06-13-14 LETTING ITEM 226

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 77	13-00430-00-SP	KANE	15	1
	ILLINOIS	CONTRACT NO. 61A10		

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

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

PROJECT IS LOCATED IN THE CITY OF GENEVA

LOCATION OF SECTION INDICATED THUS: –

INDEX OF SHEETS

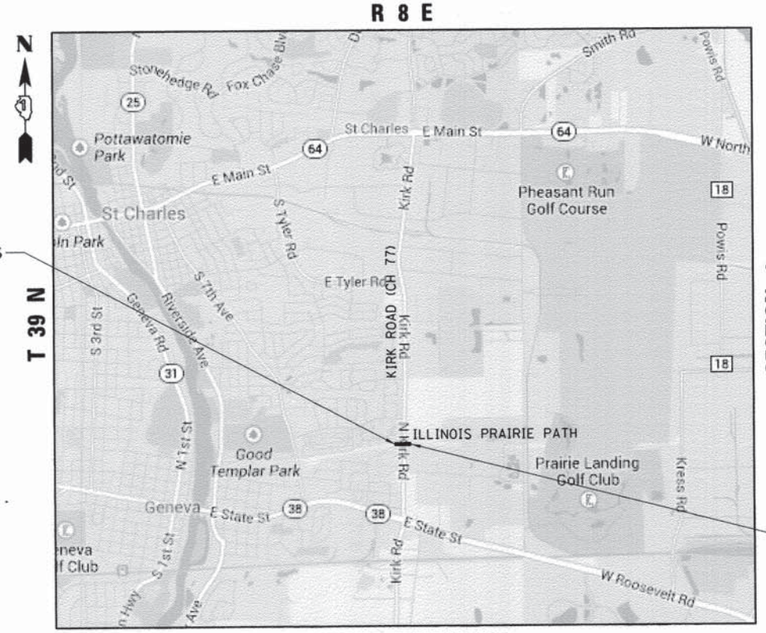
DISTRICT 1 STANDARDS

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

R 8 E



PROJECT BEGINS STA. 11+06.68

PROJECT ENDS STA. 12+03.37

T 39 N

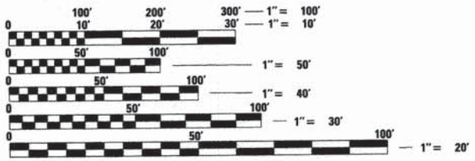
SECTION 1

GENEVA TOWNSHIP

GROSS LENGTH = 430 FEET (0.08 MILE)

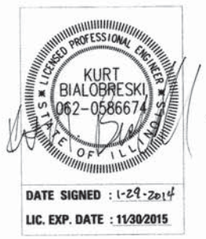
NET LENGTH = 430 FEET (0.08 MILE)

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



DATE SIGNED : 1-29-2014
LIC. EXP. DATE : 11/30/2015

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

CONTRACT NO. 61A10

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

DATE: 02/04/14

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

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Approved JANUARY 30, 2014
Kane County, County Engineer

Passed FEBRUARY 10, 2014
C.J. HOLT
District 1 Engineer of Local Roads & Streets

Releasing for Bid Based on Limited Review February 10, 2014
Deputy Director of Highways, Region 1 Engineer

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 REFFERENCE 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.

SUMMARY OF QUANTITIES

	CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY 0028
*	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	411
	81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	244
	81400100	HANDHOLE	EACH	2
	83600352	LIGHT POLE FOUNDATION, METAL, 11 1/2" BOLT CIRCLE, 8 5/8" X 6'	EACH	4
	83600355	LIGHT POLE FOUNDATION, METAL, 15" BOLT CIRCLE, 8" X 6'	EACH	1
	83800650	BREAKAWAY DEVICE, COUPLING WITH STAINLESS STEEL SCREEN	EACH	1
	86300200	CONTROLLER CABINET TYPE II	EACH	2
	87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	161
	87301804	ELECTRIC CABLE IN CONDUIT, SERVICE NO. 6 1C	FOOT	906
	87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	1030
	87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	551
	87500900	TRAFFIC SIGNAL POST, 13 FT.	EACH	4
	87900200	DRILL EXISTING HANDHOLE	EACH	1
	88800100	PEDESTRIAN PUSH-BUTTON	EACH	4
	X0323898	CLOSED CIRCUIT TELEVISION DOME CAMERA	EACH	1
	X0323906	CAMERA POLE, 45 FT	EACH	1
*	X4060110	BITUMINOUS MATERIALS (PRIME COAT)	POUND	1
*	X6061700	COMBINATION CONCRETE CURB AND GUTTER, TYPE B (SPECIAL)	FOOT	24
	X7240300	SIGN REMOVAL	EACH	2
	X8710031	FIBER OPTIC CABLE 36 FIBERS, SINGLE MODE	FOOT	43
	XX007021	PEDESTRIAN ACTIVATED CROSSWALK WARNING SYSTEM	EACH	2
	XX007953	NETWORK CONFIGURATION	L SUM	1
	XX008392	OUTDOOR RATED NETWORK CABLE	FOOT	453
	XX008453	ETHERNET SWITCH, TYPE 1	EACH	1

• SPECIALTY ITEM

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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
GENERAL NOTES

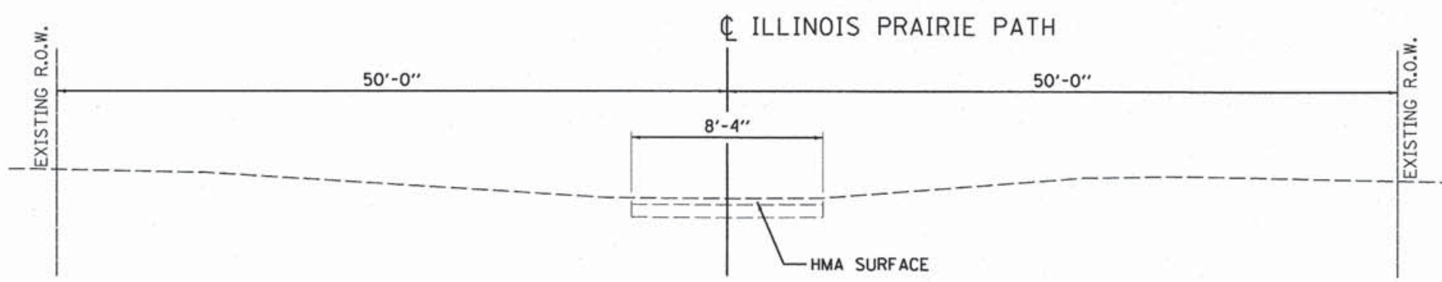
SCALE: N/A | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 77	13-00430-00-SP	KANE	15	2
		CONTRACT NO.61A10		
	ILLINOIS FED. AID PROJECT			

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)

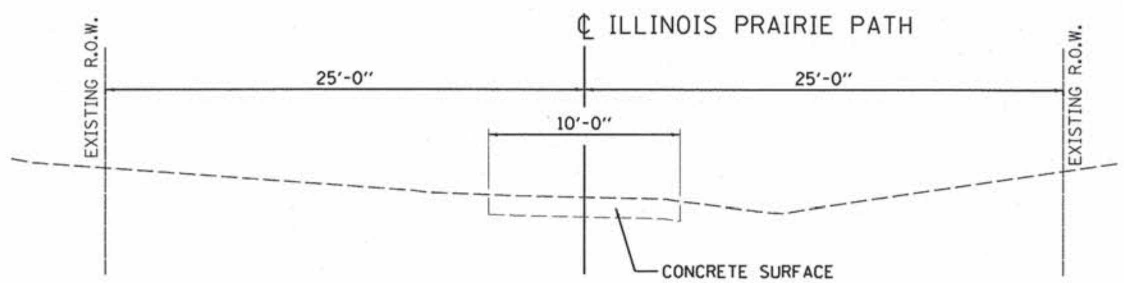
NOTE 1: THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112LB/SQ YD/IN.

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.

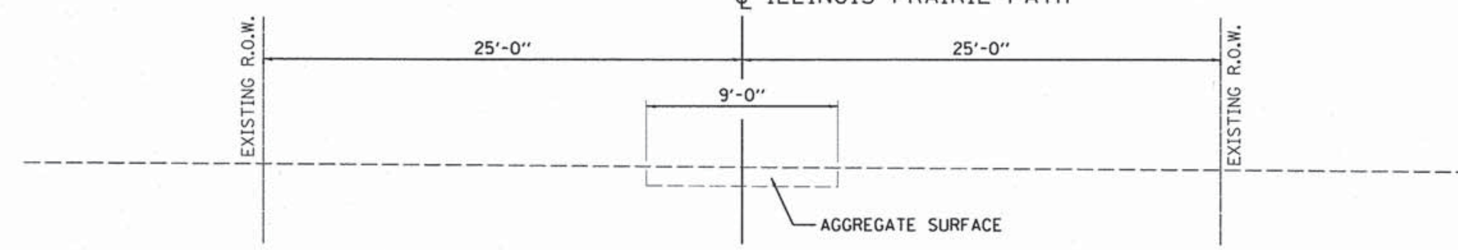


EXISTING TYPICAL SECTION
STA 10+72.47 TO STA 11+10.29

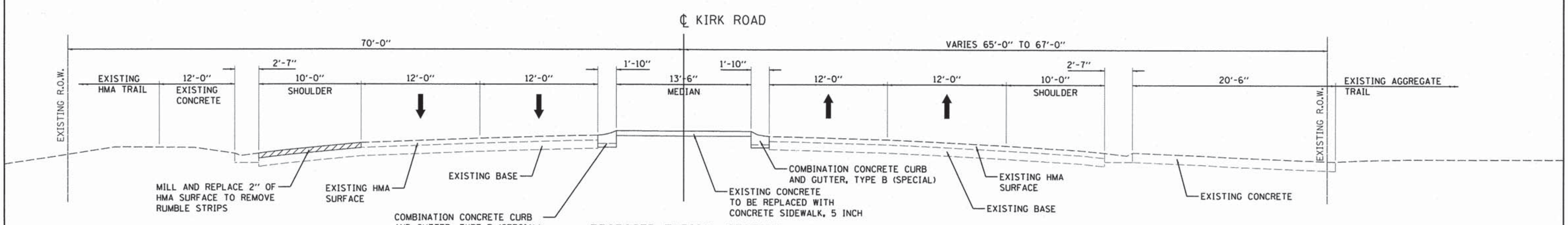
INTERSECTION OMISSION
STA 11+10.29 TO STA 12+00.36



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



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



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

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DRAWN	RLA	02/02/14
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		

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KIRK ROAD

EXISTING R.O.W.

