

Tampa Construction Specifications
Contract 25-C-00011; Howard F Curren Advanced Wastewater Treatment Plant TECO Building
Modification

CITY OF TAMPA, FLORIDA

PLANS FOR

Contract 25-C-00011 Howard F. Curren Advanced Wastewater Treatment Plant TECO Building
Modification

These Plans for the referenced projects come from uncontrolled sources and do not conform to
WCAG 2.1 at level AA. Individuals with disabilities seeking assistance with the individual project plans
or specifications should e-mail Contractadministration@tampagov.net.

City of Tampa

Contract Administration Department

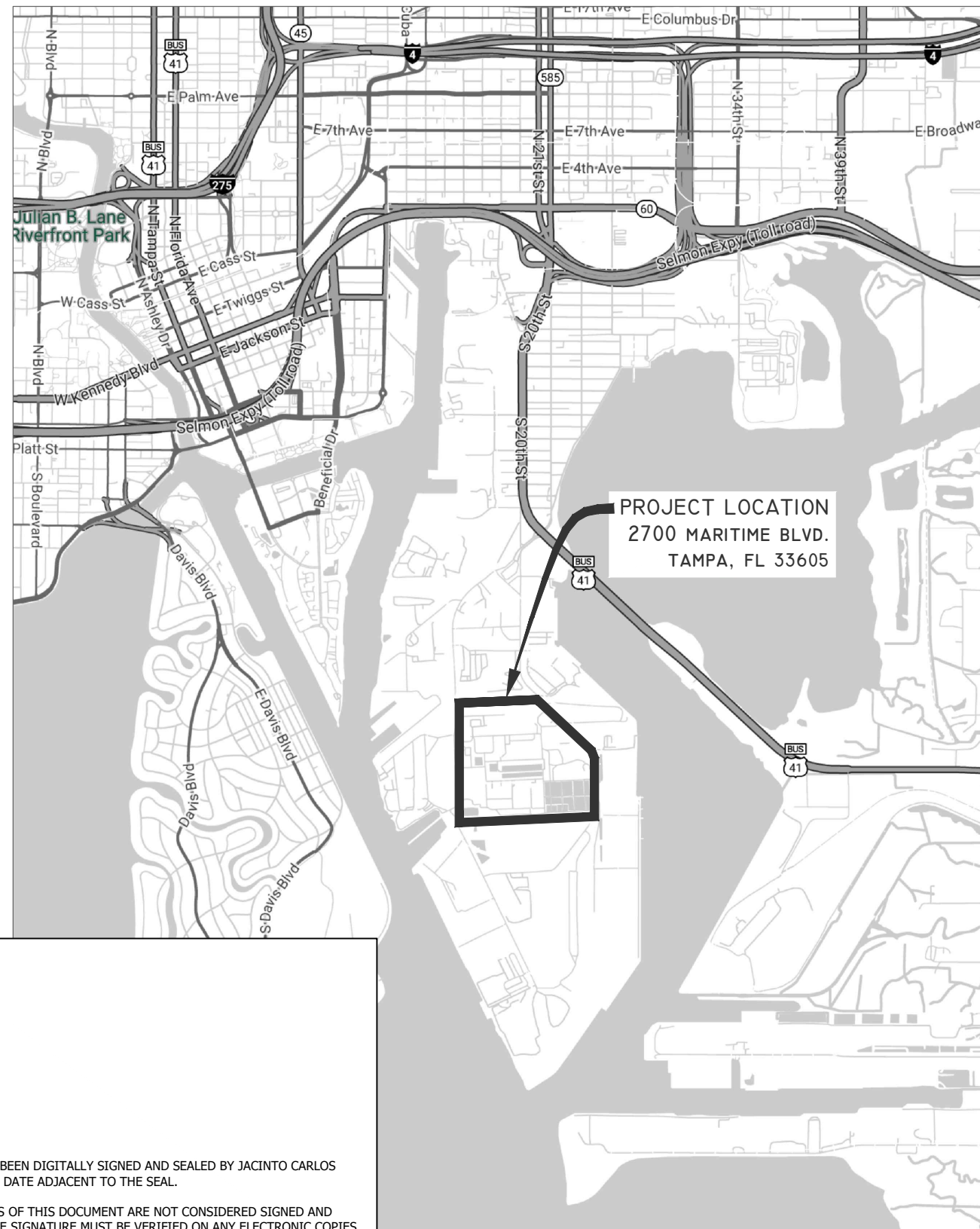
Tampa Municipal Office Building

306 E Jackson Street #280A4N Fourth Floor

Tampa, Florida 33602

SEPTEMBER 2026

LOCATION MAP - HOWARD F CURREN ADVANCED WASTEWATER TREATMENT PLANT



PROJECT LOCATION
2700 MARITIME BLVD.
TAMPA, FL 33605

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY JACINTO CARLOS FERRAS ON THE DATE ADJACENT TO THE SEAL.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

THE ABOVE-NAMED PROFESSIONAL SHALL BE RESPONSIBLE FOR SHEETS 1 THROUGH 9 OF THIS PLAN SET.

CITY of TAMPA



WASTEWATER DEPARTMENT

PLANS FOR HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT TECO BUILDING MODIFICATIONS

CONTRACT No.
25-C-00011

JACINTO CARLOS FERRAS, P.E.
#49454 DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT

#	DATE	REVISIONS
1		
2		
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DES: KG
DRN: GH
CKD:
DATE: Jun-25

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN
ADVANCED WASTEWATER TREATMENT PLANT
TECO BUILDING MODIFICATIONS
COVER SHEET

SHEET
1

GENERAL NOTES

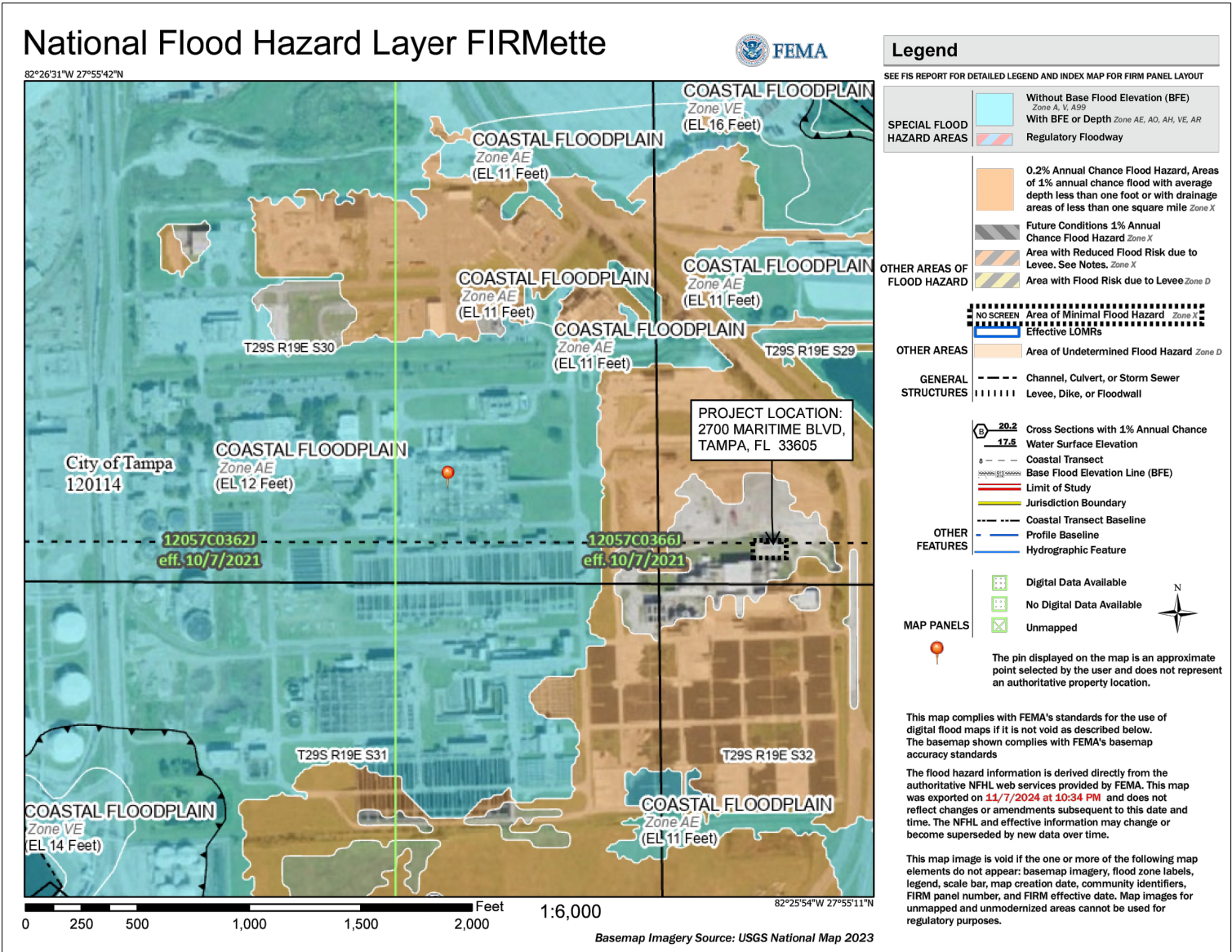
- A-1. CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES INCLUDING DESIGNATED LAYDOWN AREA FOR MATERIALS AND PARKING WITH CITY OF TAMPA PERSONNEL AND CONTRACT ADMINISTRATION DEPARTMENT PERSONNEL PRIOR TO COMMENCING ACTIVITIES.
- A-2. EXISTING DIMENSIONS AND ELEVATIONS ARE BASED ON THE BEST INFORMATION AVAILABLE. TRUE DIMENSIONS AND ELEVATIONS SHALL BE DETERMINED IN THE FIELD PRIOR TO LAYOUT AND SHOP DRAWING SUBMITTALS.
- A-3. SHOP DRAWINGS SHALL BE SUBMITTED TO AND APPROVED BY THE CITY FOR ALL PROPOSED ITEMS. ALL SUBMITTALS AND SHOP DRAWINGS SHALL BE HIGH RESOLUTION COLOR, BOOKMARKED, AND UNSECURED ELECTRONIC PORTABLE DOCUMENT FORMAT (PDF).
- A-4. ALL WORK SHALL BE PERFORMED IN ACCORDANCE TO THE FLORIDA BUILDING CODE (FBC) – EXISTING BUILDING, 8th EDITION 2023 AND CHAPTER 5 OF THE CITY OF TAMPA CODE , AND THE 2020 EDITION OF THE NATIONAL ELECTRICAL CODE. CONTRACTOR SHALL ENSURE THAT ALL ELECTRICAL WORK PERFORMED SHALL ADHERE TO THE SAME ACCORDANCE AND ALL APPLICABLE LOCAL ORDINANCES.
- A-5. CONTRACTOR SHALL REPLACE EXISTING ROOF, (1) DOUBLE DOOR, (3) SINGLE DOORS AND (7) DOWNSPOUTS. REFER TO STRUCTURAL DRAWINGS FOR DETAILS.
- A-6. CONTRACTOR SHALL INSTALL (2) SUPPLY FANS. SUPPLY FANS SHALL BE WALL MOUNTED PROPELLER WITH ALUMINUM WALL COLLAR, ALUMINUM MOTOR-SIDE WIRE GUARD AND ALUMINUM WEATHER HOOD. MANUFACTURED BY LOREN COOK EWD SUPPLY MODEL 24EWS622D08. FLOW 1948 CFM, 860RPM, 0.256 HP.
- A-7. CONTRACTOR SHALL REPLACE EXISTING EMERGENCY EYE WASH WITH A FLOOR MOUNT STAINLESS STEEL SINK. MANUFACTURED BY SANI-LAV (COLUMBIA PRODUCTS) – MODEL 5240.
- A-8 ALL HARDWARE, UNLESS OTHERWISE NOTED, SHALL BEE TYPE 316L STAINLESS STEEL.
- A-9 NORMAL WORKING HPURS SHALL BE WEEKDAYS FROM 7:30AM TO 3:30PM UNLESS OTHERWISE APPROVED BY THE ENGINEER/INSPECTOR.

DEMOLITION NOTES

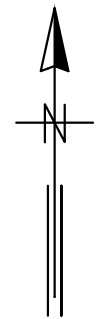
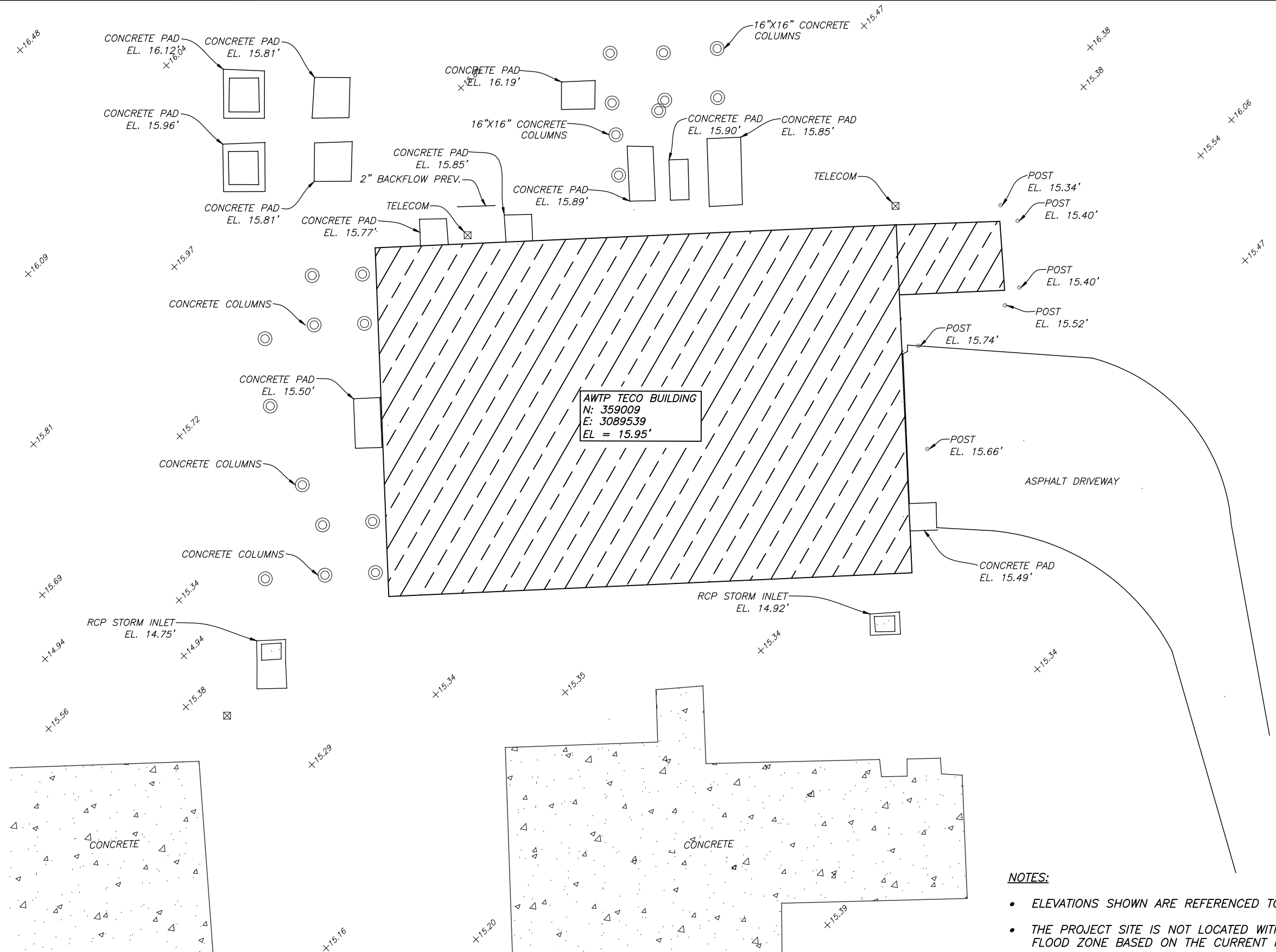
- B-1. THE CONSTRUCTION SITE SHALL BE MAINTAINED IN AS NEAT AND ORDERLY CONDITION AS POSSIBLE DURING CONSTRUCTION OPERATIONS.
- B-2. CONTRACTOR SHALL RESTORE ALL STRUCTURES, SODDING AND PAVEMENT THAT MAY HAVE BEEN DAMAGED DURING CONSTRUCTION TO ITS ORIGINAL CONDITION OR BETTER.
- B-3 NON-SALVAGEABLE MATERIALS ARE TO BE REMOVED FROM THE SITE AND PROPERNY DISPOSED AT THE CONTRACTOR EXPENSE.
- B-4 CONTRACTOR IS RESPONSIBLE FOR MEETING ALL FEDERAL, STATE AND LOCAL GOVERMENT REGULATIONS IN REGARDS TO WORKING CONDITIONS AND MATERIALS HANDLING AND DISPOSAL.

PROJECT ELEVATION NOTES

- C-1. THIS PROJECT IS NOT LOCATED IN A FLOOD ZONE BASED ON THE FEMA FLOOD MAP (PANEL 12057C0366J).



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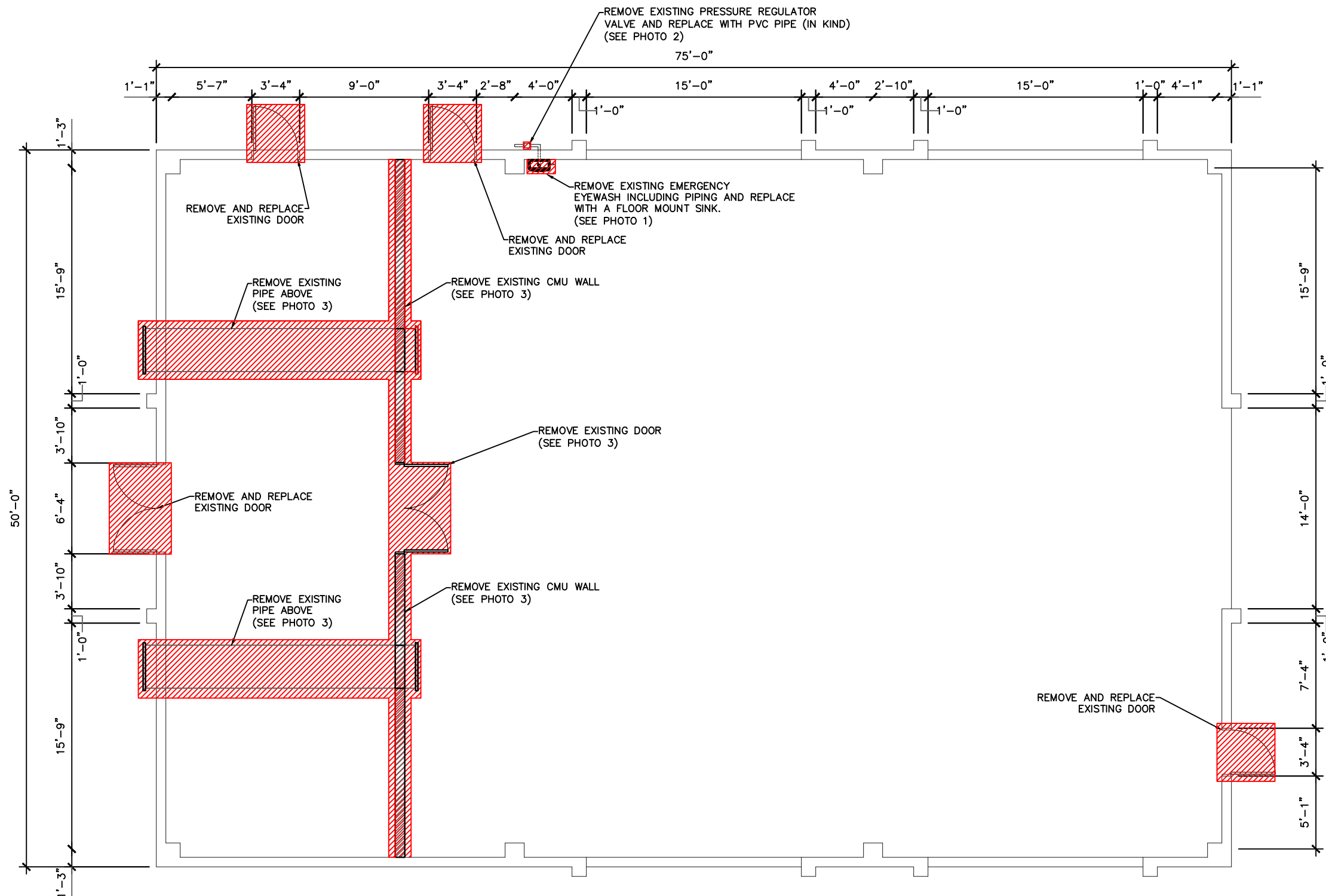


AWTP TECO BUILDING
N: 359009
E: 3089539
EL = 15.95'

SITE PLAN
SCALE: 1" = 15'

- NOTES:**
- ELEVATIONS SHOWN ARE REFERENCED TO NAVD 88.
 - THE PROJECT SITE IS NOT LOCATED WITHIN A FEMA-DESIGNATED FLOOD ZONE BASED ON THE CURRENT FEMA FLOOD MAPS.
 - THE PROJECT DOES NOT INCLUDE ANY NEW PROPOSED BUILDING AREA.

JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	#	DATE	REVISIONS	DES: KG	CITY of TAMPA WASTEWATER DEPARTMENT	HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT TECO BUILDING MODIFICATIONS SITE PLAN	SHEET 4
	1			DRN: GH			
	2			CKD:			
	3			DATE: Jun-25			



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

 HATCHED AREAS ON THIS SHEET INDICATE PIPING, EQUIPMENT AND STRUCTURES TO BE REMOVED & REPLACED

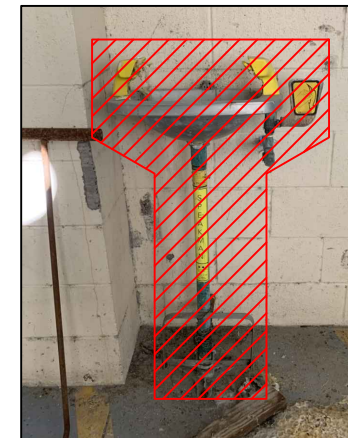


PHOTO 1
EMERGENCY EYE WASH



PHOTO 2
PRESSURE REGULATOR VALVE

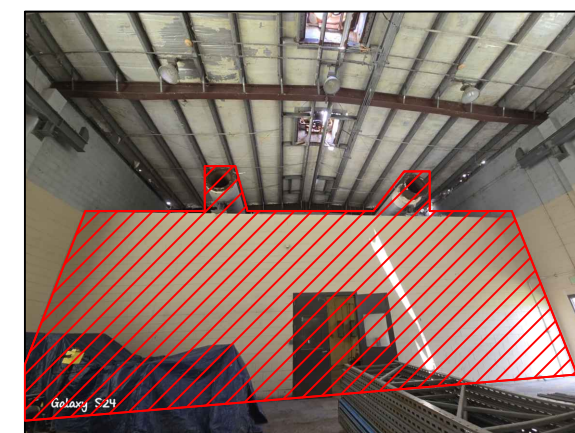
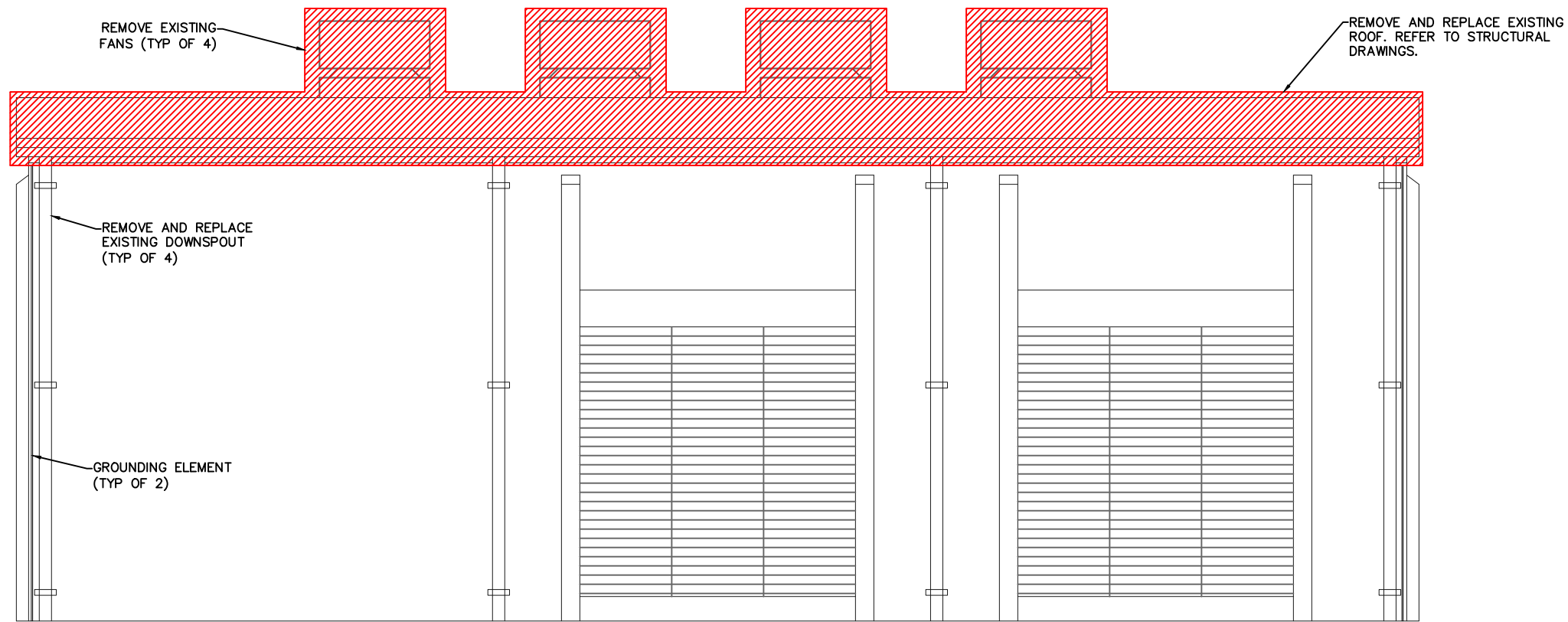


PHOTO 3
INTERIOR WALL AND PIPING



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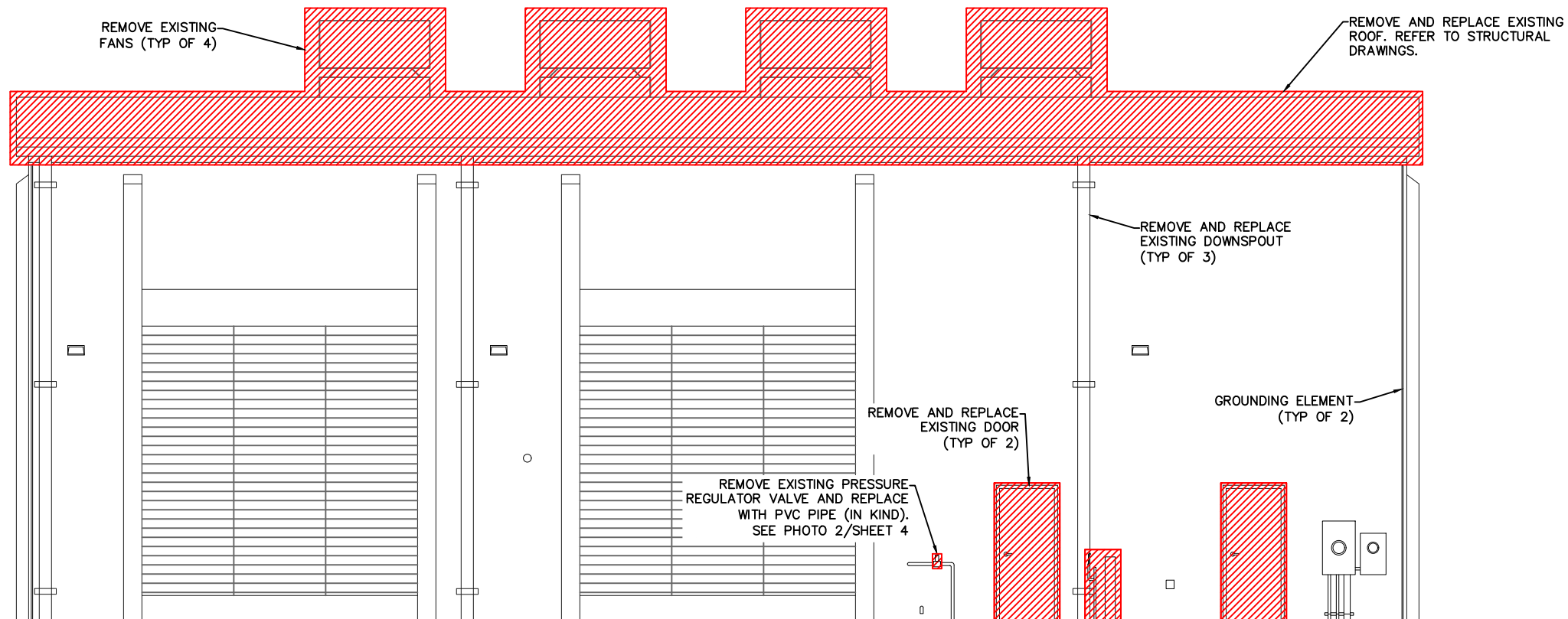
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DRN: GH
CKD:
DATE: Jun-25



DEMOLITION SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



PHOTO 4
SOUTH ELEVATION



DEMOLITION NORTH ELEVATION
SCALE: 1/8" = 1'-0"

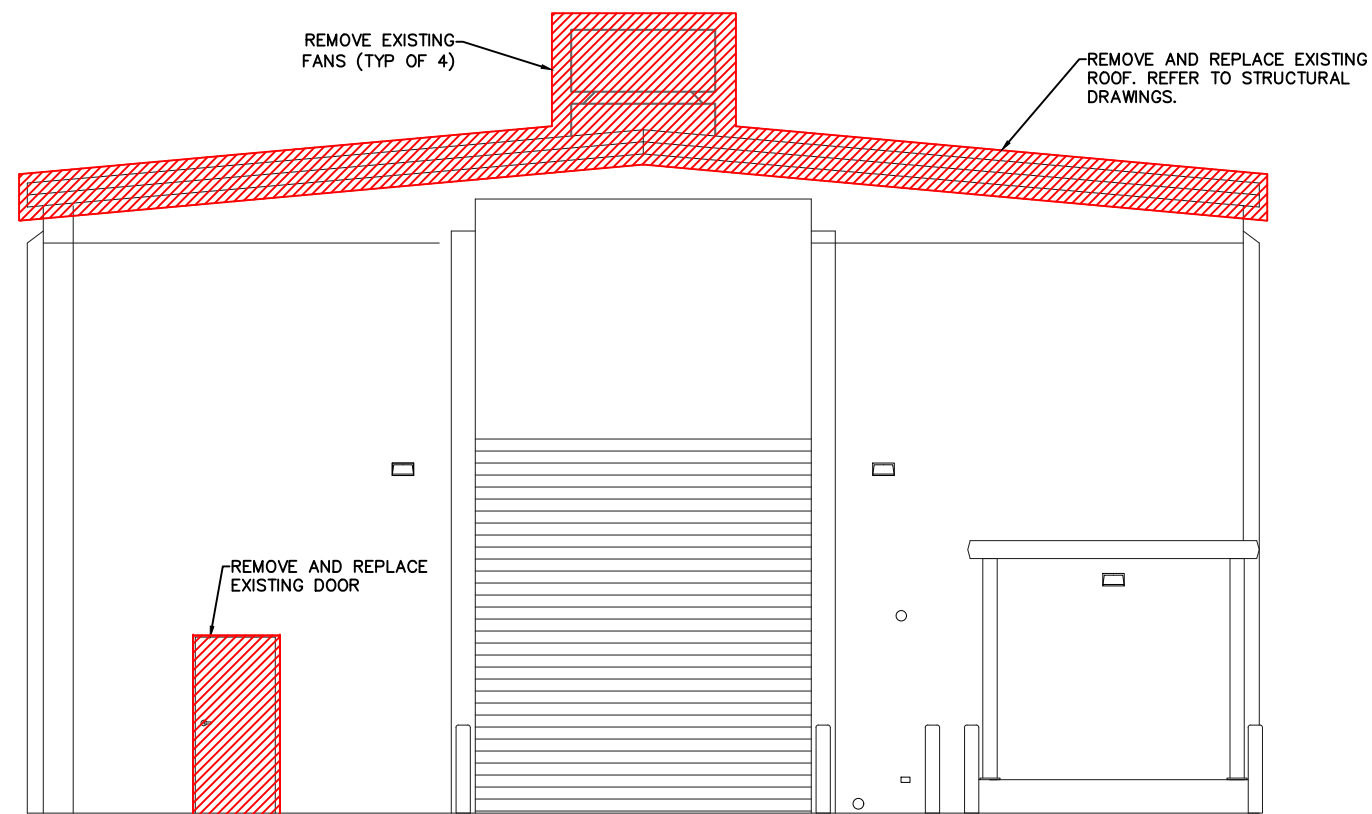


PHOTO 5
NORTH ELEVATION

 HATCHED AREAS ON THIS SHEET INDICATE PIPING, EQUIPMENT AND STRUCTURES TO BE REMOVED & REPLACED

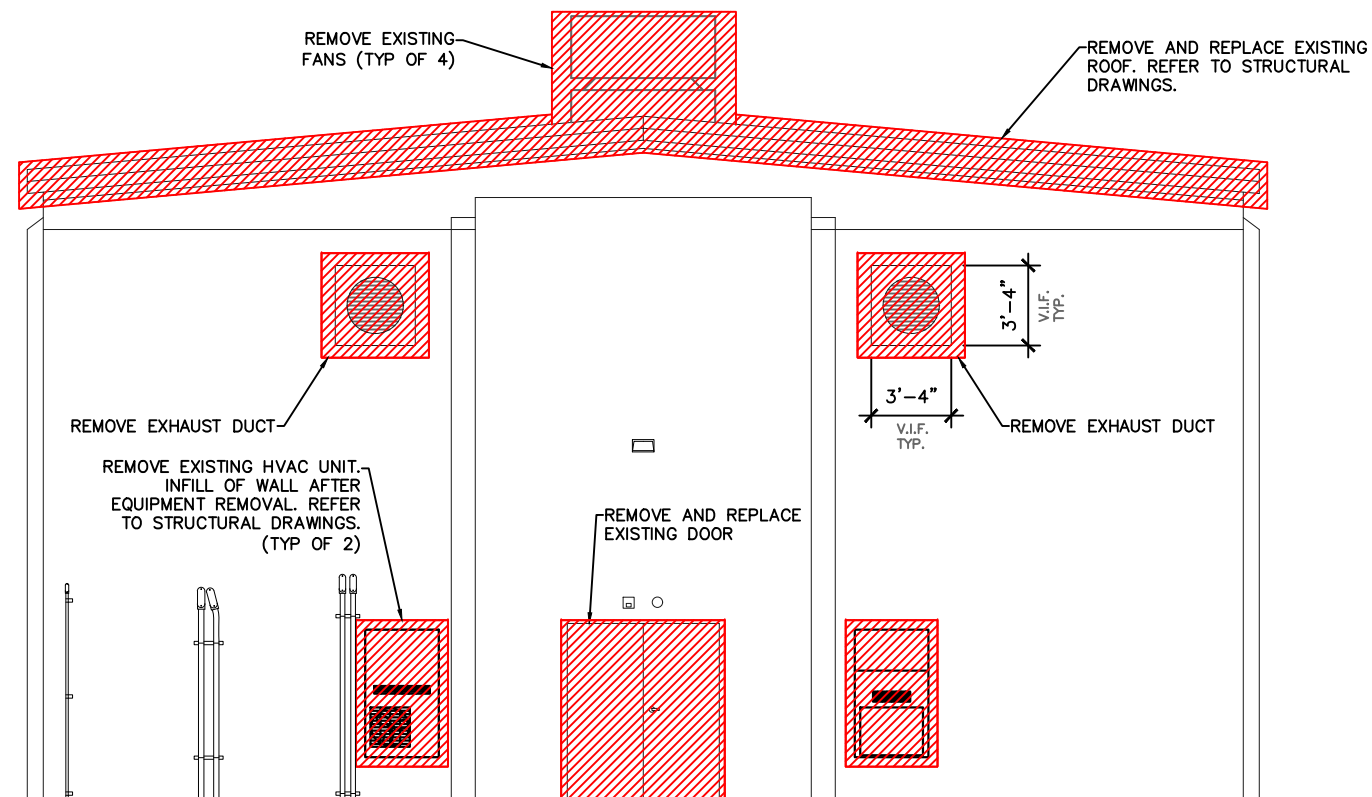
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DES: KG
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CKD:
DATE: Jun-25



