

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED FEDERAL AID HIGHWAY
CH 77 (KIRK ROAD) AT ILLINOIS PRAIRIE PATH
FLASHING WARNING BEACONS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	13-00430-00-SP	KANE	15	1
		ILLINOIS	CONTRACT NO. 61A10	

INDEX OF SHEETS

1. COVER SHEET
2. GENERAL NOTES/SUMMARY OF QUANTITIES
3. TYPICAL SECTIONS
4. PLAN SHEET
5. PAVEMENT MARKING AND ALIGNMENT PLAN
6. SIGNING PLAN
7. CABLE PLAN
- 8.-15. IDOT DISTRICT 1 STANDARDS

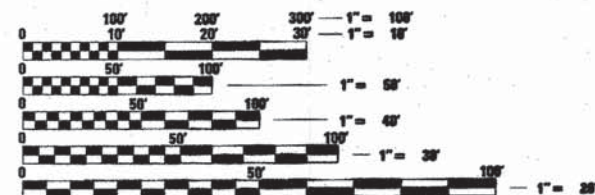
DISTRICT 1 STANDARDS

- TC-13 DISTRICT ONE TYPICAL PAVEMENT MARKINGS
 TS-05 STANDARD TRAFFIC SIGNAL DESIGN DETAILS (7 SHEETS)

STATE STANDARDS

- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS (8 SHEETS)
 424016-01 MID-BLOCK CURB RAMPS FOR SIDEWALKS
 701421-06 LANE CLOSURE, MULTILANE, DAY OPERATIONS ONLY, FOR SPEEDS ≥ 45 MPH TO 55 MPH
 701801-05 SIDEWALK, CORNER OR CROSSWALK CLOSURE (2 SHEETS)
 701901-03 TRAFFIC CONTROL DEVICES (3 SHEETS)
 720001-01 SIGN PANEL MOUNTING DETAILS
 720006-04 SIGN PANEL ERECTION DETAILS
 728001-01 TELESCOPING STEEL SIGN SUPPORT
 780001-04 TYPICAL PAVEMENT MARKINGS (2 SHEETS)
 805001-01 ELECTRICAL SERVICE INSTALLATION DETAILS
 836001-02 LIGHT POLE FOUNDATION

KIRK ROAD DESIGN DESIGNATION
 OTHER PRINCIPAL ARTERIAL
 SPEED LIMIT = 45 MPH
 TRAFFIC = 26,200 ADT



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

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

PROJECT ENGINEER: KURT BIALOBRESKI, P.E. PTOE
PROJECT MANAGER: JOHN NELSON, P.E.

CONTRACT NO. 61A10

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SECTION 13-00430-00-SP
PROJECT NO. TE-00D1(948)
KANE COUNTY
C-91-072-14

PROJECT IS LOCATED IN THE CITY OF GENEVA



PROJECT BEGINS STA. 11+06.68

PROJECT ENDS STA. 12+03.37

GENEVA TOWNSHIP
 GROSS LENGTH = 430 FEET (0.08 MILE)
 NET LENGTH = 430 FEET (0.08 MILE)

DATE SIGNED: 8-15-2014
 LIC. EXP. DATE: 11/30/2015



PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

Approved:
 8-15-14
 Kane County, County Engineer

Passed: August 28, 2014

 District 1 Engineer of Local Roads & Streets

Releasing for Bid Based on Limited Review: August 28, 2014

 Deputy Director of Highways, Region 1 Engineer

DATE: 07/30/14

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HANSON
 Hanson Professional Services Inc.
 815 Commerce Dr., Suite 200
 Oakbrook, Illinois 60523
 Offices Nationwide

PROGRAM AND OFFICE ENGINEER: CHARLES F. RIDDLE, P.E. 847-705-4406

GENERAL NOTES

1. THE CONSTRUCTION SHALL BE GOVERNED BY THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN ILLINOIS", 2012 EDITION AND "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS", 2014 EDITION.
2. WHERE SECTION, SUB-SECTION, SUBDIVISION, OR PROPERTY MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND PRESERVE ALL PROPERTY MARKERS UNTIL AN OWNER OR AUTHORIZED SURVEYOR HAS WITNESSED OR REFERENCED THEIR LOCATION.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING UNDERGROUND UTILITIES PRIOR TO EXCAVATION.
4. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCY IMMEDIATELY.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRS TO ANY UTILITY LINES AND EXISTING FACILITIES TO REMAIN THAT ARE DAMAGED AS A RESULT OF THE WORK.
6. ALL SECTIONS, DETAILS AND NOTES SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS ELSEWHERE, UNLESS OTHERWISE SHOWN.
7. ALL PAVEMENT REMOVALS SHALL BE FULL DEPTH SAW CUT AT THE LIMITS TO BE REMOVED. SAW CUTTING TO BE INCLUDED IN COST OF THE ITEM BEING REMOVED.
8. AS NECESSARY, THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL BE REQUIRED AS DIRECTED BY THE ENGINEER TO RELOCATE OR TO REMOVE AND REINSTALL ALL ROAD SIGNS WHICH INTERFERE WITH CONSTRUCTION OPERATIONS AND TO TEMPORARILY RESET ALL SUCH SIGNS DURING CONSTRUCTION, IN ACCORDANCE WITH ARTICLE 107.25.

ALL WORK INVOLVING SIGNS SHALL BE GOVERNED BY THE FOLLOWING REQUIREMENTS:
A. SIGNS SHALL NOT BE MOVED UNTIL PROGRESS OF WORK DEMANDS.
B. EVERY SIGN REMOVED MUST BE RE-ERECTED AT A TEMPORARY LOCATION IN A WORKMANLIKE MANNER AND BE VISIBLE TO ROADWAY TRAFFIC. ALL SUCH SIGNS MUST BE MAINTAINED STRAIGHT AND NEAT FOR THE DURATION OF THE TEMPORARY SETTING.
9. ACCESS SHALL BE MAINTAINED TO ALL PROPERTIES DURING ALL STAGES OF CONSTRUCTION.
10. MAINTENANCE OF TRAFFIC SHALL BE COMPLETED IN ACCORDANCE WITH STATE STANDARDS 701421, 701801 AND 701901 AS APPLICABLE AND AS DIRECTED BY THE ENGINEER.
11. DURING THE CONSTRUCTION, THE CONTRACTOR SHALL KEEP THE SITE OF THE WORK AND ADJACENT PREMISES FREE FROM MATERIAL, DEBRIS, DUST AND RUBBISH AND SHALL REMOVE ENTIRELY AND AT ONCE, IF, IN THE OPINION OF THE ENGINEER, SUCH MATERIAL, DEBRIS, DUST, OR RUBBISH CONSTITUTES A NUISANCE, A SAFETY HAZARD OR IS OBJECTIONABLE TO THE PUBLIC. THE CONTRACTOR SHALL CONTROL DUST ON THE SITE BY SPRAYING WATER OR BY OTHER MEANS SATISFACTORY TO THE ENGINEER. THIS WORK WILL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE VARIOUS CONTRACT PAY ITEMS.

UPON COMPLETION AND BEFORE FINAL ACCEPTANCE OF THE WORK, THE CONTRACTOR SHALL REMOVE FROM THE SITE OF THE WORK AND ADJACENT PREMISES ALL MACHINERY, EQUIPMENT, SURPLUS MATERIAL, FALSE WORK, EXCAVATED AND USELESS MATERIALS, RUBBISH, TEMPORARY BUILDINGS, BARRICADES AND SIGNS, AND SHALL RESTORE THE SITE TO THE SAME OR BETTER GENERAL CONDITION THAT EXISTED PRIOR TO THE COMMENCEMENT OF HIS OPERATIONS.

CLEAN UP WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE VARIOUS CONTRACT PAY ITEMS.
12. THE LOCATIONS FOR HANDHOLES, POLES, SIGNS, CABINETS, AND PUSH BUTTONS ARE PROVIDED FOR REFERENCE ONLY. THE ENGINEER SHALL BE NOTIFIED FOR LOCATION VERIFICATION BEFORE INSTALLATION.

UTILITY NOTE

THE LOCATIONS OF THOSE BURIED AND ABOVEGROUND UTILITIES SHOWN ARE APPROXIMATE, ARE SHOWN FOR CONTRACTOR INFORMATIONAL USE ONLY, AND ARE NOT TO BE REFERENCED FOR CONSTRUCTION PURPOSES. THE IMPLIED PRESENCE OR ABSENCE OF UTILITIES IS NOT TO BE CONSTRUED BY THE OWNER, ENGINEER, CONTRACTOR, OR SUBCONTRACTORS TO BE AN ACCURATE AND COMPLETE REPRESENTATION OF UTILITIES THAT MAY OR MAY NOT EXIST ON THE CONSTRUCTION SITE. BURIED AND ABOVEGROUND UTILITY LOCATION, IDENTIFICATION, AND MARKING ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. REROUTING, DISCONNECTION, PROTECTION, ETC. OF ANY UTILITIES MUST BE COORDINATED AMONG THE CONTRACTOR, UTILITY COMPANY, AND OWNER. SITE SAFETY, INCLUDING THE AVOIDANCE OF HAZARDS, ASSOCIATED WITH BURIED AND ABOVEGROUND UTILITIES REMAIN THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY
			002g
* 40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	2
* 42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	241
* 42400800	DETECTABLE WARNINGS	SQ FT	80
* 44000157	HOT-MIX ASPHALT SURFACE REMOVAL, 2"	SQ YD	14
* 44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	24
* 44000600	SIDEWALK REMOVAL	SQ FT	241
67100100	MOBILIZATION	L SUM	1
70100310	TRAFFIC CONTROL AND PROTECTION, STANDARD 701421	L SUM	1
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1
72000100	SIGN PANEL - TYPE 1	SQ FT	108
72800100	TELESCOPING STEEL SIGN SUPPORT	FOOT	111
* 78009000	MODIFIED URETHANE PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	474
* 78009006	MODIFIED URETHANE PAVEMENT MARKING - LINE 6"	FOOT	137
* 78009012	MODIFIED URETHANE PAVEMENT MARKING - LINE 12"	FOOT	208
* 78300100	PAVEMENT MARKING REMOVAL	SQ FT	220
80400200	ELECTRIC UTILITY SERVICE CONNECTION	L SUM	1
80500100	SERVICE INSTALLATION, TYPE A	EACH	1
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	109
81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	244
81400100	HANDHOLE	EACH	1
83600352	LIGHT POLE FOUNDATION, METAL, 11 1/2" BOLT CIRCLE, 8 5/8" X 6"	EACH	4
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	161
87301804	ELECTRIC CABLE IN CONDUIT, SERVICE NO. 6 1C	FOOT	553
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	553
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	401
87500900	TRAFFIC SIGNAL POST, 13 FT.	EACH	4
88800100	PEDESTRIAN PUSH-BUTTON	EACH	4
* 90600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	1
* X6061700	COMBINATION CONCRETE CURB AND GUTTER, TYPE B (SPECIAL)	FOOT	24
X7240300	SIGN REMOVAL	EACH	2
XX007021	PEDESTRIAN ACTIVATED CROSSWALK WARNING SYSTEM	EACH	2

* SPECIALTY ITEM

LAYOUT	01/28/14
MGD	
PLA	
REVIEWED	
KNB	

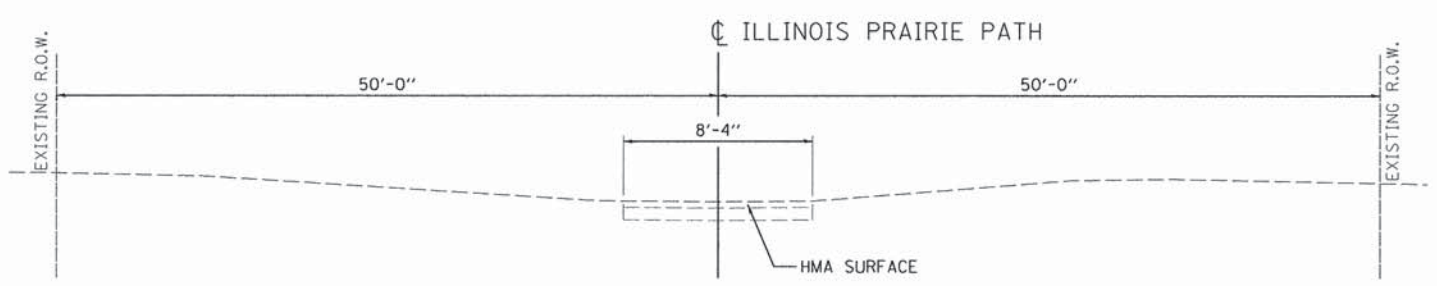
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ILLINOIS PRAIRIE PATH AND KIRK ROAD
GENERAL NOTES**

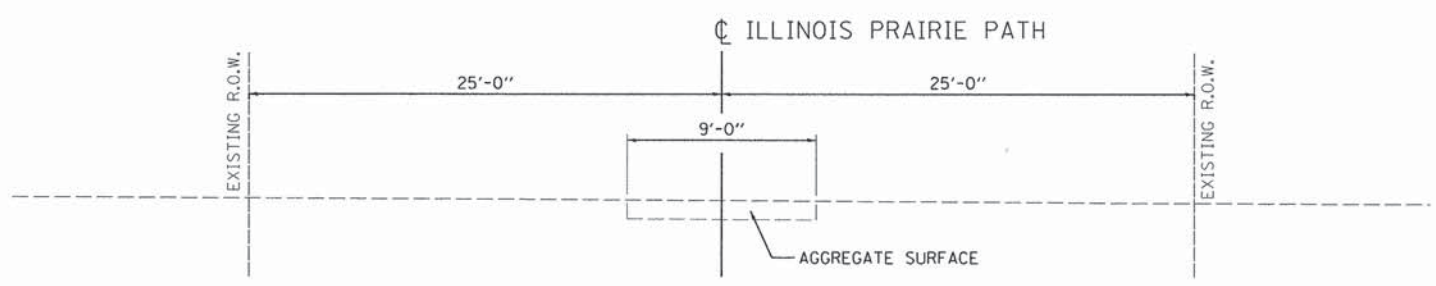
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	13-00430-00-SP	KANE	15	2
CONTRACT NO. 61A10				
[ILLINOIS] FED. AID PROJECT				

SCALE: N/A SHEET OF SHEETS STA. TO STA.

