

60C14

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	584 Y-TS	COOK	17	1

D-91-133-07

INDEX OF SHEETS

- 1 TITLE SHEET
- 2 GENERAL NOTES AND SUMMARY OF QUANTITIES
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- 8 TEMPORARY CABLE PLAN & SEQUENCE OF OPERATION, ILL. RTE. 58 (GOLF ROAD) & GREENWOOD AVENUE
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- 16 INTERCONNECT SCHEMATIC AND SCHEDULE OF QUANTITIES
- 17 MAST ARM MOUNTED STREET NAME SIGNS

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

# PLANS FOR PROPOSED FEDERAL AID HIGHWAY

DISTRICT 1  
TRAFFIC SIGNAL MODERNIZATION

## ILLINOIS ROUTE 58 (GOLF ROAD) AT GREENWOOD AVENUE PROJECT: HSIP-0339(024)

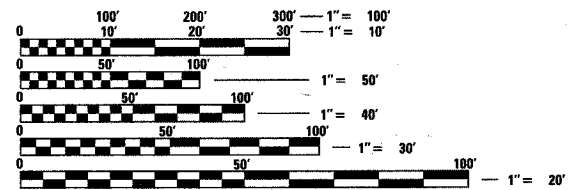
F.A.P. ROUTE 339  
SECTION 584 Y-TS  
COOK COUNTY



STANDARD DRAWINGS

701006-02	701011-01	701101-01	701301-02	702001-06
424001-04	720001	814001-01	814006-01	857001
862001	877001-02	877006-02	877011-02	878001-05
880001	880006	886001	886006	
701201-02	701316-03	701321-08	701406-04	701501-03
701502-01	701606-04	701601-04	701701-04	701801-03

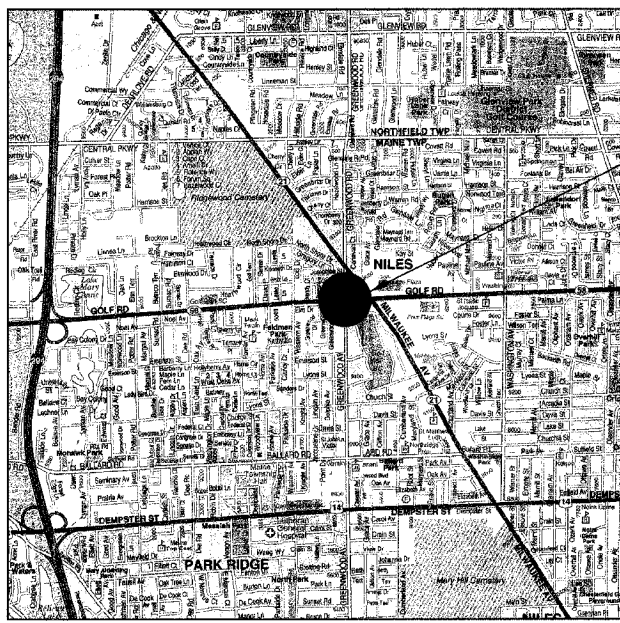
NOTE: STANDARD DRAWINGS REQUIRED (CIRCLED).



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

PREPARED BY: Steve Travia *March 27, 2007*  
TRAFFIC ENGINEER DATE

IMPROVEMENT LOCATED IN THE VILLAGE OF NILES AND UNINCORPORATED COOK COUNTY



LOCATION MAP

PROJECT LOCATION

FOR UNDERGROUND UTILITY LOCATIONS

(800) 892-0123

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED March 27, 2007

Dean M. O'Keefe  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

ENGINEER OF PROJECT DEVELOPMENT AND IMPLEMENTATION

May 11, 2007  
Eric S. Harrell  
ENGINEER OF DESIGN AND ENVIRONMENT

May 11, 2007  
Milton R. Sees, P.E.  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS**

BUREAU OF TRAFFIC: STEVE TRAVIA / DARYLE DREW 847-705-4420

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	584 Y-TS	COOK	17	2
STA.		TO STA.		
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		

FUNDING BREAKDOWN		90% FED. 10% STATE	90% FED. 10% STATE	100% VILLAGE			
LOCATION OF WORK		GREENWOOD AVENUE	INTERCONNECT	GREENWOOD AVENUE			
		URBAN	TRAFFIC SIGNALS	TRAFFIC SIGNALS			
CODE NO.	PAY ITEM	UNIT	TOTAL	Y031-1F	Y031-1F	Y031-3D	PREEMPTION
67100100	MOBILIZATION	L SUM	1	1			
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1	1			
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	1			
** 72000100	SIGN PANEL - TYPE 1	SQ FT	36.5	36.5			
** 72000200	SIGN PANEL - TYPE 2	SQ FT	25	25			
81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	899	747	152		
81000700	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	106	106			
81000800	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	12	12			
81001100	CONDUIT IN TRENCH, 5" DIA., GALVANIZED STEEL	FOOT	10	10			
81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	513	458	55		
81018900	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	357	357			
81400100	HANDHOLE	EACH	6	6			
81400200	HEAVY-DUTY HANDHOLE	EACH	4	4			
81400300	DOUBLE HANDHOLE	EACH	2	2			
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	1022	870	152		
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	2		2		
85700205	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET (SPECIAL)	EACH	1	1			
86400100	TRANSCEIVER - FIBER OPTIC	EACH	1	1			
* 87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	570				570
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	2648	2648			
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1084	1084			
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN NO. 14 1 PAIR	FOOT	2406	2406			
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	141	141			
87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL, 14 FT.	EACH	2	2			
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL, 16 FT.	EACH	1	1			
87700160	STEEL MAST ARM ASSEMBLY AND POLE, 24 FT.	EACH	1	1			
87700190	STEEL MAST ARM ASSEMBLY AND POLE, 30 FT.	EACH	1	1			
87700300	STEEL MAST ARM ASSEMBLY AND POLE, 52 FT.	EACH	1	1			
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	12	12			
87800150	CONCRETE FOUNDATION, TYPE C	FOOT	4	4			
87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	30	30			
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	15	15			
87900200	DRILL EXISTING HANDHOLE	EACH	1		1		
88030020	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	7	7			
88030110	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	3	3			
88030210	SIGNAL HEAD, L.E.D., 2-FACE, 3 SECTION, BRACKET MOUNTED	EACH	2	2			
88030220	SIGNAL HEAD, L.E.D., 2-FACE, 5 SECTION, BRACKET MOUNTED	EACH	1	1			
88030240	SIGNAL HEAD, L.E.D., 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	1	1			
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	10	10			
88500100	INDUCTIVE LOOP DETECTOR	EACH	9	9			
88600100	DETECTOR LOOP, TYPE I	FOOT	654	654			
* 88700200	LIGHT DETECTOR	EACH	3				3
* 88700300	LIGHT DETECTOR AMPLIFIER	EACH	1				1
89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1	1			
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1	1			
89502380	REMOVE EXISTING HANDHOLE	EACH	11	11			
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	9	9			
X0322925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	2469		2469		
X8050015	SERVICE INSTALLATION, POLE MOUNT	EACH	1	1			
X8620020	UNINTERRUPTIBLE POWER SUPPLY	EACH	1	1			
X8710020	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	2521		2521		
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	695	695			
* X8730250	ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED, SHIELDED	FOOT	570				570
X0325705	RE OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2	EACH	1		1		
X0325737	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1	1			
87700400	STEEL MAST ARM ASSEMBLY AND POLE, 60 FT.	EACH	1	1			
X0325742	CONCRETE FOUNDATION, TYPE E (SPECIAL)	FOOT	15	15			

\* 100% COST TO VILLAGE OF NILES  
 \*\* SPECIALTY ITEMS

GENERAL NOTES

- BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 1-800-892-0123 FOR FIELD LOCATIONS OF BURIED UTILITIES (48 HOURS NOTIFICATION REQUIRED).
- THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES AND GOVERNMENT AGENCIES.
- THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN CONSENT FROM THE DEPARTMENT.
- ALL DIMENSIONS, INCLUDING RADII, ARE GIVEN TO THE CENTERLINE UNLESS OTHERWISE NOTED.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL TWO (2) WEIGHTED SAND BAGS ON EACH TYPE I OR II BARRICADE USED, ONE (1) SAND BAG ACROSS EACH BOTTOM RAIL. TYPE III BARRICADES SHALL HAVE FOUR (4) WEIGHTED SAND BAGS.
- PAY ITEMS IN THE SUMMARY OF QUANTITIES HAVE BEEN ESTIMATED. IF, IN THE ENGINEER'S OPINION, THE WORK IS NOT REQUIRED, THE ITEM WILL BE DEDUCTED FROM THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- ALL EXISTING LANDSCAPING DISTURBED BY THE CONSTRUCTION OPERATIONS SHALL BE RESTORED, AS DIRECTED BY THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

**RESTORATION OF WORK AREA.** RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

NOTE:  
 THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

REVISIONS	
NAME	DATE

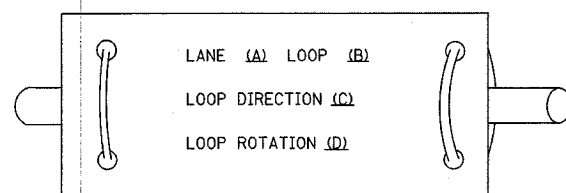
ILLINOIS DEPARTMENT OF TRANSPORTATION  
 SUMMARY OF QUANTITIES AND  
 GENERAL NOTES  
 ILL. RTE 58 (GOLF ROAD)  
 SCALE: NOT TO SCALE  
 DATE: 3/16/2007  
 DRAWN BY: CEC  
 DESIGNED BY: BRD/KEH  
 CHECKED BY: JJE

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	584 Y-TS	COOK	17	3
STA.		TO STA.		
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		

