

U.S. DEPARTMENT OF JUSTICE FEDERAL BUREAU OF PRISONS
REPLACEMENT GENERATORS LOW FACILITY
FEDERAL CORRECTIONAL COMPLEX, FORREST CITY, ARKANSAS



APPLICABLE CODES		PROJECT ADDRESS	DOCUMENT PACKAGES	CONSTRUCTION DOCUMENTS, 100%
BUILDING	2012 INTERNATIONAL BUILDING CODE	1400 DALE BUMPERS ROAD FORREST CITY, AR 72335		
PLUMBING	2012 INTERNATIONAL PLUMBING CODE			
MECHANICAL	2012 INTERNATIONAL MECHANICAL CODE			
ELECTRICAL	2012 NATIONAL ELECTRICAL CODE			
FIRE	NFPA 1-300			
ENERGY	2012 INTERNATIONAL ENERGY CONSERVATION CODE			
FEDERAL	EXECUTIVE ORDER 12699 – SEISMIC SAFETY OF FEDERAL AND FEDERALLY ASSISTED NEW BUILDING CONSTRUCTION			
DISABILITY	THE ARCHITECTURAL BARRIERS ACT 1968 & AMENDMENTS			

SHEET INDEX		SHEET Issue Date
01 - GENERAL (G)		
G00-00	COVER SHEET	05/12/17
02 CIVIL		
VF101	EXISTING CONDITIONS SURVEY	05/12/17
CS101	OVERALL SITE PLAN	05/12/17
CS102	DETAILED SITE PLAN	05/12/17
03 ARCHITECTURAL		
04 STRUCTURAL		
S101	STRUCTURAL GENERAL NOTES, PLAN AND DETAILS	05/12/17
05 MECHANICAL		
M001	MECHANICAL COVER SHEET	05/12/17
M101	MECHANICAL PLAN	05/12/17
M201	MECHANICAL GAS PIPING PLAN	05/12/17
M301	MECHANICAL DETAILS & SCHEDULES	05/12/17
07 ELECTRICAL		
E001	ELECTRICAL COVER SHEET	05/12/17
ED101	PARTIAL SWITCH DIST. & GENERATOR ROOMS "LOW PRISON" FLOOR PLAN - ELECTRICAL DEMOLITION	05/12/17
ED201	PARTIAL ONE-LINE DIAGRAM "LOW PRISON" - ELECTRICAL DEMOLITION	05/12/17
E100	PARTIAL SITE PLAN - ELECTRICAL	05/12/17
E101	PARTIAL SWITCH DISTRIBUTION AND GENERATOR ENCLOSURES "LOW PRISON" - ELECTRICAL	05/12/17
E102	PARTIAL ENLARGED CENTRAL PLANT (MEDIUM PRISON) - ELECTRICAL	05/12/17
E201	PARTIAL ONE-LINE DIAGRAM & RISER DIAGRAM "LOW PRISON" - ELECTRICAL NEW WORK	05/12/17
E301	SWITCH DISTRIBUTION AND GENERATOR ENCLOSURES "LOW PRISON" FLOOR PLAN - POWER & CONTROLS	05/12/17
E401	ELECTRICAL DETAILS	05/12/17
E402	GENERATOR LAYOUT, ELECTRICAL PANEL SCHEDULES, RISER DIAGRAM & DETAILS	05/12/17
E403	DOUBLE ENDED UNIT SUBSTATION SCHEDULE & DETAILS	05/12/17
E701	MEDIUM ONE-LINE DIAGRAM - REFERENCE	

ADDENDUM NO. 2

REPLACE GENERATORS
FEDERAL CORRECTIONAL COMPLEX
1400 DALE BUMPERS ROAD
FORREST CITY, ARKANSAS 72335



PROJECT #: 05081.06

SHEET TITLE:
COVER SHEET

SHEET #:
G00-00

G00-00

PROJECT TEAM		SHEET TITLE:

						<p>STRUCTURAL</p> <p>L.A. FUESS PARTNERS, INC.</p> <p>3333 Lee Parkway, Suite 300 Dallas, TX 75219 T: 214.871.7010 CONTACT: Dan Velte email: DVelte@lafp.com</p>	<p>CIVIL</p> <p>MATKINHOOVER</p> <p>8 Spencer Rd Ste 100 Boerne, TX 78006 T: 830.249.0600 F: 830.249.0099 CONTACT: Dean Keller email: dkeller@matkinhooover.com</p>	<p>ARCHITECT</p> <p>-</p> <p>-</p>	<p>M E P</p> <p>B&H ENGINEERS INC.</p> <p>511 E John Carpenter Fwy Suite 210 Irving, TX 75062 T: 214.496.1670 CONTACT: James Barron email: jbarron@bandhengineers.com</p>	<p>SHEET TITLE: COVER SHEET</p> <p>SHEET #: G00-00</p>
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NOTES WORK PERFORMED ON AUGUST 29, 2016

1. ONLY APPROVED UTILITY HOLE LOCATIONS. HOUSTEATY HAS BEEN MADE AS PART OF THIS SURVEY TO SHOW THE EXISTENCE, SIZE, DEPTH, COMPOSITION, OR LOCATION OF ANY UNDERGROUND UTILITY. UNDERGROUND UTILITIES ARE BASED ON FIELD LOCATIONS AND INFORMATION PROVIDED BY THE UTILITY OWNERS. THE SURVEYOR ASSUMES NO LIABILITY FOR INFORMATION REGARDING UNDERGROUND UTILITIES PLEASE CONTACT THE APPROPRIATE AGENCY.

2. SITE CONTACT MUST BE VERIFIED ON THE JOB AND THE SURVEYOR MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE THE SURVEY BEGINS.

3. CONTRACTOR SHALL IMMEDIATELY NOTIFY SURVEYOR OF ANY QUESTIONS THAT MAY ARISE CONCERNING THE INTENT, SCOPE, OR LIMITS OF THE SURVEY.

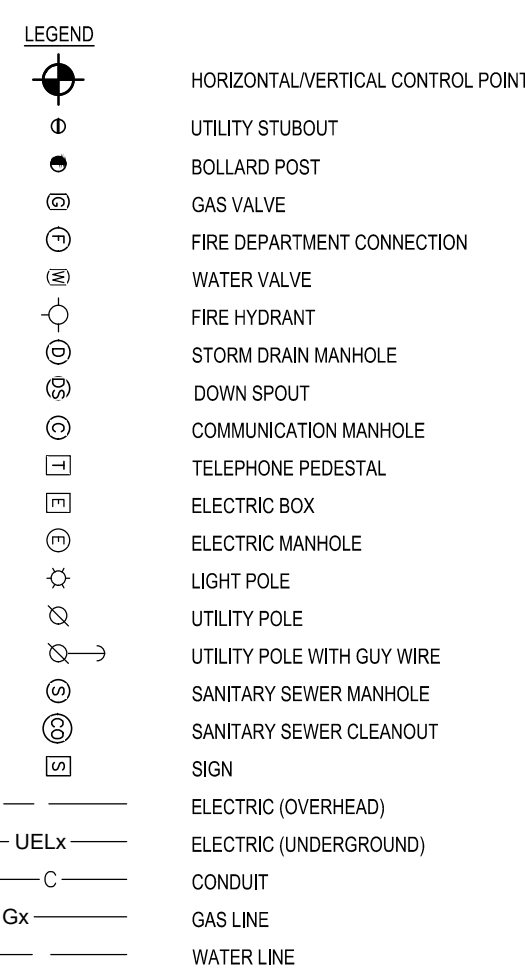
4. THE SURVEYOR ASSUMES NO LIABILITY FOR THE PLACEMENT OF THESE POINTS ON THE GROUND BY THE OTHER PARTY.

5. LIMIT CONTACT, HAS ESTABLISHED LONG THE TRIMBLE, IRI NETWORK, MAGNETIC, AND/OR ANTI-STATIC PLANE COORDINATE SYSTEM.

6. THIS SURVEY DOES NOT CONSTITUTE A BOUNDARY SURVEY AND SHALL NOT BE NOTIFIED OF ANY DISCREPANCY. FOR PURPOSES OF THIS SURVEY, THE SURVEYOR SHALL BE NOTIFIED OF ANY DISCREPANCY.

7. VERTICAL DATUM: NAVD 83

SITE CONTROL				
POINT NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
6231	235914.026	1671934.069	224.88'	1/2" IRON ROD SET WITH A BLUE CAP
6232	238371.472	1672123.576	235.87'	1/2" IRON ROD SET WITH A BLUE CAP



GENERAL UTILITY LOCATION NOTES:

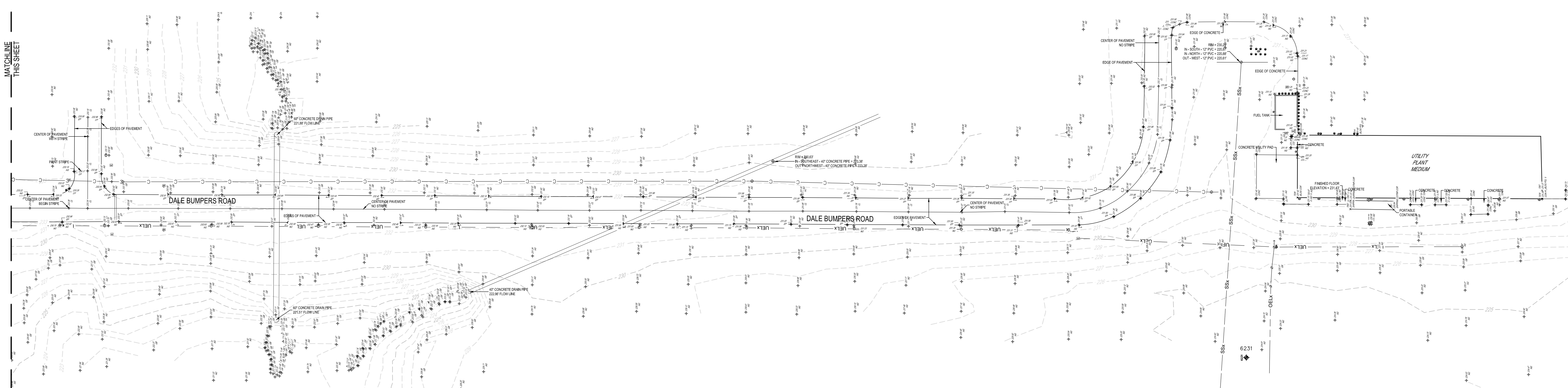
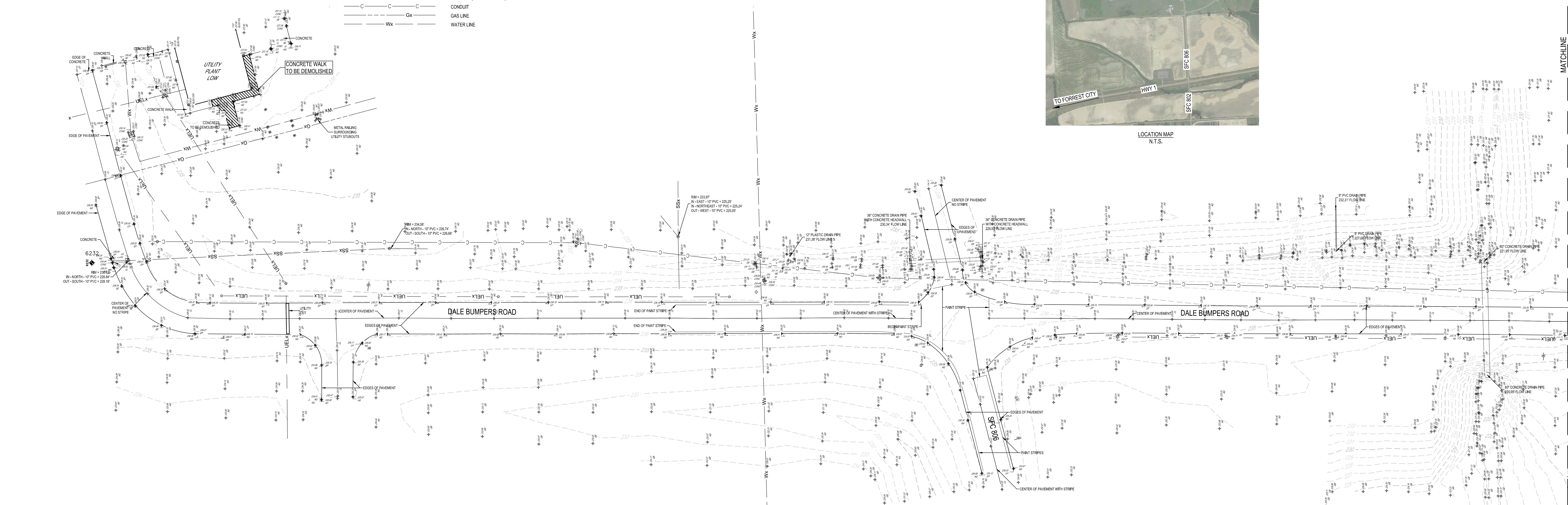
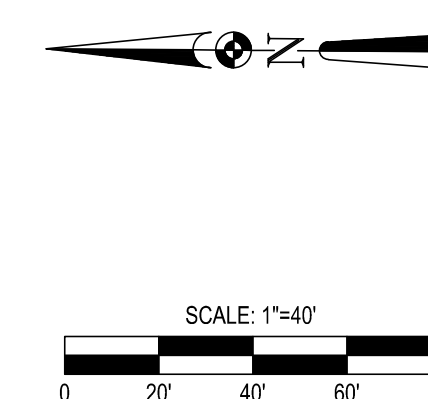
TYPICAL QUALITY LEVEL OF THE UTILITY INFORMATION SHOWN ON THESE PLANS IS SHOWN IN THE TABLE BELOW. SPECIFIC NOTES ON THE PLANS INDICATE LOCATIONS WHERE THE UTILITY INFORMATION SHOWN IS KNOWN TO FALL SHORT OF OR EXCEED THE STATED QUALITY LEVEL.

STORM DRAINAGE MAINS
SANITARY SEWER MAINS
WATER DISTRIBUTION MAINS
ABANDONED MAINS
NATURAL GAS MAINS
OVERHEAD ELECTRIC LINES
UNDERGROUND CATV LINES
UNDERGROUND TELECOMMUNICATION LINES
ALL UNDERGROUND UTILITY SERVICE LINES

QL D
QL D
QL D
QL D
QL D
QL D
QL D
QL D
QL D



LOCATION MAP
N.T.S.



○	ISSUES	
1	05.12.2017	ISSUE FOR CONSTRUCTION
2		
3		
4		
5		
△	REVISIONS	



FEDERAL CORRECTION
INSTITUTION
U.S. DEPARTMENT OF
JUSTICE BUREAU OF
PRISONS
SOUTH CENTRAL REGION
FACILITIES SECTION

PROJECT #: 05081.06

SHEET TITLE:
EXISTING CONDITIONS
SURVEY

SHEET #:

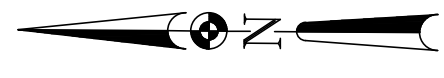
VF101

MATKINHOOVER

P.O. BOX 54
8 SPENCER ROAD SUITE 100
BOERNE, TEXAS 78006
OFFICE: 830.249.0600 FAX: 830.249.0099
TEXAS REGISTERED ENGINEERING FIRM F-004512
TEXAS REGISTERED SURVEYING FIRM F-10024000

**ENGINEERING
& SURVEYING**

CIVIL ENGINEERS SURVEYORS LAND PLANNERS CONSTRUCTION MANAGERS CONSULTANTS



SCALE: 1"=40'
0 20' 40' 60' 80'

NOTE:
CONTRACTOR SHALL HYDROMULCH OR WOOD MULCH ALL DISTURBED AREAS INCLUDING RIGHT-OF-WAY, STEEP SLOPES AND DRAINAGE DITCHES.

TRENCH EXCAVATION SAFETY PROTECTION

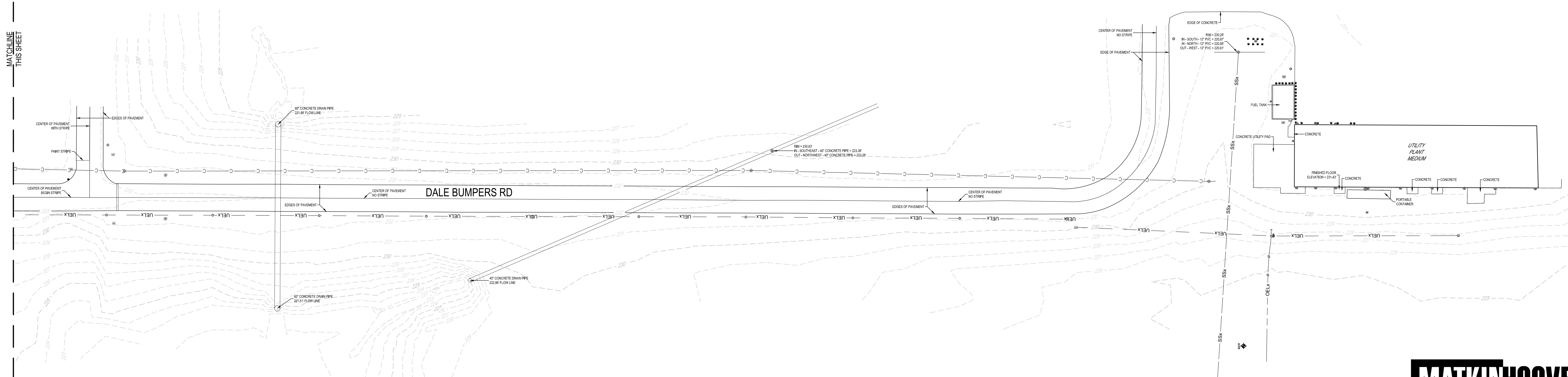
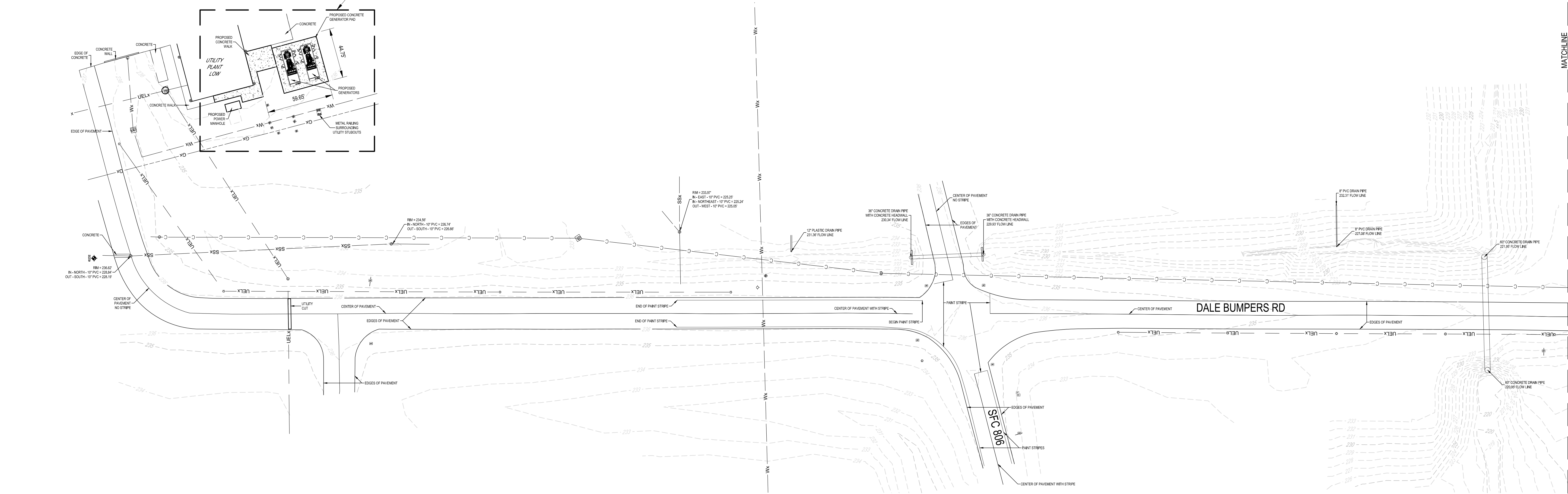
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS COVERING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

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ALL UNDERGROUND UTILITY SERVICE LINES	QL D

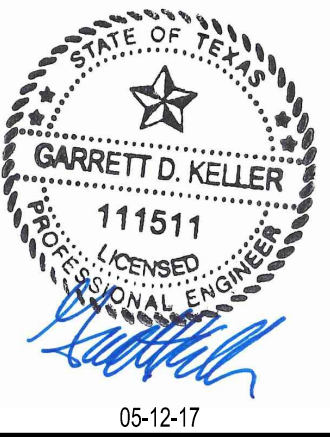
SEE SHEET CS102
FOR DETAILED SITE
PLAN



MATKINHOOVER
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CIVIL ENGINEERS SURVEYORS LAND PLANNERS CONSTRUCTION MANAGERS CONSULTANTS

ISSUES	
1	05.12.2017 ISSUE FOR CONSTRUCTION
2	
3	
4	
5	
REVISIONS	



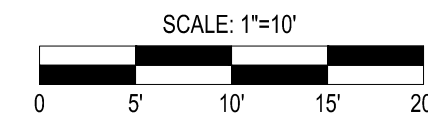
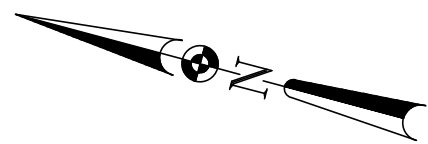
FEDERAL CORRECTION
INSTITUTION
U.S. DEPARTMENT OF
JUSTICE BUREAU OF
PRISONS
SOUTH CENTRAL REGION
FACILITIES SECTION

PROJECT #: 05081.06

SHEET TITLE:
OVERALL SITE PLAN

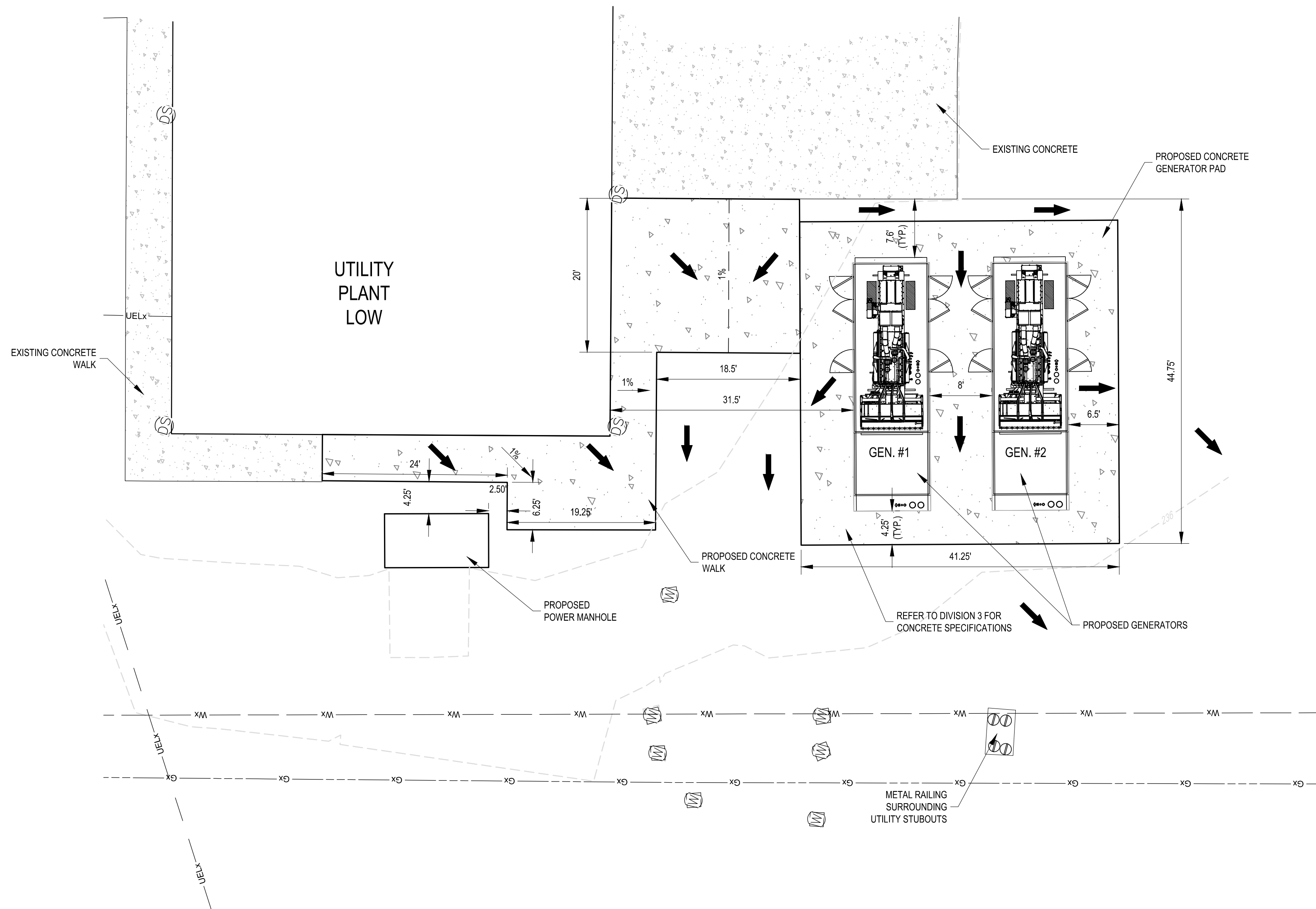
SHEET #:

CS101



LEGEND

EXISTING CONCRETE WALK	
PROPOSED CHAIN LINK FENCE	
FLOW ARROW	



TRENCH EXCAVATION SAFETY PROTECTION

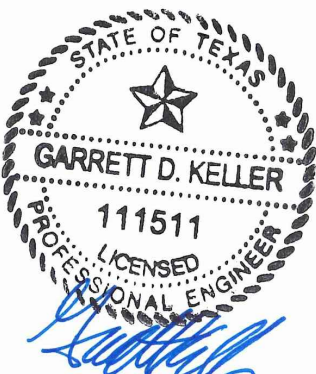
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FEDERAL CORRECTION
INSTITUTION
U.S. DEPARTMENT OF
JUSTICE BUREAU OF
PRISONS
SOUTH CENTRAL REGION
FACILITIES SECTION

PROJECT #: 05081.06

SHEET TITLE:
DETAILED SITE PLAN

SHEET #:

CS102

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GENERAL NOTES

SECTION 1 - GENERAL INFORMATION AND DESIGN CRITERIA

SECTION 1.1 - DOCUMENTS

- 1.1.1 Structural Drawings are not stand-alone documents. They are augmented by technical specifications and must be coordinated with Civil and M/E/P/HVAC documents.
- 1.1.2 General Notes and Typical Details apply generally throughout the project wherever conditions similar to those depicted exist and are not necessarily referenced specifically in the documents.

