

MICROFILMED
FEB 10 1986

NOV 17 1989

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

ROS-50-3275
ROSS COUNTY

ROSS COUNTY	OHIO
ROS - 50 - 3275	FHWA REGION 5
	FEDERAL PROJECT

1
9

Approx 2.8 miles west
of Londonderry

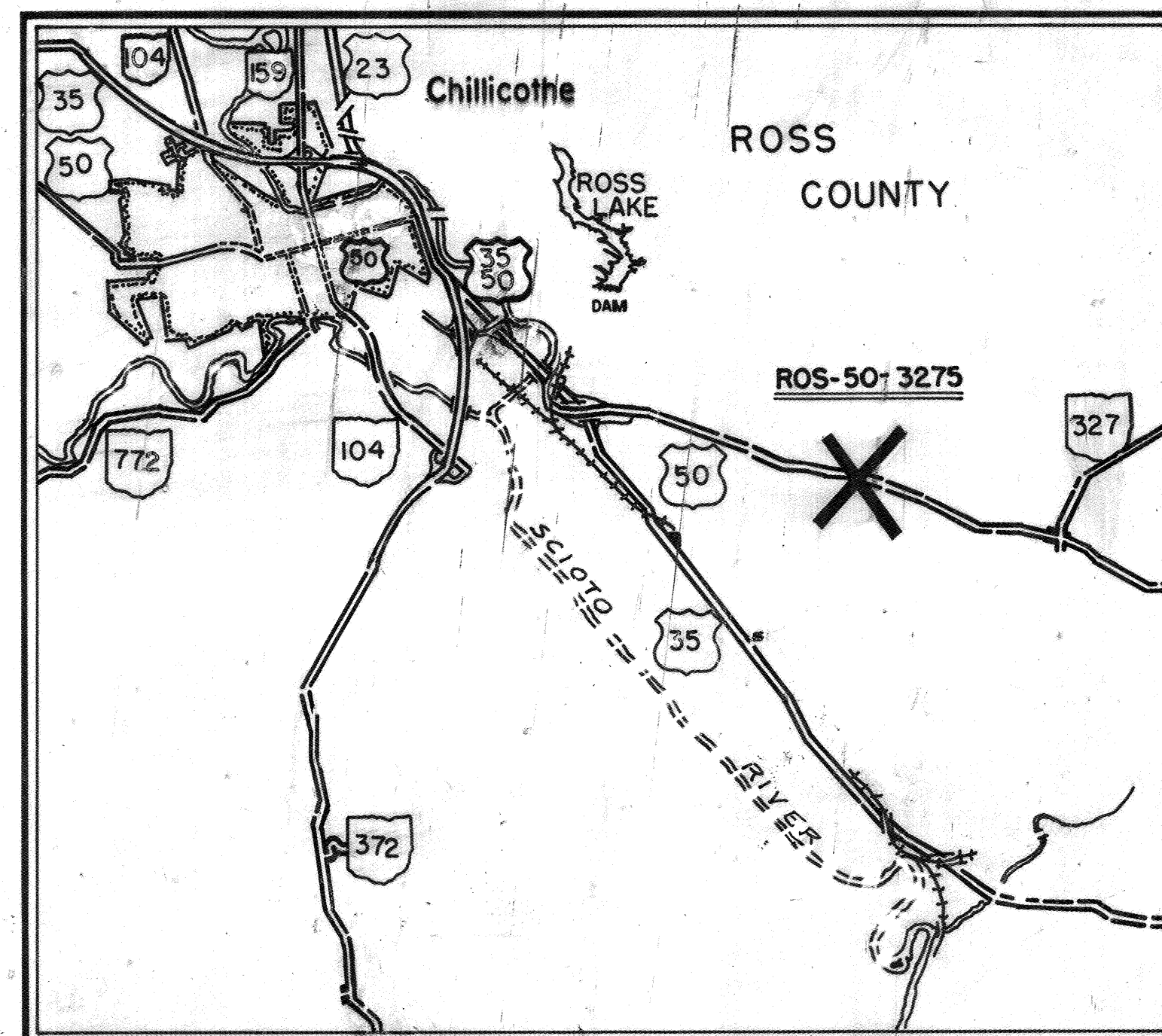
PLAN NO. BR-10-82

CONVENTIONAL SIGNS

County Line	-----	Limited Access (only)	LA
Township Line	-----	Right of Way (only)	RW
Section Line	-----	Limited Access & Right of Way	LA & RW
Corporation Line	----- or -----	Existing Right of Way	-----
Fence Line (existing)	-x-x-	Property Line	----- (in existing fence) -x-x-
Center Line	-----	Railroad	----- or -----
Trees, Stumps, (to be removed)	---X---	Guardrail (existing)	---a--- (proposed) ---a---
Utility Poles: Telephone, Power, Light	o, o, o		

INDEX OF SHEETS

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LOCATION MAP

SCALE IN MILES



LINE DATA

Begin Project	Sta. 1728+97.11
End Project	Sta. 1730+44.89
Net Length of Project = 147.78	Lin. Ft. or 0.028 mi.
Begin Work	Sta. 1727+61.63
End Work	Sta. 1731+86.63
Net Length of Work = 425	Lin. Ft. or 0.081 mi.

UNDERGROUND UTILITIES

48 HOURS
BEFORE YOU DIG
Call 800-362-2764 (Toll free)
OHIO UTILITIES PROTECTION SERVICE

NON-MEMBERS
MUST BE CALLED DIRECTLY

Portion to be improved _____
State & Federal Routes _____
Other Roads _____

SCALES

Plan _____
Profile: _____ Horizontal _____, Vertical _____
Cross Section: Horizontal _____, Vertical _____

SUPPLEMENTAL SPECIFICATIONS	
1001	1-3-77
836	3-12-75

Approved _____
Date 2-19-82 District Deputy Director of Transportation

Approved _____
Date 2-22-82 Engineer, Bureau of Bridges and Structural Design

Approved _____
Date 3-5-82 Chief Engineer, Operations

Approved _____
Date 3-5-82 Director, Department of Transportation

Plan Prepared By:
DIST. 9 BRIDGE DEPT.

