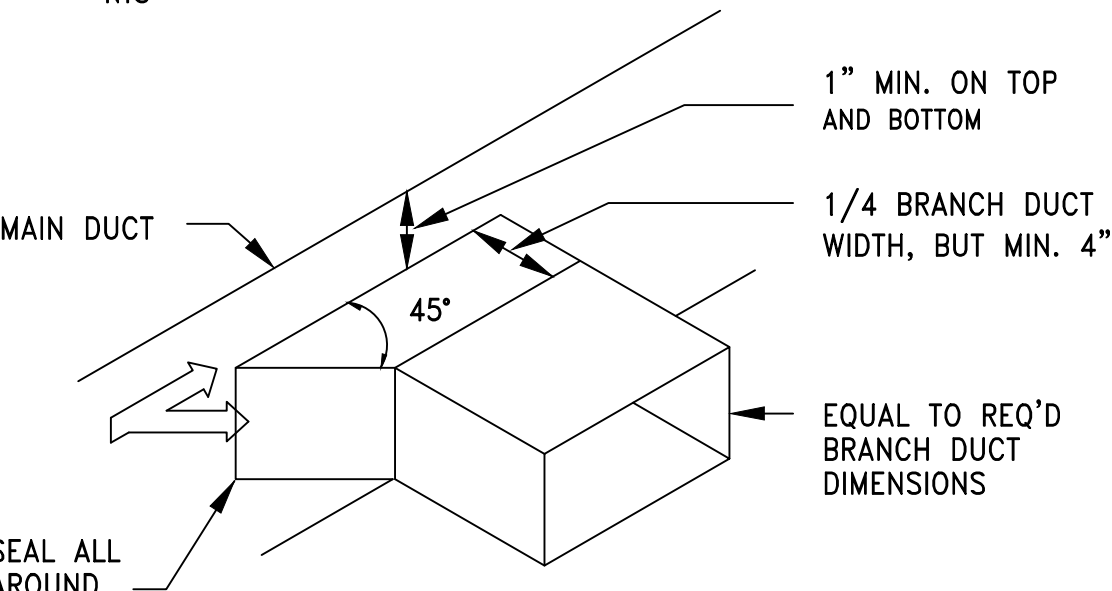
FLEXIBLE DUCT TO CEILING DIFFUSER
N.T.S.



TYPICAL BRANCH TAKE-OFF FITTING
N.T.S.



RESTROOM EXHAUST FAN DETAIL
NTS



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PROJECT

TERMINAL RAILWAY
OFFICE ADDITION/RENOVATION

126 INDUSTRIAL CANAL ROAD
MOBILE, ALABAMA

TITLE

HVAC SCHEDULE & DETAILS

SCALE
SCALE

DRAWN BY
MAD

DATE
03/30/22

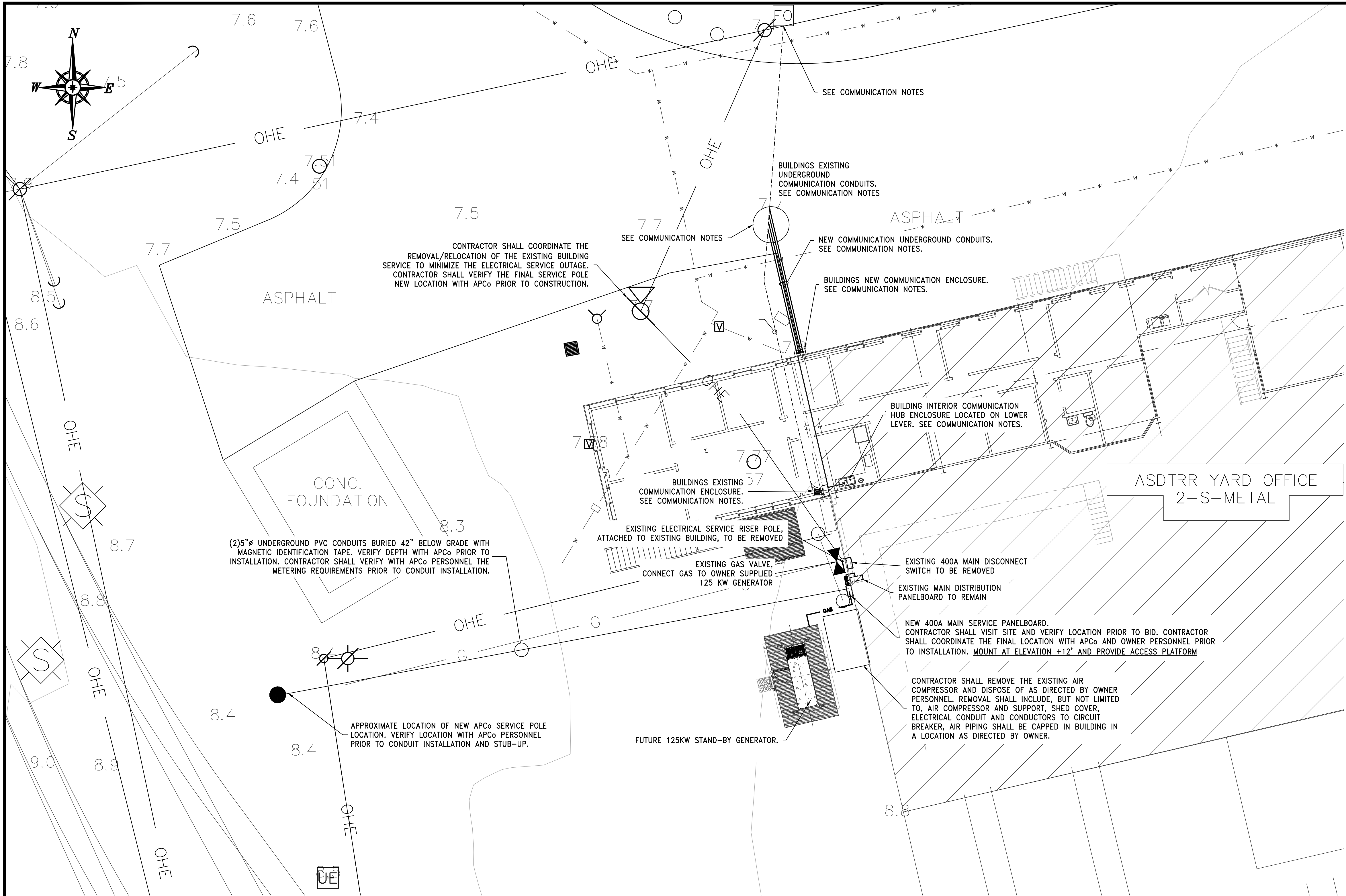
SHEET
22x34
REV. B

JOB NO.
4146-22

CHECKED BY
JDG

DATE
06/06/22

DRAWING NUMBER
4146-M2



- COMMUNICATION NOTES:**
1. CONTRACTOR SHALL VERIFY WITH TRR IT PERSONNEL THE LOCATION OF THE EXISTING COMMUNICATION ENCLOSURE AND THE ROUTING OF THE CONDUIT THAT SERVE THE BUILDINGS INSIDE COMMUNICATION HUB.
 2. CONTRACTOR SHALL LOCATE THE EXISTING UNDERGROUND COMMUNICATION CONDUITS ROUTED FROM THE COMMUNICATION PROVIDER JUNCTION ENCLOSURE TO THE BUILDINGS EXISTING COMMUNICATION ENCLOSURE LOCATED ON THE EXTERIOR OF THE BUILDING.
 3. CONTRACTOR SHALL FURNISH AND INSTALL BUILDING NEW COMMUNICATION ENCLOSURE, NEMA-3R RATED, IN A LOCATION AS SHOWN ON THE SITE PLAN OR AS DIRECTED BY THE TRR IT PERSONNEL. BUILDINGS NEW COMMUNICATION ENCLOSURE SHALL BE SIMILAR IN SIZE AND RATING AS THE BUILDINGS EXISTING COMMUNICATION ENCLOSURE.
 4. CONTRACTOR SHALL LOCATE AND UNCOVER THE EXISTING COMMUNICATION UNDERGROUND CONDUITS NEAR A LOCATION AS SHOWN ON THE SITE PLAN OR A LOCATION THAT BEST SUITS THE REROUTING OF THE COMMUNICATION CONDUITS. CONTRACTOR SHALL PROVIDE PROTECTION AND BARRIERS FOR THE EXPOSED CONDUITS IN THE OPEN GROUND AREA.
 5. CONTRACTOR SHALL FURNISH AND INSTALL (4) UNDERGROUND COMMUNICATION CONDUITS, SIMILAR IN SIZE AND MATERIAL, FROM THE NEW BUILDING COMMUNICATION ENCLOSURE TO OPEN GROUND AREA NEAR THE EXPOSED EXISTING COMMUNICATION CONDUITS. THE NEW UNDERGROUND CONDUIT SHALL BE USED TO REROUTE THE COMMUNICATION CONDUCTORS/FIBER OPTIC CABLES FROM THE COMMUNICATION PROVIDERS JUNCTION ENCLOSURE TO THE NEW BUILDING COMMUNICATION ENCLOSURE
 6. CONTRACTOR SHALL COORDINATE WITH THE TRR IT PERSONNEL THE BEST AVAILABLE TIME TO REMOVE THE COMMUNICATION CABLES FROM THE BUILDINGS EXISTING COMMUNICATION ENCLOSURE AND UNDERGROUND CONDUITS FOR REROUTING INTO BUILDINGS NEW COMMUNICATION ENCLOSURE.
 7. CONTRACTOR SHALL, AFTER COMMUNICATION CABLE REMOVAL, SPLICE NEW UNDERGROUND COMMUNICATE CONDUITS WITH THE EXISTING UNDERGROUND COMMUNICATION CONDUITS AND VERIFY THE CONDUIT ARE SEALED WHEN CONNECTED.
 8. CONTRACTOR SHALL REINSTALL OR FURNISH NEW COMMUNICATION CABLES FROM THE COMMUNICATION PROVIDER JUNCTION ENCLOSURE TO THE BUILDINGS NEW COMMUNICATION ENCLOSURE. COMMUNICATION CABLES SHALL BE ROUTED FROM THE BUILDING NEW COMMUNICATION ENCLOSURE TO THE INTERIOR COMMUNICATION HUB AND TERMINATED BY TRR IT PERSONNEL. COMMUNICATION CABLE SHALL BE INSTALLED IN CONDUIT THRU THE INTERIOR OF THE BUILDING.
 9. CONTRACTOR SHALL INSTALL OWNER FURNISHED 125kW NATURAL GAS GENERATOR AND AUTOMATIC TRANSFER SWITCH (ATS). CONTRACTOR SHALL LOCATE THE ATS IN A LOCATION +1' ABOVE THE FEMA FLOOD ELEVATION AE, EL.+11. BOTTOM OF ATS SHALL BE AT ELEVATION +12'. OWNER FURNISHED ATS SHALL BE INSTALLED INDOORS AND SURFACE MOUNT. VERIFY LOCATION WITH ASPA PERSONNEL PRIOR TO INSTALLATION.

NEW ELECTRICAL SITE PLAN
1"=10'-0"

B	ISSUED FOR BID	08/01/22	RCC	JJM
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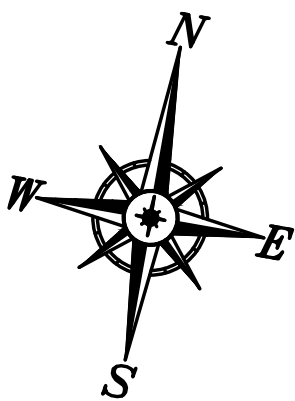
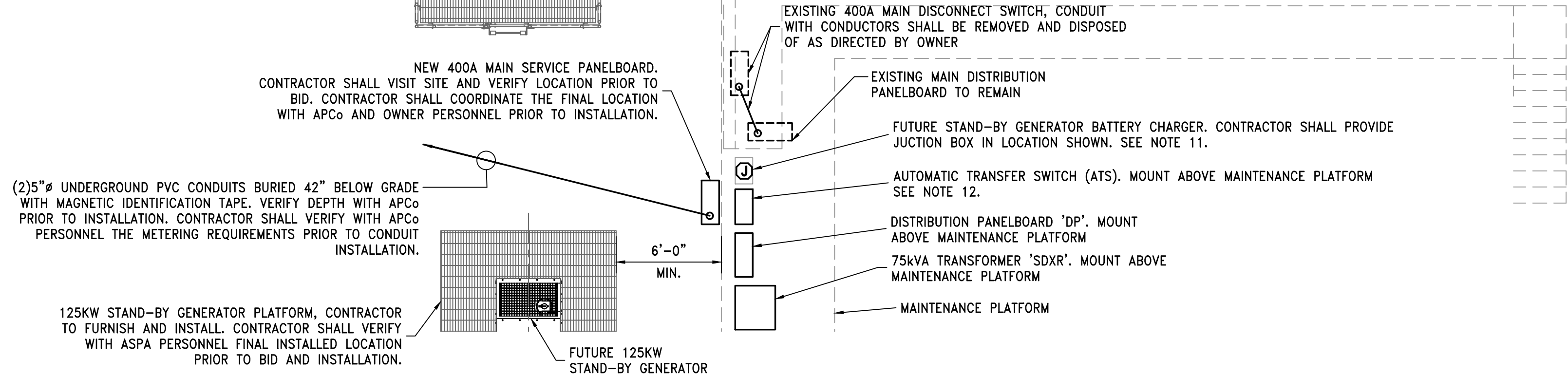
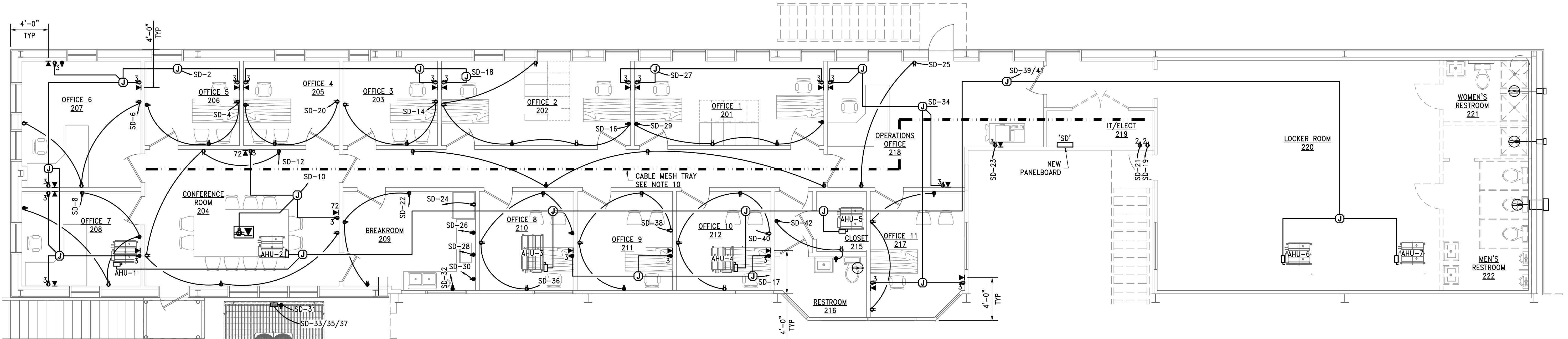
PROJECT

TERMINAL RAILWAY
OFFICE ADDITION/RENOVATION

126 INDUSTRIAL CANAL ROAD
MOBILE, ALABAMA

TITLE NEW ELECTRICAL SITE PLAN				
SCALE AS NOTED	DRAWN BY RCC	DATE 03/30/22	SHEET — OF — 22x34	REV. B
JOB NO. 4146-22	CHECKED BY JJM	DATE 07/01/22	DRAWING NUMBER 4146-E1	

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OFFICE ELECTRICAL POWER PLAN
SCALE: 3/8"=1'-0"

