

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8)PS-1	MADISON	12	1
		ILLINOIS	CONTRACT NO. 76L47	

INDEX OF SHEETS

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HIGHWAY STANDARDS

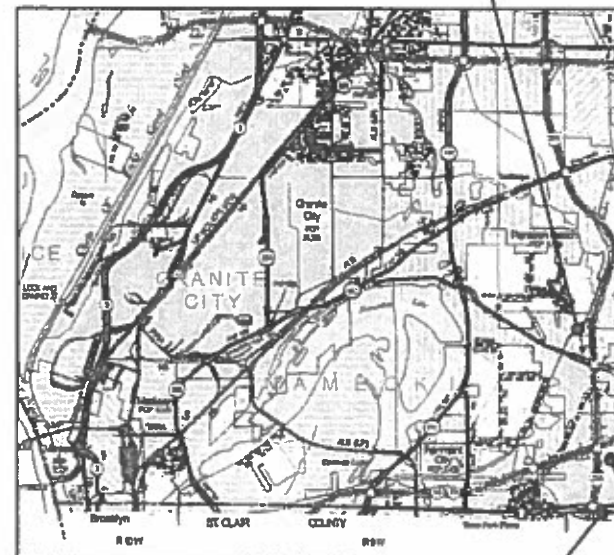
000001-07 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

PROPOSED
HIGHWAY PLANS

FAI ROUTE 255 (I-255)
SECTION 60-(7,8)PS-1
MOTOR STARTER REPLACEMENTS
MADISON COUNTY

C-98-236-18

GREY'S FARM
PUMP STATION

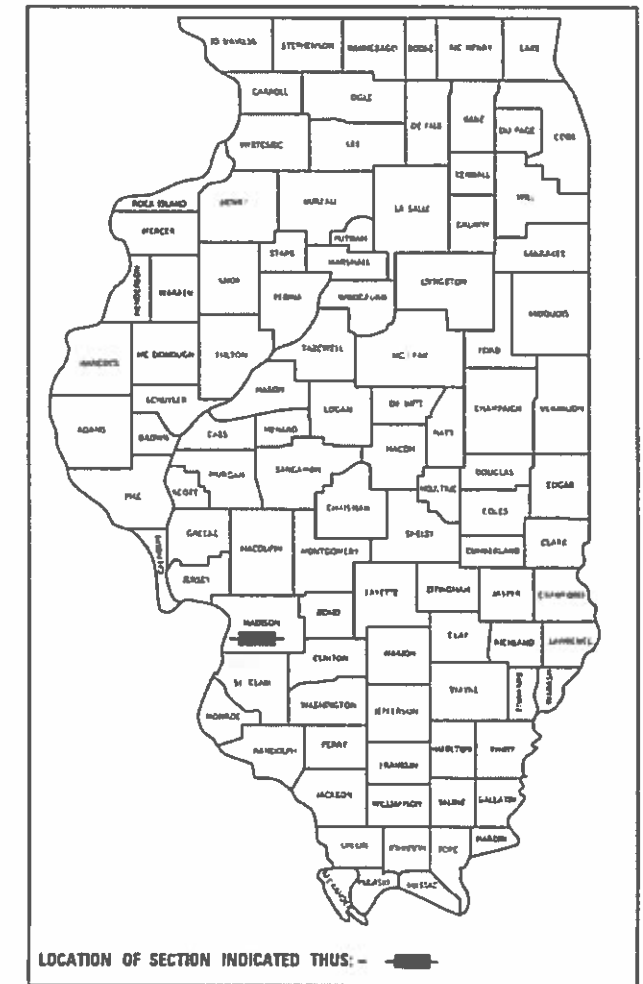


COLLINSVILLE #1
PUMP STATION

COLLINSVILLE #2
PUMP STATION

MADISON COUNTY

D-98-060-18



PLANS PREPARED BY:

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

Quincy, Illinois www.klingner.com
618 North 24th Street Galasburg, IL, Burlington, IA
217 223-3670 Peoa, IA Hannibal, MO Columbia, MO
STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

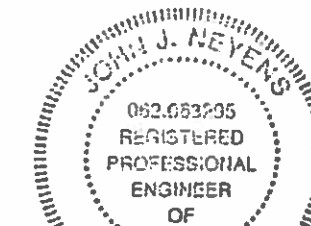


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER HERVE GELIN 618-346-3175
PROJECT MANAGER PHILLIP SAWYER 618-346-3275

CONTRACT NO. 76L47



John J. Neyens
JOHN J. NEYENS
REGISTERED PROFESSIONAL ENGINEER
STATE OF ILLINOIS NO. 062-063295
LICENSE EXPIRES NOVEMBER 30, 2021
DATE 12/4/19

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED *Dec 6 2019*
Kath. Roberts
REGIONAL ENGINEER

Jan 31 2020
EA. Etk
ENGINEER OF DESIGN AND ENVIRONMENT

Jan 31 2020
James J. Orr
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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GENERAL NOTES

1. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURES HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD, AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING MATERIALS.
2. THE CONTRACTOR SHALL SECURE ANY LOCAL, STATE, COUNTY PERMITS NEEDED FOR THIS PROJECT.
3. THE CONTRACTOR SHALL PERFORM ALL CONSTRUCTION FOR THE PROJECT IN A MANNER AND SEQUENCE THAT ARE BASED ON ACCEPTED INDUSTRY STANDARDS THAT RECOGNIZE THE INTERACTION OF THE COMPONENTS THAT COMPRISE THE STRUCTURE, WITHOUT CAUSING DISTRESS, UNANTICIPATED MOVEMENTS OR IRREGULAR LOAD PATHS AS A RESULT OF THE CONSTRUCTION MEANS AND METHODS EMPLOYED.
4. CONSTRUCTION LOADS SHALL NOT EXCEED DESIGN LIVE LOAD. THE CONTRACTOR IS RESPONSIBLE FOR ALL DESIGN REQUIRED TO SUPPORT CONSTRUCTION EQUIPMENT USED IN CONSTRUCTING THIS PROJECT. SHORING AND RESHORING IS THE RESPONSIBILITY OF THE CONTRACTOR.
5. UTILITIES - LOCATIONS / INFORMATION ON PLANS
ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE TO BE GIVEN TO UTILITIES BEFORE DIGGING. FIELD MARKING OF FACILITIES MAY BE OBTAINED BY CONTACTING J.U.L.I.E. OR FOR NON-MEMBERS, THE UTILITY COMPANY DIRECTLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA ARE AS FOLLOWS:

 - * Ameren Illinois (GAS & ELECTRIC)
 - * AT&T Illinois (COMMUNICATIONS)
 - * CenturyLink, Inc. (COMMUNICATIONS)
 - * City of East St. Louis (LIGHTING)
 - * ILLINOIS AMERICAN WATER CO. (WATER)

MEMBERS OF J.U.L.I.E. CALL TOLL FREE (800) 892-0123 OR 811 AND ARE INDICATED BY *. NON-J.U.L.I.E. MEMBERS MUST BE NOTIFIED INDIVIDUALLY
6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENFORCE ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION.
7. ALL CONTRACTORS ARE REQUIRED TO EXAMINE THE DRAWINGS AND SPECIAL PROVISIONS CAREFULLY, VISIT THE SITE AND FULLY INFORM THEMSELVES AS TO ALL EXISTING CONDITIONS AND LIMITATIONS, PRIOR TO AGREEING TO PERFORM THE WORK. FAILURE TO VISIT THE SITE AND FAMILIARIZE THEMSELVES WITH THE EXISTING CONDITIONS AND LIMITATIONS WILL IN NO WAY RELIEVE THE CONTRACTOR FROM FURNISHING ANY MATERIALS OR PERFORMING ANY WORK IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS WITHOUT ADDITIONAL COST TO THE OWNER.
8. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE EXISTING PUMP STATION BUILDING.
9. DRAWINGS ARE NOT TO SCALE.
10. THE DEPARTMENT RESERVES THE RIGHT TO NOTIFY THE CONTRACTOR TO CHANGE THE CONSTRUCTION SCHEDULE IF NEEDED TO ENSURE PROPER DEWATERING NEEDS FOR THE DEPARTMENT.
11. THE DEPARTMENT STRONGLY ENCOURAGES THE PRIME CONTRACTOR AND THEIR APPROVED SUB-CONTRACTORS TO HIRE MINORITY, WOMEN AND DISADVANTAGED INDIVIDUALS FROM ITS FEDERALLY FUNDED HIGHWAY CONSTRUCTION CAREERS TRAINING PROGRAM (HCCTP) TO HELP MEET WORKFORCE AND TRAINEE GOALS. THIS PROGRAM IS TRAINING MINORITIES, WOMEN AND DISADVANTAGED INDIVIDUALS IN HIGHWAY CONSTRUCTION RELATED SKILLS, E.G., MATH FOR THE TRADES, JOB READINESS, TECHNICAL SKILLS COURSEWORK (CARPENTRY, CONCRETE FLATWORK, BLUEPRINT READING, SITE PLANS, SITE WORK, TOOLS USE, ETC.) AND OSHA 10 HOUR CERTIFICATION TO PREPARE THEM FOR A CAREER IN THE HIGHWAY CONSTRUCTION TRADES, GRADUATES ARE WELL TRAINED AND READY TO BECOME PRODUCTIVE ENTRY LEVEL CONSTRUCTION WORKERS. CONTACT THE DISTRICT 8 EEO OFFICE AT 618-346-3360 AND/OR THE HCTP COORDINATOR AT 618-874-6528 TO LEARN MORE ABOUT THE PROGRAM AND FOR ASSISTANCE IN MEETING WORKFORCE AND TRAINEE GOALS.

