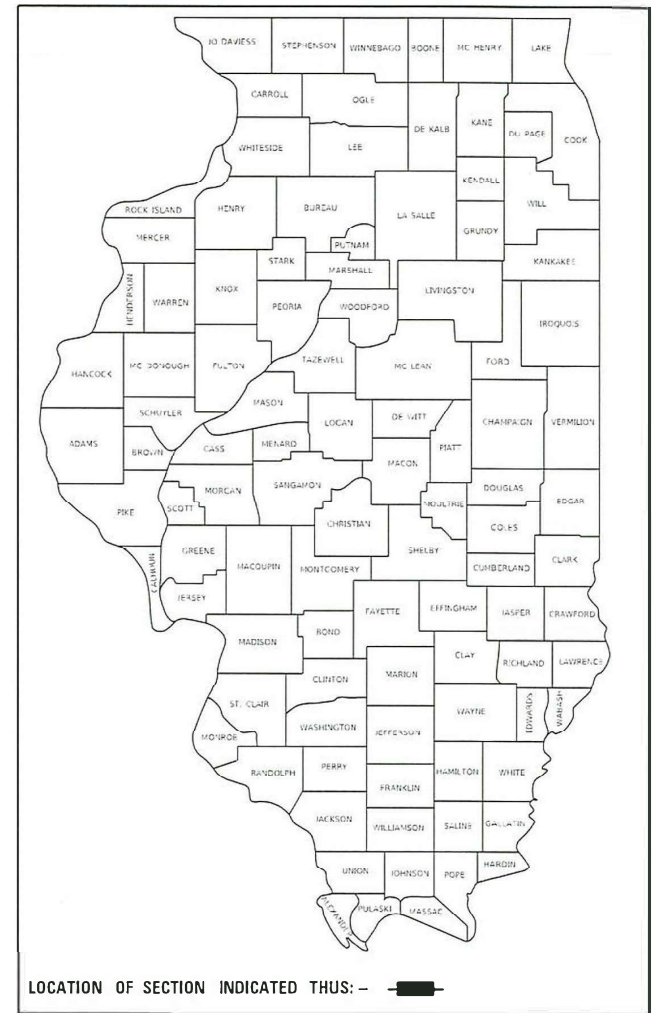


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		ILLINOIS	5	1
** VARIOUS		CONTRACT NO. 74A48		