- 1.1.3 Structural documents are protected by U.S.A. Copyright Laws, and shall not be used for any purpose other than construction of the building described in the Architectural documents and at the geographic location shown. The structural design described in these documents is not valid for any other purpose, use or location.

- 1.1.4 The Geotechnical Report referenced herein is not part of the Structural Documents, however, a copy should be obtained for reference during installation of foundations and upgrade preparation.

COORDINATION

- 1.1.5 Verify weights, location and details of structurally supported mechanical equipment prior to construction of the supporting structure. Report deviations from assumed conditions to the Engineer prior to fabricating materials.

- 1.1.6 Do not scale plans, details and sections for quantity, length or fit of materials.

REFERENCE ELEVATIONS

SECTION 1.2 - CODES AND STANDARDS

- 1.2.1 Building Code of jurisdiction : 2015 IBC
- 1.2.2 Structural Concrete Code - American Concrete Institute (ACI) 318 (latest edition)

SPECIAL INSPECTIONS

- 1.2.3 See Technical Specifications for materials testing and inspection requirements.

SECTION 1.3 - DESIGN CRITERIA

- 1.3.1 Live Loads
Generator Pad 250 psf
- 1.3.2 Seismic Design Parameters
Site Class D
Seismic Design Category D
Seismic Importance Factor 1.00
Seismic Spectral Accelerations
Ss .952 g
S1 .342 g
Seismic Design Spectral Accelerations
Sds .710 g
Sd1 .391 g
- 1.3.3 Ground Snow Load (Pg) 10 psf
- 1.3.4 Frost Depth 12 inches
- 1.3.5 Basis of Design for Generator Equipment is 15KW 1500 kW genset at 60,000 pounds each operating weight. Two generators are planned for the pad.

SECTION 2 - FOUNDATIONS AND RELATED EARTHWORK

GEOTECHNICAL REPORT

- 2.1 Design of foundations and structural components in contact with soil is based on the recommendations given in the following:

Report by : Terracon Consultants, Inc.
Date of Report : January 10, 2017
Report Number : A8165038

- 2.2 A copy of the above-referenced project geotechnical report shall be made available to the foundation contractor. Contractor shall refer to the soil report for subsol conditions that may be encountered in the installation of Foundations, and other information relevant to foundations and site preparation.

- 2.3 FOOTING
Allowable Bearing Pressure : 500 psf

- 2.4 All open foundations shall be inspected by a qualified special inspector and approved by the Contractor's licensed geotechnical engineer prior to placing concrete.

- 2.5 Refer to Specification 31 23 03 Footing Pad Preparation for earthwork requirements.

SECTION 3 - STRUCTURAL CONCRETE

SECTION 3.1 - CONCRETE FORMWORK

- 3.1.1 Provide Class C finish unless noted otherwise.

SECTION 3.2 - STEEL REINFORCING

STEEL REINFORCING

- 3.2.1 All bars shall be deformed in accordance with ASTM A615.

- 3.2.2 Strength of bars shall be Grade 60 U.N.O.

- 3.2.3 LAPPED SPICE LENGTHS
Lap reinforcing as follows, unless noted or detailed otherwise:
Slab on Grade Reinforcing 30 bar diameters

- 3.2.4 CONCRETE COVER TO REINFORCING
Clearance from face of concrete to face of reinforcing:
Generator Pad 3" bottom, 2" top, 2" sides

SECTION 3.3 - CONCRETE MIX DESIGNS

- 3.3.1 Concrete Mix Schedule:
a) 'HRC' refers to hardrock concrete having air dry unit weight of approximately 145 PCF.
b) Where the ratio is shown, it shall be adhered to regardless of strength requirements.
c) 'Strength' is required compressive cylinder strength at an age of 28 days.

Conc. Class	Strength psi	Agg. Type	Agg. Size Inches	Slump Inches	Max w/c
A	4000	HRC	1"	4-6	0.46

3.3.2 Mix Usage Schedule:

Description of Use	Concrete Class	Air Content
Generator Pad	A	3-6%

SECTION 3.7 - CONCRETE SLABS

- 3.7.1 Concrete Slab Thickness Reinforcing Clear Cover Notes
Varies #4 @ 14" OCEW 2.0 inches TOP See Plan TOP AND BOTTOM 3.0 inches BOT & Details

- 3.7.2 Sawjoints (Slabs placed on grade only)
Sawjoint layout plan shall be submitted for approval prior to placing concrete slab. Layout of the sawjoints shall be based on the following:

- a) A maximum center to center spacing of sawjoints in both directions of 16 feet. See plan.
b) Sawjoint depth shall be 1.5 inches. Do not cut top reinforcing.
c) The ratio of sawjoints spacing in each direction shall not exceed 1.5 to 1. Example: with sawjoints in the N-S direction spaced at 10.67 feet on center the E-W direction shall be spaced at a maximum of 16 feet on center.

SECTION 3.8 - DRILLED IN ANCHORS

- 3.8.1 Drill holes with rotary impact hammer drill using carbide tipped bits. Drill bits shall be of the diameter as specified by the anchor manufacturer. All holes shall be drilled perpendicular to the concrete or masonry surface.

- 3.8.2 Embedded items: Identify position of reinforcing steel and other embedded items prior to drilling holes for anchors. Exercise care in drilling to avoid damaging existing reinforcing or embedded items. Notify the Engineer if reinforcing steel or other embedded items are encountered during drilling. Take precautions as necessary to avoid damaging electrical and telecommunications conduit, and gas lines.

- 3.8.3 Base Material Strength: Unless otherwise specified, do not drill holes in concrete or masonry until concrete, mortar, or grout has achieved full design strength.

TESTING

- 3.8.4 Continuous special inspection is required for adhesive anchors. Remove and replace mis-placed or malfunctioning anchors. Clean and fill empty anchor holes and patch failed anchor locations with high-strength nonshrink, nonmetallic grout. Anchors that fail to meet proof load or installation torque requirements shall be regarded as malfunctioning.

- 3.8.5 EXPANSION, UNDERCUT, SCREW AND ADHESIVE ANCHORS
Concrete base material: provide anchors of size and type shown with ICC-ES or IAPMO-UES compliance required

- Expansion Anchors: Hilti Kwik Bolt TZ (ICC-ES ESR-1917), Simpson Strong-Bolt 2 (ICC-ES ESR-3037), Dewart/Powers Power-Stud+SD1 (ICC-ES ESR-2818), Dewart/Powers Power-Stud+SD4, SD6 SS(ICC-ES ESR-2502), Powers Power-Bolt+ (ICC-ES ESR-3200) or approved equal.

- Undercut Anchors: Hilti HDA Undercut Anchors (ICC-ES ESR-1546), Simpson Torq-Out (ICC-ES ESR-2705), Dewart/Powers Atomic Undercut (ICC-ES ESR-3067) or approved equal.

- Screw Anchors: Hilti Kwik HUS-EZ (ICC-ES ESR-3027), Simpson Titen HD (ICC-ES ESR-2713), Dewart/Powers Wedge-Bolt+ (ICC-ES ESR-2526) approved equal.

- Adhesive Anchors: Hilti HIT-HY 200 Safe Set System (ICC-ES ESR-3187) for use with Hilti HIT-Z Rod, HAS-E Rod, & Hollow Drill Bit. Hilti HIT-RE 500-V3 Safe Set System (ICC-ES ESR-3814) for use with Hilti HAS-E Rod, Hollow Drill Bit & Hilti Roughening Tool. Hilti HIT-HY-200 (ICC-ES ESR-3187), Simpson SET-XP (ICC-ES ESR-2508), Simpson AT-XP (IAPMO-UES ER-263), Dewart/Powers AC100+ Gold (ICC-ES ESR-2582), Dewart/Powers PE1000+ (ICC-ES ESR-2583), Dewart/Powers Pure 110+ (ICC-ES ESR-1995), or approved equal.

- 3.8.6 Grout filled CMU (Concrete Masonry Unit) base material: provide anchors of size and type shown with ICC-ES or IAPMO-UES compliance required

- Screw Anchors: Hilti Kwik HUS EZ (ICC-ES ESR-3056) Simpson Titen HD (ICC-ES ESR-1056) Dewart/Powers Wedge-Bolt+ (ICC-ES ESR-1678)

- Adhesive Anchors: Hilti HIT-HY 70 (ICC-ES ESR-2682) Simpson SET-XP (IAPMO-UES ER 265) Simpson AT-XP (IAPMO-UES ER261) Dewart/Powers AC100+Gold(ICC-ES ESR-3200)

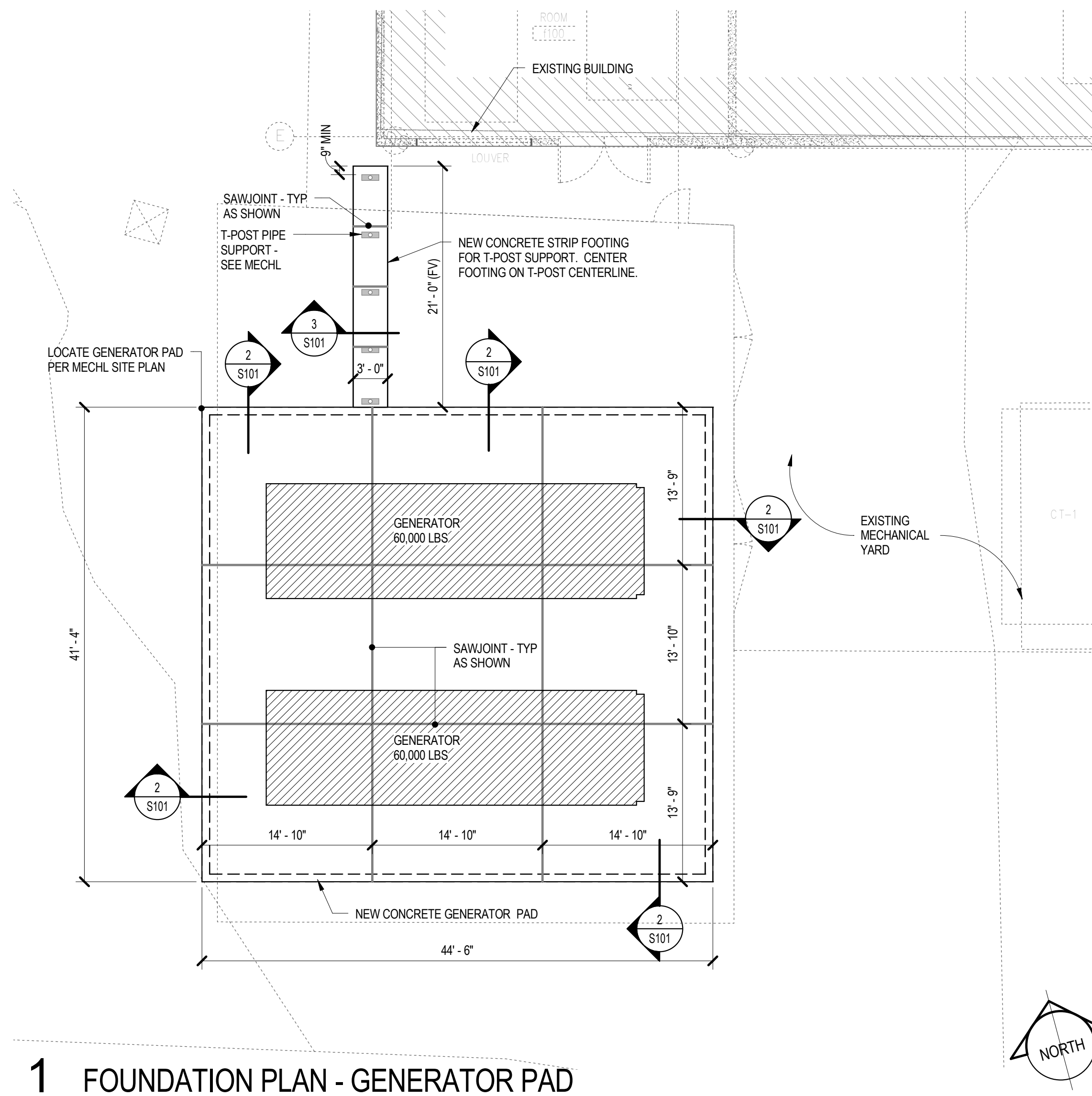
- 3.8.7 Multi-wythe solid brick wall base material: provide anchors of size and type shown with ICC-ES compliance required
- Adhesive Anchors: Hilti HIT-HY 70 (ICC-ES ESR-3342) Simpson SET (ICC-ES ESR-1772)

INSTALLATION

- 3.8.8 Perform anchor installation in accordance with manufacturer's printed installation instructions (MPII).

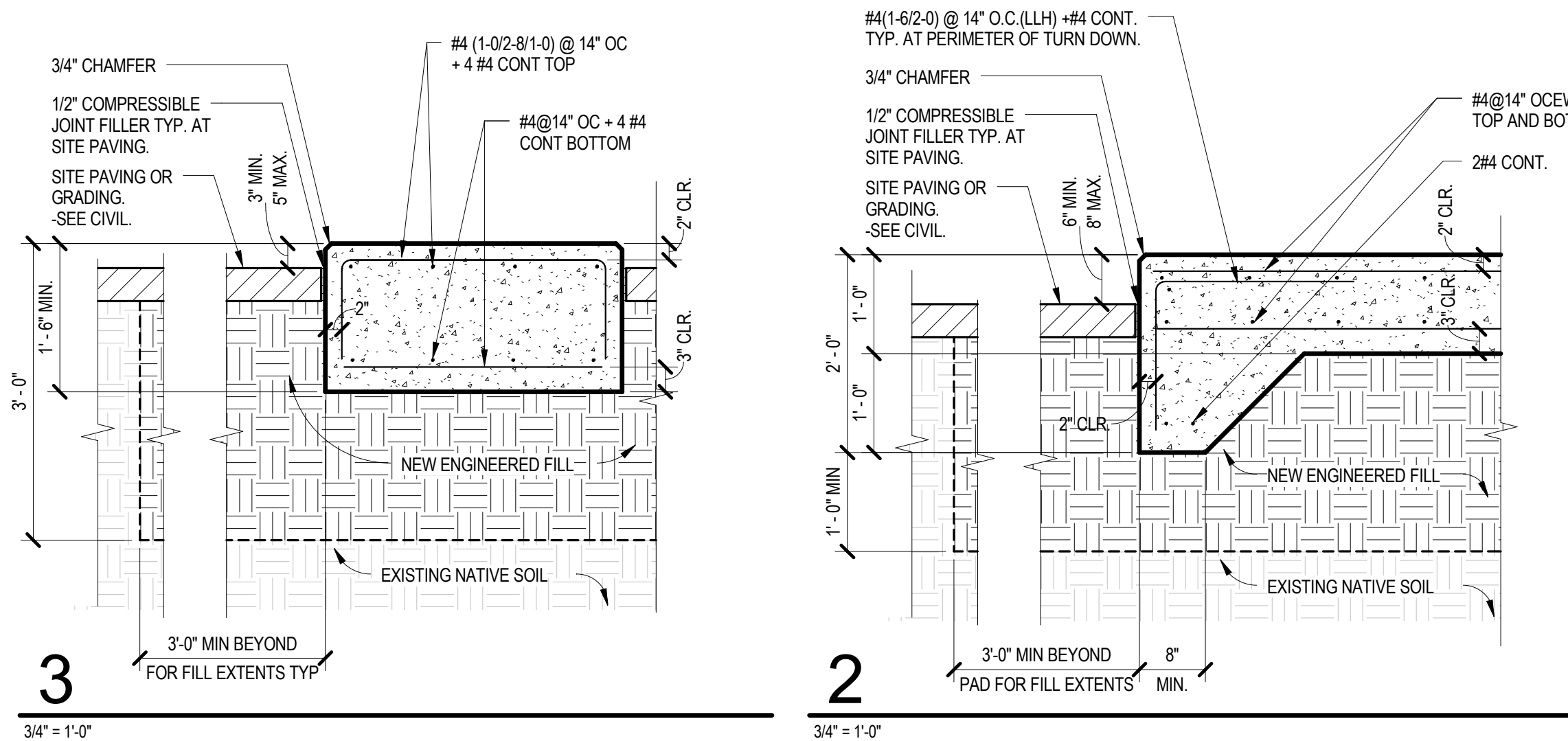
- 3.8.9 Protect threads from damage during anchor installation.

- 3.8.10 IBC 2015 requires ACI/GRSI certification for adhesive anchor installers (AAI) when installing adhesive anchors of horizontally or upwardly inclined conditions. Installers of adhesive anchors shall hold a current AAI certification as accredited by ACI/CSRI in accordance with ACI 318-11 D.9.2.2. Anchor Manufacturer Installation Training is acceptable as a supplement to ACI/GRSI AAI certification. Installers shall submit their certifications to the inspector (testing lab) for each installation.



1 FOUNDATION PLAN - GENERATOR PAD

1/8" = 1'-0"



3/4" = 1'-0"

3/4" = 1'-0"

STATEMENT OF SPECIAL INSPECTIONS NOTES:

This Statement of Special Inspections is submitted in accordance with Section 1704 of the 2015 International Building Code (referenced herewith as Code). It includes a Schedule of Special Inspection Services applicable to the Project. If applicable, it includes Requirements for Seismic Resistance and/or Requirements for Wind Resistance.

The Owner shall employ one or more qualified Special Inspectors to perform this work. Prior to the start of construction, Special Inspector(s) shall provide written documentation to the Building Official demonstrating the competence and relevant experience or training of the Special Inspectors who will perform the Special Inspections and tests during construction. The Special Inspector(s) shall keep records of Special Inspections and tests. The Special Inspector(s) shall submit reports of Special Inspections and tests to the Building Official and to the Registered Design Professional in Responsible Charge. Reports shall indicate that work inspected or tested was or was not completed in conformance to approved Construction Documents. Discrepancies shall be brought to the immediate attention of the Contractor for correction. If they are not corrected, the discrepancies shall be brought to the attention of the Building Official and the Registered Design Professional in Responsible Charge prior to completion of that phase of work. A final report documenting required special inspections and tests, and corrections of any discrepancies noted in the inspections or tests, shall be submitted at a point in time agreed upon prior to the start of work by the Owner or the Owner's authorized agent to the Building Official.

The Special Inspection program does not relieve the Contractor of responsibility to comply with the Contract Documents. Jobsite safety and means and methods of construction are solely the responsibility of the Contractor. The construction or work for which Special Inspection or testing is required shall remain accessible and exposed for Special Inspection or testing purposes until completion of the required Special Inspections or tests.

See specifications for additional testing requirements. Where conflicts occur, the most stringent requirement shall control.

INSPECTION OF CONCRETE CONSTRUCTION:

Special Inspections and tests of concrete construction shall be performed in accordance with Section 1705.3 of the Code and with Table 1705.3.

Special Inspections of welding and qualifications of Special Inspectors for reinforcing bars shall be in accordance with the requirements of AWS D1.4 for Special Inspection and of AWS D1.4 for Special Inspector qualification.

In the absence of sufficient data or documentation providing evidence of conformance to quality standards for materials in Chapter 19 and 20 of ACI 318, the Building Official shall require testing of materials in accordance with the appropriate standards and criteria for the material in Chapters 19 and 20 of ACI 318.

INSPECTION OF SOILS:

Special Inspections and tests of existing site soil conditions, fill placement and load-bearing requirements shall be performed in accordance with Section 1705.6 of the Code and Table 1705.6. The approved geotechnical report and the Construction Documents prepared by the Registered Design Professionals shall be used to determine compliance. During fill placement, the Special Inspector shall verify that proper materials and procedures are used in accordance with the provisions of the approved geotechnical report.

SCHEDULE OF SPECIAL INSPECTION SERVICES TABLE 1705.6: REQUIRED VERIFICATION AND INSPECTION OF SOILS			
CHECK IF REQD	VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC
<input checked="" type="checkbox"/>	1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	---	X
<input checked="" type="checkbox"/>	2. Verify excavations are extended to proper depth and have reached proper material.	---	X
<input checked="" type="checkbox"/>	3. Perform classification and testing of compacted fill materials.	---	X
<input checked="" type="checkbox"/>	4. Verify use of proper materials, densities, and lift thicknesses during placement and compaction of controlled fill.	X	---
<input checked="" type="checkbox"/>	5. Prior to placement of compacted fill, inspect subgrade and verify that site has been prepared properly.	---	X

SCHEDULE OF SPECIAL INSPECTION SERVICES TABLE 1705.3: REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION			
CHECK IF REQD	VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC
<input checked="" type="checkbox"/>	1. Inspect reinforcement, including prestressing tendons, and verify placement.	---	X
<input type="checkbox"/>	2. Reinforcing bar welding: a. Verify weldability of reinforcing bars other than ASTM A706. b. Inspect single-pass fillet welds, maximum 5/16", and c. Inspect all other welds.	---	X
<input checked="" type="checkbox"/>	3. Inspect anchors cast in concrete.	---	X
<input type="checkbox"/>	4. Inspect anchors post-installed in hardened concrete members. a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads. b. Mechanical anchors and adhesive anchors not defined in a.d.	X	X
<input checked="" type="checkbox"/>	5. Verifying use of required design mix.	---	X
<input checked="" type="checkbox"/>	6. Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	X	---
<input checked="" type="checkbox"/>	7. Inspect concrete and shotcrete placement for proper application techniques.	X	---
<input checked="" type="checkbox"/>	8. Verify maintenance of specified curing temperature and techniques.	---	X
<input type="checkbox"/>	9. Inspect prestressed concrete for: a. Application of prestressing forces; and b. Grouting of bonded prestressing tendons.	X	---
<input type="checkbox"/>	10. Inspect erection of precast concrete members.	---	X
<input type="checkbox"/>	11. Verify 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
<input checked="" type="checkbox"/>	12. Inspect formwork for shape, location, and dimensions of the concrete member being formed.	---	X

STANDARD ABBREVIATIONS					
AB	Anchor Bolt	DIM	Dimension	K-FT	Kip-Feet (Moment)
ADDL	Additional	DWG	Drawing	LB	Pound-Force
ADJ	Adjacent	DWL	Dowel	LLB	Long Leg Back-to-Back
AESS	Architectural Exposed	EJ	Each Face	LLH	Long Leg Horizontal
EF	Structural Steel	EA	Each Face	LVV	Long Leg Vertical
AFF	Above Finished Floor	EJ	Expansion Joint	LSH	Long Side Horizontal
AGOR	Aggregate	EL	Elevation	LSV	Long Side Vertical
ALT	Alternate	ELEV	Elevator	M	Moment
ARCH	Architect(ural)	ENGR	Engineer	MATL	Material
BL	Building Line	EQ	Equal	MAX	Maximum
BL	Brick Ledger	EW	Each Way	MECH	Mechanical
BLDG	Building	EXP BT	Expansion Bolt	MEP	Mech/Elec/Plumbing
BLK	Block	EXT	Existing	MFR	Manufacturer
BM	Beam	EX	Exterior	F	Force (Axial)
BOT	Bottom	FIN	Finish	MIN	Minimum
BRG	Bearing	FABR	Fabricator	MK	Mark
BTWN	Between	FDTN	Foundation	MTL	Metal
CH	Channel	C	Channel	NC	Not in Contract
CFMF	Cold-Formed Metal Framing	FIN FLR, FF	Finish Floor	NO	Number
CSS	Center of Gravity of Steel	FLR	Floor	NS	Near Side
CIP	Cast-in-Place	FS	Far Side	NSG	Non-Shrink Grout
CJ	Construction Joint	PV	Field Verify	NTS	Not To Scale
CL	Center Line	GC	General Contractor	OC	On Center
CMU	Concrete Masonry	GN	General Notes	OF	Outside Face
COL	Column	GR	Grade	OP-HD	Opposite Hand
COMP	Compression	GR BM	Grade Beam	OPNG	Opening
CONC	Concrete	HORIZ. H	Horizontal	P	Pan (form)
CONN	Connection	HSA	Headed Stud Anchor	P-T	Post-Tensioning
CONSTR	Construction	HSS	Hollow Structural Section	PCC	Precast Concrete
CONT	Continuous	HT	Height	PEN	Penetration
COORD	Coordinate	IBC	International Building Code	PI	Plasticity Index
CR	Center	IF	Inside Face	PL	Plaster
CW	Curtain Wall	INFO	Information	PL	Plate
db	Bar Diameter(s)	INT	Interior	PNL	Panel
DBA	Deformed Bar Anchor	INTERM	Intermediate	PSF	Pounds Per Square Foot
Deg(s)	Degree(s)	JST	Joint	PSI	Pounds Per Square Inch
DET	Detail	JT	Joint	PT	Point
DIA or Ø	Diameter	K	Kip (1,000 pounds)	R	Radius

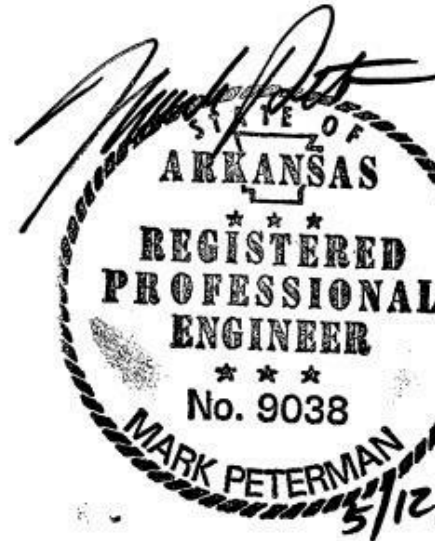
SYMBOL LEGEND	
	TOC 99'-0"
	EL 120'-0"
	SECTION
	ENLARGED PLAN OR PLAN DETAIL
	DROP IN STRUCTURE
	SLOPE IN STRUCTURE
	MECH. EQUIPMENT SEE PLAN FOR WEIGHT

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PROJECT 504V, AVE REPLACE GENERATORS
FEDERAL CORRECTIONAL COMPLEX
1400 DALE BUMPERS ROAD
FORREST CITY, ARKANSAS 72335



FEDERAL CORRECTION
INSTITUTION
U.S. DEPARTMENT OF
JUSTICE BUREAU OF
PRISONS
SOUTH CENTRAL REGION
FACILITIES SECTION

PROJECT #: 05081.06

SHEET TITLE:
STRUCTURAL
GENERAL NOTES,
PLAN, AND DETAILS

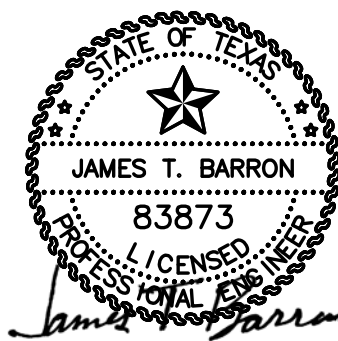
SHEET #:

S101

DIFFUSER CALLOUT KEY

- NOTES BY SYMBOL:
- 01 NEW PAD MTD. AIR HANDLING UNIT. PROVIDE 12" HIGH FIELD INSTALLED ANGLE IRON STAND FOR AIR HANDLING UNIT. ROUTE CONDENSATE TO DRY WELL PER DETAIL 5/M301.
 - 02 CONNECT TO EXISTING OUTSIDE AIR LOUVER. PROVIDE 10"x10" FREE AREA ON LOUVER. THE REMAINING AREA OF LOUVER TO BE BLANKED OFF WITH 16 GA. GALVANIZED STEEL SHEET METAL AND 2" THICK RIGID MINERAL FIBER BOARD INSULATION. PROVIDE MANUAL VOLUME DAMPER.
 - 03 NEW PAD-MOUNTED CONDENSING UNIT. ROUTE REFRIGERANT PIPING TO INDOOR AIR HANDLING UNIT. SIZE AND SECURE REFRIGERANT PIPING PER MANUFACTURERS RECOMMENDATIONS.
 - 04 COVER AND SEAL EXISTING LOUVERS WITH 16 GA. GALVANIZED STEEL SHEET METAL AND 2" THICK RIGID MINERAL FIBER BOARD INSULATION.
 - 05 PROVIDE MINIMUM OF 24" CLEARANCE IN FRONT, LEFT, RIGHT, AND TOP OF UNIT.
 - 06 PROVIDE WIRE MESH SCREEN ON RETURN AIR OPENINGS ON FRONT OF AIR HANDLING UNIT.
 - 07 SET TEMPERATURE SENSOR TO MAINTAIN SPACE TEMPERATURE AT 82 DEG F. PROVIDE LOCKABLE COVER FOR TEMPERATURE SENSOR.
 - 08 DO NOT ROUTE DUCTWORK OVER ANY ELECTRICAL EQUIPMENT.
 - 09 INSTALL DRY WELL AND PER DETAIL 5/M301.

