~~9-18-09 Letting, Item 055~~

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13A. ARTERIAL ROAD INFORMATION SIGNS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

DISTRICT 1

CONGESTION MITIGATION AND AIR QUALITY

TRAFFIC SIGNAL INTERCONNECT AND MODERNIZATION PLAN

ILL ROUTE 72 (MAIN STREET)

FROM ILL RTE 31 (8TH STREET) TO FIFTH STREET

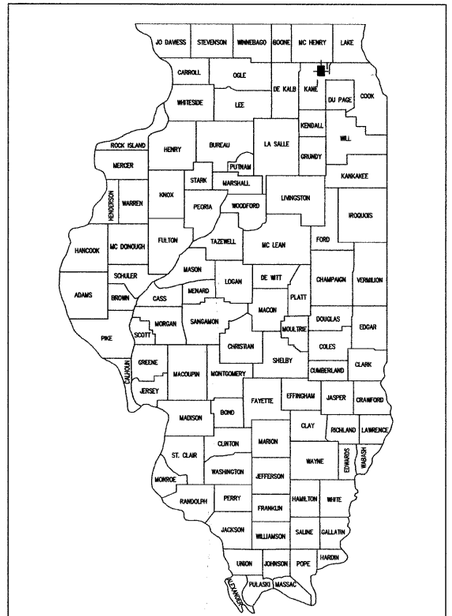
VILLAGE OF WEST DUNDEE, ILLINOIS

ROUTE: FAP 341 (ILL RTE 72)

SECTION: 2009-081TS *PROJECT: BMF-0341(049)*

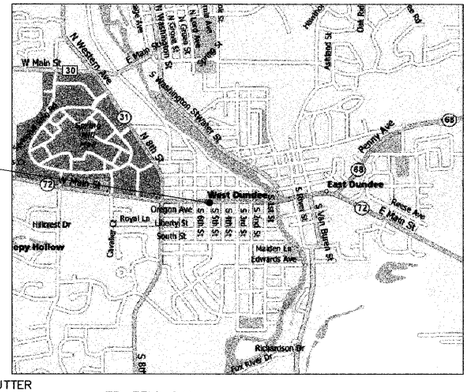
JOB NO: C-91-867-09

COUNTY: KANE



LOCATION OF SECTION INDICATED THUS: ▬

LOCATION MAP
(NOT TO SCALE)



ILL RTE 72 & FIFTH STREET

N

GEWALT HAMILTON ASSOCIATES, INC.

Consulting Engineers & Surveyors

850 Forest Edge Drive
Vernon Hills, IL 60061
847-478-9700
FAX 847-478-9701

BRUCE L. SHRAKE
62-39905
REGISTERED PROFESSIONAL ENGINEER
OF
ILLINOIS

SIGNED: Bruce L. Shrake
BRUCE L. SHRAKE
DATE: 6/25/2009

CONTRACT NO: 60120

J.U.L.I.E. TOLL FREE 1-800-892-0123

JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS

Call 48 hours before you dig
(Excluding Sat., Sun., & Holidays)

1-800-892-0123

EXISTING UTILITIES: WHEN THE PLANS OR SPECIAL PROVISIONS INCLUDE INFORMATION PERTAINING TO THE LOCATION OF UNDERGROUND UTILITY FACILITIES, SUCH INFORMATION REPRESENTS ONLY THE OPINION OF THE ENGINEER AS TO THE LOCATION OF SUCH UTILITIES AND IS ONLY INCLUDED FOR THE CONVENIENCE OF THE BIDDER. THE ENGINEER AND OWNER ASSUME NO RESPONSIBILITY WHATEVER IN RESPECT TO THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS RELATIVE TO THE LOCATION OF UNDERGROUND UTILITY FACILITIES OR THE MANNER IN WHICH THEY ARE TO BE REMOVED OR ADJUSTED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES. HE SHALL ALSO OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES, DETAILED INFORMATION RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULES OF THE UTILITY COMPANIES FOR REMOVING OR ADJUSTING THEM.

CONTRACTOR IS RESPONSIBLE FOR CONTACTING J.U.L.I.E. AT 1-800-892-0123 AND MUST ACQUIRE A DIG NUMBER A MINIMUM OF 72 HOURS PRIOR TO ANY WORK BEING DONE.

IDOT STANDARDS:

424001-05 CURB RAMPS FOR SIDEWALK
606001-04 CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
701001-02 OFF-ROAD OPERATIONS 2L, 2W, >15' AWAY
701006-03 OFF-ROAD OPERATIONS 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701011-02 OFF-ROAD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701301-03 LANE CLOSURE 2L, 2W, SHORT TIME OPERATIONS
701501-05 URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701606-06 URBAN LANE CLOSURE MULTILANE 2W WITH MOUNTABLE MEDIAN
701701-06 URBAN LANE CLOSURE MULTILANE INTERSECTION
701801-04 LANE CLOSURE MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
701901-01 TRAFFIC CONTROL DEVICES
720001-01 SIGN PANEL MOUNTING DETAILS
780001-02 TYPICAL PAVEMENT MARKINGS
814001-02 HANDHOLE
814006-02 DOUBLE HANDHOLE
857001-01 STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
862001-01 UNINTERRUPTIBLE POWER SUPPLY (UPS)
873001-02 TRAFFIC SIGNAL GROUNDING
877001-04 STEEL MAST ARM ASSEMBLY AND POLE, 16' THROUGH 55'
877011-04 STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
878001-07 CONCRETE FOUNDATION DETAILS
880001-01 SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION
880006-01 TRAFFIC SIGNAL MOUNTING DETAILS
886001-01 DETECTOR LOOP INSTALLATIONS

TRAFFIC SIGNAL MODERNIZATION PLAN
GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

INTERCONNECT PLAN
GRAPHIC SCALE
50 0 25 50
(IN FEET)
1 inch = 50ft.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED: June 26 20 09
Devin M. O'Keefe /D
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
August 14, 20 09
Charles J. Ingersoll /D
ENGINEER OF DESIGN AND ENVIRONMENT
August 14, 20 09
Christine M. Reed /D
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

★13+1=14 total Sheets

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

FILE NAME = 4085.850-TR1.dwg	USER NAME =	DESIGNED - JRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TITLE SHEET	F.A.P. RTE	SECTION	COUNTY	TOTAL SHEETS / SHEET NO.
		DRAWN - PJS	REVISED -			341	2009-081TS	KANE	13★ / 1
	PLOT SCALE =	CHECKED - KLB	REVISED -					CONTRACT #:	60120
	PLOT DATE =	DATE - 6-24-2009	REVISED -		SCALE: NONE / SHEET NO. 1 OF 13 SHEETS / STA. / TO STA.			ILLINOIS	FED. AID PROJECT

URBAN

SUMMARY OF QUANTITIES

	NO.	CODE NO.	ITEM	UNIT	TOTAL	ILL RTE 72 (MAIN STREET) AND 5th STREET		ILL RTE 72 (MAIN STREET) INTERCONNECT
						80% FED	100% VILLAGE	80% FED
						20% STATE	WEST DUNDEE	20% STATE
						Y031-1F	Y031-3D	Y031-1F
	1	42400200	PORTLAND CEMENT CONRETE SIDEWALK 5 INCH	SQ. FT.	950	950		
	2	42400800	DETECTABLE WARNINGS	SQ. FT.	96	96		
	3	44000600	SIDEWALK REMOVAL	SQ FT	950	950		
	4	44001700	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	150	150		
	5	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL.MO.	3	3		
	6	67100100	MOBILIZATION	L.SUM	1	1		
	7	70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L. SUM	1	0.50		0.50
	8	70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L.SUM	1	0.50		0.50
	9	70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L.SUM	1	0.50		0.50
	10	70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L. SUM	1	0.50		0.50
*	11	72000100	SIGN PANEL - TYPE 1	SQ FT	12	12		
*	12	72000200	SIGN PANEL - TYPE 2	SQ FT	25	25		
*	13	78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	130	130		
*	14	78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	300	300		
*	15	78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	75	75		
*	16	78300100	PAVEMENT MARKING REMOVAL	SQ FT	350	350		
	17	81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	927	587		340
	18	81000700	CONDUIT IN TRENCH, 2-1/2" DIA., GALVANIZED STEEL	FOOT	109	109		
	19	81001000	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	10	10		
	20	81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	424	79		345
	21	81018900	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	179	179		
	22	81400100	HANDHOLE	EACH	6	5		1
	23	81400300	DOUBLE HANDHOLE	EACH	1	1		
	24	81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	1005	665		340
	25	85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	2			2
	26	85700205	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1	1		
	27	86400100	TRANSCEIVER - FIBER OPTIC	EACH	1	1		
	28	87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 2C	FOOT	975	975		
	29	87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 3C	FOOT	1305	1045	260	
	30	87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 5C	FOOT	1765	1765		
	31	87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1290	1290		
	32	87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	160	160		
	33	87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL, 14 FT	EACH	4	4		
	34	87700160	STEEL MAST ARM ASSEMBLY AND POLE, 24 FT.	EACH	4	4		
	35	87800100	CONCRETE FOUNDATION, TYPE A	FOOT	16	16		
	36	87800150	CONCRETE FOUNDATION, TYPE C	FOOT	4	4		
	37	87800400	CONCRETE FOUNDATION, TYPE E, 30-INCH DIAMETER	FOOT	40	40		
	38	87900200	DRILL EXISTING HANDHOLE	EACH	1			1
	39	88030020	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	8	8		
	40	88030050	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	4	4		
	41	88102717	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8	8		
	42	88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINIUM	EACH	8	8		
	43	88500100	INDUCTIVE LOOP DETECTOR	EACH	5	5		
	44	88600100	DETECTOR LOOP, TYPE I	FOOT	320	320		
	45	88700200	LIGHT DETECTOR	EACH	2		2	
	46	88700300	LIGHT DETECTOR AMPLIFIER	EACH	1		1	
	47	88800100	PEDESTRIAN PUSH-BUTTON	EACH	8	8		
	48	89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1	1		
	49	89502200	MODIFY EXISTING CONTROLLER	EACH	3			3
	50	89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	1854			1854
	51	89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1	1		
	52	89502380	REMOVE EXISTING HANDHOLE	EACH	7	7		
	53	89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	9	9		
	54	X0322256	TEMPORARY INFORMATION SIGNING	SQ. FT.	51.4	51.4		
	55	X0322925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	2790			2790
	56	X0325705	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2	EACH	6			6
	57	X0325737	TEMPORARY TRAFFIC SIGNAL TIMINGS	EACH	1	1		
	58	X8050015	SERVICE INSTALLATION - POLE MOUNTED	EACH	1	1		
	59	X8620020	UNINTERRUPTIBLE POWER SUPPLY	EACH	1	1		
	60	X8710020	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12FSM12F	FOOT	2790			2790
	61	X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	515	515		
	62	X8730250	ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED, SHIELDED	FOOT	260		260	
	63	XX000406	BRICK PAVER REMOVAL AND REPLACEMENT	SQ. FT.	325	325		
	64	X0326164	PAINT NEW MAST ARM AND POLE, UNDER 40 FOOT	EACH	4		4	
	65	X0323797	PAINT NEW TRAFFIC SIGNAL POST	EACH	4		4	

* SPECIALTY ITEMS

FILE NAME = 4085.850-TR1.dwg	USER NAME =	DESIGNED - JRD	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
		DRAWN - PJS	REVISED -	
	PLOT SCALE =	CHECKED - KLB	REVISED -	
	PLOT DATE =	DATE - 6-24-2009	REVISED -	

SUMMARY OF QUANTITIES

SCALE NONE | SHEET NO. 2 OF 14 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
341	2009-081TS	KANE	13	2
		CONTRACT #:	60120	
		ILLINOIS	FED. AID PROJECT	

LOOP DETECTOR NOTES

1. 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.

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.

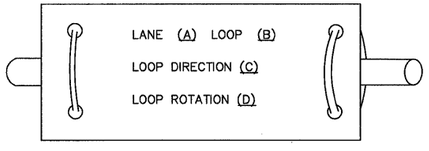
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

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

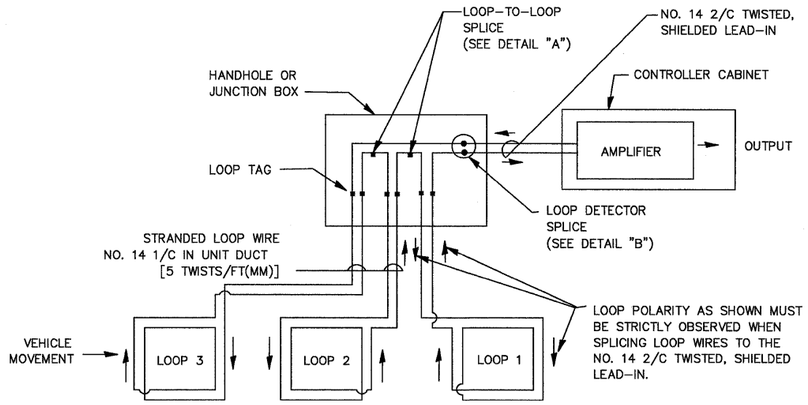


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.

