TOPEKA METRO

REQUEST FOR BIDS
Concrete Pads and Conduits
TO-23-09

Appendix III
Engineering Studies

16000 - ELECTRICAL SPECIFICATIONS

SECTION 16000 – ELECTRICAL REQUIREMENTS

GENERAL REQUIREMENTS

A. ALL WORK SHALL BE IN ACCORDANCE W/ LATEST EDITION OF INTERNATIONAL BUILDING CODE, NATIONAL ELECTRICAL CODE, NFPA, CODES AS ADOPTED BY CITY, COUNTY, STATE & ALL OTHER APPLICABLE CODES.
B. ALL MATERIALS & EQUIPMENT SHALL BE NEW & SHALL BEAR U.L. LABEL WHERE APPLICABLE. PROVIDE WATERPROOF EQUIPMENT ENCLOSURES WHERE REQUIRED.
C. OBTAIN & PAY FOR ALL PERMITS REQUIRED FOR EXECUTION OF THIS WORK & SHALL MAKE ARRANGEMENTS FOR MODIFICATIONS TO ELECTRICAL CONNECTIONS TO BUILDING AS REQUIRED.
D. CONTRACTOR SHALL PROVIDE ALL LABOR & MATERIALS REQUIRED TO HAVE COMPLETE FUNCTIONING ELECTRICAL LIGHTING & POWER SYSTEMS TOGETHER W/ ALL ASSOCIATED EQUIPMENT & APPARATUS AS SHOWN ON PLANS.
E. WHERE AN ELECTRICAL DEVICE IS REQUIRED BY CODE BUT NOT SHOWN, IT SHALL BE PROVIDED AS THOUGH FULLY SHOWN & SPECIFIED.
F. CONTRACTOR SHALL VISIT SITE & OBSERVE CONDITIONS UNDER WHICH WORK WILL BE DONE. ANY DISCREPANCIES SHALL BE CALLED TO ARCHITECT'S ATTENTION. NO SUBSEQUENT ALLOWANCE WILL BE MADE IN THIS CONNECTION FOR ANY ERROR OR NEGLIGENCE ON CONTRACTOR'S PART.
G. FINAL ACCEPTANCE OF WORK SHALL BE SUBJECT TO CONDITION THAT ALL SYSTEMS, EQUIPMENT, APPARATUS & APPLIANCES OPERATE SATISFACTORILY AS DESIGNED & INTENDED. WORK SHALL INCLUDE REQUIRED ADJUSTMENT OF SYSTEMS & CONTROL EQUIPMENT INSTALLED UNDER THESE SPECIFICATIONS.
H. WARRANT TO OWNER QUALITY OF MATERIALS, EQUIPMENT, WORKMANSHIP & OPERATION OF EQUIPMENT PROVIDED UNDER THESE SPECIFICATIONS FOR ONE YEAR FROM & AFTER COMPLETION OF BUILDING & ACCEPTANCE OF MECHANICAL SYSTEMS BY OWNER.
I. ALL MATERIALS INSTALLED IN PLENUMS SHALL BE NONCOMBUSTIBLE OR HAVE FLAME/SMOKE INDEX OF NO MORE THAN 25/50 IN ACCORDANCE W/ ASTM E 84.

SECTION 16100 – CONDUIT & CONDUCTORS

A. FOLLOW CIRCUITING SHOWN ON PLANS. USE NO CONDUIT SMALLER THAN 1/2" & NO CONDUCTORS SMALLER THAN #12 GA. UNLESS NOTED OTHERWISE.
B. CONDUIT INSTALLED BELOW GRADE SHALL BE SCHEDULE 40 PVC HEAVY WALL PLASTIC CONDUIT MEETING NEMA STANDARDS & UL LISTED FOR UNDERGROUND & EXPOSED USE. PROVIDE GRS RADIUS BENDS & RISERS AS CONDUITS RISE ABOVE GRADE OR ABOVE FLOOR SLAB.
C. PROVIDE INTERLOCKING SPACERS FOR MULT RUNS OF UG CONDUITS IN SAME TRENCH.
D. CIRCUITS W/ NO. 8 OR LARGER CONDUCTORS, MOTOR CIRCUITS, POWER & FEEDER CIRCUITS & BUILDING SERVICE FEEDERS SHALL BE COPPER THWN/THHN 600 VOLT, 75 DEG C.
E. ALL CONDUIT, JUNCTION BOXES, ETC. ABOVE SUPPORTED PER THE NEC.

