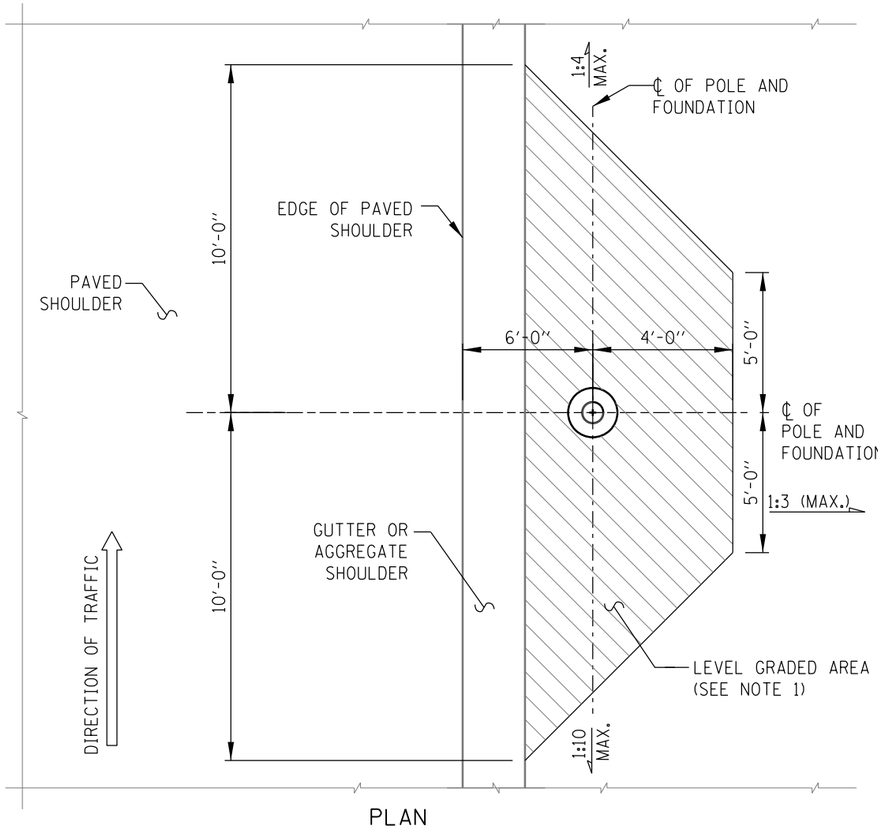
Tollway Standard Drawing Revisions

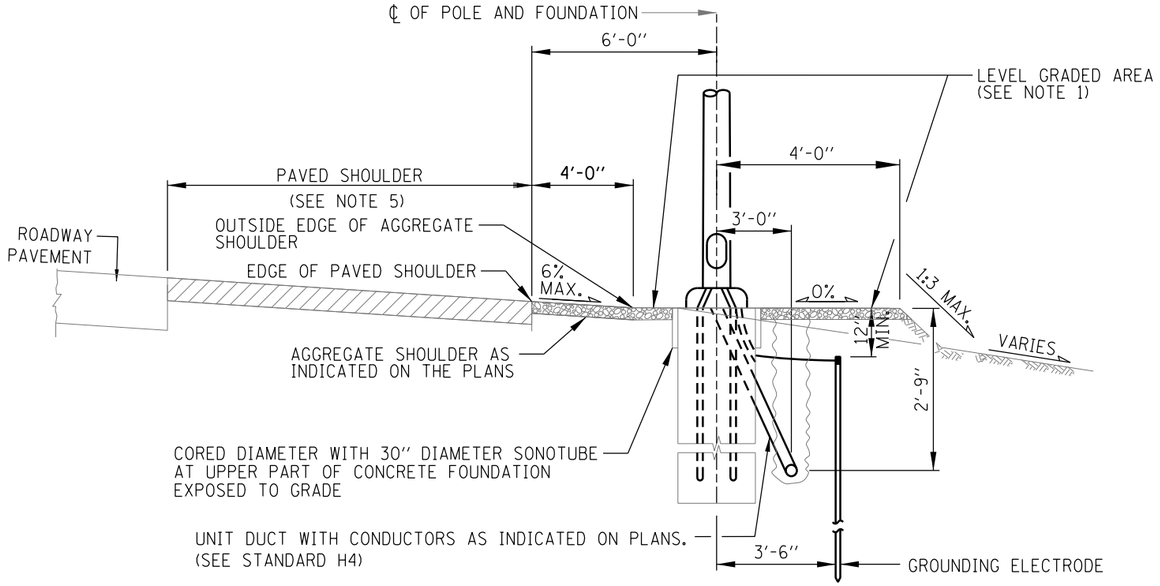
Section H	Roadway Lighting and Electrical	
	Standard	**Modification Summary** **Effective 3/31/2014**
	H1	**Light Standard Foundation**
	All Sheets	Revised Light Pole Graded Area To Aggregate Shoulder Type B
		Modified Graded Area Shape To Trapezoidal
	Sheet 1	Revised Notes For New Details
	Sheet 2	No. 6 Bare Copper Wire Ground Wire Changed To 1/C No.2
		Ground Rod Changed To Grounding Electrode
		Concrete Foundation Rebars To Be Epoxy Coated
	Sheet 4	Revised Helix Foundation
		New Slot Dimension Length 21" Beginning 15" Below Foundation Plate
		Two Slots 180^0 Apart
		Revised helix pitch from 2 1/2" to 3"
		Eliminated Leveling Plate
		New Slot Dimension Length 21" Beginning 15" Below Foundation Plate
		No. 6 Bare Copper Wire Ground Wire Changed To 1/C No.2
		Ground Rod Changed To Grounding Electrode
	Sheet 6	New Detail A- Bridge Mounted Light Standard
		Revised Notes
	H2	**Light Standard Pole Wiring**
	Sheet 1	Revised Single Mast Pole Base Wiring Diagram
	Sheet 2	Relocated Light Standard Details
	H6	**Control Console Details**
	Sheet 1-2	New Control Console-Exterior Installation
		Revised Item Descriptions
	Sheet 3-4	New Control Console-Interior Installation
	H8	**Median Barrier Light Pole Foundation Details**
		Revised Grounding Electrode Detail
		Grounding Rod Extends Through Barrier Wall To Top
	H11	**Overhead Truss With Sign Lighting**
		Without Catwalk-Typical Lighting Details
		Revised Foundation Per Standard F3
		New Grade Beam Foundation on Drilled Shafts
	H12	**Cantilever Sign With Lighting Without Catwalk Typical Wiring Details**
		Revised Electrical Control Panel Details For New Cantilever Sign
	H15	**Overhead Truss and Cantilever Sign**
		Without Catwalk-Typical Lighting Detail
		Revised Foundation Per Standard F3
		New Grade Beam Foundation on Drilled Shafts

New Sheet

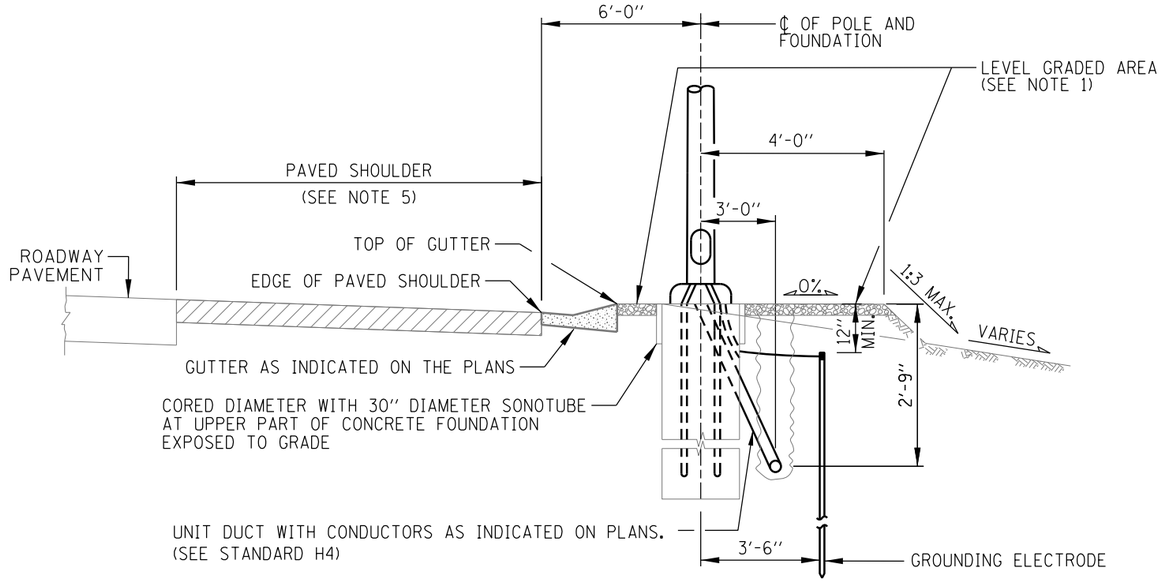


PLAN

CONCRETE FOUNDATION GRADING PLAN WITH FORESLOPE



CONCRETE FOUNDATION ADJACENT TO AGGREGATE SHOULDER WITH FORESLOPE



CONCRETE FOUNDATION ADJACENT TO GUTTER WITH FORESLOPE

NOTES:

1. AT LOCATIONS NOT SHIELDED BY GUARDRAIL, THE LIGHT POLE FOUNDATION SHALL BE FLUSH WITH SURROUNDING GRADED ON ALL SIDES. THE SURROUNDING AREA SHALL BE A LEVEL GRADED AREA CONSTRUCTED OF AGGREGATE SHOULDERS WITH FILTER FABRIC, TYPE B, 4".
2. AT LOCATIONS NOT SHIELDED BY GUARDRAIL, THE TOP OF FOUNDATION SHALL BE AT THE SAME ELEVATION AS THE ADJACENT TOP OF GUTTER OR WHEN ADJACENT TO AGGREGATE SHOULDER, AT THE SAME ELEVATION AS THE OUTSIDE EDGE OF THE AGGREGATE SHOULDER SLOPED A MAXIMUM 6% AWAY FROM THE PAVED SHOULDER.
3. ALL SLOPES ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).
4. ALL GROUND MOUNTED LIGHT POLES SHALL BE PROVIDED WITH AN ACCEPTED FHWA BREAKAWAY BASE OR DEVICE PER THE TOLLWAY SUPPLEMENTAL SPECIFICATIONS.
5. THE MINIMUM LIGHT POLE SETBACK DISTANCE FROM EDGE OF ROADWAY TO ℄ OF POLE AND FOUNDATION SHALL BE 11'-0" WHEN THE PAVED SHOULDER WIDTH IS LESS THAN 10'-0". REFERENCE TOLLWAY GUIDELINES FOR ROADWAY ILLUMINATION.
6. ALL LIGHT STANDARDS SHALL BE IDENTIFIED IN ACCORDANCE WITH TOLLWAY GUIDELINES FOR ROADWAY ILLUMINATIONS.
7. FOR DETAILS OF FUSE HOLDER, POLE BASE WIRING AND JOINT ASSEMBLY SEE STANDARD H2.
8. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EXPOXY COATED.

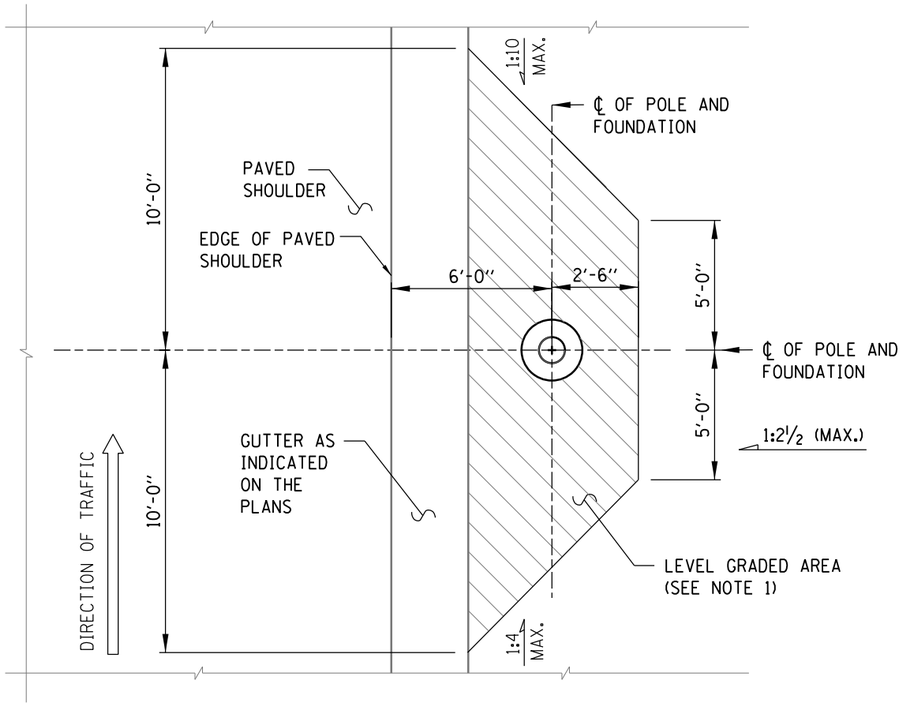
Paul Kovacs
APPROVED ..... DATE 2-7-2012
CHIEF ENGINEER

Illinois Tollway

DATE	REVISIONS
2-7-2012	MODIFIED FOUNDATION DETAILS, REVISED NOTES.
11-1-2012	ADDED CONTROLLER NUMBER.
3-31-2014	REVISED HELIX FOUNDATION, NEW DETAIL "A", AND GRADED AREA.

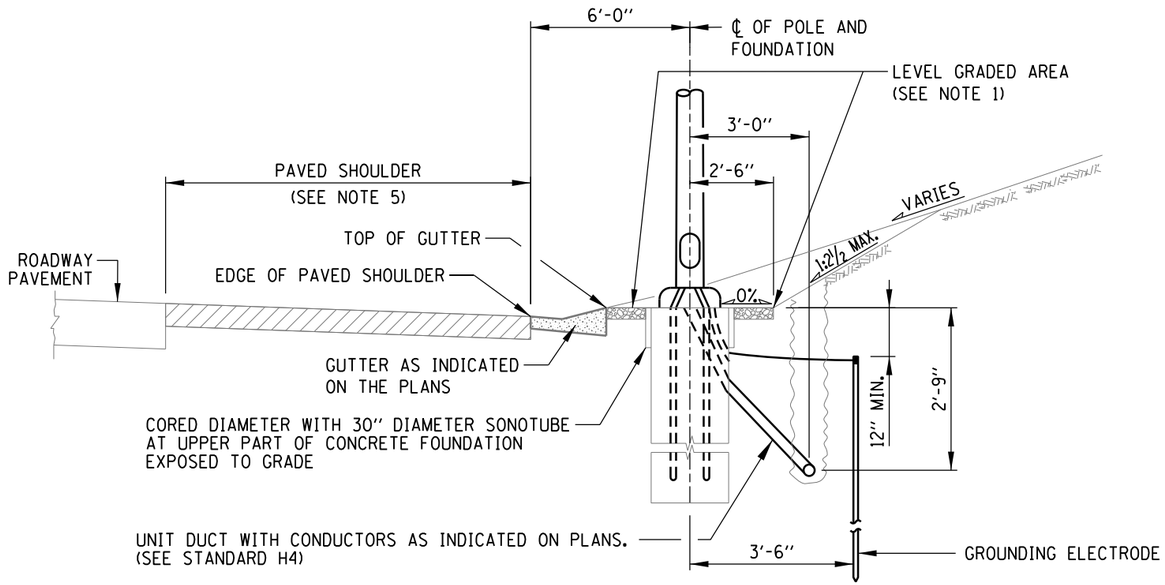
LIGHT STANDARD FOUNDATION

STANDARD H1-03

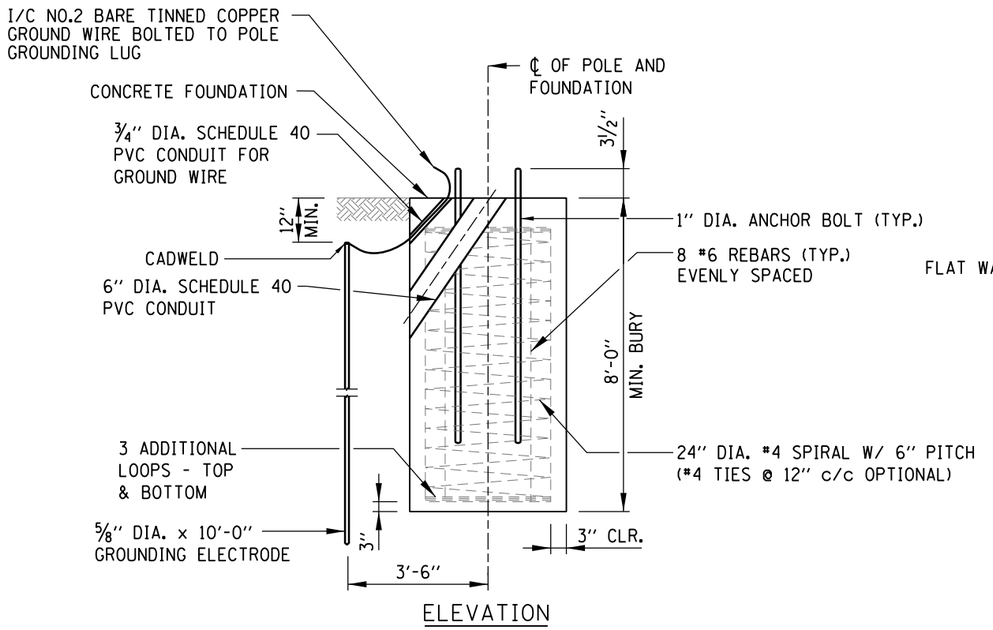


PLAN

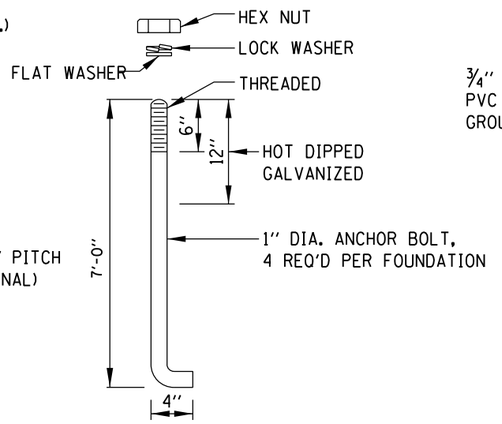
CONCRETE FOUNDATION GRADING PLAN WITH BACKSLOPE



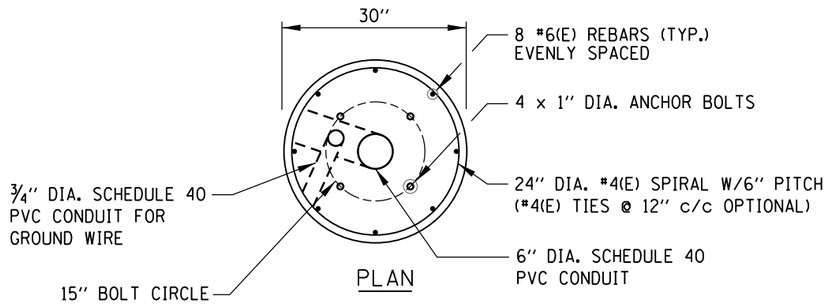
CONCRETE FOUNDATION ADJACENT TO GUTTER WITH BACKSLOPE



ELEVATION



ANCHOR BOLT DETAIL



PLAN

CONCRETE FOUNDATION DETAILS

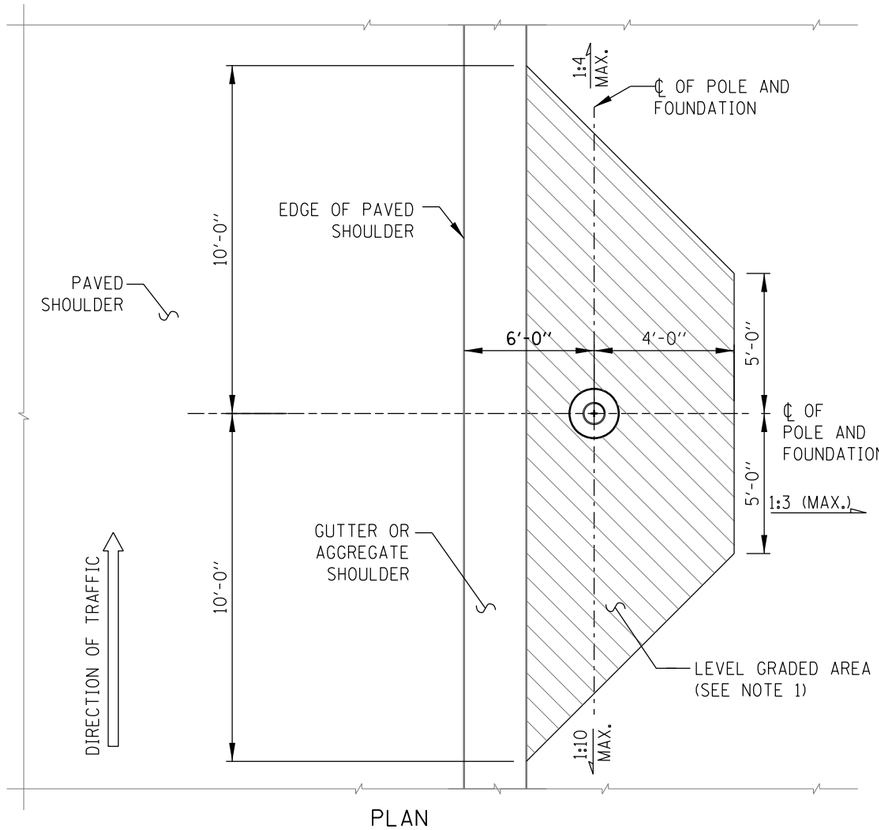
Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 2-7-2012

NOTE:
SEE SHEET 1 OF THIS SERIES FOR NOTES.

Illinois Tollway

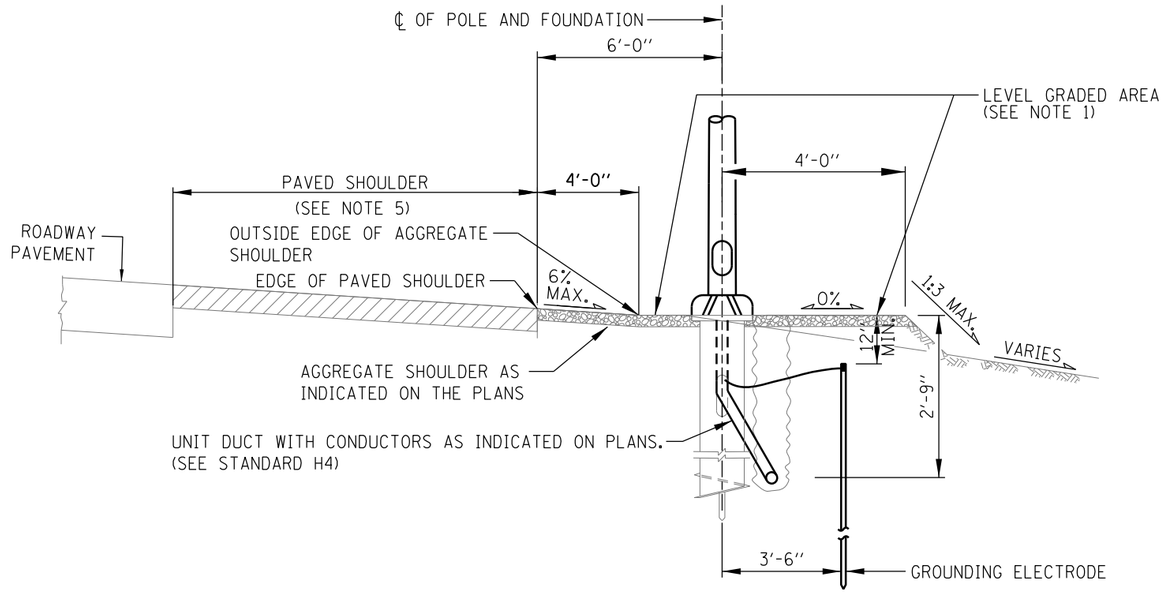
LIGHT STANDARD FOUNDATION

STANDARD H1-03

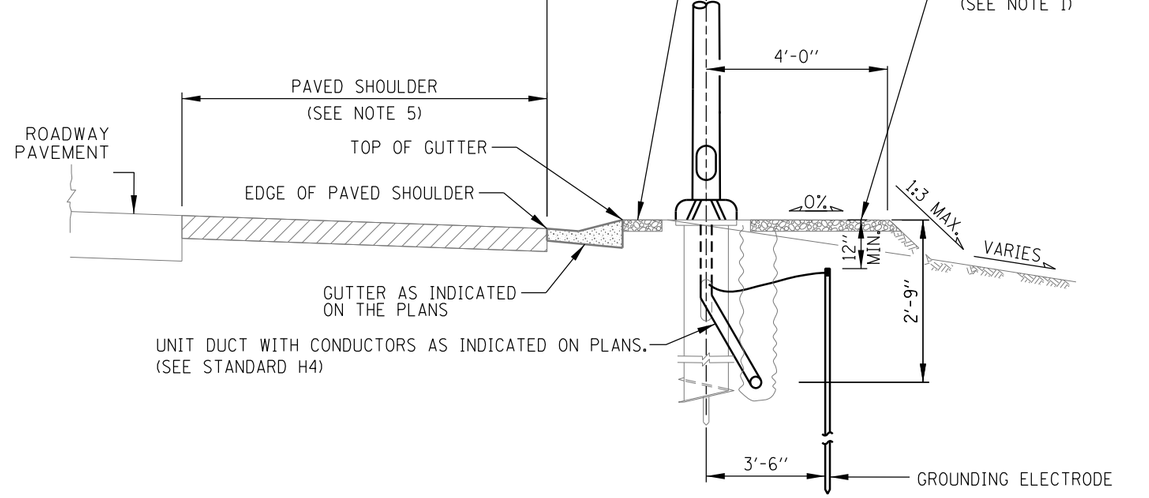


PLAN

HELIX FOUNDATION GRADING PLAN WITH FORESLOPE



HELIX FOUNDATION ADJACENT TO AGGREGATE SHOULDER WITH FORESLOPE



HELIX FOUNDATION ADJACENT TO GUTTER WITH FORESLOPE

NOTE:

SEE SHEET 1 OF THIS SERIES FOR NOTES.

