

CAMERON COUNTY

835 EAST LEVEE & SAN BENITO ANNEX BUILDING

STANDBY POWER UPGRADES

NO. REVISION: BY:

COPY NO:



TEXAS

CAMERON COUNTY
835 EAST LEVEE & SAN BENITO ANNEX BUILDING
STANDBY POWER UPGRADES

CAMERON COUNTY



1128 SOUTH COMMERCE ST.
HARLINGEN, TX
PHONE: 361-206-3435
TEXAS REGISTERED
ENGINEERING FIRM
E-15998

DATE: JUNE 23, 2023

CHECKED BY: G.G.

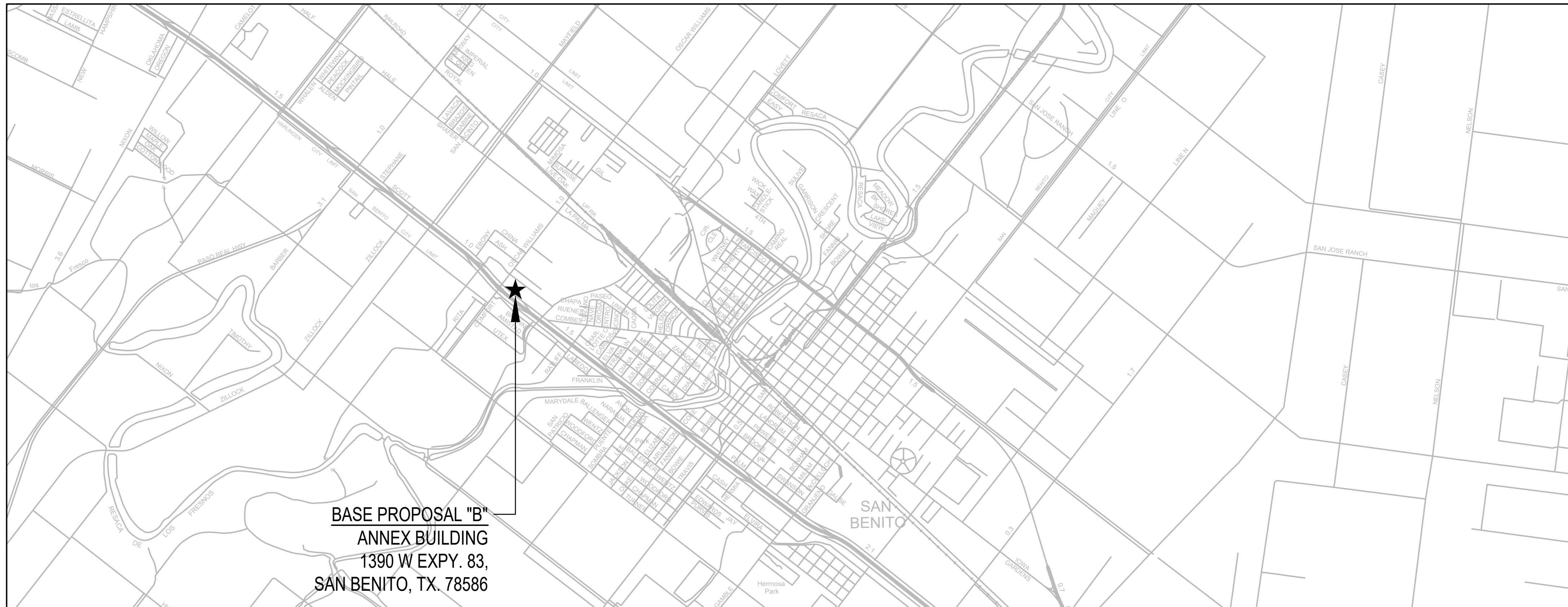
DRAWN BY: C.G.

PROJECT NO.: 23v14

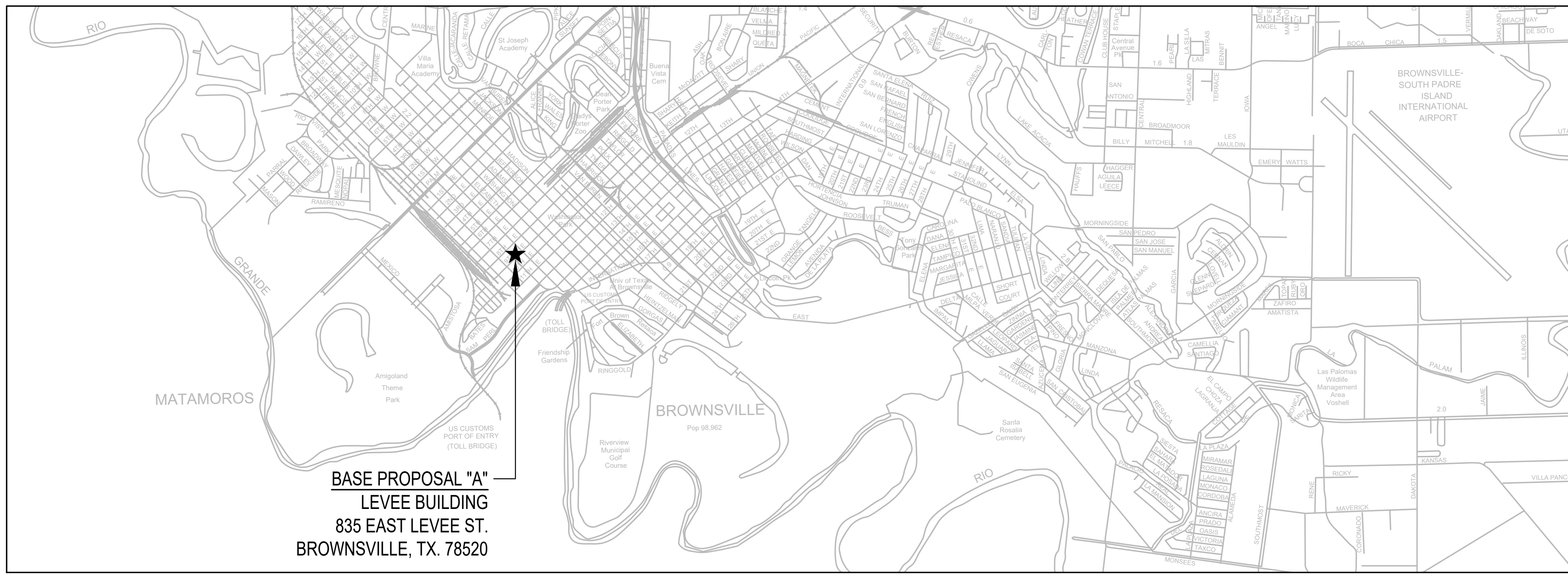
CAD FILE:
SHEET:

COVER

VICINITY MAPS



BASE PROPOSAL "B"
ANNEX BUILDING
1390 W EXPY. 83,
SAN BENITO, TX. 78586



BASE PROPOSAL "A"
LEVEE BUILDING
835 EAST LEVEE ST.
BROWNSVILLE, TX. 78520

DATE OF ISSUE

JUNE 23, 2023

LIST OF DRAWINGS

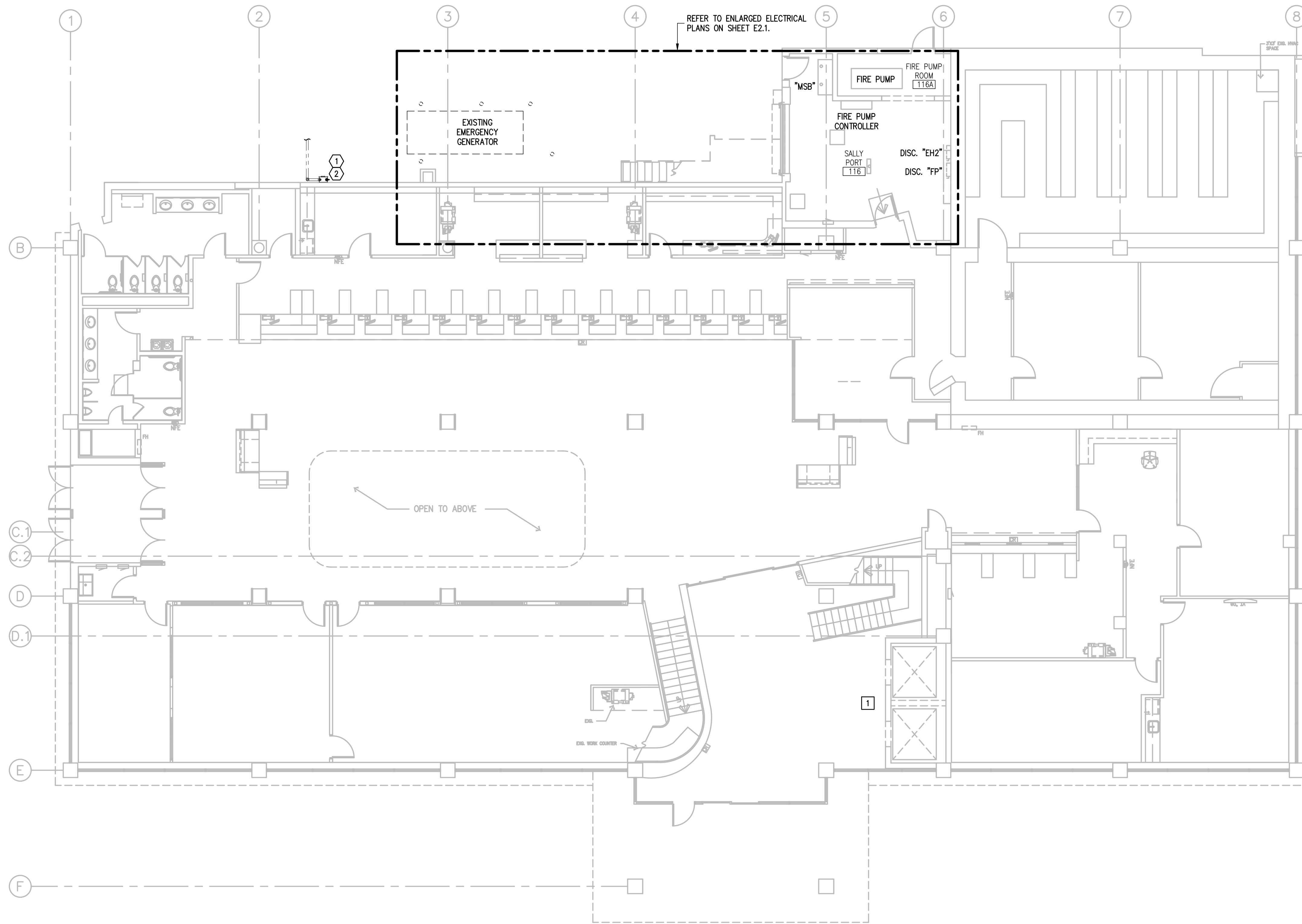
COVER	COVER	BASE PROPOSAL "A" - 835 EAST LEVEE BUILDING	BASE PROPOSAL "B" - SAN BENITO ANNEX BUILDING
LEP1.1	FIRST FLOOR OVERALL ELECTRICAL & PLUMBING PLAN	SE1.1	ELECTRICAL SITE PLAN
LE2.1	FIRST FLOOR DEMOLITION & NEW ELECTRICAL PLAN	SE2.1	ENLARGED ELECTRICAL SITE PLAN
LE2.2	MID LEVEL DEMOLITION & NEW ELECTRICAL PLAN	SE2.2	DEMOLITION & NEW ELECTRICAL PLAN
LE2.3	ROOF NEW ELECTRICAL PLAN	SE3.1	DEMOLITION AND NEW ELECTRICAL RISER DIAGRAM
LE3.1	DEMOLITION AND NEW ELECTRICAL RISER DIAGRAM	SE4.1	ELECTRICAL DETAILS
LE4.1	ELECTRICAL DETAILS	SM2.1	MECHANICAL PLAN
LP2.1	FIRST FLOOR NATURAL GAS PLAN	SS1.1	STRUCTURAL GENERAL NOTES
LS1.1	STRUCTURAL GENERAL NOTES	SS2.1	STRUCTURAL FOUNDATION PLAN & DETAILS
LS2.1	STRUCTURAL FOUNDATION PLAN & DETAILS		

SCOPE OF WORK

- A. PROVIDE ALL MATERIALS AND LABOR ASSOCIATED WITH COMPLETE OPERATIONAL SYSTEMS. MAJOR ITEMS OF WORK INCLUDE, BUT ARE NOT LIMITED TO:
 1. GENERAL:
 - A. SEE DRAWINGS FOR SCOPE OF WORK AND LIMITS OF CONSTRUCTION SHOWING AREAS IN THE BUILDING THAT WILL BE AFFECTED.
 - B. SEE DRAWINGS AND SPECIFICATIONS FOR DETAILS.
 2. DEMOLITION WORK:
 - A. REMOVE AND DISPOSE OF EXISTING ELECTRICAL EQUIPMENT. SEE DRAWINGS FOR REMOVAL OR ASSOCIATED MATERIALS SUCH AS HANGERS, SUPPORT ASSEMBLY, MOUNTING HARDWARE, CONTROLS, AND DEVICES ASSOCIATED WITH DEMOLISHED EQUIPMENT, INCLUDING BUT NOT LIMITED TO, CONDUIT & POWER WIRING, ETC. CLEAR AREA AND PREPARE FOR NEW WORK.
 - B. WHERE INDICATED, SAVE EXISTING POWER WIRING, CONDUIT AND CIRCUIT BREAKERS FOR REUSE. DEMOLISH ELECTRICAL EQUIPMENT, CIRCUIT BREAKERS, DISCONNECTS AND OTHER MISCELLANEOUS MATERIALS AS NOTED IN THE DRAWINGS.
 3. SEQUENCE OF CONSTRUCTION:
 - A. COORDINATE WITH CAMERON COUNTY STAFF THE 835 EAST LEVEE EXISTING GENERATOR REMOVAL FOR RELOCATION TO THE SAN BENITO ANNEX BUILDING.
- B. SAN BENITO ANNEX ELECTRICAL SERVICE: COORDINATE WORK WITH AEP PERSONNEL AND CC STAFF.
- C. INCLUDE IN THE BID PROPOSAL THE RENTAL OF A TEMPORARY GENERATOR OF 300KW FOR 30 DAY DURATION.
4. HVAC WORK: PROVIDE ALL MATERIALS AND LABOR ASSOCIATED WITH NEW FULLY OPERATIONAL MECHANICAL AND CONTROLS SYSTEMS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 - A. PROVIDE CONTROLS TO ADJUST START UP DELAYS ON EACH SYSTEM INDIVIDUALLY TO ENSURE INDICATED UNITS START-UP STAGGERED AND IN AN ORDERLY FASHION DURING, AND AFTER, A POWER OUTAGE.
 - B. TEST ALL TIMER DELAYS FOR FUNCTIONALITY AND DOCUMENT SUCCESSFUL ACHIEVEMENT OF STAGGER START-UPS OF EQUIPMENT.
 - C. PERFORM STARTUP SERVICES TO DEMONSTRATE PROPER OPERATION OF INSTALLED DEVICES AND TRAIN OWNER'S MAINTENANCE PERSONNEL TO ADJUST, OPERATE, AND MAINTAIN.
5. ELECTRICAL: PROVIDE ALL MATERIALS AND LABOR ASSOCIATED WITH COMPLETE OPERATIONAL ELECTRICAL DISTRIBUTION SYSTEM. MAJOR ITEMS OF WORK INCLUDE, BUT ARE NOT LIMITED TO:
 - A. ELECTRICAL SERVICE: TO REMAIN AS IS WITH MODIFICATIONS.
 - B. DEMOLITION: DISCONNECT AND REMOVE EXISTING STANDBY GENERATOR ALONG WITH RELATED TRANSFER SWITCH, FEEDERS, CONTROLS, ETC.
 - C. POWER SYSTEMS: PROVIDE NEW STANDBY GENERATOR, TRANSFER SWITCH, FEEDERS, CONTROLS, ETC.
 - D. HVAC CONTROLS: DEPROGRAM/REPROGRAM EQUIPMENT FOR START-UP TIME DELAY.
 - E. ELEVATOR CONTROLS: DEPROGRAM/REPROGRAM/MODIFY FOR EXISTING ELEVATORS START-UP TIME DELAY.

COMMISSIONERS COURT

EDDIE TREVIÑO, JR.	COUNTY JUDGE
SOFIA C. BENAVIDES	COMMISSIONER PRECINCT 1
JOEY LOPEZ	COMMISSIONER PRECINCT 2
DAVID A. GARZA	COMMISSIONER PRECINCT 3
GUS RUIZ	COMMISSIONER PRECINCT 4



**01 FIRST FLOOR OVERALL
ELECTRICAL & PLUMBING PLAN**

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



PLUMBING NEW KEYED NOTES:

- 1 NEW NATURAL GAS SERVICE FOR THE GENERATOR AT THIS LOCATION. GAS METER AND REGULATOR FOR A TOTAL DEMAND OF 3,000,000 BTU'S AT 5 PSI PRESSURE. GAS METER, REGULATOR AND PIPING UPSTREAM THE METER TO BE PROVIDED BY THE GAS COMPANY. COORDINATE INSTALLATION WITH GAS COMPANY.
- 2 ALL GAS PIPING DOWNSTREAM THE METER AND REGULATOR TO BE PROVIDED BY THE PLUMBING CONTRACTOR. REFER TO SHEET LP2.1 FOR MORE INFORMATION.

NEW KEYED NOTES:

- 1 PROVIDE MODERNIZATION OF EACH ELEVATOR LIGHT INDICATOR LIGHT AS REQUIRED. CONTACT RIO ELEVATOR COMPANY INC. MR. KEVIN HILL. PHONE # (956)792-4112(C) / (956)423-6576(O).

GENERAL NOTES:

1. COORDINATE WORK AMONG ALL DISCIPLINES. IT IS NOT THE INTENT OF THESE DOCUMENTS TO DICTATE WHO MUST DO THE WORK. ALL WORK SHOWN IS THE RESPONSIBILITY OF THE (PRIME) CONTRACTOR.
2. FIELD VERIFY PROJECT SITE EXISTING CONDITIONS AND ELEVATIONS PRIOR TO BEGINNING ANY WORK.
3. COORDINATE ELECTRICAL AND PLUMBING WITH GENERAL CONSTRUCTION.
4. PHASING AND SEQUENCE OF CONSTRUCTION SHALL BE PER DRAWINGS AND SPECIFICATIONS.
5. FIELD VERIFY/SPOT EXACT LOCATIONS AND EXISTING CONDITIONS OF EXISTING PLUMBING, AND ELECTRICAL. IT IS THE INTENT OF THESE PLANS TO PROVIDE A COMPLETE AND WORKABLE SYSTEMS. SHOULD BIDDER FIND OMISSIONS OR DISCREPANCIES IN THE PLANS, BIDDER SHALL NOTIFY THE ENGINEER PRIOR TO THE BID DATE AND A WRITTEN CLARIFICATION WILL BE ISSUED.
6. DAMAGED ITEMS SHALL BE REPAIRED AT NO ADDITIONAL COST TO OWNER. CONTRACTORS ARE REQUIRED TO SEARCH AND INVESTIGATE FOR EXISTING UTILITIES BEFORE EXCAVATING.
7. ALL MATERIALS AND LABOR, WHETHER SPECIFICALLY INDICATED ON PLANS OR NOT, WHICH ARE NECESSARY FOR THE PROPER INSTALLATION AND FUNCTION OF THE SYSTEM SHALL BE FURNISHED BY THIS CONTRACTOR. INCLUDE ALL COSTS OF CHANGES, IF/AS REQUIRED IN BID PROPOSAL.
8. PROVIDE J-BOXES AS REQUIRED FOR PULL WIRING.
9. ELECTRICAL WIRING SHALL NOT BE SPLICED BELOW GRADE.
10. PERFORM ALL WORK PER LATEST VERSION OF NATIONAL ELECTRICAL CODE, AND APPLICABLE LOCAL CODES AND ORDINANCES, UNLESS DRAWINGS OR SPECIFICATIONS HAVE MORE STRINGENT REQUIREMENTS.
11. CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS AND FEES ASSOCIATED WITH PROJECT, INCLUDING FEES FOR INSPECTIONS, APPLICATIONS, AND PROVISION OF NEW SERVICES.
12. CONTRACTOR WHO WILL ACTUALLY PERFORM WORK MUST APPLY FOR ALL REQUIRED PERMITS.
13. NOTIFY ENGINEER OF ANY ASPECTS OF DESIGN WHICH ARE THOUGHT TO BE IN NONCOMPLIANCE WITH APPLICABLE CODES.
14. COORDINATE ALL WORK WITH OTHER TRADES; COORDINATE SCHEDULE OF WORK WITH ALL SUB-CONTRACTORS TO ACHIEVE SMOOTH FLOW OF CONSTRUCTION.
15. SEAL AROUND ELECTRICAL RACEWAYS AT ALL WALLS. PENETRATIONS WITH FIREPROOF CAULKING. RE: SPECS. PROVIDE FLASHING AROUND PENETRATION, BOTH INSIDE AND OUTSIDE, TO PROVIDE FINISHED LOOK.
16. TIME OR MONEY ALLOWANCES WILL NOT BE MADE TO ACCOMMODATE UTILITY CONFLICTS THAT CAN BE REASONABLY RESOLVED BY COORDINATION DURING SHOP DRAWING PHASE.
17. CONTRACTOR SHALL REVIEW COMPLETE DOCUMENTS PRIOR TO SUBMITTAL OF PROPOSAL TO GAIN COMPLETE UNDERSTANDING OF PROJECT SCOPE, WORK BY OTHERS, AND ELECTRICAL WORK ASSOCIATED WITH OTHER DISCIPLINES.
18. MAINTAIN MANUFACTURER RECOMMENDED CLEARANCE AROUND ALL EQUIPMENT.
19. AFFIX ID TAGS TO ALL DIVISION 26 EQUIPMENT.
20. FIELD VERIFY ALL CONDITIONS AND MEASURE DIMENSIONS WITHIN THE BUILDING PRIOR TO ORDERING EQUIPMENT AND/OR PROCEEDING WITH INSTALLATION.
21. ALL EQUIPMENT SHALL BE FACTORY TESTED, AND CONTRACTOR SHALL VERIFY THEIR CONDITION PRIOR TO INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR EQUIPMENT DAMAGED DURING MOVING AND INSTALLATION.
22. EQUIPMENT FOUND DEFECTIVE PRIOR TO FINAL ACCEPTANCE SHALL BE REPLACED AT NO COST TO OWNER.
23. WORK TO BE DONE UNDER ALLOWANCES BECOMES AN INTEGRAL PART OF THE PROJECT AND RESPONSIBILITY OF CONTRACTOR ONCE ALLOWANCE IS APPROVED.
24. CONTRACTOR SHALL NOT PROCEED WITH ANY WORK INVOLVING A CHANGE IN PROJECT SCOPE OR COST WITHOUT FIRST HAVING OBTAINED ENGINEER'S APPROVAL IN WRITING. UNLESS ENGINEER HAS AGREED TO SUCH CHANGE PRIOR TO IT BEING DONE, AND HAS AGREED THAT AN INCREASE IN COST ASSOCIATED WITH SUCH CHANGE IS WARRANTED; CONTRACTOR WILL NOT BE REIMBURSED FOR SUCH CHANGE.
25. SEQUENCE OF CONSTRUCTION COORDINATE WITH CAMERON COUNTY STAFF 835 EAST LEVEE BUILDING. GENERATOR CAN NOT BE REMOVED UNLESS THE NEW GENERATOR IS ALREADY ON SITE.

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CAMERON COUNTY
835 EAST LEVEE & SAN BENITO ANNEX BUILDING
STANDBY POWER UPGRADES
CAMERON COUNTY



1128 SOUTH COMMERCE ST.
HARLINGEN, TX
PHONE: 956-205-2435
TEXAS REGISTERED
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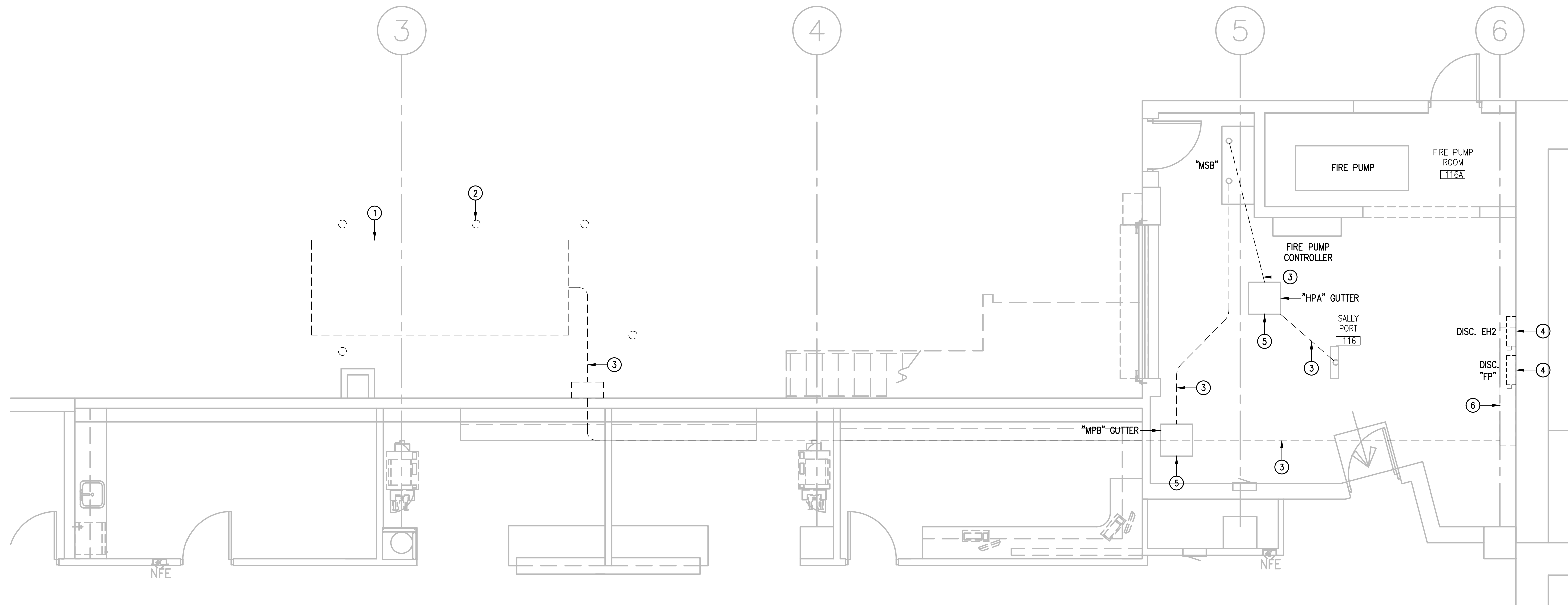
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PROJECT NO.: 23v14

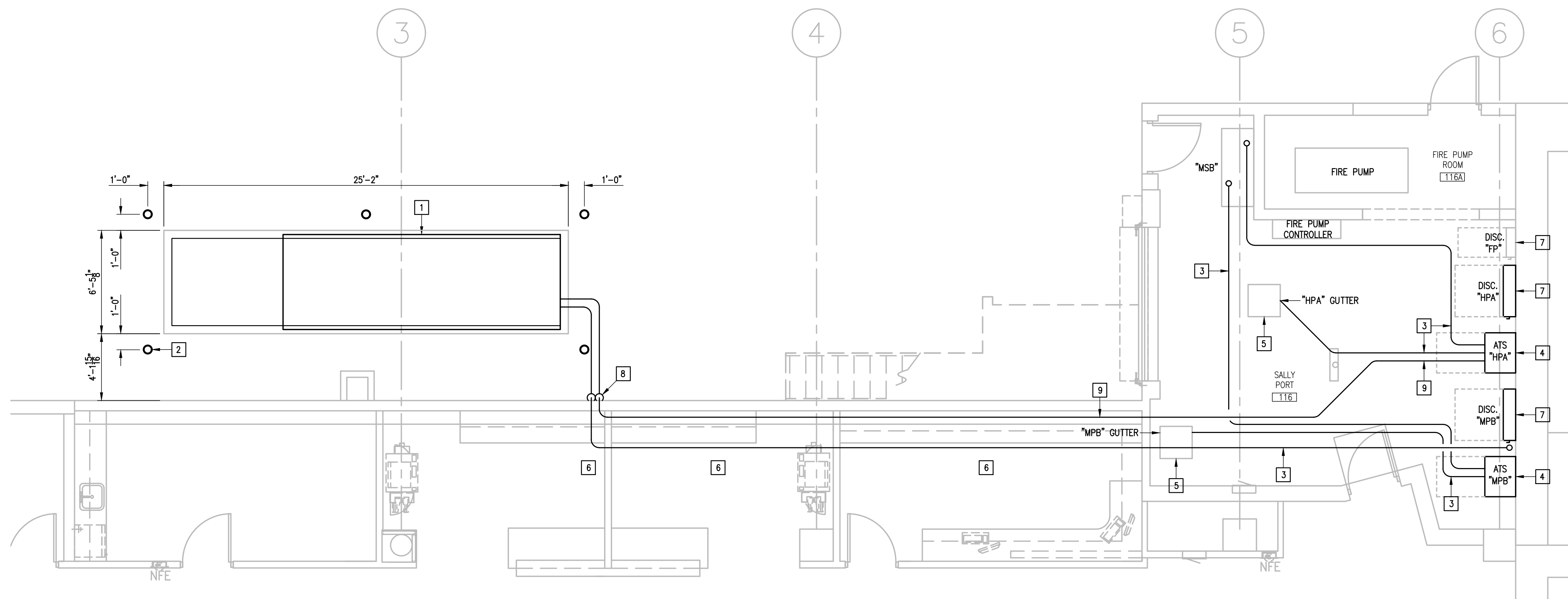
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LEP1.1



835 EAST LEVEE BUILDING
01 1ST FLOOR DEMOLITION ELECTRICAL PLAN
 SCALE : 1/4"=1'-0"



835 EAST LEVEE BUILDING
02 1ST FLOOR NEW ELECTRICAL PLAN
 SCALE : 1/4"=1'-0"



DEMOLITION GENERAL NOTES:

1. THE EXTENT OF DEMOLITION WORK IS INDICATED ON THE DRAWINGS AND BY THE REQUIREMENTS OF THIS SECTION. A VISIT TO THE SITE IS REQUIRED TO PROPERLY BID THE DEMOLITION WORK.
2. REMOVED MATERIALS SHALL BELONG TO OWNER. DELIVER THEM TO OWNERS DESIGNATED LOCATION. IF OWNER DOES NOT WANT THE REMOVED MATERIALS THEN REMOVE THEM FROM SITE & PROPERLY DISPOSE OF THEM.
3. IF REMOVAL OF EXISTING ELECTRICAL SYSTEMS RENDERS EXISTING ELECTRICAL SYSTEMS DOWNSTREAM TO REMAIN INOPERABLE, PROVIDE J-BOXES, CONDUIT WIRING AND SPLICES ABOVE ACCESSIBLE CEILINGS IN ORDER TO CONTINUE OPERATION.

DEMOLITION KEYED NOTES:

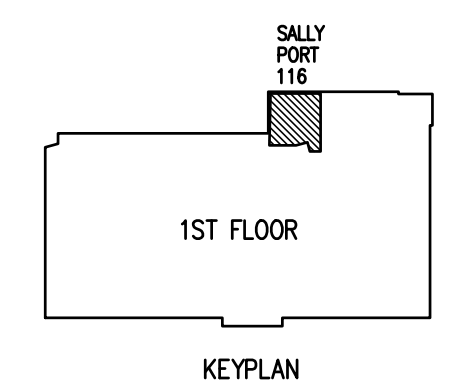
- 1 DISCONNECT AND REMOVE EXISTING STANDBY GENERATOR.
- 2 REMOVE TRAFFIC CONTROL PIPE BOLLARDS - TYPICAL OF 5.
- 3 DISCONNECT AND REMOVE EXISTING FEEDERS.
- 4 DISCONNECT AND REMOVE EXISTING SAFETY SWITCH.
- 5 RETAIN EXISTING WIRING GUTTER.
- 6 REMOVE EXISTING WIRING GUTTER.

NEW KEYED NOTES:

- 1 PROVIDE STANDBY GENERATOR. SEE RISER DIAGRAM.
- 2 PROVIDE TRAFFIC CONTROL PIPE BOLLARDS - TYPICAL OF 5. SEE DETAIL 04/E4.1.
- 3 PROVIDE FEEDERS. SEE FEEDER SCHEDULE
- 4 PROVIDE AUTOMATIC TRANSFER SWITCH. SEE RISER DIAGRAM.
- 5 REUSE EXISTING WIRING GUTTER.
- 6 TEMPORARILY REMOVE EXISTING CEILING TILES FOR INSTALLATION OF NEW RACEWAYS. REINSTALL EXISTING CEILING TILES AFTER WORK ABOVE THE CEILING HAS BEEN COMPLETED.
- 7 PROVIDE SAFETY SWITCH WALL MOUNTED.
- 8 RISE UP RACEWAYS ALONG EXTERIOR WALL AND PENETRATE BUILDING AT AN ACCESSIBLE LOCATION ABOVE THE CEILING.
- 9 PROVIDE RACEWAY WITH CONTROL CABLING UP TO ROOF LEVEL. INTERFACE GENERATOR WITH EXISTING HVAC AND ELEVATORS CONTROLS. SEE DETAIL #03/E2.3.

