

08-03-13 LETTING ITEM 013

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

IL 56 (BUTTERFIELD ROAD)/FAP 365
AT I-355 (NB & SB RAMPS)
SECTION (56R-2) TS
PROJECT: *HSIP-0365(015)*
TRAFFIC SIGNAL MODERNIZATION
DuPAGE COUNTY
JOB NO.: C-91-429-12

F.A.P. RTE. 365	SECTION 156R-2 TS	COUNTY DuPAGE	TOTAL SHEETS 33	SHEET NO. 1
ILLINOIS			CONTRACT NO. 60T98	

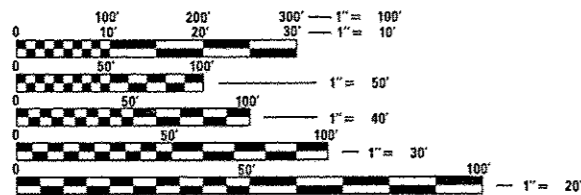
FOR INDEX OF SHEETS, SEE SHEET NO. 2

DESIGN DESIGNATION

IL 56 (BUTTERFIELD ROAD) - OTHER PRINCIPAL ARTERIAL
ADT = 33,700 - 50,800
POSTED SPEED LIMIT = 45 MPH

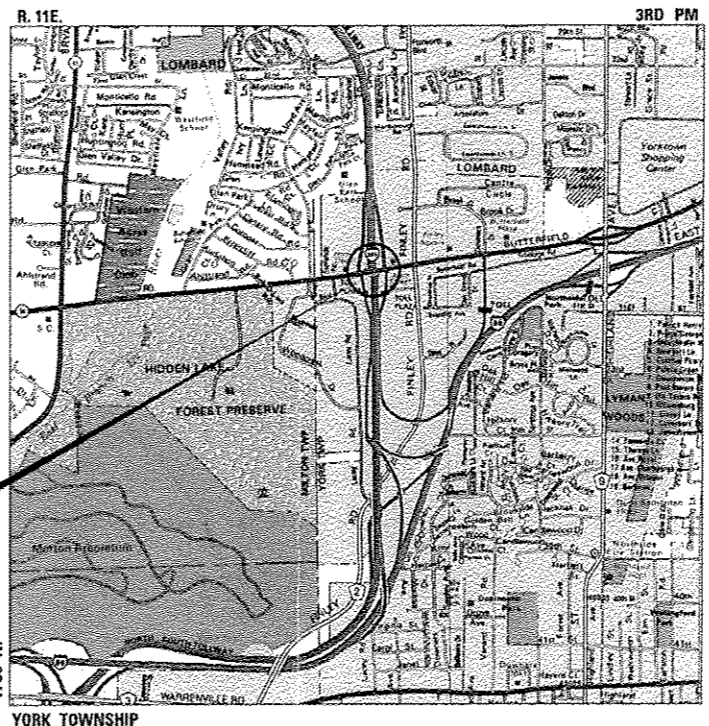
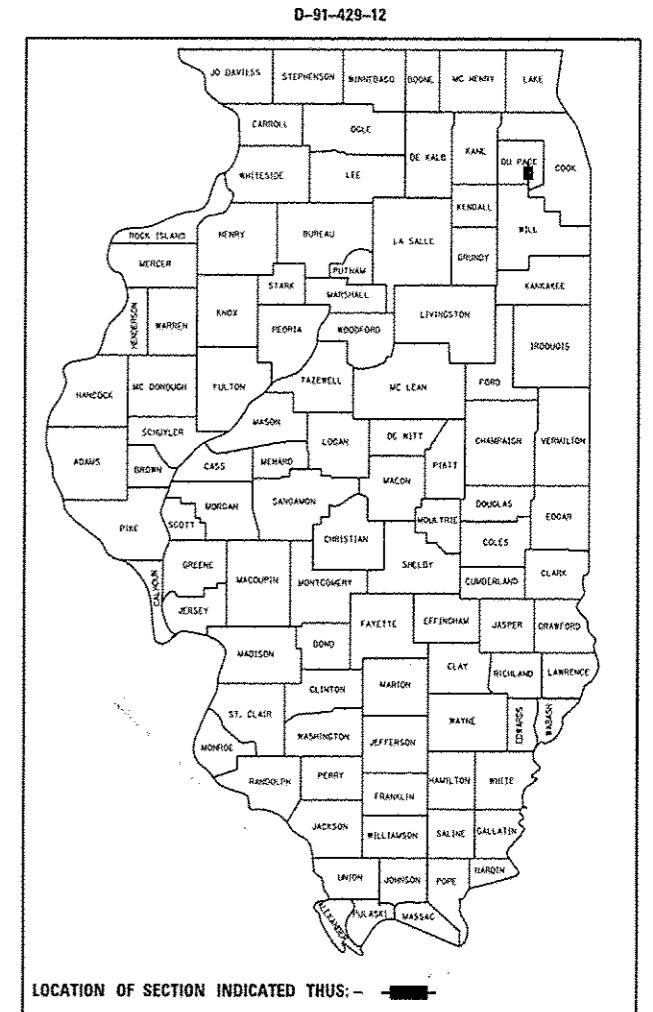
I-355 - INTERSTATE
ADT = 81,200 - 121,500
POSTED SPEED LIMIT = 55 MPH

PROJECT IS LOCATED IN THE
VILLAGE OF DOWNERS GROVE



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.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123 OR 811



LOCATION MAP
(Not to Scale)

GHA GEWALT HAMILTON
ASSOCIATES, INC.
850 Forest Edge Drive - Vernon Hills, IL. 60061
Consulting Engineers & Surveyors
847-478-9760
FAX: 847-478-9701

SIGNED: *Kevin L. Belgrave*
KEVIN L. BELGRAVE, EXP. 11/30/2013
DATE: *May 8, 2013*

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED *May 10* 20 *13*

John Johnson
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

June 28 20 *13*
John D. Baranzelli PE, Inc.
ENGINEER OF DESIGN AND ENVIRONMENT

June 28 20 *13*
Omer Osman PE, Inc.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

DISTRICT 1 - TRAFFIC SIGNAL DESIGN - SUDDUD MAHMOUD (847) 705-4420

CONTRACT NO. 60T98

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27. INTERCONNECT PLAN - IL 56 (BUTTERFIELD RD) FROM ESPLANADE DR/HOME DEPOT ENTRANCE TO FINLEY ROAD
28. INTERCONNECT SCHEMATIC - IDOT SYSTEM #41
- 29.-32. DISTRICT 1 STANDARD DETAILS (TC-10, TC-14, TC-18 AND TC-22)
33. DISTRICT 1 TYPICAL PAVEMENT MARKINGS (TC-13)

GENERAL NOTES

THE ILLINOIS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", JANUARY 1, 2012; MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITION; PROJECT SPECIFICATIONS; ALL APPLICABLE REQUIREMENTS OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION; THE VILLAGE OF DOWNERS GROVE; ALL APPLICABLE REQUIREMENTS OF THE ORDINANCES OF AUTHORITIES HAVING JURISDICTION; AND ALL ADDENDA THERETO SHALL GOVERN THIS WORK.

THE STANDARD SPECIFICATIONS, PROJECT SPECIFICATIONS, CONSTRUCTION PLANS, AND SUBSEQUENT DETAILS ARE ALL TO BE CONSIDERED AS PART OF THE CONTRACT. INCIDENTAL ITEMS OR ACCESSORIES NECESSARY TO COMPLETE THIS WORK MAY NOT BE SPECIFICALLY NOTED BUT ARE TO BE CONSIDERED A PART OF THE CONTRACT.

WHENEVER, DURING CONSTRUCTION OPERATIONS, ANY LOOSE MATERIAL IS DEPOSITED IN THE FLOW LINE OF CUTTERS, DRAINAGE STRUCTURES, DITCHES, ETC. SUCH THAT THE NATURAL FLOW LINE OF WATER IS OBSTRUCTED, THE LOOSE MATERIAL WILL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES AND FLOW LINES SHALL BE FREE FROM DIRT AND DEBRIS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. THE CONTRACTOR'S FAILURE TO PROVIDE THE ABOVE WILL PRECLUDE ANY POSSIBLE ADDED COMPENSATION REQUESTED DUE TO DELAYS OF UNSTABLE MATERIALS CREATED AS A RESULT THEREOF.

THE CONTRACTOR SHALL SOLELY BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ADEQUATE SIGNS, TRAFFIC CONTROL DEVICES, AND WARNING DEVICES TO INFORM AND PROTECT THE PUBLIC DURING ALL PHASES OF CONSTRUCTION.

THE CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL AREAS AFFECTED BY EQUIPMENT OR LABORERS TO EXISTING CONDITIONS. THE CONTRACTOR IS ALSO RESPONSIBLE FOR PROTECTING ALL NEW WORK UNTIL COMPLETION OF THIS CONTRACT.

EXISTING UTILITIES: WHEN THE PLANS OR SPECIAL PROVISIONS INCLUDE INFORMATION PERTAINING TO THE LOCATION OF UNDERGROUND UTILITY FACILITIES, SUCH INFORMATION IS BASED ON RECORD INFORMATION PROVIDED BY THE INDIVIDUAL UTILITY OWNERS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES. THE CONTRACTOR SHALL ALSO CONTACT J.U.L.I.E. TO OBTAIN LOCATES OF THE RESPECTIVE UTILITY COMPANIES UNDERGROUND FACILITIES.

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, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD IN ACCORDANCE TO STANDARD SPECIFICATIONS ARTICLE 252 WHICH SHALL INCLUDE THE REQUIRED WATERING PER ARTICLE 252.08. ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS ARTICLE 250 AND 251, RESPECTIVELY.

THE GENERAL CONTRACTOR IS REQUIRED TO HIRE AN ENVIRONMENTAL FIRM WITH AT LEAST FIVE (5) DOCUMENTED LEAKING UNDERGROUND STORAGE TANK CLEANUPS OR THAT IS PRE-QUALIFIED IN HAZARDOUS WASTE BY THE DEPARTMENT TO REMEDIATE THE SOIL CONTAMINATION AND MONITOR FOR WORKER PROTECTION.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION. THIS SHALL INCLUDE LOCATING THE MAST ARM FOUNDATIONS AND VERIFYING THE MAST ARM LENGTH.

THE EXACT LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE ORDERING ANY MATERIALS AND STARTING ANY WORK. FOR LOCATIONS OF UTILITIES, LOCALLY OWNED EQUIPMENT, LEASED ENFORCEMENT CAMERA SYSTEM FACILITIES, AND IDOT UNDERGROUND FACILITIES, CONTACT THE LOCAL COUNTIES, MUNICIPALITIES, AND IDOT FOR LOCATES. THE CONTRACTOR SHALL CALL 'JULIE' AT (800) 892-0123 OR 811. IN THE CITY OF CHICAGO CONTACT DIGGER AT (312) 744-7000 FOR FIELD LOCATIONS OF BURIED UTILITIES (48 HOURS NOTIFICATION REQUIRED).

THE CONTRACTOR SHALL CHECK THE PROPOSED TRAFFIC SIGNAL EQUIPMENT LOCATIONS FOR OVERHEAD UTILITY CONFLICTS. THE CONTRACTOR SHALL COORDINATE ANY CONFLICTS WITH THE UTILITY COMPANIES AND THE RESIDENT ENGINEER BEFORE ORDERING MATERIALS.

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES, LOCAL GOVERNMENT AGENCIES, AND IDOT.

THE VILLAGE OF DOWNERS GROVE REQUESTS THE EXISTING EMERGENCY VEHICLE PREEMPTION SYSTEM BE REMOVED FROM THE EXISTING TRAFFIC SIGNAL INSTALLATION AND RELOCATED TO THE PERMANENT TRAFFIC SIGNAL MODERNIZATION.

IDOT STANDARDS

- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS, & PATTERNS
- 001006 DECIMAL OF AN INCH OF A FOOT
- 606001-05 CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
- 701001-02 OFF-ROAD OPERATIONS 2L, 2W, >15' AWAY
- 701006-04 OFF-ROAD OPERATIONS 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
- 701011-03 OFF-ROAD MOVING OPERATIONS, 2L, 2W, DAY ONLY
- 701301-04 LANE CLOSURE 2L, 2W, SHORT TIME OPERATIONS
- 701501-06 URBAN LANE CLOSURE 2L, 2W, UNDIVIDED
- 701606-08 URBAN LANE CLOSURE MULTILANE 2W, WITH MOUNTABLE MEDIAN
- 701701-08 URBAN LANE CLOSURE MULTILANE INTERSECTION
- 701801-05 LANE CLOSURE MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
- 701901-02 TRAFFIC CONTROL DEVICES
- 720001-01 SIGN PANEL MOUNTING DETAIL
- 720006-03 SIGN PANEL ERECTION DETAIL
- 780001-03 TYPICAL PAVEMENT MARKINGS
- 805001-01 ELECTRICAL SERVICE INSTALLATION DETAILS
- 814001-02 HANDHOLE
- 814006-02 DOUBLE HANDHOLES
- 857001-01 STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
- 862001-01 UNINTERRUPTIBLE POWER SUPPLY (UPS)
- 873001-02 TRAFFIC SIGNAL GROUNDING & BONDING
- 877001-05 STEEL MAST ARM ASSEMBLY AND POLE, 16' THROUGH 55'
- 878001-09 CONCRETE FOUNDATION DETAILS
- 880001-01 SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION
- 880006-01 TRAFFIC SIGNAL MOUNTING DETAILS
- 886001-01 DETECTOR LOOP INSTALLATIONS

FILE NAME: 60T98-02-Index-Notes.dgn	USER NAME: gshatten	DESIGNED: JRD	REVISED:	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS / GENERAL NOTES / IDOT STANDARDS	SCALE: NONE	SHEET _____ OF _____ SHEETS	STA. _____ TO STA. _____	GHA #4085.885				
MODEL NAME:	PLOT SCALE: 1/1	DRAWN: PJS/JPW	REVISED:						F.A.P. RTE.:	SECTION:	COUNTY:	TOTAL SHEETS:	SHEET NO.:
	PLOT DATE: 5/18/2013	CHECKED: KLB	REVISED:						365	(56R-2) TS	DuPAGE	33	2
		DATE:	REVISED:						CONTRACT NO. 60T98		ILLINOIS FED. AID PROJECT		

URBAN

SUMMARY OF QUANTITIES		LOCATION OF WORK		IL 56 (BUTTERFIELD RD) AT I-355 SB RAMPS		IL 56 (BUTTERFIELD RD) AT I-355 NB RAMPS		INTERCONNECT	
		TYPE		TRAFFIC SIGNALS		TRAFFIC SIGNALS		INTERCONNECT	
		CODE		0021		0021			
CODE NO.	ITEM	UNIT	TOTAL	90% FED 10% STATE	100% VILLAGE OF DOWNERS GROVE	90% FED 10% STATE	100% VILLAGE OF DOWNERS GROVE	90% FED 10% STATE	
* 66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	100	50		50			
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	3.00	1.00		1.00		1.00	
* 66900450	SPECIAL WASTE PLANS AND REPORTS	L SUM	1.00	0.5		0.5			
67100100	MOBILIZATION	L SUM	1.00	0.40		0.40		0.20	
* 66900530	SOIL DISPOSAL ANALYSIS	EACH	1.00	1.00					
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1.00	0.40		0.40		0.20	
70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	1.00	0.40		0.40		0.20	
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1.00	0.40		0.40		0.20	
72000100	SIGN PANEL - TYPE 1	SO FT	62.50	22.50		40.00			
80500010	SERVICE INSTALLATION - GROUND MOUNTED	EACH	2	1		1			
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	467	428		39			
81028210	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	271	77		194			
81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	428	187		241			
81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	876	419		457			
81028250	UNDERGROUND CONDUIT, GALVANIZED STEEL, 5" DIA.	FOOT	182	92		90			
81400100	HANDHOLE	EACH	5	2		3			
81400300	DOUBLE HANDHOLE	EACH	8	4		4			

* Specialty Items

FILE NAME = 60198-03-500.dgn	USER NAME = jwoufa	DESIGNED - JRD	REVISIONS -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES			F.A.P. RTE. 365	SECTION (56R-2) TS	COUNTY	TOTAL SHEETS 33	SHEET NO. 3
MODEL NAME =	PLOT SCALE = 1:1	DRAWN - PJS	REVISIONS -		SCALE: NONE	SHEET 1	OF 5 SHEETS	STA. _____	TO STA. _____	CONTRACT NO. 60T98	ILLINOIS FED. AID PROJECT	
	PLOT DATE = 5/8/2013	CHECKED - KLB	REVISIONS -									
		DATE -	REVISIONS -									

Rev. GHA #4085.885

URBAN

SUMMARY OF QUANTITIES		LOCATION OF WORK		IL 56 (BUTTERFIELD RD) AT I-355 SB RAMPS		IL 56 (BUTTERFIELD RD) AT I-355 NB RAMPS		INTERCONNECT	
		TYPE		TRAFFIC SIGNALS		TRAFFIC SIGNALS		INTERCONNECT	
CODE NO.	ITEM	UNIT	TOTAL	0021		0021		0021	
				90% FED 10% STATE	100% VILLAGE OF DOWNERS GROVE	90% FED 10% STATE	100% VILLAGE OF DOWNERS GROVE	90% FED 10% STATE	100% VILLAGE OF DOWNERS GROVE
87702282	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 22 FT. AND 46 FT.	EACH	1				1		
87702970	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 48 FT.	EACH	1	1					
87702980	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 50 FT.	EACH	1				1		
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	40	20			20		
87800150	CONCRETE FOUNDATION, TYPE C	FOOT	8	4			4		
87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	50	30			20		
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	67	27			40		
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	26	13			13		
88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	10	5			5		
88030070	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	2	1			1		
88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2	1			1		
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2	1			1		
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	28	14			14		
88500100	INDUCTIVE LOOP DETECTOR	EACH	22	10			12		

URBAN

SUMMARY OF QUANTITIES		LOCATION OF WORK		IL 56 (BUTTERFIELD RD) AT I-355 SB RAMPS		IL 56 (BUTTERFIELD RD) AT I-355 NB RAMPS		INTERCONNECT
		TYPE		TRAFFIC SIGNALS		TRAFFIC SIGNALS		INTERCONNECT
CODE NO.	ITEM	UNIT	TOTAL	0021				90% FED 10% STATE
				90% FED 10% STATE	100% VILLAGE OF DOWNERS GROVE	90% FED 10% STATE	100% VILLAGE OF DOWNERS GROVE	
88600100	DETECTOR LOOP, TYPE I	FOOT	1,498	660		838		
88700200	LIGHT DETECTOR	EACH	6		3		3	
88700300	LIGHT DETECTOR AMPLIFIER	EACH	2		1			
89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	2	1		1		
89501400	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT	EACH	4		3		3	
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	7,730	1,916		2,504		3,310
89501410	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT	EACH	2		1		1	
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	2	1		1		
89502380	REMOVE EXISTING HANDHOLE	EACH	13	6		6		1
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	18	10		8		
X0324085	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	1,580		675		905	
X0324599	ROD AND CLEAN EXISTING CONDUIT	FOOT	1,577	513		671		393
X0327200	MICROWAVE VEHICLE SENSOR (SMARTSENSOR ADVANCE)	EACH	2	1		1		
X8570226	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	2	1		1		
X8620200	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	2	1		1		
X8710024	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	FOOT	2,240					2,240

FILE NAME : 60798-06-500.dgn
 MODELNAME

USER NAME = jwoelfe
 PLOT SCALE = 1:1
 PLOT DATE = 5/8/2013

DESIGNED - JRD
 DRAWN - JPW
 CHECKED - KLB
 DATE - _____

REVISED - _____
 REVISED - _____
 REVISED - _____
 REVISED - _____

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: NONE SHEET 4 OF 5 SHEETS STA. _____ TO STA. _____

F.A.P. RTE. 365	SECTION (S&R-2) TS	COUNTY DuPAGE	TOTAL SHEETS 33	SHEET NO. 6
ILLINOIS FED. AID PROJECT			CONTRACT NO. 60798	

Rev.
 GHA #4085.885

8/18/13 YAK

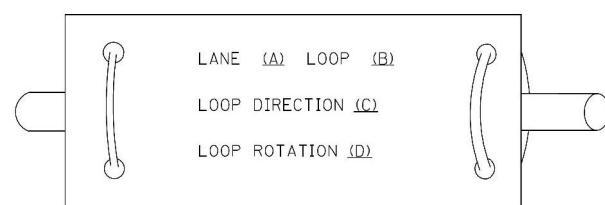
SUMMARY OF QUANTITIES		LOCATION OF WORK		IL 56 (BUTTERFIELD RD) AT I-355 SB RAMPS		IL 56 (BUTTERFIELD RD) AT I-355 NB RAMPS		INTERCONNECT
		TYPE		TRAFFIC SIGNALS		TRAFFIC SIGNALS		INTERCONNECT
CODE NO.	ITEM	UNIT	TOTAL	0021				90% FED 10% STATE
				90% FED 10% STATE	100% VILLAGE OF DOWNERS GROVE	90% FED 10% STATE	100% VILLAGE OF DOWNERS GROVE	
Z0030850	TEMPORARY INFORMATION SIGNING	SD FT	102.80	51.40		51.40		
Z0033044	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 1	EACH	2					2
Z0073510	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	2	1		1		
△ Z0010614	CLEAN EXISTING MANHOLE OR HANDHOLE	EACH	12	7		4		1

△ (100% STATE) NP

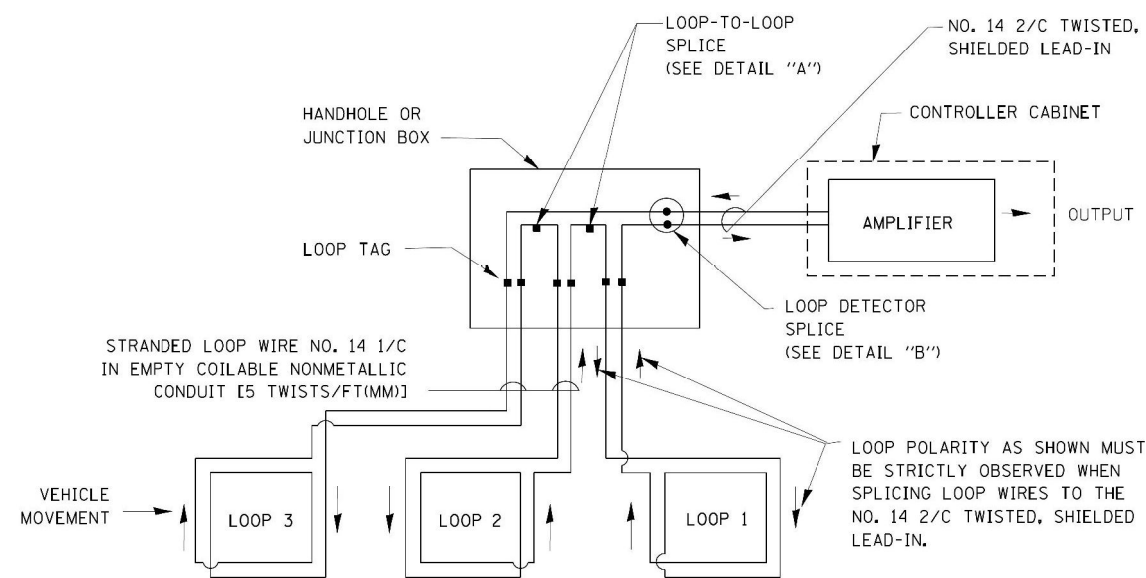
LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
2. 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.
3. 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.
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES 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.
6. 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.
7. PREFORMED 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

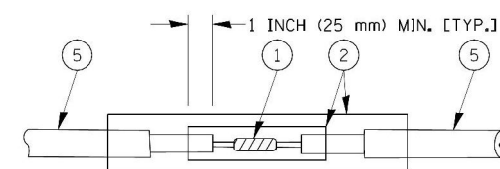


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

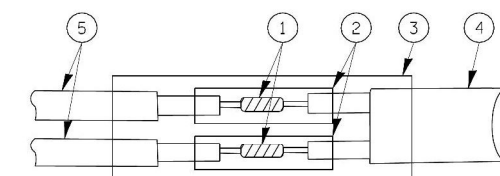


DETECTOR LOOP WIRING SCHEMATIC

- 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.