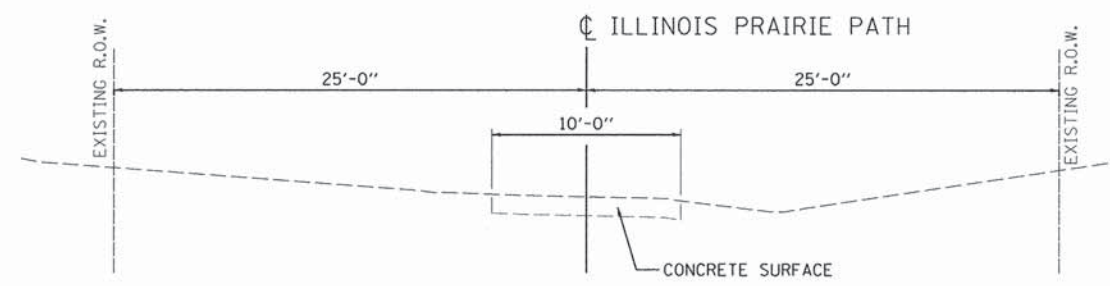


EXISTING TYPICAL SECTION
 STA 10+72.47 TO STA 11+10.29

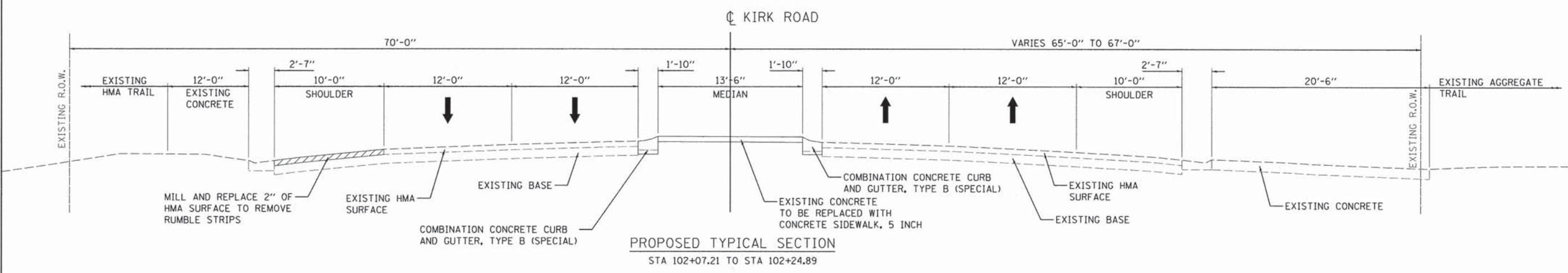
INTERSECTION OMISSION
 STA 11+10.29 TO STA 12+00.36



EXISTING TYPICAL SECTION
 STA 12+20.68 TO STA 13+08.61



EXISTING TYPICAL SECTION
 STA 12+00.36 TO STA 12+20.68



PROPOSED TYPICAL SECTION
 STA 102+07.21 TO STA 102+24.89

HOT-MIX ASPHALT MIXTURE REQUIREMENTS		QUALITY MANAGEMENT PROGRAM (QMP)
MIXTURE TYPE	AIR VOIDS @ N DES	
HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50 (IL 9.5mm)	4.0% @ N-50	QUALITY CONTROL / QUALITY ASSURANCE (QC/QA)

NOTE 1: THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112LB/SO YD/IN.

NOTE 2: THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY THE DISTRICT ONE SPECIAL PROVISIONS. FOR HMA FULL DEPTH "AC TYPE" SEE SPECIAL PROVISIONS. FOR USE OF RECYCLED MATERIALS SEE SPECIAL PROVISIONS. QUALITY MANAGEMENT PROGRAM (QMP) IDENTIFIES THE PARTICULAR QUALITY CONTROL SPECIFICATION THAT APPLIES TO THE HMA MIXTURE.

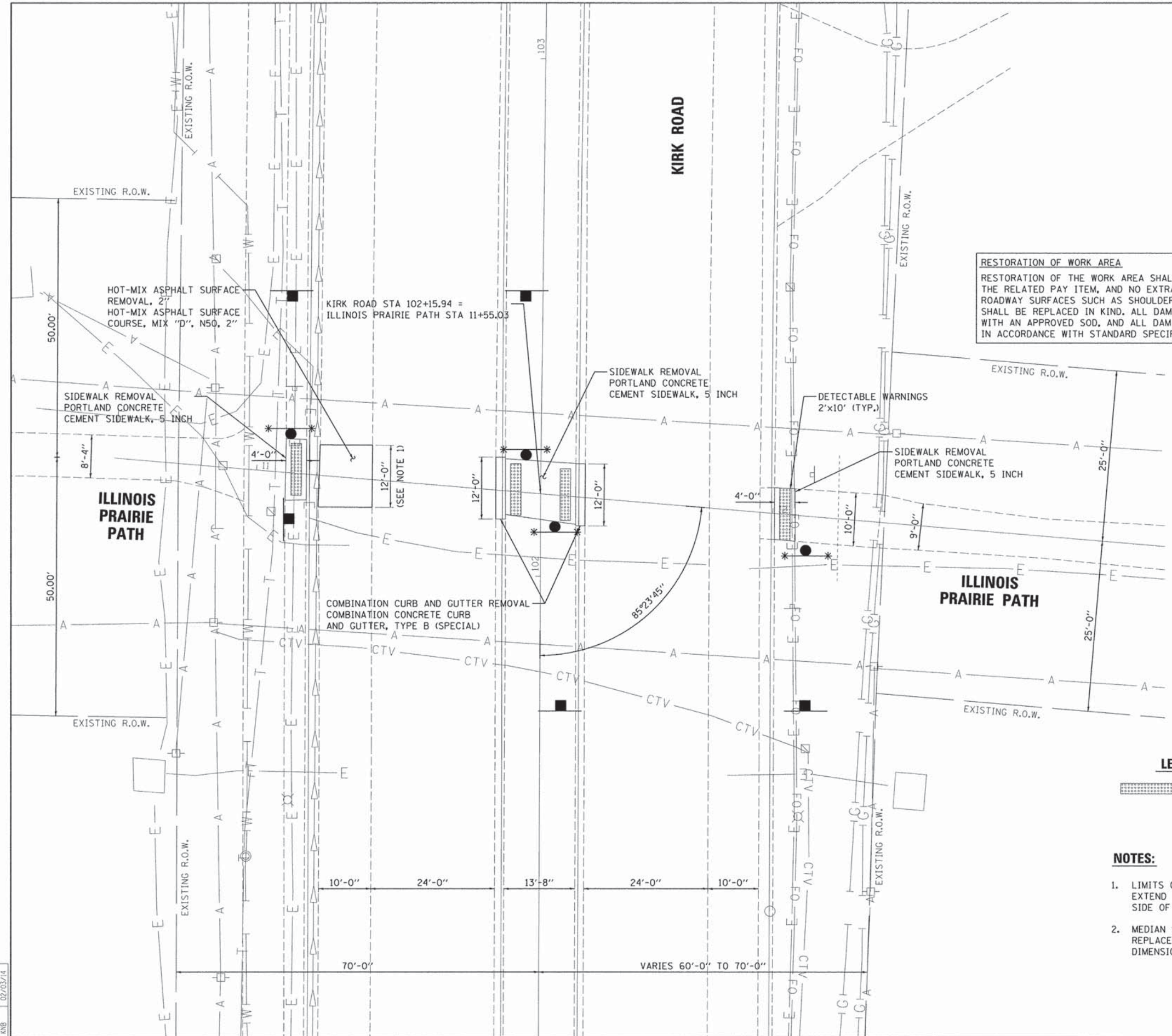
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REVIEWED	KNB	02/03/14

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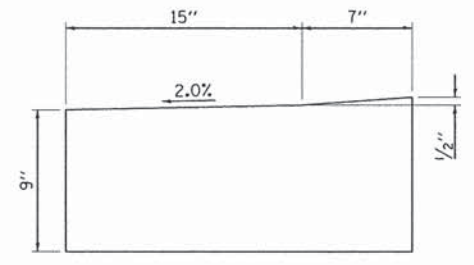
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS PRAIRIE PATH AND KIRK ROAD			
TYPICAL SECTIONS			
SCALE: N/A	SHEET	OF SHEETS	STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 77	13-00430-00-SP	KANE	15	3
CONTRACT NO. 61A10				
ILLINOIS FED. AID PROJECT				



RESTORATION OF WORK AREA
 RESTORATION OF THE WORK AREA SHALL BE INCLUDED IN THE COST OF THE RELATED PAY ITEM, 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 SEEDING IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.



COMBINATION CONCRETE CURB AND GUTTER, TYPE B (SPECIAL)
 (B-6.15 CCC&G)

LEGEND

DETECTABLE WARNINGS

NOTES:

- LIMITS OF REMOVAL AND REPLACEMENT SHALL EXTEND APPROXIMATELY 1 FOOT ON EITHER SIDE OF THE 10 FOOT CROSSWALK
- MEDIAN SIDEWALK REMOVAL AND REPLACEMENT SHALL MATCH EXISTING DIMENSIONS AND GRADES.

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DRAWN	R.A.	02/02/14
REVIEWED	KNB	02/03/14

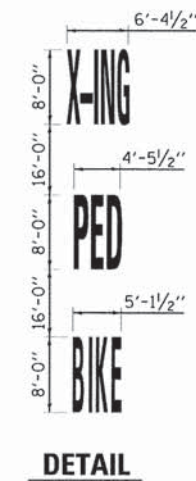
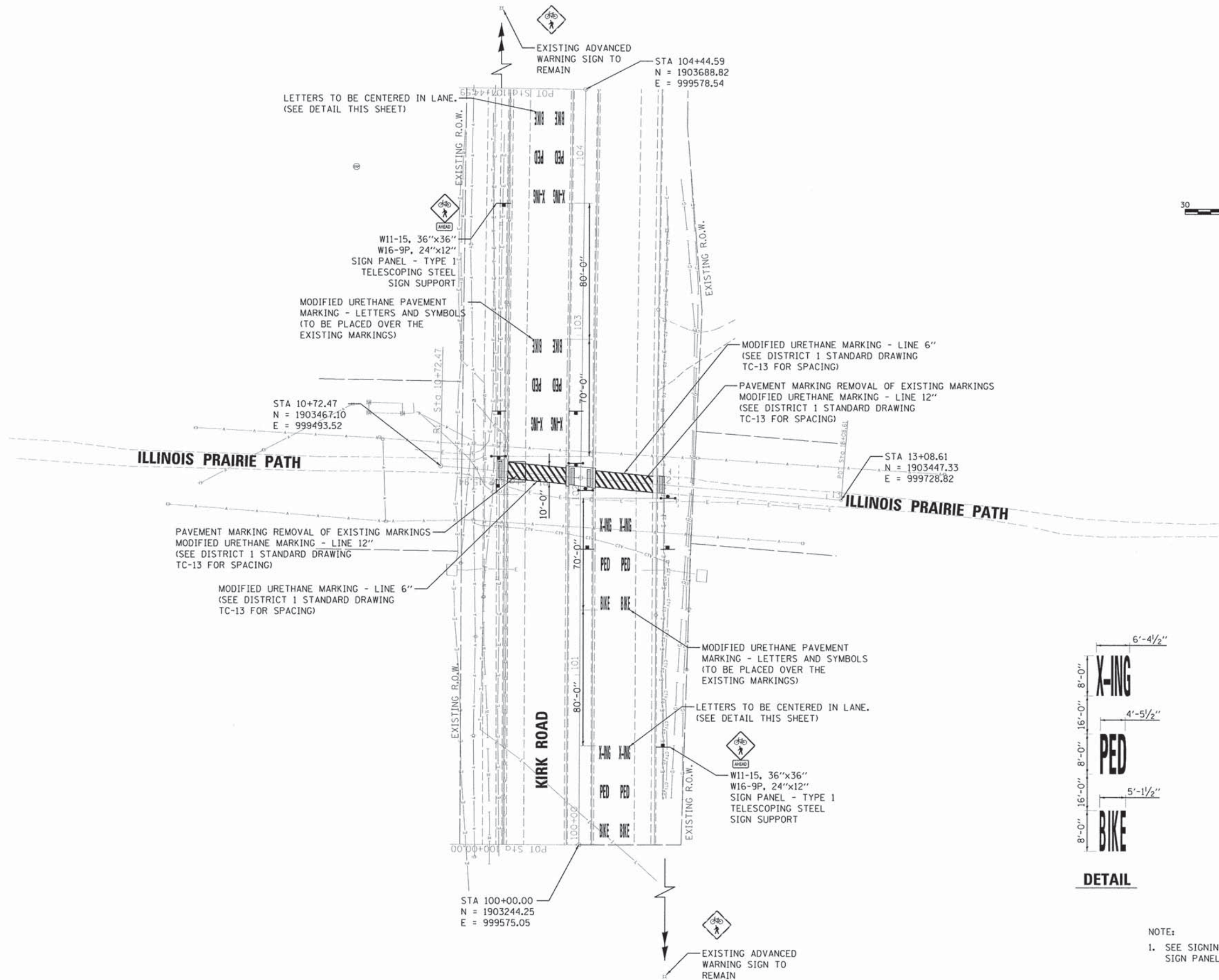
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PLOT DATE = 8/13/2014			

