

**OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS**

1
9

PLAN NO.

PART	COUNTY	ROUTE	SECTIONS	PROJECT TERMINI		TOWNSHIP	CITY	VILLAGE
				WORK LIMITS	NET LENGTH MILES			
1	ROS	35	2532	1,485.70 Ft.	0.28			

BRIDGE DECK REPAIRS

The Standard 19 89 Specifications of the State of Ohio, Department of Transportation, including changes and Supplemental Specifications listed in the plans and proposal shall govern these improvements.

I hereby approve these plans and declare that the making of these improvements will require the closing of the highways to traffic on Parts No. (NONE) and that detours will be provided by State forces. The closing to traffic of the highways will not be required on Parts No. 1 and provisions for the maintenance and safety of traffic will be as indicated in the proposal.

Approved Date 4-3-89 Keith C. Swearingen
District Deputy Director of Transportation

Approved Date _____ Engineer of Bridges

Approved Date _____ Engineer of Maintenance

Approved Date _____ Deputy Director, Operations

Approved Date _____ Assistant Deputy Director, Program Development

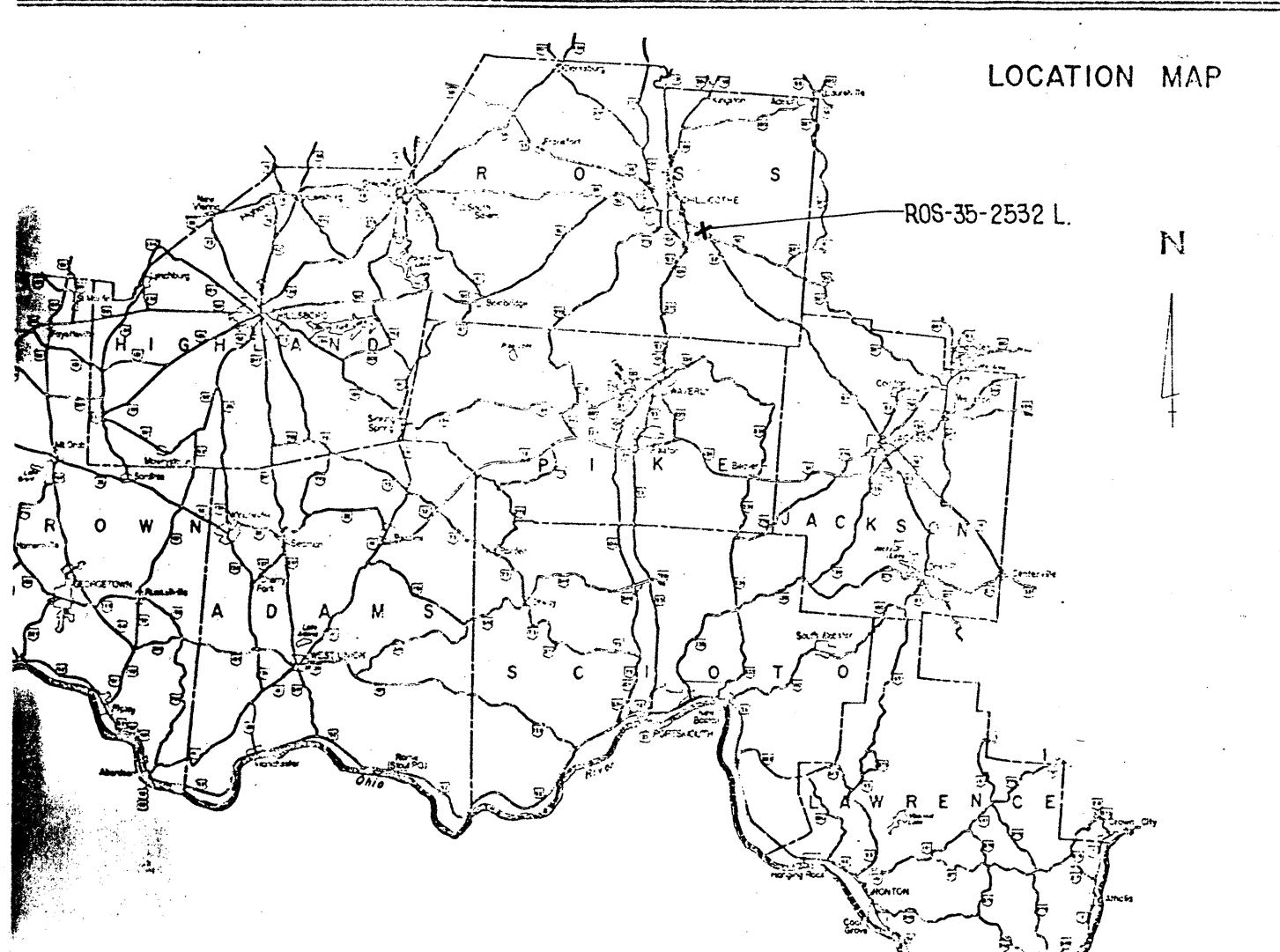
Approved Date _____ Chief Engineer, Construction

Approved Date _____ Chief Engineer, Design

Approved Date _____ Assistant Director, Department of Transportation

Approved Date _____ Director, Department of Transportation

Voir



STANDARD DRAWINGS		SUPPLEMENTAL SPECIFICATIONS	

GENERAL NOTES

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PLAN NO.