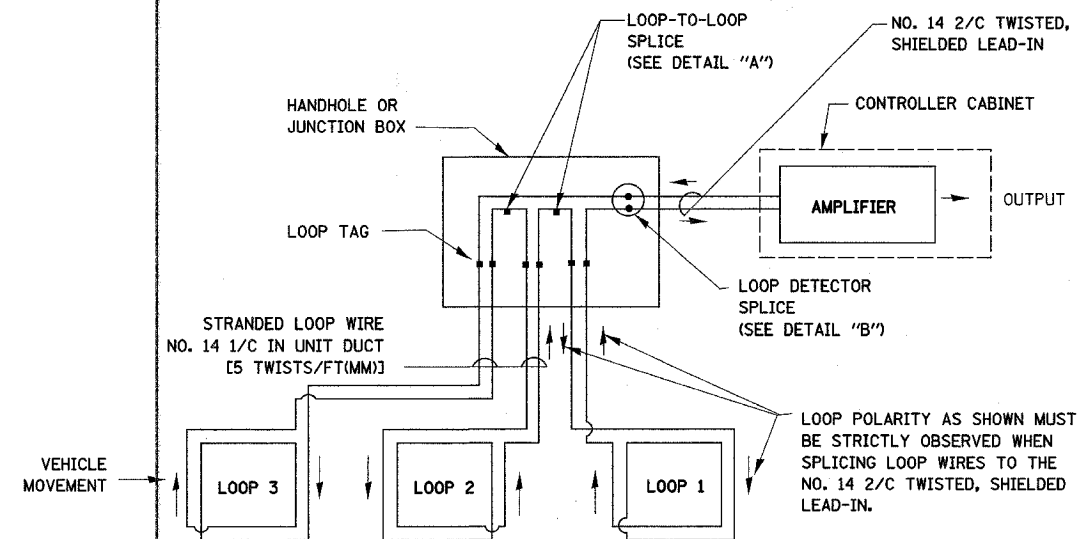
**LOOP DETECTOR NOTES**

- EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). UNIT DUCT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
- THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
- EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
- ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
- IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVESHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
- LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
- PERFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

**LOOP LEAD-IN CABLE TAG**

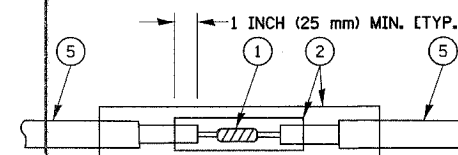


- LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

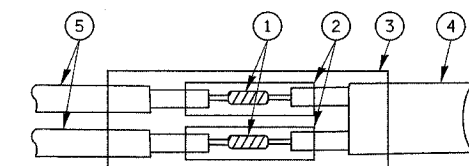


**DETECTOR LOOP WIRING SCHEMATIC**

- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE, THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.



**DETAIL "A"  
LOOP-TO-LOOP SPLICE**



**DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE**

**LOOP DETECTOR SPLICE**

- WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.
- WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- NO. 14 2/C TWISTED, SHIELDED CABLE.
- LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
DISTRICT ONE  
STANDARD TRAFFIC SIGNAL  
DESIGN DETAILS

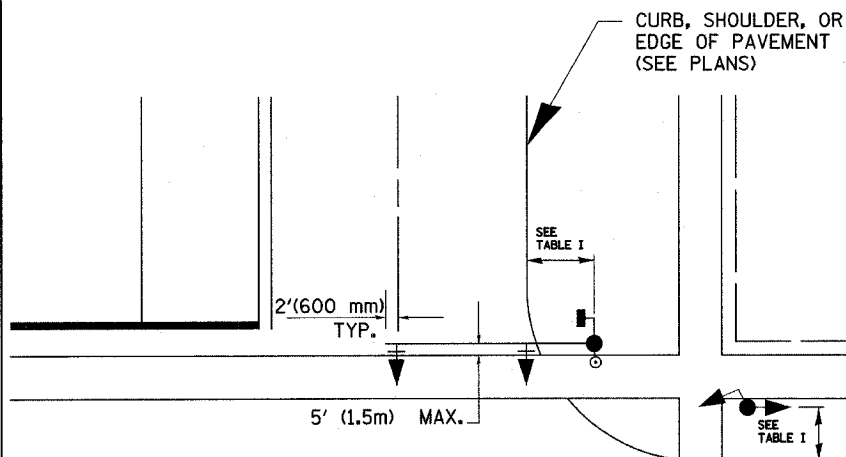
SCALE: VERT. NONE  
HORIZ. NONE  
DATE 1-01-02

DRAWN BY: RWP  
DESIGNED BY: DAD  
CHECKED BY: DAZ  
SHEET 1 OF 4

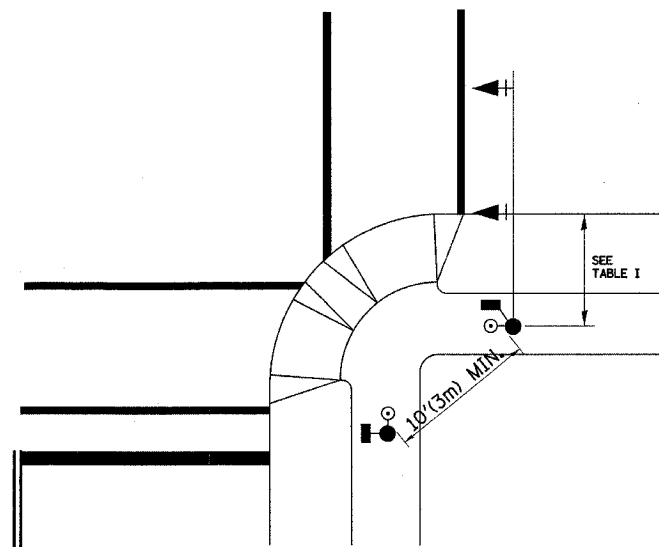
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	584 Y-TS	COOK	17	4
STA.		TO STA.		
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		

**TRAFFIC SIGNAL MAST ARM AND POST**

MAST ARM MOUNTED SIGNAL IN PROPOSED & FUTURE SIDEWALK AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNAL AND PUSHBUTTON DETECTOR



**PEDESTRIAN SIGNAL PUSHBUTTON**



RECOMMENDED PUSHBUTTON LOCATIONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHALL BE IN ACCORDANCE WITH THE CURRENT MUTCD (SEE NOTE 1). TO MEET MUTCD REQUIREMENTS, PEDESTRIAN SIGNAL PUSHBUTTONS MAY HAVE TO BE MOUNTED ON A SEPARATE POST.

**NOTES:**

- AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS WITH PEDESTRIAN ACTUATION, EACH PUSHBUTTON SHALL ACTIVATE BOTH THE WALK INTERVAL AND THE ACCESSIBLE PEDESTRIAN SIGNALS.  
  
AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS, PUSHBUTTONS SHOULD CLEARLY INDICATE WHICH CROSSWALK SIGNAL IS ACTUATED BY EACH PUSHBUTTON. PUSHBUTTONS AND TACTILE ARROWS SHOULD HAVE HIGH VISUAL CONTRAST (SEE THE DEPARTMENT OF JUSTICE'S AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN, 1991). TACTILE ARROWS SHOULD POINT IN THE SAME DIRECTION AS THE ASSOCIATED CROSSWALK. AT CORNERS OF SIGNALIZED LOCATIONS WITH ACCESSIBLE PEDESTRIAN SIGNALS WHERE PEDESTRIAN PUSHBUTTONS ARE PROVIDED, THE PUSHBUTTONS SHOULD BE SEPARATED BY THE DISTANCE OF AT LEAST 10 FT (3m). THIS ENABLES PEDESTRIANS WHO HAVE VISUAL DISABILITIES TO DISTINGUISH AND LOCATE THE APPROPRIATE PUSHBUTTON.  
  
PUSHBUTTONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHOULD BE LOCATED AS FOLLOWS:  
  - A: ADJACENT TO A LEVEL ALL-WEATHER SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR, AND WHERE THERE IS AN ALL WEATHER SURFACE, WHEELCHAIR ACCESSIBLE ROUTE TO THE RAMP.
  - B: WITHIN 5 FT (1.5m) OF THE CROSSWALK EXTENDED.
  - C: WITHIN 10 FT (3m) OF THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
  - D: PARALLEL TO THE CROSSWALK TO BE USED (SEE MUTCD FIGURE 4E-2).
  - E: NORMAL PEDESTRIAN PUSHBUTTON MOUNTING HEIGHT SHOULD BE 3.5 FT (1.05m) ABOVE ADJACENT SIDEWALK
- PEDESTRIAN SIGNAL FACES SHALL BE MOUNTED WITH THE BOTTOM OF THE HOUSING NOT LESS THAN 8 FT (2.4m) NOR MORE THAN 10 FT (3.0m) ABOVE THE SIDEWALK LEVEL AND SO THERE IS A PEDESTRIAN INDICATION IN THE LINE OF PEDESTRIANS' VISION WHICH PERTAINS TO THE CROSSWALK BEING USED.
- THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, NOT MOUNTED OVER A ROADWAY, SHALL BE AT LEAST 10 FT (3.0m) BUT NOT MORE THAN 15 FT (4.5m) ABOVE THE SIDEWALK OR, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALKS EXIST.
- THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, MOUNTED OVER A ROADWAY, SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001 AND 877006. (16 FT (5m) MIN., 18 FT (5.5m) MAX., FROM HIGHEST POINT OF PAVEMENT)

