
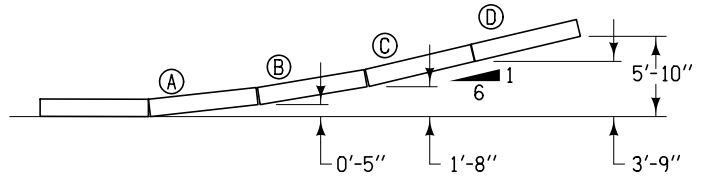
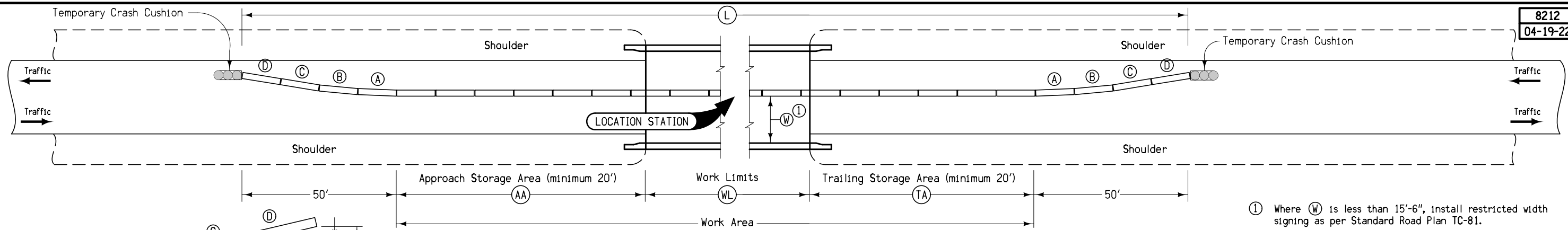


INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	Title Sheets
A.1	Title Sheet
B Sheets	Typical Cross Sections and Details
B.1 - 2	Typical Cross Sections and Details
C Sheets	Quantities and General Information
C.1 - 2	Estimated Project Quantities
C.1 - 2	Estimate Reference Information
C.3	Standard Road Plans
C.3	Index of Tabulations
C.3	General Notes
C.3 - 7	Tabulations
D Sheets	Mainline Plan and Profile Sheets
* D.1	Plan & Profile Legend & Symbol Information Sheet
J Sheets	Traffic Control and Staging Sheets
J.1	Traffic Control Plan
	* Color Plan Sheets

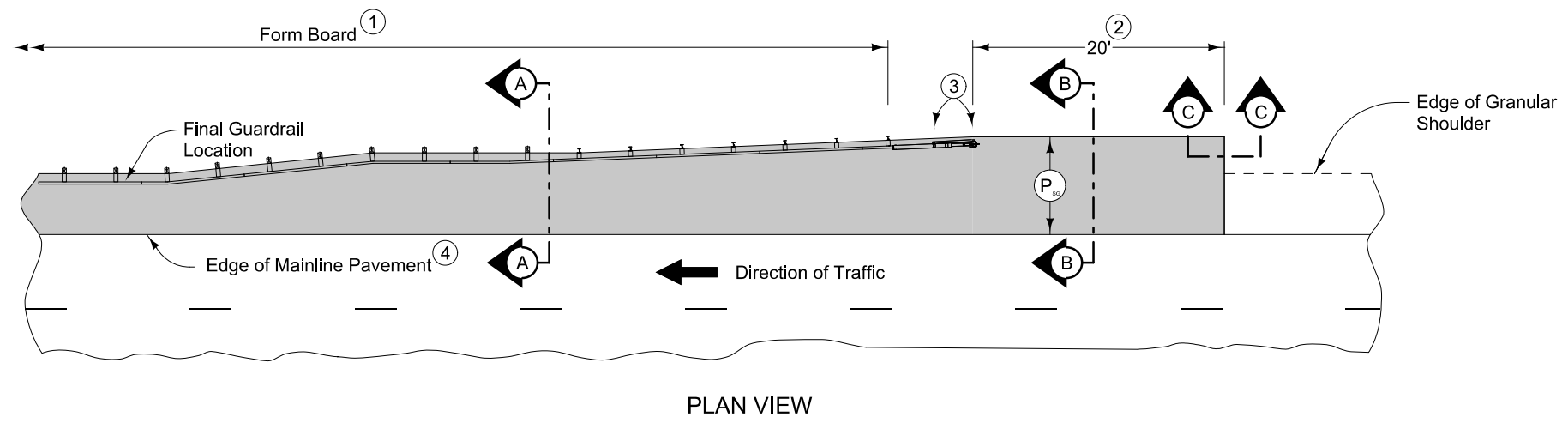
ROADWAY DESIGN	
	<p>I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.</p>
	<p>Signature: <u><i>Dung T. Ta</i></u> Date: <u>9/26/2022</u></p> <p>Printed or Typed Name: _____</p> <p>My license renewal date is December 31, 2023</p>
<p>Pages or sheets covered by this seal: <u>A.1; B.1-2; C.1-7; D.1; and J.1</u></p>	



BARRIER OFFSETS FOR FLARE SECTIONS

Station	Side	AA	WL	TA	L	Anchored	W ^①	Remarks
		Feet	Feet	Feet	Feet	X	Ft-Inches	
160+40.00	Lt.	50	437.5	50	637.5	X	13-4.5	Stage 1
160+40.00	Rt.	50	437.5	50	637.5	X	13-4.5	Stage 2

**TEMPORARY CONCRETE BARRIER LAYOUT
for Two-Way Traffic**



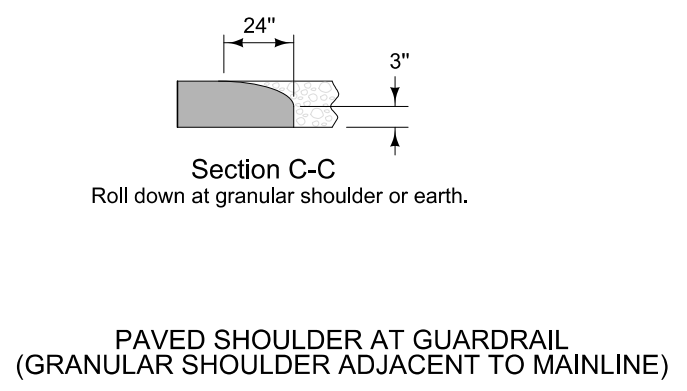
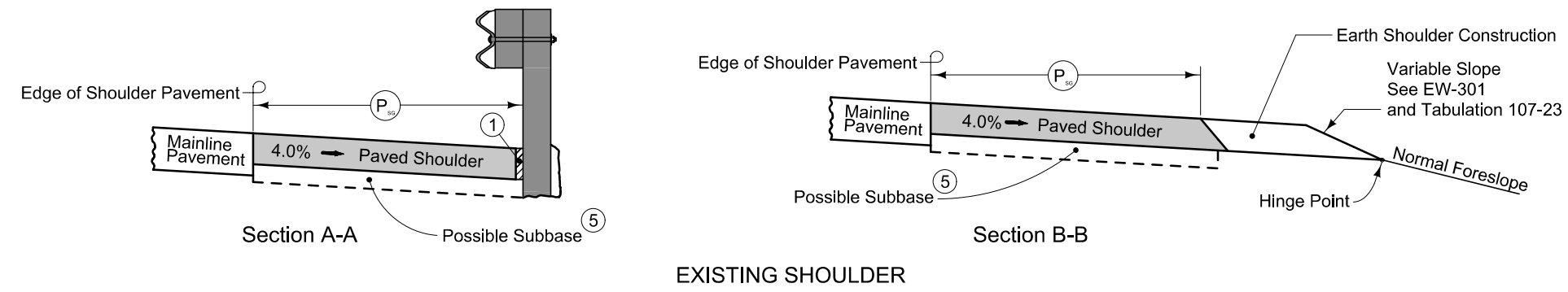
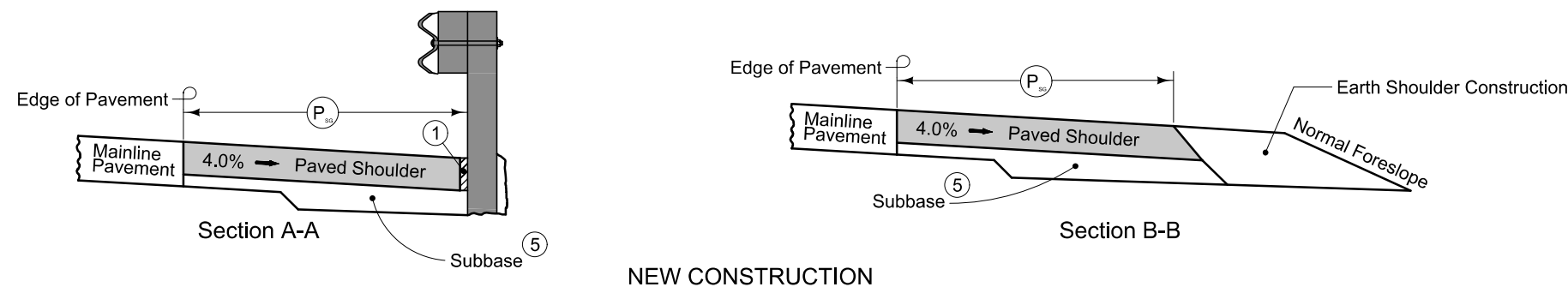
9" HMA Paved Shoulder at guardrail. 8" PCC may be substituted with the following jointing layout:

Match mainline pavement joint spacing. When mainline pavement is 8" or greater in thickness, place additional transverse 'C' joints in shoulder at mid-panel of the mainline pavement. Place longitudinal 'C' joint at P/2 from edge of mainline pavement when P is greater than 10' wide. Terminate longitudinal joint at transverse joint less than 10' in length.

Compaction of HMA is required to face of guardrail post. Hand compaction will be allowed under guardrail. Removal and reinstallation of guardrail will be allowed with no additional payment.

Refer to Tabulation 112-9 for shoulder quantities.

- ① PCC option only: When guardrail posts are installed prior to construction of PCC paved shoulder, fasten form board to the face of guardrail posts for the length shown.
- ② Continue paved shoulder 20 feet beyond the center of the first post.
- ③ Shoulder may be notched for first 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.
- ④ 'KT' joint (per PV-101) for PCC shoulder. 'B' joint (per PV-101) for HMA shoulder.
- ⑤ Refer to other details in the plan.



ESTIMATED PROJECT QUANTITIES AND REFERENCE NOTES

Roadway Items : Roadway Items

Item no.	Item Code	Item	Unit	Quantities		Estimate Reference Notes
				Estimated		
				Roadway Items		
1	2102-0425070	SPECIAL BACKFILL	TON	98.305		Refer to Tab. 112-9 in the C Sheets for details.
2	2102-2625000	EMBANKMENT-IN-PLACE	CY	229.5		Refer to Tabulation 107-23 in the C Sheets for details. Material shall be provided by the Contractor. Provide borrow material according to Section 2102 of the Standard Specifications.
3	2102-2713090	EXCAVATION, CLASS 13, WASTE	CY	86.6		Refer to Tab. 112-9 in the C Sheets for details.
4	2123-7450000	SHOULDER CONSTRUCTION, EARTH	STA	3.4		Refer to Tab. 112-9 in the C Sheets for details. Requires a minimum of 4 inches of topsoil. Place according to Article 2105.03,B of the Standard Specifications.
5	2301-0690203	BRIDGE APPROACH, BR-203	SY	559		Refer to D Sheets and Tab. 112-6 in the C Sheets for details.
6	2304-0100000	DETOUR PAVEMENT	SY	267.5		Refer to Typical 7156 on Sheet B.1 and Tab. 112-9 in the C Sheets for details.
7	2505-4008120	REMOVAL OF STEEL BEAM GUARDRAIL	LF	320.5		Refer to Tab. 110-7A in the C Sheets for details.
8	2505-4008300	STEEL BEAM GUARDRAIL	LF	175		Refer to Tab. 108-8A in the C Sheets for details.
9	2505-4008410	STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION, BA-201	EACH	4		
10	2505-4021010	STEEL BEAM GUARDRAIL END ANCHOR, BOLTED	EACH	4		
11	2505-4021720	STEEL BEAM GUARDRAIL TANGENT END TERMINAL, BA-205	EACH	4		
12	2510-6745850	REMOVAL OF PAVEMENT	SY	676.8		Refer to Tab. 110-1 in the C Sheets for details.
13	2527-9263109	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	STA	47.23		Refer to Tab. 108-22 in the C Sheets for details.
14	2527-9263131	WET RETROREFLECTIVE REMOVABLE TAPE MARKINGS	STA	3.3		
15	2527-9263180	PAVEMENT MARKINGS REMOVED	STA	47.23		
16	2528-8400048	TEMPORARY BARRIER RAIL, CONCRETE	LF	1,275		Refer to Detail 8212 on Sheet B.1, Bridge Sheets, and Tab. 108-33 in the C Sheets for details.
17	2528-8400256	TEMPORARY TRAFFIC SIGNALS	EACH	1		Refer to Tab. 108-28 in the C Sheets for details.
18	2528-8445113	FLAGGERS	EACH	0		See Proposal.
19	2551-0000110	TEMP CRASH CUSHION	EACH	4		Refer to Tab. 108-30 in the C Sheets for details.

Item no.	Item Code	Item	Unit	Quantities		Estimate Reference Notes
				Estimated	Roadway Items	
20	2602-0000020	SILT FENCE	LF	750		Refer to Tab. 100-17. The tabulation includes estimated locations for placement of "Silt Fence" to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 25% additional quantity for field adjustments and replacements.
21	2602-0000071	REMOVAL OF SILT FENCE OR SILT FENCE FOR DITCH CHECKS	LF	750		This item is included for silt fence and silt fence for ditch check removal required for staging reasons, removal to allow for replacement (replacement to be paid separately), or for areas that have achieved 70% permanent growth. This item is included for silt fence and silt fence for ditch check removal. Remove silt fence and posts after mulching or vegetation is established and approved by the engineer.
22	2602-0000101	MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK	LF	75		This item is included for clean-out and repair of the silt fence and silt fence for ditch checks during the project.
23	2602-0000320	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 20 IN. DIA.	LF	1,680		Refer to Tab. 100-19. The tabulation includes estimated locations for placement of "Perimeter and Slope Sediment Control Device, 20 in. dia." to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to beginning placement.
24	2602-0000351	REMOVAL OF PERIMETER AND SLOPE OR DITCH CHECK SEDIMENT CONTROL DEVICE	LF	1,680		

PERIMETER, SLOPE AND DITCH CHECK SEDIMENT CONTROL DEVICES

100-19
10-19-21

Possible Standards: EC-204

Location			Perimeter and Slope Length of Installation			Ditch Check Length of Installation		Remarks
Begin Station	End Station	Side	9 inch Dia	12 inch Dia	20 inch Dia	12 inch Dia	20 inch Dia	
			LF	LF	LF	LF	LF	
156+65.00	158+95.00	Rt			230.0			Bottom of Foreslope
156+65.00	158+95.00	Rt			230.0			Midpoint of Foreslope
161+75.00	163+65.00	Rt			190.0			Bottom of Foreslope
161+75.00	163+65.00	Rt			190.0			Midpoint of Foreslope
157+20.00	159+10.00	Lt			190.0			Bottom of Foreslope
157+20.00	159+10.00	Lt			190.0			Midpoint of Foreslope
161+85.00	164+15.00	Lt			230.0			Bottom of Foreslope
161+85.00	164+15.00	Lt			230.0			Midpoint of Foreslope
Total=					1680.0			

**UTILITIES
(NOT A POINT 25 PROJECT)**

262-6
10-18-05

This is NOT a POINT 25 project and is not subject to the provisions of IAC 761-115.25.

INDEX OF TABULATIONS

111-25
10-18-11

Tabulation	Tabulation Title	Sheet No.
C Sheets		
100-0A	ESTIMATED ROADWAY QUANTITIES (1 DIVISION PROJECT)	C.1 - C.2
100-4A	ESTIMATE REFERENCE NOTES	C.1 - C.2
100-17	TABULATION OF SILT FENCES	C.3
100-19	PERIMETER, SLOPE AND DITCH CHECK SEDIMENT CONTROL DEVICES	C.3
102-5	EXISTING PAVEMENT	C.4
105-4	STANDARD ROAD PLANS	C.3
107-23	GRADING FOR GUARDRAIL INSTALLATIONS	C.5
108-8A	STEEL BEAM GUARDRAIL AT CONCRETE BARRIER OR BRIDGE RAIL END SECTION	C.5
108-22	PAVEMENT MARKING LINE TYPES	C.6 - C.7
108-28	TEMPORARY TRAFFIC SIGNALS	C.6
108-30	CRASH CUSHIONS	C.6
108-33	TEMPORARY BARRIER RAIL	C.6
110-1	REMOVAL OF PAVEMENT	C.5
110-7A	REMOVAL OF STEEL BEAM GUARDRAIL	C.5
111-25	INDEX OF TABULATIONS	C.3
112-6	BRIDGE APPROACH SECTION	C.4
112-9	SHOULDERS	C.4

TABULATION OF SILT FENCES

100-17
04-20-10

Refer to EC-201

Location			Length LF	Remarks
Begin Station	End Station	Side		
159+20.00	-	Both	150.0	Under Bridge
159+60.00	-	Both	150.0	Bank of Creek
160+90.00	-	Both	150.0	Bank of Creek
161+40.00	-	Both	150.0	Under Bridge
Total			600.0	
x25%			150.0	
Bid Total			750.0	

**EROSION CONTROL
(RURAL SEEDING)**

232-3A
10-19-21

Area to be seeded is estimated to be less than 1 acre. If the contractor determines the area exceeds 2 acres, notify the Engineer. Approved quantity in excess of 2 acres will be paid for as extra work according to Article 1109.03,B of the Standard Specifications.

Following the completion of work in a disturbed area and according to the seeding dates in Section 2601 of the Standard Specifications, place seed, fertilizer, and mulch on the disturbed area lying 8 feet adjacent to shoulder and median as follows:

Place seed and fertilize according to the requirements of Article 2601.03,C,3 and Section 4169 of the Standard Specifications.

Place mulch according to the requirements of Articles 2601.03,E,2,a and 4169.07,A of the Standard Specifications.

Preparing the seedbed, furnishing and applying seed, fertilizer, and mulch are all incidental to mobilization and will not be paid for separately.

**EROSION CONTROL
(NATIVE GRASS SEEDING)**

232-3C
10-19-21

Area to be seeded is estimated to be less than 1 acre. If the Contractor determines the area exceeds 2 acres, notify the Engineer. Approved quantity in excess of 2 acres will be paid for as extra work according to Article 1109.03,B of the Standard Specifications.

Following the completion of work in a disturbed area and according to the seeding dates in Section 2601 of the Standard Specifications, place seed and mulch on the disturbed area lying 8 feet or more beyond the shoulder as follows:

SEED MIX:
 Big bluestem (Andropogon gerardii) 6 lbs. PLS/Acre (7.0 kg/ha)
 Indiangrass (Sorghastrum nutans) 6 lbs. PLS/Acre (7.0 kg/ha)
 Little bluestem (Schizachyrium scoparium) 6 lbs. PLS/Acre (7.0 kg/ha)
 Partridge Pea (Chamaecrista fasciculata) 4 lbs. PLS/Acre (4.5 kg/ha)
 Sideoats grama (Bouteloua curtipendula) 4 lbs. PLS/Acre (4.5 kg/ha)
 Canada wildrye (Elymus canadensis) 2 lbs. PLS/Acre (2.2 kg/ha)
 Switchgrass (Panicum virgatum) 1 lbs. PLS/Acre (1.1 kg/ha)
 Oats (Avena sativa) 32 lbs./Acre (36.0 kg/ha)

Furnish Big bluestem, Indiangrass, Canada wildrye and Little bluestem that is debarbed or equal to facilitate the application of seed.

Furnish seed certified as Source Identified Class (Yellow Tag) Source G0-Iowa. Oats are excluded from this requirement.

Place seed according to the requirements of Article 4169.02 of the Standard Specifications.

Place mulch according to the requirements of Articles 2601.03,E,2,a and 4169.07,A of the Standard Specifications.

Preparing the seedbed, furnishing and applying seed and mulch are incidental to mobilization and will not be paid for separately.

STANDARD ROAD PLANS

105-4
10-18-11

The following Standard Road Plans apply to construction work on this project.

Number	Date	Title
BA-200	04-20-21	Steel Beam Guardrail Components
BA-201	04-19-22	Steel Beam Guardrail Barrier Transition Section (MASH TL-3)
BA-202	10-20-15	Steel Beam Guardrail Bolted End Anchor
BA-205	10-19-21	Steel Beam Guardrail Tangent End Terminal (MASH TL-3)
BA-250	04-20-21	Steel Beam Guardrail Installation at Concrete Barrier or Bridge End Post (MASH TL-3)
BA-401	04-20-21	Temporary Barrier Rail (Precast Concrete)
BA-500	04-20-21	Temporary Crash Cushions Sand Barrel
BR-203	10-19-21	Double Reinforced 12" Approach
BR-211	10-19-21	Bridge Approach (Abutting PCC or Composite Pavement)
DR-305	04-19-22	Subdrain Outlets (Standard Subdrain, Pressure Release and Special)
EC-201	04-20-21	Silt Fence
EC-204	10-19-21	Perimeter, Slope and Ditch Check Sediment Control Devices
EC-502	04-21-15	Seeding in Rural Areas
EW-301	04-20-21	Guardrail Grading
PM-110	04-21-20	Line Types
PV-101	04-19-22	Joints
SI-173	04-19-16	Object Markers
SI-211	10-18-16	Object Marker and Delineator Placement with Guardrail
SI-882	10-18-16	Special Signs for Restricted Width Traffic Control Zones
TC-1	10-15-19	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-81	10-15-19	Restricted Width Signing (Less Than 14.5 Feet)
TC-202	10-19-21	Work Within 15 ft of Traveled Way
TC-213	10-15-19	Lane Closure with Flaggers
TC-217	10-18-16	Lane Closure with Signals and TBR

EXISTING PAVEMENT

No.	Location					Year	Type	Project Number	Surface		Base		Subbase		Removal		Coarse Aggregate			Reinforcement	Remarks			
	County	Route	Dir. of Travel	Begin Ref. Loc. Sign	End Ref. Loc. Sign				Type	Depth	Type	Depth	Type	Depth	Type	Depth	Type	Depth	Source			Type	Durability Class	Type
1	51	IA-1	1	19.19	22.43	2017 2000 1968	M	MP-001-5(703)0--76-89 STP-1-1(23)--2C-89 F-1-2(1)--20-51*<1>	PCC AAC PCC	15.5 2 9	BAC	2					COLUMBUS JCT DOUDS MINE	C. LST. C. LST.		2	PCC Patching			

BRIDGE APPROACH SECTION

Refer to the Series.

* Not a bid item

Location		Approach Pavement							Standard Road Plans BR Series			Subdrain							Remarks						
Bridge Station	End	Skew Ahead		Thickness (T)	Pay Length	Non-Reinf. Pavement Area	Single-Reinf. Pavement Area	Double-Reinf. Pavement Area	Approach	Fixed or Movable Abutment	Abutting Pavement	Perforated Subdrain 4"	Subdrain Outlet			Porous Backfill	Class 'A' Crushed Stone Backfill	Modified Subbase		Polymer Grid	Special Backfill				
		Degrees											LF	STA	Side							CY	TON	SY	TON
		LEFT	RIGHT																						
160+40.00	South	30		12.0	74.2	113.8	75.8	89.9	BR-203	Fixed	BR-211	44.0	158+33.02	RT	1.3	0.2	242.000	270.0							
160+40.00	North	30		12.0	74.2	113.8	75.8	89.9	BR-203	Fixed	BR-211	44.0	162+46.98	RT	1.3	0.2	242.000	270.0							
Total=								227.7			151.5														
Overall Total=								559.0																	

SHOULDERS

- ① Lane(s) to which the shoulder is adjacent.
- ② See Typ. 7156, 7157, or 7158.
- ③ Bid Item.
- ④ Applies only for Paved Shoulders constructed on project with existing granular shoulders.
- ⑤ Bid Item. Typ. 7156, 7157, or 7158.
- ⑥ Does not include shrink.

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

Road Identification	Direction Of Traffic	Location				Side	P Width FT	P ₅₆ Width F ^②	G Width FT	L Length FT	Class 13 ^④ Excavation CY ^③	Quantities														Remarks
		Station to Station		Hot Mix Asphalt TON TON/STA	Binder TONS							Paved Shoulder SY ^③	" Paved Shoulder at Guardrail SY ^⑤	Reinforced Paved Shoulder SY ^③	Special Backfill				Subbase CY ^③	Granular Shoulder		Earth Shoulder Construction Alternates				
		Station to Station													HMA Alternate		PCC Alternate			TON ^③	TON/STA	STA ^③	HMA CY ^⑥	PCC CY ^⑥		
		FT	FT												TON ^③	TON/STA	TON ^③	TON/STA								
IA 001	NB	157+11.08	157+31.08	Rt		8.7			20.0	6.5					19.3		6.069	30.345	7.081	35.403			0.2			
IA 001	NB	157+31.08	157+82.08	Rt		8.67 to 7.5			51.0	15.3					45.8		14.432	28.298	16.837	33.014			0.5			
IA 001	NB	157+82.08	158+07.08	Rt		7.5			25.0	6.8					20.8		6.563	26.250	7.656	30.625			0.3			
IA 001	NB	158+07.08	158+23.08	Rt		7.5 to 6			16.0	3.8					12.0		3.780	23.625	4.410	27.563			0.2			
IA 001	NB	162+56.92	162+92.92	Rt		5.25 to 6			36.0	6.7					22.5		7.088	19.688	8.269	22.969			0.4			
IA 001	NB	162+92.92	163+12.92	Rt		6.0			20.0	4.1					13.3		4.200	21.000	4.900	24.500			0.2			
IA 001	SB	157+67.08	157+87.08	Rt		6.0			20.0	4.1					13.3		4.200	21.000	4.900	24.500			0.2			
IA 001	SB	157+87.08	158+23.08	Rt		6 to 5.25			36.0	6.7					22.5		7.088	19.688	8.269	22.969			0.4			
IA 001	SB	162+56.92	162+72.92	Rt		6 to 7.5			16.0	3.8					12.0		3.780	23.625	4.410	27.563			0.2			
IA 001	SB	162+72.92	162+97.92	Rt		7.5			25.0	6.8					20.8		6.563	26.250	7.656	30.625			0.3			
IA 001	SB	162+97.92	163+48.92	Rt		7.5 to 8.67			51.0	15.3					45.8		14.432	28.298	16.837	33.014			0.5			
IA 001	SB	163+48.92	163+68.92	Rt		8.7			20.0	6.5					19.3		6.069	30.345	7.081	35.403			0.2			
Total=										86.6					267.5		84.261		98.305			3.4				

107-23
10-18-11

GRADING FOR GUARDRAIL INSTALLATIONS

① Lane(s) to which the installation is adjacent.

Refer to EW-301

No.	Direction of Traffic	Location			Dimensions (Feet)									Earthwork		Remarks
		Station	Side	Foreslope at Guardrail	X1	Y1	X2	Y2	X3	Y3	X4	Y4	Z	Excavation Class 10	Embankment In Place	
														CY	CY	
1	NB	158+88.01	0	3:1	53.1	5.0	78.1	7.5	103.1	10.0	150.8	11.8	65.0		80.3	NB Approach
2	NB	161+73.49	0	3:1	65.6	5.0					113.3	6.8	47.0		34.6	NB Trailing
3	SB	159+06.51	0	3:1	65.6	5.0					113.3	6.8	47.0		34.5	SB Trailing
4	SB	161+91.99	0	3:1	53.1	5.0	78.1	7.5	103.1	10.0	150.8	11.8	65.0		80.1	SB Approach
Total=														229.5		

108-8A
10-16-18

STEEL BEAM GUARDRAIL AT CONCRETE BARRIER OR BRIDGE RAIL END SECTION

Possible Standards: BA-200, BA-201, BA-202, BA-205, BA-206, BA-210, BA-211, BA-221, BA-225, BA-250, BA-260, LS-625, LS-626, LS-630, LS-635, SI-172, SI-173 and SI-211.

① Lane(s) to which the obstacle is adjacent.

② Not a bid item. Incidental to guardrail installation.

No.	Direction of Traffic	Side O = Outside M = Median	Location				Layout Lengths				Long-Span System		Delineators and Object Markers ②				Bid Items								Remarks		
			Station	Offset	BA-250, BA-260, LS-630, or LS-635				STATION	TYPE	TYPE	SI-211	Delineator SI-172	Object Marker SI-173			Bolted End Anchor	Post Adapter	Steel Beam Guardrail	Barrier Transition Section	BA-250 or LS-630					BA-260 or LS-635	
					VT1	VF	VT2	ET						Type 1	Type 2	Type 3					BA-202	BA-210	BA-200	End Terminal			
													Tangent				Flared	Tangent	Flared	BA-201				BA-205		BA-206	LS-625
					FT	LF	LF	LF					LF	White	OM2-2	OM3-L	OM3-R	TYPE	EACH	EACH	EACH	EACH	EACH	LF		EACH	EACH
1	NB	0	158+88.01	16.0	53.125	25.00	25.00	47.7																			
2	NB	0	161+73.49	16.0	65.625			47.7					1														
3	SB	0	159+06.51	16.0	65.625			47.7						1													
4	SB	0	161+91.99	16.0	53.125	25.00	25.00	47.7					1														
Total=														4		175.0	4	4									

110-1
04-16-13

REMOVAL OF PAVEMENT

Refer to Tabulation 102-5

* Not a Bid Item

Begin Station	End Station	Side	Pavement Type	Area	Saw Cut*	Remarks
				SY	LF	
158+23.08	158+73.08	South Approach	Composite	177.8	100.0	
158+73.08	158+97.26	South Approach	Composite	86.0	45.0	
161+82.74	162+06.92	North Approach	Composite	86.0	45.0	
162+06.92	162+56.92	North Approach	Composite	177.8	100.0	
157+11.08	158+23.08	NB Shoulder	HMA	49.8	40.0	
162+56.92	163+12.92	NB Shoulder	HMA	24.9	20.0	
157+67.08	158+23.08	SB Shoulder	HMA	24.9	20.0	
162+56.92	163+68.92	SB Shoulder	HMA	49.8	40.0	
Total=				676.8		

110-7A
04-17-12

REMOVAL OF STEEL BEAM GUARDRAIL

① Lane(s) to which the installation is adjacent.

② Includes length of End Terminals and End Anchors.

No.	Direction of Traffic	Location			Removal of Guardrail ②
		Station to Station	Side	LF	
1	NB	158+07.89	158+88.01	Rt	80.1
2	NB	161+73.49	162+53.62	Rt	80.1
3	SB	158+26.39	159+06.51	Rt	80.1
4	SB	161+91.99	162+72.12	Rt	80.1
Total=					320.5

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.	Direction of Traffic	Location Station	Side	Obstacle Width FT	Crash Cushion (Select One)*					Sand Barrel Details ②					Earthwork*		Spare Parts Kit (Select One)*		Obstacle Description	Remarks
					Temporary	Temporary Redirective	Temporary Severe Use	Permanent	Permanent Severe Use	V	W	X	Y	Z	Excavation Class 10	Embankment in Place	Permanent	Permanent Severe Use		
					Length FT	Length FT	Length FT	Length FT	Length FT	Length FT	Length FT	Length FT	Length FT	CY	CY	EACH	EACH			
1	Both	157+21.25	Lt.	2.00	1													TBR		
2	Both	163+58.75	Lt.	2.00	1													TBR		
3	Both	157+21.25	Rt.	2.00	1													TBR		
4	Both	163+58.75	Rt.	2.00	1													TBR		

TEMPORARY TRAFFIC SIGNALS

No.	Location Station	Type			Remarks
		One Lane Traffic	Haul Road	Intersection	
1	155+21.25	X			South Signal
	165+58.75	X			North Signal

TEMPORARY BARRIER RAIL

Possible Standard: BA-401 Possible Detail: 560-7

* 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)		Anchored* (Y/N)	Modular Glare Screen System (Y/N)	Remarks
				Concrete BA-401	Steel 560-7			
				1	157+21.25			
2	157+21.25	163+58.75	637.5	X		Yes	No	
	Total=		1275.0					

PAVEMENT MARKING LINE TYPES

See PM-110

*BCY4 - Place on the same side of the roadway to match existing markings near the project.
 **NPY4 - For estimating purposes only. No Passing Zone Lines will be located in the field.
 ***MNY4 - Factor of 1.00 as value includes number of 4-inch passes to cover median nose area.

BCY4: Broken Centerline (Yellow) @ 0.25 DCY4: Double Centerline (Yellow) @ 2.00 NPY4: No Passing Zone Line (Yellow) @ 1.25 BLW4: Broken Lane Line (White) @ 0.25 ELW4: Edge Line Right (White) @ 1.00
 ELY4: Edge Line Left (Yellow) @ 1.00 SLW2: Stop Line (White) @ 6.00

Road ID	Station to Station		Dir. of Travel	Marking Type	Side		Length by Line Type (Unfactored)																Remarks			
							BCY4*			DCY4	NPY4**	BLW4	ELW4	ELY4	SLW2											
							L	C	R	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA		STA	STA	STA
IA 001	155+21.25	165+58.75	BOTH	Removal of Paint	X	X	X	10.38						20.75												
IA 001	155+21.25	-	NB	Waterborne/Solvent Paint			X														0.12					
IA 001	-	165+58.75	SB	Waterborne/Solvent Paint			X														0.12					
IA 001	155+21.25	156+86.25	NB	Wet Retroreflective Removable Tape			X							1.65											Stage 1	
IA 001	156+86.25	157+71.25	NB	Waterborne/Solvent Paint			X							0.85											Stage 1	
IA 001	155+21.25	165+58.75	SB	Waterborne/Solvent Paint			X							10.38											Stage 1	
IA 001	163+93.75	165+58.75	NB	Waterborne/Solvent Paint			X							1.65											Stage 1	
IA 001	155+21.25	156+86.25	NB	Removal of Removable Tape			X							1.65												
IA 001	156+86.25	157+71.25	NB	Removal of Paint			X							0.85												
IA 001	163+93.75	165+58.75	SB	Removal of Paint			X							1.65												
IA 001	163+08.75	163+93.75	SB	Waterborne/Solvent Paint			X							0.85											Stage 2	
IA 001	163+93.75	165+58.75	SB	Wet Retroreflective Removable Tape			X							1.65											Stage 2	
IA 001	155+21.25	163+93.75	NB	Waterborne/Solvent Paint			X							8.73											Stage 2	
IA 001	155+21.25	-	NB	Removal of Paint			X														0.12					
IA 001	-	165+58.75	SB	Removal of Paint			X							0.12												
IA 001	155+21.25	165+58.75	NB	Removal of Paint			X							10.38												
IA 001	155+21.25	163+93.75	SB	Removal of Paint			X							8.73												
IA 001	163+08.75	163+93.75	SB	Removal of Paint			X							0.85												
IA 001	163+93.75	165+58.75	SB	Removal of Removable Tape			X							1.65												
IA 001	155+21.25	165+58.75	BOTH	Waterborne/Solvent Paint	X	X	X	10.38						20.75												

PAVEMENT MARKING LINE TYPES

See PM-110

*BCY4 - Place on the same side of the roadway to match existing markings near the project.
**NPY4 - For estimating purposes only. No Passing Zone Lines will be located in the field.

***MNY4 - Factor of 1.00 as value includes number of 4-inch passes to cover median nose area.

BCY4: Broken Centerline (Yellow) @ 0.25
ELY4: Edge Line Left (Yellow) @ 1.00

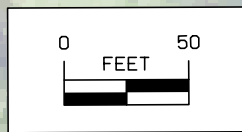
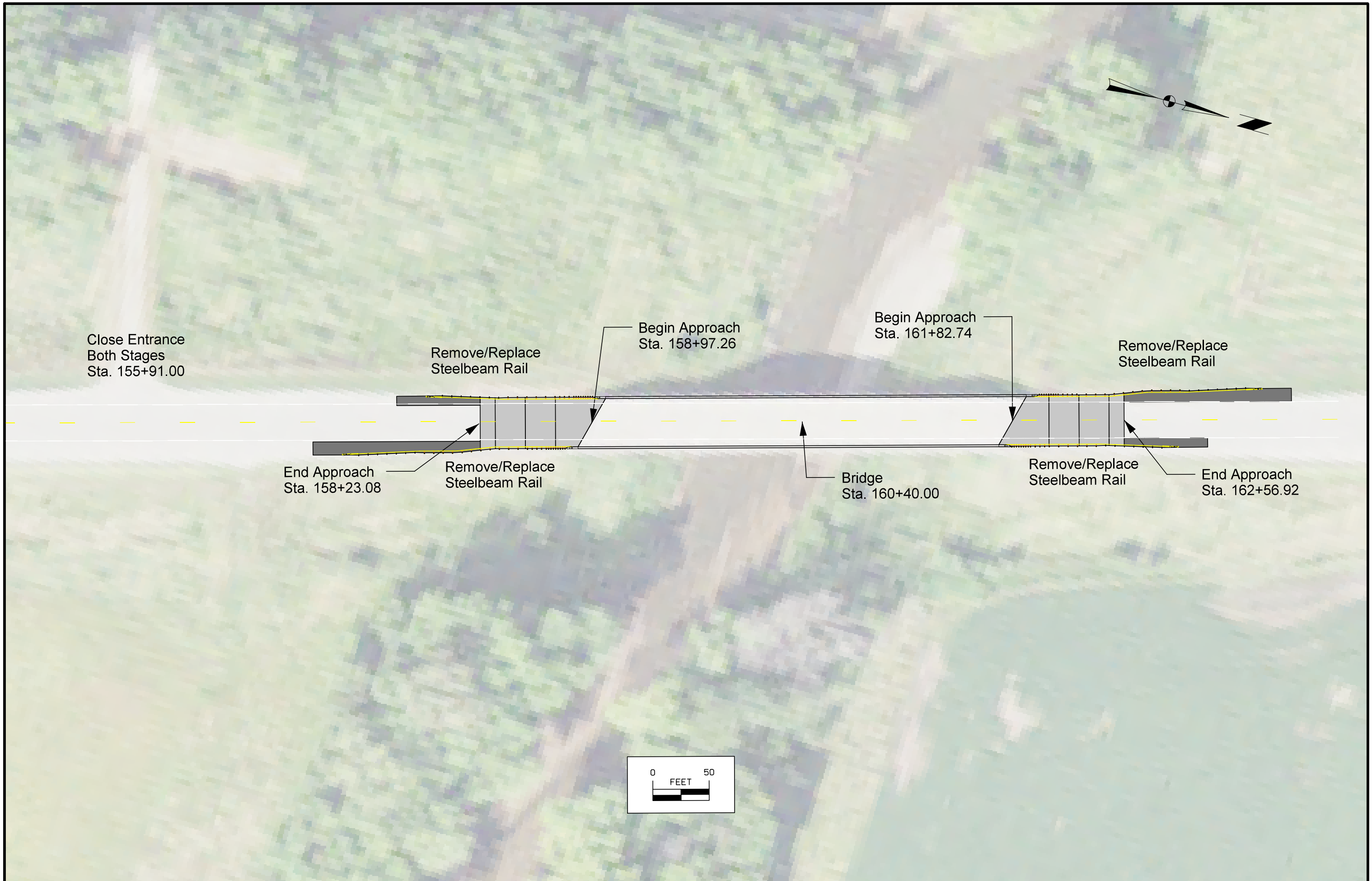
DCY4: Double Centerline (Yellow) @ 2.00
SLW2: Stop Line (White) @ 6.00

NPY4: No Passing Zone Line (Yellow) @ 1.25

BLW4: Broken Lane Line (White) @ 0.25

ELW4: Edge Line Right (White) @ 1.00

Road ID	Station to Station	Dir. of Travel	Location			Length by Line Type (Unfactored)														Remarks			
			Marking Type			Side			BCY4*	DCY4	NPY4**	BLW4	ELW4	ELY4	SLW2								
						L	C	R	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA		STA	STA	STA
			Factored Total: Waterborne/Solvent Paint						2.59	-	-	-	43.20	-	1.44	-	-	-	-	-	-	-	-
			Factored Total: Wet Retroreflective Removable Tape						-	-	-	-	3.30	-	-	-	-	-	-	-	-	-	
			Factored Total: Removal of Paint						2.59	-	-	-	43.20	-	1.44	-	-	-	-	-	-	-	
			Factored Total: Removal of Removable Tape						-	-	-	-	3.30	-	-	-	-	-	-	-	-	-	
			Bid Quantity: Painted Pavement Markings, Waterborne or Solvent-Based										47.23										
			Bid Quantity: Wet Retroreflective Removable Tape Markings										3.30										
			Bid Quantity: Pavement Markings Removed										47.23										
			Incidental Removal of Removable Tape										3.30										



108-23A
08-01-08

TRAFFIC CONTROL PLAN

Traffic on IA 001 shall be maintained at all times except as noted below.
Single lane closures with one lane, two way traffic operations as per TC-217 on IA 001 will be allowed during construction.

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
None Provided	

108-25
10-21-14

511 TRAVEL RESTRICTIONS

Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No., Structure ID, or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
IA 001	Both	JEFFERSON	IA 001 Over Big Cedar Creek		Traffic Control Device	31370	Horizontal	32	13'-4.5"	12'-4"	32	
IA 002	Both	JEFFERSON	IA 001 Over Big Cedar Creek		Temporary Signal	31370	Vertical		15' min.			
IA 003	Both	JEFFERSON	IA 001 Over Big Cedar Creek		Temporary Signal	31370	Vertical		15' min.			