Paul Kovacs
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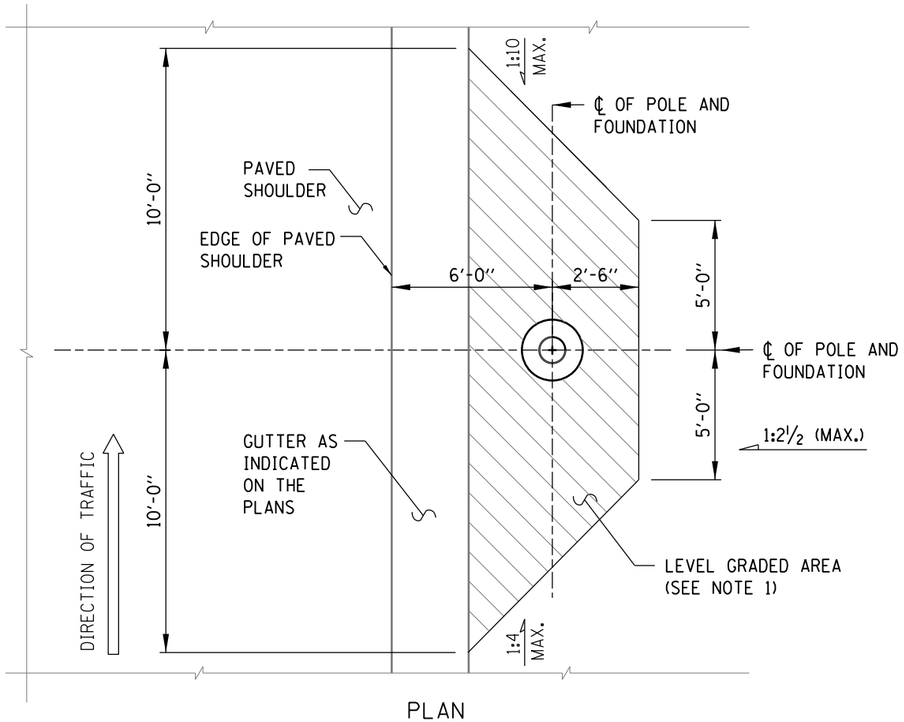
Illinois Tollway

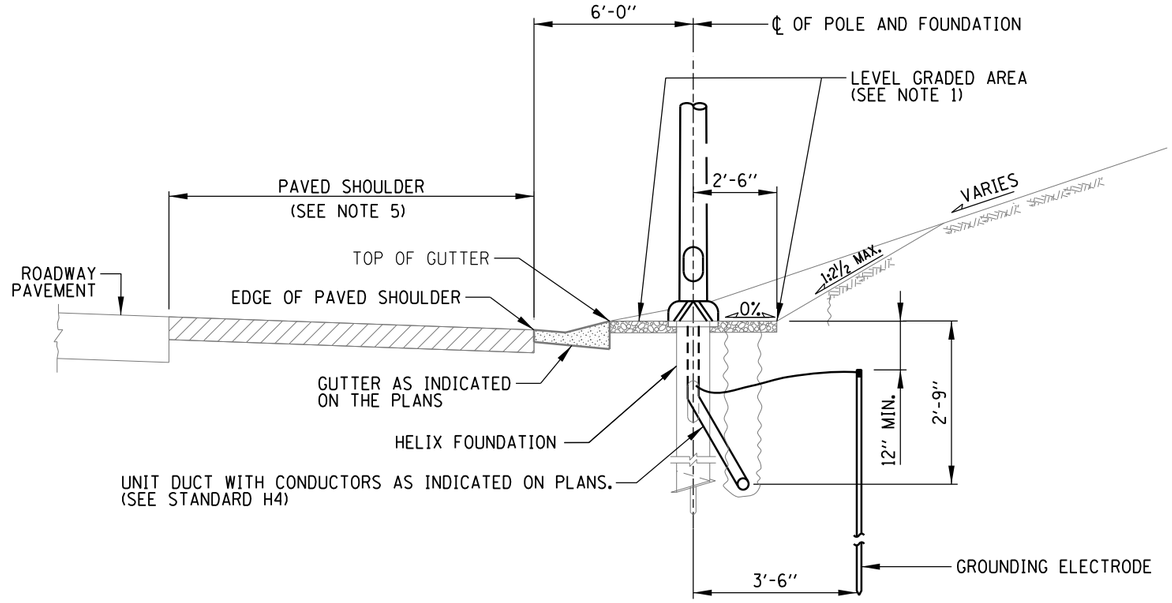
LIGHT STANDARD FOUNDATION

STANDARD H1-03

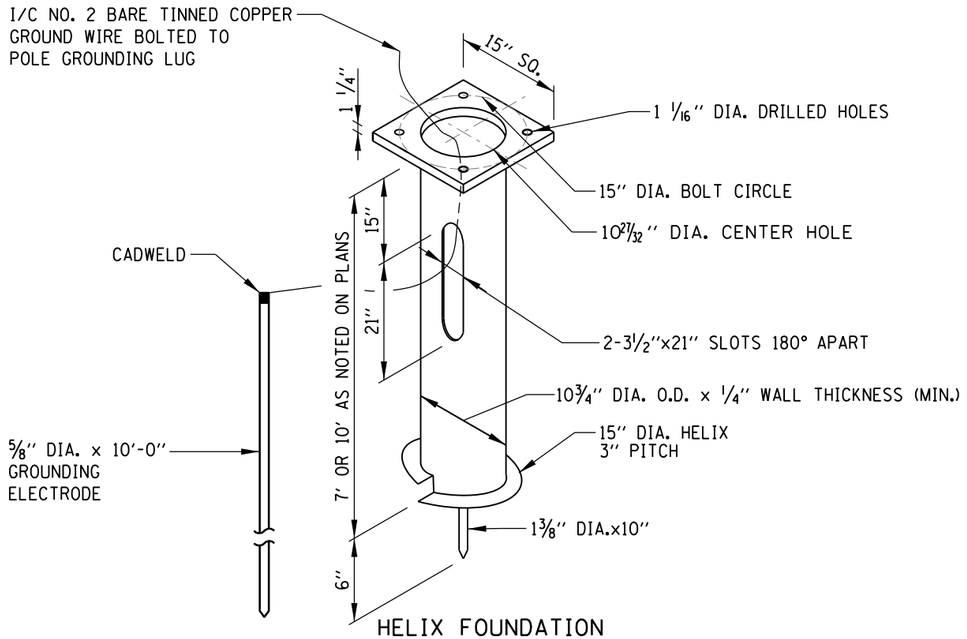


PLAN

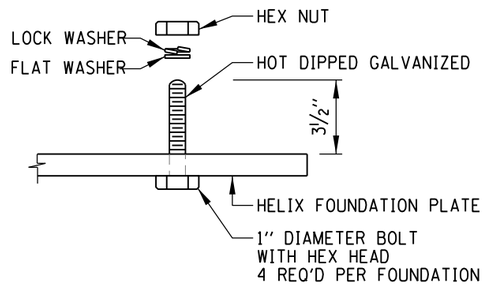
HELIX FOUNDATION GRADING PLAN WITH BACKSLOPE



HELIX FOUNDATION ADJACENT TO GUTTER WITH BACKSLOPE



HELIX FOUNDATION



HELIX FOUNDATION BASE ATTACHMENT DETAIL

NOTE:

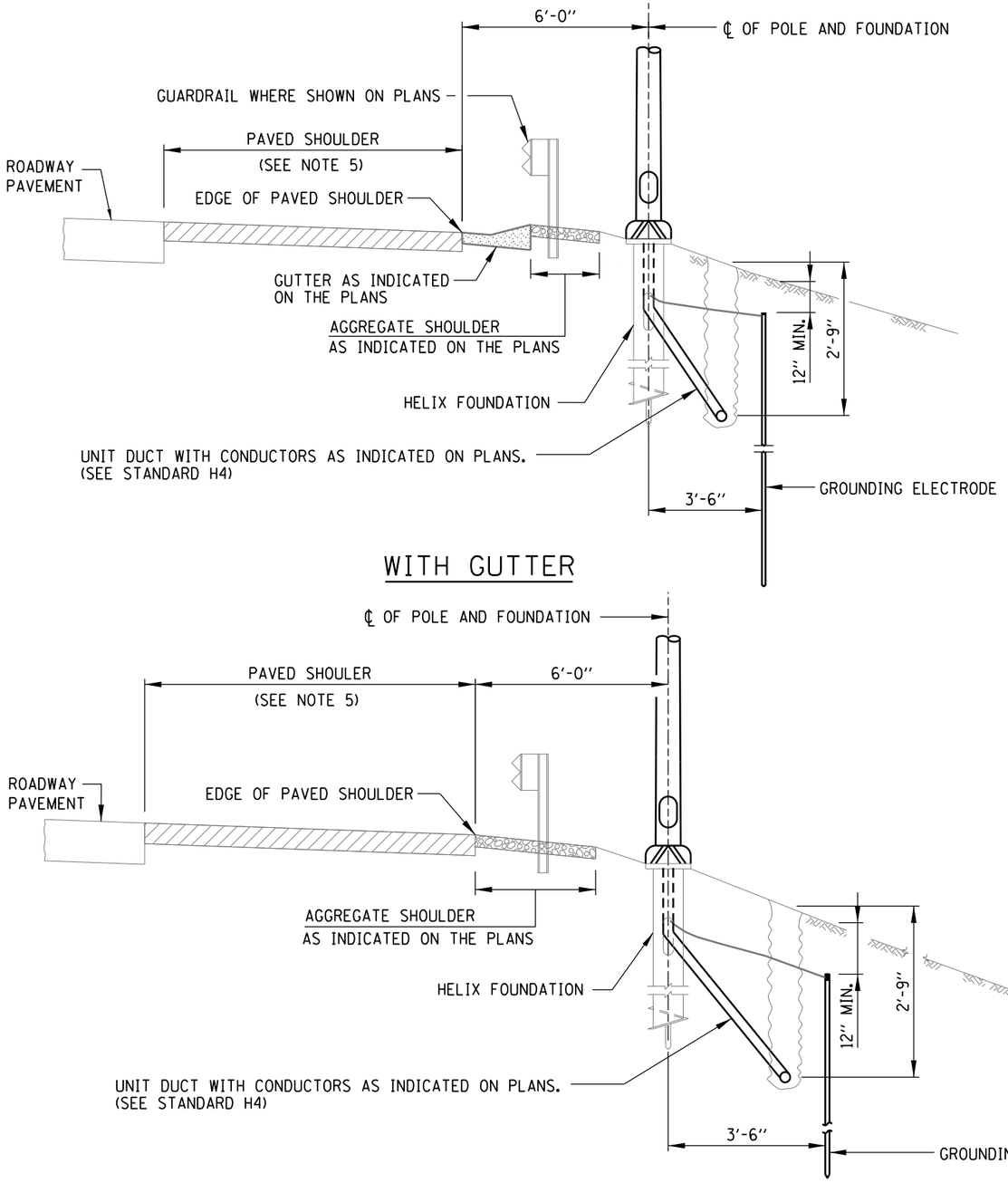
SEE SHEET 1 OF THIS SERIES FOR NOTES.

Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 2-7-2012

Illinois Tollway

LIGHT STANDARD FOUNDATION

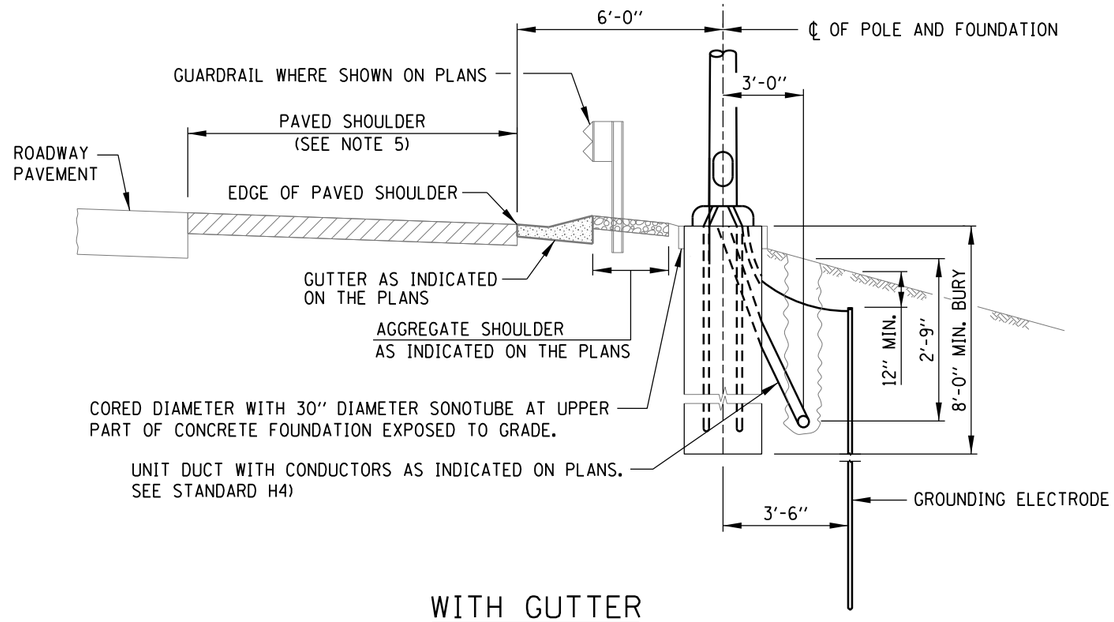
STANDARD H1-03



WITH GUTTER

WITHOUT GUTTER

HELIX FOUNDATION-SHIELDED



WITH GUTTER

WITHOUT GUTTER

CONCRETE FOUNDATION-SHIELDED

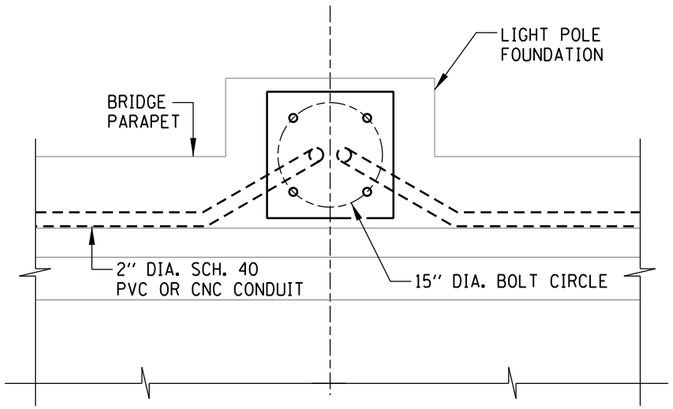
Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 2-7-2012

NOTE:
SEE SHEET 1 OF THIS SERIES FOR NOTES.

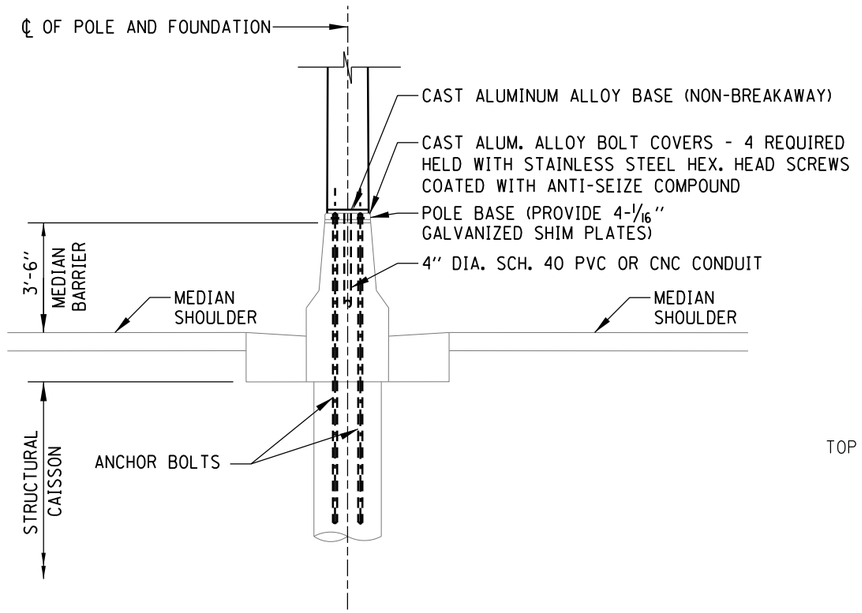
Illinois Tollway

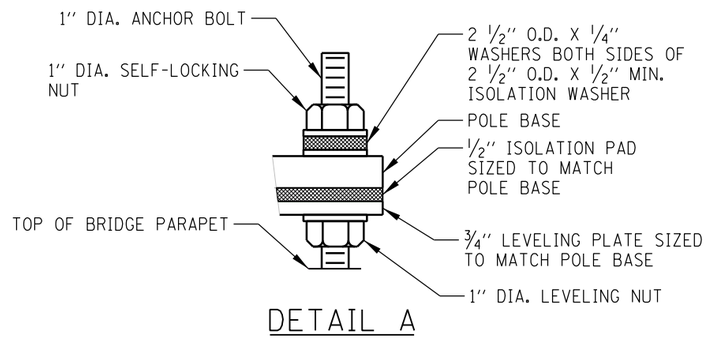
LIGHT STANDARD
FOUNDATION

STANDARD H1-03



PLAN VIEW

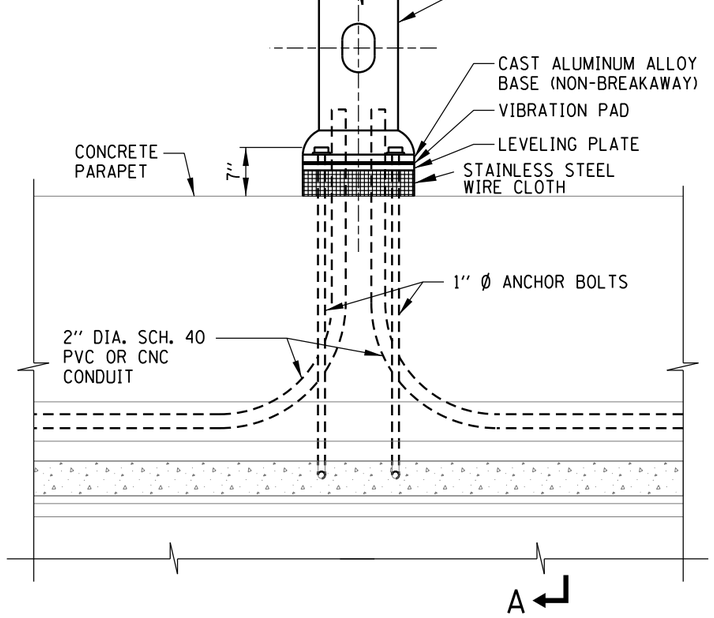




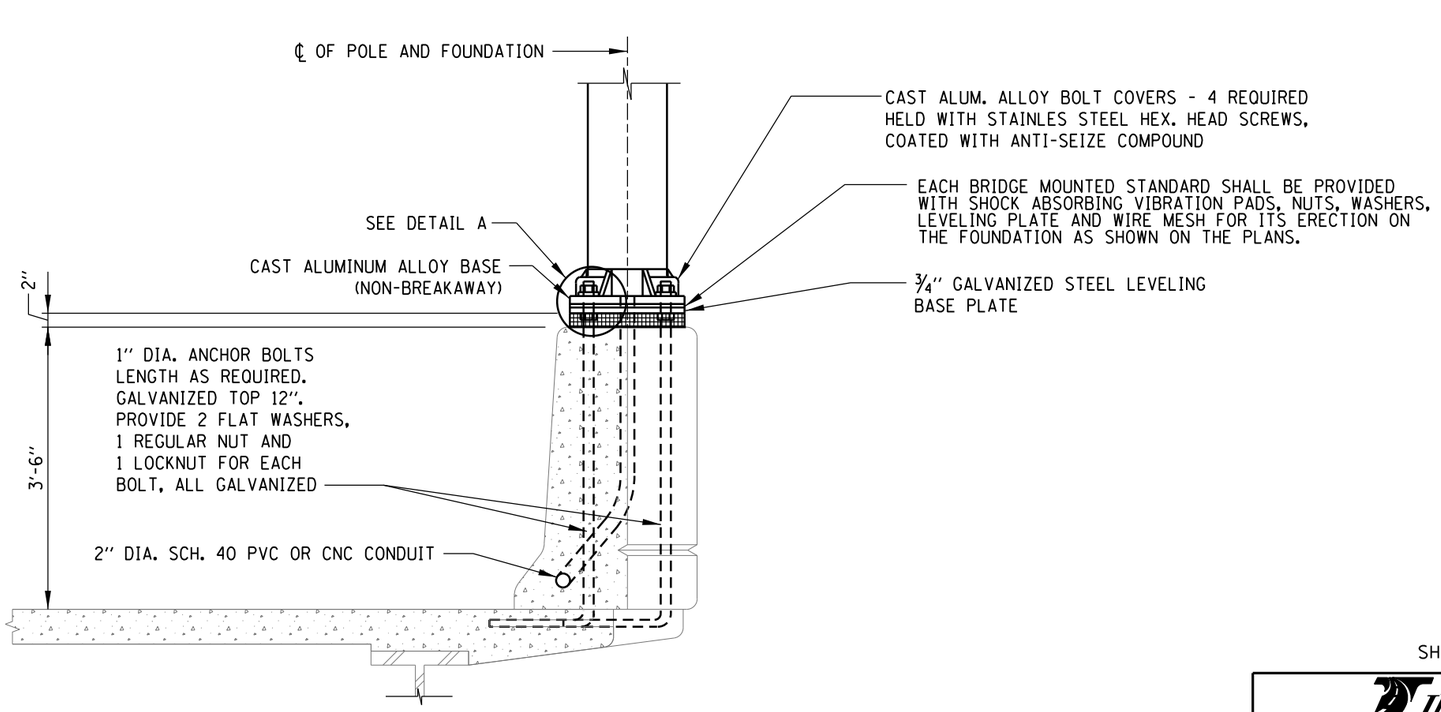
DETAIL A

MEDIAN BARRIER MOUNTED LIGHT STANDARD DETAIL

(SEE STANDARDS H8 AND H9)



ELEVATION OF CONCRETE PARAPET AND LIGHT STANDARD



BRIDGE PARAPET MOUNTED LIGHT STANDARD DETAIL SECTION A-A

NOTE:

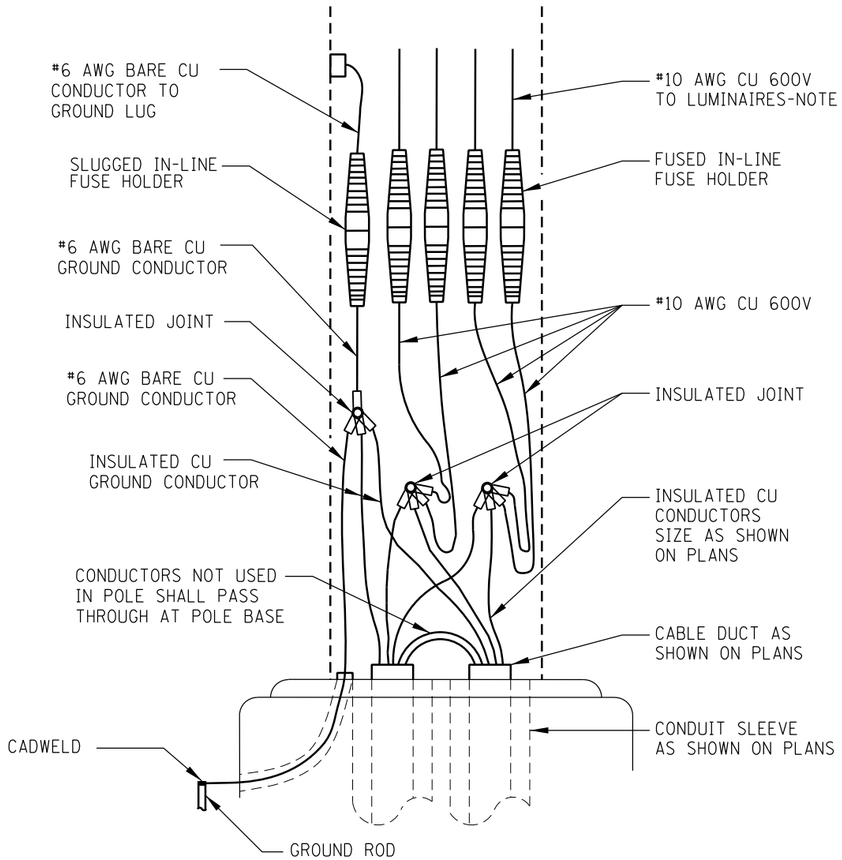
SEE SHEET 1 OF THIS SERIES FOR NOTES.

Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 2-7-2012

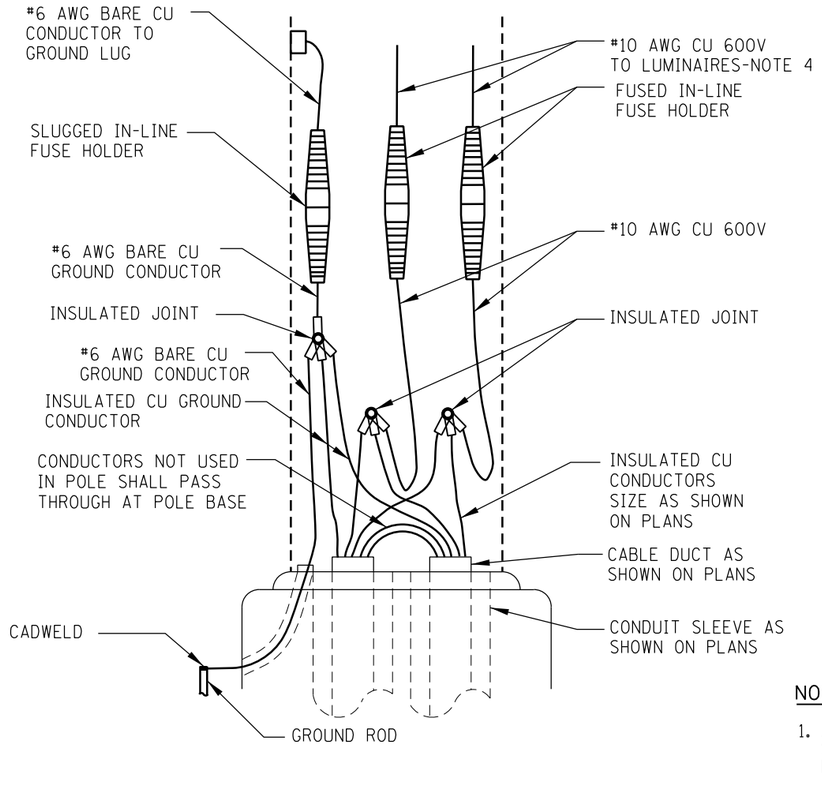
Illinois Tollway

LIGHT STANDARD FOUNDATION

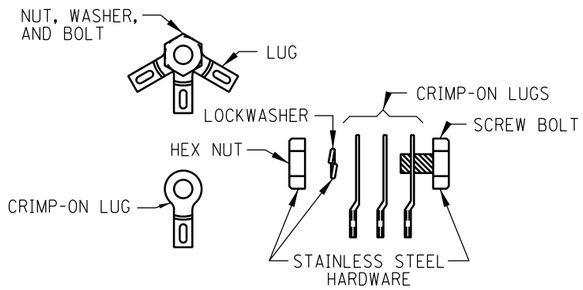
STANDARD H1-03



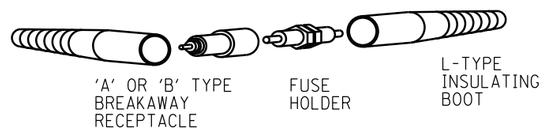
TWIN MAST POLE BASE WIRING DIAGRAM



SINGLE MAST POLE BASE WIRING DIAGRAM



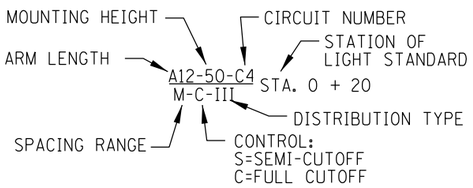
JOINT ASSEMBLY DETAILS



IN-THE-LINE FUSE HOLDER DETAIL WITH BREAKAWAY FEATURE

NOTES:

1. ALL LIGHT STANDARDS, BOTH NEW AND EXISTING, ARE SHOWN ON PLANS WITH THE FOLLOWING SAMPLE DESCRIPTION:



2. FOR STRUCTURAL DETAILS OF MEDIAN BARRIER AND CAISSON, SEE STANDARD H8 (MEDIAN BARRIER LIGHT POLE FOUNDATION DETAILS), STANDARD H9 (MEDIAN BARRIER LIGHT POLE FOUNDATION DETAILS - TYPE 4 RETROFIT, 32'' BARRIER) OR STRUCTURAL PLANS.
3. HANDHOLE COVERS SHALL BE FASTENED USING TWO STAINLESS STEEL SCREWS WITH CAPTIVE STAINLESS STEEL NUTS OR INSERTS, PER THE SUPPLEMENTAL SPECIFICATIONS.
4. PROVIDE A 24'' LONG POLYETHYLENE TUBE TO PROTECT CABLES WHERE THEY PASS THROUGH THE GROMMETED OPENING AT THE POLE/MAST ARM JUNCTION.