**PEDESTRIAN SIGNAL POST**

PEDESTRIAN SIGNAL HEAD AND PEDESTRIAN PUSHBUTTON DETECTOR LOCATION

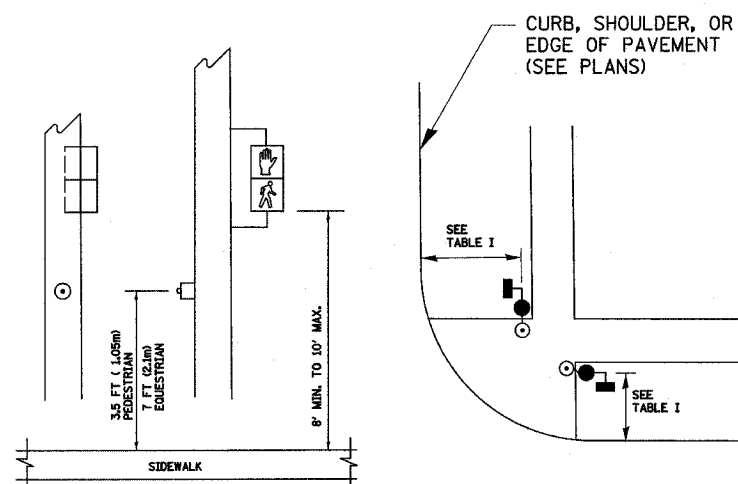


TABLE I

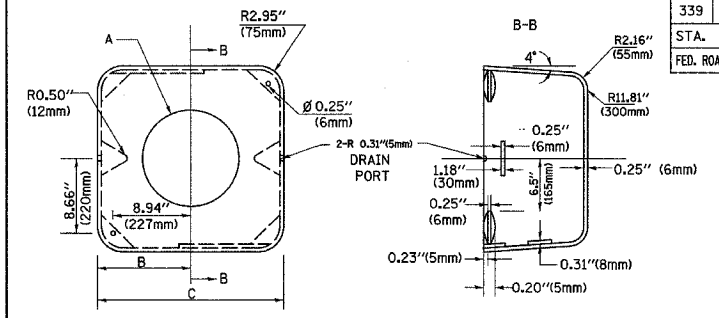
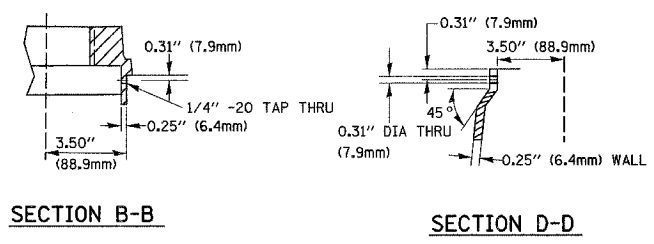
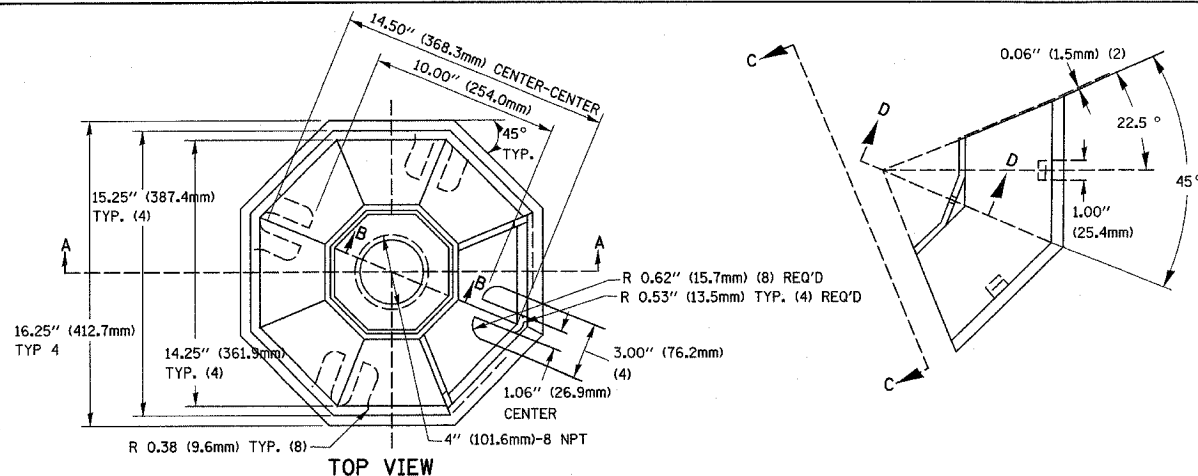
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MIN. DIST. FROM BACK OF CURB)	SHOULDER/NON-CURBED AREA (MIN. DIST. FROM EDGE OF PAVEMENT)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN PUSHBUTTON	SEE NOTE 1	SEE NOTE 1

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
  
DISTRICT 1  
STANDARD TRAFFIC SIGNAL  
DESIGN DETAILS  
  
SCALE: VERT. NONE  
HORIZ. NONE  
DATE 1-01-02  
  
DRAWN BY: RWP  
DESIGNED BY: DAD  
CHECKED BY: DAZ  
SHEET 2 OF 4  
  
TS05

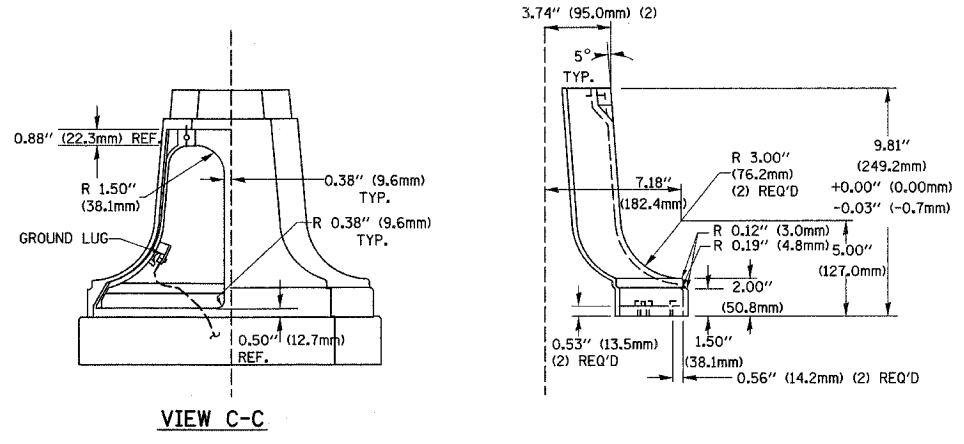
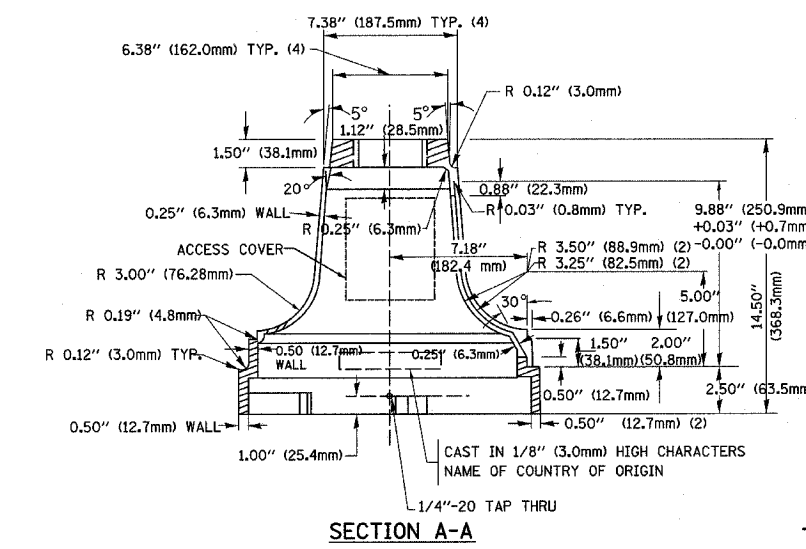


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	584 Y-TS	COOK	17	6
STA.		TO STA.		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

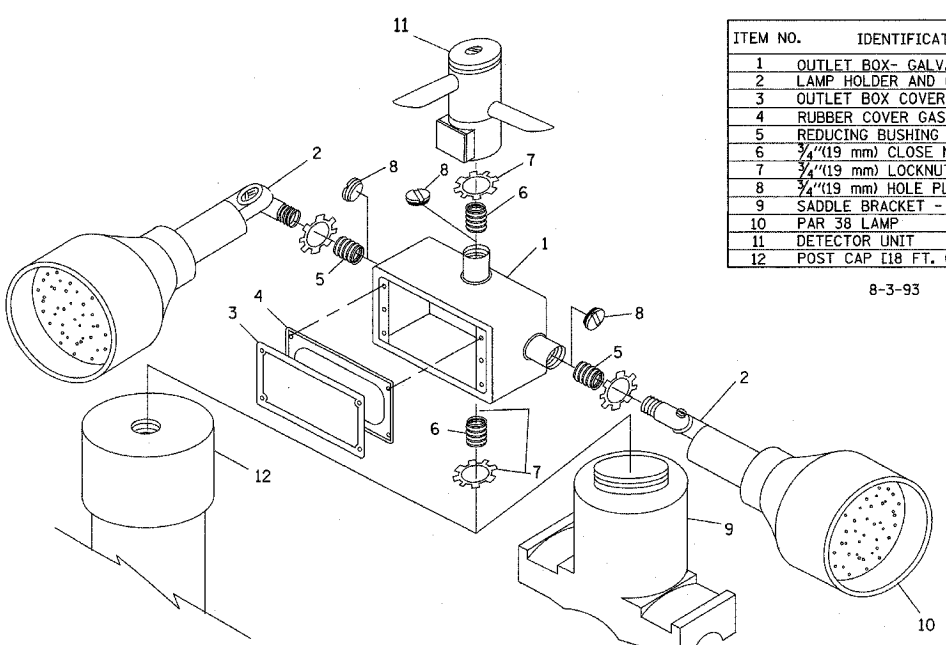
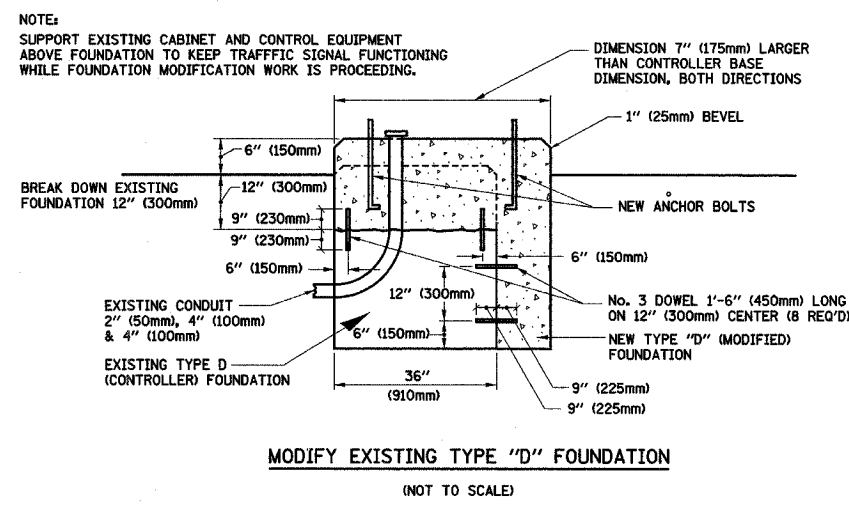