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS			
AS-1-47	7-27-49		
BP-5	7-16-81		
CSB-1-47	8-25-49		
DBR-2-73	4-10-73		
GR-2B	12-6-76		
GR-3	12-6-76		
MC-3	6-1-73		

SEAL

Project:
Date of Letting _____ 19____, Contract No. _____

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR

DATE

FHWA REGION	STATE	PROJECT	
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29 spaces @ 12'-6" = 362'-6" Railing Panels (Typ. both sides)

100'-0" = 16 spaces @ 6'-3"

162'-6" = 26 spaces @ 6'-3"

100'-0" = 16 spaces @ 6'-3"

25' type A Anchor Asby.

See Note Below

See Plan Sheet No. 4 Note - "Disposal of Mat'l Removed."

End Project (See Detail Plan Sheet No. 5.)

Begin Work 1727+64.75

1727+00

1728+00

1730+00

1731+00

1732+00

To Chillicothe

Begin Project

25' type A Anchor Asby.

100'-0" = 16 spaces @ 6'-3"

25' type A Anchor Asby.

100'-0" = 16 spaces @ 6'-3"

End Work 1731+77.25

WALNUT CREEK

20°

2:1

2:1

Existing & Proposed Bridge Limits = 147.78'

Sta. 1728+97.11 End Approach Slab

Sta. 1729+71.00 Bridge

Sta. 1730+44.89 Begin Approach Slab

300' V.C.

-0.5%

2:1 Norm.

2:1 Norm.

1727+00

1728+00

1729+00

1730+00

1731+00

1732+00

640

635

630

625

620

Note: Additional Type "A" Dumped Rock to be distributed, as directed by the Engineer, after all wasted masonry has been placed.

SITE PLAN & PROFILE

BRIDGE NO. ROS-50-3275
OVER WALNUT CREEK

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MSC	MSC	MSC	DAB	M.F.B.	1-82	

GENERAL NOTES

DESIGN DATA

Design Loading - Superstructure - Original Design 515-46 Updated by Bars Analysis of 10-81 to H5-20-44 before contract letting.

Concrete - Class C Unit Stress 1200 psi - Superstructure
1333 psi - Substructure

Reinforcing Steel - ASTM-A615, A616 or A617

REFERENCE

Supplemental Specification 836 (dated 1-1-71), include for payment in 511.
1001 (dated 1-3-77)
Standard Drawing CSB-1-47 (8-25-49), Continuous Steel Beam Bridge.
BP5 (7-16-81), Placing Feathered Areas.
" " AS-1-47 (7-27-49), Existing Approach Slab
" " MC3 (6-1-73), Barricades & Gates
" " DBR-2-73 (4-10-73), Deep Beam Bridge Rail....
" " GR-2B (12-6-76), Guardrail, Type 5
" " GR-3 (12-6-76), Bridge Terminal Asbly.

MOBILIZATION, AS PER PLAN

The Contractor shall provide a suitable field office having a minimum of 150 square feet of floor space which shall be in accordance with 619.01 and 619.02. Payment for the above shall be included in the lump sum price bid for item 624 Mobilization, as per plan.

DIMENSIONS

The Contractor shall examine the site and confirm that the existing conditions can be adapted in all respects to the proposed work as outlined on the plans, and make such measurements as may be necessary to confirm this before bidding. The Contractors attention is directed to Specification Items 102.05 and 513.02.

TRAFFIC CONTROL

One lane traffic is to be maintained through the bridge at all times while work is being performed. During any period when necessary work interferes with the free flow of traffic, as determined by the Engineer, the Contractor shall furnish a flagman and "Flagman Ahead" signs. The Contractor shall furnish temporary patches as necessary on the traffic lane to maintain a smooth travelled surface for safety & less impact on portions to be repaired.

DECK REPAIRS

Partial Depth Patching -
This shall be performed in accordance with the Proposal and Item Special Patching Concrete Bridge Decks, Type I, II or III.

Full Depth Concrete Replacement at Edge of Deck shall be paid for as 202 and 511.

Full Depth Patching

The areas where repeated soundings indicate that full depth concrete replacement is necessary, as determined by the Engineer, shall be paid for as 202 & 511.

All full depth concrete removed adjacent to the replaced portion of the edge of the deck and all other contiguous full depth concrete shall be placed at the same time to eliminate all unnecessary construction joints.

SUBSTRUCTURE REPAIR

Chipping hammers used for substructure repair of seats at locations where bumpers have been removed, and any other areas designated by the Engineer for repairs, shall be no heavier than 35 pounds and welded steel wire fabric shall be securely fastened to existing sound concrete before patches are applied as in 519.

WATERPROOFING BRIDGE DECK

This shall be done in accordance with *Item Special, Membrane Water-proofing (Liquid Type) which includes tack coat.

WATERPROOFING BACKWALL

The vertical construction joints at centerline and horizontal construction joints behind bridge seat on replaced abutment backwall shall be done in accordance with Item 512.

EXISTING BRIDGE PLANS

Detail drawings of the existing bridge as built in 1952 may be inspected in the District Bridge Office in Chillicothe.

ESTIMATED QUANTITIES

Specific locations & usage of estimated quantities set up on this plan to be used as directed by the Engineer shall be made a matter of record by incorporation into the final change order governing completion of this project. Estimated quantities of material shall not be ordered for delivery to the project unless authorized by the Engineer.

BRIDGE TERMINAL ASSEMBLY, TYPE B, AS PER PLAN

Assembly shall be as per GR-3 except all posts encased in concrete shall be W6 x 15.5 Lbs. galvanized steel posts. Payment for the above shall be included in the unit price bid for Bridge Terminal Assembly, Type B, as per plan.

FABRICATOR A.I.S.C. certification as specified in 501.04 is not required.

