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MICROFILMED SEP 10 1991

I-480-4(9)163
Proj 783 (83)

FHWA REGION	STATE	PROJECT	
5	OHIO	I-480-4(9)163	

1/500

CUYAHOGA COUNTY
CUY-480-10.39

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

CUY-480-10.39

Sheets 313, 373, 398, 403, 404, 406, 407, 408, 409, 411, 458, & 472 revised 1-5-84 EBL

CUYAHOGA COUNTY

CITY OF CLEVELAND
CITY OF BROOKLYN

GRADE SEPARATIONS WITH THE CONSOLIDATED RAIL CORPORATION AND THE BALTIMORE AND OHIO RAILROAD COMPANY

CONVENTIONAL SIGNS

Center Line	Existing Sewer
Existing R/W	Proposed Sewer
Proposed R/W	Existing Manhole
Limited Access Line —LA—	Proposed Manhole
Temporary R/W —T—	Existing Catch Basin
Work Agreement Line	Proposed Catch Basin
Property Line —PL—	Manhole Abandoned
Original Lot Line O.L. 78 / O.L. 79	Catch Basin Abandoned
Water Line —W—	Guard Rail (Existing) (Proposed)
Water Valve	Retaining Wall (Existing) (Proposed)
Water Hydrant	Fence (Existing) (Proposed)
Gas Line —G—	Trees
Gas Valve	Railroad
Telephone Underground —T—	
Electric Underground —E—	
Power Pole	
Light Pole	
Telephone Pole	

INDEX OF SHEETS

Sheets 31 & 32 deleted

Title Sheet	1	Detention Basin Access Rd.	102-103
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W. 130th St. Ramps-Plan & Profile	57-59	Service Rd. "A" Cross Sections	194-196
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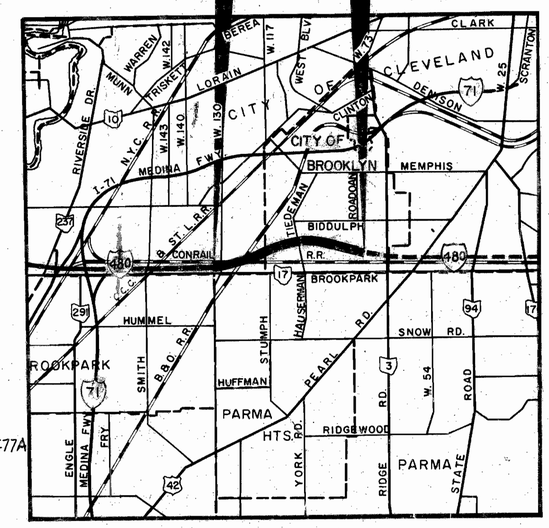
BEGIN PROJECT
STA. 573+50
S.L.M. 10.39

END PROJECT
STA. 698+50
S.L.M. 12.75



LINE DATA

	CLEVELAND	BROOKLYN	TOTAL
BEGIN PROJECT	573+50.00	616+15.52	573+50.00
END PROJECT	616+15.52	698+50.00	698+50.00
LENGTH OF PROJECT	4265.52 L.F. 0.808 Mi.	8234.48 L.F. 1.559 Mi	12500.00 L.F. OR 2.367 Mi
ADDITIONAL WORK			
I-480 STA. 484+00.00 TO STA. 573+50.00	8950.00 L.F.		8950.00 L.F.
STA. 698+50.00 TO STA. 700+00.00		150.00 L.F.	150.00 L.F.
W130th ST. STA. 48+00.00 TO STA. 64+90.00	1690.00 L.F.		1690.00 L.F.
TIEDEMAN RD. STA. 42+80.00 TO STA. 82+00.00		3920.00 L.F.	3920.00 L.F.
IDLEWOOD DR. STA. 8+75.00 TO STA. 21+63.21		1288.21 L.F.	1288.21 L.F.
SOUTHWOOD DR. STA. 7+25.00 TO STA. 12+75.00		550.00 L.F.	550.00 L.F.
LENGTH OF WORK	14,905.52 L.F. OR 2.823 Mi	14,142.69 L.F. OR 2.679 Mi	29,048.21 L.F. OR 5.502 Mi

