FR96 (Fo[illegible] 650019)
05-13

CONTRACT

Letting Date: February 17, 2015 Contract ID: 78-0293-102 Bid Order No.: 306
County: POTTAWATTAMIE Project Engineer: COUNCIL BLUFFS RCE
Cost Center: 601000 Object Code: 890 DBE Commitment: $2,365,826.80
Contract Work Type: GRADING

This agreement made and entered by and between the IOWA DEPARTMENT OF TRANSPORTATION, CONTRACTING AUTHORITY, AND
AMES CONSTRUCTION, INC. OF BURNSVILLE, MN, (AM193), CONTRACTOR

It is agreed that the notice and instructions to bidders, the proposal filed by the Contractor, the specifications, the plan, if any, for project(s) listed below, together with Contractor's performance bond, are made a part hereof and together with this instrument constitute the contract. This contract contains all of the terms and conditions agreed upon by the parties hereto. A true copy of said plan is now on file in the office of the Contracting Authority under date of 02/12/2015.

SEE ATTACHED PROJECT LIST ON PAGE 1C.

The specifications consist of the Standard Specifications for Highway and Bridge Construction, Series 2012 of the Iowa Department of Transportation plus the following Supplemental Specifications, Special Provisions, and addendums: SEE ATTACHED SPEC LIST ON PAGE 1C.

78,491,910.29

Contractor, for and in considerations of $_____ payable as set forth in the specifications constituting a part of this contract, agrees to construct various items of work and/or provide various materials or supplies in accordance with the plans and specifications therefore, and in the locations designated in the Notice to Bidders.

Contractor certifies by signature on this contract, under pain of penalties for false certification, that the Contractor has complied with Iowa Code Section 452A.17(8) as amended, if applicable, and Iowa Code Section 91C.5 (Public Registration Number), if applicable.

In consideration of the foregoing, Contracting authority hereby agrees to pay the Contractor promptly and according to the requirements of the specifications the amounts set forth, subject to the conditions as set forth in the specifications.

It is further understood and agreed that the above work shall also be commenced or completed in accordance with Page 1B of this Contract and assigned Proposal Notes.

To accomplish the purpose herein expressed, the Contracting authority and Contractor have signed this and one other identical instrument.

For Federal-Aid contracts the Contractor certifies that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the contract.

By _____, _____
Contractor — Contractor (if joint venture)

By _____ MAR 18 2015
Contracting Authority — Contract Award Date

Iowa DOT Concurrence _____ _____

Letting Date: February 17, 2015 Contract ID: 78-0293-102 Bid Order No. : 306

It is further understood and agreed that the above work shall be commenced or completed in accordance with the following schedule:

SITE NUMBER	CONTRACT PERIOD /SITE DESCRIPTION	LIQUIDATED DAMAGES
CONTRACT	CONTRACT COMPLETION DATE: 05/25/2017	$7,800.00
01	CONTRACT COMPLETION DATE: 09/30/2015 SEE SITE 01 NOTE	$5,000.00
02	APPROX START DATE 10/15/2015 30 CALENDAR DAYS SEE SITE 02 NOTE	$5,000.00
03	CONTRACT COMPLETION DATE: 06/30/2016 SEE SITE 03 NOTE	$5,000.00
04	APPROX START DATE 06/01/2016 30 CALENDAR DAYS SEE SITE 04 NOTE	$5,000.00
05	CONTRACT COMPLETION DATE: 11/15/2016 SEE SITE 05 NOTE	$6,500.00
06	APPROX START DATE 07/08/2016 90 CALENDAR DAYS SEE SITE 06 NOTE	$15,000.00

CONTRACT NOTES

SEE 656.0195
SITE DESCRIPTIONS
WORK RESTRICTION
*** INCENTIVE/DISINCENTIVE/SITE 06 ***
CRITCAL CLOSURE ACTIVITY

CONTRACT TIME RELIEF
ADVERSE WEATHER INCLUDING RAIN, SNOW, WIND, FLOOD, EXTREME HEAT, AND THE RESULTS THEREOF, SUCH AS INACCESSIBILITY OR NON-WORKABILITY OF MATERIALS, IS ONLY CONSIDERED AS EXTRAORDINARY CIRCUMSTANCE IF THE CONTRACTOR IS WORKING OR READY TO WORK ON THE CONTRACT AND THE ADVERSE WEATHER CONDITIONS DO NOT ALLOW PRODUCTIVE WORK ON THE CRITICAL PATH. ADVERSE WEATHER THAT DELAYS THE CONTRACTOR DURING WORK ON SITES NUMBER CONTRACT, 01, 03, AND 05 MUST BE DOCUMENTED BY THE CONTRACTOR AND A WRITTEN REQUEST FOR A COMPLETION DATE EXTENSION MUST BE SUBMITTED TO THE ENGINEER WITHIN 10 CALENDAR DAYS OF THE BEGINNING OF THE DELAY. COMPLETION DATE EXTENSIONS FOR ADVERSE WEATHER WILL NOT BE ALLOWED FOR THE FIRST 5 CONSECUTIVE DAYS OF EACH DELAY.

LETTING DATE: February 17, 2015 BID ORDER NO.: 306

PROJECT: IM-NHS-029-3(102)48--03-78 COUNTY: POTTAWATTAMIE
WORK TYPE: GRADING ACCOUNTING ID: 32348
ROUTE: I-29 LENGTH (MILES): 1.28
LOCATION: US 275 INTERCHANGE
FEDERAL AID - PREDETERMINED WAGES ARE IN EFFECT
PROJECT AMOUNT: $56,915,730.38

PROJECT: IM-NHS-029-3(103)48--03-78 COUNTY: POTTAWATTAMIE
WORK TYPE: TRAFFIC SIGNS ACCOUNTING ID: 32349
ROUTE: I-29 LENGTH (MILES): 0
LOCATION: I-29/80 IN COUNCIL BLUFFS - I-29/US 275 INTERCHANGE
FEDERAL AID - PREDETERMINED WAGES ARE IN EFFECT
PROJECT AMOUNT: $713,622.15

PROJECT: IM-NHS-029-3(104)48--03-78 COUNTY: POTTAWATTAMIE
WORK TYPE: TRAFFIC SIGNALS ACCOUNTING ID: 32350
ROUTE: I-29 LENGTH (MILES): 0
LOCATION: I-29/80 IN COUNCIL BLUFFS - I-29/US 275 INTERCHANGE
FEDERAL AID - PREDETERMINED WAGES ARE IN EFFECT
PROJECT AMOUNT: $921,336.25

PROJECT: IM-029-3(105)48--13-78 COUNTY: POTTAWATTAMIE
WORK TYPE: BRIDGE REPLACEMENT - PPCB ACCOUNTING ID: 32351
ROUTE: I-29 LENGTH (MILES): 0
LOCATION: I-29/80 IN COUNCIL BLUFFS - EB IA 92 OVER I-29
FEDERAL AID - PREDETERMINED WAGES ARE IN EFFECT
PROJECT AMOUNT: $4,909,899.70

PROJECT: NHS-029-3(106)48--11-78 COUNTY: POTTAWATTAMIE
WORK TYPE: BRIDGE REPLACEMENT - PPCB ACCOUNTING ID: 32352
ROUTE: I-29 LENGTH (MILES): 0
LOCATION: I-29/80 IN COUNCIL BLUFFS - EB IA 92 OVER MOSQUITO CREEK
FEDERAL AID - PREDETERMINED WAGES ARE IN EFFECT
PROJECT AMOUNT: $10,283,768.27

PROJECT LIST CONTINUES ON PAGE 1D.

SPEC LIST

DS-12027, DS-12040, DS-12042, DS-12046, DS-12047, DS-12049, DS-12050
FHWA-1273.05, GS-12005, IA14-1.1
SP-120214A, SP-120215, SP-120216A, SP-120217, SP-120218A, SP-120219, SP-120223, SP-120225, SP-120226, SP-120227, SP-120228A, SP-120229, SP-120230, SP-120231, SP-120233, SP-120234, SP-120235, SP-120236, SP-120237, SP-120238, SP-120239, SP-120240, SP-123246, SP-120259, SP-120260
ADDENDUMS: 17FEB306.A01, 17FEB306.A02, 17FEB306.A03, 17FEB306.A04, 17FEB306.A05, 17FEB306.A06, 17FEB306.A07, 17FEB306.A08, 17FEB306.A09, 17FEB306.A10, 17FEB306.A11, 17FEB306.A12

LETTING DATE: February 17, 2015 BID ORDER NO.: 306

PROJECT: IM-NHS-029-3(110)48--03-78 COUNTY: POTTAWATTAMIE
WORK TYPE: LIGHTING ACCOUNTING ID: 32353
ROUTE: I-29 LENGTH (MILES): 0
LOCATION: I-29/80 IN COUNCIL BLUFFS - I-29/US 275 INTERCHANGE
FEDERAL AID - PREDETERMINED WAGES ARE IN EFFECT
PROJECT AMOUNT: $1,298,388.60

PROJECT: IM-NHS-029-3(122)48--03-78 COUNTY: POTTAWATTAMIE
WORK TYPE: RCB CULVERT EXT - SINGLE BOX ACCOUNTING ID: 32354
ROUTE: I-29 LENGTH (MILES): 0
LOCATION: US 275 INTERCHANGE
FEDERAL AID - PREDETERMINED WAGES ARE IN EFFECT
PROJECT AMOUNT: $299,043.71

PROJECT: IM-NHS-029-3(146)48--03-78 COUNTY: POTTAWATTAMIE
WORK TYPE: BRIDGE RPLC - STEEL GIRDER ACCOUNTING ID: 32355
ROUTE: I-29 LENGTH (MILES): 0
LOCATION: I-29 SOUTHBOUND RAMP D OVER MOSQUITO CREEK AND
BNSF/CBEC R.R. IN THE CITY OF COUNCIL BLUFFS
FEDERAL AID - PREDETERMINED WAGES ARE IN EFFECT
PROJECT AMOUNT: $1,672,037.21

PROJECT: IM-NHS-080-1(416)3--03-78 COUNTY: POTTAWATTAMIE
WORK TYPE: RECONSTR - BRIDGE WIDENING ACCOUNTING ID: 32356
ROUTE: I-29 LENGTH (MILES): 0
LOCATION: I-29 NB OVER I-80 EB TEMPORARY BRIDGE WIDENING
IN THE CITY OF COUNCIL BLUFFS
FEDERAL AID - PREDETERMINED WAGES ARE IN EFFECT
PROJECT AMOUNT: $1,478,084.02

Vendor No.: AM193 Bid Order No.: 306
Contract ID No.: 78-0293-102 Letting Date: February 17, 2015
Primary Work Type: GRADING 10:00 A.M.
Primary County: POTTAWATTAMIE

Line No	Item Number / Item Description	Item Quantity and Unit	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Cts
SECTION 0001	ROADWAY ITEMS IM-NHS-029-3(102)48--03-78					
0010	2101-0850001 CLEARING AND GRUBBING	4.700 ACRE	8,500.00000		39,950.00	
0020	2102-0425071 SPECIAL BACKFILL	40,820.500 CY	45.00000		1,836,922.50	
0030	2102-2625000 EMBANKMENT-IN-PLACE	2,826.000 CY	30.00000		84,780.00	
0040	2102-2710070 EXCAVATION, CLASS 10, ROADWAY AND BORROW	783,706.000 CY	13.00000		10,188,178.00	
0050	2102-2712015 EXCAVATION, CLASS 12, BOULDERS OR ROCK FRAGMENTS	50.000 CY	100.00000		5,000.00	
0060	2105-8425015 TOPSOIL, STRIP, SALVAGE AND SPREAD	69,762.000 CY	8.00000		558,096.00	
0070	2107-0875100 COMPACTION WITH MOISTURE CONTROL	679,988.000 CY	0.60000		407,992.80	
0080	2107-3825025 GRANULAR MATERIAL FOR BLANKET AND SUBDRAIN	11,000.000 CY	12.00000		132,000.00	
0090	2111-8174100 GRANULAR SUBBASE	99,258.400 SY	12.00000		1,191,100.80	
0100	2112-0000100 WICK DRAIN	690,750.000 LF	1.10000		759,825.00	

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Primary Work Type: GRADING 10:00 A.M.
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Line No	Item Number / Item Description	Item Quantity and Unit	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Cts
0110	2113-0001100 SUBGRADE STABILIZATION MATERIAL, POLYMER GRID	51,880.000 SY	3.50000		181,580.00	
0120	2115-0100000 MODIFIED SUBBASE	12,421.800 CY	50.00000		621,090.00	
0130	2121-7425010 GRANULAR SHOULDERS, TYPE A	68.000 TON	45.00000		3,060.00	
0140	2122-5190501 PAVED SHOULDER, PORTLAND CEMENT CONCRETE (PAVED SHOULDER PANEL FOR BRIDGE END DRAIN)	313.200 SY	68.00000		21,297.60	
0150	2122-5191005 REINFORCED PAVED SHOULDER FOR CONCRETE BARRIER	3,985.700 SY	115.00000		458,355.50	
0160	2123-7450000 SHOULDER CONSTRUCTION, EARTH	341.900 STA	230.00000		78,637.00	
0170	2301-1003100 STANDARD OR SLIP-FORM PORTLAND CEMENT CONCRETE PAVEMENT, QM-C, CLASS 3 DURABILITY, 10 IN.	30,580.100 SY	60.00000		1,834,806.00	
0180	2301-1004115 STANDARD OR SLIP-FORM PORTLAND CEMENT CONCRETE PAVEMENT, QM-C, CLASS 3I DURABILITY, 11.5 IN.	87,980.100 SY	56.00000		4,926,885.60	
0190	2301-4875006 MEDIAN, P.C. CONCRETE, 6 IN.	225.700 SY	65.00000		14,670.50	

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Line No	Item Number / Item Description	Item Quantity and Unit	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Cts
0210	2303-0053502 HOT MIX ASPHALT MIXTURE (10,000, 000 ESAL), SURFACE COURSE, 1/2 IN. MIX, FRICTION L-2	529.000 TON	94.00000		49,726.00	
0220	2303-0246422 ASPHALT BINDER, PG 64-22	31.700 TON	620.00000		19,654.00	
0230	2303-6911000 HOT MIX ASPHALT PAVEMENT SAMPLES	LUMP	LUMP		2,500.00	
0240	2304-0100000 DETOUR PAVEMENT 7 INCH PCC OR 8.5 INCH HMA	1,060.300 SY	46.00000		48,773.80	
0250	2304-0100000 DETOUR PAVEMENT 8.5 INCH PCC OR 12 INCH HMA	28,798.100 SY	52.00000		1,497,501.20	
0260	2312-8260051 GRANULAR SURFACING ON ROAD, CLASS A CRUSHED STONE	324.000 TON	30.00000		9,720.00	
0270	2401-6745356 REMOVAL OF CONCRETE FOOTINGS OF LIGHT POLES	15.000 EACH	400.00000		6,000.00	
0280	2401-6745765 REMOVAL OF LIGHT POLES	18.000 EACH	300.00000		5,400.00	
0290	2402-0425030 GRANULAR BACKFILL	19,093.000 CY	40.00000		763,720.00	
0300	2402-0425030 GRANULAR BACKFILL WORKING PAD STONE	25,250.000 CY	45.00000		1,136,250.00	
0310	2402-0425040 FLOODED BACKFILL	1,156.600 CY	45.00000		52,047.00	

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0320	2402-2720100 EXCAVATION, CLASS 20, FOR ROADWAY PIPE CULVERT	3,649.300 CY	12.00000		43,791.60	
0330	2414-6444100 STEEL PIPE PEDESTRIAN HAND RAILING	60.000 LF	120.00000		7,200.00	
0340	2416-0100018 APRONS, CONCRETE, 18 IN. DIA.	7.000 EACH	900.00000		6,300.00	
0350	2416-0100024 APRONS, CONCRETE, 24 IN. DIA.	12.000 EACH	1,200.00000		14,400.00	
0360	2416-0100030 APRONS, CONCRETE, 30 IN. DIA.	2.000 EACH	1,200.00000		2,400.00	
0370	2416-0100036 APRONS, CONCRETE, 36 IN. DIA.	5.000 EACH	1,800.00000		9,000.00	
0380	2416-0100042 APRONS, CONCRETE, 42 IN. DIA.	4.000 EACH	2,200.00000		8,800.00	
0390	2416-0100048 APRONS, CONCRETE, 48 IN. DIA.	1.000 EACH	2,800.00000		2,800.00	
0400	2416-1180024 CULVERT, CONCRETE ROADWAY PIPE, 24 IN. DIA.	763.000 LF	75.00000		57,225.00	
0410	2416-1180036 CULVERT, CONCRETE ROADWAY PIPE, 36 IN. DIA.	320.000 LF	130.00000		41,600.00	
0420	2416-1180042 CULVERT, CONCRETE ROADWAY PIPE, 42 IN. DIA.	164.000 LF	165.00000		27,060.00	

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0430	2416-1180048 CULVERT, CONCRETE ROADWAY PIPE, 48 IN. DIA.	88.000 LF	275.00000		24,200.00	
0440	2416-1245036 CULVERT, 3750D CONCRETE ROADWAY PIPE, 36 IN. DIA.	50.000 LF	175.00000		8,750.00	
0450	2416-1262024 CULVERT, CONCRETE PIPE, 2000D, TRENCHLESS, 24 IN. DIA.	169.000 LF	600.00000		101,400.00	
0460	2416-1262030 CULVERT, CONCRETE PIPE, 2000D, TRENCHLESS, 30 IN. DIA. PERMANENT ENCASEMENT PIPE & CARRIER PIPE	166.000 LF	800.00000		132,800.00	
0470	2416-1262036 CULVERT, CONCRETE PIPE, 2000D, TRENCHLESS, 36 IN. DIA.	246.000 LF	900.00000		221,400.00	
0480	2416-1262042 CULVERT, CONCRETE PIPE, 2000D, TRENCHLESS, 42 IN. DIA.	172.000 LF	1,100.00000		189,200.00	
0490	2417-0225024 APRONS, METAL, 24 IN. DIA.	4.000 EACH	400.00000		1,600.00	
0500	2417-0225054 APRONS, METAL, 54 IN. DIA.	1.000 EACH	2,000.00000		2,000.00	
0510	2417-1060024 CULVERT, CORRUGATED METAL ROADWAY PIPE, 24 IN. DIA.	281.000 LF	44.00000		12,364.00	
0520	2417-1060054 CULVERT, CORRUGATED METAL ROADWAY PIPE, 54 IN. DIA.	10.000 LF	105.00000		1,050.00	

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0530	2432-0000100 MECHANICALLY STABILIZED EARTH RETAINING WALL	44,938.000 SF	50.00000		2,246,900.00	
0540	2435-0140148 MANHOLE, STORM SEWER, SW-401, 48 IN.	2.000 EACH	3,750.00000		7,500.00	
0550	2435-0140200 MANHOLE, STORM SEWER, SW-402	2.000 EACH	5,000.00000		10,000.00	
0560	2435-0250700 INTAKE, SW-507	7.000 EACH	5,000.00000		35,000.00	
0570	2435-0250900 INTAKE, SW-509	1.000 EACH	7,500.00000		7,500.00	
0580	2435-0250904 INTAKE, SW-509, TOP ONLY	2.000 EACH	3,500.00000		7,000.00	
0590	2435-0251224 INTAKE, SW-512, 24 IN.	1.000 EACH	2,750.00000		2,750.00	
0600	2435-0254500 INTAKE, SW-545	1.000 EACH	17,500.00000		17,500.00	
0610	2435-0254900 BARRIER INTAKE, SW-549	1.000 EACH	10,000.00000		10,000.00	
0620	2435-0254904 BARRIER INTAKE, SW-549, TOP ONLY	5.000 EACH	4,000.00000		20,000.00	
0630	2435-0256200 INTAKE, SW-562	4.000 EACH	5,500.00000		22,000.00	

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0640	2502-8212034 SUBDRAIN, LONGITUDINAL, (SHOULDER) 4 IN. DIA.	28,270.000 LF	12.00000		339,240.00	
0650	2502-8212204 SUBDRAIN, PERFORATED PLASTIC PIPE, 4 IN. DIA.	1,425.000 LF	12.00000		17,100.00	
0660	2502-8220196 SUBDRAIN OUTLET, RF-19E	164.000 EACH	425.00000		69,700.00	
0670	2503-0114215 STORM SEWER GRAVITY MAIN, TRENCHED, REINFORCED CONCRETE PIPE (RCP), 2000D (CLASS III), 15 IN.	93.000 LF	48.00000		4,464.00	
0680	2503-0114218 STORM SEWER GRAVITY MAIN, TRENCHED, REINFORCED CONCRETE PIPE (RCP), 2000D (CLASS III), 18 IN.	464.000 LF	52.00000		24,128.00	
0690	2503-0114224 STORM SEWER GRAVITY MAIN, TRENCHED, REINFORCED CONCRETE PIPE (RCP), 2000D (CLASS III), 24 IN.	722.000 LF	68.00000		49,096.00	
0700	2503-0114230 STORM SEWER GRAVITY MAIN, TRENCHED, REINFORCED CONCRETE PIPE (RCP), 2000D (CLASS III), 30 IN.	162.000 LF	85.00000		13,770.00	
0710	2503-0114248 STORM SEWER GRAVITY MAIN, TRENCHED, REINFORCED CONCRETE PIPE (RCP), 2000D (CLASS III), 48 IN.	130.000 LF	175.00000		22,750.00	

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0720	2503-0114418 STORM SEWER GRAVITY MAIN, TRENCHED, REINFORCED CONCRETE PIPE (RCP), 3000D (CLASS IV), 18 IN.	107.000 LF	60.00000		6,420.00	
0730	2503-0124218 STORM SEWER GRAVITY MAIN, TRENCHLESS, REINFORCED CONCRETE PIPE (RCP), 2000D (CLASS III), 18 IN.	143.000 LF	600.00000		85,800.00	
0740	2503-0134248 STORM SEWER GRAVITY MAIN WITH CASING PIPE, TRENCHED, REINFORCED CONCRETE PIPE (RCP), 2000D (CLASS III), 48 IN.	286.000 LF	700.00000		200,200.00	
0750	2503-0200036 REMOVE STORM SEWER PIPE LESS THAN OR EQUAL TO 36 IN.	912.000 LF	15.00000		13,680.00	
0760	2503-0200136 REMOVE STORM SEWER PIPE GREATER THAN 36 IN.	416.000 LF	20.00000		8,320.00	
0770	2503-0500380 BRIDGE END DRAIN, RF-38	12.000 EACH	3,500.00000		42,000.00	
0780	2505-4008120 REMOVAL OF STEEL BEAM GUARDRAIL	1,175.300 LF	4.00000		4,701.20	
0790	2505-4008300 STEEL BEAM GUARDRAIL	500.000 LF	25.00000		12,500.00	
0800	2505-4008400 STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION	10.000 EACH	2,500.00000		25,000.00	

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Line No	Item Number / Item Description	Item Quantity and Unit	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Cts
0810	2505-4021010 STEEL BEAM GUARDRAIL END ANCHOR, BOLTED	10.000 EACH	300.00000		3,000.00	
0820	2505-4021020 STEEL BEAM GUARDRAIL END ANCHOR, W-BEAM	1.000 EACH	2,500.00000		2,500.00	
0830	2505-4021700 STEEL BEAM GUARDRAIL END TERMINAL	10.000 EACH	2,800.00000		28,000.00	
0840	2505-6000111 HIGH TENSION CABLE GUARDRAIL	834.700 LF	20.00000		16,694.00	
0850	2505-6000121 HIGH TENSION CABLE GUARDRAIL, END ANCHOR	4.000 EACH	3,000.00000		12,000.00	
0860	2505-6000131 HIGH TENSION CABLE GUARDRAIL, SPARE PARTS KIT	1.000 EACH	5,000.00000		5,000.00	
0870	2506-4984000 FLOWABLE MORTAR	221.300 CY	175.00000		38,727.50	
0880	2507-3250005 ENGINEERING FABRIC	167.800 SY	3.00000		503.40	
0890	2507-8029000 EROSION STONE	77.000 TON	50.00000		3,850.00	
0900	2510-6745850 REMOVAL OF PAVEMENT	134,140.400 SY	12.00000		1,609,684.80	
0910	2510-6750600 REMOVAL OF INTAKES AND UTILITY ACCESSES	4.000 EACH	500.00000		2,000.00	

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0920	2511-0300000 REMOVAL OF RECREATIONAL TRAIL	1,861.200 SY	9.50000		17,681.40	
0930	2511-0301800 RECREATIONAL TRAIL, HOT MIX ASPHALT, 8 IN.	794.700 SY	65.00000		51,655.50	
0940	2511-0302600 RECREATIONAL TRAIL, PORTLAND CEMENT CONCRETE, 6 IN.	1,026.900 SY	40.00000		41,076.00	
0950	2511-0310100 SPECIAL COMPACTION OF SUBGRADE FOR RECREATIONAL TRAIL	17.300 STA	500.00000		8,650.00	
0960	2511-7528101 DETECTABLE WARNINGS	72.000 SF	19.00000		1,368.00	
0970	2512-1725206 CURB AND GUTTER, P.C. CONCRETE, 2.0 FT.	632.900 LF	22.00000		13,923.80	
0980	2512-1725406 CURB AND GUTTER, P.C. CONCRETE, 4.0 FT.	4,668.800 LF	24.00000		112,051.20	
0990	2512-1750006 CURB AND GUTTER, P.C. CONCRETE, AS PER PLAN	282.000 LF	23.00000		6,486.00	
1010	2513-0001050 CONCRETE BARRIER, BA-105	4.000 EACH	1,800.00000		7,200.00	
1020	2513-0001070 CONCRETE BARRIER RAIL, BA-107	4.000 EACH	1,700.00000		6,800.00	
1030	2513-0474990 CONCRETE BARRIER, REINFORCED, AS PER PLAN	3,848.100 LF	65.00000		250,126.50	

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1040	2518-6910000 SAFETY CLOSURE	18.000 EACH	100.00000		1,800.00	
1050	2519-1001000 FENCE, CHAIN LINK, VINYL COATED	4,706.000 LF	17.00000		80,002.00	
1060	2519-4200190 REMOVAL OF FENCE, 72 INCH CHAIN LINK	168.000 LF	7.00000		1,176.00	
1070	2526-8285000 CONSTRUCTION SURVEY	LUMP	LUMP		50,000.00	
1080	2527-9263109 PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	2,428.230 STA	53.00000		128,696.19	
1090	2527-9263131 WET RETROREFLECTIVE REMOVABLE TAPE MARKINGS	351.470 STA	155.00000		54,477.85	
1100	2527-9263137 PAINTED SYMBOLS AND LEGENDS, WATERBORNE OR SOLVENT-BASED	72.000 EACH	85.00000		6,120.00	
1110	2527-9263180 PAVEMENT MARKINGS REMOVED	1,051.860 STA	92.00000		96,771.12	
1120	2527-9263190 SYMBOLS AND LEGENDS REMOVED	25.000 EACH	90.00000		2,250.00	
1130	2528-3800000 MODULAR GLARE SCREEN SYSTEM	49,375.000 LF	6.00000		296,250.00	
1140	2528-8400048 TEMPORARY BARRIER RAIL, CONCRETE	54,762.500 LF	12.00000		657,150.00	

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1150	2528-8400055 TEMPORARY TO PERMANENT BARRIER CONNECTION	1.000 EACH	3,750.00000		3,750.00	
1160	2528-8400157 TEMPORARY FLOODLIGHTING LUMINAIRE	21.000 EACH	3,000.00000		63,000.00	
1170	2528-8445110 TRAFFIC CONTROL	LUMP	LUMP		450,000.00	
1180	2533-4980005 MOBILIZATION	LUMP	LUMP		5,614,000.00	
1190	2548-0000200 MILLED SHOULDER RUMBLE STRIPS, PCC SURFACE	240.000 STA	35.00000		8,400.00	
1200	2551-0000110 TEMP CRASH CUSHION	4.000 EACH	1,600.00000		6,400.00	
1210	2551-0000130 TEMP CRASH CUSHION, SEVERE USE (SU)	8.000 EACH	7,100.00000		56,800.00	
1220	2551-0000210 PERMANENT CRASH CUSHION	2.000 EACH	30,000.00000		60,000.00	
1230	2551-0000300 PERMANENT CRASH CUSHION SPARE PARTS KIT	1.000 EACH	500.00000		500.00	
1240	2590-0000020 PROJECT MANAGEMENT	LUMP	LUMP		175,000.00	
1250	2595-0005110 RAILROAD PROTECTIVE LIABILITY INSURANCE FOR CBEC RAILWAY INC.	LUMP	LUMP		15,000.00	

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1260	2599-9999003 ('CUBIC YARDS' ITEM) TOPSOIL, STRIP, AND WASTE	20,759.000 CY	6.50000		134,933.50	
1270	2599-9999005 ('EACH' ITEM) CONCRETE BARRIER-MOUNTED SIGN SUPPORT, STEEL	1.000 EACH	2,250.00000		2,250.00	
1280	2599-9999005 ('EACH' ITEM) VERIFICATION TEST FOR RIGID INCLUSIONS	5.000 EACH	50,000.00000		250,000.00	
1290	2599-9999009 ('LINEAR FEET' ITEM) RIGID INCLUSION	355,000.000 LF	25.00000		8,875,000.00	
1300	2599-9999010 ('LUMP SUM' ITEM) INSTRUMENTATION AND MONITORIING	LUMP	LUMP		1,050,000.00	
1310	2599-9999010 ('LUMP SUM' ITEM) TEMPORARY ACCESS OVER SANITARY SEWER PIPE	LUMP	LUMP		95,000.00	
1330	2599-9999018 ('SQUARE YARDS' ITEM) HIGH STRENGTH GEOTEXTILE	170,000.000 SY	6.05000		1,028,500.00	
1340	2601-2634100 MULCHING	64.500 ACRE	700.00000		45,150.00	
1350	2601-2636043 SEEDING AND FERTILIZING (RURAL)	64.500 ACRE	425.00000		27,412.50	
1360	2601-2640350 SPECIAL DITCH CONTROL, WOOD EXCELSIOR MAT	40.000 SQ	12.50000		500.00	
1370	2601-2642100 STABILIZING CROP - SEEDING AND FERTILIZING	64.500 ACRE	75.00000		4,837.50	

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1380	2601-2642120 STABILIZING CROP - SEEDING AND FERTILIZING (URBAN)	1.000 ACRE	750.00000		750.00	
1390	2601-2643110 WATERING FOR SOD, SPECIAL DITCH CONTROL, OR SLOPE PROTECTION	25.600 MGAL	60.00000		1,536.00	
1400	2601-2643300 MOBILIZATION FOR WATERING	3.000 EACH	350.00000		1,050.00	
1410	2601-2643412 TURF REINFORCEMENT MAT, TYPE 2	88.000 SQ	45.00000		3,960.00	
1430	2602-0000020 SILT FENCE	36,780.000 LF	2.00000		73,560.00	
1440	2602-0000030 SILT FENCE FOR DITCH CHECKS	682.000 LF	1.65000		1,125.30	
1450	2602-0000050 SILT BASINS	4.000 EACH	4,500.00000		18,000.00	
1460	2602-0000101 MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK	3,746.200 LF	0.50000		1,873.10	
1470	2602-0000312 PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA.	1,200.000 LF	3.25000		3,900.00	
1480	2602-0000320 PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 20 IN. DIA.	1,200.000 LF	3.95000		4,740.00	

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1490	2602-0000350 REMOVAL OF PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE	2,400.000 LF	0.50000		1,200.00	
1500	2602-0010010 MOBILIZATIONS, EROSION CONTROL	1.000 EACH	500.00000		500.00	
1510	2602-0010020 MOBILIZATIONS, EMERGENCY EROSION CONTROL	1.000 EACH	1,000.00000		1,000.00	
1511	2513-0001030 CONCRETE BARRIER, BA-103	252.100 LF	65.00000		16,386.50	
1512	2599-9999018 ('SQUARE YARDS' ITEM) ARTICULATED CONCRETE BLOCK EROSION CONTROL SYSTEM	1,030.000 SY	110.00000		113,300.00	
1513	2601-2643413 TURF REINFORCEMENT MAT, TYPE 3	60.200 SQ	133.00000		8,006.60	
1514	2505-4008130 REMOVAL OF CABLE GUARDRAIL	1,000.000 LF	5.00000		5,000.00	
1515	2502-8220197 SUBDRAIN OUTLET (RF-19F)	19.000 EACH	500.00000		9,500.00	
	SECTION 0002 ALTERNATE 'AA' OPTION 1: PCC SHOULDERS BID THIS SECTION IF ALTERNATE 'AA' OPTION 1 IS CHOSEN(102) ALT GROUP AA1					
1520	2122-5190008 PAVED SHOULDER, P.C. CONCRETE, 8 IN.	2,990.000 SY	63.00000		188,370.00	
	SECTION 0004 ALTERNATE 'BB' OPTION 1: PCC SHOULDERS BID THIS SECTION IF ALTERNATE 'BB' OPTION 1 IS CHOSEN(102) ALT GROUP BB1					

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1540	2122-5190007 PAVED SHOULDER, P.C. CONCRETE, 7 IN.	4,140.700 SY	48.00000		198,753.60	
	SECTION 0007 ALTERNATE 'CC' OPTION 2: GRANULAR BACKFILL BID THIS SECTION IF ALTERNATE 'CC' OPTION 2 IS CHOSEN(102) ALT GROUP CC2					
1600	2102-0425071 SPECIAL BACKFILL	63.500 CY	65.00000		4,127.50	
1610	2115-0100000 MODIFIED SUBBASE	595.800 CY	50.00000		29,790.00	
1620	2402-0425030 GRANULAR BACKFILL	19,288.000 CY	40.00000		771,520.00	
1630	2599-9999009 ('LINEAR FEET' ITEM) RIGID INCLUSION	42,500.000 LF	28.00000		1,190,000.00	
	SECTION 0008 SANITARY SEWER ITEMS IM-NHS-029-3(102)48--03-78					
1640	2435-0130184 MANHOLE, SANITARY SEWER, SW-301, 84 IN.	2.000 EACH	44,000.00000		88,000.00	
1650	2504-0110048 SANITARY SEWER GRAVITY MAIN, TRENCHED, 48 IN.	63.000 LF	600.00000		37,800.00	
1660	2504-0130048 SANITARY SEWER GRAVITY MAIN WITH CASING PIPE, TRENCHED, 48 IN.	100.000 LF	825.00000		82,500.00	
1670	2504-0140048 SANITARY SEWER GRAVITY MAIN WITH CASING PIPE, TRENCHLESS, 48 IN.	435.000 LF	1,500.00000		652,500.00	

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1680	2504-0240136 REMOVE SANITARY SEWER PIPE GREATER THAN 36 IN.	16.000 LF	93.41000		1,494.56	
1690	2504-0240237 SANITARY SEWER ABANDONMENT, FILL AND PLUG, GREATER THAN 36 IN. DIA.	818.000 LF	50.00000		40,900.00	
1700	2510-6750600 REMOVAL OF INTAKES AND UTILITY ACCESSES	2.000 EACH	1,500.00000		3,000.00	
1710	2599-9999005 ('EACH' ITEM) ABANDON SANITARY SEWER MANHOLE	1.000 EACH	18,448.11000		18,448.11	
1720	2599-9999010 ('LUMP SUM' ITEM) BYPASS PUMPING	LUMP	LUMP		70,000.00	
1730	2599-9999010 ('LUMP SUM' ITEM) DEWATERING	LUMP	LUMP		60,000.00	
SECTION 0009 RAISED MEDIAN ITEMS IM-NHS-029-3(102)48--03-78						
1740	2301-4875004 MEDIAN, P.C. CONCRETE, 4 IN.	1,037.560 SY	73.00000		75,741.88	
1750	2301-4875006 MEDIAN, P.C. CONCRETE, 6 IN.	549.670 SY	83.00000		45,622.61	
1760	2301-4875009 MEDIAN, P.C. CONCRETE, 9 IN.	170.440 SY	104.00000		17,725.76	
1770	2599-9999003 ('CUBIC YARDS' ITEM) FREELY DRAINING PLANTING SOIL	297.000 CY	45.00000		13,365.00	

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1780	2599-9999018 ('SQUARE YARDS' ITEM) GEOTEXTILE FABRIC	900.000 SY	3.00000		2,700.00	
	SECTION 0010 PAYMENT ADJUSTMENT INCENTIVE ITEMS IM-NHS-029-3(102)48--03-78					
1790	2301-7000110 PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR PCC PAVEMENT THICKNESS (BY SCHEDULE)	105,000.000 EACH	1.00000		105,000.00	
1800	2301-7000120 PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR QM-C PCC PAVEMENT COARSENESS AND WORKABILITY FACTORS	94,000.000 EACH	1.00000		94,000.00	
1810	2317-7000110 PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR PCC PAVEMENT SMOOTHNESS (BY SCHEDULE)	88,000.000 EACH	1.00000		88,000.00	
	SECTION 0011 SIGNING ITEMS IM-NHS-029-3(103)48--03-78					
1820	2401-6745358 REMOVAL OF CONCRETE FOUNDATIONS OF HIGHWAY SIGNS	29.000 EACH	1,200.00000		34,800.00	
1830	2401-6745910 REMOVAL OF SIGN	36.000 EACH	695.00000		25,020.00	
1840	2402-2720000 EXCAVATION, CLASS 20	603.000 CY	33.50000		20,200.50	

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1850	2403-0100000 STRUCTURAL CONCRETE (MISCELLANEOUS)	171.000 CY	260.00000		44,460.00	
1860	2404-7775005 REINFORCING STEEL, EPOXY COATED	20,664.000 LB	1.60000		33,062.40	
1870	2423-1060080 STEEL OVERHEAD SIGN TRUSS, 80 FT. SPAN	1.000 EACH	74,985.00000		74,985.00	
1880	2423-1060100 STEEL OVERHEAD SIGN TRUSS, 100 FT. SPAN	1.000 EACH	79,905.00000		79,905.00	
1890	2423-1060125 STEEL OVERHEAD SIGN TRUSS, 125 FT. SPAN	1.000 EACH	102,765.00000		102,765.00	
1900	2524-6765010 REMOVE AND REINSTALL SIGN AS PER PLAN	1.000 EACH	2,400.00000		2,400.00	
1910	2524-9081275 CONCRETE FOOTING FOR BREAKAWAY SIGN POST, 2'-8" DIA. X 7'-6"	32.000 EACH	1,025.00000		32,800.00	
1920	2524-9081290 CONCRETE FOOTING FOR BREAKAWAY SIGN POST, 2'-8" DIA. X 9'-0"	10.000 EACH	1,220.00000		12,200.00	
1930	2524-9089100 DELINEATOR, RIGID - TYPE I	23.000 EACH	145.00000		3,335.00	
1940	2524-9089110 DELINEATOR, RIGID - TYPE IA	34.000 EACH	145.00000		4,930.00	
1950	2524-9089200 DELINEATOR, RIGID - TYPE II	45.000 EACH	185.00000		8,325.00	

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1960	2524-9130011 GUIDANCE MARKER, CHEVRON W1-8 (SPECIAL)	8.000 EACH	440.00000		3,520.00	
1970	2524-9210000 MILEPOST MARKERS	26.000 EACH	155.00000		4,030.00	
1980	2524-9275222 WOOD POSTS FOR TYPE A OR B SIGNS, 4 IN. X 6 IN.	828.000 LF	19.00000		15,732.00	
1990	2524-9278046 STEEL BREAKAWAY SIGN POSTS, RECTANGULAR TUBE, 4" X 6"	84.000 LF	55.50000		4,662.00	
2000	2524-9281210 STEEL BREAKAWAY SIGN POSTS FOR TYPE A OR B SIGNS, W 8 X 21	499.000 LF	62.50000		31,187.50	
2010	2524-9281426 STEEL BREAKAWAY SIGN POSTS FOR TYPE A OR B SIGNS, W 12 X 26	263.000 LF	67.25000		17,686.75	
2020	2524-9290009 SIGN MOUNTING BRACKETS, SPECIAL	1.000 EACH	850.00000		850.00	
2030	2524-9325001 TYPE A SIGNS, SHEET ALUMINUM	448.000 SF	21.75000		9,744.00	
2040	2524-9325150 INSTALL TYPE A SIGN	10.000 EACH	185.00000		1,850.00	
2050	2524-9380001 TYPE B SIGNS, EXTRUDED ALUMINUM STRUCTURAL PANEL	3,162.000 SF	16.00000		50,592.00	
2060	2526-8285000 CONSTRUCTION SURVEY	LUMP	LUMP		25,000.00	

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2070	2528-8445110 TRAFFIC CONTROL	LUMP	LUMP		5,000.00	
2080	2528-8445113 FLAGGERS	50.000 EACH	345.00000		17,250.00	
2090	2528-9290050 PORTABLE DYNAMIC MESSAGE SIGN (PDMS)	50.000 CDAY	50.00000		2,500.00	
2100	2533-4980005 MOBILIZATION	LUMP	LUMP		31,150.00	
2110	2555-0000010 DELIVER AND STOCKPILE SALVAGED MATERIALS	LUMP	LUMP		4,530.00	
2120	2590-0000020 PROJECT MANAGEMENT	LUMP	LUMP		8,725.00	
2130	2601-2636043 SEEDING AND FERTILIZING (RURAL)	1.000 ACRE	425.00000		425.00	
SECTION 0012	TRAFFIC SIGNAL ITEMS IM-NHS-029-3(104)48--03-78					
2140	2525-0000100 TRAFFIC SIGNALIZATION	LUMP	LUMP		535,000.00	
2150	2525-0000120 REMOVAL OF TRAFFIC SIGNALIZATION	LUMP	LUMP		31,000.00	
2160	2528-8400256 TEMPORARY TRAFFIC SIGNALS	2.000 EACH	42,000.00000		84,000.00	
2170	2528-8445110 TRAFFIC CONTROL	LUMP	LUMP		7,500.00	

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2180	2528-8445113 FLAGGERS	100.000 EACH	345.00000		34,500.00	
2190	2528-9290050 PORTABLE DYNAMIC MESSAGE SIGN (PDMS)	100.000 CDAY	50.00000		5,000.00	
2200	2533-4980005 MOBILIZATION	LUMP	LUMP		43,620.00	
2210	2555-0000010 DELIVER AND STOCKPILE SALVAGED MATERIALS	LUMP	LUMP		2,850.00	
2220	2590-0000020 PROJECT MANAGEMENT	LUMP	LUMP		8,725.00	
	SECTION 0013 ITS ITEMS IM-NHS-029-3(104)48--03-78					
2230	2401-6750001 REMOVALS, AS PER PLAN ITS DEVICES AND INFRASTRUCTURE	LUMP	LUMP		6,300.00	
2240	2599-9999005 ('EACH' ITEM) CABINET, PEDESTAL MOUNT, FURNISH AND INSTALL, 36INCHX24INCHX17INCH	1.000 EACH	4,400.00000		4,400.00	
2250	2599-9999005 ('EACH' ITEM) CABINET, POLE MOUNT, FURNISH AND INSTALL, 36INCHX24INCHX17INCH	2.000 EACH	3,100.00000		6,200.00	
2260	2599-9999005 ('EACH' ITEM) DEVICE CABINET FOOTING	1.000 EACH	2,700.00000		2,700.00	

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2270	2599-9999005 ('EACH' ITEM) HANDHOLE, FURNISH AND INSTALL, TYPE FIBER VAULT	7.000 EACH	2,600.00000		18,200.00	
2280	2599-9999005 ('EACH' ITEM) HANDHOLE, FURNISH AND INSTALL, TYPE FOR27	12.000 EACH	1,270.00000		15,240.00	
2290	2599-9999005 ('EACH' ITEM) HANDHOLE, FURNISH AND INSTALL, TYPE I ITS	4.000 EACH	8,003.00000		32,012.00	
2300	2599-9999005 ('EACH' ITEM) POWER CONNECTION TO HIGH MAST LIGHTING CABINET	3.000 EACH	700.00000		2,100.00	
2310	2599-9999005 ('EACH' ITEM) POWER INSTALLED FOUNDATIONS	3.000 EACH	1,050.00000		3,150.00	
2320	2599-9999005 ('EACH' ITEM) STEEL POLE, FURNISH AND INSTALL, 45 FOOT	3.000 EACH	2,100.00000		6,300.00	
2330	2599-9999009 ('LINEAR FEET' ITEM) CABLE, FURNISH AND INSTALL, #2 AWG	2,040.000 LF	3.25000		6,630.00	
2340	2599-9999009 ('LINEAR FEET' ITEM) CABLE, FURNISH AND INSTALL, #8 AWG	780.000 LF	1.50000		1,170.00	
2350	2599-9999009 ('LINEAR FEET' ITEM) CABLE, FURNISH AND INSTALL, 1C #12 TRACER WIRE	5,384.000 LF	0.75000		4,038.00	

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2360	2599-9999009 ('LINEAR FEET' ITEM) CONDUIT, FURNISH AND INSTALL, HDPE, 2 INCH, BORED	715.000 LF	16.50000		11,797.50	
2370	2599-9999009 ('LINEAR FEET' ITEM) CONDUIT, FURNISH AND INSTALL, HDPE, 2 INCH, PLOWED	5,589.000 LF	8.75000		48,903.75	
	SECTION 0014 DESIGN NO. 0114; 476'-0 X VARIES PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE IM-029-3(105)48--13-78					
2380	2401-6745625 REMOVAL OF EXISTING BRIDGE	LUMP	LUMP		125,000.00	
2390	2402-2720000 EXCAVATION, CLASS 20	1,085.000 CY	35.00000		37,975.00	
2400	2403-0100010 STRUCTURAL CONCRETE (BRIDGE)	870.400 CY	700.00000		609,280.00	
2410	2403-7000210 HIGH PERFORMANCE STRUCTURAL CONCRETE	965.700 CY	800.00000		772,560.00	
2420	2404-7775000 REINFORCING STEEL	98,504.000 LB	1.00000		98,504.00	
2430	2404-7775005 REINFORCING STEEL, EPOXY COATED	269,428.000 LB	1.10000		296,370.80	
2440	2407-0550000 BEAMS, PRETENSIONED PRESTRESSED CONCRETE, BEAMS, PRETENSIONED PRESTRESSED CONCRETE , SBTE115	7.000 EACH	24,000.00000		168,000.00	

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Line No	Item Number / Item Description	Item Quantity and Unit	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Cts
2450	2407-0550000 BEAMS, PRETENSIONED PRESTRESSED CONCRETE, BEAMS, PRETENSIONED PRESTRESSED CONCRETE , SBTE145	7.000 EACH	30,000.00000		210,000.00	
2460	2407-0550000 BEAMS, PRETENSIONED PRESTRESSED CONCRETE, BEAMS, PRETENSIONED PRESTRESSED CONCRETE , SBTE60	7.000 EACH	15,000.00000		105,000.00	
2470	2407-0564350 BEAMS, PRETENSIONED PRESTRESSED CONCRETE, BTE150	7.000 EACH	30,000.00000		210,000.00	
2480	2408-7800000 STRUCTURAL STEEL	32,582.000 LB	3.50000		114,037.00	
2490	2413-1200000 STEEL EXTRUSION JOINT WITH NEOPRENE	479.000 LF	225.00000		107,775.00	
2500	2413-1200100 NEOPRENE GLAND INSTALLATION AND TESTING	479.000 LF	40.00000		19,160.00	
2510	2414-6424119 CONCRETE BARRIER RAILING, AESTHETIC	507.000 LF	265.00000		134,355.00	
2520	2499-2300001 DECK DRAINS	LUMP	LUMP		12,000.00	
2530	2501-0201473 PILES, STEEL, HP 14 X 73	8,700.000 LF	60.00000		522,000.00	
2540	2501-0201517 PILES, STEEL, HP 14 X 117	2,205.000 LF	82.00000		180,810.00	

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Line No	Item Number / Item Description	Item Quantity and Unit	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Cts
2550	2501-6335010 PREBORED HOLES	225.000 LF	50.00000		11,250.00	
2560	2501-8400172 TEMPORARY SHORING	LUMP	LUMP		125,000.00	
2570	2507-2638620 MACADAM STONE SLOPE PROTECTION	947.000 SY	20.00000		18,940.00	
2580	2507-2638660 BRIDGE WING ARMORING - MACADAM STONE	16.700 SY	70.00000		1,169.00	
2590	2526-8285000 CONSTRUCTION SURVEY	LUMP	LUMP		50,000.00	
2600	2533-4980005 MOBILIZATION	LUMP	LUMP		800,000.00	
2610	2590-0000020 PROJECT MANAGEMENT	LUMP	LUMP		50,000.00	
2620	2599-9999010 ('LUMP SUM' ITEM) CORROSION PROTECTION COATING	LUMP	LUMP		6,000.00	
SECTION 0015 ROADWAY ITEMS IM-029-3(105)48--13-78						
2630	2301-0690200 BRIDGE APPROACH, RK-20	577.900 SY	165.00000		95,353.50	
2640	2412-0000100 LONGITUDINAL GROOVING IN CONCRETE	2,554.000 SY	1.60000		4,086.40	
2650	2528-8445110 TRAFFIC CONTROL	LUMP	LUMP		23,000.00	

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Line No	Item Number / Item Description	Item Quantity and Unit	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Cts
2660	2602-0000020 SILT FENCE	225.000 LF	2.00000		450.00	
2670	2602-0000071 REMOVAL OF SILT FENCE OR SILT FENCE FOR DITCH CHECKS	225.000 LF	1.00000		225.00	
2680	2602-0000101 MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK	198.000 LF	0.50000		99.00	
2690	2602-0010010 MOBILIZATIONS, EROSION CONTROL	1.000 EACH	500.00000		500.00	
2700	2602-0010020 MOBILIZATIONS, EMERGENCY EROSION CONTROL	1.000 EACH	1,000.00000		1,000.00	
	SECTION 0016 DESIGN NO. 0214; A 1056'-0 X 38'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE - NHS-029-3(106)48--11-78					
2710	2104-2710020 EXCAVATION, CLASS 10, CHANNEL	2,160.000 CY	12.00000		25,920.00	
2720	2401-6745625 REMOVAL OF EXISTING BRIDGE	LUMP	LUMP		115,000.00	
2730	2402-2720000 EXCAVATION, CLASS 20	350.000 CY	30.00000		10,500.00	
2740	2403-0100010 STRUCTURAL CONCRETE (BRIDGE)	633.300 CY	950.00000		601,635.00	
2750	2403-7000210 HIGH PERFORMANCE STRUCTURAL CONCRETE	1,582.900 CY	1,000.00000		1,582,900.00	

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Line No	Item Number / Item Description	Item Quantity and Unit	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Cts
2760	2404-7775000 REINFORCING STEEL	633,602.000 LB	1.05000		665,282.10	
2770	2404-7775005 REINFORCING STEEL, EPOXY COATED	433,814.000 LB	1.10000		477,195.40	
2780	2407-0564275 BEAMS, PRETENSIONED PRESTRESSED CONCRETE, BTE75	5.000 EACH	18,000.00000		90,000.00	
2790	2407-0564285 BEAMS, PRETENSIONED PRESTRESSED CONCRETE, BTE85	5.000 EACH	20,000.00000		100,000.00	
2800	2407-0564290 BEAMS, PRETENSIONED PRESTRESSED CONCRETE, BTE90	5.000 EACH	21,000.00000		105,000.00	
2810	2407-0564315 BEAMS, PRETENSIONED PRESTRESSED CONCRETE, BTE115	5.000 EACH	28,000.00000		140,000.00	
2820	2407-0564320 BEAMS, PRETENSIONED PRESTRESSED CONCRETE, BTE120	5.000 EACH	30,000.00000		150,000.00	
2830	2407-0564330 BEAMS, PRETENSIONED PRESTRESSED CONCRETE, BTE130	5.000 EACH	32,000.00000		160,000.00	
2840	2407-0564335 BEAMS, PRETENSIONED PRESTRESSED CONCRETE, BTE135	5.000 EACH	32,000.00000		160,000.00	
2850	2407-0564340 BEAMS, PRETENSIONED PRESTRESSED CONCRETE, BTE140	5.000 EACH	34,000.00000		170,000.00	
2860	2407-0564350 BEAMS, PRETENSIONED PRESTRESSED CONCRETE, BTE150	5.000 EACH	34,000.00000		170,000.00	

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Line No	Item Number / Item Description	Item Quantity and Unit	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Cts
2870	2408-7800000 STRUCTURAL STEEL	54,555.000 LB	3.75000		204,581.25	
2880	2408-8500100 REINFORCED NEOPRENE	712.000 SF	60.00000		42,720.00	
2890	2414-6424038 CONCRETE BARRIER RAIL, 3'-8"	2,183.400 LF	95.00000		207,423.00	
2900	2433-0001048 CONCRETE DRILLED SHAFT, 48 IN. DIAMETER	1,040.000 LF	600.00000		624,000.00	
2910	2433-0001078 CONCRETE DRILLED SHAFT, 78 IN. DIAMETER	1,828.000 LF	1,300.00000		2,376,400.00	
2920	2433-0003000 DEMONSTRATION SHAFT	100.000 LF	1,500.00000		150,000.00	
2930	2507-2638650 BRIDGE WING ARMORING - EROSION STONE	29.400 SY	85.00000		2,499.00	
2940	2507-3250005 ENGINEERING FABRIC	3,455.000 SY	3.00000		10,365.00	
2950	2507-6800061 REVETMENT, CLASS E	3,455.000 TON	50.00000		172,750.00	
2960	2507-8029000 EROSION STONE	920.000 TON	50.00000		46,000.00	
2970	2526-8285000 CONSTRUCTION SURVEY	LUMP	LUMP		25,000.00	

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2980	2533-4980005 MOBILIZATION	LUMP	LUMP		900,000.00	
2990	2590-0000020 PROJECT MANAGEMENT	LUMP	LUMP		125,000.00	
3000	2595-0005110 RAILROAD PROTECTIVE LIABILITY INSURANCE FOR CBEC RAILWAY INC.	LUMP	LUMP		7,500.00	
3010	2599-9999009 ('LINEAR FEET' ITEM) EXPANSION JOINT (FINGER PLATE TYPE)	96.700 LF	2,600.00000		251,420.00	
3020	2599-9999010 ('LUMP SUM' ITEM) CONTRACTOR WORKING PADS	LUMP	LUMP		200,000.00	
3030	2599-9999018 ('SQUARE YARDS' ITEM) EROSION STONE SLOPE PROTECTION	1,420.000 SY	55.00000		78,100.00	
SECTION 0017	ROADWAY ITEMS NHS-029-3(106)48--11-78					
3040	2301-0690200 BRIDGE APPROACH, RK-20	547.500 SY	200.00000		109,500.00	
3050	2412-0000100 LONGITUDINAL GROOVING IN CONCRETE	4,579.100 SY	1.65000		7,555.52	
3060	2528-8445110 TRAFFIC CONTROL	LUMP	LUMP		5,000.00	
3070	2602-0000020 SILT FENCE	800.000 LF	1.30000		1,040.00	

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Line No	Item Number / Item Description	Item Quantity and Unit	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Cts
3080	2602-0000071 REMOVAL OF SILT FENCE OR SILT FENCE FOR DITCH CHECKS	400.000 LF	1.00000		400.00	
3090	2602-0000101 MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK	64.000 LF	0.50000		32.00	
3100	2602-0000212 FLOATING SILT CURTAIN (HANGING)	600.000 LF	15.00000		9,000.00	
3110	2602-0000240 MAINTENANCE OF FLOATING SILT CURTAIN	300.000 LF	8.50000		2,550.00	
3120	2602-0010010 MOBILIZATIONS, EROSION CONTROL	1.000 EACH	500.00000		500.00	
3130	2602-0010020 MOBILIZATIONS, EMERGENCY EROSION CONTROL	1.000 EACH	1,000.00000		1,000.00	
SECTION 0018 LIGHTING ITEMS IM-NHS-029-3(110)48--03-78						
3140	2404-7775000 REINFORCING STEEL	16,964.000 LB	1.15000		19,508.60	
3150	2433-0001048 CONCRETE DRILLED SHAFT, 48 IN. DIAMETER	252.000 LF	320.00000		80,640.00	
3160	2522-8929120 LIGHTING TOWER, 120 FT.	3.000 EACH	41,530.00000		124,590.00	
3170	2522-8929140 LIGHTING TOWER, 140 FT.	5.000 EACH	44,570.00000		222,850.00	

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Line No	Item Number / Item Description	Item Quantity and Unit	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Cts
3180	2522-8930230 LUMINAIRE, TOWER FLOODLIGHTING	74.000 EACH	710.00000		52,540.00	
3190	2523-0000100 LIGHTING POLES	6.000 EACH	2,300.00000		13,800.00	
3200	2523-0000200 ELECTRICAL CIRCUITS	8,970.000 LF	26.00000		233,220.00	
3210	2523-0000310 HANDHOLES AND JUNCTION BOXES	46.000 EACH	740.00000		34,040.00	
3220	2523-0000400 CONTROL CABINET	11.000 EACH	7,100.00000		78,100.00	
3230	2523-0000500 UNDERDECK LIGHTING (RM-41)	2.000 EACH	1,100.00000		2,200.00	
3240	2526-8285000 CONSTRUCTION SURVEY	LUMP	LUMP		25,000.00	
3250	2528-8445110 TRAFFIC CONTROL	LUMP	LUMP		5,000.00	
3260	2528-8445113 FLAGGERS	20.000 EACH	345.00000		6,900.00	
3270	2533-4980005 MOBILIZATION	LUMP	LUMP		300,000.00	
3280	2590-0000020 PROJECT MANAGEMENT	LUMP	LUMP		100,000.00	

SECTION 0019 DESIGN NO. 1112; 10' X 10' REINFORCED CONCRETE BOX CULVERT
IM-NHS-29-3(122)48--03-78

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Line No	Item Number / Item Description	Item Quantity and Unit	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Cts
3290	2104-2710020 EXCAVATION, CLASS 10, CHANNEL	240.000 CY	14.00000		3,360.00	
3300	2401-6750001 REMOVALS, AS PER PLAN	LUMP	LUMP		8,500.00	
3310	2402-0425030 GRANULAR BACKFILL	301.000 CY	40.06000		12,058.06	
3320	2402-2720000 EXCAVATION, CLASS 20	371.000 CY	30.00000		11,130.00	
3330	2403-0100020 STRUCTURAL CONCRETE (RCB CULVERT)	163.400 CY	1,000.00000		163,400.00	
3340	2404-7775000 REINFORCING STEEL	32,493.000 LB	1.05000		34,117.65	
3350	2507-3250005 ENGINEERING FABRIC	470.000 SY	4.00000		1,880.00	
3360	2507-6800061 REVETMENT, CLASS E	380.000 TON	55.30000		21,014.00	
3370	2533-4980005 MOBILIZATION	LUMP	LUMP		28,000.00	
SECTION 0020 ROADWAY ITEMS IM-NHS-29-3(122)48--03-78						
3380	2102-2710070 EXCAVATION, CLASS 10, ROADWAY AND BORROW	675.000 CY	9.14000		6,169.50	

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3390	2105-8425015 TOPSOIL, STRIP, SALVAGE AND SPREAD	200.000 CY	18.97000		3,794.00	
3400	2528-8445110 TRAFFIC CONTROL	LUMP	LUMP		5,000.00	
3410	2602-0000020 SILT FENCE	350.000 LF	1.30000		455.00	
3420	2602-0000030 SILT FENCE FOR DITCH CHECKS	90.000 LF	1.65000		148.50	
3430	2602-0000101 MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK	34.000 LF	0.50000		17.00	
SECTION 0021	DESIGN NO. 0414; A 122'-5 X 26'-0 SIMPLE SPAN WELDED PLATE GIRDER BRIDGE IM-NHS-029-3(146)48--03-78					
3440	2401-6745625 REMOVAL OF EXISTING BRIDGE	LUMP	LUMP		105,000.00	
3450	2403-7000210 HIGH PERFORMANCE STRUCTURAL CONCRETE	173.700 CY	1,100.00000		191,070.00	
3460	2404-7775000 REINFORCING STEEL	8,520.000 LB	1.30000		11,076.00	
3470	2404-7775005 REINFORCING STEEL, EPOXY COATED	44,553.000 LB	1.15000		51,235.95	
3480	2408-7800000 STRUCTURAL STEEL	151,936.000 LB	2.50000		379,840.00	

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Line No	Item Number / Item Description	Item Quantity and Unit	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Cts
3490	2408-8500100 REINFORCED NEOPRENE	298.000 SF	65.00000		19,370.00	
3500	2413-1200000 STEEL EXTRUSION JOINT WITH NEOPRENE	35.000 LF	300.00000		10,500.00	
3510	2413-1200100 NEOPRENE GLAND INSTALLATION AND TESTING	35.000 LF	85.00000		2,975.00	
3520	2414-6424038 CONCRETE BARRIER RAIL, 3'-8"	277.100 LF	113.00000		31,312.30	
3530	2433-0001060 CONCRETE DRILLED SHAFT, 60 IN. DIAMETER	375.000 LF	800.00000		300,000.00	
3540	2433-0003000 DEMONSTRATION SHAFT	125.000 LF	700.00000		87,500.00	
3550	2434-0000100 DISC BEARING ASSEMBLIES	8.000 EACH	6,200.00000		49,600.00	
3560	2499-2300001 DECK DRAINS	LUMP	LUMP		14,500.00	
3570	2526-8285000 CONSTRUCTION SURVEY	LUMP	LUMP		25,000.00	
3580	2533-4980005 MOBILIZATION	LUMP	LUMP		140,000.00	
3590	2590-0000020 PROJECT MANAGEMENT	LUMP	LUMP		65,000.00	

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Line No	Item Number / Item Description	Item Quantity and Unit	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Cts
3600	2599-9999009 ('LINEAR FEET' ITEM) EXPANSION JOINT (FINGER PLATE TYPE)	38.700 LF	2,800.00000		108,360.00	
	SECTION 0022 DESIGN NO. 0414; ALTERNATE 'DD' OPTION 1: REINFORCING STEEL BID THIS SECTION IF ALTERNATE 'DD' OPTION 1 IS CHOSEN(146) ALT GROUP DD1					
3610	2404-7775000 REINFORCING STEEL	38,770.000 LB	1.10000		42,647.00	
	SECTION 0024 ROADWAY ITEMS IM-NHS-029-3(146)48--03-78					
3630	2301-0685550 BRIDGE APPROACH PAVEMENT, AS PER PLAN	170.900 SY	175.00000		29,907.50	
3640	2412-0000100 LONGITUDINAL GROOVING IN CONCRETE	462.700 SY	1.65000		763.46	
3650	2513-0474990 CONCRETE BARRIER, REINFORCED, AS PER PLAN	42.600 LF	0.00000		0.00	
3660	2528-8445110 TRAFFIC CONTROL	LUMP	LUMP		5,000.00	
3670	2528-8445113 FLAGGERS	4.000 EACH	345.00000		1,380.00	
	SECTION 0025 DESIGN NO. 215; A 243'-0 X 39'-0 CONTINUOUS ROLLED STEEL BEAM BRIDGE IM-NHS-080-1(416)3--03-78					
3680	2401-6750001 REMOVALS, AS PER PLAN	LUMP	LUMP		25,000.00	
3690	2402-2720000 EXCAVATION, CLASS 20	54.000 CY	30.00000		1,620.00	

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Line No	Item Number / Item Description	Item Quantity and Unit	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Cts
3700	2403-0100010 STRUCTURAL CONCRETE (BRIDGE)	134.600 CY	1,800.00000		242,280.00	
3710	2404-7775000 REINFORCING STEEL	45,983.000 LB	1.10000		50,581.30	
3720	2404-7775005 REINFORCING STEEL, EPOXY COATED	41,758.000 LB	1.15000		48,021.70	
3730	2408-7800000 STRUCTURAL STEEL	46,198.000 LB	3.75000		173,242.50	
3740	2414-6424038 CONCRETE BARRIER RAIL, 3'-8"	262.200 LF	80.00000		20,976.00	
3750	2433-0001048 CONCRETE DRILLED SHAFT, 48 IN. DIAMETER	557.500 LF	745.00000		415,337.50	
3760	2501-8400172 TEMPORARY SHORING	LUMP	LUMP		115,000.00	
3770	2507-2638660 BRIDGE WING ARMORING - MACADAM STONE	11.400 SY	95.00000		1,083.00	
3780	2513-0001025 CONCRETE BARRIER, BA-102 AND FOOTING	18.700 LF	260.00000		4,862.00	
3790	2526-8285000 CONSTRUCTION SURVEY	LUMP	LUMP		25,000.00	
3800	2533-4980005 MOBILIZATION	LUMP	LUMP		100,000.00	

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3810	2590-0000020 PROJECT MANAGEMENT	LUMP	LUMP		55,000.00	
	SECTION 0026 ROADWAY ITEMS IM-NHS-080-1(416)3--03-78					
3820	2101-0850001 CLEARING AND GRUBBING	0.100 ACRE	7,500.00000		750.00	
3830	2102-0425070 SPECIAL BACKFILL	480.300 TON	30.00000		14,409.00	
3840	2102-2625000 EMBANKMENT-IN-PLACE	41.000 CY	30.00000		1,230.00	
3850	2102-2713090 EXCAVATION, CLASS 13, WASTE	639.700 CY	15.00000		9,595.50	
3860	2123-7450000 SHOULDER CONSTRUCTION, EARTH	3.900 STA	250.00000		975.00	
3870	2301-0690200 BRIDGE APPROACH, RK-20	324.400 SY	175.00000		56,770.00	
3880	2304-0100000 DETOUR PAVEMENT	755.300 SY	68.00000		51,360.40	
3890	2505-4008120 REMOVAL OF STEEL BEAM GUARDRAIL	62.500 LF	4.00000		250.00	
3900	2505-4008300 STEEL BEAM GUARDRAIL	50.000 LF	25.00000		1,250.00	

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3910	2505-4008400 STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION	1.000 EACH	2,500.00000		2,500.00	
3920	2505-4021010 STEEL BEAM GUARDRAIL END ANCHOR, BOLTED	1.000 EACH	300.00000		300.00	
3930	2505-4021700 STEEL BEAM GUARDRAIL END TERMINAL	1.000 EACH	2,800.00000		2,800.00	
3940	2510-6745850 REMOVAL OF PAVEMENT	787.900 SY	8.00000		6,303.20	
3950	2527-9263109 PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	86.580 STA	53.00000		4,588.74	
3960	2527-9263131 WET RETROREFLECTIVE REMOVABLE TAPE MARKINGS	9.000 STA	120.00000		1,080.00	
3970	2527-9263180 PAVEMENT MARKINGS REMOVED	86.580 STA	91.00000		7,878.78	
3980	2528-8400048 TEMPORARY BARRIER RAIL, CONCRETE	1,050.000 LF	12.00000		12,600.00	
3990	2528-8445110 TRAFFIC CONTROL	LUMP	LUMP		5,000.00	
4000	2551-0000110 TEMP CRASH CUSHION	1.000 EACH	1,600.00000		1,600.00	
4010	2602-0000020 SILT FENCE	100.000 LF	2.00000		200.00	

Vendor No.: AM193 Bid Order No.: 306
Contract ID No.: 78-0293-102 Letting Date: February 17, 2015
Primary Work Type: GRADING 10:00 A.M.
Primary County: POTTAWATTAMIE

Line No	Item Number / Item Description	Item Quantity and Unit	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Cts
4020	2602-0000071 REMOVAL OF SILT FENCE OR SILT FENCE FOR DITCH CHECKS	100.000 LF	1.00000		100.00	
4030	2602-0000101 MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK	50.000 LF	0.50000		25.00	
	SECTION 0027 ALTERNATE 'EE' OPTION 1: PCC PAVED SHOULDERS BID THIS SECTION IF ALTERNATE 'EE' OPTION 1 IS CHOSEN(416) ALT GROUP EE1					
4040	2102-0425070 SPECIAL BACKFILL	147.900 TON	40.00000		5,916.00	
4050	2122-5190009 PAVED SHOULDER, P.C. CONCRETE, 9 IN.	203.200 SY	62.00000		12,598.40	
	SECTION 0029 INCENTIVE/DISINCENTIVE ITEM FOR CONTRACT					
4090	2528-5160100 CRITICAL CLOSURE ACTIVITY INCENTIVE PAYMENT (OR DISINCENTIVE ASSESSMENT) SITE 6	1.000 CDAY	15,000.00000		15,000.00	
	TOTAL BID				78,491,910.29	

Addendum

Iowa Department of Transportation
Office of Contracts

Date of Letting: February 17, 2015
Date of Addendum: January 26, 2015

B.O.	Proposal ID	Proposal Work Type	County	Project Number	Addendum
306	78-0293-102	GRADING	POTTAWATTAMIE	IM-NHS-029-3(102)48--03-78 IM-NHS-029-3(103)48--03-78 IM-NHS-029-3(104)48--03-78 IM-029-3(105)48--13-78 NHS-029-3(106)48--11-78 IM-NHS-029-3(110)48--03-78 IM-NHS-029-3(122)48--03-78 IM-NHS-029-3(146)48--03-78 IM-NHS-080-1(416)3--03-78	17FEB306.A01

Make the following changes to the PROPOSAL SCHEDULE OF PRICES:

Delete Proposal Line No. 1320 2599-9999018 ('SQUARE YARDS' ITEM) ARTICULATED CONCRETE BLOCK EROSION CONTROL SYSTEM; 1,030.000 SY

Delete Proposal Line No. 1420 2601-2643413 TURF REINFORCEMENT MAT, TYPE 3; 60.200 SQ

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

Replace plan sheets C.5 & C.6 for IM-NHS-029-3(102)48--03-78 with the attached sheets:

Renumbered reference notes.