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ROSS COUNTY
ROS-50-3275

PLAN NO. BR-10-82

ESTIMATED QUANTITIES			
Item	Total	Unit	Description
202	362	Lin. Ft.	Guardrail Removed
202	Lump	Sum	Portions of Structure Removed, As Per Plan
403	21	Cu. Yds.	Asphalt Concrete, AC-20
404	20	Cu. Yds.	Asphalt Concrete, AC-20
407	55	Gals.	Tack Coat
407	2	Tons	Cover Aggregate, 703.06
503	8	Cu. Yds.	Unclassified Excavation
509	1500	Lbs.	Reinforcing Steel
Special	939	Lbs.	Reinforcing Steel, Epoxy Coated
511	50	Cu. Yds.	Class 5 Concrete, Superstructure, As per plan.
511	29	Cu. Yds.	Class C Concrete, Abutments
512	30	Sq. Yds.	Type B Waterproofing
514	Lump	Sum	Field Painting of Existing Steel, Surface Preparation
514	Lump	Sum	" " " " " " , Complete Coat Prime
514	Lump	Sum	" " " " " " , Complete Coat Finish
516	71.67	Lin. Ft.	Elastomeric Compression Seals, Including Structural Steel Joints, As Per Plan
517	295.56	Lin. Ft.	Railing, Deep Beam Rail with tubular backup, Type II Steel Posts & Bolts
518	17	Cu. Yds.	Porous Backfill
519	200	Sq. Ft.	Patching Concrete Structures
601	200	Cu. Yds.	Rock Channel Protection, Type A without bedding
606	4	Ea.	Bridge Terminal Assembly Type B, As Per Plan
606	4	Ea.	Anchor Assembly, Type A
606	429.44	Lin. Ft.	Guard Rail, Type 5
623	Lump	Sum	Construction Layout Stakes
624	Lump	Sum	Mobilization, As Per Plan
614	Lump	Sum	Maintaining Traffic
Special	67	Sq. Yds.	Patching Concrete Bridge Decks, Type I
Special	194	Sq. Ft.	Steel Drip Strip
Special	545	Sq. Yds.	Membrane Waterproofing

STATE OF OHIO

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DISTRICT 9

DEPARTMENT OF TRANSPORTATION

BRIDGE OFF.

GENERAL NOTES & ESTIMATED QUANTITIES

BRIDGE NO. ROS-50-3275 OVER WALNUT CREEK

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MSC	MSC	MSC	DAB	M.P.B.	1-82	

ROS-50-3275 WALNUT CREEK - PROPOSED WORK PROCEDURE

ONE WAY TRAFFIC TO BE MAINTAINED WHILE REPAIRING EXISTING DECK

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Ross County
ROS-50-3275

PLAN NO. BR-10-62

Summary List	MICROFILMED FEB 10 1986 Detail List	Pay Item
Close To Traffic	1. Close East Bound Lane to establish 16'-10" work area in South half while maintaining two way traffic in alternating directions in 12 ft. width of West Bound traffic as shown on plan sheets 6 & 9, with electronically controlled temporary traffic control signals as in 614 Maintaining Traffic.	614
Remove Portions of Super- Structure	2. Remove railing, curb, parapets, curb extensions & footings, asphalt wearing course and all concrete on edge of deck outside of a 1' deep saw cut line over the center of the outside beam leaving existing transverse reinforcing steel in place. Conc. Removal Approx. 100 C.Y. See Sheet 6.	202
Patch Concrete Deck	3. Remove all scuppers and bulb angles as shown on plan sheets 5 & 6, and perform partial depth patching and full depth patching of concrete deck, as per plan.	202 Item Special 202, 511
Existing Approach Slab Removal	4. Remove a portion of approach slab length away from backwall face at rear & forward abutments leaving existing reinforcing steel in place to be recast in concrete. See Sheet 8, Sect A-A (Reestablish the approach slab after the new backwalls and porous backfill have been placed.) Reinforcing steel may be carefully bent aside to provide for access space for excavating, removing and replacing backwalls, and bent back into the plane of the approach slab for recasting. Splices of 30 bar diameter minimum length or suitable approved mechanical connectors as in 509.08 may be provided at the option of the Contractor. All of the above to be included for payment in 202.	202
Excavate for Backwall	5. Excavate behind backwalls and wings down to 6" below the construction joint at the bridge seat at both abutments. Include in 503 for payment.	503
Patch Concrete Substructure Areas	5a. Patch areas on abutments at bridge seat and vertical faces in areas under stringers where chipping and damage is visible and in other areas as directed by the Engineer, (or Bridge Engineer).	519

Cont'd.

Summary List	Detail List	Pay Item
Excavate for Backwall & Porous Backfill Extend end finish metal.	6. While work space is available, alter existing structural steel end finish to adapt existing slab portion to suit elastomeric compression seal. Extend this portion on right and left sides as show on Detail A on plan sheet No. 7 & 8, so that end finish extends to the full width of the skewed slab instead of only between the curbs as before. Establish construction joint in end finish metal at E of bridge.	516
Extend Conc. Deck Edges	7. After edges of deck and all full depth concrete have been removed on deck, form & place edges of concrete deck to incorporate the extended portions of structural steel end finish.	202, 511
Form Backwalls & Wings	8. Drill for & grout in additional vertical reinforcing steel for backwalls as shown on abutment detail, plan sheet No. 8, place new A6 horizontal reinforcing steel, install backwall portion of structural steel end finish for elastomeric compression seals using the existing & extended slab portion (in 6 & 7 above) as a templet to establish the grade of the top of the backwall. Form & place new backwalls and wings as detailed on Plan Sheet No. 7.	509, 510 516
Patch Conc. Deck	9. Perform partial depth & full depth patching of conc. deck according to proposal outline. Item Special - Patching Concrete Bridge Decks, Type I, II or III.	Item Special Patching...
Install Bridge & Approach Rail, Waterproof & Pave	10. Install type 2 posts and tubular backup & drip strips on bridge. 11. Waterproof bridge deck on top (Item Special) & backwall joints (512) and pave entire length of project, to E of bridge & approaches.	517, 606 Item Special Membrane WP. 512
First Work Lane	12. All of above operations are to be performed first in eastbound lane with vertical const. joint @ E of bridge.	
Second Work Lane	13. After work is completed in eastbound half of bridge relocate traffic control signals to establish second traffic lane 14'-6" wide South Half and 17'-0" second work area in North Half.	
Paint	14. Repeat all the above operations in opposite lane. 15. Place additional dump rock in forward abutment area. 16. Prepare surface of all steel members below deck, apply prime and finish coats of paint and open to traffic.	514