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

GENERAL NOTES

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8)PS-1	MADISON	12	2
CONTRACT NO. 76L47				
ILLINOIS FED. AID PROJECT				

ILLINOIS DEPARTMENT OF TRANSPORTATION
SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	100% STATE URBAN CONSTRUCTION TYPE CODE		
				MADISON		
67100100	MOBILIZATION	L SUM	1	1		
X0783300	PUMP STATION ELECTRICAL WORK	L SUM	1	1		

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ELECTRICAL SYMBOLS

	LOW-VOLTAGE CIRCUIT BREAKER. RATING AND NUMBER OF POLES AS SHOWN
	FUSE: SIZE AND NUMBER OF FUSES AS NOTED
	FUSIBLE SWITCH: CURRENT RATING, FUSE SIZE, AND QUANTITY AS INDICATED
	NON-FUSED SWITCH: CURRENT RATING, AND NUMBER OF POLES INDICATED
	DISCONNECT OR DRAWOUT CONNECTION
	MOTOR STARTER AND SEPARATELY MOUNTED COMBINATION MOTOR STARTER MOTOR CONTROLLER AND SEPARATELY MOUNTED MOTOR CONTROLLER WITH SHORT CIRCUIT PROTECTION AND DISCONNECT MOTOR STARTER AND CONTROLLER SUBSCRIPTS: A- MOTOR STARTER NEMA SIZE B-STARTER TYPE FVNR- FULL VOLTAGE NON-REVERSING FVR- FULL VOLTAGE REVERSING 2S- TWO SPEED RVAT- REDUCED VOLTAGE AUTO TRANSFORMER CD- CONTROL DIAGRAM D- CONTROLLER TYPE VFD- VARIABLE FREQUENCY DRIVE SS- SOLID STATE SOFT STARTER
	NON-FUSED DISCONNECT OR SAFETY SWITCH. SIZE AND NUMBER OF POLES AS NOTED
	FUSED DISCONNECT OR SAFETY SWITCH. X INDICATES SIZE, Y INDICATES FUSE SIZE, AND NUMBER OF POLES AS NOTED
	SEPARATELY MOUNTED CIRCUIT BREAKER
	MOTOR WITH DESIGN HORSEPOWER
	GENERATOR
	TRANSFORMER Δ 3-PHASE, 3 WIRE DELTA CONNECTION Y 3-PHASE, 4 WIRE WYE CONNECTION
	VOLTAGE TRANSFORMER (VT OR PT)
	CURRENT TRANSFORMER
	GROUND
	TRANSIENT VOLTAGE SURGE SUPPRESSOR
	SELECTOR SWITCH
	PUSH BUTTON
	INSTRUMENTATION/CONTROL DEVICE
	CONTROL PANEL
	JUNCTION BOX
	THERMOSTAT
	PANELBOARD (250V-600V)
	PANELBOARD (LESS THAN 250V)

ELECTRICAL SYMBOLS

	LIGHT SWITCH
	LIGHT SWITCH, X WAY
	FLOOR BOX WITH DUPLEX RECEPTACLE
	FLOOR BOX FOR DATA/COMMUNICATION
	WALL BOX FOR DATA/COMMUNICATION
	DUPLEX RECEPTACLE OUTLET
	DUPLEX RECEPTACLE OUTLET WITH GROUND FAULT INTERRUPTER
	WEATHERPROOF RECEPTACLE OUTLET WITH GFCI PROTECTION
	QUAD RECEPTACLE OUTLET
	CIRCUITING NOTATION: X DENOTES PANEL AND ## DENOTES CIRCUIT NUMBER
	DENOTES CIRCUITING FOR STANDARD ELECTRICAL DEVICES
	OVERHEAD ELECTRIC
	UNDERGROUND ELECTRIC

CONTROL SYMBOLS

	ELECTRICAL CONNECTION
	NO ELECTRICAL CONNECTION
	NORMALLY OPEN CONTACT
	NORMALLY CLOSED CONTACT
	NORMALLY OPEN TIME DELAY RELAY CONTACT. CLOSES UPON TIME DELAY AFTER ACTIVATING COIL
	NORMALLY CLOSED TIME DELAY RELAY CONTACT. OPENS UPON TIME DELAY AFTER ACTIVATING COIL
	NORMALLY OPEN TIME DELAY RELAY CONTACT. OPENS UPON TIME DELAY AFTER DE-ACTIVATING COIL
	NORMALLY CLOSED TIME DELAY RELAY CONTACT. CLOSES UPON TIME DELAY AFTER DE-ACTIVATING COIL
	NORMALLY OPEN TEMPERATURE SWITCH: CLOSES ON RISING TEMPERATURE
	NORMALLY CLOSED TEMPERATURE SWITCH: OPENS ON RISING TEMPERATURE
	NORMALLY OPEN FLOW SWITCH: CLOSES ON INCREASING FLOW
	NORMALLY CLOSED FLOW SWITCH: OPENS ON INCREASING FLOW
	NORMALLY OPEN LEVEL SWITCH: CLOSES ON INCREASING LEVEL
	NORMALLY CLOSED LEVEL SWITCH: OPENS ON INCREASING LEVEL
	NORMALLY OPEN PRESSURE SWITCH: CLOSES ON INCREASING PRESSURE
	NORMALLY CLOSED PRESSURE SWITCH: OPENS ON INCREASING PRESSURE
	NORMALLY OPEN LIMIT SWITCH: CLOSES UPON REACHING LIMIT
	NORMALLY CLOSED LIMIT SWITCH: OPENS ON REACHING LIMIT
	MICROPROCESSOR INPUT
	MICROPROCESSOR OUTPUT
	FIELD WIRING EXTERNAL TO CONTROL PANEL
	3-POSITION SELECTOR SWITCH, MAINTAINED CONTACTS
	NORMALLY OPEN PUSHBUTTON, MOMENTARY CONTACT
	NORMALLY CLOSED PUSHBUTTON, MOMENTARY CONTACT
	INDICATING LIGHT, X INDICATES COLOR
	PUSH TO TEST INDICATING LIGHT, X INDICATES COLOR LENS COLOR: R- RED Y-YELLOW G- GREEN W-WHITE B-BLUE A- AMBER
	SOLENOID VALVE
	THERMAL OVERLOAD ELEMENT
	THERMAL OVERLOAD ELEMENT RELAY CONTACT
	ELAPSED TIME METER
	MOTOR STARTS COUNTER

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KLINGNER & ASSOCIATES, P.C.
Engineers • Architects • Surveyors
616 N. 24TH ST. QUINCY, ILLINOIS 62301 217.223.3670
STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

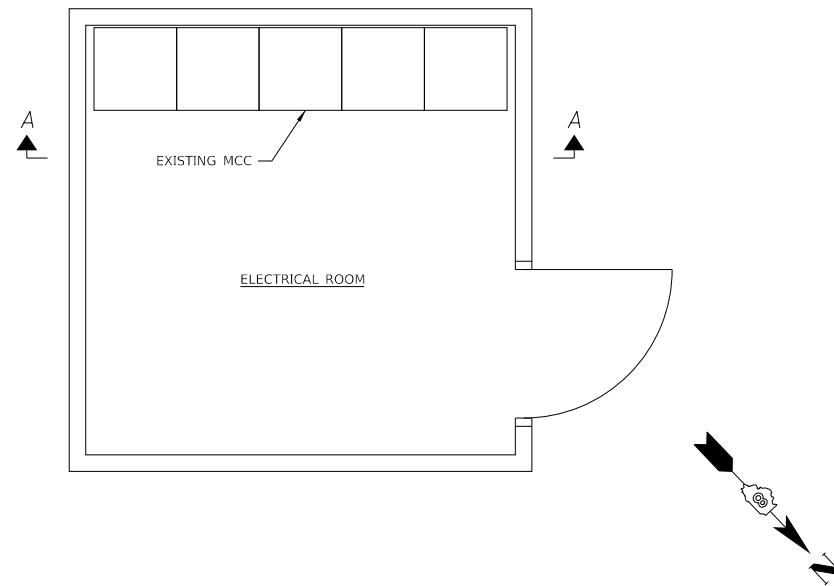
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

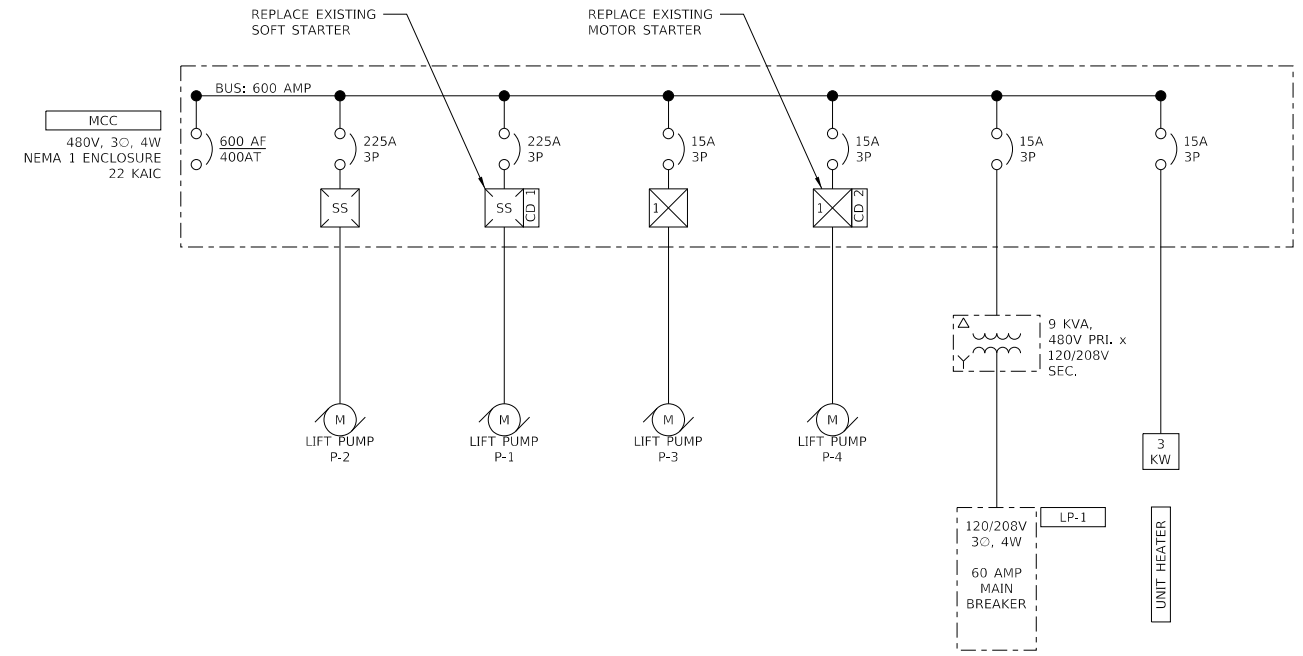
ELECTRICAL LEGEND

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8)PS-1	MADISON	12	4
CONTRACT NO. 76L47				
ILLINOIS FED. AID PROJECT				