D7 ELECTRICAL REPAIRS 2021-1

D-97-079-21



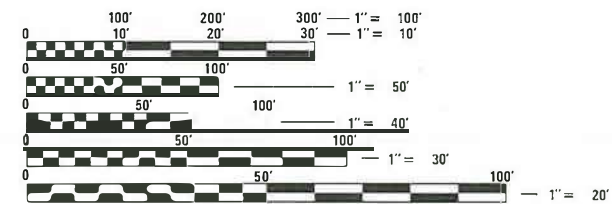
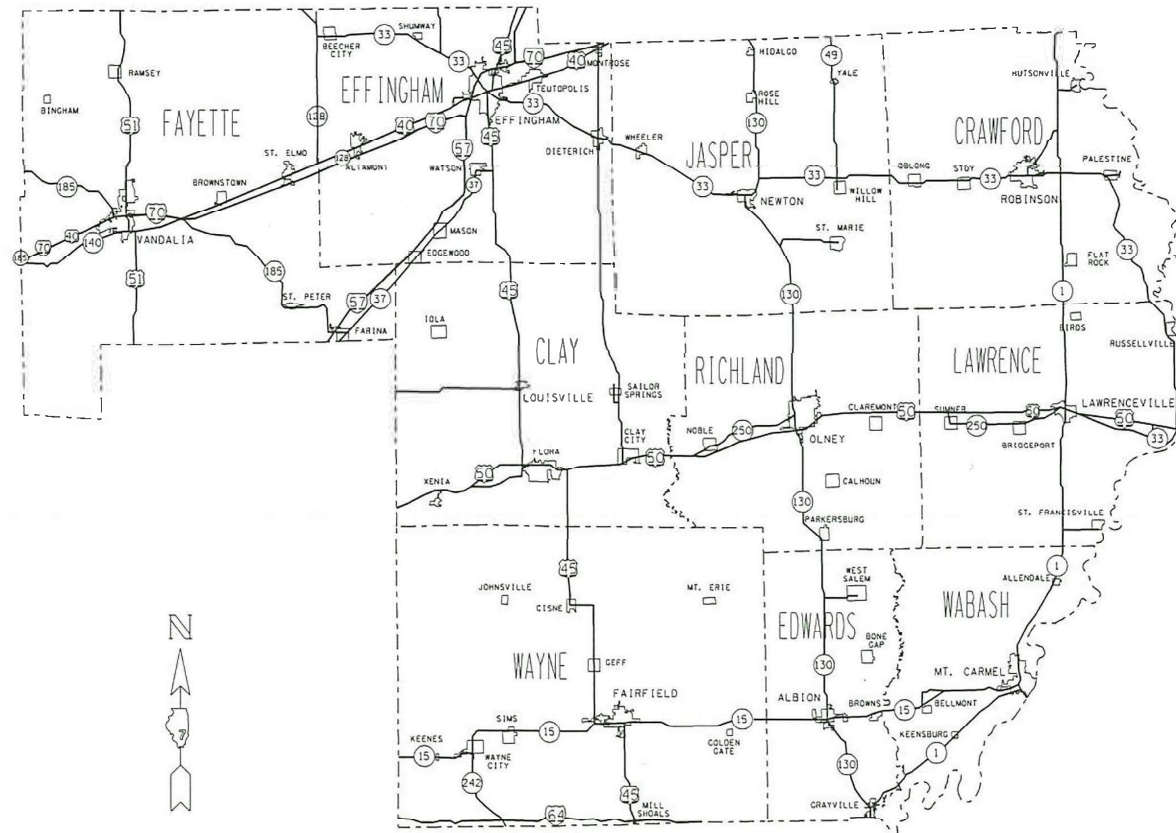
LOCATION OF SECTION INDICATED THUS: - [shaded area]

FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROPOSED HIGHWAY PLANS

VARIOUS ROUTES
SECTION D7 ELECTRICAL REPAIRS 2021-1
ELECTRICAL MAINTENANCE
VARIOUS COUNTIES
(FAYETTE, EFFINGHAM, JASPER, CRAWFORD,
LAWRENCE, RICHLAND, CLAY, WAYNE,
EDWARDS & WABASH)

C-97-138-21



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

PROJECT ENGINEER DEBRA BARRETT
PROJECT MANAGER KYLE PRICE

CONTRACT NO. 74A48

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED January 27 20 21
Jeffrey P. Myrberg
REGIONAL ENGINEER

March 19, 2021
Scott A. Elk
ENGINEER OF DESIGN AND ENVIRONMENT

March 19, 2021
James J. Quinn
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION 13

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

GENERAL NOTES

THIS PROJECT IS LOCATED ON VARIOUS ROUTES IN FAYETTE, EFFINGHAM, JASPER, CRAWFORD, CLAY, RICHLAND, LAWRENCE, WAYNE, EDWARDS AND WABASH COUNTIES, ALL LOCATED WITHIN REGION 4-DISTRICT 7. THE WORK INCLUDED IN THIS SECTION CONSISTS OF MAINTAINING AND REPAIRING THE ELECTRICAL HIGHWAY LIGHTING, ELECTRICAL HIGHWAY WARNING SYSTEMS, INTELLIGENT TRANSPORTATION SYSTEM DEVICES, FIBER OPTIC CABLE, AND ALL OTHER WORK NECESSARY TO COMPLETE THIS SECTION.

ALL WORK IS TO BE REPLACED IN KIND OR, AS INDICATED ON THE CONTRACT PLANS OR PROVISIONS.

THE LOCATIONS OF THE REPAIR AREAS SHALL BE DETERMINED BY THE ENGINEER.