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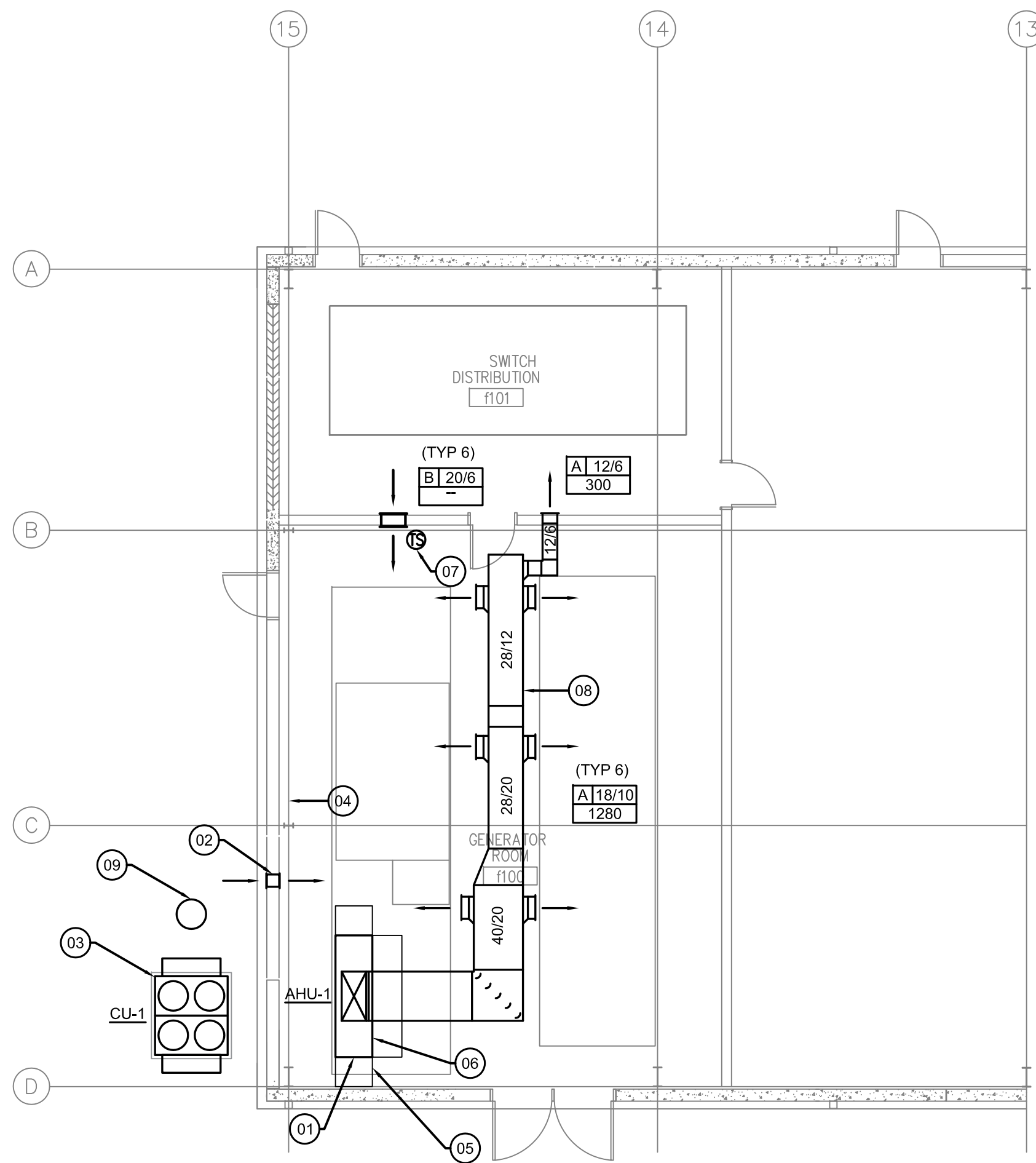
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INSTITUTION
U.S. DEPARTMENT OF
JUSTICE BUREAU OF
PRISONS
SOUTH CENTRAL REGION
FACILITIES SECTION

PROJECT #: 05081.06

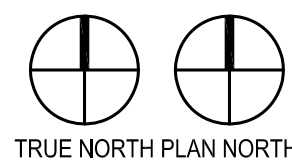
SHEET TITLE:
MECHANICAL PLAN

SHEET #:

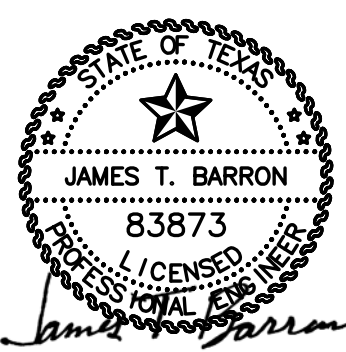
M101



01 **MECHANICAL PLAN**
SCALE: 1" = 16'-0"



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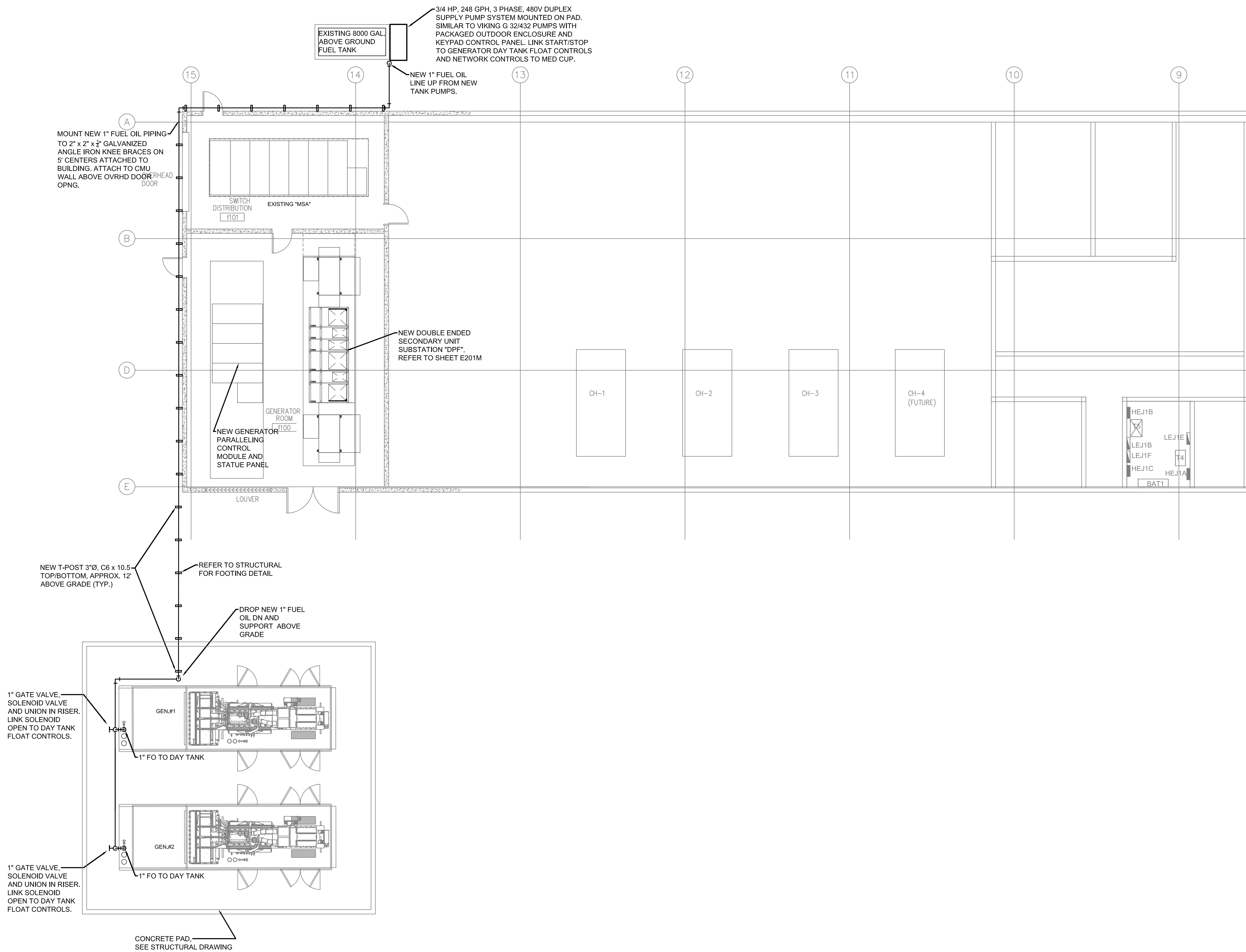
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FACILITIES SECTION

PROJECT #: 05081.06

SHEET TITLE:
MECHANICAL FUEL
PIPING PLAN

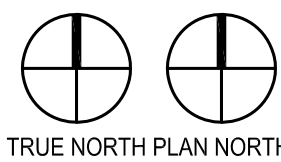
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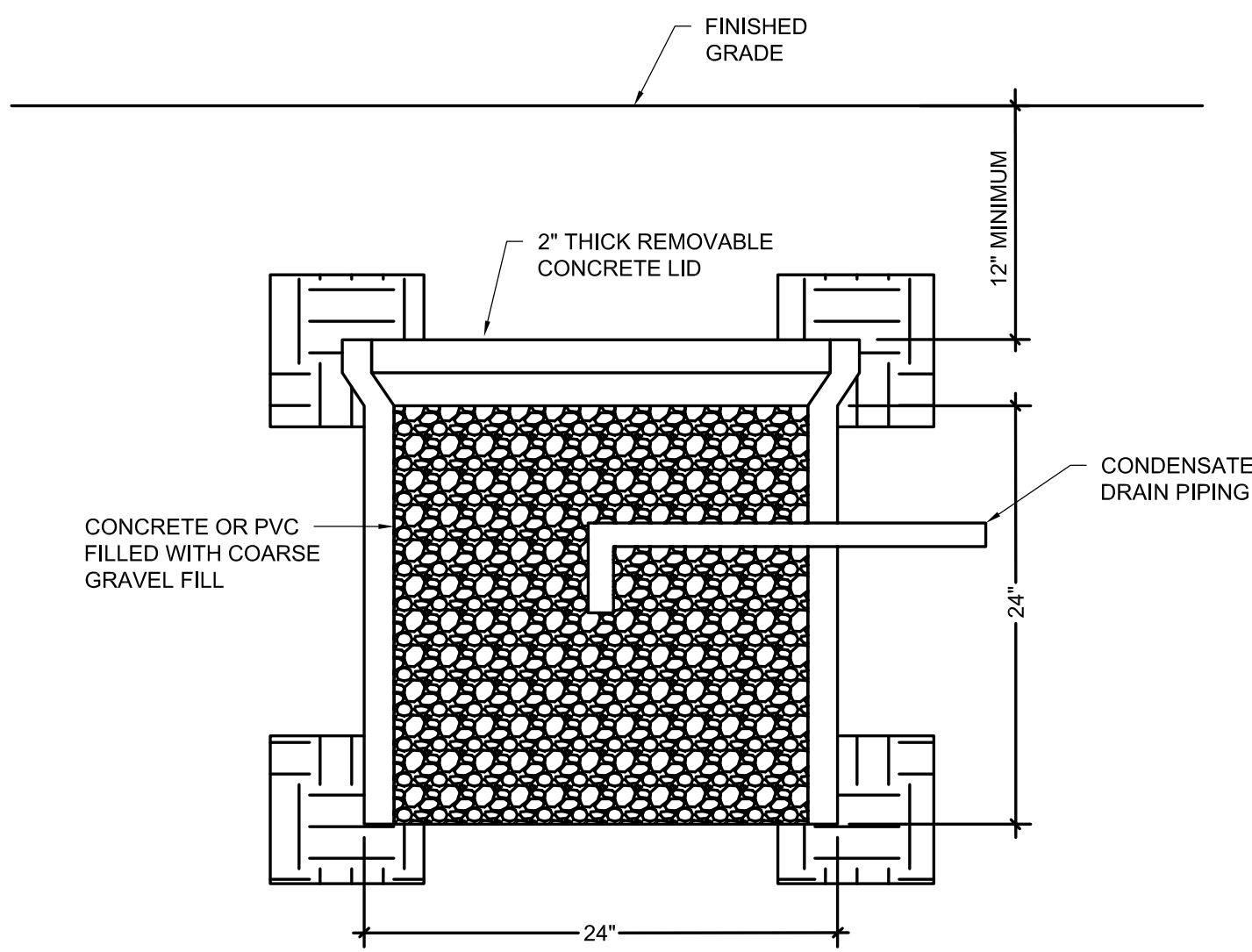
M201



01 MECHANICAL FUEL PIPING PLAN

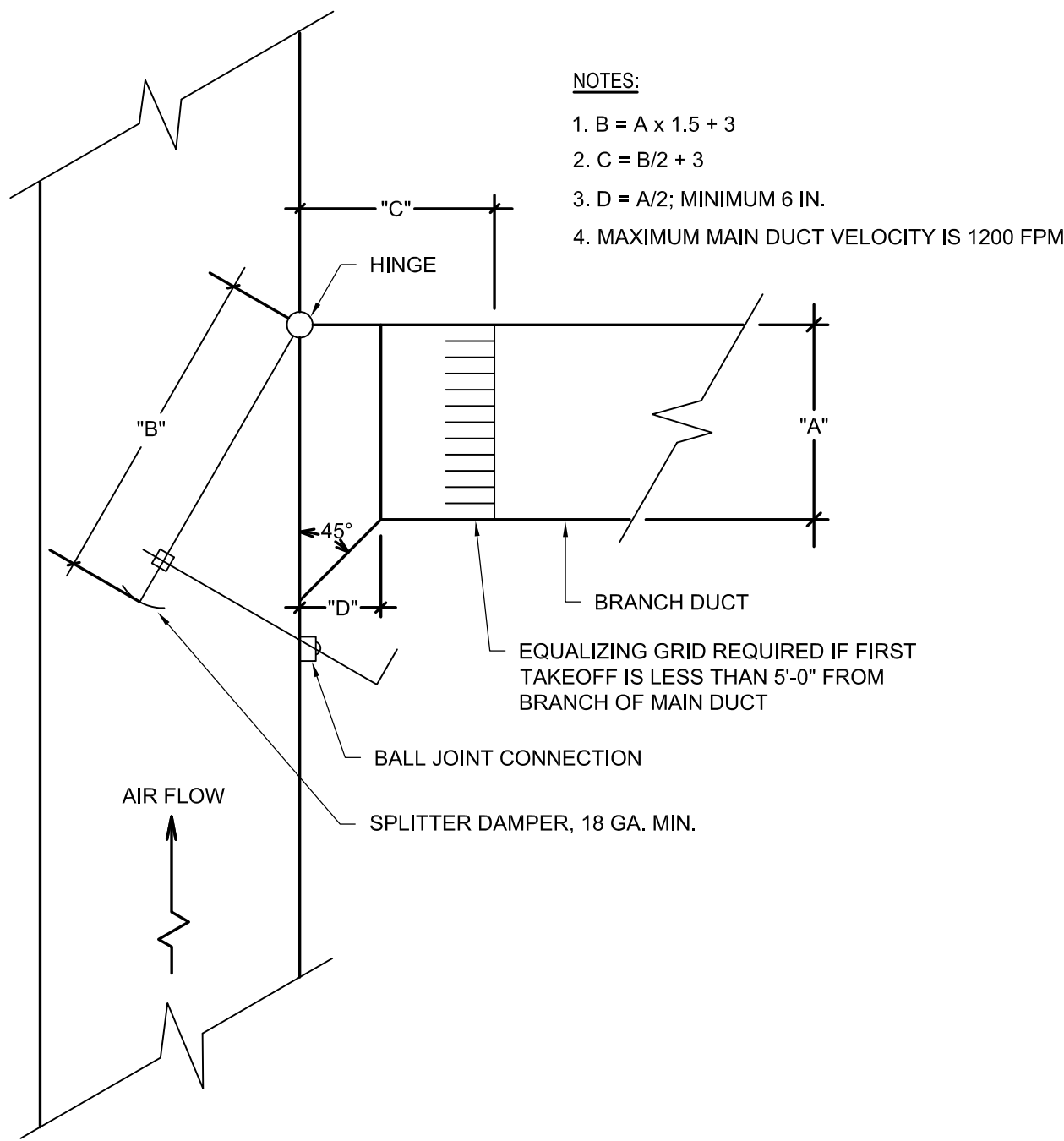
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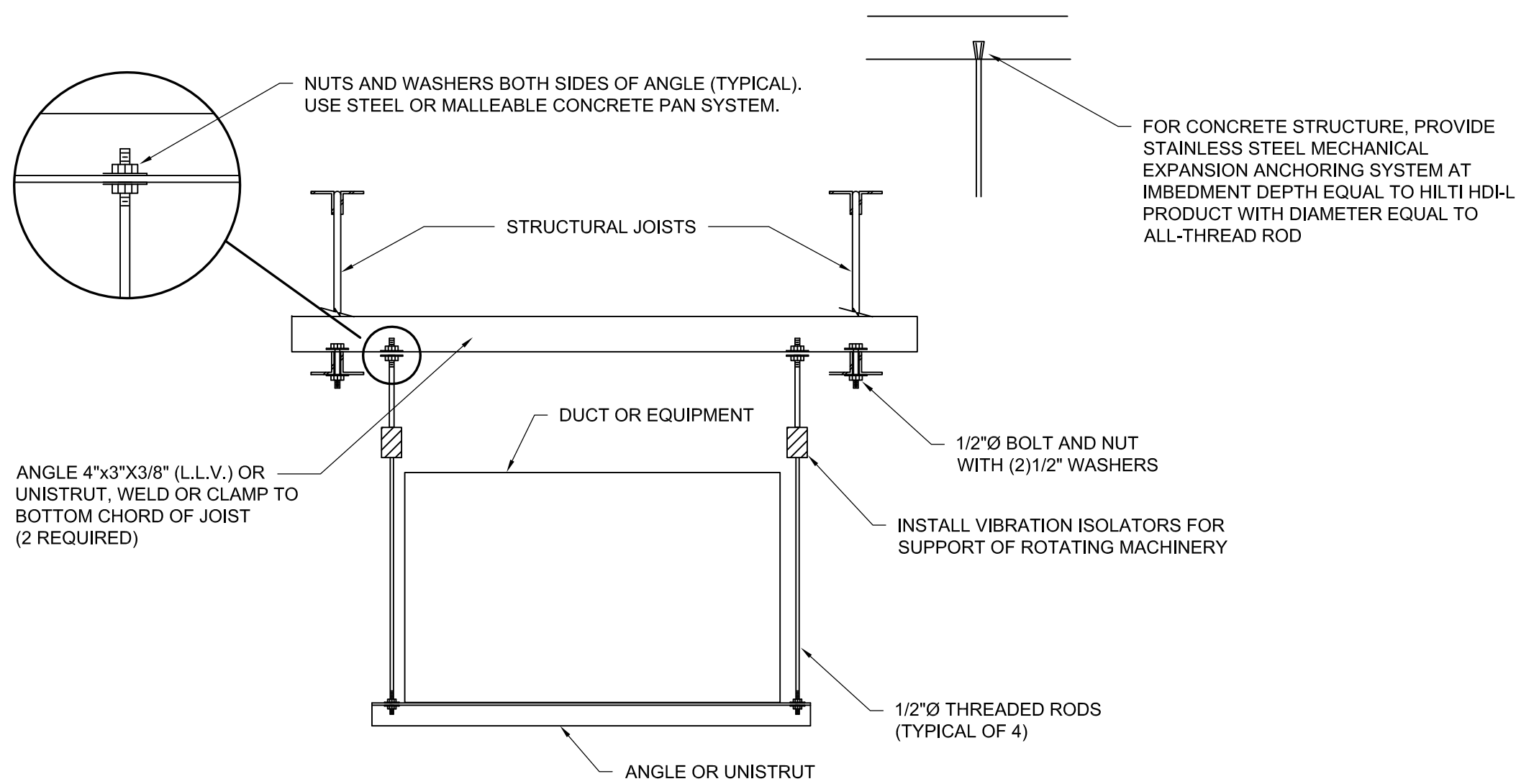
05 DRY WELL DETAIL

