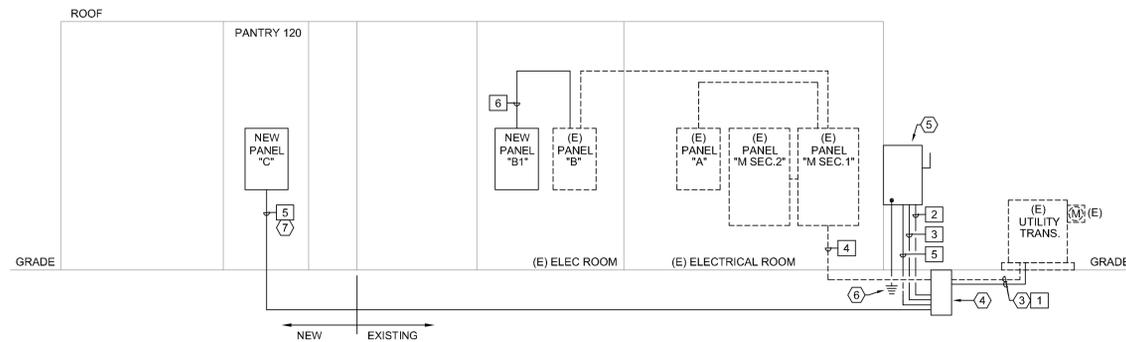
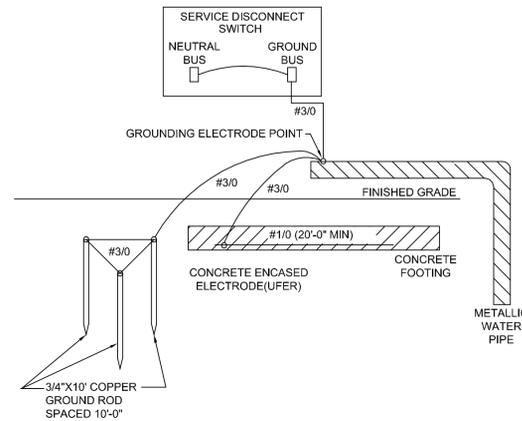


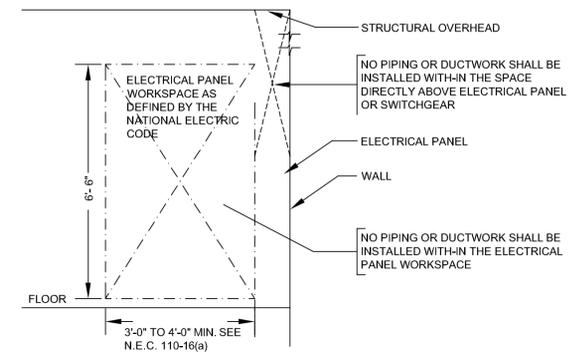
1 ELECTRICAL RISER DIAGRAM - DEMOLITION (BASE BID)
Not To Scale



2 ELECTRICAL RISER DIAGRAM - NEW (BASE BID)
Not To Scale



**4 BUILDING SERVICE ENTRANCE
GROUNDING DIAGRAM**
Not To Scale



**5 MECHANICAL / ELECTRICAL
COORDINATION DETAIL**
Not To Scale

ESTIMATED BUILDING LOAD SUMMARY (120/208V, 3PH, 4W)		
LOCATION	TOTAL WATTS	TOTAL AMPS
EXISTING FACILITY (60% OF EXISTING CIRCUIT BREAKER)	184720.0	513.0
	N.E.C. (1.25%)	128.3
NEW ADDITION (PANEL "C")	74950.0	208.2
	BUILDING AMPS	849.5
	SEVICE AMPS	1000.0

- THESE DOCUMENTS ARE BASED ON EXISTING SITE VISIT AND PICTURES. EXISTING UTILITY TRANSFORMER WHICH FEEDS MULTIPLE BUILDINGS WITH ONE UTILITY METER. CONTRACTOR TO PROVIDE BASE BID AS INDICATED ON THE DRAWINGS OF UPSIZING THE ELECTRICAL SYSTEM TO A 1000 AMPS.
- BASED ON THE EXISTING UTILITY METERING MULTIPLE BUILDING THE CONTRACTOR TO CONDUCT A 30 DAY METERING PER N.E.C. ARTICLE 220.87 DETERMINING EXISTING LOADS. TURN REPORT OVER TO THE ARCHITECT / ENGINEER TO DETERMINE THE DIRECTION THE ELECTRICAL SERVICE SHOULD BE MODIFIED.
- CONTRACTOR TO PROVIDE A SEPARATE LINE ITEM TO REFLECT THE "ALTERNATE" ELECTRICAL ONE-LINE DIAGRAM.

BRANCH CIRCUIT WIRE SCHEDULE		
BRANCH SIZE	COPPER WIRE SIZE	CONDUIT SIZE
20 AMP	2 #12, 1#12G.	1/2"
25 AMP	2 #10, 1#10G.	1/2"
30 AMP	2 #10, 1#10G.	1/2"
35 AMP	2 #8, 1#10G.	3/4"
40 AMP	2 #8, 1#10G.	3/4"
45 AMP	2 #6, 1#10G.	1"
50 AMP	2 #6, 1#10G.	1"
60 AMP	2 #4, 1#10G.	1"
70 AMP	2 #4, 1#8G.	1"
80 AMP	2 #3, 1#8G.	1-1/4"
90 AMP	2 #2, 1#8G.	1-1/4"
100 AMP	2 #1, 1#8G.	1-1/4"

- WIRE SIZES ARE BASED ON N.E.C. TABLE 310-16, 60 DEGREE C COLUMN.
- CONDUIT SHALL BE USED AS REQUIRED BY LOCAL CODE.
- PROVIDE 3 CONDUCTOR WIRE WITH GROUND WHERE REQUIRED FOR APPLIANCES. ADJUST CONDUIT SIZE AS REQUIRED BY CODE.