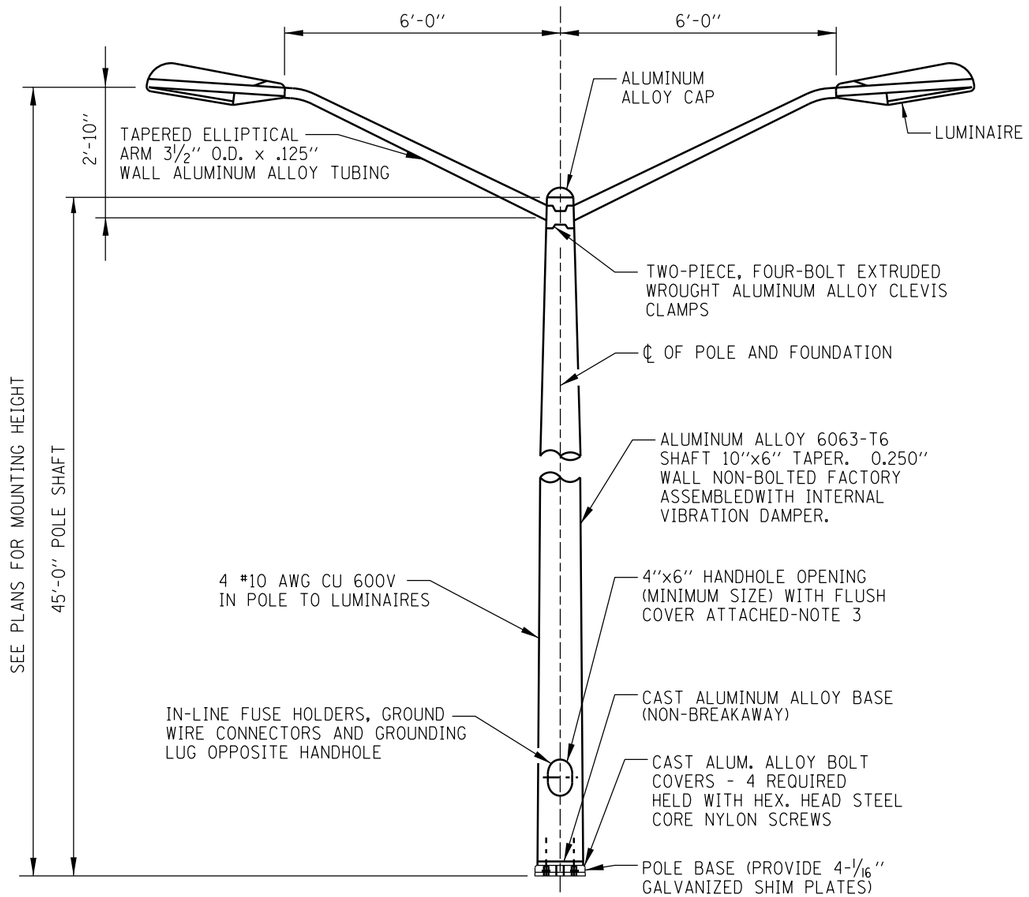
Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 2-7-2012

Illinois Tollway

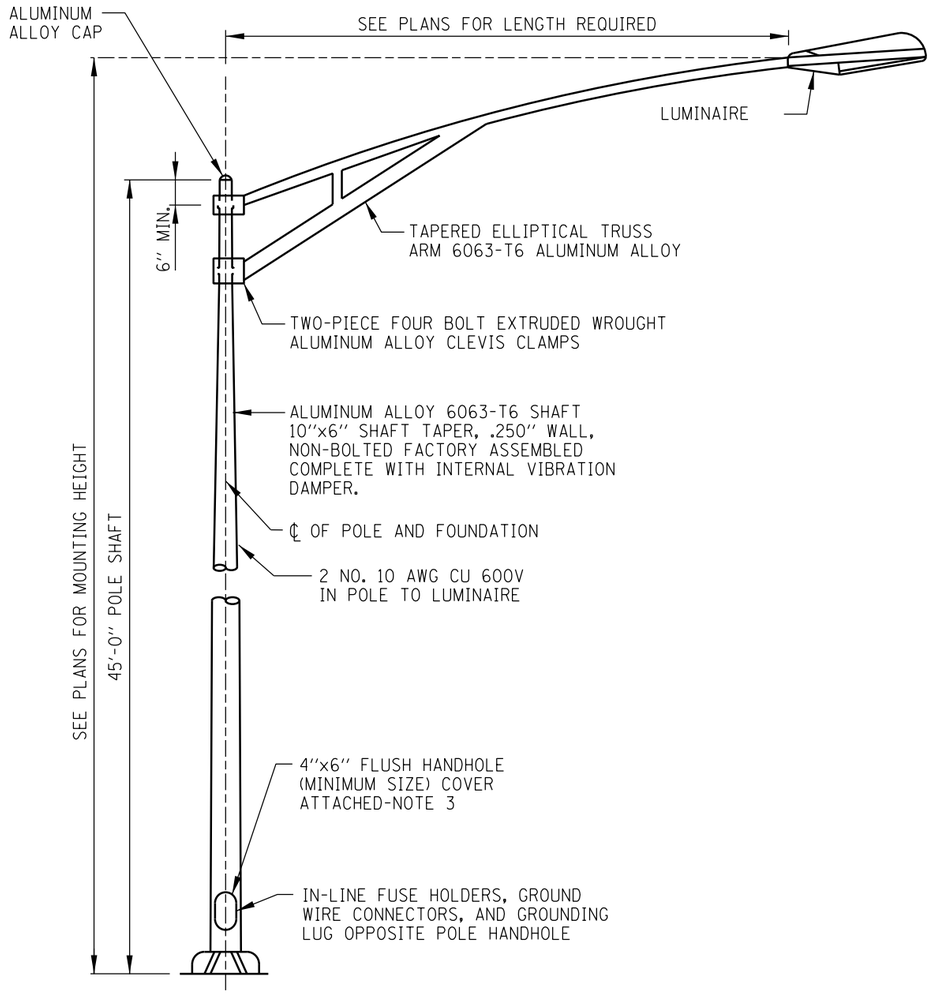
DATE	REVISIONS
2-7-2012	REVISED LIGHT POLE HANDHOLE NOTES, REMOVED CABLE VOLTAGE, AND REVISED NOTES.
3-31-2014	REVISED WIRING DIAGRAM.

LIGHT STANDARD POLE WIRING

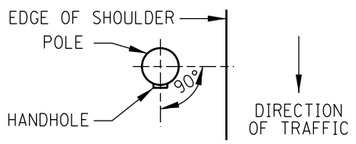
STANDARD H2-02



TWIN MAST LIGHT STANDARD DETAIL



SINGLE MAST LIGHT STANDARD DETAIL



HANDHOLE ORIENTATION

NOTE:

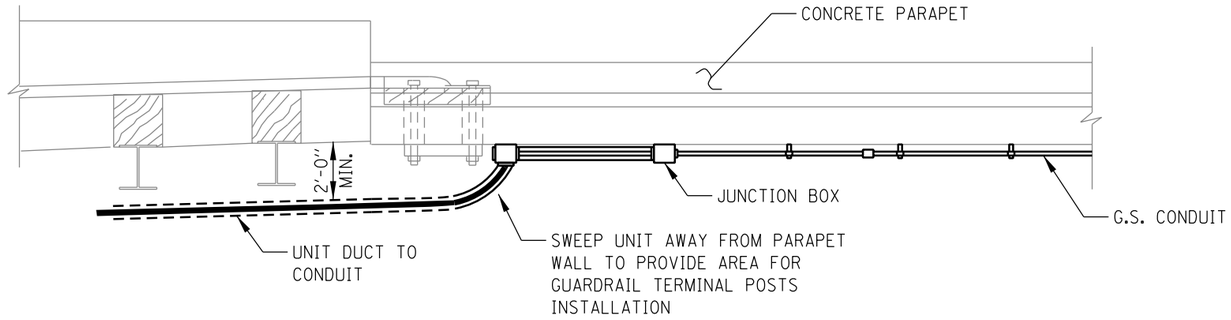
SEE SHEET 1 OF THIS SERIES.

Paul Kovacs
APPROVED ..... DATE 2-7-2012
CHIEF ENGINEER

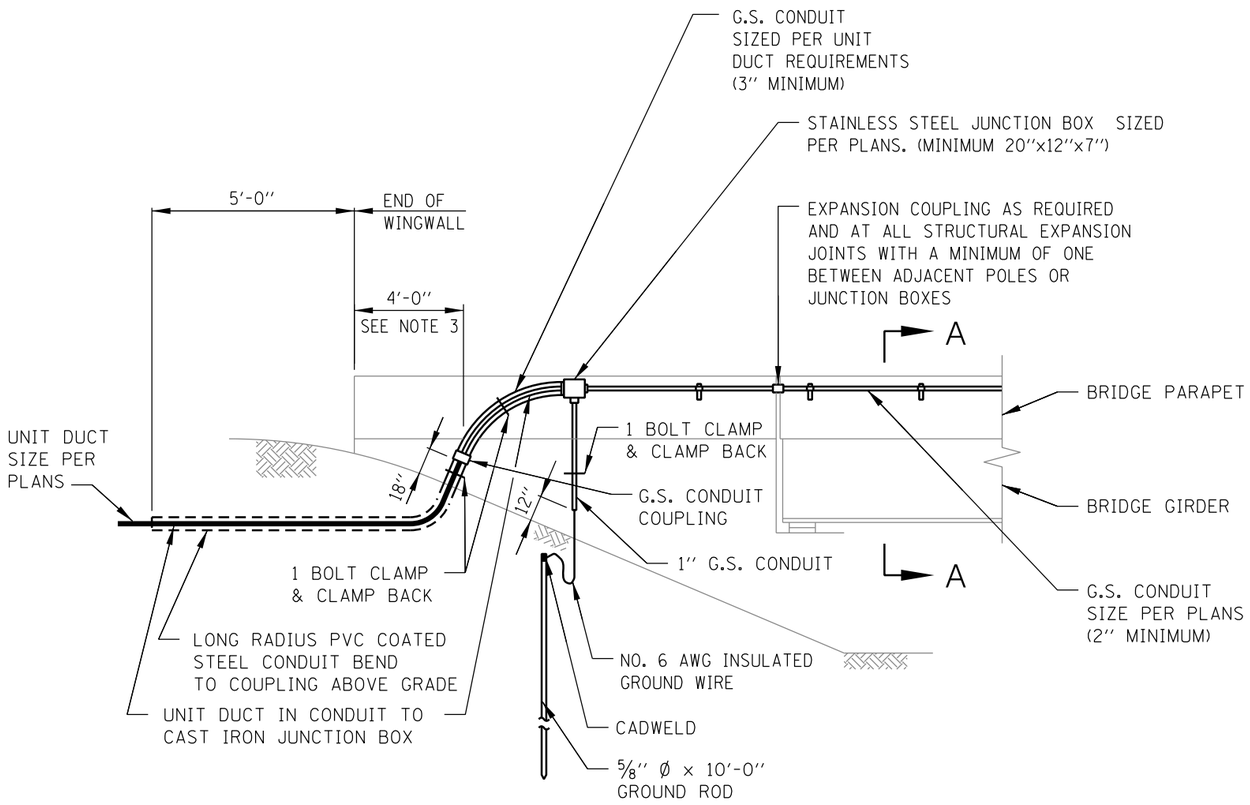
Illinois Tollway

LIGHT STANDARD POLE WIRING

STANDARD H2-02



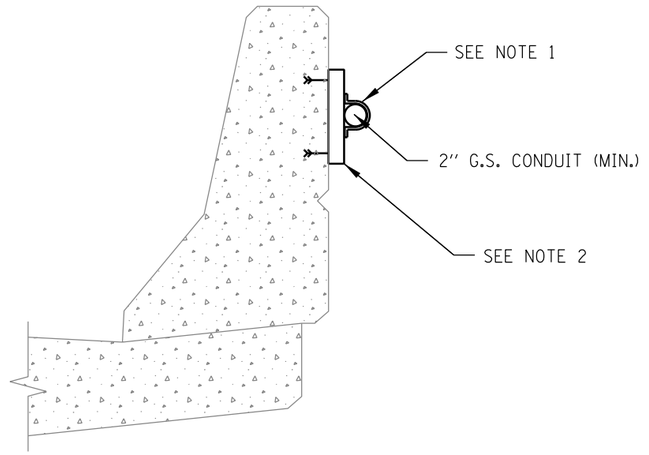
PLAN VIEW



ELEVATION OF TYPICAL WINGWALL CONDIUT TRANSITION

NOTES:

1. PIPE SUPPORT (HOT DIPPED GALVANIZED AFTER FABRICATION), MINIMUM SIZE EQUAL TO PIPE DIAMETER. MOUNT TO CHANNEL WITH TWO 3/8" STAINLESS STEEL CLAMPING NUTS, HEX HEAD CAP SCREW & LOCK WASHER, MOUNTED ON 5 FOOT CENTERS.
2. UNISTRUT P2000 STEEL CHANNEL (HOT DIPPED GALVANIZED AFTER FABRICATION), 10" LONG MOUNTED EXTERNALLY ON BRIDGE PARAPET. INSTALL ON 5'-0" CENTERS. ATTACH TO BRIDGE PARAPET WITH 1/2" DIA. EXPANSION ANCHORS, MIN. 2" LONG. EXPANSION ANCHOR SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION AND SHALL BE MADE BY PARABOLT, KWICK-BOLT OR WEJ-IT.
3. THE END 4'-0" SECTION OF WINGWALL/PARAPET SHALL BE KEPT FREE FROM ANY ATTACHMENTS TO AVOID CONFLICT FROM TRAFFIC BARRIER TERMINAL TYPE T6 ANCHORAGE ASSEMBLY.



SECTION A-A

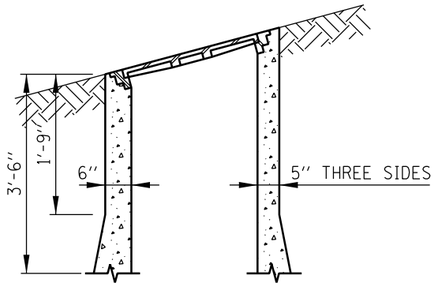
Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 2-7-2012

Illinois Tollway

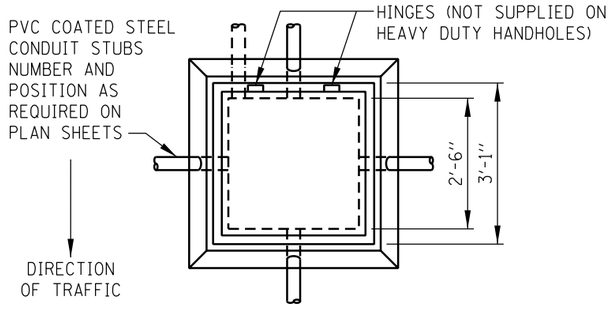
DATE	REVISIONS
2-7-2012	REVISED NOTES
11-1-2012	REVISED JUNCTION BOX

WINGWALL CONDUIT DETAILS

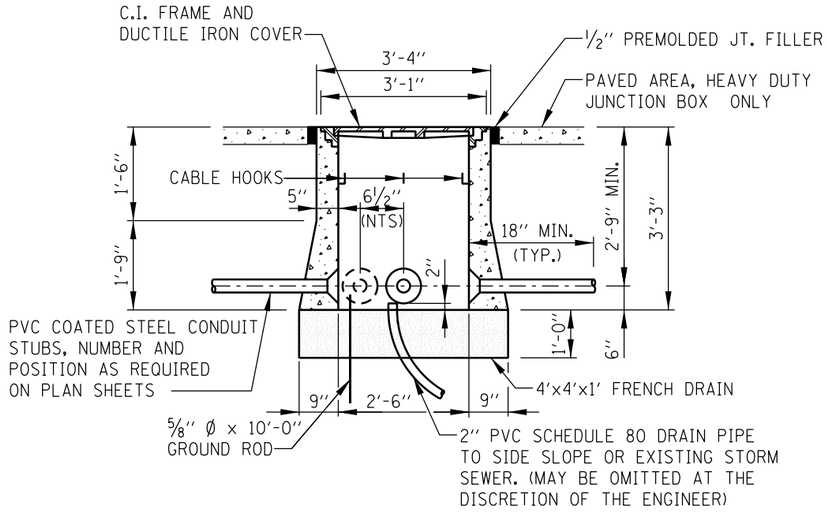
STANDARD H3-02



SLOPE INSTALLATION



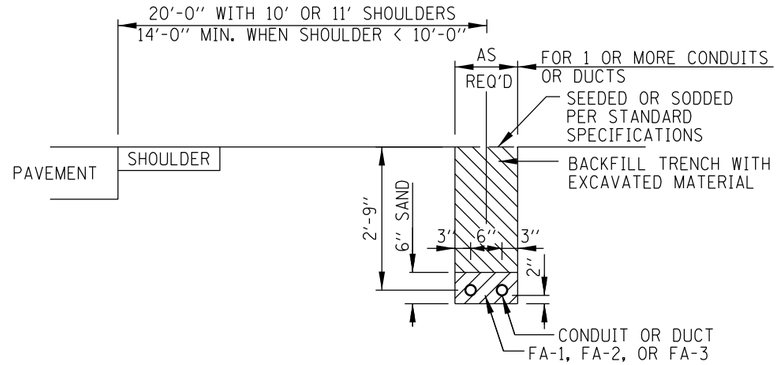
PLAN



PAVED AREA INSTALLATION

HANDHOLE AND HEAVY DUTY HANDHOLE

SEE NOTES

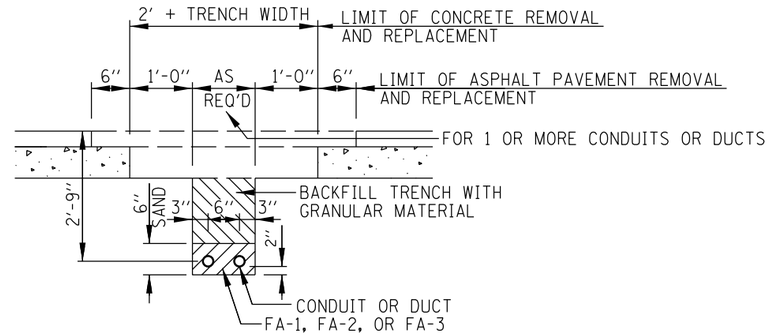


TRENCHING FOR CONDUIT IN NON-PAVED AREAS

(NOTE 6)

NOTE:

SAW-CUT HMA AND CONCRETE PAVEMENTS PRIOR TO REMOVAL



TRENCHING FOR CONDUIT IN PAVED AREAS

(NOTE 6)

NOTES:

1. HANDHOLES LOCATED IN UNPAVED AREAS AND NOT SHIELDED BY GUARDRAIL SHALL BE CONSTRUCTED WITH THE TOP FLUSH WITH THE ADAJACENT SLOPE.
2. HEAVY DUTY HANDHOLE - THIS TYPE SHALL BE CONSTRUCTED IN PAVED AREAS AND ITS FRAME AND COVER SHALL BE EITHER NEENAH FOUNDRY R-6662-PP WITH TYPE G LIFTING HANDLE OR EAST JORDAN IRON WORKS NO. 8213 WITH LIFTING RING, OR APPROVED EQUAL.
3. HANDHOLE - THIS TYPE SHALL BE CONSTRUCTED ONLY IN NON-PAVED AREAS AND ITS FRAME AND COVER SHALL BE NEENAH FOUNDRY R-6660-NH OR APPROVED EQUAL. THE FRAME AND COVER SHALL BE INSTALLED WITH THE HINGES AT THE SIDE FACING APPROACHING TRAFFIC.
4. AGGREGATE FOR FRENCH DRAIN SHALL BE PER ARTICLE 1003.04 OF THE STANDARD SPECIFICATIONS.
5. 10 FEET OF EXTRA CABLE SHALL BE COILED IN EACH HANDHOLE.
6. TRENCH AND BACKFILL FOR ELECTRICAL WORK SHALL BE INCLUDED IN THE COST OF THE UNDERGROUND RACEWAY AND WILL NOT BE MEASURED FOR PAYMENT.

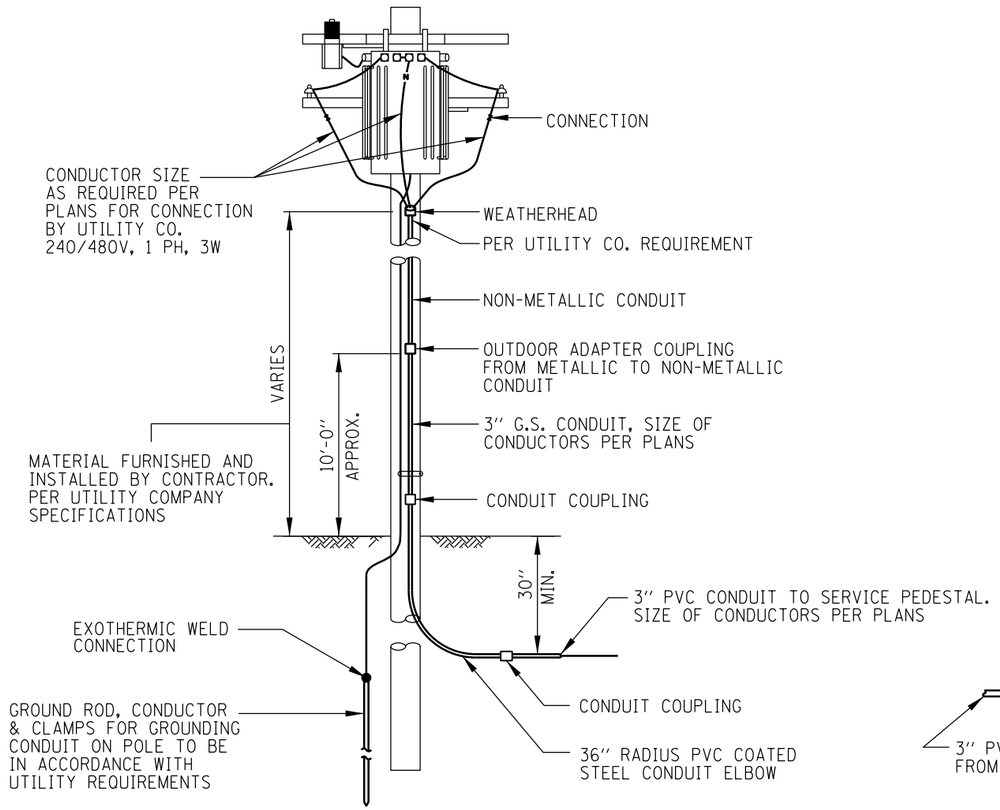
Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 2-7-2012

Illinois Tollway

DATE	REVISIONS
2-7-2012	MODIFY TRENCH DETAIL, NEW HANDHOLE DETAILS AND REVISED NOTES

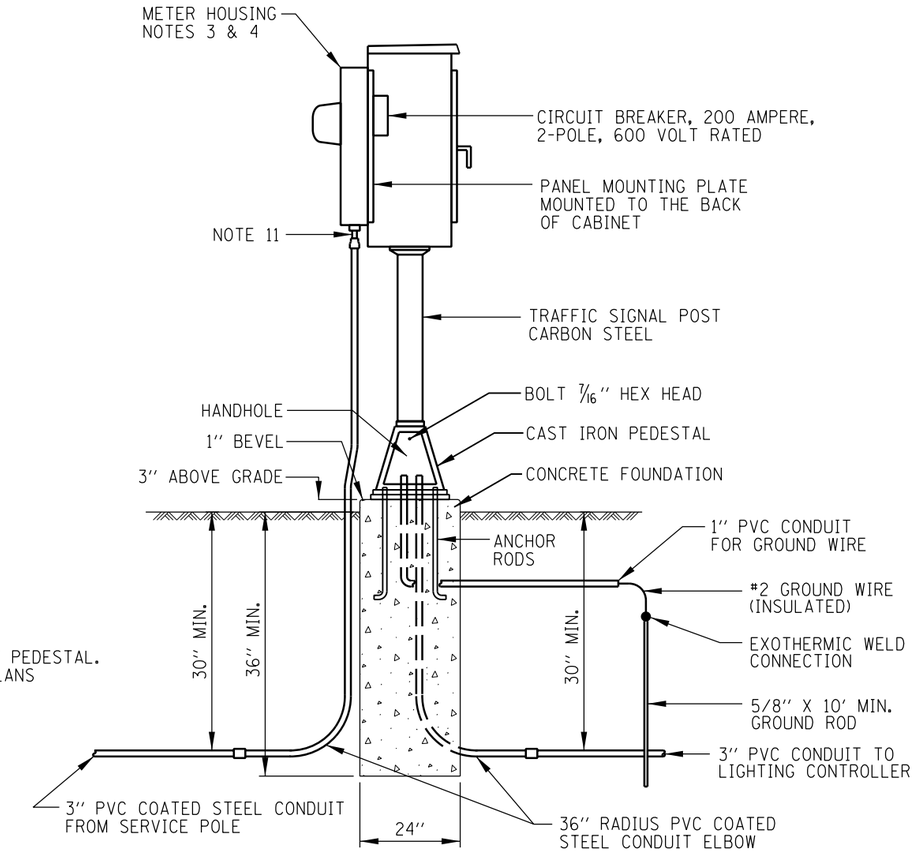
HANDHOLES AND BURIED WIRING DETAILS

STANDARD H4-01



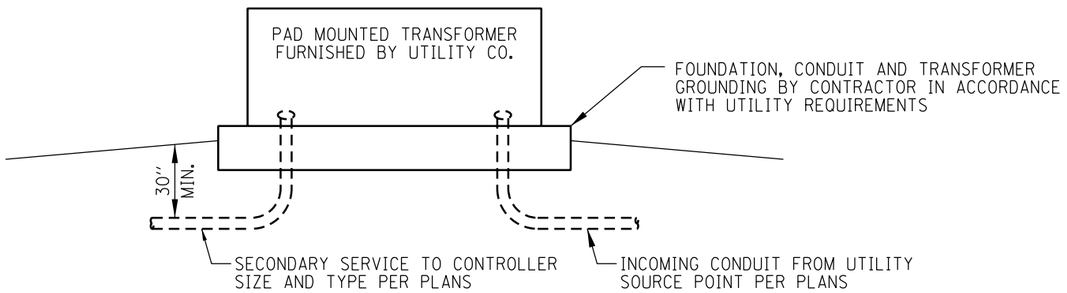
UTILITY SERVICE POLE

SUBJECT TO UTILITY COMPANY APPROVAL
NO SCALE



SERVICE PEDESTAL WITH METER DETAIL

NO SCALE (NOTE 9)



PAD MOUNTED TRANSFORMER

SUBJECT TO UTILITY COMPANY APPROVAL
NO SCALE

NOTES:

1. CABINETS, CABINET POSTS AND CABINET PEDESTALS SHALL BE PRIMED AND PAINTED. THE EXTERIOR SHALL HAVE TWO EPOXY FINISH COATS OF ANSI-61 GRAY. THE INTERIOR SHALL BE PAINTED WHITE.
2. METER HOUSING SHALL BE MOUNTED TO BACK WALL OF CONTROL CABINET. PROVIDE A GATE IN ROW FENCE TO ALLOW UTILITY ACCESS TO READ THE METER.
3. CABLES FROM METER HOUSING SHALL PASS THROUGH BACK WALL OF CONTROL CABINET.
4. METER HOUSING SHALL BE MILBANK CATALOG NUMBER U8949.
5. THE CABINET SHALL BE 36"H x 20"W x 15"D, FABRICATED FROM ALUMINUM WITH A MINIMUM THICKNESS OF .125", RATED NEMA TYPE 3R AND HAVE A MOUNTING BACK PLATE.
6. THE CABINET DOOR SHALL HAVE A CONTINUOUS HINGE THAT IS BOLTED TO THE CABINET AND DOOR WITH 1/4-20 STAINLESS STEEL CARRIAGE BOLTS AND NY-LOCK NUTS. THE HINGE SHALL BE INSTALLED ON THE RIGHT SIDE WHEN FACING THE CABINET AND BE MADE OF STAINLESS STEEL WITH A 0.25 INCH DIAMETER STAINLESS STEEL HINGE PIN. THE HINGE PIN SHALL BE CAPPED TOP AND BOTTOM BY WELD TO RENDER IT TAMPER-PROOF. THE CABINET SHALL HAVE A GASKET THAT FORMS A WEATHER-TIGHT SEAL BETWEEN THE CABINET AND DOOR. THE DOOR LATCHING MECHANISM SHALL BE THE 3-POINT DRAW ROLLER TYPE. WHEN THE DOOR IS CLOSED AND LATCHED, IT WILL BE LOCKED. THE LATCHING HANDLE SHALL BE FABRICATED FROM A 0.75" STAINLESS STEEL ROUND BAR AND SHALL HAVE A PROVISION FOR PADLOCKING IN THE CLOSED POSITION.
7. THE ENCLOSURE SHALL BE EQUIPPED WITH TWO ADJUSTABLE "C" MOUNTING CHANNELS WELDED ON BOTH SIDE WALLS AND BACK WALL OF THE ENCLOSURE, ALLOWING VERSATILE POSITIONING OF SHELVES OR PANELS. MOUNTING CHANNELS SHALL BE FACTORY PAINTED SAME COLOR AS INTERIOR OF CABINET.
8. CABINET DOOR SHALL NOT HAVE COMPARTMENT DOORS OR LOUVERS.
9. THE CABINET, POST, PEDESTAL BASE, METER HOUSING, FOUNDATION, GROUND ROD, GROUND WIRE AND GROUND CONNECTIONS SHALL BE INCLUDED IN THE COST OF EACH ELECTRIC SERVICE INSTALLATION (PAY ITEM 80400100).
10. CONTRACTOR MUST COORDINATE WITH PEDESTAL BASE SUPPLIER AND FURNISH THE NECESSARY ANCHOR RODS.
11. PROVIDE A 2½" CONDUIT HUB, 2½" NIPPLE AND 2½" TO 3" CONDUIT REDUCER FITTING.

