1-15-10 Letting, Item 018

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
852	2009-098 TS	WILL	12	1
FED. ROAD DIST. NO. _	ILLINOIS	CONTRACT NO. 60156		

D-91-071-10

INDEX OF SHEETS

STANDARDS

STANDARD 701001–02
STANDARD 701006–03
STANDARD 701011–02
STANDARD 701301–03
STANDARD 701701–06
STANDARD 701901–01
STANDARD 701201–03
STANDARD 701206–02
STANDARD 720001–01
STANDARD 814001–02
STANDARD 857001–01
STANDARD 877001–04
STANDARD 877006–03
STANDARD 878001–08
STANDARD 880006–01

PREPARED BY: Steve Travia PE 10/9/09
TRAFFIC ENGINEER DATE

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

CONTRACT NO. 60156

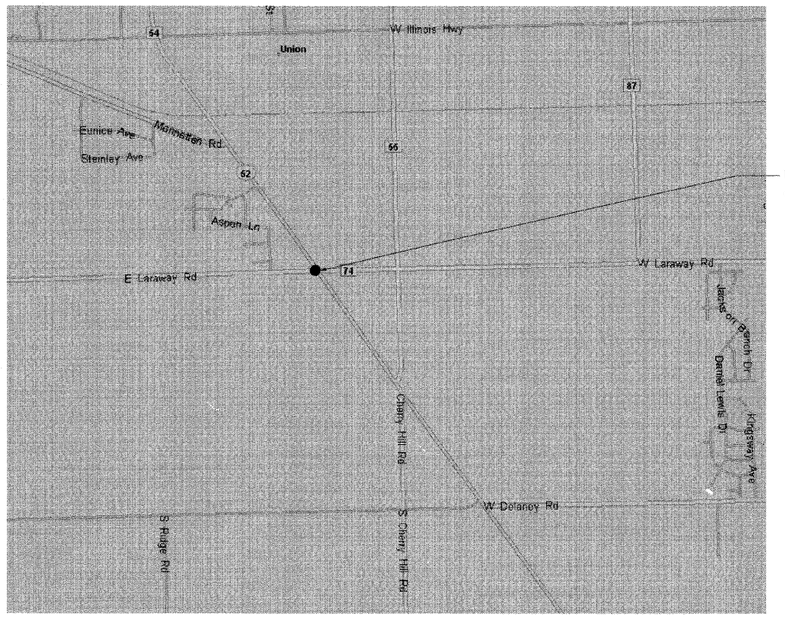
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

DISTRICT 1
HIGHWAY SAFETY IMPROVEMENT PROJECT
TRAFFIC SIGNAL INSTALLATION
FAP 852 /US. 52 (MANHATTAN RD.)
AT LARAWAY ROAD
WILL COUNTY, ILLINOIS

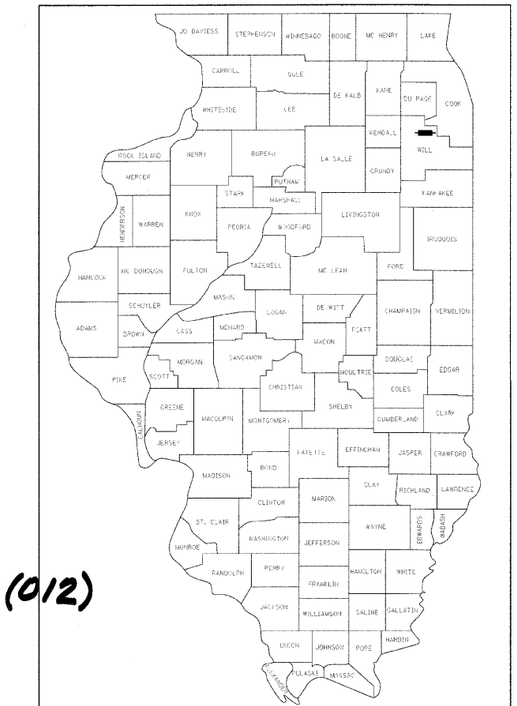
F.A.P. ROUTE 852/US 52
SECTION 2009–098 TS
~~PROJECT NO~~. C–91–071–10
WILL COUNTY

PROJECT: ACHSIP-0852(012)



US ROUTE 52 (MANHATTAN RD.) & LARAWAY ROAD

N



LOCATION OF SECTION INDICATED THUS: –

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Oct 15 20 09
Deana M. O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
December 4, 20 09
Charles J. Inguanzo PE
ENGINEER OF DESIGN AND ENVIRONMENT
December 4, 20 09
Christine M. Reed PE
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

JAMES P. STUROCK 062-051471 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

Signed James P. Sturock
JAMES P. STUROCK, P.E., IL. LIC. No. 062-051471
Expires 11-30-2009
Date 10 /16 /09

PROFESSIONAL DESIGN FIRM No. 184-002342
Expires 4-30-2011

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

REGINA WEBSTER AND ASSOC. INC.
CIVIL ENGINEERING CONSULTANTS
6160 North Cicero Avenue, Suite 500
Chicago, Illinois 60623-1369
RWA Regina Webster & Associates, Inc.
DISTRICT 1 – BUREAU OF TRAFFIC: STEPHEN TRAVIA / DARYLE DREW (847)–705–4420

SUMMARY OF QUANTITIES

URBAN
90% FED.
10% STATE

	LOCATION OF WORK				
			CONSTRUCTION CODE		Y031 1F
	SUMMARY OF QUANTITIES			GRAND	US RT 52
	CODE NO.	ITEM	UNIT	TOTAL	LARAWAY RD.
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6.0	6.00
	67100100	MOBILIZATION	L SUM	1.0	1.00
	70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1.0	1.00
	70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1.0	1.00
	70106800	CHANGEABLE MESSAGE SIGN	CAL MO	2.0	2.00
*	72000100	SIGN PANEL - TYPE I	SQ FT	34.5	34.5
*	78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	2400.0	2400.0
*	78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	260.0	260.0
*	78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	150.0	150.0
*	78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	100.0	100.0
*	78300400	THERMOPLASTIC PAVEMENT MARKING REMOVAL	SQ FT	1724.0	1724.0
	81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	856.0	856.0
	81000700	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	138.0	138.0
	81018600	CONDUIT PUSHED, 2 1/2" DIA., GALVANIZED STEEL	FOOT	86.0	86
	81018900	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	364.0	364
	81400100	HANDHOLE	EACH	7.0	7
	81400200	HEAVY-DUTY HANDHOLE	EACH	4.0	4
	81400300	DOUBLE HANDHOLE	EACH	1.0	1
	81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	994.0	994.0
	85700200	FULL - ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1.0	1
	87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	972.5	972.5
	87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1831.0	1831
	87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	3080.5	3080.5
	87301805	ELECTRIC CABLE IN CONDUIT, NO. 6 2C (SERVICE)	FOOT	59.5	59.5
	87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	2.0	2
	87700180	STEEL MAST ARM ASSEMBLY AND POLE, 28 FT.	EACH	1.0	1
	87700200	STEEL MAST ARM ASSEMBLY AND POLE, 32 FT.	EACH	1.0	1
	87700250	STEEL MAST ARM ASSEMBLY AND POLE, 42 FT.	EACH	1.0	1
	X8770216	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 14 FT. AND 55 FT.	EACH	1.0	1
	87800100	CONCRETE FOUNDATION, TYPE A	FOOT	8.0	8
	87800150	CONCRETE FOUNDATION, TYPE C	FOOT	4.0	4
	87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	30.0	30.0
	87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	32.0	32.0
	88030020	SIGNAL HEAD, L E D, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	4.0	4
	88030100	SIGNAL HEAD, L E D, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	3.0	3
	88030110	SIGNAL HEAD, L E D, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	5.0	5
	88500100	INDUCTIVE LOOP DETECTOR	EACH	10.0	10
	88600100	DETECTOR LOOP, TYPE I	FOOT	837.0	837
	88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	9.0	9
	89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1.0	1
	X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	102.8	102.8
	X8050015	SERVICE INSTALLATION-POLE MOUNTED	EACH	1.0	1
	X8620020	UNINTERRUPTABLE POWER SUPPLY	EACH	1.0	1
	X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO.6 1C	FOOT	700.0	700
	85000300	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	L SUM	1.0	1

*Specialty Items

REGINA WEBSTER AND ASSOC. INC.
CIVIL ENGINEERING CONSULTANTS
6160 North Cicero Avenue, Suite 500
Chicago, Illinois 60623-1369
RWA Regina Webster & Associates, Inc.

