

FED. AID PROJECT	IDOT SECTION	COUNTY
ILLINOIS	04-00031-00-PV	ST. CLAIR
ILLINOIS		
IDOT JOB NO.	C-98-309-06	
IDOT CONTRACT NO.	97327	

**THOUVENOT, WADE & MOERCHEN, INC.**  
ENGINEERS • SURVEYORS • PLANNERS



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**PROFESSIONAL REGISTRATIONS**

ILLINOIS PROFESSIONAL DESIGN FIRM	LICENSE NO.
PROFESSIONAL ENGINEERING CORP.	184-001220
PROFESSIONAL STRUCTURAL ENGR. CORP.	62-035370
ILLINOIS PROF. LAND SURVEYING CORP.	81-005202
MISSOURI PROFESSIONAL ENGR. CORP.	048-000029
MISSOURI LAND SURVEYING CORP.	NC 001528
MISSOURI LAND SURVEYING CORP.	NC 000346

Signature: \_\_\_\_\_  
Expiration Date: \_\_\_\_\_

**STATEMENT OF RESPONSIBILITY**  
I hereby confirm that the document herein to be authorized 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 SIGNALS  
HUNTWOOD RD/ ILLINOIS RT 159  
PLAN AND DETAILS

**PROJECT**  
HUNTWOOD ROAD RECONSTRUCTION  
VILLAGE OF SWANSEA  
ST. CLAIR COUNTY

REV.	DATE	DESCRIPTION

**DRAWN BY:** BLR  
**DESIGNED BY:** BLR  
**CHECKED BY:** SJK  
**APPROVED BY:** SJK

**PROJECT NUMBER:** 120-030356

**SHEET**  
**56**  
OF 104 SHEETS

**PROJECT DESCRIPTION**  
Huntwood Road  
Reconstruction

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

**LEGEND**

- ⊙ EXISTING PEDESTRIAN PUSH BUTTON
- ⊙ PROPOSED / RELOCATED PEDESTRIAN PUSH BUTTON
- ⊙ EXISTING PEDESTRIAN SIGNAL HEAD
- ⊙ PROPOSED PEDESTRIAN SIGNAL HEAD
- ⊙ EXISTING HANDHOLE
- ⊙ PROPOSED HANDHOLE
- ⊙ EXISTING DOUBLE HANDHOLE
- ⊙ PROPOSED DOUBLE HANDHOLE
- ⊙ EXISTING SERVICE INSTALLATION TO BE REMOVED
- ⊙ PROPOSED SERVICE INSTALLATION
- ⊙ EXISTING EVPS DUAL CHANNEL DETECTOR
- ⊙ EVPS DUAL CHANNEL DETECTOR, RELOCATED
- ⊙ EXISTING EVPS SINGLE CHANNEL DETECTOR
- ⊙ EVPS SIGNAL CHANNEL DETECTOR, RELOCATED
- ⊙ EXISTING EVPS CONFIRMATION BEACON
- ⊙ EVPS CONFIRMATION BEACON, RELOCATED
- ⊙ EXISTING SIGNAL HEAD BRACKET MOUNTED
- ⊙ PROPOSED SIGNAL HEAD BRACKET MOUNTED
- ⊙ EXISTING SIGNAL HEAD WITH BACKPLATE, MAST ARM MOUNTED
- ⊙ PROPOSED SIGNAL HEAD WITH BACKPLATE, MAST ARM MOUNTED
- ⊙ EXISTING DETECTOR LOOP TO REMAIN IN PLACE
- ⊙ PROPOSED DETECTOR LOOP
- ⊙ EXISTING CONTROLLER
- ⊙ RELOCATED CONTROLLER
- — — PROPOSED PVC CONDUIT IN TRENCH, SIZE SPECIFIED

**MAST ARM SCHEDULE**

QUADRANT	ARM LENGTH	FOUNDATION DIAMETER	FOUNDATION DEPTH
SW	50'	36"	*20'

\*ASSUMED DEPTH. SHOULD BE VERIFIED BY ENGINEER WHEN SOIL BORINGS ARE SUBMITTED.

**STANDARDS**

720001	877001
805001	878001
814001	880006
814006	886001
873001	886006
720016	

**EXISTING SEQUENCE OF OPERATION**

PHASE	1	2	3	4	5	6	7	8
MOVEMENT	↶	↷				→		↓
CONCURRENT MOVEMENT PERMITTED	6	6	NOT USED	NOT USED	NOT USED	1 OR 2	NOT USED	NONE

**PROPOSED SEQUENCE OF OPERATION**

PHASE	1	2	3	4	5	6	7	8
MOVEMENT	↶	↷	↶			→		↓
CONCURRENT MOVEMENT PERMITTED	6	6	NONE	NOT USED	NOT USED	1 OR 2	NOT USED	NONE

**DETECTOR LOOP REQUIREMENTS AND CALCULATIONS FOR ILLINOIS ROUTE 159 AND HUNTWOOD ROAD**

LOOP	PHASE (I)	LOOP SIZE (FT)	REQUIRED # OF TURNS	CALCULATED INDUCTANCE MICROHENRIES (μH)	CALCULATED RESISTANCE OHMS (Ω)
EB LEFT TURN	8	6'X50' (Q)	3-6-3	798.5	1.88
EB RIGHT TURN	8	6'X50' (Q)	3-6-3	795.0	1.80

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

**MATCH LINE STA. 66+50.00**