REMOVAL OF DAMAGED MATERIALS WILL INCLUDE DISMANTLING, LOADING, HAULING AND DISPOSAL. THE WORK SITE WILL BE LEFT IN A SAFE AND ORDERLY CONDITION.

NO MATERIAL SHOULD BE LEFT ON OR NEAR THE ROADWAY DURING NON-WORKING HOURS.

ANY NECESSARY TRAFFIC CONTROL WILL BE PROVIDED BY THE CONTRACTOR; APPROPRIATE STANDARDS ARE LISTED ON THIS SHEET UNDER THE INDEX OF SHEETS.

ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE TO BE GIVEN TO UTILITIES BEFORE DIGGING. FIELD MARKING OF FACILITIES MAY BE OBTAINED BY CONTACTING J.U.L.I.E. (PH. 800-892-0123) OR FOR NON-MEMBER, THE UTILITY COMPANY DIRECTLY. ILLINOIS DEPARTMENT OF TRANSPORTATION IS NOT A MEMBER OF THE JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS (J.U.L.I.E.) SYSTEM AND MUST BE CONTACTED DIRECTLY.

ENGLISH UNITS OF MEASUREMENT SHALL GOVERN OVER AND SUPERCEDE ANY METRIC UNITS IN THIS CONTRACT. WHERE INCLUDED, METRIC UNITS ARE FOR INFORMATION ONLY.

ELECTRONIC FILES AND/OR ELECTRONIC SURVEY INFORMATION INCLUDING CADD FILES WILL NOT BE AVAILABLE FOR THIS PROJECT TO THE CONTRACTOR.

ANY WORK ORDER MAY BE CANCELLED AT THE ENGINEER'S DISCRETION.

NO OVERNIGHT LANE CLOSURES WILL BE ALLOWED.

INDEX OF SHEETS

1	COVER SHEET
2	INDEX OF SHEETS & GENERAL NOTES
3	SUMMARY OF QUANTITIES
4-5	DETAILS

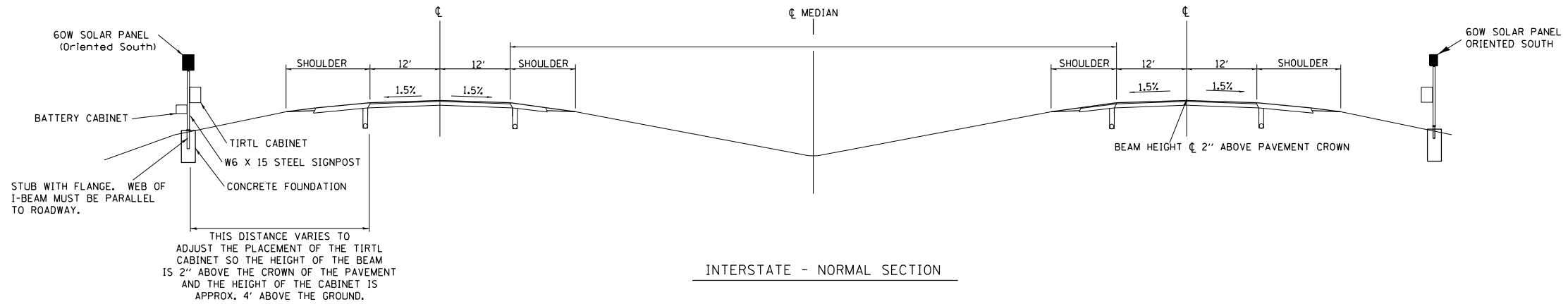
THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED AFTER SHEET NO. 5:

