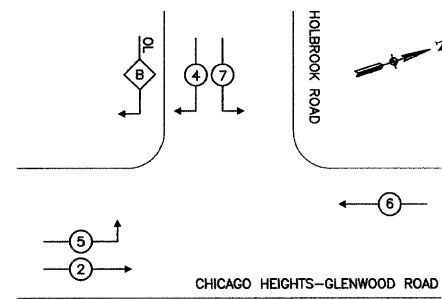


PROPOSED CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTIVE PHASE
B	= 4	+ 5

LEGEND

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

SCHEDULE OF QUANTITIES

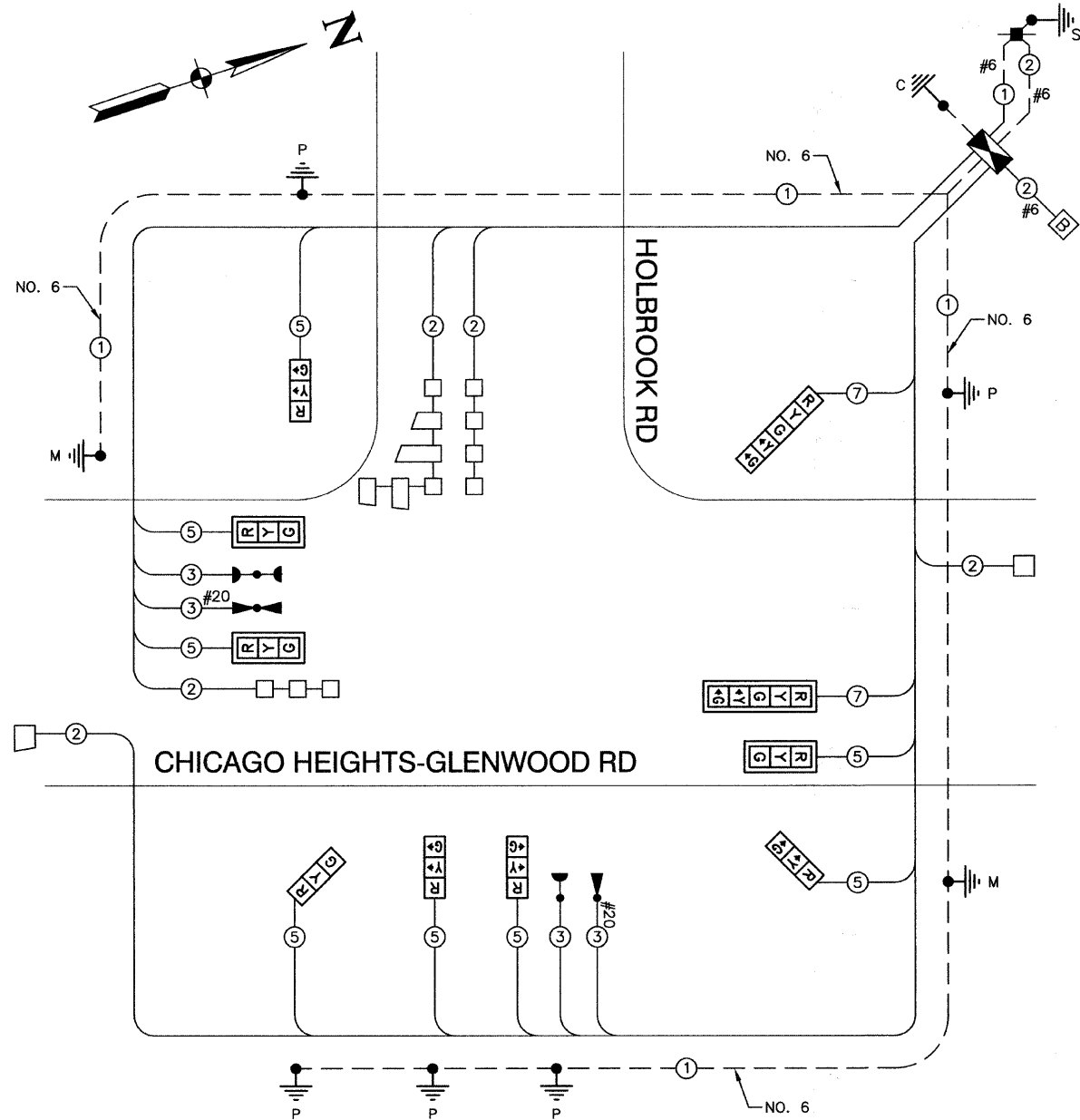
ITEM	UNIT	QUAN
SIGN PANEL, TYPE 1	SQ FT	18
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	591
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	227
CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	60
CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	34
CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	186
HANDHOLE	EACH	4
HEAVY-DUTY HANDHOLE	EACH	4
DOUBLE HANDHOLE	EACH	1
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	842
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	386
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1488
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	198
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1185
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	100
TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	3
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 24 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	29
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	15
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	15
SIGNAL HEAD, POLYCARBONATE, L.E.D., 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	5
SIGNAL HEAD, POLYCARBONATE, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	3
SIGNAL HEAD, POLYCARBONATE, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, POLYCARBONATE, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	1
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	4
INDUCTIVE LOOP DETECTOR	EACH	5
DETECTOR LOOP, TYPE 1	FOOT	700
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
UNINTERRUPTIBLE POWER SUPPLY AND TYPE III CABINET	EACH	1
SERVICE INSTALLATION, POLE MOUNT	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	464
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 20 3C	FOOT	386

