



Stewart Facility
5500 Snyder Avenue, Carson City, NV 89701

Request for Permission to Undertake Structural or Visual Alterations

In accord with the requirements set forth in existing covenants,
State Public Works Department (*name of agency*) is requesting written permission to undertake
visual or structural alterations as described below:

1. **Building Number and Name:**
2. Building 12 - Dormitory (P.O.S.T.)
Building's Date of Construction: 1941
3. Building 13 - ORM (DMV&PS), 32 - Non-Profit Office
Building's Date of Construction: 1941
4. Building 84 - B&G Shop
Building's Date of Construction: 1931
5. Building 116 - Housing
Building's Date of Construction: 1963
6. Building 117 - Housing
Building's Date of Construction: 1963
7. Building 118 - Housing
Building's Date of Construction: 1963
8. Building 119 – Housing
Building's Date of Construction: 1963
9. Building 32
Building's Date of Construction: 1941
10. Building M33a - Non-Profit Housing
Building's Date of Construction: 1941

***Stewart Indian School Complex
Request for Permission to Undertake Structural or Visual Alterations***

11. Building M33b - Non-Profit Housing
Building's Date of Construction: 1941
12. Building 3
Building's Date of Construction: 1930
13. 8 - DOIT Storage
Building's Date of Construction: 1930
14. 9 - Residence (POST)
Building's Date of Construction: 1939
15. 57 – Housing
Building's Date of Construction: 1939
16. 60a - Non-Profit Housing
Building's Date of Construction: 1939
17. 60b - Non-Profit Housing
Building's Date of Construction: 1939
18. 62a – Housing
Building's Date of Construction: 1960
19. 62b – Housing
Building's Date of Construction: 1960
20. 44 - Capitol Police Substation
Building's Date of Construction: 1937
21. 89 - Administration (NDOC)
Building's Date of Construction: 1931
22. 160 - New Gym
Building's Date of Construction: 1973

Stewart Indian School Complex
Request for Permission to Undertake Structural or Visual Alterations

23. 65 - Non-Profit

24. 67a - Non-Profit Housing
Building's Date of Construction: 1939

25. 67b - Non-Profit Housing
Building's Date of Construction: 1939

26. 67c - Non-Profit Housing
Building's Date of Construction: 1939

27. 67d - Non-Profit Housing
Building's Date of Construction: 1939

28. 17 - School (NDOC)
Building's Date of Construction: 1964

29. 110 – Housing
Building's Date of Construction: 1939

30. 107 - State Fire Marshal
Building's Date of Construction: 1964

Supplementary Information:

Please indicate if you have submitted the following–

- Written description of proposed work (*required; see second page*)
- Photographs of existing conditions (*required*)
- Sketches, plans, or architectural drawings depicting the proposed work
- Sketch or site plan of project location
- Specs of materials to be used
- Historic photographs depicting past condition or design
- Other

Request Submitted by:

Jason Aviles

Print name

Signature

Stewart Indian School Complex
Request for Permission to Undertake Structural or Visual Alterations

Agency – State Public Works Division
Title – Project Manager II – Electrical Engineer
Email address – javiles@admin.nv.gov
Phone number – 775-434-3186

Date of Request: 3/22/2021

Please allow up to 14 business days for this form to be processed. Proposed work must not begin until this form has been reviewed and approved by both the State Historic Preservation Office and the Nevada Indian Commission. In some cases, coordination with State Lands is also necessary. Per NRS 321.003, a state agency must also submit a Certification Request to the Nevada Division of State Lands before constructing a building or making other permanent improvements to state lands. This includes ground disturbance for site work and utilities. If your project requires a State Lands Certification, you will find the instructions on the Division of State Lands website under "Forms."

<http://www.lands.nv.gov/>

To expedite your project, the SHPO recommends coordinating with SHPO and State Lands concurrently.

Please submit request form and supplementary materials to the State Historic Preservation Office, 901 S. Stewart St., Ste. 5004, Carson City, NV 89701-5248 or by email to rpalmer@shpo.nv.gov.

REQUEST APPROVED BY:		
SHPO -	<u>Ashley Wiley</u> <i>Print and sign name</i>	<u>Ashley Wiley</u> <i>Date</i>
Nevada Indian Commission -	_____	_____
	<i>Print and sign name</i>	<i>Date</i>
* Nevada Division of State Lands -	<u>Charles Donohue</u> <i>Print and sign name</i>	<u>3/23/2021</u> <i>Date</i>
* (If required)		

Stewart Indian School Complex
Request for Permission to Undertake Structural or Visual Alterations

Description of Proposed Work:

Please provide a thorough written description of the proposed work, including–

- Location on building
- Approximate size of area affected
- Existing conditions
- Materials to be used
- Proposed methods (must follow the [Secretary of the Interior's Standards](#))

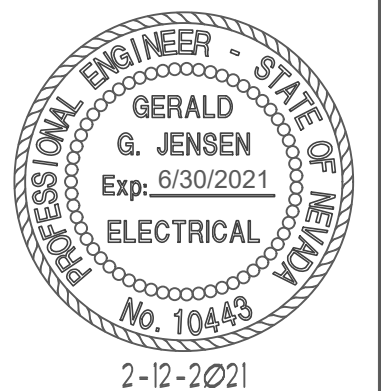
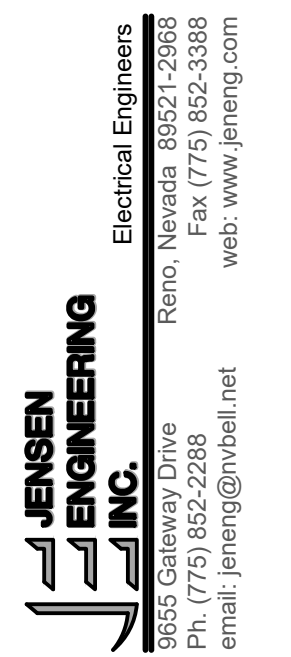
(Use as many pages as needed)

Stewart Facility in Carson City. This Capital Improvement project 17-M23 will upgrade existing pad mounted transformers, switches, and sub-metering for the Stewart Facility. Sub-metering will be installed for Buildings 3, 12, 13, 32, 84, 116, 117, 118, 119, M33A, M33B, 8, 9, 57, 60A, 60B, 62A, 62B, 44, 89, 84, 160, 65, 67A, 67B, 67C, 67D, 17, 110, 107. The project will utilize existing underground conduits and vaults to connect new site distribution. Minor Potholing to intercept three conduit stubs that were installed as part of CIP project 17-M36 will occur in previously disturbed and inspected soil.

UPGRADE ELECTRICAL POWER STEWART FACILITY

PLAN SET 1 OF 2
SPWD PROJECT NUMBER - 17-M23

5500 SNYDER AVENUE
CARSON CITY, NEVADA



CONFORMED SET

17-M36 UPGRADE ELECTRICAL POWER
STEWART FACILITY
5500 SNYDER AVE.
CARSON CITY, NEVADA

NOTES, CONSULTANT
INFORMATION,
VICINITY MAP,
& DRAWING INDEX

REVISIONS	DESCRIPTION	DATE	BY
No.			
1			
2			
3			
4			
5			

DRAWN BY: **SJM**
DESIGNED BY: **SJM**
CHECKED: **GGJ**
DATE: **4-15-2020**
PROJECT NO: **C01818TR**

SHEET NUMBER

T1

SHEET 1 OF

BASIS OF DESIGN

NEC 2017
IBC 2018

SPECIAL CONSIDERATIONS

- THE STEWART COMPLEX HAS UNDERGONE MANY UNDERGROUND INFRASTRUCTURE IMPROVEMENTS OVER ITS 120 YEAR HISTORY. CONTRACTOR SHALL GIVE CAREFUL CONSIDERATION TO, AND SHALL ALLOW FOR IN HIS BID, EXISTING UNMAPPED UNDERGROUND INFRASTRUCTURE WHICH WILL BE ENCOUNTERED DURING THE COURSE OF THIS PROJECT. NO EXTRA PAYMENT WILL BE MADE FOR REPAIR OF EXISTING UNDERGROUND INFRASTRUCTURE THAT WAS NOT CONSIDERED, DISCOVERED, AND/OR DAMAGED DURING THE COURSE OF CONSTRUCTION.

HISTORICAL CONSIDERATIONS

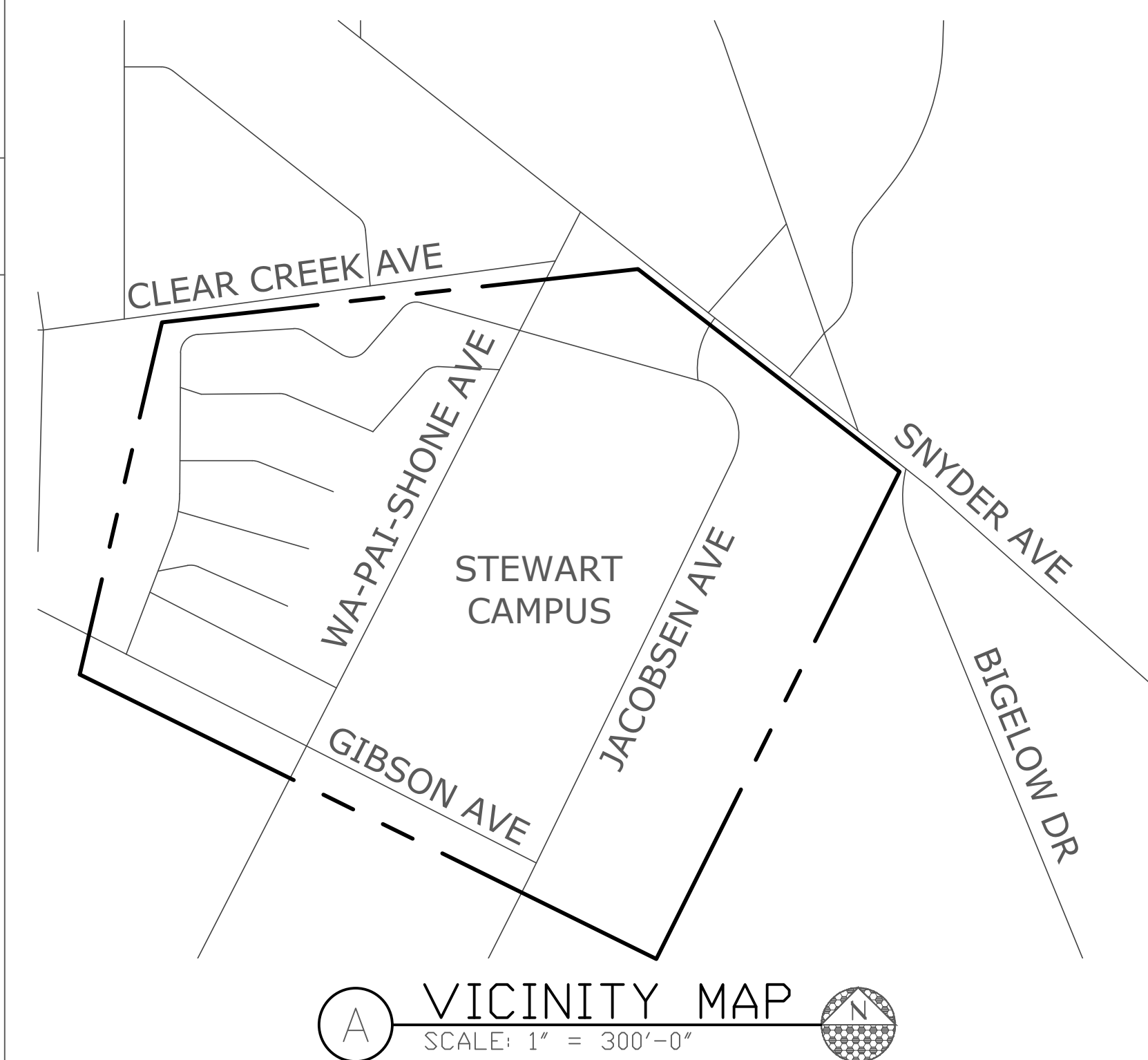
- THE STEWART INDIAN SCHOOL COMPLEX IS LISTED ON THE NATIONAL REGISTER OF HISTORIC PLACES. IT IS CONSIDERED A HISTORIC DISTRICT.
- ANY WORK COMPLETED WITHIN THIS HISTORIC DISTRICT IS SUBJECT TO WRITTEN APPROVAL FROM THE STATE HISTORIC PRESERVATION OFFICE PER THE 1982 PRESERVATION COVENANT THAT WAS ATTACHED TO THE DEED TRANSFERRING THE LAND OUT OF FEDERAL TO STATE OWNERSHIP.
- ALL WORK MUST COMPLY WITH THE SECRETARY OF THE INTERIOR'S STANDARDS FOR THE TREATMENT OF HISTORIC PROPERTIES.