ELECTRICAL SERVICE NOTE	
A.	CONTRACTOR TO BID THE NEW ELECTRICAL SERVICE AS INDICATED.
B.	CONTRACTOR TO PROVIDE A SEPARATE LINE ITEM ON THE BID FOR PERFORMING A 30-DAY METERING OF THE EXISTING INCOMING SERVICE (PANELBOARD "M1-SECTION 1). AFTER 30-DAYS OF METERING THE CONTRACTOR TO PUT TOGETHER A REPORT AND FORWARD IT TO THE ARCHITECT / ENGINEER TO EVALUATE THE EXISTING 600 AMP SERVICE AMPACITY FOR AVAILABLE CAPACITY.

PANEL FEEDER SCHEDULE					
NO.	SERVES	SERVICE SIZE	CONDUCTORS	CONDUIT SIZE	NOTES
1	PULL BOX	1000 AMPS	(2 SETS) 4 # 400 KCMIL 4 # 400 KCMIL	2 EXISTING 3"	1,2
2	DISC. SW.	1000 AMPS	(2 SETS) 4 # 400 KCMIL	(3 EA) 3"	1
3	PNL "M-SECT 1"	600 AMPS	(2 SETS) 4 # 350 KCMIL, 1 # 1G	(2 EA) 3"	1,2
4	PNL "M-SECT 1"	600 AMPS	(2 SETS) 4 # 350 KCMIL, 1 # 1G	2 EXISTING	1,2
5	PNL "C"	400 AMPS	(2 SETS) 4 # 3/0, 1 # 6G	(2 EA) 2-1/2"	1
6	PNL "B1"	60 AMPS	4 # 4, 1 # 10G	1-1/4"	1

- NOTES:
- UTILIZE (2) EXISTING CONDUITS TO BE RE-USED WITH NEW CONDUCTORS INDICATED.
 - WIRE SIZES ARE BASED ON TABLE 310-16, 60 DEGREE COPPER UP TO 100A AND ABOVE 101 AMP 75 DEGREE COPPER.

NOTES BY SYMBOL "#"	
1	CONTRACTOR TO FIELD VERIFY EXACT ROUTING OF THE EXISTING BUILDING SERVICE FEEDER. CONTRACTOR TO COORDINATE WITH THE UTILITY COMPANY AND OWNER 48 HOURS IN ADVANCE TO SHUT OFF THE POWER TO ALLOW INTERCEPTING EXISTING FEEDER WHERE FEASIBLE. DISCONNECT EXISTING FEEDER CONDUCTORS FROM EXISTING UTILITY TRANSFORMER AND EXISTING PANEL "M-SEC. 1" IN ITS ENTIRETY. RE: 2/E4.1 ELECTRICAL RISER DIAGRAM - NEW (BASE BID) FOR ADDITIONAL INFORMATION. FIELD VERIFY EXISTING CONDUIT SIZE - IF SMALLER THAN 2-1/2" NOTIFY ARCHITECT / ENGINEER.
2	CONTRACTOR TO FIELD VERIFY EXACT ROUTING OF THE EXISTING BUILDING SERVICE ENTRANCE GROUNDING CONDUCTOR AND DISCONNECT AND REMOVE. CONTRACTOR TO FIELD VERIFY EXISTING GROUND RODS (IF APPLICABLE) AND POSSIBLE TO RE-USE FOR NEW ELECTRICAL SERVICE. RE: 3/E4.1 BUILDING SERVICE ENTRANCE GROUNDING SYSTEM DETAIL FOR ADDITIONAL INFORMATION.
3	CONTRACTOR TO SAW CUT THE EXISTING PAVING TO INSTALL (1) ONE NEW CONDUIT AS INDICATED AND INSTALL ADJACENT TO THE EXISTING EXISTING CONDUITS.
4	PROVIDE A QUAZITE PULL BOX ADJACENT TO THE NEW SERVICE DISCONNECT SWITCH. COVER TO HAVE THE LABEL "ELECTRICAL" AND GREEN IN COLOR. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. VERIFY LOCATION TO INSTALL AND AVOID CONFLICTS WITH EXISTING CONDENSING UNIT(S) IN THIS AREA.
5	PROVIDE A NEW 1000 AMP 3 POLE NEMA 3R SERVICE RATED DISCONNECT SWITCH. WITH (3) THREE 1000 AMP FUSES. RE: 1/E1.0 SITE - ELECTRICAL PLAN FOR PROPOSED LOCATION. MOUNT ON THE EXTERIOR CHURCH BUILDING.
6	BUILDING SERVICE ENTRANCE GROUNDING. RE: 3/E5.1 BUILDING SERVICE ENTRANCE GROUNDING DIAGRAM FOR ADDITIONAL INFORMATION.
7	RE: 1/E1.0 SITE - ELECTRICAL PLAN FOR PROPOSED ROUTING THE NEW ELECTRICAL SERVICE.

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PERMIT SET

Drawing Title:

ELECTRICAL RISER
DETAILS & SCHEDULES

Project No.
2307

Date:
1/12/2024

Sheet No.

E5.1



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