RQAW | DCCM

ADDENDUM NO. 5

Job Name:	Knox County Emergency Operations
Project Number:	24-700-155-1
Date of Addendum:	**6/24/2025**

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Licensed Architect
State of Indiana Registration No. Click or tap here to enter text.

THIS ADDENDUM FORMS A PART OF THE CONTRACT DOCUMENTS AND IS ISSUED IN ACCORDANCE WITH THE INSTRUCTIONS TO BIDDERS. ACKNOWLEDGE RECEIPT OF THIS ADDENDUM BY SIGNING THE ADDENDUM ACKNOWLEDGEMENT SECTION OF YOUR PROPOSAL.

Drawings:

1. **Revise** Sheet: E700
    a. Replace above listed drawing in its entirety with attached modified drawing.

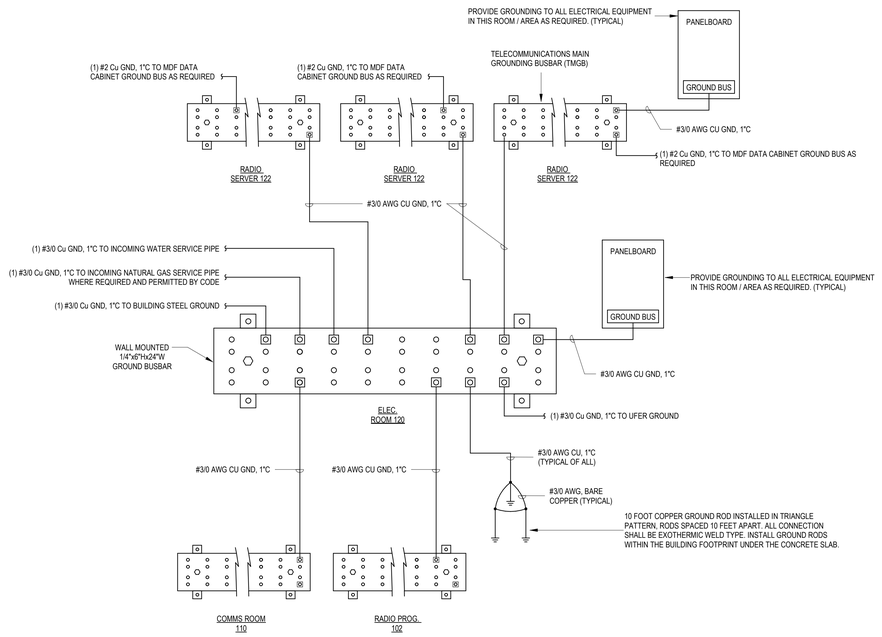
END OF ADDENDUM 5

NOTES:

A. BOND ALL METAL PIPING DESCRIBED IN NFPA 70-250.104, INCLUDING GAS PIPING.

B. GROUNDING CONDUCTORS SHALL BE INSTALLED IN CONDUIT WHERE INSTALLED ABOVE GRADE.

C. CONNECT WATER SERVICE GROUNDING CONDUCTOR TO STREET SIDE OF WATER METER. PROVIDE BONDING JUMPER ACROSS WATER METER AND INSTALL WITH TAG.



2 MAIN ELECTRICAL GROUNDING DETAIL
NO SCALE

VOLTAGE DROP FOR 20A BRANCH CIRCUITS

FEEDER SIZE TO USE	MAXIMUM DISTANCE ALLOWED	
	120V	277V
F20	100 FEET	200 FEET
F30	150 FEET	360 FEET
F40-50	240 FEET	550 FEET
F60	385 FEET	885 FEET

NOTES

1. CONDUCTORS FOR 20 AMP BRANCH CIRCUITS SHALL BE SIZED FOR VOLTAGE DROP. WIRE SIZES ARE NOT INDICATED ON THE DRAWINGS TO COMPENSATE FOR VOLTAGE DROP FOR THESE CIRCUITS. CONTRACTOR SHALL UTILIZE WIRE SIZE SHOWN ABOVE FOR THE DISTANCES LISTED ABOVE.
2. VOLTAGE DROP WIRE SIZES WILL BE STRICTLY ENFORCED. CONTRACTOR SHALL SUBMIT A LIST OF CIRCUITS THA WILL EXCEED THE DISTANCES ALLOWED AND INDICATE WIRE SIZE TO BE USED PRIOR TO ANY WIRE BEING INSTALLED.
3. PROVIDE SEPARATE, INDEPENDENT NEUTRAL CONDUCTORS FOR ALL BRANCH CIRCUITS. DO NOT SHARE NEUTRALS BETWEEN CIRCUITS.

