

R2312-01 Replace Emergency Generator MSHP Troop G Headquarters Willow Springs, Missouri

**Sandin
Engineering**
Mechanical & Electrical Engineering
www.sandinengineering.com



OWNER: STATE OF MISSOURI
MIKE KEHOE,
GOVERNOR

DEPARTMENT OF
PUBLIC SAFETY

DESIGNER: D. WILLIE SANDIN, P.E.

PROJECT NUMBER: R2312-01

PROJECT
MANAGEMENT: OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT,
DESIGN AND CONSTRUCTION

SITE NUMBER: 6008
FACILITY NUMBER: 8136008002

SHEET NUMBER:

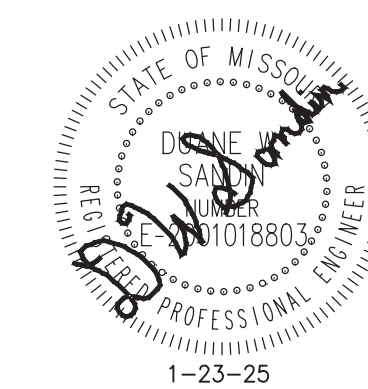
G-001

1 OF 4 SHEETS
1/23/2025



Site Plan
Scale: 1" = 10'-0"

1
E-1



**Sandin
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OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES
MANAGEMENT,
DESIGN AND CONSTRUCTION

DEPARTMENT OF
PUBLIC SAFETY

MO STATE HWY PATROL

Replace Emergency Generator
MSHP Troop G Headquarters
& Crime Lab

1226 West Business US 60/63
Willow Springs, MO 65793

PROJECT # R2312-01
SITE # 6008
FACILITY # 8136008002

REVISION: _____
DATE: _____
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DATE: _____
REVISION: _____
DATE: _____

ISSUE DATE: 1/23/2025

CAD DWG FILE: R2312-01-E-1.dwg
DRAWN BY: DWS
CHECKED BY: DWS
DESIGNED BY: DWS

SHEET TITLE:
Electrical Site Plan

SHEET NUMBER:

E-1

2 OF 4 SHEETS
1/23/2025



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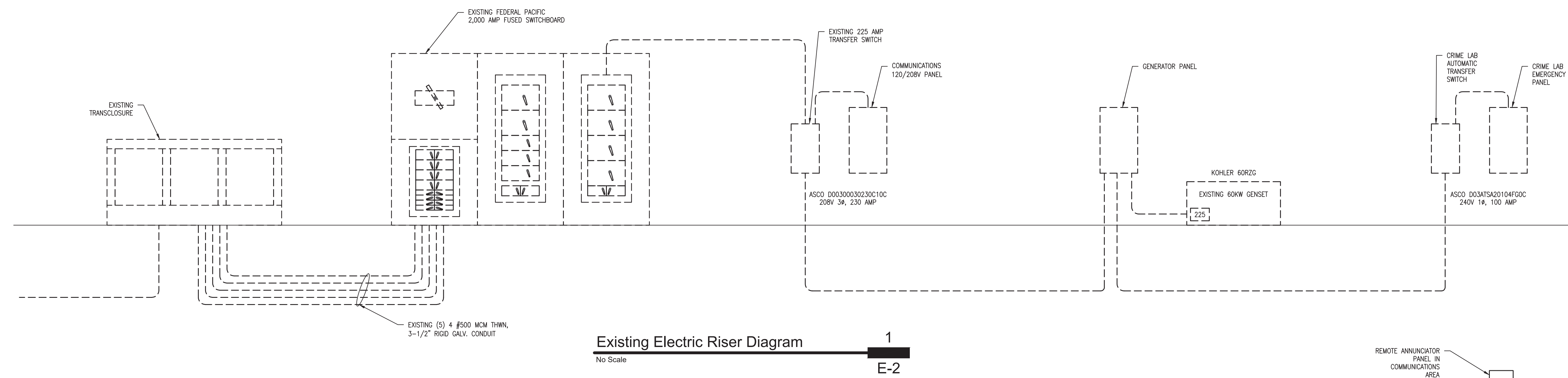
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DRAWN BY: DWS
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DESIGNED BY: DWS