- ELECTRICAL NOTES:**
- ALL ELECTRICAL WORK SHALL BE INSTALLED AS REQUIRED BY THE NATIONAL ELECTRIC CODE (N.E.C.) AND ANY STATE, CITY AND/OR LOCAL CODE REQUIREMENTS. THE MORE STRINGENT CODE REQUIREMENT SHALL BE UTILIZED AND VERIFIED WITH THE LOCAL INSPECTION APPROVAL AGENCY. (DEFINITION "CODE" - STATE, CITY AND/OR LOCAL CODE REQUIREMENTS)
 - CONTRACTOR SHALL INSTALL ALL GROUNDING AS REQUIRED BY THE NATIONAL ELECTRIC CODE (N.E.C.) AND ANY STATE, CITY AND/OR LOCAL CODE REQUIREMENTS. THE MORE STRINGENT CODE REQUIREMENT SHALL BE UTILIZED AND VERIFIED WITH THE LOCAL INSPECTION APPROVAL AGENCY.
 - ALL RECEPTACLES AND COVERS SHALL BE INSTALLED AS PER N.E.C. ARTICLE 406 AND AS REQUIRED BY CODE. LIGHT SWITCHES AND COVERS SHALL BE WHITE UNLESS NOTED OTHERWISE BY THE ARCHITECT.
 - ALL ELECTRICAL METALLIC TUBING (EMT), RIGID NON-METALLIC CONDUIT, FLEXIBLE METALLIC CONDUIT, FLEXIBLE NON-METALLIC CONDUIT, 'SEALTIGHT' TYPE CONDUITS AND ALL OTHER CONDUITS THAT DO NOT CONTAIN A REQUIRED CODE SIZED GROUND WIRE SHALL HAVE A REQUIRED CODE SIZED BOND WIRE INSTALLED WITH THE CIRCUIT CONDUCTORS.
 - RECEPTACLES INSTALLED WITHIN 6'-0" OF SINKS OR WATER SHALL BE CONNECTED TO A GROUND FAULT CIRCUIT INTERRUPTER TYPE CIRCUIT BREAKER OR TO A GROUND FAULT CIRCUIT INTERRUPTER TYPE RECEPTACLE.
 - CONTRACTOR SHALL FURNISH AND INSTALL WEATHER PROOF G.F.C.I. RECEPTACLE AT AN ACCESSIBLE LOCATION NEAR ALL HVAC EQUIPMENT IN ACCORDANCE WITH N.E.C. ARTICLE 210.63 AND AS REQUIRED BY CODE. CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF THESE RECEPTACLES IN THE FIELD REGARDLESS OF THE PLAN LAYOUT.
 - CONTRACTOR SHALL, PRIOR TO BID AND ROUGH-IN, FIELD VERIFY ALL HVAC ELECTRICAL REQUIREMENTS AGAINST THE PLAN REQUIREMENTS. FAILURE TO VERIFY AND NOTIFY ENGINEER/ARCHITECT PRIOR TO ROUGH-IN SHALL INDICATE THAT THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR THE DESIGN AND INSTALLATION REQUIREMENTS.
 - CONTRACTOR SHALL FURNISH AND INSTALL ALL AC UNITS SHALL HAVE INTEGRAL CONTROLLERS WITH OVERLOAD PROTECTION AND DISCONNECT FUNCTIONS PER N.E.C. CONTRACTOR SHALL INSTALL GFI DUPLEX SERVICE RECEPTACLES NEAR CONDENSER UNIT. PROVIDE MOTOR STARTERS WITH OVERLOAD PROTECTION AND DISCONNECT FUNCTIONS FOR AIR HANDLERS, IF NOT PROVIDED BY MECHANICAL CONTRACTOR.
 - CONTRACTOR SHALL FURNISH AND INSTALL NEW IT SERVER RACK IN IT/ELECT ROOM 219 AS DIRECTED BY THE OWNER. CONTRACTOR SHALL VERIFY THE REQUIREMENTS OF THE IT SERVER RACK WITH OWNER PERSONNEL PRIOR TO BID.
 - CONTRACTOR SHALL FURNISH AND INSTALL CABLE MESH TRAY SYSTEM IN OFFICE AREA FOR DATA CABLE ROUTING AND SUPPORT TO IT ROOM. CABLE MESH TRAY SHALL BE CABLOFIL, BY LEGRAND, #CF150-30 OR APPROVED EQUAL. CONTRACTOR SHALL FURNISH AND INSTALL THE REQUIRED SUPPORTS, GROUND STRAPS, FITTINGS AND CABLE MESH TRAY. CABLE MESH TRAY SHALL BE INSTALLED OVER THE CEILING AND LOCATED FOR EASY ACCESS. LOCATE CABLE MESH TRAY AS DIRECTED BY IT PERSONNEL.
 - BATTERY CHARGER NOT IN THIS CONTRACT. BATTERY CHARGER CONDUIT AND CONDUCTORS SHALL BE INSTALLED AND TERMINATED IN A JUNCTION BOX LOCATED AS SHOWN ON PLANS.
 - CONTRACTOR SHALL FURNISH AND INSTALL NEW KOHLER #KSS-AMTA-260-S (OR APPROVED EQUAL) AUTOMATIC TRANSFER SWITCH WITH GENERATOR MONITORING SYSTEM FOR FUTURE 125kW STAND-BY GENERATOR INSTALLATION. 125kW STAND-BY GENERATOR SHALL BE A FUTURE ADDITION BY OTHERS.

ELECTRICAL SCHEDULE	
SYMBOL	DESCRIPTION
	DATA JACK DUPLEX J-BOX WITH CONDUIT TO OVERHEAD CEILING. (2) CAT6 DATA CABLES ROUTED TO IT ROOM. TERMINATIONS BY OTHERS.
	DUPLEX RECEPTACLE. 110 VOLT GROUNDING TYPE, FLUSH WALL MTD. 18" A.F.F. UNLESS NOTED OTHERWISE.
	(2) DUPLEX RECEPTACLE. 110 VOLT GROUNDING TYPE, FLUSH WALL MTD. 18" A.F.F. UNLESS NOTED OTHERWISE.
	(3) DUPLEX RECEPTACLE. 110 VOLT GROUNDING TYPE, FLUSH WALL MTD. 18" A.F.F. UNLESS NOTED OTHERWISE.
	GROUND FAULT DUPLEX RECEPTACLE. FLUSH WALL MTD. 42" A.F.F. UNLESS NOTED OTHERWISE. WT IS FOR WEATHER TIGHT ENCLOSURE WHERE APPLICABLE
	(2)DUPLEX RECEPTACLE AND (1)DUPLEX DATA CONNECTION IN FLUSH MOUNTED FLOOR BOX. CONNECT RECEPTACLES TO GROUND FAULT CIRCUIT BREAKER. (2) CAT6 CABLE TO DATA POINT
	NON-FUSED DISCONNECT SWITCH, NEMA-3R, SIZED AS REQUIRED
	NEMA-12 OR NEMA-1 DISTRIBUTION PANEL, SEE SCHEDULE
	JUNCTION BOX WITH COVER

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REV.	DESCRIPTION	DATE	BY	CHK'D

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PROJECT

TERMINAL RAILWAY
OFFICE ADDITION/RENOVATION

126 INDUSTRIAL CANAL ROAD
MOBILE, ALABAMA

TITLE

OFFICE ELECTRICAL POWER PLAN

SCALE	DRAWN BY	DATE	SHEET	22x34	REV.
AS NOTED	RCC	03/30/22	—	OF —	B
JOB NO.	CHECKED BY	DATE	DRAWING NUMBER		
4146-22	JJM	06/10/22	4146-E4		

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PANELBOARD SCHEDULE (277/480V 3Ø, 4W)																					
MARK: SERVICE PANEL "MDP"																					
CKT #	LOAD DESCRIPTION	BREAKER P	FEEDER TRIP	CONDUIT FEED	CONDUIT GRD	CONDUIT SIZE	PHASE (kVA)			PHASE (kVA)			FEEDER/CONDUIT			BREAKER P	TRIP	LOAD DESCRIPTION	CKT #		
							A	B	C	A	B	C	FEED	GRD	SIZE						
1	EXISTING MAIN PANELBOARD	3	350	500 MCM	2	4"	44.25*			-		-			-	-	-	SPACE	2		
3																			SPACE	4	
5									44.25*			-		-						SPACE	6
7												-		-						SPACE	8
9	AUTO-TRANSFER SWITCH	3	225	4/0	4	2½"	25.0			-		-			-	-	-	SPACE	10		
11									25.0		-		-			-	-	-	SPACE	12	
13												-		-			-	-	-	SPACE	14
15												-		-			-	-	-	SPACE	16
17	SPACE		-	-	-	-	-			-		-		-	-	-	-	SPACE	18		
TOTAL (kVA) ØA 69.25							ØB 69.25	ØC 69.25	69.25			HIGH PHASE (AMPS)			250.0						
TOTAL CONNECTED LOAD (kVA)							207.75						TOTAL LOAD (AMPS)			249.9					
* - LOAD BASED ON HIGHEST APCo kWH MONTHLY BILLING FOR 2021																					

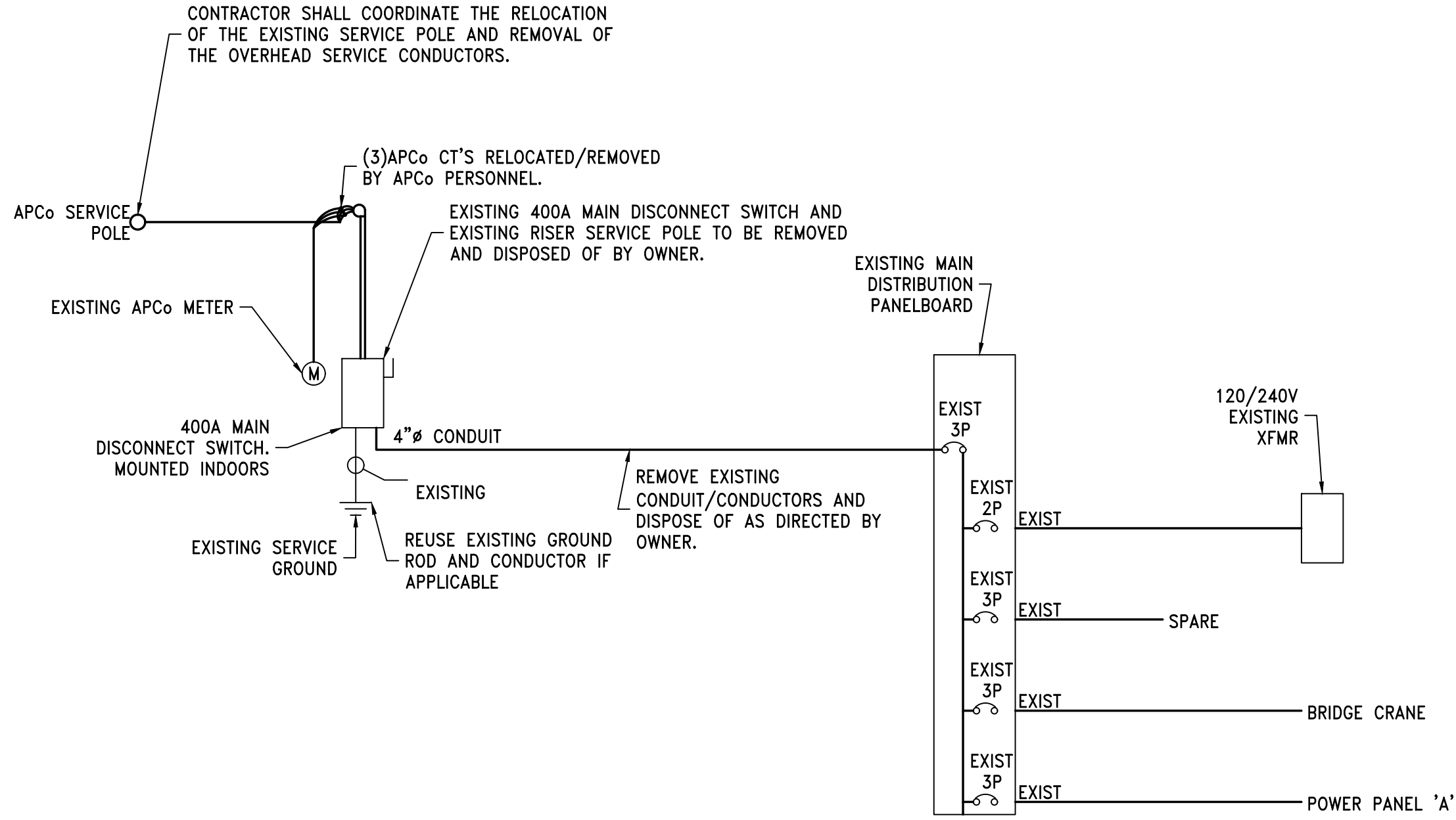
PANELBOARD SCHEDULE (277/480V 3Ø, 4W)																				
MARK: SERVICE PANEL "DP"																				
CKT #	LOAD DESCRIPTION	BREAKER	FEEDER/CONDUIT				PHASE (kVA)			PHASE (kVA)			FEEDER/CONDUIT			BREAKER	LOAD DESCRIPTION	CKT #		
			P	TRIP	FEED	GRD	SIZE	A	B	C	A	B	C	FEED	GRD				SIZE	P
1	75kVA						25.0				-				-			SPACE	2	
3	480V-120/208V SECOND FLOOR TRANSFORMER	3	150	2/0	6	2"		25.0			-				-			SPACE	4	
5									25.0		-				-			SPACE	6	
7	SPACE	-	-	-	-	-					-				-			SPACE	8	
9	SPACE	-	-	-	-	-					-				-			SPACE	10	
11	SPACE	-	-	-	-	-					-				-			SPACE	12	
13	SPACE	-	-	-	-	-					-				-			SPACE	14	
15	SPACE	-	-	-	-	-					-				-			SPACE	16	
17	SPACE	-	-	-	-	-					-				-			SPACE	18	
							69.25	69.25	69.25	-	-	-								
TOTAL (kVA) ØA 25.00							ØB 25.00	ØC 25.00				HIGH PHASE (AMPS)			90.3					
TOTAL CONNECTED LOAD (kVA)							75.0						TOTAL LOAD (AMPS)			90.2				

PANELBOARD SCHEDULE (120/208V 3Ø, 4W)																						
MARK: "SD"																						
CKT #	LOAD DESCRIPTION	BREAKER P	TRIP	FEEDER	CONDUIT GRD	CONDUIT SIZE	PHASE (VA)			PHASE (VA)			FEEDER/CONDUIT			BREAKER P	TRIP	LOAD DESCRIPTION	CKT #			
1	RM 201-219 LIGHTING	1	20	10	12	½"	1,500			1,620			10	12	½"	1	20	RM 206-207 DATA RECEPT	2			
3	RM 220-222 LIGHTING	1	20	10	12	½"		770			540		10	12	½"	1	20	RM 206 RECEPT	4			
5	SPARE	1	20	-	-	-						720	10	12	½"	1	20	RM 207 RECEPT	6			
7	SPARE	1	20	-	-	-				720			10	12	½"	1	20	RM 208 RECEPT	8			
9	SPACE	-	-	-	-	-					1,440		10	12	½"	1	20	RM 204 DATA RECEPT	10			
11	SPACE	-	-	-	-	-						900	10	12	½"	1	20	RM 204 RECEPT	12			
13	SPACE	-	-	-	-	-				540			10	12	½"	1	20	RM 203 RECEPT	14			
15	SPACE	-	-	-	-	-					900		10	12	½"	1	20	RM 202 RECEPT	16			
17	RM 210-212 DATA RECEPT	1	20	10	12	½"			1,620			1,620	10	12	½"	1	20	RM 202/203/205 DATA RECEPT	18			
19	IT QUAD RECEPT	1	20	10	12	½"	720			540			10	12	½"	1	20	RM 205 RECEPT	20			
21	IT QUAD RECEPT	1	20	10	12	½"		720			540		10	12	½"	1	20	RM 209 RECEPT	22			
23	COPIER RECEPT	1	20	10	12	½"			1,200			1,200	10	12	½"	1	20	RM 209 REFRIG RECEPT	24			
25	RM 218 RECEPT	1	20	10	12	½"	360			180			10	12	½"	1	20	RM 209 CONTER RECEPT	26			
27	RM 201/202 DATA RECEPT	1	20	10	12	½"		1,620			1,100		10	12	½"	1	20	RM 209 MICROWAVE RECEPT	28			
29	RM 201 RECEPT	1	20	10	12	½"			720			180	10	12	½"	1	20	RM 209 COUNTER RECEPT	30			
31	HP-1 RECEPT	1	20	10	12	½"	360			1,200			10	12	½"	1	20	RM 209 COFFEE RECEPT	32			
33	HP-1	3	50	6	10	1"		4,805			1,620		10	12	½"	1	20	RM 201/217/218 DATA RECEPT	34			
35									4,805			720	10	12	½"	1	20	RM 210 RECEPT	36			
37							4,805			720			10	12	½"	1	20	RM 211 RECEPT	38			
39	AHU-1 - AHU-5	2	20	10	12	½"		540			720		10	12	½"	1	20	RM 212 RECEPT	40			
41											540		10	12	½"	1	20	RM 215-216 RECEPT	42			
43	SPACE	-	-	-	-	-							-	-	-	1	20	SPACE	44			
45	SPACE	-	-	-	-	-							-	-	-	1	20	SPACE	46			
47	SPACE	-	-	-	-	-							-	-	-	-	-	SPACE	48			
49	SPACE	-	-	-	-	-							-	-	-	-	-	SPACE	50			
51	SPACE	-	-	-	-	-							-	-	-	-	-	SPACE	52			
53	GENERATOR BATTERY CHARGER	1	20	10	12	½"			840				-	-	-	-	-	SPACE	54			
TOTAL (kVA) ØA 13.265							ØB 15.315	ØC 15.06	6,860			5,880	HIGH PHASE (AMPS) 127.6									
TOTAL CONNECTED LOAD (kVA)							43.64			TOTAL LOAD (AMPS) 121.2												

NOTES:
CONTRACTOR SHALL VERIFY WITH THE OWNER THE REQUIRED CIRCUIT BREAKERS TO BE FURNISHED WITH PANELBOARD PRIOR TO PURCHASE AND INSTALLATION.