HOT-MIX ASPHALT SURFACE REMOVAL, 2"
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50, 2"

KIRK ROAD STA 102+15.94 =
ILLINOIS PRAIRIE PATH STA 11+55.03

SIDEWALK REMOVAL
PORTLAND CONCRETE
CEMENT SIDEWALK, 5 INCH

SIDEWALK REMOVAL
PORTLAND CONCRETE
CEMENT SIDEWALK, 5 INCH

DETECTABLE WARNINGS
2'x10' (TYP.)

SIDEWALK REMOVAL
PORTLAND CONCRETE
CEMENT SIDEWALK, 5 INCH

ILLINOIS
PRAIRIE
PATH

ILLINOIS
PRAIRIE PATH

COMBINATION CURB AND GUTTER REMOVAL
COMBINATION CONCRETE CURB
AND GUTTER, TYPE B (SPECIAL)

85°23'45"

50.00'

8'-4"

4'-0"

12'-0"
(SEE NOTE 1)

12'-0"

12'-0"

4'-0"

10'-0"

9'-0"

25'-0"

25'-0"

10'-0" 24'-0" 13'-8" 24'-0" 10'-0"

70'-0"

VARIES 60'-0" TO 70'-0"

CTV

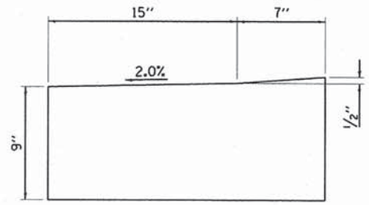
EXISTING R.O.W.

N

10 0 10 20

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 SEEDED 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:

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

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DRAWN	MGD	02/02/14
REVIEWED	RLA	02/03/14
	KNB	02/03/14

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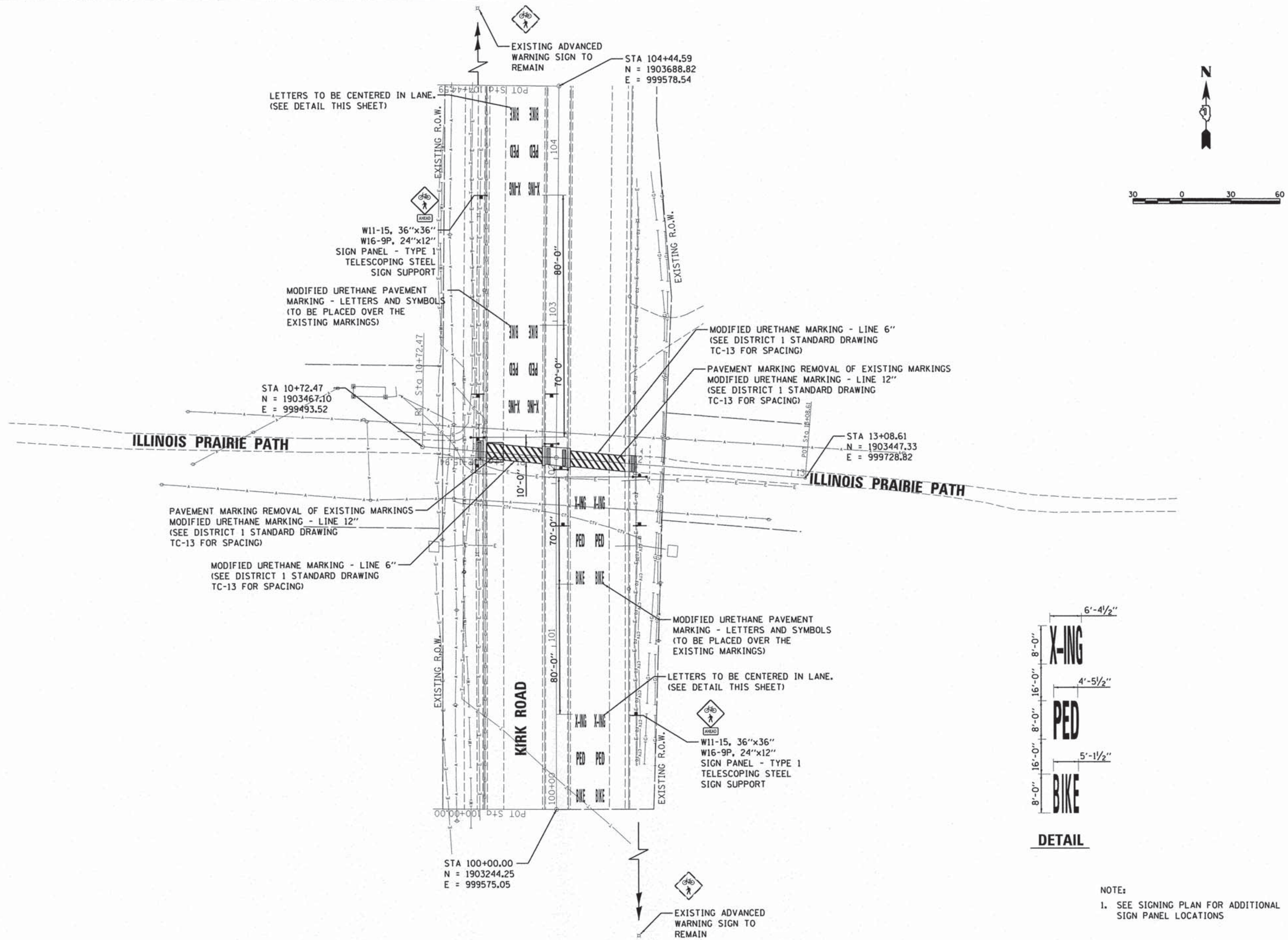
	PLOT DATE = 02\19\2014		REVISED -

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

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS PRAIRIE PATH AND KIRK ROAD
PAVEMENT MARKING AND ALIGNMENT PLAN

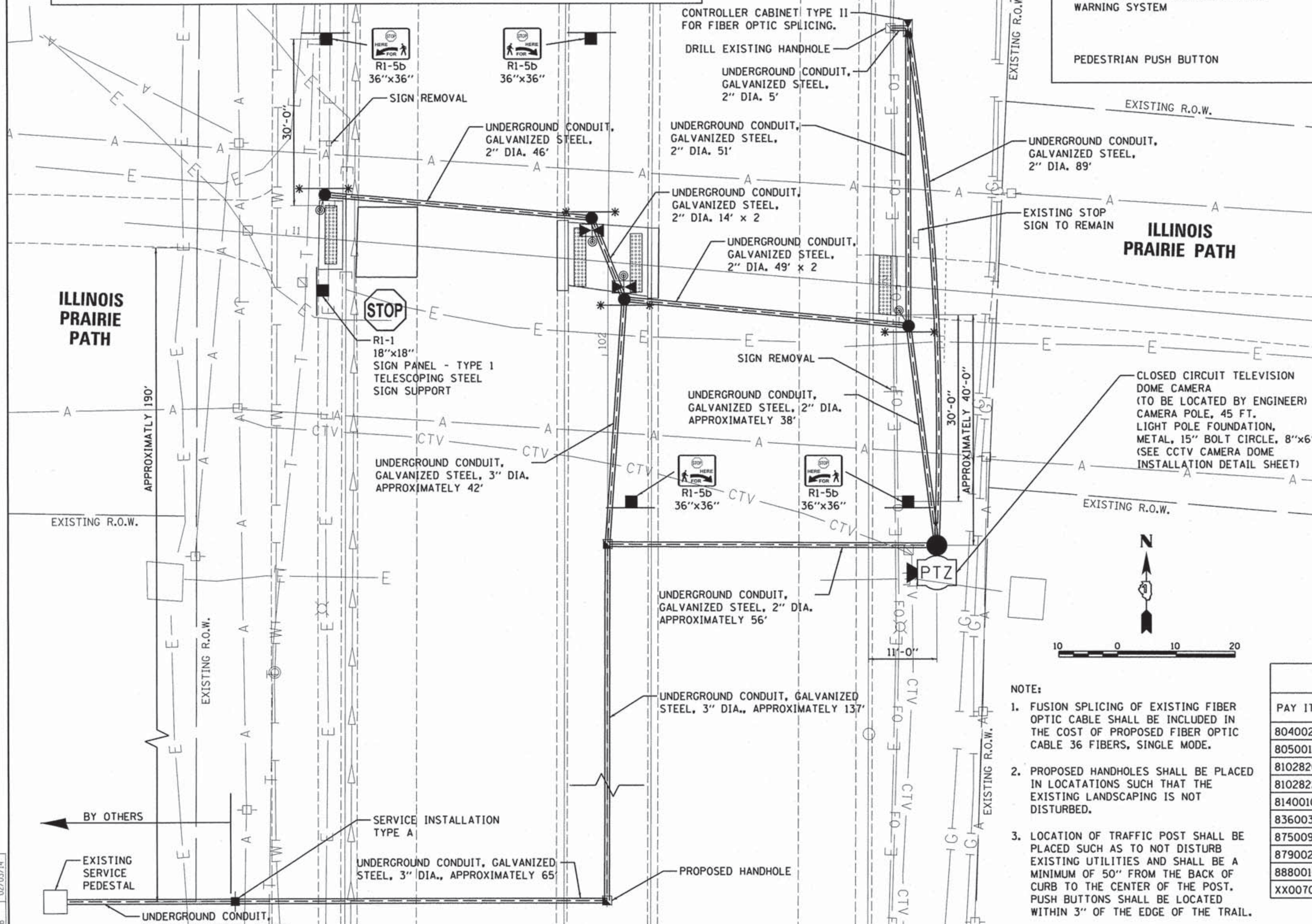
SCALE: 1"=30' | SHEET OF SHEETS | STA. TO STA.