SCALE: NONE



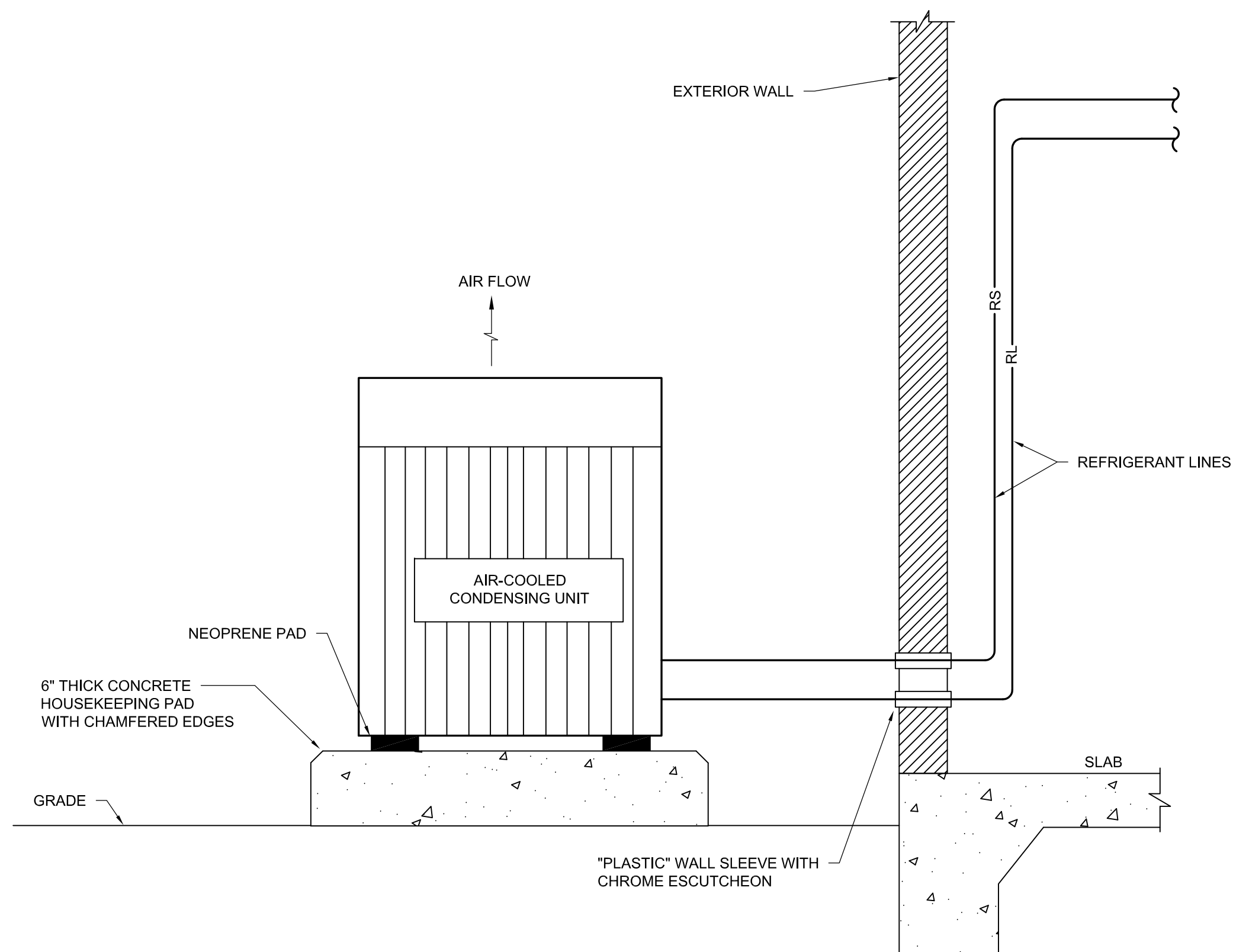
04 BRANCH DUCT DETAIL

SCALE: NONE



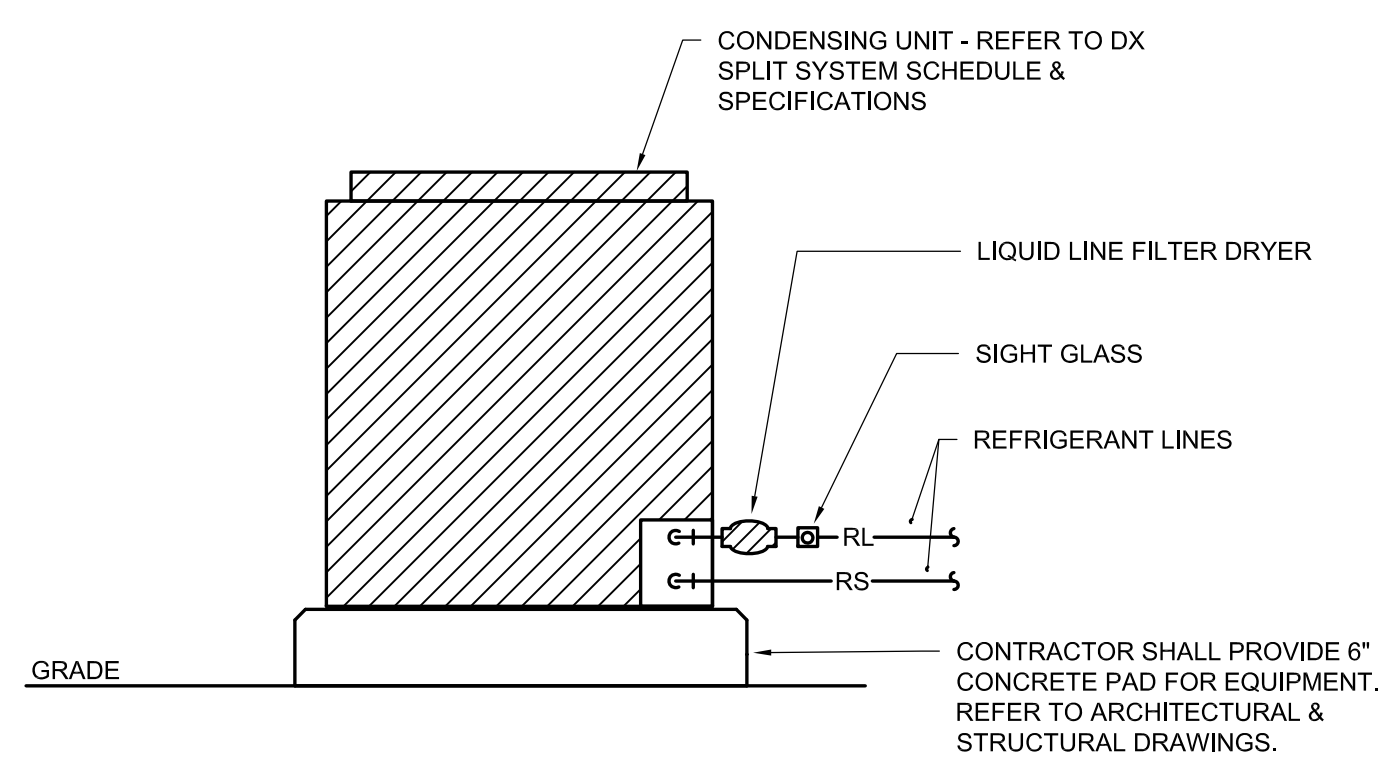
03 TYPICAL DUCT/EQUIP. SUPPORT DETAIL

SCALE: NONE



02 REFRIGERANT LINE SET DETAIL

SCALE: NONE



01 CONDENSING UNIT DETAIL

SCALE: NONE

AIR DEVICE SCHEDULE

DESIGNATION	TYPE DEVICE	MAX RADIATED NC	MANUFACTURER MODEL NO.	DESCRIPTION	REMARKS
A	SIDEWALL SUPPLY DIFFUSER	30	PRICE 620	DOUBLE DEFLECTION SUPPLY GRILLE WITH 3/4" BLADE SPACING, SURFACE MOUNTED, NECK SIZE AS INDICATED ON PLANS. COLOR TO BE APPROVED BY ARCHITECT.	
B	SIDEWALL RETURN GRILLE	30	PRICE 630	FIXED LOUVER RETURN GRILLE WITH 3/4" BLADE SPACING, SURFACE MOUNTED, NECK SIZE AS INDICATED ON PLANS. COLOR TO BE APPROVED BY ARCHITECT.	

NOTES:

- COORDINATE ALL FRAME STYLES WITH ARCHITECTURAL ROOM FINISH SCHEDULE. PROVIDE MANUAL VOLUME DAMPERS AT EACH RUN-OUT DUCT TO DIFFUSERS AND GRILLES UNLESS NOTED OTHERWISE. ALL SQUARE DIFFUSERS ARE 4-WAY THROW UNLESS NOTED OTHERWISE BY FLOW ARROWS ON PLAN.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL CEILING DIFFUSERS, REGISTERS AND GRILLES.
- PROVIDE REMOTE VOLUME DAMPER ADJUSTMENT FOR VOLUME DAMPERS LOCATED ABOVE A GYP. BOARD CEILING.

CONDENSING UNIT SCHEDULE

DESIGNATION	CU-1	
LOCATION	OUTSIDE GEN ROOM	
RELATED INDOOR UNIT	AHU-1	
COMPRESSORS:		
TOTAL CAPACITY (MBH)	217.4	
TYPE OF COMPRESSORS	SCROLL	
NUMBER OF COMPRESSORS	-	
TYPE OF REFRIGERANT	R410A	
CONDENSER:		
AMBIENT AIR TEMPERATURE (DEGREES F)	105	
TYPE OF FANS	-	
NUMBER OF FANS	4	
COIL FIN MATERIAL	ALUMINUM	
ELECTRICAL SERVICE FOR UNIT:		
MINIMUM CIRCUIT AMPACITY	44	
MAXIMUM FUSE/CIRCUIT BREAKER AMPS	60	
VOLTAGE/PHASE/HERTZ	480/3/60	
DISCONNECT FURNISHED BY	MECHANICAL	
MINIMUM EER	11.3	
MINIMUM SEER	-	
MINIMUM IEER	11.9	
DIMENSIONS, LxWxH (INCHES)	59 x 64 x 50	
WEIGHT (LBS)	930	
BASED ON JCI	J20YDC00A4GAC4	

NOTES:

- ALL NEW CONDENSING UNITS TO BE PROVIDED WITH 6" HOUSEKEEPING PADS.
- REFER TO SPECIFICATIONS FOR FURTHER REQUIREMENTS.

SPLIT DX SYSTEM AIR UNIT SCHEDULE

DESIGNATION	AHU-1	
SERVES	GENERATOR ROOM	
RELATED CONDENSING UNIT	CU-1	
MOUNTING	VERTICAL	
SUPPLY AIR CFM	8,000	
OUTSIDE AIR CFM	100	
FAN:		
EXTERNAL S.P. (" WG)	1"	
MOTOR HP	7.5	
COOLING COIL: (DX)		
EAT - DBWB (DEGREES F)	85 / 67	
SENSIBLE CAPACITY (MBH)	188.5	
TOTAL CAPACITY (MBH)	217.4	
MAXIMUM FACE VELOCITY (FPM)	500	
NUMBER OF CIRCUITS	-	
TYPE OF REFRIGERANT	R410A	
MIN. EER	11.3	
MIN. SEER	-	
MIN. IEER	-	
HEATING COIL: (NONE)		
HEATING CAPACITY (KW/STEPS)	-	
ELECTRICAL SERVICE FOR UNIT:		
MINIMUM CIRCUIT AMPACITY	12.5	
MAXIMUM FUSE/CIRCUIT BREAKER AMPS	15	
VOLTAGE/PHASE/HERTZ	480/3/60	
DISCONNECT FURNISHED BY	MECHANICAL	
FILTER TYPE	2" PLEATED MERV-8	
DIMENSIONS, LxWxH (INCHES)	99 x 30 x 65	
WEIGHT (LBS)	938	
BASED ON JCI	J20ND00F5AAA2	

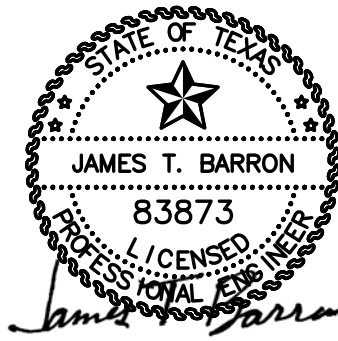
NOTES:

- REFER TO SPECIFICATIONS FOR FURTHER REQUIREMENTS.
- PROVIDE WITH TEMPERATURE SENSOR WITH TIMED OVERRIDE SWITCH.

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REPLACE GENERATORS
FEDERAL CORRECTIONAL COMPLEX
1400 DALE BUMPERS ROAD
FORREST CITY, ARKANSAS 72335



FEDERAL CORRECTION
INSTITUTION
U.S. DEPARTMENT OF
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SOUTH CENTRAL REGION
FACILITIES SECTION

PROJECT #: 05081.06

SHEET TITLE:
MECHANICAL DETAILS
& SCHEDULES

SHEET #:

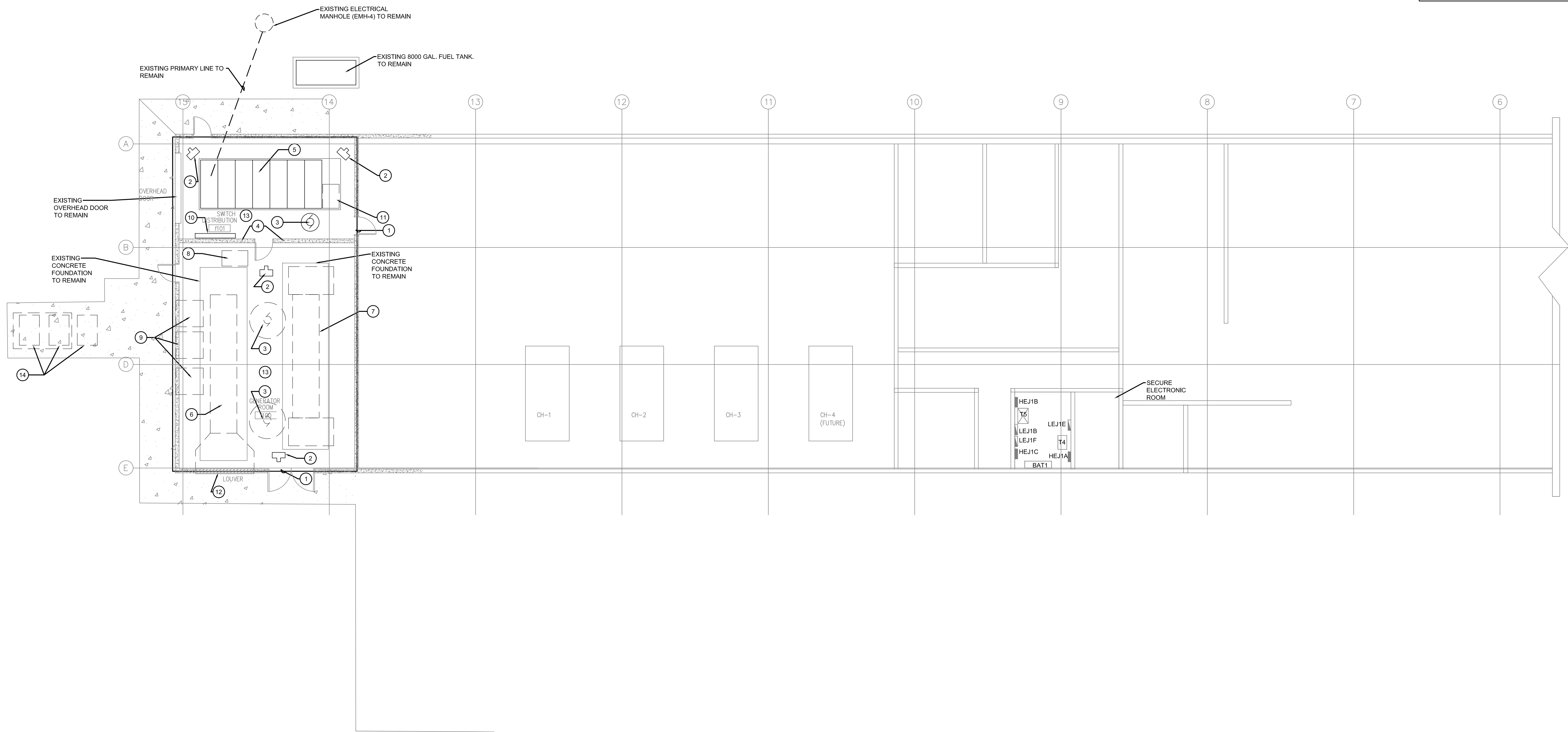
M301

6. Change Note #5 on sheet ED101 to read as follows:

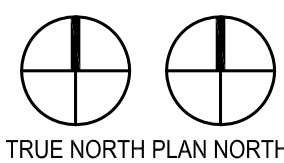
“Existing main switchboard ”MSB” to remain and be connected to the new paralleling gear.
Prior to connection, the “MSB” shall be deenergized, tested, inspected, and cleaned (remove dust and contaminants from breakers and bus bar).
Power disruptions shall be minimized as outlined on sheet E101.”

- GENERAL NOTES:
- CONTRACTOR TO UTILIZE EXISTING LIGHTING CIRCUITS FROM DEMOLITION TO POWER NEW LIGHTING LAYOUT.
 - UPDATE ALL EXISTING PANEL DIRECTORIES WHEN WORK IS COMPLETE.
 - ALL EQUIPMENT AND WIRING NOT IN RENOVATED AREAS BUT AFFECTED BY WORK IN RENOVATED AREAS SHALL BE RECONNECTED AS NECESSARY FOR THE COMPLETE WORKING SYSTEM.
 - WHERE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT WILL RESULT IN OUTAGES IN AREA NOT TO BE DEMOLISHED, CONTRACTOR SHALL IMMEDIATELY RECONNECT THAT CIRCUIT OR RE-ESTABLISH SERVICE IN THE REMAINING PORTION OF THE CIRCUIT.
 - THE ELECTRICAL CONTRACTOR SHALL TEMPORARY SUPPORT ALL ITEMS TO REMAIN THAT ARE AFFECTED BY THE DEMOLITION OF BUILDING STRUCTURE COMPONENTS (WALLS, CEILINGS, PARTITIONS, ETC), CONTRACTOR SHALL TEMPORARY SUPPORT ITEMS AND SHALL PROVIDE PERMANENT SUPPORTS WHEN FINALIZED STRUCTURES ARE IN PLACE.
 - THE EXISTING FIRE ALARM SYSTEM SHALL REMAIN FULLY FUNCTIONAL DURING THE ENTIRE DEMOLITION AND CONSTRUCTION PERIOD.

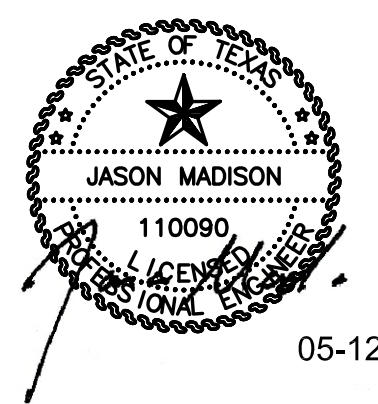
- GENERAL NOTES BY SYMBOL:
- EXISTING LIGHTING AND RECEPTACLES TO REMAIN IN THIS AREA.
 - EXISTING UNIT HEATER TO REMAIN.
 - DISCONNECT ELECTRICAL CONNECTION TO CEILING MOUNTED EXHAUST FAN AND REMOVE WIRING & CONDUIT TO POWER SOURCE.
 - EXISTING WALL TO REMAIN.
 - EXISTING MAIN SWITCHBOARD "MSB" TO REMAIN AND BE CONNECTED TO NEW PARALLELING SWITCHGEAR.
 - DISCONNECT AND REMOVE EXISTING GENERATOR (1500KW, 13.8 KV IS CURRENTLY OPERABLE BUT NOT ADEQUATE FOR INTUTIONAL GROWTH). REMOVE ASSOCIATED CONDUIT & WIRING BACK TO POWER SOURCE INCLUDING EXISTING COOLANT PUMP WIRE & CONDUIT BACK TO POWER SOURCE.
 - DISCONNECT AND REMOVE EXISTING DOUBLE ENDED SECONDARY UNIT SUBSTATION "DFF" AND REPLACE WITH NEW UNIT SUBSTATION.
 - DISCONNECT AND REMOVE EXISTING DAY TANK PUMP AND EXISTING CONTROLS. REMOVE ASSOCIATED CONDUIT & WIRING BACK TO SOURCE.
 - DISCONNECT AND REMOVE EXISTING SUPPLY FAN. REMOVE ASSOCIATED CONDUIT & WIRING BACK TO SOURCE.
 - EXISTING CONTACTOR PANEL TO REMAIN.
 - REMOVE EXISTING GENERATOR CONTROL PANEL.
 - EXISTING LOUVER TO REMAIN AND BE BLANKED OFF WITH GALVANIZED METAL AFTER GENERATOR IS REMOVED AND NEW SWITCHGEAR IS INSTALLED.
 - ANY EXISTING FIRE ALARM OR SECURITY DEVICES TO REMAIN AND TO BE PROTECTED. VERIFY THEIR ARE FUNCTIONAL AT COMPLETION.
 - DISCONNECT AND REMOVE EXISTING LOAD BANK, SWITCHGEAR, WIRE AND CONDUIT, ETC. LOCATED OUTSIDE ON PAD.



01 PARTIAL SWITCH DISTRIBUTION AND GENERATOR ROOMS "LOW PRISON" FLOOR PLAN - ELECTRICAL DEMOLITION
SCALE: 1" = 1/8"=0"



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REPLACE GENERATORS
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FORREST CITY, ARKANSAS 72335



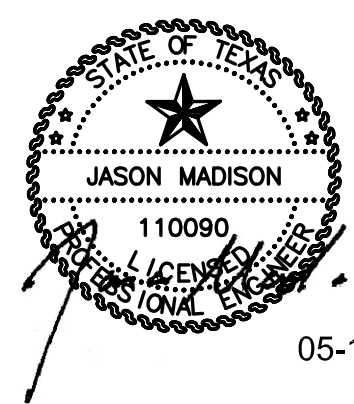
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INSTITUTION
U.S. DEPARTMENT OF
JUSTICE BUREAU OF
PRISONS
SOUTH CENTRAL REGION
FACILITIES SECTION

PROJECT #: 05081.06

SHEET TITLE:
PARTIAL SWITCH DIST.
& GENERATOR ROOMS
(LOW PRISON) FLOOR
PLAN - ELECTRICAL
DEMOLITION
SHEET #:

ED101

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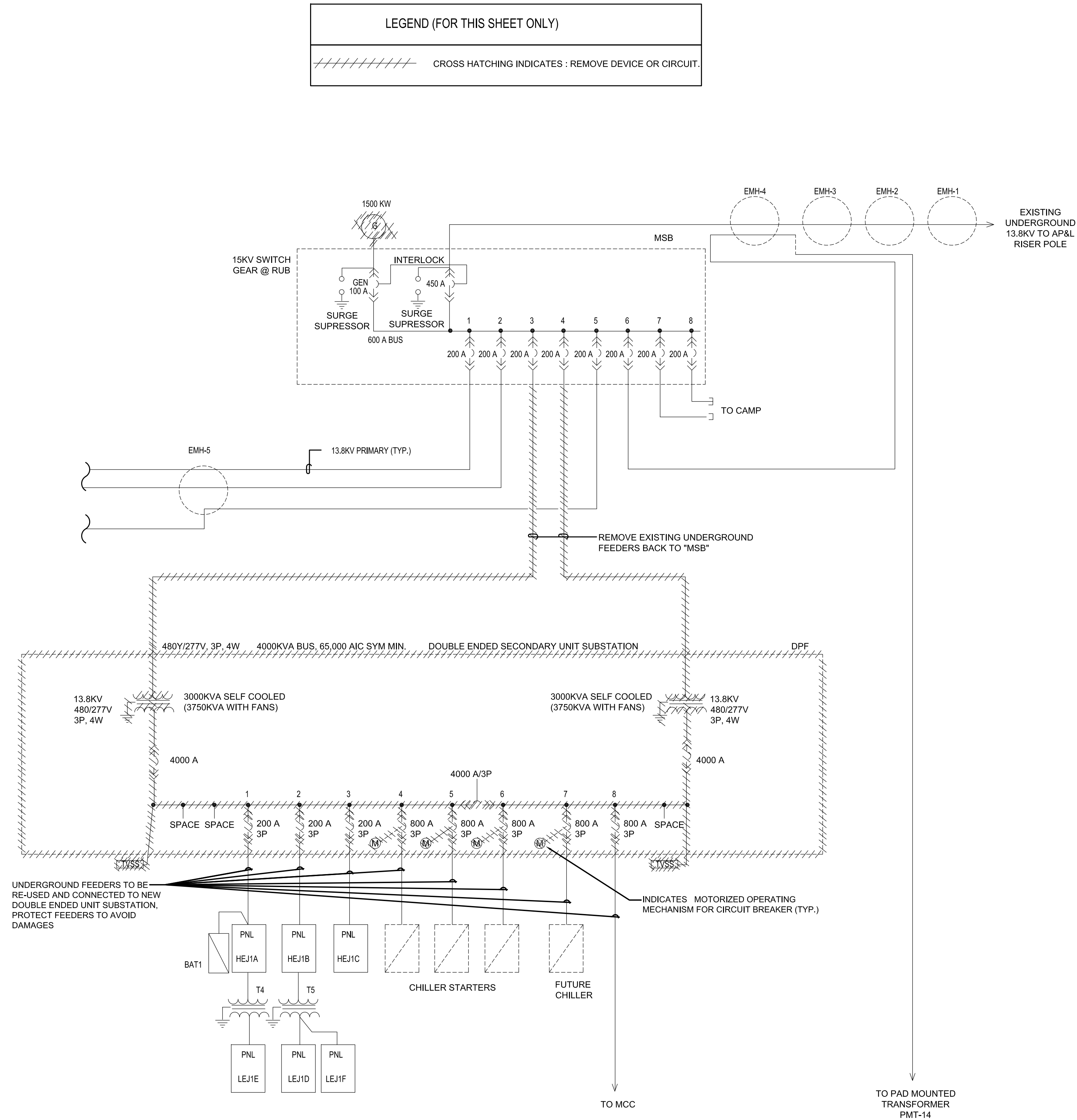


