A d d e n d u m

Iowa Department of Transportation
Office of Contracts

Date of Letting: December 16, 2014
Date of Addendum: December 12, 2014

B.O.	Proposal ID	Proposal Work Type	County	Project Number	Addendum
025	97-0296-241-A	BRIDGE REPLACEMENT - PPCB	WOODBURY	IM-NHS-029-6(197)147--03-97 IM-NHS-029-6(198)147--03-97 IM-NHS-029-6(199)147--03-97 IM-NHS-029-6(241)147--03-97	16DEC025.A03

Make the following changes to the PROPOSAL SCHEDULE OF PRICES:

Change Proposal Line No. 0880 2102-0425070 SPECIAL BACKFILL:
From: 43,509.400 TON
To: 44,572.800 TON

Change Proposal Line No. 0970 2111-8174100 GRANULAR SUBBASE:
From: 38,282.800 SY
To: 62,204.700 SY

Change Proposal Line No. 1000 2122-5191005 REINFORCED PAVED SHOULDER FOR CONCRETE BARRIER:
From: 3,234.000 SY
To: 3,525.300 SY

Change Proposal Line No. 1010 2123-7450000 SHOULDER CONSTRUCTION, EARTH:
From: 106.700 STA
To: 116.700 STA

Change Proposal Line No. 1060 2301-1004110 STANDARD OR SLIP-FORM PORTLAND CEMENT CONCRETE PAVEMENT, QM-C, CLASS 3I DURABILITY, 11 IN.:
From: 60,500.600 SY
To: 61,592.800 SY

Change Proposal Line No. 1760 2513-0001020 CONCRETE BARRIER, BA-102:
From: 7,247.600 LF
To: 7,327.600 LF

Change Proposal Line No. 1770 2513-0001050 CONCRETE BARRIER, BA-105:
From: 1.000 EACH
To: 2.000 EACH

Change Proposal Line No. 1780 2513-0001070 CONCRETE BARRIER, BA-107:
From: 1.000 EACH
To: 2.000 EACH

Change Proposal Line No. 2080 2527-9263180 PAVEMENT MARKINGS REMOVED:
From: 695.230 STA
To: 362.390 STA

Add Proposal Line No. 2501 2423-1060070 STEEL OVERHEAD SIGN TRUSS, 70 FT. SPAN; 1.000 EACH

If the above changes are not made, they will be made as shown here.

Make the following change to the PLAN for Project No. IM-NHS-029-6(241)147--03-97:

SHEET B SERIES

Where sloped curbs along ramp pavements are proposed, use the “Curb Transition From 6” Standard to 4” Sloped” shown in Standard Road Plan PV-102 adjacent to storm sewer intakes placed along curb. Where storm sewer intakes are placed along curb and spaced less than 25 feet apart, use 6” standard curb between them.

SHEET C.4:

Change the note to the ESTIMATE REFERENCE INFORMATION for the item 2122-5191005, REINFORCED PAVED SHOULDER FOR CONCRETE BARRIER as follows:

Revise the second line to read as follows: Reinforced paved shoulder to be checked for 0.5 inch bumps and dips only for Pavement Smoothness.

SHEET C.5:

Add the following note to the ESTIMATE REFERENCE INFORMATION for the item 2423-1060070 STEEL OVERHEAD SIGN TRUSS, 70 FT. SPAN:

Refer to Tabulation 190-52 and the "V" sheets.

SHEET C.17:

Replace Tab. 112-9 SHOULDER with the attached Tab. 112-9 SHOULDERS.

SHEET C.21:

Replace Tab. 108-18B CONCRETE BARRIER RAIL AT SIDE LOCATION with the attached Tab. 108-18B CONCRETE BARRIER RAIL AT SIDE LOCATION.

SHEET P.2:

Replace “Lighting Service Pedestal Specification:” note with the following:

Lighting Service Pedestal shall consist of a 120/240V, single-phase, 3-wire, Metered Main Load Center panel mounted to a wood post.

The panel assembly shall consist of a utility-approved meter socket, a 200A two-pole main circuit breaker, and a load center with 200A rated main bussing and a minimum of eight (8) single-pole branch circuit spaces. The assembly shall be service-entrance rated NEMA 3R, listed for the purpose, and be rated 22,000 AIC.

Provide the following branch circuit breakers:
- One 60A, 2-Pole.

Provide a 6 x 6 treated wood post to mount the metered main load center assembly. Embed the post a minimum of 4’-0” into the earth below finished grade. Backfill around post and compact in 6“ lifts. Post shall protrude above grade sufficiently to locate meter socket above grade per utility requirements and provide minimum of 2’-0” clearance from bottom of assembly to finished grade.

SHEET U.52:

Replace Plan Sheet U.52 with the attached Plan Sheet U.52.

Make the following change to the PLAN for Project No. IM-NHS-029-6(197)147--03-97:

SHEET 52:

Replace Plan Sheet 52 with the attached Plan Sheet 52.

Make the following change to the PLAN for Project No. IM-NHS-029-6(198)147--03-97:

SHEET 71:

Replace Plan Sheet 71 with the attached Plan Sheet 71.

Make the following change to the PLAN for Project No. IM-NHS-029-6(199)147--03-97:

SHEET 72:

Replace Plan Sheet 72 with the attached Plan Sheet 72.

CONCRETE BARRIER AT SIDE LOCATIONS

Refer to BA-102, BA-103, BA-104, BA-105, BA-106, BA-107, and BA-150.