FEEDER SIZING TABLE

DESIGNATION	CONDUCTOR SIZE PER CONDUIT			CONDUIT SIZE AND QUANTITY				
FXXX	PHASE & NEUTRAL	ISOLATED GROUND	BUILDING GROUND	OR 1P, 1N, 1G 2P, 1G	OR 2P, 1N, 1G 3P, 1G	3P, 1N, 1G	3P, 3N, 1G	3P, 1N, 2G
F20	12	12	12	3/4"	3/4"	3/4"	3/4"	3/4"
F30	10	10	10	3/4"	3/4"	3/4"	3/4"	3/4"
F40-F50	8	10	10	3/4"	3/4"	3/4"	1"	3/4"
F60	6	10	10	3/4"	3/4"	1"	1"	1"
F70-F80	4	8	8	3/4"	1"	1-1/4"	1-1/4"	1-1/4"
F90-F100	3	8	8	1"	1"	1-1/4"	1-1/2"	1-1/4"
F110	2	6	6	1"	1-1/4"	1-1/4"	1-1/2"	1-1/4"
F125	1	6	6	1-1/4"	1-1/4"	1-1/2"	2"	1-1/2"
F150	1/0	6	6	1-1/4"	1-1/2"	1-1/2"	2"	2"
F175	2/0	6	6	1-1/4"	1-1/2"	2"	2-1/2"	2"
F200	3/0	6	6	1-1/4"	2"	2"	2-1/2"	2"
F225	4/0	4	4	1-1/2"	2"	2-1/2"	2-1/2"	2-1/2"
F250	250	4	4	2"	2"	2-1/2"	3"	2-1/2"
F300	350	4	4	2"	2-1/2"	3"	3-1/2"	3"
F301	350	2	2	2-1/2"	3"	3"	4"	3"
F350	500	3	3	2-1/2"	3"	3"	4"	3"
F400	3/0	3	3		(2) 2"	(2) 2-1/2"	(2) 3"	(2) 2-1/2"
F401	3/0	1/0	1/0		(2) 2-1/2"	(2) 3"	(2) 3-1/2"	(2) 3"
F450	4/0	2	2		(2) 2"	(2) 2-1/2"	(2) 3"	(2) 2-1/2"
F500	250	2	2		(2) 2"	(2) 2-1/2"	(2) 3"	(2) 2-1/2"
F600	350	1	1		(2) 2-1/2"	(2) 3"	(2) 3-1/2"	(2) 3"
F700	500	1/0	1/0		(2) 3"	(2) 3"	(2) 4"	(2) 3-1/2"
F800	350	1/0	1/0		(3) 2-1/2"	(3) 3"	(3) 3-1/2"	(3) 3"
F900	350	2/0	2/0		(3) 2-1/2"	(3) 3"	(3) 3-1/2"	(3) 3"
F1000	500	2/0	2/0		(3) 3"	(3) 3"	(3) 4"	(3) 3-1/2"
F1200	350	3/0	3/0		(4) 2-1/2"	(4) 3"	(4) 3-1/2"	(4) 3"
F1600	500	4/0	4/0		(5) 3"	(5) 3"	(5) 4"	(5) 3-1/2"
F2000	500	250	250		(6) 3"	(6) 3-1/2"	(6) 4"	(6) 3-1/2"
F2500	500	350	350		(7) 4"	(7) 4"	(7) 4"	(7) 4"
F3000	500	500	500		(8) 4"	(8) 4"	(8) 4"	(8) 4"

NOTES:

1. ALL CONDUIT PENETRATIONS THRU THE FLOOR SLAB SHALL BE MADE WITH CAUTION. CONTRACTOR SHALL COORDINATE ALL HOLE LOCATIONS WITH STRUCTURAL ENGINEER PRIOR TO CUTTING ANY NEW HOLES. NEW HOLES SHALL BE ADJUSTED AS REQUIRED TO MISS REBAR AS DETERMINED BY THE STRUCTURAL ENGINEER.
2. VOLTAGE DROP IN NOT SHOWN ON THE DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL BRANCH CIRCUIT AND FEEDER SIZES TO COMPLY WITH STATE AND LOCAL VOLTAGE DROP REQUIREMENTS.
   A. VOLTAGE DROP ON ALL BRANCH CIRCUITS SHALL NOT EXCEED 3%.
   B. VOLTAGE DROP ON ALL FEEDERS SHALL NOT EXCEED 2%.