TYPE	A	B	C	HEIGHT	WEIGHT
I	Ø 10.125" (257mm)	9.5" (241mm)	19" (483mm)	12" (300mm)	24kg
II	Ø 11.125" (283mm)	10.75" (273mm)	21.5" (546mm)	12" (300mm)	26kg

**MATERIALS**  
- ASTM A48 CLASS 30 GREY IRON  
- ASTM A123 HOT DIPPED GALVANIZED



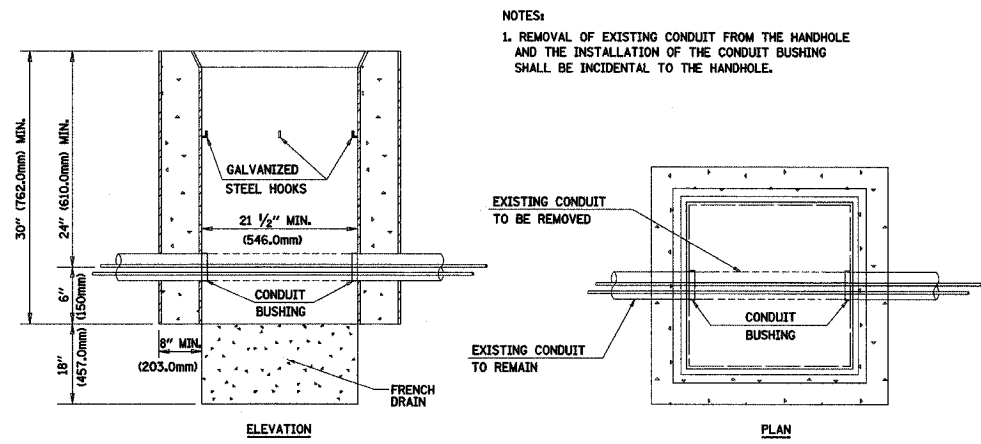
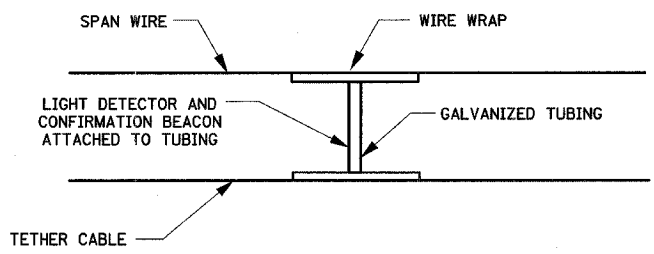
**TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A**



ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4" (19 mm) CLOSE NIPPLE
7	3/4" (19 mm) LOCKNUT
8	3/4" (19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	PAR 38 LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

8-3-93

- NOTES:**
- ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
  - ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT  
ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT  
ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
  - WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4" (19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**DISTRICT 1**

**STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: VERT. NONE  
HORIZ. NONE  
DATE: 01-01-02

DRAWN BY: RWP  
DESIGNED BY: DAD  
CHECKED BY: DAZ  
SHEET 4 OF 4



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	584 Y-TS	COOK	17	7

STA. TO STA.  
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT

**NOTES FOR TEMPORARY TRAFFIC SIGNALS**

- ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
- ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS1 OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
- ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12". HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
- ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
- ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
- THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.

**EXISTING EQUIPMENT TO BE REMOVED LEGEND**

- EXISTING SIGNAL HEAD TO BE REMOVED
- EXISTING SERVICE INSTALLATION TO BE REMOVED
- EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- EXISTING ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED
- EXISTING CONTROLLER TO BE REMOVED
- EXISTING HANDHOLE TO BE REMOVED
- EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED
- EXISTING PEDESTRIAN PUSH BUTTON TO BE REMOVED
- EMERGENCY VEHICLE LIGHT DETECTOR TO BE REMOVED
- CONFIRMATION BEACON TO BE REMOVED
- EXISTING HEAVY-DUTY HANDHOLE TO BE REMOVED
- EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED
- EXISTING ILLUMINATED SIGN TO BE RELOCATED

**TEMPORARY TRAFFIC SIGNAL LEGEND**

- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED ORIGINAL LOCATION
- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY LOCATION
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM
- TEMPORARY CONTROLLER CABINET
- TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
- TEMPORARY PEDESTRIAN PUSHBUTTON DETECTOR
- VIDEO VEHICLE DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- COMMON TRENCH
- UNIT DUCT
- G.S. CONDUIT IN TRENCH OR PUSHED
- HANDHOLE
- HEAVY-DUTY HANDHOLE

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL REMAIN THE PROPERTY OF THE STATE AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE STATE'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S MAIN FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

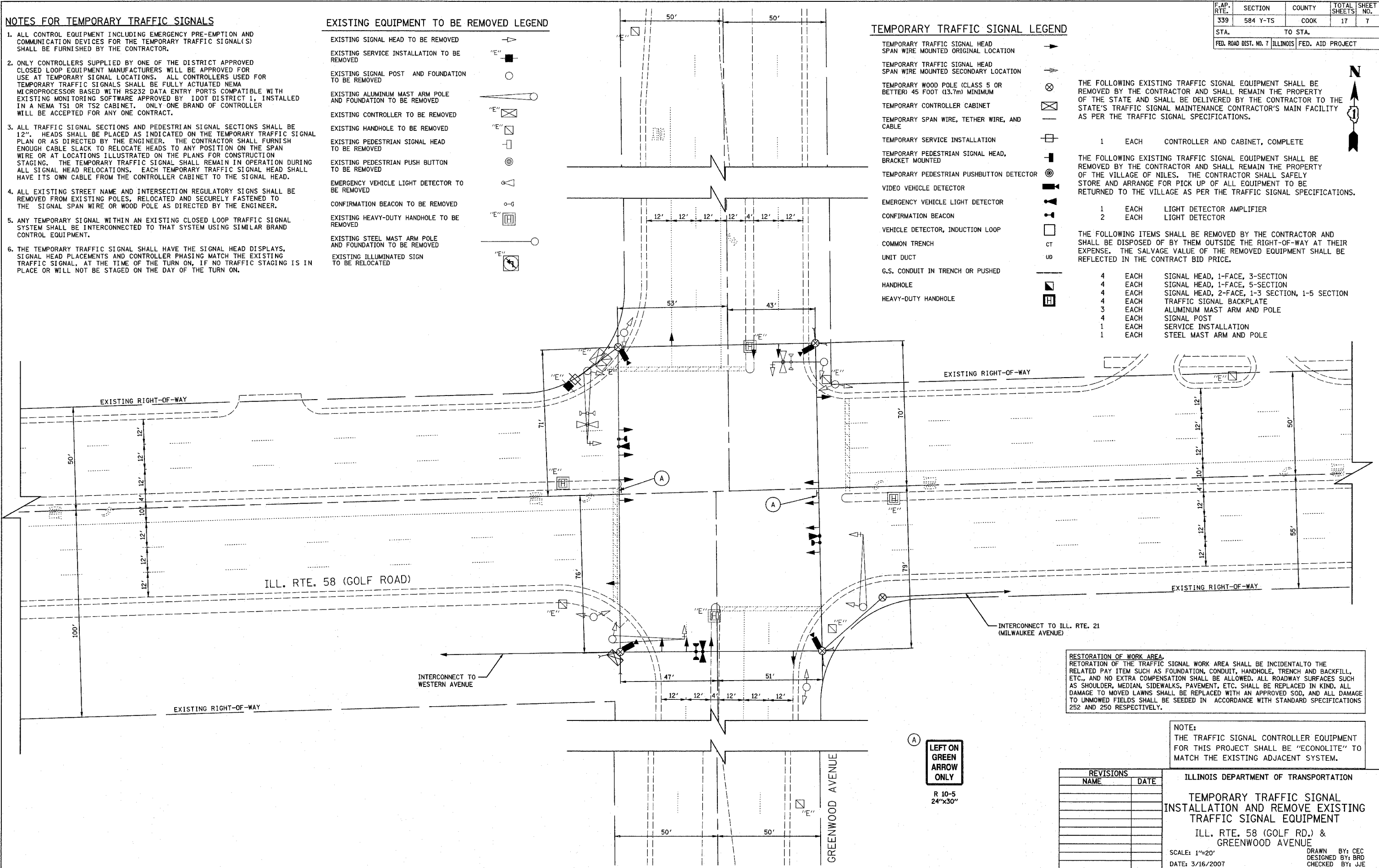
1 EACH CONTROLLER AND CABINET, COMPLETE

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL REMAIN THE PROPERTY OF THE VILLAGE OF NILES. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OF ALL EQUIPMENT TO BE RETURNED TO THE VILLAGE AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

1 EACH LIGHT DETECTOR AMPLIFIER  
2 EACH LIGHT DETECTOR

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

4 EACH SIGNAL HEAD, 1-FACE, 3-SECTION  
4 EACH SIGNAL HEAD, 1-FACE, 5-SECTION  
4 EACH SIGNAL HEAD, 2-FACE, 1-3 SECTION, 1-5 SECTION  
4 EACH TRAFFIC SIGNAL BACKPLATE  
3 EACH ALUMINUM MAST ARM AND POLE  
4 EACH SIGNAL POST  
1 EACH SERVICE INSTALLATION  
1 EACH STEEL MAST ARM AND POLE



**RESTORATION OF WORK AREA:**  
RETORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDER, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOVED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

**NOTE:**  
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

**A**  
**LEFT ON GREEN ARROW ONLY**  
R 10-5  
24"x30"

REVISIONS	
NAME	DATE

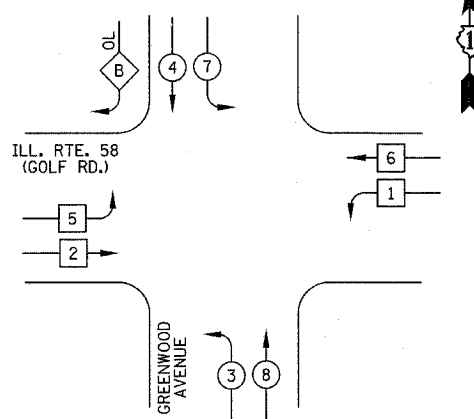
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT**  
ILL. RTE. 58 (GOLF RD.) & GREENWOOD AVENUE  
SCALE: 1"=20'  
DATE: 3/16/2007  
DRAWN BY: CEC  
DESIGNED BY: BRD  
CHECKED BY: JJE