DEMOLITION EAST ELEVATION

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



DEMOLITION WEST ELEVATION

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



PHOTO 6
EAST ELEVATION

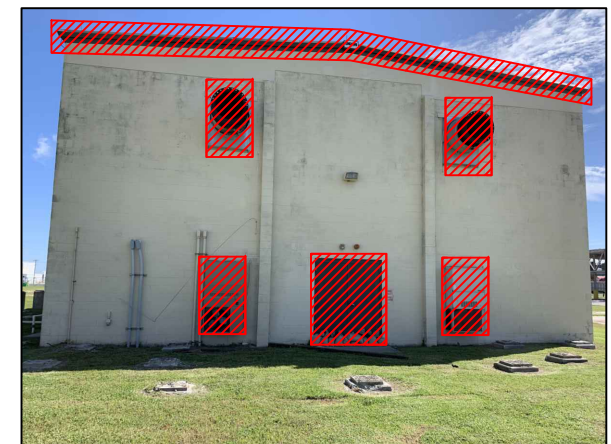


PHOTO 7
WEST ELEVATION

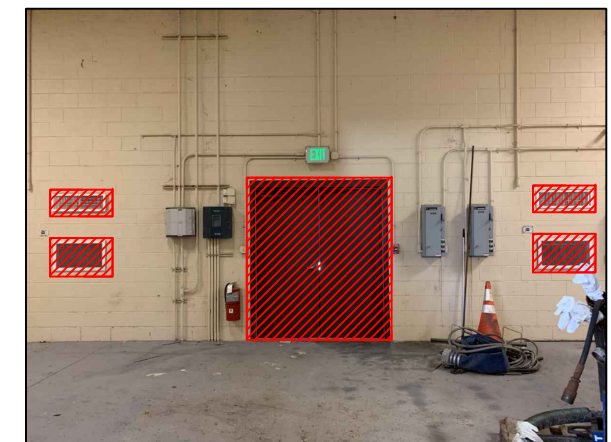
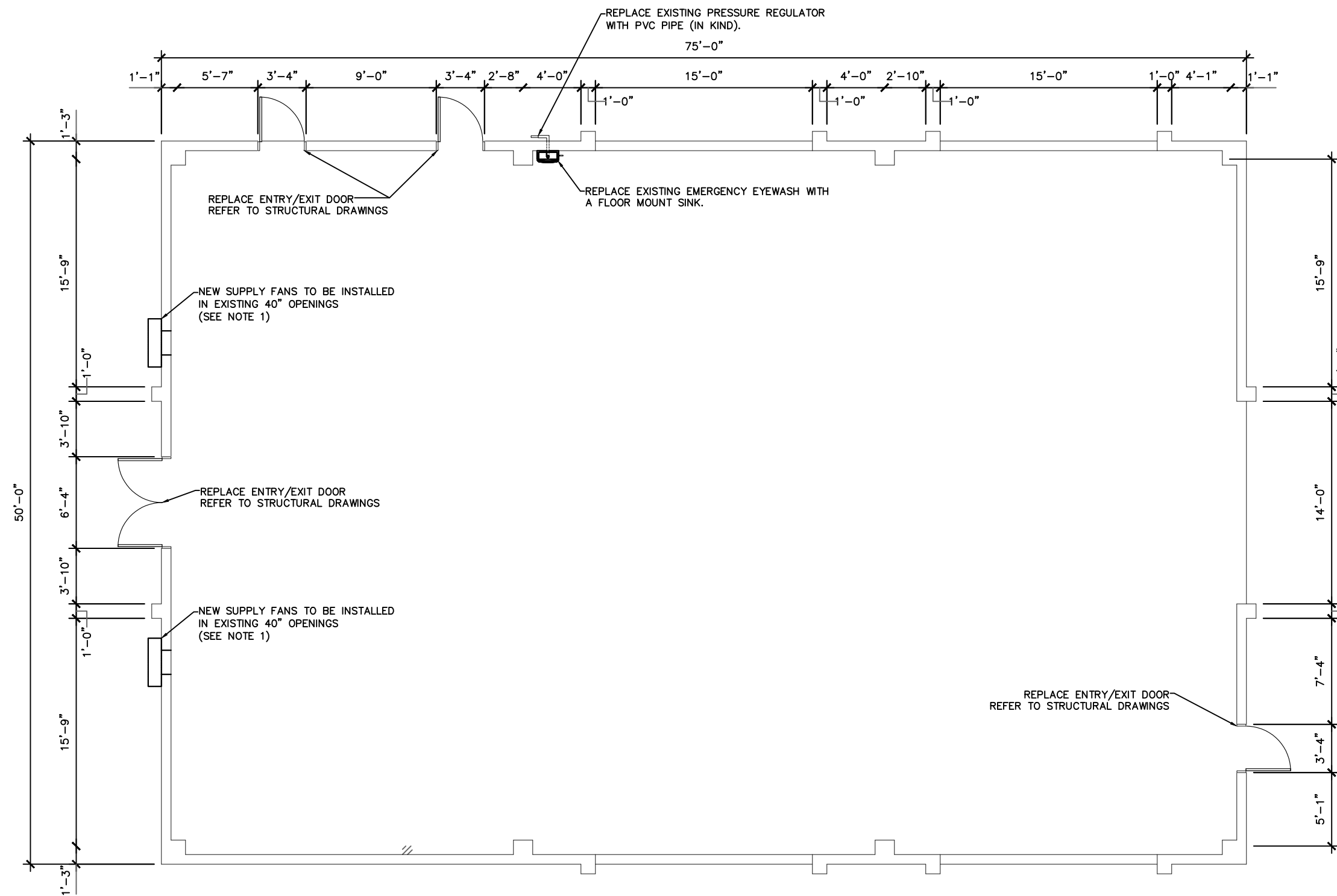


PHOTO 8
WEST ELEVATION OF INTERIOR WALL

 HATCHED AREAS ON THIS SHEET INDICATE PIPING, EQUIPMENT AND STRUCTURES TO BE REMOVED & REPLACED

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DES: KG
DRN: GH
CKD:
DATE: Jun-25



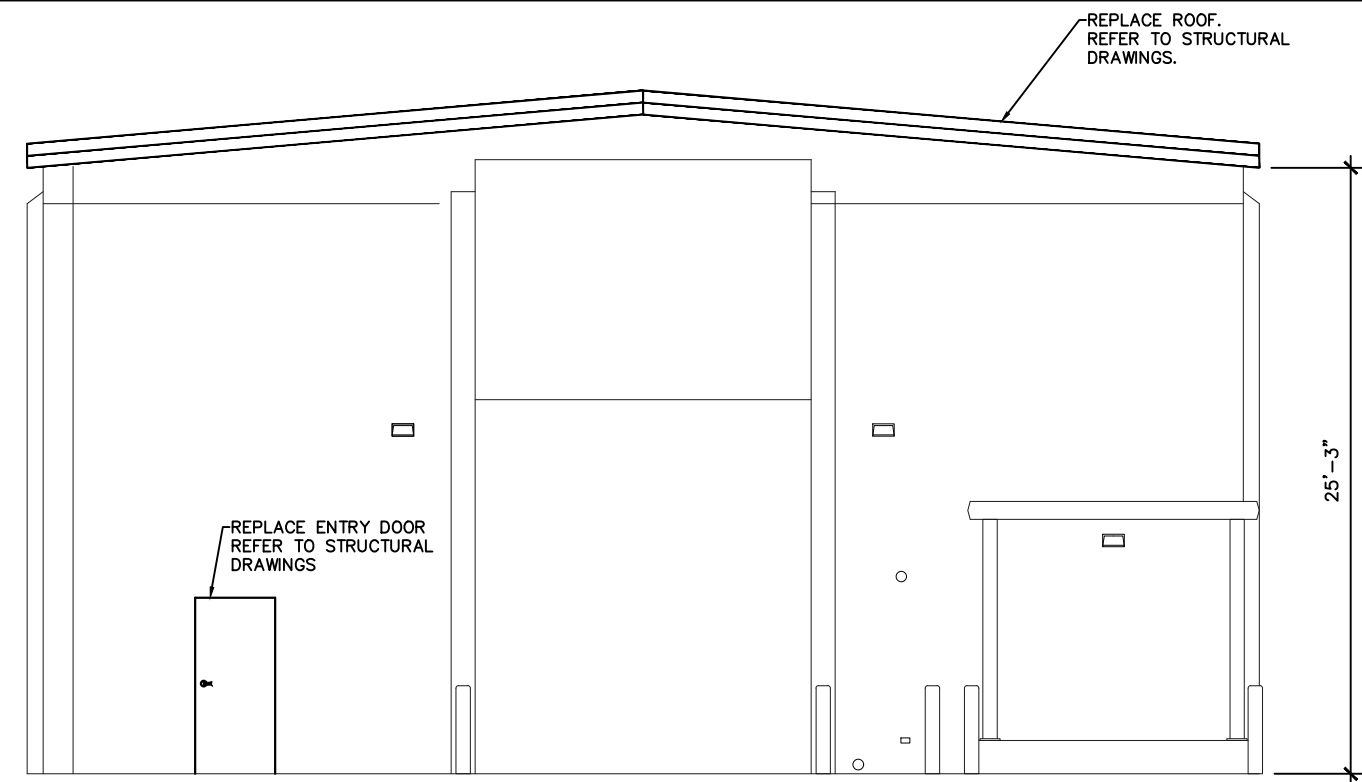
FLOOR PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

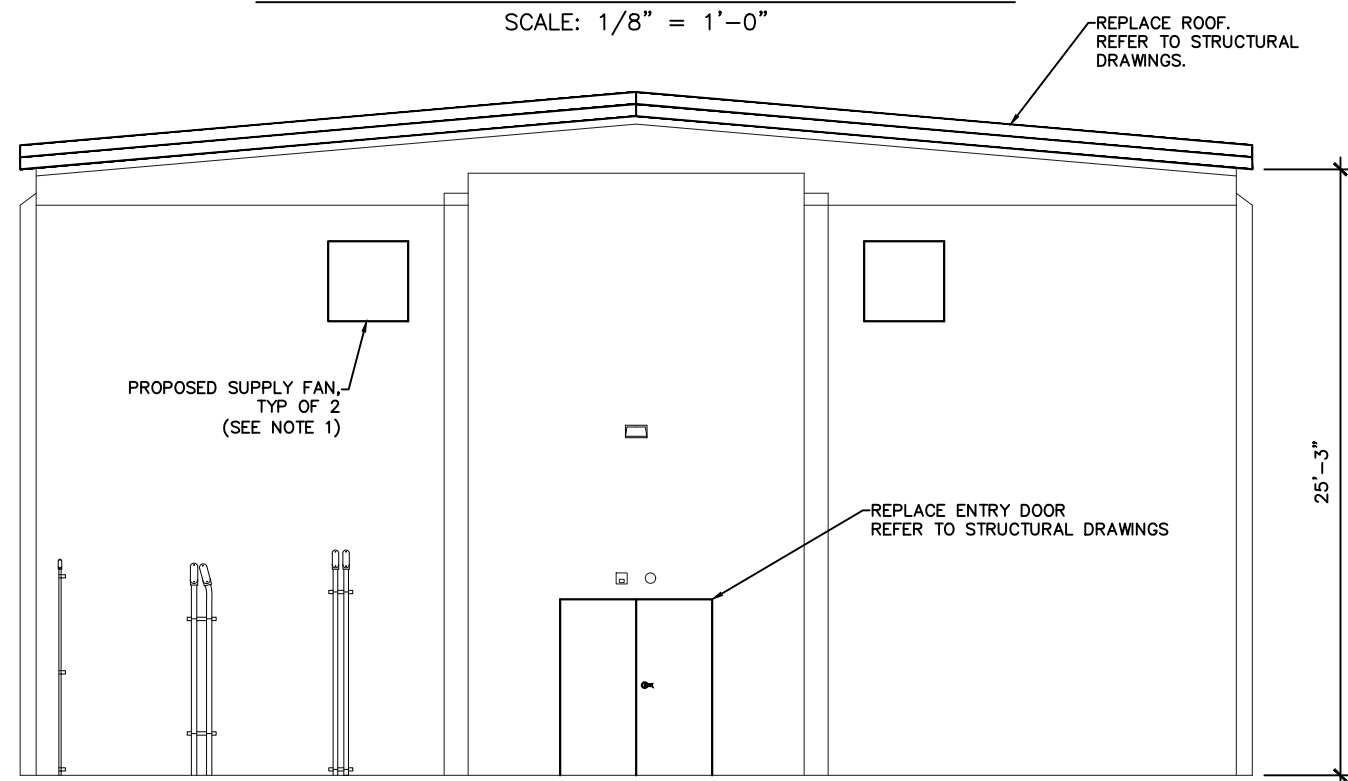
1. NEW SUPPLY FANS REQUIRE A 36 7/16" DIAMETER WALL OPENING AND EXISTING WALL OPENING IS 40" DIAMETER. CONTRACTOR SHALL PROVIDE FAN CONNECTION SUBMITTAL THAT SHOWS METHOD TO CONNECT FAN TO EXISTING OPENING AND MAKE SURE CONNECTION IS PROPERLY SEALED.

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DES: KG
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DATE: Jun-25



WEST ELEVATION OF INTERIOR BLOCK WALL
SCALE: 1/8" = 1'-0"

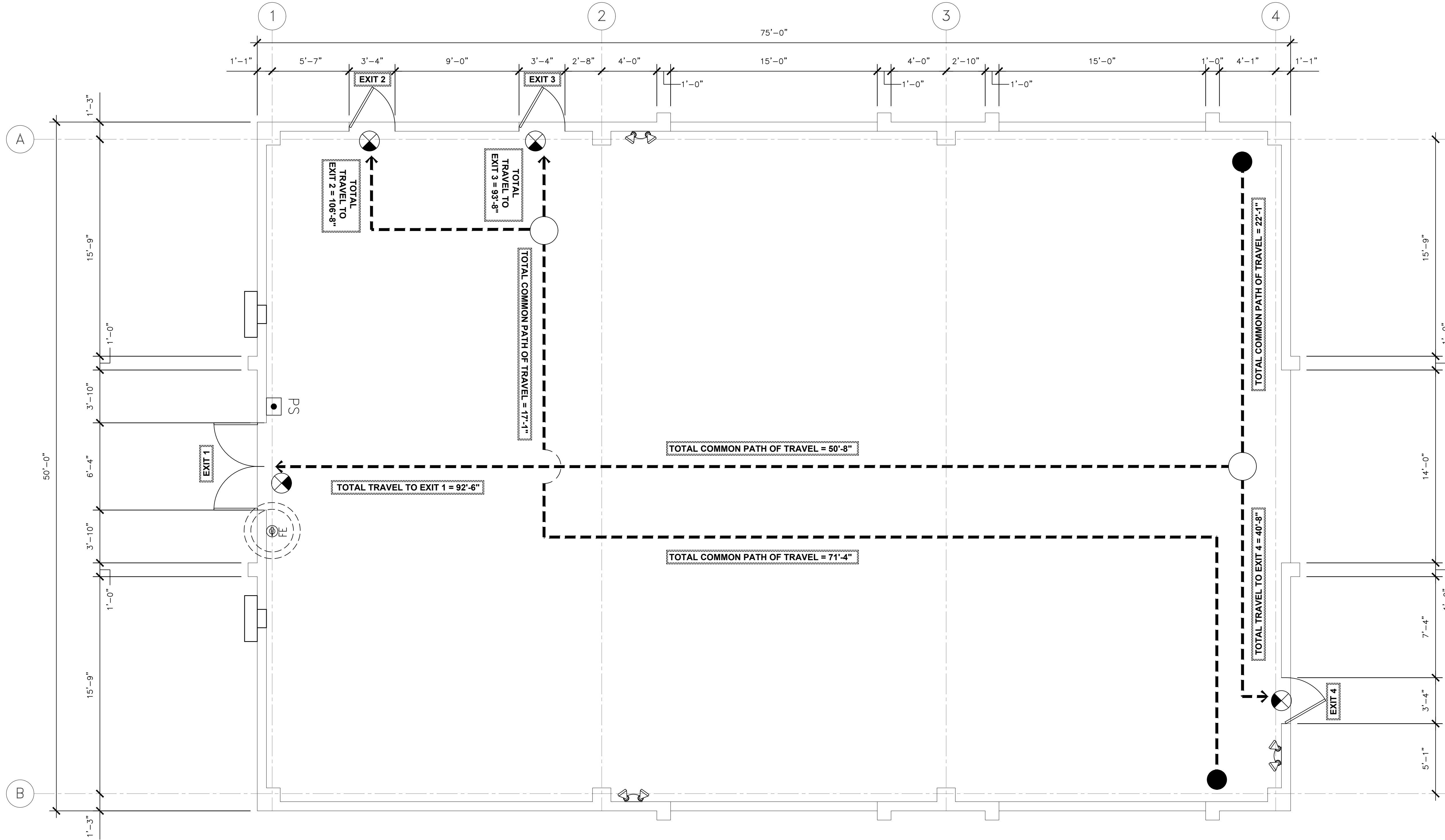


WEST ELEVATION OF EXTERIOR
SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. NEW SUPPLY FANS REQUIRE A 36 7/16" DIAMETER WALL OPENING AND EXISTING WALL OPENING IS 40" DIAMETER. CONTRACTOR SHALL PROVIDE FAN CONNECTION SUBMITTAL THAT SHOWS METHOD TO CONNECT FAN TO EXISTING OPENING AND MAKE SURE CONNECTION IS PROPERLY SEALED.

JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	#	DATE	REVISIONS	DES: KG	CITY of TAMPA WASTEWATER DEPARTMENT	HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT TECO BUILDING MODIFICATIONS PROPOSED WORK – ELEVATIONS	SHEET 9
	1			DRN: GH			
	2			CKD:			
	3			DATE: Jun-25			



USE & OCCUPANCY CLASSIFICATION:

FLORIDA BUILDING CODE CLASSIFICATION: GROUP S-2 LOW HAZARD STORARGE
NFPA 101 CLASSIFICATION (STORAGE)
SUBCLASSIFICATION: LOW HAZARD

FIRE EXTINGUISHER CALCULATION:

STORAGE AREA
3757 SQFT/3000 SQ FT = 2

PROJECT INFORMATION:

1. TOTAL STORAGE AREA 3757 S.F. @ 500 S.F. = 8 PER PERSON
2. TYPE OF CONSTRUCTION TYPE III - UNPROTECTED

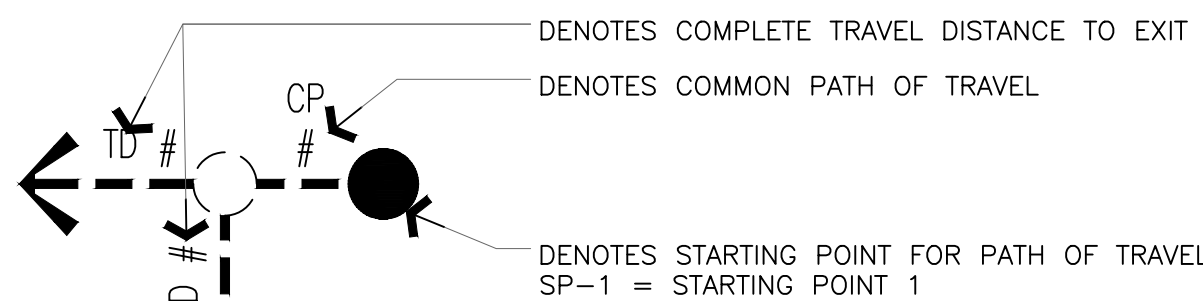
PLAN NOTES

1. PROVIDE (2) PORTABLE FIRE EXTINGUISHERS MINIMUM. EXTINGUISHERS SHALL HAVE A MINIMUM RATING OF 2-A, 40-B:C. MAXIMUM TRAVEL DISTANCE TO AN EXTINGUISHER SHALL NOT EXCEED 75 FT. INSTALLATION SHALL COMPLY WITH NFPA 10 AND THE FLORIDA FIRE PREVENTION CODE.

BUILDING CODE SECTION

1. NFPA 1
2. NFPA 10
3. NFPA 101

PLAN LEGEND



1 LIFE SAFETY PLAN
SCALE: 1/4" = 1'-0"

TO THE BEST OF THE ENGINEER'S KNOWLEDGE, THE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES AND THE APPLICABLE FIRE SAFETY STANDARDS AS DETERMINED BY THE LOCAL AUTHORITY IN ACCORDANCE WITH THIS SECTION AND CHAPTER 633, FLORIDA STATUTES.

LIFE SAFETY PLAN

DATE: 06-03-25
JOB NO: 23-302
DRAWN BY: RC/RM
DESIGN BY: RR

SHEET NO.
LF1.0

billerreinhardt
ENGINEERING GROUP INC.
3434 cobwell avenue suite 100, Tampa, florida 33614
telephone : 813.908.7203 fax : 813.931.5200
email : info@billerreinhardt.com
State of Florida Certificate of Authorization No. 9149



TECO BUILDING EVALUATION
2700 Maritime Blvd., Tampa, FL 33605
HOWARD F. CURREN AWTP
2545 GUY N. VERGER BLVD.
TAMPA, FL 33605

REVISIONS	
NO.	DATE
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GENERAL STRUCTURAL NOTES

SCOPE OF WORK

1. WORK DETAILED ON THE DRAWINGS AND APPLICABLE ITEMS DESCRIBED IN THE GENERAL STRUCTURAL NOTES.
2. REMOVE AND REPLACE THE METAL PANEL ROOF DECKING.
- A. BILLERREINHART SUGGESTS EXPLORING DEAN STEEL BUILDING, INC., FOR ROOF PANELS WITH FLORIDA PRODUCT APPROVAL DOCUMENTS AS WELL AS OTHER ROOF PANEL ACCESSORIES THAT MAY CLOSELY MATCH THE CONFIGURATION OF EXISTING ELEMENTS THAT REQUIRE REPLACEMENT.
- B. CAUTION AND EXTRA CARE WHEN REMOVING EXISTING ROOF PANELS TO AVOID DAMAGING AND/OR DISLODGING PURLINS.
- C. PROTOCOL FOR FASTENING NEW ROOF DECK TO EXISTING Z-PURLINS SHALL CONSIDER AND ADDRESS THE EXISTING FASTENED HOLES FROM THE PREVIOUS ROOF DECK, I.E., AVOID EXISTING HOLES, USE LARGER DIAMETER SCREWS.
- D. ROOF RESTORATION SHALL INCLUDE THE CLEANING AND COATING OF THE EXISTING ROOF FRAMING MEMBERS WHERE NEEDED TO REMEDIATE SURFICIAL RUSTING ON FRAMING MEMBER AND HELP PREVENT FUTURE OCCURRENCES OF CORROSION.
- E. ABRADED, DAMAGED, OR OTHERWISE COMPROMISED GALVANIZING ON STEEL ELEMENTS AND WELDS SHALL BE REPAIRED/RECOATED WITH COLD GALVANIZING COMPOUND APPLIED PER MANUFACTURER'S SPECIFICATIONS ON PROPERLY PREPARED SURFACES. STEEL FRAMING, WELD TOUCH-UP, ZINC GALVANIZING REPAIR; ZRC COLD GALVANIZING COMPOUND BY Z.R.C. WORLDWIDE, ZRC 350 GALVANIZING COMPOUND BY Z.R.C. WORLDWIDE.
- F. ROOF RESTORATION PROJECT TO INCLUDE THE COVERING OF THE BLOWER OPENINGS WITHIN THE EXISTING ROOF DECKING, COVERING THESE OPENINGS WILL REQUIRE ADDITIONAL FRAMING MEMBERS FOR FASTENING NEW ROOF DECKING.
3. COMPLETE CONCRETE RESTORATION AT THE AREAS OF SPORADIC SPALLING OF CONCRETE AT THE EXTERIOR WALL SURFACES. REPAIR PROTOCOLS SHALL BE IN ACCORDANCE WITH THE INTERNATIONAL CONCRETE REPAIR INSTITUTE (ICRI) RECOMMENDATIONS.
- A. IF REQUIRED, REPAIR DOCUMENTS SHALL INCLUDE REPAIR PROTOCOLS FOR THE REMOVAL AND REPLACEMENT OF DAMAGED CMU BLOCKS ON A PER BLOCK BASIS.
4. REMOVE DROP CEILING SYSTEM AND ALL ASSOCIATED ELEMENTS FROM THE AREA WEST OF THE EXISTING INTERIOR CONCRETE MASONRY UNIT PARTITION WALL.
5. REMOVE/DEMOLISH INTERIOR CONCRETE MASONRY UNIT PARTITION WALL, REMOVE THE TWO (2) SECTIONS OF OVERHEAD FLANGED PIPING AND PIPE SUPPORTS, AND SEAL/ENCLOSE EXTERIOR WALL PENETRATIONS UNLESS OTHERWISE INDICATED.
6. COMPLETE AN EXTERIOR PAINTING PROJECT FOR THE BUILDING (INCLUDING NEW METAL ENTRY/EXIT DOORS), THE PAINT PROJECT SHALL INCLUDE PROPER SURFACE PREPARATION, INCLUDING THE REMOVAL OF MILDWE AND RUST STAINS ON THE WALL SURFACE. PAINT SPECIFICATIONS SHALL BE OBTAINED FROM A QUALIFIED PAINT MANUFACTURER, CAPABLE OF PROVIDING SITE VISITS AS NEEDED AND ACCEPTABLE WARRANTIES ON PAINT PRODUCTS.
7. COMPLETE AN INTERIOR PAINTING PROJECT FOR THE BUILDING (INCLUDING NEW METAL ENTRY/EXIT DOORS), THE PAINT PROJECT SHALL INCLUDE PROPER SURFACE PREPARATION, PAINT SPECIFICATIONS SHALL BE OBTAINED FROM A QUALIFIED PAINT MANUFACTURER, CAPABLE OF PROVIDING SITE VISITS AS NEEDED AND ACCEPTABLE WARRANTIES ON PAINT PRODUCTS.
8. REMOVE AND REPLACE ENTRY/EXIT DOORS
- A. THREE (3) SINGLE DOORS 3'-4" x 7'-4"
- B. ONE (1) DOUBLE DOOR 6'-4" x 7'-4"
9. REPAIRS TO THE EXISTING ROLL-UP DOOR INCLUDE BUT ARE NOT LIMITED TO:
- A. INSTALL NEW DOOR BOTTOM SEALS.
- B. TOUCH-UP GALVANIZED JAMB GUIDES.
- C. REMOVE AND REPLACE CORRODED FASTENERS/ANCHORS.
10. REPAIRS TO THE EXISTING WALL LOUVER SYSTEMS ON NORTH AND SOUTH ELEVATIONS INCLUDE BUT ARE NOT LIMITED TO:
- A. REMOVE AND REPLACE CORRODED FASTENERS/ANCHORS.
- B. ABRADED, DAMAGED, OR OTHERWISE COMPROMISED GALVANIZING ON STEEL ELEMENTS AND/OR WELDS SHALL BE REPAIRED/RECOATED WITH A COLD GALVANIZING COMPOUND APPLIED PER MANUFACTURER'S SPECIFICATIONS ON PROPERLY PREPARED SURFACES. STEEL FRAMING, WELD TOUCH-UP, ZINC GALVANIZING REPAIR; ZRC COLD GALVANIZING COMPOUND BY Z.R.C. WORLDWIDE, ZRC 350 GALVANIZING COMPOUND BY Z.R.C. WORLDWIDE.
11. COORDINATE WITH THE CITY OF TAMPA FOR THE ELECTRICAL AND HVAC SCOPE OF WORK.

DRAWINGS AND SPECIFICATIONS

1. DO NOT SCALE DRAWINGS FOR DIMENSIONS NOT GIVEN.
2. ADVISE ENGINEER OF DIMENSIONAL DISCREPANCIES.
3. VERIFY ALL EXISTING FIELD CONDITIONS AND DIMENSIONS PRIOR TO COMMENCING CONSTRUCTION.
4. THE CONTRACTOR SHALL PERFORM NO PORTION OF THE WORK AT ANY TIME WITHOUT CONTRACT DOCUMENTS OR, WHERE REQUIRED, APPROVED SHOP DRAWINGS, PRODUCT DATA OR SAMPLES FOR SUCH PORTION OF THE WORK.

CONSTRUCTION SAFETY

1. THESE DRAWINGS DO NOT INCLUDE PROVISIONS TO SATISFY SAFETY REQUIREMENTS. CONTRACTOR IS SOLELY RESPONSIBLE FOR ENSURING SAFETY DURING CONSTRUCTION AND FOR CONFORMANCE TO ALL APPLICABLE OSHA STANDARDS.. JOBSITE VISITS BY ENGINEER SHALL NOT CONSTITUTE APPROVAL, AWARENESS OR LIABILITY FOR ANY HAZARDOUS CONDITIONS.

SHORING AND SUPPORT

1. WHEN REMOVAL OF STRUCTURAL ELEMENTS FOR MODIFICATIONS MAY CAUSE TEMPORARY WEAKNESS, EXCESSIVE DEFLECTIONS OR STRUCTURAL INSTABILITY, SHORING OR OTHER SUITABLE SUPPORTS SHALL BE PROVIDED UNTIL COMPLETION AND ADEQUATE CURING OF MODIFICATIONS.
2. THE CONTRACTOR SHALL SUBMIT CUT SHEETS WITH CERTIFIED CAPACITIES FOR SHORING TO BE USED. SHORING PLANS SHALL BE PREPARED, SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF FLORIDA.

VALUE ENGINEERING

1. ANY CHANGES TO THE STRUCTURE SHALL HAVE BEEN REVIEWED AND APPROVED IN WRITING BY THE ENGINEER PRIOR TO COMMENCING WORK ON ITEMS AFFECTED.

FIELD MODIFICATIONS

1. ANY CHANGES TO THE STRUCTURE SHALL HAVE BEEN REVIEWED AND APPROVED IN WRITING BY THE ENGINEER PRIOR TO COMMENCING WORK ON ITEMS AFFECTED.
2. ANY CHANGES MADE WITHOUT PRIOR APPROVAL ARE SUBJECT TO REVIEW BY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE SKETCHES, PHOTOGRAPHS AND WRITTEN DESCRIPTION OF EACH DEVIATION FROM THE PLANS FOR THE ENGINEER'S REVIEW.

BUILDING CODES AND SPECIFICATIONS

1. FLORIDA BUILDING CODE 8TH EDITION (2023).
2. MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES ASCE 7-22.
3. BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES ACI 530-13 / ASCE 5-13 / TMS 402/602-16.
4. BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE ACI 318-19.
5. AWS STRUCTURAL WELDING CODE D1.1-2020.
6. ALUMINUM DESIGN MANUAL, FEBRUARY 2020.
7. COLD-FORMED STEEL DESIGN MANUAL, 2017 EDITION.
8. FLORIDA BUILDING CODE EXISTING BUILDING, ALTERATION LEVEL: REPAIR

DESIGN LOADS

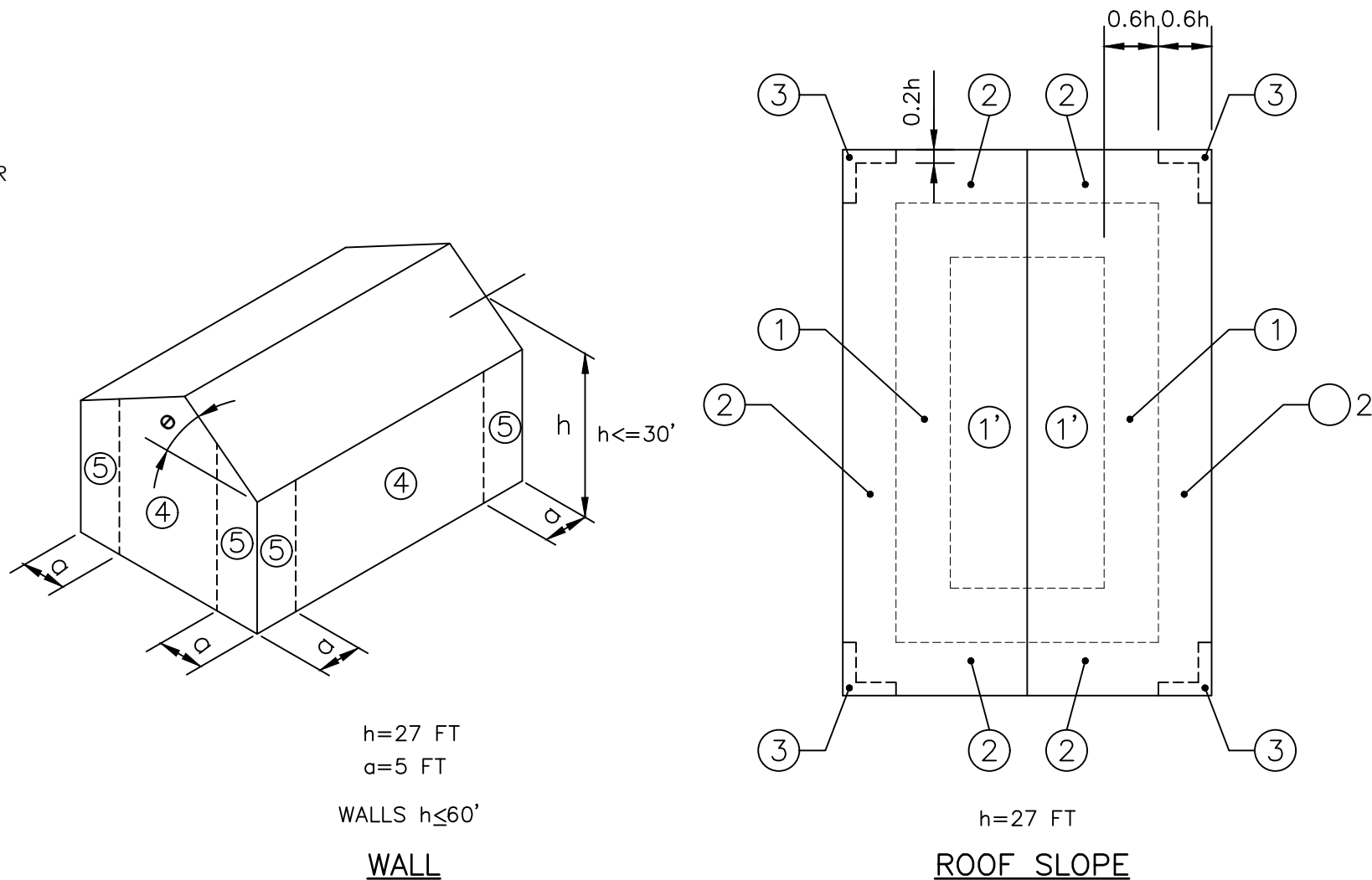
1. DEAD LOADS
- A. TABLE C3-1: MINIMUM DESIGN LOADS, ASCE 7-22
2. LIVE LOADS
- A. ROOF.....20 PSF
- B. LIGHT STORAGE.....125 PSF
- C. HEAVY STORAGE.....250 PSF
3. SNOW LOAD
- A. GROUND SNOW LOAD,P_s0<P_s<10 PSF
4. WIND LOAD
- A. ULTIMATE DESIGN WIND SPEED, V_{ult}131 MPH (3 SECOND GUST)
- B. NOMINAL DESIGN WIND SPEED, V_{asd}.....102 MPH (3 SECOND GUST)
- C. EXPOSURE CATEGORY.....C
- D. ASCE 7-22 RISK CATEGORY.....I
- E. IMPORTANCE FACTOR.....I_m = 1.0
- F. TOPOGRAPHIC FACTOR.....K_{zt} = 1.0
- G. WIND DIRECTIONALITY FACTOR.....K_d = 0.85
- H. GROUND ELEVATION FACTOR.....K_e = 1.0
- I. GUST FACTOR.....G = 0.85
- J. INTERNAL PRESSURE COEFFICIENT
- ENCLOSED.....G_{enc} = ±0.18
- PARTIALLY ENCLOSED.....G_{enc} = ±0.55
- K. ROOF SLOPE, 1:12, θ = 4.8°
5. COMPONENT AND CLADDING
- A. SPECIALTY ENGINEER DESIGNING THE COMPONENTS AND CLADDING SHOULD DETERMINE THE TRIBUTARY AREA FOR SUCH COMPONENTS AND CLADDING AND USE THE TABLE FOR THE AREA EQUAL TO OR SMALLER THAN THE ACTUAL TRIBUTARY AREA.
- B. COMPONENTS AND CLADDING SUB-CONTRACTOR SHALL PROVIDE SIGNED AND SEALED DRAWINGS AND CALCULATIONS PREPARED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA. DOCUMENTATION SHALL INCLUDE THE DESIGN OF THE COMPONENTS AND CLADDING, AND CONNECTIONS TO THE MAIN STRUCTURE.

