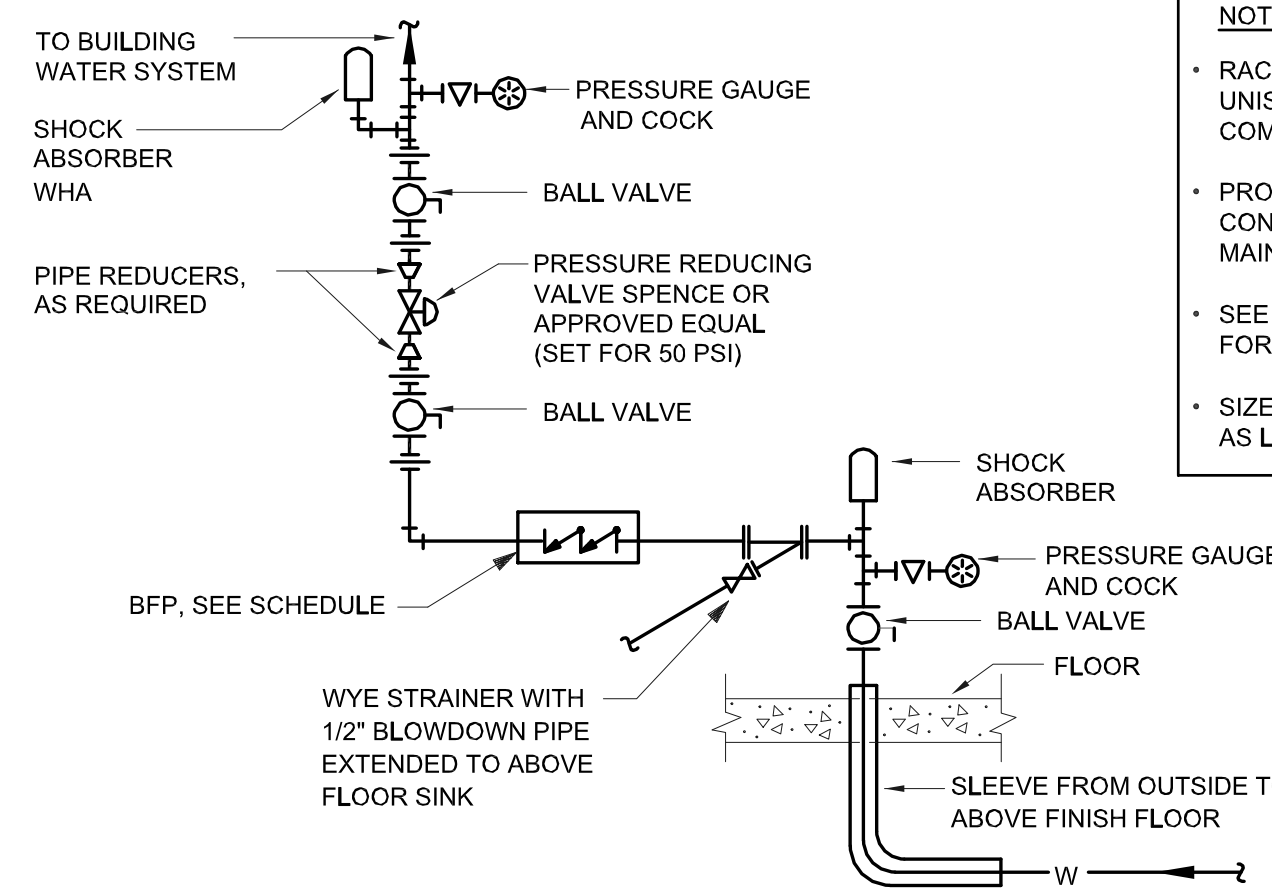


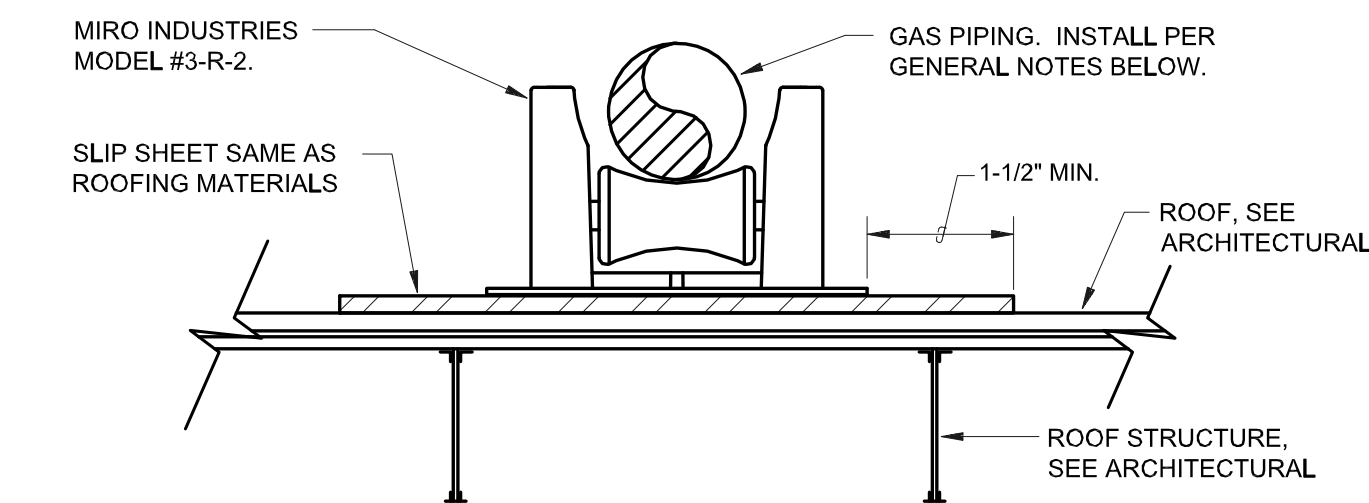
GREASE INTERCEPTOR DETAIL

NOT TO SCALE



DOMESTIC WATER ENTRANCE DETAIL

NOT TO SCALE



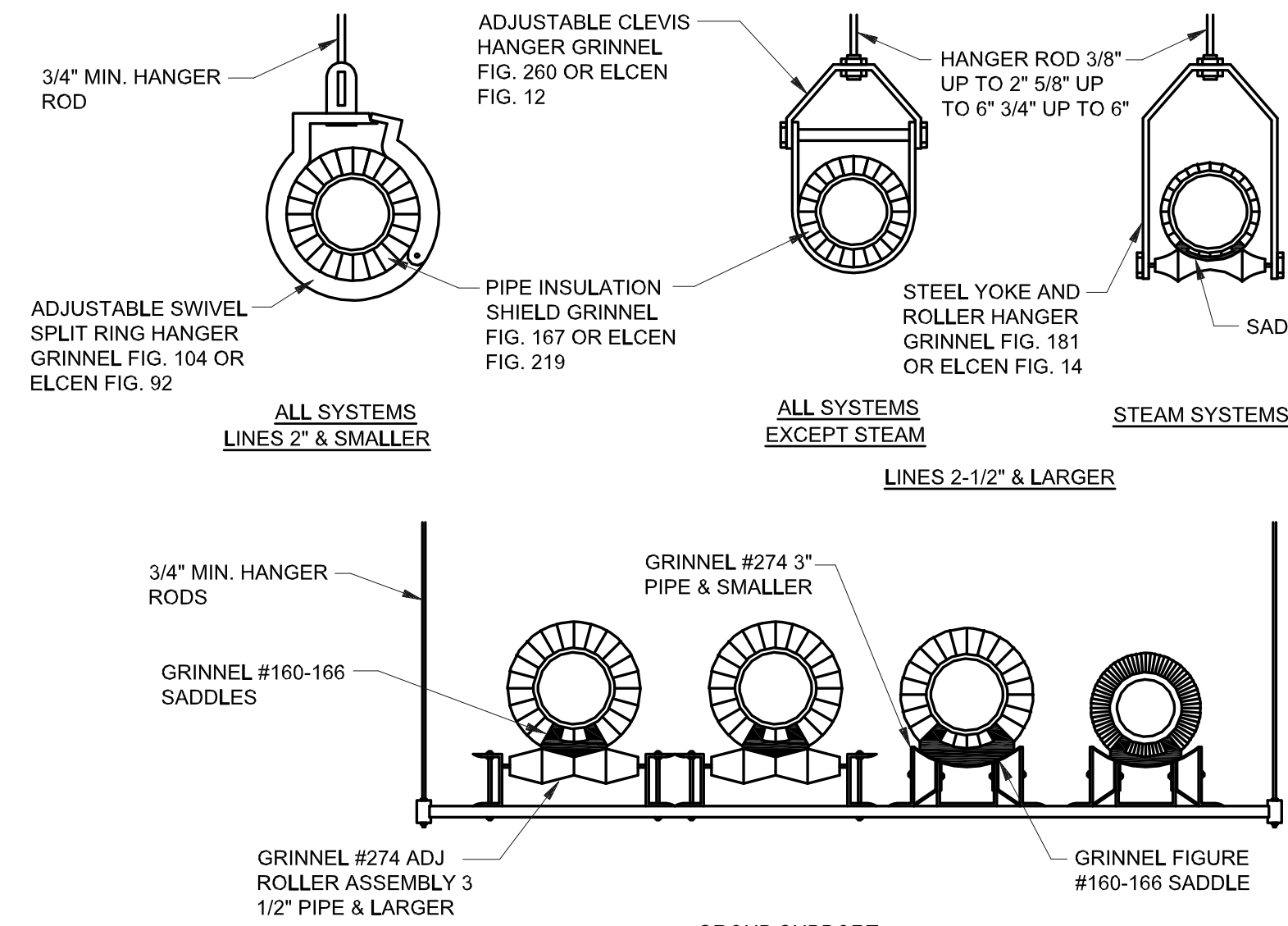
GENERAL NOTES:

1. GAS PIPING SHALL BE LOCATED ABOVE ROOF.
2. PIPE SIZE SUPPORT SPACING

1/2"	6'-0"
3/4" to 1"	8'-0"
1-1/4" & LARGER	10'-0"