SHEET TITLE:
Electric Riser
Diagrams

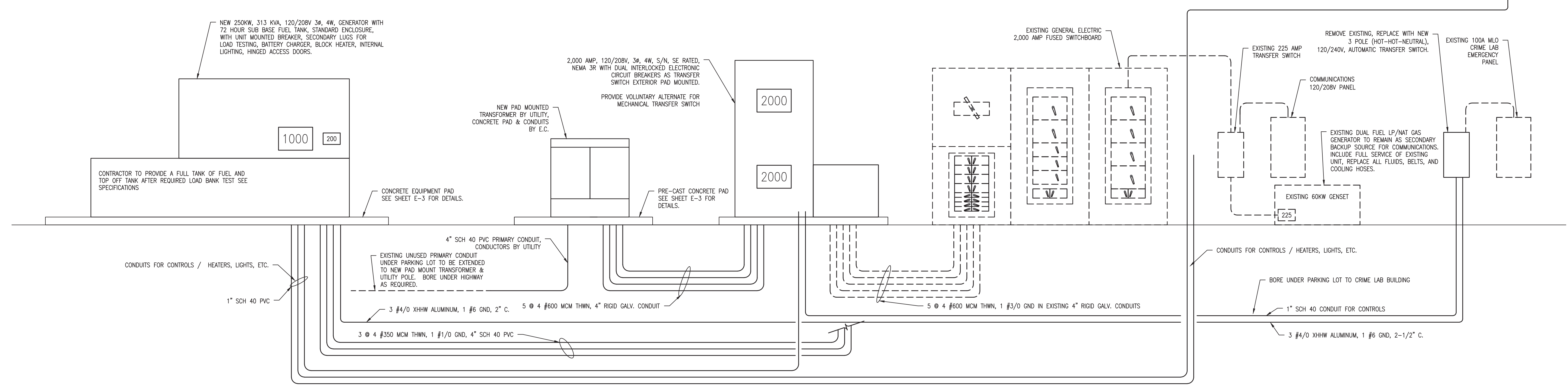
SHEET NUMBER:

E-2

3 OF 4 SHEETS
1/23/2025



Existing Electric Riser Diagram
No Scale
1
E-2



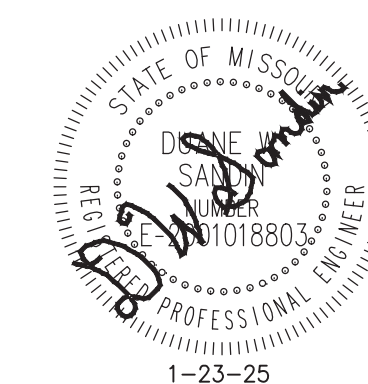
New Electric Riser Diagram
No Scale
2
Option "A"
E-2

TRANSFER SWITCH SEQUENCE TIMING

MAIN SWITCH / GENERATOR
NEW TRANSFER SWITCH TO START MAIN GENERATOR WITHIN 10 SECONDS OF UTILITY POWER FAILURE OR PHASE LOSS.
TRANSFER SHALL TO GENERATOR SHALL OCCUR WITHIN 30 SECONDS OF LOSS OF PRIMARY SOURCE.

SECONDARY SWITCH / GENERATOR
EXISTING SWITCH IS TO BE ADJUSTED TO START SECONDARY GENERATOR AFTER 60 SECONDS OF UTILITY POWER OR PHASE LOSS.
TRANSFER TO EXISTING 60KW GENERATOR SHALL OCCUR AT OR BEFORE 90 SECONDS OF MAIN UTILITY POWER OR PHASE LOSS.

RE-TRANSFER TO UTILITY
RE-TRANSFER SHALL OCCUR NOT LESS THAN 5 MINUTES OF UTILITY BEING RESTORED.