The following work is to be performed when and as directed by the Engineer and included for Payment in Item 202 Portions of Structures Removed:

Disposal of
Material
Removed

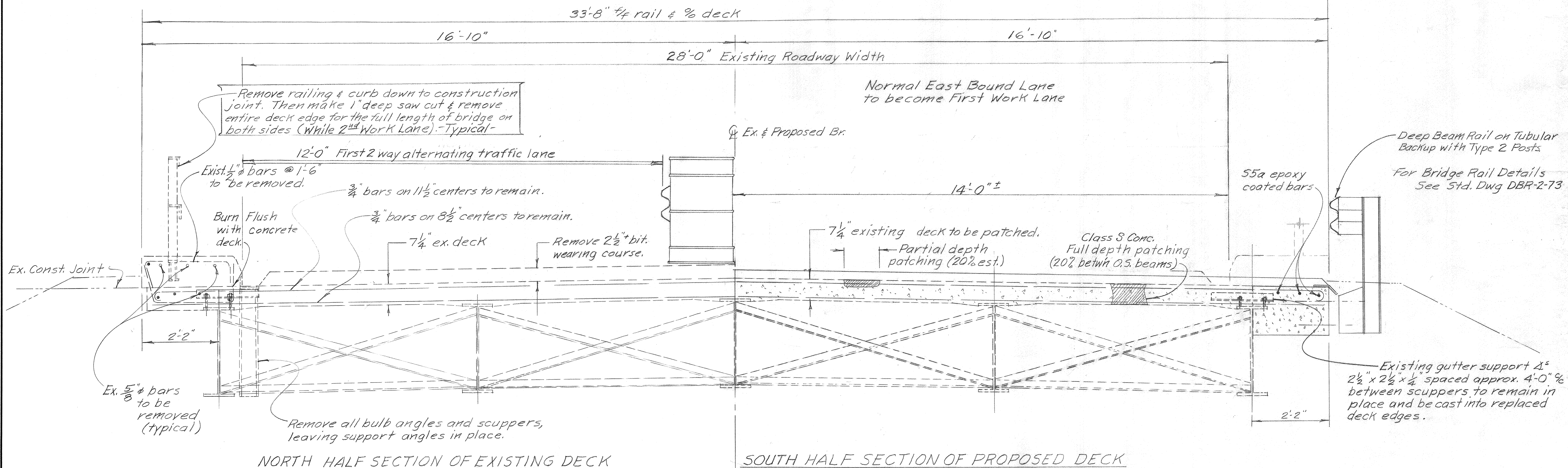
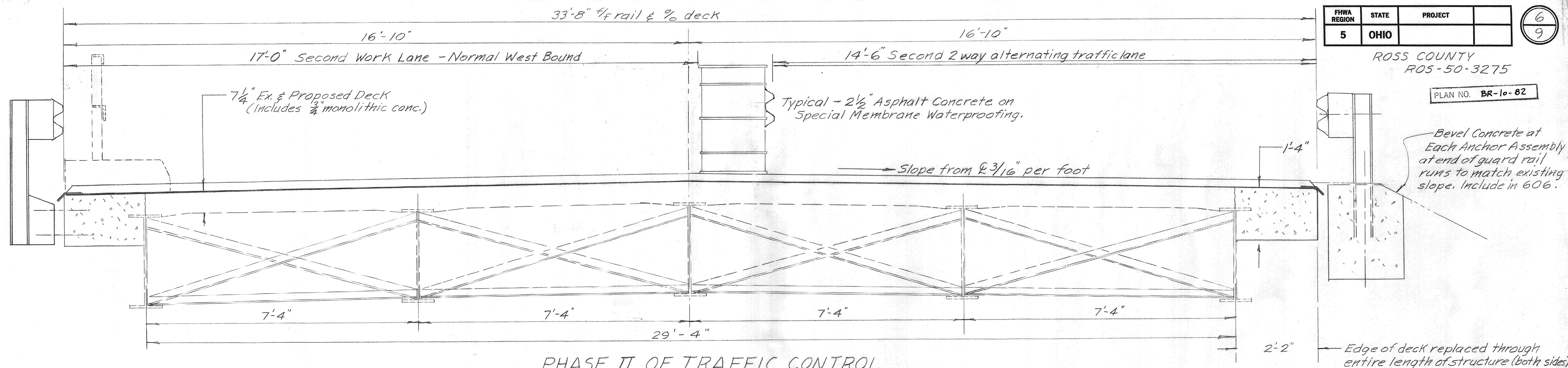
The concrete material removed from the approach slab, curbs, parapets, backwalls, deck patching and edge of deck removal is to be distributed to reestablish, as much as possible, the protection & line of the 2:1 slopes & benches. Fill deepest gulleys first with larger pieces and distribute the remainder on the bank slopes as directed. Form level benches as high as possible with the material available. Additional dump rock shall be placed as directed by the Engineer after the above is completed. All other, including the bituminous material removed from deck and approaches, shall be disposed of by the Contractor at his expense outside of the right-of-way limits.

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DISTRICT 9 DEPARTMENT OF TRANSPORTATION BRIDGE OFC.			
WORK PROCEDURE			
BRIDGE NO. ROS-50-3275 OVER WALNUT CREEK			
DESIGNED	DRAWN	TRACED	CHECKED
MSC	MSC	MSC	DAB
REVIEWED	DATE	REVISED	
MPB	1-82		

HILLIS CO. 1000 #10.7155 11.79

ROSS COUNTY
ROS-50-3275

PLAN NO. BR-10-82



PHASE I OF TRAFFIC CONTROL

STATE OF OHIO
DISTRICT 9 DEPARTMENT OF TRANSPORTATION/BRIDGE OFC.