ELECTRICAL PLAN VIEW
1/2" = 1'-0"

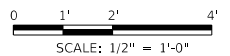


MCC ONE-LINE DIAGRAM
NTS

SECTION E1		SECTION D1	SECTION C1	SECTION B1	SECTION A1
SECTION E2		SECTION D2			
E2.1	E2.2	SECTION D3			
SECTION E3		SECTION D4			
		SECTION D5			

- SECTION A1:** EXISTING MAIN DISCONNECT
- SECTION B1:** LIFT PUMP P-2. ORIGINAL MOTOR STARTER PREVIOUSLY REPLACED. NO WORK IN THIS CONTRACT
- SECTION C1:** LIFT PUMP P-1. MOTOR STARTER TO BE REPLACED UNDER THIS CONTRACT.
- SECTION D1:** LIFT PUMP P-3. ORIGINAL MOTOR STARTER PREVIOUSLY REPLACED. NO WORK IN THIS CONTRACT
- SECTION D2:** RELAY SECTION
- SECTION D3:** LIFT PUMP P-4. MOTOR STARTER TO BE REPLACED UNDER THIS CONTRACT.
- SECTION D4:** SPACE
- SECTION D5:** SPACE
- SECTION E1:** LIGHTING PANEL
- SECTION E2.1:** LIGHTING XFMR OCPD
- SECTION E2.2:** UNIT HEATER OCPD
- SECTION E3:** LIGHTING XFMR

A MCC ELEVATION
NTS



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KLINGNER & ASSOCIATES, P.C.
Engineers • Architects • Surveyors
616 N. 24TH ST. QUINCY, ILLINOIS 62301 217.223.3670
STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

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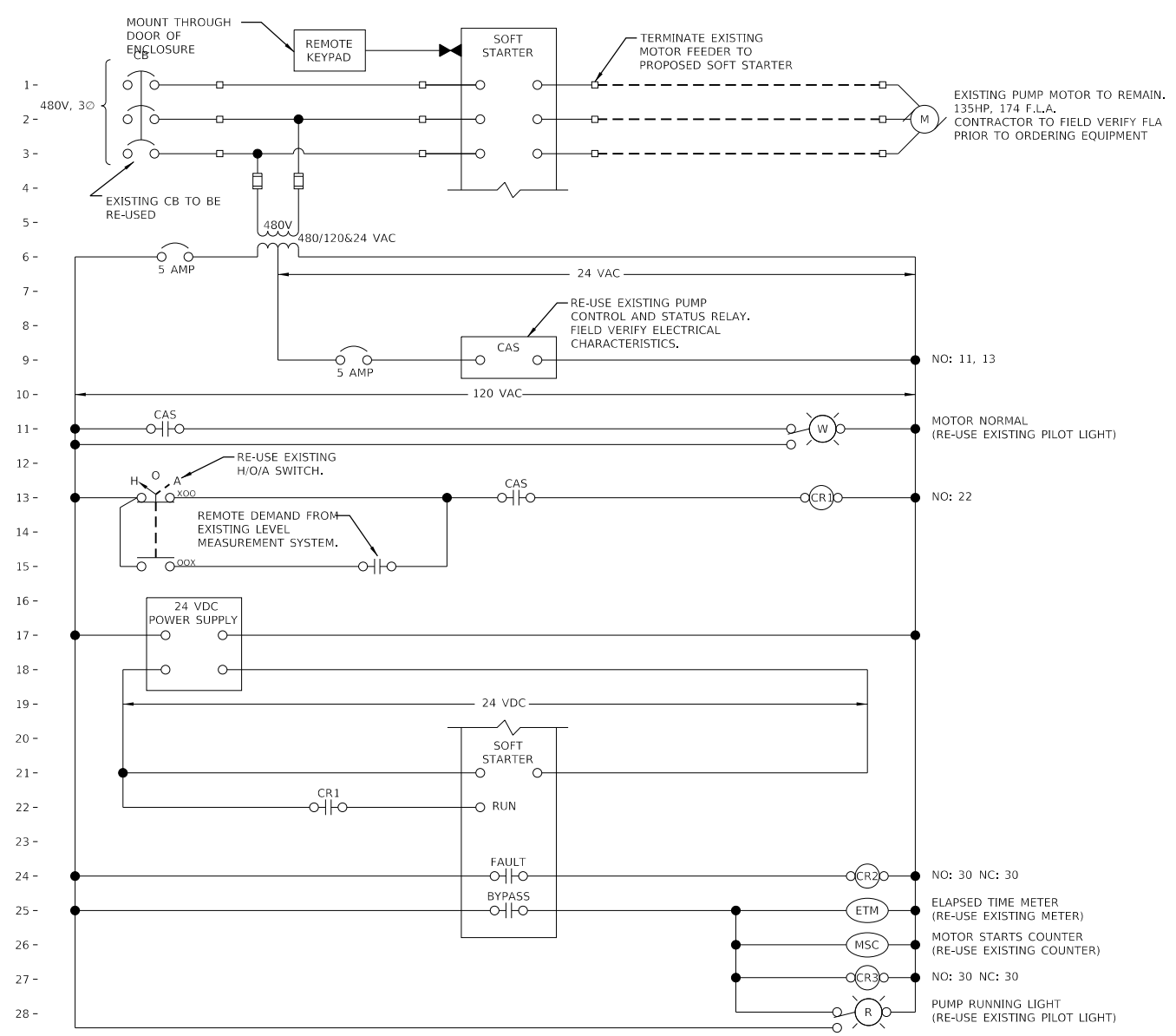
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GREY'S FARM PUMP STATION
ELECTRICAL PLAN**

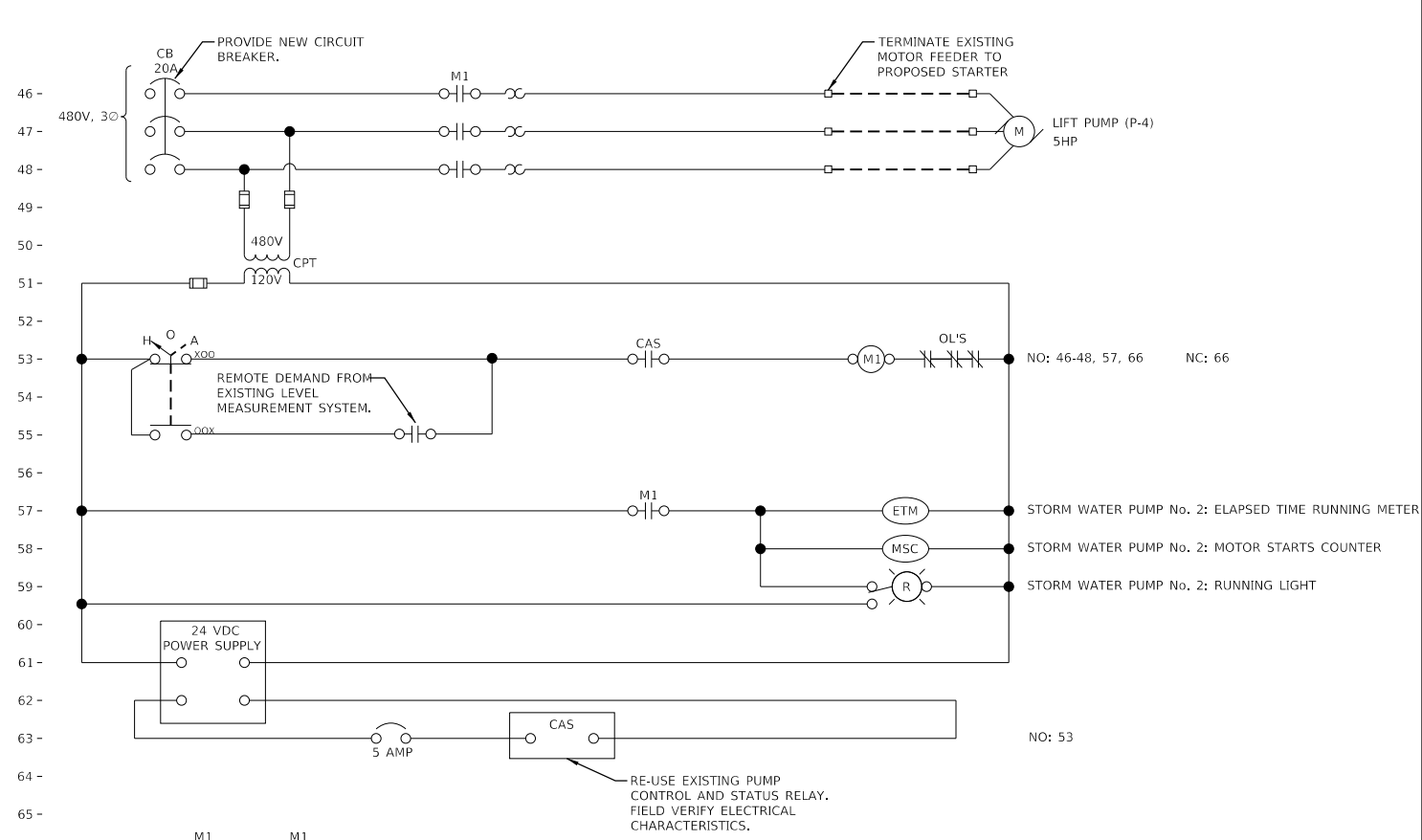
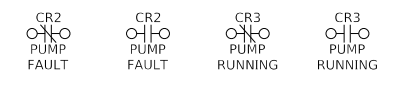
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8)PS-1	MADISON	12	5
CONTRACT NO. 76L47				
ILLINOIS FED. AID PROJECT				