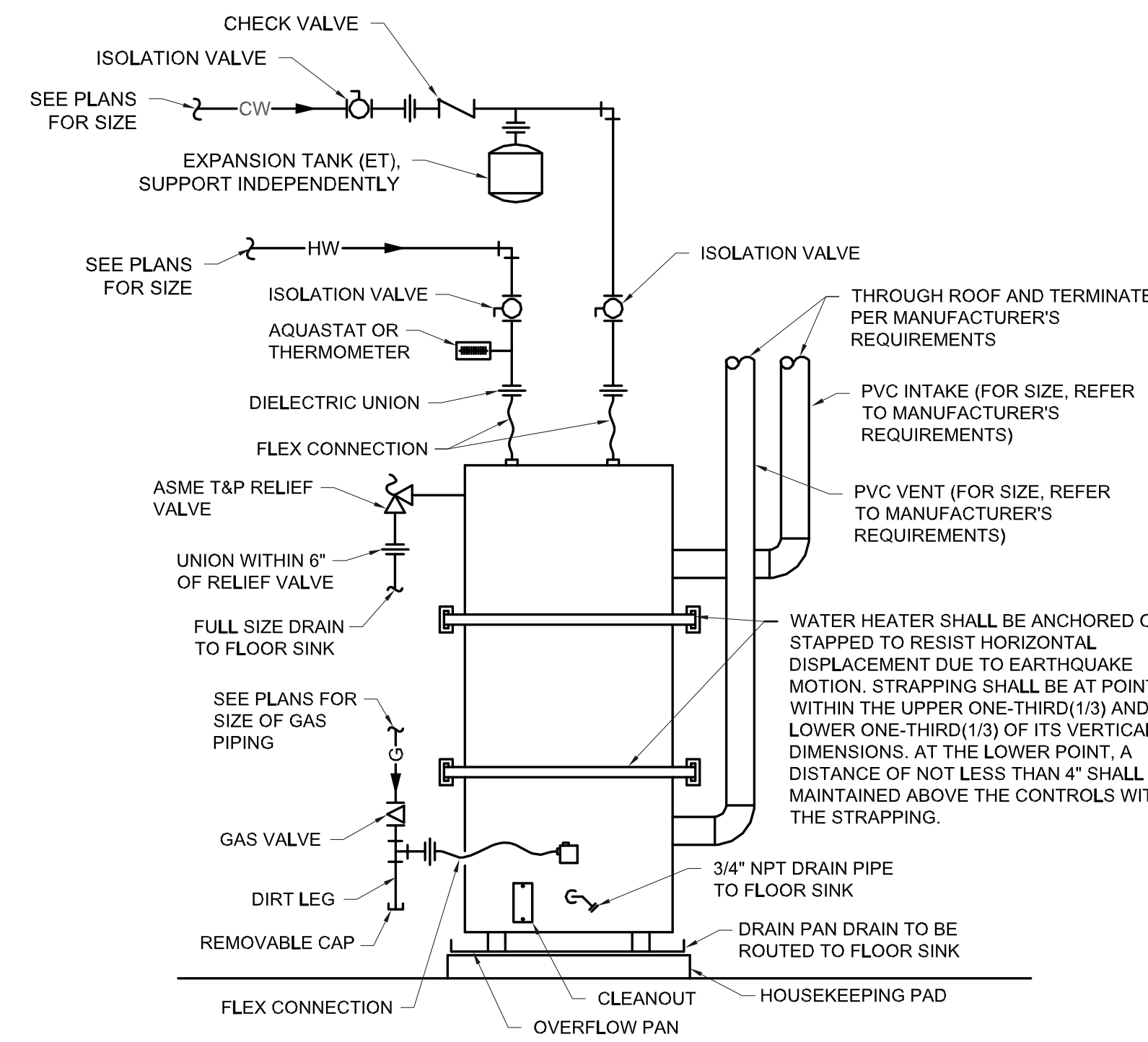
GAS PIPING SUPPORT DETAIL

NOT TO SCALE



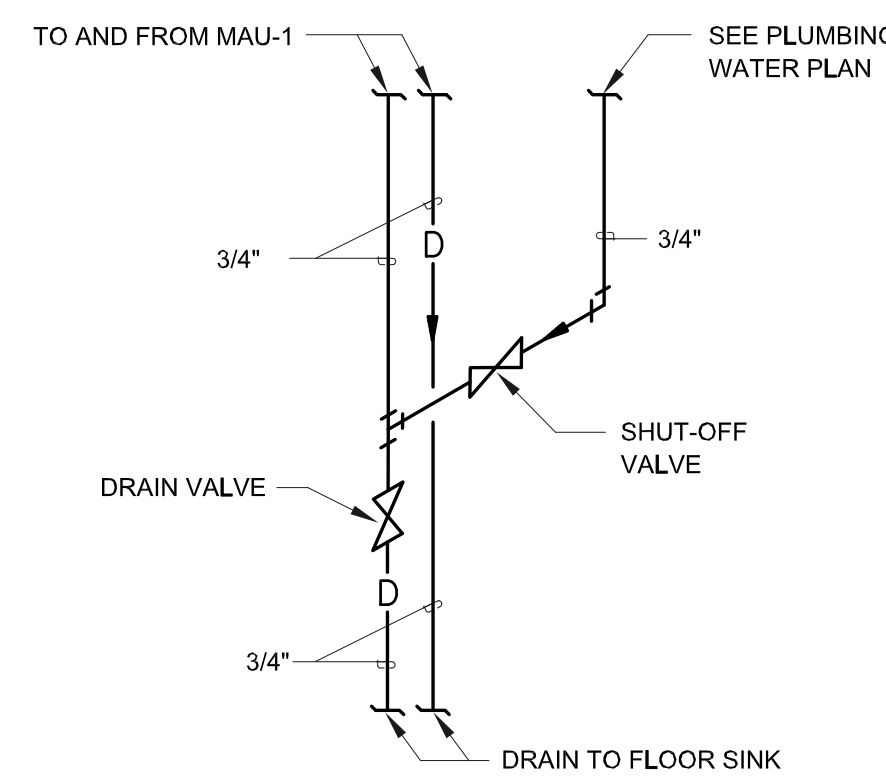
PIPE SUPPORTS DETAIL

NOT TO SCALE



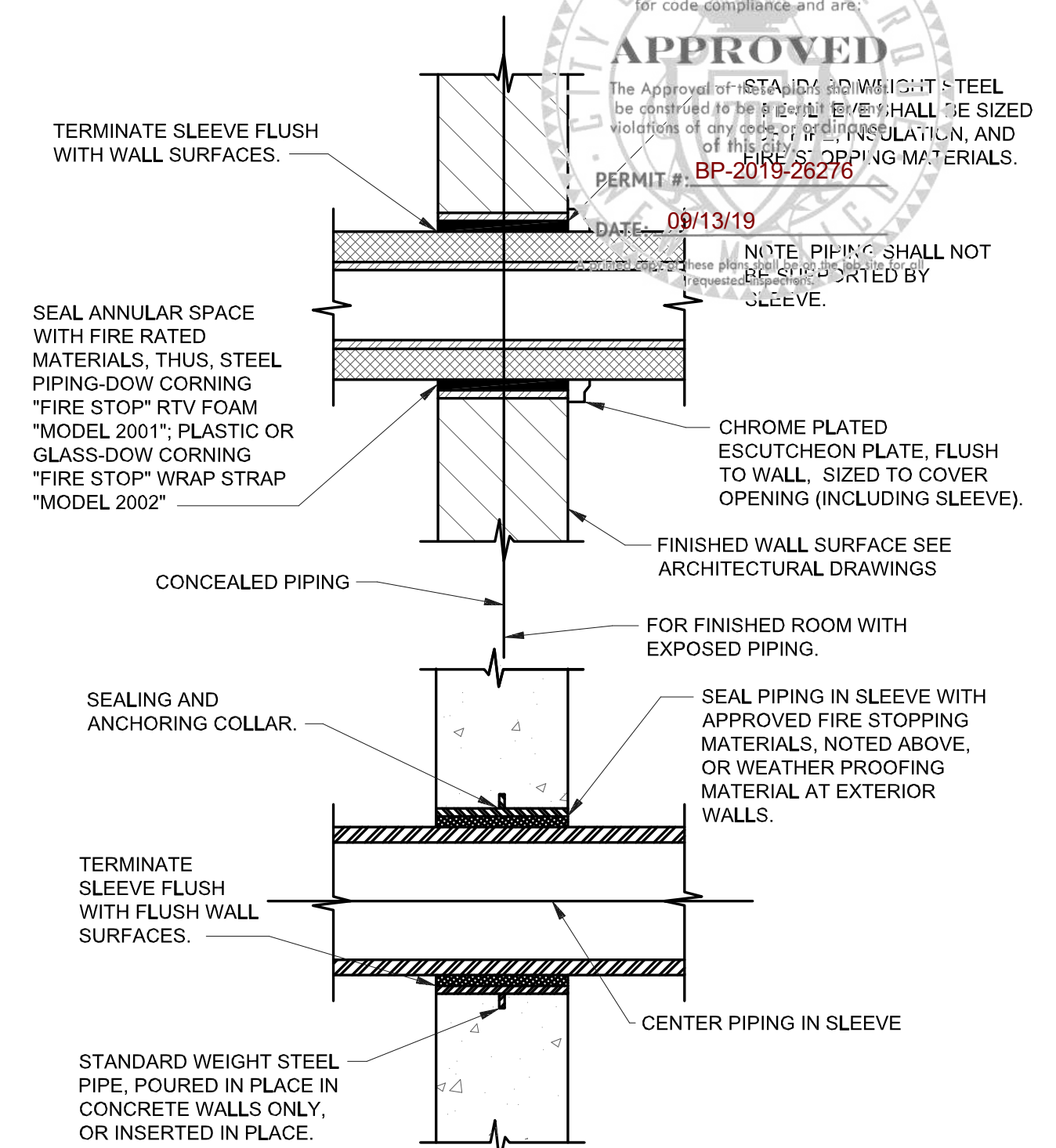
WATER HEATER PIPING SCHEMATIC

NOT TO SCALE



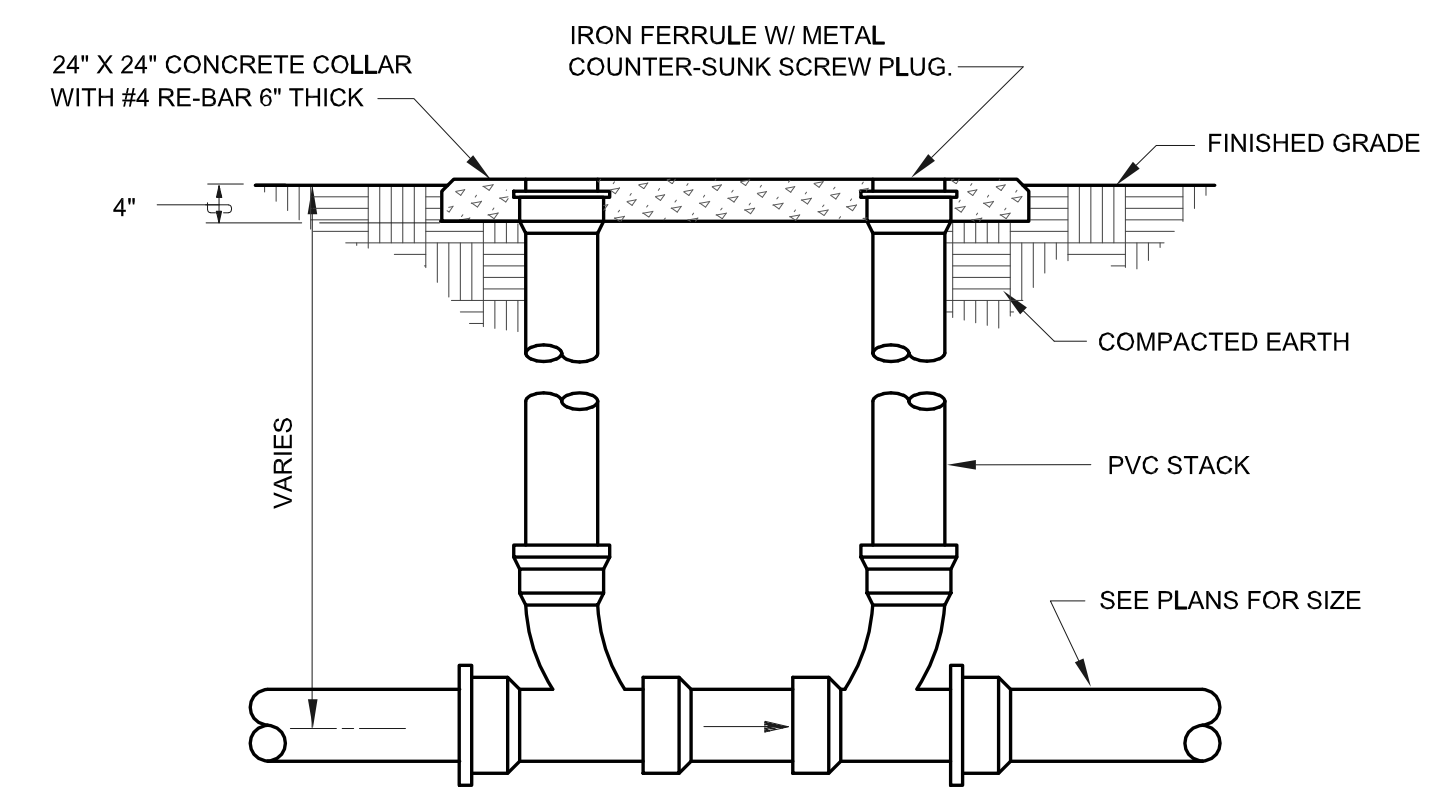
MAKE-UP AND DRAIN ASSEMBLY DETAIL

NOT TO SCALE



PIPE SLEEVE THRU WALL DETAIL

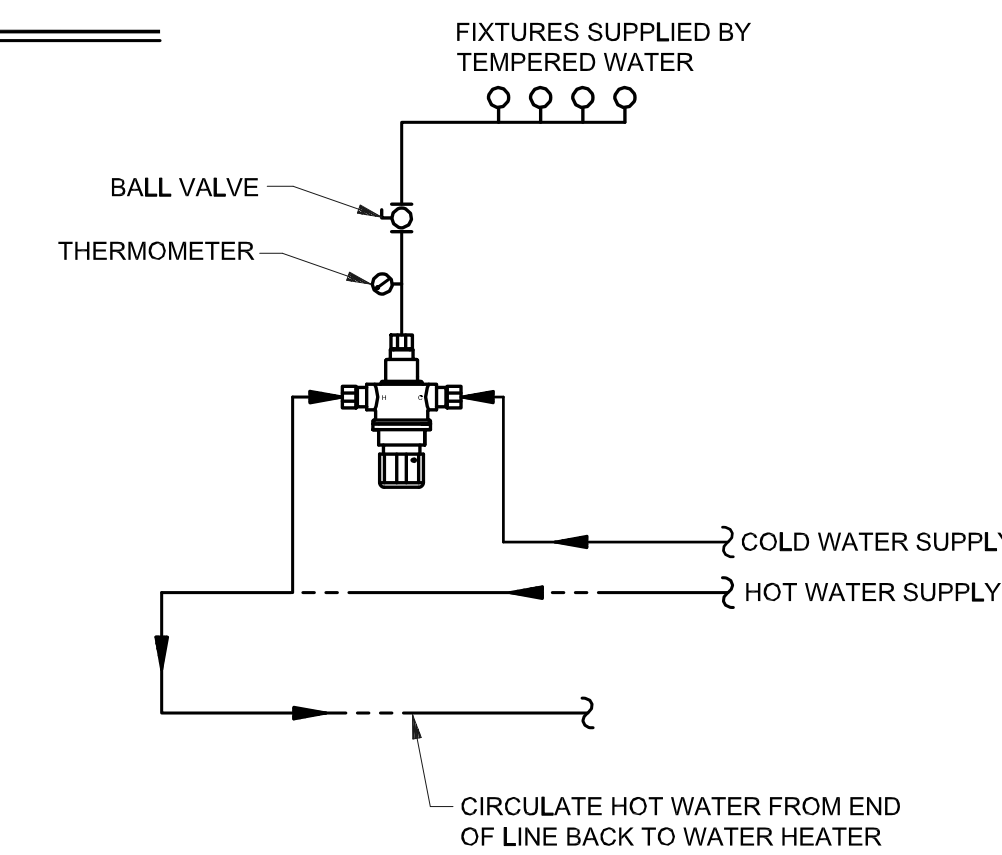
NOT TO SCALE



NOTE: THIS DETAIL SIMILAR FOR ONE-WAY CLEAN-OUT TO GRADE.

TWO-WAY CLEANOUT TO GRADE DETAIL

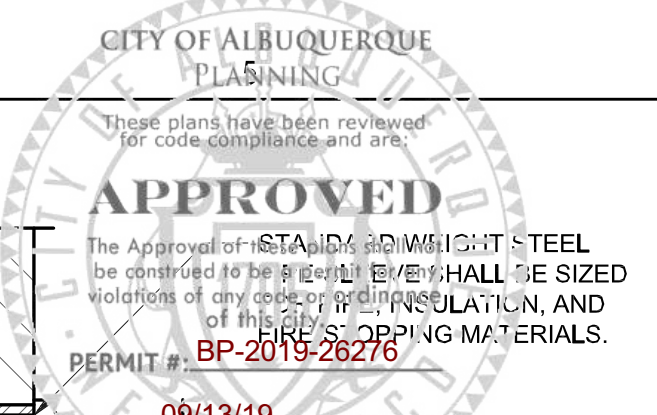
NOT TO SCALE



INSTALL PER MANUFACTURE'S RECOMMENDATIONS.

THERMOSTATIC MIXING VALVE (TMV) DETAIL

NOT TO SCALE

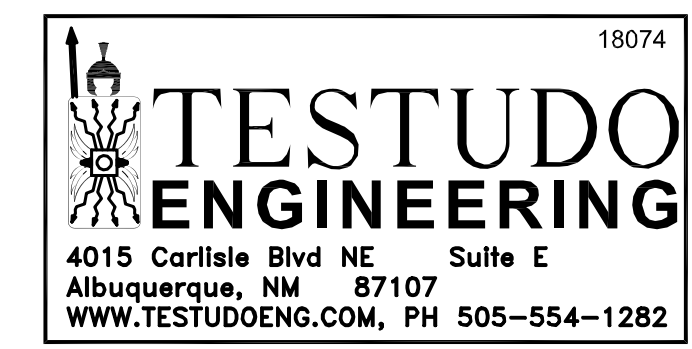


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NEW MULTI-PURPOSE BUILDING
 for ST TERESA CATHOLIC SCHOOL

date:	June 07, 2019
drawn by:	T. DURAN
checked by:	D. GRAHAM
file name:	18074_P501
revisions:	



P-501

ELECTRICAL SYMBOL LEGEND

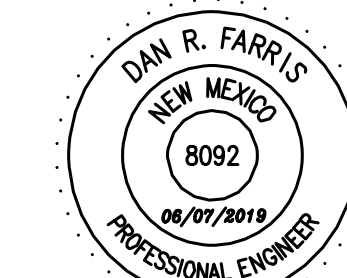
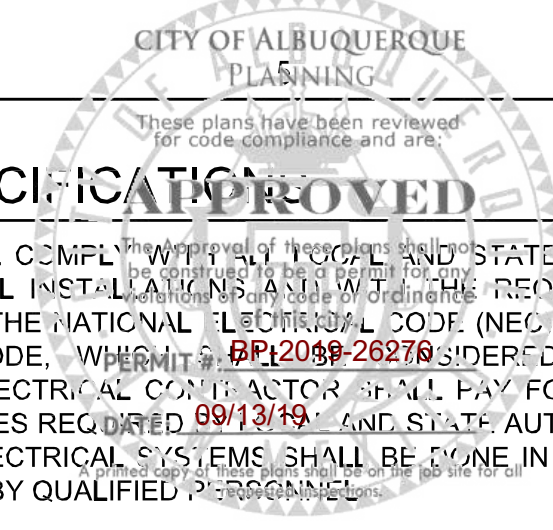
Table with 2 columns: SYMBOL and DESCRIPTION. Lists various electrical symbols and their corresponding descriptions, such as KEYED NOTE SYMBOL, MECHANICAL EQUIPMENT DESIGNATION, and various types of switches and receptacles.

ELECTRICAL GENERAL NOTES

- A. THE CONTRACTOR SHALL FAMILIARIZE THEMSELV WITH THE PROJECT PRIOR TO THE BID OPENING... B. THE WORK INDICATED ON THE ELECTRICAL SITE PLAN... C. IT WILL BE THE CONTRACTOR'S OBLIGATION TO INCLUDE... D. LOCATION OF EQUIPMENT AND OTHER DEVICES... E. THE CONDUIT RUNS, AS SHOWN ON PLANS... F. CONTRACTOR SHALL INSTALL PULL AND JUNCTION BOXES... G. SHOULD CONTRACTOR AT ANY TIME NOTICE... H. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR... I. REMOVE AND INSTALL CEILING SUPPORTS... J. THE CONTRACTOR SHALL REPAIR ANY DAMAGE... K. CONTRACTOR SHALL MAKE AS-BUILT DRAWINGS... L. INSTALL BLANK DEVICE PLATES... M. ALL ELECTRICAL WIRING SHALL BE ROUTED... N. ALL WIREMOLD RUNS ARE TO BE LOCATED... O. WIREMOLD #2000 DOES NOT HAVE A FULL RANGE... P. WIREMOLD JUNCTION BOXES TO BE #5740... Q. IN ALL LOCATIONS WHERE EXISTING CIRCUITS... R. THE CONTRACTOR SHALL REPLACE ALL DAMAGED... S. REFER TO POWER PLANS FOR DETAILED... T. AFTER THE CONTRACTOR HAS RECEIVED... U. THE CONTRACTOR SHALL BE AWARE THAT ALL... V. INTERRUPTION OF ANY ELECTRICAL SERVICES... W. WHEREVER REQUIRED, FURNISH AND INSTALL... X. ALL NEW WIRING SHALL BE COPPER... Y. ALL HOME RUN CIRCUITING TO PANELS... Z. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE... AA. MOUNTING HEIGHTS INDICATED ON THE DRAWINGS...

ELECTRICAL SPECIFICATIONS

- A. THE INSTALLATION SHALL COMPLY WITH ALL LOCAL AND STATE REGULATIONS... B. ALL MATERIALS SHALL BE NEW EXCEPT WHERE NOTED OTHERWISE... C. ALL WIRING SHALL BE RUN IN RIGID CONDUIT... D. ALL EMT COUPLINGS AND CONNECTORS SHALL BE COMPRESSION TYPE... E. ALL OUTLET BOXES SHALL BE WELDED OR DEEP DRAWN... F. ALL CONDUCTORS SHALL BE COPPER... G. THE CONDUIT SYSTEM AND NEUTRAL CONDUCTOR... H. ALL SWITCH AND RECEPTACLE PLATES... I. ALL HOMERUNS SHALL BE .75" CONDUITS... J. ALL DISCONNECTS SWITCHES SHALL BE HEAVY DUTY... K. THE USE OF MC CABLE IS NOT PERMITTED.

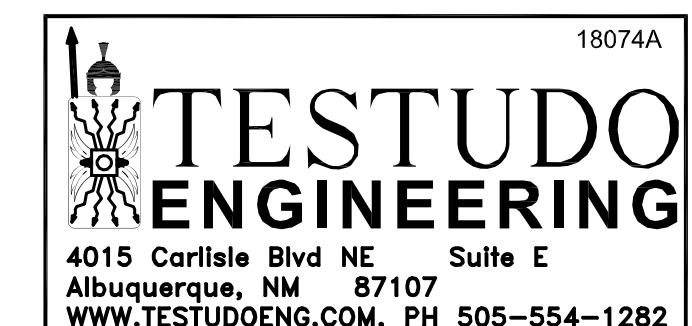


Dan R. Farris

NEW MULTI-PURPOSE BUILDING for ST TERESA CATHOLIC SCHOOL

ELECTRICAL SYMBOL LEGEND & NOTES

Table with 2 columns: field name and value. Fields include date (June 07, 2019), drawn by (D. PRYSAK), checked by (D. FARRIS), file name (18074A_E001), and revisions.