EXISTING STRUCTURE VERIFICATION: Details and dimensions shown on these plans pertaining to the existing structure have been obtained from field observations and measurements. Consequently, they are indicative of the existing structure and proposed work, but they shall be considered tentative and approximate. The contractor is referred to CMS Sections 102.05, 105.02, and 513.02.

Contract bid prices shall be based upon recognition of the uncertainties described above and upon a prebid examination of the existing structure by the contractor. However, all project work shall be based upon actual details and dimensions which have been verified by the contractor in the field.

EXISTING BRIDGE PLANS: Detail drawing of the existing bridge, as built, may be inspected in the District Bridge Office in Chillicothe.

ITEM SPECIAL-SEALING OF CONCRETE SURFACES (EPOXY)
This Item shall include all labor and material required to seal the concrete surfaces indicated on the plans with an epoxy sealant. This Item is paid for under Item Special-Sealing Of Concrete Surfaces (Epoxy), as per plan.

ESTIMATED QUANTITIES: Specific locations and usage of some of the estimated quantities set up on these plans to be used as directed by the Engineer and shall be incorporated into the final change order governing completion of this project. Estimated quantities of materials shall not be ordered for delivery to the project unless authorized by the Engineer.

TRAFFIC: Traffic shall be maintained at all times. The length of restricted traffic zones shall be kept to a minimum consistent with the specification requirements for protection of completed courses. 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.

All vehicles, equipment, materials, men and their activities are restricted at all times to the lane which is closed unless otherwise authorized by the Engineer.

Reviewed By: Lawrence A. Willis 4-3-89
Drawn By: N.G.H. 3-27-89

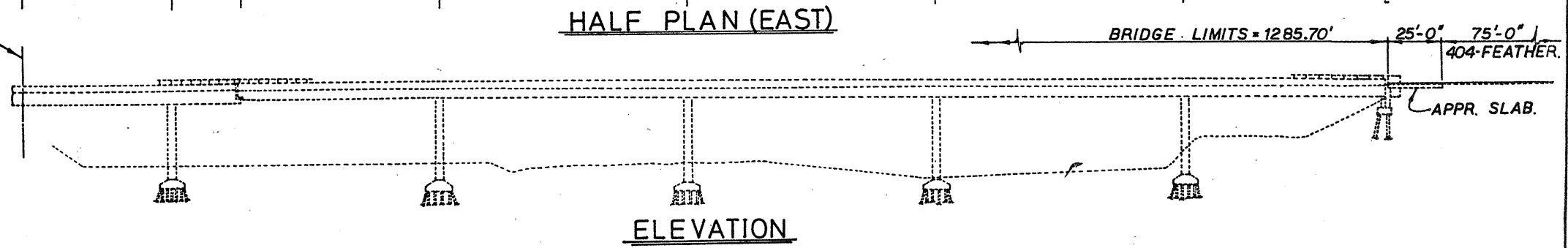
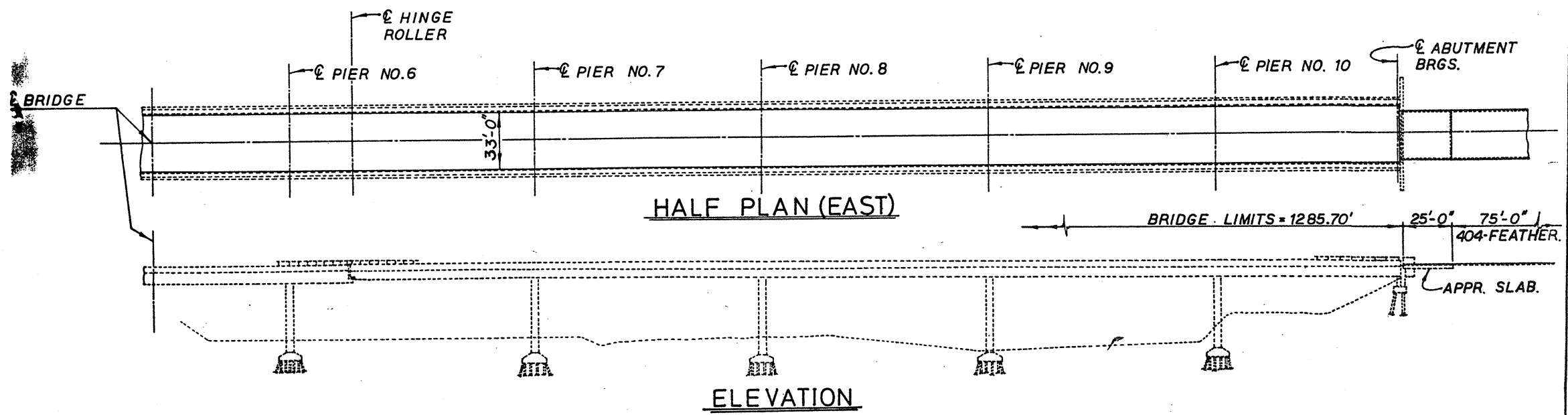
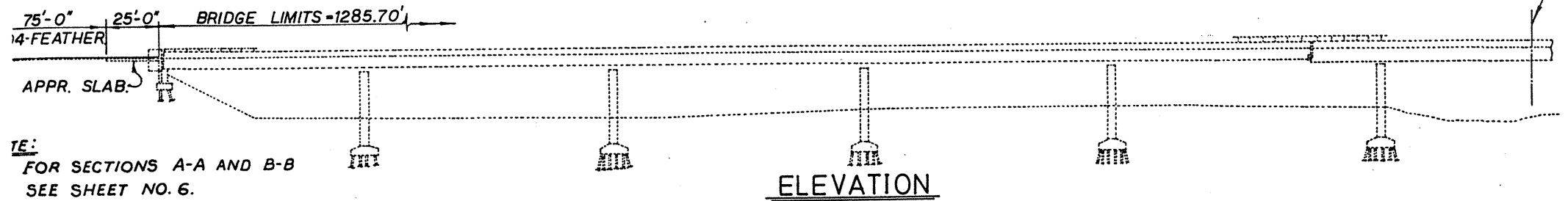
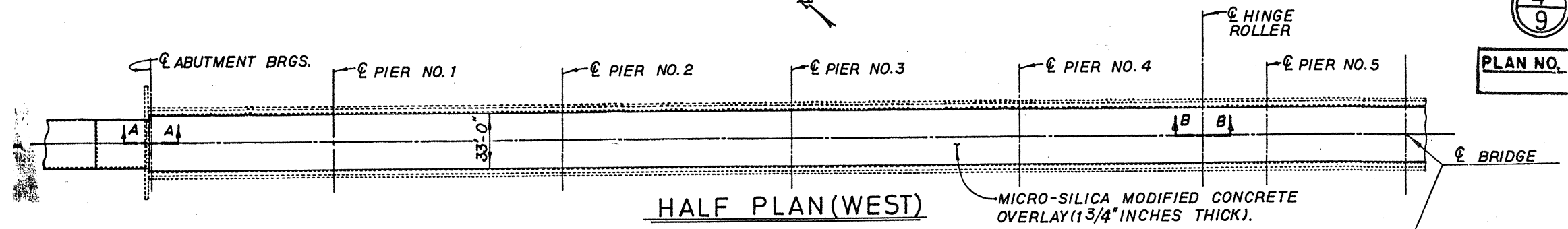


PLAN NO.

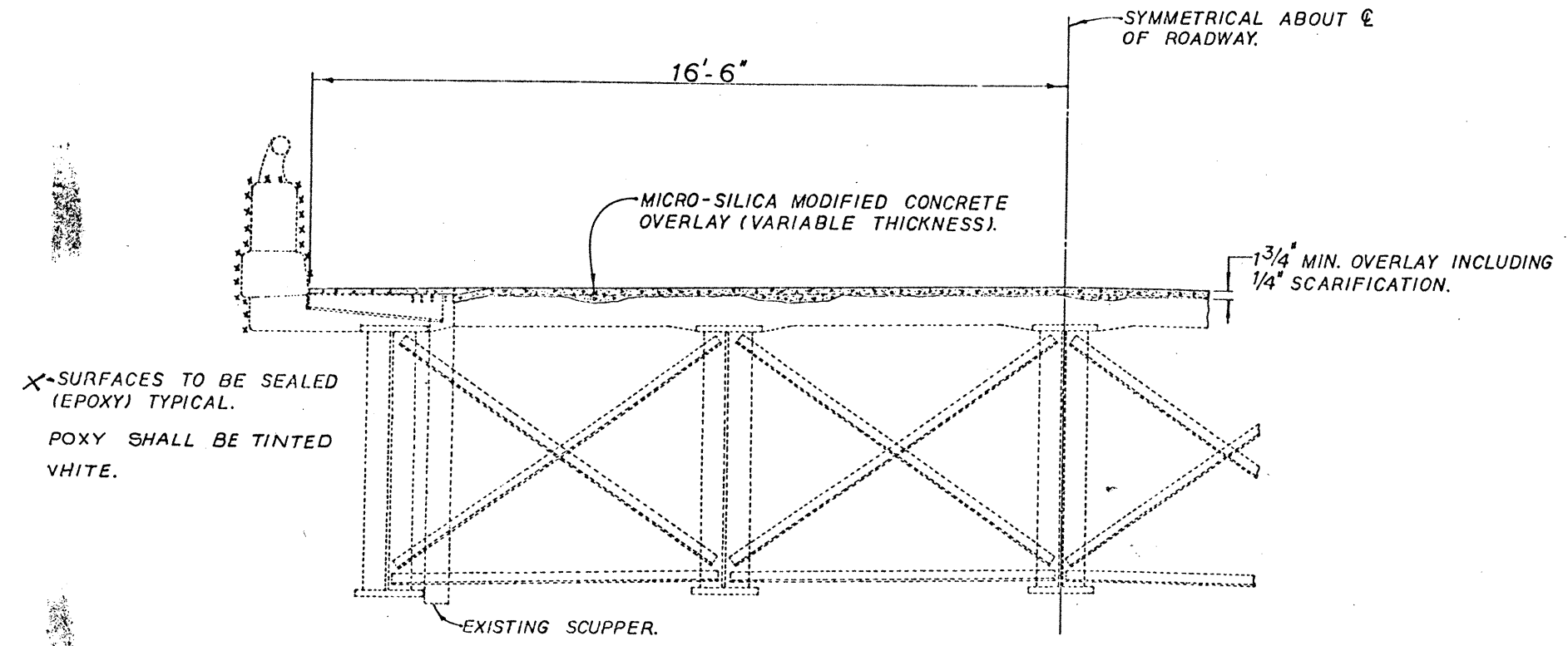
ESTIMATED QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION
404	10	Cu. Yd.	Asphalt concrete, AC-20.
516	132	Lin. Ft.	Structural expansion joints including elastomeric seals, as per plan.
614	Lump	Lump	Maintaining traffic.
619	Lump	Lump	Field office.
624	Lump	Lump	Mobilization.
Special	1,944	Sq. Yd.	Sealing of concrete surfaces (Epoxy), as per plan.
Special	4,848	Sq. Yd.	Micro-silica modified concrete overlay (1 3/4 inches thick). See Proposal Note.
Special	171	Cu. Yd.	Micro-silica modified concrete overlay (Variable thickness). See Proposal Note.
Special	Lump	Lump	Test slab. See Proposal Note.
Special	Lump	Lump	Scupper modification, as per plan.

Reviewed By: *James A. Wills* 4-3-89
 Drawn By: N.C.H. 3-20-80

PLAN NO.



Reviewed By: Lawrence A. Willis 4-3-89
Drawn By: N.C.H. 3-6-89



TYPICAL HALF TRANSVERSE SECTION

Item Special - Micro-Silica Modified Concrete Overlay
(Variable Thickness)

- Re-Steel Clearance = 1 3/4"
- #6 - Bar = 3/4"
- #6 - Bar = 3/4"
- Total = 3 1/4"

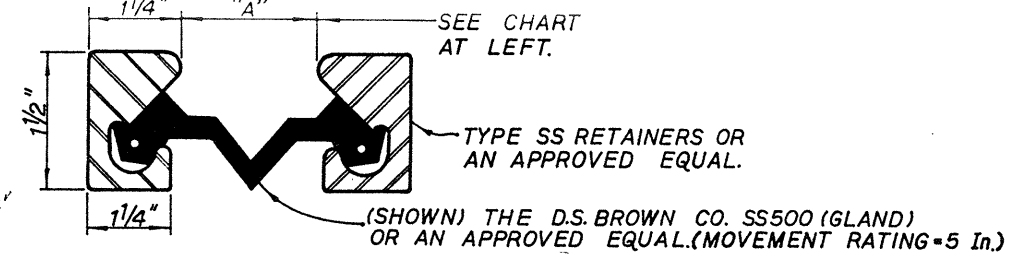
Existing Deck Area = 42,428.1 Sq. Ft.
Assume 40% of Deck Bad = 16,971.2 Sq. Ft. / 9 = 1,885.69 Sq. Yd.
1,885.69 x 3 1/4" / 36 = 170.23 = 171 Cu. Yd.

Item Special - Micro-Silica Modified Concrete Overlay
(1 3/4" Min. Thickness)

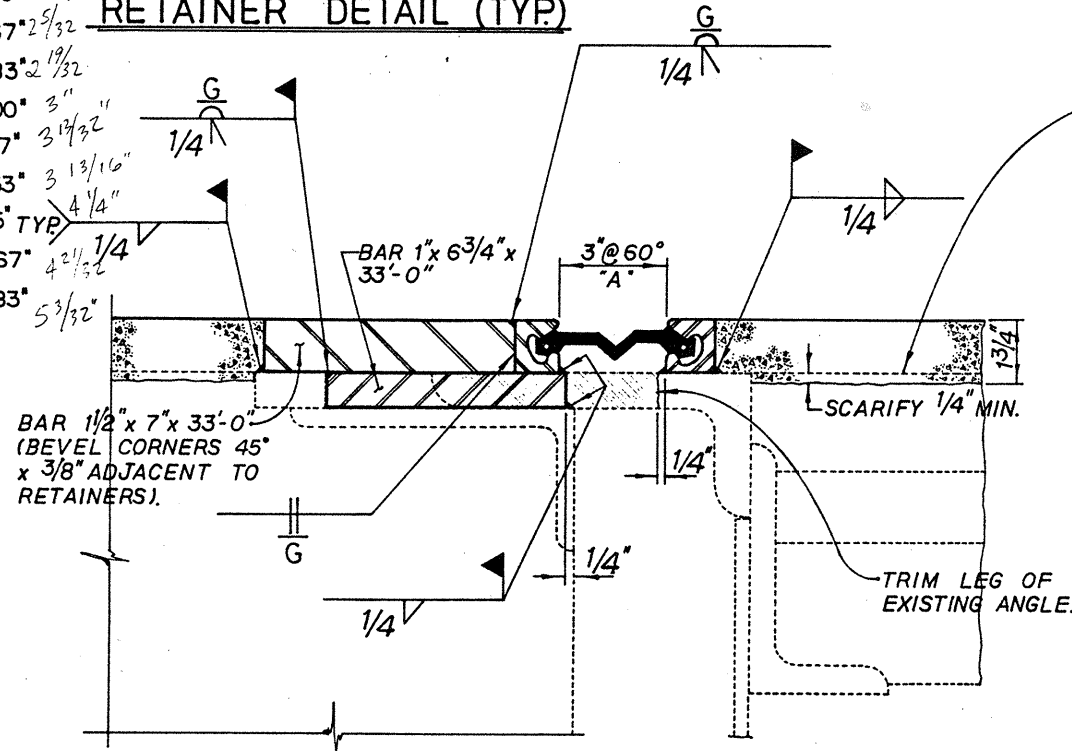
1,285.70' x 33.0' / 9 = 4,715 Sq. Yds. (On Bridge Deck).
Plus
25.0' x 24.0' / 9 x (2) = 133 Sq. Yds. (On Approach Slabs).
Total = 4,848 Sq. Yds.