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CONTROL DRAWING No. 1
LIFT PUMP P-1



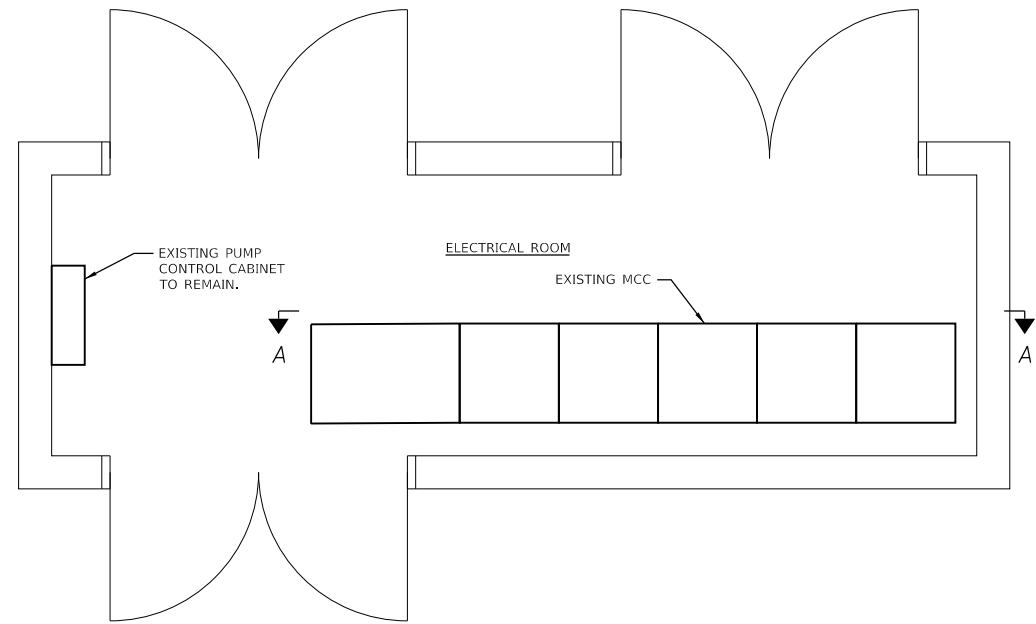
CONTROL DRAWING No. 2
LIFT PUMP P-4

STORMWATER PUMPS

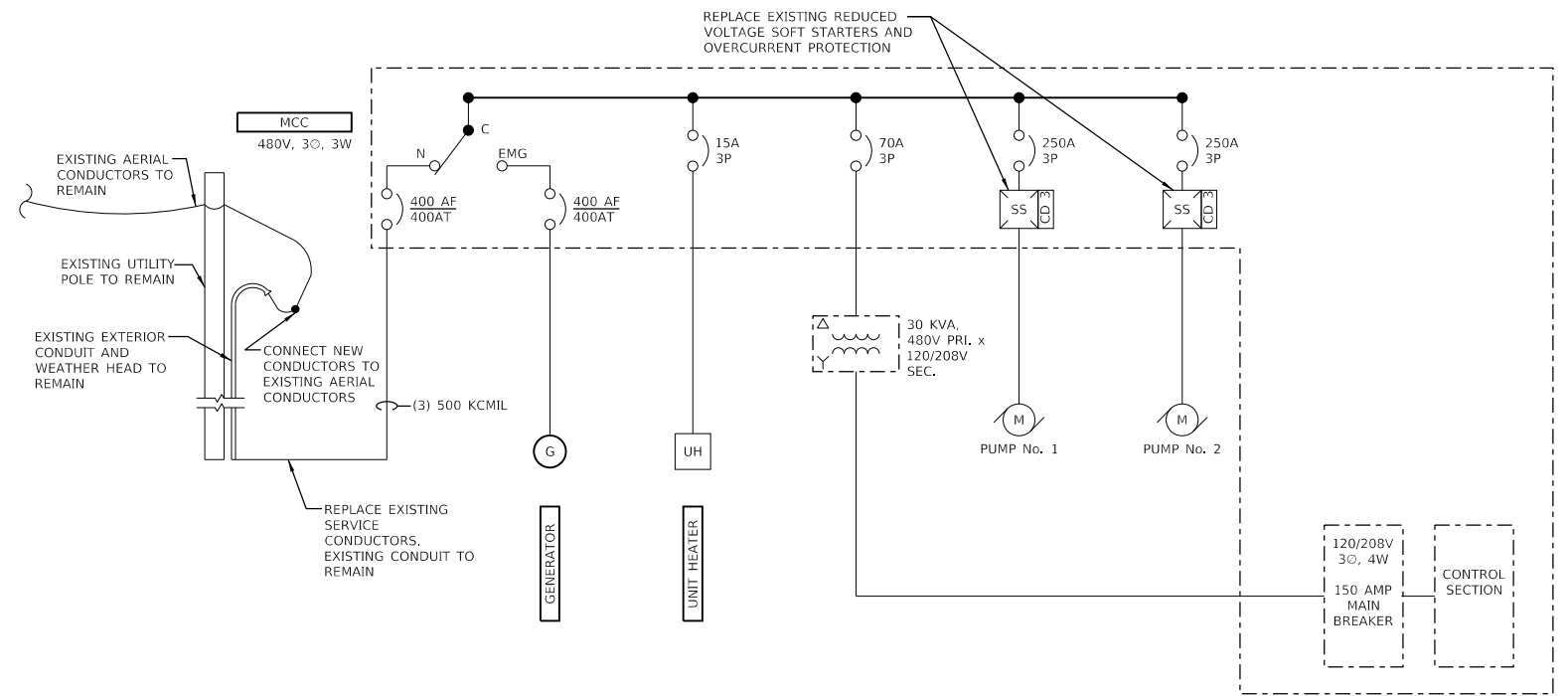
1. MAJOR EQUIPMENT:
 - a. PUMPS:
 - 1) EXISTING LIFT PUMP (P-1)
 - 2) EXISTING LIFT PUMP (P-4)
 - 3) SUMP LEVEL AND ALTERNATION SYSTEM (EXISTING SYSTEM TO BE RE-USED)
 - b. CONTROL LOGIC:
 - a. LIFT PUMP (P-1)
 - 1) PUMP OPERATION SHALL BE PREVENTED WHENEVER THE PUMP CONTROL AND STATUS RELAY (CAS) IS IN A FAULT CONDITION.
 - 2) WHEN **HAND** IS SELECTED AT THE MCC, THE PUMP SHALL RUN.
 - 3) WHEN **OFF** IS SELECTED AT THE MCC, THE PUMP SHALL BE OFF.
 - 4) WHEN **AUTO** IS SELECTED AT THE MCC, THE PUMP SHALL BE CONTROLLED ACCORDING TO THE EXISTING SUMP LEVEL AND PUMP ALTERNATION SYSTEM.
 - 5) PUMP RUNNING LIGHT, PUMP STARTS COUNTER, AND PUMP OPERATING HOUR METER SHALL BE ACTIVATED WHEN SOFT STARTER IS IN BYPASS MODE.
 - b. LIFT PUMP (P-4)
 - 1) PUMP OPERATION SHALL BE PREVENTED WHENEVER THE PUMP CONTROL AND STATUS RELAY (CAS) IS IN A FAULT CONDITION.
 - 2) WHEN **HAND** IS SELECTED AT THE MCC, THE PUMP SHALL RUN.
 - 3) WHEN **OFF** IS SELECTED AT THE MCC, THE PUMP SHALL BE OFF.
 - 4) WHEN **AUTO** IS SELECTED AT THE MCC, THE PUMP SHALL BE CONTROLLED ACCORDING TO THE EXISTING SUMP LEVEL AND PUMP ALTERNATION SYSTEM.
 - 5) PUMP RUNNING LIGHT, PUMP STARTS COUNTER, AND PUMP OPERATING HOUR METER SHALL BE ACTIVATED WHEN PUMP IS RUNNING.

THE CONTROL LOOP DESCRIPTIONS ARE NOT INTENDED TO BE AN INCLUSIVE LISTING OF ALL ELEMENTS AND APPURTENANCES REQUIRED TO EXECUTE LOOP FUNCTIONS, BUT ARE RATHER INTENDED TO SUPPLEMENT AND COMPLEMENT THE DRAWINGS AND OTHER SPECIFICATION SECTIONS.

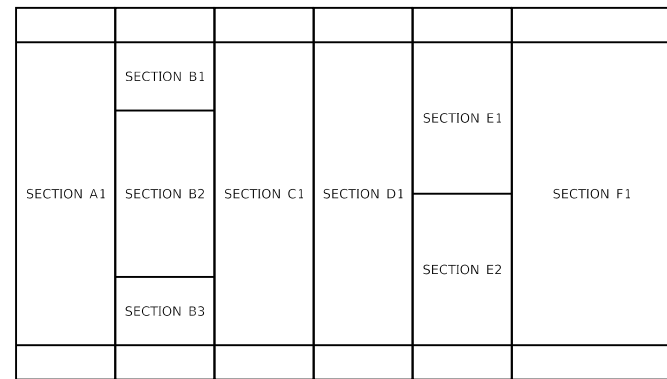
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	DATE -	REVISED -



ELECTRICAL ROOM PLAN VIEW
1/2" = 1'-0"

