CUY-90-14.90

PID 77332/85531

APPENDIX EX-60

CUY-090-1540 PID 0.726
(Reference Document)

State of Ohio
Department of Transportation
Jolene M. Molitoris, Director

Innerbelt Bridge
Construction Contract Group 1 (CCG1)

Revision Date: 1982

Q-11

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STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
CUY-90-15.40
CUYAHOGA COUNTY
CITY OF CLEVELAND

CUYAHOGA COUNTY	OHIO
CUY-90-15.40	FHWA REGION 5
	FEDERAL PROJECT

1/10

PLAN NO. BR-15-82

BRIDGE BARRIER CURB REPAIR

CONVENTIONAL SIGNS

County Line
Township Line
Section Line
Corporation Line or
Fence Line (existing) (proposed)
Center Line 352 353
Trees, Stumps, (to be removed)
Utility Poles: Telephone, Power, Light.

Limited Access (only) LA
Right of Way (only) RW
Limited Access & Right of Way LA & RW
Existing Right of Way
Property Line (in existing fence)
Railroad or
Guardrail (existing) (proposed)

INDEX OF SHEETS

LINE DATA

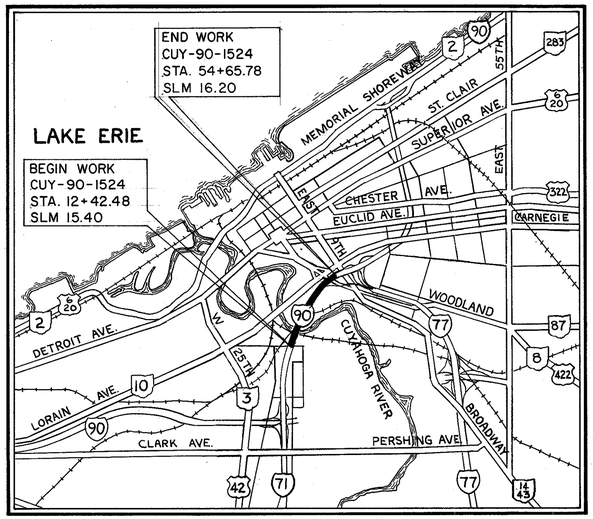
PROJECT LENGTH = 0.00 L.F. OR 0.000 MI.

WORK LENGTH

BEGIN WORK BRIDGE CUY-90-1524 STA. 12+42.48

END WORK BRIDGE CUY-90-1524 STA. 54+65.78

NET LENGTH OF WORK = 4223.30 L.F. OR 0.800 MI.



LOCATION MAP

SCALE IN MILES
0 ½ 1 1½ 2 2½

Portion to be improved
State & Federal Routes
Other Roads

SCALES

Schematic Plan 0 200' 400'
Profile: Horizontal, Vertical
Cross Section: Horizontal, Vertical

1981 SPECIFICATIONS

The standard specifications of the State of Ohio, Department of Transportation, including changes and supplemental specifications listed in the proposal shall govern this improvement.

I hereby approve these plans and declare that the making of this improvement will not require the closing to traffic of the highway and that provisions for maintenance and safety of traffic will be as set forth on the plans and estimates.

SUPPLEMENTAL SPECIFICATIONS	

Approved Thomas M. Knoll
Date 2-2-82 District Deputy Director of Transportation

gsk Approved Robert B. Pfeifer
Date 2-17-82 Engineer, Bureau of Bridges and Structural Design

Approved Gerald E. Hann
Date 3-1-82 Chief Engineer, Operations

Approved David S. Wein
Date 3-1-82 Director, Department of Transportation

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS				
	TC 35.10 10-5-77			

00820

Project:
Date of Letting 19, Contract No.

SEAL

LD0300 Rev. 11-1-78

FHWA REGION	STATE	PROJECT	
5	OHIO		

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PLAN NO. BR-15-82

CUYAHOGA COUNTY
CUY-90-15.40

GENERAL NOTES

ITEM 614 - MAINTAINING TRAFFIC

GENERALLY THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS AS TO MAKE THE PROPOSED REPAIR WITH A MINIMUM OF HAZARD, DELAY AND INCONVENIENCE TO THE MOTORISTS USING THE HIGHWAY AFFECTED BY THE WORK DONE UNDER THIS CONTRACT; FURTHERMORE, THE FOLLOWING SPECIFIC PROVISIONS ARE MANDATORY.

I. NOTIFICATION

SINCE FUNCTIONAL TRAFFIC CONTROL IS A MAJOR CONCERN ON THIS PROJECT IT IS ESSENTIAL THAT THE MOTORING PUBLIC BE ADEQUATELY FORWARNED OF FUTURE ROAD CLOSINGS, LANE CLOSURES AND TRAFFIC CONSTRICTIONS. THEREFORE, THE CONTRACTOR SHALL SUBMIT A SCHEDULE TO THE OHIO DEPARTMENT OF TRANSPORTATION INDICATING THE CLOSURE DATES AT LEAST TWO WEEKS PRIOR TO IMPLEMENTATION.

II. RESTRICTIONS

THROUGH TRAFFIC ON I-90 SHALL BE MAINTAINED AT ALL TIMES AS INDICATED IN THESE PLANS.

THE CONTRACTOR SHALL SCHEDULE HIS OPERATIONS SUCH THAT NO PORTION OF THE TRAVELED SURFACE OF IR-90 SHALL BE CLOSED TO TRAFFIC FROM MONDAY THROUGH FRIDAY BETWEEN THE HOURS OF 6:00 AM TO 10:00 AM AND 2:00 PM TO 7:00 PM. IN ADDITION, NO I-90 LANE CLOSURES SHALL BE PERMITTED DURING THE PERIOD BEGINNING AT 7:00 PM THE DAY PRECEDING AND CONTINUING UNTIL 6:00 AM THE DAY FOLLOWING LEGAL HOLIDAYS AND LEGAL HOLIDAY WEEKENDS. FURTHERMORE, LANE CLOSURES ON I-90 SHALL BE PROHIBITED DURING THE HOURS OF INCREASED TRAFFIC VOLUME GENERATED BY SPECIAL EVENTS OR OTHER CAUSES AS DETERMINED BY THE ENGINEER.

WHENEVER THE CONTRACTOR MUST CLOSE LANES ON IR-90, HE SHALL BE GOVERNED BY THE FOLLOWING CONDITIONS IN ADDITION TO THOSE PREVIOUSLY MENTIONED. ONE OR TWO LANE CLOSURES MAY BE PLACED IN THE OUTSIDE LANES. ALL ENTRANCE AND EXIT RAMPS SHALL BE KEPT OPEN EXCEPT AS NOTED IN THE PLANS. IN NO CASE WILL THE CONTRACTOR BE PERMITTED TO ROUTE TRAFFIC ON BOTH SIDES OF A CLOSURE. THE CONTRACTOR SHALL MAINTAIN TRAFFIC ON THE EXISTING LANES OF PAVEMENT, NO TRAFFIC SHALL BE ROUTED ON THE BERMS.

III. NIGHTTIME WORK

NIGHTTIME WORK SHALL BE ENCOURAGED AND PERMITTED IN ACCORDANCE WITH THESE PLANS AND NOTES. A PLAN FOR LIGHTING FOR NIGHTTIME OPERATIONS SHALL BE PRESENTED TO AND APPROVED BY THE ENGINEER. IN ORDER TO ASSURE THE SAFEST CONDITIONS DURING NIGHTTIME WORK THE CONTRACTOR SHALL PROVIDE FLOOD LIGHTING OF THE WORK AREA.

