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HIGHWAY STANDARDS

000001-07 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

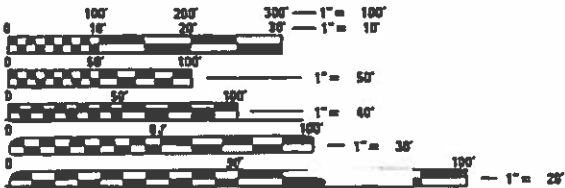
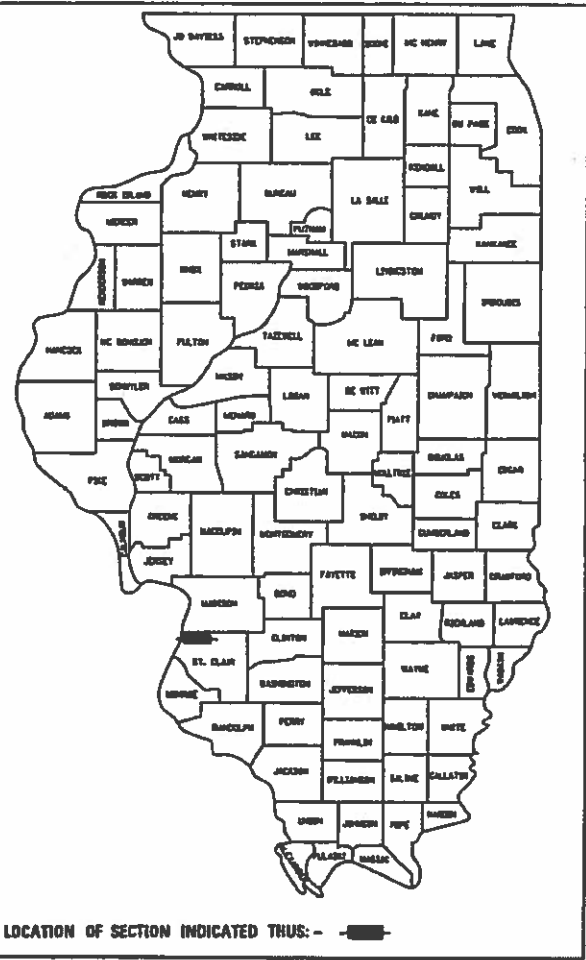
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED
HIGHWAY PLANS

FAI ROUTE 55/70 (I-55/70)
SECTION 82-2-1ELE-1
BOWMAN PUMP STATION
CONTROLS REHABILITATION
ST. CLAIR COUNTY

FAI ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-2-1ELE-1	ST. CLAIR	6	1
ILLINOIS CONTRACT NO. 76L85				