DECK CROSS SECTIONS

BRIDGE NO. ROS-50-3275
OVER WALNUT CREEK

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WSE	WSE	WSE	DAB	MPA	1-82	

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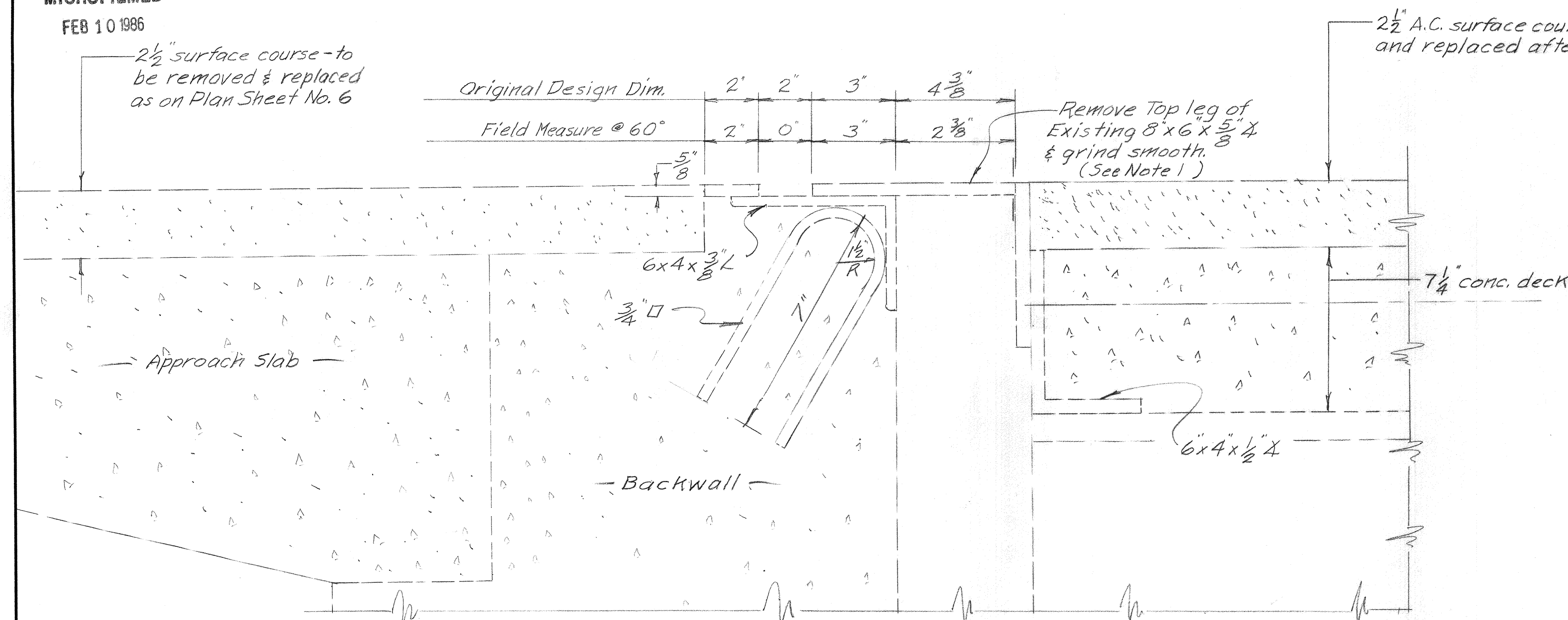
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PLAN NO. BR-10-82 Ross County
ROS-50-3275

Suggested Procedure:

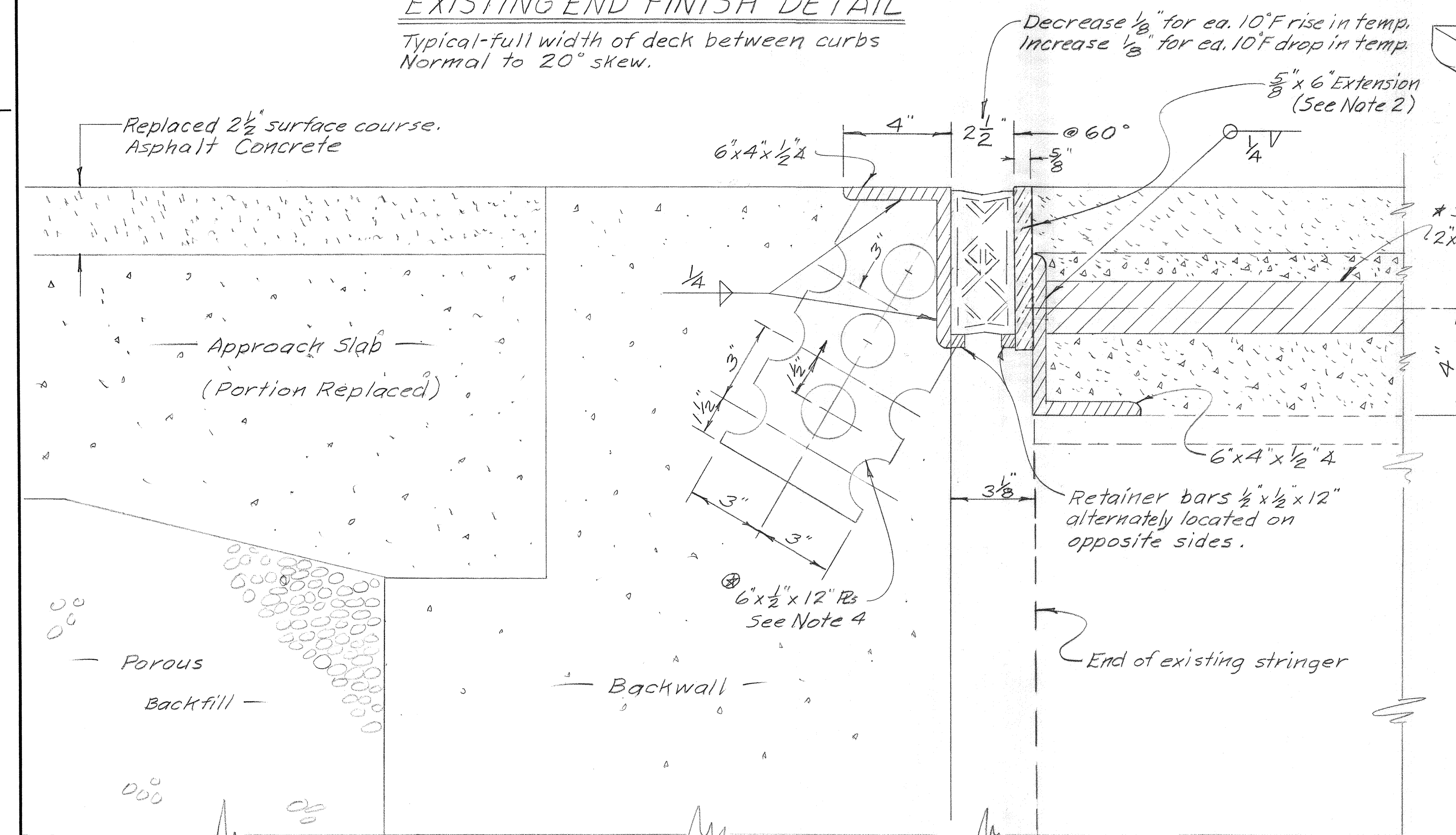
To Adapt Roadway End Finish To Elastomeric Seals;

