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Logan Colbert
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PALMER ENGINEERING CO.
2817 ERICA PLACE
NASHVILLE, TN 37204
LOGAN COLBERT, P.E. NO.117913

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	STRUCTURE-SIGN2
INDEX AND STANDARD DRAWINGS	1A
LAYOUT OF BRIDGE TO BE REPAIRED	BR-132-761
ESTIMATED BRIDGE QUANTITIES AND NOTES	BR-132-762
SCOUR REPAIR – PIER 1	BR-132-768
SCOUR REPAIR – PIER 2	BR-132-769

YEAR	PROJECT NO.	SHEET NO.
2026	73455-3512-04	STRUCTURE-SIGN2

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNATURE
SHEET

TYPE	YEAR	CONST. NO.	SHEET NO.
PS&E	2026	73455-3512-04	1A

ROADWAY INDEX

SHEET NAME	SHEET NO.
SIGNATURE SHEET	STRUCTURE-SIGN1
SIGNATURE SHEET	STRUCTURE-SIGN2
TITLE SHEET	1
INDEX AND STANDARD DRAWINGS.....	1A
PROJECT COMMITMENTS	1B
ESTIMATED ROADWAY QUANTITIES AND GENERAL NOTES	2
ENVIRONMENTAL NOTES.....	2E
EPSC PLAN AND NOTES.....	2E1-2E3
UTILITY NOTES AND UTILITY OWNERS.....	3
TRAFFIC CONTROL PLANS AND NOTES.....	T1-T4

NO UTILITY SHEETS ARE INCLUDED IN THIS PLAN SET

STANDARD 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
RD-L-5	07-30-24	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL

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-32	03-26-25	TRAFFIC CONTROL PLAN SIGNAL LAYOUT FOR TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE
T-WZ-33	03-26-25	TRAFFIC CONTROL PLAN FOR CLOSE INTERSECTION CONDITIONS USING TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE
T-WZ-34	03-26-25	TRAFFIC CONTROL PLAN GENERAL NOTES FOR TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE
T-WZ-35	03-26-25	TRAFFIC CONTROL PLAN PAY ITEM AND SIGN DETAILS FOR TRAFFIC SIGNAL AT TWO LANE BRIDGE RECONSTRUCTION SITE
T-WZ-PBR2	03-26-25	DETAILS FOR WORK ZONE CHANNELIZATION DEVICES
T-WZ-PCB2	03-26-25	20 FOOT PORTABLE CONCRETE BARRIER RAIL
T-WZ-PCB2A	03-26-25	20 FOOT PORTABLE CONCRETE BARRIER RAIL STIFFENER TUBE
T-WZ-PCB3	03-26-25	PORTABLE CONCRETE BARRIER RAIL DETAILS
T-WZ-PCB4	07-22-25	PORTABLE CONCRETE BARRIER RAIL ANCHOR PIN DETAILS

EROSION PREVENTION AND SEDIMENT CONTROL

EC-STR-3C	03-01-23	SILT FENCE WITH WIRE BACKING
EC-STR-3E	04-01-08	SILT FENCE FABRIC JOINING DETAILS
EC-STR-38	08-01-12	FLOATING TURBIDITY CURTAIN

STANDARD DRAWINGS (CONT.)

DWG. REV. DESCRIPTION

BRIDGE REPAIR APPURTENANCES

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 TYPES "A" THRU "J" - 1991
SBR-2-117	05-30-96	STRIPSEAL EXPANSION JOINTS – REPLACEMENT CONSTRUCTION DETAILS TYPE "A" AND TYPE "B" – 1991
SBR-2-120	05-30-96	STRIPSEAL EXPANSION JOINTS – REPLACEMENT CONSTRUCTION DETAILS TYPE "G" AND TYPE "H" - 1991

SAFETY DESIGN AND GUARDRAILS

S-GR28-7M	06-28-19	GUARDRAIL ATTACHMENT TO BRIDGE END DETAILS
S-GR31-1	10-31-25	GUARDRAIL DETAILS
S-GR31-1A	06-28-19	GUARDRAIL AND BLOCK-OUT DETAILS
S-GR31-1B		GUARDRAIL FASTENING HARDWARE
S-GR31-1C	07-07-23	GUARDRAIL GENERAL NOTES AND POST DETAILS
S-GRT-2R	06-28-19	EARTH PAD FOR TYPE 38 AND TYPE 21 TERMINALS (RETROFIT)
S-GRT-3	06-28-19	TYPE 21 GUARDRAIL END TERMINAL
S-GRS-4	05-04-22	SPECIAL CASE GUADRAIL HEIGHT TRANSITION DETAIL
S-PL-6	07-30-24	SAFETY PLAN SAFETY HARDWARE PLACEMENT ON OUTSIDE EDGE

STANDARD TRAFFIC OPERATIONS

T-S-10	07-30-25	STANDARD MOUNTING DETAILS FLAT SHEET SIGNS ALUMINUM-STEEL DESIGN
T-S-19	07-30-25	STANDARD STEEL SIGN SUPPORTS
T-S-20	07-30-25	SIGN DETAILS
T-SG-1	06-27-16	WOOD POLE DETAILS FOR SPAN MOUNTED SIGNALS
T-SG-2	06-27-16	LOOP LEAD-INS, CONDUIT AND PULL BOXES
T-SG-3	07-11-17	STANDARD NOTES AND DETAILS OF INDUCTIVE LOOPS
T-SG-3A	06-27-16	ALTERNATE DETECTION DETAILS
T-SG-4	06-27-16	SPAN WIRE AND MESSENGER CABLE DETAILS
T-SG-5	06-27-16	CONTROLLER CABINET DETAILS
T-SG-6	10-21-19	PEDESTRIAN SIGNAL DETAILS
T-SG-7	10-21-19	SIGNAL HEAD ASSEMBLIES

BRIDGE INDEX

SHEET NAME

SHEET NO.