LINE TYPE LEGEND:

LINE	DESCRIPTION
---	EXISTING TO BE REMOVED
---	EXISTING TO REMAIN
---	PROVIDE NEW



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835 EAST LEVEE & SAN BENITO ANNEX BUILDING
 STANDBY POWER UPGRADES
 CAMERON COUNTY



1128 SOUTH COMMERCE ST.
 HARLINGEN, TX
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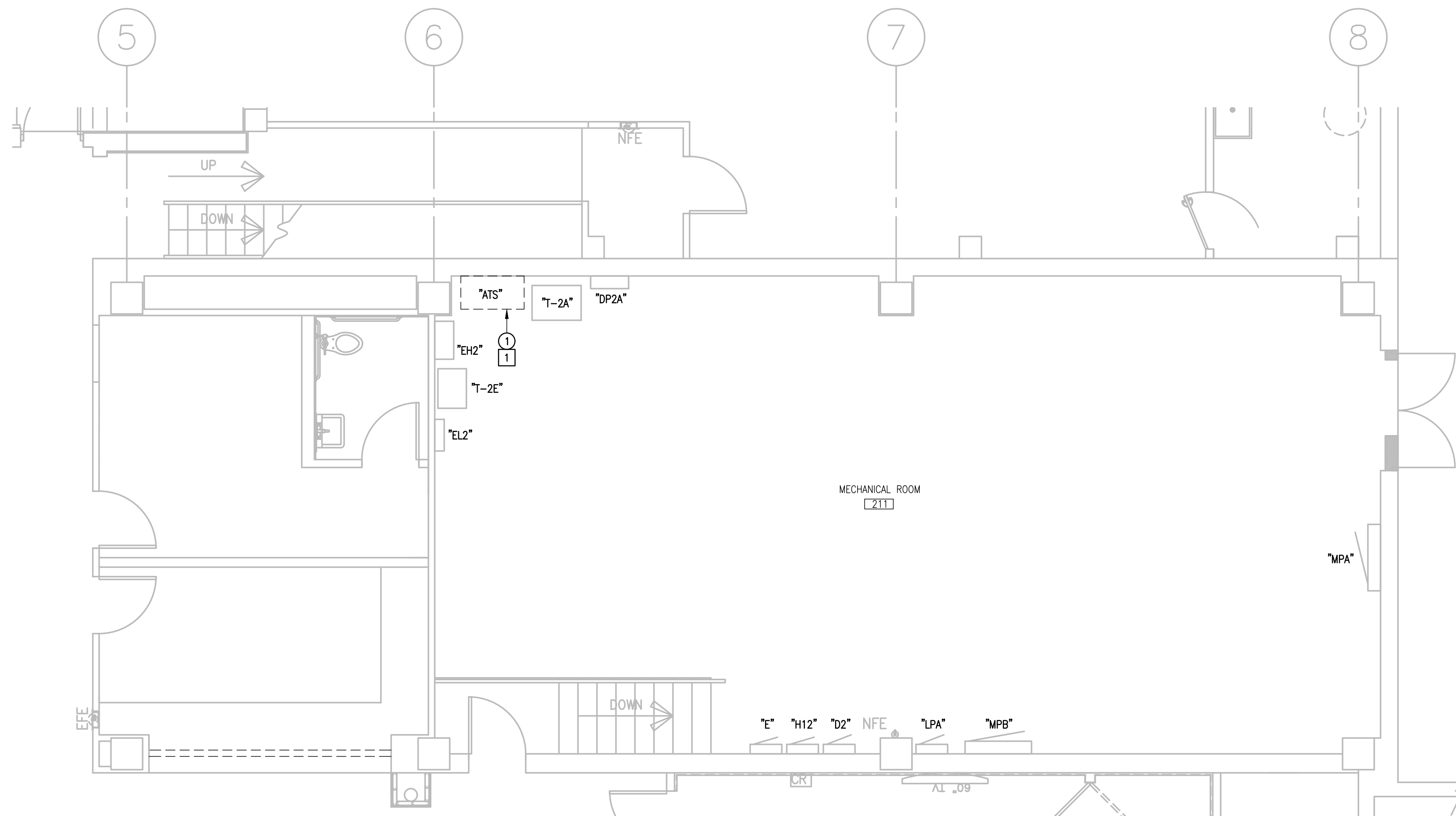
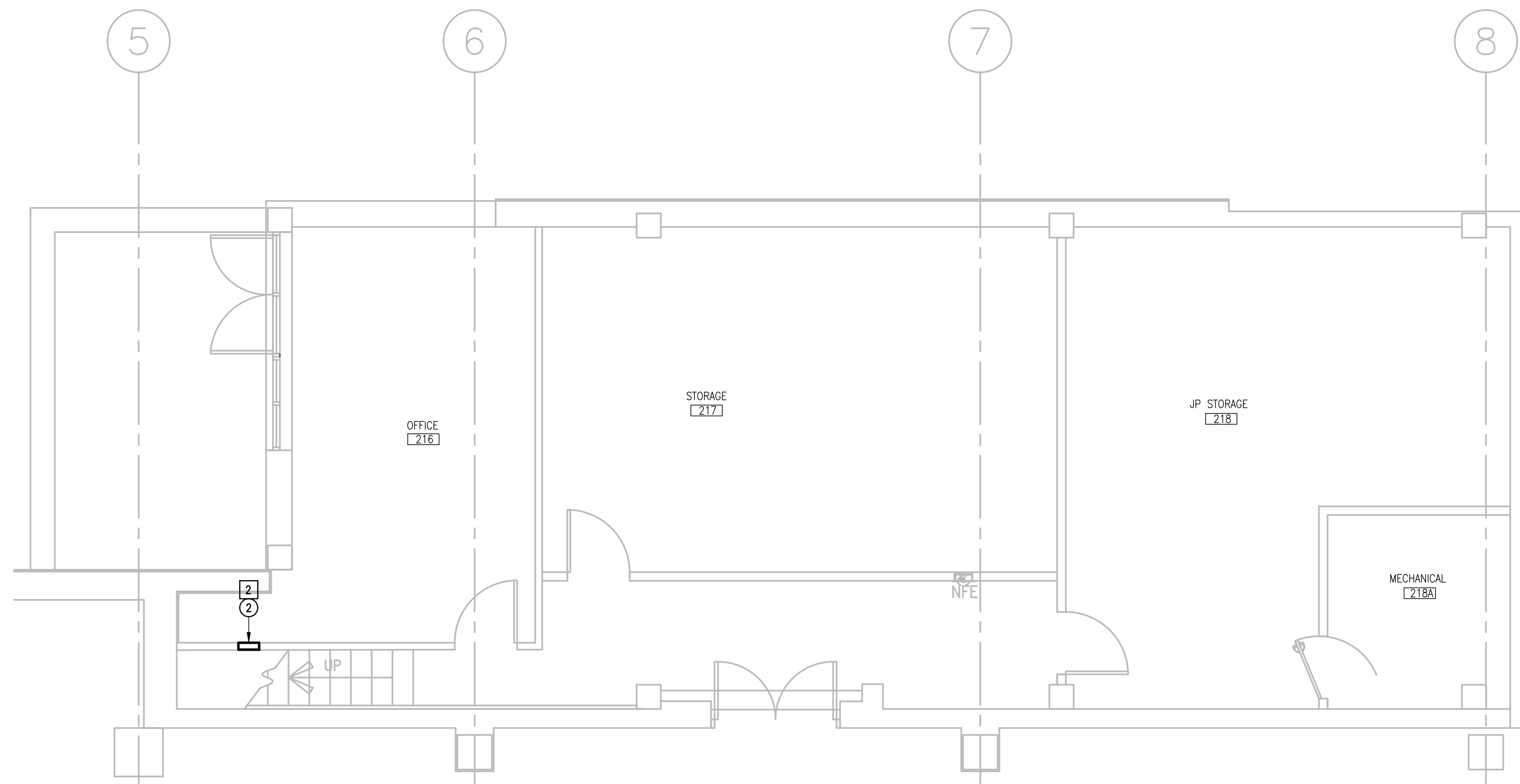
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PROJECT NO.: 23v14

CAD FILE:

SHEET:

LE2.1



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2. REMOVED MATERIALS SHALL BELONG TO OWNER. DELIVER THEM TO OWNERS DESIGNATED LOCATION. IF OWNER DOES NOT WANT THE REMOVED MATERIALS THEN REMOVE THEM FROM SITE & PROPERLY DISPOSE OF THEM.
3. IF REMOVAL OF EXISTING ELECTRICAL SYSTEMS RENDERS EXISTING ELECTRICAL SYSTEMS DOWNSTREAM TO REMAIN INOPERABLE, PROVIDE J-BOXES, CONDUIT WIRING AND SPLICES ABOVE ACCESSIBLE CEILINGS IN ORDER TO CONTINUE OPERATION.

DEMOLITION KEYED NOTES:

- 1 DISCONNECT AND REMOVE EXISTING AUTOMATIC TRANSFER SWITCH. PROVIDE A NEW WIREWAY - SEE ELECTRICAL RISER DIAGRAM.
- 2 DISCONNECT AND REMOVE EXISTING GENERATOR REMOTE ANNUNCIATOR (FLUSH MOUNTED). REMOVE EXISTING CABLING.

NEW KEYED NOTES:

- 1 PROVIDE NEW "MPB" GUTTER - SEE ELECTRICAL RISER DIAGRAM.
- 2 PROVIDE NEW GENERATOR REMOTE ANNUNCIATOR (FLUSH MOUNTED) AND CABLING. RETAIN AND REUSE EXISTING RACEWAY. CUT, PATCH AND PAINT WALL TO MATCH AS REQUIRED.



02 EXISTING AUTOMATIC TRANSFER SWITCH IMAGE
SCALE: NONE

01 835 EAST LEVEE BUILDING
MID LEVEL DEMOLITION / NEW ELECTRICAL PLAN
SCALE: 1/4" = 1'-0"

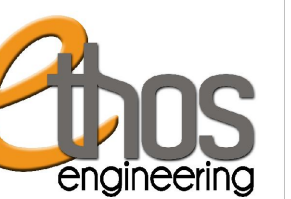
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CAMERON COUNTY
 835 EAST LEVEE & SAN BENITO ANNEX BUILDING
 STANDBY POWER UPGRADES
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1126 SOUTH COMMERCE ST.
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CAD FILE:
SHEET:

LE2.2



HVAC CONTROLS
GENERAL NOTES:

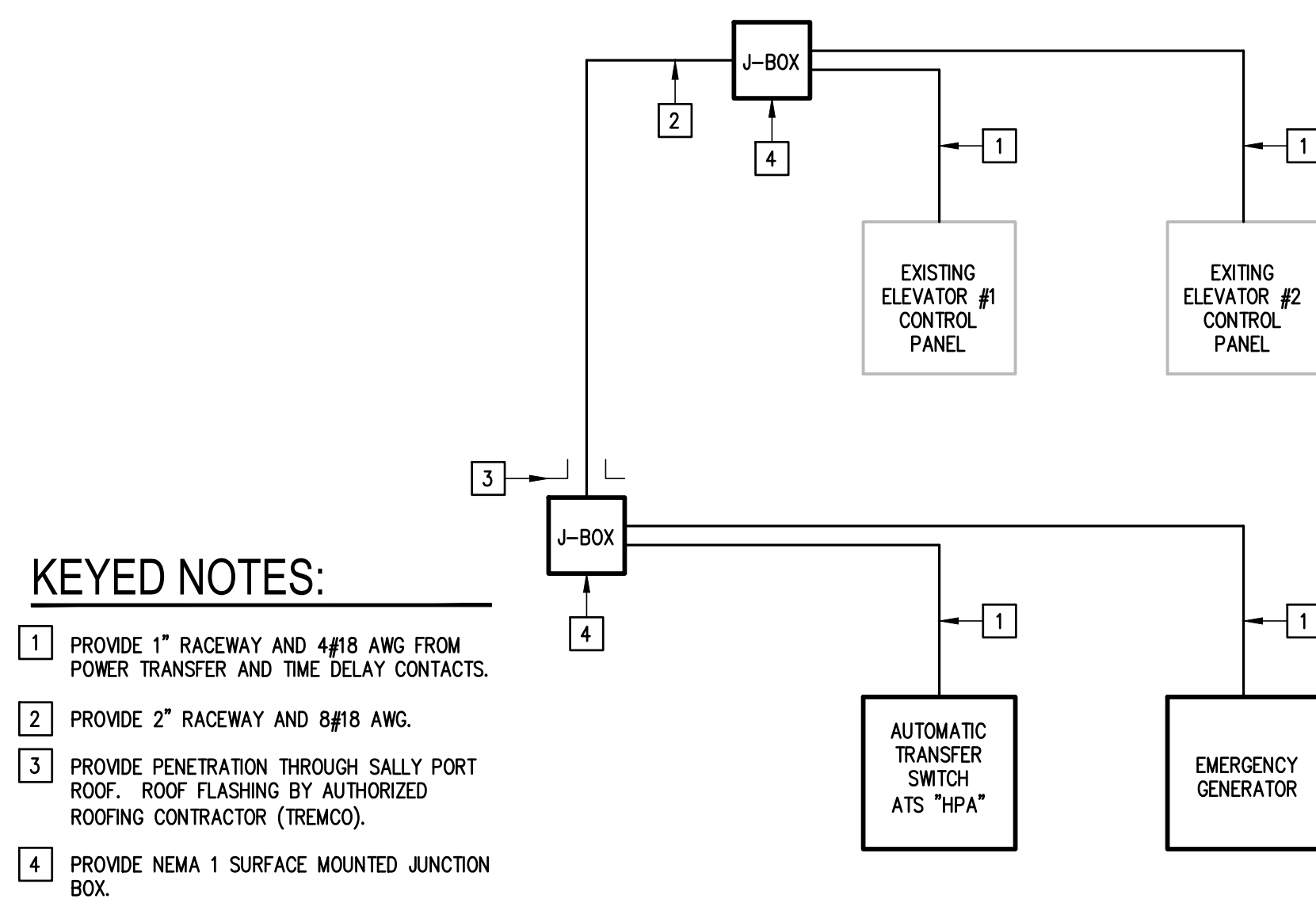
1. PROVIDE INTERFACE OR COMMUNICATIONS CARDS, MISCELLANEOUS HARDWARE, SOFTWARE AND PROGRAMING FOR GENERATOR MONITORING.
2. UPON NORMAL POWER FAILURE PROVIDE CHILLER #1 TO ALLOW START-UP/OPERATE ON EMERGENCY POWER AFTER 10 MINUTES.
3. UPON NORMAL POWER FAILURE PROVIDE CHILLER #2 TO ALLOW START-UP/OPERATE ON EMERGENCY POWER AFTER 20 MINUTES.

ELEVATOR CONTROLS
GENERAL NOTES:

1. PROVIDE INTERFACE OR COMMUNICATIONS, MISCELLANEOUS HARDWARE, SOFTWARE AND PROGRAMING WITH GENERATOR.
2. UPON NORMAL POWER FAILURE PROVIDE ELEVATOR #1 TO ALLOW START-UP/OPERATE ON EMERGENCY POWER AFTER 1 MINUTE.
3. UPON NORMAL POWER FAILURE PROVIDE ELEVATOR #2 TO ALLOW START-UP/OPERATE ON EMERGENCY POWER AFTER 2 MINUTES.

NEW KEYED NOTES:

- 1 RACEWAYS RISING FROM ABOVE SALLY PORT ROOF.
- 2 PROVIDE MOUNTED ON 3RD FLOOR ROOF.
- 3 RACEWAYS RISING FROM 3RD FLOOR ROOF.
- 4 PROVIDE RACEWAY WALL MOUNTED.
- 5 EXISTING HVAC CONTROLS PANEL.
- 6 EXISTING ELEVATOR CONTROL PANEL. PROVIDE CONTROL PANEL MODERNIZATION AS REQUIRED FOR EMERGENCY GENERATOR POWER RECOGNITION. CONTACT RIO ELEVATOR COMPANY INC. MR KEVIN HILL PHONE # (956)792-4112(C) / (956)423-6576(O).



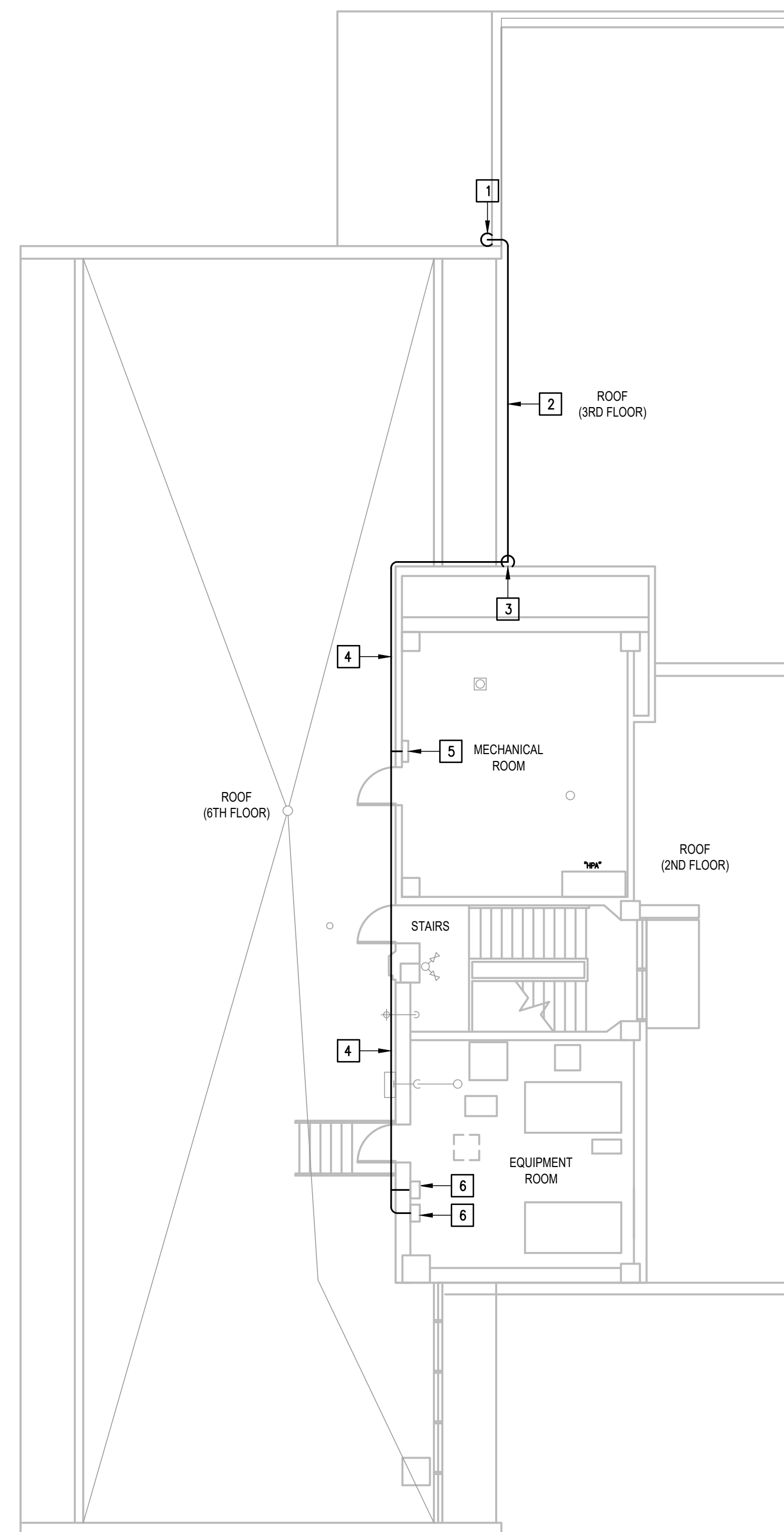
KEYED NOTES:

- 1 PROVIDE 1" RACEWAY AND 4#18 AWG FROM POWER TRANSFER AND TIME DELAY CONTACTS.
- 2 PROVIDE 2" RACEWAY AND 8#18 AWG.
- 3 PROVIDE PENETRATION THROUGH SALLY PORT ROOF. ROOF FLASHING BY AUTHORIZED ROOFING CONTRACTOR (TREMCO).
- 4 PROVIDE NEMA 1 SURFACE MOUNTED JUNCTION BOX.

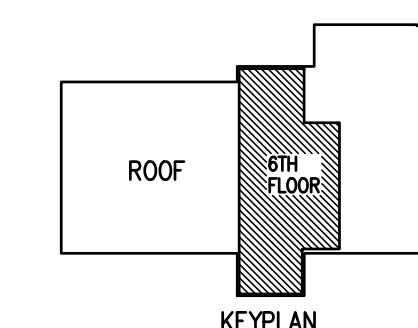
835 EAST LEVEE BUILDING
 03 ELEVATOR CONTROLS SCHEMATIC DIAGRAM
 SCALE : NONE



835 EAST LEVEE BUILDING
 02 EXISTING HVAC CONTROLS IMAGE
 SCALE : 1/8" = 1'-0"



835 EAST LEVEE BUILDING
 01 ROOF NEW ELECTRICAL PLAN
 SCALE : 1/8" = 1'-0"



KEYPLAN



DEMOLITION GENERAL NOTES:

1. THE EXTENT OF DEMOLITION WORK IS INDICATED ON THE DRAWINGS AND BY THE REQUIREMENTS OF THIS SECTION. A VISIT TO THE SITE IS REQUIRED TO PROPERLY BID THE DEMOLITION WORK.
2. REMOVED MATERIALS SHALL BELONG TO OWNER. DELIVER THEM TO OWNERS DESIGNATED LOCATION. IF OWNER DOES NOT WANT THE REMOVED MATERIALS THEN REMOVE THEM FROM SITE & PROPERLY DISPOSE OF THEM.
3. IF REMOVAL OF EXISTING ELECTRICAL SYSTEMS REQUIRES EXISTING ELECTRICAL SYSTEMS DOWNSTREAM TO REMAIN INOPERABLE, PROVIDE J-BOXES, CONDUIT WIRING AND SPLICES ABOVE ACCESSIBLE CEILING IN ORDER TO CONTINUE OPERATION.

DEMOLITION KEYED NOTES:

- 1 DISCONNECT AND REMOVE EXISTING DIESEL FUEL EMERGENCY GENERATOR. CONTRACTOR TO TRANSPORT THIS GENERATOR TO SAN BENITO ANNEX BUILDING FOR INSTALLATION.
- 2 REMOVE EXISTING GENERATOR FOUNDATION.
- 3 DISCONNECT AND REMOVE EXISTING AUTOMATIC TRANSFER SWITCH.
- 4 DISCONNECT AND REMOVE EXISTING FEEDER - TYPICAL.
- 5 RETAIN EXISTING WIRING GUTTER.
- 6 TEMPORARILY DISCONNECT EXISTING HEATER AND BATTERY CHARGER 120V CIRCUITS.
- 7 DISCONNECT AND REMOVE EXISTING SAFETY SWITCH.
- 8 DISCONNECT AND REMOVE EXISTING GENERATOR REMOTE ANNUNCIATOR INCLUDING CABLING. RETAIN EXISTING RACEWAY.
- 9 REMOVE EXISTING WIRING GUTTER.
- 10 DISCONNECT AND REMOVE EXISTING 400A SAFETY SWITCH. RETAIN FOR REUSE.
- 11 DISCONNECT AND REMOVE EXISTING START SIGNAL CABLING. RETAIN RACEWAY FOR REUSE.

FEEDER SCHEDULE:

FEEDER AMPS	CONDUIT AND FEEDER	FEEDING THESE DEVICES
800	(3-RUNS EACH) 3" - 4#350KCMIL & #3/0G	MPB GUTTER

SIZING METHOD: ALUMINUM 75°C

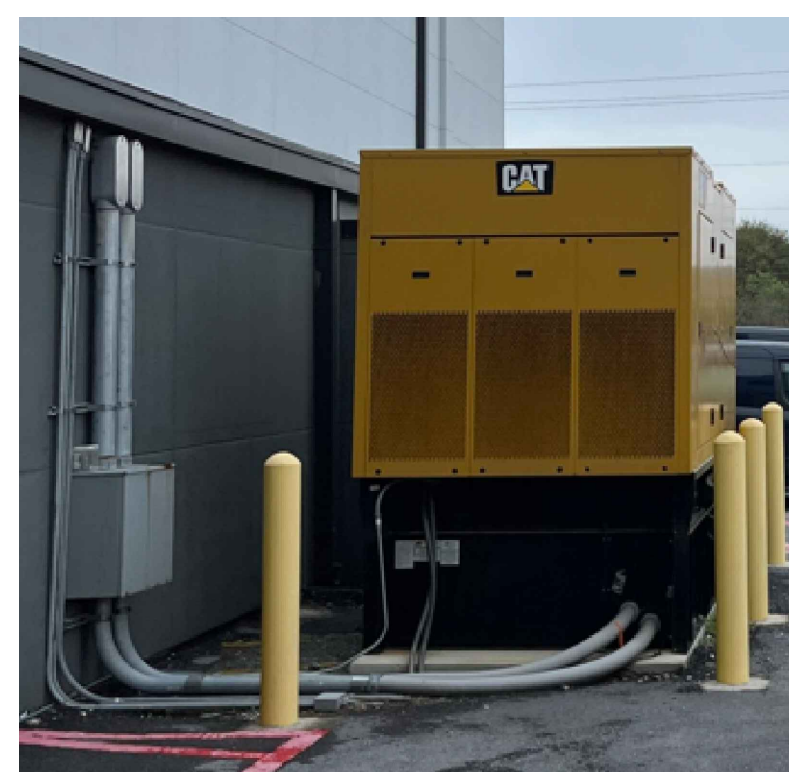
FEEDER SCHEDULE:

FEEDER AMPS	CONDUIT AND FEEDER	FEEDING THESE DEVICES
80	1.25" - 3#3 & #8G	DISC. FP
800	2-RUNS EACH 4" - 4#600KCMIL & #1/0G	DISC. HPA, ATS HPA, DISC. MPB, ATS MPB, MPB GUTTER
1200	3-RUNS EACH 3" - 4#500KCMIL & #3/0G	HPA GUTTER
1200	3-RUNS EACH 4" - 4#600KCMIL & #3/0G	GUTTER

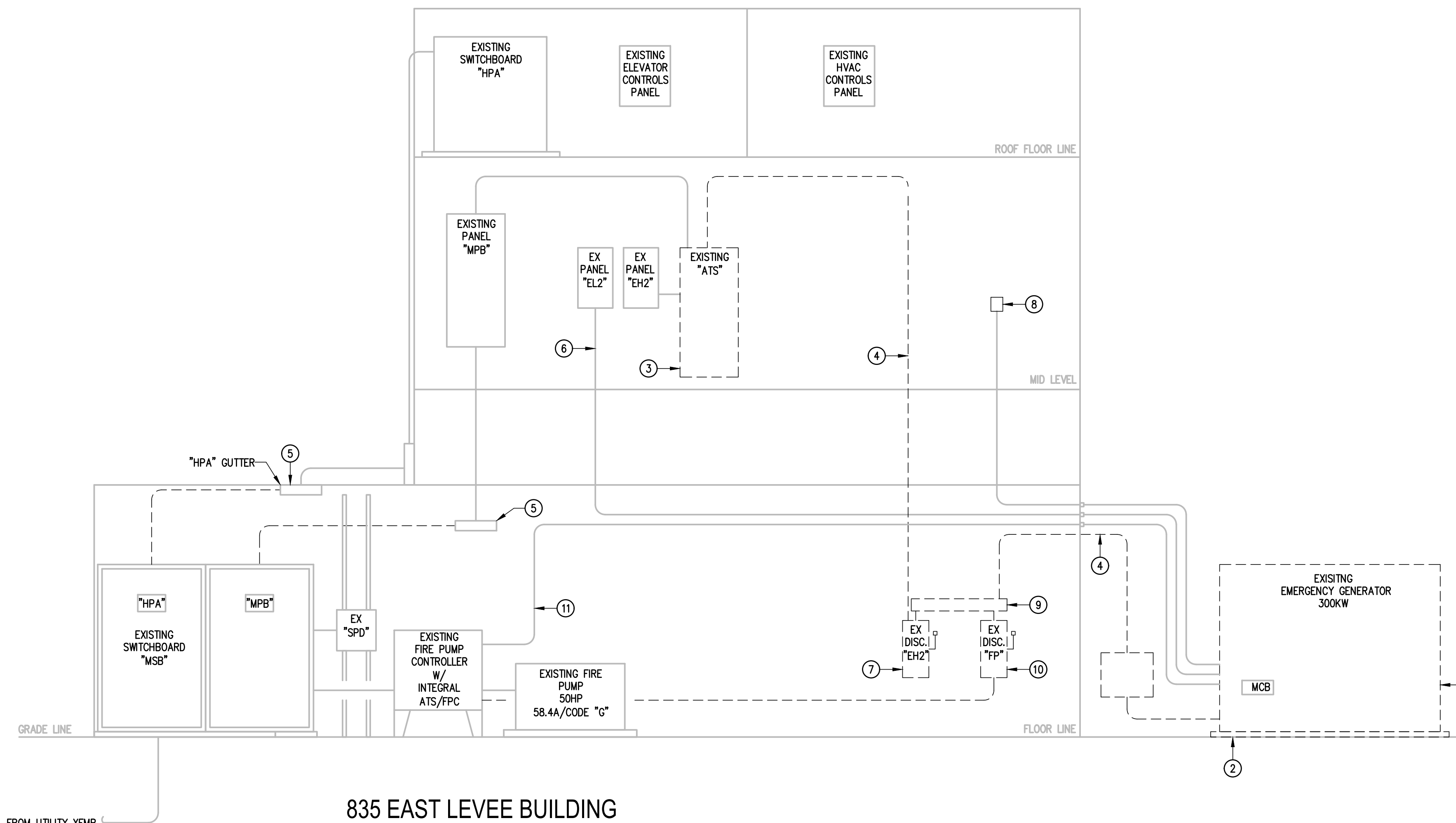
SIZING METHOD: COPPER 75°C

ELECTRICAL RISER KEYED NOTES:

- 1 PROVIDE BI-FUEL DIESEL/GASEOUS EMERGENCY GENERATOR GENERAC MODEL SB600, 60HZ, 600KW, 277/480V, 3Φ, WITH UPSIZED ALTERNATOR (K0832124Y23 - 832 KW); 1200A/3P OUTPUT CIRCUIT BREAKER. PROVIDE WITH ALUMINUM WEATHER ATTENUATED LEVEL 2 HOUSING MODEL, BATTERY, CHARGER & HEATER, RADIATOR & BLOCK HEATER, VIBRATION ISOLATION, 48 HOUR SKID BASE TANK, EXHAUST & SILENCER. PROVIDE EMERGENCY INPUT CONTACTS FOR EACH ELEVATOR.
- 2 PROVIDE GENERATOR FOUNDATION. REFER TO STRUCTURAL DRAWINGS.
- 3 PROVIDE A NEMA 1 SURFACE MOUNT WIREWAY WITH 80% FREE AREA AND HINGED FRONT COVER FOR SPLICING FEEDERS. PROVIDE POLARIS CONNECTORS.
- 4 PROVIDE FEEDER - TYPICAL.
- 5 REUSE EXISTING WIRING GUTTER. PROVIDE POLARIS CONNECTORS FOR SPLICING WIRING.
- 6 RECONNECT EXISTING HEATER AND BATTERY CHARGER 120V CIRCUITS. IF EXISTING CIRCUITS DO NOT REACH NEW POINTS OF CONNECTIONS PROVIDE NEMA 3R WALL MOUNTED JUNCTION BOX TO SPLICE AND EXTEND BRANCH CIRCUITS.
- 7 PROVIDE AUTOMATIC TRANSFER SWITCH. 800A RATED, 277/480V, 3Φ, 4-POLE, NEMA 1.
- 8 PROVIDE GENERATOR REMOTE ANNUNCIATOR. PROVIDE NEW CABLING IN EXISTING RACEWAY.
- 9 PROVIDE NEMA 1 WIRING GUTTER WITH 80% FREE AREA.
- 10 REINSTALL EXISTING 400A SAFETY SWITCH. PROVIDE NEW 400A FUSES.
- 11 PROVIDE 2#14 FOR GENERATOR START SIGNAL IN EXISTING RACEWAY.
- 12 PROVIDE 3/4" x 10' COPPER CLAD GROUND ROD AND #1/0 BARE COPPER GROUND CONDUCTOR.
- 13 PROVIDE 1" RACEWAY WITH 2#14 FOR GENERATOR START SIGNAL.
- 14 PROVIDE 4" CONCRETE HOUSEKEEPING PAD.
- 15 PROVIDE 800A, 3P3F, 800AF, 600V, NEMA 1, S/N SAFETY SWITCH.
- 16 PROVIDE RACEWAY WITH CONTROL CABLING UP TO ROOF LEVEL. INTERFACE GENERATOR WITH EXISTING HVAC AND ELEVATORS CONTROLS. SEE DETAIL #03/E2.3.