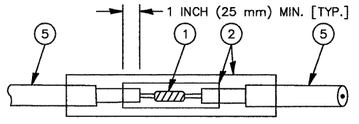
C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

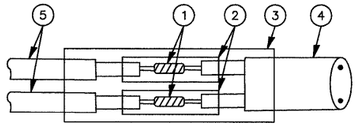


DETECTOR LOOP WIRING SCHEMATIC

- 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

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 LENGHT 6" (150 mm), UNDERWATER GRADE.

(4) NO. 14 2/C TWISTED, SHIELDED CABLE.

(5) LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS

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

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

FILE NAME = 4085.850-TR1.dwg	USER NAME =	DESIGNED - JRD	REVISED -
		DRAWN - PJS	REVISED -
	PLOT SCALE =	CHECKED - KLB	REVISED -
	PLOT DATE =	DATE - 6-24-2009	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

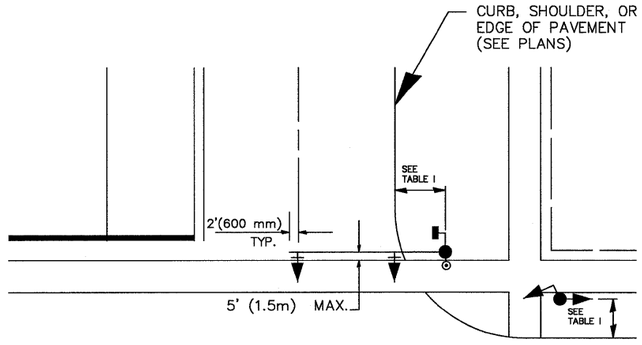
DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 3 OF 13 SHEETS | STA. | TO STA.

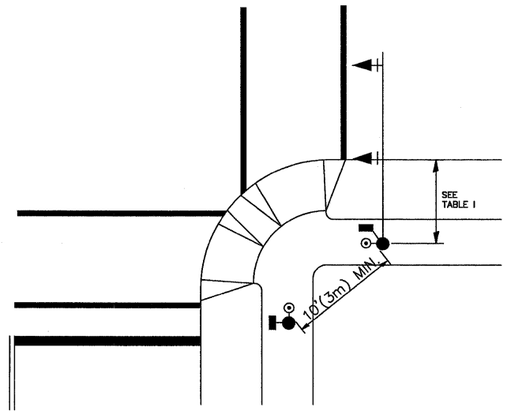
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
341	2009-081TS	KANE	13	3
		CONTRACT #:	60120	
	ILLINOIS FED. AID PROJECT			

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:

1. 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

2. 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.

3. 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.

4. 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

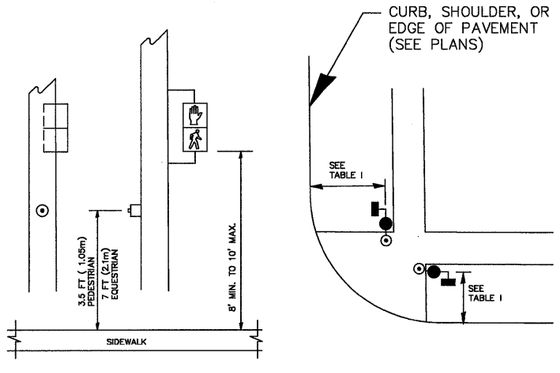


TABLE I

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 ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS

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

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 2 OF 4

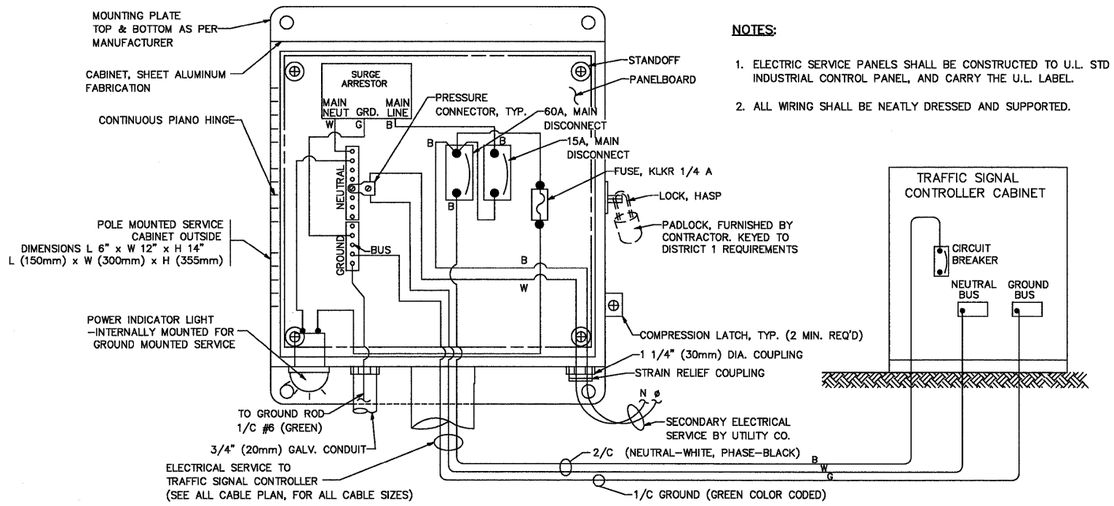
FILE NAME = 4085.850-TR1.dwg	USER NAME =	DESIGNED - JRD	REVISED -
		DRAWN - PJS	REVISED -
	PLOT SCALE =	CHECKED - KLB	REVISED -
	PLOT DATE =	DATE - 6-24-2009	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 4 OF 13 SHEETS | STA. | TO STA.

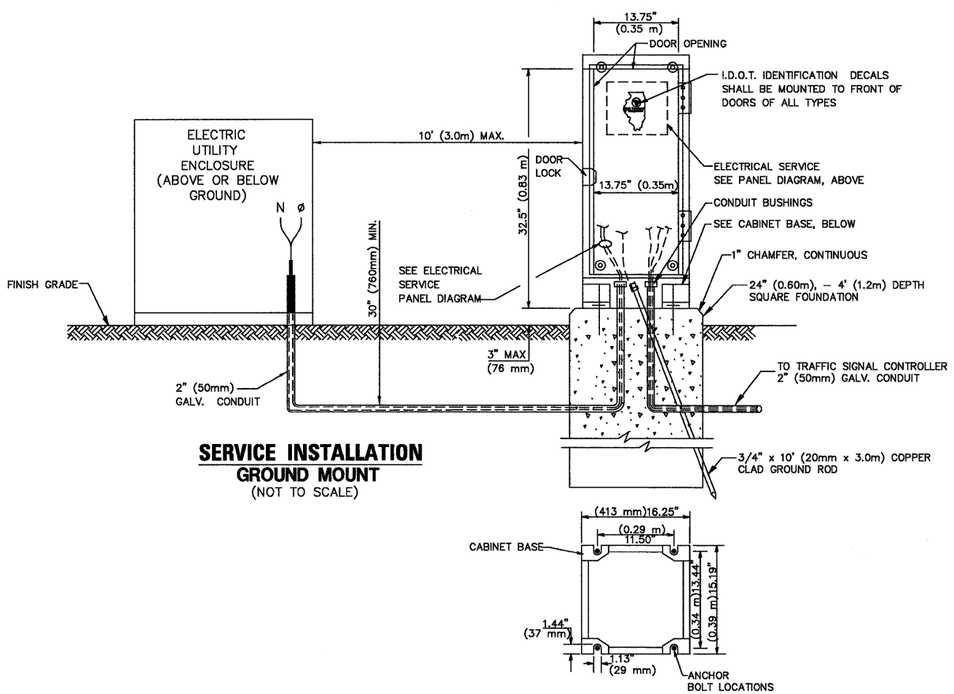
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
341	2009-081TS	KANE	13	4
		CONTRACT #:	60120	
	ILLINOIS FED. AID PROJECT			



NOTES:

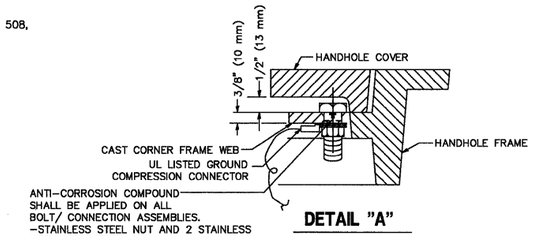
1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)

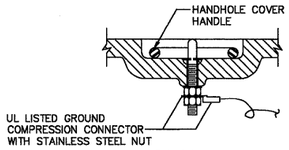


SERVICE INSTALLATION GROUND MOUNT
(NOT TO SCALE)

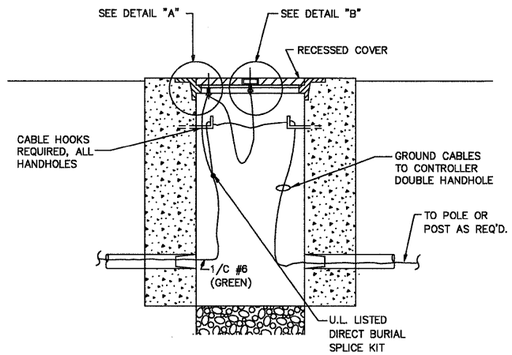
CABINET - BASE BOLT PATTERN
(NOT TO SCALE)



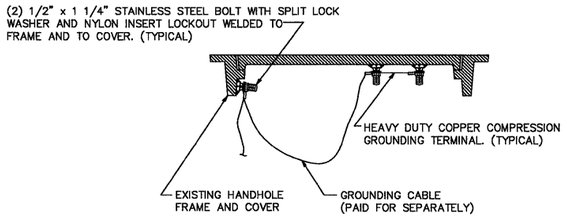
DETAIL "A"



DETAIL "B"



HANDHOLE COVER & FRAME - GROUNDING DETAIL
(NOT TO SCALE)

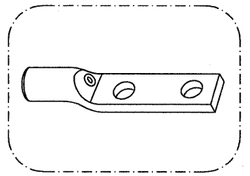


EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL
(NOT TO SCALE)

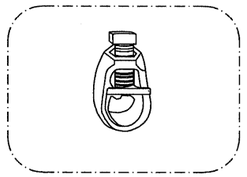
NOTES:

GROUNDING SYSTEM

1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE 3/4" DIA. x 10'–0" (20mm x 3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB–SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, LAKE COUNTY DIVISION OF TRANSPORTATION DISTRICT ONE AT (847) 705–4139.
2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



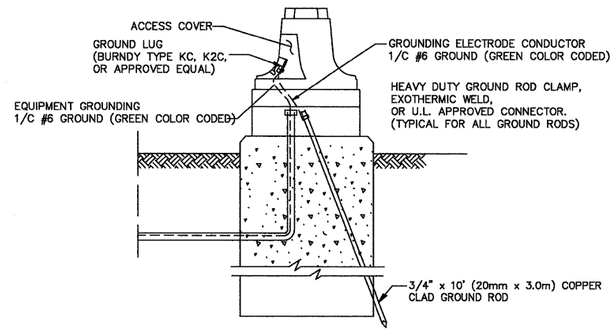
HEAVY–DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



3/4" (20mm) HEAVY–DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EUAL)

NOTES:

- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
- GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES
  6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES
  13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES.
  5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



MAST ARM POLE / POST-GROUNDING DETAIL
(NOT TO SCALE)