FILE NAME = $FILE_0	USER NAME = $USER$	DESIGNED - DW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES
		DRAWN - DW	REVISED -		
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	PLOT DATE = $DATE$	DATE - 09/01/09	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2009-098 TS	WILL	12	2
		CONTRACT NO. 60I54		
FED. ROAD DIST. NO. _	ILLINOIS FED. AID PROJECT			

REGINA WEBSTER AND ASSOC. INC.
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6160 North Cicero Avenue, Suite 500
Chicago, Illinois 60623-1369
RWA Regina Webster & Associates, Inc.

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.

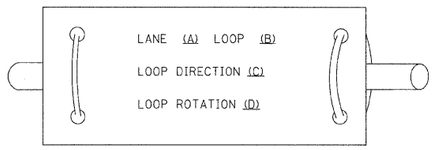
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

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

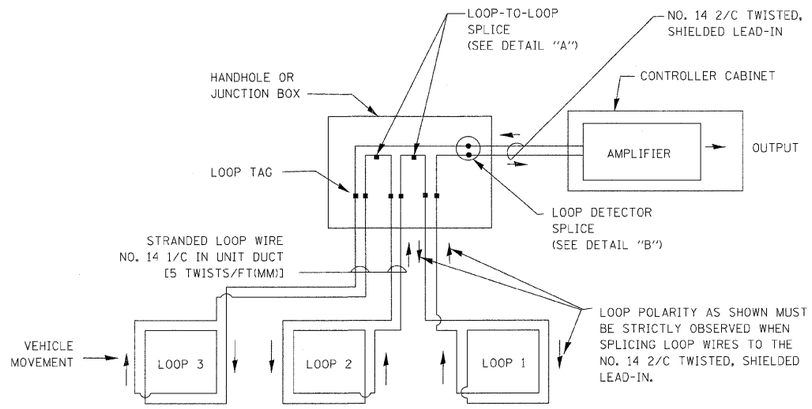
B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.

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

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

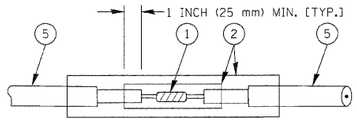
NOTE:
THE COMMONWEALTH EDISON MARKETING REPRESENTATIVE FOR THIS PROJECT IS:

NAME: AL AHERIES
TELEPHONE: (630) 691-4379

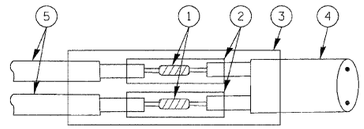


DETECTOR LOOP WIRING SCHEMATIC

- 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 = #FILE#	USER NAME = #USER#	DESIGNED - DW	REVISED -
		DRAWN - DW	REVISED -
	PLOT SCALE = #SCALE#	CHECKED - JS	REVISED -
	PLOT DATE = #DATE#	DATE - 09/01/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STANDARD TRAFFIC SIGNAL
DESIGN DETAILS – SHEET 1 OF 4

SCALE: NONE | SHEET NO. 3 OF 12 SHEETS | STA. _____ TO STA. _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2009-098 TS	WILL	12	3
		CONTRACT NO. 60154		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

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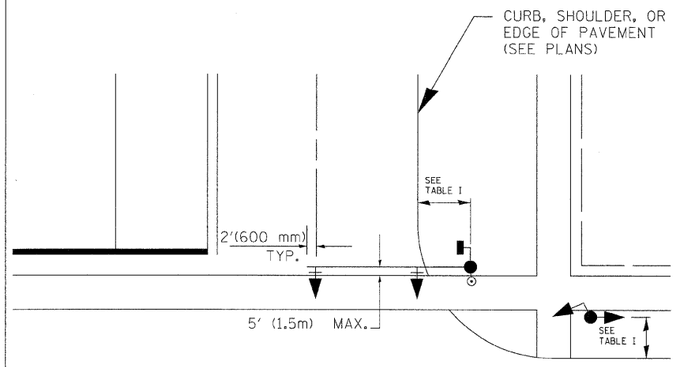
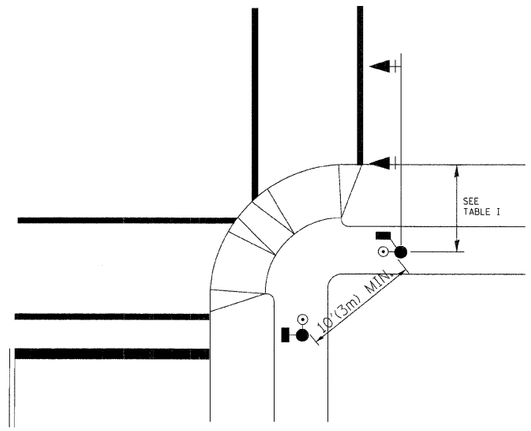
TRAFFIC SIGNAL MAST ARM AND POST

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

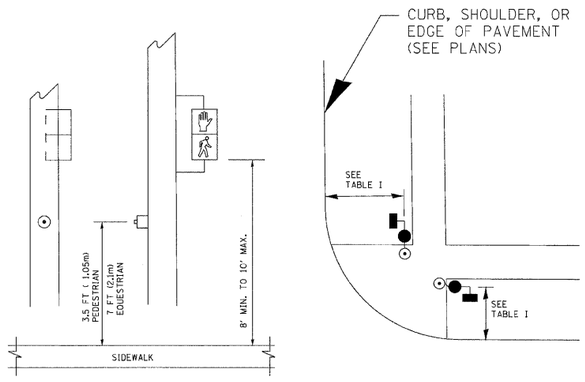


TABLE I

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 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

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

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

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED - DW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	STANDARD TRAFFIC SIGNAL DESIGN DETAILS – SHEET 2 OF 4
		DRAWN - DW	REVISED -		
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	PLOT DATE = $DATE$	DATE - 09/01/09	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2009-098 TS	WILL	12	4
		CONTRACT NO. 60154		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

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6160 North Cicero Avenue, Suite 500
Chicago, Illinois 60623-1369
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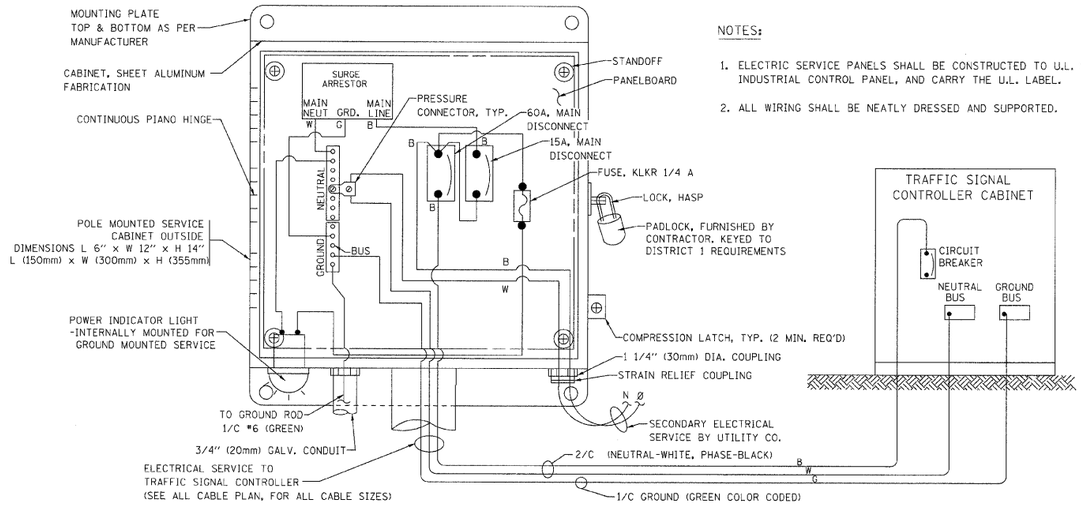