03 EXISTING GENERATOR IMAGE
SCALE: NONE



835 EAST LEVEE BUILDING
01 DEMOLITION ELECTRICAL RISER DIAGRAM
SCALE: NONE

LINE TYPE LEGEND

---	DEMOTES EXISTING TO BE REMOVED
---	DEMOTES EXISTING TO REMAIN
---	DEMOTES NEW

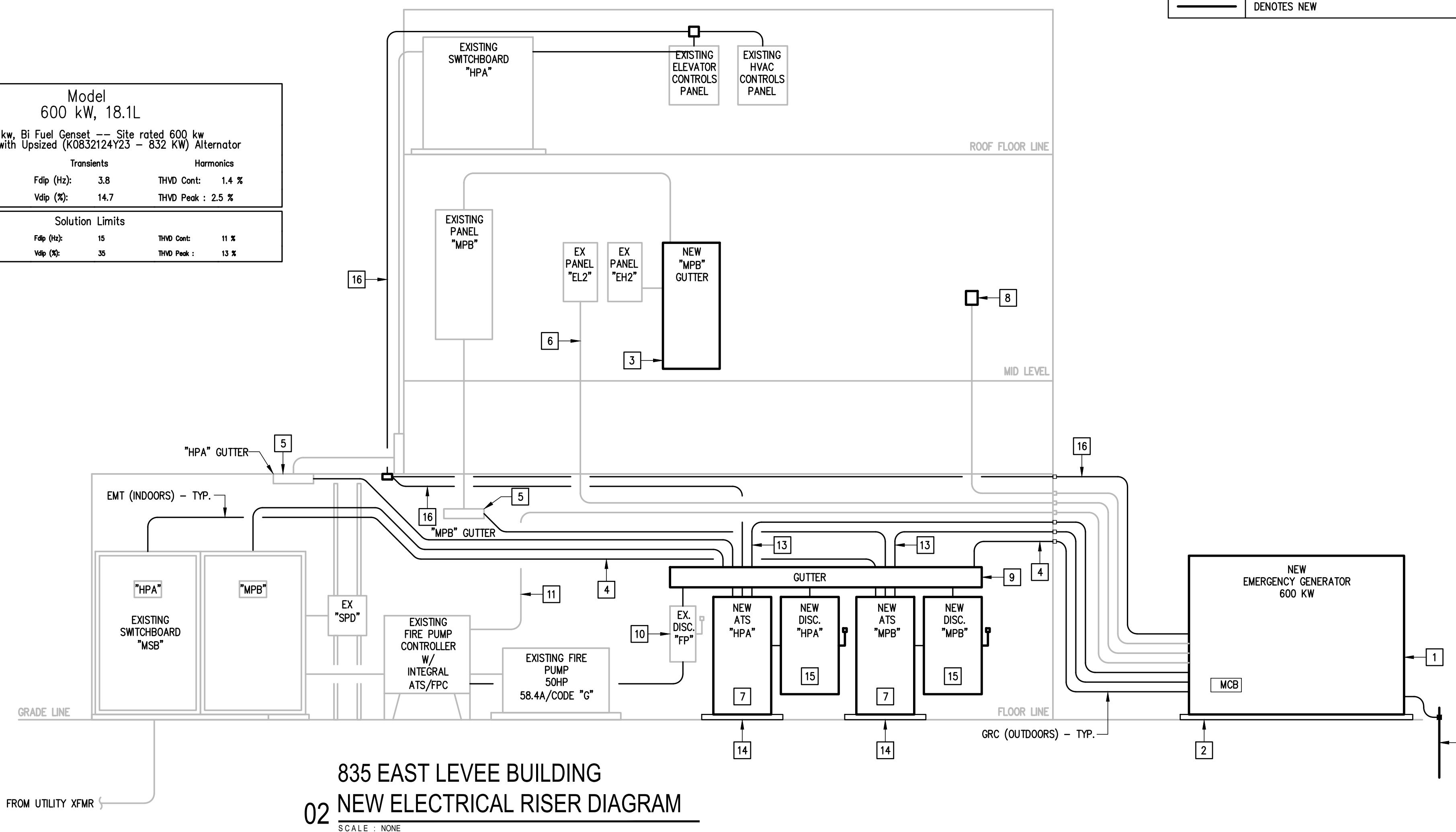
GENERATOR & LOAD SUMMARY

Selected Generator & Alternator			
Product Family Method :	Auto Select		
Product Family :	SD/MD Diesel		
Sizing Method :	Auto Select		
Generator :	1 x 600 kW, 18.1L		
Quantity :	1		
Alternator :	K0832124Y23 - 832 KW		
Load Summary -- Connected Load of 477.22 kW			
Running	Transients	Harmonics	
kW: 477.22	kW (Step): 312.88	kVA: 126.25	
kVA: 548.26	kW (Peak): 480.59	THD Cont: 15.1%	
PF: 0.87	kVA (Step): 1004.94	THD Peak: 27.3%	

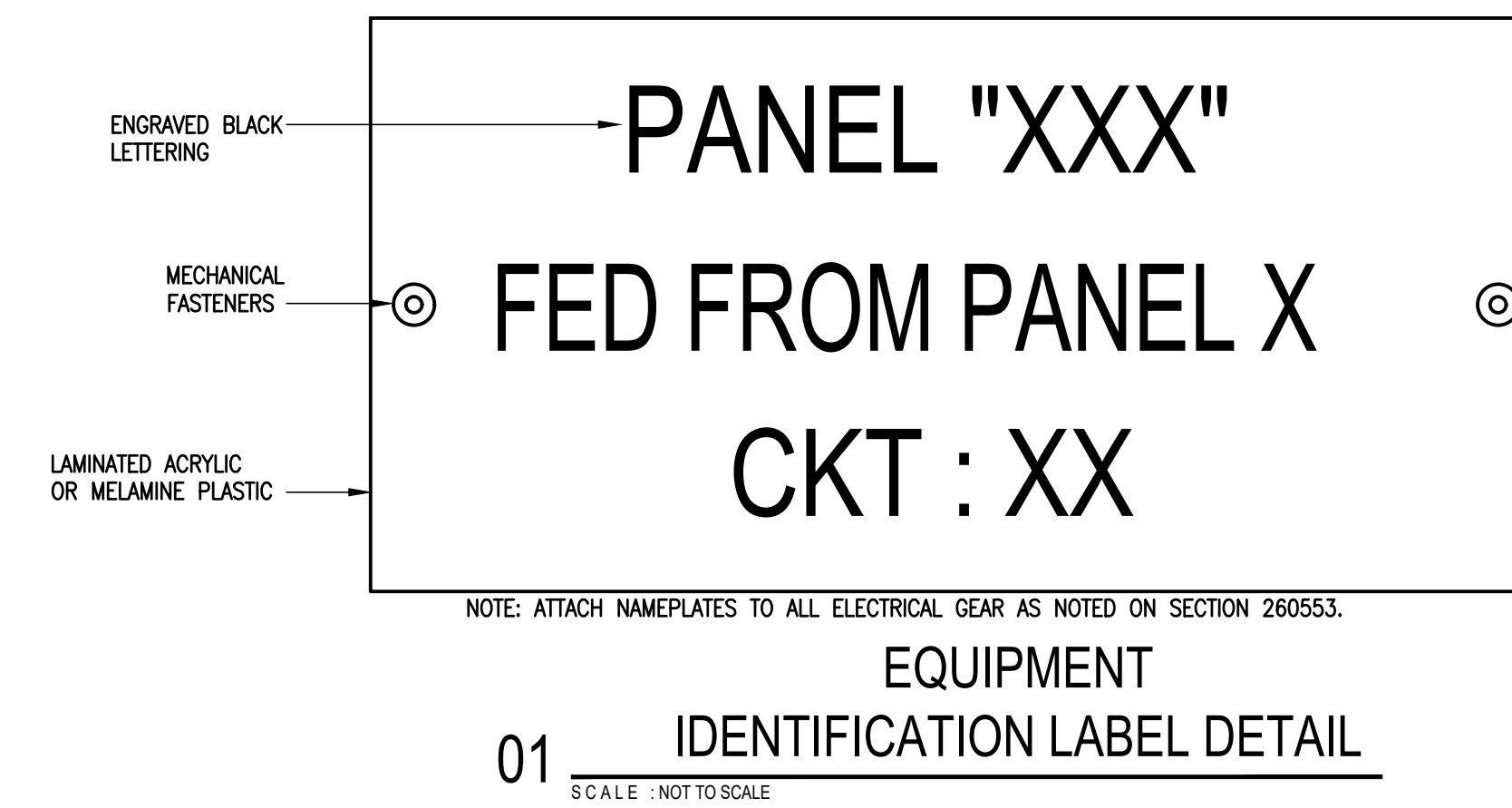
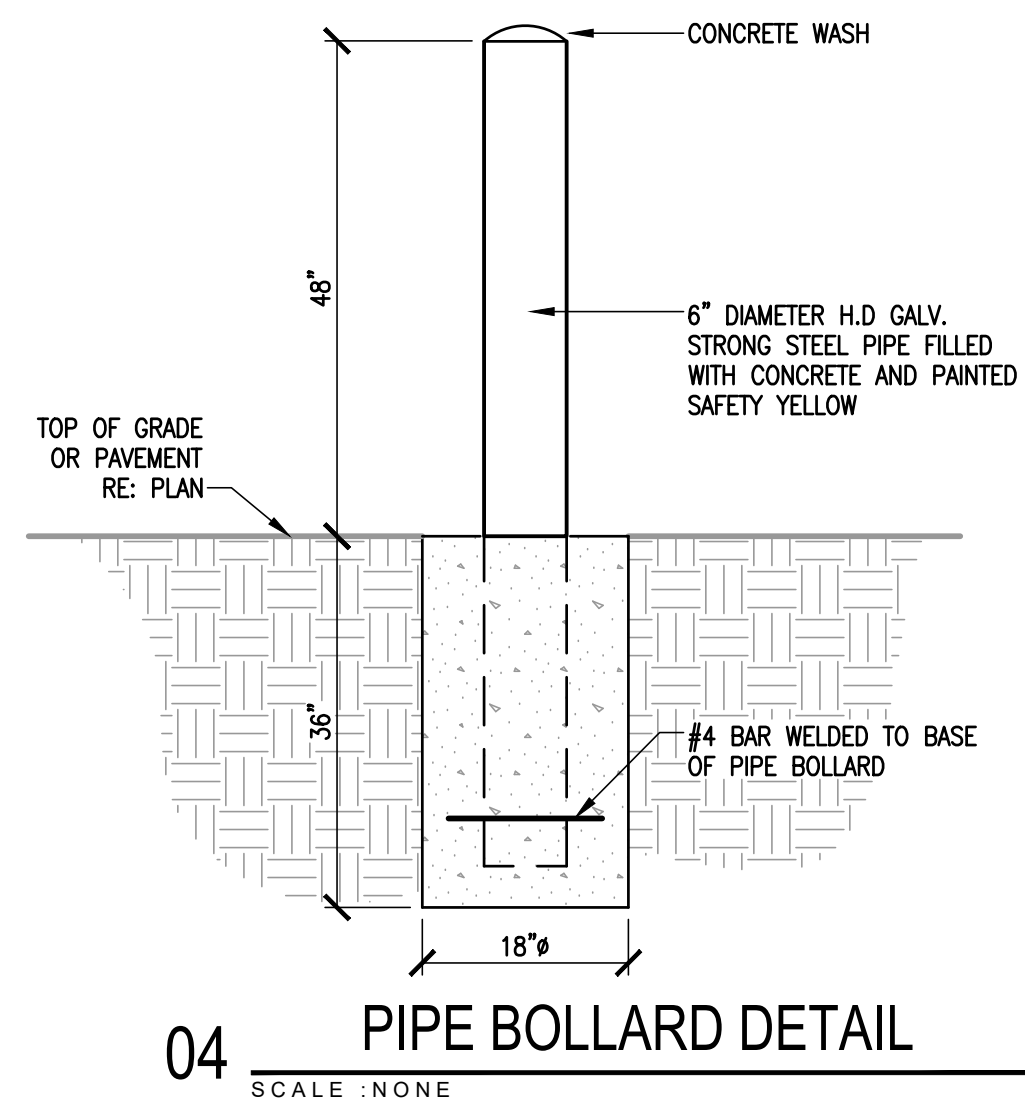
Model 600 kW, 18.1L			
600 kW, Bi Fuel Genset -- Site rated 600 kW 18.1 L Engine with Upsized (K0832124Y23 - 832 KW) Alternator			
Load Level	Transients	Harmonics	
Running : 80 %	Fdip (Hz): 3.8	THD Cont: 1.4 %	
Peak : 78	Vdip (%): 14.7	THD Peak : 2.5 %	
Solution Limits			
Max Loading : 80 %	Fdip (Hz): 15	THD Cont: 11 %	
	Vdip (%): 35	THD Peak : 13 %	



04 NEW GENERATOR IMAGE
SCALE: NONE

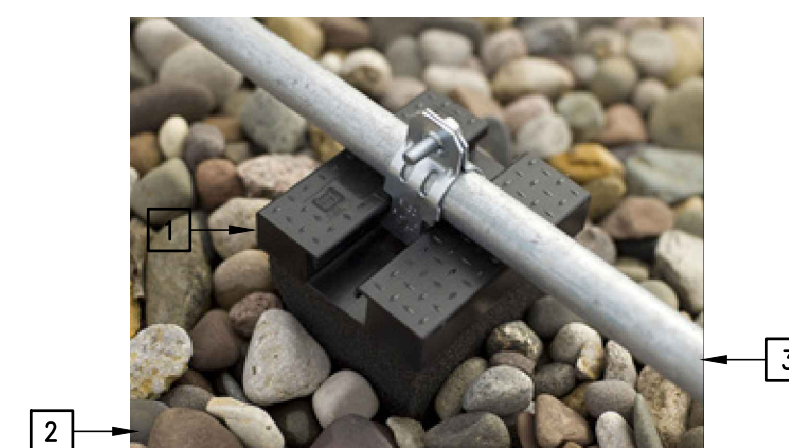


835 EAST LEVEE BUILDING
02 NEW ELECTRICAL RISER DIAGRAM
SCALE: NONE



KEYED NOTES:

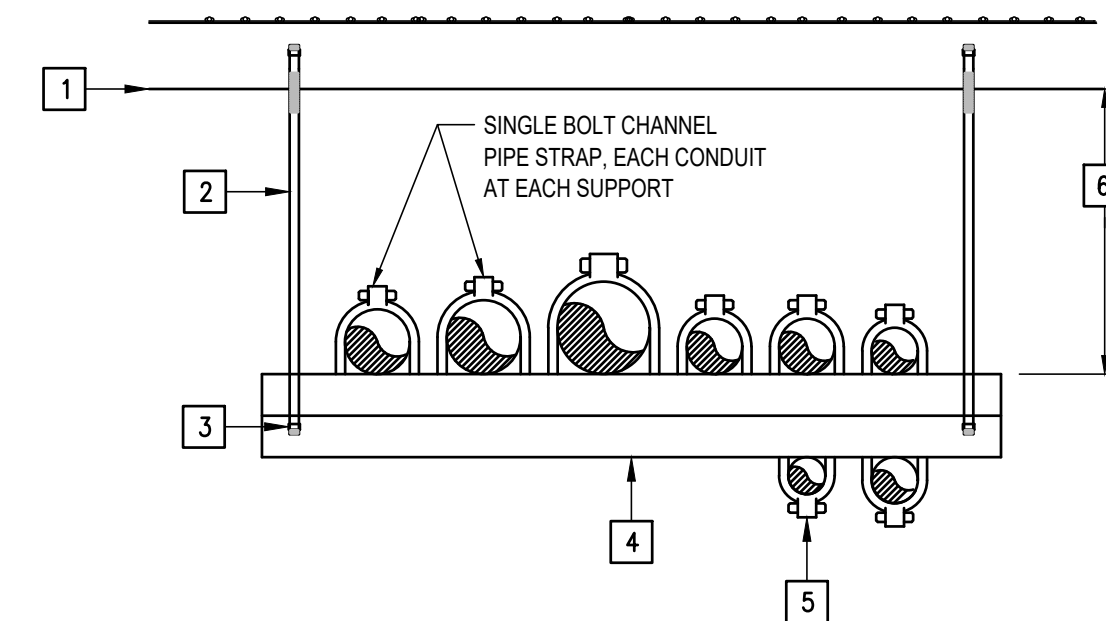
- 1 PROVIDE ROOF SUPPORT BLOCK PIPE PIER MODEL NO. PP30.
- 2 EXISTING GRADE.
- 3 PROVIDE RACEWAYS AS SPECIFIED.



05 GROUND/ROOF MOUNTED RACEWAYS SUPPORT DETAIL
SCALE: NOT TO SCALE

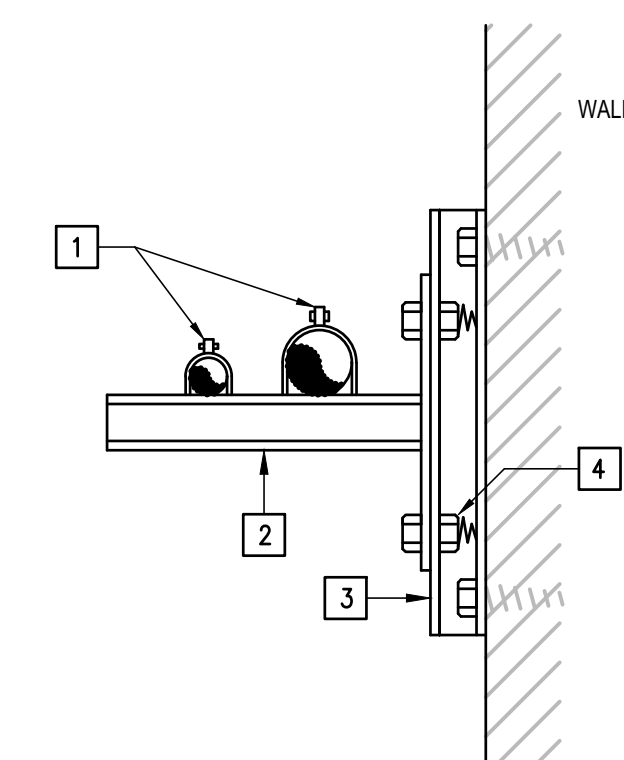
KEYED NOTES:

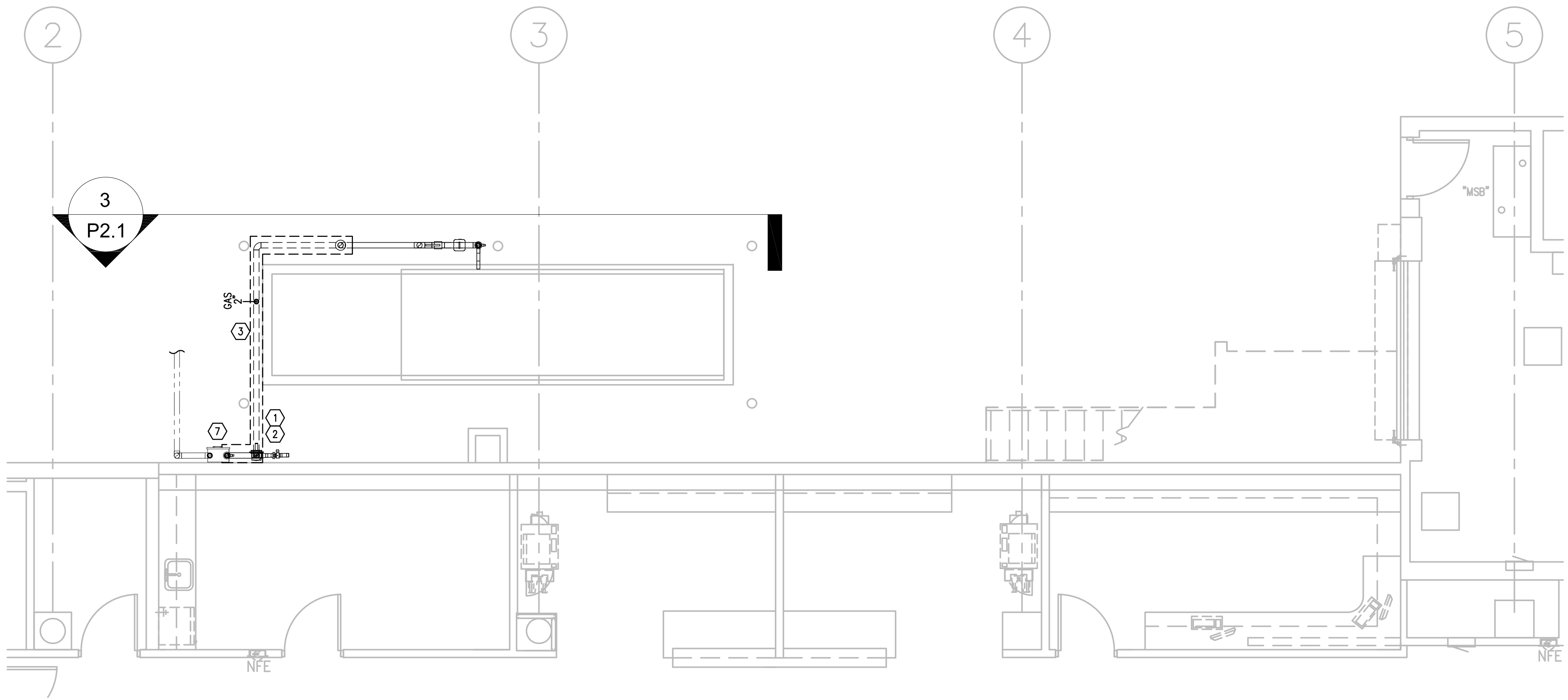
- 1 EXISTING CEILING LINE.
- 2 PROVIDE 1/2" GALVANIZED ROD MINIMUM.
- 3 PROVIDE LOCKNUT.
- 4 PROVIDE GALVANIZED UNISTRUT 8'-0" O/C MAXIMUM.
- 5 0'-1" MAXIMUM SIZE ON BOTTOM OF UNISTRUT.
- 6 VARIES.



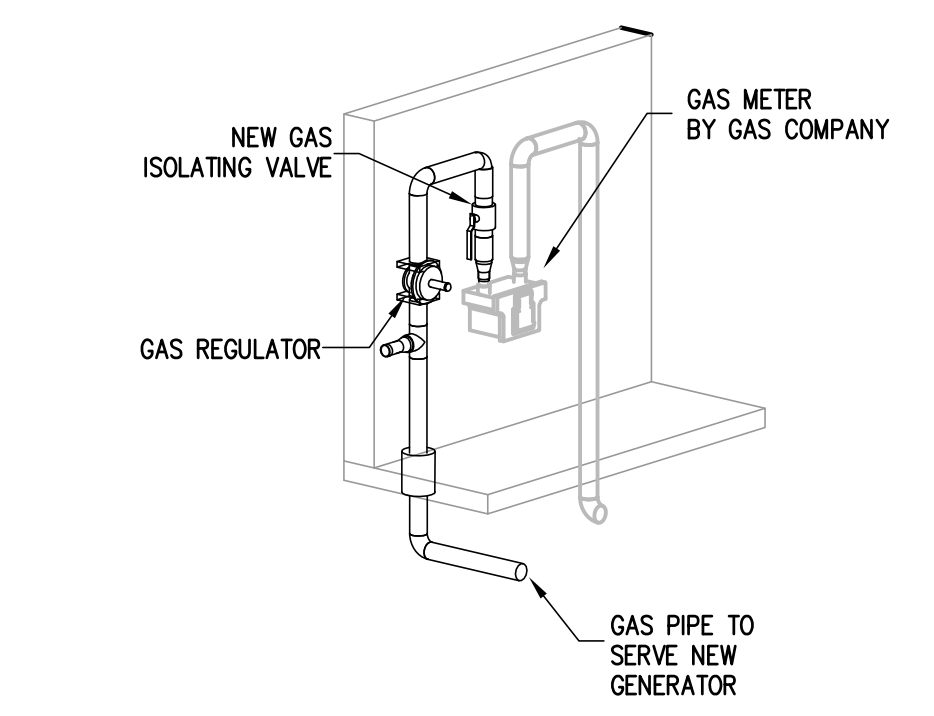
KEYED NOTES:

- 1 PROVIDE CONDUIT CLAMPS.
- 2 PROVIDE GALVANIZED UNISTRUT WALL BRACKET.
- 3 PROVIDE RAMSET OR BOLT GALVANIZED UNISTRUT TO WALL.
- 4 PROVIDE SELF HOLDING CLAMPING NUT WITH SPRING.





01 1ST FLOOR NEW NATURAL GAS PLAN
SCALE : 1/4" = 1'-0"

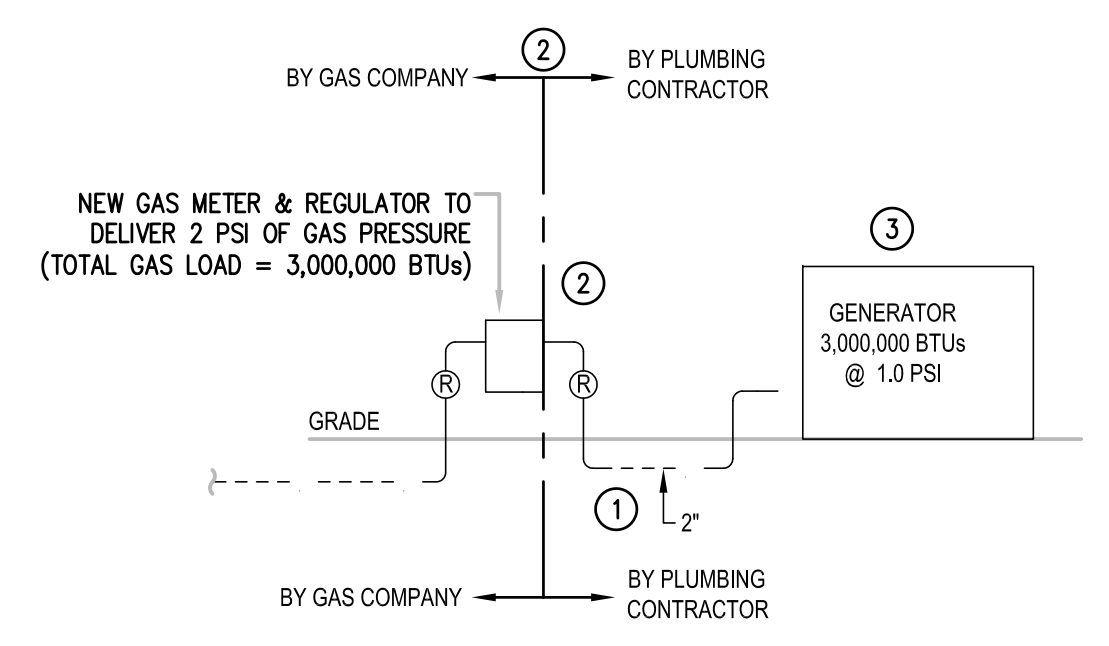


04 NATURAL GAS ISOMETRIC VIEW
SCALE : NOT TO SCALE

GAS LOAD SUMMARY	
FUEL GAS	= NATURAL
SPECIFIC GRAVITY	= 0.60
HEATING VALUE	= 1,000 BTU / CFH
MAX PRESSURE DROP	= 1.0 PSI
DISTRIBUTION GAS PRESSURE	= 2.0 PSI

GAS RISER KEYED NOTES:

- ① NEW NATURAL GAS PIPING.
- ② ALL NATURAL GAS PIPING, VALVES, REGULATOR AND FITTINGS DOWNSTREAM OF THE METER SHALL BE BY THE PLUMBING CONTRACTOR.
- ③ BI-FUEL GENERATOR BY ELECTRICAL CONTRACTOR.



05 NATURAL GAS PIPING RISER SCHEMATIC
SCALE : NOT TO SCALE

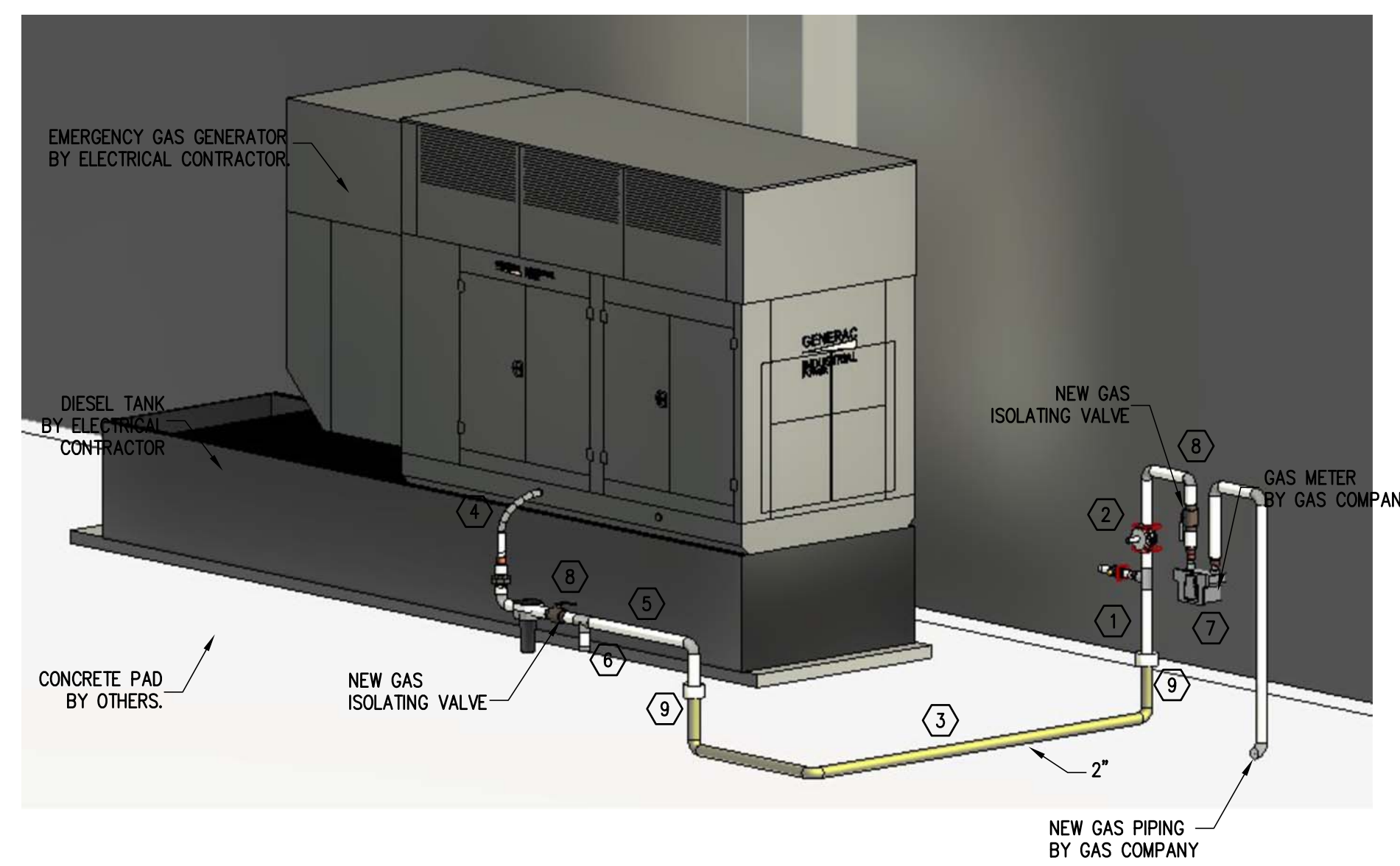
GENERAL NOTES:

1. ALL PLUMBING WORK SHALL BE IN COMPLIANCE WITH ALL APPLICABLE CODES AS ADAPTED AND AMENDED BY THE INSPECTING AUTHORITIES.
2. DRAWING IS DIAGRAMMATIC ONLY. CONTRACTOR SHALL COORDINATE EXACT LOCATIONS OF PIPING, DEVICES AND EQUIPMENT WITH BUILDING ELEMENTS AND THE WORK OF OTHER TRADES.
3. ALL PLUMBING WORK SHALL BE INSTALLED SO AS TO AVOID CONFLICT WITH THE WORK OF OTHER TRADES.
4. COORDINATE WORK AMONG ALL DISCIPLINES. IT IS NOT THE INTENT OF THESE DOCUMENTS TO DICTATE WHO MUST DO THE WORK. ALL WORK SHOWN IS THE RESPONSIBILITY OF THE PRIME CONTRACTOR.
5. ALL WORK REQUIRING SAW CUTTING, HAND DIGGING OR EXCAVATION WILL REQUIRE TO BE BACKFILLED AND COMPACTED. ASPHALT TO BE PROVIDED IF REQUIRED TO MATCH EXISTING CONDITIONS.
6. PROVIDE STEEL PIPE AND FITTINGS FOR ALL ABOVE GROUND INSTALLATIONS AS PER SPECIFICATIONS, ALL EXPOSED STEEL PIPES AND FITTINGS MUST BE PAINTED WITH PRIMER PAINT, AND TWO COAT LAYERS AS PER SPECIFICATIONS, COORDINATE FINISH COLOR WITH OWNER.
7. FOR CLARITY AND LEGIBILITY OF PHOTOGRAPHS AND OTHER INFORMATION INCLUDED HEREIN, PLANS SHALL BE PRINTED AND/OR READ IN COLOR, NOT IN BLACK/WHITE FORMAT.