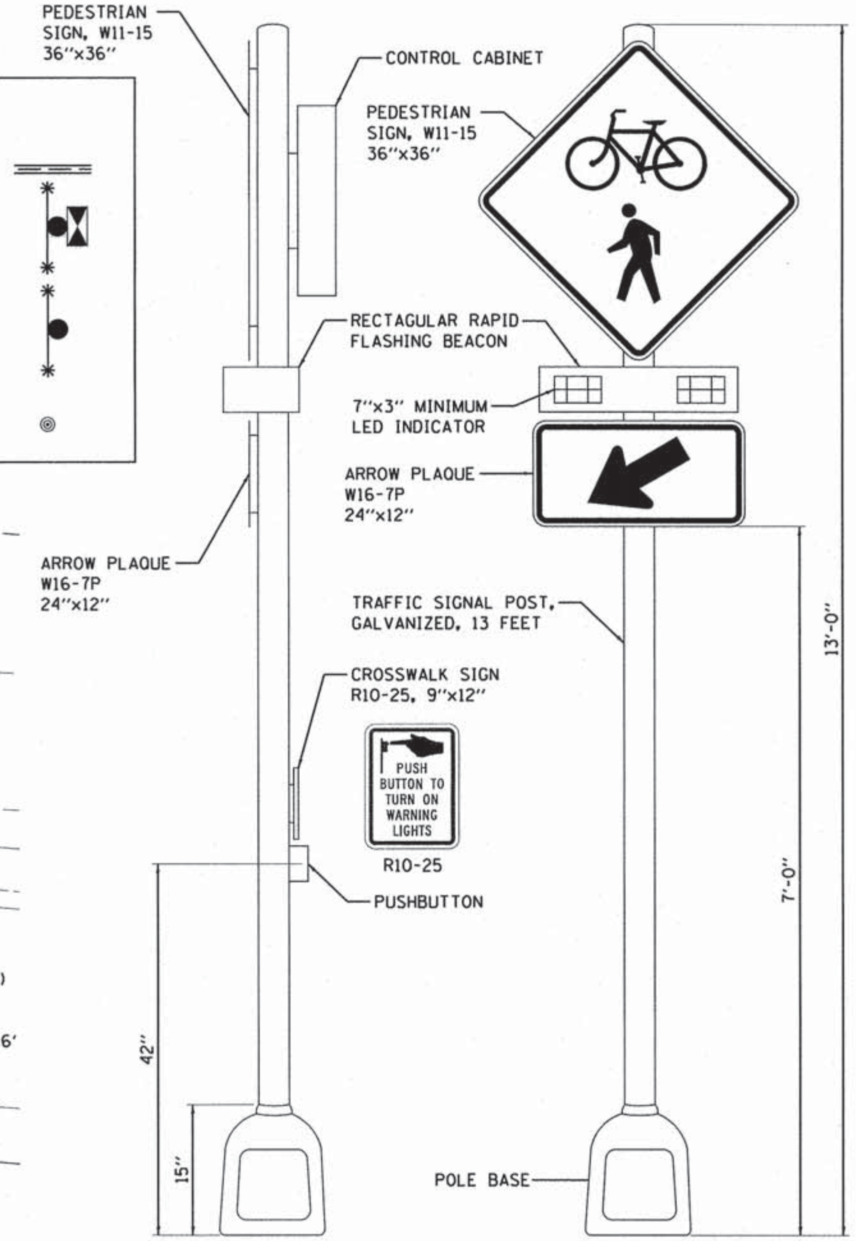
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 77	13-00430-00-SP	KANE	15	5
		CONTRACT NO.61A10		
		ILLINOIS FED. AID PROJECT		

PATTERN: DURING EACH FLASHING PERIOD ONE INDICATION SHALL EMIT TWO MEDIUM PULSES OF LIGHT WHILE THE OTHER EMITS FOUR RAPID PULSES OF LIGHT FOLLOWED BY A LONG PAUSE. 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.

PHASE SEQUENCE





PEDESTRIAN ACTIVATED CROSSWALK WARNING SYSTEM DETAIL

SCALE: N.T.S.

NOTE:

1. FUSION SPLICING OF EXISTING FIBER OPTIC CABLE SHALL BE INCLUDED IN THE COST OF PROPOSED FIBER OPTIC CABLE 36 FIBERS, SINGLE MODE.
2. PROPOSED HANDHOLES SHALL BE PLACED IN LOCATATIONS SUCH THAT THE EXISTING LANDSCAPING IS NOT DISTURBED.
3. 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	411
81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FT	244
81400100	HANDHOLE	EACH	2
83600352	LIGHT POLE FOUNDATION, METAL, 11½" BOLT CIRCLE, 8⅝"x6'	EACH	4
87500900	TRAFFIC SIGNAL POST, 13 FT.	EACH	4
87900200	DRILL EXISTING HANDHOLE	EACH	1
88800100	PEDESTRIAN PUSH-BUTTON	EACH	4
XX007021	PEDESTRIAN ACTIVATED CROSSWALK WARNING SYSTEM	EACH	2

LAYOUT MGD 01/28/14	DRAWN RLA 02/02/14	REVIEWED KNB 02/03/14	
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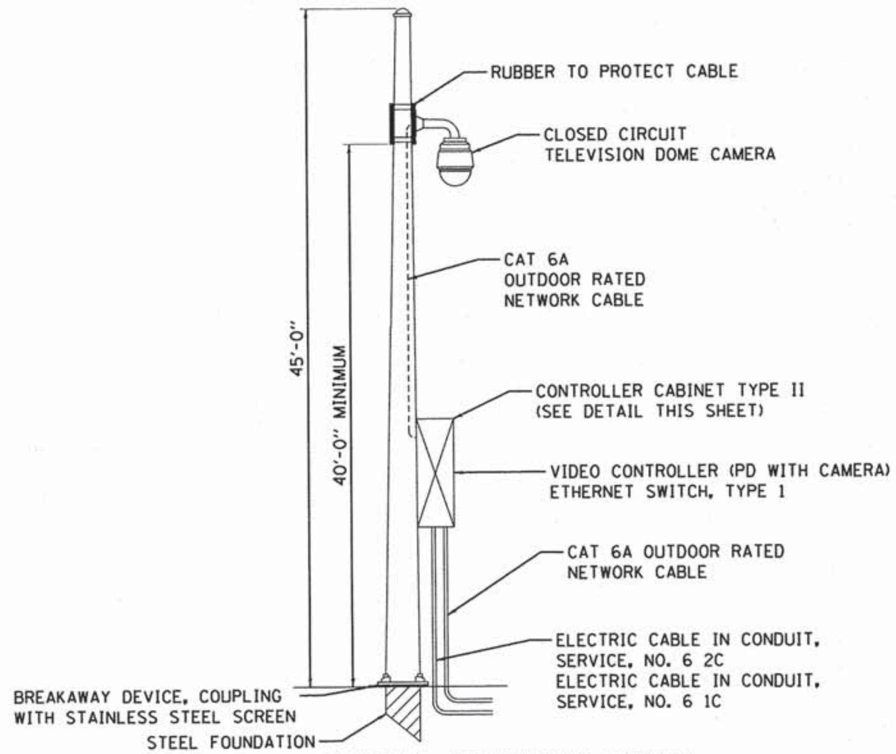
	PLOT DATE = 02\19\2014	CHECKED - KNB	REVISED -
		DATE - 02/04/2014	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

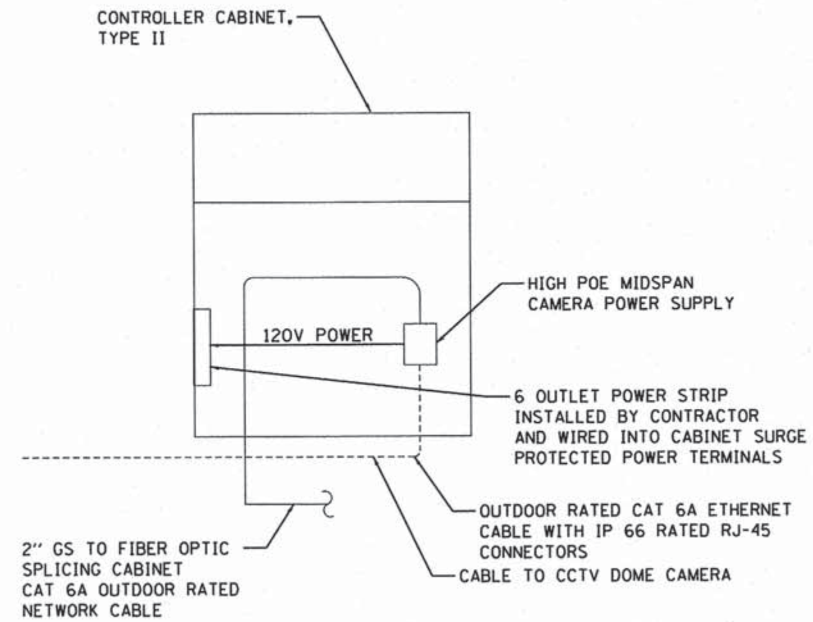
ILLINOIS PRAIRIE PATH AND KIRK ROAD SIGNING PLAN

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			

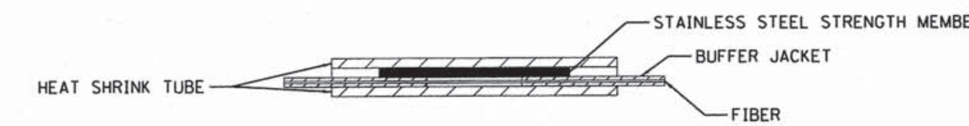


CAMERA MOUNTING DETAIL



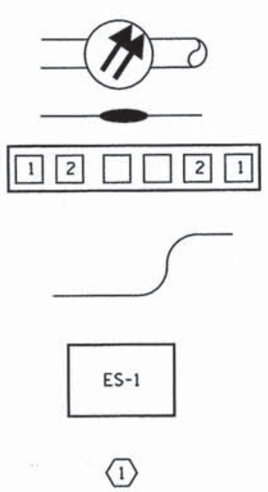
CAMERA CONTROLLER CABINET DETAIL

BILL OF MATERIALS			
PAY ITEM	ITEM	UNIT	QUANTITY
83600355	LIGHT POLE FOUNDATION, METAL, 15" BOLT CIRCLE, 8" X 6'	EACH	1
83800650	BREAKAWAY DEVICE, COUPLING WITH STAINLESS STEEL SCREEN	EACH	1
86300200	CONTROLLER CABINET TYPE II	EACH	2
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	161
87301804	ELECTRIC CABLE IN CONDUIT, SERVICE NO. 6 1C	FOOT	906
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	1030
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	551
X0323898	CLOSED CIRCUIT TELEVISION DOME CAMERA	EACH	1
X0323906	CAMERA POLE, 45 FT	EACH	1
X8710031	FIBER OPTIC CABLE 36 FIBERS, SINGLE MODE	FOOT	43
XX007953	NETWORK CONFIGURATION	LSUM	1
XX008392	OUTDOOR RATED NETWORK CABLE	FOOT	453
XX008453	ETHERNET SWITCH, TYPE 1	EACH	1