ENGINEER

ELECTRICAL: JENSEN ENGINEERING, INC.
GERALD JENSEN, P.E.
9655 GATEWAY DR., SUITE A
RENO, NEVADA 89521
VOICE: (775) 852-2288
FAX: (775) 852-3388
EMAIL: GERALD@JENENG.COM

DRAWING INDEX

- E1 - LEGEND, REQUIREMENTS, & EQUIPMENT SCHEDULE
- E2 - OVERALL SITE PLAN, LOOP MODIFICATIONS, & SITE MODIFICATIONS
- E3 - METER ADDITION PLANVIEWS
- E4A - PARTIAL SINGLE-LINE DIAGRAM (POWER UPGRADE)
- E4B - PARTIAL SINGLE-LINE DIAGRAM (METER SET)
- E5 - FEEDER SCHEDULE, TRENCH DETAILS



ADDITIONAL CONSIDERATIONS

- ELECTRICAL UTILITY METERING FOR THE ENTIRE STEWART FACILITY IS ACCOMPLISHED AT THE PRIMARY METERING EQUIPMENT AT 12.5KV. THE ELECTRICAL DISTRIBUTION SYSTEM AT THE STEWART FACILITY IS PRIVATELY OWNED BY THE STATE OF NEVADA. THE NEW ELECTRICAL METERS REQUIRED FOR THIS PROJECT ARE FOR THE OWNER'S SUB-METERING USE AND ARE NOT OWNED OR USED BY THE ELECTRICAL UTILITY. OWNERSHIP OF THE ELECTRICAL METERS SHALL REMAIN WITH THE STATE OF NEVADA.
- CONSTRUCTION ACTIVITIES SHALL ONLY OCCUR BETWEEN THE HOURS OF 6AM AND 5PM (SEVEN DAYS PER WEEK).
- CONTRACTOR SHALL PLAN CONSTRUCTION ACTIVITIES TO MINIMIZE POWER DISRUPTIONS BY MANAGEMENT OF SECTIONALIZING LOCATION. POWER OUTAGES SHALL BE COORDINATED WITH SPWD AND B&G PERSONNEL AT LEAST FOUR WEEKS IN ADVANCE. TEMPORARY POWER GENERATORS ARE NOT REQUIRED, BUT ALL OUTAGES SHALL BE MINIMIZED.
- CONTRACTOR SHALL SUBMIT A DETAILED PLAN, AND SHALL OBTAIN OWNER APPROVAL OF, THE MEANS AND METHODS PROPOSED FOR POWER CHANGE-OVER WHERE NEW EQUIPMENT IS TO BE PUT INTO SERVICE.

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	DETAIL IDENTIFICATION: TOP IS DETAIL/BOTTOM IS SHEET NUMBER
	NOTE IDENTIFICATION: NOTE NO. 1 ON SHEET E-1
	EQUIPMENT SCHEDULE IDENTIFICATION
	GFCI RECEPTACLE
	FLUORESCENT FLOOD LIGHT
	SPST SWITCH
	JUNCTION BOX
	MOTOR OUTLET AND CONNECTION (# INDICATES HP.)
	GROUND
	METER
	RED PILOT LIGHT
	CIRCUIT BREAKER
	AUTOMATIC TRANSFER SWITCH
	THERMOSTAT
	FLOW METER SENSOR
	PRESSURE TRANSDUCER
	DOOR LIMIT SWITCH
	FLOAT SWITCH
	DOOR ALARM PANEL
	SEAL-LEAK AND OVER-TEMPERATURE SENSOR
	TRANSMITTER
	LEVEL TRANSDUCER
	INTRINSICALLY SAFE RELAY
	ELAPSED TIME METER
	ALARM STROBE LIGHT
	LOCAL ANNUCIATOR HORN
	CONDUIT UP/DOWN
	CONDUIT STUB
	PHASE CONDUCTOR; #12 XHHW-2 IN 3/4" C. U.D.N.
	CODE SIZE GROUND BONDING CONDUCTOR PER N.E.C. TABLE 250-95
	NEUTRAL CONDUCTOR; #12 XHHW-2 IN 3/4" C. U.D.N.
	UNDERGROUND FEEDER, (3)-#12 XHHW-2 IN 3/4" C. U.D.N.
	EXPOSED RUN PARALLEL TO STRUCTURE IN UNFINISHED AREAS
	HOME RUN INDICATION. EX: 3-#12'S WITH 1-#12 NEUTRAL, AND 1-GROUND IN 3/4" C. TO PANELBOARD-LA, CIRCUITS 1,3,5
	BELDEN #9341 2/c #18 SHIELDED 600V CABLE IN 3/4" C.
	SLASHES INDICATE NO. OF #14 MTW STRANDED CONTRL CONDUCTORS IN CONDUIT.
N.T.S.	NOT TO SCALE
C.	CONDUIT
TYP.	TYPICAL
U.D.N.	UNLESS OTHERWISE NOTED
SPD	SURGE PROTECTIVE DEVICE
OAA	OR APPROVED ALTERNATE
A.T.S.	AUTOMATIC TRANSFER SWITCH
B.C.	BARE COPPER
GRSC	GALVANIZED RIGID STEEL CONDUIT
F.M.	FLOW METER
N4X	NEMA-4X
P.S.	POWER SUPPLY
FBO	FURNISHED BY OTHERS
D.S.	DISCONNECT SWITCH
RVSS	REDUCED VOLTAGE SOLID STATE
FVNR	FULL VOLTAGE NON-REVERSING
VFD	VARIABLE FREQUENCY DRIVE
	MOTOR RATED SWITCH
	SAFETY DISCONNECT SWITCH (FRAME/FUSE/POLE#)
ATL	ACROSS-THE-LINE

GENERAL ELECTRICAL REQUIREMENTS:

- A.** FURNISH ALL LABOR, MATERIAL, EQUIPMENT, TOOLS, ACCESSORIES, ETC. REQUIRED FOR A COMPLETE ELECTRICAL SYSTEM.
- B.** ALL WORK SHALL CONFORM WITH THE REQUIREMENTS OF THE APPLICABLE LOCAL CODES, AND POWER COMPANY STANDARDS. SPECIFICALLY, COMPLY WITH THE FOLLOWING CODES & STANDARDS (MINIMUM):

2018 INTERNATIONAL BUILDING CODE
2017 NFPA 70 - NEC
(NATIONAL ELECTRICAL CODE)
- C.** ALL MATERIAL SHALL BE NEW AND CONFORM WITH THE REQUIREMENT OF THE UNDERWRITER'S LABORATORIES, INC.
- D.** WORKMANSHIP AND NEAT APPEARANCE SHALL BE OF THE SAME LEVEL OF IMPORTANCE AS ITS ELECTRICAL AND MECHANICAL EFFICIENCY.
- E.** COORDINATE ALL WORK WITH THAT OF OTHER CONTRACTORS ON THE JOB AND ALSO WITH THAT OF THE OWNER. ANY COST FOR EXTRA WORK OR MATERIALS RESULTING FROM LACK OF COORDINATION, SHALL BE BORNE BY THIS CONTRACTOR.
- F.** ALL CONDUIT ABOVE -18" OF FINISHED GRADE TO BE GALVANIZED RIGID STEEL. ALL CONDUIT BELOW 18" OF GRADE TO BE PVC-TYPE SCHEDULE-40. ALL UNDERGROUND ELBOWS TO BE GALVANIZED RIGID STEEL (GRS). ALL METALLIC CONDUITS IN CONTACT WITH EARTH TO BE EITHER PVC-GRSC OR HALF-LAP WRAPPED IN SCOTCH-50 ELECTRICAL TAPE. FOR CONDUITS INSTALLED OUTDOORS, PROVIDE A WATER-TIGHT CONDUIT SYSTEM, (IMC OR GRS ONLY) INCLUDING THREADED HUBS AT EQUIPMENT PENETRATIONS, LIQUID-TIGHT CONNECTORS, & SEALS.
- G.** THIS CONTRACTOR SHALL GUARANTEE TO THE OWNER ALL WORK PERFORMED UNDER THIS CONTRACT TO BE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE.
- H.** ALL CONDUCTOR CRIMPING ON CONDUCTORS #6 AWG OR GREATER TO BE HYDRAULICALLY CRIMPED, USING FULLY ANNULAR DIE-TYPE CRIMPER (MATCH COLOR TO EQUIPMENT RATING).
- I.** ALL MOUNTING HARDWARE TO BE 316 STAINLESS STEEL.
- J.** ELECTRIC EQUIPMENT SHALL BE AS MANUFACTURED BY EATON, SIEMENS, GE/ABB, SQUARE-D, OR AS SPECIFIED IN THE EQUIPMENT SCHEDULE (OTHERS ON PRIOR APPROVAL).