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CAD DWG FILE: R2311-01-E-3.dwg
DRAWN BY: DWS
CHECKED BY: DWS
DESIGNED BY: DWS

SHEET TITLE:
**CONCRETE PADS
& DETAILS**

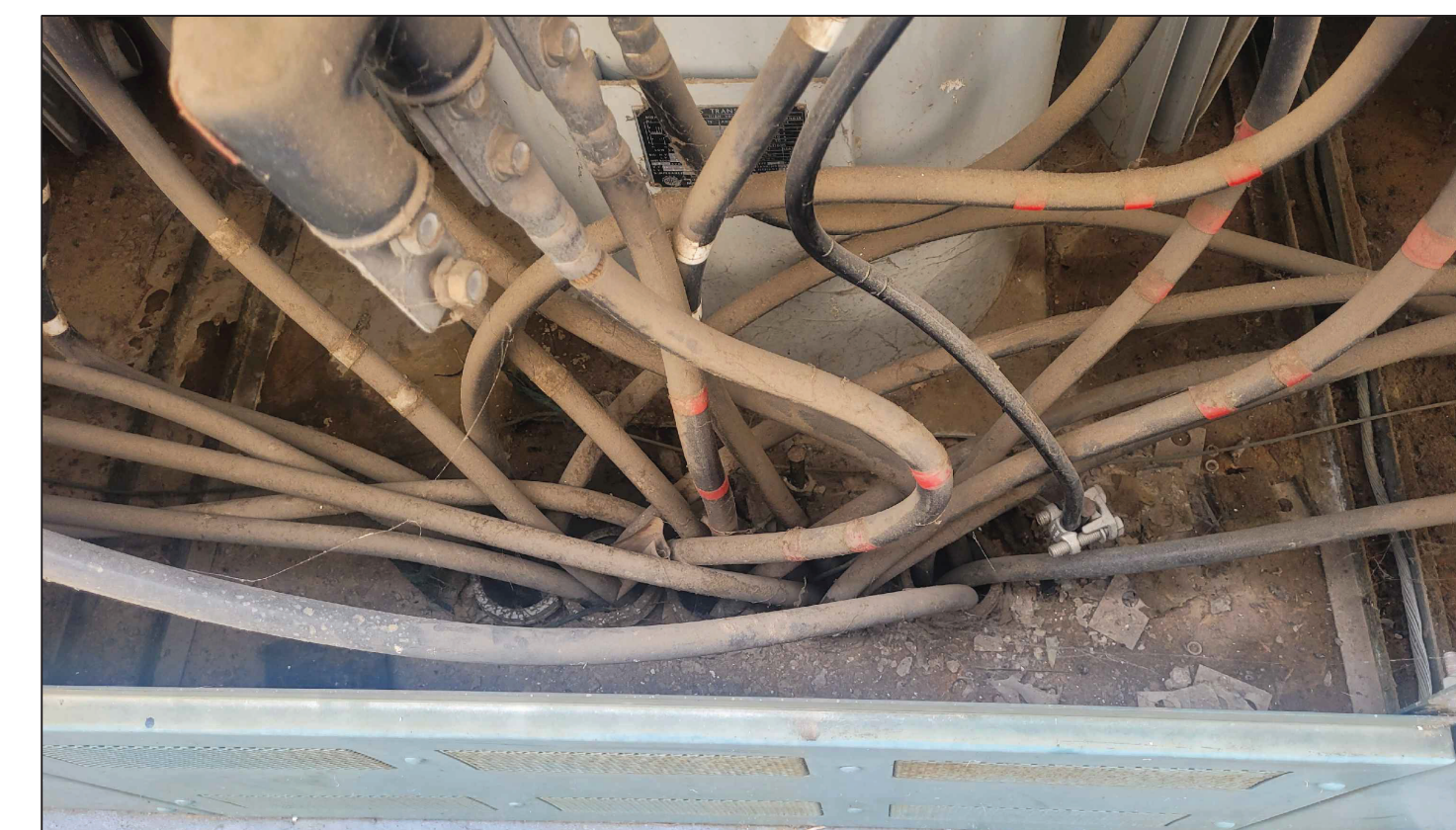
SHEET NUMBER:

E-3

4 OF 4 SHEETS
1/23/2025



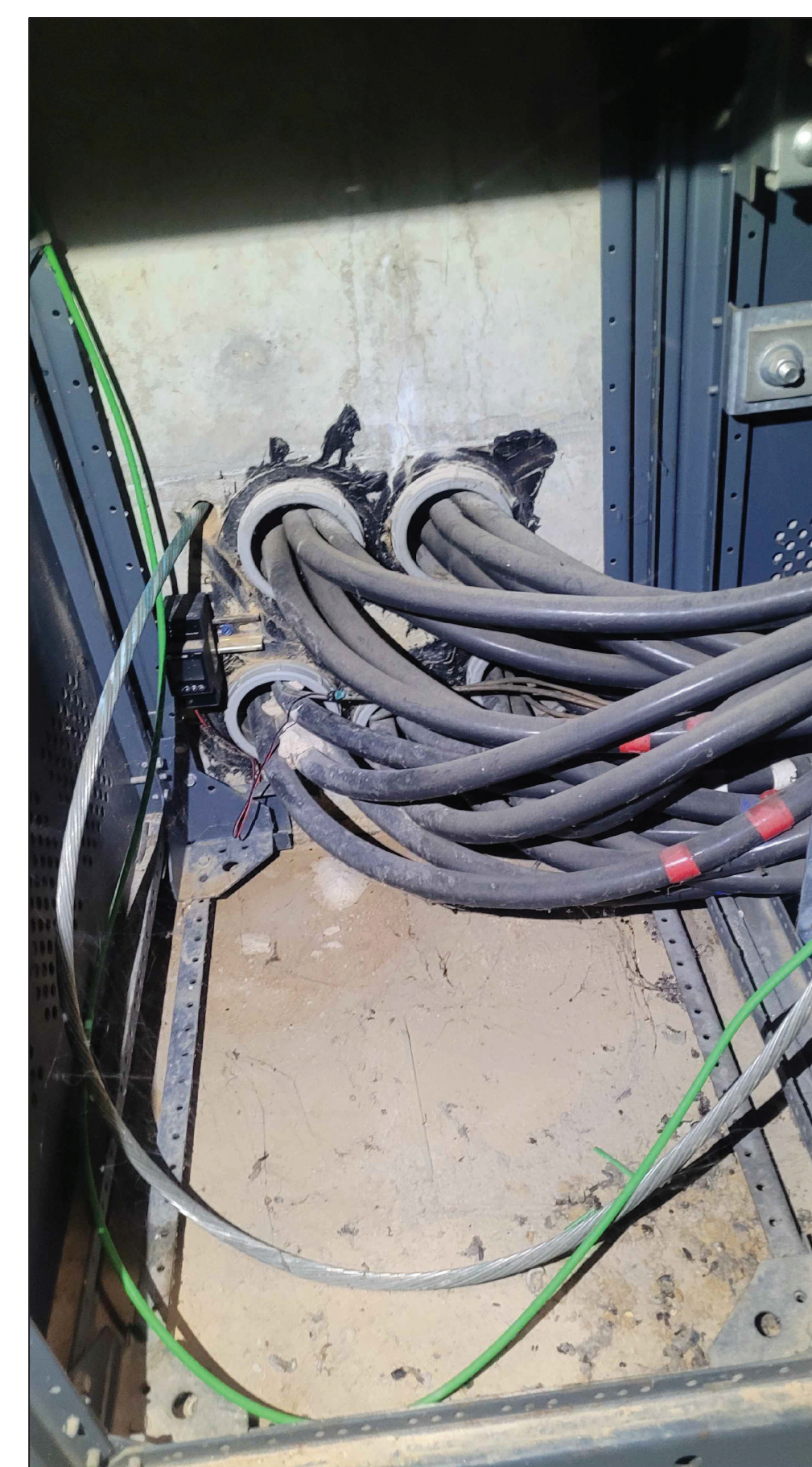
Existing Transclosure 4