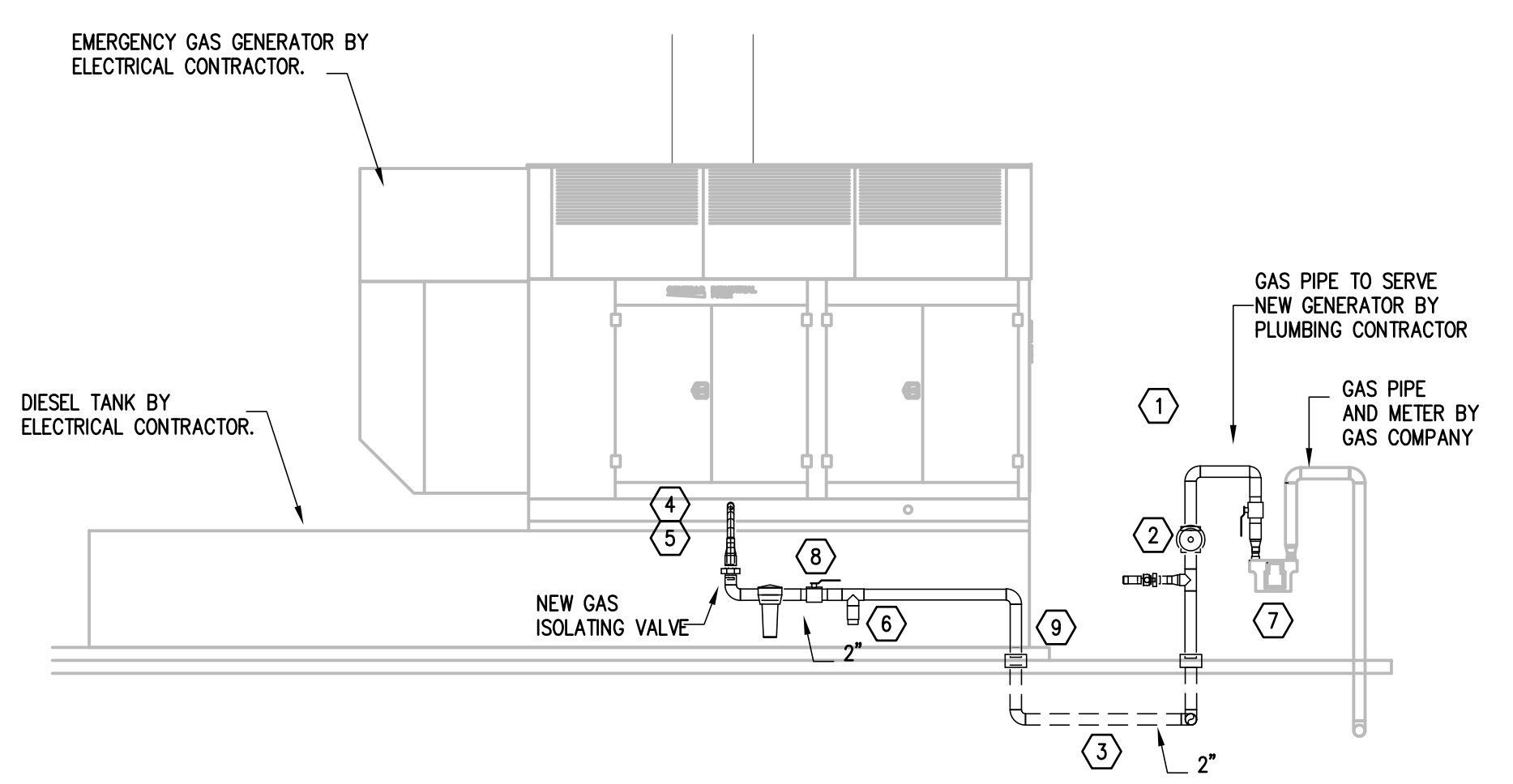
PLUMBING NEW KEYED NOTES:

- ① PROVIDE NEW 2" GAS PIPING AS SHOWN TO SERVE NEW GAS GENERATOR. TEST, INSPECT, AND PURGE NEW GAS PIPING ACCORDING TO NFPA 54, IFGC 2018, AND AUTHORITIES HAVING JURISDICTION.
- ② PROVIDE NEW GAS REGULATOR TO ADJUST PRESSURE FROM 2.0 PSI TO 1.0 PSI AT THE INLET CONNECTION OF THE BI-FUEL GENERATOR AT THIS APPROXIMATE LOCATION. INSTALL AND SECURE REGULATOR AND ISOLATION VALVES AS CLOSE TO THE WALLS AS POSSIBLE.
- ③ SAW CUT CONCRETE AND ASPHALT AS NECESSARY TO ACCOMMODATE THE NEW UNDERGROUND GAS PIPING. REPAIR CONCRETE AND ASPHALT AS NECESSARY. COORDINATE WITH GENERAL CONTRACTOR.
- ④ PROVIDE NEW 2" STAINLESS STEEL FLEXIBLE CONNECTOR TO CONNECT TO GENERATOR.
- ⑤ PROVIDE ALL ACCESSORIES REQUIRED TO CONNECT NEW GAS PIPING TO BI-FUEL GENERATOR AS PER MANUFACTURER RECOMMENDATIONS.
- ⑥ MINIMUM 6" LONG DRIP LEG WITH THREADED CAP.
- ⑦ NEW NATURAL GAS SERVICE FOR THE GENERATOR AT THIS LOCATION. GAS METER AND REGULATOR FOR A TOTAL DEMAND OF 3,000,000 BTU'S AT 2 PSI PRESSURE. GAS METER, REGULATOR AND PIPING UPSTREAM THE METER TO BE PROVIDED BY THE GAS COMPANY. COORDINATE INSTALLATION WITH GAS COMPANY.
- ⑧ PROVIDE NEW 2" GAS ISOLATION VALVE WITH THREADED ENDS UPSTREAM THE NEW METER AND AS PER DETAIL 06 AND SPECIFICATIONS.
- ⑨ RISE UNDERGROUND PIPE AT THIS APPROXIMATE LOCATION. RUN NEW GAS PIPING EXPOSED FROM THIS POINT UP TO CONNECT THE GENERATOR.

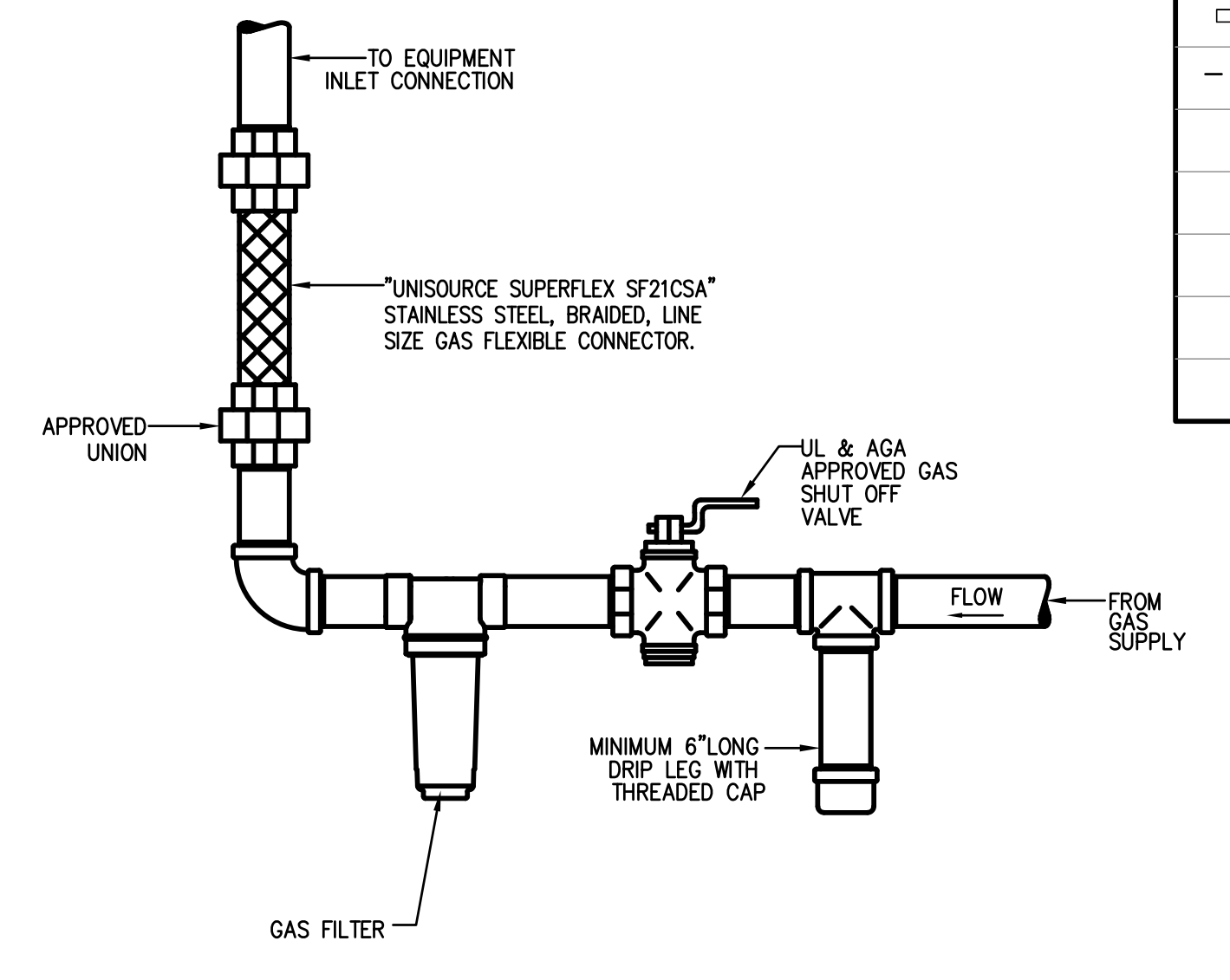
PLUMBING LEGEND	
	NEW GAS PIPING (UNDERGROUND)
	GAS PIPING BY GAS COMPANY (UNDERGROUND)
	NEW GAS PIPING (ABOVE GROUND)
	GAS PIPING BY GAS COMPANY (ABOVE GROUND)
	FLEX GAS PIPE
	SAW CUT AREA
	NEW GAS ISOLATION VALVE
	NEW GAS REGULATOR
	UNION NUT
	GAS METER BY GAS COMPANY
	NEW GAS REGULATOR (GAS PIPING RISER SCHEMATIC)



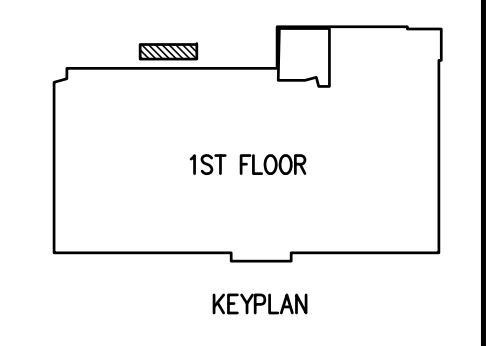
02 NATURAL GAS CONNECTION 3D - VIEW
SCALE : NOT TO SCALE



03 NATURAL GAS CONNECTION - FRONT VIEW
SCALE : 1/4" = 1'-0"



06 GAS CONNECTION TO EQUIPMENT DETAIL
SCALE : NOT TO SCALE



NO: REVISION: BY:

COPY NO:

TEXAS

CAMERON COUNTY
835 EAST LEVEE & SAN BENITO ANNEX BUILDING
STANDBY POWER UPGRADES

CAMERON COUNTY

1128 SOUTH COMMERCE ST.
HARLINGEN, TX
PHONE: 956-206-5455
TEXAS REGISTERED
ENGINEERING FIRM
E-15598

DATE: JUNE 23, 2023

CHECKED BY: G.G.

DRAWN BY: C.G.

PROJECT NO.: 23v14

CAD FILE: -

SHEET: LP2.1

GENERAL STRUCTURAL NOTES

THESE GENERAL NOTES SHALL APPLY UNLESS OTHERWISE SPECIFICALLY NOTED ON PLANS OR DETAILS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SHALL COORDINATE ALL STRUCTURAL PLANS AND DETAILS WITH ARCHITECTURAL & MECHANICAL DRAWINGS BEFORE STARTING WORK. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR CONTRACTOR MEANS AND METHODS OF CONSTRUCTION OR SITE SAFETY. DESIGN, CONSTRUCTION, WORKMANSHIP AND MATERIALS SHALL COMPLY WITH THE CONTROLLING PROVISIONS OF THE 2018 EDITION OF THE **INTERNATIONAL BUILDING CODE (IBC)**.

DESIGN CRITERIA

- BASIS FOR DESIGN AND CODE COMPLIANCE
 - A. GOVERNING BUILDING CODE.....IBC 2018 EDITION
- WIND DESIGN BASED ON THE GREATER OF:
 - A. ASCE 7-16 REQUIREMENTS
 BASIC DESIGN WIND SPEED.....151 MPH (Vsd=117 MPH)
 RISK CATEGORY.....III
 WIND EXPOSURE CATEGORY.....B
 INTERNAL PRESSURE COEFFICIENT (Cp*i*)
 RESTROOM BUILDING.....±0.18
 Kzt.....1.0
 Kd.....0.85
- GRAVITY DESIGN
 - A. BI-FUEL GENERATOR SET:
 GENERAC INDUSTRIAL BI-FUEL GENERATOR SET/SB600 18.1L 600KW
 DEAD LOAD.....5.0 KIPS

FOUNDATION DESIGN CRITERIA

- FOUNDATION DESIGN IS IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE, AND IS BASED ON ASSUMED GEOTECHNICAL PROPERTIES.
 - A. BEARING CAPACITY:
 GRADE BEAMS & CONTINUOUS FOOTINGS (TOTAL LOAD)1.5 KSF
 - B. POTENTIAL VERTICAL RISE (PVR)1.0 INCH
- GROUNDWATER IS ASSUMED TO BE ENCOUNTERED AT 8'-0" BELOW EXISTING GRADE (MAY FLUCTUATE WITH SEASON). CONTRACTOR SHALL DETERMINE ACTUAL GROUNDWATER LEVELS JUST PRIOR TO CONSTRUCTION EXCAVATION ACTIVITIES.
- A GEOTECHNICAL ENGINEER OF RECORD SHALL BE RETAINED TO PERFORM TESTING AND INSPECTIONS DURING SITE PREPARATION AND PLACEMENT OF BUILDING PAD FILL AS REQUIRED BY SPECIFICATIONS AND GENERAL STRUCTURAL NOTES.

FOUNDATION NOTES

- REMOVE **AT LEAST 48 INCHES** OF THE EXISTING SITE SOIL, VEGETATION, TREE ROOTS, DEBRIS, ETC., FROM THE PROPOSED BUILDING AREA TO A DISTANCE OF 5'-0" OUTSIDE THE BUILDING AREA (EXTERIOR OF THE FOUNDATION, INCLUDING ATTACHED IMPROVEMENTS SUCH AS SIDE WALKS AND CANOPIES). DEPTH OF REMOVAL SHALL BE VERIFIED BY THE GEOTECHNICAL ENGINEER AT THE TIME OF CONSTRUCTION.
- AFTER TOP SOIL HAS BEEN REMOVED, THE SUBGRADE SHALL BE PROOF-ROLLED WITH APPROPRIATE CONSTRUCTION EQUIPMENT WEIGHING AT LEAST 15 TONS UNTIL THE GRADE OFFERS A RELATIVELY UNYIELDING SURFACE. SOFT SOIL AND YIELDING AREAS, AND AREAS CONTAINING ORGANIC MATTER AND/OR DEBRIS, SHALL BE OVER EXCAVATED AND REPLACED WITH COMPACTED SELECT FILL IN ACCORDANCE WITH THE REQUIREMENTS BELOW.
- PROOFROLLING OPERATIONS AND EXCAVATION/BACKFILL ACTIVITIES SHOULD BE PERFORMED DURING A PERIOD OF DRY WEATHER AND OBSERVED BY THE GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE TO DOCUMENT SUBGRADE CONDITIONS AND PREPARATION. IF SUBGRADE SOILS ARE ALLOWED TO BECOME WET OR SATURATED, REMOVAL AND REPLACEMENT OF SOFT SOILS OR CHEMICAL TREATMENT PROCEDURES SUCH AS LIME STABILIZATION SHALL BE PERFORMED AT THE CONTRACTOR'S EXPENSE. THE GEOTECHNICAL ENGINEER SHALL BE CONTACTED FOR ADDITIONAL RECOMMENDATIONS, IF REQUIRED.
- SCARIFY, MOISTURE CONDITION, AND COMPACT THE TOP 12" OF THE EXPOSED SUBGRADE TO 98% OF STANDARD PROCTOR MAXIMUM DRY DENSITY OR AS REQUIRED TO PROVIDE THE SPECIFIED **FINISH FLOOR ELEVATION** WHICH IS GREATER, AND PROPER SITE DRAINAGE, CONTACTED IN ACCORDANCE WITH THE REQUIREMENTS BELOW. FINISH FLOOR ELEVATIONS SHALL BE VERIFIED WITH ARCHITECT AND CIVIL ENGINEER.
- SELECT FILL SHALL BE COMPACTED IN THE FIELD IN LIFTS NOT TO EXCEED 8" LOOSE MEASURE (6" COMPACTED LIFT) TO A MINIMUM OF 98% OF STANDARD PROCTOR MAXIMUM DRY DENSITY AND AT +/-2% OF OPTIMUM MOISTURE CONTENT, AS EVALUATED BY ASTM D-698.
- SELECT FILL SHALL BE FREE OF ORGANIC OR OTHER DELETERIOUS MATERIALS, HAVE A MINIMUM OF 35% PASSING THE #200 SIEVE AND NO SOIL PARTICLES EXCEEDING 1.1/2", AND HAVE A PLASTICITY INDEX (PI) BETWEEN 7-17. IF BLENDED OF MIXED SOILS ARE INTENDED FOR USE, THE GEOTECHNICAL ENGINEER SHOULD BE CONTACTED TO PROVIDE ADDITIONAL RECOMMENDATIONS AND REQUIREMENTS.
- FOUNDATION CONCRETE SHALL NOT BE PLACED ON SELECT FILL SOILS THAT HAVE BEEN DISTURBED BY RAINFALL OR WATER SEEPAGE, IF BEARING SOILS ARE SOFTENED BY WATER INTRUSION, OR BY DESICCATION. THE UNSUITABLE SOILS SHALL BE REMOVED FROM THE FOUNDATION EXCAVATION AND BE REPLACED WITH PROPERLY COMPACTED SELECT FILL PRIOR TO PLACEMENT OF FOUNDATION CONCRETE. ALL SOIL REMOVAL AND REPLACEMENT COSTS, INCLUDING ASSOCIATED COSTS TO REMOVE AND REINSTALL REINFORCEMENT AND VAPOR BARRIER MATERIALS, SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR. DEPTH OF SOIL REMOVAL AND RECOMPACTION REQUIREMENTS SHALL BE COORDINATED WITH THE GEOTECHNICAL ENGINEER.
- SAMPLES OF PROPOSED SELECT FILL SHALL BE FURNISHED TO THE TESTING LABORATORY 7 DAYS PRIOR TO INSTALLATION TO PERMIT TIME FOR SPECIFICATION COMPLIANCE INSPECTION AND REVIEW BY THE GEOTECHNICAL ENGINEER.
- LABORATORY MOISTURE-DENSITY CURVES SHALL BE DEVELOPED FOR SUBGRADE AND FILL. PROCTOR CURVES AND FIELD DENSITY TESTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. A MINIMUM OF ONE (1) IN PLACE DENSITY TEST PER 1,000 SQUARE FEET OF SLAB AREA SHALL BE TAKEN ON EACH LIFT DURING PLACEMENT OF SELECT FILL. DENSITY REPORTS SHALL BE TRANSMITTED TO ENGINEER WITHIN 3 DAYS AFTER TESTS ARE MADE.
- GRAIN SIZE ANALYSIS AND ATTERBERG LIMITS TESTS SHALL BE PERFORMED DURING FILL PLACEMENT AT A RATE OF ONE TEST PER 2,000 CUBIC YARDS OF FILL BROUGHT TO THE SITE. SAMPLES FOR TEST SHALL BE TAKEN FROM JOBSITE MATERIALS.
- SITE SHALL BE GRADED SO THAT WATER DOES NOT POND WITHIN 10 FEET OF THE PERIMETER FOUNDATION BEAM DURING OR AFTER CONSTRUCTION. THE SLOPE OF THE GROUND SURFACE AWAY FROM THE STRUCTURE SHOULD BE A MINIMUM OF THREE (3%) PERCENT FOR A DISTANCE OF AT LEAST TEN (10') FEET. ELEVATION OF GROUND SURFACE ADJACENT TO THE FOUNDATION SHOULD BE AT LEAST 6 INCHES BELOW FINISH FLOOR.
- FINAL DRAINAGE IS VERY IMPORTANT TO THE PERFORMANCE OF THE FOUNDATION. LANDSCAPING, PLUMBING, AND DOWNSPOUT DRAINAGE ARE ALSO VERY IMPORTANT. IT IS VITAL THAT ALL ROOF DRAINAGE BE TRANSPORTED AWAY FROM BUILDINGS SO THAT NO AREAS OF WATER POND AROUND BUILDINGS, WHICH CAN RESULT IN SOIL VOLUME CHANGE UNDER THE FOUNDATION. PLUMBING LEAKS SHOULD BE REPAIRED AS SOON AS POSSIBLE IN ORDER TO MINIMIZE THE MAGNITUDE OF MOISTURE CHANGE UNDER THE SLAB. LARGE TREES AND SHRUBS SHOULD NOT BE PLANTED IN THE IMMEDIATE VICINITY OF THE STRUCTURE, SINCE THE ROOT SYSTEMS CAN CAUSE A SUBSTANTIAL REDUCTION IN SOIL VOLUME IN THE VICINITY OF THE TREE DURING DRY PERIODS. BUSHES AND TREES SHOULD BE PLANTED A REASONABLE DISTANCE AWAY FROM THE STRUCTURE SO THAT THEIR CANOPY OR "DRIP LINE" DOES NOT EXTEND BEYOND THE PERIMETER OF THE FOUNDATION. WATERING OF VEGETATION SHOULD BE PERFORMED IN A TIMELY AND CONTROLLED MANNER. PROLONGED WATERING SHOULD BE AVOIDED.

CONCRETE

- ALL CONCRETE WORK SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE SPECIFICATION, A.C.I. #301 AND BUILDING CODE REQUIREMENTS, A.C.I. #318, LATEST EDITION.
- ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, UNLESS OTHERWISE NOTED, MUST FOLLOW THE A.C.I. "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE", A.C.I. #315, LATEST EDITION.
- CONCRETE SHALL HAVE A MINIMUM COMPRESSION STRENGTH OF 3,000 PSI AT 28 DAYS.
- A MAXIMUM OF 25% FLYASH MAY BE USED AS A CEMENT SUBSTITUTE AND SHALL CONFORM TO ASTM C618, CLASS C. THE WATER/CEMENT RATIO SHALL NOT EXCEED 0.6 AND SLUMPS SHALL BE 5 INCHES (±1 INCH). AGGREGATE SHALL BE WELL-GRADED, 1" MAXIMUM FOR THE SLAB ON GRADE, 1" MAXIMUM FOR CAST-IN-PLACE BEAMS AND ABOVE GRADE SLABS. COARSE AGGREGATE SHALL MEET ASTM C33, GRADATION #57. A QUALIFIED TESTING LABORATORY SHALL BE RETAINED TO FURNISH MIX DESIGNS FOR ALL CLASSES OF CONCRETE. A SAMPLE OF FOUR CYLINDERS SHALL BE TAKEN NOT LESS THAN ONCE A DAY, NOR LESS THAN ONCE FOR EACH 100 YD3 OF CONCRETE. ONE CYLINDER SHALL BE TESTED AT 7 DAYS AND TWO AT 28 DAYS. THE FOURTH CYLINDER MAY BE DISPOSED OF AFTER 45 DAYS IF NOT USED.
- ADMIXTURES CONTAINING WATER SOLUBLE CHLORIDE IONS GREATER THAN 0.06% BY WEIGHT OF CEMENT SHALL NOT BE USED.
- REINFORCING BARS SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A-615, GRADE 60. #3 BARS MAY BE GRADE 40.
- STANDARD PROTECTIVE COVER OF REINFORCING BARS UNLESS OTHERWISE NOTED SHALL BE:
 - WHERE CAST AGAINST DIRT OR FILL 3 IN.
 - EXPOSED TO EARTH OR WEATHER 2 IN.
 - SLABS AND WALLS 1 IN.
 - OTHER 1-1/2 IN.
- ALL ACCESSORIES SHALL BE IN ACCORDANCE WITH THE A.C.I. "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE", A.C.I. #315, LATEST EDITION.
- SLAB MAT TO BE SUPPORTED BY MASONRY BRICK BATTS (MIN OF 1/2 BRICK) SPACED AT 4 FEET ON CENTER EACH WAY (MAX). BEAM CAGES SUPPORTED BY BATTS AT 4 FEET ON CENTER.
- VERTICAL CONSTRUCTION JOINTS IN FLOOR SHALL BE COORDINATED WITH STRUCTURAL ENGINEER PRIOR TO FORMING SLAB. CRACK CONTROL JOINTS SHALL BE PROVIDED AT LOCATIONS SHOWN ON THE PLANS. CONTROL JOINTS SHALL BE SAWCUT (IMMEDIATELY SUBSEQUENT TO FINISHING SLAB) WITH "SOFF-CUT" SYSTEM. JOINTS SHALL BE CLEANED AND FILLED WITH "SONOLASTIC SA" WITHIN TWO (2) DAYS AFTER SAWCUTTING. NO HORIZONTAL JOINTS WILL BE PERMITTED IN SLABS OR BEAMS UNLESS APPROVED BY THE ENGINEER.
- PROVIDE 2 TOP & BOTTOM CORNER BARS AT ALL DISCONTINUOUS GRADE BEAMS AND FOUNDATION CORNERS. CORNER BARS SHALL BE 4'-0" IN LENGTH (2'-0" LEGS). SIZE OF THE CORNER BARS SHALL MATCH THE SIZE OF THE GRADE BEAM REINFORCING AS SHOWN BY STRUCTURAL DRAWINGS.
- MAINTAIN A MINIMUM OF ONE AND ONE-HALF (1-1/2) TIMES THE MAXIMUM COARSE AGGREGATE SIZE BETWEEN ALL REINFORCING BARS (EXCEPT AT LAPS).
- BARS SCHEDULED OR DETAILED "CONT" SHALL BE LAPPED 40 BAR DIAMETERS (24 INCHES MINIMUM) UNLESS OTHERWISE NOTED.
- WHERE CONCRETE IS TO HAVE UNEXPOSED SURFACES, THE FORMS MAY BE CONSTRUCTED OF #2 LUMBER OR BETTER, WHERE SURFACES ARE EXPOSED, SUCH AS FOR FINISH PAINTING OR STUCCO DASH, THE FORMS SHALL BE COMMERCIAL STANDARD DOUGLAS FIR, MOISTURE-RESISTANT CONCRETE FORM PLYWOOD; MINIMUM 5-PLY AND AT LEAST 9/16" THICK, OR FORMS LINED WITH COMMERCIAL STANDARD DOUGLAS FIR, CONCRETE FORM EXTERIOR, 3-PLY, NOT LESS THAN 1/4" THICK. WHERE CONCRETE IS EXPOSED, A SMOOTH SURFACE IS REQUIRED, FREE FROM FINIS, HONEYCOMB, FORM MARKS OR OTHER DEFECTS.
- EXPOSED SURFACES OF CONCRETE AT THE PERIMETER OF THE FOUNDATION SHALL BE FORMED WITH 2X10 #2 LUMBER OR BETTER. A SMOOTH SURFACE IS REQUIRED, FREE FROM FINIS, HONEYCOMB, FORM MARKS OR OTHER DEFECTS.
- CONSTRUCT FORMS SO THAT JOINTS ARE LEAKPROOF. MAINTAIN FORMS SUFFICIENTLY RIGID TO PREVENT DEFORMATION UNDER LOAD.
- CONCRETE MAY BE PLACED WITH CHUTES UP TO 25' MAXIMUM. SLUMP SHALL NOT EXCEED 6" AT TRUCK DISCHARGE POINT.
- CONCRETE PLACED BY PUMPING SHALL MEET THE FOLLOWING REQUIREMENTS:
 - A. COARSE AGGREGATE SHALL BE GRADED FROM A MAXIMUM OF 1" DOWN
 - B. MAXIMUM ALLOWABLE INCREASE IN CEMENT FACTOR SHALL BE 1/2 SACK PER CUBIC YARD OVER NORMAL MIX DESIGN.
 - C. MAXIMUM WATER CEMENT RATIO SHALL BE 7-1/2 GALLONS PER SACK OF CEMENT. IF MORE WORKABILITY IS REQUIRED, AN ADMIXTURE MAY BE USED.
 - D. MAXIMUM WEIGHT RATIO OF FINE AGGREGATES TO COARSE AGGREGATES SHALL NOT EXCEED 2/3.
 - E. REFER TO A.C.I. #301, LATEST EDITION, SECTION 800, FOR OTHER PUMPING REQUIREMENTS.
 - F. IN NO CASE SHALL CONCRETE BE PUMPED THROUGH AN ALUMINUM TUBE.
 - G. SLUMP SHALL NOT EXCEED 6" AT TRUCK DISCHARGE POINT.
- FLOOR FINISH (TOLERANCES)
 - A. STEEL TROWEL FINISH 1/8" IN 10'
 - B. FLOAT FINISH 1/4" IN 10'
 - C. SCRATCH FINISH 1/2" IN 10'
- CONCRETE TO BE CURED IN ACCORDANCE WITH ACI RECOMMENDATIONS. PROPOSED METHOD OF CURING TO BE COORDINATED WITH ENGINEER PRIOR TO CONCRETE PLACEMENT.
- SHOP DRAWINGS SHALL BE PREPARED FOR ALL REINFORCING STEEL AND SUBMITTED FOR REVIEW BY ENGINEER. SUBMITTALS SHALL INCLUDE ELECTRONIC (PDF) COPIES OF EACH DRAWING. ENGINEERING DRAWINGS SHALL NOT BE REPRODUCED AND USED AS SHOP DRAWINGS.
- THE CONTRACTOR SHALL REVIEW AND ANNOTATE SHOP DRAWINGS BEFORE SUBMITTING THEM TO THE ARCHITECT/ENGINEER FOR REVIEW. THE CONTRACTOR SHALL ALLOW ARCHITECT/ENGINEER 10 WORKING DAYS FOR REVIEW OF SHOP DRAWINGS.
- ENGINEER TO BE NOTIFIED 48 HOURS PRIOR TO PLACEMENT OF FOUNDATION AND OF STRUCTURAL CONCRETE TO SCHEDULE REQUIRED OBSERVATIONS.
- INCLUDE IN BID AN ALLOWANCE FOR **1.0 TON** OF REINFORCING BARS TO BE USED AS DIRECTED IN FIELD FOR SPECIAL CONDITIONS AT A COST OF **\$2,000.00 PER TON** (LABOR FOR PLACING SAME TO BE INCLUDED). ANY UNUSED ALLOWANCE WILL BE CREDITED TO THE OWNER AT THE END OF THE PROJECT.