ES

EQUIPMENT SCHEDULE

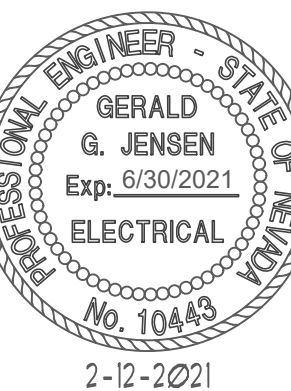
ITEM	QUANTITY	DESCRIPTION
1	2	SETS OF (3)-100-5 CURRENT TRANSFORMERS FOR EXISTING PAD-MOUNT SWITCHGEAR PROTECTION RELAYS. MATCH TYPE TO EXISTING EATON SWITCHGEAR. (3)-ABB #6353C88H01
2	3	600A MAIN-BUS, 15kV, 3Ø, 95kV-BIL, PAD-MOUNT AIR INSULATED SWITCH WITH (2)-200A SWITCHED-FUSED TAPS, LOAD-BREAK BUSHINGS, AND E-RATED FUSES AS MANUFACTURED BY FPE. SWITCHING AND FUSING SHALL BE AS DEPICTED IN THE SINGLE-LINE DIAGRAM. INSTALL AT EXISTING CONCRETE MOUNTING PAD.
3	2	225kVA, 12.47kVx208Y/120V, 3Ø, 95kV-BIL, PAD-MOUNT FR-3 OIL-FILLED, RADIAL FEED TRANSFORMER WITH Z=5.75% @ 65°C RISE. EATON-COOPER POWER SERIES TYPE CA202003EN. SEE SPECIFICATION FOR DETAILS. PROVIDE AND INSTALL ON NEW TRANSFORMER PAD. MODIFY, EXTEND, AND REUSE EXISTING GROUND ROD & SECONDARY CONDUCTORS.
4	1	75kVA, 12.47kVx208Y/120V, 3Ø, 95kV-BIL, PAD-MOUNT FR-3 OIL-FILLED, RADIAL FEED TRANSFORMER WITH Z=3.75% @ 65°C RISE. EATON-COOPER POWER SERIES TYPE CA202003EN. SEE SPECIFICATION FOR DETAILS. PROVIDE AND INSTALL ON NEW TRANSFORMER PAD. MODIFY, EXTEND, AND REUSE EXISTING GROUND ROD & SECONDARY CONDUCTORS.
5	1	500kVA, 12.47kVx480Y/277V, 3Ø, 95kV-BIL, PAD-MOUNT FR-3 OIL-FILLED, RADIAL FEED TRANSFORMER WITH Z=5.75% @ 65°C RISE. EATON-COOPER POWER SERIES TYPE CA202003EN. SEE SPECIFICATION FOR DETAILS. PROVIDE AND INSTALL ON NEW TRANSFORMER PAD. MODIFY, EXTEND, AND REUSE EXISTING GROUND ROD & SECONDARY CONDUCTORS.
6	21	100A 240S/120V 1Ø 4-JAW COMPATIBLE ELECTRONIC SMART-METER WITH CAPABILITIES AS FOLLOWS: DIGITAL MEASUREMENT DISPLAY, ONE WATT-HOUR RESOLUTION, kWh/kVARh/kVAh MEASUREMENTS, DEMAND READING, SENSUS iConA #DS-E-ICA-0911
7	3	200A 240S/120V 1Ø 4-JAW COMPATIBLE SMART-METER WITH CAPABILITIES AS FOLLOWS: DIGITAL MEASUREMENT DISPLAY, ONE WATT-HOUR RESOLUTION, kWh/kVARh/kVAh MEASUREMENTS, & DEMAND READING. ACCEPTABLE MANUFACTURERS: ABB-GE, ITRON-SIEMENS, LANDIS+GYR, SENSUS iConA
8	1	100A 208Y/120V 3Ø 7-JAW COMPATIBLE SMART-METER WITH CAPABILITIES AS FOLLOWS: DIGITAL MEASUREMENT DISPLAY, ONE WATT-HOUR RESOLUTION, kWh/kVARh/kVAh MEASUREMENTS, & DEMAND READING. ACCEPTABLE MANUFACTURERS: ABB-GE, ITRON-SIEMENS, LANDIS+GYR, SENSUS iConA
9	3	800A 208Y/120V 3Ø 13-JAW COMPATIBLE SMART-METER WITH CAPABILITIES AS FOLLOWS: DIGITAL MEASUREMENT DISPLAY, ONE WATT-HOUR RESOLUTION, kWh/kVARh/kVAh MEASUREMENTS, & DEMAND READING. ACCEPTABLE MANUFACTURERS: ABB-GE, ITRON-SIEMENS, LANDIS+GYR, SENSUS iConA PROVIDE, INSTALL, AND CONNECT MATCHING CURRENT TRANSFORMERS FOR SPECIFIED METER.
10	1	800A 480Y/277V 3Ø 13-JAW COMPATIBLE SMART-METER WITH CAPABILITIES AS FOLLOWS: DIGITAL MEASUREMENT DISPLAY, ONE WATT-HOUR RESOLUTION, kWh/kVARh/kVAh MEASUREMENTS, & DEMAND READING. ACCEPTABLE MANUFACTURERS: ABB-GE, ITRON-SIEMENS, LANDIS+GYR, SENSUS iConA PROVIDE, INSTALL, AND CONNECT MATCHING CURRENT TRANSFORMERS FOR SPECIFIED METER.
11	1	100A 208Y/120V 3Ø 7-JAW NEMA-3R 22kAIC UNDERGROUND-FEED RING-TYPE METER PANEL WITH SAFETY-SOCKET BYPASS AND A 100A/3P MAIN CIRCUIT BREAKER. EATON/B-LINE #U217-MTBH-MS45
12	1	100A 240S/120V 1Ø 4-JAW NEMA-3R 10kAIC UNDERGROUND-FEED RING-TYPE METER PANEL WITH SAFETY-SOCKET BYPASS, A 100A/2P MAIN CIRCUIT BREAKER, AND BUILT-IN LOAD-CENTER WITH CIRCUIT BREAKERS TO MATCH REPLACED EQUIPMENT CONFIGURATION & RATINGS. EATON/B-LINE #U214-MTBL
13	6	100A 240S/120V 1Ø 4-JAW NEMA-3R 42kAIC OVERHEAD-FEED RING-TYPE METER PANEL WITH SAFETY-SOCKET BYPASS AND A 100A/2P MAIN CIRCUIT BREAKER. EATON/B-LINE #214-MTBH-MS15
14	1	200A 240S/120V 1Ø 4-JAW NEMA-3R 42kAIC RING-TYPE METER PANEL WITH SAFETY-SOCKET BYPASS, A 200A/2P MAIN CIRCUIT BREAKER, AND BUILT-IN LOAD-CENTER WITH CIRCUIT BREAKERS TO MATCH REPLACED EQUIPMENT CONFIGURATION & RATINGS. EATON/B-LINE #U224-MTBPL
15	2	100A 240S/120V 1Ø 4-JAW NEMA-3R 22kAIC OVER/UNDER-FEED RING-TYPE METER PANEL WITH SAFETY-SOCKET BYPASS AND A 100A/2P MAIN CIRCUIT BREAKER. EATON/B-LINE #214-MTBH-MS45

REMARKS: CONTRACTOR TO COORDINATE EQUIPMENT SCHEDULE QUANTITIES WITH ELECTRICAL DRAWINGS AND MODIFY AS REQUIRED.

LABELING REQUIREMENT: TRANSFORMERS, SWITCH CABINETS, PANELBOARDS & OTHER EQUIPMENT SHALL PER PROVIDED WITH BLACK PHENDLIC NAMEPLATES, WITH WHITE ENGRAVED 1/2" CHARACTERS STATING THE: EQUIPMENT NAME, SUPPLY VOLTAGE, AND FEEDING CIRCUIT IDENTIFICATION.

POWER CONDUCTORS SHALL BE INSTALLED WITH WHITE HEAT-SHRINK LABELING AT EACH END, WITH PRINTED 1/8" CHARACTERS, SHALL CORRESPOND WITH SUBMITTED WIRING DIAGRAMS, AND INDICATE DESIGNATION, ORIGIN, AND DESTINATION OF EACH CONDUCTOR RUN.

JENSEN ENGINEERING INC.
 Electrical Engineers
 1735 S. W. 10th Ave.
 Reno, Nevada 89502-3988
 Phone: (775) 852-3388
 Fax: (775) 852-2288
 email: jengeng@mvbell.net
 web: www.jengeng.com