IV. TRAFFIC CONTROL SYSTEMS

A. WHEN REQUIRED

WHENEVER ANY PART OF THE TRAVELED SURFACE IS BEING WORKED UPON OR IS OTHERWISE NOT SUITABLE FOR SAFE AND CONVENIENT USE BY VEHICLES, TRAFFIC CONTROL DEVICES SUFFICIENT TO PROTECT SUCH AREAS TO ASSURE THE SAFE AND CONVENIENT PASSAGE OF VEHICULAR TRAFFIC SHALL BE INSTALLED AND MAINTAINED. SUCH TRAFFIC CONTROL DEVICES AND THE MANNER IN WHICH THEY ARE USED SHALL BE CONSISTENT WITH THESE PLANS AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, HEREINAFTER REFERRED TO AS THE "MANUAL". THE TRAFFIC CONTROL DEVICE SYSTEM SHALL CONSTITUTE THE MINIMUM PROVISIONS FOR TRAFFIC CONTROL FOR EACH PARTICULAR SITUATION. THE ENGINEER MAY DIRECT THAT ADDITIONAL OR ALTERNATIVE DEVICES BE USED WHERE NECESSARY ESPECIALLY WHERE A GRADE, CURVE, MERGE CONDITION, OR DRIVER CONFUSION EXISTS. ALSO THE CONTRACTOR SHALL PROVIDE SUFFICIENT ADDITIONAL BARRICADES, ETC. TO PROTECT THE WORK AREA FROM ANY VEHICLES WHICH DRIVE AROUND OR THROUGH THE TRAFFIC CONTROL.

B. CONDITIONS

DURING THIS PROJECT, SIGNING, BARRICADES, ETC., SHALL BE LOCATED AS INDICATED IN THESE NOTES AND THE TRAFFIC CONTROL PLANS. THE NUMBER OF LANES AND THE MINIMUM LANE WIDTHS MAINTAINED SHALL BE AS INDICATED IN THE TRAFFIC CONTROL PLANS AND NOTES.

C. ADVANCE WARNING SIGNS

ALL ADVANCE WARNING SIGNS FOR ANY CONDITION WHICH RESTRICTS TRAFFIC SHALL BE ERECTED BEFORE ANY SUCH RESTRICTION IS PUT INTO EFFECT. ALL SUCH SIGNS SHALL BE COVERED OR REMOVED FROM THE VIEW OF TRAFFIC WHENEVER THEY ARE NOT APPLICABLE.

D. FLASHING ARROW REQUIREMENT

WHENEVER ANY PART OF THE IR-90 TRAVELED SURFACE IS CLOSED, THE MOTORISTS SHALL BE WARNED AND DIRECTED BY THE CONTRACTOR THROUGH THE USE OF ONE FLASHING ARROW FOR EACH LANE CLOSED IN ADDITION TO OTHER PROVISIONS SET FORTH IN THE "MANUAL" AND THESE PLANS.

E. BERM TRAFFIC

THE CONTRACTOR SHALL PLACE TRAFFIC CONTROL DEVICES, (SIGNS, BARRICADES, ETC.) AS DIRECTED BY THE ENGINEER, TO PROHIBIT THE MOVEMENT OF TRAFFIC ON THE BERMS IN APPROACH OF THE TRAFFIC CONTROL AREA.

F. FAILURE TO COMPLY

IF THERE IS ANY FAILURE TO COMPLY WITH THE PROVISIONS FOR TRAFFIC CONTROL SET OUT IN THESE PLANS AND NOTES, OR WITH THE PROVISIONS OF THE "MANUAL", THE HIGHWAY IN THE VICINITY OF THE WORK AREA SHALL NOT BE CONSIDERED IN A CONDITION FOR THE SAFE AND CONVENIENT USE BY THE TRAVELING PUBLIC WHICH SHALL CONSTITUTE A BREACH OF THIS CONTRACT. WORK SHALL BE SUSPENDED UNTIL THE CONTRACTOR COMPLIES WITH THE PROVISIONS OF THE AFOREMENTIONED ITEMS.

V. TRAFFIC CONTROL MATERIAL

A. SIGNS

SIGN DIMENSIONS AND SPECIFICATIONS, INCLUDING LETTER SIZES, SHALL BE AS PROVIDED IN THE "MANUAL", OR IN SIGN DESIGN DRAWINGS PROVIDED BY THE DEPARTMENT OF TRANSPORTATION. THE SIGNS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER PRIOR TO THE START OF THE PROJECT.

B. SIGN SUPPORTS

SIGN SUPPORTS SHALL BE SUFFICIENT SIZE AND HEIGHT AS TO SUPPORT THE SIGNS AT THE HEIGHT INDICATED IN THE "MANUAL" ON PLATE C-1. SUPPORTS SHALL ALSO BE ADEQUATE IN MASS AND STABILITY TO PREVENT THE SIGNS BEING BLOWN OVER BY WIND OR VEHICULAR-GENERATED AIR TURBULENCE.

C. LIGHTING DEVICES

FLASHERS SHALL BE 12 VOLT BATTERY-OPERATED MODELS WITH 7 INCH DIAMETER YELLOW LENSES ILLUMINATED BY RAPID INTERMITTENT FLASHES OF SHORT DURATION AND SHALL BE PLACED ON ALL SIGNS AT ALL TIMES.

D. FLASHING ARROWS

THE ELECTRIC FLASHING ARROWS SHALL BE TYPE "A" SHOWN ON STANDARD CONSTRUCTION DRAWING TC-35.10. PAYMENT FOR FLASHING ARROWS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

E. CONES

STANDARD RUBBER OR PLASTIC CONES SHALL BE USED. CONES SHALL BE AT LEAST 36" HIGH AND SHALL BE PREDOMINANTLY ORANGE IN COLOR. ALL CONES SHALL HAVE WEIGHTED BASES.

F. DRUMS

DRUMS SHALL BE APPROXIMATELY 36" IN HEIGHT AND A MINIMUM OF 18" IN DIAMETER. THE MARKINGS ON DRUMS SHALL BE HORIZONTAL, CIRCUMFERENTIAL, ORANGE AND WHITE REFLECTORIZED STRIPES FOUR TO EIGHT INCHES WIDE, USING A MATERIAL THAT HAS A SMOOTH, SEALED OUTER SURFACE WHICH WILL DISPLAY THE SAME APPROXIMATE SIZE, SHAPE AND COLOR DAY AND NIGHT. THERE SHALL BE AT LEAST TWO ORANGE AND TWO WHITE STRIPES ON EACH DRUM. IF THERE ARE NONREFLECTORIZED SPACES BETWEEN THE HORIZONTAL ORANGE AND WHITE STRIPES, THEY SHALL BE NO MORE THAN TWO INCHES WIDE. DRUMS SHALL BE FILLED ONE-THIRD FULL OF WATER TO INSURE STABILITY OR BALLASTED AS APPROVED BY THE ENGINEER. DRUMS SHALL BE REQUIRED FOR NIGHTTIME CLOSURES. PAYMENT FOR DRUMS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

CONTINGENCY QUANTITIES: THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR PLAN ITEMS SET UP TO BE USED " AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER.

RIGHT-OF-WAY

ALL WORK WILL BE PERFORMED WITHIN THE EXISTING RIGHT-OF-WAY.

FABRICATOR A.I.S.C. CERTIFICATION AS SPECIFIED IN 501.04 IS NOT REQUIRED.