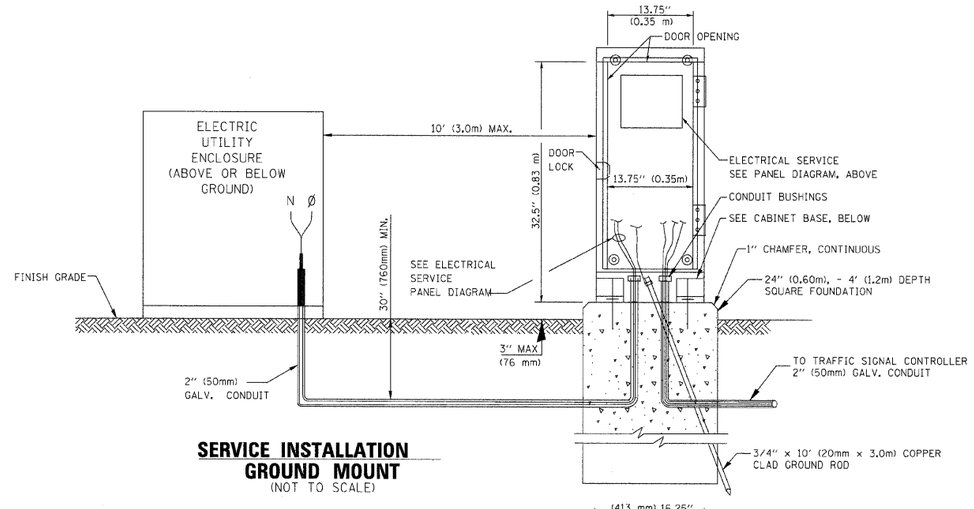
NOTES:

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)

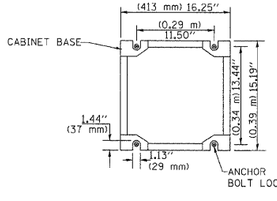
SERVICE INSTALLATION POLE MOUNT (SHOWN)

(NOT TO SCALE)



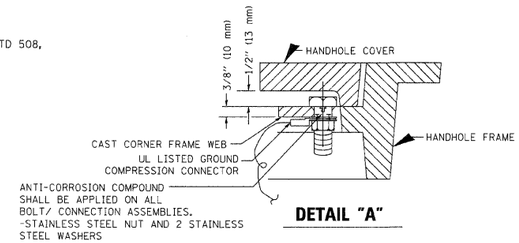
SERVICE INSTALLATION GROUND MOUNT

(NOT TO SCALE)

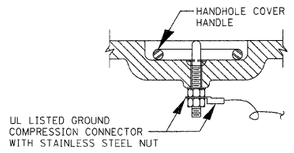


CABINET – BASE BOLT PATTERN

(NOT TO SCALE)



DETAIL "A"



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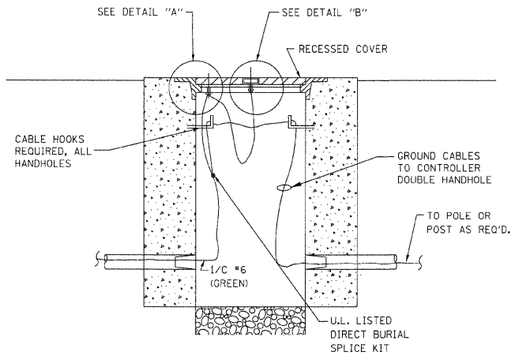
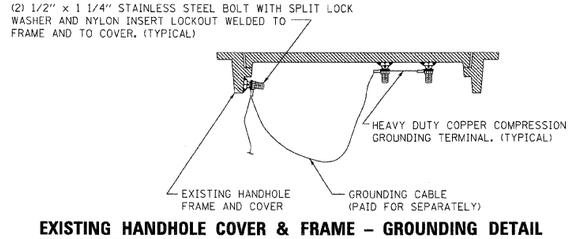


HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)



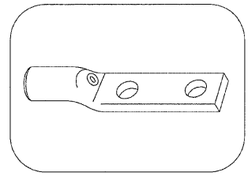
EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)

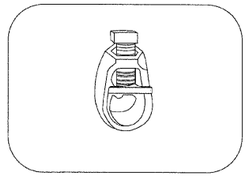
NOTES:

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, ILLINOIS DEPARTMENT 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.



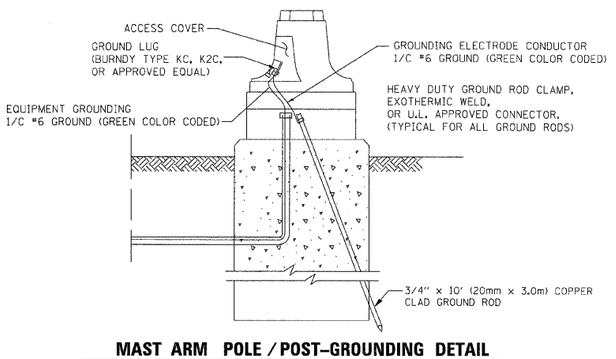
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



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 1

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 = $FILEL$	USER NAME = $USER$	DESIGNED - DW	REVISED -
		DRAWN - DW	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - JS	REVISED -
	PLOT DATE = $DATE$	DATE - 09/01/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

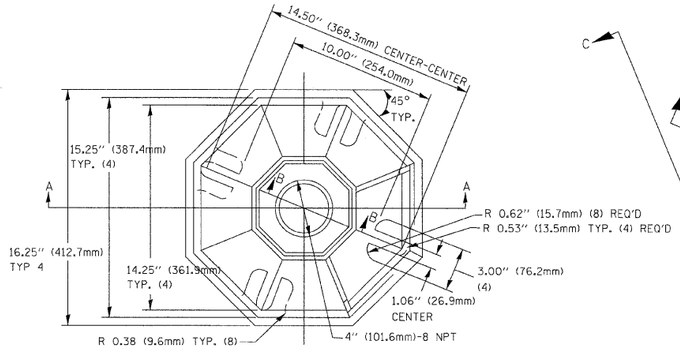
STANDARD TRAFFIC SIGNAL DESIGN DETAILS – SHEET 3 OF 4

SCALE: NONE | SHEET NO. 5 OF 12 SHEETS | STA. _____ TO STA. _____

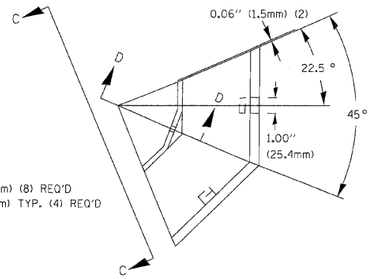
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2009-098 TS	WILL	12	5
		CONTRACT NO. 60154		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

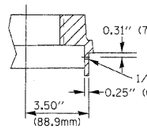
REGINA WEBSTER AND ASSOC. INC.
CIVIL ENGINEERING CONSULTANTS
6160 North Cicero Avenue, Suite 500
Chicago, Illinois 60623-1369

RWA Regina Webster & Associates, Inc.

