## ELECTRICAL GENERAL NOTES

- 1. THE LOCATION OF ALL DETECTOR LOOPS SHALL BE APPROVED BY THE ENGINEER BEFORE ANY SLOTS ARE SAWED IN THE PAVEMENT THE NUMBER OF TURNS OF WIRE FOR INDUCTIVE LOOP DETECTOR INSTALLATION SHALL BE AS SHOWN ON THE PLANS.

  DETECTOR LOOPS SHALL BE PLACED IN THE PAVEMENT AFTER ROTOMILLING AND PRIOR TO INSTALLING THE BITUMINOUS SURFACE COURSE.
- 2. CALL DELAY SHALL NOT FUNCTION WHEN THE RELATED PHASES ARE IN THE GREEN MODE.
- 3. CALL CARRY-OVER SHALL FUNCTION ONLY WHEN THE RELATED PHASES ARE IN THE GREEN MODE.
- 4. ALL INDUCTION LOOP DETECTOR AMPLIFIERS SUPPLIED FOR THIS PROJECT SHALL BE RACK MOUNTED AND SHALL HAVE THE CAPACITY OF OPERATING WITH BOTH DELAY AND EXTENSION MODES ACTIVE, IF A TIME SETTING IS PROGRAMMED.
- 5. SLOPE HANDHOLE COVERS TO MATCH PROPOSED GRADE ELEVATIONS.
- 6. ALL TRAFFIC SIGNAL CABLES SHALL BE #14 AWG STRANDED COPPER UNLESS OTHERWISE SPECIFIED. TERMINAL ENDS SHALL HAVE CRIMPED-ON RING TONGUE CONNECTORS. NO TERMINAL ENDS FOR DECTOR LOOP LEAD-INS.
- 7. ALL PRESENCE LOOPS SHALL BE QUADRUPOLE LOOP WITH CALL DELAY.
- 8. ALL SIGNAL HEADS SHALL HAVE 12" SECTIONS. MOUNTING HARDWARE SHALL BE UNPAINTED ALLWINUM. ALL BOLTS, SCREWS, NUTS AND WASHERS SHALL BE STAINLESS STEEL. ANTI-SEIZE PASTE COMPOUND SHALL BE USED ON ALL MOUNTING HARDWARE FIELD
- 9. BACKPLATES SHALL BE ABS PLASTIC.
- 10. SIGNAL POSTS AND BASES AND CONTROLLER CABINET SHALL BE UNPAINTED ALUMINUM.
- THE LOCATION OF THE MAST ARM SUPPORTS SHALL BE APPROVED BY THE ENGINEER BEFORE FOUNDATIONS ARE CONSTRUCTED. MAST ARM POLES SHALL BE LOCATED A MINIMUM OF 10 FEET FROM THE EDGE OF PAVEMENT OR 2 FEET FROM THE EDGE OF SHOULDER, WHICHEVER DISTANCE IS GREATER. IN CURBED SECTIONS, THE MAST ARM POLES SHALL BE LOCATED A MINIMUM OF 5 FEET FROM THE FACE OF THE CURB. THESE DISTANCES ARE TO THE NEAR FACE OF THE MAST ARM POLE.
- 12. ALL UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY ATTEMPT TO CONSTRUCT ANY COMPONENT OF THIS TRAFFIC SIGNAL SYSTEM.
- 13. ESTIMATED DEPTHS OF CONCRETE FOUNDATIONS FOR THE MAST ARM SUPPORT POLES ARE AS FOLLOWS:

ACTUAL DEPTHS WILL BE SPECIFIED BY THE ENGINEER PRIOR TO CONSTRUCTION.

- 14. THE SOIL BORINGS ARE INCLUDED IN THE SPECIAL PROVISIONS.
- 15. CONTRACTOR IS REQUIRED TO OBTAIN A 9-1-1 ADDRESS FROM MADISON COUNTY PRIOR TO INSTALLING ELECTRICAL SERVICES.
- 16. ALL WORK ON/OR NEAR THE RAILROAD PROPERTY WILL BE COORDINATED WITH THE SIGNAL DEPARTMENT OF THE RAILROAD.
- 17. PRESENCE DETECTOR LOOPS LOCATED AT RAILROAD TRACK SHALL BE INSTALLED NO CLOSER THAN 10 FEET FROM THE NEAREST RAIL.
- 18. THE CONTRACTOR SHALL INSTALL FOUR (4) GROUND RODS (3/4" x 12' LONG) AND #6 AWG BARE COPPER CONDUCTORS IN THE CONTROLLER FOUNDATION AS PER SPECIAL PROVISIONS, "CONCRETE FOUNDATION, TYPE D".
- 19. THE CONTROLLER SHALL BE AN ECONOLITE ASC/2-2100 TO BE COMPATIBLE WITH THE EXISTING SYSTEM.
- 20. TRAFFIC SIGNALS SHALL BE PLACED SO AS NOT TO OBSTRUCT THE VIEW OF THE PROPOSED RAILROAD SIGNALS.
- 21. THE ILLINOIS COMMERCE COMMISSION MUST BE CONTACTED TO SCHEDULE THE REQUIRED JOINT EQUIPMENT INSPECTION AT THE VENDOR'S FACILITY.
- 22. THE ILLINOIS COMMERCE COMMISSION MUST BE CONTACTED TO SCHEDULE A FIELD INSPECTION OF THE SIGNALS AS THEY ARE ENERGIZED.
- 23. ONLY ONE CONDUCTOR FROM EACH PAIR SHALL BE UTILIZED FOR THE CONNECTION OF THE RAILROAD INTERCONNECT CABLE.