COMPONENT AND CLADDING DESIGN									
WIND PRESSURES (PSF)									
ROOF SURFACE PRESSURES									
Area	10 sf	50 sf	100 sf	500 sf					
Negative Zone 1	-54.8	-54.8	-54.8	-54.8					
Negative Zone 2	-63.4	-60.4	-59.1	-59.1					
Negative Zone 2'	-76.2	-73.2	-71.9	-71.9					
Negative Zone 3	-84.8	-66.8	-59.1	-59.1					
Negative Zone 3'	-119.0	-89.1	-76.2	-76.2					
Positive All Zones	20.5	17.6	16.3	16.3					
Overhang Zone 2	-98.0	-90.3	-87.0	-82.2					
Overhang Zone 2'	-110.9	-103.1	-99.8	-95.0					
Overhang Zone 3	-131.0	-103.5	-91.7	-82.2					
Overhang Zone 3'	-165.3	-125.8	-108.8	-99.3					

PARAPET SURFACE PRESSURES							
SOLID PARAPET PRESSURE	10 sf	20 sf	50 sf	100 sf	200 sf	500 sf	
CASE A: Zone 2:	0.0	0.0	0.0	0.0	0.0	0.0	
Zone 2':	0.0	0.0	0.0	0.0	0.0	0.0	
Zone 3:	0.0	0.0	0.0	0.0	0.0	0.0	
Zone 3':	0.0	0.0	0.0	0.0	0.0	0.0	
CASE B: Interior zone:	0.0	0.0	0.0	0.0	0.0	0.0	
Corner zone:	0.0	0.0	0.0	0.0	0.0	0.0	

WALL SURFACE PRESSURES				
Area	10 sf	100 sf	200 sf	500 sf
NEGATIVE ZONE 4	-50.1	-43.3	-41.2	-38.5
NEGATIVE ZONE 5	-61.6	-48.0	-43.9	-38.5
POSITIVE ZONE 4 & 5 at h	46.2	39.4	37.4	34.7

NOTES:				
1) TABLE PRESSURES ARE FOR THE SQUARE FOOT (SF) TRIBUTARY AREA SHOWN. FOR OTHER TRIBUTARY AREAS, LINEARLY INTERPOLATE BETWEEN VALUES SHOWN ABOVE.				
2) POSITIVE PRESSURES ACT TOWARD THE BUILDING. NEGATIVE PRESSURES ACT AWAY FROM THE BUILDING.				
3) SEE DIAGRAMS FOR LOCATION OF ZONES.				
4) PRESSURES SHOWN ARE ULTIMATE PRESSURES, MULTIPLY BY 0.6 FOR NOMINAL PRESSURES				



PORTLAND CEMENT CONCRETE

1. CONCRETE PROPERTIES
- A. FOUNDATIONS 4000 PSI, 3" TO 5" SLUMP
- B. FILLED CELLS IN CMU 3000 PSI, 8" TO 11" SLUMP, 3/8" PEA GRAVEL
- C. SLABS ON GRADE 3500 PSI, 3" TO 5" SLUMP
2. FLY ASH SHALL NOT EXCEED 20 PERCENT BY WEIGHT OF TOTAL CEMENT, IF USED.
3. CONTRACTOR SHALL STRICTLY ADHERE TO SLUMP LIMITS. SUPERPLASTICIZER MAY BE USED AT THE CONTRACTOR'S OPTION TO INCREASE WORKABILITY.
4. MAXIMUM MIXING TIME (FROM BATCHING TO PLACEMENT)
- A. AIR TEMPERATURE LESS THAN 85° F: 90 MINUTES
- B. AIR TEMPERATURE 85° F TO 90° F: 75 MINUTES
- C. AIR TEMPERATURE OVER 90° F: 60 MINUTES
5. MINIMUM COVER FOR REINFORCEMENT
- A. FOOTINGS, 3 INCHES TO BOTTOM AND UNFORMED SIDES, 2 INCHES TO FORMED SIDES
- B. OTHER, 2 INCHES TO MAIN REINFORCING, 1 1/2 INCHES TO TIES AND STIRRUPS.
6. ALL REINFORCEMENT SHALL BE SECURELY HELD IN PLACE BY STANDARD ACCESSORIES DURING CONCRETE PLACEMENT.
7. REINFORCEMENT SHALL BE GRADE 60 CONFORMING TO ASTM A615.
8. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
9. DETAIL AND FABRICATE REINFORCEMENT IN ACCORDANCE WITH "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES," ACI 315.
10. PROVIDE MINIMUM LAP SPLICES PER ACI 318-14 FOR ALL REINFORCING BARS, UNLESS OTHERWISE NOTED. STAGGER SPLICES IN ADJACENT BARS AT LEAST 24 INCHES, EXCEPT IN BEAMS AND COLUMNS.
11. IN WALL FOOTINGS, GRADE BEAMS AND BOND BEAMS, PROVIDE BENT BARS AT CORNERS AND INTERSECTIONS OF THE SAME NUMBER AND SIZE AS STRAIGHT BARS.
12. APPLY CURING COMPOUND TO SLAB WITHIN TWO HOURS OF COMPLETION OF FINISHING OPERATIONS. USE LIQUID MEMBRANE FORMING COMPOUND COMPLYING WITH ASTM C309 TYPE 1 CLASS A. APPLY IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

CONCRETE MASONRY UNITS

1. BLOCKS SHALL BE HOLLOW LOAD-BEARING CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C 90 LATEST EDITION, TYPE I NON-MOISTURE CONTROLLED. THE MINIMUM NET AREA COMPRESSIVE STRENGTH SHALL BE 1500 PSI FOR AN AVERAGE OF THREE UNITS AND 1900 PSI FOR AN INDIVIDUAL UNIT. SAMPLE AND TEST MASONRY UNITS IN ACCORDANCE WITH ASTM C 140. SAMPLE AND TEST MASONRY GROUT FILL IN ACCORDANCE WITH ASTM C 39.
2. MORTAR SHALL CONFORM TO ASTM C 270 LATEST EDITION. MORTAR FOR ABOVE GRADE WORK SHALL BE TYPE S WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 1800 PSI. MORTAR FOR BELOW GRADE WORK SHALL BE TYPE M MORTAR WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 2500 PSI. SAMPLE AND TEST MORTAR IN ACCORDANCE WITH ASTM C 109.
3. PREFABRICATED HORIZONTAL JOINT REINFORCEMENT SHALL HAVE 9 GAGE SIDE RAILS FABRICATED FROM HIGH-STRENGTH COLD-DRAWN WIRE CONFORMING TO ASTM A 82 AND SHALL BE GALVANIZED AFTER FABRICATION. PLACE JOINT REINFORCEMENT IN ALTERNATE COURSES IN ALL WALLS. PLACE THREE ROWS AT 8 INCHES ON CENTER IMMEDIATELY ABOVE ALL WALL OPENINGS AND AT THE TOP OF ALL WALLS. LAP SIDE RAILS AT LEAST 6 INCHES AT SPLICES. JOINT REINFORCEMENT TO BE TRUSS-TYPE.
4. PROVIDE ALL SPECIAL, UNTEL, KNOCK-OUT, JAMB AND SASH BLOCK AS REQUIRED TO COMPLETE THE WALLS. MASONRY SAWS SHALL BE USED TO CUT THE BLOCK AS REQUIRED.
5. BRACE FOUNDATION WALLS BEFORE BACKFILLING AGAINST THEM TO PREVENT OVERSTRESSING, BUCKLING OR ROTATION OF THE WALLS. BRACE ALL WALLS AGAINST WIND, CONSTRUCTION LOADS OR OTHER TEMPORARY FORCES UNTIL SUCH PROTECTION IS NO LONGER REQUIRED FOR THE SAFE SUPPORT OF THE WALL. BRACING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
6. IN ADDITION TO REQUIREMENTS ELSEWHERE IN THE DRAWINGS FOR FILLING MASONRY CELLS, FILL CELLS WITH CONCRETE AND ONE #5 BAR AT A MAXIMUM SPACING OF 48 INCHES UNLESS OTHERWISE NOTED. FILL FIRST CELL EACH SIDE OF ANY OPENING AND FILL FIRST CELL AT END OF WALL.
7. EXTEND AND HOOK VERTICAL BARS INTO FOOTING. EXTEND AND HOOK VERTICAL BARS INTO TOP OF WALL BOND BEAM OR TIE BEAM.
8. ALL VERTICAL BARS SHALL BE SECURELY TIED TO THE LOWER BAR AT ANY SPLICES, ESPECIALLY AT THE FOOTING BARS SHALL BE SECURED IN THEIR PROPER POSITIONS WITHIN THE CELLS BY TIE WIRES, REBAR POSITIONERS OR BY OTHER APPROVED METHODS.
9. PROVIDE CLEANOUTS AND/OR INSPECTION PORTS FOR FILLING CELLS IN LIFTS EXCEEDING 5 FEET. LIFTS SHALL NOT EXCEED 8 FEET.
10. CONTROL JOINT SPACING ALONG A STRAIGHT WALL SHALL NOT EXCEED 25 FEET, NOR 3 TIMES THE WALL HEIGHT. USE REFORMED NEOPRENE JOINT STRIPS AND STANDARD SASH BLOCKS.
11. PROVIDE CONTROL JOINTS IN ACCORDANCE WITH DETAILS ON THE DRAWINGS AND IN ACCORDANCE WITH THESE GUIDELINES:
- A. CHANGES IN WALL HEIGHT
- B. AT CHANGES IN WALL THICKNESS
- C. AT WALL OPENINGS LESS THAN 6'-0" WIDE, ONE SIDE
- D. AT WALL OPENINGS 6'-0" OR WIDER, BOTH SIDES
- E. AT CONTROL JOINTS IN APPLIED PLASTER OR MASONRY VENEER
- F. AT CHASES AND RECESSES FOR PIPES, COLUMNS, ETC.
12. IN ADDITION TO REQUIREMENTS ELSEWHERE IN THE DRAWING, PROVIDE A CONTINUOUS HORIZONTAL #5 IN FULLY GROUTED KNOCK OUT BLOCK BELOW WINDOW OPENINGS EXTENDED 8" BEYOND EACH SIDE OF OPENING.

ROOF PANELS

1. THE NEW ROOF SYSTEM SHALL BE COMPRISED OF STRUCTURAL GALVALUME STEEL "RIB-12" ROOF PANELS AS MANUFACTURED BY DEAN STEEL BUILDINGS, INC., FLORIDA PRODUCT APPROVAL NO. 3774.1.
2. PROVIDE CLOSURE STRIPS, FLASHING, GAVE TRIM, RAKE TRIM, FASCIA, FINIAL, GUTTERS, DOWNSPOUTS, AND ALL ACCESSORIES FOR A COMPLETE ROOF SYSTEM PER DEAN STEEL BUILDINGS, INC.
3. ALL SELF-TAPPING FASTENERS SHALL BE ASSEMBLED WITH NEOPRENE SEALING WASHERS FOR WEATHER TIGHTNESS AND HAVE CLIMASEAL® FINISH FOR CORROSION RESISTANCE.
4. SEALER FOR SIDE LAPS, END LAPS AND FLASHING SHALL BE A BUTYL BASED POLYMER SEALANT IN EXTRUDED TAPE FORM. THE SEALER SHALL BE NON-SHRINKING, NON-DRYING, AND NON-TOXIC, AND SHALL HAVE SUPERIOR ADHESION TO METALS, PLASTICS, AND PAINTED SURFACES. THE MATERIAL SHALL MEET OR EXCEED THE REQUIREMENTS OF GOVERNMENT SPECIFICATION NUMBER MIL-C 18969 TYPE I, CLASS B AND TT-C-1796A.

ACI TENSION LAP SPLICE LENGTHS (LAP CALSS B)							
BAR SIZE	db BAR DIAMETER (in.)	f _c = 3,000 psi		f _c = 4,000 psi		f _c = 5,000 psi	
		TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	0.375	26	22	24	19	22	17
#4	0.5	37	29	32	25	29	22
#5	0.625	47	36	40	31	36	28
#6	0.75	56	43	48	37	43	33
#7	0.875	81	63	70	54	63	49
#8	1	93	72	80	62	72	55
#9	1.128	105	81	91	70	81	63
#10	1.27	118	91	102	79	91	70
#11	1.41	131	101	113	87	101	78
REQUIREMENTS:		MINIMUM COVER OF db IS PROVIDED ALONG WITH MINIMUM CLEAR SPACING OF 2db.					
		OR MINIMUM CLEAR OF db AND A MINIMUM CLEAR SPACE OF db ARE PROVIDED ALONG WITH MINIMUM TIES OR STIRRUPS					

ACI HOOK DEVELOPMENT LENGTHS				
BAR SIZE	db BAR DIAMETER (in.)	f _c = 3,000 psi	f _c = 4,000 psi	f _c = 5,000 psi
#3	0.375	9	7	7
#4	0.5	11	10	9
#5	0.625	14	12	11
#6	0.75	17	15	13
#7	0.875	19	17	15
#8	1	22	19	17
#9	1.128	25	22	19
#10	1.27	28	24	22
#11	1.41	31	27	24
#14	1.693	37	32	29
#18	2.257	50	43	39

REINFORCING MINIMUM DEVELOPMENT

LIST OF ABBREVIATIONS

@	AT	(U)	LONG
ABUT.	ABUTMENT	L.H.	LATERAL
A.F.F.	ABOVE FINISH FLOOR	L.H.	LEFT HAND
AB.	ANCHOR BOLT	L.G.	LIGHT GAUGE
ARCH.	ARCHITECTURAL/ARCHITECT'S(DRAWINGS)	L.W.	LONG WAY
	ANGLE	LINE. FT.	LINEAR FOOT
L.	ANGLES	LLO	LONG LEG OUT
L'S	CLEAR	LLV	LONG LEG VERTICAL
B.	BOTTOM	LONG.	LONGITUDINAL
B/	BOTTOM OF	MATL.	MATERIAL
B.B.	BOTTOM BAR	MAX.	MAXIMUM
B.J.	BAR JOIST	MECH.	MECHANICAL
BCK.	BACK	MIN.	MINIMUM
B	BASELINE	MSL	MEAN SEA LEVEL
BRDG.	BRIDGING	MPH	MILES PER HOUR
BRNG.	BEARING	NO.	NUMBER
BOT.	BOTTOM	N.S.	NON-SHRINK
BLDG.	BUILDING	O.C.	ON CENTER
C	CENTERLINE	O.C.E.W.	ON CENTER EACH WAY
C. TO C.	CENTER TO CENTER	OPNG.	OPENING
C.I.P.	CAST IN PLACE	O.H.	OPPOSITE HAND
CLR.	CLEAR	O.D.	OUTSIDE DIAMETER
C.M.U.	CONCRETE MASONRY UNIT	O.F.P.	OUTSIDE FACE OF PANEL
COL	COLUMN	PAVT.	PAVEMENT
CONC.	CONCRETE	R	PLATE
CONT.	CONTINUOUS	S	SHORT
CONST.	CONSTRUCTION	P.T.	PRESSURE TREATED
C.J.	CONSTRUCTION JOINT	PSF	POUND PER SQUARE FOOT
CU. FT.	CUBIC FOOT	PSI	POUNDS PER SQUARE INCH
CU. IN.	CUBIC INCH	P.G.	PROFILE GRADE
CU. YD.	CUBIC YARD	PROP.	PROPOSED
DET.	DETAIL	RAD.	RADIUS
DIA.	DIAMETER	REINF.	REINFORCING
Ø	DIAMETER STRUC. STL.	REQ.	REQUIRED
DWG.	DRAWING	REQ'D.	REQUIRED
DWGS.	DRAWINGS	REQMTS.	REQUIREMENTS
EA.	EACH	R.H.	RIGHT HAND
EL	ELEVATION	(S)	SECTION
ELEV.	ELEVATION	SIM.	SIMILAR
EQ.	EQUALLY/EQUAL	SPL	SPLICE
E.W.	EACH WAY	SP.	SPACE OR SPACING
EXP.	EXPANSION	S.F.	SQUARE FOOT
EXIST.	EXISTING	S.W.	SHORT WAY
EXT.	EXTERIOR	S.Y.	SQUARE YARD
F.B.	FIELD BEND	STD.	STANDARD
FIN. FLR.	FINISH FLOOR	STA.	STATION
F.F.	FINISH FLOOR	STL.	STEEL
FLR.	FLOOR	STFNR.	STIFFENER
FLNG.	FLANGE	STRUC.	STRUCTURAL
FT	FOOT	SYMM.	SYMMETRICAL
FTG.	FOOTING	T.	TOP
FND.	FOUNDATION	T/	TOP OF
FRMG.	FRAMING	T.B.	TOP BAR
GALV.	GALVANIZED	T & B	TOP AND BOTTOM
GA.	GAGE	T/J	TOP OF BAR JOIST
G/B	GIRDER BEARING	T/P	TOP OF PANEL
H.S.	HIGH STRENGTH	TRANS.	TRANSVERSELY/TRANSVERSE
HK.	HOOK	T/W	TOP OF WALL
HORIZ.	HORIZONTAL	Typ.	TYPICAL
H.S.A.	HEADED STUD ANCHOR	U.N.O.	UNLESS NOTED OTHERWISE
IN.	INCH	V.I.F.	VERIFY IN FIELD
I.D.	INSIDE DIAMETER	WT.	WEIGHT
INT.	INTERIOR	WWR	WELDED WIRE REINFORCING
ISO.	ISOLATION	W.F.	WIDE FLANGE
J/B	JOIST BEARING	W/	WITH
JT.	JOINT	W.P.	WORK POINT
KIP.	KILOPOUNDS (KIPS.)	YD.	YARD
K.O.	KNOCK-OUT		

TO THE BEST OF THE ENGINEER'S KNOWLEDGE, THE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES AND THE APPLICABLE FIRE-SAFETY STANDARDS AS DETERMINED BY THE LOCAL AUTHORITY IN ACCORDANCE WITH THIS SECTION AND CHAPTER 633, FLORIDA STATUTES.

COVER SHEET AND GENERAL STRUCTURAL NOTES

DATE: 06-03-25 DRAWN BY: RC/RM
JOB NO: 23-302 DESIGN BY: RR

SHEET NO.
S1.0

billerreinhardt
ENGINEERING GROUP INC.
3434 colwell avenue suite 100, Tampa, florida 33614
telephone : 813.908.7203 fax : 813.931.5200
email : info@billerreinhardt.com
State of Florida Certificate of Authorization No. 9149

TO THE BEST OF THE ENGINEER'S KNOWLEDGE, THE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES AND THE APPLICABLE FIRE-SAFETY STANDARDS AS DETERMINED BY THE LOCAL AUTHORITY IN ACCORDANCE WITH THIS SECTION AND CHAPTER 633, FLORIDA STATUTES.

ROBERT J. LEINHART
FL. P.E. NO. 50076
THE ENGINEER'S SEAL AND SIGNATURE ARE REQUIRED FOR ALL PLANS AND SPECIFICATIONS. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE IN FEET AND INCHES. UNLESS OTHERWISE NOTED, ALL DIMENSIONS ARE IN FEET AND INCHES.

GENERAL STRUCTURAL NOTES

PAINING

1. WORK IN GENERAL INCLUDES REPAIRS/REPLACEMENT OF SUBSTRATES HEREIN LISTED, SURFACE PREPARATION FOR PAINTING, AND APPLICATION OF THE PAINT COATING TO THE SUBSTRATES AND SYSTEMS OUTLINED IN THIS SPECIFICATION.
2. MATERIALS

1. ALL MATERIALS USED IN THIS PAINT SPECIFICATION/PROJECT SHALL BE DELIVERED TO THE JOB IN ORIGINAL, SEALED CONTAINERS BY THE SHERWIN WILLIAMS COMPANY (S-W).

2. ALL MATERIALS SHALL BE USED ACCORDING TO LABEL DIRECTIONS AND APPLIED AT PACKAGE CONSISTENCY.
3. COLORS TO BE APPROVED BY OWNER OR OWNER'S REPRESENTATIVE. SPECIFICATIONS ARE PREPARED WITH THE INTENT COLORS WILL BE RE-APPLIED AS THEY EXIST.
4. SURFACE PREPARATION

1. GENERAL

1. ALL SURFACES TO BE PAINTED SHALL BE CLEANED AND PREPARED AS SPECIFIED. THE PAINTING CONTRACTOR IS RESPONSIBLE FOR THE FINISH OF HIS WORK. SHOULD ANY SURFACE BE FOUND UNSUITABLE TO PRODUCE A PROPER PAINT OR SEALANT FINISH, THE OWNER OR OWNER'S AGENT SHALL BE NOTIFIED. IN WRITING, AND NO MATERIALS SHALL BE APPLIED UNTIL THE UNSUITABLE SURFACES HAVE BEEN MADE SATISFACTORY. COATING PERFORMANCE IS AFFECTED BY PROPER PRODUCT SELECTION, APPLICATION, AND SURFACE PREPARATION. COATING INTEGRITY AND SERVICE LIFE WILL BE REDUCED BECAUSE OF IMPROPERLY PREPARED SURFACES. THE SELECTION AND IMPLEMENTATION OF PROPER SURFACE PREPARATION ENSURES COATING ADHESION TO THE SUBSTRATE AND PROLONGS THE SERVICE LIFE OF THE COATING SYSTEM.

2. PREVIOUSLY COATED SURFACES

1. MAINTENANCE PAINTING WILL FREQUENTLY NOT PERMIT OR REQUIRE COMPLETE REMOVAL OF ALL OLD COATINGS PRIOR TO REPAINTING. HOWEVER, ALL SURFACE CONTAMINATION SUCH AS OIL, GREASE, LOOSE, AND MARGINALLY ADHERING PAINT, MILL SCALE, DIRT, FOREIGN MATTER, RUST, MOLD, MILDEW, MORTAR, EFFLORESCENCE, AND SEALERS MUST BE REMOVED TO ASSURE SOUND BONDING TO THE TIGHTLY ADHERING OLD PAINT. IN ADDITION, GLOSSY SURFACES OF OLD PAINT FILMS MUST BE CLEAN AND DULL BEFORE REPAINTING. SPOT PRIME ALL BARE AREAS WITH THE APPROPRIATE PRIMER. RECOGNIZE THAT ANY SURFACE PREPARATION SHORT OF TOTAL REMOVAL OF THE OLD COATINGS MAY COMPROMISE THE SERVICE LENGTH OF THE SYSTEM. ALWAYS CHECK FOR COMPATIBILITY OF THE PREVIOUSLY PAINTED SURFACE WITH THE NEW COATING BY APPLYING A TEST PATCH OF 2-3 SQUARE FEET. ALLOW TO DRY THOROUGHLY, CHECK ADHESION.

2. CLEANING AND MILDEW CONTROL

1. ALL EXTERIOR SURFACES MUST BE THOROUGHLY PRESSURE CLEANED USING A PRESSURE WASHER AT 2500 PSI AND A 15 DEGREE TIP HELD NO MORE THAN 12 INCHES FROM THE SURFACE TO ENSURE THE SURFACE IS CLEANED FREE OF ALL LOOSE, SCALING, AND MARGINALLY ADHERING PAINT, ALL CHALK, MILDEW, STAINS, DIRT, GREASE OR OTHER FOREIGN MATERIAL. SURFACE MUST BE FIRM, CLEAN, AND DRY BEFORE PROCEEDING. ALL LOOSE AND SCALING PAINT NOT REMOVED BY PRESSURE CLEANING SHALL BE REMOVED BY WIRE BRUSHING OR OTHER SUITABLE POWER TOOL CLEANING. REMOVE MILDEW USING A SOLUTION OF CHLORINE BLEACH AND WATER MIXED TO A RATIO OF ONE PART CHLORINE BLEACH AND THREE PARTS WATER. TAKING EXTREME CARE NOT TO GET SOLUTION ON ADJACENT VEGETATION. ALLOW SOLUTION TO REMAIN ON THE SURFACE FOR 10 MINUTES BEFORE RINSING THOROUGHLY WITH CLEAN WATER. CAUTION: DO NOT ADD HOUSEHOLD DETERGENTS OR AMMONIA TO THE BLEACH SOLUTION. WEAR PROTECTIVE GLASSES OR GOGGLES, WATERPROOF GLOVES, AND PROTECTIVE CLOTHING. QUICKLY WASH OFF WITH SOAP AND CLEAN WATER ANY SOLUTION THAT TOUCHES THE SKIN. WET ANY SHRUBBERY IN THE AREA WHERE CLEANING PRIOR TO USE OF ANY BLEACH AND WATER MIXTURE. RINSE COMPLETELY AFTER THE AREA HAS BEEN CLEANED. REMOVE GREASE, OIL, AND STUBBORN AIRBORNE CONTAMINANTS USING A DEGREASING AGENT BY APPLING TO THE AFFECTED AREA BY PUMP UP SPRAYER ALLOWING THEM TO SIT AS DESCRIBED BY THE MANUFACTURE, TYPICALLY 10 MINUTES AND CLEANING AT ADJACENT AREAS.

2. GALVANIZED METAL

1. REMOVE GREASE AND OILS: SOLVENT CLEAN TO SSPC-SP

2. REMOVE RUST SCALE: POWER TOOL CLEAN TO SSPC-SP3 OR SSPC-SP1 I

3. REMOVE MILL SCALE: SANDBLAST TO SSPC-SP6 (COMMERCIAL)

3. FERROUS METAL

1. AFTER PRESSURE WASHING, MILDEW TREATMENT AND CHLORIDE (SALTS) REMOVAL, FERROUS METALS WILL BE SOLVENT CLEANED IN ACCORDANCE WITH THE SOCIETY OF PROTECTIVE COATINGS STANDARD, SSPC-SP-1. CHANGE CLEANING RAGS OFTEN. DISPOSE OF ALL RAGS IN ACCORDANCE WITH LOCAL, STATE AND EPA REGULATIONS.

2. ANY EXISTING RUST OR LOOSE AND FAILED COATINGS WILL BE REMOVED BY CONSCIENTIOUS HAND AND POWER TOOL CLEANING, ACCORDING TO SSPC-SP2/3. HAND OR POWER SAND ALL EXISTING GLOSS SURFACES IN ORDER TO PROMOTE THE ADHESION OF THE SPECIFIED PRIMER/FINISH. REMOVE ALL SANDING RESIDUALS.

3. ALL RESIDUE PRODUCED BY GRINDING AND CHIPPING WILL BE COMPLETELY REMOVED FROM THE SURFACE AND SURROUNDING AREA PRIOR TO ANY OTHER PROCEDURE.

4. ANY AREA THAT PRESENTS DIFFICULTY IN REACHING WILL BE TREATED WITH THE SPECIFIED RUST CONVERSION PRIMER, APPLIED BY LABEL DIRECTION. RUST MUST BE PRESENT FOR THE CONVERTER TO PERFORM AS FORMULATED BY CONVERTING FERROUS OXIDE (RUST) TO A STABLE IRON COMPLEX.

5. PAINTING SCHEDULE AND RECOMMENDED COATING SYSTEMS

1. ZINC GALVANIZING REPAIR - Z-PURLINS, LOUVER FRAMING AND SUPPORTS, ROLL-UP DOOR SUPPORTS

1. ZRC® COLD GALVANIZING REPAIR COMPOUND BY Z.R.C. WORLDWIDE

2. ZRC 221® GALVANIZING COMPOUND BY Z.R.C. WORLDWIDE

3. ZRC GALVILITE® GALVANIZING REPAIR COMPOUND BY Z.R.C. WORLDWIDE

2. PRIMARY BEAMS (PRE-ENGINEERED DEAN BUILDING)

1. PRETREATMENT: PRESSURE CLEAN, FUNGICIDE & RINSE CLEAN (MINIMUM 2500 PSI)

2. PRETREATMENT: REMOVE ALL LOOSE, FLAKING AND BUBBLED PAINT

3. PRETREATMENT: PRIME ALL TIGHT RUST AND BARE METAL WITH SHERWIN-WILLIAMS KEM KROMIK PRIMER (B50WZ1)

4. FIRST COAT: SHERWIN-WILLIAMS PRO INDUSTRIAL PRO-CRYL UNIVERSAL METAL PRIMER (B66 SERIES) AT 5-10 WET MILS, 2-4 MILS DRY.

5. SECOND COAT: SHERWIN WILLIAMS PRO INDUSTRIAL MULTI-SURFACE ACRYLIC EGSHEL (B66W1560 SERIES) AT 6 WET MILS, 2 MILS DRY.

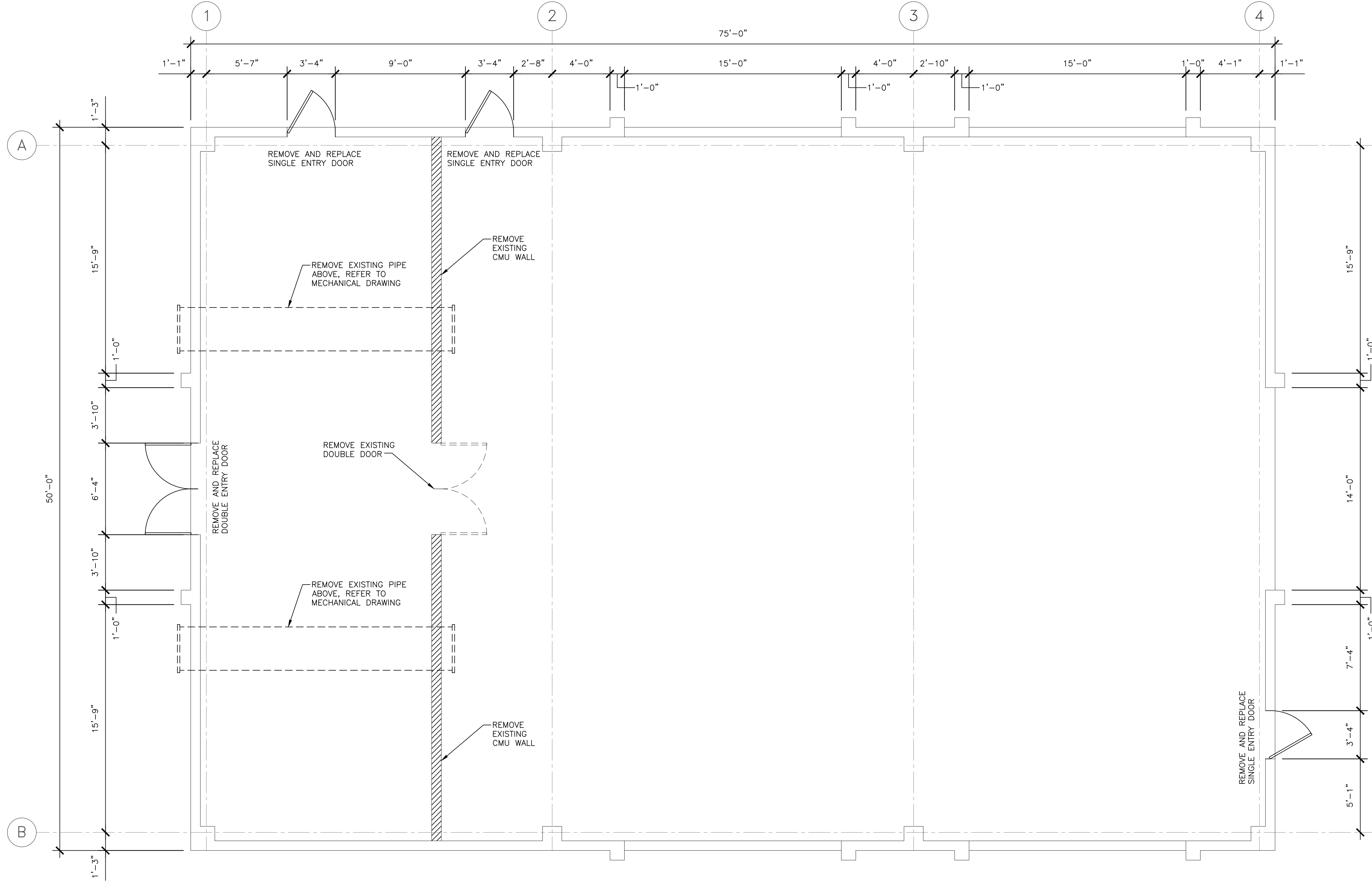
3. PREVIOUSLY PAINTED CONCRETE AND MASONRY (CONCRETE MASONRY UNITS).

1. PRETREATMENT: PRESSURE CLEAN, FUNGICIDE & RINSE CLEAN (MINIMUM 2500 PSI).

2. PRETREATMENT: REMOVE ALL LOOSE, FLAKING, AND BUBBLED PAINT.

3. OWNER'S PREFERENCE FIRST COAT AND FINAL COAT: PPG PERMA-CRETE 4-5110 VERTICAL CONCRETE STAIN [COLOR: MESA BEIGE NG, # PPG1092-2].

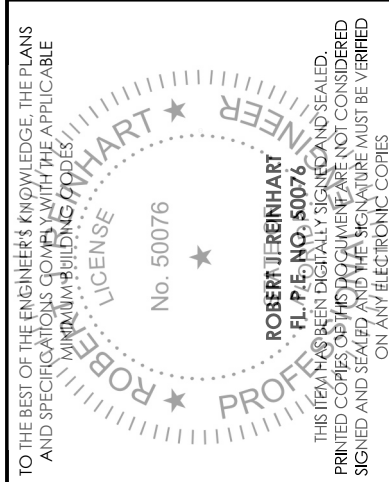
4. ALUMINUM DOOR DOES NEED TO BE PAINTED ON SITE. OWNER TO CHOOSE COLOR DURING SUBMITTAL PROCESS
- | DOOR SCHEDULE | | | | | | | | | | | | | | | | |
|---------------|------|------------------|----------|--------------------------------|--------|--------|----------|--------------|--------|-------|------------------------|-----------------|------------------------------|--|------------------------------------|--|
| DOORS | | | | | | FRAMES | | | | | FINISH
HARDWARE SET | HAND OF
DOOR | DOOR
MANUFACTURER | SERIES | FLORIDA PRODUCT
APPROVAL NUMBER | IMPACT |
| MARK | UNIT | TYPE | MATERIAL | ROUGH MASONRY OPENING
WIDTH | HEIGHT | UNIT | MATERIAL | NOMINAL SIZE | | | | | | | | |
| | | | | | | | | WIDTH | HEIGHT | DEPTH | | | | | | |
| A | EACH | FULL FLUSH PLAIN | ALUMINUM | 3'-4" | 7'-4" | EACH | ALUMINUM | 3'-4" | 7'-4" | 5" | 1 | RHR | CLINE ALUMINUM
DOORS, INC | 1008E ALUMINUM
DOOR OUTSWING
"IMPACT" | FL-6336.6 | APPROVED FOR USE IN HVHZ AND
OUTSIDE HVHZ, IMPACT RESISTANT;
MISSILE LEVEL "D" |
| B | EACH | FULL FLUSH PLAIN | ALUMINUM | 6'-4" | 7'-4" | EACH | ALUMINUM | 6'-4" | 7'-4" | 5" | 2 | X-RHR | CLINE ALUMINUM
DOORS, INC | 1008E ALUMINUM
DOUBLE DOOR
OUTSWING "IMPACT" | FL-6336.8 | APPROVED FOR USE IN HVHZ AND
OUTSIDE HVHZ, IMPACT RESISTANT;
MISSILE LEVEL "D" |
- CONSTRUCTION**
Aluminum heavy-duty frames shall be Cline 5-inch (127mm) frames or equal. Frames shall be constructed from extruded aluminum 6063-T5 alloy with a minimum wall thickness of 0.125-inch (3.18mm). Corners shall be cut square and fastened using concealed stainless steel screws. Snap-in door stop to receive replaceable wool pile weather-stripping. Hinge and strike mounting plates shall be of 0.1875-inch (4.76mm) extruded aluminum bar stock.
- HARDWARE PREPARATION**
Hinge and strike plates shall be fully mortised in frame. Hinges shall be prepped for standard weight 4.5-inch x 4.5-inch (114.3mm) template hinge. Lock strikes shall be 4.875-inch (123.84mm) in accordance with ANSI Standards A115.1 or A115.2. All surface hardware shall be drilled and tapped in the field by installer. Special hardware preparation available.
- FINISH**
Frames shall be anodized in accordance with Aluminum Association Class II AAM12C22A31, Clear 0.4 mil (0.01mm) minimum thickness. Class-1 or other distinctive finishes per owner.
- | FINISH HARDWARE | | | | |
|---------------------------|---|--|--|--|
| SET #1 SINGLE DOOR | | | | |
| 1-1/2 PR HINGES | | | | |
| 1 | LOCKSET AND PANIC HARDWARE (FREELY ACTIVATED FROM INTERIOR) | | | |
| 1 | EXIT DEVICE | | | |
| 1 | CLOSER | | | |
| 1 | DOOR BOTTOM | | | |
| 1 | THRESHOLD | | | |
| 1 | FLOOR MOUNTED STOP / HOLDER | | | |
| 1 | WEATHERSTRIPPING | | | |
| 1 | KICKPLATE | | | |
| SET #2 DOUBLE DOOR | | | | |
| 3 PR HINGES | | | | |
| 1 | LOCKSET AND PANIC HARDWARE (FREELY ACTIVATED FROM INTERIOR) | | | |
| 1 | EXIT DEVICE | | | |
| 1 | CLOSER | | | |
| 2 | DOOR BOTTOM | | | |
| 1 | THRESHOLD (CONTINUOUS) | | | |
| 2 | FLUSHBOLTS TOP AND BOTTOM ON FIXED DOOR WITH STRIKES | | | |
| 1 | ASTRAGAL | | | |
| 2 | FLOOR MOUNTED STOPS / HOLDERS | | | |
| 1 | WEATHERSTRIPPING | | | |
| 2 | KICKPLATE | | | |
- TO THE BEST OF THE ENGINEER'S KNOWLEDGE, THE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES AND THE APPLICABLE FIRE-SAFETY STANDARDS AS DETERMINED BY THE LOCAL AUTHORITY IN ACCORDANCE WITH THIS SECTION AND CHAPTER 635, FLORIDA STATUTES.
- GENERAL STRUCTURAL NOTES
- DATE: 06-03-25
JOB NO: 23-302
DRAWN BY: RC/RM
DESIGN BY: RR
- SHEET NO.
- S1.1
- TECO BUILDING EVALUATION
2700 Maritime Blvd., Tampa, FL 33605
- HOWARD F. CURREN AWT
2545 GUY N. VERGER BLVD.
TAMPA, FL 33605
- billerreinhardt**
ENGINEERING GROUP INC.
3434 colwell avenue suite 100, Tampa, Florida 33614
telephone : 813.908.7203 fax : 813.931.5200
email : info@billerreinhardt.com
State of Florida Certificate of Authorization No.9149
-
- REVISIONS
- NO. DATE COMMENTS
- 07-29-26 PERMIT REVIEW COMMENTS
-



1 DEMO FLOOR PLAN
S2.1 SCALE: 1/4" = 1'-0"

TO THE BEST OF THE ENGINEER'S KNOWLEDGE, THE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES AND THE APPLICABLE FIRE-SAFETY STANDARDS AS DETERMINED BY THE LOCAL AUTHORITY IN ACCORDANCE WITH THIS SECTION AND CHAPTER 633, FLORIDA STATUTES.

DEMO FLOOR PLAN	
DATE: 06-03-25	DRAWN BY: RC/RM
JOB NO: 23-302	DESIGN BY: RR

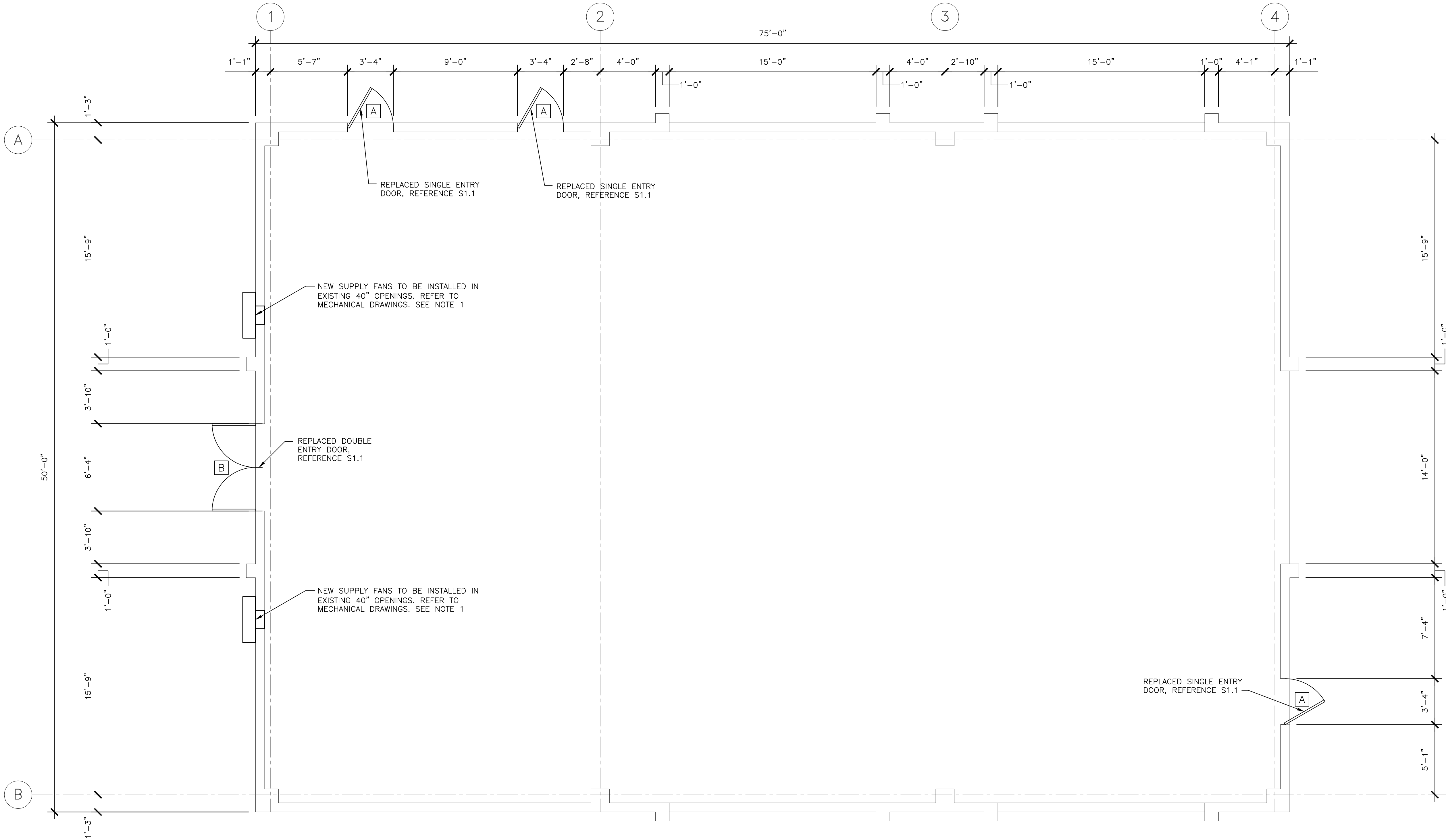


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PLAN NOTES

- NEW SUPPLY FANS ARE MANUFACTURED BY LOREN COOK EWD MODEL 24EWS622D08. FLOW 1948 CFM, 860RPM, 0.256 HP. NEW SUPPLY FANS REQUIRE A 36 7/16" DIAMETER WALL OPENING AND EXISTING WALL OPENING IS 40" DIAMETER. CONTRACTOR SHALL PROVIDE FAN CONNECTION SUBMITTAL THAT SHOWS METHOD TO CONNECT FAN TO EXISTING OPENING AND MAKE SURE CONNECTION IS PROPERLY SEALED.
- [X] - DOOR MARK, SEE S1.1 DOOR SCHEDULE.