GENERAL NOTES:

A. REFER TO SHEET E001 FOR ELECTRICAL SYMBOLS AND ADDITIONAL GENERAL NOTES.

B. REFER TO PANEL SCHEDULES ON E600-SERIES DRAWINGS FOR BREAKER QUANTITIES, SPARES, AND SPACES.

C. ALL EQUIPMENT SHALL BE RATED TO WITHSTAND THE AVAILABLE FAULT CURRENT FROM THE UTILITY. EC SHALL COORDINATE THE AIC RATINGS OF ALL EQUIPMENT AND VERIFY THAT IT IS CORRECT PRIOR TO PURCHASE / INSTALLATION OF EQUIPMENT. SERIES RATINGS SHALL NOT BE ALLOWED FOR EQUIPMENT SERVING MOTOR LOADS, AND NOT ALLOWE EXCEPT AS PERMITTED IN THE PROJECT MANUAL. (NEC ART. 240.86(C))

D. CONDUIT SIZES ARE MINIMUM GUIDELINES, AND MAY NOT COVER ALL INSTALLATIONS. IT IS ACCEPTABLE TO ADJUST CONDUIT SIZE BASED ON RACEWAY TYPE, PER NEC REQUIREMENTS.

E. EACH PARALLEL RUN SHALL BE ELECTRICALLY SIMILAR, AND CONTAIN THE SAME NUMBER OF CONDUCTORS / CABLES. COMPLY WITH ALL NEC REQUIREMENTS FOR PARALLEL INSTALLATIONS. (NEC ART. 310.10(H))

F. SEPARATELY DERIVED SYSTEMS SHALL HAVE A SUPPLY SIDE BONDING JUMPER INSTALLED PER NEC ART. 250.102(C), WHERE APPLICABLE. (NEC ART. 250.30(A)(2))

G. EMERGENCY SYSTEMS SHALL BE ISOLATED AND MARKED AS REQUIRED BY CODE. (NEC ART. 700.7(A) & NEC ART. 700.10)

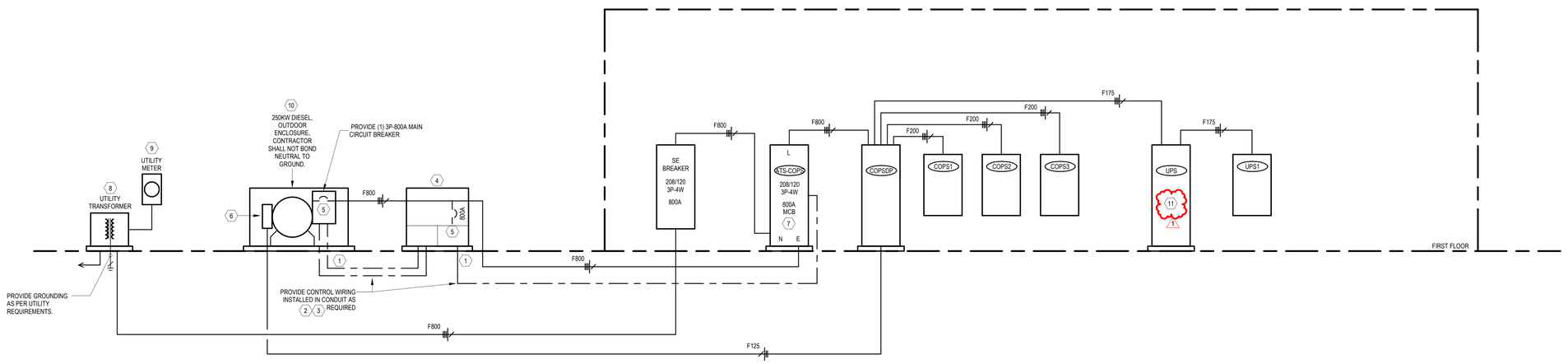
H. WHERE GROUND FAULT PROTECTION AND/OR ARC ENERGY REDUCTION IS REQUIRED, FUNCTIONAL PERFORMANCE VERIFICATION TESTING SHALL BE PERFORMED AFTER THE EQUIPMENT IS INSTALLED, PRIOR TO BEING ENERGIZED BY THE SOURCE. UTILIZING A "PUSH TO TRIP" FEATURE IS NOT ALLOWED. TESTING SHALL BE PERFORMED UTILIZING A PRIMARY CURRENT INJECTION TEST SET AND PER THE MANUFACTURER'S INSTRUCTIONS. THE TESTING RESULTS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD AND BE MADE AVAILABLE UPON REQUEST TO THE AHJ. IT IS THE RESPONSIBILITY OF THE EC TO DETERMINE IF THIRD PARTY TESTING IS REQUIRED BY THE AHJ. (NEC ART. 230.95, ART. 240.67, & ART. 240.87)