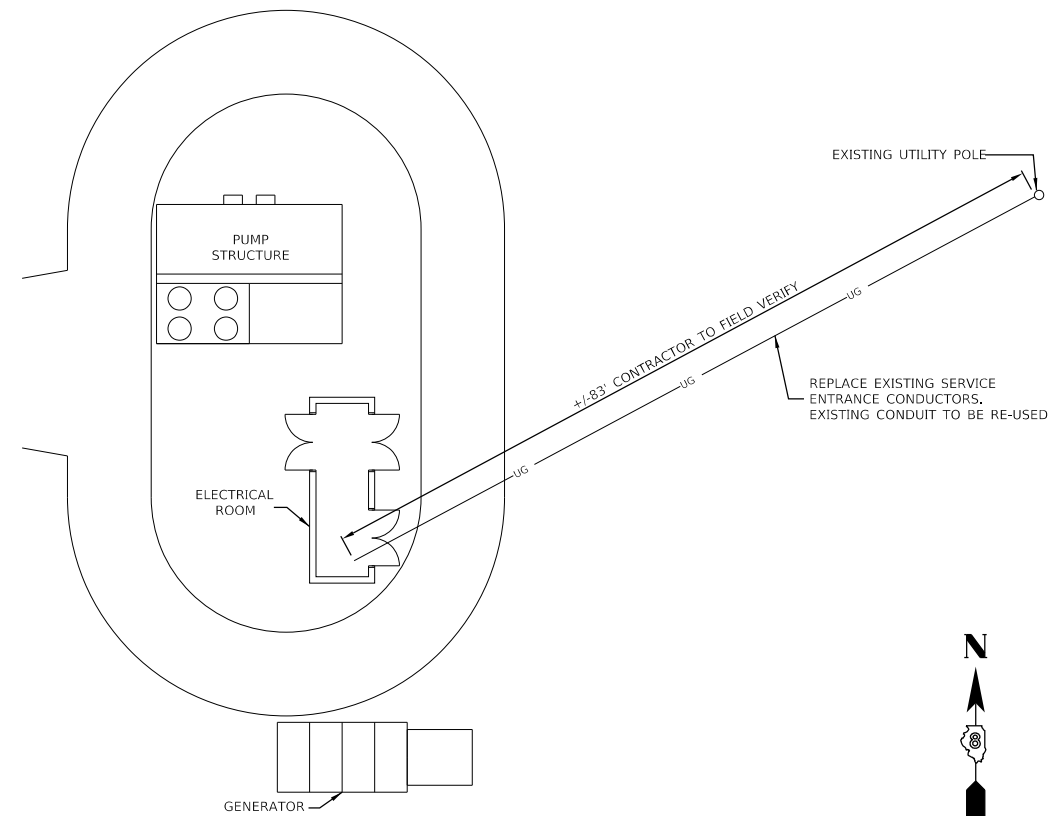


MCC ONE-LINE DIAGRAM
NTS



MCC ELEVATION
NTS

- SECTION A1:** SERVICE ENTRANCE AND TRANSFER SWITCH
- SECTION B1:** ELECTRIC HEAT OCPD
- SECTION B2:** SPACE
- SECTION B3:** LIGHTING XFMR OCPD
- SECTION C1:** PUMP No. 1 MOTOR STARTER TO BE REPLACED UNDER THIS CONTRACT.
- SECTION D1:** PUMP No. 2 MOTOR STARTER TO BE REPLACED UNDER THIS CONTRACT.
- SECTION E1:** LIGHTING PANEL
- SECTION E2:** LIGHTING PANEL XFMR
- SECTION F1:** CONTROLS



ELECTRICAL SITE PLAN
3/32" = 1'-0"



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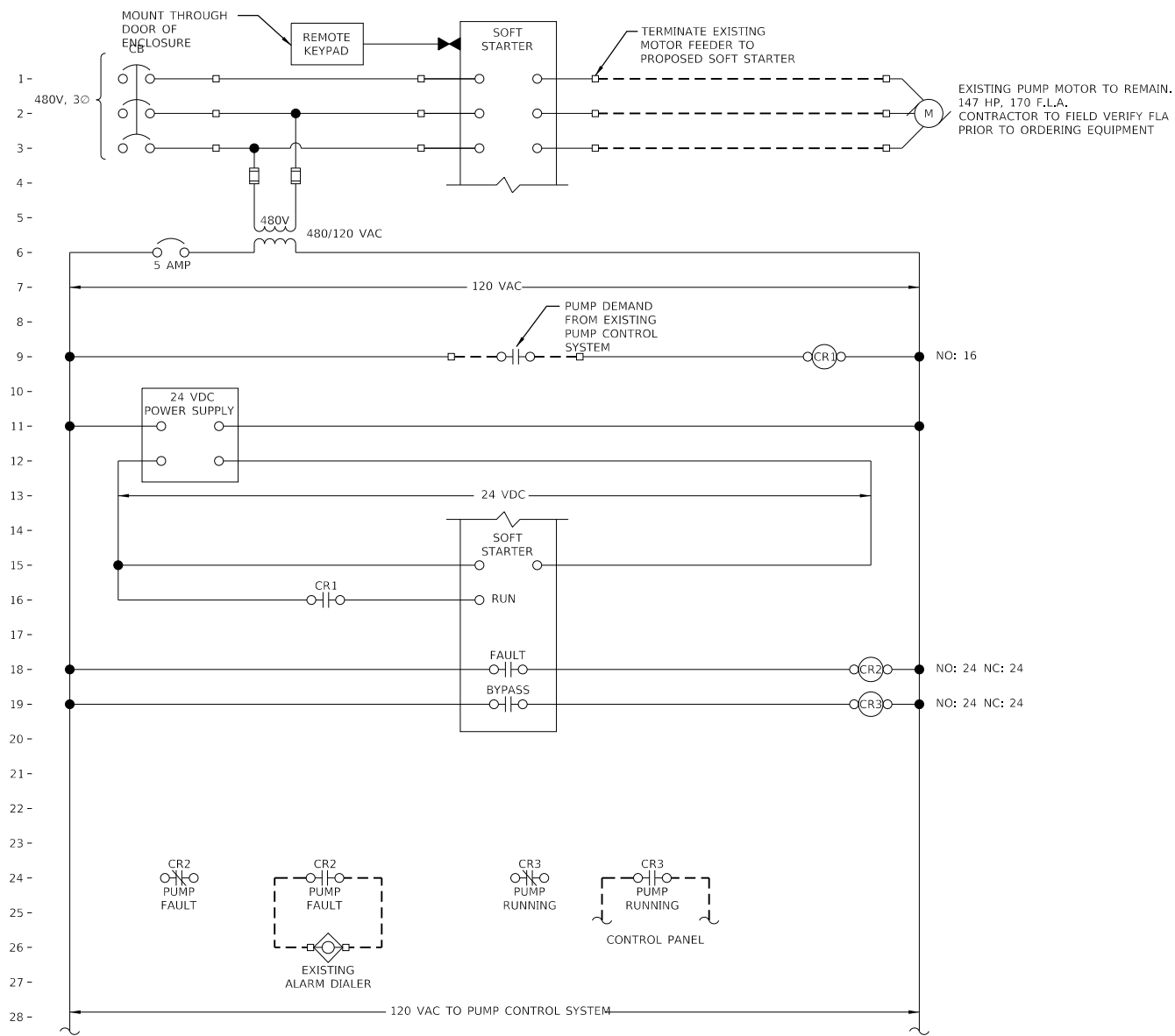
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**COLLINSVILLE #1 PUMP STATION
ELECTRICAL PLAN**

SCALE: NONE SHEET 1 OF 3 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8)PS-1	MADISON	12	7
CONTRACT NO. 76L47				

ILLINOIS FED. AID PROJECT



CONTROL DRAWING No. 3
PUMP Nos. 1 AND 2

STORMWATER PUMPS

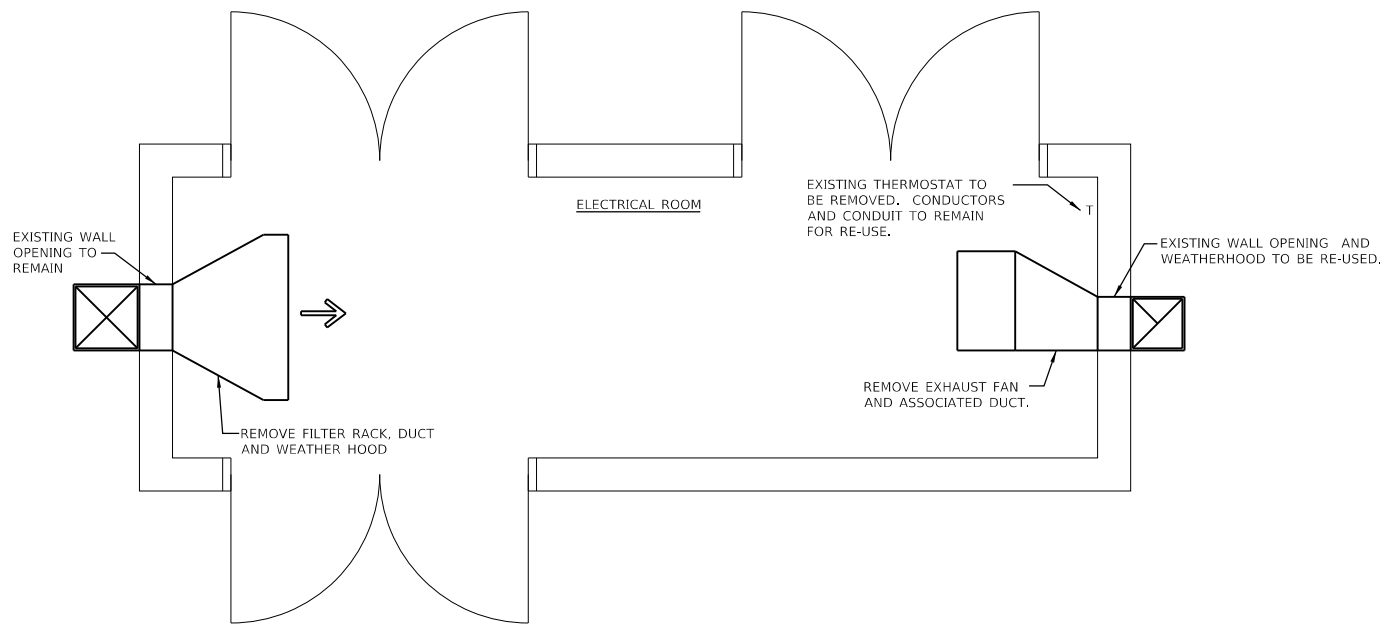
1. MAJOR EQUIPMENT:
 - a. PUMPS:
 - 1) EXISTING PUMPS (P1 AND P2)
2. CONTROL LOGIC:
 - a. PUMPS (P1 AND P2)
 - 1) PUMP OPERATION SHALL BE CONTROLLED BY EXISTING PUMP CONTROL SYSTEM.
 - 2) SOFT STARTER FAULT CONDITION SHALL BE ANNUNCIATED BY EXISTING ALARM DIALER.