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**ILLINOIS PRAIRIE PATH AND KIRK ROAD
 PLAN SHEET**

SCALE: 1"=10' SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 77	13-00430-00-SP	KANE	15	4
CONTRACT NO. 61A10				
ILLINOIS FED. AID PROJECT				



NOTE:
 1. SEE SIGNING PLAN FOR ADDITIONAL SIGN PANEL LOCATIONS

LAYOUT	MGD	01/28/14
DRAWN	PLA	02/02/14
REVIEWED	KNB	02/03/14
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

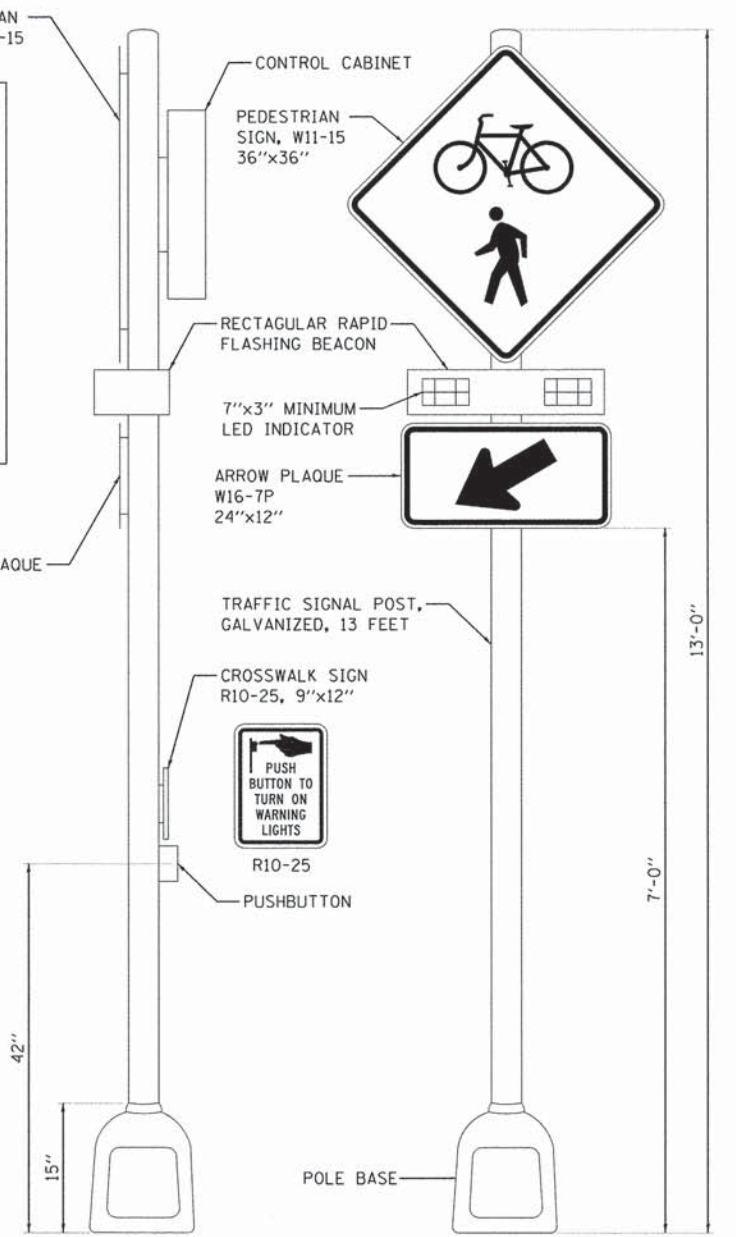
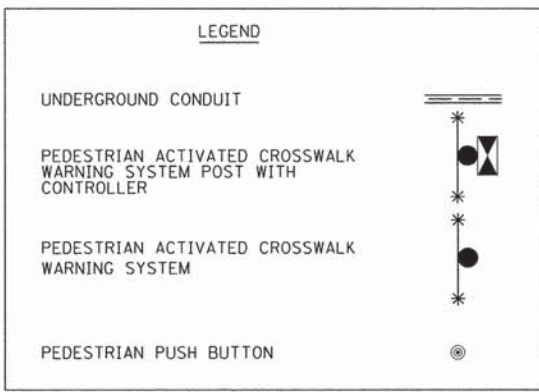
ILLINOIS PRAIRIE PATH AND KIRK ROAD PAVEMENT MARKING AND ALIGNMENT PLAN	
SCALE: 1"=30'	SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 77	13-00430-00-SP	KANE	15	5
CONTRACT NO.61A10				
ILLINOIS FED. AID PROJECT				

PATTERN: DURING EACH FLASHING PERIOD ONE INDICATION SHALL EMIT TWO RAPID PULSES OF LIGHT AND THE OTHER INDICATION SHALL EMIT THREE RAPID PULSES OF LIGHT. THE PATTERN THEN SWITCHES BETWEEN THE INDICATIONS FOR THE NEXT PERIOD.

1. DARK UNTIL ACTIVATED
2. 70 TO 80 PERIODS OF FLASHING PER MINUTE. (17 SECONDS)
3. DARK AGAIN UNTIL ACTIVATED.

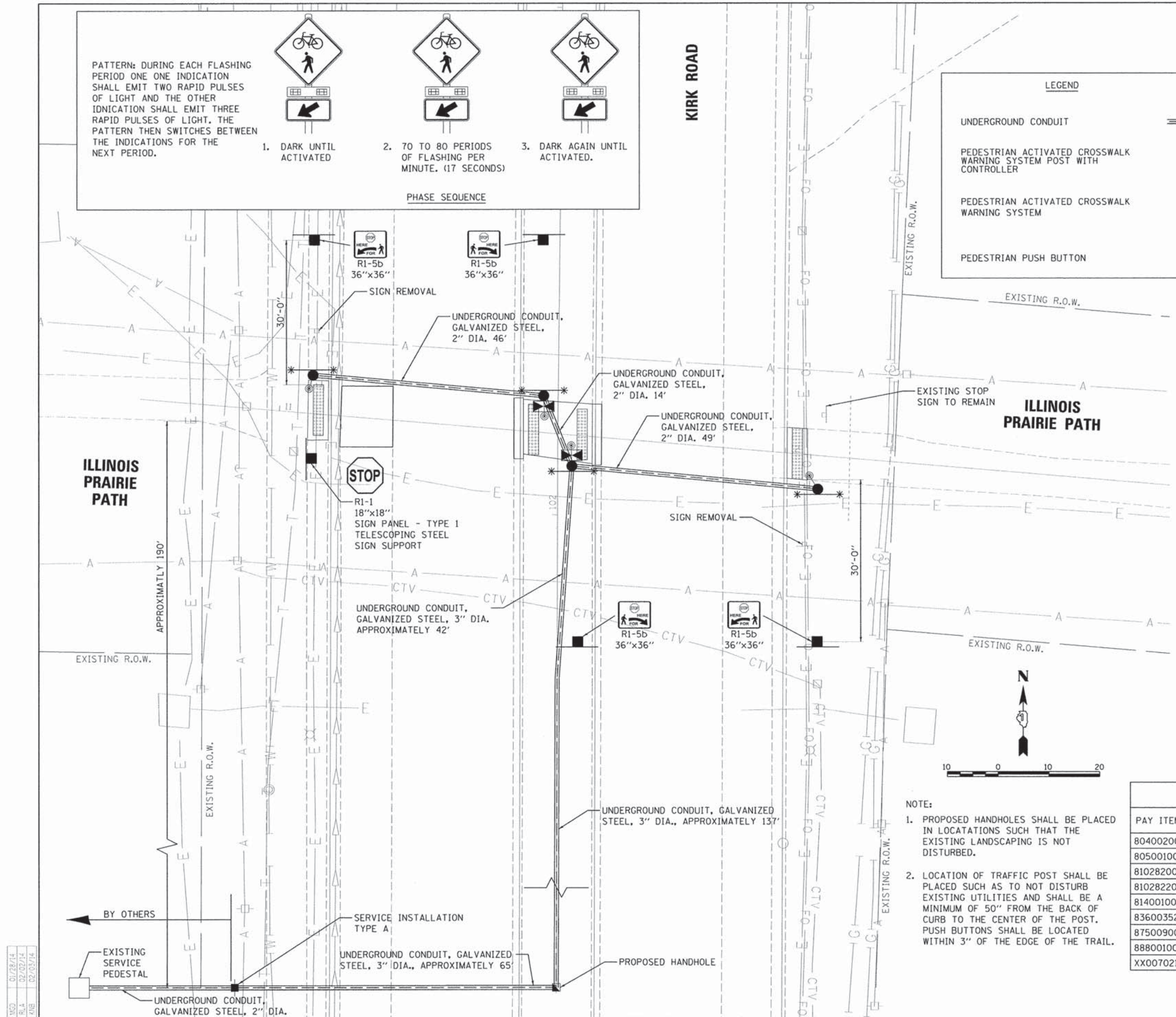
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SIDEVIEW PEDESTRIAN ACTIVATED CROSSWALK WARNING SYSTEM DETAIL
SCALE: N.T.S.

- NOTE:
1. PROPOSED HANDHOLES SHALL BE PLACED IN LOCATIONS SUCH THAT THE EXISTING LANDSCAPING IS NOT DISTURBED.
 2. LOCATION OF TRAFFIC POST SHALL BE PLACED SUCH AS TO NOT DISTURB EXISTING UTILITIES AND SHALL BE A MINIMUM OF 50" FROM THE BACK OF CURB TO THE CENTER OF THE POST. PUSH BUTTONS SHALL BE LOCATED WITHIN 3" OF THE EDGE OF THE TRAIL.

BILL OF MATERIALS			
PAY ITEM	ITEM	UNIT	QUANTITY
80400200	ELECTRIC UTILITY SERVICE CONNECTION	L SUM	1
80500100	SERVICE INSTALLATION, TYPE A	EACH	1
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FT	109
81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FT	244
81400100	HANDHOLE	EACH	2
83600352	LIGHT POLE FOUNDATION, METAL, 1 1/2" BOLT CIRCLE, 8 5/8"x6"	EACH	4
87500900	TRAFFIC SIGNAL POST, 13 FT.	EACH	4
88800100	PEDESTRIAN PUSH-BUTTON	EACH	4
XX007021	PEDESTRIAN ACTIVATED CROSSWALK WARNING SYSTEM	EACH	2