D-98-023-19

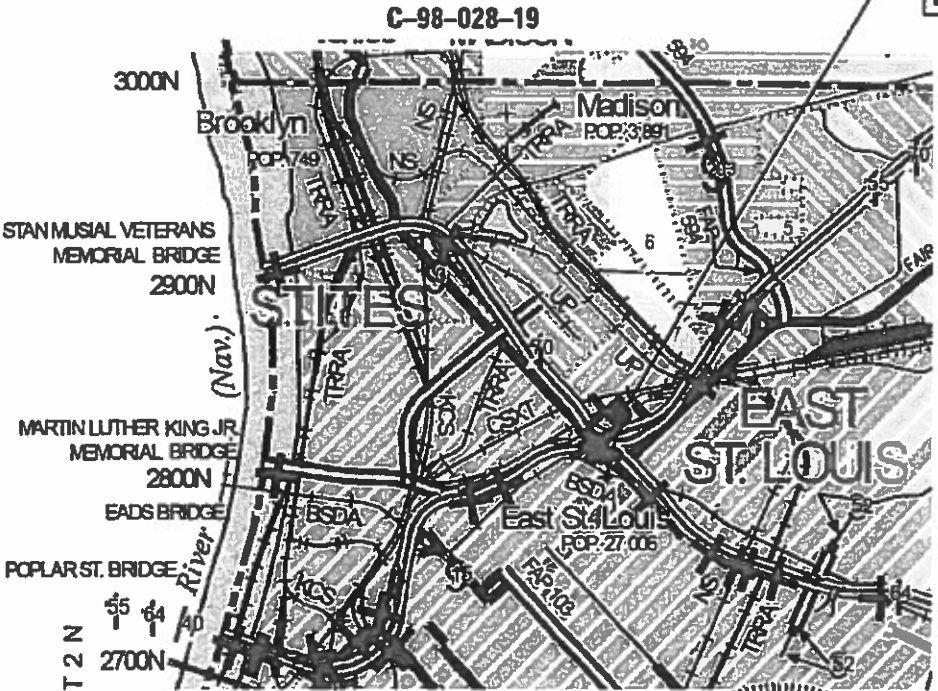


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD
ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT
CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS
ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER: HERVE GELIN 618-346-3179
PROJECT MANAGER: PHILLIP SAWYER 618-346-3275

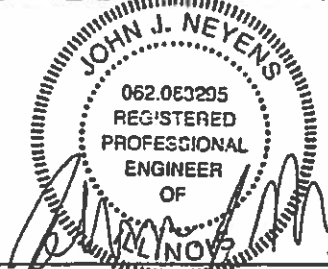
CONTRACT NO. 76L85



GROSS LENGTH = NA
NET LENGTH = NA

KLINGNER
& ASSOCIATES, P.C.
Engineers • Architects • Surveyors

Quincy, Illinois
618 N. 24th Street
Quincy, IL 62305
217.223.3670
Harrisburg, MO 64501
Burlington, IA 51003
Pella, IA 50224
STATE OF ILLINOIS DESIGN FIRM # 1842738
www.klingner.com



JOHN J. NEVENS
REGISTERED PROFESSIONAL ENGINEER
STATE OF ILLINOIS NO. 062-063295
LICENSE EXPIRES NOVEMBER 30, 2019

DATE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
SUBMITTED March 11, 2019
Kathleen Roberts REGIONAL ENGINEER
May 10, 2019 cc E. J. Etkin
ENGINEER OF DESIGN AND ENVIRONMENT
May 10, 2019 David L. Chisholm
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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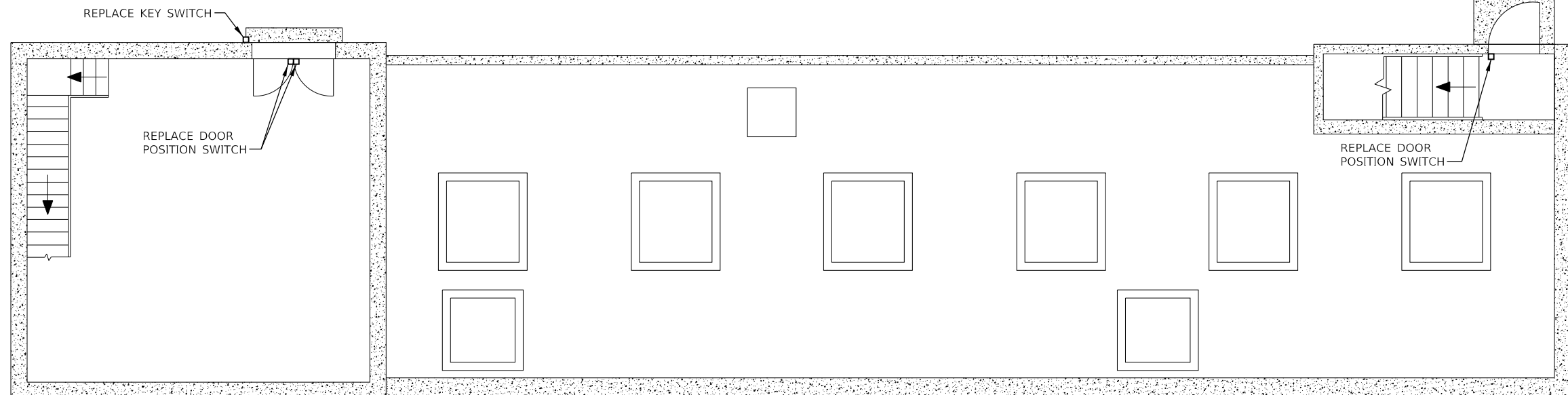
ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