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	584 Y-TS	COOK	17	8
STA.		TO STA.		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

TEMPORARY CABLE DIAGRAM LEGEND

- R TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION 12" (300 mm)
- X TEMPORARY CONTROLLER CABINET
- TEMPORARY SERVICE INSTALLATION
- ⑤ INDICATES NUMBER OF CONDUCTORS IN CABLE. ALL CONDUCTORS TO BE NUMBER 14 AWG WIRE UNLESS OTHERWISE NOTED.
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- PEDESTRIAN PUSHBUTTON DETECTOR
- VEHICLE DETECTOR, INDUCTION LOOP
- 12" (300mm) PEDESTRIAN SIGNAL SECTION
- VIDEO VEHICLE DETECTOR

TEMPORARY CONTROLLER SEQUENCE



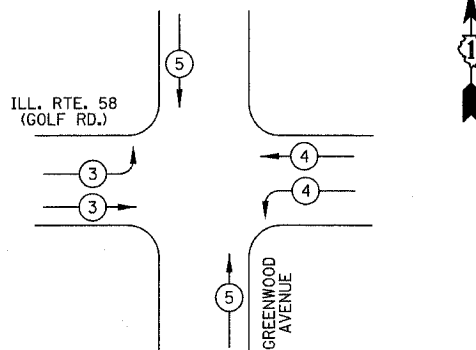
LEGEND

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

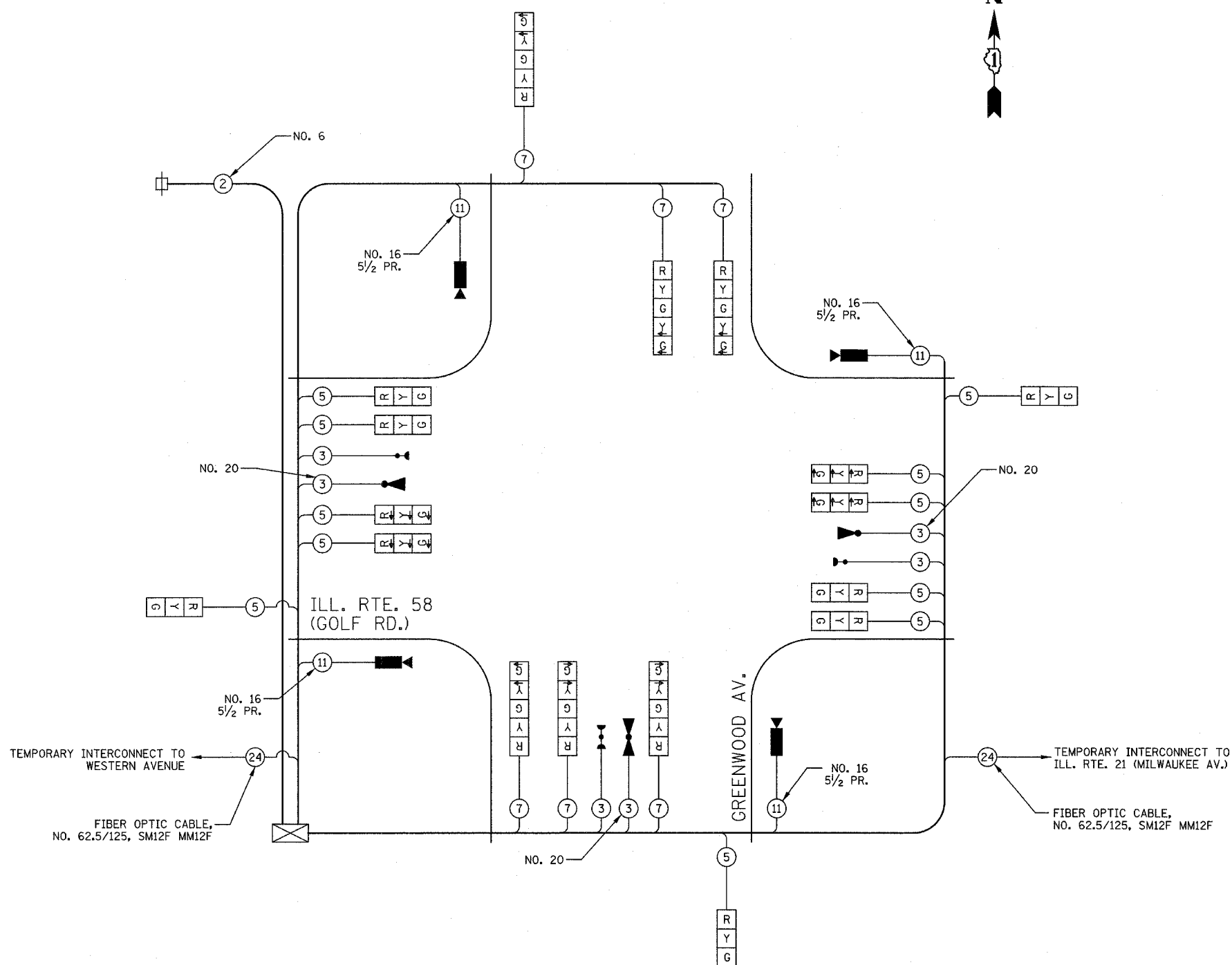
PHASE DESIGNATION DIAGRAM

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
B	= 4	+ 5

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT			



TEMPORARY CABLE PLAN  
NOT TO SCALE

NOTE:  
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	LED	% OPERATION	
SIGNAL (RED)	17	17		0.50	145
(YELLOW)	17	25		0.25	106
(GREEN)	17	15		0.25	64
ARROW	12	12		0.10	14
CONTROLLER	1	100		1.00	100
VIDEO SYSTEMS	1	150		1.00	150
FLASHER				0.50	
TOTAL =					579

ENERGY COSTS TO: ILLINOIS DEPARTMENT OF TRANSPORTATION  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY: CONTACT: CINDY ANTHONY  
PHONE: (847) 816-5322  
COMPANY: COM ED

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN  
ILL. RTE. 58 (GOLF ROAD) &  
GREENWOOD AVENUE

SCALE: NOT TO SCALE  
DATE: 3/16/2007

DRAWN BY: CEC  
DESIGNED BY: BRD  
CHECKED BY: JJE







F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	584 Y-TS	COOK	17	11
STA.		TO STA.		
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT

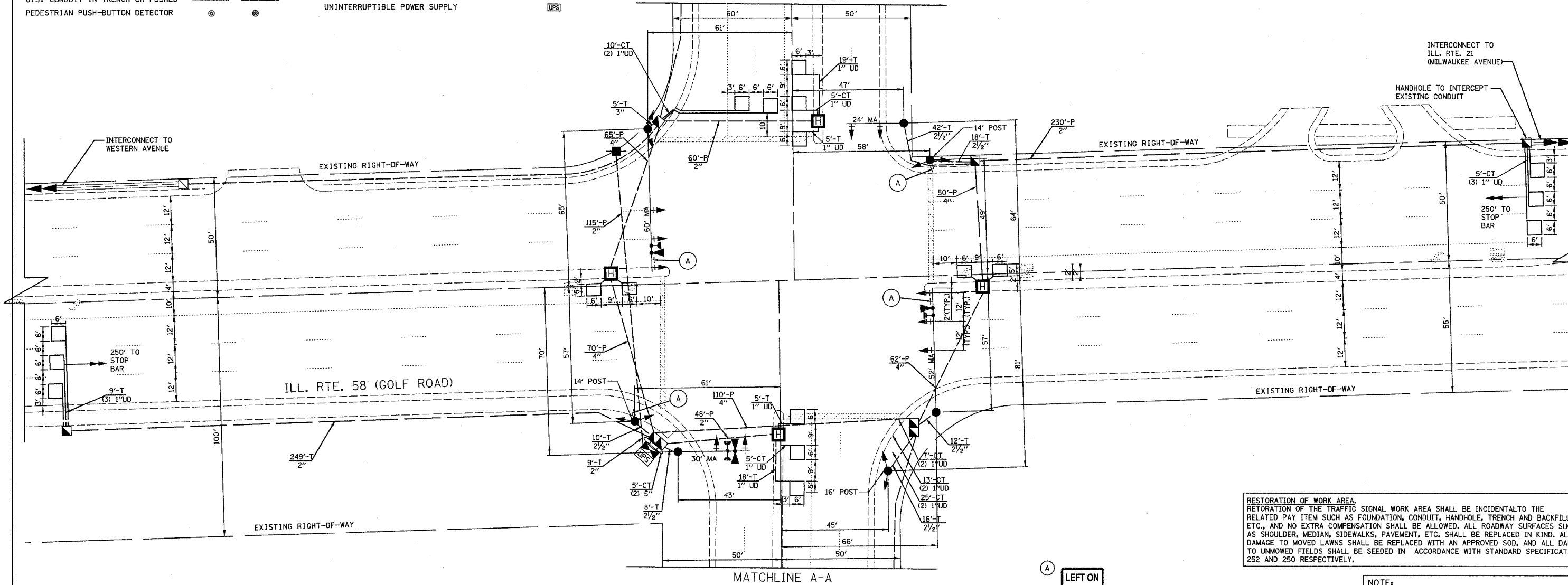
**TRAFFIC SIGNAL LEGEND**

CONTROLLER		EXISTING		PROPOSED	DETECTOR LOOP		EXISTING		PROPOSED
SERVICE INSTALLATION		EXISTING		PROPOSED	CAST IRON JUNCTION BOX		EXISTING		PROPOSED
SIGNAL HEAD		EXISTING		PROPOSED	EMERGENCY VEHICLE SYSTEM DETECTOR		EXISTING		PROPOSED
SIGNAL HEAD WITH BACKPLATE		EXISTING		PROPOSED	CONFIRMATION BEACON		EXISTING		PROPOSED
SIGNAL HEAD, PEDESTRIAN		EXISTING		PROPOSED	SIGNAL HEAD PROGRAMMED		EXISTING		PROPOSED
SIGNAL POST		EXISTING		PROPOSED	CONDUIT SPLICE		EXISTING		PROPOSED
MAST ARM ASSEMBLY AND POLE, STEEL		EXISTING		PROPOSED	WOOD POLE		EXISTING		PROPOSED
MAST ARM ASSEMBLY AND POLE, ALUMINUM		EXISTING		PROPOSED	RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		EXISTING		PROPOSED
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL		EXISTING		PROPOSED	VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		EXISTING		PROPOSED
COMMON TRENCH		EXISTING		PROPOSED	RAILROAD CONTROLLER		EXISTING		PROPOSED
UNIT DUCT		EXISTING		PROPOSED	ILLUMINATED SIGN, FIBER OPTIC NO LEFT TURN		EXISTING		PROPOSED
HANDHOLE		EXISTING		PROPOSED	ILLUMINATED SIGN, FIBER OPTIC NO RIGHT TURN		EXISTING		PROPOSED
HEAVY-DUTY HANDHOLE		EXISTING		PROPOSED	TELEPHONE CONNECTION		EXISTING		PROPOSED
DOUBLE HANDHOLE		EXISTING		PROPOSED	UNINTERRUPTIBLE POWER SUPPLY		EXISTING		PROPOSED
G.S. CONDUIT IN TRENCH OR PUSHED		EXISTING		PROPOSED					
PEDESTRIAN PUSH-BUTTON DETECTOR		EXISTING		PROPOSED					



**GREENWOOD AVENUE  
MATCHLINE B-B**

**MATCHLINE A-A**



**RESTORATION OF WORK AREA.**  
 RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDER, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOVED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

**A**  
**LEFT ON GREEN ARROW ONLY**

R 10-5  
 24"x30"  
 (TYP.) SIGN PANEL TYPE 1

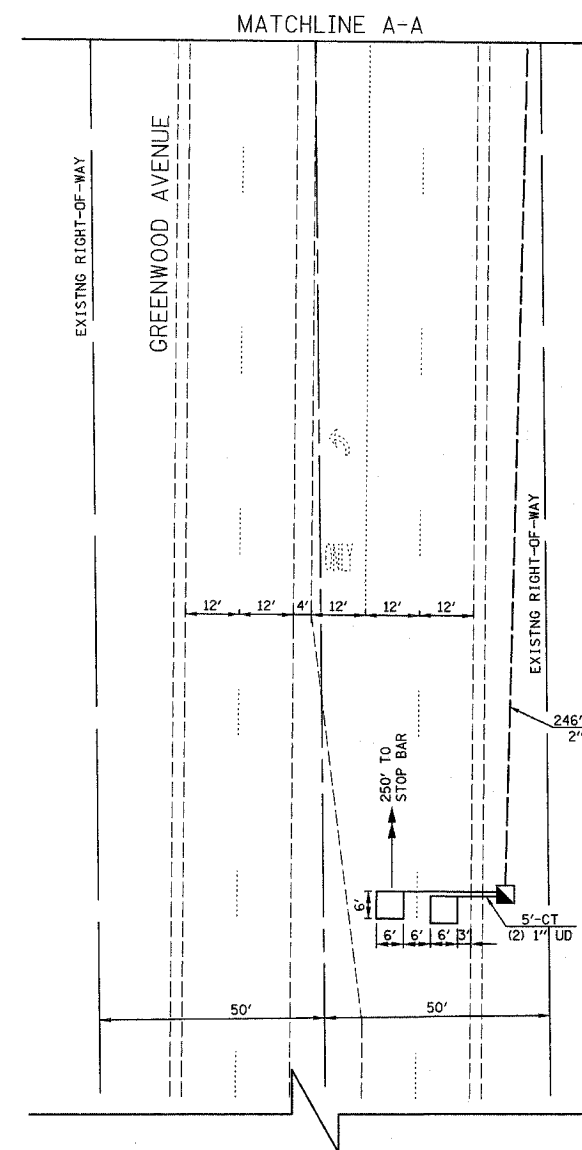
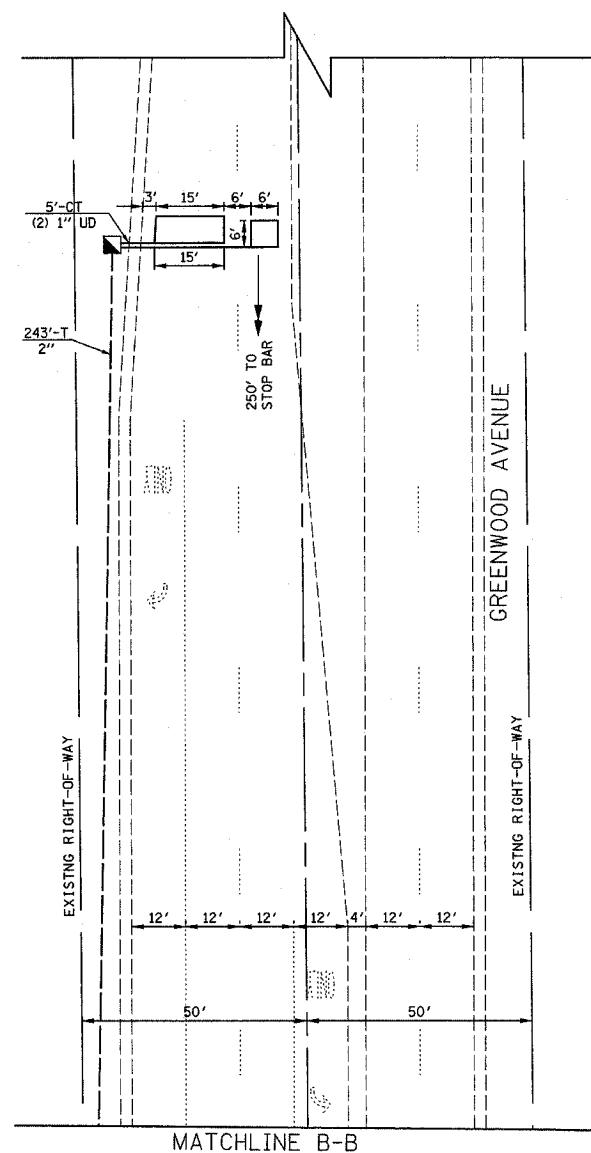
**NOTE:**  
 THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**TRAFFIC SIGNAL INSTALLATION PLAN**  
 ILL. RTE. 58 (GOLF RD.) &  
 GREENWOOD AVENUE  
 SHEET 1 OF 2

SCALE: 1"=20'  
 DATE: 3/16/2007  
 DRAWN BY: CEC  
 DESIGNED BY: BRO  
 CHECKED BY: JJE

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	584 Y-TS	COOK	17	12
STA.		TO STA.		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	



**TRAFFIC SIGNAL LEGEND**

	EXISTING	PROPOSED
CONTROLLER		
SERVICE INSTALLATION		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD, PEDESTRIAN		
SIGNAL POST		
MAST ARM ASSEMBLY AND POLE, STEEL		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL		
COMMON TRENCH		CT
UNIT DUCT		UD
HANDHOLE		
HEAVY-DUTY HANDHOLE		
DOUBLE HANDHOLE		
G.S. CONDUIT IN TRENCH OR PUSHED		
PEDESTRIAN PUSH-BUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD PROGRAMMED		
CONDUIT SPLICE		
WOOD POLE		
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROLLER		
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		
TELEPHONE CONNECTION		
UNINTERRUPTIBLE POWER SUPPLY		

**RESTORATION OF WORK AREA.**  
 RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDER, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOVED LAWNS SHALL BE REPLACED WITH AN APPROVED SOO, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

**NOTE:**  
 THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**TRAFFIC SIGNAL INSTALLATION PLAN**  
 ILL. RTE. 58 (GOLF RD.) &  
 GREENWOOD AVENUE  
 SHEET 2 OF 2

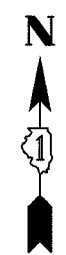
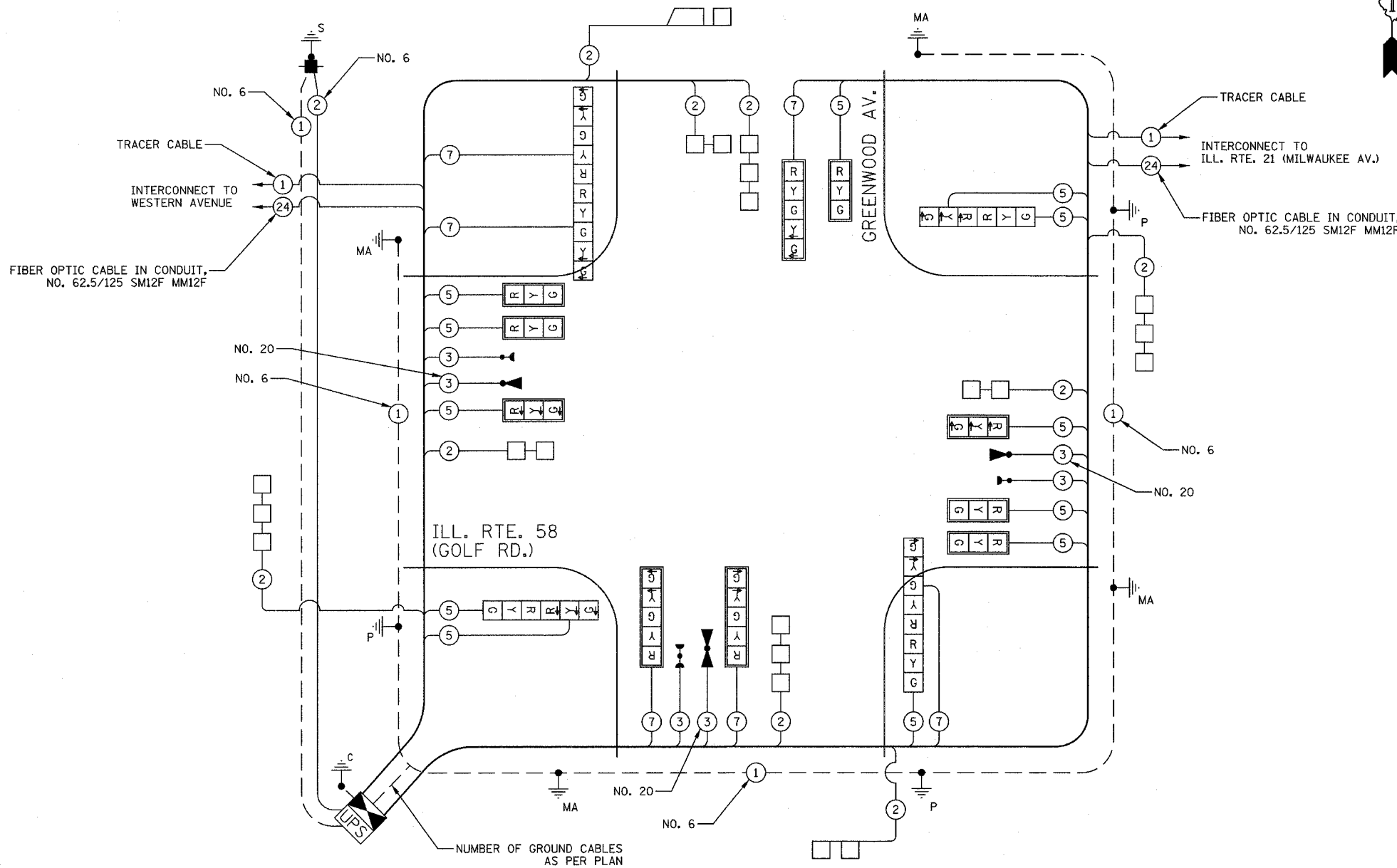
SCALE: 1"=20'  
 DATE: 3/16/2007