PANELBOARD COORDINATION SCHEDULE														
MARK	TYPE	MOUNTING	VOLTAGE	Ø	WIRE	MAIN	SERVICE RATED	kAIC RATING	BUS RATING	NEUTRAL RATING	C/B TYPE	FEEDER		
												CONDUCTORS	GROUND	CONDUIT
MDP	NEMA-12	SURFACE	480/277	3	4	400MB	YES	35	400	400	BOLT-ON	(4)600MCM	(1)#2/0	(2)5":(1-SPARE)
DP	NEMA-12	SURFACE	480/277	3	4	MLO	NO	35	250	250	BOLT-ON	(4)250MCM	(1)#2	(1)3"
OD2	NEMA-12	SURFACE	120/208	3	4	250MB	NO	18	250	250	BOLT-ON	(4)#250MCM	(1)#4	(1)3"

NOTES: ALL BUSSING COPPER, INCLUDING NEUTRAL AND GROUND.
ALL LUGS 100 AMPS AND GREATER SHALL BE COPPER.
ALL LUGS ON CIRCUIT BREAKERS GREATER THAN 400 AMPS SHALL BE COPPER.

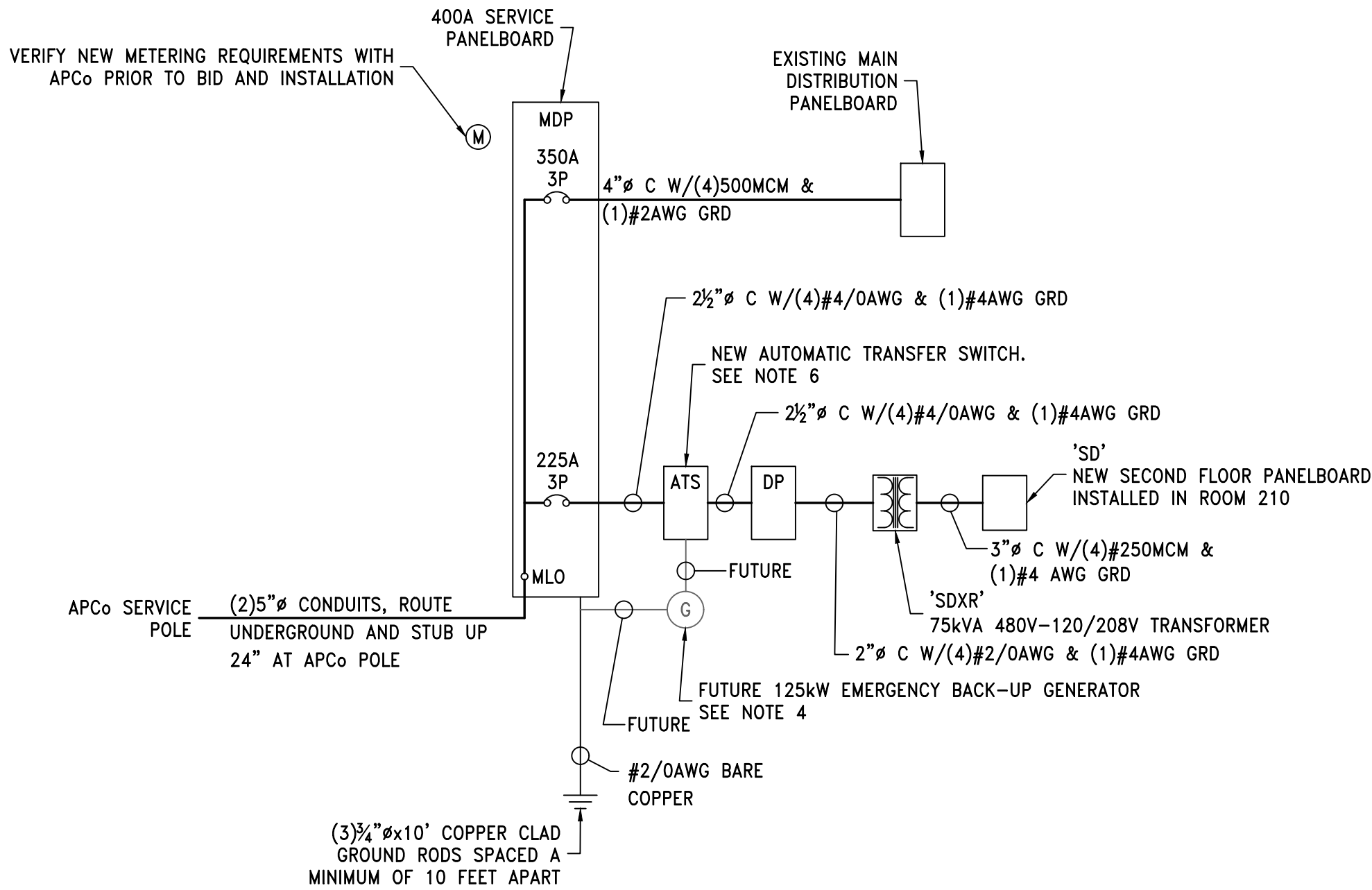


EXISTING ELECTRICAL AC RISER DIAGRAM WITH DEMO NOTES

SCALE:N.T.S.

NOTES:

- CONTRACTOR SHALL COORDINATE THE REMOVAL OF THE EXISTING ELECTRICAL SERVICE EQUIPMENT WITH APCo/OWNER REPRESENTATIVE AND THE INSTALLATION OF THE NEW ELECTRICAL SERVICE EQUIPMENT AS TO MINIMIZE THE ELECTRICAL SERVICE OUTAGE.
- CONTRACTOR SHALL VERIFY WITH APCo PERSONNEL THE REQUIREMENTS FOR A NEW FACILITY METERING EQUIPMENT LOCATION AND INSTALL AS PER APCo REQUIREMENTS.



NEW ELECTRICAL AC RISER DIAGRAM

SCALE:N.T.S.

NOTES:

- CONTRACTOR SHALL COORDINATE THE REMOVAL OF THE EXISTING ELECTRICAL SERVICE EQUIPMENT WITH APCo/OWNER REPRESENTATIVE AND THE INSTALLATION OF THE NEW ELECTRICAL SERVICE EQUIPMENT AS TO MINIMIZE THE ELECTRICAL SERVICE OUTAGE.
- CONTRACTOR SHALL VERIFY WITH APCo PERSONNEL THE REQUIREMENTS FOR A NEW FACILITY METERING EQUIPMENT LOCATION AND INSTALL AS PER APCo REQUIREMENTS.
- CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE LOCATION OF THE NEW MAIN SERVICE PANELBOARD PRIOR TO BID AND INSTALLATION.
- STAND-BY GENERATOR NOT IN THIS CONTRACT. STAND-BY GENERATOR CONDUIT AND CONDUCTORS SHALL NOT BE INSTALLED UNDER THIS CONTRACT.
- BATTERY CHARGER NOT IN THIS CONTRACT. BATTERY CHARGER CONDUIT AND CONDUCTORS SHALL BE INSTALLED AND TERMINATED IN A JUNCTION BOX LOCATED AS SHOWN ON 4146-E4.
- CONTRACTOR SHALL FURNISH AND INSTALL NEW KOHLER #KSS-AMTA-260-S (OR APPROVED EQUAL) AUTOMATIC TRANSFER SWITCH WITH GENERATOR MONITORING SYSTEM FOR FUTURE 125kW STAND-BY GENERATOR INSTALLATION. 125kW STAND-BY GENERATOR SHALL BE A FUTURE ADDITION BY OTHERS.

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REV.	DESCRIPTION		DATE	BY	CHK'D

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A Full Service Engineering Firm

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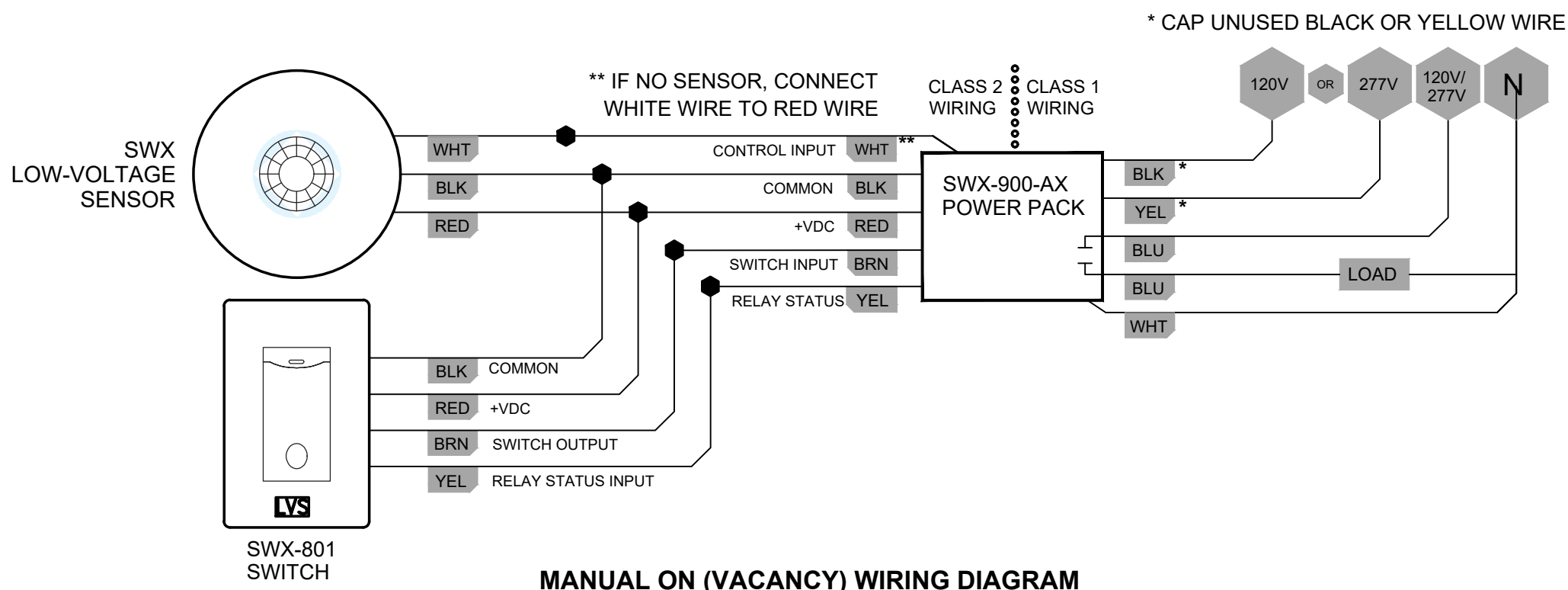
PROJECT

TERMINAL RAILWAY
OFFICE ADDITION/RENOVATION
126 INDUSTRIAL CANAL ROAD
MOBILE, ALABAMA

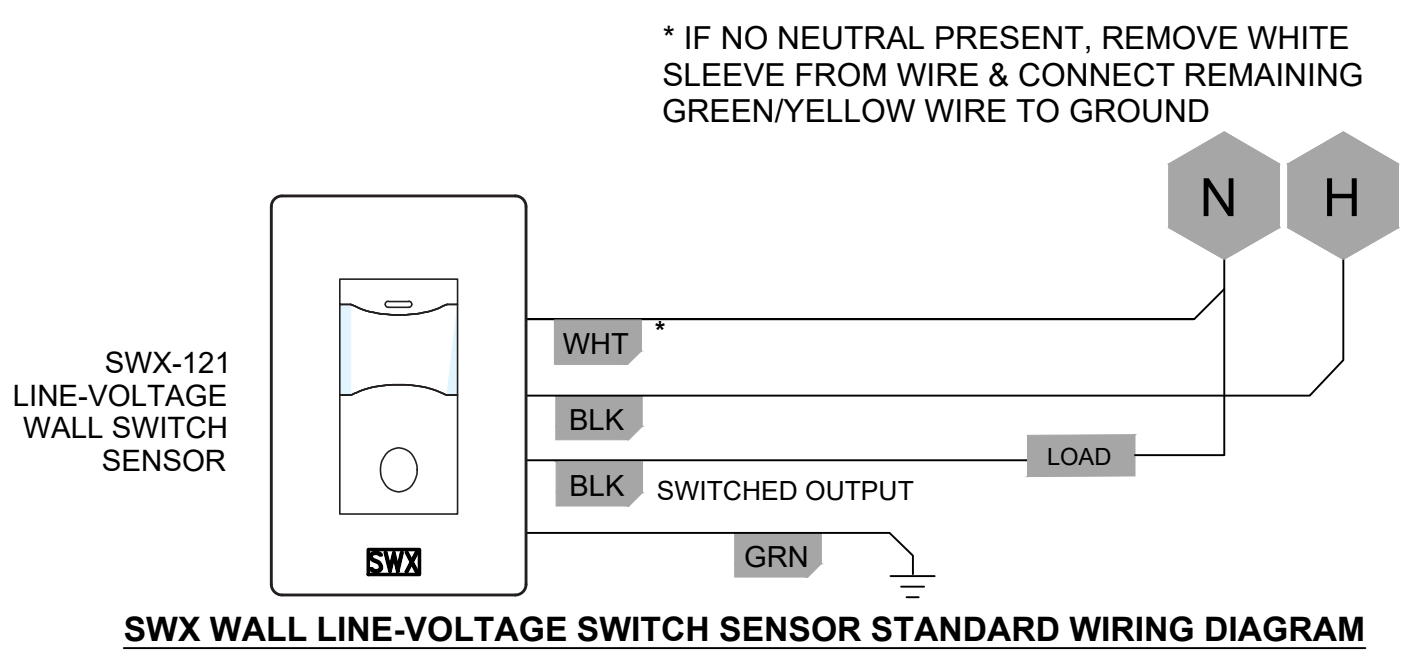
TITLE

ELECTRICAL AC-ONE-RISER DIAGRAM

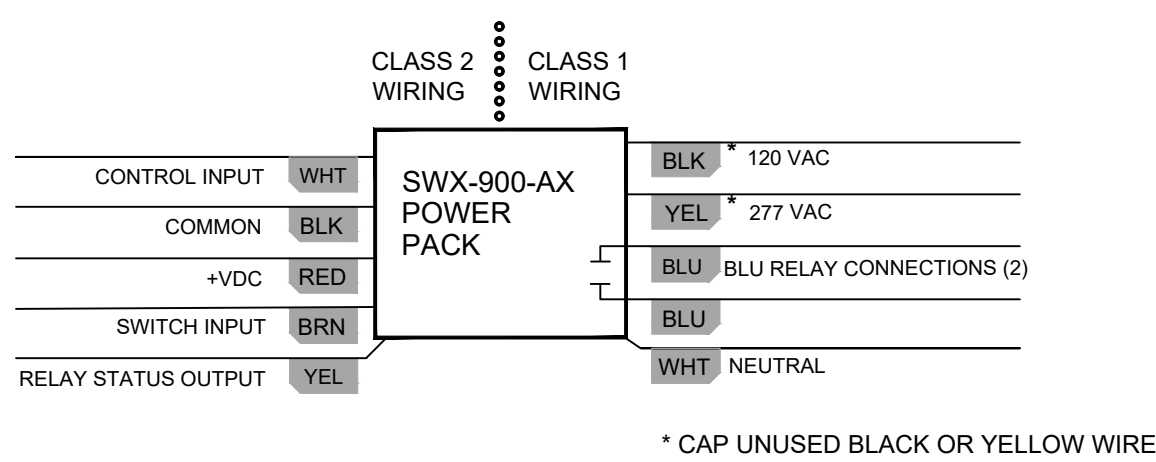
SCALE AS NOTED	DRAWN BY JDG	DATE 03/30/22	SHEET 22x34 REV. B
JOB NO. 4146-22	CHECKED BY JJM	DATE 06/10/22	DRAWING NUMBER 4146-E5



