

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

OHIO	1
FHWA REGION	5
FEDERAL PROJECT	6

DESIGN DESIGNATION

Current Year ADT (1989) = 8160 V.P.D.
 Design Year ADT (2009) = 10,994 V.P.D.
 D H V = 1649 V.P.H.
 D = 50%-50%
 T = 48 %
 V = 35 M.P.H.
 Legal Speed = 35 M.P.H.
 Functional Classification = URBAN PRIM. ARTERIAL

MAR-4D-0.70

SCANNED
BY: *Shogue*
DATE: 10-20-98 ARCHIVE: Dec 0197

MARION COUNTY
MAR-4D-0.70

CITY OF MARION (N. PROSPECT ST.)
MARION COUNTY
BRIDGE REPAIR

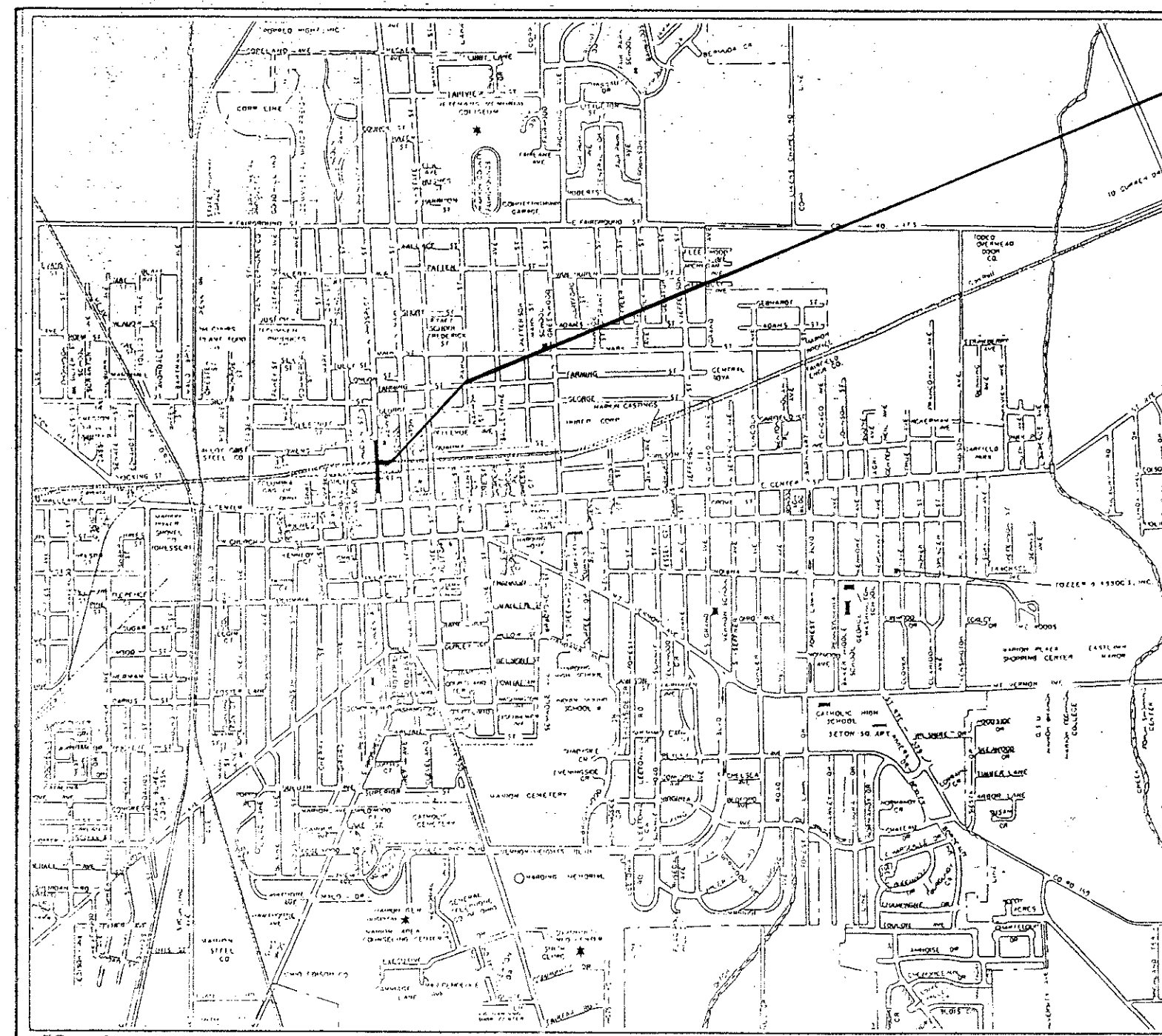
BHF-8(61)

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---	Property Line	---E---	(in existing fence) x-E-x
Center Line	---	Railroad	-----	or -----
Trees (to be removed)	⊗	Guardrail (existing)	o-o-o	(proposed) o-o-o
Utility Poles: Telephone	⊗			
Power	⊗			
Light	⊗			

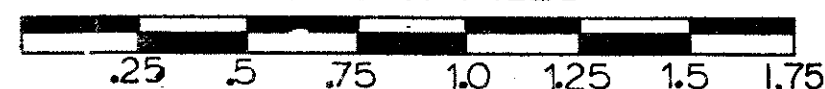
INDEX OF SHEETS

Title Sheet	1
Estimated Quantities	2
General Notes	2 & 3
Plan View	4
Resurfacing & Repair Details	5
Pier & Expansion Joint Details	6



LOCATION MAP

SCALE IN MILES



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

SCALES

Plan _____ (Not to Scale)
 Profile _____ Horizontal _____, Vertical _____ (Not to Scale)

SUPPLEMENTAL SPECIFICATIONS	
845	5-31-88
953	8-21-80
847	10-17-83
947	10-17-83
933	2-10-87
853	6-26-78
956	6-26-78

LINE DATA

Begin Project Sta. 36+96.00 / End Project Sta. 44+93.71
 Length of Project 797.71 Ft. (.151 Mi.)

Begin Work Sta. 35+21.00 / End Work Sta. 48+00.71
 Length of Work 1279.71 Ft. (.242 Mi.)

