

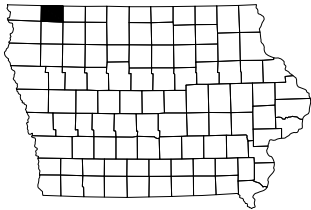
Letting Date November 17, 2026

BRIDGE REPLACEMENT - CCS

BRS-CHBP-C072(83)--GB-72

OSCEOLA COUNTY

OSCEOLA COUNTY UTILITY CONTACTS	
PREMIER COMMUNICATIONS PHONE: 712-722-3451 CONTACT: JAKE VAN ROEKEL EMAIL: jakevr@mypremieronline.com	CENTURY LINK PHONE: 918-547-0147 CONTACT: SADIE HULL EMAIL: sadie.hull@lumen.com
OSCEOLA ELECTRIC COOPERATIVE, INC. PHONE: 712-754-2519 CONTACT: TOMMY STOREY EMAIL: tstorey@osceolaelectric.com	



Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

FARM-TO-MARKET SYSTEM
OSCEOLA COUNTY
BRIDGE REPLACEMENT - CCS

On L40 over Cloverdale Creek, S29, T99, R41

Project Number: BRS-CHBP-C072(83)--GB-72

Refer to the Proposal Form for list of applicable specifications.

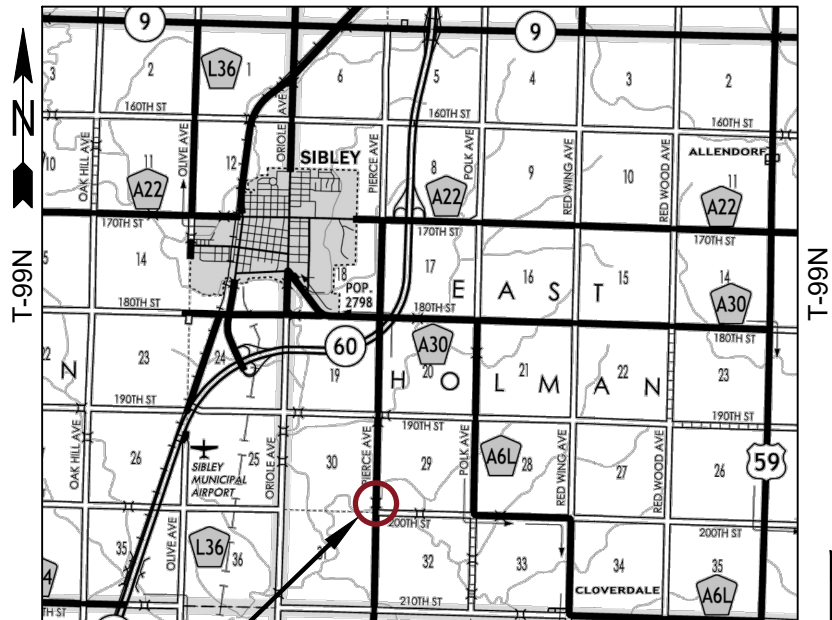
2019 Average Annual Daily Traffic: 460 VPD

Scales: As Noted

All shop drawings that require approval in accordance with Article 1105.03 of the Standard Specifications shall be approved by the Osceola County Engineer, 300 7th Street, Sibley, Iowa 51249. Office 712-754-2303, Email kbrann@osceolacoia.org.

Project Number:BRS-CHBP-C072(83)--GB-72

INDEX OF SHEETS	
No.	Description
A.1	COVER SHEET
B.1	TYPICAL SECTIONS
C.1	QUANTITIES and GENERAL NOTES
C.2	ESTIMATE REFERENCE INFORMATION
C.3	STANDARD PLANS
C.4	TABULATIONS
D.1	PLAN and PROFILE
J.1	TRAFFIC CONTROL PLAN
Q.1	SOIL BORING LOGS
Q.2	SOIL BORING LOGS
R.1	SEEDING AND EROSION CONTROL
V.1	SITUATION PLAN
V.2	DECK ELEVATIONS
W.1	CROSS SECTIONS
W.2	CROSS SECTIONS
W.3	CROSS SECTIONS



Station 5+55.00
DGA-C072(83)--XT-72
FHWA No. 263300 Bridge Replacement
BOP Sta 2+92.35 to EOP Sta 8+13.28

PROJECT LOCATION MAP
N.T.S.

LeRoy DeBoer
LeRoy DeBoer

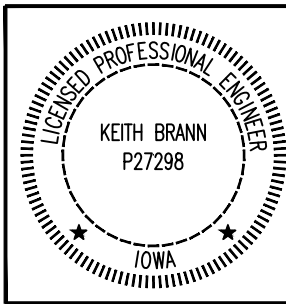
Michael Schulte
Michael Schulte

Jerry Helmers
Jerry Helmers

Jeff Loring
Jeff Loring

Jayson Vande Hoef
Jayson Vande Hoef Chairman

Date: 11/12/25
Approved: Board of Supervisors

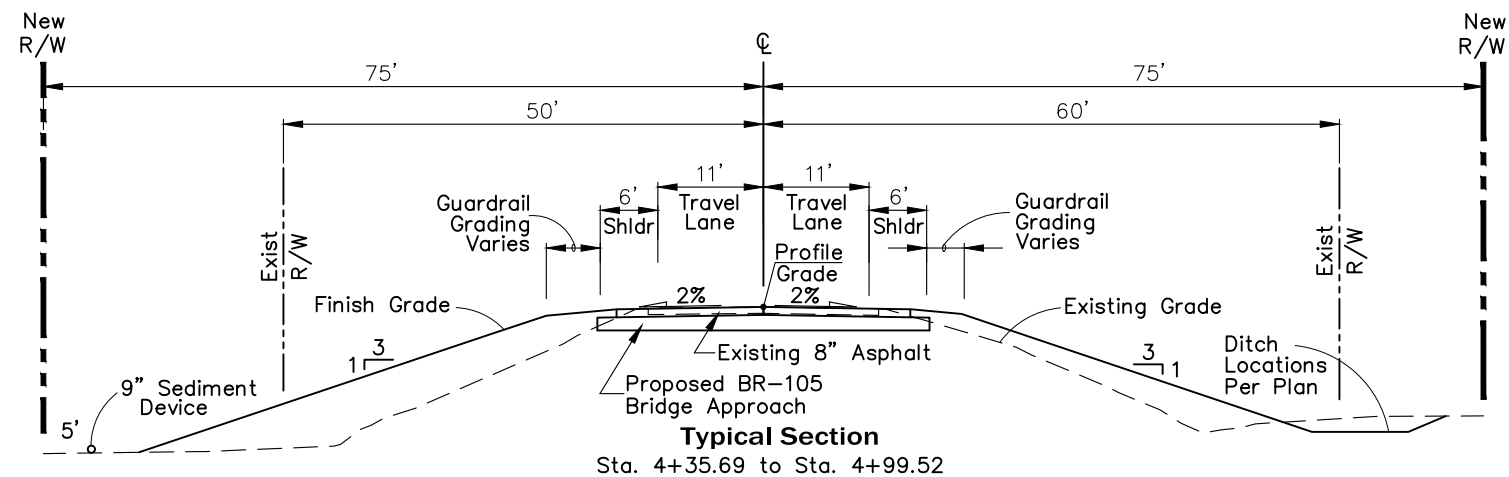
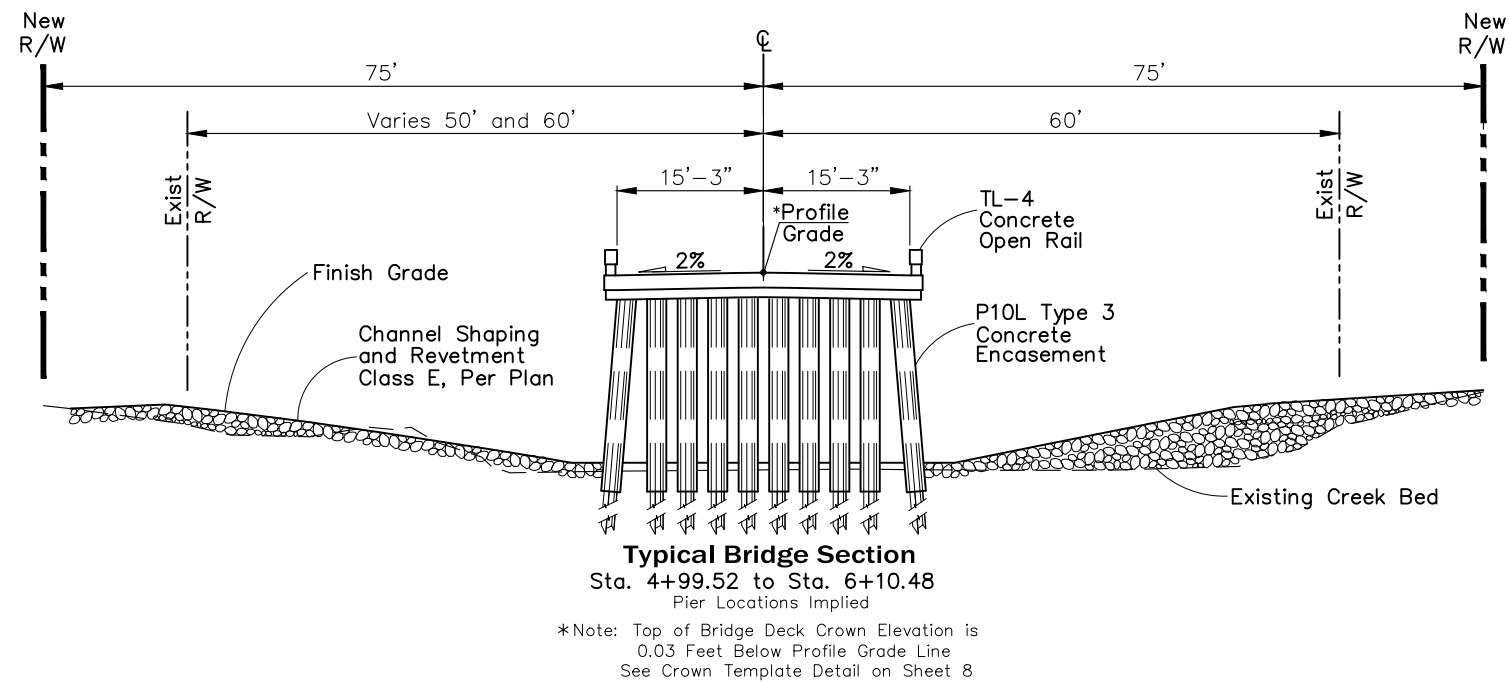
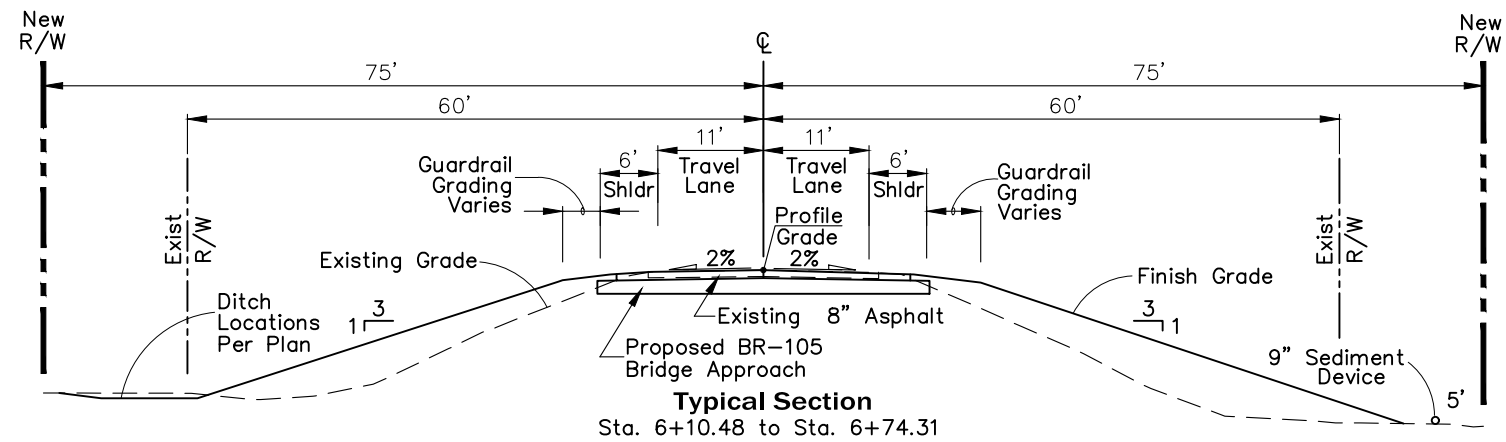


I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Keith E. Brann
License Number: P27298
My license renewal date is December 31, 2026
Pages or Sheets covered by this seal: SHEETS A.1 - W.3
8-11-26
(Date)

MILEAGE SUMMARY			
Div.	Location	Lin. Ft.	Miles
	Bridge Centerline Sta. 5+55.00	521	0.10

EXISTING BRIDGE DATA				DESIGN DATA RURAL	
COUNTY No.	SIZE (LxW)	YEAR	FHWA No.	BASE YEAR 2019	
E Holm F-10	80' x 24'	1958	263300	2019 AADT	460
				2039 AADT	644
				% of Trucks	20
				ESAL 20	288,000



DESIGN FOR	
110'-0 x 30'-6 CONTINUOUS	
CONCRETE SLAB BRIDGE	
STATION 5+55.00	30° RA SKEW
33'-6 END SPANS	43'-0 CENTER SPAN
TYPICAL SECTIONS	
BRS-CHBP-C072(83)--GB-72	
SHEET B. 1	

ESTIMATED PROJECT QUANTITIES 110'-0 x 30'-6 C.C.S. BRIDGE							
Item No.	Item Code	Item	Unit	(2) Abut.	(2) Piers	Super	Total
1	2102-2625000	EMBANKMENT-IN-PLACE	CY				3172.6
2	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY	-	-	-	316.10
3	2102-2712015	EXCAVATION, CLASS 12, BOULDERS OR ROCK FRAGMENTS	CY				15.00
4	2104-2710020	EXCAVATION, CLASS 10, CHANNEL	CY	-	-	-	59.56
5	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD	CY	-	-	-	552.50
6	2123-7450020	SHOULDER FINISHING, EARTH	STA	-	-	-	2.60
7	2301-0690210	BRIDGE APPROACH, TWO LANE	SY	-	-	-	375.40
8	2401-6745625	REMOVAL OF EXISTING BRIDGE	LS	-	-	-	1.00
9	2402-2720000	EXCAVATION, CLASS 20	CY	-	-	-	335.00
10	2403-0100010	STRUCTURAL CONCRETE (BRIDGE)	CY	25.6	-	237.8	263.40
11	2404-7775005	REINFORCING STEEL, EPOXY COATED	LB	3,458	-	63,656	67,114.00
12	2414-6424124	CONCRETE OPEN RAILING, TL-4	LF	-	-	-	242.90
13	2501-0201042	PILES, STEEL, HP 10 X 42	LF	660	-	-	660.00
14	2501-0201253	PILES, STEEL, HP 12 X 53	LF	-	1,300	-	1300.00
15	2501-5478053	CONCRETE ENCASEMENT OF STEEL H PILES, HP 12 X 53 (P10L TYPE 3)	LF	-	428	-	428.00
16	2505-4008120	REMOVAL OF STEEL BEAM GUARDRAIL	LF	-	-	-	276.00
17	2505-4008410	STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION, BA-201	EACH	-	-	-	4.00
18	2505-4021010	STEEL BEAM GUARDRAIL END ANCHOR, BOLTED	EACH	-	-	-	4.00
19	2505-4021710	STEEL BEAM GUARDRAIL TANGENT END TERMINAL, LS-625	EACH	-	-	-	4.00
20	2507-3250005	ENGINEERING FABRIC	SY	-	-	-	929.00
21	2507-6800061	REVTMENT, CLASS E	TON	-	-	-	636.00
22	2510-6745850	REMOVAL OF PAVEMENT	SY	-	-	-	405.00
23	2519-3280000	FENCE, FIELD	LF	-	-	-	527.00
24	2519-3300400	FIELD FENCE BRACE PANELS	EACH	-	-	-	18.00
25	2519-3300700	FENCE, TEMPORARY	LF	-	-	-	600.00
26	2519-4200140	REMOVAL OF FENCE, FIELD	LF	-	-	-	481.00
27	2526-8285040	CONSTRUCTION SURVEY, LOCATION SURVEY	LS	-	-	-	1.00
28	2528-2518000	SAFETY CLOSURE	EACH	-	-	-	2.00
29	2528-8445110	TRAFFIC CONTROL	LS	-	-	-	1.00
30	2533-4980005	MOBILIZATION	LS	-	-	-	1.00
31	2601-2638352	SLOPE PROTECTION, WOOD EXCELSIOR MAT	SQ	-	-	-	278.00
32	2601-2640350	SPECIAL DITCH CONTROL, WOOD EXCELSIOR MAT	SQ	-	-	-	44.00
33	2602-0000309	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 9 IN. DIA.	LF	-	-	-	380.00
34	2602-0000312	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA.	LF	-	-	-	90.00

General Notes

The existing bridge (Sta. 5+60) is an 80' x 24' Single Span I-Beam bridge built in 1958 from V I I Standards. Bridge has W-Beam guardrail at the (4) corners with Thrie-Beam rail on bridge. Bridge has a concrete deck and curbs with concrete cap abutments and concrete end diaphragms. Sub-structure is wood bearing pile, wood wing pile, wood back walls and wood wing walls.

This design is for a 110'-0" x 30'-6" 3-span Continuous Concrete Slab Bridge with 33'-6" end spans, a 43'-0" center span, P I O L Type 3 Piers and Monolithic Pier Caps with cap steel on a 30° RA Skew situated over Cloverdale Creek in Osceola County, Iowa.

Temporary Construction Easements are shown on sheet 7 and are for the benefit of contractor access. Temporary Construction Easements as shown shall be considered for access only and not part of the grading work of this project. Existing earthen and grass surfaces within Temporary Construction Easements shall be protected and returned to "as found condition" and subject to inspection and approval of the Engineer prior to completion of work. Osceola County will stake the boundaries of the temp easements.

Scrape Test Note

Scrape samples of this bridge were taken to get an indication of the existence of and level of total chromium and total lead. The analysis of total chromium in the sample was 12800 ppm. The analysis of total lead in the sample was 178000 ppm. The analysis shows the existence of these two toxic constituents. The levels indicated by these tests could create conditions above regulatory limits for health safety requirements. No other substances were analyzed. The bidder should not rely on the LPA ’ s testing and analysis for any purpose other than an indication of the existence of these two constituents.

Testing for asbestos was performed on this bridge. No asbestos was detected in the samples taken

Utility Notes

It is the bridge contractor's sole responsibility to coordinate bridge construction operations with each and all utility companies in proximity of this project and shall not become any portion of responsibility for Osceola County.

DESIGN FOR	
110’–0 x 30’–6 CONTINUOUS CONCRETE SLAB BRIDGE	
STATION 5+55.00 33’–6 END SPANS	30° RA SKEW 43’–0 CENTER SPAN
QUANTITIES & GENERAL NOTES	

ESTIMATE REFERENCE INFORMATION

110'-0" X 30'-6" CCS BRIDGE

1. EMBANKMENT - IN PLACE
Quantity shown is for the widening of the bridge berms. See Typical Sections, Plan and Profile sheets, cross sections, and applicable Standard Road Plans for details. See Sheet C.4 for tabulation of Earthwork Quantities. Type B compaction is required. Embankment is contractor provided.
2. EXCAVATION CLASS 10, CHANNEL
Includes 60 CY of Channel Excavation. Refer to Earthwork Summary.
3. EXCAVATION, CLASS 12, BOULDERS OR ROCK FRAGMENTS
Estimated Quantity, payment based on field measurements. Material to be stockpiled for measurement. Contractor to load onto County dumptruck for removal from site.
4. EXCAVATION CLASS 10, ROADWAY AND BORROW
See Earthwork Section and Summary sheet for adjusted quantities.
5. TOPSOIL, STRIP, SALVAGE AND SPREAD
Refers to areas adjacent to roadway shoulders and extending to right-of-way lines north and south of new bridge. Area within the temporary construction easements are not included in this item. Topsoil volume is calculated at a nominal depth of 6".
6. SHOULDER FINISHING EARTH
7. BRIDGE APPROACH, TWO LANE
See Tabulations in these plans. Coarse Aggregate Durrability shall be Class 3 or better. Certified Plant Inspection is Required. Reinforcing steel shall be epoxy coated. Refer to Bridge Approach Standard Road Plans listed on Sheet C.3
8. REMOVAL OF EXISTING BRIDGE
Contractor to remove at station 5+60 an existing 80' x 24' single span Steel I-Beam bridge having steel diaphragms and a reinforced concrete deck with curbs. Substructure contains wood pile in the abutment with a 2' x 2'-3" Concrete caps and wood backing plank. Wood pile wings with wood backing plank are at all 4 corners. Handrail is post mounted steel galvanize tri-beam guardrail sections. Existing Bridge steel components to remain property of Osceola County. Steel components are to be stacked neatly until they are to be loaded by the contractor onto a County trailer for removal. All wood backing plank and wood pile are to become property of the contractor and removed from the site. Concrete material is to become the property of the contractor and removed from the site.
9. EXCAVATION, CLASS 20
Includes 335 Cy. excavation necessary for new bridge construction. Additional shaping and Compaction in Place of 345 Cy. is required prior to placement of Class E, Revetment. Refer to earthwork Summary.
10. STRUCTURAL CONCRETE (BRIDGE)
No additional payment will be allowed for heating and protection of concrete if necessary. Certified Plant Inspection is required. Specification Section 2428 "Smoothness of Bridge Decks" does not apply. All Structural Concrete is to be Class "C".
11. REINFORCING STEEL, EPOXY COATED
Reinforcing Steel to be Grade 60.
12. CONCRETE OPEN RAILING
Certified Plant Inspection is required. Structural Concrete for Railing to be Class "C". Substitution to Class "D" is not allowed. No additional payment will be allowed for heating and protection of concrete if necessary.

13. PILES, STEEL, HP 10 X 42
Abutment Piling as required.
14. PILES, STEEL, HP 12 X 53
Pier Piling as required.
15. CONCRETE ENCASEMENT OF STEEL H PILES, HP 12 X 53 (PIOL TYPE 3)
Certified Plant Inspection is required. No additional payment will be allowed for heating and protections of concrete if necessary.
16. REMOVAL OF STEEL BEAM GUARDRAIL
Guardrail components to remain property of Osceola County. Removed components to be stacked neatly for the Contractor to load onto a County trailer for removal from the site.
17. STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION, BA-201
See Tabulation for Guardrail on Sheet C.4
18. STEEL BEAM GUARDRAIL END ANCHOR, BOLTED
See Tabulation for Guardrail on Sheet C.4
19. STEEL BEAM GUARDRAIL TANGENT END TERMINAL, LS-625
See Tabulation for Guardrail on Sheet C.4
20. ENGINEERING FABRIC
For use under Class E Revetment.
21. REVETMENT, CLASS E
To be placed on Engineering Fabric. Recycled portland cement concrete is not allowed.
22. REMOVAL OF PAVEMENT
Existing pavement is approximately 8" HMA.
23. FENCE, FIELD
Item is for the construction of new woven and barbwire fence. See Tabulation on Sheet C.4 Refer to Standard Detail MI-103.
24. FIELD FENCE BRACE PANELS
25. FENCE, TEMPORARY
Item is for furnishing, installation and the removal of temporary fence during construction on the west side of the project along the temporary easement line. Fence Material to be Steel T-posts with 3 strands barb wire. Method of Measurement is by the Linear Foot. Basis of Payment will be the price per LF. for furnishing, installing, maintaining and removal of the temporary fence.
26. REMOVAL OF FENCE
Item is for the removal of the existing Fence. Existing fence is woven and barbwire. Existing fence not to be removed until temporary fence is in place. All removed fence material to be neatly stacked in a area of the temporary easement as directed by the Engineer.
27. CONSTRUCTION SURVEY, LOCATION SURVEY
Includes all staking necessary for the contractor to complete the project per plan.
28. SAFETY CLOSURE
Install (1) at Sta. 1+50 and (1) at Sta. 10+00. See Sheet C.4 for tabulation.
29. TRAFFIC CONTROL
Refer to Project Traffic Control Plan on Sheet J.1

30. MOBILIZATION
31. SLOPE PROTECTION, WOOD EXCELSIOR MAT
Refer to Standard Road Plan EC-103. Seeding prior to placement of the mat is a part of this item per Standard Specifications.
32. SPECIAL DITCH CONTROL, WOOD EXCELSIOR MAT
Refer to Standard Road Plan EC-104. Seeding prior to placement of the mat is a part of this item per Standard Specifications.
33. PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 9 IN. DIA.
Install at locations shown in the plans. See tabulations on Sheet C.4. Removal of sediment control devices will be by Osceola County.
34. PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA
Install at locations shown in the plans. See tabulations on Sheet C.4. Removal of sediment control devices will be by Osceola County.

DESIGN FOR	
110'–0 x 30'–6 CONTINUOUS CONCRETE SLAB BRIDGE	
STATION 5+55.00	30° RA SKEW
33'–6 END SPANS	43'–0 CENTER SPAN
ESTIMATE REFERENCE INFORMATION	
2027 CONSTRUCTION	
OSCEOLA COUNTY	
BRS–CHBP–C072(83)––GB–72	
SHEET C. 2	

STANDARD ROAD PLANS		
The following Standard Plans shall be considered applicable to construction work on this project.		
IDENTIFICATION	DATE	DESCRIPTION
BA-201	10-21-25	Steel Beam Guardrail Barrier Transition Section (MASH TL-3)
BA-202	4-15-25	Steel Beam Guardrail Bolted End Anchor
BR-101	10-15-24	Bridge Approach Section(General Details)
BR-105	10-15-24	Bridge Approach Section(Two Lane HMA Pavement)
EC-101	4-19-16	Special Ditch Control
EC-103	4-21-15	Wood Excelsior Mat for Slope Protection
EC-204	10-19-21	Perimeter and Slope Sediment Control Devices
EW-101	10-17-17	Embankment and Rebuilding Embankment
EW-301	04-16-24	Guardrail Grading
LS-625	10-19-21	Steel Beam Guardrail Tangent End Terminal (NCHRP 350 TL-3)
MI-103	10-20-15	Deer Fence and Field Fence Construction
SI-173	4-19-16	Object Markers
TC-252	10-21-25	Routes Closed to Traffic

STANDARD BRIDGE PLANS					
The following Standard Plans shall be considered applicable to construction work on this project.					
IDENTIFICATION	DATE	IDENTIFICATION	DATE	IDENTIFICATION	DATE
J30-01-06	09/2020	J30-23-06	09/2020	J30-45-06	09/2020
J30-01A-06	09/2020	J30-24-06	09/2020	J30-46-06	09/2020
J30-10E-06	09/2020	J30-36-06	09/2020	J30-48-06	09/2020
J30-11E-06	09/2020	J30-39-06	09/2020	P10L	06/2025
J30-20-06	09/2020	J30-43-06	09/2020		
J30-22-06	09/2020	J30-44-06	09/2020		

DESIGN FOR

110'-0 x 30'-6 CONTINUOUS
CONCRETE SLAB BRIDGE

STATION 5+55.0030' RA SKEW
33'-6 END SPANS43'-0 CENTER SPAN

STANDARD PLANS

108-8A
#REF!

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.

Designer Info

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

2 Not a bid item. Incidental to guardrail installation.

This Data Entry Sheet fills Tab 108-8A effective Modified

No.	① Direction of Traffic	LOCATION		Station	Offset	Layout Lengths				Long-Span System		Delineators and Object Markers ②				Bid Items										Remarks			
		Side	O = Outside M = Median			BA-250, BA-260, LS-630, or LS-635						SI-211	Delineator SI-172	Object Marker		Bolted End Anchor	Post Adapter	Steel Beam Guardrail	BA-250 or LS-630				BA-260 or LS-635						
						VT1	VF	VT2	ET					Type 1	Type 2				Type 3	Barrier Transition Section	End Terminal				Barrier Transition Section		End Terminal		
																					Tangent	Flared	Tangent	Flared				Tangent	Flared
		LF	LF			LF	LF	STATION	TYPE	TYPE	EACH	EACH	EACH	EACH	TYPE	EACH	EACH	LF	EACH	EACH	EACH	EACH	EACH	EACH					
1	NB			5+03.80	15.79	40.625			50		2		3		1		A	1											
2	SB			4+84.74	15.79	40.625			50		2		3	1			A	1											
3	NB			6+25.20	15.79	40.625			50		2		3	1			A	1											
4	SB			6+06.20	15.79	40.625			50		2		3		1		A	1											

REMOVAL OF STEEL BEAM GUARDRAIL

① Lane(s) to which the installation is adjacent.					
② Includes length of End Terminals and End Anchors.					
This Data Entry Sheet fills Tab 110-7A effective 04-17-12					
Location					
No.	① Direction of Traffic	Station to Station		Side	Removal of Guardrail
					② LF
1	SB	4+49	5+17	LT	69.0
2	NB	4+49	5+17	RT	69.0
3	SB	6+05	6+73	LT	69.0
4	NB	6+05	6+73	RT	69.0

PERIMETER, SLOPE AND DITCH CHECK SEDIMENT CONTROL DEVICES										Designer Info
Possible Standards: EC-204										
Location			Perimeter and Slope			Ditch Check		Remarks		
Begin Station	End Station	Side	Length of Installation			Length of Installation				
			9 inch Dia	12 inch Dia	20 inch Dia	12 inch Dia	20 inch Dia			
			LF	LF	LF	LF	LF			
2+99	4+95	LT	200					Inside ROW 10', From base of foreslope		
3+96	3+96	RT				20.0		As Shown		
4+95	4+95	RT				20.0		As Shown		
5+35	5+35	RT				20.0		As Shown		
6+28	8+07	RT	180					Inside ROW 10', From base of foreslope		
5+57	5+57	LT				20.0		As Shown		
6+09	6+09	LT				20.0		As Shown		
7+09	7+09	LT				20.0		As Shown		
TOTALS :			380			120				

SAFETY CLOSURES		
Refer to Section 2528 of the Standard Specifications		
Station	Closure Type	
	Road Qty.	Hazard Qty.
1+00		1
15+00		1

REMOVAL OF EXISTING STRUCTURES		
This Data Entry Sheet fills Tab 110-2 effective 04-16-13		
Location Sta.	Description	Remarks
5+60.70	80' x 24' Single Span Steel I-Beam Bridge	See Reference Information

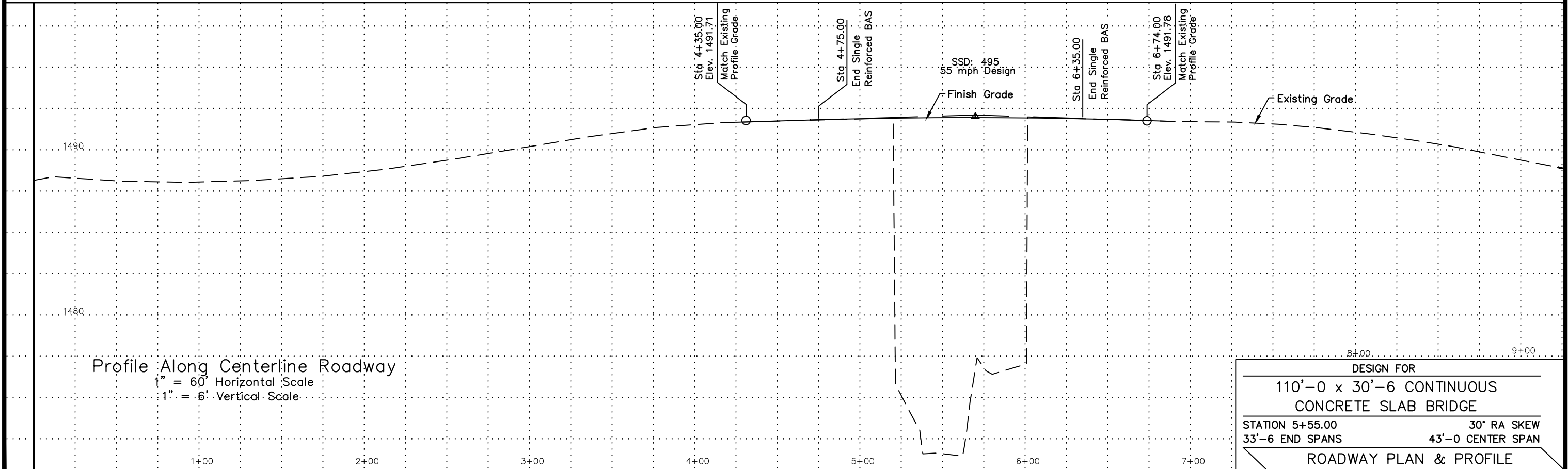
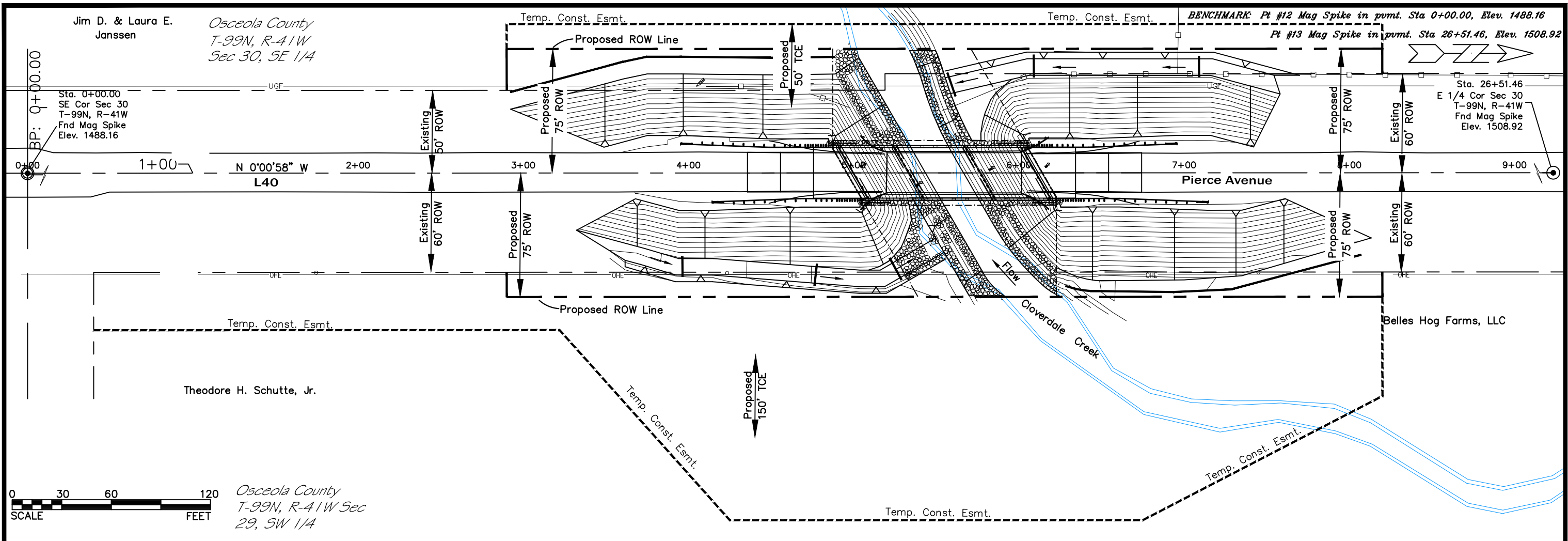
GRADING FOR GUARDRAIL INSTALLATIONS																
(1) Lane(s) to which the installation is adjacent. Refer to EW-301																
Location				Foreslope at Guardrail	Dimensions (Feet)									Earthwork		Remarks
No.	(1) Direction of Traffic	Station	Side		X1	Y1	X2	Y2	X3	Y3	X4	Y4	Z	Excavation Class 10	Embankment In Place	
1	NB	5+03.80	Rt.	3:1	36.0	5.0	-	-	-	-	90.0	7.0	46.0			
2	SB	4+84.74	Lt.	3:1	36.0	5.0	-	-	-	-	90.0	7.0	46.0			
3	NB	6+25.20	Rt.	3:1	36.0	5.0	-	-	-	-	90.0	7.0	46.0			
4	SB	6+06.20	Lt.	3:1	36.0	5.0	-	-	-	-	90.0	7.0	46.0			

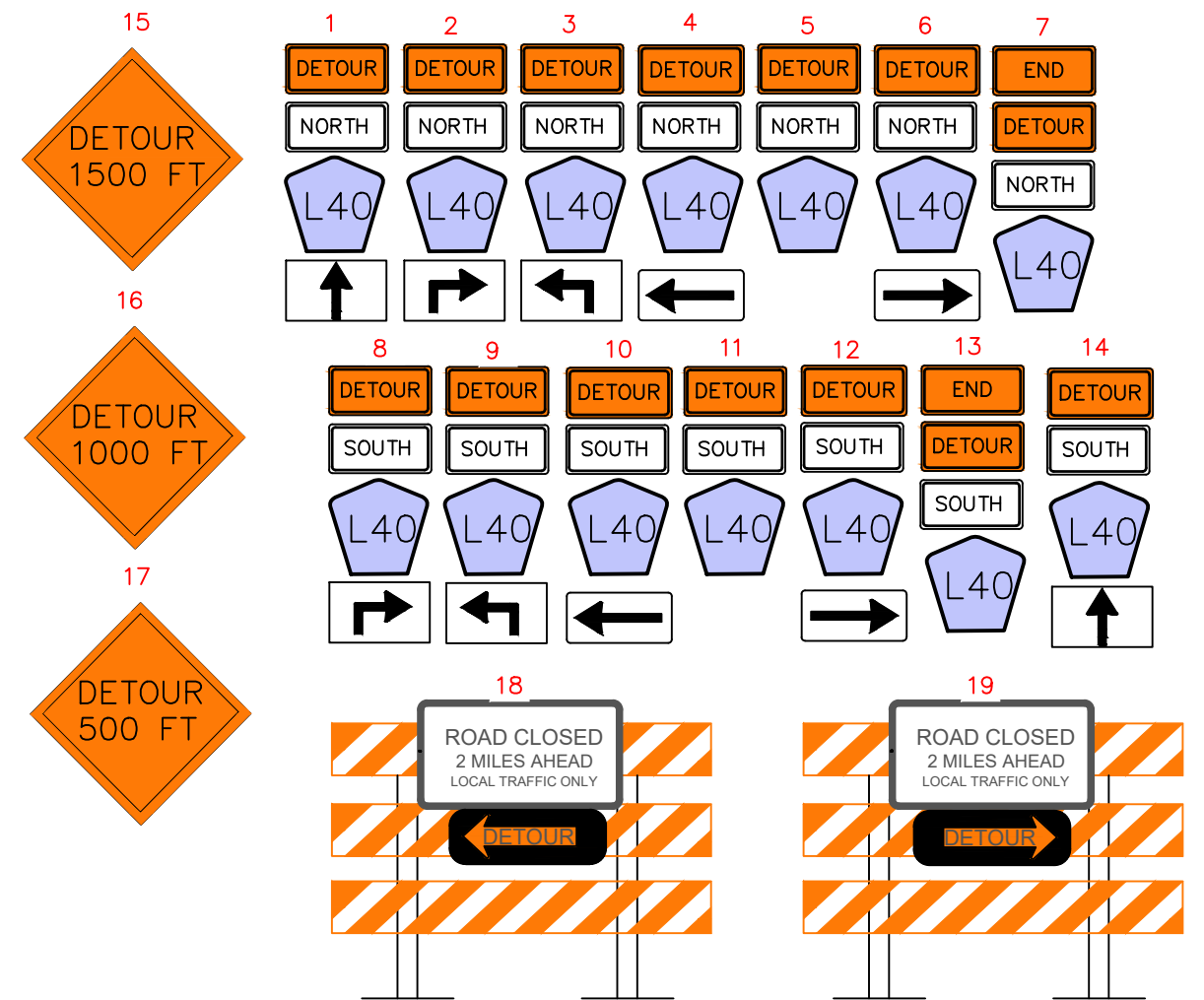
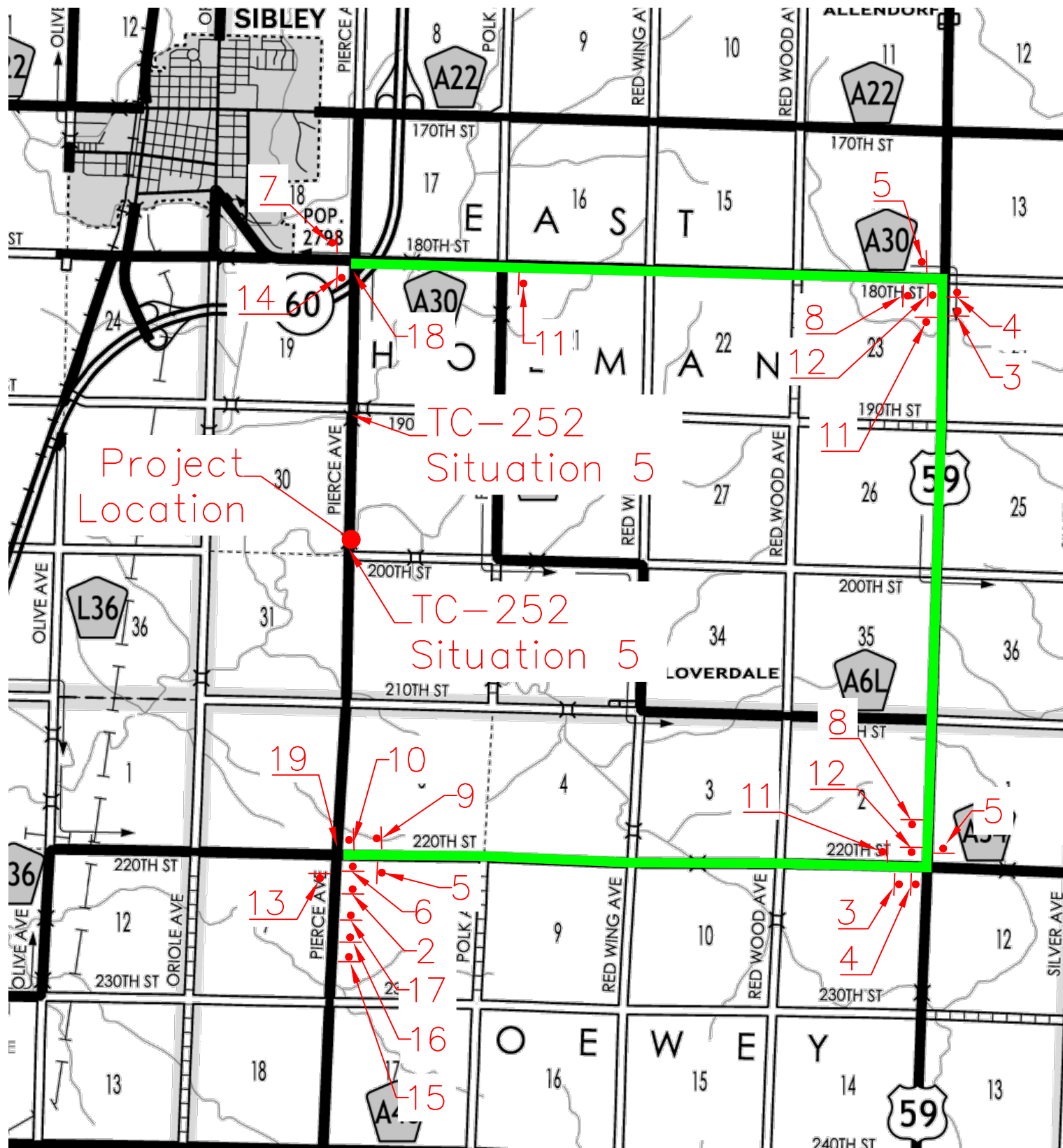
BRIDGE APPROACH SECTION															
Refer to the BR Series. B															
* Not a bid item															
This Data Entry Sheet fills Tab 112-6 effective 04-18-17															
Bridge Station	End	Location		Approach Pavement				Standard Road Plans BR Series				Subdrain			
		Skew Ahead	T	Pay Length	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 1	Class 'A' Crushed Stone	Modified Subbase
5+55.00	South	-	30	10	63.83	106.66	81.04	BR-105	Fixed	HMA	70	5+11.50	Both	3	-
5+55.00	North	-	30	10	63.83	106.66	81.04	BR-105	Fixed	HMA	70	5+98.50	Both	3	-

REMOVAL OF PAVEMENT									
Refer to Tabulation 102-5									
* Not a Bid Item									
This Data Entry Sheet fills Tab 110-1 effective 04-16-13									
Begin Station	End Station	Side	Pavement Type	Length	Width	Area	Area	Saw Cut*	Remarks
				FT	FT	SF	SY	LF	
4+35.70	5+19.90			84.2	23.3	1962	218.0	22.0	SOUTH END
6+01.70	6+74.20			72.5	23.2	1682	186.9	22.0	NORTH END

EARTHWORK TABULATION												
	CUT					Fill						
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
					Class 10 Ch + Class 20 Cut	[2]+[5]				Class 20 Fill	[7]+[8]+ [9]+[10]	[11] x 1.3
												[6]-[12]
	total cut unadjusted volume	total class 10 unadjusted volume	topsoil cut volume	template pavement removal volume	manual calculated cut adjustments (+/- cut)	total cut adjusted	total fill unadjusted volume	topsoil stripping undercut (+ fill)	existing pavement undercut (+ fill)	manual calculated fill adjustments (+/- fill)	total fill adjusted	total adjusted w/ weighted average 1.3 shrink factor
Bridge Embankment	98.1	0.6	97.5			316.1	2,518.5	650.0			3,513.2	4,567.2
Class 10 Channel					47.6					344.7		
Class 20					267.8							
TOTALS	98.1	0.6	97.5	-	315.4	316.1	2,518.5	650.0	-	344.7	3,513.2	4,567.2

DESIGN FOR	
110'-0 x 30'-6 CONTINUOUS CONCRETE SLAB BRIDGE	
STATION 5+55.00	30' RA SKEW
33'-6 END SPANS	43'-0 CENTER SPAN
TABULATIONS	
BRS-CHBP-C072(83)--GB-72	
SHEET C. 4	





PROJECT TRAFFIC CONTROL PLAN

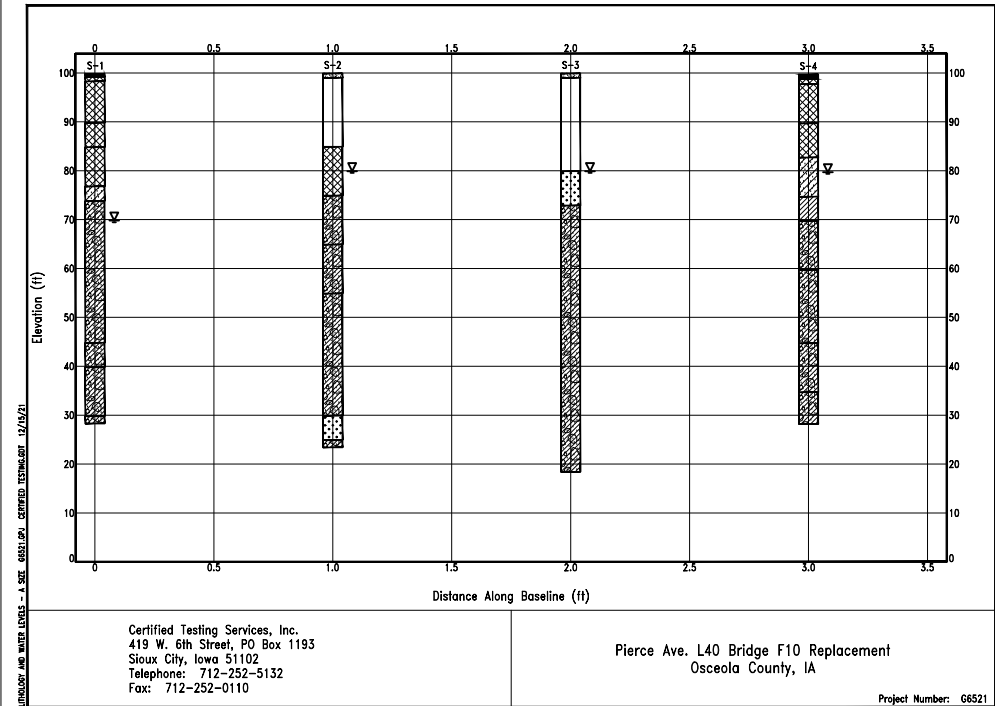
1. BRIDGE TO BE COMPLETELY CLOSED TO TRAFFIC DURING CONSTRUCTION. IMPACTED ROAD SEGMENT WILL BE CLOSED TO THROUGH TRAFFIC DURING CONSTRUCTION. LOCAL TRAFFIC TO ADJACENT PROPERTIES WILL BE MAINTAINED AS PROVIDED FOR IN ARTICLE 1107.08 OF THE CURRENT STANDARD SPECIFICATIONS. TRAFFIC CONTROL DEVICES, PROCEDURES, LAYOUTS, SIGNING, AND PAVEMENT MARKINGS INSTALLED WITHIN THE LIMITS OF THIS PROJECT SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" AS ADOPTED BY THE DEPARTMENT PER 761 OF THE IOWA ADMINISTRATIVE CODE (IAC) CHAPTER 130.
2. MAINTENANCE OF SIGNS, BARRICADES AND SAFETY CLOSURES BY THE CONTRACTOR SHALL BE AS STATED IN ARTICLE 1107.09 OF THE CURRENT STANDARD SPECIFICATIONS.
3. TRAFFIC CONTROL AND SAFETY CLOSURES ARE BID ITEMS.
4. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING, INSTALLING AND MAINTAINING ALL DETOUR AND TRAFFIC CONTROL SIGNS.

DESIGN FOR
 110'-0" x 30'-6" CONTINUOUS
 CONCRETE SLAB BRIDGE
 STATION 5+55.00 30° RA SKEW
 33'-6" END SPANS 43'-0" CENTER SPAN

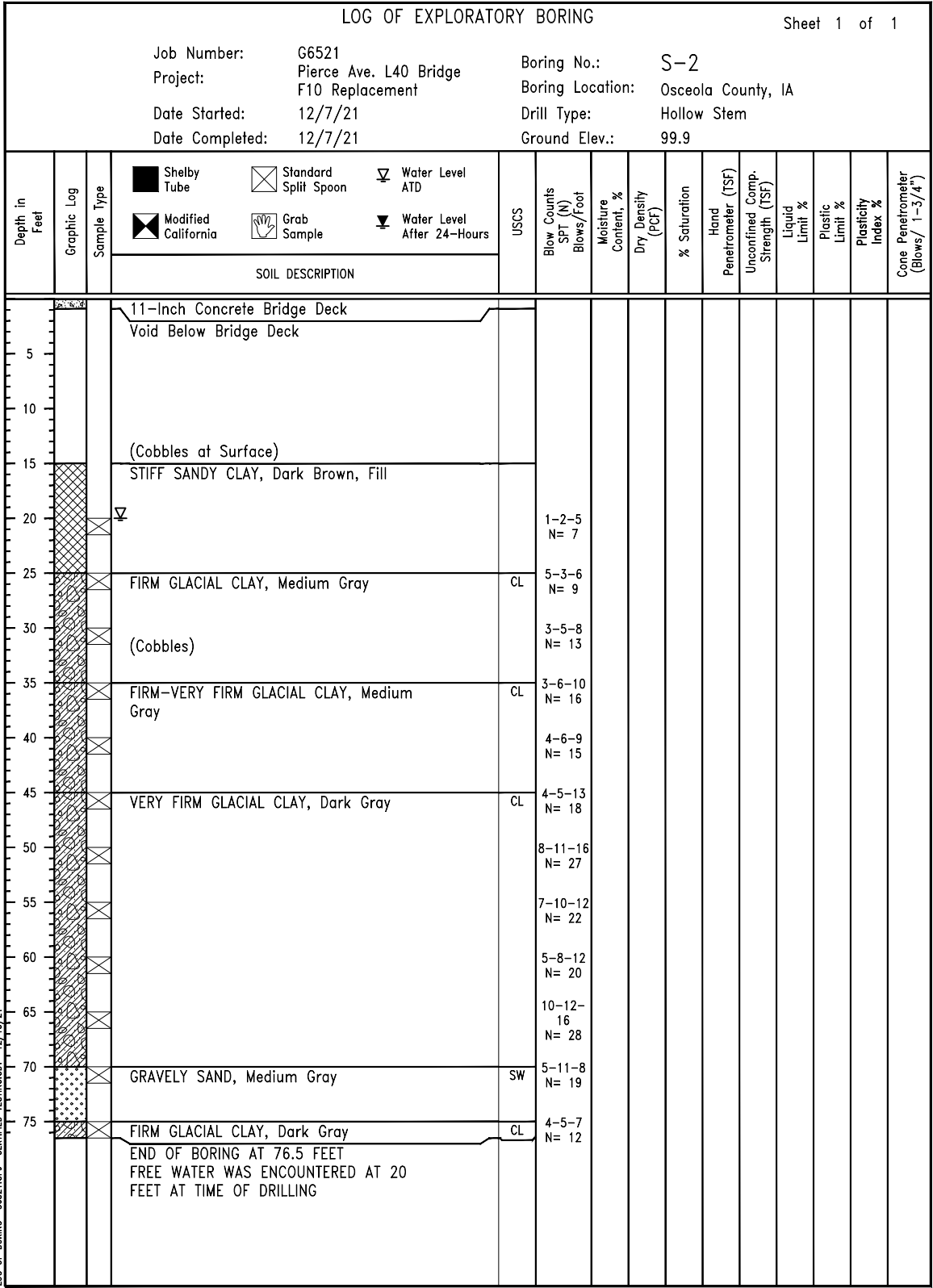
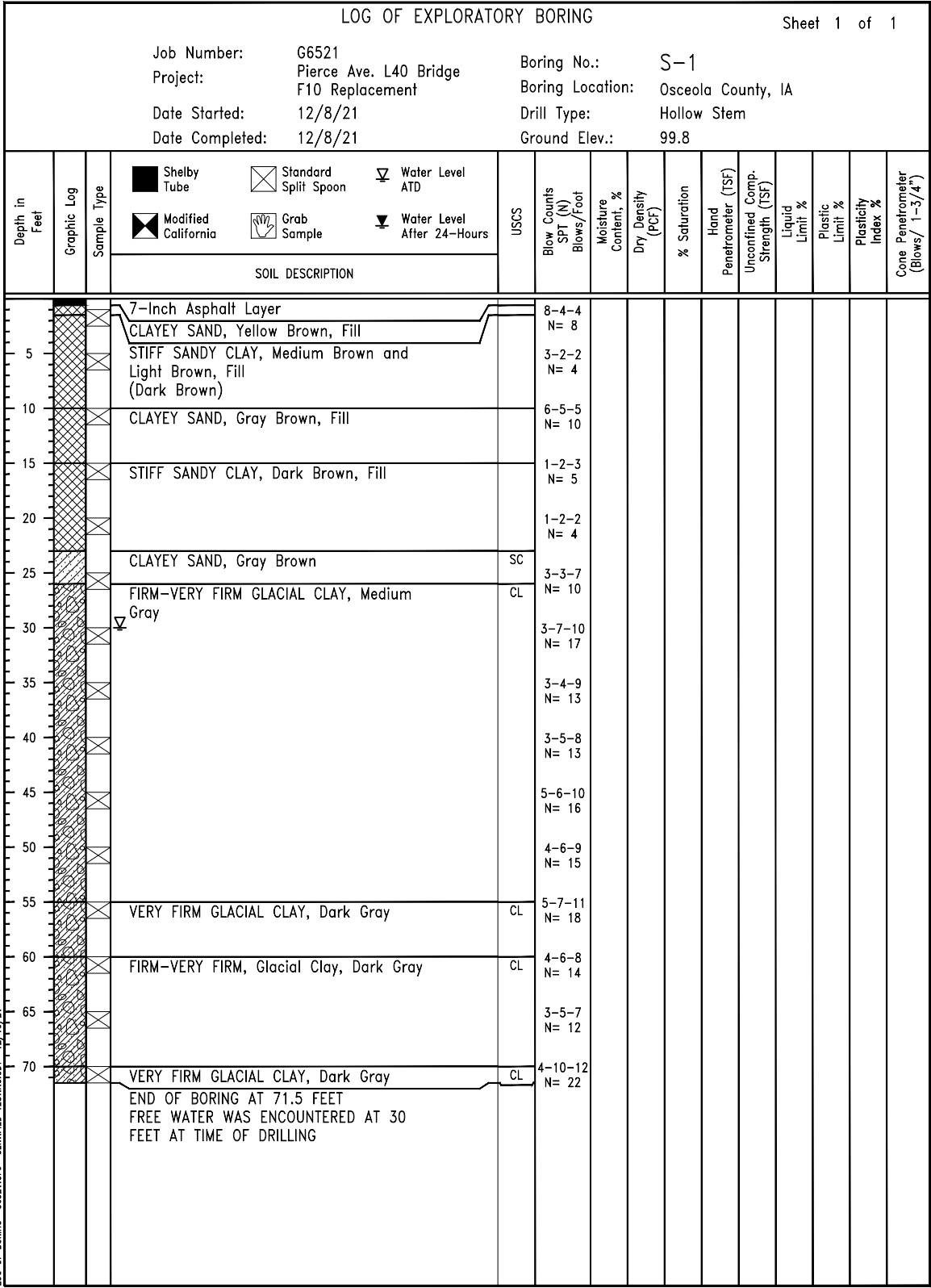
DETOUR PLAN AND TRAFFIC CONTROL

LOG OF EXPLORATORY BORING												Sheet 1 of 1					
Job Number:		G6521				Boring No.:		S-1									
Project:		Pierce Ave. L40 Bridge F10 Replacement				Boring Location:		Osceola County, IA									
Date Started:		12/8/21				Drill Type:		Hollow Stem									
Date Completed:		12/8/21				Ground Elev.:		99.8									
Depth in Feet	Graphic Log	Sample Type	Shelby Tube		Standard Split Spoon	Water Level ATD	USCS	Blow Counts SPT (N) Blows/foot	Moisture Content, %	Dry Density (pcf)	% Saturation	Hand Penetrometer (TSF)	Unconfined Comp. Strength (TSF)	Liquid Limit %	Plastic Limit %	Plasticity Index %	Cone Penetrometer (Blows/ 1-3/4")
			Modified California	Grab Sample													
SOIL DESCRIPTION																	
5			7-Inch Asphalt Layer						8-4-4								
			CLAYEY SAND, Yellow Brown, Fill						N= 8								
			STIFF SANDY CLAY, Medium Brown and Light Brown, Fill (Dark Brown)						3-2-2								
									N= 4								
			CLAYEY SAND, Gray Brown, Fill						6-5-5								
									N= 10								
			STIFF SANDY CLAY, Dark Brown, Fill						1-2-3								
									N= 5								
									1-2-2								
									N= 4								
25			CLAYEY SAND, Gray Brown					SC	3-3-7								
								N= 10									
			FIRM-VERY FIRM GLACIAL CLAY, Medium Gray					CL	3-7-10								
								N= 17									
								3-4-9									
								N= 13									
								3-5-8									
								N= 13									
								5-6-10									
								N= 16									
55			VERY FIRM GLACIAL CLAY, Dark Gray					CL	5-7-11								
								N= 18									
			FIRM-VERY FIRM, Glacial Clay, Dark Gray					CL	4-6-8								
								N= 14									
								3-5-7									
								N= 12									
								4-10-12									
								N= 22									
			END OF BORING AT 71.5 FEET														
			FREE WATER WAS ENCOUNTERED AT 30 FEET AT TIME OF DRILLING														

LOG OF EXPLORATORY BORING														Sheet 1 of 1		
Job Number:		G6521				Boring No.:		S-2								
Project:		Pierce Ave. L40 Bridge F10 Replacement				Boring Location:		Osceola County, IA								
Date Started:		12/7/21				Drill Type:		Hollow Stem								
Date Completed:		12/7/21				Ground Elev.:		99.9								
Depth in Feet	Graphic Log	Sample Type	 Shelby Tube	 Standard Split Spoon	 Water Level ATD	USCS	Blow Counts SPT (N) Blows/foot	Moisture Content, %	Dry Density (pcf)	% Saturation	Hand Penetrometer (TSF)	Unconfined Comp. Strength (TSF)	Liquid Limit %	Plastic Limit %	Plasticity Index %	Cone Penetrometer (Blows/ 1-3/4")
			 Modified California	 Grab Sample	 Water Level After 24-Hours											
SOIL DESCRIPTION																
0			11-Inch Concrete Bridge Deck													
5			Void Below Bridge Deck													
10																
15			(Cobbles at Surface)													
20			STIFF SANDY CLAY, Dark Brown, Fill													
25			FIRM GLACIAL CLAY, Medium Gray				CL	1-2-5 N= 7								
30			(Cobbles)					5-3-6 N= 9								
35			FIRM-VERY FIRM GLACIAL CLAY, Medium Gray				CL	3-5-8 N= 13								
40								3-6-10 N= 16								
45			VERY FIRM GLACIAL CLAY, Dark Gray				CL	4-6-9 N= 15								
50								4-5-13 N= 18								
55								8-11-16 N= 27								
60								7-10-12 N= 22								
65								5-8-12 N= 20								
70			GRAVELY SAND, Medium Gray				SW	10-12-16 N= 28								
75			FIRM GLACIAL CLAY, Dark Gray				CL	5-11-8 N= 19								
76.5	END OF BORING AT 76.5 FEET FREE WATER WAS ENCOUNTERED AT 20 FEET AT TIME OF DRILLING															

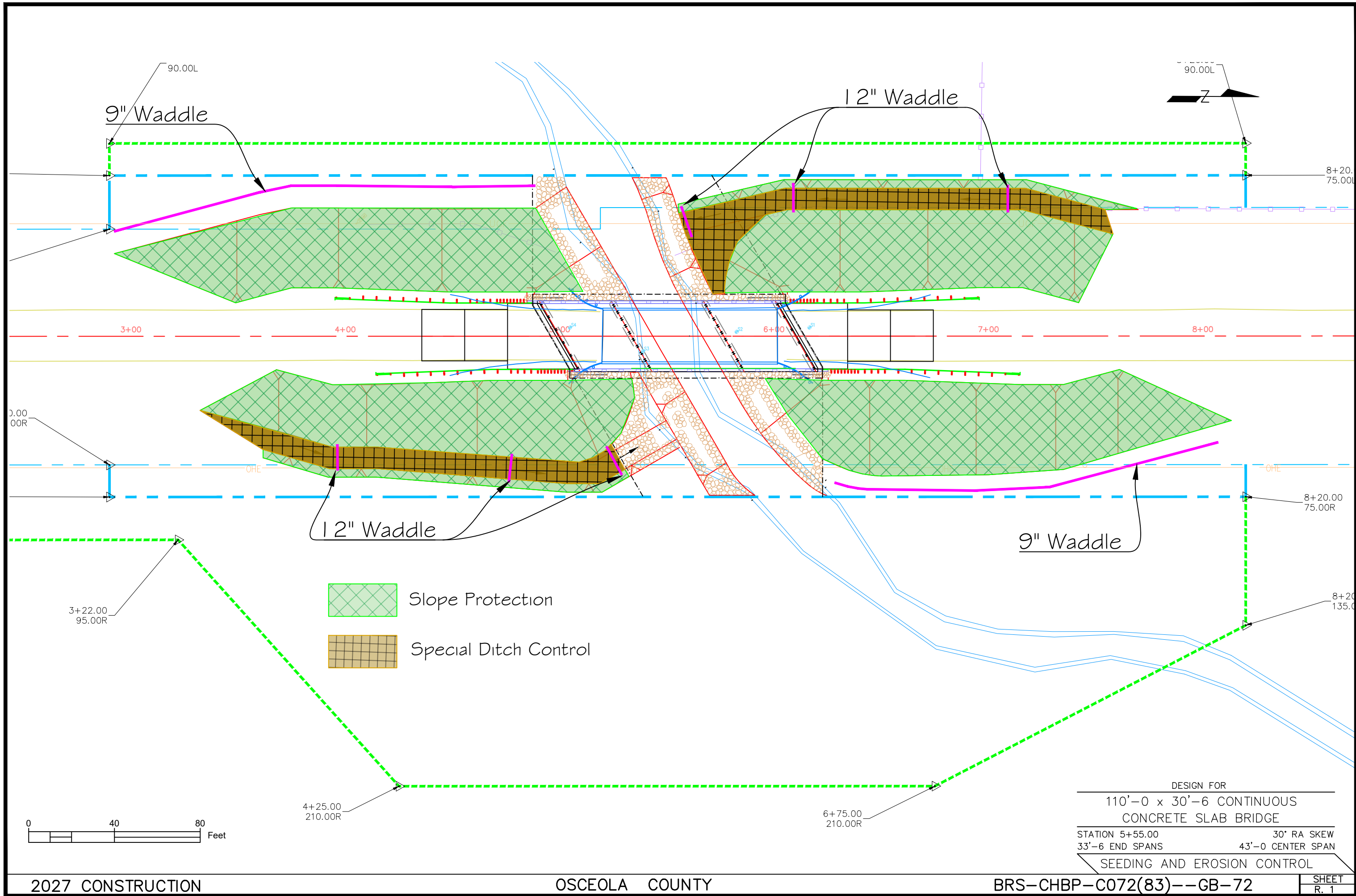


Note: Log of Boring copied from Bridge Sounding Report, Sealed by Jed A. Mcinerney P.E. # 22686 12-31-22

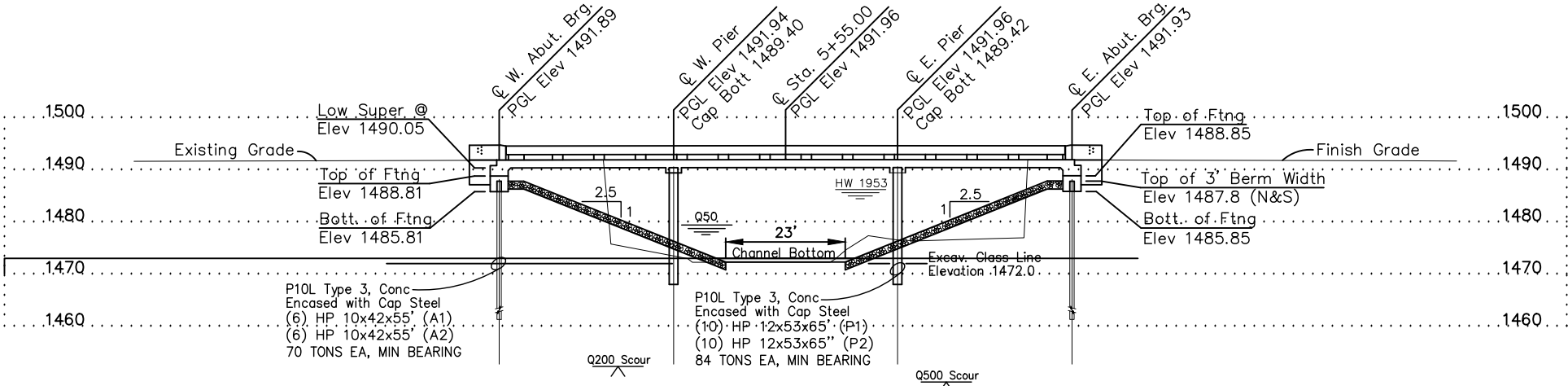


Note: Log of Boring copied from Bridge Sounding Report, Sealed by Jed A. Mcinerney P.E. # 22686 12-31-22

DESIGN FOR
110'-0 x 30'-6 CONTINUOUS
CONCRETE SLAB BRIDGE
STATION 5+55.00 30° RA SKEW
33'-6 END SPANS 43'-0 CENTER SPAN
SOIL BORING LOGS



BENCHMARK: Pt #12 Mag Spike in pmt. Sta 0+00.00, Elev. 1488.16
Pt #13 Mag Spike in pmt. Sta 26+51.46, Elev. 1508.92

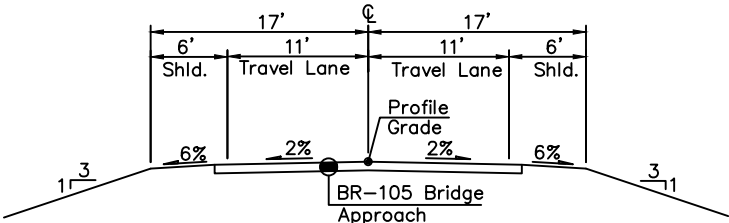


PVC	PVI	PVT
Sta 4+70.00	Sta 5+70.00	Sta 6+70.00
Elev 1491.81	Elev 1492.12	Elev 1491.79
	LVC 200.00	
	K = 315.37	
	SSD = 495	
	55 MPH Design	

+ 0.31% -0.32%

Match Grade Sta 4+60.00 Elev 1491.78 Match Grade Sta 6+90.00 Elev 1491.73

PROPOSED PROFILE GRADE LINE (PGL)



Approach Roadway
TYPICAL SECTION

LOCATION

Osceola County
T-99N, R-41W
Sections 29/30
East Holman Township
Over Cloverdale Creek

HYDRAULIC DATA

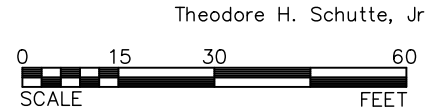
Drainage Area = 19.8 Square Miles
Design Discharge = 2,170 C.F.S.
Design High Water Elev. = 1,479.4
Manning Slope = 0.001530 Ft./Ft.
Bridge Waterway Area = 296 Sq. Ft.
Design Velocity = 7.34 Ft./Sec.
Q (design) = 2,170 C.F.S.
Q10 = 1,150 C.F.S. Stage Elev. = 1,478.6
Q25 = 1,710 C.F.S. Stage Elev. = 1,479.1
Q50 = 2,170 C.F.S. Stage Elev. = 1,479.4
Q100 = 2,690 C.F.S. Stage Elev. = 1,479.7
Q200 = 3,270 C.F.S. Stage Elev. = 1,479.9
Q500 = 3,990 C.F.S. Stage Elev. = 1,480.1
Exist. High Water Elev. = 1,486.2 (1953)
Anticipated Q200 Scour Elev. = 1,452.3
Anticipated Q500 Scour Elev. = 1,449.3

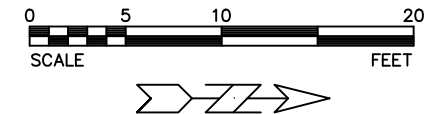
DESIGN FOR

110'-0" x 30'-6" CONTINUOUS
CONCRETE SLAB BRIDGE

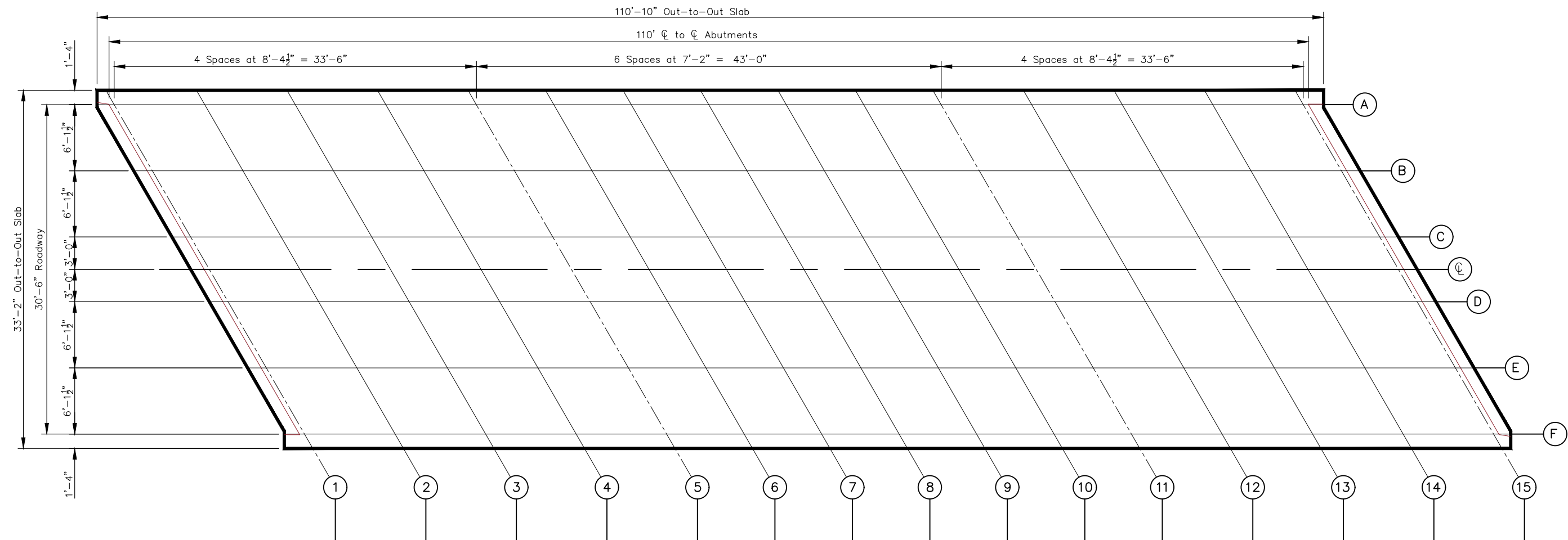
STATION 5+55.00 30' RA SKEW
33'-6" END SPANS 43'-0" CENTER SPAN

SITUATION PLAN



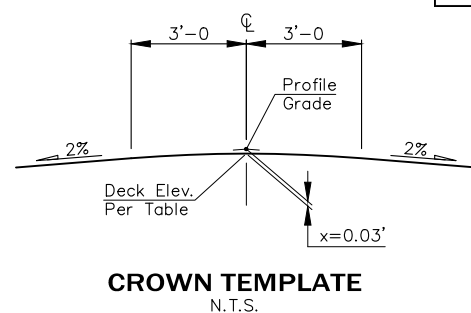


DECK ELEVATIONS GRID



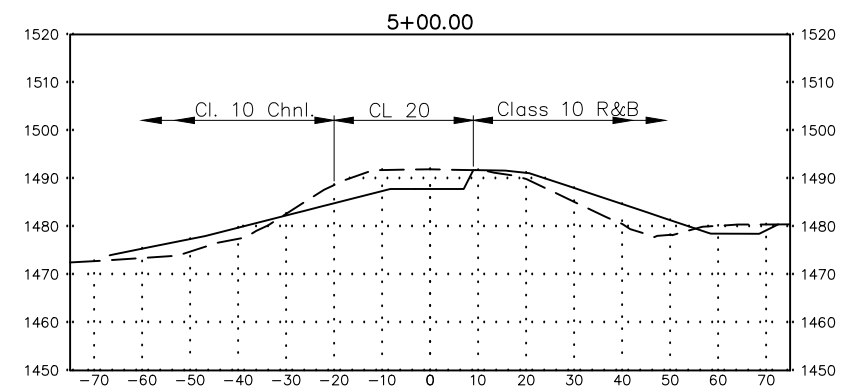
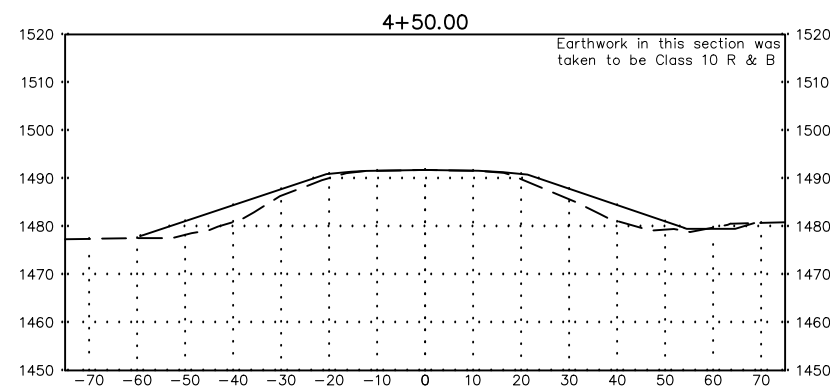
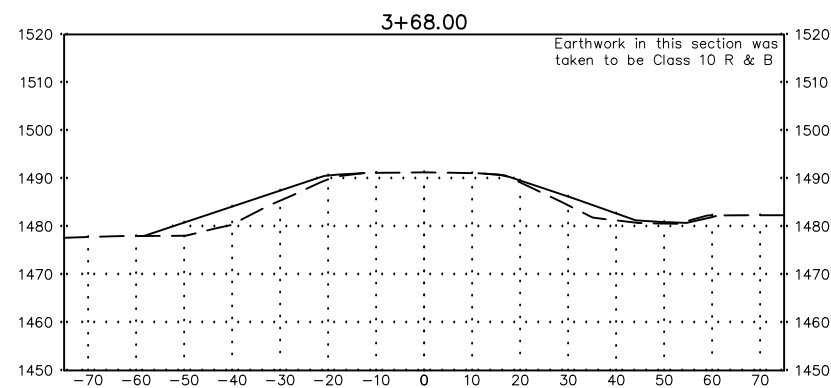
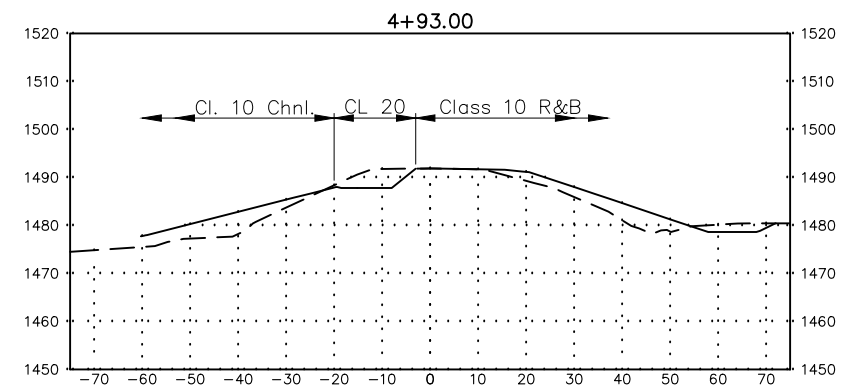
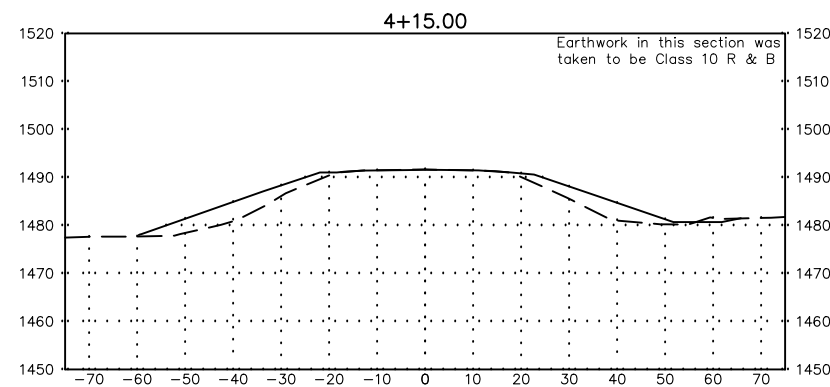
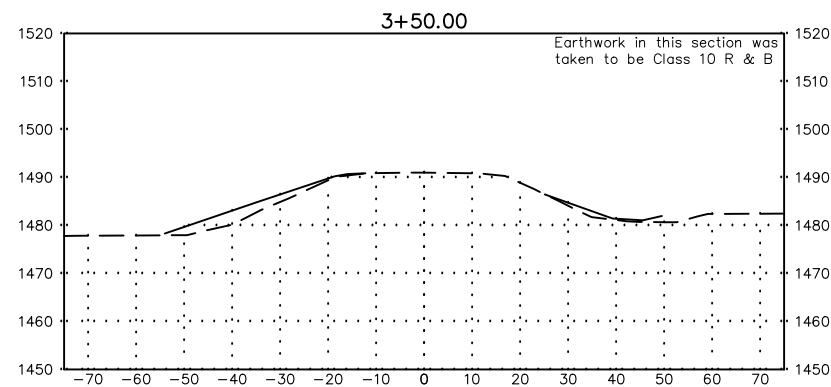
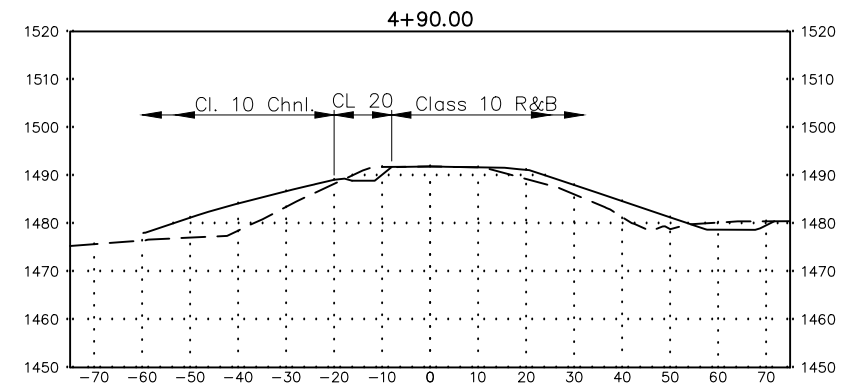
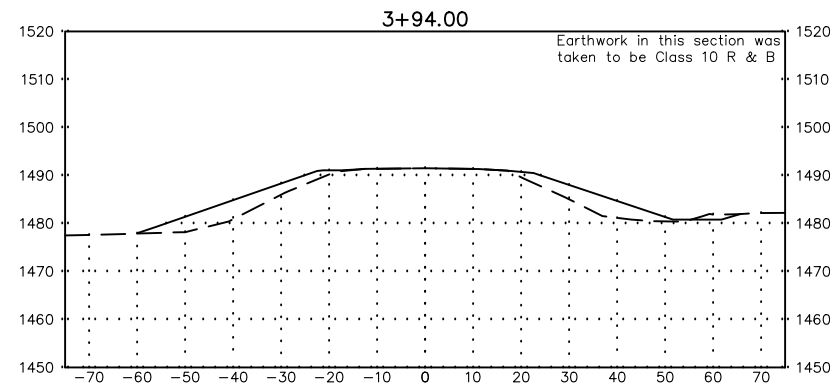
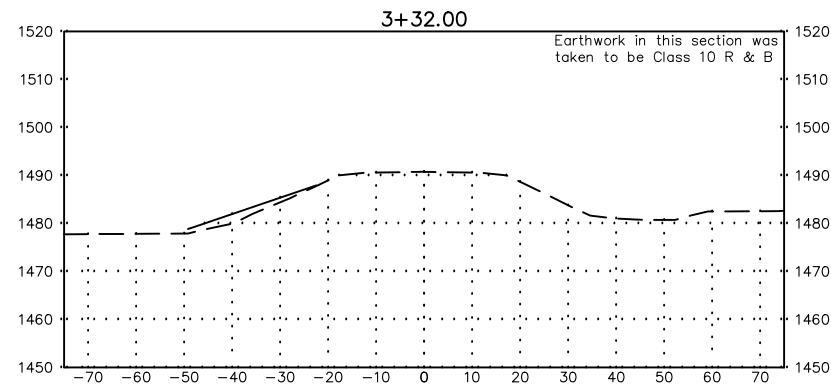
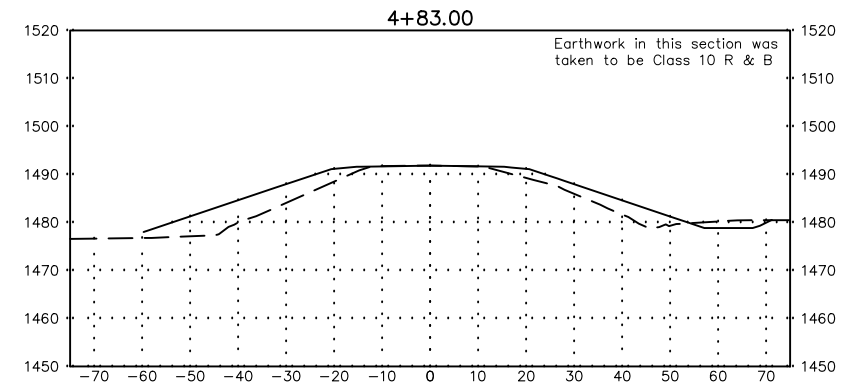
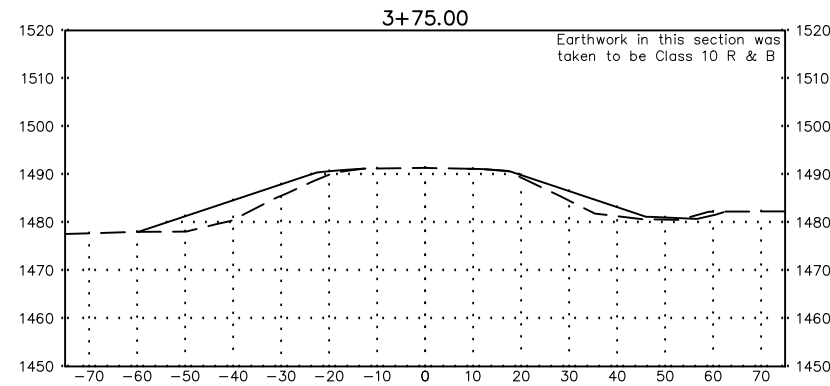
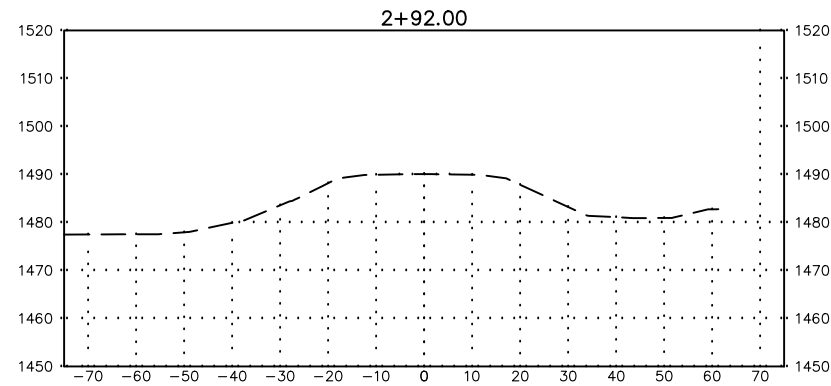
Offset Line	A1	1/4 span	1/2 span	3/4 span	P1	1/6 Span	1/3 Span	1/2 Span	2/3 Span	5/6 Span	P2	1/4 span	1/2 span	3/4 span	A2	Offset Line
A	1491.56	1491.58	1491.60	1491.62	1491.63	1491.64	1491.64	1491.65	1491.65	1491.66	1491.66	1491.66	1491.65	1491.65	1491.64	A
B	1491.70	1491.71	1491.73	1491.74	1491.75	1491.76	1491.77	1491.77	1491.78	1491.78	1491.78	1491.78	1491.77	1491.77	1491.76	B
C	1491.83	1491.84	1491.86	1491.87	1491.88	1491.89	1491.89	1491.90	1491.90	1491.90	1491.90	1491.90	1491.89	1491.88	1491.88	C
CL	1491.86	1491.88	1491.89	1491.90	1491.91	1491.92	1491.93	1491.93	1491.93	1491.93	1491.93	1491.93	1491.92	1491.91	1491.90	CL
D	1491.83	1491.85	1491.86	1491.88	1491.89	1491.89	1491.90	1491.90	1491.90	1491.90	1491.90	1491.90	1491.89	1491.88	1491.87	D
E	1491.72	1491.73	1491.75	1491.76	1491.77	1491.77	1491.78	1491.78	1491.78	1491.78	1491.78	1491.77	1491.76	1491.75	1491.74	E
F	1491.60	1491.62	1491.63	1491.64	1491.65	1491.65	1491.65	1491.66	1491.66	1491.65	1491.65	1491.65	1491.64	1491.63	1491.61	F

DECK ELEVATIONS TABLE
N.T.S.



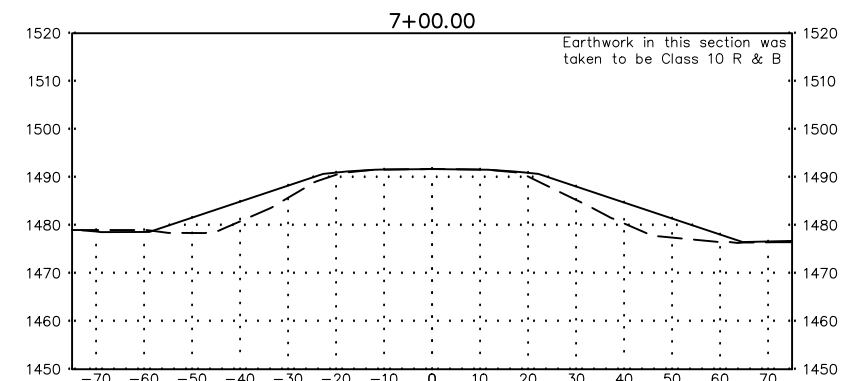
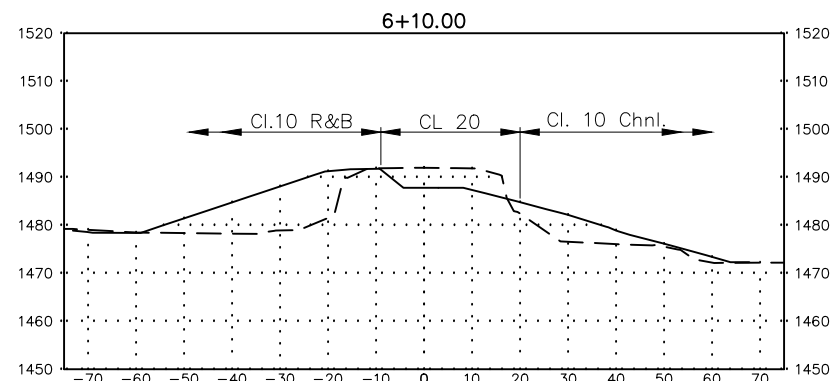
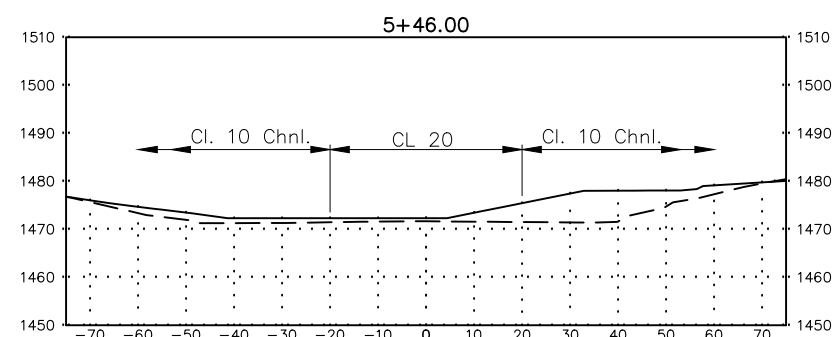
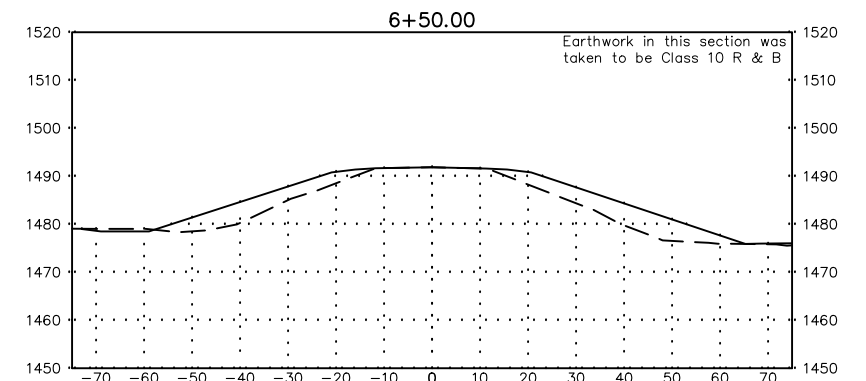
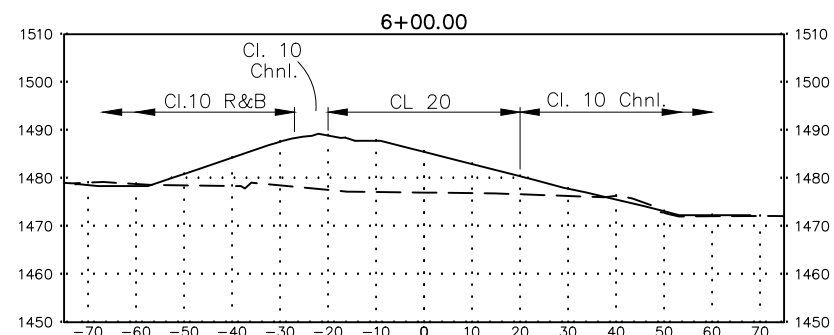
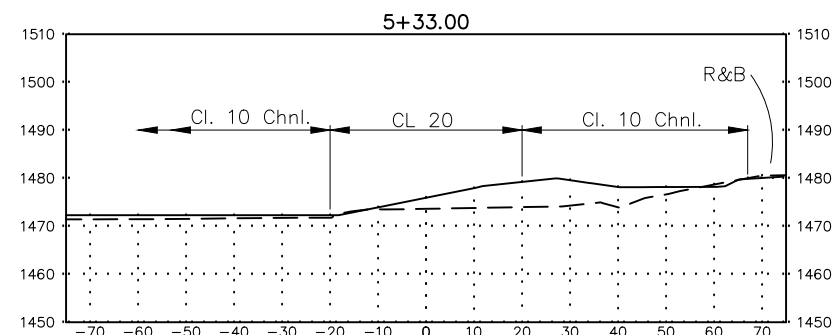
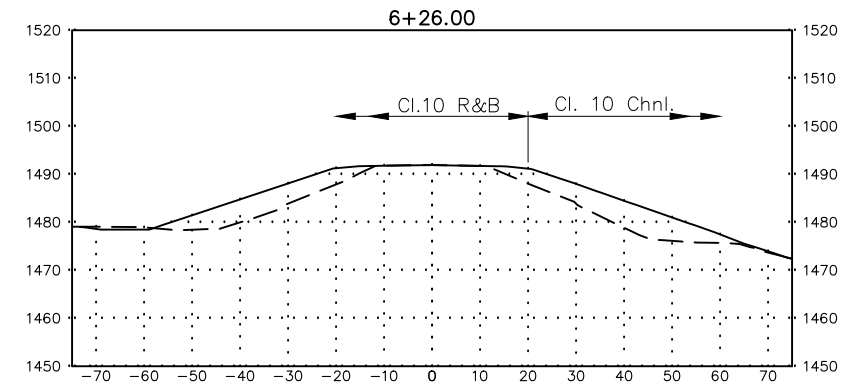
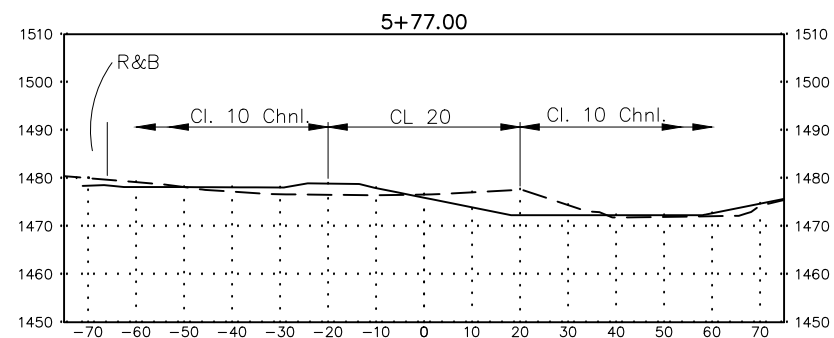
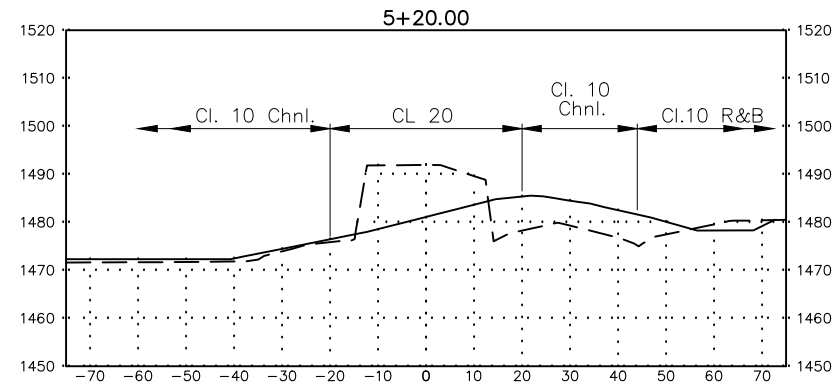
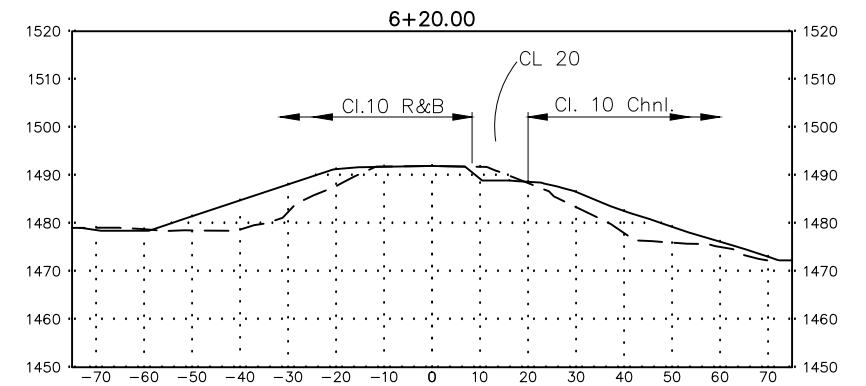
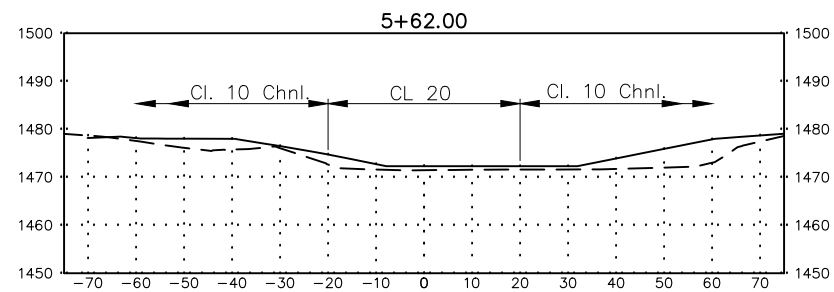
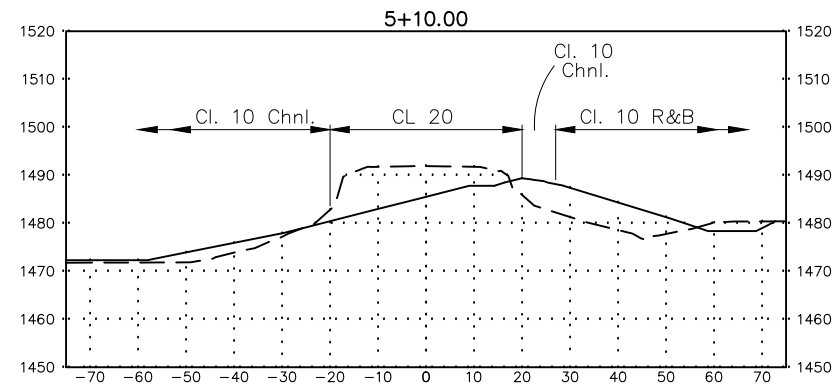
Note: Top of Bridge Deck Crown Elevation is 0.03 Feet Below Profile Grade Line

DESIGN FOR
110'-0 x 30'-6 CONTINUOUS
CONCRETE SLAB BRIDGE
STATION 5+55.00 30' RA SKEW
33'-6 END SPANS 43'-0 CENTER SPAN
DECK ELEVATIONS GRID



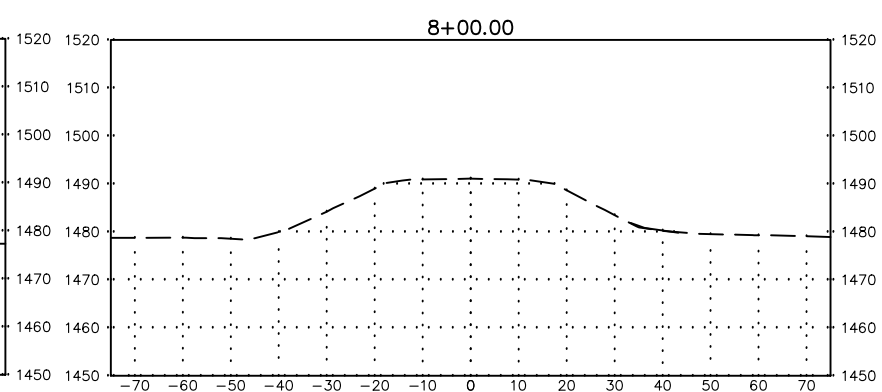
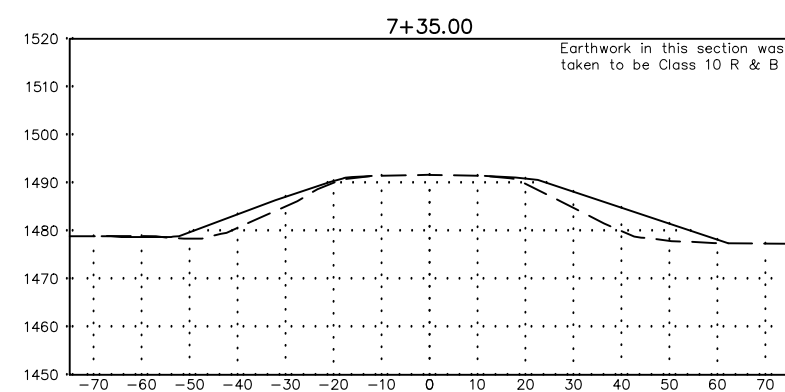
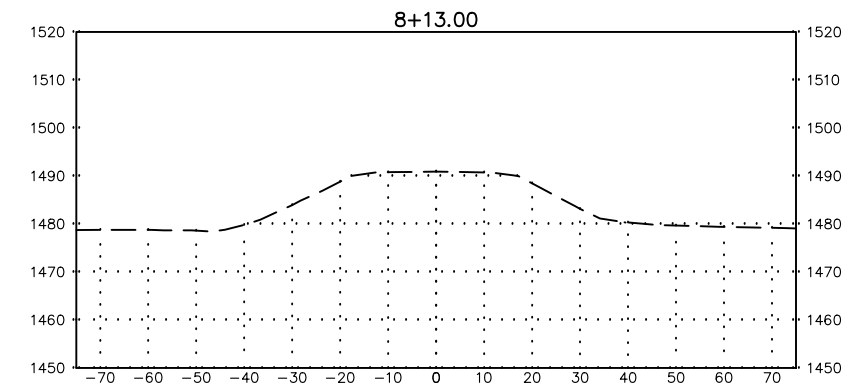
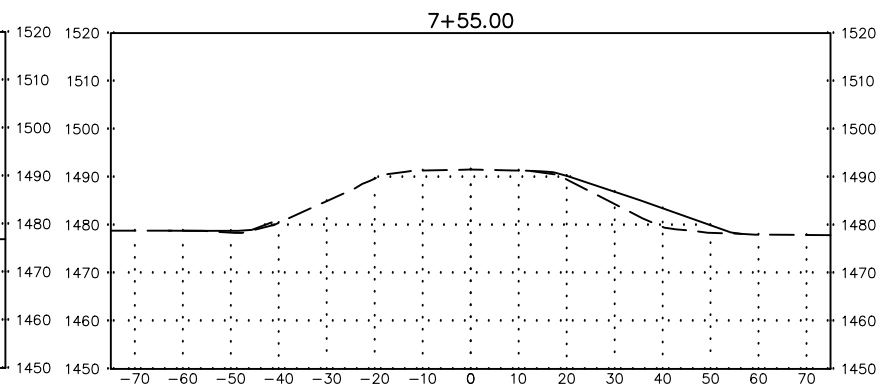
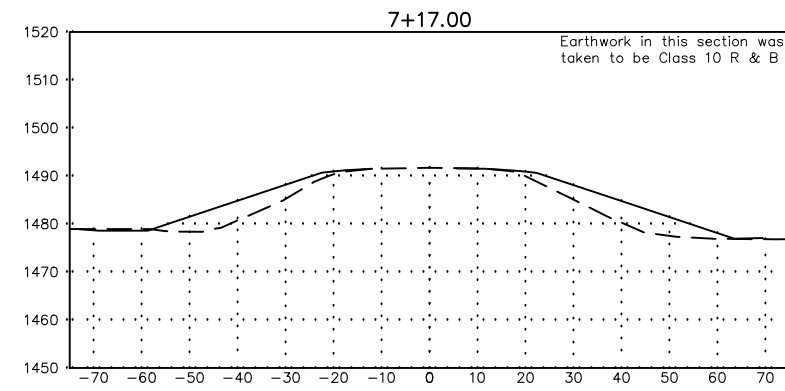
See Earthwork Tabulation for Quantities Computed from this Sheet

DESIGN FOR
110'-0 x 30'-6 CONTINUOUS
CONCRETE SLAB BRIDGE
STATION 5+55.00 30' RA SKEW
33'-6 END SPANS 43'-0 CENTER SPAN
EARTHWORK SECTIONS



See Earthwork Tabulations for Quantities Computed from this Sheet

DESIGN FOR
110'-0 x 30'-6 CONTINUOUS
CONCRETE SLAB BRIDGE
STATION 5+55.00 30' RA SKEW
33'-6 END SPANS 43'-0 CENTER SPAN
EARTHWORK SECTIONS



See Earthwork Tabulations for Quantities Computed from this Sheet

DESIGN FOR
110'-0 x 30'-6 CONTINUOUS
CONCRETE SLAB BRIDGE
STATION 5+55.00 30' RA SKEW
33'-6 END SPANS 43'-0 CENTER SPAN
EARTHWORK SECTIONS & SUMMARY