1 FLOOR PLAN
S2.2 SCALE: 1/4" = 1'-0"

TO THE BEST OF THE ENGINEER'S KNOWLEDGE, THE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES AND THE APPLICABLE FIRE-SAFETY STANDARDS AS DETERMINED BY THE LOCAL AUTHORITY IN ACCORDANCE WITH THIS SECTION AND CHAPTER 633, FLORIDA STATUTES.

FLOOR PLAN

DATE: 06-03-25
JOB NO: 23-302

DRAWN BY: RC/RM
DESIGN BY: RR

SHEET NO.
S2.2

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PROFESSIONAL ENGINEER

ROBERT L. REINHART

FL. P.E. NO. 50076

LICENSE No. 50076

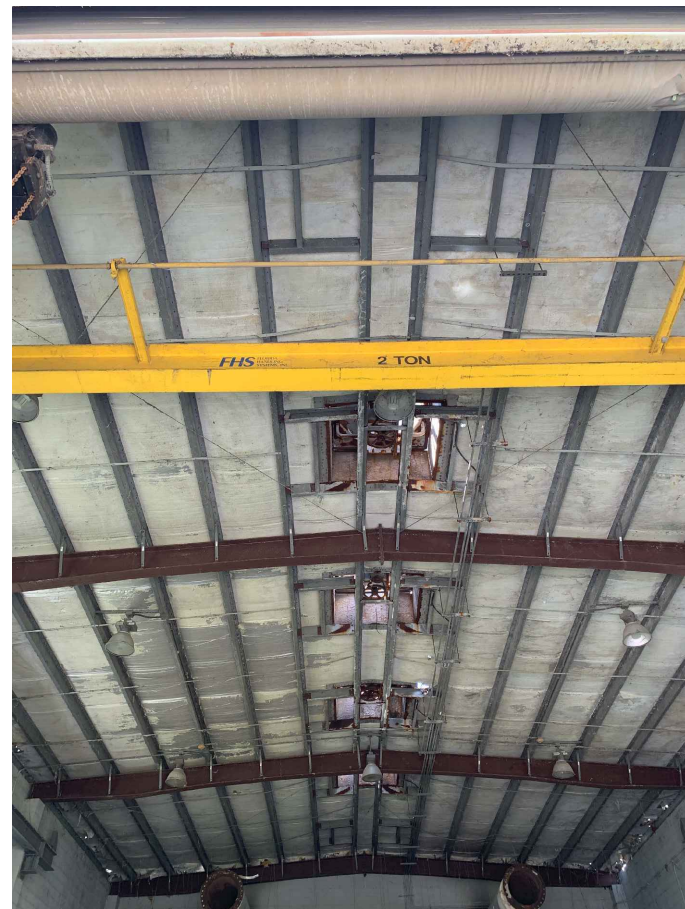
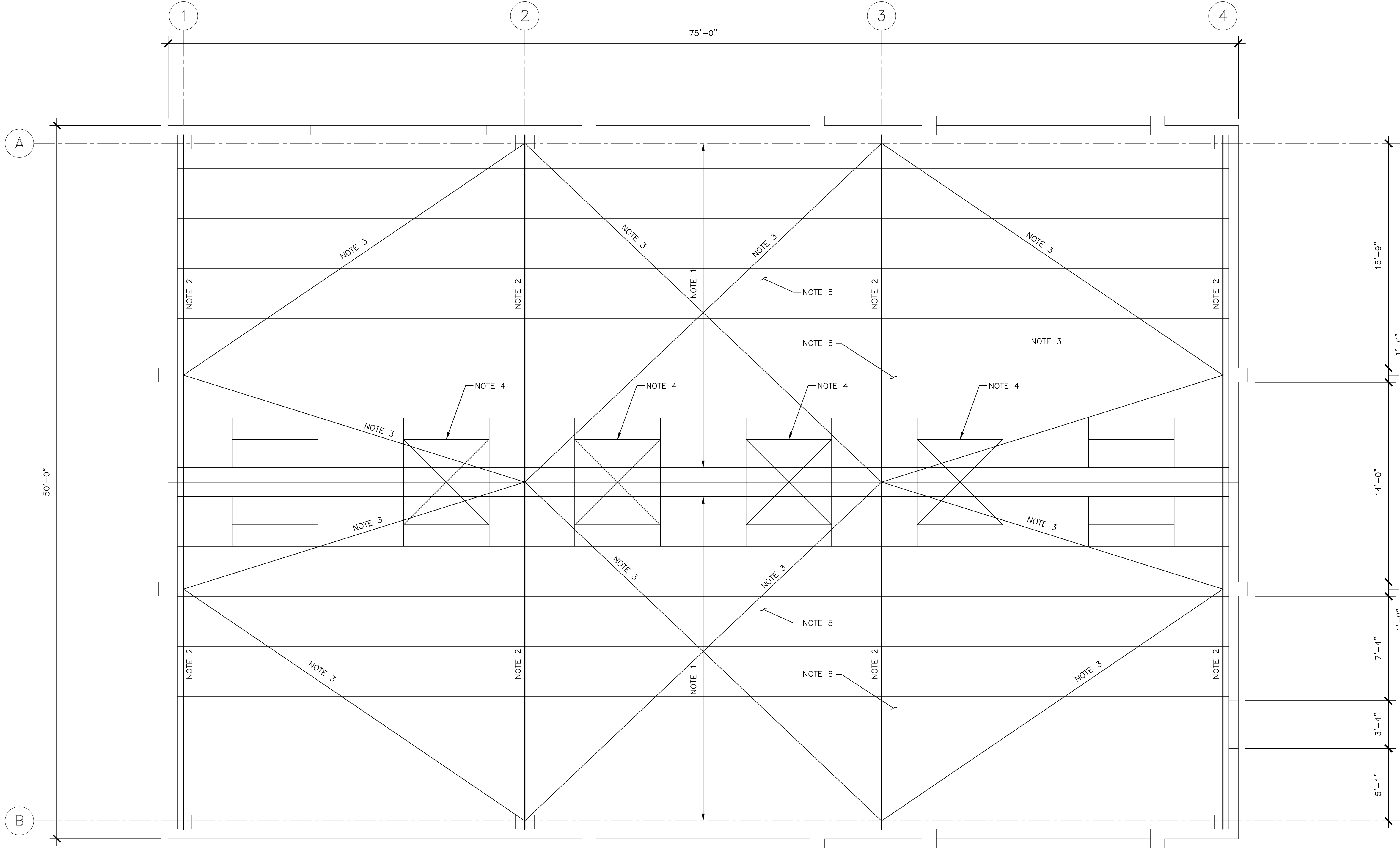
THE SEAL OF THE ENGINEER MUST BE VERIFIED AND SIGNED BY THE ENGINEER.

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2 EXISTING ROOF FRAMING
S2.3 NOT TO SCALE

NOTES:

1. EXISTING PURLIN AT 4'-0" MAX.
2. EXISTING BEAM.
3. DIAPHRAGM BRACING BELOW PURLIN.
4. REMOVE EXISTING MECHANICAL EQUIPMENT. SEE 3/S2.3
5. REMOVE EXISTING ROOF INSULATION PANELS.
6. REMOVE EXISTING METAL ROOF DECK.

1 DEMO ROOF PLAN
S2.3 SCALE: 1/4" = 1'-0"



3 DEMO ROOF DETAIL
S2.3 NOT TO SCALE

TO THE BEST OF THE ENGINEER'S KNOWLEDGE, THE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES AND THE APPLICABLE FIRE-SAFETY STANDARDS AS DETERMINED BY THE LOCAL AUTHORITY IN ACCORDANCE WITH THIS SECTION AND CHAPTER 633, FLORIDA STATUTES.

DEMO ROOF PLAN

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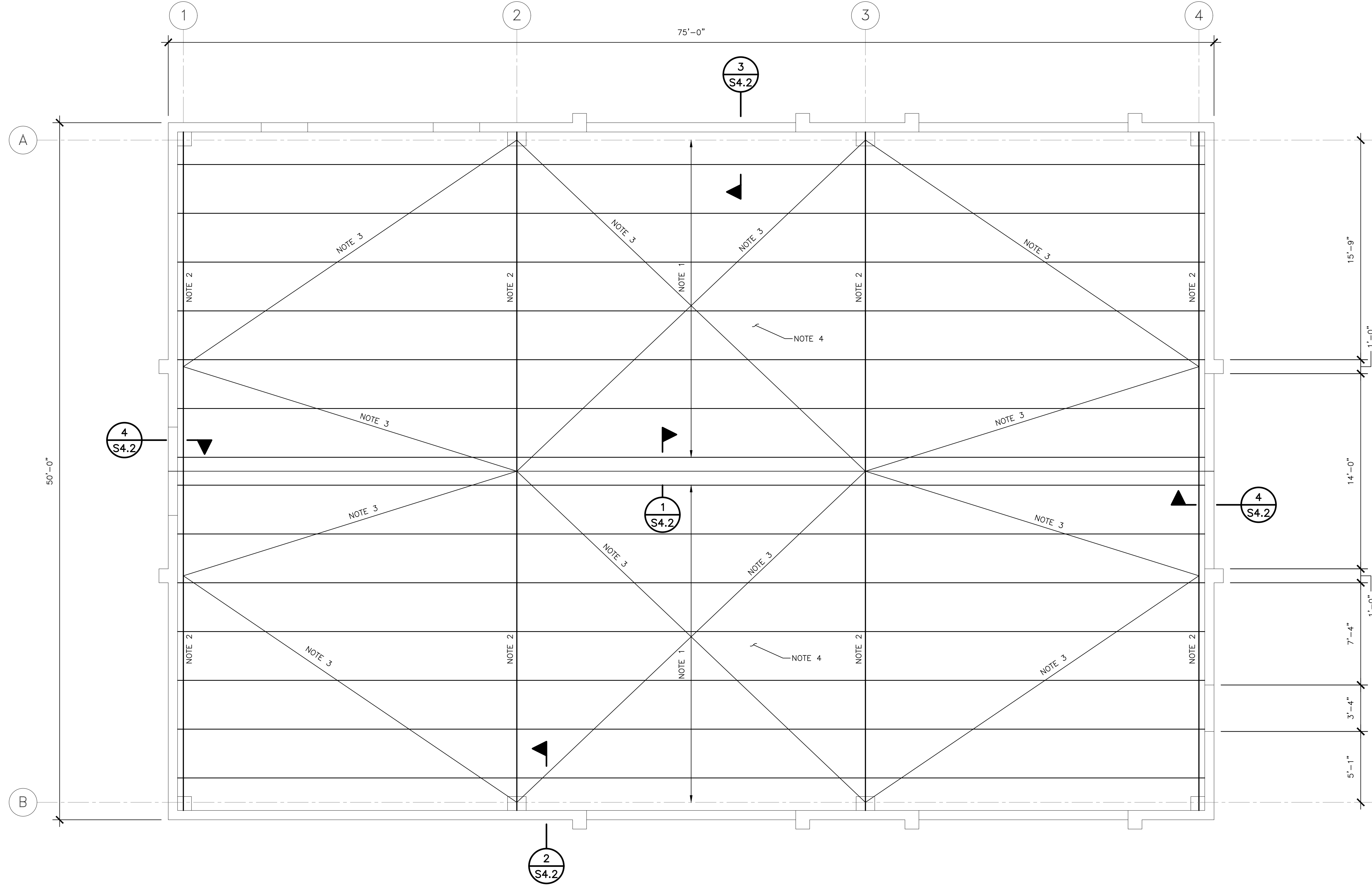
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DEMO ROOF PLAN

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NOTES:

1. EXISTING PURLIN AT 4'-0" MAX.
2. EXISTING BEAM.
3. DIAPHRAGM BRACING BELOW PURLIN.
4. INSTALL NEW STANDING SEAM METAL DECK.

1 ROOF PLAN
S2.4 SCALE: 1/4" = 1'-0"

TO THE BEST OF THE ENGINEER'S KNOWLEDGE, THE PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE MINIMUM BUILDING CODES AND THE APPLICABLE FIRE-SAFETY STANDARDS AS DETERMINED BY THE LOCAL AUTHORITY IN ACCORDANCE WITH THIS SECTION AND CHAPTER 633, FLORIDA STATUTES.

ROOF PLAN

DATE: 06-03-25
JOB NO: 23-302
DRAWN BY: RC/RM
DESIGN BY: RR

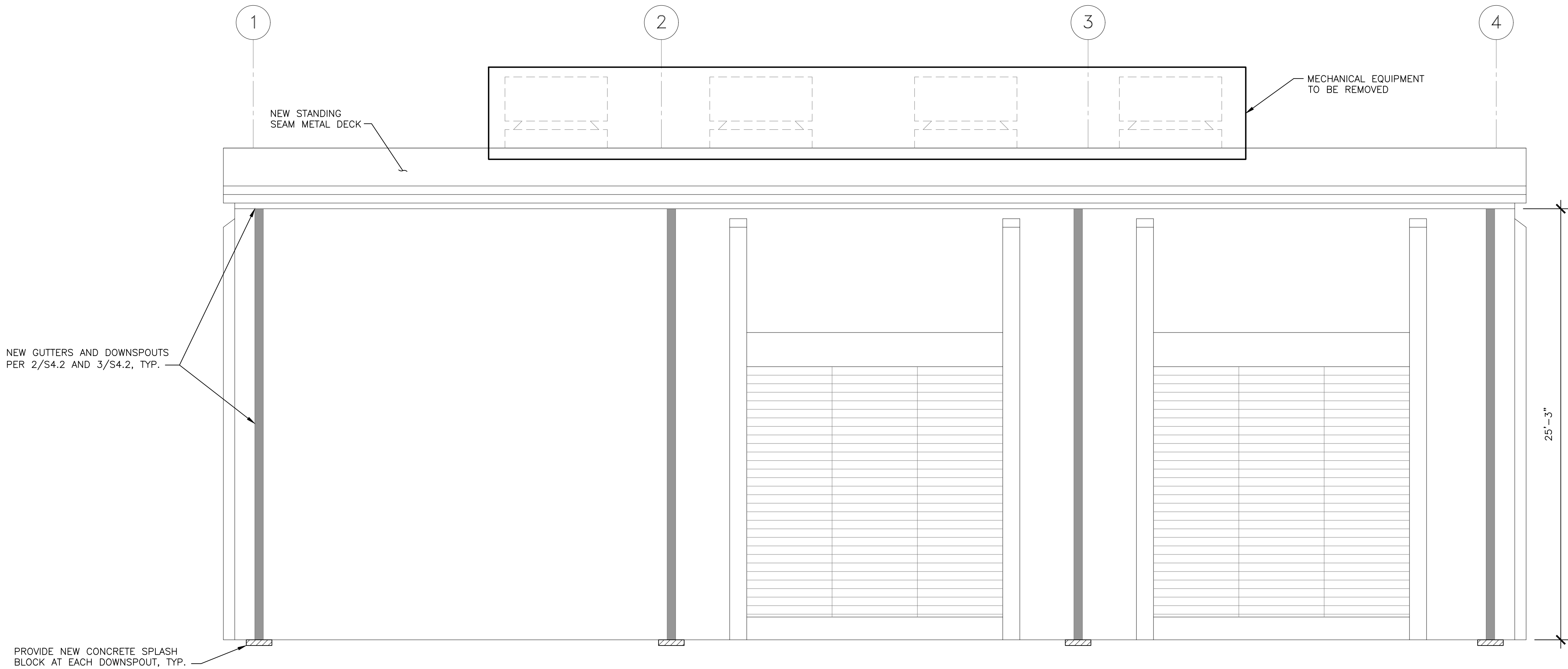
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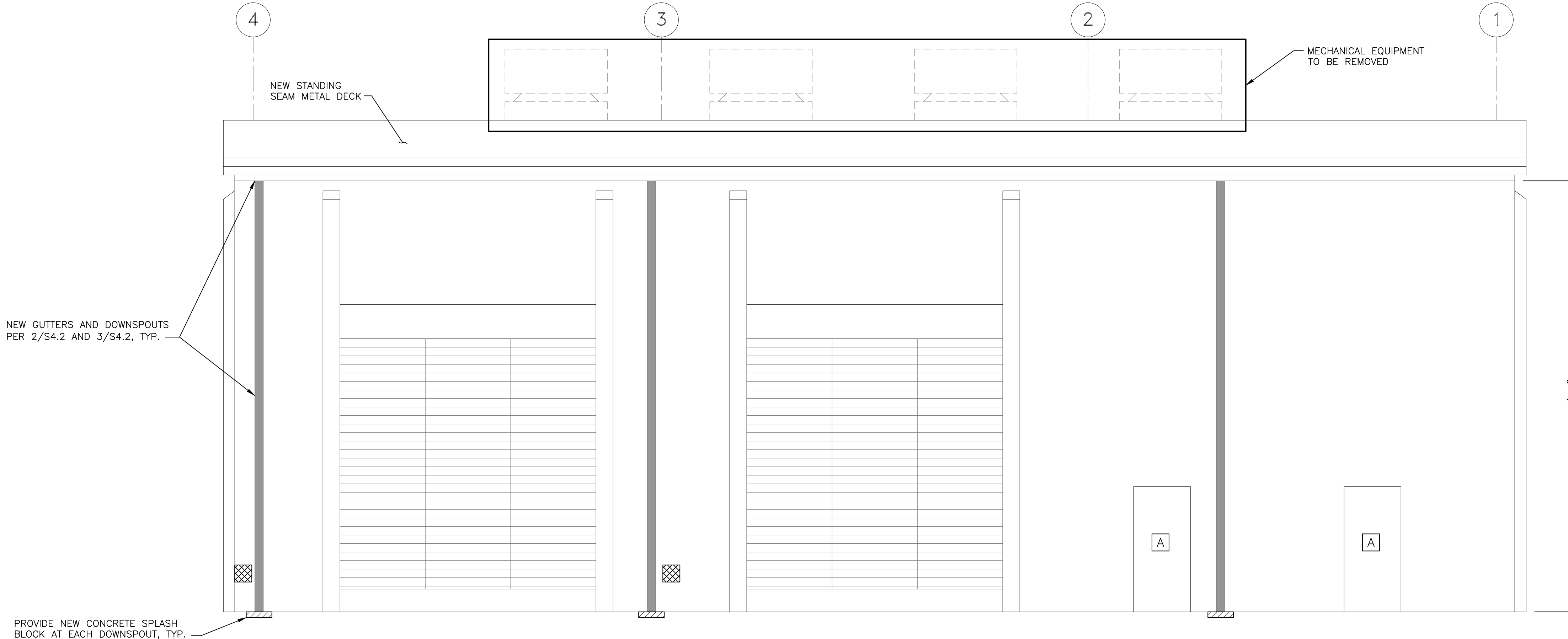
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SHEET NO.
S2.4



1 SOUTH ELEVATION
S3.1 SCALE: 1/4" = 1'-0"



2 NORTH ELEVATION
S3.1 SCALE: 1/4" = 1'-0"

LEGEND:

 CONCRETE MASONRY UNIT REPAIR

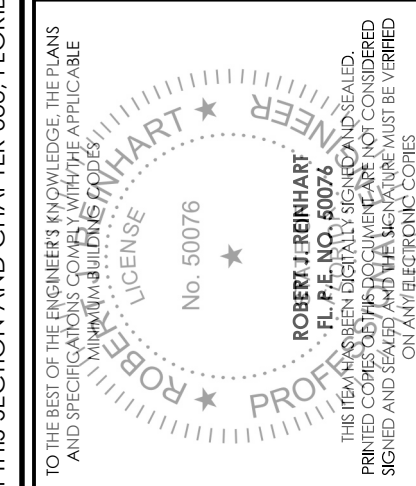


1A SOUTH ELEVATION
S3.1 SCALE: 1/4" = 1'-0"



2A NORTH ELEVATION
S3.1 SCALE: 1/4" = 1'-0"

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SOUTH AND NORTH ELEVATIONS

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JOB NO: 23-302 DESIGN BY: RR

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S3.1

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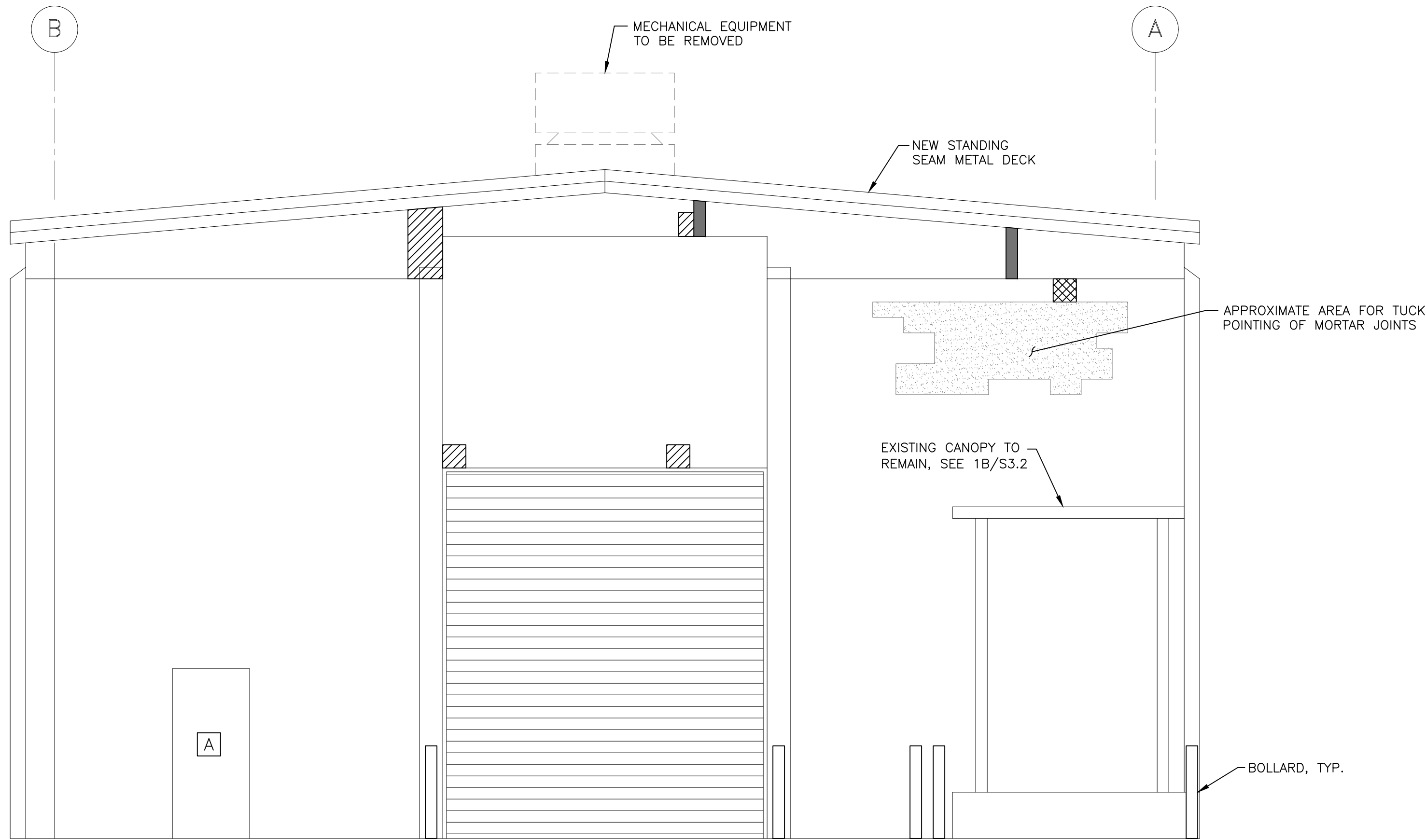
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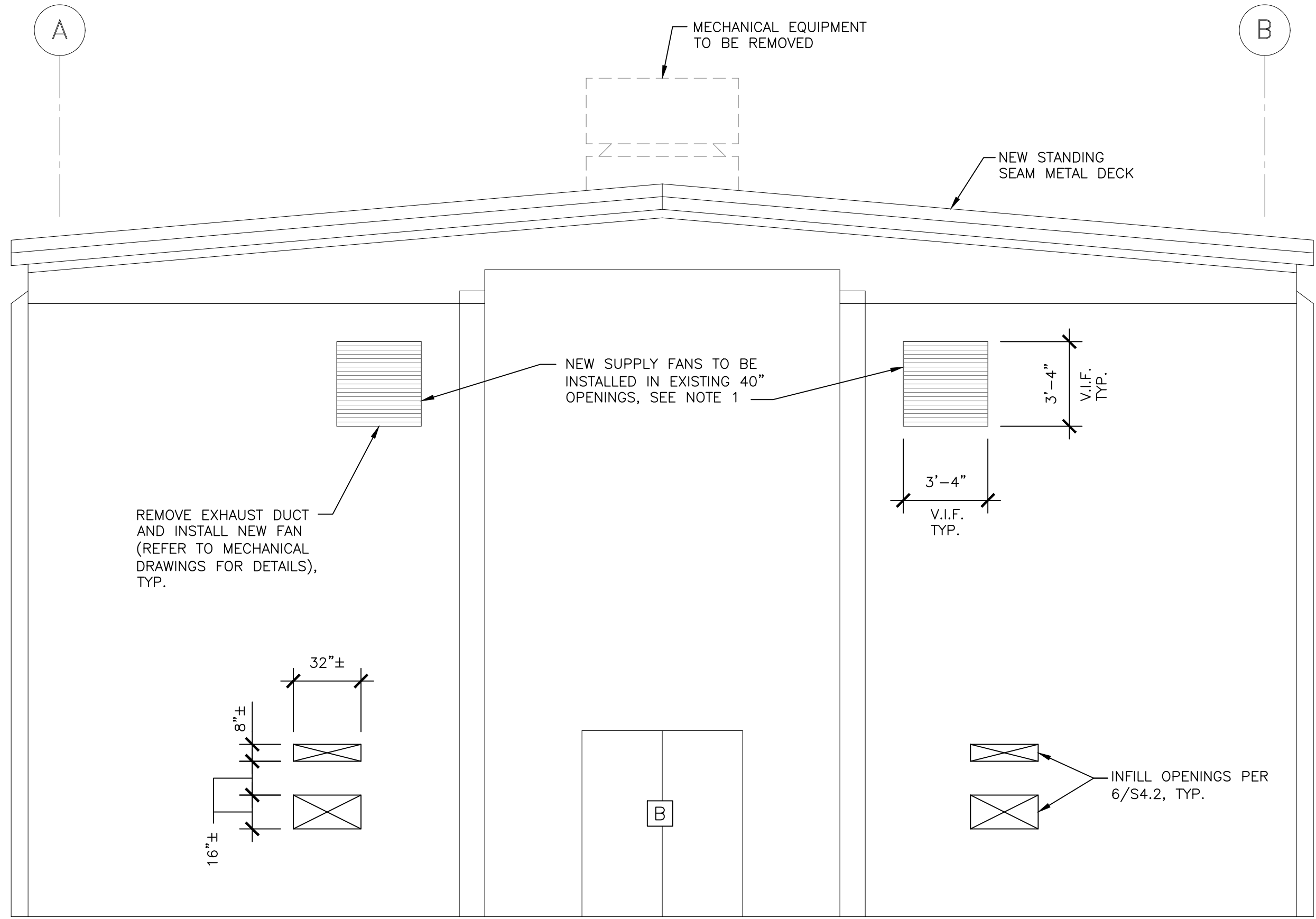
1 EAST ELEVATION
S3.2 SCALE: 1/4" = 1'-0"



1A EAST ELEVATION
S3.2 SCALE: 1/4" = 1'-0"



1B PARTIAL EAST ELEVATION – EXISTING CANOPY
S3.2 SCALE: 1/4" = 1'-0"



2 WEST ELEVATION
S3.2 SCALE: 1/4" = 1'-0"

- LEGEND:**
- CONCRETE CRACK REPAIR
 - CONCRETE SPALL REPAIR
 - CONCRETE MASONRY UNIT REPAIR

- ELEVATION NOTES**
- NEW SUPPLY FANS ARE MANUFACTURED BY LOREN COOK EWD MODEL 24EWS622D08, FLOW 1948 CFM, 860RPM, 0.256 HP. NEW SUPPLY FANS REQUIRE A 36 7/16" DIAMETER WALL OPENING AND EXISTING WALL OPENING IS 40" DIAMETER. CONTRACTOR SHALL PROVIDE FAN CONNECTION SUBMITTAL THAT SHOWS METHOD TO CONNECT FAN TO EXISTING OPENING AND MAKE SURE CONNECTION IS PROPERLY SEALED.



2A WEST ELEVATION
S3.2 SCALE: 1/4" = 1'-0"

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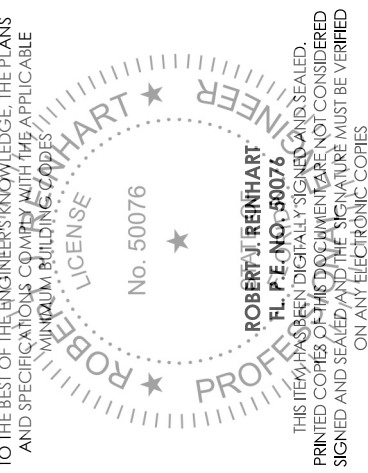
EAST AND WEST ELEVATIONS	
DATE: 06-03-25	DRAWN BY: RC/RM
JOB NO: 23-302	DESIGN BY: RR

SHEET NO.
S3.2



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TECO BUILDING EVALUATION

2700 Maritime Blvd., Tampa, FL 33605

HOWARD F. CURREN AWTP

2545 GUY N. VERGER BLVD.

TAMPA, FL 33605

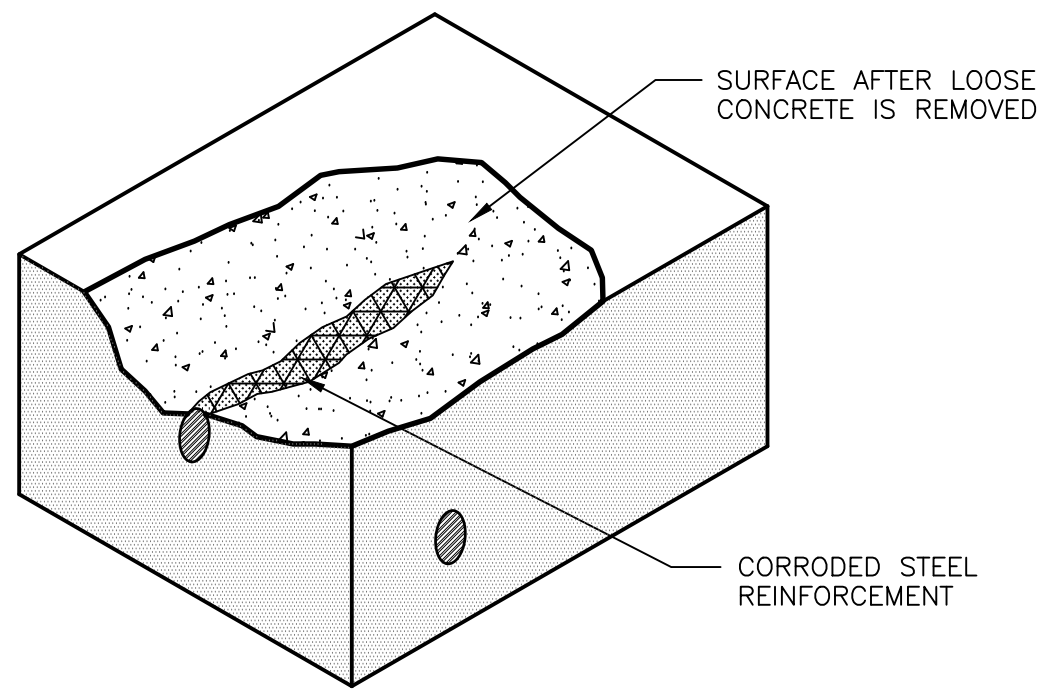


FIGURE 1:
SURFACE PREPARATION WHEN CORRODED REINFORCEMENT IS ENCOUNTERED. REFER TO FIGURES 2 AND 3.

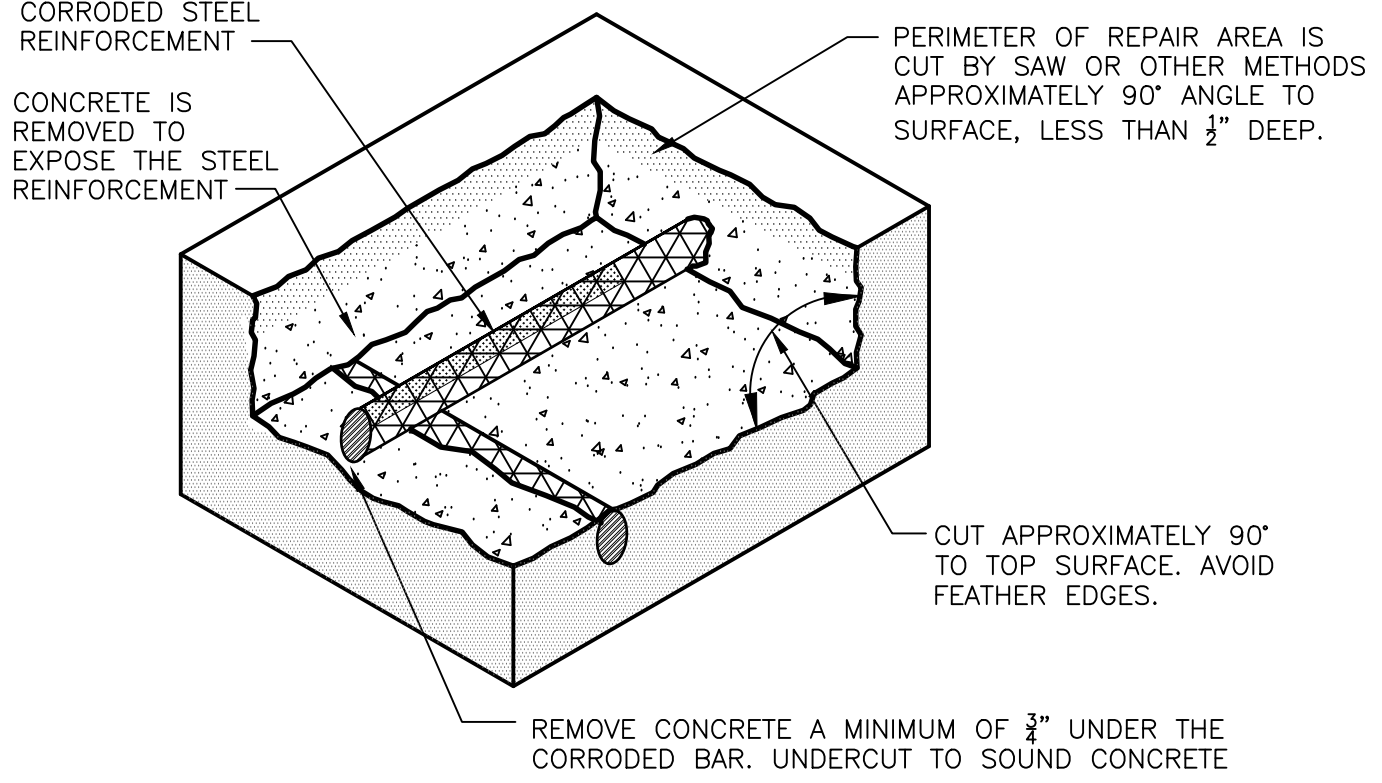


FIGURE 2:
SURFACE PREPARATION WHEN CORRODED REINFORCEMENT IS ENCOUNTERED AT TOP BARS ONLY. REFER TO FIGURE 4

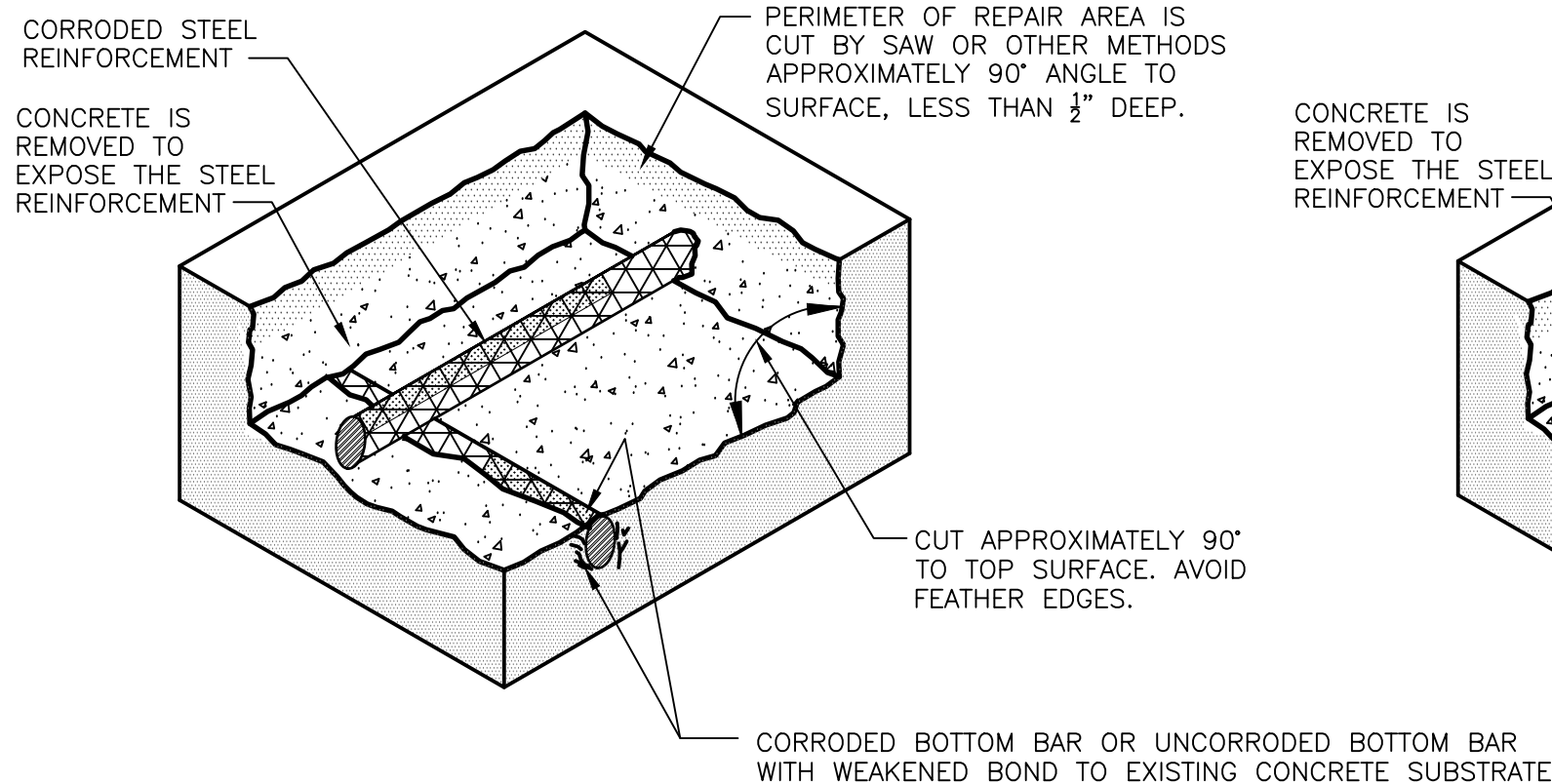


FIGURE 3:
SURFACE PREPARATION WHEN CORRODED REINFORCEMENT IS ENCOUNTERED AT TOP AND BOTTOM BARS. REFER TO FIGURE 5.