FILE NUMBER	CUYAHOGA COUNTY CUY-480-10.39
	DATE OF LETTING
	CONTRACT NUMBER

00384

SUPPLEMENTAL SPECIFICATIONS	
NUMBER	DATE
803	5-27-83
843	10-25-76
847	4-3-76
848	2-17-83
939	6-28-82
934	1-1-69
948	2-19-74
839	11-25-70
936	4-19-82
824	10-8-82
836	3-12-75
845	3-2-81
849	10-19-81
953	8-21-80

LOCATION MAP

0 1 2 3
SCALE OF MILES

Portion To Be Improved
State Routes
U.S. Routes
Interstate Routes
City Streets
To Be Improved Under Separate Contract

SCALE

PLAN	0 50	1" = 50'
PROFILE: HORIZ.	0 50	1" = 50'
VERT.	0 10-20	1" = 10' / 1" = 20'
CROSS SECTIONS	0 10	1" = 10'
PAVEMENT DETAILS	0 20	1" = 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.

1983 SPECIFICATIONS

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

I hereby approve these plans and declare that the making of this improvement will not require the closing 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 Joseph L. Stamps
Date 3/15/83 Director of Public Service, City of Cleveland

Approved Martin A. Gallik
Date 3-16-83 District Deputy Director of Transportation

Approved Robert B. Pfeifer
Date 6-6-83 Engineer, Bureau of Bridges and Structural Design

Approved Wayne H. Kauble
Date 6-6-83 Chief Engineer, Planning and Design

Approved Warren J. Smith
Date 6-6-83 Director, Department of Transportation

STANDARD			CONSTRUCTION		DRAWINGS			
BP-1	6-1-65		GR-5	2-5-82	MH-1	6-12-75	TC 7.65 3-1-79	TC 42.20 3-26-79
BP-2	12-6-76	CB-3A	HW-3	6-1-65	MH-3	6-12-75	TC 9.30 4-24-80	TC 51.10 3-20-79
BP-3	12-6-76	CB-4	HW-4A	4-1-80	MH-5	6-12-75	TC 12.30 6-10-81	
BP-4	7-16-81	CB-5	HW-4B	4-1-80	MH-2	6-12-75	TC 16.20 3-1-79	TC 52.10 4-3-79
BP-5	7-16-81	CB-6			HL-1	9-6-73	TC 18.26 5-31-79	TC 52.20 4-3-79
BP-6	6-1-65	CB-458A	5-1-79		HL-2	7-27-73	TC 21.10 5-24-79	TC 61.10 4-5-82
BP-7	12-6-76		I-3 A&B	4-1-80	HL-3	7-27-73	TC 21.20 5-31-79	TC 71.10 4-9-81
BP-9	12-6-76		MC-9A	5-1-81	HL-4	1-21-76	TC 21.40 3-1-79	TC 72.20 2-26-82
BP-10	1-3-75	F-1	5-1-76		LA-1	6-1-79	HL-5	9-6-73 TC 22.10 3-1-79
		F-3	5-1-76		LA-2	6-1-79	HL-6	3-22-77 TC 22.20 3-1-79 TC 81.20 4-8-80
		F-5	5-1-76		MC-1	6-13-69	HL-7	1-21-76 TC 31.21 3-6-79 TC 82.10 4-11-79
TS-EXJ-2-81	9-1-81	F-6	5-1-76		MC-3	6-1-73	HL-8	1-21-76 TC 32.10 3-8-79 TC 83.10 4-18-79
BR-1	5-29-79				MC-4	7-26-76	HL-9	3-22-77 TC 32.11 3-21-79 TC 83.20 4-18-79
AS-1-81	11-27-81	GR-6	2-5-82		MC-5	6-12-75	HL-10	6-1-79 TC 33.10 10-5-77
SD-1-69	6-12-69	GR-1	2-5-82		MC-6	6-1-65	HL-11	6-1-79 TC 41.10 12-23-81 TC 85.20 4-18-79
RB-1-55	2-2-59	GR-2B	2-5-82		MC-7	10-15-76	HL-12	4-6-73 TC 41.20 3-26-79
		GR-3	2-5-82		MC-9	11-1-77	HL-15	1-21-76
CB 2-2-A&B	5-1-79				MC-10	5-1-76	HL-16	4-6-73 TC 41.50 3-26-79
CB2-3&2-4	5-1-79	GR-4	2-5-82		MC-11	8-1-78	HL-19	3-22-77 TC 42.10 8-19-79
CB2-5&2-6	5-1-79	GR-4A	2-5-82		MH-4	6-12-75	HL-22	11-9-77

NOTE:
Project Designation CUY-80 Appearing Throughout This Plan Shall Be Considered To Read CUY-480.