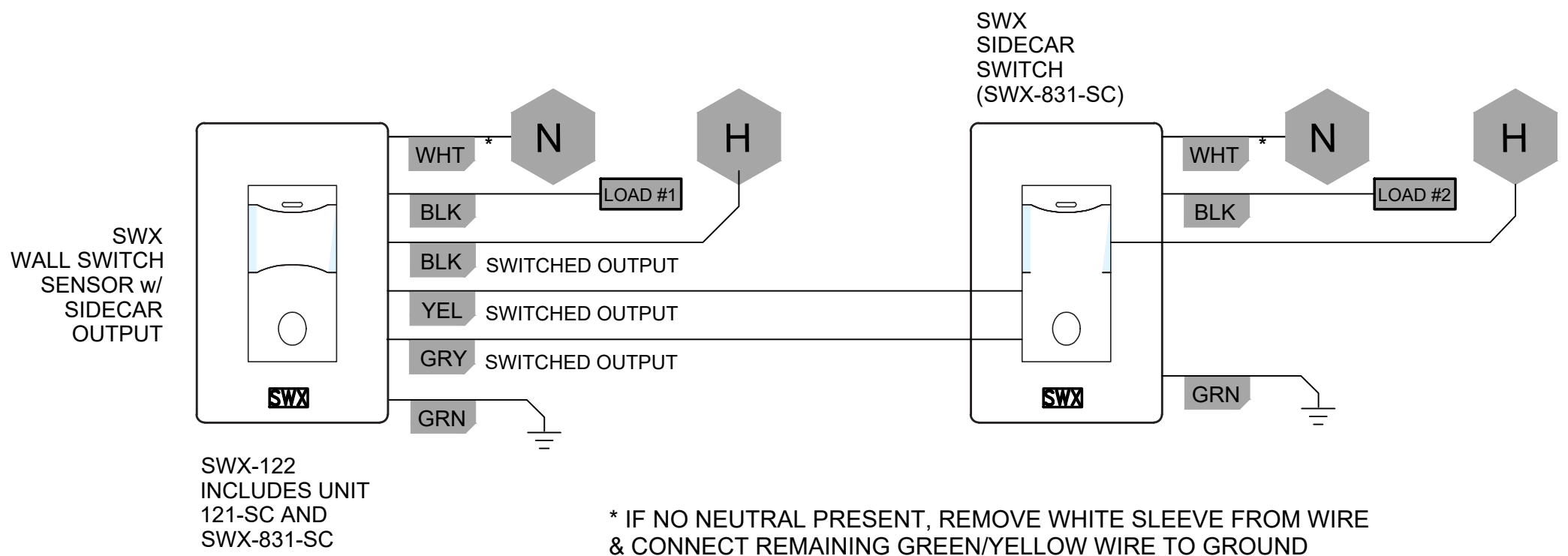
MANUAL ON (VACANCY) WIRING DIAGRAM



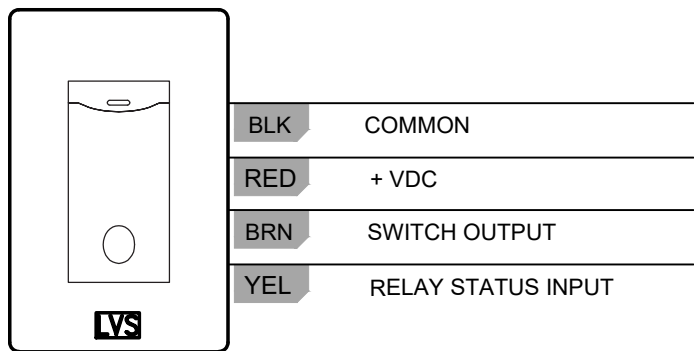
SWX WALL LINE-VOLTAGE SWITCH SENSOR STANDARD WIRING DIAGRAM



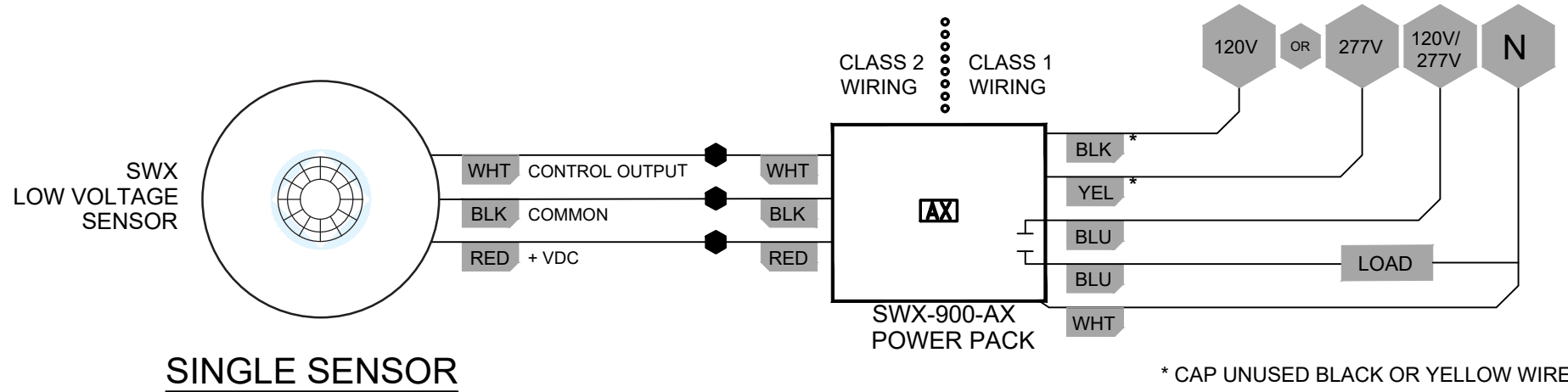
SWX - 900 - AX POWER PACK STANDARD WIRING DIAGRAM



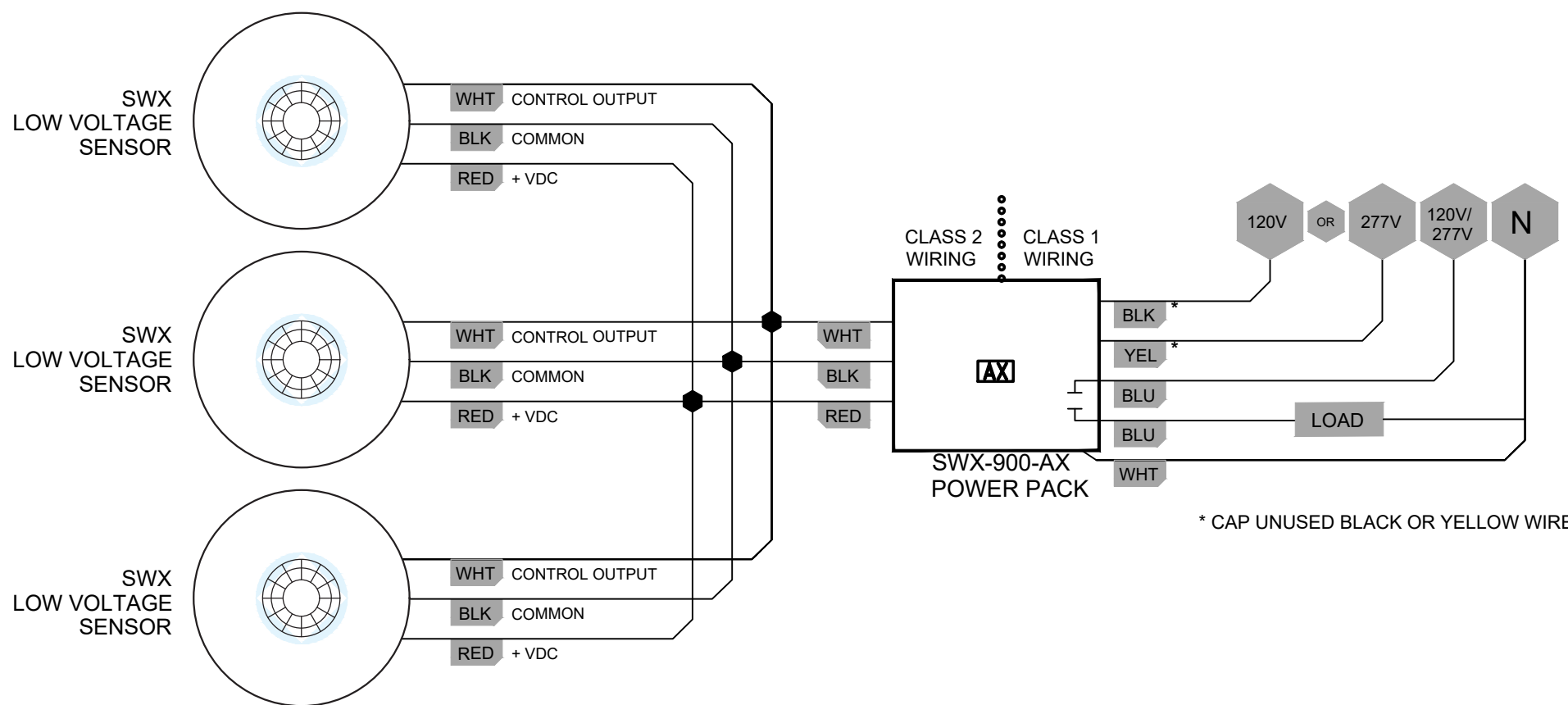
SWX WALL LINE-VOLTAGE SWITCH SENSOR WITH SIDE-CAR STANDARD WIRING DIAGRAM (2-POLE WIRING)



STANDARD WIRING DIAGRAM

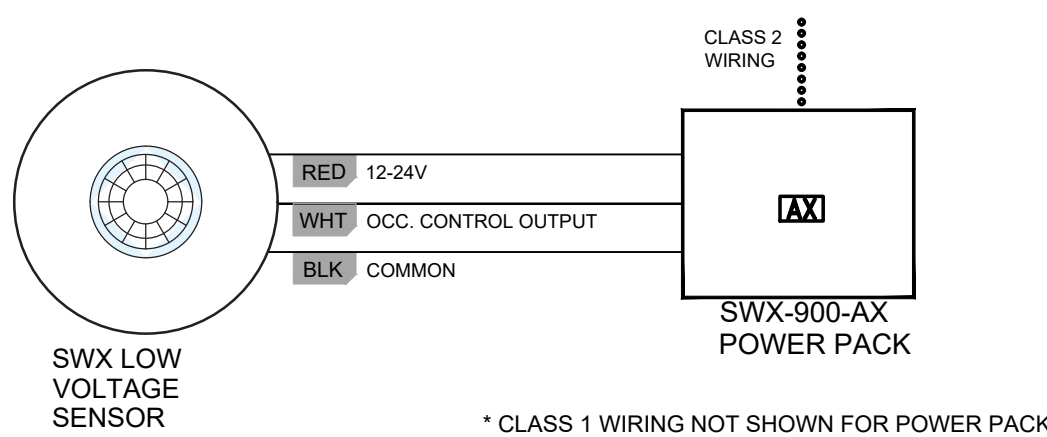


SINGLE SENSOR

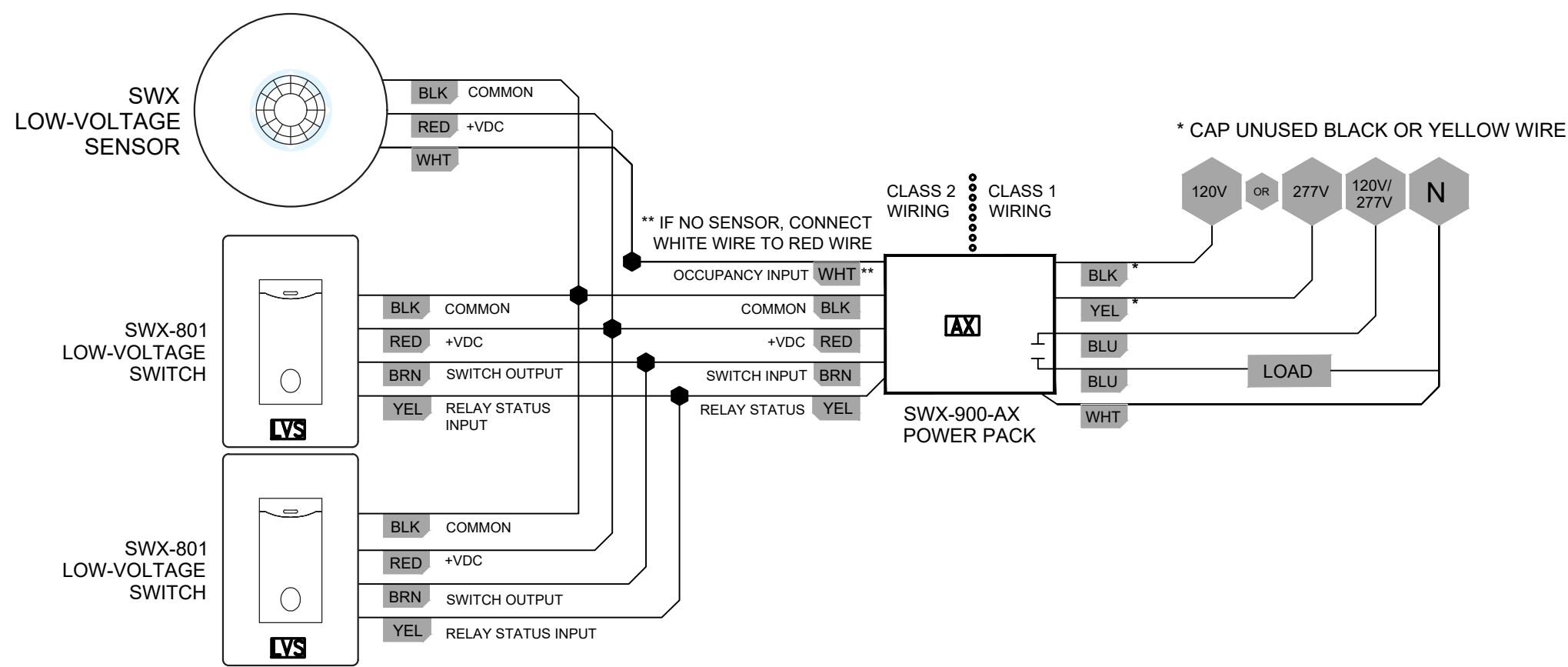


MULTIPLE SENSOR

SWX-900-AX COMMON WIRING CONFIGURATIONS



STANDARD WIRING DIAGRAM



3-WAY, MANUAL ON (VACANCY) OR AUTOMATIC ON (OCCUPANCY) CONTROL WIRING DIAGRAM

ELECTRICAL SYMBOL LEGEND	
SYMBOL	DESCRIPTION
	SENSORWORX #SWX-221-1, CEILING MOUNT OCCUPANCY SENSOR, LOW VOLTAGE, PASSIVE DUAL TECHNOLOGY (PIR/ACOUSTIC), SMALL MOTION 360°.
	SENSORWORX #SWX-222-1, CEILING MOUNT OCCUPANCY SENSOR, LOW VOLTAGE, PASSIVE DUAL TECHNOLOGY (PIR/ACOUSTIC), LARGE MOTION 360°.
	SENSORWORX #SWX-801-WH, DECORATOR LOW VOLTAGE WALL SWITCH, MOMENTARY OPERATION, WHITE.
	SENSORWORX #SWX-900-AX, POWER PACK CONTROLLER, LINE VOLTAGE, 120/277V, SINGLE RELAY +150mA SUPPLY
	SENSORWORX #SWX-121-WH, OCCUPANCY SENSOR, LINE VOLTAGE, WALL SWITCH, PASSIVE DUAL TECHNOLOGY (PIR/ACOUSTIC), 1-POLE:AUTO ON (OCCUPANCY), WHITE
	SENSORWORX #SWX-122-WH, OCCUPANCY SENSOR, LINE VOLTAGE, WALL SWITCH, PASSIVE DUAL TECHNOLOGY (PIR/ACOUSTIC), 2-POLE: PARTIAL ON, INCLUDES #SWX-831-SC, SIDECAR SWITCH, WHITE, 2-GANG

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Alabama (251) 433-1611
Georgia (706) 302-2831 Tennessee (901) 290-5444

PROJECT	TERMINAL RAILWAY OFFICE ADDITION/RENOVATION
	126 INDUSTRIAL CANAL ROAD MOBILE, ALABAMA

TITLE	OFFICE ELECTRICAL POWER PLAN			
SCALE	AS NOTED	DRAWN BY RCC	DATE 03/30/22	SHEET — of — 22x34 REV. B
JOB NO.	4146-22	CHECKED BY JJM	DATE 06/10/22	DRAWING NUMBER 4146-E6

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ELECTRICAL SPECIFICATIONS:

PART 1 – GENERAL SCOPE

FURNISHING OF ALL LABOR, MATERIAL, EQUIPMENT, SUPPLIES, AND SERVICES NECESSARY TO CONSTRUCT AND INSTALL THE COMPLETE ELECTRICAL SYSTEMS AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN. WORK SHALL INCLUDE BUT IS NOT NECESSARILY LIMITED TO THE FOLLOWING ITEMS:

- LIGHTING INSTALLATION/TERMINATION
- INTERIOR/EXTERIOR CIRCUIT DISTRIBUTION
- MAIN SERVICE PANELBOARD
- PANELBOARD INSTALLATION/TERMINATION
- EQUIPMENT INSTALLATION/TERMINATION
- RECEPTACLE INSTALLATION/TERMINATION
- CONDUIT INSTALLATION
- CONDUCTOR INSTALLATION/TERMINATION

JOB CONDITIONS

EXISTING CONDITIONS: ALL UTILITIES, EXISTING SYSTEMS, AND CONDITIONS SHOWN ON THE PLANS AS EXISTING ARE APPROXIMATE, AND THE CONTRACTOR SHALL VERIFY BEFORE ANY WORK IS STARTED.

