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MICROFILMED JUL 5 1978
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CUYAHOGA COUNTY CUY-480-8.54	OHIO	1 / 346
I-480-4(35)162	FHWA REGION 5 / FEDERAL PROJECT	

I-480-4(35)162

ISSUE 1

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

CUY-480-8.54

CUYAHOGA COUNTY

CITY OF CLEVELAND & CITY OF BROOKPARK

GRADE SEPARATION WITH THE CONSOLIDATED RAIL CORPORATION

DESIGN DESIGNATION

1978 ADT	=	62,000
1998 ADT	=	82,716
DHV	=	4,950
D	=	67%
T	=	4%
V	=	60MPH

CONVENTIONAL SIGNS

Proposed Sewer
Temporary R/W — T
Work Agreement Line
Original Lot Line — O.L. 78 — O.L. 79
Water Line — W
Water Valve
Water Hydrant
Gas Line — G
Gas Valve
Telephone Underground — T
Electric Underground — E
Corporation Line
Fence Line (existing) — (proposed)
Center Line — 352 — 353
Trees, Stumps, (to be removed)
Utility Poles: Telephone, Power, Light.

Existing Sewer
Existing Manhole
Proposed Manhole
Existing Catch Basin
Proposed Catch Basin
Manhole Abandoned
Catch Basin Abandoned
Existing Retaining Wall
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)

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SHEETS ADDED TO PLAN

NOS. 41A, 41B, 56A, 66A, 66B, 67A, 67B, 298A, 298B, 328A, 328B, 328C, 328D, 203A, 217A, 217B, 217C, 67C, 67D, 10A

SHEETS DELETED FROM PLAN

NOS. 28, 163, 180 thru 200, 205, 216, 218, 329, 330

LINE DATA

BEGIN PROJECT	STA. 476+00.00
END PROJECT	STA. 573+50.00

PROJECT LENGTH = 9,750.00 LIN. FT. OR 1.846 MILES

ADDITIONAL WORK

I-480 ~ Sta. 573+50 to Sta. 575+09	=	159 Lin. Ft.
N.B. I-71 Signs ~ 4 @ 25 ft. ea.	=	100 Lin. Ft.
S.B. I-71 Signs ~ 3 @ 25 ft. ea.	=	75 Lin. Ft.
Access Rd. C Sta. 0+27 to Sta. 9+00	=	873 Lin. Ft.
Brookpark Road Sta. 161+00 to Sta. 173+25	=	1,225 Lin. Ft.
Sta. 175+75 (Sign)	=	25 Lin. Ft.

TOTAL ADDITIONAL WORK = 2,457 Lin. Ft.

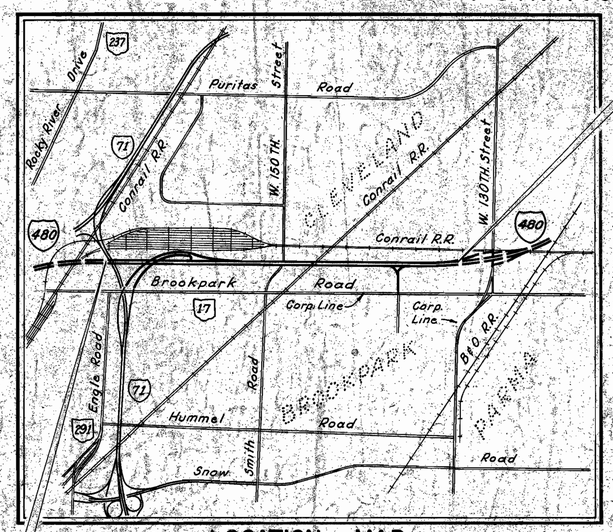
TOTAL LENGTH OF WORK = 12,207 LIN. FT. OR 2.311 MILES

00383

Project: CUYAHOGA COUNTY CUY-480-8.54
Date of Letting _____ 19__, Contract No. _____

LD0300 Rev. 9-3-75

BRUNING 44-560 29724



LOCATION MAP

SCALE IN MILES 0 ½ 1

BEGIN PROJECT
STA. 476+00.00
S.L.M. = 8.54

SCALES

Plan 0 50 100
Profile: Horizontal 0 50 100, Vertical 0 10 or 20 20 or 40
Cross Section: Horizontal 0 10 20, Vertical 0 10 20

LIMITED ACCESS

This improvement is especially designed for thru traffic and has been declared a Limited Access Highway or Freeway by action of the Director of Transportation, in accordance with the provisions of Sec. 5511.02 of the Revised Code of Ohio.