UNDERGROUND UTILITIES
 TWO WORKING DAYS
BEFORE YOU DIG
 Call 800-362-2764 (Toll Free)
 OHIO UTILITIES PROTECTION SERVICE
 NON-MEMBERS
 MUST BE CALLED DIRECTLY

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS

EXJ-3-82	8-1-84			
EXJ-4-87	1-5-89			
BP-5	10-1-87			
MT-99.10	11-14-86			

Approved *W. Howard Wood*
 Date 11-18-90 District Deputy Director
 of Transportation

Approved *B.D. Fambros*
 Date 2-8-90 Engineer, Bureau of Bridges and
 Structural Design

Approved *Charles J. Still*
 Date 4/2/90 Chief Engineer, Planning and Design

Approved *Edward A. Hurst*
 Date 4/2/90 Director, Department of Transportation

DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 APPROVED
 DIVISION ADMINISTRATOR DATE

Project _____
 Date of letting _____
 19 _____ Contract No. _____

SEAL

ESTIMATED QUANTITIES

FHWA REGION	STATE	PROJECT	

2
6

MARION COUNTY
MAR-4D-0.70

ITEM	DESCRIPTION	UNIT	TOTAL	ITEM EXT.
202	Portions of Structures Removed, as per plan	Cu. Yd.	14	11301
404	Asphalt Concrete, AC - 20	Cu. Yd.	4	20000
407	Tack Coat	Gal.	16	10000
503	Cofferdams, Cribs, and Sheeting		LUMP	11100
511	Class S Concrete	Cu. Yd.	14	34400
516	Structural Expansion Joints including Elastomeric ^{SS}	Lin. ft.	172	11201
* 519	Patching Concrete Structures	Sq. ft.	1379	11100
845	Latex Modified Concrete Overlay (1 1/4" thick)	Sq. Yd.	2483	10300
845	Latex Modified Concrete Overlay (variable thickness)	Cu. Yd.	84	11000
*SPECIAL	Preplaced Aggregate Concrete (see proposal note)	Sq. ft.	798	51171200
SPECIAL	Sealing of Concrete Surfaces*(see proposal note)	Sq. Yd.	943	51267502
614	Temporary Lane Lines, Class II	mile	.16	20400
614	Maintaining Traffic		Lump	11000
624	Mobilization		Lump	10000
SPECIAL	Patching Concrete Bridge Decks, Type I (See Proposal Note)	Sq. Yd.	100	51912200
SPECIAL	Premium on Railroad's Protective Public Liability and Property Damage Liability Insurance		Lump	10000300
**SPECIAL	Cleaning Scuppers and Downspouts		Lump	51863300

strip seal gland shall be furnished in one piece. Joints in retainers shall have watertight, partial penetration butt welds completely around the outer periphery of the abutting surfaces. Welds which will be in contact with the seal gland and/or joint armor shall be ground smooth. The minimum length of retainer shall be 6'-0" between joints unless otherwise shown. Expansion joint steel shall be painted in accordance with Item 514 of the C.M.S., and sheet 5/5 of std. drg. EXJ-4-87. Field paint shall be system OZEU, and the cost shall be included with this item for payment. The color of the finish coat shall be green.

ITEM 519 - Patching Concrete Structures

Work under this item shall consist of patching disintegrated portions of the abutment, pier, and parapet surfaces in accordance with the plans. Locations and limits of patching shall be at the direction of the Engineer.

ITEM 407 - Tack Coat

Tack coat shall be applied at the rate of 0.1 gallon per square yard.

MISC. NOTES

Field office and construction layout stakes are not required on this project. No underground utilities are located within project work length.

ITEM SPECIAL - Cleaning Scuppers & Downspouts

Scuppers and downspouts shall be cleaned to the satisfaction of the Engineer. Where necessary the scuppers and downspouts may need to be rodded and/or water jetted. The scuppers and downspouts shall remain in a clean, clear condition through the completion of this contract. Payment for this item shall be made under Item SPECIAL - Cleaning Scuppers and Downspouts (Lump).

^{SS}Strip Seals, AS PER PLAN *50 % Federal Participation ** 100 % State Funds
* Epoxy

General Notes

Item 202 - Portions Of Structures Removed, as per plan

This item shall include all labor and equipment required to remove existing concrete from the expansion joints.

ITEM 503 - Cofferdams, Cribs and Sheeting

This item shall include necessary shoring and/or bracing of the existing structure before pier and expansion joint removal and repair is to take place. For further information refer to item 503 of the C.M.S.

ITEM 516 - Structural Expansion Joints, Including Elastomeric Strip Seals[⊗]

This item shall include the cost of furnishing an Elastomeric Strip Seal at each expansion joint in accordance with the plans. All materials, labor, equipment, and incidentals required to complete this work, excluding that which is specifically included under a separate item, shall be included with this item for payment. The seal shall be furnished and installed without a field splice after all resurfacing and repair operations are completed. The end dam armor steel may be fabricated in two pieces for each end dam, but the

⊗ As Per Plan

STATE OF OHIO DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS DISTRICT 6 BRIDGE DEPARTMENT						
ESTIMATED QUANTITIES & GENERAL NOTES BRIDGE NO. MAR-4-0070						
DESIGN	DRAWN	CADD	CKD	REVIEWED	DATE	REVISED
REL	REL	REL		Ja	1-18-90	1/18/90

Rev. 5-24-90

General Notes

FHWA REGION	STATE	PROJECT	

3
6

MARION COUNTY
MAR-4D-0.70

ITEM 614 - Maintaining Traffic & Detour Limitation

Two weeks prior to the beginning of work the contractor shall contact the City of Marion Engineer so that the City may set up the detour. The contractor shall cooperate with the City of Marion at all times while the detour is in effect. The contractor shall also place barricades at both ends of the bridge.

Permanent pavement markings shall be installed by the City of Marion. The City Engineer shall be notified at least five working days prior to the opening of the road to allow for the scheduling of the pavement marking installation.

A quantity of 0.16 miles of Temporary Lane Lines, Class II is carried to the General Summary to be used as directed by the Engineer.

The road shall not be opened to traffic without either the permanent or temporary pavement markings in place.

DETOUR LIMITATION

Traffic shall be maintained at all times except for a period not to exceed 120 consecutive days for the project. The detour shall be established, maintained, and subsequently removed by the City of Marion.

The first day the detour is in effect shall be considered the starting date of the 120 day detour limitation. The 120 th day of the 120 day detour limitation shall be considered as an interim completion date. On or before the 120 th day, the roadway shall be opened to the safe and convenient use of the traveling public. If the roadway is not opened by this interim completion date, liquidated damages shall be assessed as per specification 108.07 of the construction and material specification book.

Cooperation With Railroads

To cooperate at all times with the local officials of the railroad company. He shall use all reasonable care and diligence in the work in order to avoid accidents, damage or unnecessary delay to, or interference with the trains and other property of the railroad. The contractor shall notify the local officials of the railroad prior to starting work that may affect railroad property or facilities and shall pay the Railroad Company the cost of flagmen furnished by the Railroad Company and made necessary because of any of the contractors operations over or adjacent to the tracks.