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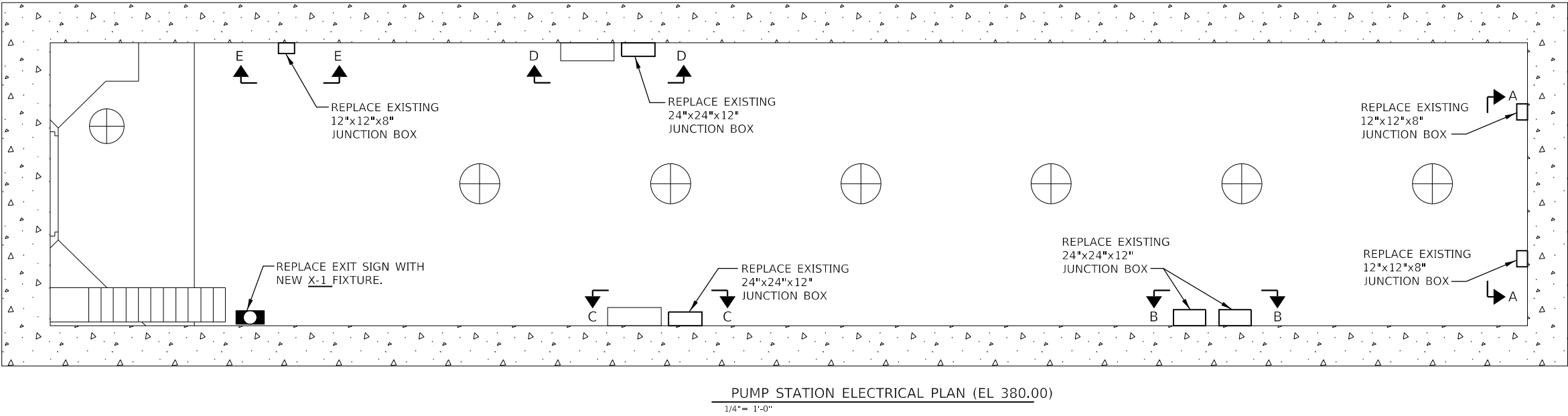
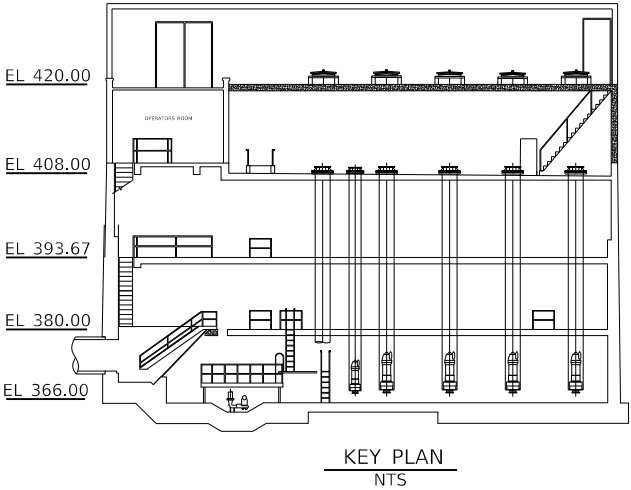
1. APPLICABLE STANDARDS: NFPA-70, NFPA-101, STATE BUILDING CODES, AND THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) OF 1971 AND ALL AMENDMENTS THERETO; EQUIPMENT, DEVICES, APPARATUS, SYSTEMS, AND INSTALLATIONS SHALL BE ENTIRELY SUITABLE AND SAFE FOR EACH INTENDED APPLICATION AND BE IN FULL COMPLIANCE WITH APPLICABLE STANDARDS, REQUIREMENTS, RULES, REGULATIONS, CODES, STATUTES, ORDINANCES, ETC. NOTHING CONTAINED IN THESE PLANS AND SPECIFICATIONS SHALL BE CONSTRUED TO CONFLICT WITH THESE LAWS, CODES, AND ORDINANCES.
2. DRAWINGS ARE SCHEMATIC AND SHOW APPROXIMATE LOCATIONS OF ELECTRICAL EQUIPMENT. EXACT LOCATIONS SHALL BE COORDINATED BY THE CONTRACTOR AND VERIFIED IN THE FIELD PRIOR TO ROUGH-IN.
3. INSTALLATIONS WHICH INCLUDE ELECTRICAL FIXTURES, DEVICES, CONDUIT, SWITCHES, PANELS, HANGERS, WIRE, CABLE, STANDARDS, ETC., MUST BE ENTIRELY SUITABLE FOR TEMPERATURES, HUMIDITY, DAMP AREAS, VOLTAGE, FREQUENCY, AND ALL INSTALLATION CONDITIONS ENCOUNTERED.
4. INSTALLATION MUST BE ENTIRELY SAFE IN EVERY RESPECT, AND MUST NOT CREATE ANY CONDITIONS OF ANY KIND WHICH WILL BE HARMFUL TO ANY OCCUPANT OF THE BUILDING. IF CONTRACTOR BELIEVES THAT INSTALLATION WILL NOT BE SAFE FOR ALL PEOPLE, HE/SHE SHALL SO REPORT IN WRITING TO ENGINEER BEFORE ANY EQUIPMENT IS PURCHASED OR WORK IS INSTALLED, GIVING EXACT RECOMMENDATIONS, AND REASONS FOR THEM.
5. GROUNDING: ALL GROUNDING SHALL BE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC).
6. INSTALLATION OF ELECTRICAL DEVICES SHALL BE COORDINATED WITH OTHER TRADES AS NECESSARY TO PREVENT ANY CONFLICTS DURING CONSTRUCTION.
7. LOW VOLTAGE CONDUIT AND JUNCTION BOXES SHALL BE INSTALLED BY THE ELECTRICAL CONTRACTOR.
8. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS, ACCESSORIES, TOOLS, EQUIPMENT, TRANSPORTATION, LABOR, SERVICES AND OPERATIONS NECESSARY FOR A COMPLETE ELECTRICAL AND CONTROLS MODIFICATION SYSTEM.
9. ELECTRICAL CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND ARRANGE FOR ALL INSPECTIONS REQUIRED BY STATE OR LOCAL AUTHORITIES.
10. MATERIALS MUST BE NEW, IN FIRST CLASS CONDITION.
11. CONDUIT SHALL BE SEPARATELY HUNG AND ANCHORED, FREE TO EXPAND AND CONTRACT QUIETLY, WITHOUT IMPOSING STRAINS ON STRUCTURE, DEVICES, AND EQUIPMENT. CONDUIT SHALL BE RUN PARALLEL OR PERPENDICULAR TO BUILDING LINES.