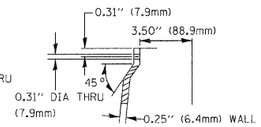


TOP VIEW

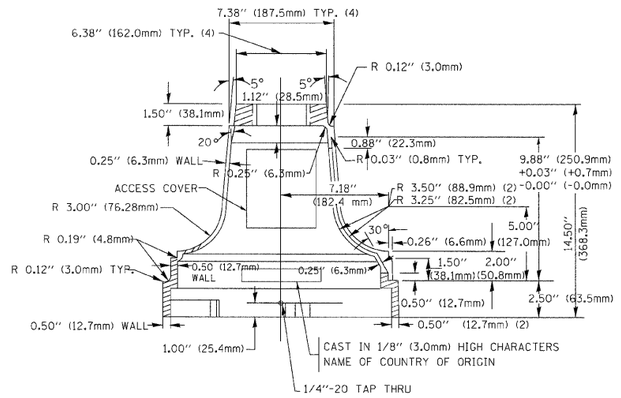




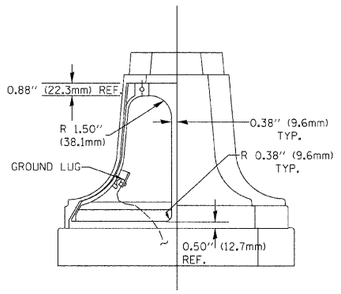
SECTION B-B



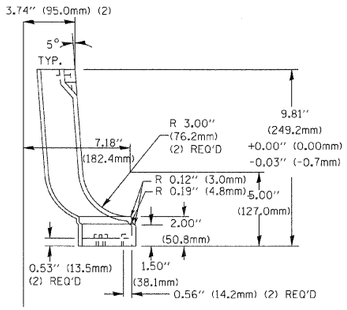
SECTION D-D



SECTION A-A

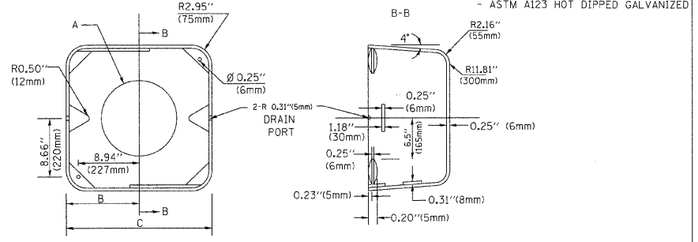


VIEW C-C



TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A

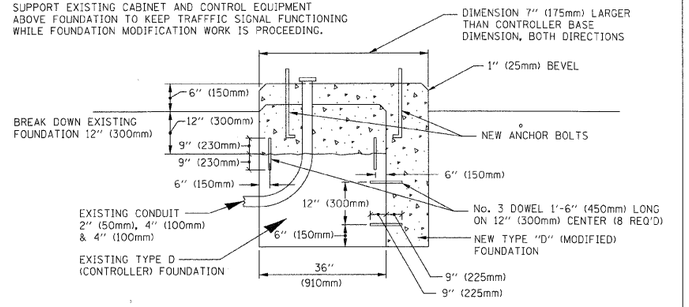
MATERIAL:
- ASTM A48 CLASS 30 GREY IRON
- ASTM A123 HOT DIPPED GALVANIZED



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

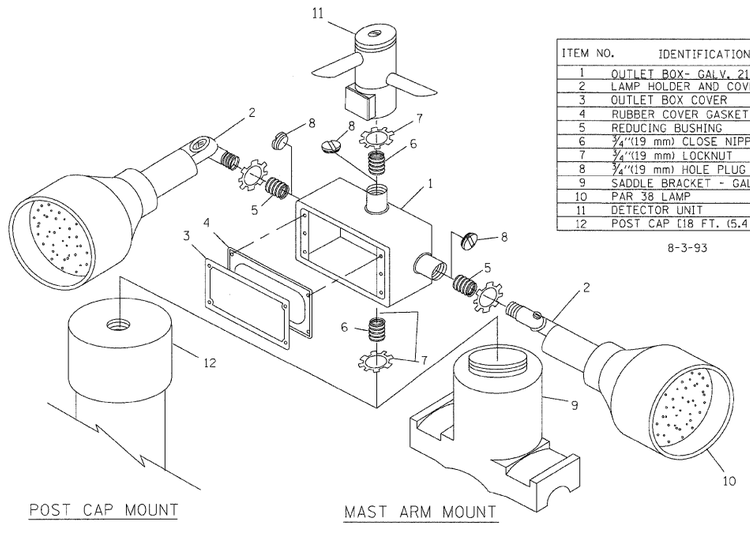
SHROUD DETAIL

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)



POST CAP MOUNT

MAST ARM MOUNT

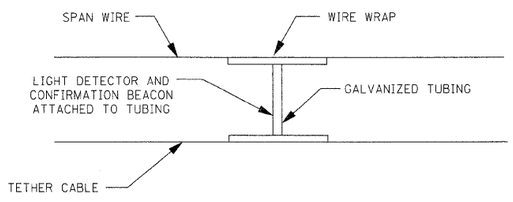
EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

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	¾"(19 mm) CLOSE NIPPLE
7	¾"(19 mm) LOCKNUT
8	¾"(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	PAR 38 LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

8-3-93

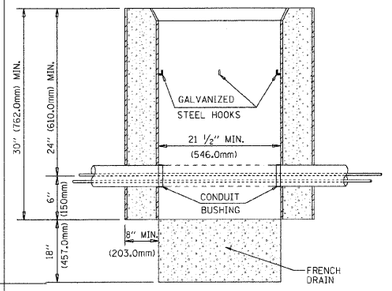
NOTES:

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 ¾"(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.

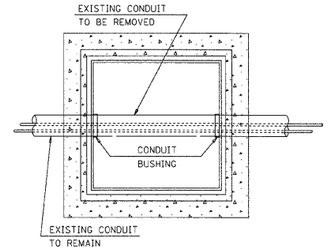


LIGHT DETECTOR AND CONFIRMATION BEACON MOUNTING FOR TEMPORARY TRAFFIC SIGNALS

(NOT TO SCALE)



ELEVATION



PLAN

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 1

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 = $FILE1$	USER NAME = $USER$	DESIGNED - DW	REVISED -
		DRAWN - DW	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - JS	REVISED -
	PLOT DATE = $DATE$	DATE - 09/01/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STANDARD TRAFFIC SIGNAL DESIGN DETAILS – SHEET 4 OF 4