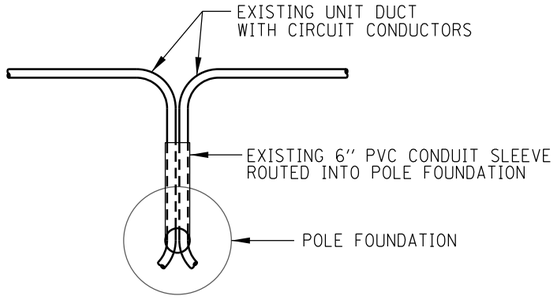
Illinois Tollway

DATE	REVISIONS
2-7-2012	NEW SERVICE PEDESTAL DETAIL,
	MODIFIED UTILITY SEVICE POLE

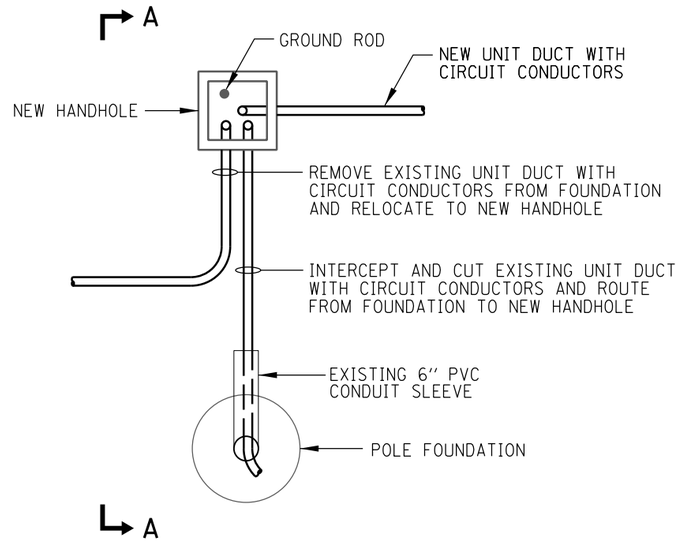
SERVICE POLE AND PEDESTAL DETAILS

STANDARD H5-01

Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 2-7-2012



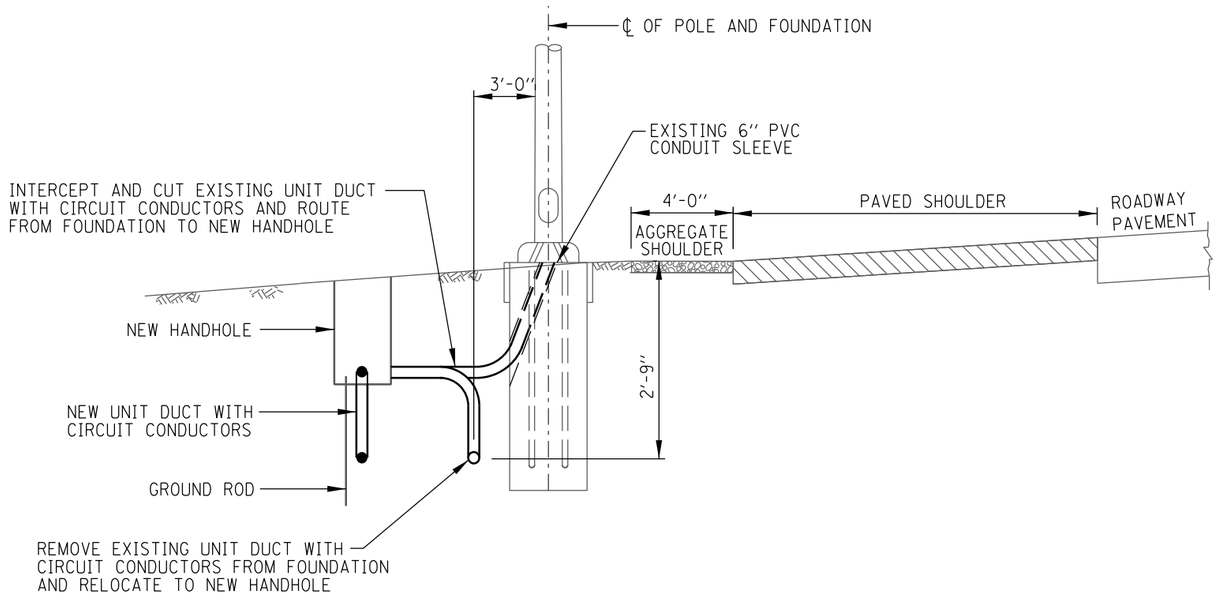
EXISTING WIRING



PROPOSED WIRING REVISION

POLE FOUNDATION WITH UNIT DUCT

NO SCALE



SECTION A-A

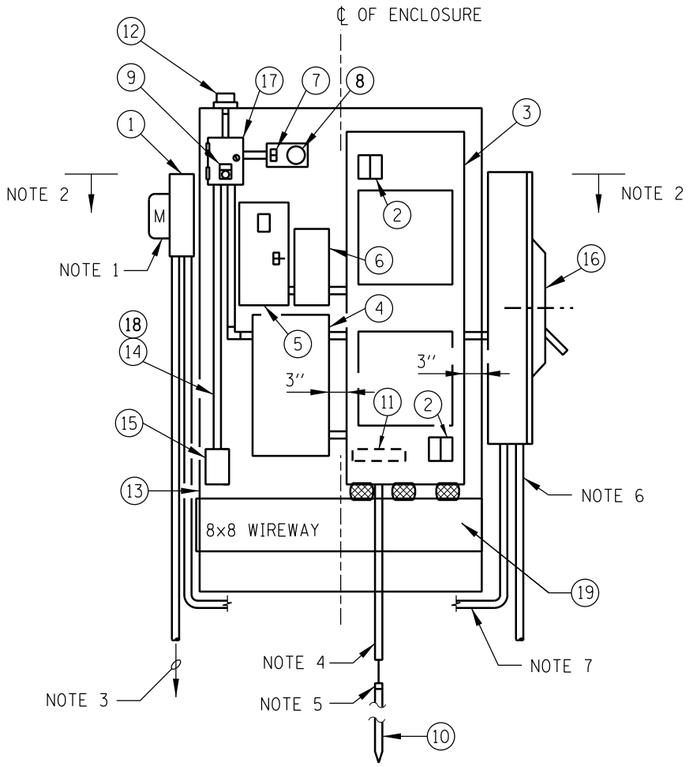
Paul Kovacs
APPROVED ..... CHIEF ENGINEER

DATE 2-7-2012

Illinois Tollway

WIRING MODIFICATIONS AT
EXISTING LIGHT STANDARDS

STANDARD H5-01



INTERIOR EQUIPMENT LAYOUT

FOR WIRING DIAGRAM SEE SHEET 2 OF 4 IN THIS SERIES

ITEM DESCRIPTION

(1) METER HOUSING

(2) SECONDARY SURGE ARRESTERS, 2 POLE, 650 VOLT.

(3) MAIN PANELBOARD IN A NEMA 1 ENCLOSURE, 480/240 VOLT, 1 PHASE, 3 WIRE, 2 SECTION, 200 AMP, 2 POLE MAIN CIRCUIT BREAKER 65,000 AMPERES SYMMETRICAL INTERRUPTING CAPACITY WITH CIRCUIT BREAKERS PER SCHEDULE ON PLANS. DOOR HINGES ON RIGHT SIDE.

(4) LIGHTING CONTACTOR, 480 VOLT, 200 AMP, 2 POLE, 120 VOLT CONTROL, WITH RELAY FOR 2 WIRE CONTROL, ONE NORMALLY OPEN AND ONE NORMALLY CLOSED AUXILIARY CONTACTS, CONTROL LINE FUSE, IN A NEMA 1 ENCLOSURE.

(5) SECONDARY BREAKER, 15 AMPERE TRIP, 120 VOLT, SINGLE POLE, 65,000 AMPERES SYMMETRICAL INTERRUPTING CAPACITY IN A NEMA 1 SURFACE MOUNTED ENCLOSURE.

(6) STEP DOWN TRANSFORMER, 1500 VA, 480 VOLT PRIMARY, 120 VOLT SECONDARY, SINGLE PHASE, 60 HERTZ, DRY TYPE, NEMA 3R ENCLOSURE.

(7) SINGLE POLE, 15 AMPERE SWITCH, IN A NEMA 1 ENCLOSURE (WITH ITEM 8), RATED AT 120-277 VAC.

(8) LAMP HOLDER 660W, 600V, MOUNTED ON A NEMA 1 ENCLOSURE (WITH ITEM 7), W/LED LAMP.

(9) HAND-OFF-AUTO SELECTOR SWITCH WITH LEGEND PLATE. MOUNTED IN THE COVER OF ITEM 17.

(10) 5/8'' x 10'-0'' GROUND ROD IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, DRIVEN EXTERNAL TO THE FOUNDATION.

(11) GROUND BUS MOUNTED IN PANELBOARD ENCLOSURE.

(12) PHOTO ELECTRIC CONTROL SWITCH,WITH RECEPTACLE.

(13) NEMA TYPE 3R STAINLESS STEEL ENCLOSURE WITH DRIP SHIELD AND STAINLESS STEEL HARDWARE. ENCLOSURE SHALL CONFORM TO J.I.C. STANDARDS WITH CELLULAR NEOPRENE GASKETED DOORS, ALL SEAMS CONTINUOUSLY WELDED, 10 GAUGE STAINLESS STEEL BODY, REMOVABLE STEEL (PAINTED WHITE) PANEL INSIDE THE BACK AND A FACTORY INSTALLED DRIP SHIELD. THE ENCLOSURE SHALL HAVE CONTINUOUS HINGED DOORS MEETING IN THE CENTER, OVERLAPPED AND GASKETED, WITH NO CENTERPOST. AN OIL TIGHT KEY LOCKING HANDLE WITH 3 POINT LATCH SHALL BE PROVIDED (FURNISH 6 KEYS). EACH END OF THE ENCLOSURE SHALL HAVE A SCREENED, GASKETED VENTILATING LOUVER AND THE TOP OF THE ENCLOSURE SHALL HAVE A VENTILATOR. INTERNAL CONDUIT SHALL HAVE LOCKNUTS, INSULATING BUSHING AND CONDULET FITTINGS AS REQUIRED. INTERNAL WIRING SHALL BE XLP INSULATED NEC TYPE RHH/RHW-2. PROVIDE A WIRING DIAGRAM IN A PRINT POCKET ON THE INSIDE OF THE CABINET DOOR.

(14) INTERNAL CONTROL WIRING SHALL BE #12 AWG, STRANDED, XLP INSULATED NEC TYPE RHH/RHW-2 RATED 600 VOLT, WITH SUITABLE COLOR CODING TO BE APPROVED BY THE ENGINEER BEFORE CONSTRUCTION.

(15) 200 WATT, 120 VOLT CABINET HEATER WITH INTEGRAL THERMOSTAT.

(16) SERVICE SAFETY SWITCH, 200 AMP, 600 VOLT, NON-FUSED, NEMA 4X STAINLESS STEEL ENCLOSURE.

(17) NEMA TYPE 1, 8''x6''x4'' JUNCTION BOX & COVER WITHOUT KNOCKOUTS. ITEM 9 IS MOUNTED IN THE COVER.

(18) INTERNAL CONDUIT AND FITTINGS SHALL BE 3/4'' MINIMUM.

(19) 8''x8'' WIREWAY WITH 3-3'' NIPPLES.

NOTES:

1. PROVIDE METER HOUSING WHEN SERVICE PEDESTAL IS NOT PROVIDED.
2. 6'-0'' MAXIMUM HEIGHT ABOVE GRADE.
3. TO UTILITY SERVICE AS INDICATED ON PLANS WHEN SERVICE PEDESTAL IS NOT PROVIDED.
4. 3/4'' PVC CONDUIT IN CONCRETE, SEE FOUNDATION DETAILS.
5. CADWELD NO. 2 BARE COPPER GROUND CABLE TO GROUND ROD.
6. TO SERVICE PEDESTAL AS INDICATED ON PLANS.
7. CONDUIT AND CABLE BETWEEN METER FITTING AND DISCONNECT SWITCH ROUTED BETWEEN CONTROL CONSOLE AND CONCRETE FOUNDATION, WHEN A METER HOUSING IS REQUIRED. CONDUIT AND CABLE SHALL BE THE SAME AS THE SERVICE.

EXTERIOR INSTALLATION

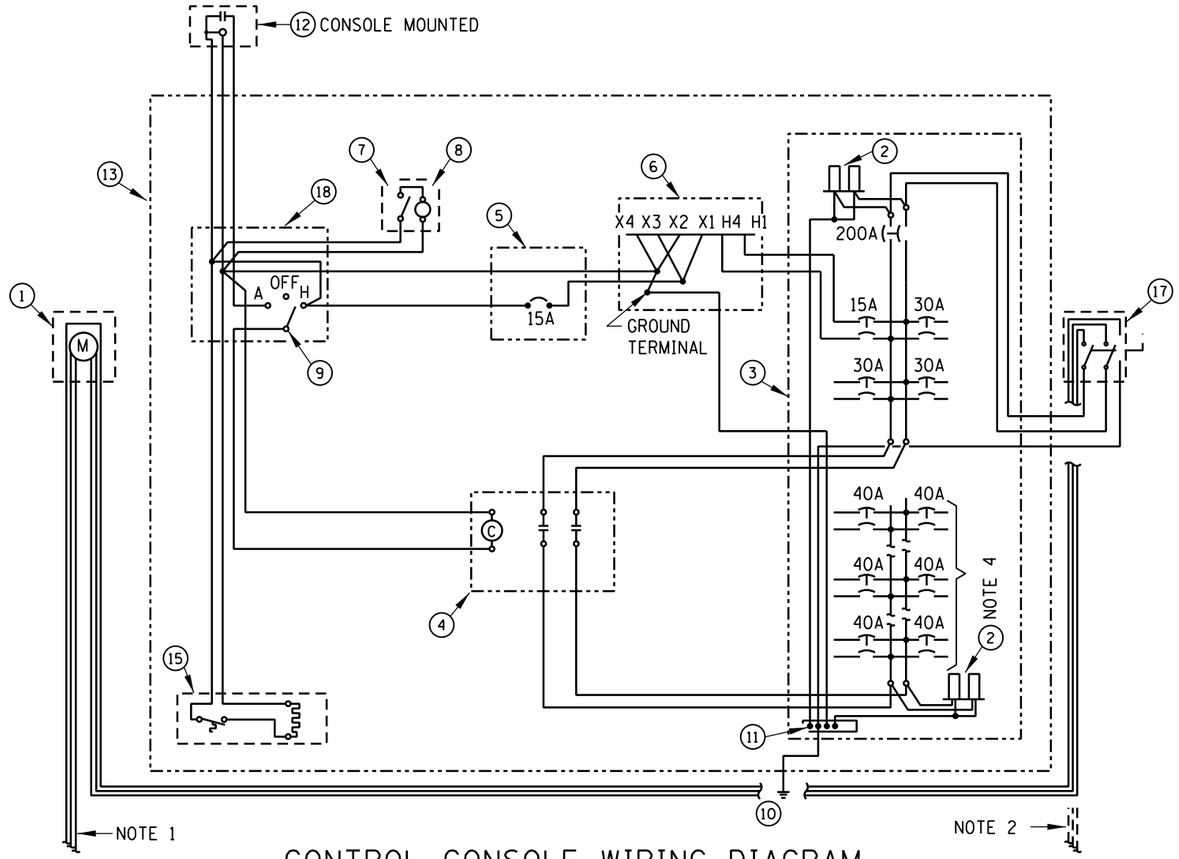
Paul Kovacs
APPROVED ..... CHIEF ENGINEER DATE 2-7-2012

Illinois Tollway

DATE	REVISIONS
2-7-2012	MODIFY ENCLOSURE DIMENSIONS, REVISED NOTES AND ITEM DESCRIPTIONS
3-31-2014	REVISED NOTES AND ITEM DESCRIPTIONS

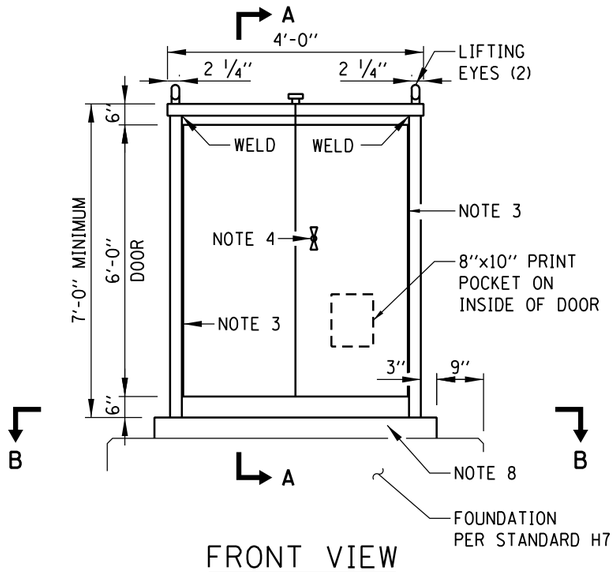
CONTROL CONSOLE DETAILS

STANDARD H6-02

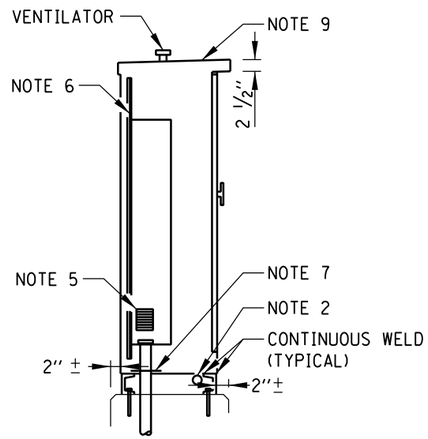


CONTROL CONSOLE WIRING DIAGRAM

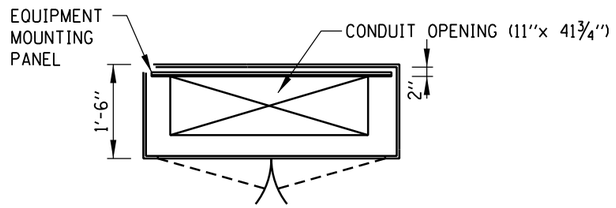
NOTE 1



FRONT VIEW



SECTION A-A



SECTION B-B

WIRING DIAGRAM NOTES:

1. TO UTILITY SERVICE. 480/240V, 1 PHASE, 3 WIRE, GROUNDED, WHEN A METER HOUSING IS REQUIRED (FED FROM PAD MOUNTED UTILITY TRANSFORMER WITHIN TOLLWAY RIGHT-OF-WAY).
2. TO SERVICE PEDESTAL, 480/240V, 1 PHASE, 3 WIRE, GROUNDED. SEE STANDARD H5.
3. ITEM NUMBERS REFER TO EQUIPMENT LIST ON SHEET 1 OF 4 IN THIS SERIES.
4. PROVIDE BREAKERS PER SCHEDULE ON THE CONTRACT PLANS.

CONTROL CONSOLE NOTES:

1. FOR INTERIOR EQUIPMENT LAYOUT DETAILS, SEE SHEET 1 OF 4 IN THIS SERIES.
2. CONDUIT AND CABLE BETWEEN METER FITTING AND DISCONNECT SWITCH ROUTED BETWEEN CONTROL CONSOLE AND CONCRETE FOUNDATION, WHEN A METER HOUSING IS REQUIRED. CONDUIT AND CABLE SHALL BE THE SAME AS THE SERVICE.
3. CONTINUOUS STAINLESS STEEL PIANO HINGES.
4. 3 POINT LATCH VAULT TYPE HANDLE WITH MASTER KEYED CHICAGO CYLINDER LOCK CATALOG NO. 60
5. SCREENED LOUVERS ON SIDES OF CABINET.
6. 10 GAUGE GALVANIZED STEEL EQUIPMENT MOUNTING PANEL (PAINTED WHITE).
7. REMOVABLE #10 GAUGE 13"x43¾" STAINLESS STEEL PLATE. DRILL PLATE AS REQUIRED FOR CONDUIT ENTRY.
8. 4" x 2½" STAINLESS STEEL CHANNEL (2 REQUIRED-FRONT AND BACK). EXTEND CHANNEL 3" BEYOND ENCLOSURE (CONTINUOUSLY WELD CHANNEL TO ENCLOSURE).
9. TOP SLOPED ½" TO REAR FOR DRAINAGE.

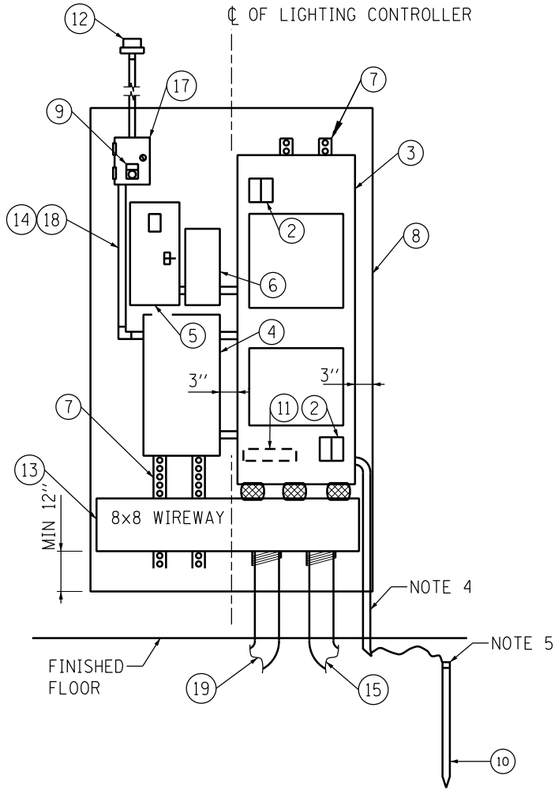
Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 2-7-2012

EXTERIOR INSTALLATION

Illinois Tollway

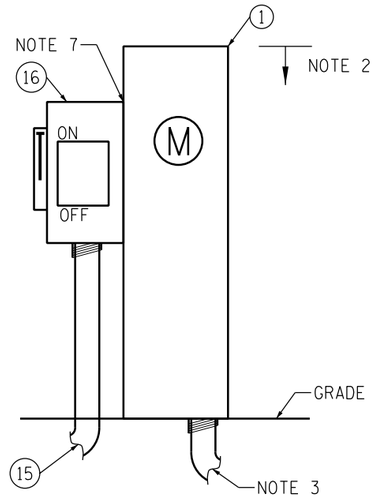
CONTROL CONSOLE DETAILS

STANDARD H6-02



INTERIOR EQUIPMENT LAYOUT

FOR WIRING DIAGRAM SEE SHEET 2 (OF 2) IN THIS SERIES



NOTES:

1. PROVIDE POWER UTILITY CO. METER HOUSING AS INDICATED ON PLANS.
2. 6'-0" MAXIMUM HEIGHT ABOVE GRADE.
3. TO UTILITY SERVICE AS INDICATED ON PLANS.
4. ¾" PVC CONDUIT.
5. CADWELD NO. 2 BARE COPPER GROUND CABLE TO GROUND ROD. 12"-24" BELOW GRADE.
6. TO POWER UTILITY COMPANY, SERVICE AS INDICATED ON PLANS.
7. CONDUIT AND CABLE BETWEEN METER FITTING AND DISCONNECT SWITCH. CONDUIT AND CABLE SHALL BE THE SAME AS THE SERVICE.
8. LABEL ALL EQUIPMENT AS "ROADWAY LIGHTING" + DEVICE AND IPDC#.