2-12-2021

CONFORMED SET

**17-M36 UPGRADE ELECTRICAL POWER
 STEWART FACILITY
 5500 SNYDER AVE.
 CARSON CITY, NEVADA**

LEGEND,
 REQUIREMENTS, &
 EQUIPMENT SCHEDULE

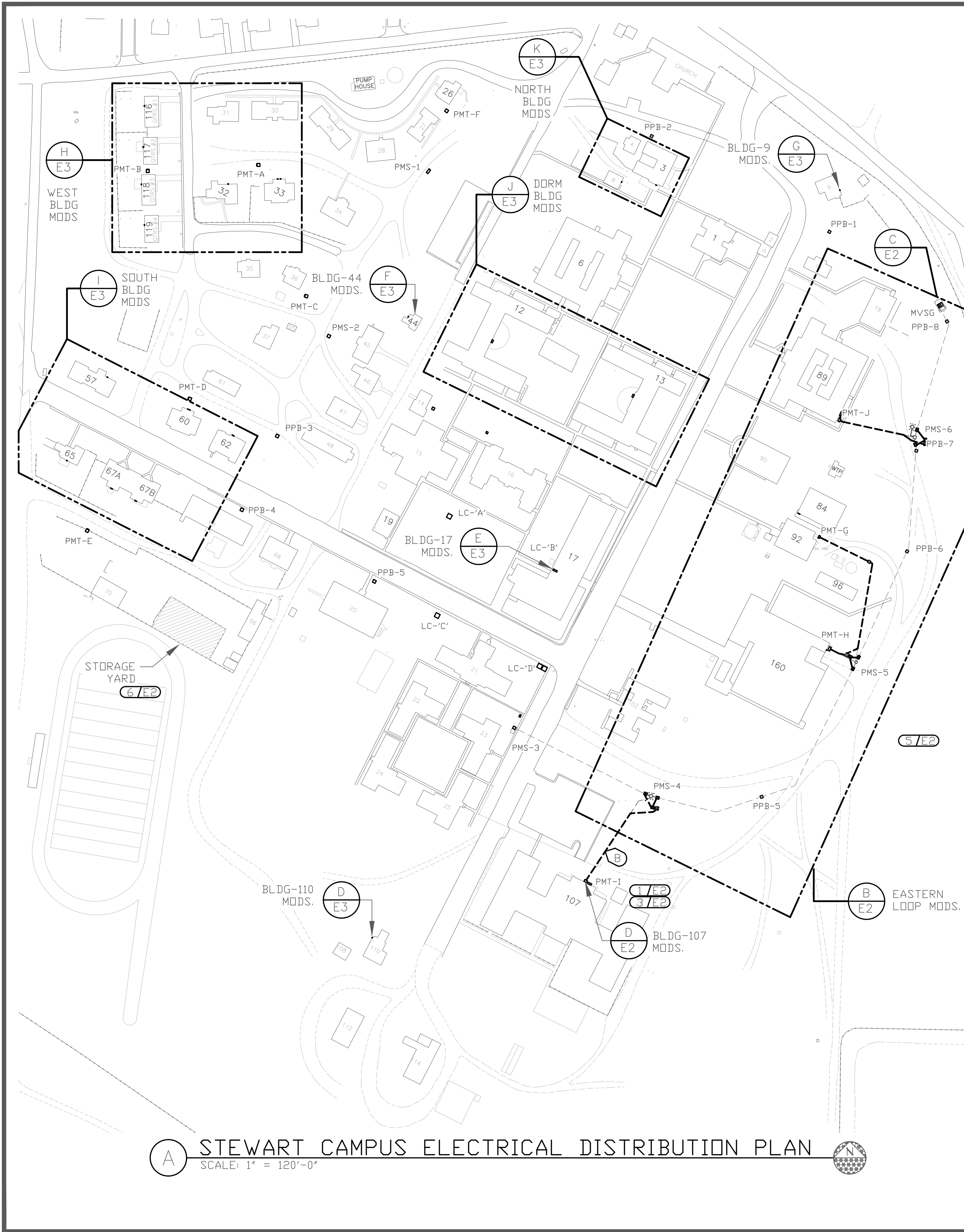
REVISIONS	DESCRIPTION	DATE	BY

DRAWN BY: **SJM**
 DESIGNED BY: **SJM**
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 DATE: **4-15-2020**
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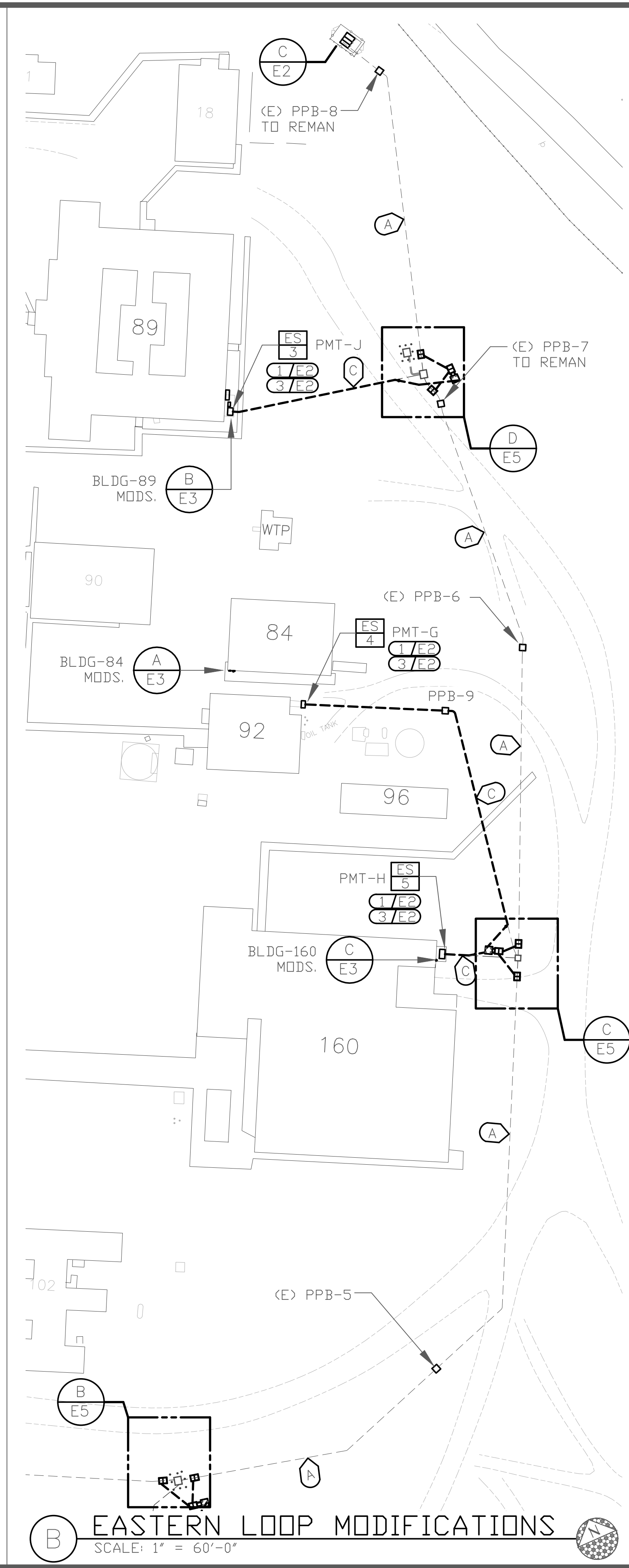
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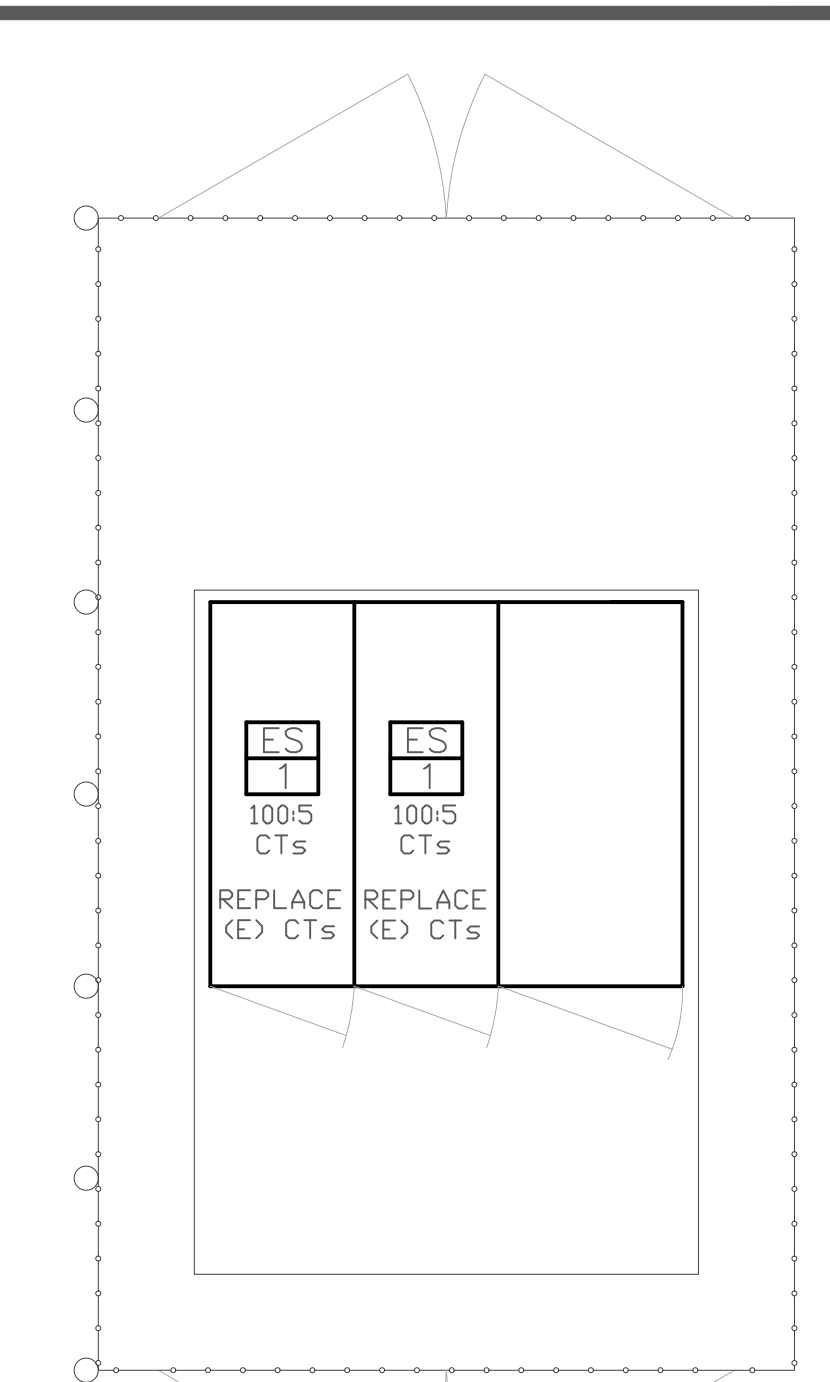
SHEET 2 OF



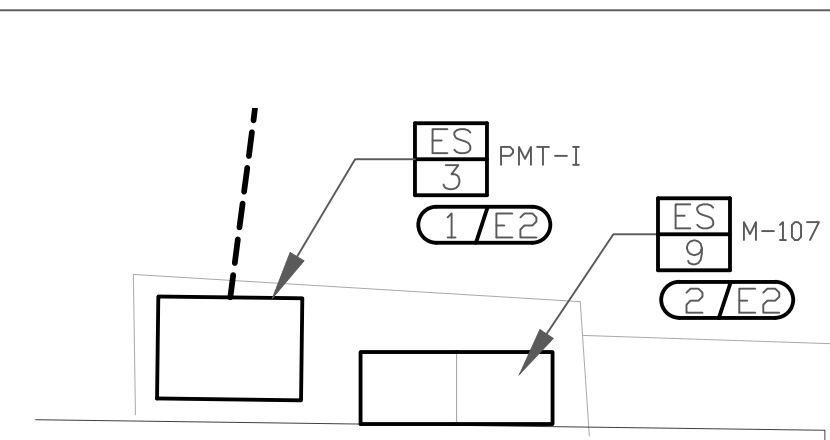
A STEWART CAMPUS ELECTRICAL DISTRIBUTION PLAN
SCALE: 1" = 120'-0"



B EASTERN LOOP MODIFICATIONS
SCALE: 1" = 60'-0"



C MVSG MODS.
SCALE: 1/4" = 1'-0"

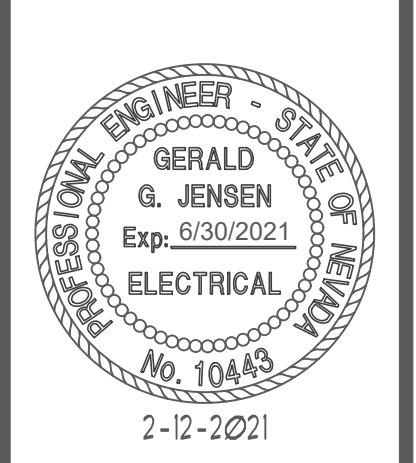


D BLDG-107 MODS.
SCALE: 1/8" = 1'-0"

SHEET NOTES:

1. REPLACE EXISTING METERING WITH NEW EQUIPMENT.
2. REPLACE EXISTING CTs WITH NEW EQUIPMENT AND CONNECT TO NEW METER COMPLETE.
3. REPLACE EXISTING TRANSFORMER PAD WITH NEW PRECAST TRANSFORMER PADS AT NEW PMT G, H, I, & J.
4. PROVIDE AND INSTALL RACK TYPE 3-THREE POINT JUNCTIONS AND TERMINATION ELBOWS AT SPLICE IN THIS VAULT
5. OVER-EXCAVATION BURDEN MAY BE STORED ON SITE. COORDINATE LOCATION OF OVERBURDEN STORAGE WITH OWNER.
6. CONTRACTOR SHALL PLACE OIL-FILLED TRANSFORMERS ON A PALLET WITH A CONTAINMENT TRAY, SUITABLE FOR CONTAINING MINOR LEAKS, AND SHALL TRANSPORT ALL TRANSFORMERS IDENTIFIED FOR REMOVAL TO THE STEWART BUILDINGS & GROUNDS STORAGE YARD AS INDICATED. OWNER SHALL BE RESPONSIBLE FOR PCB TESTING AND DISPOSAL OF TRANSFORMERS.

JENSEN ENGINEERING INC.
Electrical Engineers
Reno, Nevada (775) 852-3388
Fax: (775) 852-2248
email: jengeng@mvbell.net
web: www.jengeng.com



SDS/PA/ERIC/ONLY

**17-M36 UPGRADE ELECTRICAL POWER
STEWART FACILITY
5500 SNYDER AVE.
CARSON CITY, NEVADA**

OVERALL SITE PLAN,
LOOP MODIFICATIONS,
& SITE MODIFICATIONS

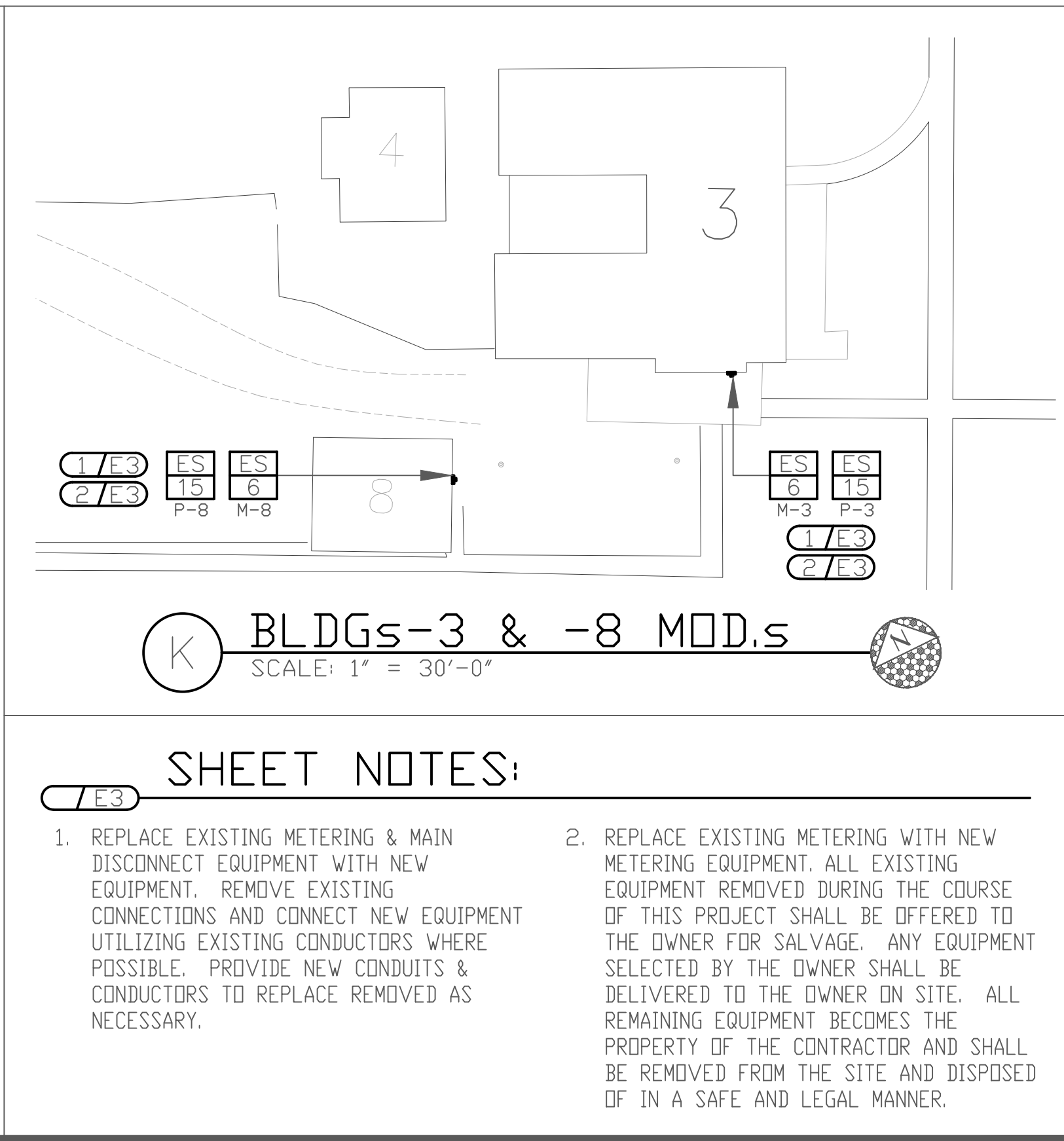
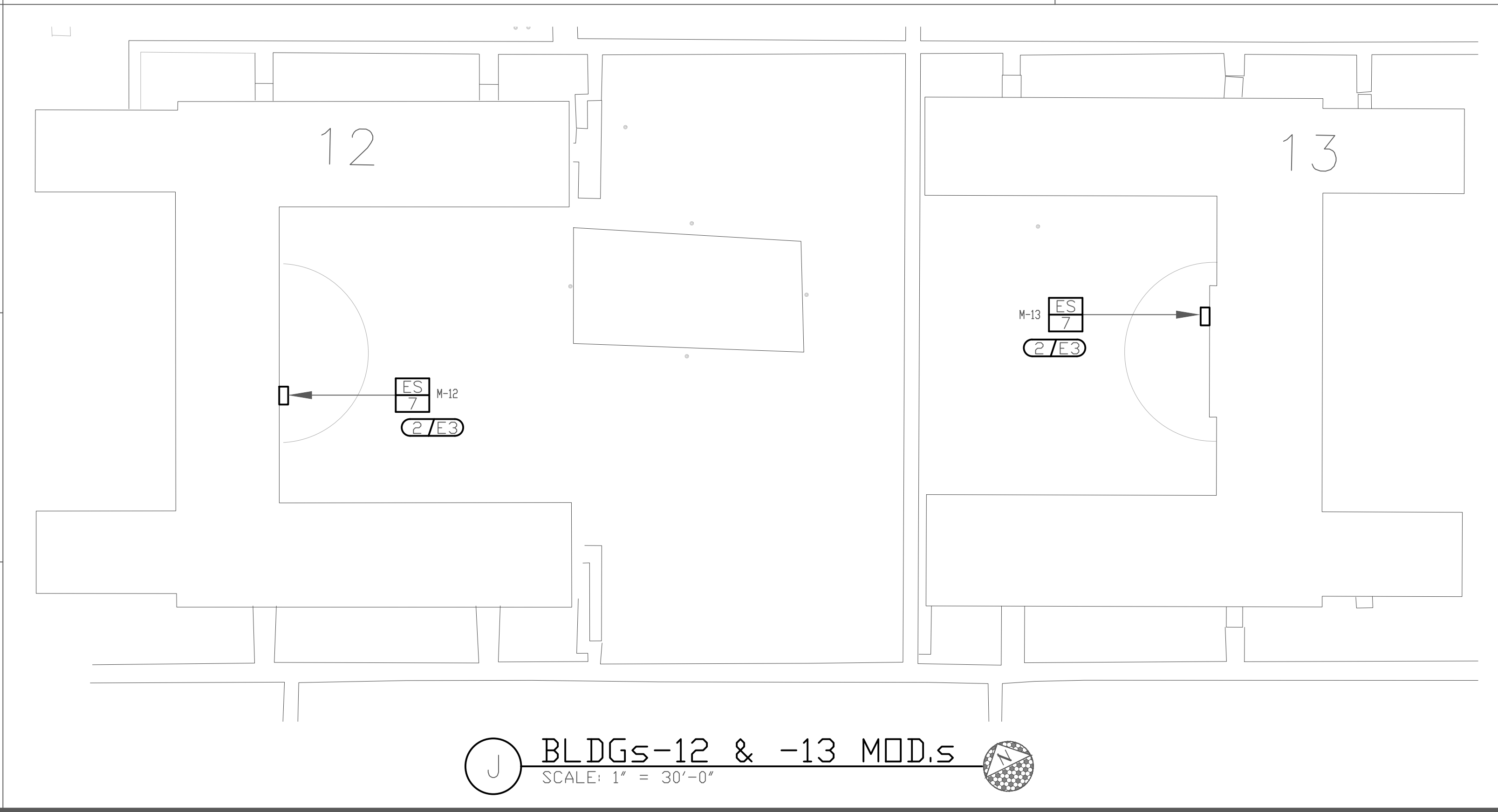
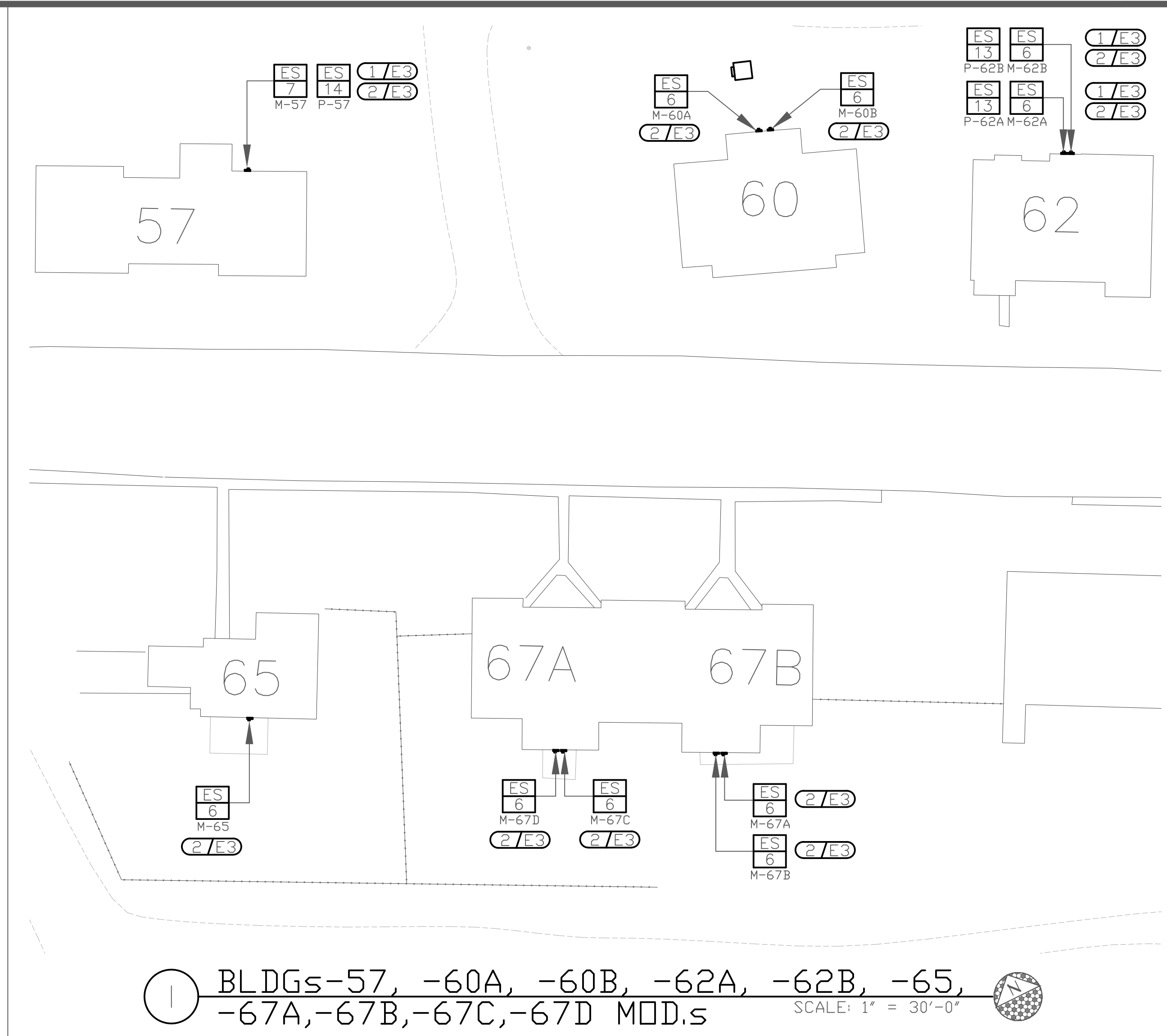
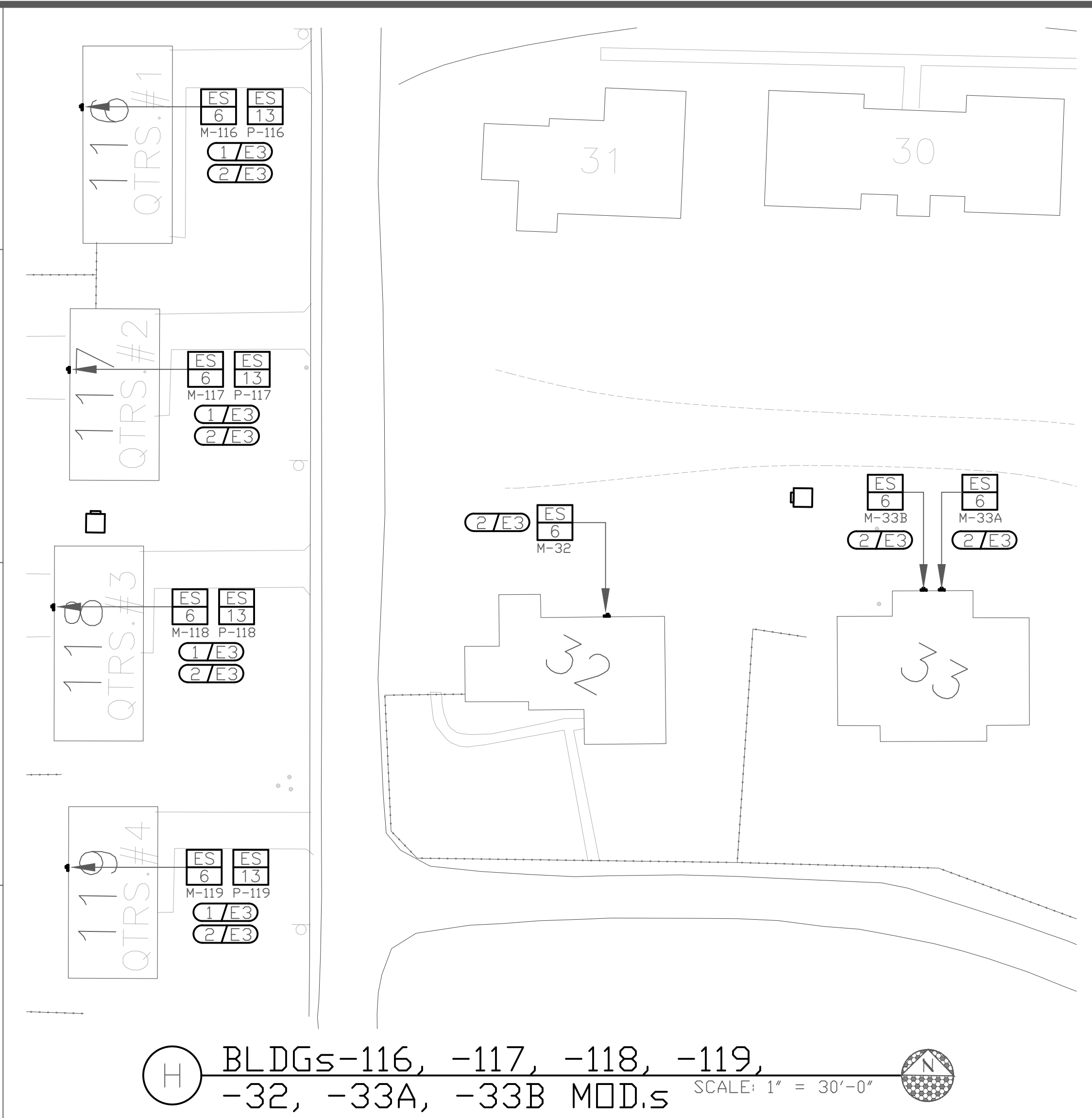
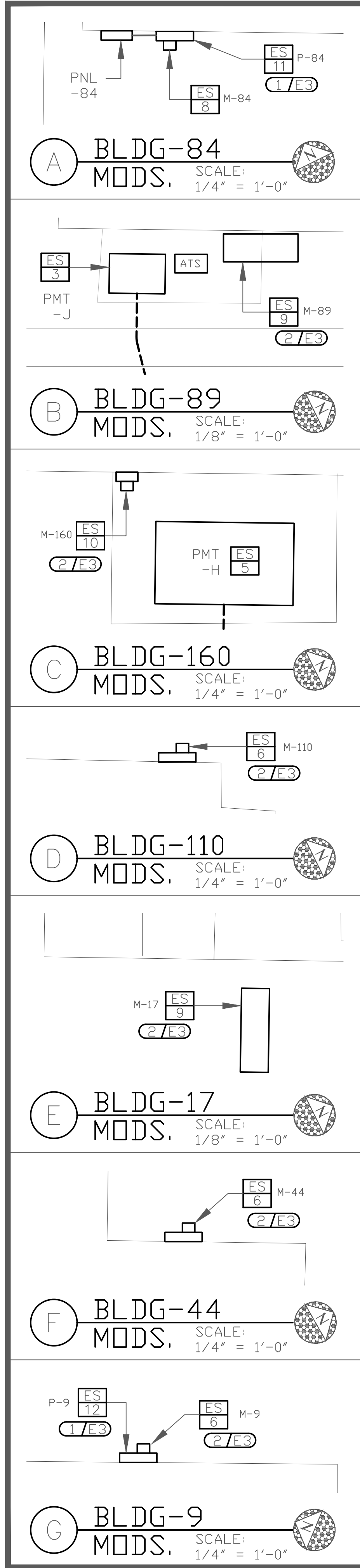
REVISIONS	DESCRIPTION	DATE	BY
1			
2			
3			
4			
5			