E-001a ALTERNATE

ELECTRICAL SYMBOL LEGEND

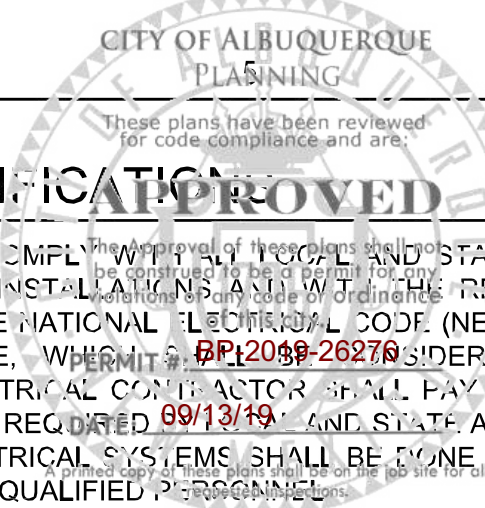
SYMBOL	DESCRIPTION
	KEYED NOTE SYMBOL - ELECTRICAL.
	MECHANICAL EQUIPMENT DESIGNATION - SEE MECHANICAL EQUIPMENT SCHEDULE.
(TYP)	TYPICAL
AC	ABOVE COUNTER
WP	WEATHERPROOF.
	1 x 4 LED FIXTURE AND OUTLET. TYPE AS INDICATED IN FIXTURE SCHEDULE.
	2 x 4 LED FIXTURE AND OUTLET. TYPE AS INDICATED IN FIXTURE SCHEDULE. LOWER CASE LETTER INDICATES SWITCH
	BRACKET FIXTURE AND OUTLET. TYPE AS INDICATED IN FIXTURE SCHEDULE.
	CEILING FIXTURE AND OUTLET. TYPE AS INDICATED IN FIXTURE SCHEDULE.
	EMERGENCY FIXTURE WITH BATTERY PACK (SELF-TESTING/SELF-DIAGNOSTICS) AND OUTLET. TYPE "EM" AS INDICATED IN FIXTURE SCHEDULE.
	CEILING MOUNTED DOUBLE FACE EXIT FIXTURE (SELF-TESTING/SELF-DIAGNOSTICS) AND OUTLET WITH DIRECTIONAL ARROWS AS INDICATED. TYPE "EXIT" AS INDICATED IN FIXTURE SCHEDULE.
	SINGLE POLE 3-WAY WALL SWITCH. FLUSH MOUNTED UP 44" UNLESS OTHERWISE INDICATED.
	WALL SWITCH WITH OCCUPANCY SENSOR AUTO ON/AUTO OFF. FLUSH MOUNTED UP 44" UNLESS OTHERWISE INDICATED.
	FOUR-WAY WALL SWITCH. FLUSH MOUNTED UP 44" UNLESS OTHERWISE INDICATED. (LOWER CASE LETTER, WHEN USED, DENOTES FIXTURES CONTROLLED).
	THERMAL SWITCH. WEATHERPROOF IF INSTALLED OUTSIDE. FLUSH MOUNTED UP 44" UNLESS OTHERWISE INDICATED.
	EQUIPMENT CONNECTION.
	20 AMP DUPLEX CONVENIENCE RECEPTACLE, UP 18" OR AS INDICATED.
	20 AMP WEATHERPROOF GROUND FAULT INTERRUPTING DUPLEX CONVENIENCE RECEPTACLE, UP 18" OR AS INDICATED. COVER TO BE CAST ALUMINUM "HUBBELL" #WP26M OR EQUAL.
	FIRE ALARM AUTOMATIC DETECTOR, TYPE AS INDICATED (I-H-HEAT, I-IONIZATION, S/H-SMOKE /HEAT, D-DUCT SMOKE), ALL DETECTORS "SMOKE" UNLESS OTHERWISE NOTED.
	FIRE ALARM CONTROL PANEL.
	BRANCH CIRCUIT PANEL. SEE PANEL SCHEDULE FOR CHARACTERISTICS.
	POWER DISTRIBUTING PANEL.
	DATA/COMM. OUTLET, UP 18" OR AS NOTED. TYPE AS INDICATED (D-DATA ONLY, C-COMMUNICATIONS ONLY, W-WALL MOUNT UP 44", P-PAY PHONE). SEE DETAIL AND SPECIFICATIONS FOR CONDUIT/CABLE REQUIREMENTS.
	SPECIAL PURPOSE RECEPTACLE. SEE DRAWINGS FOR TYPE, PROVIDE MATCHING PLUG CAP.
	SMOKE ALARM. 120 VAC PHOTOELECTRONIC STATION TYPE, TANDEM WIRED WITH ALL SMOKE ALARMS IN UNIT. GENTEX MODEL #9120.
	JUNCTION BOX FLUSH IN WALL. HEIGHT AS INDICATED FOR CONNECTION TO EQUIPMENT.
	JUNCTION BOX MOUNTED TO CEILING.
	MOTOR CONNECTION FOR FRACTIONAL HP MOTOR (LESS THAN 1/3 HP), PROVIDE THERMAL O.L. SWITCH ADJACENT TO ALL MOTORS UNLESS SWITCH IS SHOWN ELSEWHERE ON PLAN.
	DISCONNECT SWITCH, FUSED, SUBSCRIPT INDICATES SWITCH AMPERAGE, NUMBER OF POLES AND FUSE SIZE. TO BE NEMA 4 IF INSTALLED OUTDOORS. PROVIDE FUSES AT 125% F.L.A. OF UNIT UNLESS OTHERWISE INDICATED. VOLTAGE RATING AS REQUIRED BY SYSTEM.
	FIRE ALARM MANUAL PULL STATION, UP 44". SEE SPECIFICATIONS FOR CONDUIT, WIRE AND DEVICE REQUIREMENTS.
	FIRE ALARM AUDIO/VISUAL SIGNAL, DOWN 6" BELOW CEILING OR UP 6'-8" TO CENTER WHICHEVER IS LOWER). SEE SPECIFICATIONS FOR CONDUIT, WIRE AND DEVICE REQUIREMENTS.

ELECTRICAL GENERAL NOTES

- A. THE CONTRACTOR SHALL FAMILIARIZE THEMSELV WITH THE PROJECT PRIOR TO THE BID OPENING, TO ALLOW THEM TO SUBMIT A COMPLETE BID WITHIN THE SCOPE OF THE DRAWINGS AND SPECIFICATIONS. ANY QUESTIONS ARISING DURING THE BID PERIOD, IN REGARD TO THE CONTRACTOR'S FUNCTIONS, THE SCOPE OF THE WORK OR ANY OTHER ISSUE RELATED TO THIS PROJECT SHALL BE BROUGHT UP DURING THE BID PERIOD WITH THE ENGINEER FOR CLARIFICATION PRIOR TO AWARD OF CONTRACT.
- B. THE WORK INDICATED ON THE ELECTRICAL SITE PLAN AND THE POWER RISER DIAGRAM IS THE RESULT OF INITIAL CONTACT BY THE DESIGN ENGINEER WITH THE LOCAL ELECTRICAL UTILITY COMPANY. ADDITIONAL WORK MAY BE REQUIRED. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE ALL REQUIREMENTS OF THE ELECTRICAL SERVICE WITH THE LOCAL ELECTRICAL UTILITY COMPANY AND PROVIDE, PRIMARY AND SECONDARY TRENCHING, CONDUITS, CONCRETE ENCASEMENT (WHERE APPLICABLE), PULL BOXES, BACKFILL AND PATCHING, ALL ASSOCIATED WORK REQUIRED FOR INSTALLATION OF THE ELECTRICAL SERVICE AND PRIMARY SYSTEMS BY THE LOCAL ELECTRICAL UTILITY INCLUDING FIELD COORDINATION AND ROUTING WITH THE UTILITY COMPANY IS THAT OF THE ELECTRICAL CONTRACTOR AND SHALL BE INCLUDED IN THE CONTRACTOR'S BID WITHOUT EXCEPTION.
- C. IT WILL BE THE CONTRACTOR'S OBLIGATION TO INCLUDE, IN THEIR BID, THE COSTS FOR INSTALLING JUNCTION BOXES, PROVIDING MISCELLANEOUS COVERS, WORK WITH OTHER DISCIPLINES WHERE THE CONTRACT INVOLVES ELECTRICAL POWER OR CONTROL CONNECTIONS, SWITCHES, ETC. ALL OF THIS WORK SHALL BE PART OF THIS CONTRACT.
- D. LOCATION OF EQUIPMENT AND OTHER DEVICES SHOWN ON THE PLANS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED.
- E. THE CONDUIT RUNS, AS SHOWN ON PLANS, INDICATE APPROXIMATE ROUTING. EXACT LOCATION OF CONDUIT RUNS SHALL BE AS FIELD CONDITIONS DICTATE.
- F. CONTRACTOR SHALL INSTALL PULL AND JUNCTION BOXES WHEREVER REQUIRED BY N.E.C. OR JOB CONDITIONS. ALL NEW WIRING SHALL BE TAGGED AT ALL PULL BOXES, JUNCTION BOXES, EQUIPMENT BOXES AND CABINETS WITH APPROVED PLASTIC TAGS. ACTION CRAFT, BRADY OR APPROVED EQUAL.
- G. SHOULD CONTRACTOR AT ANY TIME NOTICE THAT THE ACTUAL FIELD CONDITIONS DO NOT CORRESPOND TO THE INFORMATION GIVEN ON THE DRAWINGS, THEN IT WILL BE THEIR RESPONSIBILITY TO NOTIFY THE ENGINEER FOR CLARIFICATION, PRIOR TO COMMENCING SUCH WORK.
- H. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH ALL TRADES FOR THE EXACT LOCATION OF EQUIPMENT AND APPURTENANCES THAT REQUIRE ELECTRICAL CONNECTIONS.
- I. REMOVE AND INSTALL CEILING SUPPORTS AND TILES AS REQUIRED FOR THE COMPLETION OF THIS PROJECT. THIS CONTRACTOR SHALL INCLUDE REPLACEMENT OF CEILING TILES DAMAGED IN THE PROCESS OF THIS INSTALLATION WITH NEW MATCHING TILES. THE SAME APPLIES TO DAMAGE DONE TO OTHER KINDS OF CEILINGS.
- J. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO WALLS CEILINGS, ETC. IN A PROFESSIONAL MANNER. SEAL ALL WALL OR CEILING OPENINGS WITH MATCHING MATERIAL. THIS SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
- K. CONTRACTOR SHALL MAKE AS-BUILT DRAWINGS DOCUMENTING ANY AND ALL WIRING AND EQUIPMENT CONDITIONS AND CHANGES WHILE COMPLETING THIS CONTRACT. PROVIDE UPDATED TYPEWRITTEN DIRECTORIES FOR ALL PANELS AND LABEL ALL PANELS WITH PLASTIC LAMINATED NAMEPLATES.
- L. INSTALL BLANK DEVICE PLATES ON ALL UNUSED JUNCTION BOXES IN FINISHED AREAS.
- M. ALL ELECTRICAL WIRING SHALL BE ROUTED IN CONDUIT. WIRING BELOW CEILING SHALL BE CONCEALED IN WALLS. IN CASE OF SOLID WALLS, WIREMOLD #2000 SERIES MUST BE UTILIZED IN FINISHED AREAS.
- N. ALL WIREMOLD RUNS ARE TO BE LOCATED AS NEAR AS POSSIBLE, AT THE CORNER OF CEILING, WALL OR MOLDING, ETC. RUNS SHALL BE PARALLEL AND PERPENDICULAR TO BUILDING LINES.
- O. WIREMOLD #2000 DOES NOT HAVE A FULL RANGE OF FITTINGS. ALL 500, 700 AND 5700 FITTINGS MAY BE UTILIZED THROUGH USE OF #2089E FITTING.
- P. WIREMOLD JUNCTION BOXES TO BE #5740 SERIES (1 OR 2 GANG, DEPTH AS REQUIRED FOR NUMBER OF WIRES USED) WITH BLANK PLATES.
- Q. IN ALL LOCATIONS WHERE EXISTING CIRCUITS ARE AFFECTED BY THE REMOVAL OF CONDUIT, WIRING, RECEPTACLES, LIGHTING FIXTURES, THE BLOCKING OUT OF EXISTING OUTLET BOXES, ETC. AND THE CIRCUITS ARE STILL REQUIRED TO FEED OTHER DEVICES OR EQUIPMENT WHICH ARE TO REMAIN AND MAINTAIN CIRCUIT CONTINUITY: THE CONTRACTOR SHALL REFEED THESE DEVICES OR EQUIPMENT WHICH ARE TO REMAIN IN SERVICE AFTER THE COMPLETION OF THE REMODEL AT NO ADDITIONAL COST TO THE OWNER.
- R. THE CONTRACTOR SHALL REPLACE ALL DAMAGED AND INOPERABLE DEVICES SUCH AS LIGHT SWITCHES, RECEPTACLES, ETC. AT NO ADDITIONAL COST TO THE OWNER.
- S. REFER TO POWER PLANS FOR DETAILED LAYOUTS OF ELECTRICAL GEAR.
- T. AFTER THE CONTRACTOR HAS RECEIVED APPROVED SHOP DRAWINGS FOR THE ELECTRICAL DISTRIBUTION EQUIPMENT, THEY SHALL SUBMIT SCALED LAYOUTS OF ALL ELECTRICAL EQUIPMENT TO THE ENGINEER FOR APPROVAL TO ENSURE THAT ALL CLEARANCE REQUIREMENTS ARE MET. THIS SUBMITTAL SHALL BE PROVIDED WITH SUFFICIENT TIME SO AS NOT TO INTERFERE WITH THE TIMELY EXECUTION OF THE ROUGH-IN WORK THAT WILL BE REQUIRED.
- U. THE CONTRACTOR SHALL BE AWARE THAT ALL POWER SYSTEMS ARE OPERABLE AND SHALL REMAIN OPERABLE AT PROJECT COMPLETION. THIS REQUIRES THE CONTRACTOR TO "RING OUT" ALL CIRCUITS IN AREAS OF MODIFICATIONS PRIOR TO ANY WORK IN THESE AREAS AND TO MAINTAIN ALL SUCH BRANCH CIRCUITING AND CONTROLS OPERATIONAL AFTER MODIFICATIONS.
- V. INTERRUPTION OF ANY ELECTRICAL SERVICES OR SPECIAL SYSTEMS SHALL BE COORDINATED WITH THE OWNER'S REPRESENTATIVE AT LEAST SEVEN DAYS PRIOR TO THE INTENDED OUTAGE AND SHALL BE REQUESTED IN WRITING.
- W. WHEREVER REQUIRED, FURNISH AND INSTALL ON WALL OR CEILING FREESTANDING UNISTRUT CHANNELS, ANGLE IRONS OR ANY OTHER SUPPORT STRUCTURE WITH THREADED ROD HANGERS AS REQUIRED FOR THE SUPPORT OF ELECTRICAL EQUIPMENT OF ANY KIND TO ENSURE PROPER INSTALLATION.
- X. ALL NEW WIRING SHALL BE COPPER.
- Y. ALL HOME RUN CIRCUITING TO PANELS SHALL BE .75" CONDUIT, MINIMUM.
- Z. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AND INSTALL TIE HANDLES ON ALL CIRCUIT BREAKERS SHARING A NEUTRAL CONDUCTOR PER THE NEC.
- AA. MOUNTING HEIGHTS INDICATED ON THE DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH OTHER TRADES FOR EXACT HEIGHT FOR WALL BOXES, HVAC SENSORS, T-STATS, ETC. ANY THIS: OUTLET DEVICES THAT HAVE TO BE RELOCATED DUE TO COUNTERTOP, CHALKBOARD, TACKBOARD, OR, SHALL BE RELOCATED AT NO ADDITIONAL COST TO THE OWNER.