SCALE: NONE | SHEET NO. 6 OF 12 SHEETS | STA. _____ TO STA. _____

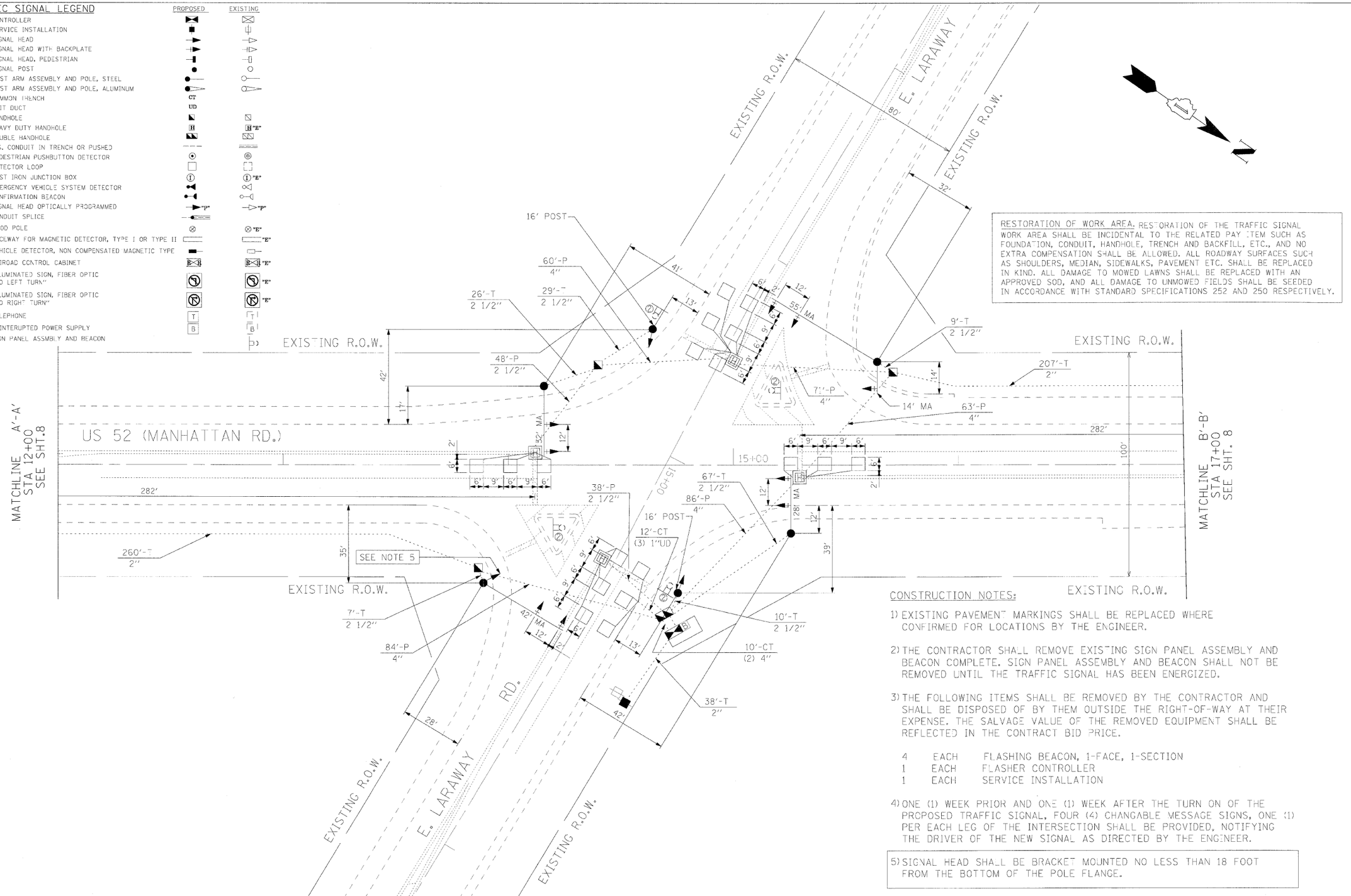
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2009-098 TS	WILL	12	6
		CONTRACT NO. 60154		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

REGINA WEBSTER AND ASSOC. INC.
CIVIL ENGINEERING CONSULTANTS
6160 North Cicero Avenue, Suite 500
Chicago, Illinois 60625-1569

RMA Regina Webster & Associates, Inc.

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER	⋈	⋈
SERVICE INSTALLATION	■	⊔
SIGNAL HEAD	→	→
SIGNAL HEAD WITH BACKPLATE	→	→
SIGNAL HEAD, PEDESTRIAN	⊣	⊣
SIGNAL POST	●	○
MAST ARM ASSEMBLY AND POLE, STEEL	●—	○—
MAST ARM ASSEMBLY AND POLE, ALUMINUM	●—	○—
COMMON TRENCH	CT	
UNIT DUCT	UD	
HANDHOLE	◪	⊠
HEAVY DUTY HANDHOLE	H	H "E"
DOUBLE HANDHOLE	◪	⊠
G.S. CONDUIT IN TRENCH OR PUSHED		
PEDESTRIAN PUSHBUTTON DETECTOR	⊙	◎
DETECTOR LOOP	□	⬚
CAST IRON JUNCTION BOX	Ⓘ	Ⓘ "E"
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	R	R "E"
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		"E"
TELEPHONE	T	T
UNINTERUPTED POWER SUPPLY	B	B
SIGN PANEL ASSMBLY AND BEACON		



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

CONSTRUCTION NOTES:

1) EXISTING PAVEMENT MARKINGS SHALL BE REPLACED WHERE CONFIRMED FOR LOCATIONS BY THE ENGINEER.

2) THE CONTRACTOR SHALL REMOVE EXISTING SIGN PANEL ASSEMBLY AND BEACON COMPLETE. SIGN PANEL ASSEMBLY AND BEACON SHALL NOT BE REMOVED UNTIL THE TRAFFIC SIGNAL HAS BEEN ENERGIZED.

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

4	EACH	FLASHING BEACON, 1-FACE, 1-SECTION
1	EACH	FLASHER CONTROLLER
1	EACH	SERVICE INSTALLATION

4) ONE (1) WEEK PRIOR AND ONE (1) WEEK AFTER THE TURN ON OF THE PROPOSED TRAFFIC SIGNAL, FOUR (4) CHANGABLE MESSAGE SIGNS, ONE (1) PER EACH LEG OF THE INTERSECTION SHALL BE PROVIDED, NOTIFYING THE DRIVER OF THE NEW SIGNAL AS DIRECTED BY THE ENGINEER.

5) SIGNAL HEAD SHALL BE BRACKET MOUNTED NO LESS THAN 18 FOOT FROM THE BOTTOM OF THE POLE FLANGE.

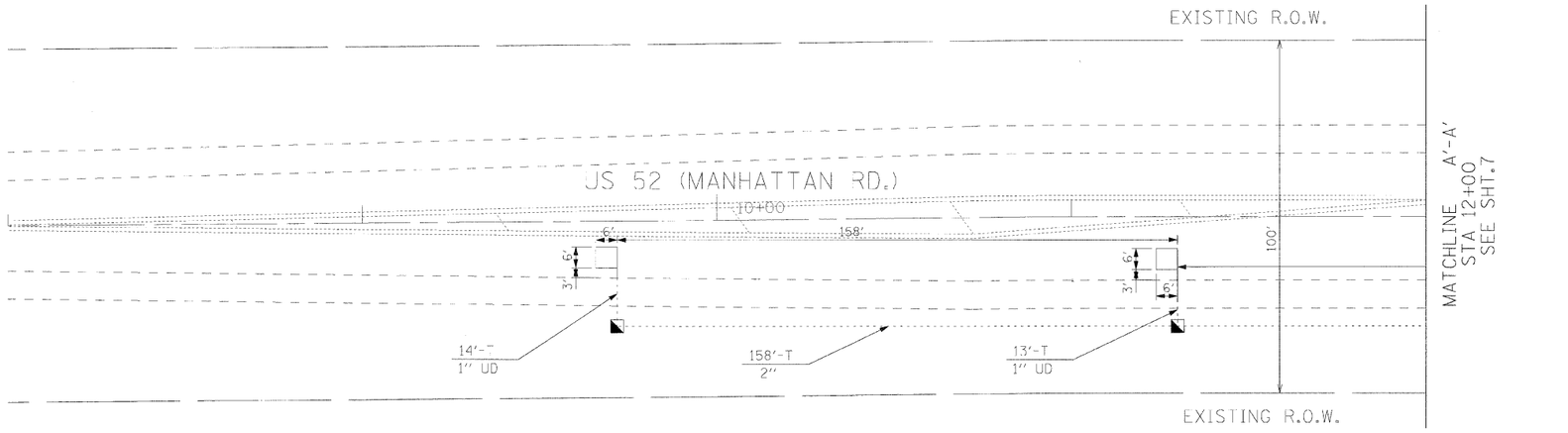
FILE NAME = $FILE$	USER NAME = $USER$	DESIGNED - DW	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**US ROUTE 52 (MANHATTAN ROAD) AND LARAWAY ROAD TRAFFIC SIGNAL INSTALLATION PLAN**
		DRAWN - DW	REVISED -		
	PLOT SCALE = $SCALE$	CHECKED - JS	REVISED -		SCALE: 1"=20' SHEET NO. 7 OF 12 SHEETS STA. TO STA.
	PLOT DATE = $DATE$	DATE - 09/01/09	REVISED -		