CODES, PERMITS AND INSPECTIONS

THE INSTALLATION SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS AND ORDINANCES APPLICABLE TO ELECTRICAL INSTALLATION AND WITH THE REGULATIONS OF THE LATEST ACCEPTED PUBLISHED EDITION OF THE NATIONAL ELECTRICAL CODE (N.E.C. 2017) WHERE SUCH REGULATIONS DO NOT CONFLICT WITH THOSE LAWS AND ORDINANCES. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND INSPECTION FEES, AND AFTER COMPLETION OF THE WORK, SHALL FURNISH THE ARCHITECT A CERTIFICATE OF FINAL INSPECTION AND APPROVAL FROM THE APPLICABLE LOCAL INSPECTION AUTHORITIES. ANY CHARGES BY A UTILITY FOR PROVIDING SERVICE AS SHOWN SHALL BE INCLUDED IN THE BID AND PAID BY THE CONTRACTOR.

STANDARDS OF MATERIALS AND WORKMANSHIP

ALL MATERIALS SHALL BE NEW AND SHALL BE LISTED AND APPROVED BY THE UNDERWRITERS' LABORATORIES, INC., IN EVERY CASE WHERE A STANDARD HAS BEEN ESTABLISHED FOR A PARTICULAR TYPE OF MATERIAL IN QUESTION. ALL WORK SHALL BE EXECUTED IN A WORKMANLIKE MANNER AND SHALL PRESENT A NEAT APPEARANCE.

SHOP DRAWINGS

THE CONTRACTOR SHALL SUBMIT A LIST OF ITEMS PROPOSED FOR USE. HE SHALL ALSO SUBMIT CATALOG DATA AND SHOP DRAWINGS ON PROPOSED SYSTEMS AND THEIR COMPONENTS, PANELBOARDS, SAFETY SWITCHES, LIGHTING FIXTURES, AND WIRING DEVICES. WHERE SUBSTITUTIONS ALTER THE DESIGN OR SPACE REQUIREMENTS, THE CONTRACTOR SHALL DEFRAY ALL ITEMS OF COST FOR THE REVISED DESIGN AND CONSTRUCTION INCLUDING COSTS TO ALL ALLIED TRADES INVOLVED.

TYPE OF PERMANENT ELECTRICAL SERVICE

NEW ELECTRICAL SERVICE SHALL BE 277/480 VOLTS,3 PHASE, 4 WIRE SERVED FROM AN UNDERGROUND ALABAMA POWER COMPANY (APCo) SERVICE. CONTRACTOR SHALL VERIFY ALL DETAILS OF ELECTRICAL SERVICE WITH THE APCo PRIOR TO BID. CONTRACTOR SHALL BE RESPONSIBILITY FOR THE INSTALLATION OF THE SERVICE UNDERGROUND CONDUIT AS REQUIRED BY APCo AND SHOWN ON THE CONTRACT PLANS, 4146–E1. INTERFACE WITH OTHER CONTRACTS IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COOPERATE WITH ALL OTHER CRAFTS WORKING ON THIS PROJECT. ALL CUTTING, TRENCHING, BACKFILL, AND STRUCTURAL REMOVALS TO PERMIT ENTRY OF THE ELECTRICAL SYSTEM COMPONENTS SHALL BE DONE BY THIS CONTRACTOR. ALL PATCHING AND FINISHING SHALL BE DONE BY THE GENERAL CONTRACTOR.

EQUIPMENT FURNISHED UNDER OTHER SECTIONS

THE CONTRACTOR SHALL FURNISH AND INSTALL COMPLETE ELECTRICAL ROUGHING-IN AND CONNECTION TO ALL EQUIPMENT FURNISHED UNDER OTHER SECTIONS AS INDICATED ON DRAWINGS. THE CONTRACTOR SHALL VERIFY AND INSTALL PROPER SIZE SERVICE AS REQUIRED FOR ALL ACTUAL EQUIPMENT PURCHASED. ALL SUCH EQUIPMENT SHALL BE SET IN PLACE AS WORK OF OTHER SECTIONS.

FIRE ALARM SYSTEM

CONTRACTOR SHALL FURNISH AND INSTALL FIRE DETECTION SYSTEM AS REQUIRED BY THE NATIONAL FIRE PROTECTION ASSOCIATION. SYSTEM SHALL BE A NEW FULLY FUNCTIONING ADDRESSABLE FIRE ALARM SYSTEM WITH VOICE EVACUATION NOTIFICATION AS WELL AS VISUAL AND HORN NOTIFICATION. FIRE DETECTION SYSTEM SHALL HAVE ALARM BELLS/HORNS IN HALLWAYS AND AS REQUIRED BY LOCAL FIRE MARSHALL OR A.H.J.. THE CONTRACTOR SHALL SUPPLY ALL NECESSARY DRAWINGS TO OBTAIN PERMITS FOR FIRE SYSTEM INSTALLATION. AN ELECTRONIC AUTOCAD FILE OF THE FLOOR PLAN WILL BE PROVIDED TO THE CONTRACTOR FOR LOCATING ALL FIRE DETECTION SYSTEM ALARM BELLS, PULL STATIONS, CONTROL PANELS, ETC. BIDDERS ARE TO PROVIDE TAMPER SWITCHES AT THE BACKFLOW VALVES NEAR THE STREET AS WELL AS RELAYS FOR THE SPRINKLER SYSTEM FLOW SWITCH (FLOW SWITCH BY SPRINKLER SUBCONTRACTOR), THE KITCHEN HOOD SUPPRESSION SYSTEM, AND ALL HVAC DUCT DETECTORS IN ADDITION TO OTHER REQUIREMENTS OF THE REFERENCED CODES. ALL FIRE ALARM CONTRACTORS MUST SUBMIT THROUGH A BIDDING ELECTRICAL CONTRACTOR WHO SHALL INCLUDE ALL BOXES, CONDUIT, WIRE, ETC. TO COMPLETE THE FIRE ALARM PACKAGE. THE ALARM CONTRACTOR IS REQUIRED TO SUBMIT TO THE ARCHITECT AND THE LOCAL CITY FIRE INSPECTOR SHOP DRAWINGS OF THE CODE COMPLIANT SYSTEM STAMPED BY A QUALIFIED FIRE ALARM ENGINEER/DESIGNER ACCEPTABLE TO THE LOCAL FIRE INSPECTOR.

GROUNDING

PROVIDE GROUNDING AND BONDING SYSTEMS IN STRICT ACCORDANCE WITH THE LATEST ACCEPTED PUBLISHED EDITION OF THE NATIONAL ELECTRICAL CODE (N.E.C. 2017), EXCEPT WHERE MORE STRINGENT REQUIREMENTS ARE SPECIFIED HEREIN. INTER-CONNECTION OF NEUTRAL AND GROUND IS NOT PERMITTED EXCEPT AT SERVICE ENTRANCE EQUIPMENT. INSTALL GROUNDING CONDUCTORS TO PERMIT SHORTEST AND MOST DIRECT PATH TO GROUND. CONCEALED JOINTS SHALL BE MADE BY CADWELD METHOD. WHERE GROUNDING CONDUCTORS ARE IN RACEWAY, BOND CONDUCTOR AND RACEWAY AT BOTH ENDS. GROUNDING AND BONDING FITTINGS USED SHALL BE UL LISTED AND BE COMPATIBLE WITH METALS USED IN SYSTEM. SHEET METAL TYPE STRAP ARE NOT ACCEPTABLE. A GREEN INSULATED GROUND CONDUCTOR SHALL BE RUN IN ALL BRACH CIRCUIT AND FEEDER CONDUIT WITH PHASE AND/OR NEUTRAL CONDUCTORS. GROUND CONDUCTOR SHALL BE SIZED PER NEC OR AS NOTED ON DRAWINGS. MINIMUM SIZE #12 AWG. CONDUIT BOX TO DEVICE STRAP OR YOKE SCREW CONNECTION IS NOT SUFFICIENT. PROVIDE AN INSULATED GROUNDING JUMPER FOR RECEPTACLE CIRCUITS.

GUARANTEE AND SERVICE

UPON COMPLETION OF ALL TESTS AND ACCEPTANCE, THE CONTRACTOR SHALL FURNISH THE OWNER OF A WRITTEN GUARANTEE COVERING THE ELECTRICAL WORK DONE FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE. GUARANTEE INCLUDES EQUIPMENT CAPACITY AND PERFORMANCE RATINGS SPECIFIED WITHOUT EXCESSIVE NOISE LEVELS. UPON NOTICE FROM THE ARCHITECT OR THE OWNER, THE CONTRACTOR SHALL, DURING THE GUARANTEE PERIOD, RECTIFY AND REPLACE ANY DEFECTIVE MATERIAL OR WORKMANSHIP AND REPAIR ANY DAMAGE CAUSED THEREBY WITHOUT ADDITIONAL COST.

PART 2 – PRODUCTS (CON'T)

GENERAL

ALL EQUIPMENT AND MATERIALS SHALL HAVE RATINGS ESTABLISHED BY THE RECOGNIZED INDEPENDENT AGENCY OR LABORATORY. THE CONTRACTOR SHALL APPLY THE ITEMS USED ON THE PROJECT WITHIN THE RATINGS AND SUBJECT TO ANY STIPULATIONS OR EXCEPTIONS ESTABLISHED BY THE INDEPENDENT AGENCY OR LABORATORY. USE OF EQUIPMENT OR MATERIALS IN APPLICATIONS BEYOND THAT CERTIFIED BY THE AGENCY OR BEYOND THAT RECOMMENDED BY THE MANUFACTURER SHALL BE CAUSE FOR REMOVAL AND REPLACEMENT OF SUCH MISAPPLIED ITEMS.

RACEWAY AND FITTINGS

- CONDUIT SYSTEMS: ACCEPTABLE TYPES OF CONDUIT:
- | | |
|---|-------------------------|
| HOT DIPPED GALVANIZED RIGID STEEL (GRS) | (1/2" MIN. TRADE SIZE) |
| ELECTRICAL METALLIC TUBING (EMT) | (1/2" MIN. TRADE SIZE) |
| POLYVINYL CHLORIDE – SCHEDULE 40 (PVC 40) | (1/2" MIN. TRADE SIZE) |
| FLEXIBLE METALLIC CONDUIT (FLEX) | (1/2" MIN. TRADE SIZE) |
| LIQUID TIGHT FLEXIBLE METALLIC CONDUIT (LQFLEX) | (1/2" MIN. TRADE SIZE) |
| MC METAL CLAD CABLE (MC) | (#12AWG MIN TRADE SIZE) |

EMT OR GRS SHALL BE THE MAIN HOME RUN RACEWAY FOR ELECTRICAL CIRCUITS FROM PANELBOARDS TO ELECTRICAL DEVICES AND/OR JUNCTION BOX. MC CABLE CAN BE USED AS A SECONDARY INTERIOR CIRCUIT RACEWAY FROM THE MAIN HOME RUN JUNCTION BOX TO RECEPTACLES AND/OR LIGHT FIXTURE. CONDUITS INSTALLED IN EARTH FILL, IN CONCRETE, OR IN SOLID MASONRY STRUCTURES SHALL BE PVC 40. WHERE PVC 40 IS USED, THE 90° ELBOWS RISING ABOVE GRADE OR EXTENDING THROUGH THE CONCRETE ENVELOPE SHALL BE GRS. CONDUITS INSTALLED IN MOIST AND/OR DAMP LOCATIONS SHALL BE PVC 40. CONDUITS SUBJECT TO MECHANICAL INJURY SHALL BE GRS. CONDUITS RUN CONCEALED IN THE HOLLOW SPACE OF NON-MASONRY WALL OR ABOVE SUSPENDED CEILINGS SHALL BE EMT. IN ALL CASES, CONDUITS/MC SHALL BE RUN AT RIGHT ANGLES TO OR PARALLEL WITH BUILDING LINES AND EXPOSED STRUCTURE. IN ALL CASES, CONDUIT/MC RUNS SHALL BE GROUPED TOGETHER WHERE POSSIBLE AND SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE, NOT FOR ANY SUSPENDED CEILING SUPPORT SYSTEM.

CONDUCTORS: ALL CONDUCTORS SHALL BE INSTALLED IN CONDUIT/MC. CONDUCTORS FOR BUILDING WIRING SHALL HAVE THHN/THWN, 600 VOLT INSULATION AND SHALL BE SOFT-DRAWN COPPER OF STANDARD AMERICAN WIRE GAUGE (AWG) SIZE. MINIMUM SIZE SHALL BE NO. 12. ALL WIRE NO. 8 AND LARGER SHALL BE STRANDED. ALL BRANCH CIRCUITS NO. 10 AND SMALLER SHALL BE WIRED WITH COLOR-CODED WIRE WITH THE SAME COLOR USED FOR A SYSTEM THROUGHOUT THE BUILDING. POWER FEEDERS AND BRANCH CIRCUITS LARGER THAN NO. 10 SHALL EITHER BE FULLY COLOR CODED OR SHALL HAVE BLACK INSULATION AND BE SIMILARLY COLOR CODED WITH TAPE OR PAINT IN ALL JUNCTION BOXES AND PANELS. TAPE OR PAINT SHALL COMPLETELY COVER THE FULL VISIBLE LENGTH OF CONDUCTOR INSULATION WITHIN THE BOX OR PANEL. COLOR CODING OF ALL CONDUCTORS SHALL BE AS FOLLOWS:

- | | |
|-------------------------|-------------------------------------|
| GROUNDING: | BARE, GREEN OR GREEN W/YELLOW STRIP |
| 120/208V 3ø CONDUCTORS: | øA-BLACK, øB-RED, øC-BLUE |
| 277/480V 3ø CONDUCTORS: | øA-BROWN, øB-ORANGE, øC-YELLOW |
| 120/208V NEUTRAL: | WHITE |
| 277/480V NEUTRAL: | GRAY |

PART 3 – EXECUTION

PAINTING

CONTRACTOR SHALL TOUCH-UP OR REFINISH ALL ITEMS OF ELECTRICAL EQUIPMENT FURNISHED WITH A FACTORY FINISH COAT OF PAINT AND WHICH MAY HAVE BEEN DAMAGED REGARDLESS OF CAUSE.