ELECTRICAL SPECIFICATIONS

- A. THE INSTALLATION SHALL COMPLY WITH ALL LOCAL AND STATE REGULATIONS APPLYING TO ELECTRICAL INSTALLATIONS AND WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) AND NATIONAL ELECTRICAL SAFETY CODE, WHERE APPLICABLE, CONSIDERED AS MINIMUM REQUIREMENTS. THE ELECTRICAL CONTRACTOR SHALL PAY FOR AND OBTAIN ALL PERMITS AND LICENSES REQUIRED BY ALL STATE AUTHORITIES. THE INSTALLATION OF ALL ELECTRICAL SYSTEMS SHALL BE DONE IN A FIRST-CLASS WORKMAN LIKE MANNER BY QUALIFIED PERSONNEL.
- B. ALL MATERIALS SHALL BE NEW EXCEPT WHERE NOTED OTHERWISE. ALL WORK SHALL PRESENT A NEAT AND MECHANICAL APPEARANCE WHEN COMPLETED AND SHALL BE EXECUTED IN A WORKMANLIKE MANNER.
- C. ALL WIRING SHALL BE RUN IN RIGID CONDUIT, INTERMEDIATE METALLIC CONDUIT (IMC) OR ELECTRICAL METALLIC TUBING (EMT) INSTALLED IN ACCORDANCE WITH THE NEC. ALUMINUM CONDUIT SHALL NOT BE USED UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS. CONDUIT INSTALLED UNDERGROUND IN CONTACT WITH EARTH OR FILL SHALL BE RIGID STEEL WITH AN 18 MIL PVC COATING OR SCHEDULE 40 PVC WITH RIGID STEEL PVC COATED ELBOWS AND RISERS. EMT OR ALUMINUM CONDUIT SHALL NOT BE INSTALLED IN CONCRETE SLABS OR BELOW GRADE. MINIMUM SIZE - 3/4 INCH. ALL CONDUITS CONTAINING POWER CONDUCTORS SHALL CONTAIN A EQUIPMENT GROUND CONDUCTOR SIZED IN ACCORDANCE WITH THE NEC. A #9 PULL WIRE SHALL BE INSTALLED IN EACH EMPTY CONDUIT.
- D. ALL EMT COUPLINGS AND CONNECTORS SHALL BE COMPRESSION TYPE. INDENTER OR SET-SCREW TYPE COUPLINGS AND CONNECTORS SHALL NOT BE USED.
- E. ALL OUTLET BOXES SHALL BE WELDED OR DEEP DRAWN ONE-PIECE STEEL SECTIONAL BOXES SHALL NOT BE USED.
- F. ALL CONDUCTORS SHALL BE COPPER, #12 AWG MINIMUM SIZE, THWN INSULATION UNLESS NOTED OTHERWISE AND SHALL BE COLOR CODED AS INDICATED IN THE NEC. INCREASE BRANCH CIRCUIT WIRE SIZE AS REQUIRED TO PREVENT EXCESSIVE VOLTAGE DROP AS FOLLOWS: 60' TO 100' - #10 AWG; OVER 100' - #8 AWG.
- G. THE CONDUIT SYSTEM AND NEUTRAL CONDUCTOR OF THE WIRING SYSTEM SHALL BE GROUNDED IN ACCORDANCE WITH THE NEC AND ALL LOCAL CODES AND ORDINANCES. GROUNDING AND BONDING SHALL COMPLY WITH ALL THE APPLICABLE REQUIREMENTS OF THE NEC.
- H. ALL SWITCH AND RECEPTACLE PLATES SHALL BE STAINLESS STEEL.
- I. ALL HOMERUNS SHALL BE .75" CONDUITS.
- J. ALL DISCONNECTS SWITCHES SHALL BE HEAVY DUTY.
- K. THE USE OF MC CABLE IS NOT PERMITTED.

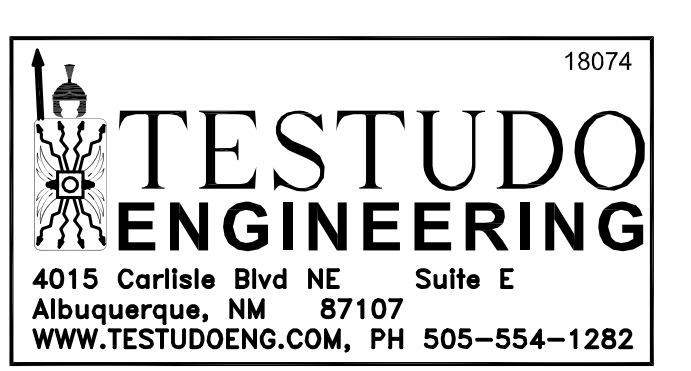


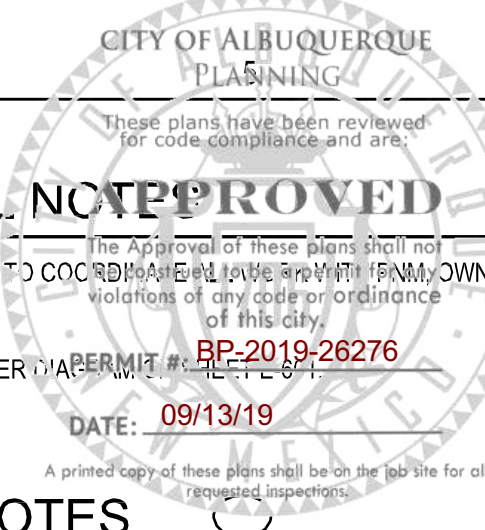
NEW MULTI-PURPOSE BUILDING

for ST TERESA CATHOLIC SCHOOL

date:	June 07, 2019
drawn by:	D. PRYSAK
checked by:	D. FARRIS
file name:	18074_E001
revisions:	

E-001



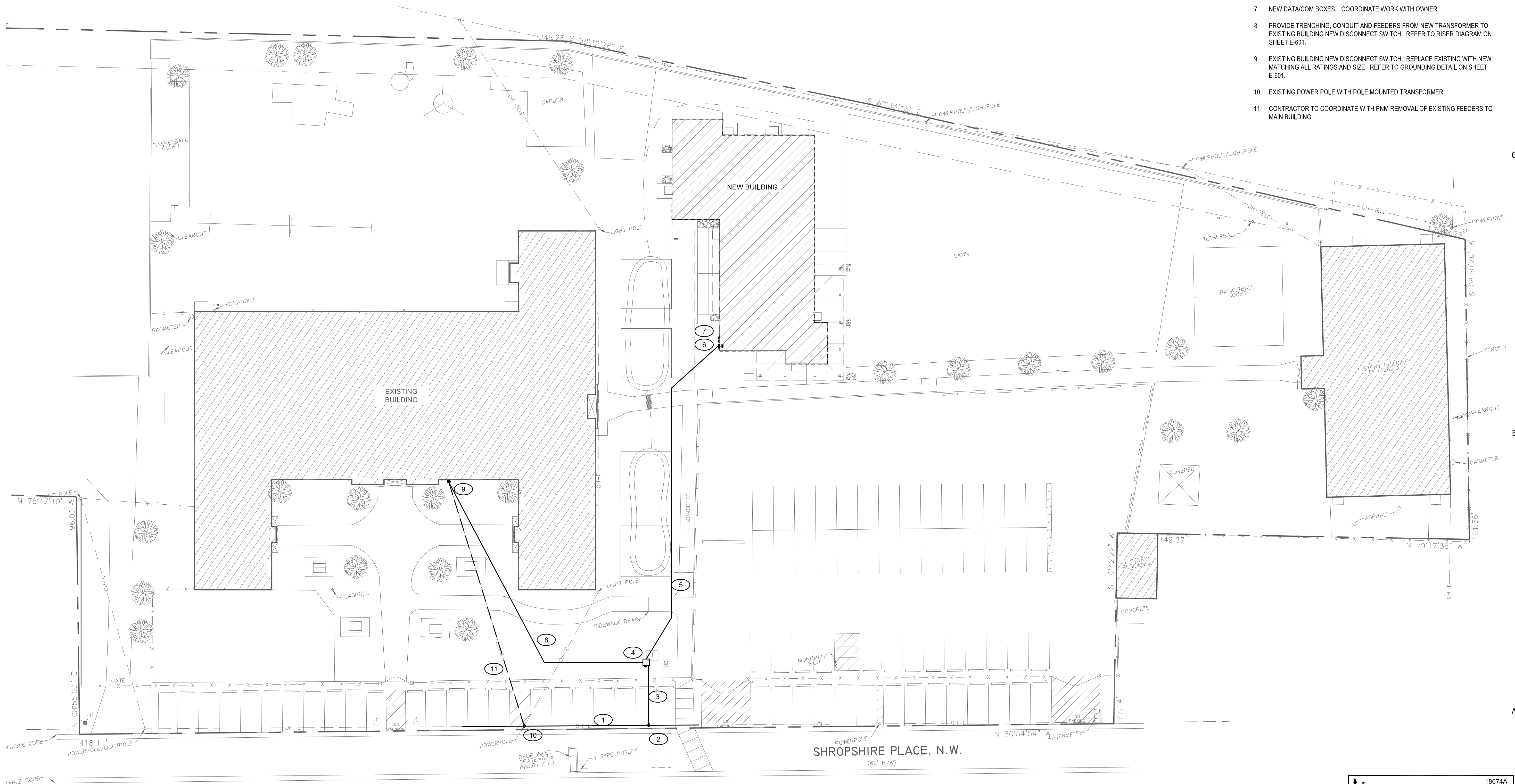


GENERAL NOTES

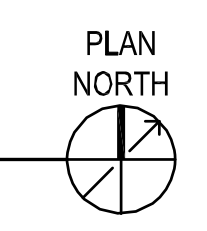
- A CONTRACTOR TO COORDINATE WITH PNM AND SOLAR SYSTEM INSTALLER.
- B REFER TO RISER PERMIT NO. RP-2019-26276

KEYED NOTES

- 1 EXISTING OVERHEAD 3 PHASE ELECTRIC SERVICE.
- 2 NEW POWER POLE WITH RISER.
- 3 PROVIDE TRENCHING AND CONDUIT FOR PRIMARY FEEDERS TO TRANSFORMER.
- 4 NEW TRANSFORMER WITH CT METER PER PNM. CONTRACTOR TO PROVIDE MOUNTING PAD. REFER TO PNM DRAWINGS FOR REQUIREMENTS AND CLEARANCES.
- 5 PROVIDE TRENCHING, CONDUIT AND FEEDERS FROM TRANSFORMER TO NEW BUILDING DISCONNECT SWITCH.
- 6 NEW DISCONNECT SWITCH. REFER TO GROUNDING DETAIL ON SHEET E-601.
- 7 NEW DATA/COM BOXES. COORDINATE WORK WITH OWNER.
- 8 PROVIDE TRENCHING, CONDUIT AND FEEDERS FROM NEW TRANSFORMER TO EXISTING BUILDING NEW DISCONNECT SWITCH. REFER TO RISER DIAGRAM ON SHEET E-601.
- 9 EXISTING BUILDING NEW DISCONNECT SWITCH. REPLACE EXISTING WITH NEW MATCHING ALL RATINGS AND SIZE. REFER TO GROUNDING DETAIL ON SHEET E-601.
- 10 EXISTING POWER POLE WITH POLE MOUNTED TRANSFORMER.
- 11 CONTRACTOR TO COORDINATE WITH PNM REMOVAL OF EXISTING FEEDERS TO MAIN BUILDING.



A3 ELECTRICAL SITE PLAN
SCALE: 1" = 20'-0"



18074A

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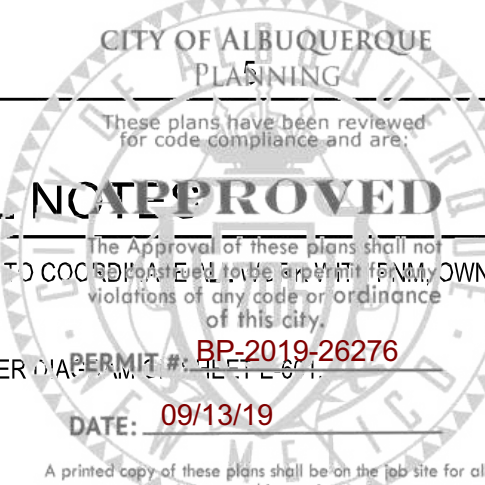
NEW MULTI-PURPOSE BUILDING
for ST TERESA CATHOLIC SCHOOL

ELECTRICAL SITE PLAN

project no. 18-007

date:	June 07, 2019
drawn by:	D. PRYSAK
checked by:	D. FARRIS
file name:	18074A_ES101
revisions:	

ES-101a
ALTERNATE



GENERAL NOTES

- A CONTRACTOR TO COORDINATE WITH PNM AND SOLAR SYSTEM INSTALLER.
- B REFER TO RISER DIAGRAM # **RP-2019-26276**

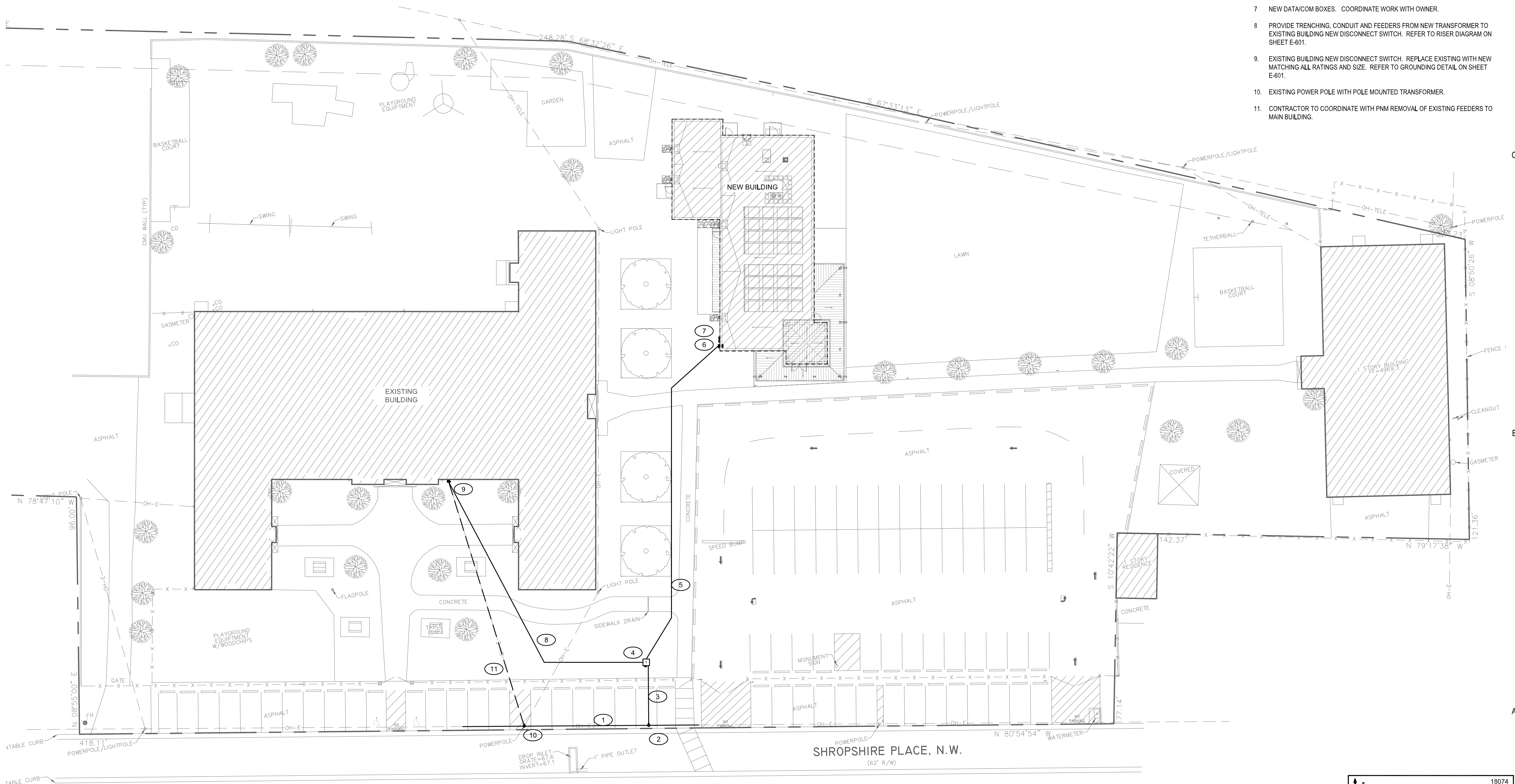
DATE: 09/13/19

KEYED NOTES

- 1 EXISTING OVERHEAD 3 PHASE ELECTRIC SERVICE.
- 2 NEW POWER POLE WITH RISER.
- 3 PROVIDE TRENCHING AND CONDUIT FOR PRIMARY FEEDERS TO TRANSFORMER.
- 4 NEW TRANSFORMER WITH CT METER PER PNM. CONTRACTOR TO PROVIDE MOUNTING PAD. REFER TO PNM DRAWINGS FOR REQUIREMENTS AND CLEARANCES.
- 5 PROVIDE TRENCHING, CONDUIT AND FEEDERS FROM TRANSFORMER TO NEW BUILDING DISCONNECT SWITCH.
- 6 NEW DISCONNECT SWITCH. REFER TO GROUNDING DETAIL ON SHEET E-601.
- 7 NEW DATA/COM BOXES. COORDINATE WORK WITH OWNER.
- 8 PROVIDE TRENCHING, CONDUIT AND FEEDERS FROM NEW TRANSFORMER TO EXISTING BUILDING NEW DISCONNECT SWITCH. REFER TO RISER DIAGRAM ON SHEET E-601.
- 9 EXISTING BUILDING NEW DISCONNECT SWITCH. REPLACE EXISTING WITH NEW MATCHING ALL RATINGS AND SIZE. REFER TO GROUNDING DETAIL ON SHEET E-601.
- 10 EXISTING POWER POLE WITH POLE MOUNTED TRANSFORMER.
- 11 CONTRACTOR TO COORDINATE WITH PNM REMOVAL OF EXISTING FEEDERS TO MAIN BUILDING.