Reviewed By: *Glenn A. Wells* 4-3-89
Drawn By: N.G.H. 3-8-89

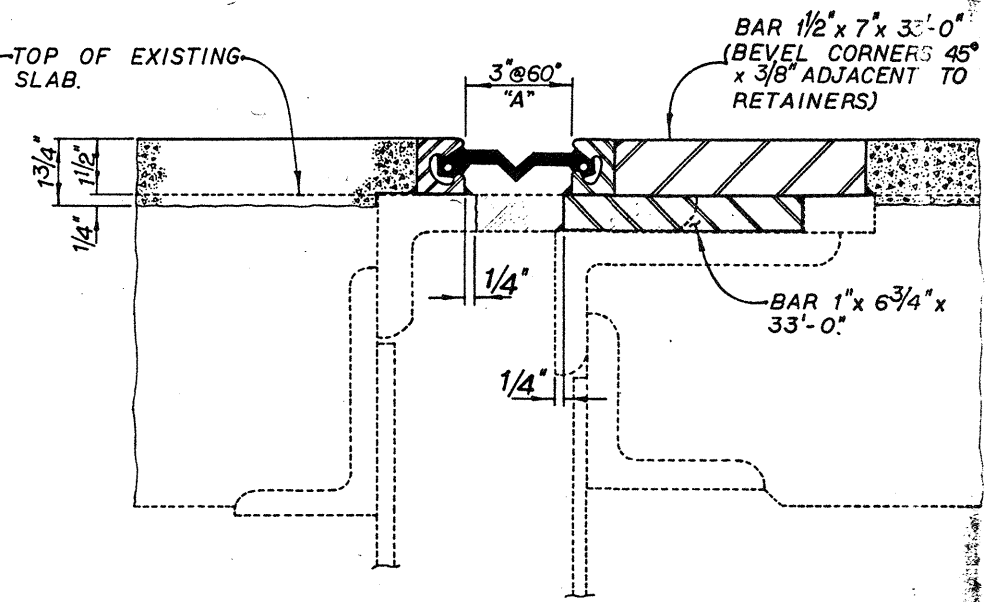
AMBIENT (°F) TEMPERATURE	DIM "A"
110	.917" $15/16"$
100	1.333" $12/8"$
90	1.750" $13/4"$
80	2.167" $25/32"$
70	2.583" $21/32"$
60	3.000" $3"$
50	3.417" $33/32"$
40	3.833" $313/16"$
30	4.25" TYP $41/4"$
20	4.667" $421/32"$
10	5.083" $53/32"$



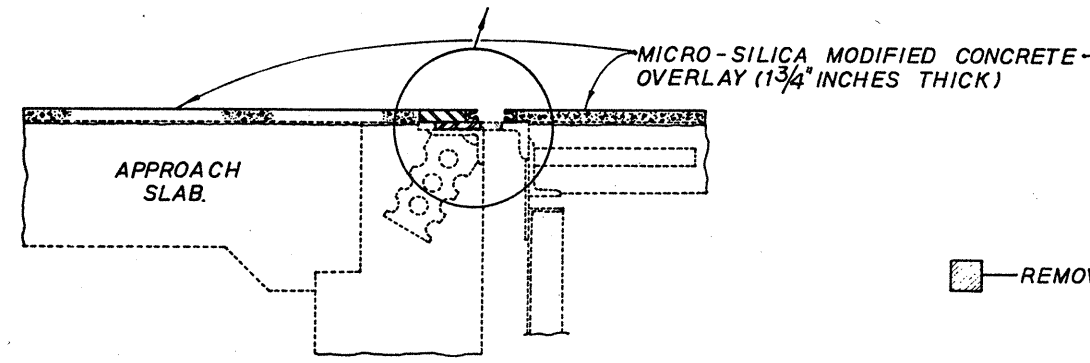
NOTE:
SEE DETAILS AT LEFT
FOR WELD DETAILS.