(1) Lane(s) to which the installation is adjacent.
(2) Refer to the Shoulders tabulation (112-9) for quantities.
* Bid Item

Location						Side Barrier						Expansion Joints		
No.	(1) Direction of Traffic	Station to Station		Side	(L2) Offset FT	Barrier Type (BA-102, BA-103, or BA-104)	(L) Length of Barrier* LF	BA-105 Transition Section* No.	BA-107 End Section* No.	Reinforced Paved (2) Shoulder (Required?) Yes/No	Remarks	Station	Side	Remarks
1	SB	396+58.59	396+75.59	LT	12.0	-	-	1	1	Yes	Attach to existing BA-102.			
2	NB	410+44.24	410+61.24	RT	12.0	-	-	1	1	Yes				
3	NB	410+61.24	411+71.87	RT	12.0	BA-102	112.5			No				
4	NB	411+71.87	411+81.87	RT	var.	BA-102	10.0			No	Height transition, see Sheet U.50			
5	NB	411+81.87	411+91.87	RT	var.	BA-102	10.0			Yes	Shape transition, see Sheet U.51			
6	NB	412+08.15	412+18.15	RT	var.	BA-102	10.0			Yes	Shape transition, see Sheet U.51			
7	NB	412+18.15	412+28.15	RT	var.	BA-102	10.0			No	Height transition, see Sheet U.50			
8	SB	410+61.24	411+79.25	LT	12.0	BA-102	116.1			No				
9	SB	411+79.25	411+89.25	LT	var.	BA-102	10.0			No	Height transition, see Sheet U.50			
10	SB	411+89.25	411+99.37	LT	var.	BA-102	10.1			Yes	Shape transition, see Sheet U.51			
11	SB	412+15.63	412+25.51	LT	var.	BA-102	9.9			Yes	Shape transition, see Sheet U.51			
12	SB	412+25.51	412+35.51	LT	var.	BA-102	10.0			No	Height transition, see Sheet U.50			
13	NB	412+28.15	413+31.80	RT	12.0	BA-102	103.7			No				
14	SB	412+35.51	412+74.34	LT	12.0	BA-102	38.8			No				
15	SB	418+75.19	438+67.00	LT	12.0	BA-102	1991.8			Yes	Note 1			
16	NB	419+46.66	446+47.67	RT	12.0	BA-102	2701.0			No	Note 1	445+57.00	RT	
17	SB	438+67.00	445+46.45	LT	12.0	BA-102	679.4			No	Note 1	445+05.00	LT	
18	NB	453+31.49	453+40.96	RT	6.0	BA-102	9.5			Yes	Note 1			
19	NB	2453+40.96	2459+49.78	RT	6.0	BA-102	619.4			Yes	Floyd Ramp B, note 1	2453+82.81	RT	
20	NB	2459+49.78	2460+80.00	RT	6.0	BA-102	130.2			No	Floyd Ramp B, note 2			
21	NB	2460+80.00	2461+40.00	RT	6-12	BA-102	60.3			No	Floyd Ramp B			
22	NB	2461+40.00	2462+00.00	RT	12.0	BA-102	60.0			No	Floyd Ramp B			
Totals:						BA-102	6702.8	2	2					

Notes:
1. Includes conduit in barrier
2. Includes conduit in barrier south of Sta. 2459+55.00

SHOULDE

(1) Lane(s) to which the shoulder is adjacent.
(2) Bid Item
(3) Applies only for Paved Shoulders constructed on project with existing granular shoulders.
(4) Does not include shrink.

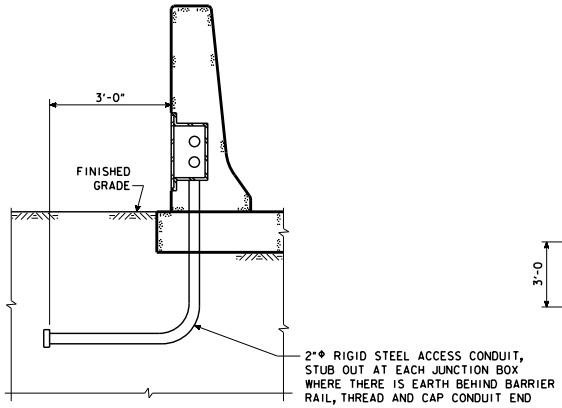
Calculations assume a HMA unit weight (lbs/cf) of 0, a Special Backfill unit weight (lbs/cf) of 140, and a Granular Shoulder unit weight (lbs/