DRAWN BY: **SJM**
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PROJECT NO: **C01818TR**

SHEET NUMBER

E2

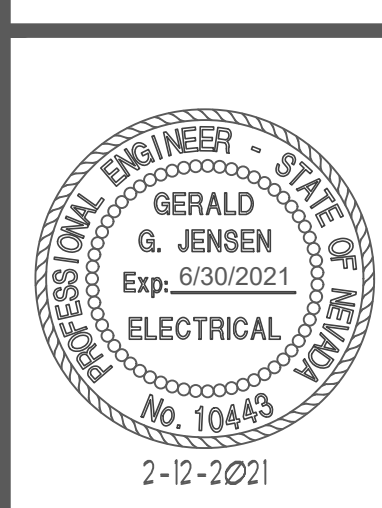
SHEET 3 OF



SHEET NOTES:

1. REPLACE EXISTING METERING & MAIN DISCONNECT EQUIPMENT WITH NEW EQUIPMENT. REMOVE EXISTING CONNECTIONS AND CONNECT NEW EQUIPMENT UTILIZING EXISTING CONDUCTORS WHERE POSSIBLE. PROVIDE NEW CONDUITS & CONDUCTORS TO REPLACE REMOVED AS NECESSARY.
2. REPLACE EXISTING METERING WITH NEW METERING EQUIPMENT. ALL EXISTING EQUIPMENT REMOVED DURING THE COURSE OF THIS PROJECT SHALL BE OFFERED TO THE OWNER FOR SALVAGE. ANY EQUIPMENT SELECTED BY THE OWNER SHALL BE DELIVERED TO THE OWNER ON SITE. ALL REMAINING EQUIPMENT BECOMES THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A SAFE AND LEGAL MANNER.

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CONFORMED SET

17-M36 UPGRADE ELECTRICAL POWER STEWART FACILITY
 5500 SNYDER AVE.
 CARSON CITY, NEVADA

METER ADDITION
 PLAN VIEWS

REVISIONS	DESCRIPTION	DATE	BY
No. 1			
No. 2			
No. 3			
No. 4			
No. 5			

DRAWN BY: **SJM**
 DESIGNED BY: **SJM**
 CHECKED: **GGJ**
 DATE: **4-15-2020**
 PROJECT NO: **C01818TR**

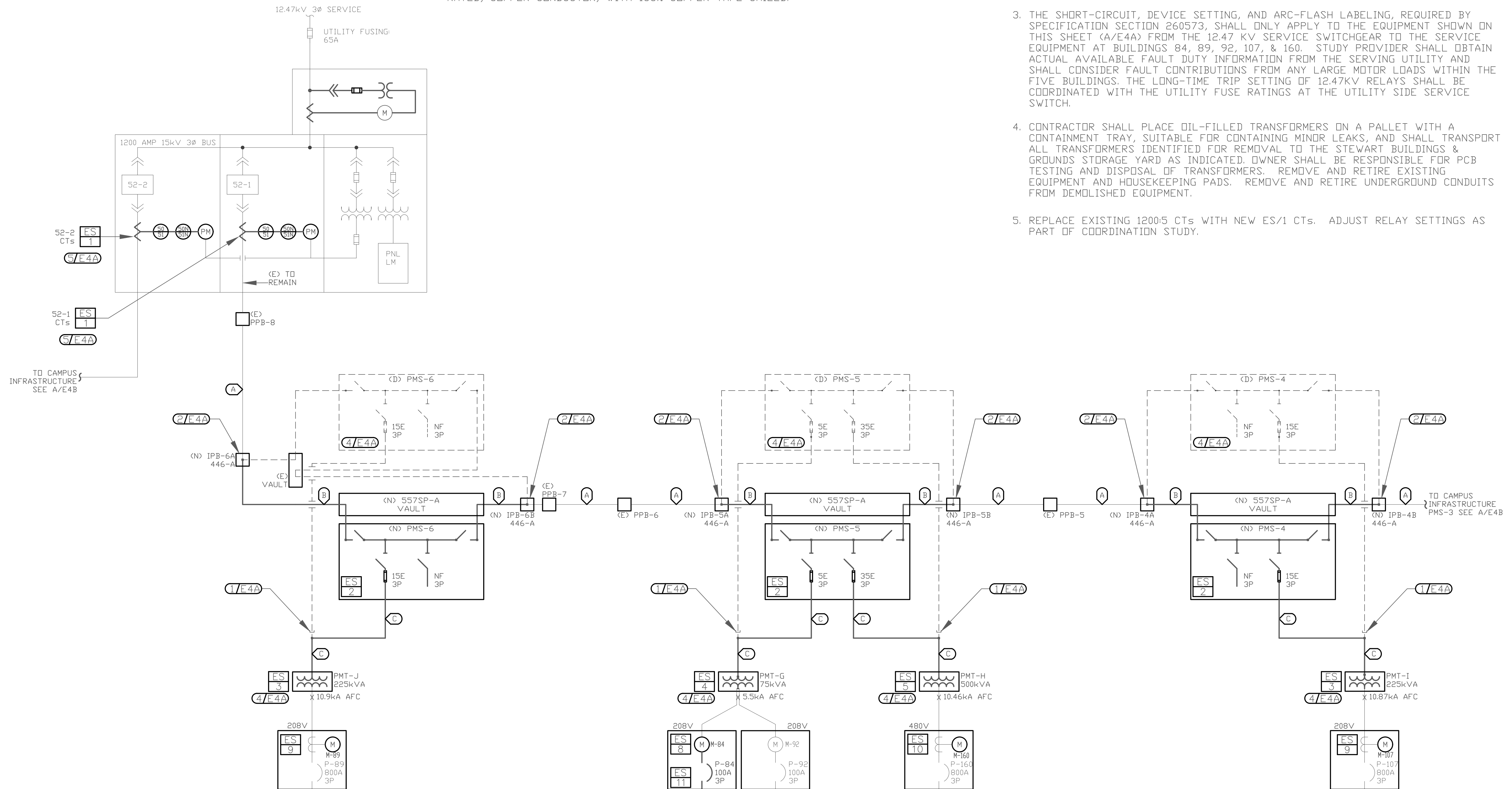
SHEET NUMBER
E3
 SHEET 4 OF

FEEDER	CONDUCTORS				GND B.C.	CONDUIT		REMARKS
	QTY.	SIZE	TYPE	MAT.		QTY.	SIZE	
A	3	(E) #2/0	(E) 15kV	(E) Cu	(E) #4	(E) 2 1-SPARE	4"	EXISTING LOOP FEEDER, INTERCEPT AT (E) IPB,
B	3	#2/0	15kV	Cu	#4	(E)	4"	EXTEND (N) CONDUCTORS FROM INTERCEPT VAULT TO (N) PMS
C	3	#2	15kV	Cu	#4	(E)	4"	SPLICE CONDUITS AND INSTALL CONDUCTORS CONTINUOUS FROM PMS TO BLDG TRANSFORMER

ALL NEW CABLES SHALL BE: 15KV, EPR INSULATION, MV-105 RATED, COPPER CONDUCTOR, WITH 133% COPPER TAPE SHIELD.

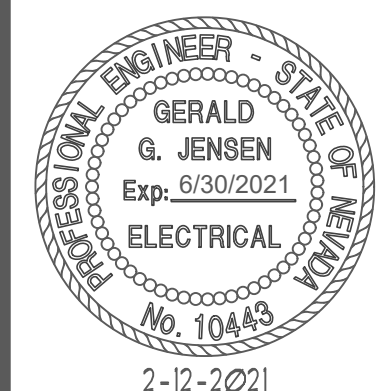
SHEET NOTES:

- CONTRACTOR SHALL DISCOVER THE EXISTING UNDERGROUND CONDUIT (AND CONDUCTORS) RUNNING FROM THE EXISTING PMS TO THE BUILDING SERVICE TRANSFORMERS AT THE POINT WHERE THE CONDUIT STUBBED FROM THE NEW PMS IS NEAREST THE EXISTING CONDUIT. CONTRACTOR SHALL REMOVE THE EXISTING 15KV CONDUCTORS AND CONNECT THE CONDUIT FROM THE NEW PMS TO THE EXISTING TRANSFORMER CONDUIT AND INSTALL NEW 15KV #2 CONDUCTORS FROM THE NEW PMS TO THE NEW (REPLACED) TRANSFORMER.
- CONTRACTOR SHALL INTERCEPT THE EXISTING UNDERGROUND 15KV LOOP FEEDER CONDUIT (AND CONDUCTORS) AT THE EXISTING INTERCEPT VAULT AND SHALL SPLICE-EXTEND NEW 15KV #2/0 Cu TO THE NEW PMS USING RACK MOUNTED 3-POINT JUNCTIONS AND 15KV 200A LOAD BREAK ELBOWS IN LIEU OF BUTT SPLICES. PROVIDE A LISTED TERMINAL CAP/COVER FOR THE UNUSED JUNCTION POINT. (18 3-POINT JUNCTIONS, 36 LOAD BREAK ELBOWS, 18 TERM CAP/COVERS, HARDWARE & INSTALLATION).
- THE SHORT-CIRCUIT, DEVICE SETTING, AND ARC-FLASH LABELING, REQUIRED BY SPECIFICATION SECTION 260573, SHALL ONLY APPLY TO THE EQUIPMENT SHOWN ON THIS SHEET (A/E4A) FROM THE 12.47 KV SERVICE SWITCHGEAR TO THE SERVICE EQUIPMENT AT BUILDINGS 84, 89, 92, 107, & 160. STUDY PROVIDER SHALL OBTAIN ACTUAL AVAILABLE FAULT DUTY INFORMATION FROM THE SERVING UTILITY AND SHALL CONSIDER FAULT CONTRIBUTIONS FROM ANY LARGE MOTOR LOADS WITHIN THE FIVE BUILDINGS. THE LONG-TIME TRIP SETTING OF 12.47KV RELAYS SHALL BE COORDINATED WITH THE UTILITY FUSE RATINGS AT THE UTILITY SIDE SERVICE SWITCH.
- CONTRACTOR SHALL PLACE OIL-FILLED TRANSFORMERS ON A PALLET WITH A CONTAINMENT TRAY, SUITABLE FOR CONTAINING MINOR LEAKS, AND SHALL TRANSPORT ALL TRANSFORMERS IDENTIFIED FOR REMOVAL TO THE STEWART BUILDINGS & GROUNDS STORAGE YARD AS INDICATED. OWNER SHALL BE RESPONSIBLE FOR PCB TESTING AND DISPOSAL OF TRANSFORMERS. REMOVE AND RETIRE EXISTING EQUIPMENT AND HOUSEKEEPING PADS. REMOVE AND RETIRE UNDERGROUND CONDUITS FROM DEMOLISHED EQUIPMENT.
- REPLACE EXISTING 1200:5 CTs WITH NEW ES/1 CTs. ADJUST RELAY SETTINGS AS PART OF COORDINATION STUDY.