000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
701001-02	OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701006-05	OFF-ROAD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701011-04	OFF-ROAD MOVING OPERATION, 2L, 2W, DAY ONLY
701101-05	OFF-ROAD OPERATIONS, MULTILANE, 15' TO 24" FROM PAVEMENT EDGE
701106-02	OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' AWAY
701201-05	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS >= 45 MPH
701206-05	LANE CLOSURE, 2L, 2W, NIGHT ONLY FOR SPEEDS >= 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701400-10	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-12	LANE CLOSURE, FREEWAY/EXPRESSWAY
701406-12	LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
701411-09	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS >= 45 MPH
701421-08	LANE CLOSURE, MULTILANE, DAY OPERATIONS ONLY, FOR SPEEDS >=45 MPH TO 55 MPH
701426-09	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS >=45 MPH
701427-05	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION, FOR SPEEDS <= 40 MPH
701428-01	TRAFFIC CONTROL SETUP AND REMOVAL FREEWAY/EXPRESSWAY
701456-05	PARTIAL EXIT RAMP CLOSURE FREEWAY/EXPRESSWAY
701501-06	URBAN LANE CLOSURE, 2L, 2W UNDIVIDED
701502-09	URBAN LANE CLOSURE, 2L, 2W, WITH BIDIRECTIONAL LEFT TURN LANE
701601-09	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701602-10	URBAN LANE CLOSURE, MULTILANE, 2W, WITH BIDIRECTIONAL LEFT TURN LANE
701606-10	URBAN LANE CLOSURE MULTILANE, 2W WITH MOUNTABLE MEDIAN
701611-01	URBAN HALF ROAD CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-06	SIDEWALK, CORNER OR CROSSWALK CLOSURE
701901-08	TRAFFIC CONTROL DEVICES
878001-11	CONCRETE FOUNDATION DETAILS
886001-01	DETECTOR LOOP INSTALLATIONS
886006-01	TYPICAL LAYOUT FOR DETECTION LOOPS

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* D7 ELECTRICAL REPAIRS 2021-1

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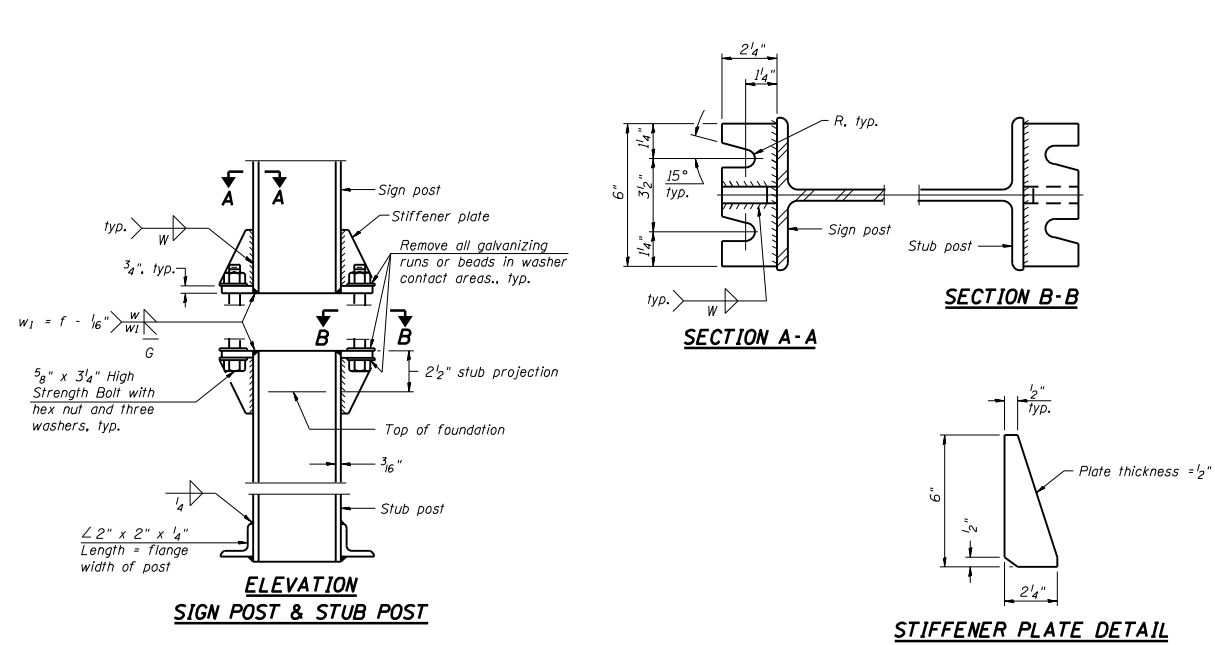