SECTION 16200 – GROUNDING

A. SUPPLEMENT GROUNDED NEUTRAL OF SECONDARY DISTRIBUTION SYSTEM W/ EQUIPMENT GROUNDING SYSTEM, INSTALLED SO THAT METALLIC STRUCTURES, ENCLOSURES, RACEWAYS, JUNCTION BOXES, OUTLET BOXES, CABINETS, MACHINE FRAMES, PORTABLE EQUIPMENT & OTHER CONDUCTIVE ITEMS OPERATE CONTINUOUSLY AT GROUND POTENTIAL & PROVIDE LOW IMPEDANCE PATH FOR GROUND FAULT CURRENTS.
B. SYSTEM SHALL COMPLY W/ NATIONAL ELECTRICAL CODE, DRAWINGS & AS SPECIFIED.
C. PROVIDE EQUIPMENT GROUND BUS IN BASE OF LOW VOLTAGE, SWITCHGEAR BRAZED OR OTHERWISE ADEQUATELY CONNECTED BY AN APPROVED METHOD TO GROUND RODS.
D. PROVIDE IN CONDUIT GREEN INSULATED COPPER GROUND CONDUCTOR TO MAIN METALLIC WATER SERVICE ENTRANCE & CONNECT BY MEANS OF ADEQUATE GROUND CLAMPS.
E. EQUIPMENT GROUNDING CONDUCTORS FOR BRANCH CIRCUIT HOME RUNS SHOWN ON DRAWINGS SHALL INDICATE AN INDIVIDUAL & SEPARATE GROUND CONDUCTOR FOR THAT BRANCH CIRCUIT WHICH SHALL BE TERMINATED AT BRANCH CIRCUIT PANELBOARD, SWITCHBOARD, OR OTHER DISTRIBUTION EQUIPMENT.
F. PROVIDE LOW VOLTAGE DISTRIBUTION SYSTEM W/ SEPARATE GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR FOR EACH SINGLE OR THREE–PHASE FEEDER.
G. GROUNDING CONDUCTORS SHALL BE AS SHOWN ON PLANS OR IF NOT SPECIFICALLY SHOWN SHALL BE NO SMALLER THAN THAT REQUIRED BY NEC.

SECTION 16300 – ELECTRICAL EQUIPMENT

A. JUNCTION BOXES & OUTLET BOXES SHALL BE GALVANIZED KNOCKOUT TYPE. LIGHTING FIXTURE BOXES IN CEILINGS SHALL NOT BE LESS THAN 4" OCTAGONAL KNOCKOUT TYPE. OUTLETS SHALL BE INSTALLED IN LOCATIONS SHOWN ON DRAWINGS EXCEPT OUTLETS MAY BE MOVED 4 FEET IN EITHER DIRECTION IF SO DIRECTED, WITHOUT ADDITIONAL COST. BOXES SHALL BE FLUSH MOUNTED ON WALLS FOR CONCEALED WORK. GANGABLE BOXES SHALL BE USED IN ALL GYPBOARD SURFACES.

SWITCHBOARD/PANELBOARDS

A. PROVIDED BY OTHERS – COORDINATE REQUIREMENTS.

SECTION 16350 – ELECTRICAL IDENTIFICATION

A. MANUFACTURED LABELS FOR EACH PANELBOARD & TRANSFORMER. TYPEWRITTEN PANEL SCHEDULES MOUNTED IN PANELS

MEP SYMBOL LIST

SOME SYMBOLS AND ABBREVIATIONS ON THIS LEGEND MAY NOT BE USED

	HOME RUN (2 #12, 1 #12 G UNLESS NOTED OTHERWISE)
	INDICATES 2 PHASE, 1 NEUTRAL, AND 1 GROUND CONDUCTOR
TELE	TELEPHONE CONDUIT
OHP	OVERHEAD POWER
UE	UNDERGROUND ELECTRICAL
UFO	UNDERGROUND FIBER OPTIC
G	UNDERGROUND GAS
SAN	UNDERGROUND SANITARY
W	UNDERGROUND WATER
EX WP	EXISTING WEATHER PROOF
GFI EM	GROUND FAULT INTERRUPT EMERGENCY
	DISCONNECT SWITCH. 30A–3P, NON–FUSED EXCEPT AS NOTED
RL	RELOCATED EXISTING
	INDICATES CONNECT TO EXISTING
	CONTROL CIRCUIT
J	JUNCTION BOX
	DISTRIBUTION PANELBOARD
	SWITCHBOARD. FEEDER/MAIN CIRCUIT BREAKER SECTION AND DISTRIBUTION SECTION.
	SURFACE PANELBOARD