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

SCALE: VERT. NONE
HORIZ.
DATE 1–01–02

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 3 OF 4

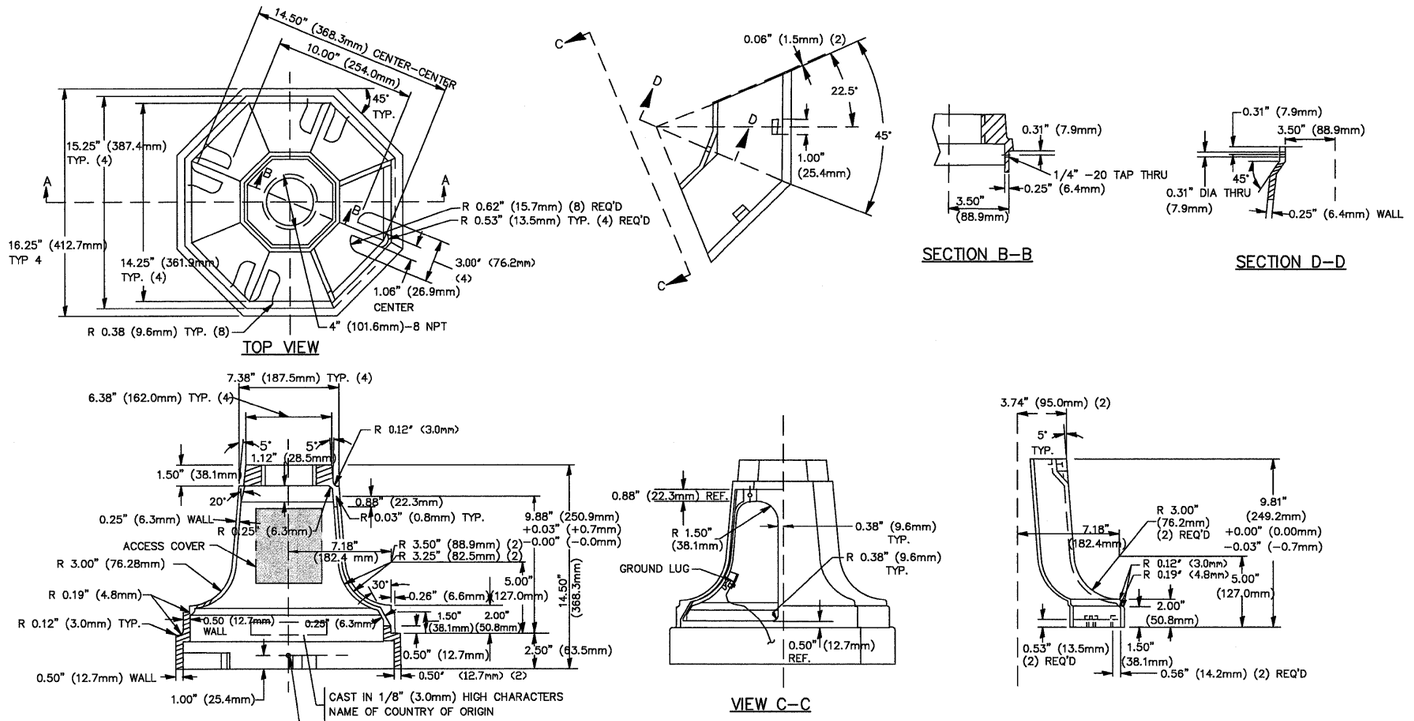
FILE NAME = 4085.850–TR1.dwg	USER NAME =	DESIGNED - JRD	REVISED -
		DRAWN - PJS	REVISED -
	PLOT SCALE =	CHECKED - KLB	REVISED -
	PLOT DATE =	DATE - 6–24–2009	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

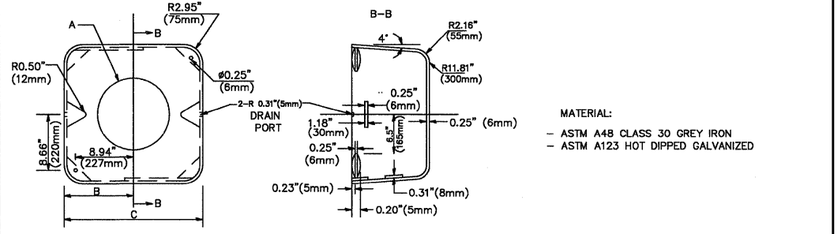
DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 5 OF 13 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
341	2009–081TS	KANE	13	5
		CONTRACT #:	60120	
	ILLINOIS FED. AID PROJECT			



TRAFFIC SIGNAL POST – MOUNTING BASE – TYPE A

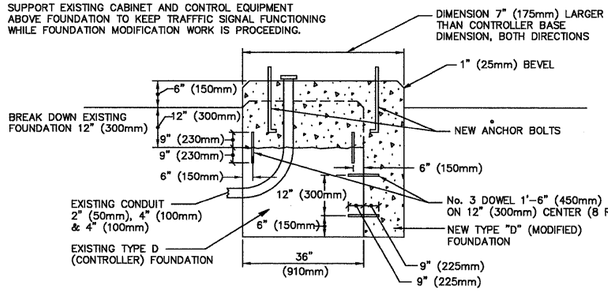


MATERIAL:
- ASTM A48 CLASS 30 GREY IRON
- ASTM A123 HOT DIPPED GALVANIZED

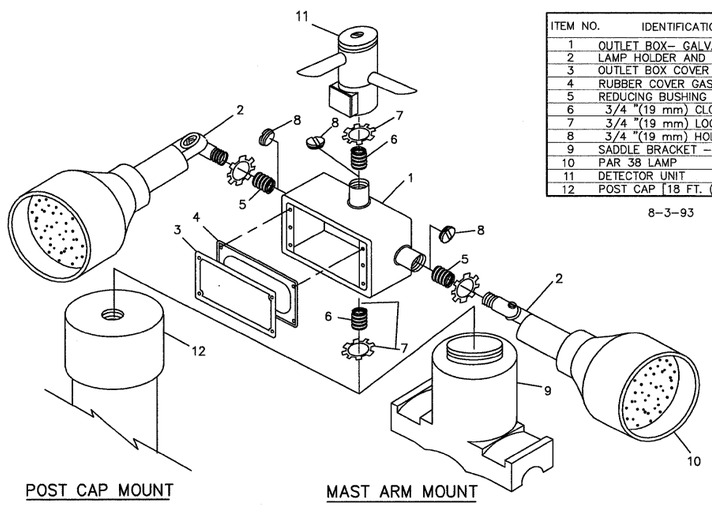
TYPE	A	B	C	HEIGHT	WEIGHT
I	ø 10.125"(257mm)	9.5"(241mm)	19"(483mm)	12" (300mm)	24kg
II	ø 11.125"(283mm)	10.75"(273mm)	21.5"(546mm)	12" (300mm)	26kg

SHROUD DETAIL

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



MODIFY EXISTING TYPE "D" FOUNDATION
(NOT TO SCALE)



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.]

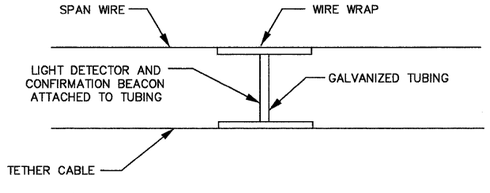
8-3-93

POST CAP MOUNT MAST ARM MOUNT

EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

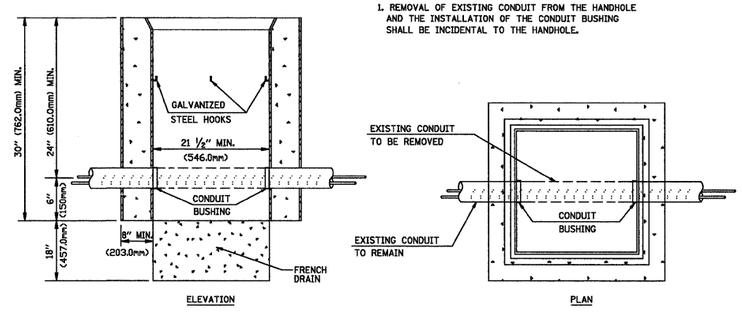
NOTES:

1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. 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
3. 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.



LIGHT DETECTOR AND CONFIRMATION BEACON MOUNTING FOR TEMPORARY TRAFFIC SIGNALS
(NOT TO SCALE)

NOTES:
1. REMOVAL OF EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHING SHALL BE INCIDENTAL TO THE HANDHOLE.



DETAIL
HANDHOLE TO INTERCEPT EXISTING CONDUIT
N.T.S.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

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

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

FILE NAME = 4085.850-TR1.dwg	USER NAME =	DESIGNED - JRD	REVISED -
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	PLOT DATE =	DATE - 6-24-2009	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 6 OF 13 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
341	2009-081TS	KANE	13	6
		CONTRACT #:		60120
		ILLINOIS FED. AID PROJECT		

EXISTING EQUIPMENT TO BE REMOVED

- EXISTING TRAFFIC SIGNAL HEAD TO BE REMOVED
- "E" EXISTING SERVICE INSTALLATION TO BE REMOVED
- "E" EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- "E" EXISTING ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED
- EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- "E" EXISTING HANDHOLE TO BE REMOVED
- EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED
- EXISTING PEDESTRIAN PUSHBUTTON TO BE REMOVED
- EMERGENCY VEHICLE LIGHT DETECTOR TO BE REMOVED
- CONFIRMATION BEACON TO BE REMOVED
- "E" EXISTING HEAVY-DUTY HANDHOLE TO BE REMOVED
- "E" EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED
- SIDEWALK TO BE REMOVED
- BRICK PAVER REMOVAL
- COMBINATION CURB AND GUTTER REMOVAL

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.

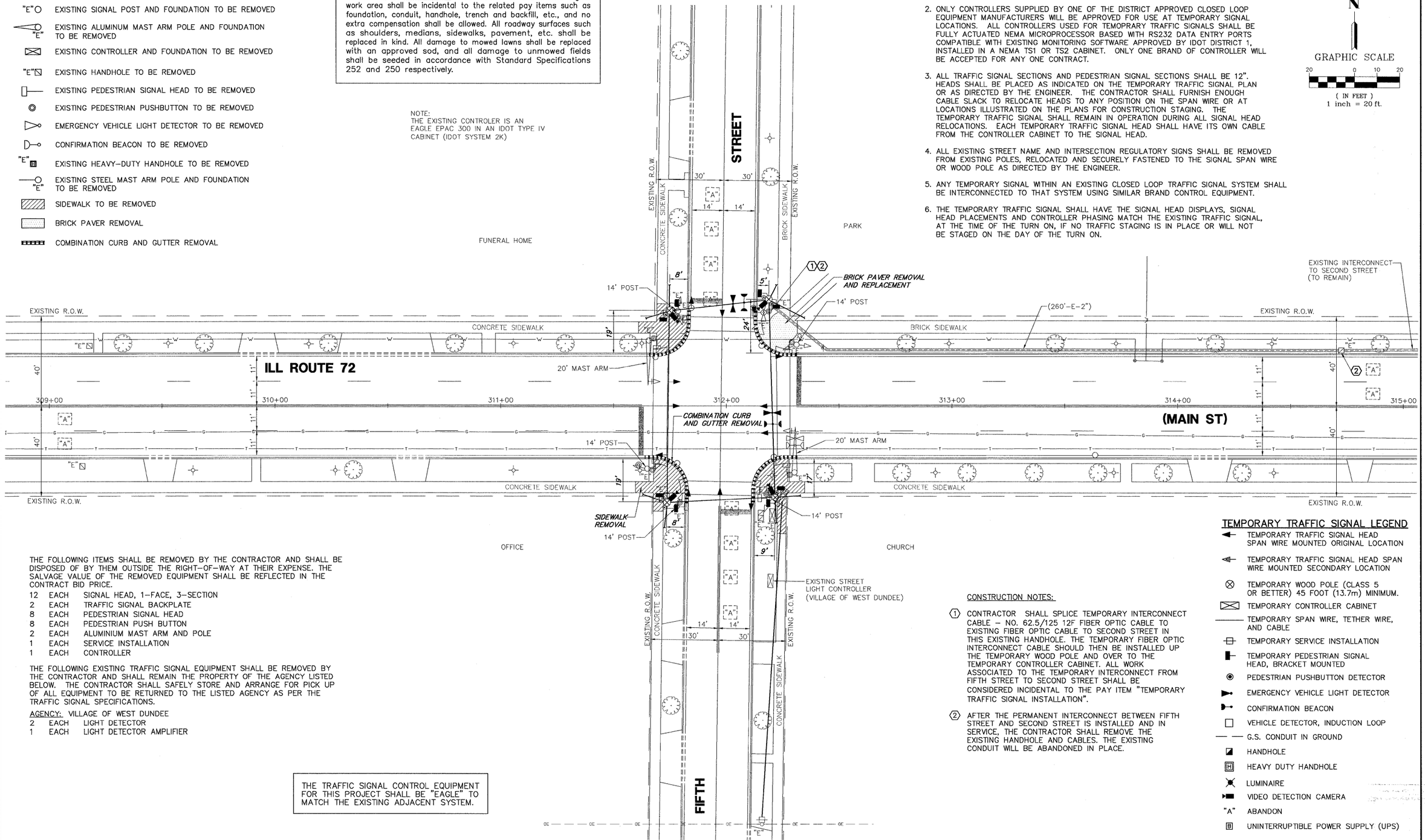
NOTE:
THE EXISTING CONTROLER IS AN EAGLE EPAC 300 IN AN IDOT TYPE IV CABINET (IDOT SYSTEM 2K)

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 TEMOPRARY 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.
3. 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.
4. 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.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL 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.