TESTING AND BALANCING

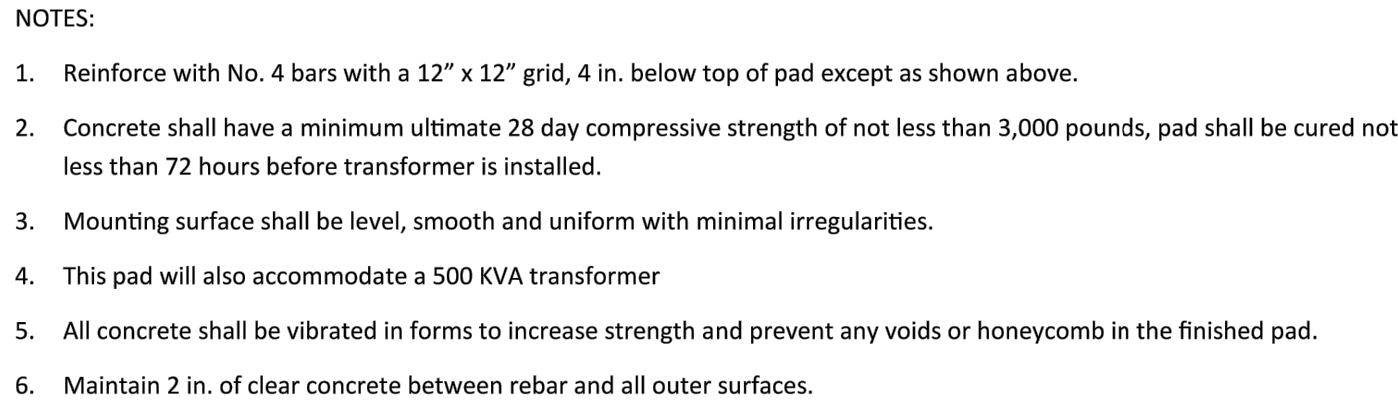
BALANCE ALL SINGLE PHASE LOADS CONNECTED TO ALL PANELBOARDS TO ENSURE AN APPROXIMATE EQUAL DIVISION ON THESE LOADS ON MAIN POWER SUPPLY SERVING BUILDING. ALL TESTS SHALL BE MADE IN ACCORDANCE WITH THE LATEST STANDARDS OF THE IEEE AND THE NEC. THE INSTALLATION SHALL BE TESTED FOR PERFORMANCE, GROUNDS AND INSULATION RESISTANCE. "MEGGER" TYPE INSTRUMENTS SHALL BE USED. CONTRACTOR SHALL PERFORM CIRCUIT CONTINUITY AND OPERATIONAL TESTS ON ALL EQUIPMENT FURNISHED OR CONNECTED BY CONTRACTOR. THE TESTS SHALL BE MADE PRIOR TO FINAL INSPECTION. THE CONTRACTOR SHALL PROVIDE ALL TESTING EQUIPMENT AND ALL COSTS SHALL BE BORNE BY HIM. WRITTEN REPORTS SHALL BE MADE OF ALL TESTS. THESE REPORTS SHALL BE TURNED OVER TO THE ARCHITECT AT TIME OF FINAL INSPECTION. ALL FAULTS SHALL BE CORRECTED IMMEDIATELY.

CLEANING UP

THE CONTRACTOR SHALL REMOVE ALL OIL, GREASE, OR OTHER STAINS RESULTING FROM HIS WORK PERFORMED IN THE BUILDING OR THE EXTERIOR THEREOF.

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Material/Installation Requirements
APCO to Furnish, Customer to Install

- 2 - 5/8"x 10' CU Clad Ground Rods
- #2 Stranded CU Ground Bus Conductor (150')
- Meter Socket (200A Feed Through, 320A Feed Through, 600A TransSocket, or 13 Terminal CT Socket)

APCO to Furnish and Install

- Underground primary conductors.
- Meter, Meter Cable, and C.T.'s.
- Primary cable riser.
- Pad Mounted 3Ø Transformer

Customer to Furnish and Instal

- ☐ Open and Close trenches per APCO specifications.
- ☐ Customer owned service conduit and conductors.
- ☐ Concrete pads for 3Ø transformers.
- ☐ Meter conduit and pull wire per APCO specifications.
- ☐ Conduit for building riser.
- ☐ 5" schedule 40 PVC conduit, bends and couplings (2 runs).

Please give APCO engineering 48 hour notice before you pick up APCO furnished material to ensure it is in stock and available
Material can be picked up at the address below:

45 Schillinger Rd S - Mobile, AL 36608

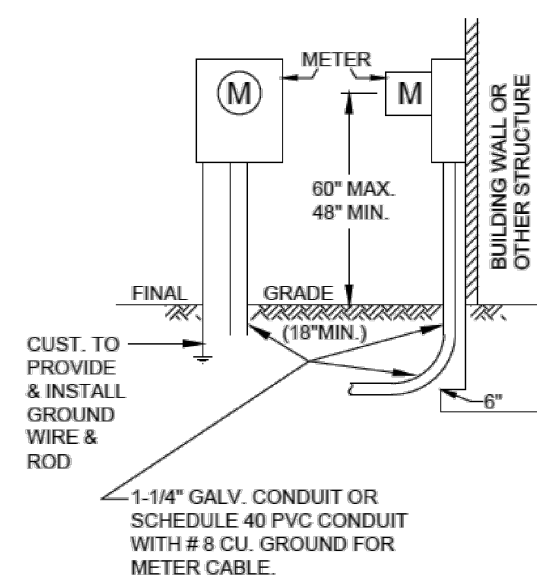
If a 600A trans socket is required, it will have to be picked up at the address below:

650 Michigan Ave - Mobile, AL 36605

GENERAL REQUIREMENTS

-
- The diagram shows a cross-section of a transformer pad. It features a grid pattern. Dimensions are indicated by arrows and text: '10'' for the width of the pad, '5'' for the width of the base, '10'' for the height of the pad, and '5'' for the height of the base. A callout box labeled 'Transformer Pad' points to the top right corner of the pad. The text 'EQUAL TO TRANSFORMER DEPTH' is written vertically on the left side of the diagram.

-



-
- CONCRETE TRANSFORMER OR SWITCHGEAR PAD
- TRAFFIC GUARDS
- 4 INCH (MINIMUM) RIGID STEEL PIPE FILLED WITH CONCRETE
- REMOVABLE GUARD
- PVC CONDUIT SLEEVE SIZED TO ACCOMMODATE RIGID STEEL PIPE USED
- 6" MIN (TYP.)
- 4 FEET
- 6" MIN (TYP.)
- 4 FEET
- DETAIL A
- DETAIL B
- FOUR INCH (MIN.) RIGID STEEL PIPE ENCASED IN CONCRETE
- PVC CONDUIT SLEEVE SIZED TO ACCOMMODATE RIGID STEEL CONDUIT SIZE USED ENCASED IN CONCRETE
- NOTES:

- NOTES:
1. THIS DRAWING SHOWS A TYPICAL GUARD LAY-OUT FOR PAD-MOUNTED EQUIPMENT EXPOSED TO TRAFFIC ON ALL SIDES. INSTALL GUARDS ONLY ON THOSE SIDES EXPOSED TO VEHICULAR TRAFFIC. INSTALL CENTER POLE ONLY ON SIDES WHERE SPACING BETWEEN CORNER POLES DOES NOT PROVIDE ADEQUATE PROTECTION.

NOTE: IF INSTALLING A CENTER POLE ON THE DOOR SIDE OF THE PAD, THE W/2 DIMENSION AND THE L DIMENSION MAY NEED ADJUSTING TO AVOID INTERFERENCE WITH DOOR OPENING.

2. MAXIMUM TRAFFIC GUARD SPACING: W = PAD WIDTH + 6 INCHES*
D = PAD DEPTH
L = 36 INCHES (MINIMUM)
* ADD 6 IN. TO FRONT OF PAD
(DOOR SIDE ONLY).
3. TRAFFIC GUARDS SHOULD BE LOCATED SO THERE WILL BE NO CONFLICT WITH THE INSTALLATION OR REMOVAL OF ELBOWS, FUSES, DOORS, ETC.
4. THE MAXIMUM HEIGHT OF TRAFFIC GUARDS ABOVE GRADE SHOULD BE FOUR (4) FT. IF THE TOP OF THE PAD-MOUNTED EQUIPMENT IS LESS THAN FOUR (4) FT. ABOVE GRADE, THE HEIGHT MAY BE REDUCED TO THE PAD-MOUNTED EQUIPMENT HEIGHT.
5. EITHER ARRANGEMENT, DETAIL A OR DETAIL B, IS AN ACCEPTABLE METHOD FOR TRAFFIC GUARD INSTALLATION

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CONFIDENTIAL, VALUABLE, AND PROPRIETARY INFORMATION

B	ISSUED FOR BID	08/01/22	RCC	JJM
REV.	DESCRIPTION	DATE	BY	CHK'D

Cowles, Murphy, Glover
& ASSOCIATES
A Full Service Engineering Firm

PERFORMANCE • RELIABILITY • EXPERIENCE

457 St. Michael St., Mobile, AL 36602
13 Thrash Rd., LaGrange, GA 30241
11880 Cranston Dr. Ste 102, Arlington, TN 38002
Alabama (251) 433-1611
Georgia (706) 302-2831 Tennessee (901) 290-5444

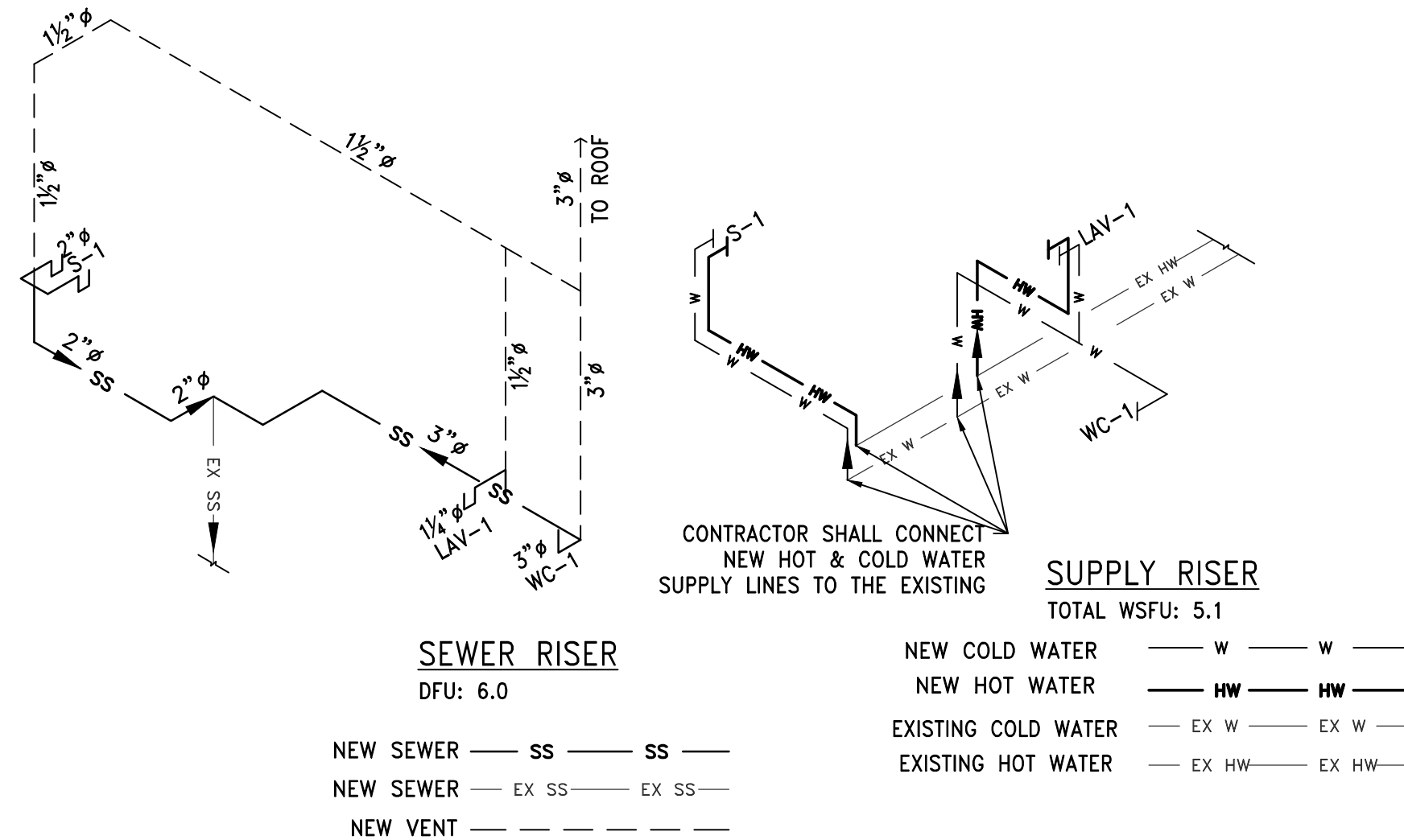
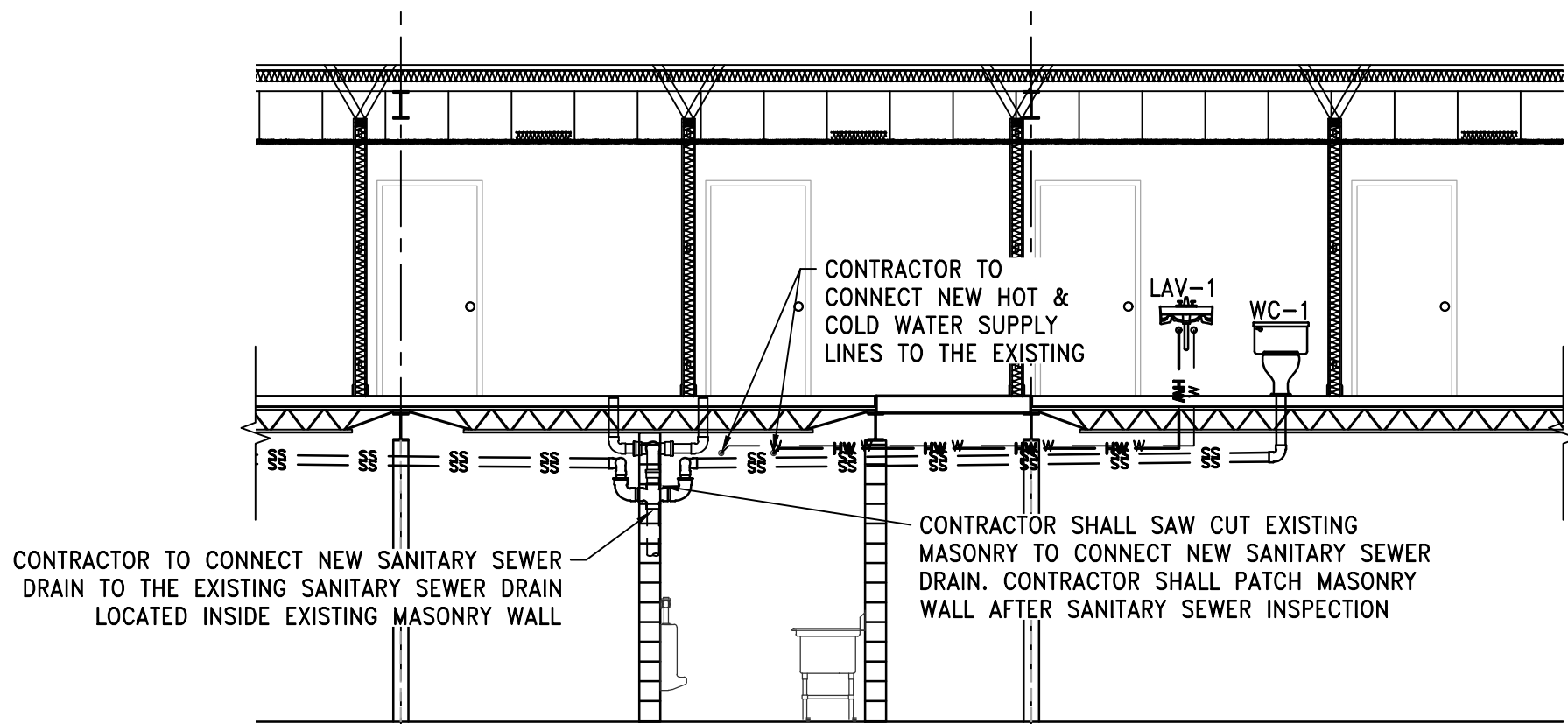
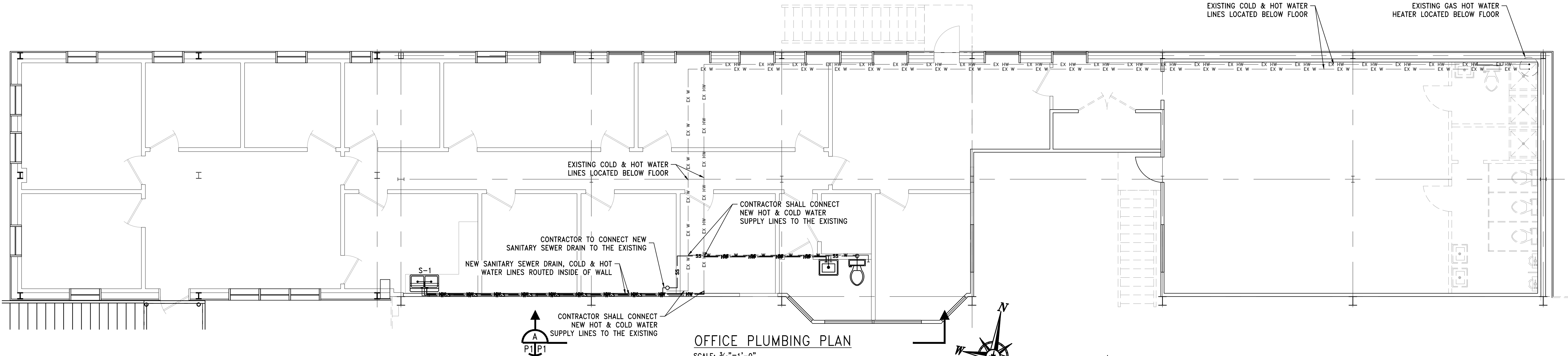
PROJECT

TERMINAL RAILWAY
OFFICE ADDITION/RENOVATION
126 INDUSTRIAL CANAL ROAD
MOBILE, ALABAMA

TITLE

APC₀ TRANSFORMER PAD REQUIREMENT

SCALE AS NOTED	DRAWN BY RCC	DATE 03/30/22	SHEET — OF —	22x34 (R)
JOB NO. 4146-22	CHECKED BY JJM	DATE 06/10/22	DRAWING NUMBER 4146-E8	



PLUMBING FIXTURE SCHEDULE					
MARK	FIXTURE	CONNECTIONS			REMARKS
		WASTE	CW	HW	
WC-1	WATER CLOSET	3"	¾"	---	FLOOR MOUNTED, RIM HEIGHT 15", BOTTOM OUTLET, ELONGATED FRONT, 1.6 GPF PRESSURE ASSISTED TYPE WITH OPEN FRONT SEAT, VERIFY RH/LH FLUSH. AMERICAN STANDARD CADET SERIES OR EQUAL.
LAV-1	LAVATORY	1¼"	½"	½"	VITREOUS CHINA WALL MOUNTED LAVATORY (24"x20") WITH SINGLE LEVER FAUCET W/WATTS MMV TEMPER VALVE. PROVIDE OFFSET GRID DRAIN, 1¼", 17 GA. P-TRAP, FLEXIBLE SUPPLIES AND STOPS.
S-1	SINK	2"	½"	½"	TOP MOUNTED DOUBLE BOWL STAINLESS STEEL 33"x22"x7" DOUBLE LEVER FAUCET W/ WATTS MMV TEMPER VALVE. FLEXIBLE SUPPLIES AND STOPS. ELKAY CELEBRITY MODEL CR3322 OR EQUAL.