Construction clearance of 14' horizontally from the center of tracks and 23' vertically from a point level with the top of the higher rail, and 4' from the center of the tracks, shall be maintained at all times

No scaffold, planks or other equipment shall be suspended or erected above or within 10 feet of a rail over which trains are operating without prior written approval of the Chief Engineer of the Railroad Company, or his authorized representative.

Failure to notify the Railroad Company as noted above shall be cause for stopping work until all provisions for protecting Railroad property have been provided.

Railroad protective liability insurance

The contractor shall furnish evidence to the highway department that, with respect to operations that he or any of his subcontractors perform, he has provided for and in behalf of the Consolidated Rail Corporation, Room 1200, 15 North 32nd. Street, Philadelphia, Pennsylvania 19104 a Railroad Protective Liability policy of insurance providing a combined single limit for damages arising out of bodily injuries to or death of one or more persons and out of injury to or destruction of property including such property in the care, custody and control of the Railroad Company in the amount of \$2,000,000.00 per occurrence and subject to that limit per occurrence, an aggregate limit in the amount of \$6,000,000.00 for each annual period.

The above railroad protective policy of insurance shall conform to the Railroad Liability requirements prescribed by the Federal Highway Administration in FHPM: 6-6-2-2 as amended.

The insurance hereinbefore specified shall be with an acceptable insurance company authorized to do business in the State of Ohio, and shall be taken out before work is commenced and kept in effect until all work required to be performed under the terms of the contract is satisfactorily completed as evidence by the formal acceptance by the State. Such policy shall include 30 days canceling notice.

"Evidence" as above set forth shall consist of furnishing the Director of Transportation one (1) original and two (2) certified copies of the policy.

Payment will be made at the contract price bid under:

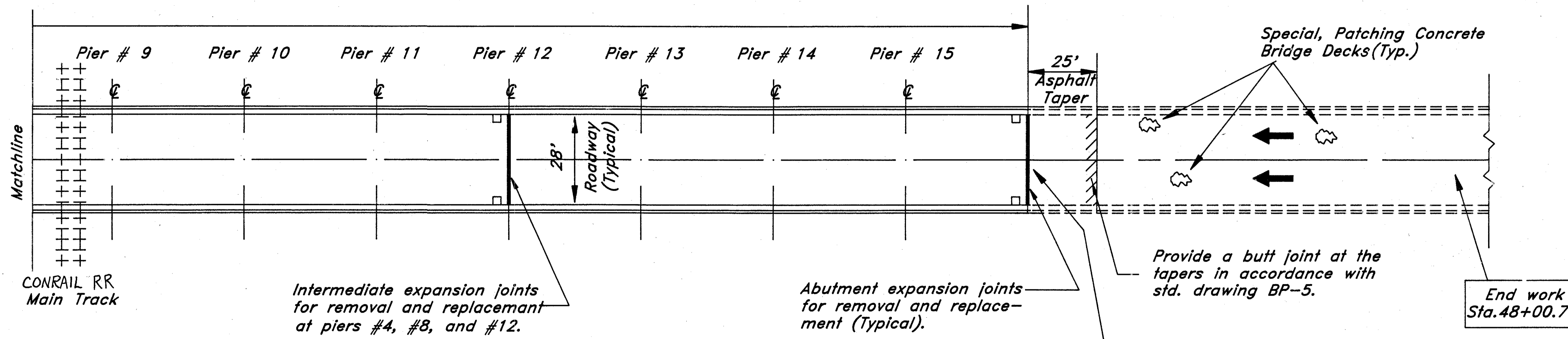
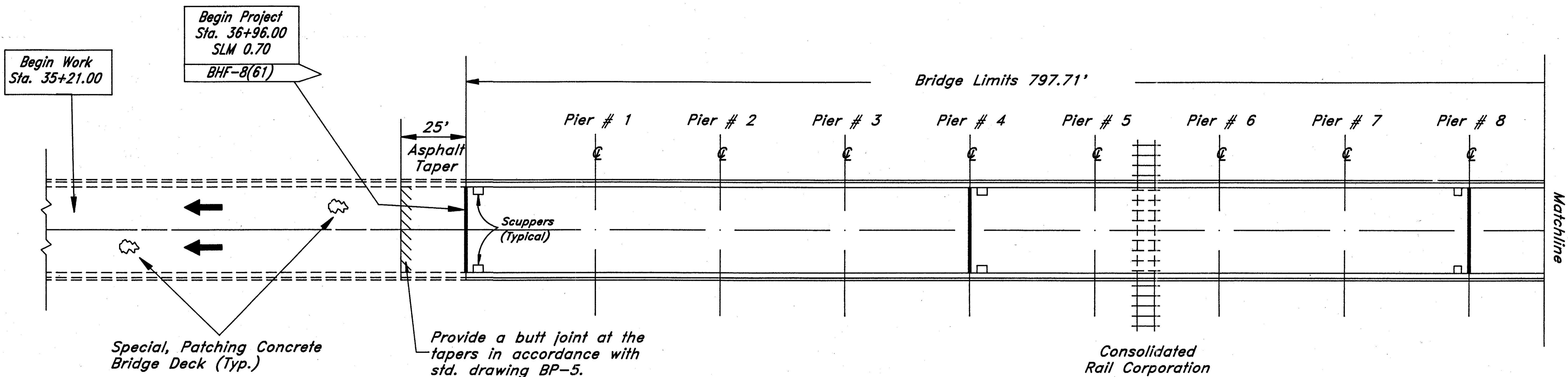
ITEM	UNIT	DESCRIPTION
Special Lump		Premium on Railroad's protective public liability and property damage liability insurance.