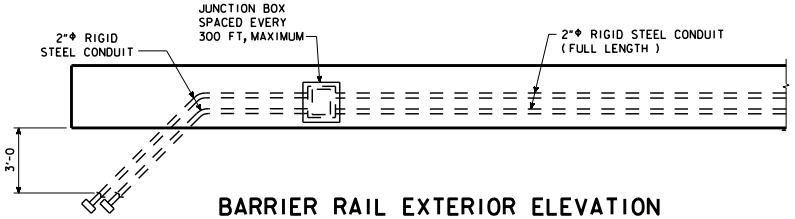
Road Identification	Direction Of Traffic (1)	Location: Station to Station		Side	P Width	G Width	L Length	Class 13 Excavation (3)	Hot Mix Asphalt		Detour Pavement	11" Pavement
					FT	FT	FT	CY (2)	TON	TON/STA	SY (2)	SY (2)
I-29	NB	396+27.13	396+58.59	OUT	3.2		31.5					11.1
I-29	NB	396+58.59	400+53.00	OUT	15.2		394.4					667.3
I-29	NB	396+58.59	412+99.47	MED	15.0		1640.9					2738.7
I-29	SB	396+58.59	412+19.31	MED	15.0		1560.7					2597.3
I-29	SB	396+58.59	396+75.59	OUT	13.6		17.0					
I-29	SB	396+75.59	397+03.62	OUT	13.6		28.0					42.3
I-29	SB	397+03.62	397+58.22	OUT	13.6 to 16.5		54.6					93.0
I-29	SB	397+58.22	397+86.00	OUT	16.5		27.8					50.9
I-29	SB	397+86.00	404+65.00	OUT	12.0		679.0					895.8
I-29	SB	404+65.00	406+78.33	OUT	15.2		213.3					354.5
I-29	SB	406+78.33	407+16.99	OUT	15.2 to 16.5		38.7					67.2
I-29	SB	407+16.99	407+50.00	OUT	16.5		33.0					59.6
I-29	SB	407+50.00	410+61.24	OUT	12.0		311.2					408.8
I-29	NB	400+53.00	409+35.00	OUT	12.0		882.0					1176.0
I-29	NB	409+35.00	409+57.65	OUT	17.0		22.7					42.8
I-29	NB	409+57.65	409+93.94	OUT	17 to 13.6		36.3					62.5
I-29	NB	409+93.94	410+44.24	OUT	13.6		50.3					76.0
I-29	NB	410+44.24	410+61.24	OUT	13.6		17.0					
I-29	NB	410+61.24	411+71.87	OUT	13.6		110.6					167.2
I-29	NB	411+71.87	411+81.87	OUT	13.6		10.0					15.1
I-29	NB	411+81.87	411+91.87	OUT	13.6 to 13.2		10.0					
I-29	NB	411+91.87	412+08.15	OUT	11.3 to 12.2		16.3					21.2
I-29	NB	412+08.15	412+18.15	OUT	14.1		10.0					
I-29	NB	412+18.15	412+28.15	OUT	14.1 to 13.6		10.0					15.4
I-29	NB	412+28.15	412+99.47	OUT	13.6		71.3					107.8
I-29	SB	410+61.24	411+79.25	OUT	13.6		118.0					178.3
I-29	SB	411+79.25	411+89.25	OUT	13.6 to 14.1		10.0					15.3
I-29	SB	411+89.25	411+99.37	OUT	14.1 to 14.2		10.1					
I-29	SB	411+99.37	412+15.63	OUT	12.3 to 11.3		16.3					21.3
I-29	SB	412+15.63	412+25.51	OUT	13.2 to 13.6		9.9					
I-29	SB	412+25.51	412+35.51	OUT	13.6		10.0					15.1
I-29	SB	412+35.51	412+69.31	OUT	13.6		33.8					51.1
I-29	SB	412+19.31	412+69.31	MED	15.0		50.0					83.3
I-29	SB	419+19.53	419+69.53	MED	15.0		50.0					83.3
I-29	SB	419+19.53	438+67.00	OUT	13.6		1947.5					
I-29	NB	419+49.69	440+00.00	OUT	13.6		2050.3					3100.5
I-29	NB	440+00.00	445+47.00	OUT	13.6		547.0					825.6
I-29	NB	419+49.69	440+00.00	MED	15.0		2050.3					3418.1
I-29	NB	440+00.00	445+47.00	MED	15.0		547.0					905.2
I-29	SB	419+69.53	440+00.00	MED	15.0		2030.5					3383.2
I-29	SB	440+00.00	444+95.00	MED	15.0		495.0					825.0
I-29	SB	438+67.00	440+00.00	OUT	13.6		133.0					200.7
I-29	SB	440+00.00	441+60.00	OUT	13.6		160.0					241.5
I-29	SB	441+60.00	444+95.00	OUT	11.3 to 7.6		335.0					320.4
I-29	SB	453+30.00	454+96.16	OUT	7.3		166.2					134.8
Floyd Ramp C	SB	3454+83.41	3455+60.00	OUT	7.3		76.6					62.3
Floyd Ramp C	SB	3455+60.00	3460+20.00	OUT	6.0		460.0					306.7
Floyd Ramp C	SB	3454+82.97	3460+20.00	IN	5.0		537.0					298.6
Floyd Ramp B	NB	2453+92.81	2463+68.92	IN	5.0		976.1					540.8
Floyd Ramp B	NB	2453+92.81	2459+50.00	OUT	7.6		557.2					
Floyd Ramp B	NB	2459+50.00	2460+80.00	OUT	7.6		130.0					109.5
INTERIM PAVEMENT												
I-29 Stage 1	NB	426+00.00	445+89.17	OUT	10.0		1989.2	1190.4			2213.1	
I-29 (RT Shldr)	NB	454+90.28	456+30.64	OUT	10.0		140.4	54.8			156.0	
DET_3_10 I-29	SB	14+44.49	19+98.61	OUT	6.0		554.1				369.4	
DET_3_20	SB	30+20.00	31+36.93	OUT	6.0		119.3				79.5	
DET_3_20	SB	30+20.00	31+19.45	IN	5.0		99.5				55.3	
DET_3_20	SB	31+19.45	31+69.42	IN	5.0		72.1				40.1	
TOTALS:											2913.4	24791.1

ERS

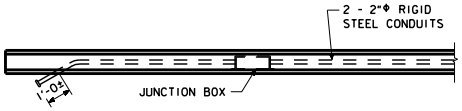
/cf) of 140.