FIBER SPLICE DETAIL

LEGEND



FIBER OPTIC CABLE, BUFFER TUBE

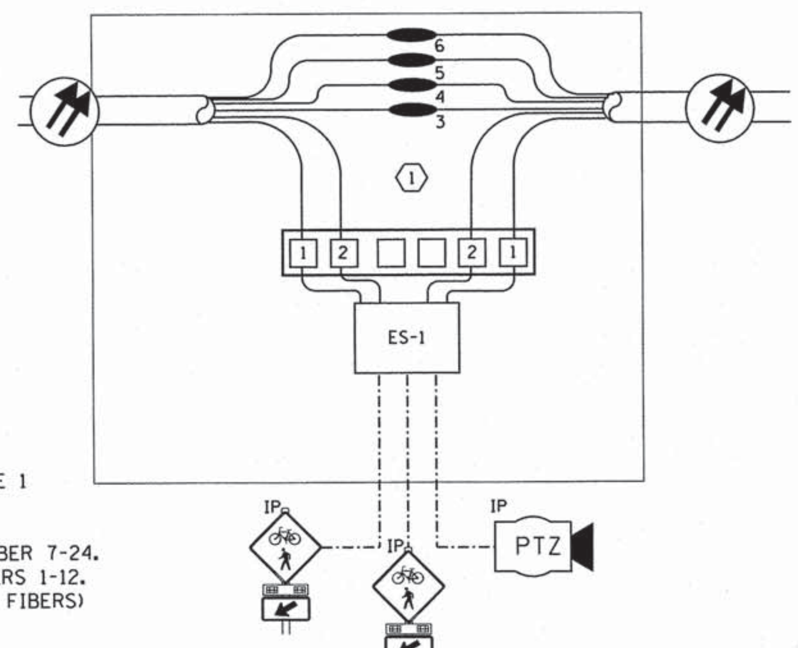
OPTICAL FIBER WITH FUSION SPLICE

FIBER OPTIC CABLE TERMINATION PANEL

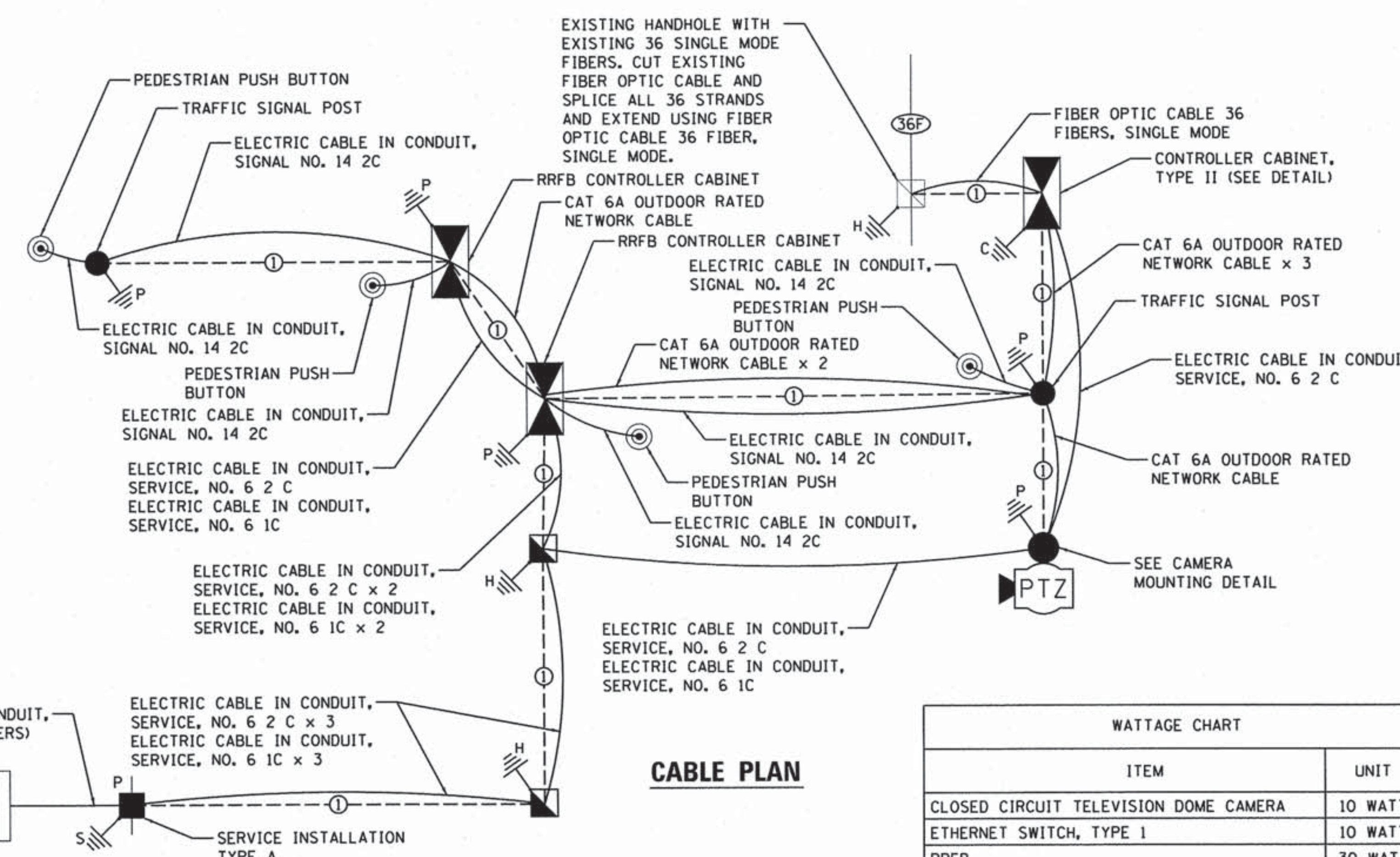
OPTICAL FIBER

ETHERNET SWITCH, TYPE 1

SPLICE THROUGH SM FIBER 7-24. DROP AND CAP SM FIBERS 1-12. (FIBER TERMINATION, 6 FIBERS)



CABINET DETAIL AND FIBER OPTIC SPLICING DETAIL



CABLE PLAN

WATTAGE CHART	
ITEM	UNIT
CLOSED CIRCUIT TELEVISION DOME CAMERA	10 WATT
ETHERNET SWITCH, TYPE 1	10 WATT
RRFB	30 WATT

NOTES:

1. THE CONTRACTOR/VENDOR WILL BE RESPONSIBLE FOR PROGRAMING THE CCTV CAMERAS PRIOR TO INSTALLATION.
2. THE CONTRACTOR/VENDOR WILL INSPECT AND TEST THE CAT 6 ETHERNET CABLE PRIOR TO INSTALLATION.
3. THE CONTRACTOR/VENDOR WILL CONNECT THE PROPOSED CCTV CAMERAS TO THE ITS NETWORK AND INTEGRATE THEM INTO THE EXISTING ITS VIDEO SUBSYSTEM.
4. THE CONTRACTOR SHALL FURNISH AND INSTALL A POWER STRIP WITH INTEGRAL SURGE SUPPRESSION IN EACH TRAFFIC SIGNAL CABINET FOR CAMERA POWER. THIS WORK SHALL BE INCLUDED IN THE BID PRICE FOR THE CCTV DOME CAMERA.
5. TERMINATE SINGLE MODE FIBERS WITH ST CONNECTIONS.
6. ITS EQUIPMENT TO BE MOUNTED ON THE SIDE OF THE CONTROLLER CABINET.
7. THE COUNTY'S FIBER SYSTEM SHALL ONLY BE DISCONNECTED FOR THE TIME IT TAKES TO CONNECT THE NEW EQUIPMENT TO THE ATMS. THE WORK SHALL BE SCHEDULED IN SUCH A WAY THAT THE WORK CAN BE COMPLETED IN ONE WORK DAY.

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

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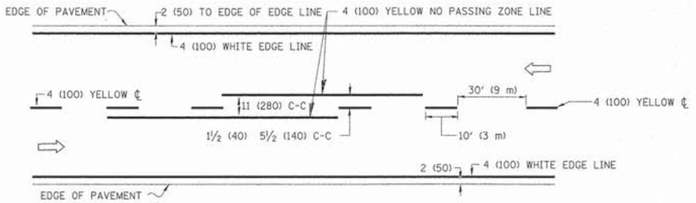
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

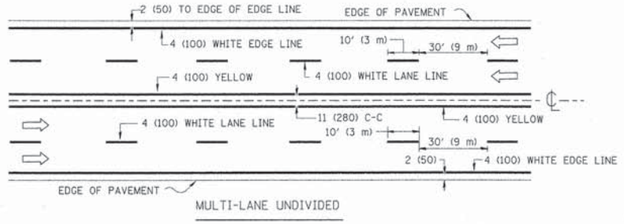
ILLINOIS PRAIRIE PATH AND KIRK ROAD
CCTV DOME CAMERA INSTALLATION DETAIL

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

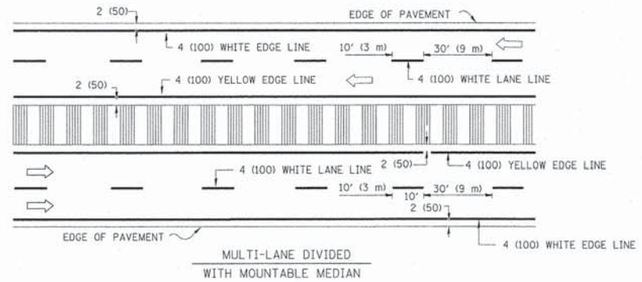
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 77	13-00430-00-SP	KANE	15	7
		CONTRACT NO.61A10		
		ILLINOIS FED. AID PROJECT		