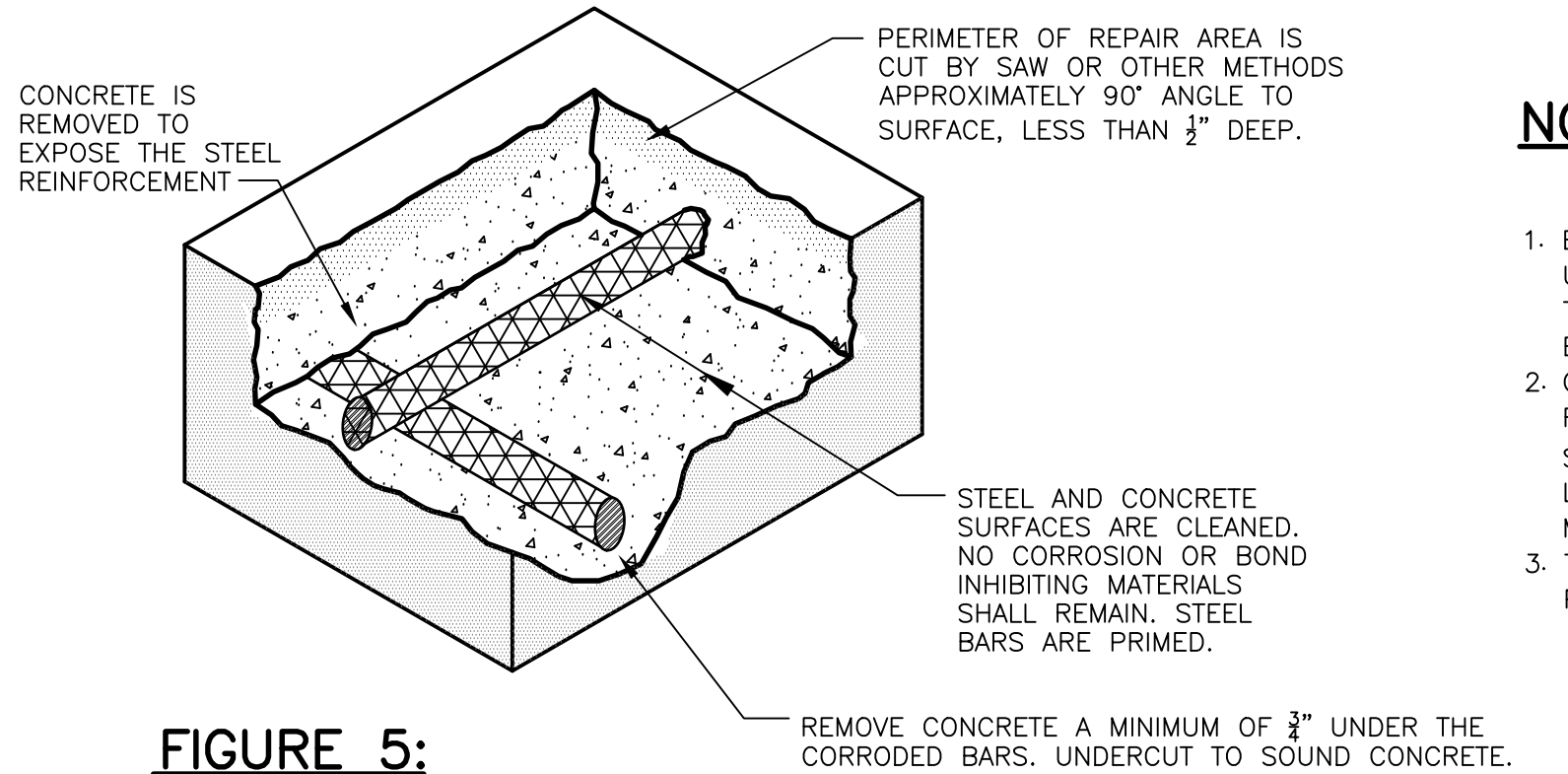
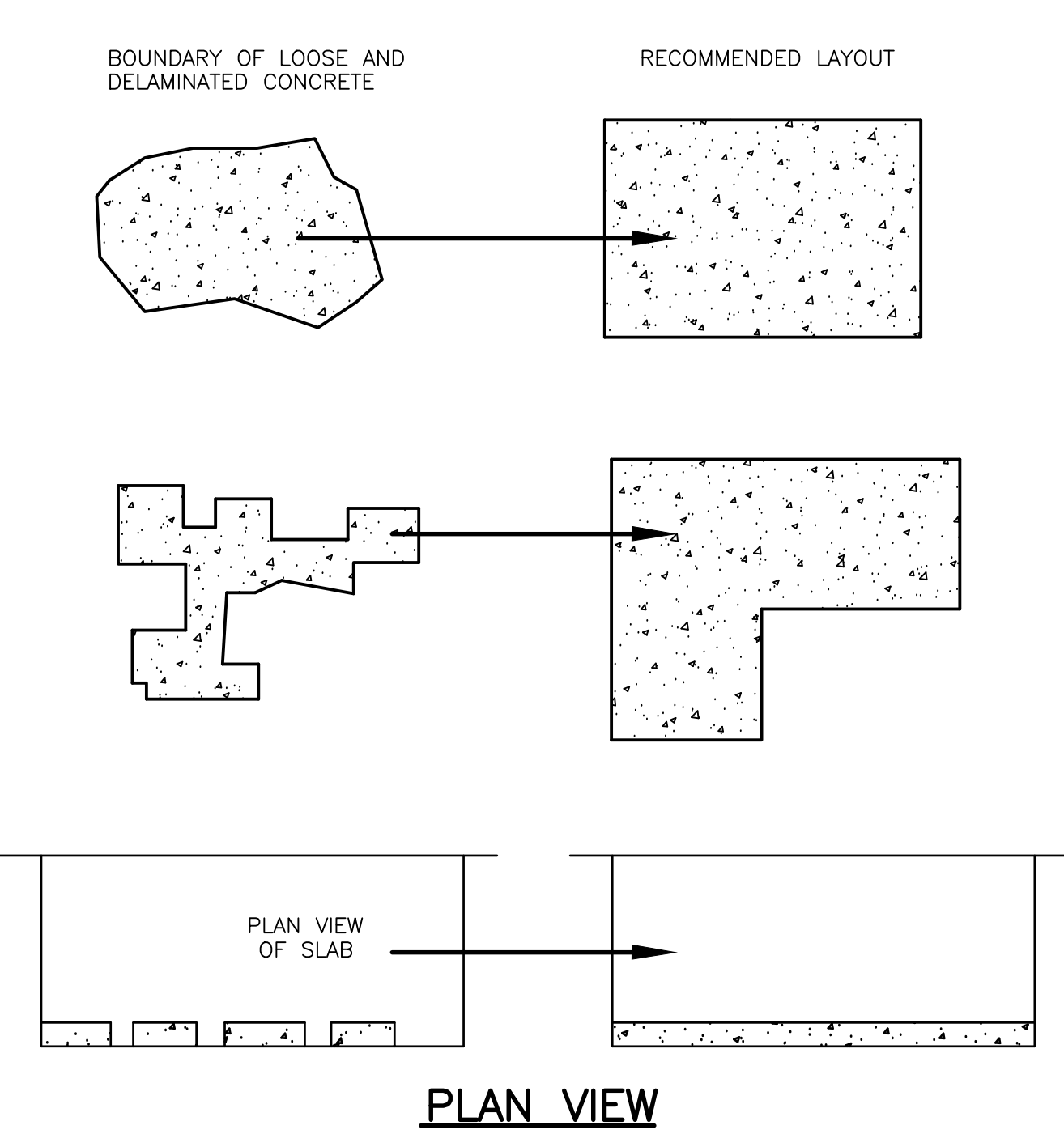


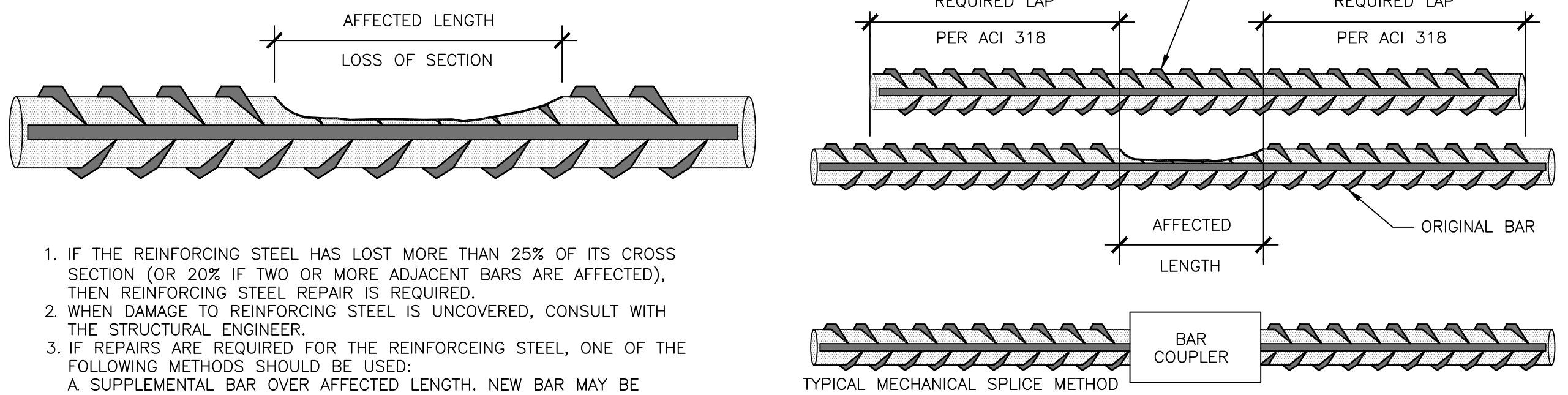
FIGURE 5:
SURFACE PREPARATION WHEN CORRODED REINFORCEMENT IS ENCOUNTERED AT TOP AND BOTTOM BARS.

1
S4.1 NOT TO SCALE
SURFACE PREPARATION DETAILS

- NOTES FOR FIGURES 1–5:**
1. EXPOSE CORRODED STEEL REINFORCEMENT UNTIL UNOXIDIZED, UNCORRODED STEEL WITH SOUND BOND TO THE EXISTING CONCRETE SUBSTRATE IS ENCOUNTERED.
 2. CLEARANCE BETWEEN UNDERCUT STEEL REINFORCEMENT AND SOUND CONCRETE SUBSTRATE SHALL BE $\frac{3}{8}$ " MINIMUM OR $\frac{1}{4}$ " LARGER THAN THE LARGEST AGGREGATE IN THE CONCRETE REPAIR MORTAR.
 3. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING PRIOR TO CONCRETE DEMOLITION.

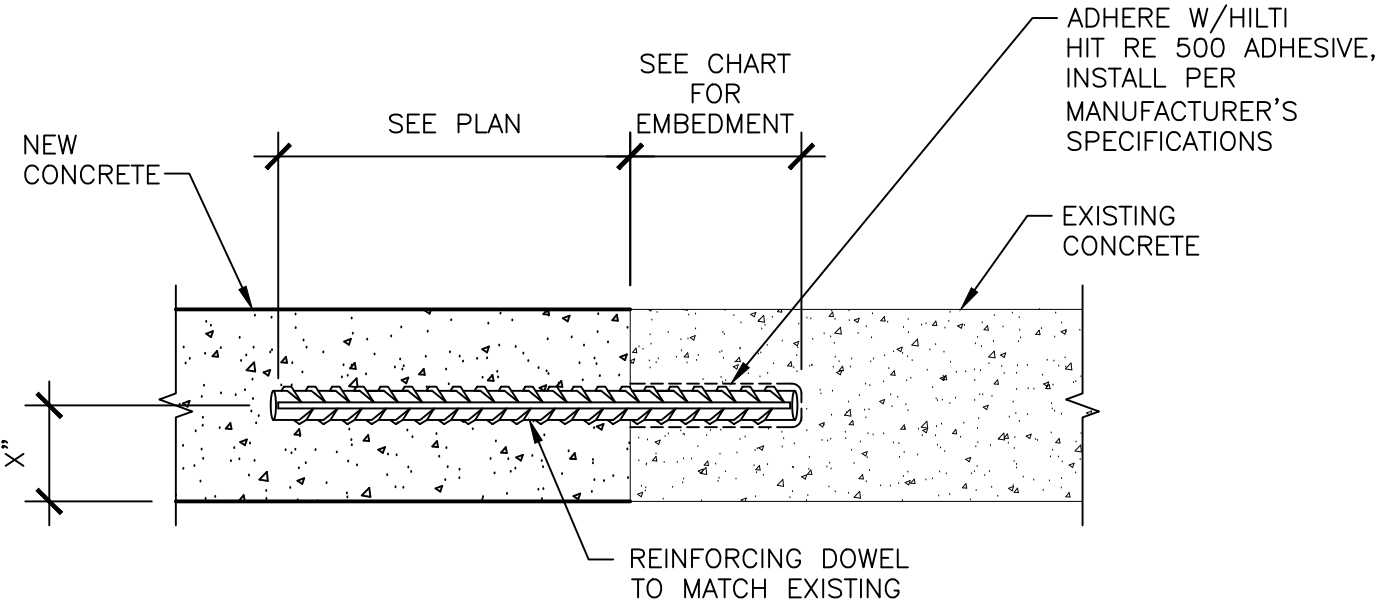


2
S4.1 NOT TO SCALE
GEOMETRY OF CONCRETE REPAIRS



1. IF THE REINFORCING STEEL HAS LOST MORE THAN 25% OF ITS CROSS SECTION (OR 20% IF TWO OR MORE ADJACENT BARS ARE AFFECTED), THEN REINFORCING STEEL REPAIR IS REQUIRED.
2. WHEN DAMAGE TO REINFORCING STEEL IS UNCOVERED, CONSULT WITH THE STRUCTURAL ENGINEER.
3. IF REPAIRS ARE REQUIRED FOR THE REINFORCING STEEL, ONE OF THE FOLLOWING METHODS SHOULD BE USED:
A. SUPPLEMENTAL BAR OVER AFFECTED LENGTH. NEW BAR MAY BE MECHANICALLY SPLICED TO AFFECTED BAR OR PLACED PARALLEL TO EXISTING BAR.
B. COMPLETE BAR REPLACEMENT.

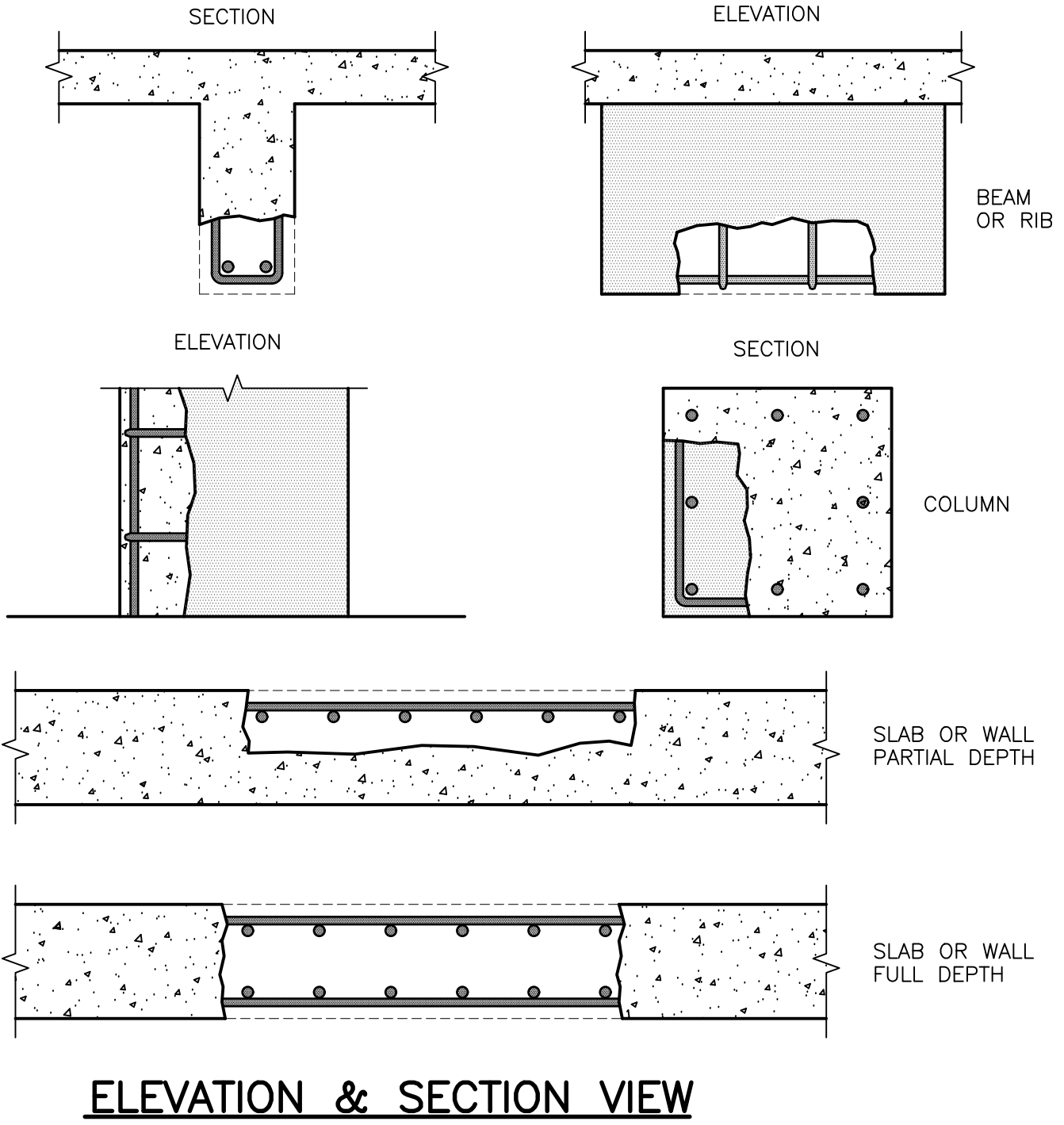
3
S4.1 NOT TO SCALE
REINFORCING STEEL REPAIR – SECTION LOSS DETAIL



REBAR SIZE	MINIMUM EMBEDMENT
#3	4"
#4	5"
#5	6"
#6	7"
#7	8"
#8	9"

NOTE:
VERIFY EMBEDMENT LENGTH WITH EPOXY MANUFACTURER

4
S4.1 NOT TO SCALE
REINFORCING BAR EMBEDMENT

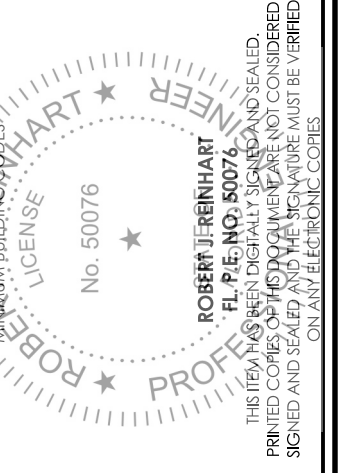


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NO.	COMMENTS

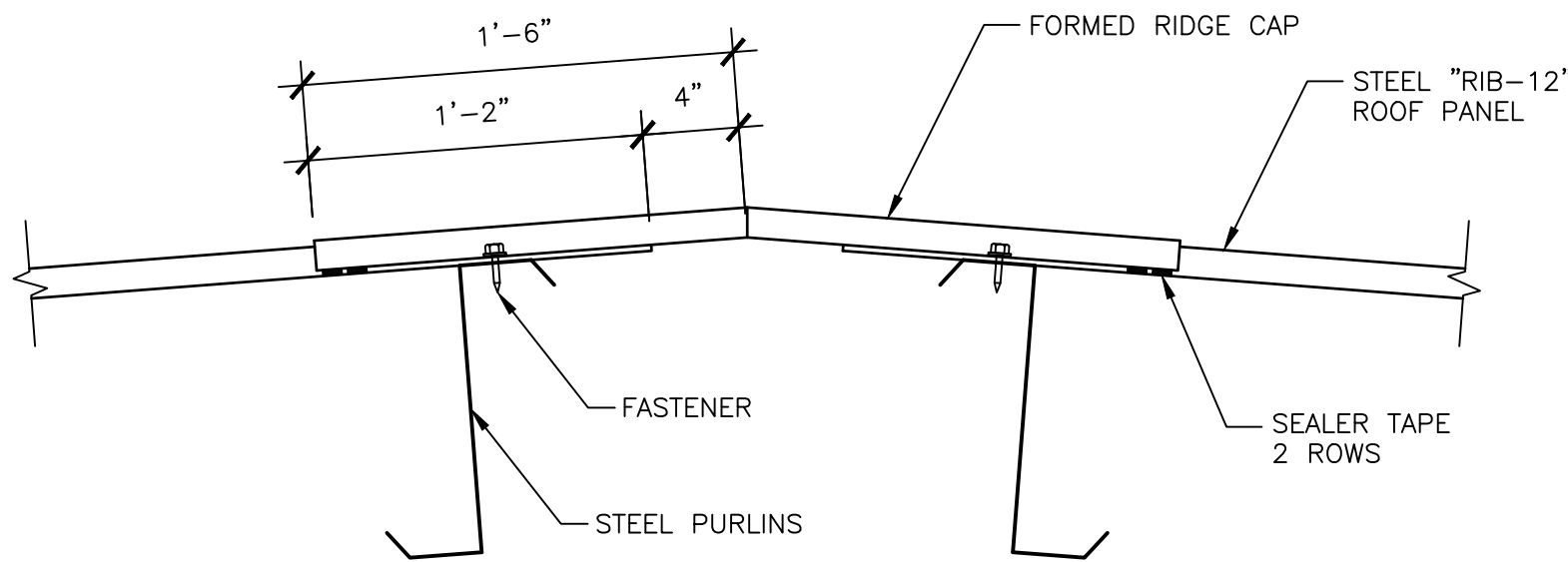
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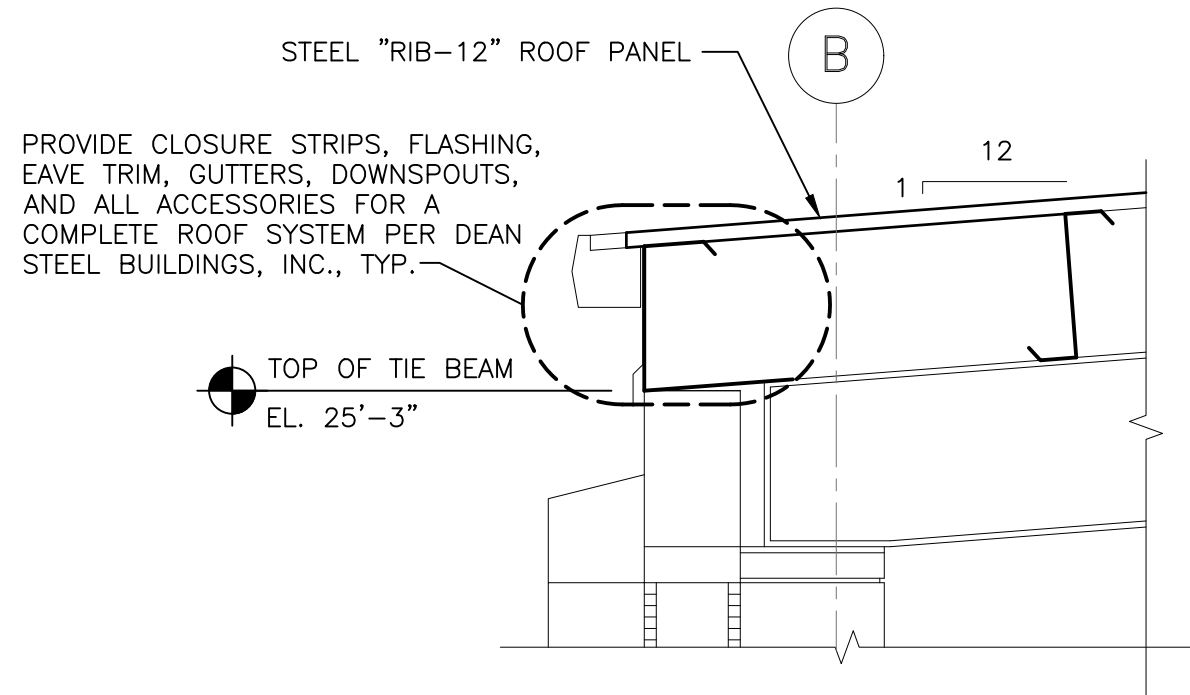


CONCRETE REPAIR DETAILS
DATE: 06-03-25
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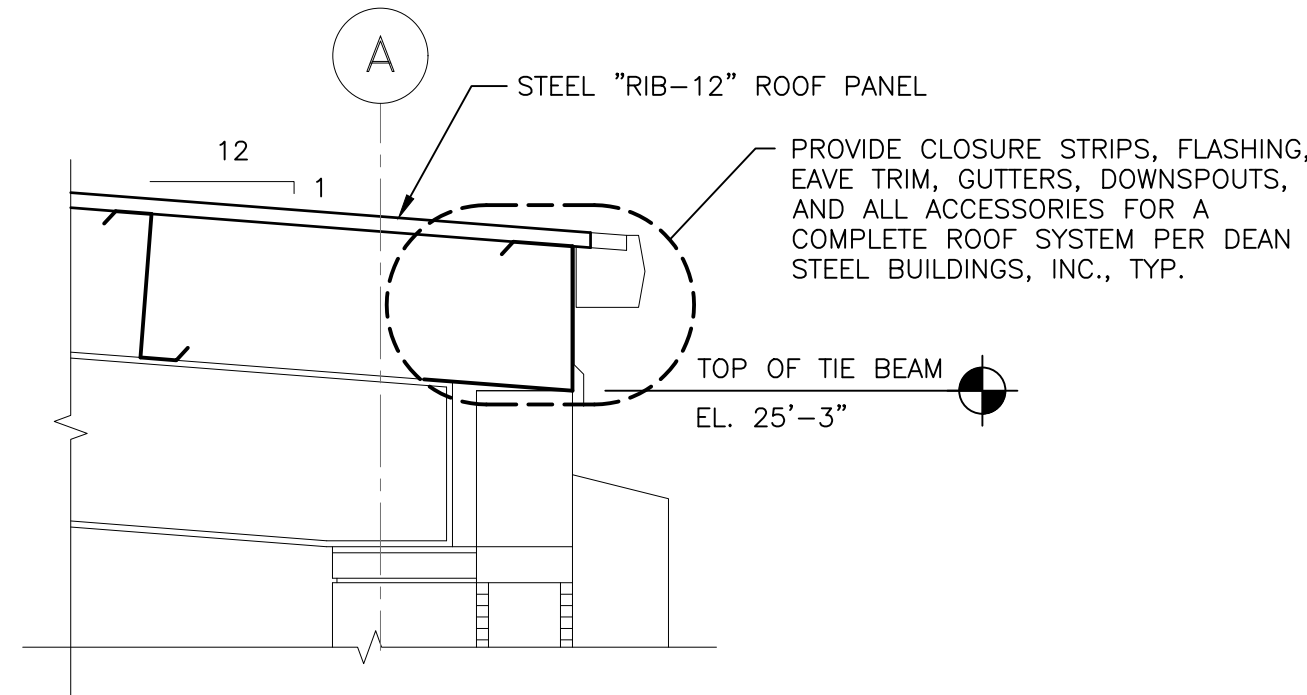
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S4.1



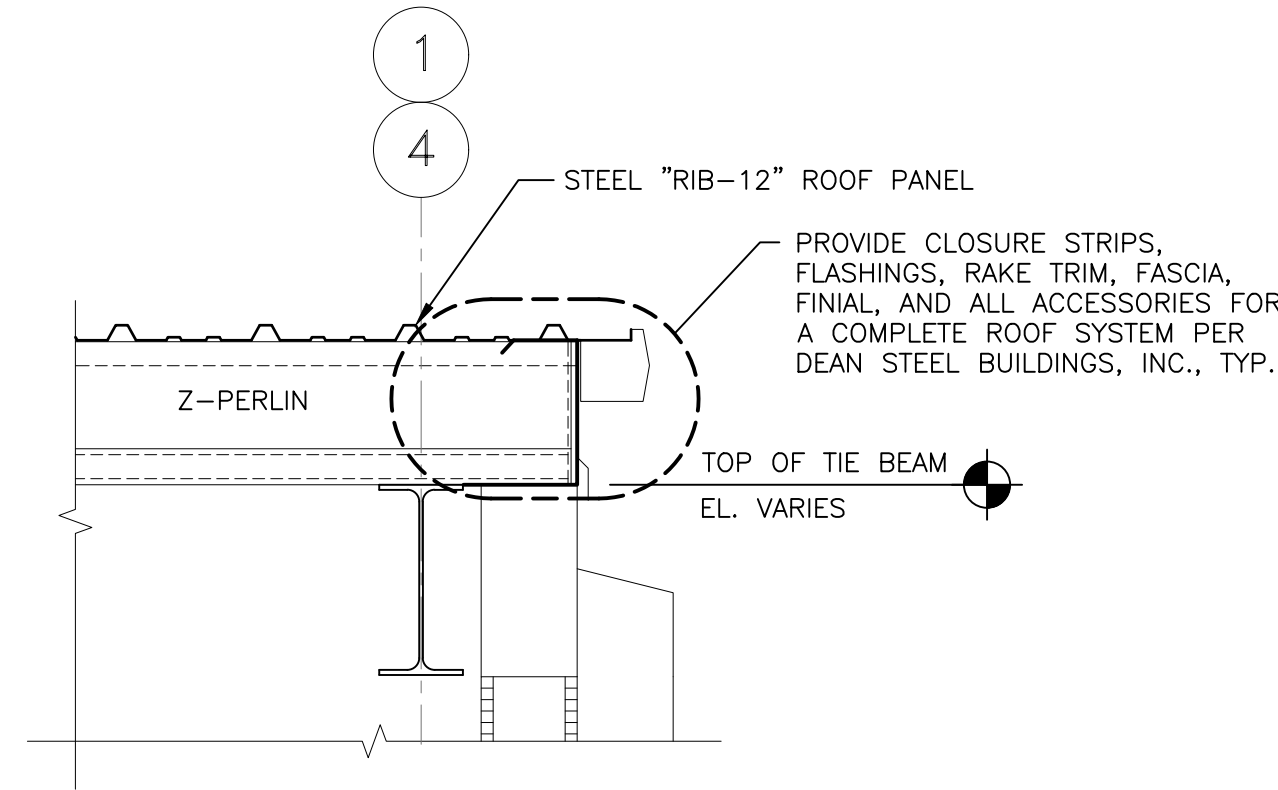
1 RIDGE DETAIL
S4.2 SCALE: 1 1/2" = 1'-0"



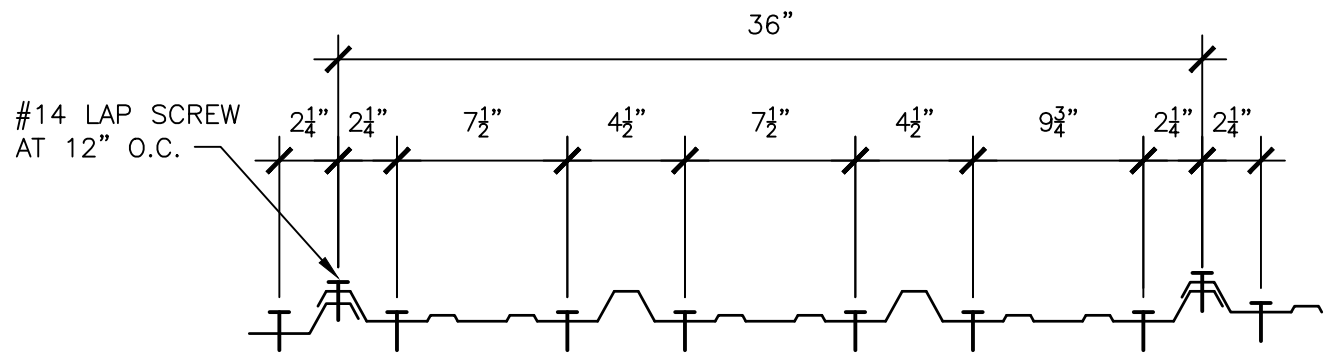
2 SECTION
S4.2 SCALE: 3/4" = 1'-0"



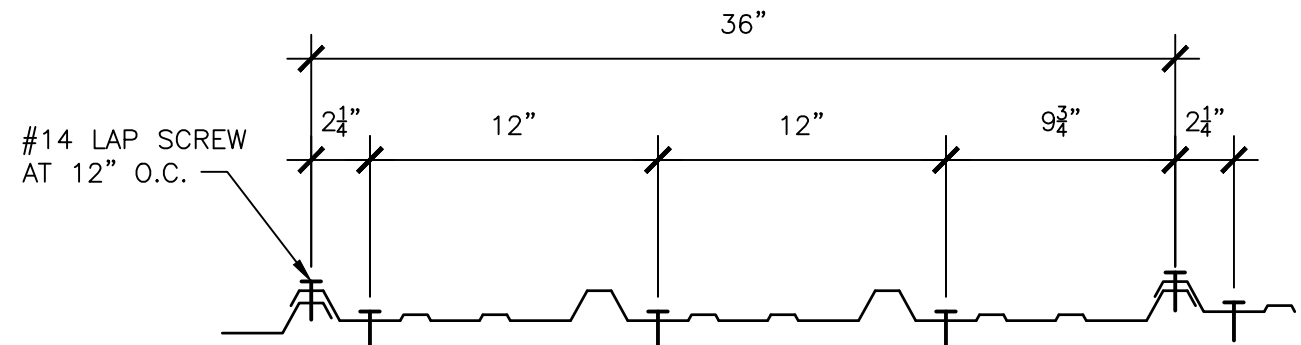
3 SECTION
S4.2 SCALE: 3/4" = 1'-0"



4 SECTION
S4.2 SCALE: 3/4" = 1'-0"



SPACING AT EAVE, END LAP & PEAK

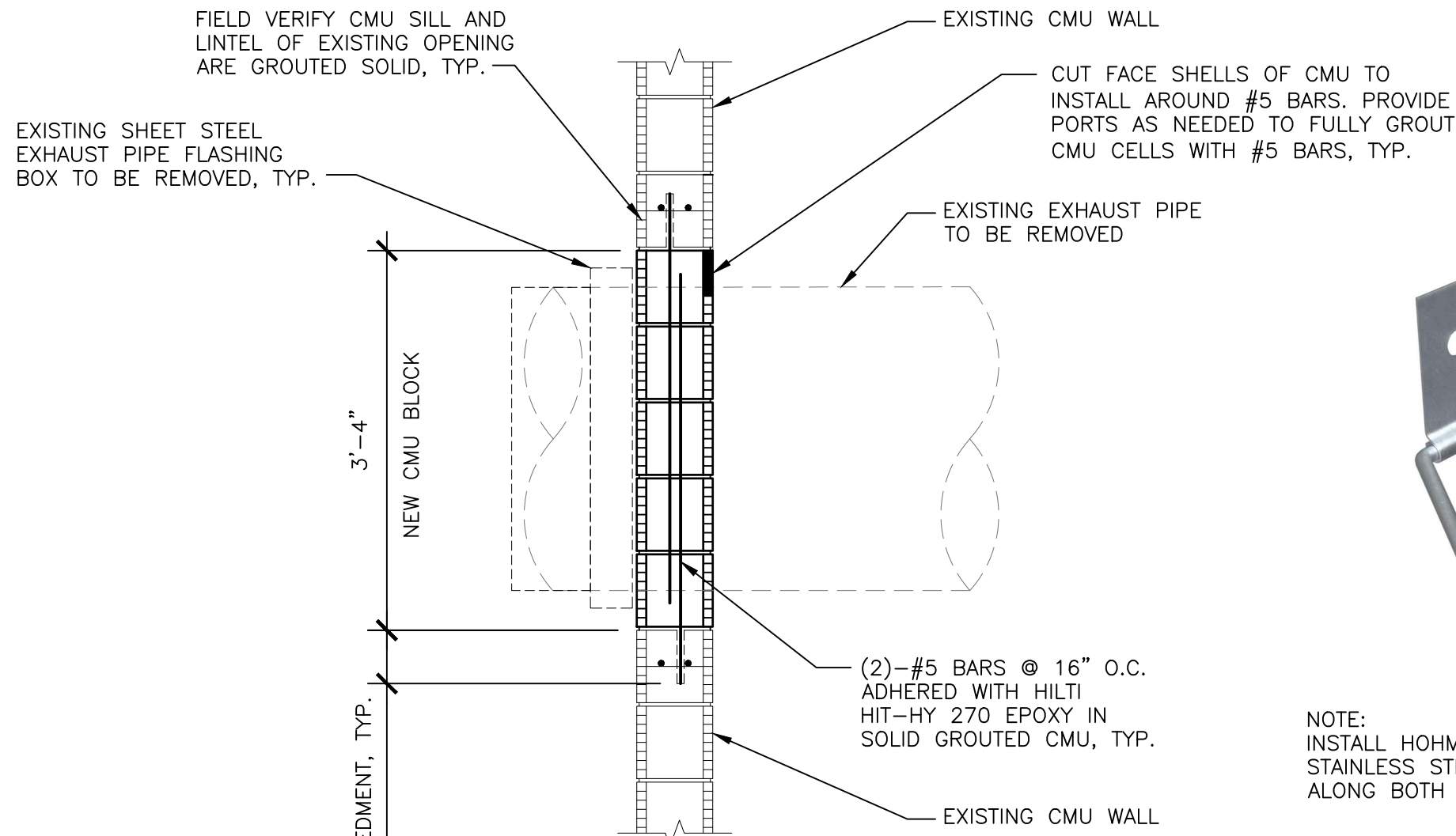


SPACING AT PURLINS

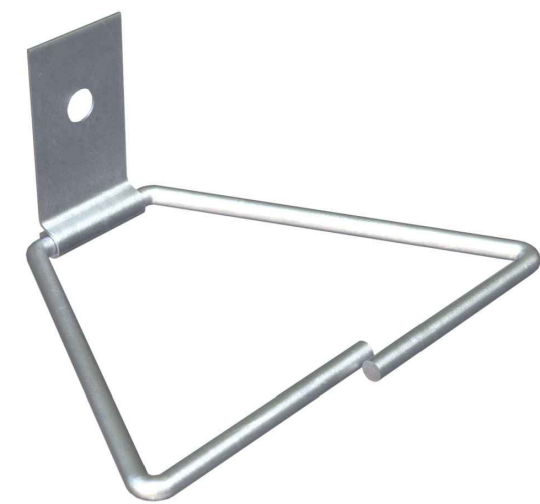
#12 SELF DRILLING SCREWS AT SPACING SHOWN

STRUCTURAL GALVALUME STEEL "RIB-12" ROOF PANEL AS MANUFACTURED BY DEAN STEEL BUILDINGS, INC., FL PRODUCT APPROVAL NUMBER 3774.