ITEM	DESCRIPTION
(1)	METER HOUSING, MILBANK U8436-0.
(2)	SECONDARY SURGE ARRESTERS, 2 POLE, 650 VOLT. (JOSLYN Z2-650-0)
(3)	MAIN PANELBOARD, 480/240 VOLT, 1 PHASE, 3 WIRE, 2 SECTION, 200 AMP, 2 POLE MAIN CIRCUIT BREAKER 65,000 AMPERES SYMMETRICAL INTERRUPTING CAPACITY. EATON PANELBOARD TYPE POW-R-LINE 3a IN A NEMA 1 ENCLOSURE, WITH CIRCUIT BREAKERS PER SCHEDULE ON PLANS. DOOR HINGES ON RIGHT SIDE.
(4)	LIGHTING CONTACTOR, 480 VOLT, 200 AMP, 2 POLE, 120 VOLT CONTROL, WITH RELAY FOR 2 WIRE CONTROL, (MAGNECRAFT W389ACX-9) ONE NORMALLY OPEN AND ONE NORMALLY CLOSED AUXILIARY CONTACTS, CONTROL LINE FUSE, IN A NEMA 1 ENCLOSURE, SQUARE-D CLASS 8903, TYPE PB.
(5)	SECONDARY BREAKER, 15 AMPERE TRIP, 120 VOLT, SINGLE POLE, 65,000 AMPERES SYMMETRICAL INTERRUPTING CAPACITY IN A NEMA 1 SURFACE MOUNTED ENCLOSURE.
(6)	STEP DOWN TRANSFORMER, 1500 VA, 480 VOLT PRIMARY, 120 VOLT SECONDARY, SINGLE PHASE, 60 HERTZ, DRY TYPE, NEMA 3R ENCLOSURE. (JEFFERSON 411-0081-000)
(7)	1¼" X ¾" C-CHANNEL (UNISTRUT) FOR ALL EQUIPMENT STANDOFF
(8)	½" FIRE RATED PLYWOOD BACKBOARD 4' W X 7' H
(9)	HAND-OFF-AUTO SELECTOR SWITCH WITH LEGEND PLATE. MOUNTED IN THE COVER OF ITEM 17. (SQ D 9001KS43BH13)
(10)	ROUTED TO BUILDING GROUND SYSTEM. IF NO GROUND AVAILABLE CONTRACTOR SHALL PROVIDE ⅝" X 10'-0" WITHIN CONTRACTOR PROVIDED GROUND WELL.
(11)	GROUND BUS MOUNTED IN PANELBOARD ENCLOSURE.
(12)	PHOTO ELECTRIC CONTROL SWITCH, (TORK 5001S) WITH RECEPTACLE (MODEL 2421) MOUNTED ON SOUTH EXTERIOR VIEW (UNOBSTRUCTED)
(13)	8"x8" WIREWAY WITH 3-3" NIPPLES.
(14)	INTERNAL CONTROL WIRING SHALL BE #12 AWG, STRANDED, INSULATED NEC TYPE THWN/THHN RATED 600 VOLT, WITH SUITABLE COLOR CODING TO BE APPROVED BY THE ENGINEER BEFORE CONSTRUCTION.
(15)	2" PVC COATED GALVANIZED STEEL CONDUIT FROM SERVICE SAFETY SWITCH TO LIGHTING CONTROLLER WIREWAY.
(16)	SERVICE SAFETY SWITCH, 200 AMP, 600 VOLT, NON-FUSED, NEMA 4X STAINLESS STEEL ENCLOSURE.
(17)	NEMA TYPE 1, 8"x6"x4" JUNCTION BOX & COVER WITHOUT KNOCKOUTS. ITEM 9 IS MOUNTED IN THE COVER.
(18)	INTERNAL CONDUIT AND FITTINGS SHALL BE ¾" MINIMUM.
(19)	(2) 4" PVC COATED GALVANIZED STEEL CONDUIT TO LIGHTING CONTROLLER HAND HOLE. REFER TO SITE PLAN FOR LOCATION.

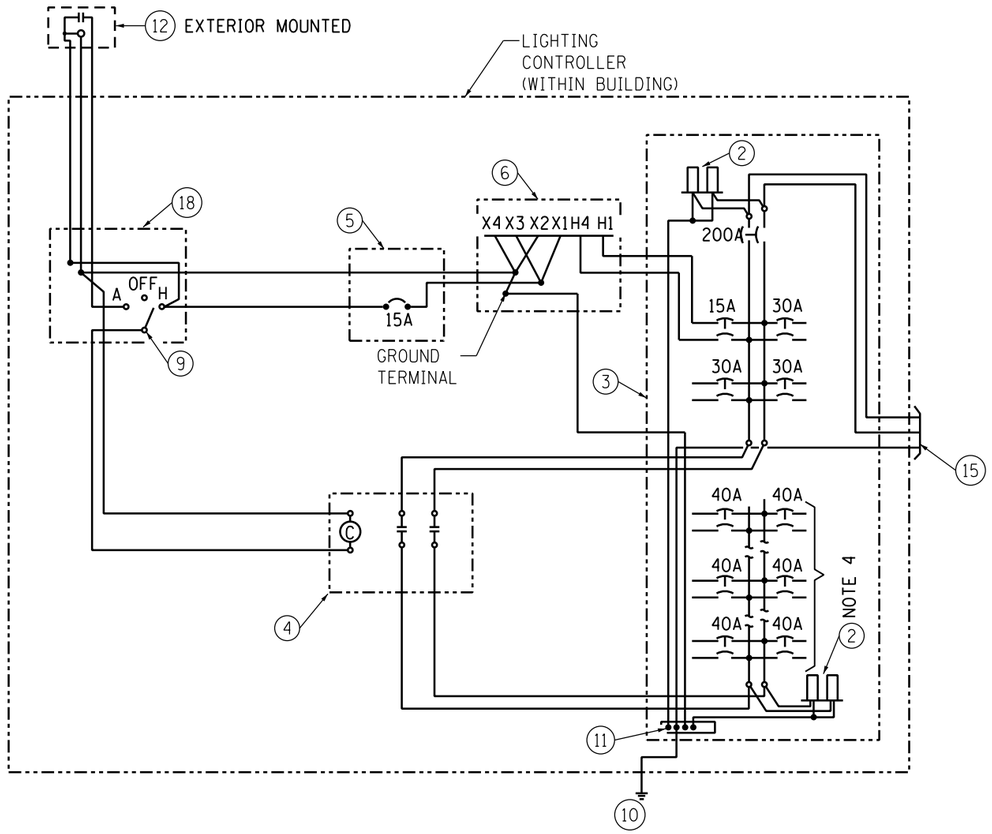
INTERIOR INSTALLATION

Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 2-7-2012

Illinois Tollway

CONTROL CONSOLE DETAILS

STANDARD H6-02



CONTROL CONSOLE WIRING DIAGRAM

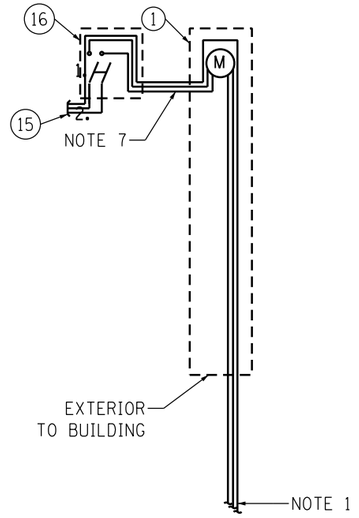
WIRING DIAGRAM NOTES:

1. TO UTILITY SERVICE. 480/240V, 1 PHASE, 3 WIRE, GROUNDED, (FED FROM PAD MOUNTED UTILITY TRANSFORMER WITHIN TOLLWAY RIGHT-OF-WAY).
2. TO SERVICE PEDESTAL, 480/240V, 1 PHASE, 3 WIRE, GROUNDED. SEE STANDARD H5.
3. ITEM NUMBERS REFER TO EQUIPMENT LIST ON PREVIOS SHEET.
4. PROVIDE BREAKERS PER SCHEDULE ON THE CONTRACT PLANS.

CONTROL CONSOLE NOTES:

FOR INTERIOR EQUIPMENT LAYOUT DETAILS, SEE PREVIOUS SHEET.

CONDUIT AND CABLE BETWEEN METER FITTING AND DISCONNECT SWITCH. CONDUIT AND CABLE SHALL BE THE SAME AS THE SERVICE.



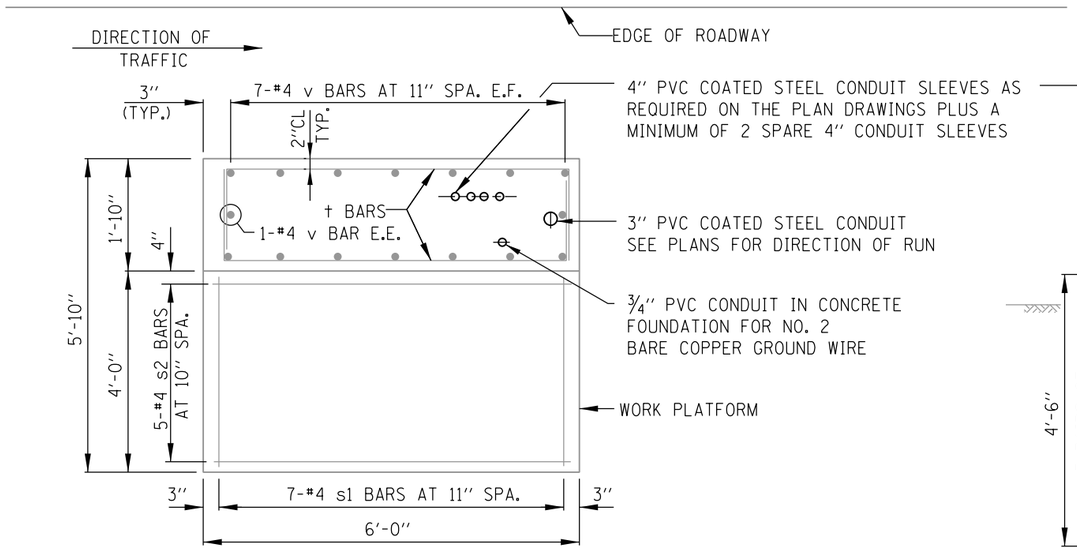
Paul Kovacs
APPROVED ..... DATE 2-7-2012
CHIEF ENGINEER

INTERIOR INSTALLATION

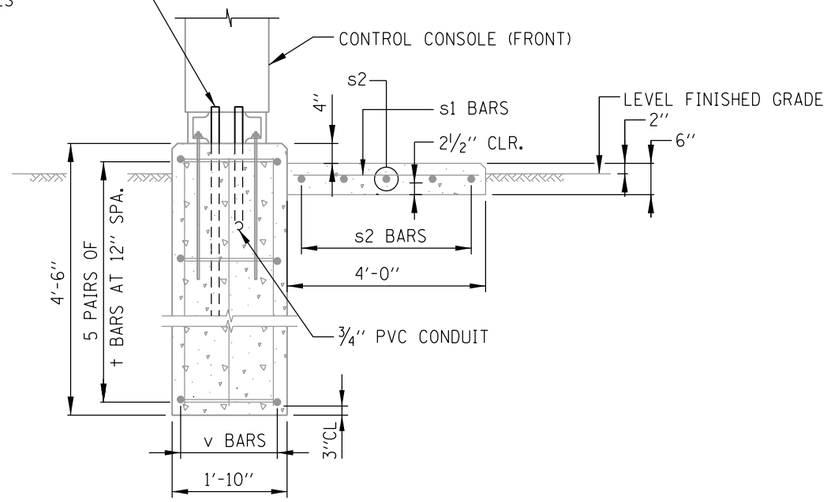
Illinois Tollway

CONTROL CONSOLE DETAILS

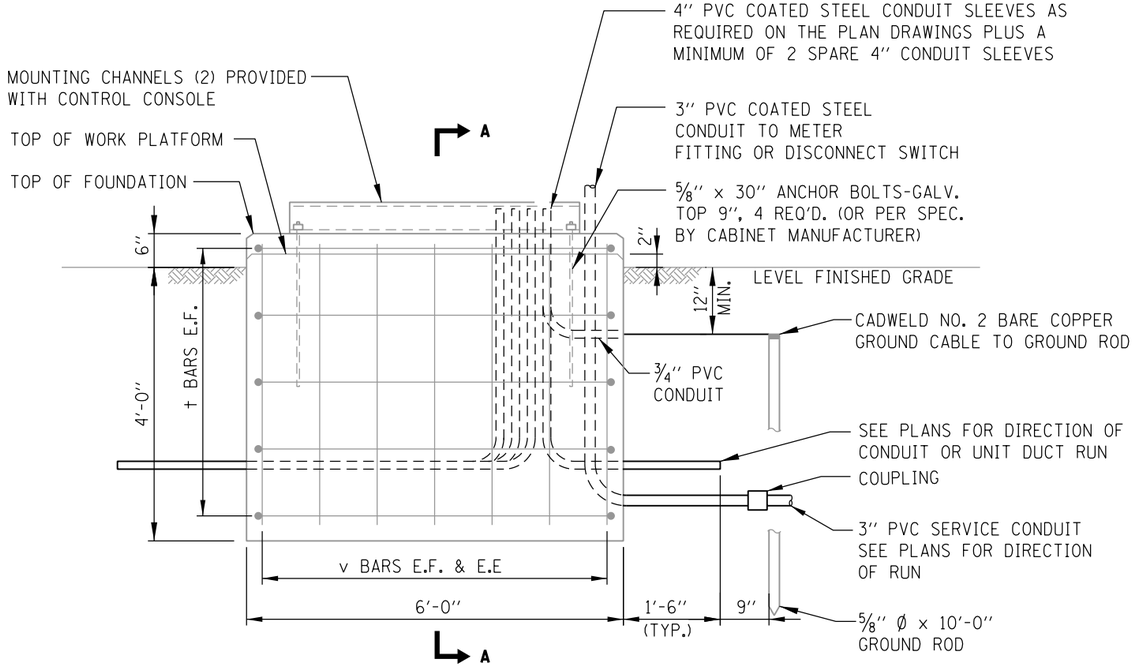
STANDARD H6-02



PLAN



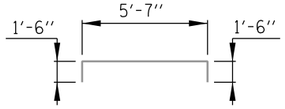
SECTION A-A



ELEVATION

REINFORCING BAR SCHEDULE					
BAR	NO.	SIZE	LENGTH	WT. LBS.	SHAPE
v	16	#4	4'-0"	43	——
†	10	#4	8'-7"	57	⌐—⌐
s1	7	#4	3'-8"	17	——
s2	5	#4	5'-8"	19	——

BILL OF MATERIAL		
DESCRIPTION	UNIT	QUANTITY
REINF. STEEL, EPOXY COATED	LBS.	136
CLASS "SI" CONCRETE	CU. YDS.	2.3



† BARS

NOTE:

SEE SHEET 2 OF THIS SERIES FOR GENERAL NOTES

TYPE A CONTROL CONSOLE FOUNDATION

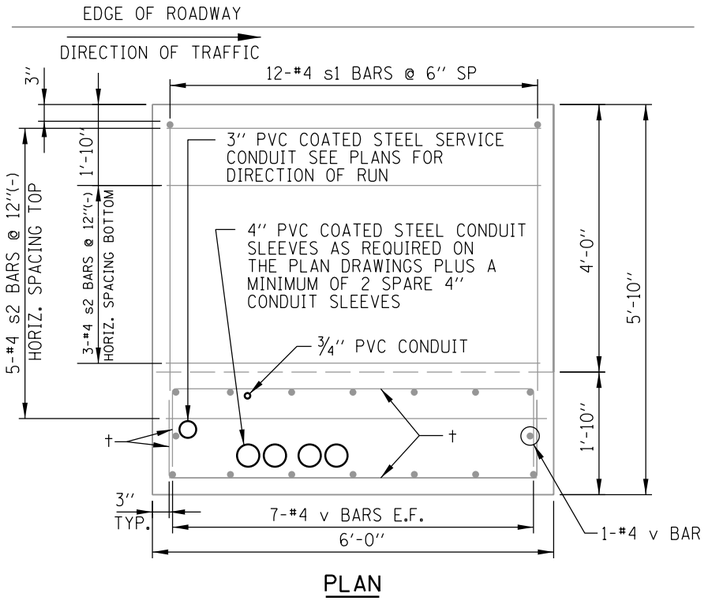
Paul Kovacs
APPROVED CHIEF ENGINEER DATE 2-7-2012

DATE	REVISIONS
2-7-2012	REVISED TYPE A AND TYPE B CONTROL CONSOLE FOUNDATIONS

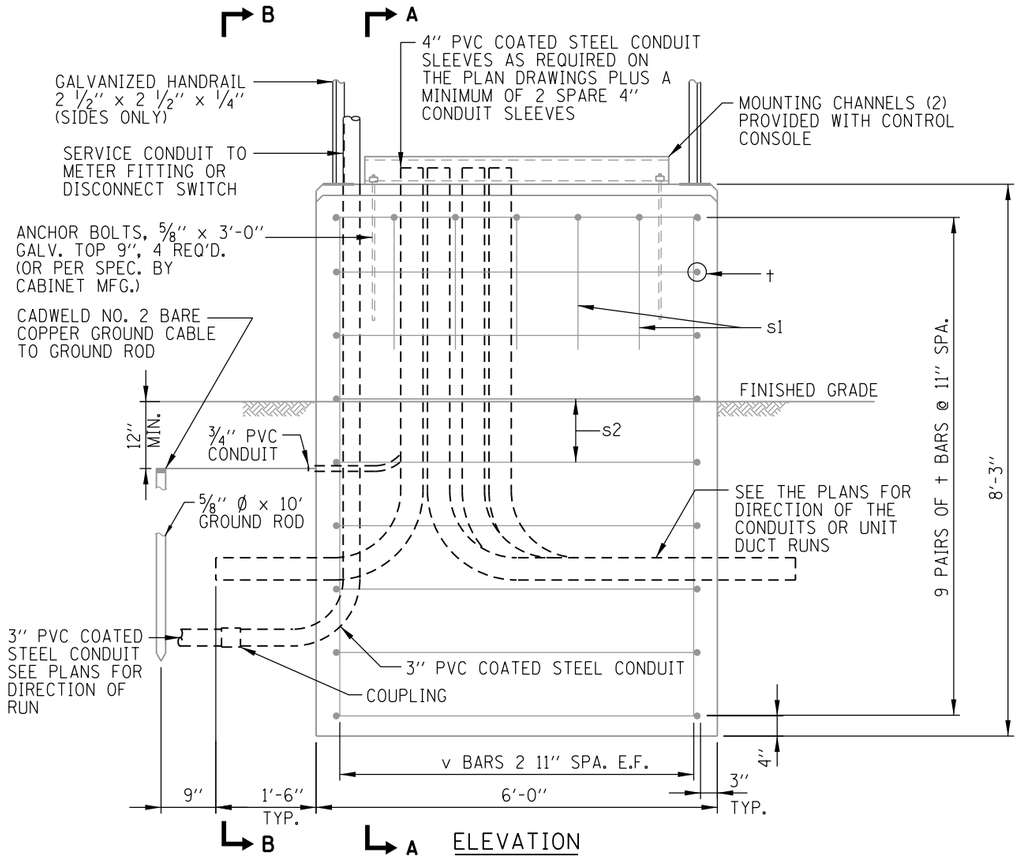
Illinois Tollway

OUTDOOR CONTROL CONSOLE FOUNDATION DETAILS

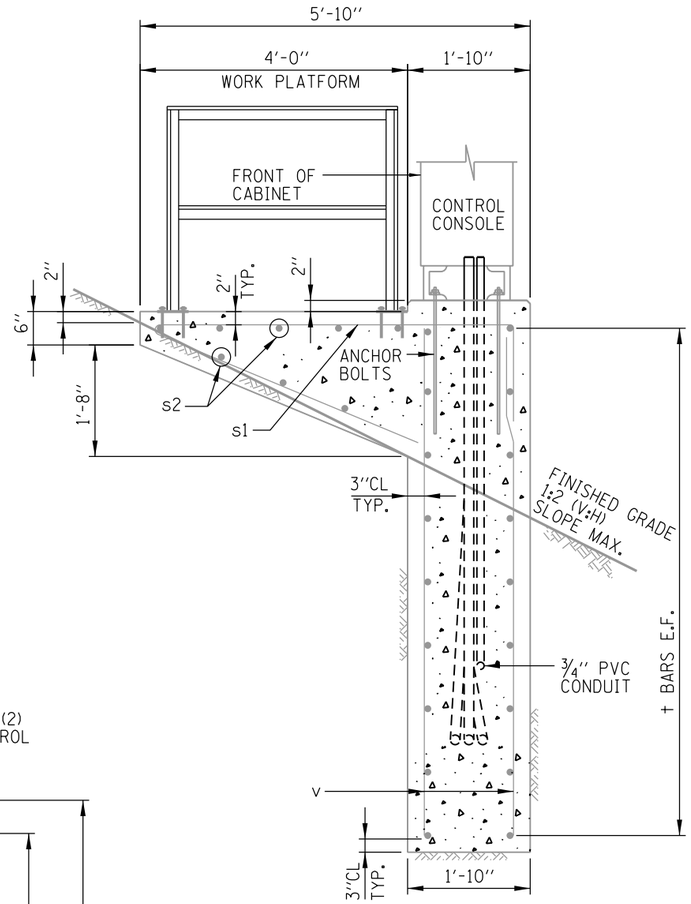
STANDARD H7-01



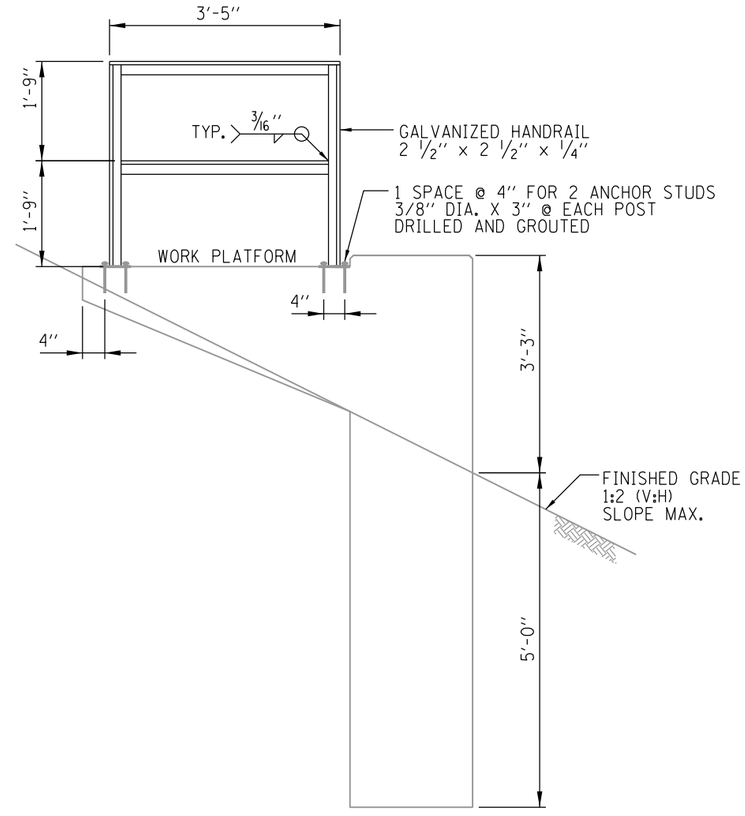
PLAN



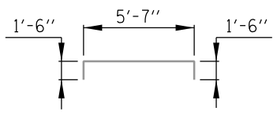
ELEVATION



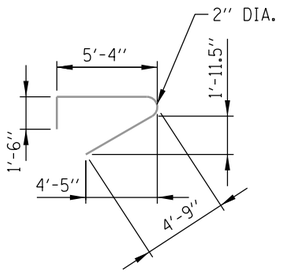
SECTION A-A



VIEW B-B



t BARS



s1 BARS

NOTES:

1. EXPOSED CONCRETE EDGES SHALL HAVE 3/4" x 45° CHAMFERS EXCEPT WHERE SHOWN OTHERWISE. CHAMFERS ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW FINISHED GROUND LEVEL.
2. ALL REINFORCEMENT BARS SHALL BE EXPOXY COATED AND SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31 (ASTM A615), GRADE 60 DEFORMED BARS.
3. REINFORCEMENT BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315, LATEST EDITION.
4. REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT TO OUT.
5. COVER FROM THE FACE OF CONCRETE TO FACE OF REINFORCEMENT BARS SHALL BE 3" FOR ALL SURFACES UNLESS OTHERWISE SHOWN.
6. FOR CLARITY, CONTROL CONSOLE AND RAILINGS ARE NOT SHOWN IN PLAN VIEW.

REINFORCING BAR SCHEDULE					
BAR	NO.	SIZE	LENGTH	WT. LBS.	SHAPE
v	16	#4	7'-10"	84	
t	18	#4	8'-7"	103	
s1	12	#4	11'-9"	94	
s2	8	#4	5'-6"	29	

BILL OF MATERIAL		
DESCRIPTION	UNIT	QTY
REINF. STEEL, EPOXY COATED	LBS.	310
CLASS "SI" CONCRETE	CU. YDS.	9.4
STRUCTURAL STEEL	LBS.	158

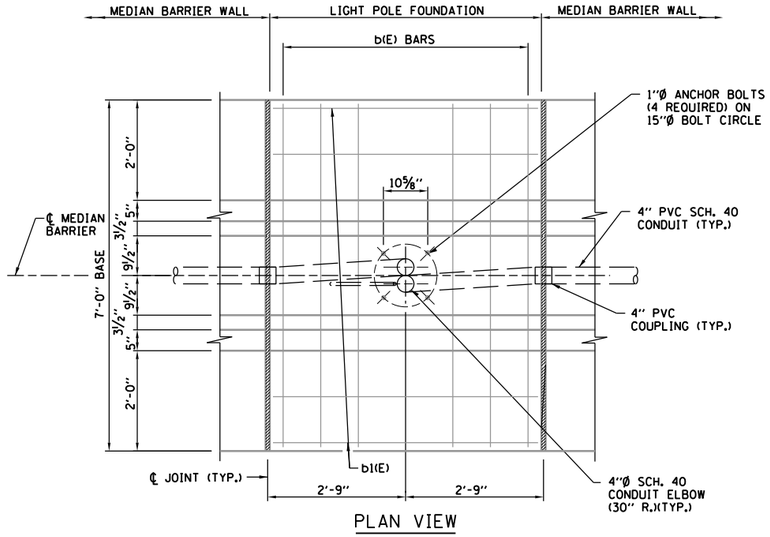
Paul Kovacs
APPROVED CHIEF ENGINEER
DATE 2-7-2012

TYPE B CONTROL CONSOLE FOUNDATION

Illinois Tollway

OUTDOOR CONTROL CONSOLE FOUNDATION DETAILS

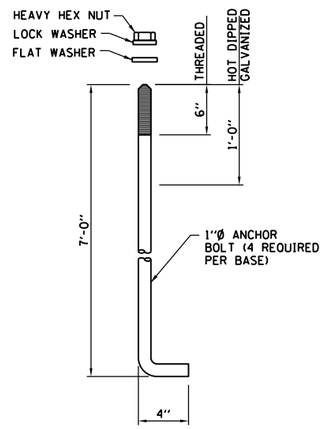
STANDARD H7-01



PLAN VIEW

NOTE:

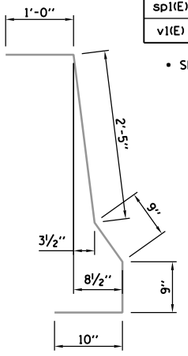
ALL BARS SHALL BE EPOXY COATED.