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

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

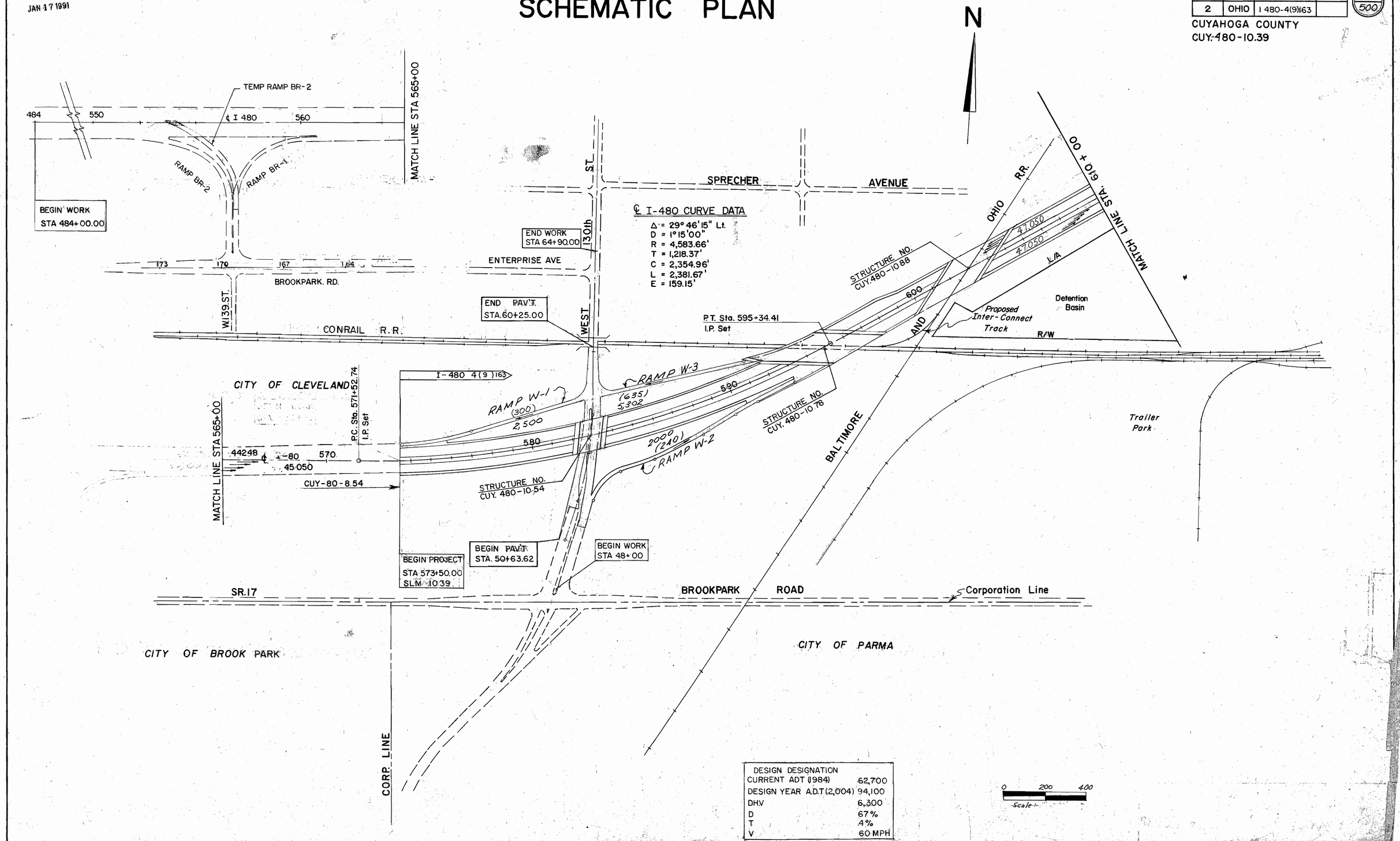
MICROFILMED
JAN 17 1991

SCHEMATIC PLAN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I 480-4(9)163	

2/500

CUYAHOGA COUNTY