2-LANE ROADWAY



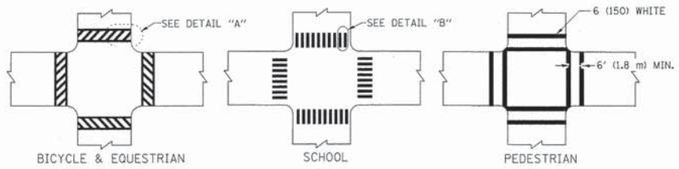
MULTI-LANE UNDIVIDED

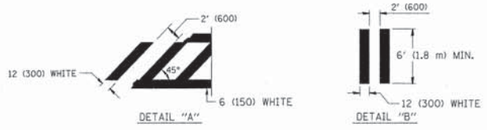


MULTI-LANE DIVIDED
WITH MOUNTABLE MEDIAN

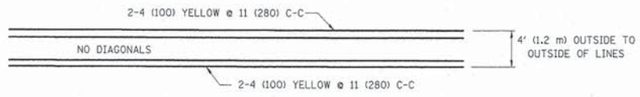
NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING

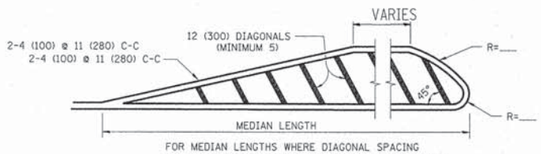




TYPICAL CROSSWALK MARKING



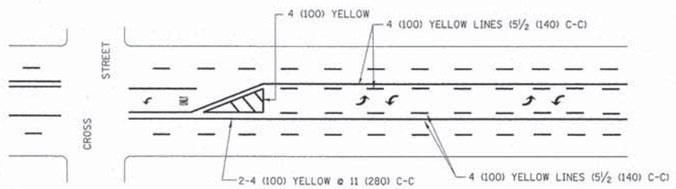
4' (1.2 m) WIDE MEDIANS ONLY



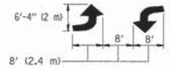
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

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

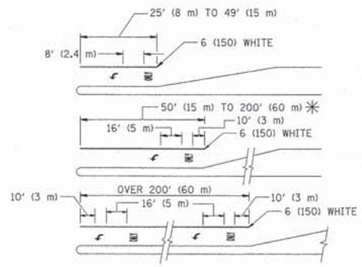


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

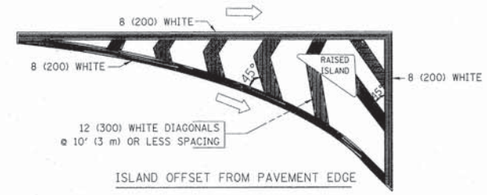


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
↰ AREA = 15.6 SQ. FT. (1.5 m^2) **ONLY** AREA = 20.8 SQ. FT. (1.9 m^2)

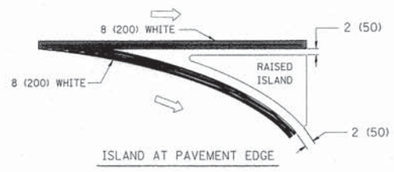
✳ TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

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 ø 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 ø 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 ø 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 ø 6 (150) 12 (300) ø 45° 12 (300) ø 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 ø 4 (100) WITH 12 (300) DIAGONALS ø 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 ø 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 m^2) EACH "X"=54.0 SQ. FT. (5.0 m^2)
SHOULDER DIAGONALS	12 (300) ø 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.

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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
CONTROLLER CABINET	R		
RAILROAD CONTROL CABINET			
COMMUNICATIONS CABINET	R CC	CC	CC
MASTER CONTROLLER		EMC	MC
MASTER MASTER CONTROLLER		EMMC	MMC
UNINTERRUPTABLE POWER SUPPLY	R UPS	EUPS	UPS
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT	R	P	P
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT	R T	P T	P T
STEEL MAST ARM ASSEMBLY AND POLE	R		
ALUMINUM MAST ARM ASSEMBLY AND POLE	R		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE	R		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA	R PTZ	PTZ	PTZ
SIGNAL POST	R		
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM	R		
GUY WIRE	R		
SIGNAL HEAD	R		
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)			2
SIGNAL HEAD WITH BACKPLATE	R		
SIGNAL HEAD OPTICALLY PROGRAMMED	R "P"	"P"	"P"
FLASHER INSTALLATION (S DENOTES SOLAR POWER)	R "F"	"F"	"F"
PEDESTRIAN SIGNAL HEAD	R		
PEDESTRIAN PUSHBUTTON DETECTOR	R		
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR	R APS	APS	APS
ILLUMINATED SIGN "NO LEFT TURN"	R		
ILLUMINATED SIGN "NO RIGHT TURN"	R		
DETECTOR LOOP, TYPE I			
PREFORMED DETECTOR LOOP		P	P
MICROWAVE VEHICLE SENSOR	R M	M	M
VIDEO DETECTION CAMERA	R V	V	V
VIDEO DETECTION ZONE			
PAN, TILT, ZOOM CAMERA	R PTZ	PTZ	PTZ
WIRELESS DETECTOR SENSOR	R W	W	W
WIRELESS ACCESS POINT	R		

ITEM	REMOVAL	EXISTING	PROPOSED
EMERGENCY VEHICLE LIGHT DETECTOR	R		
CONFIRMATION BEACON	R		
HANDHOLE	R		
HEAVY DUTY HANDHOLE	R H	H	H
DOUBLE HANDHOLE	R		
JUNCTION BOX	R		
UNDERGROUND CONDUIT, GALVANIZED STEEL (UC)			
TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE	R		
COMMON TRENCH			CT
COILABLE NONMETALLIC CONDUIT (EMPTY)			CNC
SYSTEM ITEM		S	S
INTERSECTION ITEM		I	IP
REMOVE ITEM	R		
RELOCATE ITEM	RL		
ABANDON ITEM	A		
12" (300mm) TRAFFIC SIGNAL SECTION		R	R
12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE		R Y G	
SIGNAL FACE		R Y G ◄Y ◄G	R Y G ◄Y ◄G
SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD "RB" INDICATES REFLECTIVE BACKPLATE		R Y G ◄Y ◄G "P"	R Y G ◄Y ◄G "P"
12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL		DW W	
12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED			
12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID			
PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER		C D	C D
RADIO INTERCONNECT	R		
RADIO REPEATER	R ERR	ERR	RR
DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED		5	5
GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)		1	1

ITEM	REMOVAL	EXISTING	PROPOSED
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE		1	1
COAXIAL CABLE		C	C
VENDOR CABLE FOR CAMERA		V	V
COPPER INTERCONNECT CABLE, NO. 18 3 PAIR TWISTED, SHIELDED		6	6
FIBER OPTIC CABLE NO. 62.5/125, MM12F		12F	
FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F		24F	24F
FIBER OPTIC CABLE NO. 62.5/125, MM12F SM24F		36F	36F
GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE		C	C
CONTROLLER CABINET AND FOUNDATION TO BE REMOVED	RCF		
STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED	RMF		
ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED	RMF		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED	RMF		
SIGNAL POST AND FOUNDATION TO BE REMOVED	RPF		
INTERSECTION & SAMPLING (SYSTEM) DETECTOR		IS	IS
SAMPLING (SYSTEM) DETECTOR		S	S
QUEUE DETECTOR		Q	Q
PREFORMED QUEUE DETECTOR		PQ	PQ
PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR		PIS	PIS
PREFORMED SAMPLING (SYSTEM) DETECTOR		PS	PS

RAILROAD SYMBOLS

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

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	PLOT DATE = 1/13/2014	CHECKED - DAD	REVISED -
		DATE - 10-28-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 1 OF 7 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 77	13-00430-00-SP	KANE	15	9
	TS-05	CONTRACT NO.61A10		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.

2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.

3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.

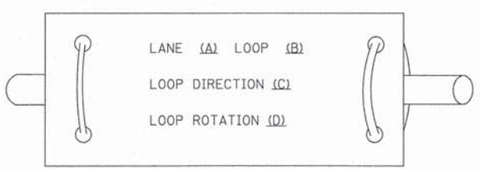
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.

6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.

7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

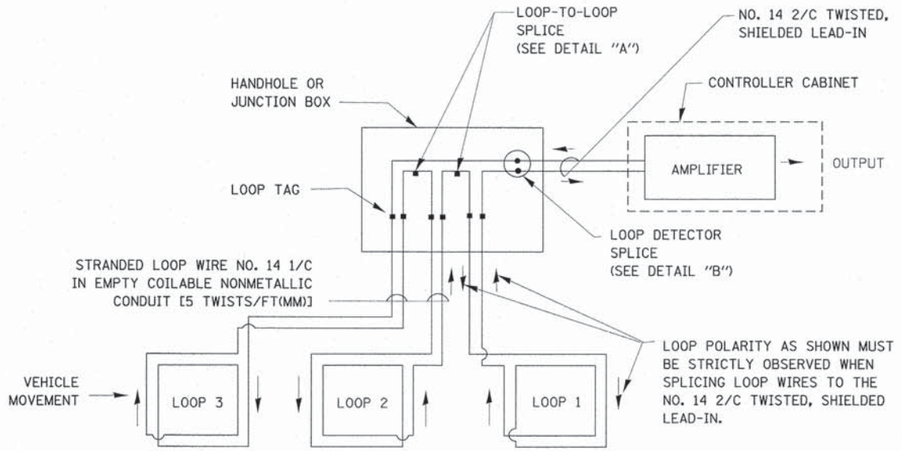


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

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

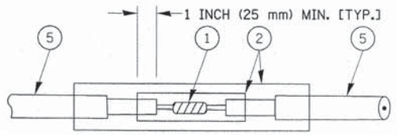
C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

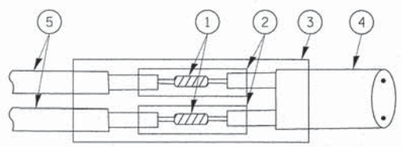


DETECTOR LOOP WIRING SCHEMATIC

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

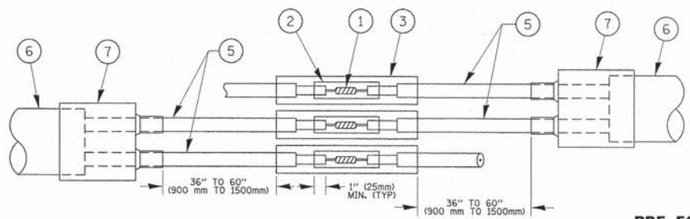


DETAIL "A"
LOOP-TO-LOOP SPLICE



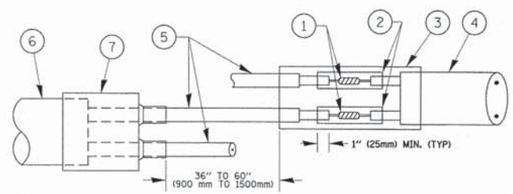
DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A"
LOOP-TO-LOOP SPLICE

PRE-FORMED LOOP



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. 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 LENGHT 6" (150 mm), UNDERWATER GRADE.