LAYOUT	MCD	01/28/14
DRAWN	RLA	02/02/14
REVIEWED	ZOB	02/03/14

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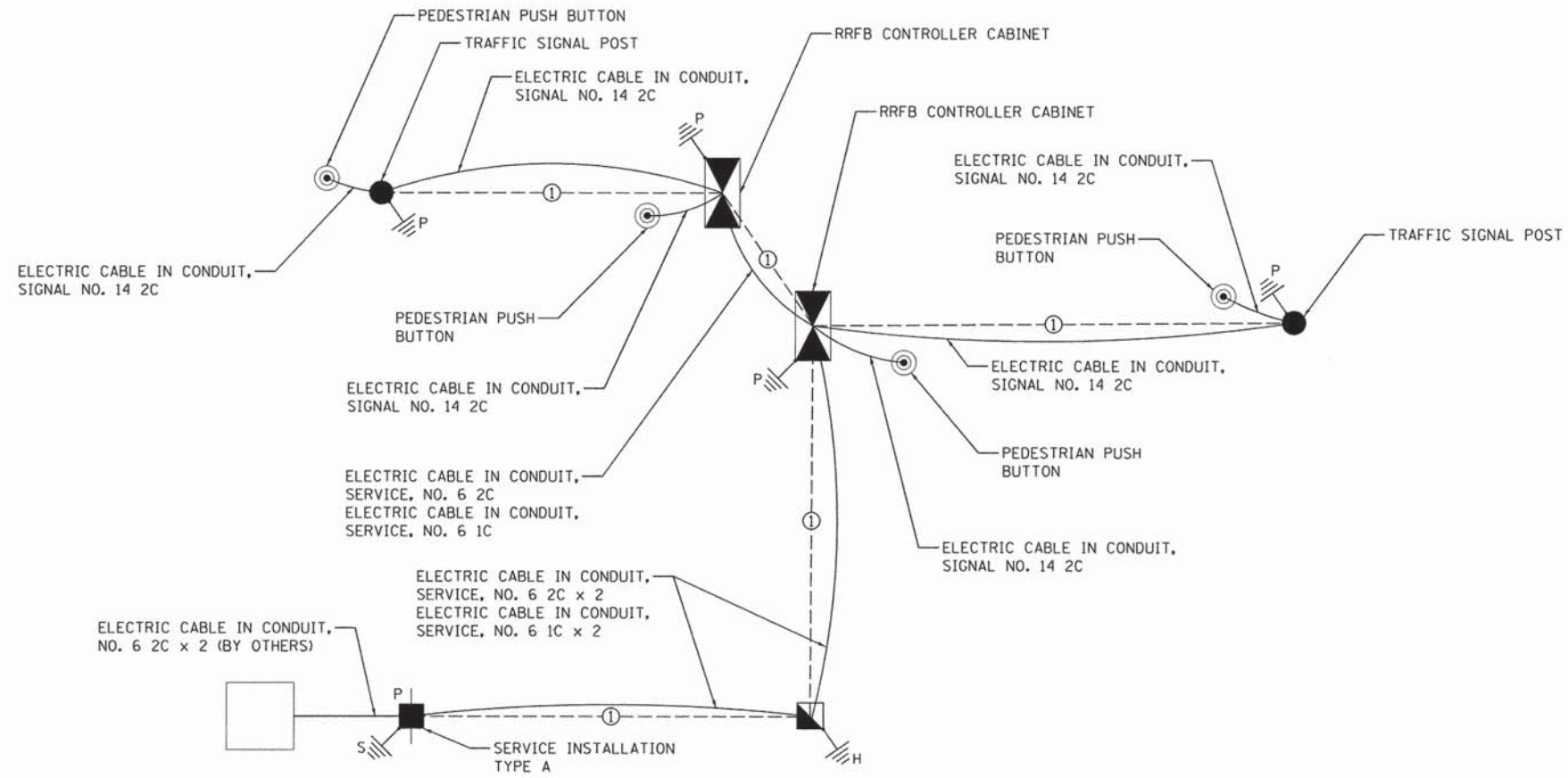
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS PRAIRIE PATH AND KIRK ROAD
SIGNING PLAN

SCALE: 1"=10' SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 77	13-00430-00-SP	KANE	15	6
CONTRACT NO.61A10				
ILLINOIS FED. AID PROJECT				

BILL OF MATERIALS			
PAY ITEM	ITEM	UNIT	QUANTITY
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	161
87301804	ELECTRIC CABLE IN CONDUIT, SERVICE NO. 6 1C	FOOT	553
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	553
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	401



WATTAGE CHART	
ITEM	UNIT
RRFB	30 WATT

LAYOUT	MGD	01/28/14
DRAWN	BLA	02/02/14
REVIEWED	KNB	02/03/14

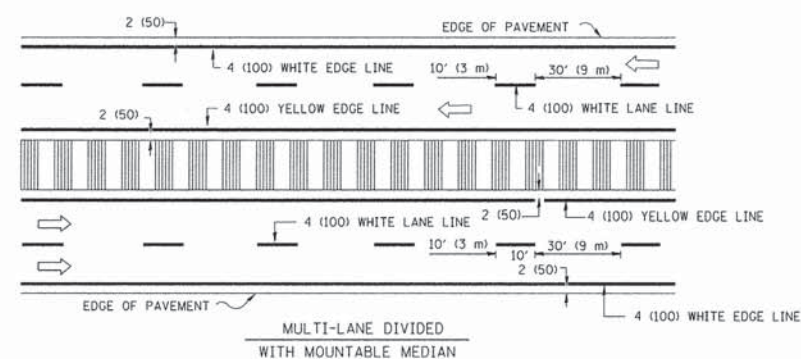
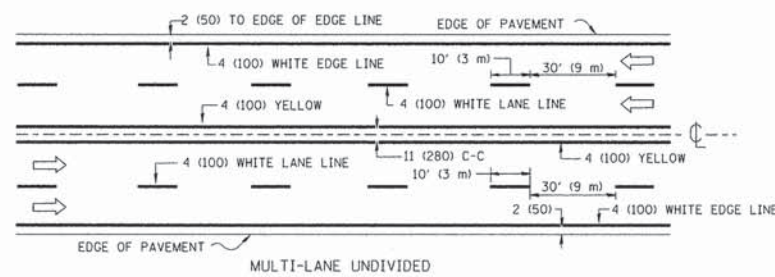
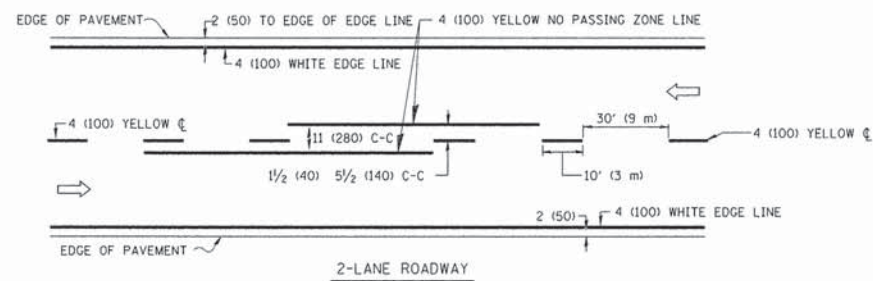
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**ILLINOIS PRAIRIE PATH AND KIRK ROAD
 CABLE PLAN**

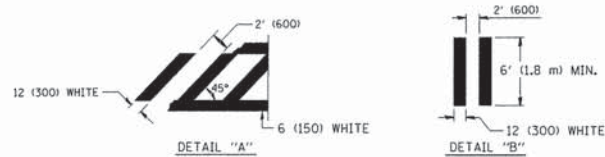
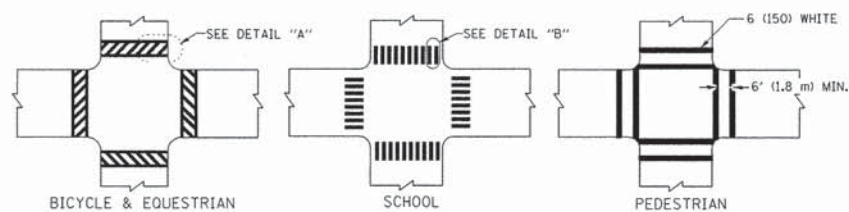
SCALE: N/A SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 61A10				
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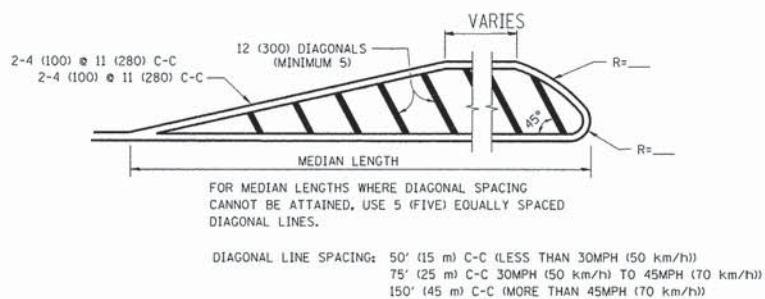
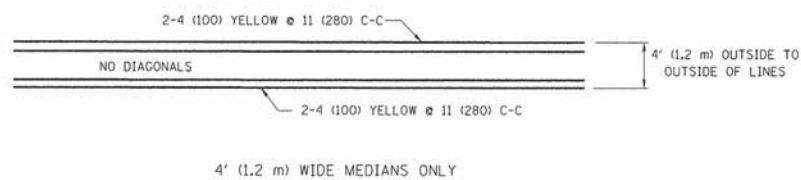


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

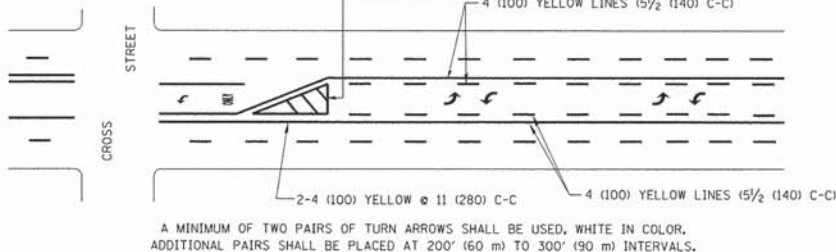
TYPICAL LANE AND EDGE LINE MARKING



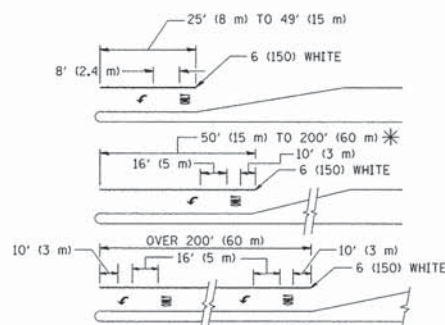
TYPICAL CROSSWALK MARKING



MEDIANS OVER 4' (1.2 m) WIDE



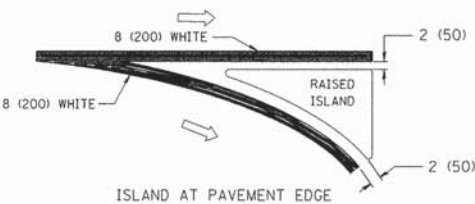
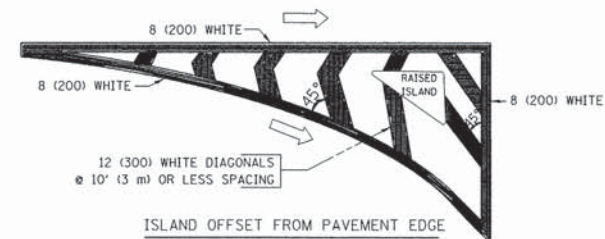
TYPICAL PAINTED MEDIAN MARKING



* 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



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	5/2 (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; 5/2 (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.
CORE 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" 15' (4.5 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.

FILE NAME =	USER NAME = drvakosgn	DESIGNED - EVERS	REVISED - T. RAMMACHER 10-27-94
ct:\pw\work\p\dot\drvakosgn\d0108315\td	3.dgn	DRAWN -	REVISED - C. JUCIUS 09-09-09
	PLOT SCALE = 50,000' / IN.	CHECKED -	REVISED -
	PLOT DATE = 9/9/2009	DATE - 03-19-90	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 77	13-00430-00-SP	KANE	15	8
TC-13		CONTRACT NO. 61A10		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