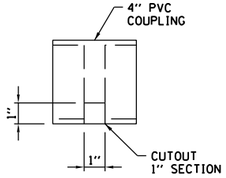
ANCHOR BOLT DETAIL

REINFORCING BAR SCHEDULE					
BAR	NO.	SIZE	LENGTH	WT. LBS.	SHAPE
a1(E)	12	#4	5'-0"	40	
b(E)	6	#4	6'-6"	26	
b1(E)	4	#4	5'-2"	14	
d1(E)	12	#4	5'-9"	46	
sp1(E)	•	#4	•		
v1(E)	8	#6	11'-9"	142	

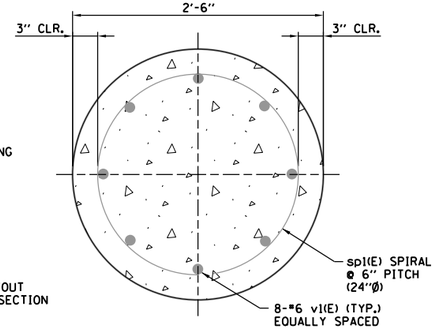
• SEE SECT. A-A



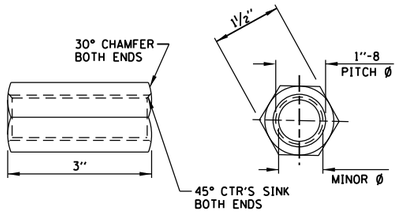
d1(E) BAR



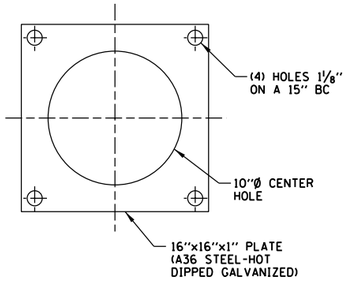
DETAIL A



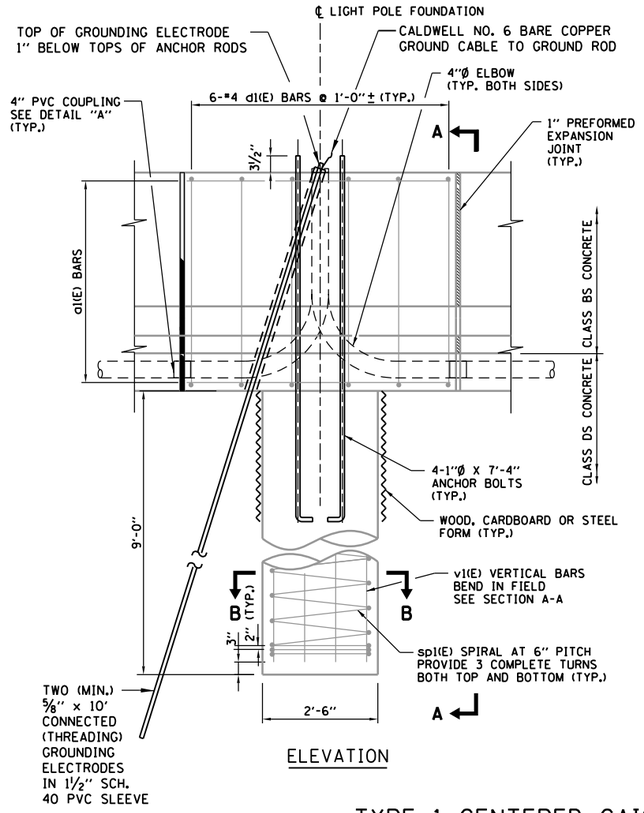
SECTION B-B



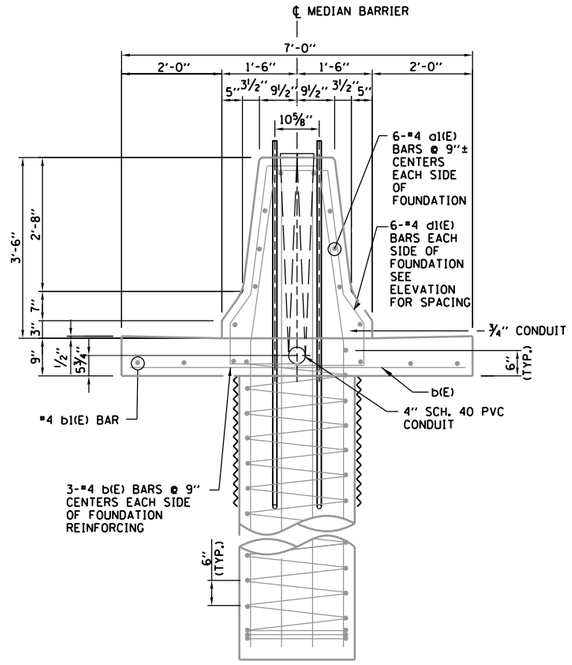
COUPLING NUT



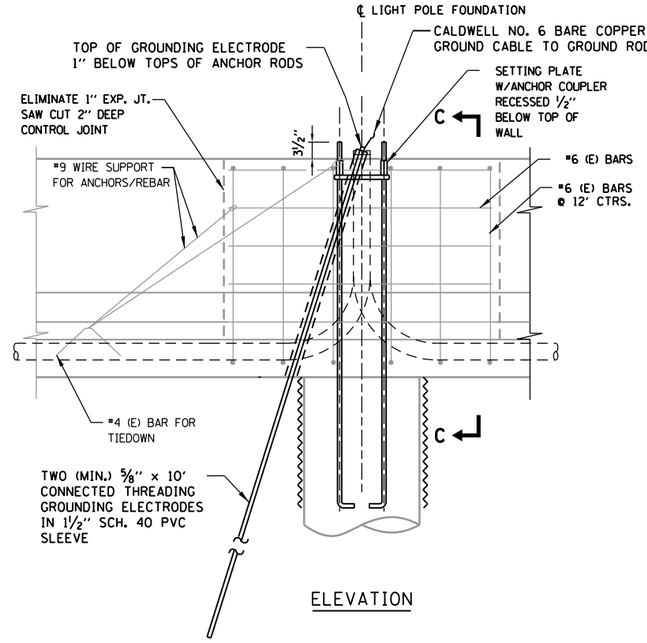
SETTING PLATE



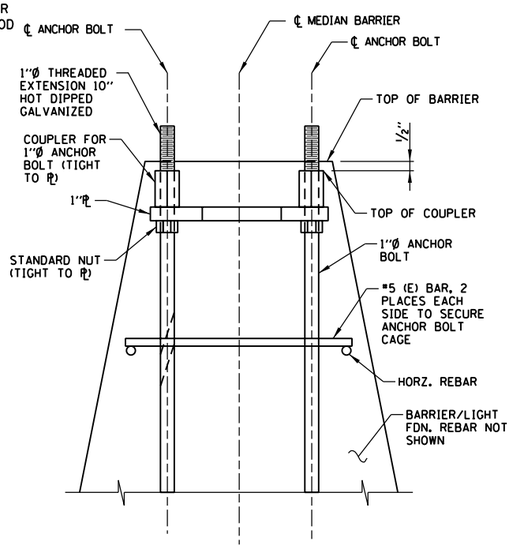
ELEVATION



SECTION A-A



ELEVATION



SECTION C-C

NOTE:

PLUG TOP OF COUPLER WITH PLASTIC PLUG OR COVER WHILE PLACING CONCRETE.

TYPE 1 CENTERED CAISSON, 42" BARRIER

MODIFIED LIGHT POLE FOUNDATION (SLIPFORM POUR)

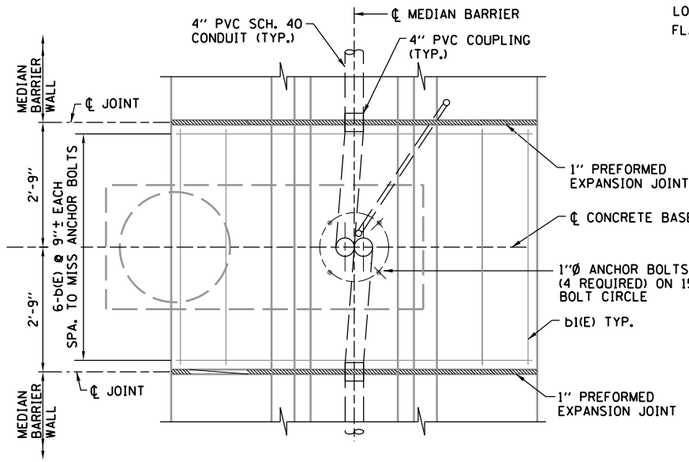
Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 2-7-2012

Illinois Tollway

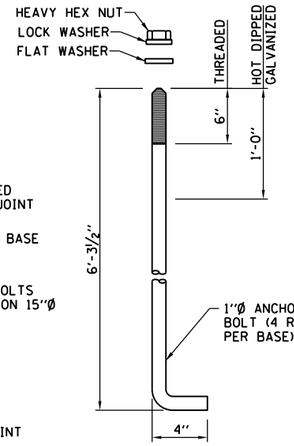
DATE	REVISIONS
2-7-2012	CHANGED ANCHOR BOLT DIMENSION, MODIFIED LIGHT POLE FOUNDATION, CHANGED FOUNDATION CONCRETE, MODIFIED REINFORCEMENT BARS.
3-31-2014	MODIFIED GROUND ROD INSTALLATION AND REVISED GUTTER DIMENSIONS

MEDIAN BARRIER LIGHT POLE FOUNDATION DETAILS

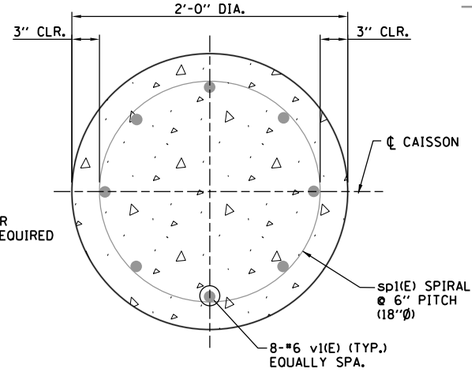
STANDARD H8-02



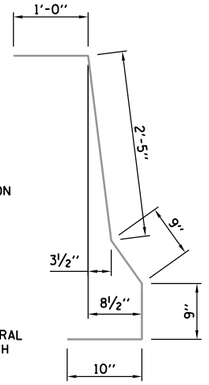
PLAN VIEW



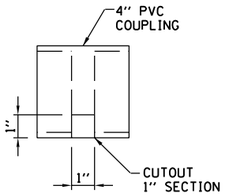
ANCHOR BOLT DETAIL



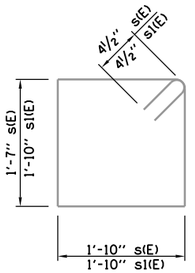
SECTION B-B



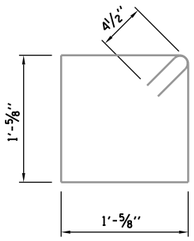
d1(E) BAR



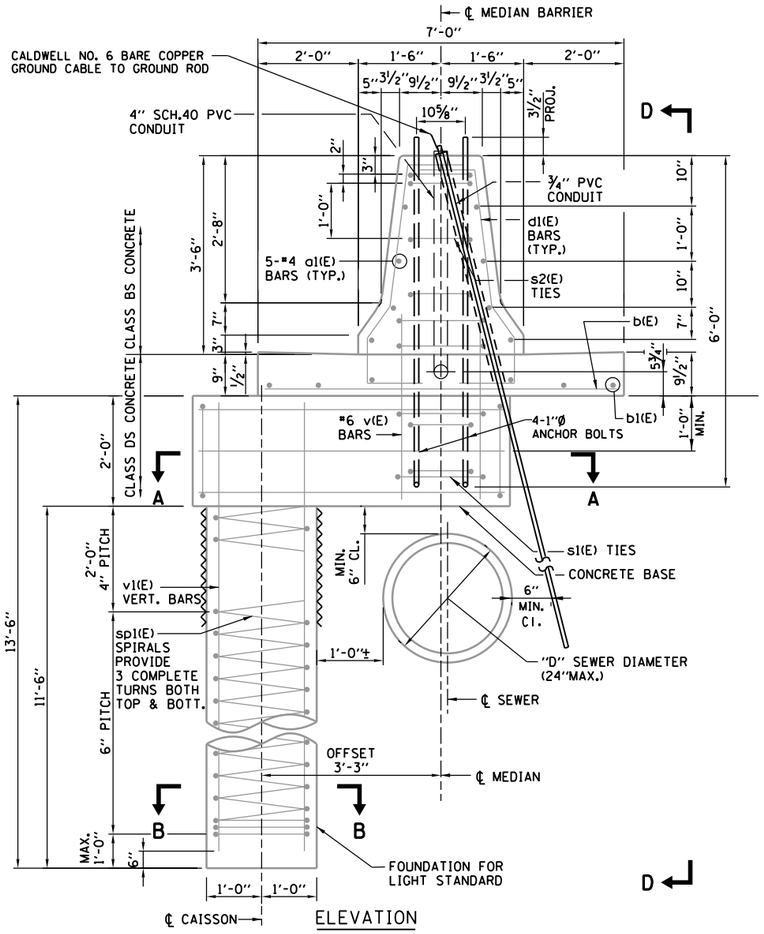
DETAIL "A"



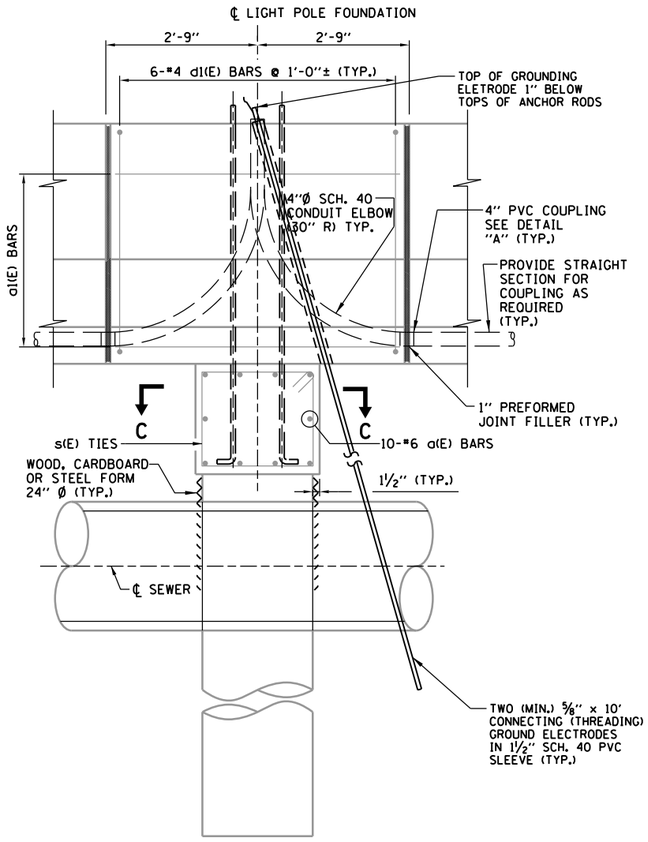
BARS s(E) AND s1(E)



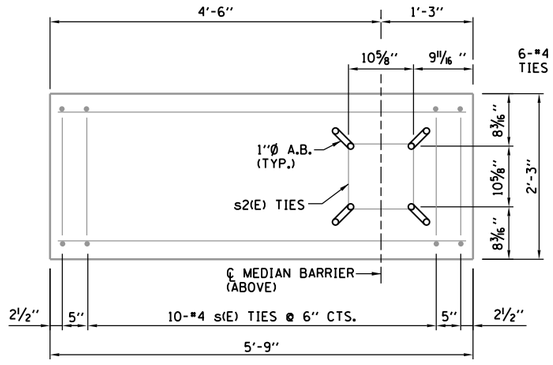
BAR s2(E)



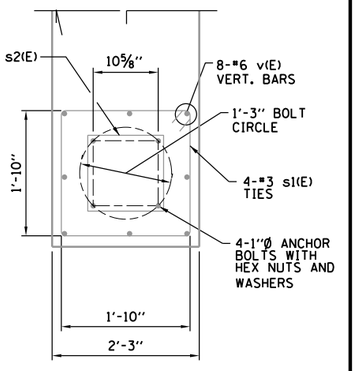
ELEVATION



VIEW D-D



SECTION A-A



SECTION C-C

REINFORCING BAR SCHEDULE					
BAR	NO.	SIZE	LENGTH	WT. LBS.	SHAPE
a(E)	10	#6	5'-6"	83	——
a1(E)	10	#4	5'-0"	34	——
b(E)	6	#4	6'-6"	26	——
b1(E)	4	#4	5'-2"	14	——
d1(E)	12	#4	5'-9"	46	⌐
s(E)	12	#4	7'-7"	61	□
s1(E)	4	#4	8'-1"	22	□
s2(E)	6	#4	5'-0"	20	□
sp1(E)	*	#4	*		≋
v(E)	8	#6	3'-2"	38	——
v1(E)	8	#6	12'-6"	150	——

* SEE SECT. B-B

NOTE:

1. ALL BARS SHALL BE EPOXY COATED.
2. FOR SLIPFORM POUR DETAIL SEE SHEET 1 OF THIS SERIES

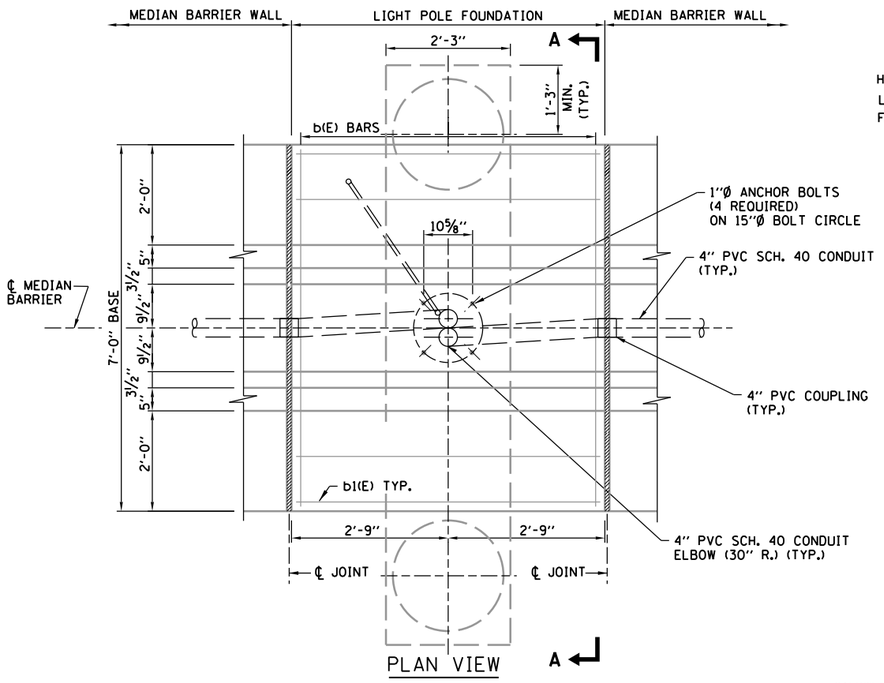
TYPE 2 OFFSET CAISSON, 42" BARRIER

Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 2-7-2012

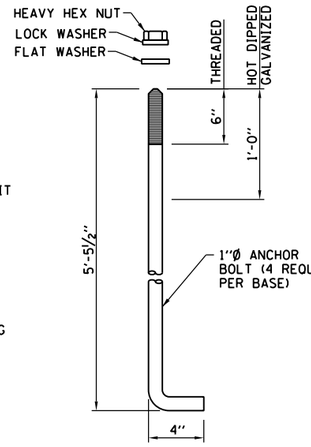
Illinois Tollway

MEDIAN BARRIER LIGHT POLE FOUNDATION DETAILS

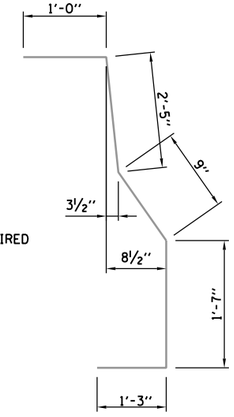
STANDARD H8-02



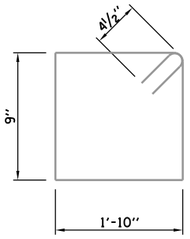
PLAN VIEW



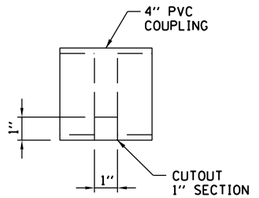
ANCHOR BOLT DETAIL



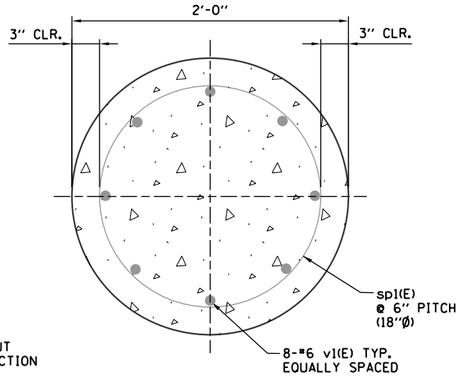
d1(E) BAR



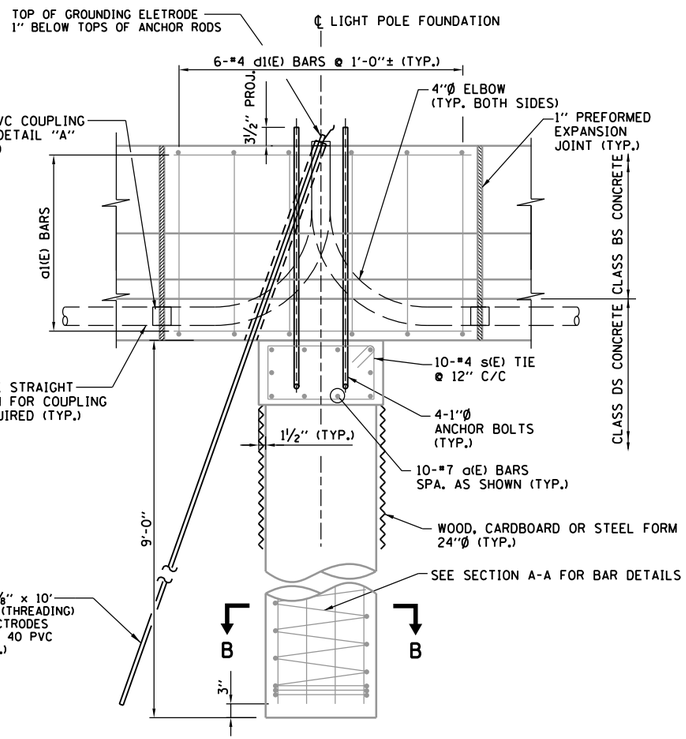
s(E) BAR



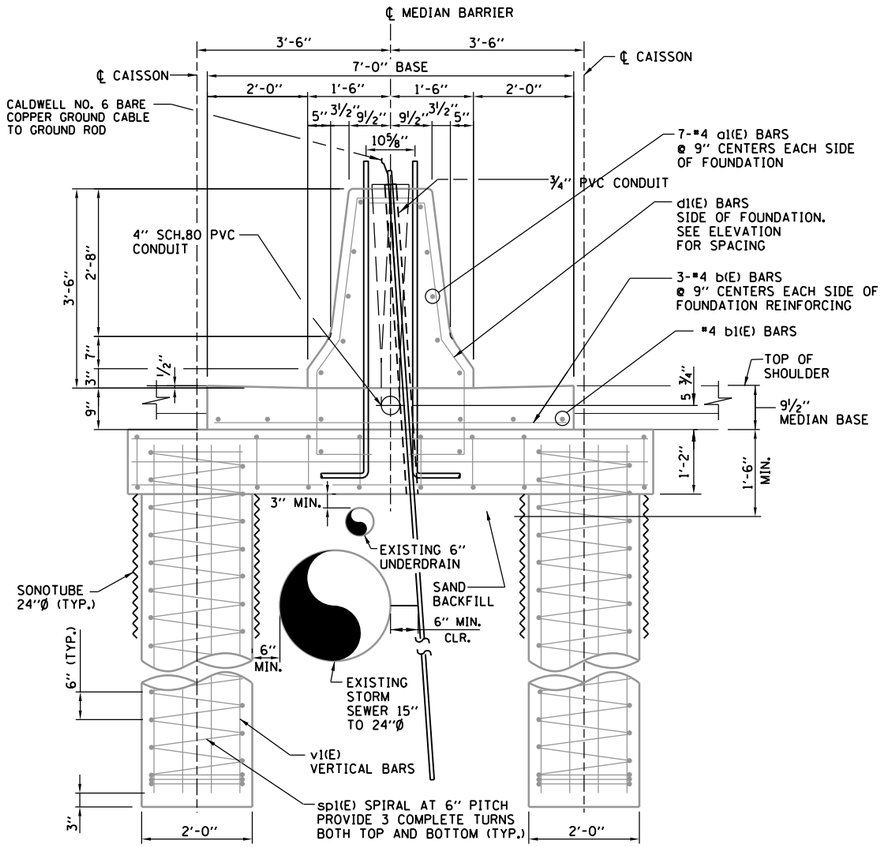
DETAIL "A"



SECTION B-B



ELEVATION



SECTION A-A

NOTES:

1. THE FURNISHING AND INSTALLATION OF THE 6" P.V.C. DRAIN PIPE INCLUDING ALL THE FITTINGS REQUIRED AND REMOVAL AND REPLACEMENT OF THE EXISTING SHOULDER NECESSARY TO INSTALL THE 6" P.V.C. PIPE SHALL BE INCIDENTAL TO LIGHT POLE FOUNDATION (MEDIAN BARRIER) STRADDLED.
2. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING CONDITIONS AND LOCATIONS AND SIZES OF DRAIN AND STORM SEWER PIPES HAVE BEEN TAKEN FROM EXISTING PLANS AND SUBJECT TO NOMINAL CONSTRUCTION VARIANCES. IT WILL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY SUCH DIMENSIONS, DETAILS AND LOCATIONS OF THE PIPES IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS.
3. ALL BARS SHALL BE EPOXY COATED.
4. FOR SLIPFORM POUR DETAIL SEE SHEET 1 OF THIS SERIES

REINFORCING BAR SCHEDULE

BAR	NO.	SIZE	LENGTH	WT. LBS.	SHAPE
a(E)	10	#7	9'-0"	184	
a1(E)	14	#4	5'-0"	47	
b(E)	6	#4	6'-6"	26	
b1(E)	4	#4	5'-2"	14	
d1(E)	12	#4	6'-7"	53	
s(E)	10	#4	5'-11"	40	
sp1(E)	*	#4	*		
v1(E)	16	#6	9'-9"	235	