No Scale E-3



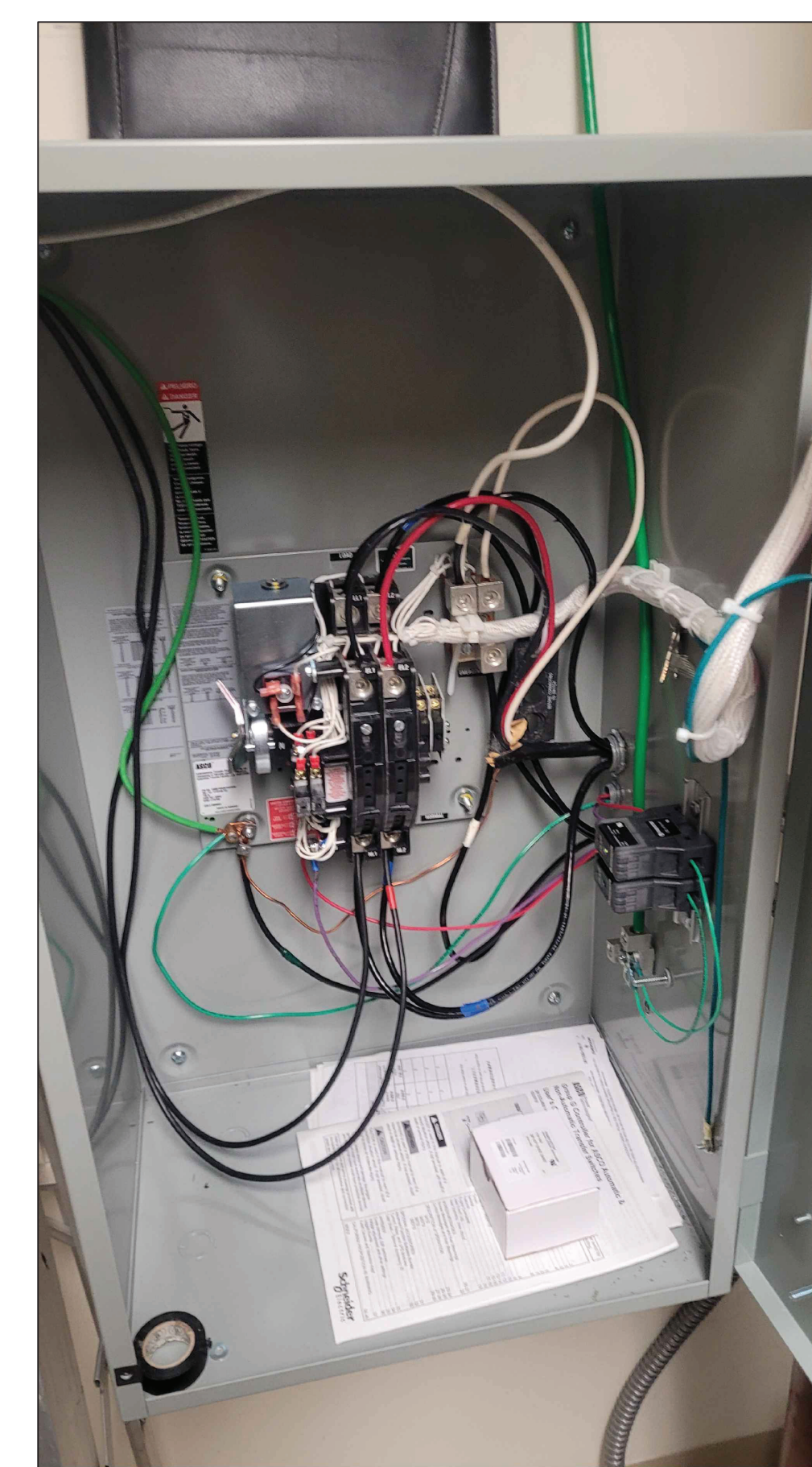
Existing Conduits in Transclosure 6
No Scale E-3