TRAFFIC SIGNAL LEGEND

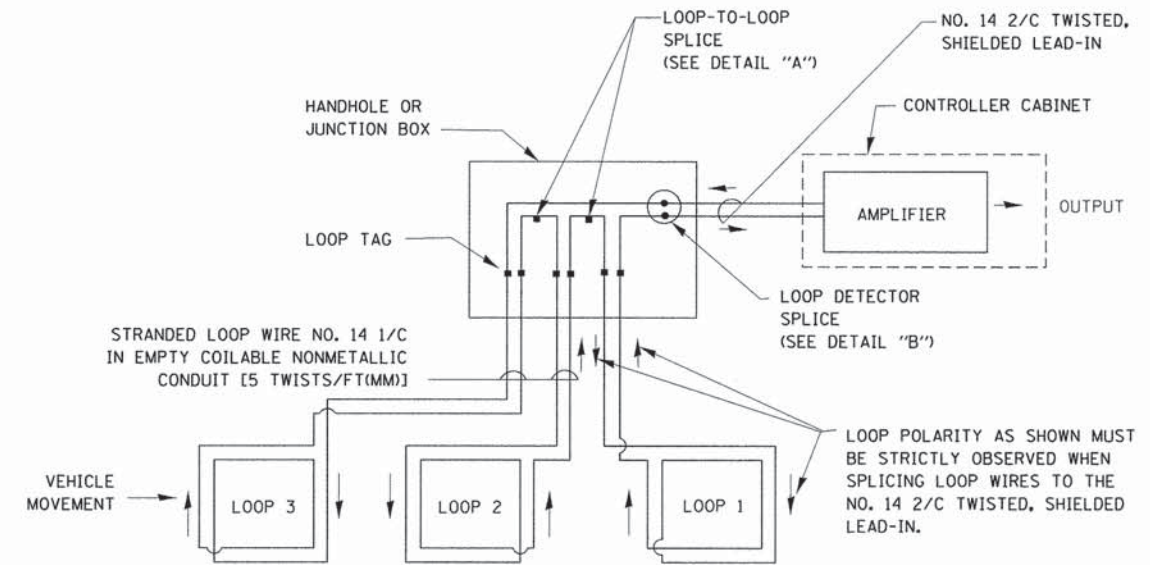
ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED
CONTROLLER CABINET				EMERGENCY VEHICLE LIGHT DETECTOR				ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE			
RAILROAD CONTROL CABINET				CONFIRMATION BEACON				COAXIAL CABLE			
COMMUNICATIONS CABINET				HANDHOLE				VENDOR CABLE FOR CAMERA			
MASTER CONTROLLER				HEAVY DUTY HANDHOLE				COPPER INTERCONNECT CABLE, NO. 18 3 PAIR TWISTED, SHIELDED			
MASTER MASTER CONTROLLER				DOUBLE HANDHOLE				FIBER OPTIC CABLE NO. 62.5/125, MM12F			
UNINTERRUPTABLE POWER SUPPLY				JUNCTION BOX				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F			
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT				UNDERGROUND CONDUIT, GALVANIZED STEEL (UC)				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM24F			
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT				TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE				GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE			
STEEL MAST ARM ASSEMBLY AND POLE				COMMON TRENCH				CONTROLLER CABINET AND FOUNDATION TO BE REMOVED			
ALUMINUM MAST ARM ASSEMBLY AND POLE				COILABLE NONMETALLIC CONDUIT (EMPTY)				STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE				SYSTEM ITEM		S	S	ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA				INTERSECTION ITEM		I	IP	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED			
SIGNAL POST				REMOVE ITEM	R			SIGNAL POST AND FOUNDATION TO BE REMOVED			
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM				RELOCATE ITEM	RL			INTERSECTION & SAMPLING (SYSTEM) DETECTOR			
GUY WIRE				ABANDON ITEM	A			SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD				12" (300mm) TRAFFIC SIGNAL SECTION				QUEUE DETECTOR			
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)				12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE				PREFORMED QUEUE DETECTOR			
SIGNAL HEAD WITH BACKPLATE				SIGNAL FACE				PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD OPTICALLY PROGRAMMED				SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD				PREFORMED SAMPLING (SYSTEM) DETECTOR			
FLASHER INSTALLATION (S DENOTES SOLAR POWER)				"RB" INDICATES REFLECTIVE BACKPLATE							
PEDESTRIAN SIGNAL HEAD				12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL							
PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED							
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID							
ILLUMINATED SIGN "NO LEFT TURN"				PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER							
ILLUMINATED SIGN "NO RIGHT TURN"				RADIO INTERCONNECT							
DETECTOR LOOP, TYPE I				RADIO REPEATER							
PREFORMED DETECTOR LOOP				DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED							
MICROWAVE VEHICLE SENSOR				GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)							
VIDEO DETECTION CAMERA											
VIDEO DETECTION ZONE											
PAN, TILT, ZOOM CAMERA											
WIRELESS DETECTOR SENSOR											
WIRELESS ACCESS POINT											

RAILROAD SYMBOLS

	EXISTING	PROPOSED
RAILROAD CONTROL CABINET		
RAILROAD CANTILEVER MAST ARM		
FLASHING SIGNAL		
CROSSING GATE		
CROSSBUCK		

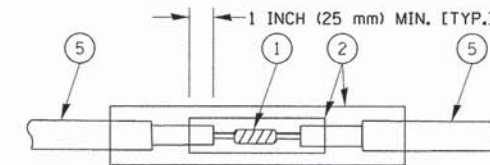
LOOP DETECTOR NOTES

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

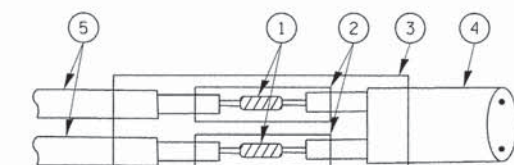


DETECTOR LOOP WIRING SCHEMATIC

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



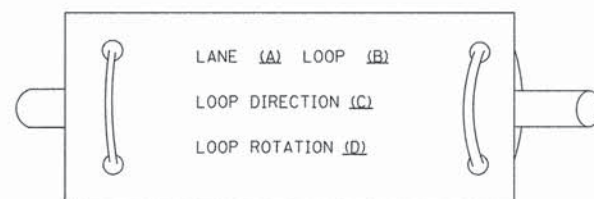
DETAIL "A"
LOOP-TO-LOOP SPLICE



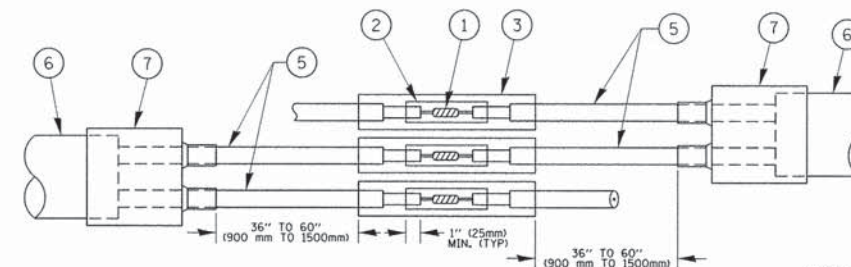
DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP

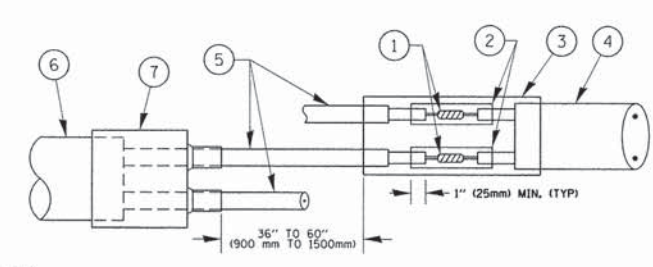
LOOP LEAD-IN CABLE TAG



- 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.



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

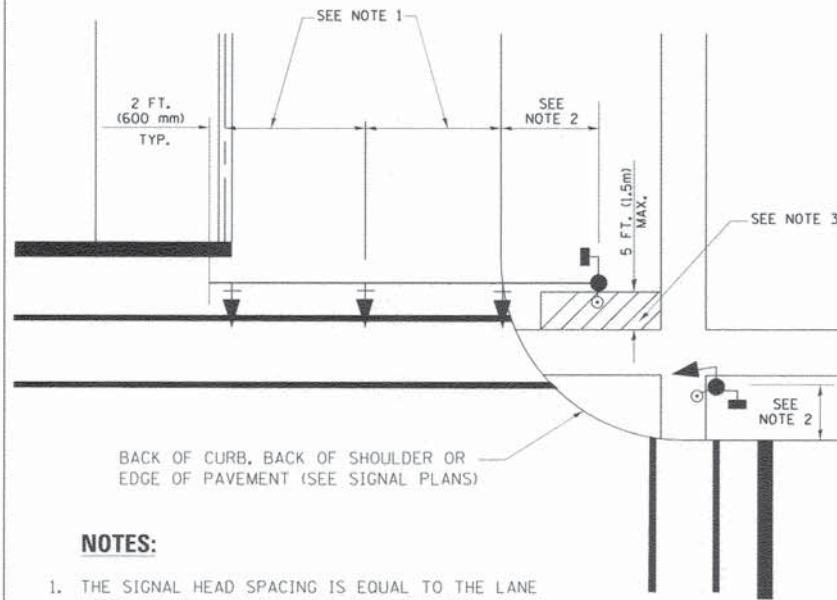
PRE-FORMED LOOP

LOOP DETECTOR SPLICE

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

FILE NAME =	USER NAME = footemj	DESIGNED - DAD	REVISED - DAG 1-1-14	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ct:\pw_work\pwidot\footemj\d0108315\ts05.dgn		DRAWN - BCK	REVISED -		SCALE: NONE	SHEET NO. 2 OF 7 SHEETS	STA.	TO STA.	CH 77	13-00430-00-SP	KANE	15	10
		CHECKED - DAD	REVISED -					TS-05		CONTRACT NO.61A10			
		DATE - 10-28-09	REVISED -		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT								

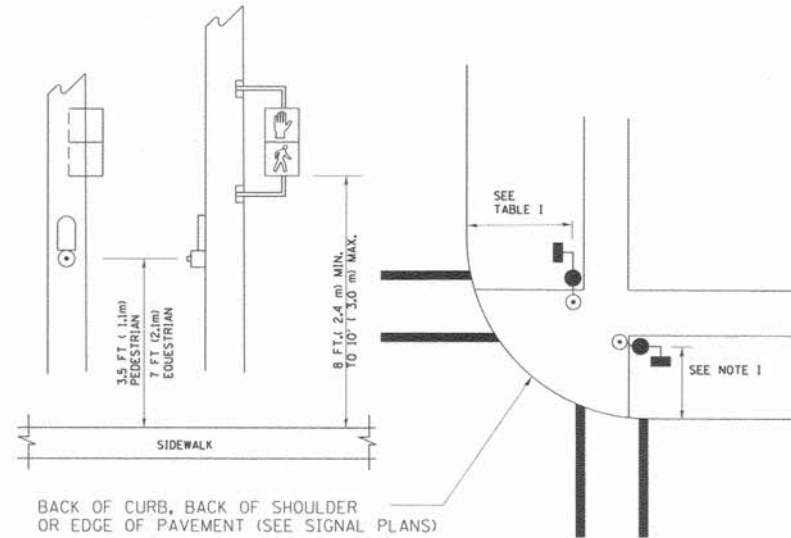
**TRAFFIC SIGNAL MAST ARM AND SIGNAL POST
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR
FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN
WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.**



NOTES:

1. THE SIGNAL HEAD SPACING IS EQUAL TO THE LANE WIDTH OR AS SHOWN ON THE TRAFFIC SIGNAL PLAN.
2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
3. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

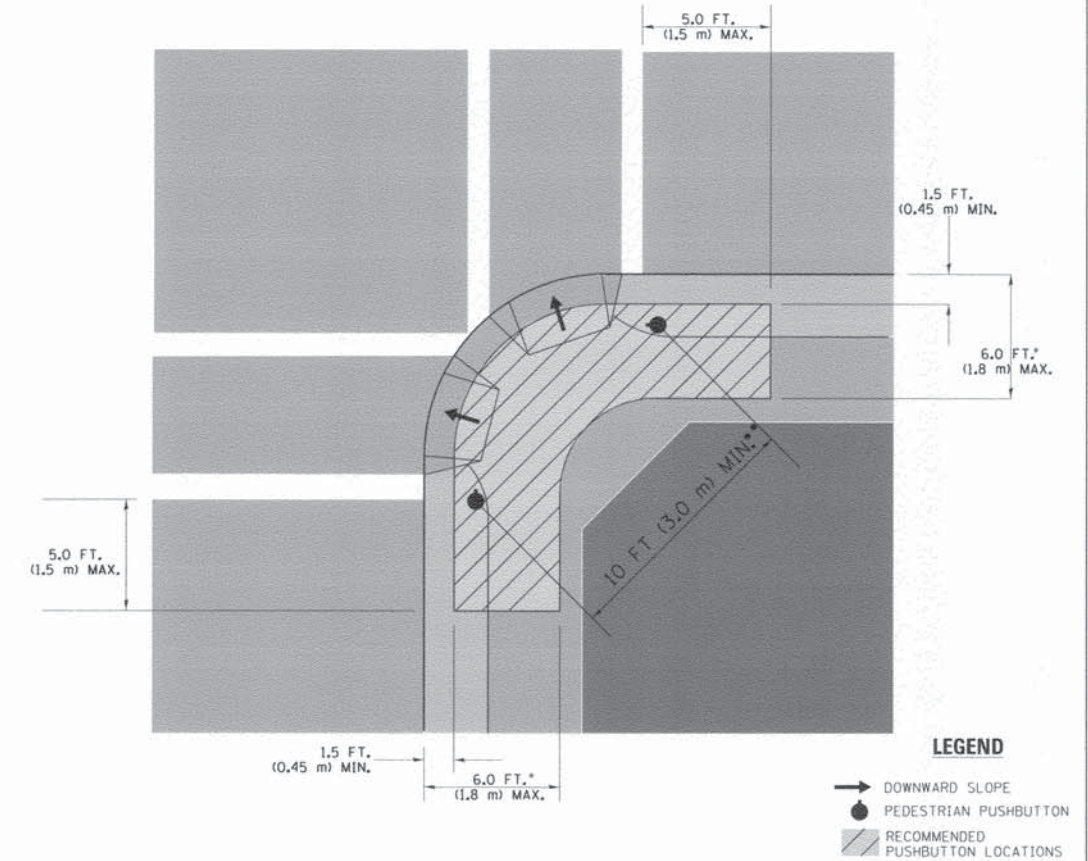
**PEDESTRIAN SIGNAL POST
AND
PEDESTRIAN PUSH BUTTON POST**



NOTES:

1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
2. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
3. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

RECOMMENDED PUSHBUTTON LOCATIONS



LEGEND

- WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT (1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
- WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

NOTES:

1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
3. THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (5.0 m) AND A MAXIMUM OF 18 FT. (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT.
4. THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.
5. THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAVEMENT.