GENERAL NOTES

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN AND KEEP AT THE JOB SITE, AN UP TO DATE SET OF "RECORD DRAWINGS" SHOWING ALL CHANGES FROM THE ORIGINAL PLANS. THE CONTRACTOR SHALL DELIVER THE "RECORD DRAWINGS" TO THE ENGINEER AT THE CONCLUSION OF THE PROJECT ELECTRONICALLY.
2. THESE DRAWINGS ARE DIAGRAMMATIC. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS (NEW AND EXISTING), DIMENSIONS, AND CLEARANCES PRIOR TO THE COMMENCEMENT OF WORK AND SHALL INCLUDE ALL COSTS, EQUIPMENT, MATERIAL, ACCESSORIES, ETC. REQUIRED FOR A FULLY COMPLETE, FUNCTIONAL AND CODE COMPLIANT INSTALLATION.
3. FINAL LOCATIONS OF ALL UTILITY EQUIPMENT ETC SHALL BE COORDINATED WITH EVERGY.
4. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS, APPROVALS, LICENSES, ETC. AS NEEDED FOR THE COMPLETE INSTALLATION AND PROJECT. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR ALL FEES AND DATA NEEDED FOR THIS.

COORDINATION NOTES

1. COORDINATE REQUIREMENTS FOR INSTALLATION OF SYSTEMS AND EQUIPMENT WITH ALL OTHER TRADES.
2. THE CONTRACTOR SHALL COORDINATE THE ROUTING AND PATH OF ALL SYSTEMS, CONDUITS, ETC WITH THE POSITION AND LAYOUT OF THE STRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING NECESSARY OFFSETS, TURNS, RISES AND DROPS FOR SYSTEMS AND COMPONENTS AS NEEDED TO INSTALL THE MEP SYSTEMS TO CLEAR STRUCTURE, CEILINGS, ETC AND OTHER SYSTEMS IN POTENTIAL CONFLICT WITH ROUTING.
3. CHECK SPACE REQUIREMENTS WITH OTHER TRADES AND STRUCTURE/CONSTRUCTION TO INSURE THAT ALL MATERIALS AND EQUIPMENT CAN BE INSTALLED IN THE SPACE ALLOTTED INCLUDING FINISHED SUSPENDED CEILINGS AND OTHER SPACES, CHASES, ETC WITHIN THE BUILDING. MAKE MODIFICATIONS THERETO AS REQUIRED AND APPROVED.
4. TRANSMIT TO OTHER TRADES ALL INFORMATION REQUIRED FOR WORK TO BE PROVIDED UNDER THEIR RESPECTIVE SECTIONS IN AMPLE TIME FOR INSTALLATION.
5. WHEREVER WORK INTERCONNECTS WITH WORK OF OTHER TRADES, COORDINATE WITH THOSE TRADES TO INSURE THAT ALL SUBCONTRACTORS HAVE THE INFORMATION NECESSARY SO THAT THEY MAY PROPERLY INSTALL ALL CONNECTIONS AND EQUIPMENT. IDENTIFY ALL ITEMS OF WORK THAT REQUIRE ACCESS SO THAT THE CEILING TRADE WILL KNOW WHERE TO INSTALL ACCESS DOORS AND PANELS.
6. COORDINATE, PROJECT AND SCHEDULE WORK WITH OTHER TRADES IN ACCORDANCE WITH THE CONSTRUCTION SEQUENCE.
7. DRAWINGS SHOW THE GENERAL RUNS OF CONDUITS, EQUIPMENT LOCATIONS, ETC. ANY SIGNIFICANT CHANGES IN LOCATION OF ITEMS NECESSARY IN ORDER TO MEET FIELD CONDITIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER AND RECEIVE HIS APPROVAL BEFORE SUCH ALTERATIONS ARE MADE. ALL SUCH MODIFICATIONS SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION AND REPAIR OF SURFACES, AREAS AND PROPERTY THAT MAY BE DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES.
9. ADJUST LOCATION OF CONDUIT, EQUIPMENT ETC. TO PREVENT INTERFERENCES, BOTH ANTICIPATED AND ENCOUNTERED. DETERMINE THE EXACT ROUTE AND LOCATION OF EACH ITEM PRIOR TO FABRICATION. MAKE OFFSETS, TRANSITIONS AND CHANGES IN DIRECTION IN SYSTEMS AS REQUIRED TO MAINTAIN ADEQUATE CLEARANCES.
10. WHEREVER THE WORK IS OF SUFFICIENT COMPLEXITY, PREPARE ADDITIONAL COORDINATION DRAWINGS AND ORGANIZE ON–SITE MEETINGS WITH ALL RELATED SUBCONTRACOTRS TO COORDINATE THE WORK BETWEEN TRADES . DRAWINGS SHALL CLEARLY SHOW THE WORK AND ITS RELATION TO THE WORK OF OTHER TRADES, AND BE SUBMITTED FOR REVIEW PRIOR TO COMMENCING SHOP FABRICATION OR ERECTION IN THE FIELD.
11. COORDINATE WITH LOCAL UTILITY PROVIDERS FOR THEIR REQUIREMENTS FOR SERVICE CONNECTIONS AND PROVIDE ALL NECESSARY PAYMENTS, MATERIALS, LABOR AND TESTING TO ACCOMPLISH THE WORK.