N

GRAPHIC SCALE
20 0 10 20
(IN FEET)
1 inch = 20 ft.



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.

12	EACH	SIGNAL HEAD, 1-FACE, 3-SECTION
2	EACH	TRAFFIC SIGNAL BACKPLATE
8	EACH	PEDESTRIAN SIGNAL HEAD
8	EACH	PEDESTRIAN PUSH BUTTON
2	EACH	ALUMINIUM MAST ARM AND POLE
1	EACH	SERVICE INSTALLATION
1	EACH	CONTROLLER

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

AGENCY: VILLAGE OF WEST DUNDEE

2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER

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

CONSTRUCTION NOTES:

(1) CONTRACTOR SHALL SPLICE TEMPORARY INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE TO EXISTING FIBER OPTIC CABLE TO SECOND STREET IN THIS EXISTING HANDHOLE. THE TEMPORARY FIBER OPTIC INTERCONNECT CABLE SHOULD THEN BE INSTALLED UP THE TEMPORARY WOOD POLE AND OVER TO THE TEMPORARY CONTROLLER CABINET. ALL WORK ASSOCIATED TO THE TEMPORARY INTERCONNECT FROM FIFTH STREET TO SECOND STREET SHALL BE CONSIDERED INCIDENTAL TO THE PAY ITEM "TEMPORARY TRAFFIC SIGNAL INSTALLATION".

(2) AFTER THE PERMANENT INTERCONNECT BETWEEN FIFTH STREET AND SECOND STREET IS INSTALLED AND IN SERVICE, THE CONTRACTOR SHALL REMOVE THE EXISTING HANDHOLE AND CABLES. THE EXISTING CONDUIT WILL BE ABANDONED IN PLACE.

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
- PEDESTRIAN PUSHBUTTON DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP
- G.S. CONDUIT IN GROUND
- HANDHOLE
- HEAVY DUTY HANDHOLE
- LUMINAIRE
- VIDEO DETECTION CAMERA
- "A" ABANDON
- UNINTERRUPTIBLE POWER SUPPLY (UPS)

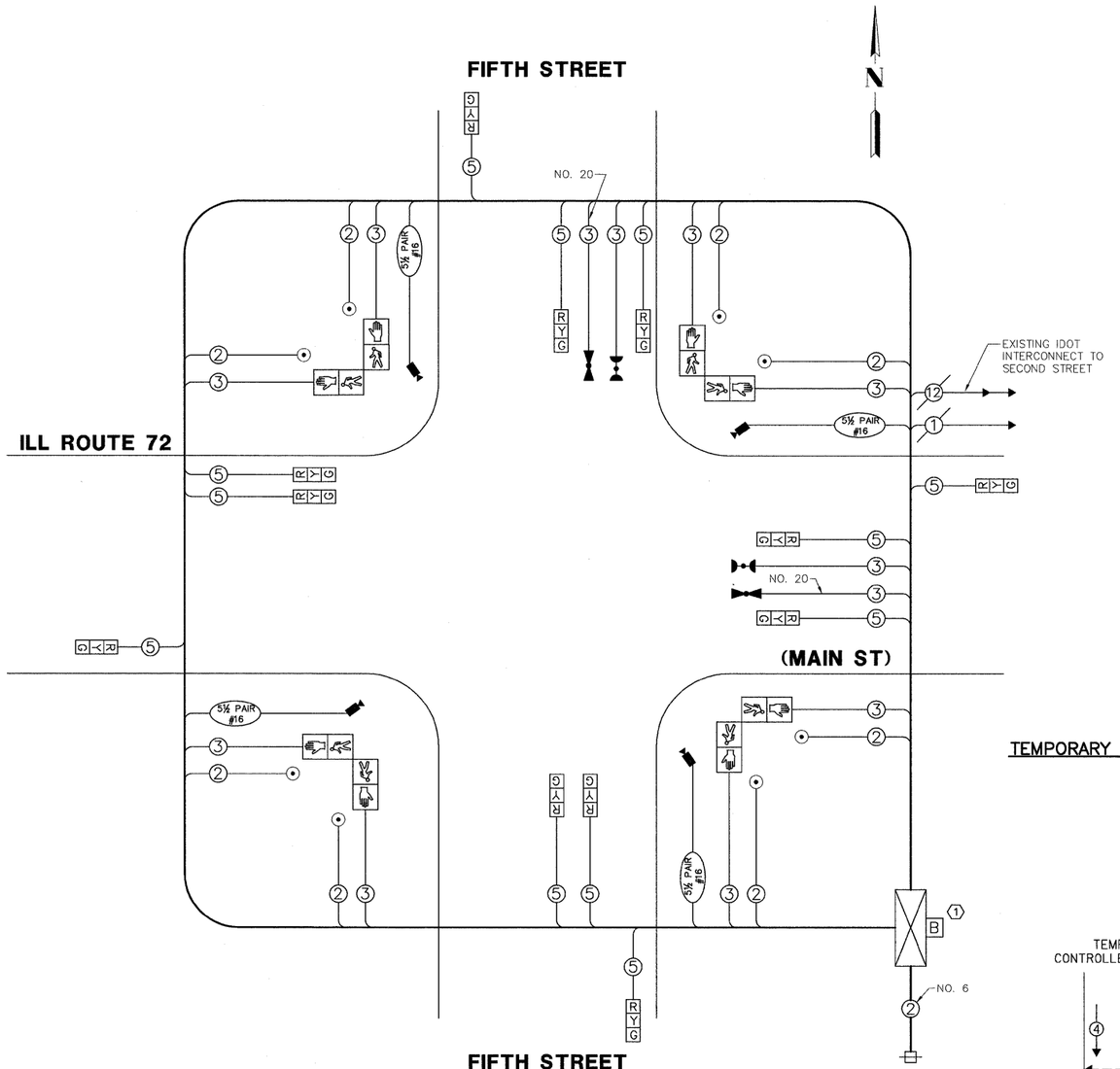
FILE NAME = 4085.850-TR1.dwg	USER NAME =	DESIGNED - JRD	REVISED -	
		DRAWN - PJS	REVISED -	
	PLOT SCALE =	CHECKED - KLB	REVISED -	
	PLOT DATE =	DATE - 6-24-2009	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN AND REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPTMENT
ILL RTE 72 (MAIN ST) AND FIFTH STREET

SCALE: 1"=20' | SHEET NO. 7 OF 13 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
341	2009-081TS	KANE	13	7
		CONTRACT #:		60120
	ILLINOIS FED. AID PROJECT			



TEMPORARY CABLE PLAN LEGEND

- R — TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION 12"
- 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
- VEHICLE DETECTOR, INDUCTION LOOP
- PEDESTRIAN PUSHBUTTON DETECTOR
- PEDESTRIAN SIGNAL HEAD
- VIDEO DETECTION CAMERA
- B — UNINTERRUPTIBLE POWER SUPPLY (UPS)

CONSTRUCTION NOTES:

(1) AN UNINTERRUPTIBLE POWER SUPPLY (UPS) SHALL BE INSTALLED WITH THE TEMPORARY CONTROLLER CABINET AND SHALL BE CONSIDERED INCIDENTAL TO THE PAY ITEM "TEMPORARY TRAFFIC SIGNAL INSTALLATION".

TEMPORARY CABLE PLAN

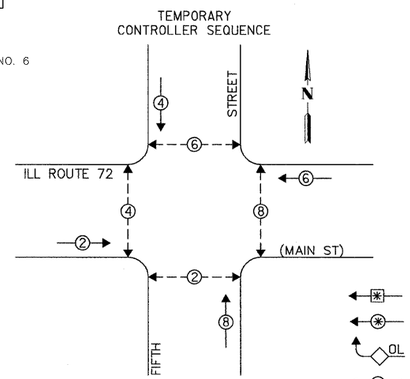
I.D.O.T.
TRAFFIC SIGNAL INSTALLATION
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO LAMPS	WATTAGE INCAND.	WATTAGE L.E.D.	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	135	17	0.50	102.0
SIGNAL (YELLOW)	12	135	25	0.25	75.0
SIGNAL (GREEN)	12	135	15	0.25	45.0
ARROW	-	135	12	0.10	-
PED.SIGNAL	8	90	25	1.00	200.0
CONTROLLER	1	100	100	1.00	100.0
LUMINAIRE	-	150	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	-	150	150	1.00	150.0
BATTERY BACKUP	-	-	25	1.00	25.0
				TOTAL =	697.0

ENERGY COSTS – BILLED TO: VILLAGE OF WEST DUNDEE
(ADDRESS) 102 S. 2ND STREET
(ADDRESS) WEST DUNDEE, IL
ENERGY SUPPLY – CONTACT: NEW BUSINESS
PHONE: 1-866-639-3552
COMPANY: COMED – ELGIN

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

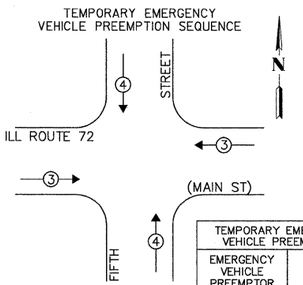
TEMPORARY CONTROLLER SEQUENCE



TEMPORARY PHASE DESIGNATION DIAGRAM

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

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



TEMPORARY EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	—	—

FILE NAME =	USER NAME =	DESIGNED - JRD	REVISED -
4085.850--TR1.dwg		DRAWN - PJS	REVISED -
	PLOT SCALE =	CHECKED - KLB	REVISED -
	PLOT DATE =	DATE - 6-24-2009	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

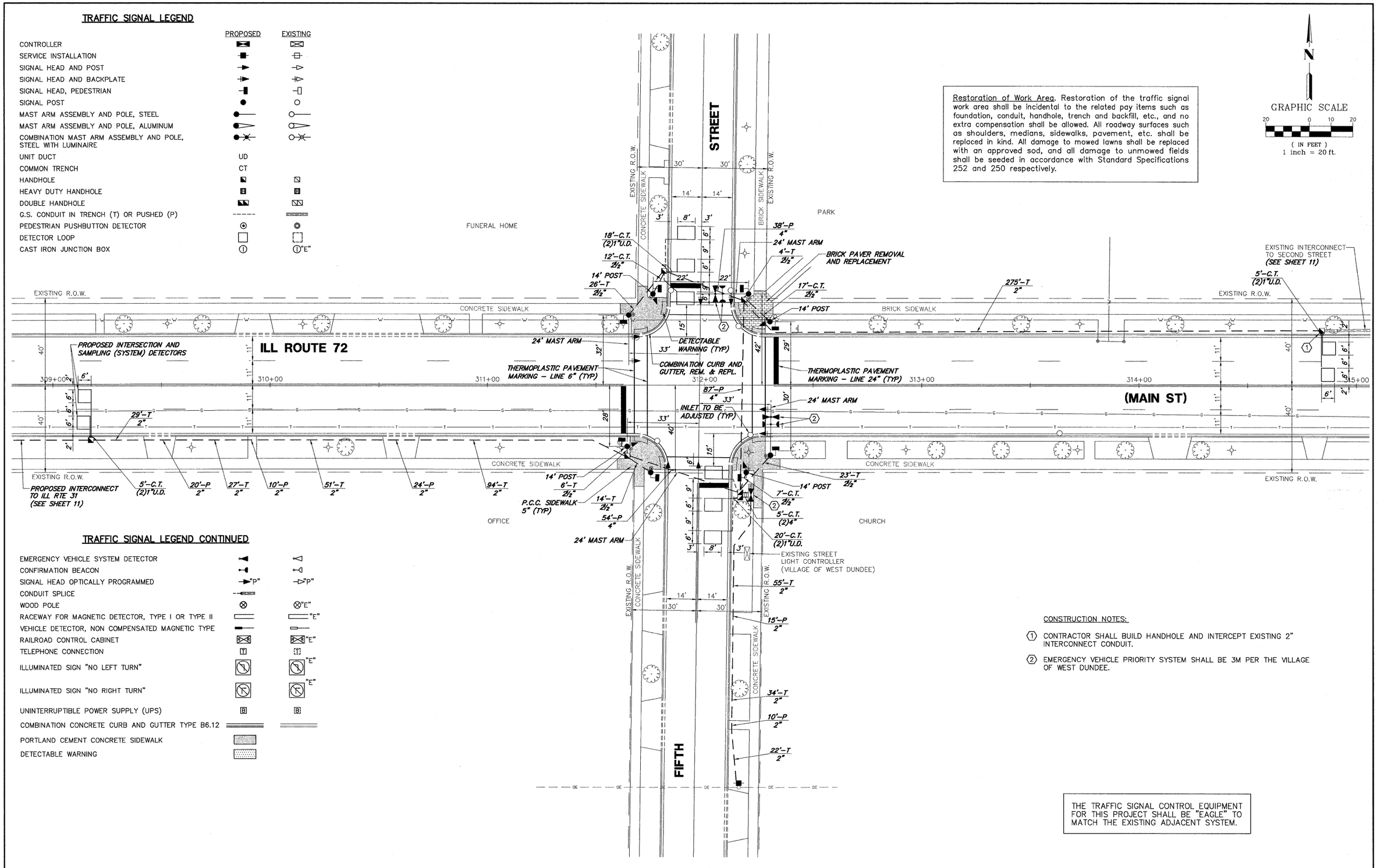
TEMPORARY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM
ILL RTE 72 (MAIN ST) AND FIFTH STREET