Dan R. Farris



A3 ELECTRICAL SITE PLAN SCALE: 1" = 20'-0"



18074

TESTUDO ENGINEERING

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date:	June 07, 2019
drawn by:	D. PRYSAK
checked by:	D. FARRIS
file name:	18074_ES101
revisions:	

ES-101

ELECTRICAL SITE PLAN

project no. 18-007



GENERAL NOTES

- A. SEE LUMINAIRE SCHEDULE... B. FOR ANY LUMINAIRES... C. PROVIDE ALL LIGHTING CONTROL EQUIPMENT WIRING... D. CONNECT ALL NEW EXIT AND EMERGENCY EGRESS LIGHTS... E. PROVIDE ALL LIGHTING CONTROL EQUIPMENT WIRING... F. CONTRACTOR SHALL COORDINATE LUMINAIRE MOUNTING HEIGHTS AND LOCATIONS WITH OWNER.

VIGIL & ASSOCIATES ARCHITECTURAL GROUP, P.C. 4477 Irving NW, Suite A Albuquerque, NM 87107 Ph: 505.850.5030 Fax: 505.850.5031 www.va-architects.com



NEW MULTI-PURPOSE BUILDING for ST TERESA CATHOLIC SCHOOL

LIGHTING PLAN & FIXTURE SCHEDULE

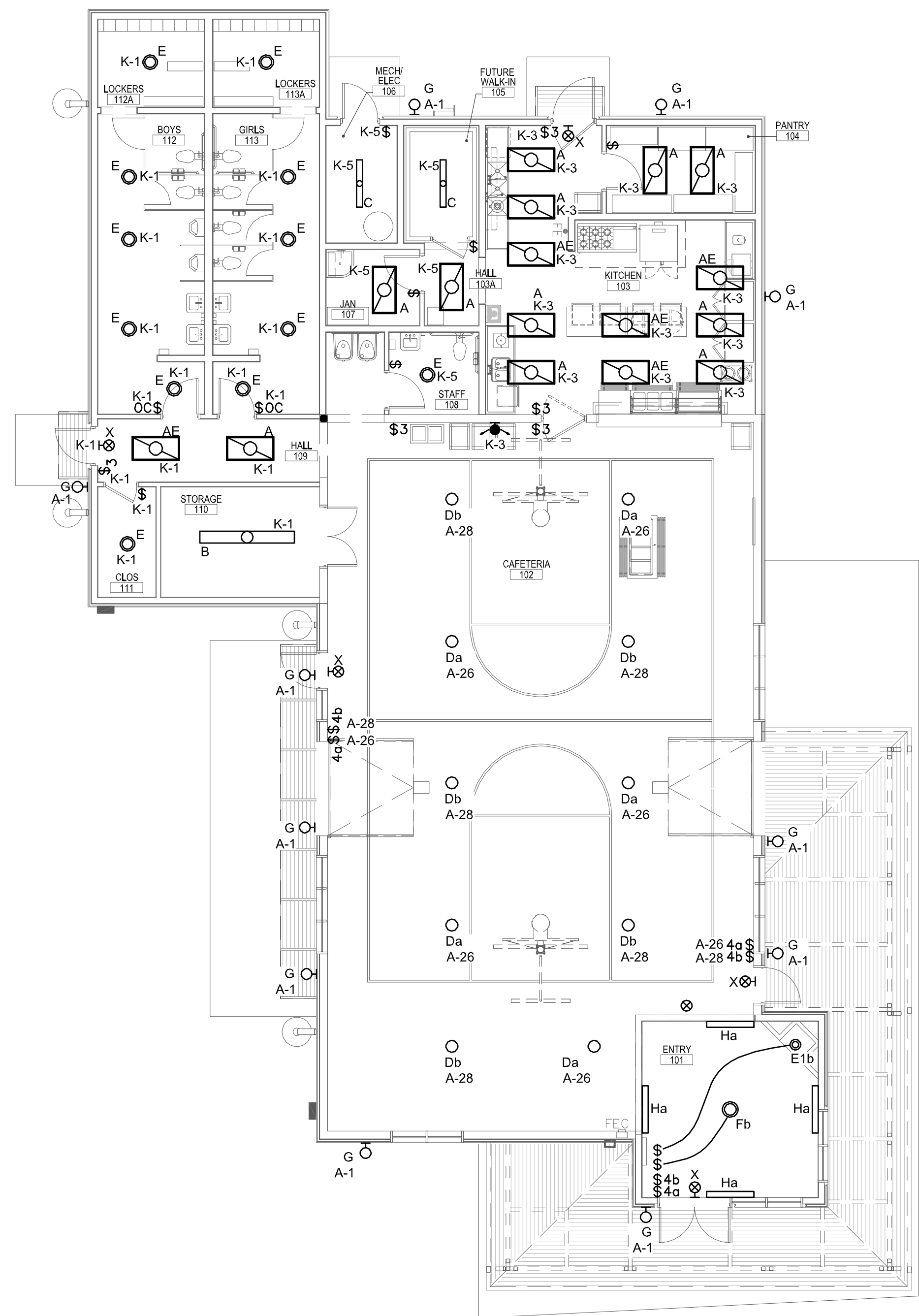
Table with columns for date, drawn by, checked by, file name, and revisions.

E-101a ALTERNATE

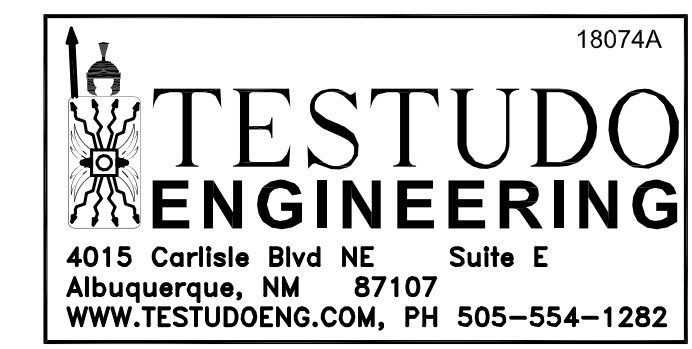
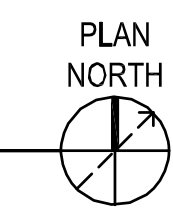
project no. 18-007

FIXTURE SCHEDULE table with columns: TYPE, VOLT, MANUFACTURER NUMBER, FIXTURE DESCRIPTION, LUMENS, WATTS, MOUNTING.

NOTES: 1. FIXTURES WITH CATALOG INFORMATION LISTED ABOVE ARE USED AS A BASIS OF QUALITY AND PERFORMANCE...



B3 LIGHTING PLAN SCALE: 1/8" = 1'-0"

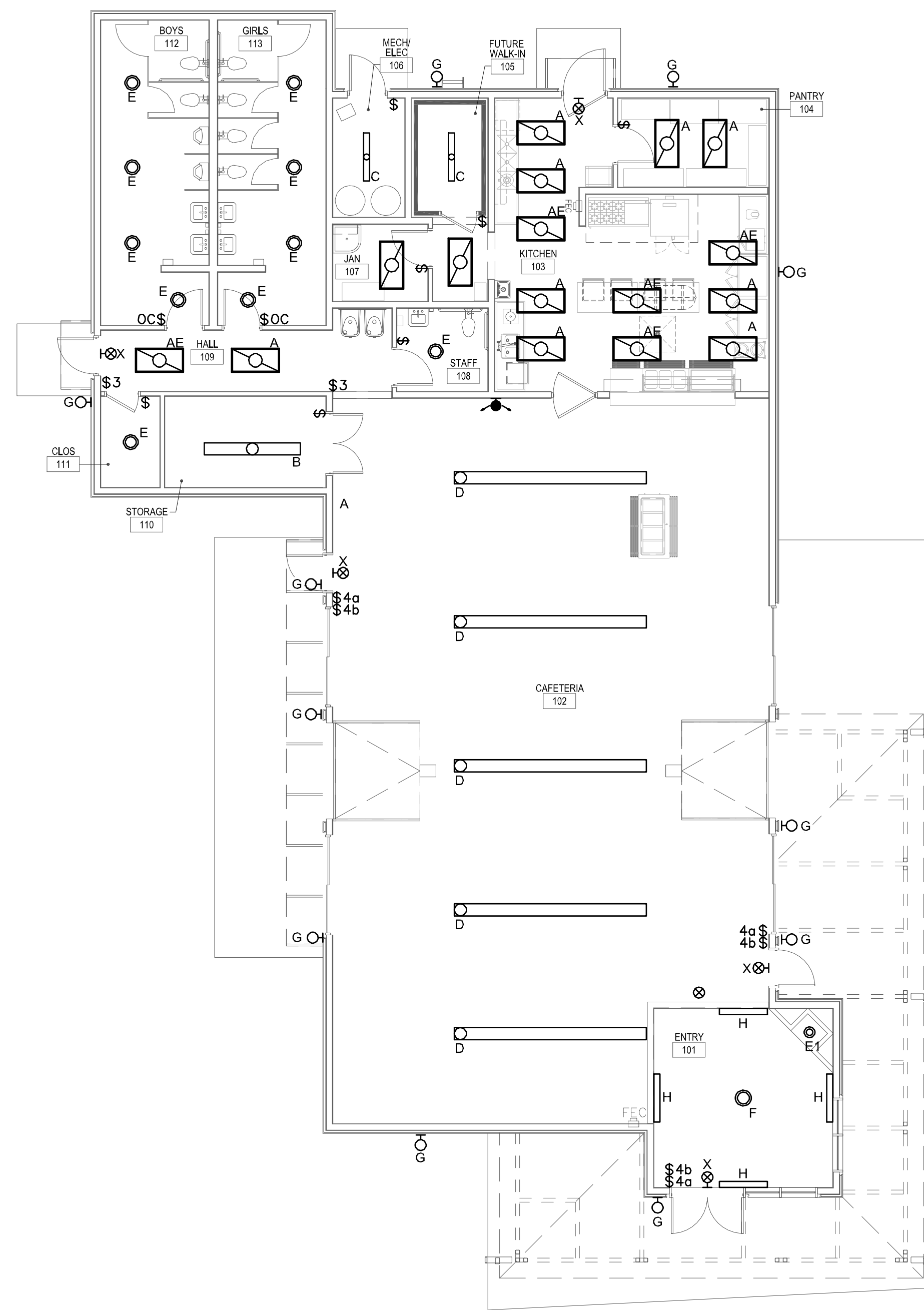


FIXTURE SCHEDULE

TYPE	VOLT	MANUFACTURER NUMBER	FIXTURE DESCRIPTION	LUMENS	WATTS	MOUNTING
A	120	COLUMBIA #LCAT24-35VW-G-EDU	2X4 LED TROFFER	3217	28	RECESSED
AE	120	COLUMBIA #LCAT24-35VW-G-EDU-ELL14	2X4 LED TROFFER W/ EM PACK	3217	28	RECESSED
B	120	COLUMBIA #LCS8-35LW-EU-2JCSWG4	8" OPEN LED STRIP W/WIREGUARD	5506	38	SURFACE
C	120	COLUMBIA #LCS4-35LW-EU-CSWG4	4" OPEN LED STRIP W/WIREGUARD	2753	19	SURFACE
D	120	LUMENWERX #VIA4PDI-HLO-WIO-LED-80-750-500-35-16-UNV-D1-1-53WAC36-FINISH	16" INDIRECT/DIRECT LINEAR PENDANT. SINGLE CKT. FINISH TBD. 1% DIMMING DRIVER.	8000 INDIRECT/12000 DIRECT	320	SUSPENDED
E	120	PRESCOLITE #LF6SL-6LFLS-11L35K8-B24	6" OPEN LED DOWNLIGHT. CLEAR ALZAK REFLECTOR. 0-10 DIM STD.	1100	12.6	RECESSED
E1	120	PRESCOLITE #LF4SL-4LFLS-11L35K8-B24	4" OPEN LED DOWNLIGHT. CLEAR ALZAK REFLECTOR. 0-10 DIM STD.	1100	12.6	RECESSED
F		PROGRESS #P2530-30	54" CEILING FAN. WHITE FINISH			SUSPENDED
G	120	TRACELITE #WL24-3-4K-FINISH-BB	LOW PROFILE LED WALL PACK. TYPE III DISTRIBUTION. FINISH TBD.	5021	40	EXTERIOR WALL
H	120	LUMENWERX #VIA3WDH-HLO-LED-80-600-750-35-4-UNV-D1-1-DMB-FINISH	4" INDIRECT/DIRECT WALL MOUNT. SINGLE CKT. FINISH TBD. 1% DIMMING DRIVER.	3000 INDIRECT/2000 DIRECT	82.5	WALL
X	120	EXITRONIX #CLEDUWHG2	WHITE THERMOPLASTIC EXIT W/INTEGRAL LED LIGHT BARS. SELF-DIAGNOSTICS.			UNIV

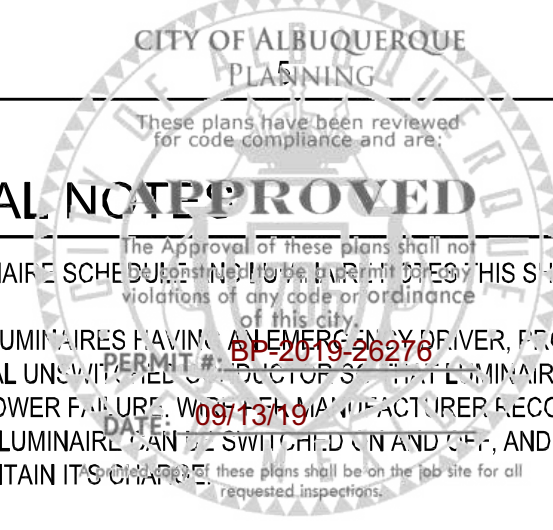
NOTES:
 1. FIXTURES WITH CATALOG INFORMATION LISTED ABOVE ARE USED AS A BASIS OF QUALITY AND PERFORMANCE. SUBSTITUTIONS/PRIOR APPROVALS SHALL COMPLY WITH SCHEDULE AND SPECIFICATIONS. IF THE FIXTURE(S) PROPOSED FOR SUBSTITUTION DO NOT COMPLY, IN OUR OPINION, THEY WILL BE REJECTED.
 2. THERE IS ADDITIONAL INFORMATION IN SPECIFICATION SECTION 16500 THAT SHALL BE FOLLOWED.

B3 LIGHTING PLAN
 SCALE: 1/8" = 1'-0"



GENERAL NOTES

- SEE LUMINAIRE SCHEDULE AND THIS SHEET FOR ALL LUMINAIRE TYPES. THESE PLANS HAVE BEEN REVIEWED FOR CODE COMPLIANCE AND ARE APPROVED.
- FOR ANY LUMINAIRE HAVING DIMMERS OR DIMMERS PROVIDE AN ADDITIONAL UNINTERRUPTIBLE POWER SUPPLY (UPS) TO THE LUMINAIRE. ALL LUMINAIRE TYPES WILL COME ON DURING POWER FAILURE. THE CONTRACTOR SHALL PROVIDE THE LUMINAIRE MANUFACTURER'S RECOMMENDATIONS, SO THAT THE LUMINAIRE CAN BE SWITCHED ON AND OFF, AND THE BATTERY WILL STILL MAINTAIN ITS CHARGE.
- PROVIDE ALL LIGHTING CONTROL EQUIPMENT WIRING PER MANUFACTURER SPECIFICATIONS AND RECOMMENDATIONS.
- CONNECT ALL NEW EXIT AND EMERGENCY EGRESS LIGHTS TO UN-SWITCHED POWER CIRCUITS.
- PROVIDE ALL LIGHTING CONTROL EQUIPMENT WIRING PER MANUFACTURER SPECIFICATIONS AND RECOMMENDATIONS.
- CONTRACTOR SHALL COORDINATE LUMINAIRE MOUNTING HEIGHTS AND LOCATIONS WITH OWNER.