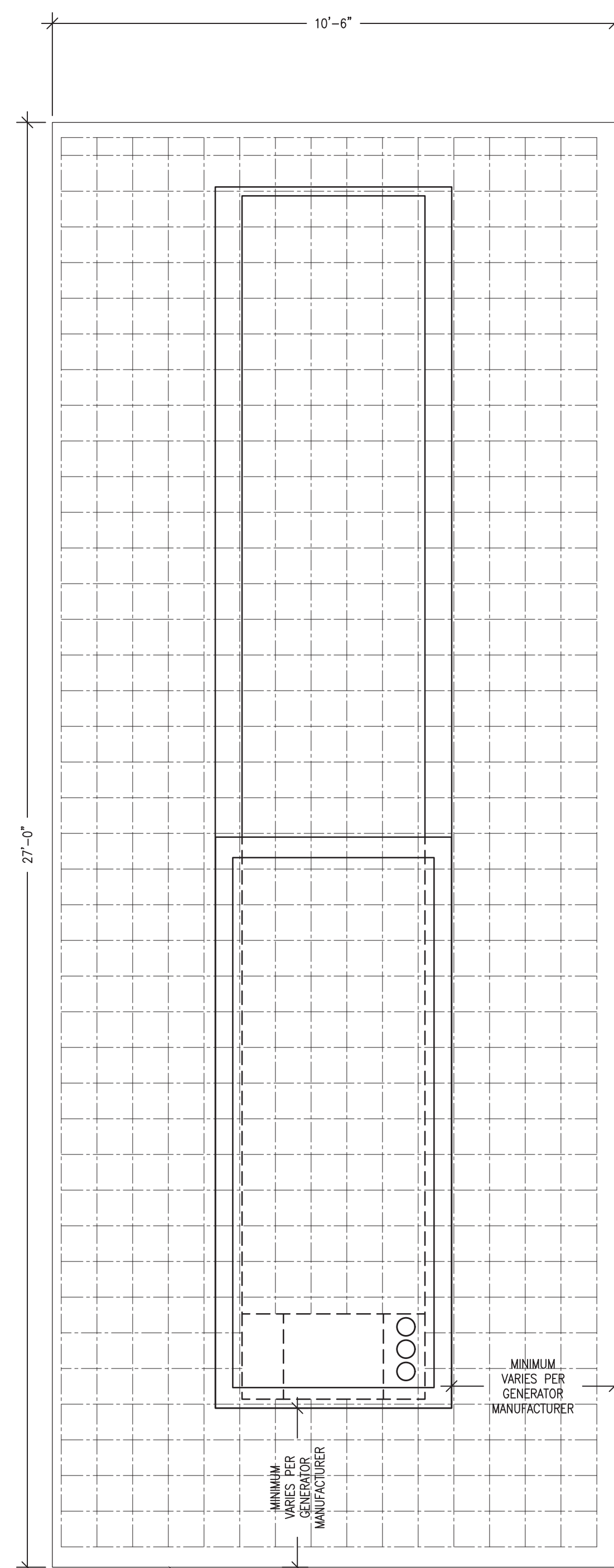
Existing Conduits in Transclosure 5
No Scale E-3