THE CONTROL LOOP DESCRIPTIONS ARE NOT INTENDED TO BE AN INCLUSIVE LISTING OF ALL ELEMENTS AND APPURTENANCES REQUIRED TO EXECUTE LOOP FUNCTIONS, BUT ARE RATHER INTENDED TO SUPPLEMENT AND COMPLEMENT THE DRAWINGS AND OTHER SPECIFICATION SECTIONS.

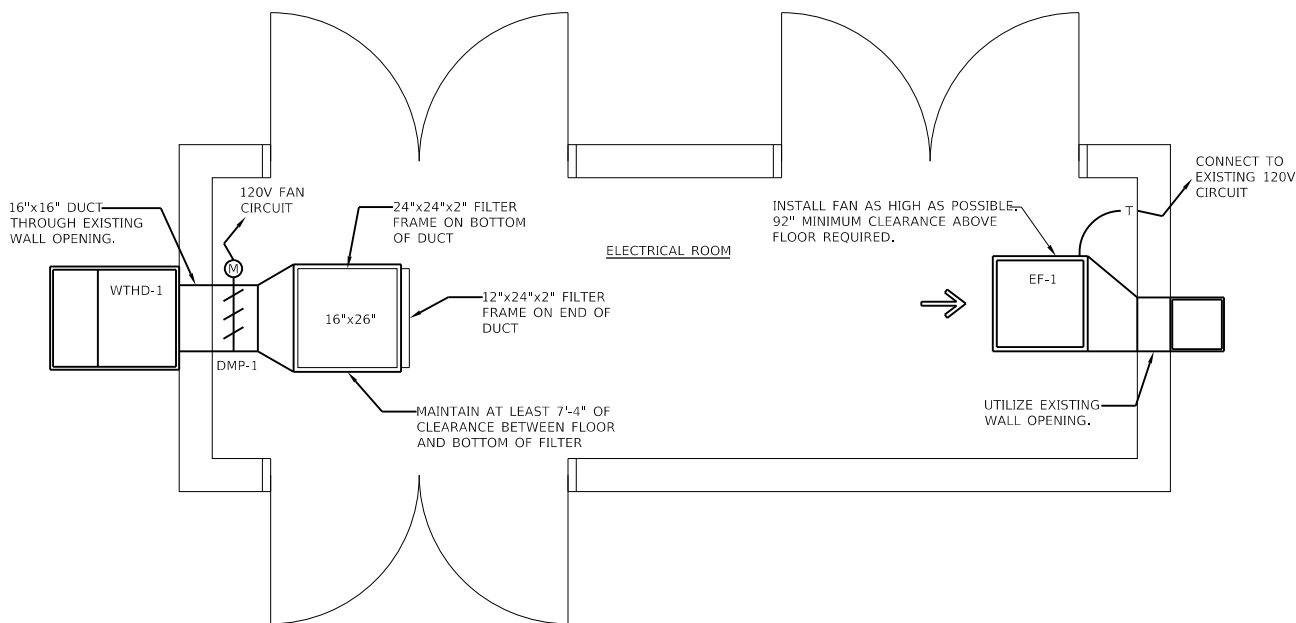
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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8)PS-1	MADISON	12	8
CONTRACT NO. 76L47				
ILLINOIS FED. AID PROJECT				



MECHANICAL DEMOLITION PLAN
1/2" = 1'-0"



PROPOSED MECHANICAL PLAN
1/2" = 1'-0"

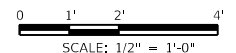
TAG	TYPE	PERFORMANCE		MOTOR				COMMENTS
		CFM	PRESSURE (INCHES WG)	HP	RPM	VOLTS	PHASE	
EF-1	DIRECT DRIVE, CENTRIFUGAL INLINE EXHAUST FAN	3,033	0.75	1	1,300	120	1	1-5
COMMENTS								
1 PROVIDE WITH FACTORY MOUNTED DISCONNECT SWITCH								
2 PROVIDE WITH INLET GUARD								
3 PROVIDE WITH GRAVITY BACKDRAFT DAMPER								
4 PROVIDE WITH HANGING NEOPRENE ISOLATORS AND ALL OTHER HANGING ACCESSORIES TO SUSPEND FAN FROM CEILING								
5 PROVIDE WITH LINE VOLTAGE THERMOSTAT								

DAMPER SCHEDULE				
TAG	TYPE	HEIGHT	WIDTH	COMMENTS
DMP-1	PARALLEL BLADE CONTROL DAMPER	16"	16"	1
COMMENTS				
1 PROVIDE WITH 120V, FAIL CLOSED ACTUATOR				

WEATHERHOOD SCHEDULE			
TAG	TYPE	OPEN AREA	COMMENTS
WTHD-1	90 DEGREE WEATHERHOOD	23' x 28"	1
COMMENTS			
1 PROVIDE WITH BIRDSCREEN			

VENTILATION SEQUENCE OF OPERATION

1. MAJOR EQUIPMENT:
 - a. EXHAUST FAN (EX-1)
 - b. SUPPLY CONTROL DAMPER (DMP-1)
 - c. THERMOSTAT
2. CONTROL LOGIC:
 - a. WHEN THE SPACE TEMPERATURE RISES ABOVE THE SETPOINT (80°F, ADJUSTABLE)
 - 1) THE SUPPLY CONTROL DAMPER SHALL OPEN.
 - 2) EXHAUST FAN SHALL TURN ON
 - b. WHEN THE SPACE TEMPERATURE FALLS BELOW THE SETPOINT (80°F, ADJUSTABLE)
 - 1) THE SUPPLY CONTROL DAMPER SHALL CLOSE.
 - 2) EXHAUST FAN SHALL TURN OFF.



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KLINGNER & ASSOCIATES, P.C.
Engineers • Architects • Surveyors
616 N. 24TH ST. QUINCY, ILLINOIS 62301 217.223.3670
STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

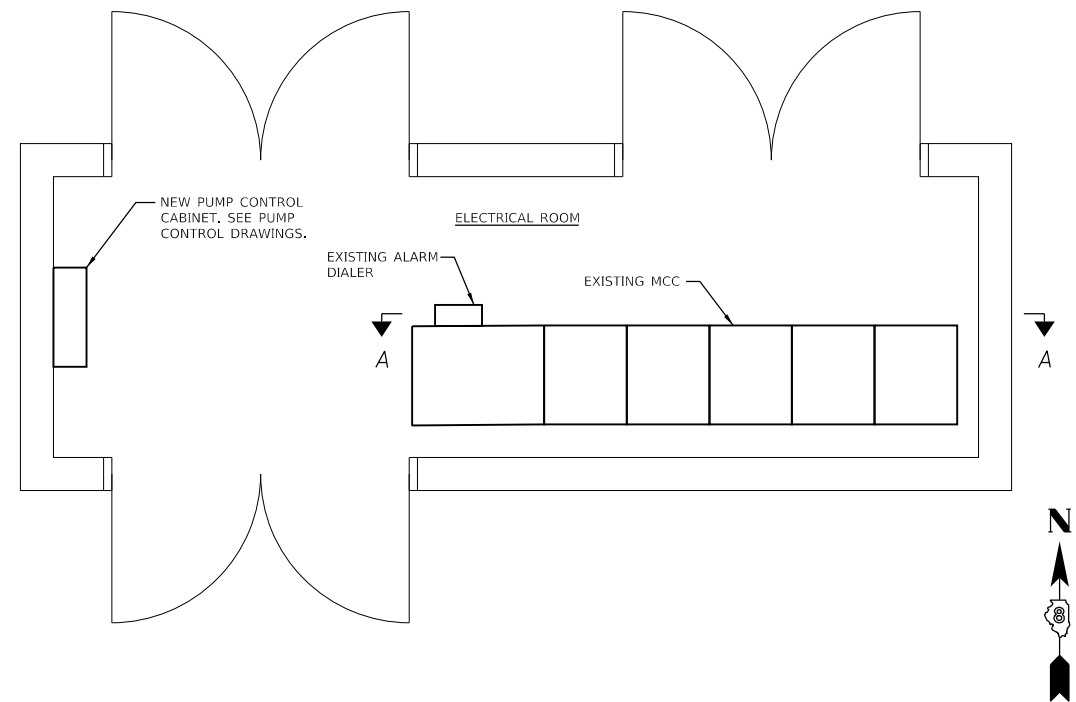
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PLOT SCALE = 0:1 7/8" = 1' / 1/8"	DRAWN -	REVISED -
PLOT DATE = 12/4/2019	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