FASTENERS

- CAST-IN-PLACE AND POST-INSTALLED ANCHORS SHALL BE PER ANCHOR DIAMETER AND EMBEDMENT DEPTH NOTED ON THE DRAWINGS. POST-INSTALLED ANCHORS SHALL BE UTILIZED ONLY WHERE SPECIFIED. ALL ANCHORS SHALL BE HOT-DIPPED GALVANIZED PER ASTM A153
- ALL ANCHORS NOTED BELOW SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL CONTACT MANUFACTURER'S REPRESENTATIVE FOR THE INITIAL TRAINING AND INSTALLATION OF ANCHORS, AND FOR PRODUCT RELATED QUESTIONS AND AVAILABILITY.
- SPECIAL INSPECTIONS SHALL BE PROVIDED FOR ALL MECHANICAL AND ADHESIVE ANCHORS PER THE APPLICABLE EVALUATION REPORT NOTED BELOW. SPECIAL INSPECTIONS SHALL BE PERFORMED BY INDEPENDENT TESTING LABORATORY PERFORMING QA/QC SERVICES ON PROJECT.
- EXPANSION BOLTS (EB) IN CONCRETE/CMU SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. ACCEPTABLE PRODUCTS:
 - A. KWIK BOLT III (ICC-ES ESR-2302) BY HILTI (CONCRETE)
 - B. KWIK BOLT III (ICC-ES-ESR-1385) BY HILTI (MASONRY)
 - C. STRONG-BOLT 2 (ICC-ES ESR-3037) BY SIMPSON STRONG-TIE (CONCRETE)
 - D. WEDGE-ALL ANCHOR (ICC-ES ESR-1396) BY SIMPSON STRONG-TIE (MASONRY)
- HEAVY DUTY SLEEVE ANCHORS IN CONCRETE/CMU SHALL BE TESTED AND QUALIFIED OR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. EXPANSION BOLTS (EB) SHALL NOT BE SUBSTITUTED FOR SLEEVE ANCHORS WITHOUT PRIOR WRITTEN APPROVAL BY STRUCTURAL ENGINEER. ACCEPTABLE PRODUCTS:
 - A. HSL-3 (ICC-ES ESR-1545) BY HILTI (CONCRETE)
- SCREW ANCHORS IN CONCRETE SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. ACCEPTABLE PRODUCTS:
 - A. KWIK HUS-EZ (ICC-ES ESR-3027) BY HILTI (CONCRETE)
 - B. KWIK HUS-EZ (ICC-ES ESR-3056) BY HILTI (MASONRY)
 - C. TITEN HD (ICC-ES ESR-2713) BY SIMPSON STRONG-TIE (CONCRETE)
 - D. TAPCON ANCHORS (ICC-ES ESR-1671) (MASONRY)
 - E. POWERS WEDGE BOLT (ICC-ES ESR-1678) (MASONRY)
- UNDERCUT ANCHORS IN CONCRETE SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. ACCEPTABLE PRODUCTS:
 - A. HDA (ICC-ES ESR-1546) BY HILTI (CONCRETE)
 - B. TORQ-CUT (ICC-ES ESR-2705) BY SIMPSON STRONG-TIE (CONCRETE)
- POWDER ACTUATED FASTENERS IN CONCRETE/CMU SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. ACCEPTABLE PRODUCTS:
 - A. X-U (ICC-ES ESR-2269) BY HILTI (CONCRETE/MASONRY)
 - B. POWDER ACTUATED FASTENERS (ICC-ES ESR-2138) BY SIMPSON STRONG TIE (CONCRETE/MASONRY)
- ADHESIVE ANCHORS IN CONCRETE/CMU SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308. ACCEPTABLE PRODUCTS:
 - A. HIT-RE 500-SD (ICC-ES ESR-2322) BY HILTI (CONCRETE)
 - B. HIT-HY 70 (ICC-ES ESR-1967) BY HILTI (MASONRY)
 - C. SET-XP (ICC-ES ESR-2508) BY SIMPSON STRONG-TIE (CONCRETE)
 - D. SET (ICC-ES ESR-1772) BY SIMPSON STRONG-TIE (MASONRY)
- J-BOLTS SHALL BE FABRICATED FROM ASTM A36/A307 ROD. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. EXPANSION BOLTS/SLEEVE ANCHORS SHALL NOT BE SUBSTITUTED FOR J-BOLTS WITHOUT PRIOR WRITTEN APPROVAL BY STRUCTURAL ENGINEER.
- HEADED ANCHOR RODS SHALL BE FABRICATED FROM ASTM F1554 MATERIAL, FY=36 KSI
- SUBSTITUTION REQUESTS FOR PRODUCTS LISTED ABOVE SHALL BE SUBMITTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER ALONG WITH CALCULATIONS THAT ARE PREPARED & SEALED BY A REGISTERED PROFESSIONAL ENGINEER. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERTINENT EQUIVALENT PERFORMANCE VALUES OF THE SPECIFIED PRODUCT USING THE APPROPRIATE DESIGN PROCEDURE AND/OR STANDARDS. SUBSTITUTED ANCHORS SHALL HAVE A VALID CURRENT EVALUATION (ICC-ES OR IAPMO-ES) REPORT.

SPECIAL INSPECTIONS

SPECIAL INSPECTIONS INDEPENDENT OF THE CONTRACTOR, THE ARCHITECT, OR THE ENGINEER, SHALL BE PROVIDED BY A SPECIAL INSPECTOR EMPLOYED BY THE OWNER ACCORDING TO CHAPTER 17 OF THE IBC 2012. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS. THE SPECIAL INSPECTOR SHALL SEND WRITTEN REPORTS TO THE OWNER, THE ARCHITECT, THE ENGINEER AND THE CONTRACTOR. THE REPORTS SHALL INDICATE IF WORK INSPECTED WAS DONE IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THE SPECIAL INSPECTOR SHALL BRING THE DISCREPANCIES TO THE ATTENTION OF THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE PRIOR TO THE COMPLETION OF THAT PHASE OF THE WORK. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING THAT THE SPECIAL INSPECTION WORK WAS, TO THE BEST OF THEIR KNOWLEDGE, IN OR NOT IN CONFORMANCE WITH THE DRAWINGS, SPECIFICATIONS AND APPLICABLE WORKMANSHIP PROVISIONS OF THE IBC 2018.

CONTINUOUS OR PERIODIC SPECIAL INSPECTION IS REQUIRED FOR THE FOLLOWING WORK:

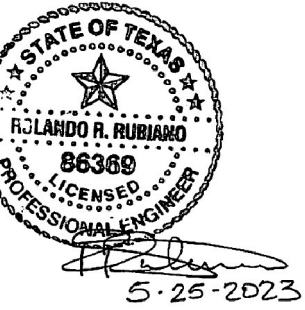
REQUIRED VERIFICATION AND INSPECTION OF SOILS		
VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		X
PERFORM CLASSIFICATION AND TESTING OF SELECT FILL MATERIALS		X
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF SELECT FILL	X	
PRIOR TO PLACEMENT OF SELECT FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY		X

REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION		
VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC
INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT		X
INSPECT BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE	X	
VERIFY USE OF REQUIRED DESIGN MIX		X
PERFORM SLUMP AND AIR CONTENT TEST, AND DETERMINE THE TEMPERATURE OF THE CONCRETE AT THE TIME OF SAMPLING FRESH CONCRETE FOR MAKING SPECIMENS FOR STRENGTH TESTS PER ACI 318	X	
INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X	
INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES		X
INSPECTION OF PRESTRESSED CONCRETE APPLICATION OF PRESTRESSING FORCES	X	
VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS		X
ERECTION OF PRECAST CONCRETE MEMBERS		X
INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED		X

REQUIRED VERIFICATION AND INSPECTION OF ANCHORS		
VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC
CAST-IN-PLACE, POST-INSTALLED, MECHANICAL AND EPOXY SET ANCHORS:		FREQUENCY OF INSPECTION SHALL BE IN ACCORDANCE WITH THE CURRENT ICC-ES EVALUATION REPORT, OR PER THE SPECIAL INSPECTION REQUIREMENTS OF THE ANCHOR SUBSTRATE WHICH EVER IS MORE STRINGENT
AS APPLICABLE, THE INSPECTION PROGRAM SHALL VERIFY THE ANCHOR TYPE, EMBEDMENT, TIGHTENING TORQUE, DIMENSIONS, HOLE DEPTH & DIAMETER AND CLEANOUT, EPOXY MIXING AND PLACEMENT PROCEDURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND THE CURRENT ICC-ES EVALUATION REPORT		

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TEXAS

CAMERON COUNTY
835 EAST LEVEE & SAN BENITO ANNEX BUILDING
STANDBY POWER UPGRADES
CAMERON COUNTY



1128 SOUTH COMMERCE ST.
MARIEN, TX
PHONE: 956-206-2435
TEXAS REGISTERED
ENGINEERING FIRM
E-15098

DATE: MAY 25, 2023

CHECKED BY: A.V

DRAWN BY: J.L.R

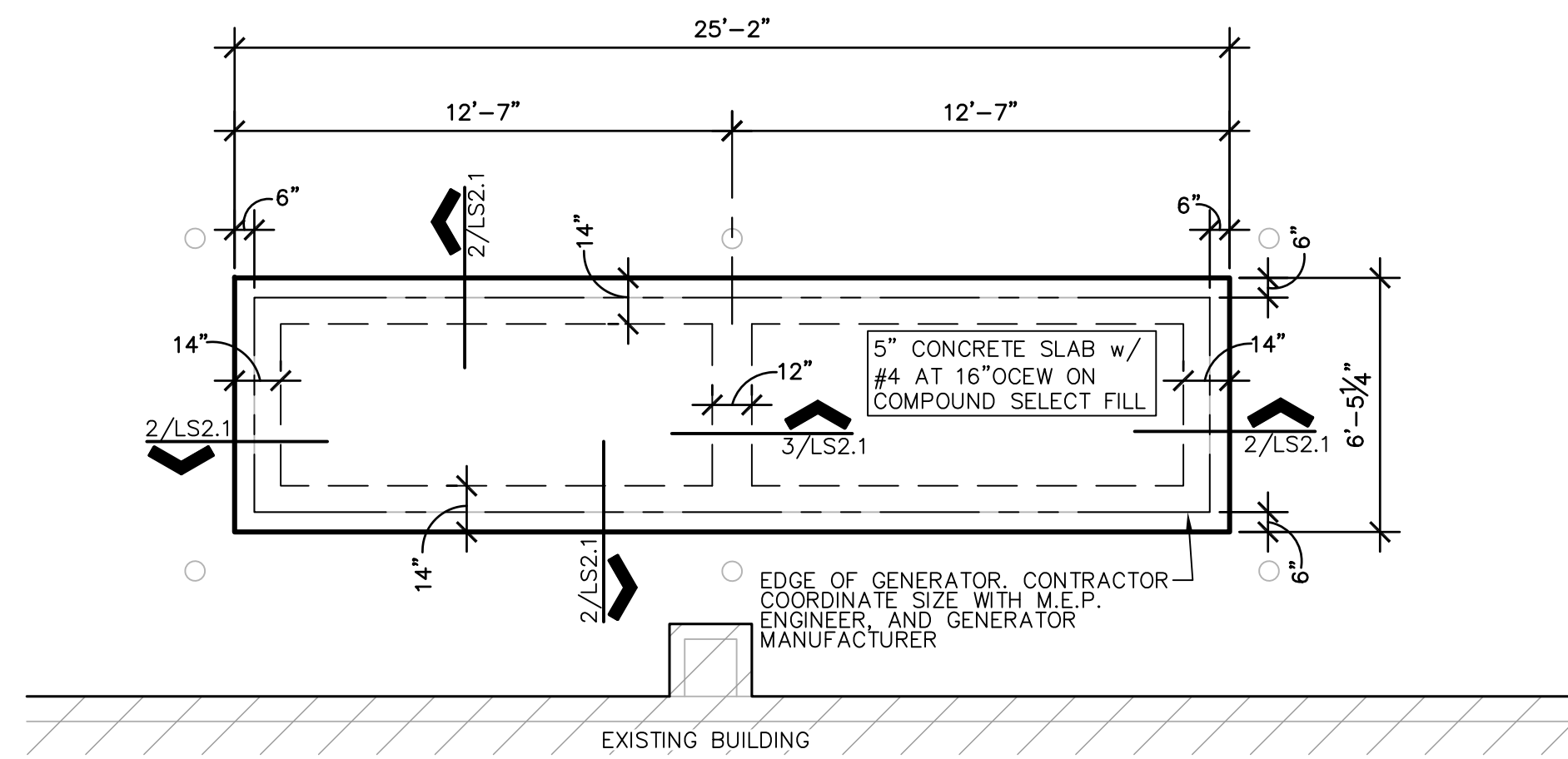
PROJECT NO.: 1178-34

CAD FILE:
SHEET:

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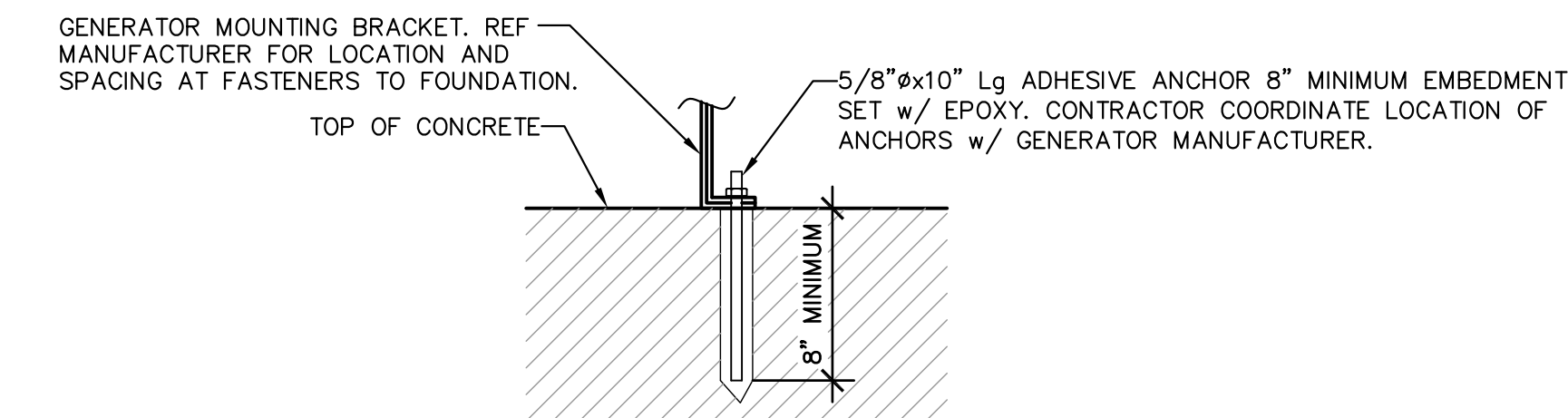
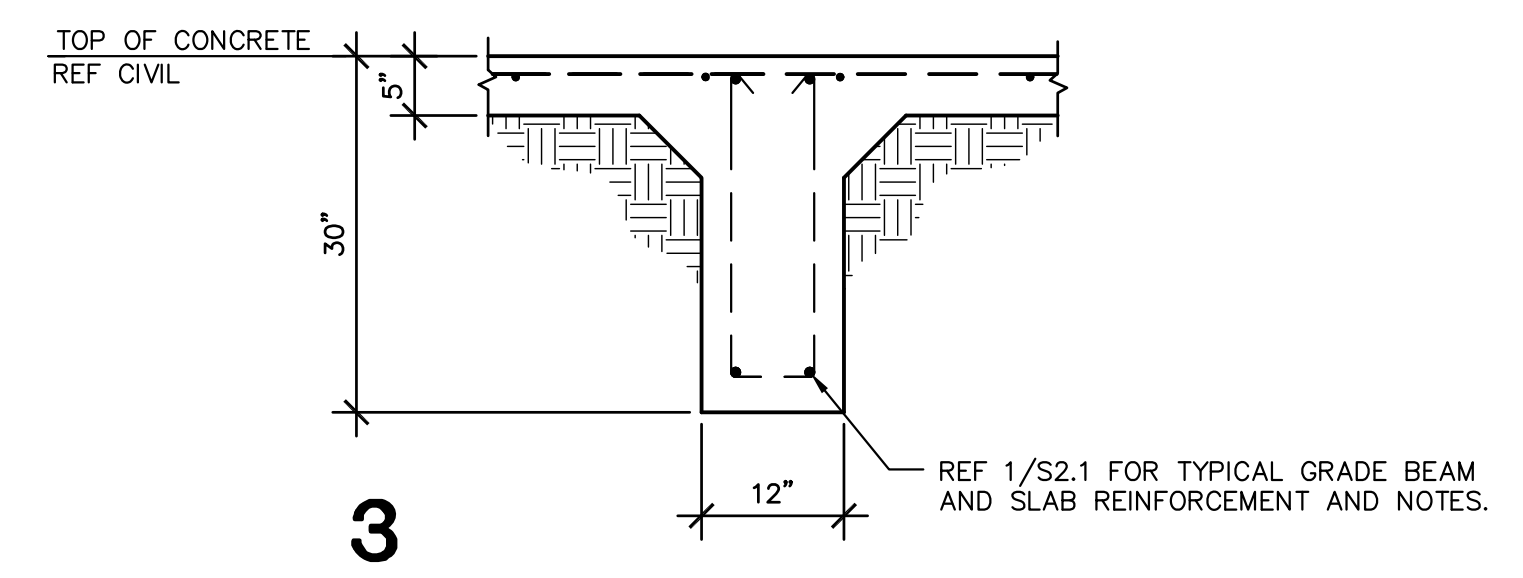
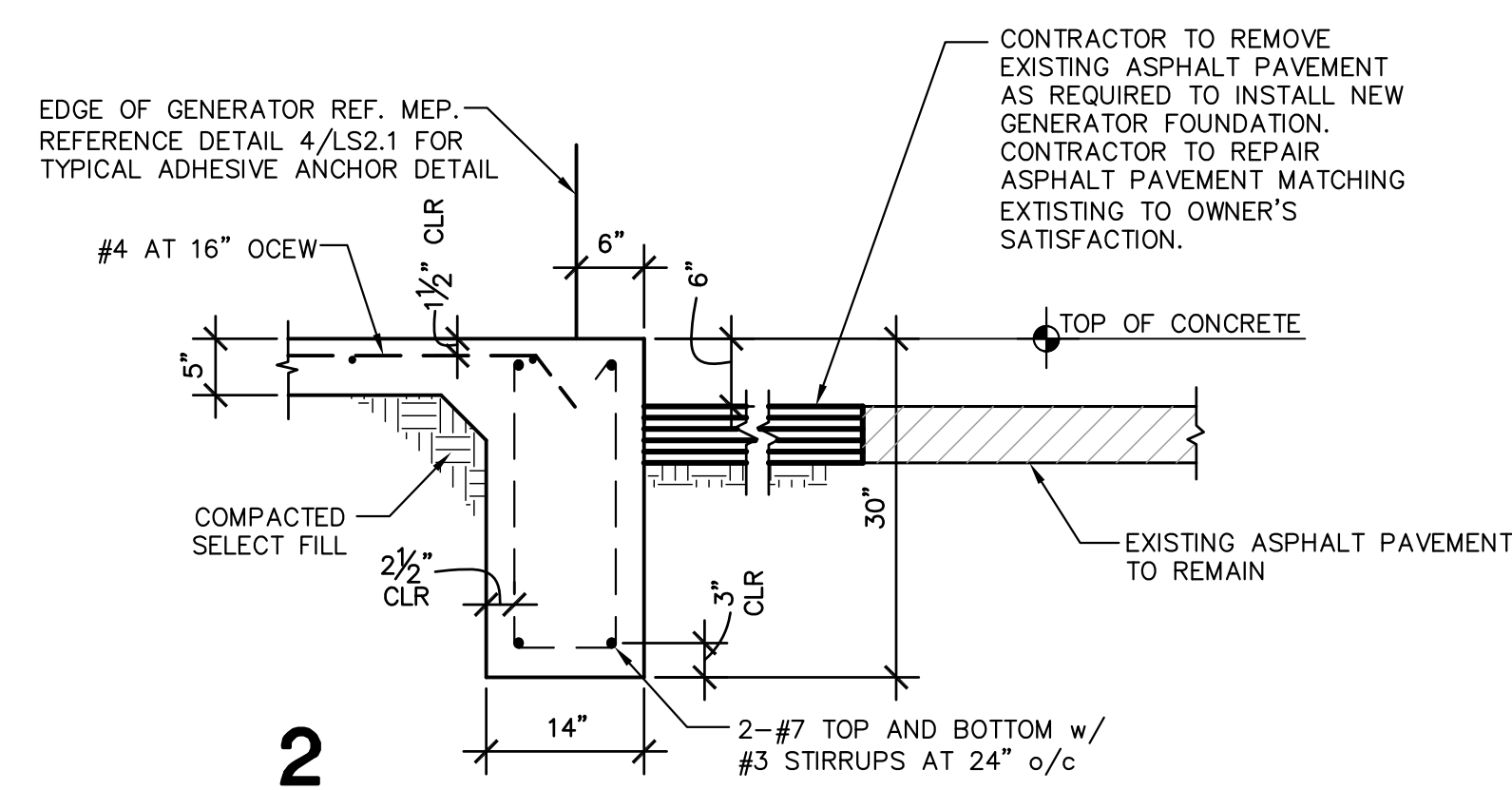
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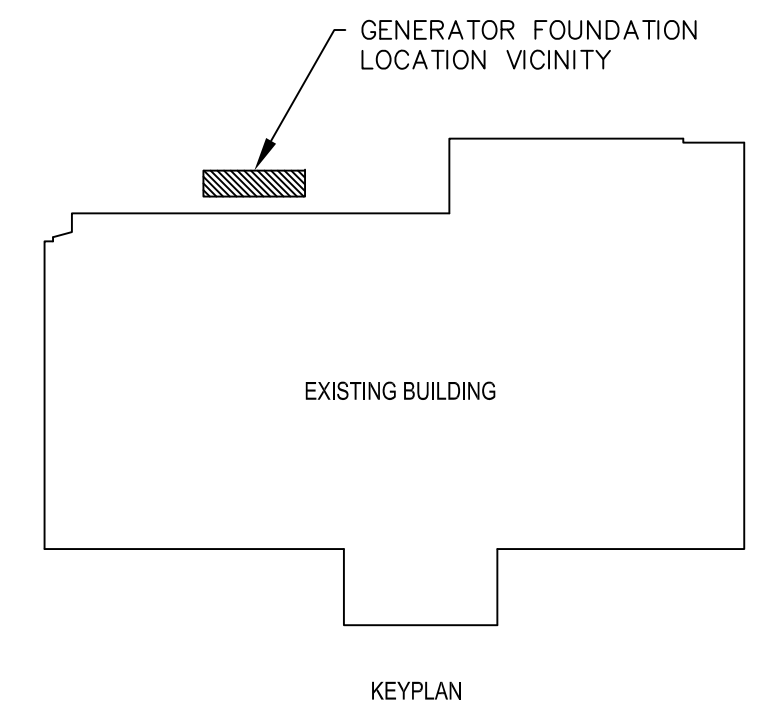
1 GENERATOR FOUNDATION PLAN
1/4" = 1'-0"



- NOTES:
- COORDINATE FOUNDATION LOCATION AND ORIENTATION WITH MEP SITE PLAN.
 - COORDINATE AND VERIFY SIZE OF GENERATOR WITH M.E.P. ENGINEER AND GENERATOR MANUFACTURER PRIOR TO PLACING FOUNDATION.



4 TYPICAL ADHESIVE DETAIL



GREEN, RUBIANO & ASSOCIATES
CONSULTING STRUCTURAL ENGINEERS
1220 WEST HARRISON HARLINGEN, TEXAS 78001
P. (956) 428-4411 WWW.GRAENGINEERS.COM
FIRM REGISTRATION # F-4146

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835 EAST LEVEE & SAN BENITO ANNEX BUILDING
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CAMERON COUNTY TEXAS

ethos
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PROJECT NO.: 1178-34
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SHEET: **LS2.1**

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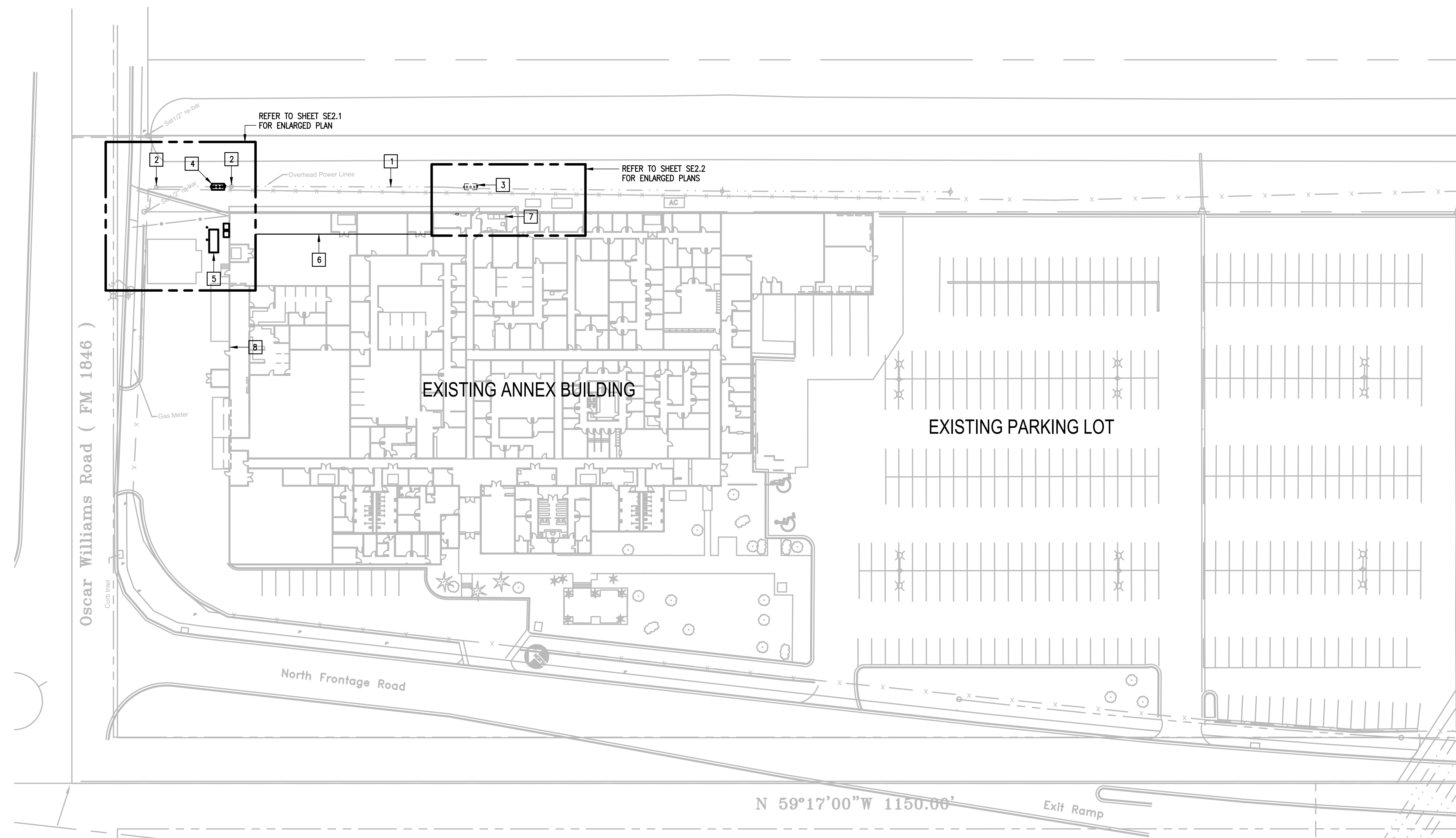


GENERAL NOTES:

1. COORDINATE WORK AMONG ALL DISCIPLINES. IT IS NOT THE INTENT OF THESE DOCUMENTS TO DICTATE WHO MUST DO THE WORK. ALL WORK SHOWN IS THE RESPONSIBILITY OF THE (PRIME) CONTRACTOR.
2. FIELD VERIFY PROJECT SITE EXISTING CONDITIONS AND ELEVATIONS PRIOR TO BEGINNING ANY WORK.
3. COORDINATE ELECTRICAL AND PLUMBING WITH GENERAL CONSTRUCTION.
4. PHASING AND SEQUENCE OF CONSTRUCTION SHALL BE PER DRAWINGS AND SPECIFICATIONS.
5. FIELD VERIFY/SPOT EXACT LOCATIONS AND EXISTING CONDITIONS OF EXISTING ELECTRICAL. IT IS THE INTENT OF THESE PLANS TO PROVIDE A COMPLETE AND WORKABLE SYSTEMS. SHOULD BIDDER FIND OMISSIONS OR DISCREPANCIES IN THE PLANS, BIDDER SHALL NOTIFY THE ENGINEER PRIOR TO THE BID DATE AND A WRITTEN CLARIFICATION WILL BE ISSUED.
6. DAMAGED ITEMS SHALL BE REPAIRED AT NO ADDITIONAL COST TO OWNER. CONTRACTORS ARE REQUIRED TO SEARCH AND INVESTIGATE FOR EXISTING UTILITIES BEFORE EXCAVATING.
7. ALL MATERIALS AND LABOR, WHETHER SPECIFICALLY INDICATED ON PLANS OR NOT, WHICH ARE NECESSARY FOR THE PROPER INSTALLATION AND FUNCTION OF THE SYSTEM SHALL BE FURNISHED BY THIS CONTRACTOR. INCLUDE ALL COSTS OF CHANGES, IF/AS REQUIRED IN BID PROPOSAL.
8. PROVIDE J-BOXES (POLYMER CONCRETE) AS REQUIRED FOR PULL WIRING.
9. ELECTRICAL WIRING SHALL NOT BE SPLICED BELOW GRADE.
10. PERFORM ALL WORK PER LATEST VERSION OF NATIONAL ELECTRICAL CODE, AND APPLICABLE LOCAL CODES AND ORDINANCES, UNLESS DRAWINGS OR SPECIFICATIONS HAVE MORE STRINGENT REQUIREMENTS.
11. CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS AND FEES ASSOCIATED WITH PROJECT, INCLUDING FEES FOR INSPECTIONS, APPLICATIONS, AND PROVISION OF NEW SERVICES.
12. CONTRACTOR WHO WILL ACTUALLY PERFORM WORK MUST APPLY FOR ALL REQUIRED PERMITS.
13. NOTIFY ENGINEER OF ANY ASPECTS OF DESIGN WHICH ARE THOUGHT TO BE IN NONCOMPLIANCE WITH APPLICABLE CODES.
14. COORDINATE ALL WORK WITH OTHER TRADES; COORDINATE SCHEDULE OF WORK WITH ALL SUB-CONTRACTORS TO ACHIEVE SMOOTH FLOW OF CONSTRUCTION.
15. SEAL AROUND ELECTRICAL RACEWAYS AT ALL WALLS, A/C ROOMS AND WALL LOUVER PENETRATIONS WITH FIREPROOF CAULKING. RE: SPECS. PROVIDE FLASHING AROUND PENETRATION, BOTH INSIDE AND OUTSIDE, TO PROVIDE FINISHED LOOK.
16. TIME OR MONEY ALLOWANCES WILL NOT BE MADE TO ACCOMMODATE UTILITY CONFLICTS THAT CAN BE REASONABLY RESOLVED BY COORDINATION DURING SHOP DRAWING PHASE.
17. CONTRACTOR SHALL REVIEW COMPLETE DOCUMENTS PRIOR TO SUBMITTAL OF PROPOSAL TO GAIN COMPLETE UNDERSTANDING OF PROJECT SCOPE, WORK BY OTHERS, AND ELECTRICAL WORK ASSOCIATED WITH OTHER DISCIPLINES.
18. MAINTAIN MANUFACTURER RECOMMENDED CLEARANCE AROUND ALL EQUIPMENT.
19. AFFIX ID TAGS TO ALL DIVISION 26 EQUIPMENT.
20. FIELD VERIFY ALL CONDITIONS AND MEASURE DIMENSIONS WITHIN THE BUILDING PRIOR TO ORDERING EQUIPMENT AND/OR PROCEEDING WITH INSTALLATION.
21. ALL EQUIPMENT SHALL BE FACTORY TESTED, AND CONTRACTOR SHALL VERIFY THEIR CONDITION PRIOR TO INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR EQUIPMENT DAMAGED DURING MOVING AND INSTALLATION.
22. EQUIPMENT FOUND DEFECTIVE PRIOR TO FINAL ACCEPTANCE SHALL BE REPLACED AT NO COST TO OWNER.
23. WORK TO BE DONE UNDER ALLOWANCES BECOMES AN INTEGRAL PART OF THE PROJECT AND RESPONSIBILITY OF CONTRACTOR ONCE ALLOWANCE IS APPROVED.
24. SLEEVE ALL EXTERIOR WALL PENETRATIONS.
25. CONTRACTOR SHALL NOT PROCEED WITH ANY WORK INVOLVING A CHANGE IN PROJECT SCOPE OR COST WITHOUT FIRST HAVING OBTAINED ENGINEER'S APPROVAL IN WRITING. UNLESS ENGINEER HAS AGREED TO SUCH CHANGE PRIOR TO IT BEING DONE, AND HAS AGREED THAT AN INCREASE IN COST ASSOCIATED WITH SUCH CHANGE IS WARRANTED; CONTRACTOR WILL NOT BE REIMBURSED FOR SUCH CHANGE.