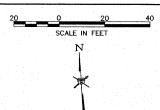
DETECTOR LOOP REQUIREMENTS AND CALCULATIONS							A HONS
	LOOP	PHASE	LOOP SIZE (FT.)	REQUIRED NO. OF TURNS	LEAD-IN LENGTH (FT.)	CALCULATED INDUCTANCE MICROHENRIES (-4H)	CALCULATED RESISTANCE OHMS (\(\Omega\))
1.	N.B. THRU CCO	3	6x6	7	580.5	493.7	3.3
2.	N.B. RIGHT CCO	3	6x6	6	568.5	380.0	3.2
3.	N.B. THRU CD	.3	6x50	3-6-3	306	853.3	3.1
4.	N.B. RIGHT CD	3	6x50	3-6-3	293	850.5	3.1
5.	N.B. THRU CD	3	6x40	3-6-3	270.5	695.5	2.6
6.	N.B. RIGHT CD	3	9x40	3-6-3	245.5	708.0	2.6
7.	E.B. THRU CD	2	6x50	3-6-3	133.5	815.4	2.3
8.	E.B. THRU CD	2	6x50	3-6-3	145.5	818.0	2.3
9.	E.B. LEFT CD	5	6x50	3-6-3	172.5	824.0	2.5
10.	E.B. THRU CCO	2	6x6	5	322.	239.6	1.9
11.	E.B. THRU CCO	2	6x6	5	334	242.2	2.0
12.	S.B. THRU CD	4	9x40	3-6-3	59	667.0	1.6
13.	W.B. THRU CD	6	6x50	3-6-3	133.5	815.4	2.3
14.	W.B. THRU CD	6	6x50	3-6-3	143.5	817.6	2.3
15.	W.B. LEFT CD	1	6x50	3-6-3	157.5	820.7	2.4
16.	W.B. THRU CCO	.6.	6x6	5	319	238.9	1.9
17.	W.B. THRU CCO	6	6x6	5	311	237.2	1.9

DETECTOR LOOP REQUIREMENTS AND CALCULATIONS

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

## TRAFFIC SIGNALS LEGEND

0 PROPOSED MAST ARM PROPOSED SERVICE INSTALLATION PROPOSED TRAFFIC SIGNAL CONTROLLER PROPOSED HANDHOLE PROPOSED DOUBLE HANDHOLE PROPOSED CONDUIT: "T" TRENCH, "P" PUSH GSC PROPOSED DETECTOR LOOP GALVANIZED STEEL CONDUIT PVCC POLYVINYL CHLORIDE CONDUIT PROPOSED STREET NAME SIGN/ TRAFFIC SIGN PROPOSED SIGNAL HEAD PROPOSED SIGNAL HEAD WITH BACKPLATE PROPOSED SIGNAL POST PROPOSED PEDESTRIAN PUSH BUTTON PROPOSED PEDESTRIAN SIGNAL HEAD BORING LOCATION AUTOMATIC R.R. GATE (BY OTHERS) PROPOSED ILLUMINATED SIGN PROPOSED RAILROAD CONTROLLER (BY OTHERS)



= 10' HORZ. 1" = 5' VERT.

Schwaab,

ઝ Morgan

Sheppard

CITY OF ALTON, ILLINOIS SECTION 06 - 00208 - 02 - RP CHRIS BELCHIK MEMORIAL EXPRESSWAY FIC SIGNAL PLANS - AT EAST BROADWAY

435

DWG, NO.
PH IN ELECTRICAL GENERAL NOTES.DWG
REF. BK. INDIANA AVE.
JOB NO. 406365.1
DSN. BY: DEG
DWN. BY: CAD
CHK. BY: DEG
DATE: OCTOBER, 2006

SCALE: 1" = 20'

SHEET 30 OF 61

FILL PIPE w/ CLASS SI CONCRETE 6" DIAMETER SCHEDULE 40 STEEL PIPE PAINT W/ 2 COATS EXTERIOR ENAMEL (SAFETY YELLOW) PROPOSED INCIDENTAL BITUMINOUS SURFACING CLASS SI CONCRETE TYPICAL GUARD POST NOT TO SCALE

PROPOSED
3" GALVANIZED

EXISTING 15" SANITARY SEWER

SECTION (A) - (A)

435

430

425

420