STATE OF OHIO DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS DISTRICT 6 BRIDGE DEPARTMENT						
GENERAL NOTES BRIDGE NO. MAR-4-0070						
DESIGN	DRAWN	CADD	CK'D	REVIEWED	DATE	REVISED
REL	REL	REL		Ja ₃	1-18-90	1/18/90

FHWA REGION	STATE	PROJECT

4
6

MARION COUNTY
MAR-4D-0.70



PLAN VIEW

Skew = 0°

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DISTRICT 6 BRIDGE DEPARTMENT

PLAN VIEWS

BRIDGE NO. MAP-4D-00 70

DESIGN	DRAWN	CADD	CK'D	REVIEWED	DATE	REVISED
REL	REL	REL		REL	1-18-90	11/18/90

FHWA REGION	STATE	PROJECT	

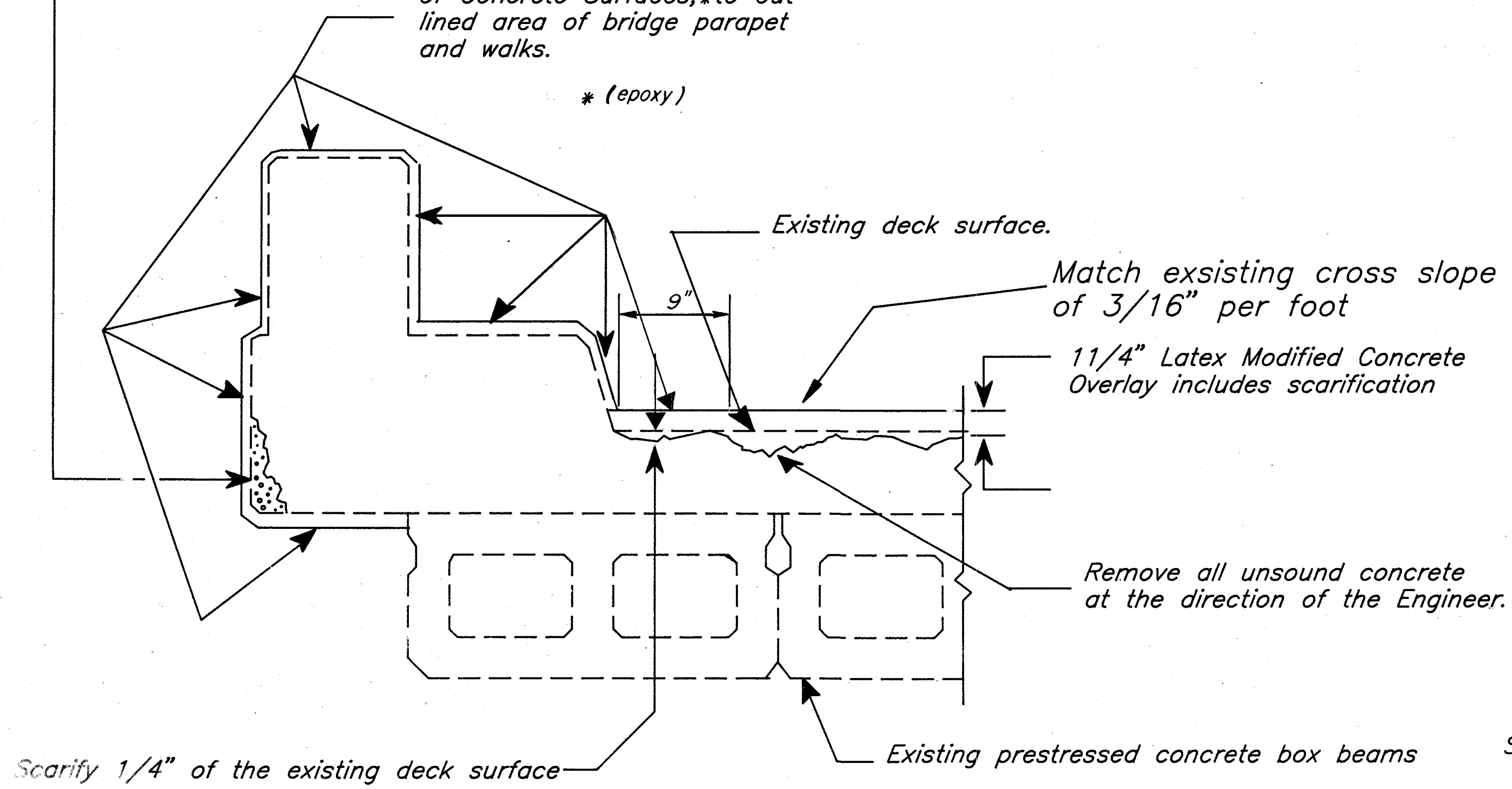
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MARION COUNTY
MAR-4D-0.70

Remove all deteriorated unsound concrete from outside edge of parapet as shown and repair with Item 519 as directed by the Engineer.

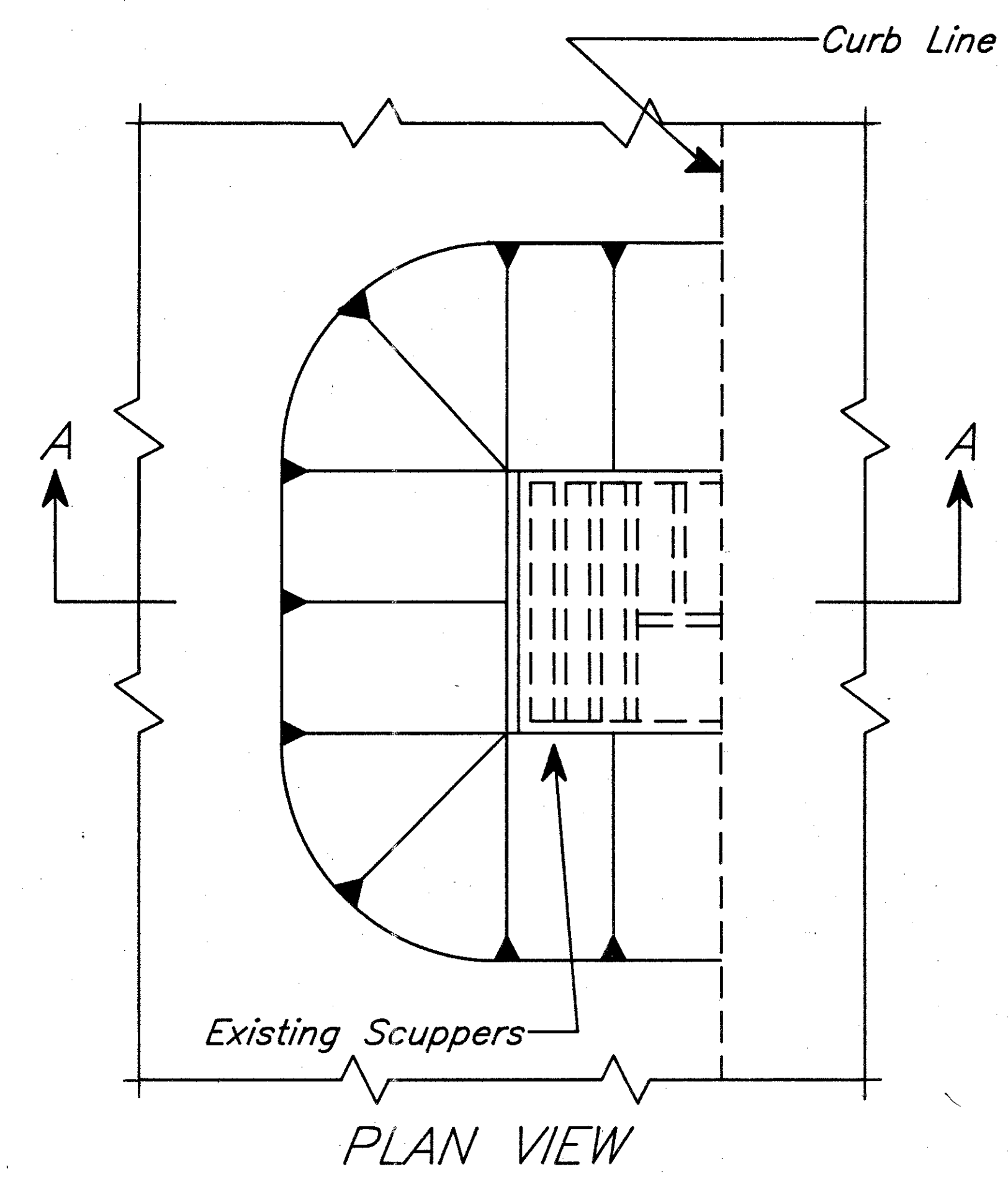
Apply Item Special - sealing of Concrete Surfaces,* to outlined area of bridge parapet and walks.