1. While existing backwalls are removed down to the bridge seat, remove horizontal leg of $8 \times 6 \times \frac{5}{8}$ " A and grind the vertical face smooth to seat the seal.
2. Extend right & left sides by placing end finish extension piece $\frac{5}{8}$ " x 6" beveled at 20° and weld in place along with the backup piece of $6 \times 4 \times \frac{1}{2}$ " A. (lgths. to be confirmed in field by Contractor.)
- * 3. The anchor bars on the extension pieces to widen the end finish on the slab shall consist of 3 anchors spaced at 8" ϕ , with equal spaces at each side of the extension angle and bent at 20° to lie parallel to the longitudinal center line of the slab.
- ⊙ 4. The anchor bars shown in the backwalls shall be spaced at approximately 15" ϕ except near joints in the angle where the plates shall be placed within 6" of each side of the joint. The holes may be burned in the plate.
5. The cost of furnishing, modifying and installing all steel angles, retaining bars, steel extension pieces, anchor bars, adhesive for the joints and all other incidentals necessary to complete the item are included in 516 Elastomeric Compression Seals, including Structural Steel Joints.

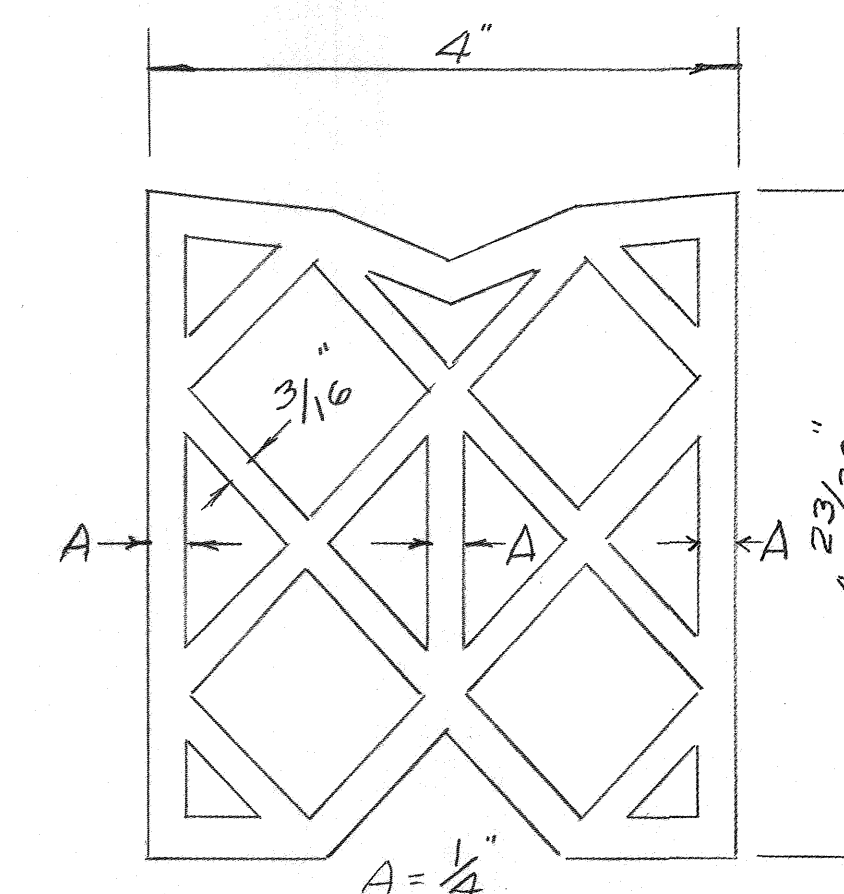
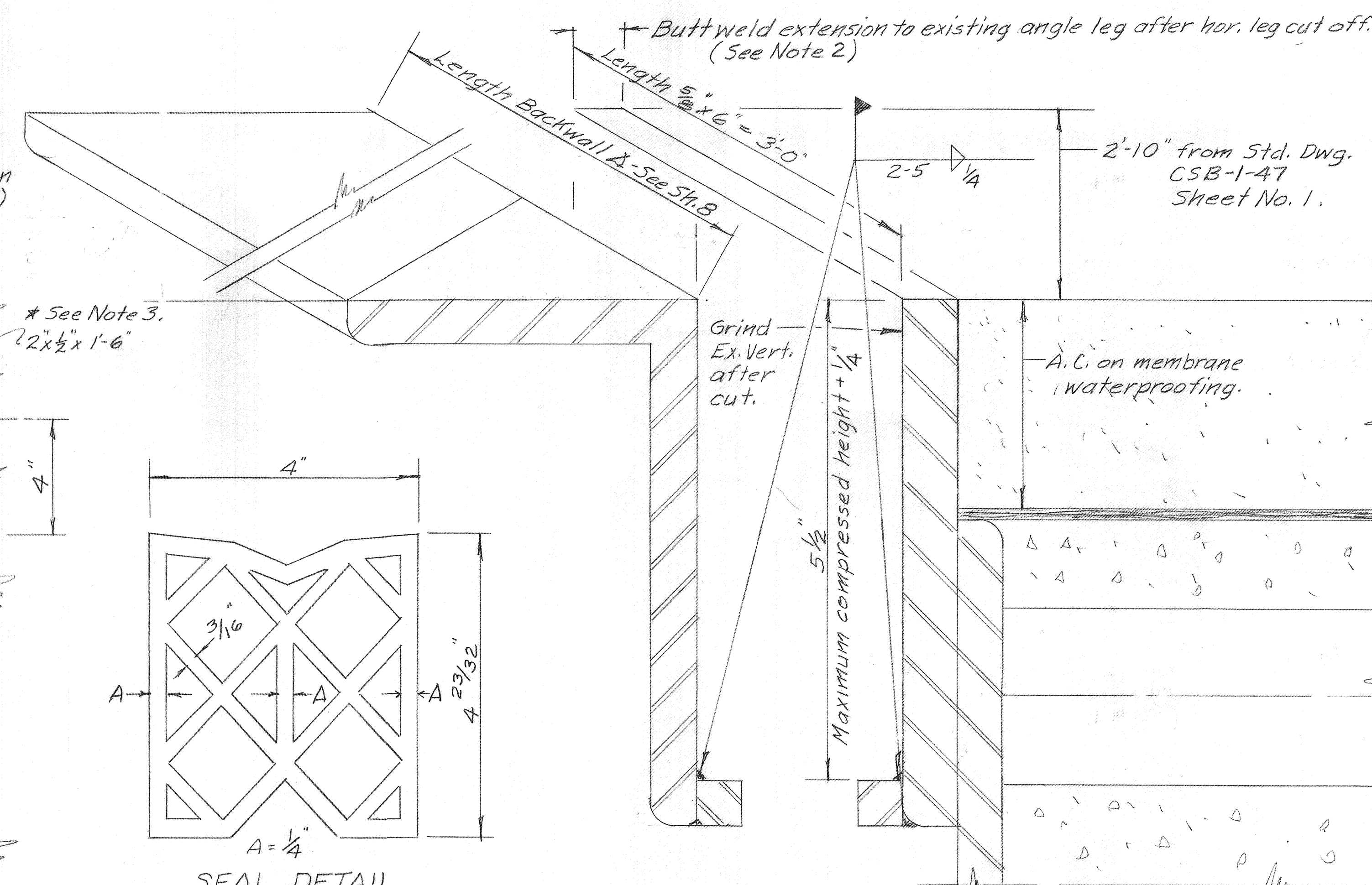


EXISTING END FINISH DETAIL

Typical full width of deck between curbs
Normal to 20° skew.



PROPOSED ALTERATIONS FOR ELASTOMERIC COMPRESSION SEALS



SEAL DETAIL
J400 Acma seal or
approved equivalent.

STATE OF OHIO
DISTRICT 9 DEPARTMENT OF TRANSPORTATION BRIDGE OFC.

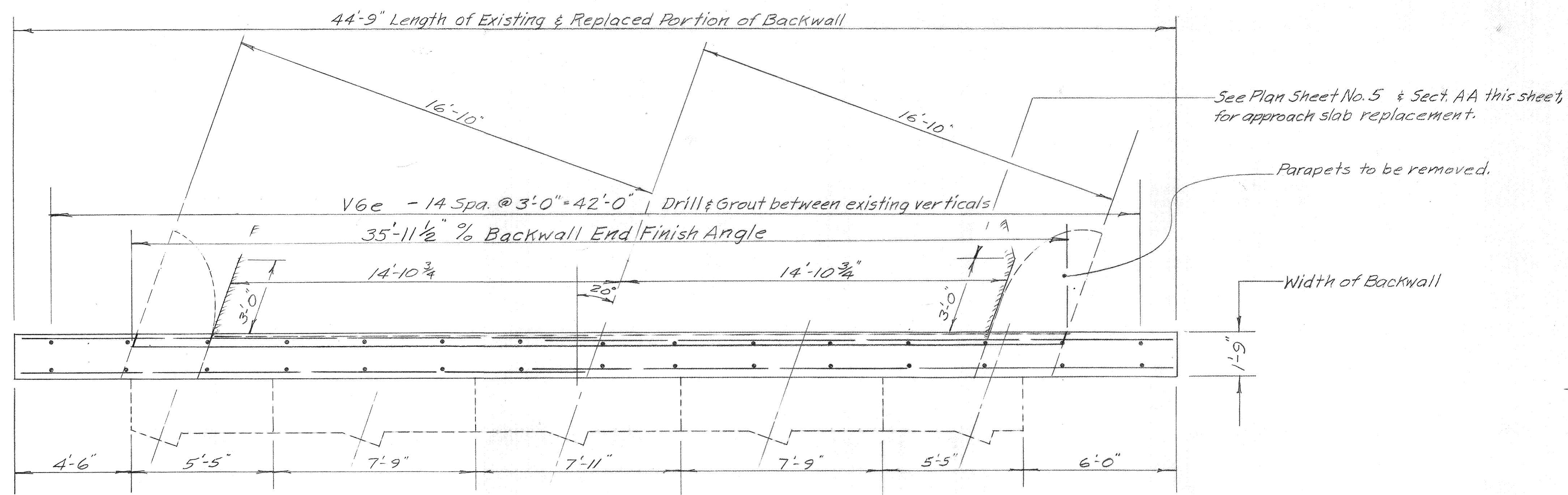
EXPANSION JOINT DETAIL

BRIDGE NO. ROS-50-3275
OVER WALNUT CREEK

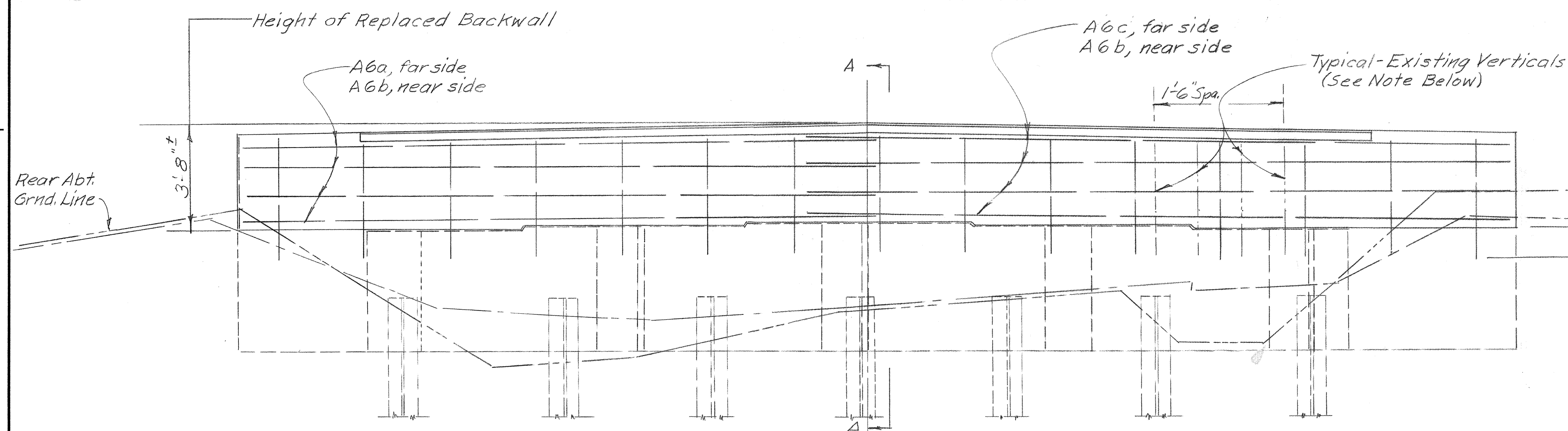
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MSE	MSE	MSE	DAB	M.P.B.	1-82	

ROSS COUNTY
ROS-50-3275

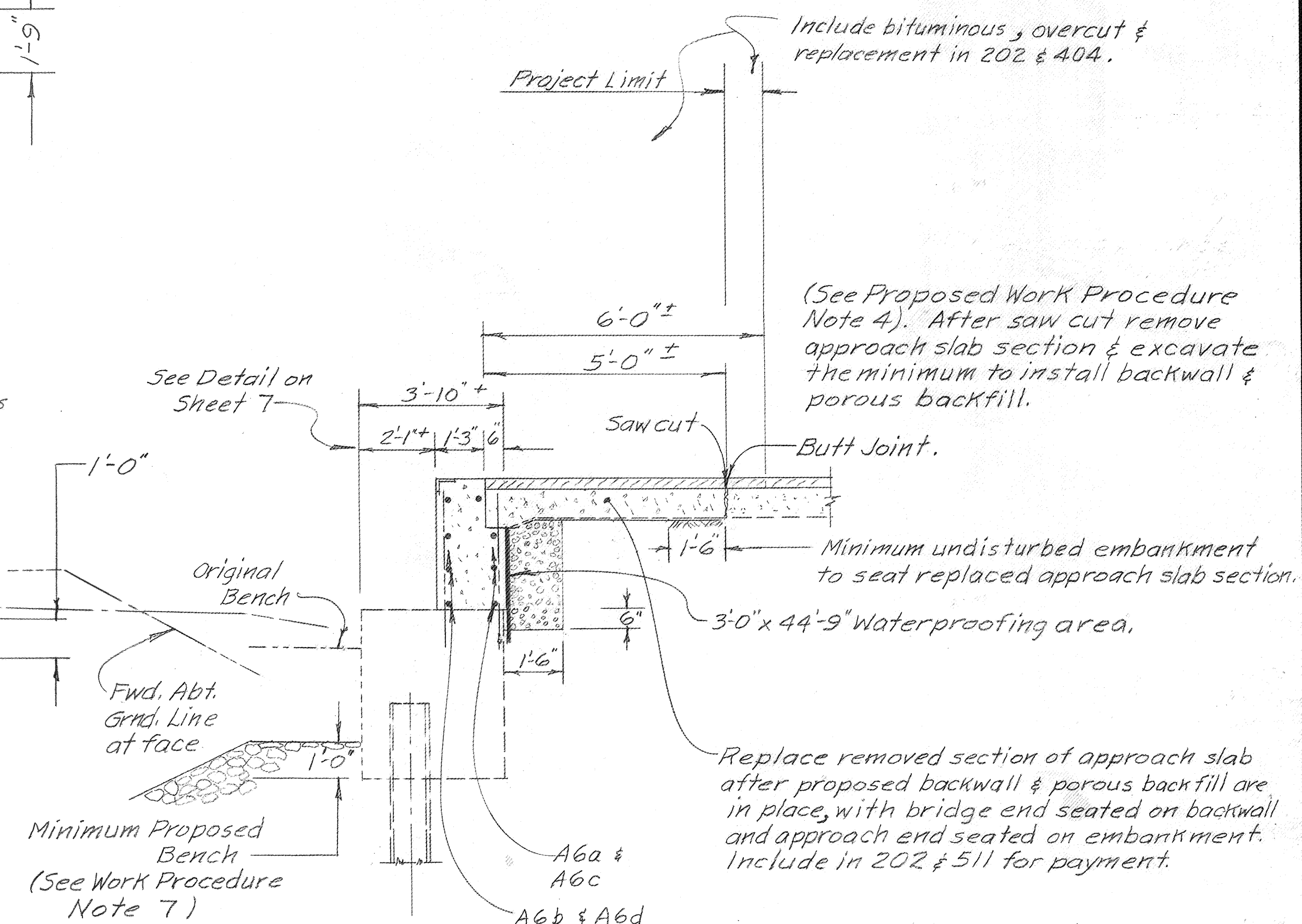
PLAN NO. BR-10-82



PLAN OF PROPOSED BACKWALL



ELEVATION OF PROPOSED BACKWALL



SECTION A-A

Notes:

- Existing verticals in abutment backwalls to be left in place and cast into the replaced backwall.

REINFORCING STEEL					
Mark	No.	Length	Weight	Sp	Description - Location
A6a	8	22'-4"	268	5	Abut. Backwalls
A6b	8	21'-8"	260	5	" "
A6c	8	24'-4"	292	5	" "
A6d	8	24'-9"	297	5	" "
V6e	60	4'-3"	383	5	Total 509-1500 Lbs.
55a	30	30'-0"	939		3 lines ea. side of deck 509 Total Epoxy Coated 939 Lbs.

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DISTRICT 9 DEPARTMENT OF TRANSPORTATION BRIDGE OFF.						
SUBSTRUCTURE DETAILS						
BRIDGE NO. ROS-50-3275 OVER WALNUT CREEK						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WSE	WSE	WSE	DAB	MP.B.	1-82	