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	WATTAGE	OPERATION	TOTAL WATTAGE
SIGNAL (RED)	10	135	0.50	85
(YELLOW)	10	135	0.25	63
(GREEN)	10	135	0.25	38
ARROW	4	135	0.10	5
PED. SIGNAL	90	25	1.00	225
CONTROLLER	1	100	1.00	100
ILLUM. SIGN	84	0.05		4.2
LUMINAIRE	250	0.25		62.5

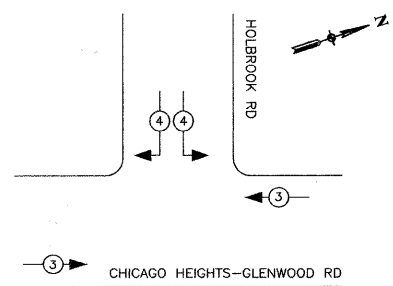
FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICLE	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
C - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2=
E - M. ARM POLE	10 (3.0)	SIGNAL POST	2 (0.5)		(6m+L-0.9m)=
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
36" (900mm)	15 (4.6)	ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

- NOTES:**
- ALL SIGNAL INDICATIONS SHALL BE LED.
 - STOP BARS ON CHICAGO HEIGHTS-GLENWOOD ROAD SHALL NOT BE INSTALLED UNTIL TRAFFIC SIGNAL IS OPERATIONAL.
 - ALL NEW GROUND RODS SHALL BE 3/4" X 10' LONG COPPER CLAD. THE COST SHALL BE INCIDENTAL TO THE COST OF INSTALLATION.
 - REFER TO TS-05 FOR IDOT DISTRICT ONE GROUNDING REQUIREMENTS.
 - IF THE CONTRACTOR REQUESTS AND OBTAINS PRIOR APPROVAL TO INSTALL "CONDUIT IN TRENCH", OF THE SIZE AND TYPE SPECIFIED, BY DIRECTIONAL BORING METHOD, NO ADDITIONAL COMPENSATION WILL BE ALLOWED AND THE WORK SHALL BE PAID FOR AS SHOWN ON THE CONTRACT PLANS.



PROPOSED CABLE PLAN

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS

EMERGENCY VEHICLE PREEMPTOR	MOVEMENT
3	4

- CABLE PLAN LEGEND**
- | EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|---|
| [Symbol] | [Symbol] | 8" TRAFFIC SIGNAL SECTION |
| [Symbol] | [Symbol] | 12" TRAFFIC SIGNAL SECTION |
| [Symbol] | [Symbol] | 12" PEDESTRIAN SIGNAL SECTION |
| [Symbol] | [Symbol] | 12" PEDESTRIAN SIGNAL SECTION |
| [Symbol] | [Symbol] | CONTROLLER CABINET |
| [Symbol] | [Symbol] | UNINTERRUPTIBLE POWER SUPPLY (BATTERY BACK-UP) |
| [Symbol] | [Symbol] | SERVICE INSTALLATION |
| [Symbol] | [Symbol] | TELEPHONE CONNECTION |
| [Symbol] | [Symbol] | MACHINE VISION PROCESSOR |
| [Symbol] | [Symbol] | EMERGENCY VEHICLE SYSTEM DETECTOR |
| [Symbol] | [Symbol] | CONFIRMATION BEACON |
| [Symbol] | [Symbol] | PUSHBUTTON DETECTOR |
| [Symbol] | [Symbol] | VEHICLE DETECTOR, INDUCTION LOOP |
| [Symbol] | [Symbol] | DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
| [Symbol] | [Symbol] | SIGNAL FACE WITH ALUMINUM LOUVERED FORMED BACKPLATE |
| [Symbol] | [Symbol] | "P" INDICATES PROGRAMMED HEAD |
| [Symbol] | [Symbol] | GROUND ROD AT CONTROLLER |
| [Symbol] | [Symbol] | GROUND ROD AT POST |
| [Symbol] | [Symbol] | GROUND ROD AT MAST ARM POLE |
| [Symbol] | [Symbol] | GROUND ROD AT ELECTRIC SERVICE INSTALLATION |
| [Symbol] | [Symbol] | GROUND CABLE SPLICE IN HANDHOLE |
| [Symbol] | [Symbol] | GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN) |
| [Symbol] | [Symbol] | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 12F |
| [Symbol] | [Symbol] | STREET LIGHT |

FILE NAME	USER NAME	DESIGNED	REVISED
05987-SIGNAL-CBLE-01 - CBLE01		BDB/JRA	
		CHECKED - PKB	REVISED -
		DRAWN - JRA	REVISED -
		CHECKED - MRS	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SCALE	SHEET NO.	OF	TOTAL SHEETS	STA.	TO STA.	F.A.J. RTI	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
N/A	24	OF	31			36/3	09-0050-00-TL	COOK	31	24

CHICAGO HEIGHTS-GLENWOOD ROAD AND HOLBROOK ROAD INTERSECTION IMPROVEMENTS TRAFFIC SIGNAL CABLE PLAN & SCHEDULE OF QUANTITIES

CONTRACT NO. 63320

FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT ARA-9003 (332)