LAST REV. DATE

LAYOUT OF BRIDGE TO BE REPAIRED	BR-132-761	01-29-2026
ESTIMATED BRIDGE QUANTITIES AND NOTES.....	BR-132-762	01-29-2026
ESTIMATED BRIDGE QUANTITIES AND NOTES.....	BR-132-763	
SUPERSTRUCTURE REPAIR DETAILS.....	BR-132-764	
JOINT REPAIR DETAILS	BR-132-765	
JOINT REPAIR DETAILS	BR-132-766	
MISCELLANEOUS REPAIR DETAILS.....	BR-132-767	
SCOUR REPAIR - PIER 1	BR-132-768	01-29-2026
SCOUR REPAIR - PIER 2	BR-132-769	01-29-2026
SUBSTRUCTURE REPAIRS.....	BR-132-770	
SUBSTRUCTURE REPAIRS.....	BR-132-771	
CONCRETE REPAIR DETAILS	BR-132-772	

LIST OF BRIDGE REFERENCE DRAWINGS

(TO BE PRINTED WITH PLANS)

M-220-156 THRU M-220-173

LIST OF SPECIAL PROVISIONS

NS SPECIAL PROVISIONS FOR PROTECTION OF RAILWAY INTERESTS (DATED 11/04/2022)

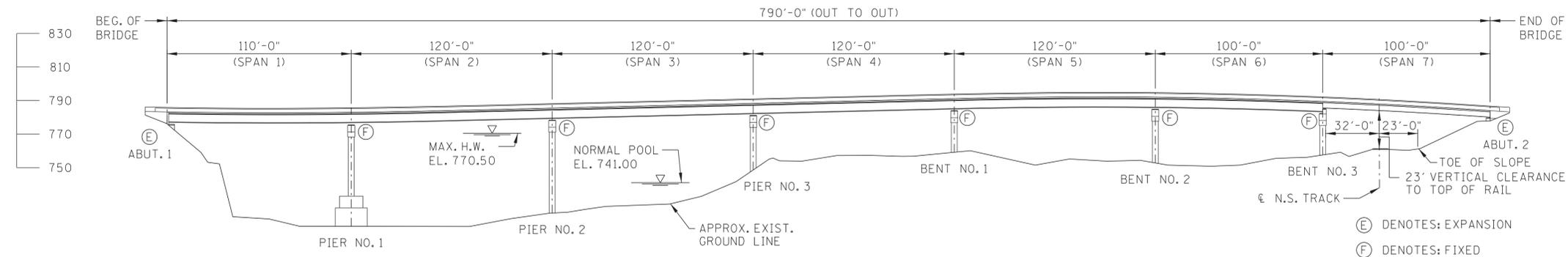
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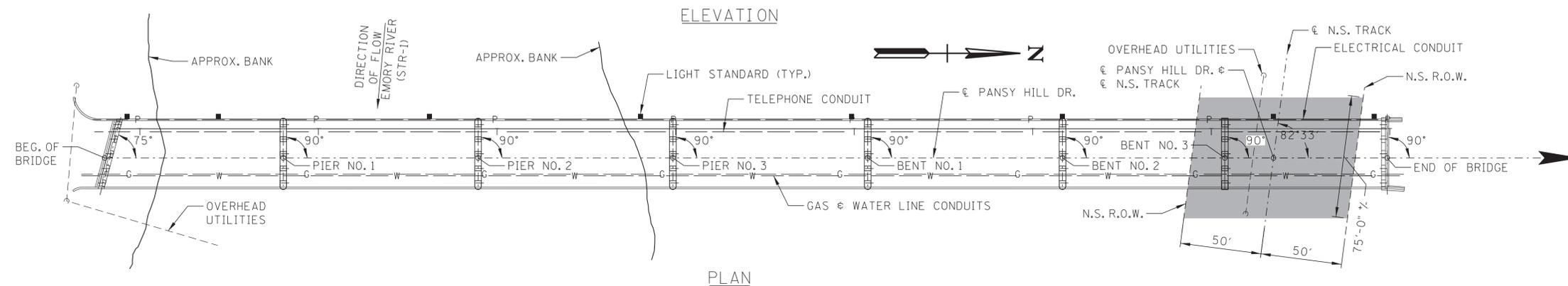
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

INDEX
AND
STANDARD DRAWINGS

PROJECT NO.	YEAR	SHEET NO.	
73455-3512-04	2026		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	01-29-2026	MEL	UPDATED LAST REV. DATES



(E) DENOTES: EXPANSION
(F) DENOTES: FIXED



ALL DIMENSIONS AND ELEVATIONS OBTAINED FROM ORIGINAL PLANS DATED 1991. REFERENCE THESE PLANS FOR VERTICAL GRADE.

VERTICAL AND HORIZONTAL CLEARANCES SHOWN ARE MINIMUMS OBTAINED FROM 2019 INSPECTION REPORTS.

RAILROAD SPECIAL NOTES:

- REFER TO EXISTING RR AGREEMENT NO. 0352 FOR ALL INFORMATION REGARDING R.O.W. AND EASEMENTS.
- EXISTING SUBSTANDARD CLEARANCES SHALL NOT BE FURTHER REDUCED FOR THE TEMPORARY CONSTRUCTION CONDITION WITHOUT WRITTEN PERMISSION FROM NORFOLK SOUTHERN.
- THE MINIMUM TEMPORARY CLEARANCES FOR USE DURING CONSTRUCTION ARE 14'-0" (HORIZONTAL) AND 22'-0" (VERTICAL) IN ACCORDANCE WITH H.1.2. OF THE NORFOLK SOUTHERN PUBLIC PROJECTS MANUAL.

■ DENOTES: APPROXIMATE LIMITS OF CONSTRUCTION AND AERIAL EASEMENTS.