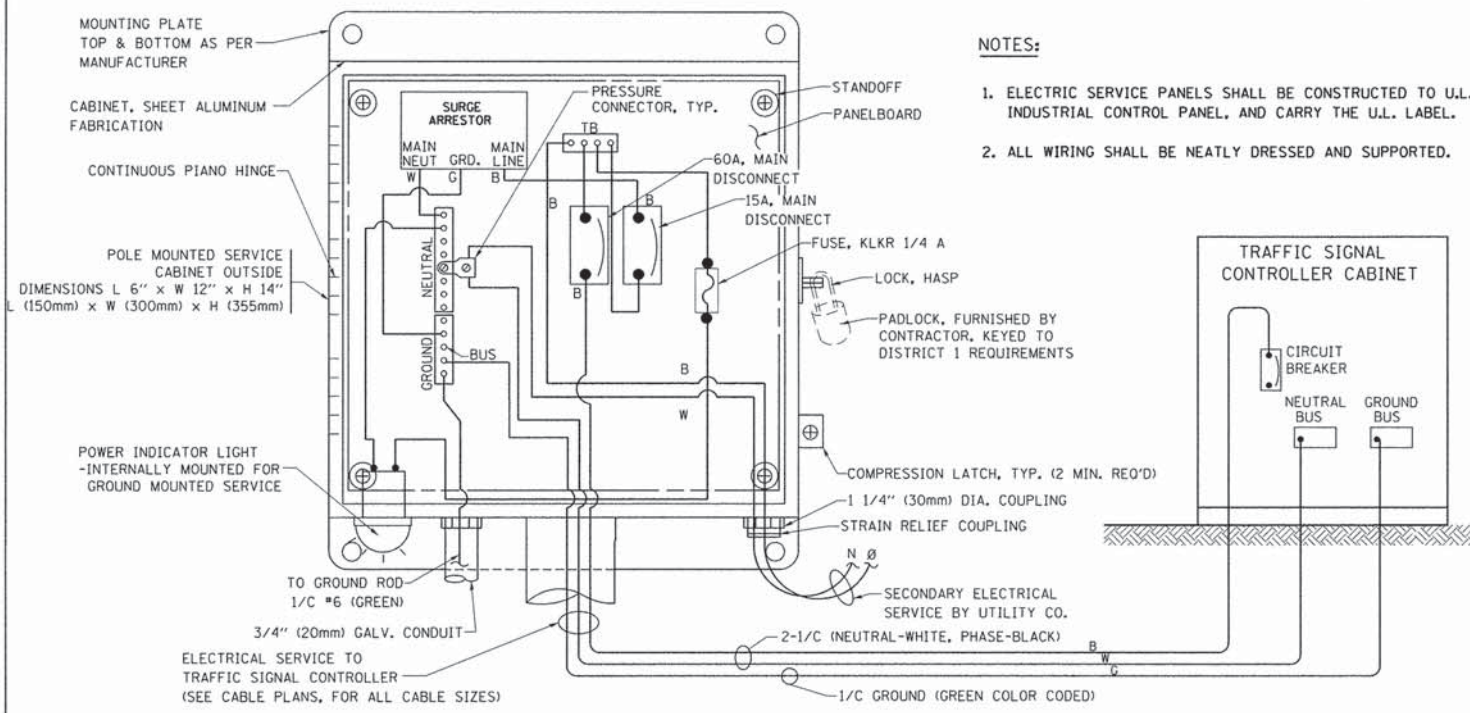
TRAFFIC SIGNAL EQUIPMENT OFFSET

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN PUSHBUTTON POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TEMPORARY WOOD POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
CONTROLLER CABINET	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.
SERVICE INSTALLATION, GROUND MOUNT	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.

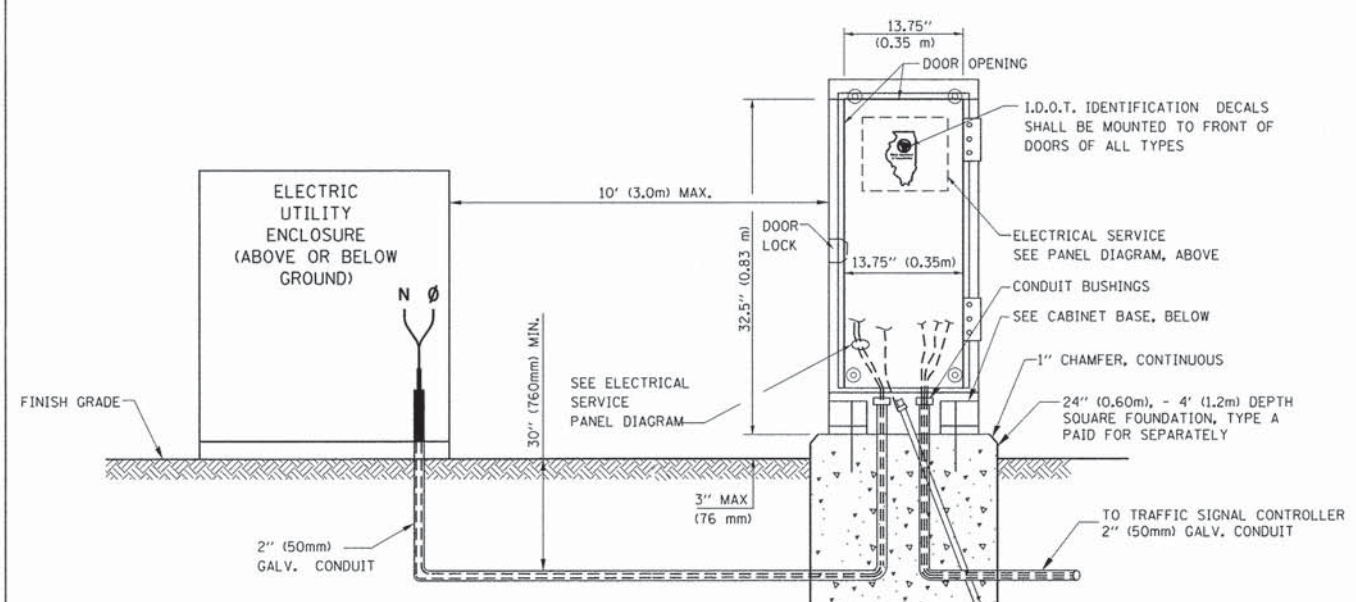
NOTES:

1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TO THE ROADWAY SIDE OF THE FOUNDATION.
4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD EFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN PUSHBUTTONS. THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.

FILE NAME =	USER NAME = footonj	DESIGNED - DAD	REVISED - DAG 1-1-14	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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	PLOT SCALE = 5/8"=1'-0"	CHECKED - DAD	REVISED -			TS-05 CONTRACT NO. 61A10					
	PLOT DATE = 1/13/2014	DATE - 10-28-09	REVISED -			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT					
				SCALE: NONE	SHEET NO. 3 OF 7 SHEETS	STA.	TO STA.				

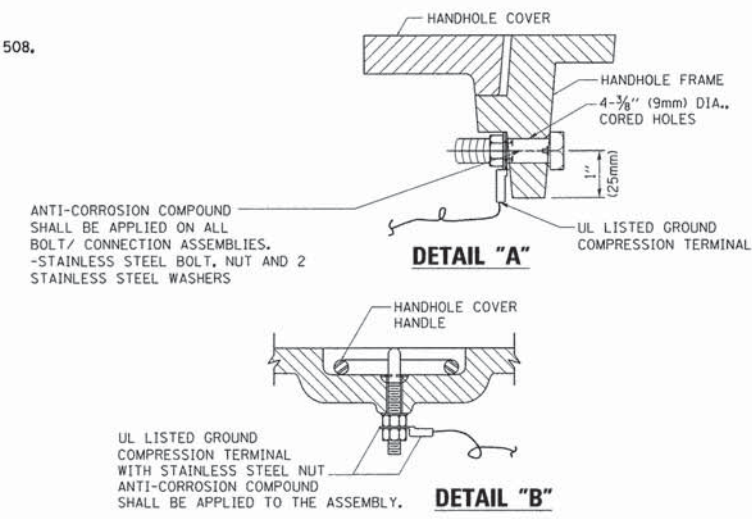
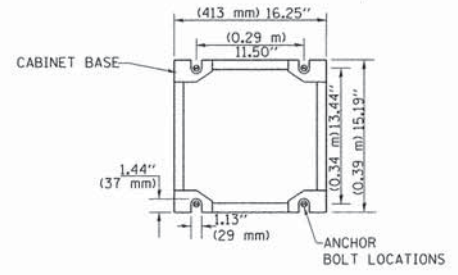


ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
 (NOT TO SCALE)



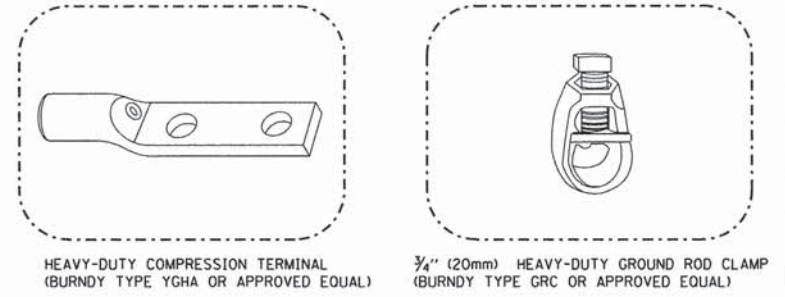
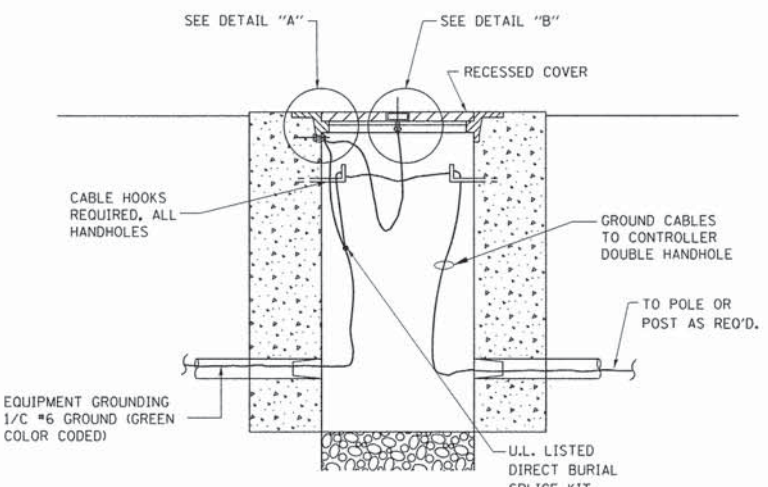
SERVICE INSTALLATION GROUND MOUNT
 (NOT TO SCALE)

CABINET - BASE BOLT PATTERN
 (NOT TO SCALE)

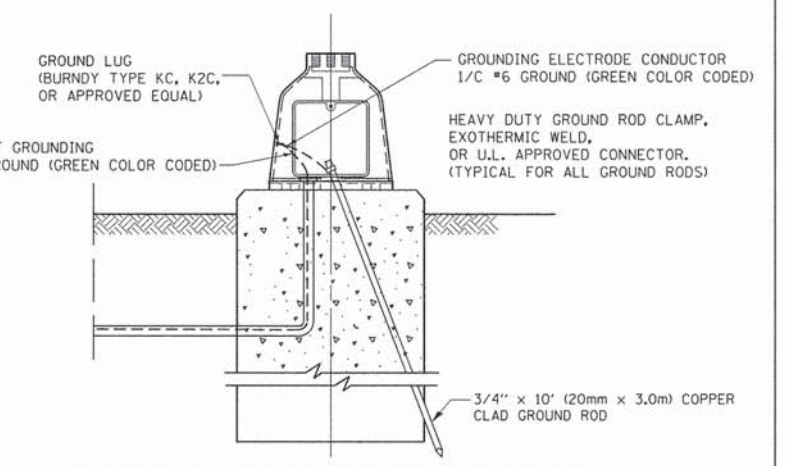
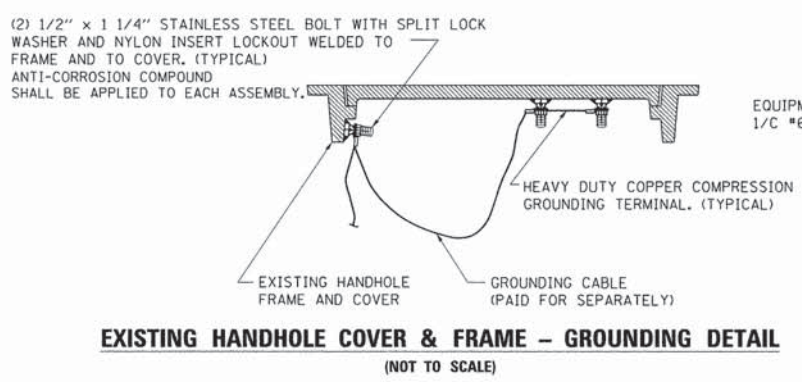


NOTES:
GROUNDING SYSTEM

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.



- 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.