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FACILITIES SECTION

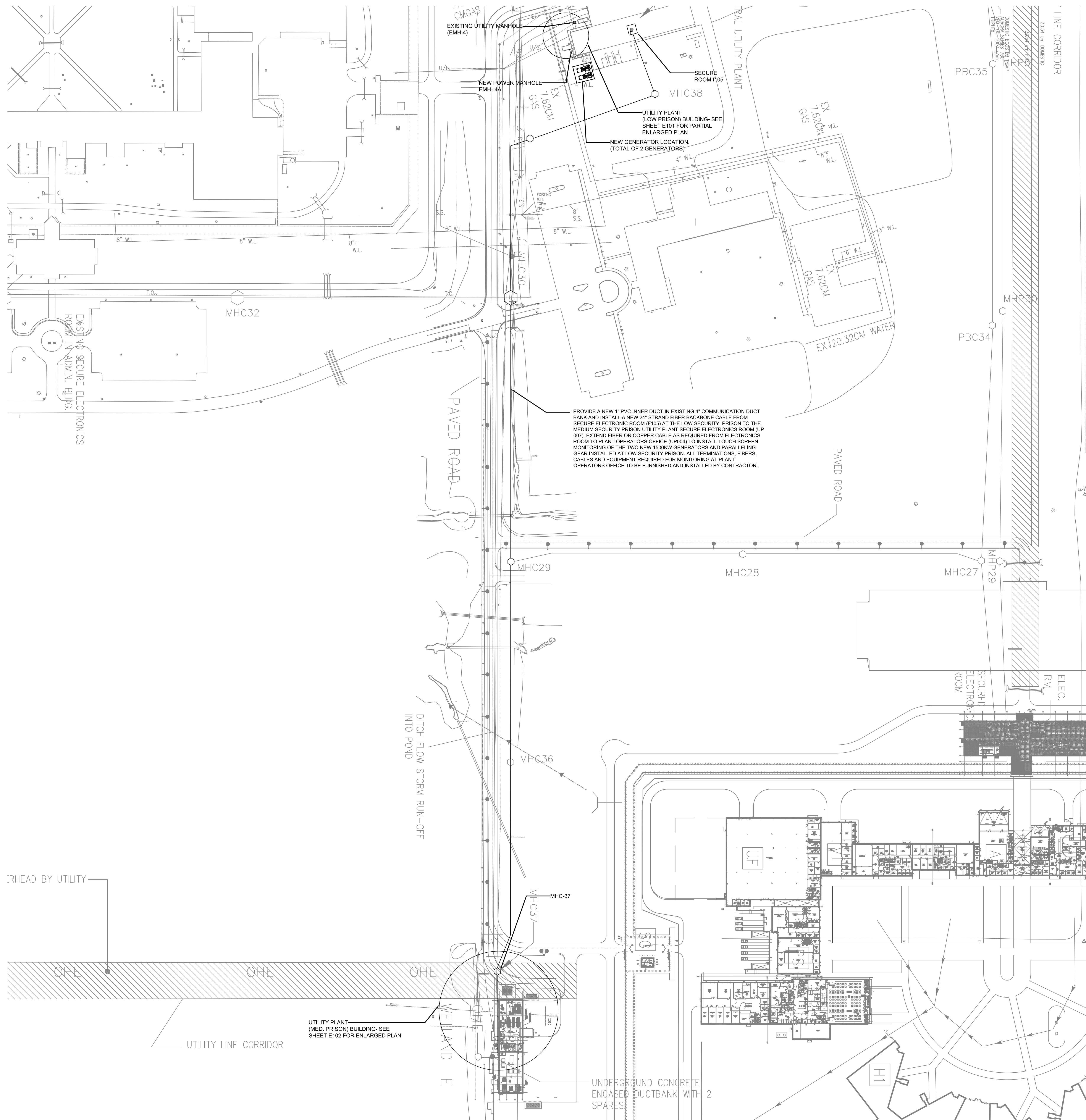
PROJECT #: 05081.06

SHEET TITLE:
PARTIAL ONE-LINE
DIAGRAM
(LOW PRISON) -
ELECTRICAL
DEMOLITION
SHEET #:

ED201

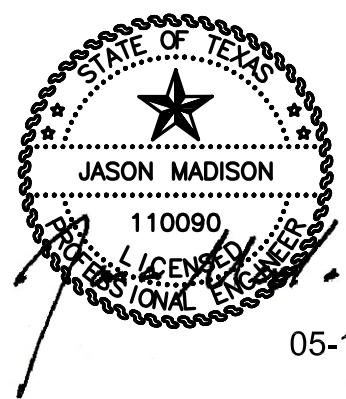


01 PARTIAL ONE-LINE DIAGRAM (LOW PRISON) - ELECTRICAL DEMOLITION
SCALE: NONE



01 PARTIAL SITE PLAN - ELECTRICAL
SCALE: 1" = 100'-0"
TRUE NORTH PLAN NORTH

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FACILITIES SECTION

PROJECT #: 05081.06

SHEET TITLE:
PARTIAL SITE PLAN
ELECTRICAL

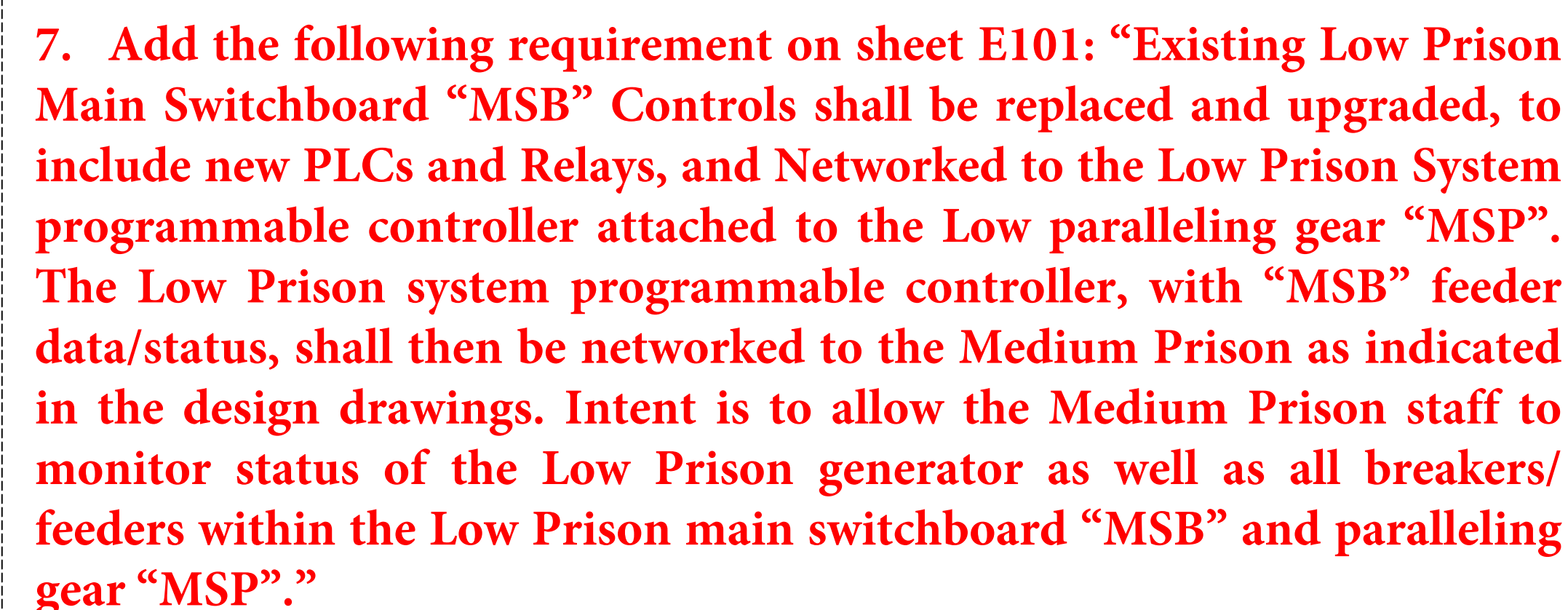
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E100

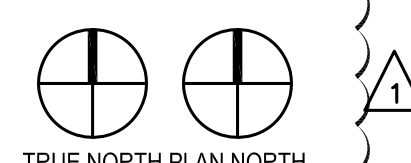
STATE OF TEXAS
JASON MADISON
110090
LICENSED
MECHANICAL ENGINEER

PROJECT #: 05081.06

E101



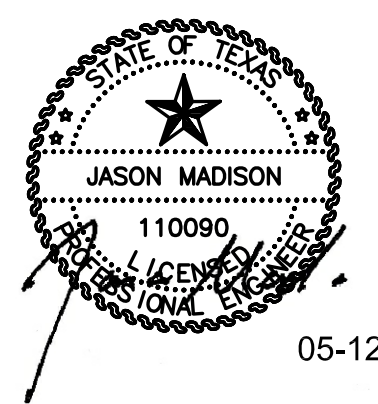
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1400 DALE BUMPERS ROAD
FORREST CITY, ARKANSAS 72335

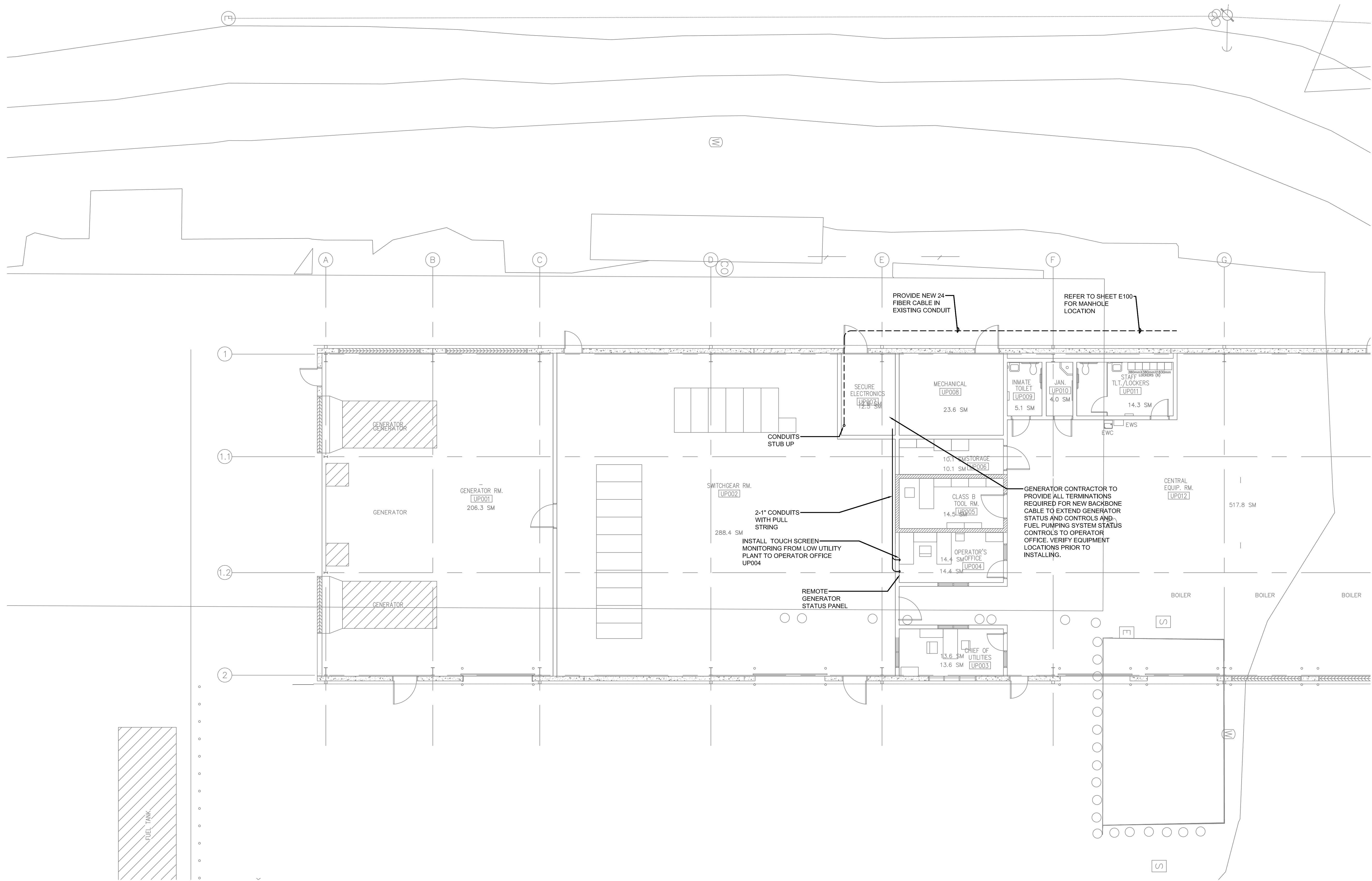


FEDERAL CORRECTION
INSTITUTION
U.S. DEPARTMENT OF
JUSTICE BUREAU OF
PRISONS
SOUTH CENTRAL REGION
FACILITIES SECTION

PROJECT #: 05081.06

SHEET TITLE:
PARTIAL ENLARGED
CENTRAL UTILITY
PLANT
(MEDIUM PRISON) -
ELECTRICAL
SHEET #:

E102



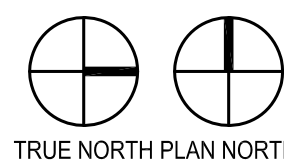
SF-30 Block 14 Description of Amendment (continuation)
(ADDENDUM NO. 2)

8. Add the following requirement on sheet E102: “Existing Medium Prison main switchboard and paralleling gear digital master controls shall be replaced in accordance with the attached digital master control specifications. The contractor shall network Low Prison controls, as indicated above, into the Medium Prison digital master controller so that Low prison equipment can be monitored from a graphic display screen. The digital master controller within the Medium Prison shall provide supervisory control of Medium power equipment via a touchscreen interface mounted in the Operator’s Office. The master control system for both prisons shall be from the same manufacturer.”

01 PARTIAL ENLARGED CENTRAL UTILITY PLANT (MEDIUM PRISON) - ELECTRICAL

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

NOTE:
CONTRACTOR IS RESPONSIBLE FOR PROVIDING TERMINATIONS, CABLING, CONDUIT AND EQUIPMENT REQUIRED TO MAKE GENERATOR CONTROLS AND FUELING SYSTEM, STATUS PANEL AND TOUCH SCREEN MONITORING OF GENERATORS AND FUELING SYSTEM AT LOW UTILITY PLANT, A COMPLETE AND OPERABLE SYSTEM. SEE SPECIFICATION SECTION 263200 FOR REQUIRED TRAINING.

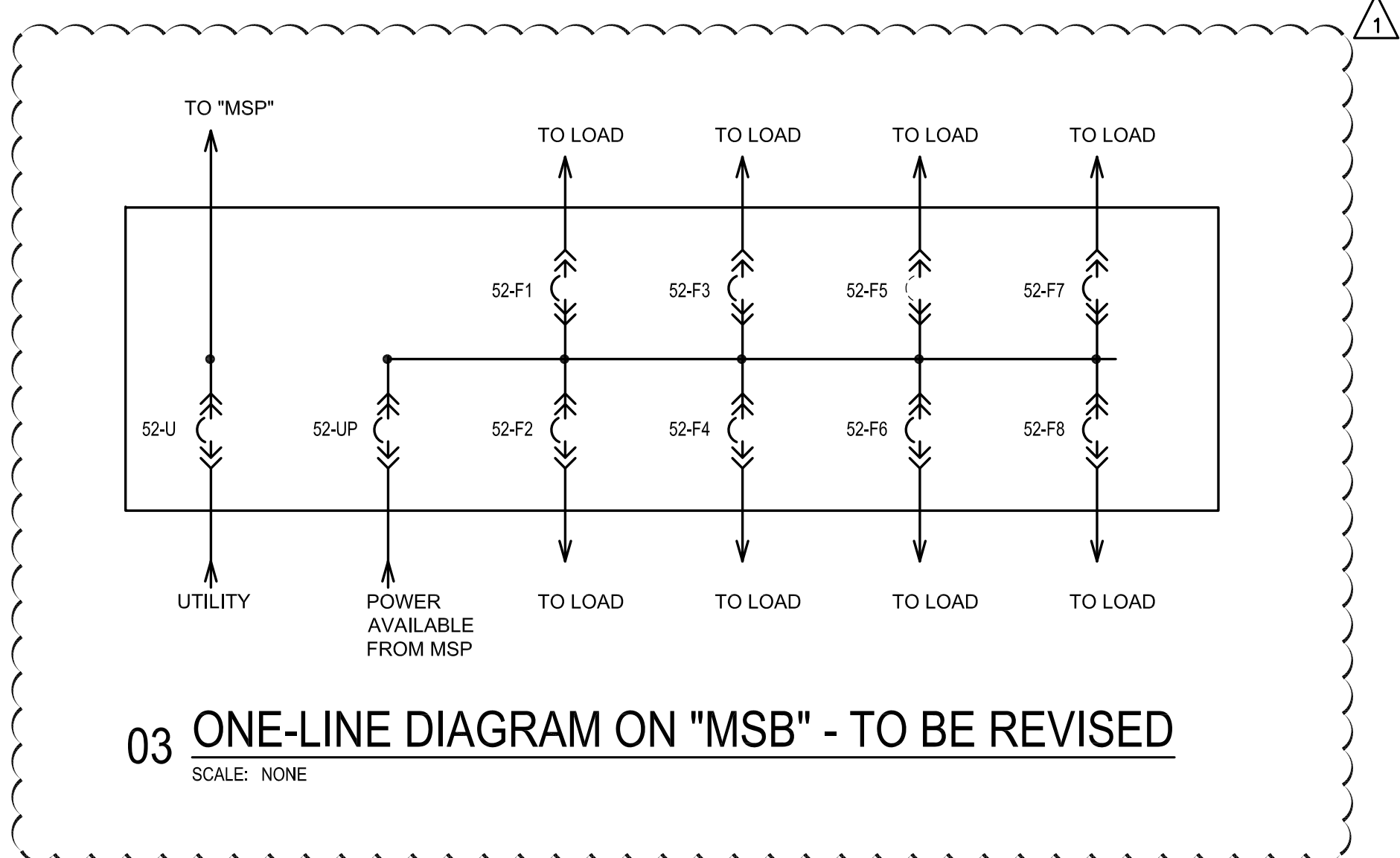
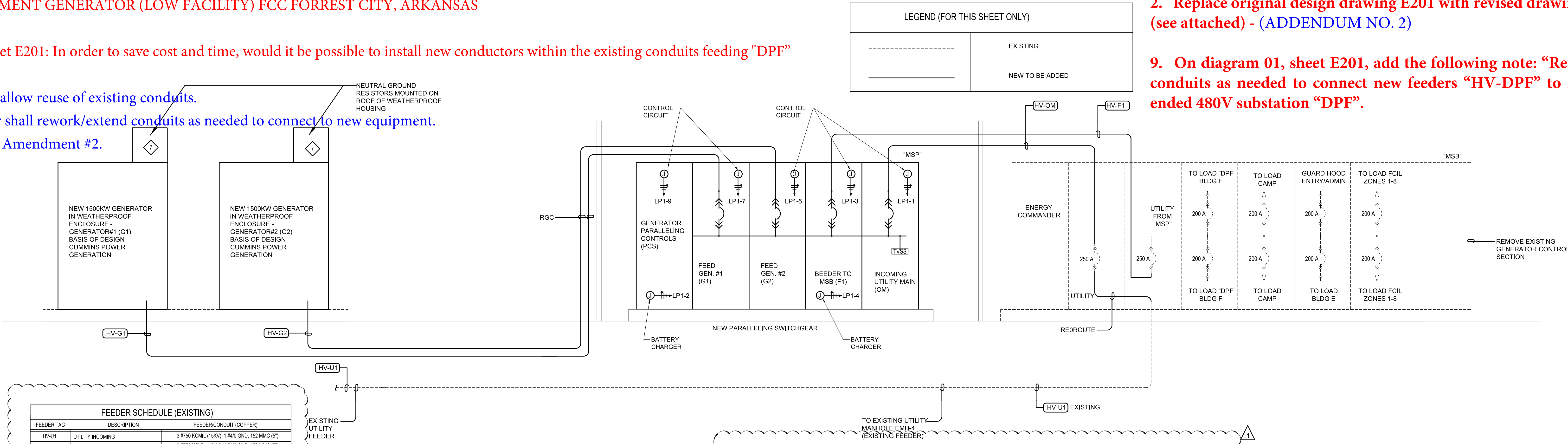


Question:
2. On sheet E201: In order to save cost and time, would it be possible to install new conductors within the existing conduits feeding "DPF"?

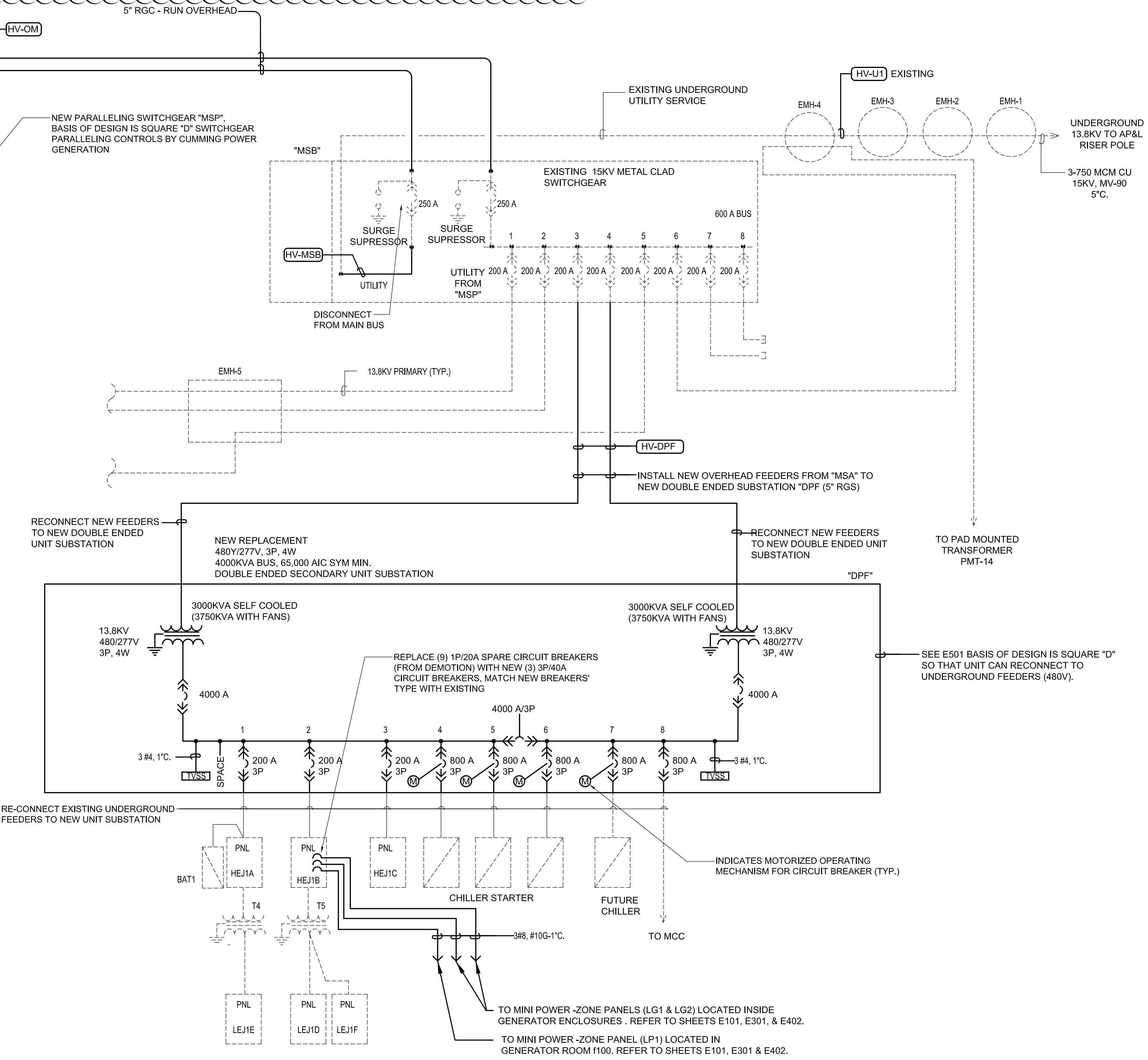
Response:
We would allow reuse of existing conduits.
Contractor shall rework/extend conduits as needed to connect to new equipment.
* Refer to Amendment #2.

SF-30 Block 14 Description of Amendment (continuation)
2. Replace original design drawing E201 with revised drawing E201 (see attached) - (ADDENDUM NO. 2)

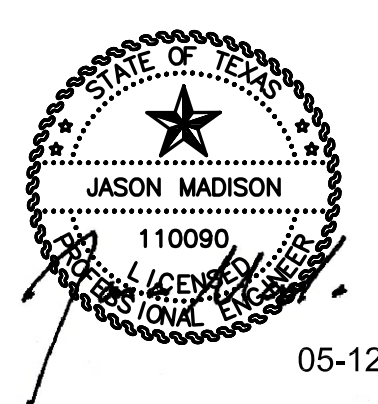
9. On diagram 01, sheet E201, add the following note: "Rework/extend conduits as needed to connect new feeders "HV-DPF" to new double-ended 480V substation "DPF".