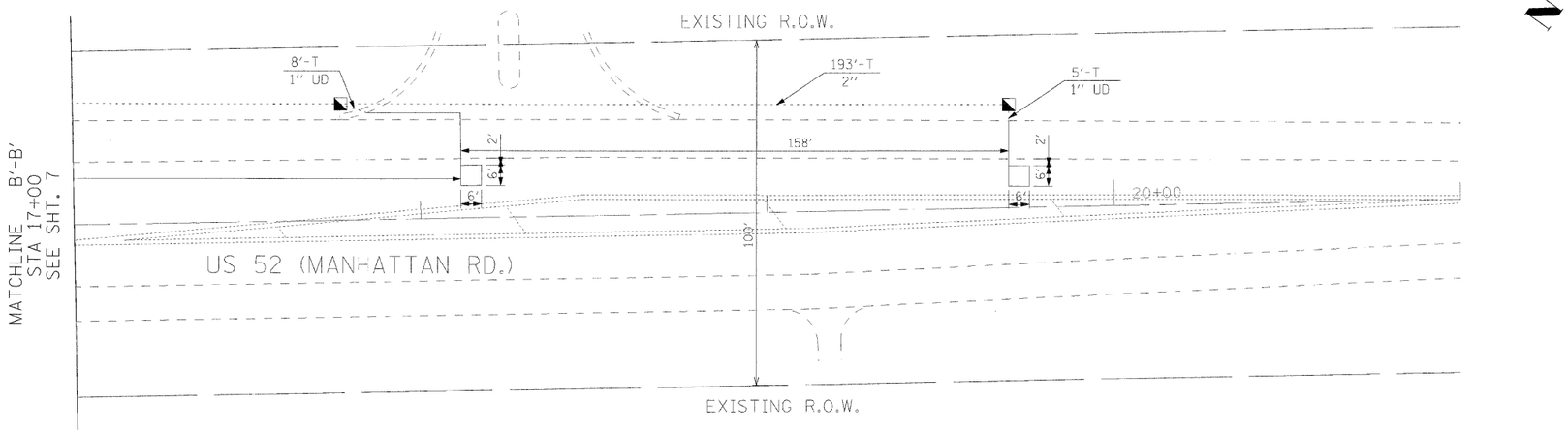
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2009-098 TS	WILL	12	7
		CONTRACT NO. 60154		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD, PEDESTRIAN		
SIGNAL POST		
MAST ARM ASSEMBLY AND POLE, STEEL		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMMON TRENCH	CT	
UNIT DUCT	UD	
HANDHOLE		
HEAVY DUTY HANDHOLE	H	H "E"
DOUBLE HANDHOLE		
G.S. CONDUIT IN TRENCH OR PUSHED		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX	I	I "E"
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	R	R "E"
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		"E"
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		"E"
TELEPHONE	T	T
UNINTERUPTED POWER SUPPLY	B	B

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





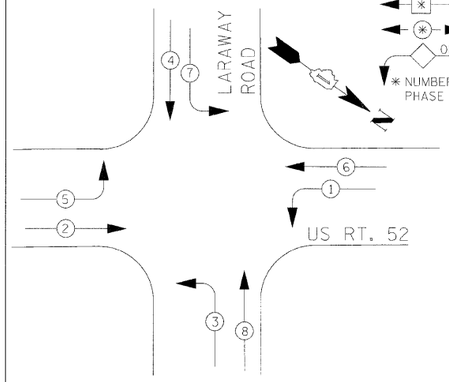
REGINA WEBSTER AND ASSOC. INC.
CIVIL ENGINEERING CONSULTANTS
6160 North Cicero Avenue, Suite 500
Chicago, Illinois 60623-1369
RWA Regina Webster & Associates, Inc.

FILE NAME = $FILE_$	USER NAME = $USER$	DESIGNED - DW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	US ROUTE 52 (MANHATTAN ROAD) AND LARAWAY ROAD TRAFFIC SIGNAL INSTALLATION PLAN
		DRAWN - DW	REVISED -		
	PLOT SCALE = $SCALE$	CHECKED - JS	REVISED -		
	PLOT DATE = $DATE$	DATE - 09/01/09	REVISED -		SCALE: 1"=20' SHEET NO. 8 OF 12 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2009-098 TS	WILL	12	8
		CONTRACT NO. 60154		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

REGINA WEBSTER AND ASSOC. INC.
CIVIL ENGINEERING CONSULTANTS
6160 North Cicero Avenue, Suite 500
Chicago, Illinois 60623-1369
RWA Regina Webster & Associates, Inc.