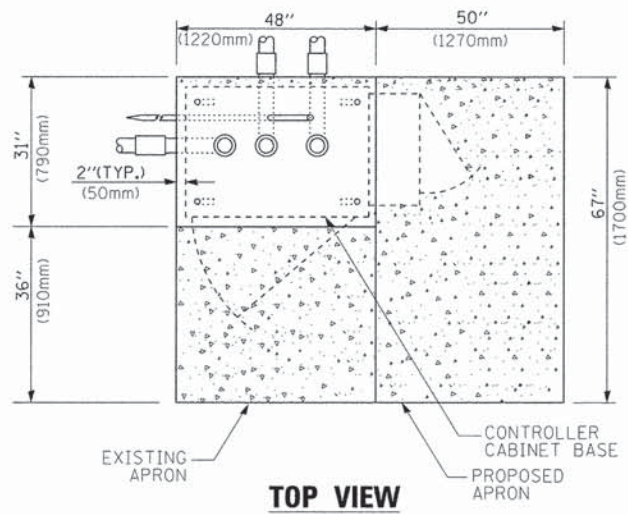


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		DATE - 10-28-09	REVISED -

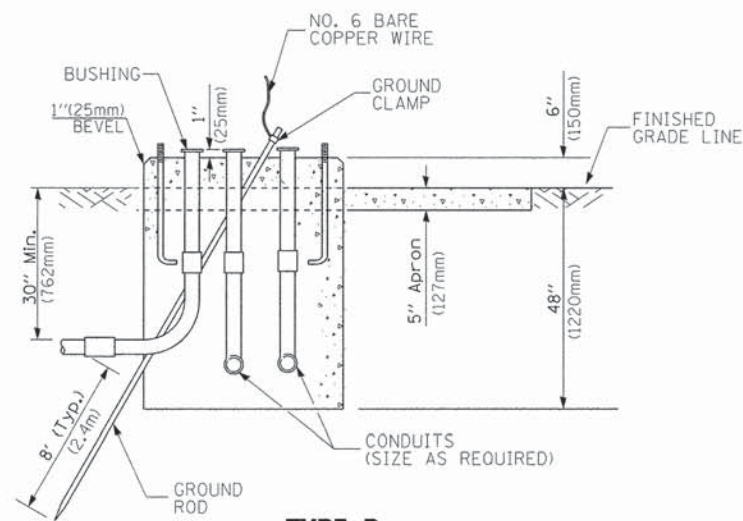
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE	
STANDARD TRAFFIC SIGNAL DESIGN DETAILS	
SCALE: NONE	SHEET NO. 4 OF 7 SHEETS
STA.	TO STA.

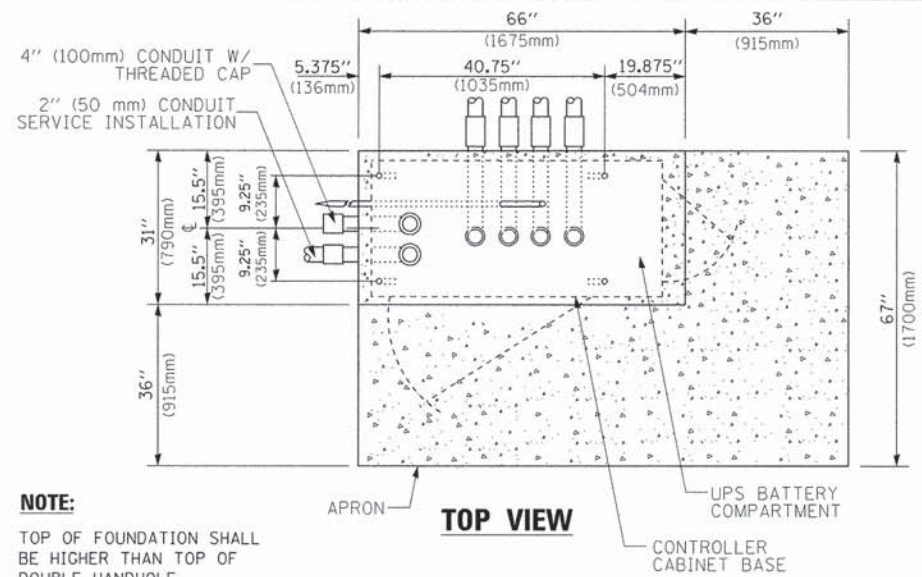
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 77	13-00430-00-SP	KANE	15	12
TS-05		CONTRACT NO.61A10		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



TOP VIEW



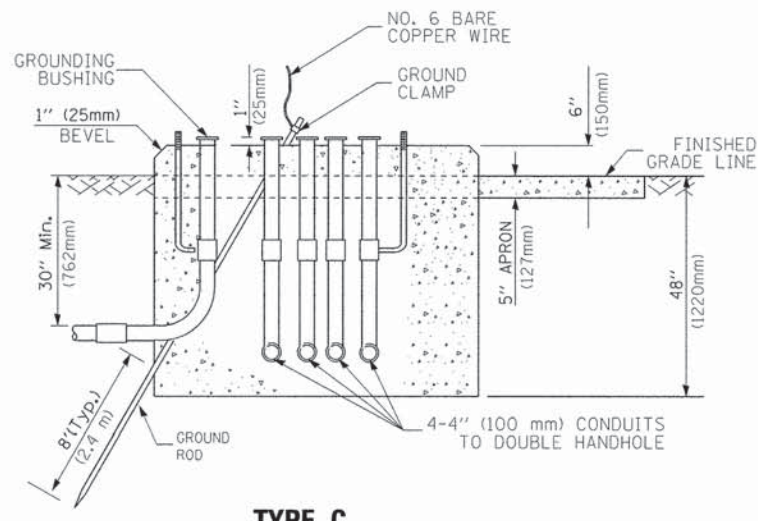
**TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET**



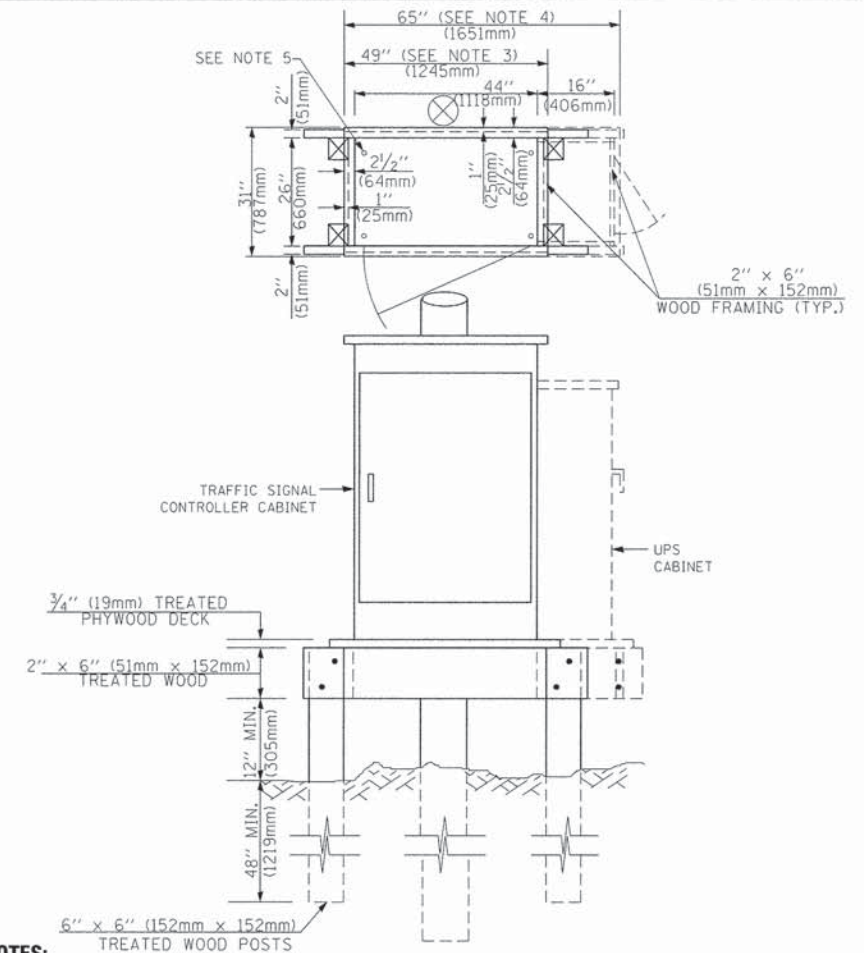
TOP VIEW

NOTE:

TOP OF FOUNDATION SHALL BE HIGHER THAN TOP OF DOUBLE HANDHOLE.



**TYPE C
FOR GROUND MOUNTED
SUPER P (TYPE IV) AND SUPER R (TYPE V)
CONTROLLER CABINETS**



NOTES:

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

**TEMPORARY SIGNAL CONTROLLER
WOOD SUPPORT PLATFORM**

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

CABLE SLACK

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

VERTICAL CABLE LENGTH

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

DEPTH OF FOUNDATION

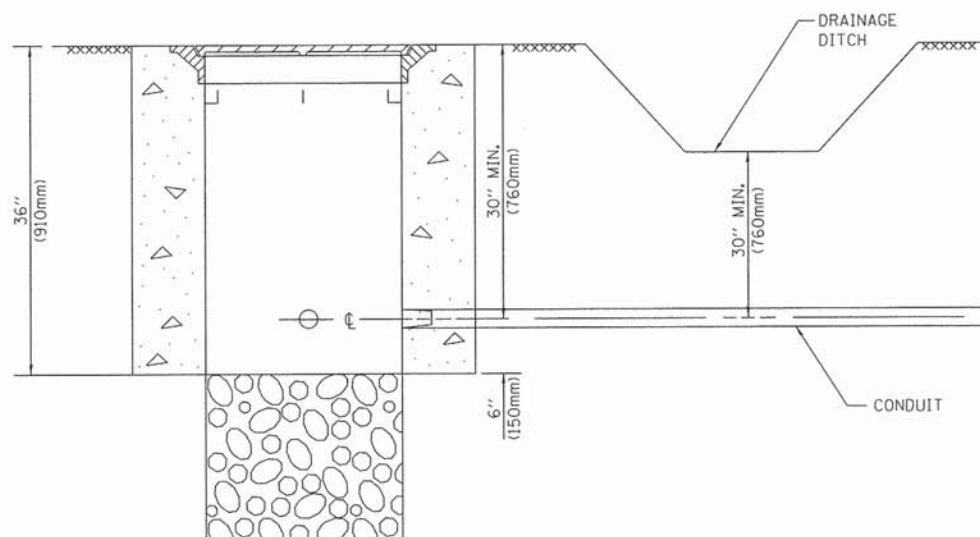
MAST ARM LENGTH	① FOUNDATION DEPTH	FOUNDATION DIAMETER	SPIRAL DIAMETER	QUANTITY OF REBARS	SIZE OF REBARS
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

NOTES:

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

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

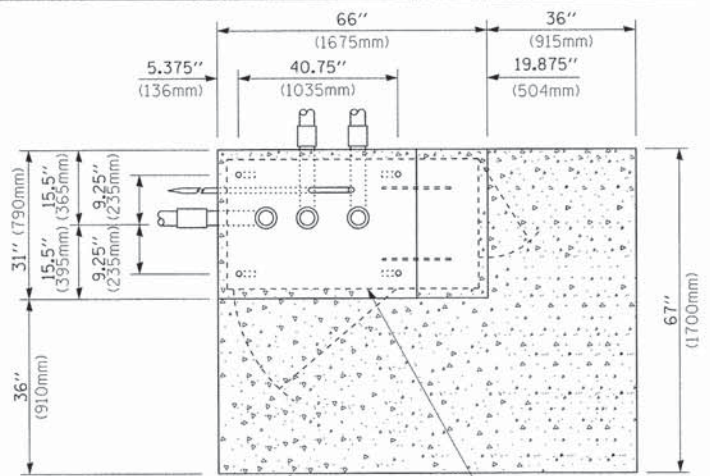
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	PLOT DATE = 1/13/2014	CHECKED - DAD	REVISED -					TS-05		CONTRACT NO.61A10		
		DATE - 10-28-09	REVISED -					SCALE: NONE		SHEET NO. 5 OF 7 SHEETS		STA. TO STA.



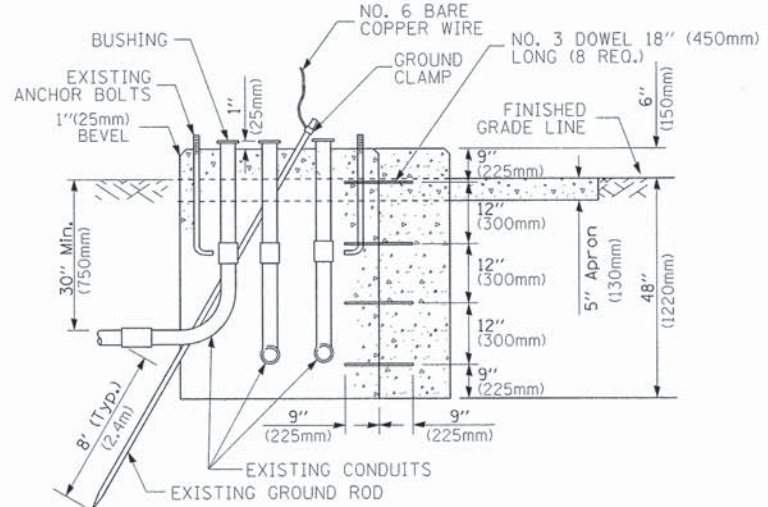
NOTES:

1. CONDUIT DEPTH SHALL BE A MINIMUM OF 30" (760mm) BELOW THE BOTTOM OF THE DRAINAGE DITCH OR ANY SLOPING GROUND
2. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL CONDUIT PLACED UNDER ROADWAY PAVEMENT, MULTI-USE PATHS, SIDEWALKS AND SOIL SURFACES.
3. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL HANDHOLES, HEAVY DUTY HANDHOLES AND DOUBLE HANDHOLES.