SCOPE OF WORK

- PROVIDE TRAFFIC CONTROL AND PHASED CONSTRUCTION MAINTAINING ONE LANE OF TRAFFIC USING A TRAFFIC LIGHT SYSTEM.
- PROVIDE TRAFFIC CONTROL TO ACCOMMODATE PARK TRAFFIC (BELOW).
- RECONSTRUCT THE CONCRETE BRIDGE DECK IN AREAS OF FULL AND PARTIAL DEPTH DECK REPAIR (UTILIZE 18 HOUR CONCRETE).
- RECONSTRUCT THE CONCRETE PAVEMENT AT BRIDGES ENDS (PABE) IN AREAS OF FULL AND PARTIAL DEPTH DECK REPAIR (UTILIZE 18 HOUR CONCRETE).
- APPLY A THIN EPOXY OVERLAY ON CONCRETE BRIDGE DECK AND PABES WITH APPROPRIATE SKID RESISTANCE FOR VEHICULAR TRAFFIC.
- REPLACE STRIP SEAL EXPANSION JOINTS AT ABUTMENTS. RECESS TOPS OF CONCRETE HEADERS TO ALLOW FOR THIN OVERLAY.
- APPLY A NON-PENETRATING SEALER TO THE SIDEWALK.
- REPAIR DAMAGED/DETERIORATED AREAS OF CONCRETE ON PARAPETS, BEAMS, DIAPHRAGMS, AND SUBSTRUCTURE UNITS.
- REPAIR CRACKS IN BEAMS, DIAPHRAGMS, AND SUBSTRUCTURE UNITS.
- REPAIR UNDERMINED FOUNDATION AND PROVIDE SCOUR COUNTERMEASURES AT PIERS 1 AND 2.
- HIGH PRESSURE WATER WASH AND TEXTURE COAT TOP AND INSIDE FACE OF PARAPETS (WHITE).
- HIGH PRESSURE WATER WASH AND TEXTURE COAT OUTSIDE OF PARAPET, DECK OVERHANG, BOTTOM OF BEAMS, AND EXPOSED AREAS OF SUBSTRUCTURES (MOUNTAIN GREY).
- REPLACE BEARING KEEPER ANGLES AND ANCHOR BOLTS FOR BEAM 1 AT ABUTMENT 1.
- CLEAN AND PAINT STEEL BEAMS OF SPAN 7.
- CLEAN AND PAINT BEARINGS OF STEEL SPAN AND BEARING KEEPER ANGLES AT ABUTMENT 1.
- REPLACE DAMAGED SECTIONS OF GUARDRAIL.
- PLACE NEW GUARDRAIL ON SOUTHWEST CORNER OF BRIDGE.
- CONSTRUCT ASPHALT ROADWAY TRANSITIONS AT BEGINNING AND END OF BRIDGE.
- CLEAN AND MAINTAIN BRIDGE DRAINS (COST TO BE INCLUDED IN ITEMS BID ON).
- ALL DIRT/DEBRIS/TRASH SHALL BE REMOVED FROM SUBSTRUCTURES AND BELOW BRIDGE (COST TO BE INCLUDED IN ITEMS BID ON).
- REMOVE VEGETATION FOR A DISTANCE OF TEN FEET ALONG EACH SIDE OF THE BRIDGES AS DIRECTED BY THE ENGINEER.

LIST OF DRAWINGS

DRAWING	DRAWING NO.	LAST REV. DATE
LAYOUT OF BRIDGE TO BE REPAIRED	BR-132-761	01-29-2026
ESTIMATED BRIDGE QUANTITIES AND NOTES	BR-132-762	01-29-2026
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SCOUR REPAIR - PIER 1	BR-132-768	01-29-2026
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SUBSTRUCTURE REPAIRS	BR-132-770	
SUBSTRUCTURE REPAIRS	BR-132-771	
CONCRETE REPAIR DETAILS	BR-132-772	

POSTED SPEED LIMIT (PANSY HILL DR.) = 25 M.P.H.
AADT (2023) = 4,933

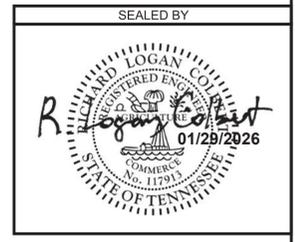
EXTREME CARE SHALL BE TAKEN TO PROTECT AND MAINTAIN THE PLAQUES ON THE BRIDGE PARAPETS, AS WELL AS THE MEMORIAL FOUNTAIN AND ASSOCIATED AESTHETIC TREATMENTS PRESENT AT BENT 3. ANY DAMAGE TO THESE ELEMENTS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

LIST OF REFERENCE DRAWINGS

(TO BE PRINTED WITH PLANS)
M-220-156 THRU M-220-173

LIST OF SPECIAL PROVISIONS

NS SPECIAL PROVISIONS FOR THE PROTECTION OF RAILWAY INTERESTS (DATED 11/4/2022)



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
LAYOUT OF
BRIDGE TO BE REPAIRED
BRIDGE NO. 73-1226-0.28
FED. I.D. NO. 73S24010001
PANSY HILL DR. OVER EMORY RIVER
& NORFOLK SOUTHERN RAILWAY
ROANE COUNTY
2026

BR-132-761

1/29/2026 7:58:22 AM J:\Structures\11685-10_Roane_Co_Pansy_Hill_Dr_over_Emory_River\Drawings\Final_dgn\11685-10_STR_LAY.dgn

Palmer ENGINEERING

PIN NO.: 124518.00

DESIGN BY: R.L. COLBERT DATE: 11/2025

DRAWN BY: M.D. SIMPSON DATE: 11/2025

SUPERVISED BY: G.S. WILSON DATE: 11/2025

CHECKED BY: R.L. COLBERT DATE: 11/2025

GENERAL NOTES

SPECIFICATIONS & LOADING

- (1) **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 [AND THE NORFOLK SOUTHERN PUBLIC PROJECTS MANUAL].
- (2) **DESIGN SPECIFICATIONS:** 10TH EDITION (2024) AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, AND THE 2ND EDITION (2011) AASHTO GUIDE SPECIFICATIONS FOR LRFD SEISMIC BRIDGE DESIGN WITH INTERNS.