1977 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.

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

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

Approved _____ Director of Public Service, City of Cleveland
Date 10/20/77

Approved _____ District Deputy of Transportation
Date 10-20-77

Approved _____ Engineer, Bureau of Bridges and Structural Design
Date 11-9-77

Approved _____ Chief Engineer, Planning and Design
Date 2-15-78

Approved _____ Director, Department of Transportation.
Date 2-15-78

NOTE: All references to former Penn Central Transportation Co. appearing throughout this plan shall be considered to pertain to the Consolidated Rail Corporation.

NOTE: Project designation CUY-80 appearing throughout this plan shall be considered to read CUY-480.

SUPPLEMENTAL SPECIFICATIONS			
801	4-25-77		
808	1-1-71	021	12-4-72
		048	2-19-74
836	3-12-75	950	4-25-77
838	1-13-77	951	4-25-77
839	11-25-70		
842	8-29-74	1001	1-3-77
843	10-23-75		
844	11-8-74		
846	4-25-77		
		3625	1-11-74
850	6-27-77	3713	1-11-74

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS															
BP-1	6-1-65			GR-5	1-1-71	MC-6	6-1-65	HL-1	9-6-73	HL-16	4-6-73	TC-31.21	8-27-76		
BP-2	12-6-76	F-1	5-1-76	GR-6	1-1-71	MC-7	10-15-76	HL-2	7-27-73	HL-22	11-9-77	TC-32.10	8-27-76	TC-61.10	8-19-77
BP-3	12-6-76	F-3	5-1-76			MC-9	11-1-77	HL-3	7-27-73			TC-32.11	8-27-76	TC-71.10	12-1-75
BP-4	12-6-76			HW-1	6-1-65	MH-1	6-12-75	HL-4	1-21-76			TC-41.10	8-19-77		
BP-5	8-11-75	F-5	5-1-76	HW-3	6-1-65	MC-10	5-1-76	HL-5	9-6-73			TC-41.20	4-1-77	TC-81.10	4-18-77
BP-6	6-1-65	F-6	5-1-76	HW-4	1-1-70	MH-3	6-12-75	HL-6	3-22-77			TC-41.50	4-1-77	TC-83.10	9-5-75
BP-7	12-6-76	F-7	11-1-77			MH-5	6-12-75	HL-7	1-21-76	TC-7.65	10-1-74	TC-42.10	8-19-77	TC-83.20	9-5-75
BP-9	12-6-76	GR-1	12-6-76	I-2A	6-6-69			HL-8	1-21-76	TC-12.30	10-1-74	TC-42.20	4-1-77	TC-84.20	9-5-75
BP-10	1-3-75	GR-2B	12-6-76			AS-1-72	6-30-72	HL-9	3-22-77	TC-21.10	10-1-74			TC-85.10	9-5-75
BP-11	1-3-75	GR-3	12-6-76	L-1	6-1-73	BR-1-67	10-15-71	HL-10	1-21-76	TC-21.20	4-18-77	TC-51.10	6-2-75	TC-85.20	9-5-75
CB-3A	1-1-76	GR-3A	12-6-76	MC-1	6-13-69	RB-1-55	2-2-59	HL-11	4-6-73	TC-21.40	8-19-77	TC-51.11	6-2-75	TC-82.10	9-5-75
CB-5	9-1-69	GR-4	12-6-76	MC-3	6-1-73	SD-1-69	6-12-69	HL-12	4-6-73	TC-22.20	8-19-77	TC-52.10	4-1-77		
CB-6	6-1-65	GR-4A	7-26-76	MC-4	7-26-76			HL-15	1-21-76			TC-52.20	4-1-77		