FHWA REGION	STATE	PROJECT	
5	OHIO		

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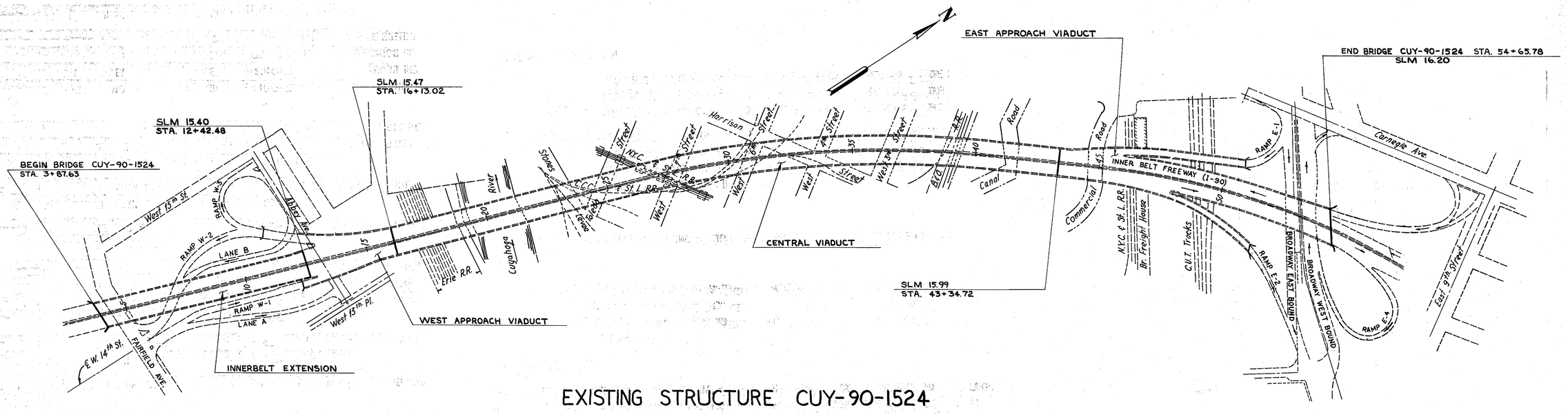
CUYAHOGA COUNTY
CUY-90-15.40

PLAN NO. BR-15-82



EXISTING STRUCTURE CUY-90-1524

INNERBELT EXTENSION

STA. 3+87.63 (SLM 15.24) TO STA. 12+42.48 (SLM 15.40)

TYPE: UNITS 1W AND 1E – CONTINUOUS WELDED STEEL GIRDER WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.
UNITS 2W, 3W AND 2E – CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.
SPANS: UNIT 1W 64'-0", 70'-6", 65'-6", 8'-0" CANTILEVER.
UNIT 2W 63'-0", 90'-0", 79'-6", 64'-0", 6'-0" CANTILEVER.
UNIT 3W 66'-0", 3 @ 72'-0", 61'-11¾"
UNIT 1E 64'-0", 102'-0", 103'-0", 90'-0", 79'-6", 64'-0", 6'-0" CANTILEVER.
UNIT 2E 66'-0", 3 @ 72'-0", 61'-11¾"
ROADWAY: 2 @ 53'-0" CURB TO CURB WITH 2'-2" SAFETY CURBS AND 2'-6" CONCRETE BARRIER MEDIAN.
LOAD FREQUENCY: CF2000(57) ADEQUATE FOR A.A.S.H.O. ALTERNATE LOADING.
SKEW: VARIES
WEARING SURFACE: 2" DENSE CONCRETE
APPROACH SLABS: AS-1-54 (25' LONG)
ALIGNMENT: TANGENT

WEST APPROACH VIADUCT

STA. 12+42.48 (SLM 15.40) TO STA. 16+13.02 (SLM 15.47)

TYPE: CONTINUOUS STEEL BEAMS AND GIRDERS WITH CONCRETE DECK AND SUBSTRUCTURE.
SPAN: VARIES
ROADWAY: 2 @ 52'-0" WITH 2 (3'-0") SAFETY CURBS WITH 2'-8" BARRIER.
LOADING: CF 2000
SKEW: VARIES
WEARING SURFACE: 2½" DENSE CONCRETE
ALIGNMENT: TANGENT

CENTRAL VIADUCT

STA. 16+13.02 (SLM 15.47) TO STA. 43+34.72 (SLM 15.99)

TYPE: STEEL DECK TRUSSES WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.
SPANS: VARIES
ROADWAYS: 2 @ 52'-0" CURB TO CURB WITH 2 (3'-0") SAFETY CURBS AND 2'-6" CONCRETE BARRIER MEDIAN.
LOADING: CF 2000, ADEQUATE FOR A.A.S.H.O. ALTERNATE LOADING.
SKEW: VARIES
WEARING SURFACE: 2½" ASPHALTIC CONCRETE.
ALIGNMENT: TANGENT, 1° 30' CURVE RIGHT, TANGENT.

EAST APPROACH VIADUCT

STA. 43+34.72 (SLM 15.99) TO STA. 54+65.78 (SLM 16.20)

TYPE: CONTINUOUS STEEL BEAMS AND GIRDERS WITH CONCRETE DECK AND SUBSTRUCTURE.
SPAN: VARIES
ROADWAY: 2 @ 52'-0" WITH 2 (3'-0") SAFETY CURBS WITH 2'-8" CONCRETE BARRIER MEDIAN.
LOADING: CF 2000, ADEQUATE FOR A.A.S.H.O. ALTERNATE LOADING.
SKEW: VARIES
WEARING SURFACE: 2½" DENSE CONCRETE.
ALIGNMENT: 2° CURVE RIGHT.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DISTRICT 12 BRIDGE DEPARTMENT

1-7

SCHEMATIC PLAN

BRIDGE NO. CUY-90-1524
OVER CUYAHOGA RIVER VALLEY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

FHWA REGION	STATE	PROJECT	
5	OHIO		

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CUYAHOGA COUNTY
CUY-90-15.40

PLAN NO. BR-15-82

STRUCTURE REPAIR NOTES

PROPOSED WORK: ITEMS OF WORK INCLUDE THE REPAIR OF DAMAGED SECTIONS OF THE STEEL BARRIER CURB RAIL AND THE CONCRETE CURB FACE BELOW IN SELECTED AREAS ON THE EAST AND WEST APPROACH VIADUCTS OF BRIDGE CUY-90-1524.

SPECIFICATIONS: ALL MATERIAL AND ITEMS OF WORK SHALL CONFORM TO THE CONSTRUCTION AND MATERIAL SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION DATED JANUARY 1, 1981.

DESIGN LOADING: THESE REPAIRS WILL NOT AFFECT THE ORIGINAL DESIGN LOADING OF CF-2000.

STRUCTURAL STEEL: NEW STRUCTURAL STEEL SHALL CONFORM TO ASTM A36, UNIT STRESS 20,000 PSI.

EXISTING STRUCTURE VERIFICATION: DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM THE PLANS OF THE EXISTING STRUCTURE AND/OR FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, AND 513.02.

CONTRACT BID PRICES SHALL BE BASED UPON A 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.

MATERIAL: ALL ANCHOR BOLTS AND NUTS SHALL CONFORM TO THE PHYSICAL PROPERTIES OF ASTM-A325 EXCEPT THAT THE MINIMUM ELONGATION SHALL BE 10%. THE CHEMICAL PROPERTIES ARE WAIVED.

