

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
TIA PROJECT CONCEPT REPORT

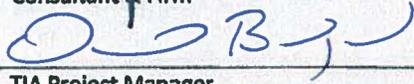
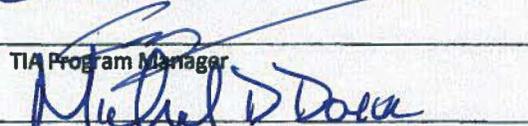


Project Type: Bridge Replacement
GDOT District: 2
Federal Route Number: N/A
State Route Number: N/A

P.I. Number: 0011397
County: Richmond
MPO ID Number: N/A

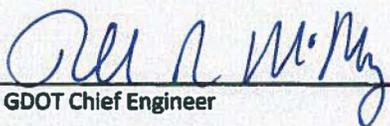
Replace the bridge on Old Waynesboro Road over Spirit Creek. This project would benefit the public through enhancing safety through replacing the bridge and increasing the load limits to allow for increasing traffic and truck loads.

Submitted for approval:

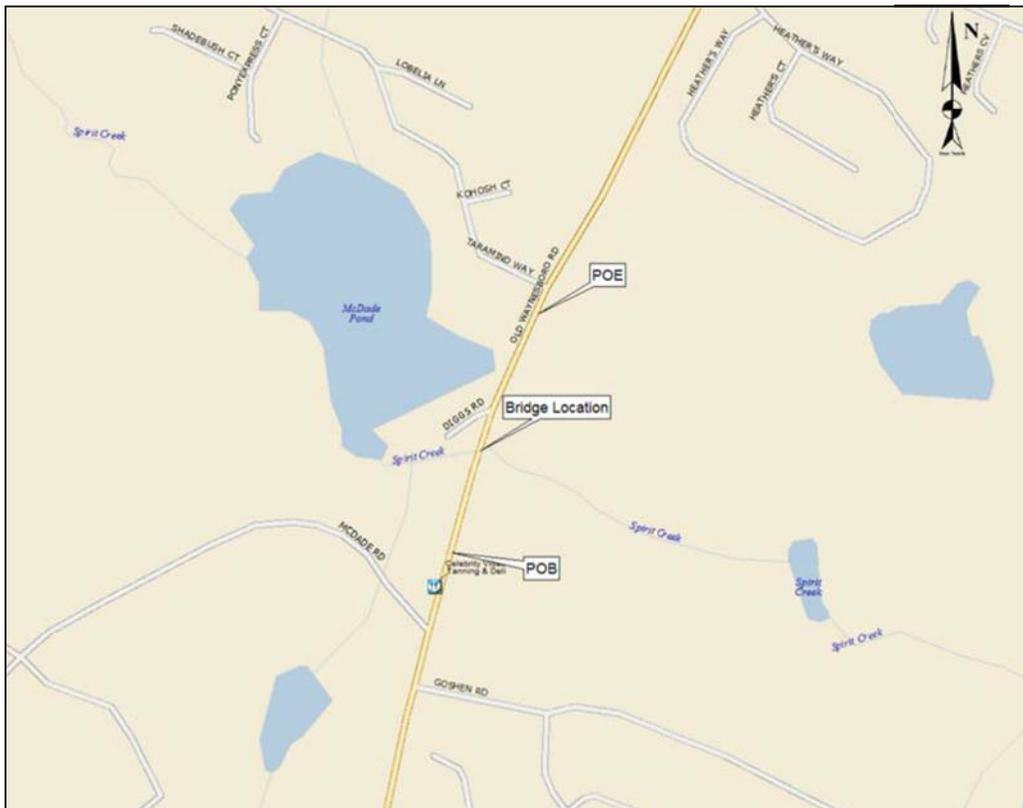
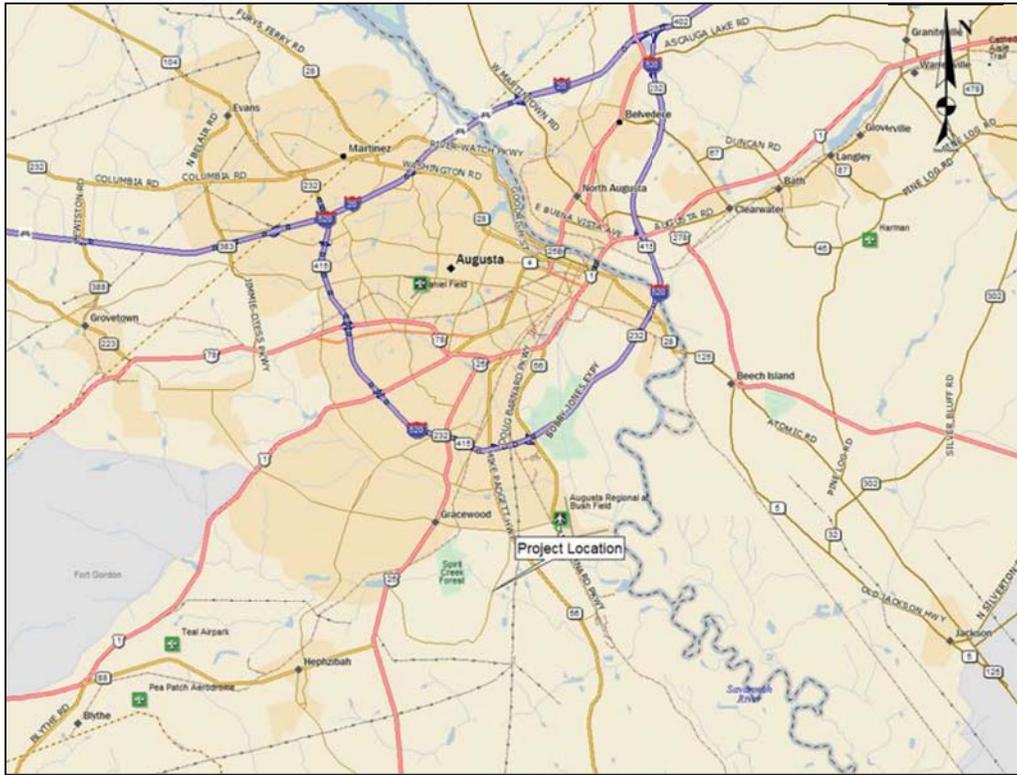
	<u>09/19/2014</u>
Local Government Representative	DATE
 <u>Civil Services, Inc.</u>	<u>09/15/14</u>
Consultant & Firm	DATE
	<u>9/19/14</u>
TIA Project Manager	DATE
	<u>9/22/14</u>
GDOT TIA Regional Coordinator	DATE
	<u>22 SEP 2014</u>
TIA Program Manager	DATE
 <u>Michael D. Dora</u>	<u>9/22/2014</u>
GDOT State TIA Administrator	DATE