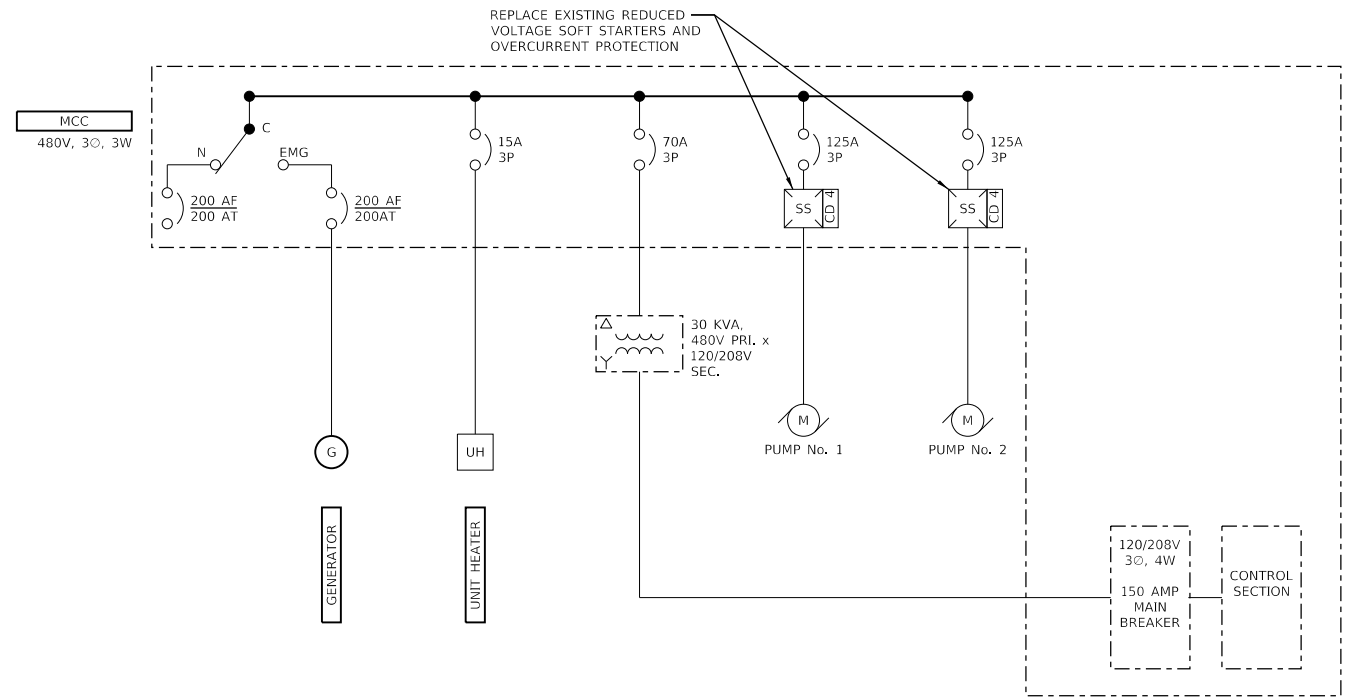
**COLLINSVILLE #1 PUMP STATION
VENTILATION CHANGES**

SCALE: NONE SHEET 3 OF 3 SHEETS STA. TO STA.

F.A.I. RTE. 255	SECTION 60-(7,8)PS-1	COUNTY MADISON	TOTAL SHEETS 12	SHEET NO. 9
CONTRACT NO. 76L47				
ILLINOIS FED. AID PROJECT				



ELECTRICAL ROOM PLAN VIEW
1/2" = 1'-0"



MCC ONE-LINE DIAGRAM
NTS

	SECTION B1			SECTION E1	
SECTION A1	SECTION B2	SECTION C1	SECTION D1	SECTION E2	SECTION F1
	SECTION B3				

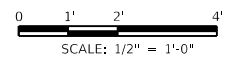
- SECTION A1: SERVICE ENTRANCE AND TRANSFER SWITCH
- SECTION B1: ELECTRIC HEAT OCPD
- SECTION B2: SPACE
- SECTION B3: MAIN CIRCUIT BREAKER
- SECTION C1: PUMP No. 1 MOTOR STARTER TO BE REPLACED UNDER THIS CONTRACT.
- SECTION D1: PUMP No. 2 MOTOR STARTER TO BE REPLACED UNDER THIS CONTRACT.
- SECTION E1: LIGHTING PANEL
- SECTION E2: LIGHTING PANEL XFMR
- SECTION F1: EXISTING PUMP CONTROLS SHALL BE REMOVED. INSTALL PAINTED STEEL COVER PLATES OVER FORMER DOOR OPENINGS.

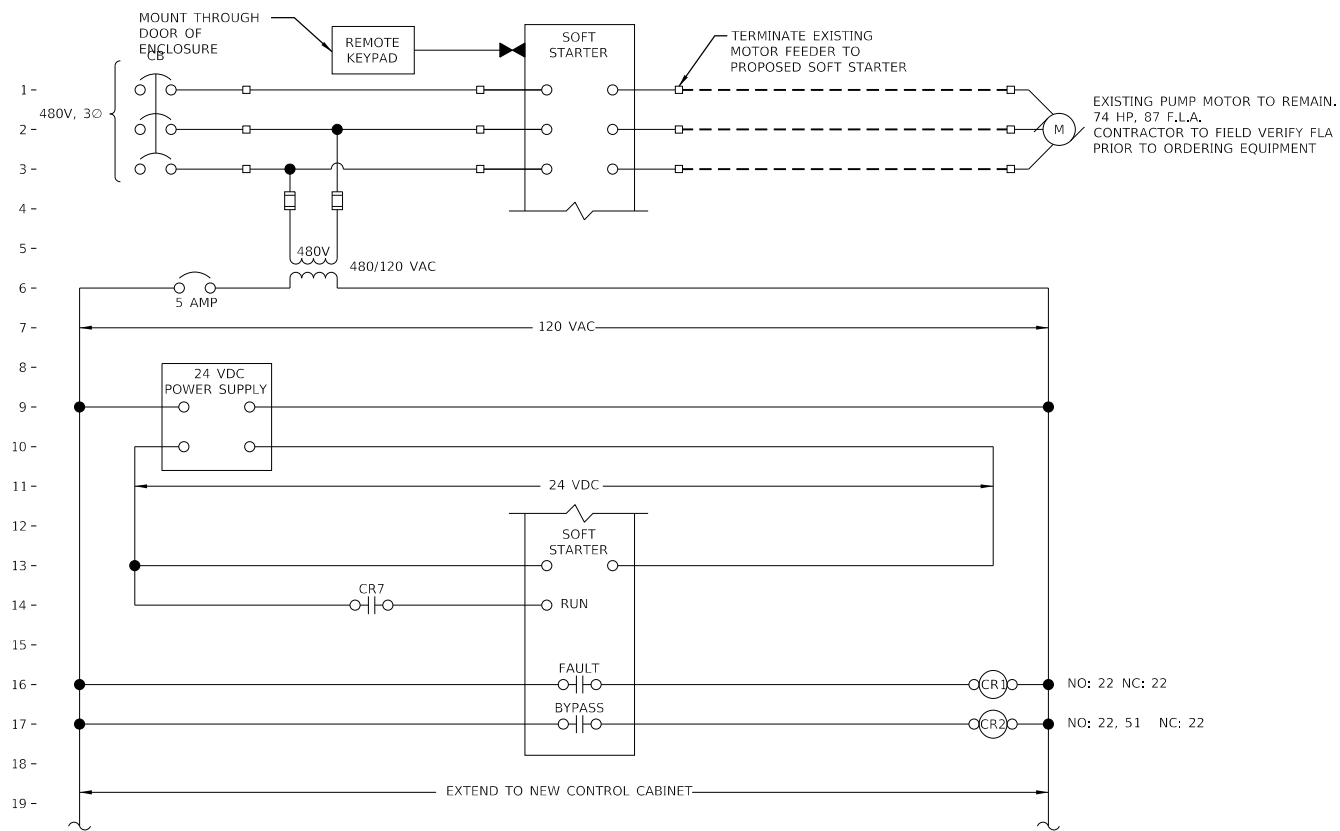
A MCC ELEVATION
NTS

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PLOT SCALE = 0:1 7/8" in / in.	DRAWN -	REVISED -
PLOT DATE = 12/4/2019	CHECKED -	REVISED -
	DATE -	REVISED -

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8)PS-1	MADISON	12	10
CONTRACT NO. 76L47				
ILLINOIS FED. AID PROJECT				





CONTROL DRAWING No. 4
PUMP Nos. 1 AND 2

STORMWATER PUMPS

1. MAJOR EQUIPMENT:

a. PUMPS:

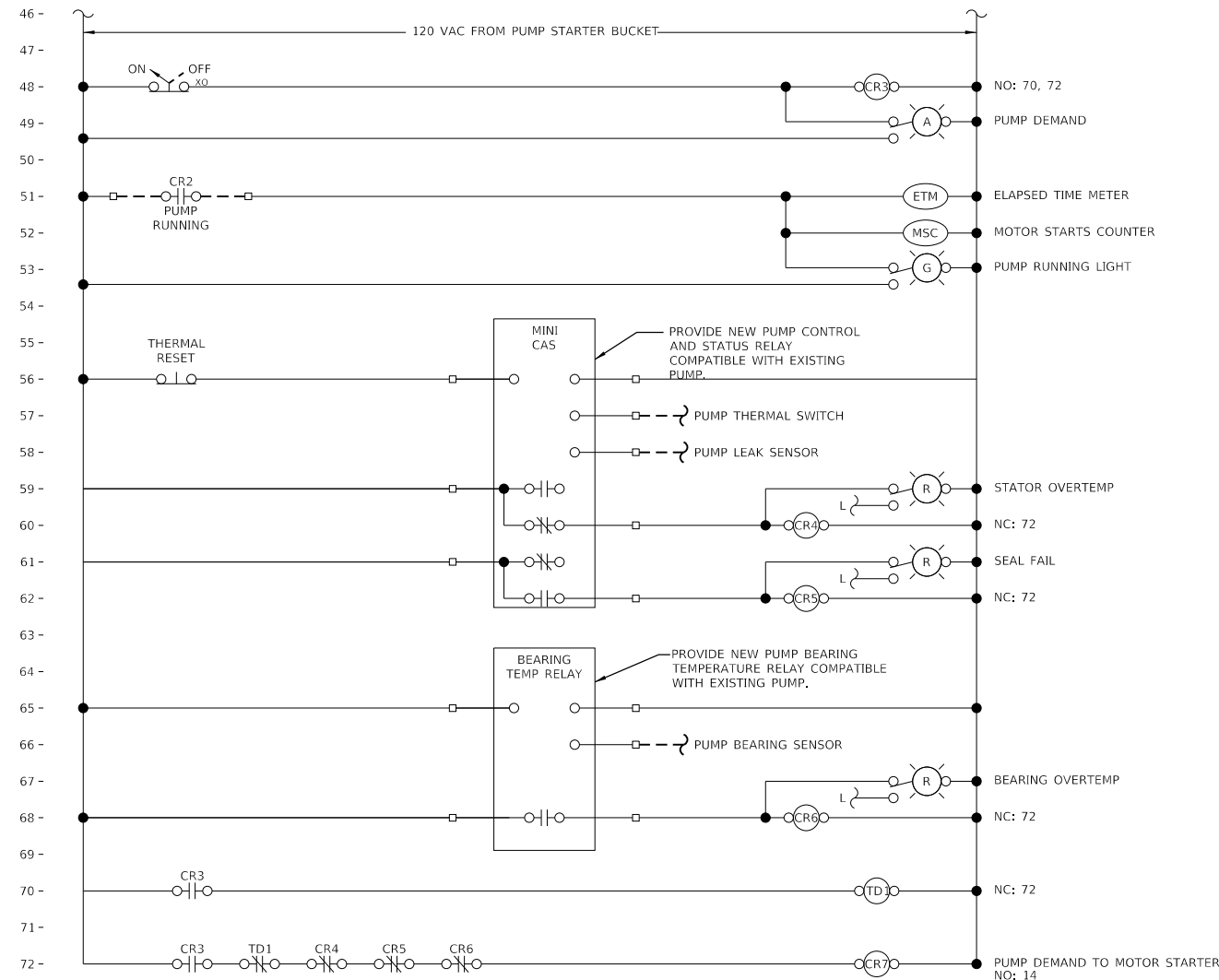
- 1) EXISTING PUMPS (P1 AND P2)