*(epoxy)

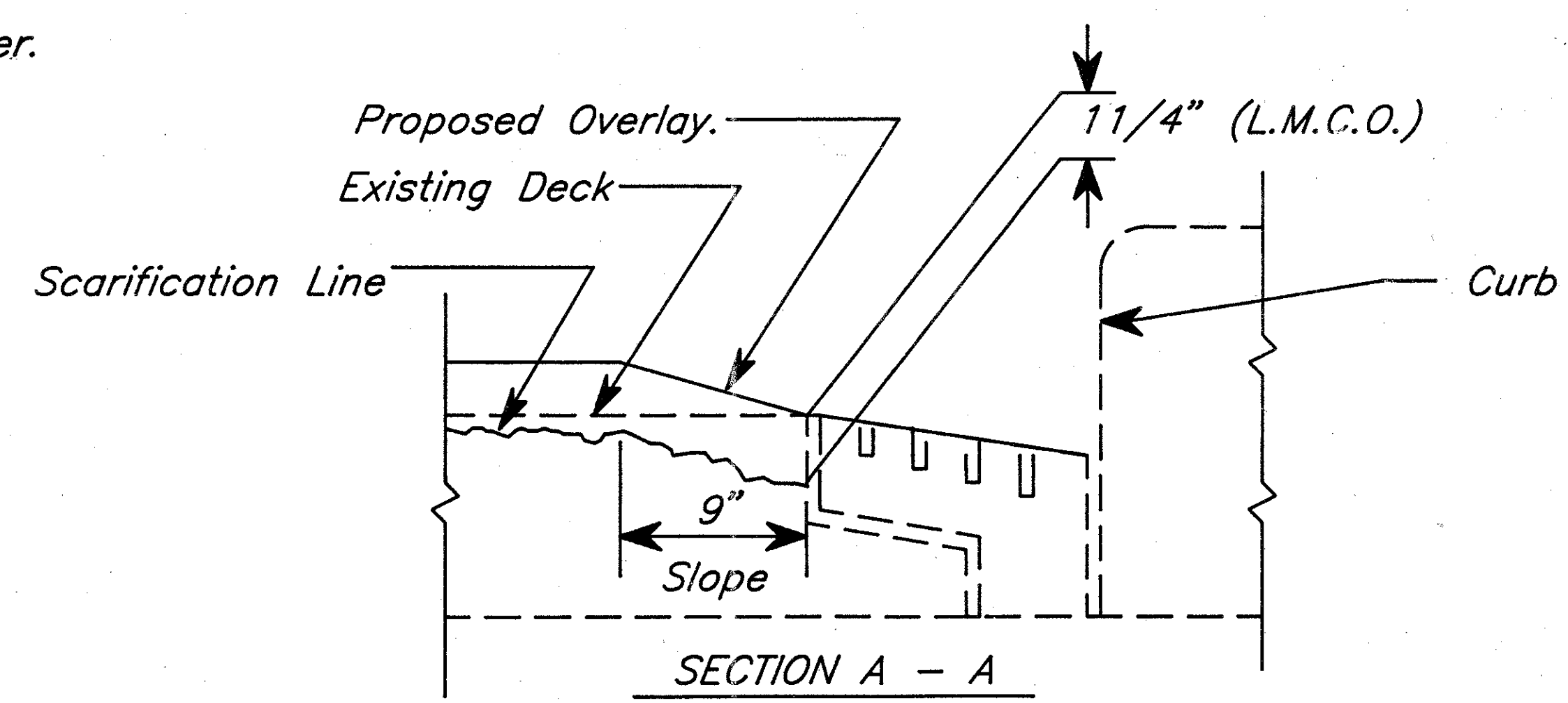


TYPICAL OVERLAY SECTION

MAR - 4D - 0070



PLAN VIEW



SECTION A - A

TYPICAL OVERLAY DETAILS AT SCUPPERS

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DISTRICT 6 BRIDGE DEPARTMENT

RESURFACING AND REPAIR DETAILS
Bridge No. MAR-4D-0070

DESIGN	DRAWN	CADD	CK'D	REVIEWED	DATE	REVISED
REL	REL	REL		3a3	1-18-70	11/18/90

See Std. Dwg. EXJ-3-82, for the following details

SHEET NO. 1/4: Part plan at abutment; Section A-A including note A; Joint armor adjustment detail including detail B.