Rev. 7-5-78

Rev. 4-12-78

PLANS PREPARED BY
ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
75 PUBLIC SQUARE
CLEVELAND, OHIO
FOR
STATE OF OHIO

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

Rev. 6-22-78

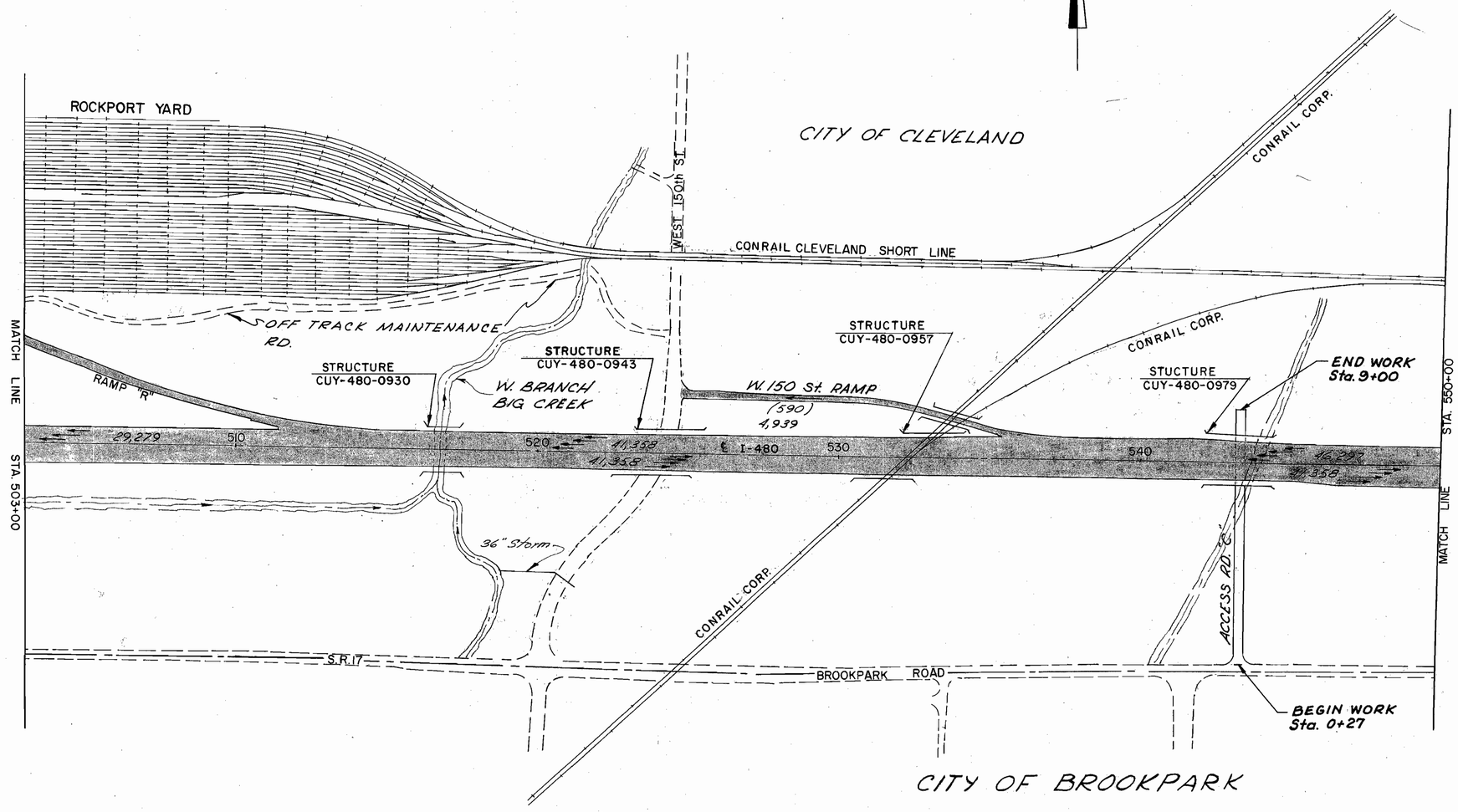
MICROFILMED
AUG 8 1002

SCHEMATIC PLAN

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO		

3/346

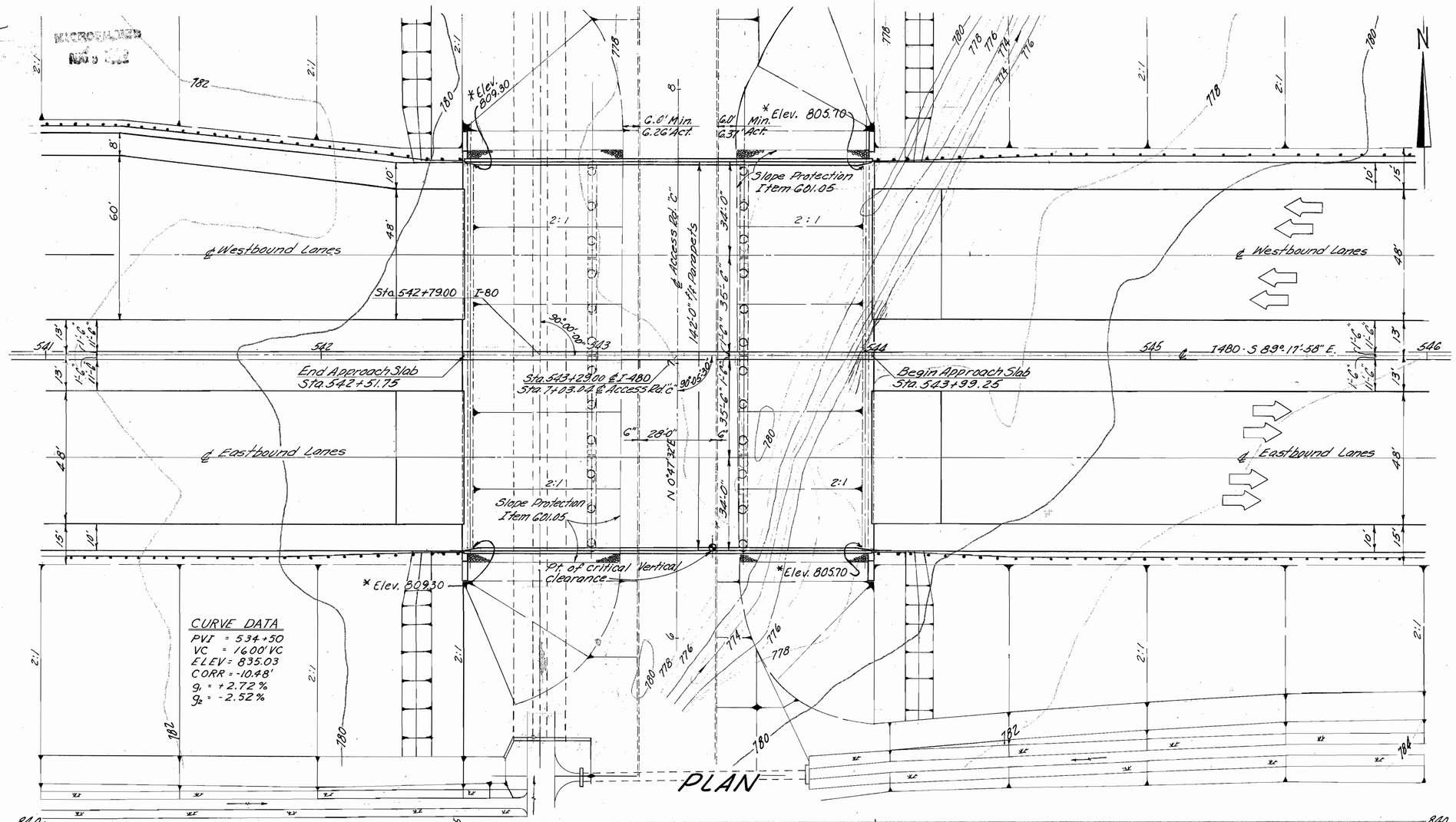
CUYAHOGA COUNTY
CUY-480-8.54



FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

318/346

CUYAHOGA COUNTY
CUY.-480-8.54



PROPOSED STRUCTURE

TYPE: Continuous steel beam with reinforced concrete deck and reinforced concrete substructure.
SPANS: 44'-0", 55'-0", 44'-0" c/c Brg's.
ROADWAY: 142'-0" f/f parapets, Concrete median barrier
LOADING: C.F.-2000 (1957). Adequate for AASHO alternate loading.
SURFACE COURSE: Monolithic concrete
SKEW: None
ALIGNMENT: Tangent
APPROACH SLABS: AS-1-72 Modified (25' long)

Earthwork limits shown are schematic. Actual slopes shall conform to plan cross-sections.