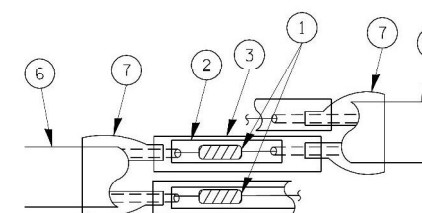


DETAIL "A"
LOOP-TO-LOOP SPLICE

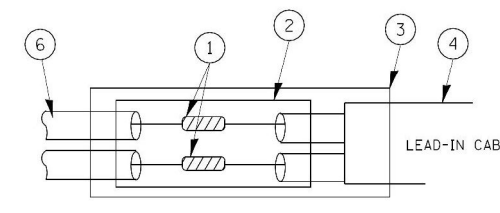


DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

- 1 WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.
- 2 WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- 3 WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- 4 NO. 14 2/C TWISTED, SHIELDED CABLE.
- 5 LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
- 6 PRE-FORMED LOOP
- 7 XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

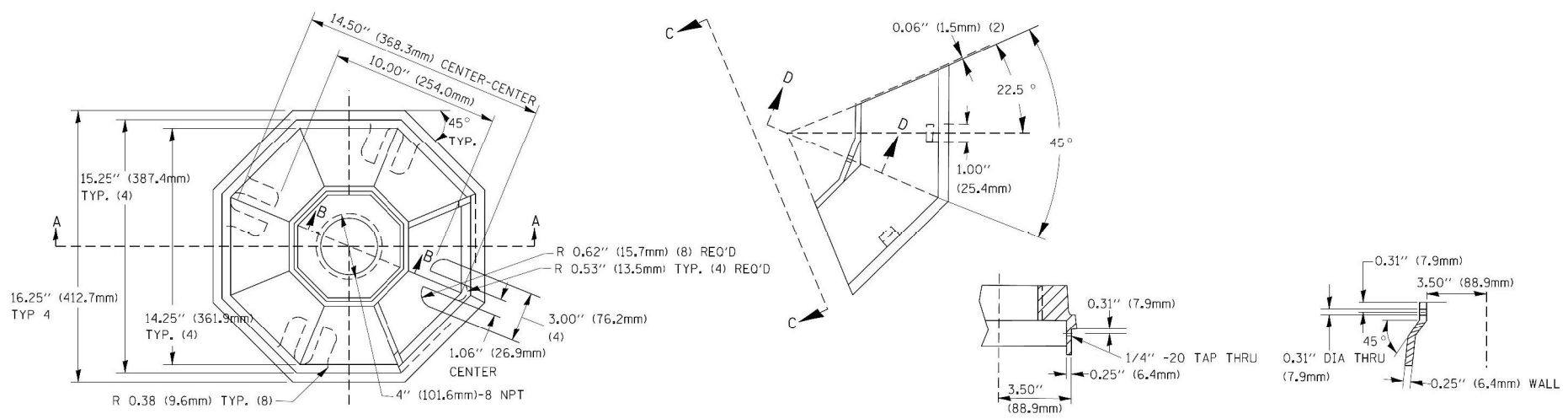
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		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -
\$MODELNAME\$	PLOT DATE = 4/9/2013		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE SHEET 1 OF 6 SHEETS STA. TO STA.

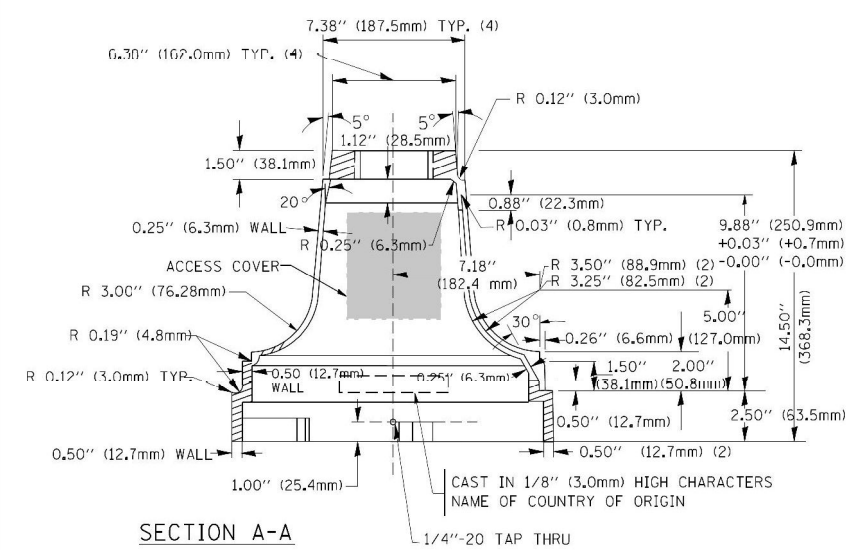
F.A.P. RTE. 365	SECTION (56R-2) TS	COUNTY DuPAGE	TOTAL SHEETS 33	SHEET NO. 8
TS-05		CONTRACT NO. 60T98		ILLINOIS FED. AID PROJECT



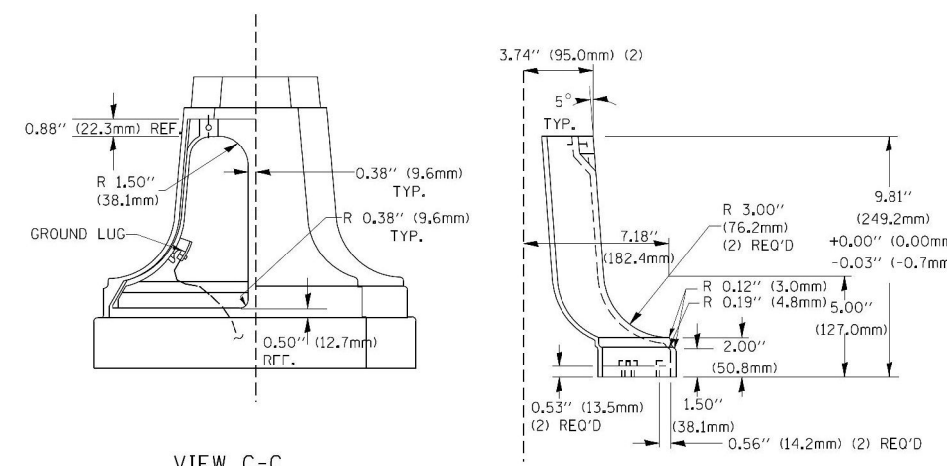
TOP VIEW

SECTION B-B

SECTION D-D

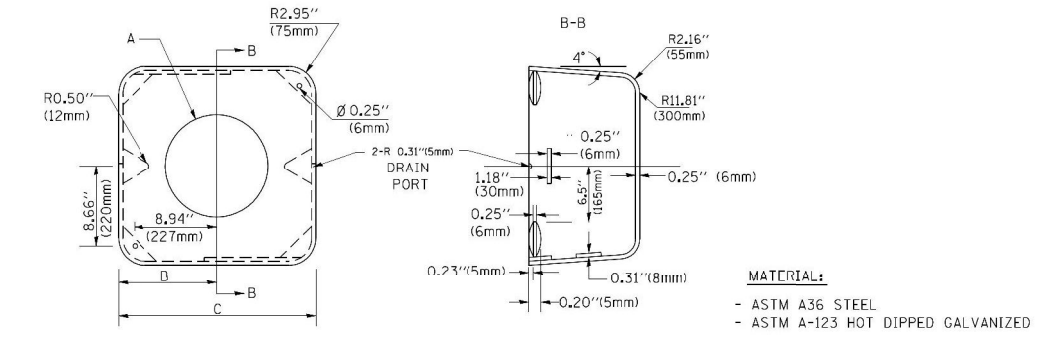


SECTION A-A



VIEW C-C

TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A



SHROUD

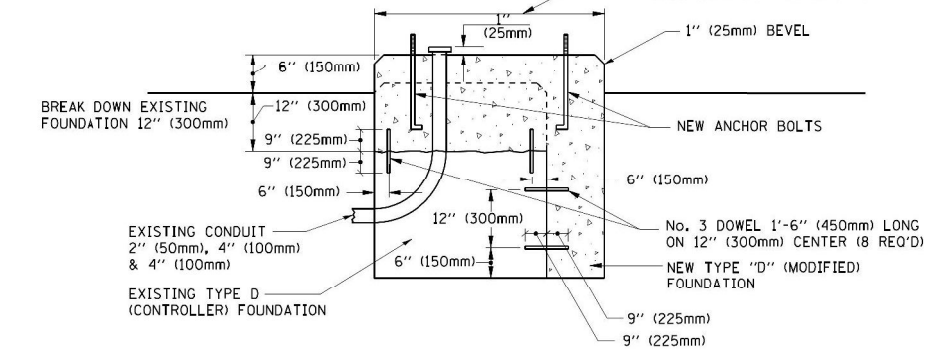
A	B	C	HEIGHT	WEIGHT
VARIABLES	9.5\" (241mm)	19\" (483mm)	7\" (178mm) - 12\" (300mm)	53 lbs (24kg)
VARIABLES	10.75\" (273mm)	21.5\" (546mm)	7\" (178mm) - 12\" (300mm)	68 lbs (31 kg)
VARIABLES	13.0\" (330mm)	26\" (660mm)	7\" (178mm) - 12\" (300mm)	81 lbs (37 kg)
VARIABLES	18.5\" (470mm)	37\" (940mm)	7\" (178mm) - 12\" (300mm)	126 lbs (57 kg)

NOTES:

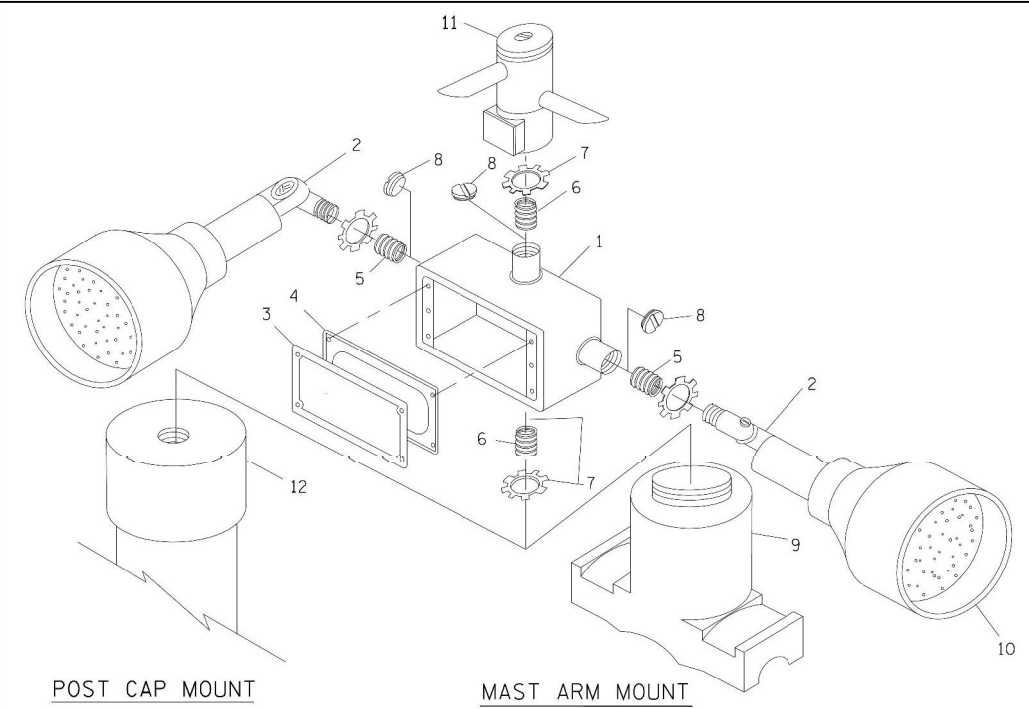
- DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
- THE SUPPLIER SHALL VERIFY THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
- THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.

NOTE:

SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.



MODIFY EXISTING TYPE "D" FOUNDATION



POST CAP MOUNT

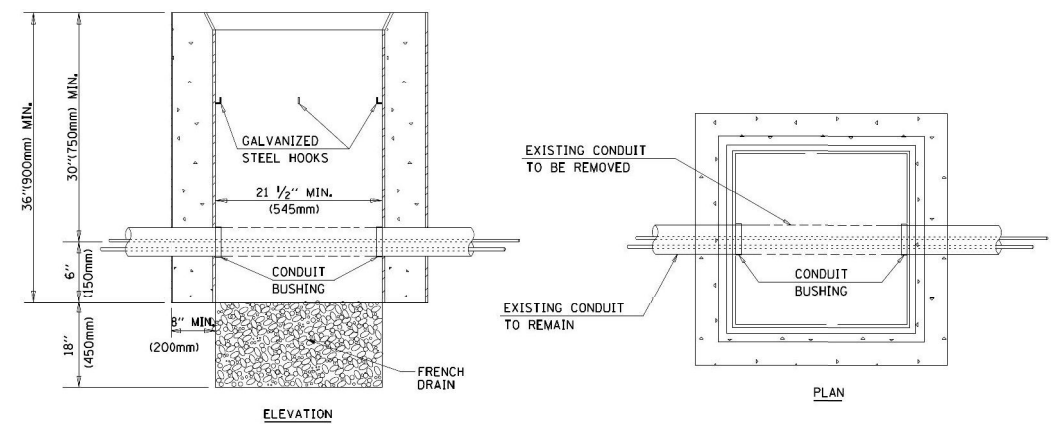
MAST ARM MOUNT

EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

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	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

NOTES:

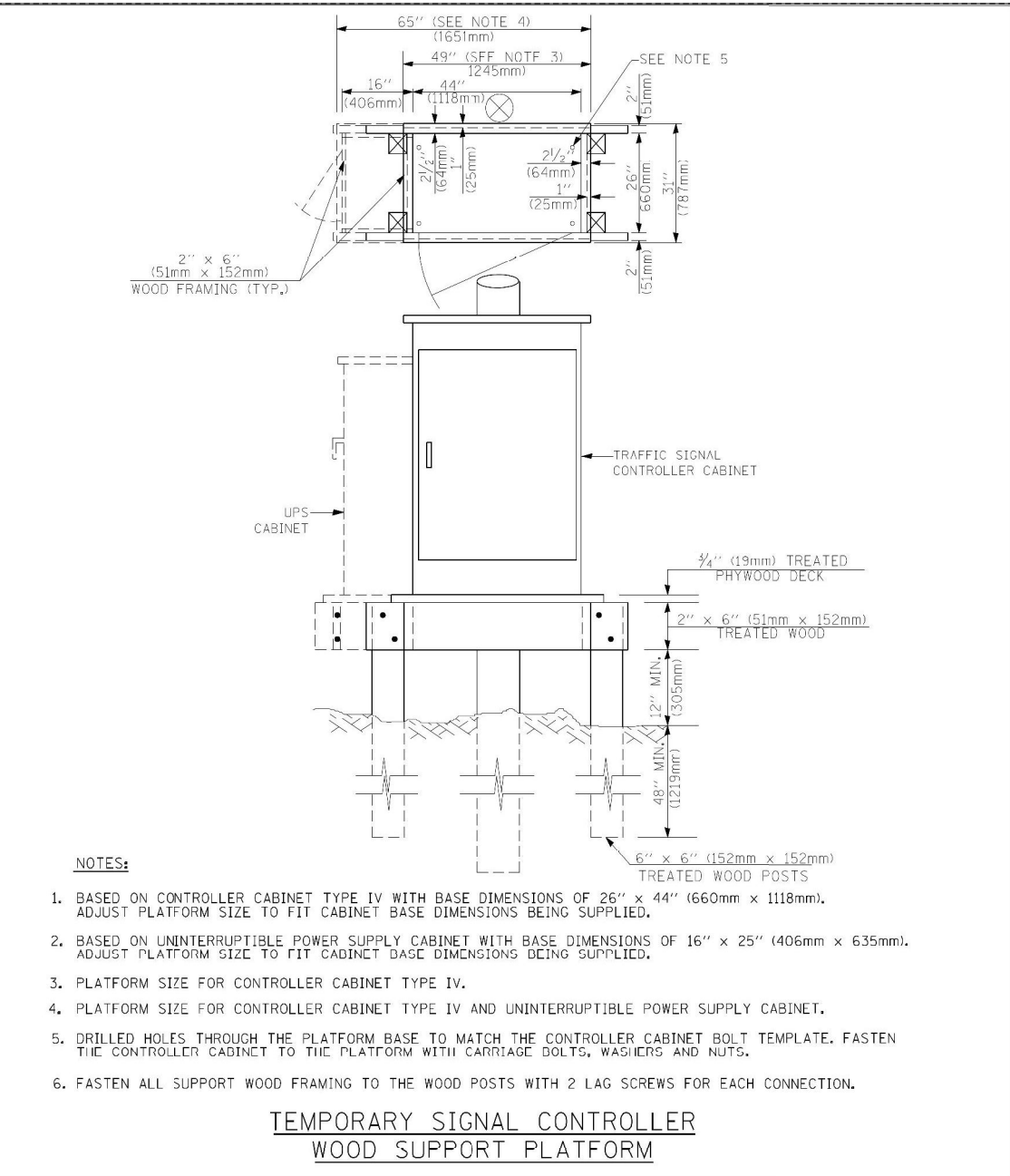
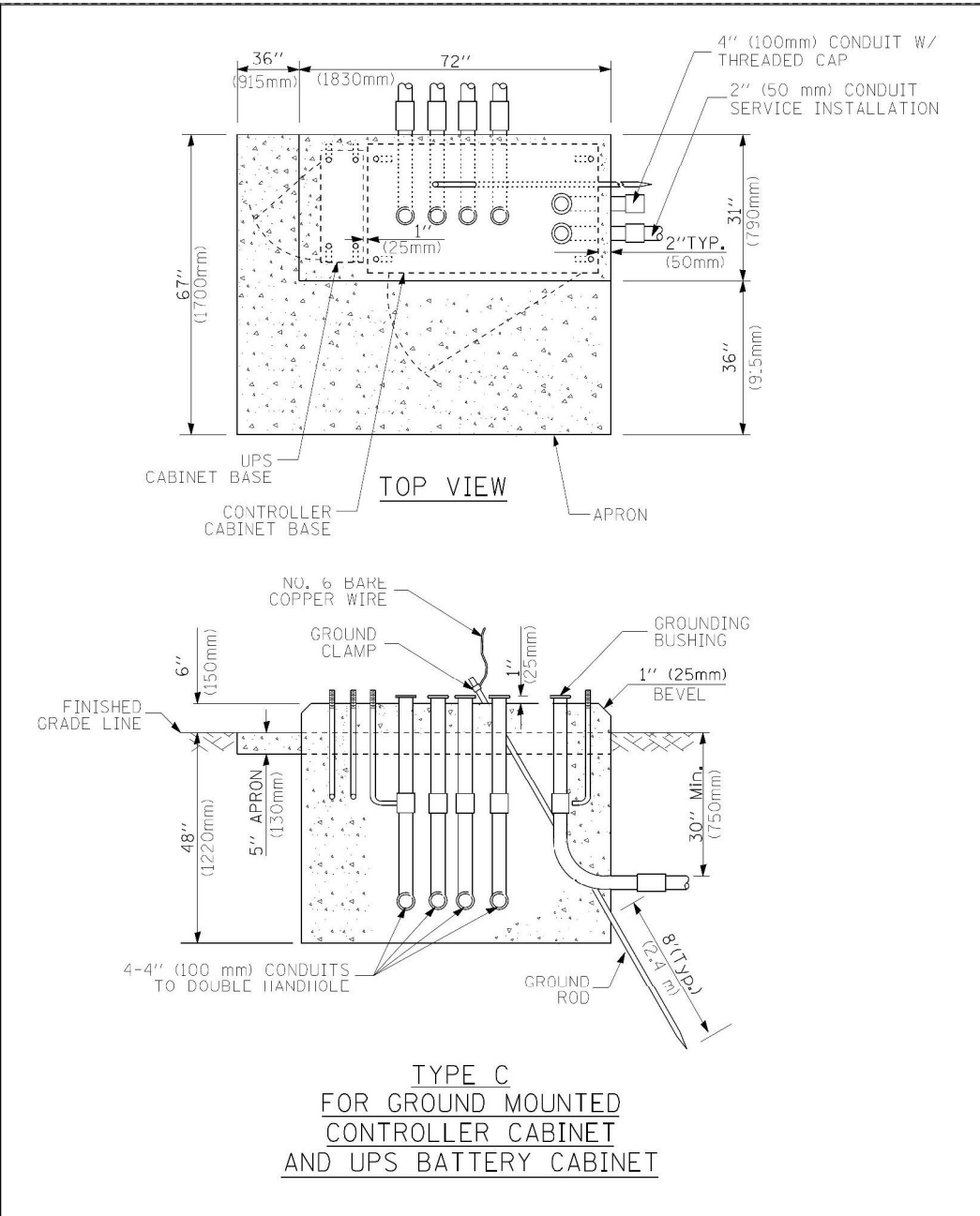
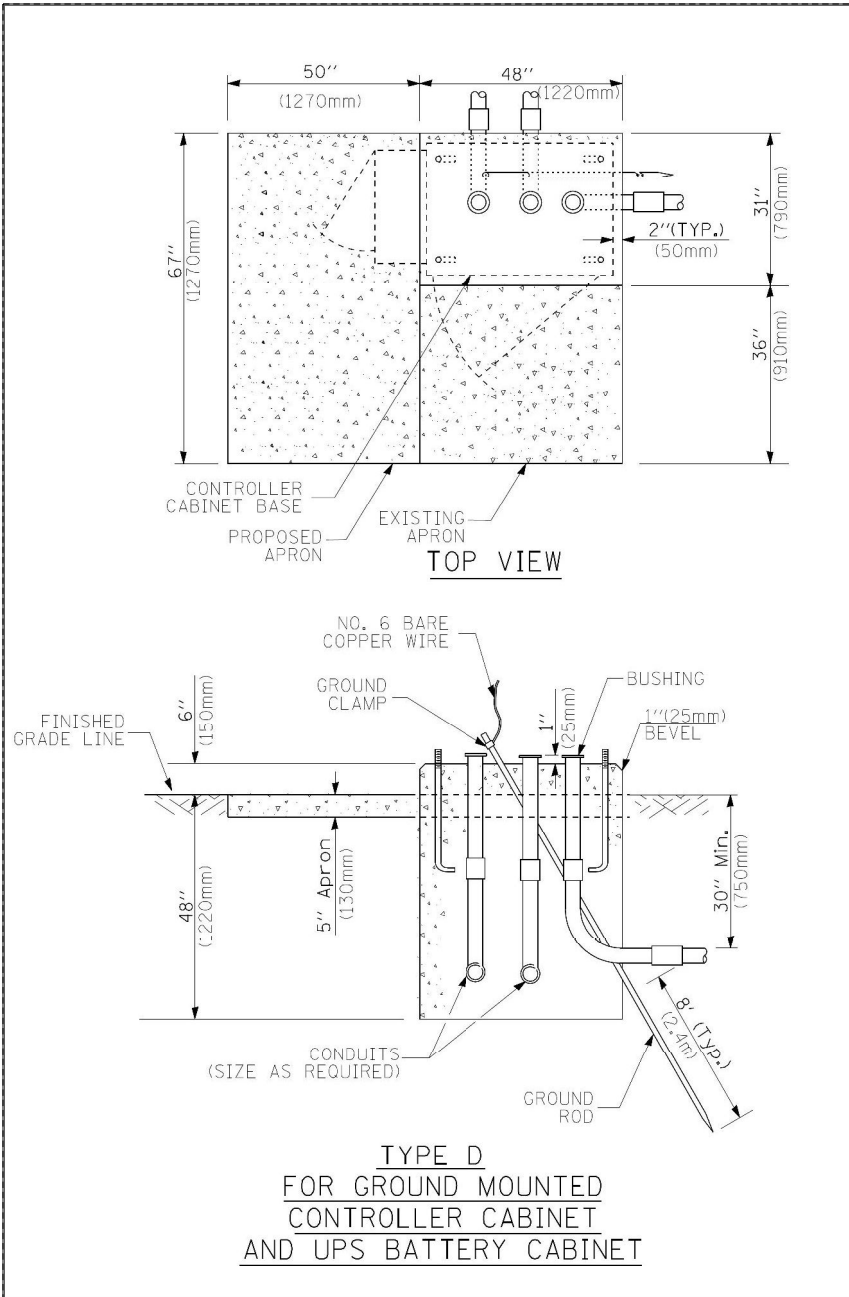
- ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
- ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
ITEM #2- MULBERRY CON-0-SHADE LAMP SHIELD OR EQUIVALENT
ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
- WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION 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.



HANDHOLE TO INTERCEPT EXISTING CONDUIT

NOTES:

- HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
- REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCIDENTAL TO THE HANDHOLE.



- NOTES:**
1. BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26" x 44" (660mm x 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
 2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
 3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
 4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
 5. DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
 6. FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION.

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

CABLE SLACK

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE (MAST ARM MOUNTED SIGNAL HEAD) (L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

VERTICAL CABLE LENGTH

FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0" (1.2m)
TYPE C - CONTROLLER w/ UPS	4'-0" (1.2m)
TYPE D - CONTROLLER	4'-0" (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE	4'-0" (1.2m)

DEPTH OF FOUNDATION

MAST ARM LENGTH	FOUNDATION DEPTH	FOUNDATION DIAMETER	SPIRAL DIAMETER	QUANTITY OF REBARS	SIZE OF REBARS
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 55' (16.8 m) and up to 65' (19.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 65' (19.8 m) and less than 75' (22.9 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 75' (22.9 m) and up to 85' (25.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

- NOTES:**
1. These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average unconfined compressive strength (Qu) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & Structures should be contacted for a revised design if other conditions are encountered.
 2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
 3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations.
 4. For mast arm assemblies with dual arms refer to state standard 878001.

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

FILE NAME = 60T98-12-D1 Standard TS Details.dgn	USER NAME = jwouife	DESIGNED -	REVISED -
		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCALE: NONE		SHEET 5 OF 6 SHEETS		STA. TO STA.		DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS		F.A.P. RTE. 365	SECTION (56R-2) TS	COUNTY DuPAGE	TOTAL SHEETS 33	SHEET NO. 12
										CONTRACT NO. 60T98		
ILLINOIS FED. AID PROJECT												

TRAFFIC SIGNAL LEGEND

ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED
CONTROLLER CABINET				EMERGENCY VEHICLE LIGHT DETECTOR				ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE			
RAILROAD CONTROL CABINET				CONFIRMATION BEACON				COAXIAL CABLE			
COMMUNICATIONS CABINET				HANDHOLE				VENDOR CABLE FOR CAMERA			
MASTER CONTROLLER				HEAVY DUTY HANDHOLE				COPPER INTERCONNECT CABLE, NO. 18 3 PAIR TWISTED, SHIELDED			
MASTER MASTER CONTROLLER				DOUBLE HANDHOLE				FIBER OPTIC CABLE NO. 62.5/125, MM12F			
UNINTERRUPTIBLE POWER SUPPLY				JUNCTION BOX				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F			
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT				GALVANIZED STEEL CONDUIT IN TRENCH (T) OR PUSHED (P)				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM21F			
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT				TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE				FIBER OPTIC CABLE NO. 62.5/125, (NUMBER OF FIBERS & TYPE TO BE NOTED ON PLANS)			
STEEL MAST ARM ASSEMBLY AND POLE				COMMON TRENCH				GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE			
ALUMINUM MAST ARM ASSEMBLY AND POLE				COILABLE NONMETALLIC CONDUIT (EMPTY)				CONTROLLER CABINET AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE				SYSTEM ITEM				STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA				INTERSECTION ITEM				ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED			
SIGNAL POST				REMOVE ITEM				STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED			
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM				RELOCATE ITEM				SIGNAL POST AND FOUNDATION TO BE REMOVED			
GUY WIRE				ABANDON ITEM				INTERSECTION & SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD				12" (300mm) TRAFFIC SIGNAL SECTION				SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)				12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE				EXISTING INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD WITH BACKPLATE				SIGNAL FACE				EXISTING PREFORMED INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD OPTICALLY PROGRAMMED				SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD				PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
FLASHER INSTALLATION (S DENOTES SOLAR POWER)				12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL				PREFORMED SAMPLING (SYSTEM) DETECTOR			
PEDESTRIAN SIGNAL HEAD				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED				RAILROAD SYMBOLS			
PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID				RAILROAD CONTROL CABINET			
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR				PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER				RAILROAD CANTILEVER MAST ARM			
ILLUMINATED SIGN "NO LEFT TURN"				RADIO INTERCONNECT				FLASHING SIGNAL			
ILLUMINATED SIGN "NO RIGHT TURN"				RADIO REPEATER				CROSSING GATE			
DETECTOR LOOP, TYPE I				DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED				CROSSBUCK			
PREFORMED DETECTOR LOOP				GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)							
MICROWAVE VEHICLE SENSOR											
VIDEO DETECTION CAMERA											
VIDEO DETECTION ZONE											
PAN, TILT, ZOOM CAMERA											
WIRELESS DETECTOR SENSOR											
WIRELESS ACCESS POINT											

FILE NAME = 60198-13-D1 Standard TS Details.dgn	USER NAME = jwouife	DESIGNED -	REVISED -
		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

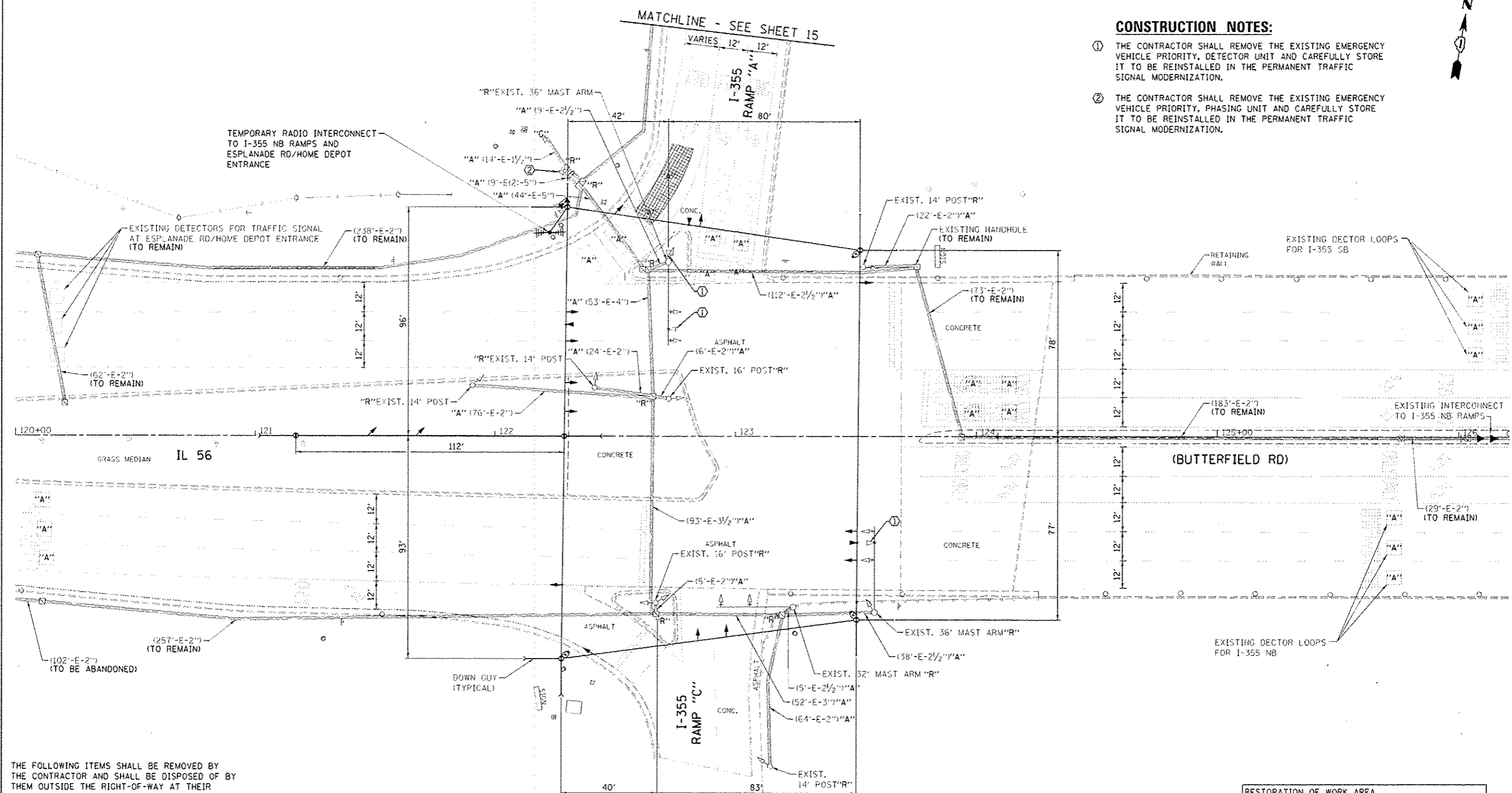
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F.A.P. RTE. 365	SECTION (56R-2) TS	COUNTY DuPAGE	TOTAL SHEETS 33	SHEET NO. 13
TS-05		CONTRACT NO. 60T98		
ILLINOIS FED. AID PROJECT				



CONSTRUCTION NOTES:

- ① THE CONTRACTOR SHALL REMOVE THE EXISTING EMERGENCY VEHICLE PRIORITY, DETECTOR UNIT AND CAREFULLY STORE IT TO BE REINSTALLED IN THE PERMANENT TRAFFIC SIGNAL MODERNIZATION.
- ② THE CONTRACTOR SHALL REMOVE THE EXISTING EMERGENCY VEHICLE PRIORITY, PHASING UNIT AND CAREFULLY STORE IT TO BE REINSTALLED IN THE PERMANENT TRAFFIC SIGNAL MODERNIZATION.



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.

- 1 EACH CONTROLLER AND CABINET (COMPLETE)
- 11 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
- 2 EACH SIGNAL HEAD, 1-FACE, 4-SECTION
- 1 EACH SIGNAL HEAD, 2-FACE, 1 3-SECTION, 1 4-SECTION
- 6 EACH TRAFFIC SIGNAL BACKPLATE
- 3 EACH STEEL MAST ARM ASSEMBLY AND POLE
- 6 EACH TRAFFIC SIGNAL POST
- 1 EACH SERVICE INSTALLATION

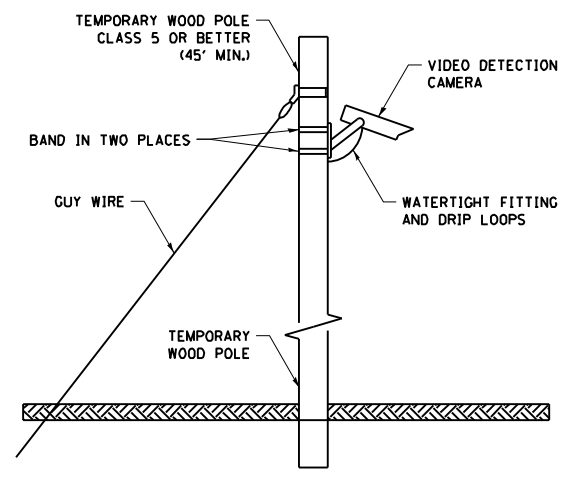
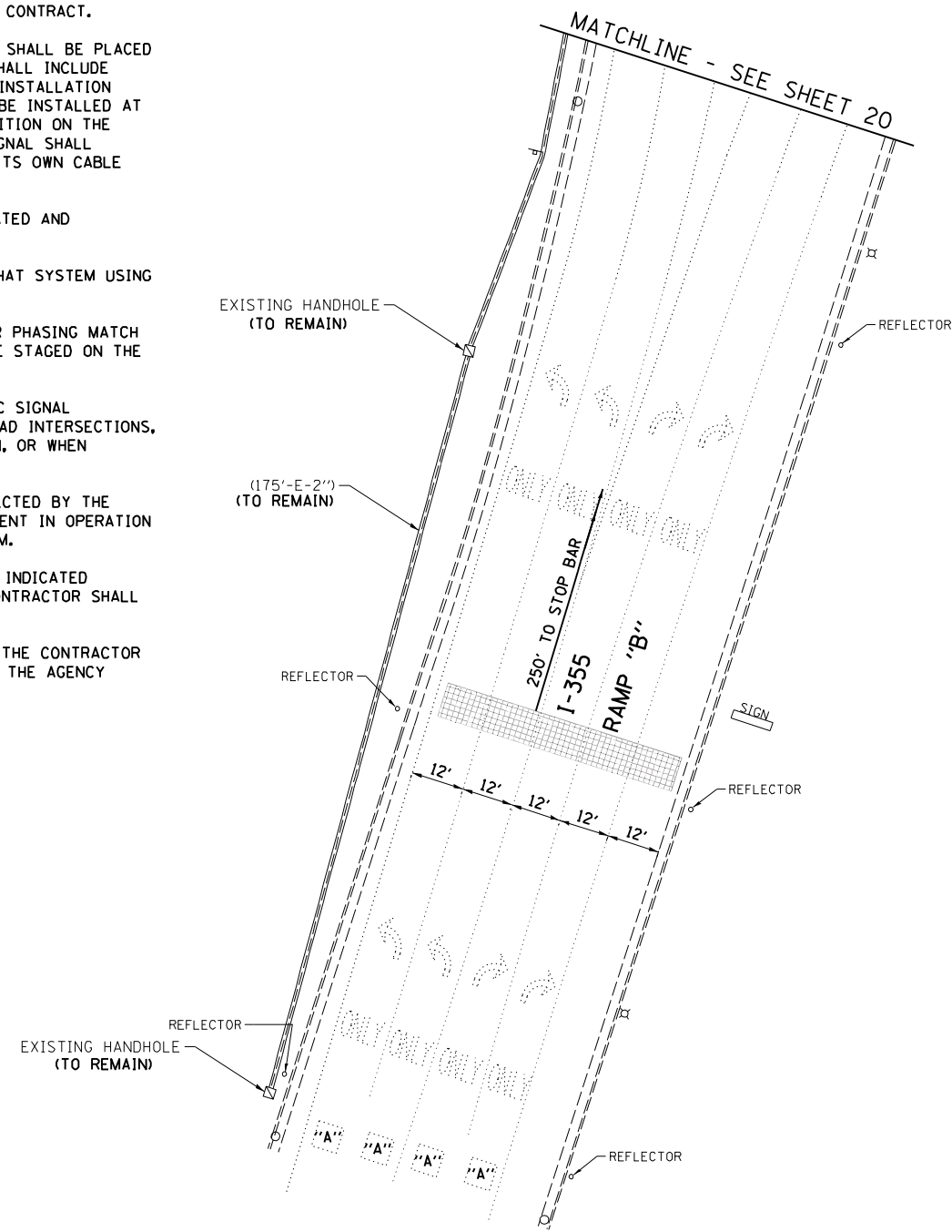
THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

RESTORATION OF WORK AREA,
RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEMS SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, 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.