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

(5) LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

(6) PRE-FORMED LOOP

(7) XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

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		DRAWN - BCK	REVISED -
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	PLOT DATE = 1/13/2014	DATE - 10-28-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

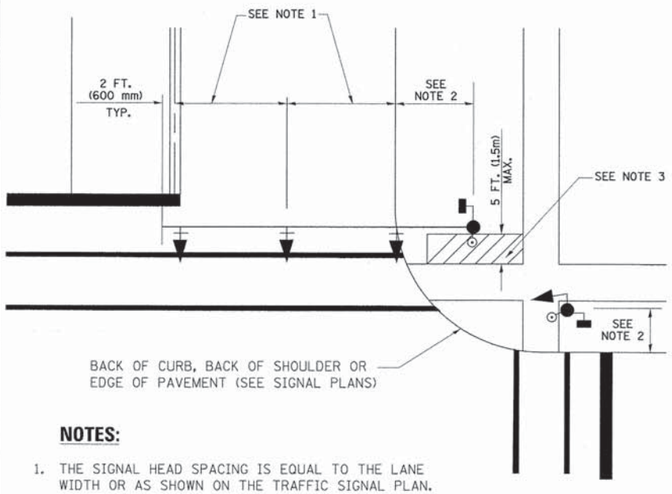
DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 2 OF 7 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 77	13-00430-00-SP	KANE	15	10
	TS-05	CONTRACT NO.61A10		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

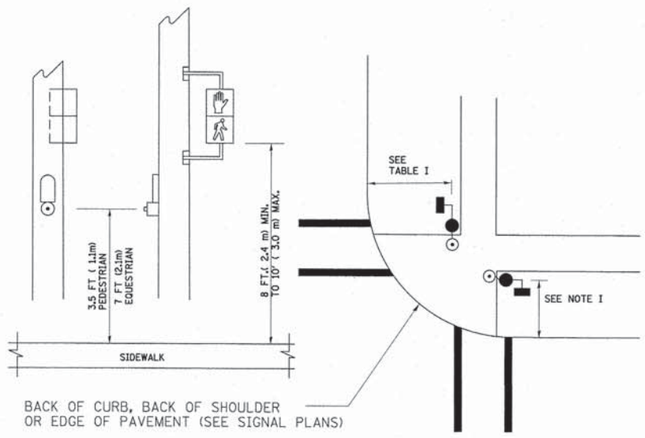
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



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."

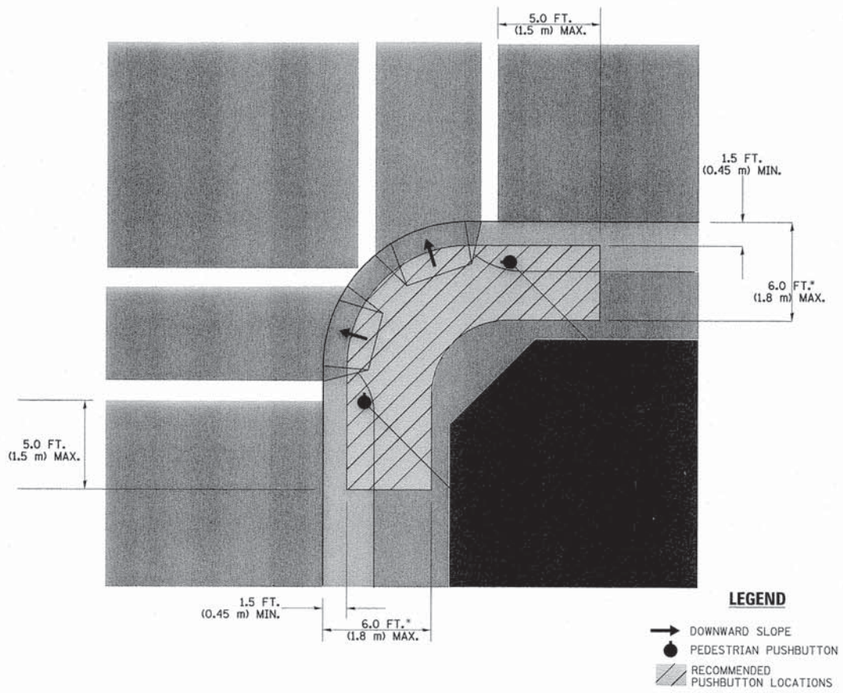
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



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



* 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 TOTHE 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.

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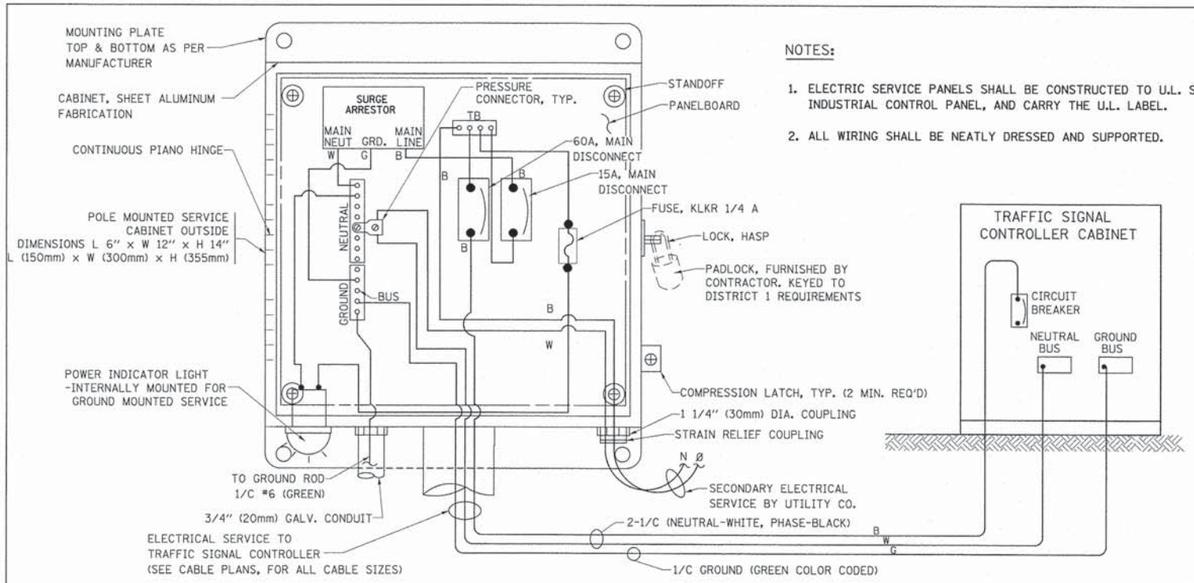
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 3 OF 7 SHEETS | STA. | TO STA.

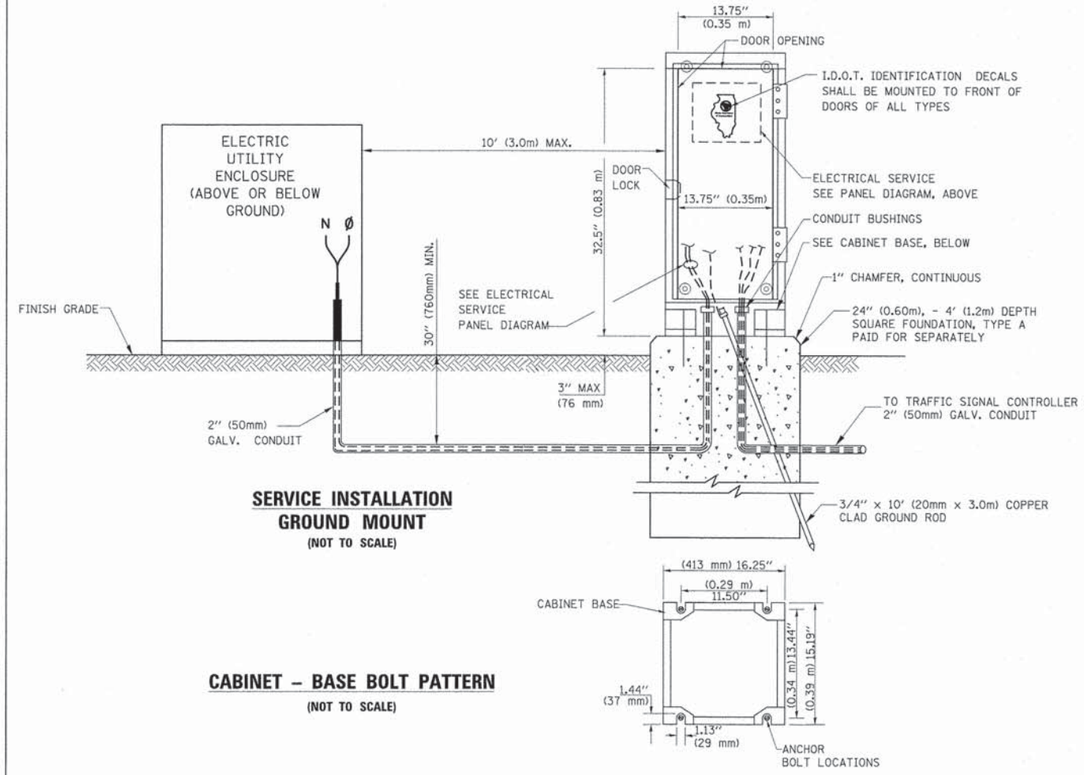
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 77	13-00430-00-SP	KANE	15	11
	TS-05	CONTRACT NO.61A10		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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

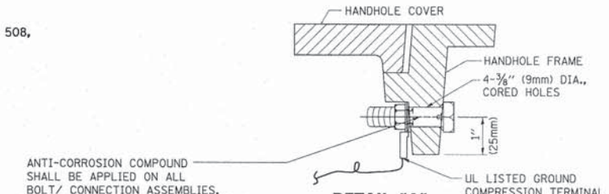
NOTES:

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.