* SEE SECT. A-A

TYPE 3 STRADDLED CAISSON, 42" BARRIER

SHEET 3 OF 3

Illinois Tollway

MEDIAN BARRIER LIGHT POLE FOUNDATION DETAILS

STANDARD H8-02

Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 2-7-2012

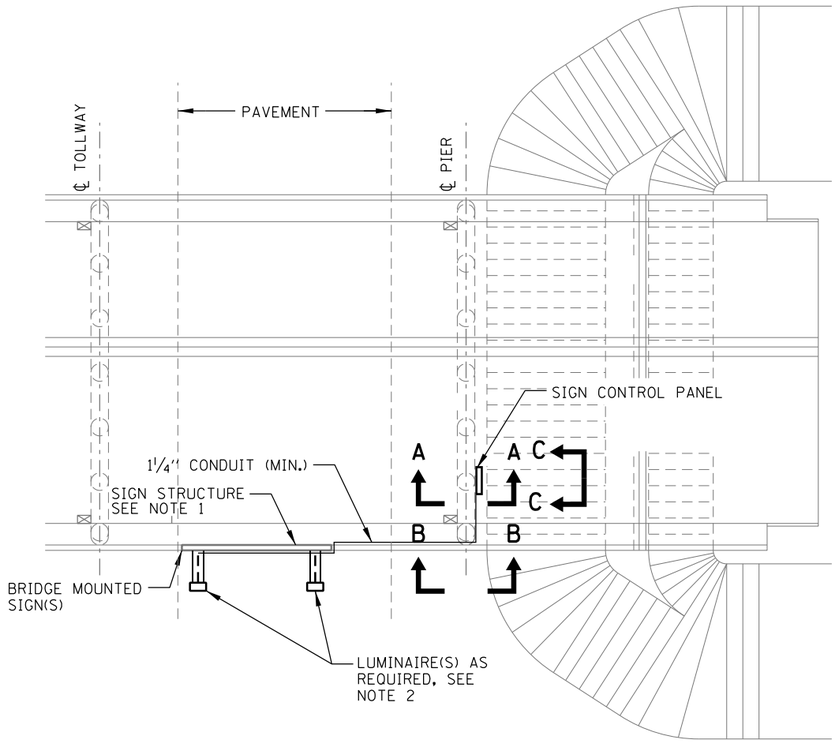
RESERVED

Paul Kovacs
APPROVED . . . . . DATE 2-7-2012
CHIEF ENGINEER

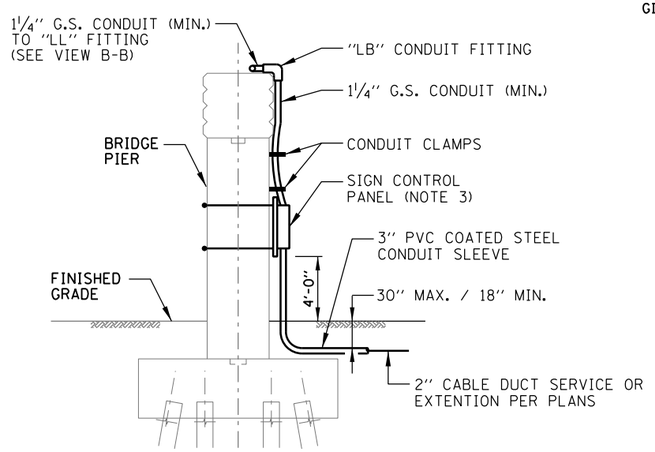
DATE	REVISIONS

Illinois Tollway

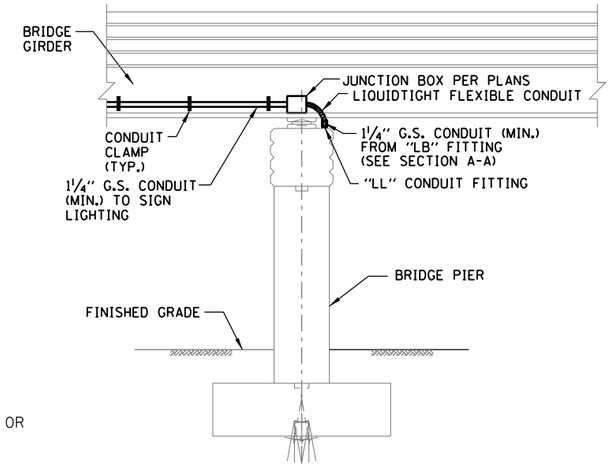
STANDARD H9-00



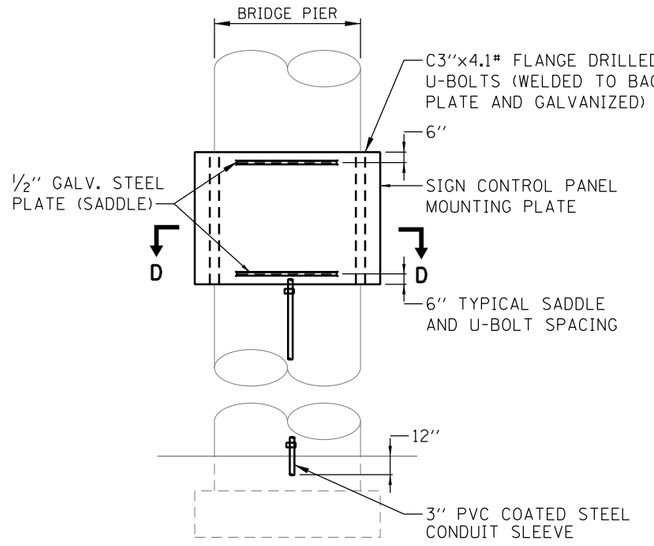
PLAN



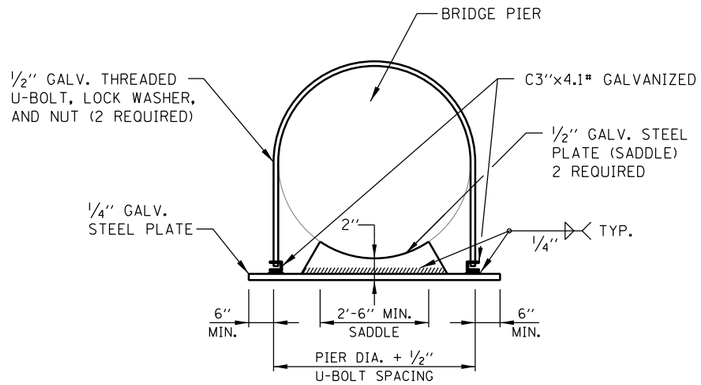
SECTION A-A



SECTION B-B



VIEW C-C



SECTION D-D

NOTES:

1. FOR SIGN STRUCTURE INSTALLATION DETAILS SEE SHEET 3 OF 3 IN THIS SERIES.
2. FOR SIGN LUMINAIRE INSTALLATION AND WIRING, SEE STANDARD H14 (SIGN LUMINAIRE MOUNTING DETAIL AND WIRING DIAGRAMS).
3. FOR TYPICAL SIGN CONTROL PANEL DETAILS SEE SHEET 2 OF 3 IN THIS SERIES.
4. DETAILS SHOWN ON THIS SHEET ARE WITHOUT FLASHING BEACON. INSTALLATION OF FLASHING BEACON REQUIRES ADDITIONAL WORK AS SHOWN ON TYPICAL SIGN CONTROL PANEL DETAIL (SHEET 2 OF 3 IN THIS SERIES).
5. LUMINAIRE SUPPORT MEMBERS TO BE INSTALLED ONLY WHEN THE SIGN IS TO BE ILLUMINATED. MAINLINE PLAZA APPROACH SIGNS SHALL BE ILLUMINATED. DESIGNER TO DETERMINE REQUIREMENTS FOR LIGHTING ALL OTHER SIGNS BASED ON ROADWAY GEOMETRY.

NOTE:

ALL STEEL TO BE HOT DIPPED GALVANIZED AFTER WELDING PER THE STANDARD SPECIFICATIONS.

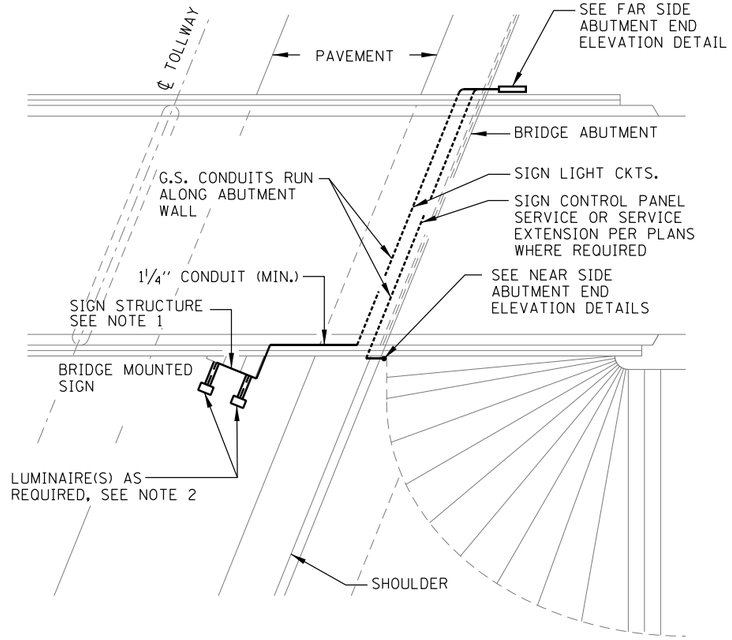
Paul Kovacs
APPROVED CHIEF ENGINEER DATE 2-7-2012

Illinois Tollway

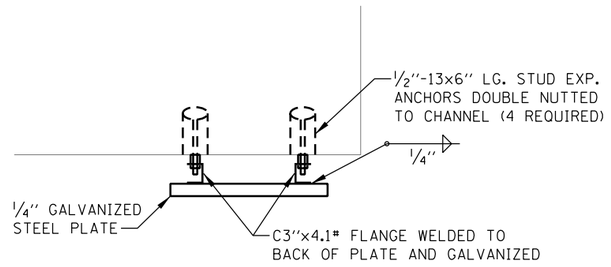
DATE	REVISIONS
2-7-2012	ADDED CONTROL PANEL MOUNTING DETAILS
	REVISED NOTES, REMOVED CANISTOR BALLASTS,
	NEW JUNCTION BOX, AND REVISED CONDUCTOR
	DESIGNATION

BRIDGE MOUNT SIGN
LIGHTING TYPICAL WIRING

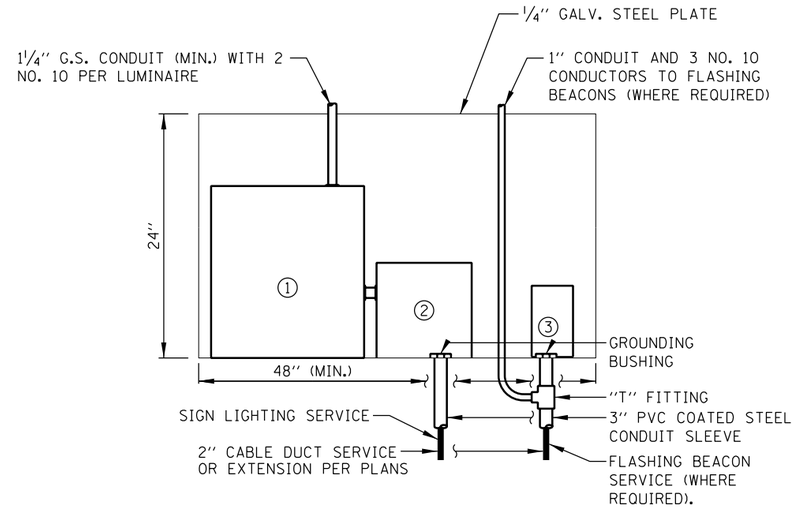
STANDARD H10-01



PLAN



SECTION A-A



LEGEND:

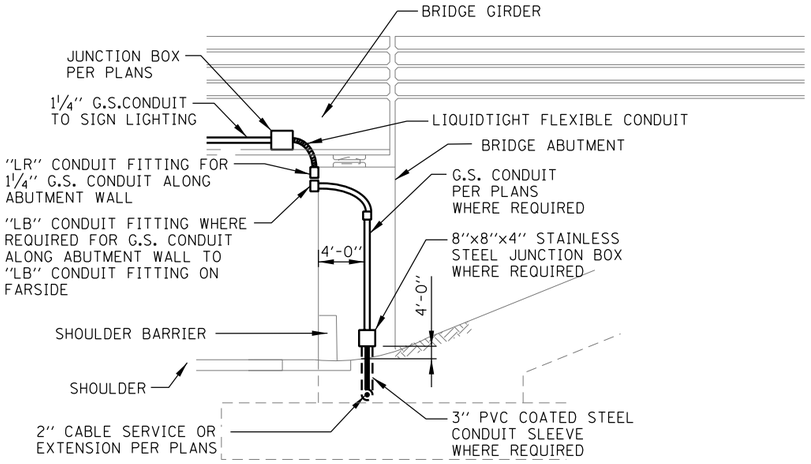
① 18"x18"x8" STAINLESS STEEL JUNCTION BOX. PROVIDE SUFFICIENT 30 AMPERE, 600 VOLT TERMINAL BLOCKS TO SPLIT 480 VOLT WIRING FROM SIGN SERVICE CIRCUIT BREAKER TO TWO NO. 10 WIRES FOR EACH LUMINAIRE.

② SIGN LIGHTING SERVICE - CIRCUIT BREAKER (30 AMP/2 POLE) IN NEMA TYPE 4 C.I. ENCLOSURE, OZ TYPE "YW" WITH MOUNTING FEET OR APPROVED EQUAL.

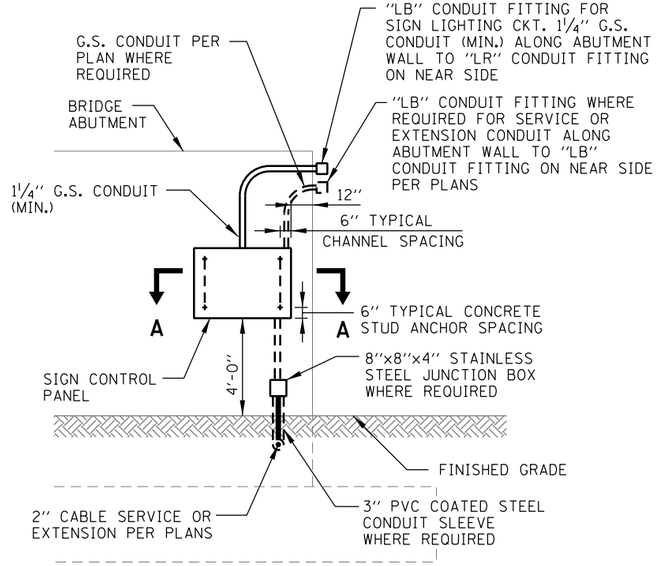
③ FLASHING BEACON CONTROLLER.

TYPICAL SIGN CONTROL PANEL

(FOR TYPICAL WIRING DIAGRAM SEE STANDARD H14)



NEAR SIDE ABUTMENT END ELEVATION



FAR SIDE ABUTMENT END ELEVATION

NOTE:

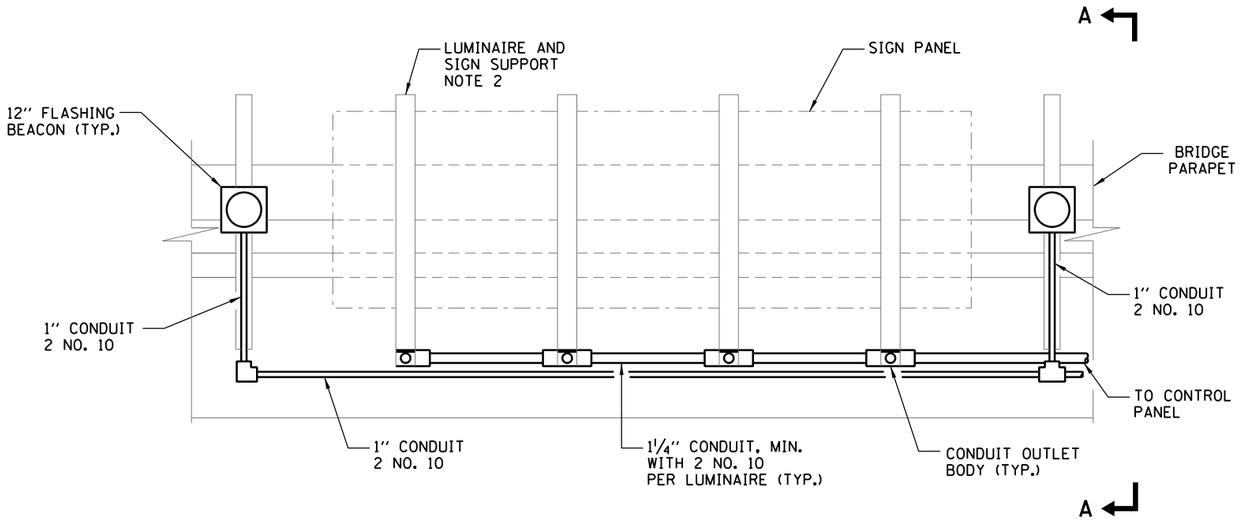
SEE SHEET I OF THIS SERIES FOR NOTES.

Paul Kovacs
APPROVED ..... DATE 2-7-2012
CHIEF ENGINEER

Illinois Tollway

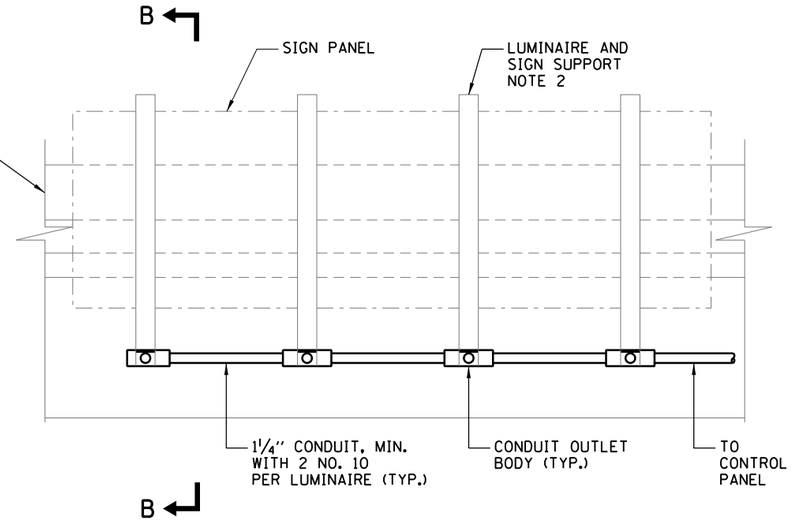
BRIDGE MOUNT SIGN LIGHTING TYPICAL WIRING

STANDARD H10-01



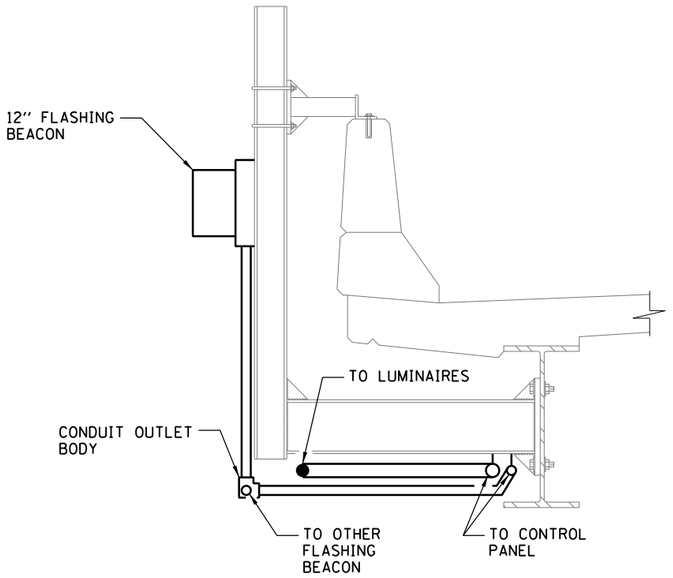
TYPICAL FRONT ELEVATION WITH FLASHING BEACON

LUMINAIRES NOT SHOWN



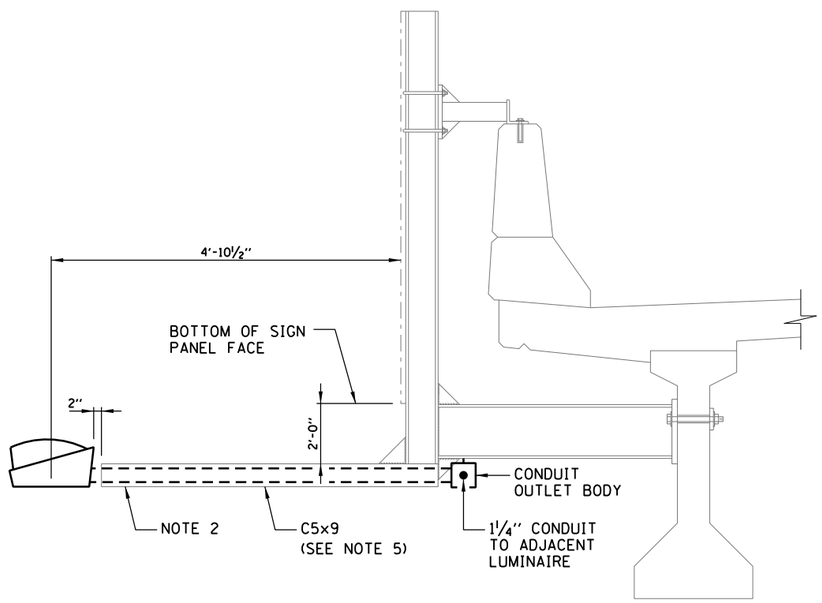
TYPICAL FRONT ELEVATION WITHOUT FLASHING BEACON

LUMINAIRES NOT SHOWN



SECTION A-A

STEEL BRIDGE SHOWN



SECTION B-B

CONCRETE BRIDGE SHOWN

NOTES:

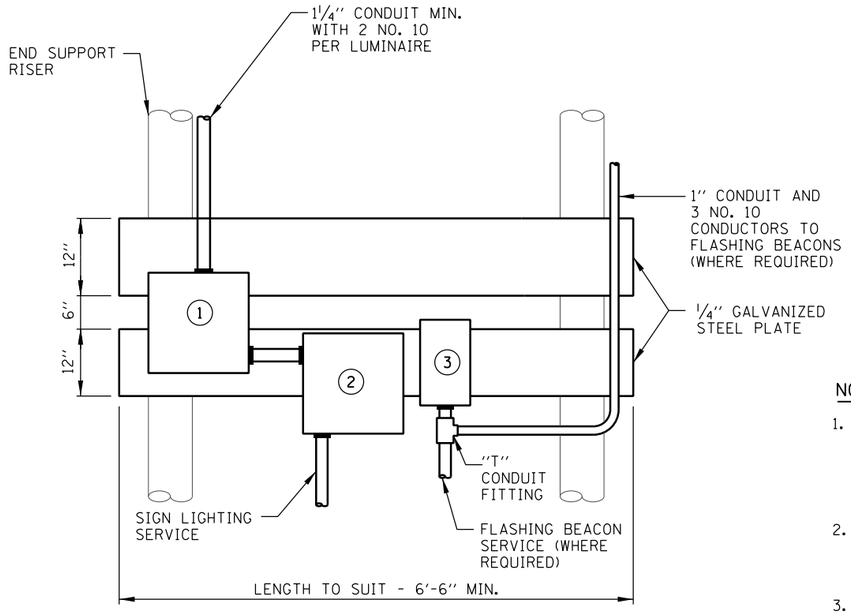
1. PROVIDE 12" FLASHING BEACON ONLY WHERE INDICATED ON PLANS.
2. SEE STRUCTURAL DRAWINGS FOR DETAILS OF SIGN SUPPORTS AND FIXTURE SUPPORT CHANNELS.
3. SEE STANDARD H14 (SIGN LUMINAIRE MOUNTING DETAIL AND WIRING DIAGRAMS) FOR INSTALLATION OF CONDUIT IN FIXTURE SUPPORT CHANNEL.
4. FLASHING BEACON TO BE ATTACHED TO SUPPORT WITH STAINLESS STEEL SCREWS AND NEOPORENE SPACERS. DRILLED SCREW HOLES TO BE SEALED WATERTIGHT.
5. LUMINAIRE SUPPORT MEMBERS TO BE INSTALLED ONLY WHEN SIGN STRUCTURE IS TO BE ILLUMINATED. MAINLINE PLAZA APPROACH SIGNS SHALL BE ILLUMINATED. DESIGNER TO DETERMINE REQUIREMENTS FOR LIGHTING ALL OTHER SIGNS BASED ON ROADWAY GEOMETRY.

Paul Kovacs
APPROVED ..... DATE 2-7-2012
CHIEF ENGINEER

Illinois Tollway

BRIDGE MOUNT SIGN LIGHTING TYPICAL WIRING

STANDARD H10-01



TYPICAL SIGN LIGHTING CONTROL PANEL

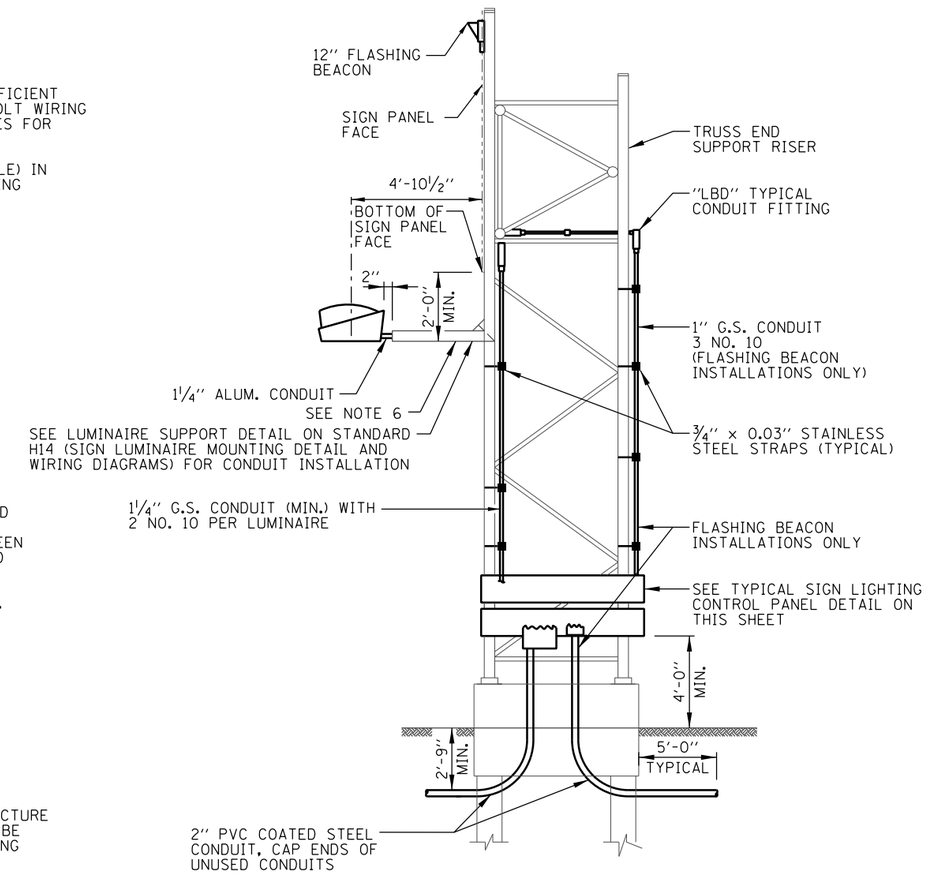
FOR WIRING DIAGRAMS SEE STANDARD H14
(SIGN LUMINAIRE MOUNTING DETAIL AND WIRING DIAGRAMS)

LEGEND:

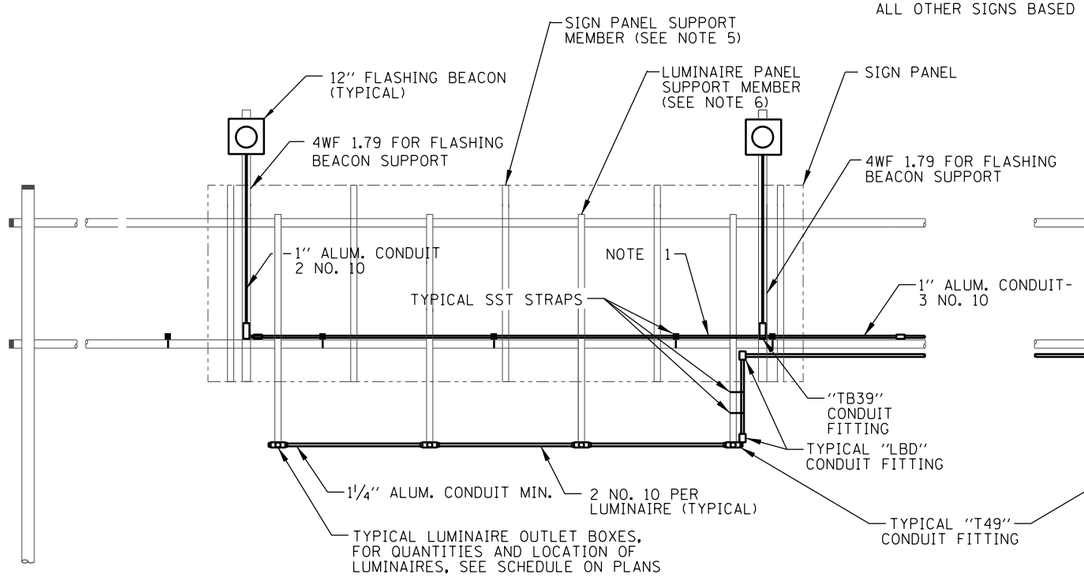
1. 18"x18"x8" STAINLESS STEEL JUNCTION BOX. PROVIDE SUFFICIENT 30 AMPERE, 600 VOLT TERMINAL BLOCKS TO SPLIT 480 VOLT WIRING FROM SIGN SERVICE CIRCUIT BREAKER TO TWO NO. 10 WIRES FOR EACH LUMINAIRE.
2. SIGN LIGHTING SERVICE - CIRCUIT BREAKER (30 AMP/2 POLE) IN NEMA TYPE 4 C.I. ENCLOSURE, OZ TYPE "YW" WITH MOUNTING FEET OR APPROVED EQUAL.
3. FLASHING BEACON CONTROLLER.