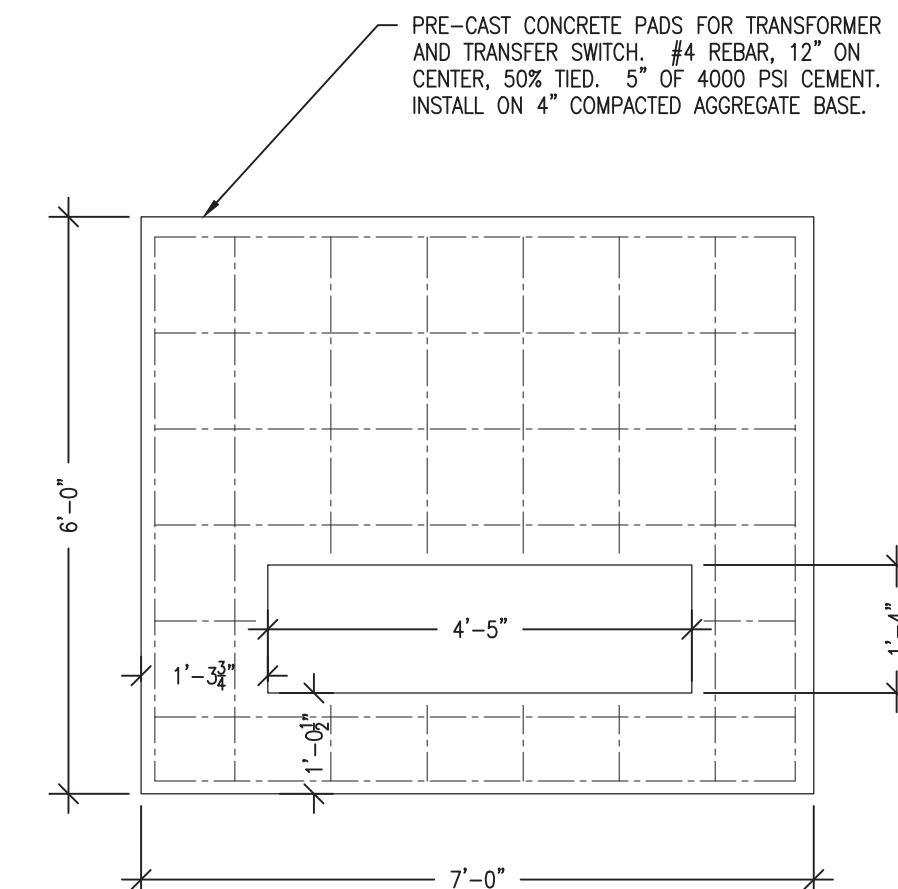
Existing Conduits in Switchgear 7
No Scale E-3



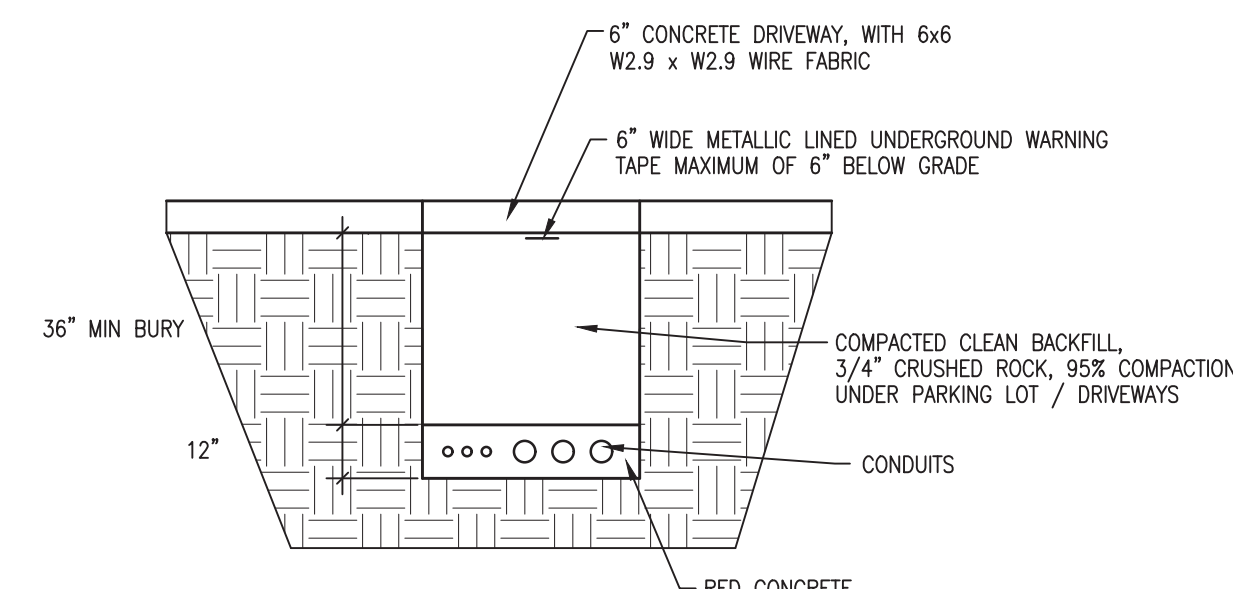
Existing Crimelab Transfer Switch 8
No Scale E-3