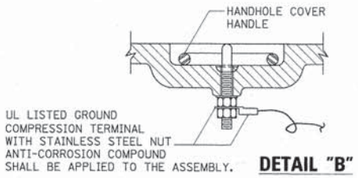


SERVICE INSTALLATION GROUND MOUNT
(NOT TO SCALE)

CABINET – BASE BOLT PATTERN
(NOT TO SCALE)



DETAIL "A"



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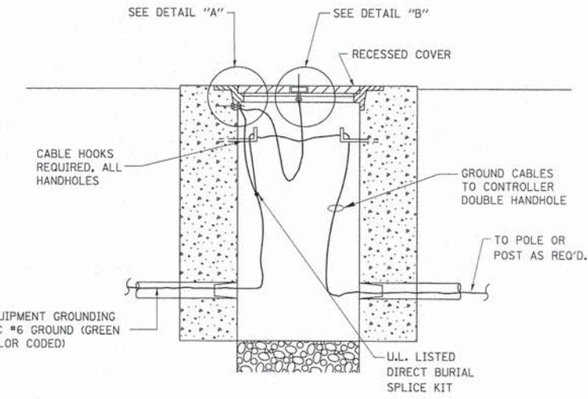
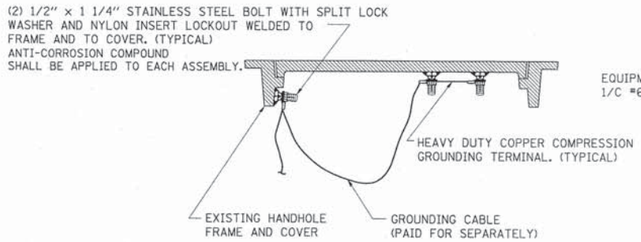


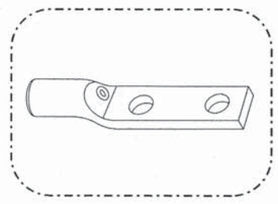
HANDHOLE COVER & FRAME – GROUNDING DETAIL
(NOT TO SCALE)



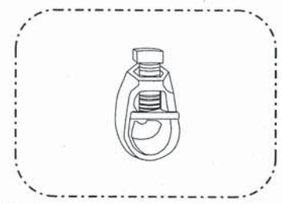
EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL
(NOT TO SCALE)

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.



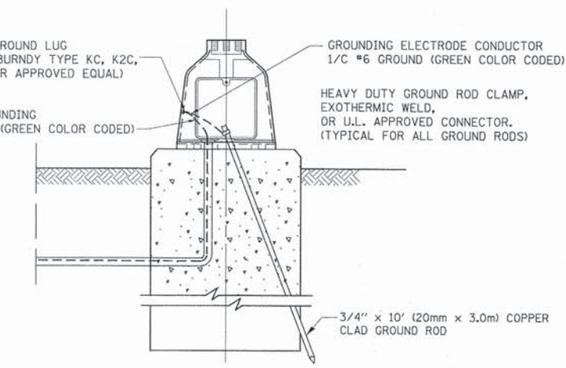
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



¾" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EQUAL)

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)

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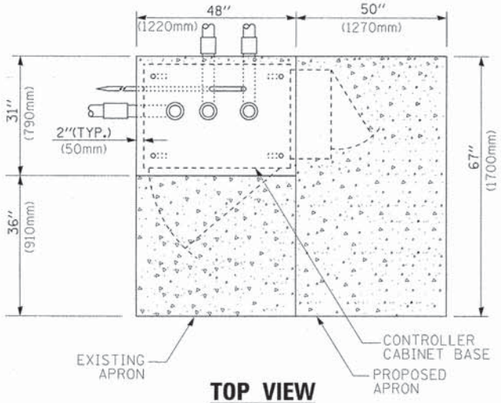
		DATE - 10-28-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

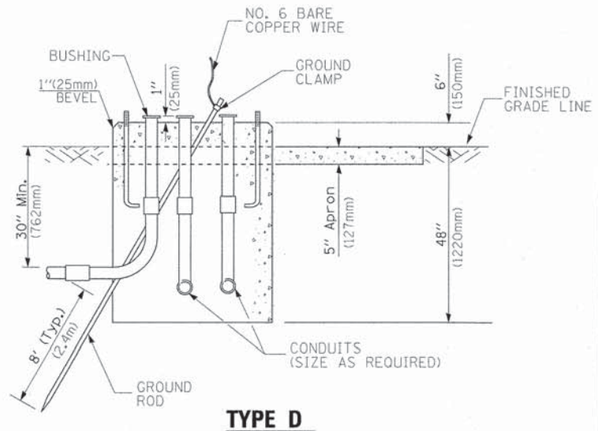
DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 4 OF 7 SHEETS | STA. | TO STA.

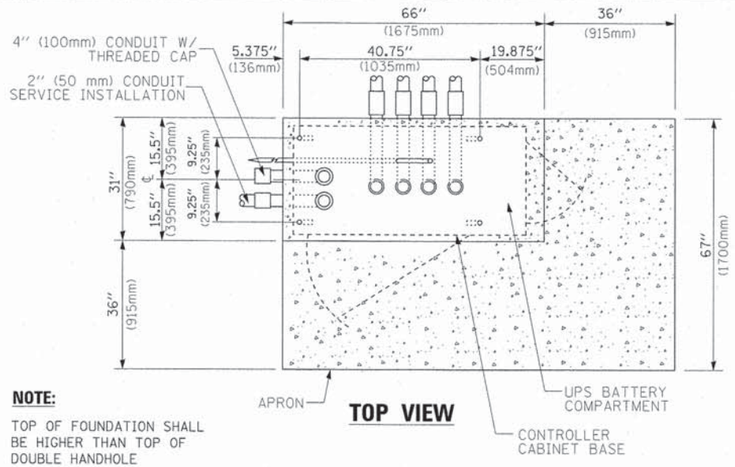
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 77	13-00430-00-SP	KANE	15	12
	TS-05	CONTRACT NO. 61A10		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



TOP VIEW



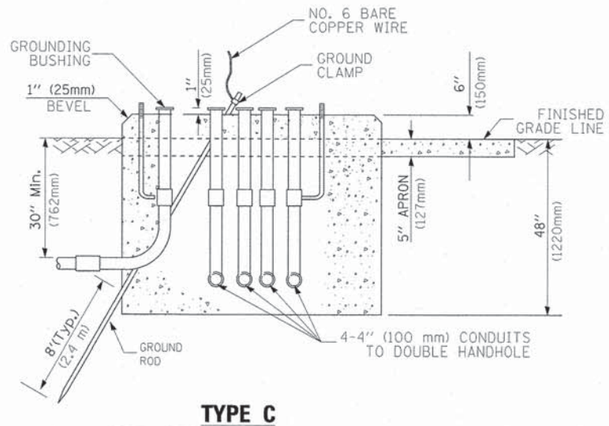
TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET



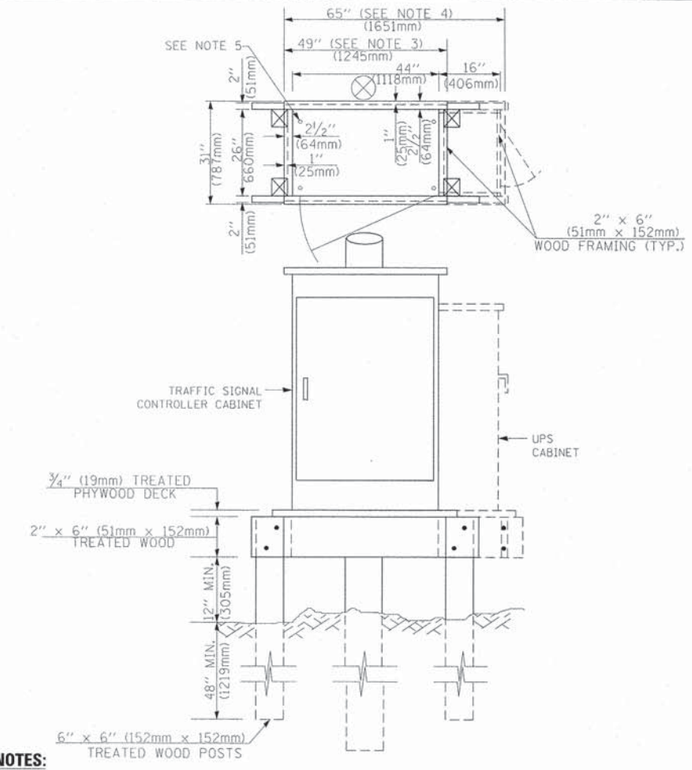
TOP VIEW

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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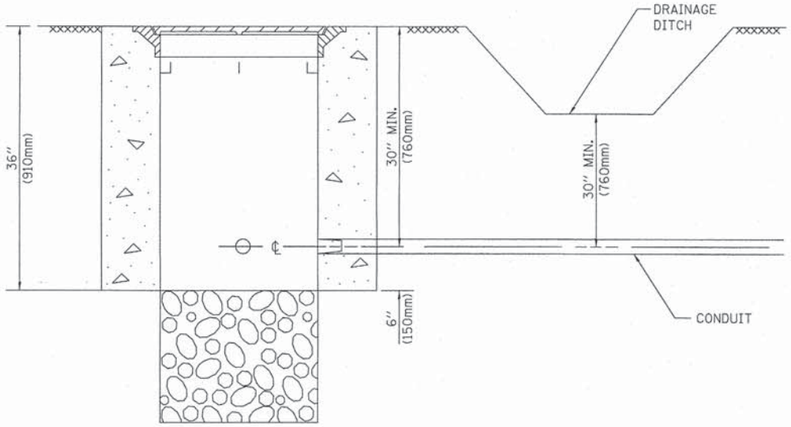
		DRAWN - BCK	REVISED -
	PLOT SCALE = 50.0000 ' / in.	CHECKED - DAD	REVISED -
	PLOT DATE = 1/13/2014	DATE - 10-28-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 5 OF 7 SHEETS | STA. | TO STA.

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

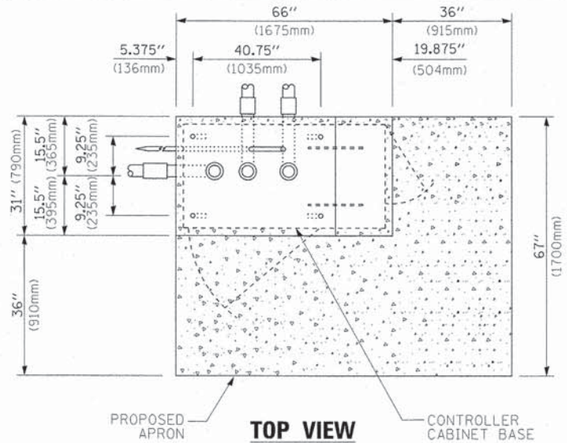


NOTES:

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.