DRAWN BY: CEC  
 DESIGNED BY: BRD  
 CHECKED BY: JJE

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	584 Y-TS	COOK	17	13
STA.		TO STA.		
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT		

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   |
|          |          | CONTROLLER CABINET  |
|          |          | SERVICE INSTALLATION  |
|          |          | TELEPHONE CONNECTION  |
|          |          | MAGNETIC DETECTOR   |
|          |          | EMERGENCY VEHICLE LIGHT DETECTOR  |
|          |          | CONFIRMATION BEACON   |
|          |          | PUSHBUTTON DETECTOR   |
|          |          | VEHICLE DETECTOR, INDUCTION LOOP  |
|          |          | DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
|          |          | MICROWAVE VEHICLE SENSOR  |
|          |          | SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD   |
|          |          | RAILROAD CONTROL CABINET  |
|          |          | ILLUMINATED SIGN "NO LEFT TURN"   |
|          |          | ILLUMINATED SIGN "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)  |
|          |          | FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM12F   |
|          |          | UNINTERRUPTIBLE POWER SUPPLY  |



I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	LED	% OPERATION	
SIGNAL (RED)	18		17	0.50	153
(YELLOW)	18		25	0.25	113
(GREEN)	18		15	0.25	68
ARROW CONTROLLER	12		12	0.10	14
	1		100	1.00	100
TOTAL =					448

ENERGY COSTS TO: ILLINOIS DEPARTMENT OF TRANSPORTATION  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096  
CONTACT: CINDY ANTHONY  
PHONE: (847) 816-5322  
COMPANY: COM ED

ENERGY SUPPLY:

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 (2.0)
D- CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'-H-2' = 16m-H-0.6m =
E- M. ARM POLE		SIGNAL POST	2 (1.0)	BRACKET MOUNTED	13 (4.0)
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	PED. PUSHBUTTON	4 (1.2)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	ELECTRIC SERVICE	13.5 (4.1)
36" (900mm)	15 (4.6)	ELECTRIC SERVICE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
		GROUND CABLE	1 (0.5)	POST MOUNTED	6 (1.8)

THE END OF THE TRACER CABLE SHALL BE CONTINUOUS AND EXTEND INTO THE CONTROLLER CABINET.

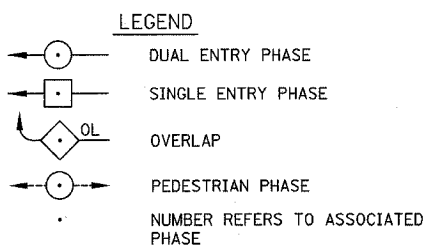
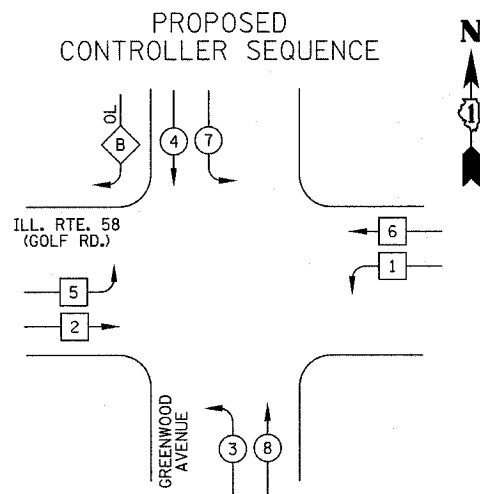
CABLE PLAN NOT TO SCALE

NOTE: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**CABLE PLAN**  
ILL. RTE. 58 (GOLF RD.) & GREENWOOD AV.  
SCALE: NOT TO SCALE  
DATE: 3/16/2007  
DRAWN BY: CEC  
DESIGNED BY: BRD  
CHECKED BY: JJE

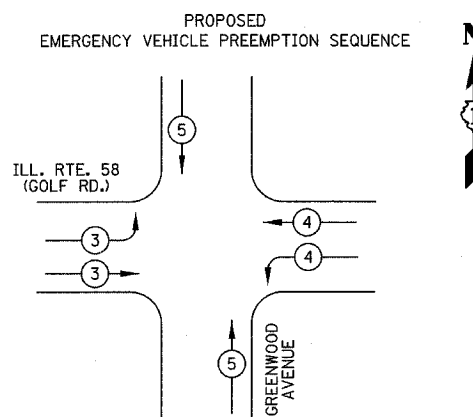
F. AP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	584 Y-TS	COOK	17	14
STA.		TO STA.		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	



**PHASE DESIGNATION DIAGRAM**

**RIGHT TURN OVERLAP PHASE DESIGNATION**

OVERLAP LETTER	=	PERMISSIVE PHASE	+	PROTECTED PHASE
B	=	4	+	5



**PROPOSED EMERGENCY VEHICLE PREEMPTORS**

EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT			

SCHEDULE OF QUANTITIES		
PAY ITEM	UNIT	QUANTITY
MOBILIZATION	L SUM	1
TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1
TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1
SIGN PANEL - TYPE 1	SQ FT	36.5
SIGN PANEL - TYPE 2	SQ FT	25
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	747
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	106
CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	12
CONDUIT IN TRENCH, 5" DIA., GALVANIZED STEEL	FOOT	10
CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	458
CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	357
HANDHOLE	EACH	6
HEAVY-DUTY HANDHOLE	EACH	4
DOUBLE HANDHOLE	EACH	2
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	870
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET (SPECIAL)	EACH	1
TRANSCEIVER - FIBER OPTIC	EACH	1
* ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	570
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	2648
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1084
ELECTRIC CABLE IN CONDUIT, LEAD-IN NO. 14 1 PAIR	FOOT	2406
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	141
TRAFFIC SIGNAL POST, GALVANIZED STEEL, 14 FT.	EACH	2
TRAFFIC SIGNAL POST, GALVANIZED STEEL, 16 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 24 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 30 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 52 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	12
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	30
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	15
SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	7
SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	3
SIGNAL HEAD, L.E.D., 2-FACE, 3 SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, L.E.D., 2-FACE, 5 SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, L.E.D., 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	1
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	10
INDUCTIVE LOOP DETECTOR	EACH	9
DETECTOR LOOP, TYPE I	FOOT	654
* LIGHT DETECTOR	EACH	3
* LIGHT DETECTOR AMPLIFIER	EACH	1
* TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	11
REMOVE EXISTING CONCRETE FOUNDATION	EACH	9
SERVICE INSTALLATION, POLE MOUNT	EACH	1
UNINTERRUPTIBLE POWER SUPPLY	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	695
* ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED, SHIELDED	FOOT	570
* TEMPORARY TRAFFIC SIGNAL TIMINGS	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 60 FT.	EACH	1
CONCRETE FOUNDATION, TYPE E (SPECIAL)	FOOT	15

\* 100% COST TO VILLAGE OF NILES

NOTE:  
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
EMERGENCY VEHICLE PREEMPTION SEQUENCE,  
PHASE DESIGNATION DIAGRAM &  
SCHEDULE OF QUANTITIES  
ILL. RTE. 58 (GOLF RD.) &  
GREENWOOD AV.