NOTES:

1. SYSTEM CONSISTS OF TWO W6 X 15 I-BEAM SIGNPOSTS WITH CONCRETE FOUNDATION AND A FLANGE WITH BREAKAWAY BOLTS
2. THE I-BEAMS ARE 12' LONG AND DRILLED AS PER THE I-BEAM DETAIL TO ACCOMODATE A PIPE TO ALLOW THE MOUNTING OF THE SOLAR PANEL.
3. THE WEB OF THE I-BEAM IS TO BE PLACED PARALLEL TO THE LANES.
4. THE TWO POSTS MUST BE PLACED DIRECTLY ACROSS FROM EACH OTHER AND PERPENDICULAR TO THE LANES.
5. TWO POSTS ARE REQUIRED LOCATED AS PER THE ENGINEER AND DRAWING.
6. THE CABINETS ARE ATTACHED TO THE I-BEAM USING 8" GALVANIZED J-BOLTS.
7. THE BOTTOM OF THE CABINET HEIGHT MUST BE NO LOWER THAN 4' ABOVE THE GROUND AND BE ABLE TO VIEW ACROSS ALL LANES AT THE CROWN OF THE PAVEMENT.
8. THE IDOT OFFICE OF PLANNING AND PROGRAMMING DATA MANAGEMENT LAB RICH MARX (217-782-2065) MUST BE CONTACTED TWO WEEKS PRIOR TO ANY WORK BEING DONE TO ENSURE PROPER POST PLACEMENT.

**TIRTL TRAFFIC COUNTER
SCHEDULE OF QUANTITIES
(FOR INFORMATION ONLY)**

CODE NUMBER	ITEM	UNIT	QUANTITY
72700100	STRUCTURAL STEEL SIGN SUPPORT - BREAKAWAY	POUND	520
X0323388	TRAFFIC COUNTER SYSTEM (INCLUDES BELOW)	EACH	1
TIRTL TRAFFIC DATA COLLECTION SYSTEM INCLUDES:			
	Sierra Wireless Modem RV-50	EACH	1
	Panorama Low Profile LTE MiMo LGAM-BC3G-26-3SP Antenna	EACH	1
	TIRTL CABINET 15" X 27" X 16"	EACH	2
	BATTERY CABINET 16.5" X 16" X 11.5" BBA1M w/ #2 Police Lock	EACH	1
	SOLAR PANEL 60 W 12 VDC with Bracket and junction box	EACH	2
	TIRTL TRAFFIC COUNTER	EACH	1
	SUNSAVER SOLAR CHARGE REGULATOR 10 AMP 12 VDC	EACH	2
	BATTERY - 33 AH ABSORBED ELECTROLYTE 8" X 5.5" X 7" (DEEP CYCLE)	EACH	1
	BATTERY -104AH ABSORBED ELECTROLYTE 10" X 6" X 8" (DEEP CYCLE)	EACH	1



BREAK-AWAY WIDE FLANGE STEEL POST DETAILS

SHIM DETAIL

Furnish two 0.01" thick and two 0.03" thick stainless steel or brass (ASTM B36) shims per post.

GENERAL NOTES

Posts shall be plumbed by using shims with post-to-stub post connection bolts snug tight only. Final tightening of all High Strength Bolts shall be in accordance with Article 727.05 and threads at the junction of the bolt and nut shall be burred or center punched to prevent the nut from loosening.

LOADING: 80 m.p.h. wind with 30% gust factor, normal to sign.