SHEET NO. 3/4 Joint plan - superstructure side; Armor anchor plates; Plate C plan

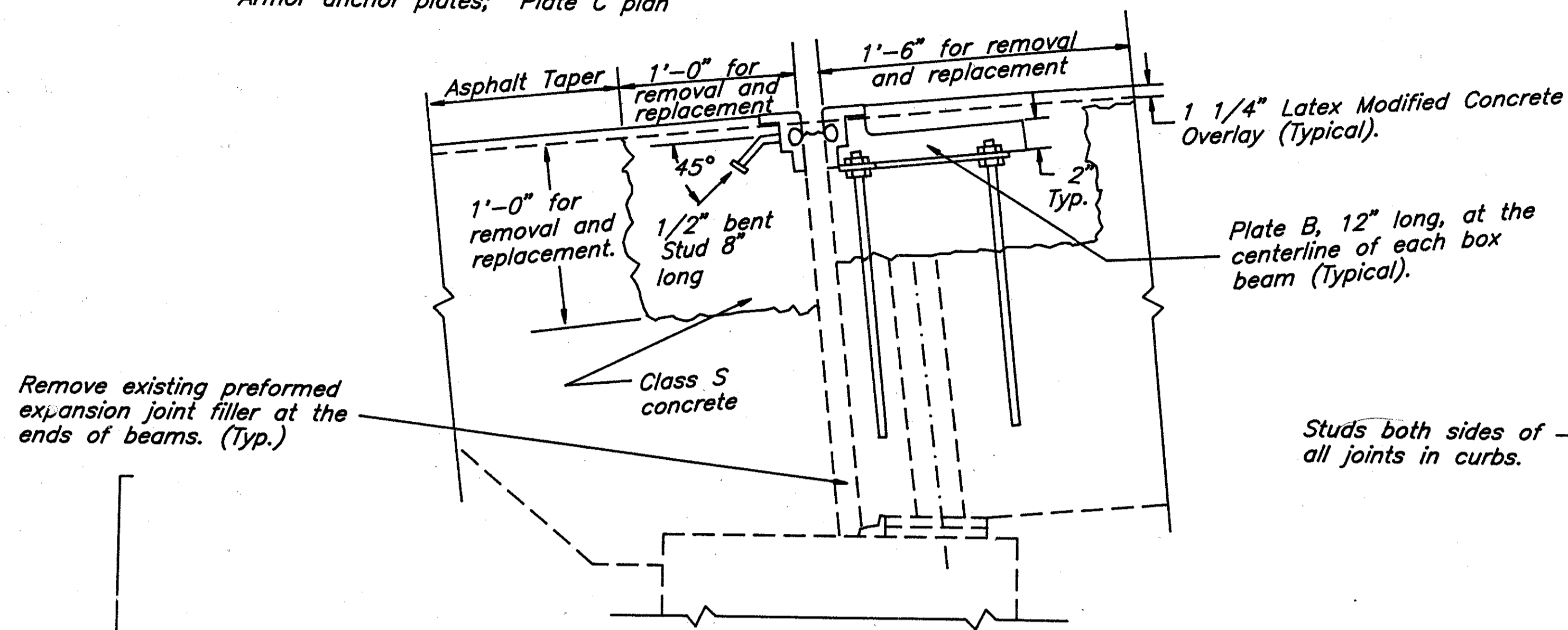
See Std. Dwg. EXJ-4-87, for additional details.

SEE SHEET NO. 2 for General notes.