GALVANIZING: ALL BARRIER CURB RAIL, POSTS, HARDWARE AND ACCESSORIES SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123 OR ASTM A153, EXCEPT AS OTHERWISE NOTED.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED: THE VARIOUS PARTS TO BE REMOVED WHICH ARE INCLUDED IN THIS ITEM FOR PAYMENT INCLUDE EXISTING RAIL ELEMENTS AND POSTS IN REPAIR ZONES, ANCHOR BOLTS AND SIDEWALK CONCRETE IN THE NEW ANCHOR BOLT ENCASEMENT LOCATIONS AND ANY OTHER DIRT, DEBRIS OR MATERIAL WHICH WOULD INHIBIT THE INSTALLATION OF THE NEW BARRIER CURB OR REPAIR OF THE CONCRETE CURB FACE.

EXTREME CAUTION SHALL BE EXERCISED TO PREVENT DAMAGE TO THE TRANSVERSE SIDEWALK REINFORCING STEEL, EXPOSURE OF THE TOP DECK SLAB REINFORCING STEEL AND UNDUE DEFORMATION OF THE LONGITUDINAL SIDEWALK STEEL.

RAIL ELEMENTS, POSTS AND BOLTS REMOVED SHALL BE STORED ON THE SITE FOR ODOT PICKUP AT A LOCATION DETERMINED BY THE ENGINEER.

ITEM 511 - CLASS C CONCRETE, SUPERSTRUCTURE: AN ESTIMATED QUANTITY OF CLASS C CONCRETE IS INCLUDED TO PROVIDE ENCASEMENT OF BARRIER CURB ANCHOR BOLTS, AS DIRECTED BY THE ENGINEER.

ITEM 517 - RAILING (STEEL BARRIER CURB WITH STEEL POST AND BOLTS): BARRIER CURB SHALL BE FABRICATED IN ELEMENT LENGTHS AS SHOWN ON THE BARRIER CURB REPAIR PLAN. GENERALLY, ELEMENTS SHALL BE THREE PANELS LONG AND SHALL INCLUDE INTERMEDIATE POSTS, SPLICE POSTS, AND END POSTS WHERE REQUIRED. APPROACH END ELEMENTS SHALL BE TWO PANELS LONG AND SHALL INCLUDE A SHORTENED INTERMEDIATE POST AND AN END BASE PLATE. WHERE NEW POSTS ARE REQUIRED FOUR NEW ANCHOR BOLTS SHALL BE INSTALLED EXCEPT THAT THE APPROACH END ELEMENT BASE PLATE SHALL REQUIRE ONLY TWO. THOSE UNDAMAGED EXISTING SPLICE POSTS WHICH ARE TO REMAIN IN PLACE AT THE LIMITS OF THE REPAIR ZONES SHALL NOT REQUIRE NEW ANCHOR BOLTS. COST OF SETTING THE ANCHOR BOLTS IN POSITION PRIOR TO ENCASEMENT SHALL BE INCLUDED IN THIS ITEM. NEW BARRIER RAIL SHALL PROPERLY FIT UP TO EXISTING RAIL.

THE INTENT OF THIS PROJECT IS TO REPAIR ALL DAMAGED BARRIER RAIL ON THE EAST AND WEST APPROACH VIADUCTS. THE REPAIR ZONES DEPICTED ARE THE RESULT OF FIELD SURVEYS; HOWEVER, ADDITIONAL DAMAGED BARRIER CURB MAY BE REPAIRED UNDER THIS ITEM AS DIRECTED BY THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER.
ITEM 517 - RAILING (STEEL BARRIER CURB WITH STEEL POST AND BOLTS): ---------- 75 LIN. FT.

ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN

THIS ITEM OF WORK SHALL BE USED TO REPAIR SPALLED OR UNSOUND SURFACE AREAS OF CONCRETE ON THE FACE OF THE CURBS WITHIN THE STEEL BARRIER CURB REPAIR ZONES AS DIRECTED BY THE ENGINEER.

IN ADDITION TO, OR EXCEPTION TO, THE REQUIREMENTS OF ITEM 519 THE FOLLOWING PROVISIONS SHALL APPLY:

519.01 DESCRIPTION

MINIMUM THICKNESS SHALL BE NOT LESS THAN 1/4 INCHES. WELDED STEEL WIRE FABRIC SHALL NOT BE REQUIRED.

519.02 MATERIALS

MATERIALS SHALL BE MAGNESIUM PHOSPHATE CONCRETE, WHICH IS A CHEMICAL CONCRETE THAT CONTAINS NO PORTLAND CEMENT, GYPSUM OR EPOXY RESINS. IT IS A TWO COMPONENT PRODUCT COMPRISED OF A POLY LIMED BAG OF CONCRETE AND A FLUID CHEMICAL AGENT. NO WATER IS TO BE ADDED. THE CONTRACTOR SHALL USE ONE OF THE THREE FOLLOWING PRODUCTS, OR AN APPROVED EQUAL:

HORN 240 CONCRETE
FAST CRETE
BOSTIK 276

519.03 REMOVAL OF CONCRETE

WHERE THE BOND BETWEEN EXISTING CONCRETE AND REINFORCING STEEL HAS BEEN DESTROYED, OR WHERE MORE THAN ONE HALF THE PERIPHERY OF THE STEEL IS EXPOSED, THE CONCRETE ADJACENT TO THE BAR SHALL BE REMOVED TO A DEPTH OF ONE-INCH WHICH WILL PERMIT CONCRETE TO BOND TO THE ENTIRE PERIPHERY OF THE BAR SO EXPOSED.

BEFORE REPAIRS BEGIN AND WITHIN 24 HOURS OF CONCRETE PLACEMENT, THE ENTIRE CONCRETE SURFACE SHALL BE SANDBLASTED AND REBARS SHALL BE SANDBLASTED TO WHITE METAL. IF THE SURFACE CONTAINS GREASE, OIL, DIRT, OR OTHER FOREIGN MATTER, SANDBLASTING, DETERGENT CLEANING, WATERBLASTING, AND/OR AIR BLASTING OR ANY COMBINATION THEREOF, SHALL BE REQUIRED TO INSURE BOND.

519.04 PREPARATION

THE PREPARED MASONRY SURFACE SHALL BE COMPLETELY DRY PRECEDING THE PLACEMENT OF THE NEW CONCRETE.

519.06 PATCHING

ALL REPAIRS SHALL BE MADE WITH MAGNESIUM PHOSPHATE CONCRETE. THE MIXING, PROPORTIONING, AND CURING PROCEDURES, INCLUDING THE TOOLS, EQUIPMENT, LABOR AND MATERIALS NECESSARY SHALL BE ACCORDING TO THE CONCRETE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS. THE SURFACE OF THE REPAIR AREA SHALL BE FLUSH WITH THE SURROUNDING AREA.

BASIS OF PAYMENT

ALL COSTS OF REMOVAL OF OLD CONCRETE, FORMING, AND OF PLACING NEW CONCRETE, INCLUDING ALL TOOLS, EQUIPMENT, LABOR, AND MATERIALS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN.