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
95	2511-0310100	SPECIAL COMPACTION OF SUBGRADE FOR RECREATIONAL TRAIL The Standard Specifications for preparation of subgrade for recreation trail are modified for this project. Replace 1st paragraph of Article 2511.03 B.2. Preparation of Subgrade, Recreation Trails as follows: When the recreational trail is to be constructed on natural subgrade, special compaction of subgrade for the recreational trail will be required. Compaction shall be according to Article 2107.05 (Type A Compaction). Replacement due to shrinkage loss shall be considered incidental.
96	2511-7528101	DETECTABLE WARNINGS See Tab. 113-1 for details and locations.
97	2512-1725206	CURB AND GUTTER, P.C. CONCRETE, 2.0 FT.
98	2512-1725406	CURB AND GUTTER, P.C. CONCRETE, 4.0 FT. See B sheets.
99	2512-1750006	CURB AND GUTTER, P.C. CONCRETE, AS PER PLAN
100	2513-0001040	CONCRETE BARRIER, BA-104 MODIFIED See U sheets for Modified BA-104.
101	2513-0001050	CONCRETE BARRIER, BA-105 See Tab 108-18B for locations and details.
102	2513-0001070	CONCRETE BARRIER RAIL, BA-107 See Tab 108-18B for locations and details.
103	2513-0474990	CONCRETE BARRIER, REINFORCED, AS PER PLAN See Tab 108-18B and U Sheets for locations and details. Includes 5176 LF of 2" diameter conduit, 8 (LI-104) juction boxes and 600 lb. tensile strength polypropylene pull rope as outlines in the plans. Rigid Steel conduit, pull ropes, and fittings including labor and any additional work for installation are considered incidental to the cost of the barrier.
104	2518-6910000	SAFETY CLOSURE See Tab. 108-13A for locations and details.
105	2519-1001000	FENCE, CHAIN LINK, VINYL COATED See Tab 108-7 Fence will be 72" in height. Vinyl coated chain link fence shall be either zinc (ASTM A392) or aluminum (ASTM A491) coated fabric, 2in. mesh, 1 ¼ in. wires, with knuckled selvages top and bottom. Fence fabric is to be PVC coated black per ASTM F668 Class 2B, with color matching Federal Standard Color Number 27038. All ferrous metal framework and fittings are to be galvanized and coated with PVC to match the fence fabric. All costs associated with PVC coating are included in the price bid for "Fence, Chain Link, Vinyl Coated".
106	2519-4200190	REMOVAL OF FENCE, CHAIN LINK
107	2526-8285000	CONSTRUCTION SURVEY
108	2527-9263109	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED See Tab 108-22 and J sheets for locations and details.
109	2527-9263131	WET REFLECTIVE REMOVABLE TAPE MARKINGS
110	2527-9263137	PAINTED SYMBOLS AND LEGENDS, WATERBORNE OR SOLVENT-BASED See Tab 108-29 for locations and details.
111	2527-9263189	PAVEMENT MARKINGS REMOVED See Tab 108-22 for locations and details. High pressure water blasting required for all removals on pavement that is to remain in place after construction.
112	2527-9263190	SYMBOLS AND LEGENDS REMOVED See Tab 108-29 for locations and details.
113	2528-3800000	MODULAR GLARE SCREEN SYSTEM
114	2528-8400048	TEMPORARY BARRIER RAIL, CONCRETE See Tab. 108-33 and J sheets for locations and details. Upon completion of this project all existing and provided TBR shall become property of the contractor.
115	2528-8400055	TEMPORARY TO PERMANENT BARRIER CONNECTION See Sheet U.49 for details. To be used to connect to existing barrier on I-29 SB bridge over Mosquito Creek at Approx. Station 220+18.
116	2528-8400157	TEMPORARY FLOODLIGHTING LUMINAIRE See Tab 108-27 for locations and details.
117	2528-8445110	TRAFFIC CONTROL Refer to Traffic Control Plan on "J" sheets. Any damage to the bike path during construction shall be repaired by the contractor. Cost of repairing any damage shall be included in the price bid for "Traffic Control." If project incomplete by winter shutdown the contractor is responsible for all traffic control during winter shutdown including surveillance and routine sign maintenance. Traffic control devices damaged during winter shutdown that need to be replaced will be paid for according to Article 1109.03.B. At the conclusion of this project all traffic control devices and signing shown in Stage 1C will remain in place and become property of the IDOT.
118	2533-4980005	MOBILIZATION
119	2548-0000200	MILLED SHOULDER RUMBLE STRIPS, PCC SURFACE
120	2551-0000110	TEMP CRASH CUSHION
121	2551-0000130	TEMP CRASH CUSHION, SEVERE USE (SU) See Tab 108-30 for location and details. Bid item 2551-0000110 is for a BA-500.
122	2551-0000210	PERMANENT CRASH CUSHION
123	2551-0000300	PERMANENT CRASH CUSHION SPARE PARTS KIT
124	2590-0000020	PROJECT MANAGEMENT See Special Provisions.
125	2599-9999003	('CUBIC YARDS' ITEM) TOPSOIL, STRIP, AND WASTE Includes 1788.4 CY stockpiled at Sta. 88619+00 (along Ramp C)from previous project. Wasted topsoil can be used for Earth Shoulder Construction material on this project. The number of cubic yards of topsoil moved will be computed on the basis of a uniform 12 inch cut over the area involved. Sufficient Field measurement will be taken to assure reasonable conformity with the required depth of cut. Payment will be the contract unit price per cubic yard. Payment is full compenstation for preparing, stripping, and wasting topsoil according to the contract documents.
126	2599-9999005	('EACH' ITEM) CONCRETE BARRIER-MOUNTED SIGN SUPPORT, STEEL See Sheets U.73-75 for details and location. Also see sheet U.73 for notes pertaining to this item.
127	2599-9999005	('EACH' ITEM) VERIFICATION TEST FOR RIGID INCLUSIONS See Special Provision and Q Sheets for Information.
128	2599-9999009	('LINEAR FEET' ITEM) RIGID INCLUSION See Special Provision, CS, and Q sheets for information.
129	2599-9999010	('LUMP SUM' ITEM) INSTRUMENTATION AND MONITORING See Special Provision and Q sheets.
130	2599-9999010	('LUMP SUM' ITEM) TEMPORARY ACCESS OVER SANITARY SEWER PIPE Refer to Special Provision for specifications.
131	2599-9999018	('SQUARE YARDS' ITEM) ARTICULATED CONCRETE BLOCK EROSION CONTROL SYSTEM See Sheet U.76 for location and details.
132	2599-9999018	('SQUARE YARDS' ITEM) HIGH STRENGTH GEOTEXTILE See Special Provision and Q sheets.
133	2601-2634100	MULCHING Mulching per Article 2601.03, E, 2. Anchor mulch into the soil using mulch anchoring equipment with a minimum of two passes. Included for areas requiring reshaping and seedbed preparation. Mulch shall be Certified Noxious Weed Seed Free Mulch as certified by the Iowa Crop Improvement Association or adjacent states Crop Improvement Associations. Mulch Rate: 1 1/2 tons of dry cereal straw or native grass straw per acre.
134	2601-2636043	SEEDING AND FERTILIZING (RURAL) All areas shall be seeded and fertilizer per Article 2601.03, C, 3.

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
		All seed and fertilizer for shall be applied with ground driven equipment.
-	-	-
135	2601-2640350	SPECIAL DITCH CONTROL, WOOD EXCELSIOR MAT Refer to Tab. 100-22 for locations. Refer to Standard Road Plan EC-101. ---------- Prepare seedbed according to Article 2601.03, B 4 and install according to Article 2601.03, H, 2 and seed according to Table 2601.03-8.
-	-	-
136	2601-2642100	STABILIZING CROP - SEEDING AND FERTILIZING Included for disturbed areas as directed by the Engineer. All rural disturbed areas shall be seeded and fertilizer per Article 2601.03, C, 1.
-	-	-
137	2601-2642120	STABILIZING CROP - SEEDING AND FERTILIZING (URBAN) Included for disturbed areas as directed by the Engineer. All urban disturbed areas shall be seeded and fertilizer per Article 2601.03, C, 2.
-	-	-
138	2601-2643110	WATERING FOR SOD, SPECIAL DITCH CONTROL, OR SLOPE PROTECTION Estimate based on four waterings of the Special Ditch Control and TRM at a rate of 50 gallons per square. The contractor shall water the required areas no later than the day following placement of the TRM. If the Contractor fails to water by the second day following placement, a price adjustment will be assessed at a rate of $200.00 per calendar day until the watering has been completed. Additional waterings will be required at intervals of 5 to 8 calendar days. Perform all waterings unless notified by the Engineer in writing at least 1 calendar day prior to the day the watering is to occur. If the Contractor fails to complete the watering before the 8th calendar day has elapsed a price adjustment will be assessed at a rate of $200.00 per calendar day, beginning on the 9th day, until the watering is completed.
-	-	-
139	2601-2643300	MOBILIZATION FOR WATERING - -
-	-	-
140	2601-2643412	TURF REINFORCEMENT MAT, TYPE 2 Refer to Tab. 100-22 for locations. Refer to Standard Road Plan EC-101. Install according to article 2601.03, H, 3 The seed and fertilizer rate for the TRM application shall be as described in Table 2601.03-8.
-	-	-
141	2601-2643413	TURF REINFORCEMENT MAT, TYPE 3 See Sheet U.76 for locations and details.
-	-	-
142	2602-0000020	SILT FENCE Item includes 25% more silt fence than the tab quantity for field adjustments and replacements. See tab 100-17 for locations and details.
-	-	-
143	2602-0000030	SILT FENCE FOR DITCH CHECKS This item includes 50% more silt fence for ditch checks than the tab quantity for field adjustments and replacements. See tab 100-18 for locations and details.
-	-	-
144	2602-0000050	SILT BASINS Refer to Tab. 100-14. The tabulation includes estimated locations for placement of "Silt Basins" to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 100% additional quantity for field adjustment and maintenance.
-	-	-
145	2602-0000101	MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK This item is included for clean-out and repair of the silt fence and silt fence for ditch checks during the grading project.
-	-	-
146	2602-0000312	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA.
147	2602-0000320	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 20 IN. DIA. Item is included for temporary perimeter sediment control, inlet protection, and water velocity reduction on slopes or ditches at locations to be determined during construction. Verify specific locations with the Engineer prior to beginning placement. Perimeter and Slope Sediment Control Devices will be required to be constructed out of wood excelsior.
-	-	-
148	2602-0000350	REMOVAL OF PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE Included for removal of perimeter and sediment control devices. All material shall become the property of the contractor and removed from the project within 24 hours.
-	-	-
149	2602-0010010	MOBILIZATIONS, EROSION CONTROL - -
-	-	-
150	2602-0010020	MOBILIZATIONS, EMERGENCY EROSION CONTROL

100-4A
10-29-02

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
-	-	- -
-	-	-
151	2122-5190088	PAVED SHOULDER, P.C. CONCRETE, 8 IN. See tab 112-9 for location and details. For permanent shoulder on US275.
-	-	-
152	2122-5500090	PAVED SHOULDER, HOT MIX ASPHALT MIXTURE, 9 IN. See Tab 112-9 for location and details. For US275 permanent shoulder.
-	-	-
153	2122-5190087	PAVED SHOULDER, P.C. CONCRETE, 7 IN. See Tab 112-9 for locations.
-	-	-
154	2122-5500080	PAVED SHOULDER, HOT MIX ASPHALT MIXTURE, 8 IN. See Tab 112-9 for locations.
-	-	-
155	2115-0100000	MODIFIED SUBBASE Optional use of Lightweight Foam Concrete Behind MSE walls. See B.7 to typical and Q sheets for details of placement. Option for Granular Backfill for MSE wall along Ramp D. See sheet B.7 and Q sheets for further details. Material for under pavement and shoulders in the area of the MSE walls along Ramp D.
-	-	-
156	2599-9999003	('CUBIC YARDS' ITEM) CLASS A LIGHTWEIGHT FOAM CONCRETE FILL
157	2599-9999003	('CUBIC YARDS' ITEM) CLASS D LIGHTWEIGHT FOAM CONCRETE FILL Optional use of Lightweight Foam Concrete Behind MSE walls. See B.7 to typical and Q sheets for details of placement.
-	-	-
158	2599-9999009	('LINEAR FEET' ITEM) RIGID INCLUSION Optional use of Lightweight Foam Concrete Behind MSE walls. See B.7 to typical and Q sheets for details of placement.
-	-	-
159	2102-0425071	SPECIAL BACKFILL Option for Granular Backfill for MSE wall along Ramp D. See sheet B.7 and Q sheets for further details.
-	-	-
160	2115-0100000	MODIFIED SUBBASE Optional use of Lightweight Foam Concrete Behind MSE walls. See B.7 to typical and Q sheets for details of placement. Option for Granular Backfill for MSE wall along Ramp D. See sheet B.7 and Q sheets for further details. Material for under pavement and shoulders in the area of the MSE walls along Ramp D.
-	-	-
161	2402-0425030	GRANULAR BACKFILL Option for Granular Backfill for MSE wall along Ramp D. See sheet B.7 and Q sheets for further details.
-	-	-
162	2599-9999009	('LINEAR FEET' ITEM) RIGID INCLUSION Optional use of Lightweight Foam Concrete Behind MSE walls. See B.7 to typical and Q sheets for details of placement. Option for Granular Backfill for MSE wall along Ramp D. See sheet B.7 and Q sheets for further details.
-	-	-

FILE NO.	ENGLISH	DESIGN TEAM SKOGERBOE\RYAN\THEDE	POTTAWATTAMIE COUNTY	PROJECT NUMBER IM-NHS-029-3(102)48--03-78	SHEET NUMBER C.6

A d d e n d u m

Iowa Department of Transportation
Office of Contracts

Date of Letting: February 17, 2015
Date of Addendum: February 3, 2015

B.O.	Proposal ID	Proposal Work Type	County	Project Number	Addendum
306	78-0293-102	GRADING	POTTAWATTAMIE	IM-NHS-029-3(102)48--03-78 IM-NHS-029-3(103)48--03-78 IM-NHS-029-3(104)48--03-78 IM-029-3(105)48--13-78 NHS-029-3(106)48--11-78 IM-NHS-029-3(110)48--03-78 IM-NHS-029-3(122)48--03-78 IM-NHS-029-3(146)48--03-78 IM-NHS-080-1(416)3--03-78	17FEB306.A02

Make the following changes to the PROPOSAL SCHEDULE OF PRICES:

Change Proposal Line No. 0030 2102-2625000 EMBANKMENT-IN-PLACE:
From: 1,8740.000 CY
To: 2,826.000 CY

Change Proposal Line No. 0400 2416-1180024 CULVERT, CONCRETE ROADWAY PIPE, 24 IN. DIA. :
From: 865.000 LF
To: 763.000 LF

Change Proposal Line No. 0450 2416-1262024 CULVERT, CONCRETE PIPE, 2000D, TRENCHLESS, 24 IN. DIA.:
From: 67.000 LF
To: 169.000 LF

Change Proposal Line No. 0730 2503-0124218 STORM SEWER GRAVITY MAIN, TRENCHLESS, REINFORCED CONCRETE PIPE (RCP), 2000D (CLASS III), 18 IN.:
From: 123.000 LF
To: 143.000 LF

Change Proposal Line No. 0910 2510-6750600 REMOVAL OF INTAKES AND UTILITY ACCESSES:
From: 3.000 EACH
To: 4.000 EACH

Change Proposal Line No. 0980 2512-1725406 CURB AND GUTTER, P.C. CONCRETE, 4.0 FT:
From: 5,627.000 LF
To: 4,668.800 LF

Change Proposal Line No. 1160 2528-8400157 TEMPORARY FLOODLIGHTING LUMINAIRE :
From: 19.000 EACH
To: 21.000 EACH

Delete Proposal Line No. 1000 2513-0001040 CONCRETE BARRIER, BA-104 MODIFIED; 252.100 LF

Add Proposal Line No. 1511: 2513-0001030 CONCRETE BARRIER, BA-103; 252.100 LF
Estimate Reference Note: See Tab 108-18B for locations and details

Add Proposal Line No. 1512: 2599-9999018 ('SQUARE YARDS' ITEM) ARTICULATED CONCRETE BLOCK EROSION CONTROL SYSTEM; 1,030.000 SY
Estimate Reference Note: See Sheet U.76 for location and details.

Add Proposal Line No. 1513: 2601-2643413 TURF REINFORCEMENT MAT, TYPE 3 ; 60.200 SQ
Estimate Reference Note: See Sheet U. 76 for location and details

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

Project IM-NHS-29-3(102)48--03-78

Replace Sheet B.14 with the attached B.14
Add typicals for piggy back levee extensions on the West and East side of Mosquito Creek under IA 92 to the south.

Sheet C.3 2102-2710070 EXCAVATION, CLASS 10, ROADWAY AND BORROW
Change Estimate Reference note: "Includes 576,513 CY of borrow." To "Includes 576,352 CY of Borrow."

Sheet C.4 2503-0200136 REMOVE STORM SEWER PIPE GREATER THAN 36 IN.
Add Estimate Reference Note: For Removal of DNR Storm Sewer Pipe in area of replacement as shown on Sheet M.15.

Sheet C.5 2512-1725406 CURB AND GUTTER, P.C. CONCRETE, 4.0 FT:
Add to Estimate Reference note: "and Tab 112-4."

Sheet C.5 Delete bid item and Estimate reference notes for: 2513-0001040 CONCRETE BARRIER, BA-104 MODIFIED

Sheet C.7
Add Standard Road Plan BA-103 to TAB 105-4.

Replace Sheet C.14 with the attached C.14
Tab 108-18B shows BA-103 instead of BA-104 Mod with no Reinforced shoulders and Concrete Barrier as per plan instead of BA-106.

Replace Sheet C.17 with the attached C.17
Updated TAB 108-27

Replace Sheet C.23 with the attached C.23
Tab 112-4 to show correct quantities for 80123+52.00 and add a row for 80132+07.89

Replace Sheet E. 8 with the attached E.8
To show addition of Piggy Back Levee Extensions.

Replace J.2 with the attached J.2
Tab 108-26A
Add Second paragraph: "Removal of the existing I-29 embankment of the Temporary North Ring Levee must be coordinated with the IM-NHS—29-3(97)48—03-78 Contractor so that the line of protection provided by the Temporary North Ring Levee is maintained at all times. Provide a minimum of 10 weeks notice to the Resident Construction Engineer prior to removal of the embankment. "

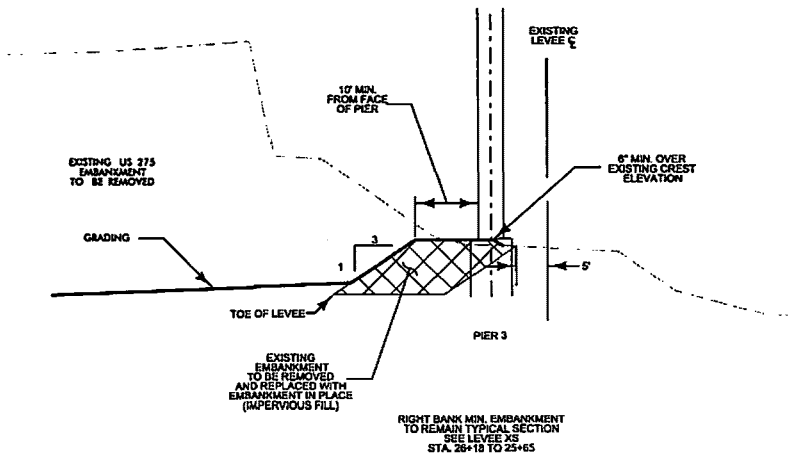
Add "and Pier 6" to notes regarding Piggy Back Levees.
At end of Notes, Stage 5, Add " and install scour mitigation per Sheet U.76."

Replace Sheets T.6 and T.7with the attached T.6 & T.7
New Earthwork numbers for West Levee Under IA 92 RMV Spoil Bank and West Lev and East Levee for extensions of Piggy Back Levees.

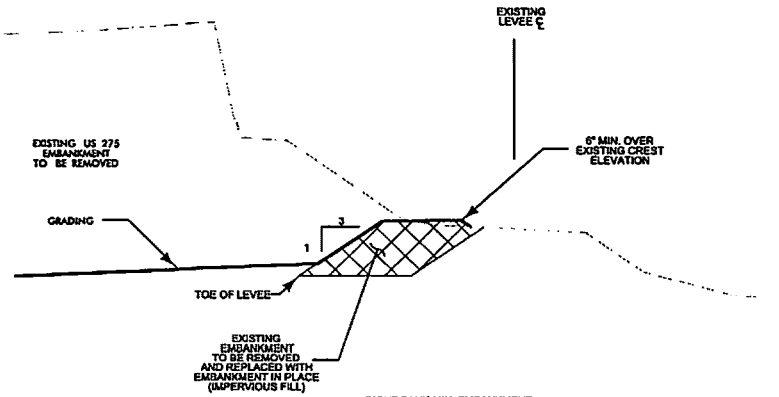
Replace X.29 to X.32 with new X.29-X.32a cross sections
Reflect the new Piggy Back Levee Extensions.

Replace Sheet U.57 with attached U.57
Removing Standard Road Plan Block information.

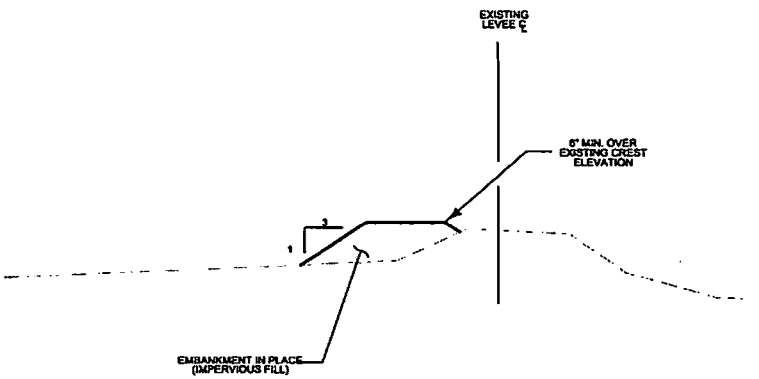
Add New Sheet U.76 for Wabash Trace Nature Trail Foreslope Armoring



RIGHT BANK MIN. EMBANKMENT
TO REMAIN TYPICAL SECTION
SEE LEVEE XS
STA. 28+18 TO 23+65



RIGHT BANK MIN. EMBANKMENT
TO REMAIN TYPICAL SECTION
SEE LEVEE XS
STA. 28+90 to 28+10



LEFT BANK PIGGY BACK LEVEE
SEE LEVEE XS
STA. 401+09 to 402+50

Mosquito Creek and Iowa 92
Piggy Back
Levee Details

FILE NO.	ENGLISH	DESIGN TEAM Skogerboe\Ryan\Thede	POTTAWATTAMIE COUNTY	PROJECT NUMBER IM-NHS-029-3(102)48--03-78	SHEET NUMBER B.14	X

9:31:29 AM 1/12/2015 aryan pw:\\projectwise.dot.int.ia:PWMain\Documents\Projects\7802901004\Design_LETTING_FOLDERS\102_SECTION_3\78029102801.sht

108-18B
10-16-12

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

No.	Location: Direction of Traffic (1)	Location: Station to Station		Location: Side	Side Barrier: Offset (L2) FT	Side Barrier: Barrier Type (BA-102, BA-103, or BA-104)	Side Barrier: Length of Barrier* (L) LF	Side Barrier: BA-105 Transition Section* No.	Side Barrier: BA-107 End Section* No.	Side Barrier: Reinforced Paved Shoulder (Required?) (2) Yes/No	Remarks	Expansion Joints: Station	Expansion Joints: Side	Expansion Joints: Remarks
		US 275												
1	EB	80137+35.76	80137+96.75	Med		BA-103	61.0			No	* Note 1			
	WB	80137+41.37	80138+07.90	Med		BA-103	66.5			No				
2	EB	80148+88.45	80149+53.89	Med		BA-103	65.1			No	* Note 1			
	WB	80148+99.57	80149+59.07	Med		BA-103	59.5			No				
		ML 29												
3	SB	6637+00.00	6637+17.80	RT			0.0	1	1	Yes				
4	SB	6637+17.00	6643+36.01	RT		Note 3	619.2			Yes				
5	SB	6654+04.14	6660+00.00	RT		Note 3	595.9			Yes	* Note 2			
		ML 29												
6	NB	6651+60.72	6661+46.00	LT		Note 3	986.4			Yes	* Note 2			
7	NB	6661+46.00	6661+62.75	LT		-	-	1	1	Yes				
		Ramp D												
8	SB	84539+82.91	84539+99.98	RT		-	-	1	1	Yes				
9	SB	84539+99.98	84544+26.51	RT		Note 3	424.6			Yes				
10	SB	84537+33.00	84537+50.00	LT		-	-	1	1	Yes				
11	SB	84537+50.80	84544+04.13	LT		Note 3	667.4			Yes	* Note 2			
		Ramp A												
12	NB	81534+75.00	81540+30.10	LT		Note 3	554.6			Yes	* Note 2			

Note 1) Includes 1 Crash Cushion Block See Sheet U.50.
Note 2) See U Sheets for location of conduit and junction boxes.
Note 3) Concrete Barrier as per plan, See U.57.

110-17
04-15-14

CLEARING AND GRUBBING

Location: Station to Station or Milepost to Milepost or Description	Location: Direction of Travel	Work and Material Type	Trees, Stumps, and Logs and Down Timber Material Diameters: 3"-6"	>6"-9"	>9"-12"	>12"-15"	>15"-18"	>18"-24"	>24"-30"	>30"-36"	>36"-42"	>42"-48"	>48"-60"	>60"-72"	>72"	All Other Materials: Length FT	Width FT	Estimated Quantities: Units	Area Acres	Herbicide Application Each	Remarks
EXML29NB																					
1255+00 to 1261+50																			2.1		
1263+00 to 1265+00																			0.7		
Ramp A																			1.0		
Ramp B																			0.6		
Ramp D																			0.3		

108-27
10-16-12

TEMPORARY FLOODLIGHTING LUMINAIRES

No.	Location Station	Offset	Number Lumin.	Remarks
1A	1247+25.32		1	EXML_NB29
	1249+25.32		1	
	1251+25.24		1	
	1253+22.24		1	
	1255+22.05		1	
	1257+21.91		1	
	1259+21.91		1	
	1261+21.28		1	
	1263+17.89		1	
2B	6683+81.00		1	MLE029
	6685+81.00		1	
	6687+81.00		1	
	6689+81.00		1	
2C	270+56.00		1	EXML29N
	272+56.00		1	
	274+56.00		1	
	276+56.00		1	
3B	197+39.95		1	EXML29S
	199+47.58		1	
	201+56.18		1	
	203+66.95		1	

108-30
04-16-13

CRASH CUSHIONS

* Bid Item
(1) Lane(s) to which the installation is adjacent.
(2) Complete this section when using the Temporary Crash Cushion bid item and Earthwork is needed for Sand Barrel placement. Refer to BA-500

No.	(1) Direction of Traffic	Location Station	Side	Obstacle Width FT	Crash Cushion (Select One)* Temporary	Temporary Redirective	Temporary Severe Use	Permanent	Permanent Severe Use	Sand Barrel Details (2) (V) Length FT	(W) Length FT	(X) Length FT	(Y) Length FT	(Z) Length FT	Earthwork* Excavation Class 10 CY	Embankment in Place CY	Spare Parts Kit (Select One)* Permanent EACH	Permanent Severe Use EACH	Obstacle Description	Remarks
1A	NB	1248+69.30	Out	2.25			X													1A
1B	NB	6692+89.60	Med	2.25			X													1B
1B	NB	6662+68.54	out	2.25			X													1B
2A	NB	6688+69.50	out	2.25	X					2.50	24.25	7.75	5.75	12.67						2A
2B	SB	288+64.00	Out	2.25	X					10.00	24.25	15.25	13.25	14.68						2B
2B	NB	6683+82.11	out	2.25			X													2B
2B	SB	1268+97.10	out	2.25			X													
3A	NB	6687+50.48	Med	2.25			X													3A
3A	SB	6666+03.10	Med	2.25			X													3A
3A	SB	6666+77.70	Out	2.25			X													3A
4A	EB	80177+01.50	Out	2.25	X					3.00	24.25	8.25	6.25	12.89						
4B	SB	288+39.20	Out	2.25	X					4.00	24.25	9.25	7.25	13.07						
	EB	80137+35.76	Med	2.00					X									X	Crash Cushion Block	
	WB	80149+59.07	Med	2.00					X									X	Crash Cushion Block	

108-33
04-16-13

TEMPORARY BARRIER RAIL

Refer to BA-400 and BA-401

* Not a bid item. Anchorage requirements are based on TBR locations shown in the plans. TBR alignments that vary from what is shown in the plans may result in additional TBR sections requiring anchorage.

No.	Station to Station		Length LF	(Select One) Steel BA-400	Concrete BA-401	Anchored* (Y/N)	Remarks
	239+86.89	242+41.43	375.0		x	No	Stage 1A along Ramp C - No Modular Glare Screen
	1264+17.88	1248+69.30	1562.5		x	No	Stage 1A
	1254+90.30	1250+55.00	437.5		x	No	Stage 1B
	6667+38.80	6692+89.60	2562.5		x	No	Stage 1B
	6632+63.14	6647+03.42	1450.0		x	No	Stage 1B
	285+82.90	292+88.20	712.5		x	No	Stage 1B
	299+64.10	305+05.00	550.0		x	No	Stage 1B
	1248+76.50	1264+05.20	1537.5		x	No	Stage 2A
	1249+29.90	1261+76.90	1250.0		x	No	Stage 2A
	6671+25.40	6683+69.50	1750.0		x	No	Stage 2A
	80123+47.10	80160+41.90	3875.0		x	No	Stage 2A- No Modular Glare Screen
	1268+97.10	260+66.50	925.0		x	No	Stage 2B
	251+88.00	288+64.00	2887.5		x	No	Stage 2B
	257+50.70	271+05.68	1362.5		x	No	Stage 2C
	80133+40.34	80133+82.96	100.0		x	No	Stage 2C- No Modular Glare Screen
	80134+06.52	80135+64.07	200.0		x	No	Stage 2C- No Modular Glare Screen
	271+05.50	262+08.80	900.0		x	No	Stage 3A
	1267+87.40	220+18.20	4875.0		x	No	Stage 3A
	1270+86.80	6690+32.70	9162.5		x	No	Stage 3A
	6666+03.10	6669+99.50	387.5		x	No	Stage 3A
	6666+77.70	6687+50.20	2050.0		x	No	Stage 3A
	257+44.80	262+08.80	475.0		x	No	Stage 3B
	239+62.60	267+31.80	2837.5		x	No	Stage 3B
	181+60.51	215+57.70	3312.5		x	No	Stage 3B
	6666+16.70	6687+75.37	2137.5		x	No	Stage 4A
	6626+24.57	6654+26.87	2812.5		x	No	Stage 4A
	80177+01.50	80122+44.70	575.0		x	No	Stage 4A- No Modular Glare Screen
	6677+73.55	6683+17.48	550.0		x	No	Stage 4B
	288+39.20	99618+85.60	2887.5		x	No	Stage 4B
	80122+44.70	80125+01.00	262.5		x	No	Stage 4B- No Modular Glare Screen

110-9
10-18-11

CULVERT ABANDONMENT

Refer to Details 4315 and 4316

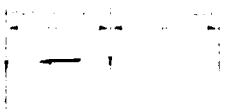
* Not a bid item

Location Station	Description	Fill Material: Flowable Mortar CY	Fill Material: Granular Backfill* TON	4" Perforated Subdrain* LF	Remarks
6674+07	36"x196' RCP	58.5	0.3	15.0	RMV Aprons, Abandon Stage 1A
6684+78	2'x3'x262' RCB	57.6	0.2	15.0	Abandon Stage 1A
333+70	18"x66' RCP	4.1	0.1		Abandon Stage 1A
180121+83.94	24" x 170.2'	19.6	0.2	13.0	RMV Aprons, Plug and Abandon Stage 1B
88620+50	24" x 94' RCP	10.7	0.2	13.0	RMV Aprons, Plug and Abandon Stage 2B
6667+90.44	24" x 200' RCP	13.3	0.2	13.0	RMV Aprons, Plug and Abandon 116' LT Stage 3A
6674+32	24"x121' RCP	12.4	0.2	13.0	RMV Aprons, Plug and Abandon LT 109' Stage 3A
Removals:					
81538+18, 200'RT	38" x 46' RCP	-	-	-	Remove Stage 1B
81538+50	36" X 142' RCP	-	-	-	Remove RT. Apron, cap RT end with RF-21, MSE wall subdrain through cap
99616+48.67	24" x 160' CMP	-	-	-	RMV STG 3A
99622+19 26.8' RT	30" x 72" RCP	-	-	-	RMV Stage 3
6667+83.64	18" inlet Apron	-	-	-	RMV Stage 3A
6667+90.44	28 x200' RCP	-	-	-	RMV B4' RT (rest P&A) Stage 1A
6674+32	24" x 121' RCP	-	-	-	RMV RT 12' and Apron, P&A rest Stage 3A
88616+77	36" x 140' RCP	-	-	-	Remove 26' RT extension and reattach apron, STG 3A
1260+99.84	36" x 139' RCP	-	-	-	Remove Extension and reattach apron Stage 3A
6636+70 199' RT	24" x 55,3' RCP	-	-	-	Remove Stage 4A
6646+70	30" x 215' RCP	-	-	-	Remove Stage 4A
82537+48, 145'RT	30" x 49' RCP	-	-	-	Remove Stage 4
81538+50	36" X 142' RCP	36.4	0.3	15.0	RMV RT 64', Plug and Abandon 78' Stage 1B
	Totals=	204.5	1.7	97.0	

113-1
04-16-13

SIDEWALKS

See MI-228 and S Sheets



Road Identification	Station to Station		Side	A FT	B FT	S %	8" HMA Trail SY	6" PCC Sidewalk SY	_" PCC Sidewalk SY	Detectable Warnings SF	Remarks
TRAIL_LEV_MC	9012+35.27	9019+50.48			10.00		794.7				
HLTRL_NW	200339+00.80	200339+37.87		Var.	Var.			46.9		10	
HLTRL_NE	510325+26.70	510325+81.87		Var.	Var.			67.2		35	
HLTRL	200326+65.50	200327+17.61		Var.	10.00			55.6		27	
275_TRAIL2	5080143+77.52	5080151+35.58			10.00			857.2			

110-15
04-16-13

REMOVAL OF INTAKES AND UTILITY ACCESSES

No.	Location/Description	Type	Remarks
1	6636+00, 110.5' RT	Intakes	SW-512 REMOVE Stage 4
2	80120+29.55, 0.78' LT	Intakes	US 275
3	80121+29.71, 1.45' RT	Intakes	US 275
4	333+70 Median	Intakes	EXUS275

110-16
04-16-13

REMOVAL OF LIGHT POLES AND CONCRETE FOOTINGS

No.	Location: Station	Location: Offset Left	Location: Offset Right	Removal of Light Pole	Removal of Concrete Footing for Light Pole	Remarks
3	Temp from (97)			3		
	247+05.27		209	1	1	
	245+12.59		198.9	1	1	
	243+29.42		329.9	1	1	
	241+59.23		433	1	1	
	301+17.10	48.5		1	1	
	302+80.24	48.5		1	1	
	304+80.42	48.5		1	1	
	306+85.00	48.5		1	1	
	300+76.00		52.5	1	1	
	300+07.87		93.5	1	1	
	299+03.18		238.1	1	1	
	297+99.22		384.6	1	1	
	296+95.43		531.94	1	1	
	295+89.32		682.74	1	1	
	295+06.75		844.18	1	1	

112-5
08-01-08

TABULATION OF CONCRETE MEDIANS

Begin Station	End Station	Area SY	Remarks
84530+38.84	84534+73.50	225.7	Ramp B & D

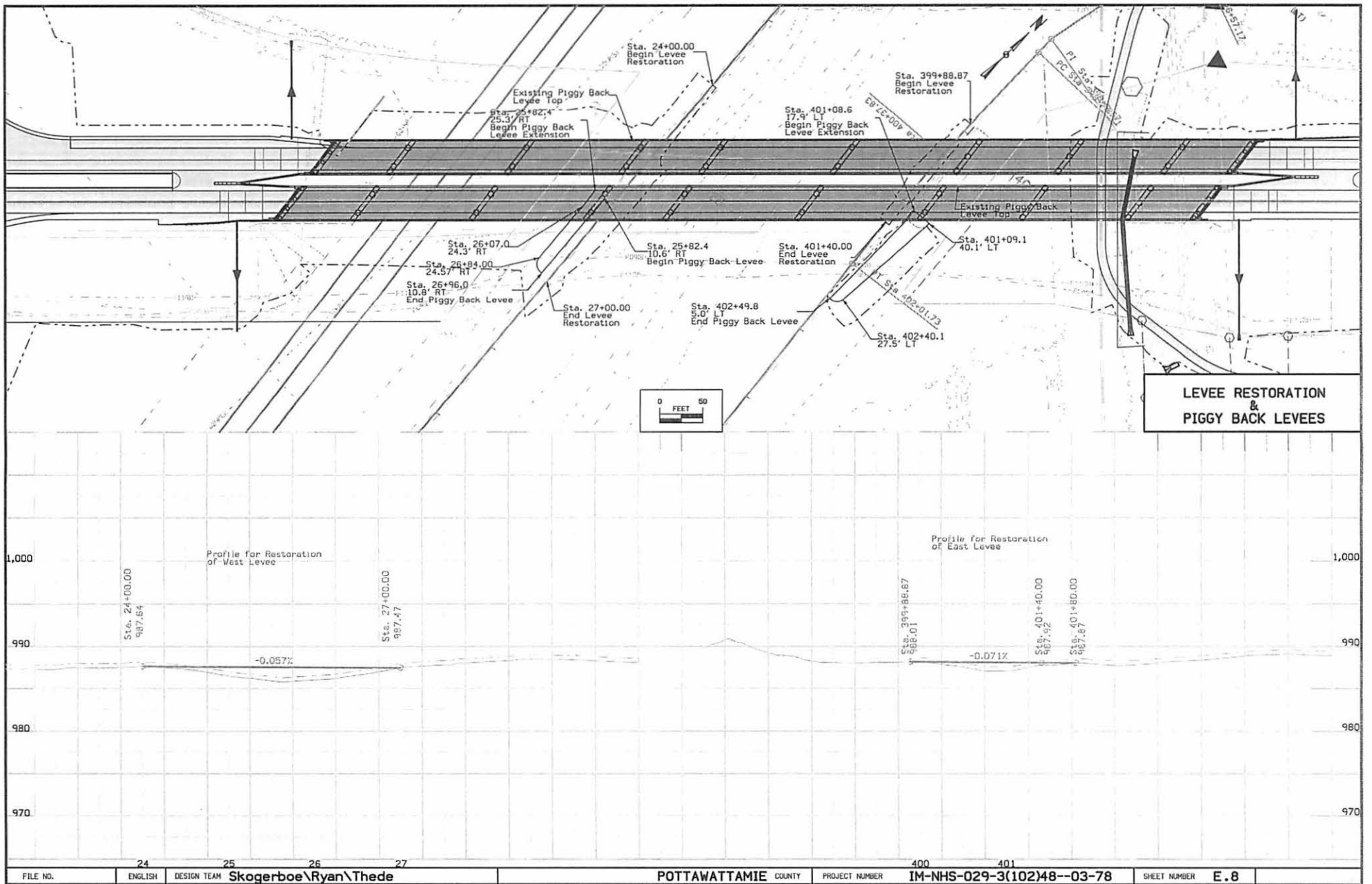
112-4
10-21-14

CURBS AND RAISED ISLANDS

Refer to PV-20, PV-102, and 6000s Detail Series.

(1) Bid Item

Point No.	Station	Offset	Island Interior Area SY (1)	Curb and Gutter: Curb Type	Curb and Gutter: Gutter Width FT	Curb and Gutter: Length LF (1)	Remarks
P1	80134+19.28	76.26	65.3	6" Sloped PCC	Var	118.5	
P2	80134+53.14	43		6" Sloped PCC	Var		
P3	80134+26.59	41.73		6" Sloped PCC	Var		
US 275	80116+29.47	6		6" Sloped PCC	4.0	1285.8	
	80123+52.00	6		6" Sloped PCC	4.0	665.4	
	80132+07.89	6		6" Sloped PCC	4.0	268.4	
	80134+20.02	3.55		6" Sloped PCC	4.0	482.8	
	80150+34.00	0		6" Sloped PCC	4.0	1960.0	
	80161+50.94	6.23		6" Sloped PCC	2.0	88.0	
HL	180326+19.29	0.7		6" Sloped PCC	2.0	50.4	
275HL Rtn	80159+49.91	46 LT		6" Sloped PCC	2.0	127.0	
	80159+53.13	52 RT		6" Sloped PCC	2.0	105.5	
	80162+13.95	34.82 RT		6" Sloped PCC	2.0	118.0	
	80162+25.26	45.72 LT		6" Sloped PCC	2.0	144.8	
Denmark Dr	180121+36.18	7.3 RT		6" Sloped PCC	Var	128.8	
	180121+36.18	7.3 LT		6" Sloped PCC	Var	153.2	



FILE NO.	ENGLISH	DESIGN TEAM Skogerboe\Ryan\Thede	POTTAWATTAMIE COUNTY	PROJECT NUMBER IM-NHS-029-3(102)48--03-78	SHEET NUMBER E.8

12:29:11 PM 1/8/2015 sryan pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\Design\.LETTING_FOLDERS\102_SECTION_3\78029102E01.sht

STAGING NOTES

The construction limits for this project include the Mosquito Creek Levees. It is required that construction impacting the levees and Mosquito Creek will be staged to maintain protection against flooding.

Removal of the existing I-29 embankment of the Temporary North Ring Levee must be coordinated with the IM-NHS-29-3(97)48-03-78 Contractor so that the line of protection provided by the Temporary North Ring Levee is maintained at all times. Provide a minimum of 10 weeks notice to the Resident Construction Engineer prior to removal of the embankment.

The proposed piggy back levees will need to be completed prior to any grading or bridge construction within the existing Mosquito Creek and levee section. The Grading Contractor will promptly notify the Engineer 1 week prior to construction of the piggy back levees and once the piggy back levees are complete. The Department will secure approval from the City for approval of the piggy back levees. (Allow up to 2 weeks for approval)

Work in Levee Area Staging Notes:

- Piggy Back Levees at pier 3 and pier 6 of the IA 92 Bridge shall not be constructed until bridge removal is complete. And drilled shaft construction at Pier 3 and Pier 6 shall not commence prior to completion of the piggy back levees at Pier 3 and Pier 6.
- Restore levees, install piggy back levees and obtain approval of completed piggy back levees construction from City as required before bridge construction.
- Stage excavation of roadway embankment, abutment removal, and levee restoration to maintain a continuous line of protection against flooding. The abutment removal and levee restoration including fill on the wet side of levee will need to be completed prior to removal of the roadway embankment.
- Levee crossing will be allowed only at designated locations as shown in U sheets.

Stage 1A
Traffic
Maintain traffic on existing I-29 and interchange at North end Shift I-29 traffic on to new detour pavement
Maintain one lane in each direction on US 275/ IA 92 EB lanes
Construction
Pave US 275/IA 92 WB from Harry Langdon Blvd. to E. of Metro Dr. (Gap Ramp C terminal)
Continue construction of IA 92 bridge over Mosquito Creek and Railroad
Continue construction of US 275/IA 92 bridge over I-29
Continue construction of I-29 NB and SB bridges over Mosquito Creek
Build interim I-29 NB and interim Ramp C pavement from Sta. 88612+12.5 to 88626+41.1
Replace inside shoulders on I-29 SB from the split of I-80 EB/I-29 SB to entrance ramp of I-80 to I-29 SB
Replace outside shoulder on I-29 NB from STA. 6662+68.4 to 6686+13.0
Pave I-29 NB from Sta. 6653+16 to 6673+00 and I-29 SB from Sta. 6654+63 to 6660+00 as shown on J sheets.
Grade Portion of US275 Loop B not affecting traffic.
Grade foreslopes of I-29 on South end of project.

Stage 1B
Traffic
Maintain traffic on existing I-29
Maintain one lane in each direction on US 275/ IA 92 EB lanes
Close Denmark Dr.
Close Ramp C
Close Ramp A
Construction
Grade and pave Ramp C terminal
Grade I-29 interim from Sta. 88621+28 to 88627+50 (IMLE029N) and proposed I-29 NB from Sta. 6627+50.0 to 6629+66.0
Grade and Pave detour on Existing I-29 NB from Sta. 6668+81.2 to 6685+65.74 and permanent pavement from Sta. 6682+03.4 to 6687+50.0 use shoulder closure and lane closure TC-402 and TC-418.
Grade and Pave US 275/ IA 92 WB from Sta. 80119+52.22 to 80126+85.23 and Denmark Dr.
Install Tower lighting on East side of I-29 and between NB and SB I-29 as shown in the lighting plan, IM-NHS-029-3(110)48--03-78.

Stage 2A
Traffic
Maintain traffic on existing I-29
Move US 275/ IA 92 traffic on to new WB lanes and continue one lane in each direction
Open new Ramp C to traffic to EB I-80
Ramp A remains closed
Construction
Grade and Pave US 275 Ramp A terminal
Remove Existing US 275/ IA 92 EB Mosquito Creek bridge.
Build new US 275/IA 92 EB Mosquito Creek bridge.
Grade and pave I-29 NB from 6672+15 to 6687+50
Resurface connection from WB US 275/IA 92 to Ramp B and D Terminal

Stage 2B
Traffic
Maintain traffic on I-29 existing
Open up new I-29 NB lane and Ramp A to Ramp A traffic
Maintain one lane in each direction on new US 275/ IA 92 WB lanes
Maintain traffic on new Ramp C to EB I-80 only
Construction
Build new US 275/ IA 92 EB bridge over Mosquito Cr
Grade and pave US 275/ IA 92 EB
Grade and pave I-29 SB detour 351800(Sta 351800+91 to 351808+50), 351900 and on existing inside I-29 SB shoulder area from Sta. 6666+33.8 to 6685+08.0
Grade and pave I29 NB from 6627+50 to 6640+44
Grade and pave Interim I-29 NB from Sta. 88609+98.5 to 88627+50.0
Pave new shoulders along I-29 SB insde and outside as shown on J sheets

Stage 2C
Traffic
Maintain traffic on I-29 existing
Maintain Ramp A traffic per Stage 2B
Maintain one lane in each direction on new US 275/ IA 92 WB lanes

108-26A
08-01-08

STAGING NOTES

Maintain traffic on new Ramp C to EB I-80 only
Construction
Continue construction on US 275 EB bridge over Mosquito Cr.
Continue G&P US 275 EB
Grade and Pave remaining detour 351800 and overlay in same area using nighttime lane closures

Stage 3A
Traffic
Move traffic I-29 NB on to new I-29 NB
Maintain one lane in each direction on new US 275/ IA 92 WB lanes
Maintain traffic on new Ramp A and C
Construction
Remove existing I-29 NB bridge over mosquito creek (by others)
Construct remaining I-29 SB bridge over Mosquito Cr. (by others) Excluding the Ramp D connection
Remove existing US 275/IA 92 bridge over I-29
Construct new US 275 EB bridge over I-29
Continue Grade and pave of US 275/ IA 92 EB
Grade and Pave I-29 SB from station 6627+50 to 6687+50
Grade and Pave detours 352000 and 352300
Grade and Pave I-29 Interim SB from station 99603+60 to 99627+50 as shown on J sheets

Stage 3B
Traffic
Maintain traffic on new I-29 NB
Maintain traffic on existing I-29 SB
IA 92/ US 275 remains on new WB lanes
Maintain traffic on new Ramp A and C
Close I-80 WB/ I-29 SB Ramp to IA 92 Loop B Movement
Construction
Grade and Pave Interim SB I-29 from 99601+49 to 99612+17 as shown on the J sheets
Grade and Pave I-29 SB from station 6667+50 to 6687+50 as shown on the J sheets
Continue Construction on SB I-29 bridge

Stage 4A
Traffic
Maintain traffic on new I-29 NB
Move I-29 SB traffic to new SB lanes
Maintain traffic on New WB IA 92/ US 275
Maintain closure of I-80 WB/ I-29 SB Ramp to IA 92 Loop B Movement
Maintain Traffic on Loop B as shown in J sheets
Maintain bike trail under I-29
Close Ramp D
Construction
Remove existing I-29 SB bridge over Mosquito Cr.
Grade and Pave portion of bike trail under I-29 not impacting trail traffic
Build I-29 SB Ramp D Stub bridge
Grade and Pave Ramp B from station 82533+25 to 82540+27 as shown on J sheets
Grade and Pave Ramp D from station 84534+74 to 84544+29 as shown on J sheets
Grade and pave remaining SB I-29 on South End as shown in the J sheets

Stage 4B
Traffic
Maintain traffic on new I-29 NB
Maintain I-29 SB traffic in new SB lanes
Maintain traffic on New WB IA 92/ US 275 Lanes until Gap at Ramps B/D reconstructed then switch to final 4 lane configuration
Close bike trail under I-29 (Maximum closure period is 2 weeks)
Close Ramp B
Maintain Ramp D Closure
Construction
Continue construction of I-29 SB Ramp D Stub bridge
Grade and Pave bike trail under I-29
Grade and Pave remaining portions of Ramps B and D
Grade and Pave remaining IA 92/ US 275 through Ramp B/D terminal
Construct permanent Bike Trail connections and raised median on I-92/ US275
Install Tower lighting on the South side of I-29

Stage 5
Traffic
Open all traffic to I-29 and US 275/IA 92
Open Ramps B and D
Construction
Complete removals and grading not affecting traffic
Following completion of removal of existing track (by others), construct new bike path under IA 92 bridge over Mosquito Creek and install scour mitigation per Sheet U.76.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Plan EW-101 and RL-1B.

STATION	TOTAL CUT	TOPSOIL CLASS 10 SAVED -C	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 25% SHRINK	TOTAL FILL WITH SHRINK						
US275A													
81538+14.38	1509	224			4042	5053	5053						Stage 2
81530+50.00	2202	338	1864	1864	6132	7665	7665						Stage 2
81531+00.00	2170	352	1818	1818	6367	7959	7959						Stage 2
81531+50.00	2345	383	1962	1962	6780	8475	8475						Stage 2
81532+00.00	2405	390	2015	2015	7173	8966	8966						Stage 2
81532+50.00	2260	395	1865	1865	7442	9303	9303						Stage 2
81533+00.00	1552	286	1266	1266	6202	7753	7753						Stage 2
81533+50.00	174	32	142	142	796	995	995						Stage 2
81533+60.00	428	65	363	363	1878	2348	2348						Stage 2
81534+00.00	176	20	156	156	501	626	626						Stage 2
81534+50.00	40	16	24	24	583	729	729						Stage 2
81535+00.00	6	6	0	0	586	733	733						Stage 2
81535+50.00	0	0	0	0	508	635	635						Stage 2
81536+00.00	0	0	0	0	429	536	536						Stage 2
81536+50.00	0	0	0	0	354	443	443						Stage 2
81537+00.00	0	0	0	0	284	355	355						Stage 2
81537+50.00	0	0	0	0	222	278	278						Stage 2
81538+00.00	0	0	0	0	167	209	209						Stage 2
81538+50.00	0	0	0	0	122	153	153						Stage 2
81539+00.00	0	0	0	0	88	110	110						Stage 2
81539+50.00	2	0	2	2	45	56	56						Stage 2
81540+00.00	8	0	8	8	12	15	15						Stage 2
81540+50.00	4	0	4	4	8	10	10						Stage 2
81540+72.99	0	0	0	0	0	0	0						
Subtotals:	15281	2507	11489	11489	50721	63405	63405						
US275/IA92													
80117+50.00	695	194	501	501	21	26	26						Stages 1-4
80118+00.00	664	197	467	467	28	35	35						Stages 1-4
80118+50.00	702	198	504	504	24	30	30						Stages 1-4
80119+00.00	684	195	489	489	19	24	24						Stages 1-4
80119+50.00	35	10	25	25	1	1	1						Stages 1-4
80119+52.23	913	245	668	668	14	18	18						Stages 1-4
80120+00.00	1017	263	754	754	9	11	11						Stages 1-4
80120+50.00	1058	243	815	815	6	8	8						Stages 1-4
80121+00.00	1386	398	988	988	328	410	410						Stages 1-4
80122+00.00	223	105	118	118	168	210	210						Stages 1-4
80122+50.00	84	23	61	61	7	9	9						Stages 1-4
80123+00.00	13		13	13	36	45	45						Stages 1-4
80123+50.00	6	5	1	1	134	168	168						Stages 1-4
80124+00.00	5	5			166	208	208						Stages 1-4
80124+50.00	846	78	768	768	191	239	239						Stages 1-4
80125+00.00	1313	162	1151	1151	308	385	385						Stages 1-4
80125+50.00	269	55	214	214	129	161	161						Stages 1-4
80125+66.17	406	122	284	284	358	448	448						Stages 1-4
80126+00.00	249	113	136	136	433	541	541						Stages 1-4
80126+29.88	136	78	58	58	357	446	446						Stages 1-4
80126+50.00	428	172	256	256	773	966	966						Stages 1-4
80127+00.00	533	174	359	359	299	374	374						Stages 1-4
80127+50.00	0	0	0	0	0	0	0						Stages 1-4
80131+50.00	186	186			1263	1579	1579						Stages 1-4
80132+00.00	478	384	94	94	2794	3493	3493						Stages 1-4
80132+50.00	609	457	152	152	3574	4468	4468						Stages 1-4
80133+00.00	249	191	58	58	3360	4200	4200						Stages 1-4
80133+50.00	0	0	0	0	2080	2600	2600						Stages 1-4
80134+00.00	5	5	0	0	1337	1671	1671						Stages 1-4
80134+50.00	52	52	0	0	1300	1625	1625						Stages 1-4
80135+00.00	47	47	0	0	912	1140	1140						Stages 1-4
80135+50.00	88	88	0	0	1373	1716	1716						Stages 1-4
80136+00.00	190	188	2	2	2381	2976	2976						Stages 1-4
80136+50.00	200	199	1	1	2586	3233	3233						Stages 1-4
80137+00.00	198	189	9	9	2471	3089	3089						Stages 1-4
80137+50.00	191	149	42	42	1459	1824	1824						Stages 1-4
80138+00.00	709	88	621	621	296	370	370						Stages 1-4
80138+50.00	1853	75	1778	1778	4	5	5						Stages 1-4
80139+00.00	2527	93	2434	2434	5	6	6						Stages 1-4
80139+50.00	2630	95	2535	2535	5	6	6						Stages 1-4
80140+00.00	2776	100	2676	2676	5	6	6						Stages 1-4
80140+50.00	1887	68	1819	1819	4	5	5						Stages 1-4
80141+00.00	547	113	434	434	1970	2463	2463						Stages 1-4
80148+00.00	189	186	3	3	4089	5111	5111						Stages 1-4
80148+50.00	287	264	23	23	3107	3884	3884						Stages 1-4
80149+00.00	410	280	130	130	1251	1564	1564						Stages 1-4
80149+50.00	436	207	229	229	508	635	635						Stages 1-4
80150+00.00	455	209	246	246	448	560	560						Stages 1-4
80150+50.00	465	203	262	262	388	485	485						Stages 1-4
80151+00.00	441	191	250	250	376	470	470						Stages 1-4
80151+50.00	421	187	234	234	374	468	468						Stages 1-4
80152+00.00	401	181	220	220	351	439	439						Stages 1-4
80152+50.00	345	175	170	170	339	424	424						Stages 1-4
80153+00.00	385	267	118	118	372	465	465						Stages 1-4
80153+50.00	442	356	86	86	421	526	526						Stages 1-4
80154+00.00	411	342	69	69	464	580	580						Stages 1-4
80154+50.00	388	325	63	63	544	680	680						Stages 1-4
80155+00.00	367	297	70	70	622	778	778						Stages 1-4
80155+50.00	361	277	84	84	591	739	739						Stages 1-4
80156+00.00	360	266	94	94	533	666	666						Stages 1-4
80156+50.00	344	248	96	96	545	681	681						Stages 1-4
80157+00.00	319	229	90	90	538	673	673						Stages 1-4
80157+50.00	298	210	88	88	475	594	594						Stages 1-4
80158+00.00	273	184	89	89	430	538	538						Stages 1-4
80158+50.00	236	161	75	75	422	528	528						Stages 1-4
80159+00.00	359	255	104	104	503	629	629						Stages 1-4
80159+50.00	0	0	0	0	0	0	0						
Subtotals:	35480	11302	24178	24178	50679	63355	63355						
West Levee Under IA 92 W Spoil Bar													
25+15.00	189	31	158	158	3	4	4						Stage 2
25+50.00	103	0	103	103	0	0	0						Stage 2
25+67.00	352	0	352	352	0	0	0						Stage 2
26+00.00	254	0	254	254	0	0	0						Stage 2
26+15.00	301	4	297	297	0	0	0						Stage 2
26+30.00	383	20	363	363	0	0	0						Stage 2
26+50.00	538	70	468	468	0	0	0						Stage 2
27+00.00	59	28	31	31	0	0	0						Stage 2
27+29.00	0	0	0	0	0	0	0						
Subtotals:	2179	153	2026	2026	3	4	4						
Totals	71763	20602	49876	49876	122788	153509	153509	0					

ENGLISH	IOWA DOT	Design Team Skogerboe/Ryan/Thede	Pottawattamie COUNTY	Project Number IM-NHS-029-3(102)48--03-78	Sheet Number T.6

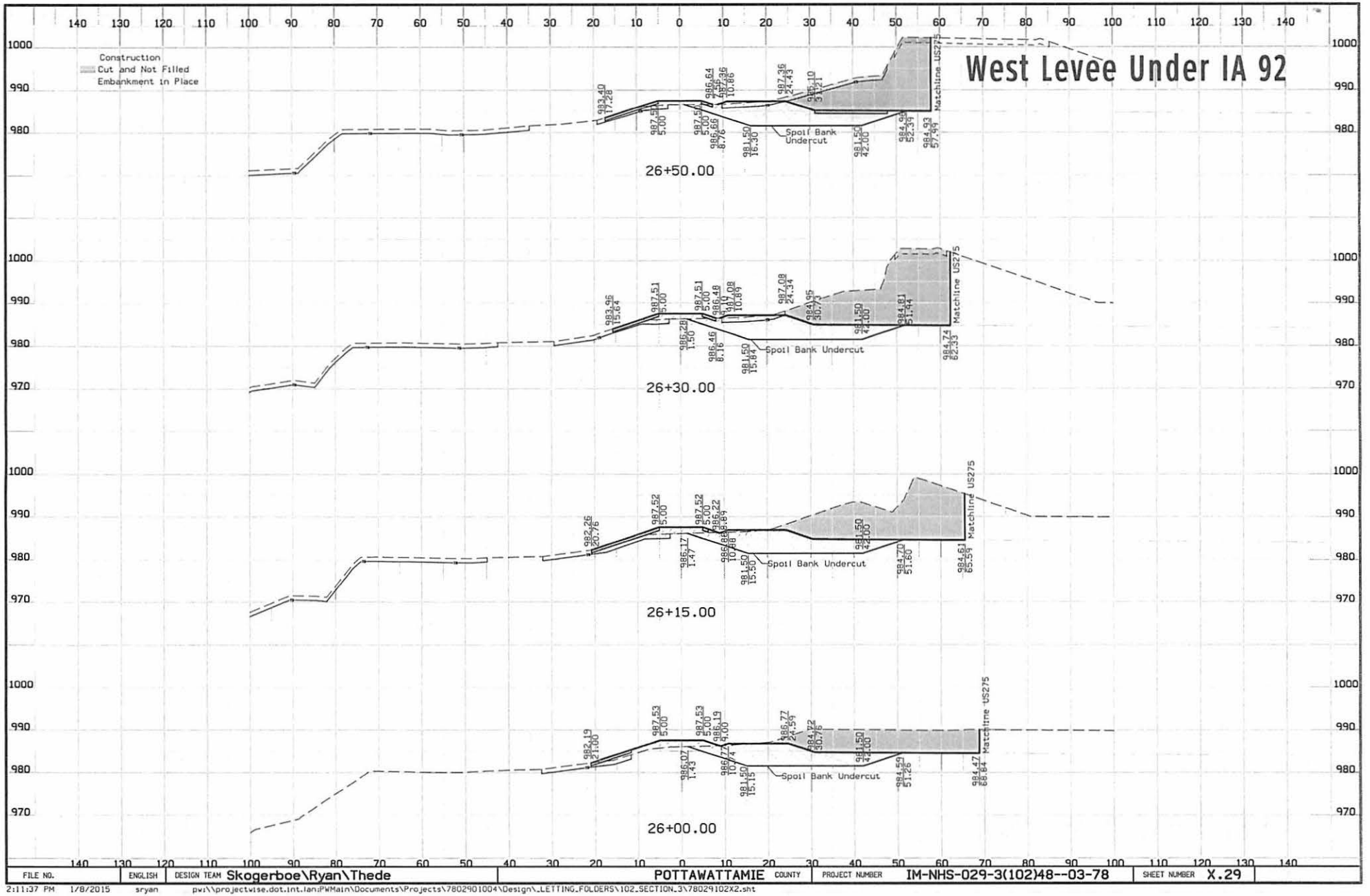
1/6/2015 8:31:21 AM Administrator M:\Projects\760250100A\Design_n\102_SECTION_3_US275\Earthwork\New_Earthwork (102) - Stage2 -newrow.xlsm

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Plan EW-101 and RL-1B.