02 PARTIAL ELECTRICAL RISER DIAGRAM (LOW PRISON) - NEW WORK



ISSUES	
1	05.12.2017 ISSUE FOR CONSTRUCTION
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REVISIONS	
1	07.16.2018 REVISE PRIMARY FEEDERS
	ADDENDUM NO. 2



REPLACE GENERATORS
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FACILITIES SECTION

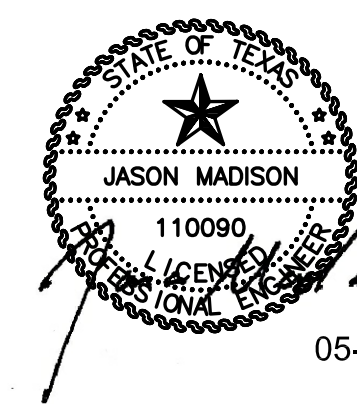
PROJECT #: 05081.06

SHEET TITLE:
PARTIAL ONE-LINE
DIAGRAM & RISER
DIAGRAM "LOW
PRISON" - ELECTRICAL
NEW WORK
SHEET #:

ISSUES

1	05.12.2017	ISSUE FOR CONSTRUCTION
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REVISIONS



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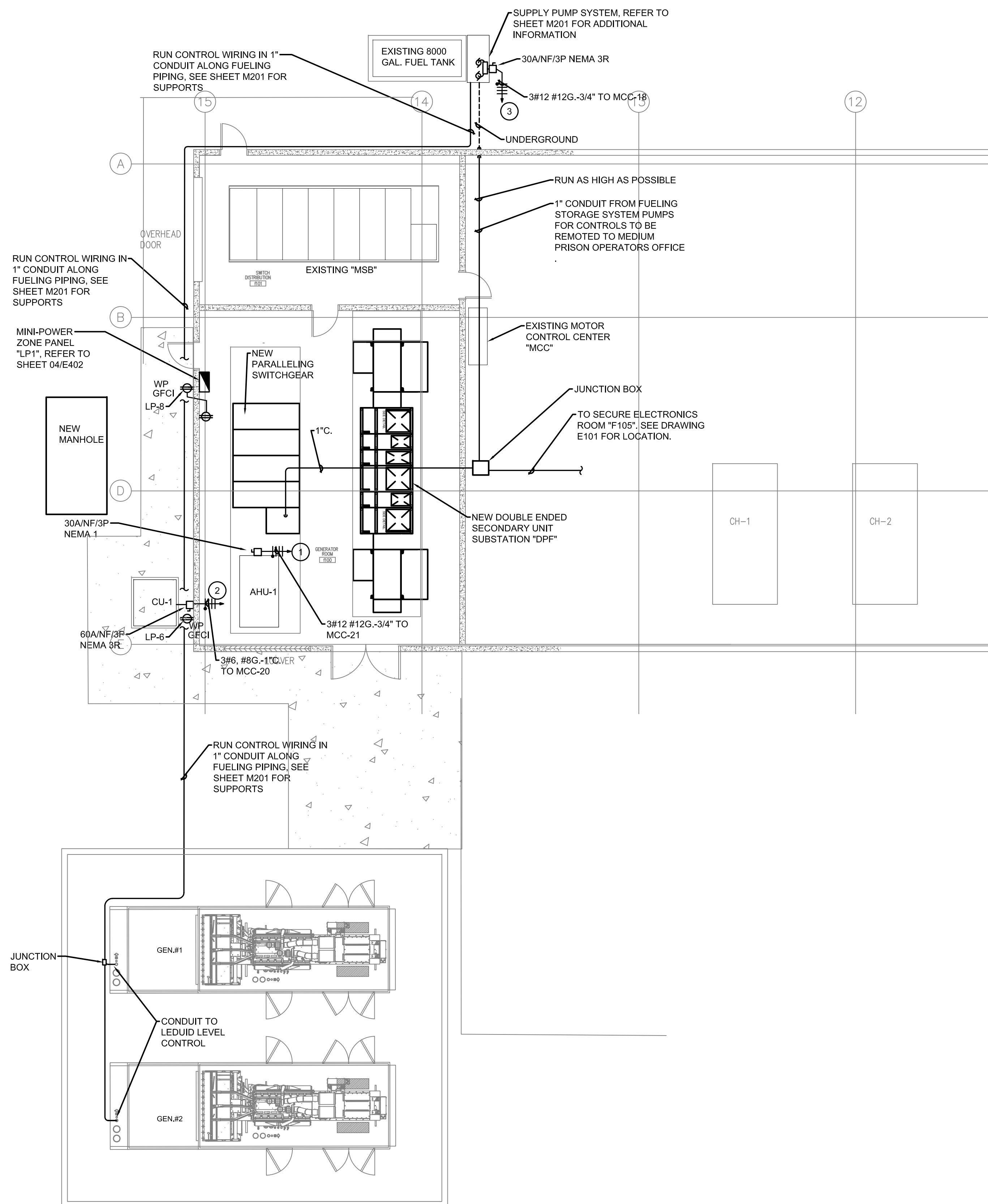


FEDERAL CORRECTION
INSTITUTION
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SOUTH CENTRAL REGION
FACILITIES SECTION

PROJECT #: 05081.06

SHEET TITLE:
SWITCH DISTRIBUTION
AND GENERATOR
ENCLOSURES (LOW
PRISON) FLOOR PLAN -
POWER AND CONTROLS
SHEET #:

E301

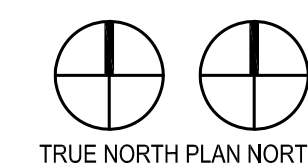


- GENERAL NOTES:**
1. UPDATE ALL EXISTING PANEL DIRECTORIES WHEN WORK IS COMPLETE.
 2. ALL EQUIPMENT AND WIRING NOT IN RENOVATED AREAS BUT AFFECTED BY WORK IN RENOVATED AREAS SHALL BE RECONNECTED AS NECESSARY FOR THE COMPLETE WORKING SYSTEM.
 3. WHERE REMOVAL OF EXISTING ELECTRICAL EQUIPMENT WILL RESULT IN OUTAGES IN AREA NOT TO BE DEMOLISHED, CONTRACTOR SHALL IMMEDIATELY RECONNECT THAT CIRCUIT OR RE-ESTABLISH SERVICE IN THE REMAINING PORTION OF THE CIRCUIT.
 4. THE ELECTRICAL CONTRACTOR SHALL TEMPORARY SUPPORT ALL ITEMS TO REMAIN THAT ARE AFFECTED BY THE DEMOLITION OF BUILDING STRUCTURE COMPONENTS (WALLS, CEILINGS, PARTITIONS, ETC). CONTRACTOR SHALL TEMPORARY SUPPORT ITEMS AND SHALL PROVIDE PERMANENT SUPPORTS WHEN FINALIZED STRUCTURES ARE IN PLACE.
 5. THE EXISTING FIRE ALARM SYSTEM SHALL REMAIN FULLY FUNCTIONAL DURING THE ENTIRE DEMOLITION AND CONSTRUCTION PERIOD.

- GENERAL NOTES BY SYMBOL:**
1. PROVIDE NEW BUCKET WITH 15A, 3P BREAKER IN EXISTING SQUARE "D" MOTOR CONTROL CENTER. (VINTAGE 1994).
 2. PROVIDE NEW BUCKET WITH 60A, 3P BREAKER AND NEMA SIZE 1 STARTER IN EXISTING SQUARE "D" MOTOR CONTROL CENTER. (VINTAGE 1994).
 3. PROVIDE NEW BUCKET WITH 15A, 3P BREAKER IN EXISTING SQUARE "D" MOTOR CONTROL CENTER. (VINTAGE 1994).

01 SWITCH DISTRIBUTION AND GENERATOR ENCLOSURES (LOW PRISON) FLOOR PLAN - POWER AND CONTROLS
SCALE: 1" = 1/8"=0"

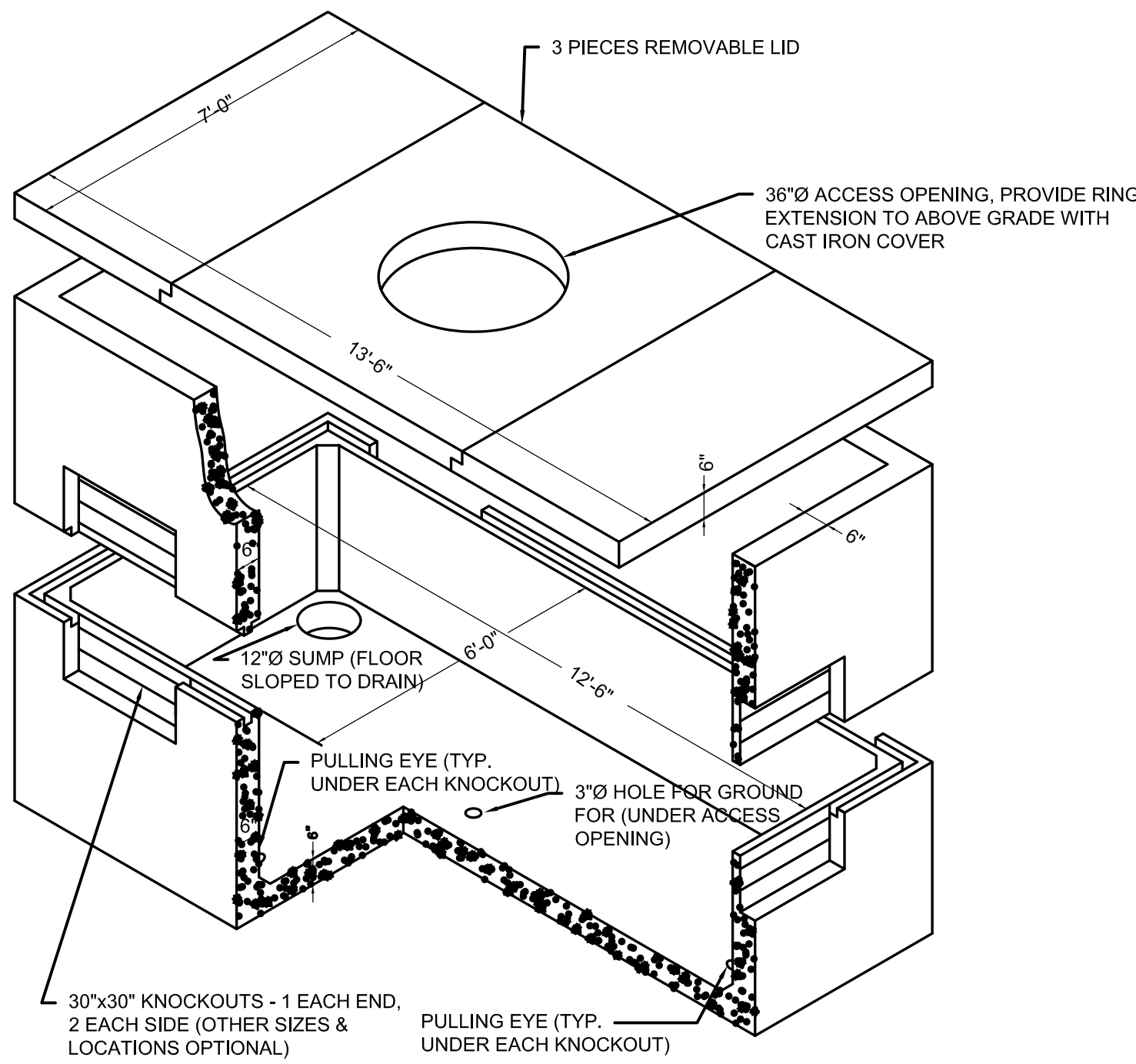
(HVAC AND FUELING SYSTEM)



TRUE NORTH PLAN NORTH

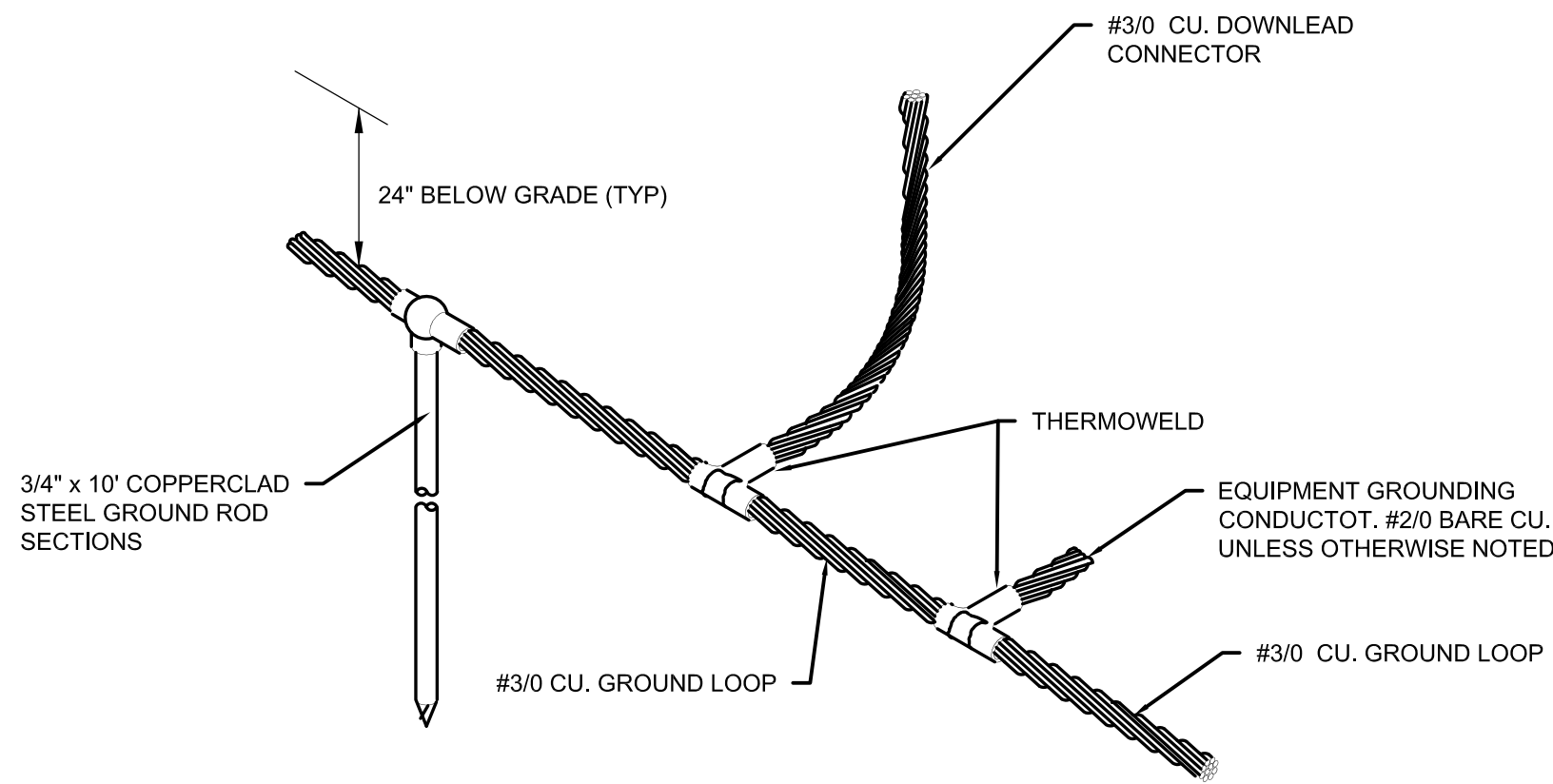
GENERAL NOTES:

- INTERIOR DIMENSIONS: 6'-0" WIDE x 12'-6" LONG x 7'-0" HEADROOM.
APPROX. WEIGHTS: LID = 7,100 LBS.
TOP RING = 10,200 LBS.
BOTTOM RING = 17,300 LBS.
- MINIMUM EXCAVATION 15'-0" x 9'-0" x DEPTH TO SUIT.
- ACCESSORIES:
 - LADDER, HOT-DIPPED GALVANIZED STEEL
 - CABLE-SUPPORT CHANNELS, HOT-DIPPED GALVANIZED STEEL, EMBEDDED IN MANHOLE WALLS, 4" ON CENTER
 - CABLE SUPPORT BRACKETS, HOT-DIPPED GALVANIZED
 - CABLE SUPPORT SADDLES, PORCELAIN
 - MANHOLE RING AND COVER, CAST IRON, CLASSIFIED AS HEAVY DUTY AND RATED 16,000 POUND WHEEL LOADS, MARKED "ELECTRIC"
- CONCRETE: 4000 PSI MINIMUM COMPRESSIVE STRENGTH.
- REINFORCING: PER ASTM C478-02 USING GRADE 40 STEEL BARS. SPLICES IN REINFORCING SHALL BE WELDED OR LAPPED AT LEAST 40 DIAMETERS.
- STRENGTH: PER AASHTO H-20 LIVE WHEEL LOAD PLUS DEAD LOAD.
- DRAINAGE: PROVIDE DRAIN ROCK SUMP 2'-0" DEEP, 3'-0" DIAMETER CENTERED BENEATH SUMP HOLE.
- SEALING: APPLY SEALING MASTIC TO JOINTS AND BETWEEN MANHOLE RING AND TOP OF MANHOLE.
- GROUND ROD: 3/4"x8'-0" COPPERWELD.



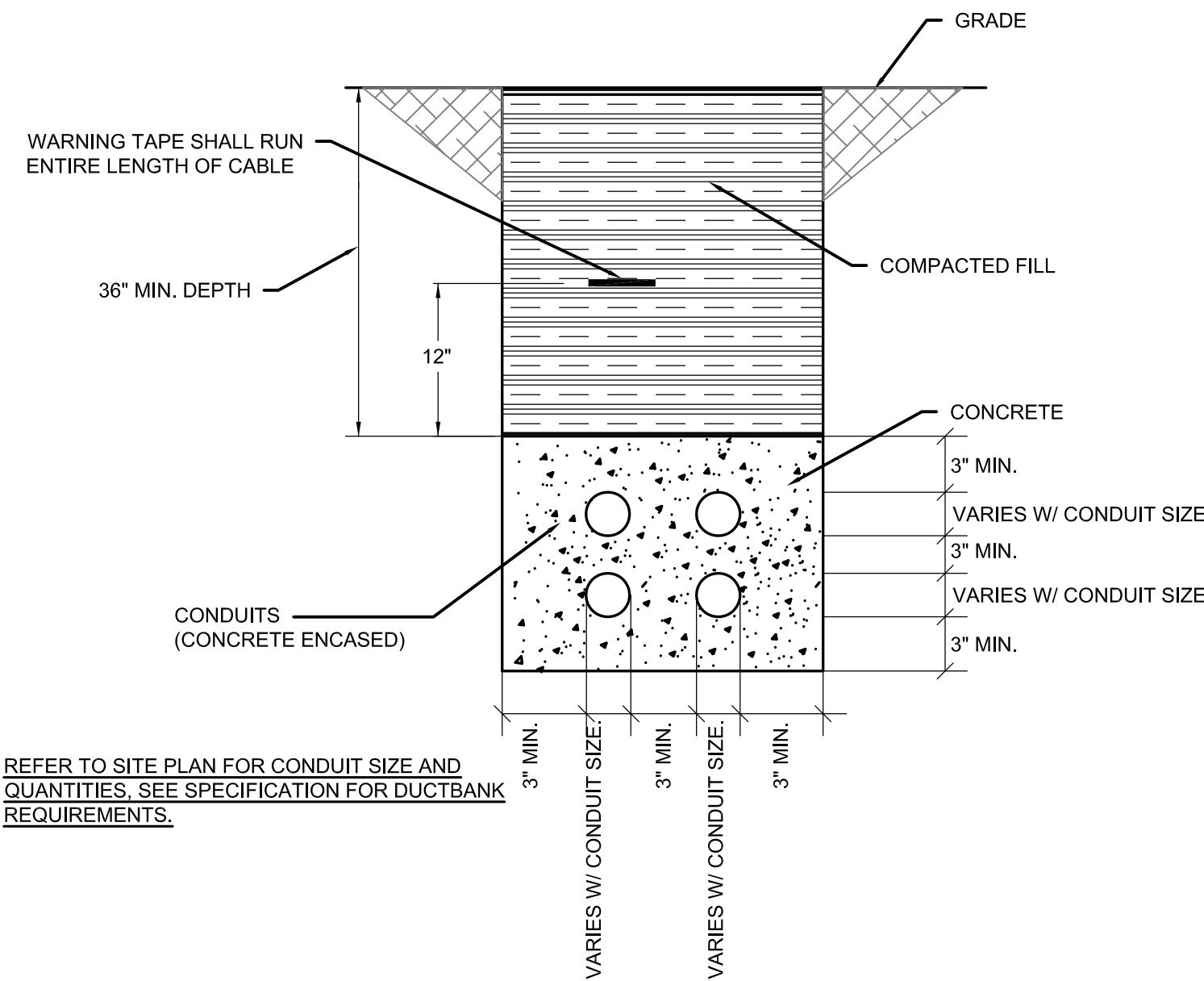
06 TYPICAL MANHOLE DETAIL

SCALE: NONE



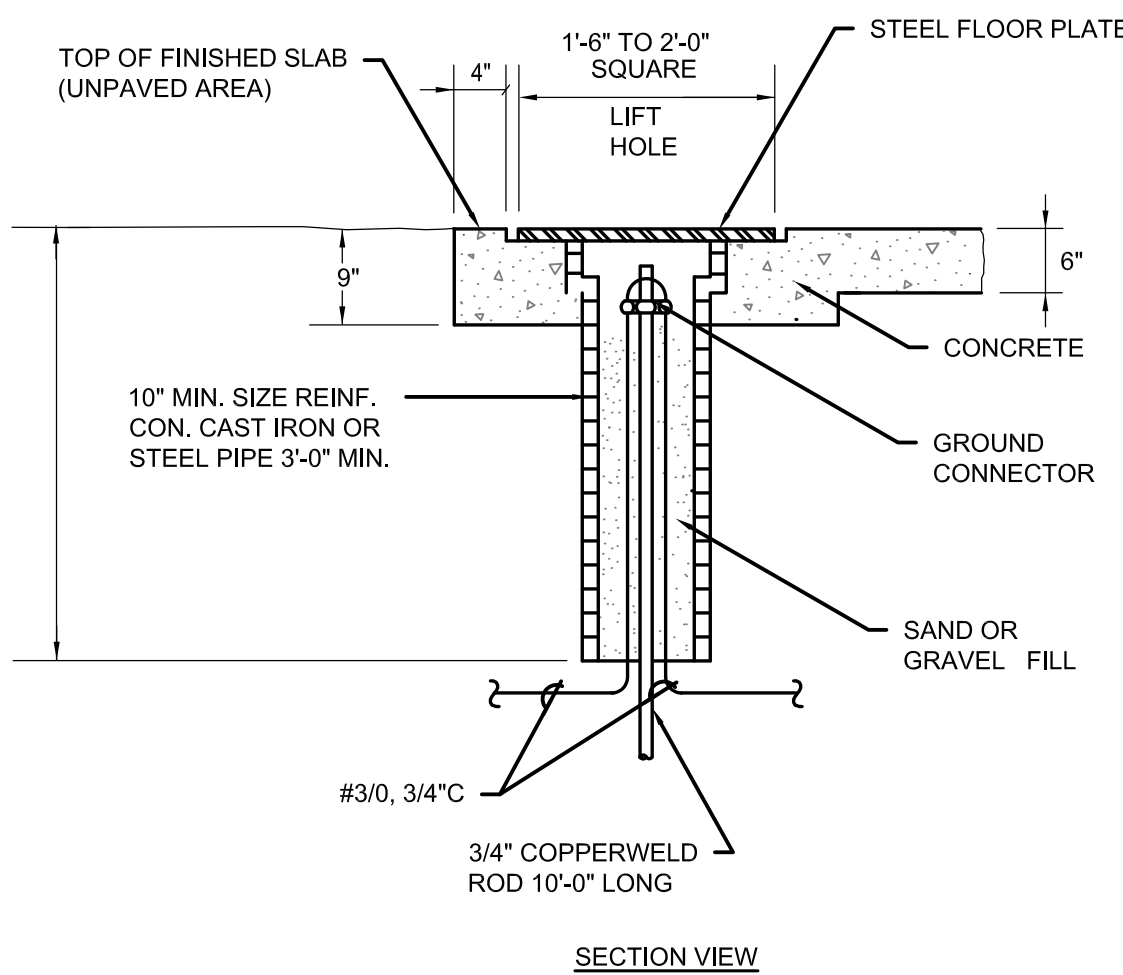
03 GROUND LOOP DETAIL

SCALE: NONE



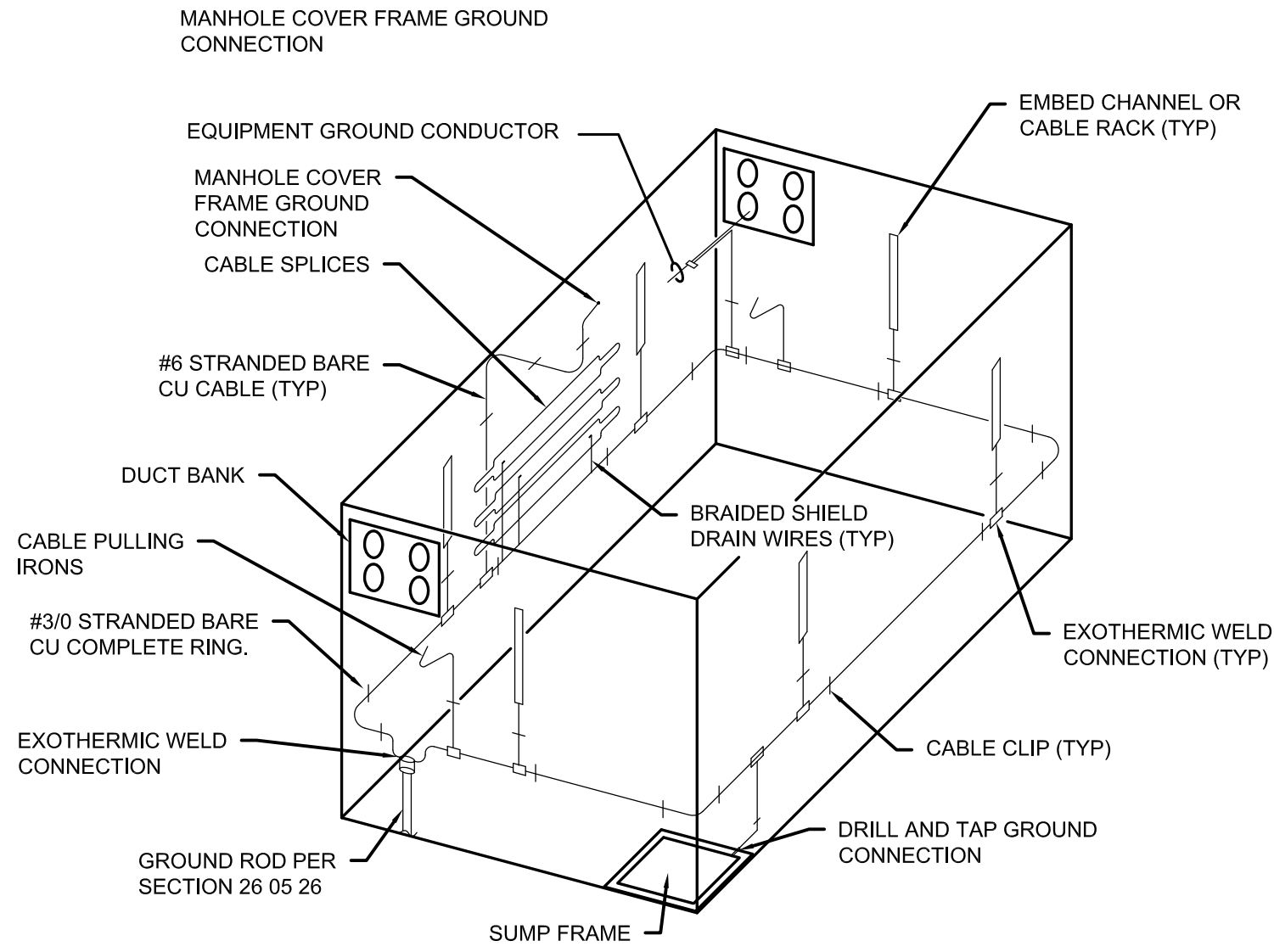
05 TYPICAL DUCT BANK DETAIL

SCALE: NONE



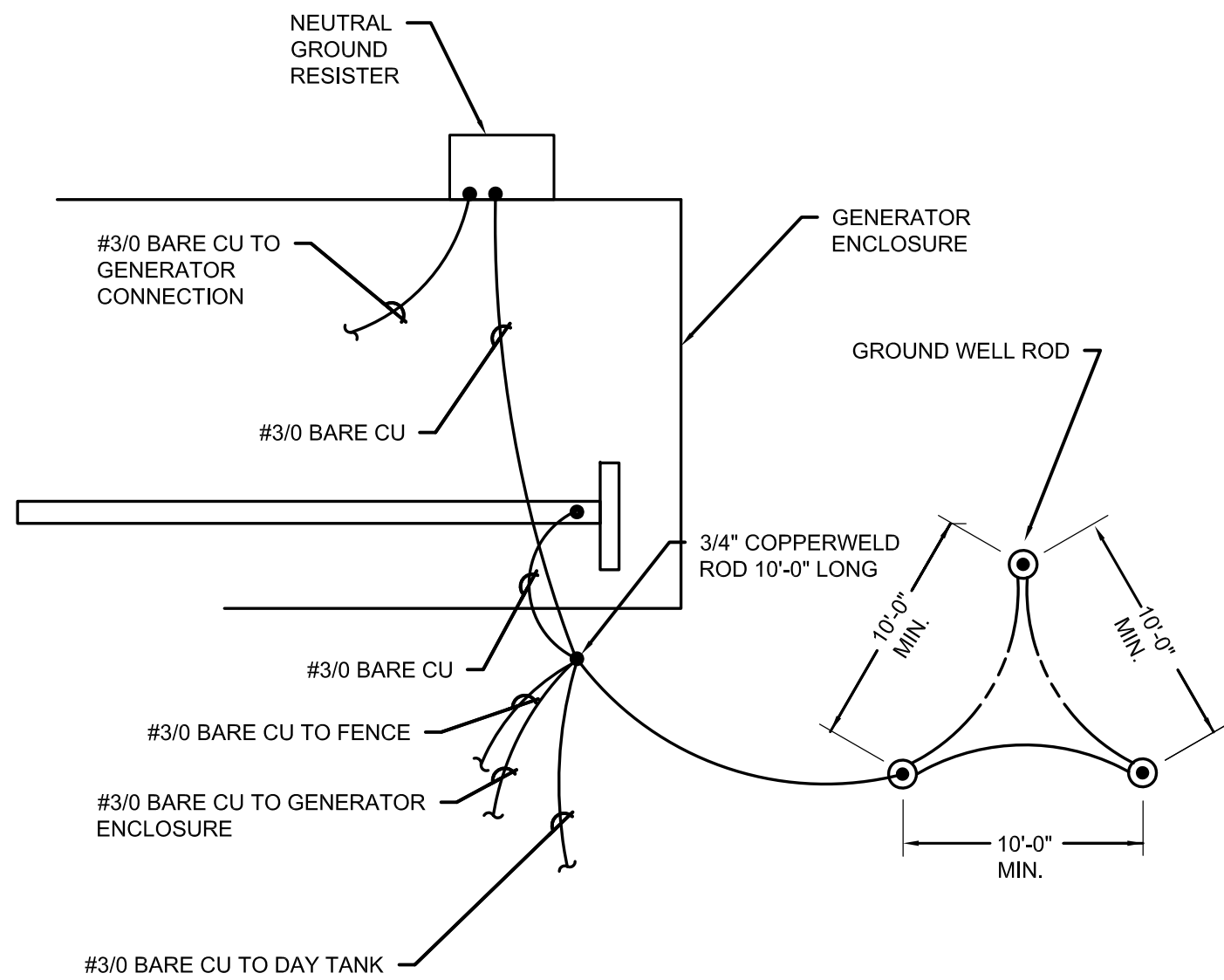
TYPICAL GROUND TEST WELL INSTALLATION DETAIL