ESTIMATED QUANTITIES

ITEM	BRIDGE NO. CUY-90-1524		TOTAL	UNIT	DESCRIPTION
202	LUMP		LUMP	LUMP	PORTIONS OF STRUCTURE REMOVED
511	3		3	CU. YD.	CLASS C CONCRETE, SUPERSTRUCTURE
517	400		400	LIN. FT.	RAILING (STEEL BARRIER CURB WITH STEEL POSTS & BOLTS), AS PER PLAN
519	250		250	SQ. FT.	PATCHING CONCRETE STRUCTURES, AS PER PLAN
614	LUMP		LUMP	LUMP	MAINTAINING TRAFFIC
624	LUMP		LUMP	LUMP	MOBILIZATION

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DISTRICT 12 BRIDGE DEPARTMENT

2/7

STRUCTURE NOTES AND ESTIMATED QUANTITIES

BRIDGE CUY-90-1524
OVER CUYAHOGA RIVER VALLEY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

RECEIVED
MAY 18 1982

FHWA REGION	STATE	PROJECT	
5	OHIO		

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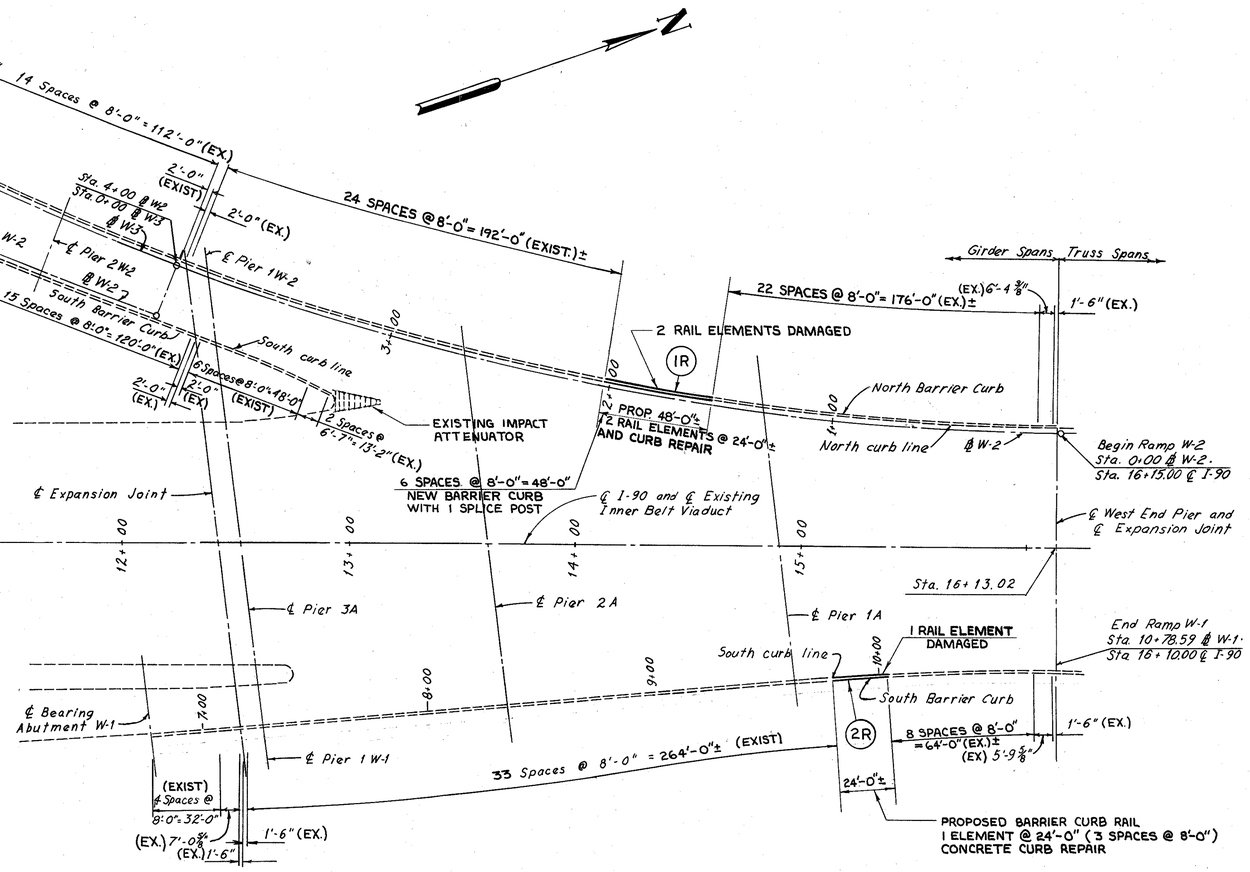
CUYAHOGA COUNTY
CUY-90-15.40

PLAN NO. BR-15-82



ITEM 517
LOCATIONS OF BARRIER CURB REPAIR

(IR)	48'-0"±	ABBEY RD.–W 14TH ST. EXIT RAMP
(2R)	24'-0"±	ABBEY RD.–W 14TH ST. ENTRANCE RAMP
TOTAL	72'-0"±	THIS SHEET

ESTIMATED NUMBER OF NEW POSTS

1 SPLICE POST
6 INTERMEDIATE POSTS

NOTES:
FOR BARRIER CURB DETAILS SEE SHEETS 5,6,&7/7.
"SPACES" DENOTES BARRIER CURB POST SPACING.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DISTRICT 12 BRIDGE DEPARTMENT

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BARRIER CURB REPAIR PLAN WEST APPROACH VIADUCT

BRIDGE NO. CUY-90-1524
OVER CUYAHOGA RIVER VALLEY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

MICROFILMED
MAY 18 82

FHWA REGION	STATE	PROJECT	
5	OHIO		

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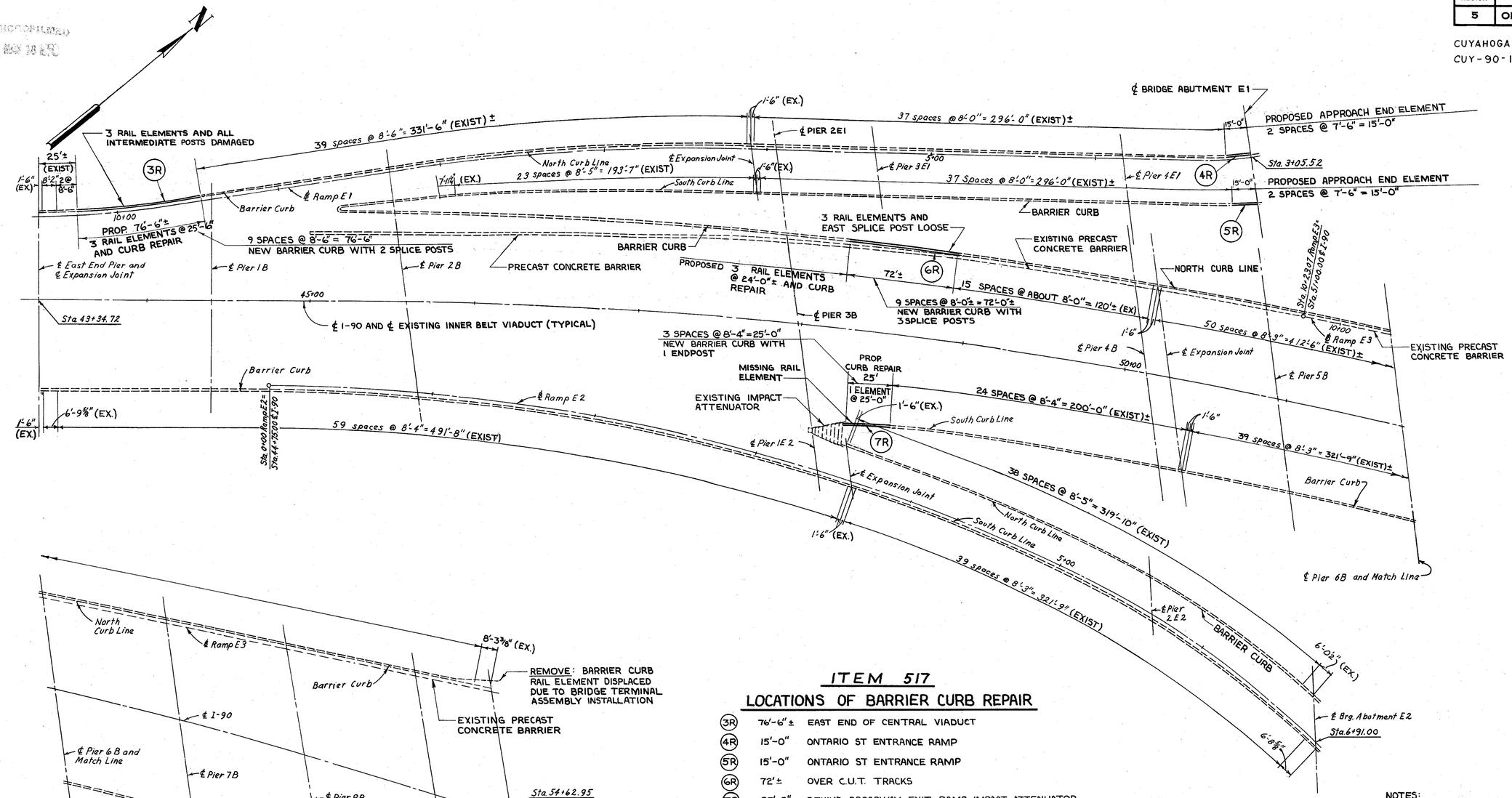
CUYAHOGA COUNTY
CUY-90-15.40