SCALE: NONE | SHEET NO. 8 OF 13 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
341	2009-081TS	KANE	13	8
		CONTRACT #:		60120
	ILLINOIS FED. AID PROJECT			

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER	▬	▭
SERVICE INSTALLATION	■	▭
SIGNAL HEAD AND POST	→	▷
SIGNAL HEAD AND 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 WITH LUMINAIRE	●✕	○✕
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE	◪	▨
HEAVY DUTY HANDHOLE	◧	▩
DOUBLE HANDHOLE	◪◪	▨▨
G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)	-----	═══
PEDESTRIAN PUSHBUTTON DETECTOR	⊙	◎
DETECTOR LOOP	□	⬚
CAST IRON JUNCTION BOX	Ⓘ	Ⓘ"E"



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.

TRAFFIC SIGNAL LEGEND CONTINUED

EMERGENCY VEHICLE SYSTEM DETECTOR	◀ ◁
CONFIRMATION BEACON	◀ ◁
SIGNAL HEAD OPTICALLY PROGRAMMED	→"P" ▷"P"
CONDUIT SPLICE	---⊣⊢---
WOOD POLE	⊗ ⊗"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II	═══ ═══"E"
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE	▬ ▭
RAILROAD CONTROL CABINET	▭ ▭"E"
TELEPHONE CONNECTION	T T"E"
ILLUMINATED SIGN "NO LEFT TURN"	◫ ◫"E"
ILLUMINATED SIGN "NO RIGHT TURN"	◫ ◫"E"
UNINTERRUPTIBLE POWER SUPPLY (UPS)	B B
COMBINATION CONCRETE CURB AND GUTTER TYPE B6.12	═══ ═══
PORTLAND CEMENT CONCRETE SIDEWALK	▒
DETECTABLE WARNING	⁙

CONSTRUCTION NOTES:

1. CONTRACTOR SHALL BUILD HANDHOLE AND INTERCEPT EXISTING 2" INTERCONNECT CONDUIT.
2. EMERGENCY VEHICLE PRIORITY SYSTEM SHALL BE 3M PER THE VILLAGE OF WEST DUNDEE.

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

FILE NAME = 4085.850-TR1.dwg	USER NAME =	DESIGNED - JRD	REVISED -
		DRAWN - PJS	REVISED -
	PLOT SCALE =	CHECKED - KLB	REVISED -
	PLOT DATE =	DATE - 6-24-2009	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN
ILL RTE 72 (MAIN ST) AND FIFTH STREET

SCALE: 1"=20' | SHEET NO. 9 OF 13 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
341	2009-081TS	KANE	13	9
		CONTRACT #:		60120
	ILLINOIS FED. AID PROJECT			

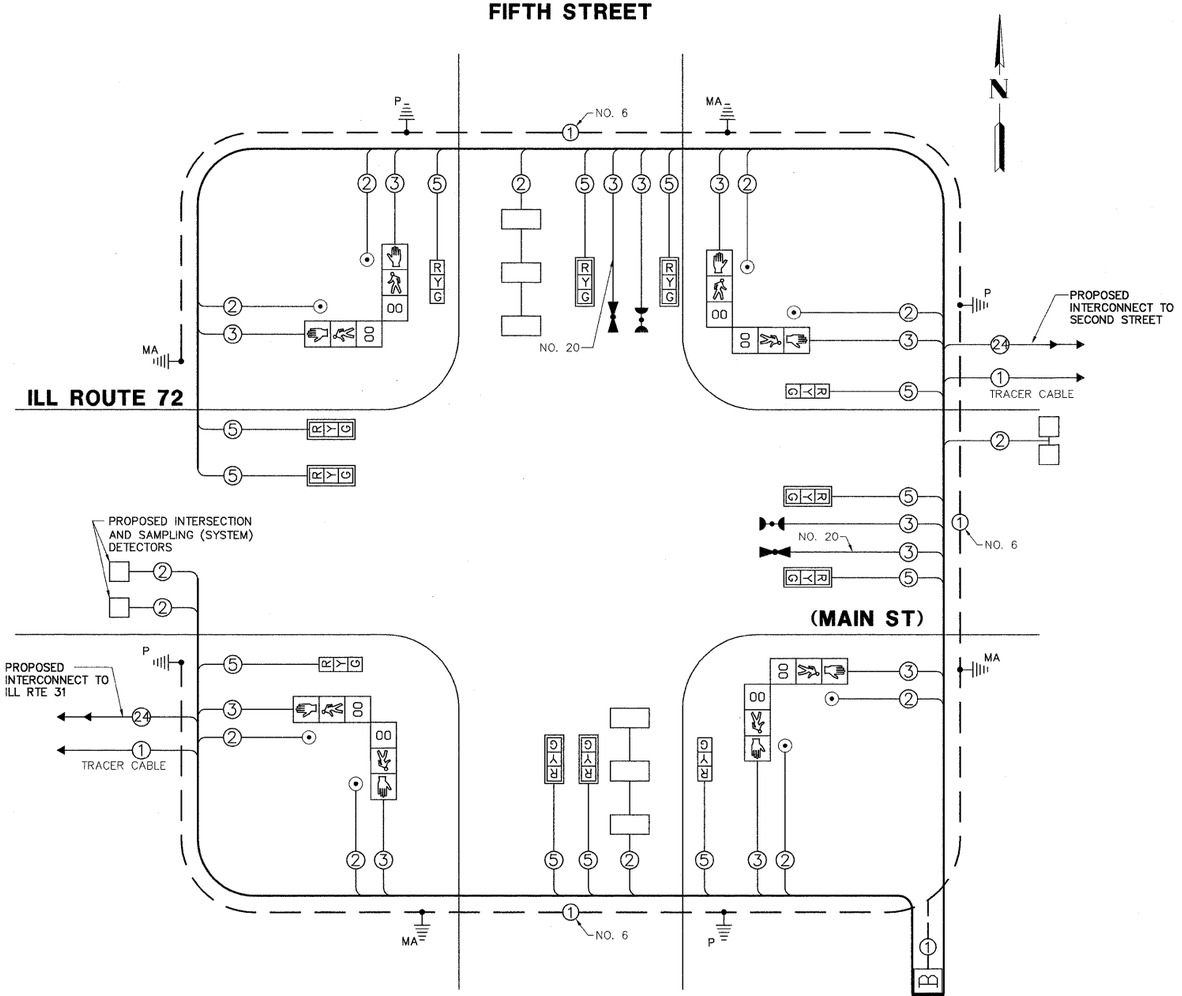
SCHEDULE OF QUANTITIES

ILL RTE 72 (MAIN STREET) AND FIFTH STREET
TRAFFIC SIGNAL MODIFICATION PLAN

	NO.	QUANT.	UNIT	ITEM
	1.	950	SQ. FT.	PORTLAND CEMENT CONRETE SIDEWALK, 5 INCH
	2.	96	SQ. FT.	DETECTABLE WARNINGS
	3.	950	SQ FT	SIDEWALK REMOVAL
	4.	150	FOOT	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT
	5.	3	CAL.MO.	ENGINEER'S FIELD OFFICE, TYPE A
	6.	1	L.SUM	MOBILIZATION
	7.	1	L. SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501
	8.	1	L.SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606
	9.	1	L.SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701
	10.	1	L. SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801
	11.	12	SQ FT	SIGN PANEL - TYPE 1
	12.	25	SQ FT	SIGN PANEL - TYPE 2
	13.	130	FOOT	THERMOPLASTIC PAVEMENT MARKING - LINE 4"
	14.	300	FOOT	THERMOPLASTIC PAVEMENT MARKING - LINE 6"
	15.	75	FOOT	THERMOPLASTIC PAVEMENT MARKING - LINE 24"
	16.	350	SQ FT	PAVEMENT MARKING REMOVAL
	17.	587	FOOT	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
	18.	109	FOOT	CONDUIT IN TRENCH, 2-1/2" DIA., GALVANIZED STEEL
	19.	10	FOOT	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
	20.	79	FOOT	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL
	21.	179	FOOT	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
	22.	5	EACH	HANDHOLE
	23.	1	EACH	DOUBLE HANDHOLE
	24.	665	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
	25.	1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL
	26.	1	EACH	TRANSCEIVER - FIBER OPTIC
	27.	975	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 2C
	28.	1,305	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 3C
	29.	1,765	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 5C
	30.	1,290	FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
	31.	160	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C
	32.	4	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL, 14 FT
	33.	4	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 24 FT.
	34.	16	FOOT	CONCRETE FOUNDATION, TYPE A
	35.	4	FOOT	CONCRETE FOUNDATION, TYPE C
	36.	40	FOOT	CONCRETE FOUNDATION, TYPE E, 30-INCH DIAMETER
	37.	8	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST-ARM MOUNTED
	38.	4	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, BRACKET MOUNTED
	39.	8	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
	40.	8	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINIUM
	41.	5	EACH	INDUCTIVE LOOP DETECTOR
	42.	320	FOOT	DETECTOR LOOP, TYPE I
*	43.	2	EACH	LIGHT DETECTOR
*	44.	1	EACH	LIGHT DETECTOR AMPLIFIER
	45.	8	EACH	PEDESTRIAN PUSH-BUTTON
	46.	1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
	47.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
	48.	7	EACH	REMOVE EXISTING HANDHOLE
	49.	9	EACH	REMOVE EXISTING CONCRETE FOUNDATION
	50.	1	EACH	TEMPORARY TRAFFIC SIGNAL TIMINGS
	51.	1	EACH	SERVICE INSTALLATION - POLE MOUNTED
	52.	1	EACH	UNINTERRUPTIBLE POWER SUPPLY (UPS)
*	53.	515	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
	54.	260	FOOT	ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED, SHIELDED
	55.	325	SQ. FT.	BRICK PAVER REMOVAL AND REPLACEMENT
*	56.	4	EACH	PAINT NEW MAST ARM AND POLE, UNDER 12.19 METER (40 FEET)
*	57.	4	EACH	PAINT NEW TRAFFIC SIGNAL POST

* 100% RESPONSIBILITY TO THE VILLAGE OF WEST DUNDEE

FIFTH STREET



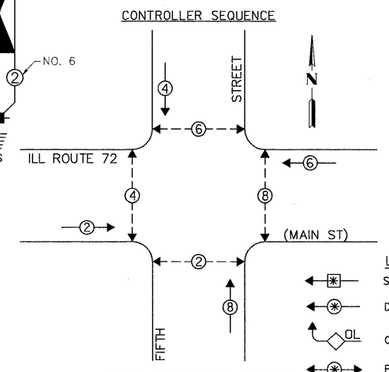
FIFTH STREET

CABLE PLAN

CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" (200mm) TRAFFIC SIGNAL SECTION
R	R	12" (300mm) TRAFFIC SIGNAL SECTION
W	W	12" (300mm) PEDESTRIAN SIGNAL SECTION
W DW	W DW	12" (300mm) PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE
		VEHICLE DETECTOR, INDUCTION LOOP
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
②	②	DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
①	①	GROUND CABLE IN CONDUIT NO.6 SOLID COPPER (GREEN)
5F	5F	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM24F
R Y G "P"	R Y G "P"	SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN "NO LEFT TURN"
"E"		ILLUMINATED SIGN "NO RIGHT TURN"
H/C	C	GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C)
P	P	GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
	B	UNINTERRUPTIBLE POWER SUPPLY (UPS)
	W DW 00	12" (300mm) PEDESTRIAN SIGNAL SECTION WITH COUNTDOWN TIMER