FILE NAME: COT-14-IL56West Ramp-TS-Temp.dgn	USER NAME: j-fulton	DESIGNED - JRO	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT IL 56 (BUTTERFIELD RD) AT I-355 SB RAMPS	F.A.P. RTE. 365	SECTION (56R-2) TS	COUNTY DUPage	TOTAL SHEETS 33	SHEET NO. 14	CONTRACT NO. 60T98		
MODEL NAME:	PLOT SCALE: 1/20	CHECKED - KLB	REVISED -			SCALE: 1"=20'	SHEET OF SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT				
DATE: 11/14/2013	DATE: 11/14/2013	DATE: -	REVISED: -			GHA #4085.885							

NOTES FOR TEMPORARY TRAFFIC SIGNALS:

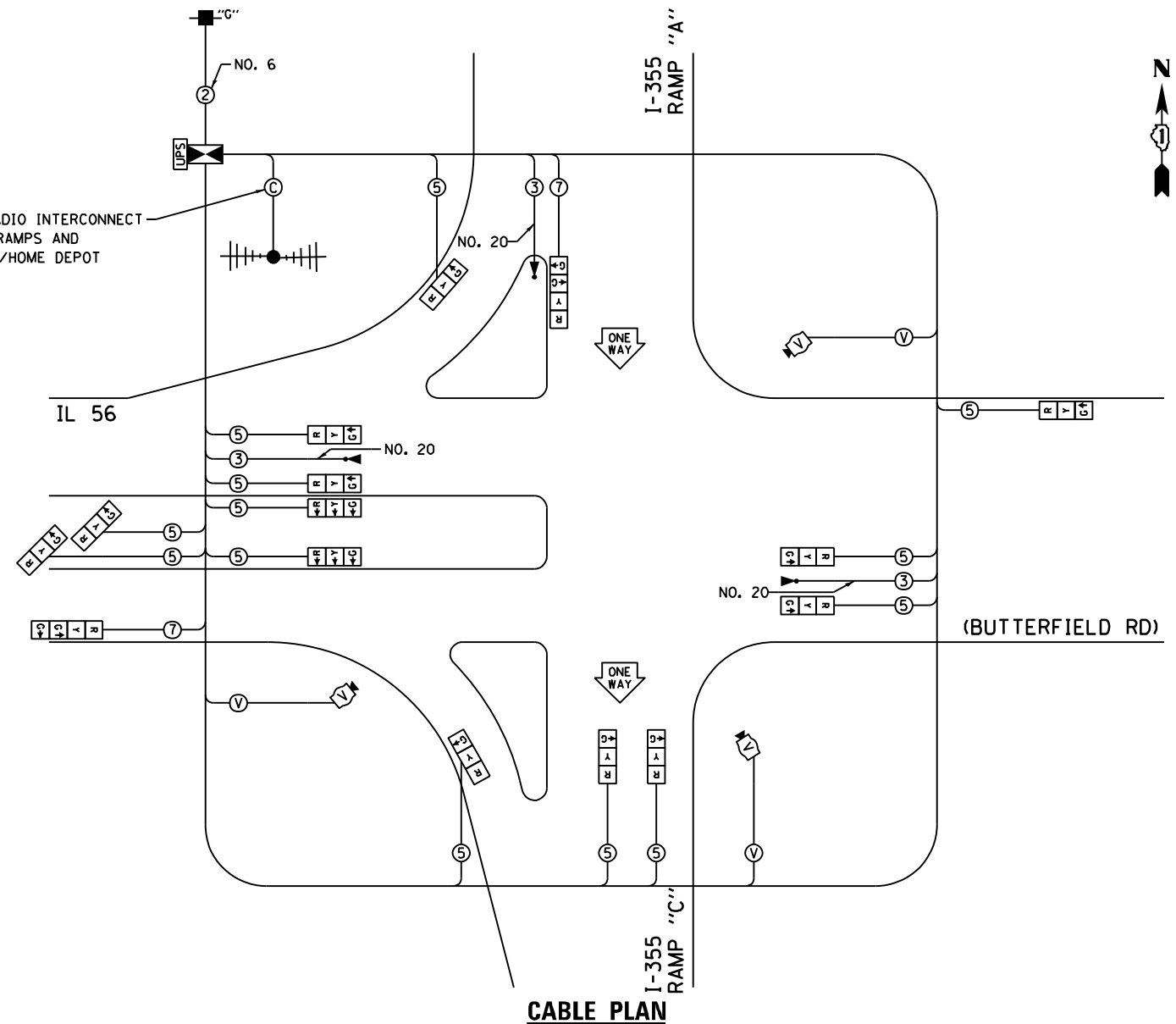
1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. 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 TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. 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.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROLLER EQUIPMENT.
6. 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.
7. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
8. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
9. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF THE DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.
10. WHEN PAN, TILT, ZOOM CAMERAS ARE INSTALLED AT THE EXISTING INTERSECTION OR ARE CALLED FOR IN THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THE CAMERAS TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE CAMERAS.



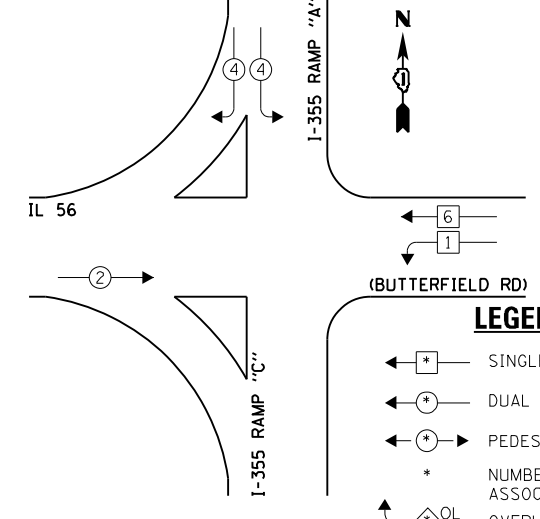
THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

RESTORATION OF WORK AREA.
 RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEMS SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, 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 SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

FILE NAME = 60T98-21-IL56EEst Ramp-TS-Temp.dgn	USER NAME = jwouife	DESIGNED - JRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT IL 56 (BUTTERFIELD RD) AT I-355 NB RAMPS	F.A.P. RTE. 365	SECTION (56R-2) TS	COUNTY DuPAGE	TOTAL SHEETS 33	SHEET NO. 21	
\$MODELNAME\$	PLOT SCALE = 1:20	CHECKED - KLB	REVISED -			SCALE: 1"=20'	SHEET OF SHEETS STA. TO STA.	CONTRACT NO. 60T98			
	PLOT DATE = 5/1/2013	DATE -	REVISED -			ILLINOIS FED. AID PROJECT					
GHA #4085,885											

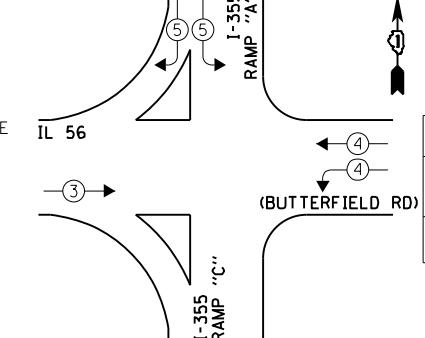


TEMPORARY CONTROLLER SEQUENCE



TEMPORARY PHASE DESIGNATION DIAGRAM

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



TEMPORARY EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	→	↘

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

TYPE	NO. LAMPS	WATTAGE		OPERATION	TOTAL WATTAGE
		INCAND.	L.E.D.		
SIGNAL (RED)	15	135	17	0.50	127.5
SIGNAL (YELLOW)	15	135	25	0.25	93.75
SIGNAL (GREEN)	17	135	15	0.25	63.75
ARROW	-	135	12	0.10	-
PED. SIGNAL	-	90	25	1.00	-
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	-	-	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	-	-	150	1.00	-
BATTERY BACKUP	1	-	25	1.00	25.0
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =					410.0

ENERGY COSTS - BILLED TO: IL DEPT. OF TRANSPORTATION
 (ADDRESS) 201 W. CENTER COURT
 (ADDRESS) SCHALMBURG, IL 60196-1096
 ENERGY SUPPLY - CONTACT: IL YAS MOHIUDDIN
 PHONE: 708-235-2692
 COMPANY: COMED - UNIVERSITY PARK

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

FILE NAME =	USER NAME = jwouife	DESIGNED - JRD	REVISED -
60T98-16-IL56@West Ramp-Temp.Cable.dgn		DRAWN - PJS	REVISED -
	PLOT SCALE = 1:20	CHECKED - KLB	REVISED -
\$MODELNAME\$	PLOT DATE = 4/26/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN, TEMPORARY PHASE DESIGNATION DIAGRAM, & TEMPORARY VEHICLE PREEMPTION SEQUENCE
IL 56 (BUTTERFIELD RD) AT I-355 SB RAMPS

SCALE: NONE SHEET ___ OF ___ SHEETS STA. ___ TO STA. ___

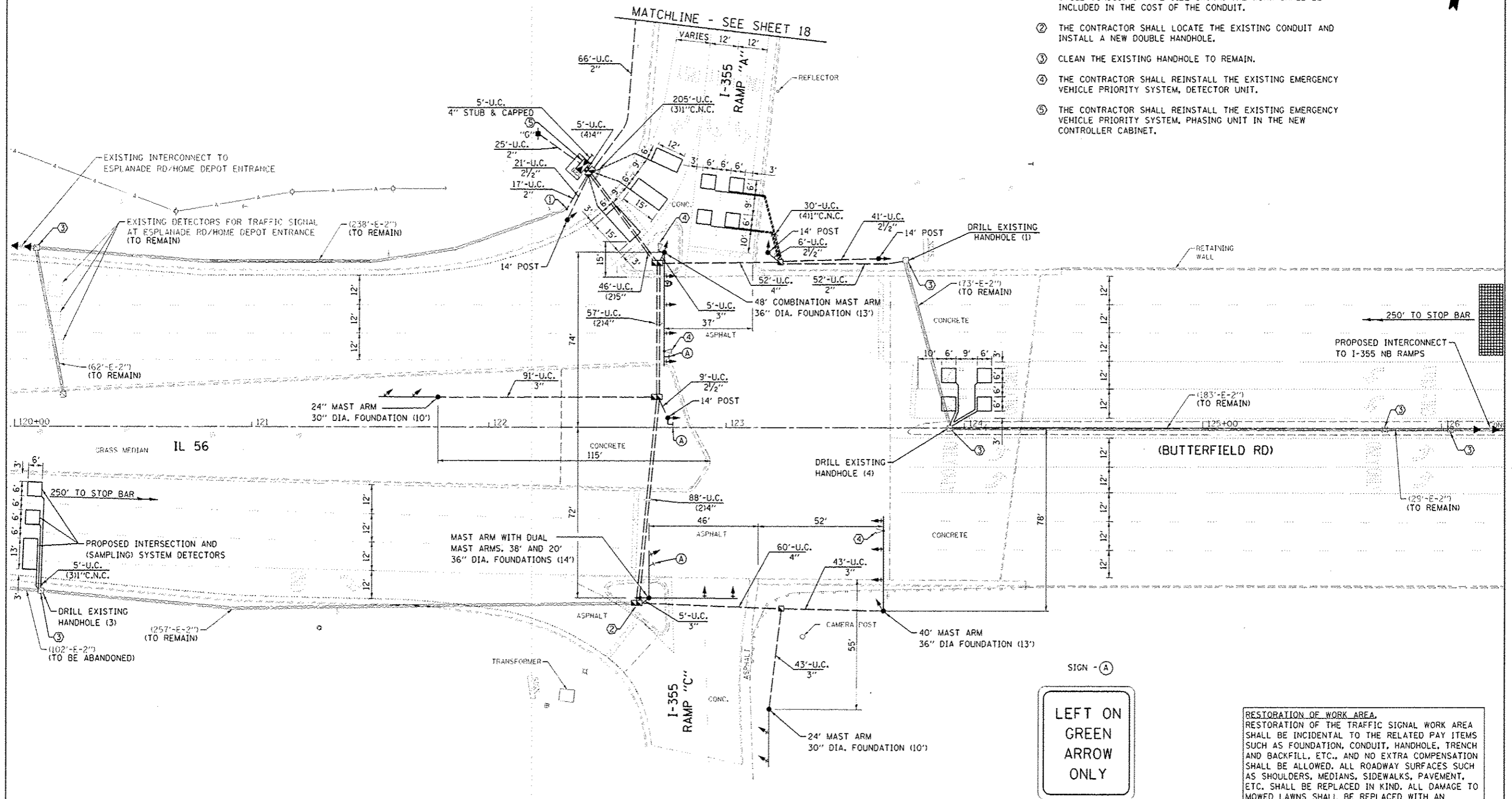
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(56R-2) TS	DuPAGE	33	16
CONTRACT NO. 60T98			ILLINOIS FED. AID PROJECT	

GHA #4085.885



CONSTRUCTION NOTES:

- ① THE CONTRACTOR SHALL LOCATE AND INTERCEPT THE COUPLING OF THE EXISTING CONDUIT AND SPLICE A NEW GALVANIZED STEEL CONDUIT OF THE SIZE SHOWN. THE WORK SHALL BE INCLUDED IN THE COST OF THE CONDUIT.
- ② THE CONTRACTOR SHALL LOCATE THE EXISTING CONDUIT AND INSTALL A NEW DOUBLE HANDHOLE.
- ③ CLEAN THE EXISTING HANDHOLE TO REMAIN.
- ④ THE CONTRACTOR SHALL REINSTALL THE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT.
- ⑤ THE CONTRACTOR SHALL REINSTALL THE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT IN THE NEW CONTROLLER CABINET.



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

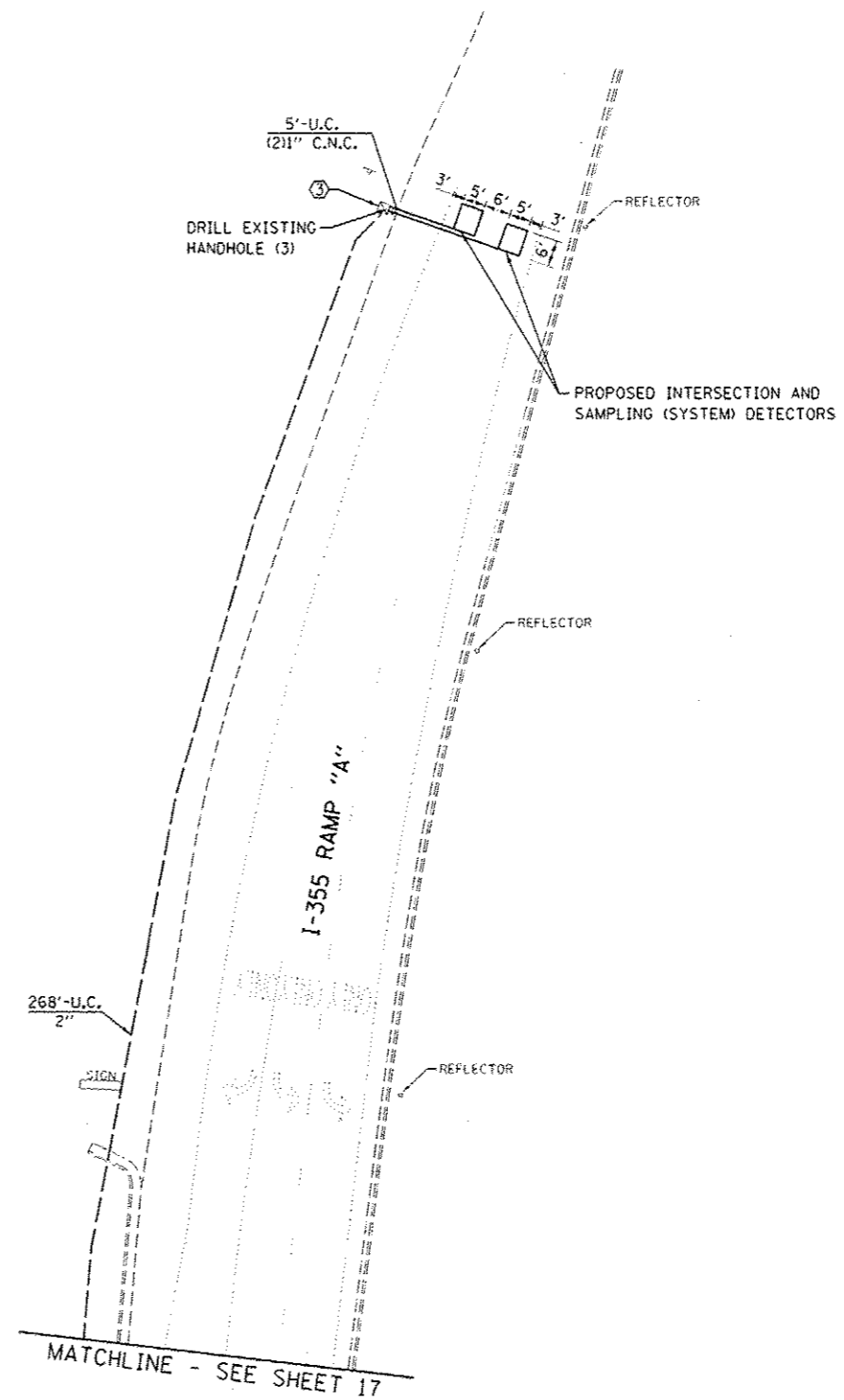


R10-5
30"x36" (TYP)
SIGN PANEL TYPE 1
(3 REQUIRED)

RESTORATION OF WORK AREA.
RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEMS SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, 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.

FILE NAME = 60T98-17-IL 56@west Ramp-TS.dgn	USER NAME = gubytan	DESIGNED - JRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC SIGNAL MODERNIZATION PLAN IL 56 (BUTTERFIELD RD) AT I-355 SB RAMPS		F.A.P. RTE. = 365	SECTION = (56R-2) TS	COUNTY =	TOTAL SHEETS = 33	SHEET NO. = 17
MODEL NAME =	PLOT SCALE = 1/2" = 1'-0"	DRAWN - PJS/JPW	REVISED -		SCALE: 1"=20'	SHEET OF SHEETS	STA. TO STA.	DUPAGE	ILLINOIS FED. AID PROJECT	CONTRACT NO. 60T98	
	PLOT DATE = 5/10/2013	CHECKED - KLB	REVISED -								
		DATE -	REVISED -								

GHA #4085,885



THE TRAFFIC SIGNAL CONTROL 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 ITEMS SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, 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.

GHA #4085,885

FILE NAME :	USER NAME :	DESIGNED -	REVISED -
FBTRD-10-IL 56 West Ramp-TS.dgn	gblvsten	JRD	-
		DRAWN -	REVISED -
		PJS/JPW	-
		CHECKED -	REVISED -
		KLB	-
		DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN
 IL 56 (BUTTERFIELD RD) AT I-355 SB RAMPS

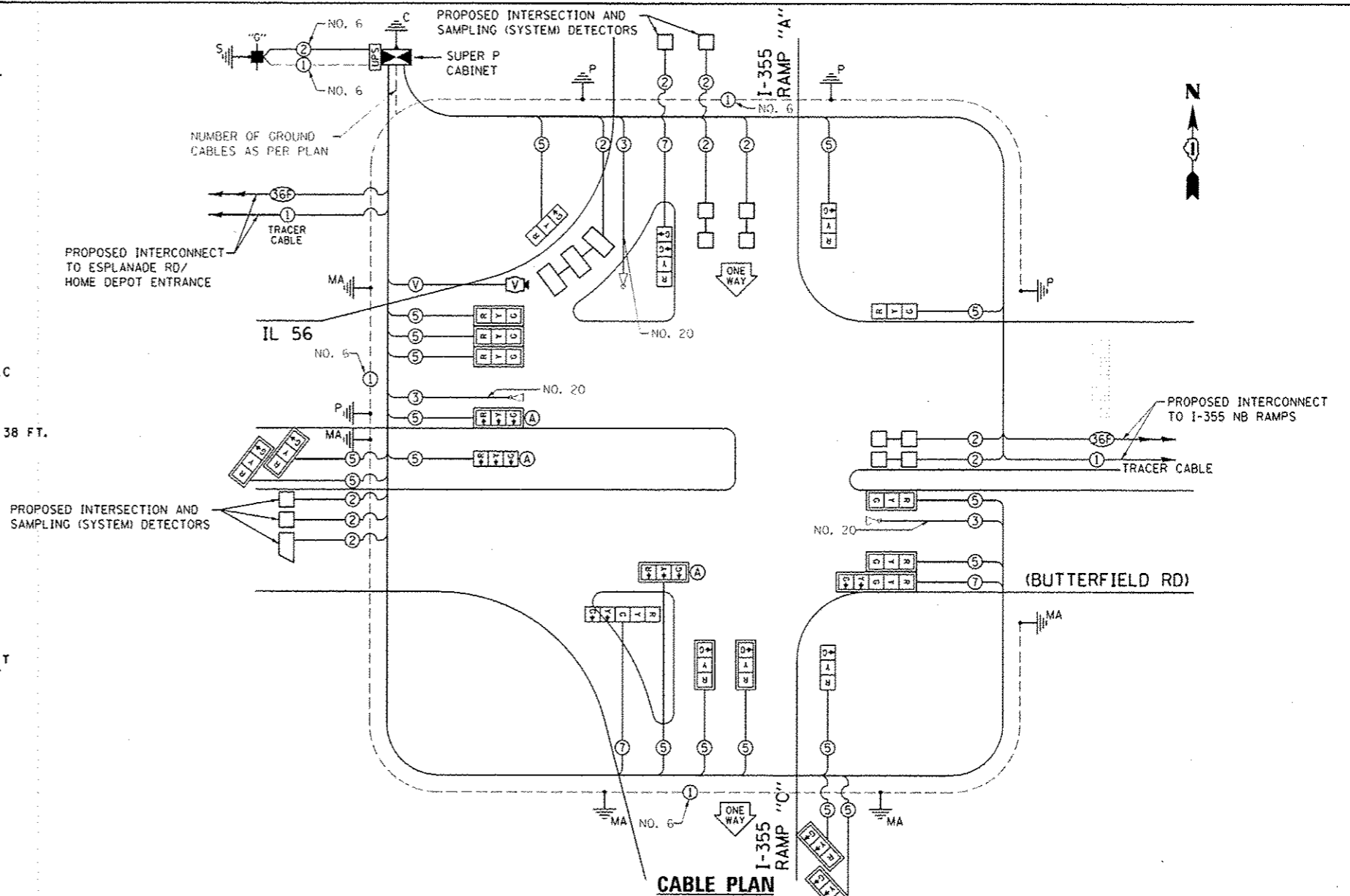
SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(56R-2) TS		33	18
CONTRACT NO. 60T98				
[ILLINOIS] FED. AID PROJECT				