2. CONTROL LOGIC:

a. PUMPS (P1 AND P2)

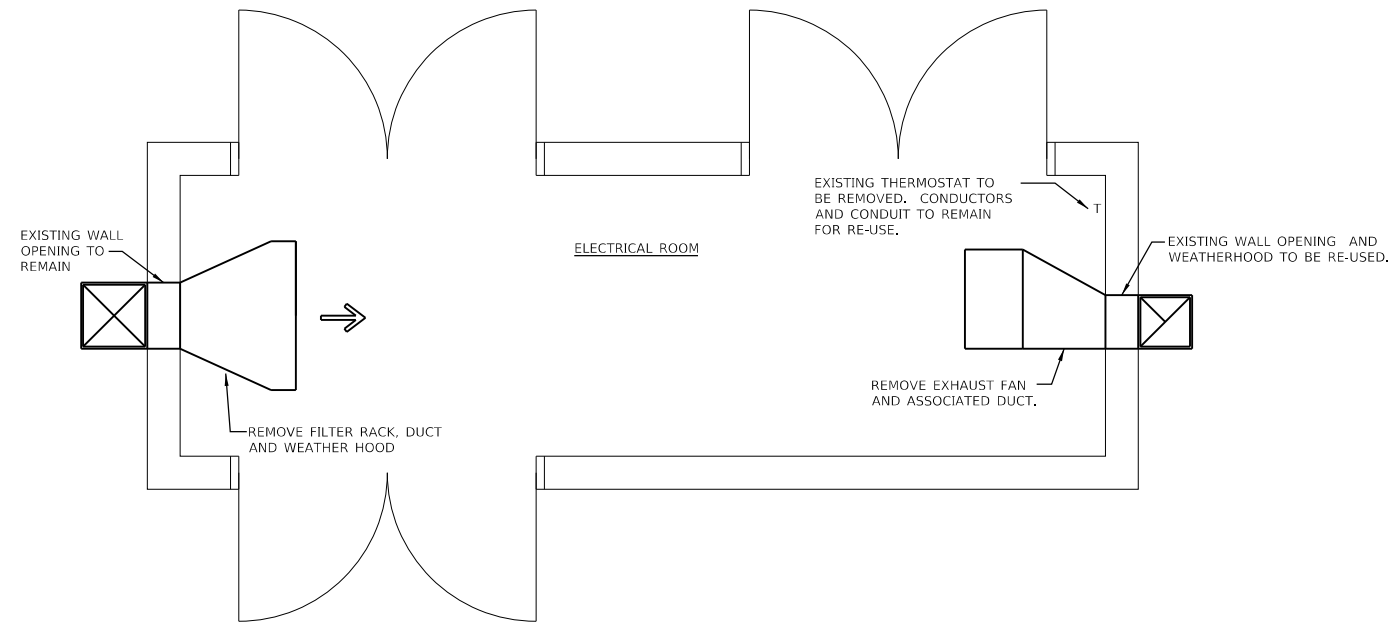
- 1) PUMP OPERATION SHALL BE PREVENTED WHENEVER THE PUMP CONTROL AND STATUS RELAYS (STATOR TEMP, BEARING TEMP, LEAK) IS IN A FAULT CONDITION.
- 2) WHEN OFF IS SELECTED AT THE MCC, THE PUMP SHALL BE OFF.
- 3) WHEN ON IS SELECTED AT THE MCC, THE PUMP SHALL BE ON FOLLOWING START DELAY.
- 4) PUMP RUNNING LIGHT, PUMP STARTS COUNTER, AND PUMP OPERATING HOUR METER SHALL BE ACTIVATED WHEN SOFT STARTER IS IN BYPASS MODE.
- 5) SOFT STARTER FAULT CONDITION SHALL BE ANNUNCIATED BY EXISTING ALARM DIALER.

THE CONTROL LOOP DESCRIPTIONS ARE NOT INTENDED TO BE AN INCLUSIVE LISTING OF ALL ELEMENTS AND APPURTENANCES REQUIRED TO EXECUTE LOOP FUNCTIONS, BUT ARE RATHER INTENDED TO SUPPLEMENT AND COMPLEMENT THE DRAWINGS AND OTHER SPECIFICATION SECTIONS.



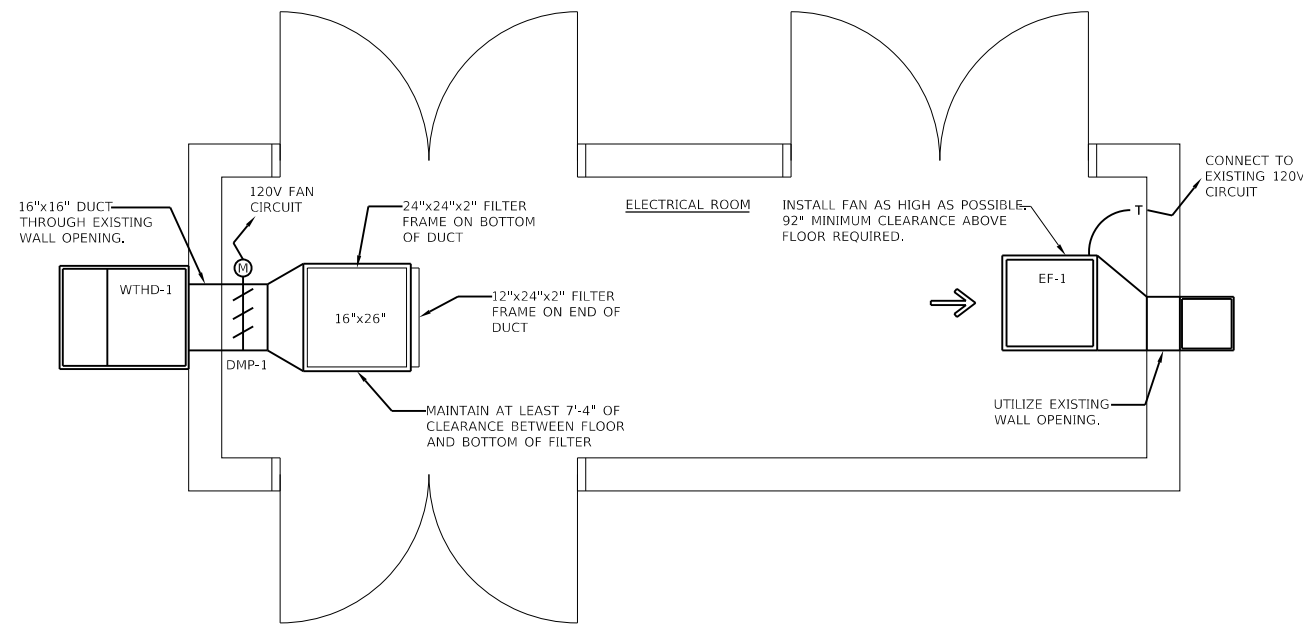
CONTROL DRAWING No. 4
CONTROL PANEL FOR PUMP Nos. 1 AND 2

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MECHANICAL DEMOLITION PLAN

1/2" = 1'-0"



PROPOSED MECHANICAL PLAN

1/2" = 1'-0"

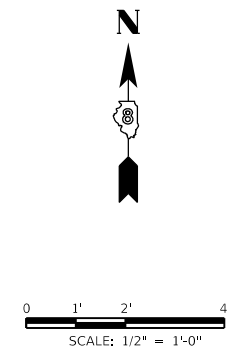
TAG	TYPE	PERFORMANCE		MOTOR				COMMENTS
		CFM	PRESSURE (INCHES WG)	HP	RPM	VOLTS	PHASE	
EF-1	DIRECT DRIVE, CENTRIFUGAL INLINE EXHAUST FAN	3,033	0.75	1	1,300	120	1	1-5
COMMENTS								
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2 PROVIDE WITH INLET GUARD								
3 PROVIDE WITH GRAVITY BACKDRAFT DAMPER								
4 PROVIDE WITH HANGING NEOPRENE ISOLATORS AND ALL OTHER HANGING ACCESSORIES TO SUSPEND FAN FROM CEILING								
5 PROVIDE WITH LINE VOLTAGE THERMOSTAT								

TAG	TYPE	HEIGHT	WIDTH	COMMENTS
COMMENTS				
1 PROVIDE WITH 120V, FAIL CLOSED ACTUATOR				

TAG	TYPE	OPEN AREA	COMMENTS
COMMENTS			
1 PROVIDE WITH BIRDSCREEN			

VENTILATION SEQUENCE OF OPERATION

1. MAJOR EQUIPMENT:
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 - 2) EXHAUST FAN SHALL TURN OFF.



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 Engineers • Architects • Surveyors
 616 N. 24TH ST. QUINCY, ILLINOIS 62301 217.223.3670
 STATE OF ILLINOIS DESIGN FIRM NO. 184-2738

USER NAME = oms
 PLOT SCALE = 0.1 7/8" = 1'-0"
 PLOT DATE = 12/4/2019

DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**COLLINSVILLE #2 PUMP STATION
 VENTILATION CHANGES**

SCALE: NONE SHEET 3 OF 3 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
255	60-(7,8)PS-1	MADISON	12	12
CONTRACT NO. 76L47				
ILLINOIS FED. AID PROJECT				