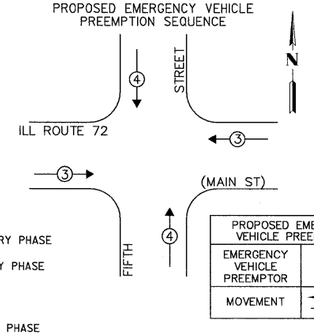
CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

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

PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	⟵	⟷ ⟷

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
		WATTAGE			
TYPE	NO LAMPS	INCAND.	L.E.D.	% OPERATION	
SIGNAL (RED)	20	135	17	0.50	170.0
SIGNAL (YELLOW)	20	135	25	0.25	125.0
SIGNAL (GREEN)	20	135	15	0.25	75.0
ARROW	-	135	12	0.10	-
PED.SIGNAL	8	90	25	1.00	200.0
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
				TOTAL =	695.0

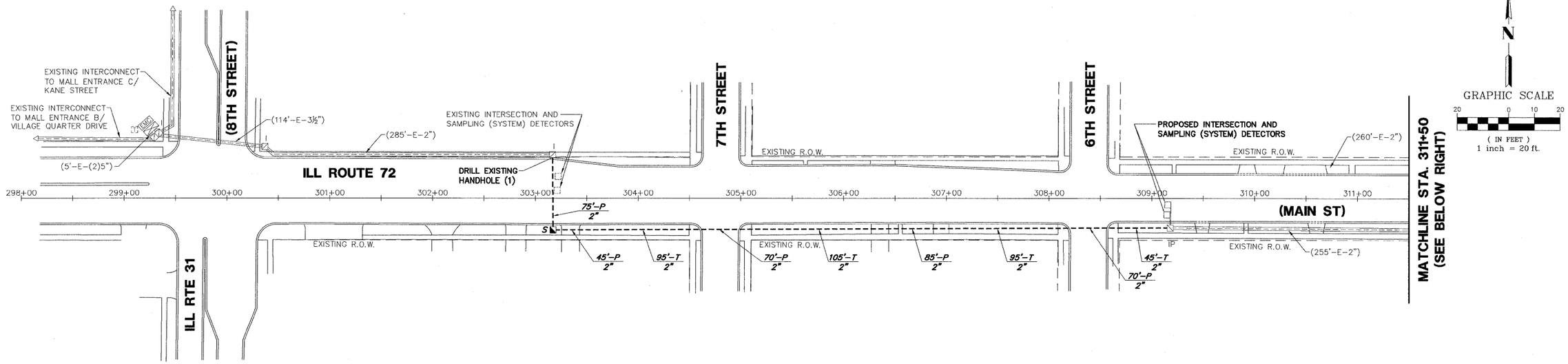
ENERGY COSTS – BILLED TO: VILLAGE OF WEST DUNDEE
(ADDRESS) 102 S. 2ND STREET
(ADDRESS) WEST DUNDEE, IL
ENERGY SUPPLY – CONTACT: NEW BUSINESS
PHONE: 1-866-639-3552
COMPANY: COMED – ELGIN

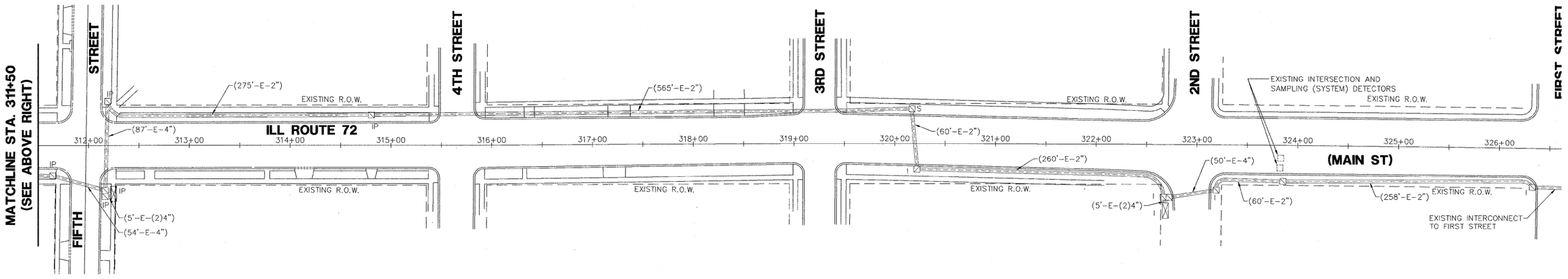
THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM.

FOUNDATION (DEPTH)	(FT.)	CABLE SLACK	(FT.)	VERTICAL	(FT.)
TYPE A - POST	4	HANDHOLE	6.5	ALL FOUNDATIONS	3.5
TYPE D - CONTROLLER	4	DOUBLE HANDHOLE	13	MAST ARM (L) POLE	20'+L-2=
TYPE E - M.ARM POLE		SIGNAL POST	2	BRACKET MOUNTED	13
30' (6'-30')	10	CONTROLLER CAB.	1	PED. PUSHBUTTON	4
30' (30'-40')	13.5	FIBER OPTIC	13	ELECTRIC SERVICE	13.5
36' (40'-48')	13	ELECTRIC SERVICE	1	SERVICE TO GROUND	13.5
36' (50'-55')	15	GROUND CABLE	1	POST MOUNTED	6

FILE NAME = 4085.850-TR1.dwg	USER NAME =	DESIGNED - JRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CABLE PLAN, PHASE DESIGNATION DIAGRAM AND SCHEDULE OF QUANTITIES ILL RTE 72 (MAIN ST) AND FIFTH ST.
		DRAWN - PJS	REVISED -		
	PLOT SCALE =	CHECKED - KLB	REVISED -		SCALE: NONE / SHEET NO. 10 OF 13 SHEETS / STA. / TO STA.
	PLOT DATE =	DATE - 6-24-2009	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
341	2009-081TS	KANE	13	10
		CONTRACT #:	60120	
	ILLINOIS FED. AID PROJECT			





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.

INTERCONNECT PLAN LEGEND

	PROPOSED	EXISTING
CONTROLLER CABINET	▶◀	⊠
VIDEO COMMUNICATIONS CABINET	⊠	⊠ 'E'
HANDHOLE	◥	◹
DOUBLE HANDHOLE	◥◤	◹◺
HEAVY-DUTY HANDHOLE	H	H
G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)	———	———
DETECTOR LOOP	□	⬚
SYSTEM	S	
INTERSECTION	IP	I
UNIT DUCT	UD	

FILE NAME = 4085.850-TR1.dwg	USER NAME =	DESIGNED - JRD	REVISED -
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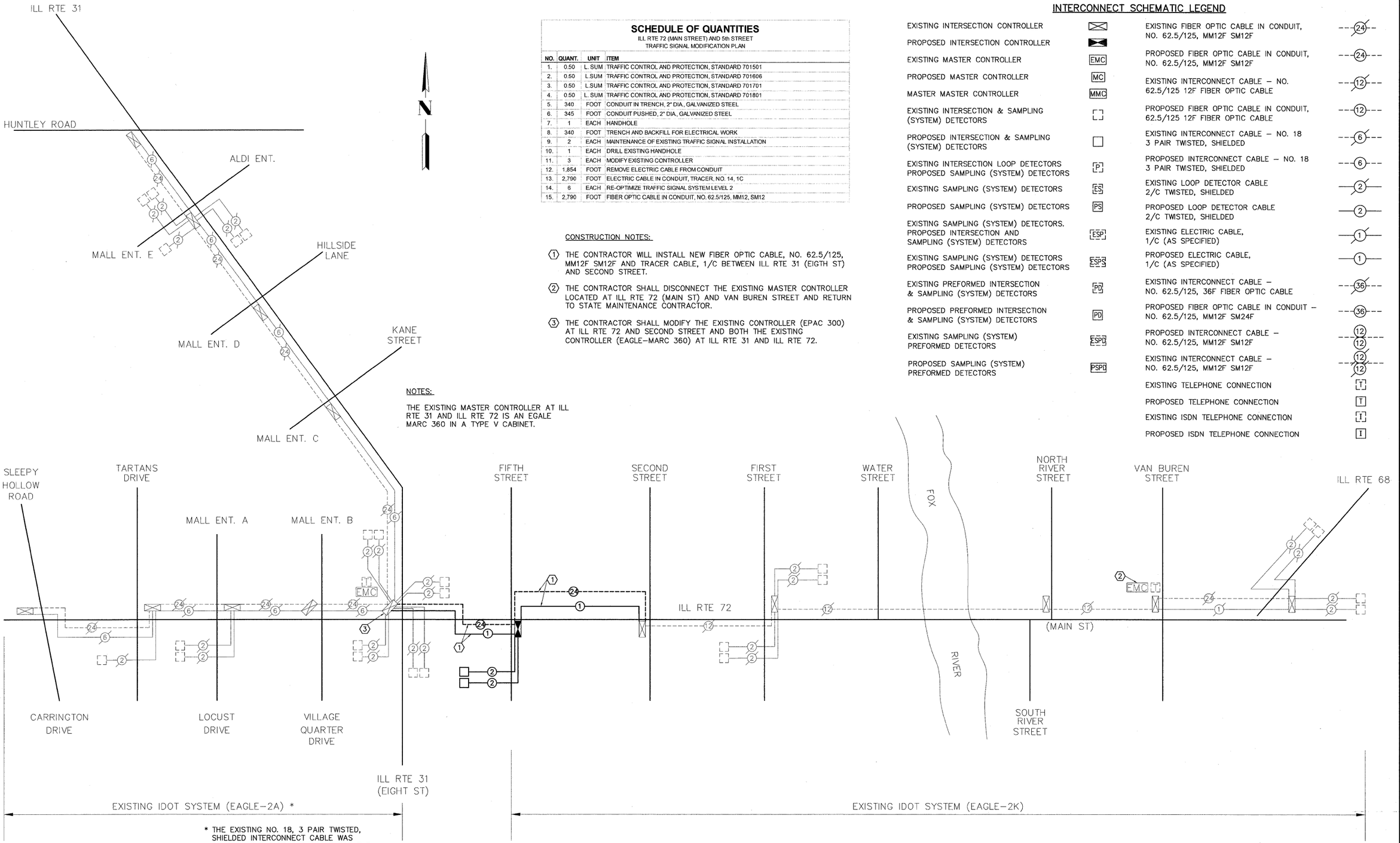
	PLOT SCALE =	CHECKED - KLB	REVISED -
	PLOT DATE =	DATE - 6-24-2009	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERCONNECT PLAN
ILL RTE 72 (MAIN ST) AND FIFTH STREET

SCALE: 1"=50' | SHEET NO. 11 OF 13 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
341	2009-081TS	KANE	13	11
		CONTRACT #:		60120
		ILLINOIS FED. AID PROJECT		



* THE EXISTING NO. 18, 3 PAIR TWISTED, SHIELDED INTERCONNECT CABLE WAS REUSED AS THE TRACER CABLE FOR THE CURRENT INTERCONNECT SYSTEM.

SCHEDULE OF QUANTITIES

ILL RTE 72 (MAIN STREET) AND 5th STREET
TRAFFIC SIGNAL MODIFICATION PLAN

NO.	QUANT.	UNIT	ITEM
1.	0.50	L. SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501
2.	0.50	L.SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606
3.	0.50	L.SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701
4.	0.50	L. SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801
5.	340	FOOT	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
6.	345	FOOT	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL
7.	1	EACH	HANDHOLE
8.	340	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
9.	2	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
10.	1	EACH	DRILL EXISTING HANDHOLE
11.	3	EACH	MODIFY EXISTING CONTROLLER
12.	1,854	FOOT	REMOVE ELECTRIC CABLE FROM CONDUIT
13.	2,790	FOOT	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14, 1C
14.	6	EACH	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2
15.	2,790	FOOT	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12, SM12

CONSTRUCTION NOTES:

1. THE CONTRACTOR WILL INSTALL NEW FIBER OPTIC CABLE, NO. 62.5/125, MM12F SM12F AND TRACER CABLE, 1/C BETWEEN ILL RTE 31 (EIGTH ST) AND SECOND STREET.
2. THE CONTRACTOR SHALL DISCONNECT THE EXISTING MASTER CONTROLLER LOCATED AT ILL RTE 72 (MAIN ST) AND VAN BUREN STREET AND RETURN TO STATE MAINTENANCE CONTRACTOR.
3. THE CONTRACTOR SHALL MODIFY THE EXISTING CONTROLLER (EPAC 300) AT ILL RTE 72 AND SECOND STREET AND BOTH THE EXISTING CONTROLLER (EAGLE-MARC 360) AT ILL RTE 31 AND ILL RTE 72.