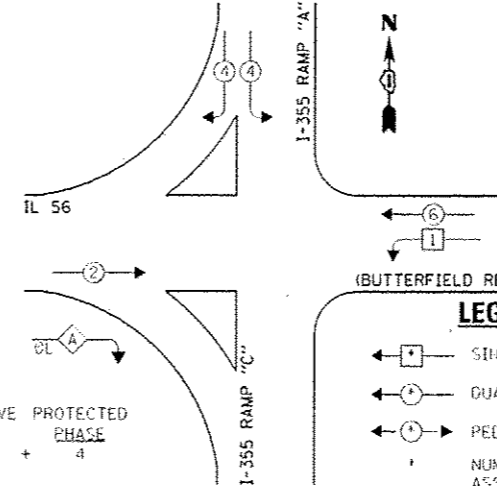
SCHEDULE OF QUANTITIES
IL 56 (BUTTERFIELD RD) AT I-355 SB RAMPS

NO.	QUANT.	UNIT	DESCRIPTION
1.	1.00	CAL MO	ENGINEER'S FIELD OFFICE, TYPE A
2.	0.40	L SUM	MOBILIZATION
3.	0.40	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501
4.	0.40	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606
5.	0.40	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701
6.	22.50	SO FT	SIGN PANEL - TYPE I
7.	1	EACH	SERVICE INSTALLATION - GROUND MOUNTED
8.	428	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
9.	77	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.
10.	187	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.
11.	419	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.
12.	92	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 5" DIA.
13.	2	EACH	HANDHOLE
14.	4	EACH	DOUBLE HANDHOLE
15.	1	EACH	TRANSCEIVER - FIBER OPTIC
16.	4,668	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
17.	803	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
18.	3,224	FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
19.	34	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C
20.	746	FOOT	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C
21.	4	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.
22.	2	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 24 FT.
23.	1	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 40 FT.
24.	1	EACH	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 20 FT. AND 38 FT.
25.	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 48 FT.
26.	20	FOOT	CONCRETE FOUNDATION, TYPE A
27.	4	FOOT	CONCRETE FOUNDATION, TYPE C
28.	30	FOOT	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER
29.	27	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
30.	13	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
31.	5	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
32.	1	EACH	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED
33.	1	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
34.	1	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
35.	14	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
36.	10	EACH	INDUCTIVE LOOP DETECTOR
37.	660	FOOT	DETECTOR LOOP, TYPE I
38.	1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
39.	3	EACH	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT
40.	1	EACH	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT
41.	1,916	FOOT	REMOVE ELECTRIC CABLE FROM CONDUIT
42.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
43.	6	EACH	REMOVE EXISTING HANDHOLE
44.	10	EACH	REMOVE EXISTING CONCRETE FOUNDATION
45.	675	FOOT	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C
46.	513	FOOT	ROD AND CLEAN EXISTING CONDUIT
47.	1	EACH	MICROWAVE VEHICLE SENSOR (SMARTSENSOR ADVANCE)
48.	1	EACH	FULL-ACTUATED CONTROLLER AND SUPER P CABINET, TYPE IV, SPECIAL
49.	1	EACH	UNINTERRUPTIBLE POWER SUPPLY, SPECIAL
50.	51.40	SO FT	TEMPORARY INFORMATION SIGNING
51.	1	EACH	TEMPORARY TRAFFIC SIGNAL TIMING
52.	7	EACH	CLEAN EXISTING MANHOLE OR HANDHOLE

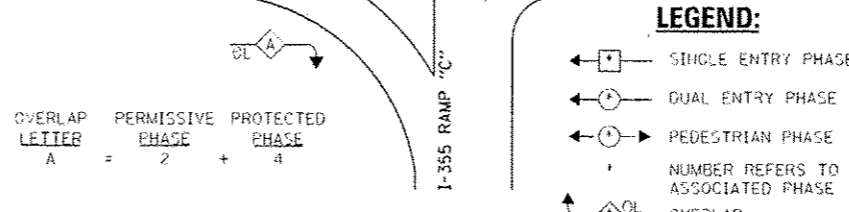
•100% OF THE COST SHALL BE PAID BY THE VILLAGE OF DOWNERS GROVE



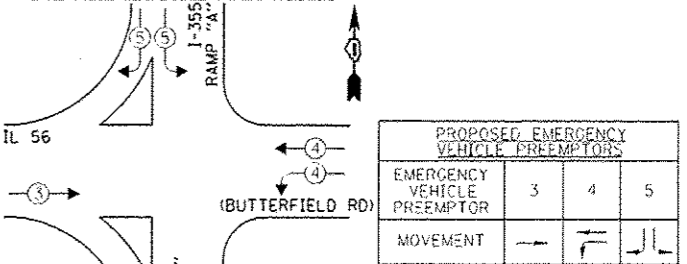
PROPOSED CONTROLLER SEQUENCE



PROPOSED PHASE DESIGNATION DIAGRAM



PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



R10-5
30"x36" (TYP)
SIGN PANEL TYPE 1
(3 REQUIRED)

THE TRAFFIC SIGNAL CONTROL 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	OPERATION		
SIGNAL (RED)	21	135	17	0.50	178.5
SIGNAL (YELLOW)	21	135	25	0.25	131.25
SIGNAL (GREEN)	22	135	15	0.25	82.5
ARROW	4	135	12	0.10	4.8
RED SIGNAL	-	90	25	1.00	-
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	-	-	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	1	-	150	1.00	150.00
BATTERY BACKUP	1	-	25	1.00	25.0
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =					672.05

ENERGY COSTS - BILLED TO: IL DEPT. OF TRANSPORTATION
(ADDRESS) 201 W. CENTER COURT
(ADDRESS) SCHAMBURG, IL 60196-1096
ENERGY SUPPLY - CONTACT: ILYAS MOHIDDIN
PHONE: 708-235-2692
COMPANY: COMED - UNIVERSITY PARK

DESIGNED	REVISED
JRD	-
PJS	-
KLB	-
-	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION
DIAGRAM, & EMERGENCY VEHICLE PREEMPTION SEQUENCE
IL 56 (BUTTERFIELD RD) AT I-355 SB RAMPS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(56R-2) TS	DuPAGE	33	19

CONTRACT NO. 60T98

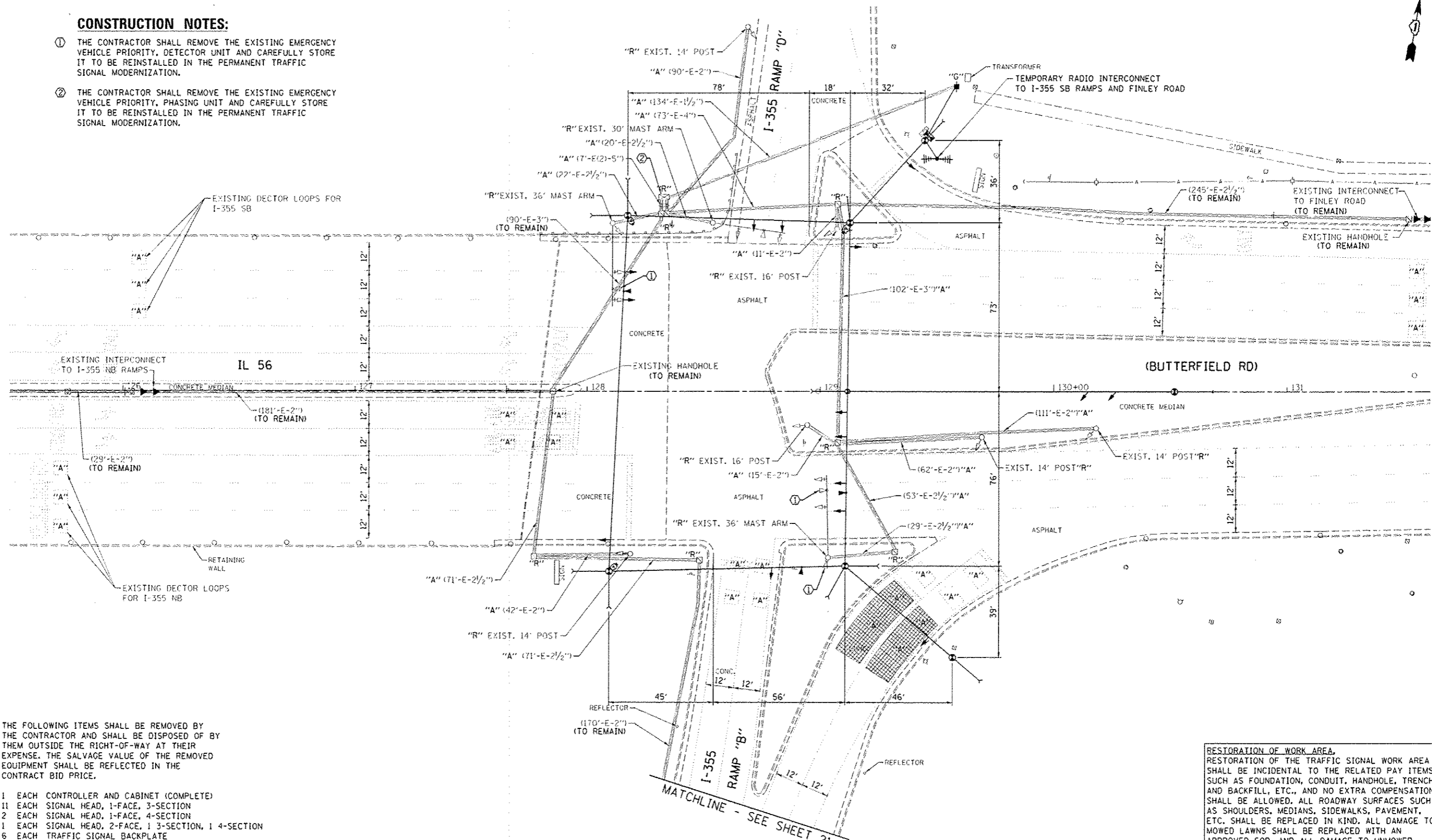
CHA #4085.885

ILLINOIS FED. AID PROJECT



CONSTRUCTION NOTES:

- ① THE CONTRACTOR SHALL REMOVE THE EXISTING EMERGENCY VEHICLE PRIORITY, DETECTOR UNIT AND CAREFULLY STORE IT TO BE REINSTALLED IN THE PERMANENT TRAFFIC SIGNAL MODERNIZATION.
- ② THE CONTRACTOR SHALL REMOVE THE EXISTING EMERGENCY VEHICLE PRIORITY, PHASING UNIT AND CAREFULLY STORE IT TO BE REINSTALLED IN THE PERMANENT TRAFFIC SIGNAL MODERNIZATION.



- 1 EACH CONTROLLER AND CABINET (COMPLETE)
- 11 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
- 2 EACH SIGNAL HEAD, 1-FACE, 4-SECTION
- 1 EACH SIGNAL HEAD, 2-FACE, 1 3-SECTION, 1 4-SECTION
- 6 EACH TRAFFIC SIGNAL BACKPLATE
- 3 EACH STEEL MAST ARM ASSEMBLY AND POLE
- 6 EACH TRAFFIC SIGNAL POST
- 1 EACH SERVICE INSTALLATION

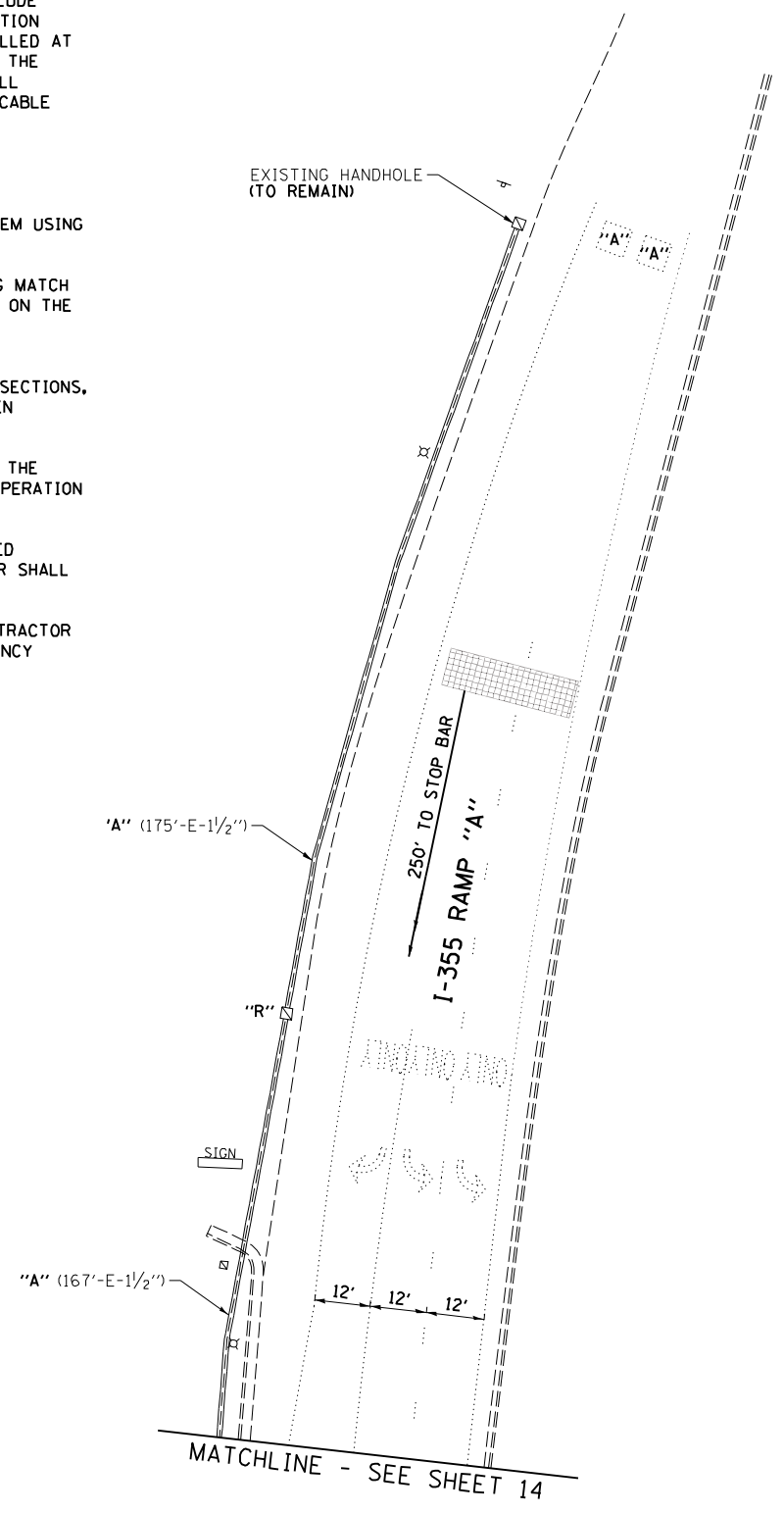
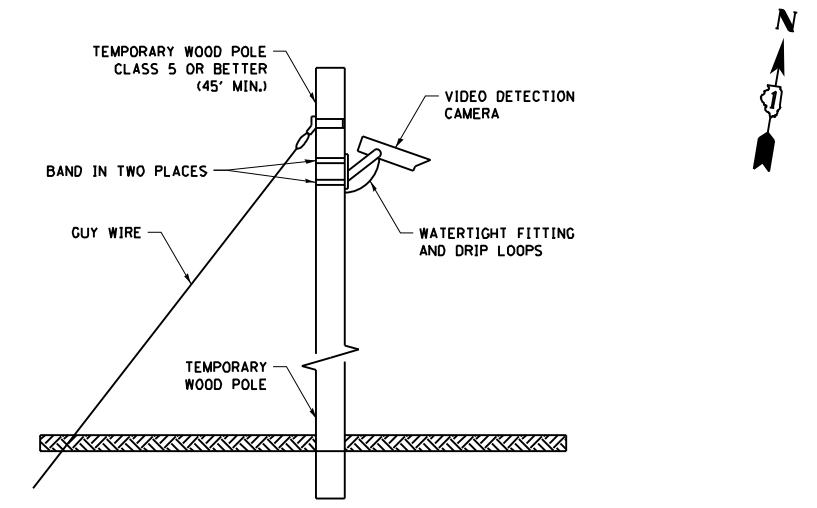
THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

RESTORATION OF WORK AREA.
 RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEMS SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, 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.

FILE NAME =	USER NAME = g-hutton	DESIGNED - JRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT IL 56 (BUTTERFIELD RD) AT I-355 NB RAMP	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
60798-20-IL56East Ramp-TS-TEMP.dgn	PLLOT SCALE = 1:20	DRAWN - PJS	REVISED -			365	(56R-2) 15	DUPAGE	33	20	
MODEL NAME =	PLLOT DATE = 5/14/2013	CHECKED - KLB	REVISED -			SCALE: 1"=20'		SHEET OF SHEETS STA. TO STA.		CONTRACT NO. 60T98	
		DATE -	REVISED -			GHA #4085.885 ILLINOIS FED. AID PROJECT					

NOTES FOR TEMPORARY TRAFFIC SIGNALS:

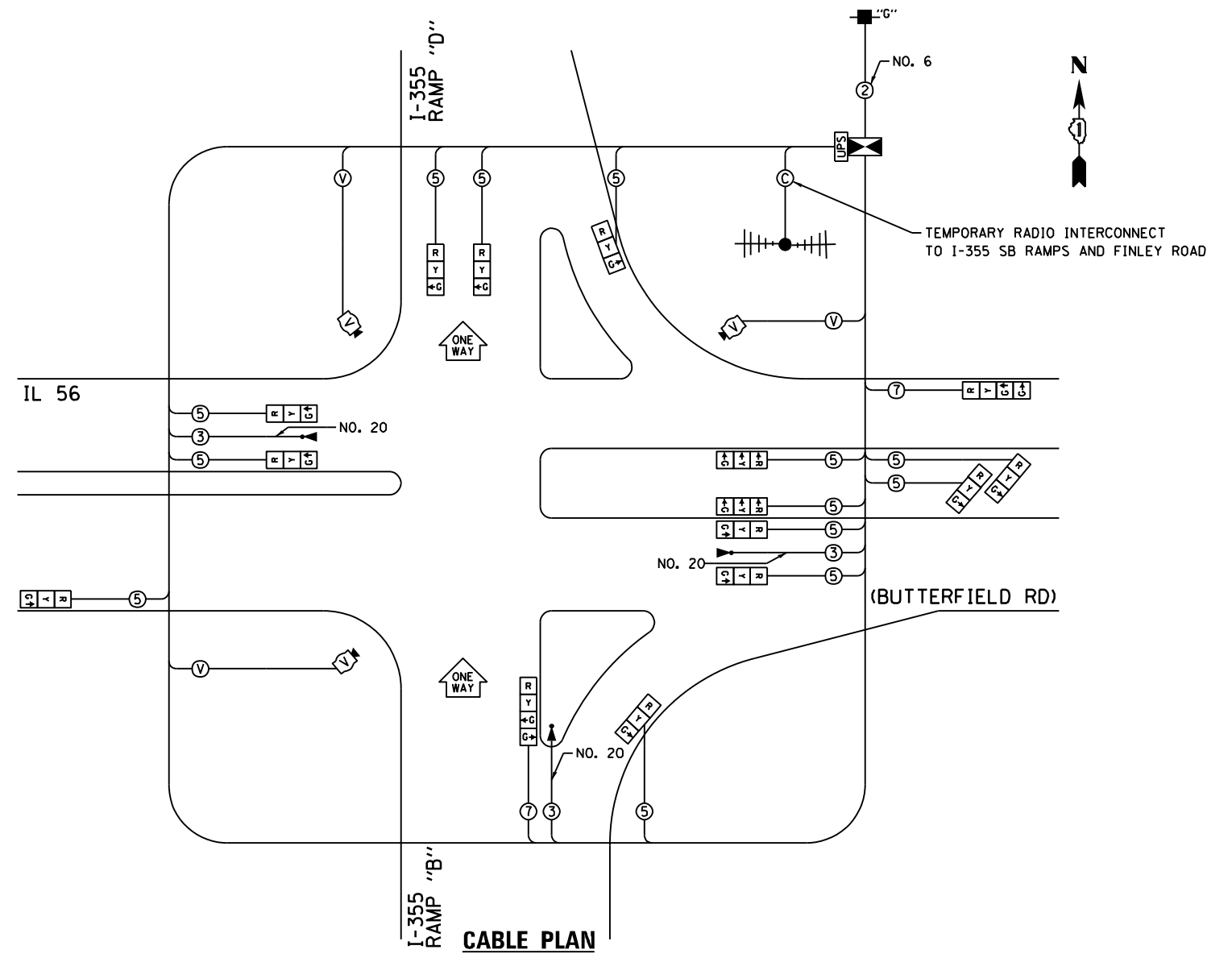
1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. 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 TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. 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.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROLLER EQUIPMENT.
6. 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.
7. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
8. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
9. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF THE DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.
10. WHEN PAN, TILT, ZOOM CAMERAS ARE INSTALLED AT THE EXISTING INTERSECTION OR ARE CALLED FOR IN THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THE CAMERAS TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE CAMERAS.