STEEL, CONCRETE, REINFORCING, AND FORMING

- (3) **STRUCTURAL STEEL:** SHALL CONFORM TO ASTM A709 GRADE 60 UNLESS OTHERWISE NOTED.
- (4) **CONCRETE:** TO BE CLASS "A" (CAST-IN-PLACE) F'C = 3000 PSI EXCEPT AS NOTED OTHERWISE.
- (5) **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 A MAXIMUM OF 8 INCHES. NO FLY ASH REPLACEMENT WILL BE PERMITTED. THE MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3,500 PSI. THE CONTRACTOR SHALL PROVIDE PROOF PRIOR TO BEGINNING WORK THAT THE PROPOSED CONCRETE MIX WILL OBTAIN THE REQUIRED PROPERTIES. PROOF SHALL BE PROVIDED BY AN INDEPENDENT TESTING COMPANY AND SUBMITTED TO THE MATERIALS AND TESTS DIVISION OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION FOR APPROVAL. TRAFFIC SHALL NOT BE PERMITTED BELOW ANY REPAIR AREA UNTIL TEST SPECIMENS ATTAIN A COMPRESSIVE STRENGTH OF 3,000 P.S.I. AND THE CONCRETE HAS BEEN IN PLACE A MINIMUM OF EIGHTEEN (18) HOURS.
- (6) **BRIDGE DECK SURFACE FINISH:** TO BE IN ACCORDANCE WITH METHOD 1 IN ARTICLE 604.22 OF THE STANDARD SPECIFICATIONS.
- (7) **CONCRETE CURING:** ALL CONCRETE IN REPAIR AREAS SHALL BE CURED ACCORDING TO THE STANDARD SPECIFICATIONS.
- (8) **FINISHING CONCRETE SURFACES:** CONCRETE FINISHING SHALL BE IN ACCORDANCE WITH SECTION 604.21 OF THE STANDARD SPECIFICATIONS. A CLASS I FINISH FOLLOWED BY AN APPLIED TEXTURE FINISH SHALL BE USED IN LIEU OF A CLASS II FINISH. NO TEXTURE FINISH SHALL BE APPLIED PRIOR TO COMPLETION OF PAVING AND HAULING OPERATIONS AT THE BRIDGE SITE. THE APPLIED TEXTURE FINISH SHALL BE MEASURED AND PAID FOR UNDER ITEM NO. 604-04.02.

MISCELLANEOUS GENERAL NOTES

- (9) **REQUIREMENTS AND RESTRICTIONS FOR PHASE CONSTRUCTION:**
 - A. A SINGLE 11 FT. TRAFFIC LANE SHALL BE MAINTAINED AT ALL TIMES.
- (10) **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 THE 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.

- (11) **EXPANSION JOINTS:** 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.
- (12) **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.
- (13) **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.
- (14) 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.
- (15) **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

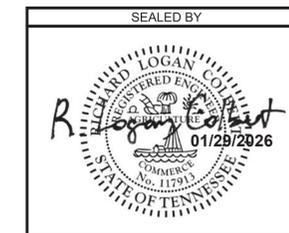
PROJECT NO.	YEAR	SHEET NO.	
73455-3512-04	2026		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	01-29-2026	MEL	REMOVED ITEM 204-12

ESTIMATED BRIDGE QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	TOTAL
①	201-05.31 VEGETATION REMOVAL	LS	1
	204-09.01 COFFERDAM (PIER NO. 1)	LS	1
	204-09.02 COFFERDAM (PIER NO. 2)	LS	1
	602-10.12 BEARING DEVICE (REPAIR)	LS	1
②	603-02.01 REPAINTING EXISTING STEEL STRUCTURES (BR. NO. 73-1226-0.28)	LS	1
③	603-05.20 CONTAINMENT & DISPOSAL OF WASTE (BR. NO. 73-1226-0.28)	LS	1
	604-03.25 CLASS S CONCRETE (FOUNDATION SEAL)	C.Y.	362
④	604-04.02 APPLIED TEXTURE FINISH (EXISTING STRUCTURES)	S.Y.	5460
⑤	604-10.05 CONCRETE	S.F.	197
	604-10.17 NON-PENETRATING CONCRETE SEAL	S.Y.	514
⑥	604-10.30 BRIDGE DECK REPAIRS (FULL DEPTH OF SLAB)	S.Y.	10
	604-10.32 EXPANSION JOINT REPAIRS (TYPE A)	L.F.	43
	604-10.42 CONCRETE REPAIRS	C.F.	3
	604-10.46 EXPANSION JOINT REPAIRS (TYPE G)	L.F.	45
	604-10.50 BRIDGE DECK REPAIRS (PARTIAL DEPTH OF SLAB)	S.Y.	25
⑦	604-10.54 CONCRETE REPAIRS	S.F.	196
	604-10.63 CONCRETE REPAIRS (CRACKS)	L.F.	26
	617-04.01 TYPE 1 THIN EPOXY OVERLAY (EPOXY-URETHANE)	S.Y.	3360

- ① INCLUDES COST OF ALL LABOR AND MATERIALS NECESSARY FOR THE REMOVAL AND DISPOSAL OF VEGETATION WITHIN 10 FEET OF THE STRUCTURE AND ANY OTHER LOCATIONS NECESSARY TO COMPLETE THE WORK, AS DIRECTED BY THE ENGINEER. WHERE POSSIBLE, STUMPS AND ROOTS ARE TO REMAIN TO PREVENT GROUND DISTURBANCE.
- ② INCLUDES ALL COSTS ASSOCIATED WITH PAINTING ALL BEARING KEEPER ANGLES AT ABUTMENT 1 (EXISTING AND NEW) AND REPAINTING ALL SPAN 7 BEARINGS AND STEEL BEAMS. SEE NOTES FOR SURFACE PREPARATION AND PAINTING STRUCTURAL STEEL ON SHEET 2A.
- ③ INCLUDES COST OF ALL LABOR AND MATERIALS NECESSARY FOR THE CONTAINMENT AND DISPOSAL OF ALL WASTE GENERATED DURING CLEANING AND PAINTING STRUCTURAL STEEL.
- ④ INCLUDES ALL COSTS ASSOCIATED WITH APPLYING TEXTURE FINISH TO INDICATED AREAS. SEE DETAILS IN PLANS. ALSO INCLUDES SURFACE PREPARATION USING A HIGH PRESSURE WATER WASH TO REMOVE ALL LOOSE COATINGS, DEBRIS, ETC., AS DIRECTED BY THE ENGINEER.
- ⑤ INCLUDES ALL LABOR AND MATERIALS NECESSARY TO PLACE HIGH EARLY STRENGTH CONCRETE FOR REPAIR OF INDICATED AREAS.
- ⑥ INCLUDES ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED FOR FULL DEPTH DECK REPAIRS IN AREAS THAT ARE MARKED FOR PARTIAL DEPTH, AND DURING REMOVAL TURN INTO FULL DEPTH.
- ⑦ INCLUDES COST OF ALL LABOR AND MATERIALS NECESSARY TO PLACE A POLYMER MODIFIED CEMENTITIOUS STRUCTURAL PATCHING MATERIAL FOR REPAIR OF INDICATED AREAS.