* Elevations marked with an asterisk are at top of slope at face of abutment.

All Piles shall be HP10x42

Estimated average pay lengths are:
Abutments 40'
Piers 20'

0 20 40
Scale in Feet

ALDEN E. STILSON & ASSOCIATES, LIMITED 1/10
CONSULTING ENGINEERS
CLEVELAND, OHIO COLUMBUS, OHIO WHEELING W. VA.

SITE PLAN

BRIDGE No. CUY. 480-0979
I480 OVER ACCESS RD. "C"

CUYAHOGA COUNTY STA. 542+51.75
STA 543+99.25

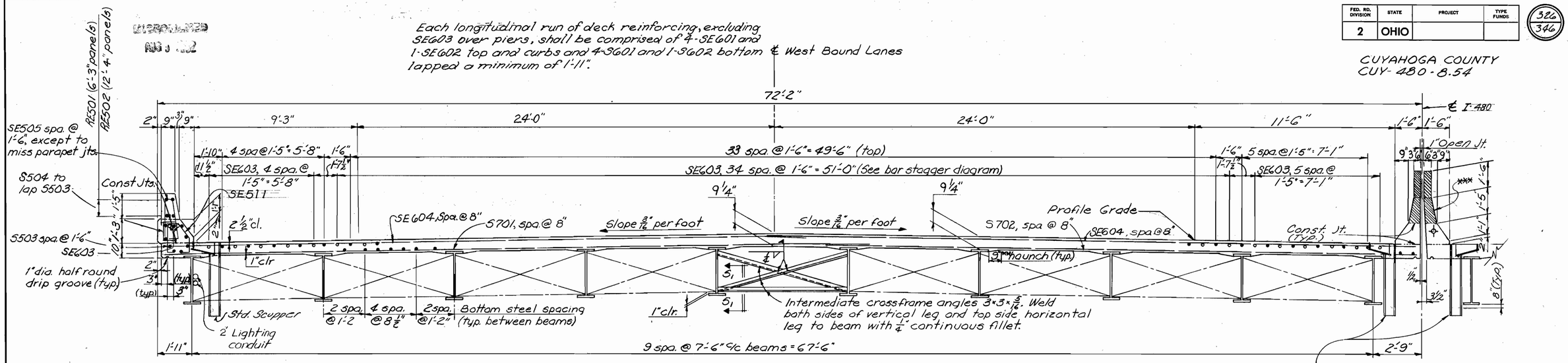
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
G.W.M.	R.T.		R.C.	J.E.V.	9/18/68	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