5 STEEL ROOF PANEL FASTENING DETAIL
S4.2 NOT TO SCALE



NOTE: THE EXISTING EXHAUST PIPES AND SHEET STEEL FLASHING BOXES ARE TO BE REMOVED AND THE OPENINGS WILL BE RE-USED FOR THE INSTALLATION OF NEW SUPPLY FANS



NOTE: INSTALL HOHMANN & BARNARD, INC., 345-BT FLEXIBLE STAINLESS STEEL TIES AT 16 INCHES VERTICALLY ALONG BOTH SIDES OF OPENING, MIN. ONE PER SIDE, TYP.

6 WALL OPENING DETAIL
S4.2 SCALE: 3/4" = 1'-0"

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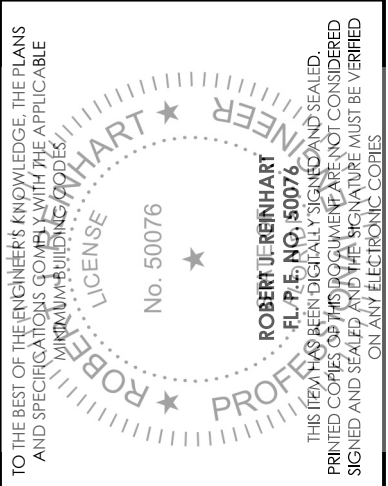
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State of Florida Certificate of Authorization No. 9149



SECTIONS AND DETAILS

DATE: 06-03-25
JOB NO: 23-302
DRAWN BY: RC/RM
DESIGN BY: RR

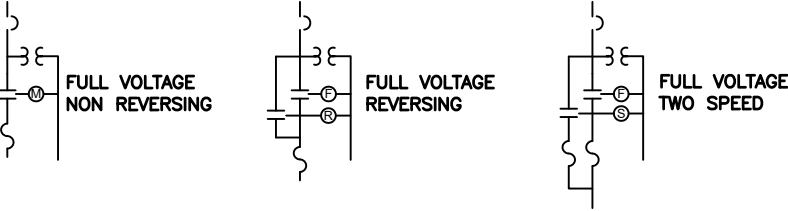
SHEET NO.
S4.2

ONE LINE DIAGRAM SYMBOLS

	BUS-RATING AS SHOWN
	INCOMING LINE
	OUTCOMING LINE
	DISCONNECTING DEVICE
	CONDUCTORS CONNECTED
	CONDUCTORS NOT CONNECTED
	FUSE-RATING AS SHOWN
	SINGLE THROW DISCONNECT SWITCH-RATING AS SHOWN
	FUSED DISCONNECT SWITCH-100A SWITCH, 70A FUSE
	LOW VOLTAGE AIR CIRCUIT BREAKER WITHOUT TRIP DEVICE 100A FRAME
	LOW VOLTAGE AIR CIRCUIT BREAKER WITH 225A FRAME AND 125A TRIP
	MEDIUM VOLTAGE DRAWOUT TYPE AIR CIRCUIT BREAKER
	GROUND CONNECTION
	LIGHTNING OR SURGE ARRESTOR
	SURGE CAPACITOR
	POWER TRANSFORMER WITH WINDING CONNECTIONS INDICATED
	CONTROL POWER TRANSFORMER
	POTENTIAL TRANSFORMER
	CURRENT TRANSFORMER

	THERMAL OVERLOAD ELEMENT (OL)
	SQUIRREL CAGE MOTOR (INDICATE HORSEPOWER)
	GENERATOR
	INDICATING LIGHT (R-RED, G-GREEN, A-AMBER, B-BLUE, W-WHITE)

COMBINATION STARTER WITH CONTROL TRANSFORMERS AND OVERLOAD RELAYS



SCHEMATIC AND WIRING DIAGRAM SYMBOLS

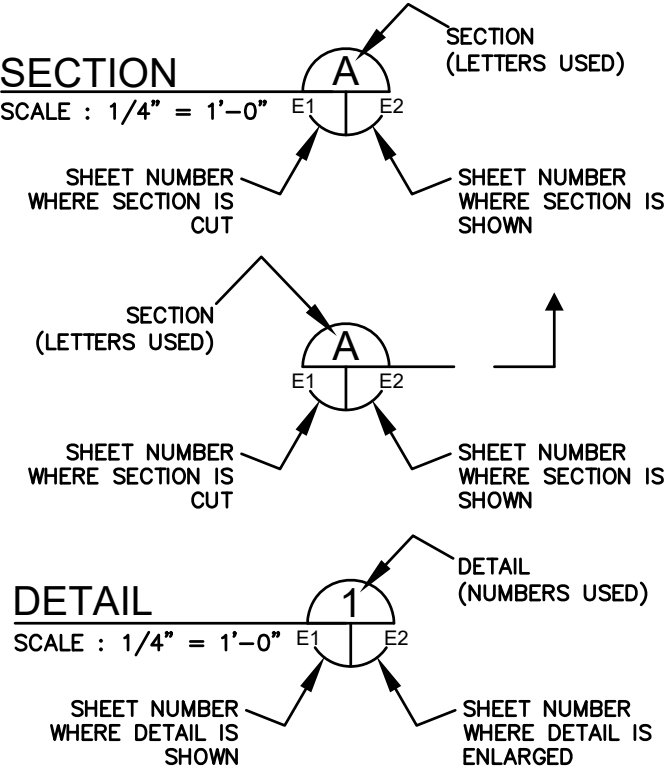
	OPERATING COIL	M-MOTOR STARTER	AR- AUXILIARY RELAY
	NORMALLY OPEN CONTACT (N.O.)	C- CONTACTOR	CR- CONTROL RELAY
	NORMALLY CLOSED CONTACT (N.C.)	F- FORWARD	TR- TIME DELAY RELAY
	NORMALLY OPEN CONTACT WITH TIME DELAY CLOSING (ON-DELAY)	R- REVERSE	
	INSTANT OPEN- TIME DELAY CLOSED CONTACT (OFF DELAY)		

	NORMALLY CLOSED CONTACT WITH TIME DELAY OPENING (ON-DELAY)
	INSTANT CLOSE- TIME DELAY OPEN CONTACT (OFF DELAY)
	INDICATING LIGHT- PUSH TO TEST (R-RED, G-GREEN, A-AMBER, B-BLUE, W-WHITE)
	3-POSITION SELECTOR SWITCH (SHOWN IN "H" POS.)
	NORMALLY OPEN PUSHBUTTON- MOMENTARY CONTACT
	NORMALLY CLOSED PUSHBUTTON- MOMENTARY CONTACT
	DOUBLE CIRCUIT PUSHBUTTON WITH SPRING RETURN TO NORMAL
	TRANSFORMER
	OVERLOAD RELAY CONTACT
	THERMAL OVERLOAD ELEMENT (OL)
	ON-OFF SWITCH
	GROUND BUS
	NEUTRAL BUS (INSULATED)
	SINGLE-POLE CIRCUIT BREAKER

	NORMALLY OPEN N.O.		NORMALLY CLOSED N.C.	LIMIT SWITCH
				FLOAT SWITCH
				PRESSURE SWITCH
				FLOW SWITCH
				TEMPERATURE

NOTE:
THE SYMBOLS SHOWN COMPRISE A GENERAL LEGEND
TO FACILITATE THE USE OF PLANS. REFER TO THE
PLANS AND SPECIFICATIONS FOR ITEMS REQUIRED.

EXAMPLE OF SECTION CUT AND DETAIL



#	DATE	REVISIONS
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DES:	TDT
DRN:	TDT
CKD:	
DATE:	

POWER AND LIGHTING SYMBOLS

	EXPOSED CONDUIT RUN
	CONDUIT RUN CONCEALED IN FLOOR OR UNDERGROUND
	OVERHEAD ELECTRICAL SERVICE CONDUCTORS OR OVERHEAD COMMUNICATIONS CONDUCTORS
	CONDUIT WITH HOT, NEUTRAL AND GROUND WIRES (LONG LINE IS NEUTRAL; LONG LINE WITH DOTS DENOTE GROUND)
	HOMERUN TO LIGHTING PANELBOARD (PNL-1 INDICATES PANELBOARD AND 1, 3, 5 INDICATES 20A-1P CKTS. 1, 3 AND 5)
	FLEXIBLE LIQUIDTIGHT CONDUIT
	CONDUIT-UP (OR TOWARDS VIEWER)
	CONDUIT-DOWN (OR AWAY FROM VIEWER)
	GROUNDING CONDUCTOR
	GROUND ROD
	LIGHTNING SYSTEM AIR TERMINAL
	GROUND ROD WITH TEST WELL
	CEILING MOUNTED LED FIXTURE. "A" INDICATES FIXTURE TYPE LISTED IN SCHEDULE
	WALL MOUNTED LED LIGHTING FIXTURE
	EXIT SIGN
	EMERGENCY LIGHTING FIXTURE

	DUPLEX RECEPTACLE- 20 A, 120 V, 3 WIRE (TO PANEL PLA - CIRCUIT No.4)
	QUAD RECEPTACLE- 20 A, 120 V, 3 WIRE (TO PANEL PLA - CIRCUIT No.4)
	SINGLE RECEPTACLE - 2 POLE, 3 WIRE, 240V, RATING NOTED
	3 POLE, 4 WIRE, 240V WELDING OUTLET (60 A)
	SINGLE POLE SWITCH
	THREE WAY SWITCH
	FOUR WAY SWITCH
	OUTLET BOX WITH BLANK COVER
	TIME CLOCK COIL
	JUNCTION BOX
	PULL BOX
	TERMINAL BOX
GENERAL SYMBOLS	
	START-STOP PUSHBUTTON
	ON-OFF MAINTAINED CONTACT PUSHBUTTON WITH LOCK ATTACHMENT
	INDICATING LIGHT AND START-STOP PUSHBUTTON WITH LOCK ATTACHMENT ON STOP
	PUSH/PULL BUTTON WITH STOP LOCK. (PULL TO RESUME- PUSH TO STOP)
	SELECTOR SWITCH ("HOA" INDICATES HAND, OFF, AND AUTO; "MOR" INDICATES MANUAL, OFF, AND REMOTE; ETC.)
	ON-OFF SWITCH WITH LOCK ATTACHMENT ON OFF POSITION

ELECTRICAL LEGEND		
SYMBOL	DESCRIPTION	MOUNTING/REMARKS
	HIGHBAY LIGHTING FIXTURE (1)	CEILING MOUNT
	LED WALLPACK LIGHTING FIXTURE (1)	EXTERIOR WALL
	LED EMERGENCY AREA LIGHTING FIXTURE (1)	WALL MOUNTED
	LED EXIT SIGN FIXTURE (1)	SURFACE UNIVERSAL MOUNT
	SWITCH: SINGLE-POLE OR AS NOTED, 20A, 120/277VAC	TOP 48" AFF OR AS NOTED
	SWITCH: THREE-WAY, 20A, 120/277VAC	TOP 48" AFF OR AS NOTED
	SWITCH: 4-WAY, 20A, 120/277VAC	TOP 48" AFF OR AS NOTED
	DUPLEX RECEPTACLE: 20A, 125VAC	TOP 20" AFF OR AS NOTED
	COUNTER-TOP DUPLEX RECEPTACLE: 20A, 125VAC	TOP 44" AFF OR AS NOTED
	QUAD RECEPTACLE: 20A, 125VAC	TOP 20" AFF OR AS NOTED
	TELEPHONE/DATA OUTLET (2)	TOP 20" AFF OR AS NOTED
	ELECTRIC PANEL	REFER TO PANEL SCHEDULE
	FIRE ALARM PANEL	
	EQUIPMENT DISCONNECT SWITCH	
	OUTLET OR JUNCTION BOX	WIRES INDICATED AS FOLLOWS: — TWO WIRES: —//— THREE WIRES: —//— FOUR WIRES, ETC. —//— NEUTRAL WIRE —//— ISOLATED GR. WIRE PROVIDE 2#12 THWN CU. IN 1/2" C. UNLESS OTHERWISE NOTED AND EQUIPMENT GROUND WIRE (NOT INDICATED) IN ALL POWER AND LIGHTING RACEWAYS.
	FIRE ALARM STROBE LIGHT	
	FIRE ALARM HORN	
	SMOKE DETECTOR	
	JUNCTION BOX WITH FLEXIBLE CONNECTION	
	CONDUIT RUN CONCEALED IN CEILING SPACE OR WALL	
	CONDUIT RUN CONCEALED IN FLOOR OR UNDERGROUND	
	CONDUIT RUN EXPOSED	
	HOME RUN TO PANEL/CIRCUIT(S) INDICATED	

NOTE:
THE SYMBOLS SHOWN COMPRISE A GENERAL LEGEND TO FACILITATE THE USE OF PLANS. REFER TO THE PLANS AND SPECIFICATIONS FOR ITEMS REQUIRED.

GENERAL NOTES:

1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO PURCHASING EQUIPMENT OR COMMENCING CONSTRUCTION.
2. ALL POWER CONDUCTORS SHALL BE STRANDED COPPER, #12 AWG MIN. W/XHHW-2 INSULATION, UNLESS OTHERWISE NOTED.
3. ALL WIRING SHALL BE IDENTIFIED W/NUMBERS AT ALL TERMINALS AND ON WIRING DIAGRAMS.
4. VERIFY ALL MECHANICAL EQUIPMENT SIZES AND RATING PRIOR TO CONNECTING.
5. FIELD VERIFY ALL EQUIPMENT LOCATIONS AND CONNECTIONS PRIOR TO COMMENCING CONSTRUCTION.
6. PLANS ARE DESIGNED IN ACCORDANCE WITH THE 8TH EDITION 2023 OF THE FLORIDA BUILDING CODE AND THE 2020 EDITION OF THE NATIONAL ELECTRICAL CODE. CONTRACTOR SHALL ENSURE THAT ALL ELECTRICAL WORK PERFORMED SHALL ADHERE TO THE SAME ACCORDANCE AND ALL APPLICABLE LOCAL ORDINANCES.
7. ALL THREADED CONNECTIONS SHALL BE COATED W/ ALUMA-SHIELD ANTI-SIEZE COMPOUND MANUFACTURED BY THOMAS & BETTS (T & B) OR EQUAL.
8. ALL PANELS, DISCONNECTS, SWITCHES, AND EQUIPMENT COVERPLATES SHALL BE LABELED W/ NAMEPLATES. NAMEPLATES SHALL BE THREE-PLY PHENOLIC BLACK-WHITE-BLACK ENGRAVED THROUGH THE FIRST BLACK LAYER. LETTERING SHALL BE 0.5 CM (3/16") MIN. EDGE OF NAMEPLATE SHALL BE BEVELED 45 DEG.
9. ALL CONDUIT SHALL BE SUPPORTED AT MAXIMUM 5'-0" INTERVALS.
10. ALL CIRCUITS SHALL HAVE A PROPERLY SIZED GROUNDING CONDUCTOR ROUTED INSIDE EACH CONDUIT W/ POWER CONDUCTORS.
11. ALL CONDUCTOR LENGTHS SHALL BE CONTINUOUS, NO SPLICES OR CONDUCTOR TERMINATIONS SHALL BE PERMITTED UNLESS SPECIFICALLY DESIGNED IN THE DRAWINGS.
12. NEATLY COIL ALL SPARE CONDUCTORS & TAPE W/ VINYL ELECTRICAL TAPE (SCOTCH 33+).
13. PROVIDE A MINIMUM OF 3'-6" CLEARANCE IN FRONT OF ALL ELECTRICAL EQUIPMENT IN ACCORDANCE W/ ARTICLE 110 OF THE NEC.
14. ALL FASTENING HARDWARE (SCREW, BOLTS, NUTS ETC.) SHALL BE 316-STAINLESS STEEL, FASTENING HARDWARE CONSTRUCTED OF FERROUS MATERIAL ARE NOT ACCEPTABLE.
15. EXPOSED CONDUITS SHALL BE NON-COATED RIGID ALUMINUM CONDUIT, UNLESS OTHERWISE NOTED (UON). INSTALL PVC COATED RIGID ALUMINUM CONDUIT TO THE WET WELL, UNLESS OTHERWISE NOTED (UON).
16. DIRECT BURIED AND CONCRETE ENCASED CONDUIT SHALL BE SCHEDULE 80 PVC, UNLESS OTHERWISE NOTED. TRANSITIONS FROM ABOVE-GRADE RIGID ALUMINUM CONDUIT TO NONMETALLIC CONDUIT SHALL BE ACCOMPLISHED WITH A THREADED ADAPTER. RIGID ALUMINUM CONDUIT INSTALLED ABOVE GRADE AND EXTENDING BELOW GRADE SHALL INCLUDE THE FIRST 90° ELBOW. ALL RIGID ALUMINUM CONDUITS EXTENDING BELOW GRADE SHALL BE COATED WITH TWO COATS OF ASPHALTUM-TYPE PAINT ALONG ITS ENTIRE LENGTH BELOW GRADE AND EXTENDING 6" ABOVE GRADE OR ABOVE THE TOP OF THE FINISHED SLAB.
17. COPPER-FREE ALUMINUM WATERTIGHT HUBS (MYERS HUBS) SHALL BE USED FOR CONNECTIONS TO CONTROL BOXES, ETC. MOUNTED OUTDOORS, BELOW GRADE, OR WASHDOWN AREAS.
18. A 316-STAINLESS STEEL CHANNEL ERECTOR SYSTEM SHALL BE USED TO SUPPORT ALL CONDUITS, BOXES ETC. USE 316 STAINLESS STEEL MOUNTING HARDWARE.
19. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND MAKE ADJUSTMENTS AS NECESSARY TO EXECUTE THE PROPOSED INSTALLATIONS.
20. ALL EXISTING INSTALLATIONS DENOTED ON THE DRAWINGS ARE FOR THE CONTRACTORS REFERENCE ONLY. ALL EXISTING INSTALLATIONS SHALL BE FIELD VERIFIED PRIOR TO SUBMITTING A BID AND PRIOR TO COMMENCING CONSTRUCTION.
21. PULL BOXES SHALL BE INSTALLED AS NECESSARY TO FACILITATE WIRE PULLS AND AVOID EXCESSIVE PULLING TENSION ON WIRING. IN NO CASE SHALL CONDUIT LENGTHS EXCEED 150' OR THE EQUIVALENT OF FOUR QUARTER BENDS (360 DEGREES TOTAL) WITHOUT A PULL BOX. PULL BOXES SHALL BE SIZED IN ACCORDANCE WITH ARTICLE 314 OF THE NEC.

22. ALL ELECTRICAL COMPONENTS SHALL BE UL LISTED AND AS SPECIFIED, OR AS APPROVED BY THE ENGINEER.
23. DIMENSIONS, ITEMS, OR ELEVATIONS MARKED "*" TO BE DETERMINED AFTER EQUIPMENT SELECTION.
24. ALL MECHANICAL CONNECTORS SHALL BE TORQUED PER NEC, UL OR MANUFACTURER'S SPECIFICATIONS.
25. ALL HINGED SURFACES SHALL BE GROUNDED WITH A BONDING JUMPER SECURED TO THE ENCLOSURE OR BACKPANEL.
26. MOUNTING OF CIRCUIT BREAKER ENCLOSURE, FAN MOTOR STARTERS, TIMECLOCK AND LIGHTING CONTACTORS SHALL BE VIA 1-5/8" x 1-5/8" 316 STAINLESS STEEL UNISTRUT SECURED TO WALL WITH 316 STAINLESS STEEL TAPCONS, WASHERS AND HARDWARE.
27. ALL CONDUITS SHALL BE SUPPORTED AT A MINIMUM OF 5'-0" WITH ALUMINUM TWO-HOLE STRAPS SECURED TO WALL WITH 316 STAINLESS STEEL TAPCONS, WASHERS AND HARDWARE.
28. ALL DEVICE BOXES (RECEPTACLES AND LIGHT SWITCHES) SHALL BE CAST, COPPER-FREE ALUMINUM FD BOXES.
28. ALL JUNCTION BOXES SHALL BE CAST, COPPER-FREE ALUMINUM FD BOXES.
29. ALL CONDUIT LB'S SHALL BE MARK 9, COPPER-FREE ALUMINUM.
30. ALL CONDUITS SECURED TO PANELBOARDS, TRANSFORMERS, MANUAL MOTOR STARTERS, LIGHTING CONTACTORS, TIMECLOCK, ETC. SHALL BE VIA COPPER-FREE ALUMINUM MYERS HUBS.
31. THE CONTRACTOR SHALL REMOVE ALL CONDUCTORS FROM CIRCUIT BREAKERS TO REMAIN BUT MADE SPARE BY THE NEW CONSTRUCTION. THE CONDUCTORS SHALL BE REMOVED THE ENTIRE LENGTH OF THE CIRCUIT FROM THE PANELBOARD TO THE DEVICE SERVED.
32. FOR THE EXISTING PANELBOARDS, ETC., WHICH WILL HAVE OBSOLETE CONDUITS REMOVED, CONTRACTOR SHALL PROVIDE AND INSTALL STAINLESS STEEL HOLE-PLUGS (HAMMOND OR EQUAL) IN HOLES CREATED BY CONDUIT REMOVAL.
33. ALL CONDUIT POURED IN THE EXISTING SLAB SHALL BE DEMOLISHED BY CUTTING THE CONDUIT OFF AT THE FINISHED FLOOR AND GROUTING THE CONDUIT.
34. ALUMINUM CONDUIT SURFACES THAT ARE IN CONTACT WITH SOIL OR CONCRETE SHALL BE COATED WITH TWO COATS ASPHALT VARNISH (FED. SPEC. TT-V-51) EXTENDING 4" BEYOND FINAL CONTACT POINT.
35. THE CONTRACTOR SHALL PROVIDE A WATERPROOF GROUT AROUND ALL NEW CONDUIT CLEAN PENETRATIONS.
36. THE CONTRACTOR SHALL PATCH ALL PENETRATIONS CREATED BY THE REMOVAL OF EXISTING CONDUITS.
37. CONTRACTOR SHALL WIPE CLEAN EXISTING EQUIPMENT (PANELBOARDS, TRANSFORMERS, ETC.).

SCOPE OF WORK:

1. REMOVE ALL EXISTING ELECTRICAL EQUIPMENT AND APPURTENANCES, INCLUDING BUT NOT LIMITED TO EXISTING CONDUIT, CONDUCTORS, BOXES, GROUNDING, LIGHTING FIXTURES, ETC. AS SHOWN ON THE DRAWINGS.
2. ANY SALVAGEABLE MATERIALS, AS DETERMINED BY THE CITY, SHALL BE DELIVERED BY THE CONTRACTOR TO A LOCATION WITHIN THE LIMITS OF THE HOWARD F. CURREN AWTP.
3. CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUCTORS, CONDUIT, SWITCHES, RECEPTACLES, DISCONNECTS, CIRCUIT BREAKERS, MOTOR STARTERS, LIGHTING FIXTURES, LIGHTING CONTRACTORS, TIMECLOCKS, ETC. AS SHOWN ON THE CONTRACT DOCUMENTS.

TIMOTHY D. THOMAS, P.E. #47079 PROFESSIONAL ELECTRICAL ENGINEER WASTEWATER DEPARTMENT	#	DATE	REVISIONS	DES: TDT	CITY of TAMPA WASTEWATER DEPARTMENT	HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT TECO BUILDING MODIFICATIONS GENERAL NOTES AND SCOPE OF WORK	SHEET EG3
	1			DRN: TDT			
	2			CKD:			
	3			DATE:			

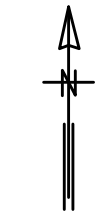
ELECTRICAL SERVICE LOAD SUMMARY			
480 VAC, 3Ø, 4W			
LOAD	APPROX. PHASE CURRENTS		
	L1	L2	L3
PANELBOARD 'PHA'	32.4 A	32.4 A	32.4 A
TOTAL	32.4 A	32.4 A	32.4 A
ELECTRICAL SERVICE SIZED AS 200 AMPERES			

SHORT CIRCUIT CALCULATIONS	
AVAILABLE SHORT-CIRCUIT CURRENT AT 480V UTILITY SERVICE IS 39,650 AMPERES.	
UTILITY SERVICE: 480/277, 3 PH, PAD-MOUNTED TRANSFORMER AVAILABLE FAULT CURRENT AT SECONDARY SIDE OF XFMR TRANSFORMER: 39,650 AMP RMS SYM. SERVICE CONDUCTOR LENGTH: 125 FEET SERVICE CONDUCTOR SIZE: #3/0 XHHW CU. FUSE RATING: 200 AMPS	
ISCA AT LINE SIDE OF FTDS:	
$ISCA = \left[1 + \frac{1}{\frac{(1.73)(125)(39,650)}{(12,844)(480)}} \right] * 39,650 = 16,585$	
SHORT CIRCUIT CURRENT AVAILABLE AT LINE SIDE LUGS OF THE TECO BUILDING SERVICE DISCONNECT = 16,585 AMPS RMS.	
THE BUILDING DISCONNECT SWITCH SHALL BE A 200A CIRCUIT BREAKER WITH AN INTERRUPTING RATING OF 35KA AT 480V.	

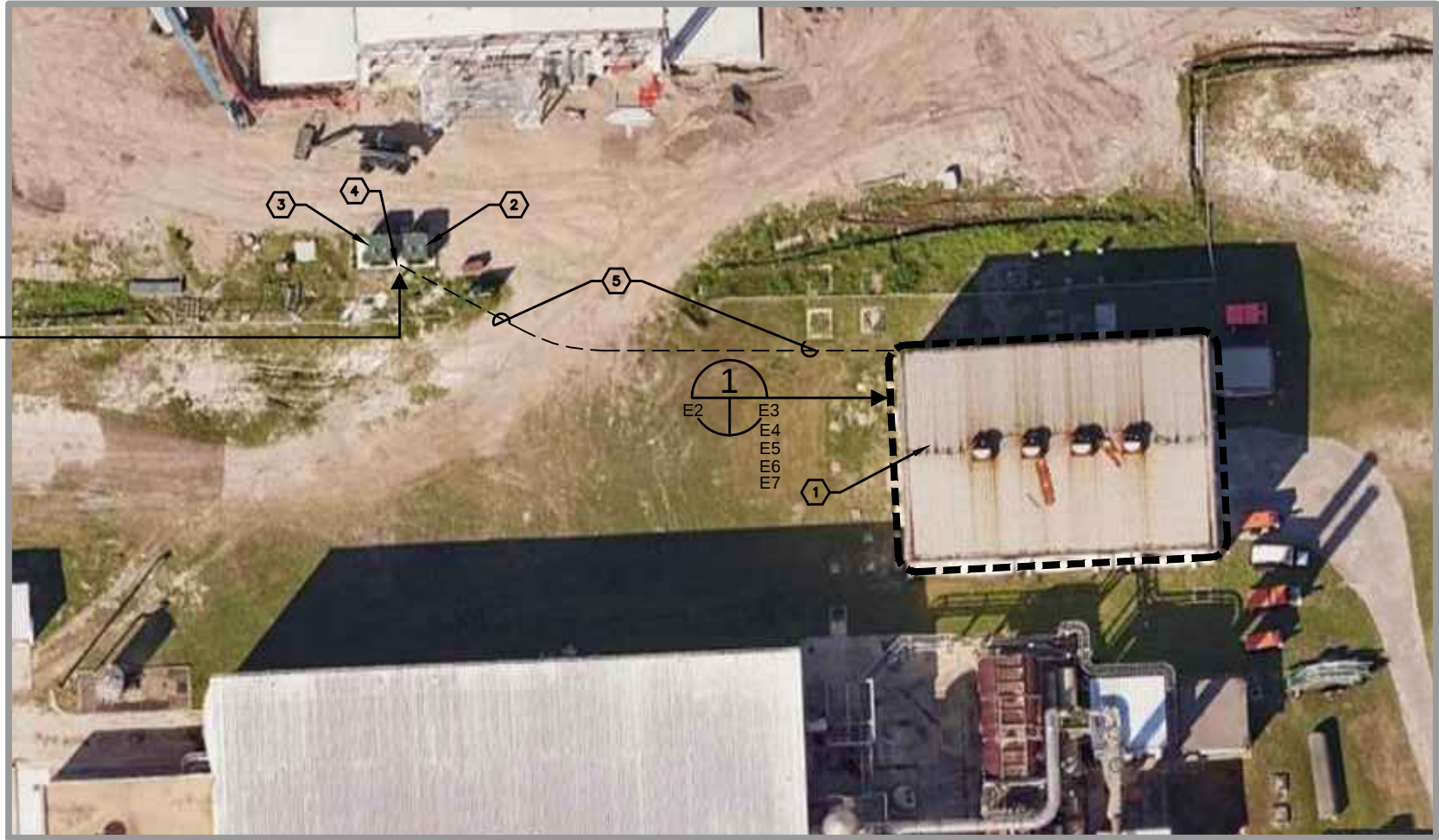
SCOPE OF WORK:

1. THE SERVICE VOLTAGE FOR THIS FACILITY SHALL REMAIN AS A 277/480 VAC, 3-PHASE, 4-WIRE, WYE SYSTEM.
2. REMOVE THE EXISTING METER SOCKET, LIGHTNING ARRESTOR, LIGHTING FIXTURES, LIGHT SWITCHES, RECEPTACLES, AUTOMATIC TRANSFER SWITCH, MOTOR STARTERS, MISCELLANEOUS PANELS AND ALL ASSOCIATED CONDUIT AND CONDUCTORS, AS SHOWN IN THE CONTRACT DOCUMENTS.
3. ANY SALVAGEABLE MATERIALS, AS DETERMINED BY THE ENGINEER, SHALL BE DELIVERED, BY THE CONTRACTOR, TO THE HOWARD F. CURREN AWTP. THE CONTRACTOR SHALL PROPERLY DISPOSE OF ALL OTHER REMOVED EQUIPMENT.
4. PROVIDE AND INSTALL NEW ENCLOSED CIRCUIT BREAKER, LIGHTNING ARRESTOR, LIGHTING FIXTURES, LIGHT SWITCHES, RECEPTACLES, JUNCTION BOXES, LIGHTING CONTACTORS, TIMECLOCK, MOTOR STARTERS, CIRCUIT BREAKERS AND ALL ASSOCIATED CONDUIT/CONDUCTORS AS SHOWN IN THE CONTRACT DOCUMENTS.
5. THE LIGHTING FIXTURE SHOP DRAWING SUBMITTAL SHALL INCLUDE THE CONTRACTORS PROPOSED DETAIL FOR MOUNTING TYPE A AND B FIXTURES TO THE ROOF PURLINS/BEAMS.
6. PROVIDE FOR PROPER GROUNDING AS SHOWN, SPECIFIED, AND REQUIRED.
7. PROVIDE AND INSTALL ALL NECESSARY CONDUITS AND CONDUCTORS, AS SHOWN, SPECIFIED AND REQUIRED.
8. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2020 EDITION OF THE NATIONAL ELECTRIC CODE AND CHAPTER 5 OF THE CITY OF TAMPA CODE.
9. REFER TO CIVIL/MECHANICAL/STRUCTURAL SHEETS FOR DIMENSIONS, NEW ROOF, FAN REQUIREMENTS, ETC.

TIMOTHY D. THOMAS, P.E. #47079 PROFESSIONAL ELECTRICAL ENGINEER WASTEWATER DEPARTMENT	#	DATE	REVISIONS	DES: TDT	CITY of TAMPA WASTEWATER DEPARTMENT	HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT TECO BUILDING MODIFICATIONS ELECTRICAL SYMBOLS LEGEND (SHEET 1 OF 2)	SHEET E1
	1			DRN: TDT			
	2			CKD:			
	3			DATE:			

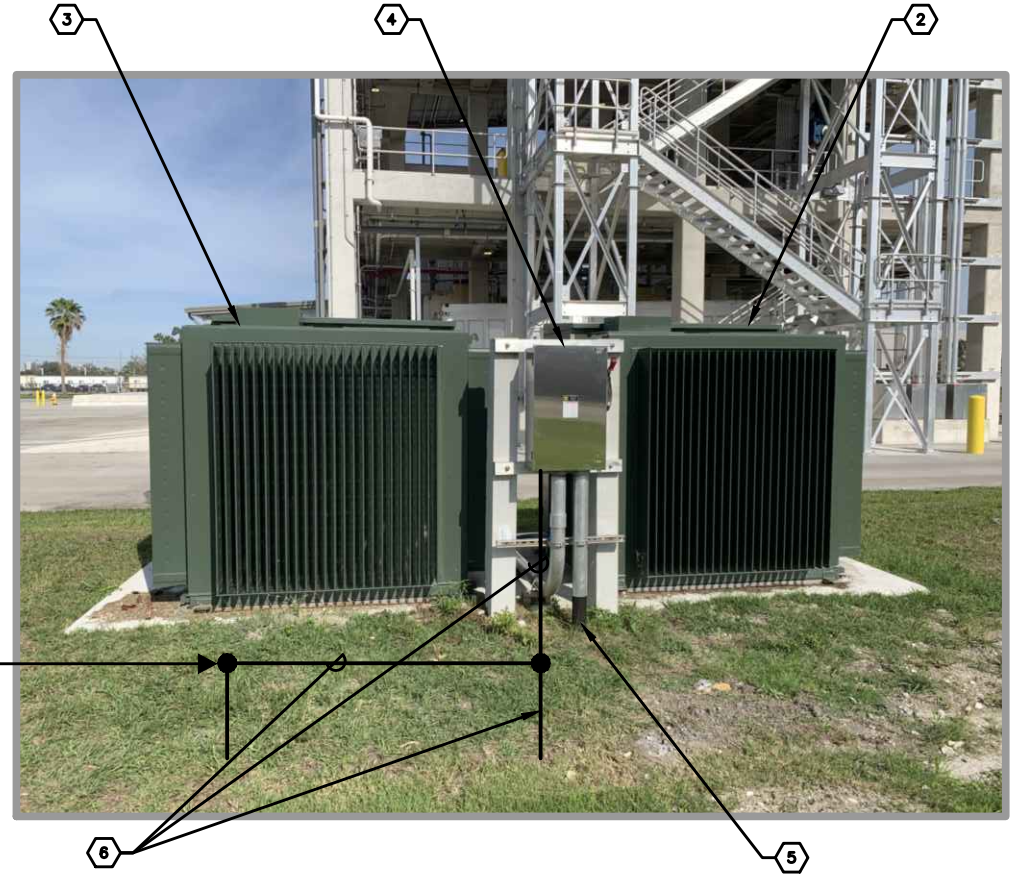


A
E2 | E2



TECO BUILDING ELECTRICAL SITE PLAN
SCALE: N.T.S.