STATION	TOTAL CUT	TOPSOIL CLASS 10 SAVED -C	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 25% SHRINK	TOTAL FILL WITH SHRINK	Embankment In Place					
West_Lev													
24+00.01	35	35	0	0	0	0	0	0					Stage 2
24+50.00	20	20	0	0	0	0	0	45					Stage 2
24+80.00	7	7	0	0	0	0	0	28					Stage 2
25+00.00	0	0	0	0	0	0	0	15					Stage 2
25+15.00	0	0	0	0	0	0	0	9					Stage 2
25+50.00	0	0	0	0	0	0	0	34					Stage 2
25+67.00	102	6	96	96	21	26	26	45					Stage 2
26+00.00	51	8	43	43	21	26	26	167					Stage 2
26+15.00	9	9	0	0	16	20	20	91					Stage 2
26+30.00	10	10	0	0	6	8	8	88					Stage 2
26+50.00	29	28	1	1	0	0	0	117					Stage 2
27+00.00	12	12	0	0	0	0	0	156					Stage 2
27+29.00	0	0	0	0	0	0	0	6					Stage 2
Subtotals:	275	135	140	140	64	80	80	801					
East Levee													
Under IA-92	0	0	0	0	0	0	0	0					Stage 2
399+88.88	1	0	1	1	0	0	0	0					Stage 2
400+00.00	1	0	1	1	0	0	0	0					Stage 2
400+25.00	0	0	0	0	0	0	0	3					Stage 2
400+50.00	0	0	0	0	0	0	0	8					Stage 2
400+75.00	0	0	0	0	0	0	0	15					Stage 2
401+00.00	0	0	0	0	0	0	0	17					Stage 2
401+09.10	0	0	0	0	0	0	0	3					Stage 2
401+25.00	1	0	1	1	0	0	0	0					Stage 2
401+40.00	0	0	0	0	0	0	0	0					Stage 2
401+50.00	0	0	0	0	0	0	0	46					Stage 2
401+75.00	0	0	0	0	0	0	0	128					Stage 2
402+00.00	0	0	0	0	0	0	0	150					Stage 2
402+25.00	0	0	0	0	0	0	0	148					Stage 2
402+50.00	0	0	0	0	0	0	0	121					Stage 2
402+65.00	0	0	0	0	0	0	0	30					
Subtotals:	3	0	3	3	0	0	0	736					
Totals	278	135	143	143	64	80	80	1537					

STATION	TOTAL CUT	TOPSOIL CLASS 10 SAVED -C	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TOTAL FILL	CLASS 10 SUITABLE + 25% SHRINK	TOTAL FILL WITH SHRINK	Embankment In Place					


West Levee Under IA 92
Construction
Cut and Not Filled
Embankment in Place
Spoil Bank Undercut
Matchline US275
26+50.00
26+30.00
26+15.00
26+00.00
FILE NO.
ENGLISH
DESIGN TEAM Skogerboe\Ryan\Thede
POTTAWATTAMIE COUNTY
PROJECT NUMBER IM-NHS-029-3(102)48--03-78
SHEET NUMBER X.29
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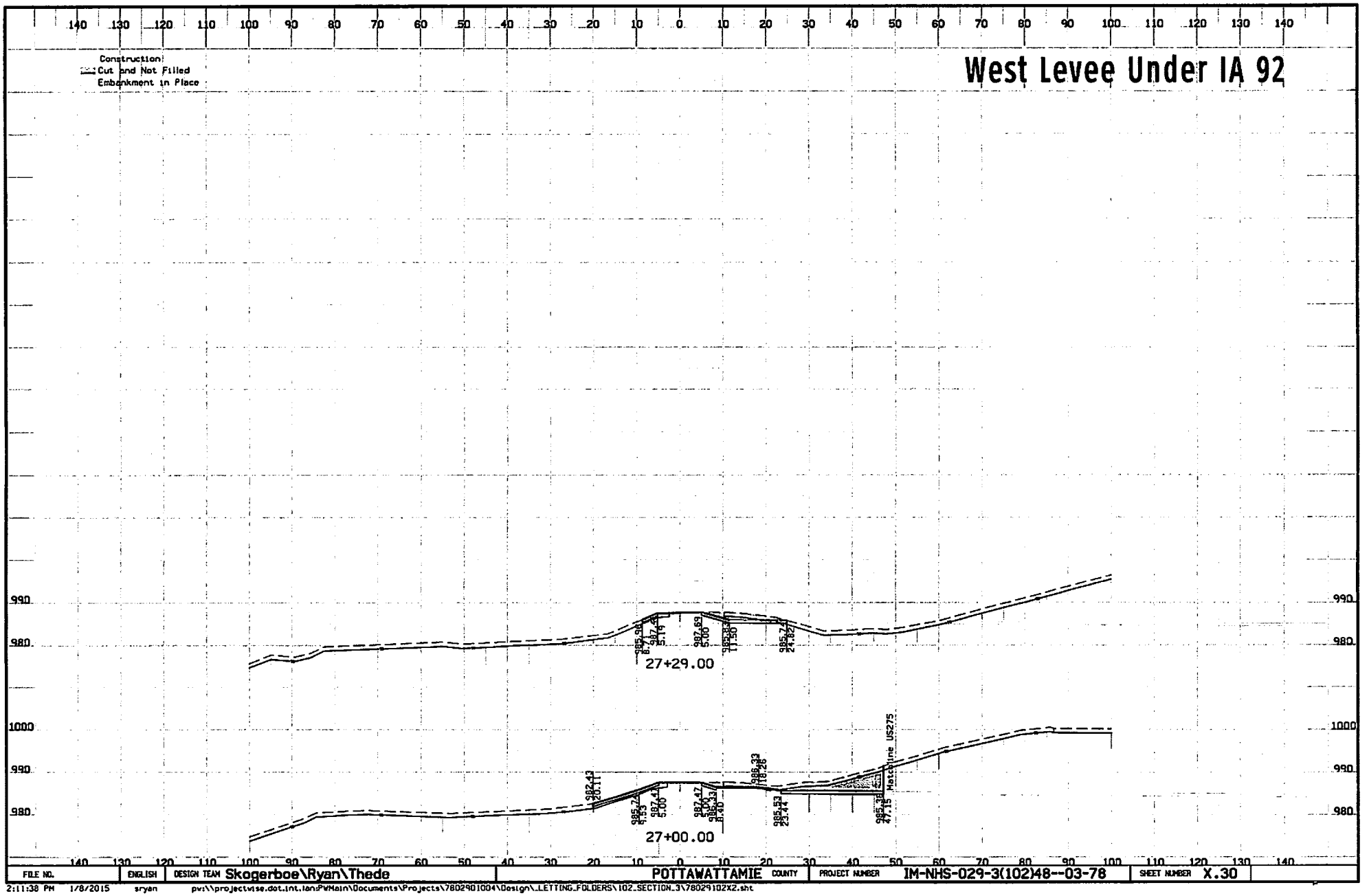
Construction
Cut and Not Filled
Embankment in Place
West Levee Under IA 92
27+29.00
27+00.00
Matchline US275
990
980
1000
140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140
FILE NO.
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POTTAWATTAMIE COUNTY
PROJECT NUMBER IM-NHS-029-3(102)48--03-78
SHEET NUMBER X.30
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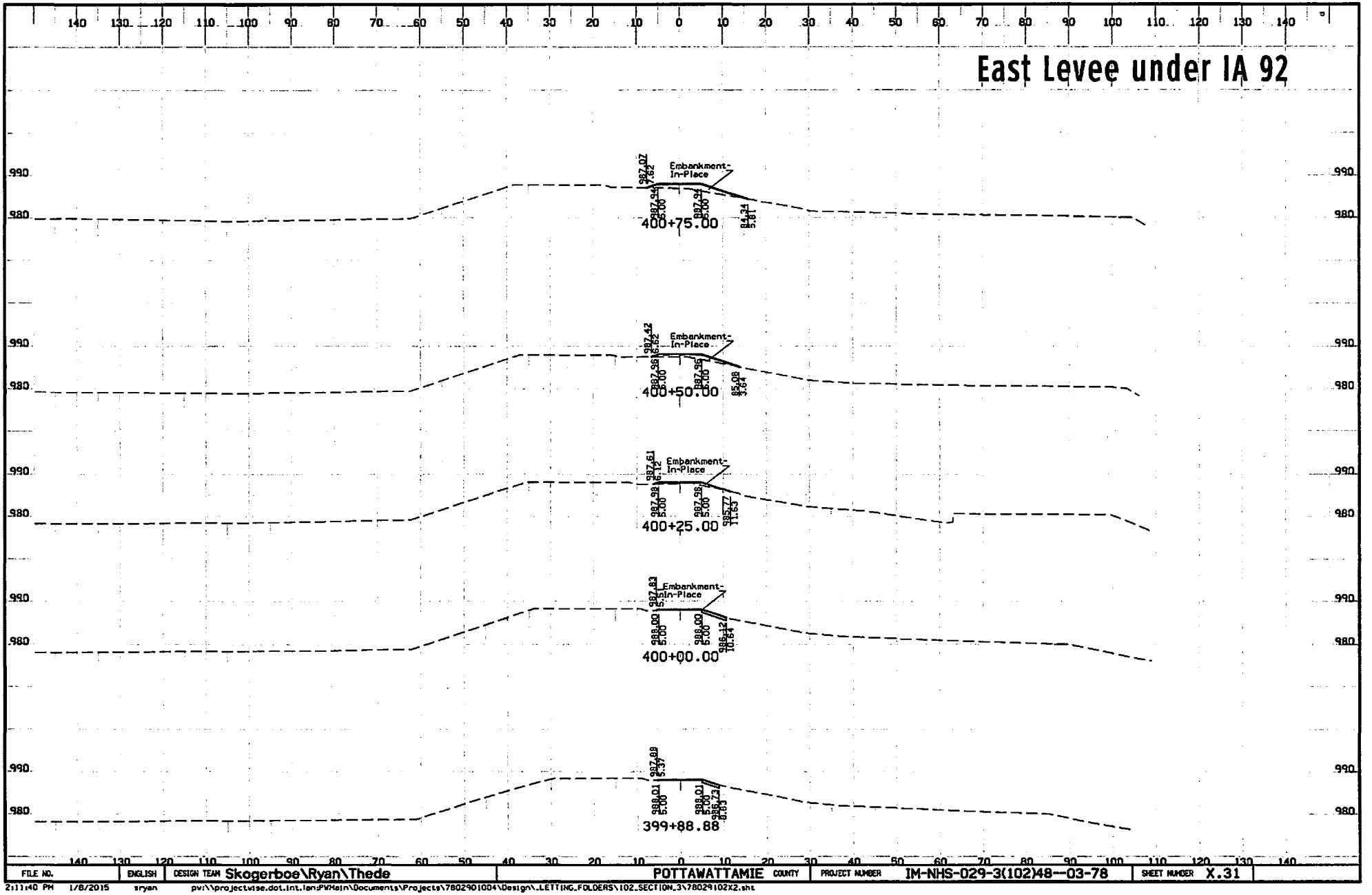
East Levee under IA 92
Embankment-In-Place
400+75.00
Embankment-In-Place
400+50.00
Embankment-In-Place
400+25.00
Embankment-In-Place
400+00.00
399+88.88
990
980
140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140
FILE NO.
ENGLISH
DESIGN TEAM Skogerboe\Ryan\Thede
POTTAWATTAMIE COUNTY
PROJECT NUMBER IM-NHS-029-3(102)48--03-78
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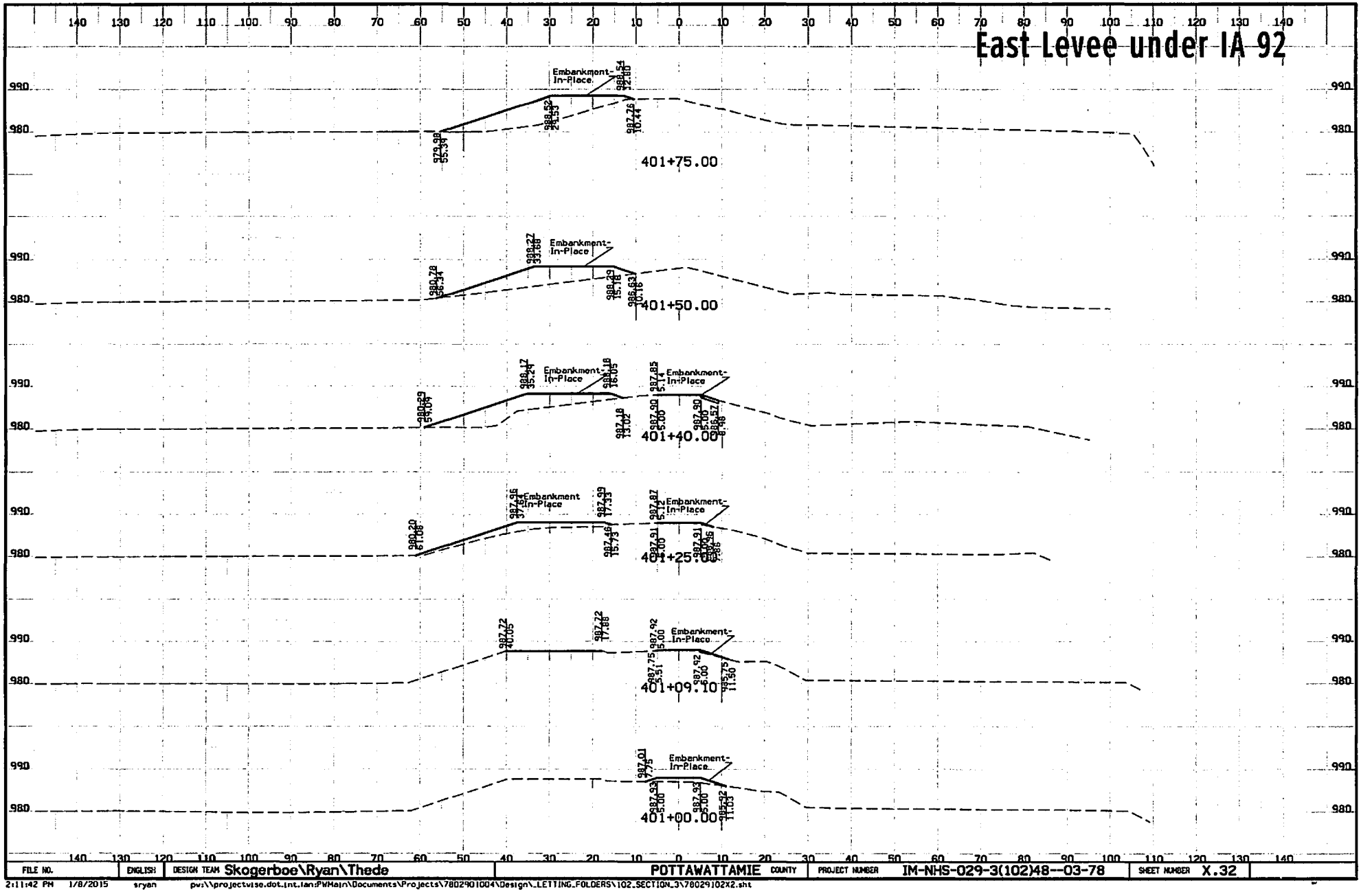
East Levee under IA 92
140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140
990
980
Embankment-In-Place
988.54
32.80
988.52
28.53
987.76
10.44
979.98
55.39
401+75.00
988.27
33.68
988.49
15.18
986.63
10.16
980.28
58.34
401+50.00
988.17
35.24
988.18
18.03
987.85
5.14
987.80
5.00
987.90
5.06
980.29
59.08
987.18
13.02
401+40.00
987.96
37.48
987.99
17.33
987.87
5.12
987.46
15.73
987.91
5.00
980.20
61.08
401+25.00
987.22
40.05
987.22
17.68
987.92
5.00
987.75
5.51
987.92
6.00
985.75
11.50
401+09.10
987.01
7.75
987.93
5.00
987.93
5.00
985.92
11.63
401+00.00
FILE NO.
ENGLISH
DESIGN TEAM Skogerboe\Ryan\Thede
POTTAWATTAMIE COUNTY
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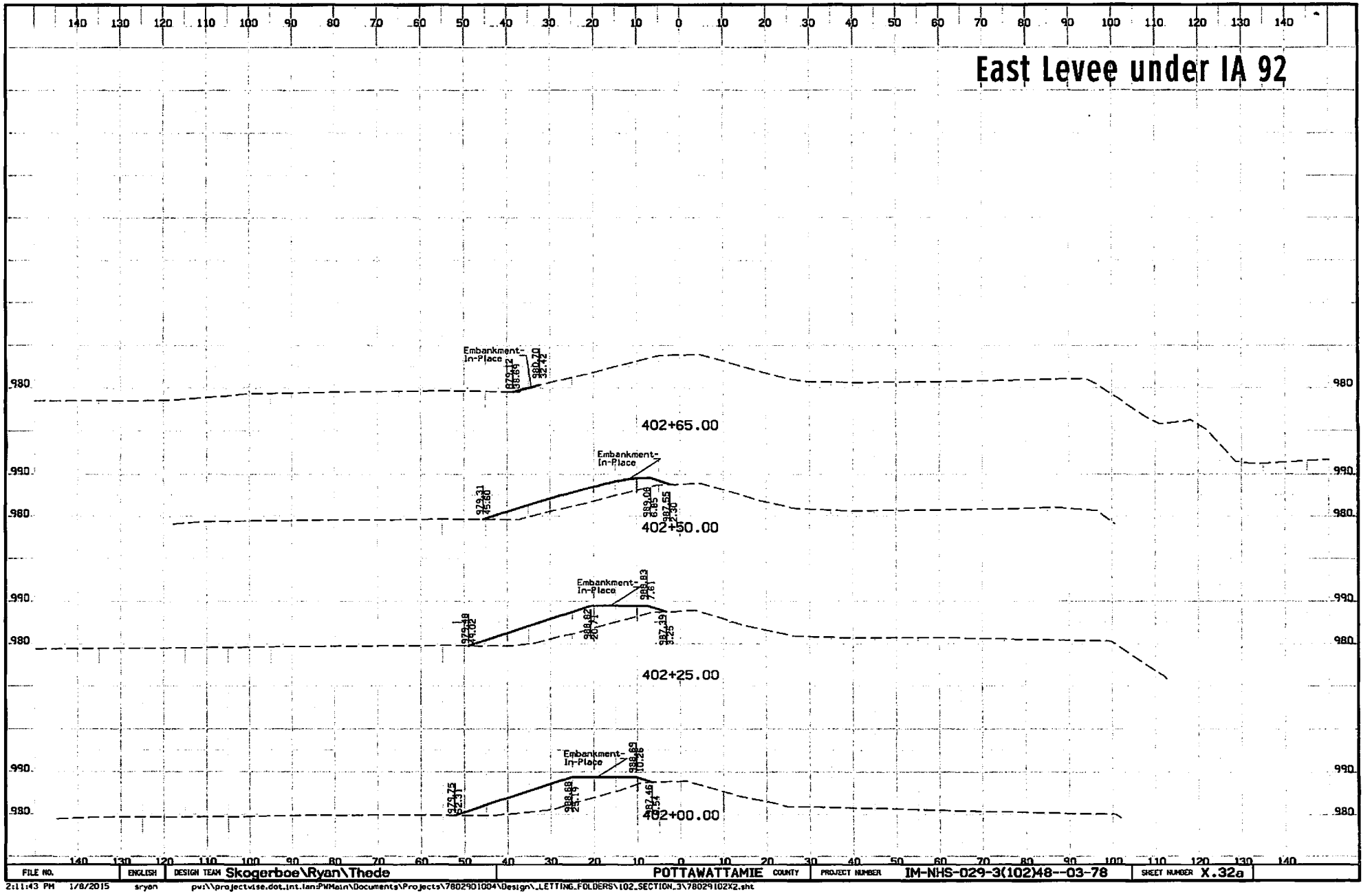
East Levee under IA 92
140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140
980
990
Embankment-In-Place
879.12
38.69
980.70
32.42
402+65.00
Embankment-In-Place
979.31
45.80
989.04
6.85
987.55
2.30
402+50.00
Embankment-In-Place
975.18
14.02
988.83
7.81
988.82
20.71
987.39
3.25
402+25.00
Embankment-In-Place
979.75
22.31
988.69
10.26
988.68
29.19
987.46
1.54
402+00.00
FILE NO.
ENGLISH
DESIGN TEAM Skogerboe\Ryan\Thede
POTTAWATTAMIE COUNTY
PROJECT NUMBER IM-NHS-029-3(102)48--03-78
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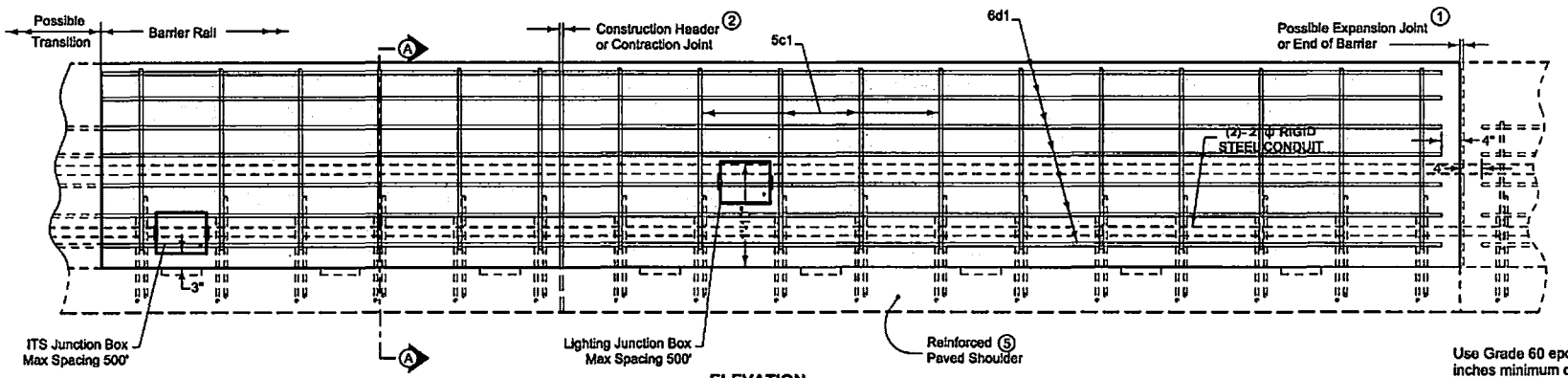
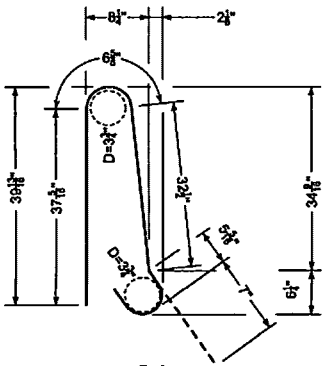
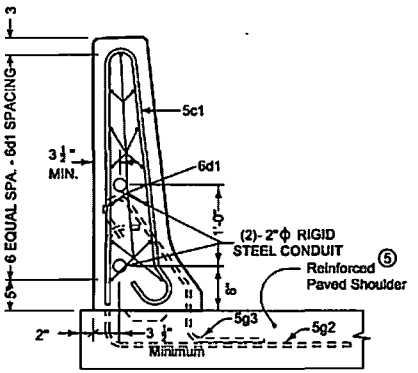


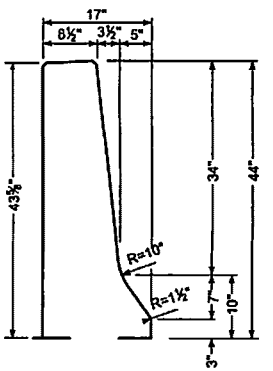
ELEVATION



5c1
BENT BAR



SECTION A-A



BARRIER FACE

Use Grade 60 epoxy-coated reinforcing bars. Provide 2 inches minimum cover. Anchor all reinforcement to prevent movement. Secure each section at the front, back, and at 3'-6" intervals using a method approved by the Engineer.

① Expansion joints are necessary only where specifically required by project plans. Conform expansion material to the shape of the barrier. No sealer is required.

② Where abutting sections are placed as separate pours, a butt joint may be used. Extend longitudinal reinforcement into the abutting section a minimum of 1'-6". Contraction joint locations shall match pavement joint locations.

③ Fillet all exposed corners with a ¾ inch dressed and beveled strip.

④ Place barrier markers at 100 foot increments in areas with non-continuous lighting, or 250 foot increments in areas with continuous lighting. Marker color to be the same as adjacent edge line.

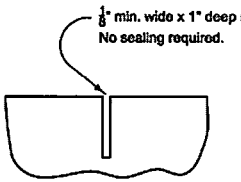
⑤ Refer to BA-106 for details of 5g2 bars, 5g3 bars, and reinforced paved shoulder.

Possible Contract Item:
Concrete Barrier, Reinforced, As Per Plan

Possible Tabulation:
108-188

ESTIMATED QUANTITIES FOR BARRIER Per Linear Foot	
Concrete - Cu. Yds.	0.13
Reinforcing Steel - Lbs.	27.3

REINFORCING BAR LIST Per Section (Approximately 20')			
Bar	Number of Bars	Length	Spacing
5c1	20	7'-5"	1'-0"
6d1	13	19'-4"	—



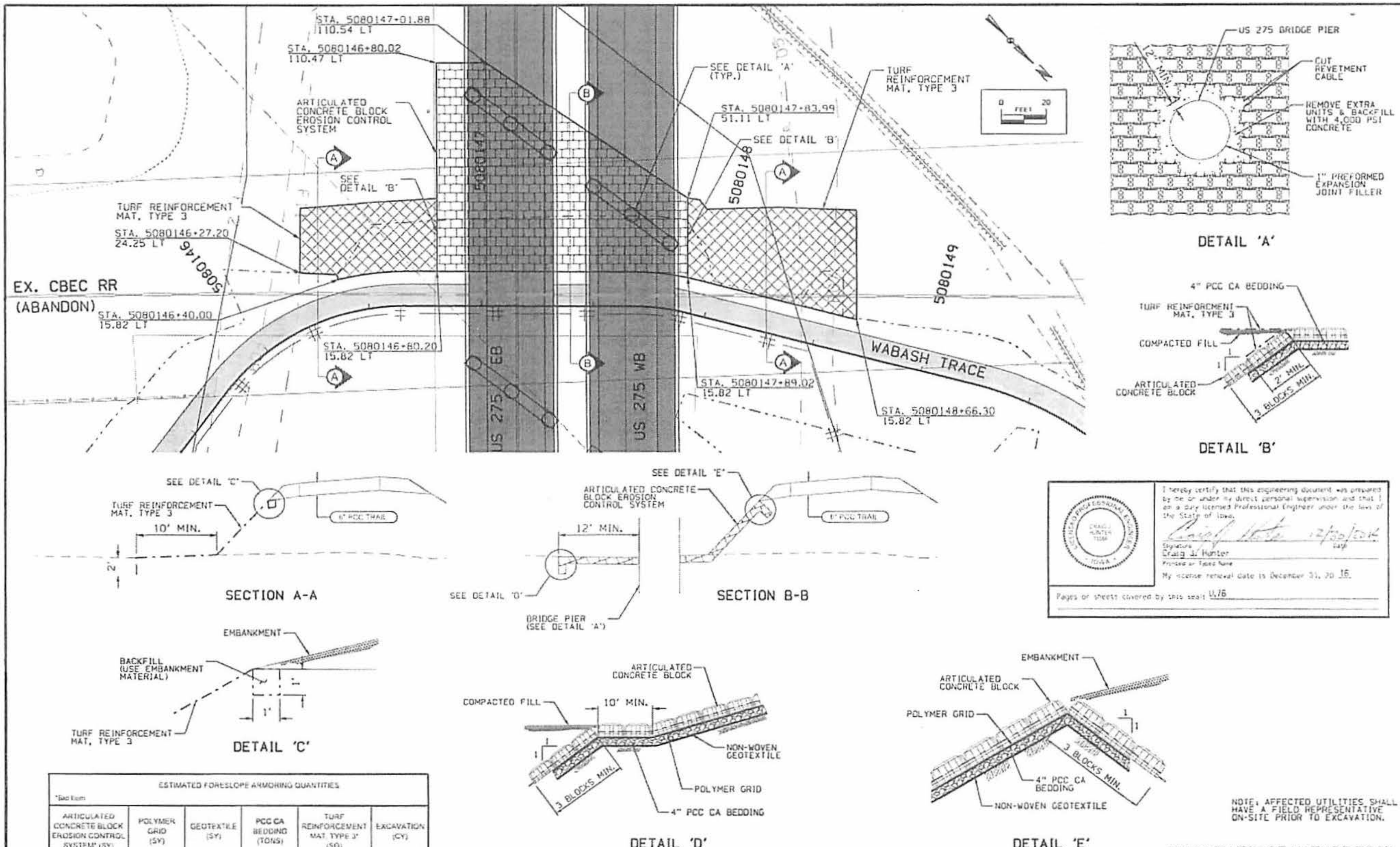
SAWED CONTRACTION JOINT

Saw cut top and front face. Saw cut back if exposed.

44" CONCRETE BARRIER FOR USE WITH REINFORCED PAVED SHOULDER

FILE NO.	ENGLISH	DESIGN TEAM Skogerboe\Ryan\Thede	POTTAWATTAMIE COUNTY	PROJECT NUMBER IM-NHS-029-3(102)48--03-78	SHEET NUMBER U.57

9:26:30 AM 2/2/2015 sryan pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\Design\.LETTING_FOLDERS\102_SECTION_3\7802910202.SHT



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Signature: Craig J. Hunter — Date: 12/30/2014

Printed or Typed Name: Craig J. Hunter

My license renewal date is December 31, 20 16.

Pages or sheets covered by this seal: U.76

ESTIMATED FORESLOPE ARMORING QUANTITIES					
ARTICULATED CONCRETE BLOCK EROSION CONTROL SYSTEM* (SY)	POLYMER GRID (SY)	GEOTEXTILE (SY)	PCC CA BEDDING (TONS)	TURF REINFORCEMENT MAT, TYPE 3* (SQ)	EXCAVATION (CY)
1030	1030	1030	192.81	60.2	458

*Bid Item

NOTE: AFFECTED UTILITIES SHALL HAVE A FIELD REPRESENTATIVE ON-SITE PRIOR TO EXCAVATION.

WABASH TRACE NATURE TRAIL
FORESLOPE ARMORING

FILE NO.	ENGLISH	DESIGN TEAM Skogerboe\Ryan\Thede	POTTAWATTAMIE COUNTY	PROJECT NUMBER IM-NHS-029-3(102)48--03-78	SHEET NUMBER U.76

6:57:29 PM 12/30/2014 johnsmith c:\pwworking\oma\d1602536\78029102076.sht

Addendum

Iowa Department of Transportation
Office of Contracts

Date of Letting: February 17, 2015
Date of Addendum: February 3, 2015

B.O.	Proposal ID	Proposal Work Type	County	Project Number	Addendum
306	78-0293-102	GRADING	POTTAWATTAMIE	IM-NHS-029-3(102)48--03-78 IM-NHS-029-3(103)48--03-78 IM-NHS-029-3(104)48--03-78 IM-029-3(105)48--13-78 NHS-029-3(106)48--11-78 IM-NHS-029-3(110)48--03-78 IM-NHS-029-3(122)48--03-78 IM-NHS-029-3(146)48--03-78 IM-NHS-080-1(416)3--03-78	17FEB306.A03

Make the following changes to the PROPOSAL SCHEDULE OF PRICES:

Change Proposal Line No. 2960 2507-8029000 EROSION STONE:
From: 1,000.000 TONS
To: 920.000 TONS

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

Project NHS-29-3(106)--11-78

On Sheet 4, in the middle column of the General Notes, revise note to read as follows: "Drilled shaft construction shall not commence prior to completion of the piggyback levees at Piers 3 and 6."

Replace Sheet 5 with attached Sheet 5.
Changes were made to show the piggyback extension adjacent to Pier 3.

Replace Sheet 6 with attached Sheet 6.
Changes were made to show the piggyback extensions adjacent to Piers 3 and 6. Note was added to reflect that hydraulic data shown does not account for the Temporary Working Pads shown on Sheet 97. This sheet has been resealed for Hydraulic Design.

Replace Sheet 7 with attached Sheet 7.
Changes were made to show the piggyback extension adjacent to Pier 6 and the "Articulated Concrete Block Erosion Control System" adjacent to Pier 7.

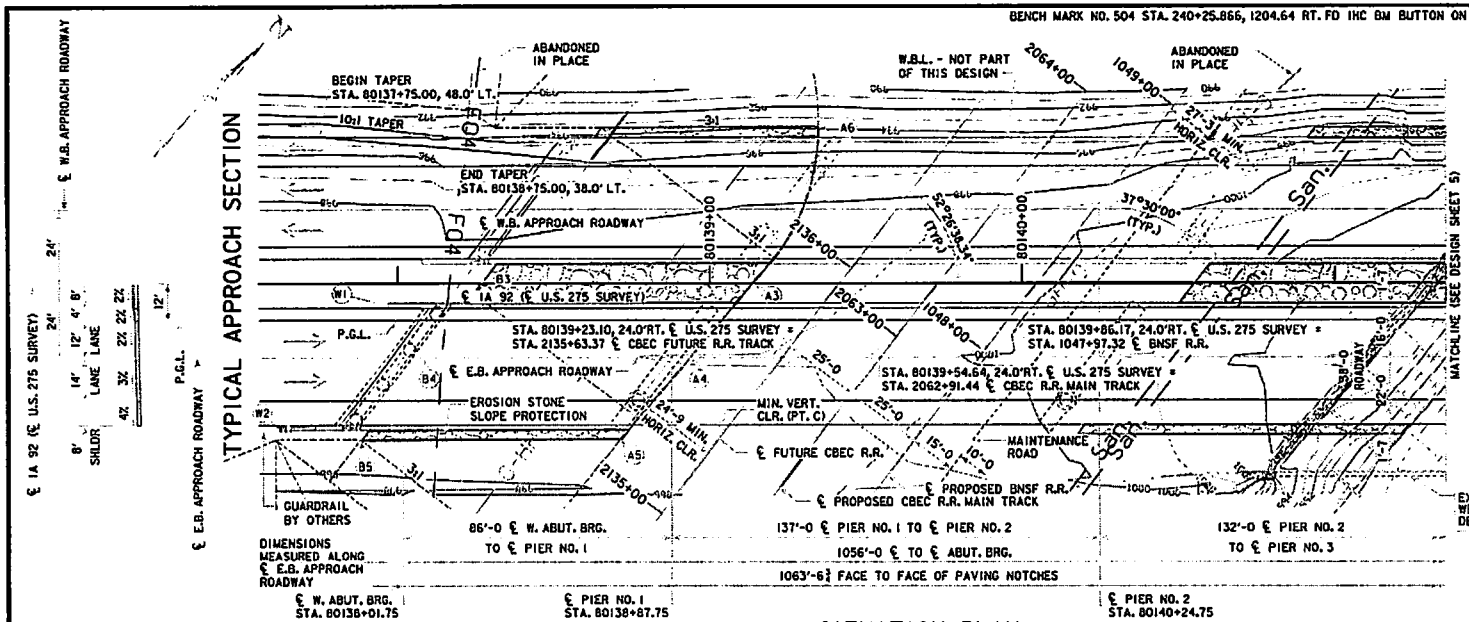
Replace Sheet 8 with attached Sheet 8.
Changes were made to show the piggyback extensions adjacent to Pier 3 and Pier 6. Articulated Concrete Block Erosion Control System was added adjacent to Pier 7. Erosion Stone quantity was reduced from 1000 TONS to 920 TONS due to overlap from the added Articulated Concrete Block Erosion Control System.

Replace Sheet 54 with attached Sheet 54.
Added Articulated Concrete Block Erosion Control System adjacent to Pier 7.

Replace Sheet 97 with attached Sheet 97.
Revised Working Pads to accommodate the piggyback extension. Revised Working Pad Notes.

Replace J.1 with attached J.1
Sheet Tab 108-26A Add "and Pier 6" to notes regarding Piggy Back Levees.

BENCH MARK NO. 504 STA. 240+25.866, 1204.64 RT. FD IHC BM BUTTON ON SE WING OF BRIDGE OVER MOSQUITO CREEK & RR TRACK ELEVATION 1002.280



SITUATION PLAN

BERM SLOPE LOCATION TABLE

	WEST ABUTMENT STATION	WEST ABUTMENT OFFSET	WEST ABUTMENT ELEV	EAST ABUTMENT STATION	EAST ABUTMENT OFFSET	EAST ABUTMENT ELEV
A3	80139+14.76	0.00'	979.30	80147+74.52	0.00'	983.05
A4	80138+93.78	24.00'RT.	979.30	80147+59.34	24.00'RT.	983.21
A5	80138+71.57	50.58'RT.	979.30	80147+52.13	50.58'RT.	983.21
A6	80139+35.26	50.58'LT.	979.30			
B3	80138+26.16	0.00'	1002.73	80148+70.18	0.00'	1008.38
B4	80138+07.74	24.00'RT.	1001.88	80148+51.77	24.00'RT.	1008.38
B5	80137+87.34	50.58'RT.	1000.94	80148+31.37	50.58'RT.	1008.38
D1	80138+39.49	90.11'RT	979.30			

BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE

END OF BRIDGE WING TABLE

	WEST ABUTMENT POINT	WEST ABUTMENT STATION	WEST ABUTMENT OFFSET	EAST ABUTMENT POINT	EAST ABUTMENT STATION	EAST ABUTMENT OFFSET
	W1	80137+96.77	6.42' RT.	W3	80148+88.45	6.42' RT.
	W2	80137+66.47	47.58' RT.	W4	80148+58.14	47.58' RT.

UTILITY LEGEND

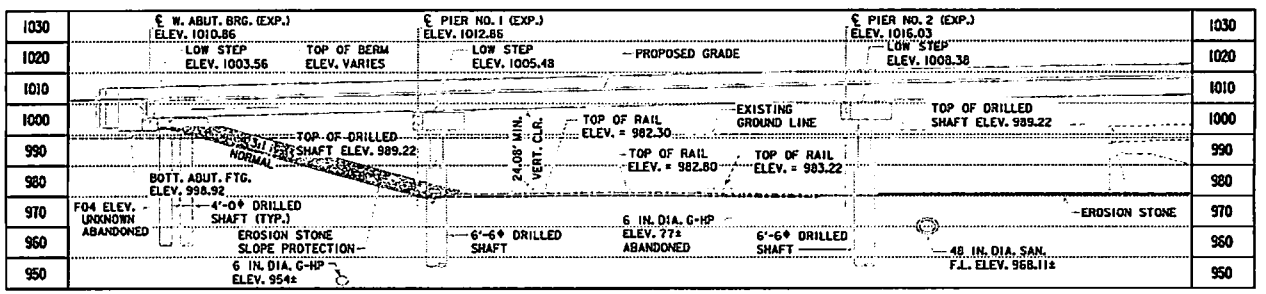
- E2 BURIED ELECTRIC, IOWA DOT, TO BE RELOCATED.
- F04 FIBER OPTIC, IOWA COMM. NETWORK, ABANDONED IN PLACE.
- G-HP 6" STEEL, HIGH PRESSURE GAS, NUSTAR ENERGY.
- SAN 48" SANITARY, CITY OF COUNCIL BLUFFS, DO NOT DISTURB.

MIN. VERT. CLEARANCE (PT. C)

OVERHEAD STA. = 80139+03.06, 46'-0 RT.
OVERHEAD ELEVATION = 1012.55'
TOP OF RAIL ELEVATION = 982.30'
DEPTH OF SUPERSTRUCTURE = 6.17'
(SLAB, HAUNCH & BEAM)
MIN. VERT. CLEARANCE = 24.08'

LOCATION

IA 92 E.B. OVER
MOSQUITO CREEK &
RELOCATED RAILROADS
T-74N R-43W
SECTION 7
LEWIS TOWNSHIP
POTTAWATTAMIE COUNTY
CITY OF COUNCIL BLUFFS
LATITUDE: 41.215688°
LONGITUDE: -95.827404°
FHWA NO. 609066
BRIDGE MAINT. NO. 7806.3R092



LONGITUDINAL SECTION ALONG ℄ E.B. APPROACH ROADWAY

NOTES:
ALL UNITS IN FEET UNLESS NOTED OTHERWISE.
TOP OF BRIDGE DECK AT CENTERLINE E.B. OR W.B. APPROACH ROADWAY IS 0.24' BELOW THE PROFILE GRADE TO ACCOUNT FOR DECK CROSS SLOPE.
FOR PROFILE OF IA 92, SEE DESIGN SHEET 5 OF 96.

0.00%
VPT STA. = 2108+03.95
VPT ELEV. = 982.30
VPC STA. = 2159+90.52
VPC ELEV. = 982.30

FUTURE CBEC R.R. PROPOSED PROFILE GRADE

0.00%
VPT STA. = 2034+10
VPT ELEV. = 982.80
VPC STA. = 2085+26.19
VPC ELEV. = 982.80

CBEC R.R. MAIN TRACK PROPOSED PROFILE GRADE

0.00%
VPT STA. = 1010+46.69
VPT ELEV. = 983.22
VPC STA. = 1054+00.00
VPC ELEV. = 983.22

BNSF R.R. PROPOSED PROFILE GRADE

NOTE:
PROPOSED RAILROAD PROFILE GRADES ARE AT TOP OF RAIL.

REFER TO DESIGN SHEET 7 FOR SITE PLAN DETAILING EROSION PROTECTION LAYOUT.

DESIGN FOR 37°30' (L.A.)

1056'-0 X 38'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE (BTE)

86'-0, 137'-0, 132'-0, 92'-0, 152'-0, 142'-0, 117'-0, 122'-0, 76'-0 SPANS

SITUATION PLAN (E.B.)

STA. 80143+29.75, 24.0' RT. (℄ IA. 92 / ℄ U.S 275 SURVEY) OCTOBER, 2014

POTTAWATTAMIE COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 4 OF 96 FILE NO. 30169 DESIGN NO. 214

DESIGN TEAM KBX / PES / GJK	POTTAWATTAMIE COUNTY	PROJECT NUMBER NHS-029-3(106)48--11-78	SHEET NUMBER 5

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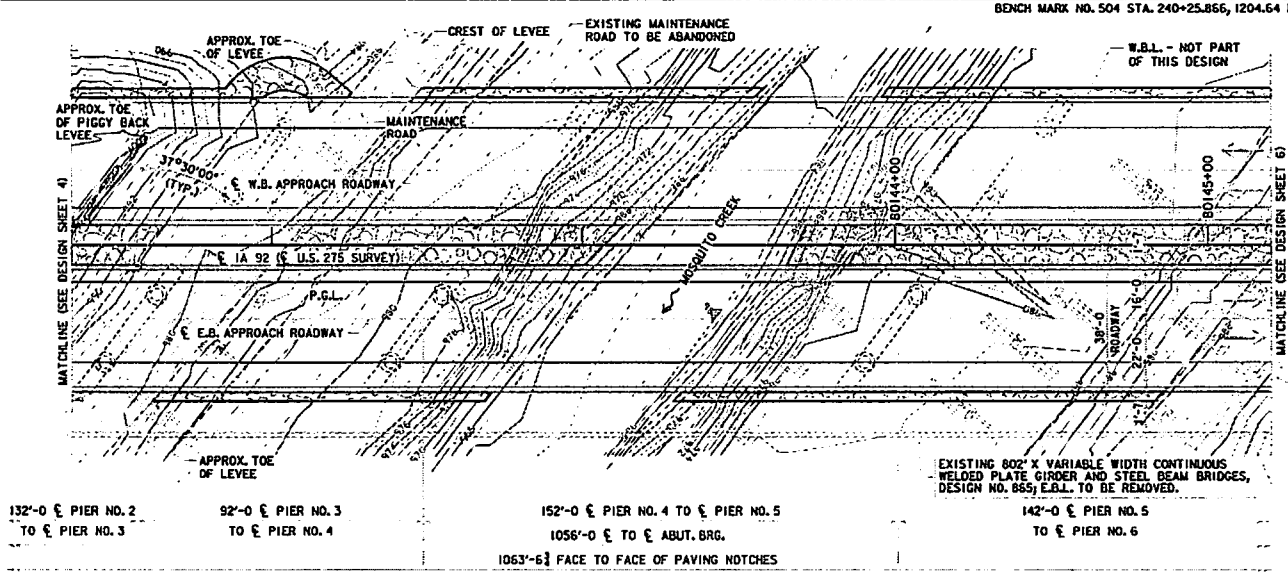
BENCH MARK NO. 504 STA. 240+25.866, 1204.64 RT. FD IHC BM BUTTON ON SE WING OF BRIDGE OVER MOSQUITO CREEK & RR TRACK ELEVATION 1002.280



SITUATION PLAN

HYDRAULIC DATA

DRAINAGE AREA = 250 SQ. MI.
STREAM SLOPE = 3.7 FT./MI.

Q2 = 3,600 CFS
STAGE = 979.7
CHANNEL VELOCITY = 6.2 FPS

Q_{50} = 16,940 CFS
STAGE = 987.0*
BACKWATER = 0.73 FT.
AVG. BRIDGE VELOCITY = 5.3 FPS

Q_{100} = 17,800 CFS
STAGE = 987.0*
BACKWATER = 0.74 FT.
AVG. BRIDGE VELOCITY = 5.4 FPS
CALCULATED DESIGN SCOUR = 951.9

Q_{500} = 19,640 CFS
STAGE = 987.0*
AVG. BRIDGE VELOCITY = 5.8 FPS
CALCULATED CHECK SCOUR = 951.9

Q LEVEE OVERTOP= 9,800 CFS
LEVEE OVERTOP ELEV. = 986.0

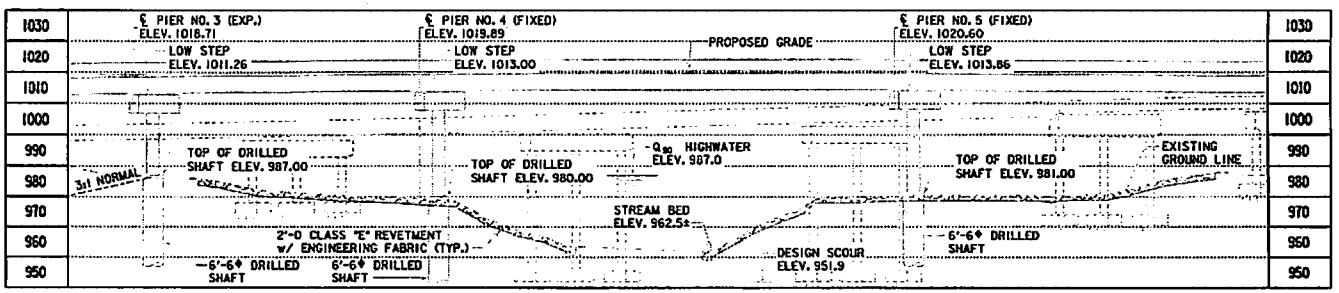
EXTREME HW STAGE = NOT AVAILABLE
DATE = NOT AVAILABLE
AVG. LOW WATER STAGE = NOT AVAILABLE

*STAGE ELEVATION HAS BEEN LIMITED TO THE LEVEE OVERTOPPING ELEVATION PLUS 1.0 FT. BACKWATER, AVERAGE BRIDGE VELOCITY AND SCOUR ARE CALCULATED BASED ON THE STAGE ELEVATION FROM THE HYDRAULIC MODEL USED IN THE HYDRAULIC REPORT. SEE THE HYDRAULIC REPORT FOR ADDITIONAL INFORMATION.

NOTE: THE 50, 100 & 500 YR. STAGES AND DISCHARGES ARE FROM THE POTTAWATTAMIE COUNTY F.I.S., DATED FEB. 4, 2005. F.I.S. DISCHARGES AT THE PROPOSED BRIDGE SITE ARE REDUCED DUE TO UPSTREAM OVERTOPPING OF THE LEVEE. 2 YR. DISCHARGE PER U.S.G.S. REPORT 00-4233. F.I.S. DATUM IS THE SAME AS THE PROJECT DATUM.

PROPOSED BRIDGE MEETS A NO-RISE CONDITION WHEN COMPARED TO THE EXISTING BRIDGE.

THE HYDRAULIC DATA ON THIS SHEET DOES NOT ACCOUNT FOR THE TEMPORARY WORKING PADS ON SHEET 9T.



LONGITUDINAL SECTION ALONG ℄ E.B. APPROACH ROADWAY

HYDRAULIC DESIGN

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Chad W. Meyer — 02-03-2015
Signature — Date
Chad W. Meyer
Printed or Typed Name

My license renewal date is December 31, 2016

Pages or sheets covered by this seal: SHEET 6

NOTES:
ALL UNITS IN FEET UNLESS NOTED OTHERWISE.
TOP OF BRIDGE DECK AT CENTERLINE E.B. OR W.B. APPROACH ROADWAY IS 0.24' BELOW THE PROFILE GRADE TO ACCOUNT FOR DECK CROSS SLOPE.
EXCAVATE STREAM BANKS AS REQUIRED SO THAT TOP OF CLASS "E" REVETMENT MATCHES EXISTING GROUND LINE.

VPI STA. = 80142+75.00
VPI ELEV. = 1022.08
L = 450'
VPC STA. = 80139+50.00
VPC ELEV. = 1017.18
G1 = -2.3549% G2 = +2.3200% G3 = -0.7254%
VPI STA. = 80136+00.00
VPI ELEV. = 1006.42
L = 400'

PROPOSED PROFILE GRADE ℄ IA 92 (℄ U.S. 275 SURVEY)

REFER TO DESIGN SHEET 7 FOR SITE PLAN DETAILING EROSION PROTECTION LAYOUT.

DESIGN FOR 37°30' (L.A.)

1056'-0 X 38'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE (BTE)

86'-0, 137'-0, 132'-0, 92'-0, 152'-0, 142'-0, 117'-0, 122'-0, 76'-0 SPANS

SITUATION PLAN (E.B.)

STA. 80143+29.75, 24.0' RT. (℄ IA. 92 / ℄ U.S 275 SURVEY) OCTOBER, 2014

POTTAWATTAMIE COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 5 OF 96 FILE NO. 30169 DESIGN NO. 214

DESIGN TEAM KBK / PES / GJK | POTTAWATTAMIE COUNTY | PROJECT NUMBER NHS-029-3(106)48--11-78 | SHEET NUMBER 6

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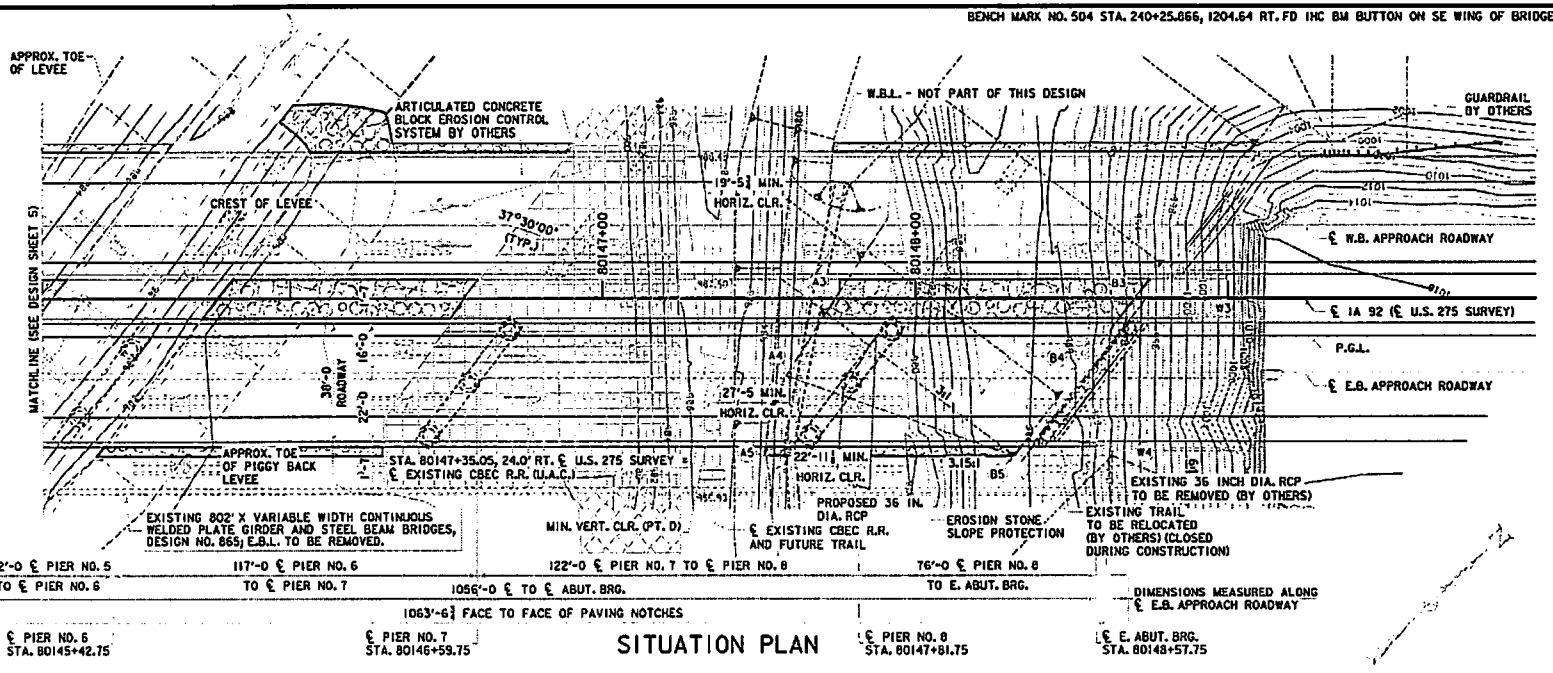
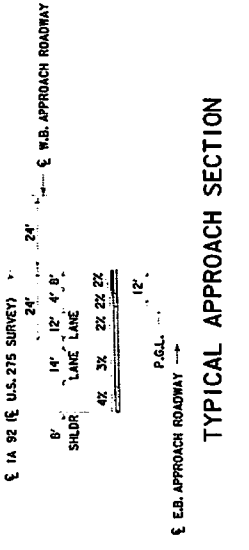
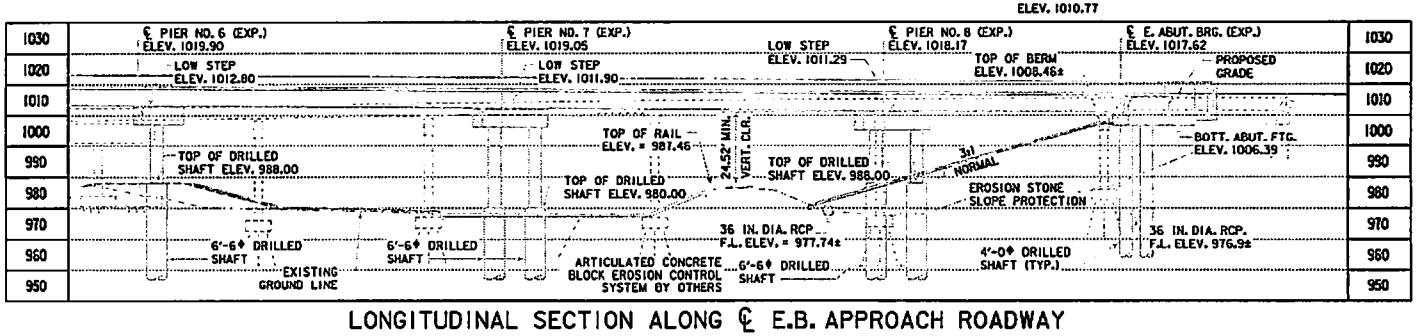
BENCH MARK NO. 504 STA. 240+25.866, 1204.64 RT. FD IHC BM BUTTON ON SE WING OF BRIDGE OVER MOSQUITO CREEK & RR TRACK ELEVATION 1002.280



SITUATION PLAN

TYPICAL APPROACH SECTION





LONGITUDINAL SECTION ALONG ℄ E.B. APPROACH ROADWAY

MIN. VERT. CLEARANCE (PT. D)

OVERHEAD STA. = 80147+37.57, 46.0' RT.	
OVERHEAD ELEVATION =	1017.82'
TOP OF RAIL ELEVATION =	987.19'
DEPTH OF SUPERSTRUCTURE = (SLAB, HAUNCH & BEAM)	6.17'
MIN. VERT. CLEARANCE =	24.47'

NOTES:
ALL UNITS IN FEET UNLESS NOTED OTHERWISE.
TOP OF BRIDGE DECK AT CENTERLINE E.B. OR W.B. APPROACH ROADWAY IS 0.24' BELOW THE PROFILE GRADE TO ACCOUNT FOR DECK CROSS SLOPE.
FOR UTILITY LEGEND, BERM SLOPE LOCATION TABLE AND END OF BRIDGE WING TABLE, SEE DESIGN SHEET 4 OF 96.

REFER TO DESIGN SHEET 7 FOR SITE PLAN DETAILING EROSION PROTECTION LAYOUT.

DESIGN FOR 37°30' (L.A.)

1056'-0 X 38'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE (BTE)

86'-0, 137'-0, 132'-0, 92'-0, 152'-0, 142'-0, 117'-0, 122'-0, 76'-0 SPANS

SITUATION PLAN (E.B.)

STA. 80143+29.75, 24.0' RT. (℄ IA. 92 / ℄ U.S. 275 SURVEY) OCTOBER, 2014

POTTAWATTAMIE COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 6 OF 96 FILE NO. 30169 DESIGN NO. 214

DESIGN TEAM KBK / PES / GJK	POTTAWATTAMIE COUNTY	PROJECT NUMBER NHS-029-3(106)48--11-78	SHEET NUMBER 7

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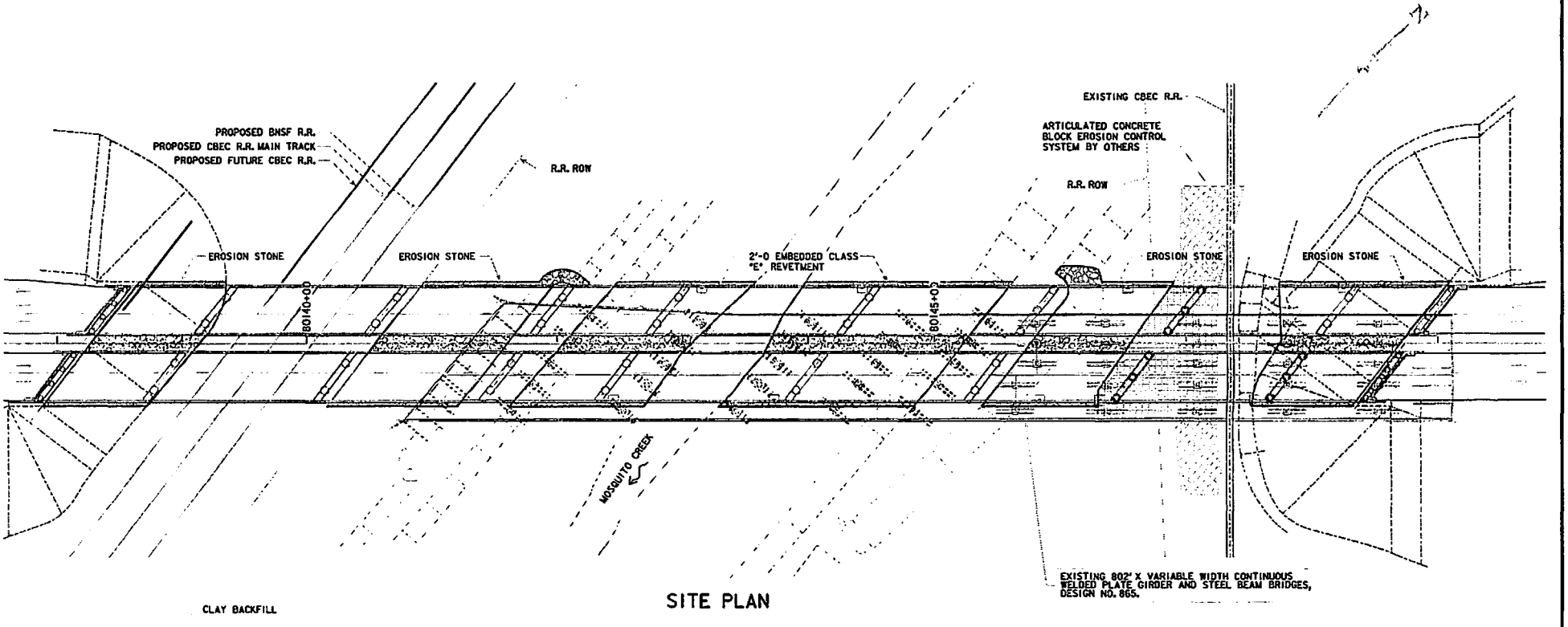
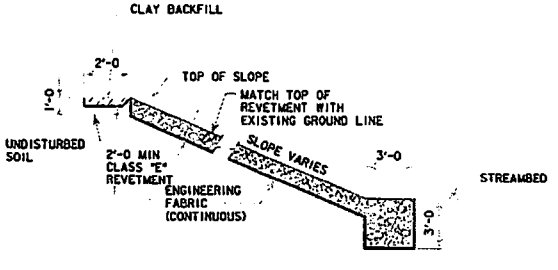


SITE PLAN



REVETMENT DETAIL WITH STREAMBED TOE

REVETMENT QUANTITY TABLE

REVETMENT, CLASS "E"	TONS	3455
ENGINEERING FABRIC	S.Y.	3455
EXCAVATION, CLASS 10, CHANNEL	C.Y.	2160
EROSION STONE	TONS	920

DESIGN FOR 37°30' (L.A.)

1056'-0 X 38'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE (BTE)

86'-0, 137'-0, 132'-0, 92'-0, 152'-0, 142'-0, 117'-0, 122'-0, 76'-0 SPANS

SITE PLAN

STA. 80143+29.75, 24.0' RT. (℄ IA. 92 / ℄ U.S 275 SURVEY) OCTOBER, 2014

POTTAWATTAMIE COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 7 OF 96 FILE NO. 30169 DESIGN NO. 214

DESIGN TEAM KBK / PES / GJK | POTTAWATTAMIE COUNTY | PROJECT NUMBER NHS-029-3(106)48--11-78 | SHEET NUMBER 8

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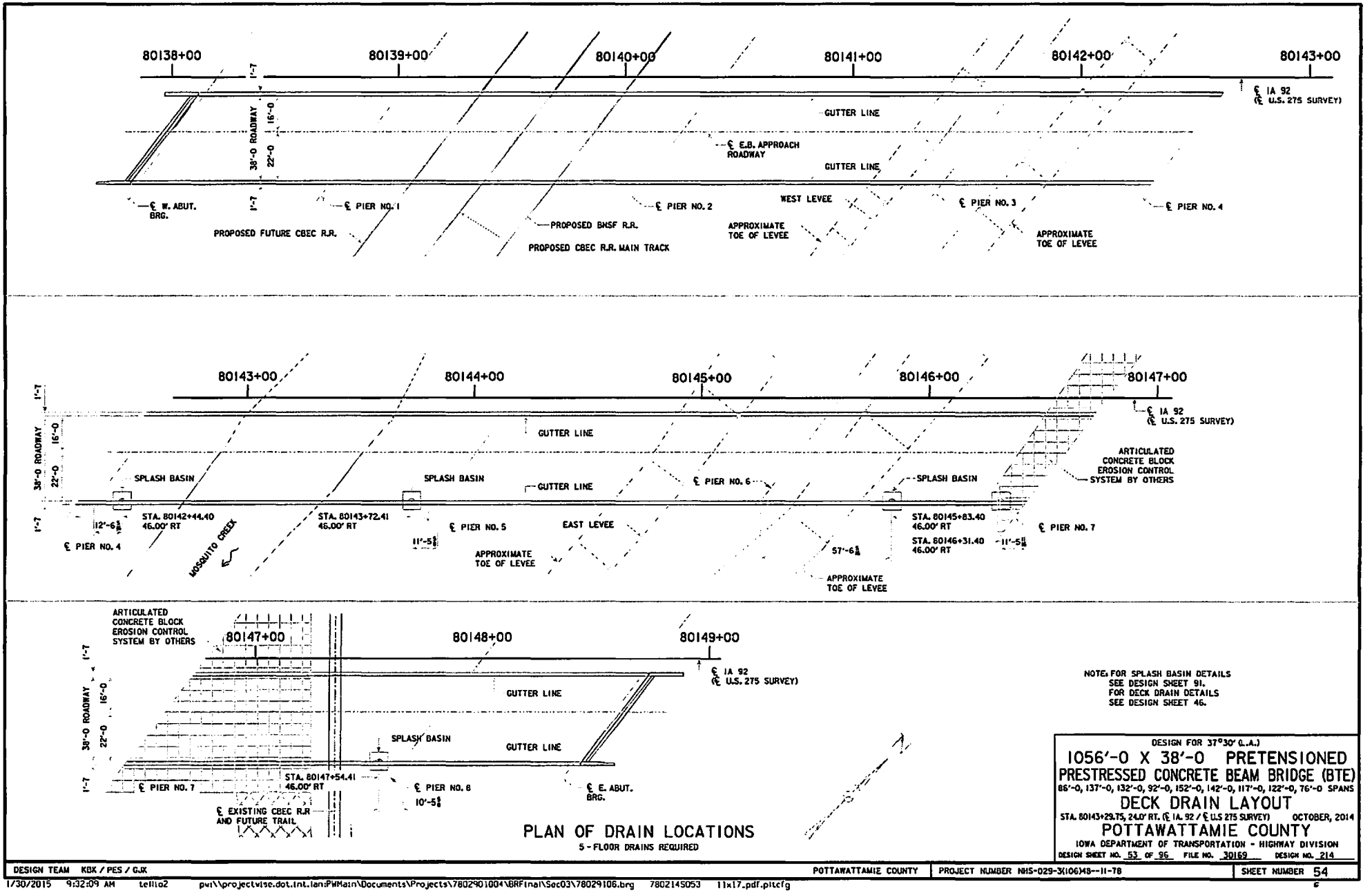

PLAN OF DRAIN LOCATIONS

5 - FLOOR DRAINS REQUIRED

NOTE: FOR SPLASH BASIN DETAILS SEE DESIGN SHEET 91.
FOR DECK DRAIN DETAILS SEE DESIGN SHEET 46.

DESIGN FOR 37°30' (L.A.)

1056'-0 X 38'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE (BTE)

86'-0, 137'-0, 132'-0, 92'-0, 152'-0, 142'-0, 117'-0, 122'-0, 76'-0 SPANS

DECK DRAIN LAYOUT

STA. 80143+29.75, 24.0' RT. (℄ IA. 92 / ℄ U.S 275 SURVEY) OCTOBER, 2014

POTTAWATTAMIE COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 53 OF 96 FILE NO. 30169 DESIGN NO. 214

DESIGN TEAM KBK / PES / GJK | POTTAWATTAMIE COUNTY | PROJECT NUMBER NHS-029-3(106)48--11-78 | SHEET NUMBER 54

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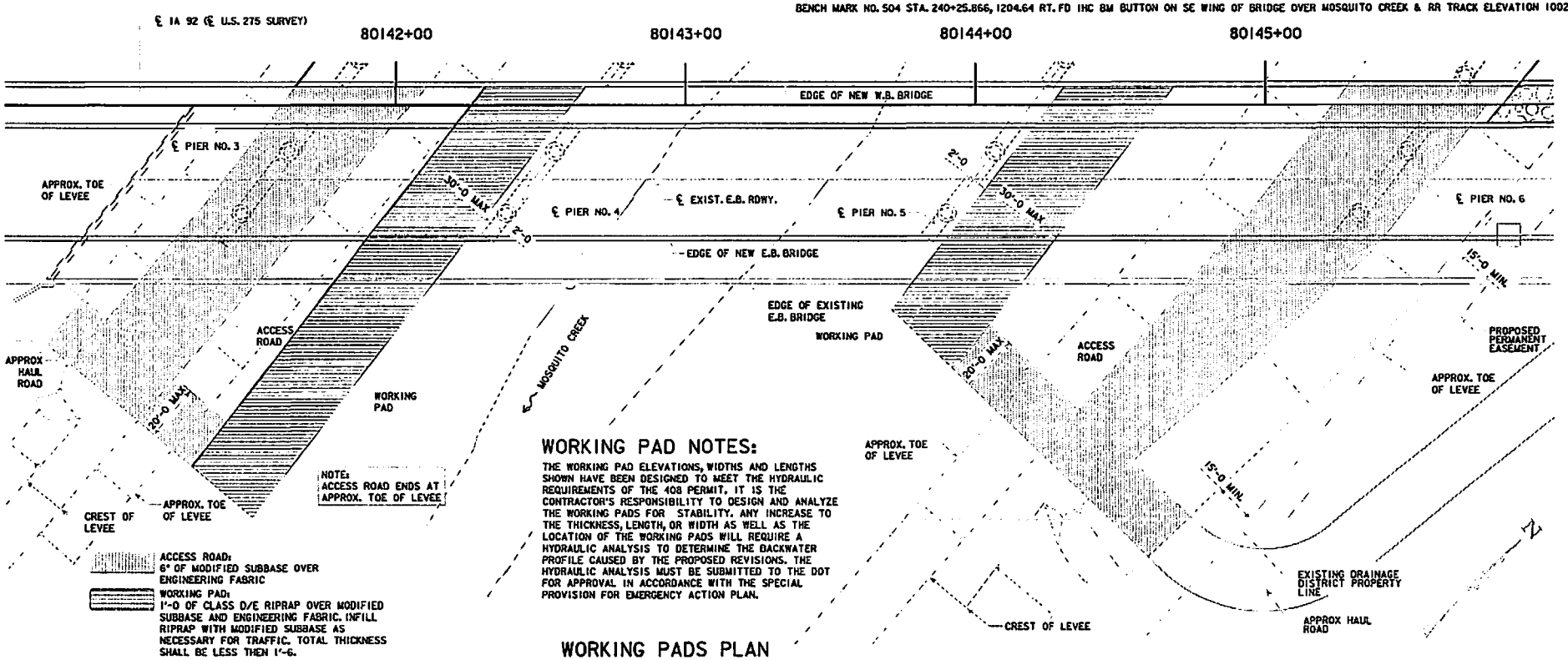
BENCH MARK NO. 504 STA. 240+25.866, 1204.64 RT. FD IHC BM BUTTON ON SE WING OF BRIDGE OVER MOSQUITO CREEK & RR TRACK ELEVATION 1002.280

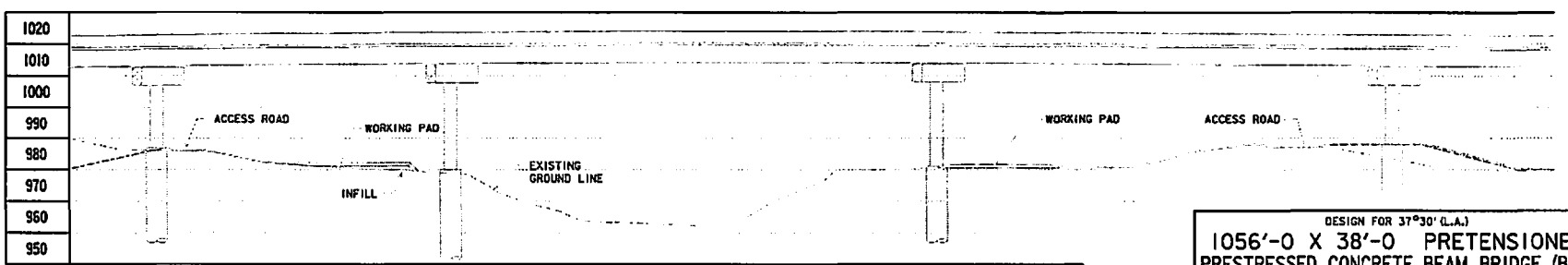
℄ IA 92 (℄ U.S. 275 SURVEY)



WORKING PAD NOTES:

THE WORKING PAD ELEVATIONS, WIDTHS AND LENGTHS SHOWN HAVE BEEN DESIGNED TO MEET THE HYDRAULIC REQUIREMENTS OF THE 408 PERMIT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DESIGN AND ANALYZE THE WORKING PADS FOR STABILITY. ANY INCREASE TO THE THICKNESS, LENGTH, OR WIDTH AS WELL AS THE LOCATION OF THE WORKING PADS WILL REQUIRE A HYDRAULIC ANALYSIS TO DETERMINE THE BACKWATER PROFILE CAUSED BY THE PROPOSED REVISIONS. THE HYDRAULIC ANALYSIS MUST BE SUBMITTED TO THE DOT FOR APPROVAL IN ACCORDANCE WITH THE SPECIAL PROVISION FOR EMERGENCY ACTION PLAN.

WORKING PADS PLAN



LONGITUDINAL SECTION ALONG ℄ NEW E.B. APPROACH ROADWAY

(SHOWING WORKING PADS)
(LOOKING UPSTREAM)

DESIGN FOR 37°30' (L.A.)

1056'-0 X 38'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE (BTE)

86'-0, 137'-0, 132'-0, 92'-0, 152'-0, 142'-0, 117'-0, 122'-0, 76'-0 SPANS

CONTRACTOR WORKING PADS

STA. 80143+29.75, 24.0' RT. (℄ IA. 92 / ℄ U.S 275 SURVEY) OCTOBER, 2014

POTTAWATTAMIE COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 96 OF 96 FILE NO. 30169 DESIGN NO. 214

DESIGN TEAM KBK / PES / GJK | POTTAWATTAMIE COUNTY | PROJECT NUMBER NHS-029-3(106)48--11-78 | SHEET NUMBER 97

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108-23A
08-01-08

TRAFFIC CONTROL PLAN

1. One lane in each direction will be maintained on US 275 at all times.

108-26A
08-01-08

STAGING NOTES

Contractor must wait 210 days after the completion of the east berm grading before paving the bridge approach. This is contingent on the movement monitoring.

Coordination required for construction of abutment drilled shafts and rigid inclusions.

Traffic moved to two-way-two lane operation on existing Westbound lanes. See plan IM-NHS-29-3(102)48--03-78 for this two-way-two-lanes traffic configuartion.

Bike path under bridge will be closed for duration of project. Closure signing and detour in plan IM-NHS-29-3(97)48--03-78.

Construction access allowed as defined in plan IM-NHS-29-3(102)48--03-78.

The construction limits for this project include the Mosquito Creek Levees. It is required that construction impacting the levees and Mosquito Creek will be staged to maintain protection against flooding. The proposed piggy back levees will need to be completed prior to any grading or bridge construction within the existing Mosquito Creek and levee section. The Grading Contractor will promptly notify the Engineer 1 week prior to construction of the piggy back levees and once the piggy back levees are complete. The Department will secure approval from the City for approval of the piggy back levees. (Allow up to 2 weeks for approval)

Work in Levee Area Staging Notes:

- Piggy Back Levees at pier 3 and pier 6 shall not be constructed until bridge removal is complete. And drilled shaft construction at pier 3 and pier 6 shall not commence prior to completion of the piggy back levees at pier 3 and pier 6.
- Restore levees, install piggy back levees and obtain approval of completed piggy back levees construction from City as required before bridge construction.
- Levee crossing will be allowed only at designated locations as shown in plan IM-NHS-29-3(102)48--03-78.

111-01
04-17-12

COORDINATED OPERATIONS

Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.

Project	Type of Work
IM-NHS-029-3(80)52--03-78	Bridge
IM-NHS-029-3(86)52--03-78	Grade and Pave
IM-NHS-029-3(94)52--03-78	Signing
IM-NHS-029-3(95)52--03-78	Lighting
IM-NHS-029-3(87)52--03-78	Grade and Pave
IM-NHS-029-3(81)52--03-78	Bridge
IM-NHS-080-1(367)2--03-78	Grade and Pave
IM-NHS-080-1(368)2--03-79	Lighting
IM-NHS-080-1(369)2--03-80	Traffic Signs
IM-NHS-80-1(309)2--03-78	Bridge
IM-NHS-080-1(428)0--03-78	RCB Culvert Extension
IM-NHS-29-3(126)48--0E-78	Miscellaneous
IM-NHS-29-3(97)48--03-78	Grade and Pave
IM-NHS-29-3(98)48--03-78	Bridge
IM-29-3(99)48--13-78	Bridge
NHS-29-3(100)48--11-78	Bridge
IM-NHS-029-3(111)48--03-78	Bridge
IM-NHS-029-3(128)48--03-78	Signing
INN-29-3(101)52-0E-78	Erosion Control
IM-NHS-80-1(419)3--03-78	Noise Wall
IM-NHS-080-1(364)3--03-78	Grade and Pave
IM_NHS-080-1(365)3--03-78	Traffic Signals
IM-NHS-080-1(370)3--03-78	Grade and Pave
INN-80-1(366)4--0E-78	Railroad Grading
IM-NHS-29-3(102)48--03-78	Grade and Pave
IM-NHS-29-3(103)48--03-78	Signing
IM-NHS-29-3(104)48--03-78	Signals
IM-NHS-29-3(110)48--03-78	Lighting
IM-NHS-29-3(122)48--03-79	Culvert
IM-29-3(105)48--13-78	Bridge
IM-NHSX-080-1(416)3--03-78	Bridge
INN-29-3(127)48)0E-78	RCB Culverts
IM-NHS-29-3(146)48--03-78	Bridge and Culverts
IM-NHS-080-1(374)4--03-78	Grade and Pave
IM-NHS-080-1(371)3--03-78	Bridge
IM-NHS-080-1(372)4--03-78	Bridge
IM-NHS-080-1(375)4--03-78	Lighting
IM-NHS-080-1(376)3--03-78	Signs
IM-NHS-080-1(377)3--03-78	Bridge
IM-NHS-080-1(373)3--03-78	Bridge
IM-NHS-080-1(420)3--03-78	Noise Wall

A d d e n d u m

Iowa Department of Transportation
Office of Contracts

Date of Letting: February 17, 2015
Date of Addendum: February 4, 2015

B.O.	Proposal ID	Proposal Work Type	County	Project Number	Addendum
306	78-0293-102	GRADING	POTTAWATTAMIE	IM-NHS-029-3(102)48--03-78 IM-NHS-029-3(103)48--03-78 IM-NHS-029-3(104)48--03-78 IM-029-3(105)48--13-78 NHS-029-3(106)48--11-78 IM-NHS-029-3(110)48--03-78 IM-NHS-029-3(122)48--03-78 IM-NHS-029-3(146)48--03-78 IM-NHS-080-1(416)3--03-78	17FEB306.A04

Make the following change to the Proposal Special Provisions Text and the Proposal Special Provisions List.:

Replace SP-120214 with attached SP-120214a

Which redefines the requirements of the contractor related to submittals, monitoring, response during flooding and levee restoration requirements.

Replace SP-120218 with attached SP 120218a

Which removes language pertaining to certain storm sewer pipes being excavated for in the levee critical area.

Iowa Department of Transportation

SPECIAL PROVISION
FOR
EMERGENCY ACTION PLAN

Pottawattamie County
IM-NHS-029-3(102)48--03-78
IM-NHS-029-3(103)48--03-78
IM-NHS-029-3(110)48--03-78
IM-NHS-029-3(146)48--03-78
NHS-029-3(106)48--11-78

Effective Date
January 21, 2015

THE STANDARD SPECIFICATIONS, SERIES 2012, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

120214a.01 DESCRIPTION.

A. Levee Unit Name: Ag Levee L-624, Section 3 (Mosquito Creek Levee)
Missouri River - Council Bluffs Flood Protection

Local Sponsor: City of Council Bluffs, Iowa

River Miles: M0.00 to about M1.69

Levee Stations: 1010+00 to 1060+00

Project Name: Council Bluffs Interstate System – Segment 3
Reconstruction of I-29 / I-80 East System Interchange
and Railroad Consolidation
Pottawattamie County, Iowa

B. The Iowa DOT is proceeding with the reconstruction of the I-29 / I-80 East System Interchange (Segment 3) as a part of the Council Bluffs Interstate System (CBIS) improvement program. The work for Segment 3 involves the construction of new roadway embankments and bridge structures. The levee affected by this construction is the Agricultural Levee L-624, which ~~was~~ is a part of the Council Bluffs Flood Protection System that was originally designed and constructed by the Omaha District of the U.S. Army Corps of Engineers (USACE) in the early 1950s. A large portion of the interstate reconstruction will take place within the "critical area" of the levee, which is defined by the USACE as the area within 300 feet riverward and 500 feet landward of the levee.

The work covered by this Emergency Action Plan (EAP) addresses the removal of bridge foundations and embankments, storm sewer pipe, and sanitary sewer pipe and construction of roadway embankments including ground improvements, bridge structures, storm sewer, and sanitary sewer within the Mosquito Creek levee critical area. The ground improvements consist of below grade concrete columns that will be used to support the new embankments.

C. The purpose of this Special Provision is:

- to identify the submittals required by the Contractor for compliance with the Section 408 submittal to the United States Army Corps of Engineers (USACE),
- state the Section 408 submittal limitations on work in the levee critical area,
- establish the minimum monitoring requirements,
- establish the emergency response in case of a flood event, and
- establish the restoration requirements for damage to the levee critical area.

A copy of the Section 408 submittal is available from the Engineer.

120214a.02 CONSTRUCTION.

A. Preparation of Emergency Action Plan.
Prior to construction, prepare and follow an EAP, which will address the requirements presented in this document and the procedures for high water conditions on either the Missouri River or the Mosquito Creek during construction. The EAP shall include emergency contact information, including cell phone and pager numbers of the project manager, project superintendent and foreman. The numbers provided shall be monitored 24 hours a day, 7 days a week.

B. Submittals.
~~Any changes proposed by the contractor that might impact the levee or are located in the levee critical area, such as: changes to staging, excavation depths, shoring, haul routes, levee access roads, or working pads adjacent to the Mosquito Creek channel; addition of a temporary stream crossings; groundwater dewatering; or pumping water from the Mosquito Creek must be submitted for approval.~~

~~Submittals for contractor proposed changes, EAP, levee access roads and working pads adjacent to the Mosquito Creek, excavation shoring designs, or temporary stream crossing designs in the levee critical area will be reviewed by the Engineer, the City of Council Bluffs, and the USACE. Construction identified in the submittal shall not begin until the City of Council Bluffs and the USACE have accepted the submittal.~~

~~1. Levee access roads and working pads located on the levee shall be designed to meet the USACE stability guidelines in "Design and Construction of Levees" EM 1110-2-1913. Working pads located on the stream bank shall be designed to be stable and not further damage existing bank areas that are distressed. Analysis shall include weight of the levee access roads, working pads, and equipment (both static and operating). Additionally, any pre-existing slope failure surfaces shall be included in the analyses. The analyses shall be signed and sealed by a qualified professional engineer in the State of Iowa specializing in geotechnical engineering. The contractor is responsible for the stabilization of their working pad as it relates to their operations. The levee access roads and working pads shall be evaluated for both global stability and local stability.~~

~~2. Settlement of the levee due to the weight of the levee access roads, working pads, and equipment (both static and operating) shall be analyzed and a mitigation plan presented in the submittal, such that the level of protection provided by the levee is not reduced during or after construction. At a minimum, this shall include pre- and post-construction survey. See Article 120214a.02.E.~~

~~Any observed deformation that is greater than 6 inches, such as sliding, sloughing, or subsidence, of the levee access road, working pad, or immediately adjacent areas must be addressed immediately. Construction activities in the distressed area shall cease until a mitigation plan has been submitted and approved.~~

~~3. Changes to the levee access roads or working pads adjacent to the Mosquito Creek or the design of a temporary stream crossing will require a hydraulic analysis and preparation of a backwater profile. Levee access roads and working pads shown in the plans were designed for a maximum backwater of 0.5 feet, prior to overtopping of the levee. Backwater profiles for the 2, 5, and 10 year events and the bank full event shall be provided. The hydraulic analyses shall be signed and sealed by a qualified professional engineer in the State of Iowa.~~

~~4. Allow 9 weeks for review of these submittals.~~

The following submittals are required:

- Emergency Action Plan,
- Pre-Construction Survey,
- Post-Construction Survey,
- Distress Mitigation Plans, and
- Proposed modifications to the approved plans and specifications.

Submittals will be reviewed by the Engineer, the City of Council Bluffs, and the USACE. Allow 9 weeks for review of any submittal or resubmittal.

1. Survey the levee, landward toe area extending 50 feet landward, and riverward toe area extending to the Mosquito Creek waterline a minimum of 50 feet beyond the downstream and upstream limits of the levee access and levee restoration areas and any other area of the levee, landward toe area, or riverward toe area that will be accessed by the Contractor. The survey shall be completed prior to construction activities, after restoration of the disturbed areas, and as requested by the Engineer to document observed distress. The results of the post-construction survey shall be provided to the Engineer prior demobilization. Areas determined to be deficient by the Engineer shall be immediately repaired and confirmed by survey. Survey information shall be reported in a table format with levee stations and elevations presented along the levee centerline at 25-foot intervals and in graphical format in plan and profile view and cross-sections at 25-foot intervals. The plan view shall show the levee centerline, levee station, and 1-foot elevation contours. The profile view shall show the elevation at the levee centerline.

   Piggy back levees have been included in this project as a mitigation measure for distress/deformation caused by construction activity on the levee or stream bank. Any observed deformation that is greater than 6 inches, such as sliding, sloughing, or subsidence, of the levee access road, working pad, or immediately adjacent areas shall be reported to the Engineer. If, in the opinion of the engineer, the deformations are determined to be significant, construction activities in the distressed area shall cease. The Contractor will work with the Engineer to develop and submit a mitigation plan and construction will only commence when the mitigation has been approved.

2. Changes to the levee access roads or working pads adjacent to the Mosquito Creek or the design of a temporary stream crossing will require a hydraulic analysis and preparation of a backwater profile. Levee access roads and working pads shown in the plans were designed for a maximum backwater of 0.5 feet, prior to overtopping of the levee. The acceptable amount of backwater will determined by the USACE based on a risk assessment of the magnitude of backwater, construction time frame, as well as other considerations. Backwater profiles for the 2, 5, and 10 year events and the bank full event shall be provided. The hydraulic analyses shall be signed and sealed by a qualified professional engineer in the State of Iowa.

3. Any modifications to the approved plans and specifications proposed by the Contractor for construction activities located in the levee critical area, such as: changes to staging, excavation depths, shoring, haul routes, levee access roads, or working pads adjacent to the Mosquito Creek channel; addition of a temporary stream crossings; groundwater dewatering; or pumping water from the Mosquito Creek must be submitted to the Engineer for approval.

C. Staging.

1. All construction related to the piggy-back levee or levee restoration must be substantially complete prior to the commencement of any excavations within the existing levee section at the location of the piggy-back levee or levee restoration. See staging plans for additional details and requirements.

2. The ~~Iowa DOT,~~ City of Council Bluffs representatives~~,~~ and the Engineer shall be notified 1 week prior to construction of the piggy-back levee or levee restoration and at the completion of the piggy-back levee or levee restoration construction operations at least 1 week prior to beginning any excavations within the existing levee section.

~~3.~~ Determination that the proposed piggy-back levee or levee restoration work is considered to be substantially complete will ~~include review of:~~ be made if the earthwork grading has been completed, compaction test results are satisfactory, and the as-built survey has been completed and shows conformance with planned grades.
~~a. The earthwork grading,~~
~~b. As-built survey, and~~
~~c. Compaction test results for the embankments.~~

D. Limitations.
Ensure that the proposed construction will not involve any additional landward or riverward excavations in the critical area that may impact the levee at any time during construction except as shown in the approved plans and specifications.

Ensure that access to the levee crest and area within 15 feet of the riverward and landward levee toe is clear and available to the City of Council Bluffs and USACE ~~for operations and maintenance~~ at all times. ~~If access to the levee crest or area within 15 feet of the levee toe will be restricted, coordinate restrictions with the Iowa DOT, Engineer and the City of Council Bluffs.~~ Any required restrictions will require prior approval of the Engineer and the City of Council Bluffs.

E. Pre- and Post-Construction Survey.
~~Survey the levee, landward toe area extending 50 feet landward, and riverward toe area extending to the Mosquito Creek waterline a minimum of 50 feet beyond the downstream and upstream limits of the levee access and levee restoration areas and any other area of the levee, landward toe area, or riverward toe area that will be accessed by the contractor. The levee, landward toe area, and riverward toe area shall be surveyed prior to construction activities, and after restoration of the disturbed areas, or as requested by the engineer to document observed distress. The results of the post-construction survey should be provided to the Engineer prior demobilization. Areas determined to be deficient by the Engineer shall be immediately repaired and confirmed by survey. Survey information should be reported in a table format with levee stations and elevations presented along the levee centerline at 25 foot intervals and in graphical format in plan and profile view and cross sections at 25 foot intervals. The plan view shall show the levee centerline, levee station, and 1 foot elevation contours. The profile view shall show the elevation at the levee centerline.~~

The Engineer will complete a pre-construction and post-construction inspection to identify any observable signs of distress including: rutting, cracks, lack of sod cover, settlement, erosion, or stability issues on the levee or riverside stream bank areas. If the post-construction inspection identifies any observable sign of distress that was the result of the eContractor, the area shall be

repaired to pre-construction conditions by the eContractor. The eContractor will prepare a submittal detailing the proposed repair method. The submittal will be reviewed by the Engineer, the City of Council Bluffs, and the USACE. Construction shall not begin until the City of Council Bluffs and the USACE have accepted the submittal. Allow 9 weeks for review of the submittal.

120214a.03 EMERGENCY ACTION PLAN.

A. Contents of Emergency Action Plan.

1. The contents of the EAP ~~will~~ shall present a detailed staging plan and all provisions in the contract documents so that the integrity of the levee system and its ability to provide flood protection will be maintained throughout the entire duration of construction. A site map will be provided in the EAP that identifies the location of:
   - Drainage District Right-of-Way (provided by the Engineer),
   - levee centerline with stationing (provided by the Engineer),
   - 500-foot landward critical area (provided by the Engineer),
   - proposed haul routes,
   - proposed construction within the levee critical area,
   - stockpiles that will be available for emergency backfill along with dates that stockpiles will be in-place and type of material,
   - levee access locations, and
   - temporary working pads or stream crossings along with dates that they will be in-place.

   ~~The design of the levee access roads and temporary working pads, as addressed in the plans, will be provided in the EAP including:~~
   ~~• plan view location,~~
   ~~• cross sections,~~
   ~~• material types,~~
   ~~• strength parameters~~
   ~~• stability analyses,~~
   ~~• settlement analyses, and,~~
   ~~• hydraulic analysis (if applicable).~~

   The pre-construction survey will be provided in the EAP.

   The schedule for activities within the levee critical area shall be specifically addressed in the EAP, such as planned excavations, working pad construction and removal, bridge demolition, and bridge construction.

   The EAP shall be submitted at least ~~3~~ 9 weeks prior to construction within the critical area ~~and 9 weeks prior to construction on or riverward of the levee~~.

2. The proposed construction will be performed during flood and non-flood event periods~~,~~ ~~including the work on the top, riverside and landside of the existing levee~~. The potential does exist for the river or stream to rise to flood level during the proposed construction ~~and provisions will be in place to address this potential~~. The Contractor shall have the provisions described in this Special Provision in place, to address this potential.

B. Procedures.

The following procedures shall be in place to address an emergency situation:

1. **Daily Monitoring.**
   The water level in the Missouri River shall be monitored on a daily basis by the Contractor ~~and the Iowa DOT~~ and recorded in the daily construction log. The extended forecast of future river levels and precipitation in the Mosquito Creek drainage basin shall also be monitored

and recorded in the daily construction log. The eContractor shall be able to ~~react~~ quickly ~~to~~ implement the required actions described in this Special Provision if a heavy precipitation event occurs at any time of the day.

The Engineer and the City of Council Bluffs shall be notified if flood waters in the Mosquito Creek come into contact with the levee or are near the top of the levee within the construction limits.

2. **Monitoring Agencies.**
The river level shall be monitored through USGS and National Weather Service websites for River Gage - 06610000 Missouri River at Omaha, NE.
   - http://waterdata.usgs.gov/ne/nwis/uv/?site_no=06610000&amp
   - http://www.riverwatch.noaa.gov/forecasts/OAXRDOAX.php

   The Mosquito Creek basin precipitation forecast shall be monitored through the National Weather Service website.
   - http://www.hpc.ncep.noaa.gov/qpf/qpf2.shtml

3. **Ceasing Operation.**
Construction operations will cease in the event the river levels are within 5 feet of the published flood stage of 29 feet (Elevation 974.4 feet). The 100-year flood elevation at this location is 981.0 feet. The 500-year flood elevation is 983.0 feet.

   In the event greater that 1 inch of rainfall in a 24-hour period is forecasted for the Mosquito Creek drainage basin, coordinate the work planned on the levee or riverward of the levee with the Iowa DOT and City of Council Bluffs and take actions to ensure that no material or equipment is stored on the levee or riverward of the levee at the end of the shift.

   Construction operations on the levee or riverward of the levee will cease if an unforeseen precipitation event occurs and the water level in the Mosquito Creek begins to approach bank full of the minor channel. Material and equipment shall be removed from the levee and riverward of the levee within 4 hours of the unforeseen precipitation event.

   Coordinate with the ~~Iowa DOT,~~ Engineer, City of Council Bluffs, and USACE to determine timing and sequence of activities, as appropriate for returning to working following the receding of flood waters. When the flood waters recede and if repairs are needed, complete repairs, as directed by the ~~Iowa DOT,~~ Engineer, City of Council Bluffs, and USACE. Remove debris that has been deposited in the work areas.

4. **Construction Equipment.**
Provide a list of all construction equipment that will be present throughout the duration of construction within the critical area and will be available for emergency flood fighting activities.

5. **Emergency Backfilling.**
Emergency backfilling shall be commenced, if the river level reaches an elevation within 5 feet of the published flood stage of 29 feet (Elevation 974.4 feet), during excavation construction of the sanitary sewer, storm sewer, drilled shafts, confirmation borings, or rigid inclusions, . The rate of emergency backfilling shall exceed the rate of the rising river. Excavated soil shall be used as emergency backfill. Concrete or soil can also be used as emergency backfill for the ground improvements and drilled shafts.

   Emergency backfilling shall commence, if the water level in the Mosquito Creek begins to approach bank full of the minor channel, during excavation construction of the drilled shafts or confirmation borings within the levee section or riverward of the levee. The rate of emergency backfilling shall exceed the rate of the rising water. Excavated soils shall be used

as emergency backfill. Concrete or cement-bentonite grout can also be used as emergency backfill.

120214a.04 EMERGENCY CONTACT INFORMATION.

A. City of Council Bluffs.
Jeff Krist, P.E.
City of Council Bluffs, Public Works Dept.
290 Pearl Street
Council Bluffs, Iowa 51503
Phone: 712-328-4635 (office)
Email: jkrist@councilbluffs-ia.gov

Pat Miller, Operations Manager
Phone: 402-510-2700 (cell)

Jeremy Noel, Levee Superintendent
Phone: 402-968-7301 (cell)

B. Iowa DOT Resident Construction Engineer.
David Dorsett, P.E.
3538 S. Expressway
Council Bluffs, Iowa 51501
Phone: 712-366-0568
Email: David.Dorsett@dot.iowa.gov

C. Iowa DOT District 4 Construction Engineer.
George Feazell, P.E.
2210 East 7th Street
Atlantic, Iowa 50022
Phone: 712-243-3355
Email: George.Feazell@dot.iowa.gov

D. Section 408 Engineer.
Patrick H. Poepsel, P.E.
HDR, Inc.
8404 Indian Hills Drive
Omaha, Nebraska 68114
Phone: 402-399-1368
Email: Patrick.Poepsel@hdrinc.com

E. USACE – Omaha District.
Ryan Buckley, P.E.
USACE – Readiness Branch
1616 Capitol Avenue, Suite 9000
Omaha, Nebraska 68102-4926
Phone: 402-995-2446
Email: Ryan.M.Buckley@usace.army.mil

F. Contractor.
Provide primary and secondary contact information for project manager, project superintendent, and foreman.

120214a.05 METHOD OF MEASUREMENT AND BASIS OF PAYMENT.
All costs for complying with this special provision including the preparation of the EAP, inclusion of submittals with the EAP, project coordination, pre- and post-construction surveys, monitoring, emergency

actions, and any other item associated with implementation of the EAP shall be considered incidental to the project. No separate payment will be made.

Iowa Department of Transportation

SPECIAL PROVISIONS
FOR
EXCAVATION FOR STRUCTURES IN LEVEE CRITICAL AREA

Pottawattamie County
IM-NHS-029-3(102)48--03-78

Effective Date
December 16, 2014

THE STANDARD SPECIFICATIONS, SERIES 2012, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

120218a.01 DESCRIPTION.
The work under this contract is located adjacent to federally constructed levees along the Mosquito Creek and Missouri River. As such, no improvement shall be passed over, under, or through the levees, improved channels or floodways, nor shall any excavation or construction be permitted within the limits of the levees other than the construction under this contract and these special provisions without prior approval of the U.S. Army Corps of Engineers (USACE). The limits of the levee critical area are 300 feet riverward and 500 feet landward of the levee. The following construction elements fall within these limits: Storm Sewer construction and removals, sanitary construction and removals, bridge foundation removals, and Articulated Concrete Block and Turf Reinforcement Mat construction.

120218a.02 WORK ZONE REQUIREMENTS.
Areas within these limits disturbed by excavation, other intrusions or disturbances of the soil shall be restored as described in this special provision. Any excavation within the levee critical area limits that is not directly related to bridge foundation removal, storm sewer construction or removal, ~~or~~ sanitary sewer construction or removal, or Articulated Concrete Block and turf Reinforcement Mat construction shall not commence without prior approval of the Engineer and the USACE.

120218a.03 CONSTRUCTION.

A. Storm Sewer Construction and Removals.
Storm Sewer construction and removals shall be completed within the levee critical area as per the contract documents. Storm Sewer construction and removals within the levee critical area limits shall be by open excavation as follows:

- Open excavation shall consist of 2 Horizontal:1 Vertical side slopes.
- Disturbed soils shall be excavated, sorted by soil type, classified and stockpiled.
- Backfill shall be placed in the excavation as it was encountered in the initial excavation.

B. Sanitary Sewer Construction and Removals.
Sanitary Sewer construction and removals shall be completed within the levee critical area as per the contract documents. Storm Sewer construction and removals within the levee critical area limits shall be by open excavation as follows:

- Open excavation shall consist of 2 Horizontal:1 Vertical side slopes.
- Disturbed soils shall be excavated, sorted by soil type, classified and stockpiled.
- Backfill shall be placed in the excavation as it was encountered in the initial excavation.

C. Bridge Structure Removal.
Bridge structure removal shall be completed within the levee critical area as per the contract documents. As such, no excavation or penetration of the existing ground beyond the limits as per the contract documents will be permitted. Excavations for removal shall be by open excavation as follows:

- Open excavation shall consist of 3 Horizontal:1 Vertical side slopes within the levee section and 2 Horizontal:1 Vertical side slopes within the levee critical area.
- Excavated soils shall be sorted by soil type, classified and stockpiled.
- The sand backfill shall be placed in the excavation as they were encountered in the initial excavation.
- The clay backfill shall be placed in the excavation as they were encountered in the initial excavation.
- All backfill within the levee section shall consist of lean clay, as defined below.

D. Articulated Concrete Block and Turf Reinforcement Mat.
Excavations for Articulated Concrete Block and Turf Reinforcement Mat shall be completed within the levee critical area as per the contract documents. As such, no excavation or penetration of the existing ground beyond the limits as per the contract documents will be permitted. Excavations for the installation of the Articulated Concrete Block and Turf Reinforcement Mat shall be by open excavation as follows:

1. Open excavation shall consist of 2 Horizontal:1 Vertical side slopes.
2. Disturbed soils shall be excavated, sorted by soil type, classified and stockpiled.
3. Backfill shall be placed in the excavation as it was encountered in the initial excavation.

D E. Materials.

1. If borrow is needed to complete the backfill, it shall be comprised of lean clay (CL). Lean clay shall consist of cohesive materials having at least 50% passing the U.S. Standard 200 mesh sieve size, a Plasticity Index of 10 or greater, and falling between the "U" line and the "A" line on Figure 4 in ASTM D 2487 – Standard Tests for Classifications of Soils for Engineering Purposes, and a Liquid Limit less than 50.

2. Moisture and density control of the backfill shall be based on the standard Proctor compaction test (Materials I.M. 309). Cohesive materials shall be compacted to a density of at least 95% of the maximum dry density and be within -1% to +4% of the optimum moisture content at the time compactive effort is applied, which may require the addition of water or aeration of materials. Non-cohesive materials shall be placed in a moist condition and compacted with approved equipment to a density of at least 95% of the maximum dry density. Sampling backfill shall be in accordance with Materials I.M. 312. Testing of the backfill shall be performed for each 2 vertical feet of fill at a maximum horizontal spacing of 200 feet.

E F. Quality Control Program.

1. Provide and maintain a Quality Control Program for construction of backfill. This is defined as process control sampling, testing, and inspection as described in Materials I.M. 540 for construction of embankments with moisture and density control.

2. Provide a Quality Control Technician who is responsible for all process control sampling, testing, and inspection. The Quality Control Technician shall obtain Soils Technician certification through the Iowa DOT Technical Training and Certification Program (TTCP).

3. Provide a laboratory facility and necessary calibrated equipment to perform required tests.

4. Notify the Engineer when a moisture content falls outside specified control limits or density falls below required minimum. If a moisture content falls outside control limits, fill material in this area will be considered unacceptable for compaction. Perform corrective action(s) to bring uncompacted fill material within control limits. If material has been compacted, disk it, bring to within control limits, and re-compact. When project has a density requirement, if an in-place density does not meet the requirements, compacted fill material in this area will be considered unacceptable. Perform corrective action(s) to material to meet density requirements. Compensation will not be allowed for delays resulting from moistening, disking, or re-compacting.

120218a.04 METHOD OF MEASUREMENT.

~~Measurements for Storm Sewer Construction will be as specified in the pay item Storm Sewer Gravity Main, Reinforced Concrete Pipe (RCP), 3750D (Class V), 48 In. and Storm Sewer Gravity Main with Casing Pipe, Trenched, Reinforced Concrete Pipe (RCP), 2000D (Class III), 48 in.~~ Compliance with this special provision will not be measured for payment, but will be considered incidental to the bid item associated with the work.

120218a.05 BASIS OF PAYMENT.

A. All costs associated with the excavation and backfilling with moisture and density control ~~for Storm Sewer Construction shall be included in the price bid for Storm Sewer Gravity Main, Reinforced Concrete Pipe (RCP), 3750D (Class V), 48 In. and Storm Sewer Gravity Main with Casing Pipe, Trenched, Reinforced Concrete Pipe (RCP), 2000D (Class III), 48 in~~ in levee critical area, will be considered incidental to the bid item associated with the work.

B. Payment is full compensation for furnishing a Quality Control Technician, sampling and testing, process control inspection, drying material, furnishing and applying water, controlling moisture content of the materials, and compacting the materials, as specified.

A d d e n d u m

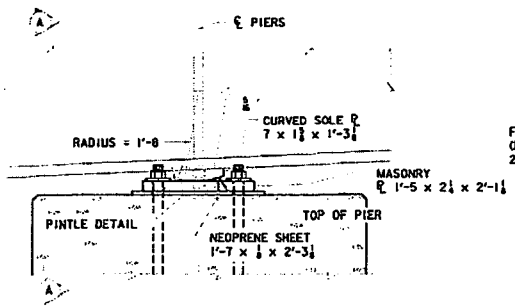
Iowa Department of Transportation
Office of Contracts

Date of Letting: February 17, 2015
Date of Addendum: February 5, 2015

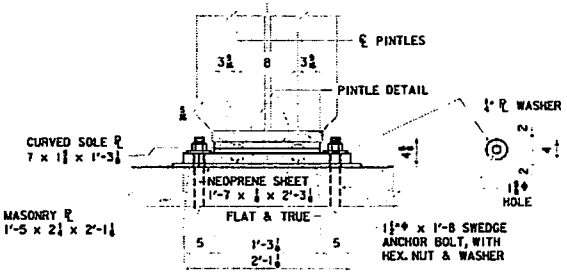
B.O.	Proposal ID	Proposal Work Type	County	Project Number	Addendum
306	78-0293-102	GRADING	POTTAWATTAMIE	IM-NHS-029-3(102)48--03-78 IM-NHS-029-3(103)48--03-78 IM-NHS-029-3(104)48--03-78 IM-029-3(105)48--13-78 NHS-029-3(106)48--11-78 IM-NHS-029-3(110)48--03-78 IM-NHS-029-3(122)48--03-78 IM-NHS-029-3(146)48--03-78 IM-NHS-080-1(416)3--03-78	17FEB306.A05

Replace plan sheet 38 with the attached for plan IM-NHS-080-1(416)3--03-78:

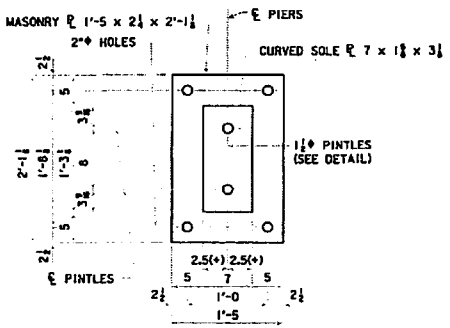
Changing notes on sheet 38 to allow welded alternate.



PART ELEVATION

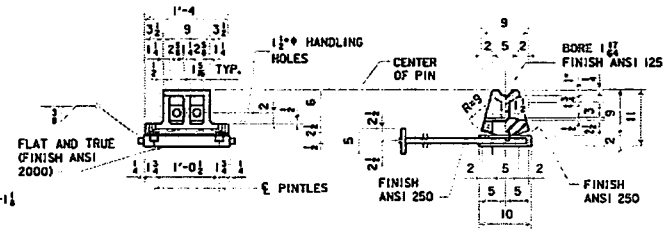


SECTION A-A



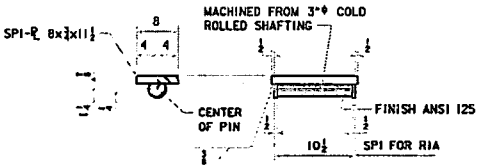
PLAN VIEW OF MASONRY AND SOLE PLATES

FIXED PIER



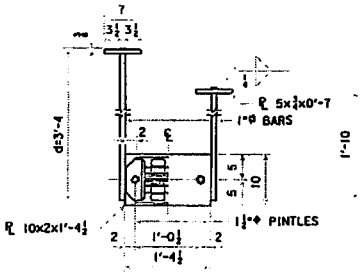
ABUT. ROCKER R1A

WT. = 143 LBS.



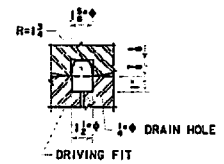
SOLE PLATE SPI

WT. = SPI = 34 LBS.

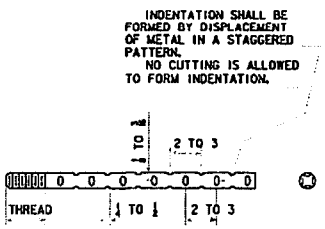


ABUTMENT MASONRY PLATE MP1A

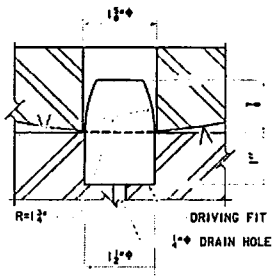
WT. = 110 LBS. (DOES NOT INCLUDE 1"ø BARS)



TYPICAL PINTLE DETAIL



ANCHOR BOLT SWEDGE DETAIL



PINTLE DETAIL

BEARING NOTES:

THE CASTING OF R1A, R2A, & R3A SHALL BE IN ACCORDANCE WITH ARTICLE 4153.04, OF THE STANDARD SPECIFICATIONS. CASTINGS MAY BE GRAY IRON OR NODULAR IRON.

THE PINS SHALL BE IN ACCORDANCE WITH ARTICLE 4153.02, OF THE STANDARD SPECIFICATIONS, AND WITH THE REQUIREMENTS OF ASTM A108 STEEL.

PREPARATION OF BEARING AREA SHALL BE IN ACCORDANCE WITH ARTICLE 2408.03, M, OF THE STANDARD SPECIFICATIONS. THE BEDDING SHALL BE A SINGLE LAYER OF ¼ INCH NEOPRENE SHEET.

THE ¼ INCH NEOPRENE SHEETS ARE TO BE 50, 60, OR 70 DUROMETER HARDNESS AND SHALL BE 1 INCH GREATER IN LENGTH AND WIDTH THAN THE BOTTOM SURFACE OF THE MASONRY PLATES OR STEEL BEARINGS.

AS SOON AS THE SURFACING PROCESS IS DONE, THE SURFACES FINISHED WITH AN ANSI 125 FINISH SHALL BE SHOP COATED WITH AN APPLICATION OF WATERPROOF NATIONAL LUBRICATING GREASE INSTITUTE NO. 3 MULTIPURPOSE GREASE. JUST BEFORE THE ERECTION OF THE STRUCTURAL STEEL IN THE FIELD, THE SHOP COATED SURFACES ARE TO BE WIPED CLEAN AND A FIELD COAT OF NLGI NO. 3 GREASE IS TO BE APPLIED.

MASONRY PLATES MP1A, MP2A AND MP3A SHALL BE GALVANIZED AFTER THE 1"ø BARS HAVE BEEN WELDED TO THE MASONRY PLATE.

ALL MASONRY PLATES SHALL BE GALVANIZED. GALVANIZING SHALL BE IN ACCORDANCE WITH ARTICLE 4100.07, OF THE STANDARD SPECIFICATIONS.

SURFACES MARKED "V" SHALL BE FINISHED ANSI 250.

MASONRY PLATES ARE TO BE SET ON A ¼ INCH NEOPRENE SHEET.

THE ¼ INCH NEOPRENE SHEETS ARE TO BE 50, 60, OR 70 DUROMETER HARDNESS AND SHALL BE 1 INCH GREATER IN LENGTH AND WIDTH THAN THE BOTTOM SURFACE OF THE MASONRY PLATES OR STEEL BEARINGS.

PINTLE PLATES, SOLE PLATES, ANCHOR BOLTS, AND MASONRY PLATES ARE A PART OF THE SUPERSTRUCTURE STRUCTURAL STEEL QUANTITY. COST OF NEOPRENE BEARING PADS AND ¼ INCH NEOPRENE SHEETS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "STRUCTURAL STEEL".

THE PINTLE PLATES, KEEPER BARS, AND MASONRY PLATES SHALL BE GALVANIZED. WELDING SHALL BE COMPLETED PRIOR TO GALVANIZING. THE SURFACES OF THE PINTLE PLATE IN CONTACT WITH THE CURVED SOLE PLATE AND THE LAMINATED NEOPRENE PAD SHALL BE FREE OF PROJECTIONS DUE TO GALVANIZING.

CURVED SOLE PLATES SHALL COMPLY WITH ASTM A709 GRADE 50W AND PAINTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

KEEPER BARS, PINTLE PLATES AND MASONRY PLATES SHALL COMPLY WITH ASTM A709 GRADE 50.

ANCHOR BOLTS, NUTS AND WASHERS SHALL MEET THE REQUIREMENTS OF I.M. 453.08.

DISTANCE FROM TOP OF SOLE PLATE TO BRIDGE SEAT		
ROCKERS	x	
R1A		1'-0½

x INCLUDING ⅛" NEOPRENE SHEET.

MAXIMUM REACTION (IN KIPS)
R1A
132

DESIGN FOR WIDENING ON VARIABLE SKEW

243'-0 x 39'-0 TO A 243'-0 x VARIES

CONTINUOUS ROLLED STEEL BEAM BRIDGE

46'-6, 51'-9, 72'-3, 63'-6 SPANS

BEARING DETAILS

STATION 1275+84.50 (℄ EXIST. I-29 N.B.) OCTOBER 2014

POTTAWATTAMIE COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 37 OF 44 FILE NO. 30169 DESIGN NO. 215

DESIGN TEAM bgm	ABUTMENT BEARING STANDARDS	STANDARD SHEET 1008a	POTTAWATTAMIE COUNTY	PROJECT NUMBER IM-NHS-080-1(416)3--03-78	SHEET NUMBER 38

10/6/2014 9:52:25 AM jlk Z:\Projects\790413 IDOT -I-29 & I-80 CB Interchange System\CADD\dgn\Final\78080416.brg 780215S037 11x17_pdf.pltcfg

ENGLISHBEAMS.DGN 1008a - THIS SHEET ISSUED 05-10.

A d d e n d u m

Iowa Department of Transportation
Office of Contracts

Date of Letting: February 17, 2015
Date of Addendum: February 6, 2015

B.O.	Proposal ID	Proposal Work Type	County	Project Number	Addendum
306	78-0293-102	GRADING	POTTAWATTAMIE	IM-NHS-029-3(102)48--03-78 IM-NHS-029-3(103)48--03-78 IM-NHS-029-3(104)48--03-78 IM-029-3(105)48--13-78 NHS-029-3(106)48--11-78 IM-NHS-029-3(110)48--03-78 IM-NHS-029-3(122)48--03-78 IM-NHS-029-3(146)48--03-78 IM-NHS-080-1(416)3--03-78	17FEB306.A06

Add the following to the bearing notes on sheet 38 in the plan for IM-NHS-080-1(416)3--03-78:

The abutment rocker RIA may be substituted with a weldment.

A d d e n d u m

Iowa Department of Transportation
Office of Contracts

Date of Letting: February 17, 2015
Date of Addendum: February 9, 2015

B.O.	Proposal ID	Proposal Work Type	County	Project Number	Addendum
306	78-0293-102	GRADING	POTTAWATTAMIE	IM-NHS-029-3(102)48--03-78 IM-NHS-029-3(103)48--03-78 IM-NHS-029-3(104)48--03-78 IM-029-3(105)48--13-78 NHS-029-3(106)48--11-78 IM-NHS-029-3(110)48--03-78 IM-NHS-029-3(122)48--03-78 IM-NHS-029-3(146)48--03-78 IM-NHS-080-1(416)3--03-78	17FEB306.A07

Replace PROPOSAL DETAILS, Page 3with the attached:

Replace in PROPOSAL SPECIAL PROVISIONS TEXT, NOTE 659.0195 with the attached:

Make the following changes to the PROPOSAL SCHEDULE OF PRICES:

Add Proposal Line No. 1514 2505-4008130 REMOVAL OF CABLE GUARDRAIL; 1000.000 LF

Delete Proposal Line No. 4080 2528-5160100 CRITICAL CLOSURE ACTIVITY INCENTIVE PAYMENT (ORDISINCENTIVE ASSESSMENT) SITE 5; 1.000 CDAY

Change Proposal Line No. 4090 2528-5160100 CRITICAL CLOSURE ACTIVITY INCENTIVE PAYMENT (OR DISINCENTIVE ASSESSMENT) SITE 6:
From: 4,000.000 UNIT PRICE
To: 15,000.000 UNIT PRICE

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

Replace SP-120216 with attached SP-120216a

Make the following changes to the IM-NHS-029-3(102)48--03-78 plan:

Add the following Estimate Information to sheets C.3 & C.4

2503-0134248 Storm Sewer Gravity Main with Casing Pipe, Trenched, Reinforced Concrete Pipe (RCP) 2000D (Class III), 48 IN. Add to Estimate Reference note: Casing pipe will have a minimum wall thickness of 0.344 inches.

2102-2710070 Excavation, Class 10 , Roadway and Borrow
Plan quantity will not be adjusted for hauling efficiencies, reduced or increased borrow needs due to revised staging.

2304-0100000 Detour Pavement 8.5 inch PCC or 12 inch HMA
The basis of payment will be by field measurement of the actual quantity placed.

2505-4008130 Removal of Cable Guardrail
Item is for the removal of cable guardrail in crossover area as shown on J.81e.

Replace Sheet B.3 and B.5 removing note in right hand corner referencing areas of 10" HMA

Sheet J. 1 remove part of Note 2C, second bullet,

" - Extended durations of over 20 minutes to remove existing bridges or place bridge beams will be allowed as nighttime closures from 9:00 PM – 5:30 AM Monday – Saturday and 7:00 PM – 5:30 AM Sunday. Northbound traffic will be detoured onto Ramps A and C (I-29/US275 NB on and off ramps.) Southbound traffic will be detoured from I-29 SB to South Expressway to US275 to Ramp D (I-29 SB on ramp.) Southbound I-29 and Northbound I-29 shall not be closed at the same time. The Contractor shall submit the traffic control plan 2 weeks in advance for Engineer approval."

Replace Sheet J.2

Add Sheets J.81a-J.81g for new Staging
Replace Sheet M.15 correcting linework for the pipe and call out what portions of the pipe are encased

Replace Sheet Q.62 to correct TYP 6 Title and add Stationing for RAMP D ALT II and add notes to Typ 8 pertaining to Backfill information and ground improvements.

Remove DET_352000 from the plans, B, C, and F sheets

Bid Order No.: 306
Proposal ID No.: 78-0293-102 Letting Date: February 17, 2015
Primary Work Type: GRADING 10:00 A.M.

Site Number	Contract Period/ Site Description	Liquidated Damages
CONTRACT	COMPLETION DATE: 05/25/17	$ 7,800.00
01	COMPLETION DATE: 09/30/15 SEE SITE 01 NOTE	$ 5,000.00
02	APPROXIMATE START DATE: 10/15/15 30 CALENDAR DAYS SEE SITE 02 NOTE	$ 5,000.00
03	COMPLETION DATE: 06/30/16 SEE SITE 03 NOTE	$ 5,000.00
04	APPROXIMATE START DATE: 06/01/16 30 CALENDAR DAYS SEE SITE 04 NOTE	$ 5,000.00
05	COMPLETION DATE: 11/15/16 SEE SITE 05 NOTE	$ 6,500.00
06	APPROXIMATE START DATE: 07/08/16 90 CALENDAR DAYS SEE SITE 06 NOTE	$ 15,000.00

PROPOSAL NOTES

SEE 656.0195
SITE DESCRIPTIONS
WORK RESTRICTION
*** INCENTIVE/DISINCENTIVE/SITE 06 ***
CRITCAL CLOSURE ACTIVITY

CONTRACT TIME RELIEF
ADVERSE WEATHER INCLUDING RAIN, SNOW, WIND, FLOOD, EXTREME HEAT, AND THE RESULTS THEREOF, SUCH AS INACCESSIBILITY OR NON-WORKABILITY OF MATERIALS, IS ONLY CONSIDERED AS EXTRAORDINARY CIRCUMSTANCE IF THE CONTRACTOR IS WORKING OR READY TO WORK ON THE CONTRACT AND THE ADVERSE WEATHER CONDITIONS DO NOT ALLOW PRODUCTIVE WORK ON THE CRITICAL PATH. ADVERSE WEATHER THAT DELAYS THE CONTRACTOR DURING WORK ON SITES NUMBER CONTRACT, 01, 03, AND 05 MUST BE DOCUMENTED BY THE CONTRACTOR AND A WRITTEN REQUEST FOR A COMPLETION DATE EXTENSION MUST BE SUBMITTED TO THE ENGINEER WITHIN 10 CALENDAR DAYS OF THE BEGINNING OF THE DELAY. COMPLETION DATE EXTENSIONS FOR ADVERSE WEATHER WILL NOT BE ALLOWED FOR THE FIRST 5 CONSECUTIVE DAYS OF EACH DELAY.

656.0195

SEE STAGING NOTES ON SHEET J.2 OF IM-NHS-029-3(102)48--03-78

SITE 01
REMOVE US 275/IA 92 EMBANKMENT STA 80138+00 TO STA 80141+00
AND EB BRIDGE OVER MOSQUITO CREEK

***SITE 02 ***
I-29 NB ONE-LANE TRAFFIC FROM STA 6670+14 TO 6694+50

SITE 03
REMOVE EMBANKMENT STA. 6643+00 TO STA 6650+00
AND I-29 SB BRIDGE

SITE 04
I-29 NB/SB two lane/two way TRAFFIC FROM STA 6675+00 TO 6700+00

SITE 05
Move I-29 SB traffic to new I-29 SB lanes, Open Loop Ramp B,
and open US 275 to 4 lanes

SITE 06
OPEN NEW RAMP B TO TRAFFIC

WORK RESTRICTION
BIKE TRAIL WORK IN STAGE 5 SHALL NOT BEGIN UNTIL APRIL 1,
2017.

*** INCENTIVE/DISINCENTIVE/SITE 06 ***
SECTION 1111 OF THE STANDARD SPECIFICATIONS FOR
INCENTIVE/DISINCENTIVE (I/D) FOR EARLY COMPLETION SHALL
APPLY TO THIS PROJECT WITH THE FOLLOWING CONDITIONS:
CALENDAR/CLOSURE DAYS SITE 06: 90
MAXIMUM INCENTIVE: NONE
INCENTIVE RATE PER DAY SITE 06: $15,000.00
DISINCENTIVE RATE PER DAY SITE 06: $15,000.00
THE CRITICAL CLOSURE ACTIVITY INCLUDES COMPLETION OF ALL
CONTRACT ITEMS NEEDED TO OPEN RAMP B.
THE INCENTIVE/DISINCENTIVE AMOUNT WILL BE PAID/COLLECTED BY
THE CONTRACTING AUTHORITY UPON COMPLETION OF THE CRITICAL
CLOSURE ACTIVITY.

CRITCAL CLOSURE ACTIVITY
WHEN THE RAMP IS CLOSED.

Iowa Department of Transportation

SPECIAL PROVISIONS
FOR
PROGRESS SCHEDULING

Pottawattamie County
IM-029-3(105)48--13-78
IM-NHS-029-3(102)48--03-78
IM-NHS-029-3(103)48--03-78
IM-NHS-029-3(104)48--03-78
IM-NHS-029-3(110)48--03-78
IM-NHS-029-3(122)48--03-78
IM-NHS-029-3(146)48--03-78
IM-NHS-080-1(416)3--03-78
NHS-029-3(106)48--11-78

Effective Date
December 16, 2014

THE STANDARD SPECIFICATIONS, SERIES 2012, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

120216a.01 GENERAL.

A. The Contractor's planning, scheduling and execution of the work shall be disclosed to Iowa DOT by submission of the Preliminary, Baseline and Contract Schedule information and data specified in this Special Provision. The Work under this Contract shall be planned, scheduled, executed, reported and accomplished using Critical Path Method (CPM) scheduling. The scheduling Work shall be performed by a Qualified Scheduler.

B. ~~No contract work shall begin without a Baseline CPM schedule approved by the Engineer.~~ Contract work may begin prior to the Engineer's approval of the Baseline CPM schedule, however, the submittal and approval shall be in accordance with the terms of this Special Provision.

C. Develop and update a computerized CPM Schedule as described herein and as required by the Engineer. When the term "Schedule" is used in the Special Provisions, it shall mean CPM Schedule. All work associated with these requirements is considered incidental for which no direct payment will be made.

D. "Primavera Project Management" (P6), version 8.2, or later shall be used to develop and update the schedule. When the term "Primavera" is used in the Special Provisions, it shall mean "Primavera Project Management" (P6), version 8.2, or later.

120216a.02 DEFINITIONS.

Activity: A fundamental unit of work in a Project Plan and Schedule establishing the time, cost and resources required for performing or furnishing a part of the Work, or a requisite step. Each activity has defined geographical boundaries, time duration in whole days and a detailed estimate of cost and resources required to construct the task. Each activity is assigned a unique description, activity number, and activity codes.

Baseline Schedule: The initial accepted Schedule representing the Contractor's work plan on the first working day of the project. The Baseline Schedule shall represent the Contractor's best judgment and intended plan for completion of the Work in compliance with specific requirements of the Contract Documents. The Baseline Schedule shall take into account all activities required to accomplish the work as well as interface dates with utility owners/railroads/municipalities/agencies, submittal review and re-submittals, Iowa DOT operations and other activities to a minimum WBS level 5 as defined later in these provisions. The Baseline Schedule shall anticipate all necessary labor equipment, materials and resources to accomplish activities within the duration set forth in the contract documents.

Contract Schedule: The most current version of the Baseline Schedule that has been reviewed and accepted by the Engineer. The accepted baseline schedule shall be updated monthly through the data date designated by the Engineer. Upon acceptance, the updated baseline schedule shall become the Contract Schedule which shall be used for subsequent planning, scheduling and management of the Project. The updated Contract Schedule shall show actual, not calculated, progress. Only accepted logic changes and accepted Contract changes shall be incorporated into the Contract Schedule.

Cost Loading: The allocation of direct and indirect costs to each activity based on Iowa DOT bid items, utilizing the scheduling software's resources and cost accounting unless approved otherwise by the Engineer.

Constraint: A scheduling restriction imposed on the start or finish of an activity. Use of constraints is generally prohibited unless the time element is contractual. The use of constraints requires approval of the Engineer.

CPM Schedule: Computerized resource loaded Schedule which accounts for the Work required by the contract documents, reflects Work remaining and factual historical information regarding how completed Work was performed.

CPM Network: The structure of the computerized Schedule. The CPM network accounts for the work required by the contract documents and defines the construction sequence by using logical predecessor and successor relationships.

Critical Path: The longest continuous chain of activities in the CPM network from start of the project to the finish of the project as defined by the contract documents. In general, a delay to an activity on the critical path could extend the scheduled completion date. The critical path shall be identified as the longest path as determined by the scheduling software when the definition of critical activities is set to "Longest Path."

Critical Path Method (CPM): A network based planning technique using activity durations and the relationships between activities to mathematically calculate a Schedule for the entire project.

Data Date: The day after the date through which a Schedule is current. Everything occurring earlier than the data date is "as-built" and everything on or after the data date is "planned."

Float: The difference between the earliest and latest allowable start or finish times for an activity.

Early Dates: The early start dates and early finish dates, i.e., the dates each Activity will start and finish if each is started at the earliest end of the range of dates that the CPM Schedule indicates the Activities can be performed.

Late Dates: The late start dates and the late finish dates; i.e., the dates each Activity will start and finish if each is started at the latest end of the range of dates that the CPM Schedule indicates the Activities can be performed and still achieve the milestones and Contract Time.

Milestone: An event activity that has zero duration and is typically used to represent a point in time.

Near Critical Path: A chain of activities with total float exceeding that of the critical path but having no more than 10 working days of total float.

Preliminary Baseline Schedule: The preliminary Baseline Schedule shall be submitted to the Engineer at the Pre-construction Scheduling Conference. The Preliminary Baseline Schedule shall include the activities and planned sequence of operations in full Baseline detail for the first 120 working days after Receipt of signed contract, and lesser detail for the remainder of the project.

Predecessor Activity: An activity, which precedes another activity (to which it is logically tied) in the network. Each schedule activity except the project start milestone shall have a logical predecessor.

Qualified Scheduler: An individual who has completed CPM scheduling training, has performed CPM scheduling as a primary responsibility, understands the specification requirements and is able to demonstrate their ability to accomplish the requirements.

Resource Loading: See Cost Loading.

Successor Activity: An activity, which follows another activity (to which it is logically tied) in the network. Each schedule activity except the project completion milestone shall have a logical successor.

Two Week Detail Schedule: The Two Week Detail Schedule is a hand or computer generated bar chart schedule which spans a forward looking, rolling period of at least 14 calendar days. The Two Week Detail Schedule shall be updated and submitted to the Engineer on a bi-weekly basis. The Two Week Detail Schedule shall be based on the accepted Contract Schedule and provide a greater breakdown of the Contract Schedule activities. The Two Week Detail Schedule shall specifically reference the accepted Contract Schedule activity ID numbers and define subsequent specific daily operations for all work activities scheduled to be performed during the 2 week period. The Two Week Detail Schedule shall be submitted at the Quantity Rectification Meeting as described in ~~section~~ Article 120216a.08, A ~~part a~~.

Time Impact Analysis (TIA): A Schedule or schedule fragnet, and narrative report developed specifically to demonstrate what effect a proposed change or delay has on the current scheduled completion date.

Total Float: Number of working days by which a part of the Work in the Progress Schedule may be delayed from its Early Dates without necessarily extending the Contract Time.

Work Breakdown Structure (WBS): "defines the project tasks, or work to be performed, expressed in terms of the product or result of the work, i.e., deliverables, and establishes a relationship between the tasks and the major project objectives. The WBS also establishes the framework for the scheduling and control of the project. It functions to establish a framework for summarizing the Schedule and cost status of the project at progressively higher levels of management." (Cook, 1971).

120216a.03 GENERAL SCHEDULING REQUIREMENTS.

A. Schedules shall show the order in which the Contractor proposes to carry out the work with logical links between time-scaled work activities, and retained logic calculations made using CPM to determine the controlling operation or operations. The Contractor is responsible for assuring that all activity sequences are logical and that each Schedule shows a coordinated plan for complete performance of the work within the contracted period of performance.

B. Schedules shall comply with the staging, phasing, work constraints, and milestones defined in the contract documents.

C. Schedules shall be developed with the intent of expeditious execution of the project and continuous flow of operations from project start to project finish. The schedule shall not include non-work periods for the contractor's convenience, except for holidays recognized by the Iowa DOT.

D. The Schedules shall be based on working shifts of at least 8 hours per day and a minimum of a 5 day work week except during periods of weather limitations. See M. Project Calendars and Weather Contingency Days.

E. Schedules shall clearly define and identify significant interaction points and action responsibilities between the Contractor, subcontractor(s), Vendor(s), Iowa DOT and other entities (such as utilities, local governments, railroads, special service districts, adjacent projects or contractors, etc.).

F. Primavera Schedule Option settings:
- Set Method of Scheduling to Retained logic.
- Calculate start –to-start lag from Early Start.
- Define critical activities as Longest Path.
- Compute total float as finish float = late finish – early finish.
- Set Calendar for scheduling relationship lag to predecessor calendar, unless directed otherwise by the Engineer.

G. Primavera Project Level settings:
- All Calendars shall be Project level Calendars; not Global or Resource Calendars.
- All Activity Codes shall be Project level; not Global or EPS level Activity Codes.
- The schedule shall not utilize User Defined fields unless approved by the Engineer.
- The Drive activity dates by default box shall be unchecked

H. Schedules shall have a sufficient number of activities to assure adequate planning of the project, to permit monitoring and evaluation of progress, earned value analysis and to perform analysis of potential impacts to cost and time. Additional activities shall be added to the schedules upon request by Iowa DOT.

I. Schedule activities shall be described in detail so that all of the contracted Work is readily identifiable and the progress on each activity can be readily measured. The schedule shall include activities to establish a level of detail acceptable to Iowa DOT. As a minimum, the following attributes shall be uniquely assigned to each activity within the schedule unless otherwise acceptable to, or required by Iowa DOT:

1. A unique alphanumeric Activity ID shall be assigned to each activity. The proposed activity ID format shall be submitted to the Engineer for approval prior to implementation.

2. An Activity Description which clearly describes the Work represented by the activity. Each activity description shall indicate its associated scope and or location of work by including such terms as, type or description of work, bridge number, station to station location, side of highway (such as, eastbound or southbound), shoulder, ramp name, pipe number, etc. Activity Descriptions shall utilize a similar and consistent format.

3. Each activity shall be additionally described by assigning the following activity codes:

I.	Discipline	BA	=	Barrier
		CI	=	Concrete Items
		DR	=	Drainage
		EA	=	Earthwork
		EN	=	Environmental
		FE	=	Fence
		GEN	=	General
		GEO	=	Geotech
		LA	=	Landscaping/Aes.
		LI	=	Lighting
		NW	=	Noise Wall
		RR	=	Railroad
		REC	=	Reconstruct/Relocate
		REM	=	Removal
		RW	=	Retaining Wall
		RP	=	Roadway Paving
		SI	=	Signal/ITS
		SS	=	Signing / Striping
		ST	=	Structure
		TC	=	Traffic Control
		UT	=	Utility

II.	Stage:	S1	=	Stage 1
	(and, or Phase)	S2	=	Stage 2
		S3	=	Stage 3

III.	FSta:	####+##		(From Station)

IV.	TSta:	####+##		(To Station)

V.	Resp:	Iowa DOT	=	Iowa DOT
	(Responsibility)	Contractor	=	Contractor Name
		Subcontractor	=	Subcontractor Name
		Third Party		Third Party Name
		Utility	=	Utility Company Name
		Vendor	=	Vendor Name

VI.	CC	CO No.	=	Change Order Description
	(Contract Change)			

The Contractor shall fully utilize the activity code structure shown above and make every effort to enhance this structure. Proposed modifications to the activity code structure shall be submitted in the above format to the Engineer for acceptance before implementation. Activity coding shall be assigned consistently and uniformly among all similar activity types. The Engineer may require project specific adjustments to the activity code template.

4. The duration of each activity shall include the necessary work days to actually complete the work defined by the activity and shall be based on the quantity of work divided by a reasonable production rate(s):
   a. A duration in whole days of not less than 1 working day, except for milestone type activities, and
   b. Not more than 20 working days, except for non-work type activities such as mobilization, settlement durations, or submittal preparation, unless otherwise authorized by the Engineer.

c. The duration of activities assigned multiple resources shall be evaluated by based on the production rate of each resource assignment.
d. Activity durations shall not include time for weather contingency.

5. Early start and early finish dates.

6. Late start and late finish dates.

7. Activity Total Float.

8. At least one predecessor and one successor activity, except for project start and finish milestones.

J. The Contractor shall use submittal review and revised submittal review periods required by Section 1105 of the Standard Specifications. A review period of 30 calendar days shall be used for all review periods not specifically identified in the specifications.

K. In addition to the Work required by the contract documents, other cost, time or millstone type activities shall be included in the schedule within the WBS. These types of activities include, but not limited to:
- Mobilization
- Project Milestones and Project highlights i.e. traffic switches, completion of structures, major roadway elements and phases.
- Submittal, review, and acceptance activities when applicable, including time periods for the Department's acceptance as specified in the Contract.
- Fabrication, delivery, installation, testing, and similar activities for materials, plants, and equipment.
- Settlement, surcharge and cure periods.
- Coordination, notification and relocation of Utilities and other third party work.
- Notifications to the Iowa DOT for significant events, such as 20 working day notification to the Iowa DOT for impacts to the Iowa DOT ITS system.
- Installation, erection and removal, and similar activities related to temporary systems or structures such as temporary electrical systems or shoring.
- Permits
- Additional information as required by the Engineer.

L. All activities included in the schedule shall be categorized within a WBS acceptable to the Engineer. The following table represents levels 1 through 4 of the WBS structure, the minimum levels of the WBS that all resource and Schedule information shall rollup to, however, the Contractor shall provide further detail, to at least level 5, to ensure a clear understanding of the Contract and construction requirements, and to ensure all work is accounted for by location; structure number, Highway/road/street number and direction, and or area of work as defined in the contract documents.

Level 1	Level 2	Level 3	Level 4	Level 5
1.00 Project Name				
	1 .01 Administration and Milestones			
	1.02 Project Management and Mobilization			
	1.03 Procurement and Submittals			
	1.04 Permits			
	1.05 Construction			
		1 .05.01 Stage/Phase		
			1.05.01.01 Maintenance of Traffic	
			1.05.01.02 Roadway	
			1.05.01.03 Ground Improvements	

1.05.01.03 Structures
1.05.01.04 Utilities
1.05.01.05 Landscaping
1.05.01.06 Signing/Striping/Signals and ITS
1.07 Contract Changes

The Contractor shall fully utilize the WBS structure shown above and make every effort to enhance this structure. Proposed modifications to the WBS structure shall be submitted in the above format to the Engineer for acceptance before implementation. The WBS structure shall be assigned consistently and uniformly among all similar activity types. The Engineer may require project specific adjustments to the WBS template.

M. Project Calendars and Weather Contingency Days.

1. Each activity shall be assigned a Project specific calendar. Each calendar, except for the seven day calendar, shall include the minimum number of non-work days related to normal weather events that prevent work from occurring as shown in the chart below; weather contingency days shall be shown as non-workdays on the appropriate calendar(s) and shall be documented and justified in the Preliminary and Baseline narrative. Saturdays cannot be used as a weather contingency work day if a 5 day work week is planned, and Sundays cannot be used as a weather contingency work day if a 6 day work week is planned. The estimated number of weather contingency days shall not be the basis for additional time compensation in the event the number of weather contingency days is exceeded. The number of weather contingency days is subject to the Engineers approval.

Calendar Category	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Earthwork, Grade, Subgrade, Paving Removals, lighting, Electrical, Landscaping, Utility etc	*	*	*	5	6	6	4	5	4	3	*	*
Substructure, Ground Improvement	*	*	*	3	4	3	2	3	2	2	*	*
Superstructure	*	*	*	1	2	2	1	2	1	1	*	*

* number of days based on temperature restrictions of materials placed or type of work i.e. concrete, backfill, subgrade, paving, structures, and landscaping.

2. Calendars shall be updated monthly in the scheduling software with actual days worked and days not worked prior to submittal of an updated Schedule. The calendar shall be updated to reflect that work occurred on a day identified as a weather contingency day by making it a standard work day. If an activity on the longest path is affected by weather, the calendar shall be updated to reflect the non- work day. The actual days work and not worked shall reflect the actual work and non-work days as identified by the Engineer.

3. The number of work related calendars shall be minimized to prevent the distortion of total float, However, calendars specific to a particular type work, such as earthwork, structures, paving and landscaping shall be utilized to address seasonal weather limitations based on the type of work. Calendars shall be assigned consistently and uniformly among all similar activities.

N. Schedule submittals shall utilize Project ID and Project Naming conventions acceptable to the Engineer.

O. Schedules shall not include or utilize negative lag durations, open ended activities, float suppression techniques or time or date constraints which are not contractual. The Schedule shall not include positive lag durations, unspecified milestones, logic ties and/or sequences that are deemed unreasonable by Iowa DOT. Sequestering of total float through the manipulation of calendars, extending activity durations, logic ties or sequences is prohibited. Multiple relationships

with the same predecessor or successor and reverse logic conditions are prohibited. Redundant logic shall be removed from the schedule.

P. The "Level Resources," "Apply Actual," "Update Progress," "Auto Compute Actuals" or similar functions shall not be used to automatically update the schedule. The schedule shall be updated manually with actual information.

Q. The Engineer may require additional information or scheduling related functions to be performed in an effort to achieve the intended results of the specifications whether or not specifically identified within specification.

R. The Contractor shall illustrate, through submittal of a time impact analysis, the effects resulting from any claimed delays or Change Orders which are being negotiated between the Engineer and the Contractor. The Contractor shall prepare a time impact analysis to determine the effect of the change in conformance with the provisions in "Time Impact Analysis" specified herein, and shall include the impacts acceptable to the Engineer in the next Schedule update. Changes that do not affect the controlling operation on the longest path will not be considered as the basis for a time adjustment. Changes that affect the controlling operation on the longest path may be considered by the Engineer for decreasing time or granting an extension of time for completion of the Contract. Time extensions will only be granted if the total float is absorbed and the scheduled completion date is delayed one or more working days because of the ordered change on contract date, calendar day or working day contracts.

S. Use of Float.

1. Total Float and Contract Float are not for the exclusive benefit of the Contractor or Iowa DOT, but is an expiring resource available to the Project, to accommodate changes in the Work, however originated, or to mitigate the effect of events which may delay performance or completion of all or part of the Work within the Contract Time. Contract time extensions for Contract performance will be granted only to the extent that delays or disruptions to affected work paths in the Contract Schedule in effect at the time of delay or disruption exceed total float along those paths causing a delay to the project completion date beyond the contract time after the Engineer enacts schedule corrections to ensure the schedule represents true and accurate as-built or planned conditions or does not include float suppression. Delays and disruptions which cause the end date of Work to exceed current Contract completion date must be beyond control and without fault or negligence of the Contractor or any Subcontractor at any tier. In the event that the delays or disruptions impact an already negative float path, the Contractor will not receive a time extension unless and until the activity with the highest negative float is driven even further negative. Delays or disruptions will not be considered a basis for time extension to this Contract unless and until such delays or disruptions are resolved as set forth in the Contract Documents.

2. Pursuant to the float sharing requirements of this Section, the use of float suppression techniques such as preferential or logic sequencing (crew movement, equipment use, etc.), special lag/lead restraints, and extended activity times or duration, imposed dates, scheduling of work not required for the Project as required work, and others, are expressly prohibited. Use of float time disclosed or implied by use of alternate float suppression techniques shall be shared to the benefit of both IOWA DOT and the Contractor. Use of any network techniques solely for the purpose of suppressing float will be cause for rejection of Schedule submittal. The Contractor shall adjust or remove any float suppression techniques as a prerequisite to a request.

T. Schedule Recovery.

1. Unless otherwise directed in writing by the Engineer, whenever the schedule includes negative float, critical items of construction fall behind the planned Schedule or when items which were

not critical become critical the Contractor shall promptly notify the Engineer and undertake appropriate action at no additional cost to Iowa DOT to recover schedule.

2. The Contractor shall submit, following recognition of the problem, a written recovery statement to the Engineer describing the cause for the slippage and the actions planned by the Contractor to recover Schedule within the shortest reasonable time whenever the Contractor fails to complete Activities within the Late Dates in the Contract Schedule.

3. The Contractor's refusal, failure or neglect to take appropriate recovery action or to submit a written recovery statement shall constitute reasonable evidence that the Contractor is not prosecuting the Work, or separable part, with the diligence that will insure its completion within the applicable Contract Time and shall constitute sufficient basis for the Engineer to recommend to withhold any payment otherwise due, or identify and order alternate recovery actions on the basis of the information in the Contract Schedule.

U. Errors or omissions on Schedules shall not relieve the Contractor from finishing all work within the time limit specified for substantial completion of the Contract. If, after a Schedule has been accepted by the Engineer, either the Contractor or the Engineer discovers that any aspect of the Schedule has an error or omission, it shall be corrected by the Contractor as required by the Engineer.

V. Mobilization activities and payment amounts shall be created using the Basis of Payment described in Section 2533.05 of the Standard Specifications. The partial payment schedule outlines payments at the following intervals:

- Within 30 days of receipt of signed contract
- 5% of original project sum earned
- 10% of original contract sum earned
- 25% of the original contract sum earned.

Each of these mobilization payment occurrences shall have a unique activity, date, and amount in the schedule.

120216a.04 COST LOADING.

A. Baseline Schedule shall be cost loaded. Activity level cost loading shall be based on Iowa DOT bid items. One or more resources shall be assigned to each activity representing the value of the work identified by the activity.

B. One resource shall be defined for each bid item where the resource ID equals the Bid Item Number and resource name equals the Bid Item Description. A prefix may be required to be added to the resource ID and resource name. The resource structure within the scheduling software shall match the bid tab structure to facilitate comparison of cost and resource loading to the bid tab using the scheduling software.

C. The cost loading shall match in quantity, units, unit price and total value of each bid item and the total bid tabulation.

D. Activity percent complete shall be set to "Physical".

E. Activity Duration type shall be set to "Fixed Durations & Units."

F. Set "Resource Type" to "Material."

G. Select "Calculate costs from Units."

H. Resources shall not drive schedule dates. All resources shall be assigned to a 7 day calendar.

I. Under Project Calculations ensure "Recalculate actual units and cost when duration % complete changes" is unchecked.

J. The baseline schedule Planned Dates will be set to match the current Start and Finish Dates; use global change once Baseline schedule is approved.

K. Financial periods shall be defined in Primavera to match pay periods.

L. Actual cost shall be updated in each schedule submittal by updating a level of effort (LOE) activity pertaining to each project contract number. Actual cost corresponding to pay voucher totals shall be inserted into applicable LOE payment activity as actual cost.

M. Create a resource per LOE payment activity representing voucher payments. Payment resource to have an assigned price of $1/unit.

N. Actual cost data paid from Iowa DOT pay vouchers shall be saved to the corresponding pay period within the financial period using Primavera's "Store Period Performance" function.

O. Update cost and resource loaded activities in the schedule based on "Physical % Complete" only, actual cost information is placed in LOE activities.

120216a.05 PRECONSTRUCTION SCHEDULING CONFERENCE.

A. The Contractor shall schedule and the Engineer will conduct a pre-construction scheduling conference with the Contractor's project manager and, qualified scheduler within 15 calendar days of Receipt of signed contract. At this meeting the Engineer will review the requirements of this section of the special provisions with the Contractor.

B. Items to be submitted by the Contractor, 2 working days before the scheduling conference, include, but are not limited to:
- The Contractor shall submit a Preliminary Baseline Schedule displaying the activities and sequence of planned operations in full Baseline detail for the first 120 working days after Receipt of signed contract, and lesser detail for the remainder of the project and shall be prepared to discuss the proposed work plan and Schedule methodology that comply with the requirements of these special provisions. The schedule shall be submitted electronically in pdf and xer formats.
- List of Activity Codes.
- WBS Structure.
- Narrative report index.
- Graphical reports (time-scaled resource bar charts).
- Proposed Qualified Scheduler's resume, references, certifications of training and list of relevant projects.
- Two Week Detail Schedule.

C. Items to be reviewed include, but are not limited to:
- Review the qualifications of the proposed Qualified Scheduler.
- Review of Narrative and report formats.
- Review utility, railroad and other third party requirements and schedules.
- Review submittal requirements and procedures.
- Review time required to review submittals and resubmittals.
- Review requirements for tests and inspections.
- Review and finalize a list of construction activities to be included in the Schedule.
- Review of cost loading.
- Review Activity Codes and WBS structure.
- Review procedures for updating the Schedule.

- Review proposed modifications to the activity ID, activity code and work breakdown structure.
- Review other requirements of the specifications regarding Scheduling that are not specifically listed above.

The Engineer will review the Preliminary Baseline Schedule, proposed modifications, sample reports and other submittals and provide comments or required Baseline Schedule changes to the Contractor for implementation.

120216a.06 SUBMITTAL OF A CPM SCHEDULE.

A. Baseline Schedule Submittals.

1. Beginning the week following the Pre-construction Scheduling Conference, the Contractor and the Contractor's Qualified Scheduler shall meet with the Engineer to review Baseline Schedule development and resolve issues identified by the Engineer's review of the submittals provided at the Pre-construction Scheduling Conference. The Baseline Schedule review meetings will continue to be held every 14 calendar days, unless determined otherwise by the Engineer, until the Baseline Schedule is accepted by the Engineer. The contractor shall submit a revised Baseline schedule 2 working days prior to the Baseline schedule review meetings.

2. The Contractor shall submit to the Engineer an acceptable Baseline Schedule submittal ~~prior to the start of construction activities, but~~ no later than ~~45~~ 60 calendar days ~~of~~ from receipt of signed contract. Failure to provide an acceptable baseline schedule within ~~45~~ 60 calendar days of Receipt of signed contract will result in enforcement of Non-Compliance provisions within this specification.

3. The Baseline Schedule shall include the entire scope of work and how the Contractor plans to complete all Work contracted. The Baseline Schedule shall clearly show the activities that define the critical path. Multiple critical paths and near-critical paths shall be minimized by minimizing the number of predecessors and successor relationships between activities, illogical or redundant logic. A total of not more than 30% of the Baseline Schedule activities shall be critical or near critical, unless otherwise authorized by the Engineer.

4. The Baseline Schedule shall start and finish all work within the contract time(s) established in the contract documents, including but not limited to project start, project finish, intermediate contract periods and milestones, closure limitations, etc. Unless directed otherwise by the Engineer, the Baseline Schedule shall use a data date set to the projects late start date and shall not include progress or as-built updates. The Baseline Schedule shall not include negative float or utilize any other prohibited scheduling technique.

B. Contract Schedule Update Submittals.

1. Schedule updates shall be submitted each calendar month with a data date matching the progress through date of the first, or last, pay request of each month unless directed otherwise by the Engineer. The first schedule update shall be submitted as prescribed the first month following acceptance of the baseline schedule. Each monthly update shall be submitted within 5 working days of the schedule's data date. Progress meetings shall be scheduled by the contractor which correspond with the schedule submittals to review progress with the Engineer.

2. Contract Schedule updates shall include all elements defined for the Baseline Schedule except that a Contract Schedule shall include progress, as-built updates and updated actual units and cost for each activity, etc.

3. Each Contract Schedule shall show the status of work actually completed up to the data date and the work remaining to be performed as planned. The Contractor shall ensure that the CPM Schedule diagram accurately reflects "as-built" information for each activity shown on previous

schedules, including, but not limited to, actual start dates (discounting early starts not representative of true as-built conditions), remaining days of work, percent complete, and actual finish dates (when the activities were completed so that dependent work could proceed) and actual resource utilization. Schedule calendars shall be updated to show actual days worked and days not worked.

4. Contract Schedule updates shall accurately represent all planning changes, adjustments, or updates in the sequencing and timing of work remaining made or required to be made to ensure that the Contract Schedule stays current with the Contractor's revised plan for performing and furnishing work remaining, or to recover schedule. If the Contract Schedule submittal indicates slippage or delayed progress caused by delays failing to meet the requirements for extensions in Contract Time, the Contractor shall include a schedule recovery statement. Any revisions made due to the issues covered under this paragraph shall be considered revisions made for the Contractor's convenience, and shall be excluded when reconciling an extension to a Milestone or Contract Time until the timing and sequences purported by those revisions actually take place.

5. The Contractor may propose modifications by adding or deleting activities or changing activity descriptions, durations or logic that do not (1) alter the critical path(s) or near critical path(s) or (2) extend the scheduled completion date compared to that shown on the current accepted Contract Schedule and (3) do not disrupt the integrity or comparative relationship between the Baseline and Contract Schedules. The Contractor shall minimize the number of changes and state in writing within the update narrative the reason and justification for any changes to Contract Schedule or planned work. The Engineer shall review the justification for changes and either accept or reject the proposed modifications.

6. If any proposed changes to the schedule or planned work will result in (1), (2) or (3) above, then the Contractor shall submit a time impact analysis as described herein.

7. The Contractor shall incorporate planning revisions, which have been agreed upon in Contract Changes ordered since the last revision. Those revisions shall conform to the sequencing and time of performance requirements of the applicable instrument. These types of revisions shall be included in the Contract Schedule when reconciling extensions in Contract Time.

8. If work is performed out of sequence, the Contractor shall implement logic changes to allow the out of sequence work to proceed. The use of negative lag shall not be permitted.

9. Monthly Update schedule shall include actual cost updates as required to facilitate earned value analysis.

C. Two Week Detail Schedule.

1. The Contractor shall prepare and submit a detailed 2 week schedule to the Engineer each bi-weekly until all work is completed. The Two Week Detail Schedule consist of the following:

2. Hand or computer generated bar chart schedule which spans a forward looking, rolling period of at least 14 calendar days from the date of submittal.

3. Updated and submitted to the Engineer on a be-weekly basis on the date at a time specified by the Engineer.

4. Based on the accepted Contract Schedule and provide a greater breakdown of the Contract Schedule activities; activities for excavation, forming, placing rebar, pouring, stripping backfilling, etc., for example.

5. Specifically reference the accepted Contract Schedule activity ID numbers and define subsequent specific daily operations at each specific location for all work activities scheduled to be performed during the 2 week period.

6. Developed to a level of detail acceptable to the Engineer.

D. Time Impact Analysis.

1. The Contractor shall submit a written TIA to the Engineer with each request for adjustment of Contract time, when the Contractor or Engineer consider that an accepted or anticipated change may impact the critical path or Contract progress or when directed by the Engineer. The Contractor shall take all steps necessary to mitigate the effects to cost and, or time resulting from impacts caused by delay regardless of who is found responsible for the delay.

2. The TIA shall illustrate the impacts of each change or delay on the current scheduled completion date or internal milestone, as appropriate. The analysis shall use the accepted Contract Schedule that has the closest data date prior to the event. If the Engineer determines that the accepted Contract Schedule used does not appropriately represent the conditions prior to the event, the accepted Contract Schedule shall be updated to the day before the event being analyzed. The TIA shall include an impact schedule developed from incorporating the event into the accepted Contract Schedule by adding or deleting activities, or by changing durations or logic of existing activities. If the impact schedule shows that incorporating the event modifies the critical path and scheduled completion date of the accepted Contract Schedule, the difference between scheduled completion dates of the two schedules may be considered for an adjustment of Contract time. The Engineer may construct and utilize an appropriate project schedule or other recognized method to determine adjustments in Contract time until the Contractor provides the TIA.

3. The Contractor shall submit a TIA in duplicate within 15 calendar days of receiving a request for a TIA from the Engineer. The Contractor shall allow the Engineer 15 calendar days after receipt to accepted or reject the submitted TIA. All accepted TIA schedule changes shall be shown on the next updated Contract Schedule.

4. If a TIA submitted by the Contractor is rejected by the Engineer, the Contractor shall meet with the Engineer to discuss and resolve issues related to the TIA. The Contractor shall only show actual as-built work, not unaccepted changes related to the TIA, in subsequent updated Contract Schedules. If agreement is reached at a later date, accepted TIA schedule changes shall be shown on the next update Contract Schedule.

5. A time impact analysis shall consist of one or all of the steps listed below:
   a. Step 1. Establish the status of the project before the impact using the most recent approved Contract Schedule prior to the impact occurrence.
   b. Step 2. Predict the effect of the impact on the most Contract Schedule prior to the impact occurrence. This requires estimating the duration of the impact and inserting the impact into the schedule update. The Contractor shall demonstrate how the impact was inserted into the schedule using a fragment. This is the presentation of a fragmentary portion of the schedule network showing the added or modified activities and the added or modified relationships. Any other changes made to the schedule including modifications to the calendars or constraints shall be noted.
   c. Step 3. Track the effects of the impact on the schedule during its occurrence. Note any changes in sequencing, and mitigation efforts.
   d. Step 4. Compare the status of the work prior to the impact (Step 1) to the prediction of the effect of the impact (Step 2), and to the status of the work during and after the effects of the impact are over (Step 3).

E. Submittal Requirements.

1. The Contractor shall provide the following items with each schedule submittal; preliminary, baseline, update, time impact, or revised schedule submittal in electronic format:
   a. Schedule plot which includes all activities organized by WBS in PDF format.
   b. Schedule plot of the longest path in PDF format.
   c. An export of all schedule data in XER format compatible with Primavera Project Manager Version P8.2
   d. Narrative Report

2. Schedule plots shall conform to the following:
   a. Include the following columns in the following order: Activity ID, Activity Name, Original Durations, Remaining Duration, Early Start, Early Finish, Total Float, Budgeted Cost, Actual Cost This Period, Actual Cost to Date.
   b. Include a title block, schedule name, run date, data date and a timeline on each page.
   c. Sorted by Early Start.

3. The narrative report shall include a description of, and thorough justification, for all changes made to the current Schedule submittal, and the effects resulting from such changes, when compared to the previous schedule submittal. The narrative report shall be prepared in a consistent and professional manner which facilitates ease of use. The narrative report shall include a table of contents with page numbers. All pages, lists, charts and attachments shall be numbered and titled. The narrative report shall be organized and tabbed in the following sequence and include all applicable and appropriate supporting documentation including, but not limited to:
   a. Contractor's transmittal letter.
   b. Narrative description of the construction philosophy supporting the approach to the Work outlined in the Contract Schedule. Address reasons for the sequencing of Work and describe any problem areas and identification of unusual conditions or restrictions regarding labor, equipment or material, such as multiple shifts, specified overtime or work at times other than regular days, potential conflicts, and other salient items that may affect the schedule and how they may be resolved.
   c. Narrative description of the general status of the Project including Work completed during the period, Work planned to be completed during the next reporting period, current total float and validity of the calculated percent complete.
   d. Narrative description of the difference between previously planned Work and the actual Work performed including an explanation for the deviations.
   e. The working days per week, number of shifts per day, number of hours per shift, the holidays to be observed, and how the schedule accommodates adverse weather days for each month or activity.
   f. Planned Production rates with justification of rates above or below typical.
   g. A listing of activity durations exceeding the 20 working days with justification thereof.
   h. A list of activity relationships with lags with justification for use of the lag.
   i. A list of constrained activities with a justification for use of the constraint.
   j. Activities requiring coordination with the Department and/or 3rd parties (i.e. Utilities, adjacent contractors, etc)
   k. Schedule changes - A listing of all changes, and a narrative description of the reason or justification for the changes and the resulting affects or impact of the changes:
      - Added, deleted or modified activities and activity descriptions.
      - Added, deleted or modified date constraints.
      - Added, deleted or modified lags.
      - Added, deleted or modified logic.
      - Added, deleted or modified calendars.
      - Modified activity durations.
      - Significant changes in float.

l. Narrative description of the current longest path.
m. Comparative analysis of changes to the longest path with the previous schedule submittal, including identification of and justification for the cause of the changes.
n. Changes to the scheduled completion date since the last Contract Schedule submittal including identification of and justification for the cause of the change.
o. Current and anticipated delays:
   - Cause of delay.
   - Impact of delay on other activities, milestones and completion dates.
   - Corrective action and schedule adjustments to correct the delay.
p. Pending items and status thereof:
   - Permits
   - Contract changes
   - Time adjustments
   - Time Impact Analysis
q. Cost information:
   - Include a listing and justification for adjustments to cost loading.
   - Comparison of schedule cost loading, updated cost actual information and current pay application.
r. Additional Information as request by the Engineer.
s. A statement certifying the schedule submittal is based on factual, accurate information which represents true planned and as-built conditions accompanied with the signature of the Project Manager and Scheduler.

Schedule submittals will be considered complete when all documents and data have been provided as described above to the satisfaction of the Engineer.

120216a.07 SCHEDULE REVIEWS.

A. The Engineer's review will be for conformance with the Contract Time and those sequences of Work indicated in or required by the Contract Documents, to record Early and Late Dates for Milestones, to identify the Contractor's use of Float, to compare as-built data, and for conformance with the requirements of this Section and other information given in the Contract Documents which may have a bearing on the Contract Schedule. The Engineer's review may extend to the accuracy of other matters dealt with by the Contract Schedule, including, but not limited to, whether work is omitted, activity durations are reasonable, the level of labor, materials and equipment, the Contractor's means, methods, techniques, procedures, or sequences of construction, or whether the sequences and timing for work remaining are practicable, the correctness of all which shall remain the sole responsibility of the Contractor. The Engineers review may also extend to the technical acceptability of the Contract Schedule submittal.

B. The Contractor shall allow 7 working days for the Engineer's review after each Contract Schedule update and all support data are submitted, except that the review period shall not start until the previous month's Contract Schedule update submittal is accepted. Contract Schedules that are not accepted or rejected within the review period will be considered not accepted by the Engineer.

C. The Engineer's review and acceptance of Schedules shall not waive any Contract requirements and shall not relieve the Contractor of any obligation or responsibility for submitting complete and accurate information. Schedules that are not approved, rejected, or returned revise and resubmit shall be corrected by the Contractor and resubmitted to the Engineer within five (5) working days of notification.

D. When reviewed by the Engineer, one copy of each Contract Schedule submittal will be returned to the Contractor as either "Revise and Resubmit" or "Acceptable". Submittals found "Acceptable" will represent the most-current Contract Schedule as of the date of the submittal. Neither the Engineer's review of a schedule, nor the Engineer's statement of "Acceptable", will relieve the

Contractor from responsibility for complying with the Contract Specifications, Contract Time requirements and completing all work required by the Contract Documents. Failure by the Contractor to include any element of the Work required by the Contract does not relieve the Contractor from its responsibility to complete the work, or to complete the omitted Work within the Contract Time(s). "Acceptance" of the Contract Schedule submittals by the Engineer does not attest to the validity of assumptions, production rates, activities, relationships, sequences, resource allocations or any other aspect of the Contract Schedule submittal. Contract Schedule submittals determined to be "Acceptable" by the Engineer may be reviewed again for "Acceptability" at a later date, if deemed necessary by the Engineer. The Contractor remains obligated to correct schedule issues identified during future reviews by the Engineer.

E. The Contractor shall make appropriate adjustments or corrections in a Contract Schedule submittal returned to him as "Revise and Resubmit", and shall respond with the required copies of a full, revised Contract Schedule revision submittal within 5 working days of receipt of the Engineer's comments. Once the Contractor's Contract Schedule submittal, or resubmittal, is returned to the Contractor as "'Acceptable", it shall represent the most current approved Contract Schedule for the Work as of the date of the submittal, and it shall be the basis for the monitoring of the Contractor's performance and progress.

F. The most-current Contract Schedule will be the basis for (a) the monitoring of the Contractor's progress against Milestone and Contract Times, and (b) the evaluation and reconciliation of extensions in Contract Time, if and when a Contract Time is indeed extended.

G. All schedules shall be in accordance with the Contract Time requirements of the Contract. Nothing contained in this Section shall relieve the Contractor from compliance with the Contract Time.

H. The Engineer's acceptance does not warrant or imply accuracy or Iowa DOT agreement with production rates or other factors used to prepare the Schedule.

I. The Engineer may monitor the Contractor's production rates, project personnel and equipment usage for comparison with the Contract Schedule at his/her discretion.

J. Should the Contractor submit a claim with reference to the Contract Schedule as part of the claim rationale, Iowa DOT's prior acceptance of the Schedule will not be considered as acceptance of the assumed production rates and other factors used in the development of the Schedule.

K. If the Contractor deviates from the current approved CPM progress schedule by not following the logical sequence of the critical path, payment will be withheld for the pay items for the affected activities until the Contractor submits a revised CPM progress schedule and this schedule is approved by the Engineer.

L. A revised CPM progress schedule will be required if the controlling operation falls 10 working days behind schedule, the Engineer then may take steps specified in Articles 1108.02, I and K of the Standard Specifications, to insure satisfactory completion of the project. If the controlling operation falls 20 working days behind schedule and it appears that the completion of the project in the specified time is in jeopardy, the Contracting Authority may take action described in Articles 1102.03 and 1103.01 of the Standard Specifications and may take further action described in Articles 1108.10 and 1108.11 of the Standard Specifications.

M. If the Engineer elects to review an early-completion Schedule, where the time between the scheduled completion date of the Work and the completion date associated with the Contract Time is Float. If the Contractor intends to or does complete the Work, or any portion of the Work, earlier than the Milestones, the Project benefits from the resulting increased Float in the Schedule.

N. The review of a portion of the Contract Schedule or an incomplete Contract Schedule submittal shall not indicate acceptance of the entire Contract Schedule.

120216a.08 PROJECT MANAGEMENT
When the Supplemental Specifications for Project Management are applied, the following requirements shall be active:

A. Communication with the Engineer: The Project Manager shall schedule and participate in a bi-weekly schedule and quantity rectification meeting with the Engineer. This meeting will occur at the beginning of each week of voucher issuance.

B. Documentation of Item Progress: Schedule Activity ID shall be included for all item quantity records and measurement.

120216a.09 NONCOMPLIANCE.

A. Level 1 Non-Compliance – Iowa DOT will remedy the nonconformance by retaining an amount equal to 100% of the total estimated value of the work performed during each period in which the Contractor fails, refuses or neglects to satisfy the requirements of this specification, or the Contract Schedule submittals precludes a proper evaluation by the Engineer, or the Contract Schedule submittals preclude an "Acceptable" determination, or if the Contractor fails to conform said submittals within the submittal time requirements herein. Retention due to this non-conformance shall be in addition to all other retentions provided for under the Contract. The retention withheld for Level 1 Non-Compliance will be released for payment on the next pay estimate for partial payment following the date the Engineer determines compliance has been achieved and, or the submittal(s) are found Acceptable.

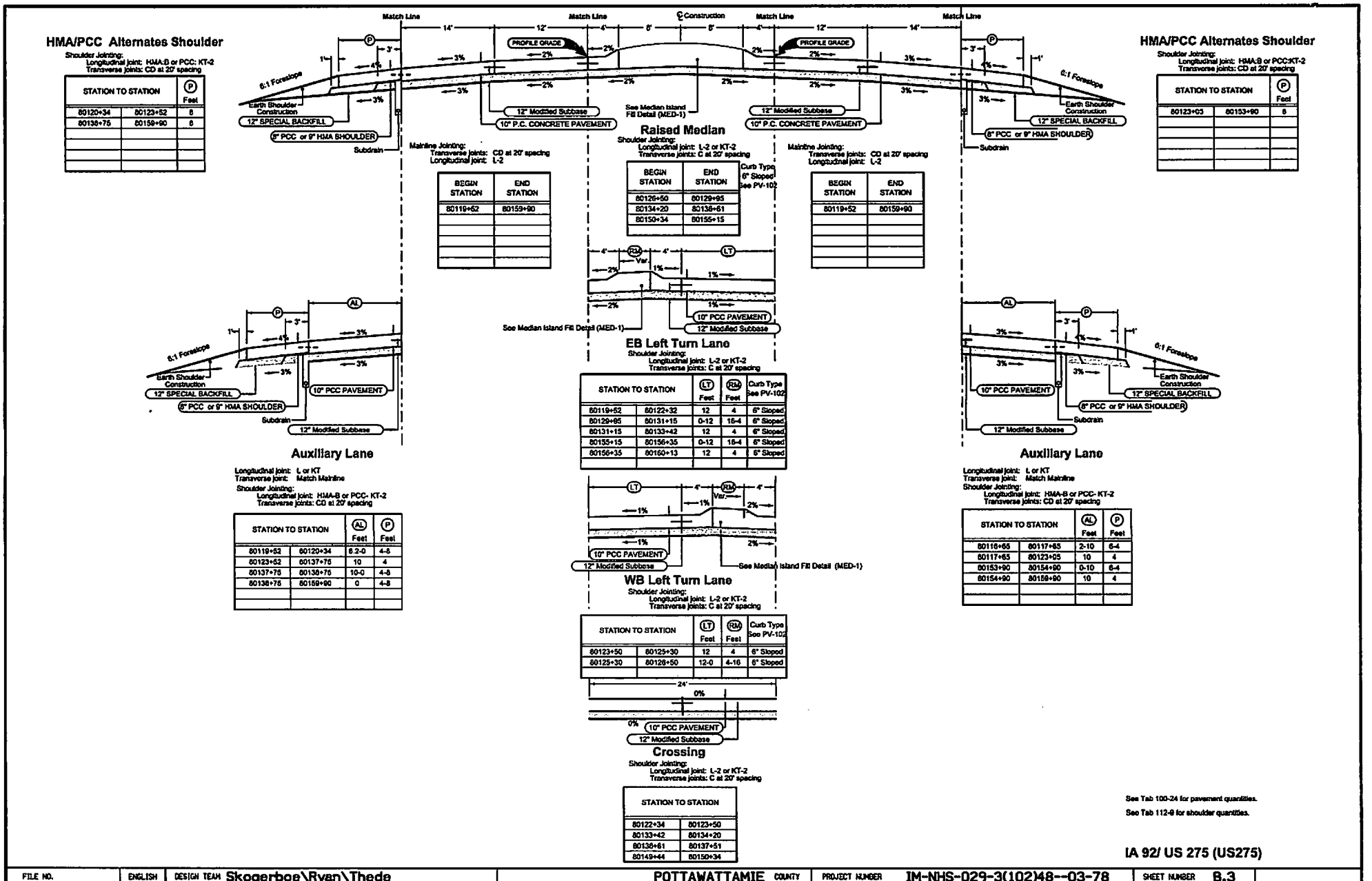
B. Level 2 Non-Compliance – If the Engineer determines that Level 1 Non-Compliance still exists and, or the submittals cannot be found Acceptable within 15 calendar days of implementation of Level 1 Non-Compliance, the Contractor shall be assessed a non-recoverable sum of $1,000.00 per calendar day, with said monies to be deducted from monies due on the next pay estimate, until the date the Engineer determines compliance has been achieved and, or the submittal(s) are found Acceptable. Level 2 Non-Compliance penalties shall be in addition to the Level 1 Non-Compliance retention. A negative Change order may be executed unilaterally (without the Contractor's consent) to adjust the contract prices to accommodate Level 2 Non-compliance assessment.

C. Level 3 Non-Compliance - If Level 1 and 2 Non-compliance measures have not promoted compliance with the schedule requirements the Engineer may consider such as a condition to suspend Contractor's bidder qualification according to Article 1102.03, A of the Standard Specifications.

D. Level 4 Non-Compliance - If Level 1, 2 and 3 Non-compliance measures have not promoted compliance with the schedule requirements the Engineer may pursue declaring the contract in default according to Article 1108.10 of the Standard Specifications.

E. These remedies for the Contractor's failure, neglect or refusal to comply with the requirements of this Section are in addition to, and not in limitation of, those provided under the Contract.

120216a.010 METHOD OF MEASUREMENT AND BASIS OF PAYMENT.
All costs for complying with this special provision shall be considered incidental to the project. No separate payment will be made.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12" SPECIAL BACKFILL
8" PCC or 9" HMA SHOULDER
Subdrain
12" Modified Subbase
10" P.C. CONCRETE PAVEMENT
See Median Island Fill Detail (MED-1)
Mainline Jointing:
Transverse Joints: CD at 20' spacing
Longitudinal Joint: L-2
BEGIN STATION
END STATION
80119+52 80159+90
Raised Median
Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: C at 20' spacing
BEGIN STATION
END STATION
Curb Type See PV-102
80126+50 80129+95 6" Sloped
80134+20 80138+61
80150+34 80155+15
Mainline Jointing:
Transverse Joints: CD at 20' spacing
Longitudinal Joint: L-2
BEGIN STATION
END STATION
80119+52 80159+90
HMA/PCC Alternates Shoulder
Shoulder Jointing:
Longitudinal Joint: HMA:B or PCC:KT-2
Transverse joints: CD at 20' spacing
STATION TO STATION
P Feet
80123+03 80153+90 8
RM
LT
Var.
4'
2%
1%
10" PCC PAVEMENT
12" Modified Subbase
See Median Island Fill Detail (MED-1)
EB Left Turn Lane
Shoulder Jointing:
Longitudinal Joint: L-2 or KT-2
Transverse joints: C at 20' spacing
STATION TO STATION
LT Feet
RM Feet
Curb Type See PV-102
80119+52 80122+32 12 4 6" Sloped
80129+85 80131+15 0-12 16-4 6" Sloped
80131+15 80133+42 12 4 6" Sloped
80155+15 80156+35 0-12 16-4 6" Sloped
80156+35 80160+13 12 4 6" Sloped
AL
P
3%
6:1 Foreslope
Earth Shoulder Construction
12" SPECIAL BACKFILL
8" PCC or 9" HMA SHOULDER
Subdrain
10" PCC PAVEMENT
12" Modified Subbase
Auxiliary Lane
Longitudinal Joint: L or KT
Transverse Joint: Match Mainline
Shoulder Jointing:
Longitudinal Joint: HMA-B or PCC- KT-2
Transverse joints: CD at 20' spacing
STATION TO STATION
AL Feet
P Feet
80119+52 80120+34 8.2-0 4-8
80123+52 80137+75 10 4
80137+75 80138+75 10-0 4-8
80138+75 80159+90 0 4-8
WB Left Turn Lane
Shoulder Jointing:
Longitudinal Joint: L-2 or KT-2
Transverse joints: C at 20' spacing
STATION TO STATION
LT Feet
RM Feet
Curb Type See PV-102
80123+50 80125+30 12 4 6" Sloped
80125+30 80126+50 12-0 4-16 6" Sloped
24'
0%
Crossing
Shoulder Jointing:
Longitudinal Joint: L-2 or KT-2
Transverse joints: C at 20' spacing
STATION TO STATION
80122+34 80123+50
80133+42 80134+20
80136+61 80137+51
80149+44 80150+34
Auxiliary Lane
Longitudinal Joint: L or KT
Transverse Joint: Match Mainline
Shoulder Jointing:
Longitudinal Joint: HMA-B or PCC- KT-2
Transverse joints: CD at 20' spacing
STATION TO STATION
AL Feet
P Feet
80116+65 80117+65 2-10 6-4
80117+65 80123+05 10 4
80153+90 80154+90 0-10 6-4
80154+90 80159+90 10 4
See Tab 100-24 for pavement quantities.
See Tab 112-8 for shoulder quantities.
IA 92/ US 275 (US275)
FILE NO.
ENGLISH
DESIGN TEAM Skogerboe\Ryan\Thede
POTTAWATTAMIE COUNTY
PROJECT NUMBER IM-NHS-029-3(102)48--03-78
SHEET NUMBER B.3
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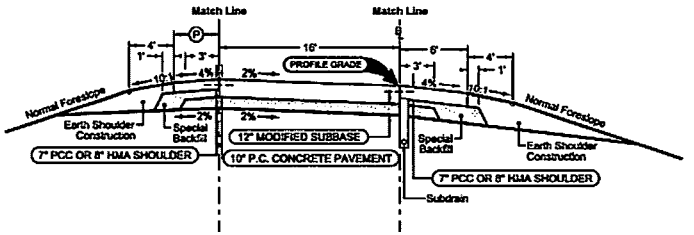
Paved Shoulder Alternates

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-3
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

	1R_P_ALT_ 10-19-10		
	BEGIN STATION	END STATION	(P) Feet
Ramp A	81534+75	81529+85	4
Ramp C	87530+71	87522+05	4
Ramp D	84534+73	84537+50	4



Section shown in the direction of traffic.

Ramp Jointing:
Transverse joints: CD at 20' spacing.

	1RP_ 10-19-10	
	BEGIN STATION	END STATION
Ramp A	81534+75	81529+85
Ramp C	87530+71	87522+05
Ramp D	84534+73	84537+50

Paved Shoulder Alternates

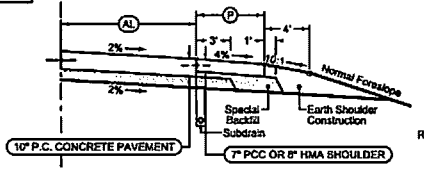
PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-3
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

	1L_P_ALT_ 10-19-10	
	BEGIN STATION	END STATION
Ramp D	84534+73	84537+50

Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

	2_AuxLane_PCC_ 10-19-10		2_AL_Shldr_ALT_ 10-19-10	
	STATION TO STATION		(AL) Feet	(P) Feet
Ramp A	81534+75	81529+85	8	6
Ramp C	87530+71	87522+05	8	8



Auxiliary Lane Paved Shoulder Alternates

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-3
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

See Tab 100-24 for pavement quantities.
See Tab 112-9 for shoulder quantities.

I-29/IA 92 INTERCHANGE RAMPS

FILE NO.	ENGLISH	DESIGN TEAM Skogerboe\Ryan\Thede	POTTAWATTAMIE COUNTY	PROJECT NUMBER IM-NHS-029-3(102)48--03-78	SHEET NUMBER B.5

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STAGING NOTES

The construction limits for this project include the Mosquito Creek Levees. It is required that construction impacting the levees and Mosquito Creek will be staged to maintain protection against flooding.

Removal of the existing I-29 embankment of the Temporary North Ring Levee must be coordinated with the IM-NHS-29-3(97)48-03-78 Contractor so that the line of protection provided by the Temporary North Ring Levee is maintained at all times. Provide a minimum of 10 weeks notice to the Resident Construction Engineer prior to removal of the embankment.

The proposed piggy back levees will need to be completed prior to any grading or bridge construction within the existing Mosquito Creek and levee section. The Grading Contractor will promptly notify the Engineer 1 week prior to construction of the piggy back levees and once the piggy back levees are complete. The Department will secure approval from the City for approval of the piggy back levees. (Allow up to 2 weeks for approval)

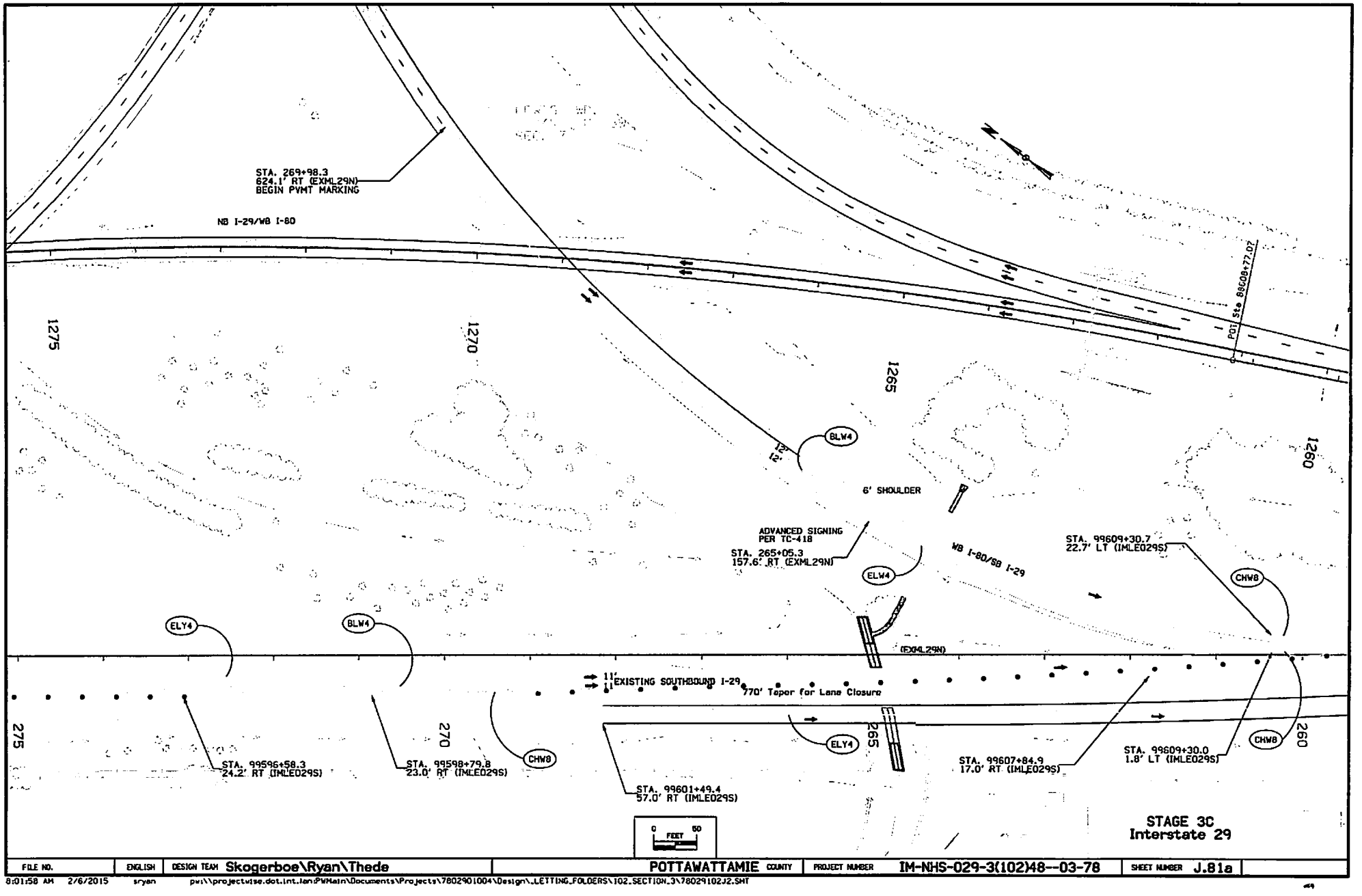
Work in Levee Area Staging Notes:
- Piggy Back Levees at pier 3 and pier 6 of the IA 92 Bridge shall not be constructed until bridge removal is complete. And drilled shaft construction at Pier 3 and Pier 6 shall not commence prior to completion of the piggy back levees at Pier 3 and Pier 6.
- Restore levees, install piggy back levees and obtain approval of completed piggy back levees construction from City as required before bridge construction.
- Stage excavation of roadway embankment, abutment removal, and levee restoration to maintain a continuous line of protection against flooding. The abutment removal and levee restoration including fill on the wet side of levee will need to be completed prior to removal of the roadway embankment.
- Levee crossing will be allowed only at designated locations as shown in U sheets.

Stage 1A
Traffic
Maintain traffic on existing I-29 and interchange at North end Shift I-29 traffic on to new detour pavement
Maintain one lane in each direction on US 275/ IA 92 EB lanes
Construction
Pave US 275/IA 92 WB from Harry Langdon Blvd. to E. of Metro Dr. (Gap Ramp C terminal)
Continue construction of IA 92 bridge over Mosquito Creek and Railroad
Continue construction of US 275/IA 92 bridge over I-29
Continue construction of I-29 NB and SB bridges over Mosquito Creek
Build interim I-29 NB and interim Ramp C pavement from Sta. 88612+12.5 to 88626+41.1
Replace inside shoulders on I-29 SB from the split of I-80 EB/I-29 SB to entrance ramp of I-80 to I-29 SB
Replace outside shoulder on I-29 NB from STA. 6662+68.4 to 6686+13.0
Pave I-29 NB from Sta. 6653+16 to 6673+00 and I-29 SB from Sta. 6654+63 to 6660+00 as shown on J sheets.
Grade Portion of US275 Loop B not affecting traffic.
Grade foreslopes of I-29 on South end of project.
Stage 1B
Traffic
Maintain traffic on existing I-29
Maintain one lane in each direction on US 275/ IA 92 EB lanes
Close Denmark Dr.
Close Ramp C
Close Ramp A
Construction
Grade and pave Ramp C terminal
Grade I-29 interim from Sta. 88621+20 to 88627+50 (IMLE029N) and proposed I-29 NB from Sta. 6627+50.0 to 6629+66.0
Grade and Pave detour on Existing I-29 NB from Sta. 6668+81.2 to 6685+65.74 and permanent pavement from Sta. 6682+03.4 to 6687+50.0 use shoulder closure and lane closure TC-402 and TC-418.
Grade and Pave US 275/ IA 92 WB from Sta. 80119+52.22 to 80126+85.23 and Denmark Dr.
Install Tower lighting on East side of I-29 and between NB and SB I-29 as shown in the lighting plan, IM-NHS-029-3(110)48--03-78.
Stage 2A
Traffic
Maintain traffic on existing I-29
Move US 275/ IA 92 traffic on to new WB lanes and continue one lane in each direction
Open new Ramp C to traffic to EB I-80
Ramp A remains closed
Construction
Grade and Pave US 275 Ramp A terminal
Remove Existing US 275/ IA 92 EB Mosquito Creek bridge.
Build new US 275/IA 92 EB Mosquito Creek bridge.
Grade and pave I-29 NB from 6672+15 to 6687+50
Resurface connection from WB US 275/IA 92 to Ramp B and D Terminal
Stage 2B
Traffic
Maintain traffic on I-29 existing
Open up new I-29 NB lane and Ramp A to Ramp A traffic
Maintain one lane in each direction on new US 275/ IA 92 WB lanes
Maintain traffic on new Ramp C to EB I-80 only
Construction
Build new US 275/ IA 92 EB bridge over Mosquito Cr
Grade and pave US 275/ IA 92 EB
Grade and pave I-29 SB detour 351880(Sta 351880+91 to 351808+50), 351900 and on existing inside I-29 SB shoulder area from Sta. 6666+33.8 to 6685+08.0
Grade and pave I29 NB from 6627+50 to 6640+44
Grade and pave Interim I-29 NB from Sta. 88609+98.5 to 88627+50.0
Pave new shoulders along I-29 SB inside and outside as shown on J sheets
Stage 2C
Traffic
Maintain traffic on I-29 existing
Maintain Ramp A traffic per Stage 2B
Maintain one lane in each direction on new US 275/ IA 92 WB lanes
Maintain traffic on new Ramp C to EB I-80 only
Construction
Continue construction on US 275 EB bridge over Mosquito Cr.
Continue G&P US 275 EB

108-26A
08-01-08

STAGING NOTES

Grade and Pave remaining detour 351800 and overlay in same area using nighttime lane closures
Stage 3A
Traffic
Move traffic I-29 NB on to new I-29 NB
Maintain one lane in each direction on new US 275/ IA 92 WB lanes
Maintain traffic on new Ramp A and C
Construction
Remove existing I-29 NB bridge over mosquito creek (by others)
Construct remaining I-29 SB bridge over Mosquito Cr. (by others) Excluding the Ramp D connection
Remove existing US 275/IA 92 bridge over I-29
Construct new US 275 EB bridge over I-29
Continue Grade and pave of US 275/ IA 92 EB
Grade and Pave I-29 SB from station 6627+50 to 6687+50
Grade and Pave detour 352300
Delete Detour 352000
Grade and Pave I-29 Interim SB and DET_353000 and Crossover at Sta. 6700+05 as shown on J.81b-J.81c
Stage 3B
Traffic
Maintain traffic on new I-29 NB
Maintain traffic on existing I-29 SB
IA 92/ US 275 remains on new WB lanes
Maintain traffic on new Ramp A and C
Close I-80 WB/ I-29 SB Ramp to IA 92 Loop B Movement
Construction
Grade and Pave Interim SB I-29 from 99601+49 to 99612+17 as shown on the J sheets
Grade and Pave I-29 SB from station 6667+50 to 6687+50 as shown on the J sheets
Continue Construction on SB I-29 bridge
Stage 3C
Traffic
Move I-29 SB traffic onto New I-29 NB with I-29 NB traffic maintaining 2 lanes of traffic in each direction except in area shown on J.81d and J.81e
Construction
Remove existing I-29 SB bridge
Construct I-29 median crossover as shown on Sheets J.81f and J.81g and I-29 SB pavement from Sta. 6681+65 to 6686+65
Stage 3D
Traffic
Maintain I-29 NB and SB traffic on I-29 NB new lanes per Stage 3C except maintain 2 lanes throughout utilizing 2 lane crossover at Sta. 6681+65 See J.81f and J.81g
Stage 4A
Traffic
Maintain traffic on new I-29 NB
Move I-29 SB traffic to new SB lanes
Maintain traffic on New WB IA 92/ US 275
Maintain closure of I-80 WB/ I-29 SB Ramp to IA 92 Loop B Movement
Maintain Traffic on Loop B as shown in J sheets
Maintain bike trail under I-29
Close Ramp D
Construction
Remove existing I-29 SB bridge over Mosquito Cr.
Grade and Pave portion of bike trail under I-29 not impacting trail traffic
Build I-29 SB Ramp D Stub bridge
Grade and Pave Ramp B from station 82533+25 to 82548+27 as shown on J sheets
Grade and Pave Ramp D from station 84534+74 to 84544+29 as shown on J sheets
Grade and pave remaining SB I-29 on South End as shown in the J sheets
Stage 4B
Traffic
Maintain traffic on new I-29 NB
Maintain I-29 SB traffic in new SB lanes
Maintain traffic on New WB IA 92/ US 275 Lanes until Gap at Ramps B/D reconstructed then switch to final 4 lane configuration
Close bike trail under I-29 (Maximum closure period is 2 weeks)
Close Ramp B
Maintain Ramp D Closure
Construction
Continue construction of I-29 SB Ramp D Stub bridge
Grade and Pave bike trail under I-29
Grade and Pave remaining portions of Ramps B and D
Grade and Pave remaining IA 92/ US 275 through Ramp B/D terminal
Construct permanent Bike Trail connections and raised median on I-92/ US275
Install Tower lighting on the South side of I-29
Stage 5
Traffic
Open all traffic to I-29 and US 275/IA 92
Open Ramps B and D
Construction
Complete removals and grading not affecting traffic
Following completion of removal of existing track (by others), construct new bike path under IA 92 bridge over Mosquito Creek and install scour altigation per Sheet U.76.



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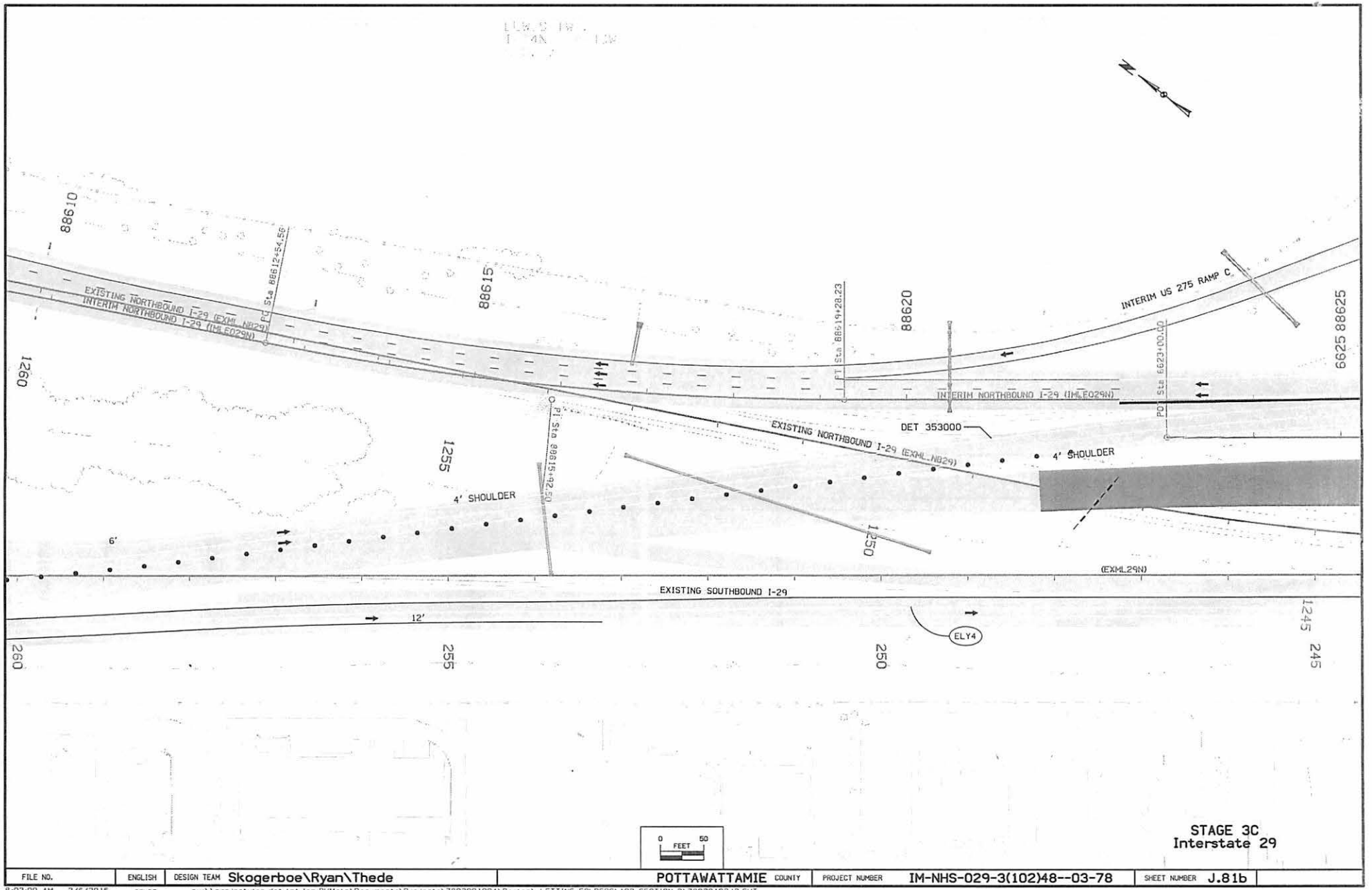
EXISTING NORTHBOUND I-29 (EXML_NB29)
INTERIM NORTHBOUND I-29 (IM_E029N)
PC Sta 88612+54.56
PT Sta 88619+28.23
INTERIM US 275 RAMP C
PC Sta 6623+00.00
6625 88625
88610
88615
88620
1260
1255
1250
1245
INTERIM NORTHBOUND I-29 (IM_E029N)
DET 353000
EXISTING NORTHBOUND I-29 (EXML_NB29)
4' SHOULDER
PI Sta 88615+82.50
4' SHOULDER
6'
(EXML29N)
EXISTING SOUTHBOUND I-29
12'
ELY4
260
255
250
245
0 FEET 50
STAGE 3C
Interstate 29
FILE NO.
ENGLISH
DESIGN TEAM Skogerboe\Ryan\Thede
POTTAWATTAMIE COUNTY
PROJECT NUMBER IM-NHS-029-3(102)48--03-78
SHEET NUMBER J.81b
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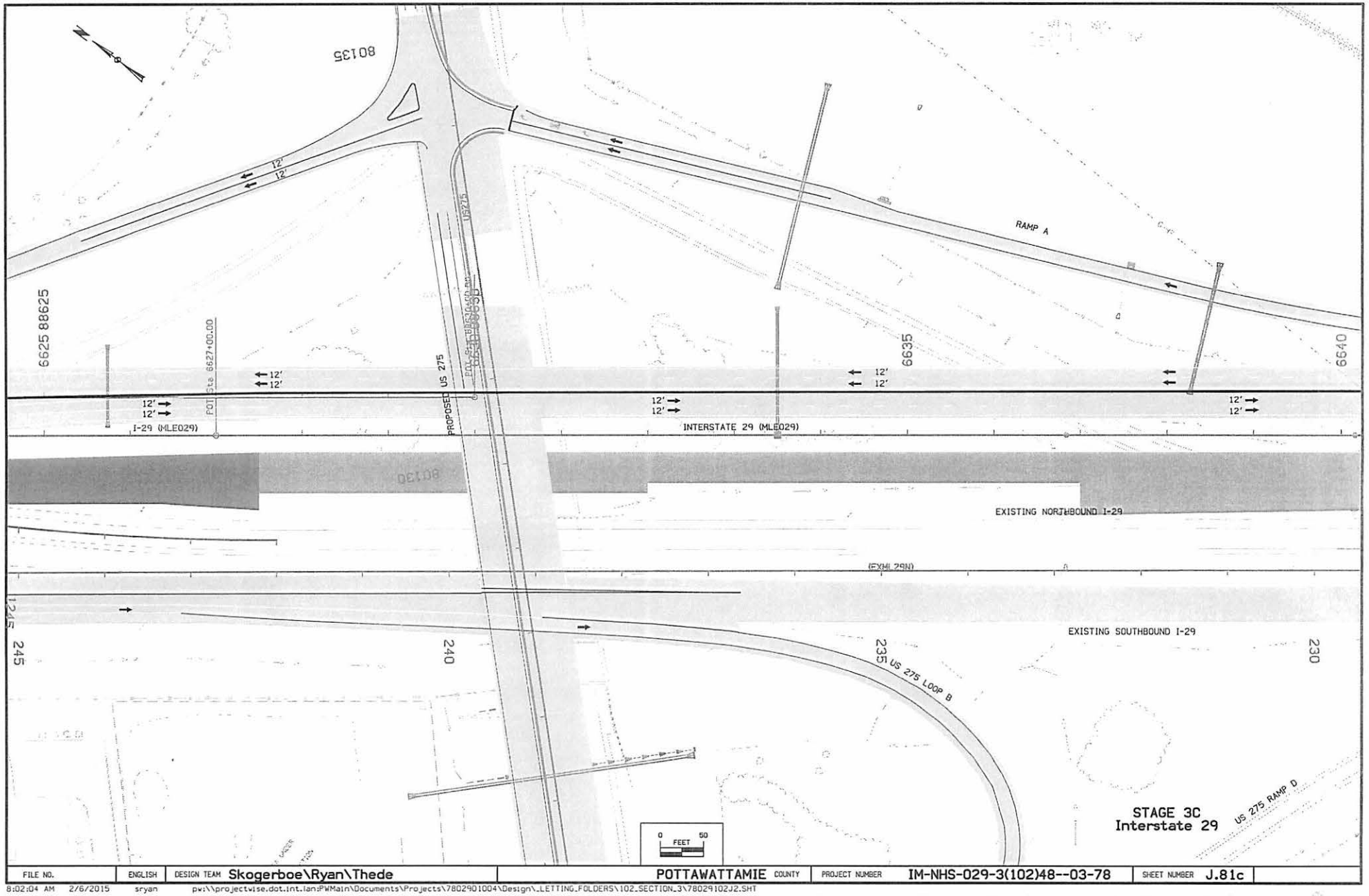

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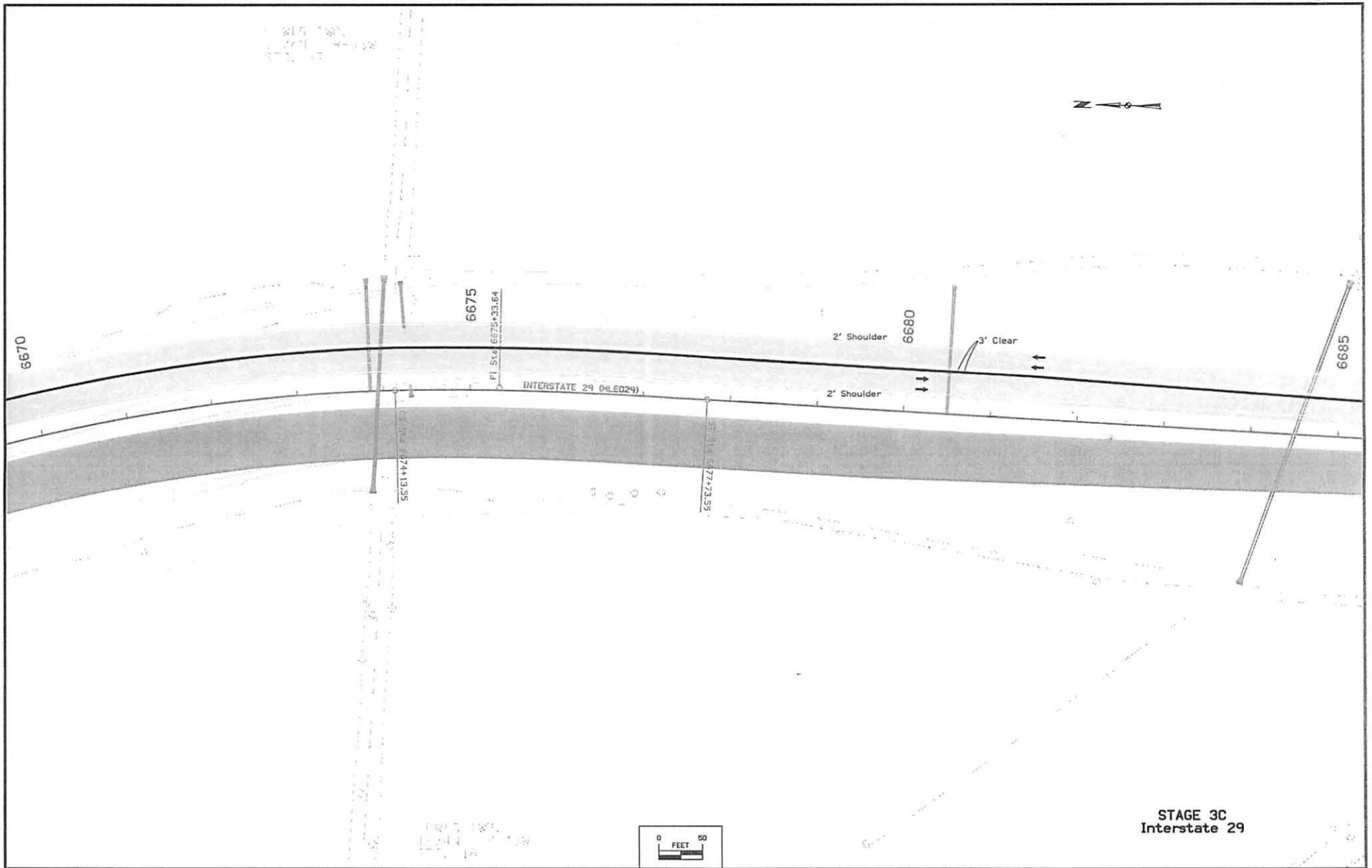

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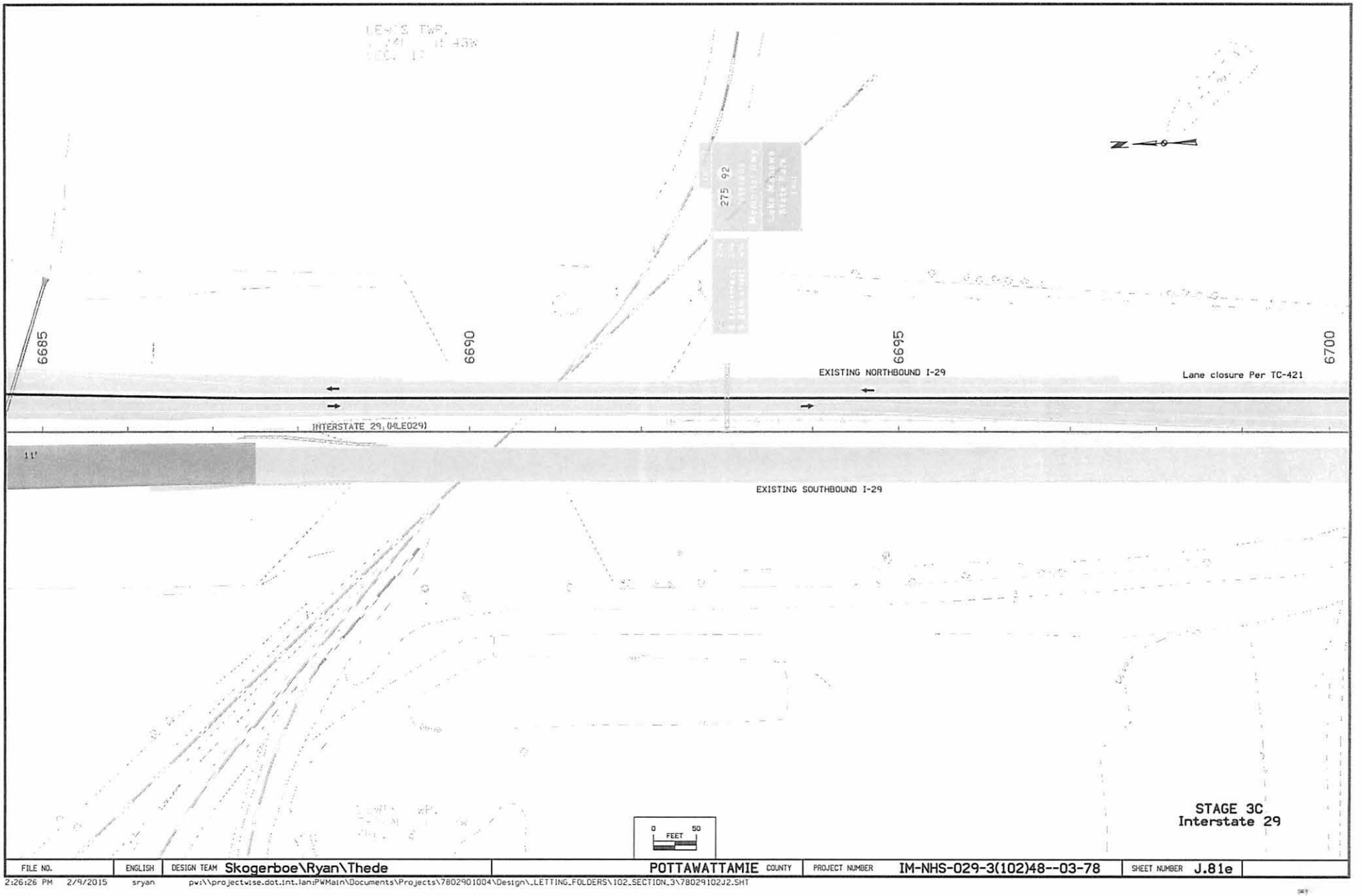

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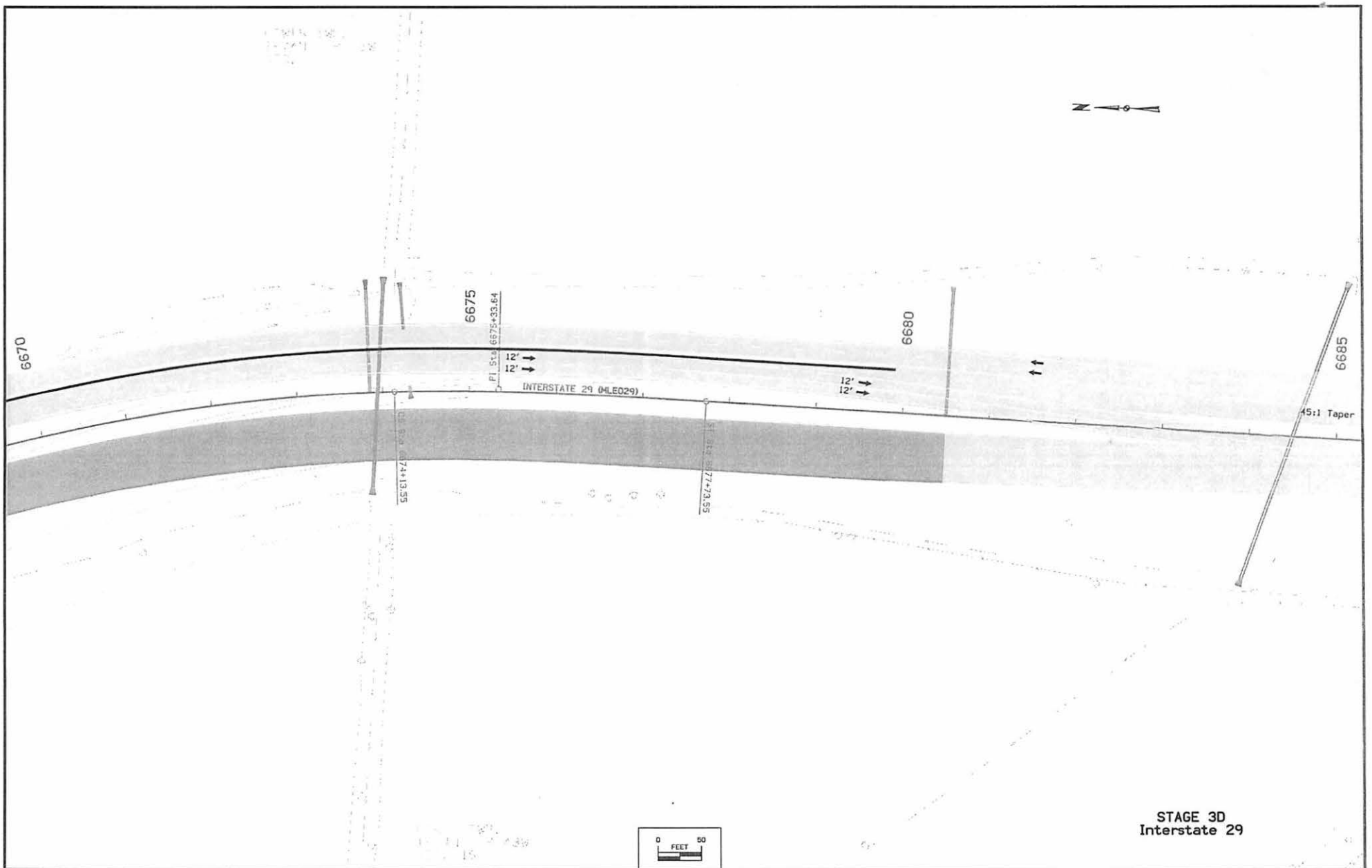

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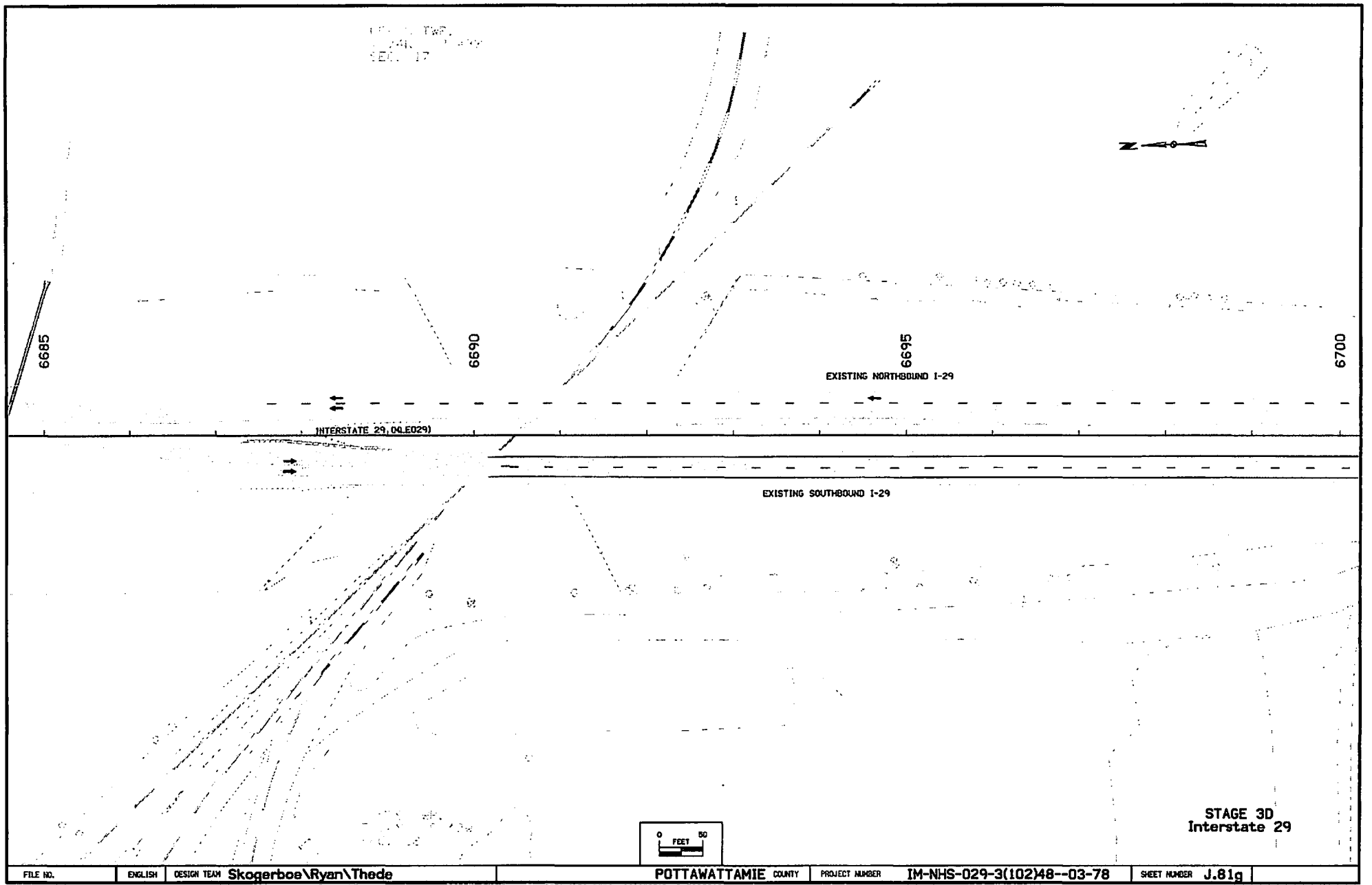

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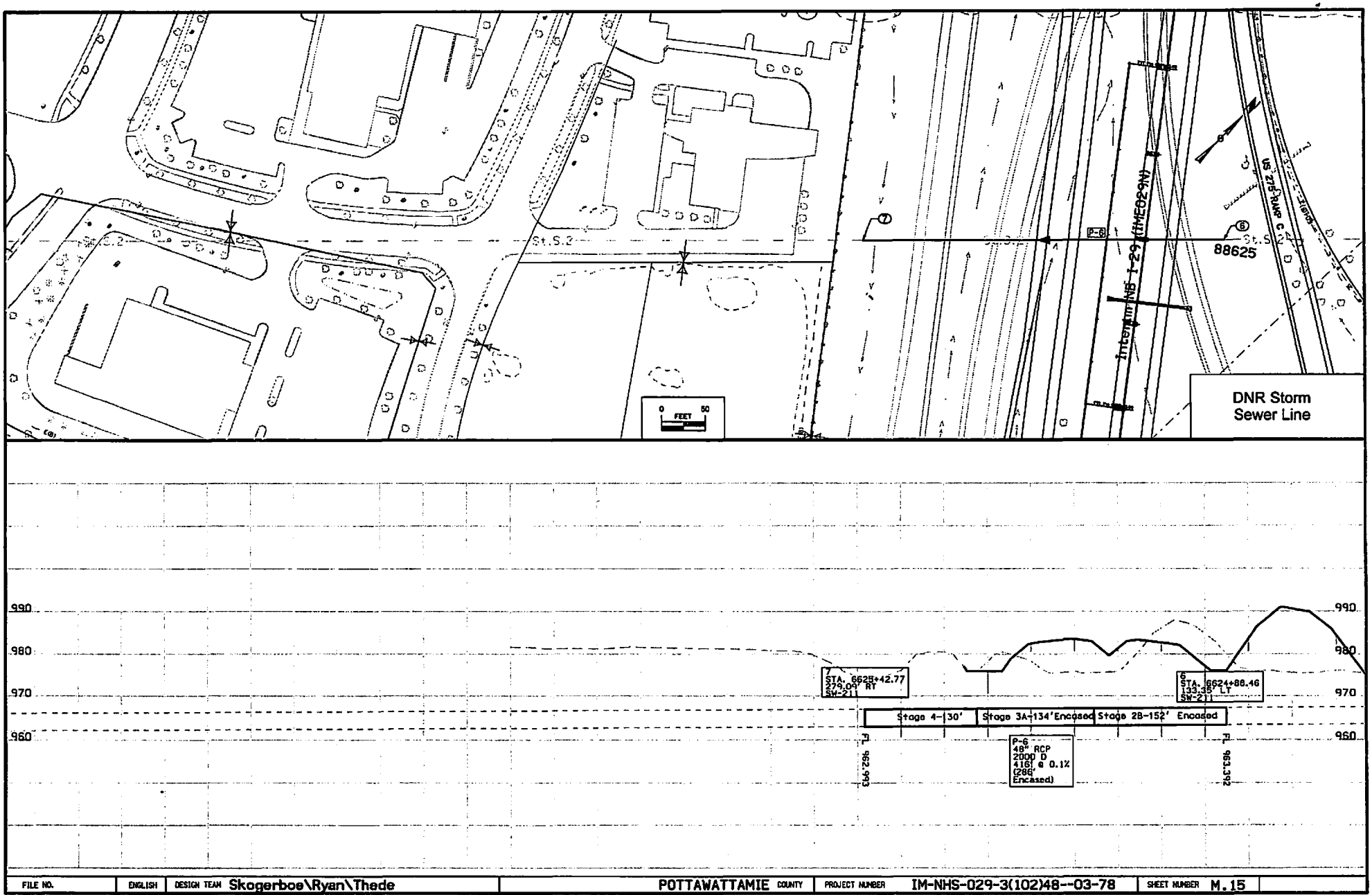

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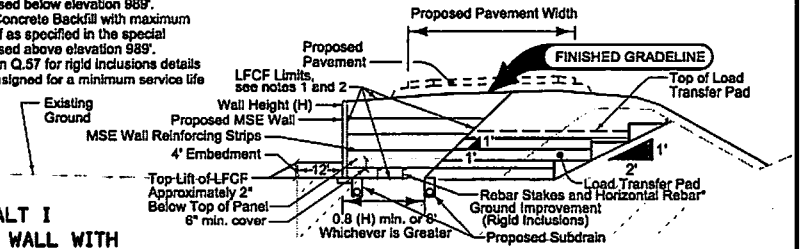
TYP 4

NOTES:
1. Lightweight Foam Concrete backfill with maximum unit weight of 70 pcf as specified in the special provision shall be used below elevation 989'.
2. Lightweight Foam Concrete Backfill with maximum unit weight of 40 pcf as specified in the special provision shall be used above elevation 989'.
3. Refer to Table 1B on Q.57 for rigid inclusions details
4. The wall shall be designed for a minimum service life of 75 years.

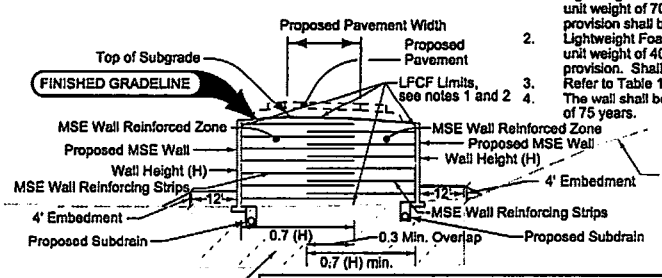


RAMP D ALT I
ONE SIDED MSE WALL WITH LIGHT WEIGHT FOAM CONCRETE FILL TYPICAL SECTION

LOCATION			GROUND IMPROVEMENT TYPE	SIDE	REMARKS
ROAD IDENTIFICATION	STATION TO STATION				
RAMP D	84537+50.00	84540+00.00	RI	LT	SEE SHEETS 0.38,0.57-0.59

TYP 5

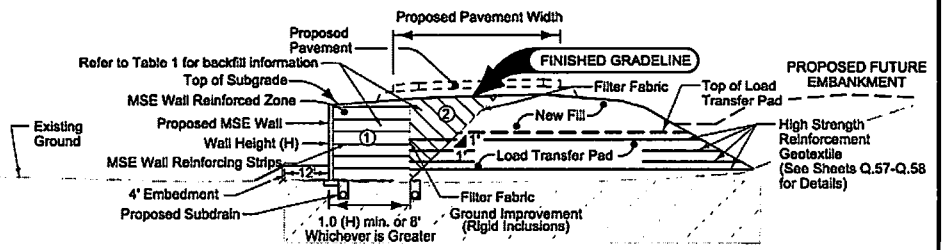
NOTES:
1. Lightweight Foam Concrete backfill with maximum unit weight of 70 pcf as specified in the special provision shall be used below elevation 989.
2. Lightweight Foam Concrete Backfill with maximum unit weight of 40 pcf as specified in the special provision. Shall be used above elevation 989'.
3. Refer to Table 1B on Q.58 for details
4. The wall shall be designed for a minimum service life of 75 years.



RAMP D ALT I
BACK TO BACK MSE WALL WITH LIGHT WEIGHT FOAM CONCRETE FILL TYPICAL SECTION

LOCATION			GROUND IMPROVEMENT TYPE	REMARKS
ROAD IDENTIFICATION	STATION TO STATION			
RAMP D	84540+00.00	84544+75.29	RI	SEE SHEETS 0.38,0.57-0.59

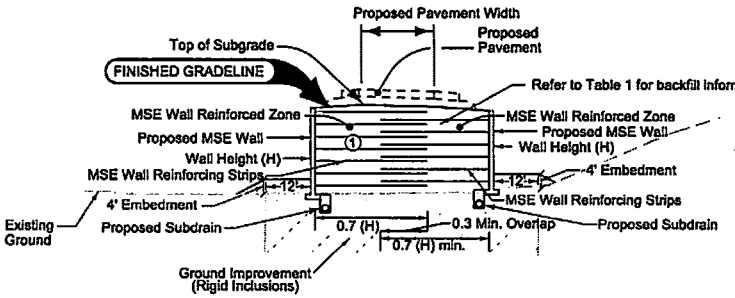
TYP 6



ONE SIDE MSE WALL WITH STONE BACKFILL TYPICAL SECTION

LOCATION			GROUND IMPROVEMENT TYPE	SIDE	REMARKS
ROAD IDENTIFICATION	STATION TO STATION				
I-29	6637+00.00	6640+91.44	RI	RT	SEE SHEETS 0.1,0.57-0.59
RAMP D ALT II	84537+50.00	84540+00.00	RI	LT	SEE SHEETS 0.38,0.57-0.59

TYP 7

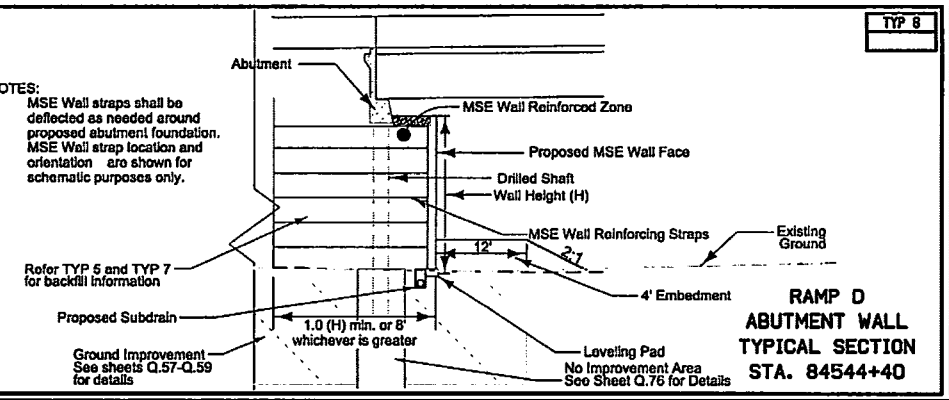


RAMP D ALT II
BACK TO BACK MSE WALL WITH STONE BACKFILL TYPICAL SECTION

LOCATION			GROUND IMPROVEMENT TYPE	REMARKS
ROAD IDENTIFICATION	STATION TO STATION			
RAMP D	84540+00.00	84544+75.29	RI	SEE SHEETS 0.38,0.57-0.59

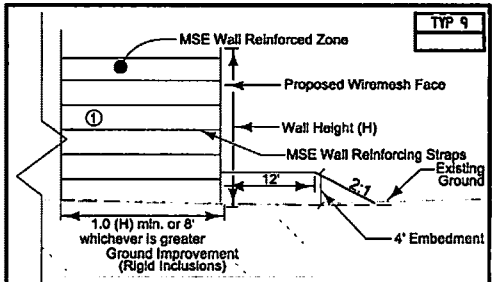
TYP 8

NOTES:
1. MSE Wall straps shall be deflected as needed around proposed abutment foundation.
2. MSE Wall strap location and orientation are shown for schematic purposes only.



RAMP D
ABUTMENT WALL
TYPICAL SECTION
STA. 84544+40

TYP 9



NOTES:
1. Refer to Table 1 for backfill information
2. MSE Wall straps shall be deflected as needed around

I-29 MAINLINE
TEMPORARY WIRE MESH
TYPICAL SECTION
STA. 6637+00

Table 1: MSE Backfill Soil Data

SOILS DATA	REINFORCED ZONE (1)	(2)	
	Stone Fill	Stone Fill	Granular Fill
MAX UNIT WEIGHT =	105 +/- 5 pcf	105 +/- 5 pcf	120 +/- 5 pcf
PHI ANGLE =	40 degrees	40 degrees	30 degrees
UNIT COHESION =	0 psf	0 psf	0 psf

* depending on construction sequence see note 2.

NOTES:
1. MSE backfill material gradation is specified in the special provisions for MSE wall with stone material. Special provisions for MSE wall with stone material.
2. Granular material can be used in zone (2) if the new fill embankment and the MSE wall are constructed in lifts at the same time. Otherwise, stone backfill shall be used in this area.
3. One vertical filter fabric layer will be required as shown. If the granular material option is adopted for zone (2), the filter fabric shall be constructed from upper layer of high strength geotextile to top of embankment fill.
4. The wall shall be designed for a minimum service life of 75 years.

A d d e n d u m

Iowa Department of Transportation
Office of Contracts

Date of Letting: February 17, 2015
Date of Addendum: February 10, 2015

B.O.	Proposal ID	Proposal Work Type	County	Project Number	Addendum
306	78-0293-102	GRADING	POTTAWATTAMIE	IM-NHS-029-3(102)48--03-78 IM-NHS-029-3(103)48--03-78 IM-NHS-029-3(104)48--03-78 IM-029-3(105)48--13-78 NHS-029-3(106)48--11-78 IM-NHS-029-3(110)48--03-78 IM-NHS-029-3(122)48--03-78 IM-NHS-029-3(146)48--03-78 IM-NHS-080-1(416)3--03-78	17FEB306.A08

Replace place sheets N.1, N.3, N.4, N.5, N.7, N.9, N.10, N.11, N.12, & N.14 with the attached plan sheets for project IM-NHS-029-3(104)48--03-78

N.1
Update Bill of Materials items:
-Advance Microwave Radar Detection (Detector Units)
-Presence Microwave Radar Detection (Detector Units)
-Radar (Wire and Cable)
-3'-0" Dia. X 14-0" (Wire and Cable)
-3'6" Dia. X 23'-0" (Wire and Cable)
-POWER - 1c #6

N.3
Removed Advance Detector for NB Ramp (3A)

N.4
Remove Advance Detector for NB Ramp (3A)
Updated Radar cable quantities
Updated power connection.

N.5
Removed Detector 3A

N.7
Removed Advance Microwave Detector from Pole 2

N.9
Removed Detector 3A
Removed "power located in north Bridge Rail" note

Adjusted location on "02" Preemption
Added power source

N.10
Adjusted Radar Cable Quantities
Removed Detector 3A

N.11
Removed Detector 3A

N.12
Removed Detector 3A from Pole 2
Removed Advance Microwave Detector from Pole 2
Removed Detectors from Pole 4 (looking north)

N.14
Updated power connection. Added note.

BILL OF MATERIALS

ITEM	ITEM CODE	DESCRIPTION	UNIT	PROPOSED QUANTITIES			AS BUILT QUANTITIES		
				—	—	TOTAL	—	—	TOTAL
Controller and Cabinet	—	8 Phase, Cabinet W/ Accessories	Each	3	—	—	—	—	—
	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—
Detector Units	—	Advance Microwave Radar Detector	Each	6	—	—	—	—	—
	—	Presence Microwave Radar Detector	Each	10	—	—	—	—	—
Traffic Signal Heads	—	12" R,Y,G, <G Mastarm Mount (with backplate)	Each	2	—	—	—	—	—
	—	12" <R, <Y, <FY, <G Mastarm Mount (with backplate)	Each	5	—	—	—	—	—
	—	12" R, Y, G Mastarm Mount (with backplate)	Each	17	—	—	—	—	—
	—	12" R, Y>,G> Mastarm Mount (with backplate)	Each	2	—	—	—	—	—
	—	—	—	—	—	—	—	—	—
	—	12" R,Y,G,Y>,G> Pole Mount (no backplate)	Each	2	—	—	—	—	—
	—	12" R,Y,G Pole Mount (no backplate)	Each	3	—	—	—	—	—
	—	12" <R, <Y, <G Mastarm Mount (with backplate)	Each	3	—	—	—	—	—
	—	12" R,Y,G,Y>,G> Mastarm Mount (with backplate)	Each	3	—	—	—	—	—
Handholes	—	LI-103 Type I	Each	11	—	—	—	—	—
Wire and Cable	—	SIGNAL - 5c #14	FL	5500	—	—	—	—	—
	—	SIGNAL - 7c #14	FL	3670	—	—	—	—	—
	—	Radar	FL	6550	—	—	—	—	—
	—	POWER - 1c #8	FL	1400	—	—	—	—	—
	—	GROUND - 1c #6, BARE	FL	1415	—	—	—	—	—
	—	TRACER - 1c #10	FL	1415	—	—	—	—	—
	—	LUMINAIRE - 1c #8	FL	4130	—	—	—	—	—
	—	Opticom Pre-Emption	FL	2025	—	—	—	—	—
	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—
Detector Saw Cut	—	—	—	—	—	—	—	—	—
Conduit	—	2" PVC, Trenched	FL	—	—	—	—	—	—
	—	2" PVC, Pushed	FL	—	—	—	—	—	—
	—	3" PVC, Trenched	FL	225	—	—	—	—	—
	—	3" PVC, Pushed	FL	1150	—	—	—	—	—
	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—
Concrete Foundations	—	Controller Foundation	Each	3	—	—	—	—	—
	—	3'-0" Dia. X 15-0"	Each	1	—	—	—	—	—
	—	3'-0" Dia. X 14'-0"	Each	2	—	—	—	—	—
	—	3'-6" Dia. X 21'-0"	Each	4	—	—	—	—	—
	—	3'-6" Dia. X 23'-0"	Each	1	—	—	—	—	—
	—	2'-0" Dia. X 3'-0" Ped pushbutton pole	Each	4	—	—	—	—	—
	—	Contractor Designed	Each	2	—	—	—	—	—
Traffic Signal Poles	—	Combo Pole - 55 feet	Each	1	—	—	—	—	—
	—	Combo Pole - 60 feet	Each	1	—	—	—	—	—
	—	Twin Combo Pole - 45 feet and 70 feet	Each	1	—	—	—	—	—
	—	Combo Pole - 65 feet	Each	2	—	—	—	—	—
	—	Combo Pole - 70 feet	Each	2	—	—	—	—	—
	—	Combo Pole - 80 feet	Each	1	—	—	—	—	—
	—	Combo Pole - 85 feet	Each	1	—	—	—	—	—
	—	Signing Mastarm - 50 feet	Each	1	—	—	—	—	—
	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—
Luminaire	—	15' Spread	10	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—
Misc.	—	12" LED Displays	Each	128	—	—	—	—	—
	—	16" PED Display	Each	4	—	—	—	—	—
	—	R 3-5L Sign, 30" x 36"	Each	8	—	—	—	—	—
	—	R 3-5R Sign, 30" x 36"	Each	8	—	—	—	—	—
	—	R 3-5A Sign, 30" x 36"	Each	4	—	—	—	—	—
	—	R 3-6L Sign, 30" x 36"	Each	3	—	—	—	—	—
	—	R 3-6R Sign, 30" x 36"	Each	1	—	—	—	—	—
	—	Opticom GPS Emergency Vehicle Preemption System	Each	3	—	—	—	—	—
	—	PED pushbutton and pole	Each	4	—	—	—	—	—
	—	R 3-2 Sign, 30" x 30"	Each	1	—	—	—	—	—
	—	R 3-1 Sign, 30" x 30"	Each	1	—	—	—	—	—
	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—
Power Supply	—	Signal Control Cabinet	Each	3	—	—	—	—	—
	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—

TRAFFIC SIGNAL LEGEND

- Tranched Signal Conduit
- Pushed Signal Conduit
- Traffic Signal Cabinet and Controller
- Fiber Optic Cabinet and Controller
- Traffic Signal Foundation and Identifying Number
- Traffic Signal Head and Identifying Number
- Traffic Signal Head with Backplate and Identifying Number
- Pedestrian Signal Head and Identifying Number
- Mastarm Suspended Traffic Signal (## - Length of Mastarm)
- Loop Detector and Identifying Number
- Video/Radar Detection Area and Identifying Number
- Video Detection Camera and Identifying Number
- Radar Detector and Identifying Number
- Preemption Detector and Identifying Number
- Handhole and Identifying Number
- Luminaire
- Mastarm Mounted Sign and Identifying Letter
- R Solid Red Ball
- R Solid Red Arrow
- Y Solid Yellow Ball
- SY Solid Yellow Arrow
- FY Flashing Yellow Arrow
- G Solid Green Ball
- G Solid Green Arrow

Traffic signal general notes:

1. All quantities shown in the plans and specifications are for informational and estimating purposes only the contractor's lump sum bid for this project shall include all labor and material necessary to provide a complete and functional traffic signal installation, in conformance with the plans and specifications.
2. The plan locations of underground utilities are approximate only. the Contractor shall notify all utility companies prior to excavation on the project to establish locations.
3. The locations of all footings, handholes, detector loops, and conduit are to be coordinated with the Engineer and are subject to adjustment in the field by the engineer.
4. The Contractor shall install one signal cable from each signal head to the base of the pole. A 7-conductor cable shall be used in the pole for a 5-section vehicle signal head. A 5-conductor cable shall be used in the poles for all other 3-section vehicle heads.
5. The body of the signal head housing shall be of the yellow polycarbonate type.
6. Install a no. 6 A.W.G. bare copper ground wire between the ground rods in the signal footings and the controller cabinet to form a continuously grounded system. The ground wire shall be installed in all conduits with the exception of the 1 inch conduit between the detector loops and the handhole, and any conduit containing only dectector lead-in cable.
7. All conduit shall be rigid PVC or innerduct conduit, unless otherwise noted.
8. Controllers and cabinet hardware shall be expansible to provide the number of phases as indicated on the traffic signal phasing and timing sheet.
9. All detector units shall be provided with delay and extension timing. The delay inhibit on each unit shall be in effect during the associated green phase.
10. All secondary service points will be field located. Provide meter socket on controller cabinet and construct service risers for signals. All labor, equipment, and materials necessary to establish secondary service shall be included in the traffic signalization item.
11. The Contractor shall furnish a schedule of unit prices for each item listed in the estimate of traffic signal quantities.
12. The new light poles shall have a 40' mounting height, 15' mastarms, and a 150 W HPS fixture.
13. Refer to plan IM-NHS-029-3(102)48--03-78 for additional staging information
14. Installation of radar detection units, pre-emption devices, and vehicle detection zones shall be coordinated with the City of Council Bluffs and be set in accordance with the manufacturer's specifications.
15. The Contractor shall be responsible for contacting the local utility company to determine the location of the power connection(s).
16. Additional temporary traffic signal faces may be added as site conditions warrant.
17. Maintain the use of the existing wireless interconnect for signal coordination between the signal controllers at Exit 47 East Terminal, West Terminal, and Harry Langdon Boulevard
18. Existing emergency pre-emption shall be maintained throughout the project. Temporary pre-emption shall be compatible with existing pre-emption. The Contractor should coordinate pre-emption installation with the City of Council Bluffs.

Traffic Signal General Notes

FILE NO.	ENGLISH	DESIGN TEAM Abrams	POTTAWATTAMIE COUNTY	PROJECT NUMBER IM-NHS-029-3(104)48--03-78	SHEET NUMBER N.1	REVISED 2/9/15

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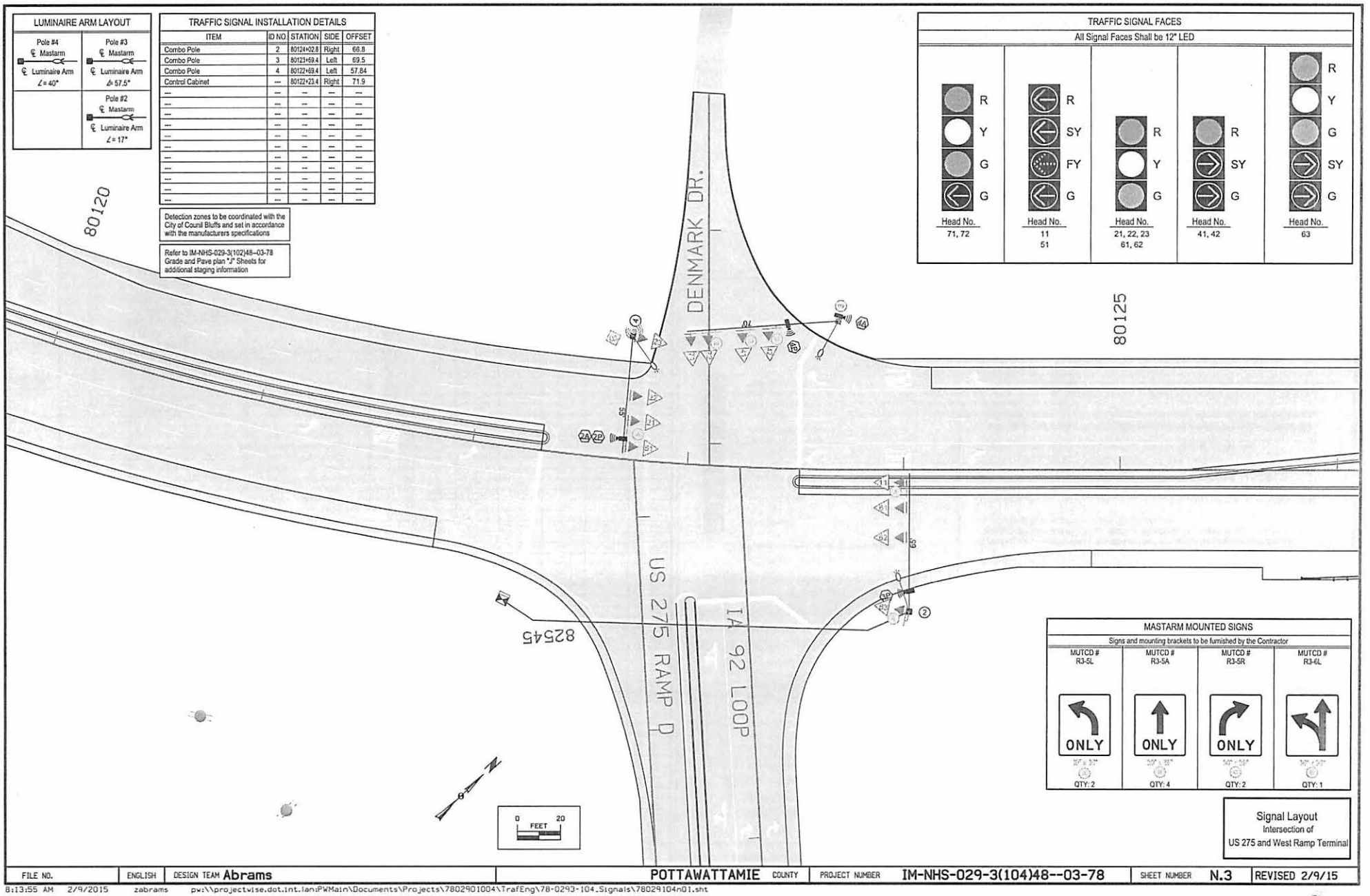

FILE NO.	ENGLISH	DESIGN TEAM Abrams	POTTAWATTAMIE COUNTY	PROJECT NUMBER IM-NHS-029-3(104)48--03-78	SHEET NUMBER N.3	REVISED 2/9/15

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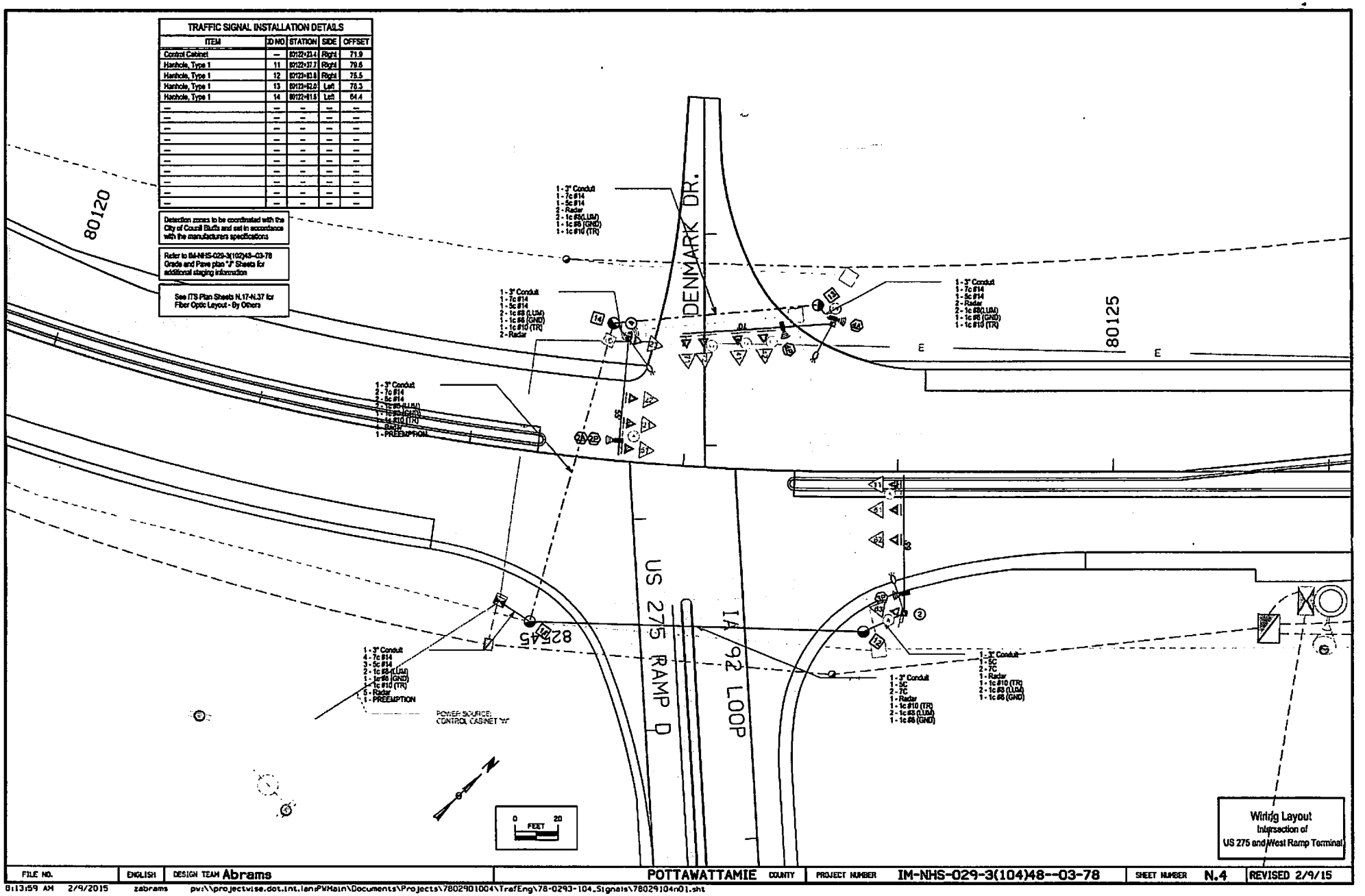
TRAFFIC SIGNAL INSTALLATION DETAILS
ITEM | ID NO | STATION | SIDE | OFFSET
Control Cabinet | — | 80122+23.4 | Right | 71.9
Handhole, Type 1 | 11 | 80122+37.7 | Right | 79.6
Handhole, Type 1 | 12 | 80123+83.8 | Right | 75.5
Handhole, Type 1 | 13 | 80123+82.0 | Left | 78.3
Handhole, Type 1 | 14 | 80122+81.5 | Left | 64.4
Detection zones to be coordinated with the City of Council Bluffs and set in accordance with the manufacturers specifications
Refer to IM-NHS-029-3(102)48--03-78 Grade and Pave plan "J" Sheets for additional staging information
See ITS Plan Sheets N.17-N.37 for Fiber Optic Layout - By Others
80120
80125
DENMARK DR.
US 275 RAMP D
IA 92 LOOP
82545
1 - 3" Conduit
1 - 7c #14
1 - 5c #14
2 - Radar
2 - 1c #8(LUM)
1 - 1c #8 (GND)
1 - 1c #10 (TR)
1 - PREEMPTION
POWER SOURCE: CONTROL CABINET
0 20 FEET
Wiring Layout
Intersection of
US 275 and West Ramp Terminal
FILE NO.
ENGLISH
DESIGN TEAM Abrams
POTTAWATTAMIE COUNTY
PROJECT NUMBER IM-NHS-029-3(104)48--03-78
SHEET NUMBER N.4
REVISED 2/9/15
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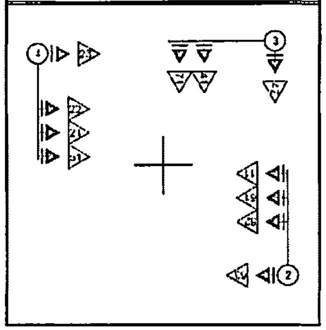
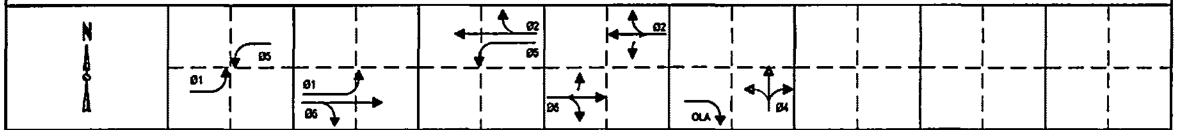
SIGNAL FACE LOCATION



TRAFFIC PHASING AND COLOR SEQUENCE



APPROACH	FACE NO.	Ø1+5					Ø1+6					Ø2+5					Ø2+6					Ø4					Ø_+_					Ø_+_					Ø_+_				
		R/W	CLEAR TO Ø				R/W	CLEAR TO Ø				R/W	CLEAR TO Ø				R/W	CLEAR TO Ø				R/W	CLEAR TO Ø				R/W	CLEAR TO Ø				R/W	CLEAR TO Ø				R/W	CLEAR TO Ø			
			1+6	2+5	2+6	4+7		2+5	2+6	4+7	_+_		2+6	4+7	_+_	_+_		4+7	_+_	_+_	_+_		1+5	_+_	_+_	_+_		_+_	_+_	_+_	_+_		_+_	_+_	_+_	_+_		_+_	_+_	_+_	_+_
WB Approach US 275	51	<G	Y	<G	<SY	<SY	R	R	R	R	—	<G	<SY	<SY	—	—	<FY	<SY	—	—	—	R	R	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	21, 22, 23	R	R	R	R	R	R	R	R	R	—	G	G	Y	—	—	G	Y	—	—	—	R	R	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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EB Approach US 275	11	<G	<G	Y	<SY	<SY	<G	<SY	<SY	<SY	—	R	R	R	—	—	<FY	<SY	—	—	—	R	R	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	61, 62	R	R	R	R	R	G	Y	G	Y	—	R	R	R	—	—	G	Y	—	—	—	R	R	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	63	R	R	R	R	R	G	Y	G	G	—	R	R	R	—	—	G	Y	—	—	—	G>	Y>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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NB Approach Ramp B	71, 72	R	R	R	R	R	R	R	R	R	—	R	R	R	—	—	R	R	—	—	—	<G,G	Y	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	41	R	R	R	R	R	R	R	R	R	—	R	R	R	—	—	R	R	—	—	—	G>	Y>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	42	G>	Y	G>	Y	Y>	R	R	R	R	—	G>	G>	G>	—	—	R	R	—	—	—	G>	G>	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

INITITAL RECOMMENDED TIMINGS (SECONDS)

	Phase 1	2	3	4	5	6	7	8
Minimum Green	10	10	—	7	10	10	7	—
Passage	—	—	—	—	—	—	—	—
Maximum I	—	—	—	—	—	—	—	—
Maximum II	—	—	—	—	—	—	—	—
Yellow Change	4.5	4.5	—	3.0	4.5	4.5	3.0	—
Red Clearance	2.2	2.2	—	3.5	2.2	2.2	3.5	—
Walk	—	—	—	—	—	—	—	—
Flashing Don't Walk	—	—	—	—	—	—	—	—
Added Initial	—	—	—	—	—	—	—	—
Time to Reduce	—	—	—	—	—	—	—	—
Time before Reduction	—	—	—	—	—	—	—	—
Recall Position	—	—	—	—	—	—	—	—
Vehicle Call Memory	—	—	—	—	—	—	—	—
Volume Density	—	—	—	—	—	—	—	—
Maximum Initial	—	—	—	—	—	—	—	—
Minimum Gap	—	—	—	—	—	—	—	—

** NOTE: The timings shown are for start-up only. The final and coordination timings should be obtained from Mark Franz with The City of Concil Bluffs. The Contractor shall notify the City of Council Bluffs three weeks prior to needing the timings.

LEGEND

- Actuated Vehicular Movement
- Non-Actuated Vehicular Movement
- Partially Restricted Vehicular Movement
- Actuated Pedestrian Movement
- Non-Actuated Pedestrian Movement

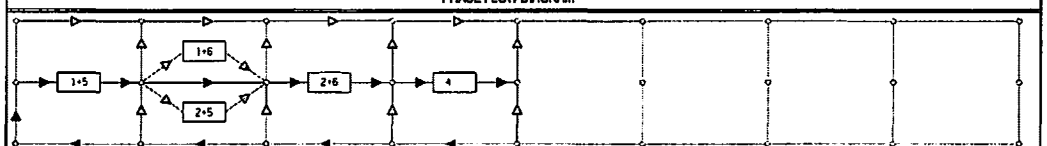
R/W	Right Of Way Interval
Ø	Traffic Phase
R	Circular Red
Y	Circular Yellow
G	Circular Green
↑G	Green Straight Ahead Arrow
<Y	Yellow Left Arrow
<FY	Flashing Yellow Left Arrow
<G	Green Left Arrow
Y>	Yellow Right Arrow
FY>	Flashing Yellow Right Arrow
G>	Green Right Arrow
W	Walk
DW	Don't Walk
FDW	Flashing Don't Walk
AO	All Other Phases
PR1	Preempt #1
PR2	Preempt #2

DETECTOR SUMMARY

Approach	Detector Number	New	Existing	TYPE: Pedestrian Pushbutton	Inductive Loop	Video	Microwave	LOOP PARAMETERS: Distance from Stop Bar ft.	Size (ft. x ft.)	Number of Turns
EB	2A	X	—	—	—	—	X	—	—	—
EB	2P	X	—	—	—	—	X	—	—	—
—	—	—	—	—	—	—	—	—	—	—
NB	3P	X	—	—	—	—	X	—	—	—
WB	4A	X	—	—	—	—	X	—	—	—
WB	4P	X	—	—	—	—	X	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—

* LINES IN THE TABLE WITH MULTIPLE DETECTORS SHALL BE CONFIGURED IN SERIES

PHASE FLOW DIAGRAM



Note: Flow path if all phases are requested
Flow path when phase is not requested before right of way transfer

CONTROLLER AND CABINET HARDWARE

Phases Used:	6
Expansible To:	8
Minimum Number of Backpanel Positions:	16

FLASHING OPERATIONS

US 275	Red
West Ramp	Red
Pedestrian Indications	OFF

TYPE OF INTERCONNECT

None	—
TBC	—
Closed Loop Twisted Pair *	—
Closed Loop Fiber Optic *	X
Radio	—
* Location of the Master Controller	—
Signal System *:	—

TYPE OF PRE-EMPT

None	—
Railroad	—
Emergency Vehicle	—
Opticom	X
Tomar	—
Hardwire	—
Other	—
Queue Detector	—

PHASE SEQUENCE NOT ALLOWED

FROM	TO
2+6	1+5
_+_	_+_,_+_,_+_

DUAL ENTRY PHASES

_+_,_+_

TYPE OF LIGHTING

By Other Agency	X
In Traffic Signal Cabinet	X
In Separate DOT Lighting Cabinet	—

PHASING DIAGRAM
Intersection of
US 275 and West Ramp Terminal

FILE NO.	ENGLISH	DESIGN TEAM Abrams	POTTAWATTAMIE COUNTY	PROJECT NUMBER IM-NHS-029-3(104)48--03-78	SHEET NUMBER N.5	REVISED 2/9/15

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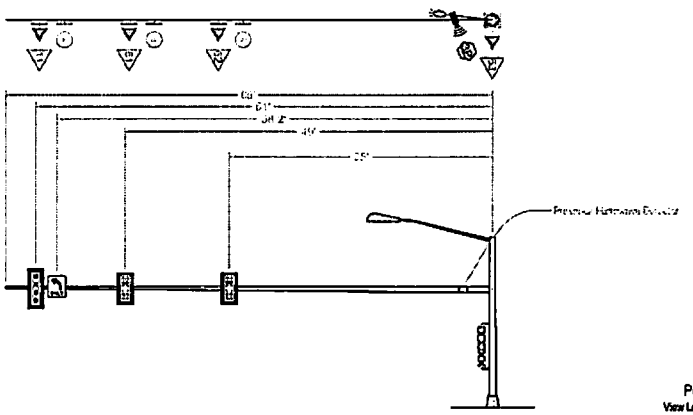
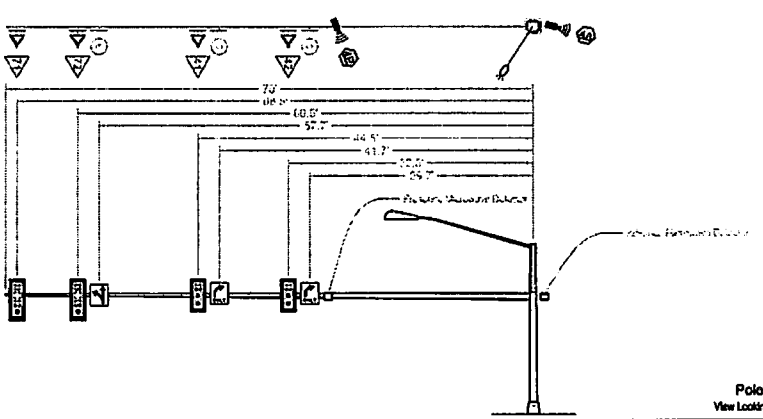
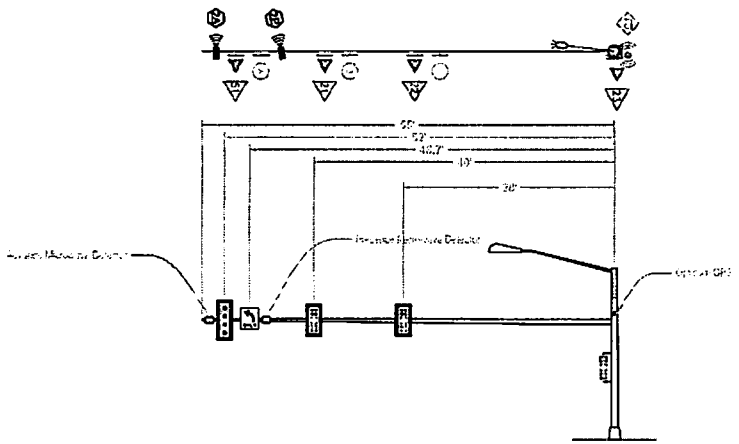


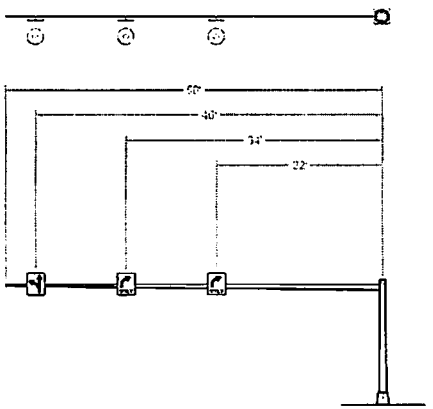
Pole #2
View Looking East



Pole #3
View Looking North



Pole #4
View Looking West



Pole #1
View Looking North

TRAFFIC SIGNAL POLE DATA

Intersection	Pole Number	Pole Type	Mastarm Length Or Pedestal Height	Traffic Signal Heads (1)		Traffic Signs (2)		Luminaire Arm (3)			Footing Dimensions		Miscellaneous	Total Quantity
				Qty.	Location On Pole	Qty.	Location On Pole	Spread	Mounting Height	Orientation	Dia.	Depth		
			FT	EACH	FT	EACH	FT	FT	FT	DEGREE	FT	FT		
Intersection of US 275 and West Ramp Terminal in Council Bluffs	1	Signing Mastarm	50	–	–	3	See N.7	–	–	–	3	14	Sta. 82541+25 US 275 Ramp B.	1
	2	Combo Signal / Lighting	65	4	See N.7	3	See N.7	15	40	17	3.5	21	–	1
	3	Combo Signal / Lighting	70	3	See N.7	2	See N.7	15	40	57.5	3.5	21	–	1
	4	Combo Signal / Lighting	55	4	See N.7	3	See N.7	15	40	40	3	14	–	1
	5	–	–	–	–	–	–	–	–	–	–	–	–	–
	6	–	–	–	–	–	–	–	–	–	–	–	–	–
	7	–	–	–	–	–	–	–	–	–	–	–	–	–
	8	–	–	–	–	–	–	–	–	–	–	–	–	–
	9	–	–	–	–	–	–	–	–	–	–	–	–	–

(1) (2) Location is distance for center of pole measured out to the end of the arm.
(3) Orientation of luminaire arm is clockwise angle measured from the centerline of the signal mast arm.

On combination poles, a minimum 4"x6" handhole and cover shall be located in the shaft opposite the signal mast arm.

POLE DETAILS
Intersection of US 275 and West Ramp Terminal in Council Bluffs

FILE NO.	ENGLISH	DESIGN TEAM Abrams	POTTAWATTAMIE COUNTY	PROJECT NUMBER IM-NHS-029-3(104)48--03-78	SHEET NUMBER N.7	REVISED 2/9/15

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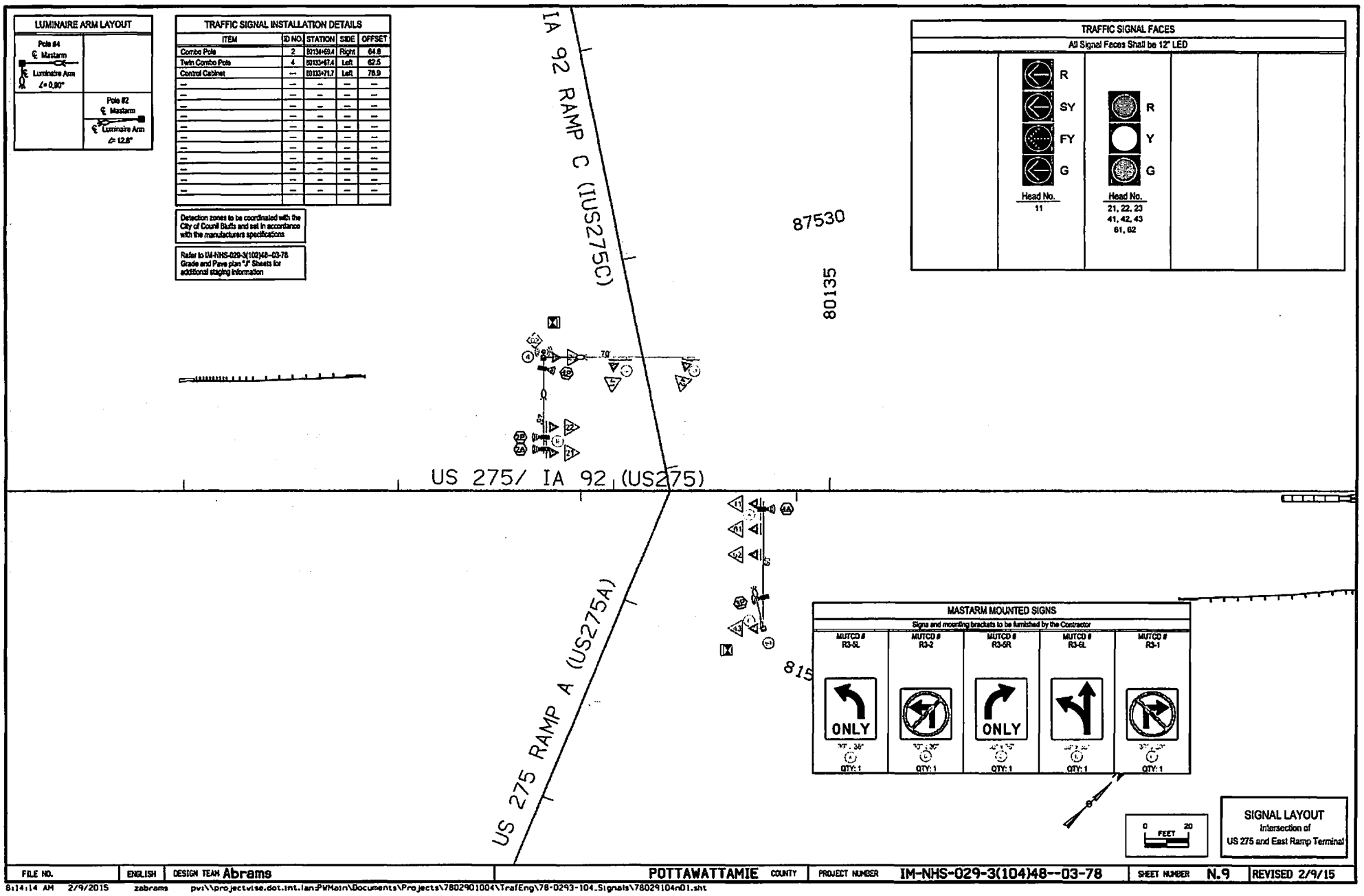

FILE NO.	ENGLISH	DESIGN TEAM Abrams	POTTAWATTAMIE COUNTY	PROJECT NUMBER IM-NHS-029-3(104)48--03-78	SHEET NUMBER N.9	REVISED 2/9/15

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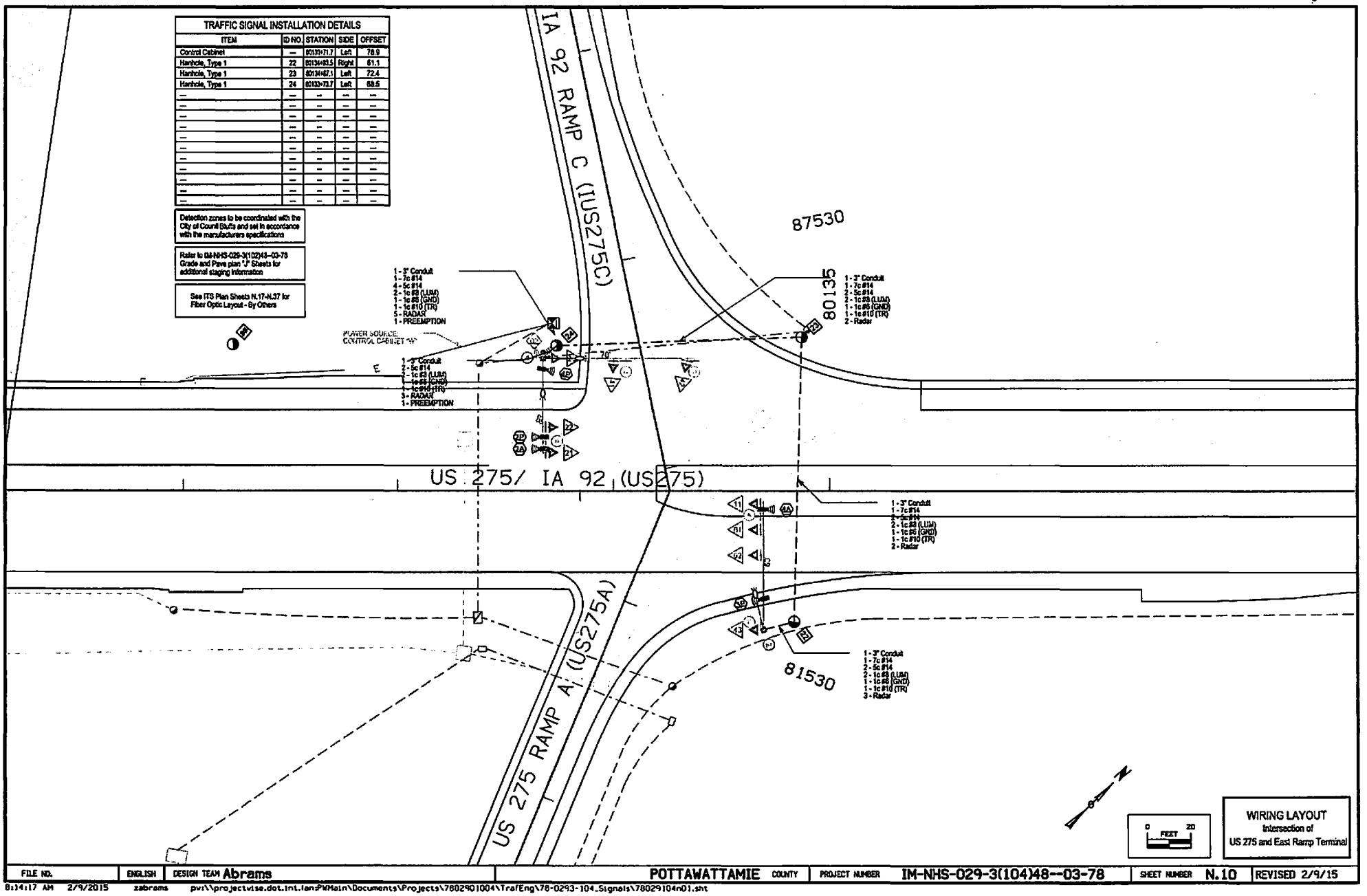
TRAFFIC SIGNAL INSTALLATION DETAILS
ITEM | ID NO. | STATION | SIDE | OFFSET
Control Cabinet | — | 80133+71.7 | Left | 78.9
Handhole, Type 1 | 22 | 80134+83.5 | Right | 61.1
Handhole, Type 1 | 23 | 80134+67.1 | Left | 72.4
Handhole, Type 1 | 24 | 80133+73.7 | Left | 68.5
Detection zones to be coordinated with the City of Council Bluffs and set in accordance with the manufacturers specifications
Refer to 04-NHS-029-3(102)48--03-78 Grade and Pave plan "J" Sheets for additional staging information
See ITS Plan Sheets N.17-N.37 for Fiber Optic Layout - By Others
IA 92 RAMP C (IUS275C)
87530
80135
1 - 3" Conduit
1 - 7c #14
4 - 5c #14
2 - 1c #3 (LUM)
1 - 1c #6 (GND)
1 - 1c #10 (TR)
5 - RADAR
1 - PREEMPTION
POWER SOURCE CONTROL CABINET
2 - 5c #14
3 - RADAR
2 - Radar
US 275/ IA 92 (US275)
US 275 RAMP A (US275A)
81530
3 - Radar
WIRING LAYOUT
Intersection of
US 275 and East Ramp Terminal
0 FEET 20
FILE NO.
ENGLISH
DESIGN TEAM Abrams
POTTAWATTAMIE COUNTY
PROJECT NUMBER IM-NHS-029-3(104)48--03-78
SHEET NUMBER N.10
REVISED 2/9/15
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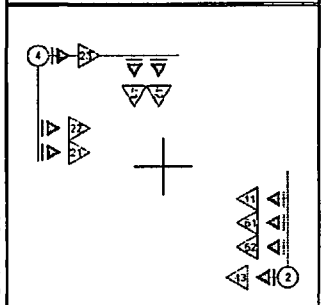

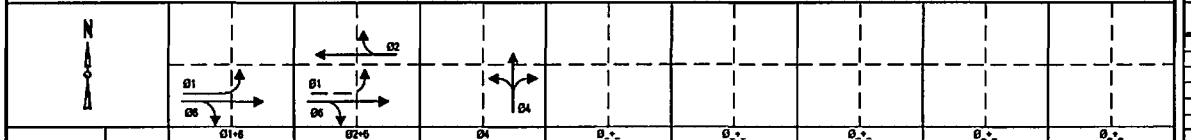

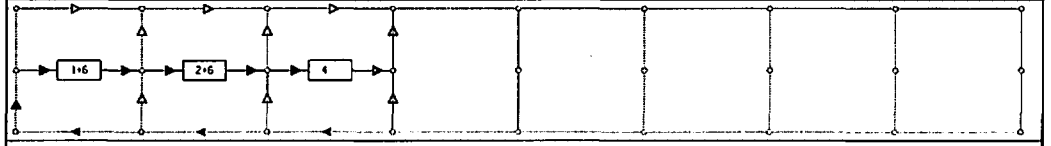

SIGNAL FACE LOCATION

LEGEND

——▶	Actuated Vehicular Movement
——▷	Non-Actuated Vehicular Movement
— —▶	Partially Restricted Vehicular Movement
——▷	Actuated Pedestrian Movement
— —▷	Non-Actuated Pedestrian Movement
R/W	Right Of Way Interval
Ø	Traffic Phase
R	Circular Red
Y	Circular Yellow
G	Circular Green
↑G	Green Straight Ahead Arrow
<Y	Yellow Left Arrow
<FY	Flashing Yellow Left Arrow
<G	Green Left Arrow
Y>	Yellow Right Arrow
FY>	Flashing Yellow Right Arrow
G>	Green Right Arrow
W	Walk
DW	Don't Walk
FDW	Flashing Don't Walk
AO	All Other Phases
PR1	Preempt #1
PR2	Preempt #2

CONTROLLER AND CABINET HARDWARE

Phases Used:	8
Expansible To:	8
Minimum Number of Backpanel Positions:	16

FLASHING OPERATIONS

Roadway 1	Red
Roadway 2	Red
Pedestrian Indications	OFF

TYPE OF INTERCONNECT

None	—
TBC	—
Closed Loop Twisted Pair *	—
Closed Loop Fiber Optic *	X
Radio	—
* Location of the Master Controller	—
Signal System *:	—

TYPE OF PRE-EMPT

None	—
Railroad	—
Emergency Vehicle	—
Opticom	X
Tomar	—
Hardwire	—
Other	—
Queue Detector	—

PHASE SEQUENCE NOT ALLOWED

FROM ——▶	TO
_+_	_+_ _+_ _+_
_+_	_+_ _+_ _+_
DUAL ENTRY PHASES	
_+_ _+_	

TYPE OF LIGHTING

By Other Agency	X
In Traffic Signal Cabinet	X
In Seperate DOT Lighting Cabinet	—

TRAFFIC PHASING AND COLOR SEQUENCE

APPROACH	FACE NO.	Ø1+6					Ø2+6					Ø4					Ø_+_					Ø_+_					Ø_+_					Ø_+_					Ø_+_				
		R/W	CLEAR TO Ø				R/W	CLEAR TO Ø				R/W	CLEAR TO Ø				R/W	CLEAR TO Ø				R/W	CLEAR TO Ø				R/W	CLEAR TO Ø				R/W	CLEAR TO Ø				R/W	CLEAR TO Ø			
			2+6	4	_+_	_+_		4	_+_	_+_	_+_		1+6	2+6	_+_	_+_		_+_	_+_	_+_	_+_		_+_	_+_	_+_	_+_		_+_	_+_	_+_	_+_		_+_	_+_	_+_	_+_		_+_	_+_	_+_	_+_
EB Approach US 275	11	<G	<SY	<SY	—	—	<FY	<SY	—	—	—	R	R	R	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	61,62	G	G	Y	—	—	G	Y	—	—	—	R	R	R	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
WB Approach US 275	21,22	R	R	R	—	—	G	Y	—	—	—	R	R	R	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	23	R	R	R	—	—	G>	Y>	—	—	—	R	R	R	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
NB Approach RAMP A	41,42,43	R	R	R	—	—	R	R	—	—	—	G	Y	Y	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

PHASE FLOW DIAGRAM

Note: ——▶—— Flow path if all phases are requested
——▷—— Flow path when phase is not requested before right of way transfer

INITITAL RECOMMENDED TIMINGS (SECONDS)

	Phase 1	2	3	4	5	6	7	8
Minimum Green	10	10	—	7	—	10	—	—
Passage	—	—	—	—	—	—	—	—
Maximum I	—	—	—	—	—	—	—	—
Maximum II	—	—	—	—	—	—	—	—
Yellow Change	4.3	4.3	—	4.3	—	4.3	—	—
Red Clearance	1.4	1.4	—	2.0	—	1.4	—	—
Walk	—	—	—	—	—	—	—	—
Flashing Don't Walk	—	—	—	—	—	—	—	—
Added Initial	—	—	—	—	—	—	—	—
Time to Reduce	—	—	—	—	—	—	—	—
Time before Reduction	—	—	—	—	—	—	—	—
Recall Position	—	—	—	—	—	—	—	—
Vehicle Call Memory	—	—	—	—	—	—	—	—
Volume Density	—	—	—	—	—	—	—	—
Maximum Initial	—	—	—	—	—	—	—	—
Minimum Gap	—	—	—	—	—	—	—	—

** NOTE: The timings shown are for start-up only. The final and coordination timings should be obtained from Mark Franz with The City of Council Bluffs. The Contractor shall notify the City of Council Bluffs three weeks prior to needing the timings.

DETECTOR SUMMARY

Approach	Detector Number	New	Existing	TYPE: Pedestrian Pushbutton	Inductive Loop	Video	Microwave	LOOP PARAMETERS: Distance from Stop Bar ft.	Size (ft. x ft.)	Number of Turns
EB	2A	X	—	—	—	—	X	—	—	—
EB	2P	X	—	—	—	—	X	—	—	—
—	—	—	—	—	—	—	—	—	—	—
NB	3P	X	—	—	—	—	X	—	—	—
WB	4A	X	—	—	—	—	X	—	—	—
WB	4P	X	—	—	—	—	X	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—

* LINES IN THE TABLE WITH MULTIPLE DETECTORS SHALL BE CONFIGURED IN SERIES

PHASING DIAGRAM
Intersection of
US 275 and East Ramp Terminal

FILE NO.	ENGLISH	DESIGN TEAM Abrams	POTTAWATTAMIE COUNTY	PROJECT NUMBER IM-NHS-029-3(104)48--03-78	SHEET NUMBER N.11	REVISED 2/9/15

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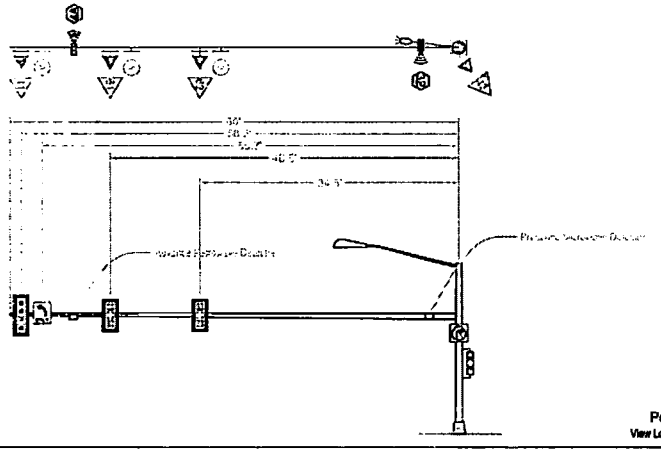
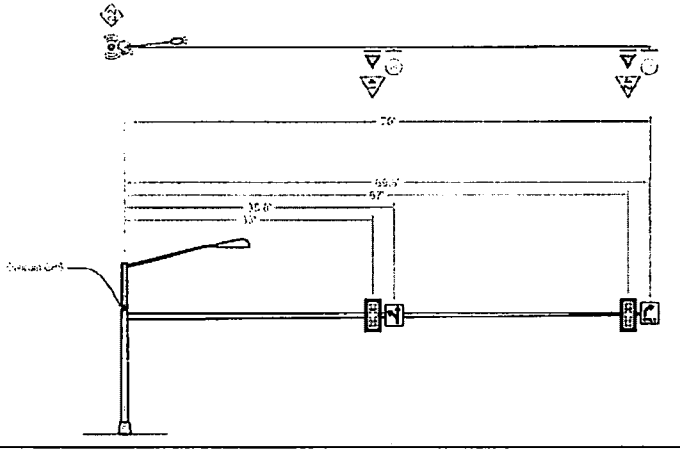
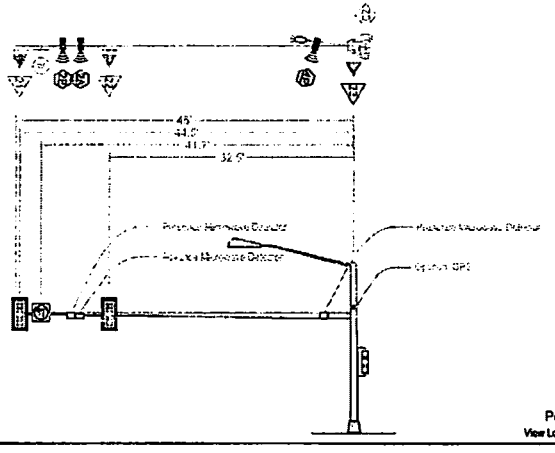


Pole #2
View Looking East



Pole #4
View Looking North



Pole #4
View Looking West

TRAFFIC SIGNAL POLE DATA

Intersection	Pole Number	Pole Type	Mastarm Length Or Pedestal Height	Traffic Signal Heads (1)		Traffic Signs (2)		Luminaire Arm (3)			Footing Dimensions		Miscellaneous	Total Quantity
				Qty.	Location On Pole	Qty.	Location On Pole	Spread	Mounting Height	Orientation	Dia.	Depth		
			FT	EACH	FT	EACH	FT	FT	FT	DEGREE	FT	FT		
Intersection of US 275 and East Ramp Terminal in Council Bluffs	1	–	–	–	–	–	–	–	–	–	–	–	–	–
	2	Combo Signal / Lighting	60	4	See N.12	3	See N.12	15	40	12.5	3	16	–	1
	3	–	–	–	–	–	–	–	–	–	–	–	–	–
	4	Twin Combo Signal/Lighting	70,45	2,3	See N.12	2,2	See N.12	15,15	40,40	0,90	–	–	Contractor to submit footing design	1
	5	–	–	–	–	–	–	–	–	–	–	–	–	–
	6	–	–	–	–	–	–	–	–	–	–	–	–	–
	7	–	–	–	–	–	–	–	–	–	–	–	–	–
	8	–	–	–	–	–	–	–	–	–	–	–	–	–
	9	–	–	–	–	–	–	–	–	–	–	–	–	–

(1) (2) Location is distance for center of pole measured out to the end of the arm.

(3) Orientation of luminaire arm is clockwise angle measured from the centerline of the signal mast arm.

On combination poles, a minimum 4"x6" handhole and cover shall be located in the shaft opposite the signal mast arm.

POLE DETAILS

Intersection of
US 275 and East Ramp Terminal
in Council Bluffs

FILE NO.	ENGLISH	DESIGN TEAM Abrams	POTTAWATTAMIE COUNTY	PROJECT NUMBER IM-NHS-029-3(104)48--03-78	SHEET NUMBER N.12	REVISED 2/9/15

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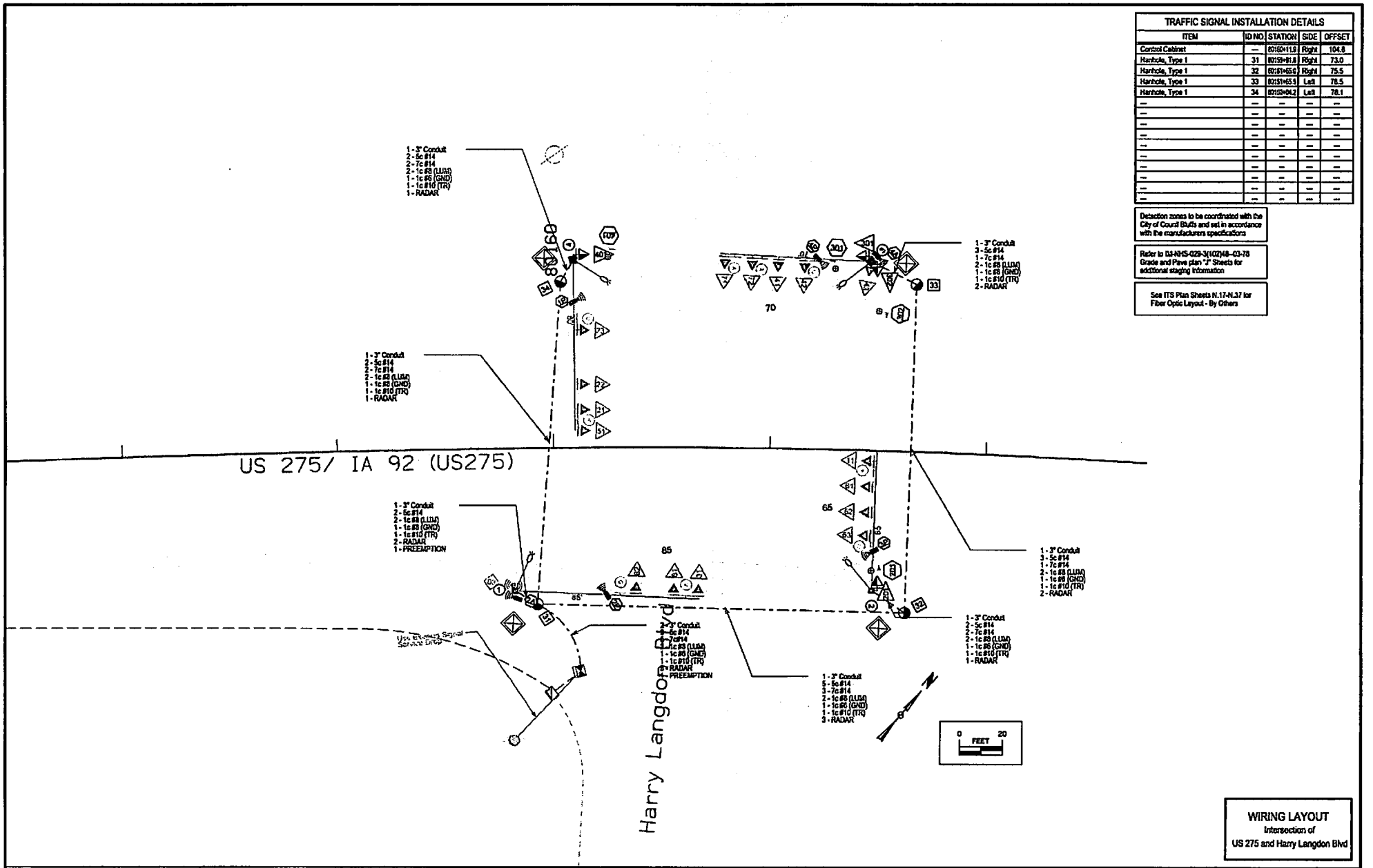

TRAFFIC SIGNAL INSTALLATION DETAILS

ITEM	ID NO.	STATION	SIDE	OFFSET
Control Cabinet	—	80160+11.9	Right	104.6
Handhole, Type 1	31	80159+81.8	Right	73.0
Handhole, Type 1	32	80181+65.6	Right	75.5
Handhole, Type 1	33	80181+65.5	Left	78.5
Handhole, Type 1	34	80159+04.2	Left	78.1
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—

Detection zones to be coordinated with the City of Council Bluffs and set in accordance with the manufacturers specifications

Refer to IM-NHS-029-3(102)48--03-78 Grade and Pave plan "J" Sheets for additional staging information

See ITS Plan Sheets N.17-N.37 for Fiber Optic Layout - By Others

WIRING LAYOUT
Intersection of
US 275 and Harry Langdon Blvd

FILE NO.	ENGLISH	DESIGN TEAM Abrams	POTTAWATTAMIE COUNTY	PROJECT NUMBER IM-NHS-029-3(104)48--03-78	SHEET NUMBER N.14	REVISED 2/9/15

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A d d e n d u m

Iowa Department of Transportation
Office of Contracts

Date of Letting: February 17, 2015
Date of Addendum: February 12, 2015

B.O.	Proposal ID	Proposal Work Type	County	Project Number	Addendum
306	78-0293-102	GRADING	POTTAWATTAMIE	IM-NHS-029-3(102)48--03-78 IM-NHS-029-3(103)48--03-78 IM-NHS-029-3(104)48--03-78 IM-029-3(105)48--13-78 NHS-029-3(106)48--11-78 IM-NHS-029-3(110)48--03-78 IM-NHS-029-3(122)48--03-78 IM-NHS-029-3(146)48--03-78 IM-NHS-080-1(416)3--03-78	17FEB306.A09

Make the following change to the Proposal Special Provisions Text and the Proposal Special Provisions List.:

Replace SP-120228 with attached SP-120228a
Add Attached DS-12027 PCC PAVEMENT NON-DESTRUCTIVE THICKNESS DETERMINATION

Make the following changes to the PROPOSAL SCHEDULE OF PRICES:

Change Proposal Line No. 1050 2519-1001000 FENCE, CHAIN LINK, VINYL COATED:
From: 5,337.600 LF
To: 4,706.000 LF

Add Proposal Line No. 1515 2502-8220197 SUBDRAIN OUTLET (RF-19F); 19.000 EACH

Estimate Reference Note: See Tab 104-5C in CS Sheets for locations and details.

Delete Proposal Line No. 0200 2301-6911722 PORTLAND CEMENT CONCRETE PAVEMENT SAMPLES; LUMP

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

Make the following changes to the plans.

Sheet C.4 ESTIMATE REFERENCE INFORMATION

2503-0134248 STORM SEWER GRAVITY MAIN WITH CASING PIPE, TRENCHED, REINFORCED CONCRETE PIPE (RCP), 2000D (CLASS III), 48 IN.
Add to Estimate Reference Note: For all joints use rubber O-ring or profile gasket complying with ASTM C 443/C 553M (AASHTO M 315/M 315M).

Sheet C.7

Add Standard Road Plan BA-103 to Tab 105-4

Replace Sheet C.13 with attached sheet.

Tab 104-8 Second "L2" in table heading under "Length" replace with "L3"

Replace Sheet C.16 with attached sheet

Changed Tab for Fencing

Replace sheet J.1 with attached sheet.

Add Note to J.1, Tab 108-23A, 2.C.

Extended durations of over 20 minutes to remove existing bridge or place bridge beams will be allowed as nighttime closures from 9:00 PM – 5:30 AM Monday –Saturday and 7:00 PM – 5:30 AM Sunday. Northbound traffic will be detoured onto Ramps A and C (I-29/US275 NB on and off ramps.) Southbound traffic will be detoured from I-29 SB to South Expressway to US275 to Ramp D (I-29 SB on ramp.) Southbound I-29 and Northbound I-29 shall not be closed at the same time. The Contractor shall submit the traffic control plan 2 weeks in advance for Engineer approval.

Replace sheet J.2 with attached sheet.

Adding note concerning the construction project for the Railroad.

Replace Q.16, Q18, Q.20, Q.22, & Q42 with attached sheets.

Remove area 12-1 that should not have been on the sheet.

Replace Sheet Q.60 with attached sheet.

Change note to say only one reading a day is required not every 8 inches.

Iowa Department of Transportation

SPECIAL PROVISIONS
FOR
INSTRUMENTATION

Pottawattamie County
IM-NHS-029-3(102)48--03-78

Effective Date
December 16, 2014

THE STANDARD SPECIFICATIONS, SERIES 2012, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

120228a.01 DESCRIPTION.

A. Scope.
The work shall consist of installing, maintaining, and monitoring instrumentation designated on the project drawings and as specified herein. The settlement plates will be installed by the grading contractor; however, the monitoring of the settlement plates, shall be included in this work and monitored in accordance with Article 2526.03, G of the Standard Specification.

B. Definitions.

1. Inclinometers: Inclinometers shall be installed by a qualified instrumentation specialist as subcontractor to the Contractor with minimum 5 years of experience and installation of at least three similar projects within the last 3 years. The purpose of the inclinometers is to monitor potential slope/embankment/MSE wall lateral movements. It shall consist of Geokon, Micro-Electro-Mechanical Sensor (MEMS) 6150 In-Place Inclinometer with biaxial tilt sensors, RST Digital MEMS Inclinometer System ICB0021W, or approved equivalent.

2. Vibrating Wire Piezometers: Vibrating Wire Piezometers (VWP) shall be installed by a qualified instrumentation specialist as subcontractor to the Contractor with minimum 5 years of experience and installation of at least three similar projects within the last 3 years. The purpose of the VWP is to monitor excess pore water pressures in the soil to confirm that primary consolidation is complete, the rate has stabilized, and that clay gained enough shear strength to allow staged construction.

3. Push-In Pressure Cells: Push-In pressure cells (PPC) shall be installed by a qualified instrumentation specialist as subcontractor to the Contractor with minimum 5 years of experience and installation of at least three similar projects within the last 3 years. The purpose of the PPC is to monitor the effective stress in the clay layer to confirm that primary consolidation is complete, the rate has stabilized, and that clay gained enough shear strength to allow staged construction.

4. Multi-point Settlement Extensometers: Extensometers shall be installed by a qualified instrumentation specialist as subcontractor to the Contractor with minimum 5 years of experience and installation of at least three similar projects within the last 3 years. The purpose of the extensometers is to monitor vertical settlement at multiple points of the extensometers.

5. All boreholes, where either an extensometer, inclinometer or piezometer shall be installed shall be logged and boring log shall be submitted with the installation log of the instrument. Boring logs shall logged per ASTM D2488 standard with sampling at 5 foot intervals.

6. Real Time Monitoring: Real time monitoring is defined as automated, remote, and web-based monitoring and shall be provided for all instrumentation. The real time monitoring shall be performed by a qualified instrumentation specialist as subcontractor to the Contractor with minimum 5 years of experience and installation of at least three similar projects within the last 3 years. The real time monitoring shall consist of monitoring all instrumentation, including the strain gauges for the rigid inclusions that have been load tested prior to construction of production rigid inclusions. The real time monitoring frequency shall be of at least twice every 24 hours. All data collected shall be provided to the Engineer to an internet website. Link to the website and access instructions shall be provided to the Engineer. Provide necessary data collection box or points to facilitate real time monitoring. Ensure that any such data collection point(s) has a protective housing to prevent damage due to weather related events, vandalism, theft, etc. Any repairs or replacement to the real time monitoring system or the protective housing shall be done at no additional cost to the Iowa DOT. The collection data box shall contain full backup power and backup for data on a 72 hour basis. Manual readings for the inclinometers will be acceptable only during fill placement as long as the frequency of reading is achieved.

7. Real Time Monitoring for Strain Gauges on Rigid Inclusions: Monitoring of the strain gauges for rigid inclusion load tested prior to construction shall be in accordance with Special provisions for Ground Improvement with Rigid Inclusions. After monitoring of the strain gauges during the load tests, the strain gauges wiring shall be routed through a buried schedule 80 PVC pipe and shall be connected to the real time monitoring system. Strain gauges shall be compatible with the real time monitoring system.

8. Any instrumentation that malfunctions or becomes inoperable or unreadable shall be replaced at no additional cost to the Iowa DOT.

9. If excessive lateral or vertical movements are detected during monitoring of the fill placement, the Engineer may elect to hold the grading activities up to 3 weeks to allow excess pore water pressures to dissipate and therefore, foundation soils to gain strength before resuming grading activities. Grading activities shall continue at other locations with no additional compensation to the Contractor or additional working days added.

C. Subsurface Conditions.

1. Borings completed within the limits of the project encountered varying thicknesses of soft to medium stiff alluvial silt and clay. The explorations typically encountered medium dense to very dense alluvial sand and gravel with silt and clay below elevations shown in the plans.

2. Groundwater at the time of boring drilling was recorded between approximately 4 and 10 feet below the natural ground at the time of drilling, which was performed in November and December of 2010. It is anticipated that the groundwater level will rise during prolonged periods of precipitation or flooding, and perched groundwater may be present. For the purpose of installation, assume that the ground water is at the ground surface and make all necessary preparation to complete the installation under this condition at no additional cost to Iowa DOT.

D. Submittals.

1. Provide means and methods for installation of all instrumentation. Means and methods shall include a map with the locations of inclinometers, extensometers, PPC, VWP, and remote station for data loggers. This information shall be provided to the Engineer at least 20 days prior to installation.

2. Instrumentation type/model including ranges, operating principle, advantages and limitations shall be submitted to the Engineer at least 20 days prior to installation or with sufficient time to be able to replace any instrumentation without impacting the construction schedule. No additional time will be granted for any delays due to replacing type or range of instrumentation.

120228a.02 MATERIALS.

A. Inclinometers.

1. Inclinometer casing shall be grooved plastic 2.75 inches outside diameter casing that is compatible with the inclinometer being provided. The casing shall be complete with necessary rigid self-aligning couplings and end plugs.

2. The inclinometer monitoring system shall include a suspension and wheel assemble, a support cable, string of biaxial tilt sensors, universal joint, spacer tubings, adequate cable length to facilitate the real time monitoring, and readout. The inclinometer readout shall measure inclinations at any depth selected by the operator and shall digitally store, process and report the data (by display and downloadable digital files) as lateral movements from a stored baseline reading.

3. All cables connected to the real-time read out equipment shall be protected and routed through schedule 80 PVC pipe to ensure that these are not damaged during construction activities.

4. The suspension assembly guide pulley shall mount to the top of the inclinometer casing.

5. Any other devices needed to facilitate and achieve the required real time monitoring shall be furnished and installed.

B. Vibrating Wire Piezometers.

1. The vibrating wire piezometer (VWP) system shall include a pressure transducer rated for water pressure range from 50 to 150 psi, signal cable, adequate cable length to facilitate the real time monitoring, and real-time readout equipment. The VWP reading shall be obtained at the depth of the sensor specified. The readout equipment shall digitally store, process and report the data.

2. Each VWP location shall include two transducers levels sensors and shall be installed at approximately 15 and 25 feet below ground surface. Final depth shall be adjusted by the Engineer on site based on the confirmation borings.

3. All cables connected to the real-time read out equipment shall be protected and routed through schedule 80 PVC pipe to ensure that these are not damaged during construction activities.

4. Any other devices needed to facilitate and achieve the required real time monitoring shall be furnished and installed.

C. Push-In Pressure Cells.

1. The Push-In pressure cells system shall include a pressure transducer rated for pressure range from 20 to 90 psi, signal cable, adequate cable length to facilitate the real time monitoring, and real-time readout equipment. The PPS reading shall be obtained at the depth of the sensor specified. The readout equipment shall digitally store, process and report the data.

2. Each PPS location shall include two transducers levels sensors and shall be installed at approximately 15 and 25 feet below ground surface. Final depth shall be adjusted by the Engineer on site based on the confirmation borings.

3. All cables connected to the real-time read out equipment shall be protected and routed through schedule 80 PVC pipe to ensure that these are not damaged during construction activities.

4. Any other devices needed to facilitate and achieve the required real time monitoring shall be furnished and installed.

D. Multi-point Settlement Extensometers.

1. The multi-point settlement extensometers monitoring system shall include adequate cable length to facilitate the monitoring readout. The extensometer readout shall measure multi-point settlements at the specified preliminary depth of the extensometer sensor and shall digitally store, process and report the data (by display and downloadable digital files) as settlement movements from a stored baseline reading.

2. The multi-point settlement extensometers shall be capable of measuring up to ~~24~~ 12 inches of settlement.

3. The multi-point settlement extensometers monitoring system shall include five levels of settlement sensors. Preliminary settlement extensometer sensor elevations are provided in the Table 120228a-3. Final elevation shall be adjusted by the Engineer on site based on the confirmation borings.

Table 120228a-3: Extensometer Sensor Level Preliminary Elevations

Approximate Depth (feet)	Approximate Elevation (feet)*	Sub-surface Layer
2.0-5.0	976.0-973.0	Medium Stiff to Stiff Fat Clay (near ground surface)
12.0	966.0	Medium Stiff to Stiff Fat Clay / Very Soft to Soft Fat Clay
22.0	956.0	Very Soft to Soft Fat Clay/Silt
32.0	946.0	Loose to Medium Dense Sand/Silty Sand
42.0	936.0	Medium Dense Sand/Silty Sand

* Approximate elevations for strain gauges are based on an approximate ground surface elevation of 978 feet.

4. All cables connected to the real-time read out equipment shall be protected and routed through schedule 80 PVC pipe to ensure that these are not damaged during construction activities.

5. Any other devices needed to facilitate and achieve the required real time monitoring shall be furnished and installed.

120228a.03 CONSTRUCTION.

A. Inclinometers Installation.

1. Install inclinometer casing at the locations shown on Q sheets. The Engineer may change the location of the inclinometers as needed during construction.

2. The inclinometers shall have a minimum length of 90 feet.

3. Drill, sample, and log soil borings drilled for the purpose of installing inclinometer casing. Borings for inclinometers shall be drilled using 6 inch minimum inside diameter casing and water or, where ground conditions permit, using drilling mud in a 6 inch diameter borehole. This boring shall be used as soil confirmation boring of the location.

4. Install inclinometer casings prior to the embankment fill being placed and extend as the embankment construction progresses. Install the inclinometer monitoring system for the depth of the casing before the casing is extended. This will include the biaxial sensors, joints, wheel assembly, spacer tubings and any other parts as necessary. In case of damage to the inclinometer casing or any other instruments, the damaged part(s) shall be replaced at no additional cost to Iowa DOT. The casing shall protrude 3 feet above finished grade.

5. Flag and protect inclinometer locations. Provide the top of each inclinometer casing with a protective cap, and with a locked protective metal housing extending at least 3 feet below finished grade. All cables shall be protected and routed through a schedule 80 PVC pipe to ensure that these are not damaged during construction activities. Any repairs or replacement shall be done at no additional cost to the Iowa DOT.

6. Cable splicing is acceptable.

B. Vibrating Wire Piezometers Installation.

1. Install VWP at the locations shown on Q sheets.

2. Drill, sample, and log borings of soil drilled for the purpose of installing the piezometers casing. The borehole shall be drilled below the required depth of the piezometer. This boring shall be used as soil confirmation boring of the location.

3. Install the VWP prior to the embankment fill being placed. In case of damage to the VWP and cables, the damaged items shall be replaced at no additional cost to the Iowa DOT.

4. Flag and protect VWP locations. The cables connecting to the real-time read out equipment shall be routed through a buried schedule 80 PVC pipe to ensure that these are not damaged or cut off during construction activities.

5. Cable splicing is acceptable.

C. Push-In Pressure Cells Installation.

1. Install PPC at the locations shown on Q sheets.

2. Drill, sample, and log borings of soil drilled for the purpose of installing the PPC to within about 2-ft of the desired location, and then push the cell the rest of the way. This boring shall be used as soil confirmation boring of the location.

3. When pushing the cell into the ground it is possible that pressure in excess of the sensors full scale range can be generated casing the sensor to experience a zero shift or even permanent damage. To prevent this, reading should be taken as the sensor is pushed and terminate the installation until the excess pressure is dissipated. Any damaged sensor should be replaced at no additional cost to the Iowa DOT.

4. Install the PPC prior to the embankment fill being placed. In case of damage to the PPC and cables, the damaged items shall be replaced at no additional cost to the Iowa DOT.

5. Flag and protect PPC locations. The cables connecting to the real-time read out equipment shall be routed through a buried schedule 80 PVC pipe to ensure that these are not damaged or cut off during construction activities.

6. Cable splicing is acceptable.

D. Multi-Point Settlement Extensometers Installation.

1. Install multi-point settlement extensometer at the locations shown on Q sheets.

2. Multi-point settlement extensometers shall have a minimum length of 50 feet below existing ground surface. The extensometers sensors preliminary elevations are provided in Article 120228a.02, E, 3. Preliminary elevations will be modified based on the confirmation borings.

3. Drill, sample, and log borings of soil drilled for the purpose of installing extensometer casing. Borings for extensometer shall be drilled using 6 inch minimum inside diameter casing and water or, where ground conditions permit, using drilling mud in a 6 inch diameter borehole. This boring shall be used as soil confirmation boring of the location.

4. Attach grout tubing to the multi-point settlement extensometer.

5. Place the extensometer into the borehole. Grout the borehole from bottom to top.

6. After grout cures and installation is stable, install the readout unit system and take the initial readings.

7. Flag and protect all cables. The cables connecting to the real-time read out equipment shall be routed through a buried schedule 80 PVC pipe to ensure that these are not damaged or cut off during construction activities.

8. Cable splicing is acceptable.

E. Contractor Quality Control.

1. **Field Quality Control.**
   The following describes the minimum inspection and testing required in the Contractor's Quality Control (CQC) Plan and Program for the work of this section and is for CQC only. The implementation of the Contractor Quality Control Program does not relieve the Contractor from the responsibility to provide the work in accordance with the contract documents, applicable codes, regulations, and governing authorities.

2. **Quality Control: Supervision, Inspection, and Records.**
   a. The Contractor shall have an onsite field engineer to manage all of the QC activities on the project. The installation of the inclinometers and extensometers shall be done under the direct supervision of a Professional geotechnical Engineer registered in the State of Iowa on the staff of the Contractor or a sub-consultant to the Contractor.

b. Records.

1) Inclinometer, VWP, PPC, and Multi-point Settlement Extensometers Readings: Take initial readings 24 hours after completing installation and testing of each inclinometer, VWP, PPC and extensometer. At each inclinometer location, a total of eight, four of which biaxial sensors shall be placed above existing grade and up to the elevation of the finished grade with equal spacing between each other. The remaining four biaxial sensor shall be placed below existing grade. The elevation of the inclinometers will be determined based on the confirmation borings drilled prior to installation of the inclinometer. For the Inclinometers, readings shall consist of a minimum of two reading surveys per 24 hours using real time remote and automated monitoring operation, with each survey consisting of a set of readings in each of the two primary orientations. Manual readings for the inclinometers will be acceptable only during fill placement as long as the frequency of reading is achieved. Process the survey results, graphically plot them, and furnish the results to the Engineer. Based on comparison of the plotted results, the Engineer will determine which survey will represent the initial set of measurements. Typically, the results are approximately the same for the two surveys, and the last set of readings is typically selected. For the VWP, PPC and Multi-point Extensometers, readings shall consist of a minimum of two readings surveys per 24 hours using real time remote and automated monitoring operations for each sensor.

For the duration of the project, inclinometers and multi-point settlement extensometers shall continue to be monitored after the completion of the fill placement and through 52 weeks from the start of the first reading. VWP and PPC shall continue to be monitored after the completion of the fill placement and through 25 weeks from the start of the first reading. The readings shall consist of real time monitoring with daily monitoring frequency and available online to the Engineer.

2) Real Time Monitoring Strain Gauges: Test rigid inclusion strain gauges shall continue to be monitored after the completion of the load test throughout the fill placement and beyond through a duration of 50 weeks. The readings shall consist of real time monitoring with daily frequency and available online to the Engineer.

3) Settlement plate readings shall be taken at the start and end of placing of each embankment lift with a maximum of one reading per day and at weekly intervals after the fill is placed to its final height for a period of 12 weeks, and at the end of fill placement and once every two weeks for 40 weeks thereafter. Additional readings over additional duration may be needed based on the settlement plate's readings.

4) Embankment Fill and MSE Wall Fill Heights at the locations of the instrumentation (Inclinometer, VWP, PPC, and Multi-point Settlement Extensometers) shall be taken at the start and end of placing of each embankment lift and at weekly intervals after the fill is placed to its final height for a period of 12 weeks, and at the end of fill placement and once every 2 weeks for 40 weeks thereafter. Additional readings over additional duration may be needed based on the instrumentation (Inclinometer, VWP, PPC, and Multi-point Settlement Extensometers) readings.

120228a.04 METHOD OF MEASUREMENT.

Measurement for Installation of instrumentation including Real Time automated and web based monitoring, and the settlement plates monitoring as shown contract documents and herein shall be based on lump sum basis.

120228a.05 BASIS OF PAYMENT.

Payment for Instrumentation will be acceptable installation, maintenance, and monitoring of instruments, including inclinometers, VWP, and PPC, multi-point settlement extensometers, shall include all materials, labor, installation equipment, real time monitoring, replacement, trouble shooting, and mobilization costs involved to install the instrumentation and protective housings, and to flag and protect each instrumentation location for the duration of the project. Instrumentation shall be paid on a lump sum basis and shall include the settlement plate monitoring for the duration of the project. Instrumentation

readings shall include all materials, labor, mobilization, monitoring equipment, and data collection, data reduction, data reporting, and engineering time costs required to present a letter report of the findings. All instrumentation data collection with the exception of the settlement plate shall be real time monitoring.

Iowa Department of Transportation

DEVELOPMENTAL SPECIFICATIONS
FOR
PCC PAVEMENT NON-DESTRUCTIVE THICKNESS DETERMINATION

Effective Date
October 16, 2012

THE STANDARD SPECIFICATIONS, SERIES 2012, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE DEVELOPMENTAL SPECIFICATIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

Replace all of Articles 2301.04 and 2301.05 of the Standard Specifications with the following. Differences from the Standard Specifications are highlighted.

2301.04 METHOD OF MEASUREMENT.
Measurement will be as follows:

A. Portland Cement Concrete Pavement.

1. Square yards (square meters), of the type specified, shown in the contract documents.

2. The ~~coring~~ measurement requirements for thickness do not apply to detour pavements, paved drives, and temporary pavements. The thickness of pavement constructed will be determined from ~~core depths~~ thickness measurements as follows:
   a. The division of sections, lots, and ~~core~~ measurement locations will be according to ~~Materials I.M. 346~~ Appendix A.
   b. At locations determined by the Engineer~~, cut samples from the pavement, as directed above, by drilling with a core drill that will provide samples with a 4 inch (101.6 mm) outside diameter~~, the Engineer will measure for thickness according to Appendix A. ~~Restore the surface by tamping low-slump concrete into the hole, finishing, and texturing. The Engineer will witness the core drilling, and identify and measure the cores immediately. The Engineer will measure the cores and determine the thickness index according to Materials I.M. 346. After measurement on the grade, deliver the cores to the Engineer's office or field laboratory. When cores are not measured on the grade, the Engineer will take immediate possession of the cores.~~
   c. ~~Coring of pavement and other~~ Measurement work for thickness determination may be waived by mutual agreement for sections of the same design thickness less than 5000 square yards (4200 m^2).
   d. Only sections which are ~~cored~~ measured for thickness will be included in the thickness index determination. Areas not ~~cored~~ measured for thickness will be paid for at the contract unit price.

B. Integral Curb.
Incidental to the other items of work. Not measured for payment.

C. Concrete Median.
Square yards (square meters) shown in the contract documents. This will be calculated to the nearest 0.1 foot (0.1 m) of the length along the surface and the overall width of median when no integral curb is involved, or the width from back to back of curb when integral curb is involved.

D. Bridge Approach Sections.
Square yards (square meters) shown in the contract documents.

E. Excavation.

1. When the contract provides a unit price per station (meter) for earth shoulder finishing and a price per cubic yard (cubic meter) for excavation, the excavation required for preparation of natural subgrade will be measured as provided in Article 2102.04. The volume measured for payment will include only the materials actually removed above the elevation of the pavement subgrade and between vertical planes 1 foot (0.3 m) outside the edge of the finished pavement.

2. Other work connected with preparation of natural subgrade will not be measured for payment.

3. When the contract provides a unit price for earth shoulder construction (whether or not a unit price per cubic yard (cubic meter) of excavation is provided in the contract), excavation required for preparation of natural subgrade will not be measured for payment. Unless otherwise provided in the contract documents, work connected with preparation of natural subgrade will not be measured for payment.

F. Driveway Surfacing Material.
Tons (megagrams) or cubic yards (cubic meters), as provided in the contract and in Section 2315, placed at intersecting roads, drives, and turnouts. Excavation required for placement of this material will not be measured for payment.

~~**G. Portland Cement Concrete Pavement Samples.**~~
~~Not individually counted for payment when furnished according to Article 2301.04, A, or when required in the contract documents.~~

H. Saw Cut and Joint Sealing.

1. Saw cut for constructing joints in new pavement will not be measured for payment.

2. Saw cut for cutting old existing pavement, which is to be abutted with new pavement, will not be measured for payment.

3. Joint sealing will not be measured for payment.

I. Safety Fence for Pavement.
Not measured for payment.

J. Rumble Strip Panel (PCC Surface)
By count for Rumble Strip Panels properly installed at locations designated in the contract documents.

2301.05 BASIS OF PAYMENT.
Payment will be as follows:

A. Portland Cement Concrete Pavement.

1. Contract unit price for Standard or Slip-Form Portland Cement Concrete Pavement of the type specified per square yard (square meter).

2. Payment for the quantities of pavement in square yards (square meters) will be at a percentage of the contract unit price according to Table 2301.05-1.

Table 2301.05-1: Payment Schedule for Quantities of Pavement

Thickness Index Range	Percent Payment	Thickness Index Range	Percent Payment
English (Metric)		English (Metric)	
0.00 or more (0.00 or more)	103	-0.56 to -0.60 (-13.98 to -15.24)	91

-0.01 to -0.05 (-0.01 to -1.27)	102	-0.61 to -0.65 (-15.25 to -16.51)	90
-0.06 to -0.10 (-1.28 to -2.54)	101	-0.66 to -0.70 (-16.52 to -17.78)	89
-0.11 to -0.15 (-2.55 to -3.81)	100	-0.71 to -0.75 (-17.79 to -19.05)	88
-0.16 to -0.20 (-3.82 to -5.08)	99	-0.76 to -0.80 (-19.06 to -20.32)	87
-0.21 to -0.25 (-5.09 to -6.35)	98	-0.81 to -0.85 (-20.33 to -21.59)	86
-0.26 to -0.30 (-6.36 to - 7.62)	97	-0.86 to -0.90 (-21.69 to -22.86)	85
-0.31 to -0.35 (-7.63 to -8.89)	96	-0.91 to -0.95 (-22.87 to -24.13)	84
-0.36 to -0.40 (-8.90 to -10.16)	95	-0.96 to -1.00 (-24.14 to -25.40)	83
-0.41 to -0.45 (-10.17 to -11.43)	94	-1.01 to -1.05 (-25.41 to -26.67)	82
-0.46 to -0.50 (-11.44 to -12.70)	93	-1.06 to -1.10 (-26.68 to - 27.94)	81
-0.51 to -0.55 (-12.71 to -13.97)	92	-1.11 or less (-27.95 or less)	80

3. Use the following formula to determine the thickness index for the section of pavement thickness:

$$TI = (\overline{X} - S) - T$$

Where:

TI = thickness index for the section.
$\overline{X}$ = mean ~~core length~~ thickness for the section.
T = ~~design thickness~~ see Table 2301.05-2.
S = ~~core length~~ measurement thickness standard deviation (of the sample) for the section.

Table 2301.05-2: Thickness Value for determining Thickness Index

Type of Base, Subbase, Subgrade just below the concrete	Value of T in Inches
Natural Subgrade or Soil Aggregate Subbase	Design Thickness
HMA Base, PCC Base, or Asphalt or Cement Treated Base	Design Thickness
Modified Subbase or Special Subbase	Design Thickness minus 0.25 inches (6 mm)
Granular Subbase	Design Thickness minus 0.35 inches (9 mm)

4. Replace pavement represented by cores deficient from design thickness by 1 inch (25 mm) or greater. The deficient areas and the replacement of the deficient cores will be determined according to ~~Materials I.M. 346~~ Appendix A. The cost for coring that confirms deficient pavement or determines deficient areas shall be incidental to the price paid for Portland Cement Concrete Pavement. The cost for coring that indicates that pavement is sufficient shall be paid as extra work, according to Article 1109.03, B of the Standard Specifications. The cost for coring replacement pavement to verify compliance shall be incidental to the price paid for Portland Cement Concrete Pavement.

5. At the Contractor's option, ~~cores that are~~ measurement readings that are larger than the thickness value (from Table 2301.05-2) by three standard deviations or greater ~~than design thickness~~ may be removed from analysis for thickness index determination. Do not remove more than 10% of the total ~~cores~~ measurements in a section. Do not replace ~~cores~~ measurements removed from the analysis.

6. Gaps in the pavement less than 500 feet (150 m), required by staging, will be considered irregular areas for analysis of pavement thickness determinations.

7. The percent payment for projects which have all ~~core lengths~~ measurement readings greater than ~~design thickness~~ T in Table 2301.05-2 will be at least 100%.

B. Integral Curb.
Not paid for separately.

C. Concrete Median.
Contract unit price per square yard (square meter).

D. Bridge Approach Sections.

1. Contract unit price for bridge approach pavement per square yard (square meter).

2. Payment is full compensation for:
   - Excavation for modified subbase and subdrain.
   - Furnishing and installing subdrain.
   - Furnishing and installing subdrain outlet.
   - Furnishing and installing polymer grid.
   - Furnishing and placing porous backfill material.
   - Furnishing and placing modified subbase backfill material.
   - Saw cutting.
   - Furnishing and installing reinforcing steel, tie bars, and dowel assemblies.
   - Placing, finishing, texturing, grooving, and curing.
   - All joint construction.
   - All other materials and labor to construct the Bridge Approach Section as shown in the contract documents.

E. Excavation.

1. When the contract provides a unit price per station (meter) for earth shoulder finishing and the contract also provides a price per cubic yard (cubic meter) for excavation, payment will be the contract unit price per cubic yard (cubic meter) for excavation in connection with subgrade preparation and building shoulders.

2. When the contract provides a unit price for earth shoulder construction, the excavation required for preparation of subgrade and construction of shoulders will not be paid for as a separate item. It is incidental to pavement construction and earth shoulder construction and is to be included in those contract prices.

3. When no price per cubic yard (cubic meter) for excavation is provided in the contract and no unit price is provided for earth shoulder finishing or earth shoulder construction, excavation necessary for subgrade preparation is incidental to pavement construction and is to be included in that contract unit price.

F. Driveway Surfacing Material.
Contract unit price as provided in Section 2315 for the quantity of driveway surfacing placed.

~~**G. Portland Cement Concrete Pavement Samples.**~~

~~1. Lump sum contract price for furnishing samples of finished pavement or other course according to Article 2301.04.A, or when required in the contract documents.~~

~~2. Payment is full compensation for furnishing all such samples for all courses or items of work.~~

H. Saw Cut and Joint Sealing
Incidental to the price for pavement.

I. Safety Fence for Pavement.
Incidental to the price for pavement.

J. Rumble Strip Panel (PCC Surface)
Each. Payment is full compensation for construction of the panels as detailed in the contract documents.

K. General.

1. Deduction will not be made from the area of pavement for fixtures with an area less than 9 square feet (1 m^2).

2. When any of the types of additional protection described in Article 2301.03, K, 3, is necessary, additional payment will be made as extra work at the rate of $1.00 per square yard ($1.20 per square meter) of surface protected. Payment will be limited to protection necessary within the contract period. Protection necessary after November 15 will be paid for only when the Engineer authorizes the work.

3. Furnish concrete for test specimens and transport the specimens and molds between the grade and plant as directed by the Engineer, at no additional cost to the Contracting Authority.

4. The above prices are full compensation for furnishing all tools, equipment, labor, and materials necessary for construction of the pavement in accordance with the contract documents.

5. The cost of furnishing, installing, and monitoring vibrators, as well as the vibrator monitoring device itself, is incidental to the contract unit price for PCC pavement.

APPENDIX A
EVALUATING PORTLAND CEMENT CONCRETE PAVEMENT THICKNESS

SCOPE

Thickness measurements will be taken on Portland Cement Concrete (PCC) pavement, to determine the pavement thickness and the thickness index for each section. Refer to Specification DS-12027.

APPARATUS

1. An MIT Scan T2 gauge will be used to perform thickness measures.
2. Steel Targets will be 11.81 inches (300.0 mm) in diameter, 24 gauge, meeting ASTM A 653, commercial steel with a G90 coating (about 275 g/m^2 total both sides).

DEFINITIONS

Section: All Portland Cement Concrete in a project of the same bid item. Irregular areas, as defined herein, of the same bid item shall form a separate section.

Lot: A portion of a section normally 200 feet (50 m) in length and 2 traffic lanes wide.

Regular area pavement sections:

- All mainline pavement for normal travel lanes. Includes middle (both direction) turn lanes
- Paved shoulder – if same thickness as pavement and part of pavement bid item include with pavement. If separate bid item, treat as separate section.
- Paved median - if same thickness as pavement and part of pavement bid item, and longer than 300 feet (100 m), include with pavement.
- Auxiliary lanes of full width longer 300 feet (100 m).
- Widening greater than 6 feet (2 m).

Irregular areas:

- Widening less than 6 feet (2 m).
- Side street connections.
- Ramps, including gore areas, and collector distributor roads.
- Deceleration and acceleration lanes.
- Turn lanes, including taper sections.
- Tapers.
- Radiuses.
- Median crossovers

PROCEDURES

The District Materials Engineer will determine the location of each lot, the random location of each metal target, and the random thickness measuring scheme for each section using an Iowa DOT developed MSExcel spreadsheet.

A. Target Location for Regular Areas

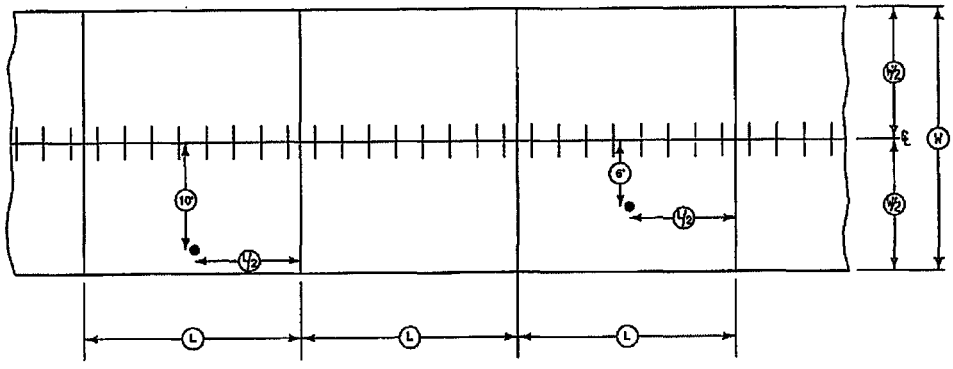
1. Divide the section longitudinally into 200 foot (50 m) long lots. One target will be located in each lot based on the spreadsheet selection (The targets should be placed half way between dowel baskets). See Figure 1. A minimum of ten targets will be tested. If a target location falls on a bridge or in an approach section, it will be eliminated.

2. The transverse location of the targets will be randomly determined by the spreadsheet program. The random locations will be either 6 or 10 feet (2 or 3 m) left or right of centerline. When tie steel is present at the edge of the pavement or lane, the locations will be 5 or 9 feet (1.5 or 2.5 m).

3. The program will randomly determine which targets to measure. If a measurement location falls on a bridge or bridge approach pavement, it will be eliminated and the next closest target not in the original random selection will be used for measurement.

4. Shoulders. Divide the section into 200 foot (50 m) long lots. Place targets approximately mid-point transversely on shoulders wider than 6 feet (1.82 m). On 6 foot (1.82 m) shoulders, the targets should be 4 feet (1.2 m) from the edge of the pavement.

Figure1. Target Location



PLAN

B. Target Location for Irregular Areas

1. All irregular areas of the same design thickness will be grouped together for determining the number of lots. The Engineer may waive sections of the same design thickness that total less than 5,000 square yards (4200 sq. m).

2. Place targets randomly in all irregular areas larger than 100 square feet (10 m^2). One target will be randomly located in each selected irregular area, unless one or more of the areas are significantly larger than the others, then more than one target may be located in the large area. Targets must be placed at least 2 feet (0.6 m) away from tie steel and 4 feet (1.2 m) from dowel bars. A minimum of ten targets will be tested to represent each section of irregular areas. All targets will be measured.

C. Testing

Follow the manufacturer's instructions for operating the thickness gauge. It is important to avoid testing close to any steel including vehicles, equipment, steel toed shoes as well as tie bars, dowel bars and baskets, and manhole covers. When wearing steel toed shoes, always keep both toes at least 2 feet (0.6 m) from the gauge during the test. Three repeat readings will be taken. The readings should all be within 1 to 2 mm of each other. If the difference between any of the readings is more than 3 mm, take 2 additional readings. If the two additional readings are within 3 mm of any of the first 3 readings, the measurement is valid for that location. If not, note that the location is not valid and select the next target location not originally selected for testing.

The US made targets produce a slight bias on the T2 unit (approximately 3 mm less than the actual thickness). The correction factor is programmed into the reporting spreadsheet. The correlation factor is:

$$\text{Corrected Thickness Reading} = -0.00003723X(\text{T2 reading})^2 + 1.01629229X(\text{T2 reading}) + 1.44772852$$

D. Section Evaluation

1. Use the following formula to determine the mean thickness for the section:

$$\overline{X} = \frac{\sum X}{n}$$

Where: $\overline{X}$ = mean length for the section

$\sum X$ = sum of core lengths for the section

n = number of cores taken within the section

Round the mean thickness to two decimal places.

2. Use the following formula to determine the sample standard deviation of the thickness of the section:

$$S = \sqrt{\frac{\sum (X - \overline{X})^2}{n-1}}$$

Where:

S = thickness standard deviation for the section.
$\overline{X}$ = mean thickness for the section
X = individual thickness values for the section.
n = number of tests representing the section.

$\sum$ = sign indicating the sum of all values of $(X - \overline{X})^2$

Round the sample standard deviation to two decimal places.

NOTE: Calculations of the standard deviation are best made with an electronic calculator with standard deviation capability that uses the formula containing the quantity (n-1).

3. Use the following formula to determine the thickness index for the section of pavement thickness.

$$TI = (\overline{X} - S) - T$$

Where:

TI = thickness index for the section
$\overline{X}$ = mean thickness length for the section
T = from Table 2301.05-2
S = measurement thickness standard deviation (of the sample) for the section

Round the thickness index to two decimal places.

NOTE: If the mean thickness minus the standard deviation is less than T of the section, the thickness index will be a negative number.

4. Basis of Payment. Payment for the quantities of pavement in square yards (square meters) in each section will be as shown in Article 2301.05 and based on the thickness index as determined in accordance with these instructions.

E. Deficient Areas

1. If any measurement is deficient from T by 1 inch (25.4 mm) or more, the measurement should be rechecked to confirm the reading and the equipment. If the repeat measurement is also 1 inch (25.4 mm) or more below T, mark the location directly over the target. The Contractor shall drill a 4.0 inch (101.6 mm) diameter core at that location. If the core length confirms the pavement is deficient by 1 inch or more, continue to drill cores as described below.

2. Deficient areas, represented by cores deficient in length by 1 inch (25.4 mm) or more from design thickness, are to be replaced. These areas will be determined by drilling a core 60 feet (18 m) in each direction longitudinally at the same transverse location from the deficient core. Drilling will be continued at 60 feet (18 m) intervals until a core is obtained which is not deficient by 1 inch (25.4 mm) or more from design thickness. Interpolate between this core and the adjacent core to determine the limits of the deficient area. This is the area to be removed and replaced at contractor's expense. These additional cores are to be used to define the deficient area and will not be used in the thickness index calculation. When an obstruction, such as a bridge, intersection, previous work, etc., prevents drilling a core at the required 60 feet (18 m) interval in either direction longitudinally, continue the balance of the distance on the other side of the obstruction.

3. Any readings taken in the area for removal will be eliminated from the analysis for the entire section. After replacement, the contractor will take cores as directed by the engineer to verify the thickness.

100-23
10-19-10

* Design shown for mandatory locations is the minimum allowed.

ROCK DITCH CHECKS/DITCHES/FLUMES/SPLASH BASINS/SLOPE PROTECTION

Refer to Typicals 4401, 4402, 4403, 4404, and 4405

Location				Type								Material			
Road Identification	Station	Side	Mandatory* Location (yes or no)	Rock Ditch Check	Rock Ditch	Rock Flume	Rock Splash Basin	Rock Slope Protection		L	W	Erosion Stone	Class E Revetment	Eng. Fabric	Remarks
		Lt./Rt.								FT	FT	TON	TON	SY	
US275 Ramp D (US275D)	84537+02.00	LT	Yes				x			6.0	7.0	5.0		12.2	
US275 Ramp D (US275D)	84539+52.00	Rt.	Yes				x			6.0	10.0	7.2		15.6	
I-29 (MLE029)	6636+83.50	Rt.	Yes				x			6.0	10.0	7.2		15.6	
IA 92/ US 275 (US275)	80126+57.00	Rt.	Yes				x			6.0	10.0	7.2		15.6	
IA 92/ US 275 (US275)	80126+79.20	Lt.	Yes				x			6.0	10.0	7.2		15.6	
IA 92/ US 275 (US275)	80132+35.00	Lt.	Yes				x			6.0	10.0	7.2		15.6	
IA 92/ US 275 (US275)	80132+13.90	Rt.	Yes				x			6.0	10.0	7.2		15.6	
IA 92/ US 275 (US275)	80137+36.00	Rt.	Yes				x			6.0	10.0	7.2		15.6	
IA 92/ US 275 (US275)	80138+00.00	Lt.	Yes				x			6.0	10.0	7.2		15.6	
IA 92/ US 275 (US275)	80149+60.00	Lt.	Yes				x			6.0	10.0	7.2		15.6	
IA 92/ US 275 (US275)	80148+91.20	Rt.	Yes				x			6.0	10.0	7.2		15.6	

108-20
04-15-14

CONCRETE BARRIER WITH MSE WALL

Refer to Road Design Detail 8208

Station to Station		Side	W	Remarks
			IN	
6637+00.00	6643+36.01	RT	2	
6654+04.14	6660+00.00	RT	2	
6651+60.72 Ramp D	6661+55.85	NE	2	
84539+89.94	84544+26.51	Out	2	
84537+10.00 Ramp A	84544+04.13	Med	2	
81534+75.00	81540+30.10	Out	2	

104-8
MODIFIED

BRIDGE END DRAINS

(1) Refer to Modified Standard Road Plan RF-38
(2) Not a Bid Item

Location			Shoulder		Polymer Grid (2)	Installation Information									Modified Subbase (2)	Remarks
						Elevation						Length				
Bridge Station	Bridge Corner	Distance DI-1 or DI-2 (1)	Panels Required A B C or D	PCC		Form Grade	A	B	C	D	E	L1	L2	L3		
				Sq.Yds.	Sq.Yds.										Tons	
84537+02.0 LT	-	-	-	31.7	-	996.3	996.2	990.5	990.1	985.7	985.5	18.0	10.0	2.0	-	See Note 1*
84539+52.0 RT	-	-	-	35.8	-	1003.8	1003.7	998.0	997.2	978.2	977.0	10.0	54.0	12.0	-	See Note 1*
6636+83.50 RT	-	-	-	48.4	-										-	See M Sheets for details of profile and bid items. See Note 2*
80126+57.00 RT	-	32.9	C	45.1	54.0	1009.0	1008.9	1003.1	1002.8	975.3	975.0	12.0	94.0	6.0	42.490	*
80126+79.2 LT		-	A	6.7	11.1	1009.5	1009.4	1003.6	1003.4	974.7	974.4	6.0	98.0	6.0	8.750	*
80132+35.0 LT	-	31.9	C	22.0	30.9	1013.8	1013.7	1007.9	1007.7	978.5	978.2	10.0	100.0	6.0	24.316	*
80132+13.9 RT		-	A	17.8	22.2	1014.4	1014.3	1008.6	1008.4	990.7	990.4	8.0	58.0	6.0	17.491	*
80137+36.0 RT	-	32.1	C	44.1	53.0	1008.8	1008.7	1003.0	1002.8	978.6	978.3	10.0	82.0	6.0	41.738	*
80138+00.4 LT		-	A	-	-	1010.0	1009.9	1004.2	1004.0	978.7	978.5	8.0	86.0	4.0	-	* Shoulder bid in tab 112-9 Use PCC.
80149+60.0 LT	-	31.8	C	43.9	52.8	1016.1	1016.0	1010.3	1010.1	979.3	979.0	10.0	106.0	6.0	41.580	*
80148+91.2 RT	-	-	A	17.8	22.2	1016.7	1016.6	1010.8	1010.5	978.1	977.7	8.0	110.0	8.0	17.483	*

* Modified RF-38 see Sheet U.52, "Bridge Station" is actual station of center of modified RF-38.

Notes
1) Use special backfill under shoulders per typical for Ramp D Shoulders and no Polymer Grid.
2) Match mainline subbase. Subbase quantities bid with mainline paving

112-10
04-19-11

MILLED RUMBLE STRIPS

See modified PV-12 in the U sheets

* Calculated at 18" width for Shoulder.

Location				Length		Type (Centerline, Rt or Lt Shoulder	Fog Seal* (Milled Rumble Strip)	Effective Shoulder Width			Remarks
Road Identification		Station to Station		PCC	HMA		Shoulder	PCC Paved	HMA Paved	Granular\ Earth	
				STA	STA		GAL	FT	FT	FT	
MLE029	SB	6627+50.00	6687+50.00	60.00		Left Shoulder	0.0	12.0			Rumble strips are being placed for ultimate lane configuration and will not match the pavement markings. See modified PV-12 in the U sheets.
MLE029	SB	6627+50.00	6687+50.00	60.00		Right Shoulder	0.0	12.0			
MLE029	NB	6627+50.00	6687+50.00	60.00		Left Shoulder	0.0	12.0			
MLE029	NB	6627+50.00	6687+50.00	60.00		Right Shoulder	0.0	12.0			

FENCING

* Bid Item

Refer to MI-101, MI-102, MI-103, MI-104, 510-3, and 510-5

Location From Station	Location From Offset	Location To Station	Location To Offset	Side	Chain Link Fence Length* LF	Chain Link Fence Type	Chain Link Gate No.* EACH	Chain Link Gate Type	Deer Fence Length* LF	Deer Brace Panels* EACH	Deer Gate No.* EACH	Deer Gate Type	Field Fence Length* LF	Field Brace Panels* EACH	Field Gate No.* EACH	Field Gate Type	Channel Crossing Length* LF	Channel Crossing Type	Remarks
Handrail																			
6653+84.77	81.8	6653+84.77	96.2	NB RT	14.5														Handrail on MSE wall at bump out for sign truss See U sheets for details
6653+84.77	96.2	6654+15.23	96.2	NB RT	30.5														
6654+15.23	96.2	6654+15.23	81.8	NB RT	14.5														
IME029N																			
88617+48.81	112.8	88623+64.94	207.7	LT	616.8	72 IN.													Vinyl Coated
88623+64.94	207.7	88627+67.55	417.9	LT	454.2	72 IN.													Vinyl Coated
US 275																			
80135+28.98	195.3	80138+30.69	175.6	LT	302.3	72 IN.													Vinyl Coated
80138+30.69	175.6	80138+30.69	47.9	LT	127.8	72 IN.													Vinyl Coated
80149+47.30	182.0	80148+83.10	184.0	RT	64.2	72 IN.													Vinyl Coated
80148+83.10	184.0	80148+03.55	168.2	Rt	81.1	72 IN.													Vinyl Coated
80148+03.55	168.2	80147+81.15	150.9	Rt	28.3	72 IN.													Vinyl Coated
80147+81.15	150.9	80147+43.64	74.2	Rt	80.4	72 IN.													Follow Curve of Trail,Coated Vinyl Coated
80147+43.64	74.2RT	80147+43.93	27.4LT		101.6	72 IN.													Vinyl Coated
80147+43.93	27.4	80147+46.94	51.0	Lt	23.9	72 IN.													Vinyl Coated
80147+46.94	51.0	80147+60.89	105.5	Lt	56.3	72 IN.													Vinyl Coated
80147+60.89	105.5	80148+70.73	138.0	LT	114.5	72 IN.													Vinyl Coated
80148+70.73	138.0	80149+61.73	208.4	LT	115.0	72 IN.													Vinyl Coated
80149+61.73	208.4	80151+74.94	214.0	LT	215.7	72 IN.													Vinyl Coated
80151+74.94	214.0	80159+85.49	107.7	LT	826.1	72 IN.													Vinyl Coated
80135+24.64	178.1	80137+48.19	167.9	RT	223.6	72 IN.													Vinyl Coated
80137+48.19	167.9	80137+66.10	48.6	RT	120.6	72 IN.													Vinyl Coated
80127+08.93	52.6	80127+47.65	167.6	LT	121.4	72 IN.													Vinyl Coated
US275 Ramp A																			
81530+64.34	155.8	81538+97.14	171.6	LT	827.3	72 IN.													Vinyl Coated
81538+97.14	171.6	81540+08.23	8.6	LT	195.0	72 IN.													Vinyl Coated

TABULATION OF SILT FENCES FOR DITCH CHECKS

Refer to EC-201

Location Station	Side	Length LF	Remarks
6629+00.00	West	52.0	
6630+50.00	West	42.0	
6632+00.00	West	60.0	
6667+00.00	West	22.0	
6668+50.00	West	22.0	
6670+00.00	West	22.0	
6671+50.00	West	22.0	
6673+00.00	West	22.0	
6674+50.00	West	22.0	
6674+50.00	East	22.0	
6676+00.00	West	22.0	
6676+00.00	East	22.0	
6677+50.00	West	22.0	
6677+50.00	East	22.0	
6679+00.00	West	22.0	
6679+00.00	East	22.0	
6680+50.00	West	22.0	
6680+25.00	East	22.0	
6680+75.00	East	22.0	
6682+00.00	West	22.0	
6682+00.00	East	22.0	
6683+50.00	West	22.0	
6683+50.00	East	22.0	
6685+00.00	West	22.0	
6685+00.00	East	22.0	
6686+50.00	West	22.0	
6686+50.00	East	22.0	

TABULATION OF SILT FENCES

Refer to EC-201

Location Begin Station	Location End Station	Location Side	Length LF	Remarks
6627+50.00	6632+70.00	West	680.0	MLE029S
6635+75.00	6643+75.00	West	1060.0	MLE029S
6653+90.00	6682+05.00	West	3080.0	MLE029S
6627+50.00	6642+00.00	Med	1760.0	MLE029
6653+35.00	6682+00.00	Med	3300.0	MLE029
6627+50.00	6628+50.00	East	120.0	MLE029N
6630+65.00	6640+80.00	East	1355.0	MLE029N
6661+10.00	6682+00.00	East	2420.0	MLE029N
80117+10.00	80121+90.00	Soutl	660.0	US275
80121+90.00	80126+86.00	Soutl	660.0	US275
80131+95.00	80133+70.80	Soutl	220.8	US275
80134+53.00	80137+66.00	Soutl	440.0	US275
80148+58.00	80160+50.00	Soutl	1320.0	US275
80119+52.00	80122+67.00	Nortl	440.0	US275
80153+35.00	80160+58.00	Nortl	880.0	US275
81530+08.80	81540+80.80	LT	1180.0	US275A
81530+10.00	81533+90.00	RT	440.0	US275A
82533+25.40	82540+95.00	RT	860.0	US275B
82534+40.00	82540+95.00	LT	720.0	US275B
83522+14.00	83538+83.00	RT	950.0	US275C
83522+35.00	83530+50.00	LT	895.0	US275C
84530+20.00	84544+40.00	RT	1550.0	US275D
84535+85.00	84544+10.00	LT	900.0	US275D
84530+50.00	84535+65.00	LT	560.0	US275D

HIGH TENSION CABLE GUARDRAIL

(1) Lane(s) to which the installation is adjacent.

Refer to BA-351.

No.	Direction of (1) Traffic	Location Station	Location Side	Dimensions Offset D_o FT	Dimensions Approach C_a FT	Dimensions Obstacle C_o FT	Dimensions Trailing C_r FT	Bid Items Protection Length ($C_a+C_o+C_r$) FT	Bid Items End Anchor No.	Remarks
1	NB	6633+74.68	LT	6.0	160.3	227.8	0.0	396.1	2	
2	SB	6627+63.80	LT	6.0	211.5	227.1	0.0	438.6	2	

TABULATION OF SILT FENCES

Refer to EC-201

Location Begin Station	Location End Station	Location Side	Length LF	Remarks
88622+00.00	88627+50.00	RT	605.0	IMLE029N
88612+13.00	88621+16.00	RT	990.0	IMLE029N
88610+00.00	88627+50.00	MED	1925.0	IMLE029N
99601+50.00	99627+50.00	RT	2860.0	IMLE029S
99602+86.00	99609+00.00	MED	675.0	IMLE029S
99609+33.00	99627+49.00	MED	2000.0	IMLE029S
6662+10.00	6667+80.00	RT	625.0	I29 Ramp G
6662+10.00	6668+00.00	LT	650.0	I29 Ramp G

108-23A
08-01-08

TRAFFIC CONTROL PLAN

1. Two lanes in each direction will be maintained on I-29 and one lane in each direction will be maintained on US 275 at all times and except as provided for in the following. No closures will be allowed during the College World Series or July 3rd. For areas that overlap, the more restrictive times shall govern.

2. A. The Contractor will be allowed to close one lane of I-29 in each direction south of US 275 as follows:
   - Saturday - Thursday - No time restrictions
   - Friday - No lane closures allowed 2:00 PM - 6:00 PM
   - I-29 NB from Stations 6670+14 to 6694+58
     - One time for up to 4 consecutive weeks to complete paving operations
     - The Contractor shall submit the traffic control plan 2 weeks in advance for Engineer approval.
   - I-29 SB from Stations 6677+75 to 6690+48
     - One time for up to 4 consecutive weeks to complete paving operations
     - The Contractor shall submit the traffic control plan 2 weeks in advance for Engineer approval.

   B. The Contractor will be allowed to close one lane of:
   I-29 Northbound north of US 275 as follows:
   - Monday - Thursday - No lane closures allowed from 6:00 AM - 9:00 AM and 3:00 PM - 7:00 PM
   - Friday - No lane closures allowed from 6:00 AM - 9:00 AM and 2:00 PM - 7:00 PM
   - Saturday and Sunday - No time restrictions

   I-29 Southbound north of US 275 as follows:
   - Monday - Thursday - No lane closures allowed from 2:00 PM - 7:00 PM
   - Friday - No lane closures allowed from 11:00 AM - 7:00 PM
   - Saturday and Sunday - No time restrictions

   C. Temporary nighttime road closures of I-29 will be permitted as follows:
   - Short duration of up to 20 minutes to complete overhead work and to set new bridge beams. The Contractor shall submit the traffic control plan 2 weeks in advance to the Engineer for approval.
   - Extended durations of over 20 minutes to remove existing bridge or place bridge beams will be allowed as nighttime closures from 9:00 PM - 5:30 AM Monday -Saturday and 7:00 PM - 5:30 AM Sunday. Northbound traffic will be detoured onto Ramps A and C (I-29/US275 NB on and off ramps.) Southbound traffic will be detoured from I-29 SB to South Expressway to US275 to Ramp D (I-29 SB on ramp.) Southbound I-29 and Northbound I-29 shall not be closed at the same time. The Contractor shall submit the traffic control plan 2 weeks in advance for Engineer approval.

   D. Ramp closures shall be in accordance with the layouts outlined in the plans or permitted from 9:00 PM - 5:30 AM Monday-Saturday

3. All shy distances to TBR shall be 3' minimum from travel lane unless where noted.

4. The Contractor shall notify the Engineer 5 calendar days in advance of all lane shifts.

Final signing is shown for reference. Details are in the signing plan, IM-NHS-029-3(103)48--03-78.

111-01
04-17-12

COORDINATED OPERATIONS

Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.

Project	Type of Work
IM-NHS-029-3(80)52--03-78	Bridge
IM-NHS-029-3(86)52--03-78	Grade and Pave
IM-NHS-029-3(94)52--03-78	Signing
IM-NHS-029-3(95)52--03-78	Lighting
IM-NHS-029-3(87)52--03-78	Grade and Pave
IM-NHS-029-3(81)52--03-78	Bridge
IM-NHS-080-1(367)2--03-78	Grade and Pave
IM-NHS-080-1(368)2--03-79	Lighting
IM-NHS-030-1(369)2--03-80	Traffic Signs
IM-NHS-80-1(309)2--03-78	Bridge
IM-NHS-080-1(428)0--03-78	RCB Culvert Extension
IM-NHS-29-3(126)48--0E-78	Miscellaneous
IM-NHS-29-3(98)48--03-78	Bridge
IM-29-3(99)48--13-78	Bridge
NHS-29-3(100)48--11-78	Bridge
IM-NHS-029-3(111)48--03-78	Bridge
IM-NHS-029-3(128)48--03-78	Signing
IMN-29-3(101)52-0E-78	Erosion Control
IM-NHS-80-1(419)3--03-78	Noise Wall
IM-NHS-080-1(364)3--03-78	Grade and Pave
IM_NHS-080-1(365)3--03-78	Traffic Signals
IM-NHS-080-1(370)3--03-78	Grade and Pave
IMN-80-1(366)4--0E-78	Railroad Grading
IM-NHS-29-3(103)48--03-78	Signing
IM-NHS-29-3(104)48--03-78	Signals
IM-NHS-29-3(110)48--03-78	Lighting
IM-NHS-29-3(122)48--03-79	Culvert
IM-29-3(105)48--13-78	Bridge
NHS-29-3(106)48--11-78	Bridge
IM-NHSX-080-1(416)3--03-78	Bridge
IMN-29-3(127)48)0E-78	RCB Culverts

ENGLISH	IOWA DOT	DESIGN TEAM Skogerboe\Ryan\Thede	POTTAWATTAMIE COUNTY	PROJECT NUMBER IM-NHS-029-3(102)48--03-78	SHEET NUMBER J.1

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STAGING NOTES

The construction limits for this project include the Mosquito Creek Levees. It is required that construction impacting the levees and Mosquito Creek will be staged to maintain protection against flooding.

Removal of the existing I-29 embankment of the Temporary North Ring Levee must be coordinated with the IM-NHS-29-3(97)4D-03-78 Contractor so that the line of protection provided by the Temporary North Ring Levee is maintained at all times. Provide a minimum of 10 weeks notice to the Resident Construction Engineer prior to removal of the embankment.

The proposed piggy back levees will need to be completed prior to any grading or bridge construction within the existing Mosquito Creek and levee section. The Grading Contractor will promptly notify the Engineer 1 week prior to construction of the piggy back levees and once the piggy back levees are complete. The Department will secure approval from the City for approval of the piggy back levees. (Allow up to 2 weeks for approval)

Work in Levee Area Staging Notes:

- Piggy Back Levees at pier 3 and pier 6 of the IA 92 Bridge shall not be constructed until bridge removal is complete. And drilled shaft construction at Pier 3 and Pier 6 shall not commence prior to completion of the piggy back levees at Pier 3 and Pier 6.
- Restore levees, install piggy back levees and obtain approval of completed piggy back levees construction from City as required before bridge construction.
- Stage excavation of roadway embankment, abutment removal, and levee restoration to maintain a continuous line of protection against flooding. The abutment removal and levee restoration including fill on the wet side of levee will need to be completed prior to removal of the roadway embankment.
- Levee crossing will be allowed only at designated locations as shown in U sheets.

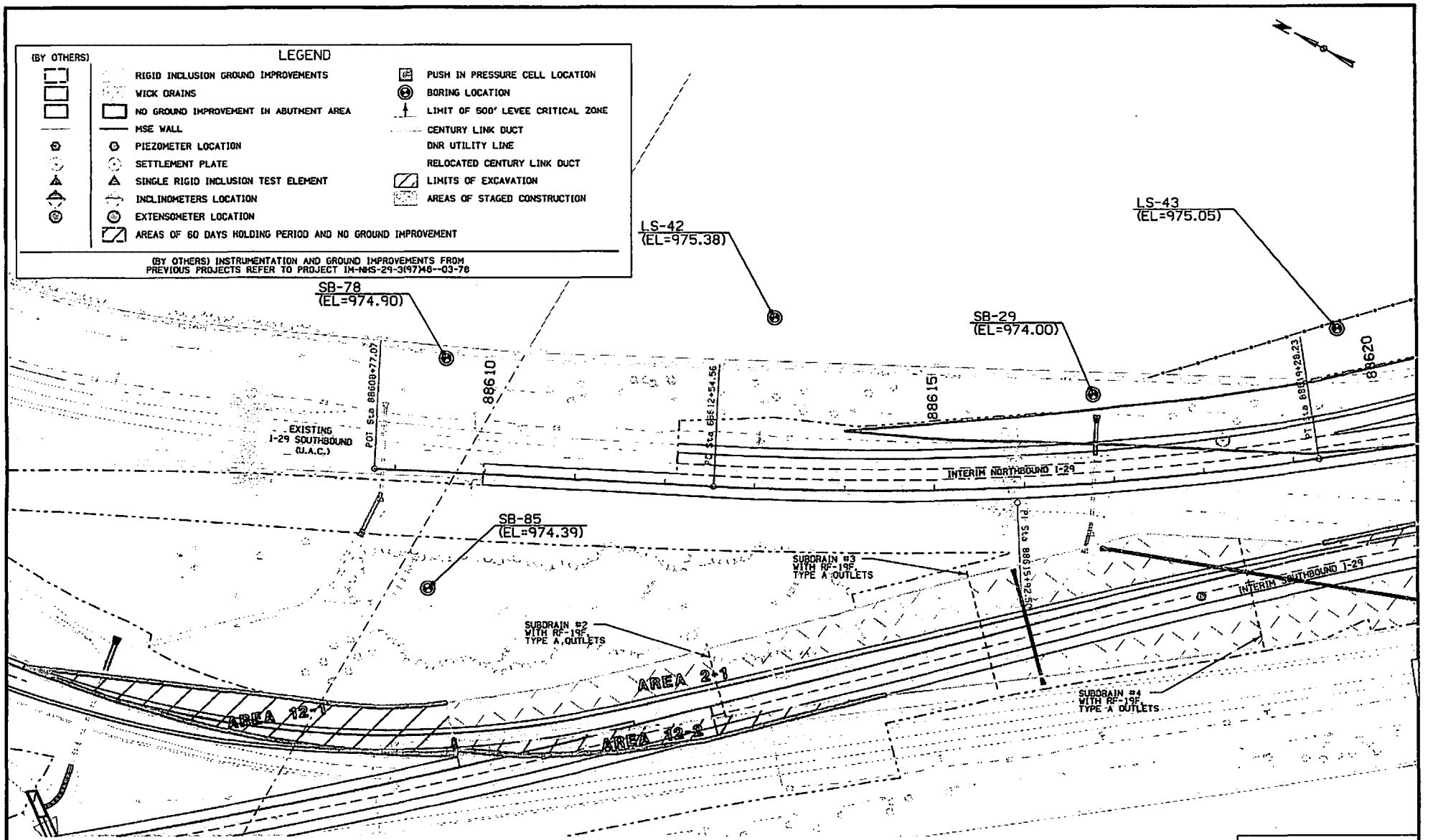
The construction limits for this project overlap with grading and track construction for the Railroad Construction Project (IMN-80-1(366)4-0E-78). Grading and hauling operations for the Railroad Construction will be primarily limited to night operations. The contractor for this project will need to coordinate with the contractor for the Railroad Construction to:

- accommodate haul route access under the US 275 bridges starting in Stage 2A after removal of the US 275 EB bridge over Mosquito Creek and associated embankment
- remove I-29 roadway embankment and make site under I-29 bridges available for track grading and construction starting in Stage 4A

Stage 1A
Traffic
Maintain traffic on existing I-29 and interchange at North end Shift I-29 traffic on to new detour pavement
Maintain one lane in each direction on US 275/ IA 92 EB lanes
Construction
Pave US 275/IA 92 WB from Harry Langdon Blvd. to E. of Metro Dr. (Gap Ramp C terminal)
Continue construction of IA 92 bridge over Mosquito Creek and Railroad
Continue construction of US 275/IA 92 bridge over I-29
Continue construction of I-29 NB and SB bridges over Mosquito Creek
Build interim I-29 NB and interim Ramp C pavement from Sta. 88612+12.5 to 88626+41.1
Replace inside shoulders on I-29 SB from the split of I-80 EB/I-29 SB to entrance ramp of I-80 to I-29 SB
Replace outside shoulder on I-29 NB from STA. 6662+68.4 to 6686+13.0
Pave I-29 NB from Sta. 6653+16 to 6673+00 and I-29 SB from Sta. 6654+63 to 6660+00 as shown on J sheets.
Grade Portion of US275 Loop B not affecting traffic.
Grade foreslopes of I-29 on South end of project.
Stage 1B
Traffic
Maintain traffic on existing I-29
Maintain one lane in each direction on US 275/ IA 92 EB lanes
Close Denmark Dr.
Close Ramp C
Close Ramp A
Construction
Grade and pave Ramp C terminal
Grade I-29 interim from Sta. 88621+20 to 88627+50 (IMLE029N) and proposed I-29 NB from Sta. 6627+50.0 to 6629+66.0
Grade and Pave detour on Existing I-29 NB from Sta. 6668+81.2 to 6685+65.74 and permanent pavement from Sta. 6682+03.4 to 6687+50.0 use shoulder closure and lane closure TC-402 and TC-418.
Grade and Pave US 275/ IA 92 WB from Sta. 80119+52.22 to 80126+85.23 and Denmark Dr.
Install Tower lighting on East side of I-29 and between NB and SB I-29 as shown in the lighting plan, IM-NHS-029-3(110)48--03-78.
Stage 2A
Traffic
Maintain traffic on existing I-29
Move US 275/ IA 92 traffic on to new WB lanes and continue one lane in each direction
Open new Ramp C to traffic to EB I-80
Ramp A remains closed
Construction
Grade and Pave US 275 Ramp A terminal
Remove Existing US 275/ IA 92 EB Mosquito Creek bridge.
Build new US 275/IA 92 EB Mosquito Creek bridge.
Grade and pave I-29 NB from 6672+15 to 6687+50
Resurface connection from WB US 275/IA 92 to Ramp B and D Terminal
Stage 2B
Traffic
Maintain traffic on I-29 existing
Open up new I-29 NB lane and Ramp A to Ramp A traffic
Maintain one lane in each direction on new US 275/ IA 92 WB lanes
Maintain traffic on new Ramp C to EB I-80 only
Construction
Build new US 275/ IA 92 EB bridge over Mosquito Cr
Grade and pave US 275/ IA 92 EB
Grade and pave I-29 SB detour 351800(Sta 351800+91 to 351808+50), 351900 and on existing inside I-29 SB shoulder area from Sta. 6666+33.8 to 6685+88.0
Grade and pave I29 NB from 6627+50 to 6640+44
Grade and pave Interim I-29 NB from Sta. 88609+98.5 to 88627+50.0
Pave new shoulders along I-29 SB insde and outside as shown on J sheets
Stage 2C
Traffic
Maintain traffic on I-29 existing
Maintain Ramp A traffic per Stage 2B
Maintain one lane in each direction on new US 275/ IA 92 WB lanes
Maintain traffic on new Ramp C to EB I-80 only
Construction
Continue construction on US 275 EB bridge over Mosquito Cr.
Continue G&P US 275 EB
Grade and Pave remaining detour 351800 and overlay in same area using nighttime lane closures
Stage 3A
Traffic
Move traffic I-29 NB on to new I-29 NB
Maintain one lane in each direction on new US 275/ IA 92 WB lanes
Maintain traffic on new Ramp A and C
Construction
Remove existing I-29 NB bridge over mosquito creek (by others)
Construct remaining I-29 SB bridge over Mosquito Cr. (by others) Excluding the Ramp D connection
Remove existing US 275/IA 92 bridge over I-29
Construct new US 275 EB bridge over I-29
Continue Grade and pave of US 275/ IA 92 EB
Grade and Pave I-29 SB from station 6627+50 to 6687+50
Grade and Pave detour 352300
Grade and Pave I-29 Interim SB and DET_353000 and Crossover at Sta. 6700+05 as shown on J.81b-J.81e
Stage 3B
Traffic
Maintain traffic on new I-29 NB
Maintain traffic on existing I-29 SB
IA 92/ US 275 remains on new WB lanes
Maintain traffic on new Ramp A and C
Close I-80 WB/ I-29 SB Ramp to IA 92 Loop B Movement
Construction
Grade and Pave Interim SB I-29 from 99601+49 to 99612+17 as shown on the J sheets
Grade and Pave I-29 SB from station 6667+50 to 6687+50 as shown on the J sheets
Continue Construction on SB I-29 bridge
Stage 3C
Traffic
Move I-29 SB traffic onto New I-29 NB with I-29 NB traffic maintaining 2 lanes of traffic in each direction except in area shown on J.81d and J.81e.
For NB I-29 Lane closure on Sheet J.81e use TC-421.
Construction
Remove existing I-29 SB bridge
Construct I-29 median crossover as shown on Sheets J.81f and J.81g and I-29 SB pavement from Sta. 6681+65 to 6686+65
Stage 3D
Traffic
Maintain I-29 NB and SB traffic on I-29 NB new lanes per Stage 3C except maintain 2 lanes throughout utilizing 2 lane crossover at Sta. 6681+65 See J.81f and J.81g
Stage 4A
Traffic
Maintain traffic on new I-29 NB
Move I-29 SB traffic to new SB lanes
Maintain traffic on New WB IA 92/ US 275
Maintain closure of I-80 WB/ I-29 SB Ramp to IA 92 Loop B Movement
Maintain Traffic on Loop B as shown in J sheets
Maintain bike trail under I-29
Close Ramp D
Construction
Remove existing I-29 SB bridge over Mosquito Cr.
Grade and Pave portion of bike trail under I-29 not impacting trail traffic
Build I-29 SB Ramp D Stub bridge
Grade and Pave Ramp B from station 82533+25 to 82540+27 as shown on J sheets
Grade and Pave Ramp D from station 84534+74 to 84544+29 as shown on J sheets
Grade and pave remaining SB I-29 on South End as shown in the J sheets
Stage 4B
Traffic
Maintain traffic on new I-29 NB
Maintain I-29 SB traffic in new SB lanes
Maintain traffic on New WB IA 92/ US 275 Lanes until Gap at Ramps B/D reconstructed then switch to final 4 lane configuration
Close bike trail under I-29 (Maximum closure period is 2 weeks)
Close Ramp B
Maintain Ramp D Closure
Construction
Continue construction of I-29 SB Ramp D Stub bridge
Grade and Pave bike trail under I-29
Grade and Pave remaining portions of Ramps B and D
Grade and Pave remaining IA 92/ US 275 through Ramp B/D terminal
Construct permanent Bike Trail connections and raised median on I-92/ US275
Install Tower lighting on the South side of I-29
Stage 5
Traffic
Open all traffic to I-29 and US 275/IA 92
Open Ramps B and D
Construction
Complete removals and grading not affecting traffic
Following completion of removal of existing track (by others), construct new bike path under IA 92 bridge over Mosquito Creek and install scour mitigation per Sheet U.76.

108-26A
08-01-08

STAGING NOTES


LEGEND
(BY OTHERS)
RIGID INCLUSION GROUND IMPROVEMENTS
WICK DRAINS
NO GROUND IMPROVEMENT IN ABUTMENT AREA
MSE WALL
PIEZOMETER LOCATION
SETTLEMENT PLATE
SINGLE RIGID INCLUSION TEST ELEMENT
INCLINOMETERS LOCATION
EXTENSOMETER LOCATION
AREAS OF 60 DAYS HOLDING PERIOD AND NO GROUND IMPROVEMENT
PUSH IN PRESSURE CELL LOCATION
BORING LOCATION
LIMIT OF 500' LEVEE CRITICAL ZONE
CENTURY LINK DUCT
DNR UTILITY LINE
RELOCATED CENTURY LINK DUCT
LIMITS OF EXCAVATION
AREAS OF STAGED CONSTRUCTION
(BY OTHERS) INSTRUMENTATION AND GROUND IMPROVEMENTS FROM PREVIOUS PROJECTS REFER TO PROJECT IM-NHS-29-3(97)48--03-78
SB-78 (EL=974.90)
LS-42 (EL=975.38)
SB-29 (EL=974.00)
LS-43 (EL=975.05)
SB-85 (EL=974.39)
EXISTING I-29 SOUTHBOUND (U.A.C.)
INTERIM NORTHBOUND I-29
INTERIM SOUTHBOUND I-29
SUBDRAIN #3 WITH RF-19F TYPE A OUTLETS
SUBDRAIN #2 WITH RF-19F TYPE A OUTLETS
SUBDRAIN #4 WITH RF-19F TYPE A OUTLETS
AREA 12-1
AREA 12-2
AREA 2-1
SUBDRAIN AND OUTLET LOCATIONS SUBJECT TO LEVELING OF THE SITE FOR WICK DRAIN INSTALLATION AS DISCUSSED IN THE STANDARD SPECIFICATIONS FOR WICK DRAINS
For Ground Improvement Area Coordinates Refer to Sheet No. 0.63
0 50 FEET
For Ramp C Soils Details Refer to Sheet No. 0.36-0.37
For Interim SB I-29 Soils Details Refer to Sheets No. 0.20-0.23
INTERIM NORTHBOUND I-29
ENGLISH
IOWA DOT
DESIGN TEAM Iowa DOT\CH2M HILL
POTTAWATTAMIE COUNTY
PROJECT NUMBER IM-NHS-029-3(102)48--03-78
SHEET NUMBER 0.16
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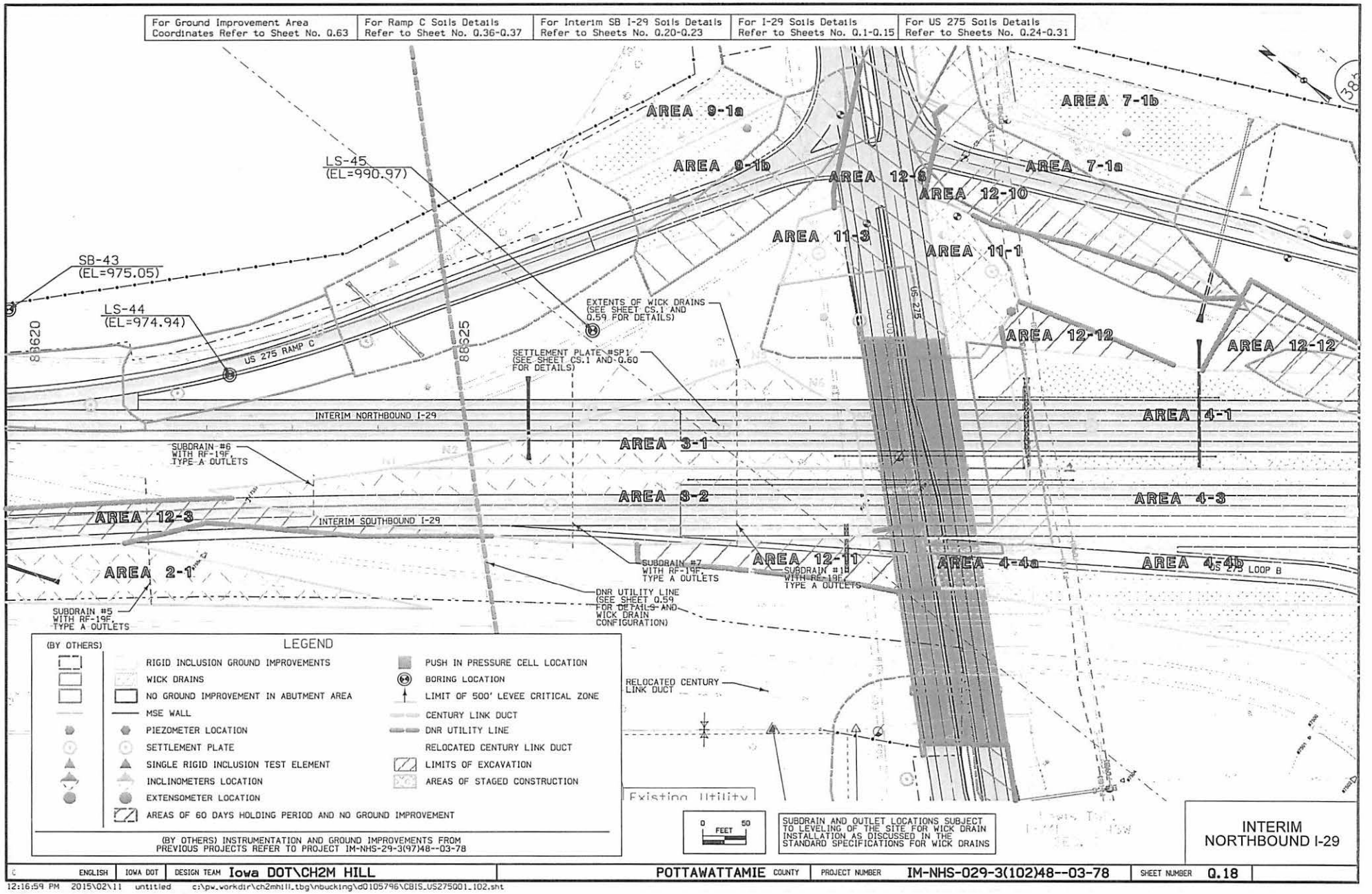
For Ground Improvement Area Coordinates Refer to Sheet No. Q.63
For Ramp C Soils Details Refer to Sheet No. Q.36-Q.37
For Interim SB I-29 Soils Details Refer to Sheets No. Q.20-Q.23
For I-29 Soils Details Refer to Sheets No. Q.1-Q.15
For US 275 Soils Details Refer to Sheets No. Q.24-Q.31
AREA 9-1a
AREA 9-1b
AREA 7-1b
AREA 7-1a
AREA 12-8
AREA 12-10
AREA 11-3
AREA 11-1
AREA 12-12
AREA 12-12
AREA 4-1
AREA 3-1
AREA 3-2
AREA 4-3
AREA 12-3
AREA 2-1
AREA 12-11
AREA 4-4a
AREA 4-4b
LS-45 (EL=990.97)
SB-43 (EL=975.05)
LS-44 (EL=974.94)
US 275 RAMP C
INTERIM NORTHBOUND I-29
INTERIM SOUTHBOUND I-29
US 275
US 275 LOOP B
EXTENTS OF WICK DRAINS (SEE SHEET CS.1 AND Q.59 FOR DETAILS)
SETTLEMENT PLATE #SP1 (SEE SHEET CS.1 AND Q.60 FOR DETAILS)
SUBDRAIN #6 WITH RF-19F TYPE A OUTLETS
SUBDRAIN #5 WITH RF-19F TYPE A OUTLETS
SUBDRAIN #7 WITH RF-19F TYPE A OUTLETS
SUBDRAIN #8 WITH RF-19F TYPE A OUTLETS
DNR UTILITY LINE (SEE SHEET Q.59 FOR DETAILS AND WICK DRAIN CONFIGURATION)
RELOCATED CENTURY LINK DUCT
Existing Utility
LEGEND
(BY OTHERS)
RIGID INCLUSION GROUND IMPROVEMENTS
WICK DRAINS
NO GROUND IMPROVEMENT IN ABUTMENT AREA
MSE WALL
PIEZOMETER LOCATION
SETTLEMENT PLATE
SINGLE RIGID INCLUSION TEST ELEMENT
INCLINOMETERS LOCATION
EXTENSOMETER LOCATION
AREAS OF 60 DAYS HOLDING PERIOD AND NO GROUND IMPROVEMENT
PUSH IN PRESSURE CELL LOCATION
BORING LOCATION
LIMIT OF 500' LEVEE CRITICAL ZONE
CENTURY LINK DUCT
DNR UTILITY LINE
RELOCATED CENTURY LINK DUCT
LIMITS OF EXCAVATION
AREAS OF STAGED CONSTRUCTION
(BY OTHERS) INSTRUMENTATION AND GROUND IMPROVEMENTS FROM PREVIOUS PROJECTS REFER TO PROJECT IM-NHS-29-3(97)48--03-78
0 FEET 50
SUBDRAIN AND OUTLET LOCATIONS SUBJECT TO LEVELING OF THE SITE FOR WICK DRAIN INSTALLATION AS DISCUSSED IN THE STANDARD SPECIFICATIONS FOR WICK DRAINS
INTERIM NORTHBOUND I-29
ENGLISH
IOWA DOT
DESIGN TEAM Iowa DOT\CH2M HILL
POTTAWATTAMIE COUNTY
PROJECT NUMBER IM-NHS-029-3(102)48--03-78
SHEET NUMBER Q.18
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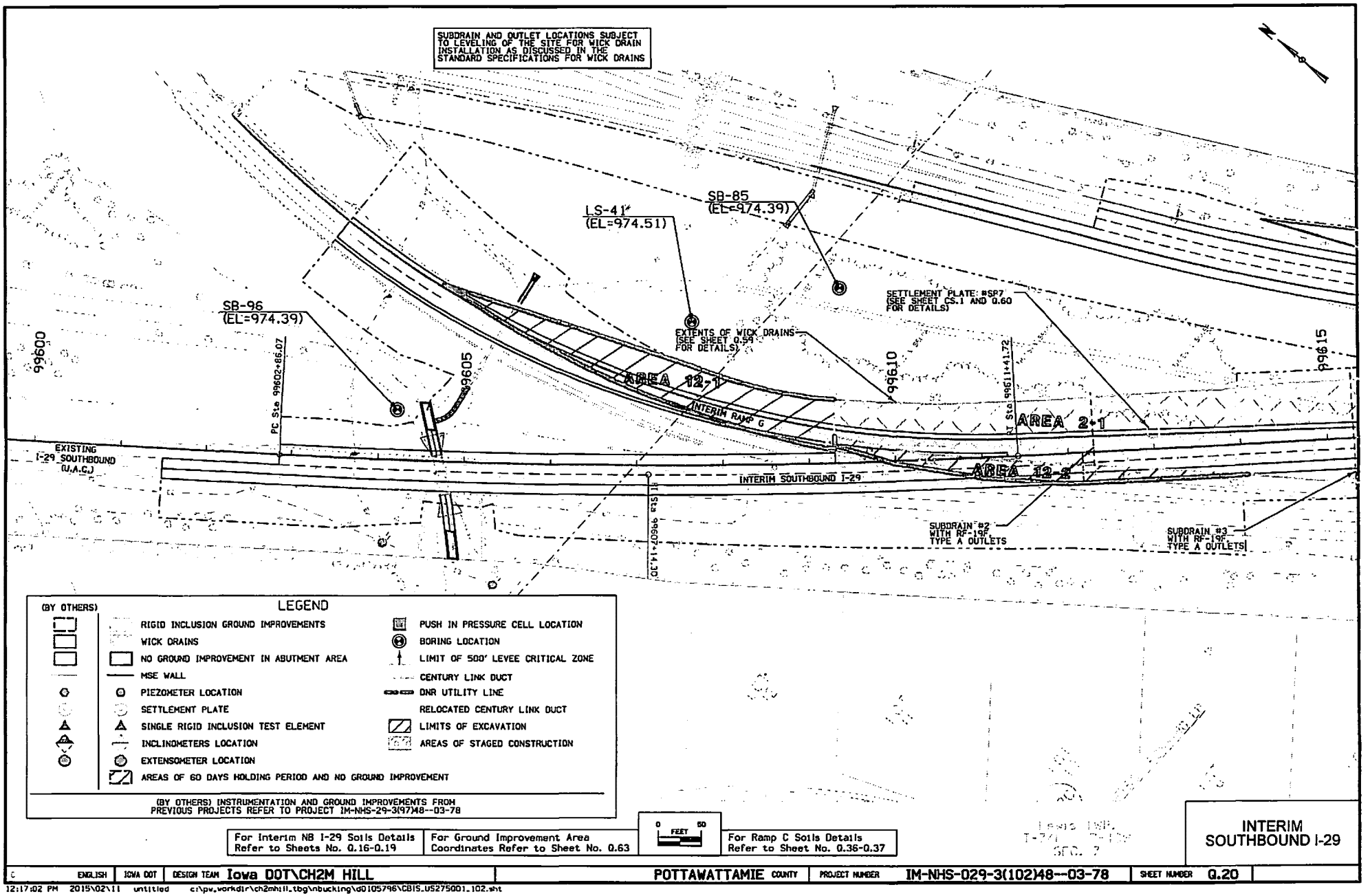

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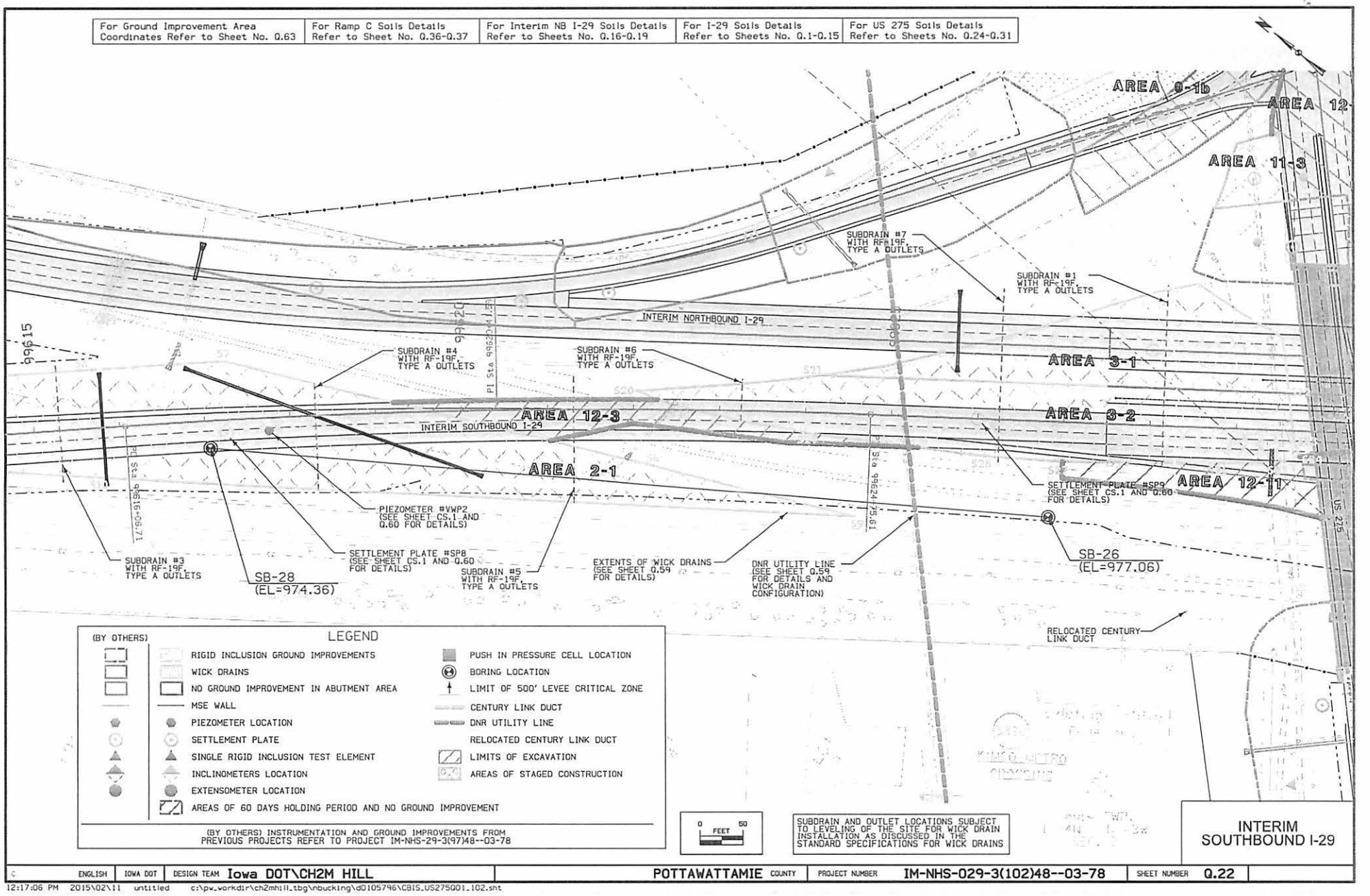
For Ground Improvement Area Coordinates Refer to Sheet No. Q.63
For Ramp C Soils Details Refer to Sheet No. Q.36-Q.37
For Interim NB I-29 Soils Details Refer to Sheets No. Q.16-Q.19
For I-29 Soils Details Refer to Sheets No. Q.1-Q.15
For US 275 Soils Details Refer to Sheets No. Q.24-Q.31
AREA 9-1b
AREA 12-
AREA 11-3
SUBDRAIN #7 WITH RF-19F, TYPE A OUTLETS
SUBDRAIN #1 WITH RF-19F, TYPE A OUTLETS
INTERIM NORTHBOUND I-29
SUBDRAIN #4 WITH RF-19F, TYPE A OUTLETS
SUBDRAIN #6 WITH RF-19F, TYPE A OUTLETS
AREA 3-1
AREA 12-3
AREA 3-2
INTERIM SOUTHBOUND I-29
AREA 2-1
AREA 12-11
SETTLEMENT PLATE #SP9 (SEE SHEET CS.1 AND Q.60 FOR DETAILS)
PIEZOMETER #VWP2 (SEE SHEET CS.1 AND Q.60 FOR DETAILS)
SETTLEMENT PLATE #SP8 (SEE SHEET CS.1 AND Q.60 FOR DETAILS)
SUBDRAIN #3 WITH RF-19F, TYPE A OUTLETS
SB-28 (EL=974.36)
SUBDRAIN #5 WITH RF-19F, TYPE A OUTLETS
EXTENTS OF WICK DRAINS (SEE SHEET Q.59 FOR DETAILS)
DNR UTILITY LINE (SEE SHEET Q.59 FOR DETAILS AND WICK DRAIN CONFIGURATION)
SB-26 (EL=977.06)
US 275
RELOCATED CENTURY LINK DUCT
LEGEND
(BY OTHERS)
RIGID INCLUSION GROUND IMPROVEMENTS
WICK DRAINS
NO GROUND IMPROVEMENT IN ABUTMENT AREA
MSE WALL
PIEZOMETER LOCATION
SETTLEMENT PLATE
SINGLE RIGID INCLUSION TEST ELEMENT
INCLINOMETERS LOCATION
EXTENSOMETER LOCATION
AREAS OF 60 DAYS HOLDING PERIOD AND NO GROUND IMPROVEMENT
PUSH IN PRESSURE CELL LOCATION
BORING LOCATION
LIMIT OF 500' LEVEE CRITICAL ZONE
CENTURY LINK DUCT
DNR UTILITY LINE
RELOCATED CENTURY LINK DUCT
LIMITS OF EXCAVATION
AREAS OF STAGED CONSTRUCTION
(BY OTHERS) INSTRUMENTATION AND GROUND IMPROVEMENTS FROM PREVIOUS PROJECTS REFER TO PROJECT IM-NHS-29-3(97)48--03-78
0 50 FEET
SUBDRAIN AND OUTLET LOCATIONS SUBJECT TO LEVELING OF THE SITE FOR WICK DRAIN INSTALLATION AS DISCUSSED IN THE STANDARD SPECIFICATIONS FOR WICK DRAINS
INTERIM SOUTHBOUND I-29
ENGLISH
IOWA DOT
DESIGN TEAM Iowa DOT\CH2M HILL
POTTAWATTAMIE COUNTY
PROJECT NUMBER IM-NHS-029-3(102)48--03-78
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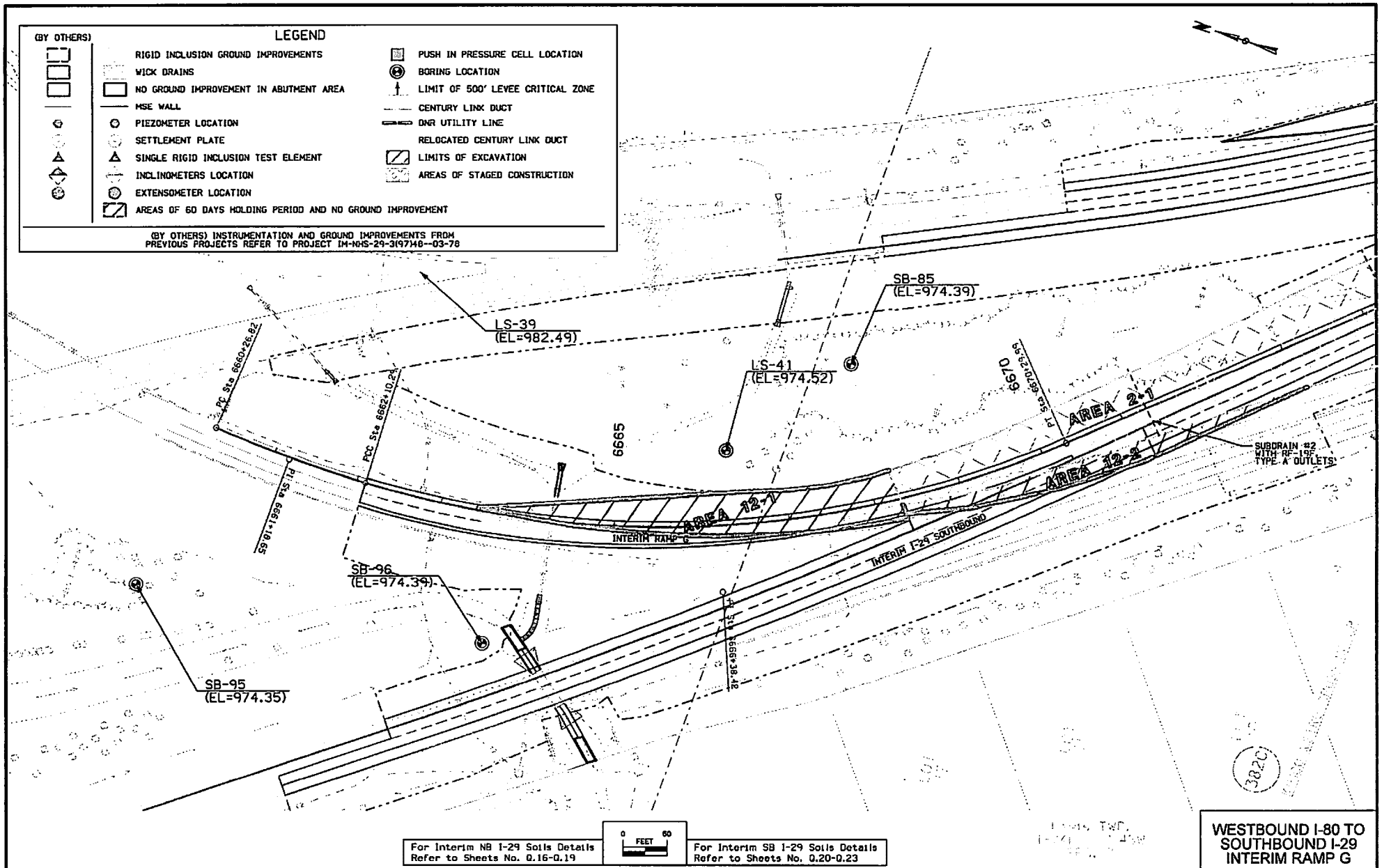

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2M HILL	POTTAWATTAMIE COUNTY	PROJECT NUMBER IM-NHS-029-3(102)48--03-78	SHEET NUMBER Q.42

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SETTLEMENT PLATES

1. Settlement plates shall be installed by the grading contractor at the locations shown in the plans and summarized in table 1 as per detail shown in Standard Roadway plan EW-212 and in accordance with Section 2106 of the Standard Specifications. The Engineer may change the location of the instrumentation as needed during construction with no additional cost to the Iowa DOT.
2. Care shall be taken to protect the settlement plates from damage during placement of the embankment fill from equipment traffic or construction activities.
3. Settlement plate readings shall be taken at the start and end of placing of each embankment lift with a maximum of one reading per day and at weekly intervals after the fill is placed to its final height for a period of 10 weeks, and at the end of fill placement and once every two weeks for 42 weeks thereafter. Additional readings over additional duration may be needed based on the settlement plates readings. The total estimated delay period between the end of grading and start of paving operations varies between 30 and 360 days.
4. The settlement plates shall be monitored by the contractor as part of the instrumentation work.
5. Refer to the instrumentation special provisions for additional requirements.

VIBRATING WIRE PIEZOMETERS AND PUSH IN PRESSURE CELLS

1. Vibrating Wire Piezometers, and push in pressure cells shall be installed by a qualified instrumentation specialist as subcontractor to the prime contractor at the locations shown in the plans.
2. The Contractor shall notify the Engineer at least 10 workdays in advance of the start of the installation and shall be responsible for maintenance of the data logging equipment during and after construction. The Engineer shall be on site during installation of the Vibrating Wire Piezometers.
3. Four two-level Vibrating Wire Piezometers (GEOKON MODEL 4500S or equivalent) and two push in pressure cells (GEOKON MODEL 4830) shall be installed in one borehole immediately following the foundation soil preparation at the location shown in the plans.
4. The Contractor shall take initial readings within 24 hours after completing installation and testing of each piezometer. Readings shall consist of minimum of two reading surveys per 24 hours using real time remote and automated monitoring operations.
5. For the duration of the project, piezometers shall continue to be monitored after completion of the fill placement and beyond through a duration of 25 weeks. The readings shall consist of real time monitoring with daily monitoring frequency and available online to the Engineer.
6. The Engineer may change the location of the instrumentation as needed during construction with no additional cost to the Iowa DOT.
7. Refer to the instrumentation special provisions for additional requirements.

INCLINOMETERS

1. Inclinometer casings and inclinometers shall be installed by a qualified Instrumentation Specialist at the locations shown in the plans and after the embankment fill is completed. The Engineer may change the location of the instrumentation as needed during construction with no additional cost to the Iowa DOT.
2. The Contractor shall drill, sample, and log borings of soil drilled for the purpose of installing inclinometer casing. Borings for inclinometers shall be drilled using 6" minimum inside diameter casing and water or, where ground conditions permit, using drilling mud in a 6" diameter borehole.
3. The inclinometers shall have a minimum length of 90'.
4. The casing shall protrude 3' above finished grade. The Contractor shall flag and protect inclinometer locations. Provide the top of each inclinometer casing with a cap, and with a locked protective metal housing extending below grade. All cables shall be protected and routed through a PVC pipe to ensure that these are not damaged during construction activities.
5. The Contractor shall notify the Engineer at least 10 workdays in advance of the start of installation and shall be responsible for maintenance of the data logging equipment during and after construction. The Engineer shall be on site during installation of the inclinometers.
6. The Contractor shall take initial inclinometer readings 24 hours after completing installation and testing of each inclinometer casing. Readings shall consist of a minimum of two reading surveys per 24 hours using real time remote and automated monitoring operations, at 2' intervals throughout the depth of the inclinometer casing.
7. For the duration of construction, inclinometers shall continue to be monitored by the contractor. After completion of construction and through a duration of 52 weeks the readings shall be completed by the engineer. The readings shall consist of real time monitoring with daily monitoring frequency and available online to the Engineer.
8. Refer to the instrumentation special provisions for additional requirements.

MULTI-POINT SETTLEMENT EXTENSOMETERS

1. Multi-point settlement extensometers shall be installed by a qualified Instrumentation Specialist at the locations shown in the plans. The Engineer may change the location of the instrumentation as needed during construction with no additional cost to the Iowa DOT.
2. The Contractor shall drill, sample, and log borings of soil drilled for the purpose of installing extensometer casing. Borings for extensometers shall be drilled using 6" minimum inside diameter casing and water or, where ground conditions permit, using drilling mud in a 6" diameter borehole.
3. The Contractor shall flag and protect all cables. The cables shall be routed through a PVC pipe to ensure that these are not damaged during construction activities.
4. The multi-point extensometers shall have a minimum length of 50' below existing ground surface. Preliminary elevations of settlement points are provided in the Special Provisions. Final settlement point elevations shall be adjusted by the Engineer on site based on the confirmation borings.
5. The Contractor shall notify the Engineer at least 10 workdays in advance of the start of installation and shall be responsible for maintenance of the data logging equipment during and after construction. The Engineer shall be on site during installation of the multi-point settlement extensometers.
6. The Contractor shall take initial readings 24 hours after completing installation and testing of each multi-point settlement extensometer.
7. For the duration of the project, multi-point settlement extensometers shall continue to be monitored after completion of the fill placement and beyond through a duration of 52 weeks. The readings shall consist of real time monitoring with daily monitoring frequency and available online to the Engineer.
8. Refer to the instrumentation special provisions for additional requirements.

TABLE 1
List of Proposed Instrumentation

Area (Alignment)	Station Range From	Station Range To	Ground Improvement Type	Number of Instrumentation: Settlement Plate	Inclinometer	Piezometer	Push in Pressure Cell	Multipoint Extensometer
2 (Interim I-29 SB)	99609+00	99625+00	PVD	1[a]		1		
3-1 (I-29 NB)	6627+50	6630+00	PVD	1[a]				
3-2 (Interim I-29 SB)	99622+00	99627+50	PVD	1[a]				
4-1 (I-29)	6631+00	6636+50	Rigid Inclusion	1[a]	1			
4-2 (I-29)	6637+00	6641+00	Rigid Inclusion	1[a]	1			1
4-3 (I-29)	6632+00	6635+50	Rigid Inclusion	1[a]	1			
4-4 (I-29)	6631+50	6637+50	Rigid Inclusion	1[a]	1			
6-1 (I-29 SB)	6671+00	6686+00	No improvement	1[a]	1		1	
6-2 (I-29 NB)	6673+00	6686+50	No improvement	1[a]		1		
7-1 (Ramp A)	81530+50	81534+00	Rigid Inclusion	1[a]	1			1
8-1 (Loop B)	82537+25	82540+00	Rigid Inclusion	1[b]				
8-2 (Loop B)	82539+50	82542+00	PVD	1[a]	1	1	1	
9-1 (Ramp C)	87520+57	87529+00	Rigid Inclusion	1[a]	1			1
10-1a (Ramp D)	84536+00	84540+00	Rigid Inclusion	1[a]				
10-1b (Ramp D)	84540+00	84544+00	Rigid Inclusion	1[a]	2			1
11-1 EB (US 275)	60131+75	60133+50	No improvement	1[a]	1	1		
11-2 EB (US 275)	60134+50	60138+50	No improvement	1[a]	1		1	
11-3 EB (US 275)	60132+75	60133+50	No improvement	1[a]				
11-4 (US 275)	60139+00	60144+50	Rigid Inclusion	1[a]	1			
Total				19	13	4	3	4

a. [illegible]

b. [illegible]

MONITORING DETAILS

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2M HILL		POTTAWATTAMIE COUNTY	PROJECT NUMBER IM-NHS-029-3(102)48--03-78	SHEET NUMBER Q.60	

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A d d e n d u m

Iowa Department of Transportation
Office of Contracts

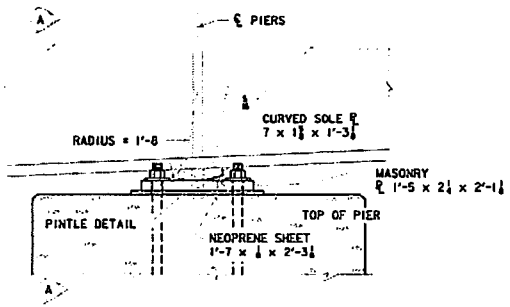
Date of Letting: February 17, 2015
Date of Addendum: February 12, 2015

B.O.	Proposal ID	Proposal Work Type	County	Project Number	Addendum
306	78-0293-102	GRADING	POTTAWATTAMIE	IM-NHS-029-3(102)48--03-78 IM-NHS-029-3(103)48--03-78 IM-NHS-029-3(104)48--03-78 IM-029-3(105)48--13-78 NHS-029-3(106)48--11-78 IM-NHS-029-3(110)48--03-78 IM-NHS-029-3(122)48--03-78 IM-NHS-029-3(146)48--03-78 IM-NHS-080-1(416)3--03-78	17FEB306.A10

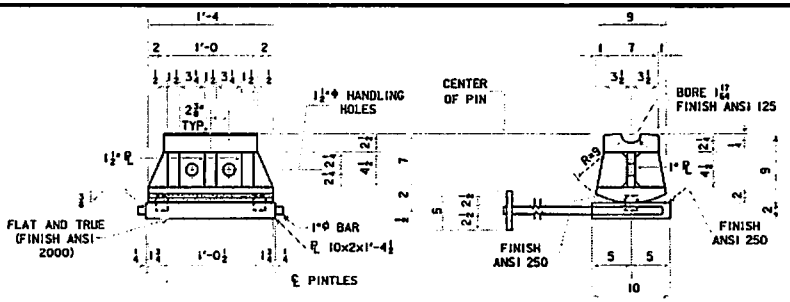
Make the following changes to IM-NHS-080-1(416)3--03-78 plans.

Add attached alternate sheet 38A.

This sheet provides a Rocker Weldment Alternate to the Cast Iron Rocker detailed on Sheet 38. The Contractor can use Rocker Weldment Alternate with no additional payment for the added Structural Steel weight.

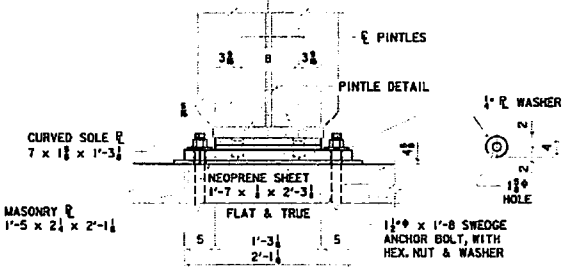


PART ELEVATION

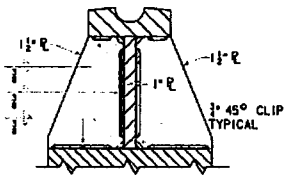


ABUTMENT ROCKER (RA1)

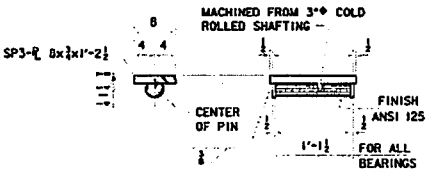
WT. = 211 LBS.



SECTION A-A



TYPICAL DETAILS



SOLE PLATE (SP3)

WT. SP3 = 43 LBS.

BEARING NOTES:

ALL MATERIAL USED TO CONSTRUCT ROCKER WELDMENTS, MASONRY PLATES AND KEEPER BAR ASSEMBLIES SHALL COMPLY WITH ASTM A709 GRADE 50.

THE PINS SHALL BE IN ACCORDANCE WITH ARTICLE 4153.02, OF THE STANDARD SPECIFICATIONS, AND WITH THE REQUIREMENTS OF ASTM A108 STEEL.

PREPARATION OF BEARING AREA SHALL BE IN ACCORDANCE WITH ARTICLE 2408.03, M, OF THE STANDARD SPECIFICATIONS. THE BEDDING SHALL BE A SINGLE LAYER OF ½ INCH NEOPRENE SHEET.

THE ½ INCH NEOPRENE SHEETS ARE TO BE 50, 60, OR 70 DUROMETER HARDNESS AND SHALL BE 1 INCH GREATER IN LENGTH AND WIDTH THAN THE BOTTOM SURFACE OF THE MASONRY PLATES OR STEEL BEARINGS.

AS SOON AS THE SURFACING PROCESS IS DONE, THE SURFACES FINISHED WITH AN ANSI 125 FINISH SHALL BE SHOP COATED WITH AN APPLICATION OF WATERPROOF NATIONAL LUBRICATING GREASE INSTITUTE NO. 3 MULTIPURPOSE GREASE. JUST BEFORE THE ERECTION OF THE STRUCTURAL STEEL IN THE FIELD, THE SHOP COATED SURFACES ARE TO BE WIPED CLEAN AND A FIELD COAT OF NLGI NO. 3 GREASE IS TO BE APPLIED.

MASONRY PLATES MP1A SHALL BE GALVANIZED AFTER THE 1"ø BARS HAVE BEEN WELDED TO THE MASONRY PLATE.

ALL MASONRY PLATES SHALL BE GALVANIZED. GALVANIZING SHALL BE IN ACCORDANCE WITH ARTICLE 4100.07, OF THE STANDARD SPECIFICATIONS.

SURFACES MARKED "V" SHALL BE FINISHED ANSI 250.

MASONRY PLATES ARE TO BE SET ON A ½ INCH NEOPRENE SHEET.

ALL ROCKER WELDMENTS SHALL BE SHOP PAINTED IN ACCORDANCE WITH ARTICLE 2408.02,Q OF THE STANDARD SPECIFICATIONS.

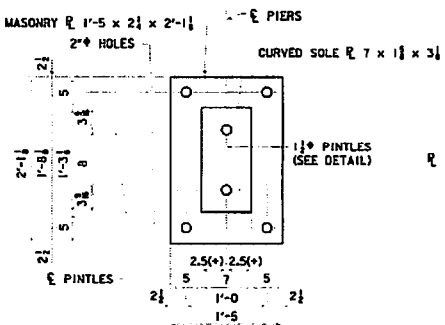
PINTLE PLATES, SOLE PLATES, ANCHOR BOLTS, AND MASONRY PLATES ARE A PART OF THE SUPERSTRUCTURE STRUCTURAL STEEL QUANTITY. COST OF NEOPRENE BEARING PADS AND ½ INCH NEOPRENE SHEETS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "STRUCTURAL STEEL".

THE PINTLE PLATES, KEEPER BARS, AND MASONRY PLATES SHALL BE GALVANIZED. WELDING SHALL BE COMPLETED PRIOR TO GALVANIZING. THE SURFACES OF THE PINTLE PLATE IN CONTACT WITH THE CURVED SOLE PLATE AND THE LAMINATED NEOPRENE PAD SHALL BE FREE OF PROJECTIONS DUE TO GALVANIZING.

CURVED SOLE PLATES SHALL COMPLY WITH ASTM A709 GRADE 50W AND PAINTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

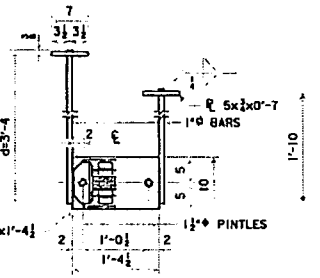
KEEPER BARS, PINTLE PLATES AND MASONRY PLATES SHALL COMPLY WITH ASTM A709 GRADE 50.

ANCHOR BOLTS, NUTS AND WASHERS SHALL MEET THE REQUIREMENTS OF I.M. 453.08.



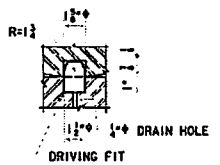
PLAN VIEW OF MASONRY AND SOLE PLATES

FIXED PIER



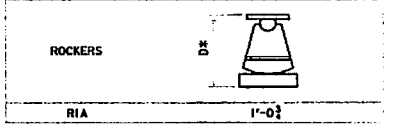
ABUTMENT MASONRY PLATE MP1A

WT. = 110 LBS. (DOES NOT INCLUDE 1"ø BARS)



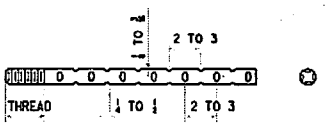
TYPICAL PINTLE DETAIL

DISTANCE FROM TOP OF SOLE PLATE TO BRIDGE SEAT

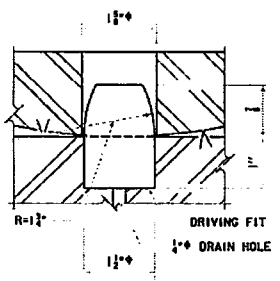


* INCLUDING ½" NEOPRENE SHEET.

INDENTATION SHALL BE FORMED BY DISPLACEMENT OF METAL IN A STAGGERED PATTERN.
NO CUTTING IS ALLOWED TO FORM INDENTATION.



ANCHOR BOLT SWEDGE DETAIL



PINTLE DETAIL

MAXIMUM REACTION (IN KIPS)
RIA
132

DESIGN FOR WIDENING ON VARIABLE SKEW

243'-0 x 39'-0 TO A 243'-0 x VARIES CONTINUOUS ROLLED STEEL BEAM BRIDGE

46'-6, 51'-9, 72'-3, 63'-6 SPANS

BEARING DETAILS

STATION 1275+84.50 ℄ EXIST. I-29 N.B.) OCTOBER 2014

POTTAWATTAMIE COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 37 OF 44 FILE NO. 30169 DESIGN NO. 215

DESIGN TEAM bgm	ABUTMENT BEARING STANDARDS	STD. SHT. (MODIFIED) 1008	POTTAWATTAMIE COUNTY	PROJECT NUMBER IM-NHS-080-1(416)13--03-78	SHEET NUMBER 38A

2/12/2015 11:27:12 AM jlk Z:\Projects\790413 IDOT -I-29 & I-80 CB Interchange System\CADD\dgn\Final\780804l6.brg 780215S037A 11x17_pdf.pltcfg

ENGLISHBEAMS.DGN 1008a - THIS SHEET ISSUED 05-10.

Addendum

Iowa Department of Transportation
Office of Contracts

Date of Letting: February 17, 2015
Date of Addendum: February 13, 2015

B.O.	Proposal ID	Proposal Work Type	County	Project Number	Addendum
306	78-0293-102	GRADING	POTTAWATTAMIE	IM-NHS-029-3(102)48--03-78 IM-NHS-029-3(103)48--03-78 IM-NHS-029-3(104)48--03-78 IM-029-3(105)48--13-78 NHS-029-3(106)48--11-78 IM-NHS-029-3(110)48--03-78 IM-NHS-029-3(122)48--03-78 IM-NHS-029-3(146)48--03-78 IM-NHS-080-1(416)3--03-78	17FEB306.A11

Make the following changes to plan sheet 3 for NHS-029-3(106)48--11-78

On Sheet 3, for Item No. 22, 2433-0003000 DEMONSTRATION SHAFT, add the following note to the Estimate Reference Information:

"DEMONSTRATION SHAFT SHALL BE 6'-6" DIAMETER."

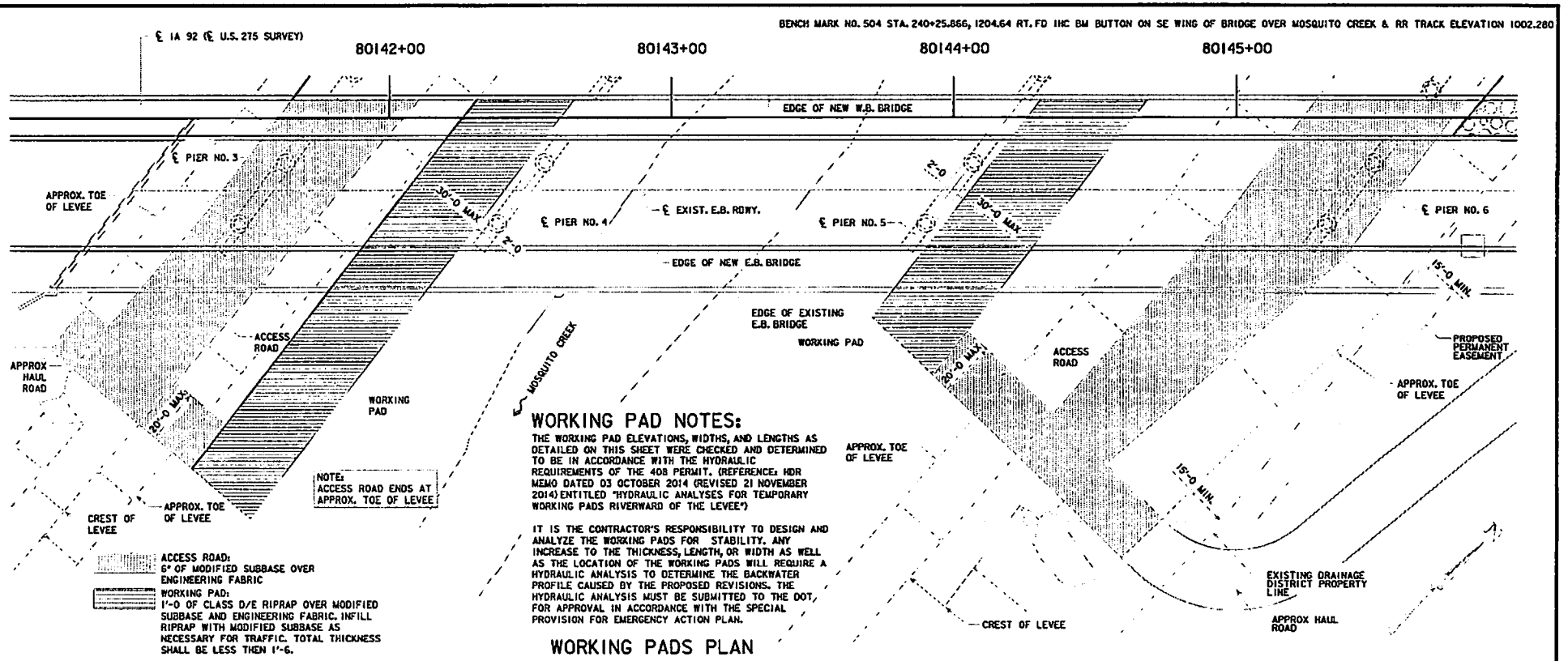
On Sheet 3, for Item No. 22, 2433-0003000 DEMONSTRATION SHAFT, replace the phrase "TEST SHAFT" with "DEMONSTRATION SHAFT".

On Sheet 3, for Item No. 32, 2599-9999010 CONTRACTOR WORKING PADS, add the following notes to the Estimate Reference Information:

"INCLUDES ALL LABOR AND MATERIAL COSTS ASSOCIATED WITH THE REMOVAL OF CONTRACTOR ACCESS ROADS AND CONTRACTOR WORKING PADS AND RESTORATION OF THOSE AREAS DISTURBED BY THIS TEMPORARY CONSTRUCTION."

"INCLUDES ALL COSTS ASSOCIATED WITH SPECIAL PROVISIONS FOR EXCAVATION FOR STRUCTURES IN LEVEE CRITICAL AREA."

Replace Sheet 97 with attached Sheet 97.
Revised Working Pad Notes to reference the hydraulic analyses.

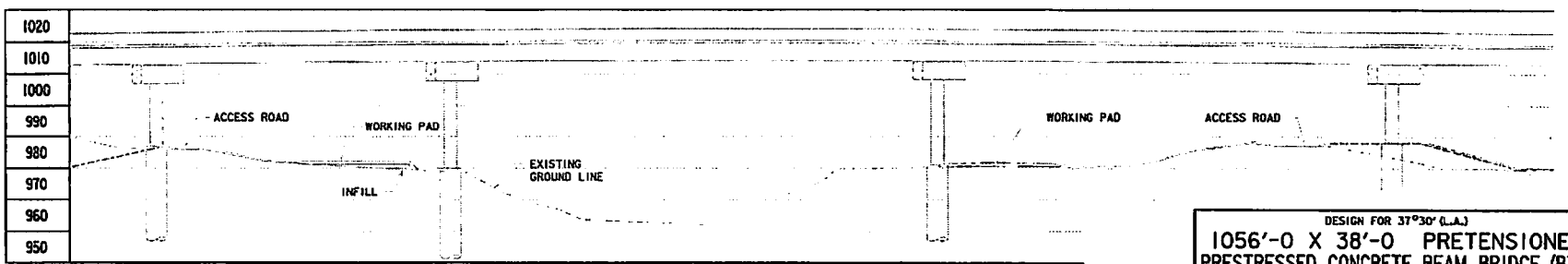


WORKING PAD NOTES:

THE WORKING PAD ELEVATIONS, WIDTHS, AND LENGTHS AS DETAILED ON THIS SHEET WERE CHECKED AND DETERMINED TO BE IN ACCORDANCE WITH THE HYDRAULIC REQUIREMENTS OF THE 408 PERMIT. (REFERENCE: HDR MEMO DATED 03 OCTOBER 2014 (REVISED 21 NOVEMBER 2014) ENTITLED "HYDRAULIC ANALYSES FOR TEMPORARY WORKING PADS RIVERWARD OF THE LEVEE")

IT IS THE CONTRACTOR'S RESPONSIBILITY TO DESIGN AND ANALYZE THE WORKING PADS FOR STABILITY. ANY INCREASE TO THE THICKNESS, LENGTH, OR WIDTH AS WELL AS THE LOCATION OF THE WORKING PADS WILL REQUIRE A HYDRAULIC ANALYSIS TO DETERMINE THE BACKWATER PROFILE CAUSED BY THE PROPOSED REVISIONS. THE HYDRAULIC ANALYSIS MUST BE SUBMITTED TO THE DOT, FOR APPROVAL IN ACCORDANCE WITH THE SPECIAL PROVISION FOR EMERGENCY ACTION PLAN.

WORKING PADS PLAN



LONGITUDINAL SECTION ALONG ℄ NEW E.B. APPROACH ROADWAY

(SHOWING WORKING PADS)
(LOOKING UPSTREAM)

DESIGN FOR 37°30' (L.A.)

1056'-0 X 38'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE (BTE)

86'-0, 137'-0, 132'-0, 92'-0, 152'-0, 142'-0, 117'-0, 122'-0, 76'-0 SPANS

CONTRACTOR WORKING PADS

STA. 80143+29.75, 24.0' RT. (℄ IA. 92 / ℄ US 275 SURVEY) OCTOBER, 2014

POTTAWATTAMIE COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 96 OF 96 FILE NO. 30169 DESIGN NO. 214

DESIGN TEAM KBK / PES / GJK	POTTAWATTAMIE COUNTY	PROJECT NUMBER NHS-029-3(106)48--11-78	SHEET NUMBER 97

2/13/2015 8:54:18 AM teilio2 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\7802901004\BRFinal\Sec03\78029106.brg 7802145096 11x17_pdf.pltcfg

A d d e n d u m

Iowa Department of Transportation
Office of Contracts

Date of Letting: February 17, 2015
Date of Addendum: February 16, 2015

B.O.	Proposal ID	Proposal Work Type	County	Project Number	Addendum
306	78-0293-102	GRADING	POTTAWATTAMIE	IM-NHS-029-3(102)48--03-78 IM-NHS-029-3(103)48--03-78 IM-NHS-029-3(104)48--03-78 IM-029-3(105)48--13-78 NHS-029-3(106)48--11-78 IM-NHS-029-3(110)48--03-78 IM-NHS-029-3(122)48--03-78 IM-NHS-029-3(146)48--03-78 IM-NHS-080-1(416)3--03-78	17FEB306.A12

Replace Sheet J.2 with attached Sheet J.2.

New Sheet J.2 addresses the following on Tab 108-26A:

Under Stage 1B, Construction, remove note:
Install Tower lighting on East side of I-29 and between NB and SB I-29 as shown in the lighting plan, IM-NHS-029-3(110)48--03-78.

Under Stage 4B, Construction, remove note:
Install Tower lighting on the South side of I-29

STAGING NOTES

The construction limits for this project include the Mosquito Creek Levees. It is required that construction impacting the levees and Mosquito Creek will be staged to maintain protection against flooding.

Removal of the existing I-29 embankment of the Temporary North Ring Levee must be coordinated with the IM-NHS-29-3(97)48--03-78 Contractor so that the line of protection provided by the Temporary North Ring Levee is maintained at all times. Provide a minimum of 10 weeks notice to the Resident Construction Engineer prior to removal of the embankment.

The proposed piggy back levees will need to be completed prior to any grading or bridge construction within the existing Mosquito Creek and levee section. The Grading Contractor will promptly notify the Engineer 1 week prior to construction of the piggy back levees and once the piggy back levees are complete. The Department will secure approval from the City for approval of the piggy back levees. (Allow up to 2 weeks for approval)

Work in Levee Area Staging Notes:

- Piggy Back Levees at pier 3 and pier 6 of the IA 92 Bridge shall not be constructed until bridge removal is complete. And drilled shaft construction at Pier 3 and Pier 6 shall not commence prior to completion of the piggy back levees at Pier 3 and Pier 6.
- Restore levees, install piggy back levees and obtain approval of completed piggy back levees construction from City as required before bridge construction.
- Stage excavation of roadway embankment, abutment removal, and levee restoration to maintain a continuous line of protection against flooding. The abutment removal and levee restoration including fill on the wet side of levee will need to be completed prior to removal of the roadway embankment.
- Levee crossing will be allowed only at designated locations as shown in U sheets.

The construction limits for this project overlap with grading and track construction for the Railroad Construction Project (IMN-80-1(366)4-0E-78). Grading and hauling operations for the Railroad Construction will be primarily limited to night operations. The contractor for this project will need to coordinate with the contractor for the Railroad Construction to:

- accommodate haul route access under the US 275 bridges starting in Stage 2A after removal of the US 275 EB bridge over Mosquito Creek and associated embankment
- remove I-29 roadway embankment and make site under I-29 bridges available for track grading and construction starting in Stage 4A

Stage 1A
Traffic
Maintain traffic on existing I-29 and interchange at North end Shift I-29 traffic on to new detour pavement
Maintain one lane in each direction on US 275/ IA 92 EB lanes
Construction
Pave US 275/IA 92 WB from Harry Langdon Blvd. to E. of Metro Dr. (Gap Ramp C terminal)
Continue construction of IA 92 bridge over Mosquito Creek and Railroad
Continue construction of US 275/IA 92 bridge over I-29
Continue construction of I-29 NB and SB bridges over Mosquito Creek
Build interim I-29 NB and interim Ramp C pavement from Sta. 88612+12.5 to 88626+41.1
Replace inside shoulders on I-29 SB from the split of I-80 EB/I-29 SB to entrance ramp of I-80 to I-29 SB
Replace outside shoulder on I-29 NB from STA. 6662+68.4 to 6686+13.0
Pave I-29 NB from Sta. 6653+16 to 6673+00 and I-29 SB from Sta. 6654+63 to 6660+00 as shown on J sheets.
Grade Portion of US275 Loop B not affecting traffic.
Grade foreslopes of I-29 on South end of project.
Stage 1B
Traffic
Maintain traffic on existing I-29
Maintain one lane in each direction on US 275/ IA 92 EB lanes
Close Denmark Dr.
Close Ramp C
Close Ramp A
Construction
Grade and pave Ramp C terminal
Grade I-29 interim from Sta. 88621+20 to 88627+50 (IMLE029N) and proposed I-29 NB from Sta. 6627+50.0 to 6629+66.0
Grade and Pave detour on Existing I-29 NB from Sta. 6660+81.2 to 6685+65.74 and permanent pavement from Sta. 6682+03.4 to 6687+50.8 use shoulder closure and lane closure TC-402 and TC-418.
Grade and Pave US 275/ IA 92 WB from Sta. 80119+52.22 to 80126+85.23 and Denmark Dr.
Stage 2A
Traffic
Maintain traffic on existing I-29
Move US 275/ IA 92 traffic on to new WB lanes and continue one lane in each direction
Open new Ramp C to traffic to EB I-80
Ramp A remains closed
Construction
Grade and Pave US 275 Ramp A terminal
Remove Existing US 275/ IA 92 EB Mosquito Creek bridge.
Build new US 275/IA 92 EB Mosquito Creek bridge.
Grade and pave I-29 NB from 6672+15 to 6687+50
Resurface connection from WB US 275/IA 92 to Ramp B and D Terminal
Stage 2B
Traffic
Maintain traffic on I-29 existing
Open up new I-29 NB lane and Ramp A to Ramp A traffic
Maintain one lane in each direction on new US 275/ IA 92 WB lanes
Maintain traffic on new Ramp C to EB I-80 only
Construction
Build new US 275/ IA 92 EB bridge over Mosquito Cr
Grade and pave US 275/ IA 92 EB
Grade and pave I-29 SB detour 351880(Sta 351880+91 to 351888+50), 351900 and on existing inside I-29 SB shoulder area from Sta. 6666+33.8 to 6685+08.0
Grade and pave I29 NB from 6627+58 to 6640+44
Grade and pave Interim I-29 NB from Sta. 88609+98.5 to 88627+50.0
Pave new shoulders along I-29 SB insde and outside as shown on J sheets
Stage 2C
Traffic
Maintain traffic on I-29 existing

188-26A
08-01-08

STAGING NOTES

Maintain Ramp A traffic per Stage 2D
Maintain one lane in each direction on new US 275/ IA 92 WB lanes
Maintain traffic on new Ramp C to EB I-80 only
Construction
Continue construction on US 275 EB bridge over Mosquito Cr.
Continue G&P US 275 EB
Grade and Pave remaining detour 351800 and overlay in same area using nighttime lane closures
Stage 3A
Traffic
Move traffic I-29 NB on to new I-29 NB
Maintain one lane in each direction on new US 275/ IA 92 WB lanes
Maintain traffic on new Ramp A and C
Construction
Remove existing I-29 NB bridge over mosquito creek (by others)
Construct remaining I-29 SB bridge over Mosquito Cr. (by others) Excluding the Ramp D connection
Remove existing US 275/IA 92 bridge over I-29
Construct new US 275 EB bridge over I-29
Continue Grade and pave of US 275/ IA 92 EB
Grade and Pave I-29 SB from station 6627+50 to 6687+50
Grade and Pave detour 352380
Grade and Pave I-29 Interim SB and DET_353000 and Crossover at Sta. 6700+05 as shown on J.81b-J.81e
Stage 3B
Traffic
Maintain traffic on new I-29 NB
Maintain traffic on existing I-29 SB
IA 92/ US 275 remains on new WB lanes
Maintain traffic on new Ramp A and C
Close I-80 WB/ I-29 SB Ramp to IA 92 Loop B Movement
Construction
Grade and Pave Interim SB I-29 from 99601+49 to 99612+17 as shown on the J sheets
Grade and Pave I-29 SB from station 6667+58 to 6687+50 as shown on the J sheets
Continue Construction on SB I-29 bridge
Stage 3C
Traffic
Move I-29 SB traffic onto New I-29 NB with I-29 NB traffic maintaining 2 lanes of traffic in each direction except in area shown on J.81d and J.81e.
For NB I-29 Lane closure on Sheet J.81e use TC-421.
Construction
Remove existing I-29 SB bridge
Construct I-29 median crossover as shown on Sheets J.81f and J.81g and I-29 SB pavement from Sta. 6681+65 to 6686+65
Stage 3D
Traffic
Maintain I-29 NB and SB traffic on I-29 NB new lanes per Stage 3C except maintain 2 lanes throughout utilizing 2 lane crossover at Sta. 6681+65 See J.81f and J.81g
Stage 4A
Traffic
Maintain traffic on new I-29 NB
Move I-29 SB traffic to new SB lanes
Maintain traffic on New NB IA 92/ US 275
Maintain closure of I-80 WB/ I-29 SB Ramp to IA 92 Loop B Moveeent
Maintain Traffic on Loop B as shown in J sheets
Maintain bike trail under I-29
Close Ramp D
Construction
Remove existing I-29 SB bridge over Mosquito Cr.
Grade and Pave portion of bike trail under I-29 not impacting trail traffic
Build I-29 SB Ramp D Stub bridge
Grade and Pave Ramp B from station 82533+25 to 82548+27 as shown on J sheets
Grade and Pave Ramp D from station 84534+74 to 84544+29 as shown on J sheets
Grade and pave remaining SB I-29 on South End as shown in the J sheets
Stage 4B
Traffic
Maintain traffic on new I-29 NB
Maintain I-29 SB traffic in new SB lanes
Maintain traffic on New NB IA 92/ US 275 Lanes until Gap at Raops B/D reconstructed then switch to final 4 lane configuration
Close bike trail under I-29 (Maximum closure period is 2 weeks)
Close Ramp B
Maintain Ramp D Closure
Construction
Continue construction of I-29 SB Ramp D Stub bridge
Grade and Pave bike trail under I-29
Grade and Pave remaining portions of Ramps B and D
Grade and Pave remaining IA 92/ US 275 through Ramp B/D terminal
Construct permanent Bike Trail connections and raised median on I-92/ US275

Stage 5
Traffic
Open all traffic to I-29 and US 275/IA 92
Open Ramps B and D
Construction
Complete removals and grading not affecting traffic
Following completion of removal of existing track (by others), construct new bike path under IA 92 bridge over Mosquito Creek and install scour mitigation per Sheet U.76.

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;
(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

T h i s p r o v i s i o n i s applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

T h i s p r o v i s i o n i s applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. **Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

General Decision Number: IA140001 05/16/2014 IA1

Superseded General Decision Number: IA130001

State: Iowa

Construction Types: Heavy and Highway

Counties: Adair, Adams, Allamakee, Appanoose, Audubon, Benton, Black Hawk, Boone, Bremer, Buchanan, Buena Vista, Butler, Calhoun, Carroll, Cass, Cedar, Cerro Gordo, Cherokee, Chickasaw, Clarke, Clay, Clayton, Clinton, Crawford, Dallas, Davis, Decatur, Delaware, Des Moines, Dickinson, Dubuque, Emmet, Fayette, Floyd, Franklin, Fremont, Greene, Grundy, Guthrie, Hamilton, Hancock, Hardin, Harrison, Henry, Howard, Humboldt, Ida, Iowa, Jackson, Jasper, Jefferson, Johnson, Jones, Keokuk, Kossuth, Lee, Linn, Louisa, Lucas, Lyon, Madison, Mahaska, Marion, Marshall, Mills, Mitchell, Monona, Monroe, Montgomery, Muscatine, O'Brien, Osceola, Page, Palo Alto, Plymouth, Pocahontas, Polk, Pottawattamie, Poweshiek, Ringgold, Sac, Shelby, Sioux, Story, Tama, Taylor, Union, Van Buren, Wapello, Warren, Washington, Wayne, Webster, Winnebago, Winneshiek, Woodbury, Worth and Wright Counties in Iowa.

STATEWIDE EXCEPT SCOTT COUNTY HEAVY CONSTRUCTION PROJECTS
(Does not include work on or pertaining to the Mississippi or Missouri Rivers or on Water and Sewage Treatment Plants), AND HIGHWAY PROJECTS (does not include building structures in rest areas)

Modification Number	Publication Date
0	01/03/2014
1	05/16/2014

SUIA2002-003 02/28/2012

CARPENTERS AND PILEDRIVERMEN:	Rates	Fringes
ZONE 1	24.92	9.93
ZONE 2	22.83	9.93
ZONE 3	22.83	9.93
ZONE 4	22.15	8.25
ZONE 5**	21.25	6.85
CONCRETE FINISHER:		
ZONE 1	22.70	7.00
ZONE 2	22.70	7.00
ZONE 3	22.70	7.00
ZONE 4	20.50	5.45
ZONE 5	18.90	6.00

ELECTRICIANS: (STREET AND HIGHWAY LIGHTING AND TRAFFIC SIGNALS)		
ZONE 1, ZONE 2, AND ZONE 3	21.30	5.70
ZONE 4	20.00	5.70
ZONE 5	17.75	5.70
IRONWORKERS: (SETTING OF STRUCTURAL STEEL)		
ZONE 1	26.55	7.45
ZONE 2	25.31	7.45
ZONE 3	25.01	7.75
ZONE 4	22.00	6.60
ZONE 5**	21.25	6.10
LABORERS:	Rates	Fringes
ZONE 1, 2, AND 3		
GROUP AA	22.21	7.95
GROUP A	20.56	7.95
GROUP B	18.68	7.95
GROUP C	15.45	7.95
ZONE 4		
GROUP A	18.05	7.65
GROUP B	16.73	7.65
GROUP C	13.85	7.65
ZONE 5		
GROUP A	18.50	6.00
GROUP B	15.75	6.00
GROUP C	15.15	6.00
POWER EQUIPMENT OPERATORS:		
ZONE 1		
GROUP A	27.80	12.90
GROUP B	26.25	12.90
GROUP C	23.75	12.90
GROUP D	23.75	12.90
ZONE 2		
GROUP A	27.10	12.90
GROUP B	25.50	12.90
GROUP C	22.95	12.90
GROUP D	22.95	12.90
ZONE 3		
GROUP A	26.70	16.80
GROUP B	24.90	16.80
GROUP C	23.90	16.80
GROUP D	23.90	16.80

ZONE 4		
GROUP A	26.75	8.55
GROUP B	25.61	8.55
GROUP C	23.53	8.55
GROUP D	23.53	8.55
ZONE 5		
GROUP A	23.07	6.80
GROUP B	22.03	6.80
GROUP C	20.70	6.80
GROUP D	19.70	6.80

TRUCK DRIVER (AND PAVEMENT MARKING DRIVER/SWITCHPERSON)

ZONE 1	20.00	10.05
ZONE 2	20.00	10.05
ZONE 3	20.00	10.05
ZONE 4	20.20	5.65
ZONE 5	18.25	5.65

ZONE DEFINITIONS

ZONE 1 The Counties of Polk, Warren and Dallas for all Crafts, and Linn County Carpenters only.

ZONE 2 The Counties of Dubuque for all Crafts and Linn County for all Crafts except Carpenters.

ZONE 3 The Cities of Burlington, Clinton, Fort Madison, Keokuk, and Muscatine (and abutting municipalities of any such cities).

ZONE 4 Story, Black Hawk, Cedar, Jasper, Jones, Jackson, Louisa, Madison, and Marion Counties; Clinton County (except the City of Clinton), Johnson County, Muscatine County (except the City of Muscatine), the City of Council Bluffs, Lee County and Des Moines County.

ZONE 5 All areas of the state not listed above.

LABORER CLASSIFICATIONS - ALL ZONES

GROUP AA – Asbestos abatement worker (Zones 1, 2, and 3); Skilled pipelayer (sewer, water and conduits) and tunnel laborers (zones 1, 2 and 3).

GROUP A – Asbestos abatement worker (Zones 4 and 5); Carpenter tender on bridges and box culverts; curb machine (without a seat); deck hand; diamond & core drills; drill operator on air tracs, wagon drills and similar drills; form setter/stringman on paving work; gunnite nozzleman; joint sealer kettleman; laser operator; pipelayer (sewer, water, and conduits) Zone 4 & 5; powderman tender; powderman/blaster; saw operator; tunnel laborer (zones 4 and 5).

GROUP B - Air, gas, electric tool operator; barco hammer; carpenter tender; caulker; chain sawman; compressor (under 400 cfm); concrete finisher tender; concrete processing materials and monitors; cutting torch on demolition; drill tender; dumpmen; electric drills; fence erectors; form line expansion joint assembler; form tamper; general laborer; grade checker; handling and placing metal mesh, dowel bars, reinforcing bars and chairs; hot asphalt laborer; installing temporary traffic control devices; jackhammerman; mechanical grouter; painter (all except stripers); paving breaker; planting trees, shrubs and flowers; power broom (not self-propelled); power buggyman; rakers; rodman (tying reinforcing steel); sandblaster; seeding and mulching; sewer utility topman/bottom man; spaders; stressor or stretcherman on pre or post tensioned concrete; stringman on re/surfacing/no grade control; swinging stage, tagline, or block and tackle; tampers; timberman; tool room men and checkers; tree climber; tree groundman; underpinning and shoring caissons over twelve feet deep; vibrators; walk behind trencher; walk behind paint stripers; walk behind vibrating compactor; water pumps (under three inch); work from bosun chair.

GROUP C - Scale weigh person; traffic control/flagger, surveillance or monitor; water carrier.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS - ALL ZONES

GROUP A - All terrain (off road) forklift, Asphalt breakdown roller (vibratory); Asphalt laydown machine; asphalt plant; Asphalt screed; bulldozer (finish); central mix plant; concrete pump; crane; crawler tractor pulling scraper; directional drill (60,000 (lbs) pullback and above); dragline and power shovel; dredge engineer; excavator (over ½ cu. yd.); front end loader (4 cy and over); horizontal boring machine; master mechanic; milling machine (over 350 hp); motor grader (finish); push cat; rubber tired backhoe (over ½ cu. yd.); scraper (12 cu. yd. and over or finish); Self-propelled rotary mixer/road reclaimer; sidebroom tractor; slipform portland concrete paver; tow or push boat; trenching machine (Cleveland 80 or similar).

GROUP B - Articulated off road hauler, asphalt heater/planer; asphalt material transfer vehicle; Asphalt roller; belt loader or similar loader; bulldozer (rough); churn or rotary drill; concrete curb machine; crawler tractor pulling ripper, disk or roller; deck hand/oiler; directional drill (less than 60,000 (lbs) pullback); distributor; excavator (1/2 cu. yd. and under); form riding concrete paver; front end loader (2 to less than 4 cu. yd.); group equipment greaser; mechanic; milling machine (350 hp. and less); paving breaker; portland concrete dry batch plant; rubber tired backhoe (1/2 cu. yd. and under); scraper (under 12 cu. yd.); screening, washing and crushing plant (mobile, portable or stationary); shoulder machine; skid loader (1 cu. yd. and over); subgrader or trimmer; trenching machine; water wagon on compaction.

GROUP C - Boom & winch truck; concrete spreader/belt placer; deep wells for dewatering; farm type tractor (over 75 hp.) pulling disc or roller; forklift; front end loader (under 2 cu. yd.); motor grader (rough); pile hammer power unit; pump (greater than three inch diameter); pumps on well points; safety boat; self-propelled roller (other than asphalt); self-propelled sand blaster or shot blaster, water blaster or striping grinder/remover; skid loader (under 1 cu. yd.); truck mounted post driver.

GROUP D - Boiler; compressor; cure and texture machine; dow box; farm type or utility tractor (under 75 hp.) pulling disk, roller or other attachments; group greaser tender; light plants; mechanic tender; mechanical broom; mechanical heaters; oiler; pumps (under three inch diameter); tree chipping machine; truck crane driver/oiler.

****CARPENTERS AND PILEDRIVERMEN, or IRONWORKERS (ZONE 5)**

Setting of structural steel; any welding incidental to bridge or culvert construction; setting concrete beams.

WELDERS: Receive rate prescribed for craft performing operation to which welding is incidental.

*****LABORERS**

ASBESTOS ABATEMENT WORKERS: Removes asbestos from ceilings, walls, beams, boilers, and other structures, following hazardous waste handling guidelines: Assembles scaffolding and seals off work area, using plastic sheeting and duct tape. Positions mobile decontamination unit or portable showers at entrance of work area. Builds connecting walkway between mobile unit or portable showers and work area, using handtools, lumber, nails, plastic sheeting, and duct tape. Positions portable air evacuation and filtration system inside work area. Sprays chemical solution over asbestos covered surfaces, using tank with attached hose and nozzle, to soften asbestos. Cuts and scrapes asbestos from surfaces, using knife and scraper. Shovels asbestos into plastic disposal bags and seals bags, using duct tape. Cleans work area of loose asbestos, using vacuum, broom, and dust pan. Places asbestos in disposal bags and seals bags, using duct tape. Dismantles scaffolding and temporary walkway, using handtools, and places plastic sheeting and disposal bags into transport bags. Seals bags, using duct tape, and loads bags into truck.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5 (a) (1) (ii)).

In the listing above, the "SU" designation means that rates listed under that identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters, PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council

number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rates.

0000/9999: weighted union wage rates will be published annually each January.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 05-13-2010. SU indicates the rates are bot union majority rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later, 05/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION