

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

Allyson Foster Boyd
Allyson Foster Boyd
2025.11.21 13:08:46-05'00'

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED. THE SIGNATURE MUST BE VERIFIED ON THE ELECTRONIC DOCUMENTS.

CDM Smith
1100 Marion Street
Suite 300
Knoxville, TN 37921

Allyson Foster Boyd, P.E. No. 119,736

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE OF TENN. CODE ANN. §62-2-306.

SHEET NAME	SHEET NO.
SIGNATURE SHEETS	BRIDGE-SIGN1
TITLE SHEET	1
INDEX AND STANDARD DRAWINGS	1A
PROJECT COMMITMENTS	1B
ESTIMATED ROADWAY QUANTITIES & UTILITY OWNERS	2A
GENERAL NOTES AND SPECIAL NOTES	2B
ENVIRONMENTAL GENERAL NOTES	2E
PAVEMENT TRANSITION DETAILS	3
TRAFFIC CONTROL PLAN BR. NO. 53-SR073-8.72 (LT. & RT.) PHASE 1	4, 4A – 4H
TRAFFIC CONTROL PLAN BR. NO. 53-SR073-8.72 (LT. & RT.) PHASE 2	5, 5A – 5F
TRAFFIC CONTROL PLAN SR444 PHASE 1	6, 6A
TRAFFIC CONTROL PLAN SR444 PHASE 2	7, 7A
TRAFFIC CONTROL PLAN SR444 DETOUR	8



THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

Susanne Dawson
Susanne Dawson
2025.11.21 12:53:14-05'00'

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CDM Smith
1100 Marion Street
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Knoxville, TN 37921

Susanne Dawson, P.E. No. 111,826

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE OF TENN. CODE ANN. §62-2-306.

SHEET NAME	SHEET NO.
SIGNATURE SHEET	BRIDGE-SIGN1
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INDEX AND STANDARD DRAWINGS	1A
LAYOUT OF BRIDGES TO BE REPAIRED	BR-1
ESTIMATED BRIDGE QUANTITIES	BR-2
GENERAL NOTES	BR-3
PHASE CONSTRUCTION	BR-4
SUPERSTRUCTURE REPAIRS SPAN 1 – LEFT BRIDGE	BR-5
SUPERSTRUCTURE REPAIRS SPAN 2 – LEFT BRIDGE	BR-6
SUPERSTRUCTURE REPAIRS SPAN 3 – LEFT BRIDGE	BR-7
SUPERSTRUCTURE REPAIRS SPAN 4 – LEFT BRIDGE	BR-8
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ABUTMENT REPAIRS LEFT BRIDGE	BR-10
PIER REPAIRS PIER 1 – LEFT BRIDGE	BR-11
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JOINT REPLACEMENT DETAILS LEFT BRIDGE	BR-15
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BEARING REPLACEMENT DETAILS LEFT BRIDGE	BR-17
GIRDER REPAIR DETAILS LEFT BRIDGE	BR-18
CONCRETE REPAIR DETAILS LEFT BRIDGE	BR-19



THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

David G. Franke
2025.11.21
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CDM Smith
424 Lewis Hargett Circle
Suite 250
Lexington, KY 40504 USA

David George Franke, P.E. No. 113,904

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE OF TENN. CODE ANN. §62-2-306.

SHEET NAME	SHEET NO.
NAVIGATIONAL LIGHTING PLAN	BR-20
NAVIGATIONAL LIGHTING NOTES	BR-21
NAVIGATIONAL LIGHTING DETAILS	BR-22
NAVIGATIONAL LIGHTING ELECTRICAL DETAILS (1)	BR-23
NAVIGATIONAL LIGHTING ELECTRICAL DETAILS (2)	BR-24

YEAR	PROJECT NO.	SHEET NO.
2026	53S073-M3-005	BRIDGE-SIGN1

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNATURE SHEET

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Index Of Sheets
SEE SHEET NO. 1A

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

DOES THIS PROJECT QUALIFY FOR UTILITY CHAPTER 86	YES _	NO X
WORK ZONE SIGNIFICANCE DETERMINATION		
SIGNIFICANT	YES X	NO _

TENN.	YEAR	SHEET NO.
	2026	1
FED. AID PROJ. NO.	----------	
STATE PROJ. NO.	53S073-M3-005	
FED. BRIDGE ID NOS.	53SR0950009 & 53SR0950010	

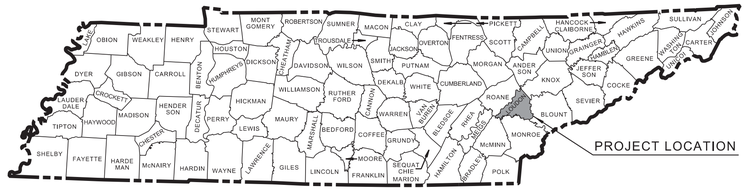
LOUDON COUNTY

BRIDGES OVER TELLICO LAKE
AND SR-444, LM 8.72

PS&E

BRIDGE REPAIR

STATE HIGHWAY NO. 73



BRIDGE ID. NOS. 53-SR073-8.72 (LEFT & RIGHT)



SCALE: 1" = 1 MILE

SEALED BY

ALLYSON FOSTER BOYD
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 119,736
STATE OF TENNESSEE

11-05-2025

SEALED BY

SUSANNE DAWSON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 111,926
STATE OF TENNESSEE

11-05-2025

APPROVED:

SHANE HESTER, CHIEF ENGINEER

DATE:

APPROVED:

WILL REID, COMMISSIONER

SPECIAL NOTES

PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED JANUARY 1, 2021 AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

TDOT PROJECT MANAGER : STEPHEN WILSON

DESIGN FIRM : CDM Smith

DESIGNER : BRADLEY B. WARREN CHECKED BY SUSANNE DAWSON / FRANK G. BALE, JR.

P.E. NO. 53S073-M3-005

PIN NO. 135558.00

TOTAL DISTURBED AREA = LESS THAN AN ACRE

SR-444		SR-73 / US 321	
TRAFFIC DATA		TRAFFIC DATA	
ADT (2024)	12,327	ADT (2024)	16,815
DHV (2024)	------	DHV (2024)	1,549
D	65 - 55	D	54 - 46
T (ADT)	3 %	T (ADT)	11 %
T (DHV)	3 %	T (DHV)	11 %
V	55 MPH	V	40 MPH

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2026	53S073-M3-005	1A

LOUDON COUNTY S.R. 73

ROADWAY INDEX

SHEET NAME	SHEET NO.
SIGNATURE SHEETS	BRIDGE-SIGN1
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PROJECT COMMITMENTS	1B
ESTIMATED ROADWAY QUANTITIES & UTILITY OWNERS	2A
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TRAFFIC CONTROL PLAN SR444 PHASE 2	7, 7A
TRAFFIC CONTROL PLAN SR 444 DETOUR	8

STANDARD ROADWAY DRAWINGS

DWG.	REV.	DESCRIPTION
ROADWAY DESIGN STANDARDS		
RD-A-1	02-20-20	STANDARD ABBREVIATIONS A THROUGH L
RD-A-2		STANDARD ABBREVIATIONS M THROUGH Z
RD-L-1	02-20-20	STANDARD LEGEND
RD-L-1A		STANDARD LEGEND
SAFETY DESIGN AND GUARDRAILS		
S-CC-1	10-01-24	CRASH CUSHION

STANDARD TRAFFIC DESIGN DRAWINGS

DESIGN - TRAFFIC CONTROL		
T-M-1	01-24-25	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-M-2	01-24-25	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS
T-WZ-10	03-26-25	ADVANCE ROAD WORK SIGNING ON HIGHWAYS AND FREEWAYS
T-WZ-12	03-26-25	ONE LANE CLOSURE DETAIL FOR BRIDGES ON DIVIDED HIGHWAYS
T-WZ-16	03-26-25	LANE SHIFT FOR DIVIDED HIGHWAYS AND FREEWAYS
T-WZ-21	03-26-25	LANE CLOSURE WITH LEFT HAND MERGE AND LANE SHIFT
T-WZ-63	03-26-25	WORK ZONE IN THE VICINITY OF AN ENTRANCE RAMP
T-WZ-64	03-26-25	WORK ZONE IN THE VICINITY OF AN EXIT RAMP
T-WZ-FAB1	03-26-25	FLASHING YELLOW ARROW BOARD
T-WZ-PBR2	03-26-25	DETAILS FOR WORK ZONE CHANNELIZATION DEVICES
T-WZ-PCB1	03-26-25	10 FOOT PORTABLE CONCRETE BARRIER RAIL
T-WZ-PCB2	03-26-25	20 FOOT PORTABLE CONCRETE BARRIER RAIL
T-WZ-PCB3	03-26-25	PORTABLE CONCRETE BARRIER RAIL DETAILS
T-WZ-PCB4	07-22-25	PORTABLE CONCRETE BARRIER RAIL ANCHOR PIN DETAILS

LIST OF BRIDGE DRAWINGS

DRAWING	DWG. NO.	SHEET NO.
LAYOUT OF BRIDGES TO BE REPAIRED	BR-133-280	BR-01
ESTIMATED BRIDGE QUANTITIES	BR-133-281	BR-02
GENERAL NOTES	BR-133-282	BR-03
PHASE CONSTRUCTION	BR-133-283	BR-04
SUPERSTRUCTURE REPAIRS SPAN 1 - LEFT BRIDGE	BR-133-284	BR-05
SUPERSTRUCTURE REPAIRS SPAN 2 - LEFT BRIDGE	BR-133-285	BR-06
SUPERSTRUCTURE REPAIRS SPAN 3 - LEFT BRIDGE	BR-133-286	BR-07
SUPERSTRUCTURE REPAIRS SPAN 4 - LEFT BRIDGE	BR-133-287	BR-08
SUPERSTRUCTURE REPAIRS SPAN 5 - LEFT BRIDGE	BR-133-288	BR-09
ABUTMENT REPAIRS LEFT BRIDGE	BR-133-289	BR-10
PIER REPAIRS PIER 1 - LEFT BRIDGE	BR-133-290	BR-11
PIER REPAIRS PIER 2 - LEFT BRIDGE	BR-133-291	BR-12
PIER REPAIRS PIER 3 - LEFT BRIDGE	BR-133-292	BR-13
PIER REPAIRS PIER 4 - LEFT BRIDGE	BR-133-293	BR-14
JOINT REPLACEMENT DETAILS LEFT BRIDGE	BR-133-294	BR-15
RISER REPAIR DETAILS LEFT BRIDGE ABUTMENTS	BR-133-295	BR-16
BEARING REPLACEMENT DETAILS LEFT BRIDGE	BR-133-296	BR-17
GIRDER REPAIR DETAILS LEFT BRIDGE	BR-133-297	BR-18
CONCRETE REPAIR DETAILS LEFT BRIDGE	BR-133-298	BR-19
NAVIGATIONAL LIGHTING PLAN	BR-133-299	BR-20
NAVIGATIONAL LIGHTING NOTES	BR-133-300	BR-21
NAVIGATIONAL LIGHTING DETAILS	BR-133-301	BR-22
NAVIGATIONAL LIGHTING ELECTRICAL DETAILS (1)	BR-133-302	BR-23
NAVIGATIONAL LIGHTING ELECTRICAL DETAILS (2)	BR-133-303	BR-24

LIST OF BRIDGE REFERENCE DRAWINGS

(TO BE PRINTED WITH PLANS)

K-86-3, M-28-1, M-35-121, M-35-124 THRU M-35-141, U-38-60, U-38-62, AND U-38-65

STANDARD BRIDGE DRAWINGS

DRAWING NO.	LATEST REV. DATE	DRAWING
STD-8-5	10/01/25	STANDARD PROTECTIVE FENCE DETAILS
SBR-2-115	06/15/16	GENERAL NOTES AND DETAILS FOR EXPANSION JOINT REPLACEMENT CONSTRUCTION TYPES “A” THRU “J” - 1991
SBR-2-116	01/04/96	GENERAL DETAILS FOR STRIPSEAL EXPANSION JOINT REPLACEMENT CONSTRUCTION DETAILS TYPES “A” THRU “J” - 1991

SEALED BY

SUSANNE DAWSON REGISTERED ENGINEER AGRICULTURE SUMMERS NO. 118878 STATE OF TENNESSEE

11-05-2025

SEALED BY

ALLISON FOSTER BOYD REGISTERED ENGINEER AGRICULTURE SUMMERS NO. 118178 STATE OF TENNESSEE

11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

INDEX AND STANDARD DRAWINGS

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PIN NO.: 135558.00

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2026	53S073-M3-005	1B

LOUDON COUNTY S.R. 73

PROJECT COMMITMENTS

COMMITMENT ID	SOURCE DIVISON	DESCRIPTION	STA. / LOCATION
EDEC001	ENVIRONMENTAL DIVISION, ECOLOGY	Cliff swallow nests, eggs, or birds (young and adults) will not be disturbed between April 15 and July 31. From August 1 to April 14, nests can be removed or destroyed, and measures implemented to prevent future nest building at the site (e.g., closing off area using netting).	Bridge Nos. 53SR0950009 & 53SR0950010 S.R. 73 over Tellico Canal and S.R. 444, LM 8.72 (53-SR073-8.72 (LT & RT))
EDHZ001	ENVIRONMENTAL DIVISION, HAZARDOUS MATERIALS	An Asbestos Containing Material (ACM) survey was completed on Bridge No. 53SR0950009 SR-95 NB over Tellico Lake and SR-444 LM 8.72 (53-SR073-08.72L). The bridge has asbestos in the texture coatings on piers, inner guard rails, outer guard rails, abutments, and wing walls at 3% Chrysotile. Please see the report for further details and photographs.	Bridge No. 53SR0950009 S.R. 73 over Tellico Canal and S.R. 444, LM 8.72 (53-SR073-8.72 LT)
EDHZ002	ENVIRONMENTAL DIVISION, HAZARDOUS MATERIALS	The State of Tennessee asbestos accreditation requirements (TDEC Rules Chapter 1200-01-20) mandates that ACM abatement work be performed by an accredited firm (contractor) using accredited abatement workers and supervisors. Abatement of this material shall be accomplished per SP202ACM Special Provision Regarding Removal of Asbestos-Containing Materials. ACM abatement should be completed prior to any demolition activities if possible. Prior to the demolition or rehabilitation of any structure (bridge or building), the contractor is required to submit the National Emission Standards for Hazardous Air Pollutants standard 10-day notice of demolition to the TDEC Division of Air Pollution Control (per TDOT Standard Specifications for Road and Bridge Construction (January 1, 2021) Sections 107.08.D and 202.03).	Bridge No. 53SR0950009 S.R. 73 over Tellico Canal and S.R. 444, LM 8.72 (53-SR073-8.72 LT)
EDPM001	ENVIRONMENTAL DIVISION, PERMITS	TDOT commits to no work in the water for this project.	Bridge No. 53SR0950009 S.R. 73 over Tellico Canal and S.R. 444, LM 8.72 (53-SR073-8.72 LT)

SEALED BY

ELLYSON FOSTER BOYD REGISTERED ENGINEER STATE OF TENNESSEE

11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROJECT COMMITMENTS

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PIN NO.: 135558.00

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2026	53S073-M3-005	2A

LOUDON COUNTY S.R. 73

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	802
	403-01	BITUMINOUS MATERIAL FOR TACK COAT	TON	6
	411-01.10	ACS MIX (PG76-22) GRADING D	TON	470
	415-01.02	COLD PLANING BITUMINOUS PAVEMENT	S.Y.	778
(1)	712-01	TRAFFIC CONTROL	LS	1
(2)(3)	712-02.10	PORTABLE BARRIER RAIL (MASH TL-3)	L.F.	2,760
(4)	712-02.60	TEMPORARY WORK ZONE CRASH CUSHION (MASH TL-3)	EACH	2
(1)(8)	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	369
(9)	712-04.50	BARRIER RAIL DELINEATOR	EACH	165
(5)	712-05.01	WARNING LIGHTS (TYPE A)	EACH	13
(1)(6)	712-06	SIGNS (CONSTRUCTION)	S.F.	852
(8)	712-07.02	TEMPORARY BARRICADE (TYPE II)	L.F.	587
(8)	712-07.03	TEMPORARY BARRICADE (TYPE III)	L.F.	60
(8)	712-08.03	ARROW BOARD (TYPE C)	EACH	2
(7)(8)	712-09.02	REMOVABLE PAVEMENT MARKING (8" BARRIER LINE)	L.F.	27,094
(7)(8)	712-09.31	REMOVABLE BLACK-OUT TAPE (8")	L.F.	13,139
(8)	713-16.01	CHANGEABLE MESSAGE SIGN UNIT	EACH	3
	716-12.02	ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE)	L.M.	1.0
	717-01	MOBILIZATION	LS	1

SR-73 TRAFFIC CONTROL SIGN QUANTITIES

SIGN NO.	DESCRIPTION	SIZE	QUANTITY	AREA (S.F.)
E5-1	GORE EXIT	72X60	1	30
E5-2	EXIT OPEN	48X36	1	12
E5-2A	EXIT CLOSED	48X36	1	12
G20-2	END ROAD WORK	48X24	5	40
M62PL	DIRECTIONAL ARROW SIGN	30X21	1	4.375
R1-2	YIELD	48X48	1	16
R9-12	BIKE LANE CLOSED	24X12	1	2
R9-20	BICYCLES ALLOWED USE OF FULL LANE	30X30	1	6.25
R11-2	ROAD CLOSED	48X30	1	10
W1-4AL	REVERSE CURVE LEFT	48X48	2	32
W1-4AR	REVERSE CURVE RIGHT	48X48	2	32
W3-2	YIELD AHEAD	48X48	1	16
W4-2R	LANE ENDS RIGHT	48X48	4	64
W9-5A	BICYCLES MERGING	48X48	1	16
W20-1	ROAD WORK AHEAD	36X36	6	54
W20-1	ROAD WORK 1 MILE	48X48	4	64
W20-3	RAMP CLOSED AHEAD	48X48	2	32
W20-5B	BIKE LANE CLOSED AHEAD	48x48	1	16
W20-5R	RIGHT LANE CLOSED 1/2 MILE	48x48	4	64
W20-5R	RIGHT LANE CLOSED 1500 FT	48x48	4	64
TOTAL				586.625

SR-444 TRAFFIC CONTROL SIGN QUANTITIES

SIGN NO.	DESCRIPTION	SIZE	QUANTITY	AREA (S.F.)
G20-2	END ROAD WORK	36X18	2	9
R9-9	SIDEWALK CLOSED	24X12	1	2
R11-2C	PATH CLOSED	48X30	2	20
W1-4AL	REVERSE CURVE	36X36	1	9
W1-6	ONE DIRECTION SYMBOL	48X24	1	8
W20-1	ROAD WORK AHEAD	36X36	2	18
W20-1	ROAD WORK 1/2 MILE	36X36	1	9
W20-3A	PATH CLOSED AHEAD	36X36	1	9
W20-4	ONE LANE ROAD 1000 FT	36X36	1	9
TOTAL				93.0

SR444 DETOUR SIGN QUANTITITES

SIGN NO.	DESCRIPTION	SIZE	QUANTITY	AREA (S.F.)
M4-5	TO	24X12	16	32
M4-8	DETOUR	24X12	16	32
M4-8A	END DETOUR	24X18	1	3
M5-1L	ADVANCE ARROW - 90 DEGREES LT	21X15	1	2.1875
M5-1R	ADVANCE ARROW - 90 DEGREES RT	21X15	3	6.5625
M6-1L	DIRECTIONAL ARROW - LT	21X15	1	2.1875
M6-1R	DIRECTIONAL ARROW - RT	21X15	3	6.5625
M6-3	DIRECTIONAL ARROW - STRAIGHT	21X15	3	6.5625
TN-6B	SECONDARY STATE ROUTE	30X24	16	80
TOTAL				171.0625

FOOTNOTES

(1) ALL COSTS ASSOCIATED WITH INSTALLING, STORING, COVERING, AND RE-INSTALLING ALL TRAFFIC CONTROL DEVICES AND SIGNS DURING AND BETWEEN THE DIFFERENT TRAFFIC CONTROL PHASES WILL BE INCLUDED IN TH BID ITEM OF EACH ITEM. DURING THE TIME BETWEEN DIFFERENT TRAFFIC CONTROL PHASES, THE CONTRACTOR SHALL STORE ALL TRAFFIC CONTROL DEVICES IN A PROPER LOCATION THAT WILL NOT INTERFERE WITH THE TRAFFIC FLOW. ALL WORK MUST MEET THE FULL APPROVAL OF THE TDOT ENGINEER.

(2) ITEM SHALL INCLUDE INSTALLING AND RELOCATING PORTABLE BARRIER RAIL. THE AMOUNT PAID WILL BE THE HIGHEST QUANTITY USED AT ANY ONE POINT DURING THE PROJECT.

(3) ITEM MAY BE REPLACED WITH MASH TL-3 APPROVED BARRIER FROM QPL 45, IF UNAVAILABLE. THE PAY ITEM WII INCLUDE FURNISHING AND INSTALLING ALL COMPONENTS AS LISTED FOR THE APPROVED BARRIER.

(4) THIS ITEM SHALL BE A PORTABLE ENERGY ABSORBING TERMINAL MEETING THE REQUIREMENTS OF NCHRP 350 FOR TEST LEVEL 3. THE PAY ITEM WILL INCLUDE FURNISHING AND INSTALLING ALL COMPONENTS AS LISTED ON THE MANUFACTURER'S SHOP DRAWING.

(5) TO INCREASE VISIBILITY AND ATTENTION TO TRAFFIC CONTROL.

(6) THIS ITEM INCLUDES THE COST OF INSTALLATION, INSPECTION AND MAINTENANCE OF ANY SIGN SHEETING AND SUPPORTS AND TRAFFIC CONTROL APPURTENANCES DURING THE CONSTRUCTION OPERATIONS.

(7) TO SUPPORT LANE SHIFTS AND CHANGES TO TRAVEL PATH FOR THE LANE CLOSURES REQUIRED FOR CONSTRUCTION. ITEM INCLUDES APPLICATION AND REMOVAL OF TEMPORARY MARKINGS FOR EACH CONSTRUCTION PHASE. THIS ALSO INCLUDES ALL MAINTENANCE TO KEEP THE TAPE ON THE ROADWAY. SHOULD THE TAPE NEED REPLACING, THIS WILL BE CONSIDERED TYPICAL MAINTENANCE AND INCIDENTAL TO THE WORK ITEM. NO ADDITIONAL PAYMENT WILL BE MADE FOR REPLACING AND/OR MAINTAINING ALREADY PLACED TAPE STRIPING.

(8) ITEM CAN BE INCREASED OR DECREASED AS DIRECTED BY THE TDOT ENGINEER.

(9) INCLUDES **138** TO BE PLACED ON PORTABLE BARRIER RAIL AND **27** ON TOP OF PARAPETS WITHIN LIMITS OF BRIDGE.

UTILITY OWNERS

WATER, SEWER:

TELLICO AREA SERVICES SYSTEM
505 CLEARVIEW RD
MARYVILLE, TN 37801
CONTACT: CARL PLAUGHER;
M. BAKER
OFFICE PHONE: (423) 884-6400
CELL PHONE: (865) 207-0112; (865) 253-2972
EMAIL: plaugher@tassonline.org;
mbaker@tassonline.org

ELECTRIC:

FORT LOUDOUN ELECTRIC COOPERATIVE
PO BOX 1030
110 INDUSTRIAL DRIVE
VONORE, TN 37885-1030
CONTACT: CHAD KIRKPATRICK;
SHANE SCHAFFER
OFFICE PHONE: (865) 865-4722; (865) 353-2674
CELL PHONE: (865) 255-2463; (423) 295-5982
EMAIL: chad.kirkpatrick@flec.org;
shane.schaffer@flec.org

TELE/COMM:

ATT
9733 PARKSIDE DRIVE
KNOXVILLE, TN 37922
CONTACT: JAY FRAZIER
CELL PHONE: (865) 387-2685
EMAIL: jf092g@att.com

CABLE:

XFINITY
5720 ASHEVILLE HWY
KNOXVILLE, TN 37924
CONTACT: JAMES MCCAWLEY
OFFICE PHONE: (865) 862-5061
CELL PHONE: (865) 312-2340
EMAIL: james_mccawley@cable.comcast.com

CHARTER
1774 HENRY G. LANE ST.
MARYVILLE, TN 37801
CONTACT: BILLY CLICK; JAMES CHRISMAN
OFFICE PHONE: (865) 273-2761
CELL PHONE: (865) 388-7524; (865) 296-1679
EMAIL: billy.click@charter.com;
james.chrisman@charter.com

UTILITY NOTES

UTILITY

(1) NO UTILITY CONFLICTS ARE ANTICIPATED BASED ON THE SCOPE OF WORK.

SEALED BY

ALLYSON FOSTER BOYD
REGISTERED ENGINEER
AGRICULTURE
SUMMERS
NO. 113570
STATE OF TENNESSEE

11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED ROADWAY QUANTITIES & UTILITY OWNERS

PIN NO.: 135558.00

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GENERAL NOTES

FINAL PAVEMENT MARKING

(1) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 6" ENHANCED FLATLINE THERMOPLASTIC INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-12.02, ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE), L.M. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

DETOURS, LANE SHIFTS AND MEDIAN CROSS-OVERS

(1) BEFORE OPENING THE ROADWAY TO TRAFFIC, THE TRANSITIONAL MARKINGS ON THE EXISTING ROADWAY MUST BE IN PLACE. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 712-09.02 REMOVABLE PAVEMENT MARKING (8" BARRIER LINE) PER L.F. ALL EXISTING MARKINGS IN THE AREA OF THESE TRANSITIONAL MARKINGS SHALL BE OBLITERATED AND ALL EXISTING RAISED PAVEMENT MARKERS SHALL BE REMOVED TO ELIMINATE CONFLICTING MARKINGS. REMOVAL OF THE EXISTING CONFLICTING MARKINGS AND RAISED PAVEMENT MARKERS WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN ITEM NO. 712-01, TRAFFIC CONTROL, LUMP SUM.

TRAFFIC CONTROL DIRECTIONAL SIGNING

(1) ON ALL ACCESS CONTROLLED AND INTERSTATE RECONSTRUCTION AND NEW CONSTRUCTION PROJECTS, THE CONTRACTOR SHALL UTILIZE ALL EXISTING DIRECTIONAL SIGNING FOR AS LONG AS POSSIBLE. THESE EXISTING SIGNS CAN BE MOVED USING TEMPORARY SUPPORTS AS NEEDED. AS SOON AS THESE EXISTING DIRECTIONAL SIGNS COME DOWN PERMANENTLY, THE CONTRACTOR SHALL HAVE UP AT LEAST ONE NEW TEMPORARY "ADVANCE GUIDE SIGN" AND ONE NEW TEMPORARY "EXIT DIRECTIONAL SIGN" AT ALL EXIT RAMPS. THESE SIGNS ARE TO BE MAINTAINED WITHIN CLEAR VIEW OF THE PUBLIC ON THE RIGHT SIDE OF THE HIGHWAY AND SHALL BE REPLACED IF DAMAGED, DURING ALL PHASES OF CONSTRUCTION, AS DIRECTED BY THE ENGINEER.

(2) THE SIZE OF THESE NEW TEMPORARY SIGNS WILL BE DETERMINED BY THE MESSAGE. THE MESSAGE SHALL BE THE SAME AS THE EXISTING SIGN THAT THESE NEW TEMPORARY SIGNS WILL BE REPLACING. THE LETTER SIZE SHALL BE A MINIMUM OF 8 INCH, "D" UPPER CASE LETTER. THE DIRECTIONAL ARROW WILL BE A "B" ARROW AT A 45 DEGREE ANGLE (SAME ANGLE AS THE EXISTING ARROW). THE MATERIAL SHALL BE 0.100 INCH SHEET ALUMINUM; THE COLOR SHALL BE A REFLECTIVE GREEN BACKGROUND WITH REFLECTIVE WHITE COPY.

(3) ALL WORK AND MATERIAL TO MAKE THESE NEW TEMPORARY DIRECTIONAL SIGNS ALONG WITH ADEQUATE SUPPORTS AND TO MOVE THEM AS NEEDED DURING EACH PHASE OF CONSTRUCTION WILL BE PAID FOR UNDER ITEM NO. 712-06, SIGNS (CONSTRUCTION), S.F. , AS DIRECTED BY THE ENGINEER.

(4) SOME OF THESE DIRECTIONAL SIGNS WILL NEED AN INTERSTATE, U.S., OR A STATE HIGHWAY SHIELD, A CARDINAL DIRECTION, AND A DIRECTION ARROW TO ACCOMPANY THE DIRECTIONAL SIGN. THESE SIGNS SHALL BE MOUNTED BELOW THE DIRECTIONAL SIGN.

(5) ALL EXISTING "EMERGENCY REFERENCE MARKERS" AND "HOSPITAL SIGNS" SHALL BE MAINTAINED WITHIN FULL VIEW OF THE MOTORING PUBLIC THROUGHOUT ALL PHASES OF CONSTRUCTION. ALL WORK IN MOVING AND TEMPORARY SUPPORTS SHALL BE PAID FOR UNDER ITEM NO. 712-06, SIGNS (CONSTRUCTION), S.F. .

PAVEMENT

PAVING

(1) THE CONTRACTOR SHALL BE REQUIRED TO PAVE IN THE DIRECTION OF TRAFFIC.

(2) THE CONTRACTOR SHALL BE REQUIRED TO COLD PLANE AND PAVE IN THE DIRECTION OF TRAFFIC.

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

(1) ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE WEEK BEFORE NEEDED, IF THE SIGN FACE IS FULLY COVERED.

(2) IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COSTS OF REMOVAL, COVERING, AND REINSTALLING SIGNS SHALL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT ALL COSTS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO. 712-06, SIGNS (CONSTRUCTION) PER SQUARE FOOT.

(3) A LONG TERM BUT SPORADIC USE WARNING SIGN, SUCH AS A FLAGGER SIGN, MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.

(4) TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.

(5) USE OF BARRICADES, PORTABLE BARRIER RAILS, AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WHERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED ALONG THE ROADWAY WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL INCREASE TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

(6) THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY, WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO PARK WITHIN THIRTY (30) FEET OF AN OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

(7) ALL DETOUR AND CONSTRUCTION SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

(8) ALL DETOURS SHALL BE PAVED, STRIPED, SIGNED, AND FLEXIBLE DRUMS ARE TO BE IN PLACE BEFORE IT IS OPENED TO TRAFFIC.

(9) THE CONTRACTOR SHALL BE RESPONSIBLE FOR STAKING CONSTRUCTION SIGNS. THE COST OF THIS WORK SHALL BE INCLUDED IN ITEM NO. 712-06, SIGNS (CONSTRUCTION), S.F.

SPECIAL NOTES

DEMOLITION, REPAIR, OR REHABILITATION OF BRIDGES

(1) THE CONTRACTOR SHALL VERIFY THAT AN ASBESTOS SURVEY HAS BEEN COMPLETED PRIOR TO ANY DEMOLITION, REPAIR OR REHABILITATIONS ACTIVITIES (NOT INCLUDING ASPHALT MILLING OR OVERLAY).

(2) ASBESTOS-CONTAINING MATERIALS (ACM) ABATEMENT IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE COMPLETED PRIOR TO ANY DEMOLITION, REPAIR OR REHABILITATION OF BRIDGE(S). ABATEMENT SHOULD BE ACCOMPLISHED PER SP202ACM SPECIAL PROVISION REGARDING REMOVAL OF ASBESTOS-CONTAINING MATERIALS. STATE OF TENNESSEE ASBESTOS ACCREDITATION REQUIREMENTS (TCA 1200-01-20) MANDATE THAT ACM ABATEMENT WORK BE PERFORMED BY AN ACCREDITED FIRM (CONTRACTOR) USING ACCREDITED ABATEMENT WORKERS AND SUPERVISORS.

(3) THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING A NOTICE TO THE TDEC, DIVISION OF AIR POLLUTION CONTROL TEN (10) DAYS IN ADVANCE OF ANY ACM ABATEMENT, DEMOLITION, OR MAJOR REPAIR INVOLVING THE REMOVAL/REPLACEMENT OF A STRUCTURAL COMPONENT.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2026	53S073-M3-005	2B

LOUDON COUNTY S.R. 73

SEALED BY

ALLYSON FOSTER BOYD
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
10.11.9.1.16
STATE OF TENNESSEE

11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES AND SPECIAL NOTES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2026	53S073-M3-005	2E

LOUDON COUNTY S.R. 73

ENVIRONMENTAL GENERAL NOTES

PROJECT COMMITMENTS

(1) SEE PROJECT COMMITMENTS, SHEET 1B FOR DETAILS RELATING TO SPECIAL ENVIRONMENTAL COMMITMENTS REQUIRED BY THIS PROJECT.

SCOPE OF WORK

(2) THIS PROJECT IS A BRIDGE REPAIR PROJECT TO RESTORE THE SR-73 BRIDGES OVER TELLICO LAKE AND SR-444 THAT ARE IN NEED OF REPAIRS.

EROSION PREVENTION AND SEDIMENT CONTROL GENERAL NOTES

DISTURBED AREA

(1) IF DISTURBED ACREAGE IS EQUAL TO ONE ACRE OR MORE, PLEASE CONTACT TDOT ENVIRONMENTAL DIVISION, PERMITS SECTION AS SOON AS POSSIBLE BECAUSE AN NPDES PERMIT WILL BE REQUIRED.

SEDIMENT CONTROL

(2) EPSC MEASURES SHALL BE INSTALLED AND FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD EXCEPT AS SUCH WORK MAY BE NECESSARY TO INSTALL EPSC MEASURES.

(3) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT THE OFFSITE MIGRATION OR DEPOSIT OF SEDIMENT OFF THE PROJECT LIMITS (E.G. R.O.W., EASEMENTS, ETC.), INTO WATERS OF THE STATE/U.S., OR ONTO ROADWAYS USED BY THE GENERAL PUBLIC. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFFSITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFFSITE IMPACTS (E.G., FUGITIVE SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE AND HAS COLLECTED IN A STREET MUST BE REMOVED SO THAT IT IS NOT SUBSEQUENTLY WASHED INTO STORM SEWERS AND STREAMS BY THE NEXT RAIN AND/OR SO THAT IT DOES NOT POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS). ARRANGEMENTS CONCERNING REMOVAL OF SEDIMENT ON ADJOINING PROPERTY MUST BE NEGOTIATED WITH THE ADJOINING PROPERTY OWNER BEFORE REMOVAL OF SEDIMENT.

GOOD HOUSEKEEPING MEASURES & WASTE DISPOSAL

(4) CONTRACTORS SHALL PROVIDE DESIGNATED TRUCK WASHOUT AREAS ON THE SITE. THESE AREAS MUST BE SELF CONTAINED, NOT CONNECTED TO ANY STORMWATER OUTLET OF THE SITE, AND PROPERLY SIGNED. WASH DOWN OR WASTE DISCHARGE OF CONCRETE TRUCKS SHALL NOT BE PERMITTED ONSITE UNLESS PROPER SETTLEMENT AREAS HAVE BEEN PROVIDED IN ACCORDANCE WITH BOTH STATE AND FEDERAL REGULATIONS.

(5) WHEEL WASH WATER SHALL BE COLLECTED AND ALLOWED TO SETTLE OUT SUSPENDED SOLIDS PRIOR TO DISCHARGE. WHEEL WASH WATER SHALL NOT BE DISCHARGED DIRECTLY INTO ANY STORMWATER SYSTEM OR STORMWATER TREATMENT SYSTEM.

(6) IF PORTABLE SANITARY FACILITIES ARE PROVIDED ON CONSTRUCTION SITES, SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS IN A TIMELY MANNER BY A LICENSED WASTE MANAGEMENT CONTRACTOR OR AS REQUIRED BY ANY REGULATIONS. THE CONTRACTOR SHALL OBTAIN ANY AND ALL NECESSARY PERMITS TO DISPOSE OF SANITARY WASTE.

(7) ONLY CONSTRUCTION PRODUCTS NEEDED SHALL BE STORED ONSITE BY THE CONTRACTOR. THE CONTRACTOR SHALL STORE ALL MATERIALS UNDER COVER AND IN APPROPRIATE CONTAINERS. PRODUCTS MUST BE STORED IN ORIGINAL CONTAINERS AND LABELED. MATERIAL MIXING SHALL BE CONDUCTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR'S RESPONSIBLE PARTY SHALL INSPECT MATERIALS STORAGE AREAS REGULARLY TO ENSURE PROPER USE AND DISPOSAL.

(8) WHEN POSSIBLE, ALL PRODUCTS SHALL BE USED COMPLETELY BEFORE PROPERLY DISPOSING OF THE CONTAINER OFFSITE. THE MANUFACTURER'S DIRECTIONS FOR DISPOSAL OF MATERIALS AND CONTAINERS SHALL BE FOLLOWED.

(9) ALL PAINT CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT SHALL BE DISPOSED OF ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS AND APPLICABLE STATE AND LOCAL REGULATIONS.

(10) ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN A MANNER WHICH IS COMPLIANT WITH LOCAL OR STATE REGULATIONS. SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES, AND THE INDIVIDUAL DESIGNATED AS THE CONTRACTOR'S RESPONSIBLE PARTY SHALL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED. THE CONTRACTOR SHALL OBTAIN ANY AND ALL NECESSARY PERMITS TO DISPOSE OF HAZARDOUS MATERIAL.

(11) OPEN BURNING IS PROHIBITED UNLESS IT IS SPECIFICALLY ALLOWED BY LAW. IF ALLOWED, NATURAL VEGETATION, TREES, AND UNTREATED LUMBER SHALL BE THE ONLY MATERIALS THAT CAN BE OPEN BURNED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE STATE AND LOCAL PERMITS PRIOR TO ANY BURNING.

(12) DISPOSAL OF ONSITE VEGETATION AND TREES BY CHIPPING THEM INTO MULCH IS PREFERABLE TO OPEN BURNING. THIS MULCH MAY BE USED AS AN ONSITE SOIL STABILIZATION MEASURE WHERE APPROPRIATE.

(13) WASTE MATERIAL (EARTH, ROCK, ASPHALT, CONCRETE, ETC.) NOT REQUIRED FOR THE CONSTRUCTION OF THE PROJECT WILL BE DISPOSED OF BY THE CONTRACTOR. IMPACTS TO WATERS OF THE STATE/U.S. SHALL BE AVOIDED IF POSSIBLE. IF UNAVOIDABLE, THE CONTRACTOR WILL OBTAIN ANY AND ALL NECESSARY PERMITS INCLUDING, BUT NOT LIMITED TO NPDES, AQUATIC RESOURCES ALTERATION PERMIT(S), CORPS OF ENGINEERS SECTION 404 PERMITS, AND TVA SECTION 26A PERMITS TO DISPOSE OF WASTE MATERIALS.

SEALED BY

ALLYSON FOSTER BOYD
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 119139
STATE OF TENNESSEE

11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ENVIRONMENTAL GENERAL NOTES

PIN NO.: 135558.00

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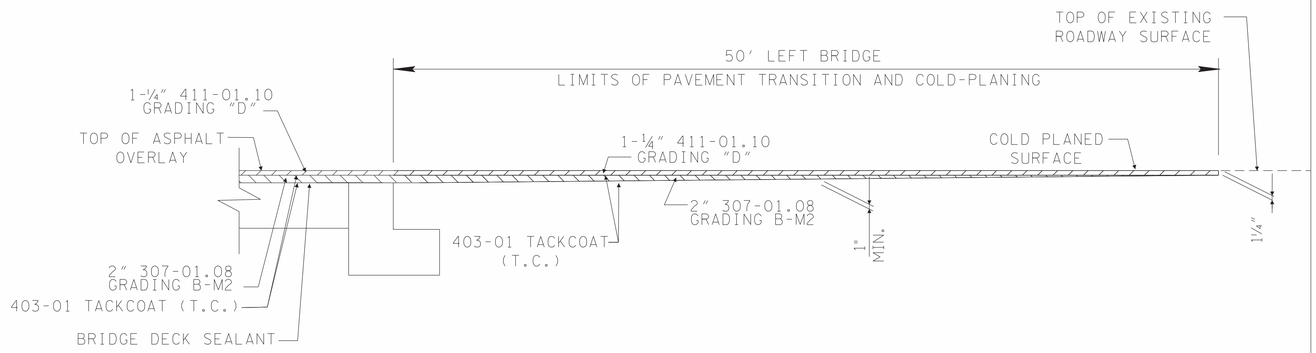
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2026	53S073-M3-005	3

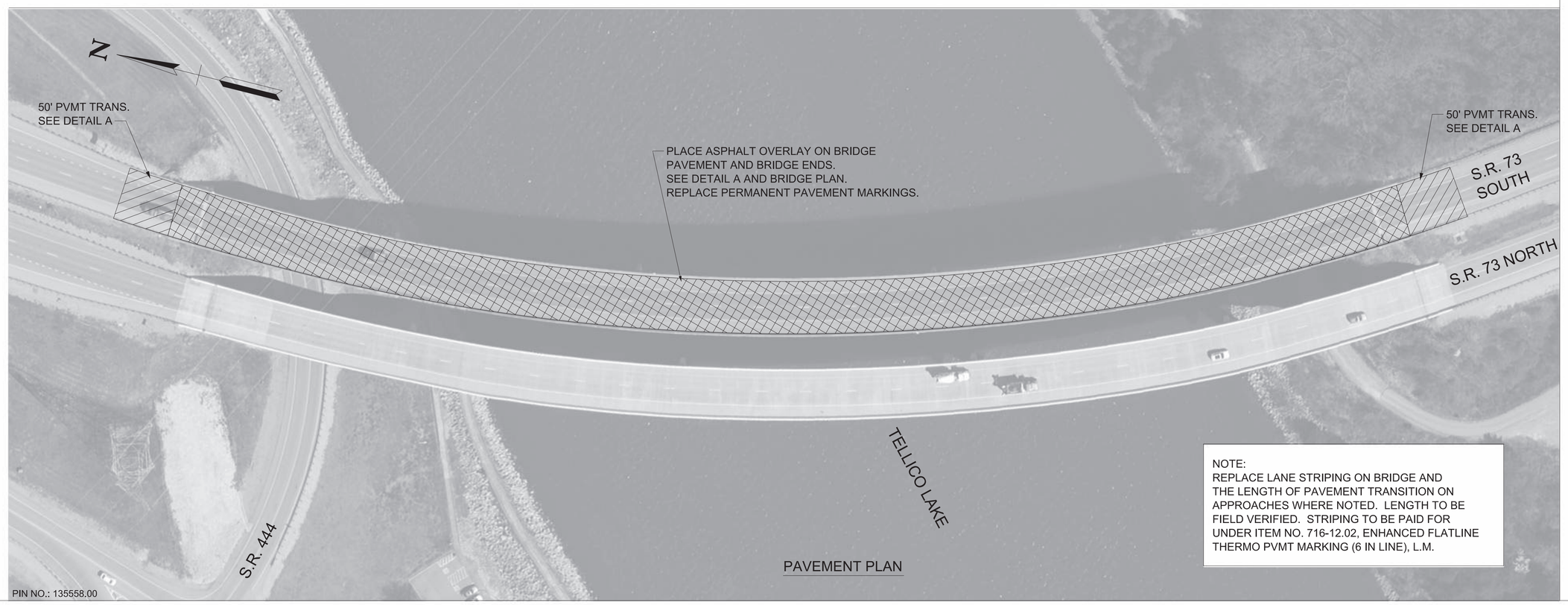
LOUDON COUNTY S.R. 73

DETAIL A



ASPHALT PAVEMENT TRANSITION DETAIL
(TYP. EACH END OF BRIDGE)

SEE SEC.617 AND 906.04 OF THE TENNESSEE STANDARD SPECIFICAITONS FOR ROAD AND BRIDGE CONSTRUCTION.



NOTE:
REPLACE LANE STRIPING ON BRIDGE AND THE LENGTH OF PAVEMENT TRANSITION ON APPROACHES WHERE NOTED. LENGTH TO BE FIELD VERIFIED. STRIPING TO BE PAID FOR UNDER ITEM NO. 716-12.02, ENHANCED FLATLINE THERMO PVMT MARKING (6 IN LINE), L.M.

PAVEMENT PLAN

PIN NO.: 135558.00

SEALED BY

ALLYSON FOSTER BOYD REGISTERED ENGINEER CIVIL STATE OF TENNESSEE COMMERCE NO. 119,736

11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PAVEMENT TRANSITION DETAILS

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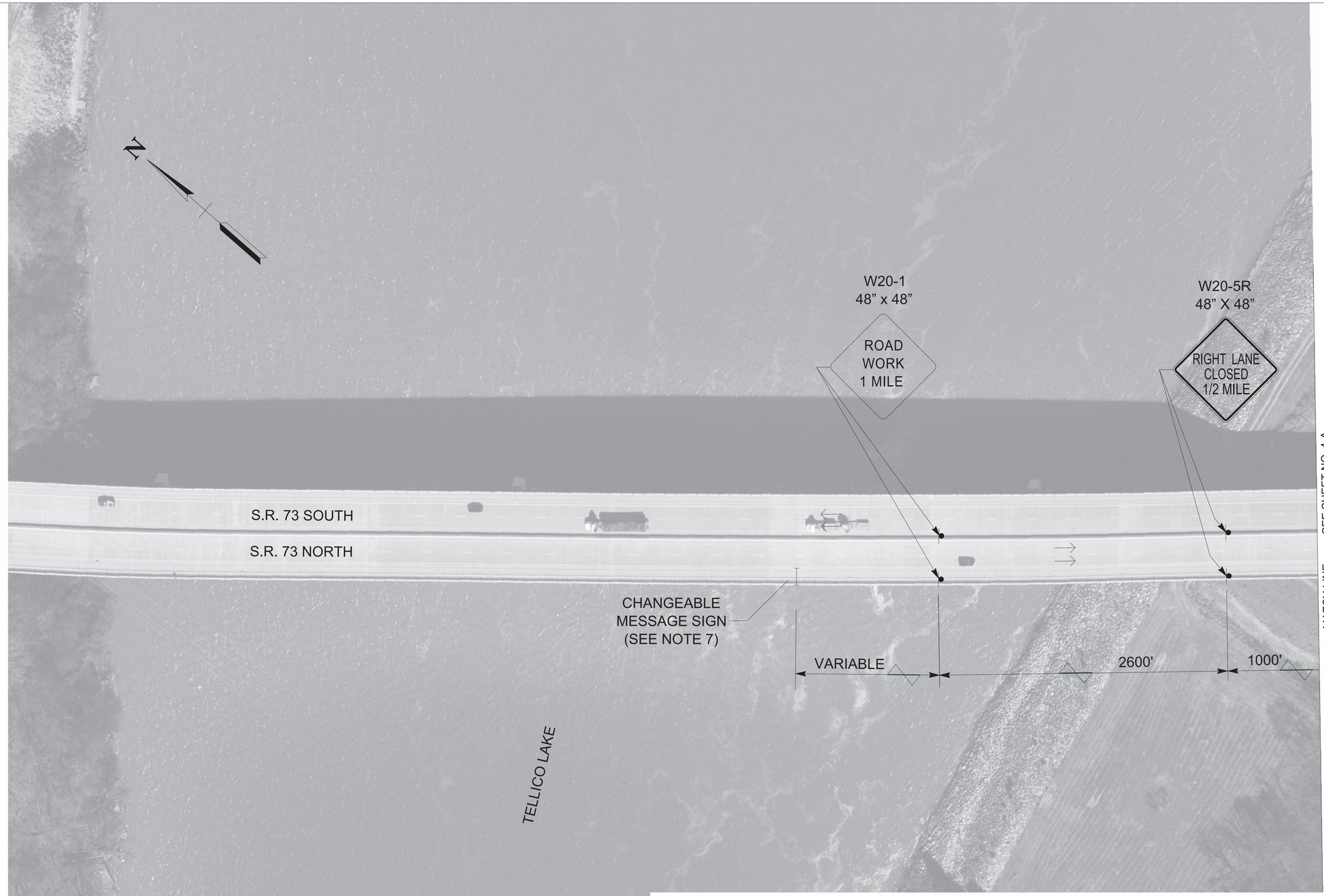
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2026	53S073-M3-005	4

LOUDON COUNTY S.R. 73



TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
▸	SIGN (CONSTRUCTION)
→	TRAFFIC FLOW
⊢⊣	CHANGEABLE MESSAGE SIGN

NOTES:

1. ADVANCE WARNING SIGNS TO BE PLACED PRIOR TO BRIDGE REPAIR WORK AND TO REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE. IF SIGNS ARE PLACED BEFORE PHYSICAL CONSTRUCTION BEGINS, SIGN FACES SHOULD BE FULLY COVERED.
2. WHEN TRAFFIC LANES ON SR-73 AND SR-444 ARE REDUCED, CONTRACTOR SHALL WORK NORMAL WORKING HOURS UNTIL ALL LANES ARE RESTORED.
3. THE TRAFFIC CONTROL PLAN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSTALLING TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
4. IF ADDITIONAL SIGNS ARE DEEMED NECESSARY BY THE ENGINEER, THEY SHALL BE FURNISHED AND INSTALLED AT THE UNIT PRICE BID FOR ITEM NO. 712-06, SIGNS (CONSTRUCTION), SQ. FT.
5. FOR ADDITIONAL NOTES AND DETAILS, SEE TDOT STD. DWG. T-WZ-12, T-WZ-16, T-WZ-21, T-WZ-63 AND T-WZ-64.
6. SEE SHEET 2A FOR QUANTITIES.
7. CHANGEABLE MESSAGE SIGNS MAY BE PLACED PRIOR TO BRIDGE REPAIR WORK TO ALERT ROAD USERS OF CONSTRUCTION. LOCATION AND MESSAGE TO BE DETERMINED BY THE TDOT ENGINEER. ADDITIONAL MESSAGE SIGNS ARE TO BE PLACED AHEAD OF THE WORK ZONE.
8. PAVEMENT MARKINGS THAT CONFLICT WITH TRAVEL LANES SHALL BE COVERED WITH BLACK OUT TAPE DURING CONSTRUCTION AND REMOVED WHEN WORK IS NO LONGER CONDUCTED. OVERHEAD SIGNS THAT CONFLICT WITH TRAVEL LANES SHALL ALSO BE COVERED DURING CONSTRUCTION AND REMOVED WHEN WORK IS NO LONGER CONDUCTED.
9. DURING BOTH PHASES, THE TELLICO DAM AND CANAL BRANCH PEDESTRIAN TRAILS WILL BE CLOSED AT THE BRIDGE APPROACHES. SEE SHEETS 6A & 7A FOR DETAILS. CONTRACTOR SHALL COORDINATE WITH THE TDOT ENGINEER FOR CLOSURE DETAILS.
10. EXIT RAMP FROM S.R. 73 SOUTH TO S.R. 444 WEST TO REMAIN CLOSED FOR BOTH PHASES. TRAFFIC TO BE DETOURED AROUND THE PROJECT AREA. SEE SHEET 8.

SEALED BY



11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN
BR. NO. 53-SR073-8.72
(LT. & RT.)
PHASE 1

PIN NO.: 135558.00

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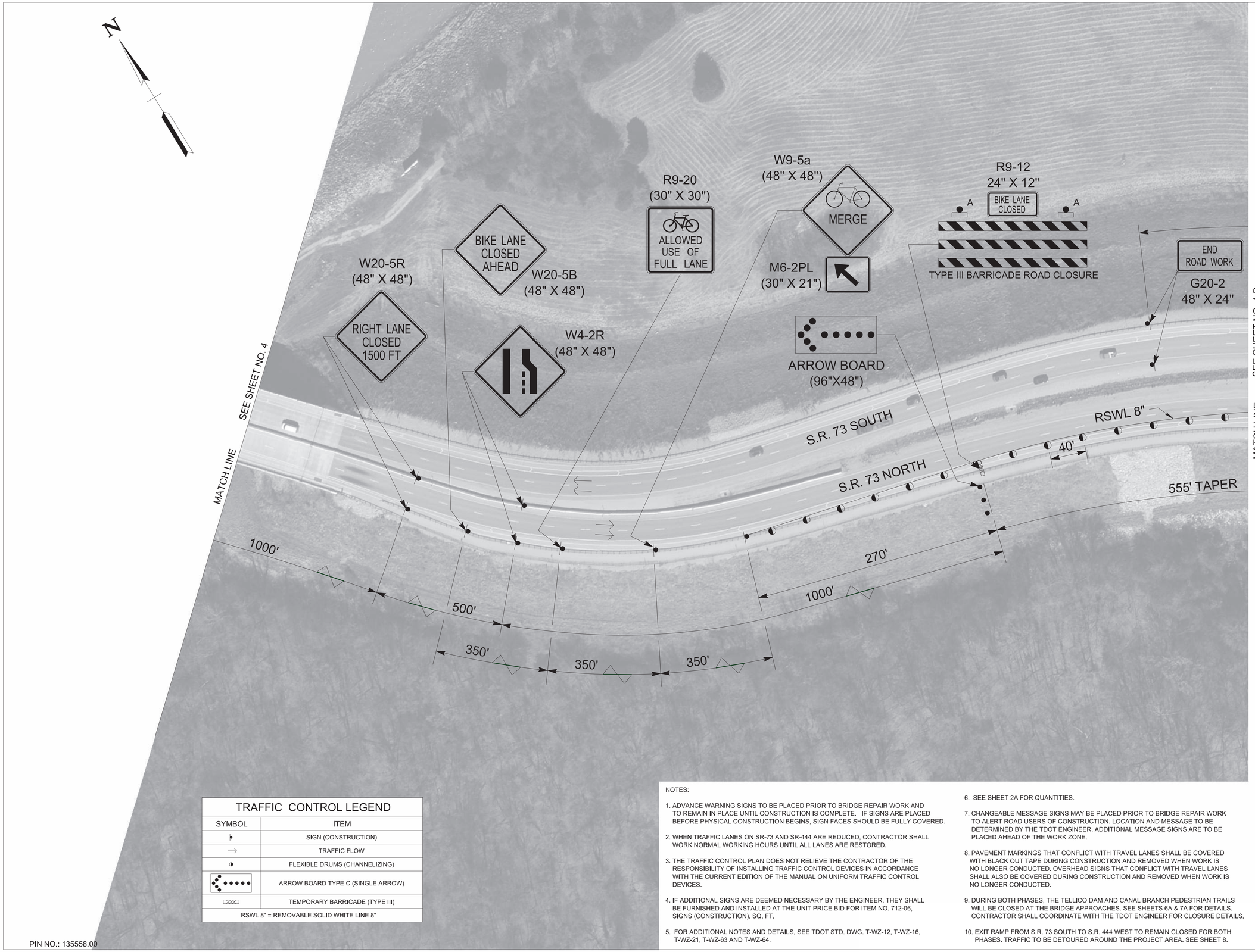
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2026	53S073-M3-005	4-A

LOUDON COUNTY S.R. 73



TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	SIGN (CONSTRUCTION)
	TRAFFIC FLOW
	FLEXIBLE DRUMS (CHANNELIZING)
	ARROW BOARD TYPE C (SINGLE ARROW)
	TEMPORARY BARRICADE (TYPE III)
RSWL 8" = REMOVABLE SOLID WHITE LINE 8"	

NOTES:

1. ADVANCE WARNING SIGNS TO BE PLACED PRIOR TO BRIDGE REPAIR WORK AND TO REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE. IF SIGNS ARE PLACED BEFORE PHYSICAL CONSTRUCTION BEGINS, SIGN FACES SHOULD BE FULLY COVERED.
2. WHEN TRAFFIC LANES ON SR-73 AND SR-444 ARE REDUCED, CONTRACTOR SHALL WORK NORMAL WORKING HOURS UNTIL ALL LANES ARE RESTORED.
3. THE TRAFFIC CONTROL PLAN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSTALLING TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
4. IF ADDITIONAL SIGNS ARE DEEMED NECESSARY BY THE ENGINEER, THEY SHALL BE FURNISHED AND INSTALLED AT THE UNIT PRICE BID FOR ITEM NO. 712-06, SIGNS (CONSTRUCTION), SQ. FT.
5. FOR ADDITIONAL NOTES AND DETAILS, SEE TDOT STD. DWG. T-WZ-12, T-WZ-16, T-WZ-21, T-WZ-63 AND T-WZ-64.
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7. CHANGEABLE MESSAGE SIGNS MAY BE PLACED PRIOR TO BRIDGE REPAIR WORK TO ALERT ROAD USERS OF CONSTRUCTION. LOCATION AND MESSAGE TO BE DETERMINED BY THE TDOT ENGINEER. ADDITIONAL MESSAGE SIGNS ARE TO BE PLACED AHEAD OF THE WORK ZONE.
8. PAVEMENT MARKINGS THAT CONFLICT WITH TRAVEL LANES SHALL BE COVERED WITH BLACK OUT TAPE DURING CONSTRUCTION AND REMOVED WHEN WORK IS NO LONGER CONDUCTED. OVERHEAD SIGNS THAT CONFLICT WITH TRAVEL LANES SHALL ALSO BE COVERED DURING CONSTRUCTION AND REMOVED WHEN WORK IS NO LONGER CONDUCTED.
9. DURING BOTH PHASES, THE TELLICO DAM AND CANAL BRANCH PEDESTRIAN TRAILS WILL BE CLOSED AT THE BRIDGE APPROACHES. SEE SHEETS 6A & 7A FOR DETAILS. CONTRACTOR SHALL COORDINATE WITH THE TDOT ENGINEER FOR CLOSURE DETAILS.
10. EXIT RAMP FROM S.R. 73 SOUTH TO S.R. 444 WEST TO REMAIN CLOSED FOR BOTH PHASES. TRAFFIC TO BE DETOURED AROUND THE PROJECT AREA. SEE SHEET 8.

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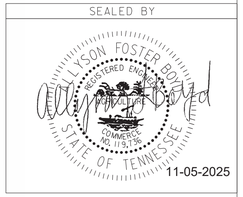

11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN
BR. NO. 53-SR073-8.72
(LT. & RT.)
PHASE 1

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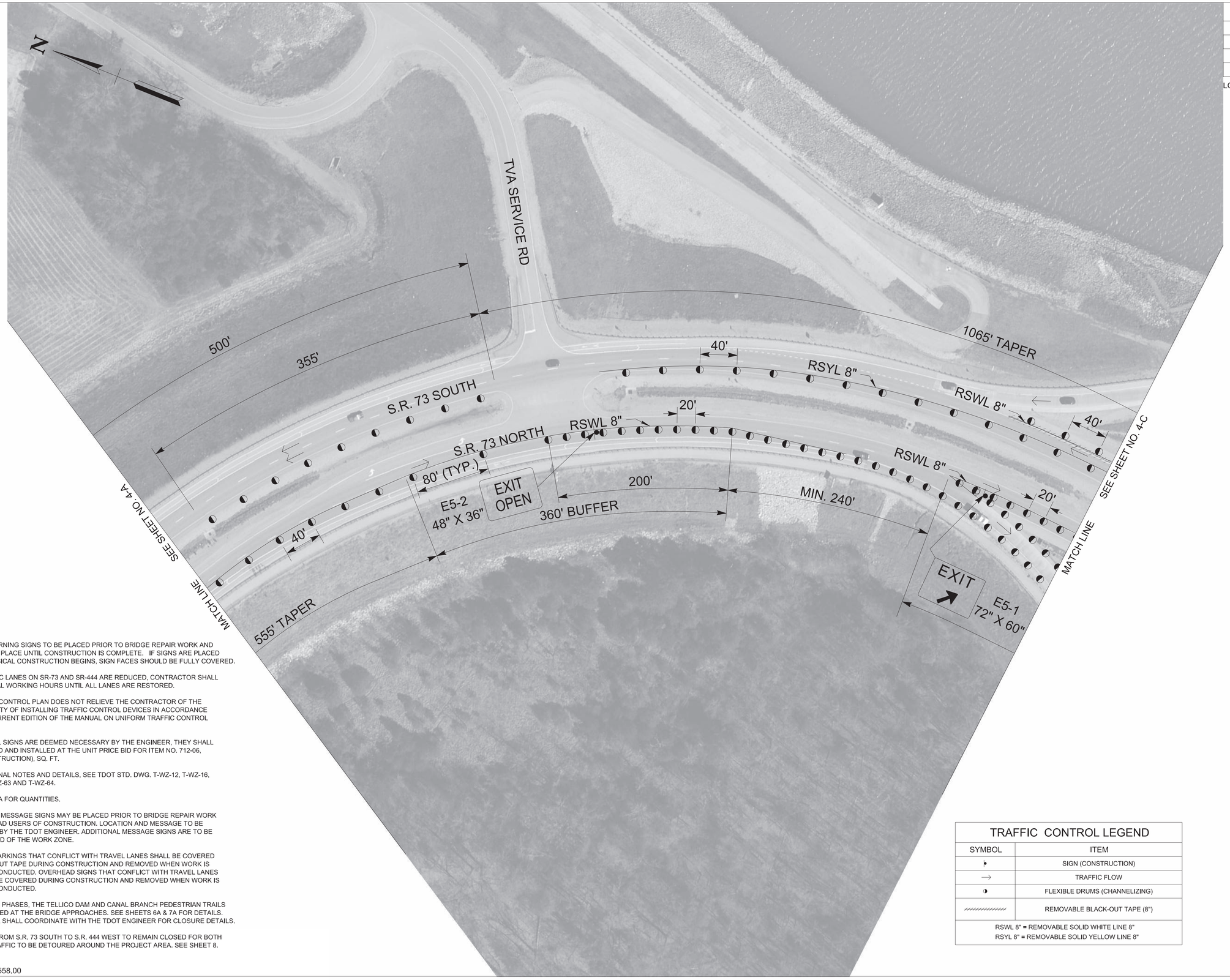
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2026	53S073-M3-005	4-B

LOUDON COUNTY S.R. 73



NOTES:

1. ADVANCE WARNING SIGNS TO BE PLACED PRIOR TO BRIDGE REPAIR WORK AND TO REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE. IF SIGNS ARE PLACED BEFORE PHYSICAL CONSTRUCTION BEGINS, SIGN FACES SHOULD BE FULLY COVERED.
2. WHEN TRAFFIC LANES ON SR-73 AND SR-444 ARE REDUCED, CONTRACTOR SHALL WORK NORMAL WORKING HOURS UNTIL ALL LANES ARE RESTORED.
3. THE TRAFFIC CONTROL PLAN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSTALLING TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
4. IF ADDITIONAL SIGNS ARE DEEMED NECESSARY BY THE ENGINEER, THEY SHALL BE FURNISHED AND INSTALLED AT THE UNIT PRICE BID FOR ITEM NO. 712-06, SIGNS (CONSTRUCTION), SQ. FT.
5. FOR ADDITIONAL NOTES AND DETAILS, SEE TDOT STD. DWG. T-WZ-12, T-WZ-16, T-WZ-21, T-WZ-63 AND T-WZ-64.
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8. PAVEMENT MARKINGS THAT CONFLICT WITH TRAVEL LANES SHALL BE COVERED WITH BLACK OUT TAPE DURING CONSTRUCTION AND REMOVED WHEN WORK IS NO LONGER CONDUCTED. OVERHEAD SIGNS THAT CONFLICT WITH TRAVEL LANES SHALL ALSO BE COVERED DURING CONSTRUCTION AND REMOVED WHEN WORK IS NO LONGER CONDUCTED.
9. DURING BOTH PHASES, THE TELLICO DAM AND CANAL BRANCH PEDESTRIAN TRAILS WILL BE CLOSED AT THE BRIDGE APPROACHES. SEE SHEETS 6A & 7A FOR DETAILS. CONTRACTOR SHALL COORDINATE WITH THE TDOT ENGINEER FOR CLOSURE DETAILS.
10. EXIT RAMP FROM S.R. 73 SOUTH TO S.R. 444 WEST TO REMAIN CLOSED FOR BOTH PHASES. TRAFFIC TO BE DETOURED AROUND THE PROJECT AREA. SEE SHEET 8.

PIN NO.: 135558.00

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	SIGN (CONSTRUCTION)
→	TRAFFIC FLOW
	FLEXIBLE DRUMS (CHANNELIZING)
//////////////	REMOVABLE BLACK-OUT TAPE (8")
RSWL 8" = REMOVABLE SOLID WHITE LINE 8" RSYL 8" = REMOVABLE SOLID YELLOW LINE 8"	

SEALED BY

ALLYSON FOSTER BOYD
REGISTERED ENGINEER
COMMERCE
STATE OF TENNESSEE

11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN
BR. NO. 53-SR073-8.72
(LT. & RT.)
PHASE 1

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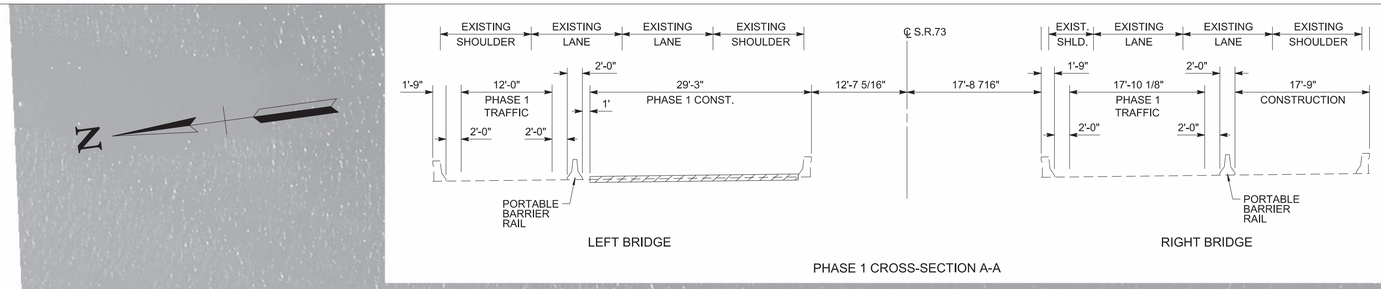

PHASE 1 CROSS-SECTION A-A

NOTES:

1. ADVANCE WARNING SIGNS TO BE PLACED PRIOR TO BRIDGE REPAIR WORK AND TO REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE. IF SIGNS ARE PLACED BEFORE PHYSICAL CONSTRUCTION BEGINS, SIGN FACES SHOULD BE FULLY COVERED.
2. WHEN TRAFFIC LANES ON SR-73 AND SR-444 ARE REDUCED, CONTRACTOR SHALL WORK NORMAL WORKING HOURS UNTIL ALL LANES ARE RESTORED.
3. THE TRAFFIC CONTROL PLAN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSTALLING TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
4. IF ADDITIONAL SIGNS ARE DEEMED NECESSARY BY THE ENGINEER, THEY SHALL BE FURNISHED AND INSTALLED AT THE UNIT PRICE BID FOR ITEM NO. 712-06, SIGNS (CONSTRUCTION), SQ. FT.
5. FOR ADDITIONAL NOTES AND DETAILS, SEE TDOT STD. DWG. T-WZ-12, T-WZ-16, T-WZ-21, T-WZ-63 AND T-WZ-64.
6. SEE SHEET 2A FOR QUANTITIES.
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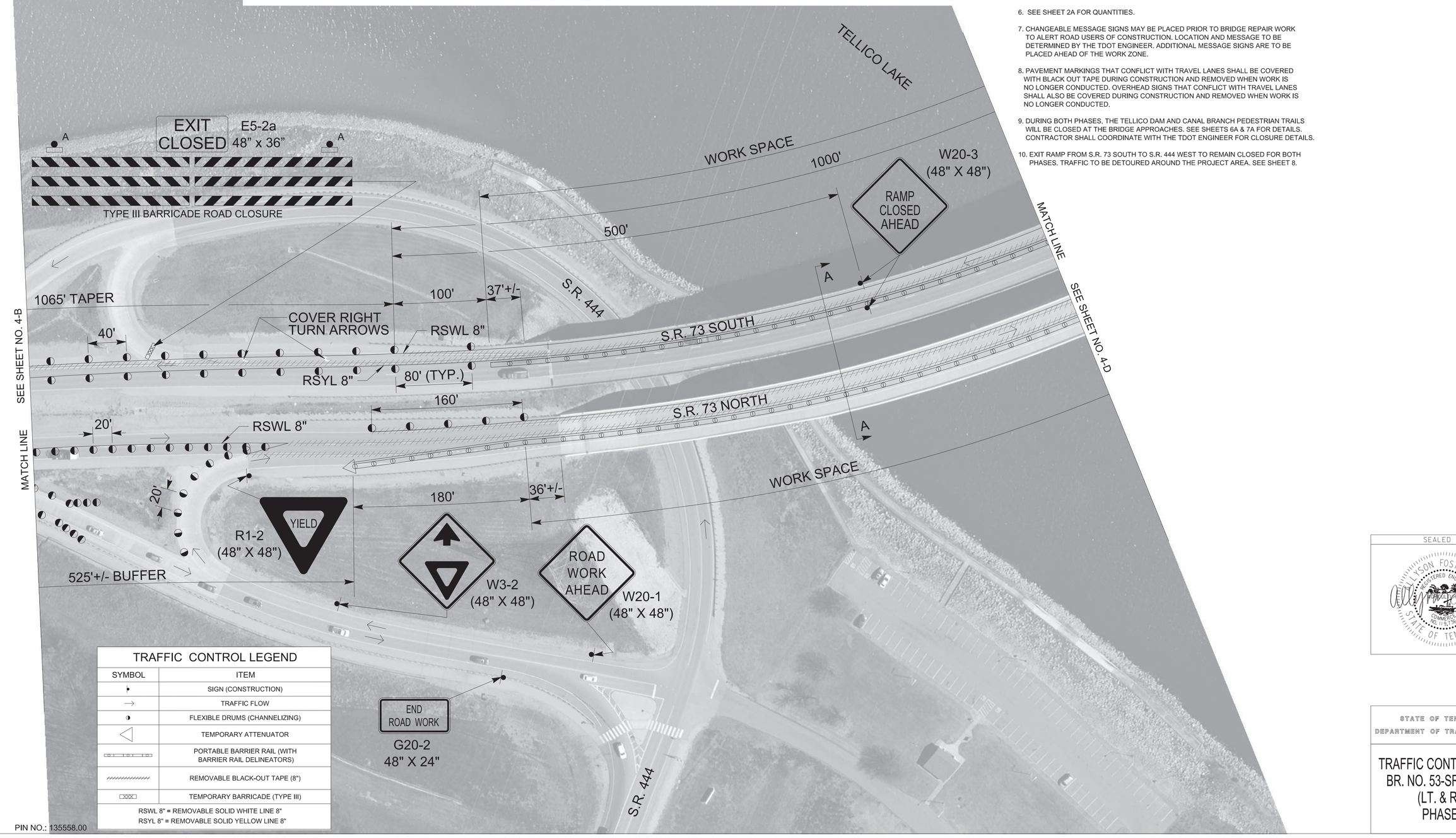
10. EXIT RAMP FROM S.R. 73 SOUTH TO S.R. 444 WEST TO REMAIN CLOSED FOR BOTH PHASES. TRAFFIC TO BE DETOURED AROUND THE PROJECT AREA. SEE SHEET 8.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2026	53S073-M3-005	4-C

LOUDON COUNTY S.R. 73



TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	SIGN (CONSTRUCTION)
	TRAFFIC FLOW
	FLEXIBLE DRUMS (CHANNELIZING)
	TEMPORARY ATTENUATOR
	PORTABLE BARRIER RAIL (WITH BARRIER RAIL DELINEATORS)
	REMOVABLE BLACK-OUT TAPE (8")
	TEMPORARY BARRICADE (TYPE III)
RSWL 8" = REMOVABLE SOLID WHITE LINE 8" RSYL 8" = REMOVABLE SOLID YELLOW LINE 8"	

PIN NO.: 135558.00

SEALED BY

ALLYSON FOSTER BOYD
REGISTERED ENGINEER
No. 117575
STATE OF TENNESSEE

11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN
BR. NO. 53-SR073-8.72
(LT. & RT.)
PHASE 1

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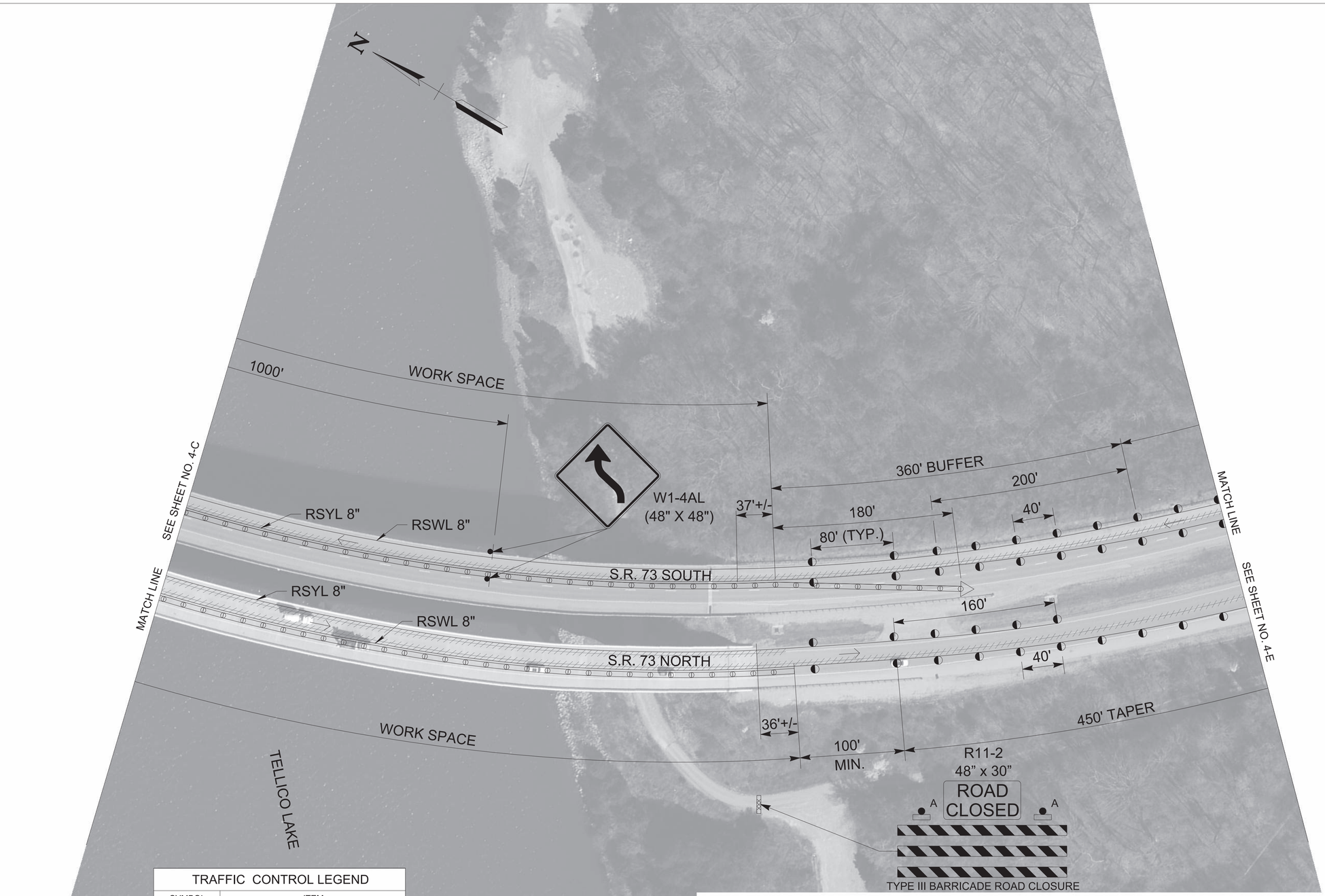
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2026	53S073-M3-005	4-D

LOUDON COUNTY S.R. 73



TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	SIGN (CONSTRUCTION)
→	TRAFFIC FLOW
	FLEXIBLE DRUMS (CHANNELIZING)
	TEMPORARY ATTENUATOR
	PORTABLE BARRIER RAIL (WITH BARRIER RAIL DELINEATORS)
	REMOVABLE BLACK-OUT TAPE (8")
	TEMPORARY BARRICADE (TYPE III)

RSWL 8" = REMOVABLE SOLID WHITE LINE 8"
RSYL 8" = REMOVABLE SOLID YELLOW LINE 8"

NOTES:

1. ADVANCE WARNING SIGNS TO BE PLACED PRIOR TO BRIDGE REPAIR WORK AND TO REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE. IF SIGNS ARE PLACED BEFORE PHYSICAL CONSTRUCTION BEGINS, SIGN FACES SHOULD BE FULLY COVERED.
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3. THE TRAFFIC CONTROL PLAN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSTALLING TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
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5. FOR ADDITIONAL NOTES AND DETAILS, SEE TDOT STD. DWG. T-WZ-12, T-WZ-16, T-WZ-21, T-WZ-63 AND T-WZ-64.
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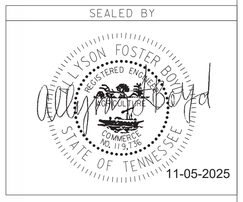
SEALED BY



11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN
BR. NO. 53-SR073-8.72
(LT. & RT.)
PHASE 1

PIN NO.: 135558.00

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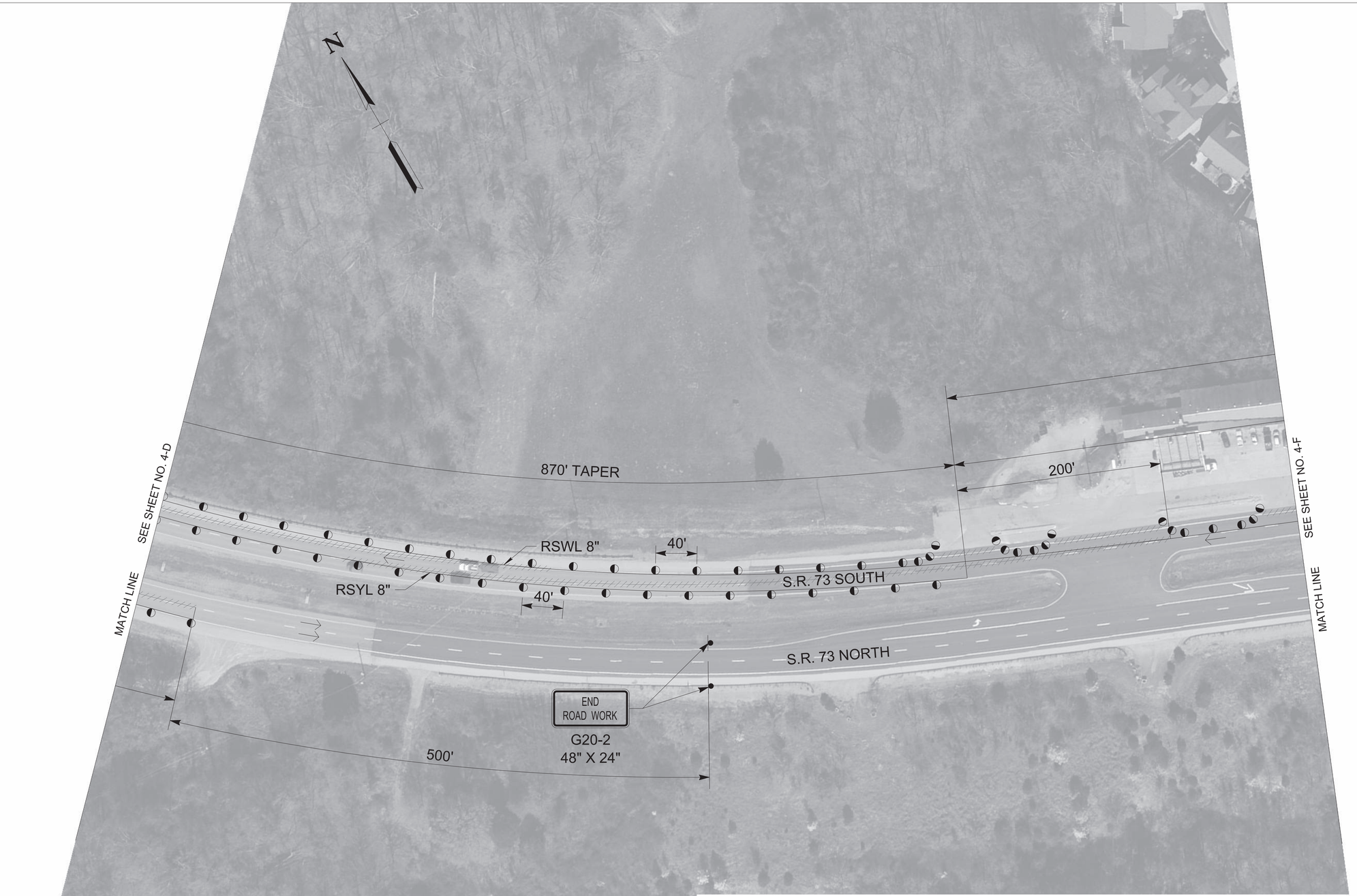
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2026	53S073-M3-005	4-E

LOUDON COUNTY S.R. 73



TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	SIGN (CONSTRUCTION)
→	TRAFFIC FLOW
	FLEXIBLE DRUMS (CHANNELIZING)
	REMOVABLE BLACK-OUT TAPE (8")

RSWL 8" = REMOVABLE SOLID WHITE LINE 8"
RSYL 8" = REMOVABLE SOLID YELLOW LINE 8"

NOTES:

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SEALED BY

ALYSON FOSTER BOYD
REGISTERED ENGINEER
No. 119196
COMMERCE
STATE OF TENNESSEE

11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN
BR. NO. 53-SR073-8.72
(LT. & RT.)
PHASE 1

PIN NO.: 135558.00

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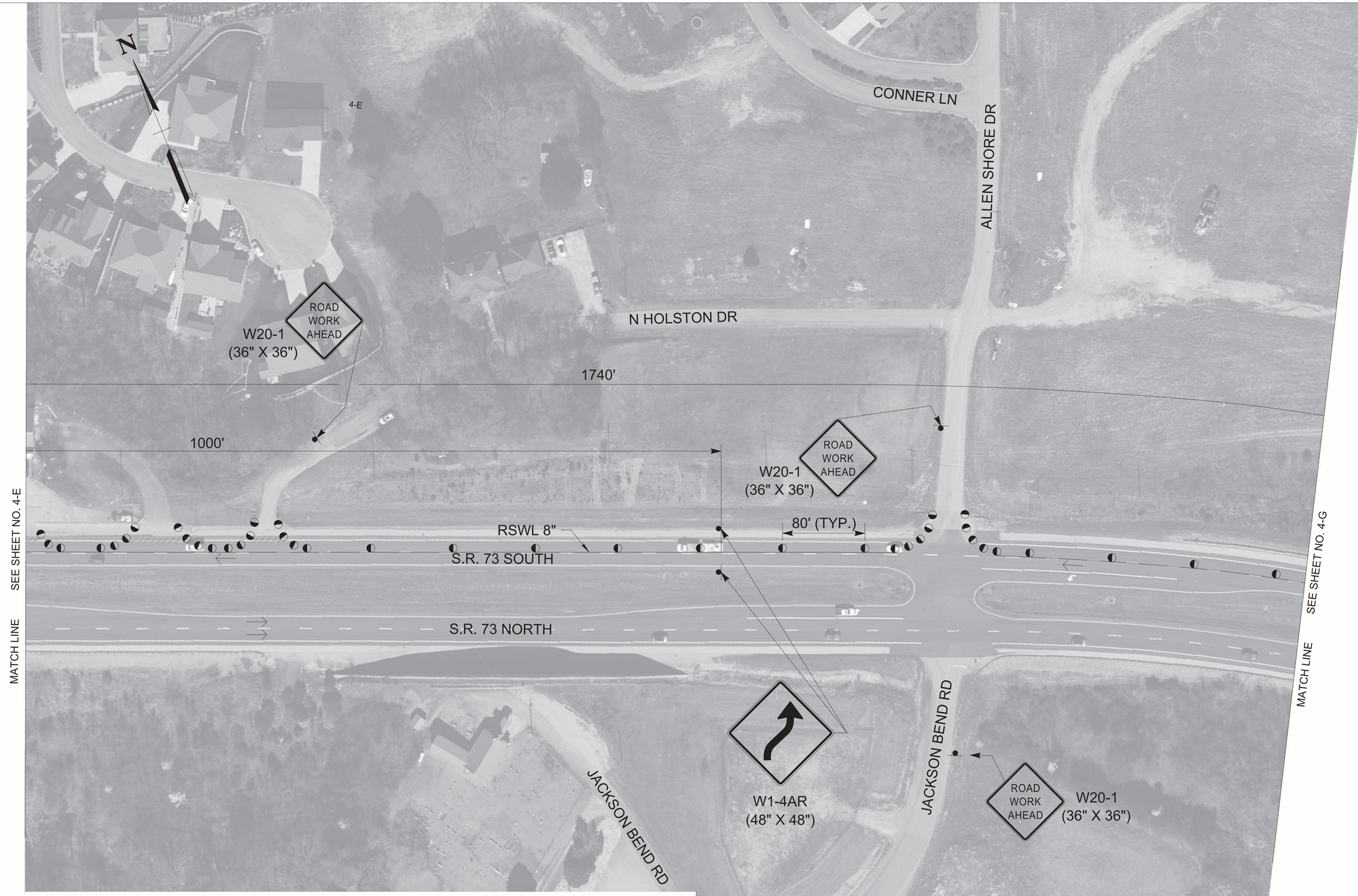
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2026	53S073-M3-005	4-F

LOUDON COUNTY S.R. 73



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TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	SIGN (CONSTRUCTION)
→	TRAFFIC FLOW
	FLEXIBLE DRUMS (CHANNELIZING)
RSWL 8" = REMOVABLE SOLID WHITE LINE 8"	

SEALED BY



11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN
BR. NO. 53-SR073-8.72
(LT. & RT.)
PHASE 1

PIN NO.: 135558.00

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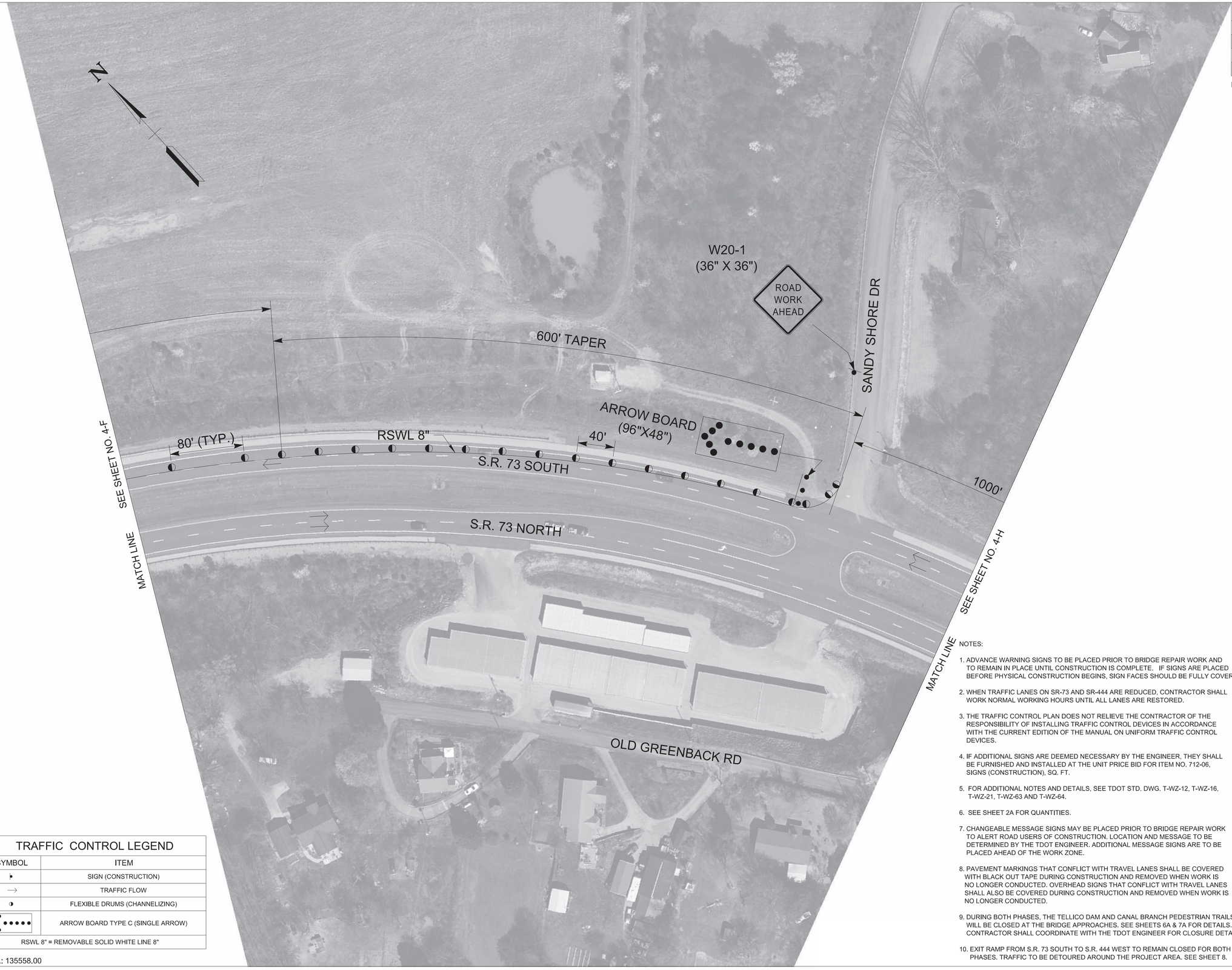
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2026	53S073-M3-005	4-G

LOUDON COUNTY S.R. 73



NOTES:

1. ADVANCE WARNING SIGNS TO BE PLACED PRIOR TO BRIDGE REPAIR WORK AND TO REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE. IF SIGNS ARE PLACED BEFORE PHYSICAL CONSTRUCTION BEGINS, SIGN FACES SHOULD BE FULLY COVERED.
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10. EXIT RAMP FROM S.R. 73 SOUTH TO S.R. 444 WEST TO REMAIN CLOSED FOR BOTH PHASES. TRAFFIC TO BE DETOURED AROUND THE PROJECT AREA. SEE SHEET 8.

SEALED BY

ALLYSON FOSTER BOYD
REGISTERED ENGINEER
COMMERCE
NO. 119,736
STATE OF TENNESSEE

11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN
BR. NO. 53-SR073-8.72
(LT. & RT.)
PHASE 1

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	SIGN (CONSTRUCTION)
→	TRAFFIC FLOW
	FLEXIBLE DRUMS (CHANNELIZING)
	ARROW BOARD TYPE C (SINGLE ARROW)
RSWL 8" = REMOVABLE SOLID WHITE LINE 8"	

PIN NO.: 135558.00

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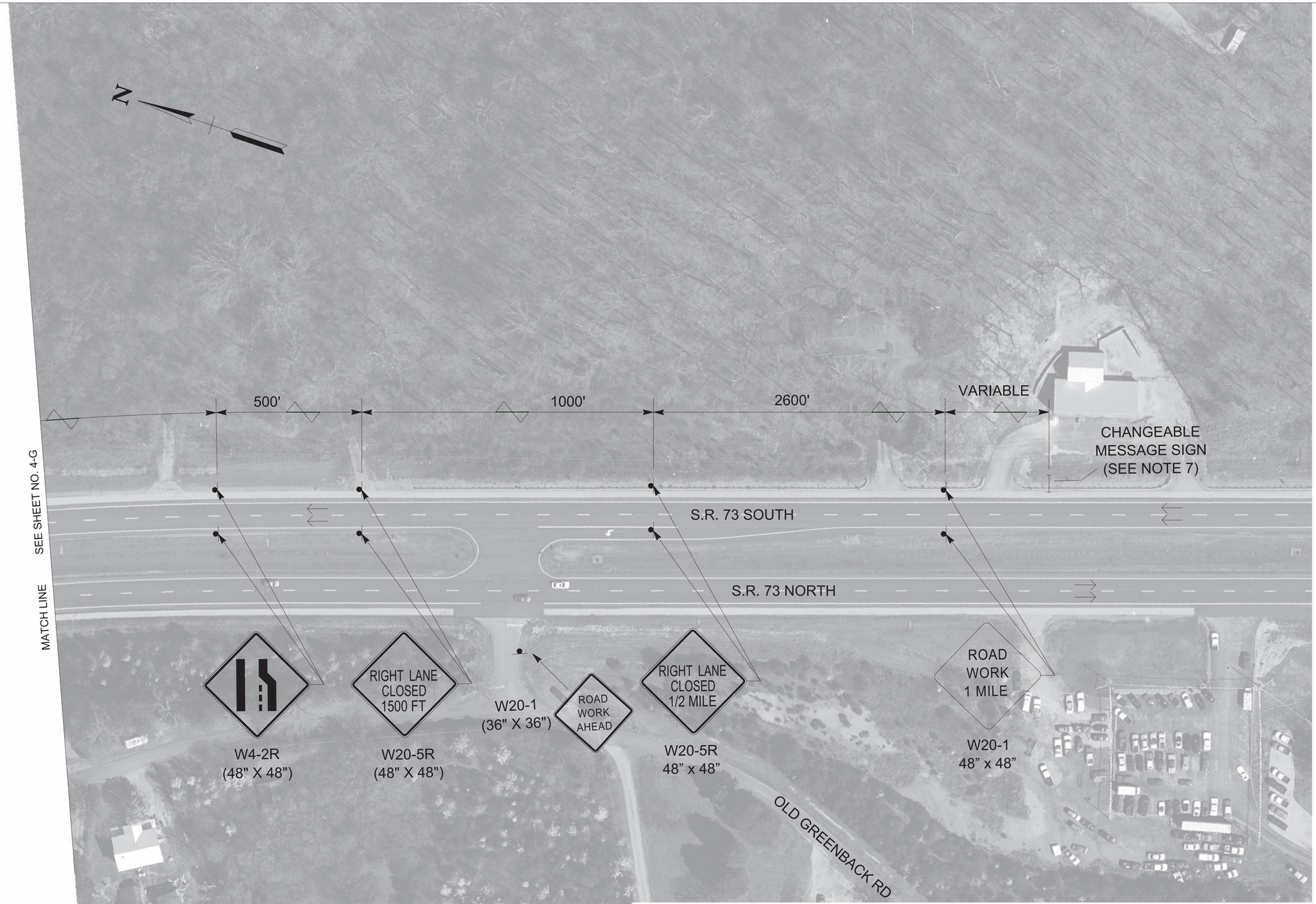
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2026	53S073-M3-005	4-H

LOUDON COUNTY S.R. 73



TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	SIGN (CONSTRUCTION)
→	TRAFFIC FLOW
⊢⊣	CHANGEABLE MESSAGE SIGN

NOTES:

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SEALED BY

ALLYSON FOSTER BOYD
REGISTERED ENGINEER
COMMERCE
NO. 119,736
STATE OF TENNESSEE

11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN
BR. NO. 53-SR073-8.72
(LT. & RT.)
PHASE 1

PIN NO.: 135558.00

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2026	53S073-M3-005	5

LOUDON COUNTY S.R. 73



NOTES:

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PIN NO.: 135558.00

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
▸	SIGN (CONSTRUCTION)
→	TRAFFIC FLOW
◑	FLEXIBLE DRUMS (CHANNELIZING)
//////////////	REMOVABLE BLACK-OUT TAPE (8")
RSYL 8" = REMOVABLE SOLID YELLOW LINE 8"	

SEALED BY

ALYSON FOSTER BOYD
REGISTERED ENGINEER
No. 119196
COMMERCE
STATE OF TENNESSEE

11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN
BR. NO. 53-SR073-8.72
(LT. & RT.)
PHASE 2

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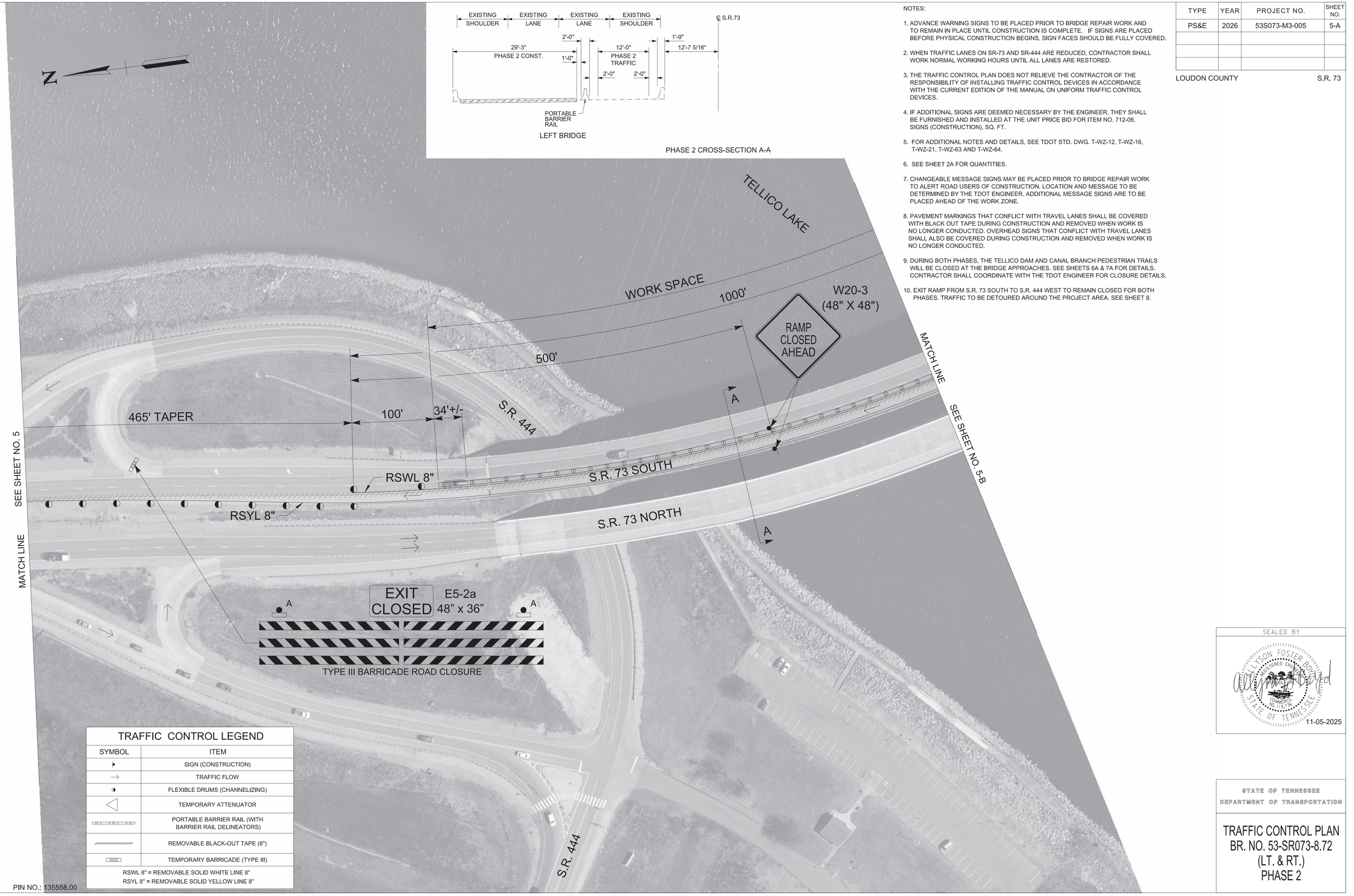

NOTES:

1. ADVANCE WARNING SIGNS TO BE PLACED PRIOR TO BRIDGE REPAIR WORK AND TO REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE. IF SIGNS ARE PLACED BEFORE PHYSICAL CONSTRUCTION BEGINS, SIGN FACES SHOULD BE FULLY COVERED.
2. WHEN TRAFFIC LANES ON SR-73 AND SR-444 ARE REDUCED, CONTRACTOR SHALL WORK NORMAL WORKING HOURS UNTIL ALL LANES ARE RESTORED.
3. THE TRAFFIC CONTROL PLAN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSTALLING TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
4. IF ADDITIONAL SIGNS ARE DEEMED NECESSARY BY THE ENGINEER, THEY SHALL BE FURNISHED AND INSTALLED AT THE UNIT PRICE BID FOR ITEM NO. 712-06, SIGNS (CONSTRUCTION), SQ. FT.
5. FOR ADDITIONAL NOTES AND DETAILS, SEE TDOT STD. DWG. T-WZ-12, T-WZ-16, T-WZ-21, T-WZ-63 AND T-WZ-64.
6. SEE SHEET 2A FOR QUANTITIES.
7. CHANGEABLE MESSAGE SIGNS MAY BE PLACED PRIOR TO BRIDGE REPAIR WORK TO ALERT ROAD USERS OF CONSTRUCTION. LOCATION AND MESSAGE TO BE DETERMINED BY THE TDOT ENGINEER. ADDITIONAL MESSAGE SIGNS ARE TO BE PLACED AHEAD OF THE WORK ZONE.
8. PAVEMENT MARKINGS THAT CONFLICT WITH TRAVEL LANES SHALL BE COVERED WITH BLACK OUT TAPE DURING CONSTRUCTION AND REMOVED WHEN WORK IS NO LONGER CONDUCTED. OVERHEAD SIGNS THAT CONFLICT WITH TRAVEL LANES SHALL ALSO BE COVERED DURING CONSTRUCTION AND REMOVED WHEN WORK IS NO LONGER CONDUCTED.
9. DURING BOTH PHASES, THE TELLICO DAM AND CANAL BRANCH PEDESTRIAN TRAILS WILL BE CLOSED AT THE BRIDGE APPROACHES. SEE SHEETS 6A & 7A FOR DETAILS. CONTRACTOR SHALL COORDINATE WITH THE TDOT ENGINEER FOR CLOSURE DETAILS.
10. EXIT RAMP FROM S.R. 73 SOUTH TO S.R. 444 WEST TO REMAIN CLOSED FOR BOTH PHASES. TRAFFIC TO BE DETOURED AROUND THE PROJECT AREA. SEE SHEET 8.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2026	53S073-M3-005	5-A

LOUDON COUNTY S.R. 73

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	SIGN (CONSTRUCTION)
	TRAFFIC FLOW
	FLEXIBLE DRUMS (CHANNELIZING)
	TEMPORARY ATTENUATOR
	PORTABLE BARRIER RAIL (WITH BARRIER RAIL DELINEATORS)
	REMOVABLE BLACK-OUT TAPE (8")
	TEMPORARY BARRICADE (TYPE III)

RSWL 8" = REMOVABLE SOLID WHITE LINE 8"
RSYL 8" = REMOVABLE SOLID YELLOW LINE 8"

PIN NO.: 135558.00

SEALED BY

ALLYSON FOSTER BOYD REGISTERED ENGINEER STATE OF TENNESSEE COMMISSION NO. 115,176

11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN
BR. NO. 53-SR073-8.72
(LT. & RT.)
PHASE 2

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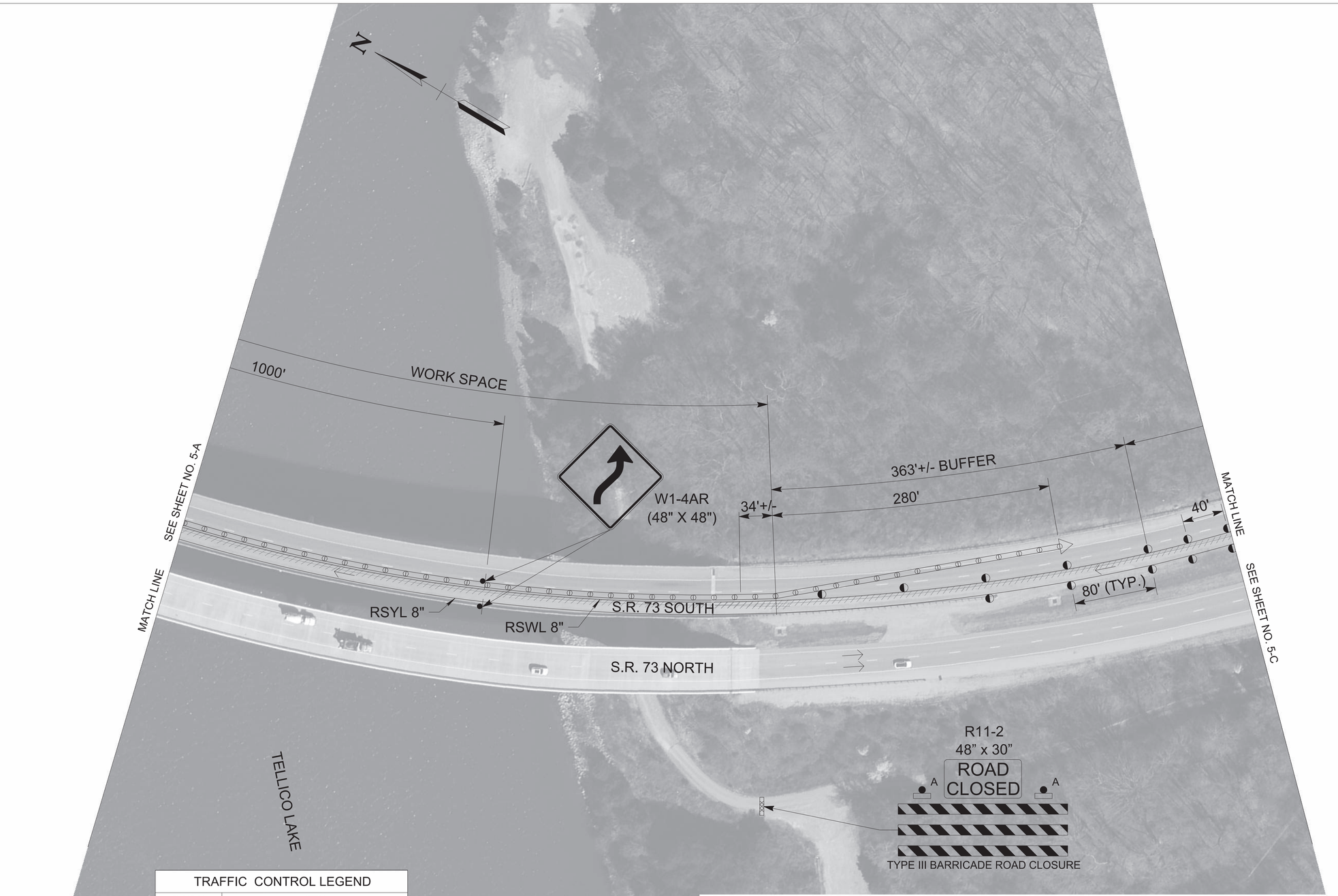
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2026	53S073-M3-005	5-B

LOUDON COUNTY S.R. 73



TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	SIGN (CONSTRUCTION)
	TRAFFIC FLOW
	FLEXIBLE DRUMS (CHANNELIZING)
	TEMPORARY ATTENUATOR
	PORTABLE BARRIER RAIL (WITH BARRIER RAIL DELINEATORS)
	REMOVABLE BLACK-OUT TAPE (8")
	TEMPORARY BARRICADE (TYPE III)

RSWL 8" = REMOVABLE SOLID WHITE LINE 8"
RSYL 8" = REMOVABLE SOLID YELLOW LINE 8"

NOTES:

1. ADVANCE WARNING SIGNS TO BE PLACED PRIOR TO BRIDGE REPAIR WORK AND TO REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE. IF SIGNS ARE PLACED BEFORE PHYSICAL CONSTRUCTION BEGINS, SIGN FACES SHOULD BE FULLY COVERED.
2. WHEN TRAFFIC LANES ON SR-73 AND SR-444 ARE REDUCED, CONTRACTOR SHALL WORK NORMAL WORKING HOURS UNTIL ALL LANES ARE RESTORED.
3. THE TRAFFIC CONTROL PLAN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSTALLING TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
4. IF ADDITIONAL SIGNS ARE DEEMED NECESSARY BY THE ENGINEER, THEY SHALL BE FURNISHED AND INSTALLED AT THE UNIT PRICE BID FOR ITEM NO. 712-06, SIGNS (CONSTRUCTION), SQ. FT.
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10. EXIT RAMP FROM S.R. 73 SOUTH TO S.R. 444 WEST TO REMAIN CLOSED FOR BOTH PHASES. TRAFFIC TO BE DETOURED AROUND THE PROJECT AREA. SEE SHEET 8.

SEALED BY

ALLYSON FOSTER BOYD
REGISTERED ENGINEER
COMMISSION NO. 115176
STATE OF TENNESSEE

11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN
BR. NO. 53-SR073-8.72 (LT. & RT.)
PHASE 2

PIN NO.: 135558.00

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2026	53S073-M3-005	5-C

LOUDON COUNTY S.R. 73



TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	SIGN (CONSTRUCTION)
→	TRAFFIC FLOW
	FLEXIBLE DRUMS (CHANNELIZING)
	REMOVABLE BLACK-OUT TAPE (8")

RSWL 8" = REMOVABLE SOLID WHITE LINE 8"
RSYL 8" = REMOVABLE SOLID YELLOW LINE 8"

NOTES:

1. ADVANCE WARNING SIGNS TO BE PLACED PRIOR TO BRIDGE REPAIR WORK AND TO REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE. IF SIGNS ARE PLACED BEFORE PHYSICAL CONSTRUCTION BEGINS, SIGN FACES SHOULD BE FULLY COVERED.
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10. EXIT RAMP FROM S.R. 73 SOUTH TO S.R. 444 WEST TO REMAIN CLOSED FOR BOTH PHASES. TRAFFIC TO BE DETOURED AROUND THE PROJECT AREA. SEE SHEET 8.

SEALED BY

ALLYSON FOSTER BOYD
REGISTERED ENGINEER
COMMISSION NO. 115176
STATE OF TENNESSEE
11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN
BR. NO. 53-SR073-8.72
(LT. & RT.)
PHASE 2

PIN NO.: 135558.00

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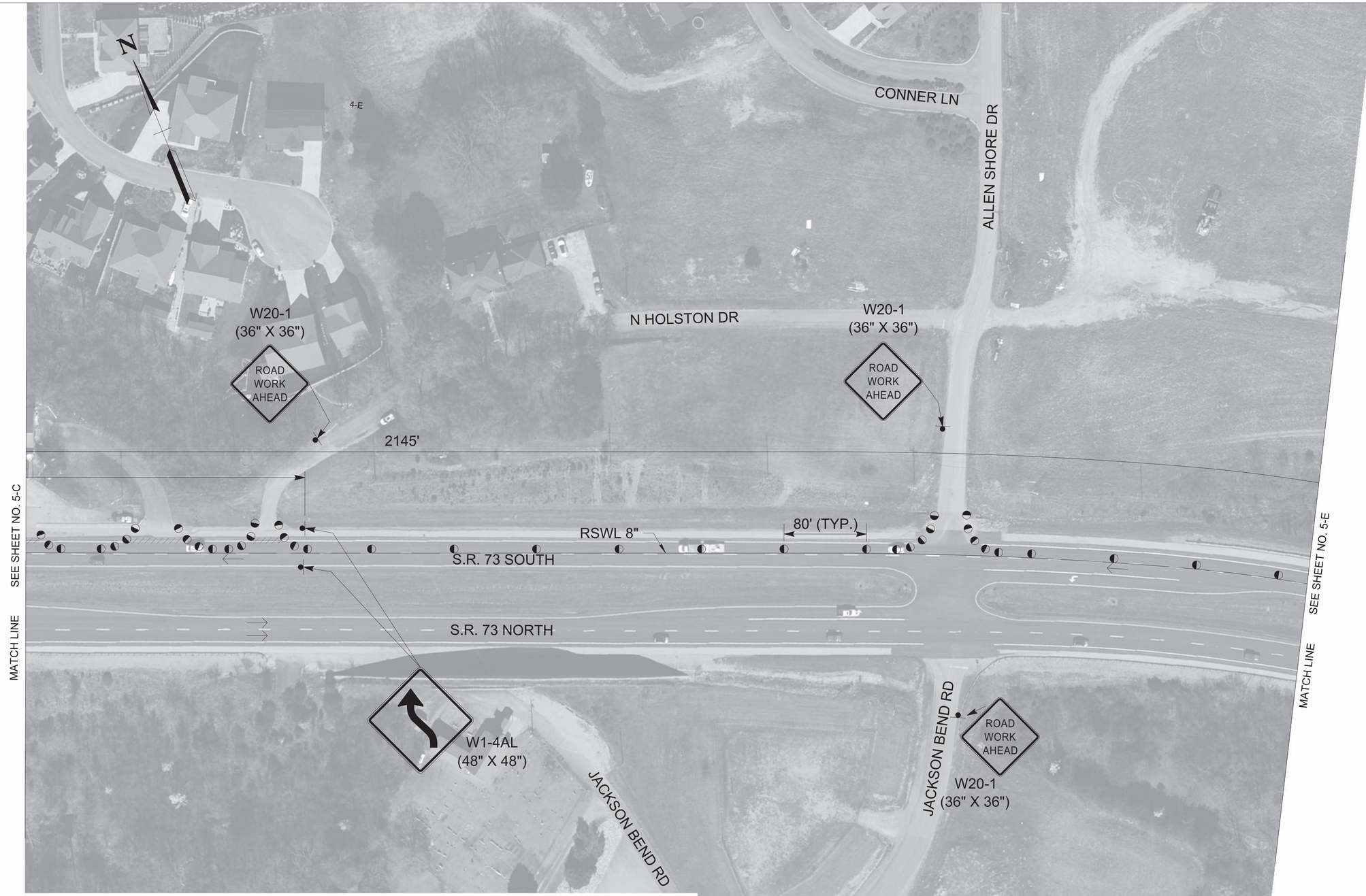
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2026	53S073-M3-005	5-D

LOUDON COUNTY S.R. 73



NOTES:

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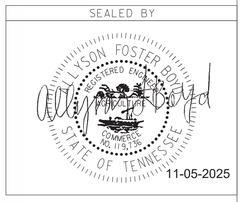
10. EXIT RAMP FROM S.R. 73 SOUTH TO S.R. 444 WEST TO REMAIN CLOSED FOR BOTH PHASES. TRAFFIC TO BE DETOURED AROUND THE PROJECT AREA. SEE SHEET 8.

PIN NO.: 135558.00

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	SIGN (CONSTRUCTION)
→	TRAFFIC FLOW
	FLEXIBLE DRUMS (CHANNELIZING)
	REMOVABLE BLACK-OUT TAPE (8")
RSWL 8" = REMOVABLE SOLID WHITE LINE 8"	

SEALED BY



11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN
BR. NO. 53-SR073-8.72
(LT. & RT.)
PHASE 2

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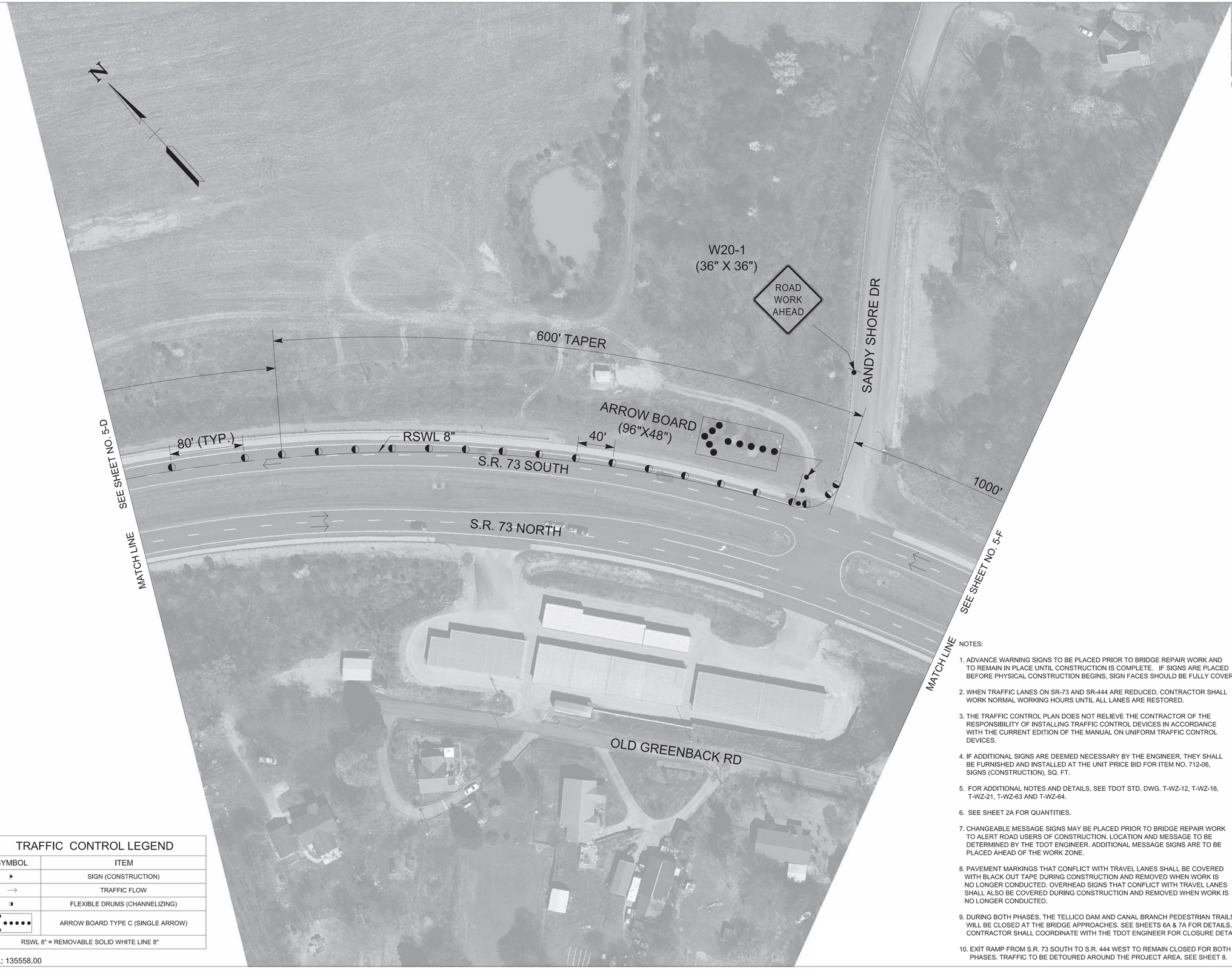
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2026	53S073-M3-005	5-E

LOUDON COUNTY S.R. 73



NOTES:

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TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	SIGN (CONSTRUCTION)
→	TRAFFIC FLOW
	FLEXIBLE DRUMS (CHANNELIZING)
	ARROW BOARD TYPE C (SINGLE ARROW)
RSWL 8" = REMOVABLE SOLID WHITE LINE 8"	

PIN NO.: 135558.00

SEALED BY

ALLYSON FOSTER BOYD
REGISTERED ENGINEER
COMMERCE
NO. 119,736
STATE OF TENNESSEE

11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN
BR. NO. 53-SR073-8.72
(LT. & RT.)
PHASE 2

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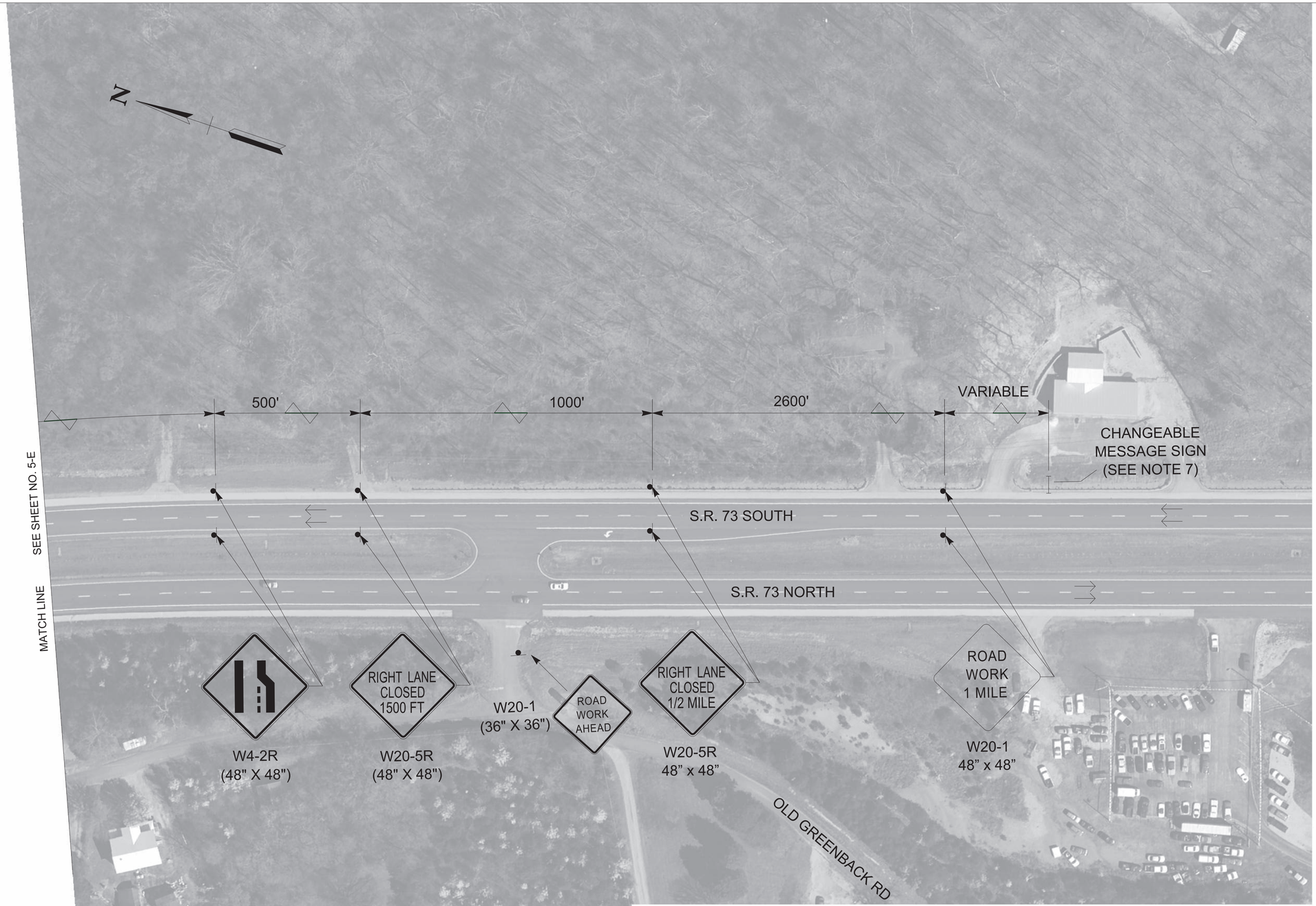
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2026	53S073-M3-005	5-F

LOUDON COUNTY S.R. 73



TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	SIGN (CONSTRUCTION)
→	TRAFFIC FLOW
⊢⊣	CHANGEABLE MESSAGE SIGN

NOTES:

1. ADVANCE WARNING SIGNS TO BE PLACED PRIOR TO BRIDGE REPAIR WORK AND TO REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE. IF SIGNS ARE PLACED BEFORE PHYSICAL CONSTRUCTION BEGINS, SIGN FACES SHOULD BE FULLY COVERED.
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10. EXIT RAMP FROM S.R. 73 SOUTH TO S.R. 444 WEST TO REMAIN CLOSED FOR BOTH PHASES. TRAFFIC TO BE DETOURED AROUND THE PROJECT AREA. SEE SHEET 8.

SEALED BY

ALLYSON FOSTER BOYD REGISTERED ENGINEER COMMERCE NO. 119,736 STATE OF TENNESSEE

11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN
BR. NO. 53-SR073-8.72
(LT. & RT.)
PHASE 2

PIN NO.: 135558.00

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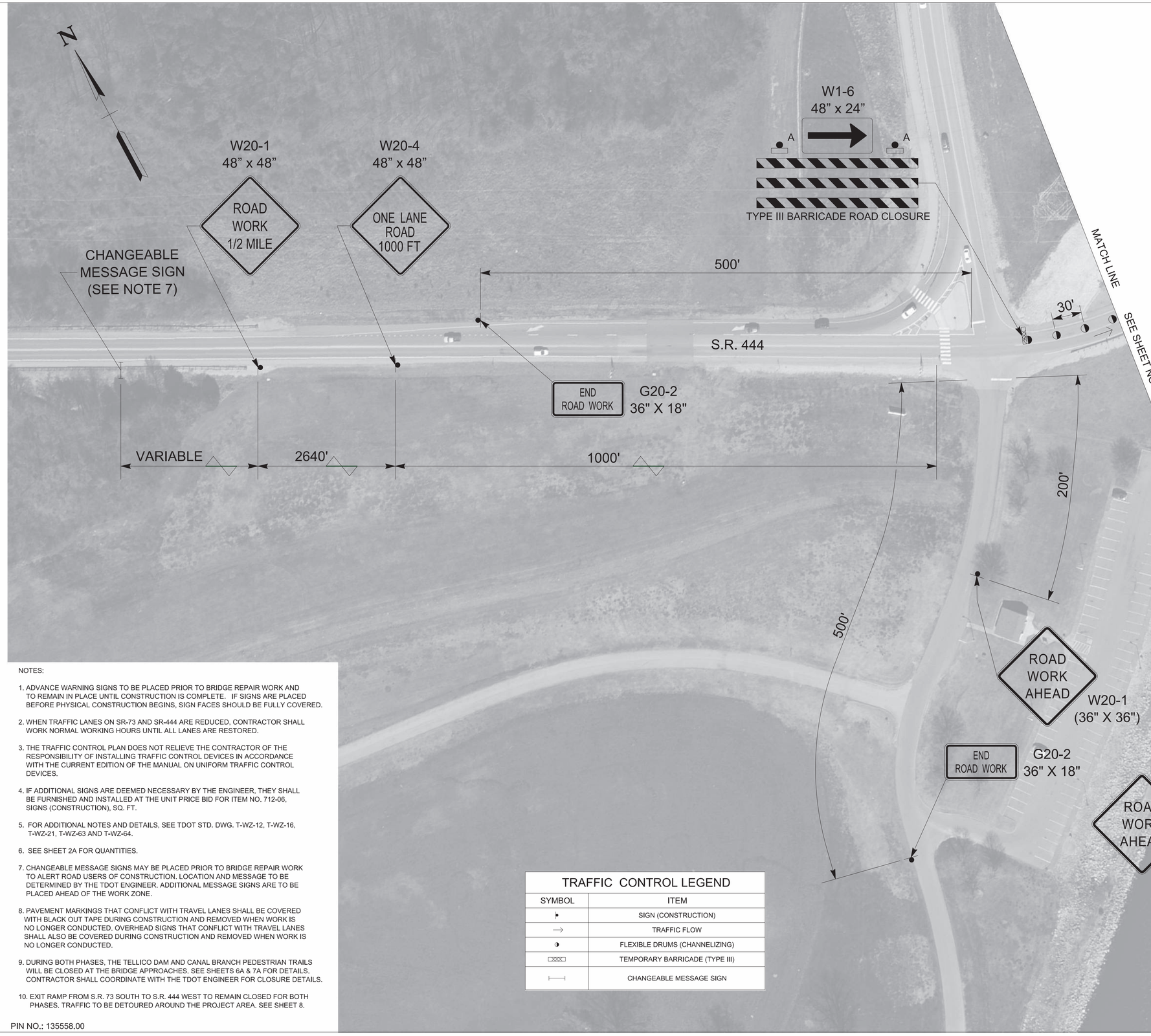
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2026	53S073-M3-005	6

LOUDON COUNTY S.R. 73



NOTES:

1. ADVANCE WARNING SIGNS TO BE PLACED PRIOR TO BRIDGE REPAIR WORK AND TO REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE. IF SIGNS ARE PLACED BEFORE PHYSICAL CONSTRUCTION BEGINS, SIGN FACES SHOULD BE FULLY COVERED.
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PIN NO.: 135558.00

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	SIGN (CONSTRUCTION)
	TRAFFIC FLOW
	FLEXIBLE DRUMS (CHANNELIZING)
	TEMPORARY BARRICADE (TYPE III)
	CHANGEABLE MESSAGE SIGN

SEALED BY

ALLYSON FOSTER BOYD
REGISTERED ENGINEER
No. 119736
STATE OF TENNESSEE

11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN
SR-444
PHASE 1

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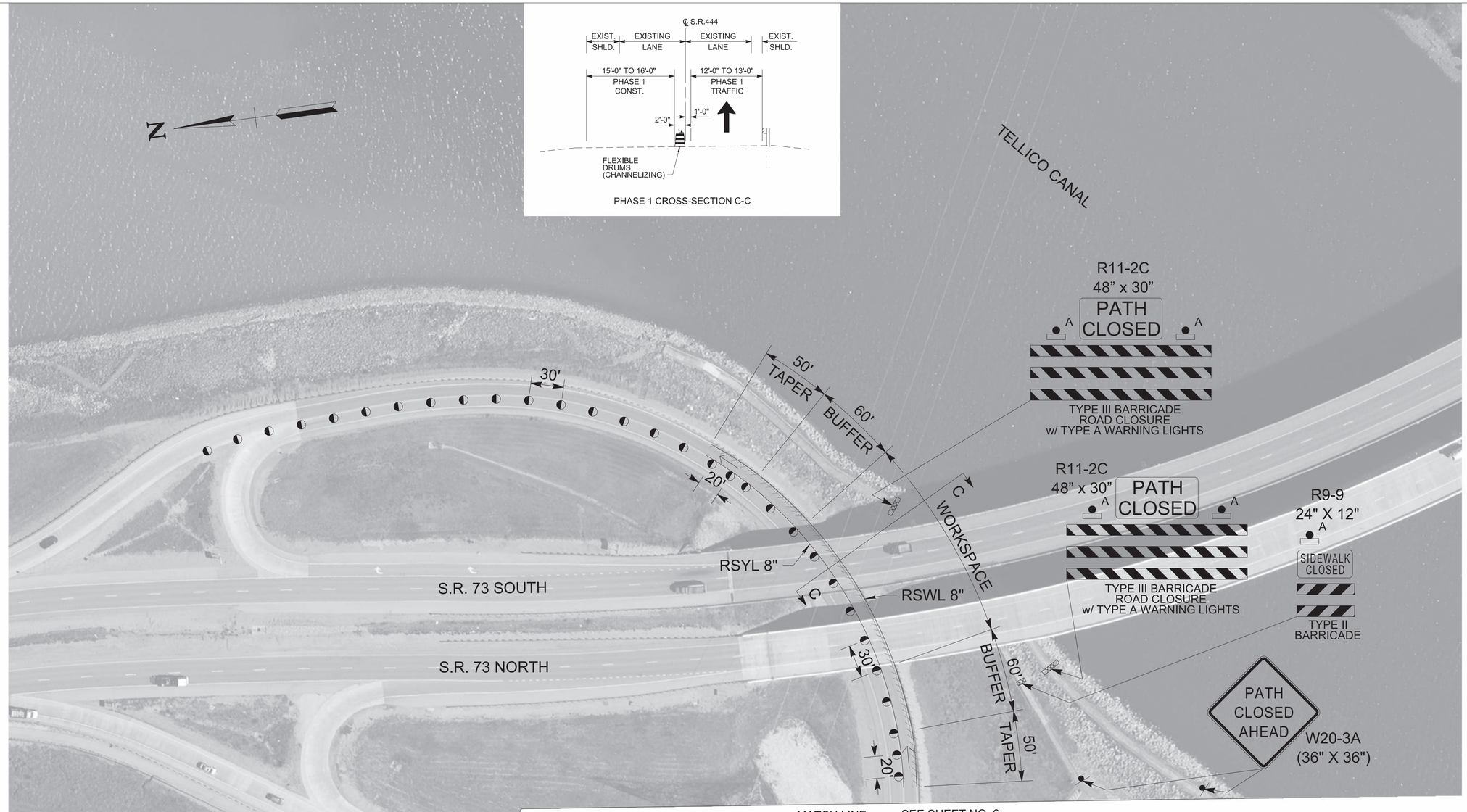
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2026	53S073-M3-005	6-A

LOUDON COUNTY S.R. 73



TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	SIGN (CONSTRUCTION)
→	TRAFFIC FLOW
	FLEXIBLE DRUMS (CHANNELIZING)
	REMOVABLE BLACK-OUT TAPE (8")
	TEMPORARY BARRICADE (TYPE II)
	TEMPORARY BARRICADE (TYPE III)

RSWL 8" = REMOVABLE SOLID WHITE LINE 8"
RSYL 8" = REMOVABLE SOLID YELLOW LINE 8"

PIN NO.: 135558.00

NOTES:

1. ADVANCE WARNING SIGNS TO BE PLACED PRIOR TO BRIDGE REPAIR WORK AND TO REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE. IF SIGNS ARE PLACED BEFORE PHYSICAL CONSTRUCTION BEGINS, SIGN FACES SHOULD BE FULLY COVERED.
2. WHEN TRAFFIC LANES ON SR-73 AND SR-444 ARE REDUCED, CONTRACTOR SHALL WORK NORMAL WORKING HOURS UNTIL ALL LANES ARE RESTORED.
3. THE TRAFFIC CONTROL PLAN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSTALLING TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
4. IF ADDITIONAL SIGNS ARE DEEMED NECESSARY BY THE ENGINEER, THEY SHALL BE FURNISHED AND INSTALLED AT THE UNIT PRICE BID FOR ITEM NO. 712-06, SIGNS (CONSTRUCTION), SQ. FT.
5. FOR ADDITIONAL NOTES AND DETAILS, SEE TDOT STD. DWG. T-WZ-12, T-WZ-16, T-WZ-21, T-WZ-63 AND T-WZ-64.
6. SEE SHEET 2A FOR QUANTITIES.
7. CHANGEABLE MESSAGE SIGNS MAY BE PLACED PRIOR TO BRIDGE REPAIR WORK TO ALERT ROAD USERS OF CONSTRUCTION. LOCATION AND MESSAGE TO BE DETERMINED BY THE TDOT ENGINEER. ADDITIONAL MESSAGE SIGNS ARE TO BE PLACED AHEAD OF THE WORK ZONE.
8. PAVEMENT MARKINGS THAT CONFLICT WITH TRAVEL LANES SHALL BE COVERED WITH BLACK OUT TAPE DURING CONSTRUCTION AND REMOVED WHEN WORK IS NO LONGER CONDUCTED. OVERHEAD SIGNS THAT CONFLICT WITH TRAVEL LANES SHALL ALSO BE COVERED DURING CONSTRUCTION AND REMOVED WHEN WORK IS NO LONGER CONDUCTED.
9. DURING BOTH PHASES, THE TELLICO DAM AND CANAL BRANCH PEDESTRIAN TRAILS WILL BE CLOSED AT THE BRIDGE APPROACHES. SEE SHEETS 6A & 7A FOR DETAILS. CONTRACTOR SHALL COORDINATE WITH THE TDOT ENGINEER FOR CLOSURE DETAILS.
10. EXIT RAMP FROM S.R. 73 SOUTH TO S.R. 444 WEST TO REMAIN CLOSED FOR BOTH PHASES. TRAFFIC TO BE DETOURED AROUND THE PROJECT AREA. SEE SHEET 8.

SEALED BY

ALLYSON FOSTER BOYD
REGISTERED ENGINEER
GUMMERSE
STATE OF TENNESSEE
11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN SR-444 PHASE 1

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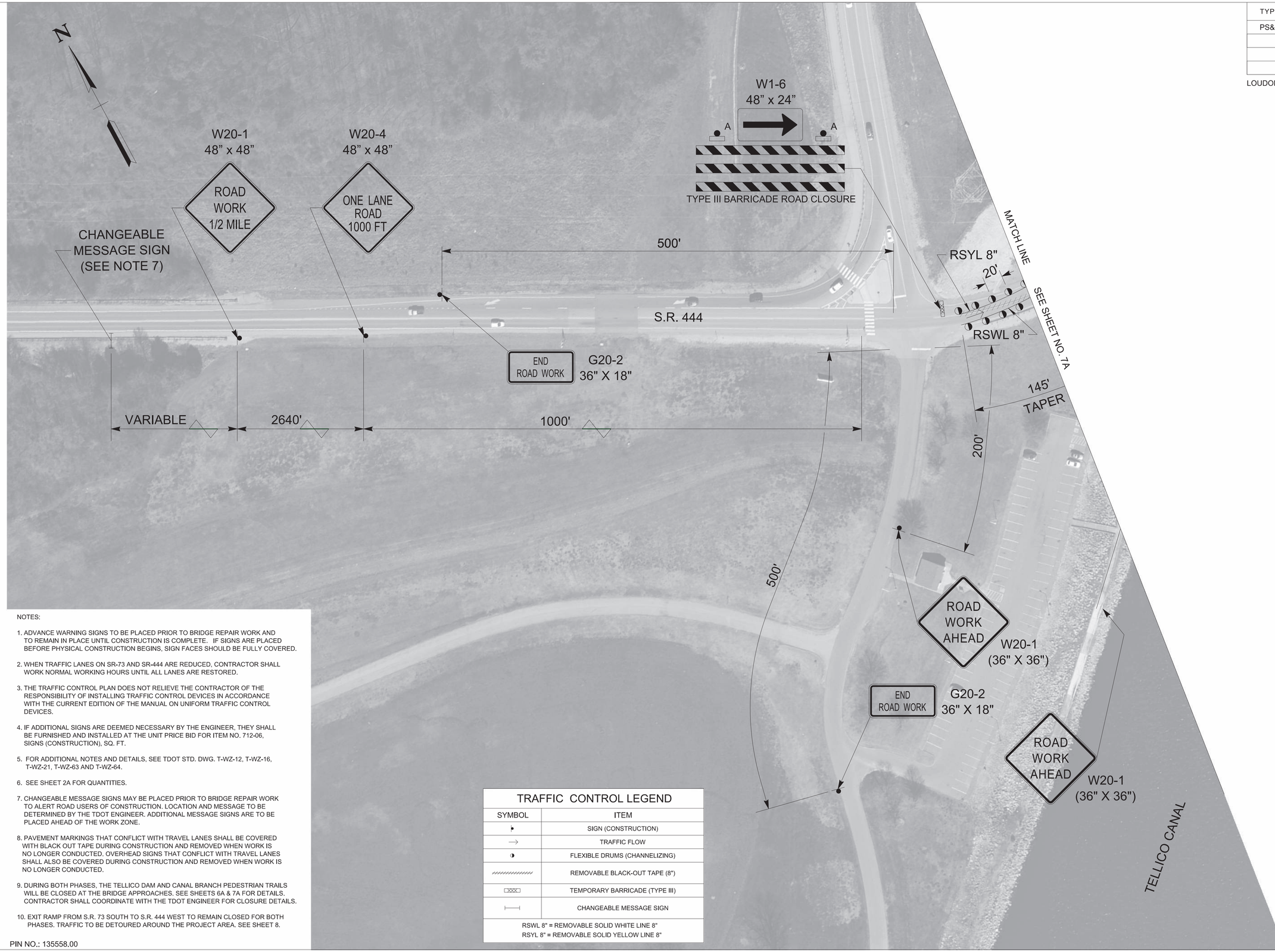
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2026	53S073-M3-005	7

LOUDON COUNTY S.R. 73



NOTES:

1. ADVANCE WARNING SIGNS TO BE PLACED PRIOR TO BRIDGE REPAIR WORK AND TO REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE. IF SIGNS ARE PLACED BEFORE PHYSICAL CONSTRUCTION BEGINS, SIGN FACES SHOULD BE FULLY COVERED.
2. WHEN TRAFFIC LANES ON SR-73 AND SR-444 ARE REDUCED, CONTRACTOR SHALL WORK NORMAL WORKING HOURS UNTIL ALL LANES ARE RESTORED.
3. THE TRAFFIC CONTROL PLAN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSTALLING TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
4. IF ADDITIONAL SIGNS ARE DEEMED NECESSARY BY THE ENGINEER, THEY SHALL BE FURNISHED AND INSTALLED AT THE UNIT PRICE BID FOR ITEM NO. 712-06, SIGNS (CONSTRUCTION), SQ. FT.
5. FOR ADDITIONAL NOTES AND DETAILS, SEE TDOT STD. DWG. T-WZ-12, T-WZ-16, T-WZ-21, T-WZ-63 AND T-WZ-64.
6. SEE SHEET 2A FOR QUANTITIES.
7. CHANGEABLE MESSAGE SIGNS MAY BE PLACED PRIOR TO BRIDGE REPAIR WORK TO ALERT ROAD USERS OF CONSTRUCTION. LOCATION AND MESSAGE TO BE DETERMINED BY THE TDOT ENGINEER. ADDITIONAL MESSAGE SIGNS ARE TO BE PLACED AHEAD OF THE WORK ZONE.
8. PAVEMENT MARKINGS THAT CONFLICT WITH TRAVEL LANES SHALL BE COVERED WITH BLACK OUT TAPE DURING CONSTRUCTION AND REMOVED WHEN WORK IS NO LONGER CONDUCTED. OVERHEAD SIGNS THAT CONFLICT WITH TRAVEL LANES SHALL ALSO BE COVERED DURING CONSTRUCTION AND REMOVED WHEN WORK IS NO LONGER CONDUCTED.
9. DURING BOTH PHASES, THE TELLICO DAM AND CANAL BRANCH PEDESTRIAN TRAILS WILL BE CLOSED AT THE BRIDGE APPROACHES. SEE SHEETS 6A & 7A FOR DETAILS. CONTRACTOR SHALL COORDINATE WITH THE TDOT ENGINEER FOR CLOSURE DETAILS.
10. EXIT RAMP FROM S.R. 73 SOUTH TO S.R. 444 WEST TO REMAIN CLOSED FOR BOTH PHASES. TRAFFIC TO BE DETOURED AROUND THE PROJECT AREA. SEE SHEET 8.

PIN NO.: 135558.00

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	SIGN (CONSTRUCTION)
→	TRAFFIC FLOW
	FLEXIBLE DRUMS (CHANNELIZING)
	REMOVABLE BLACK-OUT TAPE (8")
	TEMPORARY BARRICADE (TYPE III)
	CHANGEABLE MESSAGE SIGN

RSWL 8" = REMOVABLE SOLID WHITE LINE 8"
RSYL 8" = REMOVABLE SOLID YELLOW LINE 8"

SEALED BY

ALLYSON FOSTER BOYD
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 119,736
STATE OF TENNESSEE

11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN
SR-444
PHASE 2

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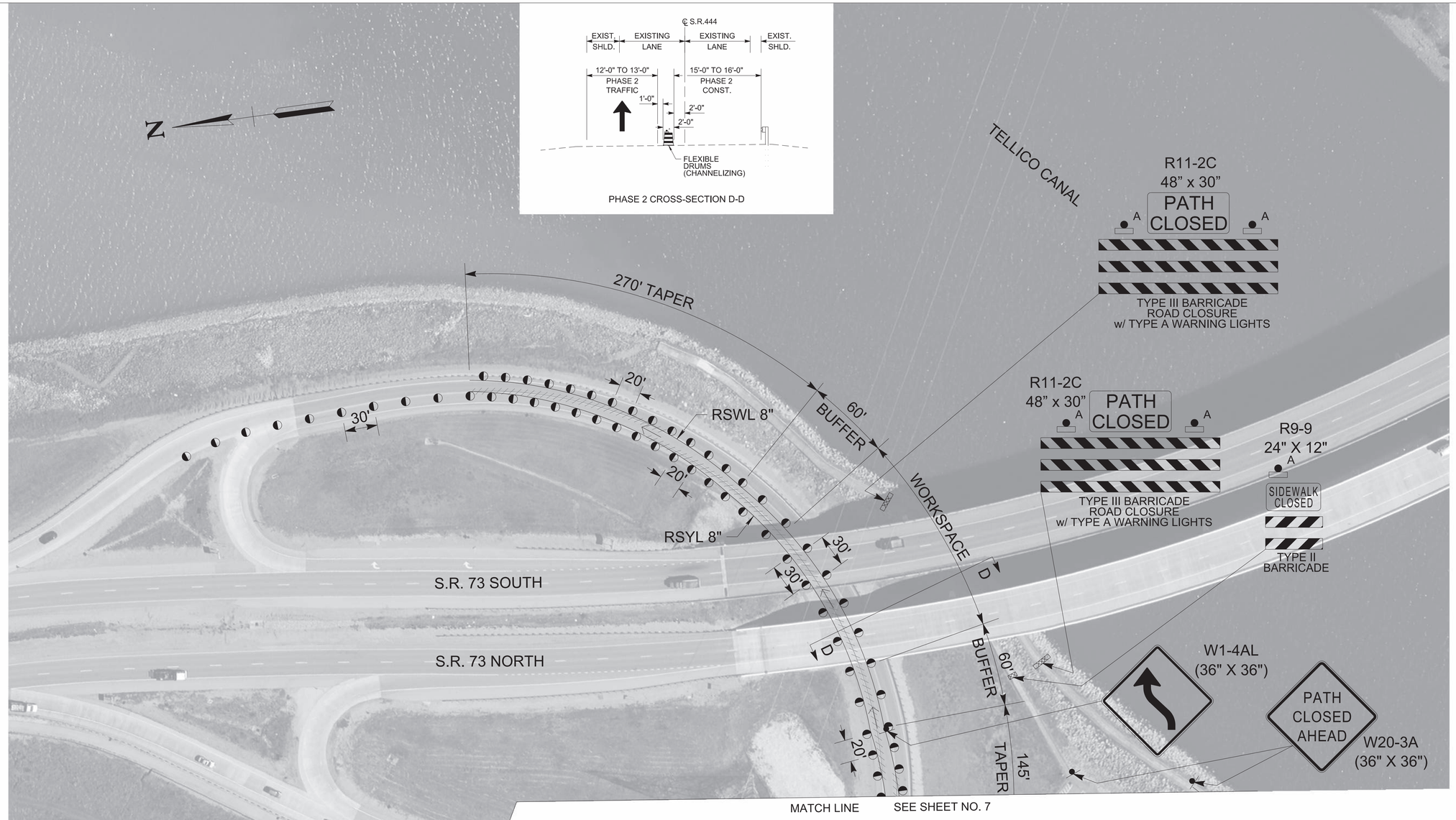
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2026	53S073-M3-005	7-A

LOUDON COUNTY S.R. 73



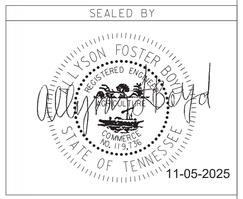
TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	SIGN (CONSTRUCTION)
→	TRAFFIC FLOW
	FLEXIBLE DRUMS (CHANNELIZING)
	REMOVABLE BLACK-OUT TAPE (8")
	TEMPORARY BARRICADE (TYPE II)
	TEMPORARY BARRICADE (TYPE III)
RSWL 8" = REMOVABLE SOLID WHITE LINE 8" RSYL 8" = REMOVABLE SOLID YELLOW LINE 8"	

PIN NO.: 135558.00

NOTES:

1. ADVANCE WARNING SIGNS TO BE PLACED PRIOR TO BRIDGE REPAIR WORK AND TO REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE. IF SIGNS ARE PLACED BEFORE PHYSICAL CONSTRUCTION BEGINS, SIGN FACES SHOULD BE FULLY COVERED.
2. WHEN TRAFFIC LANES ON SR-73 AND SR-444 ARE REDUCED, CONTRACTOR SHALL WORK NORMAL WORKING HOURS UNTIL ALL LANES ARE RESTORED.
3. THE TRAFFIC CONTROL PLAN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSTALLING TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
4. IF ADDITIONAL SIGNS ARE DEEMED NECESSARY BY THE ENGINEER, THEY SHALL BE FURNISHED AND INSTALLED AT THE UNIT PRICE BID FOR ITEM NO. 712-06, SIGNS (CONSTRUCTION), SQ. FT.
5. FOR ADDITIONAL NOTES AND DETAILS, SEE TDOT STD. DWG. T-WZ-12, T-WZ-16, T-WZ-21, T-WZ-63 AND T-WZ-64.
6. SEE SHEET 2A FOR QUANTITIES.
7. CHANGEABLE MESSAGE SIGNS MAY BE PLACED PRIOR TO BRIDGE REPAIR WORK TO ALERT ROAD USERS OF CONSTRUCTION. LOCATION AND MESSAGE TO BE DETERMINED BY THE TDOT ENGINEER. ADDITIONAL MESSAGE SIGNS ARE TO BE PLACED AHEAD OF THE WORK ZONE.
8. PAVEMENT MARKINGS THAT CONFLICT WITH TRAVEL LANES SHALL BE COVERED WITH BLACK OUT TAPE DURING CONSTRUCTION AND REMOVED WHEN WORK IS NO LONGER CONDUCTED. OVERHEAD SIGNS THAT CONFLICT WITH TRAVEL LANES SHALL ALSO BE COVERED DURING CONSTRUCTION AND REMOVED WHEN WORK IS NO LONGER CONDUCTED.
9. DURING BOTH PHASES, THE TELLICO DAM AND CANAL BRANCH PEDESTRIAN TRAILS WILL BE CLOSED AT THE BRIDGE APPROACHES. SEE SHEETS 6A & 7A FOR DETAILS. CONTRACTOR SHALL COORDINATE WITH THE TDOT ENGINEER FOR CLOSURE DETAILS.
10. EXIT RAMP FROM S.R. 73 SOUTH TO S.R. 444 WEST TO REMAIN CLOSED FOR BOTH PHASES. TRAFFIC TO BE DETOURED AROUND THE PROJECT AREA. SEE SHEET 8.

SEALED BY



11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN
SR-444
PHASE 2

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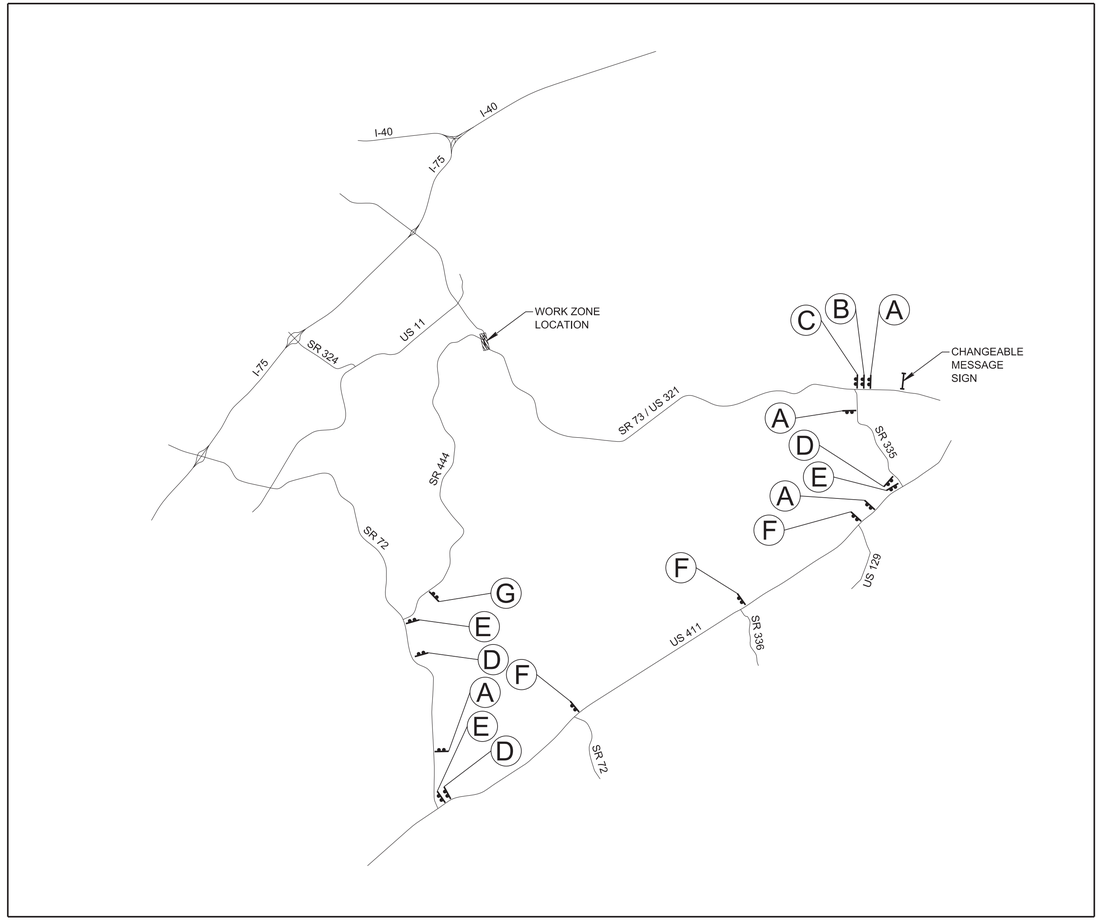
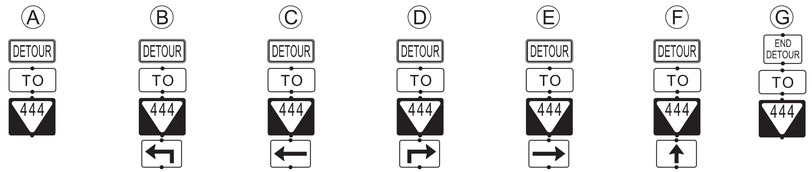
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2026	53S073-M3-005	8

LOUDON COUNTY S.R. 73







TN-6B
30" X 24"



M4-5
24" X 12"



M4-8
24" X 12"



M5-1L
21" X 15"



M5-1R
21" X 15"



M6-1L
21" X 15"



M6-1R
21" X 15"



M6-3
21" X 15"



M4-8A
24" X 18"

DETOUR NETWORK NOTES

1. CONTRACTOR TO INSTALL DETOUR SIGNS ALONG STREETS PENDING COORDINATION AND APPROVAL FROM TDOT.
2. SR 444 DETOUR TO OCCUR DURING RAMP CLOSURE ON SR-73 DURING CONSTRUCTION. SEE SHEETS 4, 4A-4H, 5, 5A-5F AND BR-04 FOR PHASING AND LANE RESTRICTIONS.
3. ADVANCE WARNING SIGNS TO BE PLACED PRIOR TO CONSTRUCTION AND TO REMAIN IN PLACE UNTIL THE COMPLETION OF THIS PROJECT. ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE WEEK BEFORE NEEDED, IF THE SIGN FACE IS FULLY COVERED.
4. THE TRAFFIC CONTROL PLAN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSTALLING TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
5. THE LOCATION OF ALL TRAFFIC CONTROL DEVICES ARE TO BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.
6. IF THE CONTRACTOR MOVES OFF THE PROJECT, THEY SHALL COVER OR REMOVE ALL UN-NEEDED SIGNS AS DIRECTED BY THE ENGINEER. COSTS OF REMOVAL, COVERING, AND REINSTALLING SIGNS SHALL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT ALL COSTS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO. 712-06, SIGNS (CONSTRUCTION) PER SQUARE FOOT.
7. SPECIAL DETOUR SIGNING SHALL BE BLACK COPY ON ORANGE BACKGROUND EXCEPT THAT STATE ROUTE SHIELDS SHALL BE STANDARD SIGNS.

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	WORK ZONE
	SIGN (CONSTRUCTION) (2-POST)
	CHANGEABLE MESSAGE SIGN

SEALED BY



11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN

SR 444 DETOUR
NOT TO SCALE

PIN NO.: 135558.00

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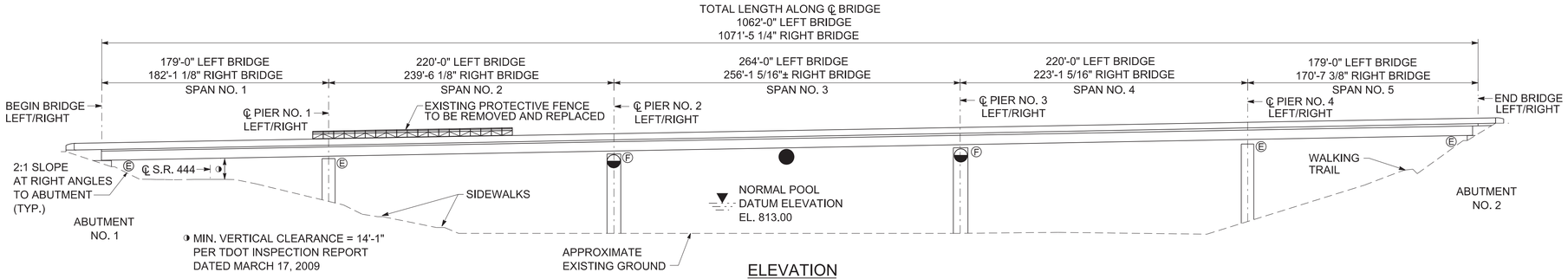


ELEVATION

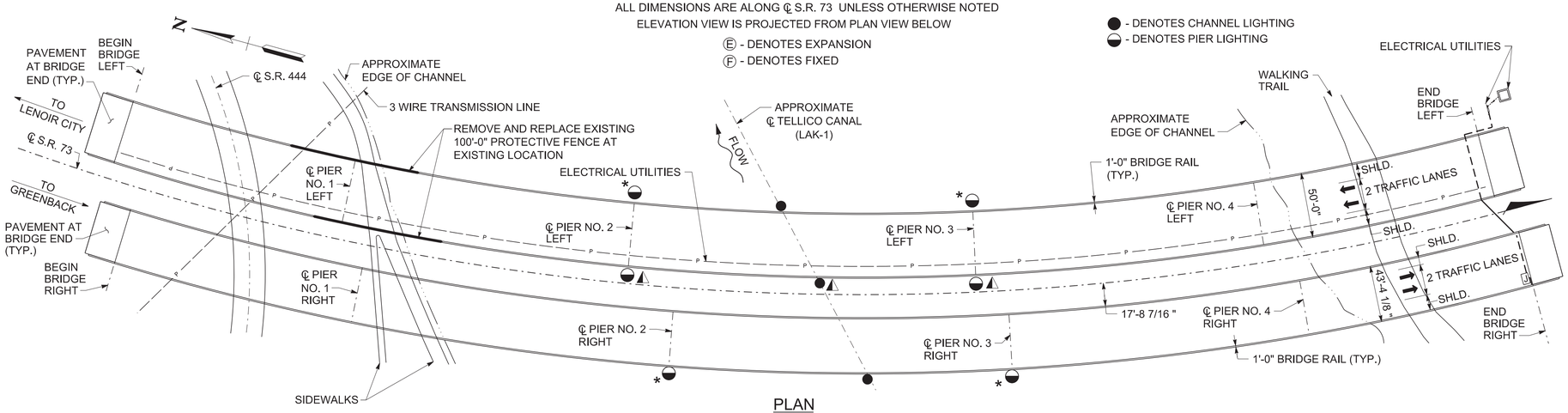
NOT TO SCALE

ALL DIMENSIONS ARE ALONG ℄ S.R. 73 UNLESS OTHERWISE NOTED

ELEVATION VIEW IS PROJECTED FROM PLAN VIEW BELOW

Ⓔ - DENOTES EXPANSION

Ⓕ - DENOTES FIXED



PLAN

NOT TO SCALE

◭ - DENOTES NAVIGATION LIGHTING TO BE REMOVED

◒ - DENOTES NAVIGATION LIGHTING TO BE UPGRADED

* (SEE NAVIGATIONAL LIGHTING PLANS FOR ADDITIONAL DETAILS)

● - DENOTES CHANNEL LIGHTING

◒ - DENOTES PIER LIGHTING

SCOPE OF WORK - BRIDGE NO. 53-SR73-8.72 (LEFT)

1. PROVIDE REQUIRED TRAFFIC CONTROL AND PHASE CONSTRUCTION MAINTAINING ONE 16 FOOT LANE OF TRAFFIC AT ALL TIMES ALONG SR 73. PROVIDE REQUIRED TRAFFIC CONTROL MAINTAINING ONE LANE OF TRAFFIC ALONG SR 444 BELOW BRIDGE AT ALL TIMES UTILIZING PORTABLE SIGNALS. WALKING TRAIL BELOW BRIDGE AT END BRIDGE SHALL BE CLOSED.
2. PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR SHALL SUBMIT TO TDOT BRIDGE INSPECTION OFFICE STRUCTURAL DESIGN PLANS SEALED BY A PROFESSIONAL ENGINEER SHOWING PROPOSED JACKING AND TEMPORARY BRACING OF THE BRIDGE REQUIRED TO REMOVE AND REPLACE THE BEARING DEVICES AT BEGIN BRIDGE, END BRIDGE, PIER NO. 1, AND PIER NO. 4.
3. REPAIR COLLISION DAMAGE ON STRUCTURAL STEEL GIRDER "1" IN SPAN 1 OF BRIDGE.
4. REMOVE ASPHALT OVERLAY ON EXISTING BRIDGE DECK AND PABES.
5. RECONSTRUCT THE CONCRETE BRIDGE DECKS IN AREAS OF PARTIAL DEPTH DECK REPAIR UTILIZING 18 HOUR HIGH EARLY STRENGTH CONCRETE.
6. REMOVE AND REPLACE MODULAR JOINTS AT BEGIN AND END BRIDGE.
7. PLACE 3¼" ASPHALT OVERLAY WITH BRIDGE DECK SEALANT ON BRIDGE DECK AND PABES.
8. CONSTRUCT ASPHALT PAVEMENT TRANSITIONS AT THE BEGINNING AND END OF BRIDGES.
9. REPAIR DETERIORATED AREAS OF CONCRETE ON SUBSTRUCTURE UNITS.
10. EPOXY INJECT CRACKS ON SUBSTRUCTURE UNITS.
11. REPAIR SPALLED AREAS OF CONCRETE ON PARAPETS.
12. REMOVE AND REPLACE BEARINGS AT BEGIN BRIDGE, END BRIDGE, PIER NO. 1, AND PIER NO. 4.
13. PERFORM SPOT CLEANING BY HAND OR POWER TOOL METHODS AT DESIGNATED REPAIR AREAS OF EXISTING STRUCTURAL STEEL IF BLAST CLEANING HAS NOT OCCURRED.
14. PERFORM APPLICATION OF RUST INHIBITOR AT DESIGNATED LOCATIONS.
15. BLAST CLEAN AND PAINT EXISTING STRUCTURAL STEEL UTILIZING SYSTEM "A". PAINT COLOR TO MATCH ADJACENT BRIDGE.
16. PLACE NON-PENETRATING CONCRETE SEAL TO TOP AND VERTICAL FACE OF ABUTMENT NOS. 1 AND 2.
17. CLEAN AND MAINTAIN BRIDGE DRAINS (COST TO BE INCLUDED IN ITEM NO. 617-01, BRIDGE DECK SEALANT).
18. HIGH PRESSURE WATER WASH AND TEXTURE COAT ALL EXPOSED CONCRETE SURFACES OF PARAPETS, DECK OVERHANGS, PIER NO.1, AND PIER CAPS AT PIER NOS. 2, 3, AND 4. TOP AND INSIDES FACE OF PARAPET SHALL BE WHITE. ALL OTHER SURFACES SHALL BE MOUNTAIN GREY.
19. REMOVE EXISTING PROTECTIVE FENCING AND REPLACE WITH NEW PROTECTIVE FENCING ON BRIDGE RAIL OVER THE WALKWAY AT THE NORTH END OF BRIDGE. SEE STD-8-5.
20. PLACE DELINEATORS ON TOP OF PARAPETS WITHIN LIMITS OF BRIDGE.
21. PLACE NEW STRIPING AND SIGNING AS APPROPRIATE.
22. UPGRADE NAVIGATION LIGHTING TO LED UTILIZING EXISTING POWER SOURCE ON EAST SIDE OF BRIDGE ONLY. MAINTAIN EXISTING LIGHTING WHILE LIGHTING IS BEING UPGRADED WITH TEMPORARY SOLAR POWERED MARINE NAVIGATION LIGHTS. REMOVE AND REPLACE EXISTING NAVIGATION LIGHTING EQUIPMENT: ELECTRICAL CABINET; WIRING; LIGHTING CONDUIT INCLUDING EXPANSION FITTINGS AND PULL BOXES; CONDUIT SUPPORTS, AND PIVOT ASSEMBLIES. EXISTING LIGHTING SUPPORTS TO BE CLEANED AND RE-GALVANIZED.
23. REMOVE NAVIGATION LIGHTING AND SUPPORTS ON WEST SIDE OF BRIDGE.
24. ENCASE EXPOSED PILES AT END BRIDGE.
25. CLEAN PAVED DITCH DRAIN AT BEGIN BRIDGE (COST TO BE INCLUDED IN ITEM NO. 617-01, BRIDGE DECK SEALANT).
26. REMOVE VEGETATION FOR A DISTANCE OF TEN FEET ALONG EACH SIDE OF THE BRIDGE AT BEGIN AND END BRIDGE.

SCOPE OF WORK - BRIDGE NO. 53-SR73-8.72 (RIGHT)

1. UPGRADE NAVIGATION LIGHTING TO LED TO MATCH LEFT BRIDGE.

PROJECT NO.	YEAR	SHEET NO.
53S073-M3-005	2026	BR-01

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

LIST OF BRIDGE DRAWINGS

DRAWING	DWG. NO.	SHEET NO.	REV. DATE
LAYOUT OF BRIDGES TO BE REPAIRED	BR-133-280	BR-01	
ESTIMATED BRIDGE QUANTITIES	BR-133-281	BR-02	
GENERAL NOTES	BR-133-282	BR-03	
PHASE CONSTRUCTION	BR-133-283	BR-04	
SUPERSTRUCTURE REPAIRS SPAN 1 - LEFT BRIDGE	BR-133-284	BR-05	
SUPERSTRUCTURE REPAIRS SPAN 2 - LEFT BRIDGE	BR-133-285	BR-06	
SUPERSTRUCTURE REPAIRS SPAN 3 - LEFT BRIDGE	BR-133-286	BR-07	
SUPERSTRUCTURE REPAIRS SPAN 4 - LEFT BRIDGE	BR-133-287	BR-08	
SUPERSTRUCTURE REPAIRS SPAN 5 - LEFT BRIDGE	BR-133-288	BR-09	
ABUTMENT REPAIRS LEFT BRIDGE	BR-133-289	BR-10	
PIER REPAIRS PIER 1 - LEFT BRIDGE	BR-133-290	BR-11	
PIER REPAIRS PIER 2 - LEFT BRIDGE	BR-133-291	BR-12	
PIER REPAIRS PIER 3 - LEFT BRIDGE	BR-133-292	BR-13	
PIER REPAIRS PIER 4 - LEFT BRIDGE	BR-133-293	BR-14	
JOINT REPLACEMENT DETAILS LEFT BRIDGE	BR-133-294	BR-15	
RISER REPAIR DETAILS LEFT BRIDGE ABUTMENTS	BR-133-295	BR-16	
BEARING REPLACEMENT DETAILS LEFT BRIDGE	BR-133-296	BR-17	
GIRDER REPAIR DETAILS LEFT BRIDGE	BR-133-297	BR-18	
CONCRETE REPAIR DETAILS LEFT BRIDGE	BR-133-298	BR-19	
NAVIGATIONAL LIGHTING PLAN	BR-133-299	BR-20	
NAVIGATIONAL LIGHTING NOTES	BR-133-300	BR-21	
NAVIGATIONAL LIGHTING DETAILS	BR-133-301	BR-22	
NAVIGATIONAL LIGHTING ELECTRICAL DETAILS (1)	BR-133-302	BR-23	
NAVIGATIONAL LIGHTING ELECTRICAL DETAILS (2)	BR-133-303	BR-24	

LIST OF BRIDGE REFERENCE DRAWINGS

(TO BE PRINTED WITH PLANS)

K-86-3, M-28-1, M-35-121, M-35-124 THRU M-35-141, U-38-60, U-38-62, AND U-38-65

STANDARD BRIDGE DRAWINGS

DRAWING NO.	LATEST REV. DATE	DRAWING
STD-8-5	10/01/2025	STANDARD PROTECTIVE FENCE DETAILS
SBR-2-115	06/15/2016	GENERAL NOTES AND DETAILS FOR EXPANSION JOINT REPLACEMENT CONSTRUCTION TYPES "A" THRU "J" - 1991
SBR-2-116	01/04/1996	GENERAL DETAILS FOR STRIPSEAL EXPANSION JOINT REPLACEMENT CONSTRUCTION DETAILS TYPES "A" THRU "J" - 1991

TRAFFIC DATA	
S.R. 444	POSTED SPEED LIMIT = 50 M.P.H. AADT (2024) = 12,327
S.R. 73	POSTED SPEED LIMIT = 40 M.P.H. AADT (2024) = 16,815

SEALED BY

SUSANNE DAWSON REGISTERED ENGINEER AGRICULTURE COMMERCE INDUSTRY STATE OF TENNESSEE

11-05-2025

PIN NO.:	135558.00	
DESIGN BY:	BRAD WARREN	DATE: AUGUST 2024
DRAWN BY:	T. PEPLOW/D. PICKEL	DATE: AUGUST 2024
SUPERVISED BY:	SUSANNE DAWSON	DATE: AUGUST 2024
CHECKED BY:	FRANK BALE	DATE: AUGUST 2024

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

LAYOUT OF BRIDGES TO BE REPAIRED

BRIDGE NO. 53-SR073-8.72 (LEFT AND RIGHT)
FEDERAL BRIDGE ID NOS.
53SR0950009 & 53SR0950010
S.R. 73 OVER TELLICO LAKE AND S.R. 444
LOUDON COUNTY
2026

BR-133-280

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	ESTIMATED BRIDGE QUANTITIES					
	ITEM NO.	DESCRIPTION	UNIT	53-SR073-08.72 LEFT	53-SR073-08.72 RIGHT	TOTAL
	201-07.01	REMOVAL AND DISPOSAL OF BRUSH & TREES	LS	1	-	1
1	202-01.02	REMOVAL OF ASBESTOS	LS	1	-	1
3	602-10.19	JACKING STEEL SPANS	LS	1	-	1
4	602-10.22	STRUCTURAL STEEL WELD REPAIR	EACH	2	-	2
5	602-10.61	BEARING DEVICE	EACH	16	-	16
2	602-10.81	HEAT STRAIGHTENING	LS	1	-	1
6	603-02.01	REPAINTING EXISTING STEEL (BRIDGE NO. 53-SR73-8.72 LEFT)	LS	1	-	1
7	603-05.20	CONTAINMENT AND DISPOSAL OF WASTE (BRIDGE NO. 53-SR73-8.72 LEFT)	LS	1	-	1
8	604-04.02	APPLIED TEXTURE FINISH (EXISTING STRUCTURES)	S.Y.	3,153	-	3153
9 ►	604-10.05	CONCRETE	S.F.	238	-	238
	604-10.14	REMOVE EXISTING WEARING SURFACE	LS	1	-	1
*	604-10.50	BRIDGE DECK REPAIR (PARTIAL DEPTH OF SLAB)	S.Y.	115	-	115
10 ►	604-10.54	CONCRETE REPAIRS	S.F.	238	-	238
*	604-10.55	CONCRETE (FOUNDATION REPAIRS)	C.Y.	6	-	6
►	604-10.58	EPOXY INJECTION (INJECTION)	GAL.	6	-	6
11, 12, 13	604-10.60	EXPANSION JOINT REPAIRS (MODULAR TYPE)	L.F.	100	-	100
►	604-10.62	EPOXY INJECTION REPAIR (COMPLETE AND IN PLACE)	L.F.	124	-	124
14	617-01	BRIDGE DECK SEALANT	S.Y.	5,700	-	5700
	707-07.01	CHAIN-LINK FENCE (BRIDGES)	S.F.	1,600	-	1600
15	714-16.01	NAVIGATIONAL LIGHTING	LS	0.5	0.5	1
16	714-16.05	TEMPORARY NAVIGATIONAL LIGHTING	LS	0.5	0.5	1

* DENOTES ITEM CAN BE INCREASED, DECREASED, OR ELIMINATED AS DIRECTED BY THE ENGINEER.
► QUANTITY INCREASED BASED ON HISTORICAL OVERRUNS.

FOOTNOTES

1. AN ASBESTOS CONTAINING MATERIAL (ACM) SURVEY WAS COMPLETED ON BRIDGE NO. 53SR0950009 SR-95 NB OVER TELLICO LAKE AND SR-444 LM 8.72 (53-SR073-08.72L). THE BRIDGE HAS ASBESTOS IN THE TEXTURE COATINGS ON PIERS, INNER GUARD RAILS, OUTER GUARD RAILS, ABUTMENTS, AND WING WALLS AT 3% CHRYSOTILE. SEE PROJECT COMMITMENTS SHEET NO. 1B. REMOVAL WILL BE REQUIRED WHERE NEW CONCRETE WILL BE CAST AGAINST EXISTING CONCRETE SURFACE OR EPOXY INJECTION WILL BE PLACED. OTHER AREAS TO RECEIVE TEXTURE COATING ARE TO RECEIVE A WATER WASH AND BE OVER COATED. SEE APPLIED TEXTURE FINISH DETAIL SKETCH ON THIS SHEET.

2. INCLUDES THE COST OF ALL LABOR AND MISCELLANEOUS MATERIALS NECESSARY FOR HEAT STRAIGHTENING PORTIONS OF EXISTING GIRDERS AND INTERMEDIATE STIFFENER AS SHOWN IN THE PLANS, DYE PENETRANT TESTING, REPAIR OF CRACKS IN WEB OF GIRDER AND ULTRASONIC TESTING OF WELDS [IF NEEDED].

3. INCLUDES ALL LABOR, EQUIPMENT, SHOP DRAWING PREPARATION (INCLUDING JACKING CALCULATIONS), AND MATERIALS NECESSARY TO JACK AND SUPPORT THE FOUR (4) EXISTING STEEL GIRDERS DURING THE REPLACEMENT OF THE STEEL EXPANSION BEARINGS AT ABUTMENT NO. 1, ABUTMENT NO. 2, PIER NO. 1, AND PIER NO. 4. SEE JACKING NOTES ON GENERAL NOTES.

4. INCLUDES ALL LABOR, EQUIPMENT AND MATERIALS OR INCIDENTALS NECESSARY TO PERFORM DYE PENETRANT TESTING TO DETERMINE THE EXTENT OF CRACK IN WELD AT DIAPHRAGM STIFFENER TO WEB.

5. INCLUDES ALL LABOR, EQUIPMENT AND MATERIALS (INCLUDING SHOP PRIMING FOR SYSTEM A) NECESSARY TO REPLACE THE FOUR (4) STEEL EXPANSION BEARINGS AT ABUTMENT NO. 1, ABUTMENT NO. 2, PIER NO. 1, AND PIER NO. 4.

6. INCLUDES ALL LABOR, MATERIALS, AND INCIDENTALS ASSOCIATED WITH PAINTING EXISTING STEEL GIRDERS, CROSS FRAMES, LATERAL BRACING, PLATES, PIER BEARINGS, AND ABUTMENT BEARINGS. ALSO INCLUDES APPLICATION OF RUST INHIBITOR AND SILICONE CAULK AT INDICATED AREAS IN THE PLANS AND RUST INHIBITOR QUANTITY TABLE ON THIS SHEET. SEE NOTES AND RUST INHIBITOR QUANTITY ON THIS SHEET.
APPROXIMATE WEIGHT OF EXISTING STRUCTURAL STEEL = 2,096,505 LBS.

7. INCLUDES CONTAINMENT AND DISPOSAL OF ALL WASTE GENERATED DURING CLEANING AND PAINTING OF STRUCTURAL STEEL. SEE NOTES ON DWG. BR-133-282.

8. INCLUDES ALL LABOR AND MATERIALS NECESSARY FOR THE APPLICATION OF ALL TEXTURE COATING FOR THE FULL LENGTH OF THE BRIDGE AS SHOWN IN THE APPLIED TEXTURE FINISH SKETCH ON THIS SHEET. ALSO INCLUDES SURFACE PREPARATION USING A HIGH PRESSURE WASH TO REMOVE ALL LOOSE COATINGS, FLAKING AND OTHER FOREIGN SUBSTANCES TO THE FULL SATISFACTION OF THE ENGINEER.

9. INCLUDES ALL LABOR AND MATERIALS NECESSARY TO PLACE HIGH EARLY STRENGTH CONCRETE FOR REPAIR OF INDICATED AREAS.

10. INCLUDES THE COST OF ALL LABOR AND MATERIALS NECESSARY TO PLACE A POLYMER MODIFIED CEMENTITIOUS STRUCTURAL PATCHING MATERIAL FOR REPAIR OF INDICATED AREAS.

11. INCLUDES ALL COSTS ASSOCIATED WITH REMOVING EXISTING CONCRETE, REMOVING AND CLEANING EXISTING EXPANSION JOINT, REMOVING AND REPLACING PORTIONS OF CONCRETE PARAPETS AND SLIDER PLATE ASSEMBLIES, CLEANING EXISTING REINFORCEMENT TO REMAIN, INSTALLATION OF NEW MODULAR JOINT ASSEMBLIES, NEW HIGH EARLY STRENGTH CONCRETE AND NEW REINFORCING STEEL.

12. THE UNIT PRICE BID FOR ROADWAY EXPANSION DEVICES TO INCLUDE THE COST OF 241 S.Y. OF CONCRETE SEALER REQUIRED. SEE GENERAL NOTES FOR DESCRIPTION OF CONCRETE SEALER.

13. THE EXPANSION JOINT AT ABUTMENT NO. 1 AND ABUTMENT NO. 2 SHALL BE IN ACCORDANCE WITH SECTION 623.02 OF THE STANDARD SPECIFICATIONS. THE TOTAL REQUIRED MOVEMENT IS 6 INCHES FOR EACH ABUTMENT. SHOP DRAWINGS AND CALCULATIONS (BOTH STAMPED BY AN ENGINEER LICENSED IN TENNESSEE) SHALL BE SUBMITTED TO THE ENGINEER OF STRUCTURES FOR APPROVAL. JOINT MEMBERS AND SUPPORT BOXES SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123.

14. INCLUDES ALL LABOR AND MATERIAL COST ASSOCIATED WITH INSTALLATION OF BRIDGE DECK SEALANT SYSTEM.

15. INCLUDES ALL ITEMS AND LABOR NECESSARY TO REMOVE THE EXISTING MARINE NAVIGATIONAL LIGHTS ON EAST AND WEST SIDE OF BRIDGE AND PROVIDING NEW LED NAVIGATIONAL LIGHTS, ANCHOR BOLTS, PLATES, AND ANY OTHER MATERIALS NECESSARY FOR MOUNTING AND SUPPORTING THE NEW LIGHT UNITS ON EAST SIDE OF BRIDGE NO. 53-SR73-08.72 (LEFT). ITEM ALSO INCLUDES UPGRADING NAVIGATIONAL LIGHTING TO LED ON BRIDGE NO. 53-SR73-08.72. FOR NOTES AND DETAILS SEE DRAWING NOS. BR-133-299 THRU BR-133-303. THE CONTRACTOR SHALL FURNISH NAVIGATION LIGHTING IN ACCORDANCE WITH THE COAST GUARD PERMIT. SHOP DRAWINGS FOR NAVIGATION LIGHTING SUPPORT BRACKETS SHALL BE SUBMITTED FOR APPROVAL.

16. INCLUDES ALL COSTS TO PROVIDE TEMPORARY NAVIGATIONAL LIGHTING AT ALL EXISTING NAVIGATIONAL LIGHT LOCATIONS THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS (6 LOCATIONS TOTAL). NAVIGATIONAL LIGHTS SHALL BE SOLAR POWERED TO PROVIDE SERVICE WHEN PERMANENT NAVIGATIONAL LIGHTING IS NOT OPERATIONAL. TEMPORARY NAVIGATIONAL LIGHTING SYSTEM SHALL MEET THE FULL APPROVAL OF THE ENGINEER FROM TDOT.

PIN NO.: 135558.00
DESIGN BY: BRAD WARREN DATE: AUGUST 2024
DRAWN BY: T. PEPLOW/D. PICKEL DATE: AUGUST 2024
SUPERVISED BY: SUSANNE DAWSON DATE: AUGUST 2024
CHECKED BY: FRANK BALE DATE: AUGUST 2024

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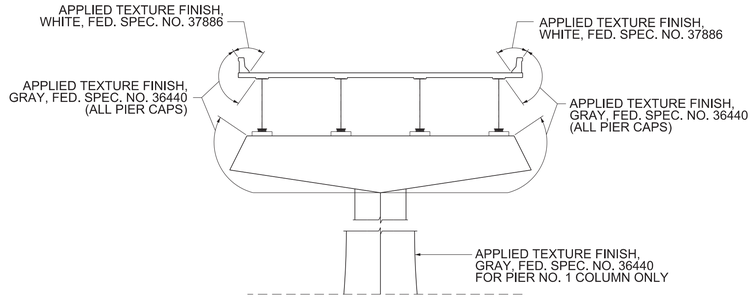


APPLIED TEXTURE FINISH SKETCH

COST OF TEXTURE COATING SHALL BE INCLUDED IN ITEM NO. 604-04.02, APPLIED TEXTURE FINISH (EXISTING STRUCTURES), S.Y.

THE EXISTING SURFACES THAT ARE TO RECEIVE A TEXTURE FINISH SHALL BE FREE OF ALL FLAKING TEXTURE COATING, RUST, DIRT, OIL, AND OTHER FOREIGN SUBSTANCES PRIOR TO THE APPLICATION OF THE TEXTURE FINISH. THE SURFACE SHALL BE CLEANED TO THE COMPLETE SATISFACTION OF THE ENGINEER USING A HIGH PRESSURE WATER WASH. COST TO BE INCLUDED IN ITEM NO. 604-04.02, APPLIED TEXTURE FINISH (EXISTING STRUCTURES), S.Y.

THE CONTRACTOR SHALL USE CONTAINMENT SCREENS OR OTHER MEASURES AS NECESSARY TO PREVENT ANY TEXTURE COATING FROM ENTERING THE ENVIRONMENT. CONTAINMENT MEASURES SHALL BE APPROVED BY THE ENGINEER IN ACCORDANCE WITH SP202ACM. COST SHALL BE INCLUDED IN ITEM NO. 202-01.02, REMOVAL OF ASBESTOS, LS.

THE WASH WATER IS TO BE FILTERED AND PAINT CHIPS AND DEBRIS COLLECTED PRIOR TO RELEASE OF WATER.

RUST INHIBITOR QUANTITY					
LOCATION		LENGTH (FT)	LOCATION		LENGTH (FT)
SPAN 1 LEFT	BACK	-	SPAN 1 RIGHT	BACK	-
	AHEAD	33		AHEAD	16.5
SPAN 2 LEFT	BACK	33	SPAN 2 RIGHT	BACK	33
	AHEAD	33		AHEAD	31.5
SPAN 3 LEFT	BACK	37	SPAN 3 RIGHT	BACK	-
	AHEAD	-		AHEAD	-
SPAN 4 LEFT	BACK	33	SPAN 4 RIGHT	BACK	-
	AHEAD	16.5		AHEAD	16.5
SPAN 5 LEFT	BACK	16.5	SPAN 5 RIGHT	BACK	-
	AHEAD	-		AHEAD	-

LIMITS OF APPLICATION OF RUST INHIBITOR: ALL STRUCTURAL STEEL GIRDER SPLICE JOINTS AND SEAMS EXHIBITING PACK RUST SHALL BE TREATED WITH PICKLEX20 (INTERNATIONAL CHEMICAL PRODUCTS, INC., HUNSTVILLE, AL., 256-650-0088) PRIOR TO PAINTING. ESTIMATED LENGTH OF JOINTS REQUIRING RUST INHIBITOR IS 300 L.F. WHICH EQUATES TO APPROXIMATELY 1 GALLON. COST OF RUST INHIBITOR SHALL BE INCLUDED IN THE PRICE BID FOR ITEM NO. 603-02.01, REPAINTING EXISTING STEEL.

SELF-ETCHING PRIMER SHALL NOT BE USED ON AREAS TREATED WITH RUST INHIBITOR.

RUST INHIBITOR SHALL NOT BE ALLOWED TO POND ON SURFACES TO BE PAINTED. EXCESS MATERIAL SHALL BE WIPED OFF BEFORE DRYING.

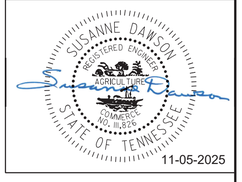
AREAS TREATED WITH RUST INHIBITOR SHALL BE SEALED WITH SILICONE CAULK (SEE TDOT QUALIFIED PRODUCTS LIST) BEFORE PAINTING.
COST TO BE INCLUDED UNDER ITEM NO. 603-02.01.

PROJECT NO.	YEAR	SHEET NO.
53S073-M3-005	2026	BR-02

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

SEALED BY



11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED BRIDGE QUANTITIES
BRIDGE NO. 53-SR073-8.72 (LEFT AND RIGHT)
FEDERAL BRIDGE ID NOS.
53SR0950009 & 53SR0950010
S.R. 73 OVER TELLICO LAKE AND S.R. 444
LOUDON COUNTY
2026

BR-133-281

GENERAL NOTES:

SPECIFICATIONS & LOADING

CONSTRUCTION SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION (JANUARY 1, 2021 EDITION), AND THE 4TH EDITION (2017) AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS WITH INTERIMS.

DESIGN SPECIFICATIONS: 10TH EDITION (2024) AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS WITH INTERIMS, AND THE 2ND EDITION (2011) AASHTO GUIDE SPECIFICATIONS FOR LRFD SEISMIC BRIDGE DESIGN WITH INTERIMS.

LOADING: HL-93 LIVE LOADING INCREASED BY 10% (MULTIPLIED BY 1.1) IN ADDITION TO ALL LOAD FACTORS SPECIFIED BY AASHTO FOR ALL APPLICABLE LOAD COMBINATIONS.

STEEL, CONCRETE, REINFORCING, AND FORMING

REINFORCING STEEL: SHALL BE ASTM A615 GRADE 60 UNLESS NOTED OTHERWISE. SEE SECTION 604 AND 907 OF THE STANDARD SPECIFICATIONS.

NOTE: MECHANICAL BAR SPLICERS MUST BE ON THE TDOT QUALIFIED PRODUCTS LIST 27. THE BAR SPLICERS SHALL MEET AASHTO LRFD SPECIFICATIONS FOR MECHANICAL CONNECTION. WHEN EPOXY COATING IS REQUIRED, THE EXPOSED THREADS SHALL BE REPAIRED AFTER SPLICING ACCORDING TO SECTION 907 OF THE STANDARD SPECIFICATIONS. THE COST OF FURNISHING THE BAR SPLICERS, (AND EPOXY COATING WHEN REQUIRED) INCLUDING ALL LABOR AND MATERIALS NECESSARY FOR COMPLETE INSTALLATION, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE REINFORCING BARS, UNLESS NOTED OTHERWISE IN PLANS.

CONCRETE: TO BE CLASS A F'C = 3000 PSI EXCEPT AS NOTED OTHERWISE.

HIGH EARLY STRENGTH CONCRETE: THE MIX IS TO MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, CLASS X. THE CEMENT CONTENT SHALL BE A MINIMUM OF 714 LBS. THE WATER-CEMENT RATIO SHALL BE A MAXIMUM OF 0.40. DESIGN AIR CONTENT SHALL BE 6% WITH ±2% ACCEPTANCE RANGE IN THE FIELD. SLUMP SHALL BE 3±1 INCHES. IF USING A TYPE A, F, OR G WATER REDUCER, THE SLUMP SHALL BE MAXIMUM OF 8 INCHES.

NO FLY ASH REPLACEMENT WILL BE PERMITTED. THE MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3,500 PSI. TRAFFIC SHALL NOT BE PERMITTED ON ANY OF THE REPAIRED AREAS UNTIL TEST SPECIMENS ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AND THE CONCRETE HAS BEEN IN PLACE A MINIMUM OF 18 HOURS.

CONCRETE CURING: ALL CONCRETE IN REPAIR AREAS SHALL BE CURED ACCORDING TO THE STANDARD SPECIFICATIONS.

STEEL REPAIR

HEAT STRAIGHTENING: HEAT STRAIGHTENING IS TO BE PERFORMED UNDER THE DIRECT SUPERVISION OF A LEAD SUPERVISOR POSSESSING THE KNOWLEDGE AND EXPERIENCE TO APPLY HEAT IN SUCH A MANNER, SEQUENCE, AND AMOUNT THAT THE FINAL STRAIGHTENED MEMBER RETAINS AS LITTLE RESIDUAL STRESS AS POSSIBLE. THE LEAD SUPERVISOR SHALL HAVE SUCCESSFULLY COMPLETED 3 PROJECTS IN THE PAST 5 YEARS. THE WORK SHALL HAVE BEEN ACCOMPLISHED USING TECHNIQUES SHOWN IN FHWA REPORT: FHWA-IF-99-004, HEAT-STRAIGHTENING REPAIRS OF DAMAGED STEEL BEAMS, A TECHNICAL GUIDE AND MANUAL OF PRACTICE.

THE LEAD SUPERVISOR SHALL BE ON SITE AT ALL TIMES WHILE THE HEAT STRAIGHTENING WORK IS PERFORMED.

HEATING AND OVER-JACKING (HOT MECHANICAL STRAIGHTENING) IS NOT ALLOWED.

THE FOLLOWING SHALL BE SUBMITTED PRIOR TO BEGINNING WORK:

WRITTEN DOCUMENTATION SHOWING THE CONTRACTOR'S SUCCESSFUL HEAT STRAIGHTENING EXPERIENCE, USING TECHNIQUES IN FHWA REPORT: FHWA-IF-99-004, WITH COMPARABLE BRIDGE BEAMS/GIRDERS, ALONG WITH PHOTOGRAPHS OF THE WORK COMPLETED. THE DOCUMENTATION SHALL BE FROM THE CONTRACTOR'S 3 SUCCESSFUL PROJECTS IN THE PAST 5 YEARS.

A WORK PLAN SHOWING ANTICIPATED HEATING PATTERNS, HEATING LOCATIONS, AND RESTRAINT METHODS FOR GENERAL APPROVAL. THE WORK PLAN SHALL INCLUDE:

A: FRAMING PLAN SHOWING AREAS TO BE REPAIRED
B: SEQUENCE OF WORK
C: SHAPE, SIZE, AND TEMPERATURE OF HEATING PATTERNS
D: LOCATION AND LIMITS OF JACKS, PULLING, OR RESTRAINING FORCES

HEAT SHALL BE APPLIED AT OR BELOW 1100 DEGREES F AND MONITORED WITH CONTACT THERMOMETERS, INFRARED DEVICES, PYROMETRIC STICKS, OR OTHER HEAT INDICATING DEVICES. THESE DEVICES SHALL BE SUPPLIED BY THE CONTRACTOR AND MADE AVAILABLE TO THE INSPECTOR AT ALL TIMES. HEATING THICKNESSES EQUALING 1 ¼"OR MORE SHALL REQUIRE HEATING BOTH FACES CONCURRENTLY. AFTER COMPLETING A PLANNED SET OF HEAT PATTERNS ALONG THE MEMBER, DO NOT APPLY ADDITIONAL HEAT UNTIL THE ENTIRE MEMBER HAS COOLED TO AT LEAST 250 DEGREES F BEFORE STARTING THE NEXT HEATING PATTERN CYCLE.

DO NOT ACCELERATE COOLING WITH WATER, WATER MIST, OR OTHER COOLING ACCELERANTS. AFTER THE STEEL SURFACE TEMPERATURE IS 600 DEGREES F OR LESS, COOLING MAY BE ACCELERATED WITH DRY COMPRESSED AIR.

THE STRAIGHTENING SHALL BE ACCOMPLISHED WITH AS LITTLE MECHANICAL FORCE AS POSSIBLE. THE BEAM MAY BE RESTRAINED FROM MOVING DURING THE HEATING PROCESS. JACKS OR "COME-ALONGS" MAY BE USED TO MECHANICALLY AUGMENT THE HEAT STRAIGHTENING PROCESS.

THE JACKING AND RESTRAINING FORCES SHALL NOT BE ADJUSTED DURING HEATING OR BEFORE THE TEMPERATURE IN THE MEMBER HAS COOLED TO 250 DEGREES F OR LESS. ADJUSTMENTS SHALL BE MADE BEFORE STARTING THE NEXT HEATING CYCLE.

PIN NO.: 135558.00
DESIGN BY: BRAD WARREN DATE: AUGUST 2024
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CHECKED BY: FRANK BALE DATE: AUGUST 2024

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STEEL REPAIR (CONTINUED)

THE CONTRACTOR SHALL ADEQUATELY BRACE THE ADJACENT BEAMS AT THE JACKING LOCATIONS IN ORDER TO PREVENT OVERLOADING DUE TO APPLIED LATERAL LOADS. POSITION JACKS AND RESTRAINING FORCES SUCH THAT STRAIGHTENING SHRINKAGE WILL RELIEVE THE FORCE DURING THE COOLING CYCLE.

MEMBERS THAT ARE CRACKED OR DAMAGED DURING HEAT STRAIGHTENING SHALL BE REPAIRED AT NO COST TO THE DEPARTMENT.

TOLERANCES SHALL MEET REQUIREMENTS AS SHOWN IN SECTION 3.5 OF THE CURRENT AASHTO/AWS BRIDGE WELDING CODE D1.5. TOLERANCE MEASUREMENTS SHALL NOT BE TAKEN UNTIL THE HEATED AREAS HAVE COOLED TO 160 DEGREES F. TOLERANCES SHALL BE CHECKED BEFORE ANY CROSS-FRAMES OR OTHER RESTRAINING DEVICES ARE ATTACHED. FORCING MEMBERS WITHIN TOLERANCES BEFORE ATTACHING CROSS-FRAMES TO HOLD THE MEMBER IN PLACE IS NOT ALLOWED.

WELDING: SEE CURRENT EDITION OF THE AASHTO/AWS D1.5 BRIDGE WELDING CODE. CONTRACTOR IS TO SUBMIT WELDING PROCEDURE SPECIFICATIONS (BASED ON SUCCESSFUL TEST RESULTS AS RECORDED IN A PROCEDURE QUALIFICATION TEST RECORD, SEE AASHTO/AWS D1.5 SECTION 1.9 AND SECTION 7 (QUALIFICATION)) AND WELDER QUALIFICATIONS TO THE ENGINEER FOR REVIEW BEFORE WELDING WILL BE ALLOWED. WELDER QUALIFICATION SHALL INCLUDE PROOF OF CONTINUOUS WORK USING THE SPECIFIED WELDING PROCESS. WELDING PROCEDURE SPECIFICATIONS ARE NOT REQUIRED FOR TEMPORARY WELDS (STAY-IN-PLACE METAL DECK FORMS ARE CONSIDERED TEMPORARY.) THE WELDING PROCEDURE SPECIFICATIONS SHOULD BE ON SITE FOR WELDER AND INSPECTOR REVIEW. WELDING IS TO BE DONE BY QUALIFIED WELDERS. SUPERVISION OF NON-QUALIFIED WELDERS IS NOT PERMITTED. TDOT HAS THE OPTION OF HAVING THE WELDER RECERTIFIED IF QUESTIONABLE WORK IS OBSERVED. THE COST OF THIS REQUALIFICATION IS TO BE PAID FOR BY THE CONTRACTOR. WELDER QUALIFICATION POSITIONS FOR FILLET AND GROOVE WELDS: FLAT (F), HORIZONTAL (H), VERTICAL (V), OVERHEAD (OH). SEE FIG 7.4 OR FIG 7.5 IN AASHTO/AWS D1.5 FOR POSITION LIMITS.

QUALIFICATION TEST		TYPE OF WELD AND POSITION OF WELDING QUALIFIED PLATE	
WELD	POSITION	GROOVE	FILLET
GROOVE	1G	F	F,H
	2G	F,H	F,H
	3G	F,H,V	F,H,V
	4G	F,OH	F,H,OH
	3G AND 4G	ALL	ALL
FILLET	1F		F
	2F		F,H
	3F		F,H,V
	4F		F,H,OH
	3F AND 4F		ALL

FROM TABLE 7.10, WELDER QUALIFICATION - TYPE AND POSITION LIMITATIONS, AASHTO/AWS D1.5

MISCELLANEOUS GENERAL NOTES

PROTECTIVE FENCE: RAILROAD PROTECTIVE FENCE IS REQUIRED TO BE BUILT IN ACCORDANCE WITH STANDARD DRAWING STD-8-5. DIMENSION "H" AS SHOWN ON STANDARD DRAWING STD-8-5 SHALL BE 8'.

CONCRETE SEALER: CONCRETE SEALER SHALL BE APPLIED TO SUBSTRUCTURES COINCIDING WITH EXPANSION JOINT LOCATIONS BEFORE PLACEMENT OF BEARING DEVICES AND APPLYING TEXTURE-COATING. CONCRETE SEALER SHALL BE APPLIED TO THE FRONT VERTICAL FACE OF THE ABUTMENT ENDWALL, THE FRONT AND TOP OF THE ABUTMENT BEAM (PLUS APRON WALLS OR ANY OTHER FACES THAT ARE DEEMED NECESSARY BY THE ENGINEER).

CONCRETE SHALL BE CLEAN AND DRY BEFORE APPLYING THE CONCRETE SEALER, AND THE THICKNESS OF THE SEALER SHALL BE AS RECOMMENDED BY THE SEALANT MANUFACTURER. ACCEPTABLE CONCRETE SEALERS ARE INCLUDED IN THE QUALIFIED PRODUCTS LIST FOR NON-PENETRATING CONCRETE SEALERS MAINTAINED BY THE DIVISION OF MATERIALS AND TESTS. THE SEALER SHALL BE CLEAR OR SIMILAR TO THE COLOR OF EXISTING CONCRETE SURFACES TO BE SEALED. THE COST OF THE SEALER, COMPLETE AND IN PLACE, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE EXPANSION DEVICE AT EACH SUBSTRUCTURE.

SHOP DRAWINGS: REFER TO SECTION 105.02 OF THE STANDARD SPECIFICATIONS. IF USING PAPER COPIES, SHOP DRAWINGS ARE TO BE SENT TO THE BRIDGE REPAIR OFFICE IN THE DIVISION OF STRUCTURES, FOR ELECTRONIC SUBMITTALS, SEE SECTION 105.02 OF THE STANDARD SPECIFICATIONS. EACH SHOP DRAWING SHALL CONTAIN IN THE TITLE BLOCK THE FOLLOWING: THE STATE PROJECT NUMBER, COUNTY, BRIDGE NAME, BRIDGE NUMBER (OR STRUCTURE TYPE AND NUMBER), STATION, AND CONTRACT NUMBER. SHOP DRAWINGS WITH TITLE BLOCKS NOT INCLUDING THE FOREGOING IDENTIFICATION WILL BE RETURNED FOR CORRECTION BEFORE ANY REVIEWS FOR APPROVAL ARE CONDUCTED.

EXPANSION JOINTS (STRIP SEAL AND MODULAR): FOR ADDITIONAL GENERAL NOTES APPLICABLE TO STRIP SEAL EXPANSION JOINTS, SEE STANDARD DRAWING NOS. SBR-2-115 AND SBR-2-116, ALSO SEE SECTION 623 OF THE STANDARD SPECIFICATIONS. FOR MODULAR JOINTS SEE SECTION 623 OF THE STANDARD SPECIFICATIONS.

SPECIAL NOTE TO CONTRACTOR: CONTRACTOR SHALL USE EXTREME CARE AND TAKE ANY MEASURES NECESSARY TO ENSURE THAT NO DEBRIS IS DROPPED INTO THE STREAM. ANY DEBRIS WHICH IS ALLOWED TO DROP ON THE BANKS BELOW THE BRIDGE SHALL NOT BE ALLOWED TO ENTER THE STREAM AND SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. COST OF REMOVAL AND DISPOSAL OF DEBRIS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OTHER ITEMS.

MISCELLANEOUS GENERAL NOTES (CONTINUED)

DEMOLITION: THE CONTRACTOR SHALL TAKE SPECIAL CARE TO PROTECT ANY PARTS OF THE STRUCTURE THAT ARE NOT TO BE REMOVED SPECIFICALLY. FOR FULL DEPTH SLAB REMOVAL, EXCEPT OVER BEAMS, THE MAXIMUM HAMMER SIZE IS 90 POUND CLASS. FOR PARTIAL DEPTH SLAB REMOVAL AND ANY WORK OVER THE BEAMS, THE MAXIMUM HAMMER SIZE IS 60 POUND CLASS; CHIPPING HAMMERS OF THE 15 POUND CLASS SHALL BE USED TO REMOVE CONCRETE FROM BENEATH ANY REINFORCING STEEL. SAWING OR CUTTING OF THE CONCRETE IS ACCEPTABLE AS LONG AS ANY SPECIFIED PROJECTION OF THE EXISTING REINFORCING STEEL IS MAINTAINED. EXPANSION JOINT REMOVAL SHALL FOLLOW THE SAME RESTRICTIONS AS FULL DEPTH SLAB REMOVAL. ALL DEVICES PROPOSED FOR CONCRETE DEMOLITION SHALL MEET THE APPROVAL OF THE ENGINEER.

THE CONTRACTOR IS NOT ALLOWED TO USE A HYDRAULIC RAM MOUNTED ON A BACKHOE (COMMONLY CALLED A HOE RAM), MINI EXCAVATOR, OR OTHER EQUIPMENT FOR ANY CONCRETE REMOVAL.

SPECIAL NOTE CONCERNING WORK OVER A NAVIGABLE WATERWAY: THE CONTRACTOR SHALL COMPLY FULLY WITH ANY REQUIREMENTS ESTABLISHED BY THE CORPS OF ENGINEERS, U.S. COAST GUARD, AND ANY OTHER AGENCIES WHICH MAY HAVE JURISDICTION RELATIVE TO CONSTRUCTION WORK OVER A NAVIGABLE STREAM WHICH IS APPLICABLE TO THIS CONTRACT, AND WHICH MAY NOT BE COVERED BY EXISTING PERMITS. THE CONTRACTOR SHALL ALSO NOTIFY THE CORPS OF ENGINEERS INFORMING THEM OF WORK TO BE PERFORMED BEFORE ANY WORK OVER THE WATERWAY BEGINS. THE CONTRACTOR SHALL SUBMIT A DESCRIPTION OF WORK AND SKETCHES OF ANY FALSEWORK, SCAFFOLDING, DEBRIS CONTAINMENT SYSTEMS, ETC. WHICH MAY BE REQUIRED DURING CONSTRUCTION WHICH MAY ENCROACH UPON THE VERTICAL AND/OR HORIZONTAL CLEARANCES FOR WATERWAY TRAFFIC TO THE U.S. COAST GUARD FOR APPROVAL BEFORE ANY WORK BEGINS.

CONTACT: ERIC WASHBURN
U.S. COAST GUARD
BRIDGE ADMINISTRATOR
1222 SPRUCE STREET
ST. LOUIS, MO 63103-2832

QUICK-SET PATCHING MATERIAL: QUICK-SET PATCHING MATERIAL SHALL BE A POLYMER MODIFIED CEMENTITIOUS PATCHING MATERIAL. SEE TDOT QUALIFIED PRODUCTS LIST 13.009 POLY MOD CEMENT STRUCT PATCH VERT & OVER FOR ACCEPTABLE PATCHING MATERIALS.

CONTAINMENT AND DISPOSAL: OUR RECORDS SHOW THAT THIS BRIDGE HAS OR HAS HAD LEAD-ASED/ CHROMATE-BASED PAINT APPLIED TO IT DURING ITS HISTORY; THEREFORE, THE CONTRACTOR SHALL ASSUME THAT REMNANTS OF THAT PAINT REMAIN ON THE BRIDGE. SEE SECTION 603.13 OF THE STANDARD SPECIFICATIONS FOR SPECIAL PRECAUTIONS THAT MUST BE TAKEN IN THE REMOVAL; CONTAINMENT AND DISPOSAL OF THE SURFACE PREPARATION WASTE AND PAINT REMOVAL MEDIA; AND WORKER AND PUBLIC SAFETY.

SPECIAL NOTE SURFACE PREPARATION FOR PAINT: OUR RECORDS SHOW THAT THIS BRIDGE HAS OR HAS HAD LEAD-BASED/CHROMATE-BASED PAINT APPLIED TO IT DURING ITS HISTORY. THEREFORE, THE CONTRACTOR SHALL ASSUME THAT REMNANTS OF THAT PAINT REMAIN ON THE BRIDGE ALONG WITH THE POSSIBILITY OF THE PRESENCE OF MILLSCALE. CONTRACTOR SHALL BID ACCORDINGLY.

WORKER PROTECTION: OUR MAINTENANCE RECORDS INDICATE THAT THIS BRIDGE WAS ORIGINALLY PAINTED WITH MATERIALS CONTAINING LEAD AND/OR CHROMATES AND THE CONTRACTOR SHALL BE REQUIRED TO PROCEED ACCORDINGLY AND TAKE ALL MANDATORY SAFEGUARDS PRESCRIBED BY THE STATE AND FEDERAL LAW FOR WORKER PROTECTION AND HAZARDOUS MATERIALS DISPOSAL.

NOTE: LUMP SUM FOR NAVIGATIONAL LIGHTING INCLUDES ALL ITEMS AND LABOR NECESSARY TO MAKE THE NAVIGATION LIGHTING COMPLETE AS SHOWN ON THE PLANS, INCLUDING CONNECTION TO THE EXISTING POWER SOURCE. NEW LIGHTING SHALL MEET COAST GUARD REGULATIONS. SHOP DRAWINGS FOR NAVIGATIONAL LIGHTING SUPPORT BRACKET MODIFICATIONS OR REPLACEMENT SUPPORTS SHALL BE SUBMITTED FOR APPROVAL.

GROUTED BARS IN DRILLED HOLES: HORIZONTALLY DRILLED HOLES SHALL BE DRILLED ½" IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH NON-SHRINK GROUT, AND THE BAR ROTATED (NOT DRIVEN) TO ITS SEAT. VERTICALLY DRILLED HOLES SHALL BE DRILLED ¼" IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH EPOXY GROUT, AND THE BAR DRIVEN TO ITS SEAT. ALL GROUTING MATERIAL SHALL BE APPROVED BY TDOT MATERIALS AND TESTS.

BLAST CLEANING AND PAINTING (SYSTEM "A") NOTES

CLEANING AND PAINTING: ALL STRUCTURAL STEEL, INCLUDING THE NEW BEARINGS, SHALL BE BLAST CLEANED AND PAINTED. BLAST CLEANING SHALL BE IN ACCORDANCE WITH SECTION 603.05(B.2) OF THE STANDARD SPECIFICATIONS. PAINT SHALL BE SYSTEM "A" (QPL 3.001) INORGANIC ZINC. COLOR OF THE FINISH COAT SHALL COMPLY WITH AMS-STD-595A, FEDERAL STANDARD NO. 13591, YELLOW. SEE SECTIONS 603 AND 910 OF THE STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL ALSO HAVE THE OPTION TO USE ORGANIC ZINC IN SYSTEM "A" INSTEAD OF AN INORGANIC ZINC. ORGANIC ZINC SYSTEMS SHALL BE FROM QPL 3.002.

BLAST CLEANING SHALL BE IN ACCORDANCE WITH SECTION 603.05(B.2) AND CLEANED TO SSPC-SP 10 "NEAR -WHITE METAL BLAST CLEANING" (OR NACE EQUIVALENT). BLAST CLEANING SHOULD PRODUCE A UNIFORM SURFACE PROFILE BETWEEN 1.5 MIL AND 3.5 MIL. IF THE PROFILE REQUIREMENTS OF THE COATING MANUFACTURER ARE MORE RESTRICTIVE, THE CONTRACTOR SHALL ADVISE THE ENGINEER AND COMPLY WITH THE MORE RESTRICTIVE REQUIREMENTS.

DRY FILM THICKNESSES SHOWN IN SECTION 603.06 OF THE STANDARD SPECIFICATIONS ARE THICKNESSES ABOVE THE SURFACE PROFILE.

ROLLER AND DAUBER NAP SHALL NOT BE ALLOWED IN THE COATINGS.

FINS, TEARS, SLIVERS, AND DELAMINATIONS ARE TO BE GROUND FOLLOWED BY RE-BLASTING. AT THE DISCRETION OF THE ENGINEER, THE USE OF POWER TOOLS TO CLEAN THE LOCALIZED AREAS AFTER GRINDING AND ESTABLISH A SURFACE PROFILE ACCEPTABLE TO THE COATING MANUFACTURER CAN BE USED IN LIEU OF RE-BLASTING.

ALL COATS SHALL BE TINTED TO CONTRAST AGAINST THE PRECEDING OR FOLLOWING COAT.

SEE TDOT QUALIFIED PRODUCTS LIST 3.001 (INORGANIC ZINC SYSTEM) OR 3.002 (ORGANIC ZINC SYSTEM) FOR ACCEPTABLE COATINGS FOR THE SYSTEM "A" PAINT SYSTEM. THE SAME MANUFACTURER SHALL SUPPLY ALL PRODUCTS USED, INCLUDING THINNERS.

PROJECT NO.	YEAR	SHEET NO.
53S073-M3-005	2026	BR-03

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

SEALED BY

SUSANNE DAWSON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 116,975
STATE OF TENNESSEE

11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

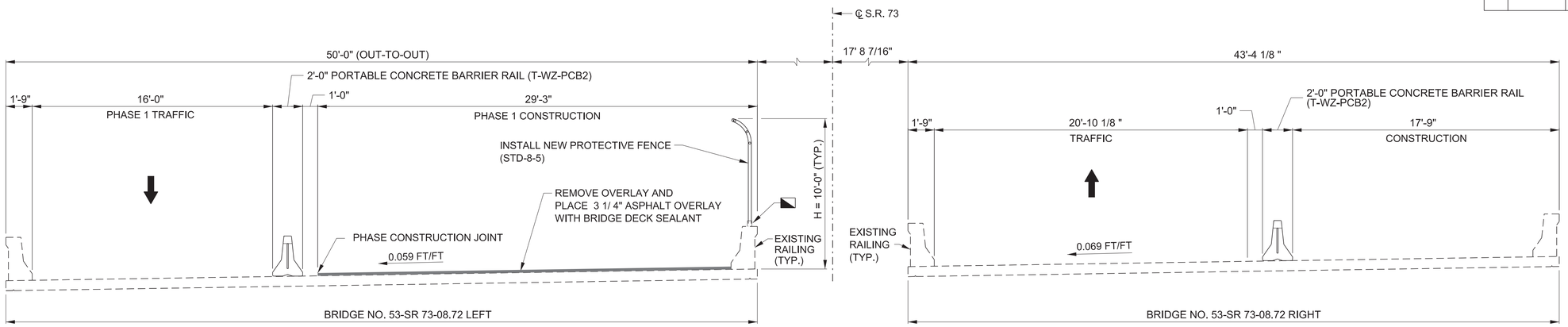
BRIDGE NO. 53-SR073-8.72 (LEFT AND RIGHT)
FEDERAL BRIDGE ID NOS.
53SR0950009 & 53SR0950010
S.R. 73 OVER TELLICO LAKE AND S.R. 444
LOUDON COUNTY
2026

BR-133-282

PROJECT NO.	YEAR	SHEET NO.
53S073-M3-005	2026	BR-04

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



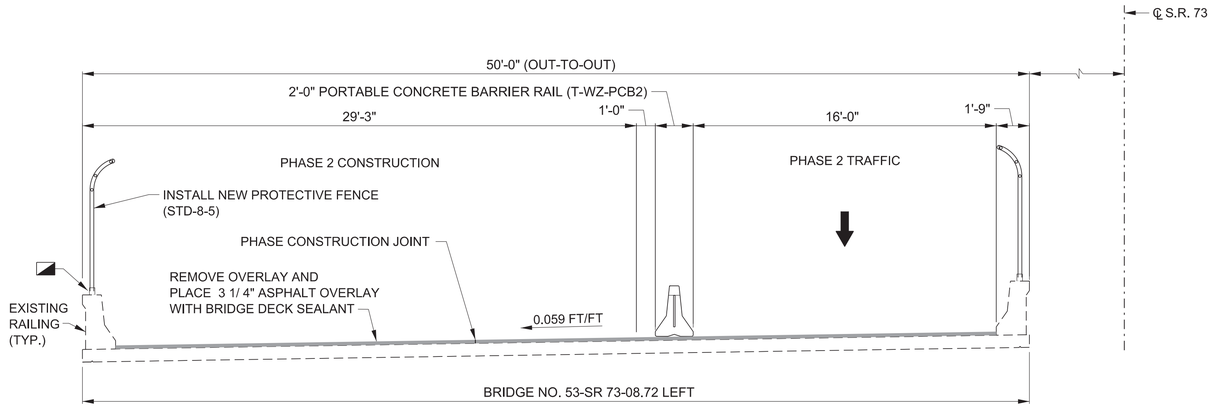
LEFT BRIDGE

RIGHT BRIDGE

PHASE 1 CONSTRUCTION

(LOOKING AHEAD ON SURVEY)

INSTALL PARAPET DELINEATORS.
COST TO BE INCLUDED IN ITEMS BID ON.



LEFT BRIDGE

PHASE 2 CONSTRUCTION

(LOOKING AHEAD ON SURVEY)

INSTALL PARAPET DELINEATORS.
COST TO BE INCLUDED IN ITEMS BID ON.

SEALED BY

SUSANNE DAWSON
REGISTERED ENGINEER
STATE OF TENNESSEE

11-05-2025

PIN NO.:	135558.00	
DESIGN BY:	BRAD WARREN	DATE: AUGUST 2024
DRAWN BY:	T. PEPLOW/D. PICKEL	DATE: AUGUST 2024
SUPERVISED BY:	SUSANNE DAWSON	DATE: AUGUST 2024
CHECKED BY:	FRANK BALE	DATE: AUGUST 2024

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PHASE CONSTRUCTION

BRIDGE NO. 53-SR073-8.72 (LEFT AND RIGHT)
FEDERAL BRIDGE ID NOS.
53SR0950009 & 53SR0950010
S.R. 73 OVER TELLICO LAKE AND S.R. 444
LOUDON COUNTY
2026

BR-133-283

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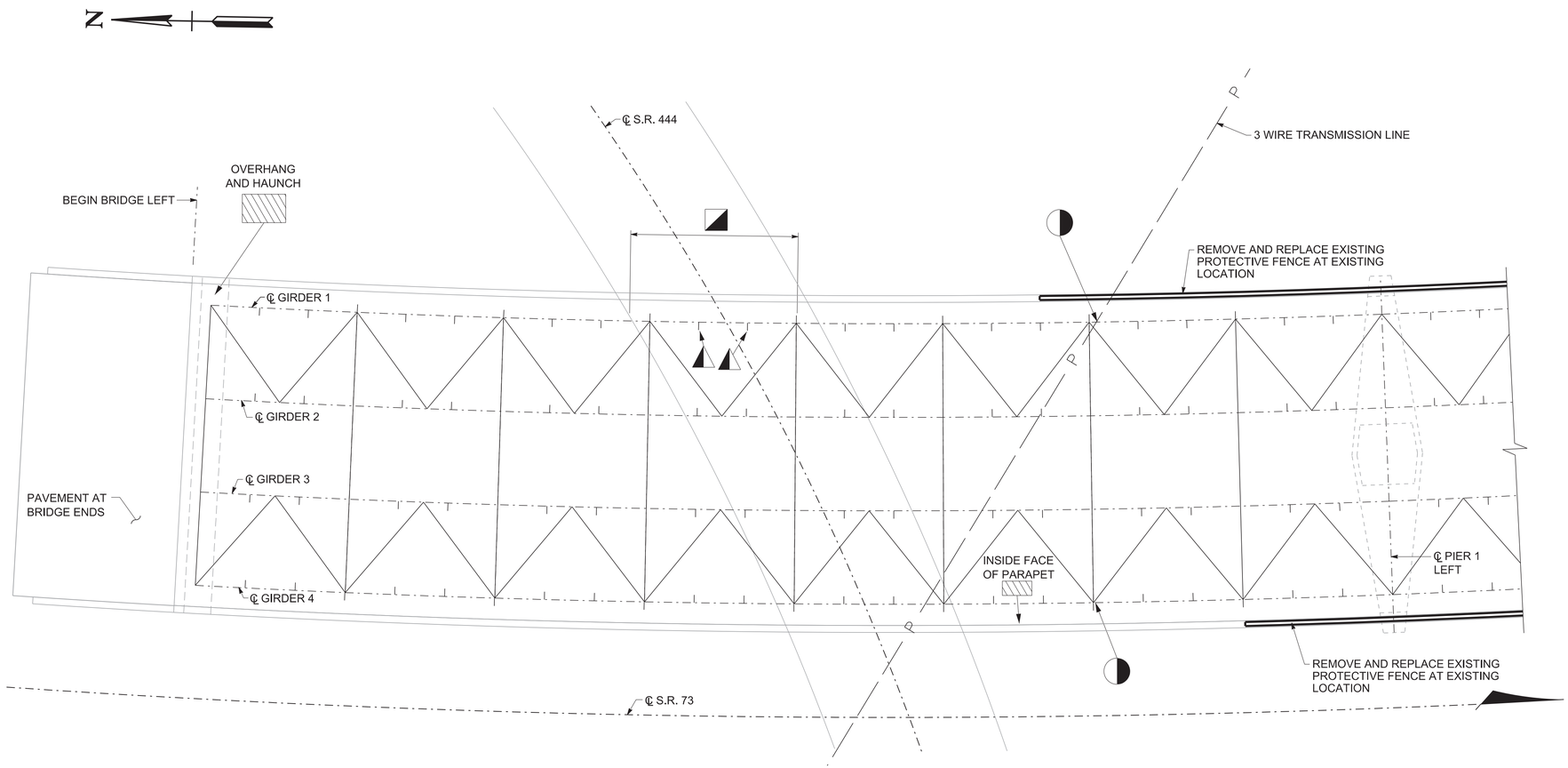
PROJECT NO.	YEAR	SHEET NO.
53S073-M3-005	2026	BR-05

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



PLAN

SPAN 1 - LEFT BRIDGE

ALL REPAIR AREAS ARE BELOW DECK UNLESS OTHERWISE NOTED

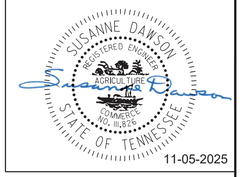
DENOTES AREA TO BE REPAIRED UNDER ITEM NO. 604-10.05, CONCRETE, AND/OR 604-10.54, CONCRETE REPAIRS, S.F.
SEE REPAIR DETAILS ON DWG. NO. BR-133-298.

DENOTES AREA TO BE HEAT STRAIGHTENED UNDER ITEM NO. 602-10.81, LS.
SEE REPAIR DETAILS ON DWG. NO. BR-133-297.

DENOTES LOCATION OF STRUCTURAL STEEL WELD REPAIR UNDER ITEM NO. 602-10.22, EACH.
SEE REPAIR DETAILS ON DWG. NO. BR-133-297.

DENOTES LOCATION OF RUST REPAIR AT SPLICE PLATES UNDER ITEM NO. 603-02.01, REPAINTING EXISTING STEEL (BRIDGE NO. 53-SR073-8.72 LEFT), LS.
SEE TABLE AND NOTES ON DWG. NO. BR-133-281.

SEALED BY



11-05-2025

ESTIMATED QUANTITIES	
LOCATION OF REPAIR	ITEM NO. 604-10.05, CONCRETE, AND/OR 604-10.54, CONCRETE REPAIRS APPROX. REPAIR AREAS (S.F.)
LEFT BRIDGE	
SPAN 1	6

PIN NO.: 135558.00

DESIGN BY: BRAD WARREN DATE: AUGUST 2024

DRAWN BY: T. PEPLOW/D. PICKEL DATE: AUGUST 2024

SUPERVISED BY: SUSANNE DAWSON DATE: AUGUST 2024

CHECKED BY: FRANK BALE DATE: AUGUST 2024

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE REPAIRS
SPAN 1 - LEFT BRIDGE

BRIDGE NO. 53-SR073-8.72 (LEFT AND RIGHT)
FEDERAL BRIDGE ID NOS.
53SR0950009 & 53SR0950010
S.R. 73 OVER TELLICO LAKE AND S.R. 444
LOUDON COUNTY
2026

BR-133-284

11/3/2025 1:22:06 PM
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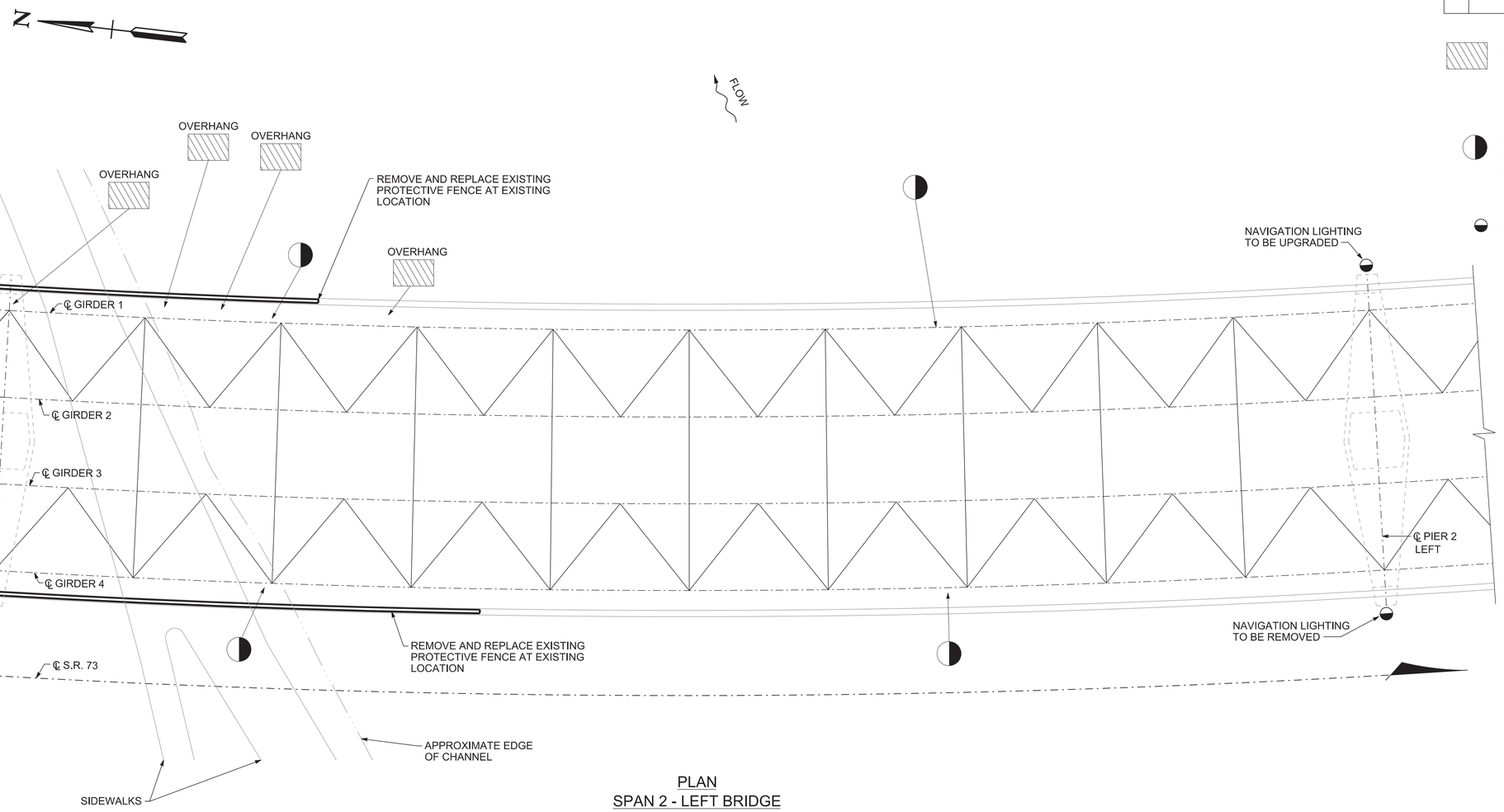
PROJECT NO.	YEAR	SHEET NO.
53S073-M3-005	2026	BR-06

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



PLAN
SPAN 2 - LEFT BRIDGE

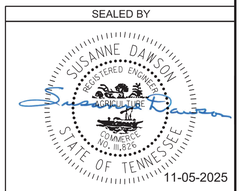
ALL REPAIR AREAS ARE BELOW DECK UNLESS OTHERWISE NOTED

DENOTES AREA TO BE REPAIRED UNDER ITEM NO. 604-10.05, CONCRETE, AND/OR 604-10.54, CONCRETE REPAIRS, S.F.
SEE REPAIR DETAILS ON DWG. NO. BR-133-298.

DENOTES LOCATION OF RUST REPAIR AT SPLICE PLATES UNDER ITEM NO. 603-02.01, REPAINTING EXISTING STEEL (BRIDGE NO. 53-SR073-8.72 LEFT), LS.
SEE TABLE AND NOTES ON DWG. NO. BR-133-281.

DENOTES PIER LIGHTING

SEALED BY



11-05-2025

ESTIMATED QUANTITIES	
LOCATION OF REPAIR	ITEM NO. 604-10.05, CONCRETE, AND/OR 604-10.54, CONCRETE REPAIRS APPROX. REPAIR AREAS (S.F.)
SPAN 2	59

PIN NO.: 135558.00
DESIGN BY: BRAD WARREN DATE: AUGUST 2024
DRAWN BY: T. PEPLOW/D. PICKEL DATE: AUGUST 2024
SUPERVISED BY: SUSANNE DAWSON DATE: AUGUST 2024
CHECKED BY: FRANK BALE DATE: AUGUST 2024

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE REPAIRS
SPAN 2 - LEFT BRIDGE
BRIDGE NO. 53-SR073-8.72 (LEFT AND RIGHT)
FEDERAL BRIDGE ID NOS.
53SR0950009 & 53SR0950010
S.R. 73 OVER TELLICO LAKE AND S.R. 444
LOUDON COUNTY
2026

BR-133-285

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DENOTES AREA TO BE REPAIRED UNDER ITEM NO. 604-10.05, CONCRETE, AND/OR 604-10.54, CONCRETE REPAIRS, S.F. SEE REPAIR DETAILS ON DWG. NO. BR-133-298.

DENOTES LOCATION OF RUST REPAIR AT SPLICE PLATES UNDER ITEM NO. 603-02.01, REPAINTING EXISTING STEEL (BRIDGE NO. 53-SR073-8.72 LEFT), LS. SEE TABLE AND NOTES ON DWG. NO. BR-133-281.

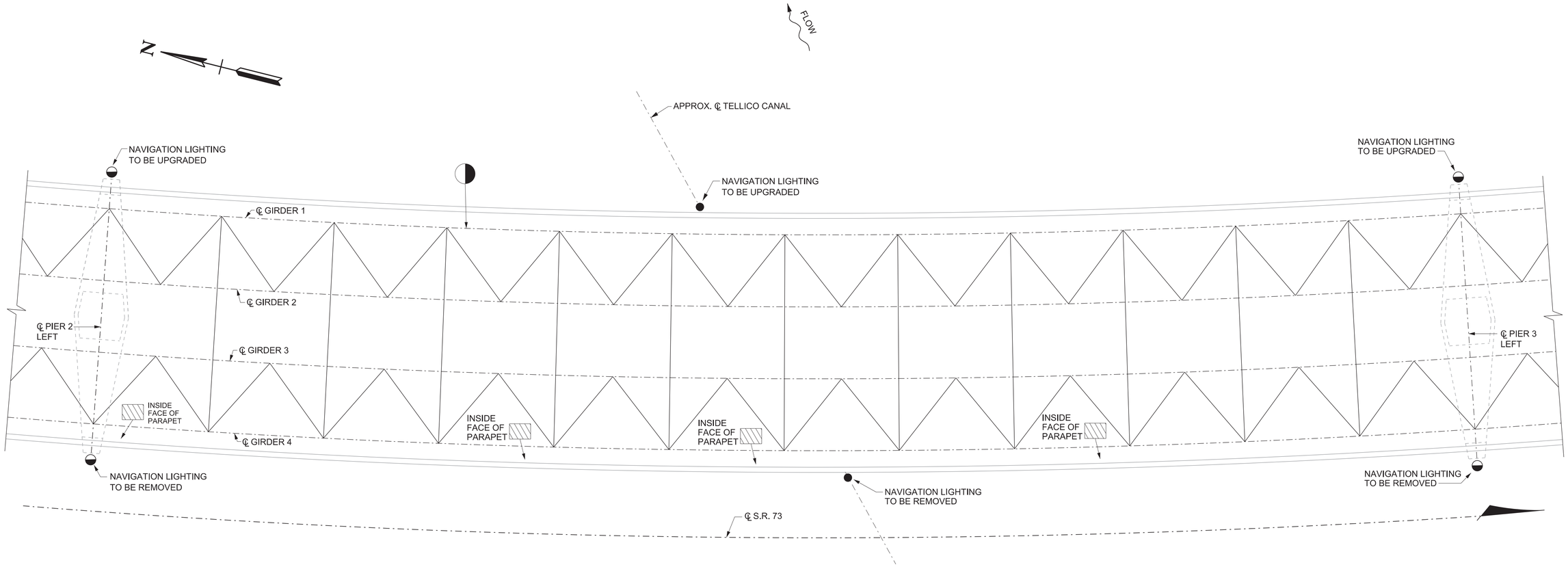
DENOTES PIER LIGHTING

DENOTES CHANNEL LIGHTING

PROJECT NO.	YEAR	SHEET NO.
53S073-M3-005	2026	BR-07

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



PLAN
SPAN 3 - LEFT BRIDGE
ALL REPAIR AREAS ARE BELOW DECK UNLESS OTHERWISE NOTED

SEALED BY

SUSANNE DAWSON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 118376
STATE OF TENNESSEE

11-05-2025

ESTIMATED QUANTITIES	
LOCATION OF REPAIR	ITEM NO. 604-10.05, CONCRETE, AND/OR 604-10.54, CONCRETE REPAIRS APPROX. REPAIR AREAS (S.F.)
SPAN 3	2

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE REPAIRS
SPAN 3 - LEFT BRIDGE

BRIDGE NO. 53-SR073-8.72 (LEFT AND RIGHT)
FEDERAL BRIDGE ID NOS.
53SR0950009 & 53SR0950010
S.R. 73 OVER TELLICO LAKE AND S.R. 444
LOUDON COUNTY
2026

BR-133-286

PIN NO.: 135558.00
DESIGN BY: BRAD WARREN DATE: AUGUST 2024
DRAWN BY: T. PEPLOW/D. PICKEL DATE: AUGUST 2024
SUPERVISED BY: SUSANNE DAWSON DATE: AUGUST 2024
CHECKED BY: FRANK BALE DATE: AUGUST 2024

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PROJECT NO.	YEAR	SHEET NO.
53S073-M3-005	2026	BR-08

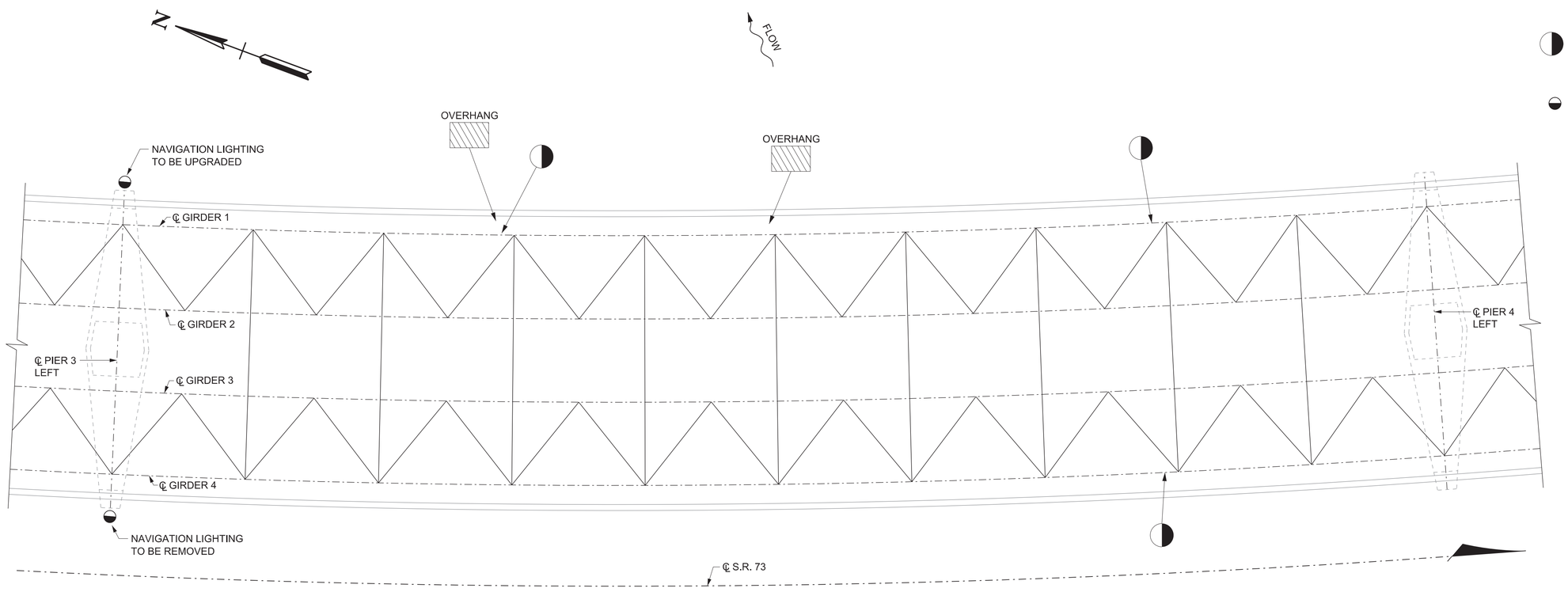
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

DENOTES AREA TO BE REPAIRED UNDER ITEM NO. 604-10.05, CONCRETE, AND/OR 604-10.54, CONCRETE REPAIRS, S.F. SEE REPAIR DETAILS ON DWG. NO. BR-133-298.

DENOTES LOCATION OF RUST REPAIR AT SPLICE PLATES UNDER ITEM NO. 603-02.01, REPAINTING EXISTING STEEL (BRIDGE NO. 53-SR073-8.72 LEFT), LS. SEE TABLE AND NOTES ON DWG. NO. BR-133-281.

DENOTES PIER LIGHTING



PLAN
SPAN 4 - LEFT BRIDGE

ALL REPAIR AREAS ARE BELOW DECK UNLESS OTHERWISE NOTED

SEALED BY

SUSANNE DAWSON REGISTERED ENGINEER AGRICULTURE COMMERCE NO. 111,826 STATE OF TENNESSEE

11-05-2025

ESTIMATED QUANTITIES	
LOCATION OF REPAIR	ITEM NO. 604-10.05, CONCRETE, AND/OR 604-10.54, CONCRETE REPAIRS APPROX. REPAIR AREAS (S.F.)
LEFT BRIDGE	
SPAN 4	45

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
SUPERSTRUCTURE REPAIRS
SPAN 4 - LEFT BRIDGE

BRIDGE NO. 53-SR073-8.72 (LEFT AND RIGHT)
FEDERAL BRIDGE ID NOS.
53SR0950009 & 53SR0950010
S.R. 73 OVER TELLICO LAKE AND S.R. 444
LOUDON COUNTY
2026

BR-133-287

PIN NO.:	135558.00	
DESIGN BY:	BRAD WARREN	DATE: AUGUST 2024
DRAWN BY:	T. PEPLOW/D. PICKEL	DATE: AUGUST 2024
SUPERVISED BY:	SUSANNE DAWSON	DATE: AUGUST 2024
CHECKED BY:	FRANK BALE	DATE: AUGUST 2024

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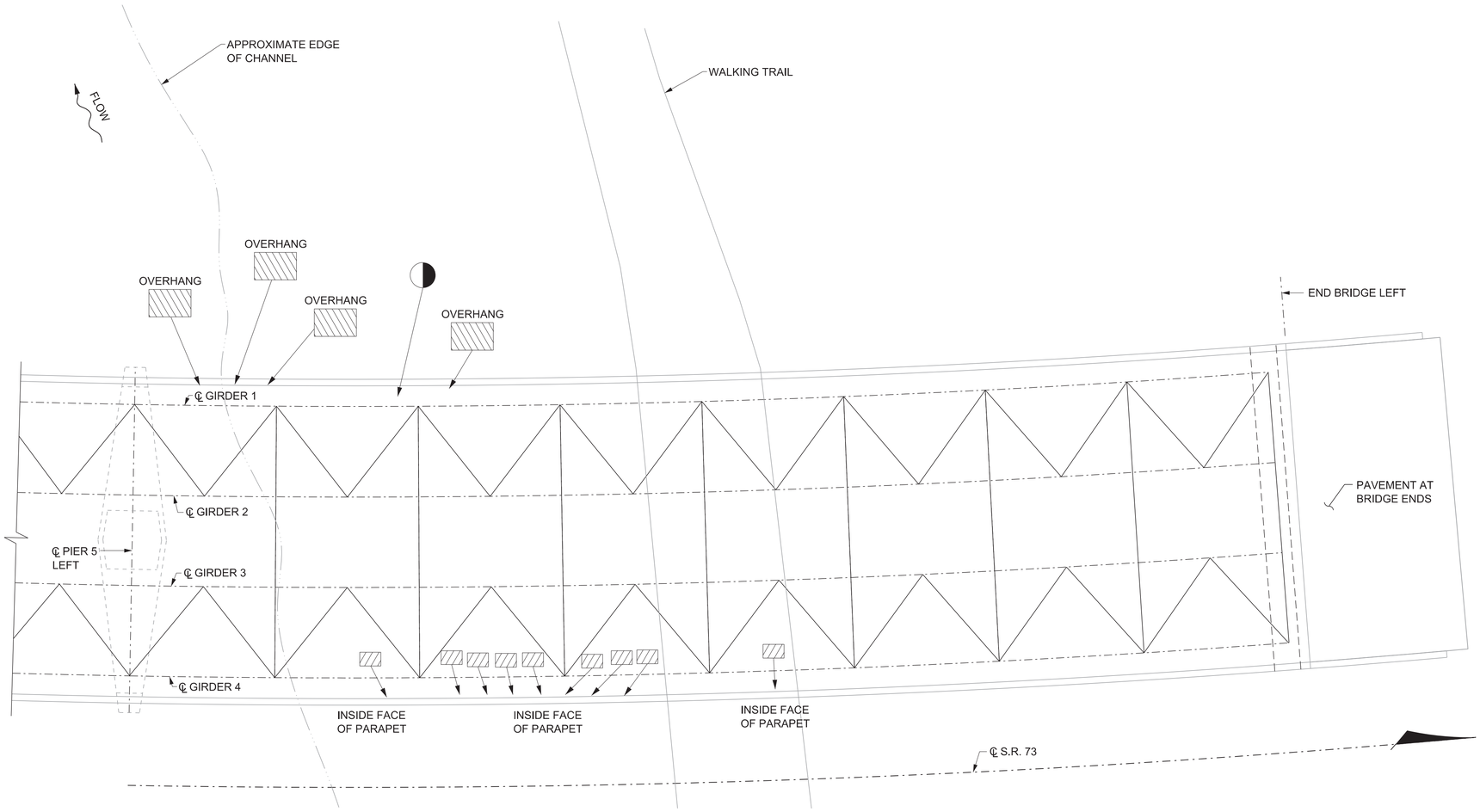
PROJECT NO.	YEAR	SHEET NO.
53S073-M3-005	2026	BR-09

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

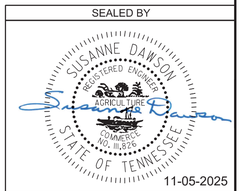
DENOTES AREA TO BE REPAIRED UNDER ITEM NO. 604-10.05, CONCRETE, AND/OR 604-10.54, CONCRETE REPAIRS, S.F.
SEE REPAIR DETAILS ON DWG. NO. BR-133-298.

DENOTES LOCATION OF RUST REPAIR AT SPLICE PLATES UNDER ITEM NO. 603-02.01, REPAINTING EXISTING STEEL (BRIDGE NO. 53-SR073-8.72 LEFT), LS.
SEE TABLE AND NOTES ON DWG. NO. BR-133-281.



PLAN
SPAN 5 - LEFT BRIDGE
ALL REPAIR AREAS ARE BELOW DECK UNLESS OTHERWISE NOTED

SEALED BY



11-05-2025

ESTIMATED QUANTITIES	
LOCATION OF REPAIR	ITEM NO. 604-10.05, CONCRETE, AND/OR 604-10.54, CONCRETE REPAIRS APPROX. REPAIR AREAS (S.F.)
SPAN 5	15

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
SUPERSTRUCTURE REPAIRS
SPAN 5 - LEFT BRIDGE
BRIDGE NO. 53-SR073-8.72 (LEFT AND RIGHT)
FEDERAL BRIDGE ID NOS.
53SR0950009 & 53SR0950010
S.R. 73 OVER TELLICO LAKE AND S.R. 444
LOUDON COUNTY
2026

BR-133-288

PIN NO.: 135558.00
DESIGN BY: BRAD WARREN DATE: AUGUST 2024
DRAWN BY: T. PEPLOW/D. PICKEL DATE: AUGUST 2024
SUPERVISED BY: SUSANNE DAWSON DATE: AUGUST 2024
CHECKED BY: FRANK BALE DATE: AUGUST 2024

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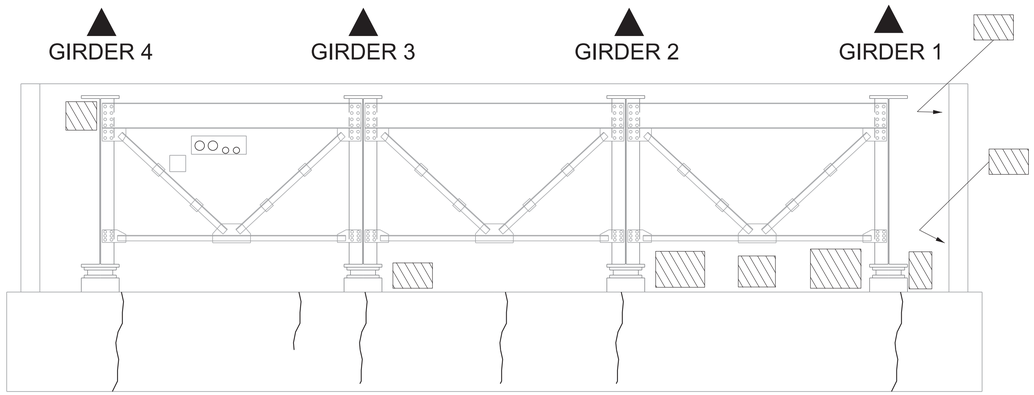
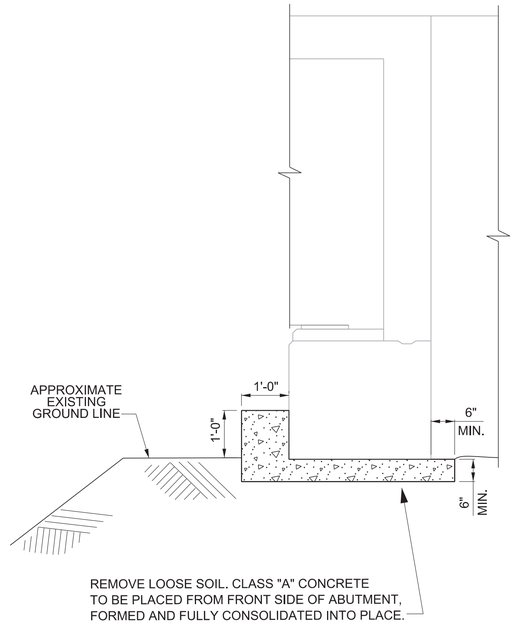
PROJECT NO.	YEAR	SHEET NO.
53S073-M3-005	2026	BR-10

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



ABUTMENT 1 - LEFT BRIDGE
LOOKING BACK



FILL SETTLEMENT REPAIR DETAIL

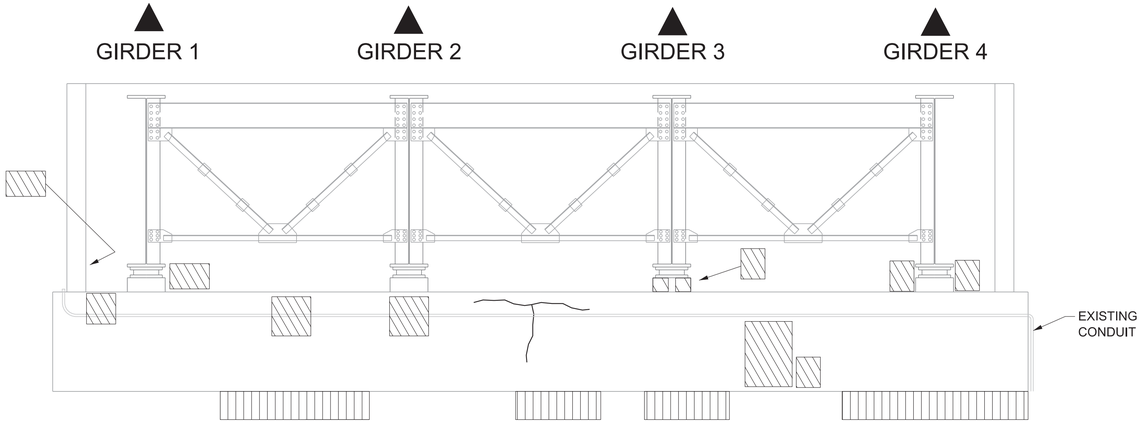
ALL COST ASSOCIATED WITH REPAIR OF SETTLEMENT AREA, INCLUDING ALL LABOR AND MISCELLANEOUS MATERIALS, SHALL BE INCLUDED IN ITEM NO. 604-10.55, CONCRETE (FOUNDATION REPAIRS),C.Y.

DENOTES AREA TO BE REPAIRED UNDER ITEM NO. 604-10.05, CONCRETE,AND/OR 604-10.54, CONCRETE REPAIRS, S.F. SEE REPAIR DETAILS ON DWG. NO. BR-133-298.

DENOTES CRACK TO BE EPOXY INJECTED UNDER ITEM NO. 604-10.62, EPOXY INJECTION REPAIR (COMPLETE AND IN PLACE), L.F. QUANTITIES AND LOCATIONS SHOWN ARE APPROXIMATE AND MAY BE INCREASED, DECREASED OR ELIMINATED BY THE ENGINEER. SEE EPOXY INJECTION NOTES ON DWG. NO. BR-133-298.

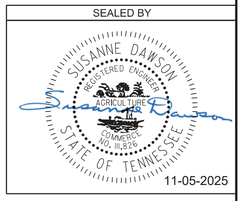
DENOTES LOCATION TO BE REPAIRED BY PLACEMENT OF CONCRETE UNDER ITEM NO. 604-10.55, CONCRETE (FOUNDATION REPAIRS), C.Y. SEE FILL SETTLEMENT DETAIL (THIS SHEET).

DENOTES BEARING TO BE REPLACED. SEE REPAIR DETAILS ON DWG. NO. BR-133-296.



ABUTMENT 2 - LEFT BRIDGE
LOOKING AHEAD

SEALED BY



11-05-2025

ESTIMATED QUANTITIES

LOCATION OF REPAIR	ITEM NO. 604-10.05, CONCRETE, AND/OR 604-10.54, CONCRETE REPAIRS APPROX. REPAIR AREAS (S.F.)	ITEM NO. 604-10.62 EPOXY INJECTION REPAIR (COMPLETE AND IN PLACE) APPROX. REPAIR AREAS (L.F.)	ITEM NO. 604-10.55 CONCRETE (FOUNDATION REPAIRS) APPROX. REPAIR AREAS (C.Y.)
ABUTMENT 1	29	24	-
ABUTMENT 2	21	7	6

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ABUTMENT REPAIRS
LEFT BRIDGE

BRIDGE NO. 53-SR073-8.72 (LEFT AND RIGHT)
FEDERAL BRIDGE ID NOS.
53SR0950009 & 53SR0950010
S.R. 73 OVER TELLICO LAKE AND S.R. 444
LOUDON COUNTY
2026

BR-133-289

PIN NO.:	135558.00	
DESIGN BY:	BRAD WARREN	DATE: AUGUST 2024
DRAWN BY:	T. PEPLOW/D. PICKEL	DATE: AUGUST 2024
SUPERVISED BY:	SUSANNE DAWSON	DATE: AUGUST 2024
CHECKED BY:	FRANK BALE	DATE: AUGUST 2024

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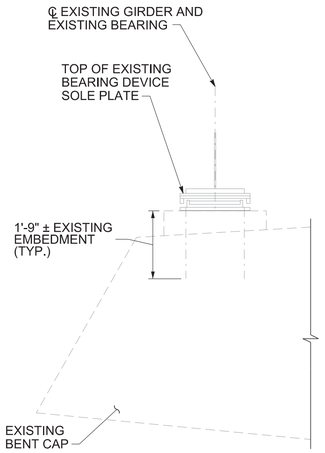
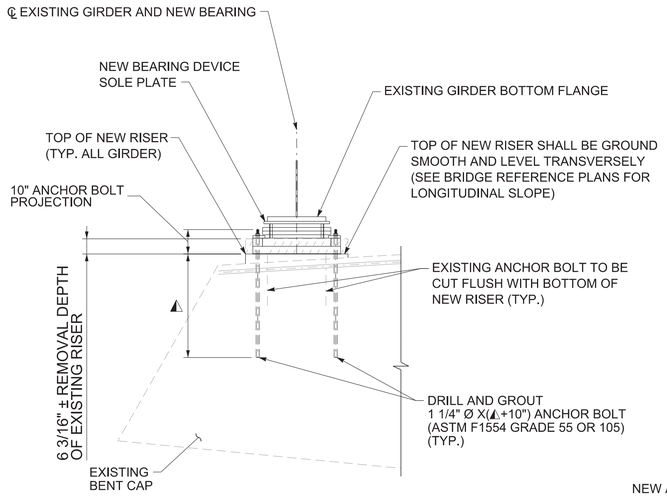


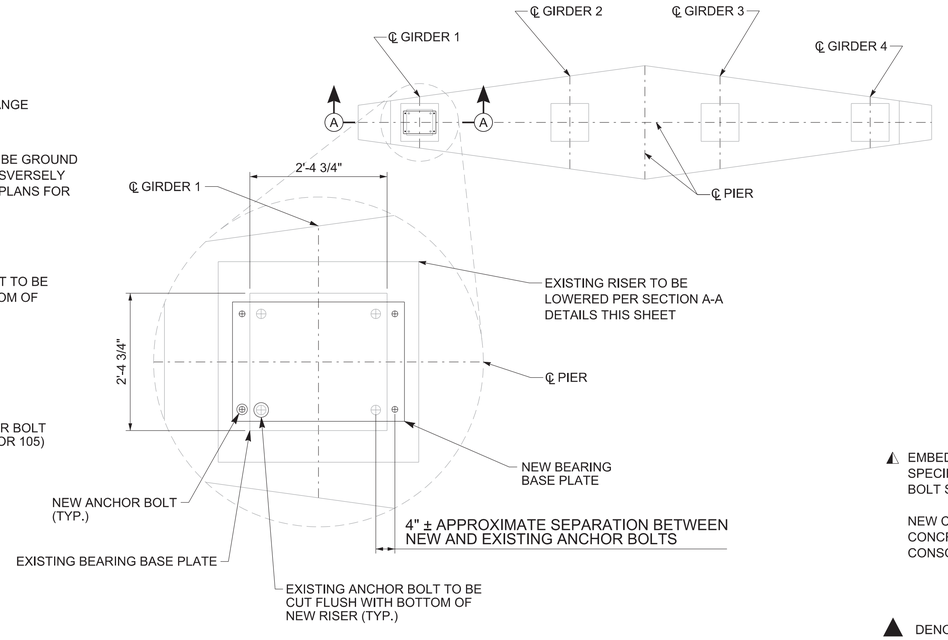
EXISTING BEARING DEVICE AND RISER

(GIRDER 1 SHOWN, TYP. ALL GIRDERS AT PIER 1 AND 4)



NEW BEARING DEVICE AND RISER

(GIRDER 1 SHOWN, TYP. ALL GIRDERS AT PIER 1 AND 4)



PLAN
BEARING REPLACEMENT DETAILS

PIER 1 SHOWN, PIER 4 SIMILAR

PROJECT NO.	YEAR	SHEET NO.
53S073-M3-005	2026	BR-11

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

△ EMBEDMENT DEPTH PER ANCHOR BOLT MANUFACTURER'S SPECIFICATIONS. SEE TDOT QUALIFIED PRODUCTS LIST FOR ANCHOR BOLT SELECTION.

NEW CONCRETE FOR RISERS SHALL BE HIGH EARLY STRENGTH CONCRETE, f'c = 3,500 PSI. THE NEW CONCRETE SHALL BE WELL CONSOLIDATED BEHIND EXISTING BENT CAP REINFORCEMENT.

▲ DENOTES BEARING TO BE REPLACED.
SEE REPLACEMENT DETAILS ON DWG. NO. BR-133-296.

SECTION A-A

SEE BEARING REPLACEMENT NOTES ON THIS SHEET

NOTES:

ALL MATERIAL SHALL A709 GRADE 50 UNLESS OTHERWISE NOTED.

ALL NEW STRUCTURAL STEEL MEMBERS SHALL BE PAINTED USING A TDOT APPROVED PAINT SYSTEM. FOR ADDITIONAL NOTES AND DETAILS SEE DWG. NO. BR-133-281. COST OF PAINTING TO BE INCLUDED IN ITEM NO. 603-02.01, REPAINTING EXISTING STEEL (BRIDGE NO. 53-SR73-8.72 LEFT) .

ALL EXISTING BEARINGS AT PIER NO. 1 AND PIER NO. 4 SHALL BE REPLACED WITH THE BEARINGS AS DETAILED ON THIS DRAWING AND BR-133-296.

THE CONTRACTOR SHALL JACK THE EXISTING STRUCTURE, RAISE THE STRUCTURE ONLY THE MINIMUM AMOUNT NEEDED TO ENABLE REMOVAL AND REPLACEMENT OF THE EXISTING BEARING DEVICES WITH THE NEW STEEL EXPANSION BEARINGS. ALL GIRDER ENDS AT EACH LOCATION SHALL BE JACKED SIMULTANEOUSLY, AT THE SAME RATE, AND BY THE SAME AMOUNT. COST OF JACKING STRUCTURE AND TEMPORARY SUPPORTS SHALL BE INCLUDED IN UNIT PRICE BID FORITEM NO. 602-10.19, JACKING STEEL SPANS, L.S.

PROCEDURES AND APPURTENANCES FOR JACKING OF THE STRUCTURE SHALL BE DESIGNED BY AN ENGINEER LICENSED IN TENNESSEE. THE JACKING PLAN SHALL BE SEALED BY THE ENGINEER AND SUBMITTED TO THE HEADQUARTERS OF BRIDGE INSPECTION AND REPAIR OFFICE FOR APPROVAL. JACKING OF THE STRUCTURE WILL NOT BE ALLOWED UNTIL THE JACKING PLAN HAS BEEN APPROVED.

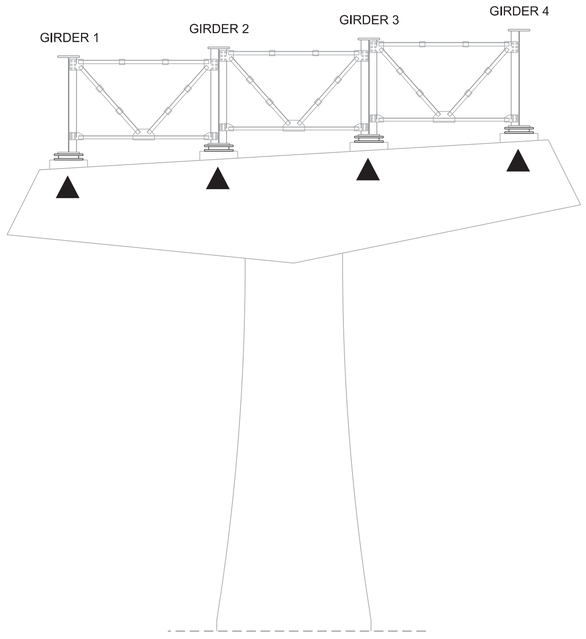
THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE FOR THE ENTIRE DURATION OF REPAIR OPERATIONS.

THE CONTRACTOR SHALL SUBMIT A COMPLETE SET OF SHOP DRAWINGS FOR THE STEEL EXPANSION BEARINGS TO THE HEADQUARTERS OF BRIDGE INSPECTION AND REPAIR OFFICE FOR APPROVAL BEFORE FABRICATION HAS BEGUN.

THE COST OF REMOVING EXISTING BEARING DEVICES, ANCHOR BOLTS, EXISTING RISER BLOCKS, CLEANING EXISTING BENT CAP SURFACES, CONSTRUCTING NEW RISER BLOCKS, INSTALLING NEW ANCHOR BOLTS, DRILLING AND GROUTING, WELDING, AND ANY MISCELLANEOUS LABOR OR MATERIALS NECESSARY TO COMPLETE THE BEARING REPLACEMENT SHALL BE INCLUDED UNDER ITEM NO. 602-10.61, BEARING DEVICE (STEEL EXPANSION BEARING), EACH.

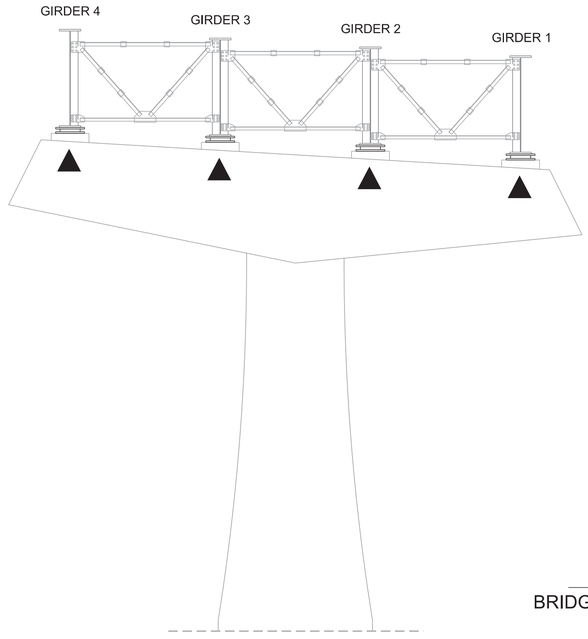
EXISTING CONCRETE SURFACES SHALL BE CLEANED IN ACCORDANCE WITH ARTICLE 604.17 OF THE STANDARD SPECIFICATIONS.

THE CONTRACTOR SHALL SELECT AN EPOXY ANCHOR SYSTEM, ANCHOR BOLTS SHALL BE INSTALLED WITH THE REQUIRED EMBEDMENT TO DEVELOP THE FULL SHEAR CAPACITY OF THE ANCHOR. THE EPOXY ANCHOR SYSTEM SHALL BE ON TDOT'S APPROVED QUALIFIED PRODUCTS LIST.



PIER 1 - LEFT BRIDGE

(LOOKING AHEAD ON SURVEY)



PIER 1 - LEFT BRIDGE

(LOOKING BACK ON SURVEY)

SEALED BY

SUSANNE DAWSON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 118376
STATE OF TENNESSEE

11-05-2025

PIN NO.: 135558.00

DESIGN BY:	BRAD WARREN	DATE: AUGUST 2024
DRAWN BY:	T. PEPLOW/D. PICKEL	DATE: AUGUST 2024
SUPERVISED BY:	SUSANNE DAWSON	DATE: AUGUST 2024
CHECKED BY:	FRANK BALE	DATE: AUGUST 2024

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PIER REPAIRS
PIER 1 - LEFT BRIDGE

BRIDGE NO. 53-SR073-8.72 (LEFT AND RIGHT)
FEDERAL BRIDGE ID NOS.
53SR0950009 & 53SR0950010
S.R. 73 OVER TELLICO LAKE AND S.R. 444
LOUDON COUNTY
2026

BR-133-290

11/4/2025 9:12:40 AM
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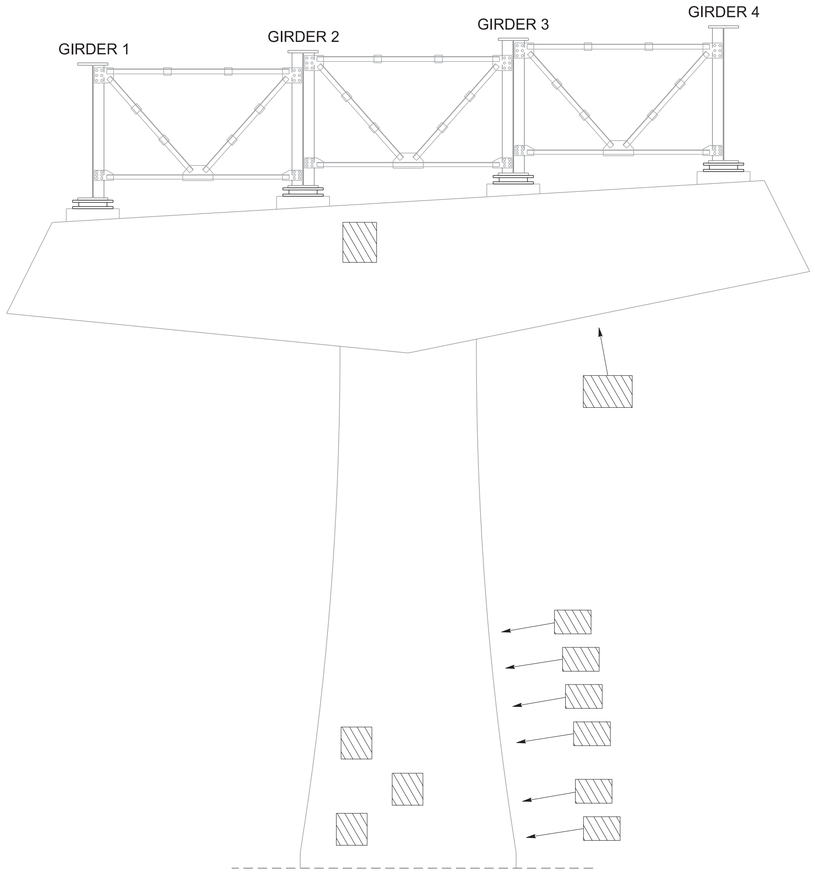
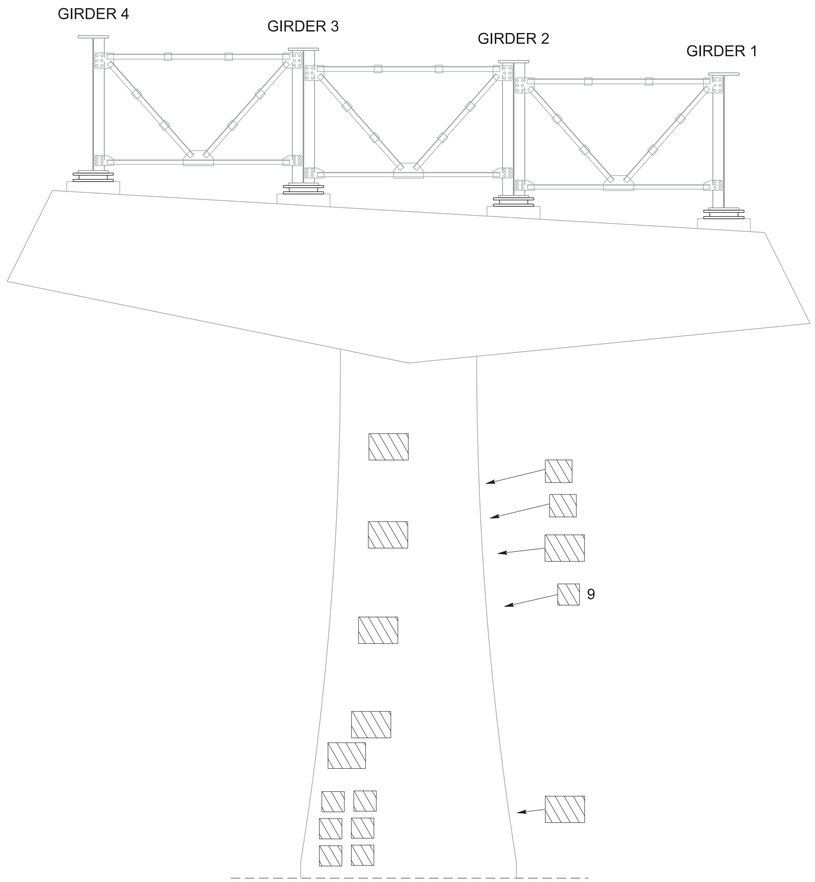
PROJECT NO.	YEAR	SHEET NO.
53S073-M3-005	2026	BR-12

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



PIER 2 - LEFT BRIDGE
(LOOKING AHEAD ON SURVEY)



PIER 2 - LEFT BRIDGE
(LOOKING BACK ON SURVEY)

DENOTES AREA TO BE REPAIRED UNDER ITEM NO. 604-10.05, CONCRETE, AND/OR 604-10.54, CONCRETE REPAIRS, S.F.
SEE REPAIR DETAILS ON DWG. NO. BR-133-298.

SEALED BY

SUSANNE DAWSON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 118276
STATE OF TENNESSEE

11-05-2025

ESTIMATED QUANTITIES	
LOCATION OF REPAIR	ITEM NO. 604-10.05, CONCRETE, AND/OR 604-10.54, CONCRETE REPAIRS APPROX. REPAIR AREAS (S.F.)
PIER 2	25

PIN NO.: 135558.00
DESIGN BY: BRAD WARREN DATE: AUGUST 2024
DRAWN BY: T. PEPLOW/D. PICKEL DATE: AUGUST 2024
SUPERVISED BY: SUSANNE DAWSON DATE: AUGUST 2024
CHECKED BY: FRANK BALE DATE: AUGUST 2024

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PIER REPAIRS
PIER 2 - LEFT BRIDGE

BRIDGE NO. 53-SR073-8.72 (LEFT AND RIGHT)
FEDERAL BRIDGE ID NOS.
53SR0950009 & 53SR0950010
S.R. 73 OVER TELLICO LAKE AND S.R. 444
LOUDON COUNTY
2026

BR-133-291

10/31/2025 12:18:54 PM
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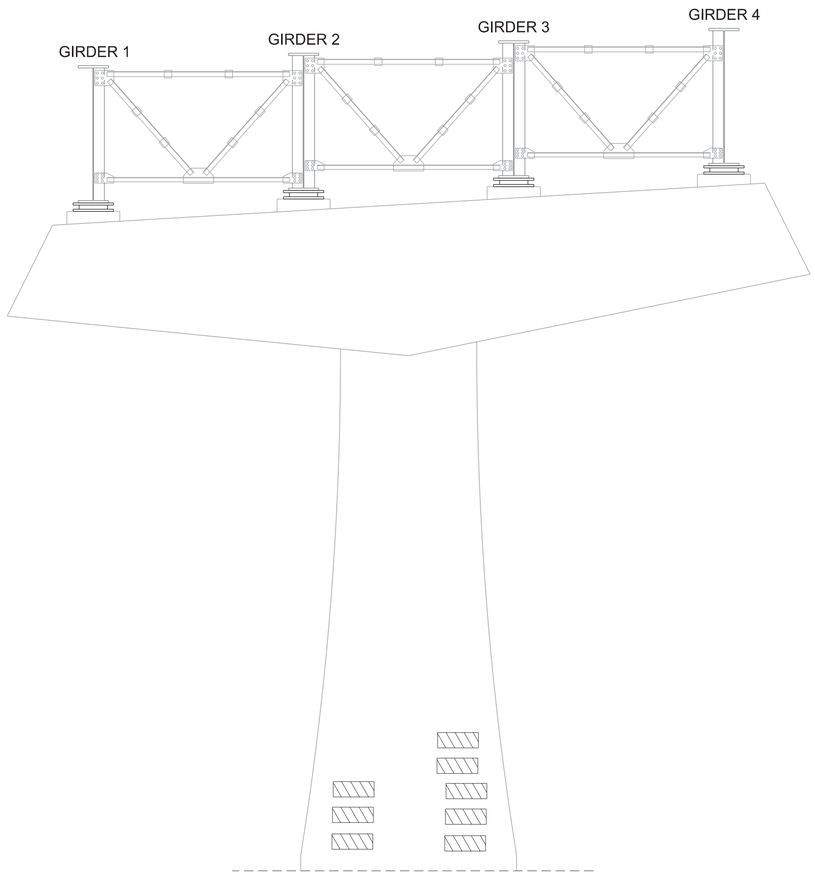
PROJECT NO.	YEAR	SHEET NO.
53S073-M3-005	2026	BR-13

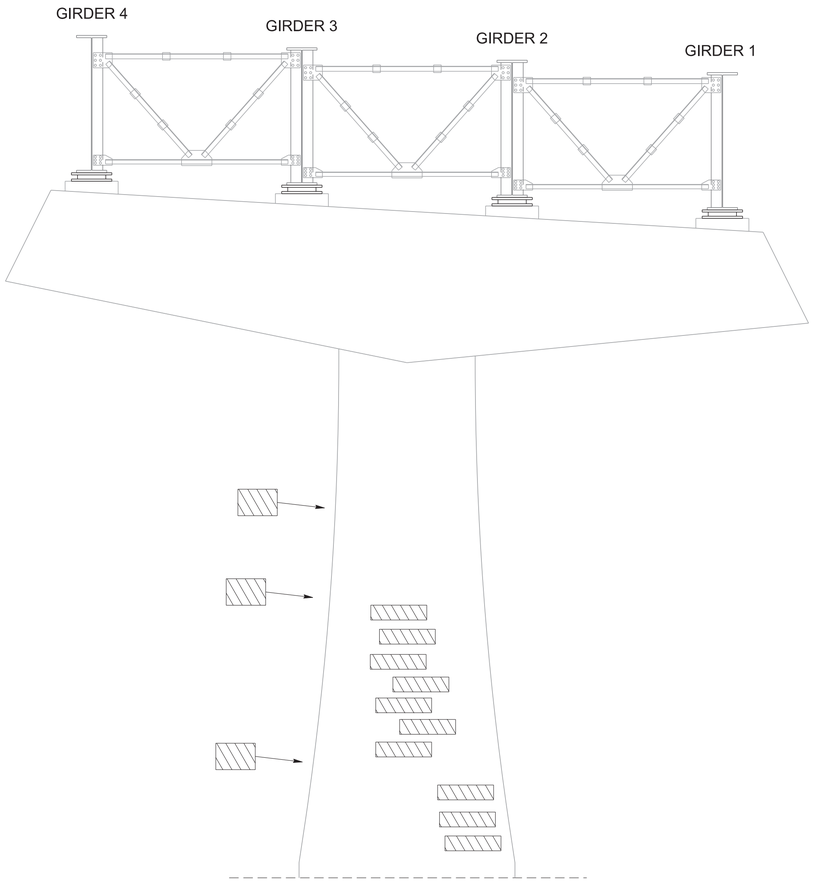
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

DENOTES AREA TO BE REPAIRED UNDER ITEM NO. 604-10.05, CONCRETE, AND/OR 604-10.54, CONCRETE REPAIRS, S.F.
SEE REPAIR DETAILS ON DWG. NO. BR-133-298.

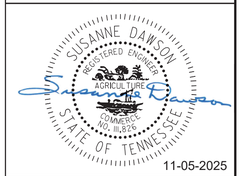


PIER 3 - LEFT BRIDGE
(LOOKING AHEAD ON SURVEY)



PIER 3 - LEFT BRIDGE
(LOOKING BACK ON SURVEY)

SEALED BY



11-05-2025

ESTIMATED QUANTITIES	
LOCATION OF REPAIR	ITEM NO. 604-10.05, CONCRETE, AND/OR 604-10.54, CONCRETE REPAIRS APPROX. REPAIR AREAS (S.F.)
PIER 3	27

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PIER REPAIRS
PIER 3 - LEFT BRIDGE

BRIDGE NO. 53-SR073-8.72 (LEFT AND RIGHT)
FEDERAL BRIDGE ID NOS.
53SR0950009 & 53SR0950010
S.R. 73 OVER TELLICO LAKE AND S.R. 444
LOUDON COUNTY
2026

BR-133-292

PIN NO.: 135558.00
DESIGN BY: BRAD WARREN DATE: AUGUST 2024
DRAWN BY: T. PEPLOW/D. PICKEL DATE: AUGUST 2024
SUPERVISED BY: SUSANNE DAWSON DATE: AUGUST 2024
CHECKED BY: FRANK BALE DATE: AUGUST 2024

10/31/2025 12:17:25 PM
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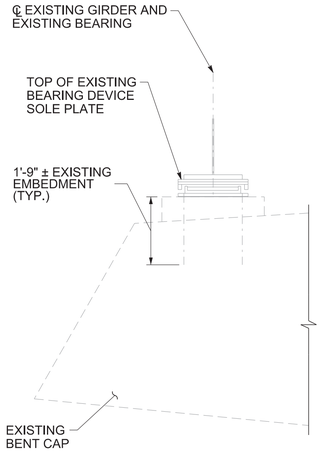
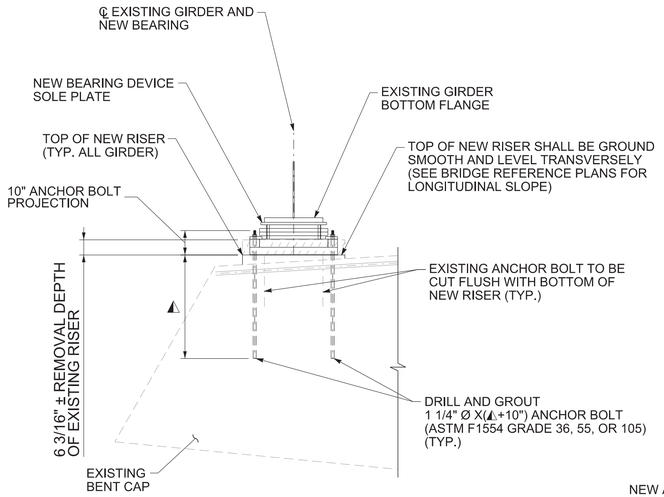


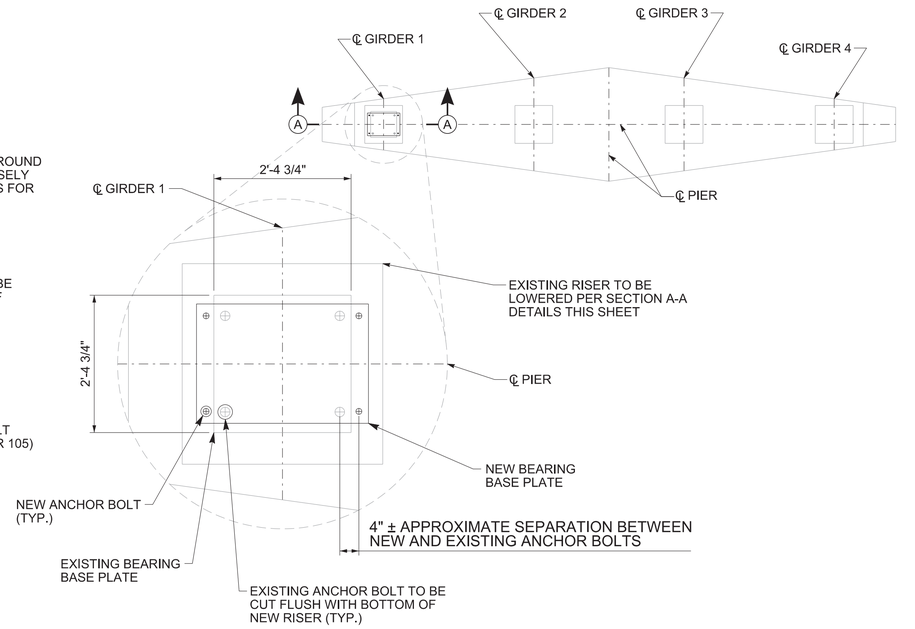
EXISTING BEARING DEVICE AND RISER

(GIRDER 1 SHOWN, TYP. ALL GIRDERS AT PIER 1 AND 4)



NEW BEARING DEVICE AND RISER

(GIRDER 1 SHOWN, TYP. ALL GIRDERS AT PIER 1 AND 4)



PLAN
BEARING REPLACEMENT DETAILS

PIER 4 SHOWN, PIER 1 SIMILAR

SECTION A-A

SEE BEARING REPLACEMENT NOTES ON THIS SHEET

PROJECT NO.	YEAR	SHEET NO.
53S073-M3-005	2026	BR-14

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

ESTIMATED QUANTITIES

LOCATION OF REPAIR	ITEM NO. 604-10.05, CONCRETE, AND/OR 604-10.54, CONCRETE REPAIRS APPROX. REPAIR AREAS (S.F.)
PIER 4	9

▨ DENOTES AREA TO BE REPAIRED UNDER ITEM NO. 604-10.05, CONCRETE, AND/OR 604-10.54, CONCRETE REPAIRS, S.F. SEE REPAIR DETAILS ON DWG. NO. BR-133-298.

▲ DENOTES BEARING TO BE REPLACED. SEE REPAIR DETAILS ON DWG. NO. BR-133-296.

◭ EMBEDMENT DEPTH PER ANCHOR BOLT MANUFACTURER'S SPECIFICATIONS. SEE TDOT QUALIFIED PRODUCTS LIST FOR ANCHOR BOLT SELECTION.

NEW CONCRETE FOR RISERS SHALL BE HIGH EARLY STRENGTH CONCRETE, f'c = 3,500 PSI. THE NEW CONCRETE SHALL BE WELL CONSOLIDATED BEHIND EXISTING BENT CAP REINFORCEMENT.

NOTES:

ALL MATERIAL SHALL A709 GRADE 50 UNLESS OTHERWISE NOTED.

ALL NEW STRUCTURAL STEEL MEMBERS SHALL BE PAINTED USING A TDOT APPROVED PAINT SYSTEM. FOR ADDITIONAL NOTES AND DETAILS SEE DWG. NO. BR-133-282. COST OF PAINTING TO BE INCLUDED IN ITEM NO. 603-02.01, REPAINTING EXISTING STEEL STRUCTURES (BRIDGE NO. 53-SR73-8.72 LEFT), LS.

ALL EXISTING BEARINGS AT PIER NO. 1 AND PIER NO. 4 SHALL BE REPLACED WITH THE BEARINGS AS DETAILED ON THIS DRAWING AND BR-133-296.

THE CONTRACTOR SHALL JACK THE EXISTING STRUCTURE, RAISE THE STRUCTURE ONLY THE MINIMUM AMOUNT NEEDED TO ENABLE REMOVAL AND REPLACEMENT OF THE EXISTING BEARING DEVICES WITH THE NEW STEEL EXPANSION BEARINGS. ALL GIRDER ENDS AT EACH LOCATION SHALL BE JACKED SIMULTANEOUSLY, AT THE SAME RATE, AND BY THE SAME AMOUNT. COST OF JACKING STRUCTURE AND TEMPORARY SUPPORTS SHALL BE INCLUDED IN UNIT PRICE BID FOR ITEM NO. 602-10.19, JACKING STEEL SPANS, L.S.

PROCEDURES AND APPURTENANCES FOR JACKING OF THE STRUCTURE SHALL BE DESIGNED BY AN ENGINEER LICENSED IN TENNESSEE. THE JACKING PLAN SHALL BE SEALED BY THE ENGINEER AND SUBMITTED TO THE HEADQUARTERS OF BRIDGE INSPECTION AND REPAIR OFFICE FOR APPROVAL. JACKING OF THE STRUCTURE WILL NOT BE ALLOWED UNTIL THE JACKING PLAN HAS BEEN APPROVED.

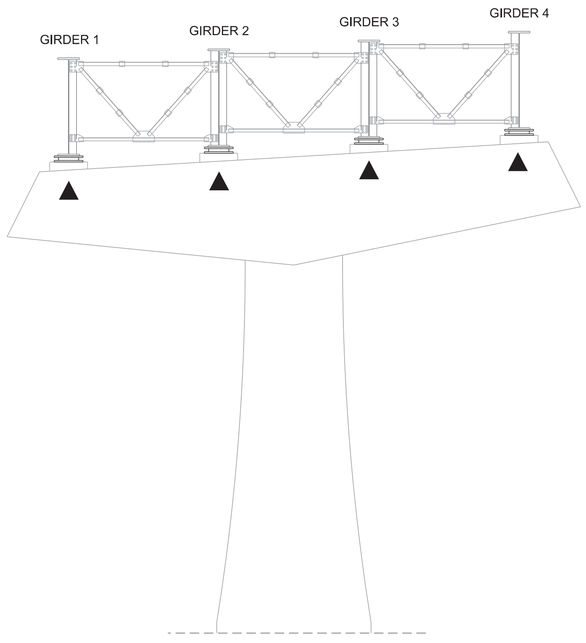
THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE FOR THE ENTIRE DURATION OF REPAIR OPERATIONS.

THE CONTRACTOR SHALL SUBMIT A COMPLETE SET OF SHOP DRAWINGS FOR THE STEEL EXPANSION BEARINGS TO THE HEADQUARTERS OF BRIDGE INSPECTION AND REPAIR OFFICE FOR APPROVAL BEFORE FABRICATION HAS BEGUN.

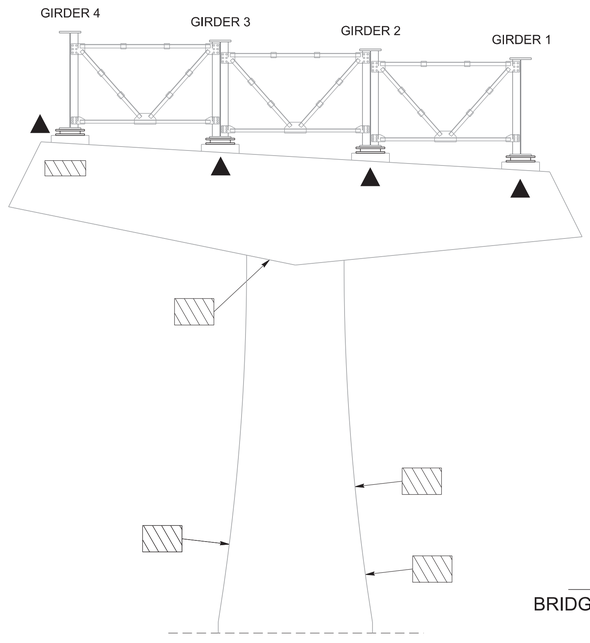
THE COST OF REMOVING EXISTING BEARING DEVICES, ANCHOR BOLTS, EXISTING RISER BLOCKS, CLEANING EXISTING BENT CAP SURFACES, CONSTRUCTING NEW RISER BLOCKS, INSTALLING NEW ANCHOR BOLTS, DRILLING AND GROUTING, WELDING, AND ANY MISCELLANEOUS LABOR OR MATERIALS NECESSARY TO COMPLETE THE BEARING REPLACEMENT SHALL BE INCLUDED UNDER ITEM NO. 602-10.61, BEARING DEVICE (STEEL EXPANSION BEARING), EACH.

EXISTING CONCRETE SURFACES SHALL BE CLEANED IN ACCORDANCE WITH ARTICLE 604.17 OF THE STANDARD SPECIFICATIONS.

THE CONTRACTOR SHALL SELECT AN EPOXY ANCHOR SYSTEM, ANCHOR BOLTS SHALL BE INSTALLED WITH THE REQUIRED EMBEDMENT TO DEVELOP THE FULL SHEAR CAPACITY OF THE ANCHOR. THE EPOXY ANCHOR SYSTEM SHALL BE ON TDOT'S APPROVED QUALIFIED PRODUCTS LIST.



PIER 4 - LEFT BRIDGE
(LOOKING AHEAD ON SURVEY)



PIER 4 - LEFT BRIDGE
(LOOKING BACK ON SURVEY)

SEALED BY

SUSANNE DAWSON
REGISTERED ENGINEER
AGRICULTURE COMMERCE
NO. 119,826
STATE OF TENNESSEE

11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PIER REPAIRS
PIER 4 - LEFT BRIDGE

BRIDGE NO. 53-SR073-8.72 (LEFT AND RIGHT)
FEDERAL BRIDGE ID NOS.
53SR0950009 & 53SR0950010
S.R. 73 OVER TELLICO LAKE AND S.R. 444
LOUDON COUNTY
2026

BR-133-293

PIN NO.: 135558.00
DESIGN BY: BRAD WARREN DATE: AUGUST 2024
DRAWN BY: T. PEPLOW/D. PICKEL DATE: AUGUST 2024
SUPERVISED BY: SUSANNE DAWSON DATE: AUGUST 2024
CHECKED BY: FRANK BALE DATE: AUGUST 2024

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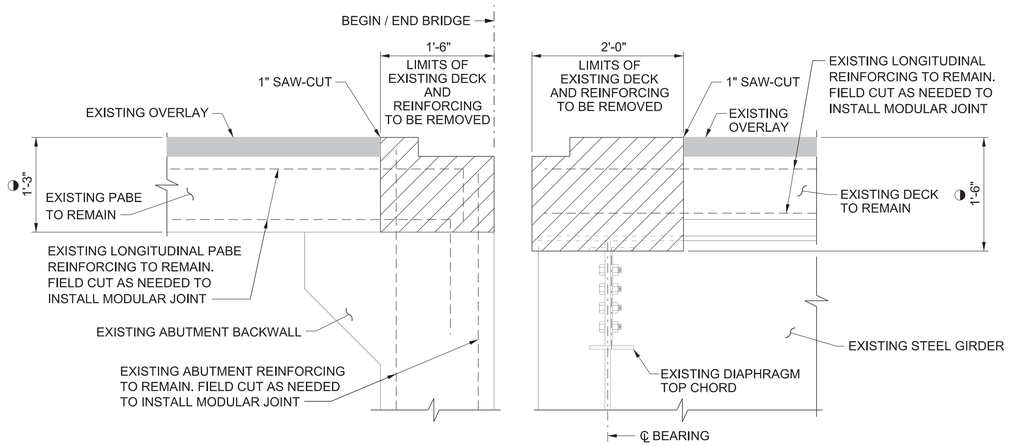
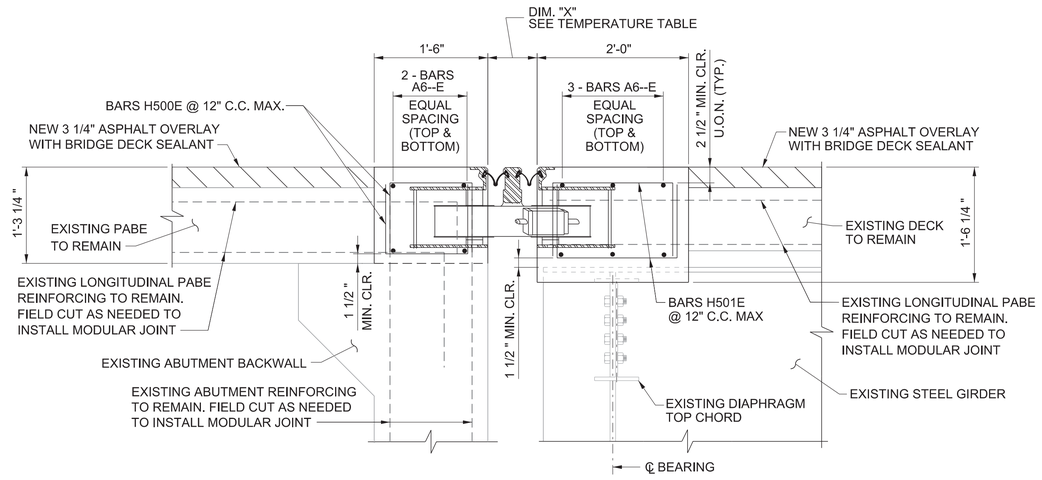


EXISTING JOINT REMOVAL

(ABUTMENT 1 SHOWN - ABUTMENT 2 SIMILAR)

DENOTES APPROXIMATE LIMITS OF REMOVAL

◑ SEE BRIDGE REFERENCE DRAWINGS

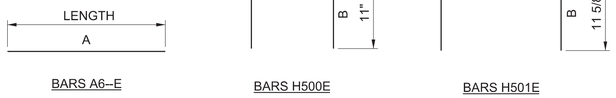


NEW MODULAR EXPANSION JOINT

(ABUTMENT 1 SHOWN - ABUTMENT 2 SIMILAR)

MID TEMPERATURE SETTING AT 60° F.
(ACTUAL SETTING AS PER TEMPERATURE CHART ON MANUFACTURER'S MODULAR EXPANSION JOINT SHOP DRAWINGS.)
TOTAL REQUIRED MOVEMENT AT BOTH ABUTMENTS IS 6 INCHES.

U.O.N. DENOTES UNLESS OTHERWISE NOTED



TEMPERATURE TABLE	
TEMPERATURE	DIM. "X"
0°F	6"
10°F	5 1/2"
20°F	5"
30°F	4 1/2"
40°F	4"
50°F	3 1/2"
60°F	3"
70°F	2 1/2"
80°F	2"
90°F	1 1/2"
100°F	1"
110°F	1/2"
120°F	0"

NOTES

THE MODULAR EXPANSION JOINT SYSTEM DETAILS ARE INCOMPLETE AS SHOWN ON THIS DRAWING DUE TO VARIOUS MANUFACTURER'S MODULAR EXPANSION JOINT SYSTEMS. THE DETAILS SHOWN THIS DRAWING MAY NEED TO BE ALTERED TO ACCOMMODATE MANUFACTURER'S EXPANSION JOINT DETAILS. THE ANCHORAGE AND SUPPORT SYSTEM SHALL MEET TDOT STANDARD SPECIFICATIONS, SECTION 623.

EXPANSION JOINT REPAIR SHALL BE CONSTRUCTED IN PHASES AS SHOWN ON SHEET BR-133-283. WHEN REPAIRS ARE COMPLETE, THE STEEL PORTIONS OF EXPANSION DEVICE SHALL BE CONTINUOUS. IF STEEL PORTION OF EXPANSION DEVICE IS CUT IN ORDER TO PERFORM PHASED CONSTRUCTION, THE STEEL PORTION SHALL BE RE-CONNECTED WITH A FULL PENETRATION BUTT WELD.

THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING MODULAR EXPANSION JOINT SYSTEM DETAILS INCLUDING ANCHORAGE AND SUPPORT SYSTEM DETAILS, NEW REINFORCING STEEL DETAILS AND SPACING FOR APPROVAL, BEFORE ANY FABRICATION IS BEGUN. THE USE OF STUD ANCHORAGE IS PROHIBITED. CONTRACTOR SHALL USE STEEL STRAPS AS REQUIRED BY TDOT STANDARD SPECIFICATIONS, SECTION 623.02, C, 7.

THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR SUPPORTING THE PORTIONS OF THE SLAB WHICH ARE NOT TO BE REMOVED WHEN MAKING REPAIRS WHICH REQUIRE THE REQUIRE THE REMOVAL OF THE END SUPPORT OF A SLAB SPAN.

THE CONTRACTOR SHALL PLACE THE NEW MODULAR JOINT WITH TEMPORARY SELF ALIGNING GUIDE MEMBERS. THE PROFILE OF THE CONCRETE POURS AND NEW JOINT SYSTEM SHALL CONFORM TO ROADWAY CROSS SLOPE, SKEW, AND GRADE.

THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND MEASUREMENTS PRIOR TO FABRICATING THE EXPANSION DEVICES. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER AT THE HEADQUARTERS BRIDGE INSPECTION AND REPAIR OFFICE FOR APPROVAL BEFORE ANY FABRICATION BEGINS.

WHEN REMOVING THE DESIGNATED CONCRETE, EXTREME CARE SHALL BE TAKEN SO AS NOT TO DAMAGE THE EXISTING LONGITUDINAL REINFORCING STEEL. EXISTING LONGITUDINAL STEEL SHALL BE LEFT PROJECTING AND BE INCORPORATED IN WITH THE NEW REINFORCING STEEL. THE EXISTING EXPOSED LONGITUDINAL REINFORCING STEEL SHALL BE COMPLETELY CLEANED BEFORE PLACEMENT OF NEW CONCRETE.

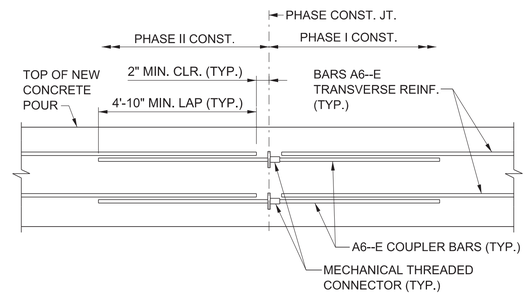
ALL CONCRETE POURS SHALL BE WELL CONSOLIDATED BEHIND AND AROUND THE EXPANSION JOINT STEEL RETAINERS.

COST OF ANY MODIFICATION NECESSARY TO PROPERLY INSTALL THE MODULAR EXPANSION JOINTS SHALL BE INCLUDED IN ITEMS BID ON.

MODULAR EXPANSION JOINT RETAINERS SHALL EXTEND TWO (2") INCHES BEYOND THE EDGE OF THE CONCRETE DECK. SEE STD-1-2 FOR DETAILS.

COST OF REMOVING THE EXISTING EXPANSION JOINTS, AND PLACEMENT OF NEW MODULAR EXPANSION JOINTS, INCLUDING ALL CONCRETE REMOVAL, REMOVAL OF SLIDER PLATE ASSEMBLIES AND NEW SLIDER PLATE ASSEMBLIES FOR PARAPET, AS PER STD. DWG. STD-1-2, NEW HIGH EARLY STRENGTH CONCRETE, REINFORCEMENT BARS, MECHANICAL COUPLERS, SPLICE BARS, WELDING, FORMING, LABOR AND ALL MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE THE REPAIRS AS SHOWN ON THESE PLANS TO THE EXPANSION JOINTS AT ABUTMENT NOS. 1 & 2 SHALL BE INCLUDED IN ITEM NO. 604-10.60, EXPANSION JOINT REPAIRS (MODULAR TYPE), L.F. THIS ITEM SHALL ALSO INCLUDES ALL COSTS ASSOCIATED WITH THE REMOVAL AND REPLACEMENT OF THE PARAPETS TO AID IN THE INSTALLATION OF NEW SLIDER PLATE ASSEMBLIES.

THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND MEASUREMENTS OF THE PARAPETS AND ADJUST SLIDER PLATE DIMENSIONS, IF NEEDED, FROM STD-1-2. SLIDER PLATE ASSEMBLIES ARE REQUIRED AT MODULAR JOINT LOCATIONS. FOUR (4) TOTAL PARAPET ASSEMBLIES ARE REQUIRED FOR BOTH ABUTMENTS SEE STD. DWG. NOS. STD-1-2 FOR THE PARAPET SLIDER PLATE DETAILS. COST OF THE PARAPET SLIDER PLATES TO BE INCLUDED IN ITEM NO. 604-10.60, EXPANSION JOINT REPAIRS, (MODULAR TYPE), L.F.



COUPLER BAR DETAIL

THE COST OF MECHANICAL THREADED CONNECTORS AND COUPLER BARS TO BE INCLUDED IN THE UNIT PRICE BID FOR ITEM NO. 604-10.60, EXPANSION JOINT REPAIRS, (MODULAR TYPE), L.F.

PROJECT NO.	YEAR	SHEET NO.
53S073-M3-005	2026	BR-15

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

SEALED BY

SUSANNE DAWSON REGISTERED ENGINEER AGRICULTURE COMMERCE HIGHWAYS STATE OF TENNESSEE

11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

JOINT REPLACEMENT DETAILS
LEFT BRIDGE

BRIDGE NO. 53-SR073-8.72 (LEFT AND RIGHT)
FEDERAL BRIDGE ID NOS.
53SR0950009 & 53SR0950010
S.R. 73 OVER TELLICO LAKE AND S.R. 444
LOUDON COUNTY
2026

BR-133-294

PIN NO.: 135558.00
DESIGN BY: BRAD WARREN DATE: AUGUST 2024
DRAWN BY: T. PEPLOW/D. PICKEL DATE: AUGUST 2024
SUPERVISED BY: SUSANNE DAWSON DATE: AUGUST 2024
CHECKED BY: FRANK BALE DATE: AUGUST 2024

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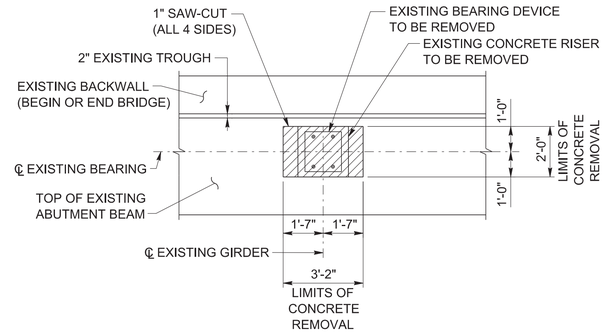
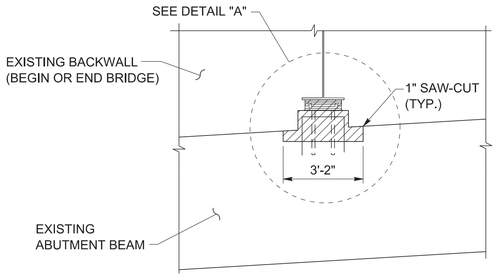


PLAN OF EXISTING RISER AND EXISTING BEARING DEVICE

(ABUTMENT NO. 2 SHOWN, ABUTMENT NO. 1 SIMILAR)
(TYPICAL FOR ALL RISERS AT BOTH ABUTMENTS)

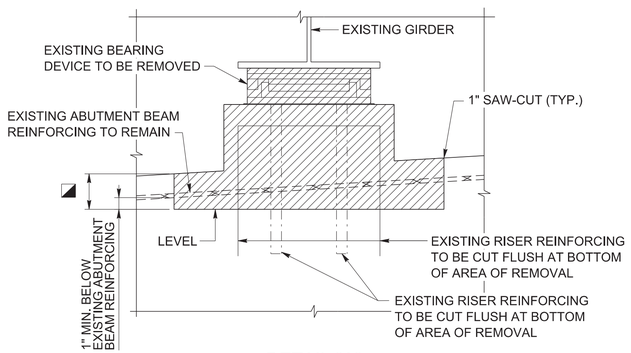
▨ DENOTES APPROXIMATE AREA OF REMOVAL



ELEVATION OF EXISTING RISER AND EXISTING BEARING DEVICE

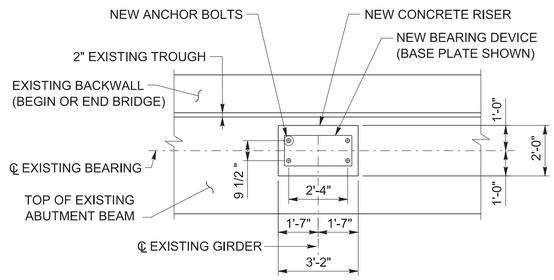
(ABUTMENT NO. 2 SHOWN, ABUTMENT NO. 1 SIMILAR)
(TYPICAL FOR ALL RISERS AT BOTH ABUTMENTS)

▨ DENOTES APPROXIMATE AREA OF REMOVAL



DETAIL "A"

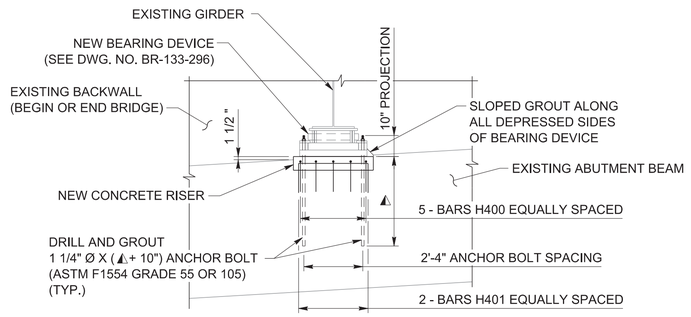
◪ DENOTES DEPTH OF CONCRETE REMOVAL SHALL EXTEND A MINIMUM OF 1" BELOW EXISTING ABUTMENT BEAM REINFORCEMENT. EXTREME CARE SHALL BE TAKEN TO PROTECT EXISTING ABUTMENT BEAM REINFORCING DURING RISER REMOVAL. EXISTING ABUTMENT BEAM REINFORCING SHALL BE CLEANED AND INCORPORATED INTO NEW RISER.



PLAN OF NEW RISER AND NEW BEARING DEVICE

(ABUTMENT NO. 2 SHOWN, ABUTMENT NO. 1 SIMILAR)
(TYPICAL FOR ALL RISERS AT BOTH ABUTMENTS)

NEW CONCRETE FOR RISERS SHALL BE HIGH EARLY STRENGTH CONCRETE, f'c = 3,500 PSI. THE NEW CONCRETE SHALL BE WELL CONSOLIDATED BEHIND EXISTING ABUTMENT BEAM REINFORCEMENT.

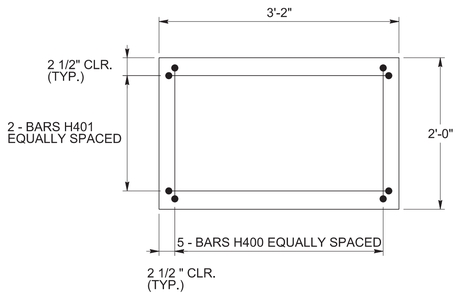


ELEVATION OF NEW RISER AND NEW BEARING DEVICE

(ABUTMENT NO. 2 SHOWN, ABUTMENT NO. 1 SIMILAR)
(TYPICAL FOR ALL RISERS AT BOTH ABUTMENTS)

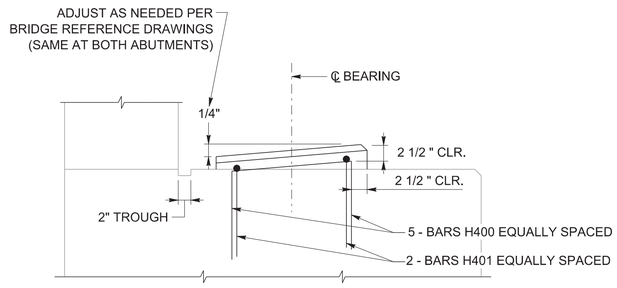
◭ EMBEDMENT DEPTH PER ANCHOR BOLT MANUFACTURER'S SPECIFICATIONS. SEE TDOT QUALIFIED PRODUCTS LIST FOR ANCHOR BOLT SELECTION.

NEW CONCRETE FOR RISERS SHALL BE HIGH EARLY STRENGTH CONCRETE, f'c = 3,500 PSI. THE NEW CONCRETE SHALL BE WELL CONSOLIDATED BEHIND EXISTING ABUTMENT BEAM REINFORCEMENT.



PLAN OF NEW RISER REINFORCING

(TYPICAL FOR ALL NEW RISERS AT BOTH ABUTMENTS)



ELEVATION OF NEW RISER SLOPE AND REINFORCING

(ABUTMENT NO. 1 SHOWN, ABUTMENT NO. 2 SIMILAR)
(TYPICAL FOR ALL NEW RISERS AT BOTH ABUTMENTS)

PROJECT NO.	YEAR	SHEET NO.
53S073-M3-005	2026	BR-16

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

NOTES:

ALL MATERIAL SHALL A709 GRADE 50 UNLESS OTHERWISE NOTED.

ALL NEW STRUCTURAL STEEL MEMBERS SHALL BE PAINTED USING A TDOT APPROVED PAINT SYSTEM. FOR ADDITIONAL NOTES AND DETAILS SEE DWG. NO. BR-133-282. COST OF PAINTING TO BE INCLUDED IN ITEM NO. 603-02.01, REPAINTING EXISTING STEEL STRUCTURES (BRIDGE NO. 53-SR73-8.72 LEFT).

ALL EXISTING BEARINGS AT ABUTMENT NO. 1 AND ABUTMENT NO. 2 SHALL BE REPLACED WITH THE BEARINGS AS DETAILED ON THIS DRAWING AND DWG. NO. BR-133-296.

THE CONTRACTOR SHALL JACK THE EXISTING STRUCTURE, RAISE THE STRUCTURE ONLY THE MINIMUM AMOUNT NEEDED TO ENABLE REMOVAL AND REPLACEMENT OF THE EXISTING BEARING DEVICES WITH THE NEW STEEL EXPANSION BEARINGS. ALL GIRDER ENDS AT EACH LOCATION SHALL BE JACKED SIMULTANEOUSLY, AT THE SAME RATE, AND BY THE SAME AMOUNT. COST OF JACKING STRUCTURE AND TEMPORARY SUPPORTS SHALL BE INCLUDED IN UNIT PRICE BID FOR ITEM NO. 602-10.19, JACKING STEEL SPANS, L.S.

PROCEDURES AND APPURTENANCES FOR JACKING OF THE STRUCTURE SHALL BE DESIGNED BY AN ENGINEER LICENSED IN TENNESSEE. THE JACKING PLAN SHALL BE SEALED BY THE ENGINEER AND SUBMITTED TO THE HEADQUARTERS OF BRIDGE INSPECTION AND REPAIR OFFICE FOR APPROVAL. JACKING OF THE STRUCTURE WILL NOT BE ALLOWED UNTIL THE JACKING PLAN HAS BEEN APPROVED.

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE FOR THE ENTIRE DURATION OF REPAIR OPERATIONS.

THE CONTRACTOR SHALL SUBMIT A COMPLETE SET OF SHOP DRAWINGS FOR THE STEEL EXPANSION BEARINGS TO THE HEADQUARTERS OF BRIDGE INSPECTION AND REPAIR OFFICE FOR APPROVAL BEFORE FABRICATION HAS BEGUN.

EXISTING CONCRETE SURFACES SHALL BE CLEANED IN ACCORDANCE WITH ARTICLE 604.17 OF THE STANDARD SPECIFICATIONS.

THE CONTRACTOR SHALL SELECT AN EPOXY ANCHOR SYSTEM, ANCHOR BOLTS SHALL BE INSTALLED WITH THE REQUIRED EMBEDMENT TO DEVELOP THE FULL SHEAR CAPACITY OF THE ANCHOR. THE EPOXY ANCHOR SYSTEM SHALL BE ON TDOT'S APPROVED QUALIFIED PRODUCTS LIST.

CONCRETE SEALER: CONCRETE SEALER SHALL BE APPLIED TO SUBSTRUCTURES COINCIDING WITH EXPANSION JOINT LOCATIONS BEFORE PLACEMENT OF BEARING DEVICES. CONCRETE SEALER SHALL BE APPLIED TO THE FRONT VERTICAL FACE OF THE ABUTMENT ENDWALL, THE FRONT AND TOP OF THE ABUTMENT BEAM (PLUS APRON WALLS OR ANY OTHER FACES THAT ARE DEEMED NECESSARY BY THE ENGINEER).

CONCRETE SHALL BE CLEAN AND DRY BEFORE APPLYING THE CONCRETE SEALER, AND THE THICKNESS OF THE SEALER SHALL BE AS RECOMMENDED BY THE SEALANT MANUFACTURER. ACCEPTABLE CONCRETE SEALERS ARE INCLUDED IN TDOT QUALIFIED PRODUCTS LIST FOR NON-PENETRATING CONCRETE SEALERS MAINTAINED BY THE DIVISION OF MATERIALS AND TESTS. THE SEALER SHALL BE CLEAR OR SIMILAR TO THE COLOR OF EXISTING CONCRETE SURFACES TO BE SEALED. THE COST OF THE SEALER, COMPLETE AND IN PLACE, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE EXPANSION DEVICE AT EACH SUBSTRUCTURE.

THE COST OF REMOVING EXISTING BEARING DEVICES, EXISTING ANCHOR BOLTS, EXISTING RISER BLOCKS AND RISER BLOCK REINFORCING, CLEANING EXISTING ABUTMENT BEAM REINFORCEMENT, CONSTRUCTING NEW RISER BLOCKS, NEW RISER BLOCK REINFORCING, INSTALLING NEW ANCHOR BOLTS, DRILLING AND GROUTING, SLOPED RISER GROUT, WELDING, AND ANY MISCELLANEOUS LABOR OR MATERIALS NECESSARY TO COMPLETE THE BEARING REPLACEMENT SHALL BE INCLUDED UNDER ITEM NO. 602-10.61, BEARING DEVICE (STEEL EXPANSION BEARING), EACH.

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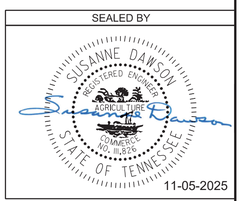

PIN NO.:	135558.00	
DESIGN BY:	BRAD WARREN	DATE: AUGUST 2024
DRAWN BY:	T. PEPLOW/D. PICKEL	DATE: AUGUST 2024
SUPERVISED BY:	SUSANNE DAWSON	DATE: AUGUST 2024
CHECKED BY:	FRANK BALE	DATE: AUGUST 2024

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RISER REPAIR DETAILS
LEFT BRIDGE ABUTMENTS

BRIDGE NO. 53-SR073-8.72 (LEFT AND RIGHT)
FEDERAL BRIDGE ID NOS.
53SR0950009 & 53SR0950010
S.R. 73 OVER TELLICO LAKE AND S.R. 444
LOUDON COUNTY
2026

BR-133-295

11/4/2025 8:59:24 AM
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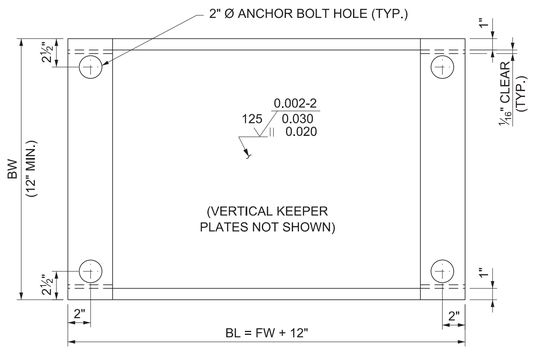
STEEL EXPANSION BEARINGS

(ALL MATERIAL SHALL BE A709 GRADE 50 UNLESS OTHERWISE NOTED.)
(ALL TABULATED DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.)

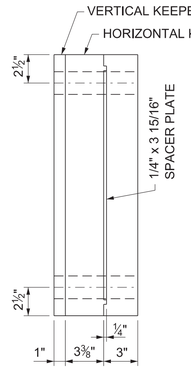
LOCATION	NUMBER REQUIRED	R (SERVICE I)	E	FW	BASE PLATE		SELF LUBRICATING PLATE		SLIDER PLATE		PIN ASSEMBLY	
					BL	BW	CL	CW	SL	SW	PL	AL
ABUTMENT NO. 1	4	360	6	20	32	15.5	24	13.5	24	21.5	23	16
ABUTMENT NO. 2	4	357	6	20	32	15.5	24	13.5	24	21.5	23	16
PIER NO. 1	4	931	4	24	36	26	28	21	28	30	27	20
PIER NO. 4	4	928	4	24	36	26	28	21	28	30	27	20

R = REACTION IN KIPS
FW = BOTTOM FLANGE WIDTH IN INCHES
E = TOTAL EXPANSION IN INCHES
CW = [R / (2 (FW + 4"))] + E
SW = BW + E
BW = (GREATER VALUE OF) CW + 2" OR BW = R / BL OR 12" MINIMUM

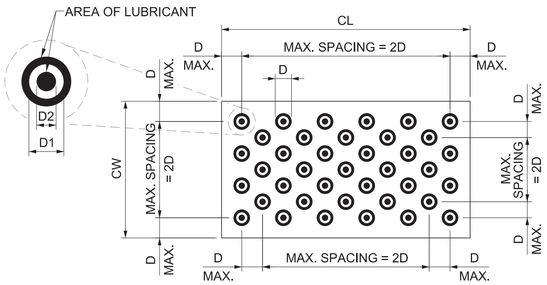


PLAN OF BASE PLATE

(CAUTION: DO NOT FINISH COPPER PLATE OR BRONZE CASTING TOP OR BOTTOM)



END VIEW

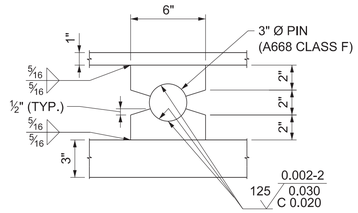


PLAN OF BRONZE / COPPER ALLOY PLATE

AL = TOTAL CROSS-SECTIONAL AREA OF LUBRICANT
(0.25) (CW) ≤ AL ≤ (0.30) (CW) (CL)

RECESSES SHALL BE TREPANNED TO A DEPTH OF 1/4"

FABRICATOR SHALL SUBMIT DETAIL OF BRONZE / COPPER ALLOY PLATE FOR APPROVAL



PIN & BEARING ASSEMBLY

BEARING DESIGN LOAD (SERVICE I)		
LOCATION	DEAD LOAD REACTION (KIPS)	LIVE LOAD REACTION (KIPS)
ABUTMENT NO. 1	193	167
ABUTMENT NO. 2	193	167
PIER NO. 1	609	322
PIER NO. 2	608	320

PROJECT NO.	YEAR	SHEET NO.
53S073-M3-005	2026	BR-17

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

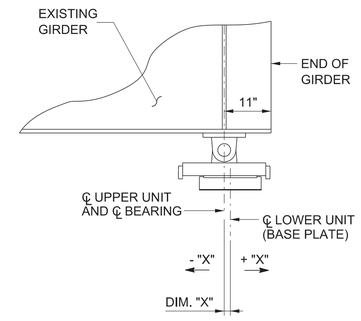
GENERAL NOTES:

NOTE: PIN AND BOTTOM OF SLIDER PLATE SHALL BE LUBRICATED WITH MOLYKOTE 3402-C ANTI-FRICTION COATING.

NOTE: ANCHOR BOLTS SHALL BE TENSIONED TO PRODUCE 60% OF ANCHOR BOLT YIELD STRESS.

NOTE: ANCHOR BOLTS SHALL BE GALVANIZED ACCORDING TO ASTM F2329 OR MECHANICALLY GALVANIZED TO ASTM B695.

NOTE: ALL EXPOSED SURFACES OF ASSEMBLED BEARING DEVICES SHALL BE PAINTED. THE COLOR OF THE TOP COAT SHALL BE YELLOW, AMS-STD-595A, FEDERAL STANDARD NO. 13591.

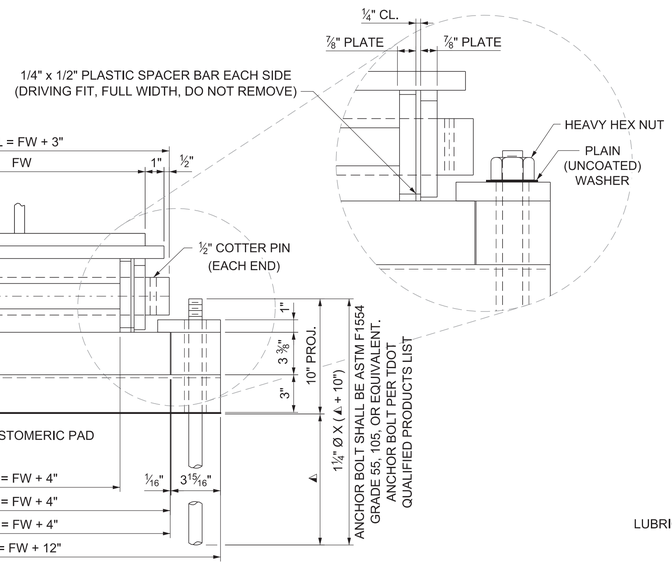


SECTION A - A

(NEW ANCHOR BOLTS AND NEW RISERS NOT SHOWN FOR CLARITY)

BEARING SETTING TEMPERATURE TABLE ABUTMENTS 1 AND 2	
TEMPERATURE	DIM. "X"
0°F	-3"
10°F	-2 1/2"
20°F	-2"
30°F	-1 1/2"
40°F	-1"
50°F	-1/2"
60°F	0"
70°F	+1/2"
80°F	+1"
90°F	+1 1/2"
100°F	+2"
110°F	+2 1/2"
120°F	+3"

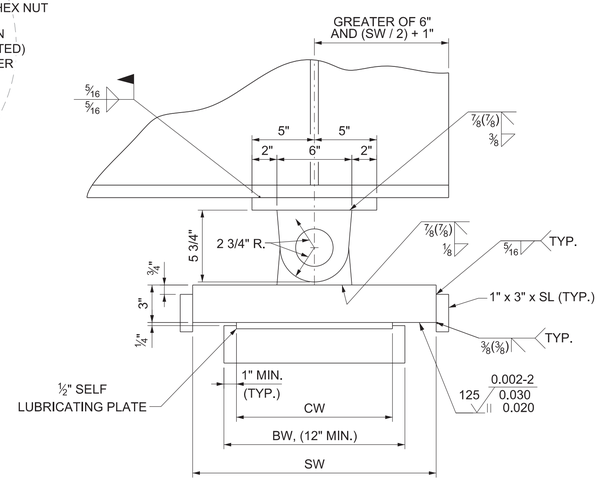
BEARING SETTING TEMPERATURE TABLE PIERS 1 AND 4	
TEMPERATURE	DIM. "X"
0°F	-2"
10°F	-1 11/16"
20°F	-1 5/16"
30°F	-1"
40°F	-11/16"
50°F	-5/16"
60°F	0"
70°F	+5/16"
80°F	+11/16"
90°F	+1"
100°F	+1 5/16"
110°F	+1 11/16"
120°F	+2"



ELEVATION

SELF-LUBRICATING SLIDER PLATES SHALL BE ASTM B22 ALLOY UNS NO. C90500, C91100 OR C86300 (BRONZE CASTINGS) OR ASTM B100 ALLOY UNS NO. C51000 (COPPER ALLOY).

▲ EMBEDMENT DEPTH PER ANCHOR BOLT MANUFACTURER'S SPECIFICATIONS. SEE TDOT QUALIFIED PRODUCTS LIST FOR ANCHOR BOLT SELECTION.

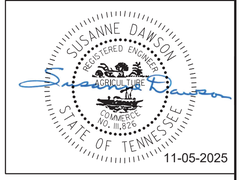


END ELEVATION

FINISH NOTE:
ALL MACHINED AND/OR ROLLED SURFACES IN DIRECT CONTACT WITH THE SELF-LUBRICATING COPPER ALLOY PLATE (ASTM B100 ALLOY UNS NO. C51000) OR BRONZE CASTING (ASTM B22 ALLOY UNS NO. C90500, C91100, OR C86300), SHALL MEET THE ANSI SURFACE ROUGHNESS REQUIREMENTS AS DEFINED IN ASME B46.1 SURFACE ROUGHNESS, WAVINESS, AND LAY, SECTION 1. MAXIMUM ROUGHNESS HEIGHT SHALL BE 125 MICROINCHES AND MACHINE MARKS ARE TO BE PARALLEL TO THE DIRECTION OF MOVEMENT ON THE MOVING PART.