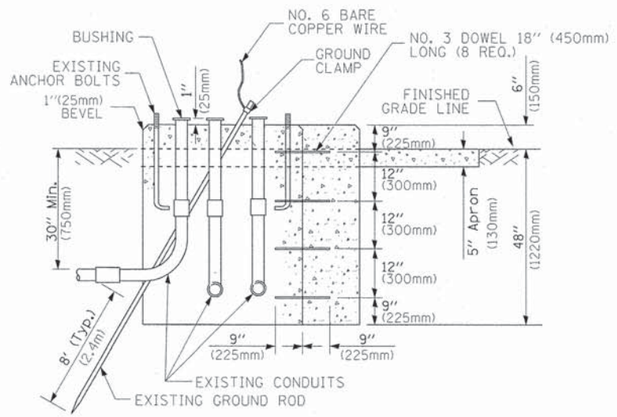
HANDHOLE WITH MINIMUM CONDUIT DEPTH

(NOT TO SCALE)



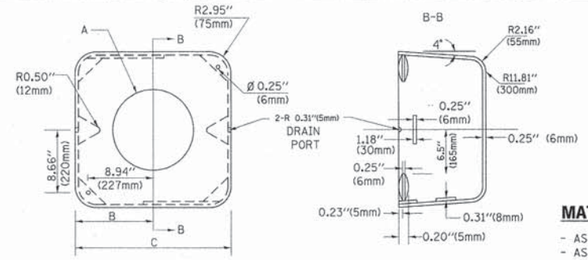
TOP VIEW

(NOT TO SCALE)



MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION

(NOT TO SCALE)



MATERIAL:

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

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

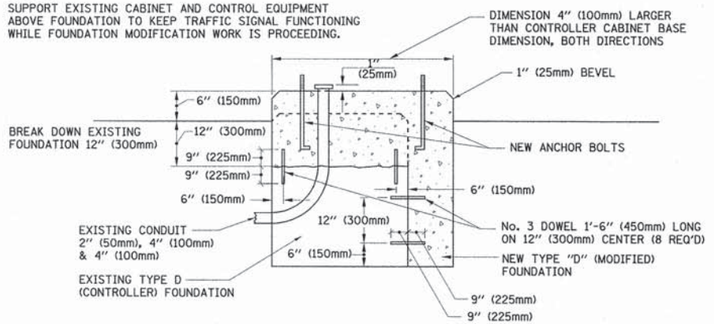
SHROUD

NOTES:

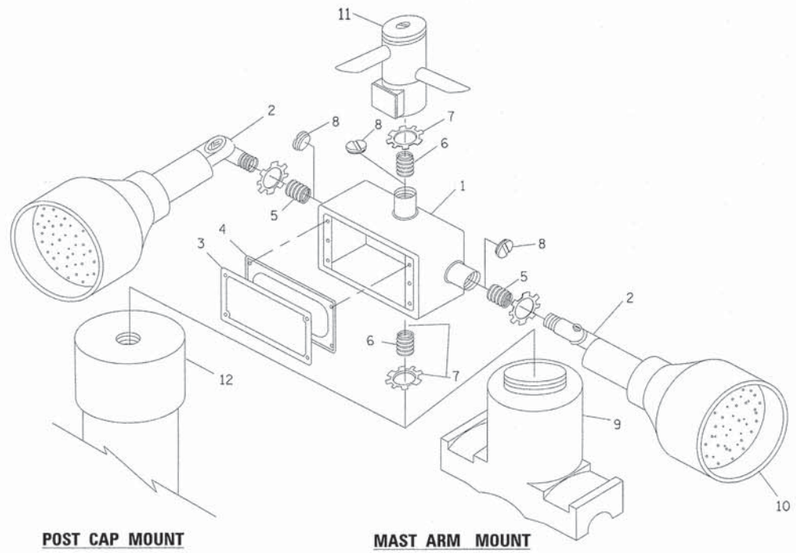
1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFIED THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE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



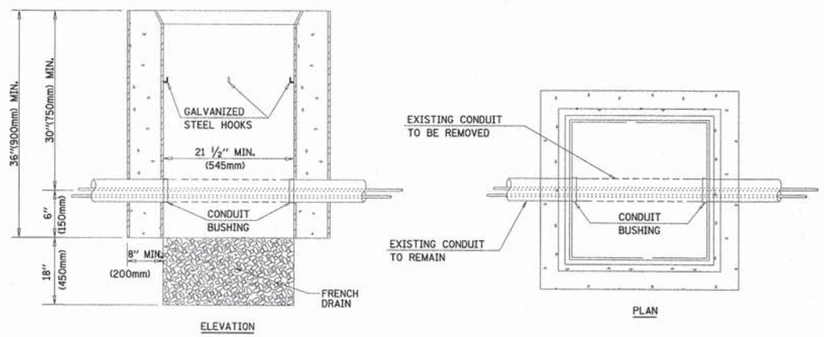
POST CAP MOUNT **MAST ARM MOUNT**

EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

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

NOTES:

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



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

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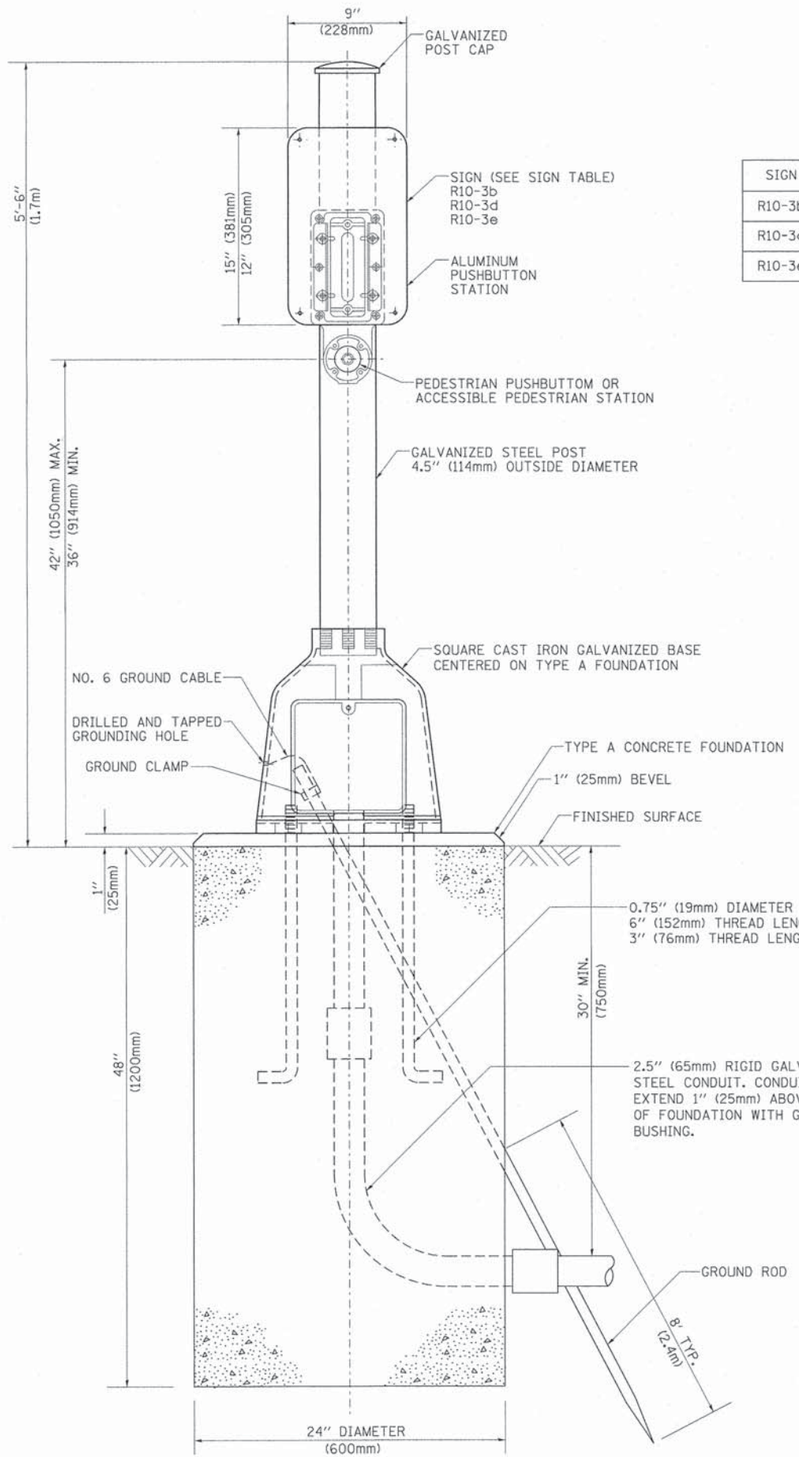
		DRAWN - BCK	REVISED -
	PLOT SCALE = 50.0000 ' / in.	CHECKED - DAD	REVISED -
	PLOT DATE = 1/13/2014	DATE - 10-28-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

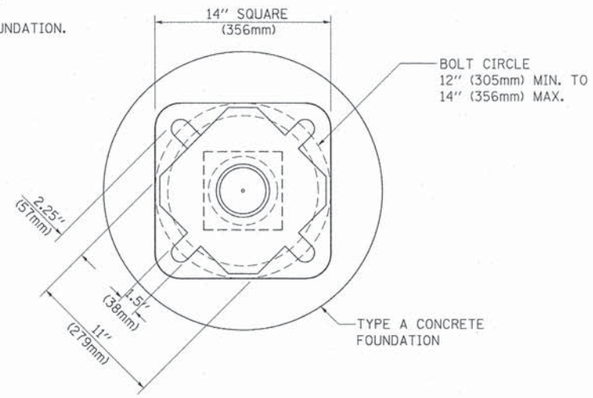
SCALE: NONE | SHEET NO. 6 OF 7 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 77	13-00430-00-SP	KANE	15	14
	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

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		DRAWN - GND	REVISED -					CH 77	13-00430-00-SP	KANE	15	15
	PLOT SCALE = 50.0000 ' / in.	CHECKED - DAD	REVISED -						TS-05	CONTRACT NO.61A10		
	PLOT DATE = 1/13/2014	DATE - 10/1/2012	REVISED -		SCALE: NONE	SHEET NO. 7 OF 7 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		