NOTES:

THE EXISTING MASTER CONTROLLER AT ILL RTE 31 AND ILL RTE 72 IS AN EGALE MARC 360 IN A TYPE V CABINET.

INTERCONNECT SCHEMATIC LEGEND

EXISTING INTERSECTION CONTROLLER	⊠	EXISTING FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	-24-
PROPOSED INTERSECTION CONTROLLER	⊠	PROPOSED FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	-24-
EXISTING MASTER CONTROLLER	EMC	EXISTING INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE	-12-
PROPOSED MASTER CONTROLLER	MC	PROPOSED FIBER OPTIC CABLE IN CONDUIT, 62.5/125 12F FIBER OPTIC CABLE	-12-
MASTER MASTER CONTROLLER	MMC	EXISTING INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED	-6-
EXISTING INTERSECTION & SAMPLING (SYSTEM) DETECTORS	[ ]	PROPOSED INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED	-6-
PROPOSED INTERSECTION & SAMPLING (SYSTEM) DETECTORS	□	EXISTING LOOP DETECTOR CABLE 2/C TWISTED, SHIELDED	-2-
EXISTING INTERSECTION LOOP DETECTORS PROPOSED SAMPLING (SYSTEM) DETECTORS	P	PROPOSED LOOP DETECTOR CABLE 2/C TWISTED, SHIELDED	-2-
EXISTING SAMPLING (SYSTEM) DETECTORS	ES	EXISTING ELECTRIC CABLE, 1/C (AS SPECIFIED)	-1-
PROPOSED SAMPLING (SYSTEM) DETECTORS	PS	PROPOSED ELECTRIC CABLE, 1/C (AS SPECIFIED)	-1-
EXISTING SAMPLING (SYSTEM) DETECTORS. PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTORS	ESP	EXISTING INTERCONNECT CABLE - NO. 62.5/125, 36F FIBER OPTIC CABLE	-36-
EXISTING SAMPLING (SYSTEM) DETECTORS PROPOSED SAMPLING (SYSTEM) DETECTORS	ESPS	PROPOSED FIBER OPTIC CABLE IN CONDUIT - NO. 62.5/125, MM12F SM24F	-36-
EXISTING PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS	PD	PROPOSED INTERCONNECT CABLE - NO. 62.5/125, MM12F SM12F	-12- -12-
PROPOSED PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS	PD	EXISTING INTERCONNECT CABLE - NO. 62.5/125, MM12F SM12F	-12- -12-
EXISTING SAMPLING (SYSTEM) PREFORMED DETECTORS	ESPD	EXISTING TELEPHONE CONNECTION	T
PROPOSED SAMPLING (SYSTEM) PREFORMED DETECTORS	PSPD	PROPOSED TELEPHONE CONNECTION	T
		EXISTING ISDN TELEPHONE CONNECTION	I
		PROPOSED ISDN TELEPHONE CONNECTION	I

FILE NAME = 4085.850-TR1.dwg	USER NAME =	DESIGNED - JRD	REVISED -	
		DRAWN - PJS	REVISED -	
	PLOT SCALE =	CHECKED - KLB	REVISED -	
	PLOT DATE =	DATE - 6-24-2009	REVISED -	

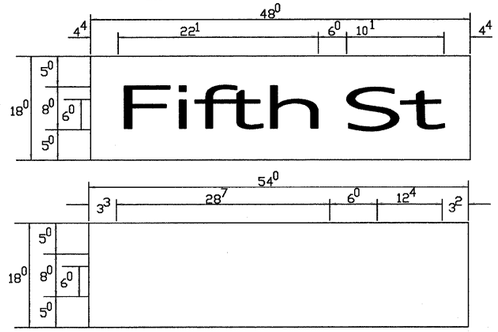
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERCONNECT SCHEMATIC AND SCHEDULE OF QUANTITIES
ILL RTE 72 (MAIN ST) AND FIFTH STREET

SCALE: NONE | SHEET NO. 12 OF 13 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
341	2009-081TS	KANE	13	12
		CONTRACT #:		60120
	ILLINOIS FED. AID PROJECT			

PANEL SIGN DESIGN TYPE 1

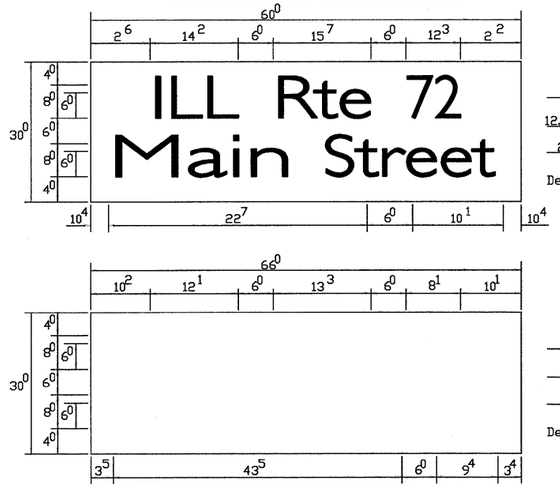


____ Sq. M. each
6.0 Sq. Ft. each
2 Required
Design Series D

____ Sq. M. each
7.5 Sq. Ft. each
2 Required
Design Series D

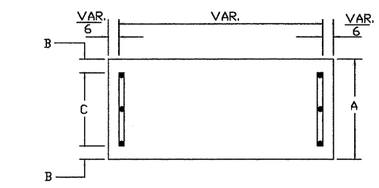
NOTE: SIGN DIMENSIONS ARE IN ENGLISH UNITS

PANEL SIGN DESIGN TYPE 2

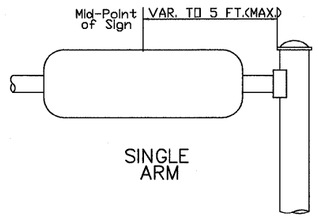


____ Sq. M. each
____ Sq. Ft. each
____ Required
Design Series ___

SUPPORTING CHANNELS

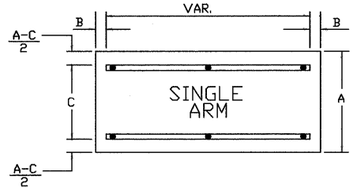


A	B	C
18"	2"	14"

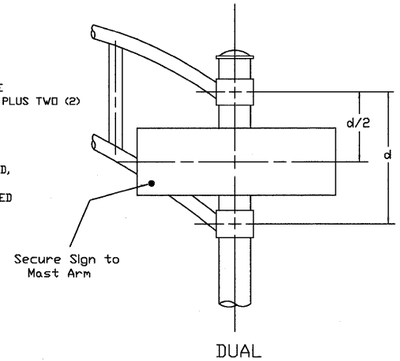


SINGLE ARM

SUPPORTING CHANNELS



A	B	C
18"	2"	12"
30"	2"	22"



DUAL ARM

SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM
Shall be used. See Note #5.

GENERAL NOTES

1. WHERE MAST ARM MOUNTED STREET NAME SIGNS ARE SPECIFIED, THE MAST ARM ASSEMBLY AND POLES SHALL BE DESIGNED TO SUPPORT THE LOADINGS CALLED FOR ON STANDARDS 834001, 834006 AND 834011, AS APPLICABLE, PLUS TWO (2) SIGN PANELS 2'-6" x 6'-0" MOUNTED AS SHOWN. THE DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS FOR 80 M.P.H. WIND VELOCITY.
2. ALL SIGNS SHALL HAVE A WHITE REFLECTORIZED LEGEND AND BORDER ON A GREEN REFLECTORIZED BACKGROUND, TYPE A SHEETING.
3. THE SIGN LENGTH SHOULD BE INCREASED IN 6-INCH INCREMENTS, BUT THE OVERALL LENGTH SHOULD NOT EXCEED 6'-0".
4. ALL BORDERS SHALL BE 3/4 " WIDE AND CORNER RADIUS SHALL BE 2-1/4 ".
5. SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM SHALL BE USED FOR ALL SIGNS ATTACHED TO SIGNAL POLES AND POSTS. LOCAL SUPPLIERS OF THE SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM ARE:
   - ✳ A.K.T. CORPORATION, SCHAUMBURG, IL
   - ✳ AMERICAN FABRICATION CO., CHICAGO HEIGHTS, IL
   - ✳ TUCKER COMPANY, INC., WAUWATOSA, WI
   - ✳ WESTERN TRAFFIC CONTROL INC., CICERO, IL

PARTS LISTING:

SIGN CHANNEL	PART #HPN053 (MED. CHANNEL)
SIGN SCREWS	1/4 " x 14 x 1" H.W.H. #3 SELF TAPPING WITH NEOPRENE WASHER
BRACKETS	PART #HPN034 (UNIVERSAL) CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING

OTHER BRANDS OF MOUNTING HARDWARE ARE ACCEPTABLE, BASED UPON THE DEPARTMENT'S APPROVAL AND COMPATIBILITY WITH THE CHANNEL/BRACKET OF THE ABOVE PRODUCT.

EXAMPLE, 2 (3) DENOTES 3/8"

Upper Case To Lower Case Spacing Chart 8–6 Inch Series "C & D"

FIRST LETTER	SECOND LETTER: a c d e g o q		b h i k l m n p r u		f w		j		s t		v y		x		z	
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
A W X	1^{2}	1^{4}	1^{4}	1^{5}	1^{2}	1^{4}	0^{6}	1^{0}	1^{1}	1^{4}	0^{6}	1^{0}	1^{1}	1^{2}	1^{2}	1^{4}
B	1^{4}	1^{5}	2^{0}	2^{1}	1^{4}	1^{5}	1^{1}	1^{2}	1^{4}	1^{5}	1^{2}	1^{4}	1^{2}	1^{4}	1^{6}	1^{7}
C E G	1^{4}	1^{5}	2^{0}	2^{1}	1^{2}	1^{4}	0^{6}	1^{0}	1^{2}	1^{4}	1^{2}	1^{4}	1^{4}	1^{5}	1^{4}	1^{5}
D O Q R	1^{4}	1^{5}	2^{0}	2^{1}	1^{4}	1^{5}	0^{6}	1^{0}	1^{2}	1^{4}	1^{2}	1^{4}	1^{4}	1^{5}	1^{4}	1^{5}
F	0^{5}	0^{6}	1^{4}	1^{5}	0^{6}	1^{0}	0^{5}	0^{6}	0^{6}	1^{0}	0^{6}	1^{0}	0^{6}	1^{0}	1^{1}	1^{2}
H I M N	2^{0}	2^{1}	2^{2}	2^{4}	2^{0}	2^{1}	1^{4}	1^{5}	1^{6}	1^{7}	1^{6}	1^{7}	2^{0}	2^{1}	2^{0}	2^{1}
J U	2^{0}	2^{1}	2^{0}	2^{1}	1^{6}	1^{7}	1^{4}	1^{5}	1^{6}	1^{7}	1^{6}	1^{7}	1^{6}	1^{7}	2^{0}	2^{1}
K L	1^{1}	1^{2}	1^{6}	1^{7}	1^{1}	1^{2}	0^{5}	0^{6}	1^{1}	1^{2}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}
P	1^{2}	1^{4}	1^{4}	1^{5}	1^{2}	1^{4}	0^{5}	0^{6}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}	1^{2}	1^{4}
S	1^{2}	1^{4}	1^{6}	1^{7}	1^{2}	1^{4}	0^{6}	1^{0}	1^{2}	1^{4}	1^{2}	1^{4}	1^{2}	1^{4}	1^{2}	1^{4}
T	1^{1}	1^{2}	1^{6}	1^{7}	0^{6}	1^{0}	0^{6}	1^{0}	1^{1}	1^{2}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}
V	0^{6}	1^{0}	1^{4}	1^{5}	1^{1}	1^{2}	0^{6}	1^{0}	1^{2}	1^{4}	1^{2}	1^{4}	1^{2}	1^{4}	1^{2}	1^{4}
Y	0^{5}	0^{6}	1^{4}	1^{5}	0^{6}	1^{0}	0^{5}	0^{6}	0^{5}	0^{7}	0^{5}	0^{6}	0^{6}	1^{0}	1^{1}	1^{2}
Z	1^{6}	1^{7}	2^{2}	2^{4}	1^{6}	1^{7}	1^{2}	1^{4}	1^{6}	1^{7}	1^{6}	1^{7}	1^{6}	1^{7}	2^{0}	2^{1}