SCALE: NOT TO SCALE  
DATE: 3/16/2007

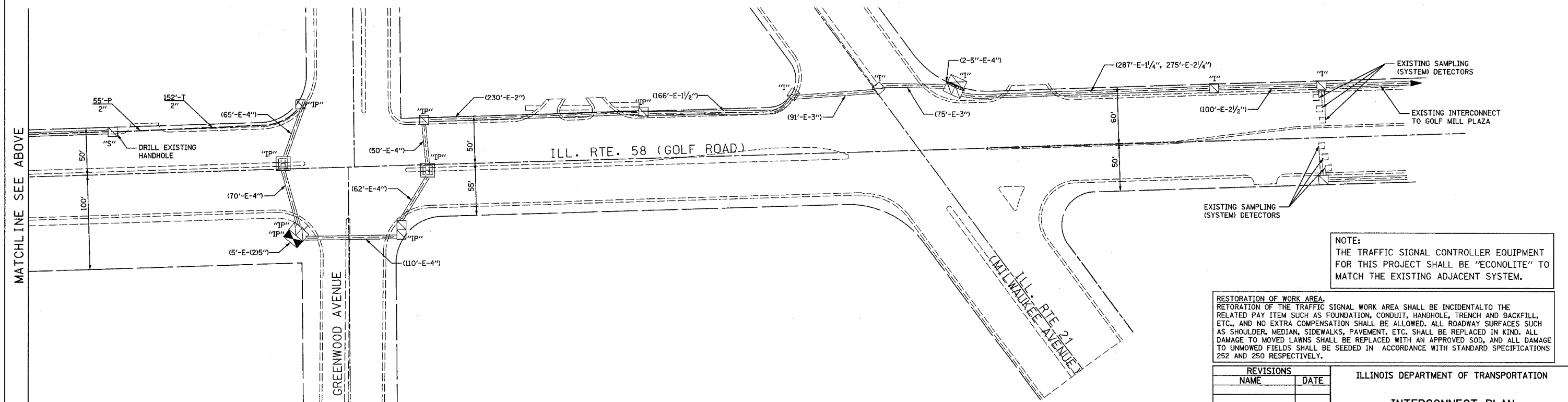
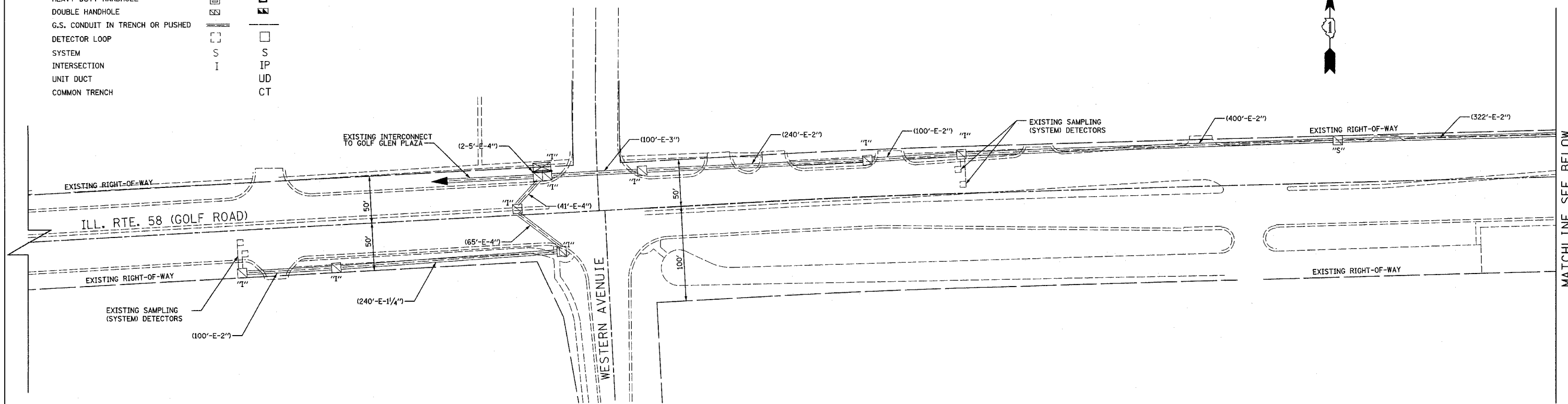
DRAWN BY: CEC  
DESIGNED BY: BRD  
CHECKED BY: JJE

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	584 Y-TS	COOK	17	15
STA.		TO STA.		
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		



**INTERCONNECT PLAN LEGEND**

	EXISTING	PROPOSED
CONTROLLER		
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		
G.S. CONDUIT IN TRENCH OR PUSHED		
DETECTOR LOOP		
SYSTEM		
INTERSECTION		
UNIT DUCT		
COMMON TRENCH		



**NOTE:**  
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

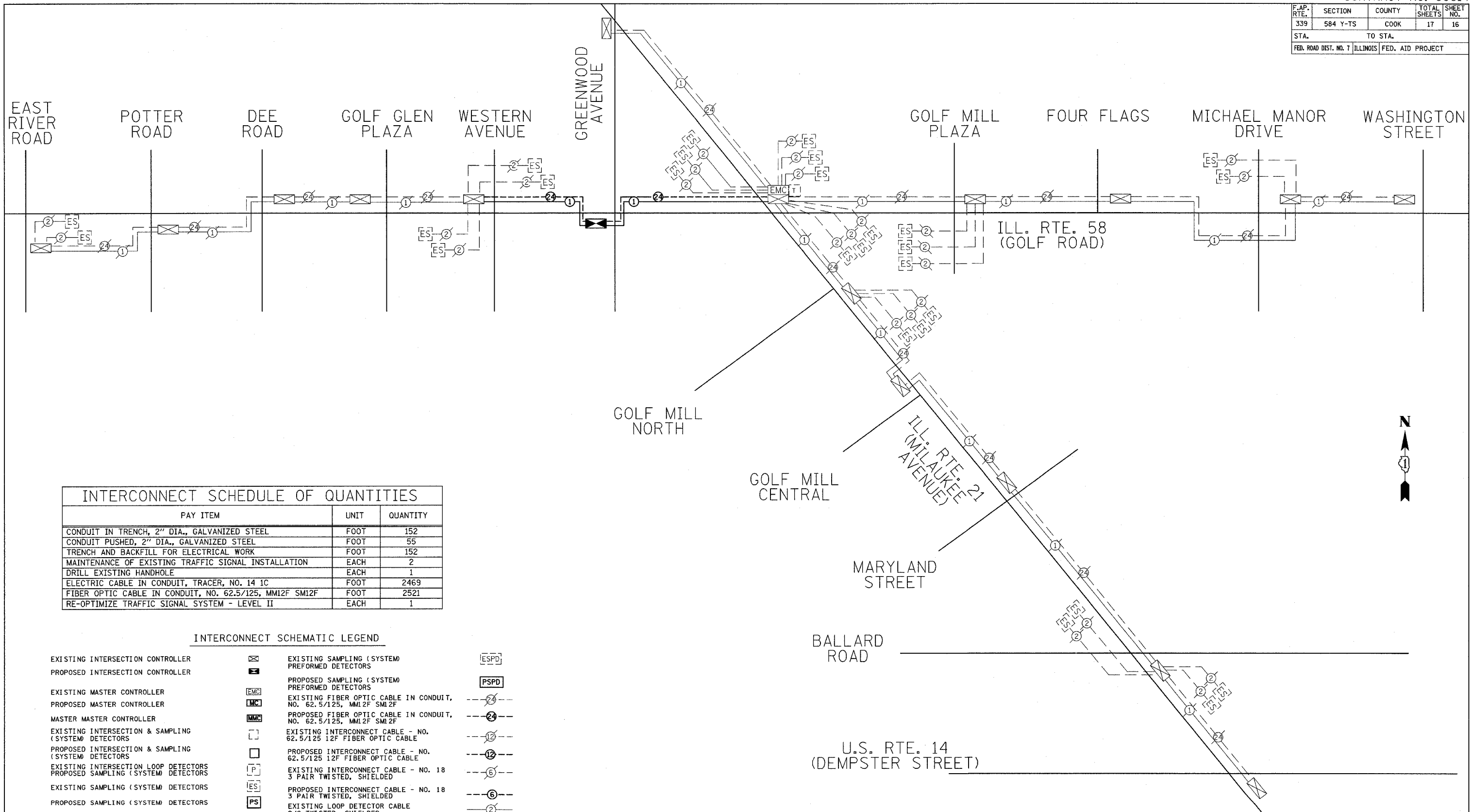
**RESTORATION OF WORK AREA:**  
RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDER, MEDIAN, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOVED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**INTERCONNECT PLAN**  
ILL. RTE. 58 (GOLF RD)  
WESTERN AVENUE TO ILL. ROUTE 21  
(MILWAUKEE AVENUE)  
SCALE: 1"=50'  
DATE: 3/16/2007  
DRAWN BY: CEC  
DESIGNED BY: KEH  
CHECKED BY: JJE



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	584 Y-TS	COOK	17	16
STA.		TO STA.		
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT



PAY ITEM	UNIT	QUANTITY
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	152
CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	55
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	152
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	2
DRILL EXISTING HANDHOLE	EACH	1
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	2469
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	2521
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM - LEVEL II	EACH	1

INTERCONNECT SCHEMATIC LEGEND

EXISTING INTERSECTION CONTROLLER		EXISTING SAMPLING (SYSTEM) PREFORMED DETECTORS	
PROPOSED INTERSECTION CONTROLLER		PROPOSED SAMPLING (SYSTEM) PREFORMED DETECTORS	
EXISTING MASTER CONTROLLER		EXISTING FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	
PROPOSED MASTER CONTROLLER		PROPOSED FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	
MASTER MASTER CONTROLLER		EXISTING INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE	
EXISTING INTERSECTION & SAMPLING (SYSTEM) DETECTORS		PROPOSED INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE	
PROPOSED INTERSECTION & SAMPLING (SYSTEM) DETECTORS		EXISTING INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED	
EXISTING INTERSECTION LOOP DETECTORS		PROPOSED INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED	
PROPOSED SAMPLING (SYSTEM) DETECTORS		EXISTING LOOP DETECTOR CABLE 2/C TWISTED, SHIELDED	
EXISTING SAMPLING (SYSTEM) DETECTORS, PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTORS.		PROPOSED LOOP DETECTOR CABLE 2/C TWISTED, SHIELDED	
EXISTING SAMPLING (SYSTEM) DETECTORS, PROPOSED SAMPLING (SYSTEM) DETECTORS.		EXISTING ELECTRIC CABLE, 1/C (AS SPECIFIED)	
EXISTING PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS		PROPOSED ELECTRIC CABLE, 1/C (AS SPECIFIED)	
PROPOSED PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS		EXISTING TELEPHONE CONNECTION	
		PROPOSED TELEPHONE CONNECTION	

NOTE:  
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**INTERCONNECT SCHEMATIC AND SCHEDULE OF QUANTITIES**  
 ILL. RTE. 58 (GOLF RD.)  
 EAST RIVER ROAD TO WASHINGTON STREET  
 SCALE: NOT TO SCALE  
 DATE: 3/16/2007  
 DRAWN BY: CEC  
 DESIGNED BY: KEH  
 CHECKED BY: JJE