SCALE: NONE



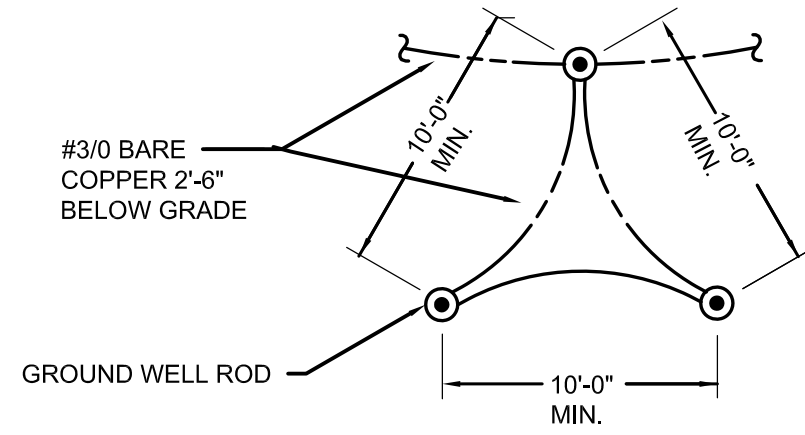
07 MANHOLE GROUNDING DETAIL

SCALE: NONE



04 GENERATOR GROUNDING CONNECTIONS DETAIL

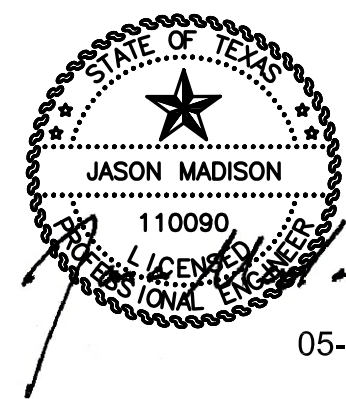
SCALE: NONE



01 TRIAD ARRAY INSTALLATION DETAIL

SCALE: NONE

ISSUES	
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JUSTICE BUREAU OF
PRISONS
SOUTH CENTRAL REGION
FACILITIES SECTION

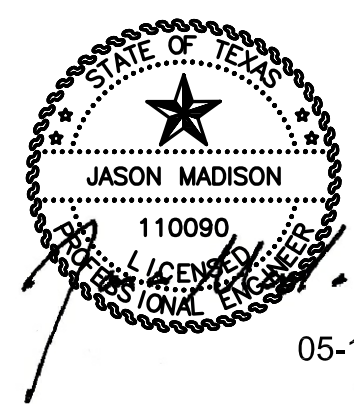
PROJECT #: 05081.06

SHEET TITLE:
ELECTRICAL
DETAILS

SHEET #:

E401

ISSUES	
1	05.12.2017 ISSUE FOR CONSTRUCTION
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FACILITIES SECTION

PROJECT #: 05081.06

SHEET TITLE:
GENERATOR LAYOUT,
ELECTRICAL PANEL
SCHEDULES, RISER
DIAGRAM & DETAILS

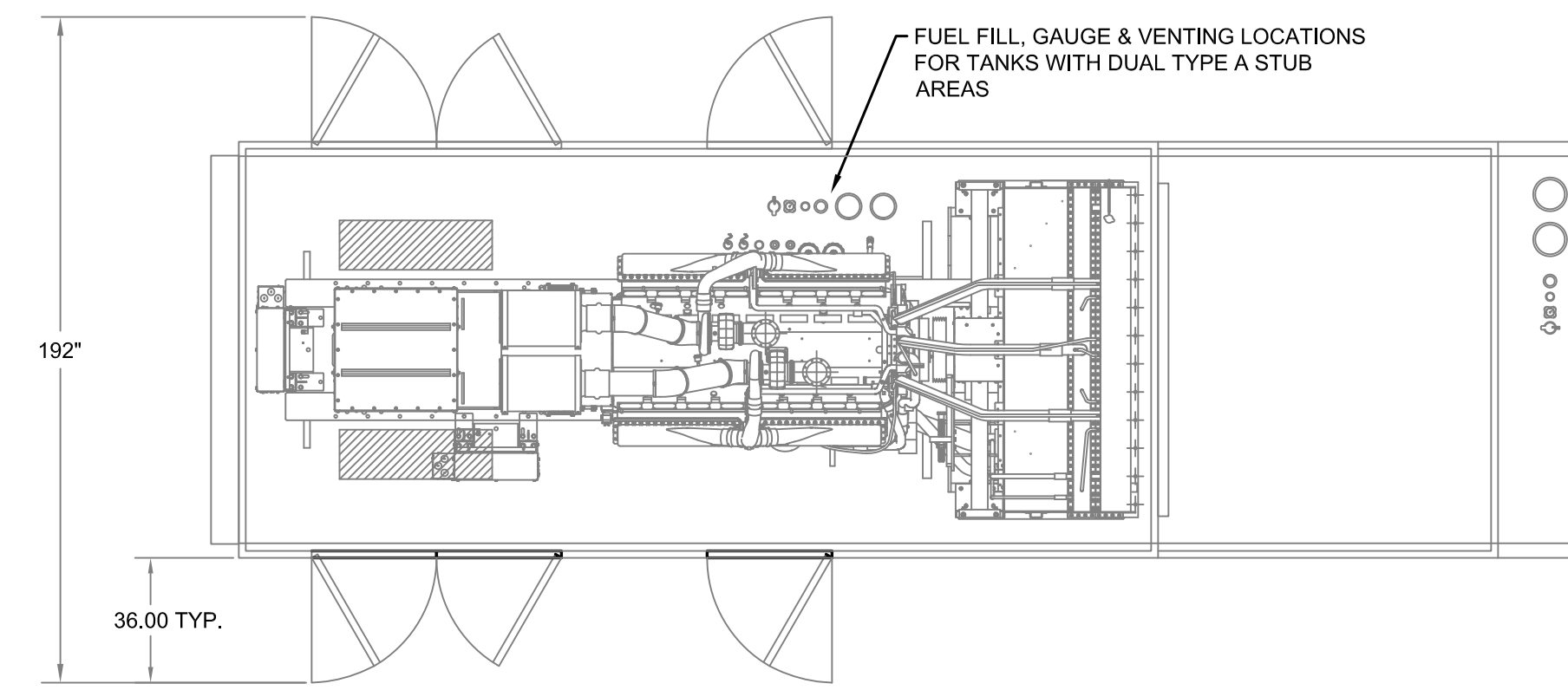
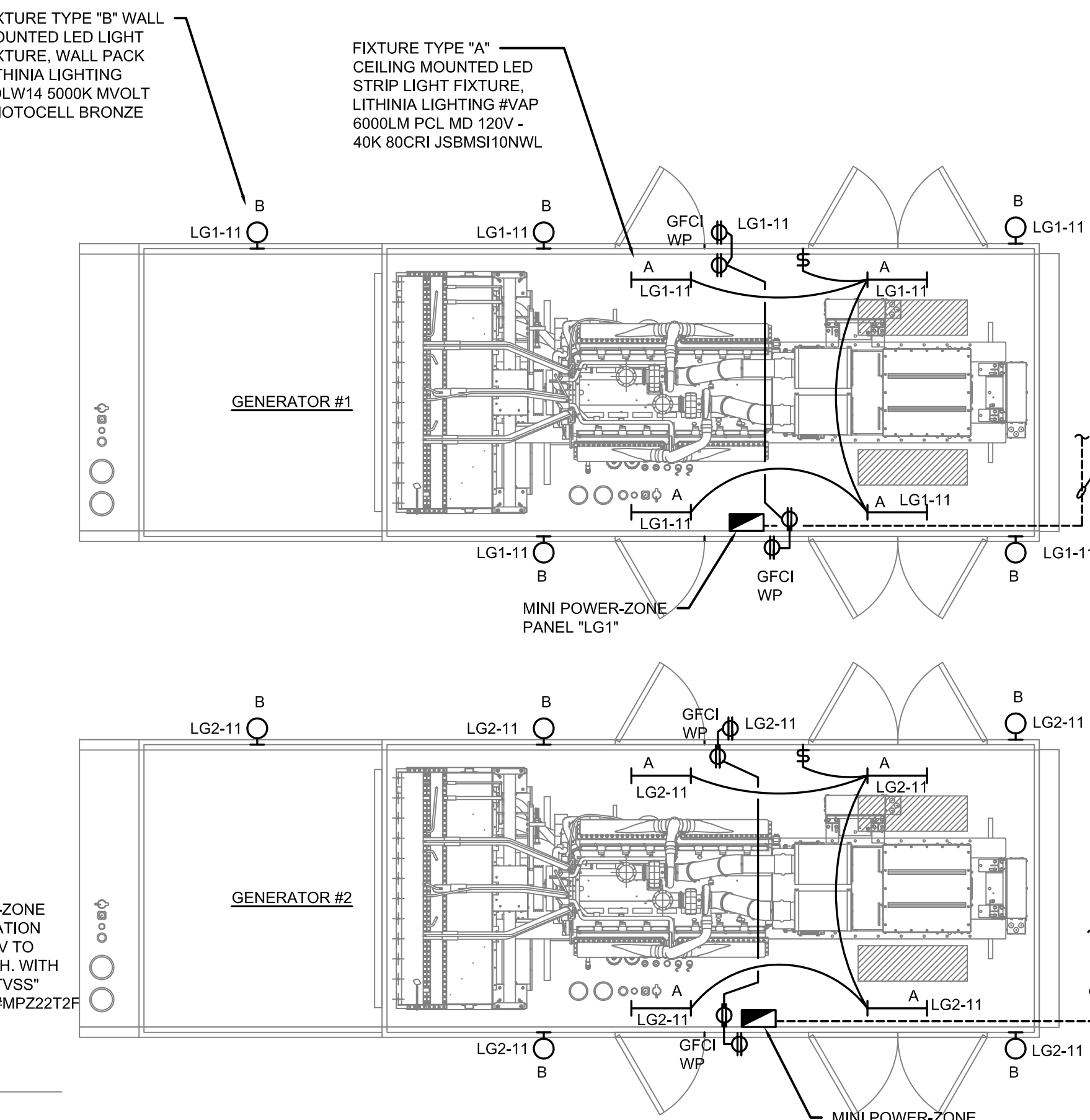
SHEET #:

E402

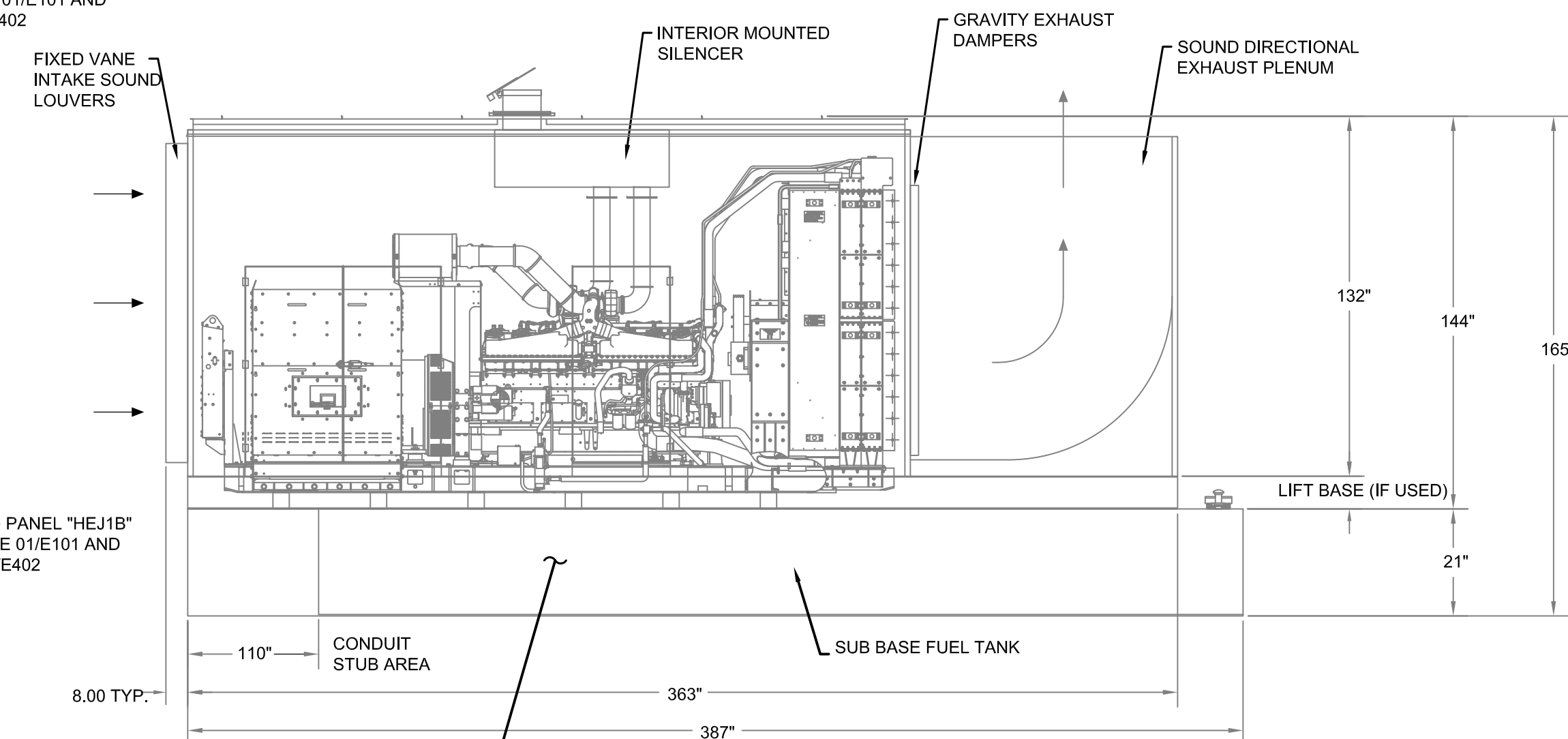
PANELBOARD SCHEDULE														PANEL NAME: LG1											
MAIN SIZE: 70 A		MAIN TYPE: MCB		MOUNTING: SURFACE		VOLTAGE: 208 /120V 3PH/4W		LOAD (KVA)		AMPS		DESCRIPTION													
AIC RATING: 10,000																									
DESCRIPTION		AMPS		LOAD (KVA)		MISC		MISC		KITCH		HEAT		MTR		RCPT		LTG		POLE		DESCRIPTION			
1	COOLANT HEATER	60/2																				20/1 SPARE			
3																						20/1 SPARE			
5	RECEPTACLES	20/1		1.20																		20/1 BATTERY CHARGER			
7	SPARE	20/1																				20/1 SPARE			
9	SPARE	20/1																				20/1 SPARE			
11	LIGHTS	20/1		0.50																		20/1 ALTERNATE. HEATER			
13		20/1																				20/1			
15		20/1																				20/1			
17		20/1																				20/1			
19		20/1																				20/1			
21		20/1																				20/1			
23		20/1																				20/1			
TOTAL AMPS:		44.1		0.00		1.70		0.00		0.00		0.00		0.00		10.00									
REMARKS:		INSTALL EXTERNAL "TVSS"																							

PANELBOARD SCHEDULE														PANEL NAME: LG2									
MAIN SIZE: 70 A		MAIN TYPE: MCB		MOUNTING: SURFACE		VOLTAGE: 208 /120V 3PH,4W		LOAD (KVA)		AMPS		DESCRIPTION											
AIC RATING: 10,000																							
DESCRIPTION		AMPS	LOAD (KVA)					LOAD (KVA)		AMPS		DESCRIPTION											
		POLE	LTG	RCPT	MTR	HEAT	KITCH	MISC	MISC	KITCH	HEAT	MTR	RCPT	LTG	POLE								
1	COOLANT HEATER	60/2						5.00	1	A	2				20/1	SPARE	2						
3								5.00	3	B	4				20/1	SPARE	4						
5	RECEPTACLES	20/1		1.20					5	C	6	0.90			20/1	BATTERY CHARGER	6						
7	SPARE	20/1							7	A	8				20/1	SPARE	8						
9	SPARE	20/1							9	B	10				20/1	SPARE	10						
11	LIGHTS	20/1	0.50						11	C	12	0.30			20/1	ALTERNATE. HEATER	12						
13		20/1							13	A	14				20/1		14						
15		20/1							15	B	16				20/1		16						
17		20/1							17	C	18				20/1		18						
19		20/1							19	A	20				20/1		20						
21		20/1							21	B	22				20/1		22						
23		20/1							23	C	24				20/1		24						
TOTAL AMPS:		44.5	0.50	1.20	0.00	0.00	0.00	10.00															
REMARKS:		INSTALL EXTERNAL "TVSS"																					

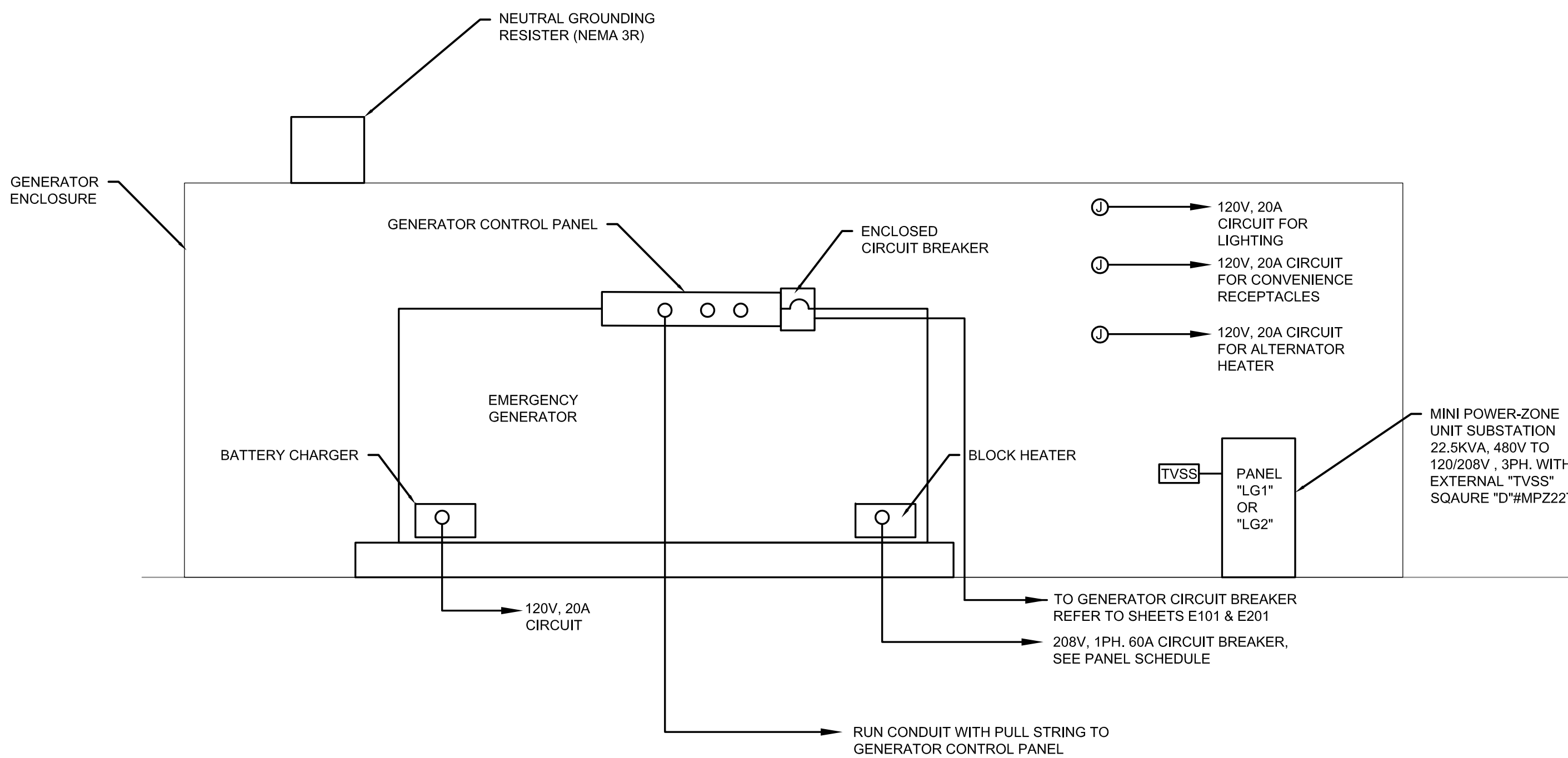
PANELBOARD SCHEDULE														PANEL NAME: LP1									
MAIN SIZE: 70 A		MAIN TYPE: MCB		MOUNTING: SURFACE		VOLTAGE: 208 /120V 3PH,4W		LOAD (KVA)		AMPS		DESCRIPTION		MAIN SIZE: 70 A		MAIN TYPE: MCB		MOUNTING: SURFACE		VOLTAGE: 208 /120V 3PH,4W		LOAD (KVA)	
AIC RATING: 10,000																							
DESCRIPTION	POLE	LTG	RCPT	MTR	HEAT	KITCH	MISC	1	A	2		DESCRIPTION	POLE	1	A	2		DESCRIPTION	POLE	1	A	2	
1 CONTROL CKT	60/2						0.20	1	A	2	0.90	2 BATTERY CHARGER	20/1	3	B	4	0.90	3 BATTERY CHARGER	20/1	5	C	6	
3 CONTROL CKT	20/1						0.20	3	B	4	0.90	4	20/1	5	C	6		4	20/1	7	A	8	
5 CONTROL CKT	20/1						0.20	5	C	6		6 RECEPTACLES	20/1	7	A	8	0.38	6	20/1	9	B	10	
7 CONTROL CKT	20/1						0.20	7	A	8		8	20/1	9	B	10		8	20/1	11	C	12	
9 SPARE	20/1							9	B	10		10 SPARE	20/1	11	C	12		10	20/1	13	A	14	
11 SPARE	20/1							11	C	12		12 SPARE	20/1	13	A	14		12	20/1	15	B	16	
13	20/1							13	A	14		14	20/1	15	B	16		14	20/1	17	C	18	
15	20/1							15	B	16		16	20/1	17	C	18		16	20/1	19	A	20	
17	20/1							17	C	18		18	20/1	19	A	20		18	20/1	21	B	22	
19	20/1							19	A	20		20	20/1	21	B	22		20	20/1	23	C	24	
21	20/1							21	B	22		22	20/1	23	C	24		22	20/1				
23	20/1							23	C	24		24	20/1					24	20/1				
TOTAL AMPS:	14.3	0.00	0.00	0.00	0.00	0.00	0.80																
REMARKS:	INSTALL EXTERNAL "TVSS"																						



FLOOR PLAN



ELEVATION



03 EMERGENCY GENERATOR DETAIL
SCALE: NONE
(TYPICAL FOR BOTH "LG1" & "LG2")

02 GENERATOR ELECTRICAL LAYOUTS
SCALE: NONE

01 GENERATOR DETAIL
SCALE: NONE
NOTE:
BASIS OF DESIGN CUMMINGS POWER
GENERATION, DOGAS IN FREEMAN
ENCLOSURE WITH VERTICAL DISCHARGE,
60 HERTZ, DIESEL 660 GALLON BASE TANK,
1500KW, STANDBY RATING, 13,800 VOLT
OUTPUT.