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

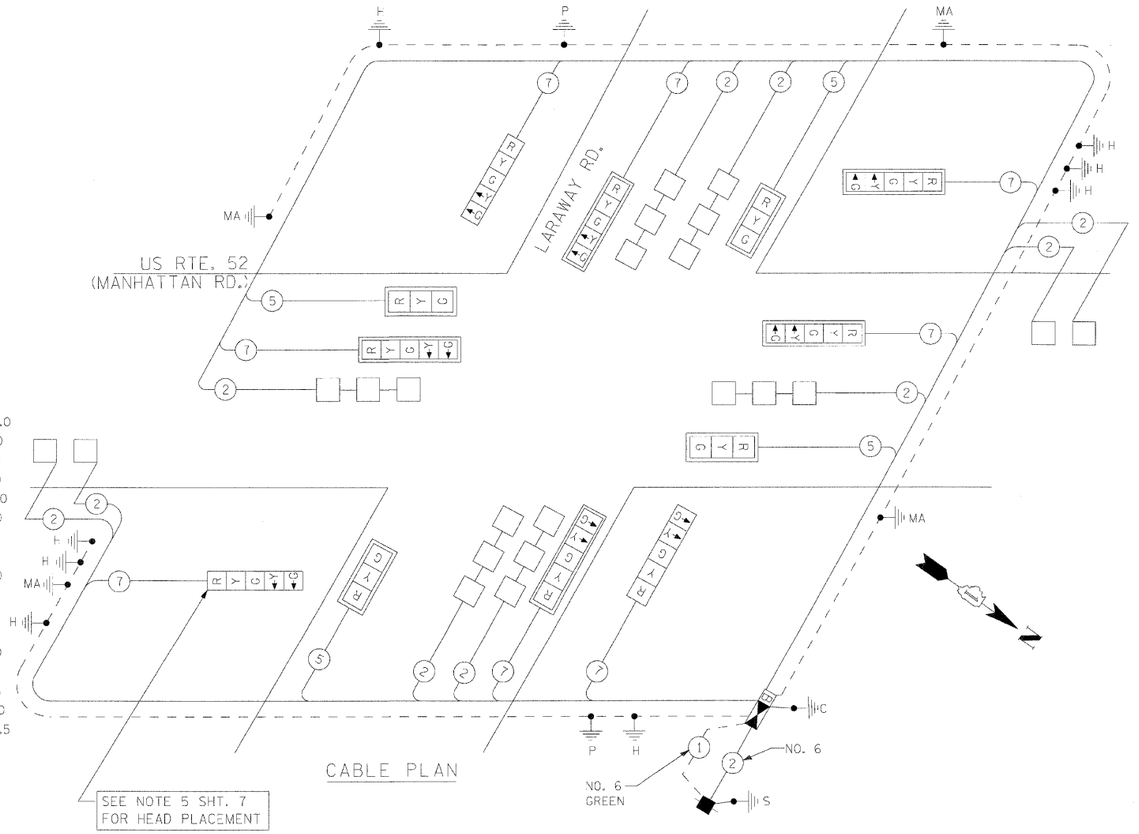
NOT TO SCALE

LEGEND

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

SCHEDULE OF QUANTITIES

ITEM	UNIT	
ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6.0
MOBILIZATION	L SUM	1.0
TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1.0
TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1.0
CHANGEABLE MESSAGE SIGN	CAL MO	2.0
SIGN PANEL - TYPE 1	SQ FT	34.5
THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	2400.0
THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	260.0
THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	150.0
THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	100.0
THERMOPLASTIC PAVEMENT MARKING REMOVAL	SQ FT	1724.0
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	856.0
CONDUIT IN TRENCH, 2½" DIA., GALVANIZED STEEL	FOOT	138.0
CONDUIT PUSHED, 2½" DIA., GALVANIZED STEEL	FOOT	86.0
CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	364.0
HANDHOLE	EACH	7.0
HEAVY-DUTY HANDHOLE	EACH	4.0
DOUBLE HANDHOLE	EACH	1.0
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	994.0
FULLY ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1.0
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	972.5
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1831.0
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	3080.5
ELECTRIC CABLE IN CONDUIT, NO. 6 2C	FOOT	59.5
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	2.0
STEEL MAST ARM ASSEMBLY AND POLE, 28 FT.	EACH	1.0
STEEL MAST ARM ASSEMBLY AND POLE, 32 FT.	EACH	1.0
STEEL MAST ARM ASSEMBLY AND POLE, 42 FT.	EACH	1.0
STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL VAST ARMS, 14 FT. AND 55 FT.	EACH	1.0
CONCRETE FOUNDATION, TYPE A	FOOT	8.0
CONCRETE FOUNDATION, TYPE C	FOOT	4.0
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	30.0
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	32.0
SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	4.0
SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	3.0
SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	5.0
INDUCTIVE LOOP DETECTOR	EACH	10.0
DETECTOR LOOP, TYPE I	FOOT	837.0
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	9.0
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1.0
TEMPORARY INFORMATION SIGNING	SQ FT	102.8
SERVICE INSTALLATION, POLE MOUNT	EACH	1.0
UNINTERRUPTABLE POWER SUPPLY (UPS)	EACH	1.0
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO.6 1C	FOOT	700.0
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	L SUM	1.0



CABLE PLAN

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

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATIONS	TOTAL WATTAGE
SIGNAL (RED)	12	135	17	0.50	102
(YELLOW)	12	135	25	0.25	75
(GREEN)	12	135	15	0.25	45
ARROW	16	135	12	0.10	19.2
PED. SIGNAL	0	90	25	1.00	0
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN	0	252	25	0.05	0
VIDEO SYSTEM	0	150		1.00	0
FLASHER LED					
				TOTAL =	341.2

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1
201 WEST CENTER COURT
SCHAMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT MARK ANDERSON
PHONE 1-815-724-5988
COMPANY COMED

FOUNDATION DEPTH	DEPTH (FT.)	CABLE SLACK	(FT.)	VERTICAL	(FT.)
TYPE A - POST	4	HANDHOLE	6.5	ALL FOUNDATIONS	3.5
D - CONTOLLER	4	DOUBLE HANDHOLE	13	MAST ARM (L) POLE	=20'+L-2
E - MAST ARM POLE		SIGNAL POST	2	BRACKET MOUNTED	13
30"	15	CONTOLLER CAB.	1	PED. PUSHBUTTON	4
36"	15	FIBER OPTIC	13	ELECTRICAL SERVICE	13.5
42"	25	ELECTRICAL SERVICE	1	SERVICE TO GROUND	13.5
		GROUND CABLE	1	POSTMOUNTED	6

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
		12" (300mm) PEDESTRIAN SIGNAL SECTION
C D	C D	12" (300mm) PEDESTRIAN SIGNAL SECTION W/ COUNTDOWN TIMER
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
(2)	(2)	DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.

EXISTING	PROPOSED	
R Y G ◄Y ◄G	R Y G ◄Y ◄G	SIGNAL FACE WITH BACKPLATE. " P" INDICATES PROGRAMMED HEAD
"P"	"P"	
"E" R R	R R	RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P/MA	P/MA	GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
1	1	GROUND CABLE IN CONDUIT, NO.6 SOLID COPPER (GREEN)
24	24	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 2-MM12F & SM12F
B	B	UNINTERRUPTED POWER SUPPLY

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED - DW	REVISED -
		DRAWN - DW	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - JS	REVISED -
	PLOT DATE = $DATE$	DATE - 09/01/09	REVISED -

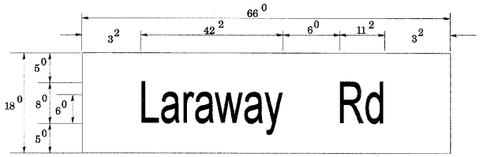
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

US ROUTE 52 (MANHATTAN RD.) AND LARAWAY RD. – SCHEDULE OF QUANTITIES, CABLE PLAN & PHASE DESIGNATION DIAGRAM

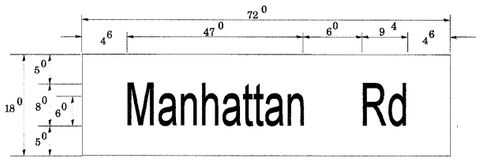
SCALE: NONE | SHEET NO. 9 OF 12 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2009-098 TS	WILL	12	9
		CONTRACT NO. 60154		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PANEL SIGN DESIGN TYPE 1



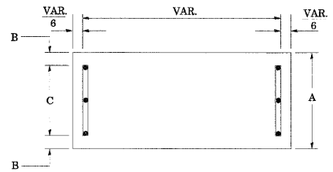
Sq. M. each
8.25 Sq. Ft. each
2 Required
Design Series D



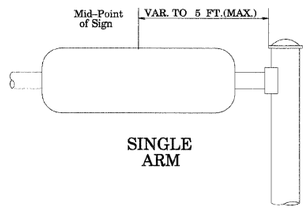
Sq. M. each
9 Sq. Ft. each
2 Required
Design Series C

NOTE: SIGN DIMENSIONS ARE IN ENGLISH UNITS

SUPPORTING CHANNELS

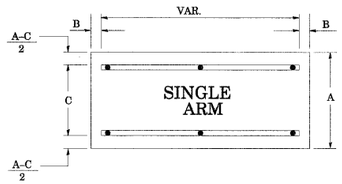


A	B	C
18"	2"	14"

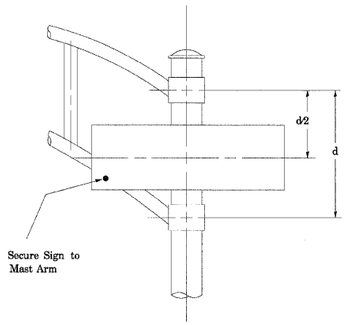


SINGLE ARM

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 1/4 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.

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

EXAMPLE, 2 (3) DENOTES 3"/8

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

NUMBERS	6 INCH SERIES C	D	8 INCH SERIES C	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.	1190
	698
CADD	1000

ILLINOIS DEPARTMENT OF TRANSPORTATION

MAST ARM MOUNTED STREET NAME SIGNS

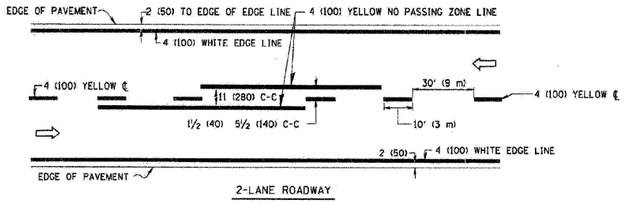
SCALE: VERT. NONE HORIZ.
DATE 1-01-02

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

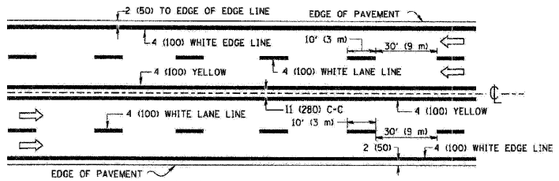
REGINA WEBSTER AND ASSOC. INC.
CIVIL ENGINEERING CONSULTANTS
6160 North Cicero Avenue, Suite 500
Chicago, Illinois 60623-1369
RWA Regina Webster & Associates, Inc.