PLAN NO. BR-15-82



ITEM 517
LOCATIONS OF BARRIER CURB REPAIR

3R	76'-6"±	EAST END OF CENTRAL VIADUCT
4R	15'-0"	ONTARIO ST ENTRANCE RAMP
5R	15'-0"	ONTARIO ST ENTRANCE RAMP
6R	72'±	OVER C.U.T. TRACKS
7R	25'-0"	BEHIND BROADWAY EXIT RAMP IMPACT ATTENUATOR
8R	49'-6"±	EAST END NEAR BROADWAY
TOTAL	253'-0"±	THIS SHEET

ESTIMATED NUMBER OF NEW POSTS

2	APPROACH END BASES
2	SHORTENED INTERMEDIATE POSTS
18	INTERMEDIATE POSTS
6	SPLICE POSTS
1	END POST

NOTES:
FOR BARRIER CURB DETAILS SEE SHEETS 5, 6, 7/7.
"SPACES" DENOTES BARRIER CURB POST SPACING.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DISTRICT 12 BRIDGE DEPARTMENT

4/7

BARRIER CURB REPAIR PLAN EAST APPROACH VIADUCT

BRIDGE NO. CUY-90-1524
OVER CUYAHOGA RIVER VALLEY

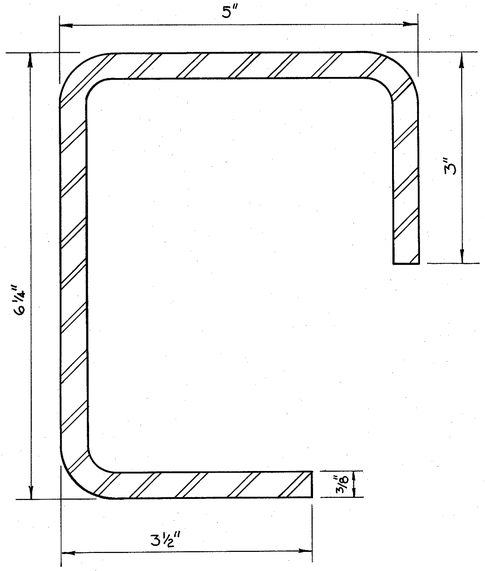
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

FHWA REGION	STATE	PROJECT	
5	OHIO		

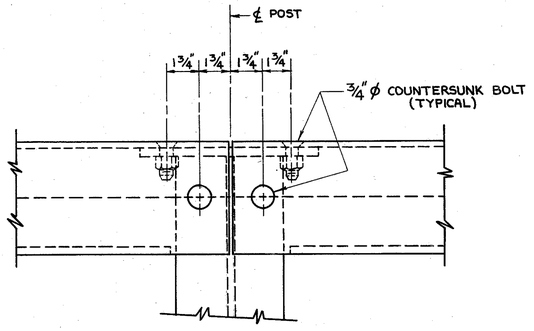
7/10

CUYAHOGA COUNTY
CUY-90-15.40

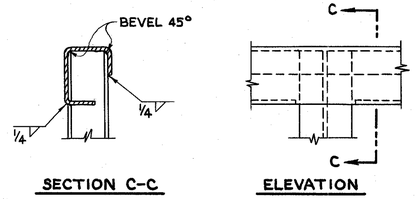
PLAN NO. BR-15-82



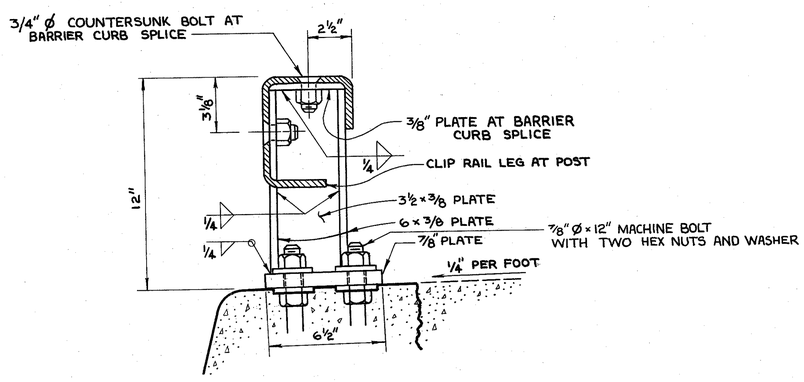
FULL SIZE SECTION OF RAIL



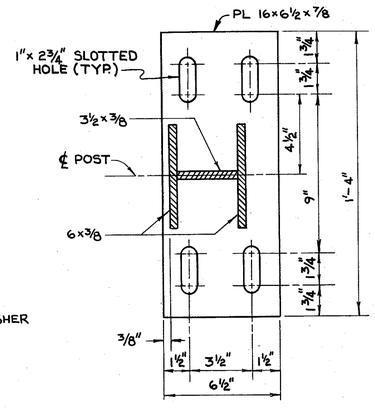
DETAIL AT
BARRIER CURB SPLICE



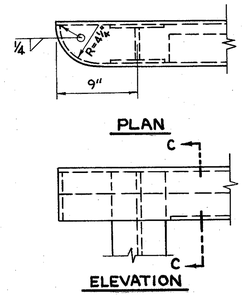
DETAILS AT INTERMEDIATE POST



POST DETAIL



SECTION D-D
BASE PLATE FOR ⅞" BOLTS



END POST DETAIL
TRAILING END

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DISTRICT 12 BRIDGE DEPARTMENT