DESIGN STRESSES:

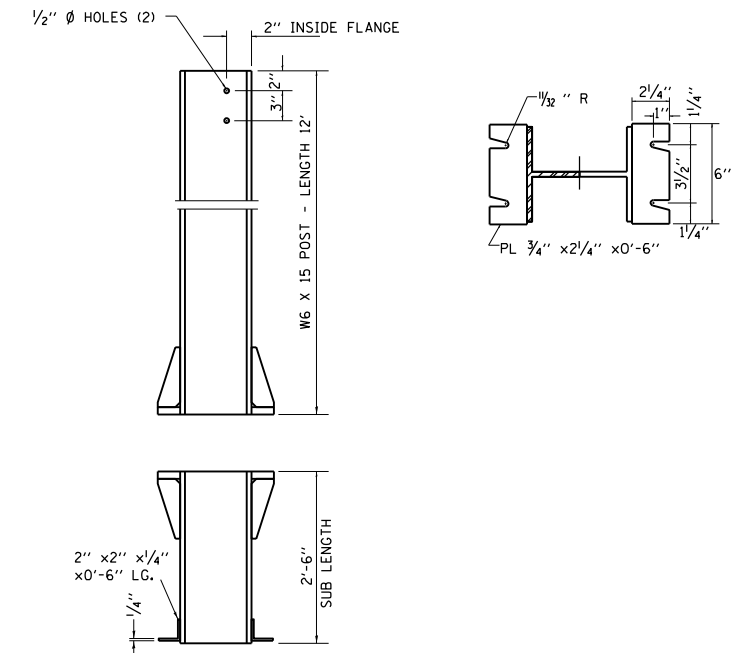
Structural steel - 20,000 p.s.i.

Reinforcing steel - 20,000 p.s.i.

Concrete - 1,400 p.s.i.

Footing soil pressure - 2,000 p.s.f.

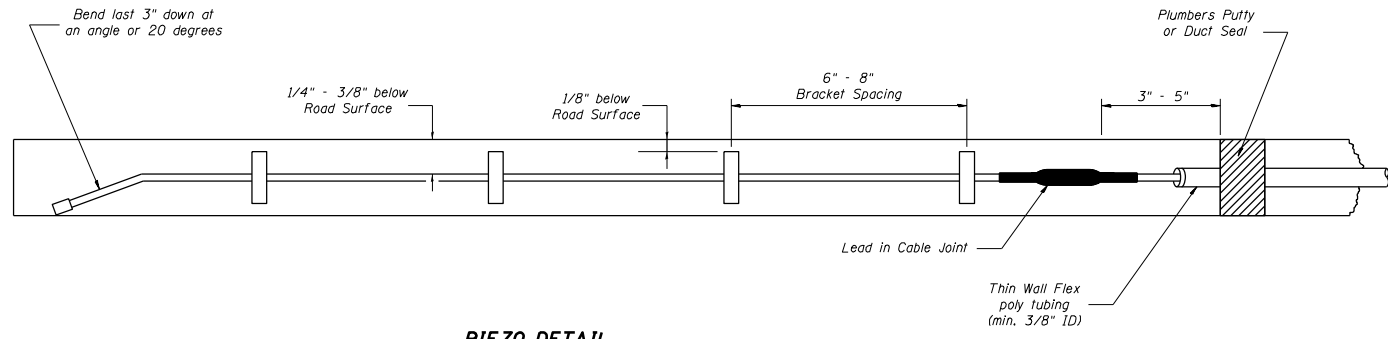
After fabrication, the post and upper 6", min. of the stub post shall be hot-dip galvanized in accordance with AASHTO M111. All bolts, nuts and washers shall be hot-dip galvanized in accordance with AASHTO M232.



TIRTL CABINET DETAILS

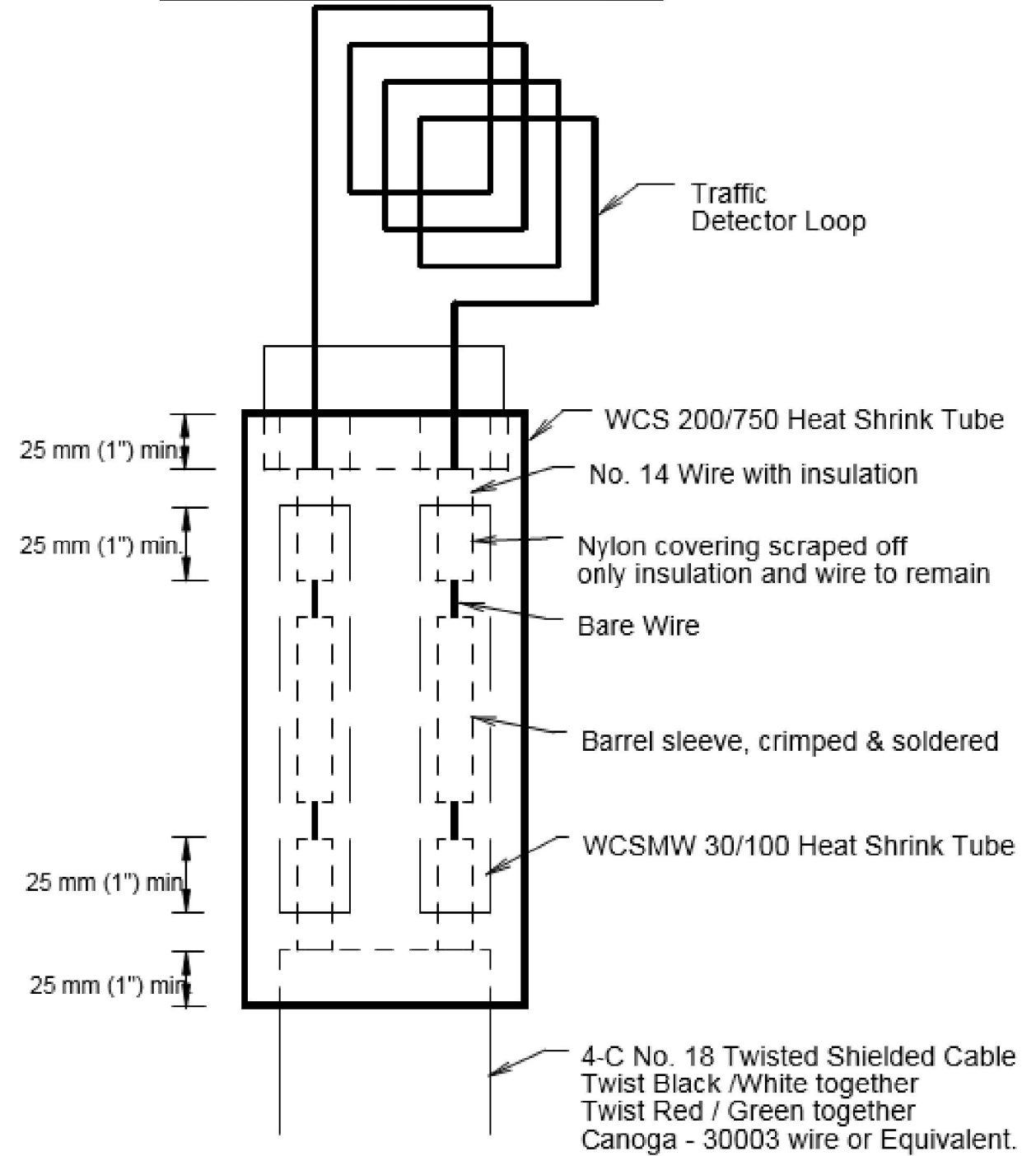
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• D7 ELECTRICAL REPAIRS 2021-1



PIEZO DETAIL

Loop Splicing Requirements



Minimum 25 mm (1") Heat Shrink Tube overlap on wire.
 PVC & Shielded cable to form water tight seal. Note: Not to Scale

REVISIONS	
Name	Date

Illinois Department of Transportation
Office of Planning and Programming

Drawn By:	Checked By:	Date:	Scale:
R. Taylor	R. Taylor	01/20/00	NONE

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
..	.	VARIOUS	5	5
.. VARIOUS			CONTRACT NO. 74A48	
ILLINOIS FED. AID PROJECT				

• D7 ELECTRICAL REPAIRS 2021-1