NOTES:
1. ALL PLUMBING FIXTURES SHALL BE WHITE, UNLESS INDICATED OTHERWISE.
2. INSTALL ZURN INSUL GUARD Z-8946-3 TRAP AND SUPPLY PROTECTORS ON ALL ADA MOUNTED LAVATORIES OR ENGINEER APPROVED EQUAL.
3. INSTALL WATTS MMV TEMPER VALVE CONFORMING TO ASSE 1070 ON ALL LAVATORIES AND SINKS. SET TO 109F MAX.

LEGEND:
EXISTING COLD WATER — EX W — EX W —
EXISTING HOT WATER — EX HW — EX HW —
EXISTING SANITARY SEWER — EX SS — EX SS —
NEW WATER — W — W —
NEW SANITARY SEWER — SS — SS —

- GENERAL NOTES:
- ALL PLUMBING TO BE DONE IN ACCORDANCE WITH INTERNATIONAL PLUMBING CODE 2018.
 - WASTE PIPING TO BE 3" PVC DWV SCH.40. ALL DRAIN LINES SHALL HAVE A MINIMUM SLOPE OF 1/8" PER FT.
 - ALL COPPER EMBEDDED SHALL BE SLEEVED AND WRAPPED TO PREVENT CORROSION. NO SEAMS/JOINTS ARE PERMITTED BELOW THE SLAB.
 - CONTRACTOR WILL BE RESPONSIBLE FOR CONNECTING ALL NEW WATER SUPPLY LINES TO EXISTING SUPPLY LINES.
 - CONTRACTOR WILL BE RESPONSIBLE FOR CONNECTING ALL NEW SEWER DRAIN LINES TO EXISTING SEWER DRAIN LINES. CONTRACTOR SHALL FIELD VERIFY GRAVITY FLOW TO THE NEW GRINDER PUMP PRIOR TO CONNECTION.
 - SUPPLY PIPING MAY BE ROUTED OVERHEAD. INSULATED ALL PIPING ROUTED OVER HEAD TO PREVENT FREEZING.

B	ISSUED FOR BID	08/01/22	MAD	JDG
REV.	DESCRIPTION	DATE	BY	CHK'D

Cowles, Murphy, Glover
& ASSOCIATES
A Full Service Engineering Firm

PERFORMANCE • RELIABILITY • EXPERIENCE

457 St. Michael St., Mobile, AL 36602
13 Thrash Rd., LaGrange, GA 30241
11880 Cranston Dr. Ste 102, Arlington, TN 38002
Alabama (251) 433-1611
Georgia (706) 302-2831 Tennessee (901) 290-5444

PROJECT

TERMINAL RAILWAY
OFFICE ADDITION/RENOVATION

126 INDUSTRIAL CANAL ROAD
MOBILE, ALABAMA

TITLE

OFFICE PLUMBING PLAN

SCALE	DRAWN BY	DATE	SHEET
SCALE	MAD	03/16/22	— OF —
JOB NO.	CHECKED BY	DATE	DRAWING NUMBER
4146-22	JDG	06/15/22	4146-P1

22x34 REV. B

PLUMBING SPECIFICATIONS

PART 1 GENERAL PLUMBING PROVISIONS

1.1 SCOPE OF WORK

A. THE WORK TO BE PERFORMED UNDER THIS SECTION OF THE SPECIFICATION SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION, CONSTRUCTION, FACILITIES, AND INCIDENTALS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF ALL PLUMBING WORK AS SHOWN AND INDICATED ON THE CONTRACT DRAWINGS, AND/OR SPECIFIED HEREIN WITH THE INTENT THAT THE INSTALLATION SHALL BE COMPLETE IN EVERY RESPECT AND READY FOR USE.

1.2 GUARANTEE

A. ALL MATERIALS AND EQUIPMENT PROVIDED AND/OR INSTALLED UNDER THIS SECTION OF THE SPECIFICATIONS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE OF THE WORK BY THE OWNER. SHOULD ANY TROUBLE DEVELOP DURING THIS PERIOD DUE TO DEFECTIVE MATERIALS OR FAULTY WORKMANSHIP, THE CONTRACTOR SHALL FURNISH ALL NECESSARY LABOR AND MATERIALS TO CORRECT THE TROUBLE WITHOUT ANY COST TO THE OWNER.

1.3 CODES AND REGULATIONS

A. ALL WORK PERFORMED UNDER THIS SECTION SHALL CONFORM WITH ALL LOCAL GOVERNING REGULATIONS, AND IN CASE OF CONFLICTING REQUIREMENTS, THE MOST STRINGENT SHALL APPLY. MINIMUM REQUIREMENTS SHALL BE THE INTERNATIONAL PLUMBING CODE AS PUBLISHED BY THE INTERNATIONAL CODE COUNCIL (ICC). ALL ELECTRICALLY OPERATED EQUIPMENT SPECIFIED IN THIS SECTION SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE 2017.

B. SHOULD IT BE FOUND THAT ANY PART OF THE WORK SHOWN OR SPECIFIED IS NOT IN ACCORDANCE WITH LOCAL REGULATIONS, THE ARCHITECT SHALL BE SO ADVISED AT THE TIME OF BIDDING AND ALL WORK INSTALLED AS REQUIRED TO MEET THE LOCAL CODES.

C. THE CONTRACTOR SHALL COMPLY WITH THE LATEST REVISIONS OF ALL COUNTY, DISTRICT, MUNICIPAL, OR LOCAL BUILDING CODES, INTERPRETATIONS, BUILDINGS PERMITS TO INCLUDE BUT NOT BE LIMITED TO:

- 1. INTERNATIONAL BUILDING CODE – 2018
- 2. INTERNATIONAL MECHANICAL CODE – 2018
- 3. INTERNATIONAL PLUMBING CODE – 2018
- 4. INTERNATIONAL ENERGY CONSERVATION CODE – 2018
- 5. LOCAL MUNICIPAL CODES

1.4 FEES AND PERMITS

A. THE PLUMBING SUBCONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, FEES FOR INSPECTION, AND OTHER CHARGES THAT MAY BE NECESSARY FOR FULLY COMPLETING THE WORK. THE PLUMBING SUBCONTRACTOR SHALL MAKE ALL NECESSARY TESTS REQUIRED BY CITY, COUNTY, OR STATE AUTHORITIES, LEGAL REGULATIONS, AND/OR THE ENGINEER, AND RETURN TO THE ENGINEER ANY CERTIFICATES OF APPROVAL ISSUED IN THIS DISTRICT FOR PLUMBING WORK, ETC. SIGNED BY THE INSPECTOR IN CHARGE OF EACH PARTICULAR PART OF THE WORK.

1.5 RESPONSIBILITY OF BIDDER

A. EACH BIDDER SHALL VISIT THE SITE OF THE PROPOSED WORK AND FULLY ACQUAINT HIMSELF WITH CONDITIONS RELATING TO THE CONSTRUCTION REQUIREMENTS SO THAT HE MAY FULLY UNDERSTAND THE FACILITIES, DIFFICULTIES AND RESTRICTIONS CONTINGENT UPON THE EXECUTION OF THE WORK UNDER THIS CONTRACT. **THIS INCLUDES THE VERIFICATION OF GRAVITY FLOW FROM THE NEW PLUMBING FIXTURES TO THE EXISTING SYSTEM PRIOR TO STARTING CONSTRUCTION.** THE FAILURE OR OMISSION OF ANY BIDDER TO RECEIVE OR EXAMINE ANY FORM, INSTRUMENT, ADDENDUM OR OTHER DOCUMENT SHALL IN NO WAY RELIEVE ANY BIDDER FROM HIS OBLIGATIONS WITH RESPECT TO HIS BID OR THE CONTRACT. THE SUBMISSION OF A BID SHALL BE TAKEN AS PRIMA FACIA EVIDENCE OF COMPLIANCE WITH THIS PARAGRAPH AND THAT HE HAS INCLUDED IN HIS PROPOSAL EVERY ITEM OF COST NECESSARY FOR A COMPLETE INSTALLATION OF THE PLUMBING SYSTEM OPERATIONS STRICTLY AS PLANNED, SPECIFIED, AND INTENDED.

1.6 PIPING

A. PROVIDE PIPE SLEEVES THROUGH MASONRY CONSTRUCTION, AND INSTALL ESCUTCHEON PLATES AROUND EXPOSED PIPING IN ALL ROOMS.

B. SOIL, WASTE AND VENT LINES SHALL BE SCHEDULE 40 PVC-DWV IN ACCORDANCE WITH COMMERCIAL STANDARDS CS272–65 OR ASTM STANDARDS D2665–68. SOIL, WASTE, AND VENT LINES PENETRATING A FIRE RATED WALL OR FLOOR SHALL BE SERVICE WEIGHT CAST IRON AT THE POINT OF PENETRATION ONLY.

C. ALL PLASTIC PIPE SHALL BEAR THE NSF SEAL OF APPROVAL, AND SUCH OTHER MARKINGS AS REQUIRED BY THE AFOREMENTIONED STANDARDS.

D. ABOVE SLAB COLD WATER AND HOT WATER PIPING SHALL BE TYPE "L" HARD COPPER WITH SWEATED JOINTS, USING WROUGHT FITTINGS AND NON-CORROSIVE FLUX. BELOW SLAB COLD WATER PIPING SHALL BE TYPE "K" SOFT COPPER TUBING.

E. OPENINGS AND PENETRATIONS IN THE BUILDING ENVELOPE SHALL BE SEALED WITH CAULKING MATERIALS OR CLOSED WITH GASKETING SYSTEMS COMPATIBLE WITH THE CONSTRUCTION MATERIALS AND LOCATION TO ALLOW EXPANSION/ CONTRACTION TO INSURE THE BUILDING ENVELOPE IS SEALED IN ACCORDANCE WITH IECC 502.4.3.

1.7 PIPE SUPPORT

A. HANGERS: SUPPORT ALL SUSPENDED PIPING WITH CLEVIS TYPE HANGERS EQUAL TO GRINNELL #260, 4'–0" O.C. ARCHITECT SHALL APPROVE ALL METHODS OF ATTACHMENT OF HANGERS TO CONSTRUCTION. HANGERS IN CONTACT WITH COPPER PIPING SHALL BE COPPER, OR COPPER PLATED.

B. VERTICAL SUPPORT: STEEL BAR BASE CLAMPED TO PIPE OR GRIP STRUT CHANNEL WITH OFFSET CLAMPS. SUPPORT MEMBERS TO BE OF SAME MATERIAL AS SUPPORTED MATERIAL WHERE POSSIBLE.

1.8 PIPING PLACEMENT

A. PLACE IN MOST DIRECT MANNER PERMITTED BY CONSTRUCTION, FREE OF UNNECESSARY OFFSETS. CHANGES IN DIRECTION BY MEANS OF STANDARD FITTINGS.

B. GRADE 2" WASTE LINES 1/4" PER FOOT AND 3" AND 4" WASTE LINES 1/8" PER FOOT FOR POSITIVE FLOW. SECURE ALL PIPING TO STRUCTURE.

C. SOIL PIPE: SUPPORT TO FIRM EARTH BELOW FLOOR SLABS.

1. CHANGES IN DIRECTION OF DRAINAGE PIPE SHALL BE MADE BY MEANS OF SUITABLE BENDS AND BRANCHES OF Y'S AND LONG SWEEPS. SHORT RADIUS QUARTER BENDS ARE PROHIBITED.

2. CONNECTIONS TO VERTICAL SOIL PIPE TO ALL CONNECTIONS IN HORIZONTAL SOIL PIPE TO BE MADE BY "Y" FITTINGS.

D. VENT PIPES:

1. MAIN SOIL PIPE STACKS TO BE EXTENDED UP THROUGH THE BUILDING FULL SIZE WITH INCREASER THROUGH ROOF PER CODE.

2. CONNECT BRANCH VENTS INTO MAIN STACKS WITH CONNECTIONS NOT LESS THAN 4 FEET ABOVE THE HIGHEST FIXTURE.

3. ALL VENT STACKS SHALL BE CONNECTED AT THE BOTTOM TO MAIN DRAINAGE SYSTEM AND ALL HORIZONTAL RUNS SHALL BE GRADED SO AS TO DISCHARGE ALL WATER OR CONDENSATION.

E. WATER PIPING: PLACE SUPPLY PIPES AS SHOWN OR AS DIRECTED IN NEAT ARRANGEMENT AND PARALLEL OR AT RIGHT ANGLES TO WALLS, JOISTS, ETC.

1. PLACE AIR CHAMBER EXTENSIONS 12" LONG ON TOP OF ALL RISERS AND ONE PIPE SIZE LARGER THAN THE RISER.

2. PLACE SHOCK ABSORBERS AT EACH FIXTURE GROUP AS RECOMMENDED BY MANUFACTURER. SHOCK ABSORBERS SHALL BE PDI CERTIFIED.

3. PLACE VALVES ON ALL WATER PIPE RISERS AND BRANCH LINES AT POINT WHERE RISERS AND BRANCH LINES CONNECT TO MAIN WATER LINES.

PART 2 PRODUCTS

2.1 WATER PIPING

A. ALL WATER PIPING, UNLESS OTHERWISE SHOWN OR SPECIFIED SHALL BE COPPER PIPE TYPE L OR K AS SPECIFIED HAVING A WALL THICKNESS OF NOT LESS THAN .035 INCHES. IT SHALL BE CLEAN, ROUND, STRAIGHT, AND TRUE TO SIZE, FREE FROM FLAWS AND OTHER DEFECTS.

B. ALL FITTINGS ON COPPER PIPE SHALL BE COPPER. THE PIPE AND FITTINGS SHALL BE THOROUGHLY CLEANED BEFORE INSERTING INTO THE JOINT AND THEN SOLDERED WITH LEAD FREE SOLDER.

2.2 GAS PIPING (NOT IN CONTRACT)

A. ALL PIPING ABOVE GRADE SHALL BE SCHEDULE 40 BLACK STEEL ASTM 120. FITTINGS SHALL BE 150 POUND BLACK MALLEABLE SCREW PATTERN FOR ALL SIZES 2" AND SMALLER.

B. ALL PIPING SHALL BE INSTALLED IN ACCORDANCE WITH NFPA RECOMMENDATIONS AND THE INTERNATIONAL FUEL GAS CODE COMPLETE WITH ALL NECESSARY APPURTENANCES.

C. HORIZONTAL PIPING SHALL GRADE WITH A SLOPE OF 1" ON 40 FEET–0" TO DRIP LEGS AT ALL LOW POINTS AS REQUIRED. DRIPS SHALL BE PROVIDED AT ALL LOW POINTS AND AT BOTTOM OF RISERS. DRIPS SHALL BE SAME SIZE AS THE PIPING WHERE INSTALLED AND SHALL BE A MINIMUM OF 12" LONG.