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NEW MULTI-PURPOSE BUILDING

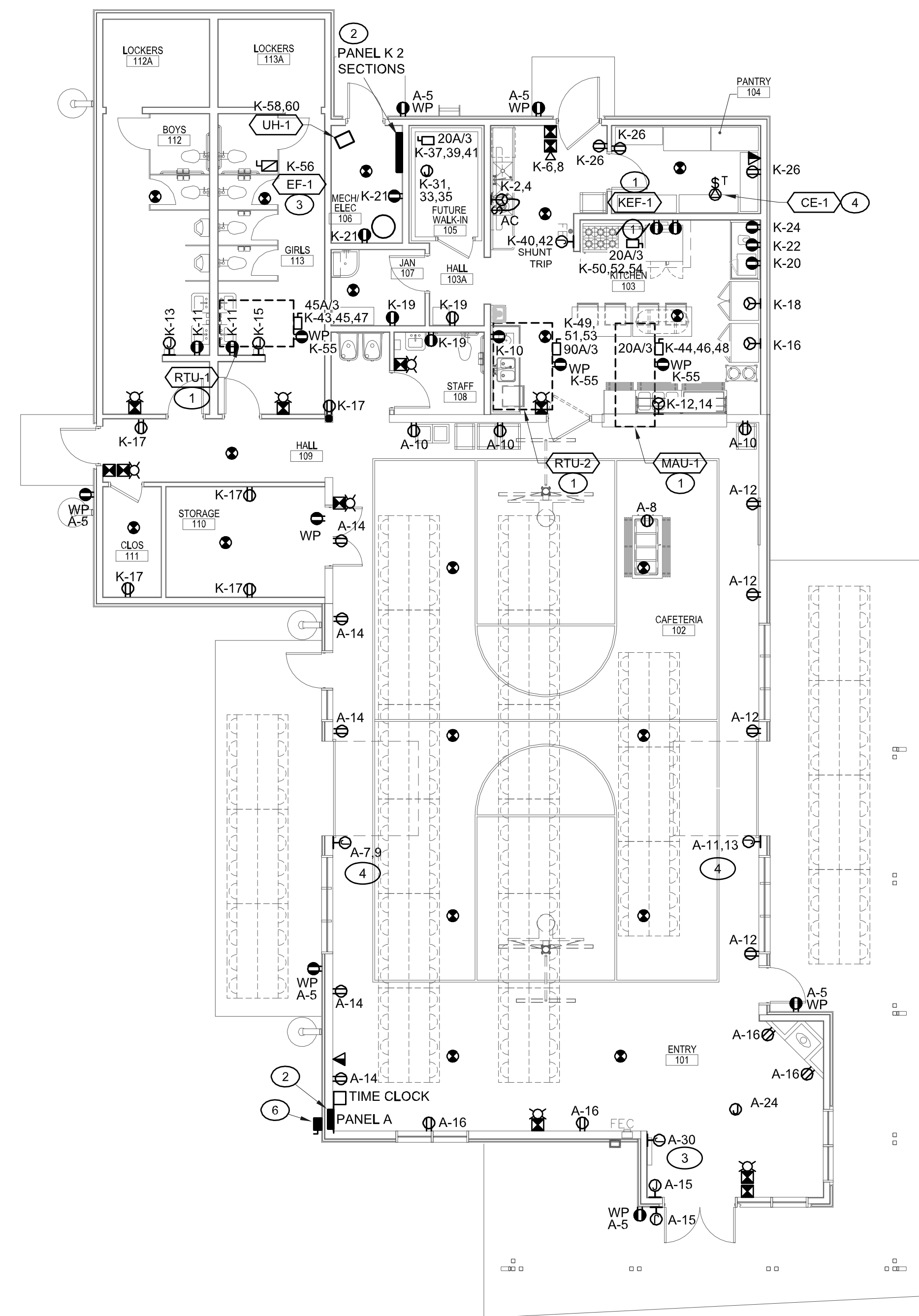
for ST TERESA CATHOLIC SCHOOL

LIGHTING PLAN & FIXTURE SCHEDULE

date:	June 07, 2019
drawn by:	D. PRYSAK
checked by:	D. FARRIS
file name:	18074_E101
revisions:	

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E-101



B3 POWER & SPECIAL SYSTEMS PLAN
SCALE: 1/8" = 1'-0"

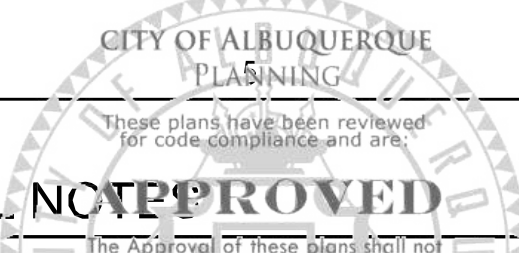


GENERAL NOTES

- A REFER TO SHEET E-01 FOR ELECTRICAL CODE AND ADDITIONAL NOTES.
- B MECHANICAL EQUIPMENT LOCATIONS, VERIFY LOCATION AND TERMINATION POINTS. MECHANICAL DRAWINGS AND MECHANICAL CONTRACTOR SHALL VERIFY LOCATIONS OF CONDUIT AND CONDUCTORS.
A printed copy of these plans shall be on the job site for all electrical work.
- C CIRCUIT NUMBERS ARE SHOWN ADJACENT TO RECEPTACLES AND EQUIPMENT CONNECTIONS. FURNISH, INSTALL AND CONNECT THE QUANTITY OF CONDUCTORS AS REQUIRED FOR THE RECEPTACLES AND EQUIPMENT CONNECTIONS ASSIGNED. USE THE NOTE BELOW TO DETERMINE CONDUCTOR SIZES FOR 20 AMP CIRCUITS UNLESS OTHERWISE NOTED.
- D FURNISH NO. 12 AWG WIRE SIZE WITH NO. 12 AWG GROUND IN 3/4" CONDUIT FOR CIRCUIT LENGTHS LESS THAN 75'-0". PROVIDE NO. 10 WIRE SIZE WITH NO. 10 AWG GROUND IN 3/4" CONDUIT FOR LENGTHS GREATER THAN 75'-0". ALL CONDUCTORS CONTRACTOR INSTALLED SHALL HAVE 90 DEGREE C RATED INSULATION.
- E SPECIAL SYSTEM INSTALL SHALL PROVIDE NEW DEVICES COMPATIBLE WITH EXISTING SYSTEM. TEST EXISTING RELOCATED DEVICES AND VERIFY OPERATION OF THE COMPLETE SYSTEM.
- F REFER TO RISER DIAGRAM AND PANEL SCHEDULES ON SHEET E-601.
- H CONTRACTOR SHALL PROVIDE AND INSTALL CONDUITS OF MINIMUM 3/4" SIZE AND 4"x4" J-BOXES FOR F.A. AND SECURITY SYSTEMS. CONTRACTOR TO COORDINATE CONDUIT ROUTING WITH OWNER.
- J THE SYSTEM LAYOUT SHOWS THE INTENT OF THE COVERAGE AND IS SHOWN IN SUGGESTED LOCATIONS. FINAL QUANTITY, LAYOUT AND COORDINATION IS THE RESPONSIBILITY OF THE CONTRACTOR. FOR ADDITIONAL REQUIREMENTS, SEE SPECIFICATIONS.
- K CONTRACTOR TO VERIFY REQUIREMENTS AND EXACT LOCATION FOR ALL ELECTRICAL CONNECTIONS NEEDED FOR KITCHEN HOOD AND FIRE SUPPRESSION EQUIPMENT AND PROVIDE SHUNT TRIP CIRCUIT BREAKERS FOR ELECTRICAL EQUIPMENT MOUNTED UNDER THE HOOD.

KEYED NOTES

- 1 ROOF MOUNTED EQUIPMENT. PROVIDE CONDUIT AND FEEDERS FOR POWER CONNECTIONS. SEE PANEL SCHEDULE FOR ON SHEET E-601 FOR SIZES AND RATINGS. PROVIDE NEMA 3R DISCONNECT SWITCHES AND WP GFCI CONVENIENCE OUTLETS. PROVIDE 3/4" CONDUIT FOR CONTROLS. COORDINATE WORK WITH MECHANICAL CONTRACTOR.
- 2 NEW ELECTRICAL PANELS. SEE SHEET E-601 FOR RATING, SCHEDULES AND CONDUIT SIZES.
- 3 JUNCTION BOX FOR FIRE ALARM CONTROL PANEL. COORDINATE REQUIREMENTS AND LOCATION WITH FIRE PROTECTION SYSTEM INSTALLER.
- 4 CONNECT TO LIGHTING CIRCUIT.
- 5 JUNCTION BOXES FOR OVERHEAD DOORS. CONTRACTOR TO VERIFY WITH OWNER ALL POWER AND MOUNTING REQUIREMENTS AND ADJUST ELECTRICAL PANEL.
- 6 DISCONNECT, SEE RISER DIAGRAM.



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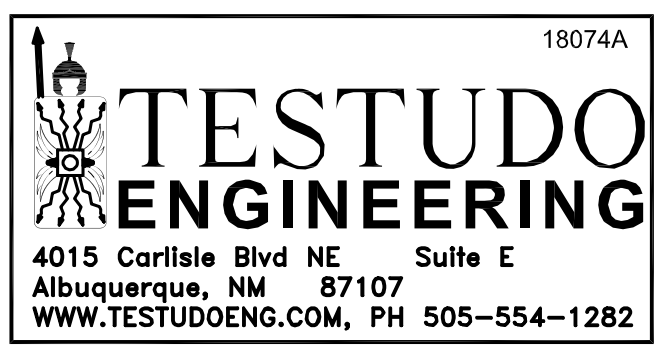
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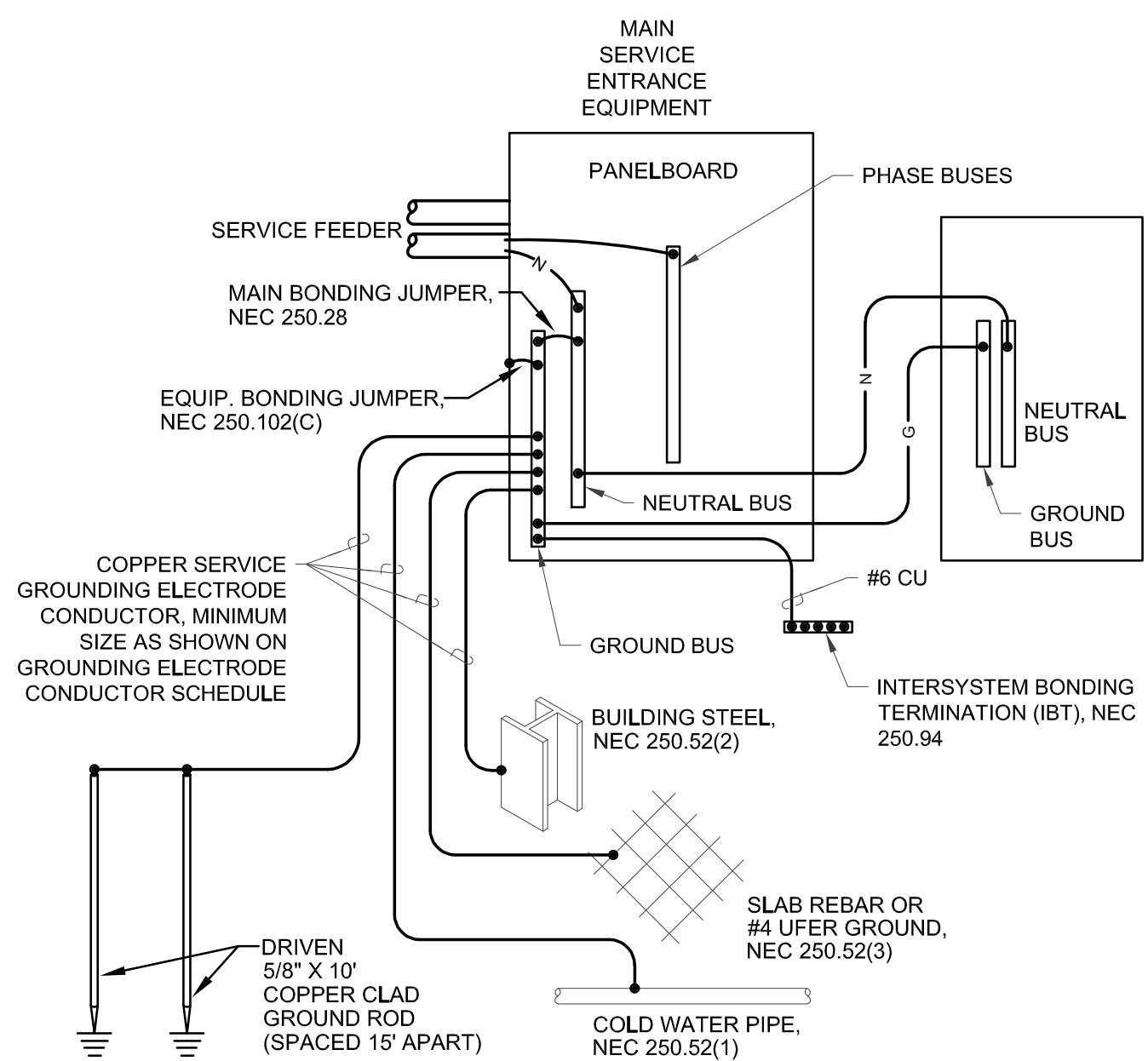
NEW MULTI-PURPOSE BUILDING
for ST TERESA CATHOLIC SCHOOL

POWER & SPECIAL SYSTEMS PLAN

date:	June 07, 2019
drawn by:	D. PRYSAK
checked by:	D. FARRIS
file name:	18074A_E201
revisions:	



E-201a
ALTERNATE



SERVICE GROUNDING SYSTEM GENERAL NOTES

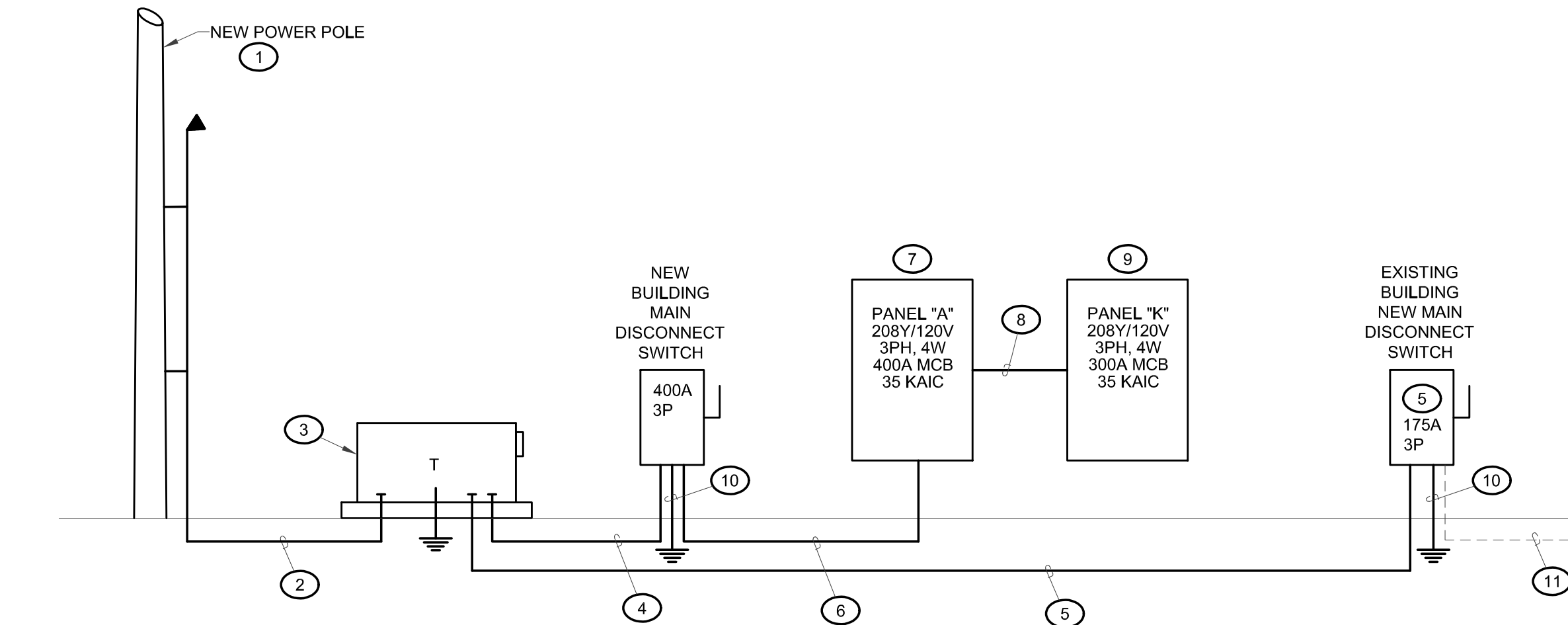
- A. ALL CONDUCTORS USED FOR THE GROUNDING SYSTEM SHALL BE COPPER.
- B. CONNECT THE GROUNDING SYSTEM TO THE FOUR FOLLOWING COMPONENTS:
 - BUILDING STEEL.
 - METAL U.G. COLD WATER PIPE.
 - CONCRETE ENCASED REBAR OR #4 COPPER UFER.
 - 10' GROUND RODS.
- C. ANY SPLICING SHALL BE VIA CAD-WELDED TYPE PROCESS.
- D. THE GROUNDING SYSTEM SHALL COMPLY WITH ALL REQUIREMENTS OF ARTICLE 250 OF THE 2014 NEC, AND SHALL PROVIDE 25 OHMS OR LESS RESISTANCE TO GROUND. PROVIDE TEST REPORT VERIFYING RESISTANCE LEVEL IS IN COMPLIANCE WITH 25 OHM MAXIMUM.