TYPICAL END FINISH DETAIL AT ABUTMENTS

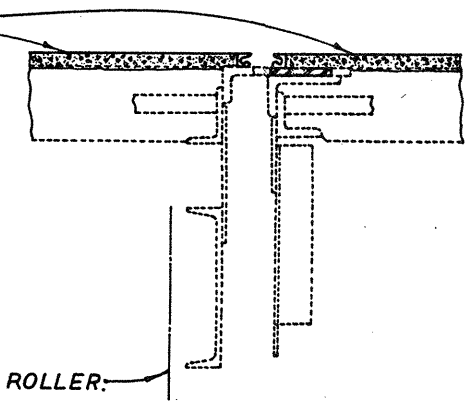


TYPICAL END FINISH DETAIL AT HINGE ROLLERS



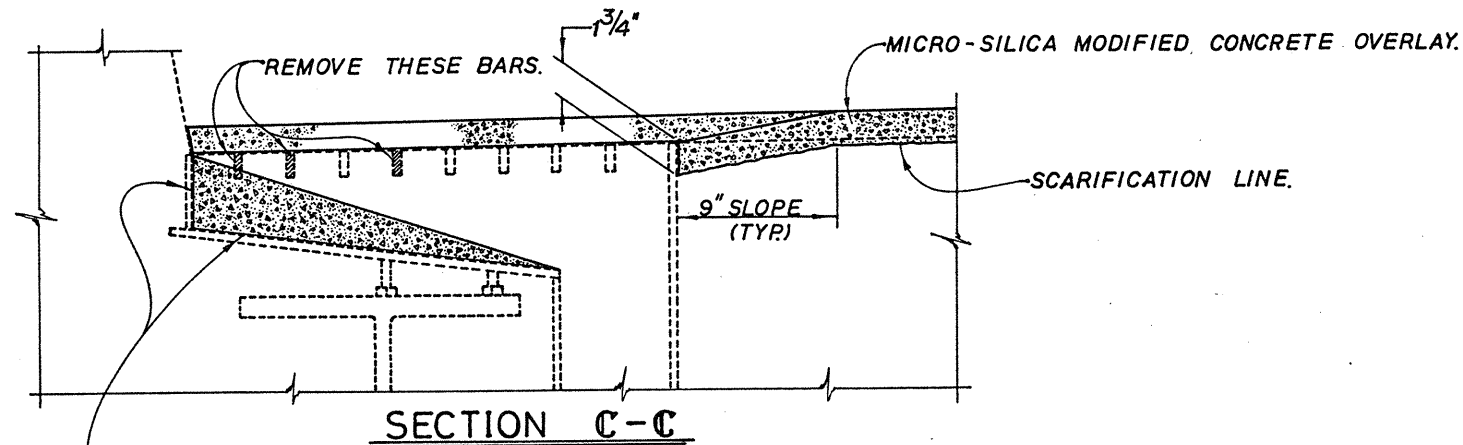
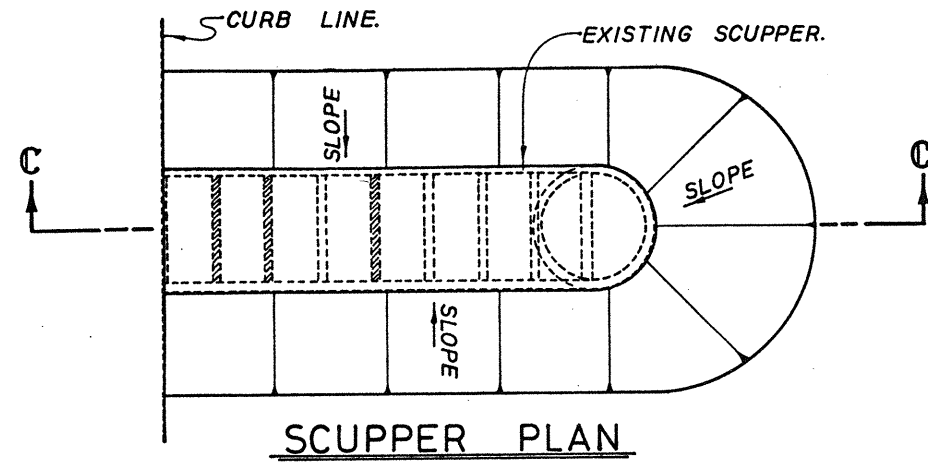
SECTION A-A

REMOVAL AREAS



SECTION B-B

Reviewed By *Shirley A. Wilks* 4-3-89
Drawn By: N.G.H. 3-20-89



Sandblast areas of scuppers and fill with Type II patching material as detailed. Payment for the bar removals, sandblasting, and placement of the concrete wedges shall be included for payment with Item Special, Scupper Modification, as per plan. This includes all materials, labor, tools, and incidentals necessary to complete the above work.

Reviewed By: *James A. Wells* 4-3-89
Drawn By: N.G.H. 3-21-89
Checked By: C.L.B. 4-3-89

THE WHITAKER-MERRELL CO.

ROAD and BRIDGE MATERIALS

33 NORTH HIGH STREET • COLUMBUS, OHIO 43215

PHONE 1-614-221-4386

DATE September 7, 1969

Subject: PROJECT NO. 515 (A) COUNTY Ross

Ohio Dept. of Transp.
Dist. Bureau

Gentlemen:

We are enclosing two (2) copies of Ryerson Steel + Watson Reinforcing
Certification
Mill Test Reports ()

Covering P.O. # 17785 - Rd. 2, 1-1/2" x 7" x 20'-0" Steel Bar
1" x 6-3/4" x 20'-0" Steel Bar
P.O. # 17705 - Rd. 2, Extension Type E, SE-500 Strip Steel
required on the subject project.