1
E2 | E10
(TYP OF 2)



**TECO BUILDING EXISTING
TRANSFORMER ELEVATION**
SCALE: N.T.S.

A
E2 | E2

KEYED NOTES:

- 1 EXISTING TECO BUILDING. REFER TO SHEETS E3, E4, E5, E6 AND E7 FOR DEMOLITION, POWER, LIGHTING AND LIGHTNING PROTECTION PLANS.
- 2 EXISTING DEWATERING BUILDING 2,000KVA, 13.2KV-480/277V TRANSFORMER T-4A-4. NO WORK REQUIRED.
- 3 EXISTING DEWATERING BUILDING 2,000KVA, 13.2KV-480/277V TRANSFORMER T-4B-4. NO WORK REQUIRED.
- 4 EXISTING 200A, 3-POLE, 600V DISCONNECT FUSED AT 200 AMPERES. DISCONNECT TO REMAIN. CONTRACTOR TO REMOVE EXISTING FEEDER, CLEAN EXISTING CONDUIT WITH MANREL, THEN PROVIDE NEW FEEDER FROM EXISTING DISCONNECT TO NEW ENCLOSED CIRCUIT BREAKER AT TECO BUILDING. REFER TO KEYED NOTES #2 (REMOVAL OF THE EXISTING CT ENCLOSURE AND THE EXISTING METER SOCKET) AND #3 (EXISTING 3" CONDUIT MODIFICATIONS) ON SHEET E3.
- 5 EXISTING 3" CONDUIT (EXACT ROUTE UNDERGROUND UNKNOWN) CONTAINING 3-#3/0 + 1-#6 NEU FROM DISCONNECT IN KEYED NOTE #4 TO CT ENCLOSURE AT TECO BUILDING. CONDUCTORS TO BE REPLACED AFTER MODIFICATIONS ARE MADE AT THE BUILDING'S SERVICE ENTRANCE. NEW CONDUCTORS SHALL BE 3-#3/0 XHHW-2 CU + 1-#4 XHHW-2 CU NEU + 1-#6 XHHW-2 GND. CLEAN EXISTING CONDUIT WITH APPROPRIATELY SIZED MANDREL PRIOR TO INSTALLING NEW CONDUCTORS. REFER TO SHEET E3 FOR CONTINUATION TO CT ENCLOSURE MOUNTED ON NORTH WALL OF TECO BUILDING. REFER ALSO TO PROPOSED ONE LINE DIAGRAM ON SHEET E9.
- 6 CONTRACTOR SHALL PROVIDE AND INSTALL 1" SCHEDULE 80 PVC CONDUIT WITH BARE #4 AWG GROUNDING ELECTRODE CONDUCTOR FROM EXISTING DISCONNECT TO TWO (2) NEW 3/4" X 10'-0" STAINLESS STEEL GROUND RODS. GROUND RODS SHALL BE SPACED A MINIMUM OF 8'-0" APART. PROVIDE GROUND ROD TEST WELL AT EACH GROUND ROD. CONTRACTOR SHALL ALSO BOND NEUTRAL TO GROUND WITH #4 AWG BONDING CONDUCTOR. REFER ALSO TO PROPOSED ONE LINE DIAGRAM ON SHEET E9.

TIMOTHY D. THOMAS, P.E. #47079
PROFESSIONAL ELECTRICAL ENGINEER
WASTEWATER DEPARTMENT

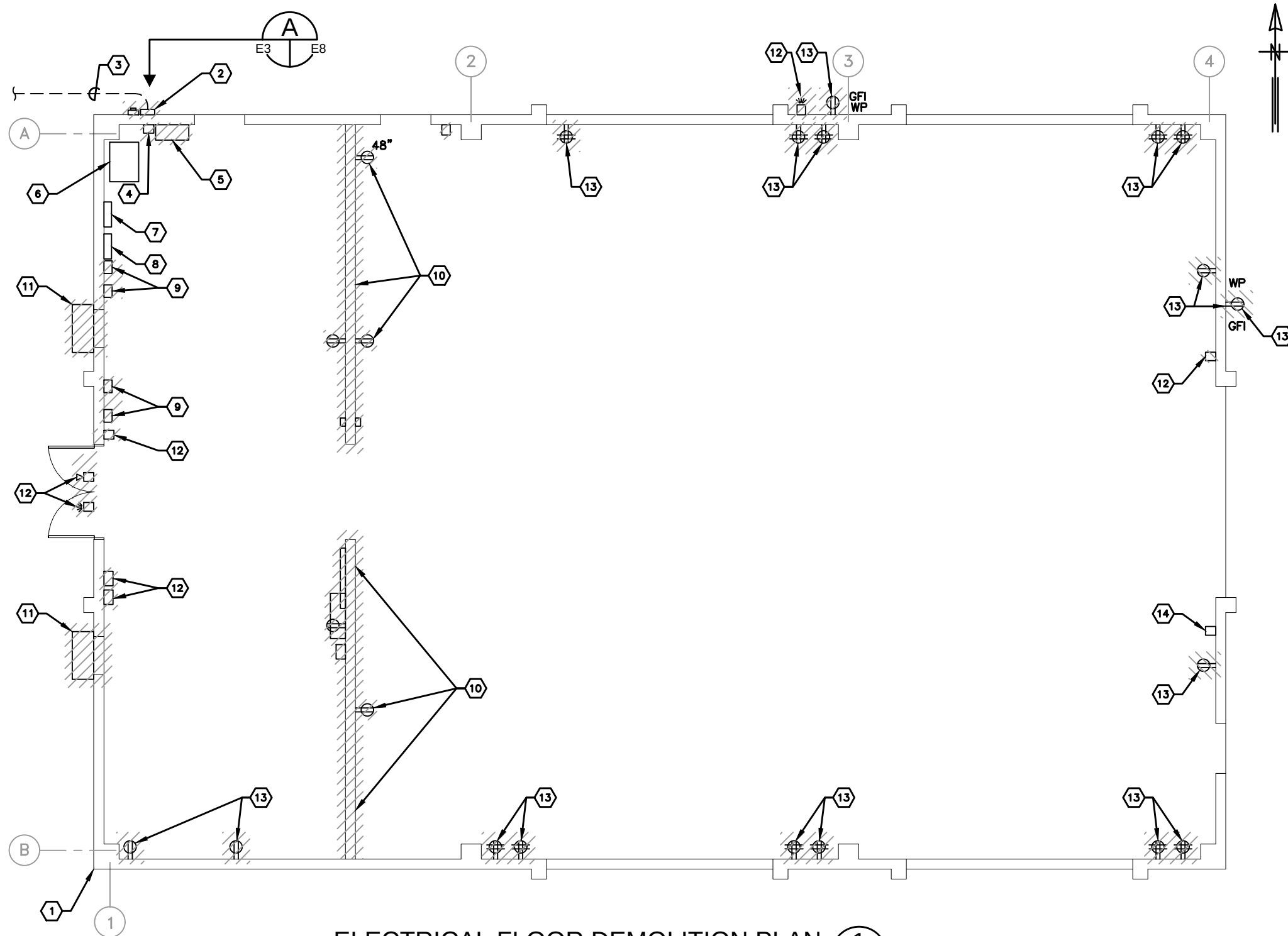
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CKD:
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CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN
ADVANCED WASTEWATER TREATMENT PLANT
TECO BUILDING MODIFICATIONS
ELECTRICAL SITE PLAN

SHEET
E2



KEYED NOTES:

- 1 EXISTING TECO BUILDING.
- 2 EXISTING CT ENCLOSURE AND ELECTRIC METER SOCKET TO BE REMOVED. REFER ALSO TO DEMOLITION DETAILS ON SHEET E8.
- 3 EXISTING 3" CONDUIT CONTAINING NEW 3-#3/0 XHHW-2 CU + 1-#4 XHHW-2 CU NEU + 1-#6 XHHW-2 GND FEEDER FROM EXISTING DISCONNECT SHOWN ON SHEET E2, KEYED NOTE #4. CONDUCTORS TO BE REPLACED AFTER CONDUIT MODIFICATIONS ARE MADE TO ROUTE THE EXISTING 3" CONDUIT TO THE NEW ENCLOSED CIRCUIT BREAKER AT THE BUILDING'S SERVICE ENTRANCE. REFER TO SHEET E4 KEYED NOTE #3 FOR REFERENCE.
- 4 EXISTING 480V, 225A, 3-POLE CIRCUIT BREAKER IN AN ENCLOSURE (BUILDING MAIN DISCONNECT) TO BE REMOVED AND REPLACED WITH NEW 480V, 200A, 3-POLE CIRCUIT BREAKER IN AN ENCLOSURE. SQUARE D JXL36200 CIRCUIT BREAKER IN A SQUARE D J250SS NEMA 1 ENCLOSURE.
- 5 EXISTING 480V, 250A AUTOMATIC TRANSFER SWITCH TO BE REMOVED.
- 6 EXISTING 480-120/208V. 75 KVA FLOOR MOUNTED TRANSFORMER 'TX-1' TO REMAIN.
- 7 EXISTING 277/480V, 225A MCB, 3-PHASE, 4-WIRE PANELBOARD 'PHA' (GE SERIES 'A' TYPE) TO REMAIN.
- 8 EXISTING 120/208V, 175A MCB, 3-PHASE, 4-WIRE PANELBOARD 'PLA' (GE SERIES 'A' TYPE) TO REMAIN.
- 9 EXISTING MOTOR STARTER TO BE REMOVED.
- 10 EXISTING CMU WALL TO BE REMOVED ALONG WITH ALL ASSOCIATED RECEPTACLES, LIGHTING FIXTURES, SWITCHES, CONDUIT, CONDUCTORS, WIREWAYS AND EQUIPMENT. REFER ALSO TO STRUCTURAL PLANS.
- 11 EXISTING WALL MOUNTED BARD UNIT TO BE REMOVED,
- 12 EXISTING FIRE ALARM DEVICE OR EXISTING EQUIPMENT TO BE REMOVED.
- 13 EXISTING RECEPTACLE TO BE REMOVED.
- 14 EXISTING ROLL UP DOOR PUSHBUTTON STATION TO REMAIN.

ELECTRICAL FLOOR DEMOLITION PLAN

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

1
E2 E3

TIMOTHY D. THOMAS, P.E. #47079
PROFESSIONAL ELECTRICAL ENGINEER
WASTEWATER DEPARTMENT

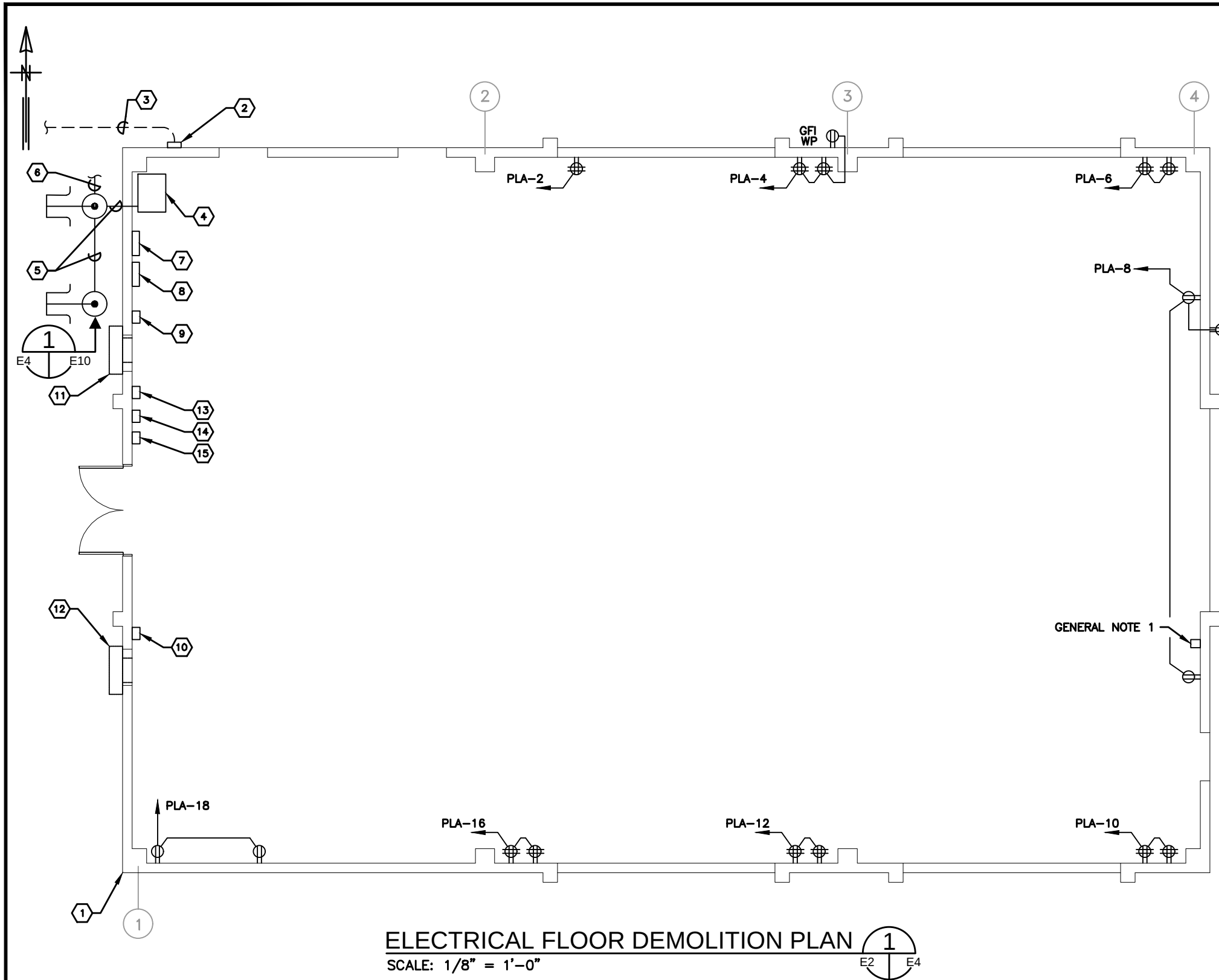
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DRN: TDT
CKD:
DATE:

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN
ADVANCED WASTEWATER TREATMENT PLANT
TECO BUILDING MODIFICATIONS
ELECTRICAL DEMOLITION FLOOR PLAN

SHEET
E3



KEYED NOTES:

1. EXISTING TECO BUILDING.
2. PROVIDE AND INSTALL NEW 480V, 200A, 3-POLE CIRCUIT BREAKER IN AN ENCLOSURE. SQUARE D JGL36200 CIRCUIT BREAKER IN A SQUARE D J250SS NEMA 4X STAINLESS STEEL ENCLOSURE. PROVIDE SQUARE D SDSA4040 SURGE PROTECTION DEVICE.
3. EXISTING 3" CONDUIT (ROUTED TO NEW ENCLOSED CIRCUIT BREAKER) CONTAINING NEW 3-#3/0 XHHW-2 CU + 1-#4 XHHW-2 CU NEU + 1-#6 XHHW-2 GND FEEDER FROM EXISTING DISCONNECT SHOWN ON SHEET E2, KEYED NOTE #4. CONDUCTORS TO BE REPLACED AFTER MODIFICATIONS ARE MADE AT THE BUILDING'S SERVICE ENTRANCE. REFER TO SHEET E2 KEYED NOTE #5 FOR REFERENCE.
4. EXISTING 480V-120/208V, 75 KVA FLOOR MOUNTED TRANSFORMER 'TX-1' TO REMAIN. CONTRACTOR TO REMOVE EXISTING GROUNDING ELECTRODE CONDUCTOR.
5. PROVIDE AND INSTALL BARE #4 AWG CU GROUNDING ELECTRODE CONDUCTOR IN 1" SCHEDULE 80 PVC CONDUIT TO TWO NEW (2) 3/4" x 10'-0" STAINLESS STEEL GROUND RODS SPACED A MINIMUM OF 8 FEET APART.
6. BOND ELECTRICAL SYSTEM GROUND ROD TO LIGHTNING PROTECTION SYSTEM GROUND ROD. PROVIDE AND INSTALL A BARE COPPER BOND BETWEEN TRANSFORMER ELECTRICAL GROUNDING ELECTRODES AND LIGHTNING PROTECTION SYSTEM. BONDING CONDUCTOR TO BE SIZED BASED ON NFPA 780. REFER ALSO TO SHEET E7, KEYED NOTE #6.
7. EXISTING 277/480V, 225A MCB, 3-PHASE, 4-WIRE PANELBOARD 'PHA' (GE SERIES 'A' TYPE) TO REMAIN.
8. EXISTING 120/208V, 175A MCB, 3-PHASE, 4-WIRE PANELBOARD 'PLA' (GE SERIES 'A' TYPE) TO REMAIN.
9. PROVIDE AND INSTALL NEW 600V, 3-POLE, MANUAL MOTOR STARTER WITH PUSH-BUTTON ON/OFF AND RED PILOT LIGHT IN NEMA 4X STAINLESS STEEL ENCLOSURE FOR FAN #1. SQUARE D 2510MBW12 WITH FACTORY OPTION P11V06. SIZE OVERLOAD RELAY BASED ON APPROVED FAN SHOP DRAWING INFORMATION. PROVIDE 3-#12 + 1-#12 GND IN 3/4"C FROM PANELBOARD PHA (CIRCUIT 8/10/12) TO FAN #1 DISCONNECT.
- PROVIDE AND INSTALL FAN #1 DISCONNECT. 600V, 3-POLE, NON-FUSED, 30A IN NEMA 4X STAINLESS STEEL ENCLOSURE. SQUARE D VHU361SSGL. DISCONNECT TO BE INSTALLED ABOVE MANUAL MOTOR STARTER. PROVIDE AND INSTALL 3-#12 + 1-#12 IN 3/4"C FROM FAN #1 DISCONNECT TO FAN #1. PROVIDE NON-METALLIC FLEXIBLE CONNECTION TO FAN #1.
10. PROVIDE AND INSTALL NEW 600V, 3-POLE, MANUAL MOTOR STARTER WITH PUSH-BUTTON ON/OFF AND RED PILOT LIGHT IN NEMA 4X STAINLESS STEEL ENCLOSURE FOR FAN #2. SQUARE D 2510MBW12 WITH FACTORY OPTION P11V06. SIZE OVERLOAD RELAY BASED ON APPROVED FAN SHOP DRAWING INFORMATION. PROVIDE 3-#12 + 1-#12 GND IN 3/4"C FROM PANELBOARD PHA (CIRCUIT 14/16/18) TO FAN #2 DISCONNECT.
- PROVIDE AND INSTALL FAN #2 DISCONNECT. 600V, 3-POLE, NON-FUSED, 30A IN NEMA 4X STAINLESS STEEL ENCLOSURE. SQUARE D VHU361SSGL. DISCONNECT TO BE INSTALLED ABOVE MANUAL MOTOR STARTER. PROVIDE AND INSTALL 3-#12 + 1-#12 IN 3/4"C FROM FAN #2 DISCONNECT TO FAN #2. PROVIDE NON-METALLIC FLEXIBLE CONNECTION TO FAN #2.
11. NEW FAN #1. REFER TO MECHANICAL PLANS FOR DETAILS.
12. NEW FAN #2. REFER TO MECHANICAL PLANS FOR DETAILS.
13. PROVIDE AND INSTALL NEW 2-POLE LIGHTING CONTACTOR FOR INTERIOR LIGHTING CONTROL. 600V CONTACTS WITH 277V COIL IN NEMA 4X STAINLESS STEEL ENCLOSURE. SQUARE D 8903LW20V04. REFER TO SHEET E10 FOR INTERIOR LIGHTING CONTROL SCHEMATIC. PROVIDE AND INSTALL 2-#12 + 1-#12 NEU + 1-#12 GND IN 3/4"C (PHA-2 AND PHA-4), 2-#12 + 1-#12 GND TO SWITCHES AND 1-#12 + 1-#12 NEU + 1-#12 GND IN 3/4"C TO INTERIOR LIGHTING FIXTURES.
14. PROVIDE AND INSTALL NEW 2-POLE LIGHTING CONTACTOR FOR EXTERIOR LIGHTING CONTROL. 600V CONTACT WITH 120V COIL AND HAND-OFF-AUTO SELECTOR SWITCH IN NEMA 4X STAINLESS STEEL ENCLOSURE. SQUARE D 8903LW20V02C. REFER TO SHEET E10 FOR EXTERIOR LIGHTING CONTROL SCHEMATIC. PROVIDE AND INSTALL 1-#12 + 1-#12 NEU + 1-#12 GND IN 3/4"C (PLA-18), 1-#12 + 1-312 NEU + 1-312 GND IN 3/4"C TO TIMECLOCK AND 1-#12 + 1-#12 NEU + 1-#12 GND IN 3/4"C TO EXTERIOR LIGHTING FIXTURES.
15. PROVIDE AND INSTALL NEW TIMECLOCK (TORK 1109A) ADJACENT TO CONTACTOR LC-2 FOR AUTOMATIC CONTROL OF EXTERIOR LIGHTING FIXTURES.

GENERAL NOTES:

1. EXISTING ROLL UP DOOR PUSHBUTTON STATION TO REMAIN. EXISTING CIRCUIT SCHEMATIC AND POWER SOURCE IS UNKNOWN. CONTRACTOR TO FIELD INVESTIGATE EXISTING CIRCUITS AND MATCH EXISTING.

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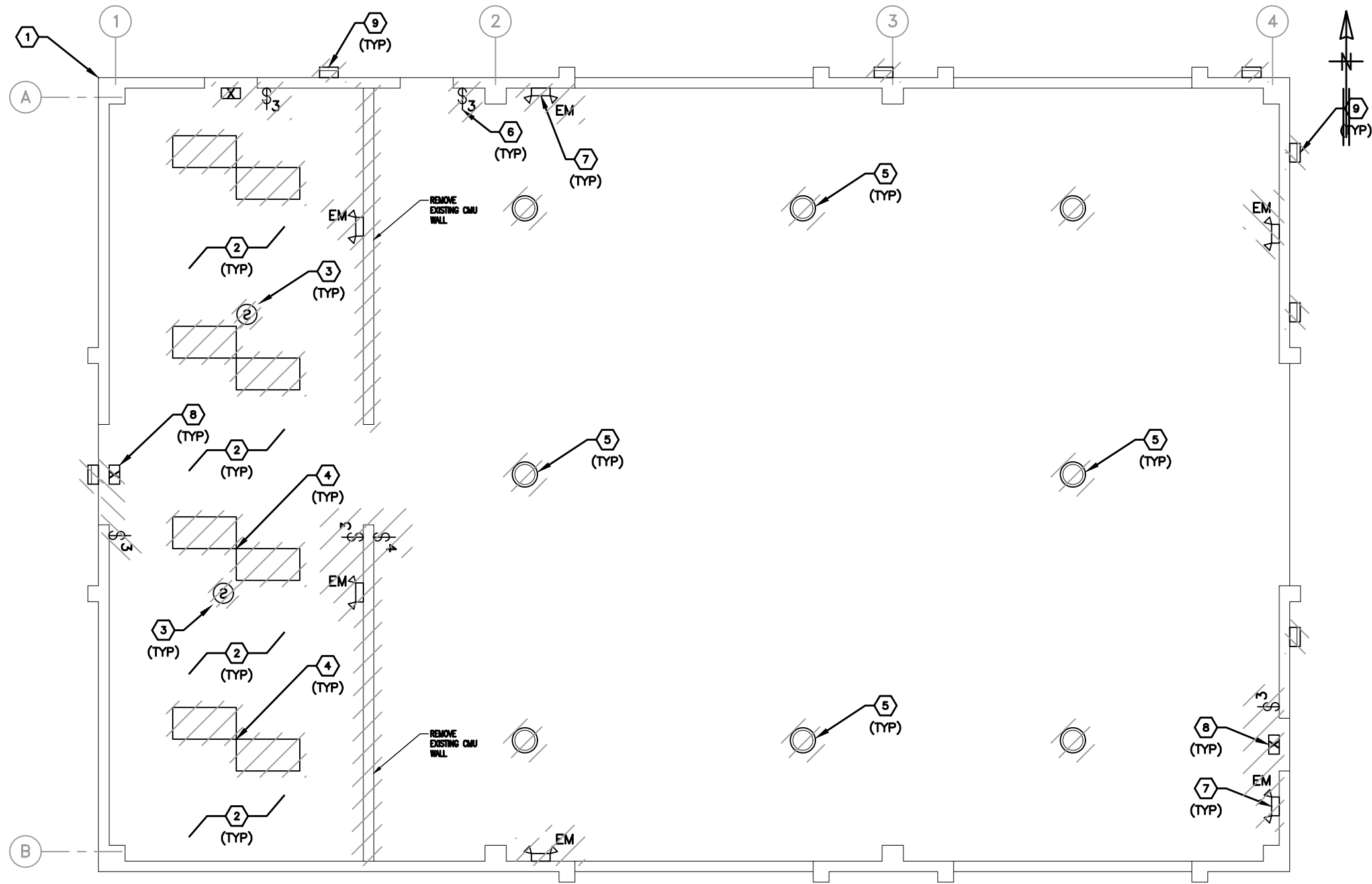
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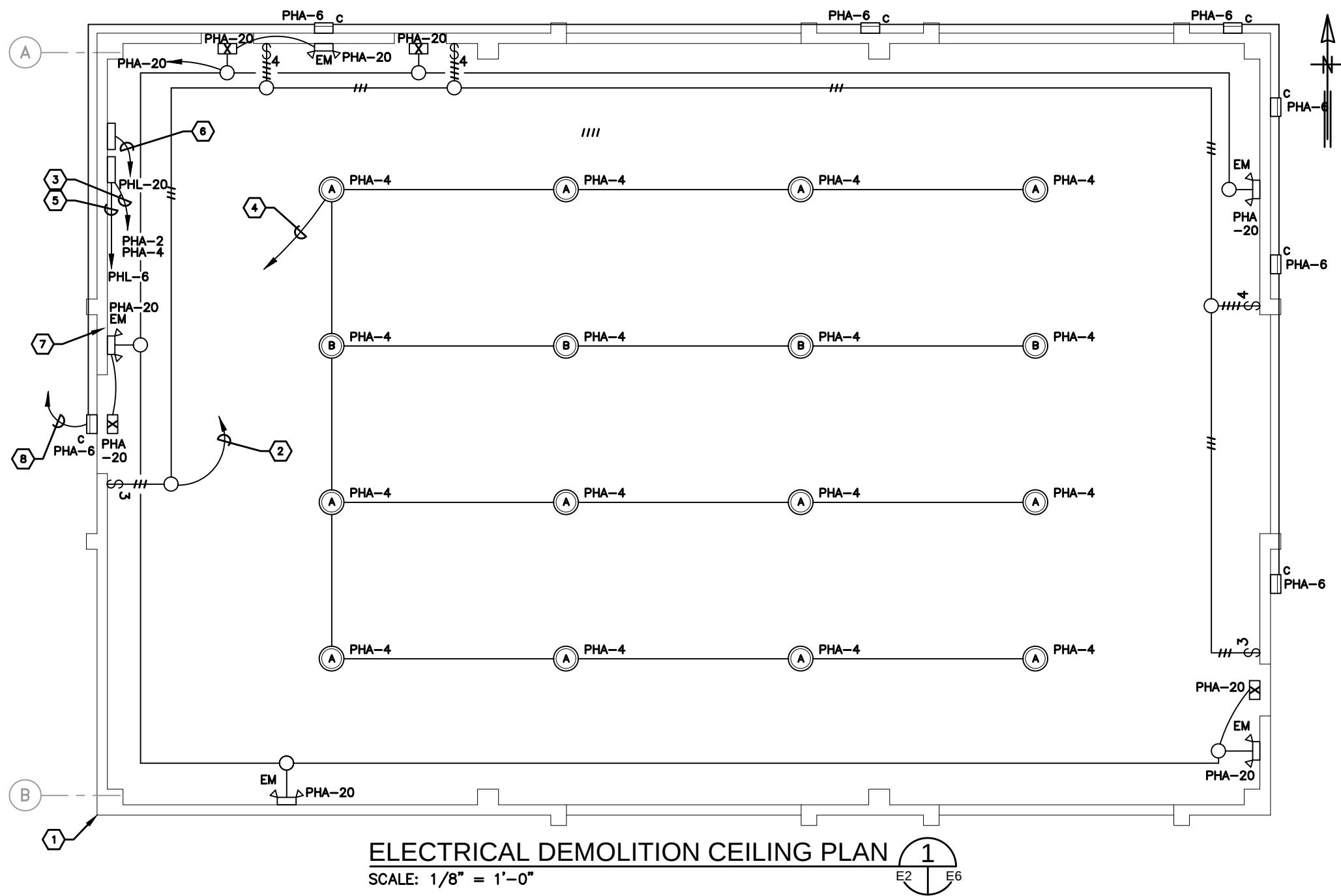
HOWARD F. CURREN
ADVANCED WASTEWATER TREATMENT PLANT
TECO BUILDING MODIFICATIONS
ELECTRICAL DEMOLITION FLOOR PLAN

SHEET
E4



- KEYED NOTES:
- 1 EXISTING TECO BUILDING.
 - 2 EXISTING ACOUSTICAL CEILING TO BE REMOVED.
 - 3 EXISTING SMOKE DETECTOR BE REMOVED.
 - 4 EXISTING 2' X 4' FLUORESCENT LIGHTING BE REMOVED.
 - 5 EXISTING LIGHT FIXTURE TO BE REMOVED.
 - 6 EXISTING LIGHT SWITCH TO BE REMOVED.
 - 7 EXISTING EMERGENCY LIGHT FIXTURE TO BE REMOVED.
 - 8 EXISTING EXIT SIGN TO BE REMOVED.
 - 9 EXISTING WALL-PACK LIGHTING FIXTURE ON EXTERIOR OF BUILDING TO BE REMOVED.

ELECTRICAL DEMOLITION CEILING PLAN 1
SCALE: 1/8" = 1'-0"



- KEYED NOTES:
- 1

EXISTING TECO BUILDING.
- 2

PROVIDE AND INSTALL 2-#12 + 1-#12 GND (HOT AND SWITCH-LEG) IN 3/4"C. FROM SWITCHES TO INTERIOR LIGHTING CONTACTOR (LC-1).
- 3

PROVIDE AND INSTALL 2-#12 + 1-#12 NEU + 1-#12 GND IN 3/4"C. FROM PANELBOARD PHA (CIRCUITS PHA-2 AND PHA-4) TO INTERIOR LIGHTING CONTACTOR (LC-1).
- 4

PROVIDE AND INSTALL 1-#12 + 1-#12 NEU + 1-#12 GND IN 3/4"C. FROM INTERIOR LIGHTING FIXTURES TO LIGHTING CONTACTOR (LC-2).
- 5

PROVIDE AND INSTALL 1-#12 + 1-#12 NEU + 1-#12 GND IN 3/4"C. FROM PANELBOARD PHA (CIRCUIT PHA-6) TO EXTERIOR LIGHTING CONTACTOR (LC-2).
- 6

PROVIDE AND INSTALL 1-#12 + 1-#12 NEU + 1-#12 GND IN 3/4"C. FROM PANELBOARD PLA (CIRCUIT PLA-20) TO EXTERIOR LIGHTING CONTACTOR (LC-2).
- 7

PROVIDE AND INSTALL 3-#12 + 1-#12 NEU + 1-#12 GND IN 3/4"C FROM LIGHTING CONTACTOR LC-2 TO TIMECLOCK.
- 8

PROVIDE AND INSTALL 1-#12 + 1-#12 NEU + 1-#12 GND IN 3/4"C. FROM EXTERIOR LIGHT FIXTURES TO EXTERIOR LIGHTING CONTACTOR (LC-2).

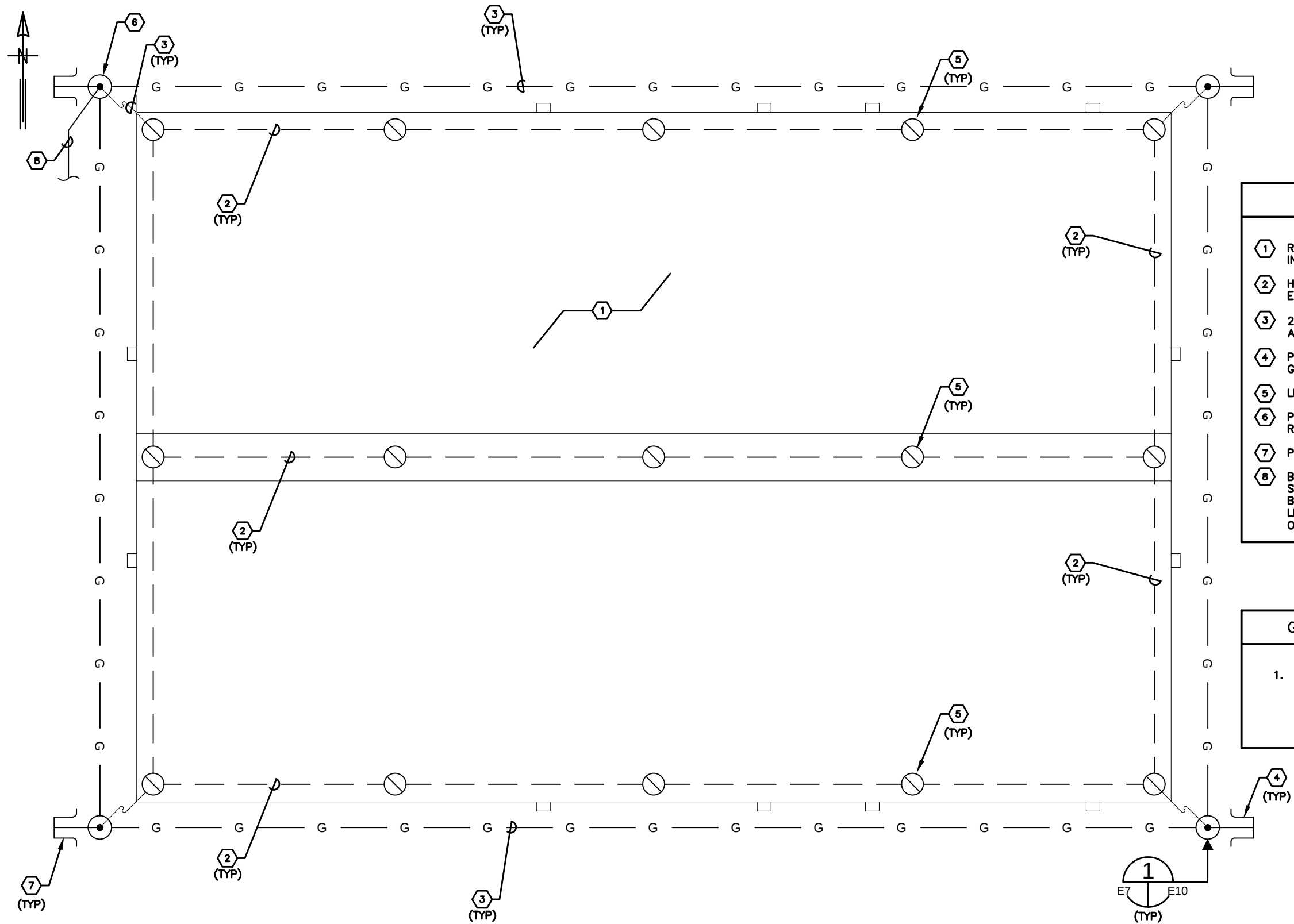
- GENERAL NOTES:
1.

THE LIGHTING FIXTURE SHOP DRAWING SUBMITTAL SHALL INCLUDE THE CONTRACTORS PROPOSED DETAIL FOR MOUNTING TYPE A AND B FIXTURES TO THE ROOF PURLINS/BEAMS.
2.

LIGHTING FIXTURES TYPES C, EM AND X SHALL BE INSTALLED AT THE SAME HEIGHT AS THE FIXTURES THEY ARE REPLACING. ANY NEW FIXTURE SHALL MATCH ASSOCIATED FIXTURE TYPE HEIGHT.
3.

REFER TO SHEET E11 FOR LIGHTING CONTROL SCHEMATICS.

LIGHTING FIXTURE SCHEDULE						
TYPE	MANUFACTURER	CATALOG NUMBER	LAMP(S)	VOLTS	MOUNTING	REMARKS
A	COLUMBIA	HBL-72L-4-P-2-5K-W-070-ND-GR	(1) 169W DRIVER	277	PENDANT	PROVIDE CORD, HOOK/LOOP, 15A PLUG AND SAFETY CHAIN.
B	COLUMBIA	HBL-72L-4-P-2-5K-W-070-ND-GR-LG250	(1) 169W DRIVER	277	PENDANT	SAME AS FIXTURE 'A' WITH EMERGENCY LIGHTING INVERTER.
C	LITHONIA	TWX2 P2 40K MVOLT DDBLXD	(1) 32W DRIVER	120/277	WALL	LED WALL LUMINAIRE - NO PHOTOCELL TO BE PROVIDED
EM	LITHONIA	EU2C HO	(2) 1W DRIVER	120/277	WALL	LED EMERGENCY LIGHT
X	LITHONIA	LQMSW3R120/277ELN	(1) 1W DRIVER	120/277	UNIVERSAL	LED EXIT SIGN WITH NICKEL CADMIUM BATTERY BACKUP



KEYED NOTES:

- 1 ROOF OF EXISTING TECO BUILDING WITH NEW METAL ROOF DECK INSTALLED.
- 2 HARGER NO. A24, CLASS I ALUMINUM LIGHTNING CONDUCTOR RUN EXPOSED ON ROOF. FASTEN EVERY 3 FEET MAX.
- 3 2/0 AWG BARE COPPER GROUNDING GRID CONDUCTOR BETWEEN ASSOCIATED GROUND RODS.
- 4 PROVIDE GROUND ROD TEST WELL FOR LIGHTNING PROTECTION SYSTEM GROUNDING. REFER TO SHEET E10 FOR DETAIL.
- 5 LIGHTNING PROTECTION SYSTEM AIR TERMINAL.
- 6 PROVIDE GROUNDING ELECTRODE SYSTEM THAT MEETS NFPA 780 REQUIREMENTS.
- 7 PROVIDE GROUND ROD TEST WELL. REFER TO SHEET E10 FOR DETAIL.
- 8 BOND LIGHTNING PROTECTION SYSTEM GROUND ROD TO ELECTRICAL SYSTEM GROUND ROD. PROVIDE AND INSTALL A BARE COPPER BOND BETWEEN TRANSFORMER ELECTRICAL GROUNDING ELECTRODES AND LIGHTNING PROTECTION SYSTEM. BONDING CONDUCTOR TO BE SIZED BASED ON NFPA 780. REFER ALSO TO SHEET E4, KEYED NOTE #6.

GENERAL NOTES:

- 1. THE LIGHTNING PROTECTION SYSTEM CONTRACTOR SHALL BE A LIGHTNING PROTECTION INSTITUTE (LPI) CERTIFIED INSTALLER/DESIGNER. THE SYSTEMS SHALL MEET THE REQUIREMENTS OF NFPA 780 AND AFTER INSTALLATION THE CONTRACTOR SHALL SUBMIT A U.L. MASTER LABEL FOR THE INSTALLED SYSTEM.