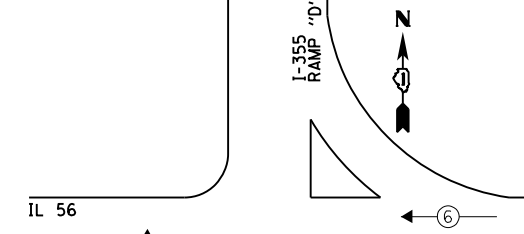
THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

RESTORATION OF WORK AREA.
 RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEMS SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, 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 SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

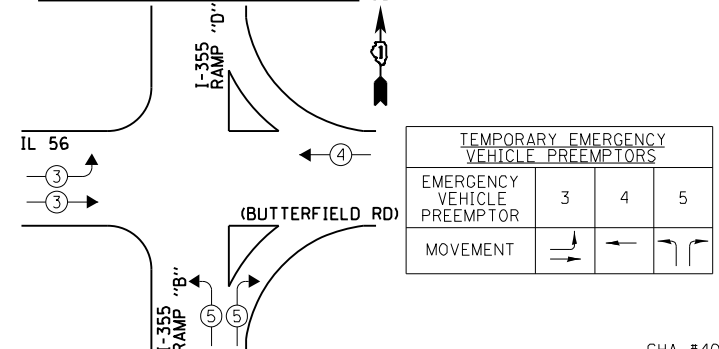
FILE NAME = 60T98-15-IL56@West Ramp-TS-Temp.dgn	USER NAME = jwouife	DESIGNED - JRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT IL 56 (BUTTERFIELD RD) AT I-355 SB RAMPS	F.A.P. RTE. 365	SECTION (56R-2) TS	COUNTY DuPAGE	TOTAL SHEETS 33	SHEET NO. 15		
\$MODELNAME\$	PLOT SCALE = 1:20	CHECKED - KLB	REVISED -			SCALE: 1"=20'	SHEET OF SHEETS STA. TO STA.	CONTRACT NO. 60T98				
	PLOT DATE = 4/26/2013	DATE -	REVISED -			ILLINOIS FED. AID PROJECT						
GHA #4085,885												



TEMPORARY CONTROLLER SEQUENCE



TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



LEGEND:

- ← * → SINGLE ENTRY PHASE
- ← * → DUAL ENTRY PHASE
- ← * → PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE
- OL OVERLAP

TEMPORARY PHASE DESIGNATION DIAGRAM

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	INCAND.	L.E.D.	OPERATION	
SIGNAL (RED)	15	135	17	0.50	127.5
SIGNAL (YELLOW)	15	135	25	0.25	93.75
SIGNAL (GREEN)	17	135	15	0.25	63.75
ARROW	-	135	12	0.10	-
PED. SIGNAL	-	90	25	1.00	-
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	-	-	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	-	-	150	1.00	-
BATTERY BACKUP	1	-	25	1.00	25.0
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =					410.0

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

ENERGY COSTS - BILLED TO: IL DEPT. OF TRANSPORTATION
 (ADDRESS) 201 W. CENTER COURT
 (ADDRESS) SCHALMBURG, IL 60196-1096
 ENERGY SUPPLY - CONTACT: IL YAS MOHIUDDIN
 PHONE: 708-235-2692
 COMPANY: COMED - UNIVERSITY PARK

FILE NAME = USER NAME = jwouife
 60T98-22-IL56East Ramp-Temp.Cable.dgn
 PLOT SCALE = 1:20
 PLOT DATE = 5/7/2013

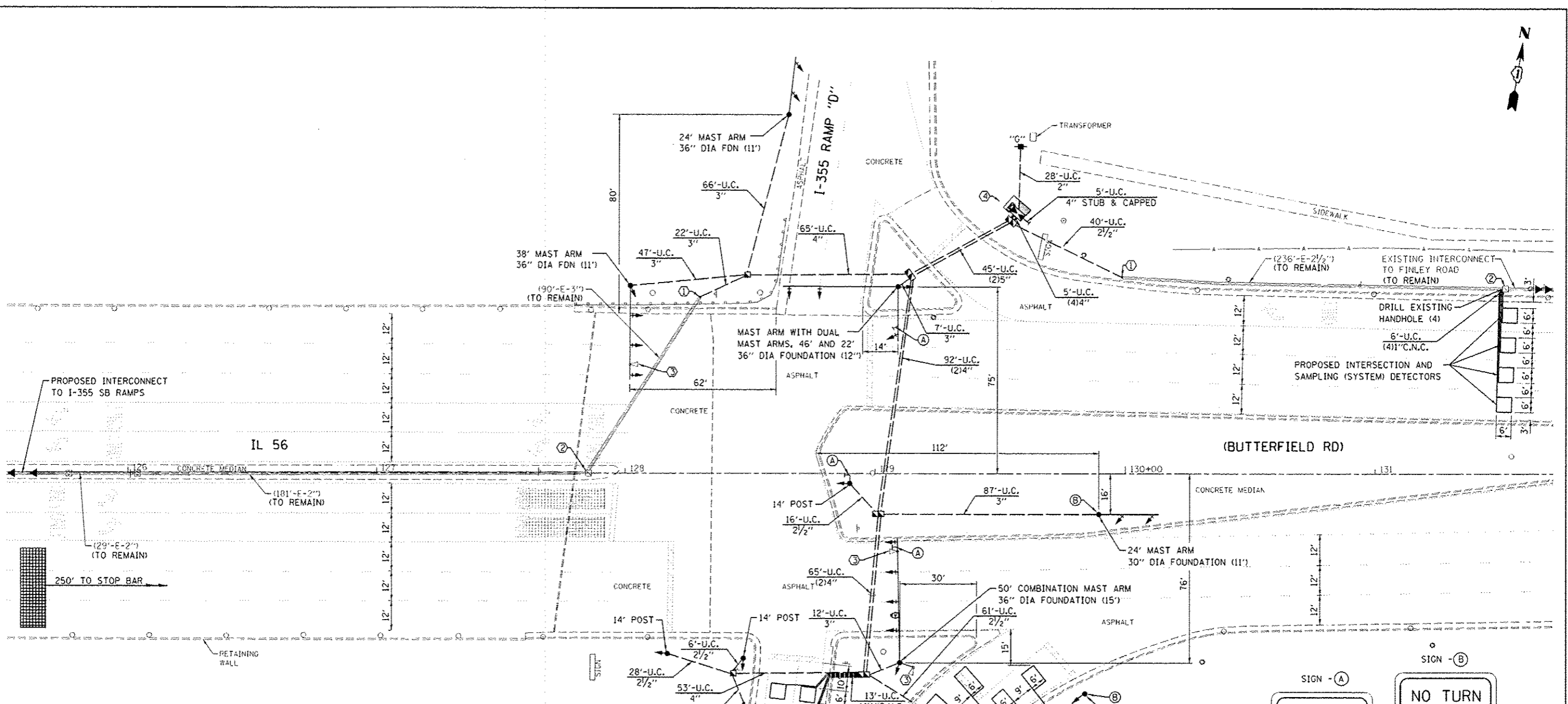
DESIGNED - JRD
 DRAWN - PJS/JPW
 CHECKED - KLB
 DATE -
 REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN, TEMPORARY PHASE DESIGNATION
 DIAGRAM, & TEMPORARY VEHICLE PREEMPTION SEQUENCE
 IL 56 (BUTTERFIELD RD) AT I-355 NB RAMP
 SCALE: NONE SHEET OF SHEETS STA. TO STA.

F.A.P. RTE. 365 SECTION (56R-2) TS COUNTY DuPAGE TOTAL SHEETS 33 SHEET NO. 22 CONTRACT NO. 60T98 ILLINOIS FED. AID PROJECT

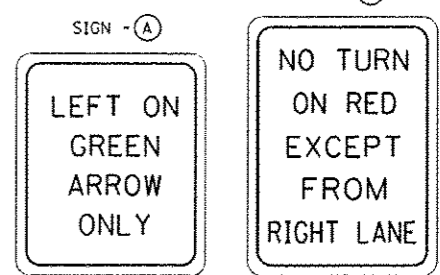
GHA #4085.885



CONSTRUCTION NOTES:

- ① THE CONTRACTOR SHALL LOCATE AND INTERCEPT THE COUPLING OF THE EXISTING CONDUIT AND SPLICE A NEW GALVANIZED STEEL CONDUIT OF THE SIZE SHOWN. THE WORK SHALL BE INCLUDED IN THE COST OF THE CONDUIT.
- ② CLEAN THE EXISTING HANDHOLE TO REMAIN
- ③ THE CONTRACTOR SHALL REINSTALL THE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT.
- ④ THE CONTRACTOR SHALL REINSTALL THE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT IN THE NEW CONTROLLER CABINET.

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

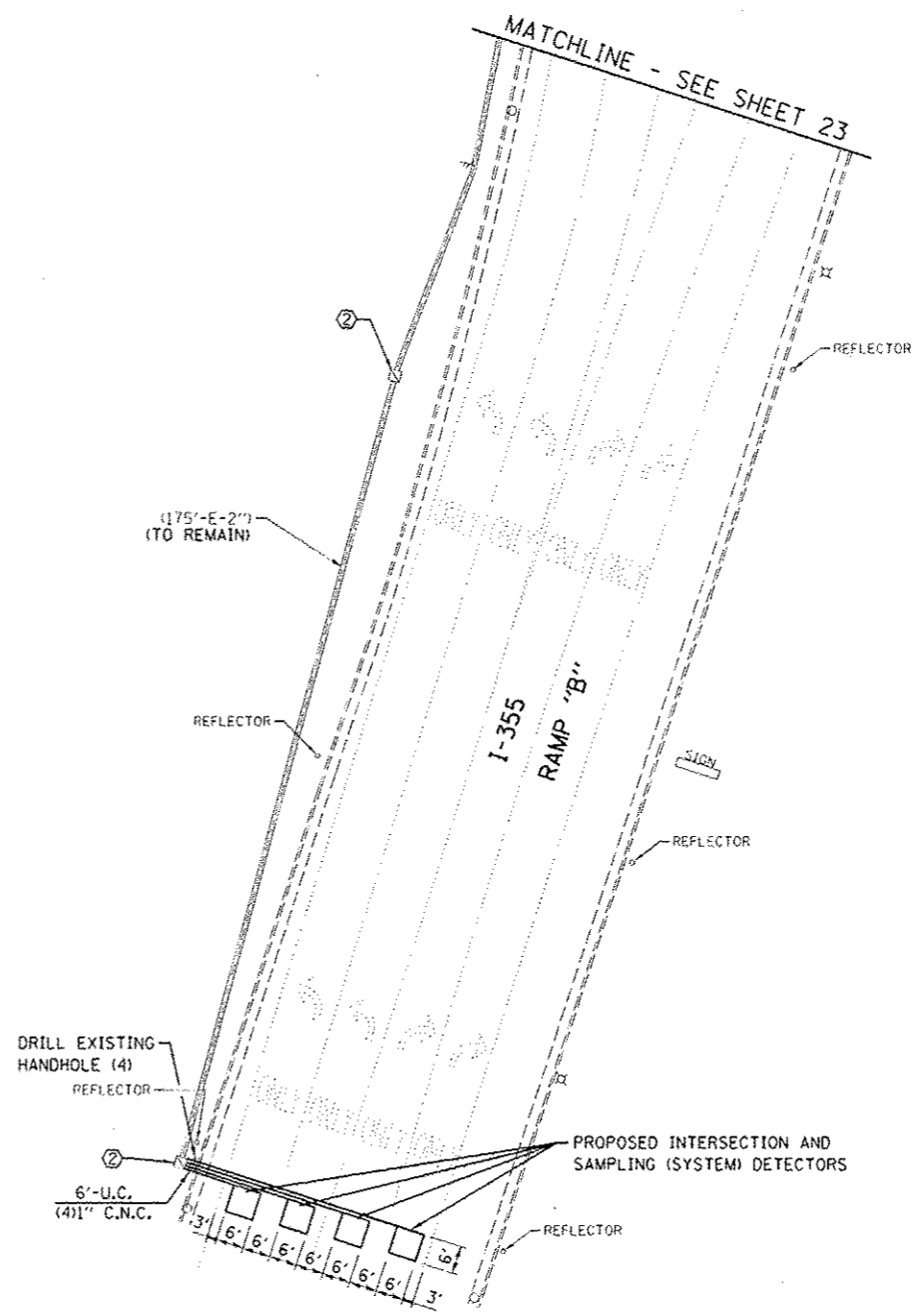


RESTORATION OF WORK AREA.
 RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEMS SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. 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.

FILE NAME =	USER NAME = gshstn	DESIGNED - JRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC SIGNAL MODERNIZATION PLAN IL 56 (BUTTERFIELD RD) AT I-355 NB RAMPS	F.A.P. RTE. =	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
60T10-23-IL 56East Ramp.TS.dgn		DRAWN - PJS/JPW	REVISED -			365	(56R-2) TS	DUPAGE	33	23	
MODEL NAME =		CHECKED - KLB	REVISED -			CONTRACT NO. 60T98					
		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					

GHA #4085.885

SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.



THE TRAFFIC SIGNAL CONTROL 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 ITEMS SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, 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 SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

GHA #4085.885

FILE NAME #	USER NAME #	DESIGNED -	REVISED -
60T98-24-IL56East Ramp-TS.dgn	g-hutton	JRD	-
		DRAWN -	REVISED -
		PJS	-
		CHECKED -	REVISED -
		KLB	-
MODEL NAME #	PLT SCALE #	DATE -	REVISED -
	1/2" = 1'-0"	5/10/2013	-

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL MODERNIZATION PLAN
 IL 56 (BUTTERFIELD RD) AT I-355 NB RAMPS**

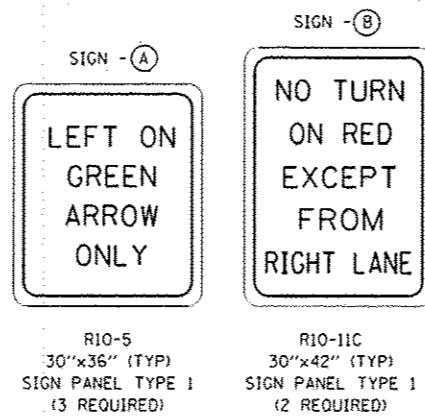
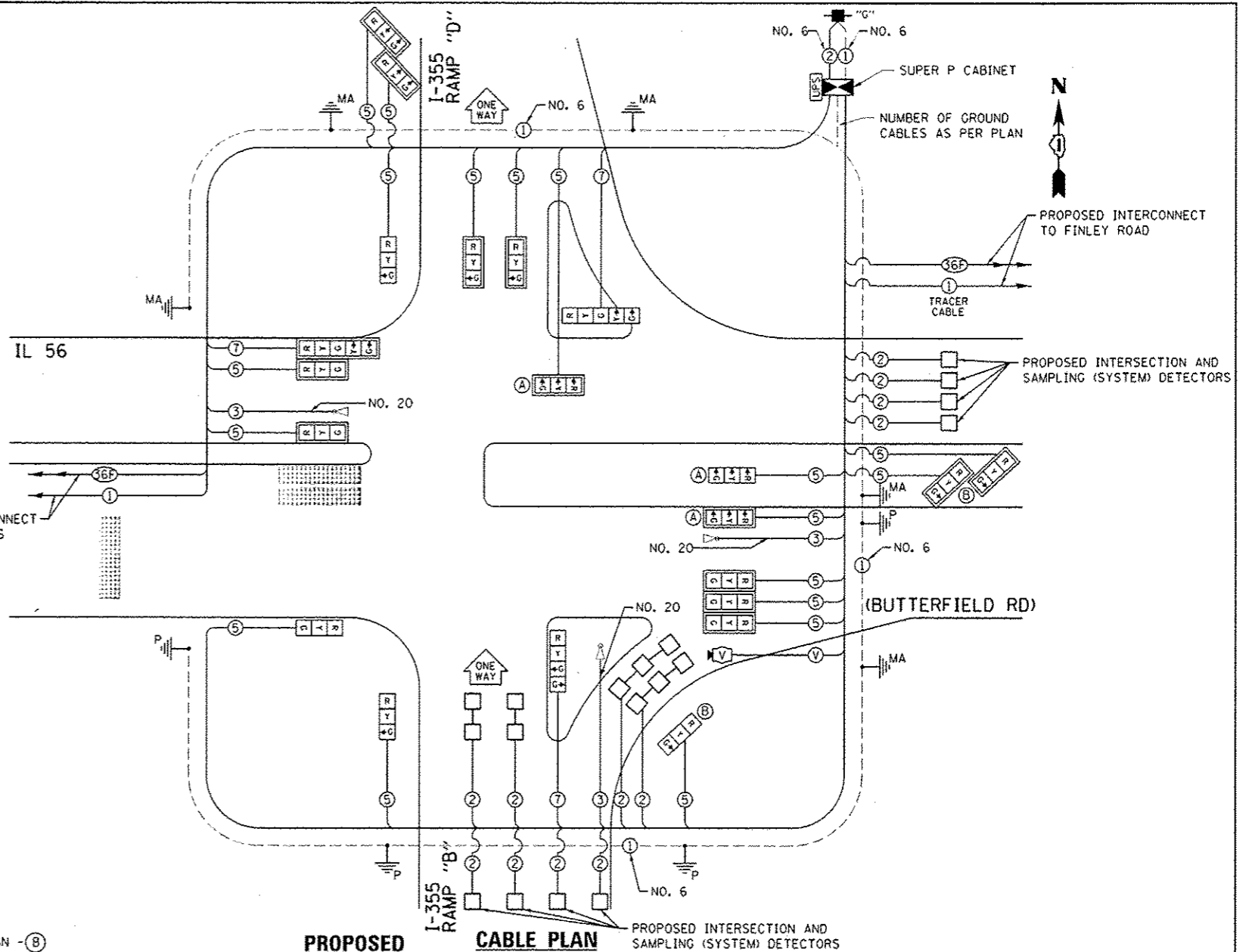
SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(56R-2) TS		33	24
CONTRACT NO. 60T98			ILLINOIS FED. AID PROJECT	

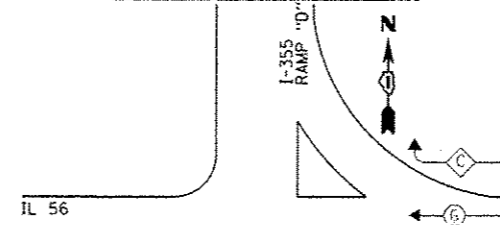
SCHEDULE OF QUANTITIES
IL 56 (BUTTERFIELD RD) AT I-355 NB RAMPS

NO.	QUANT.	UNIT	DESCRIPTION
1.	1.00	CAL MO	ENGINEER'S FIELD OFFICE, TYPE A
2.	0.40	L SUM	MOBILIZATION
3.	0.40	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501
4.	0.40	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606
5.	0.40	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701
6.	40.00	SO FT	SIGN PANEL - TYPE 1
7.	1	EACH	SERVICE INSTALLATION - GROUND MOUNTED
8.	39	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
9.	194	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.
10.	241	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.
11.	457	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.
12.	90	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 5" DIA.
13.	3	EACH	HANDHOLE
14.	4	EACH	DOUBLE HANDHOLE
15.	1	EACH	TRANSCEIVER - FIBER OPTIC
16.	5,239	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
17.	637	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
18.	5,296	FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
19.	37	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C
20.	866	FOOT	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C
21.	4	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.
22.	2	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 24 FT.
23.	1	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.
24.	1	EACH	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 22 FT. AND 46 FT.
25.	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 50 FT.
26.	20	FOOT	CONCRETE FOUNDATION, TYPE A
27.	4	FOOT	CONCRETE FOUNDATION, TYPE C
28.	20	FOOT	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER
29.	40	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
30.	13	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
31.	5	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
32.	1	EACH	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED
33.	1	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
34.	1	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
35.	14	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
36.	12	EACH	INDUCTIVE LOOP DETECTOR
37.	838	FOOT	DETECTOR LOOP, TYPE I
38.	1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
39.	3	EACH	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT
40.	1	EACH	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT
41.	2,504	FOOT	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
42.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
43.	6	EACH	REMOVE EXISTING HANDHOLE
44.	8	EACH	REMOVE EXISTING CONCRETE FOUNDATION
45.	905	FOOT	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C
46.	671	FOOT	ROD AND CLEAN EXISTING CONDUIT
47.	1	EACH	MICROWAVE VEHICLE SENSOR (SMARTSENSOR ADVANCE)
48.	1	EACH	FULL-ACTUATED CONTROLLER AND SUPER P CABINET, TYPE IV, SPECIAL
49.	1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL
50.	51.40	SO FT	TEMPORARY INFORMATION SIGNING
51.	1	EACH	TEMPORARY TRAFFIC SIGNAL TIMING
52.	4	EACH	CLEAN EXISTING MANHOLE OR HANDHOLE