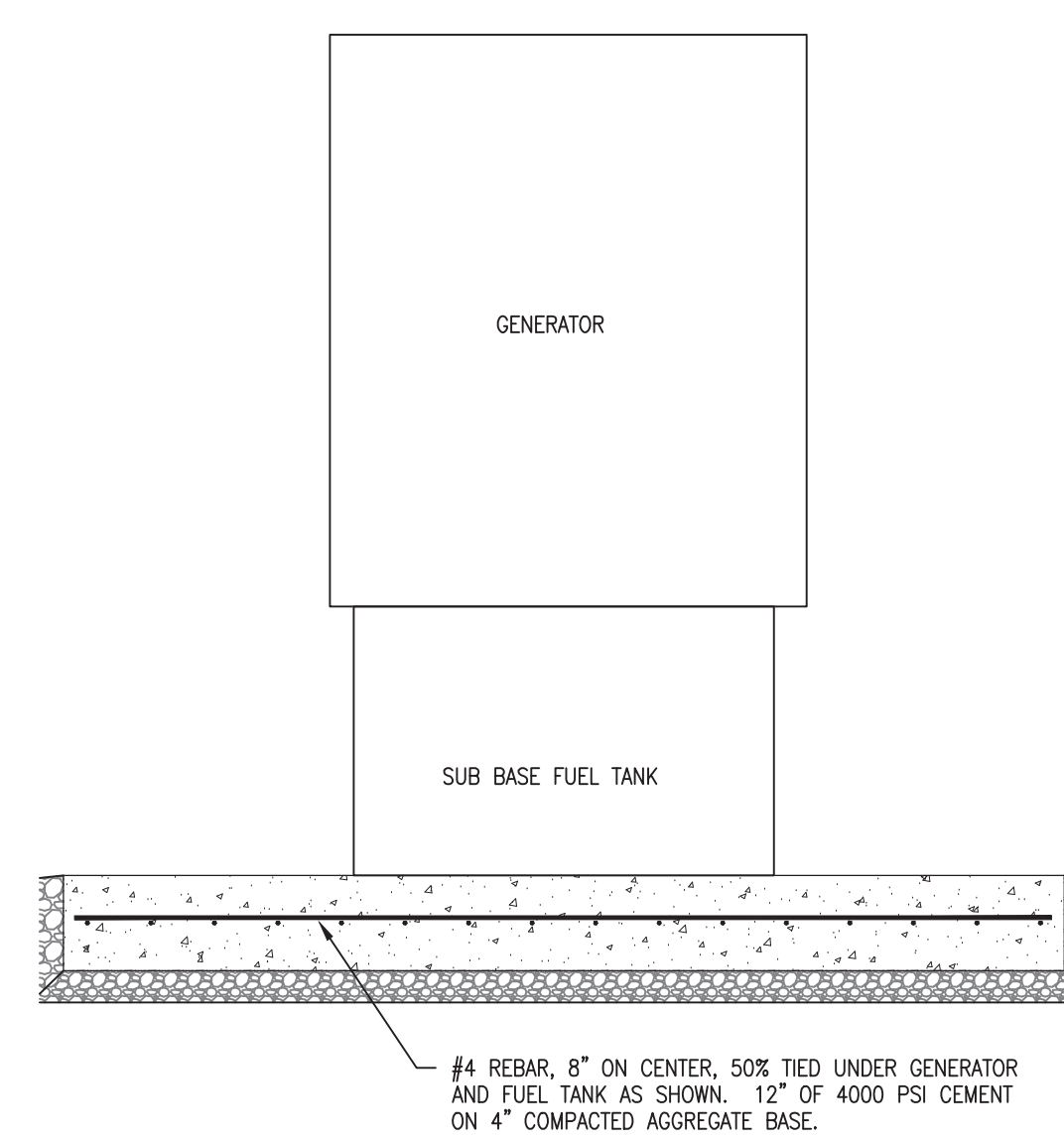
Generator Pad Details 1
Scale: 1/2" = 1'-0" E-3



Transformer Pad Details 2
Scale: 1/2" = 1'-0" E-3



Electric Bury Details 4
No Scale E-3



Generator Pad Section 3
Scale: 1/2" = 1'-0" E-3