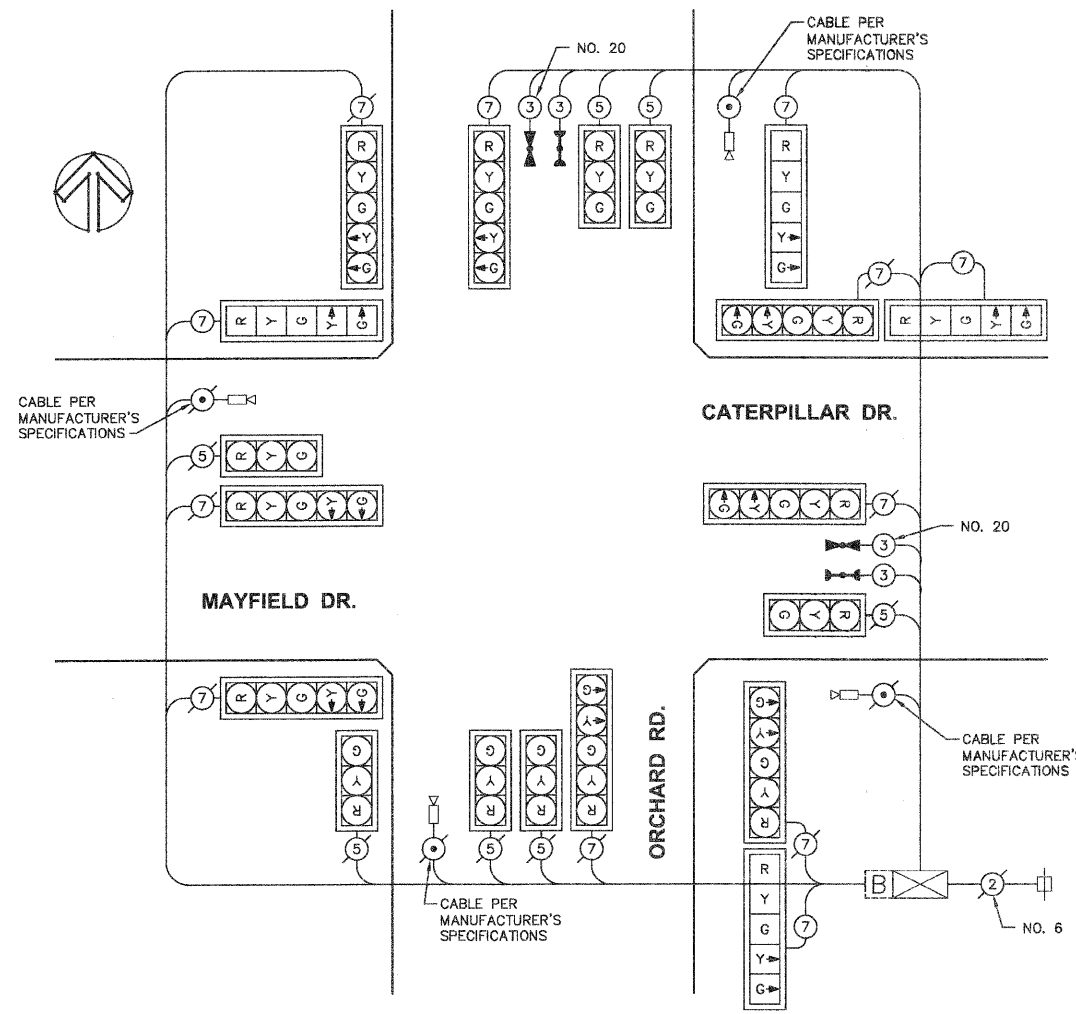


Engineering Enterprises, Inc.	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1680	05-00038-00-PV	KANE/KENDALL	130	82
	STA.	TO STA.			
FED. ROAD DIST. NO. -		ILLINOIS	FED. AID PROJECT		

**CABLE PLAN**

N.T.S.



**CABLE PLAN LEGEND**

- | EXISTING | PROPOSED |   |
|----------|----------|---|
|          |          | 8" (200mm) TRAFFIC SIGNAL SECTION   |
|          |          | 12" (300mm) TRAFFIC SIGNAL SECTION  |
|          |          | 12" (300mm) PEDESTRIAN SIGNAL SECTION   |
|          |          | 12" (300mm) PEDESTRIAN SIGNAL SECTION WITH COUNTDOWN TIMERS   |
|          |          | CONTROLLER CABINET  |
|          |          | SERVICE INSTALLATION  |
|          |          | TELEPHONE CONNECTION  |
|          |          | MAGNETIC DETECTOR   |
|          |          | EMERGENCY VEHICLE LIGHT DETECTOR  |
|          |          | CONFIRMATION BEACON   |
|          |          | VIDEO VEHICLE SENSOR  |
|          |          | PUSHBUTTON DETECTOR   |
|          |          | VEHICLE DETECTOR, INDUCTION LOOP  |
|          |          | DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
|          |          | SIGNAL FACE WITH BACKPLATE "P" INDICATES PROGRAMMED HEAD  |
|          |          | RAILROAD CONTROL CABINET  |
|          |          | ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"  |
|          |          | ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"   |
|          |          | GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H) OR CONTROLLER (C)   |
|          |          | GROUND ROD AT POST (P) OR MAST ARM POLE (MA)  |
|          |          | GROUND ROD AT ELECTRIC SERVICE INSTALLATION   |
|          |          | GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN)   |
|          |          | NO.62.5/125 MM 12F & SM 12F, FIBER OPTIC CABLE  |
|          |          | NO.62.5/125 MM 24F & SM 12F, FIBER OPTIC CABLE  |
|          |          | UNINTERRUPTIBLE POWER SUPPLY  |