PIN NO.:	135558.00
DESIGN BY:	BRAD WARREN — DATE: AUGUST 2024
DRAWN BY:	T. PEPLOW/D. PICKEL — DATE: AUGUST 2024
SUPERVISED BY:	SUSANNE DAWSON — DATE: AUGUST 2024
CHECKED BY:	FRANK BALE — DATE: AUGUST 2024

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BEARING REPLACEMENT DETAILS LEFT BRIDGE

BRIDGE NO. 53-SR073-8.72 (LEFT AND RIGHT)
FEDERAL BRIDGE ID NOS.
53SR0950009 & 53SR0950010
S.R. 73 OVER TELLICO LAKE AND S.R. 444
LOUDON COUNTY
2026

BR-133-296

11/3/2025 12:24:17 PM
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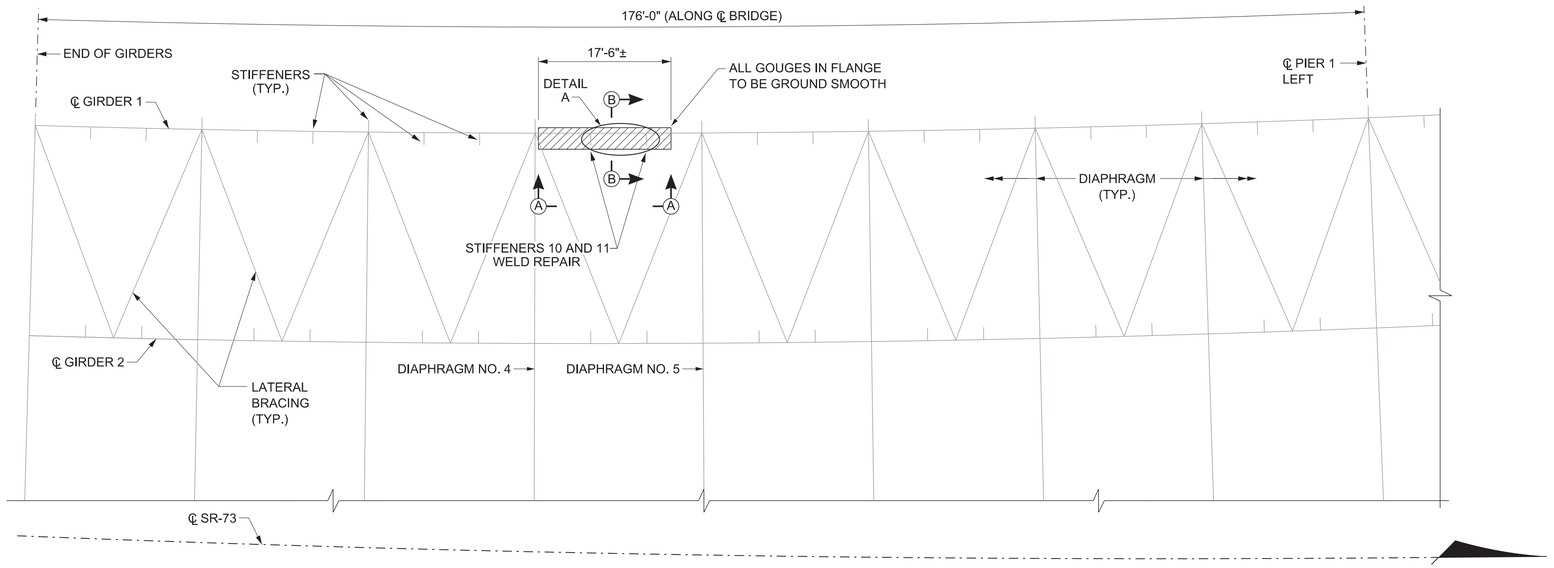
PROJECT NO.	YEAR	SHEET NO.
53S073-M3-005	2026	BR-18

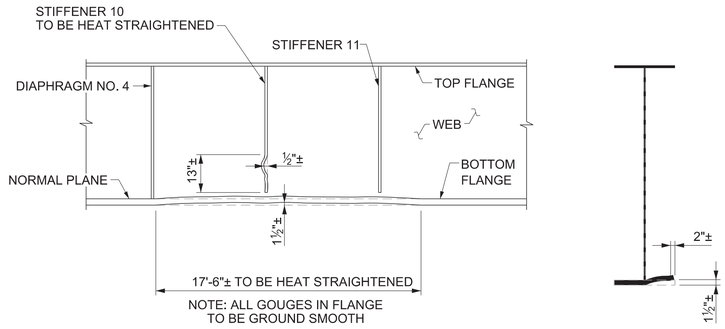
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



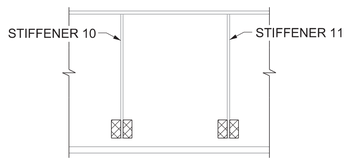
PARTIAL FRAMING PLAN
SPAN 1 - LEFT BRIDGE

DENOTES AREA OF GIRDER TO BE HEAT STRAIGHTENED



ELEVATION A-A

SECTION B-B



DETAIL A
WELD REPAIR

DENOTES LIMITS OF DYE PENETRANT TESTING AND/OR FLASH MAGNETIC PARTICLE TESTING.
SEE CRACK REPAIR PROCEDURE ON THIS DRAWING.

NOTES:

LOCATIONS AND DIMENSIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY PRIOR TO BEGINNING OF CONSTRUCTION.

TRAFFIC SHALL BE SHIFTED OFF OF GIRDER WHILE REPAIRS ARE BEING MADE.

REMOVAL OF PAINT BY GRINDING SHALL NOT BE ALLOWED IN AREAS WHERE DYE PENETRANT TESTING IS TO BE PERFORMED. DYE PENETRANT TESTING SHALL BE PAID FOR UNDER ITEM NO. 602-10.22, STRUCTURAL WELD REPAIR, EACH.

THE COST OF ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS FOR HEAT STRAIGHTENING PORTIONS OF THE EXISTING GIRDERS AS SHOWN AND GRINDING OF EXISTING BOTTOM FLANGES SHALL BE PAID FOR UNDER ITEM NO. 602-10.81, HEAT STRAIGHTENING, LS.

STRUCTURAL STEEL REPAIRS - HEAT STRAIGHTENING OF DAMAGED STRUCTURAL STEEL

DESCRIPTION: THIS ITEM SHALL CONSIST OF HEAT STRAIGHTENING THE DAMAGED PORTIONS OF THE EXISTING GIRDERS AS SHOWN. HEAT STRAIGHTENING SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ASSHTO ARTICLE 11.4.7 (DIVISION II - CONSTRUCTION) AND AS NOTED ON PLANS.

THE REPAIRS SHALL BE PERFORMED UNDER DIRECT SUPERVISION OF A PERSON WHO SHALL PRESENT WRITTEN DOCUMENTATION PRIOR TO BEGINNING WORK OF THEIR SUCCESSFUL HEAT STRAIGHTENING EXPERIENCES WITH COMPARABLE BRIDGE BEAMS/GIRDERS. THIS PERSON SHALL POSSESS THE KNOWLEDGE AND EXPERIENCE TO APPLY THE HEAT IN SUCH A MANNER, SEQUENCE AND AMOUNT THAT THE FINAL STRAIGHTENED MEMBER RETAINS AS LITTLE RESIDUAL STRESS AS POSSIBLE. HEAT SHALL BE APPLIED AT OR BELOW 1200 DEGREES FAHRENHEIT AND MONITORED WITH CONTACT THERMOMETERS, PYROMETRIC STICKS OR OTHER HEAT INDICATING DEVICES. THESE HEAT INDICATING DEVICES SHALL BE SUPPLIED BY THE CONTRACTOR AND MADE AVAILABLE TO THE INSPECTOR AT ALL TIMES. FORCED COOLING IS NOT PERMITTED. THE STRAIGHTENING SHALL BE ACCOMPLISHED WITH AS LITTLE MECHANICAL FORCE AS POSSIBLE.

TOLERANCES SHALL MEET REQUIREMENTS AS SHOWN IN SECTION 3.5 OF THE AWS STRUCTURAL WELDING CODE.

ALL WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS.

FOLLOWING THE COMPLETION OF ALL STRUCTURAL STEEL REPAIRS AND PRIOR TO PAINTING, AN INSPECTION FOR CRACKS SHALL BE MADE IN ALL REPAIR AREAS OF THE SPAN. CRACKS DISCOVERED AS A RESULT OF THIS INSPECTION SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

CRACK REPAIR PROCEDURE NOTES

AFTER DYE PENETRANT TESTING OR FLASH MAGNETIC PARTICLE TESTING IS COMPLETE AND THE TEST RESULTS HAVE BEEN PROVIDED TO THE ENGINEER, ALL CRACKS SHALL BE REPAIRED BY UTILIZING EITHER METHOD NO. 1 OR METHOD NO. 2 AS FOLLOWS:

METHOD NO. 1:
WHEN THE CRACK IS IN THE FILLET WELD MATERIAL THAT CONNECTS THE GIRDER WEB TO THE FLANGE, THE STIFFENER PLATES, OR THE LATERAL BRACING CONNECTION PLATES, THE EXISTING WELD MATERIAL IS TO BE REMOVED IN THE AREA OF THE CRACK AND A NEW FILLET WELD MADE CONNECTING THE FLANGE OR PLATES TO THE WEB.

METHOD NO. 2:
WHEN THE CRACK EXTENDS INTO THE WEB METAL, THE EXISTING WELD MATERIAL IS TO BE REMOVED, A NEW FILLET WELD MADE, AND THE CRACK IN THE WEB METAL IS TO BE REPAIRED USING FULL PENETRATION WELDS. FULL PENETRATION WELDS TO BE GROUND FLUSH. ALL FULL PENETRATION WELDS SHALL BE 100% U.T. TESTED. U.T. TESTING OF FULL PENETRATION WELDS SHALL BE INCLUDED UNDER ITEM NO. 602-10.22, EACH.

ALL WELDS SHALL BE IN ACCORDANCE WITH ANSI-AASHTO-AWS D1.5-96 BRIDGE WELDING CODE AND SPECIAL PROVISION NO. 602. PREPARATION OF CRACKS FOR WELDING AND ALL CRACK REPAIR WELDING SHALL BE PAID FOR UNDER ITEM NO. 602-10.22, EACH.

WHERE PARTIAL REMOVAL AND REPLACEMENT OF THE STIFFENER PLATE IS NECESSARY TO REPAIR THE WELD, THE REPLACEMENT SHALL BE PREPARED IN ACCORDANCE TO METHOD NO. 2 NOTE ABOVE. ALL COSTS ASSOCIATED WITH THE REMOVAL AND REPLACEMENT SHALL BE INCLUDED UNDER ITEM NO. 602-10.22, EACH.

GRINDING OF NICKS AND GOUGES

1. NO GROUND PORTION IS TO HAVE A RAIDUS OF LESS THAN 100 MM IN THE LONGITUDINAL DIRECTION (I.E. ALONG THE EDGE OF THE SURFACE.
2. THE GROUND SLOPE IS NOT TO EXCEED AN ANGLE OF 1 TO 5 TO THE NEAREST FACE OR EDGE.
3. ANY PLASTIC FLOW IS TO BE REMOVED FLUSH WITH THE FACE OR EDGE.
4. FLANGE EDGES ARE TO HAVE A MINIMUM RADIUS OF 3 MM.
5. FINAL GRINDING IS TO BE DONE IN THE LONGITUDINAL DIRECTION AND IN A MANNER AS NOT TO CAUSE HEAT DISCOLORATION.
6. ALL DISTORTED METAL IS TO BE REMOVED.
7. GRINDING IS TO EXTEND AT LEAST 1 MM BEYOND THE DAMAGED SURFACE OR END OF CRACKS.
8. USE DYE PENETRANT TO CHECK FOR CRACKS ON COMPLETION OF GRINDING.
9. COST OF GOUGE REPAIR TO BE INCLUDED IN COST OF ITEM NO. 602-10.81, HEAT STRAIGHTENING, LS.

SPECIAL NOTE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPORTING THE SUPERSTRUCTURE DURING THE REPAIR OF GIRDER SECTIONS. DETAILS OF THE SUPPORT SYSTEM SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW BEFORE ANY GIRDER REPAIR IS BEGUN. THE COST OF THE SUPPORT SYSTEM SHALL BE INCLUDED IN ITEM NO. 602-10.81, HEAT STRAIGHTENING, LS.

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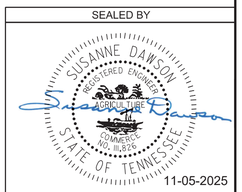

PIN NO.:	135558.00	
DESIGN BY:	BRAD WARREN	DATE: AUGUST 2024
DRAWN BY:	T. PEPLOW/D. PICKEL	DATE: AUGUST 2024
SUPERVISED BY:	SUSANNE DAWSON	DATE: AUGUST 2024
CHECKED BY:	FRANK BALE	DATE: AUGUST 2024

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GIRDER REPAIR DETAILS
LEFT BRIDGE

BRIDGE NO. 53-SR073-8.72 (LEFT AND RIGHT)
FEDERAL BRIDGE ID NOS.
53SR0950009 & 53SR0950010
S.R. 73 OVER TELLICO LAKE AND S.R. 444
LOUDON COUNTY
2026

BR-133-297

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SPECIAL NOTES FOR EPOXY INJECTION

UNLESS OTHERWISE NOTED, THE INTENT OF THIS SPECIFICATION IS FOR DESIGNATED CRACKS TO BE INJECTED THEIR FULL LENGTH AND DEPTH.

DESIGNATED CRACKS SHALL BE INJECTED WITH AN APPROVED EPOXY RESIN ADHESIVE FILLING ALL VOIDS FOR THE CRACK DEPTH OR THICKNESS OF THE MEMBER. THE EPOXY RESIN ADHESIVE SHALL BE ON THE CURRENT QUALIFIED PRODUCTS LIST MAINTAINED BY THE DIVISION OF MATERIALS AND TEST. ALL CRACKS SHALL BE INJECTED USING AN ADHESIVE SUITABLE FOR THE FIELD CONDITIONS (CRACK WIDTH, TEMPERATURE, HUMIDITY, ETC.) RECOMMENDED BY THE ADHESIVE MANUFACTURER AS SHOWN ON MATERIAL DATA SHEETS. FOLLOWING INJECTION, ALL INJECTION PORTS AND CAPPING MATERIAL SHALL BE REMOVED FROM EXPOSED SURFACES LEAVING THE SURFACE SMOOTH AND FLUSH WITH THE SURROUNDING CONCRETE SURFACES.

THE CONTRACTOR SHALL HAVE SUFFICIENT EXPERIENCE AND TRAINING TO PERFORM THE EPOXY INJECTION IN ACCORDANCE WITH THESE PLANS. PRIOR TO PERFORMING ANY WORK, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A WRITTEN PROCEDURE FOR PERFORMING THE EPOXY INJECTION. THE PROCEDURE SHALL DESCRIBE IN DETAIL HOW THE WORK WILL BE PERFORMED. THE PROCEDURE SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING INFORMATION.

1) DESCRIPTION OF EQUIPMENT.
   A. THE INJECTION EQUIPMENT SHALL BE OF THE TYPE THAT MIXES ADHESIVE COMPONENTS AT THE INJECTION HEAD.
   B. THE INJECTION EQUIPMENT SHALL BE CAPABLE OF DISCHARGING MIXED ADHESIVE AT ANY PRESSURE UP TO 300 PSI. THE INJECTION EQUIPMENT SHALL BE EQUIPPED WITH GAUGES WHICH CAN MEASURE THE INJECTION PRESSURE AND VOLUME.

2) EQUIPMENT CALIBRATION PROCEDURES AND SCHEDULE.

3) MATERIALS TO BE USED (INCLUDING MANUFACTURER DATA SHEETS)
   A. CAPPING MATERIAL
   B. EPOXY ADHESIVE (TYPE TO BE APPROPRIATE FOR CRACK SIZES TO BE INJECTED).

4) PORT SPACING
   A. PORT SPACING SHALL NOT BE LESS THAN THE THICKNESS OF THE CONCRETE IN THAT LOCATION.

5) INJECTION SEQUENCE
   A. INJECTION SHALL PROCEED FROM LOWER END OF CRACK ALONG ADJACENT PARTS.
   B. SKIPPING OF PORTS DURING INJECTION SHALL NOT BE ALLOWED.

THE CONTRACTOR SHALL HAVE THE MANUFACTURER'S INSTRUCTIONS FOR PROPORTIONING AND MIXING AVAILABLE AT THE JOB SITE AT ALL TIMES AND SHALL ENSURE THAT THE EQUIPMENT IS SUPPLYING THE MIXED ADHESIVE IN THE CORRECT PROPORTIONS.

TO ENSURE PROPER MIXING AND PROPORTIONING, SAMPLES SHALL BE TAKEN FROM THE INJECTOR HEAD AT THE START OF EACH WORKDAY AND EACH TIME THE ADHESIVE RESERVOIRS ARE REFILLED. THE SAMPLES SHALL BE IN A TEST CUP. THE SAMPLE SHALL BE MONITORED TO ENSURE THAT THE CURE TIME IS IN COMPLIANCE WITH THE MANUFACTURER'S DATA SHEETS. IF THE SAMPLES DO NOT CURE IN THE SPECIFIED TIME THEN THE EQUIPMENT USED TO PRODUCE THE SAMPLE SHALL NOT BE USED UNTIL THE PROBLEM IS CORRECTED.

CORE SAMPLES SHALL BE TAKEN AS VERIFICATION OF THE QUALITY OF WORK. THE CONTRACTOR SHALL TAKE ONE (1) ONE (1) INCH DIAMETER (FULL DEPTH OF CONCRETE AT LOCATION CORED) CORE SAMPLES STARTING WITH THE FIRST REPAIR LOCATION THEN EVERY THIRD REPAIR LOCATION AFTERWARDS. WORK SHALL NOT PROCEED UNTIL THE CORE SAMPLE IS TAKEN AND ACCEPTED. ALL CORE SAMPLES AND HOLES SHALL BE INDEXED FOR FUTURE REFERENCE. THE ENGINEER SHALL DESIGNATE ALL LOCATIONS TO BE CORED. IF ANY CORES SHOW UNACCEPTABLE RESULTS, ALL WORK SHALL BE STOPPED UNTIL THE CONTRACTOR SUBMITS A PROPOSAL FOR CORRECTING UNACCEPTABLE WORK.

THE INITIAL CORE WILL ALSO SERVE TO QUALIFY THE FOREMAN FOR THIS WORK. IF AT ANY TIME A NEW FOREMAN IS USED, HE SHALL BE QUALIFIED WITH A CORE SAMPLE.

THE CONTRACTOR, AT HIS EXPENSE, SHALL REPAIR ALL CORE HOLES WITH AN APPROVED CEMENTITIOUS PATCHING MATERIAL.

CORE SAMPLES SHALL BE VISUALLY INSPECTED TO CONFIRM THAT CRACKS ARE COMPLETELY FILLED WITH ADHESIVE. ANY CORE HAVING LESS THAN 95% OF THEM CRACK FILLED WITH ADHESIVE SHALL BE CONSIDERED UNACCEPTABLE AND BE REJECTED.

CORE SAMPLES SHALL BE TESTED FOR BOND STRENGTH. SAMPLES MAY BE FRACTURED BY HAMMER BLOW TO CRACK AREA OR THROWN AT A HARD SURFACE. IF ADHESIVE FAILURE OCCURS BEFORE CONCRETE FAILURE, THE CORE SHALL BE CONSIDERED UNACCEPTABLE AND REJECTED.

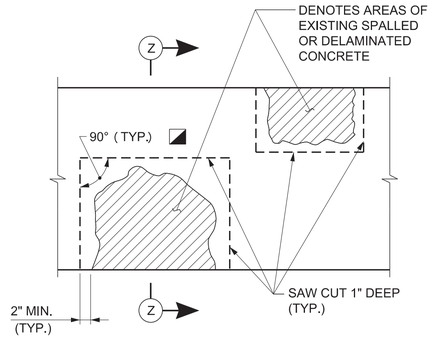
PAYMENT FOR EPOXY INJECTION CRACK REPAIR SHALL BE MADE UNDER ITEM NUMBERS 604-10.62, EPOXY INJECTION REPAIR (COMPLETE AND IN PLACE), L.F. AND 604-10.58, EPOXY INJECTION (INJECTION), GAL.

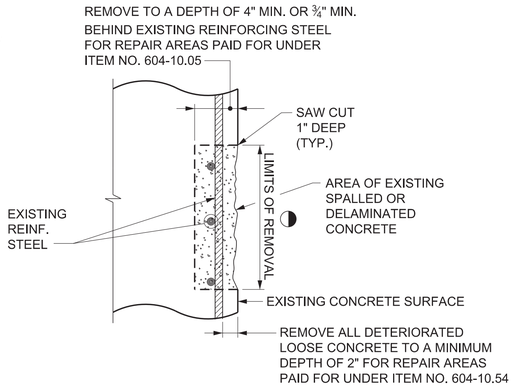
PRICE BID FOR ITEM NUMBER 604-10.62, EPOXY INJECTION REPAIR (COMPLETE AND IN PLACE), L.F. SHALL INCLUDE COST OF ALL LABOR AND MATERIALS (EXCEPT ADHESIVE) FOR GRINDING FOR SURFACE PREPARATION, CRACK PREPARATION, CAPPING, INJECTION OF ADHESIVE, ALL SAMPLES AND TESTING, REMOVAL OF CAPPING MATERIAL AND PORTS, AND OTHER INCIDENTALS. CRACKS SHALL BE MEASURED FOR PAYMENT ALONG THE LENGTH OF THE VISIBLE SURFACE CRACK.

PRICE BID FOR ITEM 604-10.58, EPOXY INJECTION (INJECTION), GAL., SHALL INCLUDE COST FOR ADHESIVE MATERIAL INJECTED ONLY.

NO PAYMENT SHALL BE MADE FOR REWORK DEEMED NECESSARY BY FAILURE OF ADHESIVE SAMPLES OR CORE SAMPLES.

ALL WORK INCLUDING SAMPLING AND TESTING SHALL BE IN THE PRESENCE OF THE ENGINEER OR HIS REPRESENTATIVE OR CONTRACT INSPECTORS. ANY WORK DONE WITHOUT INSPECTORS PRESENT SHALL NOT BE PAID FOR. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH WEEKLY SCHEDULES OF WORK TO BE PERFORMED. SCHEDULES SHALL BE SUBMITTED AT LEAST THREE (3) DAYS IN ADVANCE OF WORK TO BE DONE. THE ENGINEER SHALL BE NOTIFIED OF ANY CHANGE IN THE SCHEDULE A MINIMUM OF TWENTY -FOUR (24) HOURS IN ADVANCE OF CHANGE.





SECTION Z-Z

DETAILS SHOWING AREAS OF EXISTING SPALLED OR DELAMINATED CONCRETE SURFACES TO BE REMOVED AND REPAIRED

◑ - DENOTES LIMITS AND LOCATION OF REPAIRS TO BE DESIGNATED BY THE ENGINEER

◪ - DENOTES SAW CUT EXISTING CONCRETE SURFACES SO AS TO OBTAIN SQUARED CORNERS

NOTES

EXTREME CARE SHALL BE TAKEN WHEN REMOVING THE EXISTING SPALLED OR DELAMINATED CONCRETE SO AS NOT TO DAMAGE THE EXISTING REINFORCING STEEL. ALL EXPOSED EXISTING REINFORCING STEEL SHALL RECEIVE A COMPLETE CLEANING TO REMOVE ALL RUST. ALL EXISTING REINFORCEMENT SHALL REMAIN IN PLACE AND INCORPORATED INTO THE NEW CONSTRUCTION. ALL WORK MUST MEET WITH THE FULL APPROVAL OF THE ENGINEER.

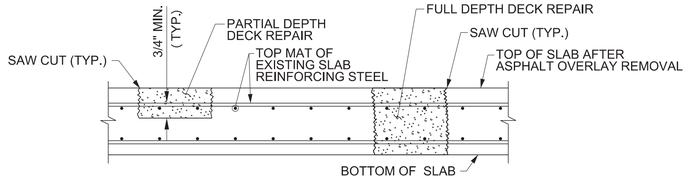
THE ENGINEER SHALL HAVE THE OPTION OF DESIGNATING A SPALLED OR DELAMINATED AREA TO BE REPAIRED UNDER ITEM NO. 604-10.05 OR 604-10.54. PATCHING MATERIAL FOR ITEM NO. 604-10.05 SHALL BE HIGH EARLY STRENGTH CONCRETE. PATCHING MATERIAL FOR ITEM NO. 604-10.54 SHALL BE A POLYMER MODIFIED CEMENTITIOUS STRUCTURAL PATCHING MATERIAL.
SEE TDOT QUALIFIED PRODUCTS LIST 13, SECTION B, MATERIAL QPL 13.009.

PNEUMATICALLY PLACED CONCRETE IS NOT ALLOWED.

COST OF SAW CUTTING, REMOVING SPALLED OR DELAMINATED CONCRETE, CLEANING, PATCHING MATERIAL, LABOR AND ANY MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE THE REPAIRS AS SHOWN TO BE INCLUDED IN ITEM NO. 604-10.54, CONCRETE REPAIRS, S.F. OR ITEM NO. 604-10.05, CONCRETE, S.F.

THE ENGINEER SHALL DESIGNATE ALL SPALLED OR DELAMINATED CONCRETE REPAIR AREAS IN THE FIELD. QUANTITIES GIVEN ARE APPROXIMATE. ITEM NO. 604-10.05 AND 604-10.54 MAY BE INCREASED, DECREASED OR ELIMINATED AS DIRECTED BY THE ENGINEER.

POWER HAND DRIVEN TOOLS USED FOR REMOVAL OF UNSOUND CONCRETE ARE SUBJECT TO THE FOLLOWING RESTRICTIONS:
1. PNEUMATIC HAMMERS HEAVIER THAN THE 35 LB. CLASS SHALL NOT BE USED.
2. CHIPPING HAMMERS OF THE 15 LB. CLASS SHALL BE USED TO REMOVE CONCRETE FROM BEHIND REINFORCING STEEL.



DETAIL SHOWING FULL AND PARTIAL DEPTH DECK REPAIR

CONCRETE FOR DECK REPAIR SHALL BE HIGH EARLY STRENGTH CONCRETE f'c≈ 3,500 p.s.i. @ 28 DAY STRENGTH, TRAFFIC WILL NOT BE PERMITTED ON ANY OF THE REPAIRED AREAS UNTIL TEST SPECIMENS ATTAIN A COMPRESSIVE STRENGTH OF 3,000 p.s.i. MINIMUM AND THE CONCRETE HAS BEEN IN PLACE A MINIMUM OF EIGHTEEN (18) HOURS.

REMOVE CONCRETE IN ALL DELAMINATED AREAS TO A DEPTH OF 3/4" BELOW THE TOP BAR OF THE TOP MAT OF REINFORCING STEEL. ALL REINFORCING STEEL IN AREAS OF DECK REPAIR SHALL BE COMPLETELY CLEANED. AREAS OF CONCRETE REMOVAL SHALL BE DESIGNATED BY PERSONNEL FROM THE BRIDGE REPAIR OFFICE. INSPECTIONS TO DETERMINE AREAS OF DECK REPAIR SHALL BE SCHEDULED WITH THE BRIDGE REPAIR OFFICE AT LEAST THREE (3) DAYS IN ADVANCE.

DECK REPAIR WILL BE PAID FOR UNDER ITEM NO. 604-10.50, BRIDGE DECK REPAIR (PARTIAL DEPTH OF SLAB), AND ITEM NO. 604-10.30, BRIDGE DECK REPAIR (FULL DEPTH OF SLAB). DURING PARTIAL DEPTH REPAIRS, SHOULD DETERIORATED CONCRETE BE ENCOUNTERED WHICH APPEARS TO RUN FULL DEPTH IN THE SLAB, THE ENGINEER MAY DESIGNATE THESE AREAS TO BE REPAIRED UNDER ITEM NO. 604-10.30. POWER DRIVEN HAND TOOLS USED FOR THE REMOVAL OF UNSOUND CONCRETE IN MAKING PARTIAL AND FULL DEPTH REPAIRS ARE SUBJECT TO THE FOLLOWING RESTRICTIONS:

1) (PARTIAL DEPTH REPAIRS) PNEUMATIC HAMMERS HEAVIER THAN NOMINAL 60 POUND CLASS SHALL NOT BE USED.
2) (FULL DEPTH REPAIRS) PNEUMATIC HAMMERS HEAVIER THAN NOMINAL 90 POUND CLASS SHALL NOT BE USED. ALSO ALL DECK REPAIR OVER BEAMS WILL BE RESTRICTED TO 60 POUND PNEUMATIC HAMMERS.
3) CHIPPING HAMMERS OF THE 15 POUND CLASS SHALL BE USED TO REMOVE CONCRETE FROM BENEATH ANY REINFORCING STEEL.
4) TRAFFIC CONTROL SHALL BE PROVIDED FOR TRAFFIC BELOW BRIDGE DURING PARTIAL AND FULL DEPTH DECK REPAIR.

ITEM NOS. 604-10.30 AND 604-10.50 MAY BE INCREASED, DECREASED, OR ELIMINATED AS DIRECTED BY THE ENGINEER.

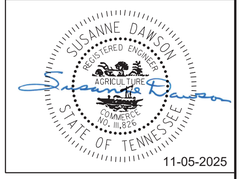
EXTREME CARE SHALL BE TAKEN WHEN REMOVING DETERIORATED CONCRETE SO AS NOT TO DAMAGE THE EXISTING REINFORCING STEEL. ALL EXPOSED REINFORCING STEEL SHALL BE COMPLETELY CLEANED TO THE SATISFACTION OF THE ENGINEER BEFORE REPOURING.

PROJECT NO.	YEAR	SHEET NO.
53S073-M3-005	2026	BR-19

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

SEALED BY



PIN NO.: 135558.00

DESIGN BY: BRAD WARREN DATE: AUGUST 2024

DRAWN BY: T. PEPLOW/D. PICKEL DATE: AUGUST 2024

SUPERVISED BY: SUSANNE DAWSON DATE: AUGUST 2024

CHECKED BY: FRANK BALE DATE: AUGUST 2024

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CONCRETE REPAIR DETAILS
LEFT BRIDGE

BRIDGE NO. 53-SR073-8.72 (LEFT AND RIGHT)
FEDERAL BRIDGE ID NOS.
53SR0950009 & 53SR0950010
S.R. 73 OVER TELLICO LAKE AND S.R. 444
LOUDON COUNTY
2026

BR-133-298

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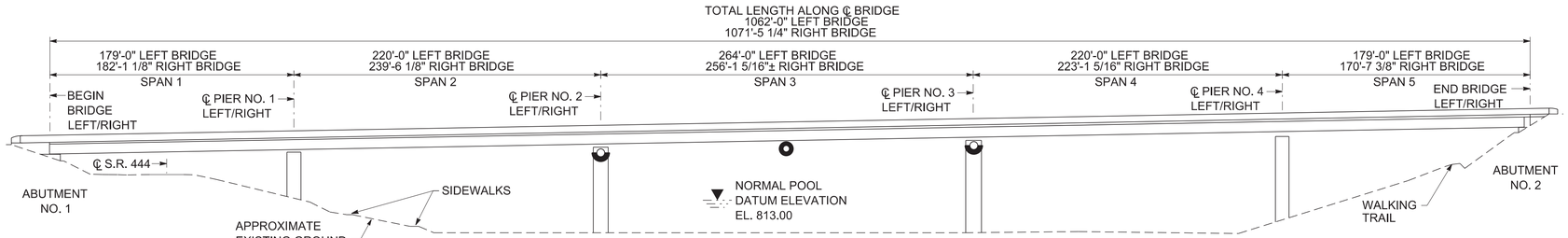
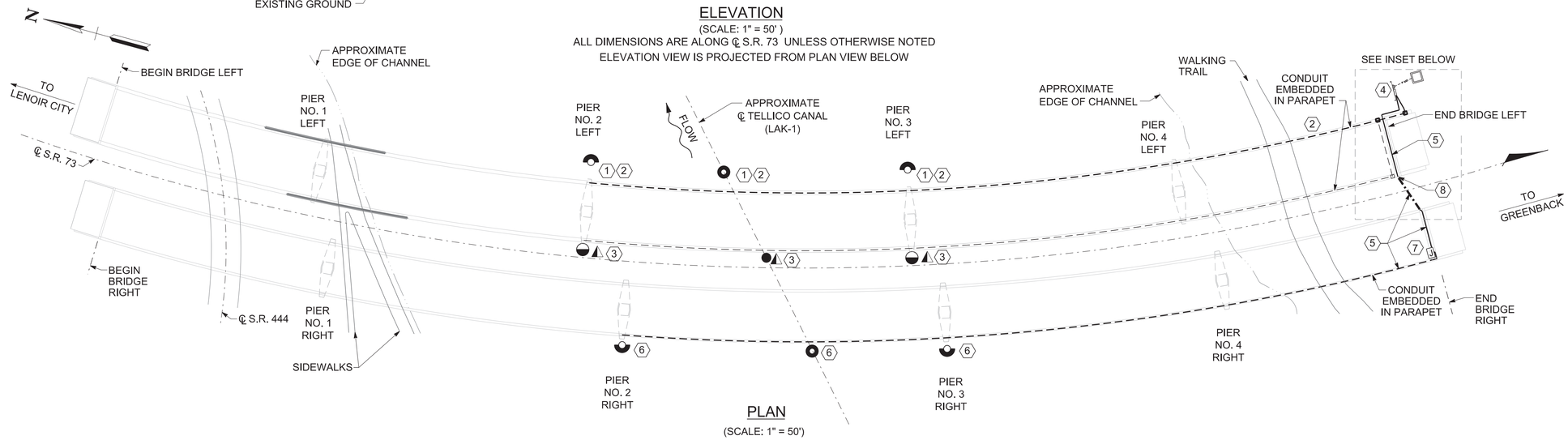


ELEVATION

(SCALE: 1" = 50')

ALL DIMENSIONS ARE ALONG ℄ S.R. 73 UNLESS OTHERWISE NOTED

ELEVATION VIEW IS PROJECTED FROM PLAN VIEW BELOW



PLAN

(SCALE: 1" = 50')

PROJECT NO.	YEAR	SHEET NO.
53S073-M3-005	2026	BR-20

REVISIONS

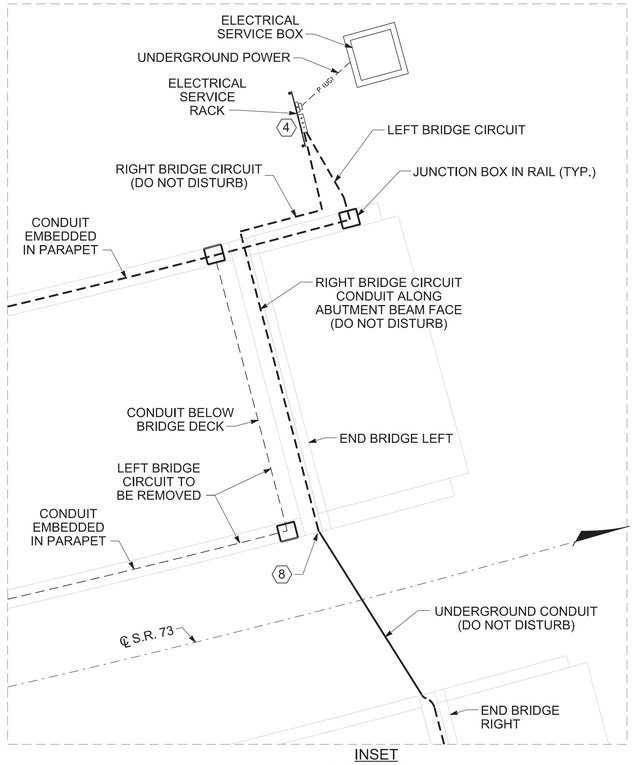
NO.	DATE	BY	BRIEF DESCRIPTION

LEGEND

- 360° GREEN CHANNEL CENTER MARINE NAVIGATION LIGHT, MOUNTED TO SIDE OF BRIDGE TO BE REMOVED AND REPLACED WITH NEW LED FIXTURE
- 180° RED PIER NAVIGATION LIGHT, MOUNTED TO SIDE OF BRIDGE TO BE REMOVED AND REPLACED WITH NEW LED FIXTURE
- 360° GREEN CHANNEL CENTER MARINE NAVIGATION LIGHT AND 180°RED PIER NAVIGATION LIGHT, MOUNTED TO SIDE OF BRIDGE TO BE REMOVED.
- J 8" X 10" X 4" PULL BOX (CLEAN AND REFURBISH)
- SERVICE RACK WITH METER, DISCONNECT, AND CABINET
- EXISTING CONDUIT EMBEDDED IN PARAPET
- EXISTING CONDUIT ALONG ABUTMENT
- EXISTING UNDERGROUND CONDUIT
- ◭ - DENOTES NAVIGATION LIGHTING TO BE PERMANENTLY REMOVED

KEYED NOTES:

1. INSTALL U.S. COAST GUARD APPROVED, SOLAR POWERED, TEMPORARY NAVIGATION LIGHTS ADJACENT TO EACH EXISTING FIXTURE, PRIOR TO DISCONNECTION OF EXISTING CIRCUITS (6 LOCATIONS).
2. REMOVE EXISTING MARINE NAVIGATIONAL LIGHT SYSTEM ON NB LEFT BRIDGE, INCLUDING ALL CONDUCTORS, CONDUITS, AND JUNCTION BOXES FOR THE NB LEFT BRIDGE CIRCUITS. CLEAN AND RE-GALVANIZE LIGHTING SUPPORTS ON THE EAST SIDE. INSTALL A NEW LED MARINE NAVIGATIONAL LIGHTING SYSTEM ON THE EAST SIDE OF THE BRIDGE, INCLUDING NEW CONDUCTORS, CONDUITS TO THE NEAREST JUNCTION BOXES, REPAIR/REPLACE JUNCTION BOX COVERS. VERIFY CORRECT LIGHT OPERATION BEFORE REMOVAL OF THE TEMPORARY LIGHT FIXTURE (TYPICAL OF 3).
3. REMOVE ALL FIXTURES, HARDWARE, CONDUITS, CONDUCTORS ON WEST SIDE OF LEFT BRIDGE. PAINT/RE-GALVANIZE ANY REMAINING EXPOSED STEEL.
4. EXISTING UTILITY POWER CONNECTION. REMOVE EXISTING AND INSTALL NEW MAIN DISCONNECT LIGHTING CONTROL CABINET, WEATHERHEAD, PHOTOCELL, CONDUITS, CONDUCTORS, AND UTILITY METER BASE. REPLACE MISSING/DAMAGED JUNCTION BOXES AND/OR COVERS AS NEEDED.
5. DO NOT REMOVE EXISTING CONDUCTORS AND CONDUITS FOR THE SB RIGHT BRIDGE NAVIGATION CIRCUIT. REPAIR CONDUIT AND REFURBISH PULL BOX AS INDICATED.
6. ON SB RIGHT BRIDGE, REMOVE ONLY THE EXISTING MARINE NAVIGATIONAL LIGHT FIXTURES AND REPLACE WITH NEW LED FIXTURES MATCHING NB BRIDGE (TYPICAL OF 3).
7. CLEAN AND REFURBISH 8" X 10" X 4" PULL BOX.
8. REPAIR AND RECONNECT CONDUIT COMING OFF OF LEFT BRIDGE END.



INSET

NOT TO SCALE

SEALED BY

DAVID GEORGE FRANKE
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 113,999
STATE OF TENNESSEE

11-05-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

NAVIGATIONAL LIGHTING PLAN

BRIDGE NO. 53-SR073-8.72 (LEFT AND RIGHT)
FEDERAL BRIDGE ID NOS.
53SR0950009 & 53SR0950010
S.R. 73 OVER TELLICO LAKE AND S.R. 444
LOUDON COUNTY
2026

BR-133-299

PIN NO.: 135558.00

DESIGN BY:	DAVID FRANKE	DATE: MARCH 2025
DRAWN BY:	D. PICKEL	DATE: MARCH 2025
SUPERVISED BY:	BRAD WARREN	DATE: MARCH 2025
CHECKED BY:	FRANK BALE	DATE: MARCH 2025

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GENERAL NOTES

BRIDGE NO. 53-SR73-8.72 - LEFT BRIDGE- NORTHBOUND (FED I.D. 53SR0950009)
BID ITEM NO. 714-16.01, NAVIGATION LIGHTS, LS

1. INCLUDES ALL ITEMS AND LABOR NECESSARY TO REMOVE ALL THE EXISTING MARINE NAVIGATION LIGHTING SYSTEM ON THE NB (LEFT) BRIDGE AND REPLACE IT IN ITS ENTIRETY WITH A NEW UPGRADED LED NAVIGATION LIGHT SYSTEM ON THE NB BRIDGE, EAST SIDE ONLY. PROVIDE ALL MATERIALS AND LABOR FOR A NEW COMPLETE LED SYSTEM TO INCLUDE REMOVAL AND REPLACEMENT OF THE METER BASE, LIGHTING CONTROL CABINET AND ALL PARTS TO INCLUDE MAIN DISCONNECT, WEATHERHEAD, PHOTOCELL, GFCI DUPLEX RECEPTACLE, ALL CONDUCTORS BACK TO THE SERVICE POINT, LIGHTING CONDUIT INCLUDING EXPANSION FITTINGS, PULL BOXES, EMBEDDED WEATHERTIGHT PULL BOX COVERS, CONDUIT SUPPORTS, AND PIVOT ASSEMBLIES. THE EXISTING LIGHTING SUPPORTS ON THE EAST SIDE ARE TO BE CLEANED AND RE-GALVANIZED.

2. DO NOT REMOVE EXISTING CONDUIT, CONDUCTORS, AND PULL BOXES FOR THE SB RIGHT BRIDGE NAVIGATION CIRCUIT.

3. INCLUDES CONNECTION TO THE EXISTING POWER SOURCE AND REFURBISHING THE MOUNTING SUPPORTS AND PROVIDING ALL OTHER MATERIALS NECESSARY FOR MOUNTING AND SUPPORTING THE NEW LIGHT UNITS.

4. THE CONTRACTOR SHALL FURNISH NAVIGATION LIGHTING IN ACCORDANCE WITH THE COAST GUARD PERMIT REQUIREMENTS. SHOP DRAWINGS FOR NAVIGATIONAL LIGHTING SUPPORT BRACKET MODIFICATIONS OR REPLACEMENT SUPPORTS SHALL BE SUBMITTED FOR APPROVAL.

5. THE NAVIGATION LIGHTING, CONDUITS, PULL BOXES, CABLES, AND LIGHT SUPPORTS FOR THE WEST SIDE OF THE NB BRIDGE ARE TO BE REMOVED AND NOT REPLACED. ANY REMAINING EXPOSED STEEL SHALL BE PAINTED/GALVANIZED TO PREVENT RUST.

6. CONTRACTOR TO MAINTAIN NAVIGATION LIGHTING THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS. TEMPORARY SOLAR-POWERED NAVIGATIONAL LIGHTING TO PROVIDE SERVICE WHEN PERMANENT NAVIGATIONAL LIGHTING IS NOT OPERATIONAL WHILE EXISTING LIGHTING IS BEING REPLACED AND UPGRADED. INCLUDES ALL COSTS TO PROVIDE TEMPORARY SOLAR NAVIGATIONAL LIGHTING ADJACENT TO EACH EXISTING FIXTURE LOCATION. TEMPORARY NAVIGATION LIGHTING SYSTEM SHALL MEET THE FULL APPROVAL OF THE COAST GUARD AND THE ENGINEER FROM TDOT PRIOR TO DISCONNECTION OF EXISTING CIRCUIT (3 LOCATIONS ON EAST SIDE).

7. ALL WORK SHALL BE PERFORMED IN A MANNER ALLOWING FOR CONTINUED OPERATION OF MARINE NAVIGATION LIGHTING FROM SUNSET TO SUNRISE. EACH LIGHT REMOVED SHALL BE REPLACED WITH A TEMPORARY LIGHT BEFORE 5:00 P.M OR TWO HOURS BEFORE SUNSET, WHICHEVER OCCURS FIRST. TEMPORARY LIGHTING SHALL BE TESTED EACH DAY PRIOR TO SUNSET TO ENSURE PROPER OPERATION.

8. ELECTRICAL DEMOLITION AND INSTALLATION WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE NFPA 70 (2023) NATIONAL ELECTRICAL CODE, NFPA 101 (2021) LIFE SAFETY CODE, STATE ELECTRICAL CODE, AND LOCAL ELECTRICAL CODE.

9. EXISTING POWER SERVICE IS 240/120V, 1PH, 3W. COORDINATE WITH THE POWER COMPANY FOR SERVICE WORK, CONSTRUCTION, AND (DIS)CONNECTION.

10. AFTER REMOVAL OF THE EXISTING LIGHT UNITS, THE CONTRACTOR SHALL TAKE MEASUREMENTS OF THE EXISTING MOUNTING AND SUPPORT LOCATIONS, MOUNTING PLATE BOLT PATTERN, AND DETERMINE FIXTURE AND COUNTERWEIGHT STEM LENGTHS IN PREPARATION FOR THE INSTALLATION OF THE NEW LED NAVIGATION LIGHT UNITS.

11. IF THE EXISTING MOUNTING SYSTEM SUPPORTS CANNOT BE UTILIZED TO MOUNT THE NEW LIGHT UNITS, THE CONTRACTOR SHALL REVISE THE INSTALLATION PLANS FOR THE NEW LIGHT UNIT WITH ADDITIONAL ANCHOR BOLTS, PLATES, CONDUIT, CONDUCTORS, PULL BOXES, AND OTHER SUPPORTING AND MISCELLANEOUS MATERIALS AS NECESSARY FOR A COMPLETE INSTALLATION AT NO ADDITIONAL COST.

12. CLEAN AND RE-GALVANIZE ALL PARTS OF THE EXISTING LIGHTING SUPPORTS TO INCLUDE BRACES AND MOUNTING PLATES.

13. MAKE ELECTRICAL CONNECTIONS TO EVERYTHING FURNISHED AND/OR INSTALLED BY THIS CONTRACT, WHETHER INDICATED OR NOT ON THE ELECTRICAL DRAWINGS.

14. EACH NEW NAVIGATION LIGHTING CIRCUIT(S) SHALL UTILIZE TWO #10 AWG POWER CONDUCTORS AND ONE #10 AWG STRANDED GREEN INSULATED EQUIPMENT GROUND.

15. ALL EXPOSED CONDUIT SHALL BE GRS. ALL UNDERGROUND CONDUIT SHALL BE PVC. FLEXIBLE CONDUIT MAY BE USED AT THE PIVOT POINT. ALL CONDUITS AND FITTINGS SHALL BE SEALED WATERTIGHT. MOUNTING BEAM CLAMPS AND STRAPS MUST BE RATED AND LISTED FOR OUTDOOR USE ONLY. SPRING STEEL FASTENERS SHALL NOT BE ALLOWED.

16. NEW JUNCTION BOXES AND FITTINGS SHALL BE O-Z/GEDNEY, INDUSTRIAL TYPE, CAST OR APPROVED EQUAL, NEMA 4 ENCLOSURES.

17. ALL ELECTRICAL MATERIALS MUST MEET OR EXCEED NEC, ANSI, AND MUST BE UL LISTED.

18. THE MARINE NAVIGATIONAL LIGHT MANUFACTURER SHALL BE B&B ROADWAY, EDKO, OR APPROVED EQUAL AND MUST MEET ALL COAST GUARD SPECIFICATIONS INCLUDING 33 CFR 118.65 "LIGHTS ON FIXED BRIDGES".

19. ALL EQUIPMENT, SUPPORTS, MOUNTING HARDWARE, AND APPURTENANCES SHALL BE CORROSION RESISTANT TYPE, SUITABLE FOR OUTDOOR INSTALLATION.

20. LED FIXTURES SHALL HAVE A MINIMUM 50,000 HOUR LIFETIME AND SHALL MEET ALL VISUAL REQUIREMENTS OF 33 CFR 118. LED LIGHTS SHALL BE MOUNTED WITH INTERNAL SHOCK AND VIBRATION ISOLATORS.

21. INSTALL CONDUIT EXPANSION FITTINGS AT ALL EXPANSION JOINTS.

22. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL SHOP DRAWINGS FOR CABINETS, MOUNTING BRACKETS, AND OTHER STRUCTURAL ITEMS PRIOR TO THE PURCHASE OR FABRICATION OF THESE ITEMS.

BRIDGE NO. 53-SR73-8.72 - RIGHT BRIDGE- SOUTHBOUND (FED I.D. 53SR0950010)
BID ITEM NO. 714-16.01, NAVIGATION LIGHTS, LS

1. UPGRADE NAVIGATION LIGHTING ON RIGHT BRIDGE TO LED TO MATCH LEFT BRIDGE BY REPLACING THE THREE LIGHT ASSEMBLIES.

2. CONTRACTOR TO MAINTAIN NAVIGATION LIGHTING THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS. TEMPORARY SOLAR-POWERED NAVIGATIONAL LIGHTING TO PROVIDE SERVICE WHEN PERMANENT NAVIGATIONAL LIGHTING IS NOT OPERATIONAL WHILE EXISTING LIGHTING IS BEING REPLACED AND UPGRADED. INCLUDES ALL COSTS TO PROVIDE TEMPORARY SOLAR NAVIGATIONAL LIGHTING ADJACENT TO EACH EXISTING FIXTURE LOCATION. TEMPORARY NAVIGATION LIGHTING SYSTEM SHALL MEET THE FULL APPROVAL OF THE COAST GUARD AND THE ENGINEER FROM TDOT PRIOR TO DISCONNECTION OF EXISTING CIRCUIT (3 LOCATIONS ON WEST SIDE).

3. ALL WORK SHALL BE PERFORMED IN A MANNER ALLOWING FOR CONTINUED OPERATION OF MARINE NAVIGATION LIGHTING FROM SUNSET TO SUNRISE. EACH LIGHT REMOVED SHALL BE REPLACED WITH A TEMPORARY LIGHT BEFORE 5:00 P.M OR TWO HOURS BEFORE SUNSET, WHICHEVER OCCURS FIRST. TEMPORARY LIGHTING SHALL BE TESTED EACH DAY PRIOR TO SUNSET TO ENSURE PROPER OPERATION.

4. CLEAN AND REFURBISH 8"X 10"X 4"PULL BOX AT SW CORNER OF THE END OF THE RIGHT BRIDGE.

5. REPAIR AND RECONNECT CONDUIT COMING OFF OF SW CORNER OF LEFT BRIDGE END.

CONSTRUCTION COST NOTES:

1. COSTS OF ALL LABOR AND MATERIALS NECESSARY TO REMOVE AND REPLACE THE EXISTING ENTIRE MARINE NAVIGATION LIGHTING SYSTEM SHALL BE INCLUDED UNDER ITEM NO. 714-16.01, NAVIGATION LIGHTS, LS.

2. THE COST SHALL INCLUDE THE REMOVAL OF THE EXISTING MARINE NAVIGATION LIGHTS AND ALL EXISTING JUNCTION/PULL BOXES, CONDUITS, AND CONDUCTORS, ON/UNDER THE BRIDGE AND IN THE GROUND BACK TO THE SERVICE POINT. THE COST SHALL INCLUDE THE REMOVAL OF THE EXISTING NAVIGATION LIGHTING SYSTEM ELEMENTS FROM THE EXISTING POWER SERVICE RACK. THESE INCLUDE THE EXISTING MAIN DISCONNECT, UTILITY METER, WEATHERHEAD, PHOTOCELL, DUPLEX RECEPTACLE, AND ALL APPLICABLE CONDUCTORS, CONDUITS, AND MOUNTING EQUIPMENT.

3. THE COST SHALL INCLUDE THE INSTALLATION OF THE NEW NAVIGATIONAL LIGHTS INCLUDING ALL ANCHOR BOLTS, PLATES, AND OTHER MATERIALS NEEDED FOR MOUNTING AND SUPPORTING THE NEW LIGHT UNITS. ALL CONNECTIONS AND MEMBERS USED IN THE LIGHT SUPPORT SYSTEM SHALL BE CAPABLE OF CARRYING ALL LIVE AND DEAD LOADS AND SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF TENNESSEE.

4. THE COST SHALL INCLUDE THE INSTALLATION OF A NEW WEATHERHEAD, UTILITY METER, CABINET, AND MAIN DISCONNECT SWITCH, MOUNTED TO THE EXISTING SERVICE RACK, AND ALL NECESSARY CONDUCTORS, CONDUITS, AND MOUNTING EQUIPMENT FOR THE INSTALLATION.

5. THE COST SHALL INCLUDE THE INSTALLATION OF NEW CONDUIT AND JUNCTION BOXES TO ALLOW FOR PROTECTION OF THE NEW MARINE NAVIGATION LIGHTING CIRCUIT(S), INCLUDING ALL STRAPS AND EXPANSION FITTINGS NECESSARY FOR MOUNTING AND SUPPORTING THE CONDUIT AND JUNCTION BOXES.

6. THE COST SHALL INCLUDE THE INSTALLATION OF NEW CONDUCTORS IN THE NEW CONDUIT FOR THE CONNECTION OF THE NEW MARINE NAVIGATION LIGHTING CIRCUIT.

7. ITEM NO. 714-16.01, NAVIGATION LIGHTS, LS. ALSO INCLUDES COSTS OF ALL LABOR AND MATERIALS NECESSARY TO INSTALL TEMPORARY NAVIGATION LIGHTS AT ALL 6 EXISTING NAVIGATION LIGHT LOCATIONS DURING THE CONSTRUCTION PROCESS. NAVIGATION LIGHTS SHALL BE SOLAR POWERED TO ALLOW FOR CONTINUED AND UNINTERRUPTED OPERATION WHEN PERMANENT NAVIGATION LIGHTING IS NOT OPERATIONAL. THE TEMPORARY NAVIGATION LIGHTING SYSTEM SHALL MEET ALL REQUIREMENTS OF THE COAST GUARD NAVIGATION LIGHT PERMIT REQUIREMENTS AND APPROVAL OF THE ENGINEER FROM TDOT.

PROJECT NO.	YEAR	SHEET NO.
53S073-M3-005	2026	BR-21

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

SEALED BY

DAVID GEORGE FRANKE
REGISTERED ENGINEER
AGRICULTURE
COMMISSION NO. 115,999
STATE OF TENNESSEE
11-05-2025

PIN NO.: 135558.00
DESIGN BY: DAVID FRANKE DATE: MARCH 2025
DRAWN BY: D. PICKEL DATE: MARCH 2025
SUPERVISED BY: BRAD WARREN DATE: MARCH 2025
CHECKED BY: FRANK BALE DATE: MARCH 2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

NAVIGATIONAL LIGHTING NOTES

BRIDGE NO. 53-SR073-8.72 (LEFT AND RIGHT)
FEDERAL BRIDGE ID NOS.
53SR0950009 & 53SR0950010
S.R. 73 OVER TELLICO LAKE AND S.R. 444
LOUDON COUNTY
2026

BR-133-300

10/31/2025 12:00:39 PM
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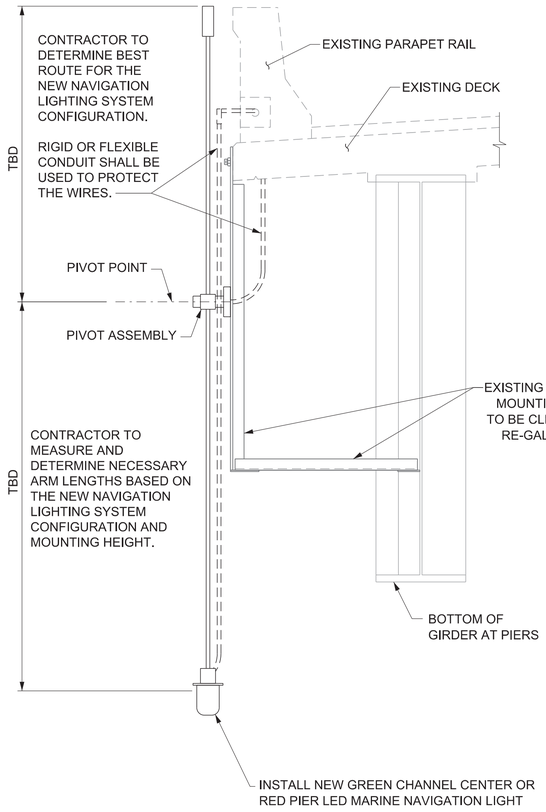
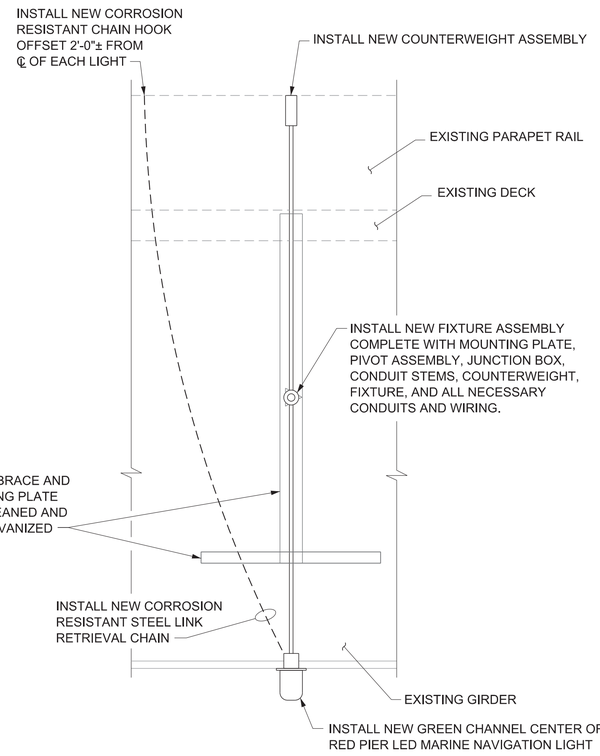
PROJECT NO.	YEAR	SHEET NO.
53S073-M3-005	2026	BR-22

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



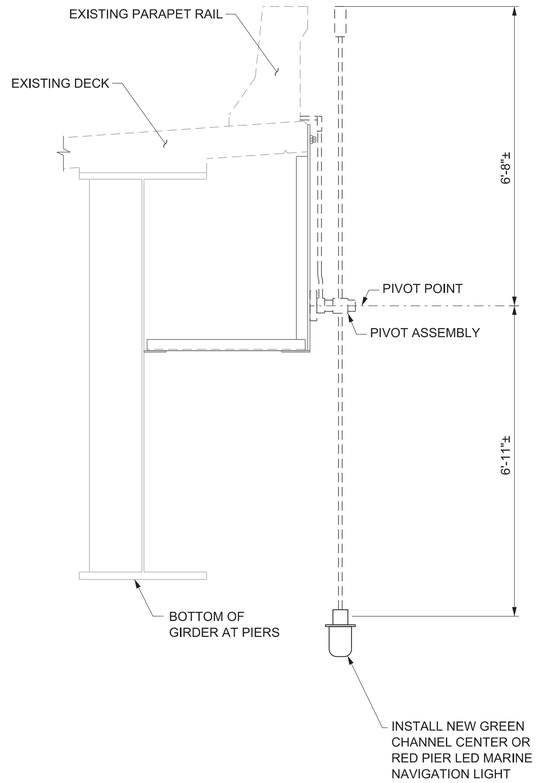
SIDE VIEW
LEFT BRIDGE
EAST SIDE



FRONT VIEW
LEFT BRIDGE
EAST SIDE

NAVIGATION LIGHT INSTALLATION LEFT BRIDGE

REPLACE ENTIRE NAVIGATION LIGHTING SYSTEM AND ASSEMBLY, TO INCLUDE: FIXTURE ASSEMBLIES, WIRING, LIGHTING CONDUIT, INCLUDING EXPANSION FITTINGS AND PULL BOXES, CONDUIT SUPPORTS, AND PIVOT ASSEMBLIES.



SIDE VIEW
RIGHT BRIDGE
WEST SIDE

NAVIGATION LIGHT INSTALLATION RIGHT BRIDGE

REPLACE ONLY THE THREE LIGHTS WITH NEW LED FIXTURES

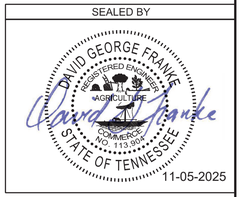
SUBMITTAL / SHOP DRAWING NOTE

THE LIGHTING SUPPORT SYSTEMS SHALL BE DESIGNED, SUBMITTED, AND APPROVED BY AN ENGINEER LICENSED IN THE STATE OF TENNESSEE.

INSTALLATION NOTES

1. NEW COUNTERWEIGHT AND PULL CHAIN SHALL BE SIZED TO ALLOW FOR ONE PERSON TO BE ABLE TO LIFT THE NAVIGATION LIGHT FIXTURE FOR MAINTENANCE.
2. THE NEW LIGHT FIXTURE, CONDUIT STEM, COUNTERWEIGHT, AND PULL CHAIN SHALL BE PROVIDED BY THE SAME MANUFACTURER.
3. COST OF ALL LABOR AND MATERIALS NECESSARY TO REPLACE THE EXISTING MARINE NAVIGATION LIGHTS SHALL BE INCLUDED UNDER ITEM NO. 714-16.01, NAVIGATION LIGHTS, L.S.

SEALED BY



11-05-2025

PIN NO.:	135558.00	
DESIGN BY:	DAVID FRANKE	DATE: MARCH 2025
DRAWN BY:	D. PICKEL	DATE: MARCH 2025
SUPERVISED BY:	BRAD WARREN	DATE: MARCH 2025
CHECKED BY:	FRANK BALE	DATE: MARCH 2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

NAVIGATION LIGHTING DETAILS

BRIDGE NO. 53-SR073-8.72 (LEFT AND RIGHT)
FEDERAL BRIDGE ID NOS.
53SR0950009 & 53SR0950010
S.R. 73 OVER TELLICO LAKE AND S.R. 444
LOUDON COUNTY
2026

BR-133-301

10/31/2025 11:59:12 AM
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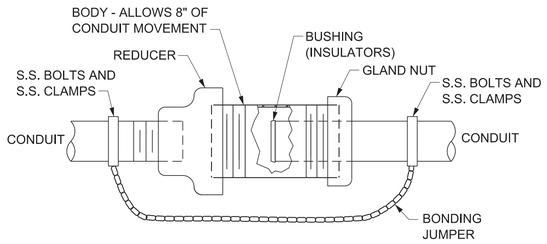
UNDERGROUND DETECTABLE WARNING TAPE

NOTES:

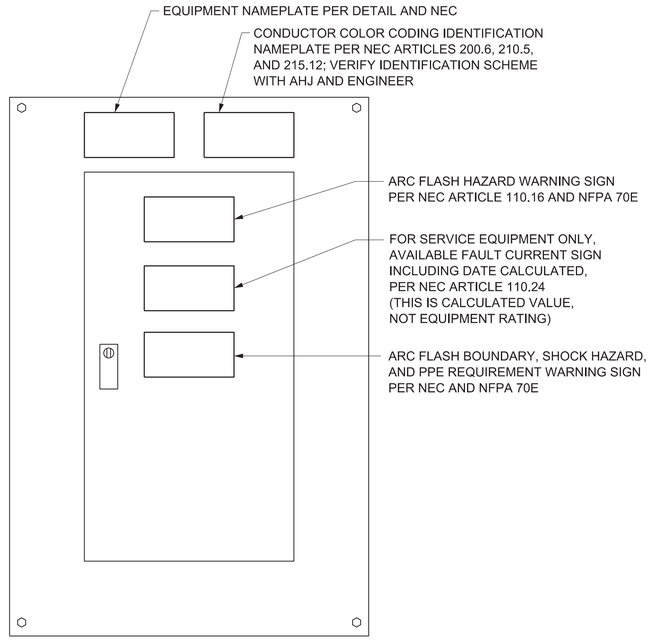
1. POWER MARKING TAPES SHALL BE DETECTABLE TYPE CONSTRUCTION WITH RED BACKGROUND AND BLACK LETTERING.
2. TAPE SHALL BE DETECTABLE, DURABLE, HIGHLY VISIBLE, RESISTANT TO ELEMENTS, MEETING AND/OR EXCEEDING ALL INDUSTRY STANDARDS.



EXPANSION FITTING

NOTES:

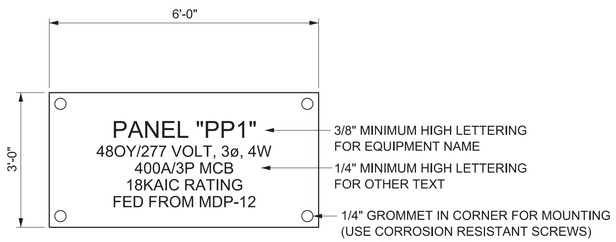
1. INSTALL AT EXPANSION JOINTS
2. QUANTITY OF EXPANSION FITTINGS MAY VARY FROM WHAT IS SHOWN ON THE PLANS.



PANEL FRONT VIEW

NOTES:

1. INSTALL ALL NAMEPLATES AND WARNING SIGNS IN ACCORDANCE WITH NEC AND NFPA 70E REQUIREMENTS.
2. INSTALL NAMEPLATES AND WARNING SIGNS ON ALL ELECTRICAL EQUIPMENT, INCLUDING BUT NOT LIMITED TO, SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SWITCHES, CONTROL PANELS, AND MOTOR CONTROL CENTERS.
3. EXTERIOR EQUIPMENT SHALL HAVE WEATHER-RESISTANT, NON-FADING NAMEPLATES AND SIGNAGE.
4. REFER TO SPECIFICATIONS FOR ADDITIONAL NAMEPLATE AND SIGNAGE REQUIREMENTS.



EQUIPMENT NAMEPLATE

NOTES:

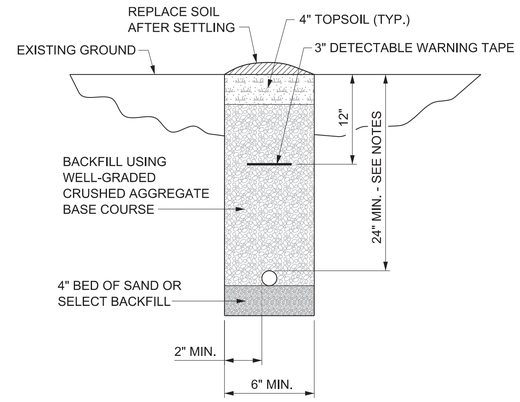
1. INSTALL 2-PLEX ACRYLIC, WHITE ON BLACK CORE, MULTIPLE LINES TEXT, CUSTOM ENGRAVED NAME PLATES.
2. MOUNT WITH STAINLESS STEEL SCREWS.
3. SEAL SCREW HOLES WITH SILICONE RUBBER.
4. NAMEPLATE INFORMATION SHALL INCLUDE:
   A. IDENTIFICATION NAME
   B. VOLTAGE SYSTEM
   C. AMPACITY RATING AND TYPE
   D. EQUIPMENT AIC RATING
   E. FEEDER DESCRIPTION

TYPICAL ENGRAVED NAMEPLATE AND SIGNAGE DETAIL

PROJECT NO.	YEAR	SHEET NO.
53S073-M3-005	2026	BR-23

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

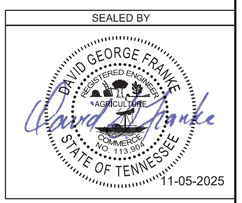


NON-ENCASED ELECTRICAL DUCT DETAIL

NOTES:

1. CONTRACTOR SHALL STAKE THE DUCT INSTALLATION PLAN AND ELEVATION FOR NEW ELECTRICAL DUCTS TO AVOID EXISTING UTILITIES. STAKING PLAN SHALL BE APPROVED BY OWNER AND ENGINEER PRIOR TO WORK.
2. CONTRACTOR SHALL ADJUST THE DEPTH OF THE ELECTRICAL DUCTS AS REQUIRED TO MAINTAIN THE MINIMUM COVER REQUIREMENT INDICATED AND AVOID EXISTING UTILITIES.
3. INSTALL DUCT CONDUIT SUPPORTS AT 5'-0" O.C. MAXIMUM SPACING. UTILIZE LOCKING COLLARS OR HOLD DOWN BARS WITH ANCHORS TO PREVENT DUCT FLOTATION (TYPICAL ALL DUCTS).
4. OFFSETS AND BENDS OVER 1-DEGREES AND ELBOWS IN PVC CONDUIT RUNS SHALL BE SCHEDULE 80 PVC CONDUIT.
5. NO PVC SHALL EMERGE FROM THE GROUND OR CONCRETE SLAB OR ENCASEMENT. PVC SHALL CONVERT TO GALVANIZED RIGID STEEL CONDUIT PRIOR TO ITS EMERGENCE.
6. INSTALL CONDUCTORS AND CABLES AS NOTED ON THE DRAWING.
7. MINIMUM COVER REQUIREMENT FOR DUCT BANKS UNDER ROADS SHALL BE 24".
8. MARKER TAPE SHALL BE A DETECTABLE TYPE CONSTRUCTION WITH RED BACKGROUND AND BLACK LETTERING, "CAUTION - BURIED ELECTRICAL LINE BELOW".
9. ROCK REMOVAL SHALL BE CONSIDERED SUBSIDIARY TO DUCT INSTALLATION.

SEALED BY



PIN NO.:	135558.00	
DESIGN BY:	DAVID FRANKE	DATE: MARCH 2025
DRAWN BY:	D. PICKEL	DATE: MARCH 2025
SUPERVISED BY:	BRAD WARREN	DATE: MARCH 2025
CHECKED BY:	FRANK BALE	DATE: MARCH 2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

NAVIGATION LIGHTING
ELECTRICAL DETAILS (1)

BRIDGE NO. 53-SR073-8.72 (LEFT AND RIGHT)
FEDERAL BRIDGE ID NOS.
53SR0950009 & 53SR0950010
S.R. 73 OVER TELLICO LAKE AND S.R. 444
LOUDON COUNTY
2026

BR-133-302

10/31/2025 11:44:49 AM
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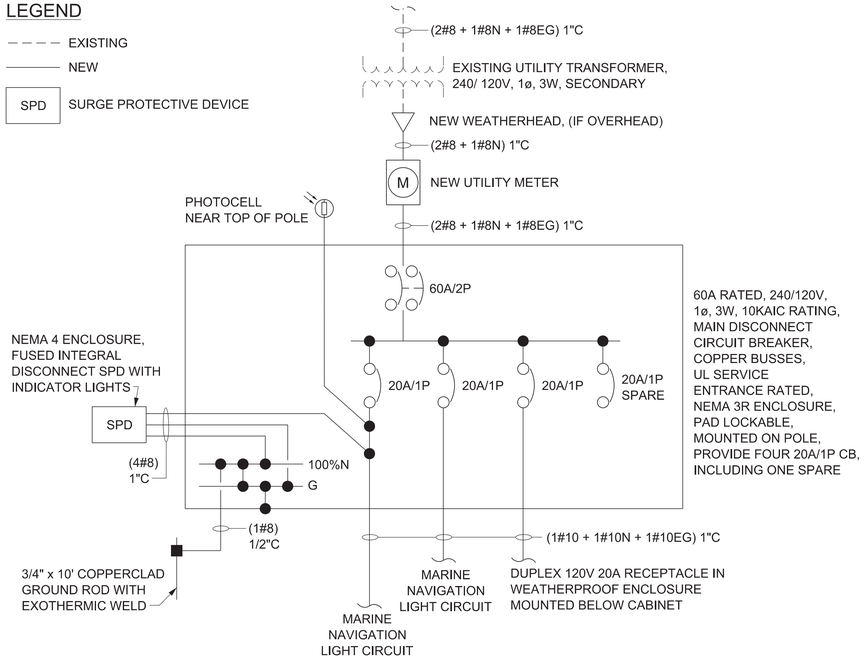
PROJECT NO.	YEAR	SHEET NO.
53S073-M3-005	2026	BR-24

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

LEGEND

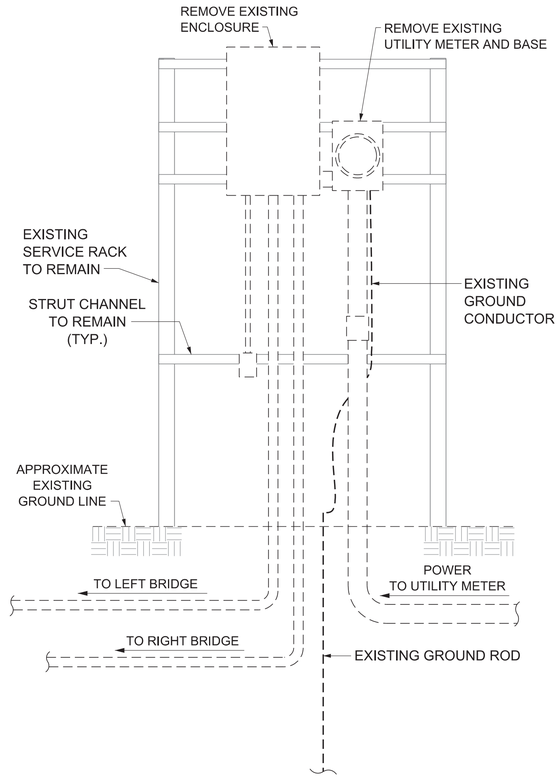
- EXISTING
- NEW
- SPD — SURGE PROTECTIVE DEVICE



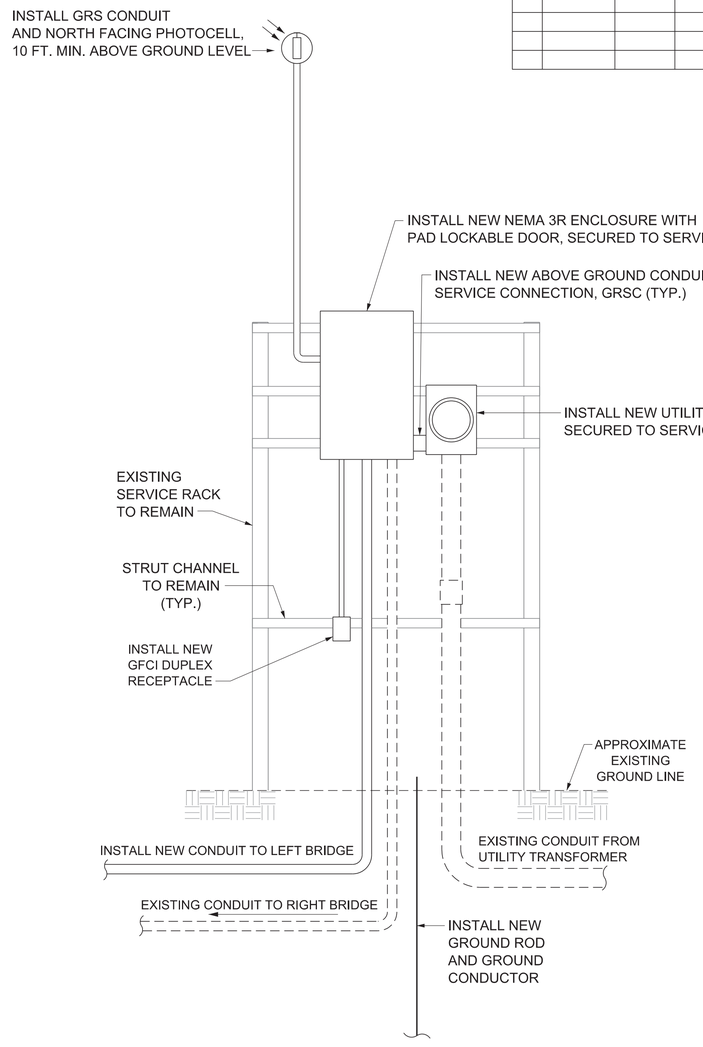
ONE-LINE DIAGRAM

NOTES:

1. ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE NFPA 70 (2023) NATIONAL ELECTRICAL CODE, NFPA 101 (2021) LIFE SAFETY CODE, STATE ELECTRICAL CODE, AND LOCAL ELECTRICAL CODE.
2. COORDINATE ELECTRICAL POWER SUPPLY WITH EQUIPMENT SUPPLIED.
3. COORDINATE ALL ELECTRICAL WORK AND POWER OUTAGES WITH TDOT AND POWER UTILITY.
4. CONDUCTORS SHALL BE A MINIMUM TYPE THHN/THWN-2.
5. EQUIPMENT SHORT CIRCUIT CURRENT RATINGS AND AVAILABLE INTERRUPTING CURRENT RATINGS SHALL BE FULLY RATED TO INTERRUPT SYMMETRICAL SHORT CIRCUIT CURRENT AVAILABLE AT TERMINALS. SERIES RATED SYSTEMS SHALL NOT BE USED.
6. INSTALL AN EQUIPMENT GROUND GROUNDING CONDUCTOR IN ALL FEEDER AND BRANCH CIRCUITS.
7. INSTALL ALL CONDUCTORS AND CABLES IN CONDUIT UNLESS NOTED OTHERWISE.
8. INSTALL LUGS AND JUNCTION BOXES AS REQUIRED TO FIT WIRING.
9. ALL WIRING SHALL BE COPPER.
10. INSTALL NEW PANEL SCHEDULES IN ALL ELECTRICAL PANELS INDICATING WORK PERFORMED.
11. INSTALL NEW PERMANENT LABELS ON PANELBOARDS INDICATING WORK PERFORMED.
12. SEE SHEET 2-A FOR ELECTRIC UTILITY OWNERS INFORMATION.



EXISTING NAVIGATIONAL LIGHTING
SERVICE RACK
REMOVAL DETAIL



NEW NAVIGATIONAL LIGHTING
SERVICE RACK
INSTALLATION DETAIL

SEALED BY



PIN NO.: 135558.00

DESIGN BY:	DAVID FRANKE	DATE: MARCH 2025
DRAWN BY:	D. PICKEL	DATE: MARCH 2025
SUPERVISED BY:	BRAD WARREN	DATE: MARCH 2025
CHECKED BY:	FRANK BALE	DATE: MARCH 2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

NAVIGATION LIGHTING
ELECTRICAL DETAILS (2)

BRIDGE NO. 53-SR073-8.72 (LEFT AND RIGHT)
FEDERAL BRIDGE ID NOS.
53SR0950009 & 53SR0950010
S.R. 73 OVER TELLICO LAKE AND S.R. 444
LOUDON COUNTY
2026

BR-133-303

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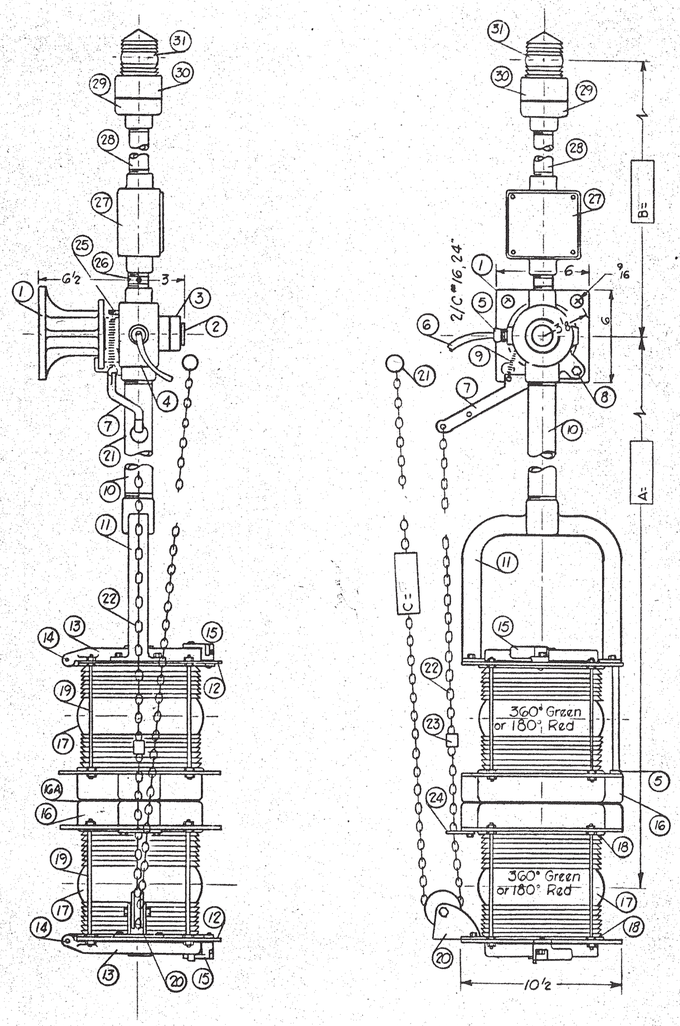


CHANNEL LIGHT DUPLEX

PARTS LIST

ITEM NO.	DESCRIPTION
1.	Bracket, Mounting, Silicon Bronze
2.	Pivot, Stainless Steel
3.	Collar, Safety, Bronze
*3A.	O-Ring, Pivot To Housing Sealing, Neoprene
4.	Housing, Main Hanger, Silicon Bronze
5.	Bushing, Cable Entrance, Watertight
6.	Cable, 2/C Type SO Flexible, #16 AWG
7.	Lever, Locking, Silicon Bronze
8.	Stud, Locking Lever, Stainless Steel
9.	Spring, Lever Locking, Phosphor Bronze
10.	Hanger Stem, 1.900", Galv. Steel, Bronze or Stainless
11.	Bail, Aluminum or Bronze
12.	Ring, Upper and Lower
13.	Lid, Upper and Lower
14.	Pin, Hinge, Stainless Steel
15.	Catch, Quick Acting, Adjustable
16.	Center Sections, Signal Housing
16A.	Gasket, Center Sections
17.	Lens, 360° Green or 180° Red
18.	Gasket, Lens Sealing, Neoprene Cork
19.	Rod, Main Stay
20.	Sheave Assembly, Bronze
21.	Ring, Retrieving Chain, Bronze
22.	Chain, Retrieving, Bronze (650 lbs.)
23.	Stop, Retrieving Chain, Brass
24.	Bracket, Chain Guide, Aluminum or Bronze
25.	Pin, Spring Anchor, Stainless
26.	Nipple, 1" Pipe Size
27.	Housing, Lamp Transfer Relay
28	Extension, Indicator Light Mounting, 1" Pipe Size
29.	Base, Indicator Light, Type 800
30.	Ring, Lens Holding, Indicator Light
31.	Lens, Indicator Light (Color, Clear) ⚠
*32.	Bracket, Receptacle Mounting, Stationary Section**
*33.	Bracket, Receptacle Mounting, Movable Section, For Single Lamp **
*35.	Receptacle, Medium Base, Single Lamp
*37.	Wing Nut & Screw Assy., Receptacle Bracket Adjusting **
*38	Spring Assy., Shock Absorbing, Receptacle Mounting, Inconel
*39.	Lamp Transfer Relay, Type MSK1-66
*40.	Rectifier, Long Lamp Life

NOTE: Miscellaneous Fastners Not Listed.**
Dimensions, Weights, Etc., Subject To Manufacturers Tolerances.

* These Parts Not Shown By Item Number.
** Material As Best Suited For The Application.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENN.		to		

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
⚠	6-1-70	W.P.G.	Clear Indicator Light

GENERAL NOTES

The Navigation Light shown is Model No. MSC 302LK-L800KIRT manufactured by B & B Engineering Corporation, Norwood Louisiana. Other models considered acceptable are: Adams and Westlake Co. Elkhart Ind. Model No. 1331 Duplex Fixture. Wallace and Tiernan FA-230021 Suspension with FA 231 Duplex Bridge Light Standard Swivel Suspension Duplex Lantern arrangement.
For dimensions A, B & C see design drawings.
For method of attaching see design drawings.

DESIGNED BY _____ DATE _____
DRAWN BY G.P.M. DATE Nov. 1969
TRACED BY _____ DATE _____
CHECKED BY W. P. Green DATE 6-70

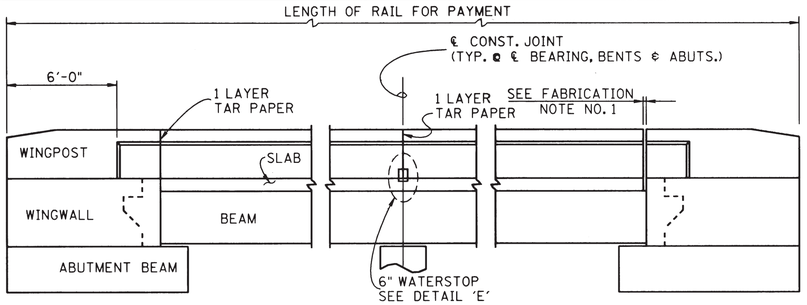
STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

STANDARD NAVIGATION LIGHT 1970

CORRECT _____ BRIDGE ENGINEER
APPROVED _____ STATE HIGHWAY ENGINEER

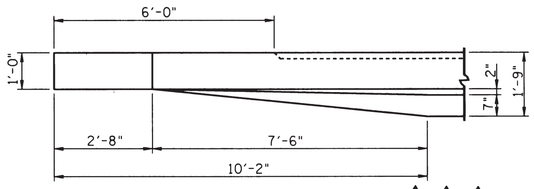
K-86-3

M281.DGN



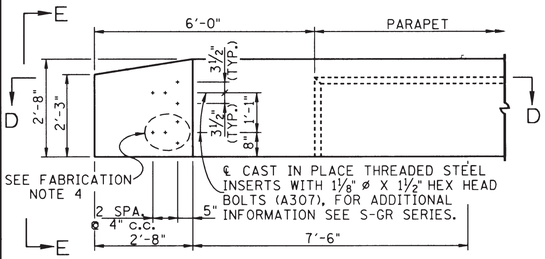
EXTERIOR ELEVATION OF PARAPET ③④

NOTE: USE WINGPOST 'A' FOR W-BEAM GUARDRAIL CONNECTION AND USE WINGPOST 'B' FOR THRIE-BEAM GUARDRAIL CONNECTION.



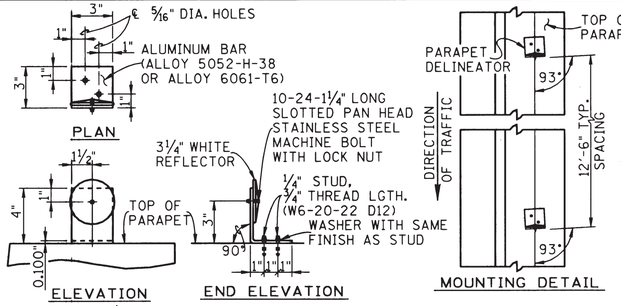
PLAN OF WINGPOST ③④⑤

(USED FOR W-BEAM TO WINGPOST CONNECTION)

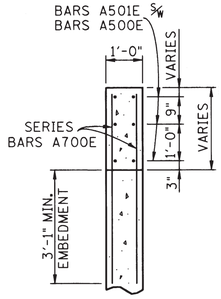


ELEVATION OF WINGPOST

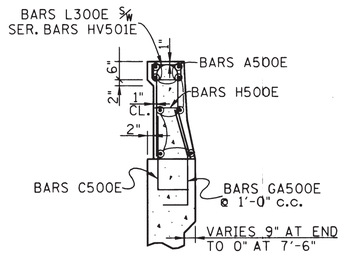
(SHOWING WINGPOST FOR W-BEAM CONNECTION)



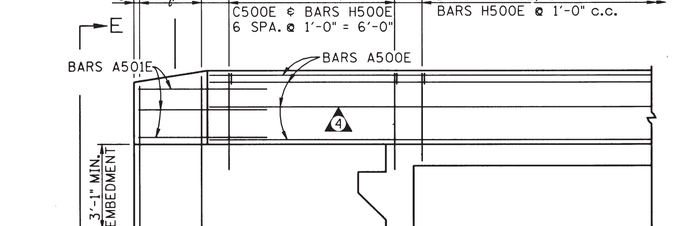
⑤ PARAPET DELINEATOR



SECTION A - A



SECTION B - B ③



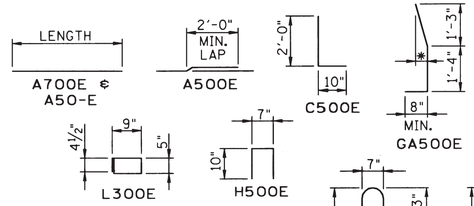
SECTION D - D ③④

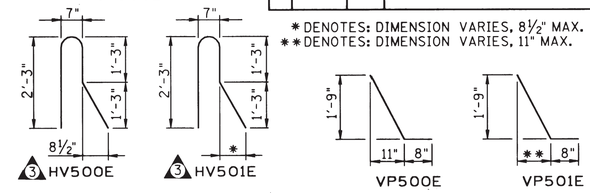
ELEVATION ③④

SHOWING REINFORCEMENT OF WINGPOST 'A' (ELEVATION OF WINGPOST 'B' SIMILAR)

REINFORCING NOTES:

1. BAR DIMENSIONS ARE OUT TO OUT. FIRST DIGIT OF THE NUMBER INDICATES SIZE.
2. THESE BARS SHALL BE FULL LENGTH OF PARAPET EXCEPT THAT NO BAR WILL PASS THROUGH OPEN JOINTS.
3. BASED ON NO OVERLAY ON THE BRIDGE. TO BE INCREASED AS REQUIRED FOR ASPHALT OVERLAY.





* DENOTES: DIMENSION VARIES, 8½" MAX.
** DENOTES: DIMENSION VARIES, 11" MAX.

GENERAL NOTES:

DESIGN: AASHTO SPECIFICATIONS CURRENT EDITION WITH ADDENDA.

SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION. (CURRENT EDITION).

CONCRETE: TO BE CLASS 'A' f'c = 3,000 psi. SEE SPECIAL PROVISION REGARDING SECTION 604 - CONCRETE STRUCTURES.

REINFORCING STEEL: TO BE ASTM A615 GRADE 60. SPACING DIMENSIONS ARE CENTER TO CENTER UNLESS OTHERWISE NOTED. THE SUFFIX 'E', FOR BARS SO MARKED, DENOTES EPOXY COATED REINFORCEMENT. SEE SPECIAL PROVISION 907A.

⑤ PARAPET DELINEATOR REFLECTOR SHALL CONFORM TO THE REQUIREMENTS OUTLINED IN SECTION 916.08 OF THE STANDARD SPECIFICATIONS FOR TYPE I OR TYPE II DELINEATORS.

⑤ PARAPET DELINEATORS WILL NOT BE REQUIRED IN AREAS WHERE ROADWAY IS LIGHTED.

⑤ THE COST OF FURNISHING AND INSTALLING PARAPET DELINEATORS, INCLUDING ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION, SHALL BE INCLUDED IN BID PRICE FOR PARAPET.

FABRICATION NOTES:

1. OPEN JOINTS OR FILLED JOINTS WILL BE ALLOWED IN PARAPET ONLY WHEN SHOWN ON PROJECT DRAWINGS. JOINTS SHALL CONFORM TO THE JOINT DETAILS ON THIS SHEET OR AS OTHERWISE SHOWN ON PROJECT DRAWINGS OR APPROVED SHOP DRAWINGS.
2. PARAPET CONCRETE SHALL NOT BE CAST PRIOR TO REMOVAL OF ALL SUPERSTRUCTURE RELATED FALSEWORK.
3. ALIGNMENT AND PROFILE OF PARAPET SHALL CONFORM TO ROADWAY PROFILE AND GEOMETRY.
4. AT THE TRAILING END OF THE BRIDGE ON A DIVIDED HIGHWAY, WHEN GUARDRAIL IS REQUIRED, ONLY THE UPPER INSERT ASSEMBLY IS REQUIRED. REFER TO STANDARD S-GR SERIES.

WINGPOST QUANTITIES

(PER WING, BASED ON 10'-2" WINGPOST)

③④⑤

CLASS 'A' CONCRETE C.Y.	REINFORCING STEEL LB.
1.028	352

PARAPET QUANTITIES

(PER LINEAR FOOT)

CLASS 'A' CONCRETE C.Y.	REINFORCING STEEL LB.
.1119	23

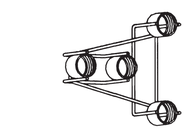
PROJECT NO.	YEAR	SHEET NO.
	1987	

REVISIONS

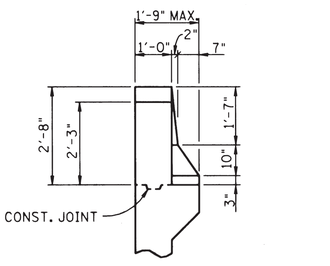
NO.	DATE	BY	BRIEF DESCRIPTION
1	9-07-87	RMD	REVISED WINGPOST AND RAIL
2	2-08-88	RMD	REVISED ENDPOST AND WATERSTOP
3	5-18-88	RMD	GENERAL REVISIONS
4	11-01-88	RMD	GENERAL REVISIONS
5	6-24-91	RMD	ADDED DELINEATOR DETAILS ℄ NOTES ℄ EDITORIAL CORRECTIONS.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

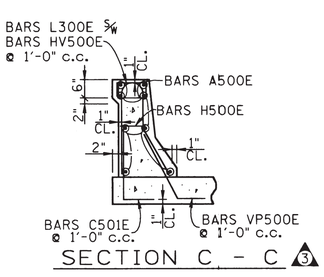
BRIDGE RAILING CONCRETE PARAPET 1987



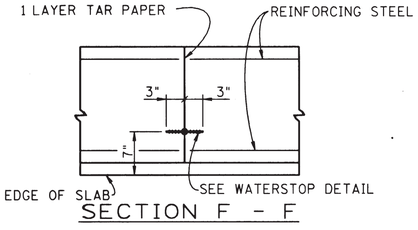
INSERT ASSEMBLY



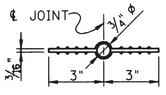
END ELEVATION E - E



SECTION C - C ③

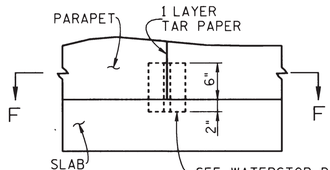


SECTION F - F



WATERSTOP DETAIL

DIMENSIONS SHOWN ARE FOR A 1" JOINT. ADJUST BULB DIMENSIONS FOR A LARGER JOINT. SEE TN. STD. SPEC. 918.11.



④ DETAIL 'E'

(TYP. AT ℄ BEARING @ BENTS ℄ ABUTMENTS)

NOTE: CONTRACTOR MAY POUR THE PARAPET WITHOUT FELT PAPER AND SAW A 1½" DEEP GROOVE ON ALL EXPOSED SIDES OF PARAPET IN ACCORDANCE WITH STANDARD SPECIFICATION SECTIONS FOR TRANSVERSE CONTRACTION JOINTS.

DESIGNED BY R. DISHNER DATE
DRAWN BY C. CENTRACCHIO DATE
SUPERVISED BY R. DISHNER DATE
CHECKED BY DATE

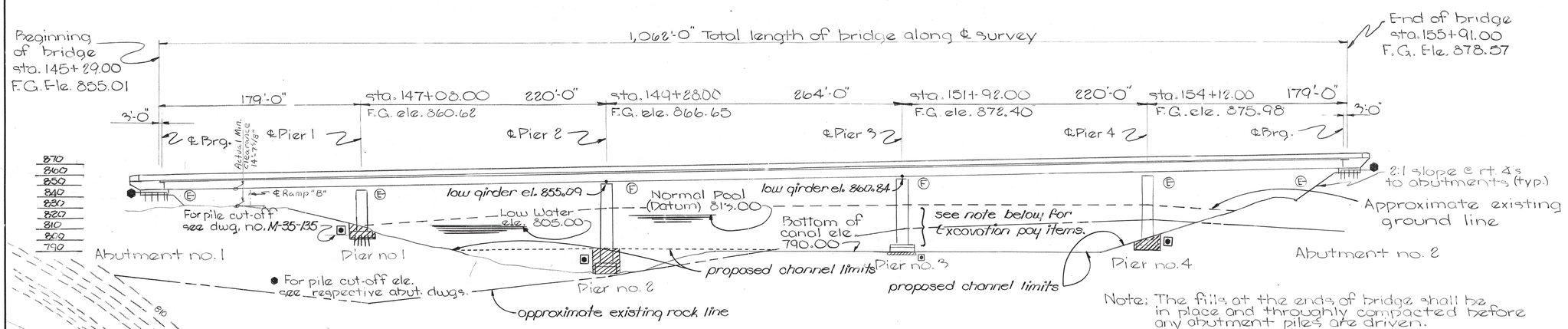
CORRECT Edward P. Wasserman
ENGINEER OF STRUCTURES

SP 53008-3216-04

PROJECT NO.	YEAR	SHEET NO.
	1975	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	10-8-75	E.P.W.	added dwg. no. M-35-129A
2	10-29-75	E.P.W.	std. dwg.'s revised

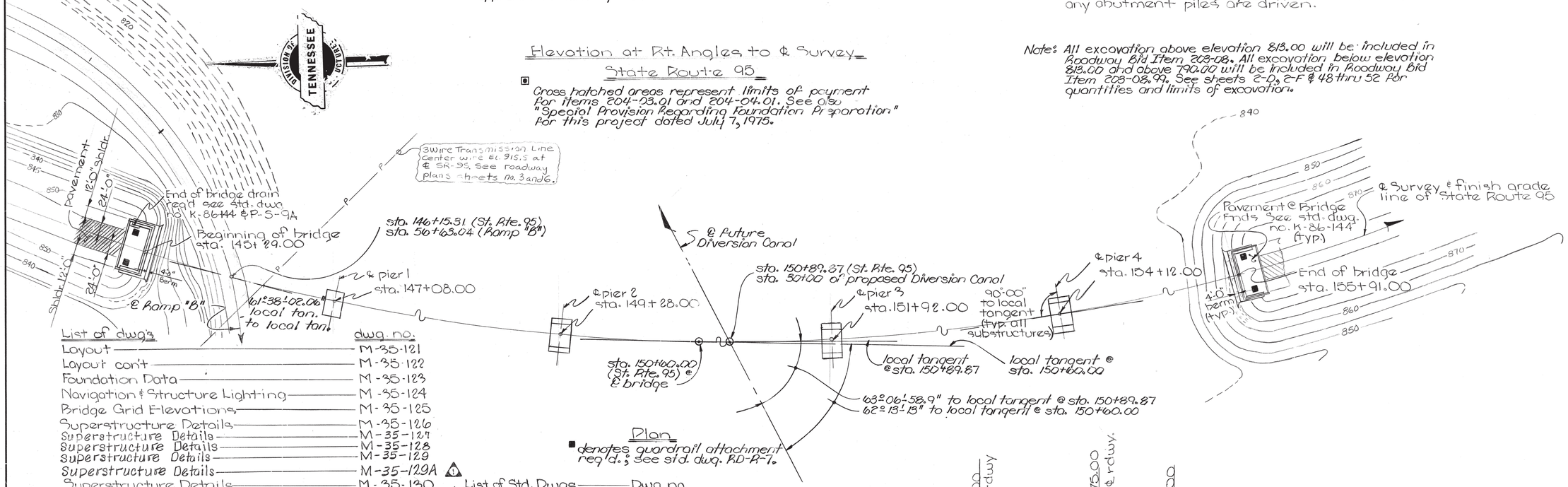


Note: The fills at the ends of bridge shall be in place and throughly compacted before any abutment piles are driven.

Note: All excavation above elevation 813.00 will be included in Roadway Bid Item 203-08. All excavation below elevation 813.00 and above 790.00 will be included in Roadway Bid Item 203-08.99. See sheets 2-D, 2-F & 48 thru 52 for quantities and limits of excavation.

Elevation at Rt. Angles to ℄ Survey State Route 95

■ Cross hatched areas represent limits of payment for items 204-03.01 and 204-04.01. See also "Special Provision Regarding Foundation Preparation" for this project dated July 7, 1975.

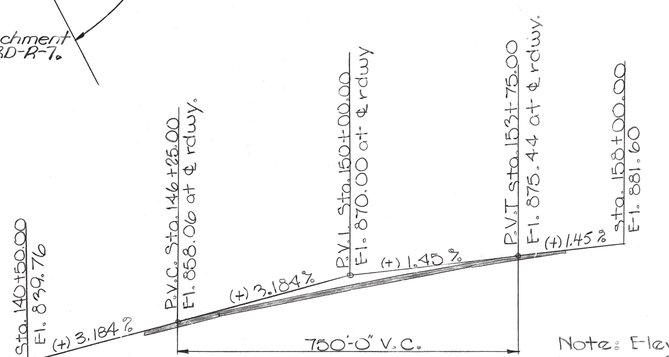


Plan

■ denotes guardrail attachment req'd.; See std. dwg. RD-R-1.

List of dwg's	dwg. no.
Layout	M-35-121
Layout con't	M-35-122
Foundation Data	M-35-123
Navigation & Structure Lighting	M-35-124
Bridge Grid Elevations	M-35-125
Superstructure Details	M-35-126
Superstructure Details	M-35-127
Superstructure Details	M-35-128
Superstructure Details	M-35-129
Superstructure Details	M-35-129A
Superstructure Details	M-35-130
Superstructure Details	M-35-131
Abutments No. 1 & 2	M-35-132
Abutments No. 1 & 2 Details	M-35-133
Abutments No. 1 & 2 Details	M-35-134
Pier Details	M-35-135
Pier Details	M-35-136
Pier Details	M-35-137
Pier Details	M-35-138
Pier Details	M-35-139
Pier Details	M-35-140
Pier Details	M-35-141
Bill of Steel	M-35-142
Bill of Steel	M-35-143
Bill of Steel	M-35-144
Bill of Steel	M-35-145

	List of Std. Dwgs	Dwg. no.
1	List of Std. Dwgs	Dwg. no.
2	Pile Details	H-5-111
	Concrete Parapet	M-28-1
	Lighting Standard Support Detail	M-8-149
	Standard Navigation Light	K-86-3
	Pavement at Bridge Ends	K-86-144
	Miscellaneous Abut. & Drainage Details	K-85-150
	Standard Reinforcing Bar Support Detail for Concrete Slab	K-80-14



GRADE SKETCH
(State Route 95)

Note: Elevations shown are based on finished grade.

1995 Estimated A.D.T. = 19,330
48'-0 Roadway w/Concrete Parapet

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

LAYOUT OF BRIDGE STATE ROUTE 95 OVER TELLICO RESERVOIR DIVERSION CANAL STATION 150+60.00 LOUDON COUNTY 1975

DESIGNED BY Waagerman DATE 5-75
DRAWN BY Scotty L. Keene DATE 5-75
SUPERVISED BY McArthur Waagerman DATE 6-75
CHECKED BY Morris DATE 6-75

CORRECT _____ ENGINEER OF STRUCTURES
APPROVED _____ DIRECTOR OF HIGHWAYS

M-35-121

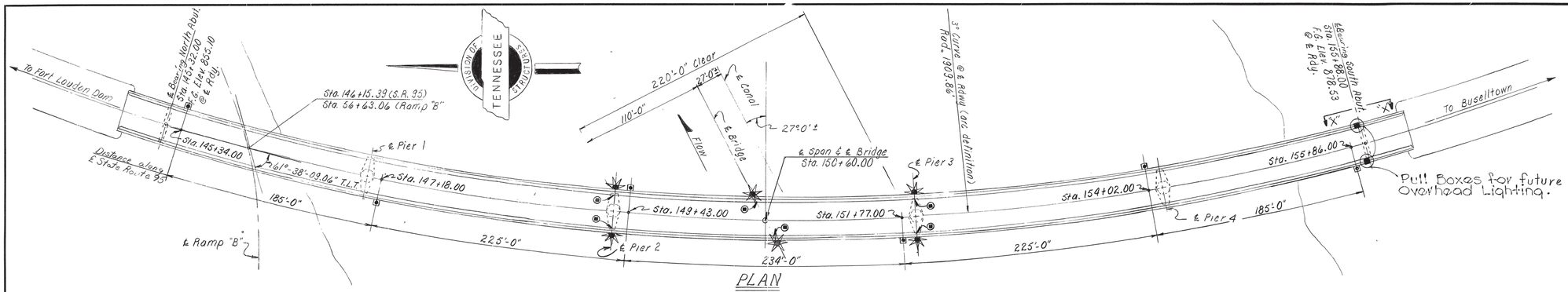
MICROFILMED

SP 53008-3216-04

PROJECT NO.	YEAR	SHEET NO.
	1975	

REVISIONS

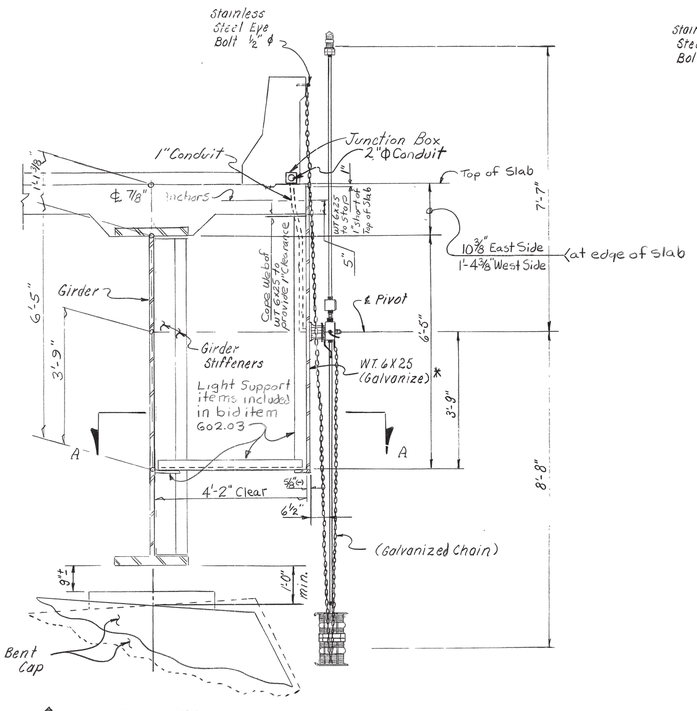
NO.	DATE	BY	BRIEF DESCRIPTION
1	4 Dec 75	JBH	Dimens. on "Side Elevation" clarified.
2	18 Mar 76	JBH	Note added



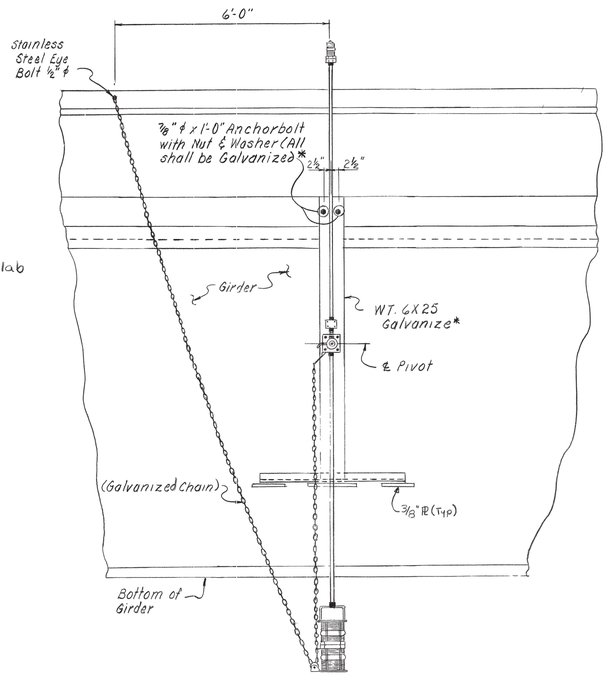
PLAN

✱ Denotes: 360° Green Light.
✱ Denotes: 180° Red Light.
■ Denotes: Pull Boxes for Overhead Structure Lighting. (To be included in price bid for Item 714-01)
▣ Denotes: Location of Overhead Structure Lighting.
◉ Denotes: Junction Boxes for Navigation Lights. (To be included in price bid for Item 714-16)

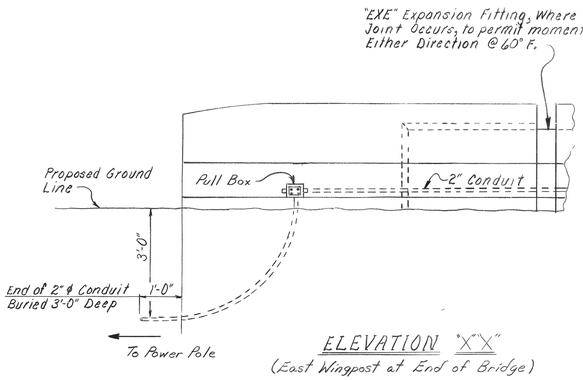
Notes:
For standard navagation light details, see std. dwg. K-810-2.
The contractor shall furnish all labor, equipment, and materials necessary for the complete installation of navigation lights in accordance with provisions of the latest national electrical code and the national electrical safety code.
All structural steel light supports, anchor bolts, chain, etc. shall be galvanized after fabrication. Light supports shall be field painted in accordance with Genral Notes.
All wires shall run in galvanized, rigid steel, thick wall conduits.
All condulets and junction boxes shall have vapor tight and weather proof covers.
All conduit runs and all structural steel shall be made electrically continuous by approved grounding.
Expansion fittings shall be weather proof OZ Electrical Co. Type "EXE" (or approved equal) with exteral bonding jumper.
Pier lights shall be 180° Red. They shall be of a type approved by the U.S. Coast Guard.
Channel lights shall be 360° Green. They shall be of a type approved by the U.S. Coast Guard.



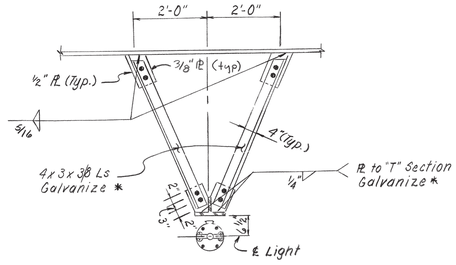
1 SIDE ELEVATION
East Side (Looking Back)
West Side (Looking Fwd.)



2 FRONT ELEVATION



ELEVATION "X"
(East Wingpost at End of Bridge)



2 SECTION A-A
Note: Structural Steel Components for navigation light supports are included in item 602.03
[Total for six (6) supports: 1660 Lbs]

* In lieu of galvanizing, Structural Steel members of the navigation light Support System may be painted. See paint note on dwg. M-35-122

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

NAVIGATION & STRUCTURAL LIGHTING
STATE ROUTE 95 OVER
TELLICO RESERVOIR
DIVERSION CANAL
STATION 150+60.00
LOUDON COUNTY
1975

DESIGNED BY Wasserman DATE 5-75
DRAWN BY Claiborne & Glenn DATE 6-75
SUPERVISED BY Molaturff & Wasserman DATE 6-75
CHECKED BY Graves DATE 6-75

CORRECT _____ ENGINEER OF STRUCTURES
APPROVED _____ DIRECTOR OF HIGHWAYS

M-35-1

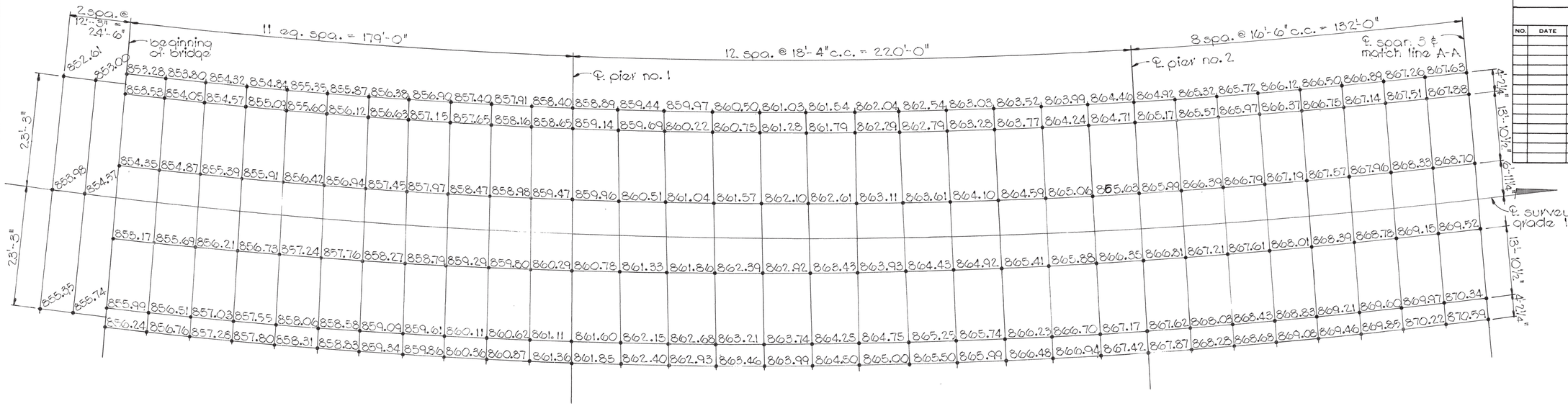
MICROFILMED

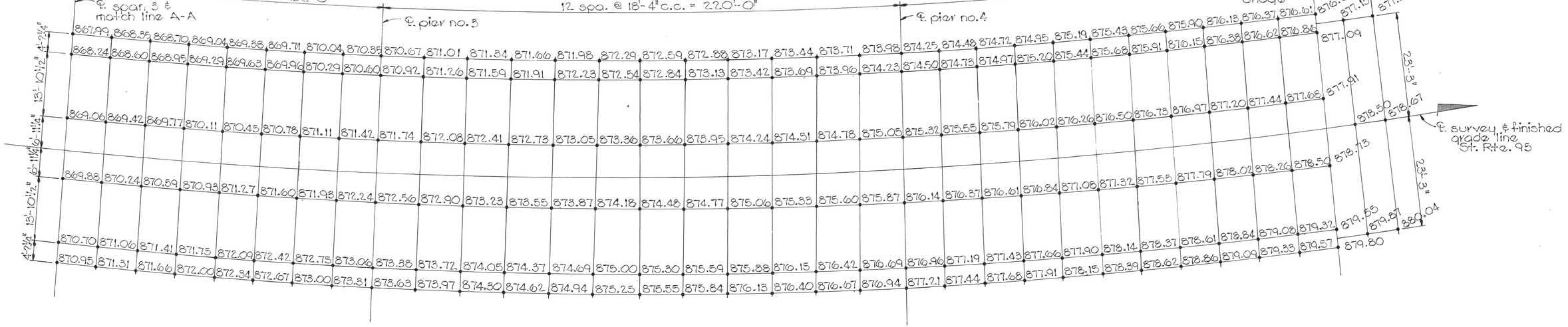
SR. 53008-3216-04

PROJECT NO.	YEAR	SHEET NO.
	1975	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION





SLAB AND PAVEMENT AT BRIDGE END GRID ELEVATIONS

Note: All elevations are given to top of concrete slab.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE GRID ELEVATIONS
STATE ROUTE 95 OVER TELLICO RESERVIOR DEVERSION CANAL
STATION 150+60.00
LOUNDON COUNTY
1975

DESIGNED BY E. Wasserman DATE May 75
DRAWN BY T. Wilson DATE May 75
SUPERVISED BY McArthur H. Wasserman DATE June 75
CHECKED BY Morris DATE June 75

CORRECT _____ ENGINEER OF STRUCTURES

APPROVED _____ DIRECTOR OF HIGHWAYS

M-35-125

MICROFILMED

NOTE: The concrete deck shall not be poured until all structural steel is erected and all welding and/or bolting complete.

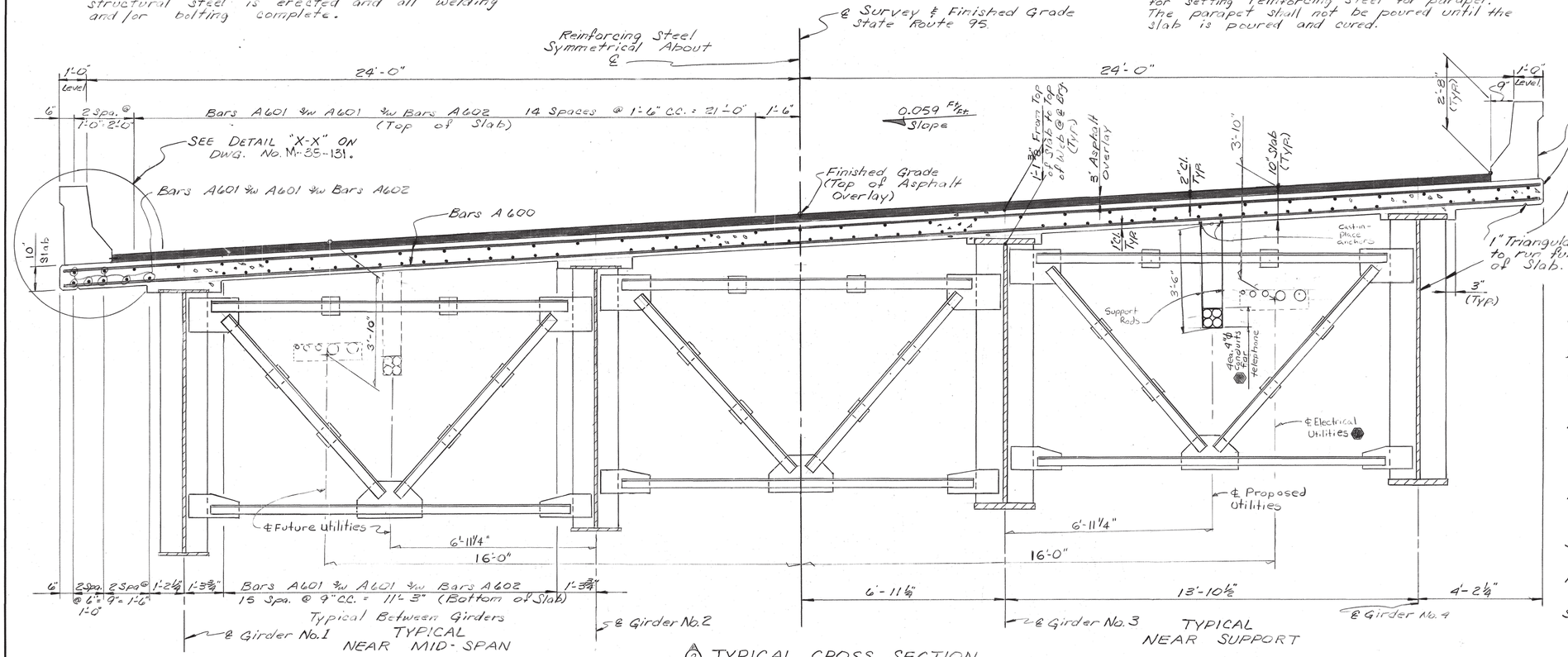
NOTE: When pouring slab provisions shall be made for setting reinforcing steel for parapet. The parapet shall not be poured until the slab is poured and cured.

SP53008-3216-04

PROJECT NO.	YEAR	SHEET NO.
	1975	

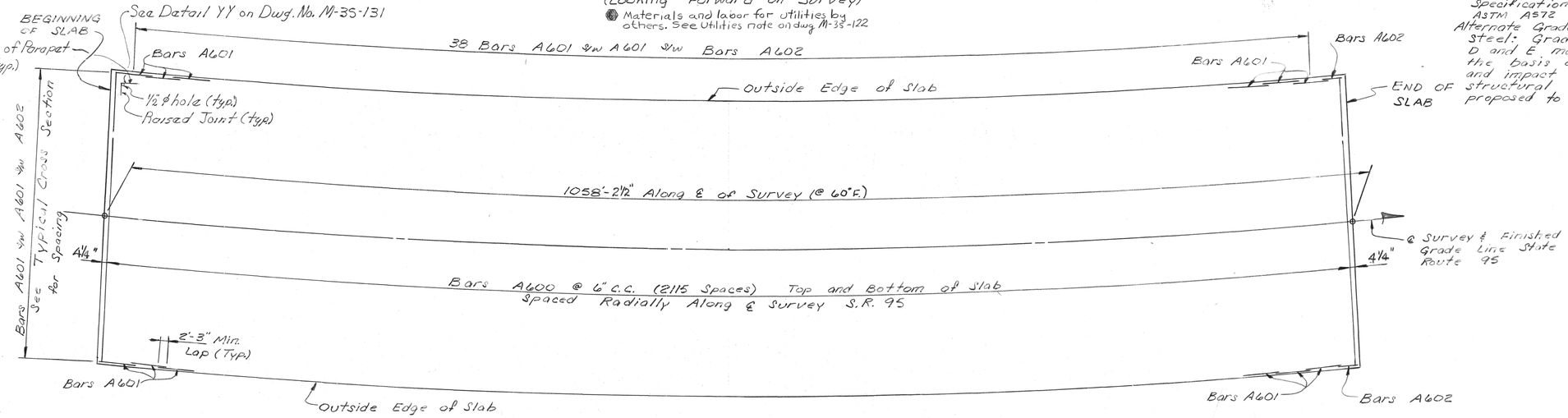
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	30 Dec 75	DRJ	Slab length revised to accomodate rdy expansion device
2	24 May 76	DRJ	Additional Utility Locations added.



② TYPICAL CROSS SECTION
(Looking Forward on Survey)

Materials and labor for utilities by others. See Utilities note on dwg M-35-122



① SLAB PLAN

GENERAL NOTES

Approval of Materials: No fabrication shall be started until the materials involved have been approved by the Tennessee Highway Division of Tests.
Identity of Main Materials: See Special Provision Regarding Identity of Main Material (Structural Steel)
Welding: AWS D1.1-72 Structural Welding Code, AASHTO Standard Specifications for welding of Structural Steel Highway Bridges and Special Provision Regarding Welded Structures.
Field Connections: Shall be ⅞" ϕ High Tensile strength bolts ASTM-A325 unless otherwise shown. See AASHTO Specifications Art. 2.10.20. All high strength bolted connections are friction type. Also see Special Provision Regarding High Strength Bolt Connections.
Additional Shop Splice Note: Shop splices necessary due to lengths or size of material unloaded may be located by the Fabricator subject to approval by the Engineer.
Splice Reaming Note: Holes to be sub-punched or sub-drilled 1/4" smaller, reamed to size and match marked while assembled in the shop.
Note: Unless otherwise noted, see AASHTO Specifications Art. 1.7.26 for minimum size of fillet weld.
Structural Steel: Shall conform to AASHTO M183 (ASTM A36) unless otherwise noted. All structural steel for girder flanges in tension and webs shall meet the requirements of longitudinal charpy V-notch tests specified in AASHTO Material Specifications. Group 2 of table A shall apply. All ASTM A572 (AASHTO M223) steel shall be grade 50. Alternate Grades for ASTM A588 (AASHTO M222) steel: Grades A,B,C,F, and G are acceptable. Grades D and E may be approved by the Engineer on the basis of submitted data of mechanical and impact tests and of weldability under structural conditions of the type of steel proposed to be furnished.

ESTIMATED QUANTITIES

Reinforcing Steel Lbs.	Concrete Class "A" C.Y.
477,321	1,747.1

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

SUPERSTRUCTURE
STATE ROUTE 95 OVER TELLICO RESERVOIR DIVERSION CANAL
STATION 150+60.00
LOUDON COUNTY
1975

DESIGNED BY E.P. Wasserman DATE 5-75
DRAWN BY R. Dotson DATE 5-75
SUPERVISED BY Martin Turpin & Wasserman DATE 5-75
CHECKED BY Morris DATE 6-75

CORRECT _____ ENGINEER OF STRUCTURES
APPROVED _____ DIRECTOR OF HIGHWAYS

M-35-126

MICROFILMED

SP 53008-3216-04

PROJECT NO.	YEAR	SHEET NO.
	1975	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	10-3-75	EPW	Optional FS-2 added, related notes

* denotes stiffener spacing
◉ see "Intermediate Stiffener Detail" on dwg. no. M-35-129.

• 528'-0" along ℄ survey State Route 95 (℄ bearing abut. no. 1 to ℄ bearing abut. no. 2)

diaphragm spacing
*A572 webs
*A36 webs

composite region — 8 eq. spa. = 176'-0" (along ℄ S.R. 95)
non-composite region — ℄ field splice
composite region — 10 eq. spa. = 220'-0" (along ℄ S.R. 95)
non-composite region — ℄ field splice
composite region — ℄ Optional FS-2 — 6 eq. spa. = 132'-0" (along S.R. 95)

girder 1 — detail "A"
girder 2
girder 3 — detail "B"
girder 4
℄ abut. brg.

detail "C" detail "D" detail "E" detail "B" detail "D" detail "J" detail "H" detail "F" detail "G"

℄ pier 1 ℄ pier 2

WT 7 x 26.5 (typ. spans 1, 2, 4 and 5)
WT 7 x 30.5 (typ. span 3)

Dim. "C" — 5% of Bay

℄ survey and finish grade line of St. Rte. 95
symm. ℄ span 3 and bridge

Note: For details "A" thru "H", see dwg. no. M-35-130. For detail "J", see dwg. no. M-35-129.

⚠1 HALF FRAMING PLAN

Note: Stiffners will be allowed on outside face of fascia girders at Cross Frames and bearings only.

⚠1 Note. Optional Field Splice No. 2 may be used at the Fabricators Option with no Compensation Paid for additional labor and materials.

top flange size	dim. "A"	80'-0"	24'-0"	18'-0"	22'-0"	22'-0"	24'-6"	dim. "B"	22'-3"	18'-0"	21'-0"	21'-0"	14'-0"	14'-6"	dim. "C"	21'-0"	41'-0"
	16 x 3/4 (A36)	20 x 7/8 (A36)	16 x 3/4 (A36)	20 x 1 1/4 (A572)	24 x 1 7/8 (A572)	(A572)	20 x 1 1/4 (A572)	16 x 3/4 (A36)	20 x 1 1/4 (A572)	24 x 1 7/8 (A572)	24 x 2 5/8 (A588)	(A588)	24 x 1 3/8 (A572)	24 x 1 (A572)	20 x 7/8 (A36)	20 x 1 (A572)	20 x 1 7/8 (A572)
shear connector spacing	56 spa. @ 2'-4" = 130'-8"		3'-0" varies	29'-9" no studs	35'-3" no studs	3'-0" varies		56 spa. @ 1'-11" = 107'-4"	3'-0" varies	50'-3" no studs	38'-6" no studs		3'-0" varies		28 spa. @ 2'-10" = 79'-4"		
	℄ abut. brg. — end of girder 11"				℄ pier 1			■ denotes 8 spa. @ 1'-0" = 8'-0"			℄ pier 2			Omit Shear Connectors Over Top Flange Splice Plates			symm. ℄ span 3 and bridge
	★ 105 x 9/16 web		℄ field splice 1		℄ field splice 1				℄ field splice 1		Field Splice 2			★ 105 x 9/16 web	℄ Optional Field Splice 2 (See dwg. M-35-129-A)		
bottom flange size	dim. "D"	34'-0"	29'-0"	33'-0"	16'-0"	18'-9"	22'-0"	22'-0"	24'-6"	dim. "E"	85'-9"	dim. "E"	22'-3"	18'-0"	21'-0"	21'-0"	14'-0"	14'-6"	dim. "C"	21'-0"	41'-0"
	20 x 7/8 (A-36)	20 x 1 (A572)	20 x 1 1/8 (A572)	20 x 1 (A572)	20 x 3/8 (A36)	20 x 1 1/4 (A572)	24 x 1 7/8 (A572)	(A572)	20 x 1 1/4 (A572)	20 x 7/8 (A36)	20 x 1 (A572)	20 x 7/8 (A36)	20 x 1 1/4 (A572)	24 x 1 7/8 (A572)	24 x 2 5/8 (A588)	24 x 1 3/8 (A572)	24 x 1 (A572)	20 x 1 (A572)	20 x 1 7/8 (A572)	20 x 2 1/8 (A588)
	℄ field splice					40'-9"		40'-6"	℄ field splice			℄ field splice		61'-3"			49'-6"		℄ field splice	

★ Web may be either all A572 (AASHTO M223) or all A36 (AASHTO M183) at the fabricator's Option using the appropriate stiffner arrangement as shown on Half Framing Plan (above).

TABLE OF DIMENSIONS

dimension	"A"	"B"	"C"	"D"	"E"
girder 1	30'-3"	109'-10 11/16"	19'-0 5/16"	22'-3"	12'-0 5/8"
girder 2	31'-6 3/8"	111'-5 7/16"	20'-0 1/4"	23'-6 3/16"	12'-10 1/4"
girder 3	32'-9 11/16"	113'-0 9/16"	20'-11 3/4"	24'-9 11/16"	13'-7 7/16"
girder 4	34'-1"	114'-7 3/4"	21'-11 1/4"	26'-1"	14'-5 3/8"

HALF GIRDER ELEVATION ⚠1

5" from face of web to ℄ 5/8" ϕ hole
5/8" ϕ hole for 1/2" ϕ inspection cable (typ.)
4'-0" from top of bottom flange to ℄ 5/8" ϕ hole

= girder 1 = = girder 2 = = girder 3 = = girder 4 =

INSPECTION CABLE DETAILS

turnbuckle eye bar
3 u-bolt clips @ each end of inspection cable
threaded rod w/ hex nut and washer
1/2" ϕ cable
abut. stiffener
2 u-bolt clip on each side of cross frames and pier stiffener (clips tight against stiffener and frames)

shop drawings must be submitted to the engineer of structures for approval.

DESIGNED BY E. P. Wasserman — DATE May 75
DRAWN BY M. L. Morris — DATE May 75
SUPERVISED BY Mc Murff & Wasserman — DATE May 75
CHECKED BY Graves — DATE May 75

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

SUPERSTRUCTURE DETAILS
ST. RTE. 95 OVER TELLICO RESERVOIR DIVERSION CANAL
STATION 150+60.00
LOUDON COUNTY
1975

CORRECT _____ ENGINEER OF STRUCTURES
APPROVED _____ DIRECTOR OF HIGHWAYS

M-35-127

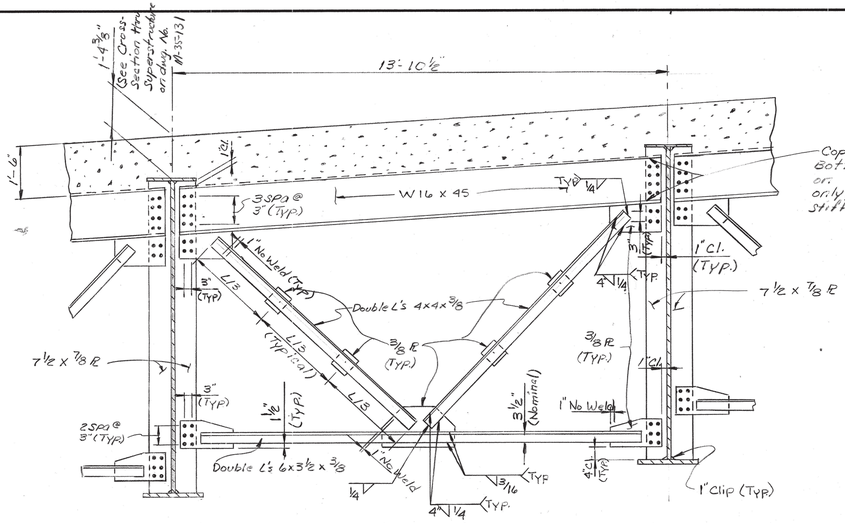
MICROFILMED

SP 53008-3216-04

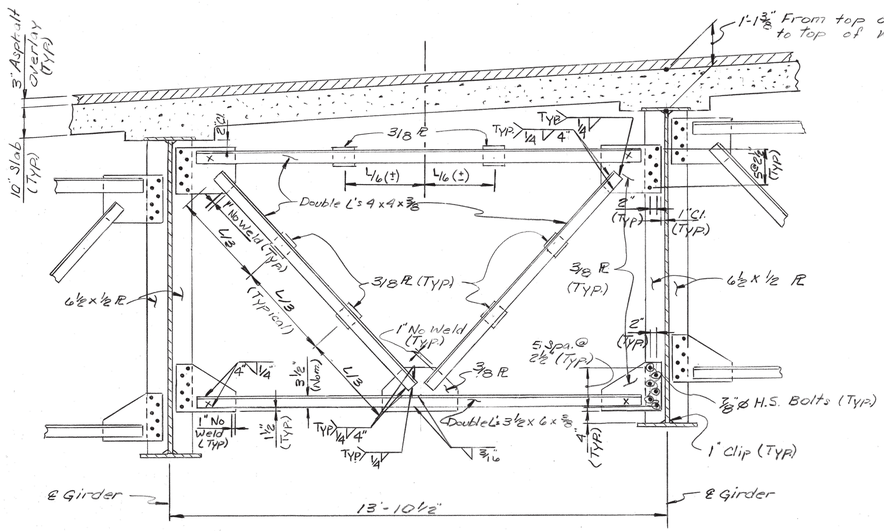
PROJECT NO.	YEAR	SHEET NO.
	1975	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	10-3-75	EPW	Added Note & Revised table of Dimensions
2	11-10-75	EPW	Optional Erection bolt detail added for cross-frames @ Piers, Bolt Data added to bearing details
3	1710ct75	EPW	Revised Table of Dimensions for Bearing devices, details of attachment of bearing sole PL's to flange.



TYPICAL ABUTMENT DIAPHRAGM
D-1



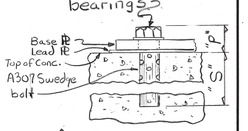
TYPICAL INTERMEDIATE DIAPHRAGM
D-2

⚠1 (See detail of Welding Stiffners at cross frames on dwg. No. M-35-129)

⚠1 TABLE OF DIMENSIONS

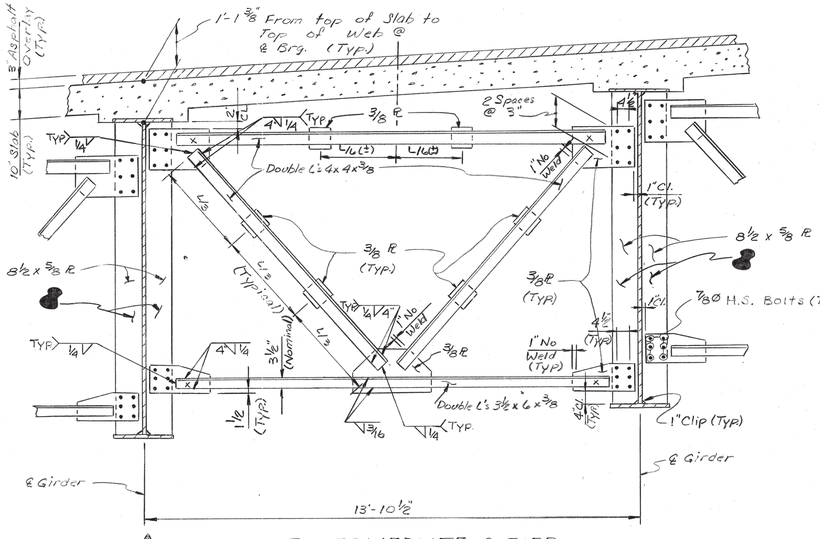
Brg. / Dims.	ABUT 1 & 2 (EB-1)	Piers 1 & 4 (EB-2)
Kips	300	800
I.D.	10.46"	17.06"
"A"	8⅜"	12⅞"
"B"	9"	11¼"
"C"	4.11"	5.66"
"D"	¾"	1"
"E"	6⅝"	10½"
"F"	8 1/16	19⅝"
"G"	9½	14⅜"
"H"	⅞"	1½"
"X"	4⅝"	12"
"Y"	7⅛"	10
"Z"	5⅜	6⅛

Note: No thread projection above nut allowed at expansion bearings.



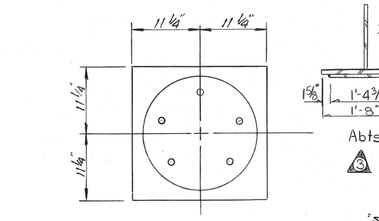
⚠2 Anchor Set and Bolt Projection Diagram.

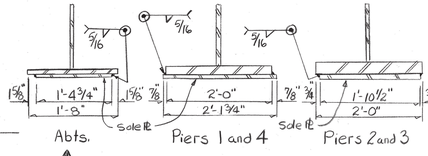
Brg. / Dims.	Abuts 1&2	Piers 1&4	Piers 2&3
"P"	2 11/16"	3⅝"	4½"
"S"	1'-9"	1'-9"	2'-6"



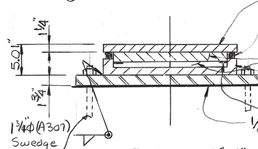
⚠2 TYPICAL INTERMEDIATE & PIER DIAPHRAGM
D-3

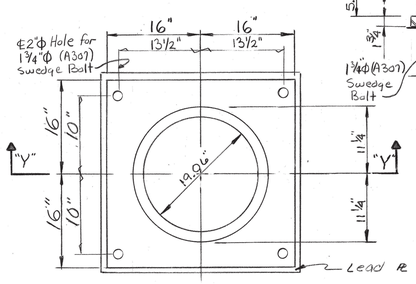
X - Denotes Erection Bolts (at Piers only)



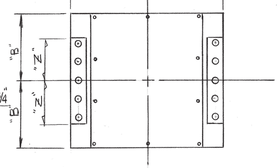


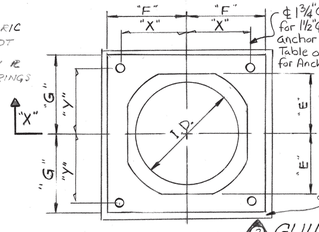
⚠3 SOLE PLATE TO FLANGE CONNECTION DETAILS

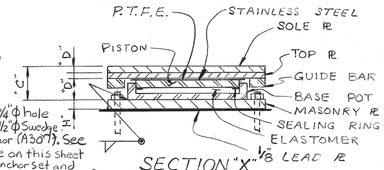




⚠2 FIXED FLOATING BEARING, FB-1 @ PIERS 2 & 3







(Location of Holes for Anchor Bolts is not to Scale, See Dixon-Spencer Shop Dwg. No. 12392/124)

⚠2 GUIDED EXPANSION FLOATING BEARING @ ABUTMENTS & PIERS 1 & 4
(EB-1 @ Abutments, EB-2 @ Piers 1 and 4)

Note: Anchor Bolt Holes are not located to Scale - See Dixon-Spencer Shop Dwg. No. 12392/124.

TABLE OF REQUIRED CAPACITIES AND MOVEMENTS FOR BRIDGE BEARINGS

BEARING MARK	Location	Required Bearing Cap. (Tons) Dead	Live	Required Total Movement
EB-1	Abts. 1&2	85	46	5"
EB-2	Piers 1&4	280	101	3 3/8"
FB-1	Piers 2&3	338	119	None

STIFFENERS

8½ x ⅝ PL	@	Mid-Span	See Details on Dwg. No. M-35-129
1 ea. 11x1 2 ea. 6x¾	@	Piers 2 & 3	See Detail "J" on Dwg. No. M-35-129.
1 ea. 10x1 2 ea. 6x¾	@	Piers 1 & 4	See Detail "E" on Dwg. No. M-35-130.

Note: Contractor may submit alternate bearing details for approval in lieu of those bearings detailed on this sheet. No compensation shall be made to the contractor due to any changes in quantities required to accomodate alternate devices.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

SUPERSTRUCTURE DETAILS
STATE ROUTE 95 OVER TELLICO RESERVOIR DIVERSION CANAL
STATION 150+60.00
LOUDON COUNTY
1975

DESIGNED BY E.P. Wasserman DATE 5-75
DRAWN BY R. Dotson DATE 5-75
SUPERVISED BY McInturff & Wasserman DATE 5-75
CHECKED BY Morris DATE 6-75

CORRECT _____ ENGINEER OF STRUCTURES
APPROVED _____ DIRECTOR OF HIGHWAYS

M-35-128

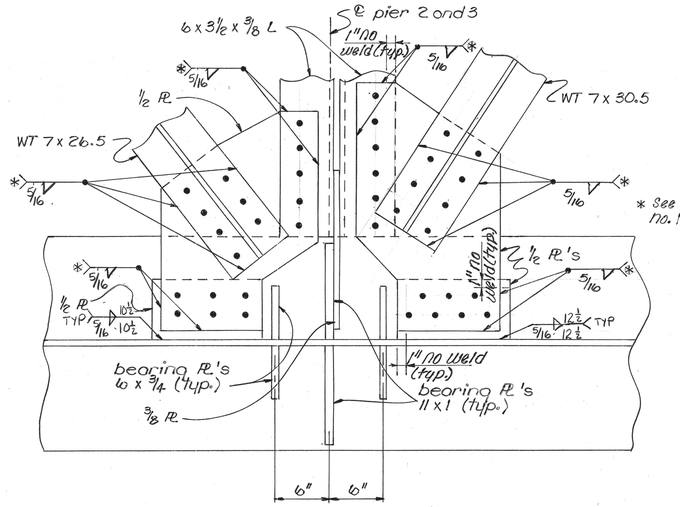
MICROFILMED

SP53008-3216-04

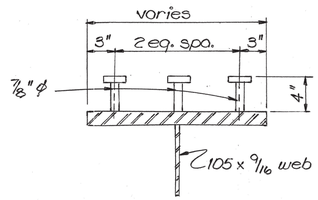
PROJECT NO.	YEAR	SHEET NO.
	1975	

REVISIONS

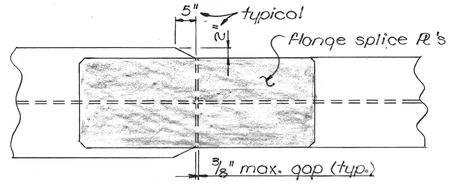
NO.	DATE	BY	BRIEF DESCRIPTION
1	3-10-76	EPW	Intermediate Stiffner Details at Cross Frames Corrected. Note added for Optional F&S
2	4DEC75	KBL	Lateral Supp. Pl to Web Weld



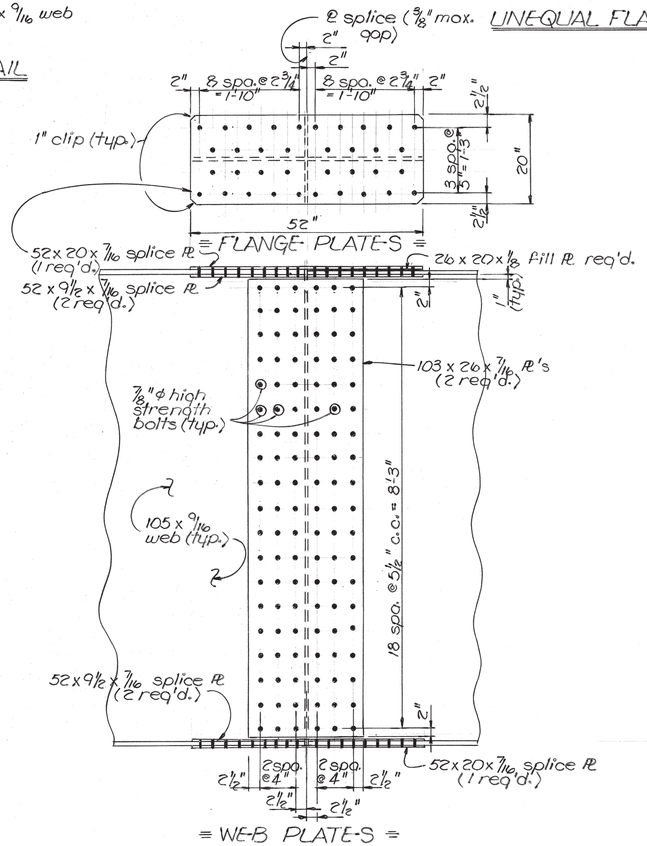
② DETAIL "J"
Pier 2 Shown Pier 3 Same except Opposite hand

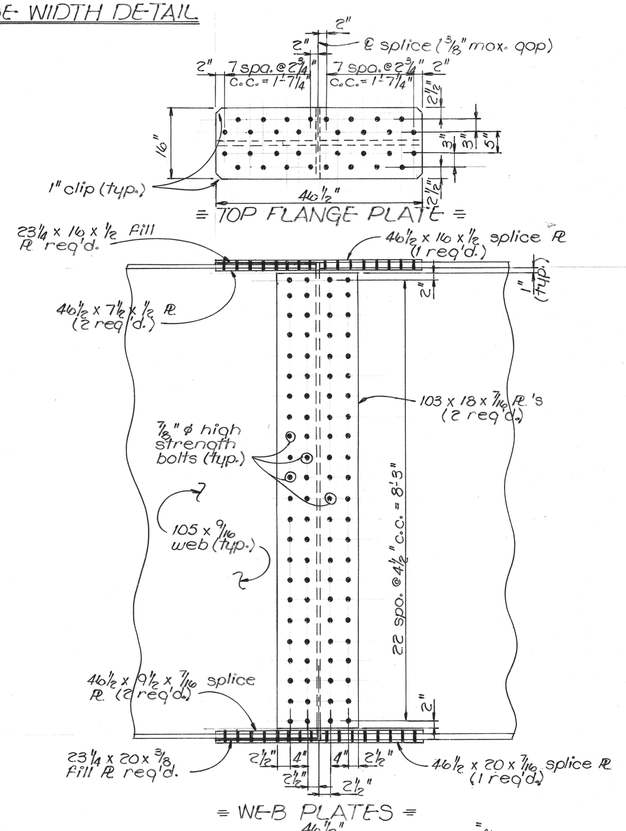


STUD DETAIL



UNEQUAL FLANGE-WIDTH DETAIL



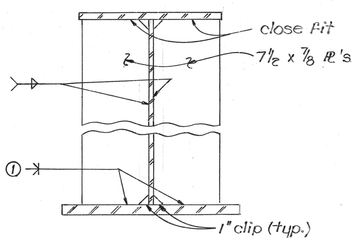


WEB PLATE-S

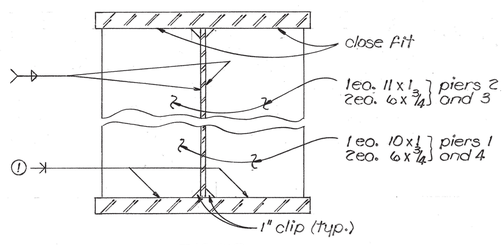
FIELD SPLICE 2

① Note: See Optional Field Splice 2 on Dwg. M-35-129A

① in lieu of the full penetration groove welds, show below, bearing Pl's may be milled to bear on bottom flange.

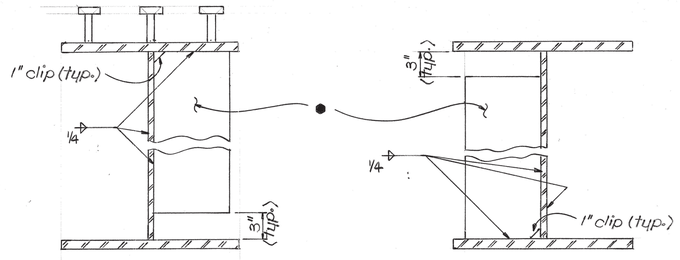


© ABUTMENTS



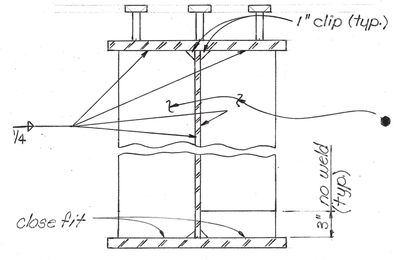
© PIERS

BEARING STIFFENER DETAILS

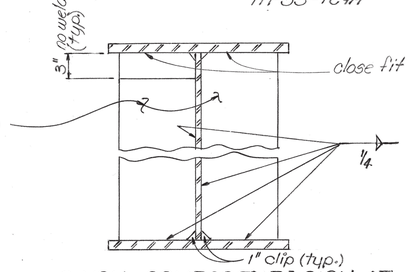


© COMPOSIT REGION

© NON-COMPOSIT REGION



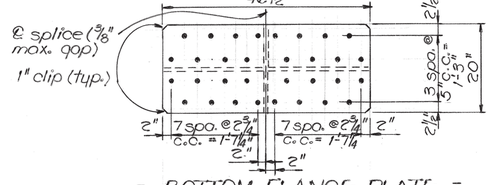
© COMPOSIT REGION AT CROSS-FRAMES



© NON-COMPOSIT REGION AT CROSS-FRAMES

① INTERMEDIATE STIFFENER DETAILS

● 6½ x ½ (A36) Pl's for 16 top flange or 8½ x ⅝ (A36) Pl's for 20 and 24 top flange



BOTTOM FLANGE PLATE

FIELD SPLICE 1

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

SUPERSTRUCTURE DETAILS
ST. RTE. 95 OVER TELLICO RESERVOIR DIVERSION CANAL
STATION 150+60.00
LOUDON COUNTY
1975

CORRECT _____ ENGINEER OF STRUCTURES
APPROVED _____ DIRECTOR OF HIGHWAYS

M-35-129

DESIGNED BY E. Wasserman DATE May 75
DRAWN BY Michael L. Morris DATE May 75
SUPERVISED BY Wasserman & McArthur DATE May 75
CHECKED BY groves DATE June 75

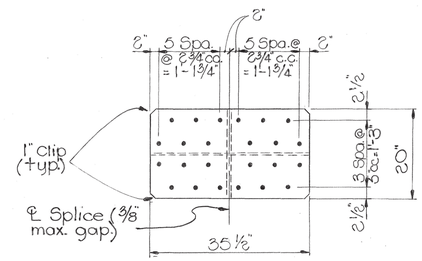
MICROFILMED

SP53008-3216-04

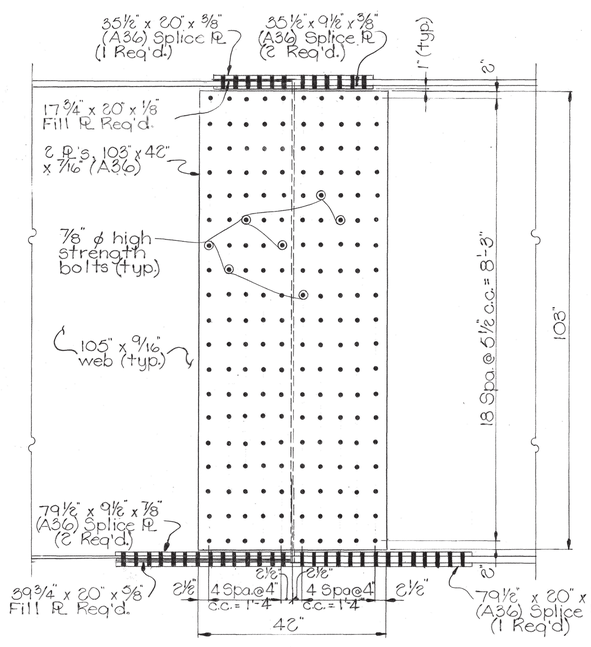
PROJECT NO.	YEAR	SHEET NO.
	1975	

REVISIONS

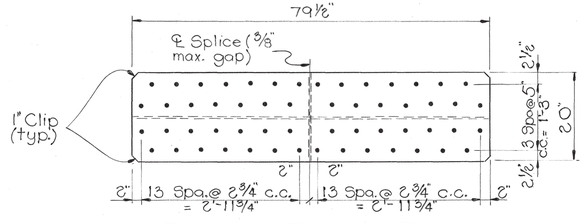
NO.	DATE	BY	BRIEF DESCRIPTION
1	4-Oct-76	E.P.W.	Dwg. added to Plans



TOP FLANGE PLATE



WEB PLATES



BOTTOM FLANGE PLATE

OPTIONAL FIELD SPLICE 2

DESIGNED BY Ed Wasserman DATE May 75
DRAWN BY G.T. Keene DATE Oct. 75
SUPERVISED BY McInturff & Wasserman DATE Oct. 76
CHECKED BY _____ DATE _____

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

SUPERSTRUCTURE DETAILS
(OPTIONAL FIELD SPLICE 2)
ST. RTE. 95 OVER TELLICO
RESERVIOR DIVISION CANAL
STATION 150+60.00
LOUNDON COUNTY
1975

CORRECT S.H. DeHuff
ENGINEER OF STRUCTURES
APPROVED Lewis Evans
DIRECTOR OF HIGHWAYS

1

M-35-129A

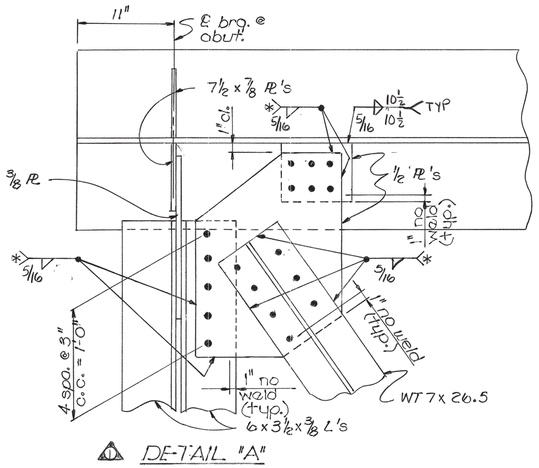
MICROFILMED

SP 53008-32.16-04

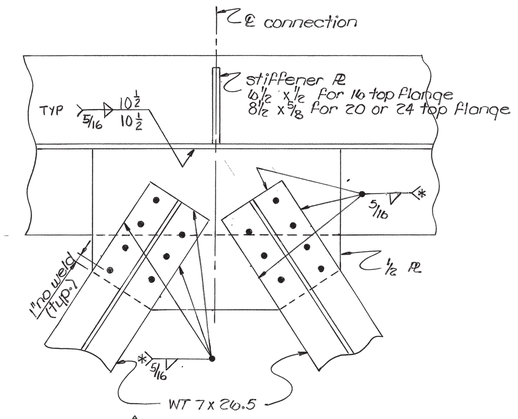
PROJECT NO.	YEAR	SHEET NO.
	1975	

REVISIONS

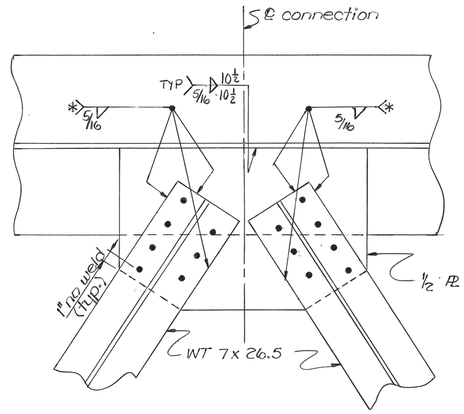
NO.	DATE	BY	BRIEF DESCRIPTION
1	4 DEC 75	RR	LATERAL SUPPORT PL TO WEB WELD REVISED



⚠ DETAIL "A"

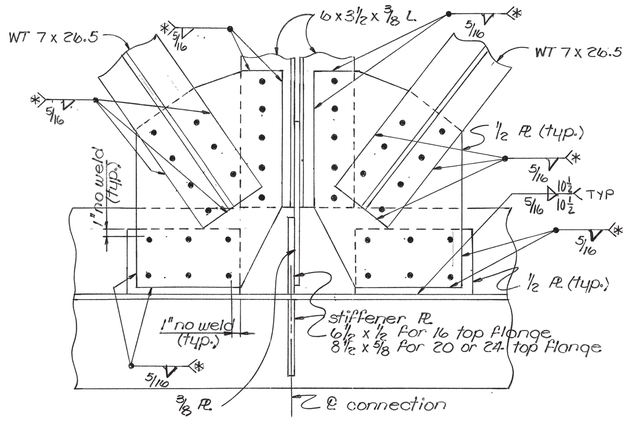


⚠ DETAIL "B"

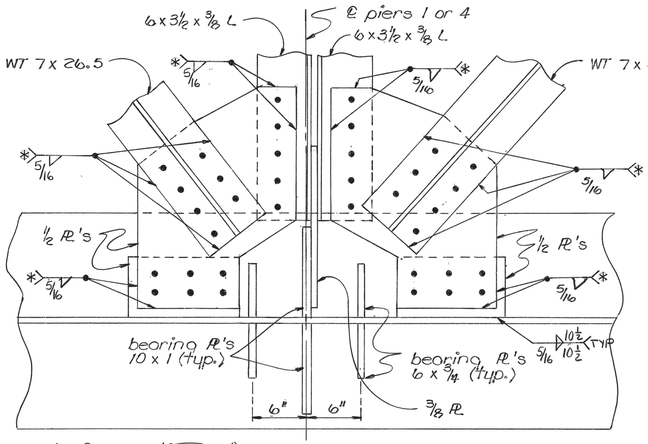


⚠ DETAIL "C"

* bolt connections shown may be replaced with 5/16 weld at the rate of 3½" of weld per bolt or equivalent weld length of larger size. Connections may be all bolted, all welded or any combination thereof.



⚠ DETAIL "D"



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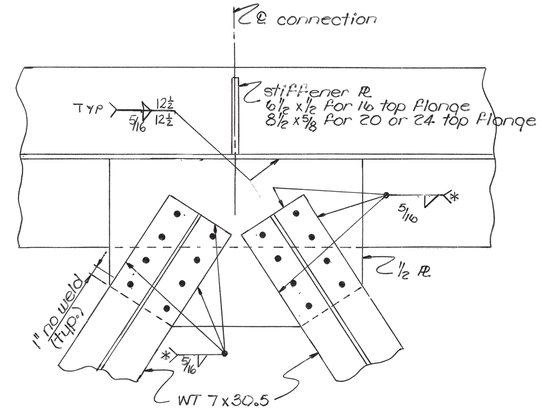
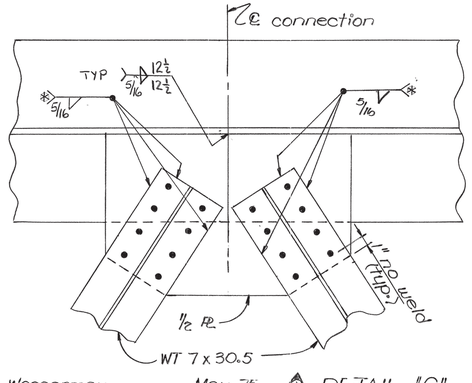
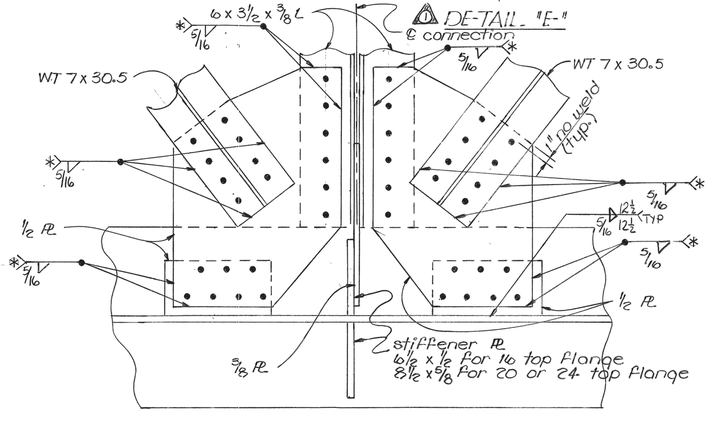


⚠ DETAIL "F"



⚠ DETAIL "G"



⚠ DETAIL "H"

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

SUPERSTRUCTURE DETAILS

ST. RTE. 95 OVER TELLICO RESERVOIR DIVERSION CANAL
STATION 150+60.00
LOUDON COUNTY
1975

CORRECT _____ ENGINEER OF STRUCTURES
APPROVED _____ DIRECTOR OF HIGHWAYS

M-35-180

DESIGNED BY E. Wasserman DATE May 75
DRAWN BY Michael L. Morris DATE May 75
SUPERVISED BY McMurtry & Wasserman DATE May 75
CHECKED BY Graves DATE May 75

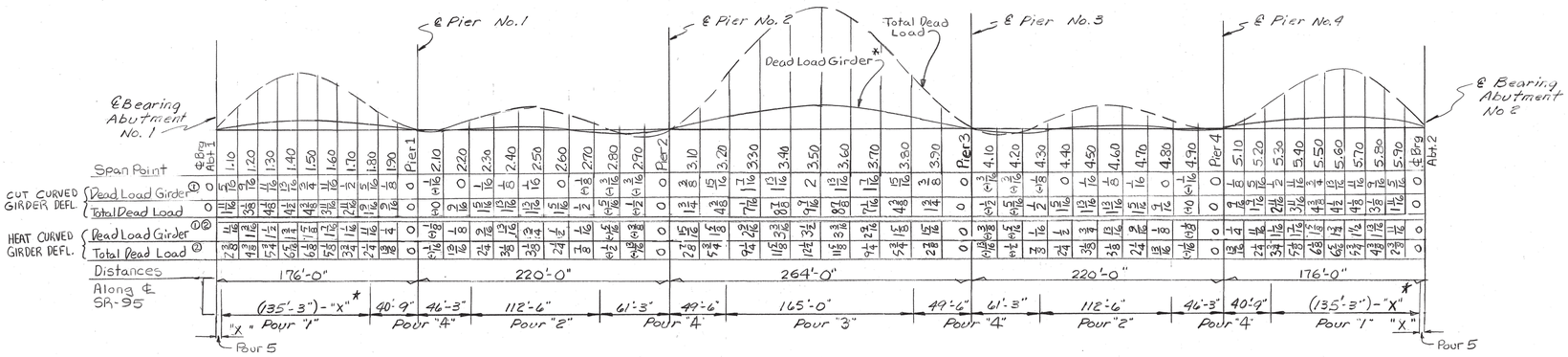
MICROFILMED

SP 53008-3216-04

PROJECT NO.	YEAR	SHEET NO.
	1975	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	21Nov75	EBW	Deflections for Heat Curved Girders & related notes added.
2	30Dec75	EBW	Detail "A" added



① Dead Load Girder includes cross frames and lateral bracing.