ANY DAMAGE TO VEGETATED AREAS NOT SPECIFICALLY MENTIONED WITHIN THE PROJECT SCOPE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. THESE AREAS ARE TO BE RETURNED TO THEIR PRE-CONSTRUCTION STATE AND SHALL BE DETERMINED BY THE ENGINEER. ALL COSTS (LABOR AND MATERIALS) ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN ITEMS BID ON.



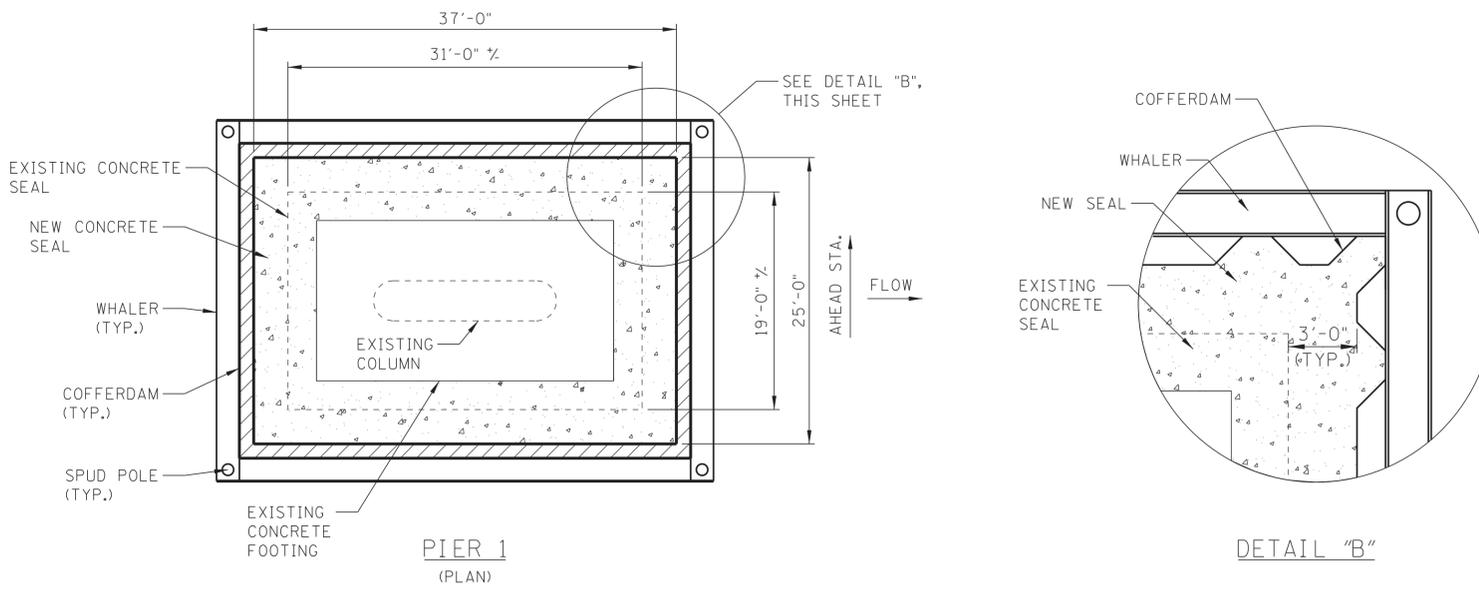
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
**ESTIMATED BRIDGE
QUANTITIES AND NOTES**
BRIDGE NO. 73-1226-0.28
FED. I.D. NO. 73S24010001
PANSY HILL DR. OVER EMORY RIVER
& NORFOLK SOUTHERN RAILWAY
ROANE COUNTY
2026

BR-132-762

(CONT. NEXT SHEET)

Palmer ENGINEERING
PIN NO.: 124518.00
DESIGN BY: R.L. COLBERT DATE: 11/2025
DRAWN BY: M.D. SIMPSON DATE: 11/2025
SUPERVISED BY: G.S. WILSON DATE: 11/2025
CHECKED BY: R.L. COLBERT DATE: 11/2025

PROJECT NO.	YEAR	SHEET NO.	
73455-3512-04	2026		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	01-29-2026	MEL	UPDATED DETAILS AND REMOVED NOTES



SCOUR REPAIR NOTES FOR PIER 1:

THE COFFERDAM SHALL BE DESIGNED BY AN ENGINEER LICENSED IN TENNESSEE. THE DESIGN SHALL BE SEALED BY THE ENGINEER AND SUBMITTED TO THE HEADQUARTERS OF BRIDGE INSPECTION AND REPAIR OFFICE FOR APPROVAL. CONSTRUCTION OF THE COFFERDAM AND CONCRETE SEAL SHALL NOT BEGIN UNTIL THE COFFERDAM DESIGN HAS BEEN APPROVED.

THE NEW COFFERDAM AND CONCRETE SEAL SHALL MEET THE REQUIREMENTS OF TDOT STANDARD SPECIFICATIONS SECTION 604.18.

CLASS S CONCRETE SHALL BE USED. NEW CONCRETE SEAL TO BE POURED 1'-0" ABOVE EXISTING CONCRETE SEAL.

DIMENSIONS OF EXISTING CONCRETE SEAL ARE TO BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO DESIGN AND CONSTRUCTION OF THE NEW COFFERDAM.

COFFERDAM TO BE CUT FLUSH WITH TOP OF NEW CONCRETE SEAL AND LEFT IN PLACE AFTER CONCRETE SEAL IS POURED AND HARDENED.

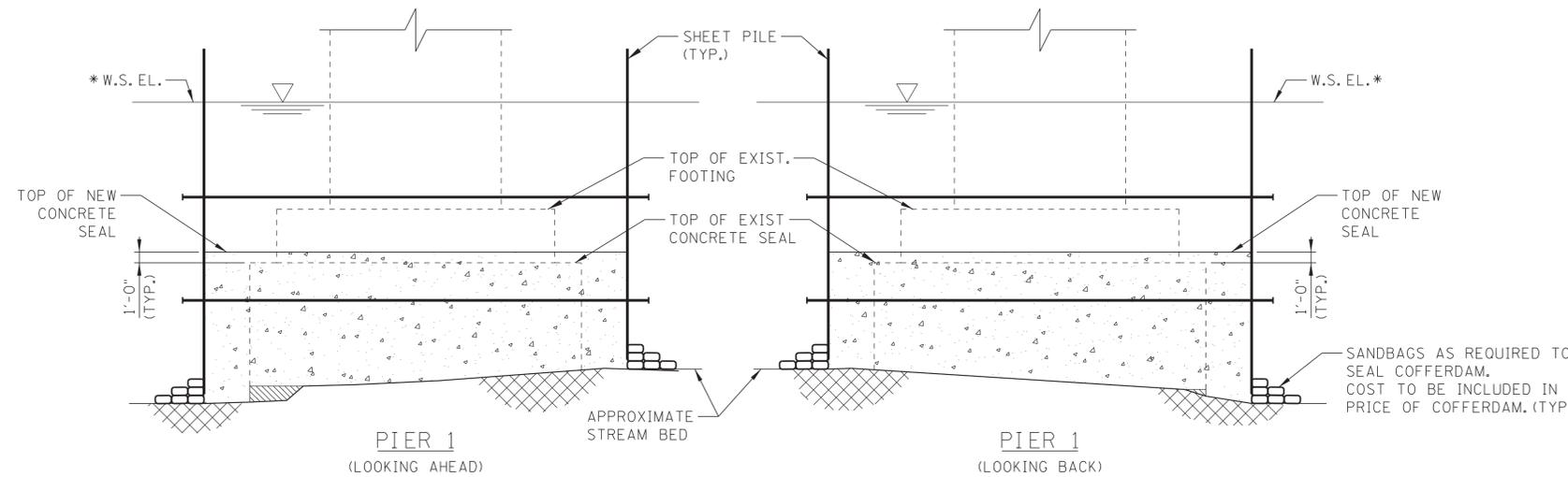
COST OF ALL LABOR AND MATERIALS REQUIRED TO PLACE COFFERDAM AT PIER NO.1 TO BE INCLUDED IN THE ITEM NO. 204-09.01, COFFERDAM (PIER 1), L.S.

FRESH CONCRETE SHALL NOT BE ALLOWED TO COME INTO CONTACT WITH FLOWING WATER.

THE CONTRACTOR SHALL NOT REMOVE ANY PORTION OF THE COFFERDAM FOR ONE (1) DAY IN ORDER FOR THE SUSPENDED SOLIDS IN THE WATER COLUMN ENCOUNTERED DURING THE TREMIE OPERATION TO SETTLE OUT.

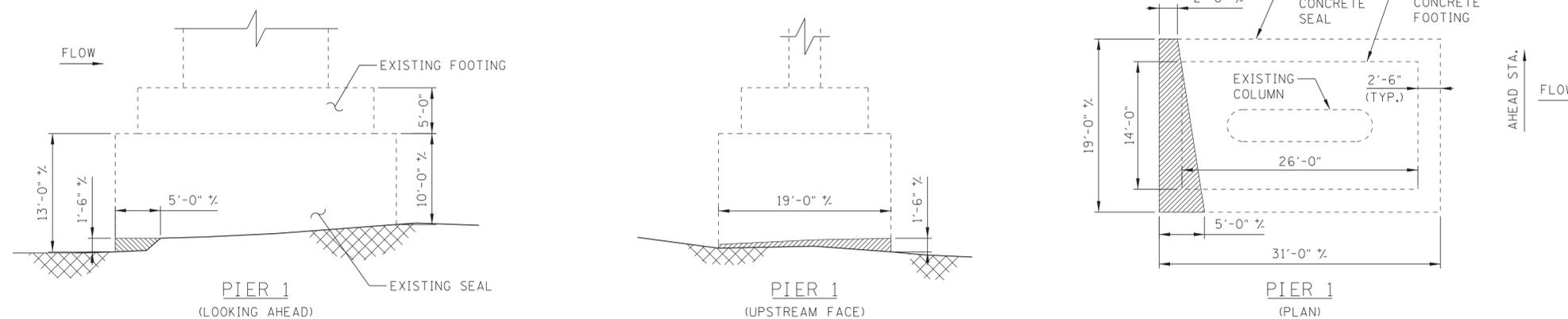
SUGGESTED CONSTRUCTION SEQUENCE:

1. PLACE COFFERDAM SHEETS AND WHALERS. USE SANDBAGS AS REQUIRED TO SEAL COFFERDAM. WHALER FRAMES TO BE ON THE OUTSIDE OF THE SHEETING. (DO NOT DE-WATER)
2. CLEAN OUT LOOSE MATERIAL AND DEBRIS FROM INSIDE COFFERDAM AND FROM UNDER SEAL FOOTING AS REQUIRED.
3. TREMIE CONCRETE BETWEEN THE EXISTING SEAL FOOTING AND THE COFFERDAM TO AN ELEVATION ONE (1) FOOT ABOVE THE EXISTING SEAL.
4. CUT AND REMOVE COFFERDAM SHEETING DOWN TO THE TOP OF NEW TREMIE CONCRETE. REMAINING SHEETING AND WHALER FRAMES ARE TO STAY IN PLACE.



PROPOSED REPAIRS

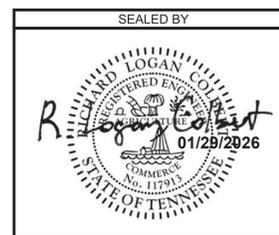
* NORMAL POOL W.S. ELEV. = 741.00' FROM 1991 BRIDGE PLANS.



EXISTING CONDITION

■ DENOTES AREAS OF EXIST. CONCRETE SEAL AND ROCK BEING UNDERMINED

EXISTING CONDITION SHOWN IS PER THE UNDERWATER INSPECTION REPORT DATED JULY 21, 2023. PRESENT CONDITIONS MAY VARY.

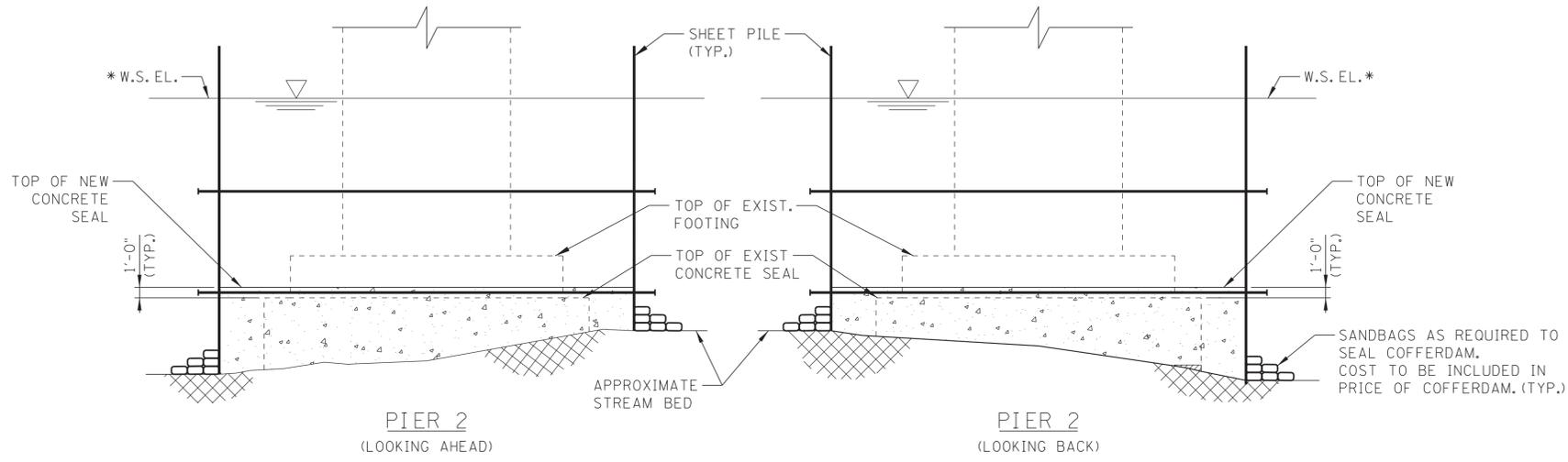
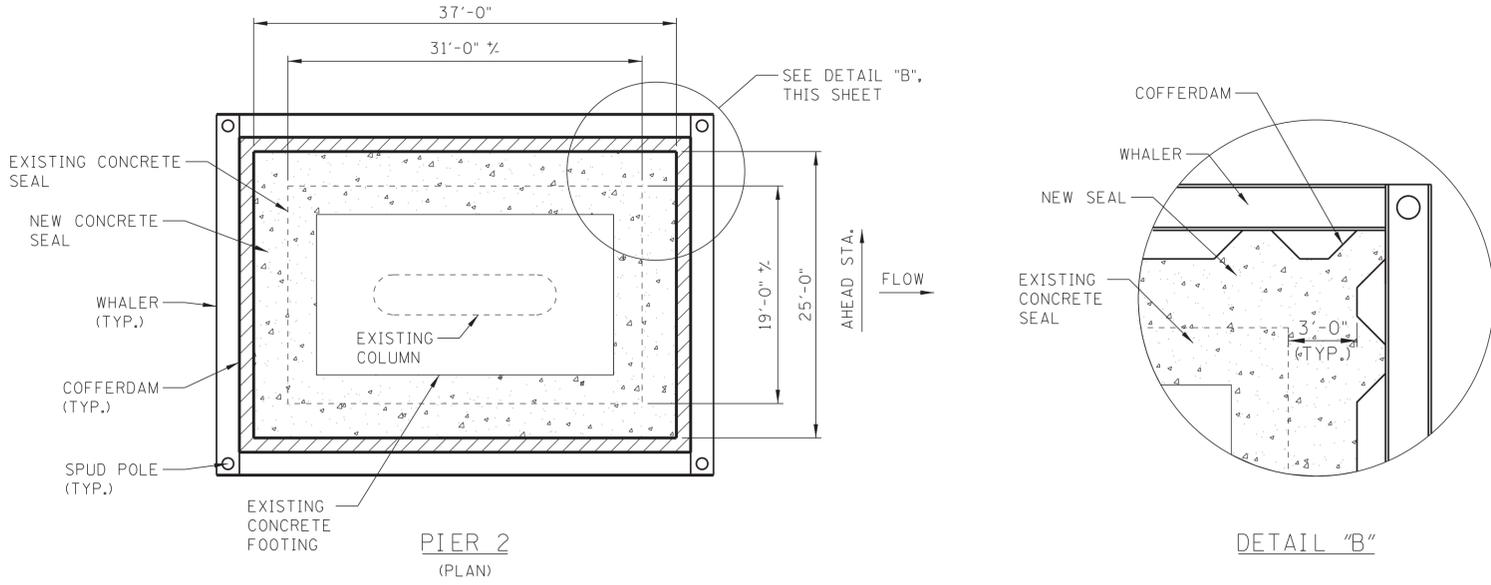


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SCOUR REPAIR - PIER 1
 BRIDGE NO. 73-1226-0.28
 FED. I.D. NO. 73S24010001
 PANSY HILL DR. OVER EMORY RIVER
 & NORFOLK SOUTHERN RAILWAY
 ROANE COUNTY
 2026