NOTES:

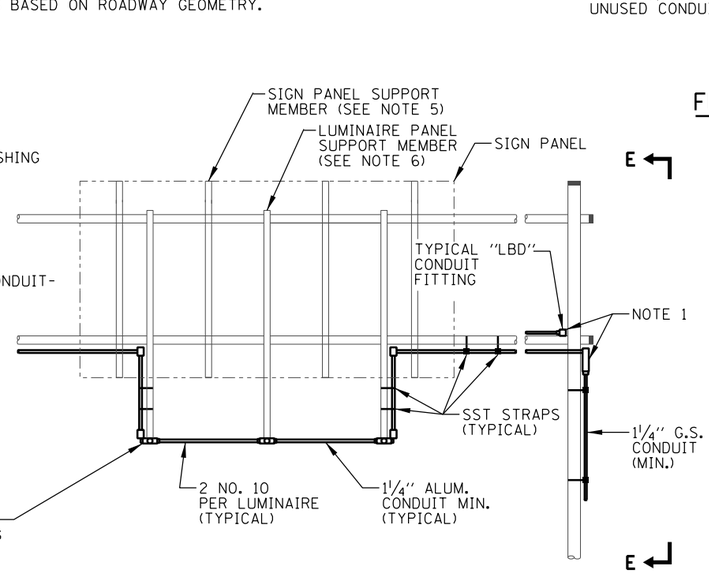
1. CONDUIT AND FITTINGS ATTACHED TO THE HORIZONTAL ALUMINUM SIGN TRUSS SHALL BE ALUMINUM. GALVANIZED STEEL CONDUIT AND CAST IRON ALLOY FITTINGS SHALL BE UTILIZED WHERE ATTACHED TO STEEL TRUSS END SUPPORT RISERS. THREADED JOINTS BETWEEN DISSIMILAR METALS SHALL BE COATED WITH AN APPROVED THREAD LUBRICANT.
2. PROVIDE 12" FLASHING BEACON ONLY WHERE INDICATED ON PLANS. FLASHING BEACON TO BE ATTACHED TO SUPPORT WITH STAINLESS STEEL SCREWS AND NEOPRENE SPACERS. DRILLED SCREW HOLES TO BE SEALED WATERTIGHT.
3. ALL EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND THE NATIONAL ELECTRICAL SAFETY CODE.
4. ALL STEEL TO BE HOT DIPPED GALVANIZED AFTER WELDING PER THE STANDARD SPECIFICATIONS.
5. FOR SIGN SUPPORT MEMBERS REQUIREMENTS; SEE STANDARD F8.
6. LUMINAIRE SUPPORT MEMBERS TO BE INSTALLED ONLY WHEN STRUCTURE IS TO BE ILLUMINATED. MAINLINE PLAZA APPROACH SIGNS SHALL BE ILLUMINATED. DESIGNER TO DETERMINE REQUIREMENTS FOR LIGHTING ALL OTHER SIGNS BASED ON ROADWAY GEOMETRY.



SECTION E-E
FULL ELEVATION (OUTSIDE FOUNDATION)



FRONT ELEVATION WITH FLASHING BEACON
LUMINAIRES NOT SHOWN



FRONT ELEVATION WITHOUT FLASHING BEACON
LUMINAIRES NOT SHOWN

TYPICAL SIGN PANEL ELEVATIONS

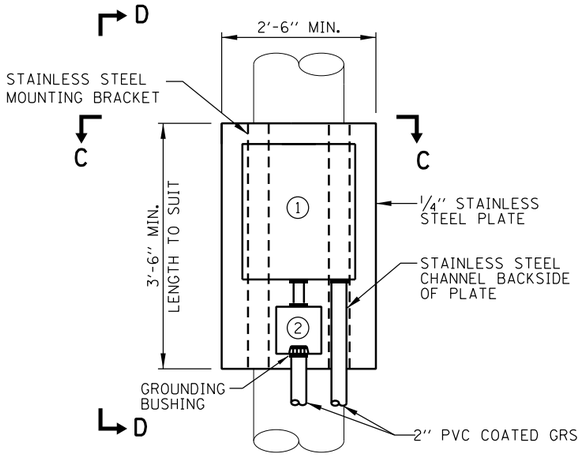
Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 2-7-2012

Illinois Tollway

DATE	REVISIONS
2-7-2012	ADDED SIGN PANEL SUPPORT MEMBER
	REVISED NOTES, BANNER SIGN REMOVED,
	BEACONS RELOCATED, REMOVED CANISTAR
	BALLASTS AND ADDED JUNCTION BOX.
3-31-2014	REVISED FOUNDATION.

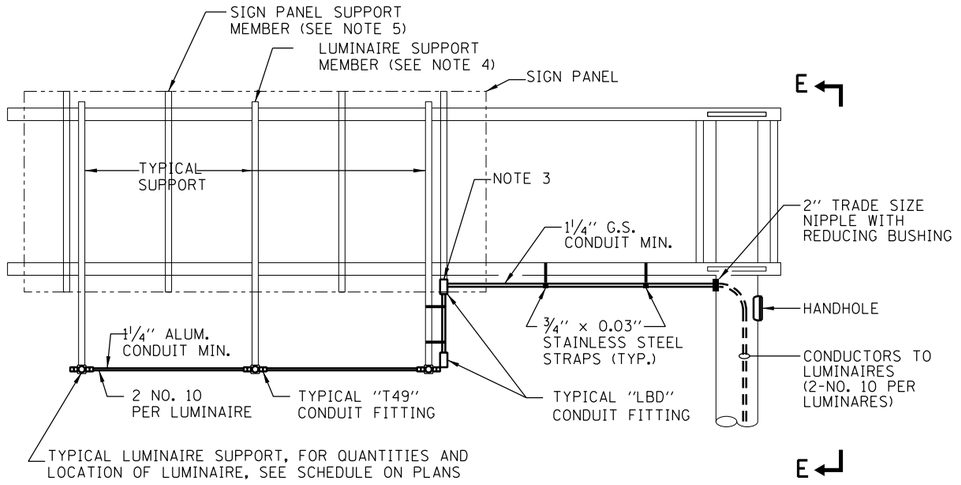
OVERHEAD TRUSS WITH SIGN LIGHTING WITHOUT CATWALK TYPICAL WIRING DETAILS

STANDARD H11-02



TYPICAL CONTROL PANEL

FOR WIRING DIAGRAM SEE STANDARD H14
(SIGN LUMINAIRE MOUNTING DETAIL AND WIRING DIAGRAMS)



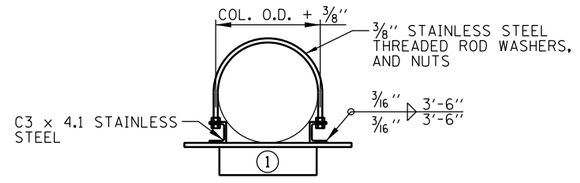
NOTES:

1. A GROUND WIRE (NO. 12 AWG.) WILL BE RUN FROM THE GROUNDING BUSHING (OVERHEAD SUPPORT) TO THE GROUNDING BUSHING IN THE JUNCTION BOX.
2. ALL EQUIPMENT SHALL BE GROUNDED AND BONDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND THE NATIONAL ELECTRICAL SAFETY CODE.
3. CONDUIT AND FITTINGS ATTACHED TO THE ALUMINUM LUMINAIRE SUPPORTS SHALL BE ALUMINUM. GALVANIZED STEEL CONDUIT AND CAST IRON ALLOY FITTINGS SHALL BE UTILIZED WHERE ATTACHED TO THE STEEL SIGN SUPPORT TRUSS. THREADED JOINTS BETWEEN DISSIMILAR METALS SHALL BE COATED WITH AN APPROVED THREAD LUBRICANT.
4. LUMINAIRE SUPPORT MEMBERS TO BE INSTALLED ONLY WHEN SIGN STRUCTURE IS TO BE ILLUMINATED. SEE STANDARD F8.
5. FOR SIGN SUPPORT MEMBERS REQUIREMENTS, SEE STANDARD F8.

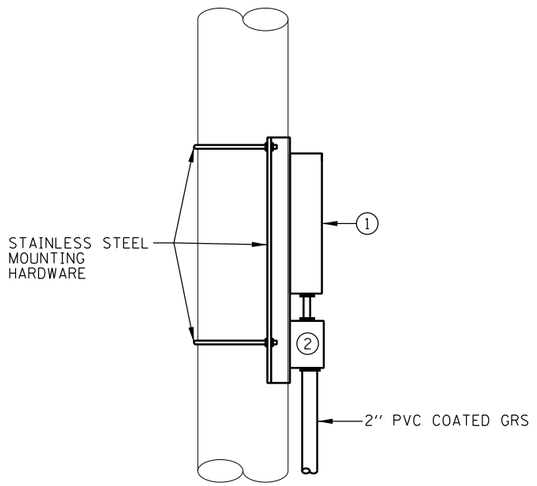
LEGEND:

(1) 18"x18"x8" STAINLESS STEEL JUNCTION BOX. PROVIDE SUFFICIENT 30 AMPERE, 600 VOLT TERMINAL BLOCKS TO SPLIT 480 VOLT WIRING FROM SIGN SERVICE CIRCUIT BREAKER TO TWO NO. 10 WIRES FOR EACH LUMINAIRE.

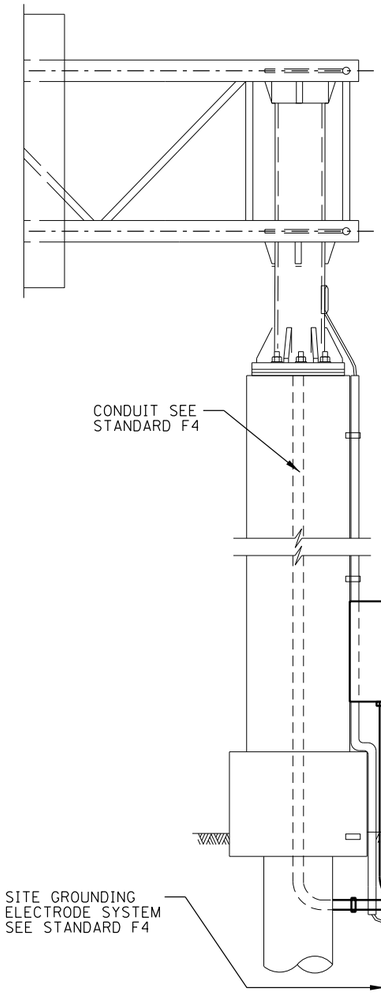
(2) SIGN LIGHTING SERVICE - CIRCUIT BREAKER (30 AMP/2 POLE) IN NEMA TYPE 4 C.I. ENCLOSURE, OZ TYPE "YW" WITH MOUNTING FEET OR APPROVED EQUAL.



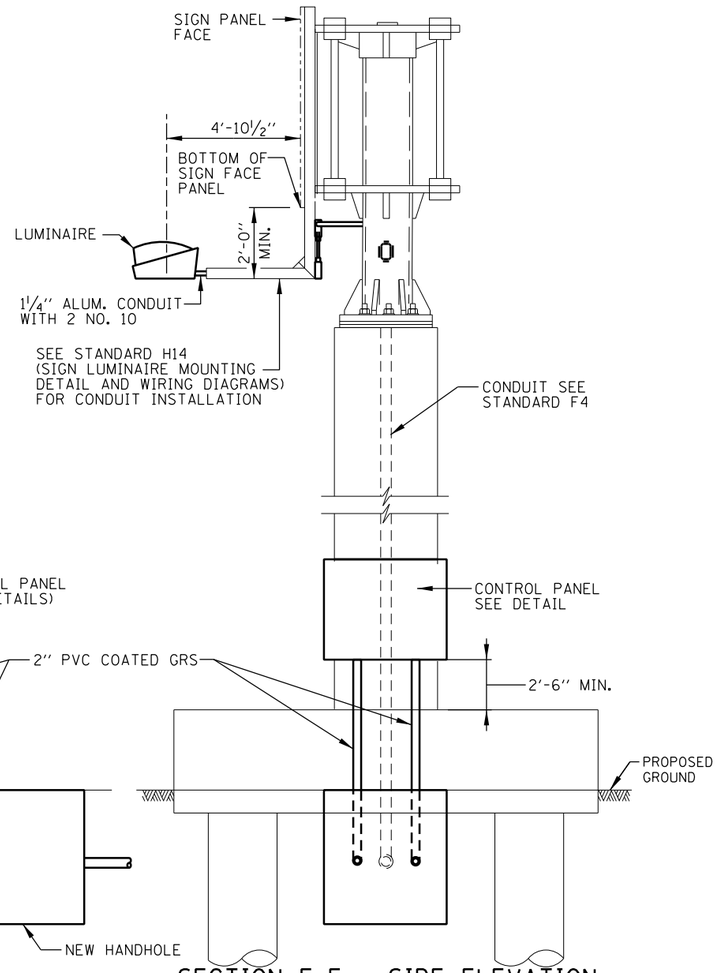
SECTION C-C



SECTION D-D



FRONT ELEVATION



SECTION E-E - SIDE ELEVATION

Paul Kovacs
2-7-2012

Illinois Tollway

DATE	REVISIONS
2-7-2012	ADDED SIGN POST SUPPORT MEMBERS,
	REVISED NOTES, REMOVED CANISTER
	BALLAST AND ADDED JUNCTION BOX
3-31-2014	REVISED ELECTRICAL DETAILS FOR
	NEW CANTILEVER SIGN.

CANTILEVER SIGN WITH
LIGHTING WITHOUT CATWALK
TYPICAL WIRING DETAILS

STANDARD H12-02

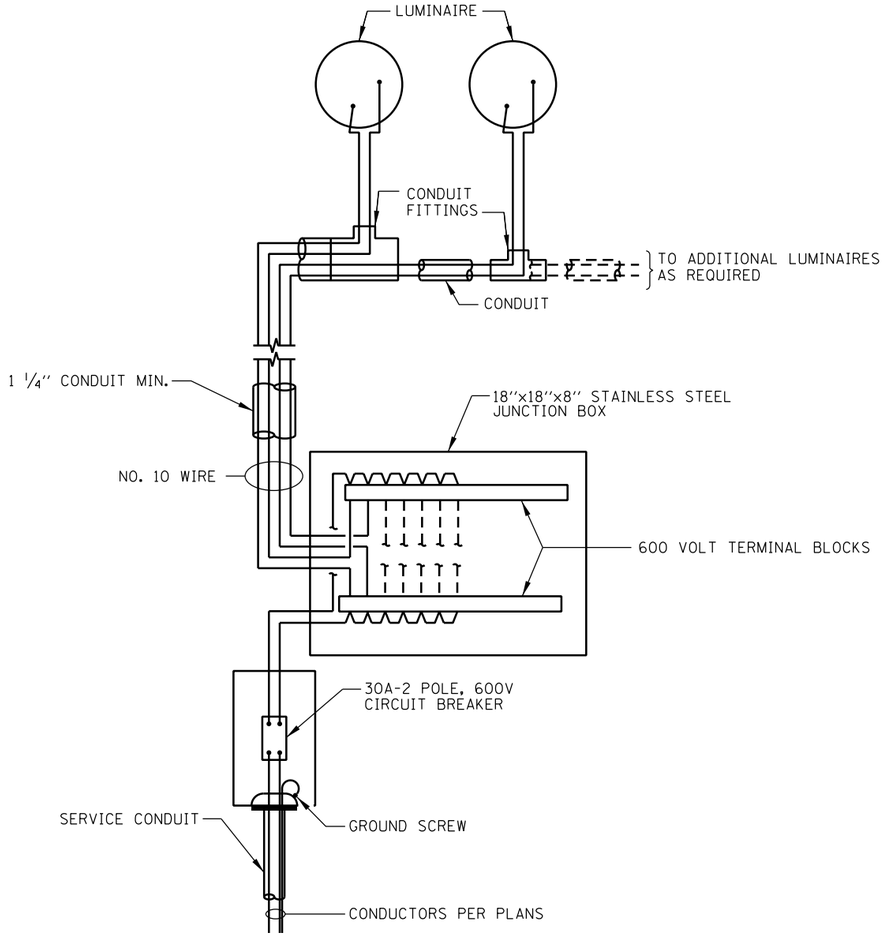
RESERVED

Paul Kovacs
APPROVED ..... DATE 2-7-2012
CHIEF ENGINEER

DATE	REVISIONS

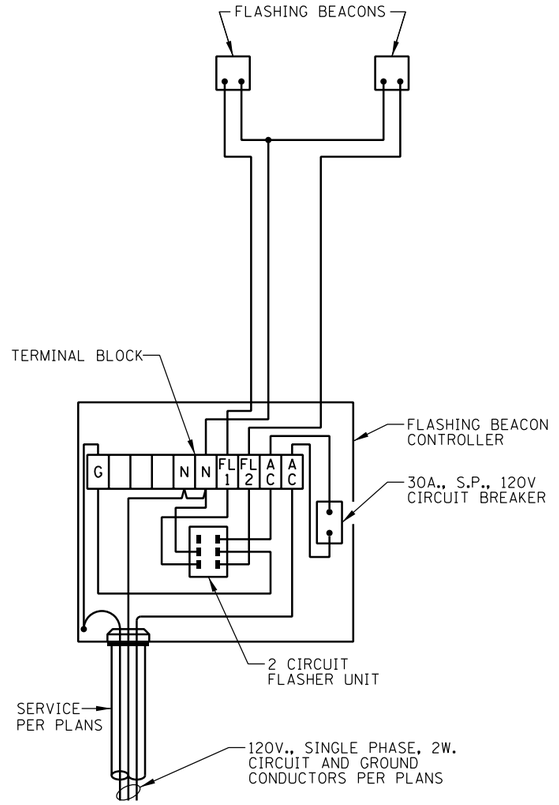
Illinois Tollway

STANDARD H13-00



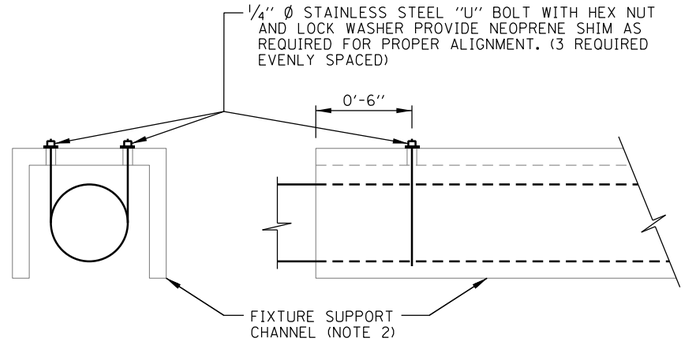
SIGN WIRING DIAGRAM

NO SCALE



FLASHING BEACON WIRING DIAGRAM

NO SCALE



LUMINAIRE SUPPORT DETAIL

NO SCALE

NOTES:

1. HOLES WHICH ARE FIELD DRILLED IN STRUCTURAL STEEL MEMBERS SHALL BE PAINTED WITH ONE (1) COAT OF ZINC PAINT IMMEDIATELY FOLLOWING DRILLING. THE PAINT SHALL CONFORM TO FEDERAL SPECIFICATION TT-P641b TYPE 2 FOR GALVANIZING PRIMER.
2. SEE STRUCTURAL DRAWINGS FOR DETAILS OF FIXTURE SUPPORT CHANNELS. SUPPORT CHANNELS ARE ALUMINUM (n4"x2") FOR TRUSS TYPE AND CANTILEVER TYPE SIGN STRUCTURES AND STEEL (C5x9) FOR BRIDGE MOUNTED SIGNS.

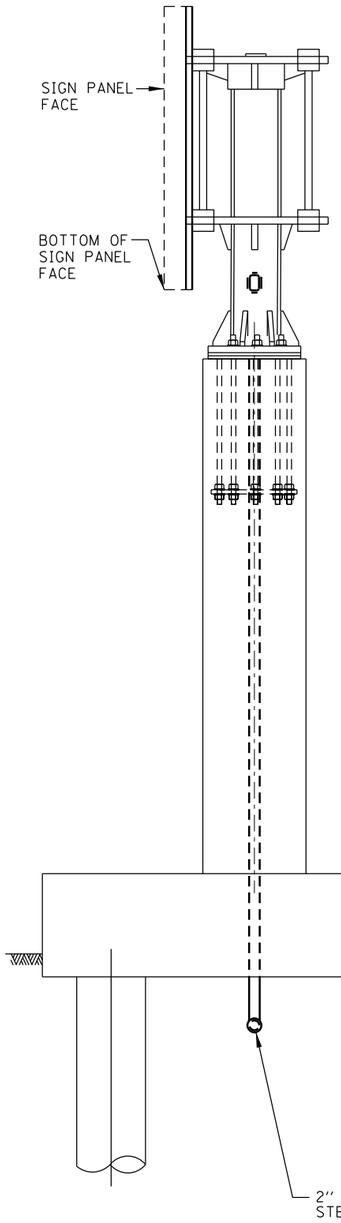
Paul Kovacs
APPROVED ..... CHIEF ENGINEER
DATE 2-7-2012

Illinois Tollway

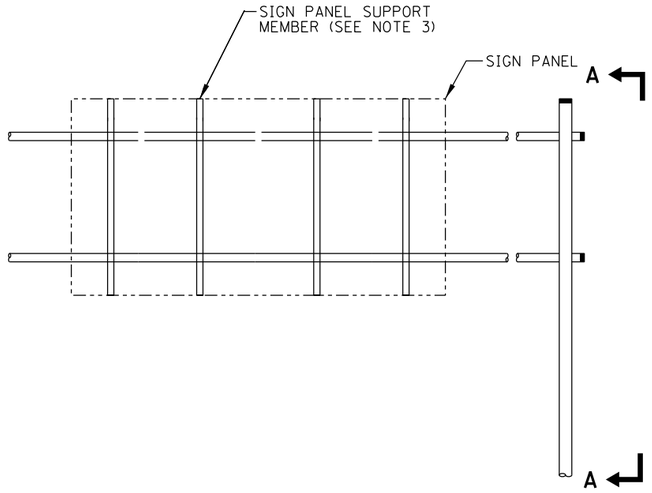
DATE	REVISIONS
2-7-2012	REMOVED CANISTER BALLASTS, NEW JUNCTION BOX AND TERMINAL BLOCKS

SIGN LUMINAIRE MOUNTING DETAIL AND WIRING DIAGRAMS

STANDARD H14-01

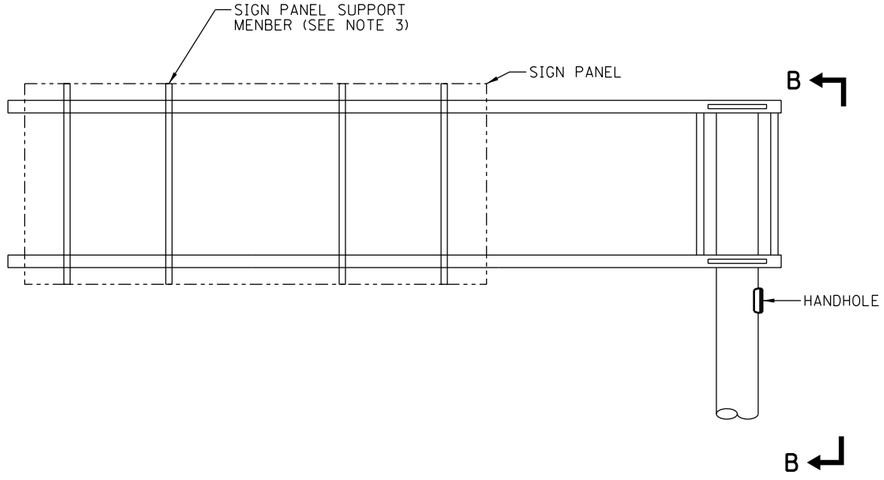


SECTION B-B
FULL ELEVATION (OUTSIDE FOUNDATION)



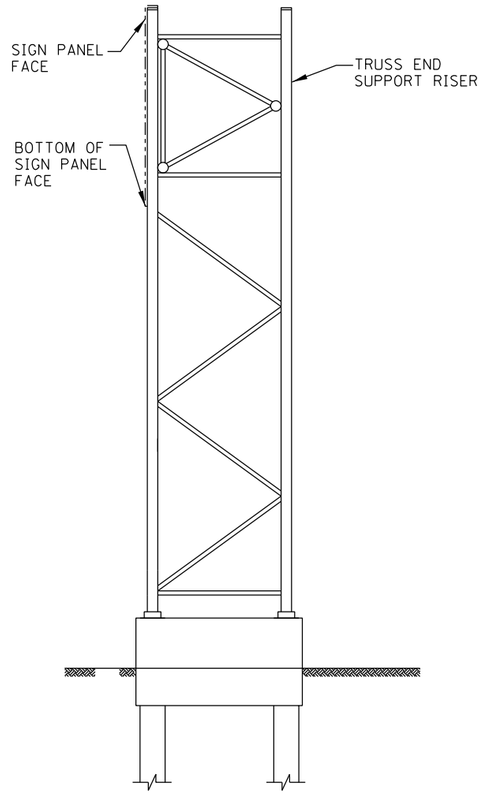
FRONT ELEVATION

TYPICAL SIGN PANEL ELEVATION-OVERHEAD SIGN TRUSS



FRONT ELEVATION

TYPICAL SIGN PANEL ELEVATION-CANTILEVER SIGN TRUSS



SECTION A-A
FULL ELEVATION (OUTSIDE FOUNDATION)

NOTES:

1. ALL EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND THE NATIONAL ELECTRICAL SAFETY CODE.
2. ALL STEEL TO BE HOT DIPPED GALVANIZED AFTER WELDING PER THE STANDARD SPECIFICATIONS.
3. FOR SIGN SUPPORT MEMBERS REQUIREMENTS; SEE STANDARD F8.
4. CONDUIT SLEEVES TO BE STUBBED AT 90° TO THE ROAD.

Paul Kovacs
APPROVED ..... DATE 2-7-2012
CHIEF ENGINEER

Illinois Tollway

DATE	REVISIONS
3-31-2014	REVISED FOUNDATION.

OVERHEAD TRUSS AND CANTILEVER SIGN WITHOUT LIGHTING OR CATWALK TYPICAL DETAILS

STANDARD H15-01