MARION COUNTY
MAR-4D-0.70

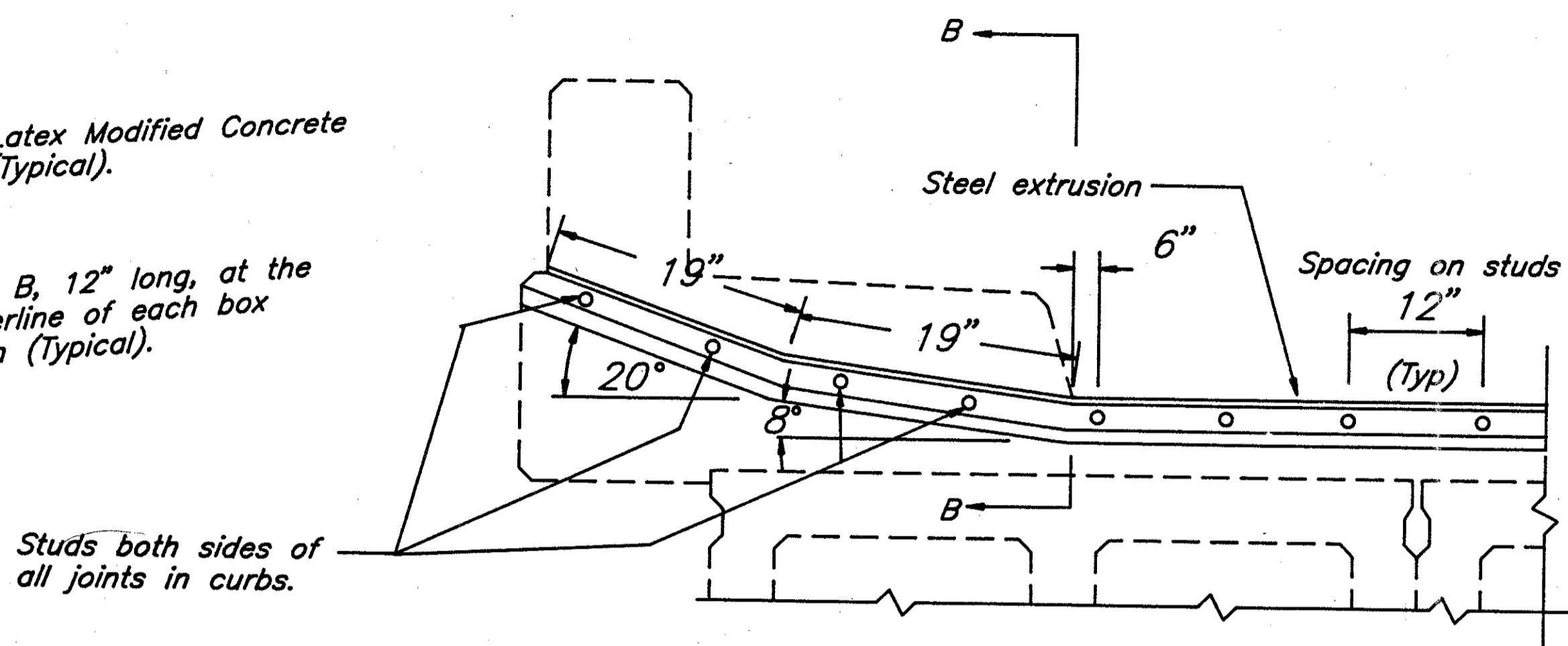
FHWA REGION	STATE	PROJECT

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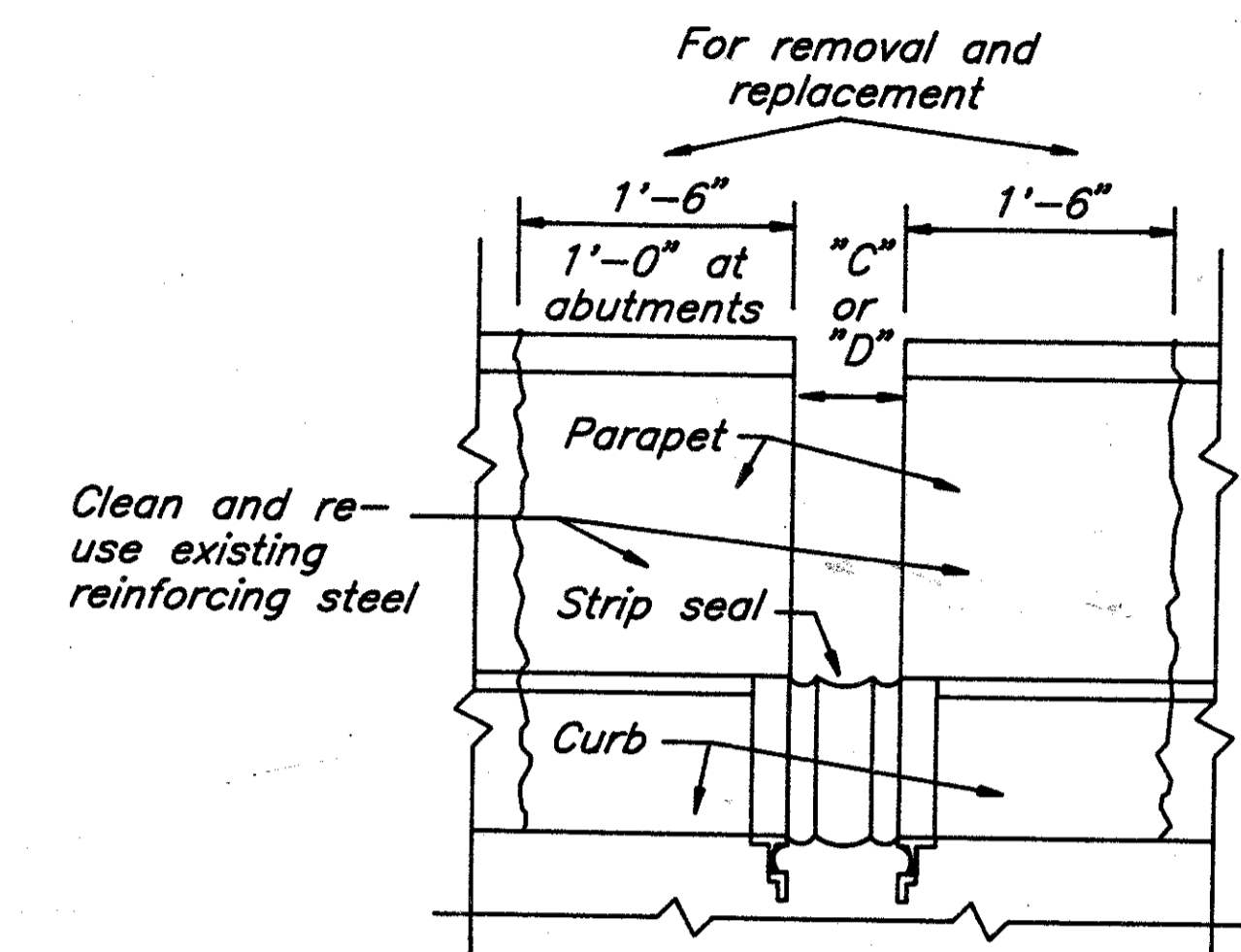


Abutment expansion joint details

All end dam armor steel shall be included with Item 516 for payment.