5/7

BARRIER CURB REPAIR DETAILS

BRIDGE NO. CUY-90-1524
OVER CUYAHOGA RIVER VALLEY

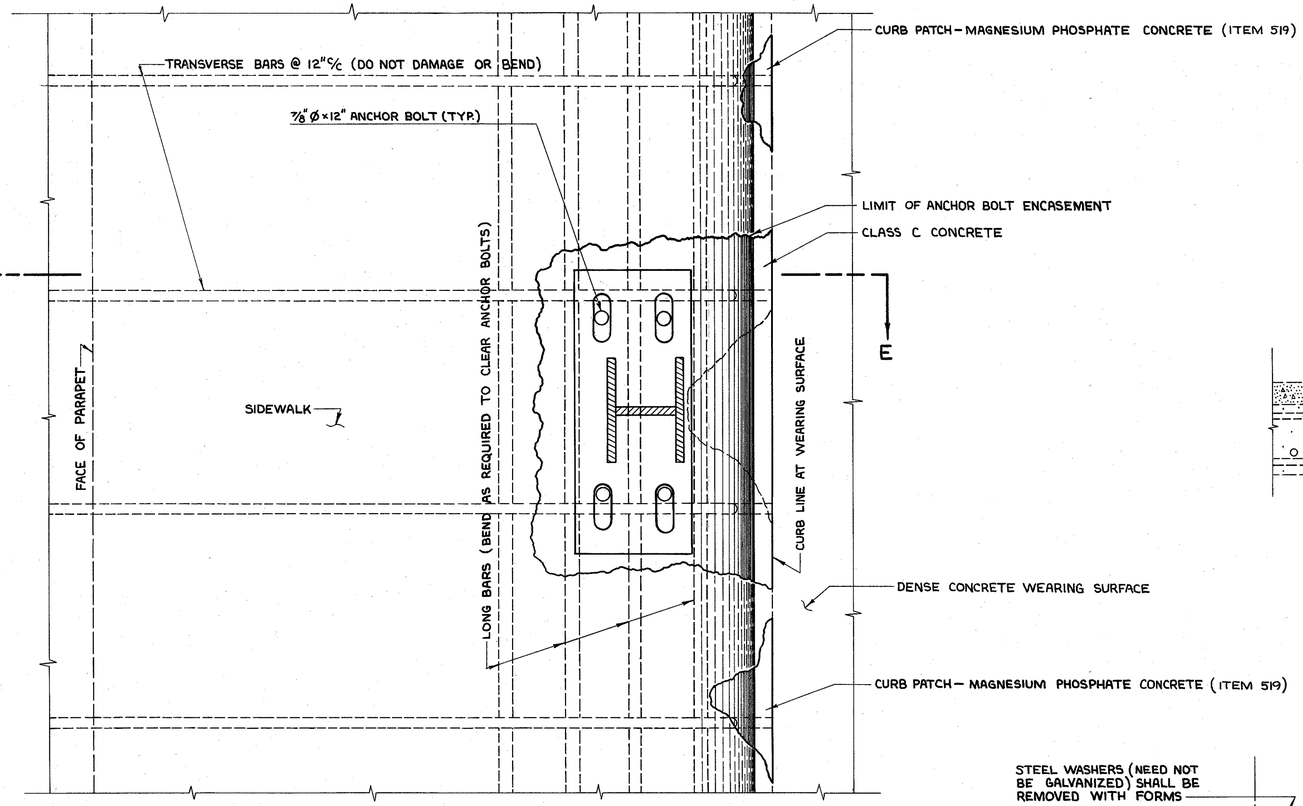
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

FHWA REGION	STATE	PROJECT	
5	OHIO		

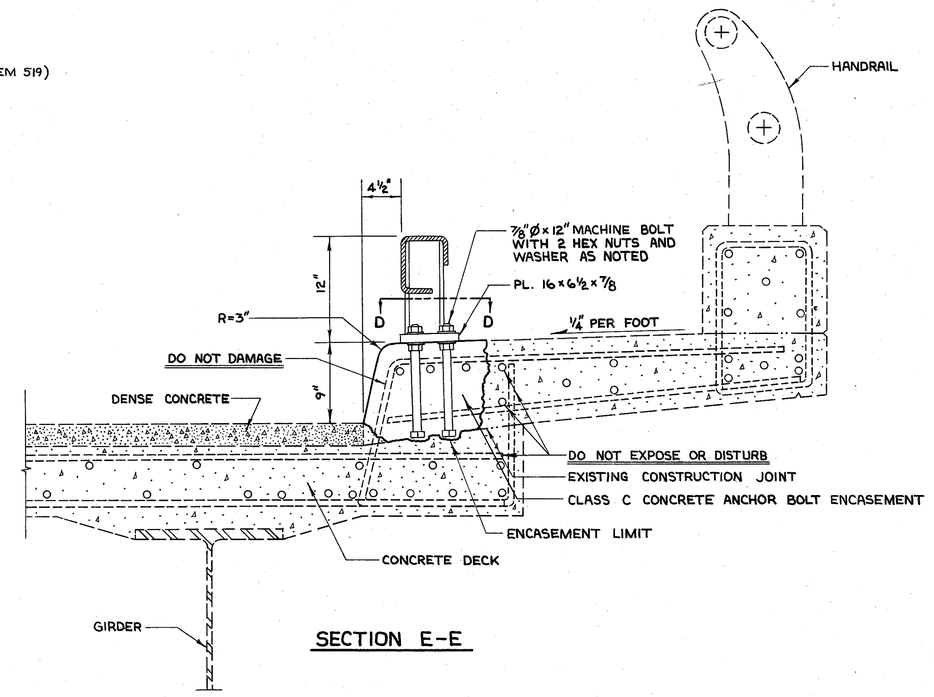
8/10

CUYAHOGA COUNTY
CUY-90-15.40

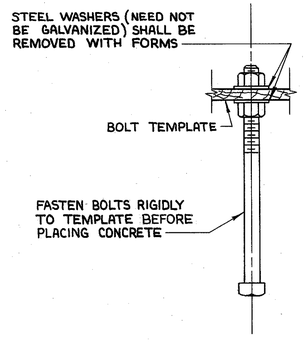
PLAN NO. BR-15-82



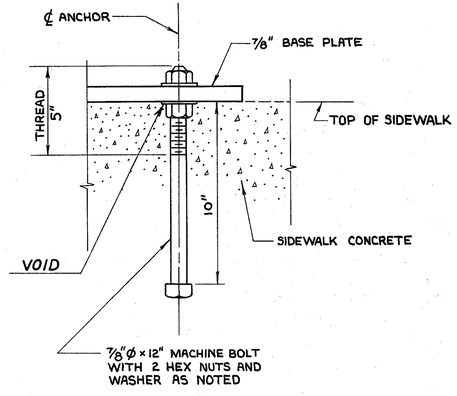
PLAN VIEW OF SIDEWALK
(RAIL ELEMENT OMITTED)



SECTION E-E



ANCHOR SUPPORTED
BY TEMPLATE



ANCHOR DETAIL

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DISTRICT 12 BRIDGE DEPARTMENT

6/7

BARRIER CURB REPAIR DETAILS

BRIDGE CUY-90-1524
OVER CUYAHOGA RIVER VALLEY

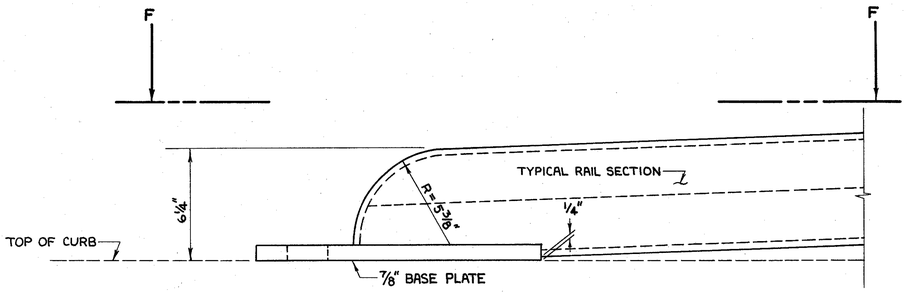
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