326
346

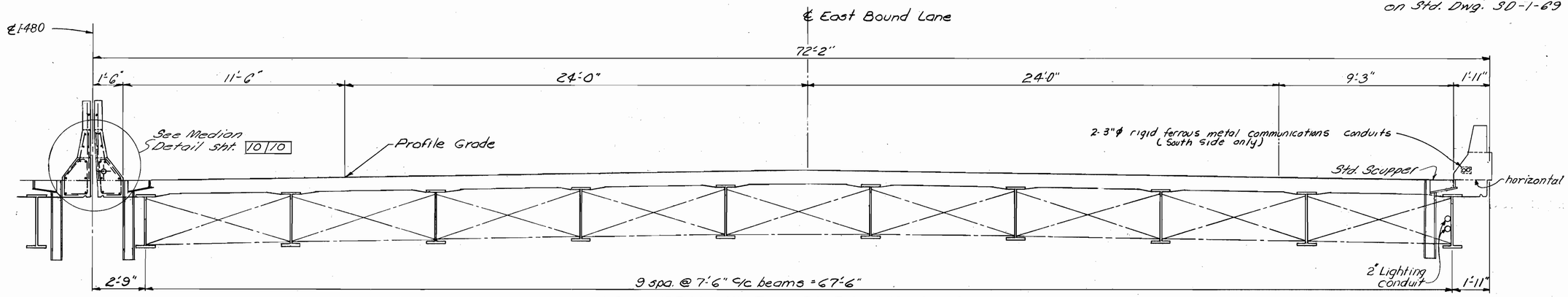
CUYAHOGA COUNTY
CUY-480-8.54

Each longitudinal run of deck reinforcing, excluding SE603 over piers, shall be comprised of 4-SE601 and 1-SE602 top and curbs and 4-SG01 and 1-SG02 bottom lapped a minimum of 1'-11".



TRANSVERSE SECTION - WEST BOUND LANES

(End Posts not shown)



TRANSVERSE SECTION - EAST BOUND LANES

(Details, dimensions, and reinforcing not shown opposite hand to W.B. Lanes)
(End Posts not shown)

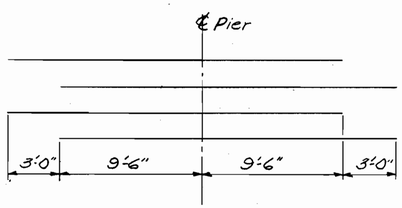
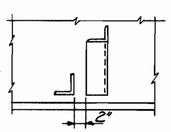


DIAGRAM SHOWING STAGGER OF SE603 BARS OVER PIERS



SECT. S1-S1

NOTES:

* This is the design dimension. The quanity of deck concrete to be paid for shall be based upon this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

** A typical haunch width of 9" shall be used for computing quantity of concrete. However the haunch width may vary between 6" and 12" provided that the slope shall not be more than 1:4 for a haunch less than 9" in width.

Field bend transverse bars to fit crown. Field bending to be included in Item 509 for payment.

Longitudinal reinforcing steel shall be field cut as necessary to avoid interference with scuppers.

For scupper details see Std. Dwg. SD-1-69

For additional notes and details see sheet 10/10

*** X-hatch area indicates limit of deflection Jt. filler material.

Lighting Conduit Attachment - Conduits shall be suitably mounted on the beam webs at intervals of 10'-0" maximum. Cost of mountings shall be included with conduits for payment.

For details of median curb plates see Std. Dwg SD-1-69

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CONSULTING ENGINEERS
COLUMBUS, OHIO