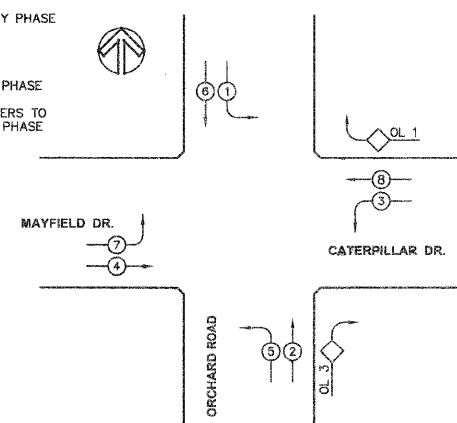
**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM DESCRIPTION
10	FOOT	CONDUIT IN TRENCH, 2" DIA., PVC
20	FOOT	CONDUIT IN TRENCH, 3" DIA., PVC
2	EACH	CONDUIT SPLICE
265	FOOT	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 10
34	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
411	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
532	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
1123	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
411	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 20 3/C, TWISTED, SHIELDED
8	FOOT	CONCRETE FOUNDATION, TYPE A
4	FOOT	CONCRETE FOUNDATION, TYPE C
15	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
2	EACH	DRILL EXISTING HANDHOLE
4	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
4	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC
2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER
1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
2	EACH	RELOCATE EXISTING TRAFFIC SIGNAL POST
1	EACH	RELOCATE EXISTING MAST ARM ASSEMBLY AND POLE
1	EACH	MODIFY EXISTING CONTROLLER
1290	FOOT	REMOVE ELECTRIC CABLE FROM CONDUIT
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
3	EACH	REMOVE EXISTING CONCRETE FOUNDATION

- LEGEND**
- DUAL ENTRY PHASE
  - SINGLE ENTRY PHASE
  - OVERLAP
  - PEDESTRIAN PHASE
  - NUMBER REFERS TO ASSOCIATED PHASE

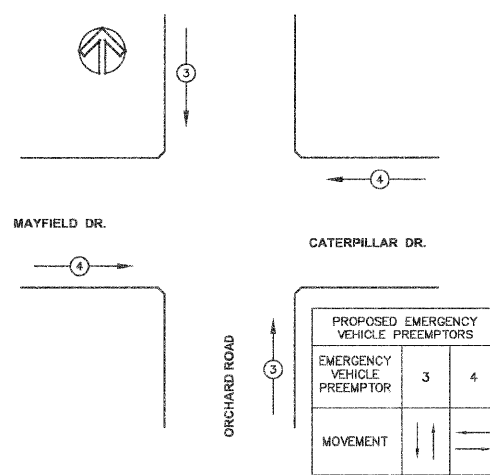
**CONTROLLER SEQUENCE**

N.T.S.



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

N.T.S.

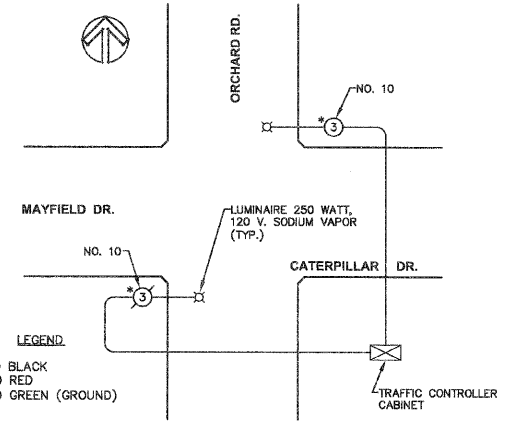


**PHASE DESIGNATION DIAGRAM**

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.1)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2 =
E - M ARM POLE	2 (1.0)	SIGNAL POST	2 (1.0)		(6.1+L-1.0) =
< 30' MA 30" DIA.	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
< 40' MA 30" DIA.	13.5 (4.1)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
< 40' MA 36" DIA.	11 (3.4)	ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
< 50' MA 36" DIA.	13 (4.0)	GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
> 50' MA 36" DIA.	15 (4.6)			POST MOUNTED	6 (1.8)

**LIGHTING CABLE PLAN**

N.T.S.



- LEGEND**
- - 
  -

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE		
		<b>ORCHARD ROAD AND CATERPILLAR DR./MAYFIELD DR. CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND SCHEDULE OF QUANTITIES</b>	
SCALE:		DRAWN BY: KKP	
DATE: 03-26-09		CHECKED BY: TWV	

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