ELECTRICAL KEYED NOTES:

- 1 EXISTING ELECTRIC UTILITY OVERHEAD POWER LINES TO REMAIN.
- 2 EXISTING ELECTRIC UTILITY POWER POLE.
- 3 EXISTING ELECTRIC UTILITY PLATFORM MOUNTED TRANSFORMERS.
- 4 PROPOSED ELECTRIC UTILITY PLATFORM MOUNTED TRANSFORMERS.
- 5 PROPOSED RELOCATED STANDBY GENERATOR FROM 835 EAST LEVEE BUILDING.
- 6 SECURE RACEWAYS TO EXISTING STRUCTURE STEEL JOIST. WHERE ROUTED ABOVE ACCESSIBLE CEILING SPACES TEMPORARILY REMOVE EXISTING CEILING TILES FOR INSTALLATION OF NEW RACEWAYS. REINSTALL EXISTING CEILING TILES AFTER WORK ABOVE THE CEILING HAS BEEN COMPLETED. REPLACE DAMAGED CEILING TILES.
- 7 EXISTING MAIN SWITCHBOARD "MDP".
- 8 GENERATOR REMOTE ANNUNCIATOR. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO ANY ROUGH-IN.



**01 SAN BENITO ANNEX BUILDING
ELECTRICAL SITE PLAN**

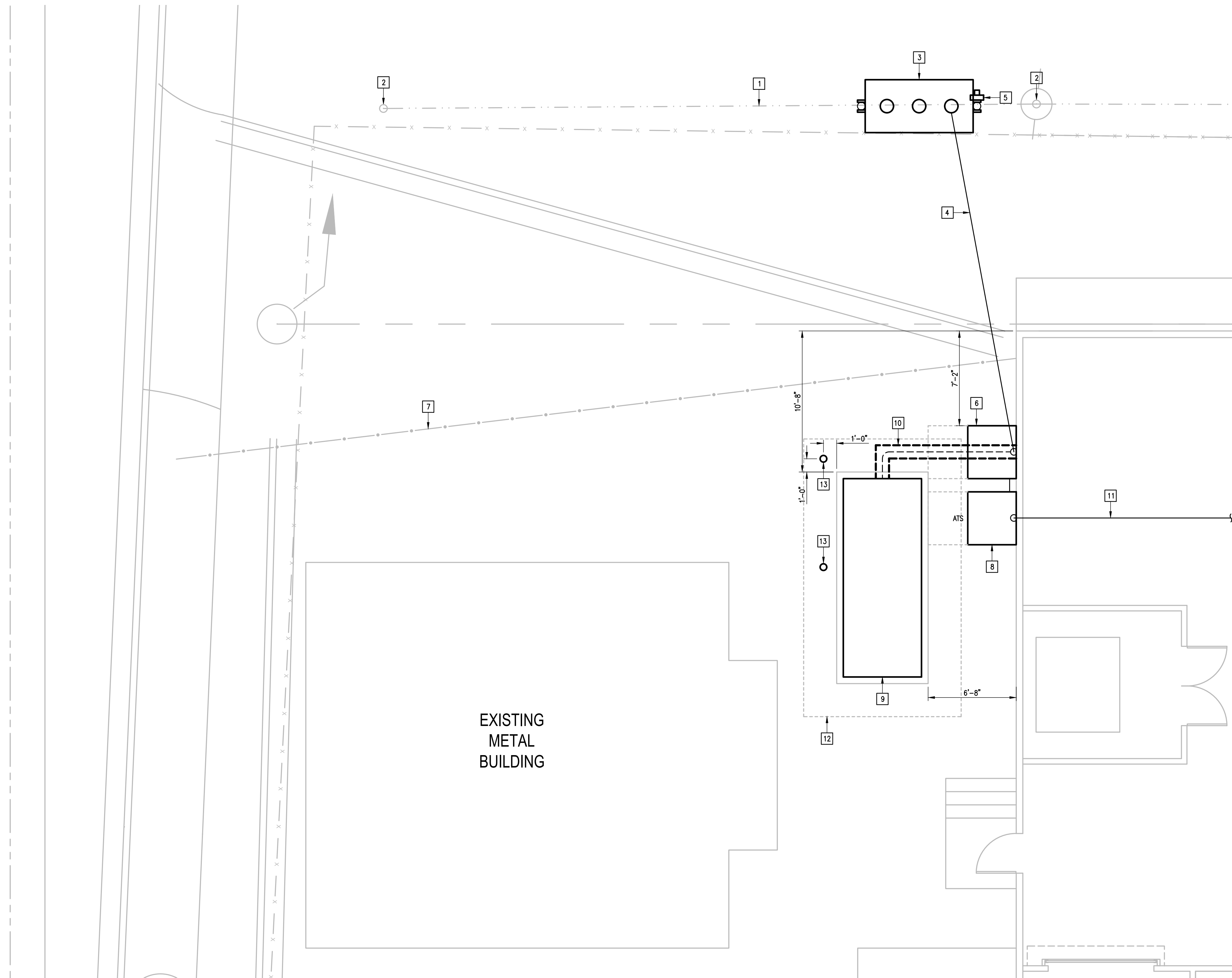
SCALE: 1" = 40'-0"



NORTH

N 59°17'00"W 1150.06'

Exit Ramp



ELECTRICAL KEYED NOTES:

- 1 EXISTING ELECTRIC UTILITY OVERHEAD POWER LINES TO REMAIN.
- 2 EXISTING ELECTRIC UTILITY POWER POLE.
- 3 PROPOSED ELECTRIC UTILITY OVERHEAD TRANSFORMERS AND SUPPORT STRUCTURE BY AEP.
- 4 PROPOSED ELECTRIC UTILITY OVERHEAD SECONDARY LINES.
- 5 PROVIDE ELECTRIC UTILITY METER.
- 6 PROVIDE WIREWAY FOR WEATHER HEADS.
- 7 APPROXIMATE LOCATION OF EXISTING WATER LINE. FIELD VERIFY PRIOR TO ANY TRENCHING.
- 8 PROVIDE SERVICE ENTRANCE RATED AUTOMATIC TRANSFER SWITCH (ATS).
- 9 INSTALL AND CONNECT STANDBY GENERATOR RELOCATED FROM 835 EAST LEVEE BUILDING.
- 10 PROVIDE SAWCUT OF EXISTING CONCRETE DRIVE. PATCH TO MATCH EXISTING CONDITIONS.
- 11 PROVIDE RACEWAYS FOR NEW FEEDERS, REMOTE ANNUNCIATOR SIGNAL, AND HVAC CONTROLS INTERFACE. ROUTE RACEWAYS BETWEEN STRUCTURAL STEEL JOIST.
- 12 NEC REQUIRED CLEARANCE - TYPICAL.
- 13 PROVIDE PIPE BOLLARD. SEE DETAIL 04/SE4.1.

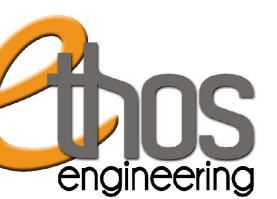
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TEXAS

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835 EAST LEVEE & SAN BENITO ANNEX BUILDING
STANDBY POWER UPGRADES
 CAMERON COUNTY



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 HARLINGEN, TX
 PHONE: 361-205-2435
 TEXAS REGISTERED
 ENGINEERING FIRM
 E-15998

DATE: JUNE 23, 2023

CHECKED BY: G.Q.

DRAWN BY: C.G.

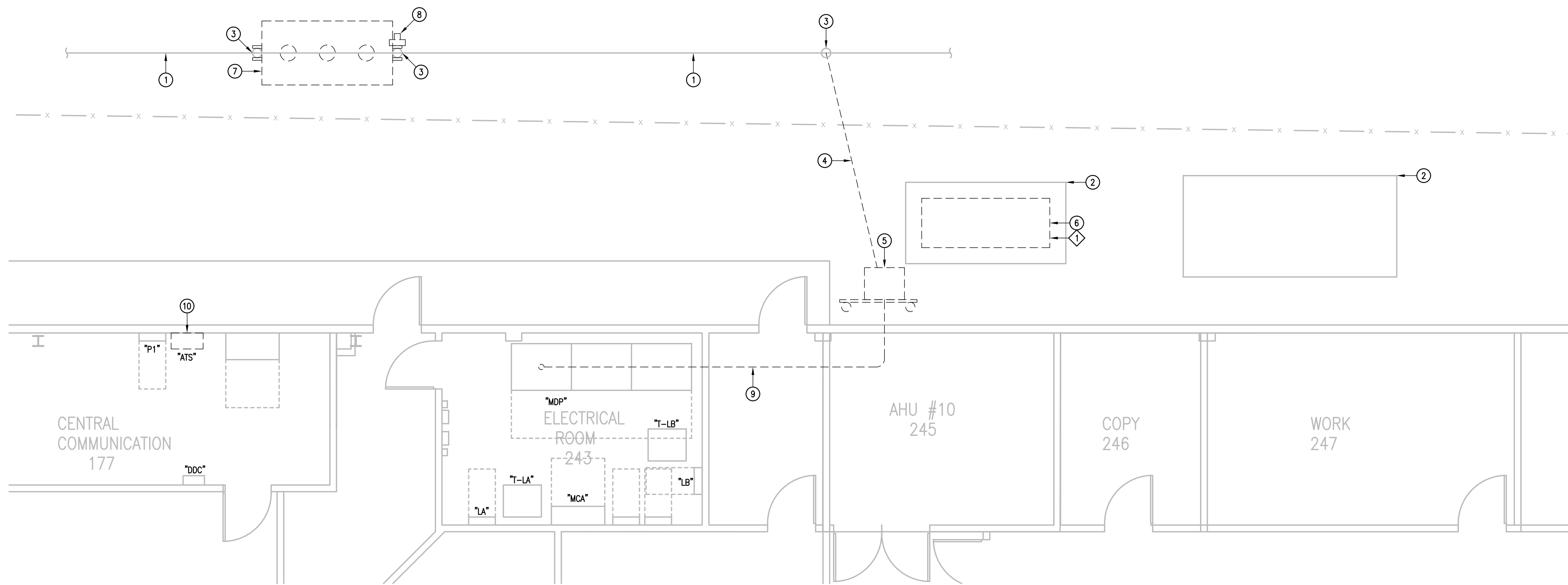
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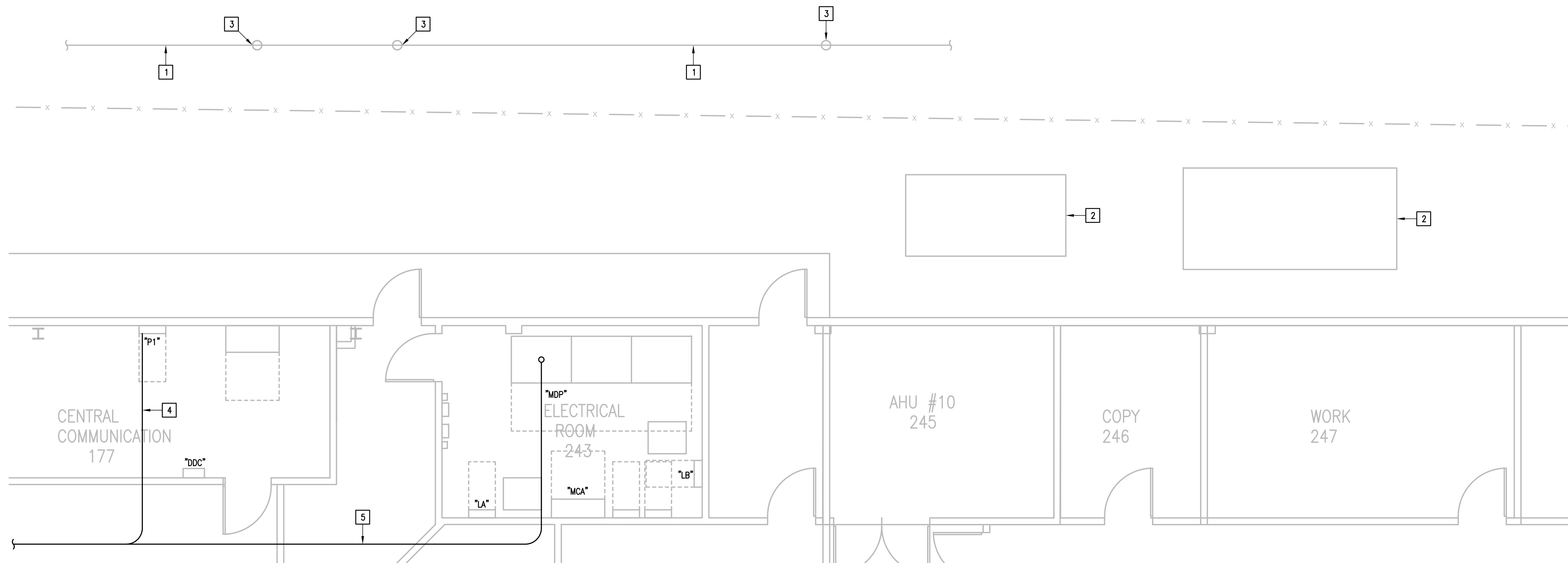
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01 SAN BENITO ANNEX BUILDING
 ENLARGED ELECTRICAL SITE PLAN
 SCALE : 1/4" = 1'-0"





01 SAN BENITO ANNEX BUILDING
DEMOLITION ELECTRICAL & PLUMBING PLAN
SCALE : 1/4" = 1'-0"



02 SAN BENITO ANNEX BUILDING
NEW ELECTRICAL PLAN
SCALE : 1/4" = 1'-0"

DEMOLITION GENERAL NOTES:

1. THE EXTENT OF DEMOLITION WORK IS INDICATED ON THE DRAWINGS AND BY THE REQUIREMENTS OF THIS SECTION. A VISIT TO THE SITE IS REQUIRED TO PROPERLY BID THE DEMOLITION WORK.
2. REMOVED MATERIALS SHALL BELONG TO OWNER. DELIVER THEM TO OWNERS DESIGNATED LOCATION. IF OWNER DOES NOT WANT THE REMOVED MATERIALS THEN REMOVE THEM FROM SITE & PROPERLY DISPOSE OF THEM.
3. IF REMOVAL OF EXISTING ELECTRICAL SYSTEMS RENDERS EXISTING ELECTRICAL SYSTEMS DOWNSTREAM TO REMAIN INOPERABLE, PROVIDE J-BOXES, CONDUIT WIRING AND SPLICES ABOVE ACCESSIBLE CEILINGS IN ORDER TO CONTINUE OPERATION.
4. COORDINATE SEQUENCE OF CONSTRUCTION WITH CAMERON COUNTY STAFF.

DEMOLITION KEYED NOTES:

- 1 EXISTING ELECTRIC UTILITY 3Ø OVERHEAD SERVICE LINES TO REMAIN.
- 2 EXISTING CONCRETE PAD TO REMAIN AS IS.
- 3 EXISTING ELECTRIC UTILITY POWER POLE TO REMAIN.
- 4 EXISTING ELECTRIC UTILITY 3Ø OVERHEAD SERVICE LINES TO BE REMOVED. REMOVE EXISTING WIREWAY AND SUPPORT STRUCTURE.
- 5 DISCONNECT AND REMOVE EXISTING 45KW NATURAL GAS STANDBY GENERATOR ALONG WITH RELATED WIRING, RACEWAYS AND SUPPORT HARDWARE. CAP AND ABANDON UNDERGROUND RACEWAYS BELOW GRADE.
- 7 EXISTING ELECTRIC UTILITY POLE MOUNT TRANSFORMERS AND SUPPORT STRUCTURE TO BE REMOVED.
- 8 EXISTING ELECTRIC UTILITY METER TO BE REMOVED.
- 9 DISCONNECT AND REMOVE EXISTING FEEDER ALONG WITH RELATED WIRING, RACEWAYS AND SUPPORT HARDWARE.
- 10 DISCONNECT AND REMOVE EXISTING AUTOMATIC TRANSFER SWITCH AND SUPPORT HARDWARE.

PLUMBING DEMO KEYED NOTE:

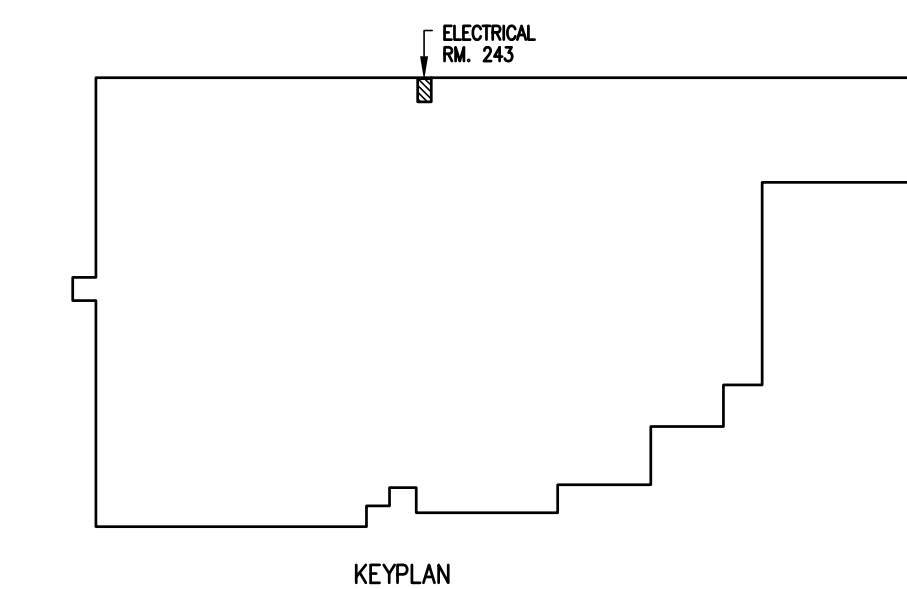
- ◇ ISOLATE EXISTING NATURAL GAS PIPE SERVING GENERATOR, DISCONNECT FROM EQUIPMENT, CAP AND ABANDON GAS PIPE.

NEW KEYED NOTES:

- 1 EXISTING ELECTRIC UTILITY 3Ø OVERHEAD SERVICE LINES TO REMAIN.
- 2 EXISTING CONCRETE PAD.
- 3 EXISTING ELECTRIC UTILITY POWER POLE.
- 4 CONNECT GENERATOR BATTERY CHARGER, HEATER AND CONTROLS CIRCUITS. SEE ELECTRICAL RISER DIAGRAM.
- 5 PROVIDE NEW FEEDER. SEE ELECTRICAL RISER DIAGRAM.

LINE TYPE LEGEND:

LINE	DESCRIPTION
---	EXISTING TO BE REMOVED
---	EXISTING TO REMAIN
---	PROVIDE NEW



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TEXAS

CAMERON COUNTY
835 EAST LEVEE & SAN BENITO ANNEX BUILDING
STANDBY POWER UPGRADES

CAMERON COUNTY



1128 SOUTH COMMERCE ST.
HARLINGEN, TX
PHONE: 361-205-2435
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ENGINEERING FIRM
E-15998

DATE: JUNE 23, 2023

CHECKED BY: G.O.

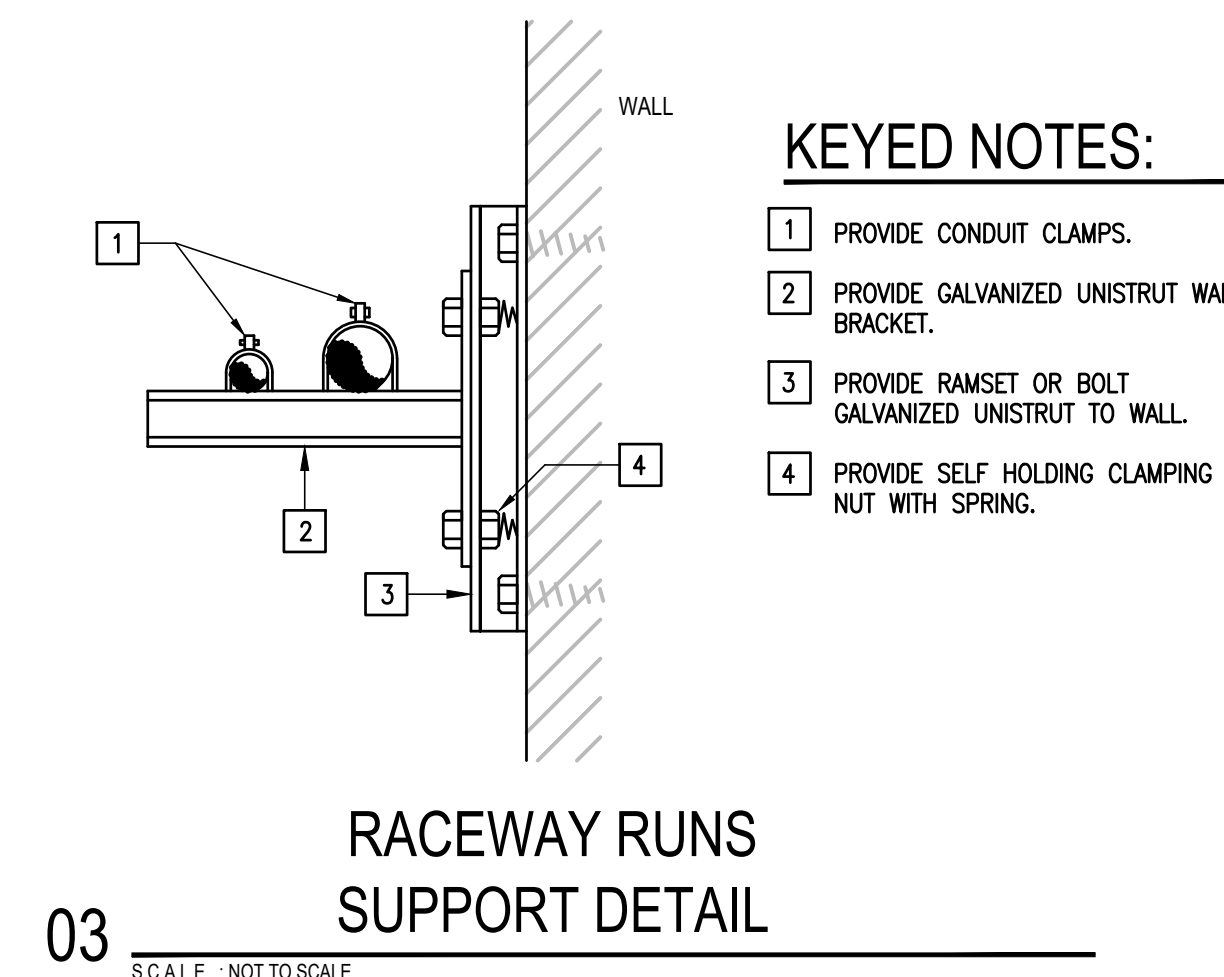
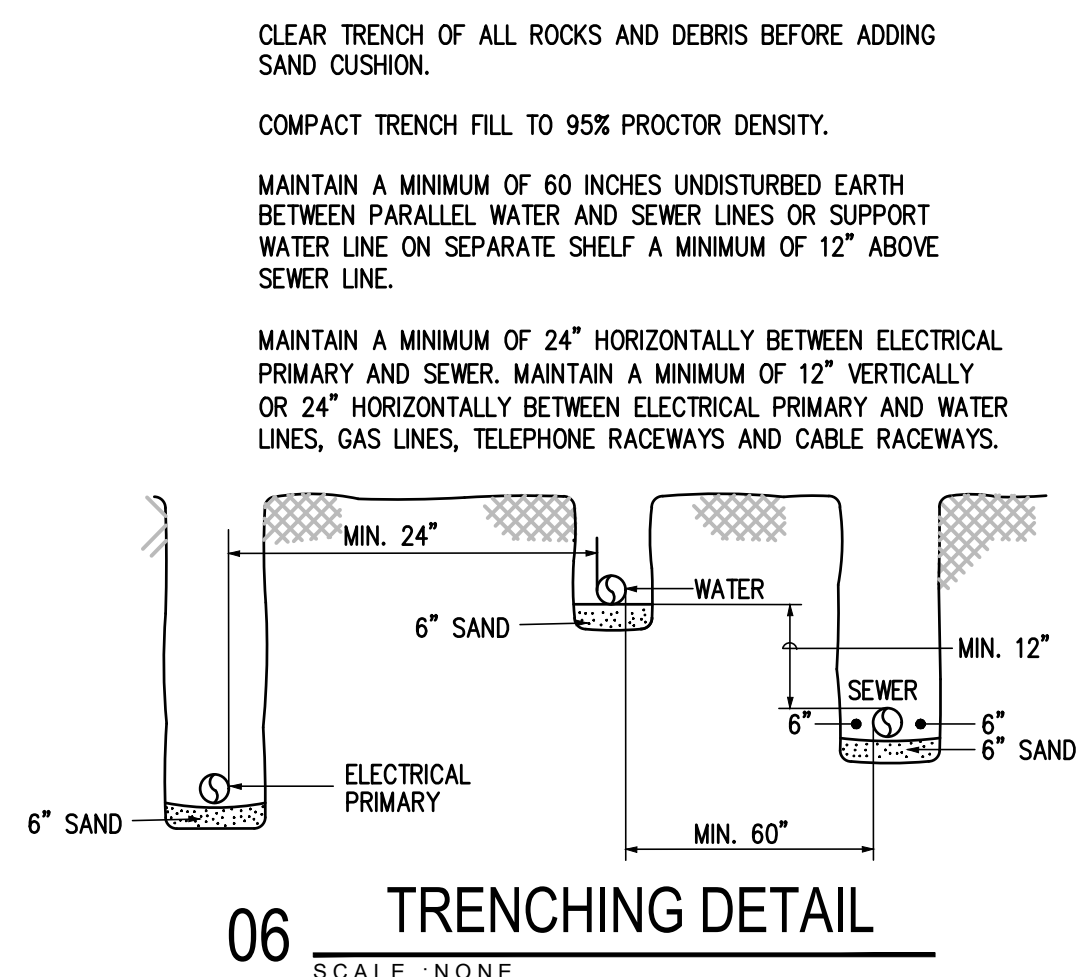
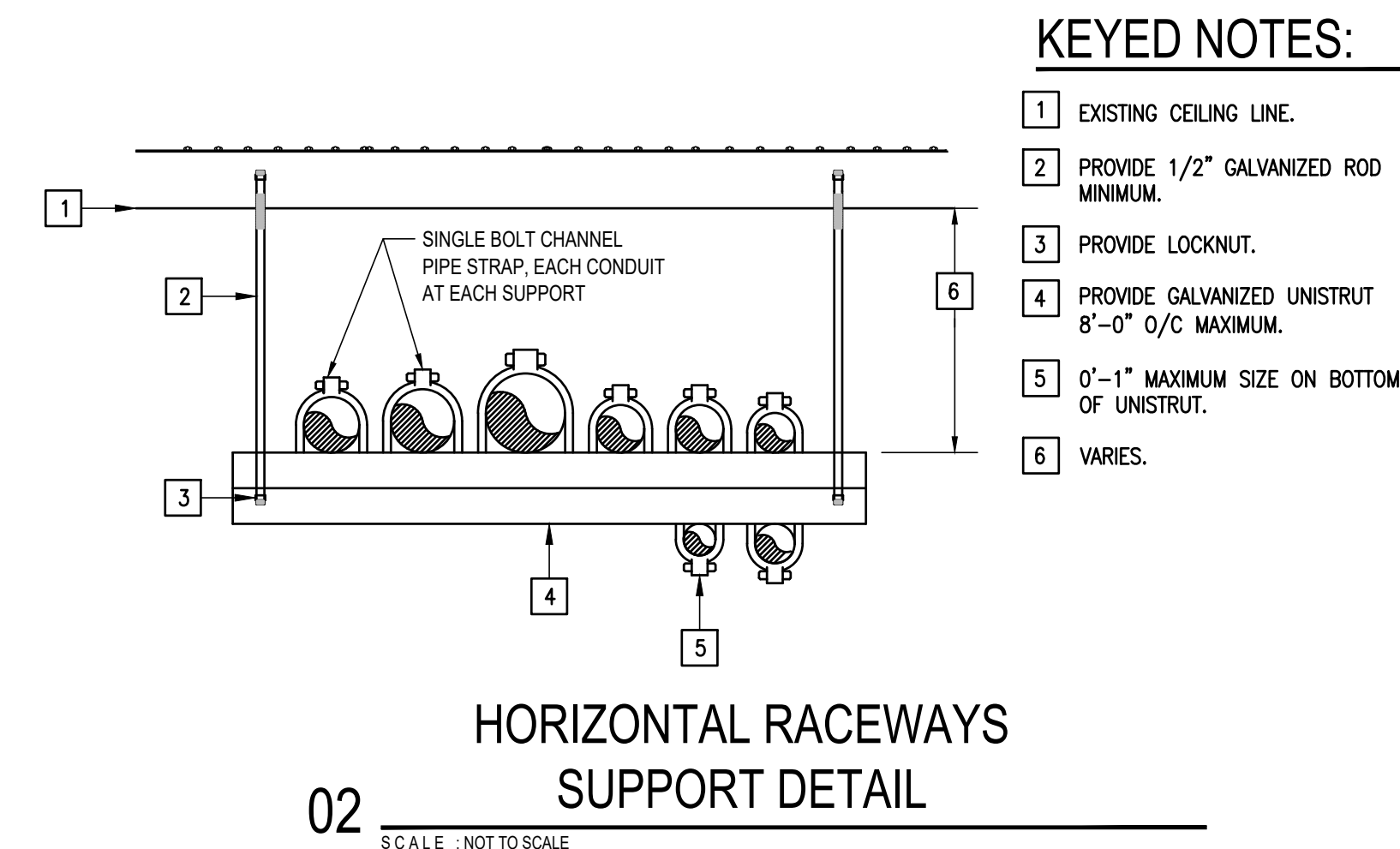
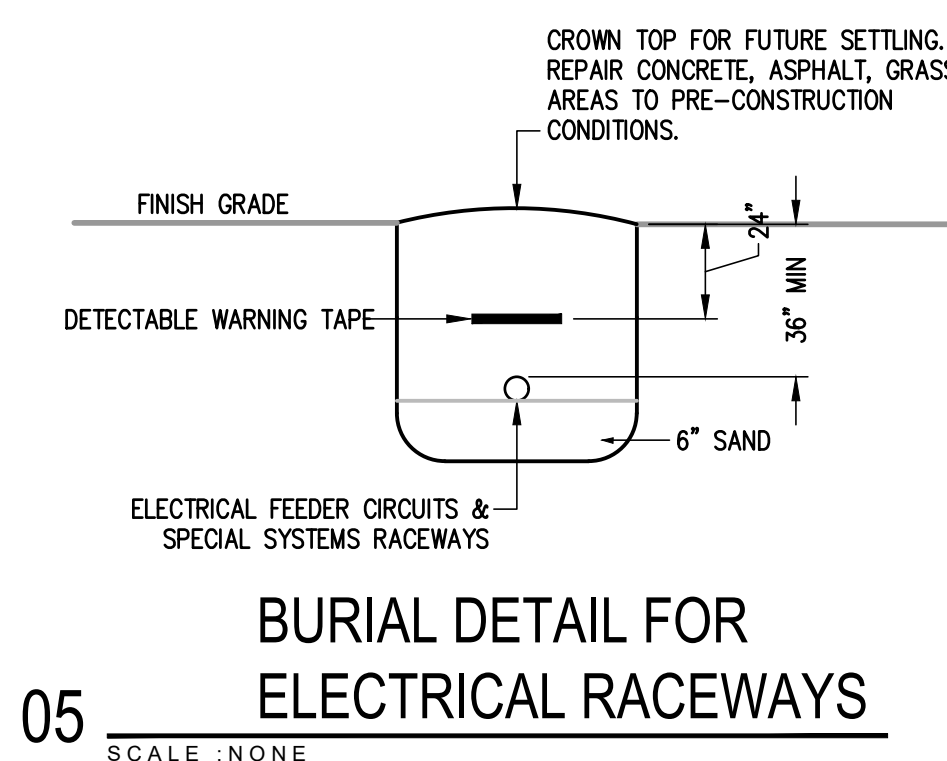
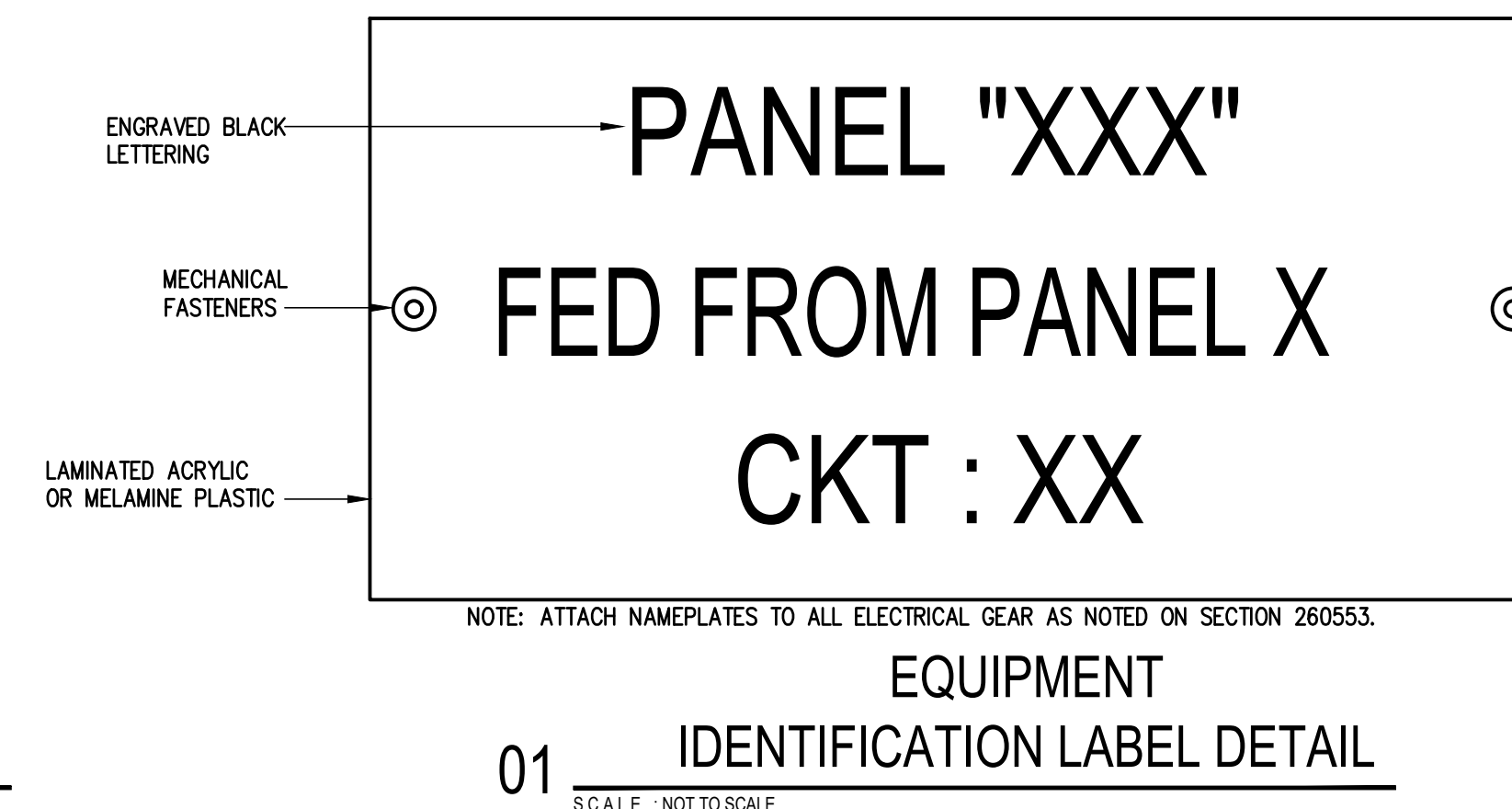
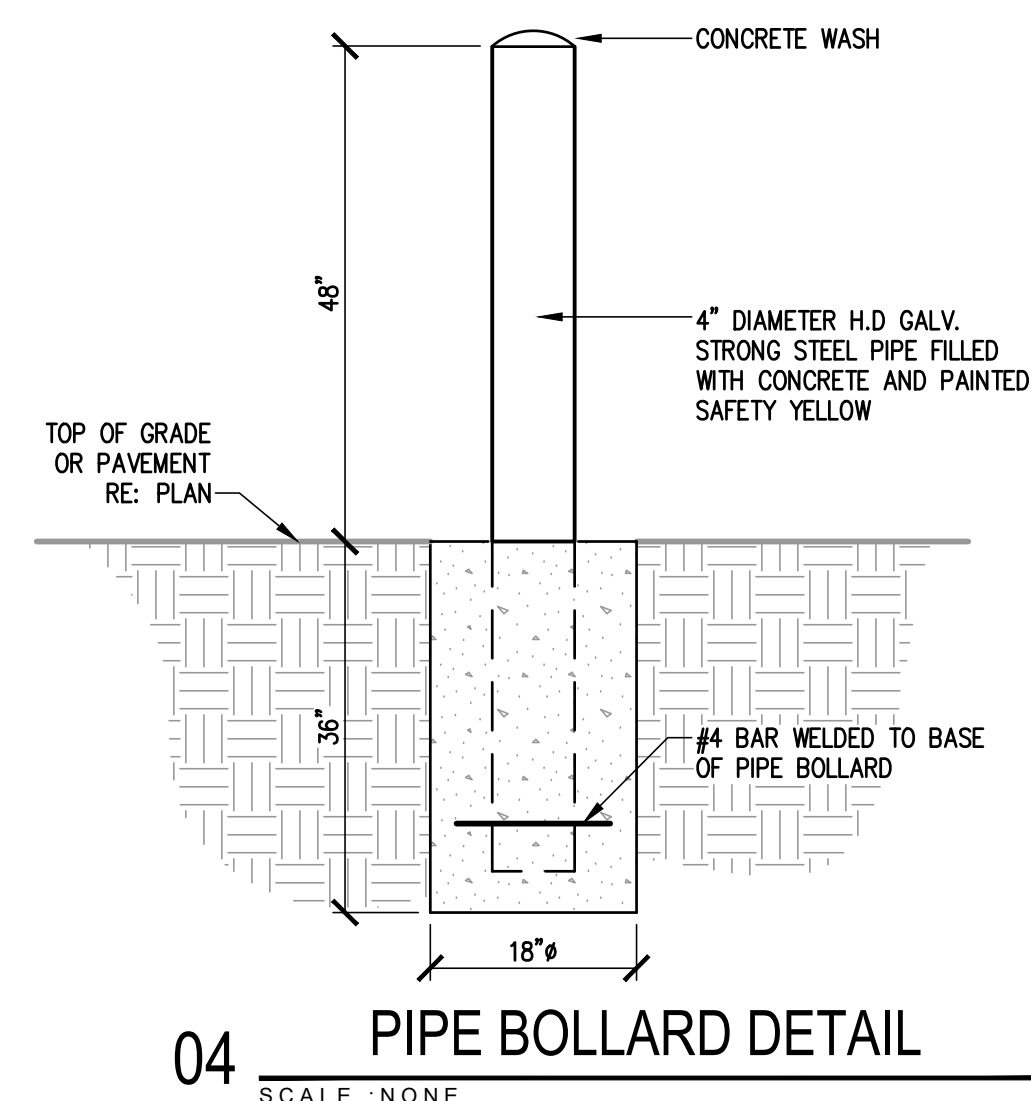
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PROJECT NO.: 23v14