1 PROVIDE NEW CAT-6 CABLE FROM REMOTE OPERATOR INTERFACE TO MAIN CONTROL PANEL. UTILIZE EXISTING CONTROL CABLE ROUTING INCLUDING EXISTING CONDUITS.

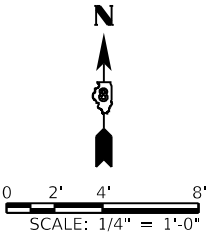


GENERAL NOTES:

1.
- CONTRACTOR TO FIELD VERIFY QUANTITY AND ARRANGEMENT OF DIN RAIL AND TERMINAL STRIPS WITHIN EXISTING JUNCTION BOXES.
- REPLACEMENT JUNCTION BOXES SHALL CONTAIN DIN RAILS AND TERMINAL STRIPS MATCHING ORIGINAL CONFIGURATION.
2.
- WIRE WITHIN EXISTING JUNCTION BOXES SHALL BE CUT BACK 6 INCHES OR UNTIL COPPER SHOW NO SIGNS OF DETERIORATION BEFORE RE-TERMINATING WITHIN REPLACEMENT JUNCTION BOX.
3.
- REPLACE ALL WIRE LABELS WITHIN JUNCTION BOX.
4.
- EXCESS CABLE SHALL BE NEATLY COILED WITHIN JUNCTION BOX.