Lower Case To Lower Case Spacing Chart 6 Inch Series "C & D"

FIRST LETTER	SECOND LETTER: a c d e		b h i k l m n p q r u		f w		j		s t		v y		x		z	
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
a d h g i j l m n q u	1^{6}	1^{7}	2^{2}	2^{4}	1^{6}	1^{7}	1^{2}	1^{4}	1^{4}	1^{5}	1^{4}	1^{5}	1^{6}	1^{7}	1^{6}	1^{7}
b f k o p s	1^{2}	1^{4}	1^{6}	1^{7}	1^{1}	1^{2}	0^{5}	0^{6}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}	1^{2}	1^{4}
c e	1^{2}	1^{4}	1^{6}	1^{7}	1^{2}	1^{4}	0^{6}	1^{0}	1^{2}	1^{4}	1^{2}	1^{4}	1^{2}	1^{4}	1^{2}	1^{4}
r	0^{6}	1^{0}	1^{2}	1^{4}	0^{6}	1^{0}	0^{3}	0^{3}	0^{5}	0^{6}	0^{5}	0^{6}	0^{6}	1^{0}	0^{6}	1^{0}
t z	1^{2}	1^{4}	1^{6}	1^{7}	1^{2}	1^{4}	0^{6}	1^{0}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}	1^{2}	1^{4}
v y	1^{1}	1^{2}	1^{4}	1^{5}	1^{1}	1^{2}	0^{5}	0^{6}	0^{6}	1^{0}	0^{6}	1^{0}	1^{1}	1^{2}	1^{1}	1^{2}
w	1^{1}	1^{2}	1^{4}	1^{5}	1^{1}	1^{2}	0^{5}	0^{6}	1^{1}	1^{2}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}
x	1^{2}	1^{4}	1^{6}	1^{7}	1^{1}	1^{2}	0^{5}	0^{6}	1^{1}	1^{2}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}

Number To Number Spacing Chart 8 Inch Series "C & D"

FIRST NUMBER	SECOND NUMBER: 0		1		2		3		4		5		6		7		8		9	
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
0 9	1^{6}	1^{7}	1^{6}	1^{7}	1^{4}	1^{5}	1^{2}	1^{4}	1^{4}	1^{5}	1^{4}	1^{5}	1^{6}	1^{7}	1^{2}	1^{4}	1^{6}	1^{7}	1^{6}	1^{7}
1	2^{0}	2^{1}	2^{0}	2^{1}	2^{0}	2^{1}	1^{6}	1^{7}	1^{4}	1^{5}	2^{0}	2^{1}	2^{0}	2^{1}	1^{4}	1^{5}	2^{0}	2^{1}	2^{0}	2^{1}
2 3 4	1^{4}	1^{5}	1^{4}	1^{5}	1^{4}	1^{5}	1^{2}	1^{4}	1^{2}	1^{4}	1^{4}	1^{5}	1^{4}	1^{5}	1^{1}	1^{2}	1^{6}	1^{7}	1^{4}	1^{5}
5	1^{4}	1^{5}	1^{4}	1^{5}	1^{4}	1^{5}	1^{1}	1^{2}	1^{1}	1^{2}	1^{4}	1^{5}	1^{4}	1^{5}	1^{1}	1^{2}	1^{4}	1^{5}	1^{4}	1^{5}
6	1^{6}	1^{7}	1^{4}	1^{5}	1^{4}	1^{5}	1^{2}	1^{5}	1^{2}	1^{4}	1^{4}	1^{5}	1^{4}	1^{5}	1^{1}	1^{2}	1^{4}	1^{5}	1^{4}	1^{5}
7	1^{2}	1^{4}	1^{2}	1^{4}	1^{4}	1^{5}	1^{2}	1^{5}	0^{5}	0^{6}	1^{2}	1^{4}	1^{4}	1^{5}	1^{1}	1^{2}	1^{4}	1^{5}	1^{2}	1^{4}
8	1^{6}	1^{7}	1^{6}	1^{7}	1^{4}	1^{5}	1^{2}	1^{5}	1^{2}	1^{4}	1^{4}	1^{5}	1^{6}	1^{7}	1^{2}	1^{4}	1^{6}	1^{7}	1^{4}	1^{5}

UPPER AND LOWER CASE LETTER WIDTHS

LETTERS	6 INCH UPPER CASE LETTERS, SERIES C	6 INCH UPPER CASE LETTERS, SERIES D	8 INCH UPPER CASE LETTERS, SERIES C	8 INCH UPPER CASE LETTERS, SERIES D	LETTERS	6 INCH LOWER CASE LETTERS, SERIES C	6 INCH LOWER CASE LETTERS, SERIES D
A	3^{6}	5^{0}	5^{0}	6^{5}	a	3^{5}	4^{2}
B	3^{2}	4^{0}	4^{3}	5^{3}	b	3^{5}	4^{2}
C	3^{2}	4^{0}	4^{3}	5^{3}	c	3^{5}	4^{1}
D	3^{2}	4^{0}	4^{3}	5^{3}	d	3^{5}	4^{2}
E	3^{0}	3^{5}	4^{0}	4^{7}	e	3^{5}	4^{2}
F	3^{0}	3^{5}	4^{0}	4^{7}	f	2^{3}	2^{6}
G	3^{2}	4^{0}	4^{3}	5^{3}	g	3^{5}	4^{2}
H	3^{2}	4^{0}	4^{3}	5^{3}	h	3^{5}	4^{2}
I	0^{7}	0^{7}	1^{1}	1^{2}	i	1^{1}	1^{1}
J	3^{0}	3^{6}	4^{0}	5^{0}	j	2^{0}	2^{2}
K	3^{2}	4^{1}	4^{3}	5^{4}	k	3^{5}	4^{2}
L	3^{0}	3^{5}	4^{0}	4^{7}	l	1^{1}	1^{1}
M	3^{7}	4^{5}	5^{1}	6^{1}	m	6^{0}	7^{0}
N	3^{2}	4^{0}	4^{3}	5^{3}	n	3^{5}	4^{2}
O	3^{4}	4^{2}	4^{5}	5^{5}	o	3^{6}	4^{3}
P	3^{2}	4^{0}	4^{3}	5^{3}	p	3^{5}	4^{2}
Q	3^{4}	4^{2}	4^{5}	5^{5}	q	3^{5}	4^{2}
R	3^{2}	4^{0}	4^{3}	5^{3}	r	2^{6}	3^{2}
S	3^{2}	4^{0}	4^{3}	5^{3}	s	3^{6}	4^{2}
T	3^{0}	3^{5}	4^{0}	4^{7}	t	2^{7}	3^{2}
U	3^{2}	4^{0}	4^{3}	5^{3}	u	3^{5}	4^{2}
V	3^{5}	4^{4}	4^{7}	6^{0}	v	4^{2}	4^{7}
W	4^{4}	5^{2}	6^{0}	7^{0}	w	5^{5}	6^{4}
X	3^{4}	4^{0}	4^{5}	5^{3}	x	4^{4}	5^{1}
Y	3^{6}	5^{0}	5^{0}	6^{6}	y	4^{6}	5^{3}
Z	3^{2}	4^{0}	4^{3}	5^{3}	z	3^{6}	4^{3}

NUMBER	6 INCH SERIES, C	6 INCH SERIES, D	8 INCH SERIES, C	8 INCH SERIES, D
1	1^{2}	1^{4}	1^{5}	2^{0}
2	3^{2}	4^{0}	4^{3}	5^{3}
3	3^{2}	4^{0}	4^{3}	5^{3}
4	3^{5}	4^{3}	4^{7}	5^{7}
5	3^{2}	4^{0}	4^{3}	5^{3}
6	3^{2}	4^{0}	4^{3}	5^{3}
7	3^{2}	4^{0}	4^{3}	5^{3}
8	3^{2}	4^{0}	4^{3}	5^{3}
9	3^{2}	4^{0}	4^{3}	5^{3}
0	3^{4}	4^{2}	4^{5}	5^{5}

REVISIONS NAME	DATE
D.A.Z./D.A.G.	11/90
	6/98
CADD	10/00

ILLINOIS DEPARTMENT OF TRANSPORTATION

MAST ARM MOUNTED STREET NAME SIGNS

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

DRAWN BY: RDB
DESIGNED BY: JHE
CHECKED BY: DAD

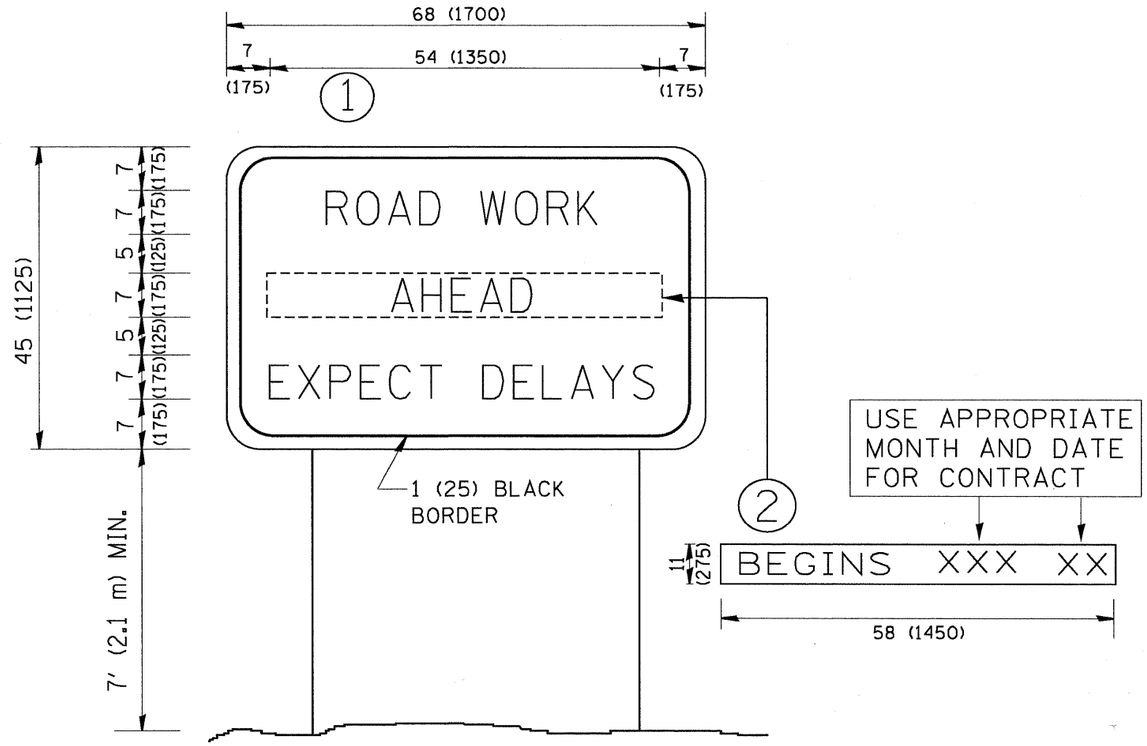
FILE NAME = 4085.850-TR1.dwg	USER NAME =	DESIGNED - JRD	REVISED -	
		DRAWN - PJS	REVISED -	
	PLOT SCALE =	CHECKED - KLB	REVISED -	
	PLOT DATE =	DATE - 6-24-2009	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAST ARM MOUNTED STREET NAME SIGNS

SCALE: NONE | SHEET NO. 13 OF 13 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
341	2009-081TS	KANE	13	13
		CONTRACT #:	60120	
	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 = 4085.850-TR1.dwg	USER NAME =	DESIGNED - JRD	REVISED - R. MIRS 09-15-09
		DRAWN - PJS	REVISED - R. MIRS 12-11-97
	PLOT SCALE =	CHECKED - KLB	REVISED - T. RAMMACHER 02-02-99
	PLOT DATE =	DATE - 6-24-2009	REVISED - C. JUCIUS 01-31-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ARTERIAL ROAD
INFORMATION SIGN

SCALE: NONE | SHEET NO. 14 OF 14 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
341	2009-081TS	KANE	13	13A
		CONTRACT #:		60120
		ILLINOIS FED. AID PROJECT		