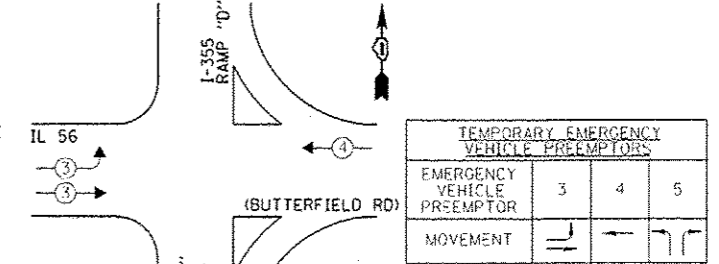
*100% OF THE COST SHALL BE PAID BY THE VILLAGE OF DOWNERS GROVE



PROPOSED CONTROLLER SEQUENCE



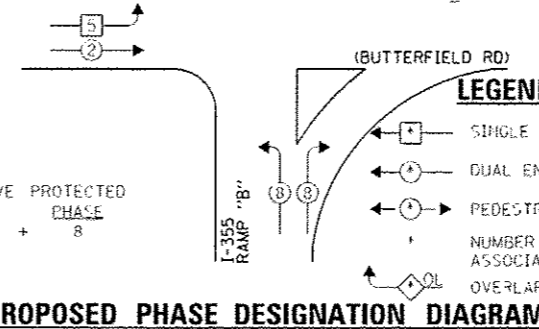
PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



LEGEND:

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

PROPOSED PHASE DESIGNATION DIAGRAM



I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS				TOTAL WATTAGE	
TYPE	NO. LAMPS	WATTAGE	OPERATION		
SIGNAL (RED)	21	135	17	0.50	178.5
SIGNAL (YE. LGW)	21	135	25	0.25	131.25
SIGNAL (GREEN)	22	135	15	0.25	82.5
ARROW	4	135	12	3.10	4.3
PEE. SIGNAL	-	90	25	1.00	-
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	-	-	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VID-O SYSTEM	1	-	150	1.00	150.0
BATTERY BACKUP	1	-	25	1.00	25.0
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =					672.05

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

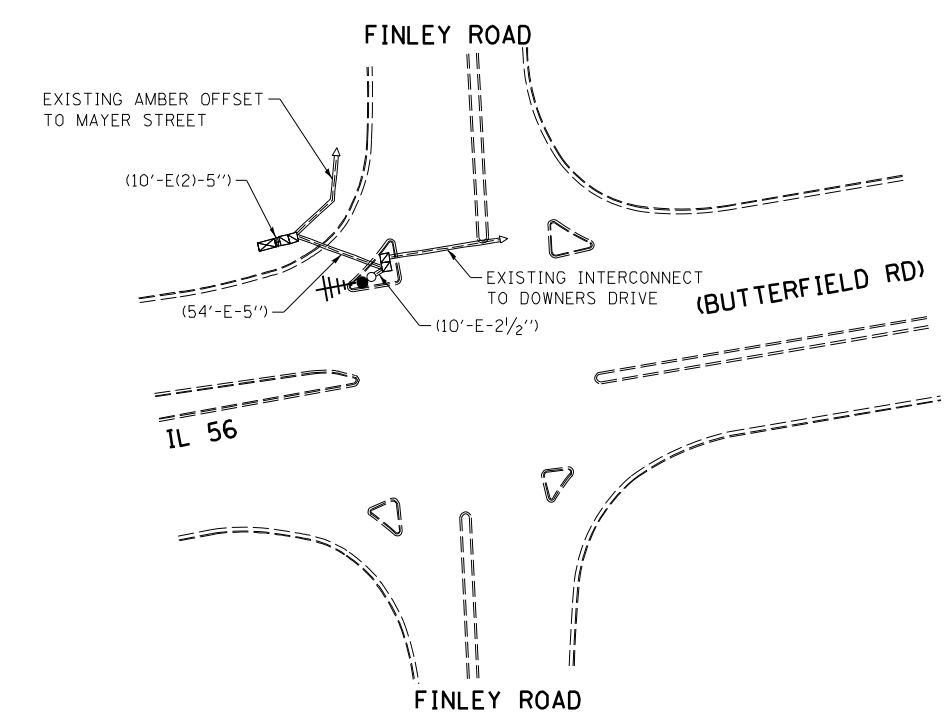
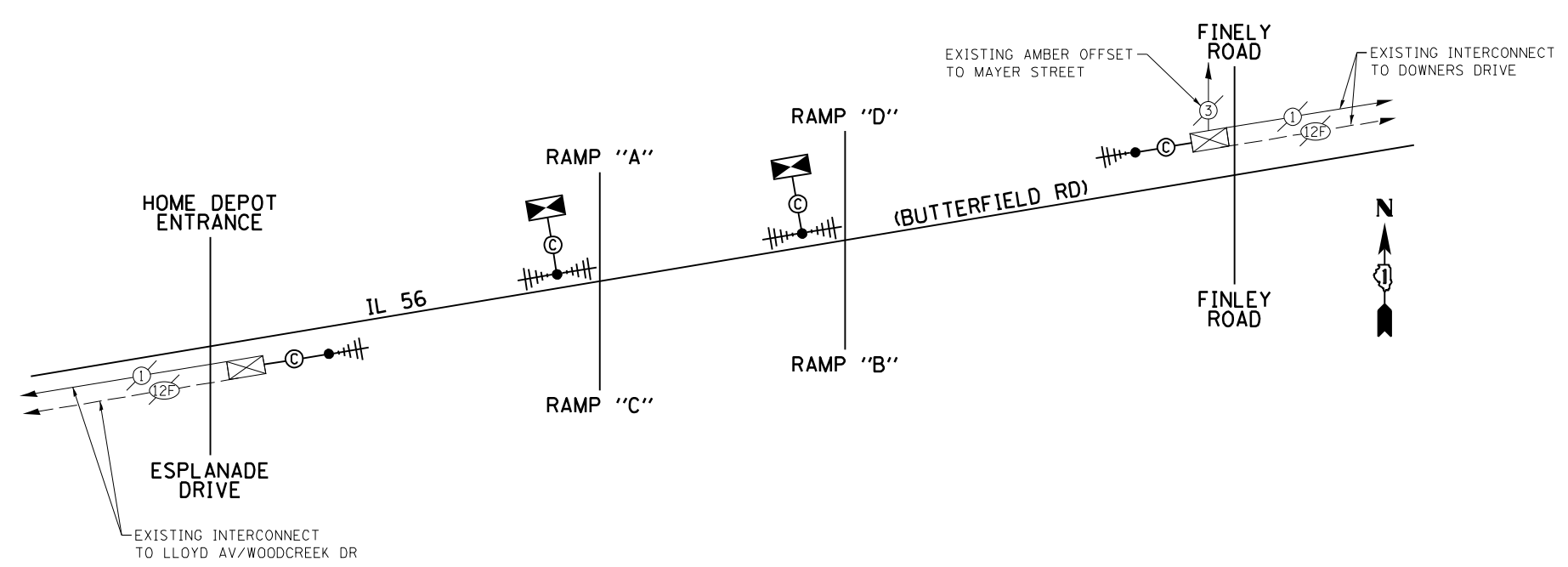
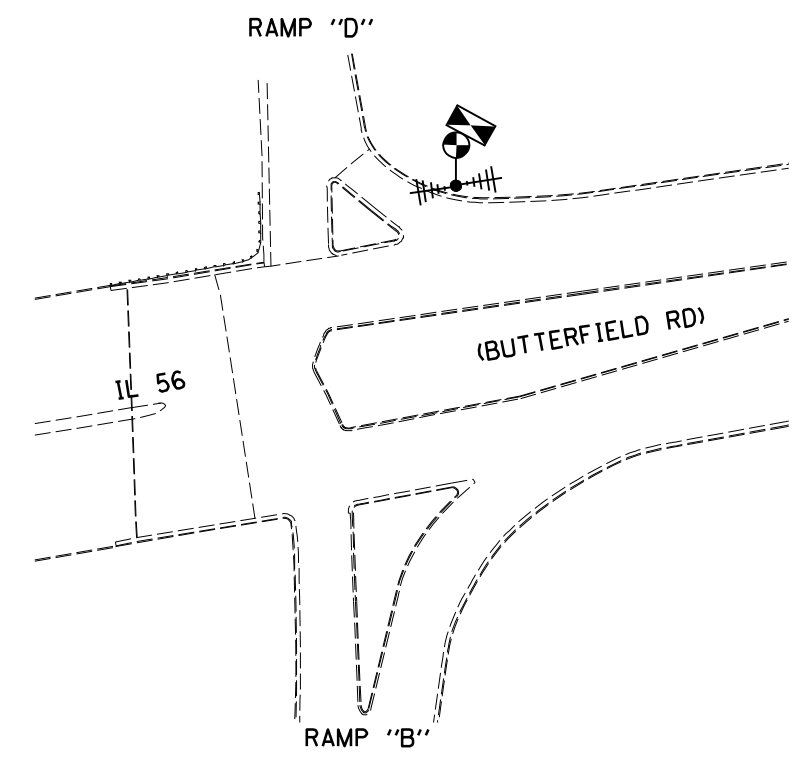
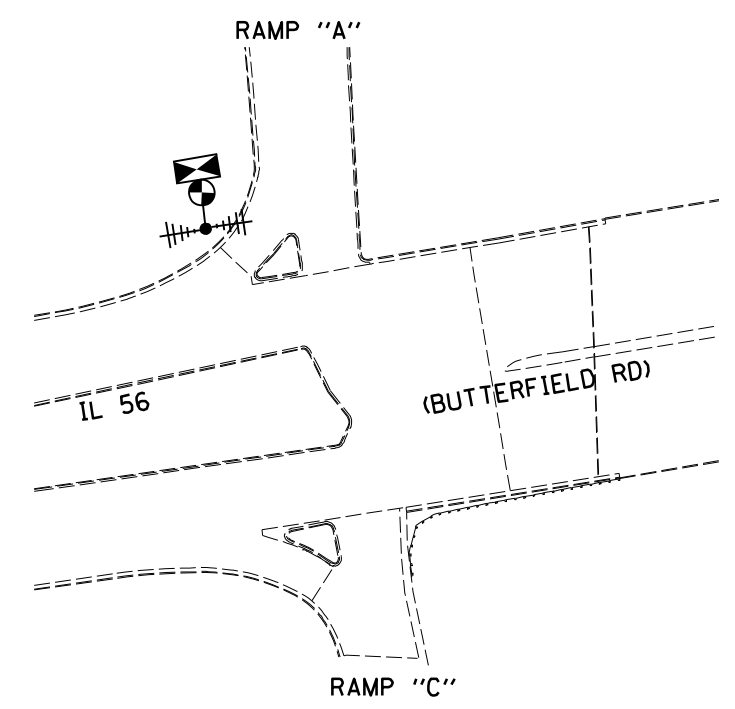
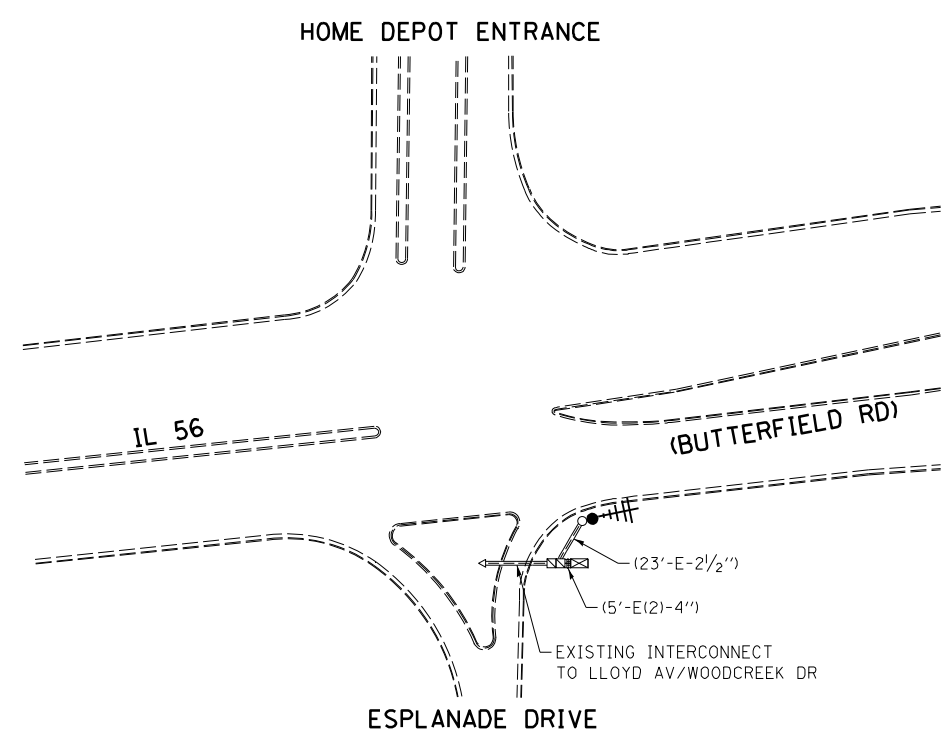
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60190-25-IL56East Ramp-Cable.dgn	gibson	JRD	-
MODEL NAME =	PLOT SCALE =	DRAWN -	REVISED -
	1/8" = 1'-0"	PJS/JPW	-
	PLOT DATE =	CHECKED -	REVISED -
	5/15/2013	KLB	-
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION
DIAGRAM, & EMERGENCY VEHICLE PREEMPTION SEQUENCE
IL 56 (BUTTERFIELD RD) AT I-355 NB RAMPS

SCALE: NONE SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(56R-2) TS	DUPAGE	33	25
CONTRACT NO. 60T9B			CHA #4085.885	
[ILLINOIS] FED. AID PROJECT				

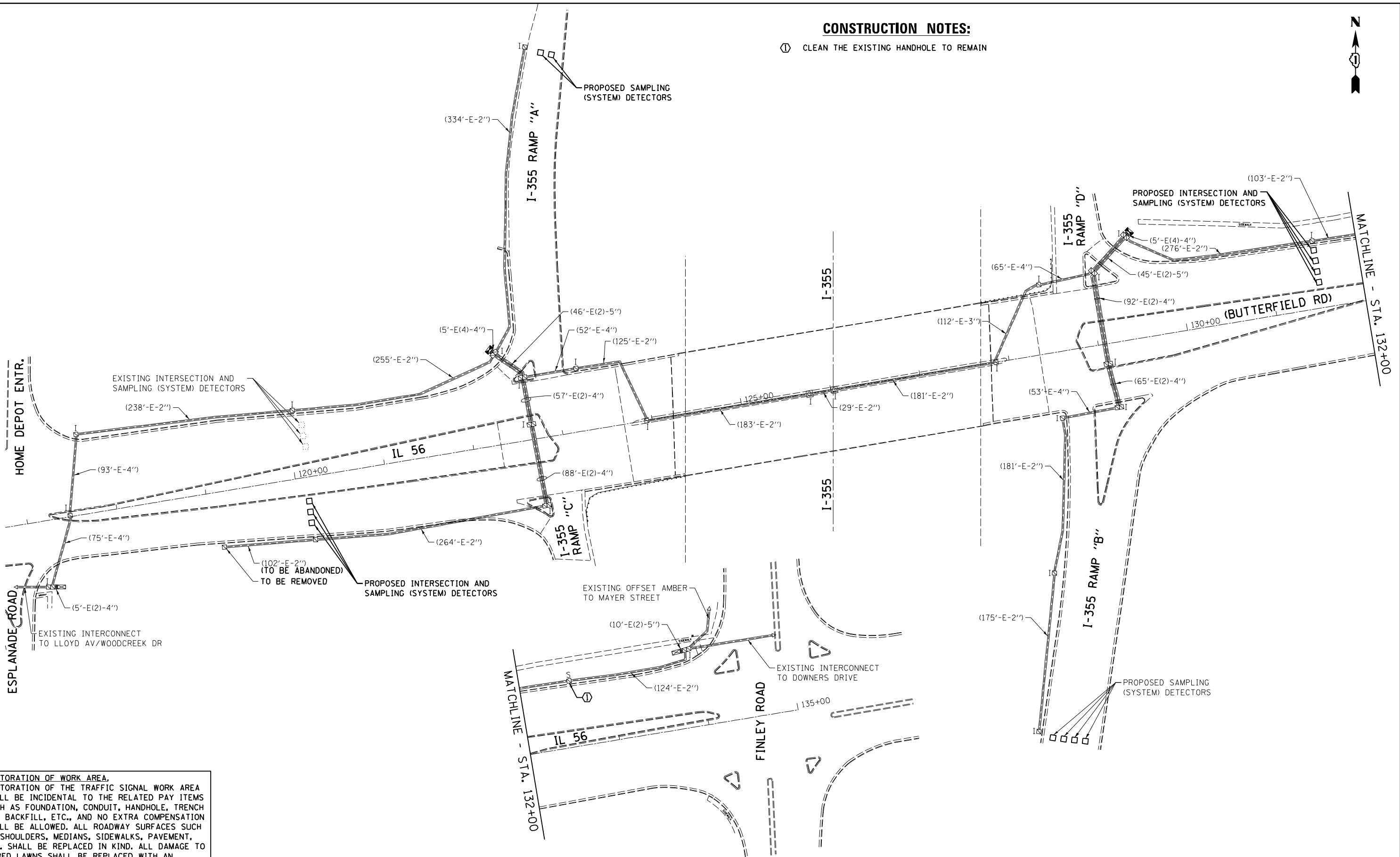
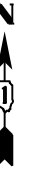


THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

FILE NAME = 60T98-26-Temp_Interconnect_Schematic.dgn	USER NAME = jwouife	DESIGNED - JRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY INTERCONNECT AND SCHEMATIC PLAN IL 56 (BUTTERFIELD RD) FROM ESPLANADE DRIVE/HOME DEPOT ENTRANCE TO FINLEY ROAD			F.A.P. RTE. 365	SECTION (56R-2) TS	COUNTY	TOTAL SHEETS 33	SHEET NO. 26
\$MODELNAME\$	PLOT SCALE = 1:50	CHECKED - KLB	REVISED -		SCALE: 1"=50'	SHEET OF SHEETS	STA. TO STA.	CONTRACT NO. 60T98				
	PLOT DATE = 4/17/2013	DATE -	REVISED -		ILLINOIS FED. AID PROJECT							
GHA #4085.885												

CONSTRUCTION NOTES:

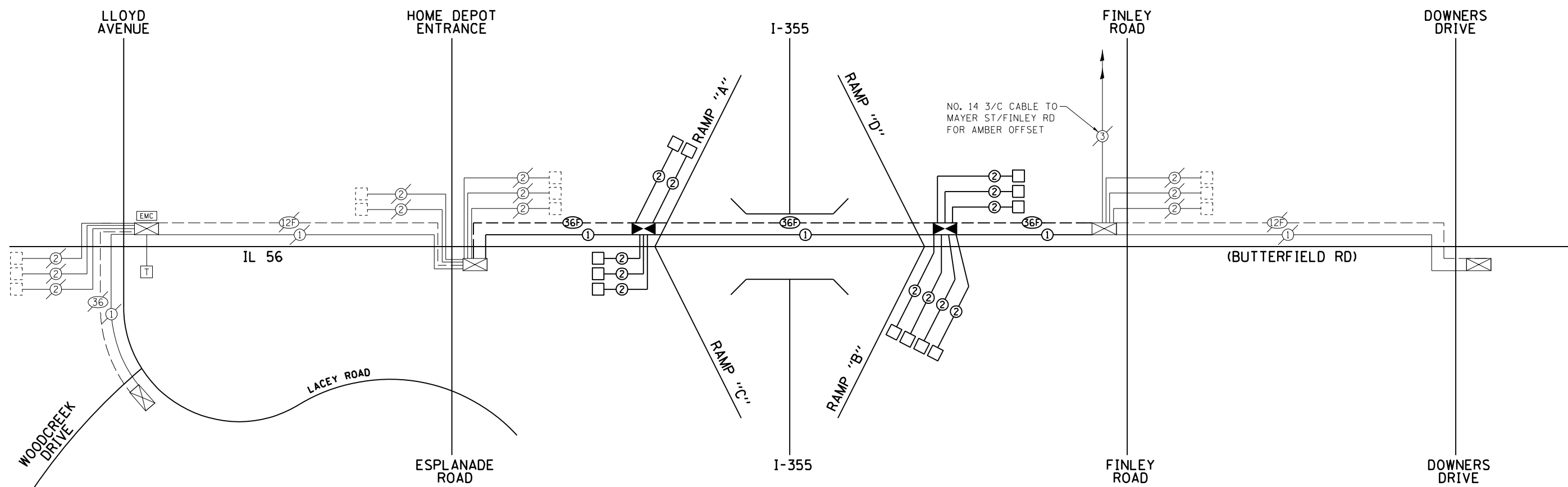
① CLEAN THE EXISTING HANDHOLE TO REMAIN



RESTORATION OF WORK AREA.
 RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEMS SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, 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.