GENERAL DEMOLITION NOTES

1. CONTACT UTILITY LOCATING SERVICE TO LOCATE EXACT LOCATION OF UTILITIES BELOW GRADE.
2. MAINTAIN ALL EXISTING UNDERGROUND/OVERHEAD UTILITIES SHOWN AS EXISTING TO REMAIN OR OTHERWISE UNRELATED TO THE SCOPE OF THE PROJECT IN WORKING ORDER.
3. NOTES AND DRAWINGS ARE BASED UPON A FIELD EXAMINATION OF THE SITE AND MAY NOT INDICATE ALL ITEMS. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE SITE AND THE SCOPE OF WORK FOR THE CONTRACT PRIOR TO BID. ANY EXISTING CONDITION WHICH IS APPARENT OR COULD BE REASONABLY INFERRED FROM A VISIT TO THE SITE SHALL NOT BE THE BASIS FOR A CHANGE IN THE CONTRACT AMOUNT.
4. PROTECT ALL EXISTING SURFACES AND EQUIPMENT DURING CONSTRUCTION. EXISTING ITEMS TO REMAIN SHALL BE ADEQUATELY PROTECTED FROM DEMOLITION AND NEW CONSTRUCTION WORK, AS REQUIRED. ANY ITEMS DAMAGED OR MARRED SHALL BE ADEQUATELY CLEANED OR REPLACED TO THE OWNERS SATISFACTION TO ORIGINAL CONDITION BEFORE CONSTRUCTION.

ABBREVIATIONS

A/E	ARCHITECT / ENGINEER
AG	ABOVE GRADE
AHJ	AUTHORITY HAVING JURISDICTION
BG	BELOW GRADE
BLDG	BUILDING
C	CONDUIT
E/C	ELECTRICAL CONTRACTOR
EX	EXISTING ITEM
G	GROUND / GANG
G/C	GENERAL CONTRACTOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
JB	JUNCTION BOX
MCB	MAIN CIRCUIT BREAKER
MH	MANHOLE
MLO	MAIN LUGS ONLY
PVC	POLYVINYLCHLORIDE
RE/REF	REFER / REFERENCE
RGS	RIGID GALVANIZED STEEL
RL	RELOCATED ITEM
TYP	TYPICAL
WP	WEATHERPROOF

SHEET INDEX

GENERAL ELECTRICAL NOTES

1. COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED VERSION OF THE NATIONAL ELECTRICAL CODE, LOCAL AND STATE CODES, AND REQUIREMENTS OF THE AHJ.
2. COORDINATE LOCATIONS OF RECEPTACLES, SWITCHES, ETC. WITH ARCHITECTURAL CASEWORK AND ELEVATIONS.
3. REFER TO MOUNTING HEIGHTS DETAIL FOR MOUNTING HEIGHTS OF ALL DEVICES NOT INDICATED OTHERWISE.
4. PROVIDE ALL EMPTY CONDUITS WITH PULL STRINGS AND BUSHED ENDS.
5. CONTRACTOR SHALL CONCEAL ALL CONDUIT, FITTINGS, AND DEVICES FROM VIEW WHERE REASONABLY POSSIBLE.