Quantities										
Reinforced Paved Shoulder	Special Backfill				Modified Subbase	Granular Subbase	Earth Shoulder Construction Alternates			Remarks
	HMA Alternate		PCC Alternate					HMA	PCC	
SY (2)	TON (2)	TON/STA	TON (2)	TON/STA	CY (2)	SY (2)	STA (2)	CY (4)	CY (4)	
			14.8	46.9			0.3		23.4	
			516.3	130.9		527.2	3.9		293.6	
			1722.9	105.0		2738.7				
			1638.8	105.0		2597.3				
25.7			20.9	123.2		25.7	0.2		12.7	
			30.4	108.5		37.4	0.3		20.9	
			59.2	108.5		72.8	0.5		40.6	
			30.1	108.5		37.0	0.3		20.7	
			736.7	108.5		1138.1	6.8		505.5	
			231.5	108.5		280.2	2.1		158.8	
			41.9	108.5		50.8	0.4		28.8	
			35.8	108.5		43.4	0.3		24.6	
			337.7	108.5		512.9	3.1		231.7	
			957.0	108.5		1517.6	8.8		656.6	
			24.6	108.5		30.6	0.2		16.9	
			39.4	108.5		49.1	0.4		27.0	
			54.6	108.5		68.1	0.5		37.4	
25.7			20.9	123.2		32.3	0.2		12.7	
			136.3	123.2		210.2	1.1		82.4	
			12.3	123.2		19.0	0.1		7.4	
14.9			12.3	123.2		18.5	0.1		7.4	
			20.1	123.2		21.2	0.2		12.1	
15.7			12.3	123.2		19.4	0.1		7.4	
			12.3	123.2		19.0	0.1		7.4	
			87.9	123.2		133.3	0.7		53.1	
			145.4	123.2		217.2	1.2		87.9	
			12.3	123.2		18.8	0.1		7.4	
15.7			12.5	123.2		19.5	0.1		7.5	
			20.0	123.2		21.3	0.2		12.1	
14.9			12.2	123.2		18.5	0.1		7.4	
			12.3	123.2		18.8	0.1		7.4	
			41.6	123.2		63.2	0.3		25.2	
			52.5	105.0		27.9				
			52.5	105.0		27.8				
2942.8			1854.0	95.2		2975.9	19.5		1449.8	
			2526.0	123.2		3263.1	20.5		1526.3	
			673.9	123.2		1007.9	6.5		262.4	11"PCC
			2152.8	105.0		3418.1				
			574.4	105.0		905.2				11"PCC
			2132.0	105.0		3383.2				
			519.8	105.0		825.0				11"PCC
			163.9	123.2		248.8	1.3			
			185.9	116.2		294.8	1.6		64.6	11"PCC
			318.9	95.2		432.0	3.9		157.4	11"PCC
			122.2	74.2		183.2	2.6		17.3[2]	11"PCC, 4" Sloped Curb
					31.7		0.8	4.1[2]	4.1[2]	11"PCC, 4" Sloped Curb
					166.1		4.6	168.7	168.7	11"PCC
					172.6		5.4	60.0[2]	60.0[2]	11"PCC, 4" Sloped Curb
					312.4		10.7	118.9[2]	118.9[2]	11"PCC, 4" Sloped/6"Std Curb
469.9					169.7		0.0	0.0	0.0	11"PCC
					55.2		1.3	37.1	37.1	11"PCC
	1533.5	77.1	1533.5	77.1			20.3	379.0	327.1	8.5"PCC/10"HMA
	54.0	38.5	54.0	38.5			1.4	26.2	22.6	8.5"PCC/10"HMA
	349.1	63.0	349.1	63.0			5.5	90.1[2]	66.1[2]	9.5"PCC/13.5"HMA, 4" Sloped
	34.8	29.2	34.8	29.2			1.2	21.8	18.5	8"PCC/9"HMA
	27.9	28.0	27.9	28.0			1.0	16.7[2]	15.6[2]	8"PCC/9"HMA, 4" Sloped
	17.1	23.7	17.9	23.7			0.7	13.5	11.4	8"PCC/9"HMA
										[1] Included in Earthwork Run
										[2] Earth Shoulder Finishing
										[3] Earth Shoulder Construction
3525.3	2016.4		20409.3		907.7	27570.0	26.0[2]	289.8[2]	282.0[2]	
							115.5[3]	646.3[3]	6490[3]	

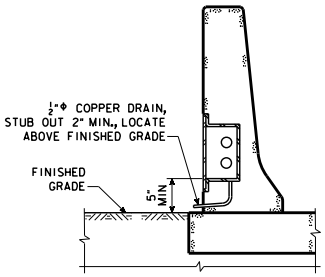




BARRIER RAIL EXTERIOR ELEVATION
LOOKING TOWARD CENTER OF ROADWAY



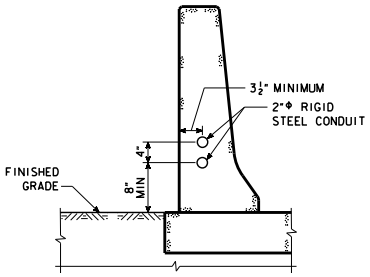
BARRIER RAIL
PART PLAN



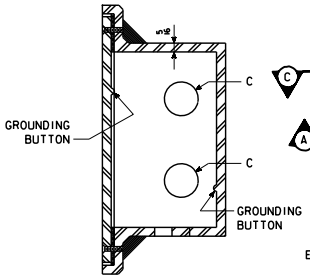
SECTIONS THRU
JUNCTION BOX

BOSSED FOR	HOLE	FOR CONDUIT SIZE
5 THREADS	C	2"Φ RIGID STEEL
NONE	D	1"Φ RIGID STEEL
NONE	E	½"Φ COPPER PIPE

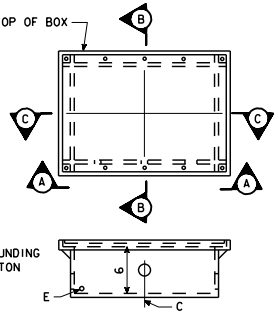
NOTE:
THE GROUNDING BUTTONS ARE TO BE BLIND DRILLED AND TAPPED FOR ⅜"Φ x 0'-0¾ BOLTS.



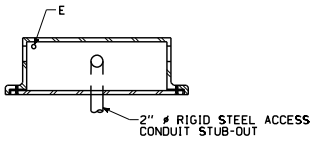
SECTION THRU
BARRIER RAIL



SECTION B-B
OPPOSITE END SIMILAR



VIEW A-A



SECTION C-C

LI-104, TYPE I JUNCTION BOX
WATERTIGHT, CAST IRON - FLUSH MOUNT

NOTES:

SEE LI-104 STANDARD ROAD PLAN FOR ADDITIONAL INFORMATION ON JUNCTION BOXES.

CONSTRUCTION SHALL CONFORM TO THE CURRENT IOWA D.O.T. STANDARD AND SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

CONDUIT INSTALLATION SHALL BE IN ACCORDANCE WITH ARTICLE 2523.03, N, OF THE STANDARD SPECIFICATIONS.