Please transmit the enclosed to your project engineer for handling.

cc: Central Allied

Very truly yours,

THE WHITAKER-MERRELL CO.

Cyril A. Marks

Enclosure

FPS. NO. INVOICE	STATE	PROJECT
2	OHIO	

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ROSS COUNTY
ROS-35-2532 L

JOINT RETAINER MANUFACTURERS

D.S. BROWN COMPANY
P.O. BOX 158
NORTH BALTIMORE, OHIO 45872

WATSON-BOWMAN & ACME CORPORATION
95 PINEVIEW DRIVE
AMHERST NEW YORK 14120

STRUCTURAL ACCESSORIES, INCORPORATED
SOUTH MAIN STREET
P.O. BOX 10 TERRYVILLE, CT 06786 (203) 589-8826

PAVEMENT TECHNOLOGY SYSTEMS, LIMITED
P.O. BOX 8408
GREENSBORO, NORTH CAROLINA 27419 (919-294-0113)

TYPE E
SE-500

GENERAL NOTES

MATERIALS: A588 OR A36 WITH PAINT AS SPECIFIED FOR THE MAIN STRUCTURAL STEEL, EXCEPT THAT SYSTEM B SHALL BE USED WHEN THE MAIN STRUCTURAL STEEL IS TO REMAIN UNPAINTED. NO SHOP COAT IS REQUIRED. FIELD PAINT SHALL CONSIST OF ONE PRIME COAT FOR SYSTEM A OR TWO PRIME COATS FOR SYSTEM B, AND ONE FINISH COAT.

THE PREFORMED STRIP SEAL GLAND SHALL BE EXTRUDED POLYCHLOROPRENE MATERIAL MEETING THE REQUIREMENTS OF ASTM D2628. DUE TO THE CONFIGURATIONS OF THE STRIP SEAL THE RECOVERY TESTS ARE NOT APPLICABLE. PHYSICAL PROPERTIES SHALL MEET THE REQUIREMENTS SPECIFIED IN TABLE "E" THIS SHEET.

EACH LOT STRIP SEAL GLANDS SHALL BE TESTED BY THE MANUFACTURER OR AN ACCREDITED LABORATORY TO INSURE COMPLIANCE WITH THESE PROVISIONS. TWO CERTIFIED COPIES OF THE QUALIFICATION TEST DATA INDICATING THAT THE TESTED MATERIALS COMPLY WITH THESE PROVISIONS SHALL BE SUBMITTED TO THE TESTING LABORATORY.

EACH STRIP SEAL GLAND DESIGN, SHAPE, WIDTH, DEPTH AND THICKNESS SHALL BE APPROVED BY THE DIRECTOR. MATERIAL ACCEPTANCE SHALL BE BASED UPON LABORATORY EVALUATION OF CERTIFIED TEST DATA AND THE TE-30 FIELD INSPECTION REPORT.

LUBRICANT - ADHESIVE USED TO INSTALL THE PREFORMED STRIP SEALS

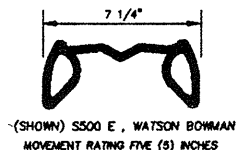


TABLE "E" (PHYSICAL PROPERTIES OF SEAL ELEMENT)		
PROPERTY	REQUIREMENT	ASTM METHOD
TENSILE STRENGTH, MIN. P.S.I.	2000	D412
ELONGATION AT BREAK, MIN. PERCENT	250	D412
HARDNESS, TYPE A DUROMETER	50 MIN 65 MAX.	D2240 (MODIFIED)
OVEN AGING, 70 HR. AT 212° F. TENSILE STRENGTH, LOSS, MAX. ELONGATION, LOSS, MAX. HARDNESS, TYPE A DUROMETER (POINTS CHANGE)	20 PERCENT 20 PERCENT 0 TO + 10	D573
OZONE RESISTANCE 20 PERCENT STRAIN, 300 PPHM, IN AIR AT 104° F (WIPED WITH TOLUENE TO REMOVE SURFACE CONTAMINATION).	NO CRACKS	D1149

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STATE OF OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT 9 BRIDGE DEPARTMENT