FILE NAME = $FILE$	USER NAME = $USER$	DESIGNED - DW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MAST ARM MOUNTED STREET NAME SIGNS
		DRAWN - DW	REVISED -		
	PLOT SCALE = $SCALE$	CHECKED - JS	REVISED -		SCALE: NONE SHEET NO. 10 OF 12 SHEETS STA. _____ TO STA. _____
	PLOT DATE = $DATE$	DATE - 09/01/09	REVISED -		

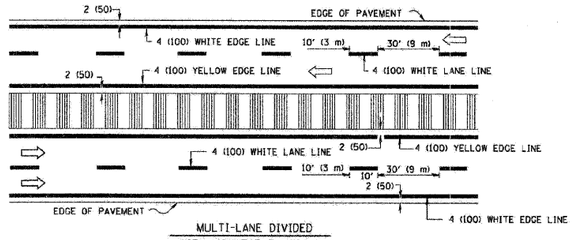
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2009-098 TS	WILL	12	10
		CONTRACT NO. 60154		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



2-LANE ROADWAY



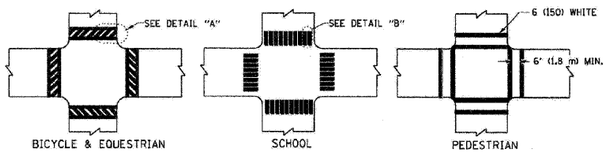
MULTI-LANE UNDIVIDED

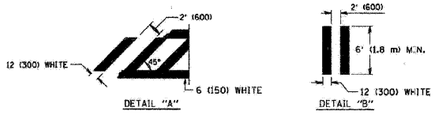


MULTI-LANE DIVIDED
WITH MOUNTABLE MEDIAN

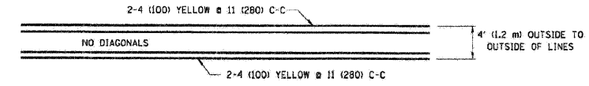
NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING

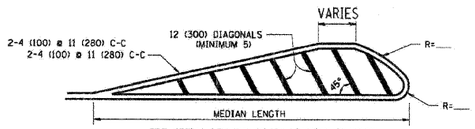




TYPICAL CROSSWALK MARKING



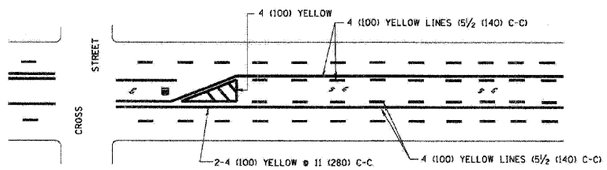
4' (1.2 m) WIDE MEDIANS ONLY



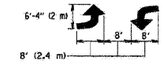
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h))
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

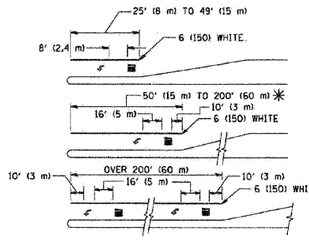


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

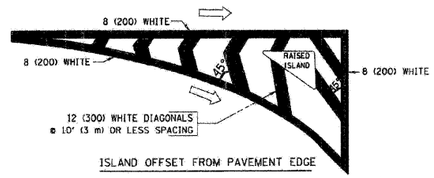


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
↰ AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)

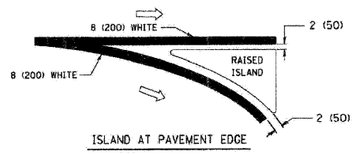
* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



ISLAND OFFSET FROM PAVEMENT EDGE



ISLAND AT PAVEMENT EDGE

TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5½ (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m²) EACH "X"=54.0 SQ. FT. (5.0 m²)
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

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

REVISIONS NAME	DATE
EVERS	03-19-90
T. RAMMACHER	10-27-94
ALEX HOUSEH	10-09-96
ALEX HOUSEH	10-17-96
T. RAMMACHER	01-06-00

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

SCALE: NONE — DRAWN BY CADD — CHECKED BY

TC-13

REGINA WEBSTER AND ASSOC. INC.
CIVIL ENGINEERING CONSULTANTS
6160 North Cicero Avenue, Suite 500
Chicago, Illinois 60623-1369
RWA Regina Webster & Associates, Inc.

PLOT DATE = 3/6/2007
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USER NAME = tdpsnsh

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		DRAWN - DW	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

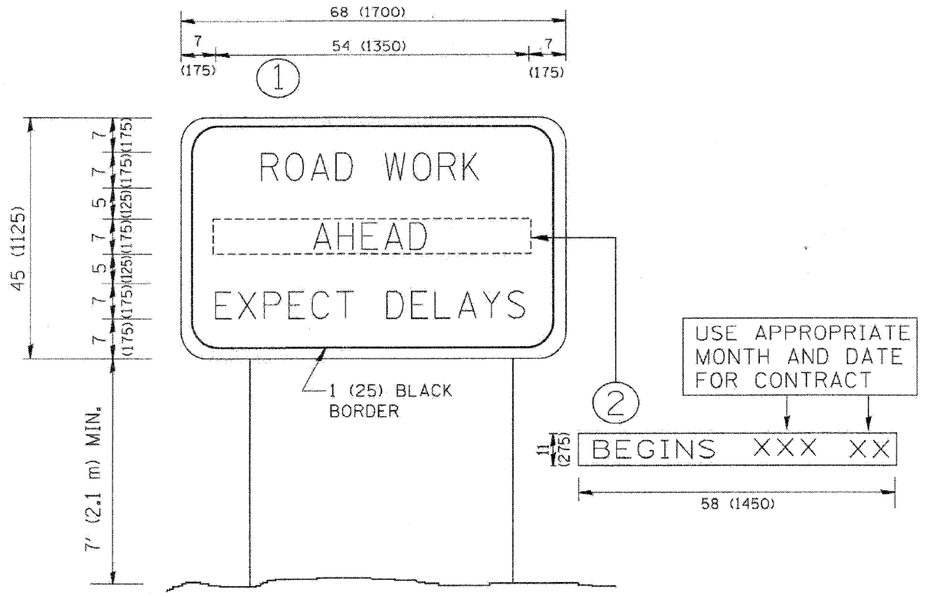
DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

SCALE: NONE | SHEET NO. 11 OF 12 SHEETS | STA. _____ TO STA. _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR.	2009-098 TS	WILL	12	11
		CONTRACT NO. 60154		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

REGINA WEBSTER
AND ASSOC. INC.
CIVIL ENGINEERING CONSULTANTS
6160 North Cicero Avenue, Suite 500
Chicago, Illinois 60623-1363

RWA Regina Webster & Associates, Inc.



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.

REVISIONS	
NAME	DATE
R. MIRS	9-15-97
R. MIRS	12-11-97
T. RAMMACHER	2-2-99
C. JUCIUS	1-31-07

ILLINOIS DEPARTMENT OF TRANSPORTATION

ARTERIAL ROAD
INFORMATION SIGN

SCALE: NONE

DRAWN BY DESIGN
CHECKED BY
TC22

PLOT DATE = 2/8/2007
FILE NAME = c:\projects\tc22.dgn
PLOT SCALE = 50.0000 ' / IN.
USER NAME = beuerrd

FILE NAME = $FILE1$	USER NAME = $USER$	DESIGNED - DW	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ARTERIAL ROAD INFORMATION SIGN	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - DW	REVISED -			VAR.	2009-098 TS	WILL	12	12
	PLOT SCALE = $SCALE$	CHECKED - JS	REVISED -					CONTRACT NO. 60154		
	PLOT DATE = $DATE$	DATE - 09/01/09	REVISED -		SCALE: NONE SHEET NO. 12 OF 12 SHEETS STA. _____ TO STA. _____	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		