LIGHTING FIXTURE SCHEDULE										
TAG	TYPE	MANUFACTURER	MODEL NUMBER	VOLTS	LUMENS	WATTS	LAMP	DISTRIBUTION	COLOR TEMP.	COMMENTS
X-1	WALL MOUNTED EXIT SIGN	COOPER	EX LITE ZE	120	N/A	6	LED	N/A	N/A	CLASS 1 DIVISION 2 RATED FIXTURE 90 MINUTE BACK-UP BATTERY
		EMERGI-LITE	GG-SVXNHZ-R-D			2	LED			
		LITHONIA	LZ-S-A-R-ELN-SD			4	LED			



MODEL Default
FILE: \\KLINGNER-001\liles\110023\Work Order 18 - Bowman Pump Station Electrical\Plans\076L85-Sht E10-L-BOWMAN ELECTRICAL DRAWINGS.dgn

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	DRAWN - BGJ	REVISED -
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PLOT DATE = 1/25/2019	DATE -	REVISED -

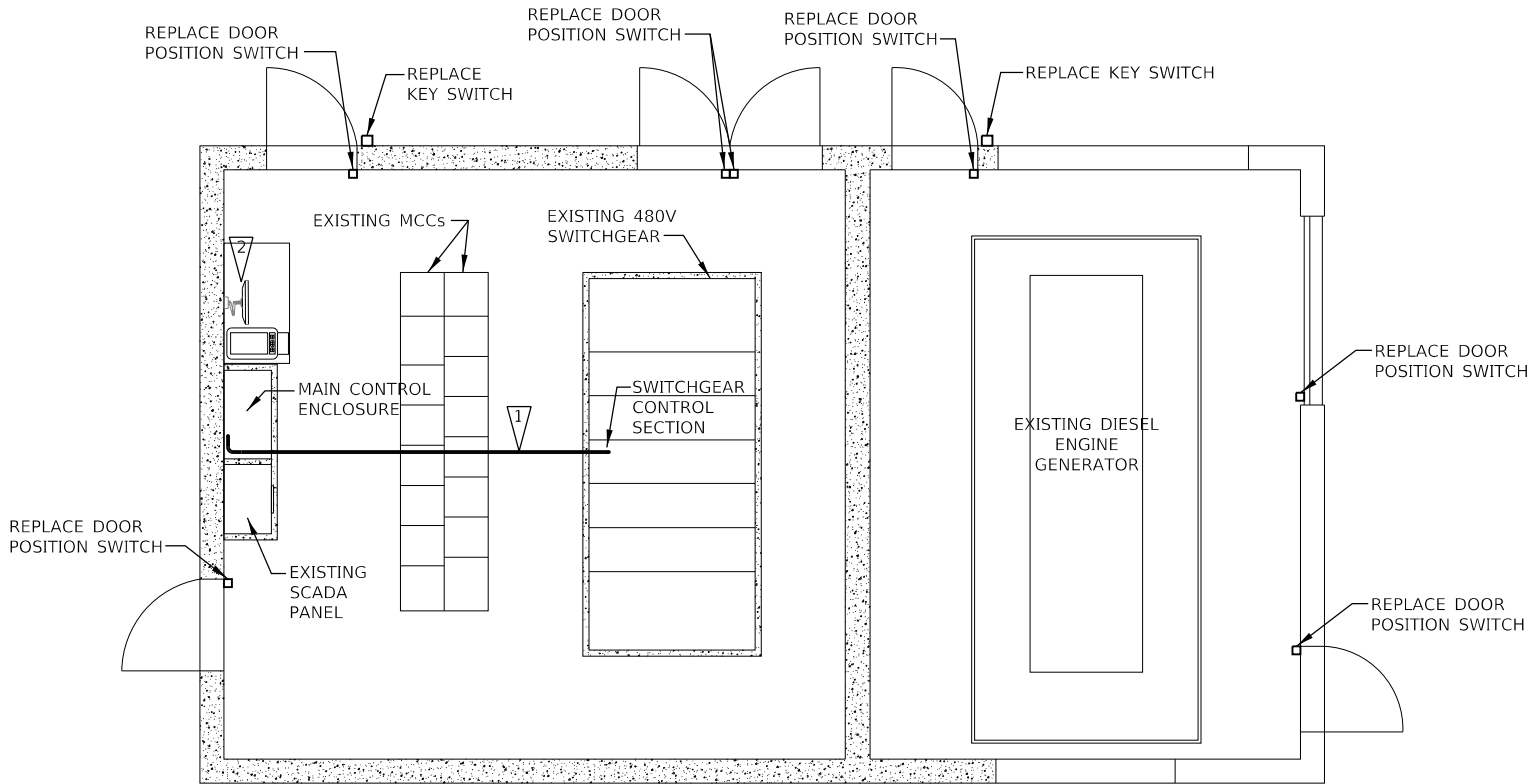
F.A.J RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-2-1ELE-1	ST. CLAIR	6	4
CONTRACT NO. 76L85				
ILLINOIS		FED. AID PROJECT		

