TRAFFIC SIGNALS LEGEND

REC	REMOVE ELECTRIC CABLE FROM CONDUIT
RREC	REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT
PVCC	POLYVINYL CHLORIDE CONDUIT
GSC	GALVANIZED STEEL CONDUIT
	EXISTING TRAFFIC SIGNAL MAST ARM
	EXISTING HANDHOLE
	EXISTING DOUBLE HANDHOLE
	EXISTING DETECTOR LOOP
	EXISTING CONTROLLER
	EXISTING CONDUIT
	PROPOSED HANDHOLE
	PROPOSED DETECTOR LOOP
	PROPOSED CONDUIT: "T" TRENCH, SIZE SPECIFIED
	PROPOSED CONDUIT: "P" PUSHED SIZE SPECIFIED

SCHEDULE OF QUANTITIES

ITEM	UNIT	TOTAL QUANTITIES
LOCATING UNDERGROUND CABLE	FOOT	100
CONDUIT IN TRENCH, 1" DIA., PVC	FOOT	74
CONDUIT IN TRENCH, 1 1/2" DIA., PVC	FOOT	161
CONDUIT IN TRENCH, 2" DIA., PVC	FOOT	96
CONDUIT IN TRENCH, 3" DIA., PVC	FOOT	24
CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	32
CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL	FOOT	124
HANDHOLE PORTLAND CONCRETE CEMENT	EACH	2
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	309
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	866
DRILL EXISTING HANDHOLE	EACH	2
INDUCTIVE LOOP DETECTOR	EACH	1
DETECTOR LOOP, TYPE I	FOOT	589
MODIFY EXISTING CONTROLLER	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	614
REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	2,013
REMOVE EXISTING HANDHOLE	EACH	2

DETECTOR LOOP REQUIREMENTS AND CALCULATIONS
FOR IL ROUTE 3 AND NORTH MARKET STREET

LOOP	PHASE (Ø)	LOOP SIZE(FT)	REQUIRED # OF TURNS	CALCULATED INDUCTANCE MICROHENRIES (μH)	CALCULATED RESISTANCE OHMS (Ω)
EB LT CD	3	6'X50' (Q)	3-6-3	837.8	2.77
EB THRU CD	3	6'X50' (Q)	3-6-3	834.1	2.68
EB RT CD	3	6'X50' (Q)	3-6-3	829.9	2.59
EB CCO	3	6'X6'	5	249.1	2.13

THE ABOVE VALUES ARE CALCULATED OF COMBINED LOOP AND LEAD-IN INDUCTANCE AND RESISTANCE. ACTUAL MEASURED VALUES SHOULD BE WITHIN +/- 20% OF THESE VALUES.

STANDARDS

814001
857001
880006
886001
886006

ELECTRICAL GENERAL NOTES

1. THE LOCATION OF ALL DETECTOR LOOPS SHALL BE APPROVED BY THE ENGINEER BEFORE ANY SLOTS ARE SAWED IN THE PAVEMENT.
2. DETECTOR LOOP LEAD-IN SPLICES SHALL BE MADE IN A HANDHOLE PER ARTICLE 873.03 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STANDARD DRAWING 886001. CONDUCTORS SHALL BE SPLICED IN A RIGID MOLD. ROSIN-CORE SOLDER SHALL BE USED.
3. CALL DELAY SHALL NOT FUNCTION WHEN THE RELATED PHASES ARE IN THE GREEN MODE.
4. ALL HANDHOLES SHALL BE CAST-IN-PLACE PORTLAND CEMENT CONCRETE (PER ARTICLE 814.03(B)). THE CAST IN PLACE LEGEND IN THE COVER SHALL BE "TRAFFIC SIGNALS". SLOPE HANDHOLE COVERS TO MATCH PROPOSED GRADE ELEVATIONS.
5. ALL UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY ATTEMPT TO CONSTRUCT ANY COMPONENT OF THE VARIOUS TRAFFIC SIGNAL INSTALLATION. AGENCIES KNOWN TO HAVE UNDERGROUND FACILITIES WITHIN THE LIMITS OF THIS IMPROVEMENT ARE THE FOLLOWING: MEMBER OF J.U.L.I.E. PHONE (800) 892-0123 ARE INDICATED BY * (CALL ONE WEEK BEFORE YOU PLAN TO DIG).

   * CITY OF WATERLOO (WATER, SAN. SEWER, ELECTRIC, & GAS)
   * CHARTER COMMUNICATIONS (CABLE)
   * HARRISONVILLE TELEPHONE (TELEPHONE)

6. ALL INDUCTIVE LOOP DETECTORS SUPPLIED FOR THIS PROJECT SHALL HAVE THE CAPACITY OF OPERATING WITH BOTH DELAY AND EXTENSION MODES ACTIVE, IF A TIME SETTING IS PROGRAMMED. THEY SHALL BE RACK MOUNTED.
7. CABLE MARKING TAPE SHALL BE INCLUDED WITH THE PAY ITEM "TRENCH AND BACKFILL FOR ELECTRICAL WORK" AND INSTALLED PER ARTICLE 815.03(D) OF THE STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION.
8. A 1/4" NYLON PULL ROPE SHALL BE FURNISHED AND INSTALLED IN ALL SIGNAL CONDUITS, THIS WORK SHALL BE INCLUDED WITH THE CONDUIT PAY ITEM.

THOUVENOT, WADE & MOERCHEN, INC.
ENGINEERS ◆ SURVEYORS ◆ PLANNERS

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PROFESSIONAL REGISTRATIONS	LICENSE NO.
ILLINOIS PROFESSIONAL DESIGN FIRM	184-001220
PROFESSIONAL ENGINEERING CORP.	62-035379
PROFESSIONAL STRUCTURAL ENGR. CORP.	81-005202
ILLINOIS PROF. LAND SURVEYING CORP.	048-000029
MISSOURI PROFESSIONAL ENGR. CORP.	NC 001528
MISSOURI LAND SURVEYING CORP.	NC 000346

SEAL

Renewal Date:
Signature Date:

STATEMENT OF RESPONSIBILITY
I hereby confirm that the document herein to be authenticated by my seal is restricted to this sheet, and I hereby disclaim any responsibility for all other drawings, specifications, estimates, reports or other documents or instruments relating to or intended to be utilized for any other part of the architectural, engineering or survey project.

TITLE: TRAFFIC SIGNAL PLAN
SCHEDULE OF QUANTITIES,
LOOP TABLES & GEN. NOTES

PROJECT: NORTH MARKET STREET
AT ILLINOIS ROUTE 3
CITY OF WATERLOO
MONROE COUNTY, ILLINOIS

REV.	DATE	DESCRIPTION
△		
△		

DRAWN BY:	JMI	SHEET
DESIGNED BY:	JMI	8
CHECKED BY:	SJK	
APPROVED BY:		
PROJECT NUMBER	060025	OF 12 SHEETS

☒ ISSUED FOR REVIEW ☐ ISSUED FOR BIDDING
☐ ISSUED FOR CONSTR. ☐ RECORD DRAWING