GROUNDING ELECTRODE CONDUCTOR SCHEDULE

SERVICE AMPACITY	EQUIV. CU WIRE SIZE	MAIN BONDING JUMPER	EQUIPMENT BONDING JUMPER	METALLIC PIPE CONDUCTOR	BUILDING STEEL CONDUCTOR	REBAR OR UFER CONDUCTOR	CONDUCTOR
200A	#3/0	#4	#4	#4	#4	#4	
400A	500	#1/0	#1/0	#1/0	#1/0	#1/0	

SERVICE GROUNDING SYSTEM DIAGRAM

SCALE: NONE



RISER DIAGRAM

SCALE: NONE

PANEL A		SERVICE: 208/120V, 3PH, 4W MANS RATING: 400 AMP MANS OPTIONS: 400AT / 100AF MAIN CIRCUIT BREAKER INTERRUPTING RATING: 35,000 AAC										ACCESSORIES: NEUTRAL BAR, GROUND BAR	
LOCATION: RM 106 DWG REF: DWG NO.:		CABINET: SURFACE MOUNTED, NEMA 1, DOOR-IN/DOOR, 30 POLES											
CCT NO.	LOAD DESCRIPTION	CABLE SIZE	BKR SIZE	LOAD (KVA)	PHASE	PHASE	LOAD (KVA)	BKR SIZE	CABLE SIZE	LOAD DESCRIPTION	CCT NO.		
1	LIGHTS OUTSIDE	(2)-#12#12G	20A/1P	1.00	26.3		25.33	300A/3P	(4)-350#4G	SUB PANEL K	2		
3	SPARE		20A/1P				25.33	400AF			4		
5	RECEPT OUTSIDE GFCI WP	(2)-#12#12G	20A/1P	1.00		20.4	25.33				6		
7	JBOX OVERHEAD DOOR	(3)-#12#12G	20A/2P	1.00	2.0		1.00	20A/1P	(2)-#12#12G	RECEPT FLOOR SALAD BAR	8		
9	...					1.5	0.54	20A/1P	(2)-#12#12G	RECEPT NORTH WALL CAFETERIA	10		
11	JBOX OVERHEAD DOOR	(3)-#12#12G	20A/2P	1.00		1.9	0.90	20A/1P	(2)-#12#12G	RECEPT EAST WALL CAFETERIA	12		
13	...					1.9	0.90	20A/1P	(2)-#12#12G	RECEPT WEST WALL CAFETERIA	14		
15	JBOX LOOK OPERATOR	(2)-#12#12G	20A/1P	1.00		1.7	0.72	20A/1P	(2)-#12#12G	RECEPT SOUTH WALL ENTRY	16		
17	SPARE		20A/1P			0.0				SPARE	18		
19	SPARE		20A/1P			0.0				SPARE	20		
21	SPARE		20A/1P			0.0				SPARE	22		
23	SPARE		20A/1P			1.0	1.0	20A/1P	(2)-#12#12G	JBOX FAN	24		
25	SOLAR SYSTEM		200A/3P		1.0		1.00	20A/1P	(2)-#12#12G	LIGHTING CAFETERIA	26		
27	SPARE						1.0	20A/1P	(2)-#12#12G	LIGHTING CAFETERIA	28		
29	SPARE						1.0	20A/1P	(2)-#12#12G	FIRE ALARM CONTROL PANEL	30		
NOTE:													
31.2 29.6 30.3 KVA LL VOLTS AMPS 91.1 209 252													
2.9% 2.6% 0.2% PHASE UNBALANCE 260.1 245.4 252.4 PHASE AMPS													

PANEL K 2 SECTIONS		SERVICE: 208/120V, 3PH, 4W MANS RATING: 400 AMP MANS OPTIONS: 300AT / 100AF MAIN CIRCUIT BREAKER INTERRUPTING RATING: 35,000 AAC										ACCESSORIES: NEUTRAL BAR, GROUND BAR	
LOCATION: RM 106 DWG REF: DWG NO.:		CABINET: SURFACE MOUNTED, NEMA 1, DOOR-IN/DOOR, 64 POLES											
CCT NO.	LOAD DESCRIPTION	CABLE SIZE	BKR SIZE	LOAD (KVA)	PHASE	PHASE	LOAD (KVA)	BKR SIZE	CABLE SIZE	LOAD DESCRIPTION	CCT NO.		
1	LIGHTING OUTSIDE	(2)-#12#12G	20A/1P	1.00	2.3		1.26	20A/2P	(2)-#12#12G	ITEM #4 GARBAGE DISPOSER	2		
3	LIGHTING	(2)-#12#12G	20A/1P	1.60		2.6	1.26	100AF			4		
5	LIGHTING	(2)-#12#12G	20A/1P	1.60		5.0	3.44	45A/2P	(3)-#6#10G	ITEM #6 UNDERCOUNTER DISHWASHER	6		
7	SPARE		20A/1P			3.4	3.44	100AF			8		
9	SPARE		20A/1P			1.0	1.00	20A/1P	(2)-#12#12G	ITEM #32 PLANETARY MIXER	10		
11	RECEPT GFCI RESTROOMS	(2)-#12#12G	20A/1P	0.36		1.5	1.13	20A/2P	(3)-#12#12G	ITEM #27 SERVING COUNTER HOT FOOD	12		
13	HAND DRYER RR112	(2)-#12#12G	20A/1P	1.00	2.1		1.13	100AF			14		
15	HAND DRYER RR113	(2)-#12#12G	20A/1P	1.00		2.2	1.20	20A/1P	(2)-#12#12G	ITEM #24 REACH IN FREEZER	16		
17	RECEPT 106,110,111	(2)-#12#12G	20A/1P	0.90		1.6	0.70	20A/1P	(2)-#12#12G	ITEM #23 REACH IN REFRIGERATOR	18		
19	RECEPT GFCI RR106, JAN	(2)-#12#12G	20A/1P	0.54	2.1		1.55	20A/1P	(2)-#12#12G	ITEM #22 MICROWAVE OVEN	20		
21	RECEPT MECH/ELEC 106	(2)-#12#12G	20A/1P	0.36		1.1	0.75	20A/1P	(2)-#12#12G	ITEM #21 FOOD BLENDER	22		
23	SPARE		20A/1P			0.2	0.16	20A/1P	(2)-#12#12G	RECEPT PANTRY 134	24		
25	SPARE		20A/1P			0.5	0.54	20A/1P	(2)-#12#12G	SPARE	26		
27	SPARE		20A/1P			0.0				SPARE	28		
29	SPARE		20A/1P			0.0				SPARE	30		
31	ITEM #2A FUTURE WALK-IN COOLER EVAPORATOR	(4)-#12#12G	20A/3P	0.33	0.3			20A/1P		SPARE	32		
33	...		100AF	0.33		0.3		20A/1P		SPARE	34		
35	...		100AF	0.33		0.3		20A/1P	(2)-#10#12G	KH-1 SUPPRESSION SYSTEM	36		
37	ITEM #2B FUTURE WALK-IN COOLER CONDENSER	(4)-#12	20A/3P	1.00	2.0		1.00	20A/1P	(2)-#12#12G	KH-1 KITCHEN HOOD LIGHTS	38		
39	...		100AF	1.00		2.0	1.00	20A/2P	(3)-#12#12G	KH-1 KITCHEN HOOD CONTROL PNL - SHUNT TRIP	40		
41	...		100AF	1.00			1.0	100AF			42		
43	RTU-1	(4)-#6#10G	45A/3P	3.73	4.6		0.90	20A/3P	(4)-#12#12G	MUA-1	44		
45	...		100AF	3.73		4.6	0.90	100AF			46		
47	...		100AF	3.73		4.6	0.90				48		
49	RTU-2	(4)-#6#10G	100A/3P	8.33	9.1		0.73	20A/2P	(4)-#12#12G	KEF-1 EXHAUST FAN	50		
51	...		100AF	8.33		9.1	0.73	100AF			52		
53	...		100AF	8.33		9.1	0.73				54		
55	RECEPT GFCI WP ROOF RTU1 & 2, MUA, KEF	(2)-#12#12G	20A/1P	0.72	0.9		0.20	20A/1P	SEE PLAN	EF-1 FAN RESTROOMS	56		
57	SPARE		20A/1P			0.9	0.80	20A/2P	SEE PLAN	LN-1	58		
59	SPARE		20A/1P			0.9	0.90	100AF			60		
61	SPARE		20A/1P			0.0		20A/1P		SPARE	62		
63	SPARE		20A/1P			0.0		20A/1P		SPARE	64		
65	SPARE		20A/1P			0.0		20A/1P		SPARE	66		
67	SPARE		20A/1P			0.0		20A/1P		SPARE	68		
69	SPARE		20A/1P			0.0		20A/1P		SPARE	70		
71	SPACE					0.0				SPACE	72		
73	SPACE					0.0				SPACE	74		
75	SPACE					0.0				SPACE	76		
77	SPACE					0.0				SPACE	78		
79	SPACE					0.0				SPACE	80		
81	SPACE					0.0				SPACE	82		
83	SPACE					0.0				SPACE	84		
NOTE:													
27.4 24.1 24.2 KVA LL VOLTS AMPS 75.7 208 210													
0.5% 4.5% 4.0% PHASE UNBALANCE 228.2 200.7 201.8 PHASE AMPS													

GENERAL NOTES

- A. CONTRACTOR TO COORDINATE WITH PNM, OWNER AND SOLAR SYSTEM INSTALLER.
- DATE: 09/13/19
- PERMIT # BP-2019-26276

KEYED NOTES

- NEW POWER POLE AND RISER PER PNM.
- PROVIDE TRENCHING AND CONDUIT FOR PRIMARY FEEDERS FROM PNM POWER POLE TO NEW PAD MOUNTED TRANSFORMER.
- PROVIDE MOUNTING PAD PER PNM REQUIREMENTS. NEW TRANSFORMER WITH CT/METER, SIZE PER PNM.
- PROVIDE TRENCHING, CONDUIT AND FEEDERS (2 SETS OF 4X#350 KCMIL CU IN 2 1/2" CONDUIT) FROM TRANSFORMER TO NEW BUILDING DISCONNECT SWITCH.
- PROVIDE TRENCHING, CONDUIT AND FEEDERS TO EXISTING BUILDING. 4X#30 CU AND 1X#4 CU IN 2" CONDUIT. CONTRACTOR TO VERIFY SIZE AND RATING OF THE EXISTING DISCONNECT SWITCH AND REPLACE WITH NEW. CONTRACTOR TO VERIFY EXISTING BUILDING GROUNDING AND UPGRADE TO 2017 NEC REQUIREMENTS AS REQUIRED.
- PROVIDE CONDUIT AND FEEDERS (2 SETS OF 4X#30 CU AND 1X#4 CU IN 2" CONDUIT) FROM BUILDING DISCONNECT TO PANEL A.
- NEW PANEL A. SEE PANEL SCHEDULE AND RATING THIS SHEET.
- PROVIDE CONDUIT AND FEEDERS (2 SETS OF 3X#30 CU, 1X#30 CU NEUTRAL IN 2" EMT CONDUIT) AND 1X#2 CU GND) TO SUB PANEL K.
- NEW PANEL K. REFER TO ARCHITECTURAL DRAWINGS FOR FOR KITCHEN EQUIPMENT CONNECTING REQUIREMENTS.
- INSTALL GROUNDS PER DETAIL ON THIS SHEET (TYP.).
- RECONNECT EXISTING BUILDING FEEDERS.

Available Fault Current Calculation

Utility Fault Current: 65,000 amperes

$I = \frac{kVA \times 1000}{E \times 1.732} = \text{trans. FLA}$

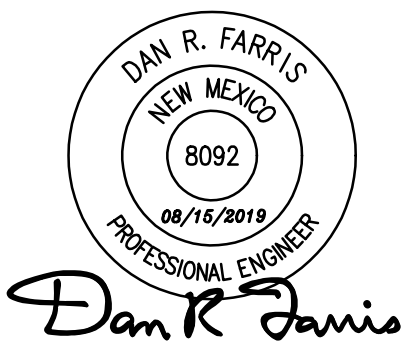
$I_{SCA} = \frac{\text{trans. FLA} \times 100}{\text{transformer Z}} = 27,758 \text{ amperes}$

Point to Point Method: $I_{SCA} = 21,240 \text{ amperes}$

Multiplier: $M = \frac{1}{1+f} = 0.327$

Fault Current at Service Equipment: $I_{SCA} \times M = 12,686 \text{ amperes}$

Fault Current from Service disc. to panel "A": $I_{SCA} \times M = 9,544 \text{ amperes}$



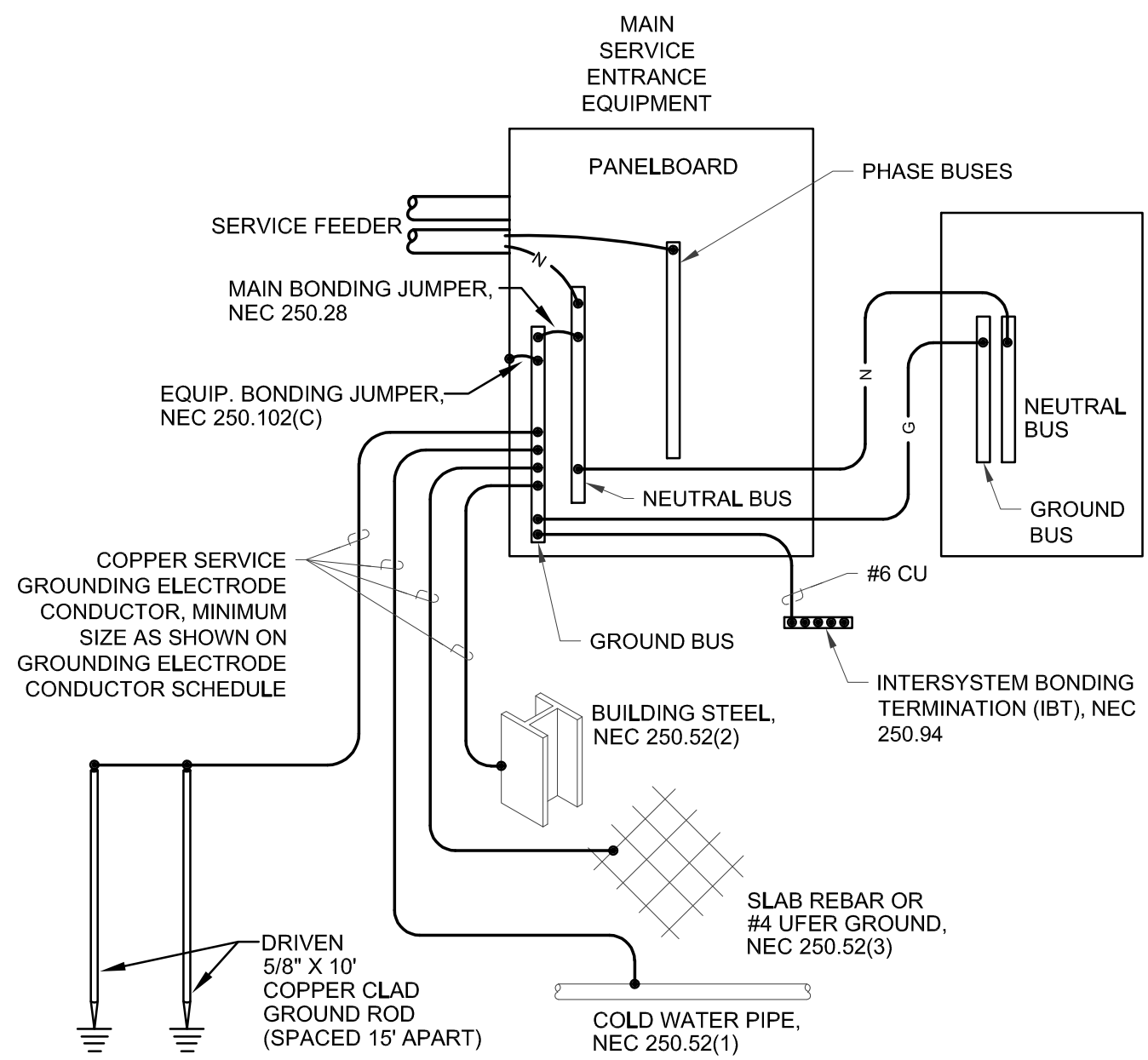
NEW MULTI-PURPOSE BUILDING

for ST TERESA CATHOLIC SCHOOL

date:	August 15, 2019
drawn by:	D. PRYSAK
checked by:	D. FARRIS
file name:	18074A_E601
revisions:	