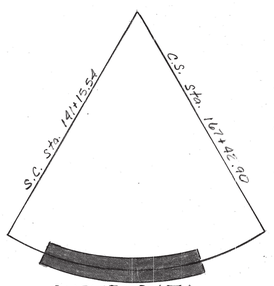
② Values for camber of heat curved girders include anticipated increased deflection due to losses of residual stresses. The anticipated increase has been equally divided between Dead Load Girder and all other applied Dead Loads.

⚠ DEAD LOAD CORRECTION CURVE AND POURING SEQUENCE

Note: Girders shall be cambered to compensate for dead load deflection and vertical curve.

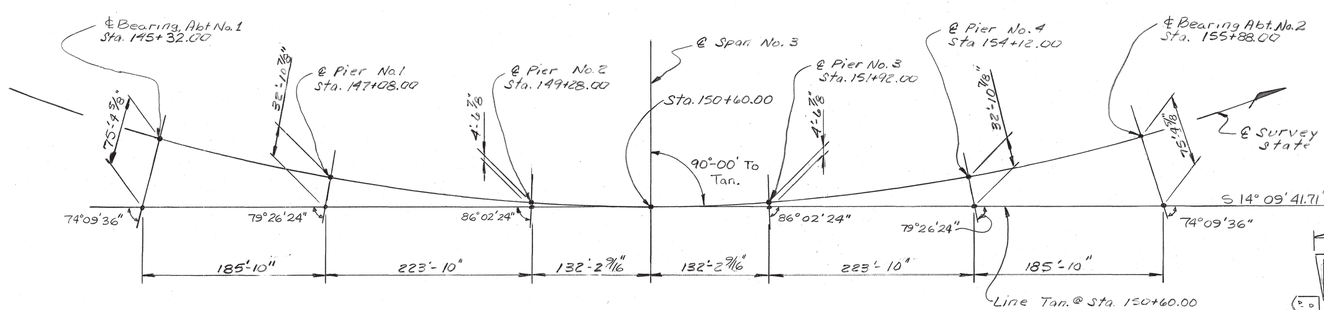
Note: The slab shall not be poured until all structural steel is erected and all welding or bolting complete. All pours are to be numerical sequence; pours with the same number designation may be made simultaneously. The contractor shall make adequate provisions during placement of slab to prevent the exterior beam from twisting. No portion of the curb shall be poured untill the entire slab is in place.

★ Dimension "x" depends upon the physical size of the roadway expansion device. It shall be the responsibility of the Contractor to set this dimension so that adequate encasement of the device and its anchors is provided.



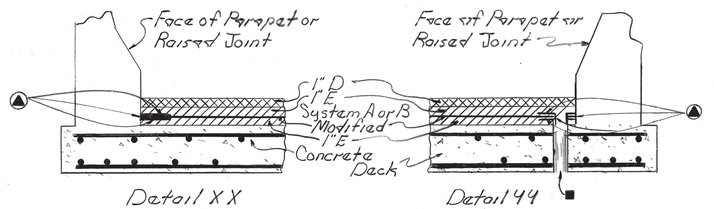
P.I 157+60.92
Δ = 89°-49'-15"
T.S. = 1845.38'
Δ_c = 3°
R = 1909.86
L_c = 2627.36'
S_e = 0.057 ft/ft

CURVE DATA
STATE ROUTE 95



PLAN OF BRIDGE SHOWING TANGENT LINE STAKE OUT

Note: ℄ of bearing at abutments no. 1 and 2, as well as ℄ of all piers, are radial.



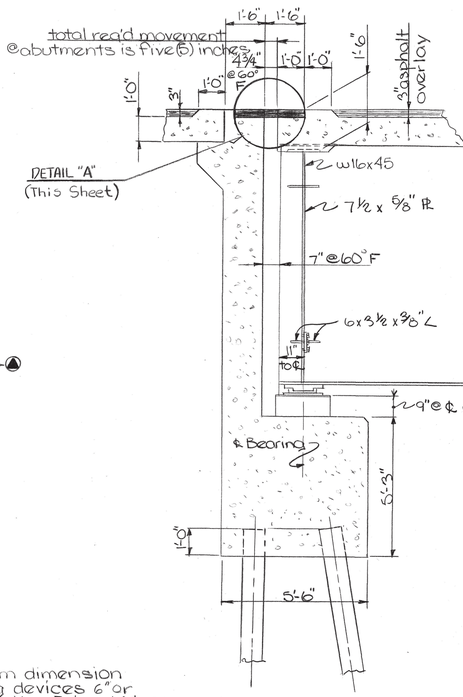
Detail XX
Typical for Fixed or Integral Abutment

Detail YY
Typical for Expansion Abutment

Deck Sealant Details

■ 1⅛" hole and sealed in accordance with special provisions 435, paragraph 4.3.2.(H)

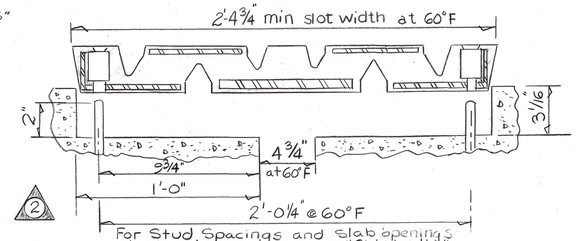
▲ Mastic as recommended by manufacture of membrane. See Special Provision 435, Paragraph 4.3.2(C) and 4.3.2.(D)



** Minimum dimension for bearing devices 6" or less in depth. Price bid for item 908-21.01 shall be full compensation for all labor, material and quantities required to accomodate the installation of approved bearing device.

Typical Detail @ Beginning & End of Bridge ②

see dwg. M-35-134 for additional details of installation of roadway expansion device.



② For Stud Spacings and Slab openings at other temperatures, see "Old North" Shop Drawing, 1 of 1, for this project.

~ DETAIL "A" ~

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

SUPERSTRUCTURE DETAILS
STATE ROUTE 95 OVER TELLICO RESERVOIR DIVERSION CANAL
STATION 150+60.00
LOUDON COUNTY
1975

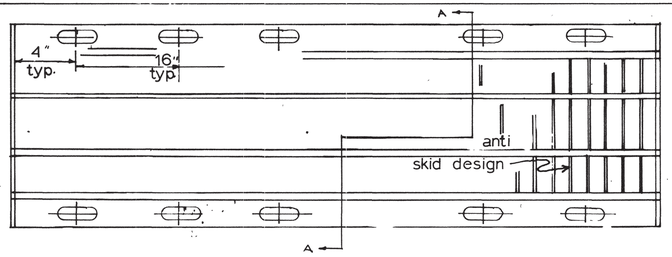
DESIGNED BY E.P. Wasserman DATE 5-75
DRAWN BY R. Dotson DATE 6-75
SUPERVISED BY McTurtle/Wasserman DATE 6-75
CHECKED BY Morris DATE 6-75

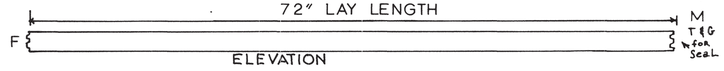
CORRECT H.H. Derrick ENGINEER OF STRUCTURES
APPROVED Lewis Evans DIRECTOR OF HIGHWAYS

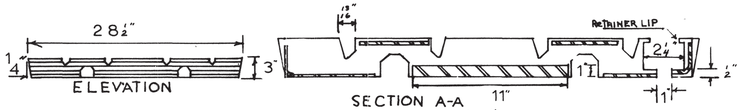
M-35-131

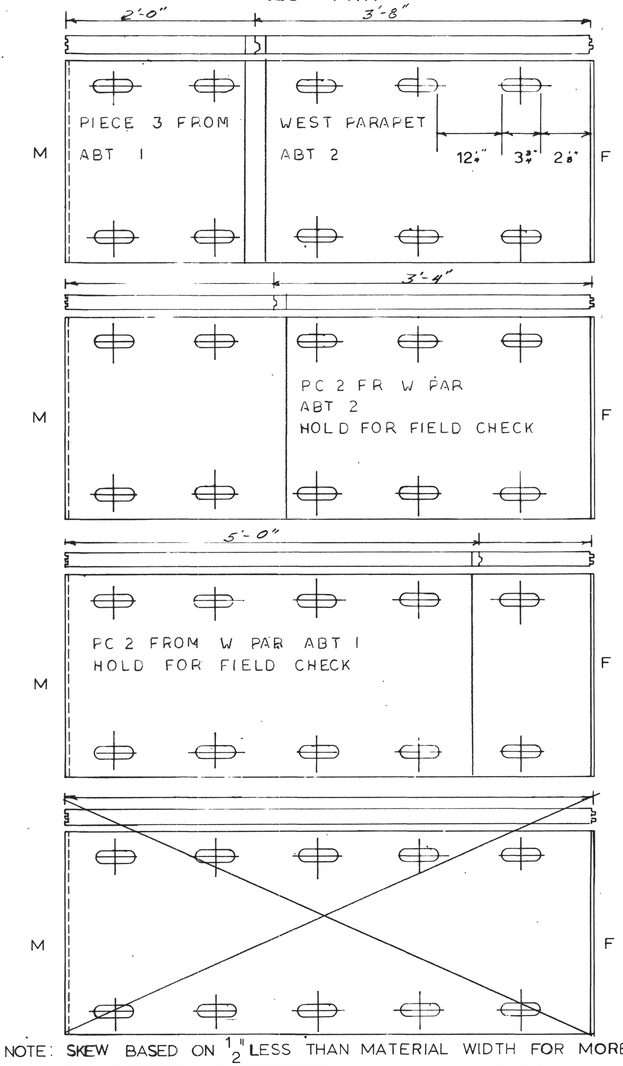
MICROFILMED

Revision 1 EEI 13 Jan 76: This Dwg Added to Contract Plans.

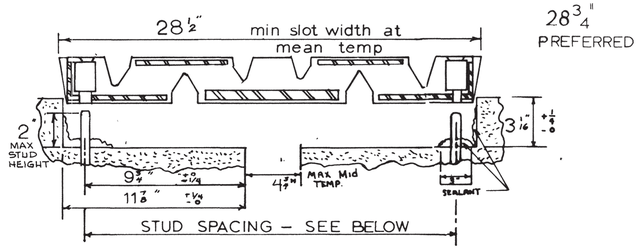








NOTE: SKEW BASED ON $\frac{1}{2}$" LESS THAN MATERIAL WIDTH FOR MORE ACCURATE MEASURE.



SECTION THROUGH JOINT

NOTE: SIDES OF TROUGH MAY BE VERTICAL OR SLOPED. EDGES MAY BE ARMORED. SEE CONTRACT DRWGS.

STUD SPACING CHART — 650	
TEMP. °F	cc stud spacing (inches)
0	27½
16	26⅝
32	25⅞
48	24⅞
60	24¼
72	23⅝
88	22¾
104	21⅞
120	21
TORQUE TO 100 FT. LBS.	7/8" D STUDS

M = MALE END START LOW-EAST CURB w/ M. END OF MOLDED CURB

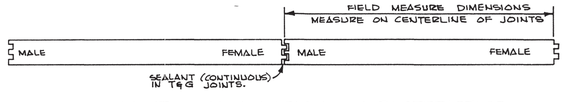
INSTALLATION INSTRUCTIONS FOR ELASTOMERIC EXPANSION DAM (TRANSFLEX)

THIS EXPANSION JOINT IS WATERTIGHT WHEN PROPERLY INSTALLED. A FACTORY TRAINED REPRESENTATIVE MUST BE ON THE JOB PRIOR TO AND DURING INSTALLATION OF INITIAL PIECES.

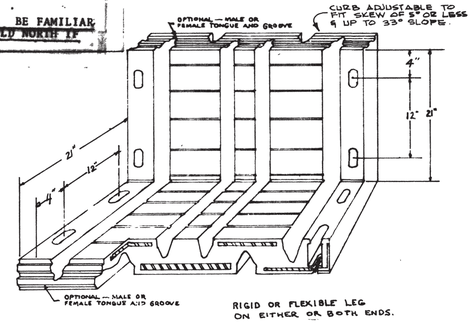
1. FORM NOTCH AS INDICATED ABOVE. BOTTOM OF NOTCH SHALL BE PARALLEL TO GRADE. ANY DEPRESSIONS OR HIGH AREAS SHALL BE CORRECTED BY FILLING WITH GROUT OR GRINDING.
2. USE TEMPLATE OR UNIT OF JOINT TO MARK STUD SPACING ACCORDING TO TEMPERATURE CHART ABOVE. DRILL AND SET ANCHORS IF NOT POURED INTEGRALLY WITH CONCRETE. (NOTE MAX. HEIGHT)
3. REMOVE DUST, LOOSE MORTAR AND DEBRIS FROM DEPRESSION PRIOR TO PLACING SEALANT. BEDDING SURFACE MUST BE DRY.
4. CLEAN ENDS, SIDES AND BOTTOM OF ELASTOMERIC WITH WIRE BRUSH.
5. APPLY SUFFICIENT SEALANT BOTH SIDES OF ANCHOR BOLT LINES AND UP EACH SIDE OF NOTCH TO INSURE WATERTIGHTNESS.
6. LAY ELASTOMERIC JOINT, BUTTERING JOINTS AND SEATING FIRMLY IN NOTCH AND MAKING UP TIGHTLY WITH EACH ADJACENT SECTION.
7. TORQUE TO SPECIFIED AMOUNT AFTER SEALANT HAS TAKEN INITIAL SET. DO NOT TORQUE STUDS AT END OF JOINT UNTIL ADJACENT SECTION HAS BEEN INSTALLED. RE-TORQUE AFTER 1 HOUR.

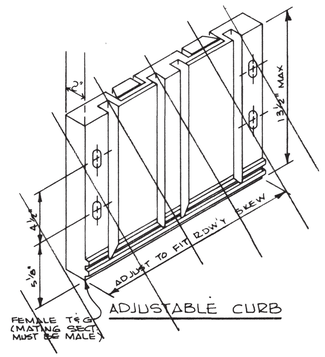
8. FILL ANCHOR CAVITIES HALF FULL OF SEALANT AND INSTALL CAVITY PLUGS. PUSH INTO VOID UNTIL SECURED BY RETAINER LIP. INSERT TIP OF CAULKING CARTRIDGE INTO CAVITY AND FILL COMPLETELY.
9. FILL ANY VOID BETWEEN ELASTOMERIC AND ADJACENT UNITS OR WEARING SURFACE WITH SEALANT.
10. CURB SECTIONS SHALL BE OF THE TYPE SHOWN, CONTAINING A MINIMUM OF TWO ANCHORS PER SIDE PER SECTION. CURB SECTIONS SHALL BE LIBERALLY COATED WITH SEALANT BEFORE BOLTING DOWN, WITH PROCEDURES OUTLINED ABOVE TO BE FOLLOWED.
11. CLEAN EXCESS SEALANT FROM JOINTS, ROADWAY AND PLUGS.
12. FINAL CUT PIECE ON ANY JOINT TO BE MADE AFTER FIELD MEASUREMENT OF ALL PIECES INSTALLED EXCEPT FINAL TWO PIECES. SEE SKETCH ABOVE FOR MEASUREMENT METHOD AND NOMENCLATURE.
13. FINAL CUT PIECES INSTALLED SIMULTANEOUSLY TO INSURE MATING OF T & G.
14. MINIMUM EQUIPMENT NEEDED BY CONTRACTOR:
    A. CARTRIDGE TYPE CAULKING GUN FOR 1 COMPONENT SEALANT.
    B. ROTARY IMPACT DRILL AND BITS FOR DRILLING STUD HOLES.
    C. WIRE BRUSHES.
    D. SOCKET WRENCHES AND TORQUE WRENCH.
    E. HYDRAULIC JACK (MUST WORK LYING ON SIDE)

SCHEDULE FACTORY REPRESENTATIVE AT INSTALLATION TIME. ALLOW 2 WEEKS. BE FAMILIAR WITH THESE SHOP DRAWINGS. CHECK JOINT DEPRESSION DIMENSIONS. CALL OLD NORTH IF ANY QUESTIONS.

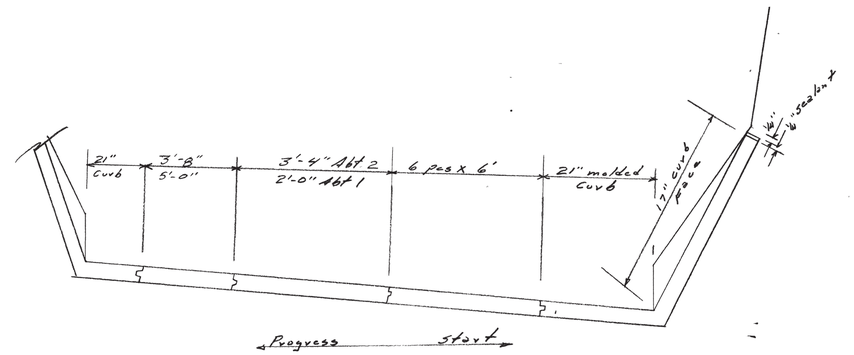


JOINT INSTALLATION CHARACTERISTICS





MOLDED CURB SECTION



TYP SECT AT ABT

DEVIATIONS _____

PO NOS CUST _____ ON _____

LENGTHS BID _____ INSTALL _____ ORDER _____

BILL OF MATERIAL

MATERIAL	QUANTITY	TYPE	LOCATION COMPONENT	JOINT ON ℄
SEALANT	6 CSE			
ANCHORS	195	EXP		
JOINT	12 X 6'	650	ABT 1-2	46'-6"
DO	3	650	CUT-CLOSURES	
~~DO~~		650		
~~DO~~		650		
TONGUE & GROOVE	2	MALE		
DO	2	FEM		
CURB ℄	2	MOLD	RIGID RDWY LEG RIGID VERT LEG M T&G	
DO		DO	" DO " DO F DO	
~~DO~~		~~DO~~	DO DO DO	
~~DO~~		ADJ		

ENGINEER TENN DOT

LOCATION S OF LENOIR CITY

COUNTY LOUDON

CONTRACTOR SOUTHEASTERN BRIDGE

SHIP ADDRESS JOBSITE

DISTRIBUTOR M. J + W

BRIDGE NO

SR95 OVER

DIVERSION CANAL

STATION 150+60.00

LOUDON COUNTY

Elastomeric Expansion Joint

drn MR

ck BHS

rev

approved

OLD-NORTH manufacturing co., inc.

800-222-4481 IN N.C.
800-438-4436 IN DEL., S.C., TENN., VA., W.VA., GA., MD.

OLD NORTH RD. LENOIR, NC 28645

proj SP 53008 321G-04

job instal date 8-76

M-35-131-A

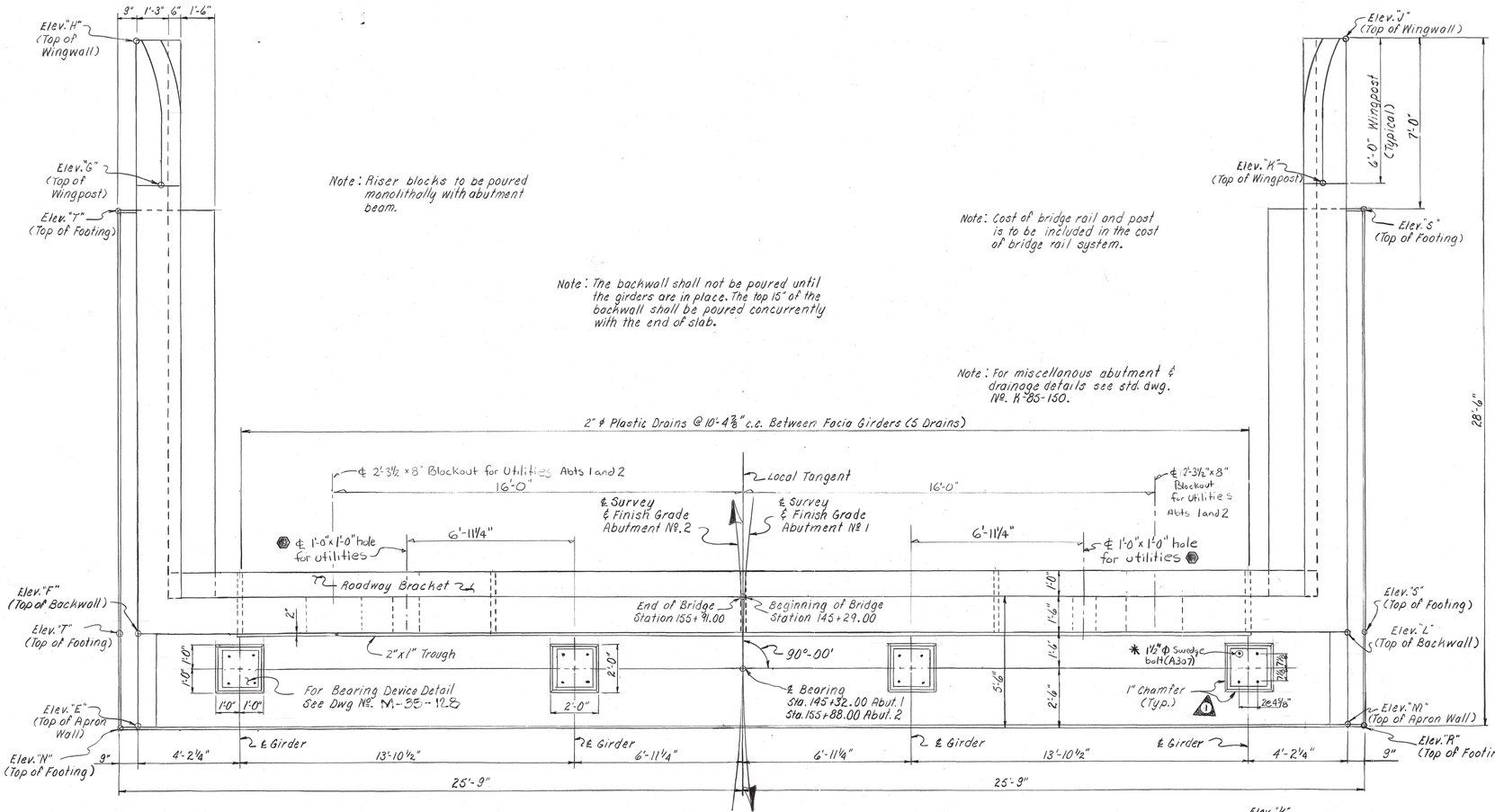
MICROFILMED

SP53008-3216-04

PROJECT NO.	YEAR	SHEET NO.
	1975	

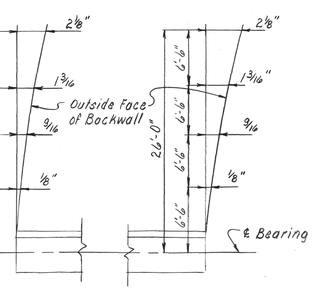
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	11-10-75	DRL	Anchor Bolt Information Added.
2	24May76	DRL	Additional Utility Blockouts added.



PLAN

Abutment No. 1 Looking Back on Survey
Abutment No. 2 Looking Forward on Survey



WING LAYOUT ABUTMENT No. 1

(Looking Back on Survey)

Wingwalls to conform to horizontal cure.

TABLE OF ELEVATIONS

Elev.	Abut. No. 1	Abut. No. 2
"A"	845.71	846.69
"B"	844.30	847.51
"C"	844.08	848.33
"D"	843.26	849.14
"E"	854.83	875.18
"F"	856.54	877.07
"G"	858.51	880.11
"H"	855.76	877.43
"J"	852.80	880.39
"K"	855.76	882.84
"L"	853.58	880.03
"M"	851.88	878.13
"N"	844.99	865.97
"R"	842.54	868.42
"S"	842.50	868.38
"T"	844.95	865.93
"P1"	841.21	862.19
"P2"	841.12	862.28
"P3"	840.84	862.56
"P4"	840.55	862.84
"P5"	840.27	863.13
"P6"	839.99	863.41
"P7"	839.71	863.70
"P8"	839.43	863.98
"P9"	839.14	864.27
"P10"	838.85	864.55
"P11"	838.76	864.64

WING LAYOUT ABUTMENT No. 2

(Looking Forward on Survey)

ELEVATION

Abutment No. 1 Looking Back on Survey
Abutment No. 2 Looking Forward on Survey

Note: For sections not shown this sheet see Dwg. No. M-35-133.

Note: Batter all piles forward 2:12 front face.

See Dwg M-35-128 and Dixon-Spencer Dwg 12392/124 for additional data concerning bearing device installation.

41 Bars A542 ¾w H540 @1'-0" c.c. 40 Spaces = 40'-0" (F.S.)
41 Bars A447 ¾w H540 @1'-0" c.c. 40 Spaces = 40'-0" (N.S.)

ESTIMATED QUANTITIES

Item	Concrete Class "A" C.Y.	Steel Reinf. Lbs.
Abut. No. 1	138.7	13,900
Abut. No. 2	138.6	13,955

See "Isometric at Bridge Ends" and Section "C-C" for cover plates over hole for "Future utilities." Plate to be furnished by Contractor and to be included in the price bid for item 602.03

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

ABUTMENTS No. 1 & 2
STATE ROUTE 95 OVER
TELLICO RESERVOIR DIVERSION CANAL
STATION 150+60.00
LOUDON COUNTY
1975

CORRECT _____ ENGINEER OF STRUCTURES
APPROVED _____ DIRECTOR OF HIGHWAYS

M-35-132

DESIGNED BY	Wasserman	DATE	5-75
DRAWN BY	Claiborne Glenn	DATE	5-75
SUPERVISED BY	McNulty & Wasserman	DATE	5-75
CHECKED BY	Graves	DATE	5-75

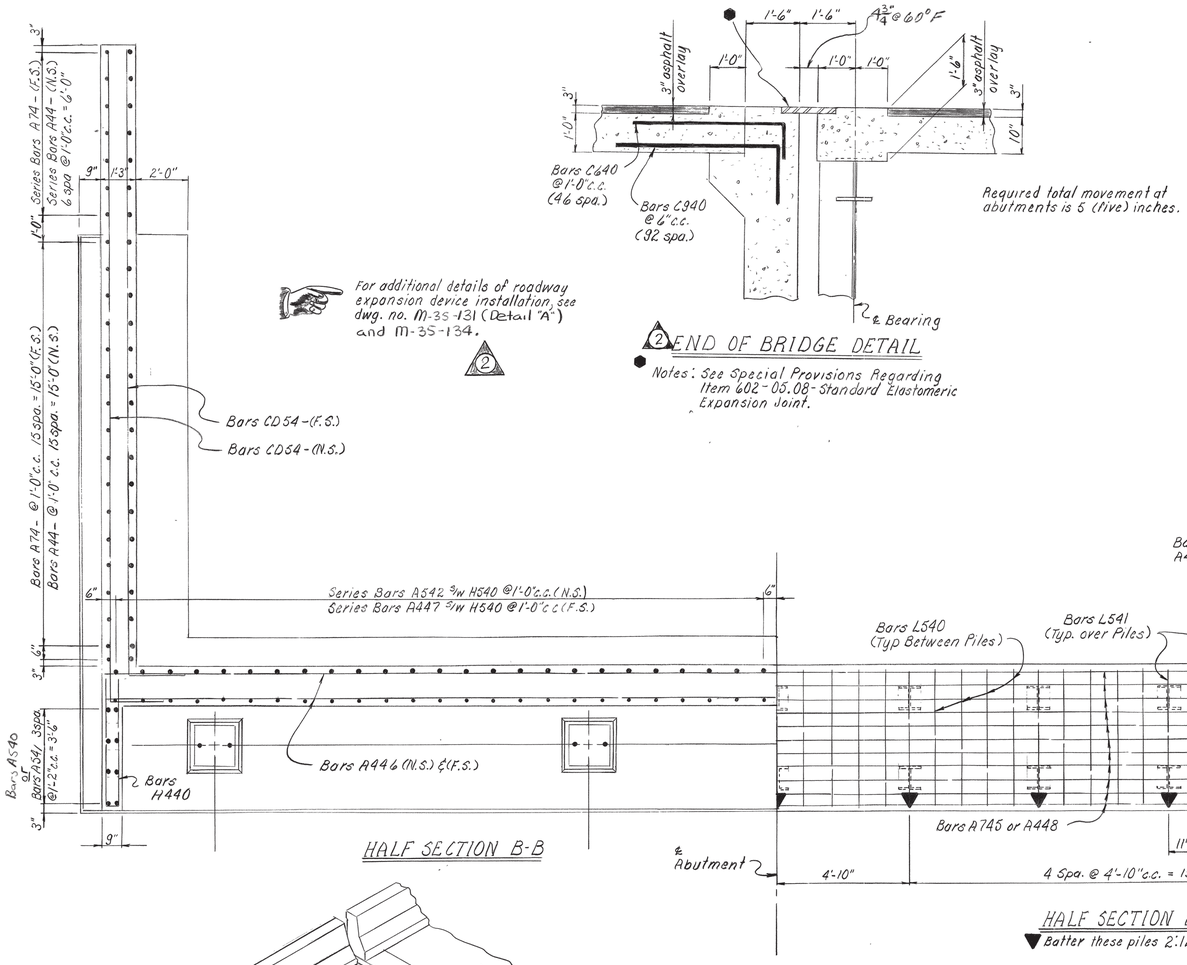
MICROFILMED

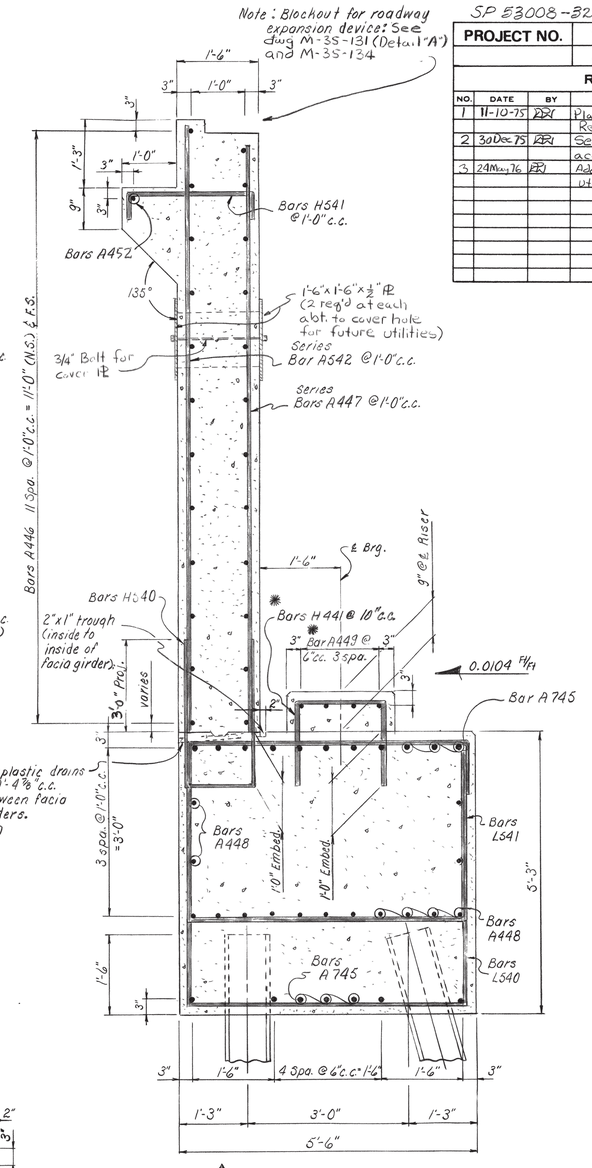
SP E3008-3216-04

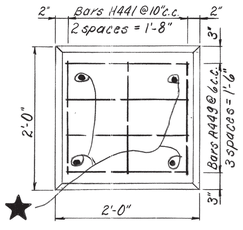
PROJECT NO.	YEAR	SHEET NO.
	1975	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	11-10-75	RRT	Plan of Riser Block Detail Revised.
2	30Dec75	RRT	Sec C-C revised to accomodate rdy expan. dev.
3	24May76	RRT	Additional Blockouts for utilities.







Note: Place reinforceing steel in riser blocks so as not to interfear with bearing device anchor bolt. See bearing device detail on dwg No. M-35-128.

★ Note: When pouring riser blocks & abutment beam provisions shall be made for setting anchor bolts for bearing devices. See bearing details on dwg. No. M-35-128.

4 PLAN OF RISER BLOCK
(Showing Anchor Bolts & Reinforcing Steel)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

ABUTMENTS No. 1 & 2 DETAILS
STATE ROUTE 95 OVER
TELLICO RESERVOIR DIVERSION CANAL
STATION 150+60.00
LOUDON COUNTY
1975

DESIGNED BY Wasserman DATE 5-75
DRAWN BY Claiborne, Glenn DATE 5-75
SUPERVISED BY McInturff & Wasserman DATE 5-75
CHECKED BY Graves DATE 5-75

CORRECT _____ ENGINEER OF STRUCTURES
APPROVED _____ DIRECTOR OF HIGHWAYS

M-35-133

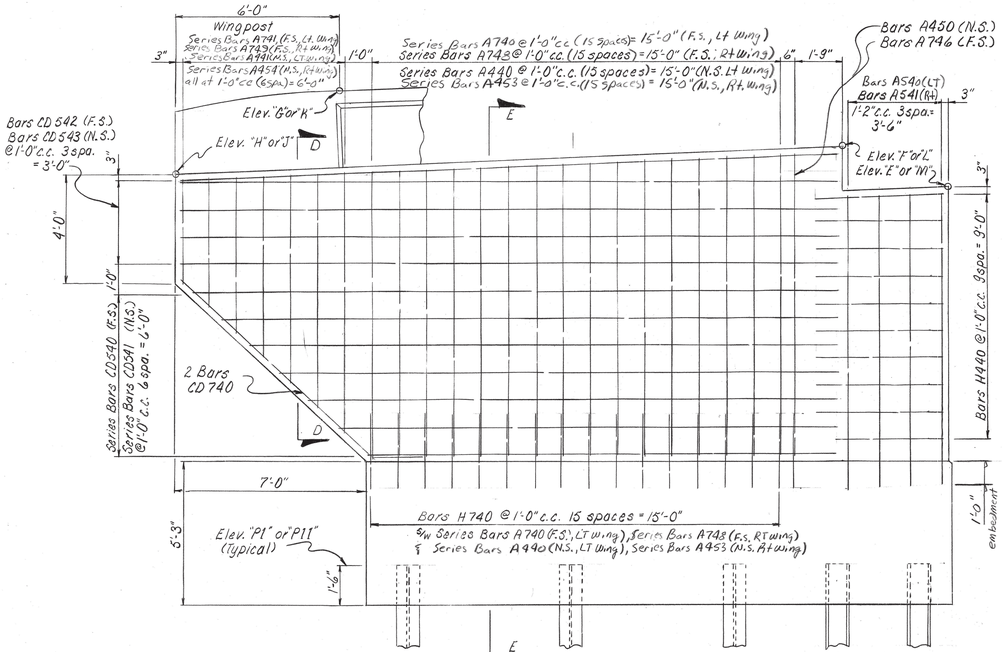
MICROFILMED

S.P. 53008-3216-04

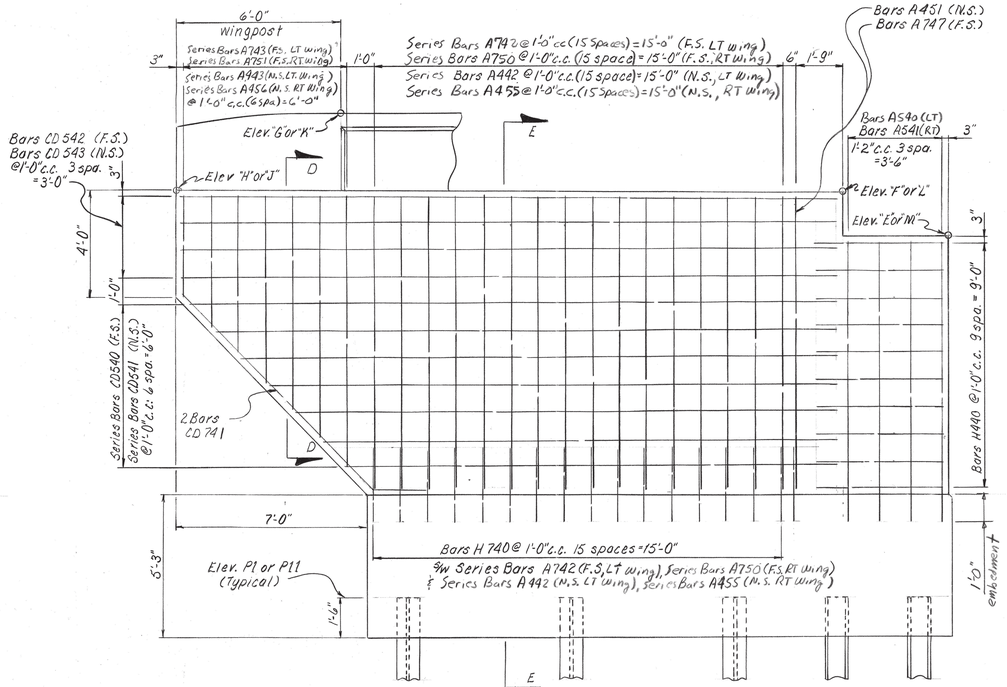
PROJECT NO.	YEAR	SHEET NO.
	1975	

REVISIONS

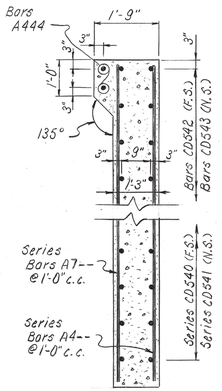
NO.	DATE	BY	BRIEF DESCRIPTION



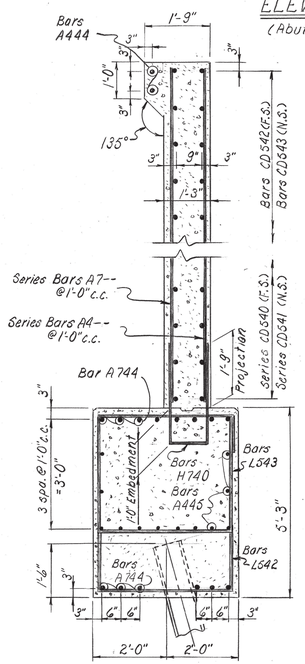
ELEVATION X-X
(Abutment No. 1)



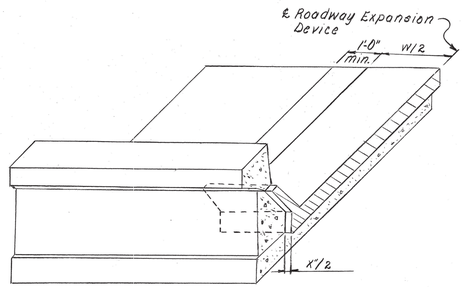
ELEVATION Y-Y
(Abutment No. 2)



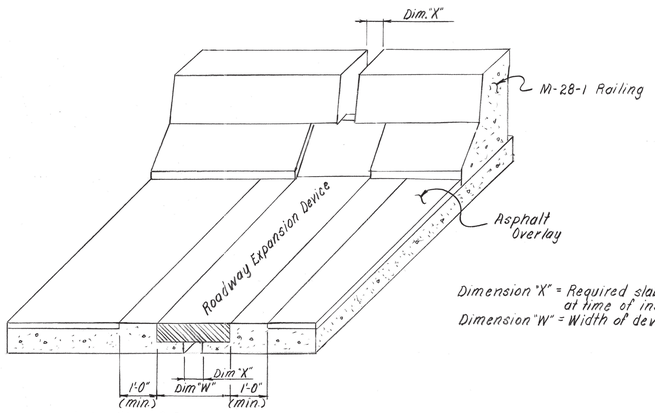
SECTION D-D



SECTION E-E



Back elevation of Roadway Expansion Device Installation



Front elevation of Roadway Expansion Device Installation

Dimension "X" = Required slab opening for temperature at time of installation.
Dimension "W" = Width of device.

ROADWAY EXPANSION DEVICE INSTALLATION DETAILS

DESIGNED BY Wasserman DATE 5-75
DRAWN BY Claiborne, Glenn DATE 5-75
SUPERVISED BY Nicholoff & Wasserman DATE 5-75
CHECKED BY Graves DATE 6-75

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

ABUTMENTS No. 1 & 2
STATE ROUTE 95 OVER
TELLICO RESERVOIR DIVERSION CANAL
STATION 150+60.00
LOUDON COUNTY
1975

CORRECT _____ ENGINEER OF STRUCTURES
APPROVED _____ DIRECTOR OF HIGHWAYS

M-35-134

MICROFILMED

SP 53008-3216-04

PROJECT NO.	YEAR	SHEET NO.
	1975	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	10-28-75	E.P.W.	Revised Reinforcing Steel Qts.
2	11-10-75	RBT	Revised Reinf. Steel Qts. & Added Anchor Bolt Dimes. (Note
3	17 Dec 75	RBT	Anchor Bolt Spacing Changed
4	3-5-76	E.P.W.	Revised Reinf. Steel Qts.

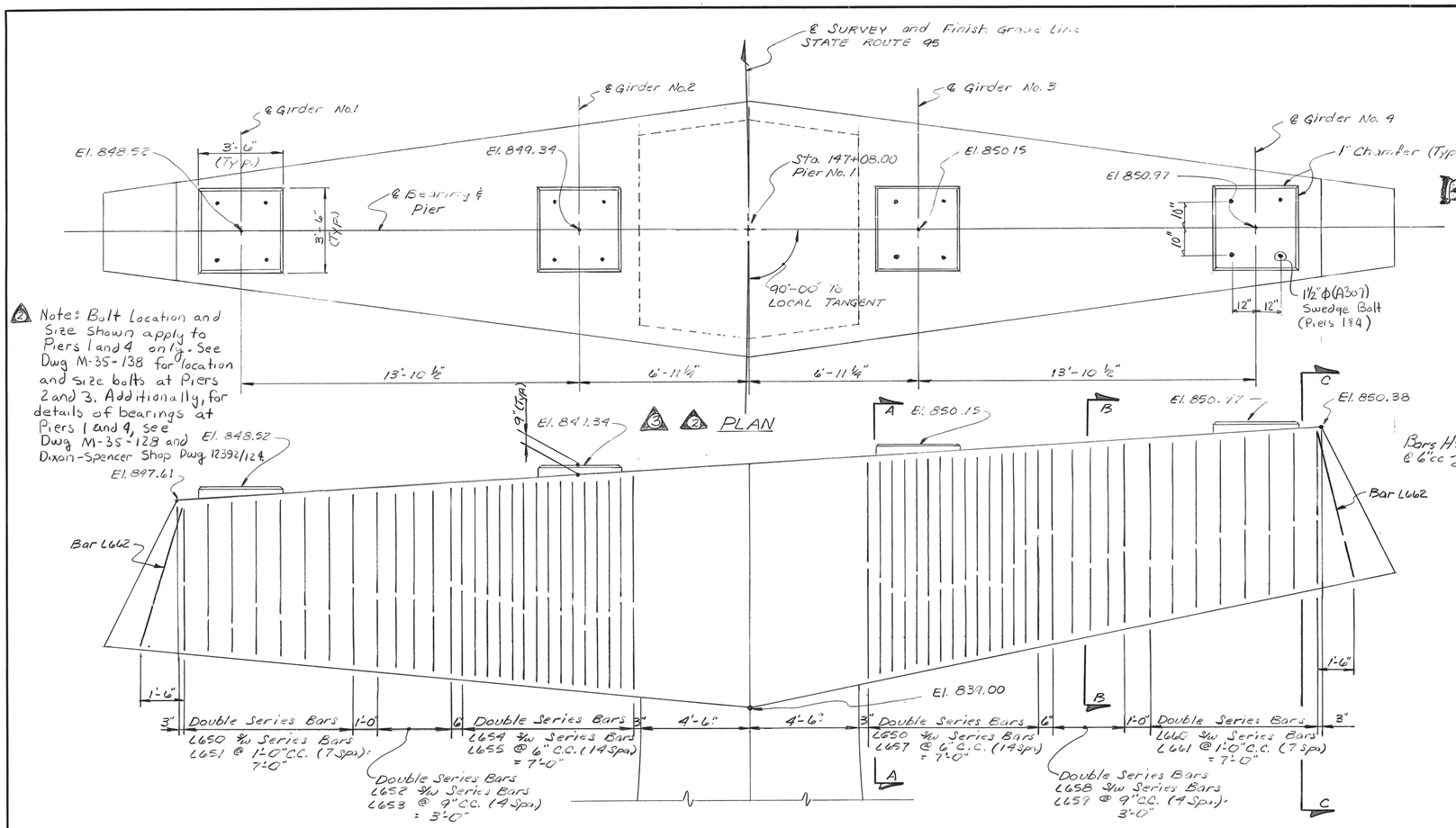
NOTE: Riser blocks to be poured monolithically with cap beam.

When pouring capbeam, provisions shall be made for setting anchor bolts. Bolt projection.

Column Steel to extend 6'-0" into cap Lmin.

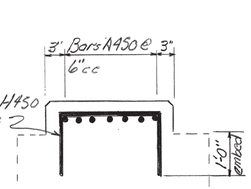
For Additional Pier Details, Dimensions, and Notes; see respective pier drawings.

NOTE: For sections A-A, B-B, and C-C, showing stirrup arrangement see dwg. no. M-35-140

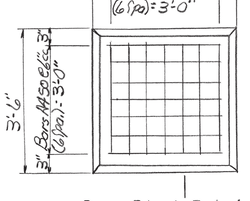


Note: Bolt location and size shown apply to Piers 1 and 4 only. See Dwg M-35-138 for location and size bolts at Piers 2 and 3. Additionally, for details of bearings at Piers 1 and 4, see Dwg M-35-128 and Dixon-Spencer Shop Dwg 12392/124

PLAN

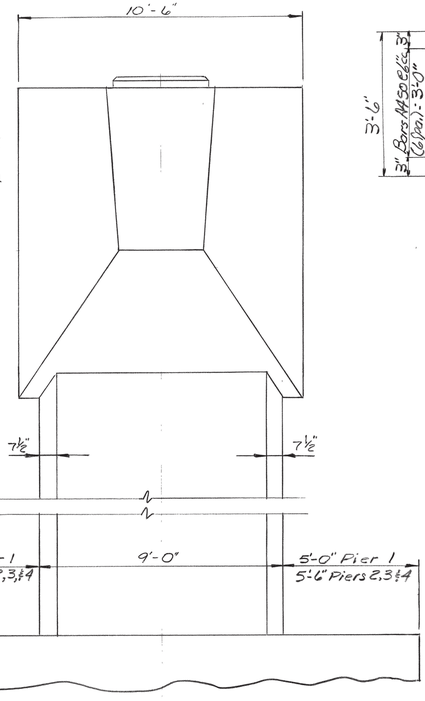


Section A-B



Riser Block Detail

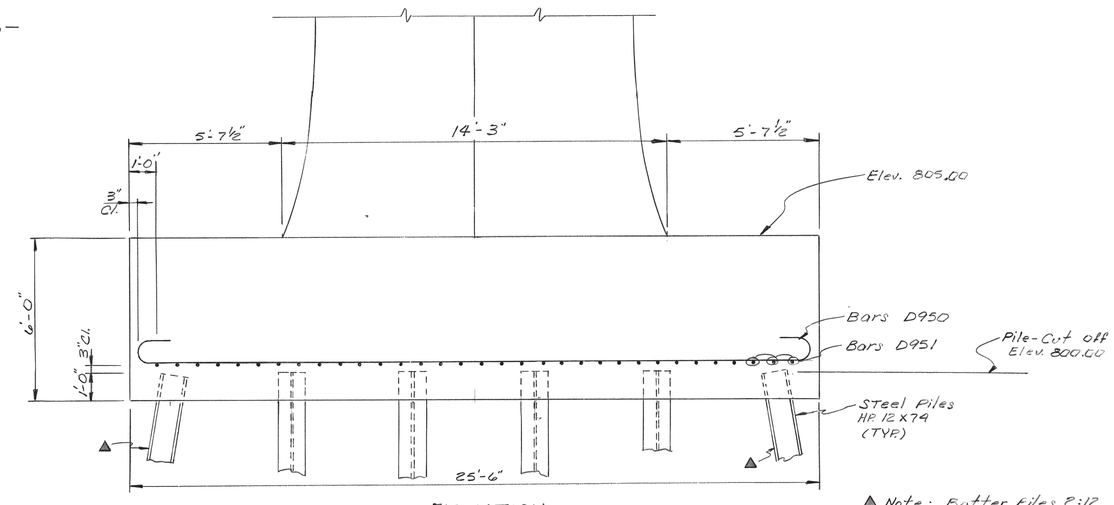
R.B.



END ELEVATION
(Typical Piers 1 thru 4)

-INDEX OF PIER DETAILS-

ITEM	Pier 1	Pier 2	Pier 3	Pier 4
Cap Beam Stirrup Spacing	M-35-135	M-35-135	M-35-135	M-35-135
Cap Beam Temp. Reinf.	M-35-138	M-35-138	M-35-138	M-35-138
Cap Beam Main Reinf.	M-35-139	M-35-139	M-35-139	M-35-139
Cap Beam Typ. Sec.	M-35-140	M-35-140	M-35-140	M-35-140
Cap Beam Dimens.	M-35-141	M-35-141	M-35-141	M-35-141
Column Front Elev. View	M-35-135 M-35-136 M-35-141	M-35-137 M-35-141	M-35-137 M-35-141	M-35-138 M-35-141
Column End View	M-35-135	M-35-135	M-35-135	M-35-135
Column Typ. Sec.	M-35-140	M-35-140	M-35-140	M-35-140
Footing Details	M-35-135 M-35-136	M-35-137 M-35-139	M-35-137 M-35-139	M-35-138 M-35-139
Riser Block Slope Det.	M-35-141	M-35-141	M-35-141	M-35-141
Pier Elev.	M-35-135	M-35-138	M-35-138	M-35-138
Pier Quantities	M-35-135	M-35-138	M-35-138	M-35-138
Clearance Gauges	M-35-141	M-35-141	M-35-140	M-35-141



ELEVATION
(Looking Forward or Survey)

▲ Note: Batter Piles 2:12

ESTIMATED QUANTITIES

ITEM	Concrete Class "A" C.Y.	Reinforcing Steel Lbs.
Pier No. 1	333.1	48,025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PIER NO. 1 DETAILS
STATE ROUTE 95 OVER TELLICO RESERVOIR DIVERSION CANAL
STATION 150+60.00
LOUDON COUNTY
1975

DESIGNED BY E.P. Wasserman DATE 5-75
DRAWN BY R. Dotson DATE 6-75
SUPERVISED BY M.C. Jr. Turpin / E.P. Wasserman DATE 6-75
CHECKED BY Morris DATE 6-75

CORRECT H.H. DeWitt
ENGINEER OF STRUCTURES
APPROVED Lewis Evans
DIRECTOR OF HIGHWAYS

M-35-135

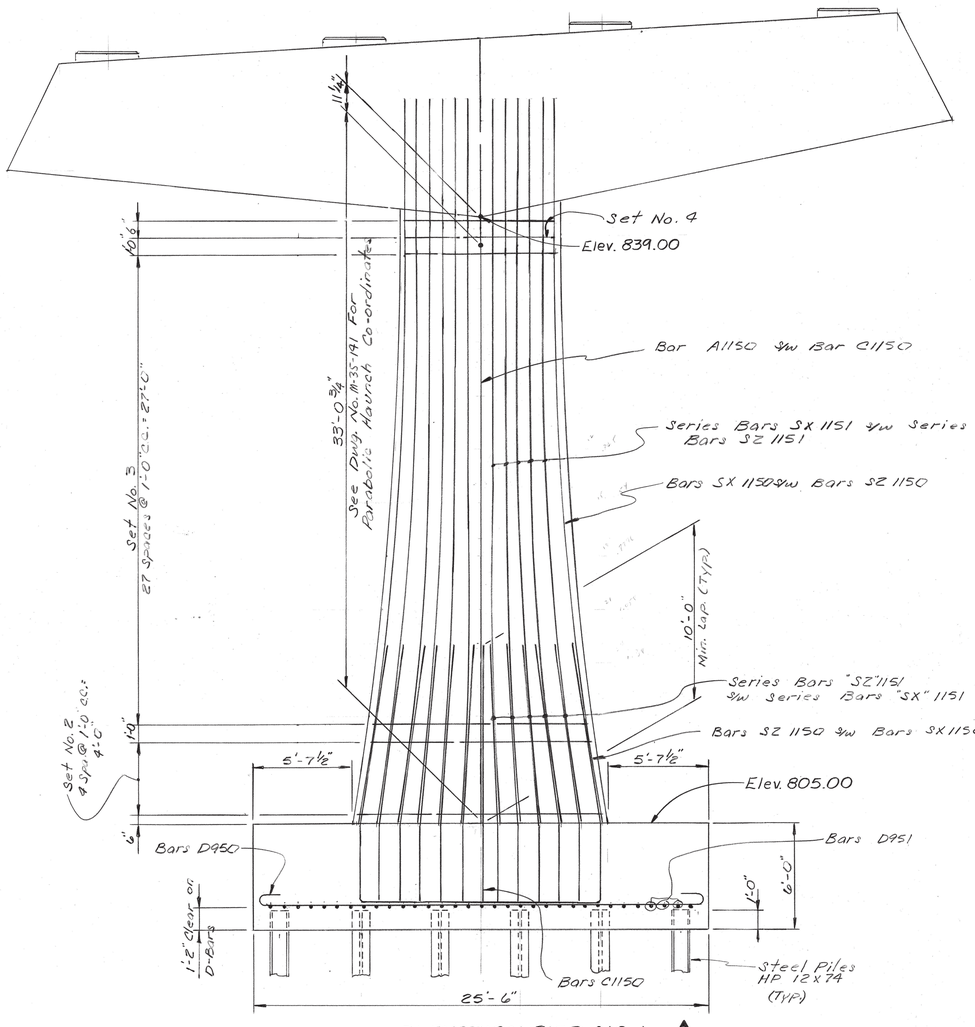
ILMED

SP 53008-3216-04

PROJECT NO.	YEAR	SHEET NO.
	1975	

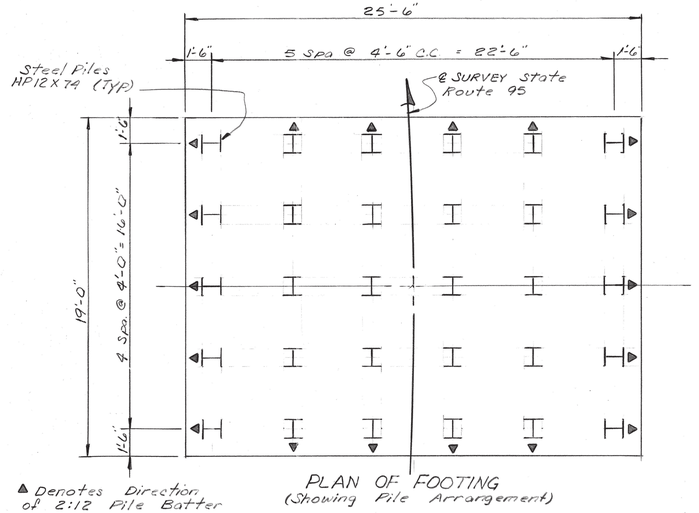
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	10-28-75	E.P.W.	General Revisions



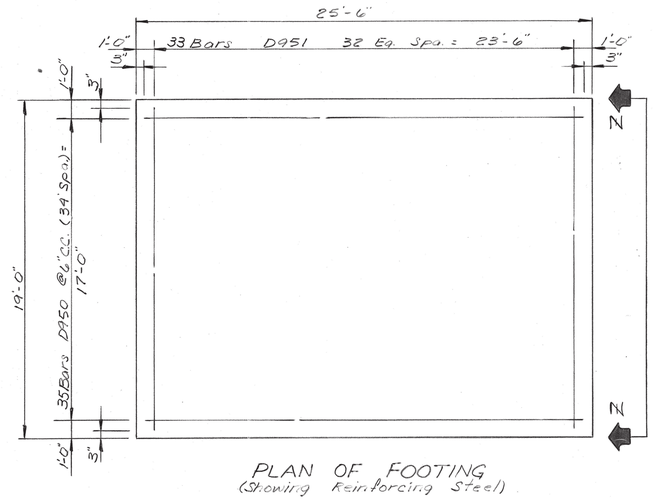
ELEVATION PIER NO. 1 ⚠1
(Looking Forward on Survey)

Note: For typical cross sections of columns showing sets 1 thru 4, see dwg. no. M-35-140.

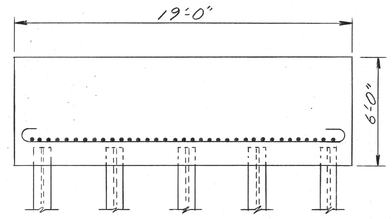


▲ Denotes Direction of 2:12 Pile Batter

PLAN OF FOOTING
(Showing Pile Arrangement)



PLAN OF FOOTING
(Showing Reinforcing Steel)



ELEVATION "Z-Z"
(Typical for Pier 1 only)

NOTE: For Index of Pier Details see dwg. no. M-35-135.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PIER No. 1 DETAILS
STATE ROUTE 95 OVER TELLICO
RESERVOIR DIVERSION CANAL
STATION 150+60.00
LOUDON COUNTY
1975

DESIGNED BY E.P. Wasserman DATE 5-75
DRAWN BY R. Dotson DATE 6-75
SUPERVISED BY McInturff & Wasserman DATE 6-75
CHECKED BY Morris DATE 6-75

CORRECT H. V. Lee Frick
ENGINEER OF STRUCTURES
APPROVED Lewis Evans
DIRECTOR OF HIGHWAYS

M-35-136

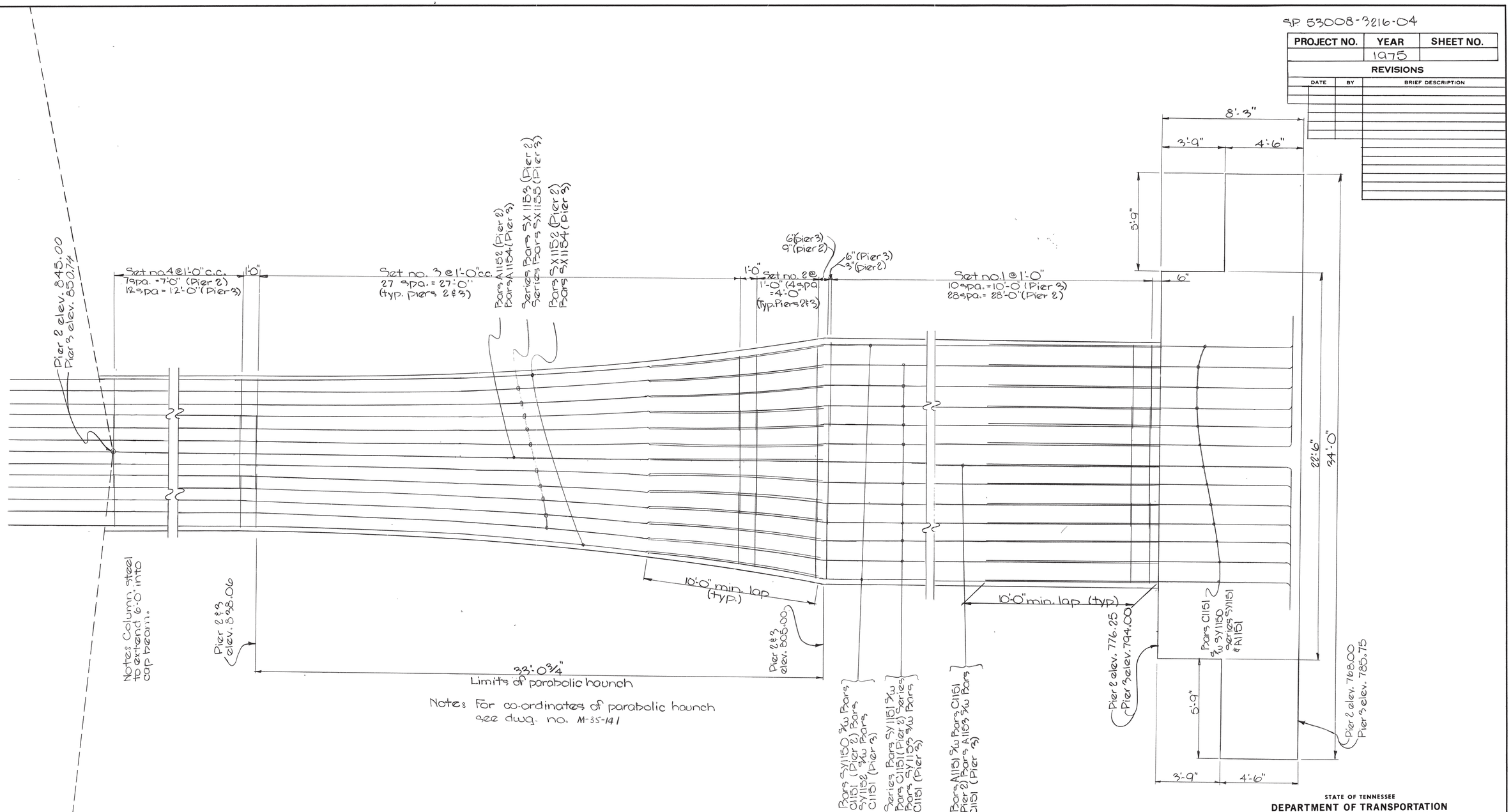
MICROFILMED

SP 53008-3216-04

PROJECT NO.	YEAR	SHEET NO.
	1975	

REVISIONS

DATE	BY	BRIEF DESCRIPTION



Notes: For co-ordinates of parabolic haunch see dwg. no. M-35-141

NOTE: For Index of Pier Details see dwg. no. M-35-135

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PIER FOOTING & COLUMN 2 & 3 DETAILS
STATE ROUTE 95 OVER TELLICO RESERVOIR DIVERSION CANAL
STATION 150+60.00
LOUDON COUNTY
1975

DESIGNED BY Wasserman DATE 5-75
DRAWN BY Scotty Kappa DATE 6-75
SUPERVISED BY McInturff & Wasserman DATE 6-75
CHECKED BY Graves DATE 6-75

CORRECT _____ ENGINEER OF STRUCTURES
APPROVED _____ DIRECTOR OF HIGHWAYS

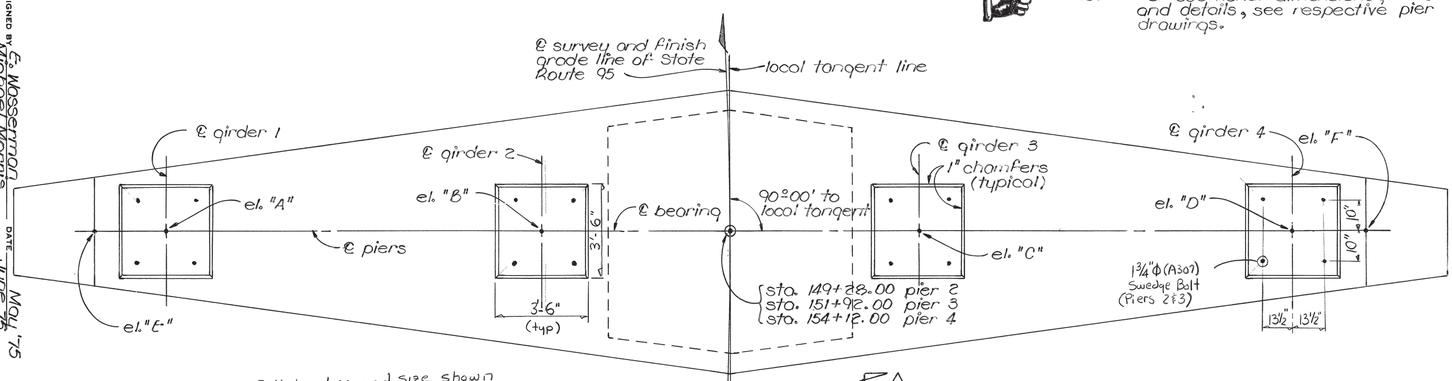
M-35-137

MICROFILMED

MICROFILMED

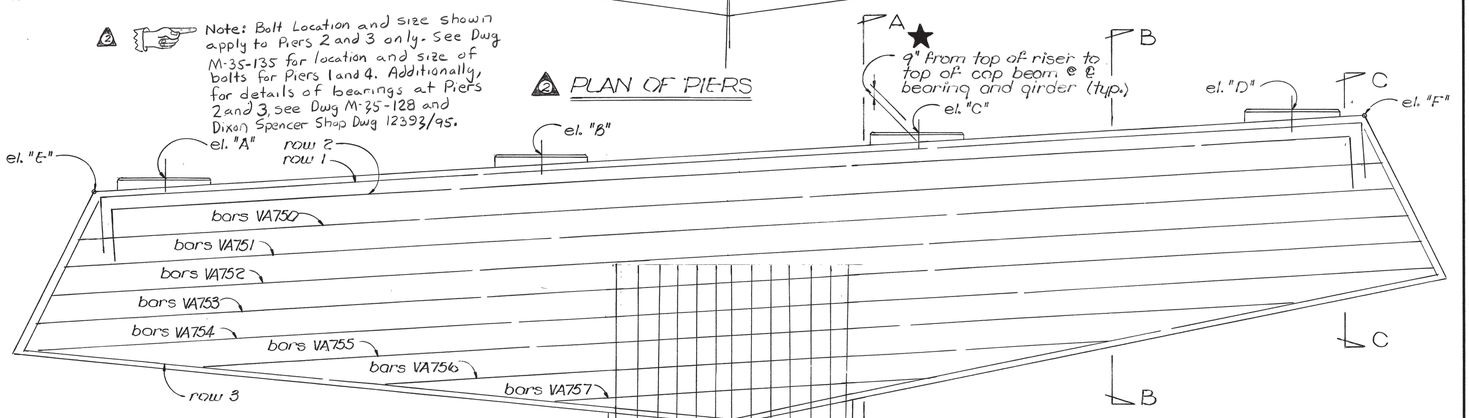
DESIGNED BY E. Wasserman DATE May '75
DRAWN BY Michael Morris DATE June 75
SUPERVISED BY McIntyre & Wasserman DATE June 75
CHECKED BY Graves DATE June 75

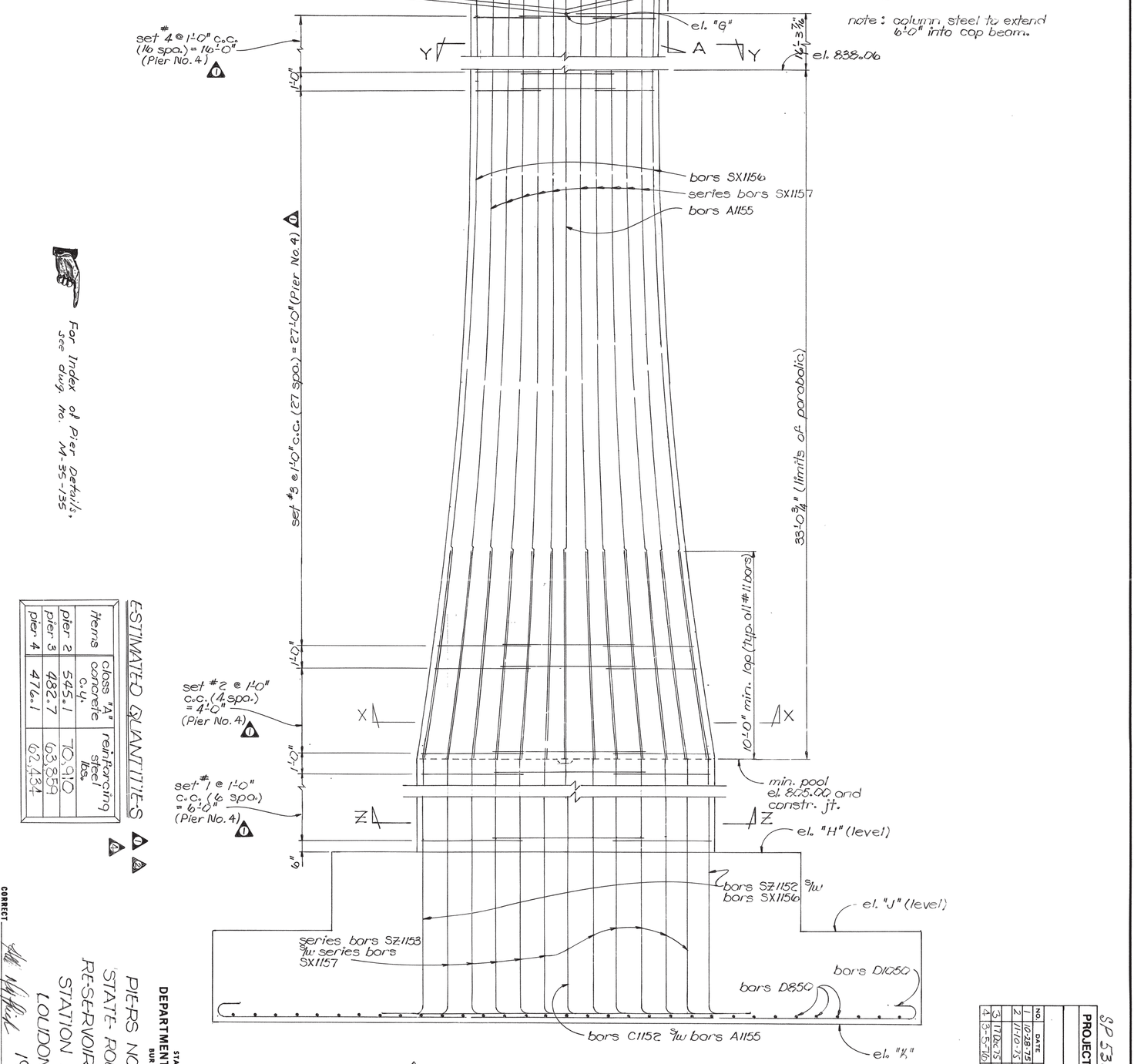
note: For additional dimensions, notes and details, see respective pier drawings.



Note: Bolt Location and size shown apply to Piers 2 and 3 only. See Dwg M-35-135 for location and size of bolts for Piers 1 and 4. Additionally, for details of bearings at Piers 2 and 3, see Dwg M-35-128 and Dixon Spencer Shop Dwg 12393/95.

PLAN OF PIERS





For Index of Pier Details, see dwg. no. M-35-135

ELEVATION OF PIER 4
looking forward on survey

TABLE OF ELEVATIONS

items	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"J"	"K"
pier 2	854.51	855.33	856.15	856.97	853.60	856.38	845.00	776.25	772.50	768.00
pier 3	860.26	861.08	861.90	862.72	859.35	862.13	850.74	794.00	790.25	785.75
pier 4	863.87	864.69	865.51	866.33	862.96	865.74	854.35	797.75	794.00	789.50

ESTIMATED QUANTITIES

items	class "A" concrete c.y.	reinforcing steel lbs.
pier 2	545.1	70,910
pier 3	482.7	63,859
pier 4	476.1	62,434

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PIERS NO. 2, 3 and 4 DETAILS
STATE ROUTE 95 OVER TELLICO
RESERVOIR DIVERSION CANAL
STATION 150+60.00
LOUDON COUNTY
1975

CORRECT [signature] ENGINEER OF STRUCTURES
APPROVED [signature] DIRECTOR OF HIGHWAYS

M-35-138

SP 53008-3216-04

PROJECT NO.	YEAR	SHEET NO.
	1975	

REVISIONS

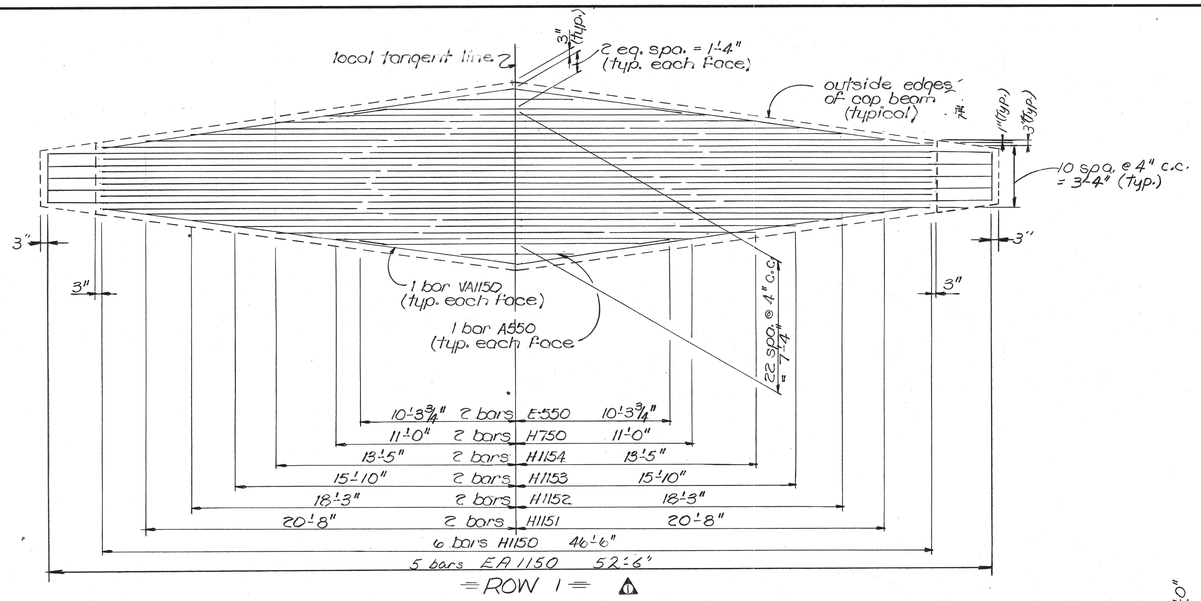
NO.	DATE	BY	BRIEF DESCRIPTION
1	10-28-75	E.P.W.	GENERAL REVISIONS & EST. QTS.
2	11-10-75	DRJ	Revised Reinf. Steel Quant.
3	11 Dec 75	DRJ	Added Anchor Bolt Dimens. Note
4	3-5-76	E.P.W.	Anchor Bolt Spacing Changed Revised Rein. Steel Qts. Pier 2, 3, & 4

SP 53008-3216-04

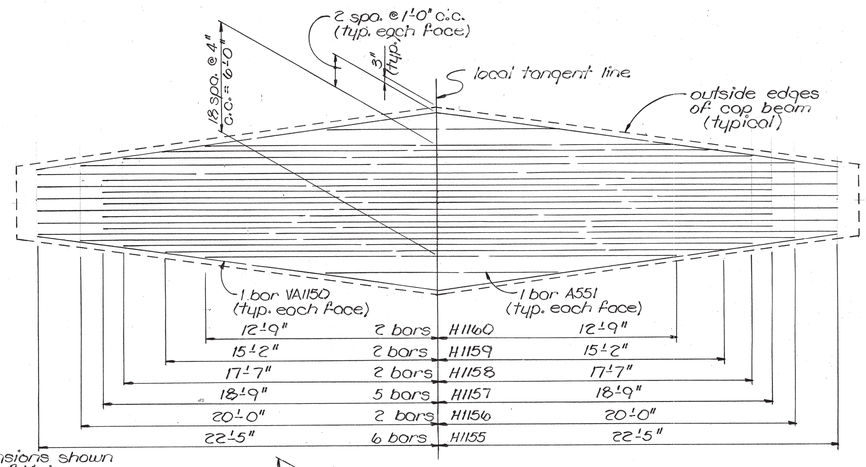
PROJECT NO.	YEAR	SHEET NO.
	1975	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	11-10-75	SPW	Deleted BARS A1160

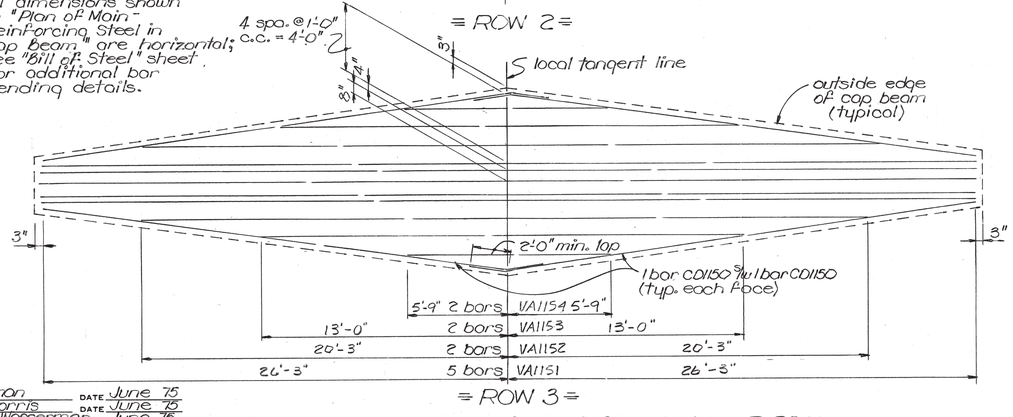


= ROW 1 = ⚠1



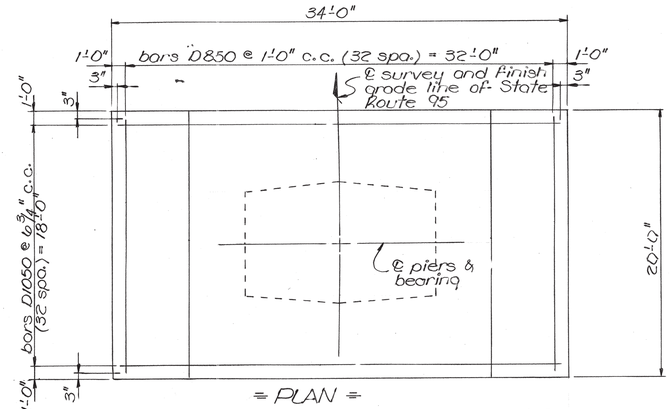
= ROW 2 =

note: all dimensions shown in "Plan of Main Reinforcing Steel in Cap Beam" are horizontal; see "Bill of Steel" sheet for additional bar bending details.