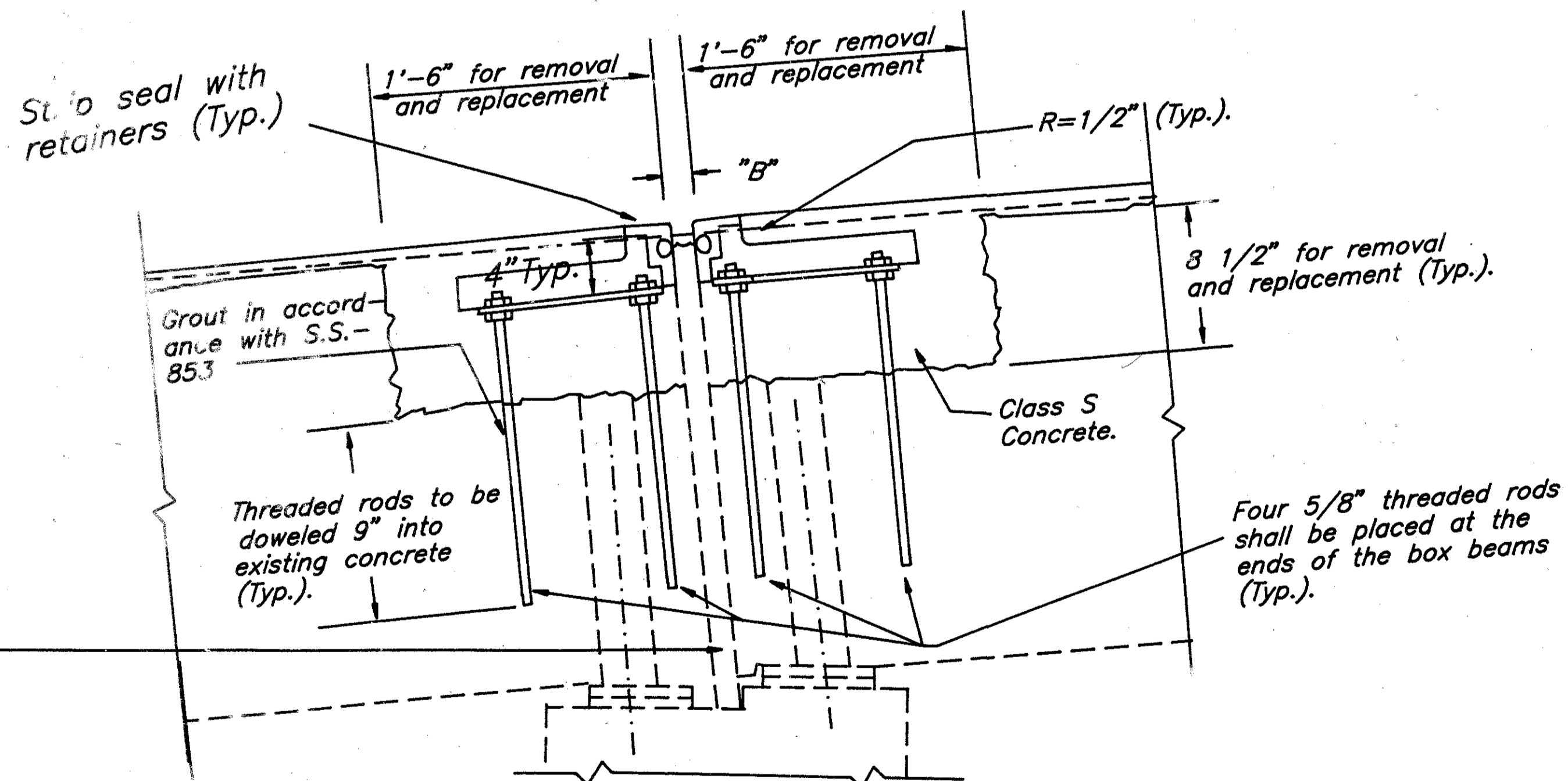


Typical Transverse Section At Expansion Joints
Studs only at abutment expansion joints



Distances "C" and "D" relate to only to the parapet joint gap. Distance "C" = "A" + 3/8". Distance "D" = "B" + 3/8".

Section B-B

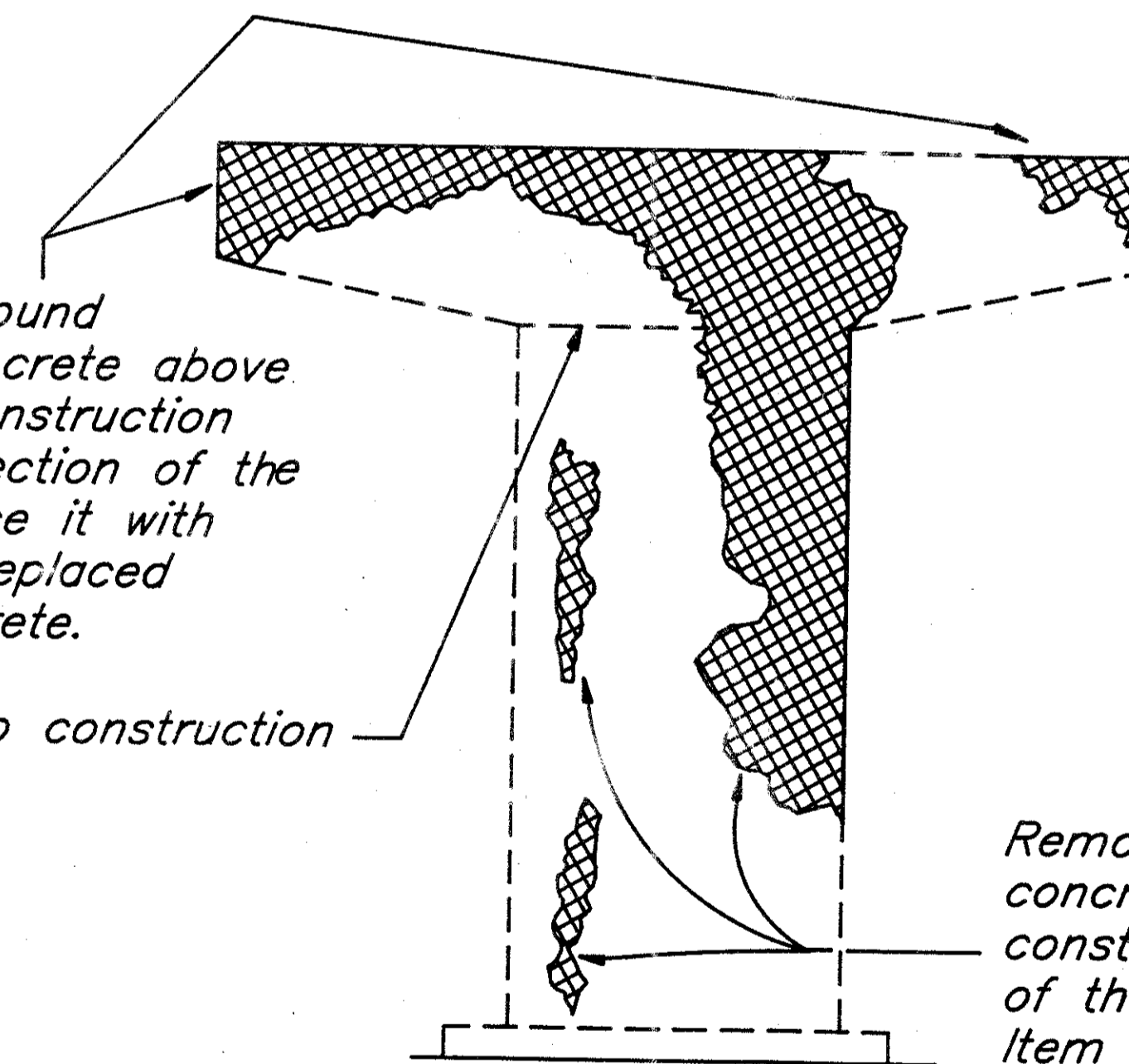


Intermediate expansion joint details

All end dam armor steel shall be included with Item 516 for payment. Strip seals shall be WABO S300 with Watson-Bowman Acme type W retainers, D.S. Brown 300L with type SSCM retainers, Structural Accessories Inc. 40SS with type SC retainers or an approved equivalent.

Remove all unsound deteriorated concrete above the pier cap construction joint at the direction of the Engineer. Replace it with Item Special-Preplaced Aggregate Concrete.

Existing pier cap construction joint



Remove all unsound deteriorated concrete below the pier cap construction joint at the direction of the Engineer. Replace it with Item 519-Patching Concrete Structures.

Pier Repair Details

Pier # 4,8, and 12

Seal	Opening		Temperature Adjustment						
	Min	Max.	30F	40F	50F	60F	70F	80F	90F
"A"	1 3/16	2 1/4	1 13/16	1 3/4	1 11/16	1 5/8	1 9/16	1 1/2	1 7/16
"B"	5/8	2 13/16	1 15/16	1 13/16	1 5/8	1 1/2	1 3/8	1 3/16	1 1/16

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DISTRICT 6 BRIDGE DEPARTMENT

Pier And Expansion Joint Details
BRIDGE NO. MAR-4D-00 70

DESIGN	DRAWN	CADD	CK'D	REVIEWED	DATE	REVISED
REL	REL	REL		Ja	1-18-70	1/18/90