GENERAL NOTES:

1. SEE PROJECT MANUAL FOR CONTROL SYSTEM MODIFICATION INFORMATION.

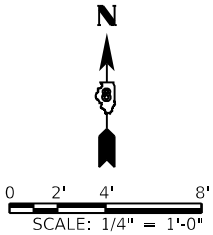
ELECTRICAL KEYED NOTES:
(APPLICABLE TO THIS SHEET ONLY)

- 1 PROVIDE (2) NEW 3/4" EMT CONDUITS BETWEEN SWITCHGEAR CONTROL SECTION AND MAIN CONTROL ENCLOSURE. PROVIDE NEW CAT-6 CABLE IN ONE CONDUIT AND A PULL STRING IN OTHER CONDUIT.
- 2 SCADA COMPUTER SYSTEM TO BE REPLACED



ELECTRICAL ROOM ELECTRICAL PLAN

1/4"= 1'-0"



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KLINGNER & ASSOCIATES, P.C.
Engineers • Architects • Surveyors
616 N. 24th St., Quincy, Illinois 62301 217.223.3670
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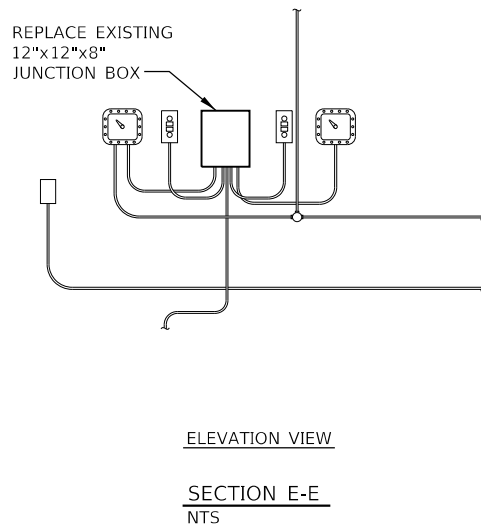
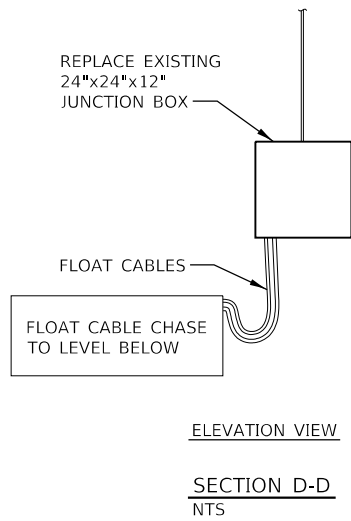
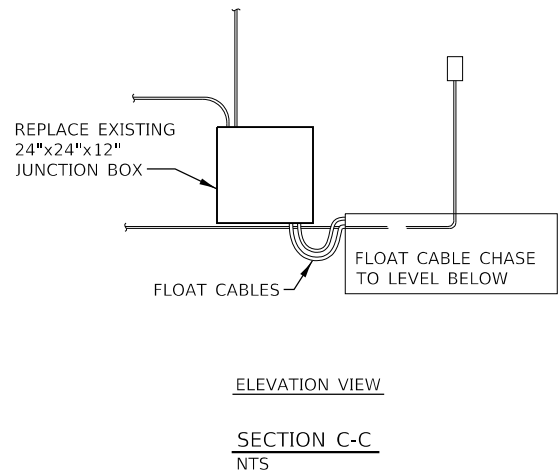
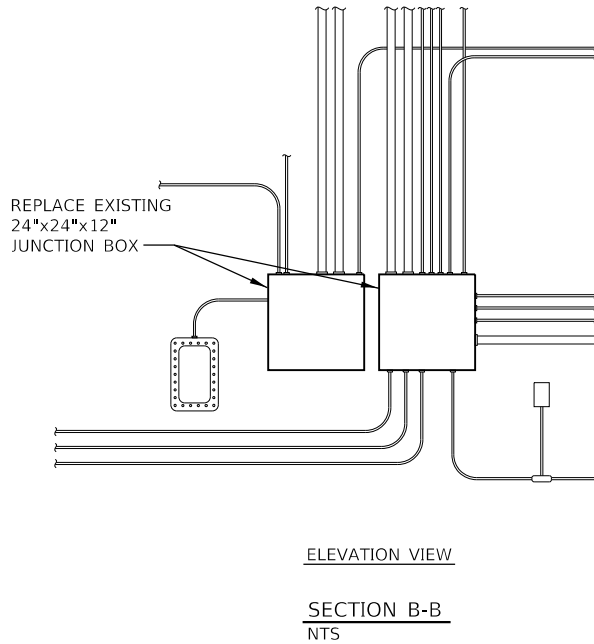
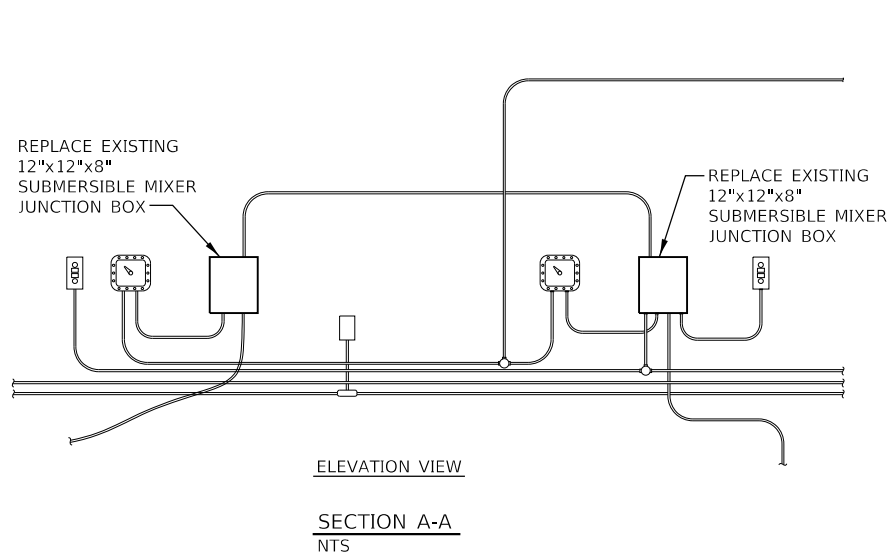
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PLOT DATE = 1/25/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ELECTRICAL PLAN

SCALE: 1/4"=1'-0" SHEET OF SHEETS STA. TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-2-1ELE-1	ST. CLAIR	6	5
CONTRACT NO. 76L85				
ILLINOIS FED. AID PROJECT				



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& ASSOCIATES, P.C.
Engineers • Architects • Surveyors
616 N. 24th St., Quincy, Illinois 62301 217.223.3670
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DRAWN - BGJ	REVISED -	
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PLOT DATE = 1/25/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SECTIONS & DETAILS

SCALE: N.T.S. SHEET OF SHEETS STA. TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-2-1ELE-1	ST. CLAIR	6	6
CONTRACT NO. 76L85				
		ILLINOIS	FED. AID PROJECT	