D. USE GROUND JOINT UNIONS IN ALL SCREW PIPING JOINTS.

2.3 UNIONS

A. UNIONS SHALL BE PROVIDED ON INLET AND OUTLET OF ALL APPARATUS AND EQUIPMENT. WHERE VALVES ARE ADJACENT TO EQUIPMENT, UNIONS SHALL BE ON DOWNSTREAM SIDE OF VALVES.

B. UNIONS IN COPPER PIPE SHALL BE CAST BRONZE, WOG PATTERN, GROUND JOINT, 150 PSI TYPE.

C. UNIONS IN STEEL PIPE SHALL BE MALLEABLE IRON, WOG FEMALE PATTERN BRASS SEAT, GROUND JOINT, 150 PSI TYPE.

D. UNIONS CONNECTING DISSIMILAR METALS SHALL BE DIELECTRIC TYPE.

2.4 VALVES AND COCKS

A. VALVES AND COCKS SHALL BE INSTALLED WHERE SHOWN ON THE DRAWINGS, AND/OR WHERE FOUND TO BE NECESSARY FOR PROPER OPERATION OF THE SYSTEM. ALL BRANCHES FROM RISERS, ALL BRANCHES FROM MAINS, AND ALL FIXTURES OR EQUIPMENT NOT HAVING STOPS SHALL BE PROVIDED WITH VALVES WHETHER SHOWN OR NOT.

B. ANGLE OR STRAIGHTWAY CHROMIUM PLATED STOPS ON THE SUPPLIES TO ALL FIXTURES ACCESSIBLE FROM THE SAME ROOM IN WHICH THE FIXTURES ARE LOCATED.

C. ALL VALVES SHALL BE THE PRODUCT OF ONE MANUFACTURER AS CATALOGED BY MILWAUKEE, STOCKHAM, CRANE, OR NIBCO.

D. FOR WATER PIPING, VALVES SHALL BE EQUAL TO 125 PSI SWP/200 PSI WOG NIBCO AS FOLLOWS:

- 1. GATE VALVES 1/2" TO 3" = S–111.
- 2. BALL VALVES 1/2" TO 2" = S–585.
- 3. CHECK VALVES 1/2" TO 3" = S–413W.

2.5 WALL HYDRANTS

A. WALL HYDRANTS SHALL BE BOX TYPE, 1/2", FREEZE PROOF, KEYED WITH NICKEL BRONZE FACE PLATE AND VACUUM BREAKER. MOUNT FLUSH WITH WALL. WALL HYDRANT SHALL BE EQUAL TO ZURN Z–1321.

2.6 THERMAL INSULATION WORK

A. ALL INSULATION WORK SHALL BE PERFORMED BY EXPERIENCED INSULATION APPLICATION MECHANICS THOROUGHLY FAMILIAR WITH AND EXPERIENCED IN THE APPLICATION OF INSULATION MATERIALS. ALL INSULATION MATERIALS SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED RECOMMENDED METHODS. INSTALLATION AND FINISH OF INSULATION MATERIALS SHALL MEET WITH COMPLETE DATA FOR APPROVAL OF MATERIALS AND APPLICATION METHODS AS PROPOSED FOR USE. ALL PIPING SHALL BE PRESSURE TESTED AND ALL SURFACES SHALL BE THOROUGHLY CLEANED BEFORE COVERING IN APPLIED. INSULATION MATERIALS, INCLUDING SEALER, ADHESIVE, FINISHED, ETC., SHALL MEET NFPA STANDARDS WITH REGARD TO FLAME SPREAD AND SUPPORT OF COMBUSTION.

B. COLD WATER PIPING SHALL BE COVERED WITH 1" THICK HEAVY DENSITY FIBERGLASS SECTIONAL PIPE INSULATION EQUAL TO OWENS CORNING FIBERGLASS 25 ASJ/SSL, EXCLUDING PIPING BELOW GRADE OR CHROMIUM PLATED FIXTURE CONNECTIONS.

C. HOT WATER PIPING SHALL BE COVERED WITH HEAVY DENSITY FIBERGLASS SECTIONAL PIPE INSULATION EQUAL TO OWENS CORNING FIBERGLASS 25 ASJ/SSL AS FOLLOWS:

- 1. PIPE SIZES 1" TO <1–1/2"= 1" THICK.
- 2. PIPE SIZES 1–1/2" TO <4" = 1–1/2" THICK.

D. FITTINGS FOR THE ABOVE SHALL BE INSULATED WITH PREMOLDED FITTING INSULATION OF THE SAME MATERIAL AND THICKNESS AS THE ADJACENT INSULATION AND SHALL BE COVERED WITH A PREMOLDED PLASTIC (PVC) VAPOR BARRIER AND SEALED WITH VAPOR BARRIER LAGGING ADHESIVE. COVERING ADJACENT TO UNIONS AND OTHER POINTS OF TERMINATION SHALL BE FINISHED WITH THE PLASTIC MATERIAL NEATLY BEVELED.

E. IT SHALL BE THE RESPONSIBILITY OF THE INSULATION SUBCONTRACTOR TO COORDINATE HANGER LOCATIONS AND PREVENT CRUSHING OR BREAKING FINISHES.

F. CONTRACTOR SHALL INSULATE WATER SUPPLY ASSEMBLIES AND P–TRAP ASSEMBLY WITH ARMAFLEX 3/8" FOAM INSULATION KIT ON HANDICAPPED LAVATORIES.

2.7 FLOOR, WALL, AND CEILING PLATES

A. NICKEL PLATED FLOOR, WALL, AND CEILING PLATES SHALL BE PROVIDED ON ALL PIPES PASSING THROUGH FLOOR, CEILING, OR PARTITION. NICKEL OR CHROMIUM PLATED ESCUTCHEONS SHALL BE PROVIDED ON ALL FIXTURE SUPPLIES.

2.8 PLUMBING FIXTURES AND EQUIPMENT

A. PROVIDE ROUGHING–IN FOR AND CONNECT TO SUPPLY LINES, WASTE AND VENT LINES, ALL EQUIPMENT, FIXTURES, DRAINS, ETC., SPECIFIED HEREIN OR IN OTHER SECTIONS OF THE SPECIFICATIONS WHICH REQUIRE SUCH CONNECTIONS.

B. PROVIDE STOPS IN HOT AND COLD WATER CONNECTIONS TO EACH FIXTURE, EQUIPMENT ITEMS, ETC. WHERE NOT OTHERWISE SPECIFIED, STOPS SHALL BE SAME AS SPECIFIED HEREIN BEFORE FOR BALL VALVES. PROVIDE DEEP ESCUTCHEON ON ALL SINKS AND LAVATORIES WHERE WASTE PIPE GOES INTO WALL. ANCHOR ALL SUPPLIES FROM WALL SECURELY WITHIN WALL CONSTRUCTION.

C. PROVIDE STOPS FOR ALL FIXTURES. TRAPS FOR ALL FIXTURES SHALL BE 17–GAUGE CHROMIUM PLATED BRASS.

D. PLUMBING FIXTURES SHALL BE EQUAL TO AMERICAN STANDARD, CRANE OR KOHLER. NO OTHERS WILL BE ACCEPTED.

2.9 CLEANOUTS

A. PROVIDE IN CAST IRON SANITARY PIPING AT ALL CHANGES IN DIRECTION AT ENDS OF BRANCHES, AT INTERVALS NOT EXCEEDING 40' ON STRAIGHT RUNS, AND ELSEWHERE AS SHOWN. CLEANOUTS SHALL BE FULL OPENING TYPE COMPLETELY ACCESSIBLE. SIZE SAME AS LINES IN WHICH THEY OCCUR, BUT NOT LARGER THAN 4". TEES AND EXTENSIONS SHALL BE OF SAME WEIGHT AS PIPE. PLUGS SHALL BE COUNTERSUNK TYPE. CATALOG NUMBERS FROM JOSAM OR APPROVED EQUAL.

B. OUTSIDE CLEANOUTS TO GRADE SHALL BE BROUGHT UP FLUSH WITH FINISHED GRADE AND INSTALLED IN 14" X 14" X 4" CONCRETE PAD, CLEANOUT PLUG SHALL BE COUNTERSUNK.

C. IN TILE FLOORS: 56030–2, ADJUSTABLE, CAST IRON BODY WITH CADMIUM PLUG AND SATIN FINISHED SQUARE SCORIATED NIKALOY TOP; WHERE SOFT TILE OCCURS, PROVIDE 56030–12–2 RECESSED SQUARE NIKALOY COVER.

D. IN CONCRETE FLOORS: 58190, ADJUSTABLE HEAD, CAST IRON HEAD AND FERRULE WITH CADMIUM PLUG, ROUND LOOSE SET SCORIATED TRACTOR COVER.

E. IN OUTSIDE LINE: 58190 CAST IRON HEAD AND FERRULE WITH CADMIUM PLUG. TERMINATE AT GRADE OR PAVEMENT IN 14" X 14" X 4" CONCRETE PAD WITH TOOLED EDGES.

PART 3 EXECUTION

3.1 COMPLETION OF WORK

A. THIS CONTRACTOR SHALL ARRANGE FOR THE INSTALLATION OF ALL EQUIPMENT IN ORDER THAT IT PROGRESSES ALONG WITH THE GENERAL CONSTRUCTION OF THE BUILDING, AND IN NO CASE SHALL BE HOLD UP OTHER PHASES OF THE WORK DUE TO THE FACT HIS EQUIPMENT IS NOT PROPERLY INSTALLED.

3.2 TESTING

A. GENERAL: PERFORM ALL TESTS IN THE PRESENCE OF THE ARCHITECT OR HIS REPRESENTATIVE. TEST SHALL CONFORM TO LOCAL CODE REQUIREMENTS. FILE COPIES OF ALL TEST REPORTS IN DUPLICATE TO PHYSICAL PLANT.

B. SOIL, WASTE, AND VENT SYSTEMS: PLUG ALL OPENINGS, FILL ENTIRE SYSTEM WITH WATER TO POINT OF OVERFLOW AND HOLD FOR AT LEAST ONE HOUR BEFORE INSPECTION. SYSTEM MUST REMAIN FULL DURING THE TEST WITHOUT LEAKAGE. EACH VERTICAL STACK WITH ITS BRANCHES MAY BE TESTED SEPARATELY, BUT ANY PORTION TESTED MUST HAVE A 10' HEAD. PROVIDE TEST TEES AND PLUGS FOR ALL TESTS AS REQUIRED.

C. WATER SUPPLY SYSTEM: TEST AND SECURE ACCEPTANCE OF ENTIRE SYSTEM BEFORE THE PIPING OR HOT WATER HEATERS ARE OTHERWISE CONCEALED. TEST AS FOLLOWS: DISCONNECT AND CAP ALL OUTLETS TO PLUMBING FIXTURES AND ALL OTHER EQUIPMENT NOT DESIGNED FOR THE FULL TEST PRESSURE. FILL THE SYSTEM WITH WATER; APPLY 150 PSI HYDROSTATIC PRESSURE AND HOLD UNTIL INSPECTION IS COMPLETED. ALL PIPING THROUGHOUT SHALL BE TIGHT UNDER TEST. WATER PIPING SHALL REMAIN UNDER NORMAL WATER PRESSURE DURING CONSTRUCTION WHERE FREEZING CONDITIONS DO NOT EXIST.

3.3 DISAFFECTION

A. DISINFECT ALL DOMESTIC WATER PIPING IN ACCORDANCE WITH LOCAL HEALTH DEPARTMENT GUIDELINES.

B	ISSUED FOR BID	08/01/22	MAD	JDG
REV.	DESCRIPTION	DATE	BY	CHK'D

Cowles, Murphy, Glover
& ASSOCIATES

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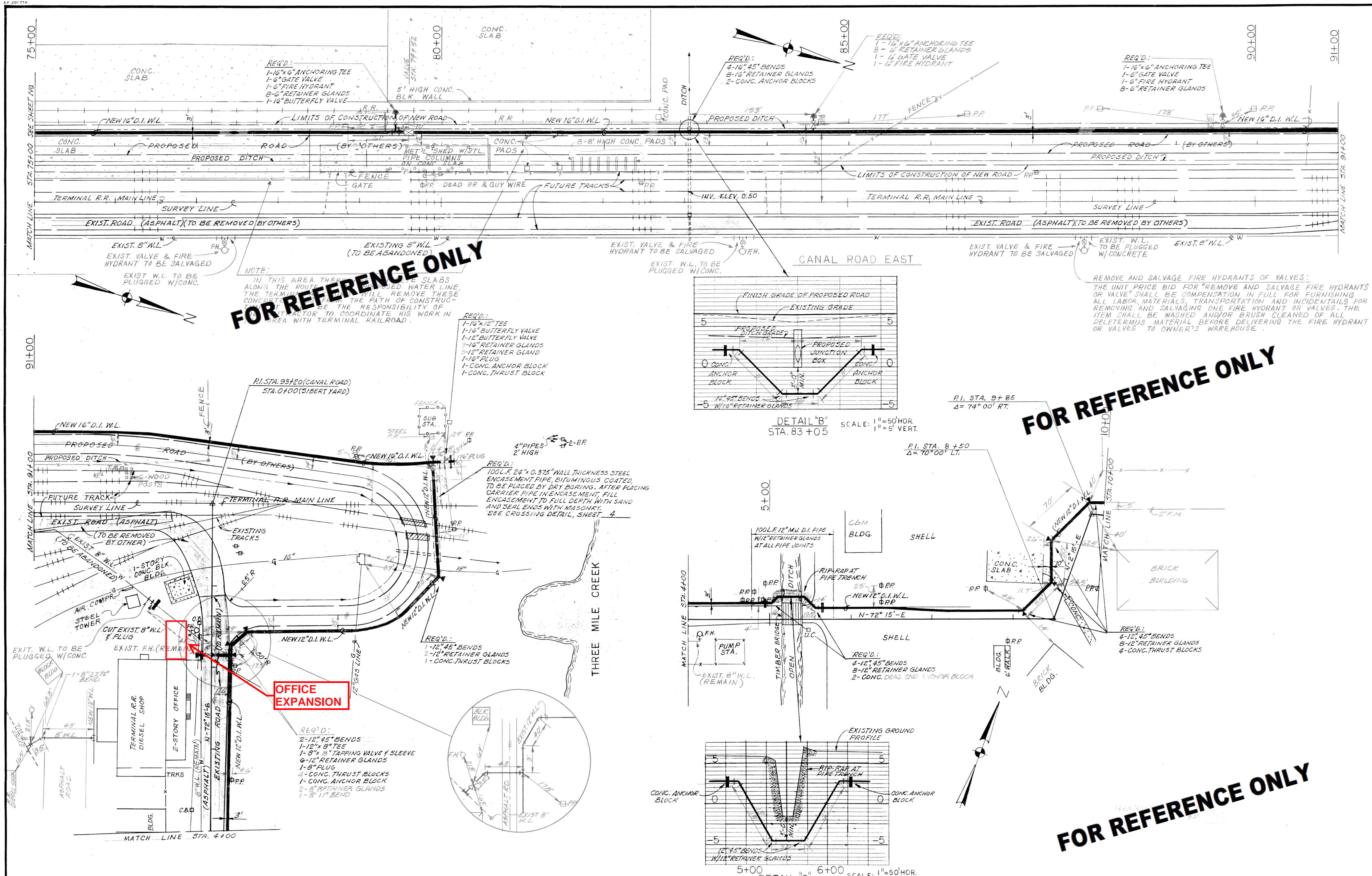
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PROJECT

TERMINAL RAILWAY
OFFICE ADDITION/RENOVATION

126 INDUSTRIAL CANAL ROAD
MOBILE, ALABAMA

TITLE				
PLUMBING SPECIFICATIONS				
SCALE	DRAWN BY	DATE	SHEET	22x34 REV.
NTS	MAD	05/17/22	— of —	B
JOB NO.	CHECKED BY	DATE	DRAWING NUMBER	
4146–22	JDG	05/31/22	4146–P2	



										DRAFTSMAN: A. B.-M.D.C.										CLIENT: BOARD OF WATER AND SEWER COMMISSIONERS										PROJECT NO: 05-0002-9									
										CHECKED BY: R. B.M.										OF THE										DRAWING NO.:									
										APPROVED BY: J. B. D.										CITY OF MOBILE																			
										DATE: OCT., 1981										WATER LINE RELOCATION										SHEET: 2 OF 5									
NO. DESCRIPTION DATE ENGR. NO.										DATE ENGR.										AT																			
REVISIONS										DATE ISSUED FOR										ALABAMA STATE DOCKS																			