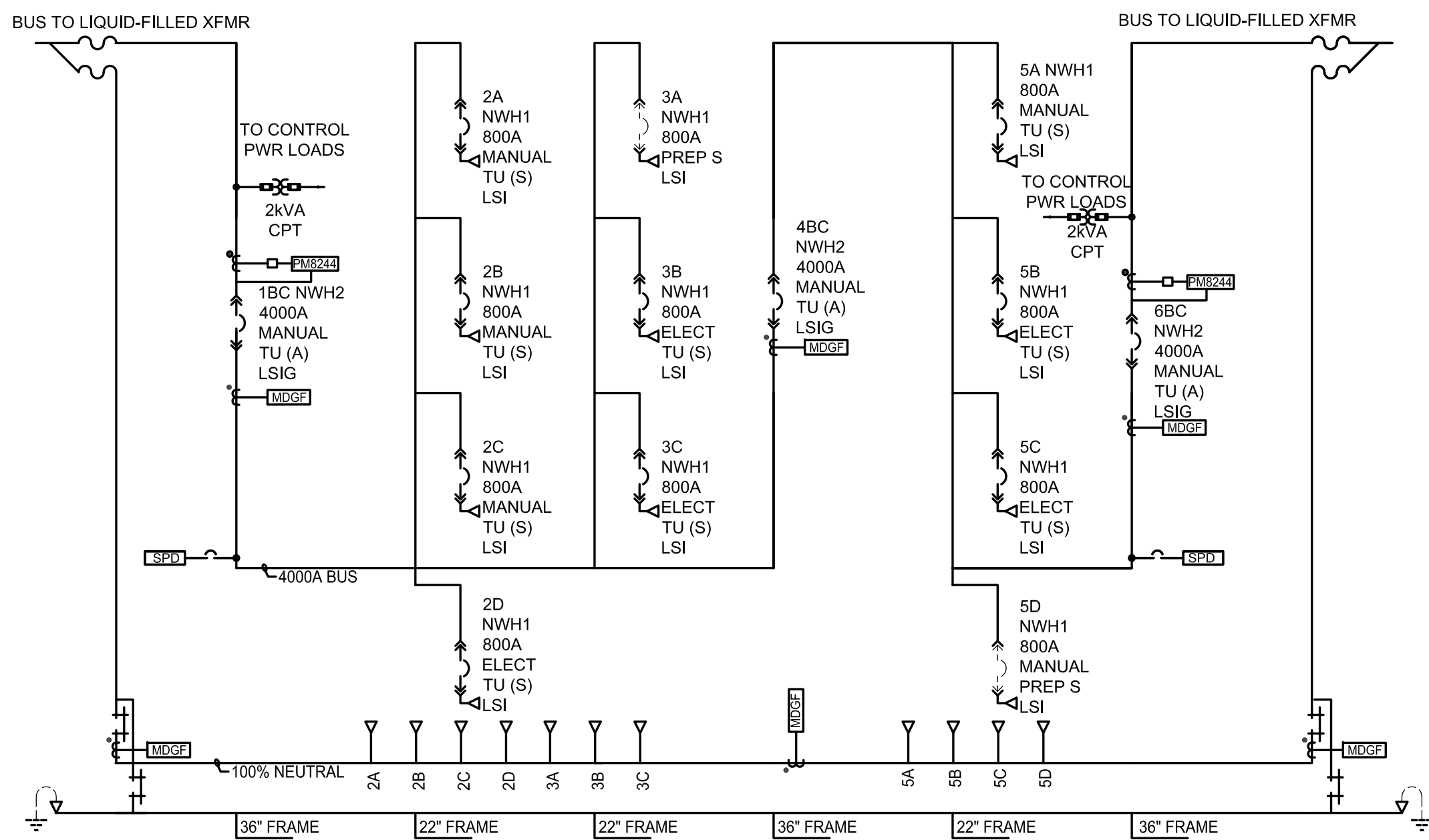
ABBREVIATIONS (THIS SHEET ONLY)	
DV-DRAIN VALVE	
FP-FILL PLUG	
GP-GROUND PADS (2) -50-13 TAPS 1 FRONT AND REAR	
HV-HIGH VOLTAGE	
LH-LIFTING HOOKS	
LL-LIQUID LEVEL GAUGE	
LV-LOW VOLTAGE	
NP-NAMEPLATE	
PV-PRESSURE VACUUM GAUGE	
RV-PRESSURE RELIEF VALVE	
TC-TAP CHANGER (PADLOCKING PROVISION)	
TM-THERMOMETER	
TV-PRESSURE TEST VALVE	
RA-RADIATORS	
TB-TERMINAL BOX	
RD-PRESSURE RELIEF DEVICE	

TRANSFORMER RATING	
KVA:	3000KVA
PRIMARY VOLTAGE:	13800 Delta
HW BASIC IMPULSE LEVEL (KV):	95 KV
SECONDARY VOLTAGE:	480V/277V
LV BASIC IMPULSE LEVEL (KV):	30 KV BIL
PRIMARY CONDUCTOR:	Copper Windings
SECONDARY CONDUCTOR:	Copper Windings
TAPS:	2-2.5% FCAN 2-2.5% FCBN
IMPEDANCE:	5.75 Nominal +/- 7.5%
TEMPERATURE RISE:	65 C
INSULATION CLASS:	Liquid Filled 120 Degrees
UL LISTING:	Yes
SEISMIC SDS:	Not Required
DESIGN EFFICIENCY:	Standard Design
GALLONS:	912 GALLONS
FLUID:	LESS FLAMMABLE SEED OILF

TRANSFORMERS / SW GEAR INFO.	
LEFT TRANSFORMER: CORE AND COILS 9816 LB / 3099 KG ENCLOSURE 11605 LB / 5275 KG TOTAL 18421 LB / 8374 KG	
SECONDARY SWITCHGEAR: Ship Split 1 4170.00 LBS / 1891.48 KGS Ship Split 2 4060.00 LBS / 1841.59 KGS Ship Split 3 4170.00 LBS / 1891.48 KGS	
RIGHT TRANSFORMER: CORE AND COILS 6816 LB / 3099 KG ENCLOSURE 11605 LB / 5275 KG TOTAL 18421 LB / 8374 KG	

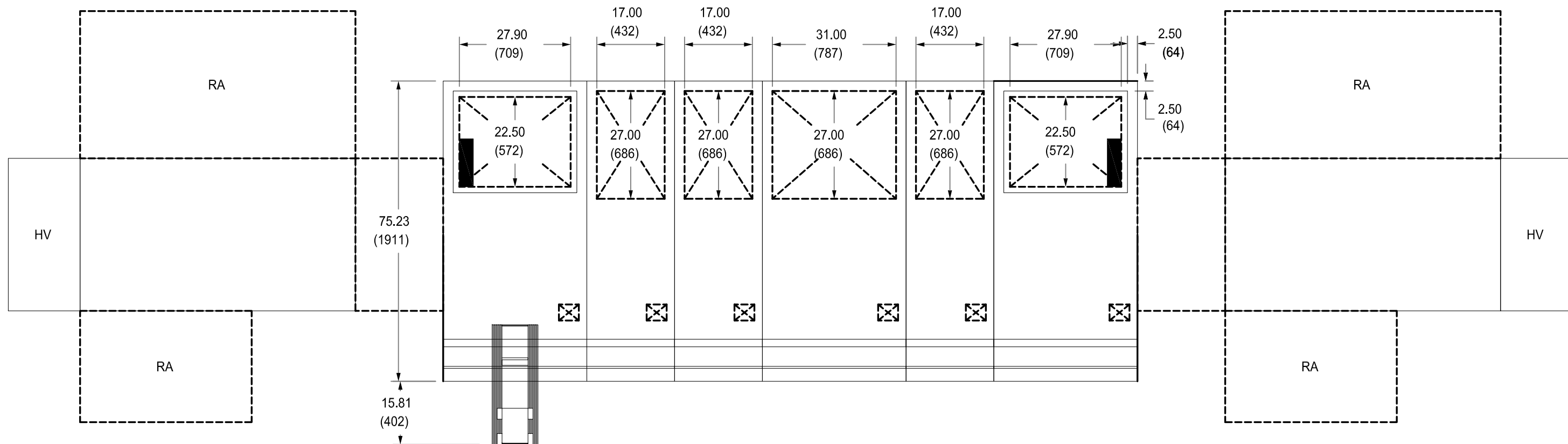
POWER-ZONE 4 SWITCHGEAR - MASTERPACT POWER CIRCUIT BREAKER TABLE																		
CELL NO	BREAKER DESIGNATION	BKR TYPE	BKR OPER	BREAKER TRIP UNIT	FRAME SIZE	SENSOR PLUG	TRIP SETTING	RATING PLUG	BKR AIC	TRIP PARAM	LUGS PER PHASE: MECHANICAL						BREAKER AND CRADLE ACCESSORIES (NON STANDARD)	
											QTY	A,B,C + SIZE	QTY	NEUT SIZE	QTY	GND SIZE		
1BC	MAIN 1	NWH2	MANUAL	AMMETER	4000A	4000A	4000A	A	85KA	LSIG	-	Transformer-In	1	3/0 - 750kcmil	-	-	MCT, K, PL	
2A	PANEL "HEJ1A"	NWH1	MANUAL	STANDARD	800A	250A	200A	A	65KA	LSI	1	3/0 - 750kcmil	1	3/0 - 750kcmil	-	-	PL	
2B	PANEL "HEJ1B"	NWH1	MANUAL	STANDARD	800A	250A	200A	A	65KA	LSI	1	3/0 - 750kcmil	3	3/0 - 750kcmil	-	-	PL	
2C	PANEL "HEJ1C"	NWH1	MANUAL	STANDARD	800A	250A	200A	A	65KA	LSI	3	3/0 - 750kcmil	3	3/0 - 750kcmil	-	-	PL	
2D	SPARE	NWH1	ELECT	STANDARD	800A	800A	800A	A	65KA	LSI	3	3/0 - 750kcmil	3	3/0 - 750kcmil	-	-	MCH, MX1, XF, PL	
3A	SPACE	(NWH1)	-----	(PREP SPACE)	800A	-----	-----	-	65KA	(LSI)	3	3/0 - 750kcmil	3	3/0 - 750kcmil	-	-		
3B	CHILLER STARTER	NWH1	ELECT	STANDARD	800A	800A	640A	A	65KA	LSI	2	3/0 - 750kcmil	2	3/0 - 750kcmil	-	-	MCH, MX1, XF, PL	
3C	CHILLER STARTER	NWH1	ELECT	STANDARD	800A	800A	640A	A	65KA	LSI	2	3/0 - 750kcmil	2	3/0 - 750kcmil	-	-	MCH, MX1, XF, PL	
4BC	TIE	NWH2	MANUAL	AMMETER	4000A	4000A	4000A	A	85KA	LSIG	-	Tie	-	-	-	-	K, PL	
5A	MCC	NWH1	MANUAL	STANDARD	800A	800A	800A	A	65KA	LSI	3	3/0 - 750kcmil	3	3/0 - 750kcmil	-	-	PL	
5B	CHILLER STARTER	NWH1	ELECT	STANDARD	800A	250A	200A	A	65KA	LSI	1	3/0 - 750kcmil	1	3/0 - 750kcmil	-	-	MCH, MX1, XF, PL	
5C	FUTURE CHILLER STARTER	NWH1	ELECT	STANDARD	800A	250A	200A	A	65KA	LSI	1	3/0 - 750kcmil	1	3/0 - 750kcmil	-	-	MCH, MX1, XF, PL	
5D	SPACE	(NWH1)	-----	(PREP SPACE)	800A	-----	-----	-	65KA	(LSI)	3	3/0 - 750kcmil	3	3/0 - 750kcmil	-	-		
6BC	MAIN 2	NWH2	MANUAL	AMMETER	4000A	4000A	4000A	A	85KA	LSIG	-	Transformer-In	-	-	-	1	3/0 - 750kcmil	MCT, K, PL

LEGEND (ACCESSORIES)	
OF4 AUX CONTACTS - TYPE NW & NT (STD)	MX1 SHUNT TRIP
UC1 ZSI SECONDARIES (STD)	XF SHUNT CLOSE
UC2 MODIFIED DIFFERENTIAL GROUND FAULT (STD)	MC SPRING CHARGING MOTOR
UC3 24VDC POWER SUPPLY (STD)	MX1C SHUNT TRIP WITH COMMS
SDE1 ELECTRICAL FAULT ALARM CONTACT (STD)	XFC SHUNT CLOSE WITH COMMS
CPL CRADLE PADLOCK ATTACHMENT	PF READY TO CLOSE CONTACT
NON-STANDARD ACCESSORIES	
CE(X) CONNECTED CELL SWITCHES (X=QTY)	EF(X) CONNECTED AND CLOSED SWITCHES (X=QTY)
CT(X) TEST CELL SWITCHES (X=NUMBER OF)	SH(X) SHUTTERS (P=POSITION, L=LOCK PROVISION)
CD(X) DISCONNECTED CELL SWITCHES (X=QTY)	MCT METERING CT
COM COMMUNICATION or ERMIS or FDM	PBL PUSH BUTTON INTERLOCK COVER
M2C 2 PROGRAMMABLE CONTACT MODULE	AR AUTOMATIC RESET
M6C 6 PROGRAMMABLE CONTACT MODULE	CDM OPERATIONS COUNTER
SDE2 ADDITIONAL ELECTRICAL FAULT ALARM CONTACT	PL PADLOCK ATTACHMENT (REQD FOR KEYLOCK)
RES ELECTRICAL RESET	K KEY INTERLOCK
MN UNDERVOLTAGE TRIP	CK CRADLE KEY INTERLOCK
MX2 SHUNT TRIP	UC4 EXTERNAL VOLTAGE INPUTS
	FDM FRONT DISPLAY MODULE

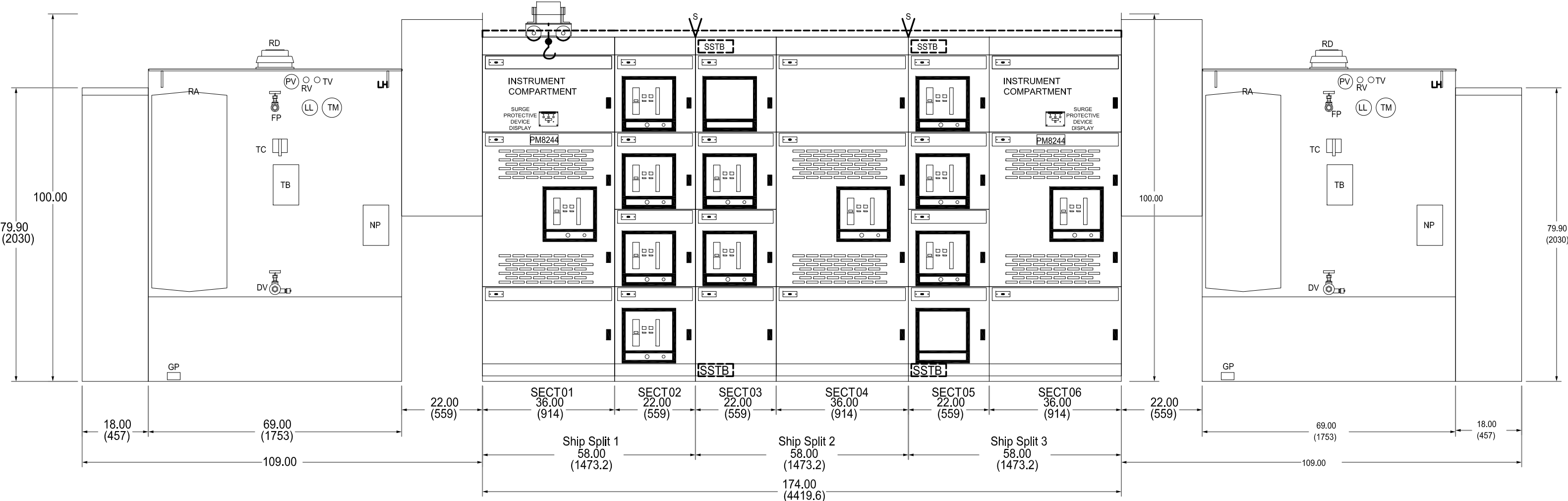


02 DOUBLE ENDED UNIT SUBSTATION ONE LINE DIAGRAM
SCALE: NONE
NOTE: BASIS OF DESIGN : SQUARE "D".

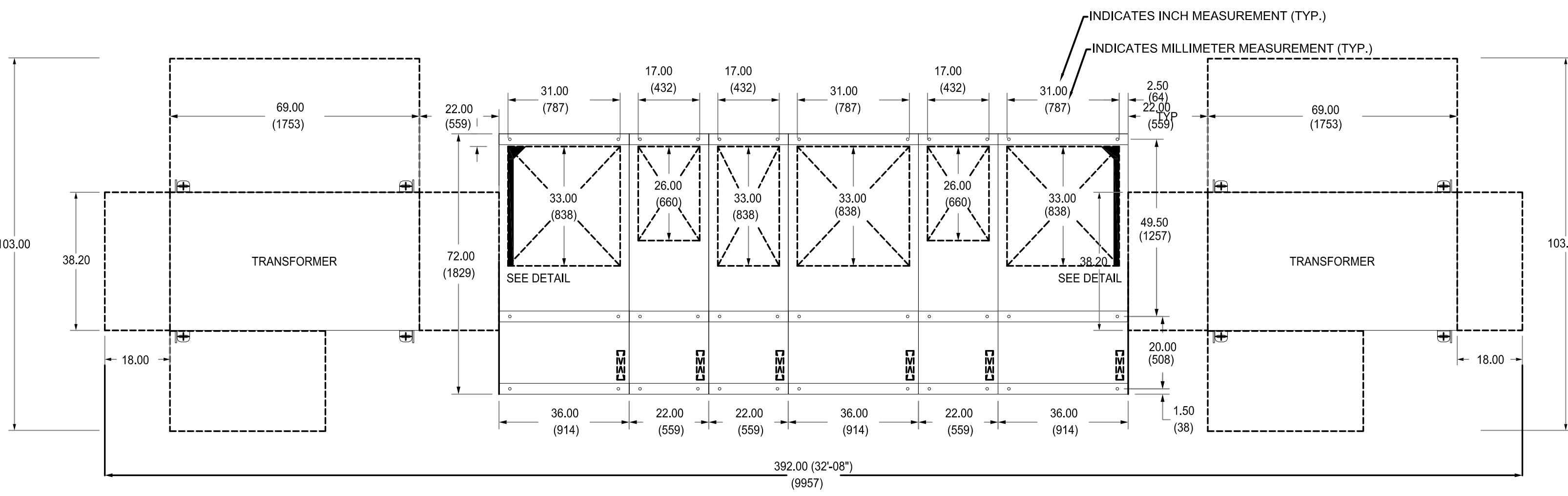
ONE LINE ABBREVIATIONS	
NWH1- SINGLE WIDTH CIRCUIT BREAKER	
NWH2- DOUBLE WIDTH CIRCUIT BREAKER	
TU-TRIP UNIT	
(S)-STANDARD TU WITH LSI TRIP FUNCTIONS	
(A)-AMMETER TU WITH LSI TRIP FUNCTIONS AND AMMETER DISPLAY	
MDGF-MODIFIED DIFFERENTIAL GROUND FAULT MODULE	
PM8244-POWERLOGIC METER. *	
SPD-SURGE PROTECTION DEVICE	
* With around 45 different display values: V, A, Watts, Vars, Freq., PF, Energy, Demand, Harmonic distortion, Waveform capture, etc.	



TOP VIEW



ELEVATION

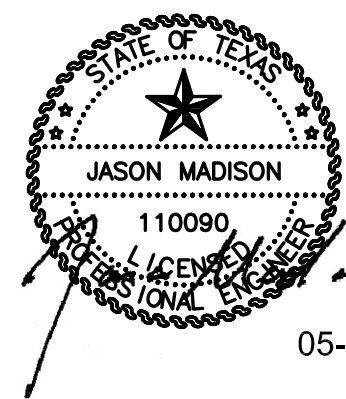


FLOOR PLAN

01 DOUBLE ENDED UNIT SUBSTATION

SCALE: AS SHOWN
NOTE: BASIS OF DESIGN : SQUARE "D".

ISSUES	
1	05.12.2017 ISSUE FOR CONSTRUCTION
2	
3	
4	
5	
REVISIONS	



REPLACE GENERATORS
FEDERAL CORRECTIONAL COMPLEX
1400 DALE BUMPERS ROAD
FORREST CITY, ARKANSAS 72335



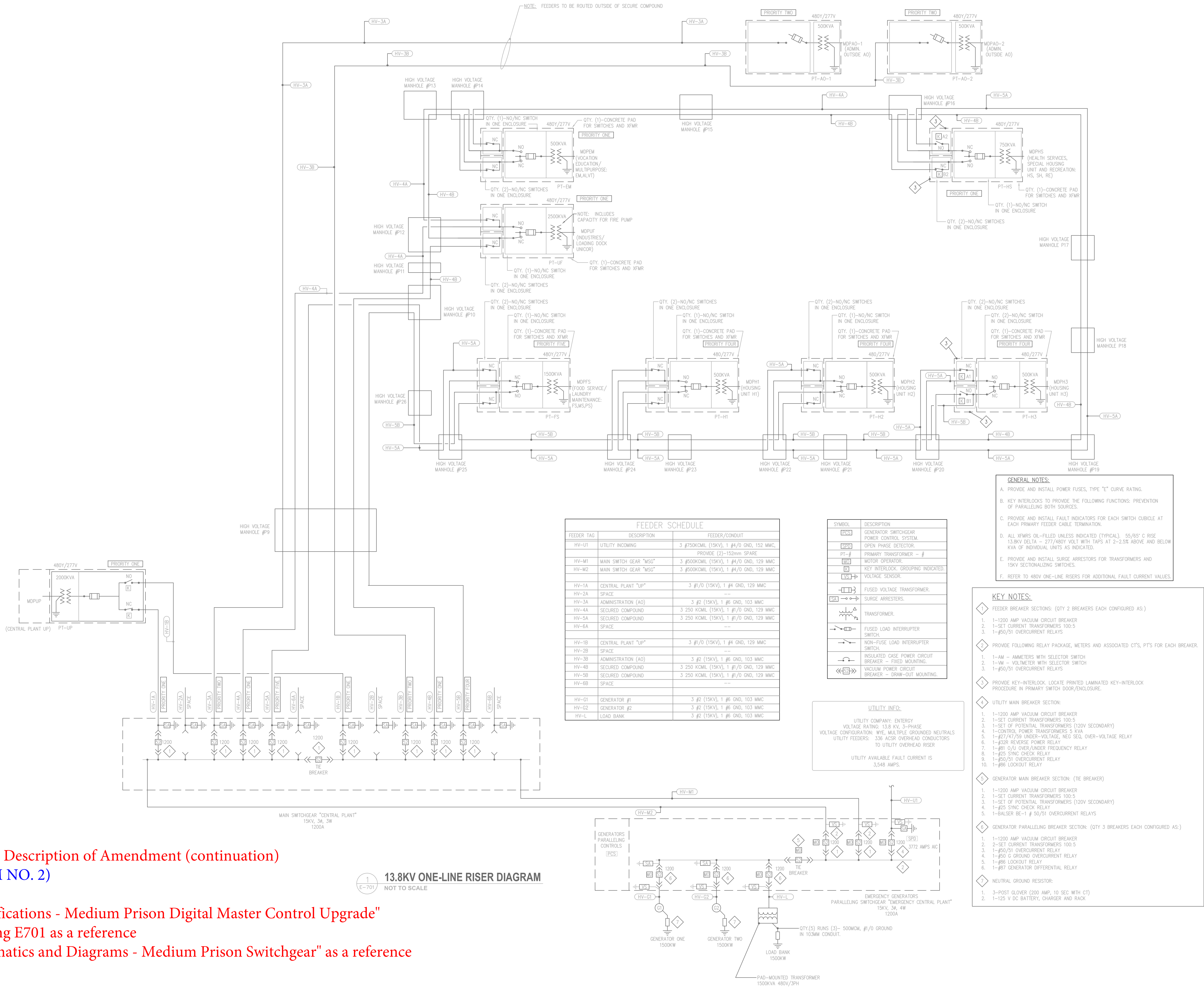
FEDERAL CORRECTION
INSTITUTION
U.S. DEPARTMENT OF
JUSTICE BUREAU OF
PRISONS
SOUTH CENTRAL REGION
FACILITIES SECTION

PROJECT #: 05081.06

SHEET TITLE:
DOUBLE ENDED UNIT
SUBSTATION
SCHEDULE AND
DETAILS

SHEET #:

E403



- SF-30 Block 14 Description of Amendment (continuation)
(ADDENDUM NO. 2)
- Add "Specifications - Medium Prison Digital Master Control Upgrade"
 - Add drawing E701 as a reference
 - Add "Schematics and Diagrams - Medium Prison Switchgear" as a reference

ELECTRICAL 13.8KV
ONE-LINE RISER DIAGRAM

NONE

E-701