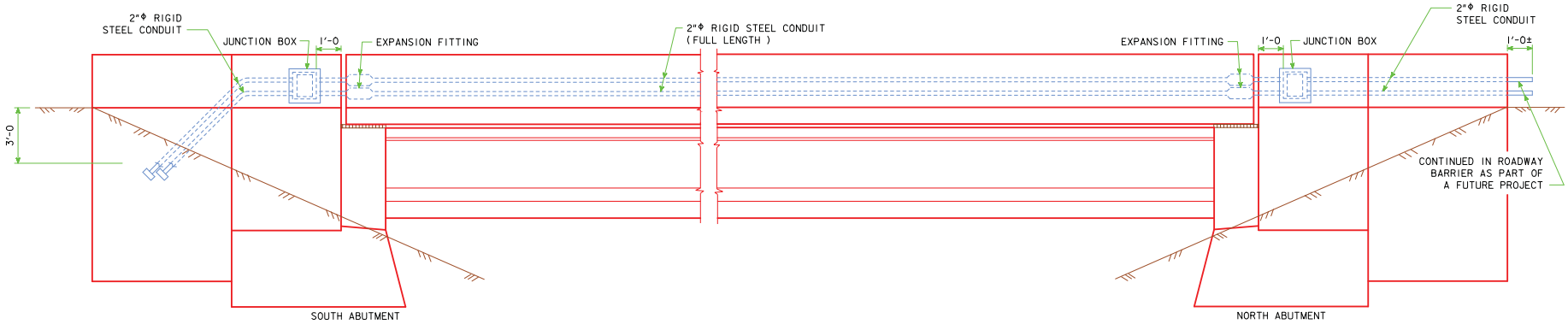
ALL "C" ENTRANCE HOLES IN JUNCTION BOXES SHALL BE DRILLED AND TAPPED FOR THE SPECIFIED CONDUIT SIZE. ALL OTHER HOLES SHALL HAVE A CONCRETE - TIGHT SLIP FIT. CONDUIT ENDS SHALL NOT PROTRUDE INTO JUNCTION BOX MORE THAN ¼". DRAIN PIPE END SHALL BE FLUSH WITH INSIDE SURFACE OF BOX. GROUNDING BUTTONS SHALL BE LOCATED APPROXIMATELY 3" FROM THE INSIDE SURFACE OF THE BOX WALL, AND NOT CLOSER THAN 3" TO THE EDGE OF ANY HOLE IN THE BOX FLOOR. HOLES FOR DRAIN PIPE SHALL BE PLACED IN THE LOW CORNER OF THE BOX, WITH A MINIMUM CLEARANCE OF 1" BETWEEN THE EDGE OF THE HOLE AND THE INSIDE SURFACE OF THE BOX WALL. TYPICAL DETAILS ARE SHOWN ON THIS SHEET.

THE RIGID STEEL CONDUIT, JUNCTION BOXES AND FITTINGS INCLUDING LABOR AND ANY ADDITIONAL WORK TO DO THE INSTALLATION IS CONSIDERED INCIDENTAL TO THE COST OF THE BARRIER.

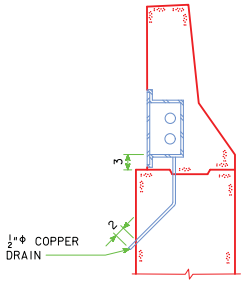
CONDUITS IN
CONCRETE BARRIER
(SHEET 1 OF 1)

FILE NO.	ENGLISH	DESIGN TEAM Tymkowicz\HR Green, Inc\HDR	WOODBURY COUNTY	PROJECT NUMBER IM-NHS-029-6(241)147--03-97	SHEET NUMBER U.52

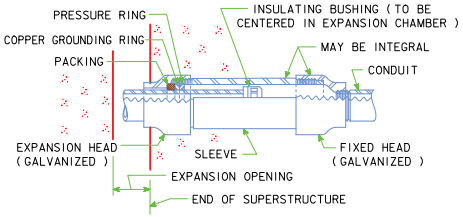
10:31:23 AM 12/12/2014 mhahn \\hrgcrnas\data\CAD\816440_Seg2\97029241\CAD\Design\97029241U1HRG.sht



EXTERIOR ELEVATION - EAST BARRIER RAIL LOOKING WEST



SECTION THRU JUNCTION BOX



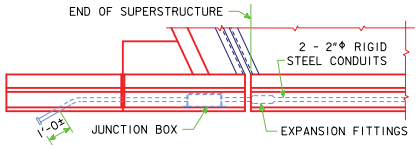
EXPANSION CHAMBER LENGTH IS 3 INCHES.

EXPANSION FITTING DETAIL

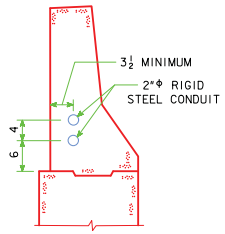
(4 REQUIRED)

BOSSED FOR	HOLE	FOR CONDUIT SIZE
5 THREADS	C	2"Φ RIGID STEEL
NONE	E	1/2"Φ COPPER PIPE

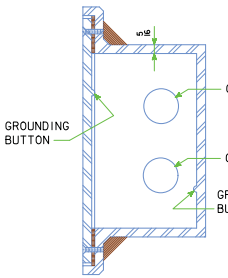
NOTE:
THE GROUNDING BUTTONS ARE TO BE BLIND DRILLED AND TAPPED FOR 3/8"Φ x 0'-0 3/4 BOLTS.



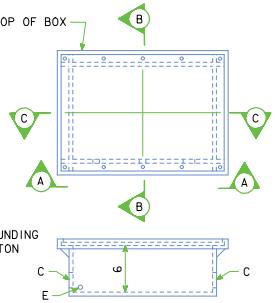
PART PLAN AT SOUTH WING



SECTION THRU BARRIER RAIL



SECTION B-B



VIEW A-A

SECTION C-C

LI-104 JUNCTION BOX

WATERTIGHT, CAST IRON - FLUSH MOUNT

LIGHTING NOTES:

SEE LI-104 STANDARD ROAD PLAN FOR ADDITIONAL INFORMATION ON JUNCTION BOXES.

CONSTRUCTION SHALL CONFORM TO THE CURRENT IOWA D.O.T. STANDARD AND SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

CONDUIT INSTALLATION SHALL BE IN ACCORDANCE WITH ARTICLE 2523.03, N, OF THE STANDARD SPECIFICATIONS.

ALL "C" ENTRANCE HOLES IN JUNCTION BOXES SHALL BE DRILLED AND TAPPED FOR THE SPECIFIED CONDUIT SIZE. ALL OTHER HOLES SHALL HAVE A CONCRETE - TIGHT SLIP FIT. CONDUIT ENDS SHALL NOT PROTRUDE INTO JUNCTION BOX MORE THAN 1/4". DRAIN PIPE END SHALL BE FLUSH WITH INSIDE SURFACE OF BOX. GROUNDING BUTTONS SHALL BE LOCATED APPROXIMATELY 3" FROM THE INSIDE SURFACE OF THE BOX WALL, AND NOT CLOSER THAN 3" TO THE EDGE OF ANY HOLE IN THE BOX FLOOR. HOLES FOR DRAIN PIPE SHALL BE PLACED IN THE LOW CORNER OF THE BOX, WITH A MINIMUM CLEARANCE OF 1" BETWEEN THE EDGE OF THE HOLE AND THE INSIDE SURFACE OF THE BOX WALL. TYPICAL DETAILS ARE SHOWN ON THIS SHEET.

THE RIGID STEEL CONDUIT, JUNCTION BOXES AND FITTINGS INCLUDING LABOR AND ANY ADDITIONAL WORK TO DO THE INSTALLATION IS CONSIDERED INCIDENTAL TO THE COST OF THE RAILING.

EXPANSION FITTING SHALL BE AS SPECIFIED OR AS APPROVED BY THE ENGINEER. TYPICAL DETAILS ARE SHOWN ON THIS SHEET.

DESIGN FOR 25° SKEW (R.A.)

585'-0 X 61'-4 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

81'-0 END SPANS 87'-0, (2) 122'-0, 92'-0 INTERIOR SPANS

LIGHTING DETAILS

STA. 416+22.09 NB I-29 OVER BACON CREEK OCTOBER, 2014

WOODBURY COUNTY

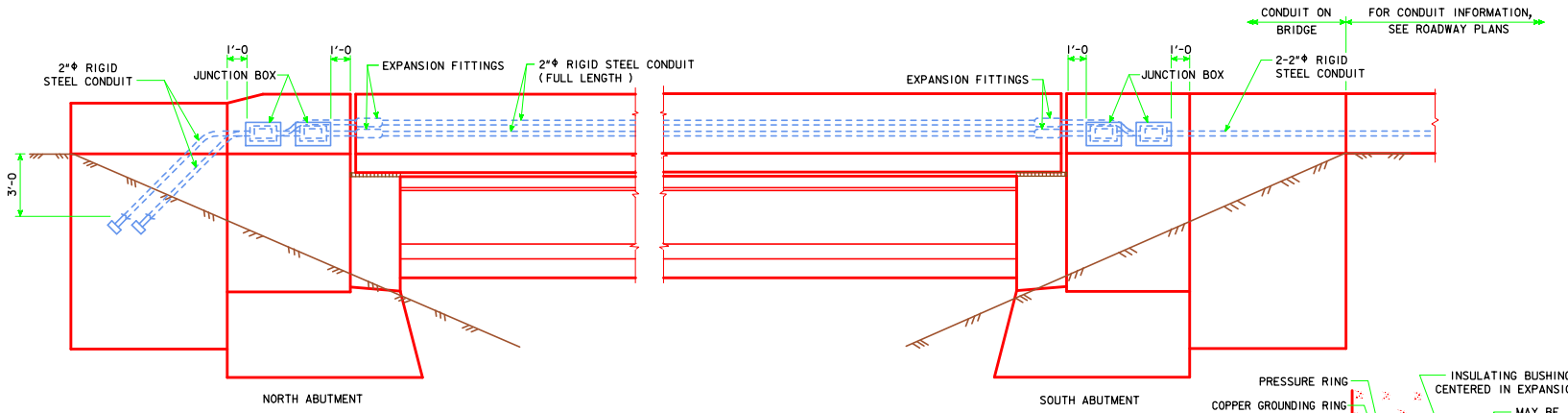
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 51 OF 51 FILE NO. 30377 DESIGN NO. 211

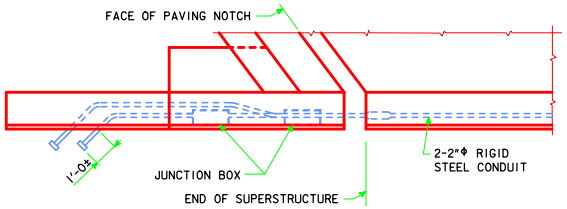
DESIGN TEAM HR GREEN, INC. | MODIFIED STANDARD SHEET 1030A | WOODBURY COUNTY | PROJECT NUMBER IM-NHS-029-6(197)147--03-97 | SHEET NUMBER 52

12/12/2014 11:09:49 AM IA_DOT \\hrgcrnas\data\CAD\816440_Seg2\97029197\CAD\BrFinal\97029197.brg 970211s051 11x17_pdf.pltcfg

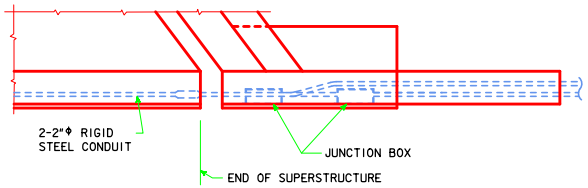
REVISION 05-11 - ADDED THE WORD 'MINIMUM' TO THE 3½ INCH DIMENSION FOR THE LOCATION OF THE 2 INCH CONDUIT IN THE BARRIER RAIL.
ENGLISHDECKRAILBRIDGES.DGN 1030AS2 - THIS SHEET ISSUED 09-03.



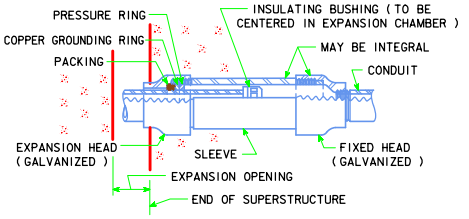
EXTERIOR ELEVATION - WEST BARRIER RAIL - LOOKING EAST



PART PLAN AT NORTH WING



PART PLAN AT SOUTH WING



EXPANSION CHAMBER LENGTH IS TO ACCOMMODATE 3" MOVEMENT EACH WAY.

EXPANSION FITTING DETAIL

(4 REQUIRED)

LIGHTING NOTES:

SEE LI-104 STANDARD ROAD PLAN FOR ADDITIONAL INFORMATION ON JUNCTION BOXES.

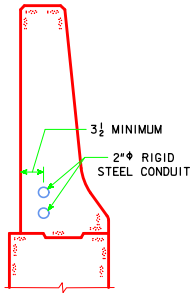
CONSTRUCTION SHALL CONFORM TO THE CURRENT IOWA D.O.T. STANDARD AND SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

CONDUIT INSTALLATION SHALL BE IN ACCORDANCE WITH ARTICLE 2523.03, N, OF THE STANDARD SPECIFICATIONS.

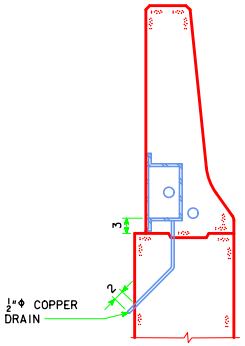
ALL "C" ENTRANCE HOLES IN JUNCTION BOXES SHALL BE DRILLED AND TAPPED FOR THE SPECIFIED CONDUIT SIZE. ALL OTHER HOLES SHALL HAVE A CONCRETE - TIGHT SLIP FIT. CONDUIT ENDS SHALL NOT PROTRUDE INTO JUNCTION BOX MORE THAN ¼". DRAIN PIPE END SHALL BE FLUSH WITH INSIDE SURFACE OF BOX. GROUNDING BUTTONS SHALL BE LOCATED APPROXIMATELY 3" FROM THE INSIDE SURFACE OF THE BOX WALL, AND NOT CLOSER THAN 3" TO THE EDGE OF ANY HOLE IN THE BOX FLOOR. HOLES FOR DRAIN PIPE SHALL BE PLACED IN THE LOW CORNER OF THE BOX, WITH A MINIMUM CLEARANCE OF 1" BETWEEN THE EDGE OF THE HOLE AND THE INSIDE SURFACE OF THE BOX WALL. TYPICAL DETAILS ARE SHOWN ON THIS SHEET.

THE RIGID STEEL CONDUIT, JUNCTION BOXES AND FITTINGS INCLUDING LABOR AND ANY ADDITIONAL WORK TO DO THE INSTALLATION IS CONSIDERED INCIDENTAL TO THE COST OF THE RAILING.

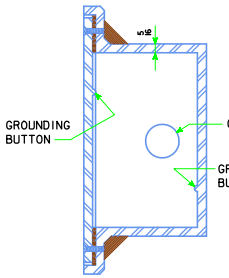
EXPANSION FITTING SHALL BE AS SPECIFIED OR AS APPROVED BY THE ENGINEER. TYPICAL DETAILS ARE SHOWN ON THIS SHEET.



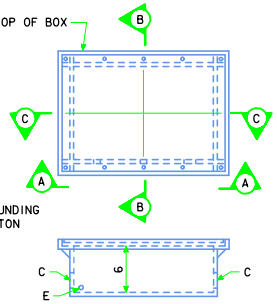
SECTION THRU BARRIER RAIL



SECTION THRU JUNCTION BOX



SECTION B-B



VIEW A-A

SECTION C-C

LI-104, TYPE I JUNCTION BOX

WATERTIGHT, CAST IRON - FLUSH MOUNT

BOSSED FOR	HOLE	FOR CONDUIT SIZE
5 THREADS	C	2"Φ RIGID STEEL
NONE	E	½"Φ COPPER PIPE

NOTE:
THE GROUNDING BUTTONS ARE TO BE BLIND DRILLED AND TAPPED FOR ⅝"Φ x 0'-0¾ BOLTS.

DESIGN FOR VARIABLE SKEW (R.A.)

645'-11⅝ X VARIES PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

71'-0,3@ 112'-0, 112'-4⅛, 126'-6¾ SPANS

LIGHTING DETAILS

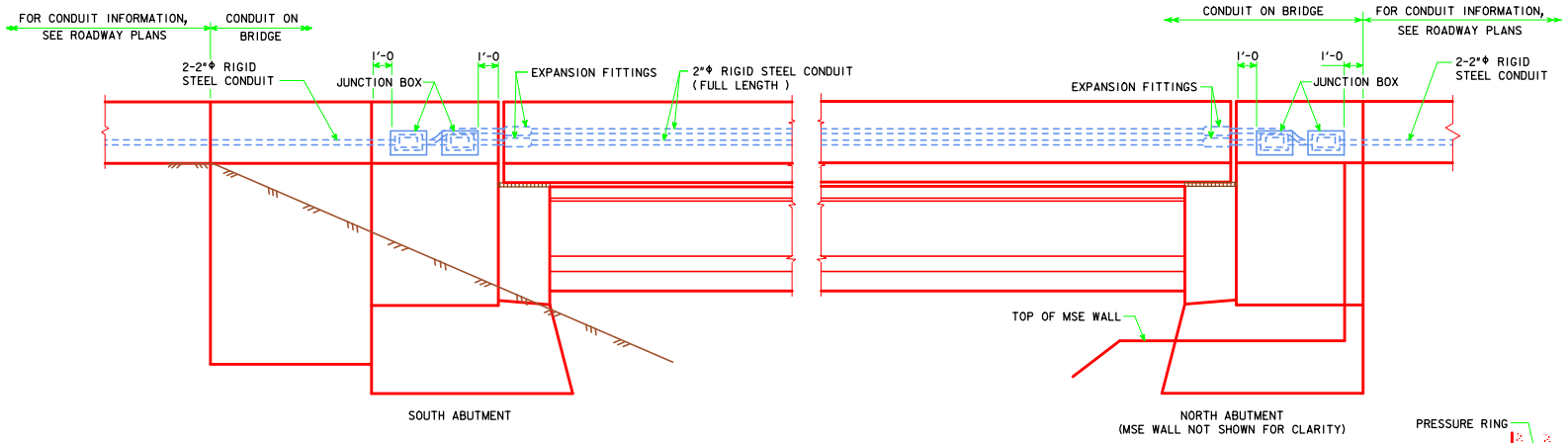
STA. 449+19.55, 27.00' LT. ℄ I-29 OCTOBER 2014

WOODBURY COUNTY

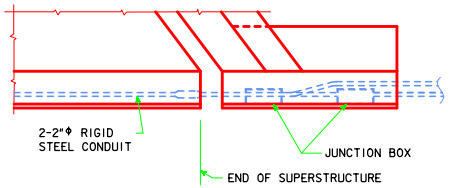
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 70 OF 78 FILE NO. 30377 DESIGN NO. 311

DESIGN TEAM DLO/NJL/ACB	LIGHTING DETAILS	STANDARD SHEET 1030A (MODIFIED)	WOODBURY COUNTY	PROJECT NUMBER IM-NHS-029-6(198)147--03-97	SHEET NUMBER 71

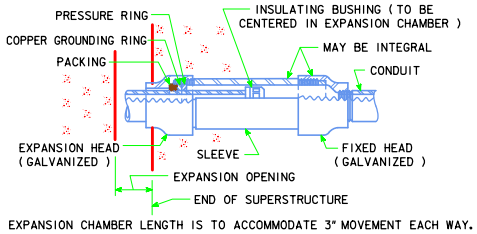


EXTERIOR ELEVATION - EAST BARRIER RAIL - LOOKING WEST



PART PLAN AT WING

(NORTH SHOWN, SOUTH SIMILAR)



EXPANSION CHAMBER LENGTH IS TO ACCOMMODATE 3" MOVEMENT EACH WAY.

EXPANSION FITTING DETAIL

(4 REQUIRED)

LIGHTING NOTES:

SEE LI-104 STANDARD ROAD PLAN FOR ADDITIONAL INFORMATION ON JUNCTION BOXES.

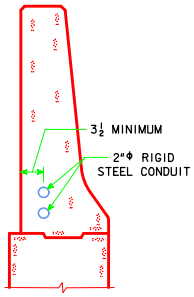
CONSTRUCTION SHALL CONFORM TO THE CURRENT IOWA D.O.T. STANDARD AND SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

CONDUIT INSTALLATION SHALL BE IN ACCORDANCE WITH ARTICLE 2523.03, N, OF THE STANDARD SPECIFICATIONS.

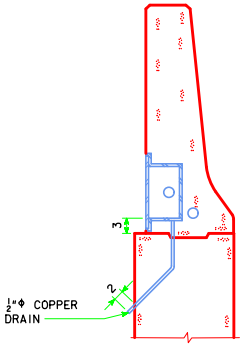
ALL "C" ENTRANCE HOLES IN JUNCTION BOXES SHALL BE DRILLED AND TAPPED FOR THE SPECIFIED CONDUIT SIZE. ALL OTHER HOLES SHALL HAVE A CONCRETE - TIGHT SLIP FIT. CONDUIT ENDS SHALL NOT PROTRUDE INTO JUNCTION BOX MORE THAN $\frac{1}{4}$". DRAIN PIPE END SHALL BE FLUSH WITH INSIDE SURFACE OF BOX. GROUNDING BUTTONS SHALL BE LOCATED APPROXIMATELY 3" FROM THE INSIDE SURFACE OF THE BOX WALL, AND NOT CLOSER THAN 3" TO THE EDGE OF ANY HOLE IN THE BOX FLOOR. HOLES FOR DRAIN PIPE SHALL BE PLACED IN THE LOW CORNER OF THE BOX, WITH A MINIMUM CLEARANCE OF 1" BETWEEN THE EDGE OF THE HOLE AND THE INSIDE SURFACE OF THE BOX WALL. TYPICAL DETAILS ARE SHOWN ON THIS SHEET.

THE RIGID STEEL CONDUIT, JUNCTION BOXES AND FITTINGS INCLUDING LABOR AND ANY ADDITIONAL WORK TO DO THE INSTALLATION IS CONSIDERED INCIDENTAL TO THE COST OF THE RAILING.

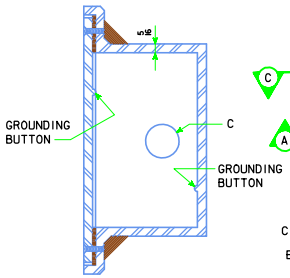
EXPANSION FITTING SHALL BE AS SPECIFIED OR AS APPROVED BY THE ENGINEER. TYPICAL DETAILS ARE SHOWN ON THIS SHEET.



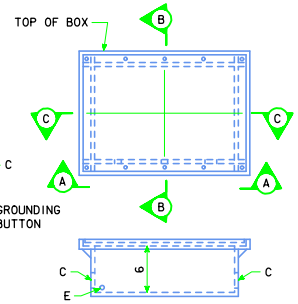
SECTION THRU BARRIER RAIL



SECTION THRU JUNCTION BOX



SECTION B-B



VIEW A-A

SECTION C-C

BOSSED FOR	HOLE	FOR CONDUIT SIZE
5 THREADS	C	2"Φ RIGID STEEL
NONE	E	½"Φ COPPER PIPE

NOTE:
THE GROUNDING BUTTONS ARE TO BE BLIND DRILLED AND TAPPED FOR $\frac{3}{8}$"Φ x 0'-0$\frac{3}{4}$ BOLTS.

LI-104, TYPE I JUNCTION BOX

WATERTIGHT, CAST IRON - FLUSH MOUNT

DESIGN FOR VARIABLE SKEW (R.A.)

644'-0$\frac{7}{8}$ X VARIES PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

71'-0, 3 @ 112'-0, 111'-6$\frac{5}{8}$, 125'-6$\frac{1}{4}$ SPANS

LIGHTING DETAILS

STA. 449+57.34, 27.00' RT. ℄ I-29 OCTOBER 2014

WOODBURY COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 71 OF 77 FILE NO. 30377 DESIGN NO. 411

DESIGN TEAM DLO/ERJ/EES	LIGHTING DETAILS	STANDARD SHEET 1030A (MODIFIED)	WOODBURY COUNTY	PROJECT NUMBER IM-NHS-029-6(199)147--03-97	SHEET NUMBER 72

12/11/2014 3:36:48 PM bgreen pw:\\PWAPPOMA001:NorthCentral_Omaha\Documents\011648\CON0076047\00000000193219\13.00_CAD\13.01_Bridge\Design_411 Floyd R NB\97029199.brg 970411S071 11x17c_pdf.pltcfg

REVISION 05-11 - ADDED THE WORD 'MINIMUM' TO THE 3½ INCH DIMENSION FOR THE LOCATION OF THE 2 INCH CONDUIT IN THE BARRIER RAIL.
ENGLISHDECKRAILBRIDGES.DGN 1030AS2 - THIS SHEET ISSUED 09-03.