Approval:

Concur:  9/24/14
GDOT Director of Engineering DATE

Approve:  9-30-14
GDOT Chief Engineer DATE

PROJECT LOCATION MAP



County: Richmond

PLANNING & BACKGROUND DATA

Project Intended Benefit: To improve roadway operation and safety through the use of bridge replacement and associated roadway improvements.

Description of the proposed project:

It is a bridge replacement project. The existing bridge is functionally obsolete and structurally deficient and does not meet the current standards. The existing bridge will be replaced with a 180'-0" long bridge with 2-12'-0" lanes; 2-4'-0" bike lanes; 2-2'-0" buffers; 2-5'-6" raised sidewalks. The proposed typical section of the roadway consists of 2-12'-0" lanes, 2-4'-0" bike lanes; 2-2'-6" curb & gutter; 2-6'-0" turf buffer; 2-5'-0" concrete sidewalk and 2-2'-6" utility stripes.

Federal Oversight: Exempt State Funded TIA Other

MPO: Augusta-Richmond County

MPO Project ID: N/A

Regional Commission: Central Savannah River RC

RC Project ID RC07-000130

Congressional District(s): 12

Projected Traffic: (if necessary) ADT

Year (2010): 6120

Open Year (2016): NA

Design Year (2030): 9180

Traffic Projections Performed by: GDOT

Functional Classification (Mainline): Urban Minor Arterial Street

Is this a 3R (Resurfacing, Restoration, & Rehabilitation) Project? No Yes

Will Context Sensitive Solutions procedures be utilized? No Yes

DESIGN AND STRUCTURAL DATA - Delete table if not applicable to project Mainline Design

Features: Roadway name/ID - delete any rows in table that are not applicable.

Feature	Existing	Standard*	Proposed
Typical Section			
- Number of Lanes	2	2	2
- Lane Width(s)	12	12	12
- Median Width & Type	N/A	N/A	N/A
- Outside Shoulder or Border Area Width	5'	16'	Curb & Gutter
- Outside Shoulder Slope	¾" per FT	2%	N/A
- Inside Shoulder Width	N/A	N/A	N/A
- Sidewalks	N/A	5'	5'
- Auxiliary Lanes	N/A	N/A	N/A
- Bike Lanes	N/A	4'	4'

County: Richmond

Posted Speed	45		45
Design Speed	50	50	50
Min Horizontal Curve Radius	2870.39	930	2870.39
Superelevation Rate	2.5%	4%	2.8%
Grade	2%	2%	2%
Access Control	N/A	N/A	N/A
Right-of-Way Width	80	80	80
Maximum Grade – Crossroad	N/A	N/A	N/A
Design Vehicle	WB-50	WB-50	WB-50
<i>Additional Items as needed</i>			None at this time

*According to current GDOT design policy if applicable

Major Structures:

Structure ID	Existing	Proposed
245-0078-0	180'-0" bridge with 2 – 12'-0" lanes; 2'-0" raised curbs. Curb to curb width = 24'-0"; Overall bridge width = 30'-3"	180'-0" long bridge with 2 - 12'-0" lanes; 2 - 4'-0' bike lanes; 2 - 2'-0" buffers; 2 – 5'-6" raised sidewalks. Curb to curb width = 36'-0"; Overall bridge width = 49'-3".

Major Interchanges/Intersections: NA

Utility Involvements: Yes

Telephone: AT&T

Water: Augusta/Richmond County Water and Sewer

Electric: Georgia Power

Sanitary Sewer: Augusta/Richmond County Water and Sewer

Cable: Comcast

Water line attached to the existing bridge to be relocated. AT&T FOC telephone line to be relocated.

Public Interest Determination Policy and Procedure recommended (Utilities)? No Yes

SUE Required: No Yes

Railroad Involvement: No

Complete Streets - Bicycle, Pedestrian, and/or Transit Warrants:

Warrants met: None Bicycle Pedestrian Transit

County: Richmond

Right-of-Way:

Required Right-of-Way anticipated: No Yes Undetermined
Easements anticipated: None Temporary Permanent Utility Other

Anticipated number of impacted parcels: 3
Displacements Anticipated: None
Businesses: None
Residences: None
Other: None

Transportation Management Plan [TMP] Required: No Yes
If Yes: Project classified as: Non-Significant Significant
TMP Components Anticipated: TTC TO PI

Design Exceptions to FHWA/AASHTO controlling criteria anticipated: NO

Design Variances to GDOT Standard Criteria anticipated: NO

ENVIRONMENTAL DATA

Augusta, GA will certify that compliance with applicable local, state, federal environmental requirements has been completed. Augusta, GA will submit "Environmental Certification"

Anticipated Environmental Document:

GEPA: Type A Letter Type B Letter
NEPA: CE EA/FONSI

Project Air Quality: (On-system projects only)

Is the project located in a PM 2.5 Non-attainment area? No Yes
Is the project located in an Ozone Non-attainment area? No Yes
Is a Carbon Monoxide hotspot analysis required? No Yes

MS4 Compliance – Is the project located in an MS4 area? No Yes
Project is located in Augusta, GA MS4 service area

Environmental Permits/Variations/Commitments/Coordination anticipated:

The bridge layout does not appear to impact the stream buffer, existing wetlands, or any Section 4(f) properties. The project will likely require a USACE Nationwide 3(a) or 14 permit from the USACE. MS4 compliance for this project will be handled through the City of Augusta.

NEPA/GEPA Comments & Information:

The project is being funded regionally through the TIA Fund and does not include any State or Federal funds. Augusta, GA will certify that compliance with applicable local, state, federal environmental requirements has been completed. Augusta, GA will submit “Environmental Certification”.

PROJECT RESPONSIBILITIES

Project Activities:

Project Activity	Party Responsible for Performing Task(s)
Concept Development	Civil Services, Inc.
Design	Civil Services, Inc.
Right-of-Way Acquisition	N/A
Utility Relocation	Augusta, GA and others
Letting to Contract	Augusta, GA
Construction Supervision	Augusta, GA
Providing Material Pits	Augusta-GA
Providing Detours	Augusta-GA
Environmental Studies, Documents, and Permits	Edwards-Pitman Environmental, Inc.
Environmental Mitigation	N/A
Construction Inspection & Materials Testing	Augusta, GA

Lighting required: No Yes

Other projects in the area: None

Other coordination to date: Augusta/Richmond County Utilities Department

Project Cost Estimate and Funding Responsibilities:

	Breakdown of PE	Breakdown of ROW	Breakdown of Reimbursable Utilities	Breakdown of CST	GDOT Project Management	Total Cost
By Whom	TIA	TIA	NA	TIA	TIA	
Date of Estimate	7/2014	7/2014	7/2014	7/2014		
TIA Current Programmed Budget \$	\$165,000	\$50,600	\$0.00	\$2,891,305.14	\$31,382.86	\$3,138,288
Estimated \$ Amount	\$334,602	\$0	\$0	\$2,562,125	N/A	
Budget Contingency \$	\$3,346	\$10,000	\$0	\$196,832	N/A	
Total Estimated Cost	\$337,948	\$10,000	\$0	\$2,758,957	\$31,383	\$3,138,288

- Note: 1. Construction phase contains CEI & CMT in addition to other contingencies.
 2. All phases contains Augusta, GA Project Management cost

ALTERNATIVES Augusta, GA preferred design concept is submitted

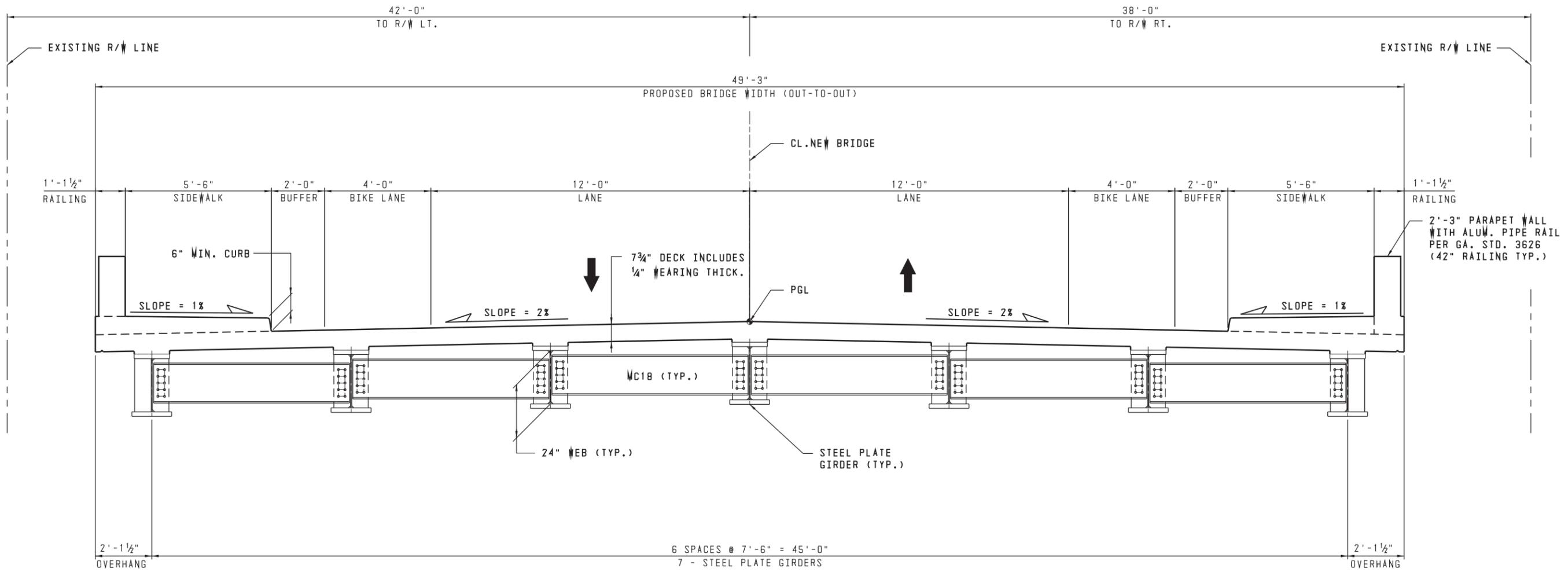
Preferred Alternative:			
Estimated Property Impacts:	None	Estimated Total Cost:	
Estimated ROW Cost:	None	Estimated CST Time:	
Rationale:			

Alternative 1: if applicable			
Estimated Property Impacts:		Estimated Total Cost:	
Estimated ROW Cost:		Estimated CST Time:	
Rationale			

Comments/additional information:

Attachments:

1. Concept Layout
2. Typical sections
3. Cost Estimates
4. Stage Construction Layout
5. Roadway Typical Section



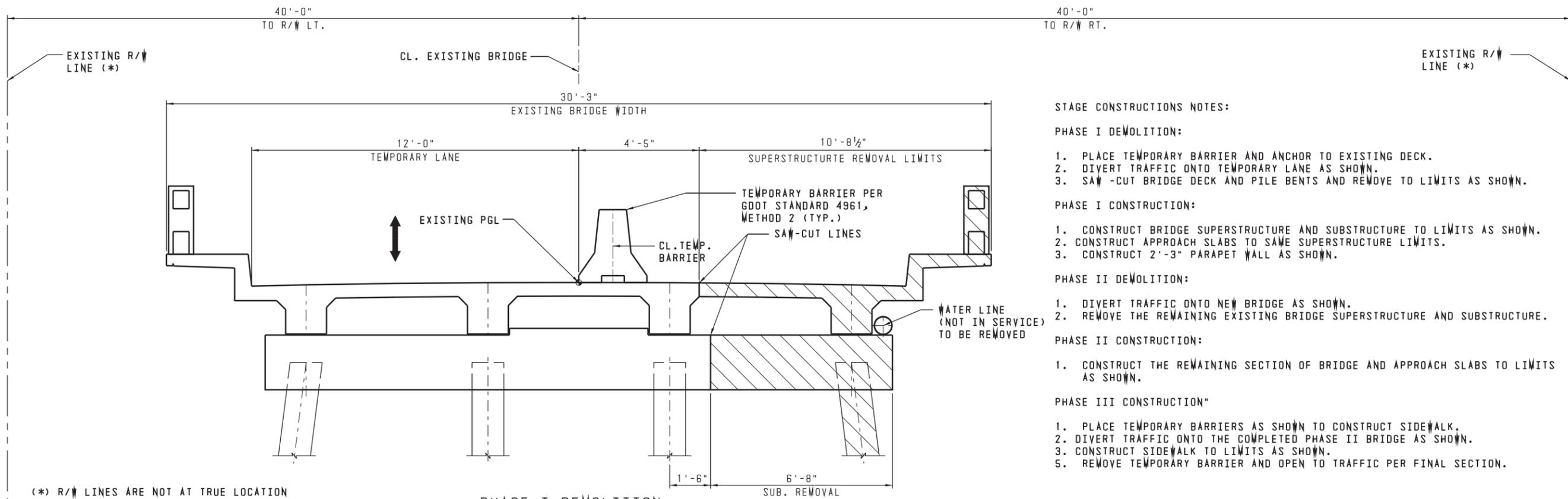
TYPICAL SECTION
(LOOKING IN DIRECTION OF STATIONING)

SHEET NO.		DATE		SCALE	
THE AUGUSTA-RICHMOND COUNTY COMMISSION OLD WAYNESBORO ROAD BRIDGE REPLACEMENT OVER SPIRIT CREEK					
DATE	BY	CHECKED	APPROVED	SCALE	DATE
AUGUSTA-RICHMOND COUNTY ENGINEERING DEPARTMENT 505 TELFAIR STREET, AUGUSTA, GEORGIA 30901 Tel. (706)-796-5040 Fax (706)-796-5045					
CSI CIVIL SERVICES, INC. CONSULTING ENGINEERS <small>INCORPORATED IN N.E.</small> <small>ATTENTION: 1000</small> <small>PHONE: (404) 525-8801</small> <small>FAX: (404) 525-8801</small>					

**Estimated Construction Cost for
Old Waynesboro Road over Spirit Creek
Richmond County
RC07-000130
P.I. No. 0011397**

ROADWAY						
	Description	Unit	Quantity	Unit Price	Duration	Cost
1	Temporary Barrier Wall	LF	282	\$32.00	1	\$9,024.00
2	Relocate Temporary Barrier Wall	LF	282	\$12.00	1	\$3,384.00
3	Temporary Crash Cushion	LO	2	\$1,500.00	1	\$3,000.00
4	Signs	ED	30	\$0.60	279	\$5,022.00
5	Portable Variable Message Sign	ED	2	\$15.00	279	\$8,370.00
6	Portable Signal	ED	2	\$145.00	279	\$80,910.00
7	Drum	ED	60	\$0.45	279	\$7,533.00
8	Guardrail - Roadway	LF	600	\$20.00	1	\$12,000.00
9	End Anchorage Assembly - Parallel	EA	4	\$2,200.00	1	\$8,800.00
10	Bridge Anchorage Assembly	EA	4	\$2,100.00	1	\$8,400.00
11	Curb & Gutter	LF	1222	\$20.00	1	\$24,440.00
12	4" Sidewalk	SY	679	\$30.00	1	\$20,370.00
13	2.5" Asphalt Traffic C	TN	288	\$100.00	1	\$28,800.00
14	8" Base	SY	2172	\$17.00	1	\$36,924.00
15	12" Stabilization	SY	2557	\$4.00	1	\$10,228.00
16	Embankment	CY	2000	\$7.00	1	\$14,000.00
17	Pipe Culvert, Optional Material, Round, 24" SD	LF	1340	\$75.00	1	\$100,500.00
18	Curb Inlet < 10'	EA	8	\$10,000.00	1	\$80,000.00
19	Mitered End Section 24" SD	EA	4	\$1,500.00	1	\$6,000.00
SIGNING & PAVEMENT MARKINGS						
	Description	Unit	Quantity	Unit Price	Duration	Cost
1	10x10 Yellow Reflectorized Panel	EA	25	\$5.00	1	\$125.00
2	Stop Bar Markings (Phase 1)	LF	24	\$5.00	1	\$120.00
3	Stop Bar Markings (Phase 2)	LF	24	\$5.00	1	\$120.00
4	Single Post Sign	AS	3	\$250.00	1	\$750.00
5	Single Post Sign, Relocate	AS	2	\$70.00	1	\$140.00
6	Object Marker	EA	4	\$175.00	1	\$700.00
7	PAINTED PAVEMENT MARKINGS, FINAL SURFACE	LS	1	\$10,000.00	1	\$10,000.00
BRIDGE						
	Description	Unit	Quantity	Unit Price	Duration	Cost
1	Permanent Bridge	SF	8865	\$115.00	1	\$1,019,475.00
UTILITIES						
	Description	Unit	Quantity	Unit Price	Duration	Cost
1	Water Line Relocation	LS	1	\$60,000.00	1	\$60,000.00
2	Telephone Line Relocation	LS	1	\$25,000.00	1	\$25,000.00
3	Subsurface Utility Engineering Services	LS	1	\$20,000.00	1	\$20,000.00
Sub-Total						\$1,604,135.00
	Mobilization (10%)					\$160,413.50
	Maintenance of Traffic (10%)					\$176,454.85
	Contingency (20%)					\$388,200.67
	Scope Creep (10%)					\$232,920.40
Total						\$2,562,124.42

* Based on 279 Construction Days



PHASE I DEMOLITION
(LOOKING IN DIRECTION OF STATIONING)

STAGE CONSTRUCTIONS NOTES:

PHASE I DEMOLITION:

1. PLACE TEMPORARY BARRIER AND ANCHOR TO EXISTING DECK.
2. DIVERT TRAFFIC ONTO TEMPORARY LANE AS SHOWN.
3. SAW-CUT BRIDGE DECK AND PILE BENTS AND REMOVE TO LIMITS AS SHOWN.

PHASE I CONSTRUCTION:

1. CONSTRUCT BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE TO LIMITS AS SHOWN.
2. CONSTRUCT APPROACH SLABS TO SAME SUPERSTRUCTURE LIMITS.
3. CONSTRUCT 2'-3" PARAPET WALL AS SHOWN.

PHASE II DEMOLITION:

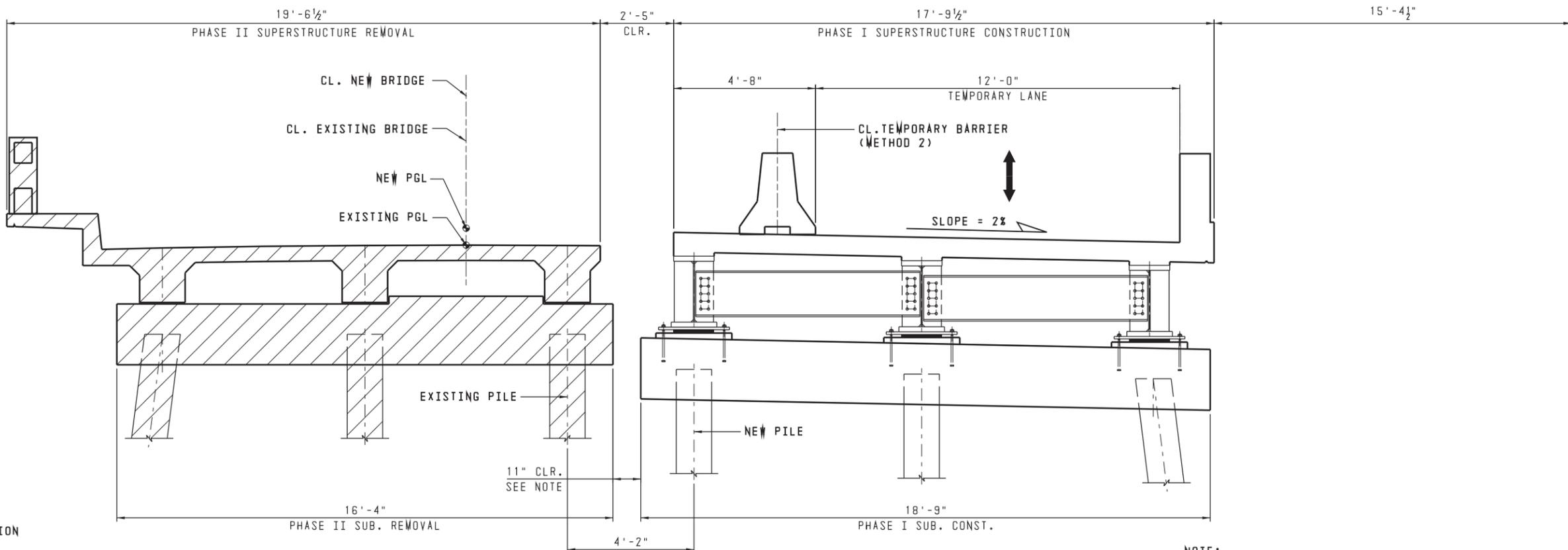
1. DIVERT TRAFFIC ONTO NEW BRIDGE AS SHOWN.
2. REMOVE THE REMAINING EXISTING BRIDGE SUPERSTRUCTURE AND SUBSTRUCTURE.

PHASE II CONSTRUCTION:

1. CONSTRUCT THE REMAINING SECTION OF BRIDGE AND APPROACH SLABS TO LIMITS AS SHOWN.

PHASE III CONSTRUCTION:

1. PLACE TEMPORARY BARRIERS AS SHOWN TO CONSTRUCT SIDEWALK.
2. DIVERT TRAFFIC ONTO THE COMPLETED PHASE II BRIDGE AS SHOWN.
3. CONSTRUCT SIDEWALK TO LIMITS AS SHOWN.
5. REMOVE TEMPORARY BARRIER AND OPEN TO TRAFFIC PER FINAL SECTION.



PHASE II DEMOLITION
(LOOKING IN DIRECTION OF STATIONING)

PHASE I CONSTRUCTION
(LOOKING IN DIRECTION OF STATIONING)

PHASE DEMOLITION

PHASE CONSTRUCTION

NOTE:
THE 11" DIMENSION SHOWN IS THE CLEAR DISTANCE BETWEEN THE EXISTING AND NEW SUBSTRUCTURE CONSTRUCTION LIMITS AND NOT BETWEEN EXISTING AND NEW BENTS. THE PROPOSED BENT 2 AND EXISTING BENTS DO NOT LINE UP.

SHEET NO. **1**

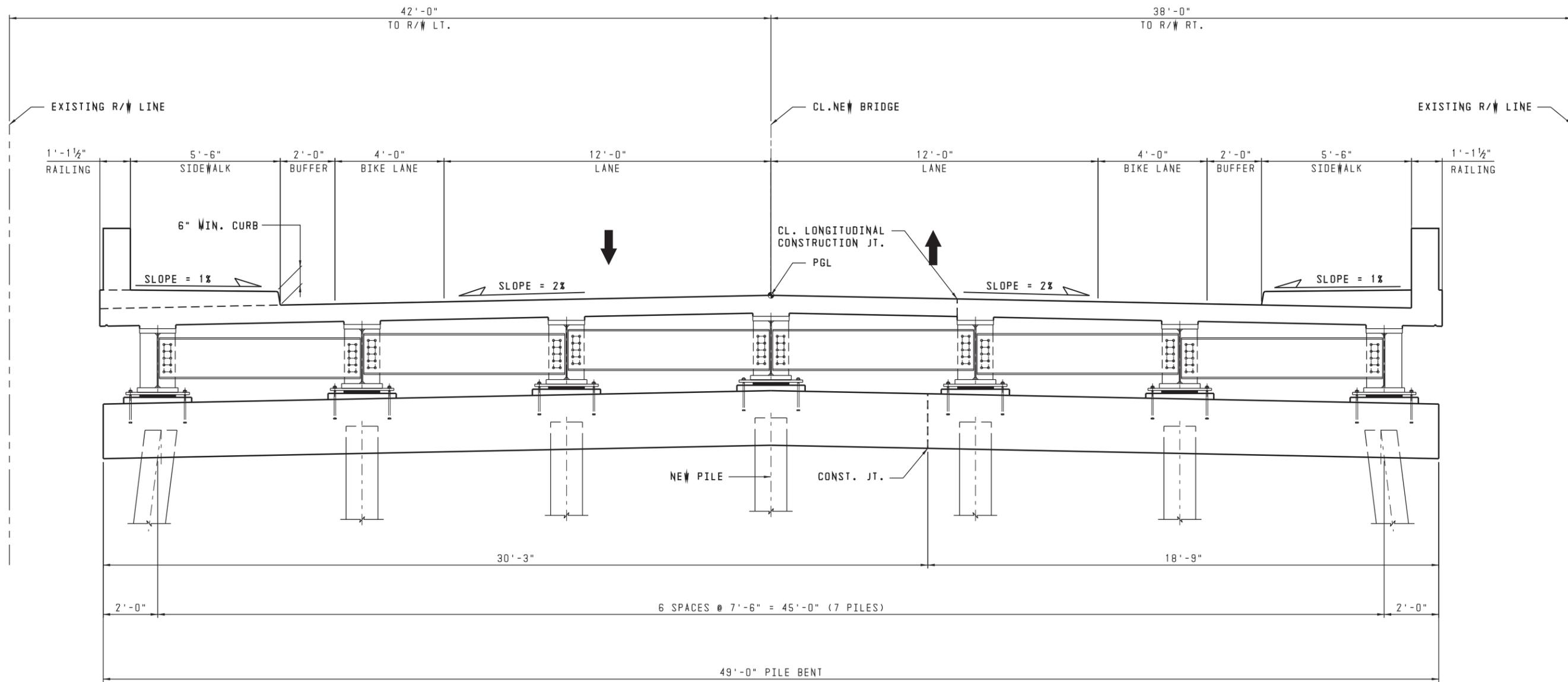
THE AUGUSTA-RICHMOND COUNTY COMMISSION
 OLD WAYNESBORO ROAD BRIDGE REPLACEMENT
 OVER SPIRIT CREEK

DATE	08/20/14
SCALE	SCALE AS SHOWN
PROJECT NO.	00-0000 0000
DATE	08-2000
SCALE	SCALE AS SHOWN
PROJECT NO.	00-0000

AUGUSTA-RICHMOND COUNTY
ENGINEERING DEPARTMENT
 505 TELFAIR STREET, AUGUSTA, GEORGIA 30901
 Tel. (706)-796-5040 Fax (706)-796-5045

CSI CIVIL SERVICES, INC.
CONSULTING ENGINEERS
 800 PEARSONS BLVD., N.E.
 ATLANTA, GA 30328
 PHONE (404) 525-2001
 FAX (404) 525-2004

DATE



FINAL PROPOSED BRIDGE (BENT 2 SHOWN)
(LOOKING IN DIRECTION OF STATIONING)

SHEET NO.

THE AUGUSTA-RICHMOND COUNTY COMMISSION
OLD WAYNESBORO ROAD BRIDGE REPLACEMENT
OVER SPIRIT CREEK

DATE OF REVISION: 08/2014
SCALE: AS SHOWN
PROJECT NO.: 00-0000
JOB NUMBER: 00-0000

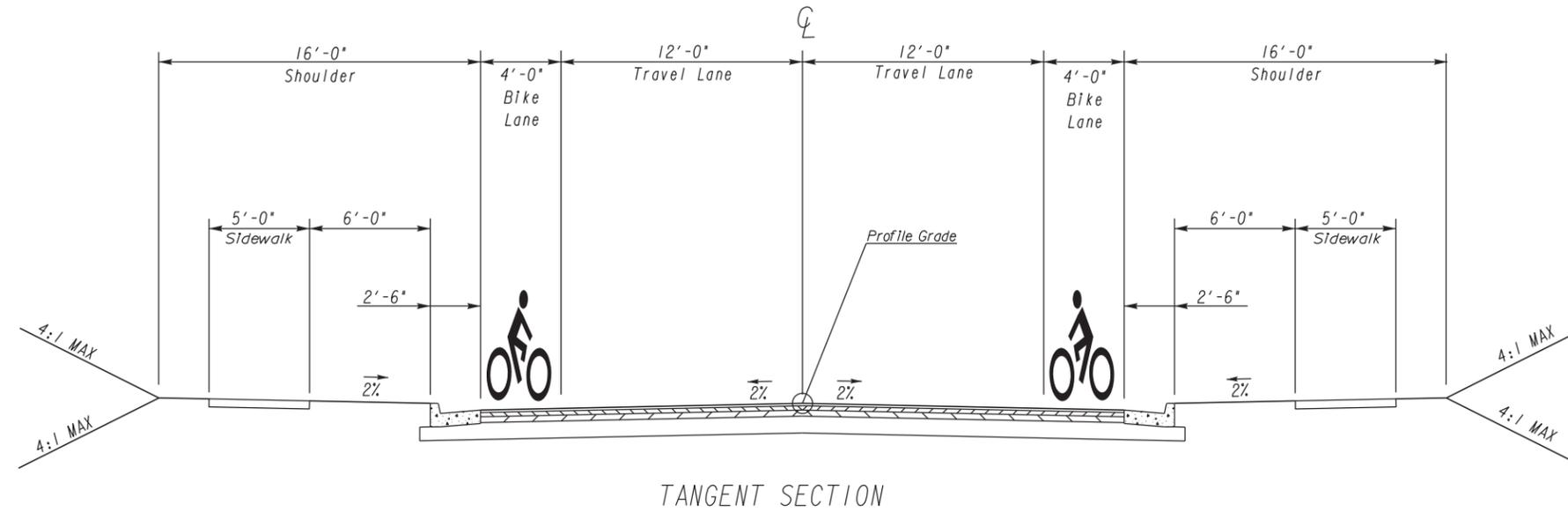
REV. NO.	DATE	BY	CHKD.	DESCRIPTION

AUGUSTA-RICHMOND COUNTY
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505 TELFAIR STREET, AUGUSTA, GEORGIA 30901
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ATLANTA, GA 30328
PHONE: (404) 525-8801
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DATE

TYPICAL SECTION



ALLOWABLE RANGES TABLE

FOR THIS PROJECT, CROSS SLOPES THAT ARE ADJUSTED TO 'BEST FIT' EXISTING PAVEMENT SLOPES ARE SUBJECT TO THE FOLLOWING LIMITS:

A. NORMAL CROWN

SECTION WITH GRADES 0.5% OR GREATER	SECTION WITH GRADES LESS THAN 0.5%
0.0150 FT/FT - MINIMUM	0.0156 FT/FT - MINIMUM
0.0208 FT/FT - DESIRABLE	0.0208 FT/FT - DESIRABLE
0.0250 FT/FT - MAXIMUM	0.0300 FT/FT - MAXIMUM

B. SUPERELEVATION RATE

S.E. RATE SHOWN ON PLANS OR SE RATE EXISTING IN FIELD, WHICHEVER IS GREATER.

C. SUPERELEVATION TRANSITION LENGTH (LENGTH FROM FLAT POINT TO FULL SE)

RATE OF CHANGE		CORRESPONDING DIFFERENCE IN GRADE BETWEEN PIVOT POINT AND EDGE OF PAVEMENT
MINIMUM	1:150	0.67%
DESIRABLE	1:200	0.50%
MAXIMUM	1:300	0.33%

LENGTH SHALL BE SET TO AVOID CREATING A FLAT GUTTER GRADE ON LOW SIDE AND TO AVOID FLAT CROSS SLOPES AT OR NEAR THE LOW POINT OF VERTICAL CURVES.

D. POSITIONING OF SUPERELEVATION TRANSITION LENGTH ON SIMPLE CURVES

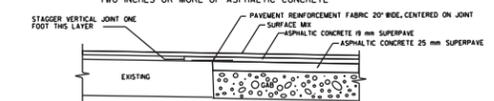
- 50% OF TRANSITION INSIDE CURVE - MAXIMUM
- 33% OF TRANSITION INSIDE CURVE - DESIRABLE
- 20% OF TRANSITION INSIDE CURVE - MINIMUM

NOTE: CROWN WIPE-OUT SHALL BE AT THE SAME RATE AS THE SE TRANSITION.

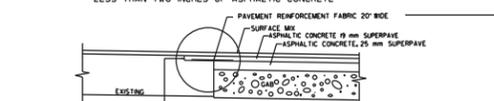
E. SMOOTHING OF BREAKS IN EDGE PROFILE AT BEGIN AND END OF TRANSITION SHALL BE ACCOMPLISHED BY VERTICAL CURVE WITH A MINIMUM LENGTH (1 IN FEET) EQUAL TO THE SPEED DESIGN (IN MPH).

PAVEMENT FABRICATION DETAIL

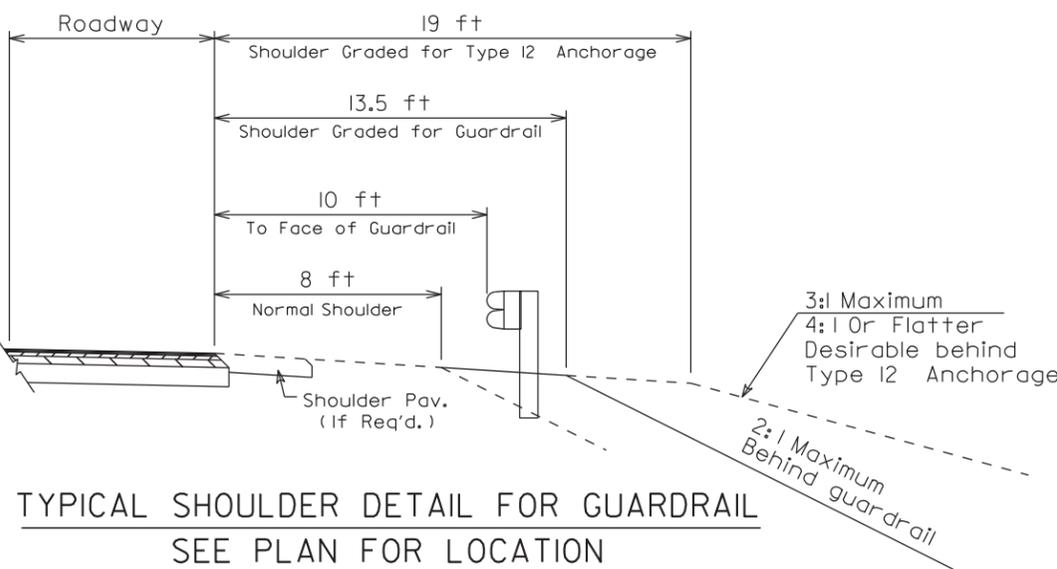
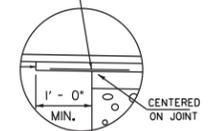
TYPICAL SECTION DETAIL TO BE USED WHEN EXISTING PAVEMENT IS TO BE RESURFACED WITH TWO INCHES OR MORE OF ASPHALTIC CONCRETE



TYPICAL SECTION DETAIL TO BE USED WHEN EXISTING PAVEMENT IS TO BE RESURFACED WITH LESS THAN TWO INCHES OF ASPHALTIC CONCRETE



MILL EXISTING LANE ONE FOOT WIDE TO DEPTH OF ADJOINING LAYER TO BE PLACED. COST OF MILLING FOR THIS WORK TO BE INCLUDED IN THE UNIT PRICE BID FOR PAVEMENT REINFORCING FABRIC.



SLOPE CONTROLS		
SLOPE	CUT	FILL
4:1	—	0-10'
2:1	ALL	OVER 10'

CSI CIVIL SERVICES, INC.
CONSULTING ENGINEERS
620 PEACHTREE ST. N.E.
SUITE 300R
ATLANTA, GA 30308
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REVISION DATES

BRIDGE REPLACEMENT
OLD WAYNESBORO ROAD
OVER SPIRIT CREEK
TYPICAL SECTIONS