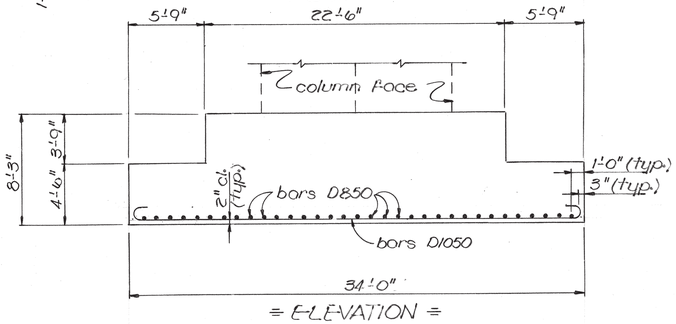


= ROW 3 =

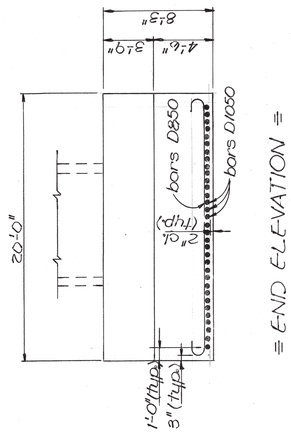
PLAN OF MAIN-REINFORCING STEEL IN CAP BEAM



= PLAN =



= ELEVATION =



= END ELEVATION =

FOOTING DETAILS @ PIERS 2, 3 and 4

NOTE: For Index of Pier Details see dwg. no. M-35-135

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PIERS NO. 2, 3 and 4 DETAILS
STATE ROUTE 95 OVER TELLICO
RESERVOIR DIVERSION CANAL
STATION 150+60.00
LOUDON COUNTY
1975

DESIGNED BY E. Wasserman DATE June '75
DRAWN BY Michael L. Morris DATE June '75
SUPERVISED BY Mountain & Wasserman DATE June '75
CHECKED BY Graves DATE June '75

CORRECT _____ ENGINEER OF STRUCTURES
APPROVED _____ DIRECTOR OF HIGHWAYS

M-35-139

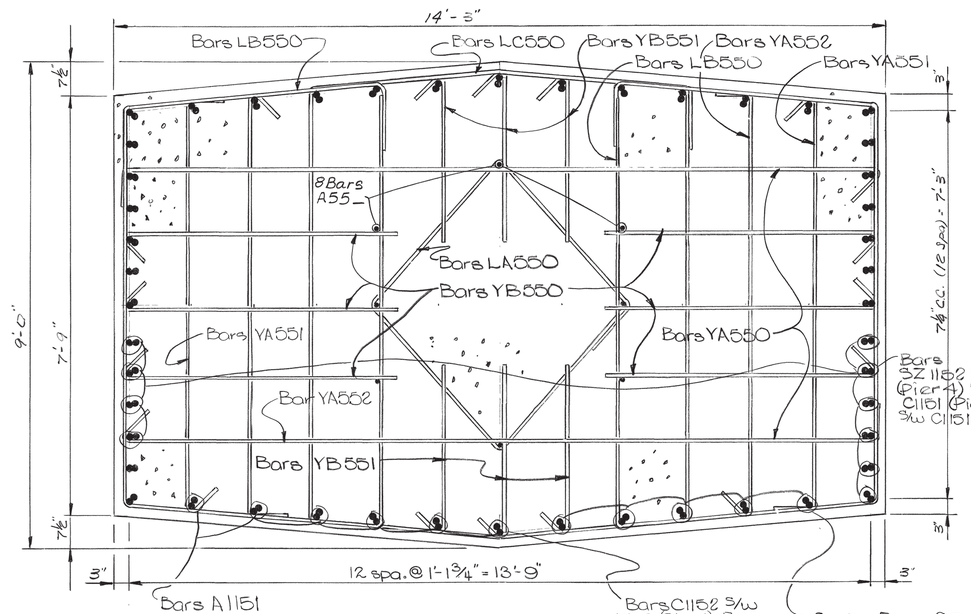
MICROFILMED

SP 53008-8216-04

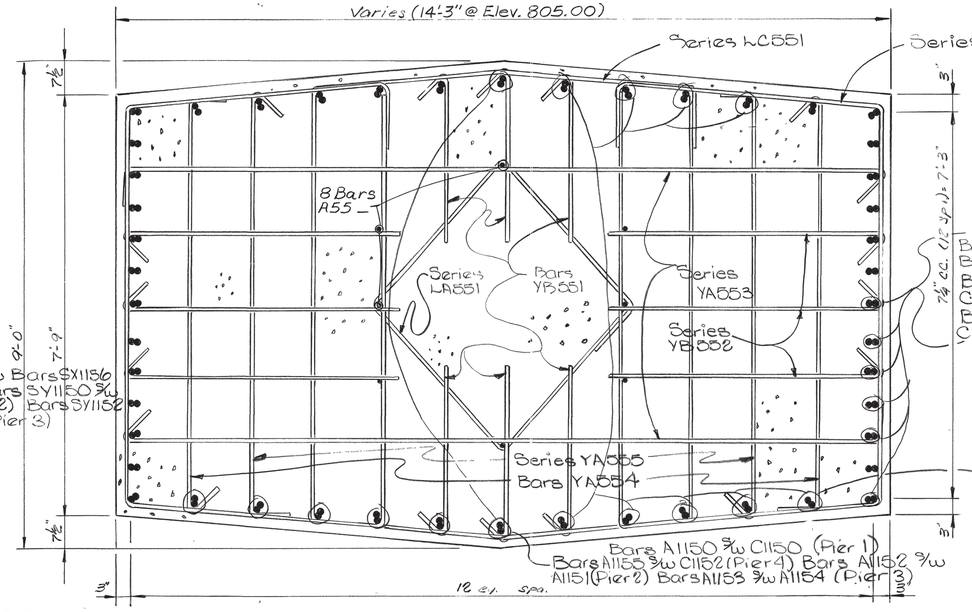
PROJECT NO.	YEAR	SHEET NO.
	1975	

REVISIONS

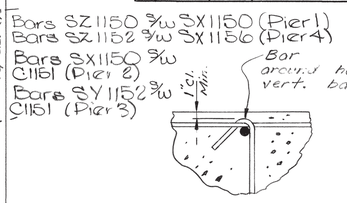
NO.	DATE	BY	BRIEF DESCRIPTION
1	10-28-75	E.P.W.	GENERAL REVISIONS
2	11-10-75	[illegible]	Deleted bars A1160, Added bars YB555
3	8-5-76	E.P.W.	Series bars YA559 & Bars YA560 added to column sections.



⚠1 —SECTION Z-Z—
(Showing Set No. 1 Bars)

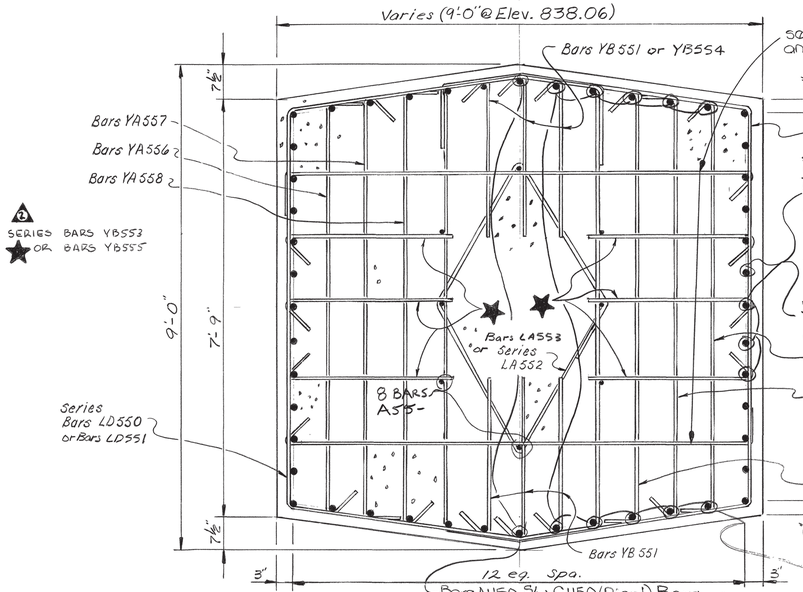


⚠1 —SECTION X-X—
(Showing Set No. 2 Bars)

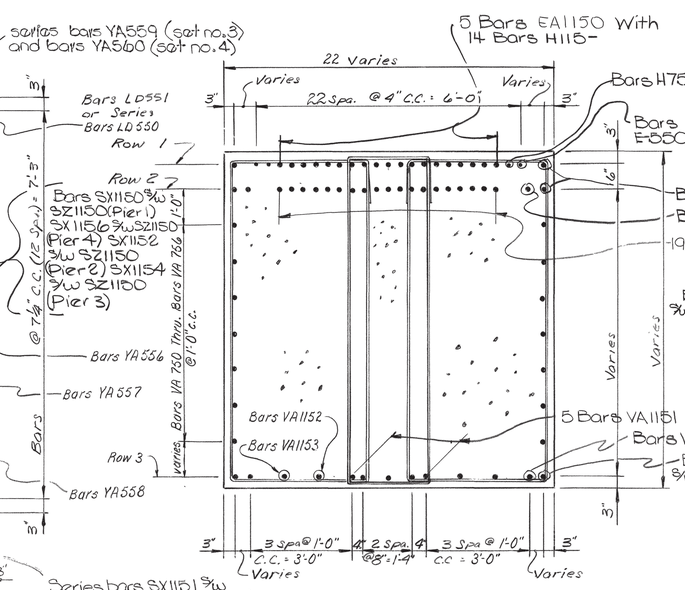


BAR HOOK DETAIL

Series Bars SZ1153 & Series Bars SX1157 (Pier 4) Bars SX1151 & SZ 1151 (Pier 1) Series Bars SY1151 & Series Bars SX1153 (Pier 2) Series SY1153 & Series Bars SX1155 (Pier 3)

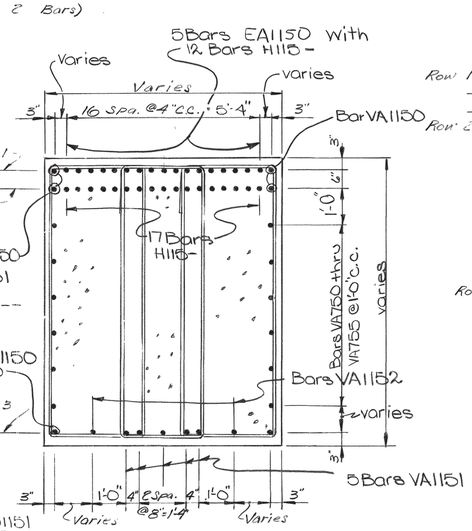


⚠1 —SECTION Y-Y—
(Showing Set No. 3 & 4 Bars)

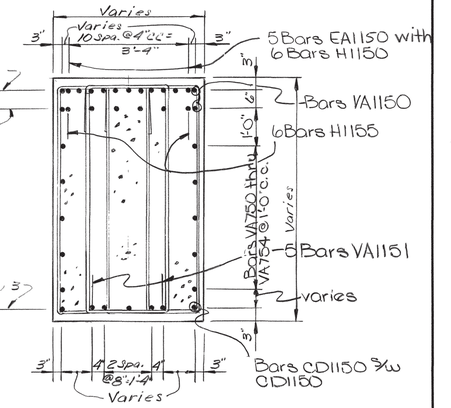


⚠2 —SECTION A-A—

Series bars SX1151 & Series bars SZ1151 (Pier 1) Series bars SX1157 & Series SZ1151 (Pier 4) Series bars SX1153 & Series SZ1151 (Pier 2) Series bars SX1155 & Series SZ1151 (Pier 3)



⚠2 —SECTION B-B—



⚠2 —SECTION C-C—

NOTE: For location of sections A-A thru C-C see dwg. no. M-35-138.

NOTE: For Index of Pier Details, See dwg. no. M-35-135

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

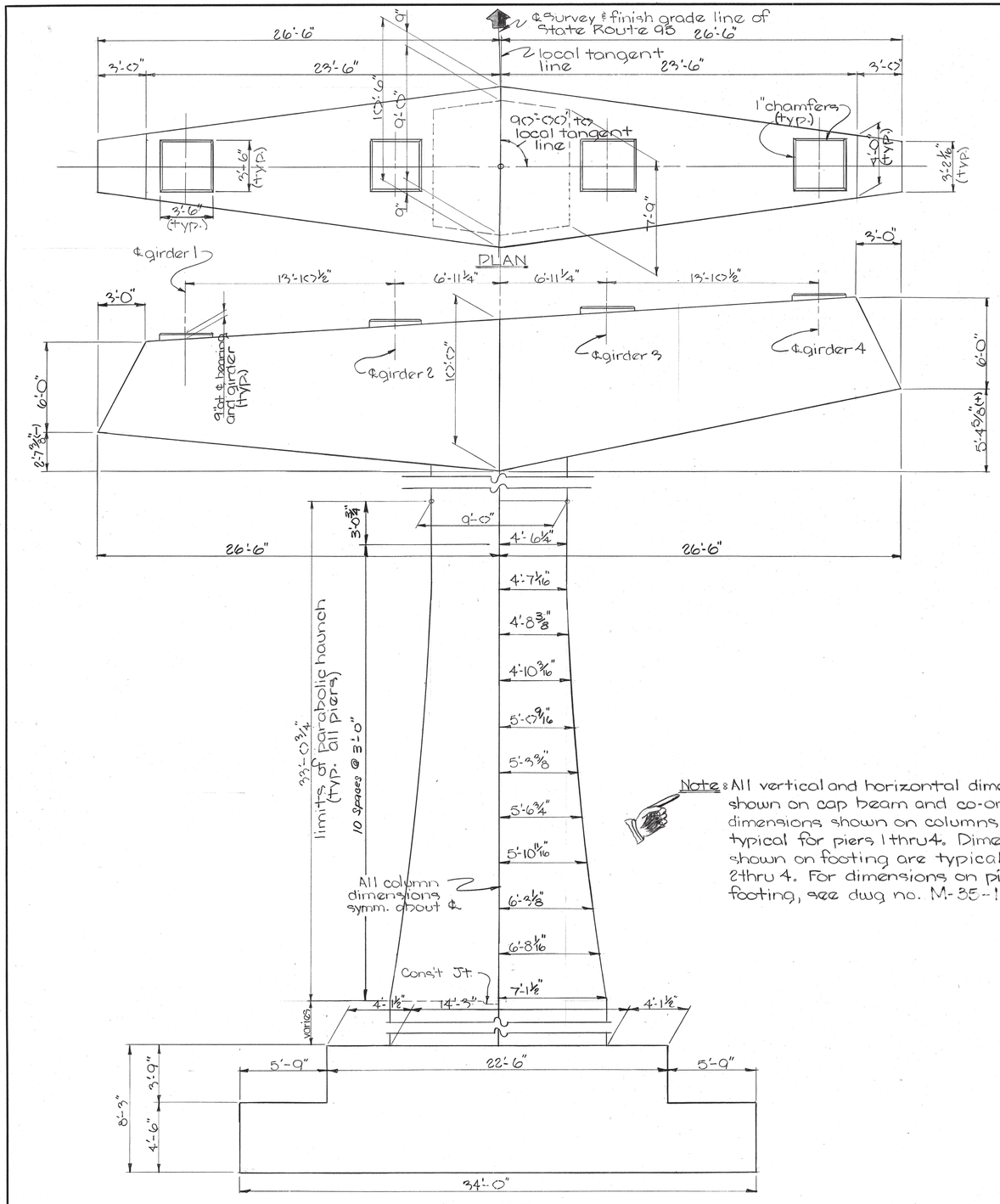
PIER DETAILS
STATE ROUTE 95 OVER TELLICO RESERVOIR DIVERSION CANAL
STATION 150+60.00
LOUDON COUNTY
1975

DESIGNED BY E. P. Wasserman DATE 6-75
DRAWN BY R. Dotson DATE 6-75
SUPERVISED BY McInturff & Wasserman DATE 6-75
CHECKED BY Morris DATE 6-75

CORRECT _____ ENGINEER OF STRUCTURES
APPROVED _____ DIRECTOR OF HIGHWAYS

M-35-140

MICROFILMED

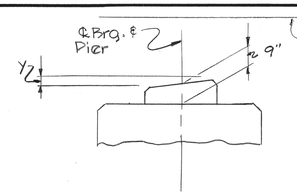


ELEVATION
(LOOKING FORWARD ON SURVEY)

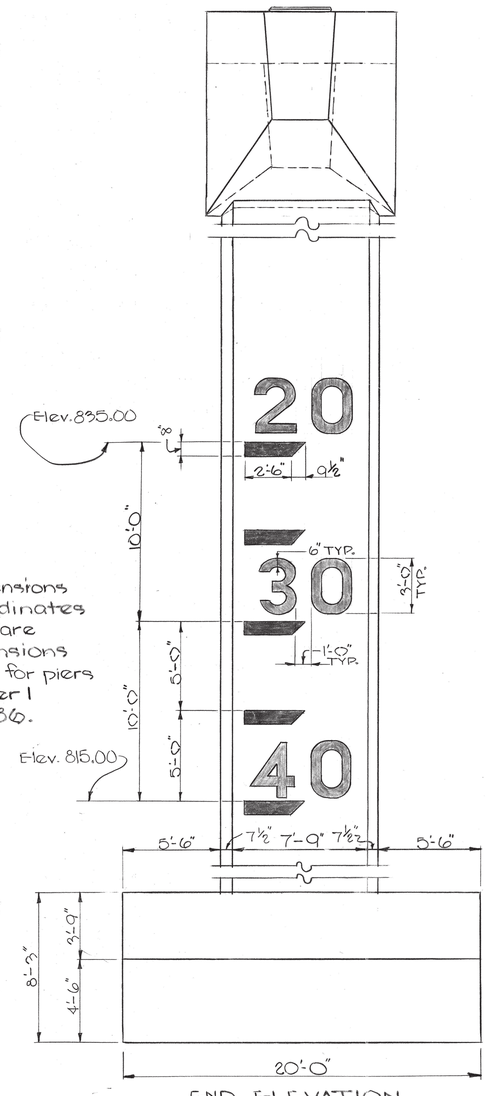
ITEM	DIM "Y"
PIER 1	1¼"
PIER 2	1"
PIER 3	¾"
PIER 4	⅝"

Note: See respective drawings for pier stations and elevations.

Note: All vertical and horizontal dimensions shown on cap beam and co-ordinates dimensions shown on columns are typical for piers 1 thru 4. Dimensions shown on footing are typical for piers 2 thru 4. For dimensions on pier 1 footing, see dwg no. M-35-136.



RISER BLOCK SLOPE DETAIL



END ELEVATION

Note: The contractor shall paint a clearance gage on pier 2 (east end) & pier 3 (west end) as shown on the clearance gage details. Details and materials shall be as directed by the District Commander of the U.S. Coast Guard.

Note: Numeral Details shall conform to series "E" Numerals as shown in reference guide for "Standard Alphabet for Highway signs."

For Index of Pier Details, see dwg. no. M-35-135

SP 53008-3216-04

PROJECT NO.	YEAR	SHEET NO.
	1975	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PIER DETAILS
STATE ROUTE 95 OVER TELLICO RESERVOIR DIVERSION CANAL
STATION 150+60.00
LOUDON COUNTY
1975

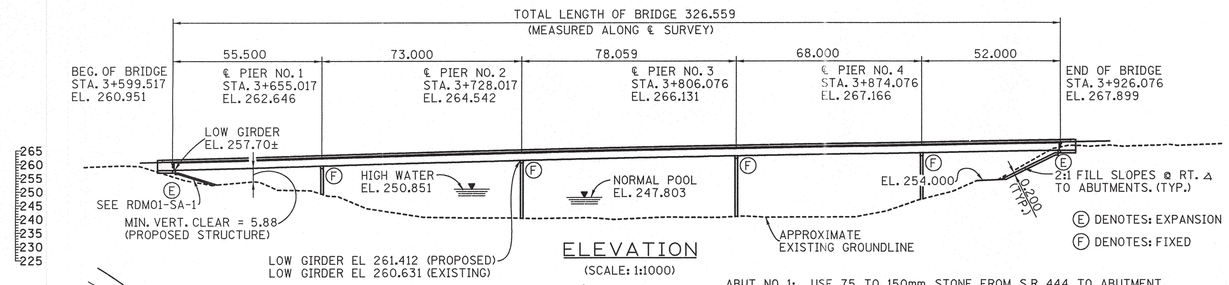
DESIGNED BY E. Wasserman DATE 6-75
DRAWN BY Scotty Keene DATE 6-75
SUPERVISED BY McMurry & Wasserman DATE 6-75
CHECKED BY Graves DATE 6-75

CORRECT _____ ENGINEER OF STRUCTURES
APPROVED _____ DIRECTOR OF HIGHWAYS

M-35-141

MICROFILMED

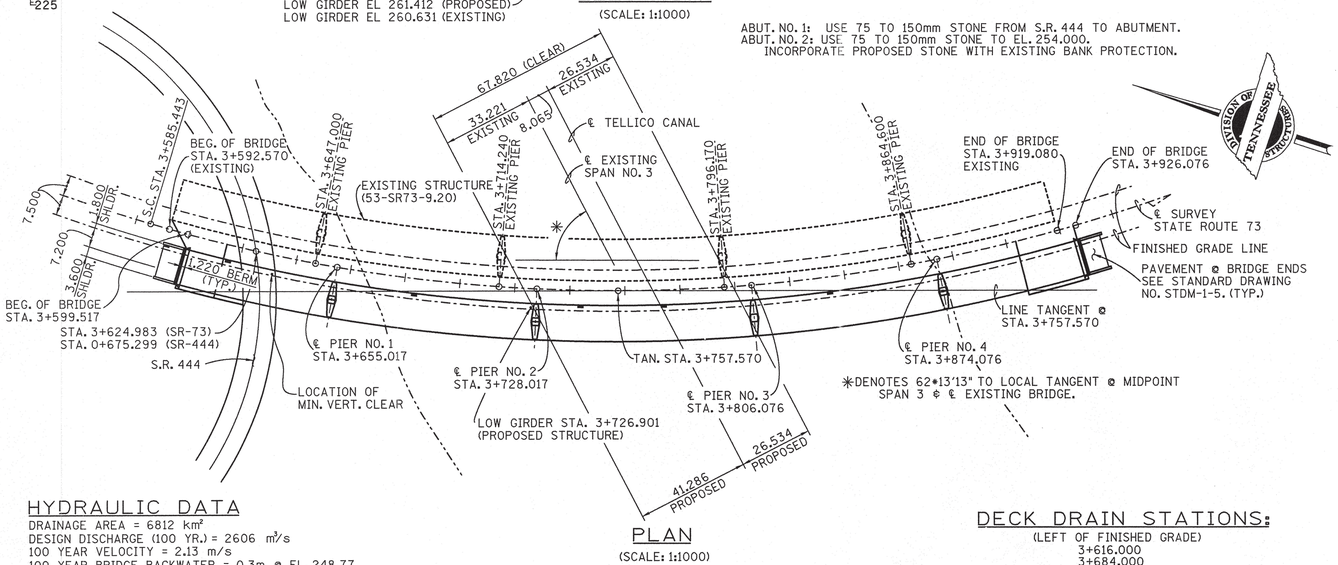
TELLIC02
0853BPL.DGN



ELEVATION

(SCALE: 1:1000)

ABUT. NO. 1: USE 75 TO 150mm STONE FROM S.R. 444 TO ABUTMENT.
ABUT. NO. 2: USE 75 TO 150mm STONE TO EL. 254.000.
INCORPORATE PROPOSED STONE WITH EXISTING BANK PROTECTION.



PLAN

(SCALE: 1:1000)

HYDRAULIC DATA

DRAINAGE AREA = 6812 km^2
DESIGN DISCHARGE (100 YR.) = 2606 m^3/s
100 YEAR VELOCITY = 2.13 m/s
100 YEAR BRIDGE BACKWATER = 0.3m @ EL. 248.77
OVERTOPPING EL. 249.20

DECK DRAIN STATIONS:

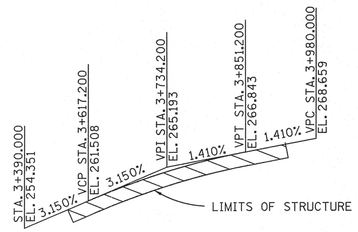
(LEFT OF FINISHED GRADE)
3+616.000
3+684.000
3+744.000
3+774.000
3+834.000

▬ DENOTES: END OF BRIDGE DRAIN REQUIRED.
(1.22m X 2.62m) SEE STD. DWG. NO. STDM-1-6, 7, ℄ 9.

▬ DENOTES: BRIDGE DECK DRAIN REQUIRED. (PARAPET TYPE)
SEE STD. DWG. NO. STDM-1-2.

CURVE DATA

(STATE ROUTE 73)
P.I. STA. 3+989.102
N 161741.837
E 758866.639
△ 75°20'12"
△c 64°42'49"
Dc 2°56'37"
R 593.284
Ts 513.659
Ls 110.000
Lc 670.094
θs 5°18'42"
P 0.850m
K 54.984m
Xc 109.906m
Yc 3.397m
Es 157.301m
LT 73.366m
ST 36.697m
LC 109.958m
SE 6.9 '/'
TRANS. LGTH. = 110.000m



V.C. 234.000

SR-73 GRADE SKETCH

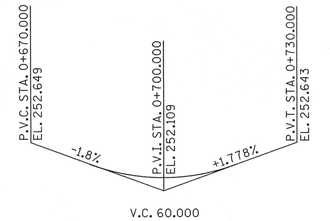
NOTE: ANY EXCAVATION OF THE STREAM CHANNEL AREA (E.G. FOR RIP-RAP PLACEMENT) SHALL BE ACCOMPLISHED IN THE DRY DURING LOW FLOW CONDITIONS. THIS SHALL BE ACCOMPLISHED BY THE USE OF FLUMES, LINED DIVERSION CHANNEL WITH SANDBAG BERM, DIVERSION PIPE WITH SAND BAG DAM AT PIPE INLET OR IN SOME CASES COFFERDAMS.

LIST OF STANDARD DRAWINGS

	DWG. NO.	LAST REV. DATE
BRIDGE RAILING CONCRETE PARAPET	STDM-1-1	7-31-00
STEEL SLIDER PLATE ASSEMBLIES FOR CONCRETE PARAPET AND BRIDGE DECK DRAIN DETAILS	STDM-1-2	1-5-01
REINFORCED CONCRETE PAVEMENT AT BRIDGE ENDS	STDM-1-5	4-8-05
BRIDGE END DRAIN DETAILS 610×2620 ℄ 1220×2620 WITH PAVEMENT AT BRIDGE ENDS	STDM-1-6	4-28-97
BRIDGE END DRAIN DETAILS 610×2620 ℄ 1220×2620 WITH PAVEMENT AT BRIDGE ENDS	STDM-1-7	7-31-00
BRIDGE END DRAIN DETAILS 1220×2620 WITH PAVEMENT AT BRIDGE ENDS	STDM-1-9	6-10-96
STANDARD PILE DETAILS	STDM-5-1	6-10-96
STANDARD PILE DETAILS	STDM-5-2	4-8-05
STANDARD SEISMIC DETAILS	STDM-6-1	5-21-99
STANDARD SEISMIC DETAILS	STDM-6-2	6-10-96
REINF. BAR SUPPORT DETAILS FOR CONC. SLABS	STDM-9-1	6-10-96
MISCELLANEOUS ABUTMENT ℄ DRAINAGE DETAILS	STDM-10-1	4-8-05
SLOPE PROTECTION	RDM01-SA-1	10-15-02

△ LIST OF EXISTING BRIDGE DRAWINGS

	DWG. NO.
LAYOUT OF BRIDGE THRU BILL OF STEEL	M-35-121 THRU M-35-145



V.C. 60.000

SR-444 GRADE SKETCH

CONST. NO. 53008-3233-14

PROJECT NO.	YEAR	SHEET NO.
NH-73(50)	2010	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	3-9-11	R.L.C.	LAST REVISION DATE AND REVISED FEDERAL PROJECT NUMBER APPLIES TO ALL OTHER BRIDGE SHEETS
2	11-18-11	R.L.C.	LAST REVISION DATE
3	2-22-12	R.L.C.	LAST REVISION DATE
4	5-31-12	R.L.C.	LAST REVISION DATE AND ADDED LIST OF EXISTING DRAWINGS
5	12-20-13	R.L.C.	LAST REVISION DATE
6	12-05-14	R.L.C.	LAST REVISION DATE

LIST OF DRAWINGS

	DWG. NO.	LAST REV. DATE
LAYOUT	U-38-60	12-20-13
GENERAL NOTES ℄ ESTIMATED QUANTITIES	U-38-61	12-05-14 △6
NAVIGATIONAL LIGHTING DETAILS	U-38-62	11-18-11
FOUNDATION DATA	U-38-63	
FOUNDATION DATA	U-38-64	
SUPERSTRUCTURE	U-38-65	5-31-12
SUPERSTRUCTURE DETAILS	U-38-66	5-31-12
SUPERSTRUCTURE DETAILS	U-38-67	5-31-12
SUPERSTRUCTURE DETAILS	U-38-68	5-31-12
SUPERSTRUCTURE DETAILS	U-38-69	5-31-12
SUPERSTRUCTURE DETAILS	U-38-70	5-31-12
SUPERSTRUCTURE DETAILS	U-38-71	5-31-12
SUPERSTRUCTURE DETAILS	U-38-72	
SUPERSTRUCTURE DETAILS	U-38-73	5-31-12
SUPERSTRUCTURE DETAILS	U-38-74	5-31-12
SUPERSTRUCTURE DETAILS	U-38-75	5-31-12
SUPERSTRUCTURE DETAILS	U-38-76	5-31-12
CROSS-FRAME DETAILS	U-38-77	5-31-12
BRIDGE SCREED AND POURING SEQUENCE	U-38-78	
FIELD SPLICE DETAILS	U-38-79	5-31-12
BEARING DEVICE DETAILS	U-38-80	5-31-12
ABUTMENT NO. 1	U-38-81	5-31-12
ABUTMENT NO. 1 DETAILS	U-38-82	5-31-12
ABUTMENT NO. 2	U-38-83	5-31-12
ABUTMENT NO. 2 DETAILS	U-38-84	5-31-12
PIER NO. 1	U-38-85	12-20-13
PIER NO. 1 DETAILS	U-38-86	5-31-12
PROXIMITY SKETCH FOR EXISTING AND PROPOSED PIER NO. 1 FOUNDATIONS	U-38-86A	5-31-12
PIER NO. 2	U-38-87	12-20-13
PROXIMITY SKETCH FOR EXISTING AND PROPOSED PIER NO. 2 FOUNDATIONS	U-38-87A	5-31-12
PIER NO. 3	U-38-88	12-05-14 △6
PROXIMITY SKETCH FOR EXISTING AND PROPOSED PIER NO. 3 FOUNDATIONS	U-38-88A	5-31-12
PIER NO. 4	U-38-89	12-20-13
PROXIMITY SKETCH FOR EXISTING AND PROPOSED PIER NO. 4 FOUNDATIONS	U-38-89A	5-31-12
PIER NO. 2, 3 ℄ 4 DETAILS	U-38-90	12-05-14 △6
PIER NO. 2, 3 ℄ 4 DETAILS	U-38-90A	5-31-12
PIER NO. 2 SEAL FOOTING DETAILS	U-38-91	5-31-12
PIER NO. 2 SEAL FOOTING DETAILS	U-38-92	5-31-12
PIER NO. 2 SEAL FOOTING DETAILS	U-38-92A	5-31-12
PIER NO. 2 SEAL FOOTING DETAILS	U-38-93	5-31-12
PIER NO. 2 SEAL FOOTING DETAILS	U-38-94	5-31-12
PIER NO. 3 ℄ 4 SEAL FOOTING DETAILS	U-38-95	5-31-12
PIER NO. 3 ℄ 4 SEAL FOOTING DETAILS	U-38-96	5-31-12
PIER NO. 3 ℄ 4 SEAL FOOTING DETAILS	U-38-97	5-31-12
PIER NO. 3 ℄ 4 SEAL FOOTING DETAILS	U-38-97A	5-31-12
PIER NO. 3 ℄ 4 SEAL FOOTING DETAILS	U-38-98	5-31-12
FINAL FOUNDATION DATA	U-38-99	
BILL OF STEEL	U-38-100	12-20-13
BILL OF STEEL	U-38-101	12-05-14 △6
BILL OF STEEL	U-38-102	5-31-12

NOTE: ALL DIMENSIONS SHOWN IN MILLIMETERS, WITH THE EXCEPTION OF STATIONS AND ELEVATIONS, UNLESS OTHERWISE NOTED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

LAYOUT
STATE ROUTE 73
OVER
TELLICO CANAL
AND STATE ROUTE 444
BRIDGE I. D. 53SR0950009
STATION 3+757.570
LOUDON COUNTY
2010

RICKY L. CRAWFORD
REGISTERED
PROFESSIONAL
ENGINEER
STATE OF TENNESSEE

CORRECT Edward P. Wasserman
ENGINEER OF STRUCTURES

U-38-60

DESIGNED BY R.L. CRAWFORD (K.E.) DATE 6-09
DRAWN BY K.L. FRANKENFIELD DATE 4-09
SUPERVISED BY R.L. CRAWFORD DATE 4-09
CHECKED BY _____ DATE _____

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MACHINED RIP-RAP = 451 TONNE

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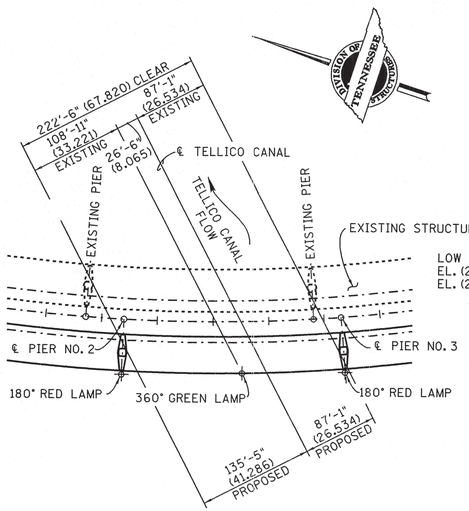
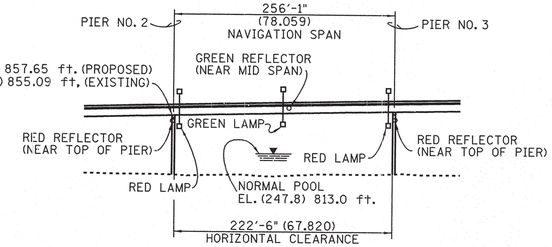
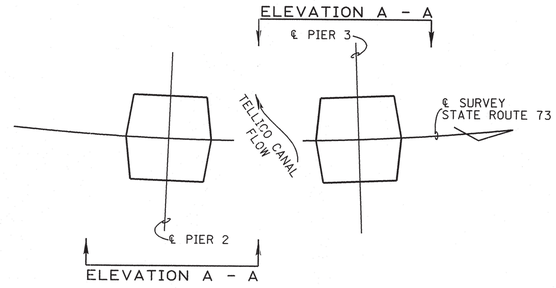


PLAN



1 ELEVATION



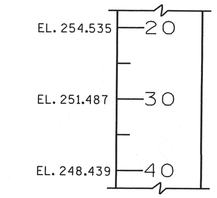
PART PLAN

CLEARANCE GAUGE DETAILS

NOTE: COST OF CLEARANCE GUAGE TO BE INCLUDED IN OTHER ITEMS BID ON.

NOTE: THE CONTRACTOR SHALL PAINT A CLEARANCE GAUGE ON PIER 2, UPSTREAM AND PIER 3, DOWNSTREAM, AS SHOWN ABOVE. DETAILS AND MATERIALS SHALL BE AS DIRECTED BY THE DISTRICT COMMANDER OF THE UNITED STATES COAST GUARD.

1 NOTE: THE .610 SERIES D STANDARD NUMERAL SHALL BE USED. SEE STANDARD ALPHABET FOR HIGHWAY SIGNS, BUREAU OF PUBLIC ROADS.



1 ELEVATION A - A
(SHOWING VERTICAL CLEARANCES)
(BASED ON EXISTING BRIDGE LOW GIRDER ELEVATION)

CONST. NO. 53008-3233-14

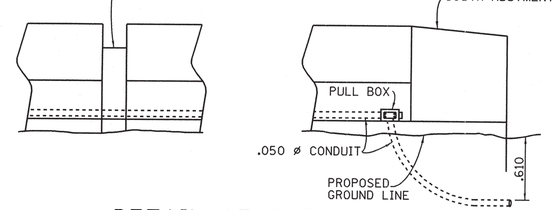
PROJECT NO.	YEAR	SHEET NO.
NHE-73(50)	2010	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	11-18-11	RLC	GENERAL REVISION

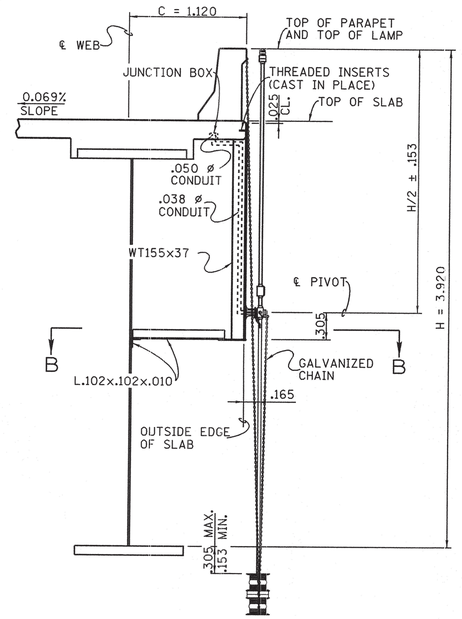
NOTES

1. CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY FOR THE COMPLETE INSTALLATION OF NAVIGATION LIGHTS IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST NATIONAL ELECTRICAL CODE AND THE NATIONAL ELECTRICAL SAFETY CODE.
2. ALL WIRES SHALL RUN IN GALVANIZED, RIGID STEEL THICK WALL CONDUIT. CONDUITS AND JUNCTION BOXES SHALL HAVE VAPOR TIGHT AND WEATHER PROOF COVERS.
3. ALL CONDUIT RUNS SHALL BE MADE ELECTRICALLY CONTINUOUS BY APPROVED GROUNDING.
4. EXPANSION FITTINGS SHALL BE WEATHER PROOF OF ELECTRICAL CO. TYPE 'EXE' OR APPROVED EQUAL, WITH EXTERNAL BONDING JUMPER.
5. PIER LIGHTS SHALL BE 180° RED AND CHANNEL LIGHTS 360° GREEN. ALL MUST BE COAST GUARD APPROVED.
6. THE STRUCTURAL STEEL AND MISCELLANEOUS FITTINGS SHALL BE HOT DIP GALVANIZED.
7. THE CONTRACTOR SHALL SUBMIT FOR APPROVAL A SCHEMATIC DIAGRAM OF THE WIRE CIRCUITRY PROPOSED AND INCLUDE THE LOCATION, MANUFACTURER AND MODEL NUMBERS, WHERE APPROPRIATE, SHOWING SIZE OF ALL WIRE JUNCTION BOXES, EXPANSION COUPLINGS AND RELATED ITEMS FOR NAVIGATION LIGHTS. UPON RECEIPT OF APPROVED DETAILS, THE CONTRACTOR SHALL FURNISH A PERMANENT REPRODUCIBLE ON 4 MIL MYLAR, .559 BY .914 SHOWING APPROVED DETAILS.
8. RED AND GREEN REFLECTORS SHALL HAVE A REFLECTIVE AREA OF NOT LESS THAN .025 SQUARE METERS AND NOT MORE THAN .095 SQUARE METERS.
9. STRUCTURAL STEEL MOUNTING BRACKETS AND MISCELLANEOUS FITTINGS TO BE INCLUDED IN THE PRICE BID FOR ITEM NO. 714M16.01, NAVIGATIONAL LIGHTING, LUMP SUM.

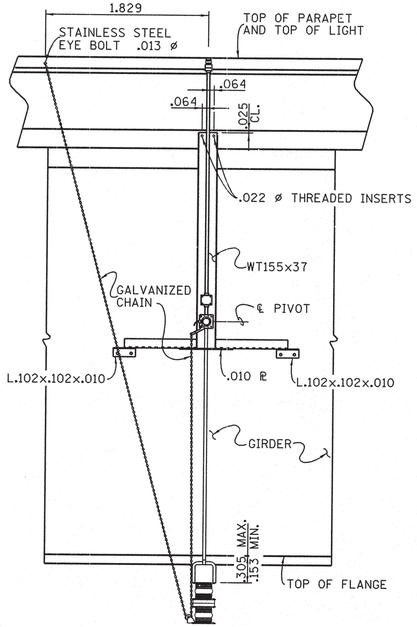


DETAIL AT EXPANSION
(ABUTMENTS NO. 1 ℄ 2)

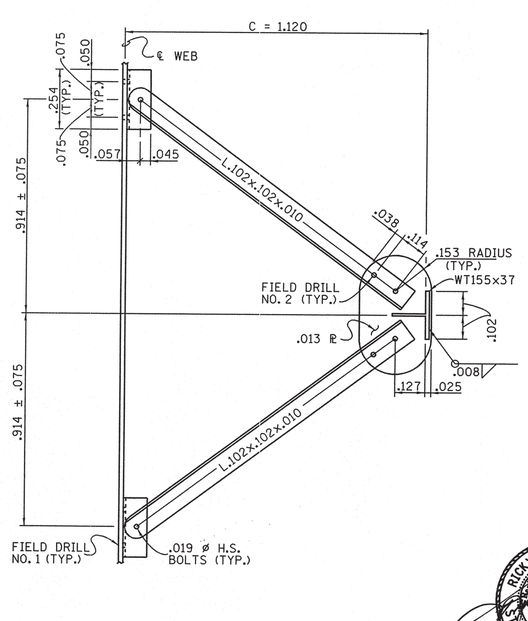
NOTE: ALL DIMENSIONS SHOWN IN METERS, WITH THE EXCEPTION OF STATIONS AND ELEVATIONS, UNLESS OTHERWISE NOTED.



SECTION A - A



ELEVATION



SECTION B - B



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

NAVIGATIONAL LIGHTING DETAILS
STATE ROUTE 73
OVER
TELLICO CANAL
AND STATE ROUTE 444
STATION 3+757.570
LOUDON COUNTY
2010

DESIGNED BY RICK CRAWFORD DATE 6-00
DRAWN BY K.L. FRANKENFIELD DATE 4-09
SUPERVISED BY RICK CRAWFORD DATE 4-09
CHECKED BY _____ DATE _____

CORRECT Edward P. Wasserman
ENGINEER OF STRUCTURES

U-38-62

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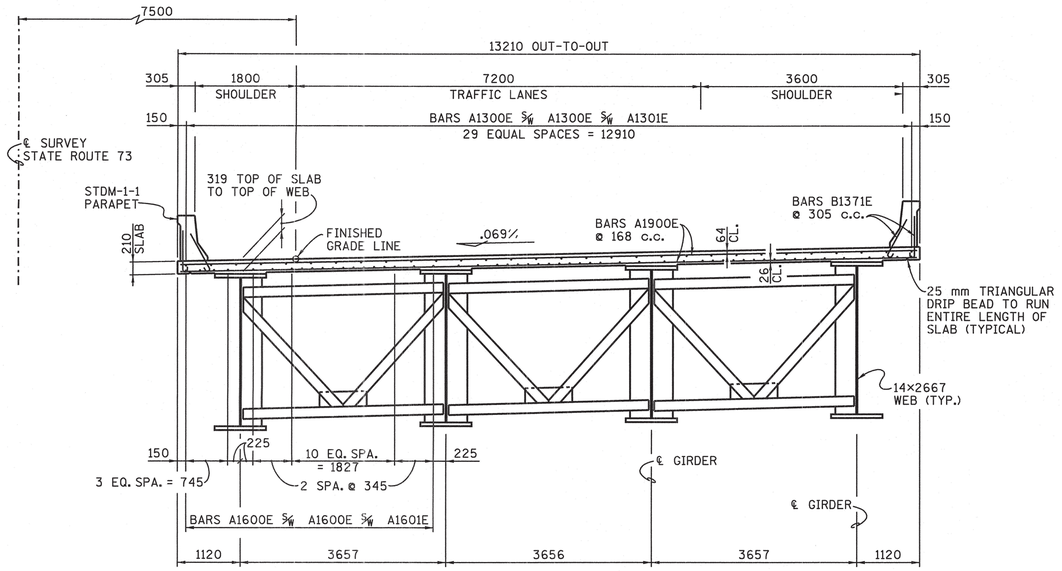
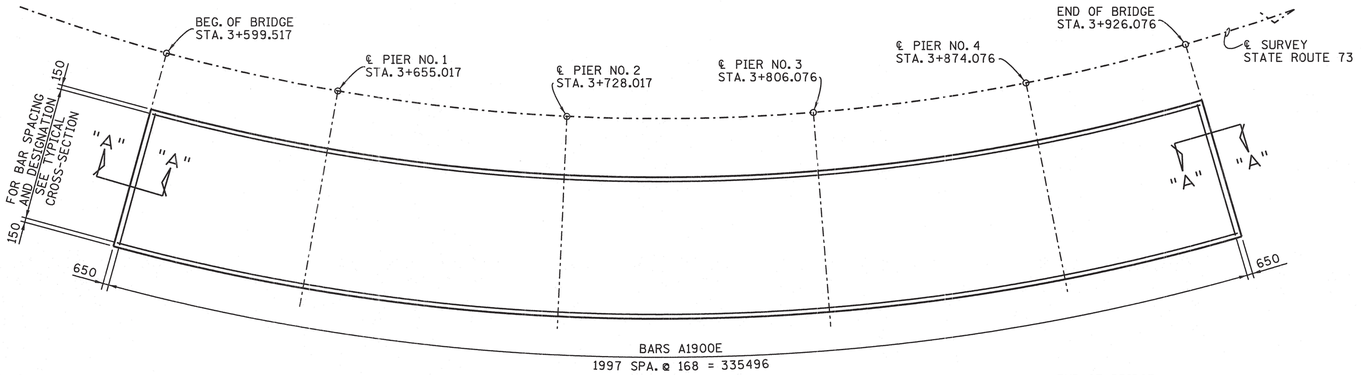


TYPICAL CROSS-SECTION

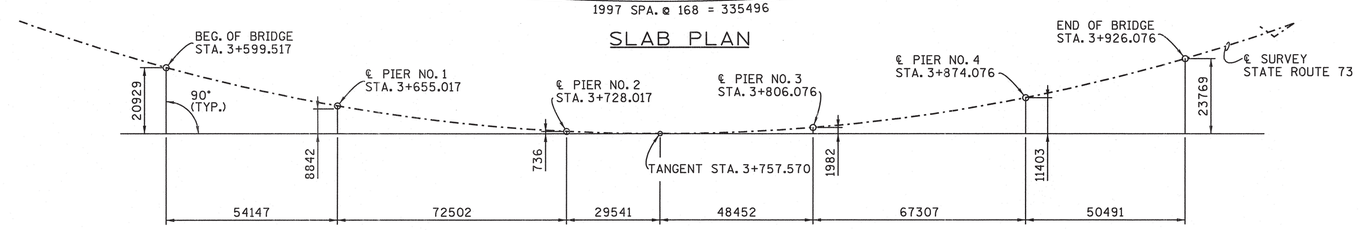
(LOOKING FORWARD ON SURVEY)

MINIMUM SPLICE LENGTHS

#13 ⅝ #13 = 660
#16 ⅝ #16 = 865



SLAB PLAN



STAKE -OUT PLAN

DESIGNED BY RICK CRAWFORD DATE 6-00
DRAWN BY K.L. FRANKENFIELD DATE 3-07
SUPERVISED BY RICK CRAWFORD DATE 3-07
CHECKED BY _____ DATE _____

D:\FILES\Detail Check by County and Project @ Mac\LOUDON\SP SR 73 over Tellico Cond\0853BSS.DGN
07-JUN-2012
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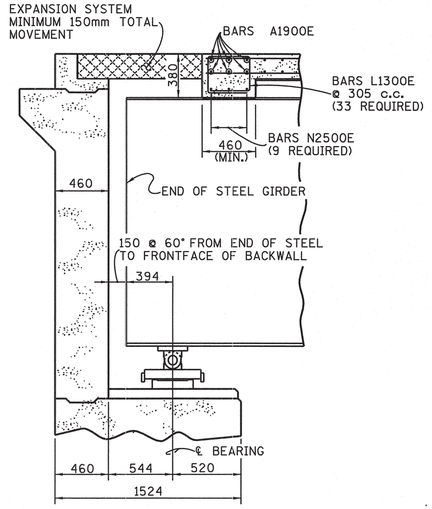
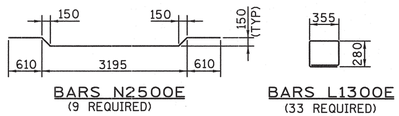


SECTION "A"-"A"



EXPANSION JOINT SYSTEM

NOTE: BARS L1300E & N2500E TO BE INCLUDED IN THE COST OF EXPANSION JOINT SYSTEM.
NOTE: NUMBER OF BARS REQUIRED IS FOR EACH EXPANSION JOINT SYSTEM.

CONST. NO. 53008-3233-14

PROJECT NO.	YEAR	SHEET NO.
NHE-73(50)	2010	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	5-31-12	R.L.C.	GENERAL REVISIONS.

SUPERSTRUCTURE GENERAL NOTES:

NOTE: NO PORTION OF THE PARAPET SHALL BE POURED UNTIL THE ENTIRE DECK SLAB IS IN PLACE.
NOTE: THE CONCRETE DECK SHALL NOT BE POURED UNTIL ALL STRUCTURAL STEEL IS ERECTED AND ALL WELDING AND/OR BOLTING COMPLETE.
NOTE: THE CONTRACTOR SHALL INSURE THAT THE FASCIA WEBS ARE ADEQUATELY BRACED TO PREVENT WEB DISTORTION AND BUCKLING DUE TO FORCES TRANSMITTED BY OVERHANG FORM BRACKETS DURING SLAB POURING OPERATIONS.
DEAD LOAD CORRECTION CURVE: GIRDERS SHALL BE CAMBERED TO COMPENSATE FOR DEAD LOAD DEFLECTION.
NOTE: OUTSIDE EDGE OF SLAB AND BRIDGE RAIL TO CONFORM TO HORIZONTAL CURVE.
NOTE: WHEN POURING SLAB, PROVISIONS SHALL BE MADE FOR SETTING REINFORCING STEEL FOR PARAPET. THE PARAPET SHALL NOT BE POURED UNTIL THE SLAB IS POURED AND CURED. ALSO SEE DRAWING NO. STDM-1-1.
APPROVAL OF MATERIALS: NO FABRICATION SHALL BE STARTED UNTIL THE MATERIALS INVOLVED HAVE BEEN APPROVED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION, DIVISION OF MATERIALS AND TESTS.
IDENTITY OF MAIN MATERIALS: SEE SECTION 602 OF THE STANDARD SPECIFICATIONS.
STRUCTURAL STEEL: SHALL CONFORM TO AASHTO M270 (ASTM A709M GRADE 250) UNLESS OTHERWISE NOTED. ALL STRUCTURAL STEEL FOR GIRDER FLANGES IN TENSION AND ALL WEBS SHALL MEET THE SUPPLEMENTAL REQUIREMENTS FOR LONGITUDINAL CHARPY V-NOTCH TESTS SPECIFIED IN AASHTO MATERIALS SPECIFICATIONS. ZONE 2 OF NON-FRACTURE CRITICAL CRITERIA SHALL APPLY.
WELDING: ANSI/AASHTO/AWS D1.5-95 BRIDGE WELDING CODE AND SECTION 602 OF THE STANDARD SPECIFICATIONS.
FIELD CONNECTIONS: SHALL BE M25@ HIGH TENSILE STRENGTH BOLTS ASTM A325 UNLESS OTHERWISE SHOWN. SEE AASHTO SPECIFICATIONS ART. 11.3.2 DIVISION II AND SECTION 602 OF THE STANDARD SPECIFICATIONS.
HEAT CURVING STEEL GIRDERS: HEAT CURVING WILL BE PERMITTED FOR GIRDER WITH RADIUS OF CURVATURE IN EXCESS OF THE MINIMUM REQUIREMENTS SPECIFIED IN AASHTO ART. 10.15.2 DIV I, PROVIDED THE PROCEDURE IS IN ACCORDANCE WITH ART. 11.4.12 DIV II, AND THE VERTICAL CAMBER IS ADJUSTED IN ACCORDANCE WITH ART. 10.15.3 DIV I.
ADDITIONAL SHOP SPLICE NOTE: SHOP SPLICES NECESSARY DUE TO LENGTHS OR SIZE OF MATERIAL INVOLVED MAY BE ADDED BY THE FABRICATOR SUBJECT TO APPROVAL BY THE ENGINEER AND SHALL BE AT NO ADDITIONAL COST TO THE PROJECT.
ADDITIONAL FIELD SPLICE NOTE: FIELD SPLICES NECESSARY DUE TO LENGTHS INVOLVED MAY BE ADDED BY THE FABRICATOR SUBJECT TO APPROVAL BY THE ENGINEER AND SHALL BE AT NO ADDITIONAL COST TO THE PROJECT.
FIELD SPLICE NOTE: FIELD SPLICES SHOWN ON THE PLANS MAY BE DELETED BY THE CONTRACTOR. ADJUSTMENT TO THE LUMP SUM PRICE FOR STEEL STRUCTURES SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS.
SHOP ASSEMBLY: PROGRESSIVE SHOP ASSEMBLY WILL BE ALLOWED. SEE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, ART. 11.5.3.1 DIVISION II.
NOTE: SEE AASHTO SPECIFICATIONS ART. 10.23 FOR MINIMUM SIZE OF FILLET WELD.

ESTIMATED QUANTITIES

CLASS "D" CONCRETE (BRIDGES) m3	STEEL BAR REINFORCEMENT (BRIDGES) kg
983	160079

NOTE: ALL DIMENSIONS SHOWN IN MILLIMETERS, WITH THE EXCEPTION OF STATIONS AND ELEVATIONS, UNLESS OTHERWISE NOTED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

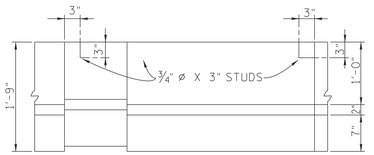
SUPERSTRUCTURE STATE ROUTE 73 OVER TELLICO CANAL AND STATE ROUTE 444 STATION 3+757.570 LOUDON COUNTY 2010

RICKY L. CRAWFORD — 6-8-2012 — STATE OF TENNESSEE

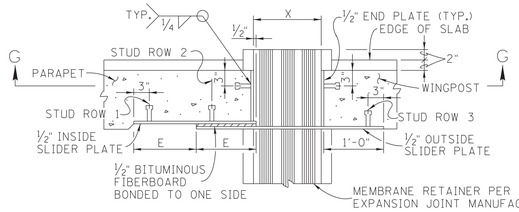
CORRECT Edward P. Wasserman
ENGINEER OF STRUCTURES

U-38-65

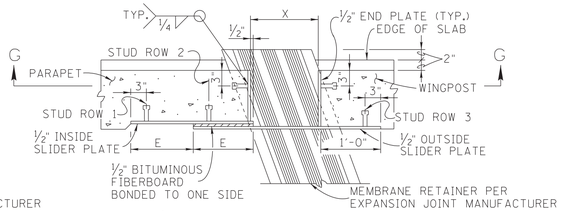
STD12.DGN



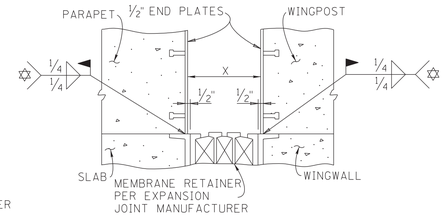
PLAN VIEW OF PARAPET



SECTION A - A



6 SECTION A - A
(SKEWED EXPANSION JOINT)



6 3 SECTION G - G

✡ NOTE: WELD WIDTH OF CONTACT POINT

E DENOTES: ONE HALF OF THE TOTAL EXPANSION JOINT MOVEMENT PLUS (+) THREE (3) INCHES, AT MID TEMPERATURE.

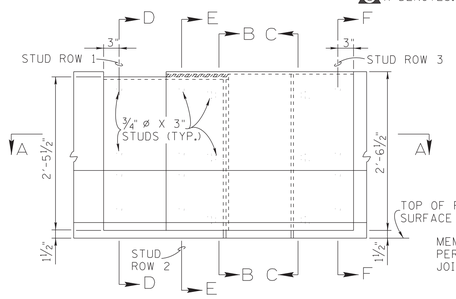
IF E IS LESS THAN 6½" OMIT STUD ROW 2

5 X DENOTES: EXPANSION JOINT + 1"

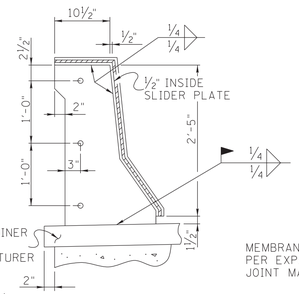
PROJECT NO.	YEAR	SHEET NO.
	1993	

REVISIONS

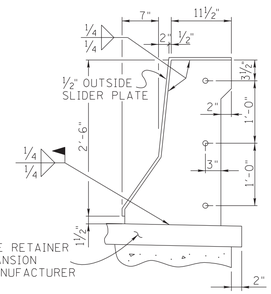
	NO.	DATE	BY	BRIEF DESCRIPTION
M/R	1	5-19-94	CMH	REVISED NOTE
M/R	2	12-19-94	CMH	REV. BRIDGE DECK DRAIN DETAILS. RENAMED ALT C TO ALT B. DELETED CAST IRON GRATE INLET DRAIN AND ADDED TYPE 1 & 2 DRAIN DETAILS
M/R	3	5-1-95	CMH	REVISED WELD SYMBOL
M/R	4	9-11-95	CMH	REVISED GRATE INLET DRAIN DIMENSIONS
M/R	5	5-21-99	CMH	REVISED DEPTH OF ½" ø ROD
M/R	6	7-31-00	CMH	REVISED WELD & ADDED SKEWED SECTION
M/R	7	1-5-01	CMH	REVISED NOTE
M/R	8	8-1-07	JHW	REVISED TITLES, NOTES, ADDED BOLT DESIGNATION AND DETAIL
M/R	9	3-28-08	JHW	ADDED NOTE & MATERIAL SPECIFICATIONS



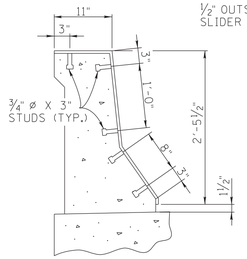
ELEVATION VIEW OF PARAPET



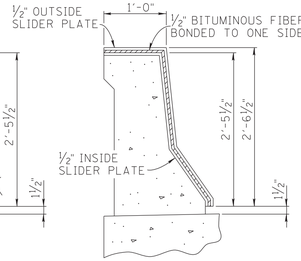
3 SECTION B - B
(SHOWING STUD SPACING IN END PLATE)



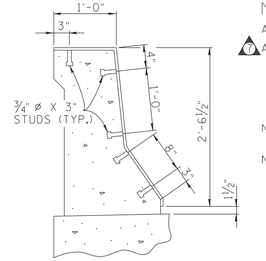
3 SECTION C - C
(SHOWING STUD SPACING IN END PLATE)



SECTION D - D
(SHOWING STUD SPACING IN ½" INSIDE SLIDER PLATE)



SECTION E - E



SECTION F - F
(SHOWING STUD SPACING IN ½" OUTSIDE SLIDER PLATE)

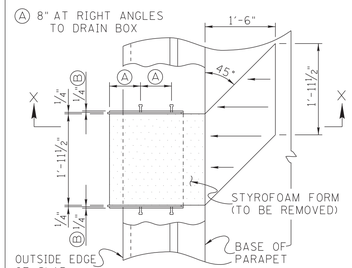
NOTES:

ALL METAL PLATE MATERIAL SHALL BE (ASTM A709) GRADE 36.

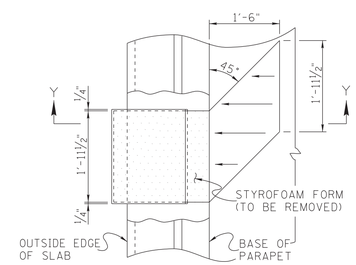
1 ALL WELDING, INCLUDING STUDS, SHALL BE COMPLETED PRIOR TO METAL PLATES BEING PAINTED OR GALVANIZED. ALL STEEL THAT IS PART OF THE JOINT ASSEMBLY SHALL BE PAINTED WITH 4 MILS OF INORGANIC ZINC OR GALVANIZED IN ACCORDANCE WITH ASTM STANDARD SPECIFICATION A123. UNLESS SHOWN OTHERWISE ON PLANS.

NOTE: ALL CONCRETE POURS SHALL BE WELL CONSOLIDATED AROUND THE SLIDER PLATE ASSEMBLIES.

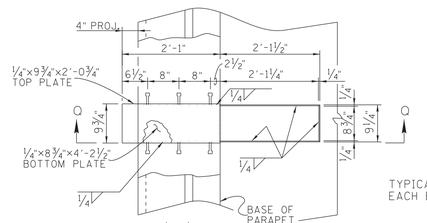
NOTE: COST OF STRUCTURAL STEEL, FORMING, LABOR AND ALL MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE THE INSTALLATION OF SLIDER PLATE ASSEMBLIES TO BE INCLUDED IN EXPANSION DEVICE.



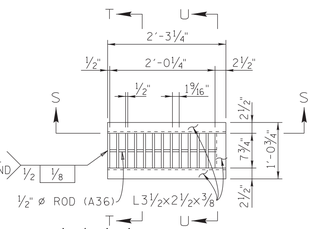
B PLAN OF PARAPET DRAIN
(ALTERNATE A)



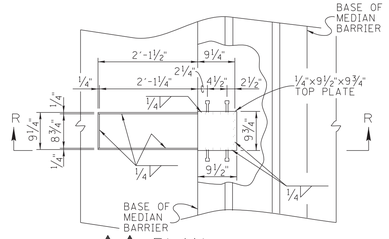
B PLAN OF PARAPET DRAIN
(ALTERNATE B)



4 2 PLAN



5 4 2 PLAN



4 2 PLAN

5 4 3 2 NOTES:
(FOR ALTERNATES A & B)

FOR ALTERNATE A: ALL METAL PLATE MATERIAL SHALL BE AASHTO M270 (ASTM A709) GRADE 36.

TOP OF DRAIN TO BE SUPPORTED INTERNALLY PRIOR TO AND DURING POURING OF PARAPET CONCRETE. STYROFOAM FORM TO BE REMOVED AFTER THE PARAPET CONCRETE HAS SET.

STYROFOAM FORM TO BE IN ACCORDANCE WITH ASTM C 578 (TYPE VIII).

THE COST OF THE DECK DRAINS TO BE INCLUDED IN COST OF THE PARAPET.

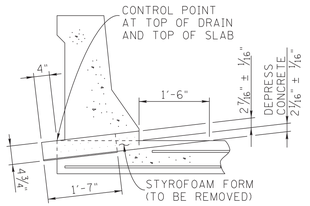
GENERAL NOTES:

ALL STUDS SHALL BE ½"ø × 2" (A108).

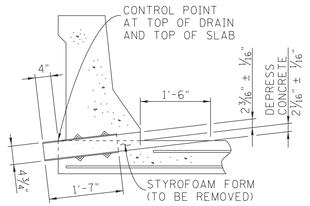
THE CONTRACTOR MAY USE EITHER ALTERNATE A OR B, EXCEPT WHERE GRATE INLET DRAINS ARE DESIGNATED. EITHER A WHITE OR GREY PVC MATERIAL MAY BE USED FOR ALTERNATE B. MATERIAL FOR GRATE INLET DRAINS SHALL BE AASHTO M270 (ASTM A709) GRADE 36 UNLESS NOTED OTHERWISE.

ALL WELDING, INCLUDING STUDS, SHALL BE COMPLETED PRIOR TO METAL DRAINS BEING ZINC COATED. ZINC COATING SHALL BE AS SPECIFIED BY ASTM STANDARD SPECIFICATION A-123.

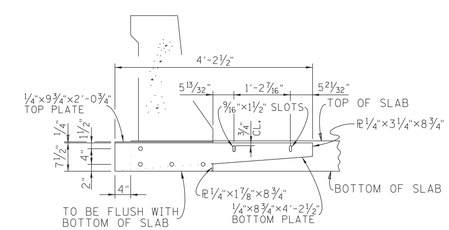
REINFORCING STEEL IN CONFLICT WITH DECK DRAIN TO BE CUT IN FIELD. EPOXY COATED REINFORCING STEEL TO BE REPAINTED ACCORDING TO ASTM D-3963.



SECTION X - X
(ALTERNATE A)

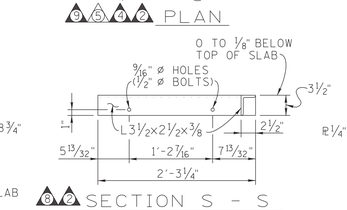


SECTION Y - Y
(ALTERNATE B)

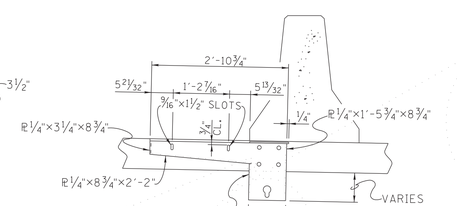


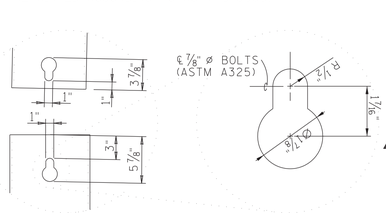
4 2 SECTION Q - Q

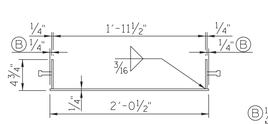
TYPE 1



6 2 SECTION S - S

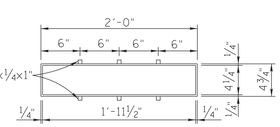




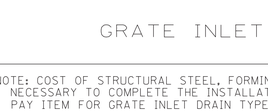


ALTERNATE A
(SECTION MAY BE BENT PLATE IN LIEU OF FABRICATION SHOWN THIS DETAIL)

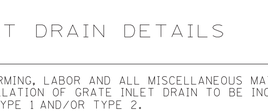
B ¼" PROJECTION NOT REQ'D FOR BENT PLATE.



ALTERNATE B



5 4 2 SECTION T - T



SECTION U - U 6 4 5



5 4 2 SECTION R - R

TYPE 2

GRATE INLET DRAIN DETAILS

NOTE: COST OF STRUCTURAL STEEL, FORMING, LABOR AND ALL MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE THE INSTALLATION OF GRATE INLET DRAIN TO BE INCLUDED IN PAY ITEM FOR GRATE INLET DRAIN TYPE 1 AND/OR TYPE 2.

M/R MINOR REVISION - FHWA APPROVAL NOT REQUIRED

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

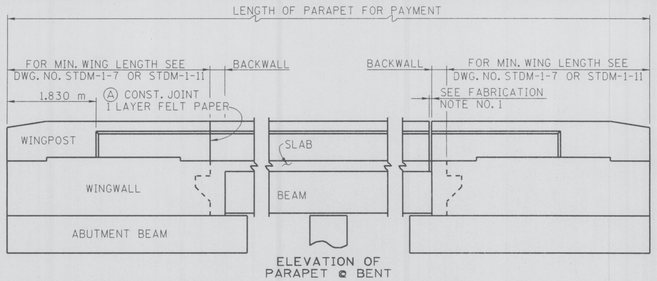
STEEL SLIDER PLATE ASSEMBLIES FOR CONCRETE PARAPET AND BRIDGE DECK DRAIN DETAILS 1993

DESIGNED BY C.M. HILES DATE 12-92
DRAWN BY KIM FRANKENFIELD DATE 12-92
SUPERVISED BY C.M. HILES DATE 12-92
CHECKED BY C.M. HILES DATE

CORRECT Edward P. Wasserman
ENGINEER OF STRUCTURES

SHEET 2 OF 13
STD-1-2

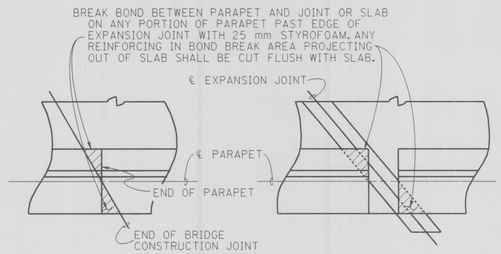
STDM11.DGN



ELEVATION OF PARAPET ℄ WINGWALL WITH CONSTRUCTION JOINT

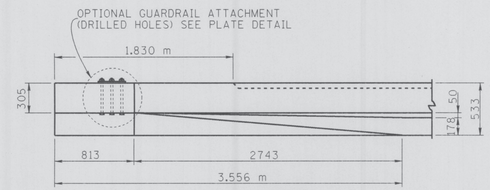
ELEVATION OF PARAPET ℄ BENT

ELEVATION OF PARAPET ℄ WINGWALL WITH EXPANSION JOINT

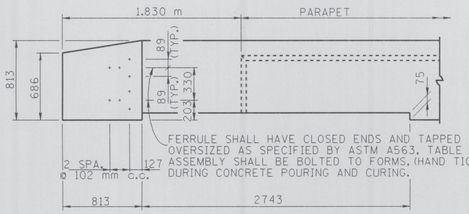


PLAN ⚠

(SHOWING DETAIL ⊘ OPEN JOINT)



PLAN OF WINGPOST



ELEVATION

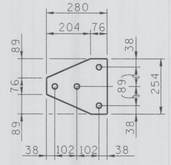
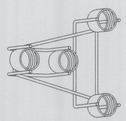


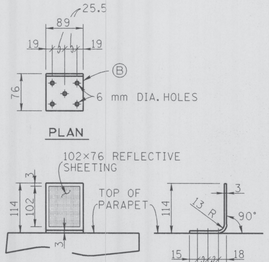
PLATE DETAIL

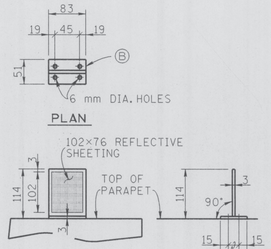
13mm ASTM A36M GALVANIZED PLATE WITH M22 ⌀ HEX HEAD GALVANIZED BOLTS (A307) HOT DIP ZINC COATING ASTM A153

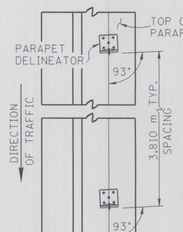


INSERT ASSEMBLY

CAST IN PLACE THREADED INSERT WITH M22 x 51 HEX HEAD GALVANIZED BOLTS (A307) HOT DIP ZINC COATING ASTM A153



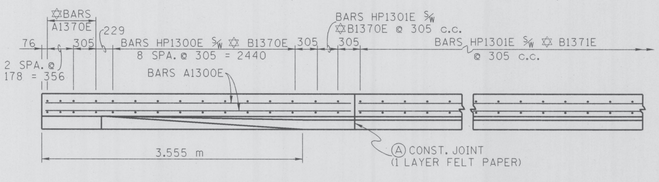




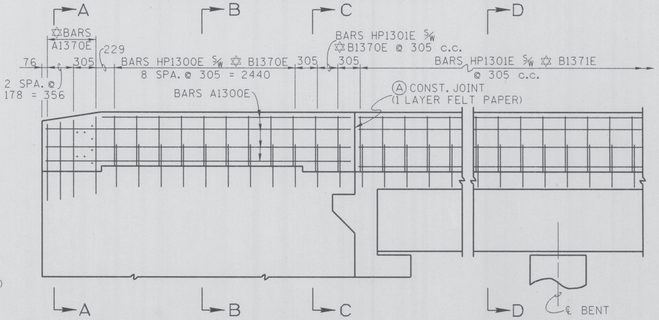
MOUNTING DETAIL

PARAPET DELINEATOR

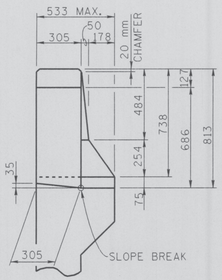
⚠Ⓑ PARAPET DELINEATORS SHALL BE HIGH IMPACT, UV-STABILIZED, ENGINEERED THERMOPLASTIC OR POLYCARBONATE SUBSTRATE. SEE TDOT APPROVED QUALIFIED PRODUCT LISTS FOR ACCEPTABLE PRODUCTS.



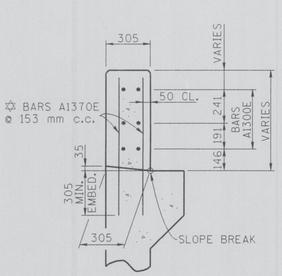
⚠ PLAN SHOWING REINFORCING STEEL



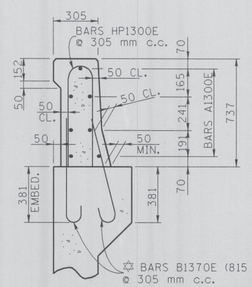
⚠ ELEVATION SHOWING REINFORCING STEEL



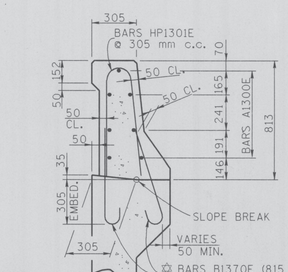
⚠ END ELEVATION



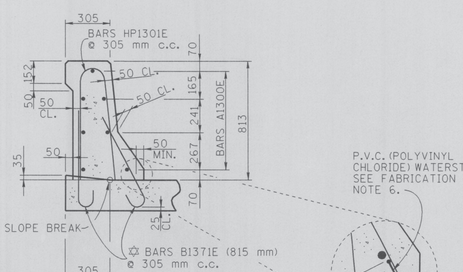
⚠ SECTION A - A



⚠ SECTION B - B



⚠⚠ SECTION C - C



⚠⚠ SECTION D - D

PROJECT NO.	YEAR	SHEET NO.
	1996	

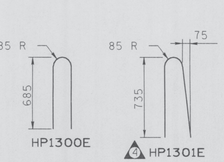
REVISIONS

	NO.	DATE	BY	BRIEF DESCRIPTION
M/R	1	6-10-96	BRB	NEW METRIC STANDARD
M/R	2	4-28-97	CMH	ADDED LENGTH TO BARS B137-E
M/R	3	5-21-99	CMH	REVISED NOTE Ⓐ, Ⓑ ; DELINEATORS ℄ ADDED V-GROOVE NOTE #5
M/R	4	7-31-00	CMH	REVISED NOTE Ⓐ ℄ #5, BARS HP401E, ADDED SLOPE BREAK TO SECTIONS A-A, C-C, D-D, END ELEVATION, PLAN SHOWING JOINT DETAILS, WATERSTOP, NOTE #6 ℄ DELETED JOINT ⊘ BENT

LENGTH

A1300E

(660 mm MIN. LAP)



REINFORCING NOTES:

1. BAR DIMENSIONS ARE OUT TO OUT. THE FIRST TWO DIGITS OF THE NUMBER INDIACTES SIZE.
2. THESE BARS SHALL BE FULL LENGTH OF PARAPET EXCEPT THAT NO BAR WILL PASS THROUGH OPEN JOINTS.

✡ BARS A1370E AND BARS B1370E TO BE INCLUDED IN EPOXY COATED REINFORCING QUANTITIES AND BILL OF STEEL FOR WINGWALLS.
✡ BARS B1371E TO BE INCLUDED IN EPOXY COATED REINFORCING QUANTITIES AND BILL OF STEEL FOR SUPERSTRUCTURE.
NOTE: BARS LISTED IN ABOVE NOTES ARE NOT INCLUDED IN WINGPOST QUANTITIES OR PARAPET QUANTITIES SHOWN THIS SHEET.

GENERAL NOTES:

DESIGN : AASHTO SPECIFICATIONS CURRENT EDITION WITH ADDENDA.

SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION. (CURRENT EDITION).

CONCRETE: TO BE CLASS 'A' f'c = 21 MPa. SEE SPECIAL PROVISION REGARDING SECTION 604 - CONCRETE STRUCTURES.

REINFORCING STEEL: TO BE ASTM A615M GRADE 400. SPACING DIMENSIONS ARE CENTER TO CENTER UNLESS OTHERWISE NOTED. THE SUFFIX 'E', FOR BARS SO MARKED, DENOTES EPOXY COATED REINFORCEMENT. SEE SPECIAL PROVISION 907A.

⚠⚠⚠Ⓐ NOTE: CONTRACTOR MAY POUR THE PARAPET WITHOUT FELT PAPER PROVIDED HE FORMS A 13 mm DEEP V-GROOVE ALONG THE TRAFFIC FACE AND TOP OF PARAPET DURING CASTING OF CONCRETE OR SOON AFTER SLIP-FORMING.

⚠ PARAPET DELINEATOR REFLECTIVE SHEETING SHALL MEET ASTM D4956, TYPE V SPECIFICATIONS. THE REFLECTIVE SHEETING SHALL BE A MINIMUM OF 102×76 AND HAVE MINIMUM COVEREGE AREA OF 7740 SQUARE MILLIMETERS. THE COLOR OF THE DELINEATORS SHALL CONFORM TO THE REQUIREMENTS OUTLINED IN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. PARAPET DELINEATORS WILL NOT BE REQUIRED IN AREAS WHERE ROADWAY IS LIGHTED.

⚠ THE COST OF FURNISHING AND INSTALLING PARAPET DELINEATORS, INCLUDING ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION, SHALL BE INCLUDED IN BID PRICE FOR CONCRETE PARAPET.

⚠ PARAPET DELINEATORS SHALL BE MOUNTED TO THE CONCRETE PARAPET WITH A ONE COMPONENT ADHESIVE AS RECOMMENDED BY THE MANUFACTURER. THEY SHALL BE INSTALLED NO EARLIER THAN THREE WEEKS AFTER THE TEXTURE COATING HAS BEEN APPLIED.

FABRICATION NOTES:

1. OPEN JOINTS OR FILLED JOINTS WILL BE ALLOWED IN PARAPET ONLY WHEN SHOWN ON PROJECT DRAWINGS. JOINTS SHALL CONFORM TO THE JOINT DETAILS ON THIS SHEET OR AS OTHERWISE SHOWN ON PROJECT DRAWINGS.
2. PARAPET CONCRETE SHALL NOT BE CAST PRIOR TO REMOVAL OF ALL SUPERSTRUCTURE RELATED FALSEWORK.
3. ALIGNMENT AND PROFILE OF PARAPET SHALL CONFORM TO ROADWAY PROFILE AND GEOMETRY.
4. IF THE PARAPET IS SLIP-FORMED, ROUNDED EDGES WITH A 20 mm RADIUS MAY BE USED INSTEAD OF THE 20 mm CHAMFER AS SHOWN.

⚠⚠ 5. A 13 mm DEEP V-GROOVE ALONG THE TRAFFIC FACE AND TOP OF PARAPET SHALL BE FORMED DURING CASTING OF CONCRETE OR SOON AFTER SLIP-FORMING @ 3050 mm CENTER-TO-CENTER.

⚠ 6. A 10×100 FLAT DUMBBELL OR FLAT RIBBED P.V.C. (POLYVINYL CHLORIDE) WATERSTOP MAY BE USED IN LIEU OF THE 35 mm SLOPE AT EDGE OF SLAB. WATERSTOP MUST BE CONTINUOUS ENTIRE LENGTH OF PARAPET. RUBBER WATERSTOP MUST BE FACTORY OR FIELD VULCANIZED OR CEMENT SPLICED WITH THE AID OF PREMOLDED JUNCTIONS, AND/OR UNIONS.

WINGPOST QUANTITIES

(PER WING, BASED ON 3.555 m WINGPOST)

CLASS 'A' CONCRETE m^3	REINFORCING STEEL kg
0.82	42

PARAPET QUANTITIES

(PER METER)

CLASS 'A' CONCRETE m^3	REINFORCING STEEL kg
0.2807	12

ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

M/R MINOR REVISION - FHWA APPROVAL NOT REQUIRED

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BRIDGE RAILING CONCRETE PARAPET 1996

DESIGNED BY C.M. HILES DATE
DRAWN BY KIM FRANKENFIELD DATE
SUPERVISED BY C.M. HILES DATE
CHECKED BY DATE

CORRECT Edward P. Wasserman
ENGINEER OF STRUCTURES

DIVISION OF METRIC STRUCTURES

SHEET 1 OF 13

STDM-1-1