9/10

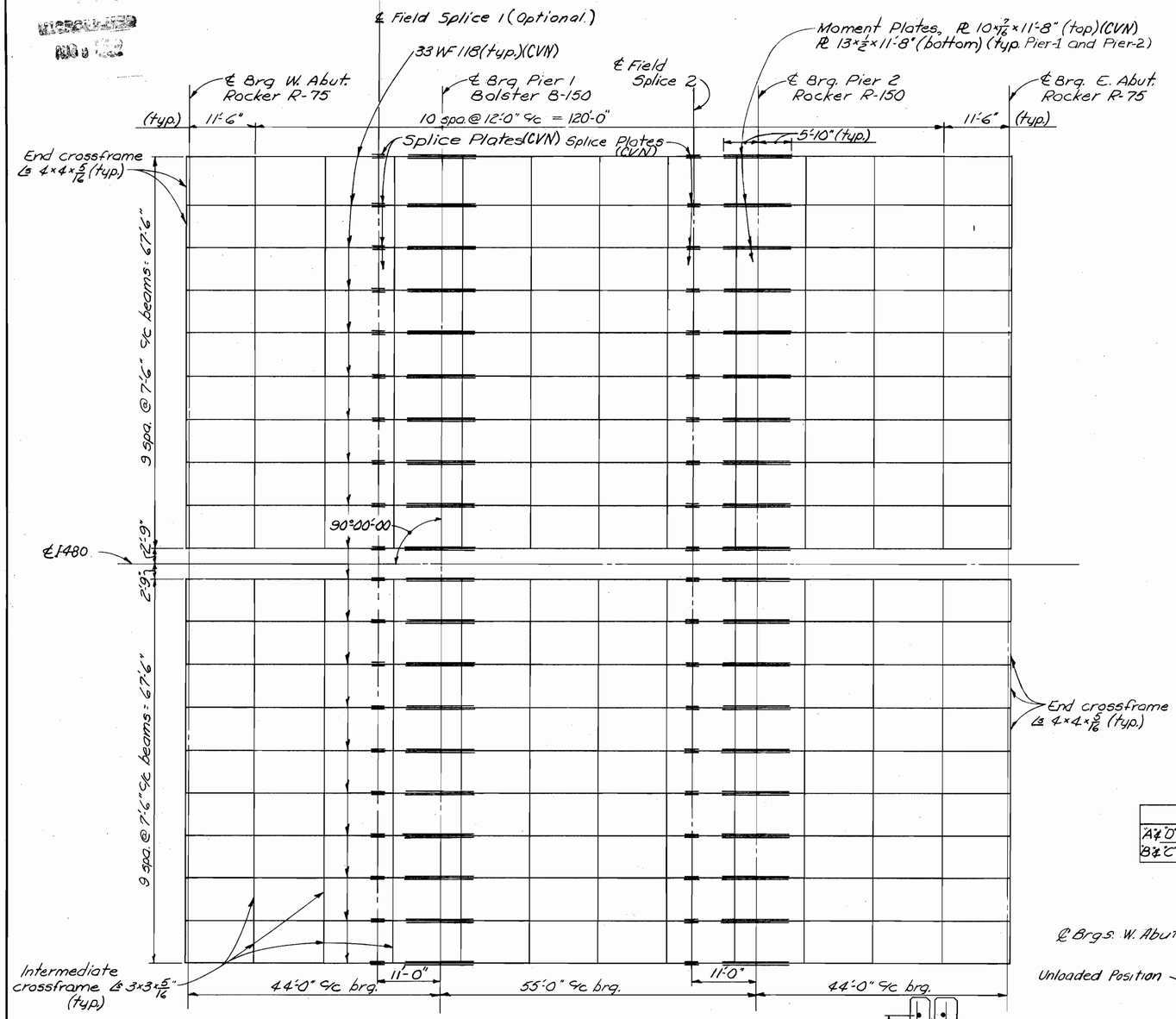
SUPERSTRUCTURE DETAILS
BRIDGE Nº CUY-480-0979
I-480 OVER ACCESS ROAD "C"
CUYAHOGA COUNTY STA. 542+51.75 STA. 543+99.25

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
S.B.P.	G.T.R.		DLW	J.E.V.	9/18/68	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

327
346

CUYAHOGA COUNTY
CUY-480-8.54



FRAMING PLAN

NOTES:

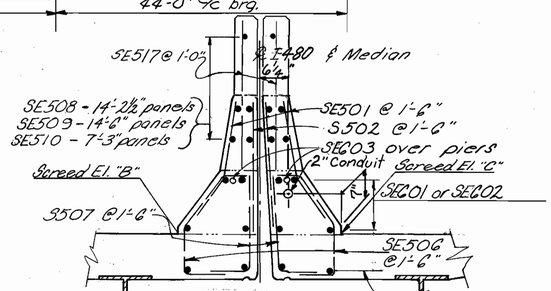
All intermediate crossframes shall be normal to beams

For field splice and moment plate details see Std. Dwg. SD-1-69, sheets 3 and 4.

For additional notes and details see sheet 9/10

Where "(CVN)" follows a shape or plate size designation, the material shall meet specified minimum notch toughness requirements.

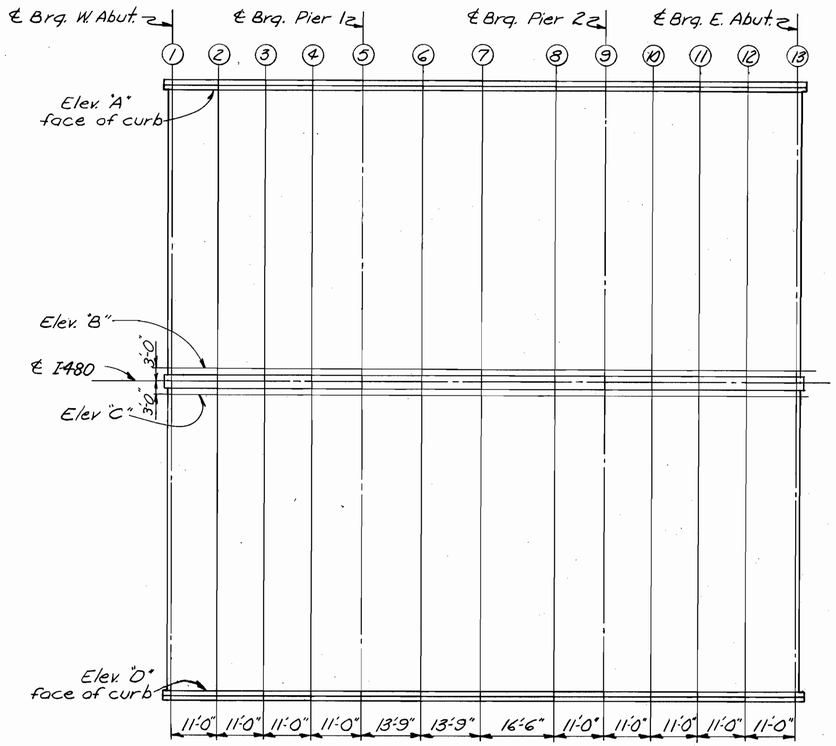
All splice material shall meet specified minimum notch toughness requirements.



MEDIAN DETAIL

N

BEARINGS shall be in accordance with Std. Dwg. RB-1-55 except that upper plate element shall be beveled to match roadway grade. Tabulated plate thickness C shall apply at centerline of plate.

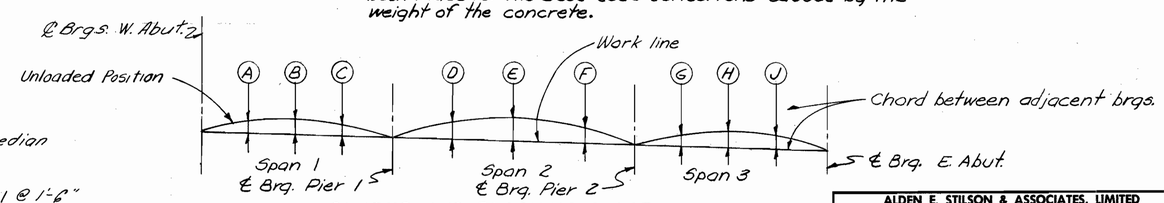


SCREED LINE LOCATIONS

TABLE OF SCREED ELEVATIONS

	1	2	3	4	5	6	7	8	9	10	11	12	13
A & D	814.62	814.36	814.08	813.80	813.52	813.18	812.84	812.41	812.13	811.86	811.59	811.31	811.02
B & C	814.61	814.34	814.07	813.78	813.50	813.17	812.83	812.40	812.11	811.84	811.58	811.29	811.01

The elevations shown at the face of curbs are those which are required before concrete is placed. Proper allowance has been made for the Dead Load deflections caused by the weight of the concrete.



CAMBER AND BLOCKING DIAGRAM

DEFLECTION AND CAMBER	Span 1			Span 2			Span 3		
	1/4 Pt.	1/2 Pt.	3/4 Pt. Splice	1/4 Pt.	1/2 Pt.	.80 Pt. Splice	1/4 Pt.	1/2 Pt.	3/4 Pt.
All beams	A	B	C	D	E	F	G	H	J
Defl. due to wt. of steel	0	0	0	0	0	0	0	0	0
Defl. due to remaining D.L.	1/8	3/16	1/16	1/8	1/4	1/16	1/16	3/16	1/8
Reqd. shop camber	1/8	3/16	1/16	1/8	1/4	1/16	1/16	3/16	1/8

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

10/10

SUPERSTRUCTURE DETAILS
BRIDGE Nº CUY-480-0979
I-480 OVER ACCESS ROAD "C"
CUYAHOGA COUNTY STA. 542+51.75 STA. 543+99.25

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
S.B.P.	G.T.R.		DLM	J.E.V.	3/18/68	