LIGHTNING PROTECTION PLAN

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



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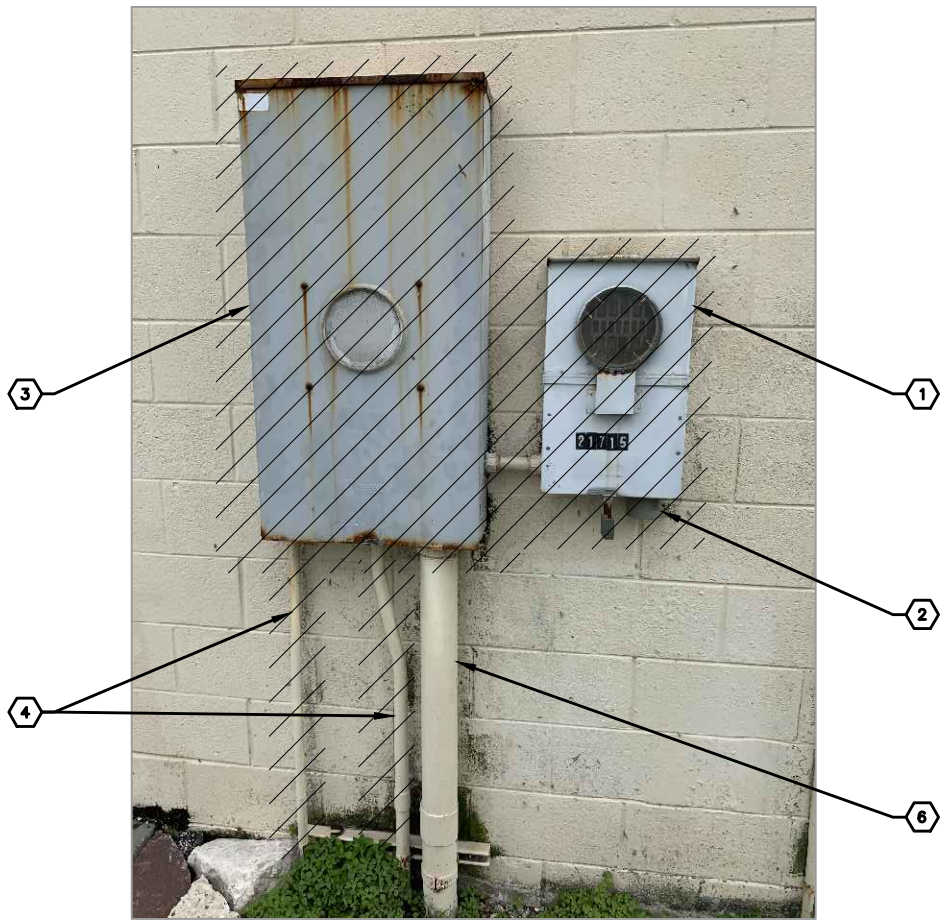
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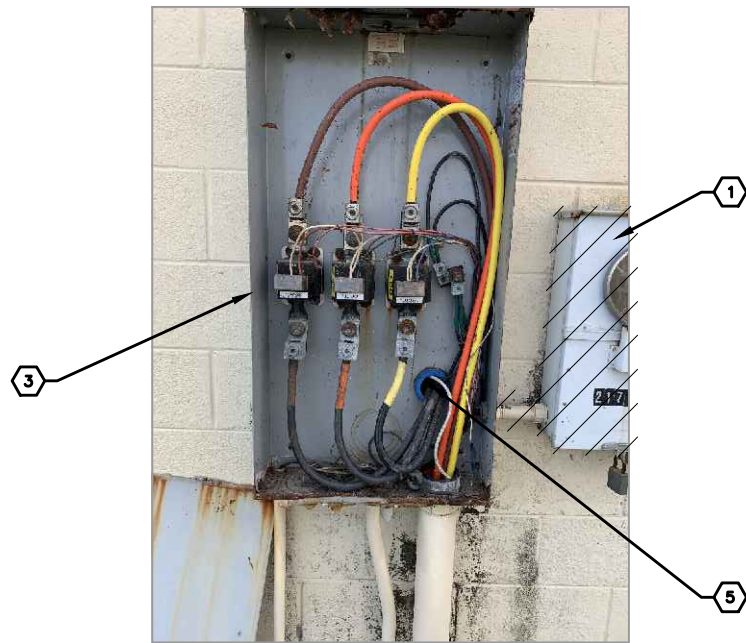
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TECO BUILDING MODIFICATIONS
LIGHTNING PROTECTION PLAN

SHEET
E7



EXISTING METER DEMOLITION DETAIL
SCALE: NOT TO SCALE



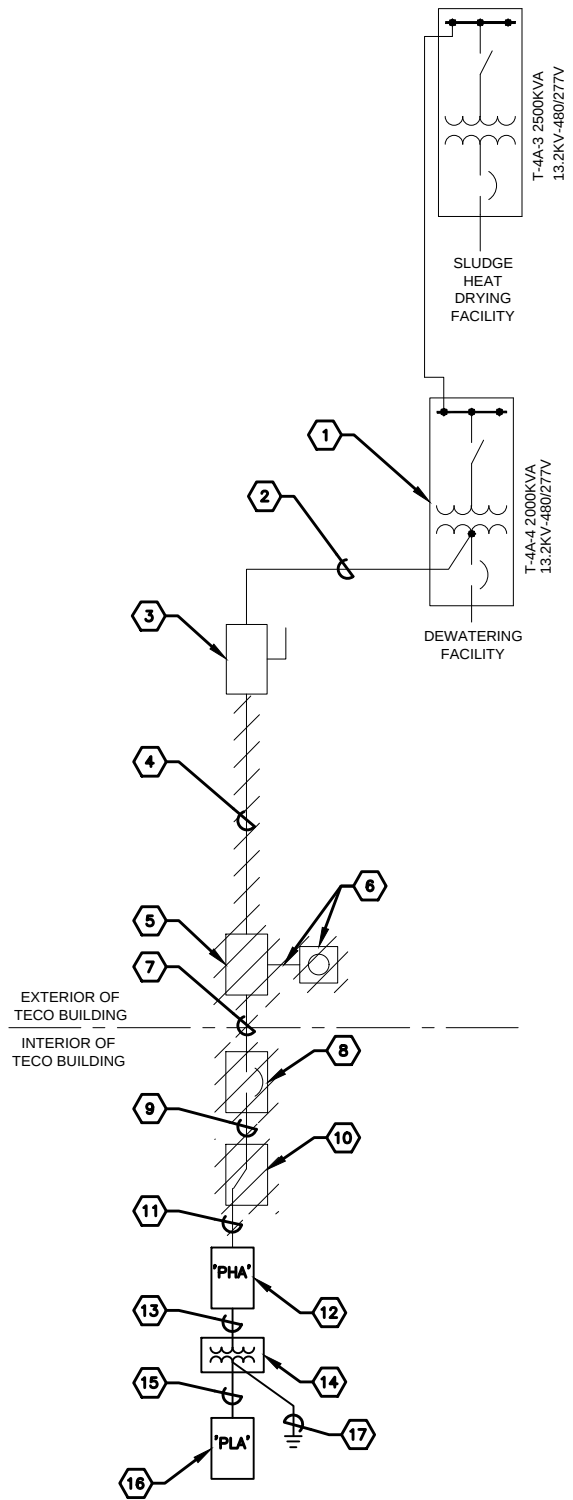
EXISTING CT ENCLOSURE
INTERIOR DETAIL
SCALE: NOT TO SCALE

KEYED NOTES:

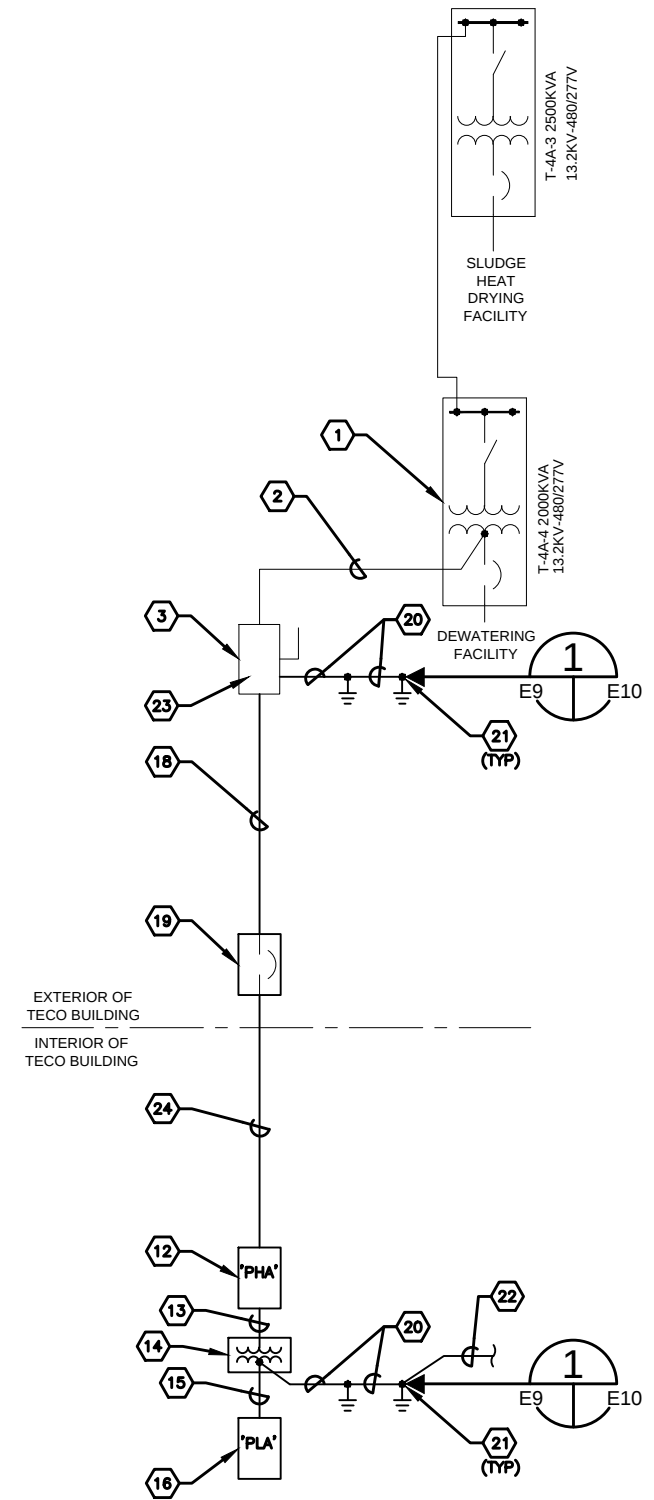
- 1 EXISTING METER SOCKET TO BE REMOVED.
 - 2 EXISTING LIGHTNING ARRESTOR TO BE REMOVED.
 - 3 EXISTING CT ENCLOSURE TO BE REMOVED.
 - 4 REMOVE EXISTING GROUNDING ELECTRODE CONDUCTOR FROM EXISTING GROUND ROD AND CT ENCLOSURE. REMOVE EXISTING CABLES. REMOVE EXISTING CONDUITS BY CUTTING AT GRADE.
 - 5 EXISTING CONDUIT PENETRATION THROUGH NORTH WALL OF TECO BUILDING TO EXISTING ENCLOSED CIRCUIT BREAKER IN INTERIOR OF BUILDING.
 - 6 EXISTING LOCATION OF 3" RIGID CONDUIT FROM EXISTING DISCONNECT AT TRANSFORMER T-4A-4.
- THE LOCATION OF THE NEW ENCLOSED CIRCUIT BREAKER SHALL BE AT THE CONTRACTOR'S DISCRETION, BUT IT IS ASSUMED THAT THERE WILL BE CONFLICTS BETWEEN THE DIMENSIONS OF THE NEW ENCLOSURE, THE STUB-UP LOCATION OF THE EXISTING 3" CONDUIT AND THE LOCATION OF THE EXISTING PENETRATION IN THE NORTH WALL OF THE TECO BUILDING. IT IS ASSUMED THAT EITHER THE 3" RIGID ALUMINUM CONDUIT WILL NEED TO BE MODIFIED OR A NEW PENETRATION WILL BE REQUIRED. IF A NEW PENETRATION IS REQUIRED, THE CONTRACTOR SHALL PATCH THE EXISTING PENETRATION AND GROUT AROUND THE NEW PENETRATION AND NEW 2" RIGID ALUMINUM CONDUIT TO THE EXISTING PANELBOARD 'PHA'.

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EXISTING
ONE LINE DIAGRAM



PROPOSED
ONE LINE DIAGRAM

KEYED NOTES:

- 1 EXISTING TRANSFORMER 'T-4A-4' TO REMAIN. NO WORK REQUIRED. REFER TO SHEET E2 FOR LOCATION.
- 2 EXISTING 3" CONDUIT CONTAINING 4-#250 MCM + 1-#4 GND (FIELD VERIFY) FROM TRANSFORMER 'T-4A-4' TO EXISTING DISCONNECT. NO WORK REQUIRED.
- 3 EXISTING 200A, 3-POLE, 600V DISCONNECT FUSED AT 200 AMPERES. DISCONNECT TO REMAIN. CONTRACTOR TO PROVIDE NEW FEEDER TO TECO BUILDING DISCONNECT. REFER TO SHEET E8 FOR DETAILS.
- 4 EXISTING 3" CONDUIT CONTAINING 3-#250 MCM + 1-#4 NEU (FIELD VERIFY) FROM DISCONNECT IN KEYED NOTE #3 TO EXISTING CT ENCLOSURE AT TECO BUILDING. FEEDER SHALL BE REPLACED. REFER TO SHEET E2 AND E8 FOR OTHER DETAILS.
- 5 EXISTING CT ENCLOSURE ON EXTERIOR WALL OF TECO BUILDING. CT ENCLOSURE TO BE REMOVED. REFER TO SHEET E3 FOR CT ENCLOSURE LOCATION.
- 6 EXISTING ELECTRIC METER SOCKET ON EXTERIOR WALL OF TECO BUILDING. ELECTRIC METER SOCKET AND ASSOCIATED CONDUIT/CONDUCTORS TO BE REMOVED. REFER TO SHEET E3 FOR ELECTRIC METER SOCKET LOCATION.
- 7 EXISTING 2-1/2" CONDUIT CONTAINING 4-#250 MCM + 1-#4 GND (FIELD VERIFY) FROM EXISTING CT ENCLOSURE ON WALL OF TECO BUILDING TO EXISTING 225A ENCLOSED CIRCUIT BREAKER IN INTERIOR OF TECO BUILDING. EXISTING CONDUCTORS TO BE REMOVED.
- 8 EXISTING 225A ENCLOSED CIRCUIT BREAKER ON INTERIOR WALL OF TECO BUILDING. EXISTING 225A ENCLOSED CIRCUIT BREAKER AND ASSOCIATED CONDUIT TO BE REMOVED. REFER TO SHEET E3 FOR ENCLOSED CIRCUIT BREAKER LOCATION.
- 9 EXISTING 2-1/2" CONDUIT CONTAINING 4-#250 MCM + 1-#6 GND (FIELD VERIFY) FROM EXISTING 225A ENCLOSED CIRCUIT BREAKER TO EXISTING AUTOMATIC TRANSFER SWITCH IN INTERIOR OF TECO BUILDING. EXISTING CONDUCTORS TO BE REMOVED.
- 10 EXISTING 250A AUTOMATIC TRANSFER SWITCH (ATS) ON INTERIOR WALL OF TECO BUILDING. EXISTING ATS AND ASSOCIATED CONDUIT TO BE REMOVED.
- 11 EXISTING 2-1/2" CONDUIT CONTAINING 4-#250 MCM + 1-#4 GND (FIELD VERIFY) FROM EXISTING ATS TO EXISTING PANELBOARD 'PHA' IN INTERIOR OF TECO BUILDING. EXISTING CONDUIT AND CONDUCTORS TO BE REMOVED.
- 12 EXISTING 277/480V, 225A PANELBOARD 'PHA' TO REMAIN.
- 13 EXISTING 1-1/4" CONDUIT CONTAINING 3-#2 + 1-#8 GND (FIELD VERIFY) FROM EXISTING PANELBOARD 'PHA' TO TRANSFORMER 'TX-1' TO REMAIN.
- 14 EXISTING 480-120/208V, 75KVA TRANSFORMER 'TX-1' TO REMAIN.
- 15 EXISTING 2-1/2" CONDUIT CONTAINING 4-#4/0 + 1-#4 GND (FIELD VERIFY) FROM EXISTING TRANSFORMER 'TX-1' TO PANELBOARD 'PLA' TO REMAIN.
- 16 EXISTING 120/208V, 225A PANELBOARD 'PLA' TO REMAIN.
- 17 EXISTING GROUNDING ELECTRODE CONDUCTOR TO BE REMOVED AND REPLACED. REFER TO KEYED NOTES 20, 21 AND 22 BELOW.
- 18 REMOVE EXISTING CONDUCTORS AS INDICATED IN KEYED NOTE #4. CLEAN EXISTING CONDUIT WITH MANDREL AND INSTALL 3-#3/0 XHHW-2 CU + 1-#4 XHHW-2 CU NEUM + 1-#6 XHHW-2 GND TO NEW TECO BUILDING DISCONNECT.
- 19 PROVIDE AND INSTALL NEW 480V, 200A, 3-POLE CIRCUIT BREAKER. SQUARE D JGL36200 CIRCUIT BREAKER IN A SQUARE D J250SS NEMA 4X STAINLESS STEEL ENCLOSURE WITH ISOLATED NEUTRAL AND GROUND LUGS. PROVIDE AND INSTALL LIGHTNING ARRESTOR, SQUARE D SDSA 4040, ON NEW CIRCUIT BREAKER.
- 20 PROVIDE AND INSTALL BARE #2 AWG CU GROUNDING ELECTRODE CONDUCTOR IN 1" SCHEDULE 80 PVC CONDUIT TO TWO NEW (2) 3/4" x 10'-0" STAINLESS STEEL GROUND RODS SPACED A MINIMUM OF 8 FEET APART.
- 21 PROVIDE AND INSTALL GROUND ROD TEST WELL (TYPICAL FOR EACH GROUND ROD). REFER TO SHEET E10 FOR GROUND ROD TEST WELL DETAIL.
- 22 PROVIDE AND INSTALL A BARE COPPER BOND BETWEEN TRANSFORMER ELECTRICAL GROUNDING ELECTRODES AND LIGHTNING PROTECTION SYSTEM. BONDING CONDUCTOR TO BE SIZED BASED ON NFPA 780.
- 23 CONTRACTOR TO BOND NEUTRAL AND GROUND AT EXISTING FUSED DISCONNECT. PROVIDE NEW LUGS (IF REQUIRED) TO ACCOMMODATE BONDING.
- 24 PROVIDE AND INSTALL 4-#4/0 XHHW-2 CU + 1-#4 XHHW-2 CU GND IN 2-1/2" CONDUIT FROM NEW ENCLOSED CIRCUIT BREAKER TO EXISTING PANELBOARD 'PHA'. FIELD ROUTE CONDUIT AS NECESSARY. CONTRACTOR MAY UTILIZE EXISTING PENETRATION IN NORTH WALL OF TECO BUILDING IF IT IS A VIABLE OPTION. GROUT AROUND NEW CONDUIT. REFER ALSO TO DEMOLITION DETAILS ON SHEET E8.

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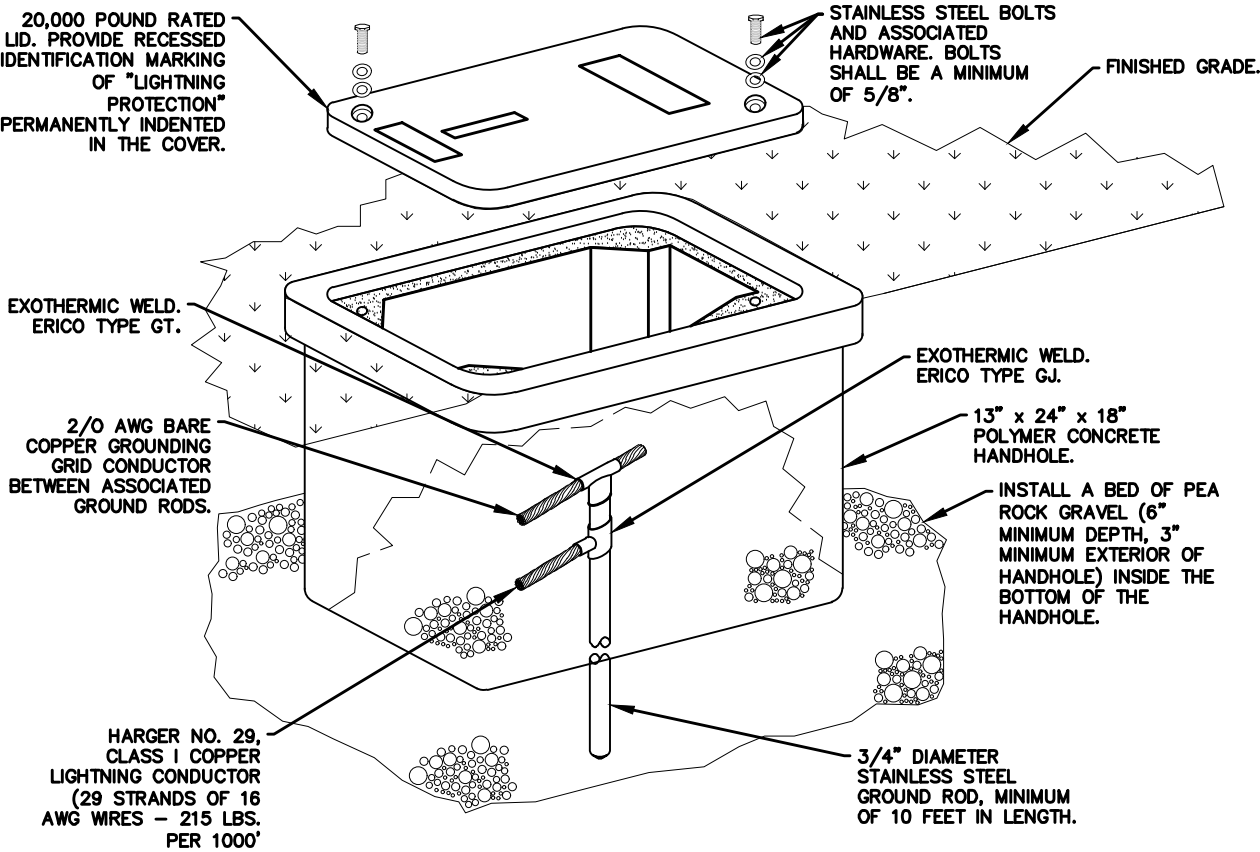
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ELECTRICAL ONE LINE DIAGRAMS

SHEET
E9

EXISTING PANEL 'PHA' SCHEDULE																
PANEL 'PHA' : GENERAL ELEC : 277/480 VOLTS, 3Ø, 4W : 175 AMP MAIN CIRCUIT BREAKER : 25 KAIC RATING : SURFACE ENCLOSURE TOP AT 5'-6" AFF																
EQUIPMENT SERVED	CIRCUIT BREAKER			AMPS/PHASE			CIRC. NO.	CIRC. NO.	AMPS/PHASE			CIRCUIT BREAKER			EQUIPMENT SERVED	
	POLE	AMPS	FRAME	A	B	C			A	B	C	POLE	AMPS	FRAME		
TX-1 (1)	3	100	SEHA	90.0	/	/	1	2	0.2	/	/	1	20	TED	277V FOR 'LC-1' COIL (3)	
" "	-	-	-	/	90.0	/	3	4	/	10.4	/	1	20	TED	INTERIOR LIGHTING (3)	
" "	-	-	-	/	/	90.0	5	6	/	/	0.8	1	20	TED	EXTERIOR LIGHTING (3)	
EXISTING TO REMAIN (2)	3	60	SEHA	/	/	/	7	8	0.6	/	/	3	15	SEHA	FAN #1 (4)	
" "	-	-	-	/	/	/	9	10	/	0.6	/	-	-	-	" "	
" "	-	-	-	/	/	/	11	12	/	/	0.6	-	-	-	" "	
EXISTING TO REMAIN (2)	3	30	SEHA	/	/	/	13	14	0.6	/	/	3	15	SEHA	FAN #2 (4)	
" "	-	-	-	/	/	/	15	16	/	0.6	/	-	-	-	" "	
" "	-	-	-	/	/	/	17	18	/	/	0.6	-	-	-	" "	
EXISTING TO REMAIN (2)	3	60	SEHA	/	/	/	19	20	0.4	/	/	1	20	TED	EMERGENCY LIGHTING (5)	
" "	-	-	-	/	/	/	21	22	/	/	/	-	-	-	BLANK	
" "	-	-	-	/	/	/	23	24	/	/	/	-	-	-	BLANK	
EXISTING TO REMAIN (2)	3	30	SEHA	/	/	/	25	26	/	/	/	3	30	SEHA	EXISTING TO REMAIN (2)	
" "	-	-	-	/	/	/	27	28	/	/	/	-	-	-	" "	
" "	-	-	-	/	/	/	29	30	/	/	/	-	-	-	" "	
EXISTING TO REMAIN (2)	3	30	SEHA	/	/	/	31	32	/	/	/	3	30	SEHA	EXISTING TO REMAIN (2)	
" "	-	-	-	/	/	/	33	34	/	/	/	-	-	-	" "	
" "	-	-	-	/	/	/	35	36	/	/	/	-	-	-	" "	
EXISTING TO REMAIN (2)	3	60	SEHA	/	/	/	37	38	/	/	/	-	-	-	BLANK	
" "	-	-	-	/	/	/	39	40	/	/	/	-	-	-	BLANK	
" "	-	-	-	/	/	/	41	42	/	/	/	-	-	-	BLANK	
SUB-TOTAL KVA				90.0	90.0	90.0			1.8	11.6	2.0					
CONNECTED LOAD = 104.2 AMPERES										TOTAL DEMAND LOAD = 32.4 AMPERES						
NOTES:																
(1) EXISTING CIRCUIT BREAKER FOR TX-1 TO BE REUSED (FIELD CONFIRM). (4) PROVIDE NEW 3-POLE, 15A SEHA36AT0150 CIRCUIT BREAKER WITH PADLOCKING KIT (TEFPLD1 OR EQUAL).																
(2) EXISTING CIRCUIT TO REMAIN AS SPARE. (5) PROVIDE NEW SINGLE-POLE, 20A TED CIRCUIT BREAKER.																
(3) EXISTING CIRCUIT BREAKER TO BE REUSED AND REPURPOSED FOR NEW CIRCUIT.																

EXISTING PANEL 'PLA' SCHEDULE																
PANEL 'PHA' ; GENERAL ELEC ; 120/208 VOLTS, 3Ø, 4W ; 225 AMP MAIN CIRCUIT BREAKER ; 35K AIC RATING ; SURFACE ENCLOSURE TOP AT 5'-6" AFF																
EQUIPMENT SERVED	CIRCUIT BREAKER			AMPS/PHASE			CIRC. NO.	CIRC. NO.	AMPS/PHASE			CIRCUIT BREAKER			EQUIPMENT SERVED	
	POLE	AMPS	FRAME	A	B	C			A	B	C	POLE	AMPS	FRAME		
EXISTING TO REMAIN (1)	3	50	TEY	/	/	/	1	2	3.0	/	/	1	20	TEY	RECEPTACLES (3)	
" "	-	-	-	/	/	/	3	4	/	7.5	/	1	20	TEY	RECEPTACLES (3)	
" "	-	-	-	/	/	/	5	6	/	/	6.0	1	20	TEY	RECEPTACLES (3)	
EXISTING TO REMAIN (1)	3	50	TEY	/	/	/	7	8	4.5	/	/	1	20	TEY	RECEPTACLES (3)	
" "	-	-	-	/	/	/	9	10	/	6.0	/	1	20	TEY	RECEPTACLES (3)	
" "	-	-	-	/	/	/	11	12	/	/	6.0	1	20	TEY	RECEPTACLES (3)	
EXISTING TO REMAIN (1)	1	20	TEY	/	/	/	13	14	/	/	/	1	15	TEY	EXISTING TO REMAIN (1)	
OPEN SPACE (2)	--	--	--	/	/	/	15	16	/	6.0	/	1	20	TEY	RECEPTACLES (3)	
EXISTING TO REMAIN (1)	1	20	TEY	/	/	/	17	18	/	/	3.0	1	20	TEY	RECEPTACLES (3)	
EXISTING TO REMAIN (1)	2	30	TEY	/	/	/	19	20	1.0	/	/	1	20	TEY	120V FOR 'LC-2' COIL (3)	
" "	-	-	-	/	/	/	21	22	/	/	/	1	20	TEY	EXISTING TO REMAIN (1)	
EXISTING TO REMAIN (1)	2	30	TEY	/	/	/	23	24	/	/	/	1	20	TEY	EXISTING TO REMAIN (1)	
" "	-	-	-	/	/	/	25	26	/	/	/	1	20	TEY	EXISTING TO REMAIN (1)	
OPEN SPACE (2)	--	--	--	/	/	/	27	28	/	/	/	1	20	TEY	EXISTING TO REMAIN (1)	
EXISTING TO REMAIN (1)	1	20	TEY	/	/	/	29	30	/	/	/	1	20	TEY	EXISTING TO REMAIN (1)	
EXISTING TO REMAIN (1)	3	30	TEY	/	/	/	31	32	/	/	/	2	20	TEY	EXISTING TO REMAIN (1)	
" "	-	-	-	/	/	/	33	34	/	/	/	-	-	-	" "	
" "	-	-	-	/	/	/	35	36	/	/	/	--	--	--	BLANK TO REMAIN	
EXISTING TO REMAIN (1)	3	30	TEY	/	/	/	37	38	/	/	/	3	20	TEY	EXISTING TO REMAIN (1)	
" "	-	-	-	/	/	/	39	40	/	/	/	-	-	-	" "	
" "	-	-	-	/	/	/	41	42	/	/	/	-	-	-	" "	
SUB-TOTAL KVA				0.0	0.0	0.0			3.4	7.0	3.5					
TOTAL CONNECTED LOAD = 13.9 AMPERES																
TOTAL DEMAND LOAD = 13.9 AMPERES																
NOTES: (1) EXISTING CIRCUIT TO REMAIN AS SPARE. (2) PROVIDE BLANK FOR OPENING. (3) EXISTING CIRCUIT BREAKER TO BE REUSED AND REPURPOSED FOR NEW CIRCUIT.																

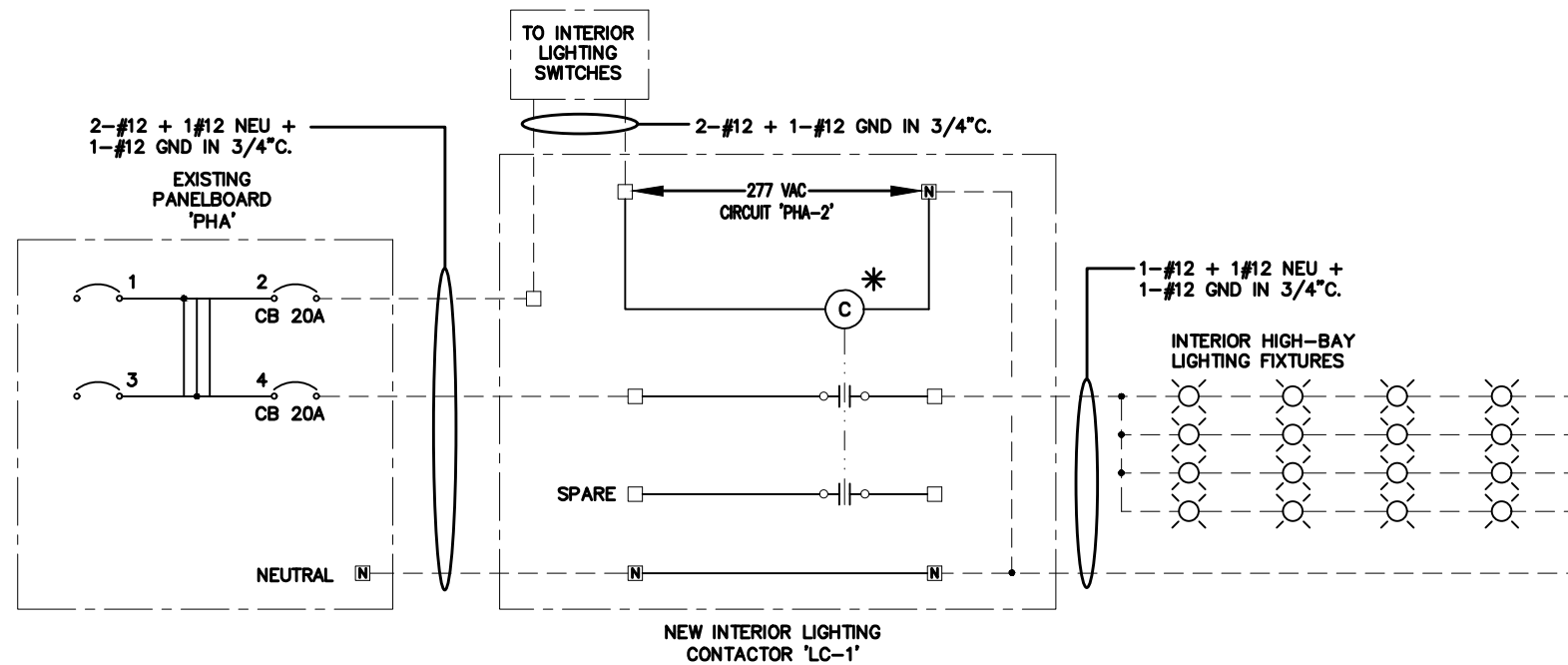


NOTES:
THE GROUND ROD TEST WELLS DETAILS DIFFER BETWEEN WHAT IS REQUIRED AT THE EXISTING DISCONNECT AT TRANSFORMER T-8A-2, THE EXISTING 75 KVA TRANSFORMER AND THE NEW PROTECTION LIGHTNING GROUNDING. THE DETAIL IS INTENDED TO PROVIDE THE BASIC CONCEPTS. MODIFICATIONS ARE REQUIRED BASED ON THE APPLICATIONS LISTED.

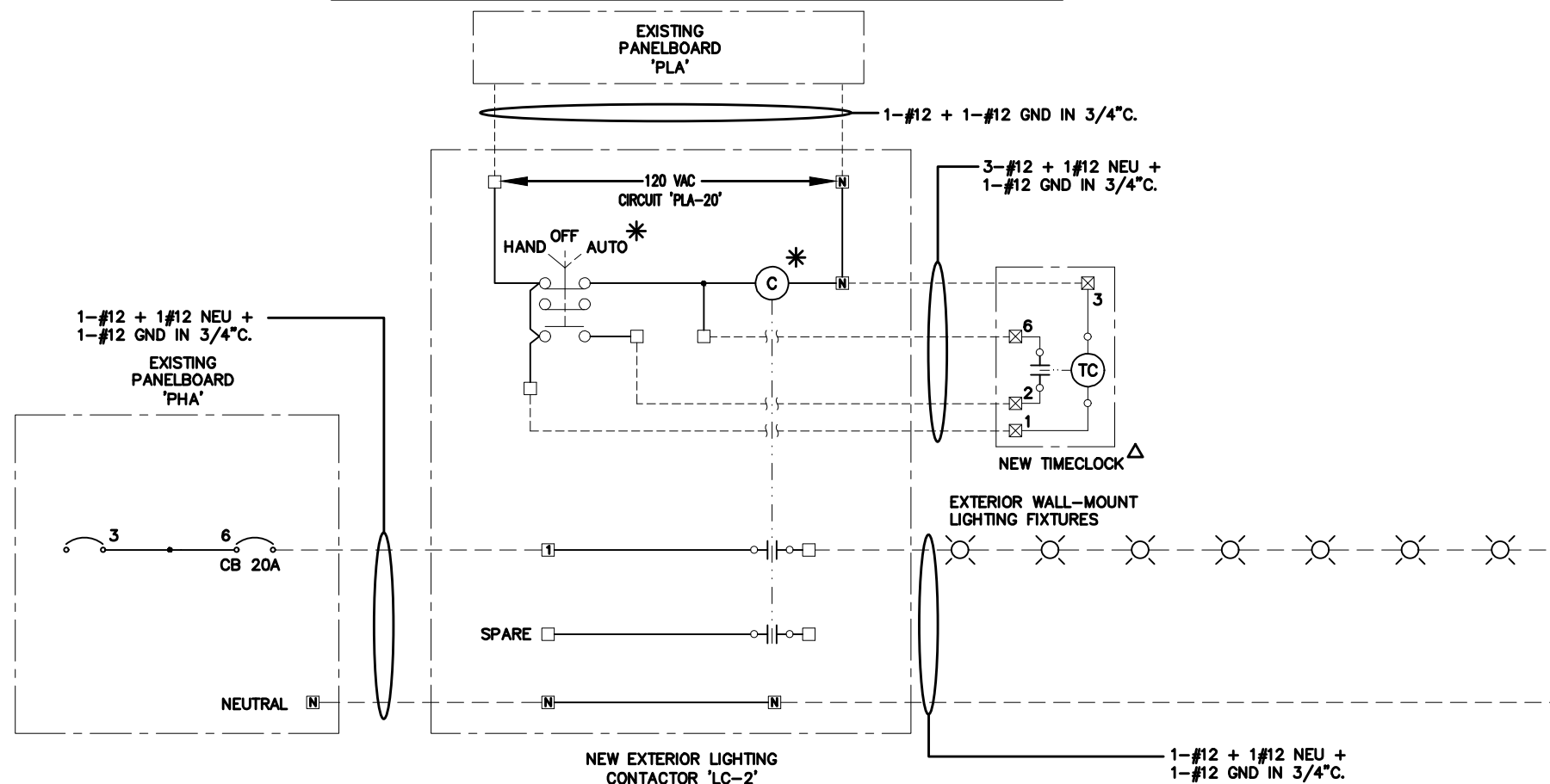
GROUND ROD TEST WELL DETAIL 1

SCALE: NOT TO SCALE

E2
E4
E7
E9



INTERIOR LIGHTING CONTROL SCHEMATIC



EXTERIOR LIGHTING CONTROL SCHEMATIC

LEGEND

- Δ INDICATES A REMOTE DEVICE
- * INDICATES DEVICE LOCATED IN CONTACTOR
- INDICATES TERMINAL BLOCK IN CONTACTOR
- ⊠ INDICATES TERMINAL BLOCK IN TIMECLOCK
- FIELD WIRING

#	DATE	REVISIONS
1		
2		
3		

DES: TDT
DRN: TDT
CKD:
DATE: