COUNTY OF CUYAHOGA

DECK AND ABUTMENT REPAIRS

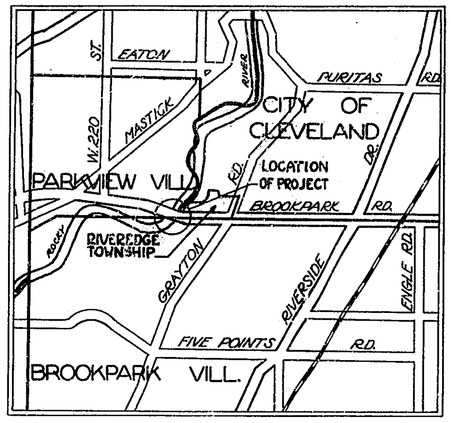
BROOKPARK VIADUCT

RIVEREDGE TOWNSHIP AND VILLAGE OF PARKVIEW

PLAN — SURVEYED — PLOTTED — NOTE BOOK — NO. — DRAFTING CHECKED — ALIGNMENT CHECKED — PT. OF WAY CHECKED — BY — DATE

PROFILE — SURVEYED — PLOTTED — NOTE BOOK — NO. — DRAFTING CHECKED — ALIGNMENT CHECKED — BY — DATE

INDEX OF SHEETS



N

LOCATION PLAN

Scale of Miles
0 ¼ ½ ¾ 1

Portion to be improved
State Highways
County Roads

SCALES

As Shown

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: A.W. Dietrich
Date: 6-3-55 Chief Engineer

Approved: A.J. Poelma
Date: 6-3-55 Chief Deputy

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

BOARD OF COMMISSIONERS

Approved: J. F. Lum
Date: 6/6/55 County Commissioner

Approved: J. D. Farnan
Date: 6/6/55 County Commissioner

Approved: Henry W. Speers
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 _____

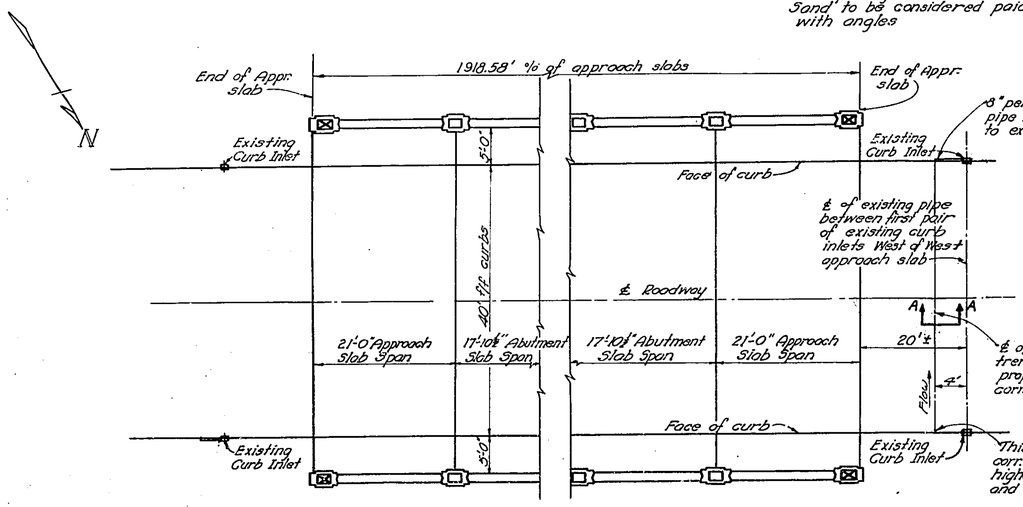
BROOKPARK RD. VIADUCT NO. B-191

BUILT BY CONTRACT 1955

Brookpark Viaduct

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

2/8



PART PLAN

Fill opening with coarse sand. Sand to be considered paid for with angles

$1\frac{1}{2}$"x$1\frac{1}{2}$"x$\frac{1}{4}$" L shall be held firm against face of existing pavement.

Provide smooth surface on existing pavement for full length bearing of legs of L.

SECTION B-B

$\frac{1}{4}$" Pl. welded on top of each L

1'-6"

L $1\frac{1}{2}$"x$1\frac{1}{2}$"x$\frac{1}{4}$"x1'-3" long, spaced 1'-6" ℄ full width of roadway (Paid for per pound as structural steel)

1'-0" (T-35)

bituminous surface course

3" brick course

$\frac{3}{4}$" slag cushion

9" concrete base

4" compacted slag course

Existing

(Compacted slag, gravel or crushed stone)

Subgrade

8" perf. corr. metal pipe

SECTION A-A

Note:
The removal of Existing Bituminous Surface Course, Concrete Base Course, Trench excavation and filling material included in Item 1-A for payment.

1'-6" Width of T-35 shall be placed in layers not to exceed 3" compacted thickness. Asphaltic Wearing Course replacement (T-35) adjacent to roadway expansion joints to be compacted in two courses.

Excavate a 1'-6" wide trench through pavement, full width of pavement and fill with materials as shown. Invert of 8" perforated corrugated metal pipe shall be 2'-6" below gutter at high end and 3'-0" below gutter at low end. Connect low end to adjacent curb inlet.

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.

WORK TO BE DONE is summarized as follows:

Concrete footings shall be placed under each end of the crossbeam of 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: Pertinent 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: "S-14" per lin. ft. for removal, repair and reinstallation.

Abutment sidewalk and curb (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 breastwall, 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.

ESTIMATED QUANTITIES

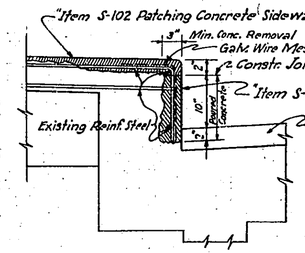
ITEM	TOTAL	UNIT	DESCRIPTION
E-2	20	Cu.Yds.	Excavation for Structures-Unclassified
S-14 Spec.	550	Lin. Ft.	Repair of Bridge Curbs-Class "C" Concrete
S-1	20	Cu.Yds.	Class "C" Concrete, abutment sidewalks
S-1	4	Cu.Yds.	Class "C" Concrete, abutment crossbeam footings
S-2	200	Sq.Ft.	Patching Concrete
S-102	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-1A	30'-4"	Lin. Ft.	Railing, removal, repair, reinstallation
S-22	20	Cu.Yds.	Removal of portions of existing structure
S-29	14	Lin. Ft.	Subdrainage for wearing surface course
I-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

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

REINFORCING STEEL LIST

Mark	Size	No	Length	Weight	Shp	Bending Diagram
K2b	1⅛" ℄	58	7'-7"	294	Bt.	
K2c	1⅛" ℄	59	6'-3"	242	St.	
K4a	⅝" ℄	16	4'-7"	76	St.	
K4a	⅝" ℄	38	2'-0"	79	St.	
K4b	⅝" ℄	14	17'-9"	252	St.	
K4b	⅝" ℄	22	2'-8"	61	St.	
K5f	¾" ℄	8	24'-1"	290	Bt.	
K4c	⅝" ℄	12	3'-8"	46	St.	
K7a	1" ℄	4	17'-3"	184	St.	
E2j	1⅛" ℄	16	2'-3"	24	St.	

Bending Diagram: 6'-3"⅞ / K2b / 9" / 22'-9"½ / K5f



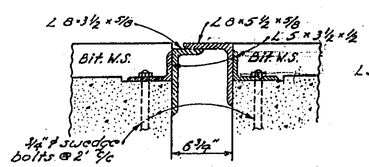
TYPICAL DETAIL - SHOWING CURB & SIDEWALK REPAIR

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

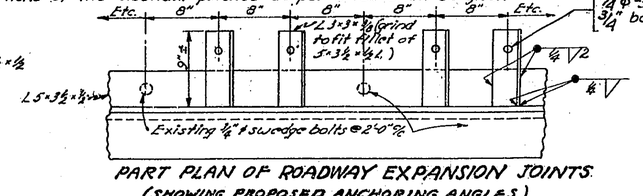
CONDUIT: The Contractor shall exercise care to insure that the existing conduit and wiring will not be damaged during repair operations. Conduit which will be disturbed shall be returned to original position.

SURFACE FINISH OF CONCRETE: The repaired portions of railing shall be given a special rubbed 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 rubbed 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-1.24.

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.



TYPICAL DETAIL OF EXISTING ROADWAY EXPANSION JOINTS



NOTE: Where existing ¾" ℄ swedge bolts are loose, place 3"x3"x⅜" angle anchors as shown. Both sides of exp. joint shall be repaired in like manner.

¾" ℄ - 3 Unit Cinch Anchor Assembly with ¾" bolt, lock washer and nut.

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."

NO. B-191

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.	W.M.B.	C.M.B.	W.H.E.	6-16-51	7-6-53 8-5-53


FED. RD. DIVISION
STATE
PROJECT
TYPE FUNDS
2
OHIO
3/8
Partial post on both sides of roadway shall be removed (S-22) and replaced (S-1)
NOTE
Sidewalk end finish angles and anchor bars in abutment slab span and bent curb plates shall be replaced (Included with structural steel for payment). See Sheet No.8 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.6 for details. Concrete for manhole covers included with sidewalk concrete for payment.
SECTION E-E
End finish not shown
Existing face of abutment backwall
Limits of existing concrete
Limits of excavation
Face of wall
SECTION G-G
The excavation limits shown indicate limits for payment for excavation
SECTION F-F
PART PLAN OF WEST ABUTMENT
Bottom of fascia
Rustication groove
Remove and replace concrete in the approximate area shown in accordance with the provisions of Item S-2.
VIEW D-D
Superstructure
2" open joint
Remove and replace concrete in the area shown in accordance with the provisions of "Item S2."
Existing reinforcing steel shall remain in place and be straightened back to original position before new concrete is placed.
VIEW A-A
(Railing not shown)
VIEW B-B
VIEW C-C
NO.B-191
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 C.F.B.
DRAWN C.F.B.
REVIEWED W.H.R.
DATE 6-26-51
REVISED 7-6-55

Estimated Quantities

Class "B" Concrete (1:5½)	350	Cu. Yds.
Class "C" Concrete (1:6½)	72	Cu. Yds.
Shale Excavation	72	Cu. Yds.
Earth Excavation	296	Cu. Yds.
Type "B" Waterproofing	41	Sq. Yds.

Sections E-E and F-F Shown On Sheet #29

NOTE: THIS SHEET IS A REPRODUCTION OF SHEET NO. 28 OF ORIGINAL CONSTRUCTION DRAWINGS.

State of Ohio
Department of Highways
Bureau of Bridges

West End Abutment Brookpark Viaduct Over Rocky River

Br. No. Cu-17-58 Cuyahoga County

NO. B-191

Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
		R.R.B.	W	W. H. K.	6-26-51, 10/28/52	11-22-52


CUYAHOGA COUNTY
5
8
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.
NOTE:- Carry all footings in D-D and F-F at least 5'-0" into shale.
SECTION E-E (see sheet Nº 28)
(All details not shown are identical with Section C-C)
THRU WEST END ABUTMENT
NOTE:- Carry footings in Sections C-C and E-E at least 4'-0" into shale.
SECTION F-F (see sheet Nº 28)
(All details not shown are identical with those in Section D-D)
THRU WEST END ABUTMENT
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 CC Similar)
NO. B-191
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES
END ABUTMENT
CROSS-SECTIONS
BROOKPARK VIADUCT
OVER ROCKY RIVER
BR. NO. CU-17-38 CUYAHOGA COUNTY

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR	6/8

CUYAHOGA COUNTY

HALF PLAN

ELEVATION

INTERMEDIATE STRINGERS

PART VIEW C-C

PART SECTION D-D

PART SEC. F-F

SECTION G-G
(Showing intermediate & bracket steel at ends)

SECTION B-B
(Showing Floor Beam & Pier Bracket Details)

SECTION A-A

BRONZE EXPANSION PLATES (East & West Approach Spans)

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-17-58 CUYAHOGA COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
QFF EMO.	QFF	SKR	WF	H.H.B.	6-26-52 10/21/52	11/22/52

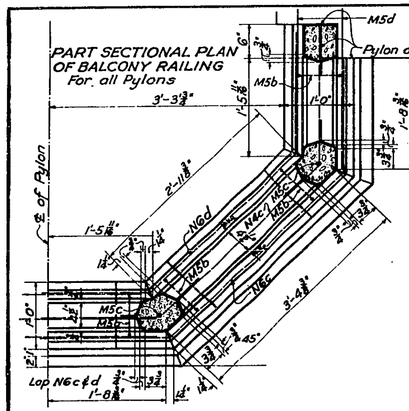
NO. B-191

FED. FD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR

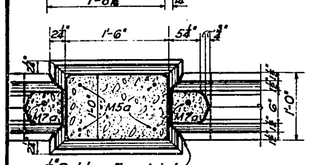
7/8

CUYAHOGA COUNTY

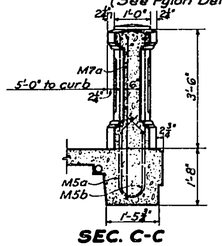
PART SECTIONAL PLAN OF BALCONY RAILING
For all Pylons



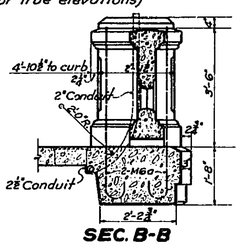
PART ELEVATION OF BALCONY RAIL
Development along outside surface
(See Pylon Details for true elevations)



SEC. D-D

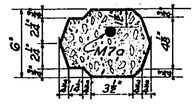


SEC. C-C

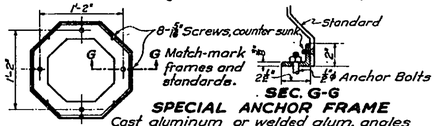


SEC. B-B

SEC. E-E



SEC. F-F

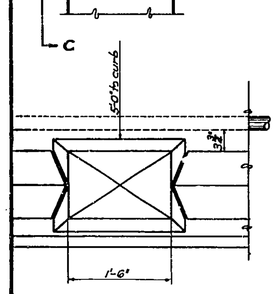


SEC. G-G

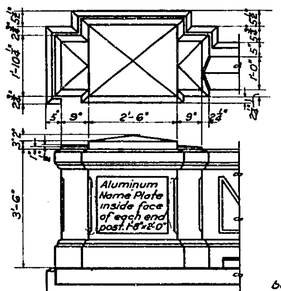
SPECIAL ANCHOR FRAME
Cast aluminum or welded alum. angles

RAILING ELEVATION

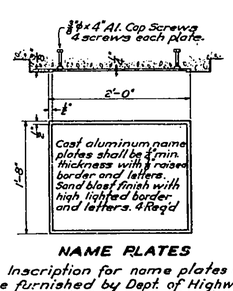
SEC. A-A



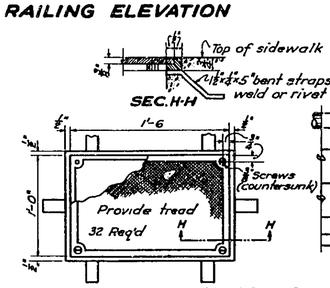
PLAN



END POST
Same general details for all abutment posts.

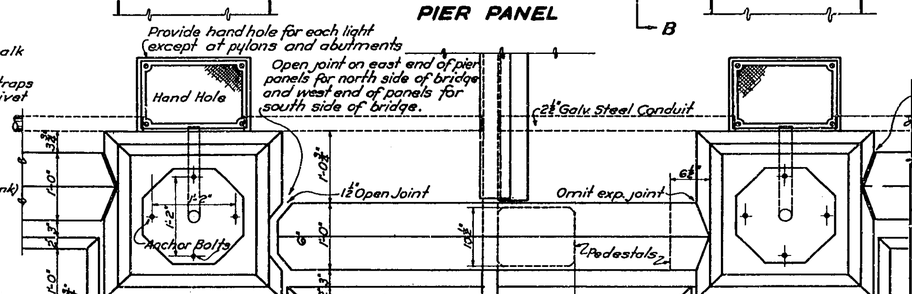


NAME PLATES
Inscription for name plates will be furnished by Dept. of Highways on request. Two sets of plates with inscription different on each set Designs must be approved by this department. 4-Plates required.



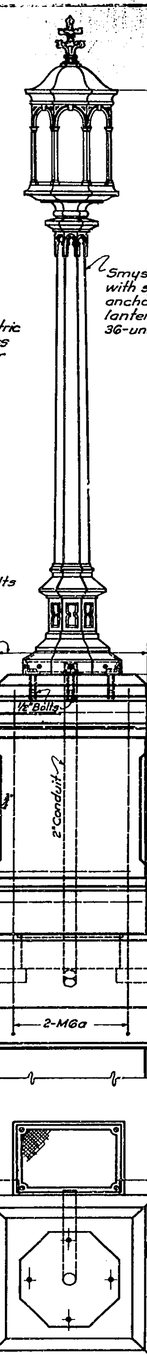
HAND HOLE COVER & FRAME
CAST ALUMINUM
Frame may be cast or made from bar stock and welded.
32 units required

PIER PANEL



PART PLAN

¾" light gray rubber expansion joint between all posts and railing panels, except where 12" open joints occur in pier panels and panels adjacent to pylons, included with railing for payment.



BACK PLATE

Special Smyser-Royer Design with lantern equipment as specified 16 units required.

NOTE: THIS SHEET IS A REPRODUCTION OF SHEET NO. 45 OF ORIGINAL CONSTRUCTION DRAWINGS.

WIRING DIAGRAM

LIGHTING SYSTEM SPECIFICATIONS

System shall consist of two-60 cycle, 6.6 ampere constant current series circuits operated from two transformers with oil switches controlled by an electric time switch as shown on above diagram.

Cables shall be No.8 B & S gage conductor with 15/64"-30% para rubber insulation for 6000 volts encased in a sheath of lead at least 4/64" thick containing 2% tin. They shall be installed in conduit, without injury to wires or covering, in accordance with the above diagram.

Conduit shall be 2½" and 2" galvanized inside and out, as indicated on plans. All bends shall be made as shown in details and all ends shall be reamed. They shall be connected together so as to give adequate electrical continuity throughout the entire length and the system shall be grounded. After the conduit has been rigidly fastened in place the ends shall be effectively plugged to keep out all concrete during placing. All conduit shall be drained.

Contractor shall install 2½" galvanized steel conduit and cable from N. W. Pylon to terminal pole or point of supply approx. 100 ft. west of N.W. corner of bridge. Conduit from end of bridge to pole shall be laid 2'-6" below original ground surface (beyond toe of fill) and shall be encased in concrete. The conduit shall rise to top of pole and terminate in suitable pot head.

Handholes shall be placed in sidewalks adjacent to each light except at pylons and abutments where access to conduits and cables will be provided by means of manholes. Handholes and frames shall be made of cast aluminum.

Transformers. All regulating transformers and control switches shall be furnished and installed in the N.W. Pylon by the power company.

Lighting Units shall consist of 36-Smyser-Royer pole mounted units with special finials and anchor frames, as detailed, and 16-Special Smyser-Royer bracket mounted units as detailed or approved equivalents. All units shall be equipped with A-Sym-etric dome refractors, or approved equivalents, and light alabaster glass panels. All sockets, refractors, frames, etc., shall be adjustable for either 1000 or 4000 lumen lamps.

All units shall be made of cast aluminum (Alcoa 43 alloy) with a "depleted" and "high lighted" finish. "High lighting" will be required only on high points of finials, projecting corners and beads, and edges of panels. Drawings, showing "high lighted" areas shall be submitted to Dept. of Highways for approval. All anchor bolts, anchor frames, screws, etc., shall be made of aluminum and shall comply with "Aluminum Specifications" shown on Sheet No. 25. Minimum thickness of castings ¼". Lamps shall be 1000 lumen Mazda series, or approved equal.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

RAILING DETAILS · & · LIGHTING SYSTEM

BROOKPARK VIADUCT
OVER ROCKY RIVER

BR. NO. CU-17-58 CUYAHOGA COUNTY.

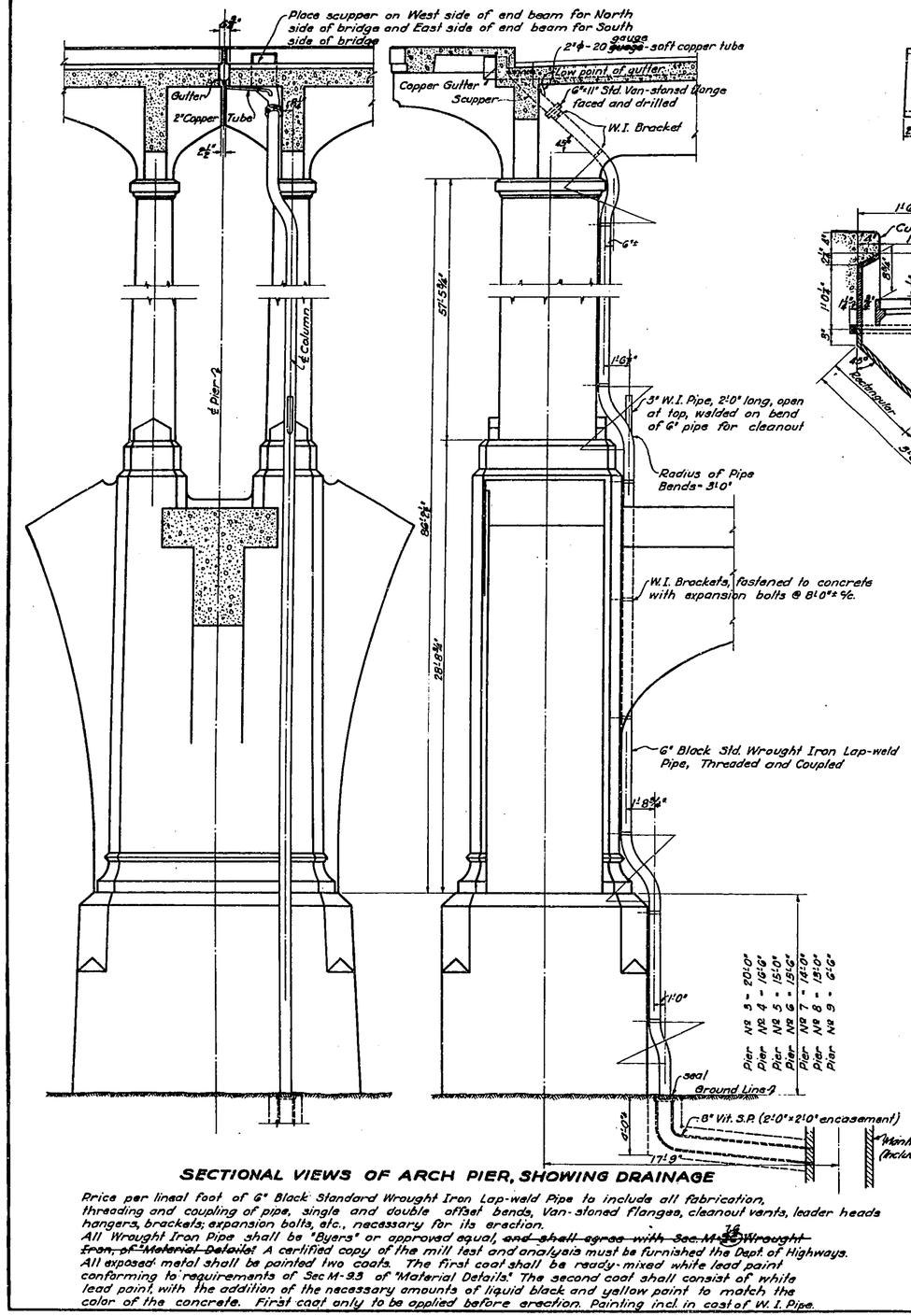
DESIGNED	DRAWN	TRACED	CHECKED	REVISED	DATE	REVISED
4/8/40	4/8/40	J.V.L.	W.E.	A.S.D.	6-26-51	9-22-52
				W.H.B.	10/21/52	

NO. B-191

FED. RD. DIST. NO.	STATE	FED. AID PROJECT	FISCAL YEAR

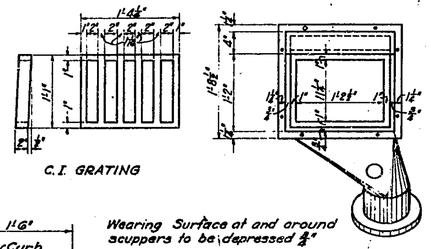
8
8

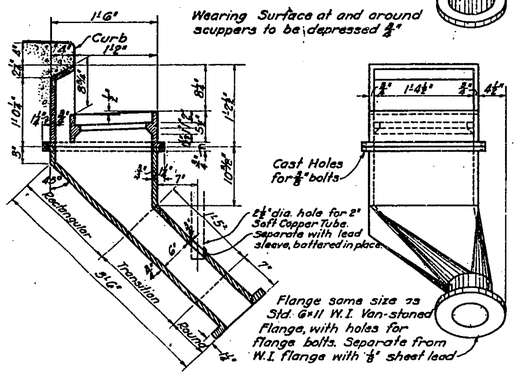
CUYAHOGA COUNTY



SECTIONAL VIEWS OF ARCH PIER, SHOWING DRAINAGE

Price per lineal foot of 6" Black Standard Wrought Iron Lap-weld Pipe to include all fabrication, threading and coupling of pipe, single and double offset bends, Van-stoned flanges, cleanout vents, leader heads hangers, brackets, expansion bolts, etc., necessary for its erection.
All Wrought Iron Pipe shall be "Byers" or approved equal, ~~and shall agree with Sec. M-93 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.

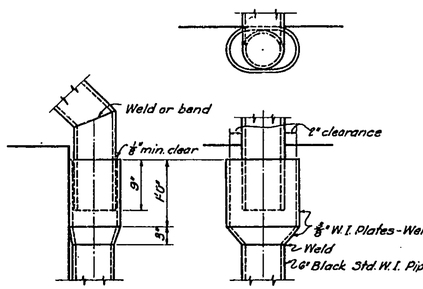




DETAIL OF CAST IRON SCUPPERS

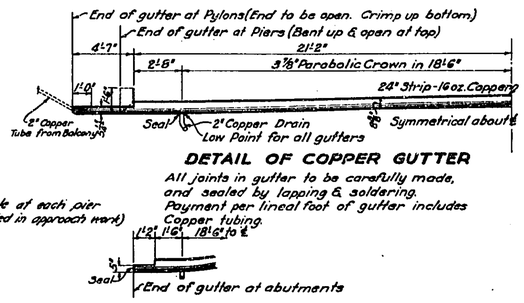
18 UNITS REQUIRED

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



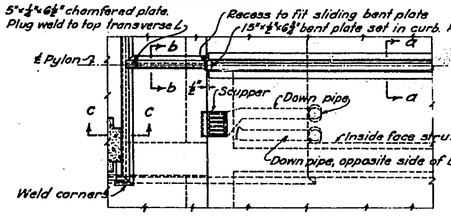
W.I. LEADER HEADS

4 REQ'D.

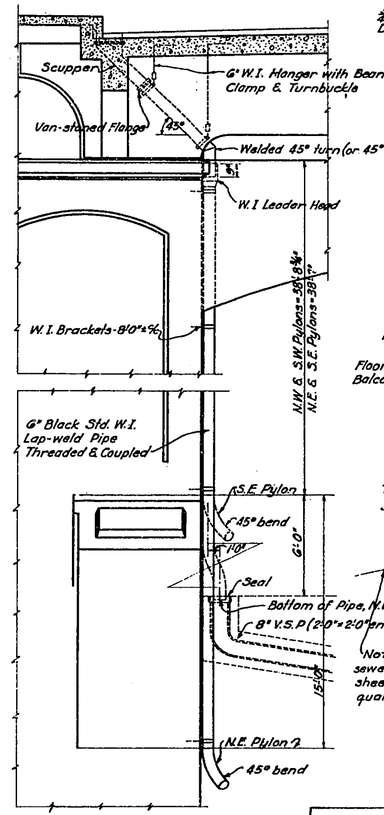


DETAIL OF COPPER GUTTER

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



PART PLAN

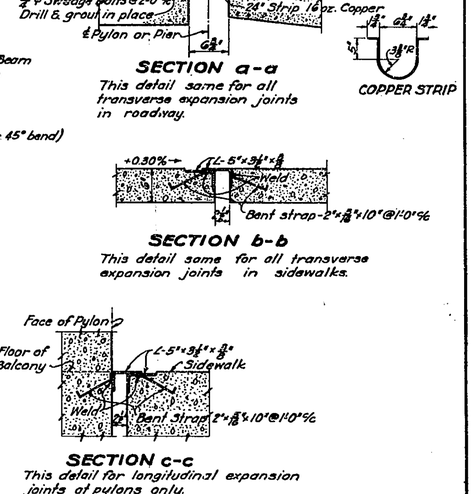


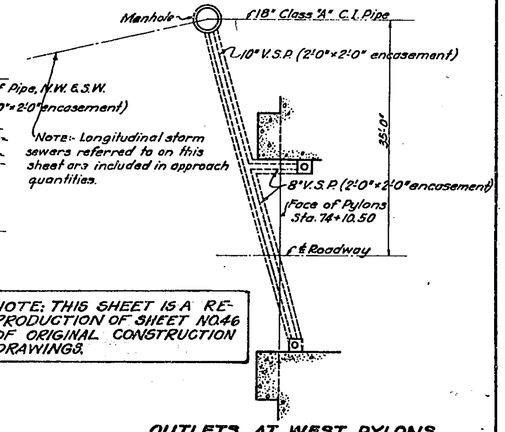
DRAINAGE AT PYLONS

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.





OUTLETS AT WEST PYLONS

NOTE: Longitudinal storm sewers referred to on this sheet are included in approach quantities.

NOTE: THIS SHEET IS A REPRODUCTION OF SHEET NO. 46 OF ORIGINAL CONSTRUCTION DRAWINGS.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

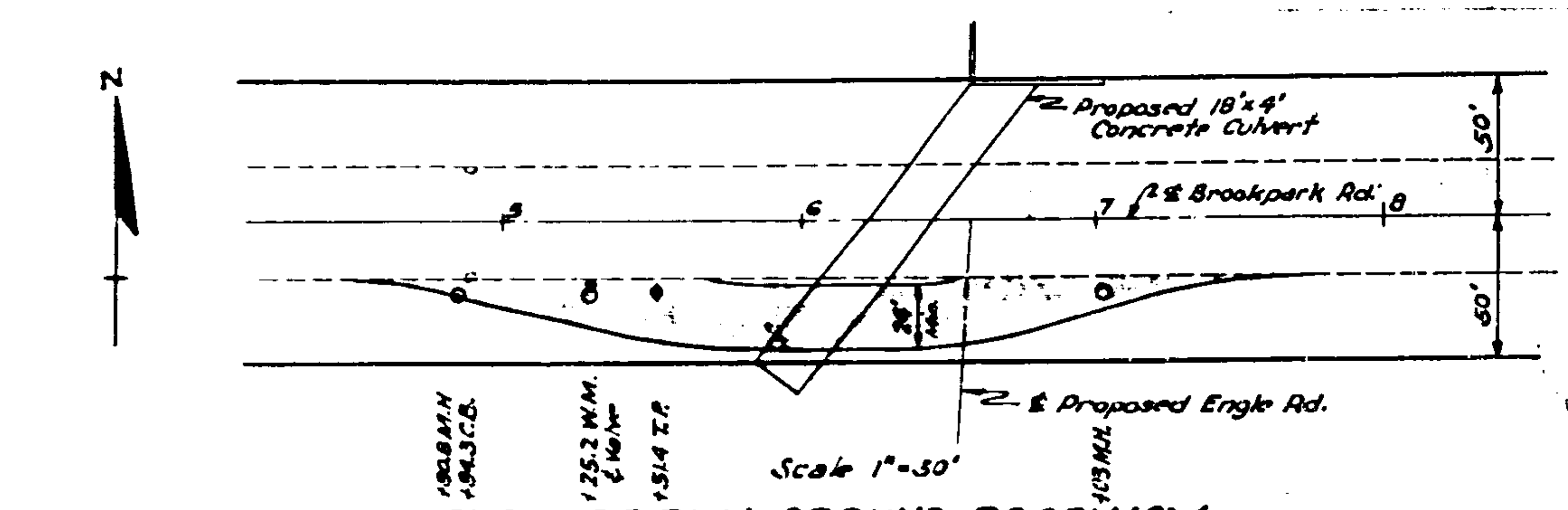
DRAINAGE & EXPANSION JOINTS

BROOKPARK VIADUCT OVER ROCKY RIVER

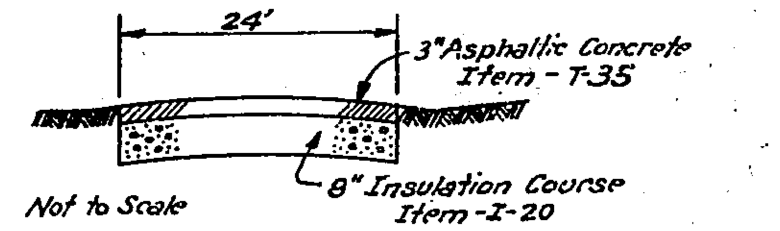
BR. NO. CU-17-58 CUYAHOGA COUNTY

DESIGNED A.D.C.	DRAWN	TRACED	CHECKED	REVIEWED A.D.C.	DATE	REVISED 11-22-52
C.P.S.	C.P.S.	W.F.	W.F.	W.H.E.	6-26-51 10/22/52	

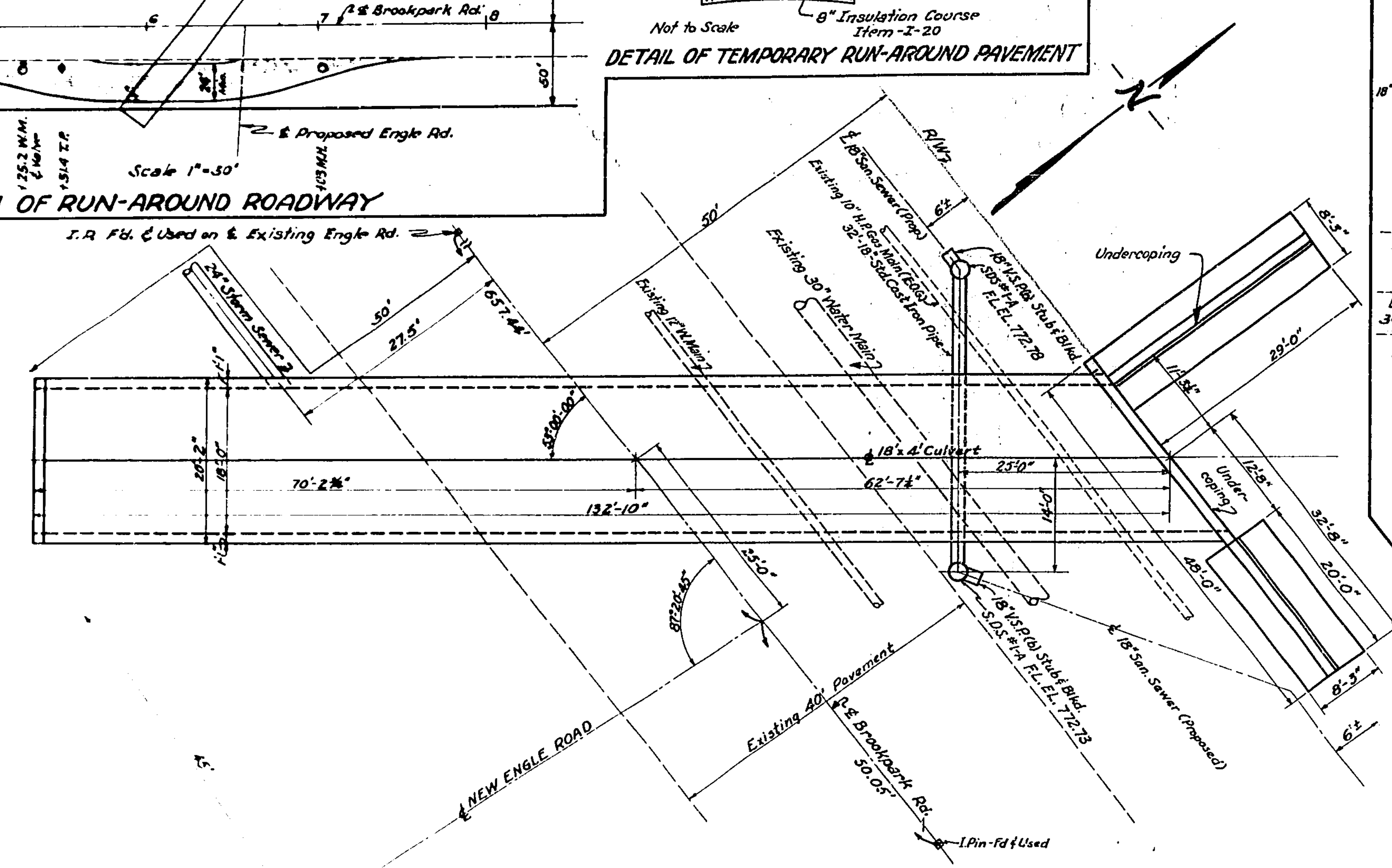
NO. B-191



PLAN OF RUN-AROUND ROADWAY



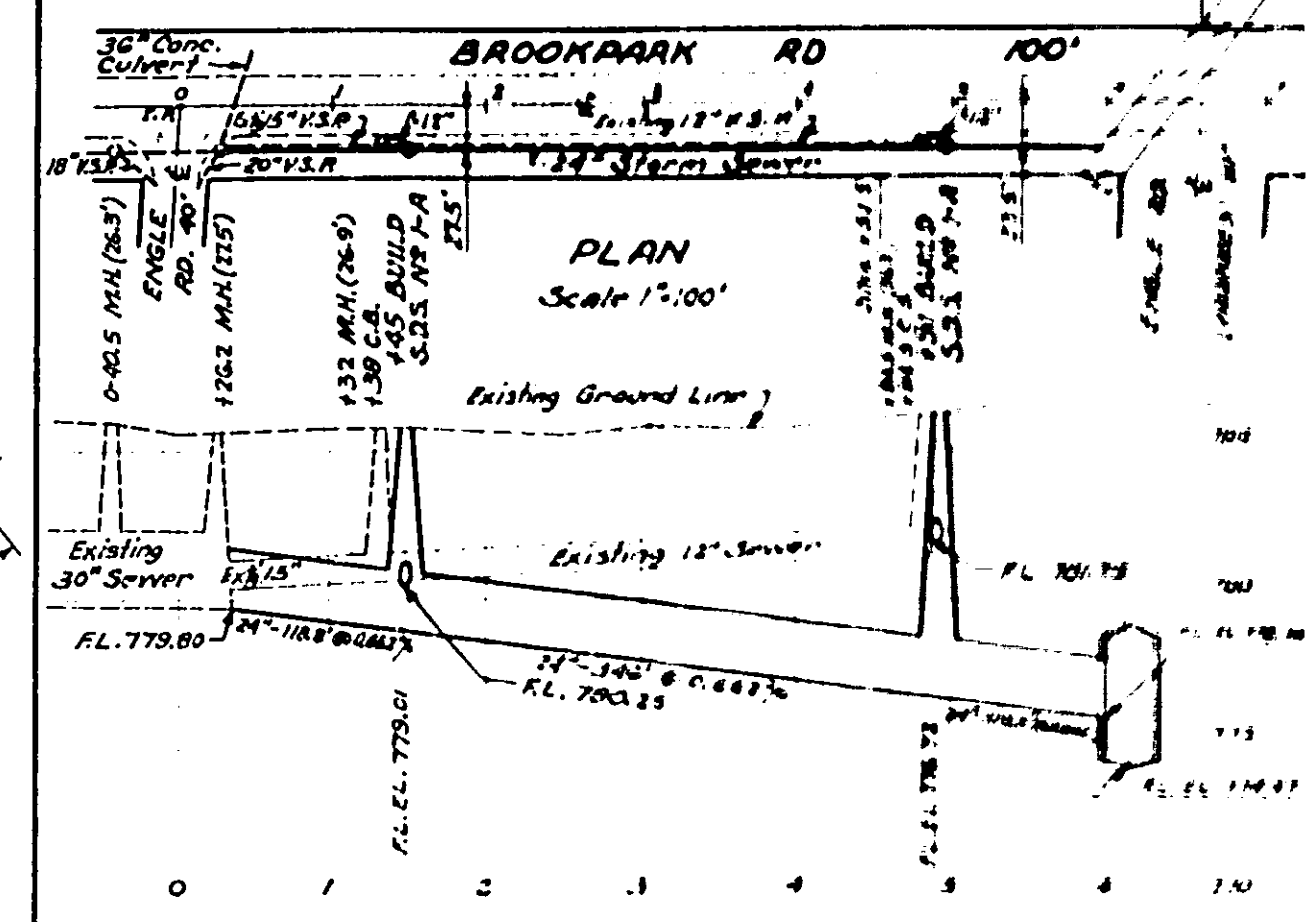
DETAIL OF TEMPORARY RUN-AROUND PAVEMENT



GENERAL PLAN

Scale - 1"=10'

24" STORM SEWER
BROOKPARK RD.



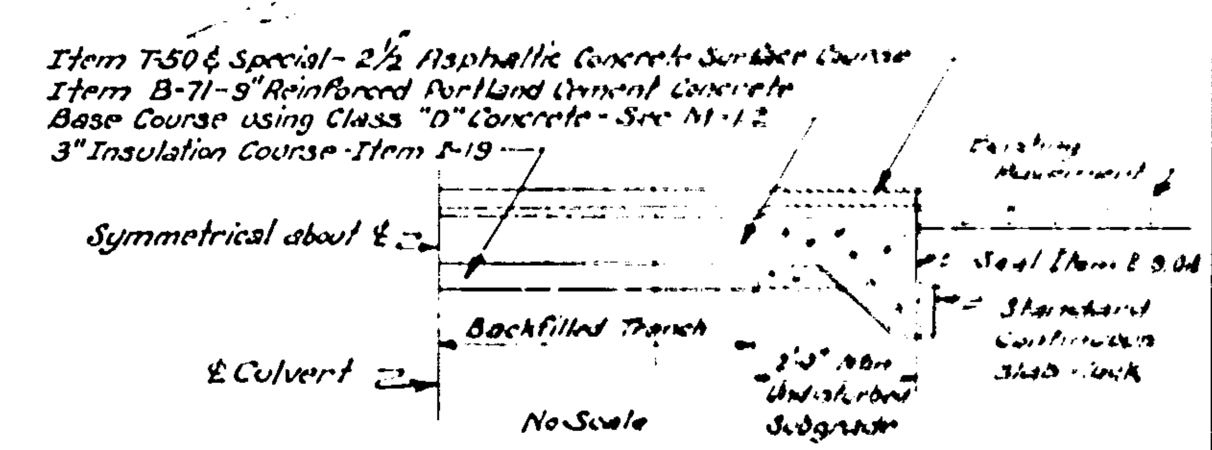
PROFILE

Scales
Hor. 1"=100'
Vert. 1"=5'

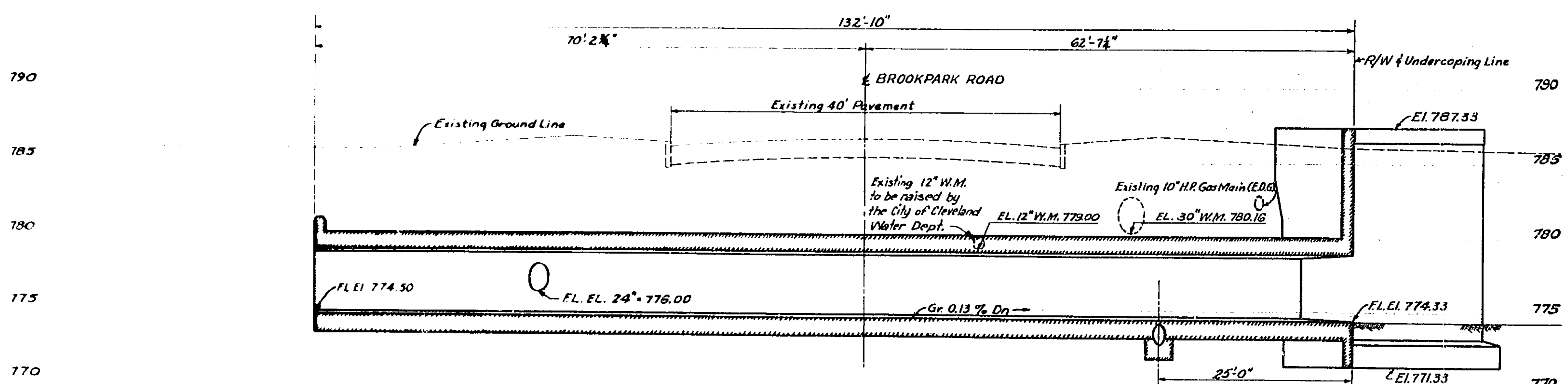
Note:

24" Storm Sewer and Manholes shall not be built until new 18'x4' Concrete Culvert and new Outlet Channel are constructed, complete, ready to receive the storm water run-off.

Existing 18" inlet in M.H. at Sta. 0+41.5 and existing 36" inlet and 36" Outlet in M.H. at Sta. 0+26.2 shall be plugged when and as directed by the Engineer. These operations are included for payment in "Item I-2 and Special 24" Storm Sewer"



DETAIL OF PAVEMENT REPLACEMENT-ITEM SPECIAL



PROFILE ALONG ℄ CULVERT

Railing on Headwall Not Shown
Scales - 1"=10' Hor. & 1"=5' Vert.

Note:

The joint in the 18" cast iron sanitary sewer pipe within the slab of the Culvert shall be a butt joint, requiring the removal of the bell end of one section of the pipe. The butting ends shall be reasonably true and smooth. The entire joint shall be wrapped around with a suitable wire screen and fully encased as detailed. No additional payment will be allowed for this operation.

ESTIMATE OF QUANTITIES

E-2	Excavation for Structures	1800 Cu. Yds.
S-1	Concrete for Structures (Class "C")	320 Cu. Yds.
S-1	Concrete for Structures (Class "E" Footing)	25 Cu. Yds.
S-3	Waterproofing Type "A"	360 Sq. Yds.
S-3	Waterproofing Type "B"	30 Sq. Yds.
S-4	Reinforcing Steel (Int. Gr.) M-7.1	70000 Lbs.
S-9	Copper Waterstop	36 Lin Ft
S-14	Concrete Railing	48 Lin Ft
S-27 & Spec.	18" Sanitary Sewer Cast Iron Pipe	32 Lin Ft
S-29	Porous Backfill	150 Cu. Yds.
I-2 & Spec.	12" Storm Sewer V.S.P.(a) Encased or R.C.C.P.(b)	20 Lin Ft
I-2 & Spec.	24" Storm Sewer V.S.P.(a) Encased or R.C.C.P.(b)	575 Lin Ft
I-4 & Spec.	4" V.S.P. Underdrain	40 Lin Ft
I-8	Manholes S.D.S. № 1-A Storm Sewer	2
I-8	Manholes S.D.S. № 1-A Sanitary Sewer	2
E-8	Pavement Removal	Lump Sum
Spec.	Pavement Replacement	Lump Sum
I-11 & Spec.	Straight Sandstone Curb Reset	40 Lin Ft
S-15 & Spec.	Temporary Run-Around Roadway	Lump Sum

BUILT BY CONTRACT - 1950

25' WEST OF NEW ENGLE ROAD

COUNTY OF CUYAHOGA
ALBERT S. PORTER
COUNTY ENGINEER
DESIGN DEPT

Approved — Asst. Deputy
Date

Approved *Martin E. Friedman* — Engineer of Design
Date

Approved *A. C. Holland* — Chief Engineer
Date

Approved *Irving M. Baker* — Chief Deputy Engineer
Date

Approved — County Engineer
Date

Approved — County Commissioner
Date

Approved — County Commissioner
Date

Approved — County Commissioner
Date

Approved — County Auditor
Date

Journal — Page — Date

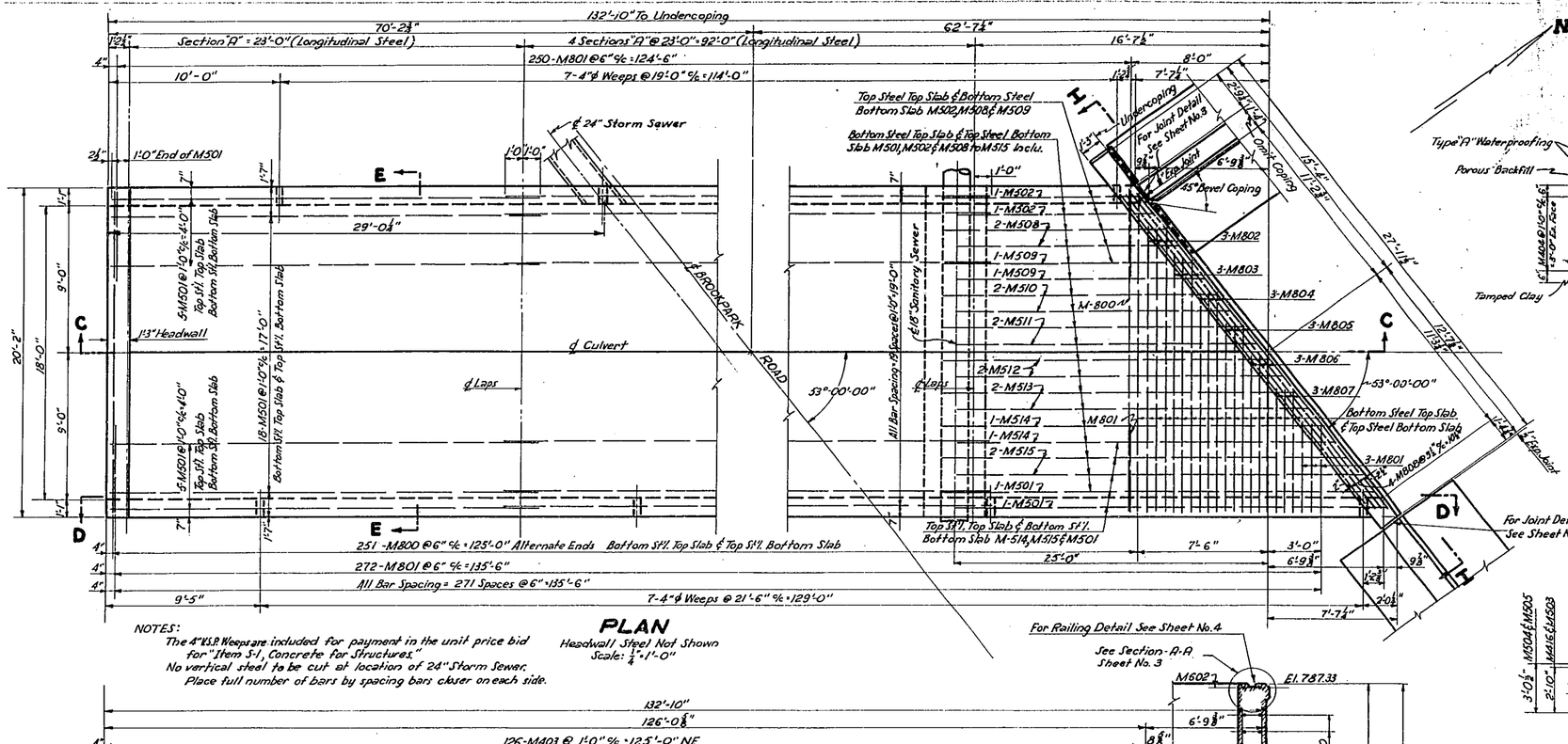
BROOKPARK ROAD
CITY OF CLEVELAND
VILLAGE OF BROOKPARK
18'x4' CONCRETE BOX CULVERT
25' WEST OF NEW ENGLE RD.

CONTOUR F-206 — REPORT NO. 6702

NO. B-191 — 1/4

SCALE Indicated — DATE

DRAWN BY — CHECKED BY — REVISED



PLAN

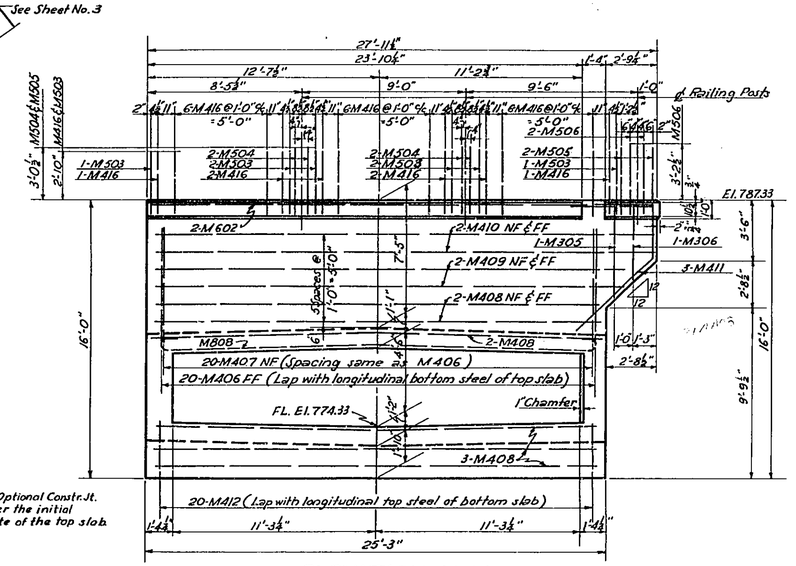
Headwall Steel Not Shown
Scale: ¼" = 1'-0"

NOTES:
The 4" V.S.P. Weeps are included for payment in the unit price bid for "Item 511, Concrete for Structures."
No vertical steel to be cut at location of 24" Storm Sewer.
Place full number of bars by spacing bars closer on each side.

SECTION E-E

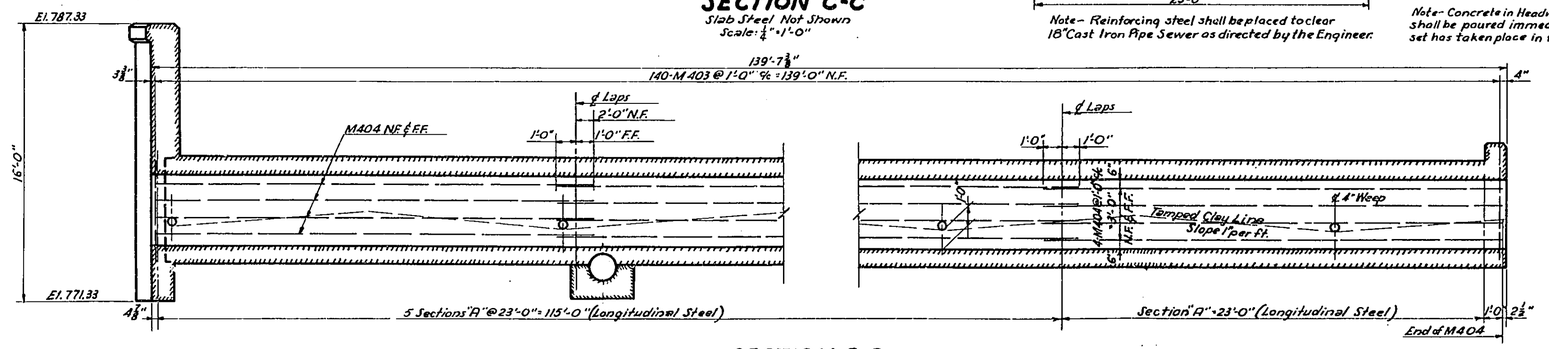
Scale ⅜" = 1'-0"

Note:
Chamfer exposed edges ¾" except as noted.



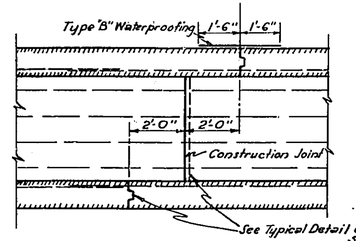
ELEVATION H-H

Scale ¼" = 1'-0"



SECTION D-D

Headwall & Slab Steel Not Shown
Scale: ¼" = 1'-0"



BARREL CONSTRUCTION JOINT

No Scale

BROOKPARK ROAD

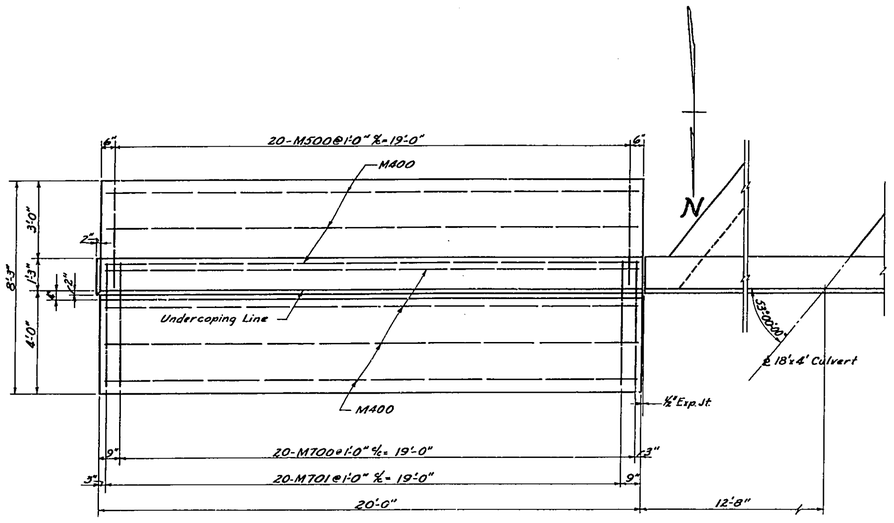
18'x4' CONCRETE BOX CULVERT
25' WEST OF NEW ENGLE RD.

CONTOUR F - 205 REPORT NO. 6702

NO. B - 191 (2/4)

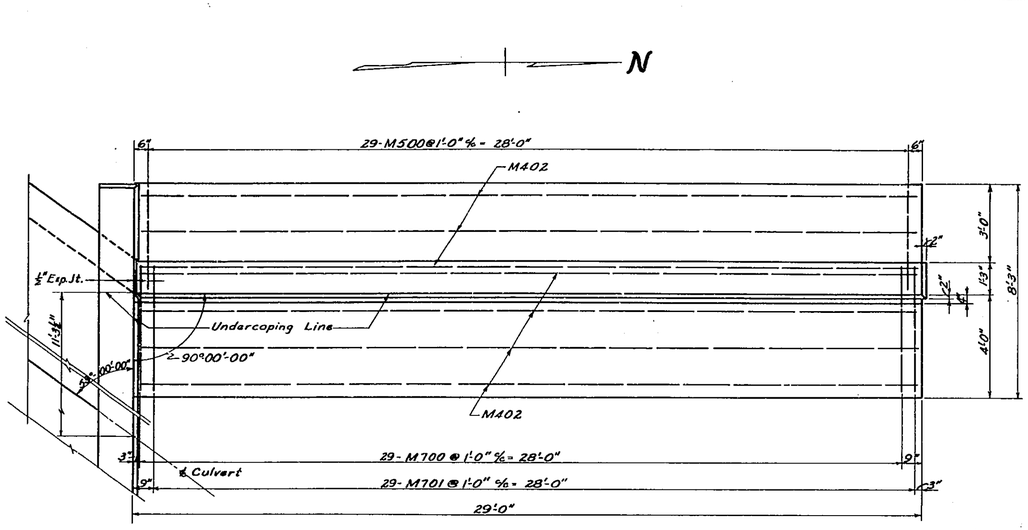
SCALE Indicated DATE 5/8/50

DRAWN BY C.V.R. CHECKED BY A.C.F. REVISED



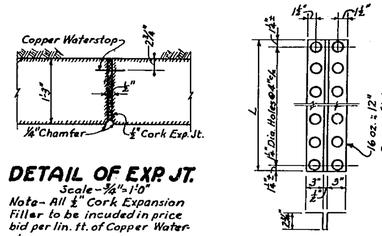
PLAN OF EAST WING-NORTH HEADWALL

Stem Reinforcing Not Shown
Scale - 3/8" = 1'-0"



PLAN OF NORTH WING - NORTH HEADWALL

Stem Reinforcing Not Shown
Scale - 3/8" = 1'-0"



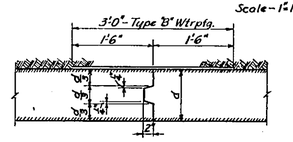
DETAIL OF EXP. JT.

Scale - 3/4" = 1'-0"

Note - All ½" Cork Expansion Filler to be incuded in price bid per lin. ft. of Copper Waterstop.

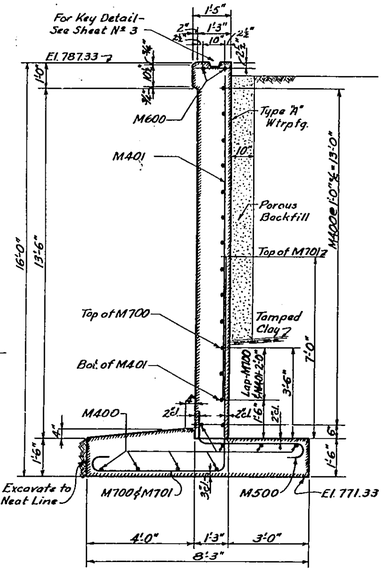
DETAIL OF COPPER WATERSTOP

Scale - 1" = 1'-0"



TYPICAL KEY CONSTR. JT.

Not to Scale

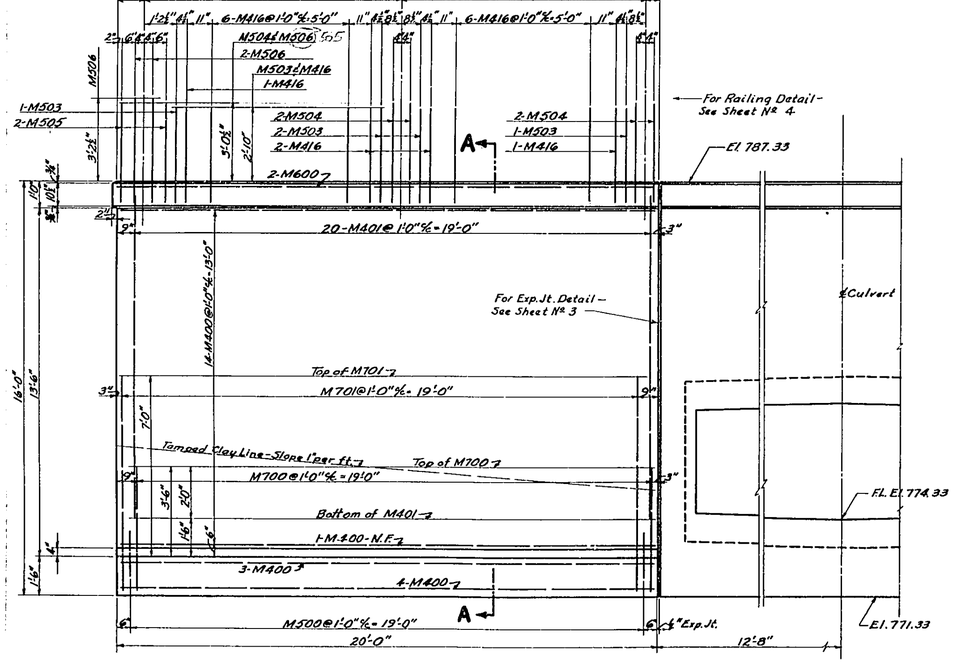


SECTION A-A As Shown

SECTION B-B As Shown Except M601 Replaces M600, M402 Replaces M400 & Omit Keyway for Railing.

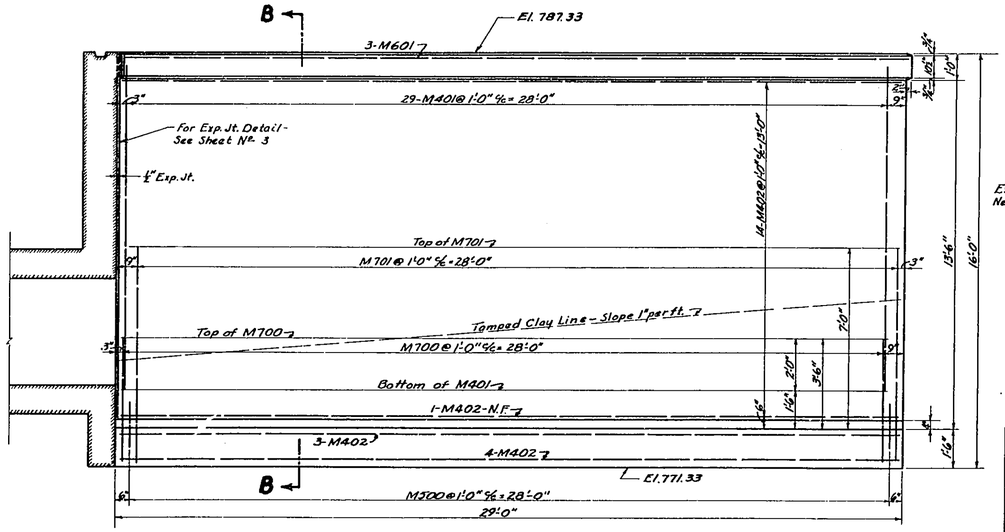
Scale - 3/8" = 1'-0"

Note - All exposed edges shall have a ¾" Chamfer unless otherwise noted.



ELEVATION OF EAST WING-NORTH HEADWALL

Scale - 3/8" = 1'-0"



ELEVATION OF NORTH WING - NORTH HEADWALL

Scale - 3/8" = 1'-0"

BROOKPARK ROAD

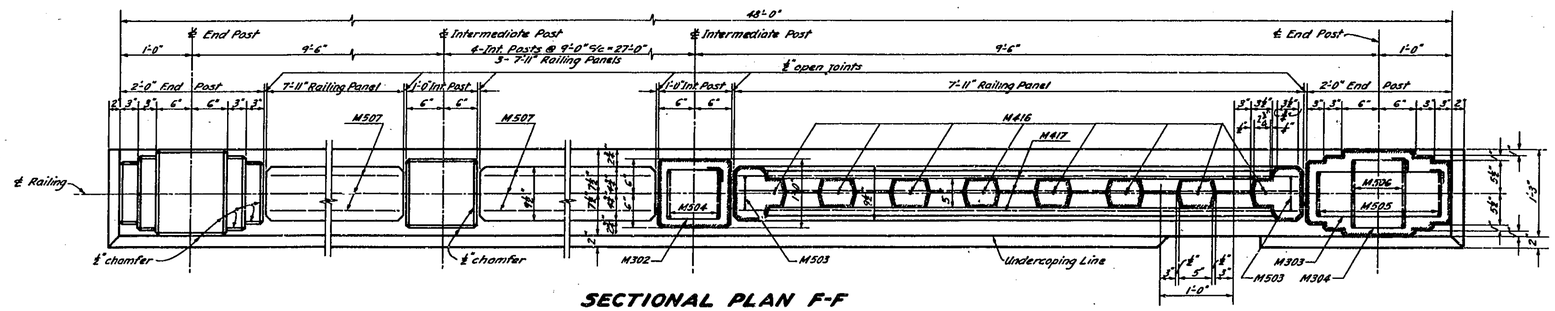
18'x4' CONCRETE BOX CULVERT
25' WEST OF NEW ENGLE RD.

CONTOUR F- 205 REPORT NO. 6702

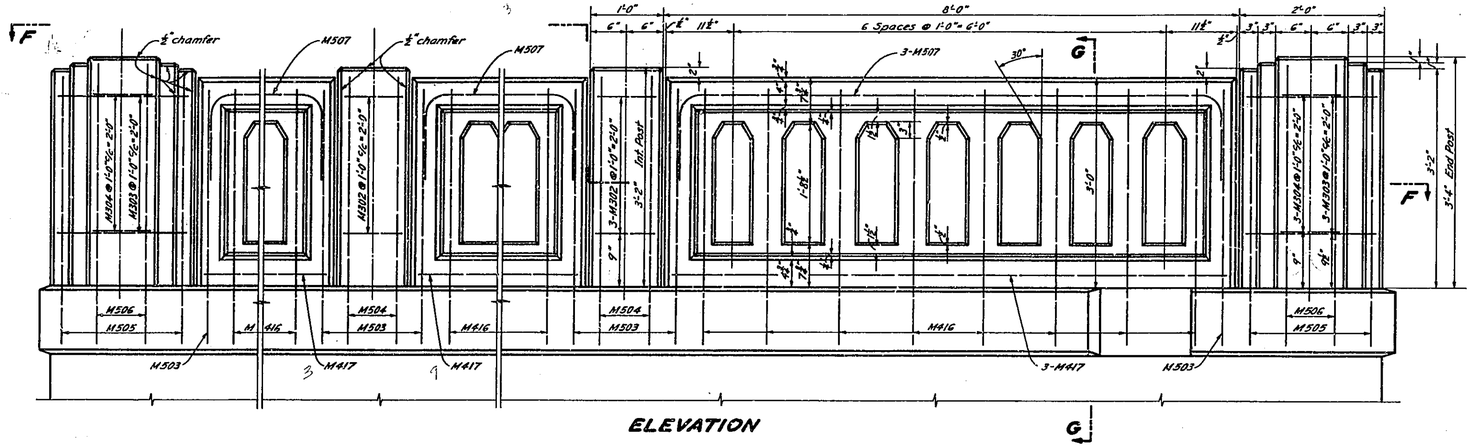
NO. B - 191 (3/4)

SCALE Indicated DATE 5/10/60

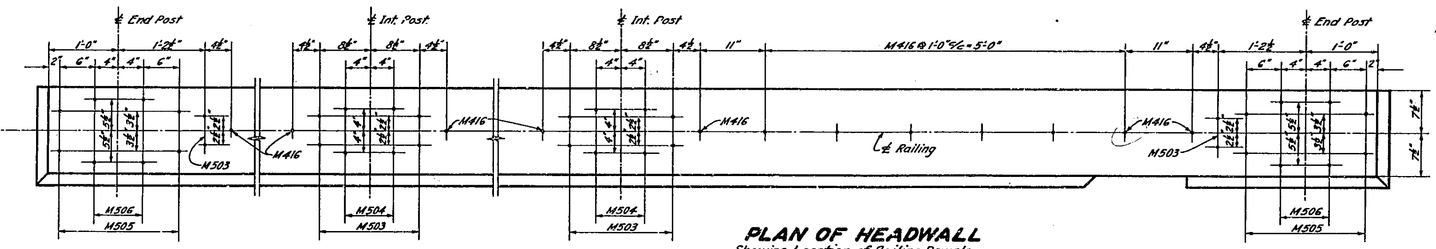
DRAWN BY R.E.K CHECKED BY C.V.P REVISED



SECTIONAL PLAN F-F



ELEVATION



PLAN OF HEADWALL
Showing Location of Railing Dowels

DETAILS OF RAILING

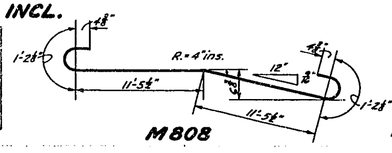
Scale : 1"=1'-0"

M700, M701

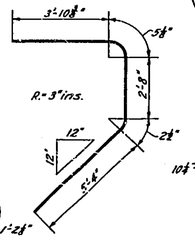
MARK	A	B
M700	4'-9"	4'-4⅝"
M701	8'-3"	7'-10⅝"

M800 & M802 TO M805 INCL.

MARK	A	B	C
M800	9'-1"	3⅜"	6¼"
M802	7'-2⅜"	4"	4⅜"
M803	5'-3"	3⅜"	3⅜"
M804	3'-3"	3⅜"	2¼"
M805	1'-3"	3⅜"	⅜"

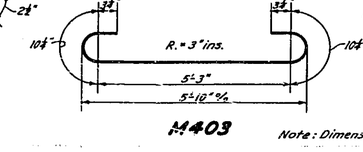


M808

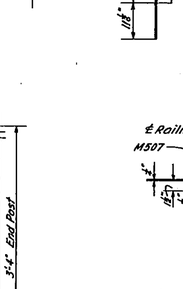


M411

M806, M807

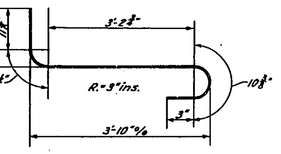


M403

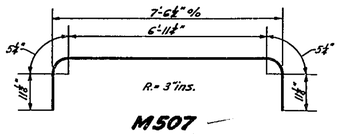


M503, M504, M505 & M506

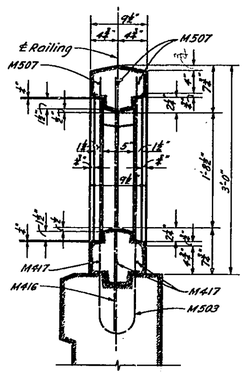
MARK	A	B	C	R
M503	3'-6⅜"	5"	7⅜"	2⅜"
M504	3'-6⅜"	6"	1'-0⅛"	3⅛"
M505	3'-7⅜"	7"	11"	3⅛"
M506	3'-7⅜"	11"	1'-5⅛"	5⅞"



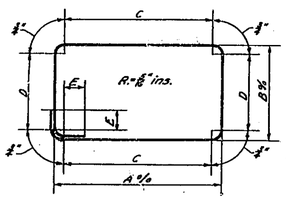
M500



M507

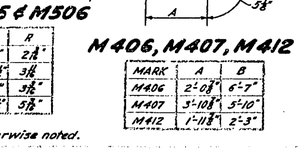


SECTION G-G

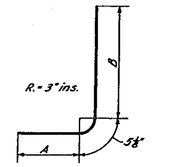


M302, M303, M304
M305, M306

MARK	A	B	C	D	E
M302	9⅞"	9⅞"	8"	6"	3⅜"
M303	1'-9⅞"	8⅜"	1'-8"	7"	3⅜"
M304	1'-0⅜"	9⅜"	11"	6"	3⅜"
M305	3'-2"	11"	5'-0⅜"	9⅞"	1⅞"
M306	4'-2"	11"	4'-0⅜"	9⅞"	1⅞"



M801



M406, M407, M412

MARK	A	B
M406	2'-0⅜"	6'-7"
M407	3'-10⅜"	5'-10"
M412	1'-11⅜"	2'-3"

Note: Dimensions are to ℄ of bar unless otherwise noted.

Note:
Railing Reinforcing Steel is included for payment in the unit price bid for "Item S-14, Railing."

REINFORCING STEEL

MARK	N#	SIZE	LENGTH	BEND	LOCATION
M800	502	1"ø	21'-10"	Shown	Top & Bottom Slabs
M801	522	"	16'-2"	"	" ℄ " "
M802	6	"	20'-0"	"	" ℄ " "
M803	6	"	18'-0"	"	" ℄ " "
M804	6	"	16'-0"	"	" ℄ " "
M805	6	"	14'-0"	"	" ℄ " "
M806	6	"	12'-0"	"	" ℄ " "
M807	6	"	10'-0"	"	" ℄ " "
M808	4	"	26'-0"	"	Top Slab - North Headwall
M700	49	⅞"ø	10'-5"	Shown	Wingwalls - Ftg & Stem
M701	49	"	13'-11"	"	" - " ℄ "
M600	2	⅜"ø	19'-9"	0	N. Headwall - E. Wing - Coping
M601	3	"	28'-9"	0	" " - N. Wing - "
M602	2	"	27'-7"	0	" " - Coping
M500	49	⅝"ø	5'-9"	Shown	Wingwalls - Ftg. & Stem
M501	286	"	25'-0"	0	Top & Bottom Slabs
M502	6	"	11'-0"	0	" ℄ " "
M503	10	"	7'-8"	Shown	Railing Panel Dowels
M504	8	"	8'-2"	"	Int. Post Dowels
M505	4	"	8'-2"	"	End " "
M506	4	"	8'-9"	"	" " "
M508	8	"	12'-6"	0	Top & Bottom Slabs
M509	6	"	14'-0"	0	" ℄ " "
M510	4	"	15'-6"	0	" ℄ " "
M511	4	"	17'-0"	0	" ℄ " "
M512	4	"	18'-6"	0	" ℄ " "
M513	4	"	20'-0"	0	" ℄ " "
M514	6	"	21'-6"	0	" ℄ " "
M515	8	"	23'-0"	0'	" ℄ " "
M400	22	⅝"ø	19'-7"	0	N. Headwall - E. Wing - Ftg. & Stem
M401	49	"	12'-6"	0	" " - E. & N. Wings - Stem
M402	22	"	28'-7"	0	" " - N. Wing - Ftg. & Stem
M403	266	"	7'-6"	Shown	Sidwalls
M404	88	"	25'-0"	0	"
M405	8	"	11'-0"	0	"
M406	20	"	9'-1"	Shown	N. Headwall
M407	20	"	10'-2"	"	" "
M408	9	"	24'-3"	0	" "
M409	4	"	25'-6"	0	" "
M410	4	"	27'-3"	0	" "
M411	3	"	12'-6"	Shown	" "
M412	20	"	4'-8"	"	" " - Cutoff
M416	40	"	3'-9"	0	Railing Dowels
M305	1	⅜"ø	12'-4"	Shown	N. Headwall
M306	1	"	10'-4"	"	" "

RAILING REINFORCING STEEL

MARK	N#	SIZE	LENGTH	BEND	LOCATION
M507	15	⅝"ø	9'-8"	Shown	Railing Panels
M417	15	⅝"ø	7'-9"	0	Railing Panels
M302	12	⅜"ø	3'-6"	Shown	Int. Post Dowel Ties
M303	6	"	5'-4"	"	End " " "
M304	6	"	4'-0"	"	" " " "

BROOKPARK ROAD

18 x 4 CONCRETE BOX CULVERT
25 WEST OF NEW ENGLE RD.
CONTOUR F-205 REPORT NO. 6702

NO.B-191 (4/4)

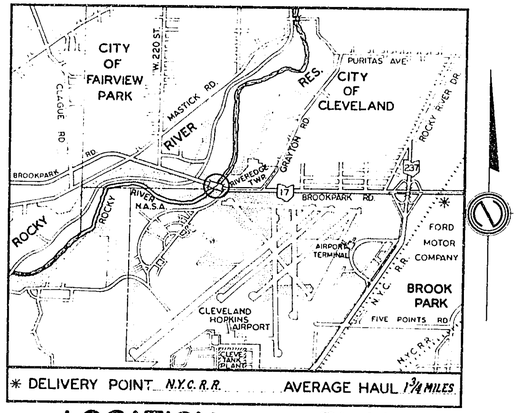
SCALE Indicated DATE 5-10-50 R.E.I.
DRAWN BY C.F.S. CHECKED BY C.V.P. REVISED

2	OHIO		

CUYAHOGA COUNTY
CUY.-17-5.82

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

CUY.-17-5.82
CUYAHOGA COUNTY
CITY OF FAIRVIEW PARK
RIVEREDGE TOWNSHIP



LOCATION PLAN

SCALE IN MILES

0 3000 FT 6000 FT
1 MILE

PORTION TO BE IMPROVED
STRUCTURE Nº CUY 17-0582
STATE ROADS
OTHER ROADS

SCALES
DETAILS AND PLAN: (AS INDICATED ON SHT. 3 & 4)

CONVENTIONAL SIGNS

CORPORATION LINE
TOWNSHIP LINE
CENTER LINE
RAILROAD

INDEX OF SHEETS

LINE DATA

LENGTH OF PROJECT - 0.00 LIN. FT. OR 0.00 MILES
BEGIN WORK STA. 0+00
END WORK STA. 19+17.8
NET LENGTH OF WORK = 1917.8 LIN. FT. = 0.3632 MILES

SUPPLEMENTAL STANDARD CONSTRUCTION DRAWINGS			
MC-3	5-1-66		

SUPPLEMENTAL SPECIFICATIONS			

1967 SPECIFICATIONS

The Standard Specifications of the State of Ohio Department of Highways including changes and Supplemental Specifications listed in the proposal shall govern this improvement.

The right of way for this improvement will be provided by the State of O

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 the maintenance and safety of traffic will be as set forth on the plans and estimates.

Approved _____
Date _____ Division Deputy Director

Approved _____
Date _____ Engineer of Bridges

Approved _____
Date _____ Engineer of Location and Design

Approved _____
Date _____ Deputy Director of Design and Construction

Approved _____
Date _____ Deputy Director of Right of Way

Approved _____
Date _____ Deputy Director of Planning and Programming

Approved _____
Date _____ First Assistant Director

Approved _____
Date _____ Director of Highways

Approved _____
Date _____ County Engineer

BOARD OF COMMISSIONERS - CUYAHOGA COUNTY

Date

FILE Nº CUYAHOGA COUNTY CUY.-17-5.82
DATE OF LETTING 1967
CONTRACT Nº

TITLE SHEET

GENERAL NOTES

SHEET NO.	STATE	PROJECT NO.	
2	OHIO		

CUYAHOGA COUNTY
CUY. 17 - 5.82

ITEM 614 - MAINTAINING TRAFFIC

UNDER THIS ITEM, THE CONTRACTOR SHALL MAINTAIN AND PROTECT TRAFFIC, BY THE USE OF LABOR, EQUIPMENT AND MATERIALS ON PORTIONS OF THE BRIDGE AND THE BRIDGE APPROACHES IN WHICH NO WORK IS BEING PERFORMED AND WHICH WILL REMAIN IN FULL SERVICE. IN GENERAL, IT IS INTENDED THAT THE CURBS ON EACH SIDE OF THE BRIDGE SHALL BE CONSTRUCTED EITHER PRIOR TO THE WORK ON THE EXPANSION JOINTS IN THE ADJOINING CURB LANE OR SIMULTANEOUSLY THEREWITH. IN ANY CASE HOWEVER, ONLY ONE SIDEWALK AND THE ADJOINING CURB LANE SHALL BE BLOCKED AT ANY TIME. IN THIS CONNECTION, IT IS EMPHASIZED THAT ONLY ONE TRAFFIC LANE ON THE ROADWAY OF THE BRIDGE AND ON THE APPROACHES SHALL BE CLOSED TO TRAFFIC AT ANY TIME DURING THE ENTIRE CONSTRUCTION.

THE CONTRACTOR SHALL PROVIDE SUITABLE BARRICADES OR CHANNELIZING DEVICES ON THE BRIDGE AND APPROACHES TO DIRECT THE FLOW OF VEHICULAR TRAFFIC INTO A SINGLE LANE WESTBOUND AND INTO TWO LANES EASTBOUND DURING THE PEAK HOUR OF THE MORNING. SIMILARLY, THE CHANNELIZATION OF THE TRAFFIC SHALL BE ACCOMPLISHED IN THE REVERSE DIRECTION DURING THE PEAK HOURS IN THE EVENING. MOREOVER, THE CONTRACTOR SHALL PROVIDE AN ADEQUATE NUMBER OF FLAGMEN DURING THE ABOVE NOTED PEAK INTERVALS TO INSURE A CONTINUOUS AND UNINTERRUPTED SAFE FLOW OF TRAFFIC. FLAGMEN IN ALL OTHER TRAFFIC LANES NEEDED HEREIN SHALL PROMPTLY RESTORE OR REPOSITION ANY TRAFFIC DEVICES WHICH MAY BE KNOCKED DOWN OR DISPLACED BY CARELESS MOTORISTS. THE ACTUAL RANGE OF HOURS DURING WHICH THE FLAGMEN SHALL BE EMPLOYED SHALL BE DETERMINED BY THE ENGINEER.

THE CONTRACTOR'S ATTENTION IS SPECIALLY DIRECTED TO THE PROVISIONS OF PARAGRAPH 614.3 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS RELATIVE TO TRAFFIC CONTROL WITH PARTICULAR ATTENTION TO LIGHTING AND REFLECTORIZATION OF BARRICADES, TRAFFIC DEVICES, EQUIPMENT AND MATERIALS STORED ON THE STRUCTURE BETWEEN THE HOURS OF SUNSET AND SUNRISE.

THE COST OF MAINTAINING TRAFFIC, INCLUDING PROVISION OF LIGHTS, SIGNS, BARRICADES, WATCHMEN AND FLAGMEN SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - "MAINTAINING TRAFFIC."

SPECIFICATION - ITEM SPECIAL - PATCHING CONCRETE SIDEWALKS USING EPOXY MORTAR

1. DESCRIPTION. THIS ITEM CONSISTS OF THE REMOVAL OF ALL LOOSE AND DISINTEGRATED CONCRETE, THE PREPARATION OF THE SURFACE, APPLICATION OF AN EPOXY RESIN TACK COAT, THE FURNISHING OF THE EPOXY MATERIAL AND SAND, AND THE MIXING, PLACING AND FINISHING OF THE EPOXY MORTAR PATCHES.

2. EXAMINATION OF PLANS, SPECIFICATIONS, SITE. THE BIDDER SHALL EXAMINE THE SITE OF THE WORK AND FAMILIARIZE HIMSELF WITH THE MATERIALS SPECIFIED AND THEIR HANDLING CHARACTERISTICS.

3. MATERIALS.

   (A) EPOXY RESIN. SHALL BE A POLYAMIDE-CURED TYPE MEETING THE REQUIREMENTS OF THE INTERIM GUIDE SPECIFICATIONS FOR EPOXY RESIN SYSTEMS - AASHO DESIGNATION: M 200 - 63 I-TYPE B. IT SHALL BE FURNISHED IN TWO COMPONENTS FOR COMBINING IMMEDIATELY PRIOR TO USE IN ACCORDANCE WITH THE WRITTEN INSTRUCTIONS OF THE MANUFACTURER.

   (B) SAND. THE SAND FOR EPOXY MORTAR SHALL BE A SILICA SAND, PREDOMINANTLY ROUND PARTICLES, 100% PASSING THE NO. 16 SIEVE AND NOT MORE THAN 5% PASSING THE NO. 100 SIEVE. IT SHALL BE CLEAN, SURFACE DRY AND INERT. (WILL NOT AFFECT CURE RATE OR PHYSICAL PROPERTIES OF THE EPOXY RESIN).

4. QUALIFICATION OF MATERIALS.

   (A) ALL MATERIALS SHALL BE APPROVED BY THE COUNTY ENGINEER'S TESTING LABORATORY.

   (B) WITHIN 10 DAYS AFTER THE AWARDING OF THE CONTRACT, THE CONTRACTOR SHALL SUBMIT TO THE COUNTY ENGINEER'S TESTING LABORATORY A CERTIFIED TEST REPORT FROM THE MANUFACTURER OR AN APPROVED INDEPENDENT TESTING LABORATORY WHICH ESTABLISHES THAT THE EPOXY RESIN SYSTEM MEETS THE REQUIREMENTS OF SECTION 3 (A) OF THESE SPECIFICATIONS.

5. REMOVAL OF DISINTEGRATED CONCRETE. ALL LOOSE AND DISINTEGRATED CONCRETE SHALL BE REMOVED FROM THE AREAS TO BE REPAIRED IN SUCH A MANNER AND TO SUCH AN EXTENT AS TO EXPOSE A SOUND CONCRETE SURFACE. THE WORK SHALL BE DONE IN SUCH A MANNER AS NOT TO DAMAGE THE CONCRETE THAT IS TO REMAIN.

6. PREPARATION OF SURFACE. AFTER ALL DISINTEGRATED AND LOOSE CONCRETE HAS BEEN REMOVED, THE SURFACE SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, GREASE, OIL, OR OTHER FOREIGN MATERIALS BY THE USE OF WATER AND/OR AIR UNDER PRESSURE AND SUCH OTHER METHODS AS ARE NECESSARY TO SECURE SATISFACTORY RESULTS. EXPOSED STEEL SHALL BE WIRE BRUSHED TO REMOVE ALL LOOSE RUST.

7. MIXING AND APPLICATIONS.

   (A) UNLESS OTHERWISE DIRECTED BY THE ENGINEER, WORK SHALL PROCEED ONLY WHEN THE ATMOSPHERIC TEMPERATURE IS 60° F. OR ABOVE. THE SURFACE SHALL BE DRY BEFORE THE EPOXY RESIN IS APPLIED.

   (B) THE PROPORTIONS OF THE POLYAMIDE CURING COMPOUND AND THE EPOXY RESIN SHALL BE IN ACCORDANCE WITH THE WRITTEN INSTRUCTIONS OF THE MANUFACTURER.

   (C) THE EPOXY MORTAR SHALL CONSIST OF 1 PART EPOXY LIQUID (EPOXY RESIN AND POLYAMIDE CURING COMPOUND) TO NOT MORE THAN 4½ PARTS SAND (BY VOLUME).

   (D) THE TIME OF MIXING AND SIZE OF BATCH SHALL BE AS RECOMMENDED BY THE MANUFACTURER OF THE EPOXY RESIN.

   (E) TACK COAT. A TACK COAT USING THE CLEAR OR LIGHT AMBER POLYAMIDE-CURE EPOXY RESIN MEETING THE REQUIREMENTS OF AASHO DESIGNATION: M 200 - 63 I-TYPE B SHALL BE APPLIED TO THE CONCRETE SURFACE IMMEDIATELY BEFORE PLACING THE EPOXY MORTAR. THE EPOXY MORTAR SHALL BE APPLIED WHILE THE TACK COAT IS STILL LIQUID. IF THE EPOXY RESIN TACK COAT HAS REACTED SUFFICIENTLY TO CAUSE IT TO LOSE ITS LIQUID STATE, AN ADDITIONAL APPLICATION OF THE EPOXY RESIN SHALL BE MADE TO INSURE GOOD BOND.

   (F) THE EPOXY MORTAR MAY BE APPLIED BY TROWEL OR SHOVEL AND SHALL BE TO GRADE AND FINISHED BY SCREEDING, FLOATING OR TROWELLING AS DIRECTED BY THE MANUFACTURER OR SUPPLIER OF THE EPOXY MATERIAL.

   (G) THE AREAS TO BE PATCHED SHALL BE AS DIRECTED BY THE ENGINEER.

8. HANDLING PRECAUTIONS. EPOXY COMPOUNDS ARE TOXIC AND MUST BE HANDLED WITH CARE TO PREVENT SKIN IRRATION, SUCH AS BURNS, RASHES, ITCHES, ETC. THE CONTRACTOR SHOULD FOLLOW THE INSTRUCTIONS OF THE MANUFACTURER TO PREVENT SUCH A CONDITION.

9. METHOD OF MEASUREMENT. THE QUANTITY TO BE PAID FOR SHALL BE THE ACTUAL AREA IN SQUARE FEET OF THE EXPOSED SURFACES OF ALL COMPLETED PATCHES, IRRESPECTIVE OF THE DEPTH OR THICKNESS OF THE PATCH.

10. BASIS OF PAYMENT. THE NUMBER OF SQUARE FEET MEASURED AS PROVIDED UNDER "METHOD OF MEASUREMENT" SHALL BE PAID AT THE UNIT PRICE BID, WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR REMOVING DISINTEGRATED CONCRETE, PREPARING THE SURFACE AS SPECIFIED HEREIN, APPLICATION OF THE EPOXY RESIN TACK COAT, FURNISHING, MIXING AND PLACING ALL MATERIALS NECESSARY TO COMPLETE THIS WORK.

BONDING NEW CONCRETE TO OLD USING AN EPOXY RESIN ADHESIVE

1. REMOVAL OF DISINTEGRATED CONCRETE. ALL LOOSE AND DISINTEGRATED CONCRETE SHALL BE REMOVED FROM THE AREAS TO BE REPAIRED IN SUCH A MANNER AND TO SUCH AN EXTENT AS TO EXPOSE A SOUND CONCRETE SURFACE. THE WORK SHALL BE DONE IN SUCH A MANNER AS NOT TO DAMAGE THE CONCRETE THAT IS TO REMAIN.

2. PREPARATION OF SURFACE. AFTER ALL DISINTEGRATED AND LOOSE CONCRETE HAS BEEN REMOVED, THE SURFACE SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, GREASE, OIL, OR OTHER FOREIGN MATERIALS BY THE USE OF WATER AND/OR AIR UNDER PRESSURE AND SUCH OTHER METHODS AS ARE NECESSARY TO SECURE SATISFACTORY RESULTS. EXPOSED STEEL SHALL BE WIRE BRUSHED TO REMOVE ALL LOOSE RUST.

3. EPOXY ADHESIVE. SHALL BE A POLYAMIDE-CURED TYPE MEETING THE REQUIREMENTS OF THE INTERIM GUIDE SPECIFICATIONS FOR EPOXY RESIN SYSTEMS - AASHO DESIGNATION: M 200 - 63 I-TYPE B, EXCEPT THAT IT SHALL BE FORMULATED TO MAXIMIZE SAGGING AND RUN-OFF ON VERTICAL SURFACES. IT SHALL BE FURNISHED IN TWO COMPONENTS FOR COMBINING IMMEDIATELY PRIOR TO USE IN ACCORDANCE WITH THE WRITTEN INSTRUCTIONS OF THE MANUFACTURER.

4. QUALIFICATION OF THE EPOXY RESIN SYSTEM. WITHIN 10 DAYS AFTER THE DATE OF THE CONTRACT, THE CONTRACTOR SHALL SUBMIT TO THE COUNTY ENGINEER'S TESTING LABORATORY A CERTIFIED TEST REPORT FROM THE MANUFACTURER OR AN APPROVED INDEPENDENT TESTING LABORATORY WHICH ESTABLISHES THAT THE EPOXY RESIN SYSTEM MEETS THE REQUIREMENTS OF SECTION 3 OF THESE SPECIFICATIONS.

5. APPLICATION.

   (A) UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THE EPOXY ADHESIVE SHALL BE APPLIED ONLY WHEN THE ATMOSPHERIC TEMPERATURE IS 60° F. OR ABOVE. THE CONCRETE SURFACE SHALL BE DRY BEFORE THE EPOXY RESIN IS APPLIED.

   (B) THE PROPORTIONS OF THE EPOXY RESIN AND THE POLYAMIDE CURING COMPOUND SHALL BE IN ACCORDANCE WITH THE WRITTEN INSTRUCTIONS OF THE MANUFACTURER.

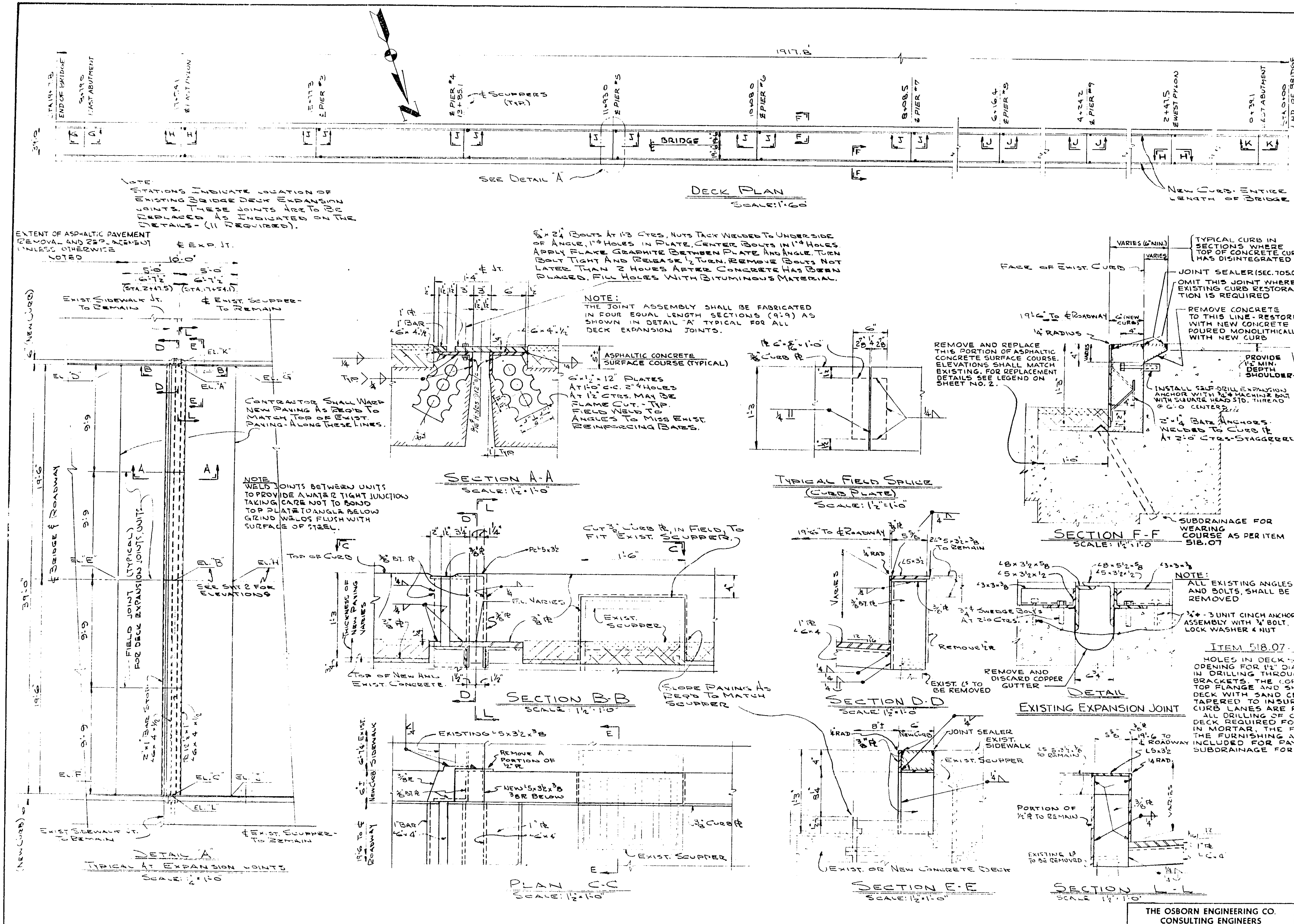
   (C) THE EPOXY RESIN SHALL BE APPLIED BY BRUSH OR ROLL. IF THE SURFACE IS ROUGH OR IRREGULAR, THE RESIN SHOULD BE WORKED IN WELL TO FILL ALL VOIDS.

   (D) THE PLASTIC PORTLAND CEMENT CONCRETE SHALL BE PLACED WHILE THE EPOXY COMPOUND IS STILL LIQUID. IF THE EPOXY RESIN HAS REACTED SUFFICIENTLY TO CAUSE IT TO LOSE ITS LIQUID STATE AN ADDITIONAL APPLICATION OF THE EPOXY RESIN SHALL BE MADE TO INSURE GOOD BOND.

6. HANDLING PRECAUTIONS. EPOXY COMPOUNDS ARE TOXIC AND MUST BE HANDLED WITH CARE TO PREVENT SKIN IRRITATION, SUCH AS BURNS, RASHES, ITCHES, ETC. THE CONTRACTOR SHOULD FOLLOW THE INSTRUCTIONS OF THE MANUFACTURER TO PREVENT SUCH A CONDITION.

2	OHIO		

CUYAHOGA COUNTY
CUY.-17-582



ITEM 518.07 - SUBDRAINAGE FOR WEARING ...

HOLES IN DECK SLAB TO BE DRILLED TO PROVIDE A ... OPENING FOR 1½" DIAMETER COPPER TUBES ... IN DRILLING THROUGH THE SLAB TO AVOID ... BRACKETS. THE COPPER TUBES SHALL BE PROVIDED ... TOP FLANGE AND SHALL BE SET IN OPENINGS IN THE EXISTING DECK WITH SAND CEMENT MORTAR. THE HOLES SHALL BE ... TAPERED TO INSURE THE RETENTION OF THE MORTAR WHEN THE CURB LANES ARE RESTORED TO SERVICE.

ALL DRILLING OF CONCRETE TOGETHER WITH THE CHIPPING ... DECK REQUIRED FOR THE SETTING OF THE COPPER TUBE ... IN MORTAR, THE FURNISHING AND SETTING OF COPPER ... THE FURNISHING AND INSTALLATION OF THE STEEL ANGLES ARE INCLUDED FOR PAYMENT IN THE UNIT PRICE BID FOR ITEM ... SUBDRAINAGE FOR WEARING COURSE.

APPROVED: ______ STRUCTURAL CONSULTANT
DATE: ______

APPROVED: ______ CHIEF ENGINEER
DATE: ______

APPROVED: ______ CHIEF DEPUTY ENGINEER
DATE: ______

APPROVED: ______ COUNTY ENGINEER
DATE: ______

BOARD OF COMMISSIONE[RS]

APPROVED: ______ COUNTY COMMISSIONER
DATE: ______

APPROVED: ______ COUNTY COMMISSIONER
DATE: ______

APPROVED: ______ COUNTY COMMISSIONER
DATE: ______

JOURNAL ____ PAGE ____ DATE ____

VOID

THE OSBORN ENGINEERING CO.
CONSULTING ENGINEERS
CLEVELAND, OHIO

STATE HIGHWAY BRIDGE Nº CUY-17-...

BROOKPARK ROAD

RIVER EDGE TOWNSHIP
CITY OF FAIRVIEW PARK
BRIDGE OVER ROCKY RIVER
DECK REPAIRS

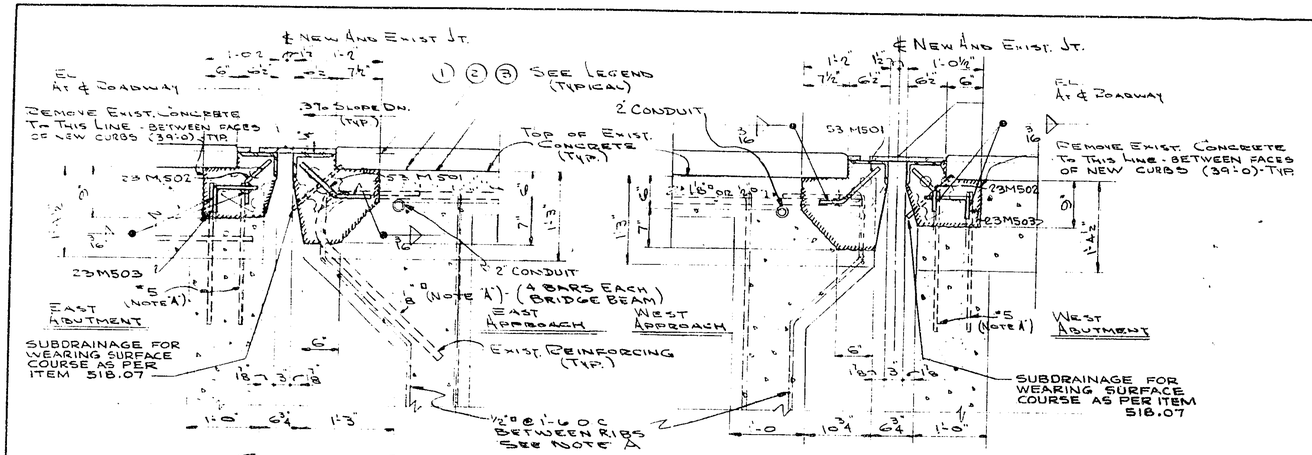
REPORT NO. 6924 BRIDGE NO.

NO. B-191

3/4

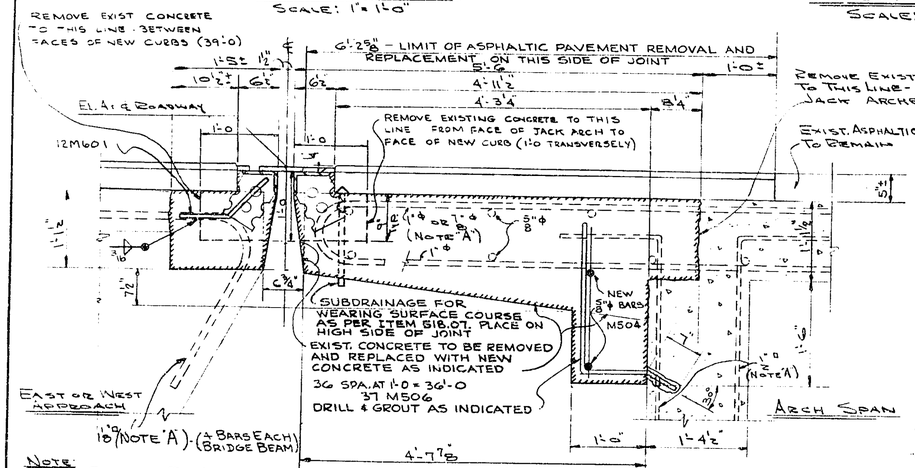
SCALE AS NOTED DATE ...

DRAWN BY RHN CHECKED BY S.H. REVISED ...



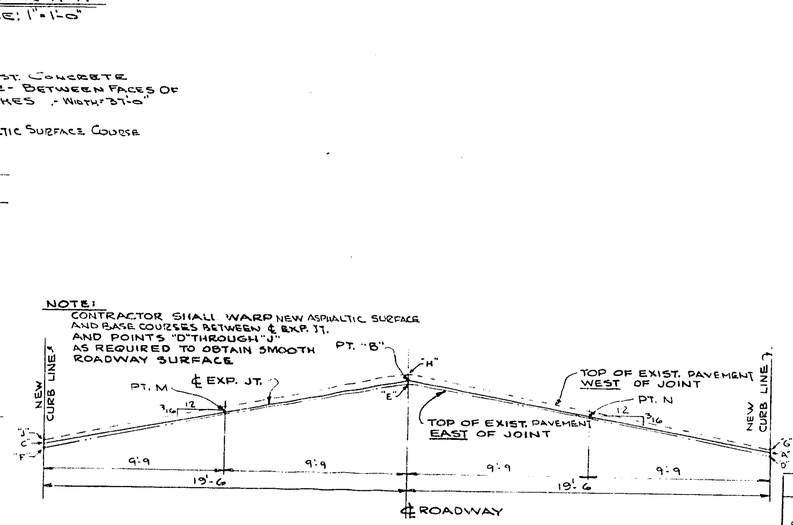
Section G.G
Scale: 1" = 1'-0"

Section K.K
Scale: 1" = 1'-0"



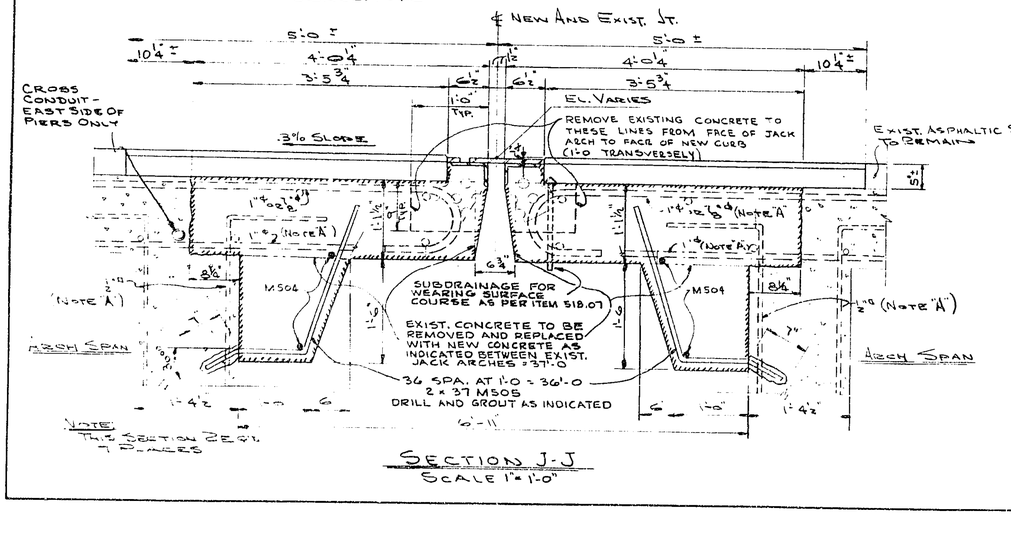
Note: This Section Req'd 2 Places

Section H-H
Scale: 1" = 1'-0"



NOTE:
CONTRACTOR SHALL WARP NEW ASPHALTIC SURFACE AND BASE COURSES BETWEEN ℄ EXP. JT. AND POINTS "D" THROUGH "J" AS REQUIRED TO OBTAIN SMOOTH ROADWAY SURFACE

Typical Cross Section at Expansion Jt.
(See Table of Elevations)
(No Scale)



Note: This Section Req'd 2 Places

Section J-J
Scale 1" = 1'-0"

Pavement Replacement Legend

① ITEM 404 - 1" ASPHALT CONCRETE SURFACE COURSE

② ITEM 403 - VARIABLE THICKNESS ASPHALT CONCRETE INTERMEDIATE COURSE

③ ITEM 512 - TYPE "C" WATERPROOFING - APPLY TO ALL SURFACES CONTAINING ASPHALTIC CONCRETE.

Note "A"
EXISTING REINFORCING BARS SHALL BE RETAINED, IN ORIGINAL POSITION, CLEANED AND REUSED IN NEW CONCRETE.

NOTE "B"
All required cleaning of existing reinforcing bars which are retained in the new construction as well as all designated lap welding of new reinf. steel to existing bars are included for payment in the unit price per lb. bid for "Item 509 - Reinforcing Steel - 709.01 - including Welding."

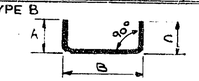
REINFORCING BAR LIST

MARK	QUAN	SIZE	LENGTH	TYPE
M501	106	#5	1'-2"	A
M502	46	#5	9"	A
M503	46	#5	1'-0"	B
M504	32	#5	11'-0	B
M505	518	#5	3'-9"	C
M506	74	#5	3'-6½"	C
M601	24	#6	1'-6"	A

TYPE A

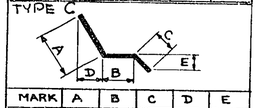
MARK	A	B	C	D
M501	6"	8"	6"	6"
M502	4"	5"	3½"	3½"
M601	9"	9"	6½"	6½"

TYPE B



MARK	A	B	C
M503	4"	8"	0"
M504	1'-0"	9'-0"	1'-0"

TYPE C



MARK	A	B	C	D	E
M505	2'-4"	11"	6"	9"	3½"
M506	2'-2"	10½"	6"	0"	3½"

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

CUYAHOGA COUNTY
CUY. - 17 - 5.82

ESTIMATED QUANTITIES

ITEM	ESTIMATED QUANTITIES	UNIT	DESCRIPTION
509	2933	LB.	REINFORCING STEEL 709.01 INT. GRADE INCLUDING WELDING
513	40839	LB.	STRUCTURAL STEEL - EXPANSION DAMS INCLUDING FIELD PAINTING
513	79127	LB.	STRUCTURAL STEEL - CURB RS AND ANCHORS INCLUDING FIELD PAINTING
SPECIAL	G42	UNIT	¾" SELF DRILLING EXPANSION TYPE - CONCRETE ANCHORS, INCLUDING ¾ø ST MACHINE BOLTS COMPLETE IN PLACE AS PER PLAN.
202	1077	SQ.YD.	EXISTING WEARING COURSE REMOVE AND DISPOSED OF
202	LUMP		PORTIONS OF EXISTING STRUCTURES REMOVED AND DISPOSED OF
404	23	CU.YD.	1" ASPHALT CONCRETE SURFACE COURSE AS PER PLAN
403	92	CU.YD.	ASPHALT CONCRETE INTERMED. COURSE, VARIABLE THICKNESS, AS PER PLAN
512	7672	LIN. FT.	HOT APPLIED JOINT SEALER - 705.01
518	4265	LIN. FT.	SUBDRAINAGE FOR WEARING COURSE
SPECIAL	5000	SQ.FT.	PATCHING CONCRETE SIDEWALKS USING EPOXY MORTAR AND EPOXY COMPOUND TACK COAT
511	158	CU.YD.	CLASS "C" CONCRETE AT EXPANSION DAMS INCL. EPOXY RESIN ADHESIVE BONDING
511	87	CU.YD.	CLASS "C" CONCRETE FOR NEW CURB INCLUDING EPOXY RESIN ADHESIVE BONDING
510	592	EACH	DOWEL HOLES
512	828	SQ.YD.	WATERPROOFING TYPE "C" FOR CONCRETE DE
614	LUMP	LUMP SUM	MAINTAINING TRAFFIC

TABLE OF ELEVATIONS

STATION	TOP OF STEEL AT EXPANSION JT. C	M	B	N	A	TOP OF PAVEMENT EAST & WEST OF JOINT F	E	D	J	H	G	TOP CU K
0+39.1	-0.30	-0.15	0.00	-0.15	-0.30	-0.28	+0.01	-0.27	-0.26	+0.04	-0.2	+0.66
2+47.5	-0.30	-0.15	0.00	-0.15	-0.30	-0.31	+0.02	-0.31	-0.29	+0.03	-0.32	+0.63
4+24.2	-0.30	-0.15	0.00	-0.15	-0.30	-0.35	+0.01	-0.27	-0.36	+0.04	-0.32	+0.63
6+16.4	-0.30	-0.15	0.00	-0.15	-0.30	-0.33	-0.02	-0.39	-0.35	+0.06	-0.39	+0.63
8+08.5	-0.30	-0.15	0.00	-0.15	-0.30	-0.30	-0.02	-0.26	-0.3	+0.06	-0.29	+0.70
10+08.0	-0.30	-0.15	0.00	-0.15	-0.30	-0.33	+0.02	-0.33	-0.31	+0.02	-0.35	+0.61
11+93.0	-0.30	-0.15	0.00	-0.15	-0.30	-0.34	-0.01	-0.28	-0.33	+0.05	-0.31	+0.64
13+85.1	-0.30	-0.15	0.00	-0.15	-0.30	-0.28	-0.01	-0.27	-0.30	+0.06	-0.29	+0.68
15+77.3	-0.30	-0.15	0.00	-0.15	-0.30	-0.25	0.00	-0.32	-0.30	+0.04	-0.27	+0.67
17+54.1	-0.30	-0.15	0.00	-0.15	-0.30	-0.26	+0.02	-0.26	-0.29	+0.03	-0.29	+0.65
18+79.0	-0.30	-0.15	0.00	-0.15	-0.30	-0.30	+0.02	-0.29	-0.27	+0.03	-0.26	+0.65

NOTE: 1) SEE DETAIL "A" ON SHT. #1 FOR LOCATION OF ELEVATION POINTS.
2) BASIC ELEVATION = 0.00 AT ℄ OF EACH JOINT.

Note "B" Cont.
Welding of Reinforcing Steel shall be in accordance with the provisions of the current edition of the American Welding Society's Specification, AWS D 12.1, Welding Reinforcing Steel, Metal Inserts and Connections in Reinforced Concrete Construction.

THE OSBORN ENGINEERING CO.
CONSULTING ENGINEERS
CLEVELAND, OHIO

STATE HIGHWAY BRIDGE № CUY.-17-0

BROOKPARK ROAD

RIVER EDGE TOWNSHIP
CITY OF FAIRVIEW PARK
BRIDGE OVER ROCKY RIVER
DECK REPAIRS

REPORT NO. 6924

BRIDGE N

NO. B-191

SCALE AS NOTED DATE 3-23-60

DRAWN BY RMN CHECKED BY S.H. REVISED

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