811 **KANSAS ONE-CALL CENTER: ALWAYS CALL BEFORE YOU DIG**

PROTECT YOURSELVES AND YOUR PROPERTY AGAINST UNDERGROUND UTILITY DAMAGE AND LIABILITY.

FIND OUT WHERE THE UNDERGROUND UTILITY LINES MIGHT BE BURIED BEFORE YOU DIG.

ANYONE DIGGING IN KANSAS MUST CALL BEFORE DIGGING. THE PERSON WHO IS DOING THE WORK IS RESPONSIBLE FOR CALLING. IF THE OWNER CONTRACTS WITH A PROFESSIONAL EXCAVATOR TO DO THE EXCAVATION THEN THE PROFESSIONAL EXCAVATOR IS RESPONSIBLE FOR CALLING.

YOU (THE DIGGER) WILL NEED TO PROVIDE INFORMATION ABOUT THE WORK SITE WHEN YOU CALL. THIS IS A FREE SERVICE.

CALL BEFORE YOU DIG, IT'S THE LAW.

SCOTT W. MCKINLEY
LICENSED
15159
10/19/2022
KANSAS
PROFESSIONAL ENGINEER

pkmr ENGINEERS

PEARSON KENT MCKINLEY RAAF ENGINEERS LLC
2933 SW WOODSIDE DR., SUITE C TOPEKA, KS 66614
785.273.2447 WWW.PKMRENG.COM

22.462

TOPEKA METROPOLITAN TRANSIT AUTHORITY 2ND ELECTRICAL SERVICE

201 N KANSAS AVE
TOPEKA, KS 66603

ISSUED FOR:

	DESCRIPTION	DATE
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DRAWN BY:	KAH
CHECKED BY:	SWM

SHEET TITLE: ELECTRICAL COVER SHEET

DATE: 10/19/22

PKMR PROJECT: 22.462

SHEET NUMBER: E-1

SITE PLAN - POWER

1"=20'

GENERAL SITE PLAN NOTES

1. REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.
2. EXISTING UNDERGROUND UTILITIES ARE SHOWN PER SURVEY CONDUCTED SEPTEMBER 2022, SHOWN FOR REFERENCE ONLY.
3. COORDINATE ALL EQUIPMENT PAD LOCATIONS WITH EVERGY.

SCOTT W. MCKINLEY RAAF
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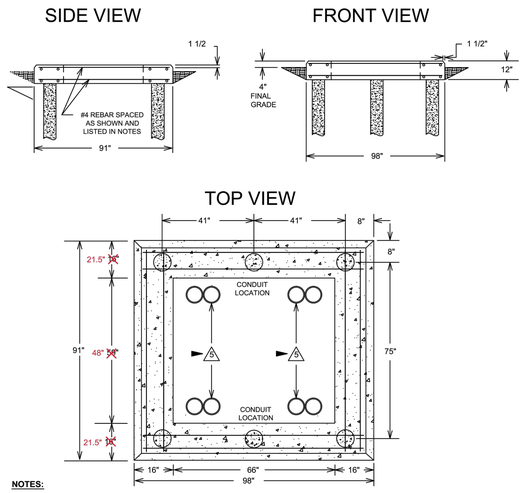
DRAWN BY:	KAH
CHECKED BY:	SWM

SHEET TITLE: ELECTRICAL SITE PLAN

DATE: 10/19/22

PKMR PROJECT: 22.462

SHEET NUMBER: E-2



NOTES:

1 CONCRETE SHALL BE A MINIMUM OF 3,000 LB MIX.

2 TOP OF THE PAD SHALL RECEIVE A SMOOTH TROWEL FINISH.

3 CORNERS SHALL BE BEVELLED.

4 CONDUIT OPENING SHALL BE FREE AND CLEAR OF CONCRETE.

⚠5 TOPS OF THE CONDUITS SHALL BE FLUSH WITH THE TOP OF THE CONCRETE PAD. SEPARATION BETWEEN SETS OF CONDUITS AS SHOWN ON THE DRAWING SHALL BE MINIMUM 36 INCHES AND MAXIMUM 47 INCHES.

6 PILLARS ARE FORMED BY AUGERING AN 8" DIAMETER HOLE TO A DEPTH OF UNDISTURBED EARTH. A SEPARATOR, SUCH AS TAR PAPER, SHOULD BE PLACED BETWEEN THE PILLAR AND THE PAD SO THAT THE PAD CAN BE LEVELED AT A LATER TIME IF NECESSARY.

7 #4 REBAR SHALL BE INSTALLED 1 1/2" FROM BOTTOM OF PAD, 3" FROM TOP OF PAD, AND NO CLOSER THEN 3" FROM EDGE OF PAD - ALL AS SHOWN.

► DENOTES LATEST REVISION

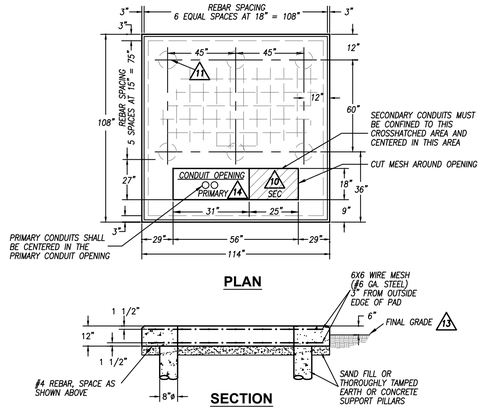
10/5/2022
Stephanie Wallace
modified foundation for ATO switchgear
stock # 000096010131
Innovative PS40406666-101A-A02

NOTE: UNLESS SPECIFIED OTHERWISE, ALL DIMENSIONS ARE IN INCHES.

NO.	DATE	BY	CK	APP	SHEET 1 OF 1	LCS 17 - 1410	REV 1
1	10/10/16	JJR	JJR	RO	WESTAR ENERGY, INC. ALL RIGHTS RESERVED	600-AMP SWITCHGEAR PAD	
0	12/31/09	DDP	SKT	RO			

Westar Energy

EVERGY ATO PAD DETAIL
NO SCALE



NOTES:

1. PAD LOCATION SHALL BE APPROVED BY EVERGY ENERGY.
2. TRANSFORMER SHALL BE INSTALLED NEAR THE CUSTOMER'S SERVICE ENTRANCE.
3. IF TRANSFORMER PAD IS INSTALLED IN AN AREA SUBJECT TO VEHICULAR TRAFFIC, THE INSTALLATION SHALL BE PROTECTED WITH A PIPE-RAIL GUARD.
4. CONTRACTOR SHALL EXTEND FORMS DOWN TO AT LEAST 3" BELOW AVERAGE GROUND LINE.
6. CONCRETE SHALL BE A MINIMUM OF 3,000 LB. MIX.
7. TOP OF THE XFMR PAD SHALL RECEIVE A SMOOTH TROWEL FINISH. CORNERS SHALL BE ROUNDED OR BEVELLED.
8. CONDUIT OPENING SHALL BE FREE AND CLEAR OF CONCRETE.
9. TOPS OF THE CONDUITS SHALL BE FLUSH WITH THE TOP OF THE CONCRETE PAD.

⚠10 NUMBER OF CONDUITS NECESSARY IS DEPENDENT ON THE MAXIMUM NUMBER OF SERVICE CONDUCTORS ALLOWED IN THE LOW-VOLTAGE COMPARTMENT OF THE XFMR. 1 FOR MAXIMUM NUMBER. INSTALL 1" METERING CONDUIT FROM PAD TO METER ENCL WHEN TRANSFORMER RATED METERING IS SET ON ADJACENT BLDG OR STAND & METERING TRANSFORMERS ARE IN THE PADMOUNT TRANSFORMER.

⚠11 PILLARS ARE FORMED BY AUGERING AN 8"DIA HOLE TO A DEPTH OF UNDISTURBED EARTH. A SEPARATOR, SUCH AS TAR PAPER, SHOULD BE PLACED BETWEEN THE PILLAR AND THE PAD SO THAT THE PAD CAN BE LEVELED AT A LATER TIME IF NECCESARY.

12. EVERGY ENERGY RESERVES THE RIGHT NOT TO ACCEPT THE CONDITION OF THE CONCRETE PAD IF IT FAILS TO MEET THE REQUIREMENTS STATED IN THIS STANDARD.

⚠13 THE 6" ABOVE GRADE CAN BE REDUCED TO 4" ABOVE FINISHED PAVEMENT.

⚠14 CONDUIT OPENING DIMENSIONS PERTAIN TO HOWARD (2012 OR NEWER) TRANSFORMERS. CHECK WITH EVERGY ENERGY'S LOCAL SERVICE CENTER TO BE SURE THAT THE OPENING IS THE CORRECT SIZE FOR THE TRANSFORMER DESIGNATED FOR THE JOB. CALL LOCAL SERVICE CENTER TO CONFIRM PAD DIMENSIONS BEFORE PAD IS POURED.