E-601a
ALTERNATE



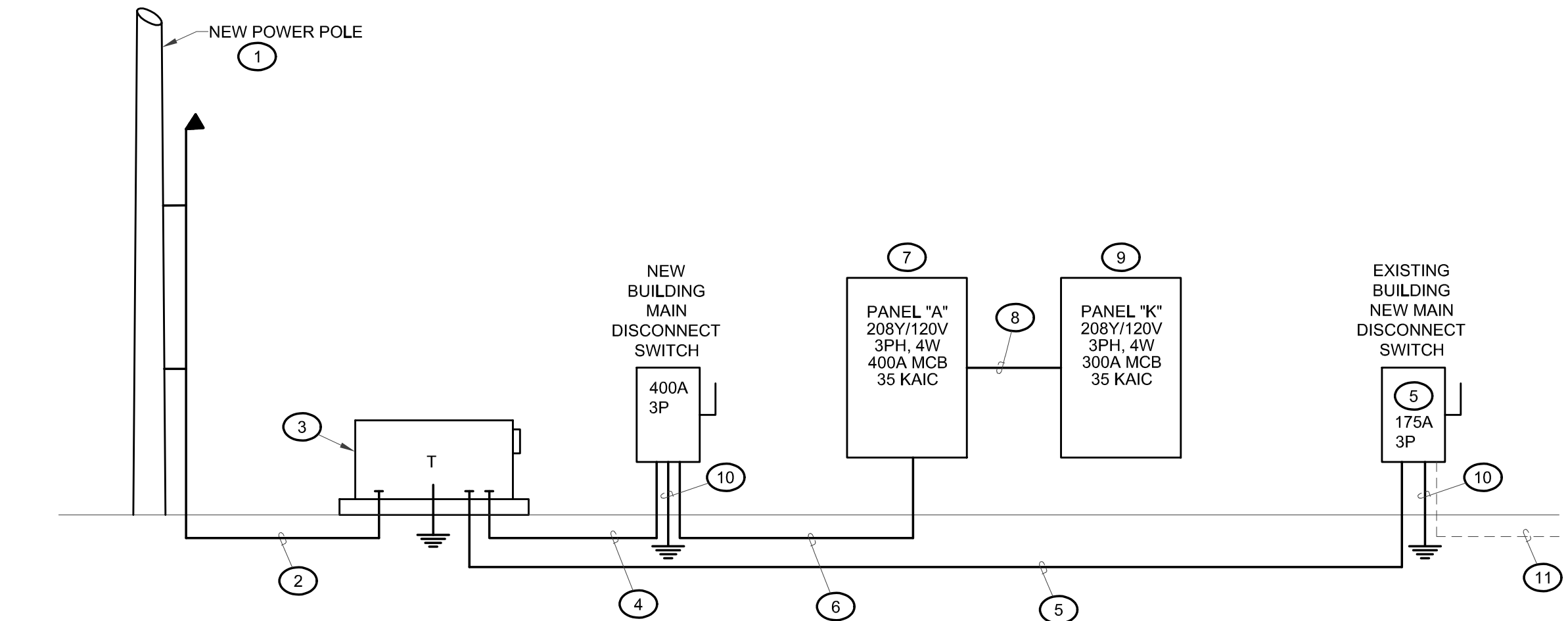
SERVICE GROUNDING SYSTEM GENERAL NOTES

- A. ALL CONDUCTORS USED FOR THE GROUNDING SYSTEM SHALL BE COPPER.
- B. CONNECT THE GROUNDING SYSTEM TO THE FOUR FOLLOWING COMPONENTS:
 - BUILDING STEEL.
 - METAL U.G. COLD WATER PIPE.
 - CONCRETE ENCASED REBAR OR #4 COPPER UFER.
 - 10' GROUND RODS.
- C. ANY SPLICING SHALL BE VIA CAD-WELDED TYPE PROCESS.
- D. THE GROUNDING SYSTEM SHALL COMPLY WITH ALL REQUIREMENTS OF ARTICLE 250 OF THE 2014 NEC, AND SHALL PROVIDE 25 OHMS OR LESS RESISTANCE TO GROUND. PROVIDE TEST REPORT VERIFYING RESISTANCE LEVEL IS IN COMPLIANCE WITH 25 OHM MAXIMUM.

GROUNDING ELECTRODE CONDUCTOR SCHEDULE						
SERVICE AMPACITY	EQUIV. CU WIRE SIZE	MAIN BONDING JUMPER	EQUIPMENT BONDING JUMPER	METALLIC PIPE CONDUCTOR	BUILDING STEEL CONDUCTOR	REBAR OR UFER CONDUCTOR
200A	#3/0	#4	#4	#4	#4	#4
400A	500	#1/0	#1/0	#1/0	#1/0	#1/0

SERVICE GROUNDING SYSTEM DIAGRAM

SCALE: NONE



RISER DIAGRAM

SCALE: NONE

PANEL A											
SERVICE: 208/120V 3PH, 4W MANS RATING: 400 AMP											
MANS OPTIONS: 400AT / 100AF MAIN CIRCUIT BREAKER											
ACCESSORIES: NEUTRAL BAR, GROUND BAR											
CABINET: SURFACE MOUNTED, NEMA 1, DOOR-IN-DOOR, 30 POLES											
CCT NO.	LOAD DESCRIPTION	CABLE SIZE	BKR SIZE	LOAD (KVA)	PHASE A	PHASE B	PHASE C	BKR SIZE	CABLE SIZE	LOAD DESCRIPTION	CCT NO.
1	LIGHTS OUTSIDE	2-#12R12G	20A1P	1.00	25.3			25.33	300A/3P	(4)-300M4G	2
3	SPARE		20A1P					25.33	400AF	---	4
5	RECEPT OUTSIDE GFCI WP	2-#12R12G	20A1P	1.08		26.4		0.54	20A1P	(2)-#12R12G	6
7	J-BOX OVERHEAD DOOR	3-#12R12G	20A2P	1.00	2.0			1.00	20A1P	(2)-#12R12G	8
9	---		20A1P			1.5		0.90	20A1P	(2)-#12R12G	10
11	J-BOX OVERHEAD DOOR	3-#12R12G	20A2P	1.00		1.9	0.90	0.90	20A1P	(2)-#12R12G	12
13	---		20A1P			1.9		0.90	20A1P	(2)-#12R12G	14
15	J-BOX DOOR OPERATOR	2-#12R12G	20A1P	1.00		1.7	0.72	0.72	20A1P	(2)-#12R12G	16
17	SPARE		20A1P			0.0			20A1P	SPARE	18
19	SPARE		20A1P			0.0			20A1P	SPARE	20
21	SPARE		20A1P			0.0			20A1P	SPARE	22
23	SPARE		20A1P			1.0	1.0	1.00	20A1P	(2)-#12R12G	24
25	SOLAR SYSTEM		200A3P	1.0				1.00	20A1P	(2)-#12R12G	26
27	SPARE		225AF					1.00	20A1P	(2)-#12R12G	28
29	SPARE		20A1P	0.00				1.00	20A1P	(2)-#12R12G	30
NOTE:											
2.9% 2.8% 0.2% PHASE UNBALANCE											
263.1 248.4 252.4 PHASE AMPS											

PANEL K 2 SECTIONS											
SERVICE: 208/120V 3PH, 4W MANS RATING: 300AT / 100AF MAIN CIRCUIT BREAKER											
ACCESSORIES: NEUTRAL BAR, GROUND BAR											
CABINET: SURFACE MOUNTED, NEMA 1, DOOR-IN-DOOR, 84 POLES											
CCT NO.	LOAD DESCRIPTION	CABLE SIZE	BKR SIZE	LOAD (KVA)	PHASE A	PHASE B	PHASE C	BKR SIZE	CABLE SIZE	LOAD DESCRIPTION	CCT NO.
1	LIGHTING OUTSIDE	2-#12R12G	20A1P	1.00	2.3			1.26	20A2P	(3)-#12R12G	2
3	LIGHTING	2-#12R12G	20A1P	1.60		2.9		1.26	100AF	---	4
5	LIGHTING	2-#12R12G	20A1P	1.60			5.0	3.44	45A2P	(3)-#8R10G	6
7	SPARE		20A1P					3.44	100AF	---	8
9	SPARE		20A1P			1.0		1.00	20A1P	(2)-#12R12G	10
11	RECEPT GFCI RESTROOMS	2-#12R12G	20A1P	0.36		1.5	1.13	1.20	20A2P	(3)-#12R12G	12
13	HAND DRYER RR112	2-#12R12G	20A1P	1.00	2.1			1.13	100AF	---	14
15	HAND DRYER RR113	2-#12R12G	20A1P	1.00		2.2		1.20	20A1P	(2)-#12R12G	16
17	RECEPT 106, 110, 111	2-#12R12G	20A1P	0.90			1.6	0.70	20A1P	(2)-#12R12G	18
19	RECEPT GFCI RR106, JAN	2-#12R12G	20A1P	0.54	2.1			1.55	20A1P	(2)-#12R12G	20
21	RECEPT MECH/ELEC 106	2-#12R12G	20A1P	0.36			1.1	0.75	20A1P	(2)-#12R12G	22
23	SPARE		20A1P			0.2	0.18	0.20	20A1P	(2)-#12R12G	24
25	SPARE		20A1P			0.5	0.54	0.54	20A1P	(2)-#12R12G	26
27	SPARE		20A1P			0.0			20A1P	SPARE	28
29	SPARE		20A1P			0.0			20A1P	SPARE	30
31	ITEM #2A FUTURE WALK-IN COOLER EVAPORATOR	(4)-#12R12G	20A3P	0.33	0.3				20A1P	SPARE	32
33	---		100AF	0.33			0.3		20A1P	SPARE	34
35	---		100AF	0.33			0.3		20A1P	(2)-#12R12G	36
37	ITEM #2B FUTURE WALK-IN COOLER CONDENSER	(4)-#12	20A3P	1.00	2.0			1.00	20A1P	(2)-#12R12G	38
39	---		100AF	1.00		2.0		1.00	20A2P	(3)-#12R12G	40
41	---		100AF	1.00			1.0		100AF	---	42
43	RTU-1	(4)-#8R10G	45A3P	3.73	4.6			0.90	20A3P	(4)-#12R12G	44
45	---		100AF	3.73		4.6		0.90	100AF	---	46
47	---		100AF	3.73			4.6	0.90	---	---	48
49	RTU-2	(4)-#8R10G	90A3P	8.33	9.1			0.73	20A3P	(4)-#12R12G	50
51	---		100AF	8.33		9.1		0.73	100AF	---	52
53	---		100AF	8.33			9.1	0.73	---	---	54
55	RECEPT GFCI WP ROOF RTU1 & 2, MUA, KEF	2-#12R12G	20A1P	0.72	0.9			0.20	20A1P	---	56
57	SPARE		20A1P			0.9		0.90	20A2P	---	58
59	SPARE		20A1P			0.9	0.90	0.90	100AF	---	60
61	SPARE		20A1P			0.0			20A1P	SPARE	62
63	SPARE		20A1P			0.0			20A1P	SPARE	64
65	SPARE		20A1P			0.0			20A1P	SPARE	66
67	SPARE		20A1P			0.0			20A1P	SPARE	68
69	SPARE		20A1P			0.0			20A1P	SPARE	70
71	SPACE					0.0				SPACE	72
73	SPACE					0.0				SPACE	74
75	SPACE					0.0				SPACE	76
77	SPACE					0.0				SPACE	78
79	SPACE					0.0				SPACE	80
81	SPACE					0.0				SPACE	82
83	SPACE					0.0				SPACE	84
NOTE:											
27.4 24.1 24.2 PHASE UNBALANCE											
75.7 208 210 PHASE AMPS											
0.55% -4.5% -4.0% PHASE UNBALANCE											
228.2 200.7 201.8 PHASE AMPS											

GENERAL NOTES

- A. CONTRACTOR TO COORDINATE WITH PNM, OWNER AND SOLAR SYSTEM INSTALLER.
- DATE: 09/13/19
- PERMIT # BP-2019-26276

KEYED NOTES

- 1. NEW POWER POLE AND RISER PER PNM.
- 2. PROVIDE TRENCHING AND CONDUIT FOR PRIMARY FEEDERS FROM PNM POWER POLE TO NEW PAD MOUNTED TRANSFORMER.
- 3. PROVIDE MOUNTING PAD PER PNM REQUIREMENTS. NEW TRANSFORMER WITH CT/METER, SIZE PER PNM.
- 4. PROVIDE TRENCHING, CONDUIT AND FEEDERS (2 SETS OD 4X#350 KCMIL CU IN 2 1/2" CONDUIT) FROM TRANSFORMER TO NEW BUILDING DISCONNECT SWITCH.
- 5. PROVIDE TRENCHING, CONDUIT AND FEEDERS TO EXISTING BUILDING. 4X#30 CU AND 1X#4 CU IN 2" CONDUIT. CONTRACTOR TO VERIFY SIZE AND RATING OF THE EXISTING DISCONNECT SWITCH AND REPLACE WITH NEW. CONTRACTOR TO VERIFY EXISTING BUILDING GROUNDING AND UPGRADE TO 2017 NEC REQUIREMENTS AS REQUIRED.
- 6. PROVIDE CONDUIT AND FEEDERS (2 SETS OF 4X#30 CU AND 1X#4 CU IN 2" CONDUIT) FROM BUILDING DISCONNECT TO PANEL A.
- 7. NEW PANEL A. SEE PANEL SCHEDULE AND RATING THIS SHEET.
- 8. PROVIDE CONDUIT AND FEEDERS (2 SETS OF 3X#30 CU, 1X#30 CU NEUTRAL IN 2" EMT CONDUIT) AND 1X#2 CU GND) TO SUB PANEL K.
- 9. NEW PANEL K. REFER TO ARCHITECTURAL DRAWINGS FOR FOR KITCHEN EQUIPMENT CONNECTING REQUIREMENTS.
- 10. INSTALL GROUNDS PER DETAIL ON THIS SHEET (TYP.).
- 11. RECONNECT EXISTING BUILDING FEEDERS.

Available Fault Current Calculation

Utility Fault Current: 65,000 amperes

$I = \frac{kVA \times 1000}{E \times 1.732} = \text{trans. FLA}$

$I_{SCA} = \frac{\text{trans. FLA} \times 100}{\text{transformer Z}} = 27,758 \text{ amperes}$

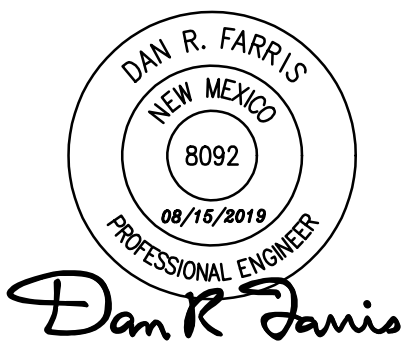
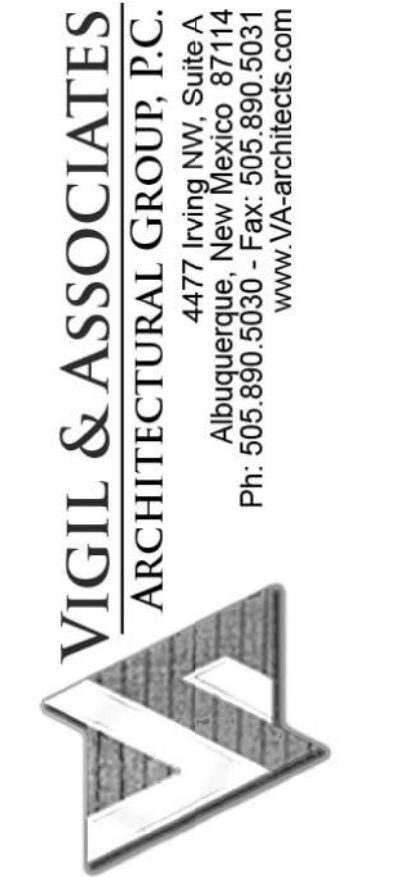
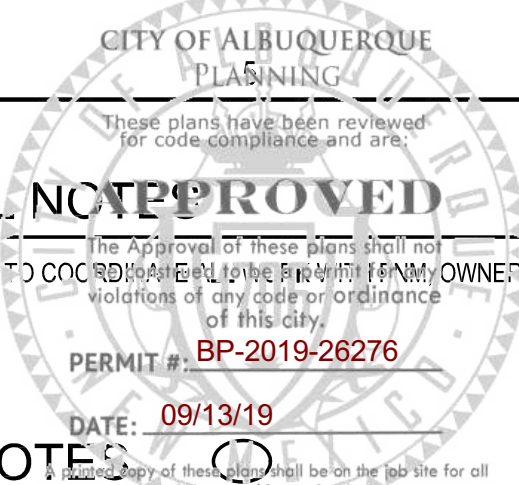
Point to Point Method: $I_{SCA} = 21,240 \text{ amperes}$

Fault Current at Service Equipment: $I_{SCA} \times M = 12,686 \text{ amperes}$

Fault Current from Service disc. to panel "A": $I_{SCA} \times M = 16,654 \text{ amperes}$

Fault Current from Service disc. to panel "K": $I_{SCA} \times M = 9,544 \text{ amperes}$

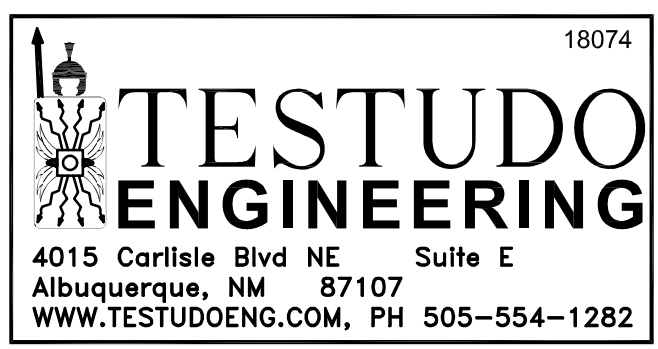
Calculation does not include motor contribution



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E-601