A PARTIAL SINGLE-LINE DIAGRAM
SCALE: NONE

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STEWART FACILITY
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PARTIAL SINGLE-LINE DIAGRAM

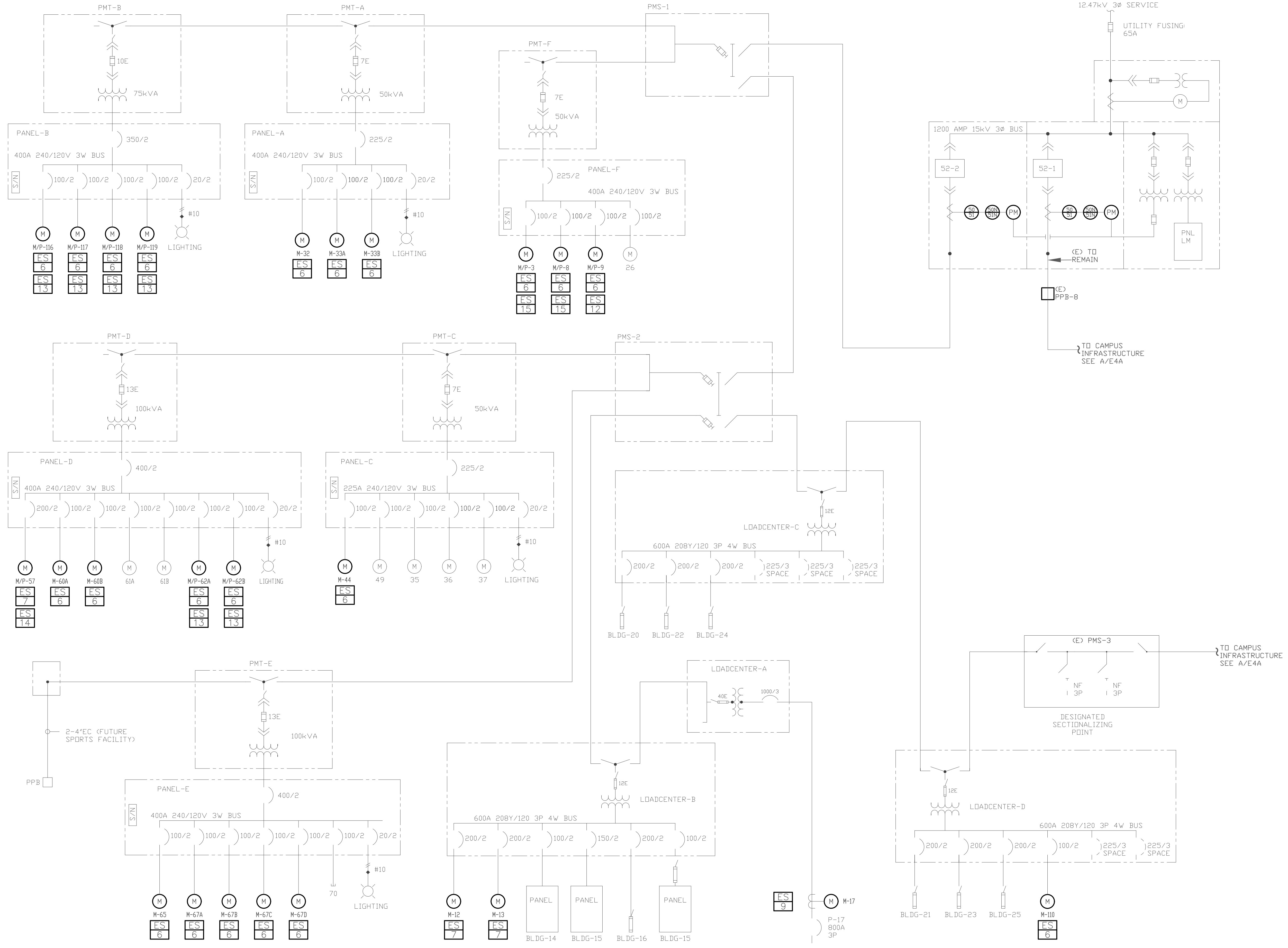
REVISIONS	DESCRIPTION	DATE	BY
No. 1			
No. 2			
No. 3			
No. 4			
No. 5			

DRAWN BY: **SJM**
DESIGNED BY: **SJM**
CHECKED: **GGJ**
DATE: **4-15-2020**
PROJECT NO: **C01818TR**

SHEET NUMBER

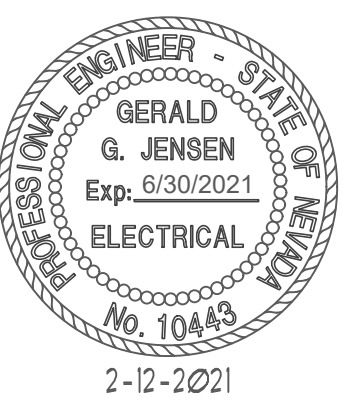
E4A

SHEET 5 OF



STEWART CAMPUS ELECTRICAL DISTRIBUTION SINGLE-LINE DIAGRAM
SCALE: NONE

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CONFORMED SET

**17-M36 UPGRADE ELECTRICAL POWER
STEWART FACILITY
5500 SNYDER AVE.
CARSON CITY, NEVADA**

CAMPUS
SINGLE-LINE
DIAGRAM

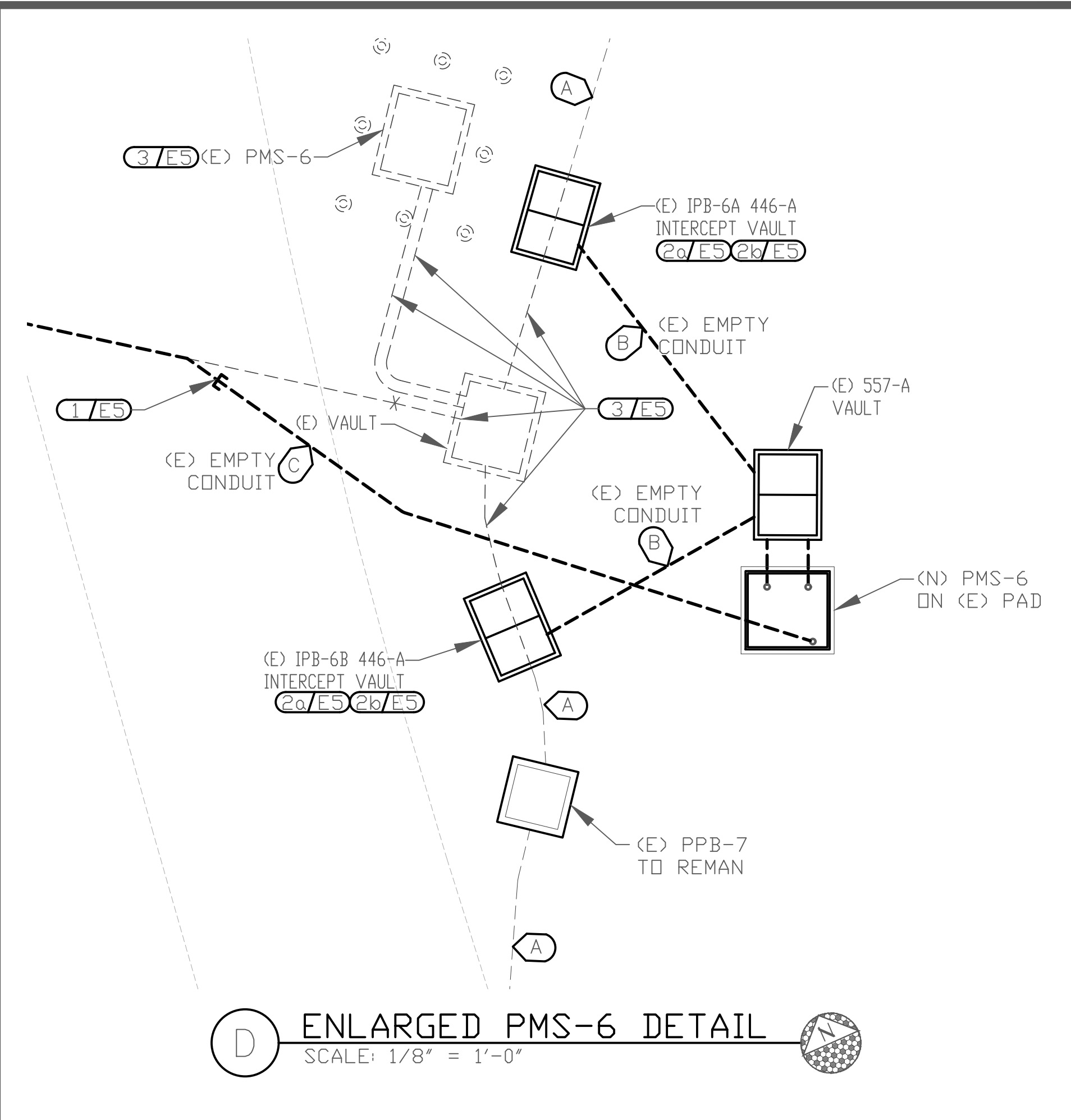
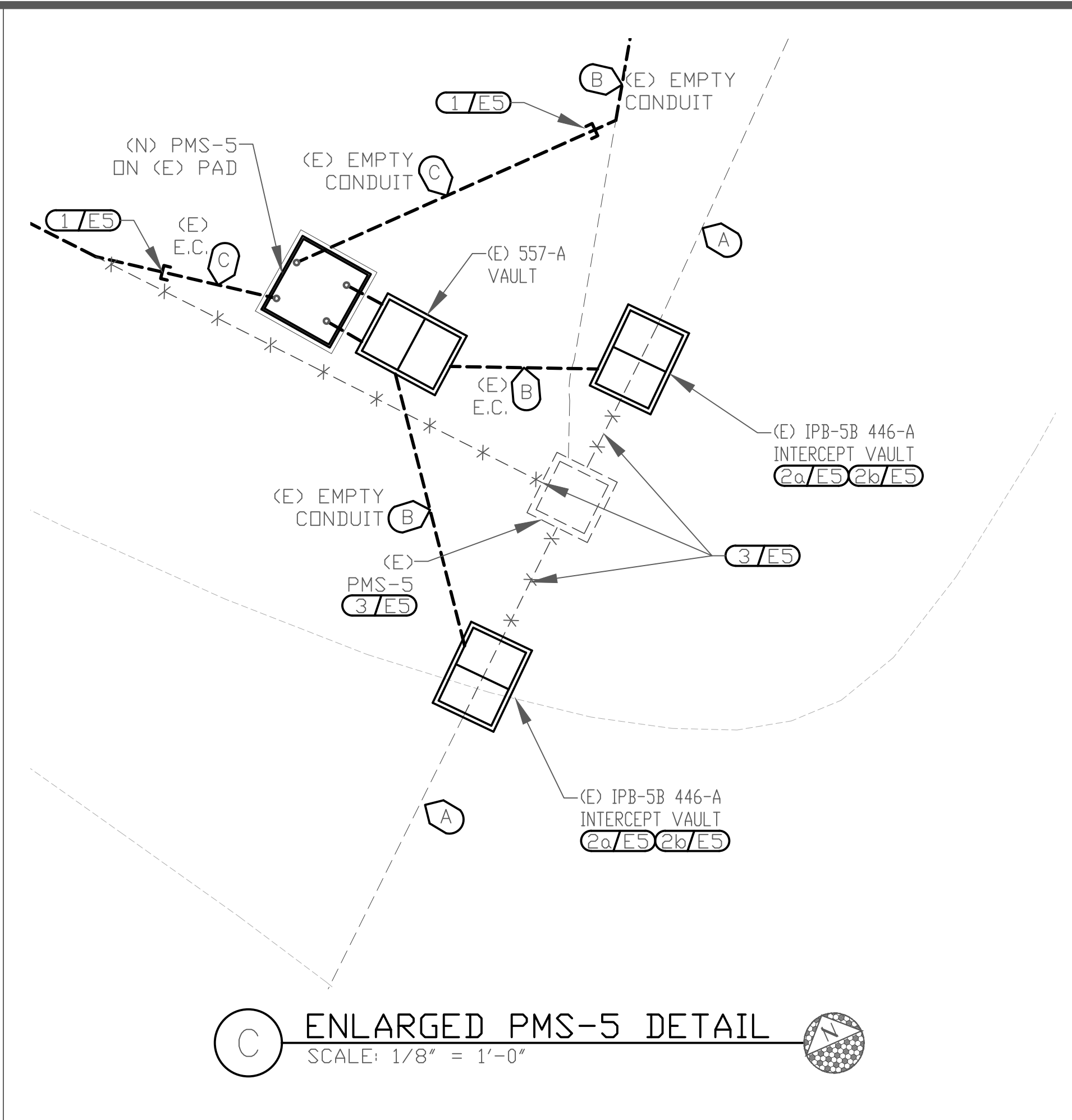
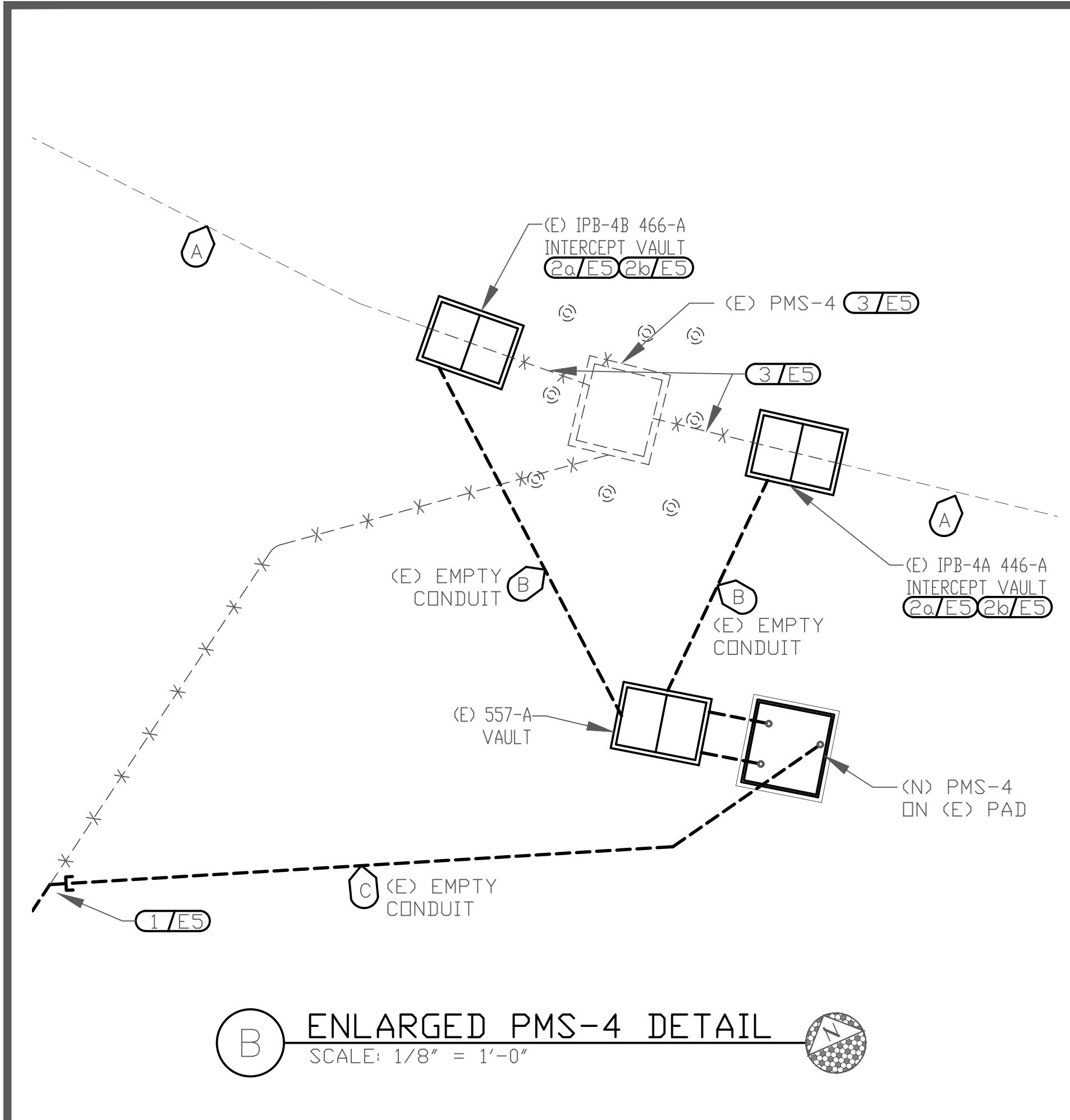
REVISIONS	DESCRIPTION	DATE	BY
No. 1			
No. 2			
No. 3			
No. 4			
No. 5			

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PROJECT NO: **C01818TR**

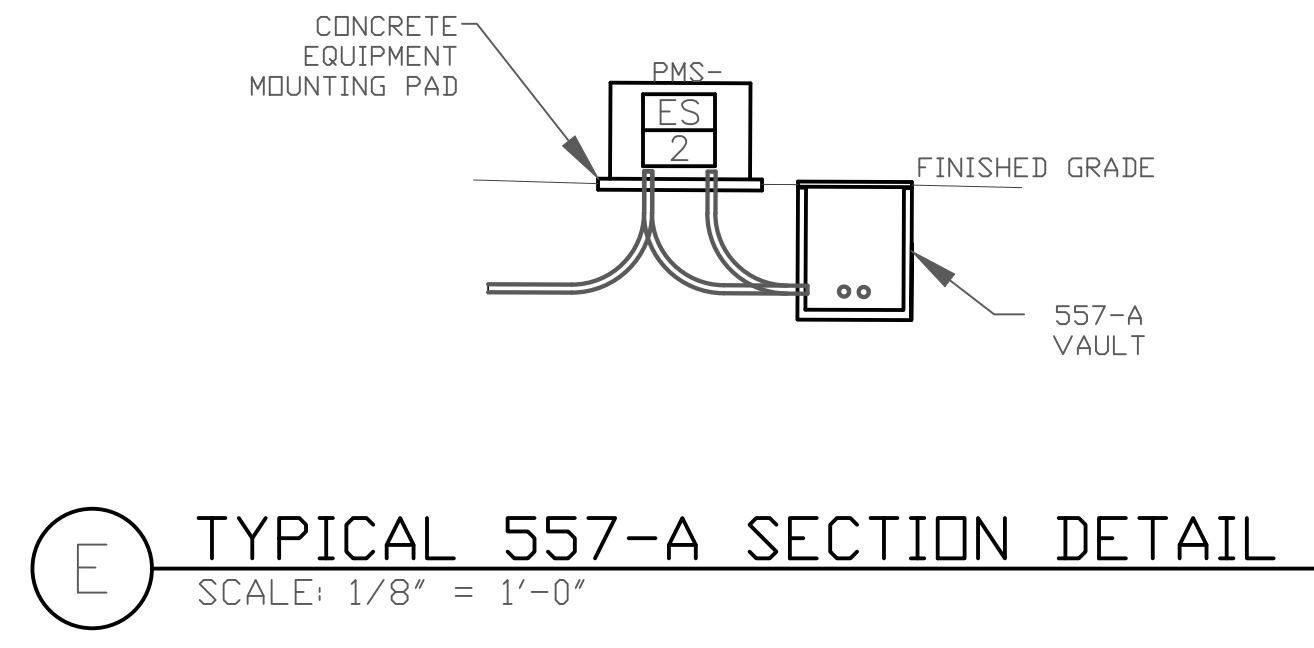
SHEET NUMBER

E4B

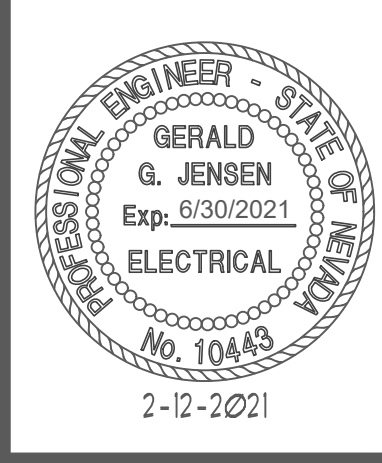
SHEET 6 OF



- SHEET NOTES:**
- CONTRACTOR SHALL DISCOVER THE EXISTING UNDERGROUND CONDUIT (AND CONDUCTORS) RUNNING FROM THE EXISTING PMS TO THE BUILDING SERVICE TRANSFORMERS AT THE POINT WHERE THE CONDUIT STUBBED FROM THE NEW PMS IS NEAREST THE EXISTING CONDUIT. CONTRACTOR SHALL REMOVE THE EXISTING 15kV CONDUCTORS AND CONNECT THE CONDUIT FROM THE NEW PMS TO THE EXISTING TRANSFORMER CONDUIT AND INSTALL NEW 15kV #2 CONDUCTORS FROM THE NEW PMS TO THE NEW (REPLACED) TRANSFORMER.
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 - REMOVE AND RETIRE EXISTING ELECTRICAL DISTRIBUTION EQUIPMENT. DEMOLISH ON GRADE CONCRETE PAD AND PROTECTION BOLLARDS AND IN FILL EXISTING SUBSTRUCTURE FLUSH TO GRADE. PROVIDE AND INSTALL NEW CONCRETE EQUIPMENT MOUNTING PAD.



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CONFORMED SET

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 STEWART FACILITY
 5500 SNYDER AVE.
 CARSON CITY, NEVADA**

CAMPUS
 SINGLE-LINE
 DIAGRAM

REVISIONS	DESCRIPTION	DATE	BY
1			
2			
3			
4			
5			

DRAWN BY: **SJM**
 DESIGNED BY: **SJM**
 CHECKED: **GGJ**
 DATE: **4-15-2020**
 PROJECT NO: **C01818TR**

SHEET NUMBER
E5
 SHEET 7 OF