HANDHOLE WITH MINIMUM CONDUIT DEPTH
(NOT TO SCALE)



TOP VIEW
(NOT TO SCALE)

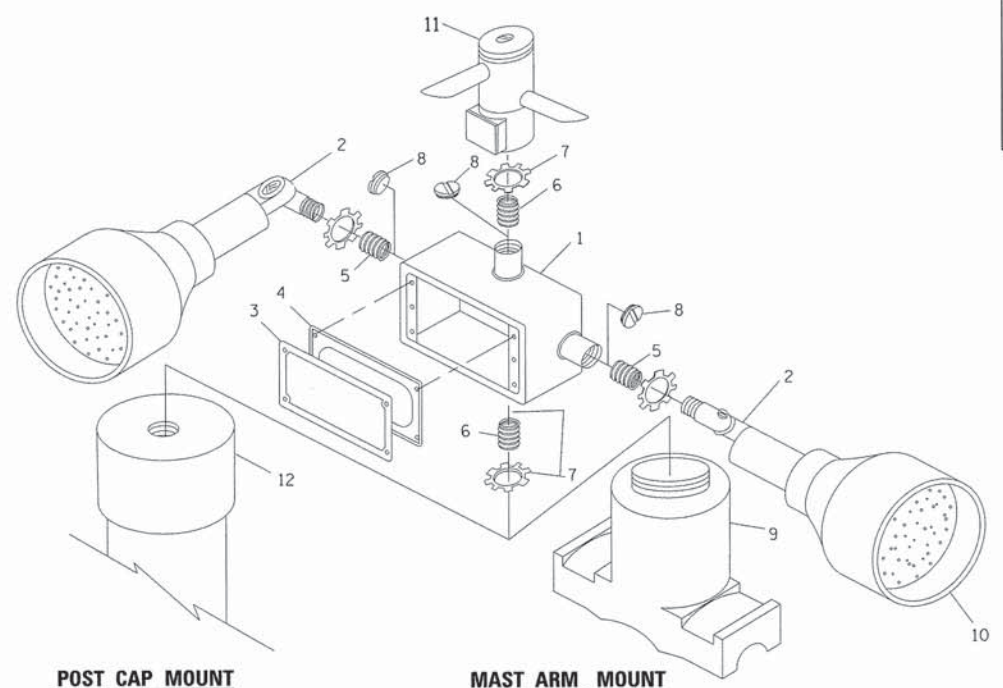


MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION
(NOT TO SCALE)

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

NOTES:

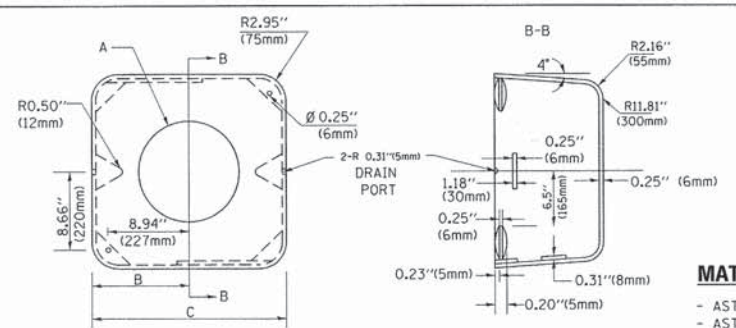
1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
ITEM #2- MULBERRY CON-0-SHADE LAMP SHIELD OR EQUIVALENT
ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE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



POST CAP MOUNT

MAST ARM MOUNT

EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL



MATERIAL:
- ASTM A36 STEEL
- ASTM A-123 HOT DIPPED GALVANIZED

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

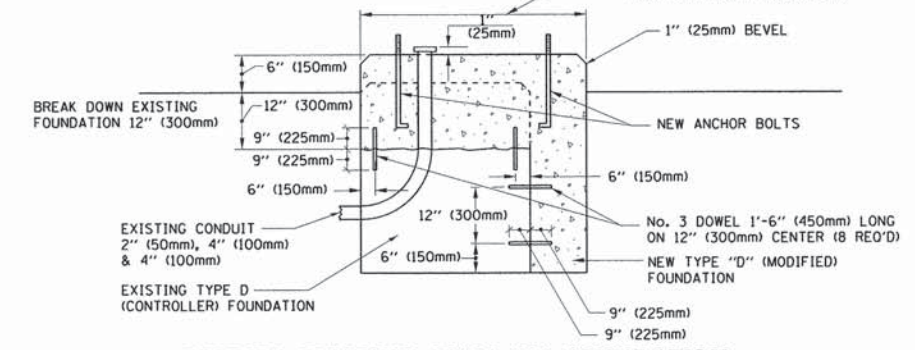
SHROUD

NOTES:

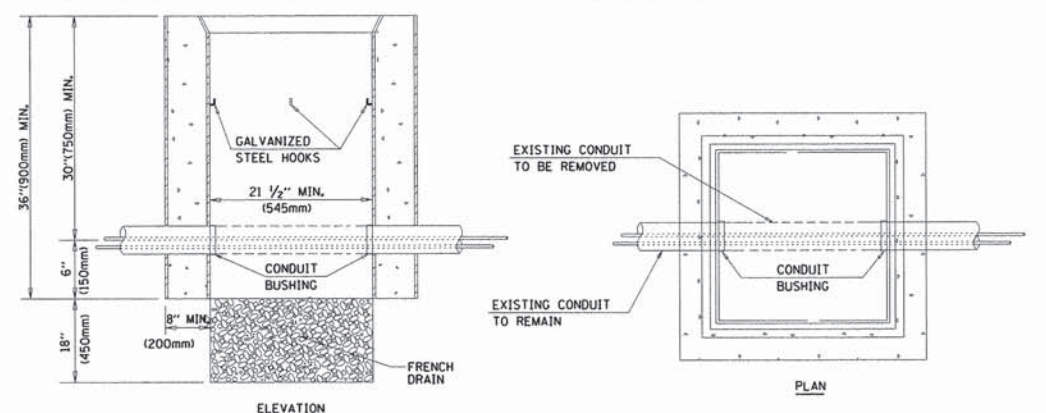
1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFY THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.

NOTE:

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



MODIFY EXISTING TYPE "D" FOUNDATION



NOTES:

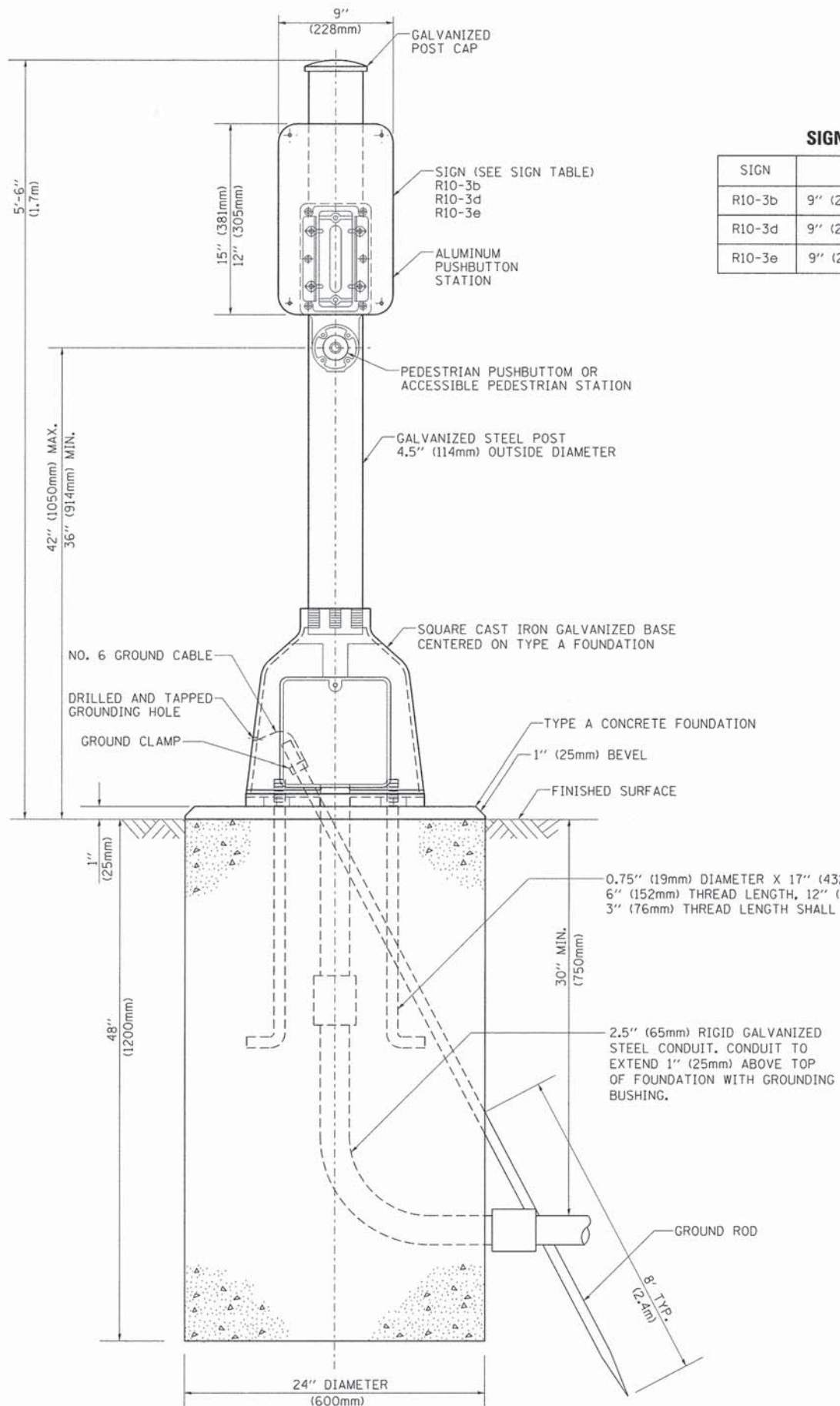
1. HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
2. REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCLUDED WITH THE COST OF THE HANDHOLE.

HANDHOLE TO INTERCEPT EXISTING CONDUIT

FILE NAME =	USER NAME = footemj	DESIGNED - DAD	REVISED - DAG 1-1-14
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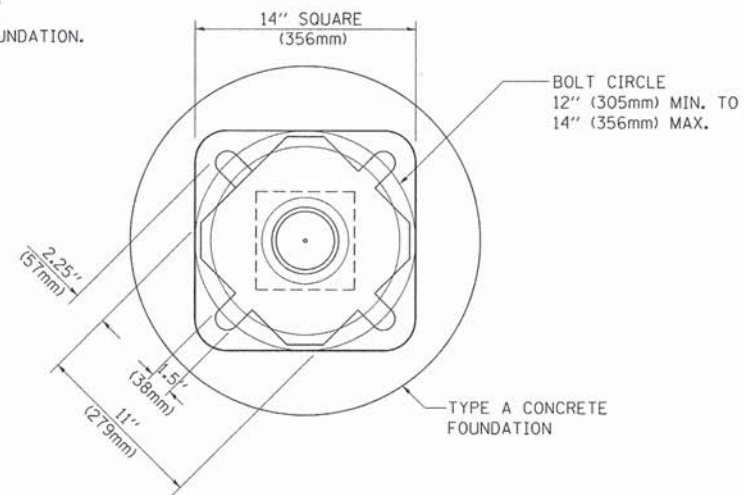
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STANDARD TRAFFIC SIGNAL DESIGN DETAILS		CH 77	13-00430-00-SP	KANE	15	14
SCALE: NONE		SHEET NO. 6 OF 7 SHEETS		STA. TO STA.	TS-05 CONTRACT NO. 61A10	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT						



SIGN TABLE

SIGN	DIMENSIONS
R10-3b	9" (228mm) X 12" (305mm)
R10-3d	9" (228mm) X 12" (305mm)
R10-3e	9" (228mm) X 15" (381mm)



BOLT PATTERN

PEDESTRIAN PUSH BUTTON POST, TYPE A

FILE NAME =	USER NAME = footemj	DESIGNED - DAG	REVISED - DAG 1-1-14
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	PLOT SCALE = 50.0000 1/ in.	CHECKED - DAD	REVISED -
	PLOT DATE = 1/13/2014	DATE - 10/1/2012	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: NONE SHEET NO. 7 OF 7 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 77	13-00430-00-SP	KANE	15	15
TS-05			CONTRACT NO. 61A10	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				