15. VERIFY PAD REGULATIONS WITH EVERGY.

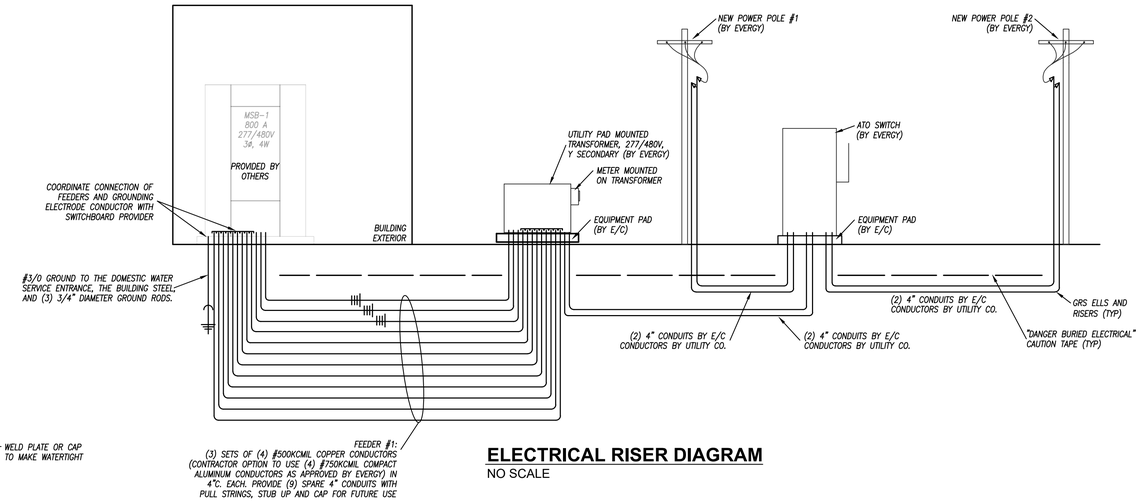
ELECTRICAL TRANSFORMER PAD DETAIL
NO SCALE — 1500 - 2500 KVA

EQUIPMENT FAULT CURRENT RATING SCHEDULE				
EQUIPMENT	SCA **	SCCR	% OF RATING	NOTES
SWITCHBOARD MSB-1	32,229	42,000	77%	1,2,3

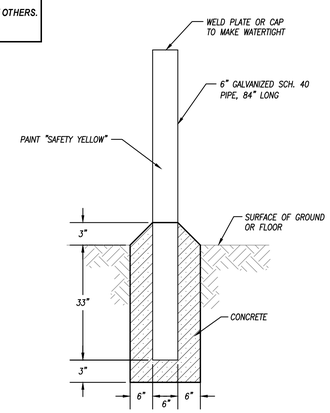
NOTES:

1. *RATING BASED ON AN ASSUMED FAULT AT UTILITY CO. TRANSFORMER OF 34,368A.*
2. *EQUIPMENT MAY BE SERIES RATED.*
3. *CALCULATION PROVIDED ONLY FOR COORDINATION PURPOSES OF THE SWITCHGEAR. MSB-1 PROVIDED BY OTHERS.*

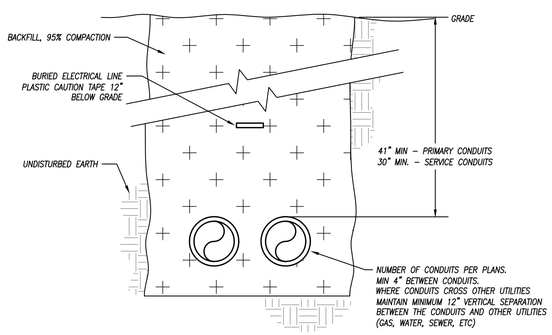
** *CALCULATIONS PERFORMED USING BUSSMANN POINT-TO-POINT METHOD.*



ELECTRICAL RISER DIAGRAM
NO SCALE



BOLLARD DETAIL
NOT TO SCALE



UNDERGROUND ELECTRICAL CONDUITS DETAIL
NOT TO SCALE

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DRAWN BY:	KAH
CHECKED BY:	SWM

SHEET TITLE: ELECTRICAL DETAILS

DATE: 10/19/22

PKMR PROJECT: 22.462

SHEET NUMBER: E-3