GENERAL NOTES - COPS:

A. ELECTRICAL POWER SYSTEM SHALL BE PROVIDED AS A CRITICAL OPERATIONS POWER SYSTEM AND PROVIDED AND INSTALLED AS PER NEC 708 REQUIREMENTS.

PLAN NOTES

#	NOTE
1	PROVIDE WATER STOP SEALANT FOR ALL CONDUITS, INCLUDING SPARES, AT THE EXIT POINT FROM THE GENERATOR AND DOCKING STATION TO PREVENT WATER FROM ENTERING THE CONDUITS.
2	PROVIDE GENERATOR START AND CONTROL WIRING FROM EACH TRANSFER SWITCH TO GENERATOR AND DOCKING STATION. ROUTE ALL WIRING IN CONDUIT. QUANTITY AND SIZE OF WIRING AND CONDUIT AS RECOMMENDED BY MANUFACTURER.
3	PROVIDE WIRING FROM GENERATOR AND DOCKING STATION / CONNECTION CABINET TO ANNUNICATOR LOCATION. ROUTE ALL WIRING IN CONDUIT. QUANTITY AND SIZE OF WIRING AND CONDUIT AS RECOMMENDED BY MANUFACTURER.
4	PROVIDE GENERATOR DOCKING STATION / CONNECTION CABINET ADJACENT TO GENERATOR FOR CONNECTION MEANS OF PORTABLE GENERATOR. DOCKING STATION SHALL INCLUDE INTEGRAL BREAKERS AS INDICATED, AND ACCESSORY RECEPTACLES FOR BLOCK HEATER AND BATTERY CHARGER. COORDINATE EXACT LOCATION WITH GENERATOR EQUIPMENT. MAINTAIN ALL REQUIRED CLEARANCES AND PROVIDE ACCORDINGLY.
5	PROVIDE INTEGRAL BREAKER WITH KIRK KEY INTERLOCK BETWEEN GENERATOR BREAKER AND BREAKER FOR PORTABLE GENERATOR CONNECTION.
6	CONNECT COMPLETE GENERATOR LOAD CENTER PANEL FOR GENERATOR ACCESSORIES. COORDINATE EXACT LOCATION WITH MANUFACTURER PRIOR TO INSTALLATION. COORDINATE EXACT SIZE WITH GENERATOR MANUFACTURER AND PROVIDE FEEDER BREAKER AND FEEDER SIZE AS REQUIRED.
7	TRANSFER SWITCH SHALL BE CLOSED TRANSITION WITH BYPASS ISOLATION AND SOLID NEUTRALS.
8	UTILITY TRANSFORMER, REFER TO ELECTRICAL SITE PLAN FOR ADDITIONAL INFORMATION.
9	PROVIDE METER AND CT CABINET AS REQUIRED BY UTILITY.
10	GENERATOR SHALL BE PROVIDED WITH AN UPSIZED 300KW ALTERNATOR.
11	UPS PROVIDED BY OWNER'S VENDOR (EDGE IT), INSTALLED BY EC.



1 ELECTRICAL RISER DIAGRAM
NO SCALE

RQAW
DCCM

BID SET

KNOX COUNTY BOARD OF COMMISSIONERS

Knox Co. Emergency Op.

2830 E. ARC AVE.
VINCENNES, IN 47591

#	Revision	Date
1	Addendum #05	06.24.2025

Project #: 24-700-155-1
Designed By: JAF
Drawn By: JAF
Checked By: DB
Date: 05/16/2025

DUSTIN E. BARTH
REGISTERED
No. 12200401
STATE OF
INDIANA
PROFESSIONAL ENGINEER
Dustin Barth

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ELECTRICAL RISER DIAGRAM

E700

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