EXPANSION JOINT
INSTALLATION DETAILS

BRIDGE NO. ROS-35-2532 L
OVER SCIOTO RIVER

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
NLH	NLH	NLH	GLB		11-2-79	

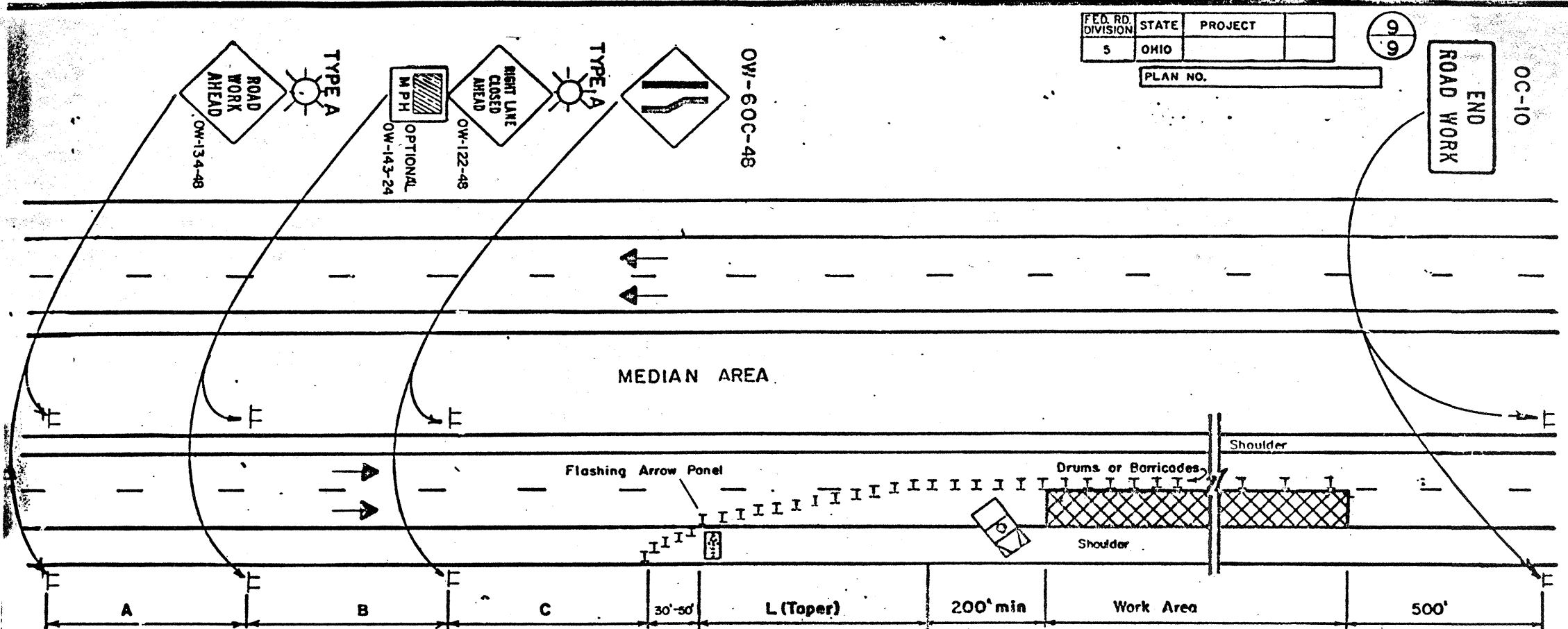
FED. RD. DIVISION	STATE	PROJECT
5	OHIO	

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PLAN NO.

END
ROAD WORK

OC-10



GENERAL NOTES:

- The taper length (L) shall be in accordance with Section 7F-17 of the OMUTCD. The location of the transition taper and location of the advance warning signs should be adjusted to provide for adequate sight distance for the existing vertical and horizontal roadway alignment. In order to determine the minimum number of channelizing devices for the transition taper see Table 7-5 OMUTCD. For a 55 MPH prevailing speed and a 12 ft. lane, not less than thirteen (13) drums or barricades shall be used to form the lane transition taper in advance of the work area. Not less than five (5) drums or barricades shall be used to form the taper on the shoulder. Drums or barricades shall be spaced approximately 50' to 60' center to center for the first 1000 feet of the work area and at a maximum of 100 to 120 feet for the balance of the work area.
- The major standard level warning sign sizes may be used on divided streets or highways that are not classified as freeways or expressways.
- When work is being performed in the lane adjacent to the median on a divided highway an OW-123-48 sign(s) shall be substituted for the OW-122-48 sign(s) and an OW-600-48 sign(s) shall be substituted for the OW-60C sign(s).
- The work vehicle shown at the beginning of the work area shall be in place and unoccupied whenever workers are in the work area. This work vehicle shall be removed from the pavement whenever workers are not in the work area. Other protective devices may be used in lieu of the work vehicle shown when approved by the Engineer. The vehicle shall be equipped with a 360° rotating or flashing amber beacon clearly visible a minimum of a mile.
- The flashing arrow panel shall meet requirements contained in Section 7G-8, OMUTCD.
- Type C steady burning barricade warning lights shall be erected on drums or barricades for night lane closures. The maximum spacing shall be identical to the channelizing device spacing requirements described in Note 1.
- Type A flashing barricade warning lights shown on the "Road Work Ahead" and the "Right Lane Closed Ahead" signs are required whenever a night lane closure is necessary.
- Some work area locations may require more than just static or conventional signs to enhance communication with the driver. At these locations Portable Changeable Message Signs (PCMS) units are recommended. These devices should be located approximately 2000-4000 ft in advance of a lane closure or other point of required action. See Section 7G-8.1, OMUTCD for further guidance on use of PCMS units.

MINIMUM DISTANCE	A	B	C
MAJOR STANDARD	500'	500'	500'
URBAN FREEWAY & EXPRESSWAY	500' TO 1000'	500' TO 1000'	500' TO 1000'
RURAL FREEWAY & EXPRESSWAY	2600'	1600'	1000'

OHIO DEPARTMENT OF TRANSPORTATION

CLOSING ONE LANE OF A FOUR LANE DIVIDED HIGHWAY

DATE 2/82