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

FILE NAME = 60198-27-Interconnect	USER NAME = jwoulfe	DESIGNED - JRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INTERCONNECT PLAN IL 56 (BUTTERFIELD RD) FROM ESPLANADE ROAD/HOME DEPOT ENTRANCE TO FINLEY ROAD	F.A.P. RTE. 365	SECTION (56R-2) TS	COUNTY DuPAGE	TOTAL SHEETS 33	TOTAL SHEET NO. 27		
\$MODELNAME\$	PLOT SCALE = 1:50	CHECKED - KLB	REVISED -			SCALE: 1"=50'	SHEET OF SHEETS	STA. TO STA.	CONTRACT NO. 60T98			
	PLOT DATE = 4/29/2013	DATE -	REVISED -			ILLINOIS FED. AID PROJECT						
CHA #4085.885												

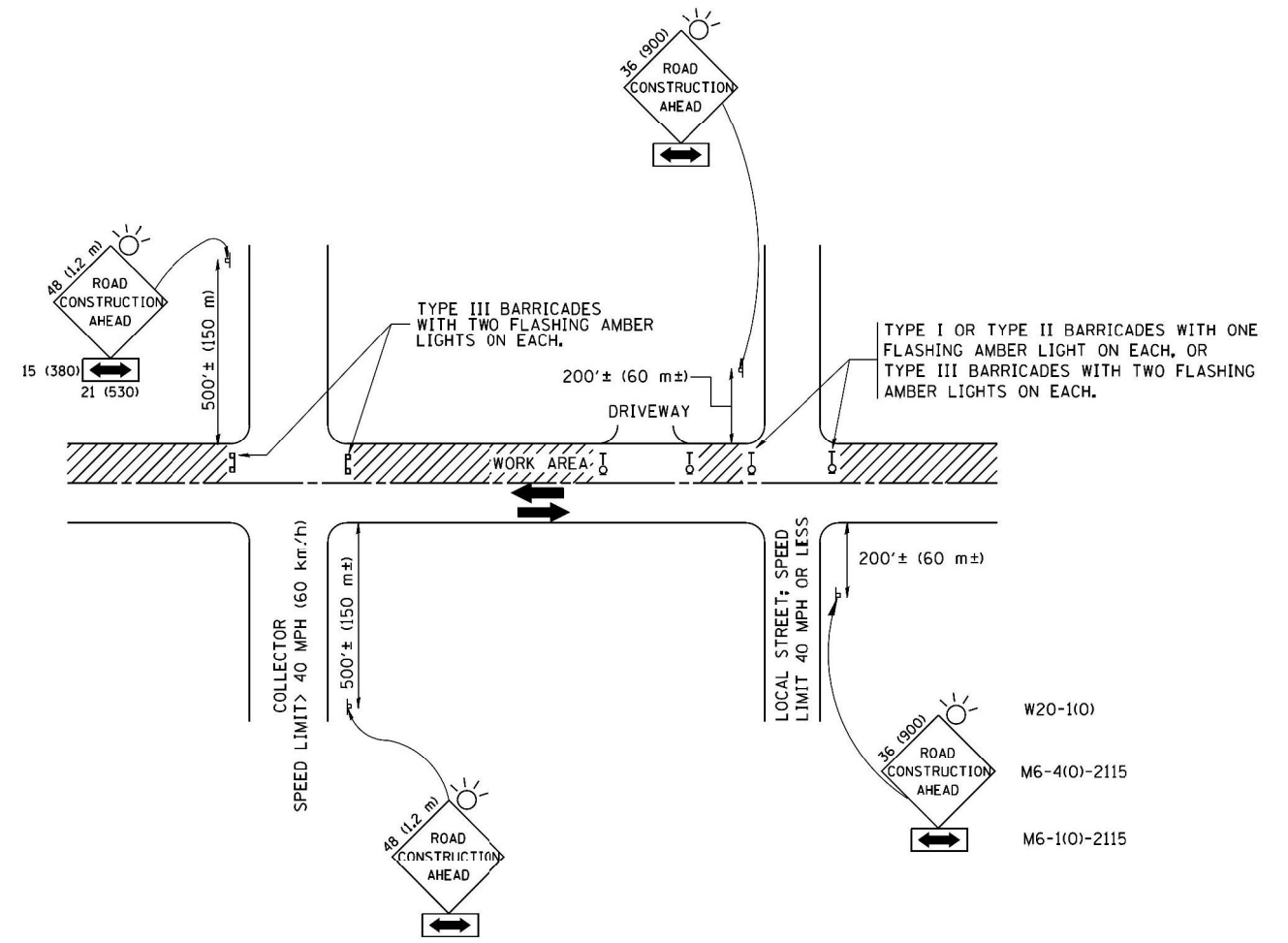


NOTE:
 THE EXISTING TRAFFIC SIGNAL AT WOODCREEK DRIVE AND LACEY ROAD IS MAINTAINED BY THE VILLAGE OF DOWNERS GROVE.

SCHEDULE OF QUANTITIES
 INTERCONNECT

NO.	QUANT.	UNIT	DESCRIPTION
1.	1.00	CAL MO	ENGINEER'S FIELD OFFICE, TYPE A
2.	0.20	L SUM	MOBILIZATION
3.	0.20	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501
4.	0.20	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606
5.	0.20	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701
6.	2	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
7.	2,240	FOOT	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C
8.	3,310	FOOT	REMOVE ELECTRIC CABLE FROM CONDUIT
9.	1	EACH	REMOVE EXISTING HANDHOLE
10.	393	FOOT	ROD AND CLEAN EXISTING CONDUIT
11.	2,240	FOOT	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F
12.	2	EACH	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 1
13.	1	EACH	CLEAN EXISTING MANHOLE OR HANDHOLE

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



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
 1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
 2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
 3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in millimeters (inches) unless otherwise shown.

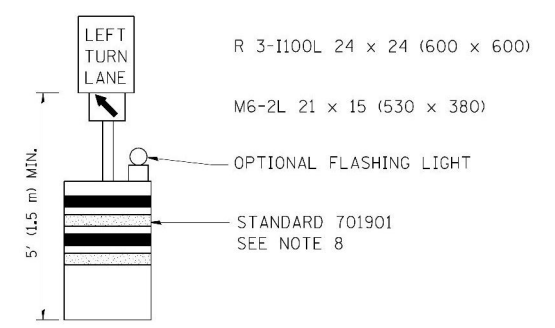
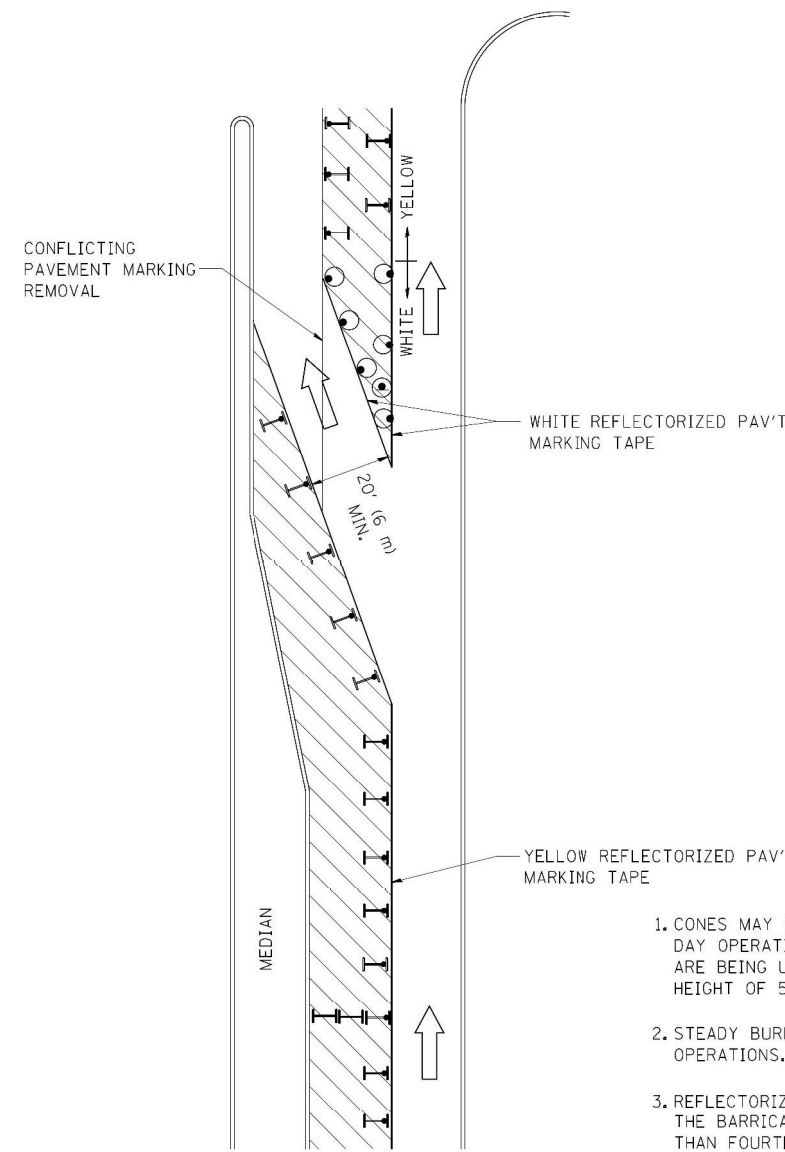
FILE NAME =	USER NAME = jwouife	DESIGNED -	REVISED -
60T98-29-01 Standard Details.dgn		DRAWN -	REVISED -
\$MODELNAME\$		CHECKED -	REVISED -
	PLOT DATE = 4/9/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION FOR
SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(56R-2) TS	DuPAGE	33	29
TC-10			CONTRACT NO. 60T98	
ILLINOIS FED. AID PROJECT				









GENERAL NOTES

1. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT. WHEN CONES ARE BEING USED, THE "LEFT TURN LANE" SIGN MAY BE SKID MOUNTED AT A MINIMUM HEIGHT OF 5' (1.5 m).
2. STEADY BURNING LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
3. REFLECTORIZED TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE BARRICADED AREA OF EACH TURN BAY WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS.
4. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-100 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.
5. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
6. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
7. FORM OPER 725 IS REQUIRED.
8. IF A DRUM OR TYPE II BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHRP 350 REQUIREMENTS.
9. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST SPECIFIED TRAFFIC CONTROL STANDARDS OR ITFMS.

All dimensions are in inches (millimeters) unless otherwise shown.

LEGEND

-  WORK AREA
-  LANE OPEN TO TRAFFIC
-  TYPE I OR II BARRICADE WITH STEADY BURN LIGHT
-  DRUM WITH STEADY BURN LIGHT
-  DRUM WITH SIGN (WITH OPTIONAL FLASHING LIGHT) SEE DETAIL
-  TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

FILE NAME = 60T98-30-01 Standard Details.dgn	USER NAME = jwouife	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLLOT SCALE = 1:1	CHECKED -	REVISED -
\$MODELNAME\$	PLLOT DATE = 4/9/2013	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

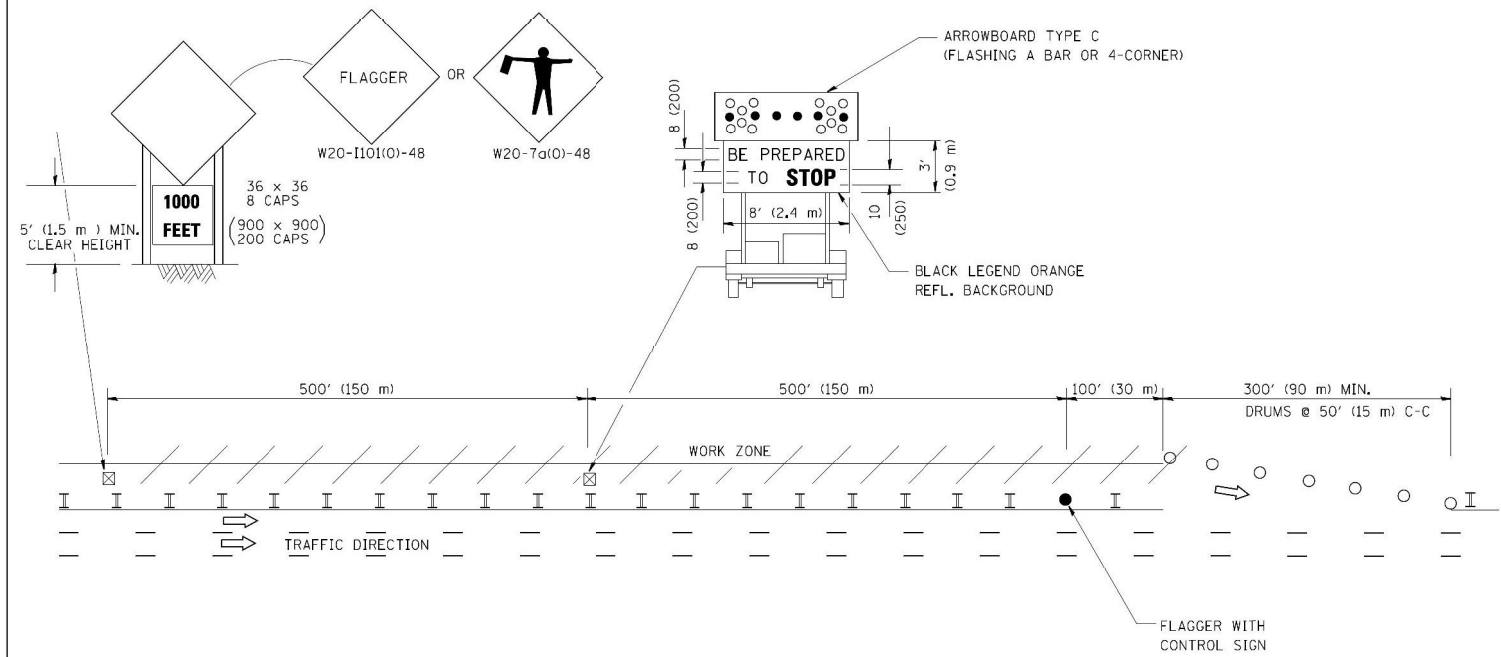
**TRAFFIC CONTROL AND PROTECTION AT TURN BAYS
(TO REMAIN OPEN TO TRAFFIC)**

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

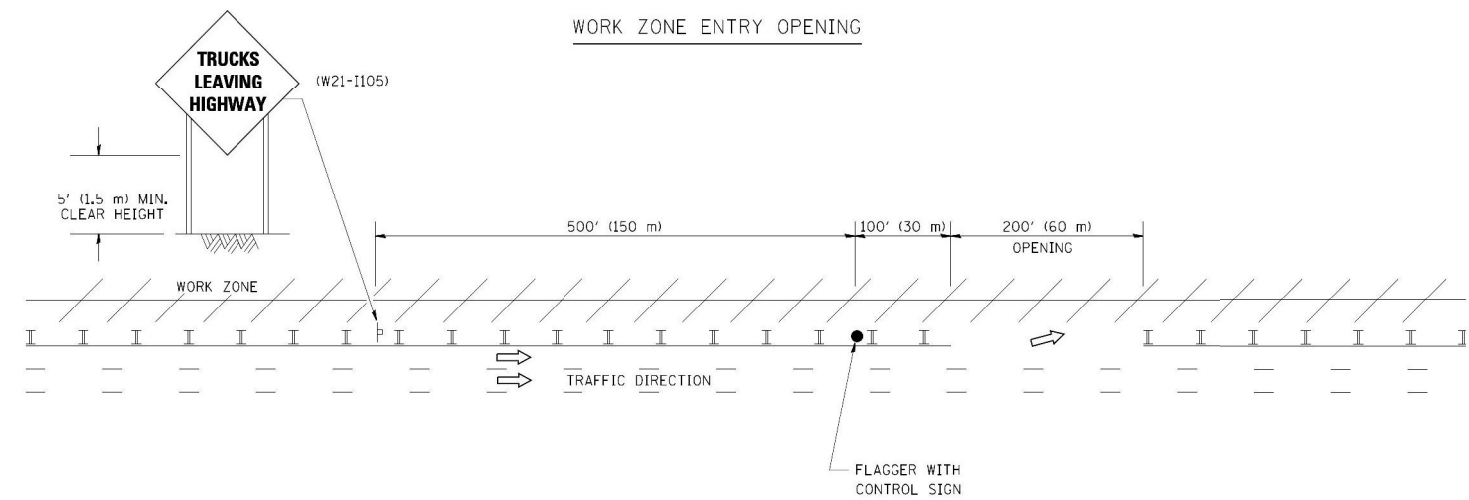
F.A.P. RTE. 365	SECTION (56R-2) TS	COUNTY TC-14	TOTAL SHEETS 33	SHEET NO. 30
CONTRACT NO. 60T98			ILLINOIS FED. AID PROJECT	

SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

WORK ZONE EXIT OPENING



WORK ZONE ENTRY OPENING



NOTES:

1. THE ARROWBOARD, THE FLAGGER AHEAD SIGN AND THE TRUCKS LEAVING HIGHWAY SIGN SHALL BE REMOVED OR TURNED AWAY FROM TRAFFIC AND THE EXIT AND ENTRY OPENINGS SHALL BE CLOSED WHEN THE FLAGGING OPERATION CEASES. NON OPERATING EQUIPMENT SHALL COMPLY WITH ARTICLE 701.11
2. WORK ZONE EXIT OPENINGS SHOULD BE A MINIMUM OF ONE HALF MILE APART.
3. EXITING THE WORK ZONE AT ANY PLACE OTHER THAN AT A WORK ZONE EXIT OPENING WILL BE PROHIBITED.
4. ALL VEHICLES SHALL ENTER THE WORK ZONE AT ENTRY OPENINGS, USING THEIR TURN SIGNALS TO WARN MOTORISTS

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

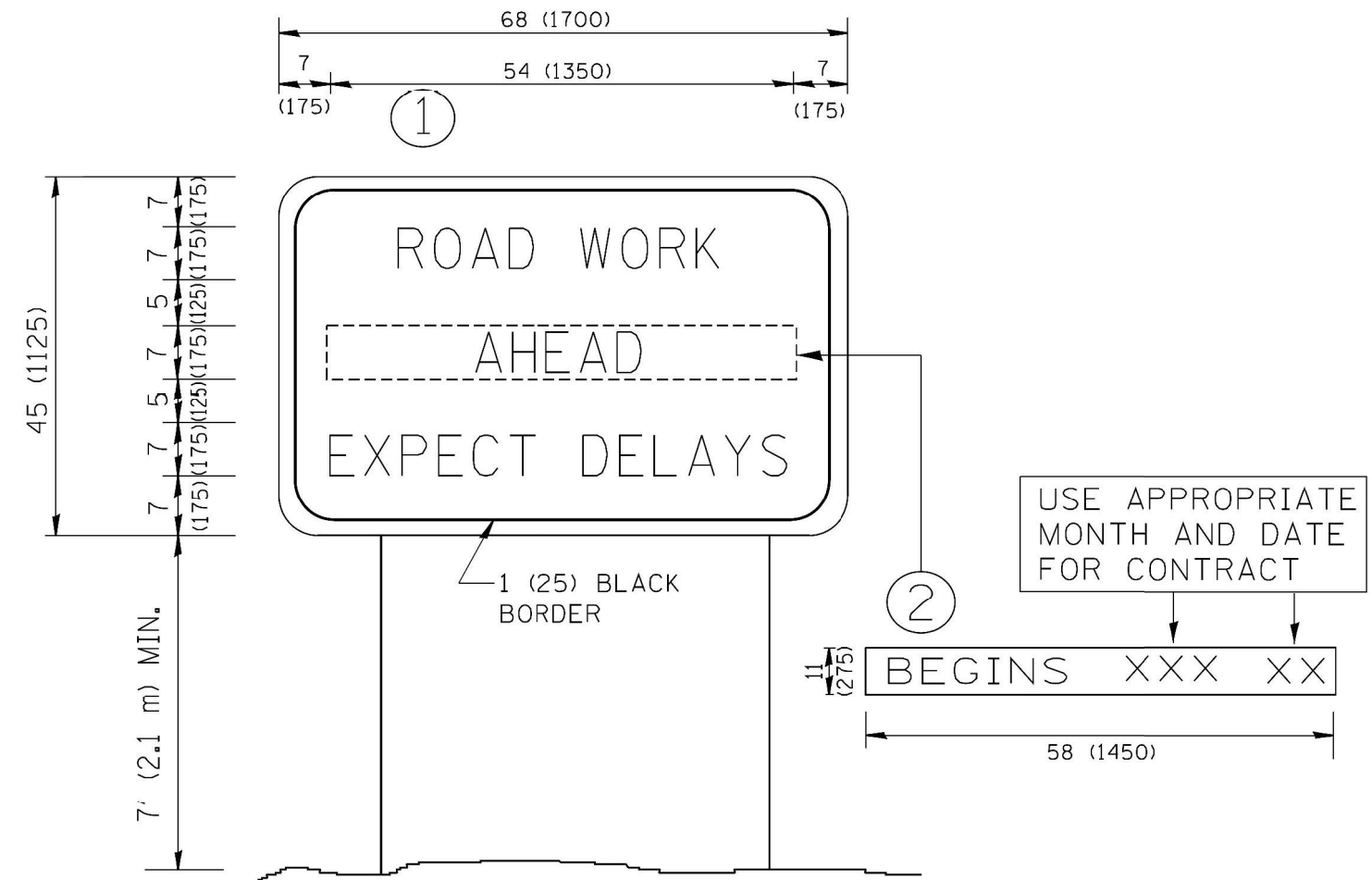
FILE NAME = 60T98-31-D1 Standard Details.dgn	USER NAME = jwouife	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 1:1	CHECKED -	REVISED -
	PLOT DATE = 4/10/2013	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING FOR FLAGGING OPERATIONS
AT WORK ZONE OPENINGS

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
365	(56R-2) TS	DuPAGE	33	31
TC-18		CONTRACT NO. 60T98		
ILLINOIS FED. AID PROJECT				



NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

FILE NAME = 60T98-32-01 Standard Details.dgn	USER NAME = jwouife	DESIGNED -	REVISED -
		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

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ARTERIAL ROAD
INFORMATION SIGN

SCALE: NONE SHEET 1 OF 5 SHEETS STA. TO STA.

F.A.P. RTE. 365	SECTION (56R-2) TS	COUNTY DuPAGE	TOTAL SHEETS 33	SHEET NO. 32
TC-22			CONTRACT NO. 60T98	
ILLINOIS FED. AID PROJECT				

