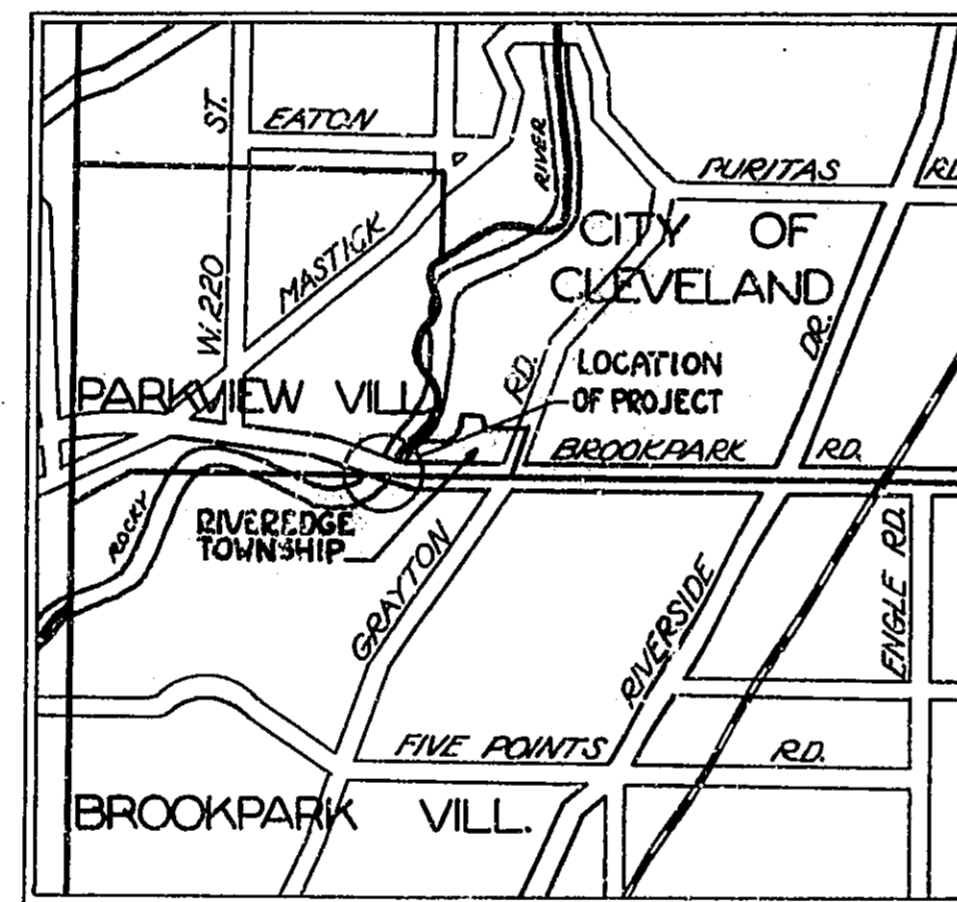


COUNTY OF CUYAHOGA

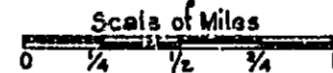
DECK AND ABUTMENT REPAIRS

BROOKPARK VIADUCT

RIVEREDGE TOWNSHIP
AND
VILLAGE OF PARKVIEW



LOCATION PLAN



Portion to be improved
State Highways
County Roads

SCALES
As Shown

INDEX OF SHEETS

Title Sheet	Sheet No.
Details of Deck and Abutment Repairs	2-3
Original Plans - West Abutment	4-5
Original Plans - Deck Details	6
Original Plans - Railing Details	7
Original Plans - Expansion Joint Details	8

PLAN	DATE	BY
SURVEYED		
NOTE BOOK		
ALIGNED		
CHECKED		
NO. OF WAY CHECKED		
NO.		

PROFILE	DATE	BY
SURVEYED		
GRADES CHECKED		
STRUCTURE NOTATION CHECKED		
NO.		

Date of Contract: _____
Date of Completion: _____
Constructed By: _____

Approved: Martin E. Friedman
Date: 6/3/55 Bridge Engineer
Approved: _____
Date: _____ Land Deputy

ALBERT S. PORTER
COUNTY ENGINEER

Approved: R.W. Deitrick
Date: 6-3-55 Chief Engineer

Approved: A.V. Pollard
Date: 6-3-55 Chief Deputy

Approved: A. S. Porter
Date: 6/3/55 County Engineer

BOARD OF COMMISSIONERS

Approved: _____
Date: _____ County Commissioner
Approved: 4/6/55 John J. Korman
Date: _____ County Commissioner
Approved: Henry W. Speth
Date: 6-6-55 County Commissioner

JOURNAL _____ PAGE _____

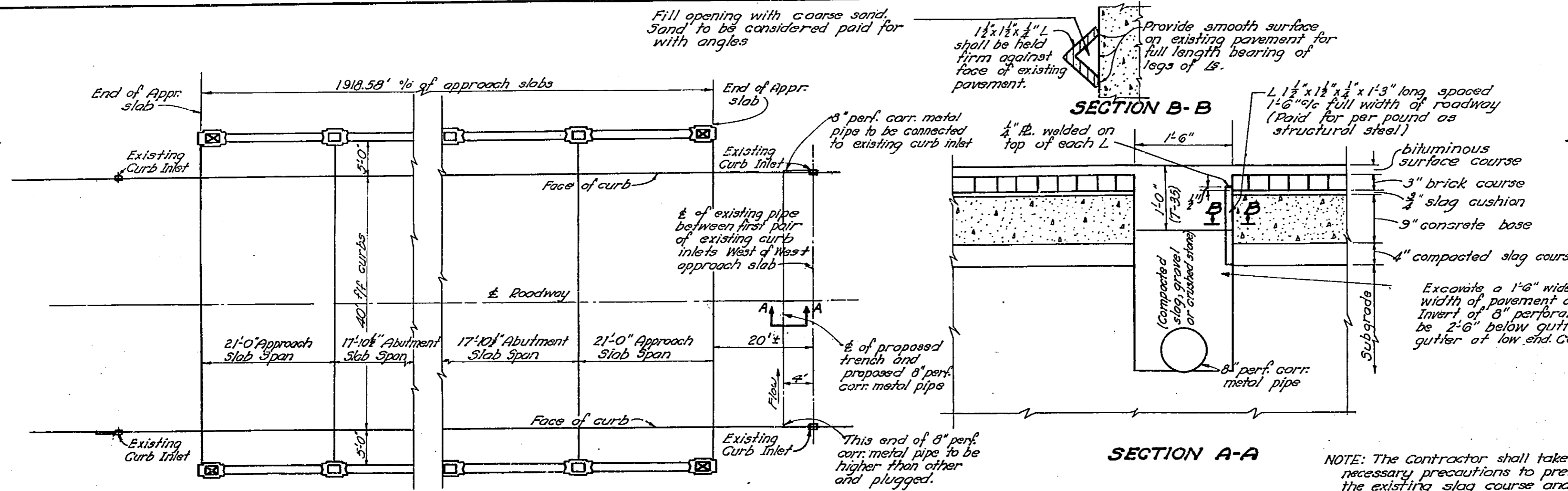
MUNICIPALITIES

Approved in Riveredge Township
Ordinance of Consent No. _____ Passed _____
Approved in the Village of Parkview
Ordinance of Consent No. _____ Passed _____

BROOKPARK RD. VIADUCT
NO. B-191

BUILT BY CONTRACT 1955

Brookpark Viaduct



REINFORCING STEEL LIST						
Mark	Size	No	Length	Weight	Shp	Bending Diagram
K2b	1/2" φ	58	7'-7"	294	Bt.	6'-3 1/2"
K2c	1/2" φ	58	6'-3"	242	St.	
X4a	3/8" φ	16	4'-7"	76	St.	22'-9 1/2"
K4a	3/8" φ	38	2'-0"	79	St.	
K4b	3/8" φ	14	17'-3"	252	St.	K5f
X4b	3/8" φ	22	2'-8"	61	St.	
K5f	3/8" φ	8	24'-1"	290	Bt.	
X4c	3/8" φ	12	3'-8"	96	St.	
K7a	1" φ	4	17'-3"	184	St.	
E2j	1/2" φ	16	2'-3"	24	St.	

NOTE: The Contractor shall take necessary precautions to prevent the existing slag course and subgrade from sloughing out from under the concrete base course in the 1'-6" wide trench.

ESTIMATED QUANTITIES			
ITEM	TOTAL	UNIT	DESCRIPTION
E-2	20	Cu. Yds.	Excavation for Structures-Unclassified
S-1 & Spec.	550	Lin. Ft.	Repair of Bridge Curbs-Class "C" Concrete
S-1	20	Cu. Yds.	Class "C" Concrete, abutment sidewalks
S-1	4	Cu. Yds.	Class "C" Concrete, abutment crossbeam footings
S-2	200	Sq. Ft.	Patching Concrete
S-102	10000	Sq. Ft.	Patching Concrete, sidewalks
S-4	2000	Lbs.	Reinforcing steel (M-7.1 Int. Gr.)
S-7	800	Lbs.	Structural Steel, including painting
S-7 & Spec.	4000	Lbs.	Structural Steel for Roadway Exp. Joint Anchorage-Complete in Place
S-14	30'-4"	Lin. Ft.	Railing, removal, repair, reinstallation
S-22	20	Cu. Yds.	Removal of portions of existing structure
S-29	44	Lin. Ft.	Subdrainage for wearing surface course
E-4 & Spec.	50	Lin. Ft.	Pipe underdrains
SPECIAL	10	Cu. Yds.	Cold Patch-in Place
F-35 & Spec.	10	Cu. Yds.	Asphaltic concrete surface course, Type "A" Composition

WORK TO BE DONE is summarized as follows:

Concrete footings shall be placed under each end of the crossbeam at the West end of the West abutment slab span, as per plan.

Railing panel of abutment slab span on both sides of roadway on West Abutment and the partial post adjacent to the end span shall be removed, repaired and reinstalled.

The sidewalk and curb in abutment slab span on both sides of roadway on West Abutment shall be removed and replaced.

The manholes in the sidewalks on the West Abutment shall be relocated.

Repair various existing Roadway Expansion Joints-as per plan.

The asphaltic concrete surface course, immediately adjacent to the removed portion of curb and adjacent to various Roadway Expansion Joints which are re-anchored, shall be removed and replaced.

Where the asphaltic concrete surface course along the curb is removed and replaced, sub-surface drainage consisting of drainage angles and tubes shall be installed.

The upper part (fascia) of the wingwalls in the abutment slab span of the West Abutment on both sides of the roadway shall be removed and replaced. (See Section E-E, sheet 3)

Broken and disintegrated concrete on the faces of the wingwalls, breast wall, pylons and railing post in the abutment slab span of the West Abutment shall be removed and replaced.

The broken concrete of the ends of the crossbeam under the West end of the West Abutment slab span shall be patched.

Disintegrated concrete in the sidewalks and curbs of other portions of the bridge shall be removed and the surfaces patched.

Immediately beyond the West end of the bridge a transverse drainage system and small section of flexible pavement shall be installed to intercept seepage water and to prevent approach pavement creep from causing a longitudinal force against the approach slab of the bridge.

REFERENCE shall be made to Supplemental Specification S-102 dated 6-15-49.

DETAILS OF EXISTING STRUCTURE: Appropriate sheets from the original construction drawings for this structure are a part of these plans. A copy of the complete original plans may be examined at the Cuyahoga County Engineer's Office.

PAY ITEMS FOR REMOVAL AND REPLACEMENT shall be applied as follows:

Railing: \$14; per lin. ft. for removal, repair and reinstallation.

Abutment sidewalk and curbs (where completely removed), and top of wingwall (fascia) (where completely removed): S-22; per cu. yd. for removal, S-1; per cu. yd. for new concrete.

Abutment breast wall, pylon and wingwall and ends of West abutment cross beam (where removal is only for partial thickness): S-2; per sq. ft. for both removal and replacement.

Sidewalks and face of curbs (except abutment slab span of West Abutment): Supplemental Specification S-102, per sq. ft. for both removal and replacement. Areas to be patched will be determined by the Engineer.

REPLACEMENT DETAILS will be according to the original plans for this bridge except as otherwise shown on these repair plans and except for the additional reinforcing steel required under Item S-2. Existing reinforcing steel extending from undisturbed concrete into replacement concrete shall be carefully protected and cleaned. Reinforcing steel that is entirely within the replacement concrete shall be replaced under Item S-4.

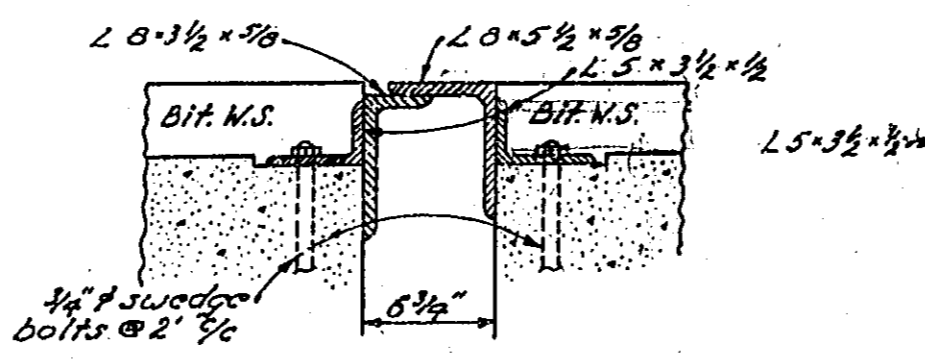
MAINTENANCE OF TRAFFIC: The Contractor shall so conduct his operations that there will be a minimum of interference with the free flow of traffic. Two way traffic shall be maintained at all times. Only one sidewalk shall be closed to pedestrian traffic at a time.

REMOVED MATERIALS: All materials removed shall become the property of the Contractor and shall be removed from the site by him.

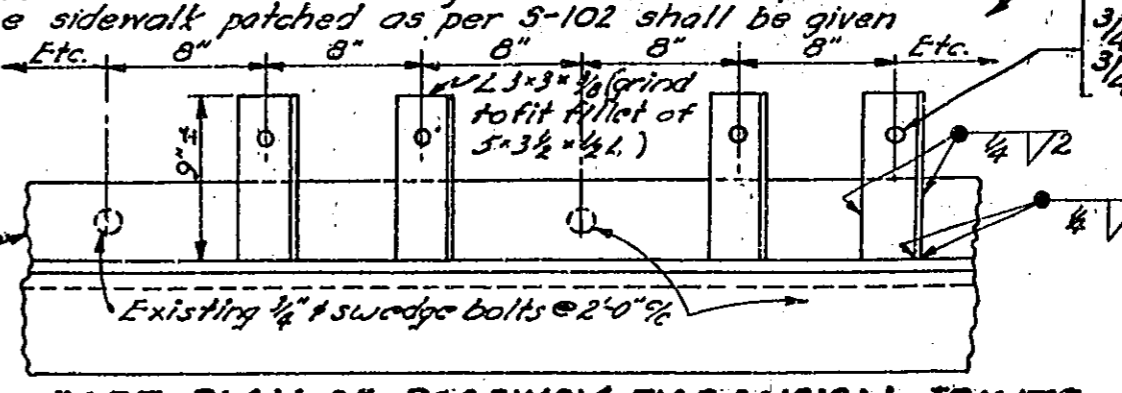
BASIS OF PAYMENT: The Engineer will determine exact extent of all repair and authorize payment based upon actual quantities of materials in place.

CONDUIT: The Contractor shall exercise care to insure that the existing conduit and wiring will not be damaged during repair operations. Conduit which will be disturbed shall be returned to original position.

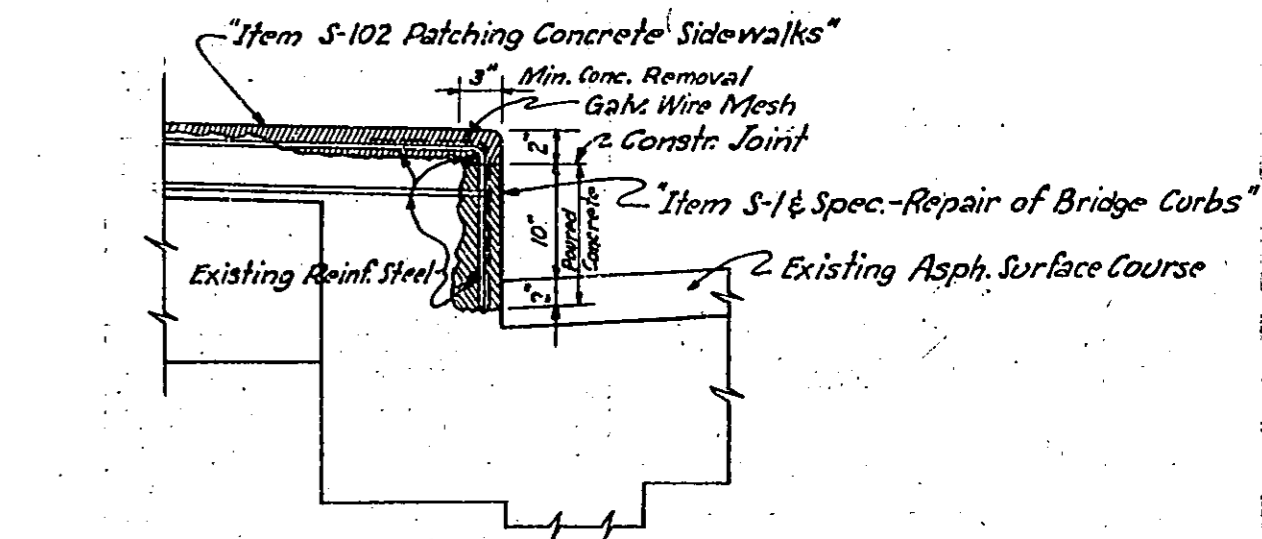
SURFACE FINISH OF CONCRETE: The repaired portions of railing shall be given a special rubbered surface finish so as to match as nearly as possible the finish on the existing railing panels. The faces of the curbs and the exposed faces of new concrete on the walls shall be given a rubbered surface finish as per Items S-1 and S-2. The portions of the sidewalk patched as per S-102 shall be given a float finish as per Sec. S-124.



TYPICAL DETAIL OF EXISTING ROADWAY EXPANSION JOINTS



PART PLAN OF ROADWAY EXPANSION JOINTS (SHOWING PROPOSED ANCHORING ANGLES) ITEM S-7 & SPEC.-STRUCTURAL STEEL FOR ROADWAY EXPANSION JOINT ANCHORAGE-COMplete in PLACE-INCLUDING PAINTING.



TYPICAL DETAIL - SHOWING CURB & SIDEWALK REPAIR

NOTE: The bar size designations shown above do not correspond with the size designations given in the January 1, 1955 edition of the Construction and Material Specifications.

NOTE: Where existing 1/2" φ swedge bolts are loose, place 3x3x3/8 angle anchors as shown. Both sides of exp. joint shall be repaired in like manner.

3/4" φ -3 Unit Cinch Anchor Assembly with 3/4" bolt; lock washer and nut.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

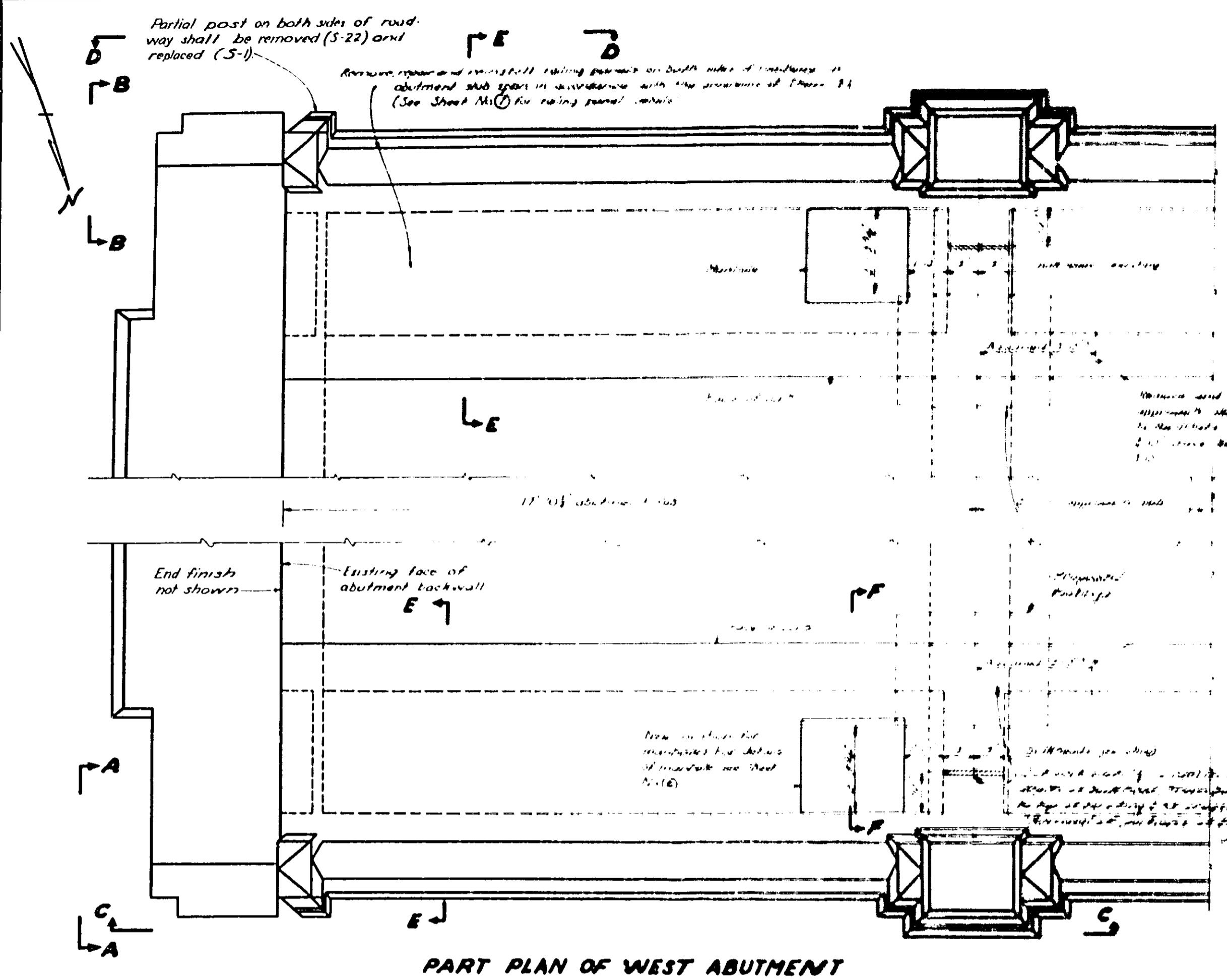
**REPAIR OF BROOK PARK VIADUCT
OVER ROCKY RIVER**

BRIDGE NO. CU-17-58
CUYAHOGA COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.F.B.	C.F.B.	WMB	C.H.B.	W.H.C.	6-16-51	7-6-53 8-5-53

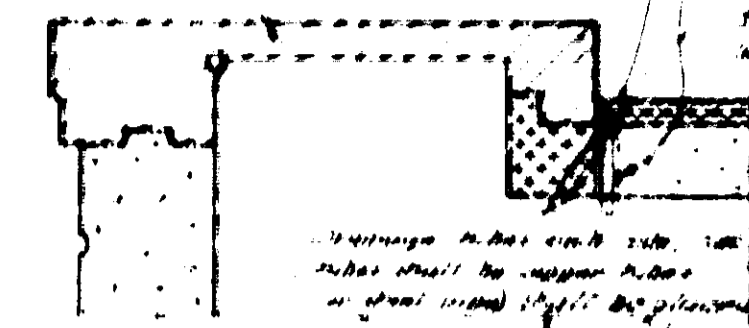
NO. B-191

FED. DIVISION	STATE	PROJECT	TYPE FUNDS	3 8
2	OHIO			



PART PLAN OF WEST ABUTMENT

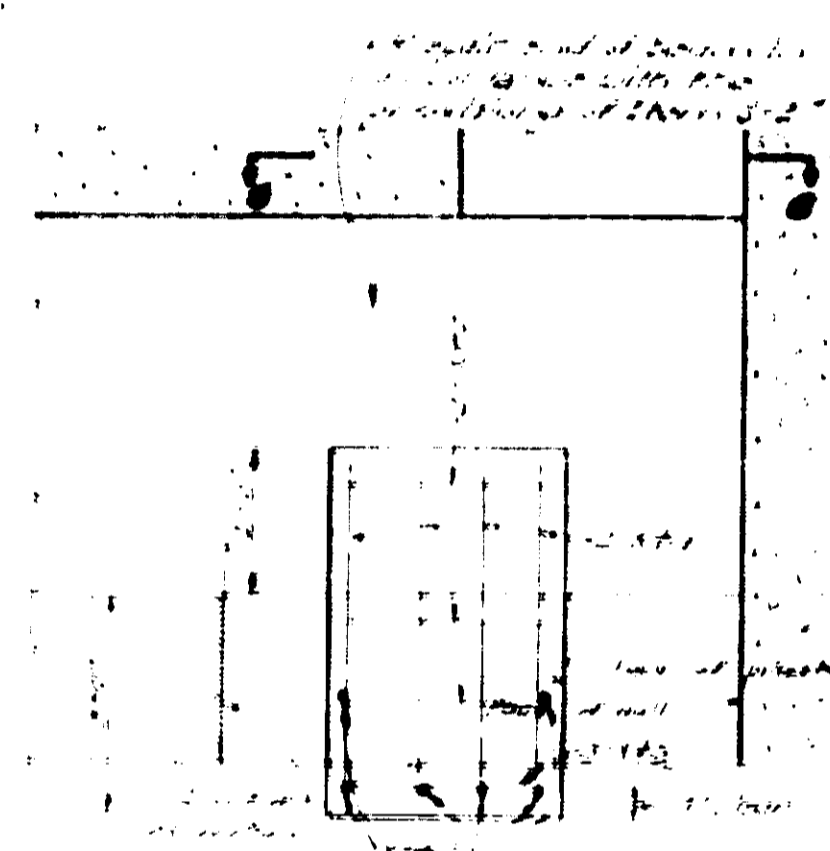
Remove and replace concrete in the area shown in accordance with the provisions of Item 5.2. Existing reinforcing steel shall remain in place and be straightened back to original position before new concrete is placed.



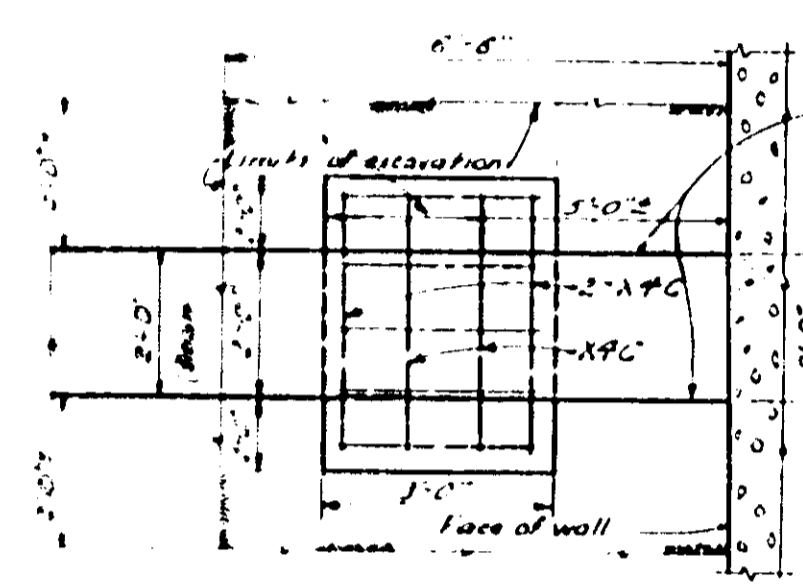
SECTION E-E

Remove and replace concrete in the area shown in accordance with the provisions of Item 5.2. Existing reinforcing steel shall remain in place and be straightened back to original position before new concrete is placed.

NOTE
 Indemnity and finish angles and anchor bars in abutment slab span and bent slab plates shall be replaced (Included with structural steel for payment) See Sheet No. 10 for details.
 Angles for manhole frames and cover and steel handles for covers shall be replaced (Included with structural steel for payment). See Sheet No. 10 for details. Concrete for manhole covers included with sidewalk concrete for payment.

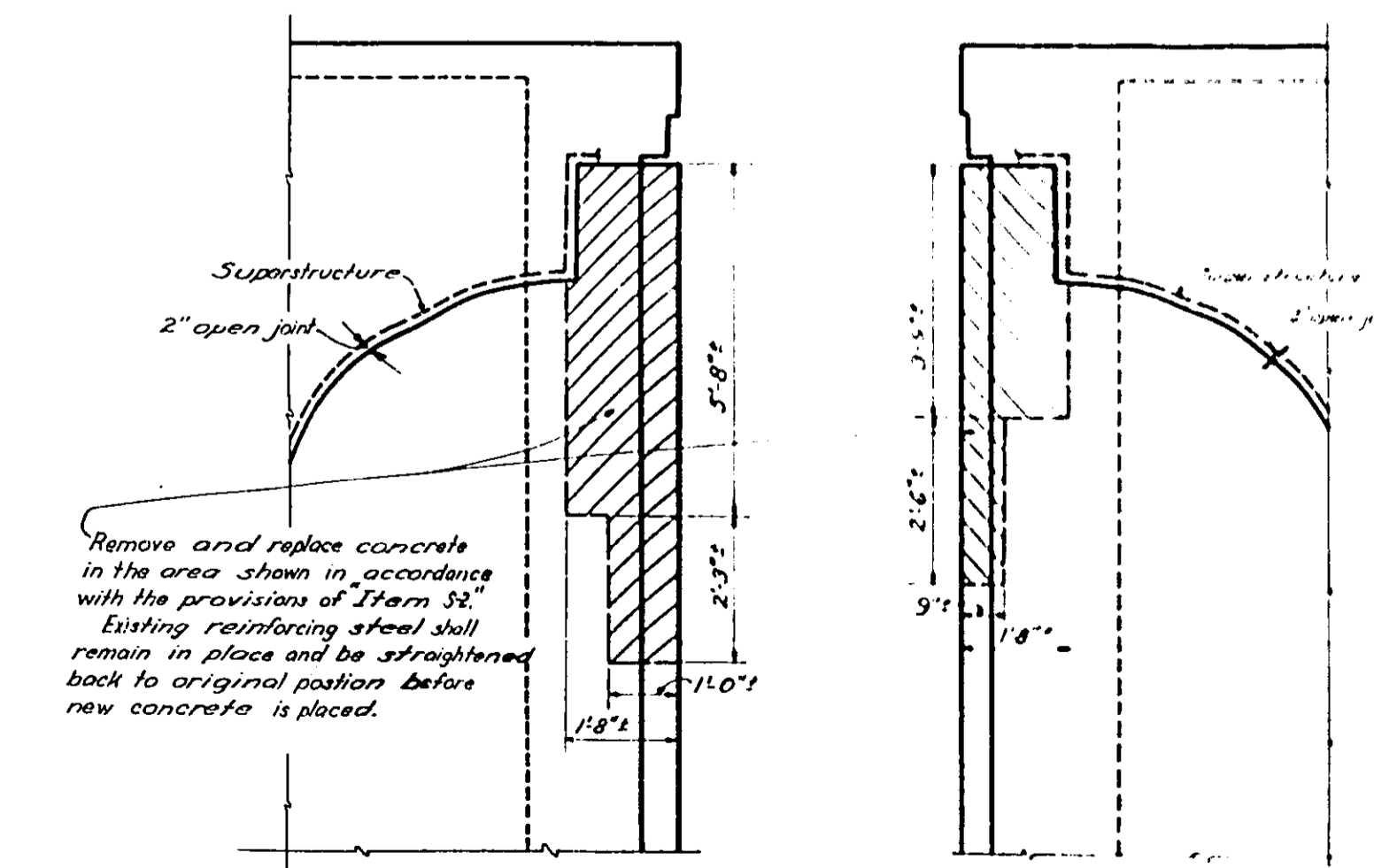


SECTION F-F



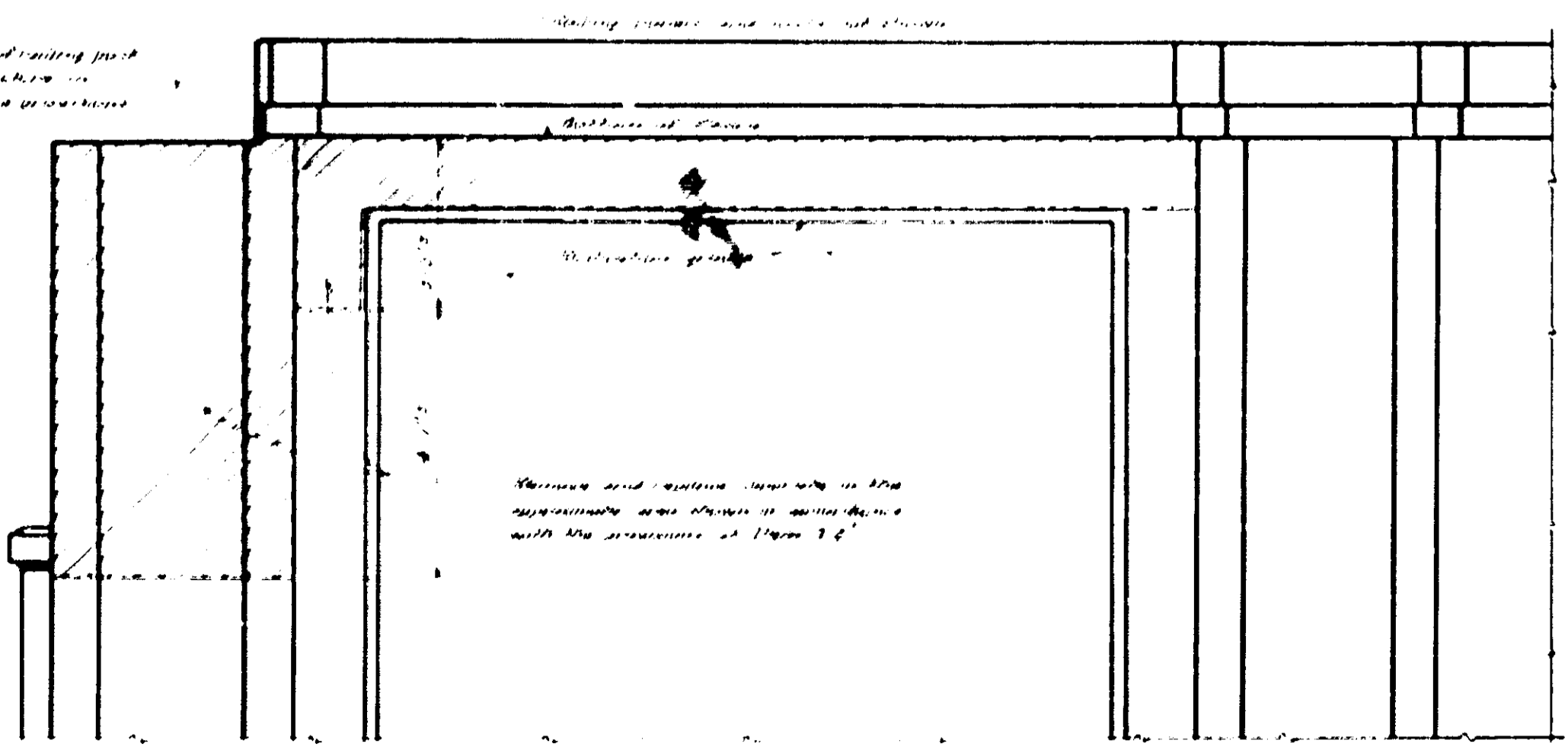
SECTION G-G

The excavation limits shown indicate limits for payment for excavation.

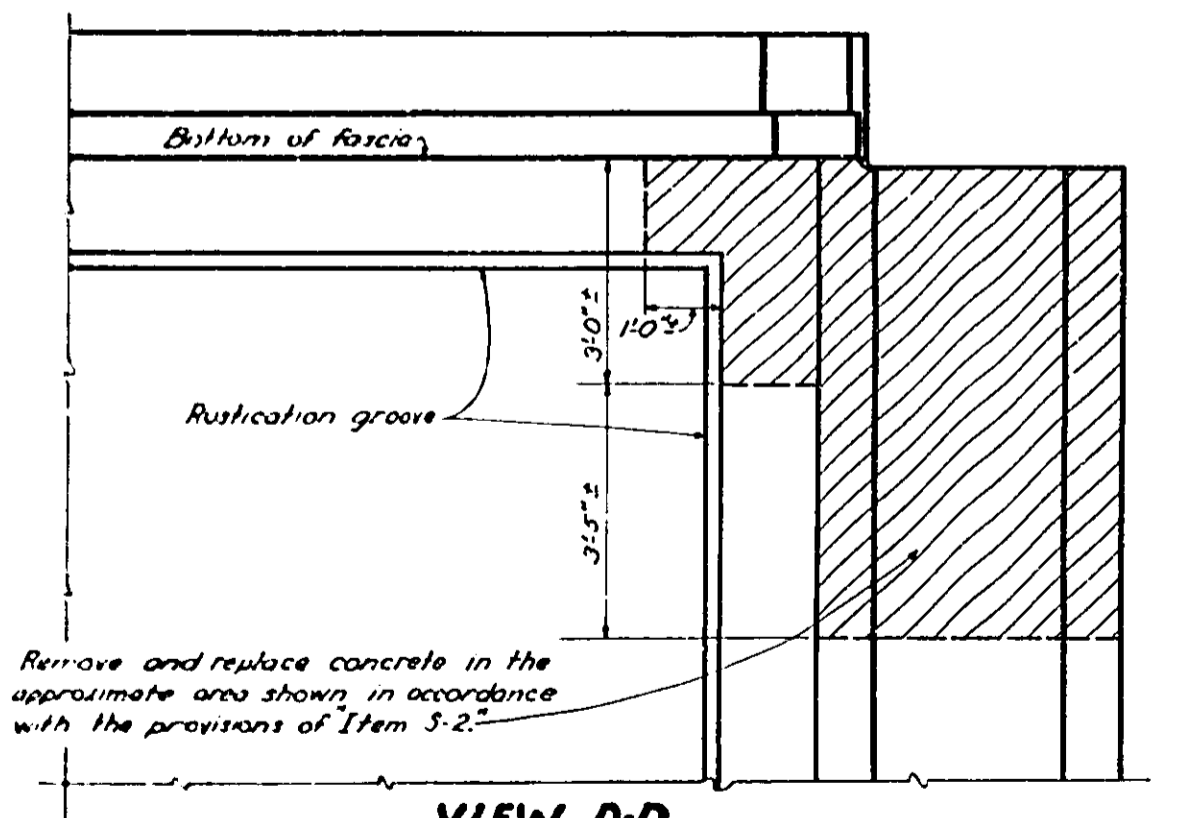


VIEW A-A
(Railing not shown)

VIEW B-B
(Railing not shown)



VIEW C-C



VIEW D-D

Remove and replace concrete in the approximate area shown in accordance with the provisions of Item 5.2.

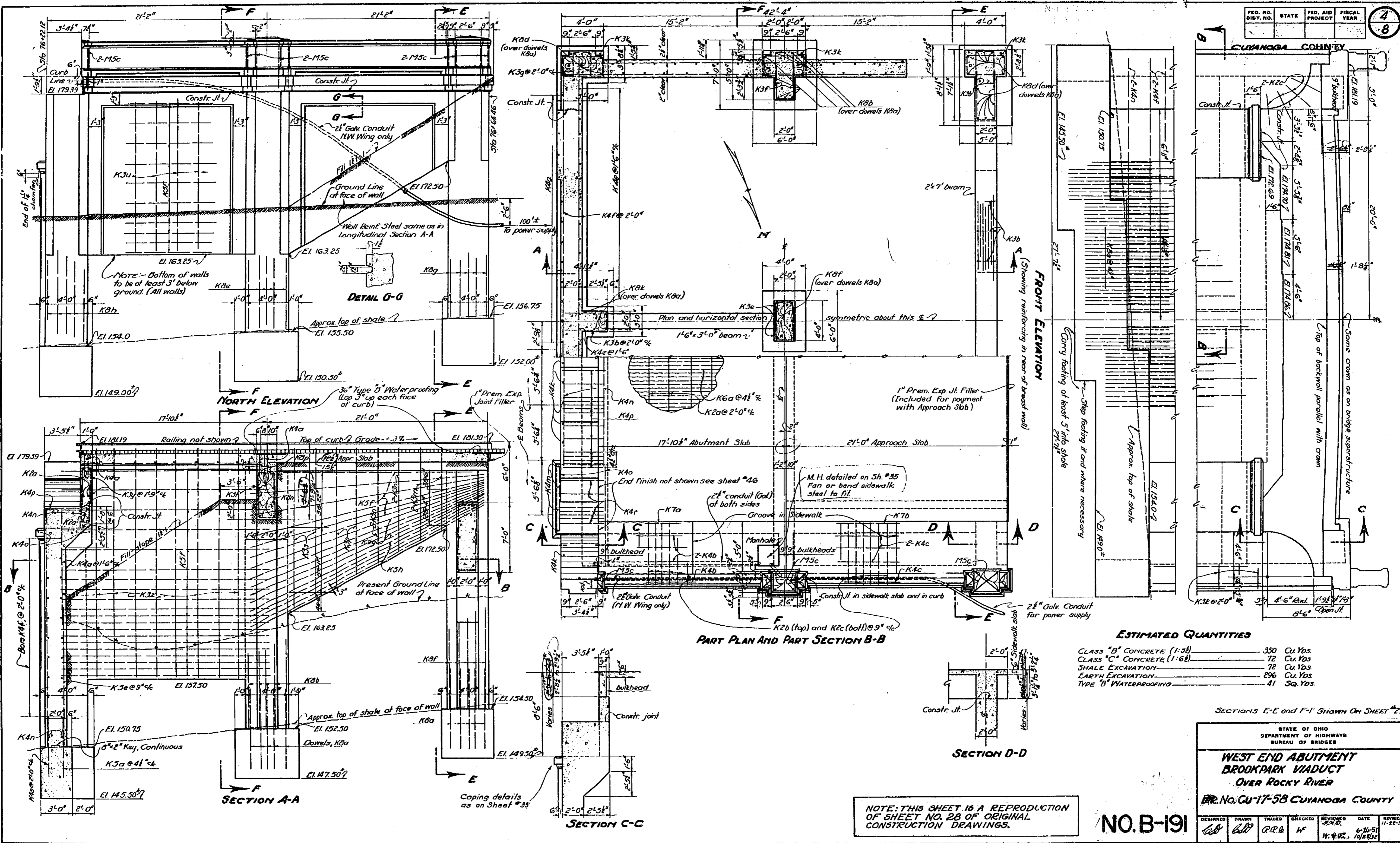
STATE OF OHIO
 DEPARTMENT OF HIGHWAYS
 BUREAU OF BRIDGES AND RAILROAD CROSSINGS

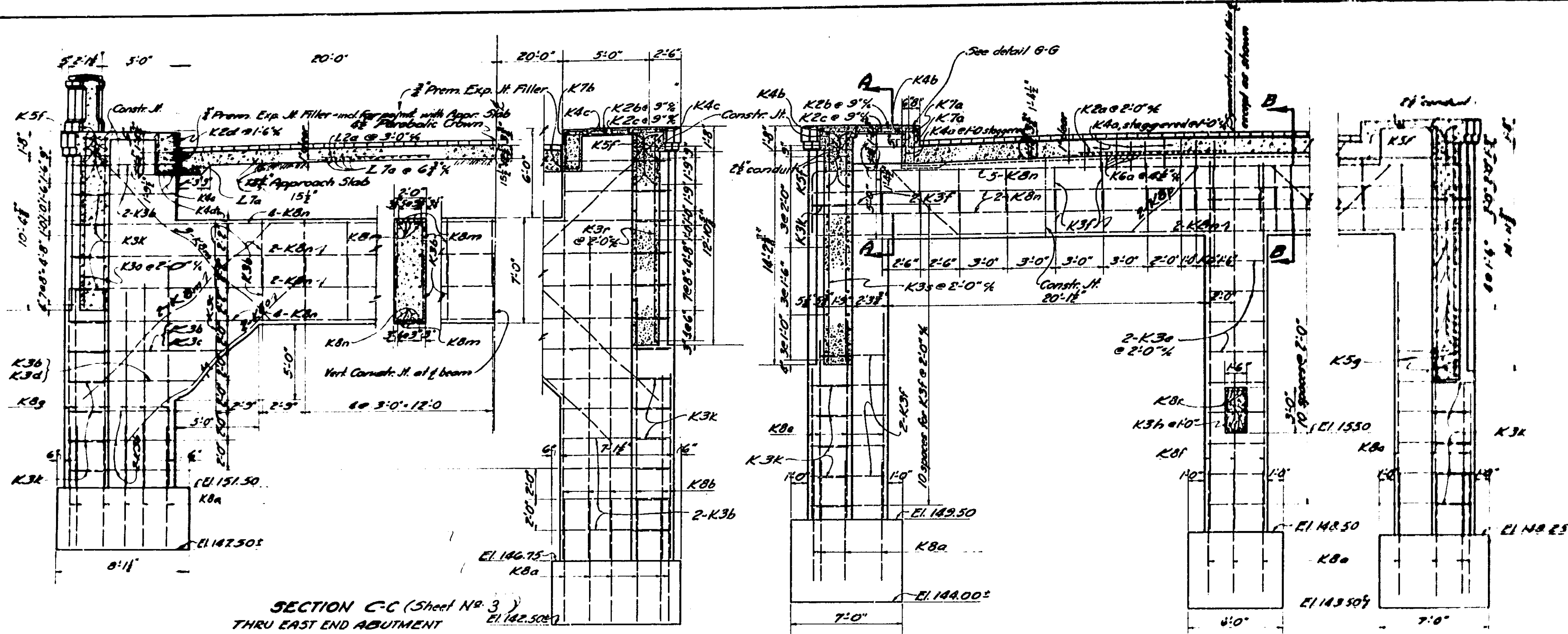
**REPAIR OF
 BROOK PARK VIADUCT
 OVER ROCKY RIVER
 BRIDGE NO. CU-17-58
 CUYAHOGA COUNTY**

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CFB.	CFB.	gws	gws	WHE.	6-16-51	7-6-53

NO. B-191

CUYAHOGA COUNTY

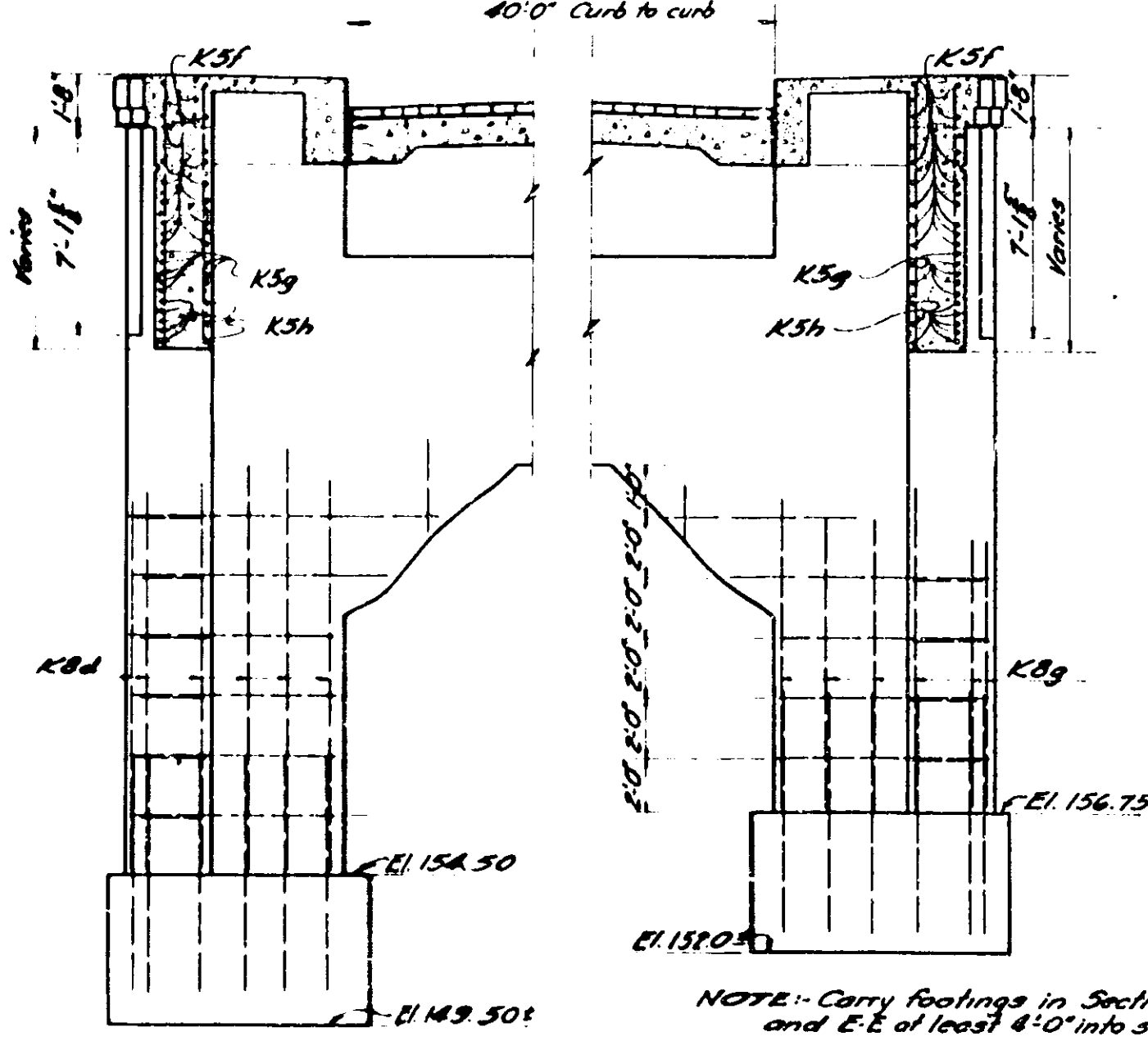




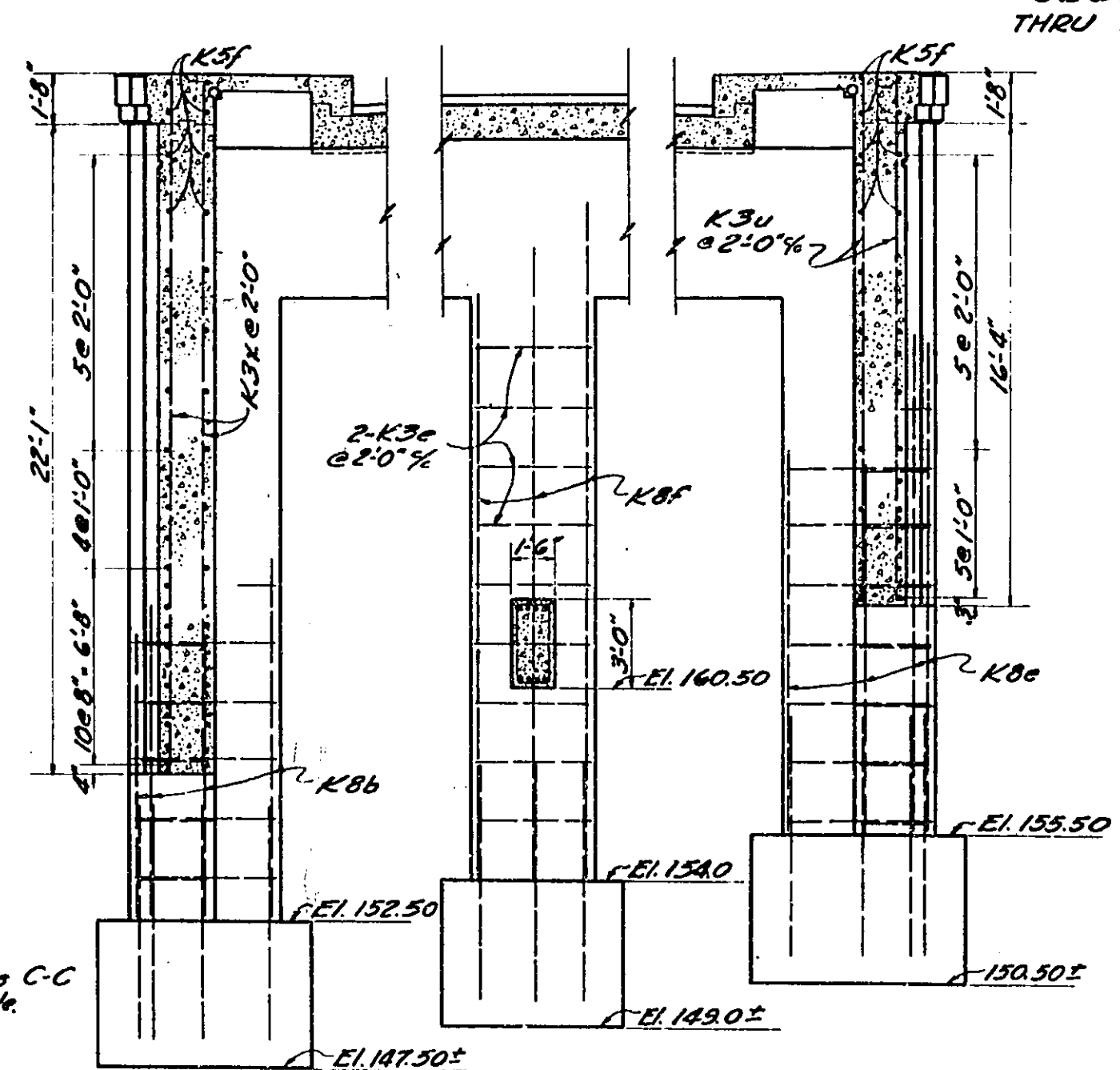
SECTION C-C (Sheet No. 3)
THRU EAST END ABUTMENT

SECTION D-D (Sheet No. 27)
THRU EAST END ABUTMENT

NOTE: THIS SHEET IS A REPRODUCTION OF SHEET NO. 29 OF ORIGINAL CONSTRUCTION DRAWINGS.

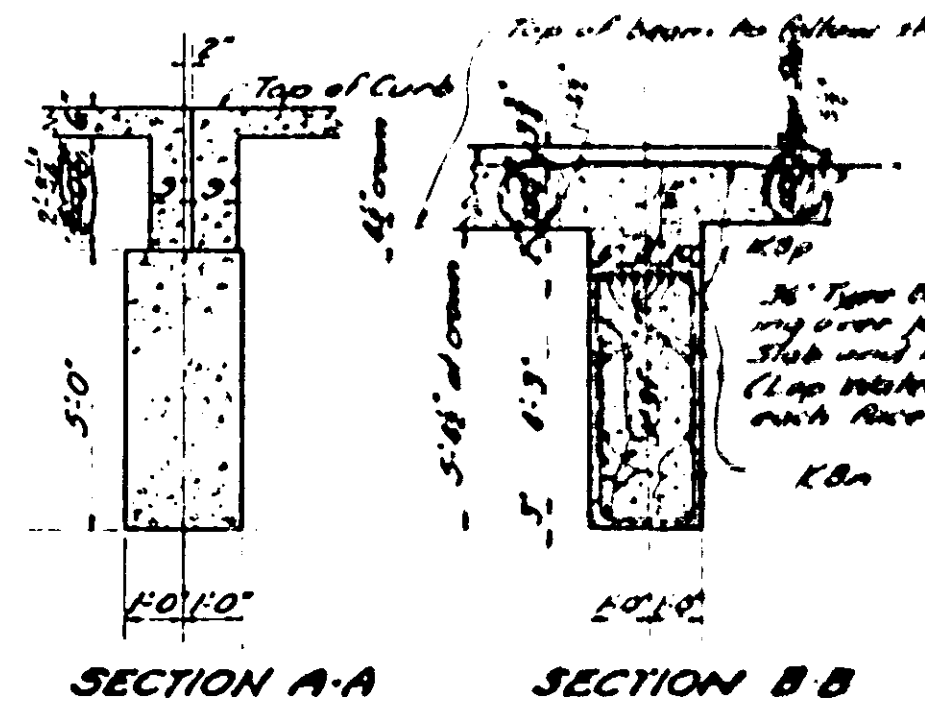


SECTION E-E (see sheet No. 28)
THRU WEST END ABUTMENT



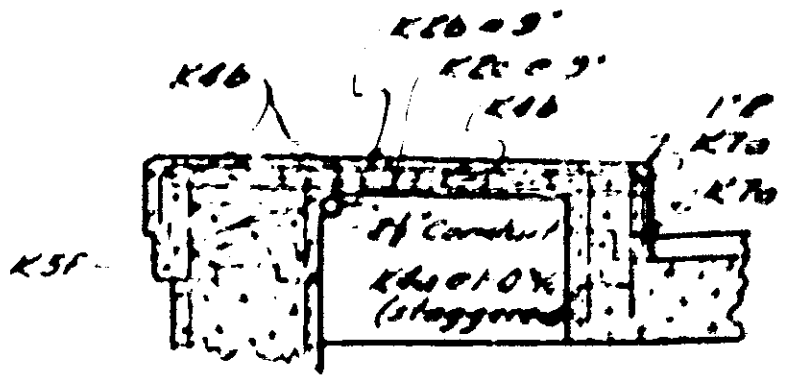
SECTION F-F (see sheet No. 28)
THRU WEST END ABUTMENT

NOTE: Carry all roofings in D and F of at least 5'0" into shaft.



SECTION A-A SECTION B-B

NOTE: No construction joints other than shown will be allowed. All construction joints shown, however, are optional and may be left out.



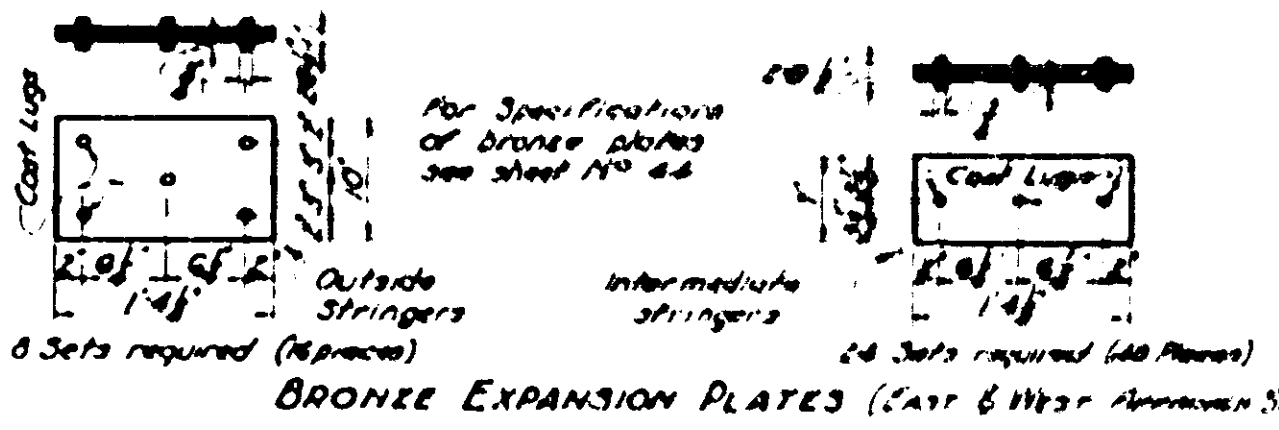
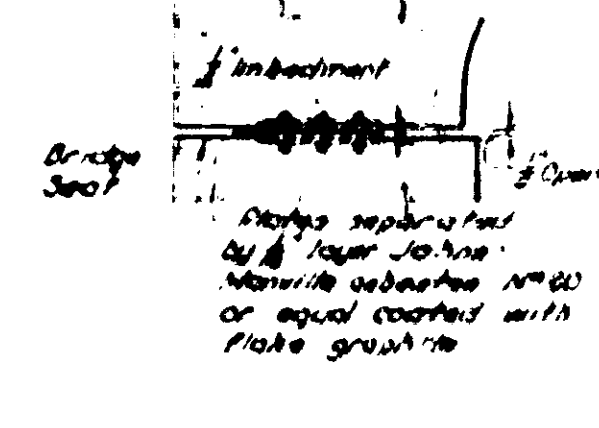
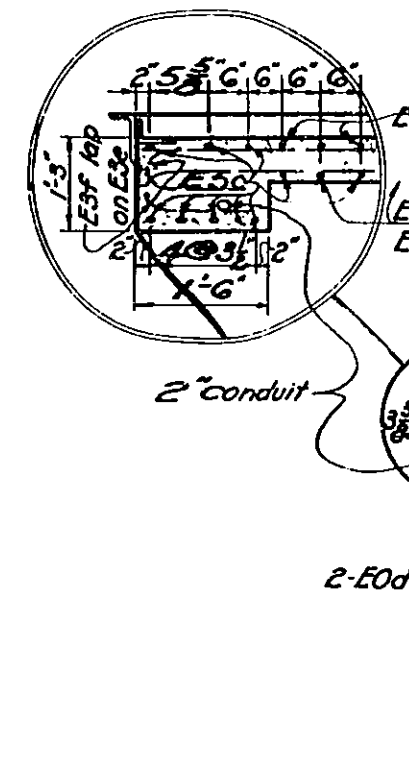
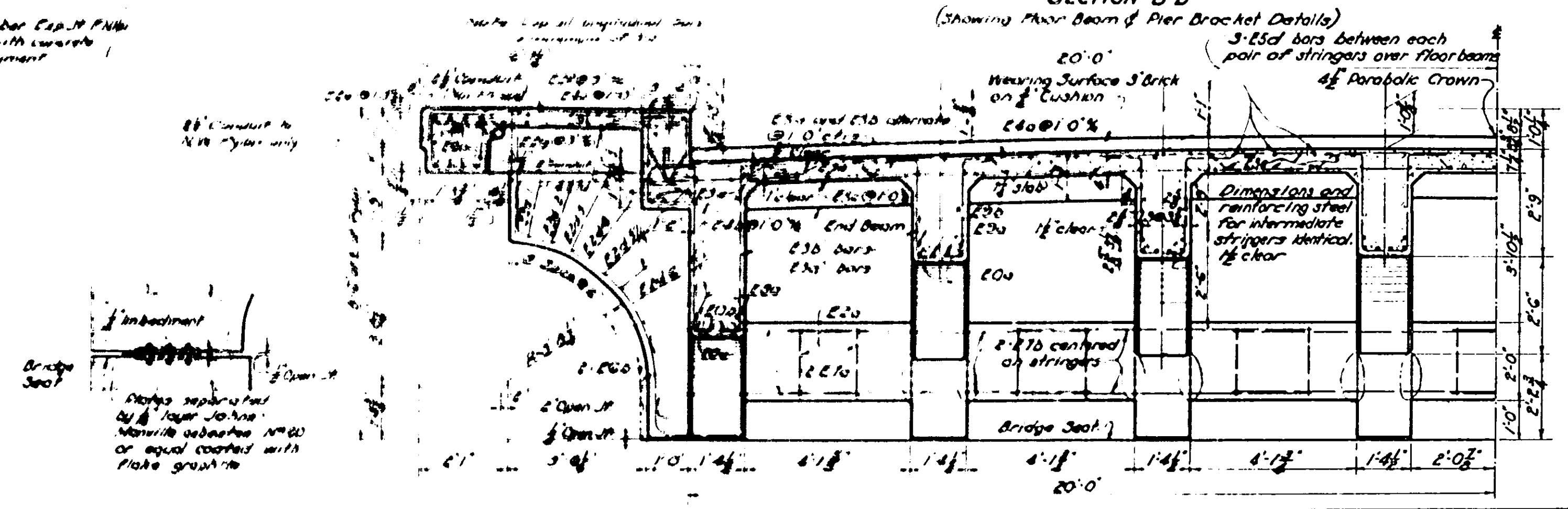
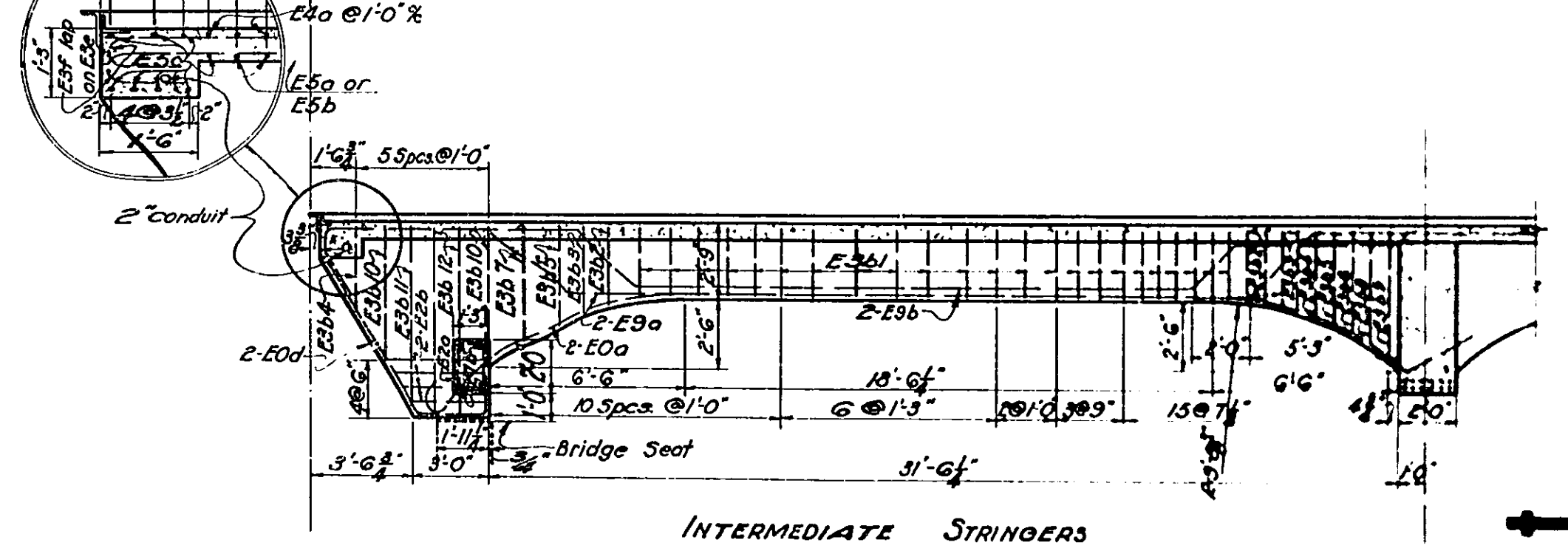
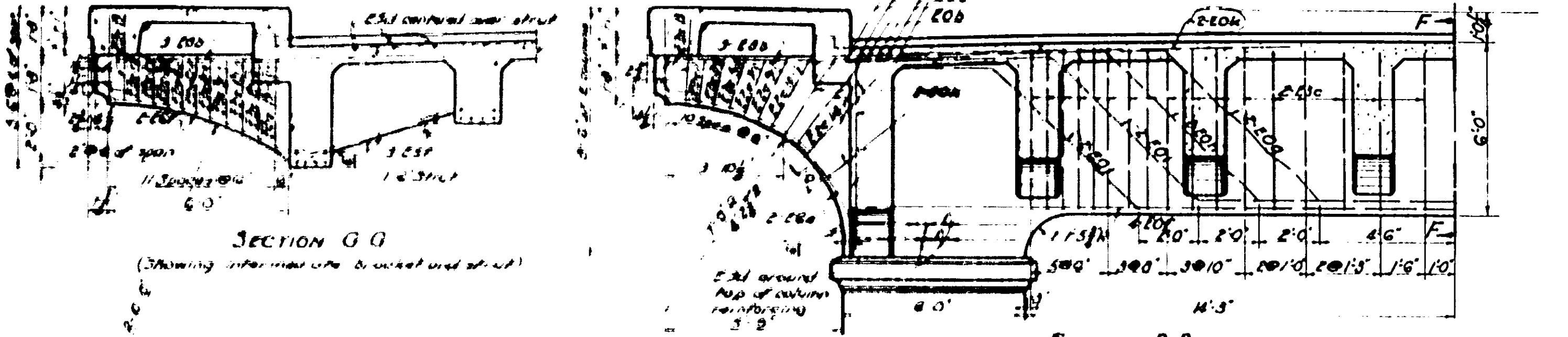
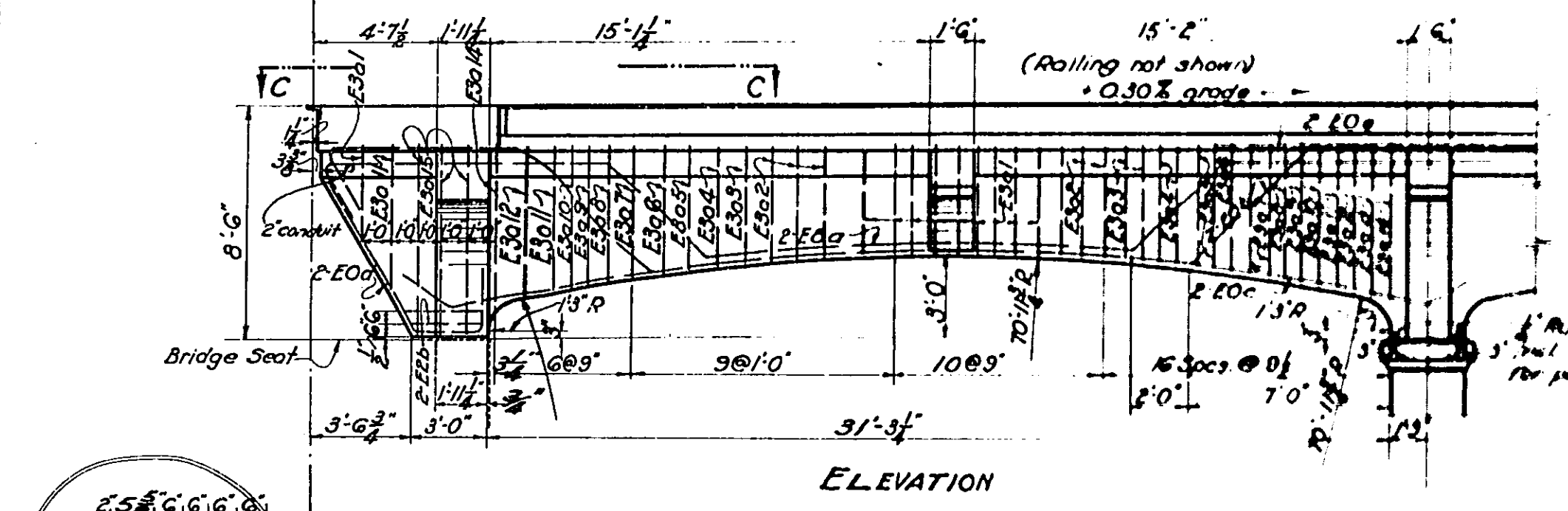
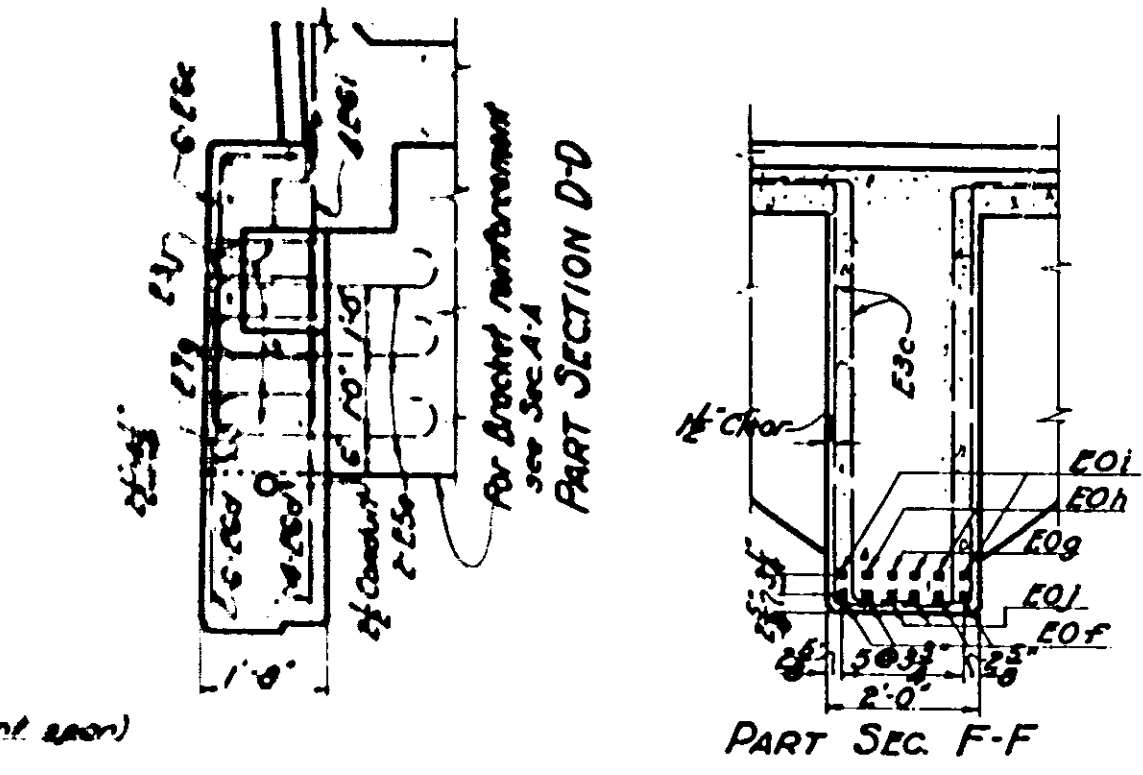
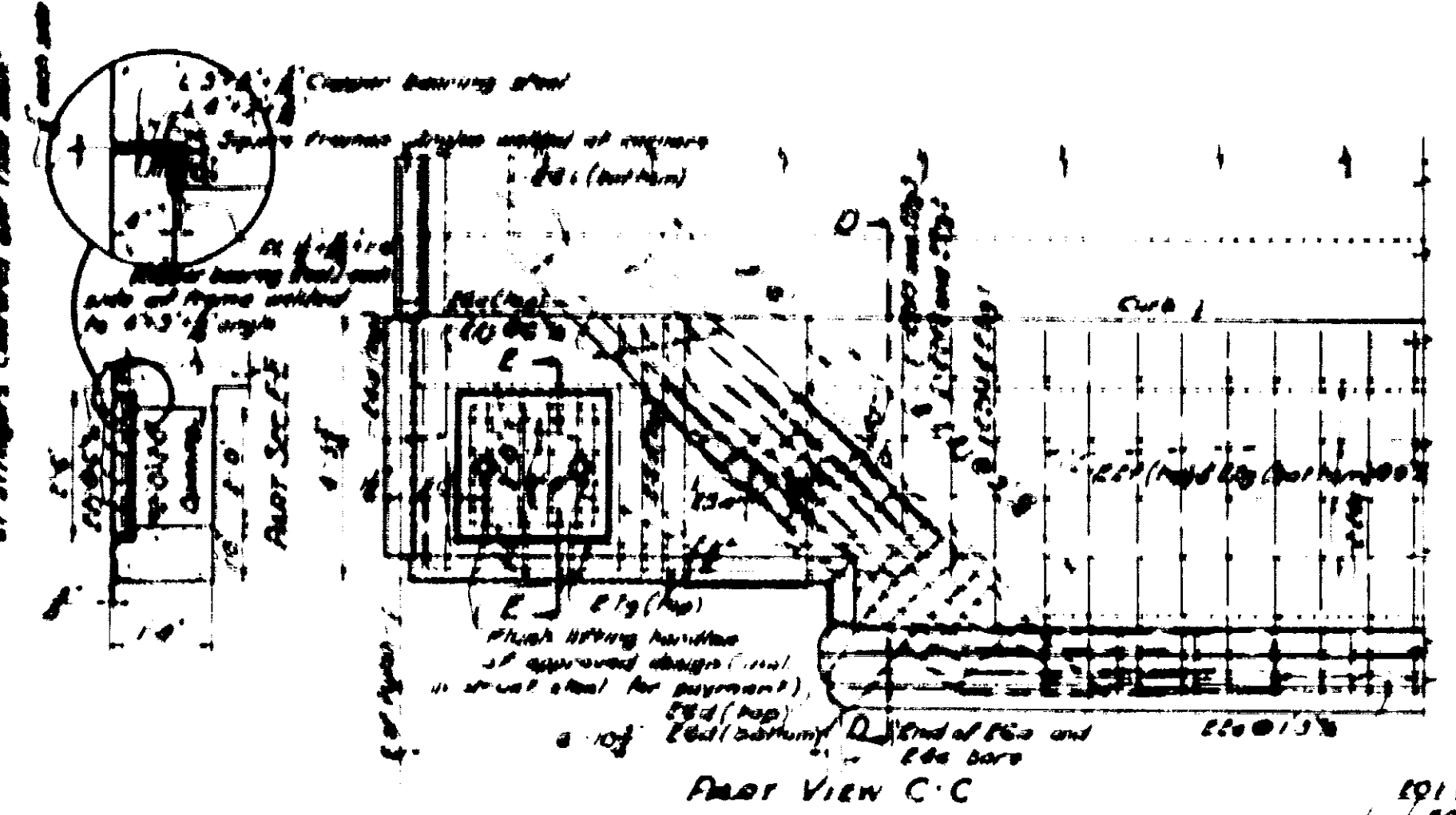
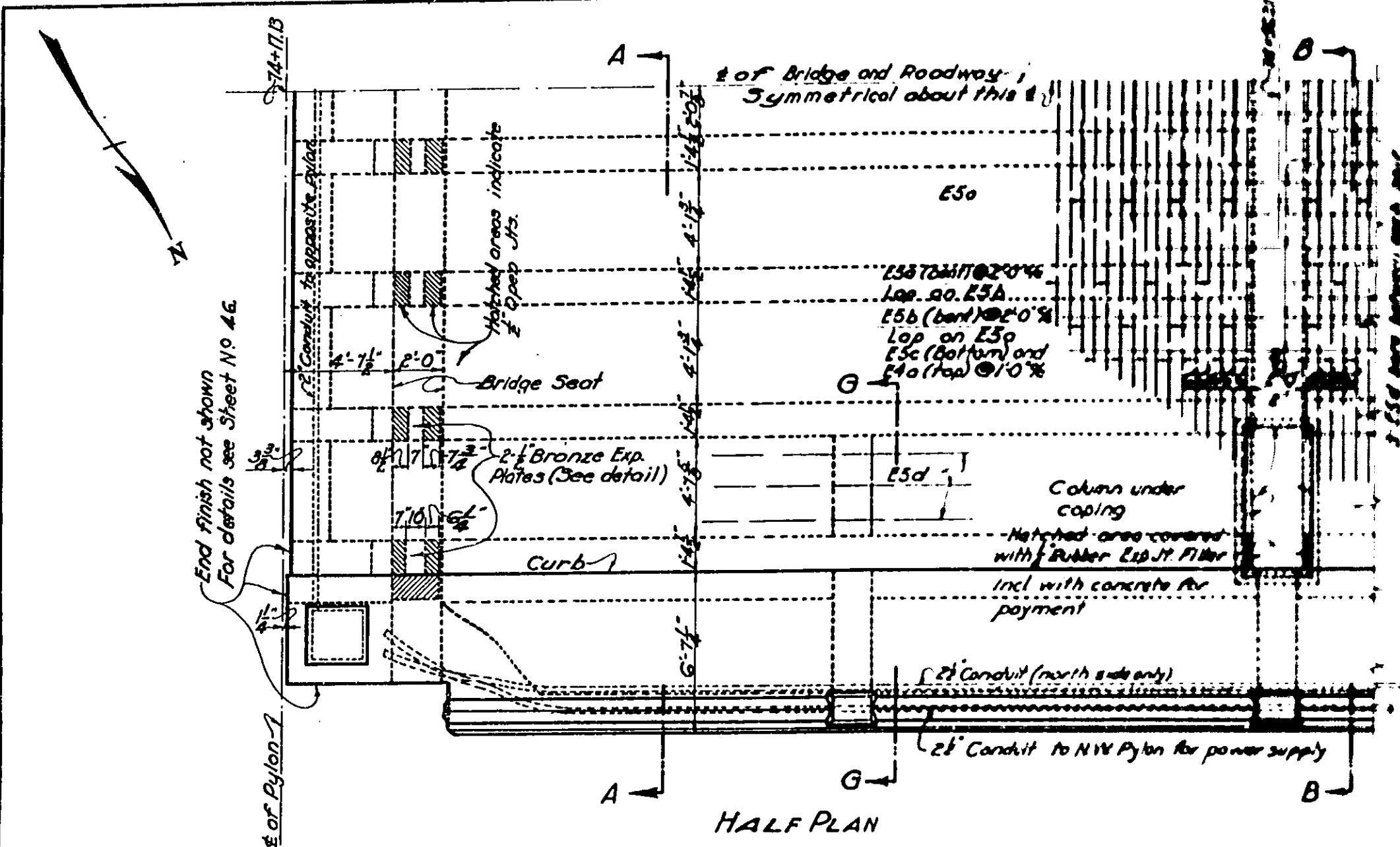
SIDEWALK DETAIL G-G
(Sidewalk Details in Section C-C Standard)

NO. B-191

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

**END ABUTMENT
CROSS SECTIONS
BROOKPARK VIADUCT
OVER ROCKY RIVER
BR. NO. 11-38 CUYAHOGA COUNTY**

NO.	DATE	BY	REVISION
1	7-26	J.P.S.	11-18-32
2	8-16-34	J.P.S.	11-18-32
3	7-26	J.P.S.	11-18-32

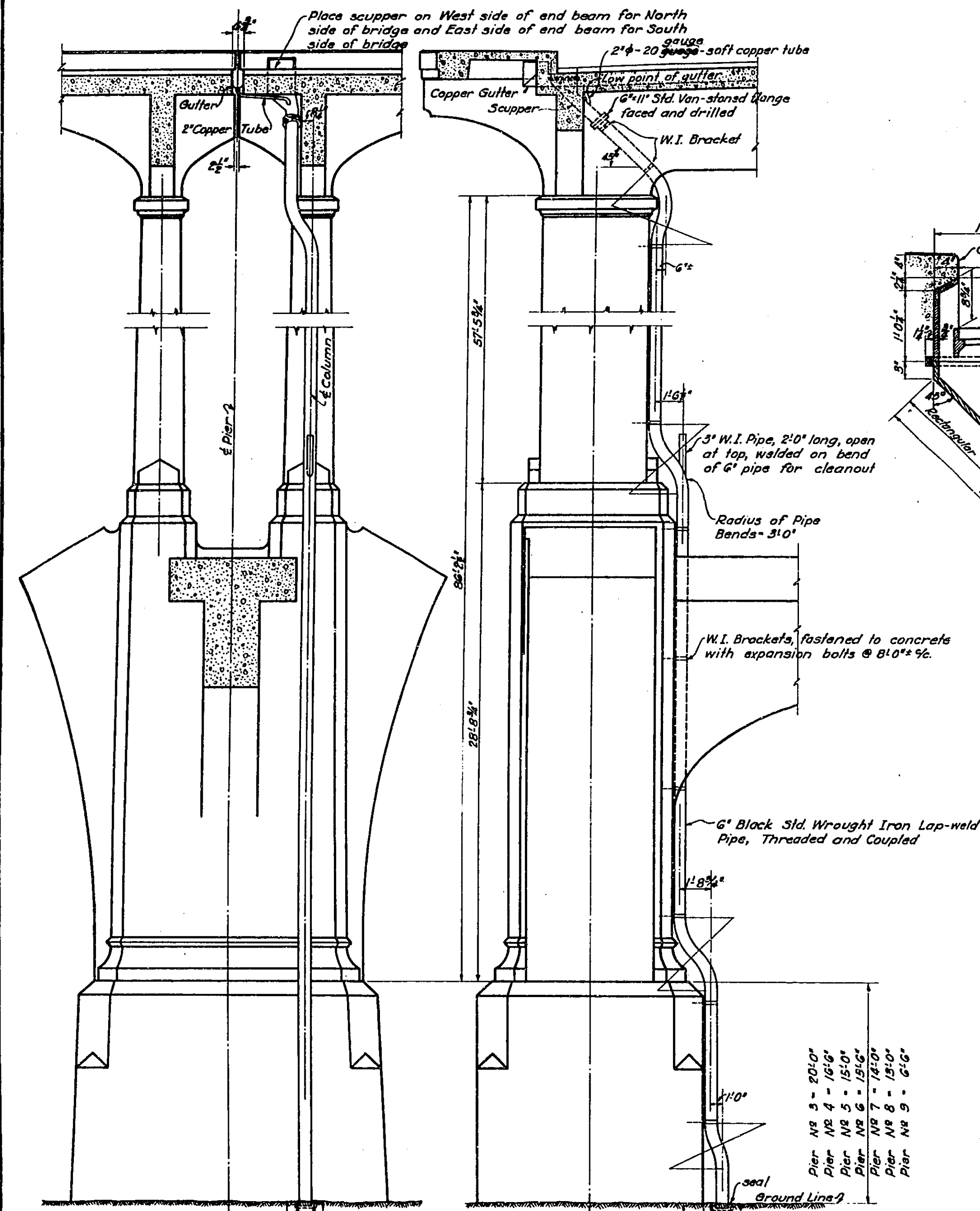


NOTE: THIS SHEET IS A REPRODUCTION OF SHEET NO. 33 OF ORIGINAL CONSTRUCTION DRAWINGS.

STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES					
EAST SPAN OF WEST APPROACH BROOKPARK VIADUCT OVER ROCKY RIVER					
BR. NO. CU-7-58 CUYAHOGA COUNTY					
DESIGNED	DRAWN	TRACED	CHECKED	REVISED	DATE
985	987	SR	WF	W.H.B.	6-24-58
480					10/21/52
					REV. 11/22/74

NO. B-191

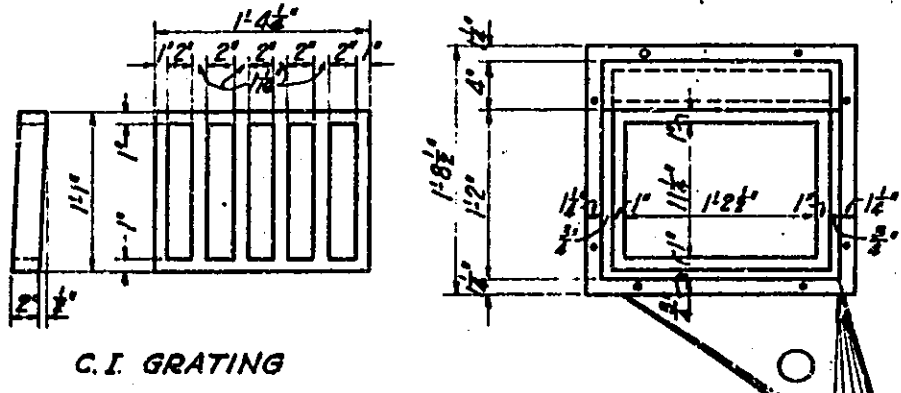
CUYAHOGA COUNTY



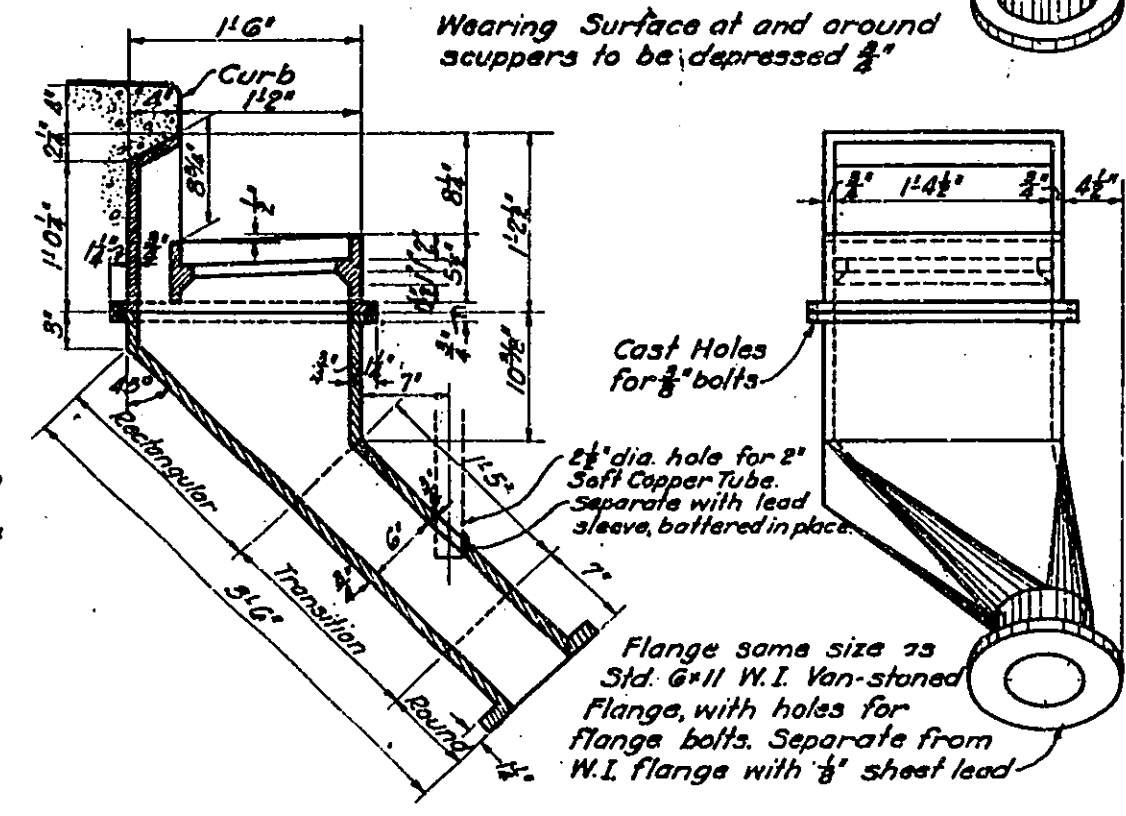
SECTIONAL VIEWS OF ARCH PIER, SHOWING DRAINAGE

Price per lineal foot of 6\"/>

All Wrought Iron Pipe shall be \"Byers\" or approved equal, and shall agree with Sec. M-13 of Wrought Iron of Material Details. A certified copy of the mill test and analysis must be furnished the Dept. of Highways. All exposed metal shall be painted two coats. The first coat shall be ready-mixed white lead paint conforming to requirements of Sec. M-93 of \"Material Details.\" The second coat shall consist of white lead paint, with the addition of the necessary amounts of liquid black and yellow paint to match the color of the concrete. First coat only to be applied before erection. Painting incl. in cost of W. I. Pipe.

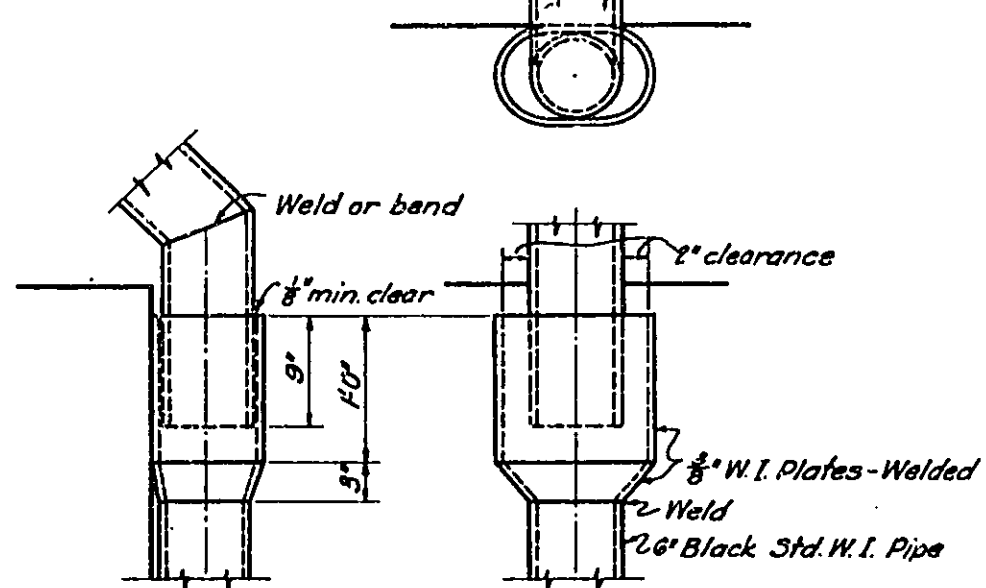


C.I. GRATING

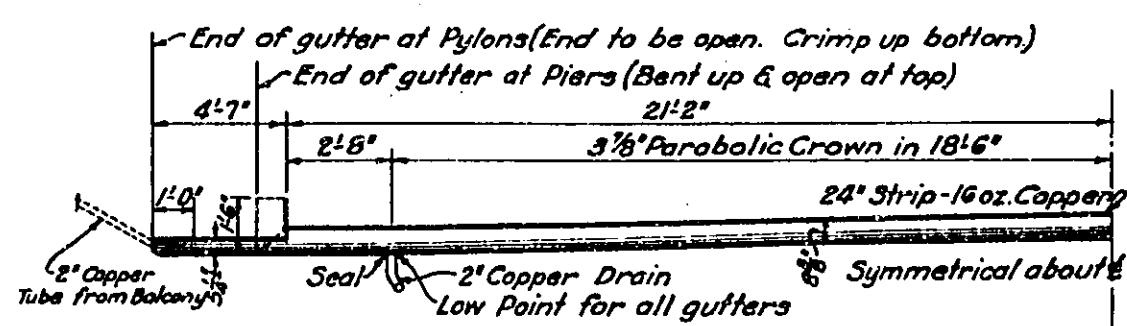


DETAIL OF CAST IRON SCUPPERS
18 UNITS REQUIRED

Price bid for each scupper includes 3 castings with necessary bolts and sheet lead, in place.

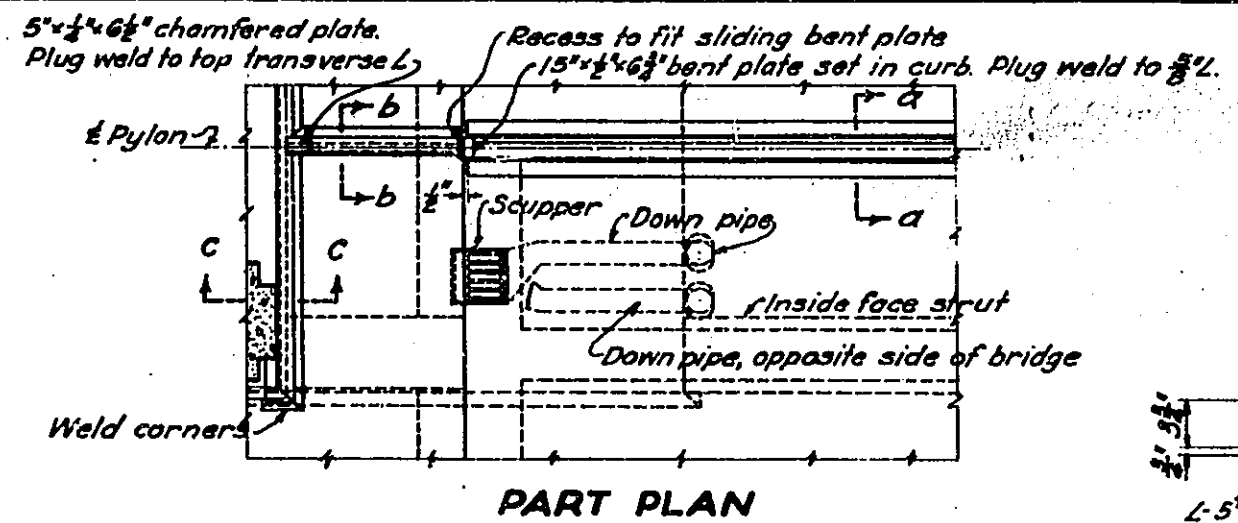


W. I. LEADER HEADS
4 REQ'D

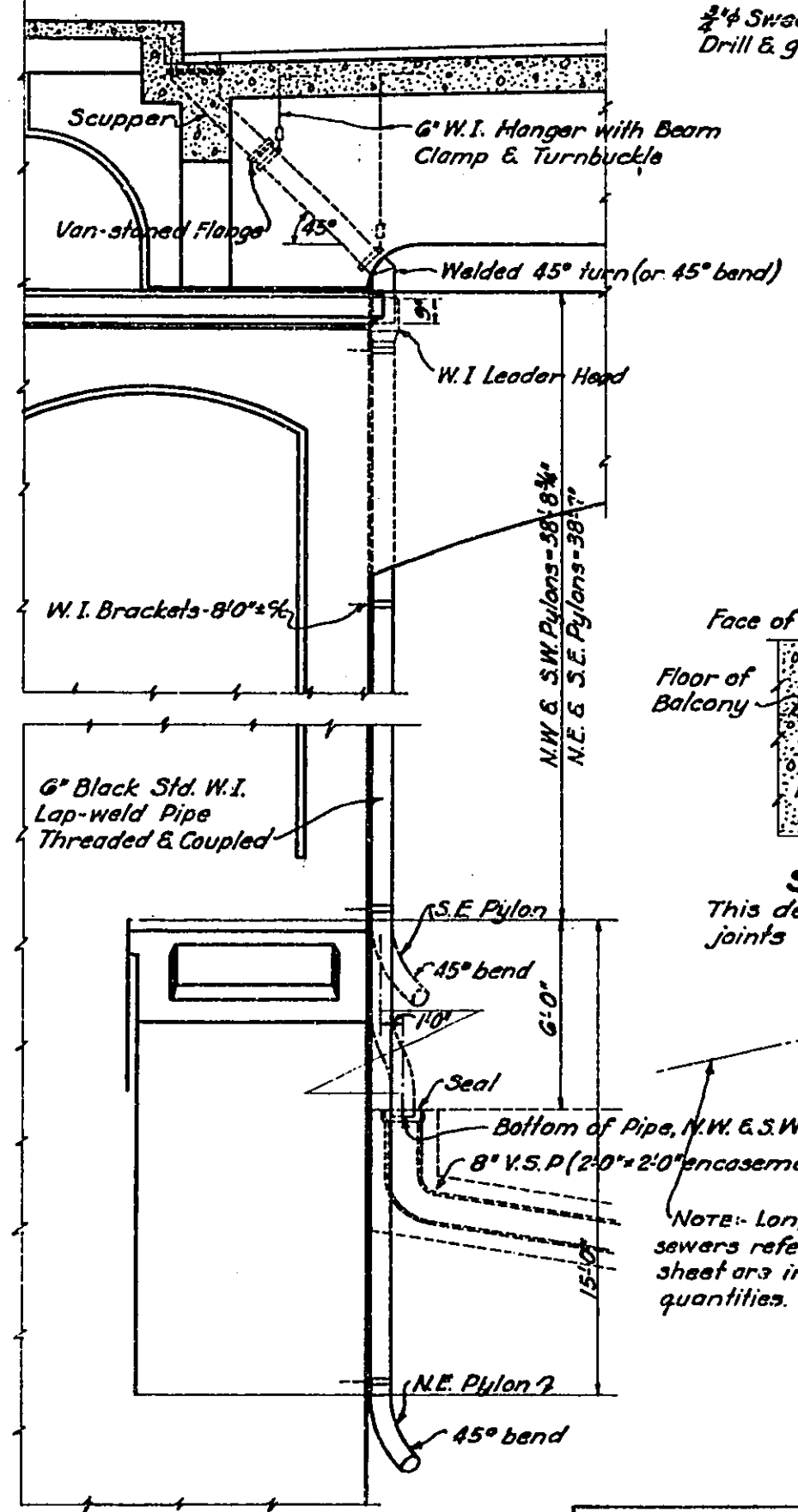


DETAIL OF COPPER GUTTER

All joints in gutter to be carefully made, and sealed by lapping & soldering. Payment per lineal foot of gutter includes Copper tubing.



PART PLAN

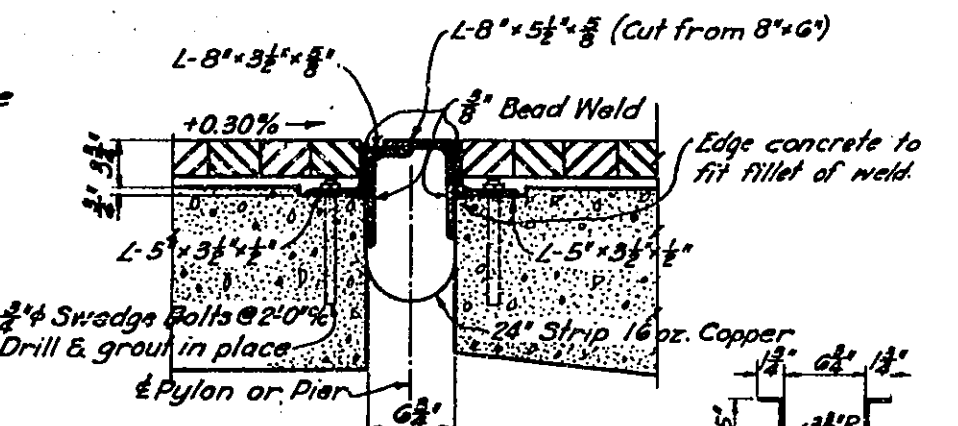


DRAINAGE AT PYLONS

Riprap Gutter to be provided at N.E. & S.E. Pylons from end of pipe to water line, at direction of the Engineer. Included with riprap for payment. 50 sq. yds. of riprap provided in addition to quantity indicated around N.E. & S.E. pylons.

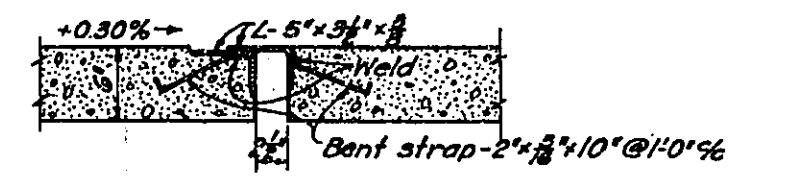
ESTIMATED QUANTITIES

Riprap	50 sq. yds.
--------	-------------



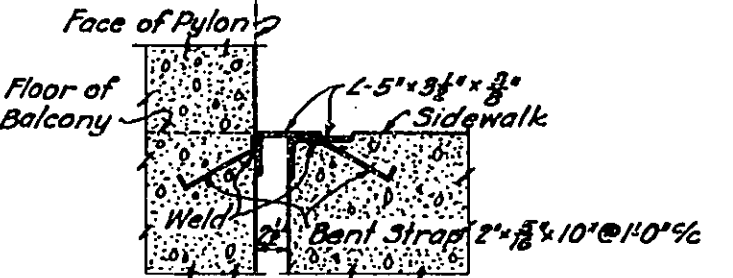
SECTION a-a

This detail same for all transverse expansion joints in roadway.



SECTION b-b

This detail same for all transverse expansion joints in sidewalks.



SECTION c-c

This detail for longitudinal expansion joints at pylons only.

NOTE: THIS SHEET IS A RE-PRODUCTION OF SHEET NO. 46 OF ORIGINAL CONSTRUCTION DRAWINGS.

OUTLETS AT WEST PYLONS

STATE OF OHIO DEPARTMENT OF HIGHWAYS BUREAU OF BRIDGES					
DRAINAGE & EXPANSION JOINTS BROOKPARK VIADUCT OVER ROCKY RIVER					
BR. NO. CU-1758 CUYAHOGA COUNTY					
DESIGNED R.R.C.	DRAWN C.P.S.	TRACED S.H.P.	CHECKED W.F.	REVIEWED H.H.E.	DATE 6-26-51
					REVISED 11-22-52