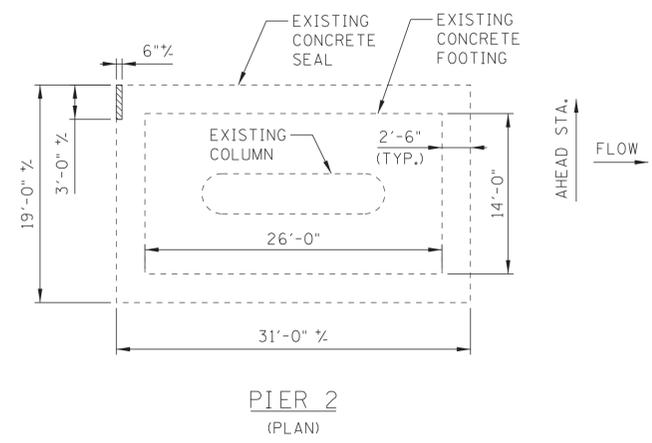
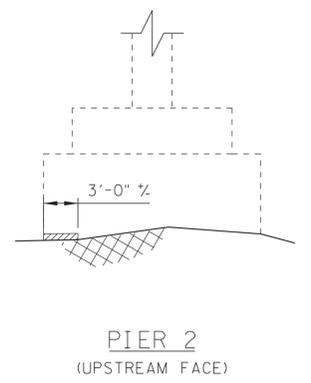
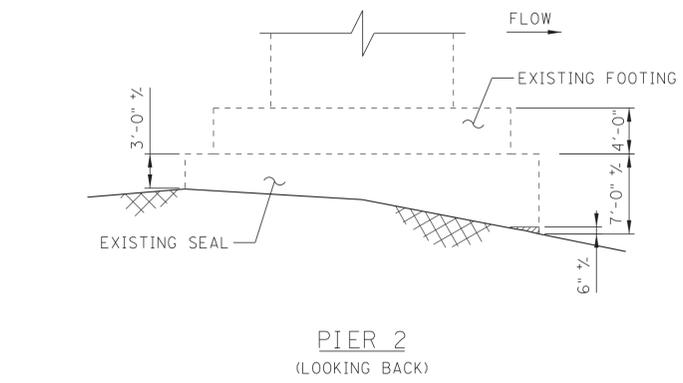
BR-132-768

PROJECT NO.	YEAR	SHEET NO.	
73455-3512-04	2026		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	01-29-2026	MEL	UPDATED DETAILS AND REMOVED NOTES



PROPOSED REPAIRS

* NORMAL POOL W.S. ELEV. = 741.00' FROM 1991 BRIDGE PLANS.



EXISTING CONDITION

▨ DENOTES AREAS OF EXIST. CONCRETE SEAL AND ROCK BEING UNDERMINED

EXISTING CONDITION SHOWN IS PER THE UNDERWATER INSPECTION REPORT DATED JULY 21, 2023. PRESENT CONDITIONS MAY VARY.

SCOUR REPAIR NOTES FOR PIER 2:

THE COFFERDAM SHALL BE DESIGNED BY AN ENGINEER LICENSED IN TENNESSEE. THE DESIGN SHALL BE SEALED BY THE ENGINEER AND SUBMITTED TO THE HEADQUARTERS OF BRIDGE INSPECTION AND REPAIR OFFICE FOR APPROVAL. CONSTRUCTION OF THE COFFERDAM AND CONCRETE SEAL SHALL NOT BEGIN UNTIL THE COFFERDAM DESIGN HAS BEEN APPROVED.

THE NEW COFFERDAM AND CONCRETE SEAL SHALL MEET THE REQUIREMENTS OF TDOT STANDARD SPECIFICATIONS SECTION 604.18.

CLASS S CONCRETE SHALL BE USED. NEW CONCRETE SEAL TO BE POURED 1'-0" ABOVE EXISTING CONCRETE SEAL.

DIMENSIONS OF EXISTING CONCRETE SEAL ARE TO BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO DESIGN AND CONSTRUCTION OF THE NEW COFFERDAM.

COFFERDAM TO BE CUT FLUSH WITH TOP OF NEW CONCRETE SEAL AND LEFT IN PLACE AFTER CONCRETE SEAL IS POURED AND HARDENED.

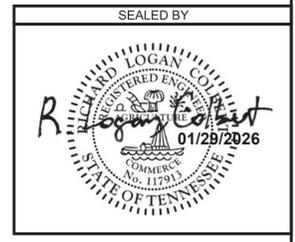
COST OF ALL LABOR AND MATERIALS REQUIRED TO PLACE COFFERDAM AT PIER NO. 2 TO BE INCLUDED IN THE ITEM NO. 204-09.02, COFFERDAM (PIER 2), L.S.

FRESH CONCRETE SHALL NOT BE ALLOWED TO COME INTO CONTACT WITH FLOWING WATER.

THE CONTRACTOR SHALL NOT REMOVE ANY PORTION OF THE COFFERDAM FOR ONE (1) DAY IN ORDER FOR THE SUSPENDED SOLIDS IN THE WATER COLUMN ENCOUNTERED DURING THE TREMIE OPERATION TO SETTLE OUT.

SUGGESTED CONSTRUCTION SEQUENCE:

1. PLACE COFFERDAM SHEETS AND WHALERS. USE SANDBAGS AS REQUIRED TO SEAL COFFERDAM. WHALER FRAMES TO BE ON THE OUTSIDE OF THE SHEETING. (DO NOT DE-WATER)
2. CLEAN OUT LOOSE MATERIAL AND DEBRIS FROM INSIDE COFFERDAM AND FROM UNDER SEAL FOOTING AS REQUIRED.
3. TREMIE CONCRETE BETWEEN THE EXISTING SEAL FOOTING AND THE COFFERDAM TO AN ELEVATION ONE (1) FOOT ABOVE THE EXISTING SEAL.
4. CUT AND REMOVE COFFERDAM SHEETING DOWN TO THE TOP OF NEW TREMIE CONCRETE. REMAINING SHEETING AND WHALER FRAMES ARE TO STAY IN PLACE.



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SCOUR REPAIR - PIER 2
BRIDGE NO. 73-1226-0.28
FED. I.D. NO. 73S24010001
PANSY HILL DR. OVER EMORY RIVER
& NORFOLK SOUTHERN RAILWAY
ROANE COUNTY
2026

BR-132-769

1/29/2026 8:00:31 AM J:\S\structures\11685-10_Roane_Co_Pansy_Hill_Dr_Over_Emory_River\Drawings\Final_dgn\11685-10_STR_SCOUR.dgn

Palmer ENGINEERING	PIN NO: 124518.00
DESIGN BY: R.L. COLBERT	DATE: 11/2025
DRAWN BY: M.D. SIMPSON	DATE: 11/2025
SUPERVISED BY: G.S. WILSON	DATE: 11/2025
CHECKED BY: R.L. COLBERT	DATE: 11/2025