CAD FILE:

SHEET:

SE2.2



EXISTING UNITS INVENTORY

MARK	TYPE	TONNAGE	ELECTRICAL V/P	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	NOTES
RTU-12	RTU	7.5	208-230/3	CARRIER	50TC-D08A2ASAD0G0	2919P34810	ALL
RTU-13	RTU	7.5	208/3	LENNOX	LCH02H4M4Y	5620L04866	ALL
RTU-14	RTU	5	208/3	RHEEM	RNLN-AD80CL	7527F171202743	ALL
RTU-15	RTU	5	208/3	CARRIER	50TC-A06A2ASAD0A0	4813C8461	ALL
RTU-16	RTU	4	208-230/3	CARRIER	50KC-A05A2ASAD0A0	3417C55305	ALL
RTU-17	RTU	4	208/3	LENNOX	LCH048HE4Y	5620M07152	ALL
RTU-18	RTU	4	208/3	LENNOX	LCH048HE4Y	5620M07154	ALL
RTU-19	RTU	10	208/3	LENNOX	LCH120H4M4Y	5620M04963	ALL
RTU-20	RTU	3	208/3	LENNOX	LCH038HE4Y	5620M07063	ALL
AHU-2	AHU	30	230/3	DAIKIN	CAH025GDAC	FB0U201200974	ALL
CU-2	ACCU	30	230/3	DAIKIN	RC5030YYYYY-F	FB0U210101046	ALL
AHU-5	AHU	20	230/3	DAIKIN	CAH017GDAC	FB0U201200975	ALL
CU-5	ACCU	20	230/3	DAIKIN	RC5020YYYYY-F	FB0U210101047	ALL
AHU-6	AHU	20	230/3	DAIKIN	CAH017GDAC	FB0U201200976	ALL
CU-6	ACCU	20	230/3	DAIKIN	RC5020YYYYY-F	FB0U210101048	ALL
AHU-8	AHU	30	230/3	CARRIER	40RUA30ASASAD0A0	1112U09443	ALL
CU-8	ACCU	30	230/3	CARRIER	38AFS030G4A10320	1212C44608	ALL
AHU-11	AHU	20	230/3	CARRIER	40RM-024-B511HC	3390U21032	ALL
CU-11	ACCU	17.5	230/3	CARRIER	38AKS024-521	3509G20064	ALL
FCU-MEETING	FCU	2	208/1	-	B-SMH24SB	-	ALL
CU-MEETING	ACCU	2	208/1	-	A-SMH24SB	-	ALL
FCU-IDF	FCU	5	208/1	Lennox	CBA27UHE-060-230-6-05	1620L20920	ALL
CU-IDF	ACCU	5	208/1	Lennox	ML14XC1-059-230-A03	1920L20304	ALL

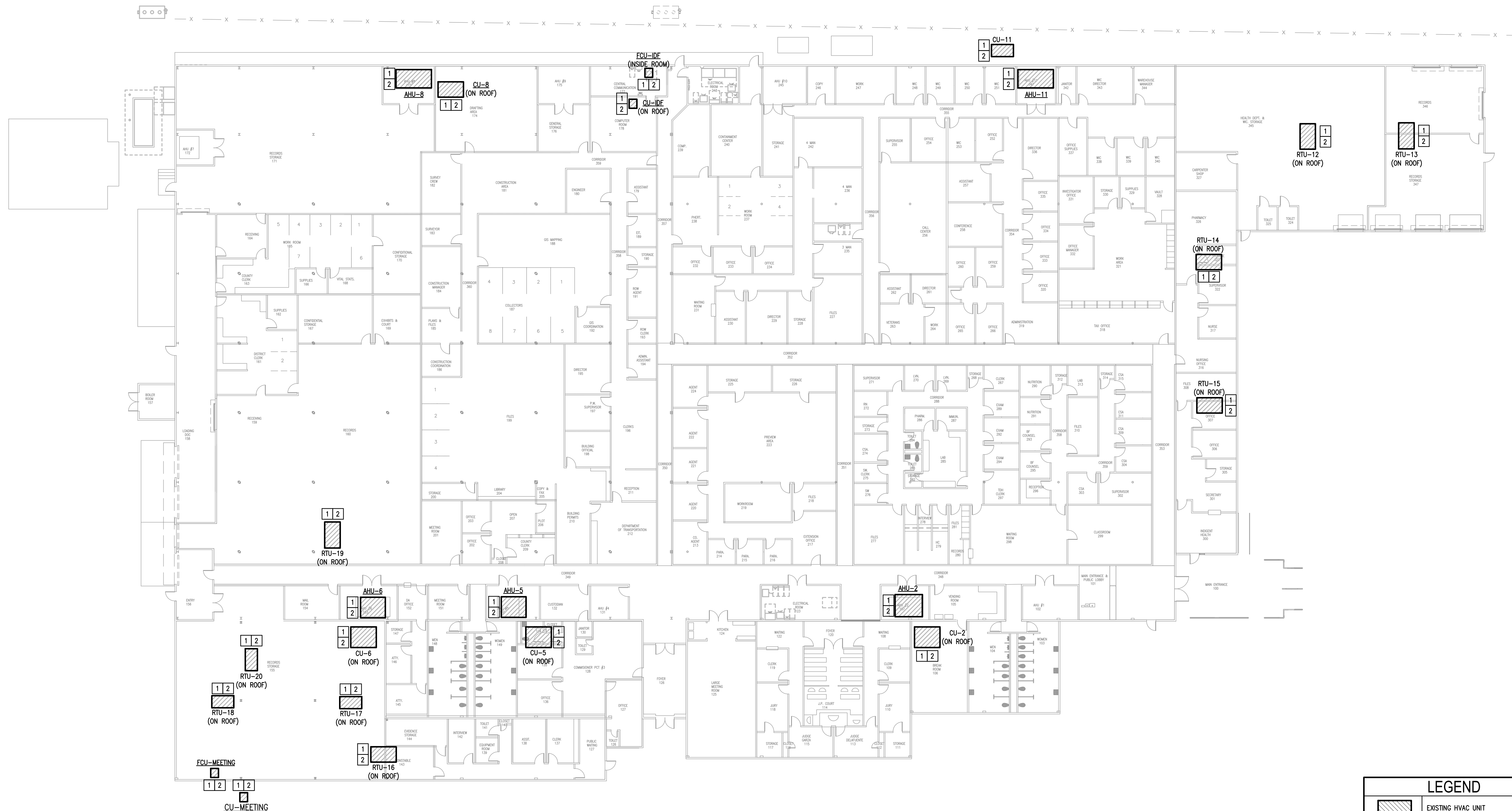
NOTES:
 1. EXISTING UNIT INFORMATION HAS BEEN COMPILED FOR REFERENCE PURPOSES TO PROVIDE PROPER TIME DELAY DEVICE.
 2. ANY DISCREPANCIES NEED TO BE REPORTED TO THE ENGINEER OF RECORD PRIOR TO ANY WORK BEING DONE FOR ASSOCIATED CHANGE.

GENERAL NOTES:

1. PROVIDE ELECTRO-MECHANICAL CONTROLS TO ADJUST START UP DELAYS ON EACH SYSTEM INDIVIDUALLY TO ENSURE CONDENSING UNITS AND PACKAGE UNITS START-UP STAGGERED AND IN ORDERLY FASHION DURING AND AFTER A POWER OUTAGE. DURING A POWER OUTAGE THE NEW GENERATOR WILL BE ENGAGED TO POWER THE ELECTRICAL PANELS SERVING THE AIR CONDITIONING EQUIPMENT. INTENT IS TO AVOID ALL SYSTEMS COMING BACK ON AT THE SAME TIME AND TO AVOID HAVING PROBLEMS WITH GENERATOR AT START-UP.
2. TEST ALL TIMER DELAYS FOR FUNCTIONALITY AND DOCUMENT SUCCESSFUL ACHIEVEMENT OF STAGGERING START-UPS OF EQUIPMENT AS SPECIFIED. SUBMIT A REPORT TO PROJECT'S ENGINEER. PERFORM STARTUP SERVICES TO DEMONSTRATE PROPER OPERATION OF INSTALLED DEVICES AND TRAIN OWNER'S MAINTENANCE PERSONNEL TO ADJUST, OPERATE AND MAINTAIN. PROVIDE A 2-YEAR WARRANTY ON ALL NEW COMPONENTS, DEVICES, AND SYSTEMS INSTALLED.
3. EXISTING BUILDING AUTOMATION SYSTEM IS JOHNSON CONTROLS. COORDINATE ALL ACTIVITIES THAT MAY BE REQUIRED FOR THE INSTALLATION OF THE TIMER DELAYS AND INCLUDE ALL COSTS IN THE BID.

KEYED NOTES:

1. PROVIDE "DELAY-ON-MAKE" ADJUSTABLE TIMER SWITCH AT EACH CONDENSING UNITS AND PACKAGED UNITS TO PREVENT SIMULTANEOUS START-UPS DURING AND AFTER A POWER OUTAGE. PROVIDE 15 SECONDS (ADJ.) START-UP DELAY IN BETWEEN START-UPS OF CONDENSING UNITS AND PACKAGED UNITS AFTER NORMAL OR EMERGENCY POWER IS REESTABLISHED. CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY WIRING, CONDUITS, DELAYS, RELAYS, CONTACTORS, ETC. TO FULLY ACHIEVE THIS SEQUENCE PROPERLY. COORDINATE WITH ELECTRICAL CONTRACTOR.
2. INSTALL "DELAY-ON-MAKE" ADJUSTABLE TIMER SWITCH IN SERIES WITH AC EQUIPMENT INTERNAL CONTROLS WIRING IN SUCH WAY THAT DELAY ON OPERATION BEGINS UPON APPLICATION OF INPUT POWER. THE EQUIPMENT SHALL BE ENERGIZED AT THE END OF THE DELAY PERIOD. JCI BAS SYSTEM MAY BE EQUIPPED WITH A UPS/BATTERY BACK-UP WHICH MAY CONTINUE TO POWER THE CONTROLS SIGNALS DURING A POWER OUTAGE. ENSURE THAT INPUT POWER TO THE TIMER SWITCH IS FROM A SOURCE THAT LOSES AND FEEDS POWER IN THE SAME MANNER AS THE AC EQUIPMENT AND IS INDEPENDENT FROM JCI BAS SIGNAL.



01 MECHANICAL PLAN
 SCALE: 1/8" = 1'-0"

LEGEND	
	EXISTING HVAC UNIT

NO. REVISION: BY:

 COPY NO:

 TEXAS

CAMERON COUNTY
835 EAST LEVEE & SAN BENITO ANNEX BUILDING
STANDBY POWER UPGRADES
 CAMERON COUNTY

1126 SOUTH COMMERCE ST.
 MARLINGEN, TX
 PHONE: 855-226-2455
 TEXAS REGISTERED
 ENGINEERING FIRM
 E-15598
 DATE: JUNE 23, 2023
 CHECKED BY: G.G.
 DRAWN BY: C.G.
 PROJECT NO.: 23v14
 CAD FILE:
 SHEET: **SM2.1**

GENERAL STRUCTURAL NOTES

THESE GENERAL NOTES SHALL APPLY UNLESS OTHERWISE SPECIFICALLY NOTED ON PLANS OR DETAILS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SHALL COORDINATE ALL STRUCTURAL PLANS AND DETAILS WITH ARCHITECTURAL & MECHANICAL DRAWINGS BEFORE STARTING WORK. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR CONTRACTOR MEANS AND METHODS OF CONSTRUCTION OR SITE SAFETY. DESIGN, CONSTRUCTION, WORKMANSHIP AND MATERIALS SHALL COMPLY WITH THE CONTROLLING PROVISIONS OF THE 2018 EDITION OF THE **INTERNATIONAL BUILDING CODE (IBC)**.

DESIGN CRITERIA

- BASIS FOR DESIGN AND CODE COMPLIANCE
 - GOVERNING BUILDING CODE.....IBC 2018 EDITION
- WIND DESIGN BASED ON THE GREATER OF:
 - ASCE 7-16 REQUIREMENTS
BASIC DESIGN WIND SPEED.....151 MPH (V_{sd}=117 MPH)
RISK CATEGORY.....III
WIND EXPOSURE CATEGORY.....B
INTERNAL PRESSURE COEFFICIENT (C_{gp})
RESTROOM BUILDING.....±0.18
K_{zt}.....1.0
K_d.....0.85
- GRAVITY DESIGN
 - DIESEL GENERATOR SET:
CAT C9 DIESEL GENERATOR SET/300EKW
DEAD LOAD.....51.6 KIPS

FOUNDATION DESIGN CRITERIA

- FOUNDATION DESIGN IS IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE, AND IS BASED ON ASSUMED GEOTECHNICAL PROPERTIES.
 - BEARING CAPACITY:
GRADE BEAMS & CONTINUOUS FOOTINGS (TOTAL LOAD)1.5 KSF
 - POTENTIAL VERTICAL RISE (PVR)1.0 INCH
- GROUNDWATER IS ASSUMED TO BE ENCOUNTERED AT 8'-0" BELOW EXISTING GRADE (MAY FLUCTUATE WITH SEASON). CONTRACTOR SHALL DETERMINE ACTUAL GROUNDWATER LEVELS JUST PRIOR TO CONSTRUCTION EXCAVATION ACTIVITIES.
- A GEOTECHNICAL ENGINEER OF RECORD SHALL BE RETAINED TO PERFORM TESTING AND INSPECTIONS DURING SITE PREPARATION AND PLACEMENT OF BUILDING PAD FILL AS REQUIRED BY SPECIFICATIONS AND GENERAL STRUCTURAL NOTES.

FOUNDATION NOTES

- REMOVE **AT LEAST 48 INCHES** OF THE EXISTING SITE SOIL, VEGETATION, TREE ROOTS, DEBRIS, ETC., FROM THE PROPOSED BUILDING AREA TO A DISTANCE OF 5'-0" OUTSIDE THE BUILDING AREA (EXTERIOR OF THE FOUNDATION, INCLUDING ATTACHED IMPROVEMENTS SUCH AS SIDE WALKS AND CANOPIES). DEPTH OF REMOVAL SHALL BE VERIFIED BY THE GEOTECHNICAL ENGINEER AT THE TIME OF CONSTRUCTION.
- AFTER TOP SOIL HAS BEEN REMOVED, THE SUBGRADE SHALL BE PROOF-ROLLED WITH APPROPRIATE CONSTRUCTION EQUIPMENT WEIGHING AT LEAST 15 TONS UNTIL THE GRADE OFFERS A RELATIVELY UNYIELDING SURFACE. SOFT SOIL AND YIELDING AREAS, AND AREAS CONTAINING ORGANIC MATTER AND/OR DEBRIS, SHALL BE OVER EXCAVATED AND REPLACED WITH COMPACTED SELECT FILL IN ACCORDANCE WITH THE REQUIREMENTS BELOW.
- PROOFROLLING OPERATIONS AND EXCAVATION/BACKFILL ACTIVITIES SHOULD BE PERFORMED DURING A PERIOD OF DRY WEATHER AND OBSERVED BY THE GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE TO DOCUMENT SUBGRADE CONDITIONS AND PREPARATION. IF SUBGRADE SOILS ARE ALLOWED TO BECOME WET OR SATURATED, REMOVAL AND REPLACEMENT OF SOFT SOILS OR CHEMICAL TREATMENT PROCEDURES SUCH AS LIME STABILIZATION SHALL BE PERFORMED AT THE CONTRACTOR'S EXPENSE. THE GEOTECHNICAL ENGINEER SHALL BE CONTACTED FOR ADDITIONAL RECOMMENDATIONS, IF REQUIRED.
- SCARIFY, MOISTURE CONDITION, AND COMPACT THE TOP 12" OF THE EXPOSED SUBGRADE TO 98% OF STANDARD PROCTOR MAXIMUM DRY DENSITY AND THE MOISTURE CONTENT SHALL BE MAINTAINED AT OPTIMUM MOISTURE CONTENT TO +4% OF OPTIMUM MOISTURE CONTENT, IN ACCORDANCE WITH TEST METHOD ASTM D-698. MOISTURE CONTENT SHALL BE AS NOTED IMMEDIATELY PRIOR TO PLACING SELECT FILL.
- RESTORE GRADE USING SELECT FILL. **MINIMUM OF 48 INCHES** OR AS REQUIRED TO PROVIDE THE SPECIFIED **FINISH FLOOR ELEVATION** WHICH IS GREATER, AND PROPER SITE DRAINAGE, CONTACTED IN ACCORDANCE WITH THE REQUIREMENTS BELOW. FINISH FLOOR ELEVATIONS SHALL BE VERIFIED WITH ARCHITECT AND CIVIL ENGINEER.
- SELECT FILL SHALL BE COMPACTED IN THE FIELD IN LIFTS NOT TO EXCEED 8" LOOSE MEASURE (6" COMPACTED LIFT) TO A MINIMUM OF 98% OF STANDARD PROCTOR MAXIMUM DRY DENSITY AND AT, +/-2% OF OPTIMUM MOISTURE CONTENT, AS EVALUATED BY ASTM D-698.
- SELECT FILL SHALL BE FREE OF ORGANIC OR OTHER DELETERIOUS MATERIALS, HAVE A MINIMUM OF 35% PASSING THE #200 SIEVE AND NO SOIL PARTICLES EXCEEDING 1.1/2", AND HAVE A PLASTICITY INDEX (PI) BETWEEN 7-17. IF BLENDED OF MIXED SOILS ARE INTENDED FOR USE, THE GEOTECHNICAL ENGINEER SHOULD BE CONTACTED TO PROVIDE ADDITIONAL RECOMMENDATIONS AND REQUIREMENTS.
- FOUNDATION CONCRETE SHALL NOT BE PLACED ON SELECT FILL SOILS THAT HAVE BEEN DISTURBED BY RAINFALL OR WATER SEEPAGE, IF BEARING SOILS ARE SOFTENED BY WATER INTRUSION, OR BY DESICCATION. THE UNSUITABLE SOILS SHALL BE REMOVED FROM THE FOUNDATION EXCAVATION AND BE REPLACED WITH PROPERLY COMPACTED SELECT FILL PRIOR TO PLACEMENT OF FOUNDATION CONCRETE. ALL SOIL REMOVAL AND REPLACEMENT COSTS, INCLUDING ASSOCIATED COSTS TO REMOVE AND REINSTALL REINFORCEMENT AND VAPOR BARRIER MATERIALS, SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR. DEPTH OF SOIL REMOVAL AND RECOMPACTION REQUIREMENTS SHALL BE COORDINATED WITH THE GEOTECHNICAL ENGINEER.
- SAMPLES OF PROPOSED SELECT FILL SHALL BE FURNISHED TO THE TESTING LABORATORY 7 DAYS PRIOR TO INSTALLATION TO PERMIT TIME FOR SPECIFICATION COMPLIANCE INSPECTION AND REVIEW BY THE GEOTECHNICAL ENGINEER.
- LABORATORY MOISTURE-DENSITY CURVES SHALL BE DEVELOPED FOR SUBGRADE AND FILL. PROCTOR CURVES AND FIELD DENSITY TESTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. A MINIMUM OF ONE (1) IN PLACE DENSITY TEST PER 1,000 SQUARE FEET OF SLAB AREA SHALL BE TAKEN ON EACH LIFT DURING PLACEMENT OF SELECT FILL. DENSITY REPORTS SHALL BE TRANSMITTED TO ENGINEER WITHIN 3 DAYS AFTER TESTS ARE MADE.
- GRAIN SIZE ANALYSIS AND ATTERBERG LIMITS TESTS SHALL BE PERFORMED DURING FILL PLACEMENT AT A RATE OF ONE TEST PER 2,000 CUBIC YARDS OF FILL BROUGHT TO THE SITE. SAMPLES FOR TEST SHALL BE TAKEN FROM JOBSITE MATERIALS.
- SITE SHALL BE GRADED SO THAT WATER DOES NOT POND WITHIN 10 FEET OF THE PERIMETER FOUNDATION BEAM DURING OR AFTER CONSTRUCTION. THE SLOPE OF THE GROUND SURFACE AWAY FROM THE STRUCTURE SHOULD BE A MINIMUM OF THREE (3%) PERCENT FOR A DISTANCE OF AT LEAST TEN (10') FEET. ELEVATION OF GROUND SURFACE ADJACENT TO THE FOUNDATION SHOULD BE AT LEAST 6 INCHES BELOW FINISH FLOOR.
- FINAL DRAINAGE IS VERY IMPORTANT TO THE PERFORMANCE OF THE FOUNDATION. LANDSCAPING, PLUMBING, AND DOWNSPOUT DRAINAGE ARE ALSO VERY IMPORTANT. IT IS VITAL THAT ALL ROOF DRAINAGE BE TRANSPORTED AWAY FROM BUILDINGS SO THAT NO AREAS OF WATER POND AROUND BUILDINGS, WHICH CAN RESULT IN SOIL VOLUME CHANGE UNDER THE FOUNDATION. PLUMBING LEAKS SHOULD BE REPAIRED AS SOON AS POSSIBLE IN ORDER TO MINIMIZE THE MAGNITUDE OF MOISTURE CHANGE UNDER THE SLAB. LARGE TREES AND SHRUBS SHOULD NOT BE PLANTED IN THE IMMEDIATE VICINITY OF THE STRUCTURE, SINCE THE ROOT SYSTEMS CAN CAUSE A SUBSTANTIAL REDUCTION IN SOIL VOLUME IN THE VICINITY OF THE TREE DURING DRY PERIODS. BUSHES AND TREES SHOULD BE PLANTED A REASONABLE DISTANCE AWAY FROM THE STRUCTURE SO THAT THEIR CANOPY OR "DRIP LINE" DOES NOT EXTEND BEYOND THE PERIMETER OF THE FOUNDATION. WATERING OF VEGETATION SHOULD BE PERFORMED IN A TIMELY AND CONTROLLED MANNER. PROLONGED WATERING SHOULD BE AVOIDED.

CONCRETE

- ALL CONCRETE WORK SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE SPECIFICATION, A.C.I. #301 AND BUILDING CODE REQUIREMENTS, A.C.I. #318, LATEST EDITION.
- ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, UNLESS OTHERWISE NOTED, MUST FOLLOW THE A.C.I. "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE", A.C.I. #315, LATEST EDITION.
- CONCRETE SHALL HAVE A MINIMUM COMPRESSION STRENGTH OF 3,000 PSI AT 28 DAYS.
- A MAXIMUM OF 25% FLYASH MAY BE USED AS A CEMENT SUBSTITUTE AND SHALL CONFORM TO ASTM C618, CLASS C. THE WATER/CEMENT RATIO SHALL NOT EXCEED 0.6 AND SLUMPS SHALL BE 5 INCHES (±1 INCH). AGGREGATE SHALL BE WELL-GRADED, 1" MAXIMUM FOR THE SLAB ON GRADE, 1" MAXIMUM FOR CAST-IN-PLACE BEAMS AND ABOVE GRADE SLABS. COARSE AGGREGATE SHALL MEET ASTM C33, GRADATION #57. A QUALIFIED TESTING LABORATORY SHALL BE RETAINED TO FURNISH MIX DESIGNS FOR ALL CLASSES OF CONCRETE. A SAMPLE OF FOUR CYLINDERS SHALL BE TAKEN NOT LESS THAN ONCE A DAY, NOR LESS THAN ONCE FOR EACH 100 YD3 OF CONCRETE. ONE CYLINDER SHALL BE TESTED AT 7 DAYS AND TWO AT 28 DAYS. THE FOURTH CYLINDER MAY BE DISPOSED OF AFTER 45 DAYS IF NOT USED.
- ADMIXTURES CONTAINING WATER SOLUBLE CHLORIDE IONS GREATER THAN 0.06% BY WEIGHT OF CEMENT SHALL NOT BE USED.
- REINFORCING BARS SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A-615, GRADE 60. #3 BARS MAY BE GRADE 40.
- STANDARD PROTECTIVE COVER OF REINFORCING BARS UNLESS OTHERWISE NOTED SHALL BE:
 - WHERE CAST AGAINST DIRT OR FILL 3 IN.
 - EXPOSED TO EARTH OR WEATHER 2 IN.
 - SLABS AND WALLS 1 IN.
 - OTHER 1-1/2 IN.
- ALL ACCESSORIES SHALL BE IN ACCORDANCE WITH THE A.C.I. "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE", A.C.I. #315, LATEST EDITION.
- SLAB MAT TO BE SUPPORTED BY MASONRY BRICK BATTS (MIN OF 1/2 BRICK) SPACED AT 4 FEET ON CENTER EACH WAY (MAX). BEAM CAGES SUPPORTED BY BATTS AT 4 FEET ON CENTER.
- VERTICAL CONSTRUCTION JOINTS IN FLOOR SHALL BE COORDINATED WITH STRUCTURAL ENGINEER PRIOR TO FORMING SLAB. CRACK CONTROL JOINTS SHALL BE PROVIDED AT LOCATIONS SHOWN ON THE PLANS. CONTROL JOINTS SHALL BE SAWCUT (IMMEDIATELY SUBSEQUENT TO FINISHING SLAB) WITH "SOFF-CUT" SYSTEM. JOINTS SHALL BE CLEANED AND FILLED WITH "SONOLASTIC SA" WITHIN TWO (2) DAYS AFTER SAWCUTTING. NO HORIZONTAL JOINTS WILL BE PERMITTED IN SLABS OR BEAMS UNLESS APPROVED BY THE ENGINEER.
- PROVIDE 2 TOP & BOTTOM CORNER BARS AT ALL DISCONTINUOUS GRADE BEAMS AND FOUNDATION CORNERS. CORNER BARS SHALL BE 4'-0" IN LENGTH (2'-0" LEGS). SIZE OF THE CORNER BARS SHALL MATCH THE SIZE OF THE GRADE BEAM REINFORCING AS SHOWN BY STRUCTURAL DRAWINGS.
- MAINTAIN A MINIMUM OF ONE AND ONE-HALF (1-1/2) TIMES THE MAXIMUM COARSE AGGREGATE SIZE BETWEEN ALL REINFORCING BARS (EXCEPT AT LAPS).
- BARS SCHEDULED OR DETAILED "CONT" SHALL BE LAPPED 40 BAR DIAMETERS (24 INCHES MINIMUM) UNLESS OTHERWISE NOTED.
- WHERE CONCRETE IS TO HAVE UNEXPOSED SURFACES, THE FORMS MAY BE CONSTRUCTED OF #2 LUMBER OR BETTER, WHERE SURFACES ARE EXPOSED, SUCH AS FOR FINISH PAINTING OR STUCCO DASH, THE FORMS SHALL BE COMMERCIAL STANDARD DOUGLAS FIR, MOISTURE-RESISTANT CONCRETE FORM PLYWOOD; MINIMUM 5-PLY AND AT LEAST 9/16" THICK, OR FORMS LINED WITH COMMERCIAL STANDARD DOUGLAS FIR, CONCRETE FORM EXTERIOR, 3-PLY, NOT LESS THAN 1/4" THICK. WHERE CONCRETE IS EXPOSED, A SMOOTH SURFACE IS REQUIRED, FREE FROM FINS, HONEYCOMB, FORM MARKS OR OTHER DEFECTS.
- EXPOSED SURFACES OF CONCRETE AT THE PERIMETER OF THE FOUNDATION SHALL BE FORMED WITH 2X10 #2 LUMBER OR BETTER. A SMOOTH SURFACE IS REQUIRED, FREE FROM FINS, HONEYCOMB, FORM MARKS OR OTHER DEFECTS.
- CONSTRUCT FORMS SO THAT JOINTS ARE LEAKPROOF. MAINTAIN FORMS SUFFICIENTLY RIGID TO PREVENT DEFORMATION UNDER LOAD.
- CONCRETE MAY BE PLACED WITH CHUTES UP TO 25' MAXIMUM. SLUMP SHALL NOT EXCEED 6" AT TRUCK DISCHARGE POINT.
- CONCRETE PLACED BY PUMPING SHALL MEET THE FOLLOWING REQUIREMENTS:
 - COARSE AGGREGATE SHALL BE GRADED FROM A MAXIMUM OF 1" DOWN
 - MAXIMUM ALLOWABLE INCREASE IN CEMENT FACTOR SHALL BE 1/2 SACK PER CUBIC YARD OVER NORMAL MIX DESIGN.
 - MAXIMUM WATER CEMENT RATIO SHALL BE 7-1/2 GALLONS PER SACK OF CEMENT. IF MORE WORKABILITY IS REQUIRED, AN ADMIXTURE MAY BE USED.
 - MAXIMUM WEIGHT RATIO OF FINE AGGREGATES TO COARSE AGGREGATES SHALL NOT EXCEED 2/3.
 - REFER TO A.C.I. #301, LATEST EDITION, SECTION 800, FOR OTHER PUMPING REQUIREMENTS.
 - IN NO CASE SHALL CONCRETE BE PUMPED THROUGH AN ALUMINUM TUBE.
 - SLUMP SHALL NOT EXCEED 6" AT TRUCK DISCHARGE POINT.
- FLOOR FINISH (TOLERANCES)
 - STEEL TROWEL FINISH 1/8" IN 10'
 - FLOAT FINISH 1/4" IN 10'
 - SCRATCH FINISH 1/2" IN 10'
- CONCRETE TO BE CURED IN ACCORDANCE WITH ACI RECOMMENDATIONS. PROPOSED METHOD OF CURING TO BE COORDINATED WITH ENGINEER PRIOR TO CONCRETE PLACEMENT.
- SHOP DRAWINGS SHALL BE PREPARED FOR ALL REINFORCING STEEL AND SUBMITTED FOR REVIEW BY ENGINEER. SUBMITTALS SHALL INCLUDE ELECTRONIC (PDF) COPIES OF EACH DRAWING. ENGINEERING DRAWINGS SHALL NOT BE REPRODUCED AND USED AS SHOP DRAWINGS.
- THE CONTRACTOR SHALL REVIEW AND ANNOTATE SHOP DRAWINGS BEFORE SUBMITTING THEM TO THE ARCHITECT/ENGINEER FOR REVIEW. THE CONTRACTOR SHALL ALLOW ARCHITECT/ENGINEER 10 WORKING DAYS FOR REVIEW OF SHOP DRAWINGS.
- ENGINEER TO BE NOTIFIED 48 HOURS PRIOR TO PLACEMENT OF FOUNDATION AND OF STRUCTURAL CONCRETE TO SCHEDULE REQUIRED OBSERVATIONS.
- INCLUDE IN BID AN ALLOWANCE FOR **1.0 TON** OF REINFORCING BARS TO BE USED AS DIRECTED IN FIELD FOR SPECIAL CONDITIONS AT A COST OF **\$2,000.00 PER TON** (LABOR FOR PLACING SAME TO BE INCLUDED). ANY UNUSED ALLOWANCE WILL BE CREDITED TO THE OWNER AT THE END OF THE PROJECT.

FASTENERS

- CAST-IN-PLACE AND POST-INSTALLED ANCHORS SHALL BE PER ANCHOR DIAMETER AND EMBEDMENT DEPTH NOTED ON THE DRAWINGS. POST-INSTALLED ANCHORS SHALL BE UTILIZED ONLY WHERE SPECIFIED. ALL ANCHORS SHALL BE HOT-DIPPED GALVANIZED PER ASTM A153
- ALL ANCHORS NOTED BELOW SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL CONTACT MANUFACTURER'S REPRESENTATIVE FOR THE INITIAL TRAINING AND INSTALLATION OF ANCHORS, AND FOR PRODUCT RELATED QUESTIONS AND AVAILABILITY.
- SPECIAL INSPECTIONS SHALL BE PROVIDED FOR ALL MECHANICAL AND ADHESIVE ANCHORS PER THE APPLICABLE EVALUATION REPORT NOTED BELOW. SPECIAL INSPECTIONS SHALL BE PERFORMED BY INDEPENDENT TESTING LABORATORY PERFORMING QA/QC SERVICES ON PROJECT.
- EXPANSION BOLTS (EB) IN CONCRETE/CMU SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. ACCEPTABLE PRODUCTS:
 - KWK BOLT III (ICC-ES ESR-2302) BY HILTI (CONCRETE)
 - KWK BOLT III (ICC-ES-ESR-1385) BY HILTI (MASONRY)
 - STRONG-BOLT 2 (ICC-ES ESR-3037) BY SIMPSON STRONG-TIE (CONCRETE)
 - WEDGE-ALL ANCHOR (ICC-ES ESR-1396) BY SIMPSON STRONG-TIE (MASONRY)
- HEAVY DUTY SLEEVE ANCHORS IN CONCRETE/CMU SHALL BE TESTED AND QUALIFIED OR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. EXPANSION BOLTS (EB) SHALL NOT BE SUBSTITUTED FOR SLEEVE ANCHORS WITHOUT PRIOR WRITTEN APPROVAL BY STRUCTURAL ENGINEER. ACCEPTABLE PRODUCTS:
 - HSL-3 (ICC-ES ESR-1545) BY HILTI (CONCRETE)
 - KWK HUS-EZ (ICC-ES ESR-3056) BY HILTI (MASONRY)
 - TITEN HD (ICC-ES ESR-2713) BY SIMPSON STRONG-TIE (CONCRETE)
 - TAPCON ANCHORS (ICC-ES ESR-1671) (MASONRY)
 - POWERS WEDGE BOLT (ICC-ES ESR-1678) (MASONRY)
- UNDERCUT ANCHORS IN CONCRETE SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. ACCEPTABLE PRODUCTS:
 - HDA (ICC-ES ESR-1546) BY HILTI (CONCRETE)
 - TORQ-CUT (ICC-ES ESR-2705) BY SIMPSON STRONG-TIE (CONCRETE)
- POWDER ACTUATED FASTENERS IN CONCRETE/CMU SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.2 AND ICC-ES AC193. ACCEPTABLE PRODUCTS:
 - X-U (ICC-ES ESR-2269) BY HILTI (CONCRETE/MASONRY)
 - POWDER ACTUATED FASTENERS (ICC-ES ESR-2138) BY SIMPSON STRONG TIE (CONCRETE/MASONRY)
- ADHESIVE ANCHORS IN CONCRETE/CMU SHALL BE TESTED AND QUALIFIED FOR USE IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308. ACCEPTABLE PRODUCTS:
 - HIT-RE 500-SD (ICC-ES ESR-2322) BY HILTI (CONCRETE)
 - HIT-HY 70 (ICC-ES ESR-1967) BY HILTI (MASONRY)
 - SET-XP (ICC-ES ESR-2508) BY SIMPSON STRONG-TIE (CONCRETE)
 - SET (ICC-ES ESR-1772) BY SIMPSON STRONG-TIE (MASONRY)
- J-BOLTS SHALL BE FABRICATED FROM ASTM A36/A307 ROD. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. EXPANSION BOLTS/SLEEVE ANCHORS SHALL NOT BE SUBSTITUTED FOR J-BOLTS WITHOUT PRIOR WRITTEN APPROVAL BY STRUCTURAL ENGINEER.
- HEADED ANCHOR RODS SHALL BE FABRICATED FROM ASTM F1554 MATERIAL, F_y=36 KSI
- SUBSTITUTION REQUESTS FOR PRODUCTS LISTED ABOVE SHALL BE SUBMITTED BY THE CONTRACTOR TO THE STRUCTURAL ENGINEER ALONG WITH CALCULATIONS THAT ARE PREPARED & SEALED BY A REGISTERED PROFESSIONAL ENGINEER. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING THE PERTINENT EQUIVALENT PERFORMANCE VALUES OF THE SPECIFIED PRODUCT USING THE APPROPRIATE DESIGN PROCEDURE AND/OR STANDARDS. SUBSTITUTED ANCHORS SHALL HAVE A VALID CURRENT EVALUATION (ICC-ES OR IAPMO-ES) REPORT.

SPECIAL INSPECTIONS

SPECIAL INSPECTIONS INDEPENDENT OF THE CONTRACTOR, THE ARCHITECT, OR THE ENGINEER, SHALL BE PROVIDED BY A SPECIAL INSPECTOR EMPLOYED BY THE OWNER ACCORDING TO CHAPTER 17 OF THE IBC 2012. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS. THE SPECIAL INSPECTOR SHALL SEND WRITTEN REPORTS TO THE OWNER, THE ARCHITECT, THE ENGINEER AND THE CONTRACTOR. THE REPORTS SHALL INDICATE IF WORK INSPECTED WAS DONE IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF THE DISCREPANCIES ARE NOT CORRECTED, THE SPECIAL INSPECTOR SHALL BRING THE DISCREPANCIES TO THE ATTENTION OF THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE PRIOR TO THE COMPLETION OF THAT PHASE OF THE WORK. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING THAT THE SPECIAL INSPECTION WORK WAS, TO THE BEST OF THEIR KNOWLEDGE, IN OR NOT IN CONFORMANCE WITH THE DRAWINGS, SPECIFICATIONS AND APPLICABLE WORKMANSHIP PROVISIONS OF THE IBC 2018.

CONTINUOUS OR PERIODIC SPECIAL INSPECTION IS REQUIRED FOR THE FOLLOWING WORK:

REQUIRED VERIFICATION AND INSPECTION OF SOILS

VERIFICATION AND INSPECTION TASK	CONTINUOUS DURING TASK LISTED	PERIODICALLY DURING TASK LISTED
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		X
PERFORM CLASSIFICATION AND TESTING OF SELECT FILL MATERIALS		X
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF SELECT FILL	X	
PRIOR TO PLACEMENT OF SELECT FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY		X

REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC
INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT		X
INSPECT BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE	X	
VERIFY USE OF REQUIRED DESIGN MIX		X
PERFORM SLUMP AND AIR CONTENT TEST, AND DETERMINE THE TEMPERATURE OF THE CONCRETE AT THE TIME OF SAMPLING FRESH CONCRETE FOR MAKING SPECIMENS FOR STRENGTH TESTS PER ACI 318	X	
INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X	
INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES		X
INSPECTION OF PRESTRESSED CONCRETE APPLICATION OF PRESTRESSING FORCES	X	
VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS		X
ERECTION OF PRECAST CONCRETE MEMBERS		X
INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED		X

REQUIRED VERIFICATION AND INSPECTION OF ANCHORS

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC
CAST-IN-PLACE, POST-INSTALLED, MECHANICAL AND EPOXY SET ANCHORS:		FREQUENCY OF INSPECTION SHALL BE IN ACCORDANCE WITH THE CURRENT ICC-ES EVALUATION REPORT, OR PER THE SPECIAL INSPECTION REQUIREMENTS OF THE ANCHOR SUBSTRATE WHICHEVER IS MORE STRINGENT
AS APPLICABLE, THE INSPECTION PROGRAM SHALL VERIFY THE ANCHOR TYPE, EMBEDMENT, TIGHTENING TORQUE, DIMENSIONS, HOLE DEPTH & DIAMETER AND CLEANOUT, EPOXY MIXING AND PLACEMENT PROCEDURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND THE CURRENT ICC-ES EVALUATION REPORT		

NO: REVISION: BY:

COPY NO:



TEXAS

CAMERON COUNTY
835 EAST LEVEE & SAN BENITO ANNEX BUILDING
STANDBY POWER UPGRADES
CAMERON COUNTY



1128 SOUTH COMMERCE ST.
MARIEN, TX
PHONE: 956-206-2435
TEXAS REGISTERED
ENGINEERING FIRM
E-15098

DATE: MAY 25, 2023

CHECKED BY: A.V

DRAWN BY: J.L.R

PROJECT NO.: 1178-34

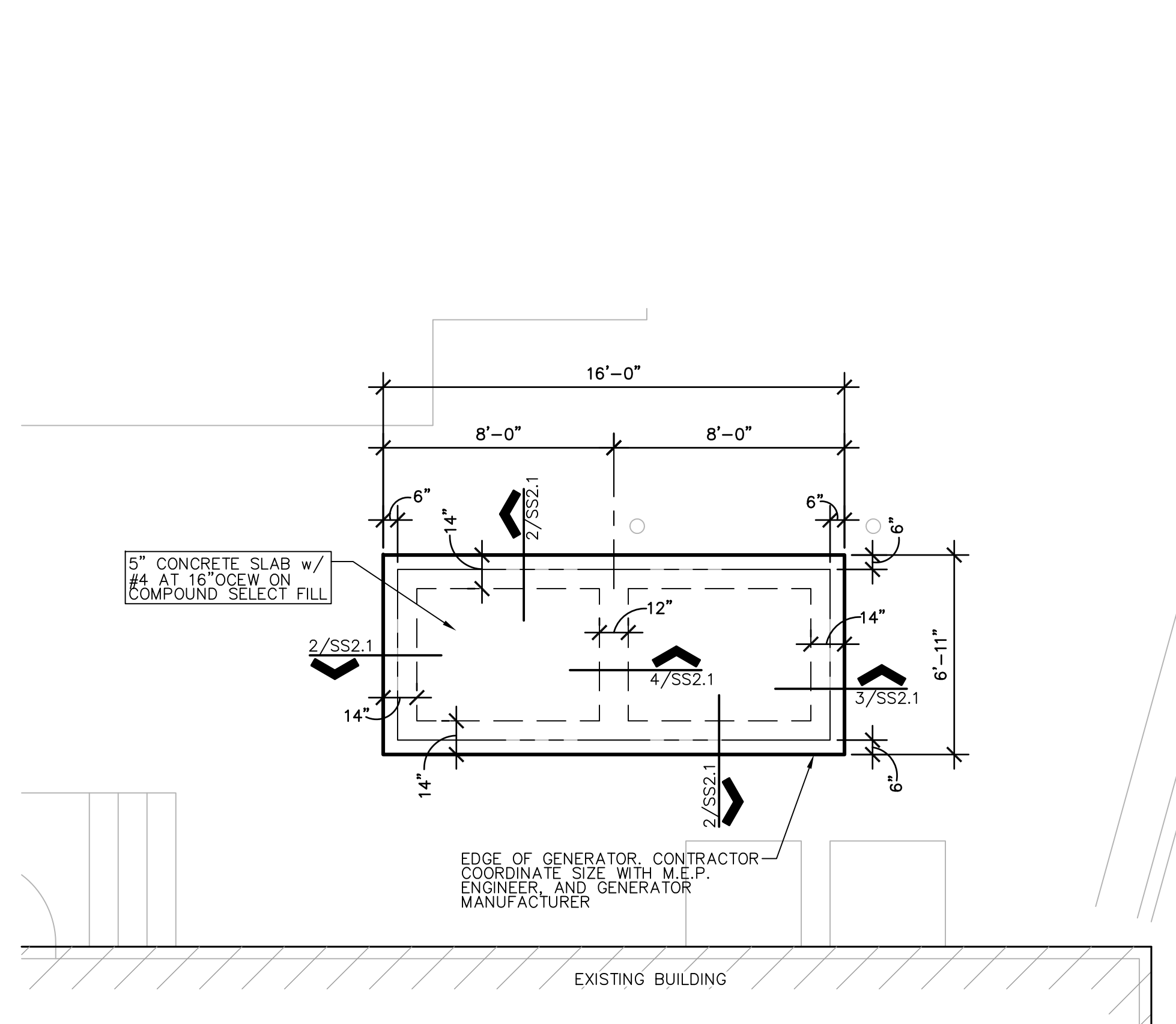
CAD FILE:

SHEET:

SS1.1



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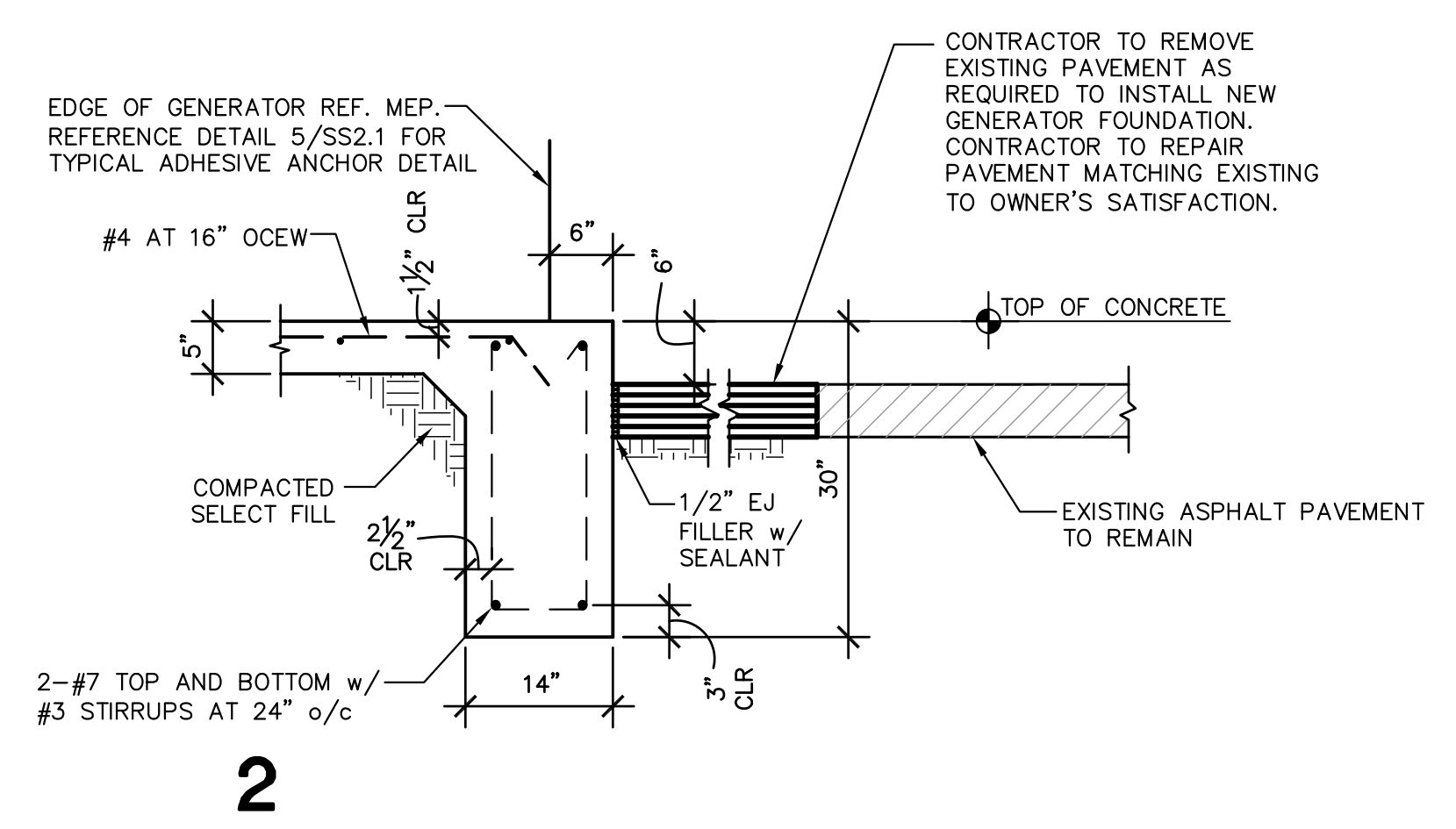


1 GENERATOR FOUNDATION PLAN

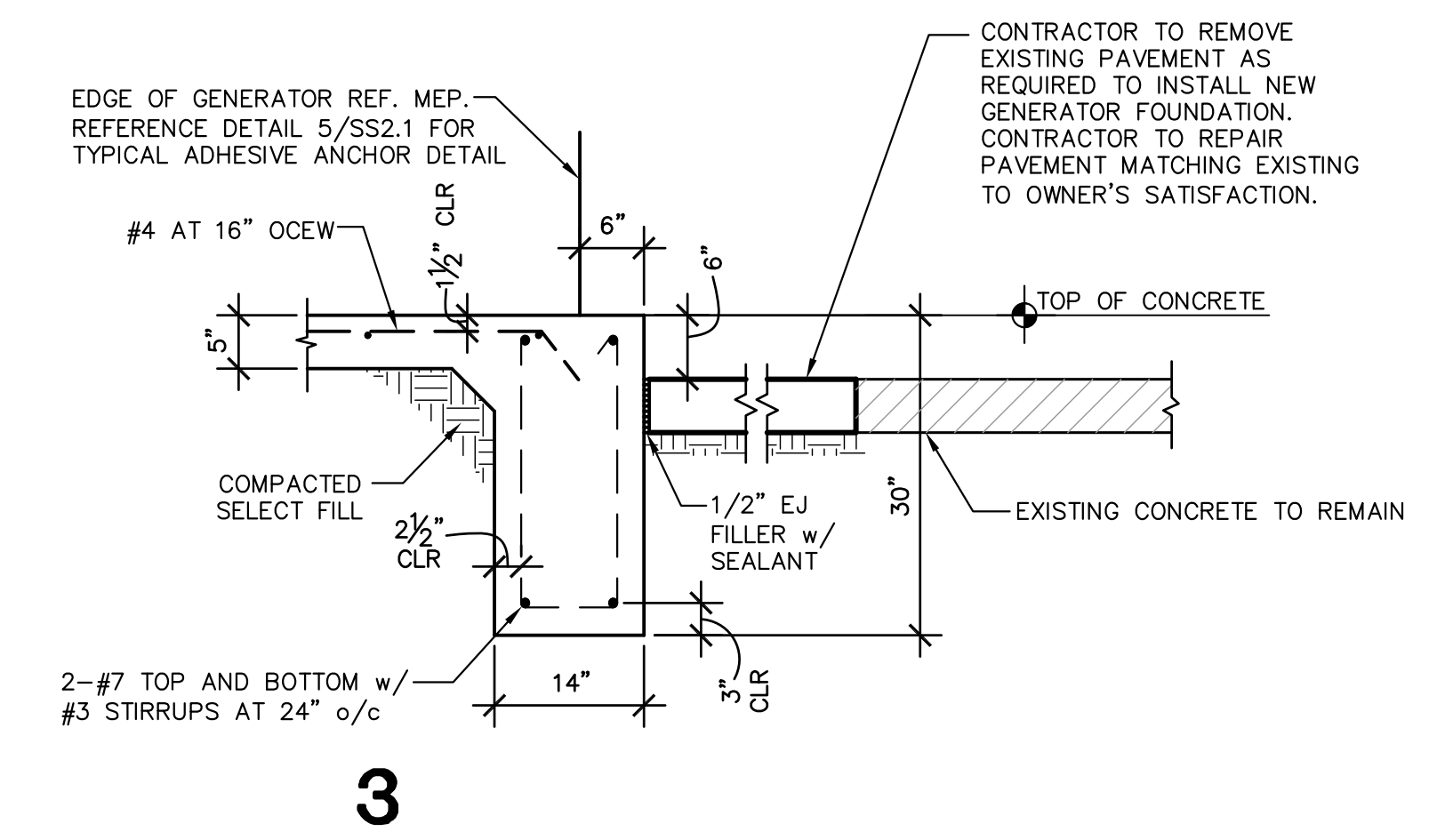
1/4" = 1'-0"



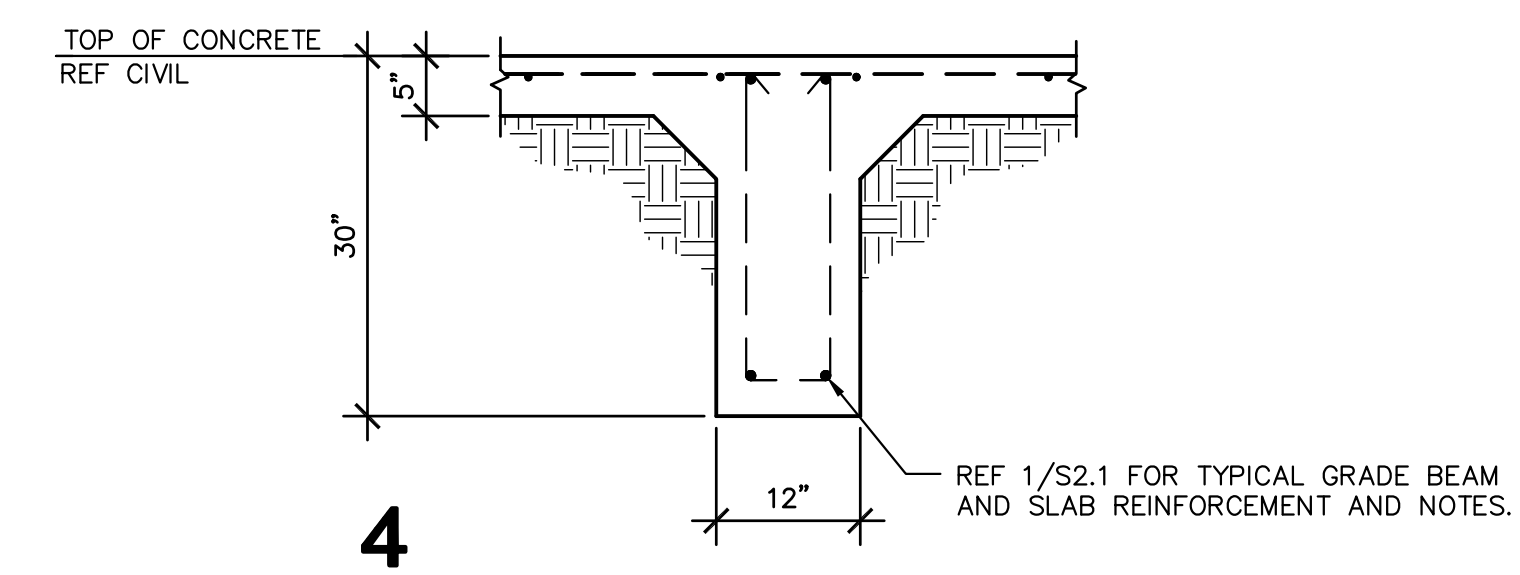
- NOTES:
1. COORDINATE FOUNDATION LOCATION AND ORIENTATION WITH MEP SITE PLAN.
 2. COORDINATE AND VERIFY SIZE OF GENERATOR WITH M.E.P. ENGINEER AND GENERATOR MANUFACTURER PRIOR TO PLACING FOUNDATION.



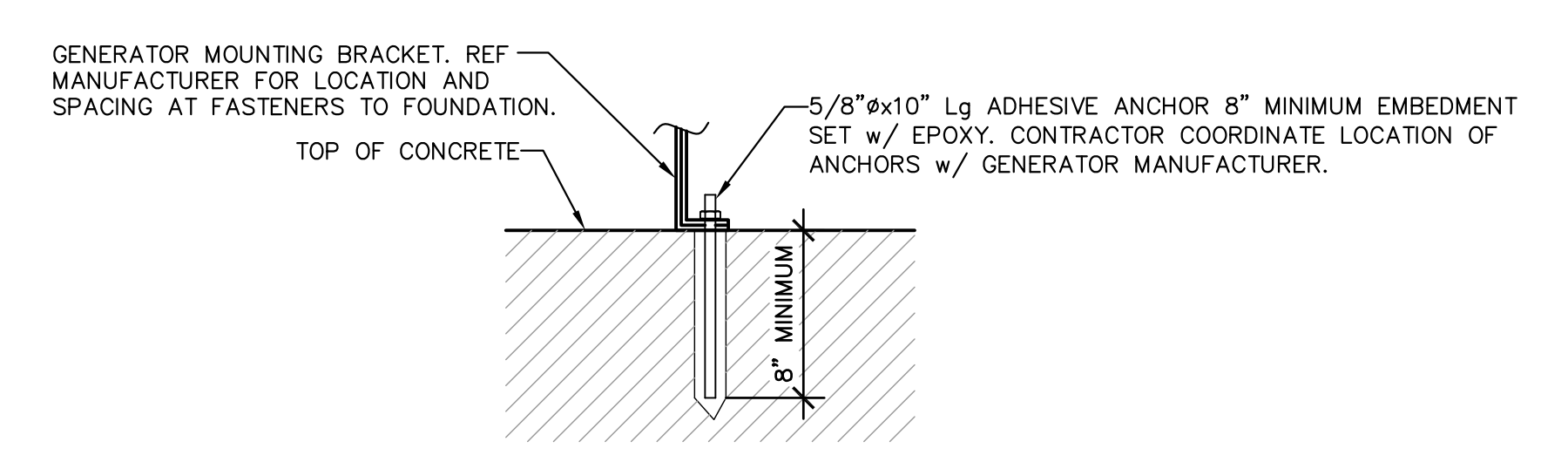
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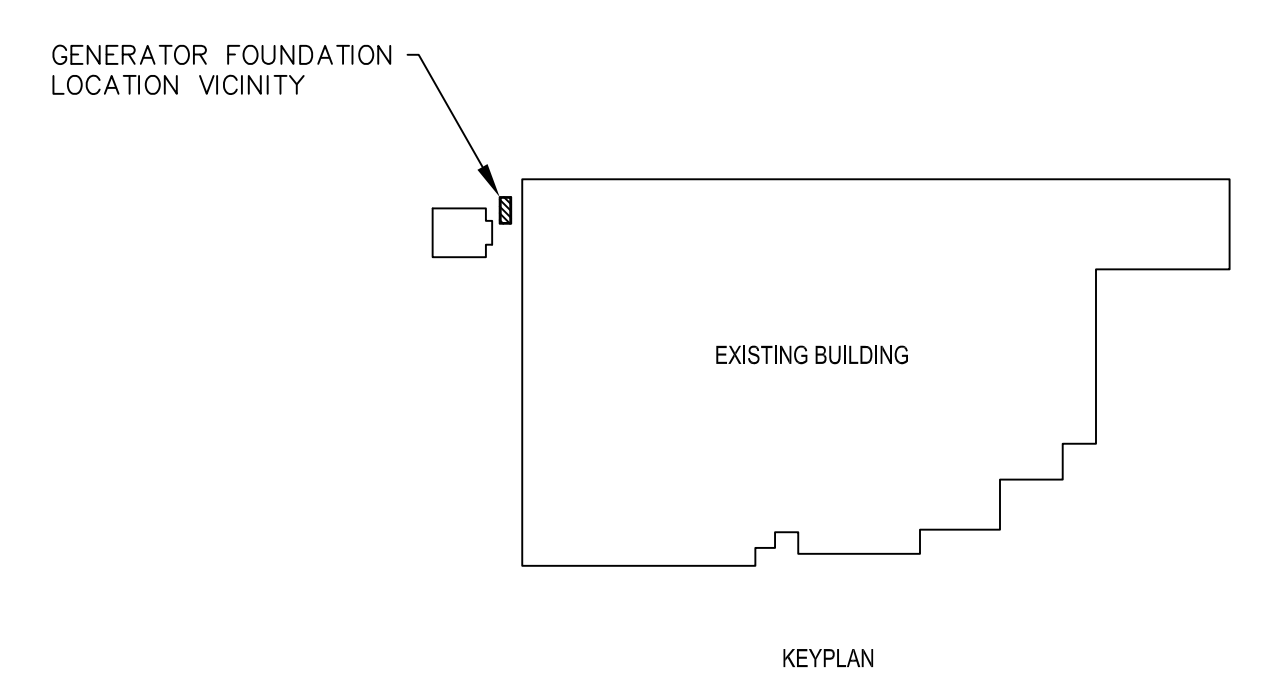
3



4



5 TYPICAL ADHESIVE DETAIL



KEYPLAN