FHWA REGION	STATE	PROJECT	
5	OHIO		

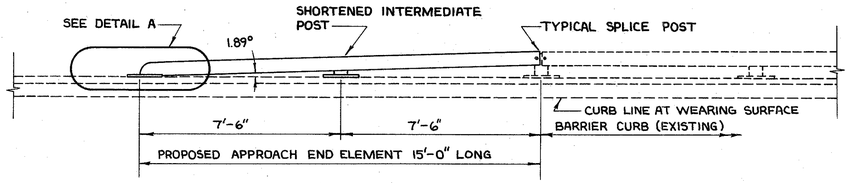
9/10

CUYAHOGA COUNTY
CUY-90-15.40

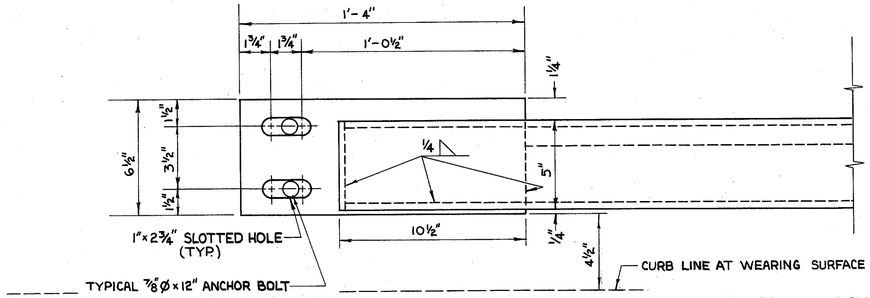
PLAN NO. BR-15-82



DETAIL A

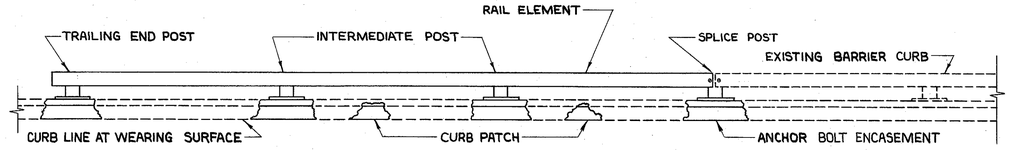


APPROACH END ELEMENT ELEVATION



VIEW F-F

NOTE: APPROACH END ELEMENT BASE PLATE OFFSET IS 4½" FROM CURB LINE AT WEARING SURFACE.



TYPICAL RAIL ELEMENT ELEVATION

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DISTRICT 12 BRIDGE DEPARTMENT

7/7

BARRIER CURB REPAIR DETAILS

BRIDGE CUY-90-1524
OVER CUYAHOGA RIVER VALLEY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

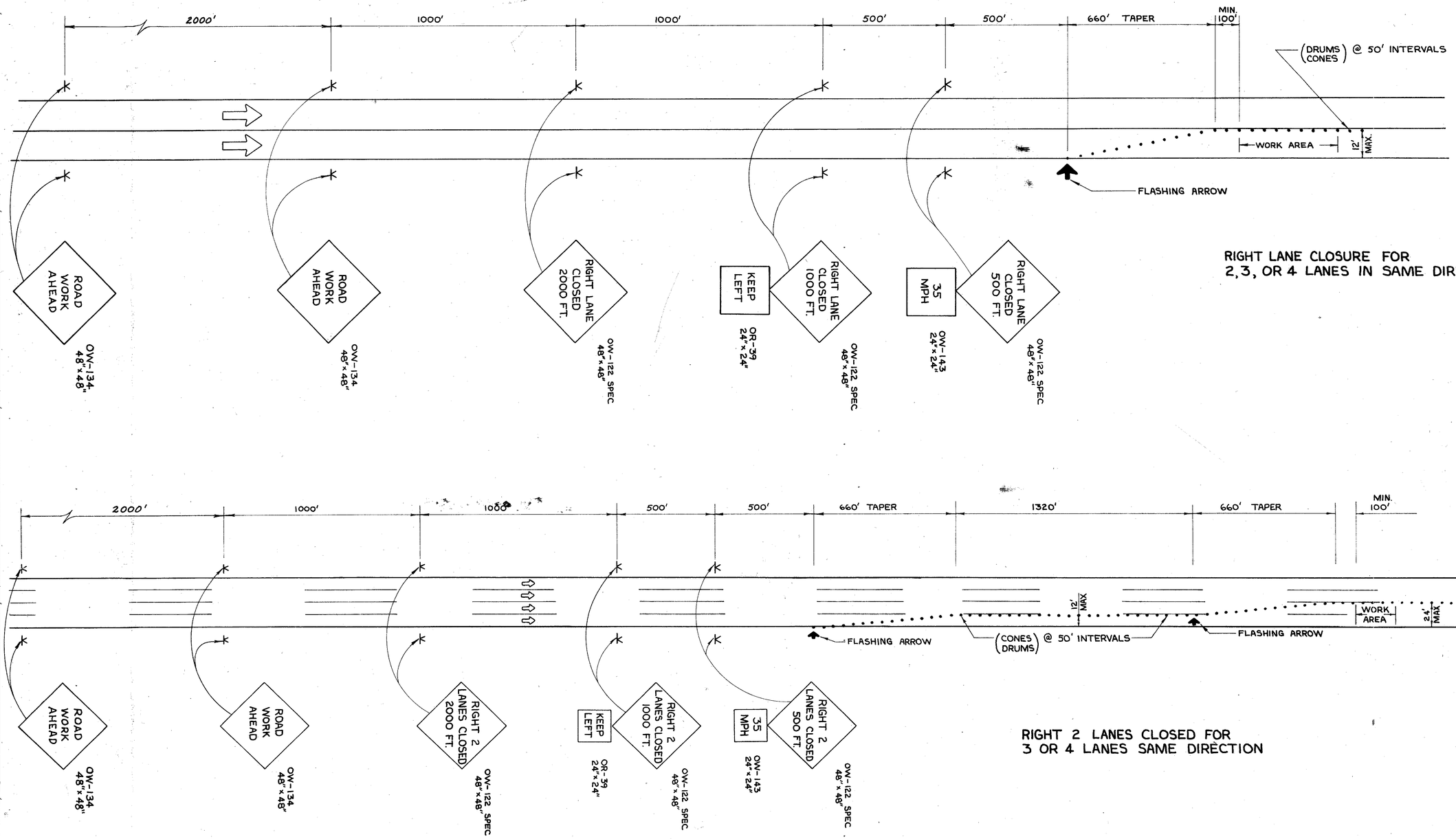
MAINTENANCE OF TRAFFIC

FHWA REGION	STATE	PROJECT	
5	OHIO		

10/10

CUYAHOGA COUNTY
CUY-90-15.40

PLAN NO. BR-15-82



RIGHT LANE CLOSURE FOR
2, 3, OR 4 LANES IN SAME DIRECTION

RIGHT 2 LANES CLOSED FOR
3 OR 4 LANES SAME DIRECTION