CUY-480-10.39



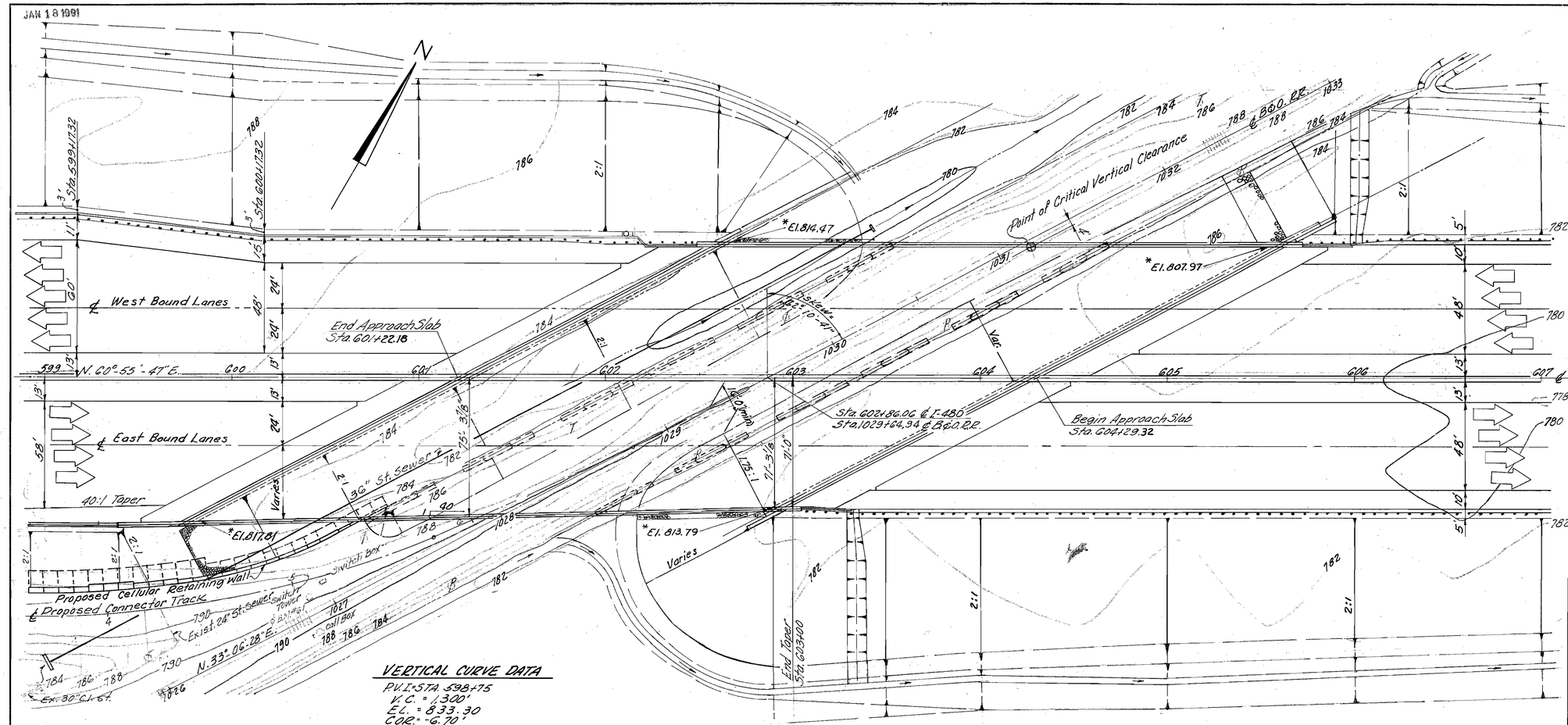
DESIGN DESIGNATION	
CURRENT ADT (1984)	62,700
DESIGN YEAR A.D.T (2,004)	94,100
DHV	6,300
D	67%
T	4%
V	60 MPH

MICROFILMED
JAN 18 1991

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

378
500

CUYAHOGA COUNTY
CUY.-480-10.39



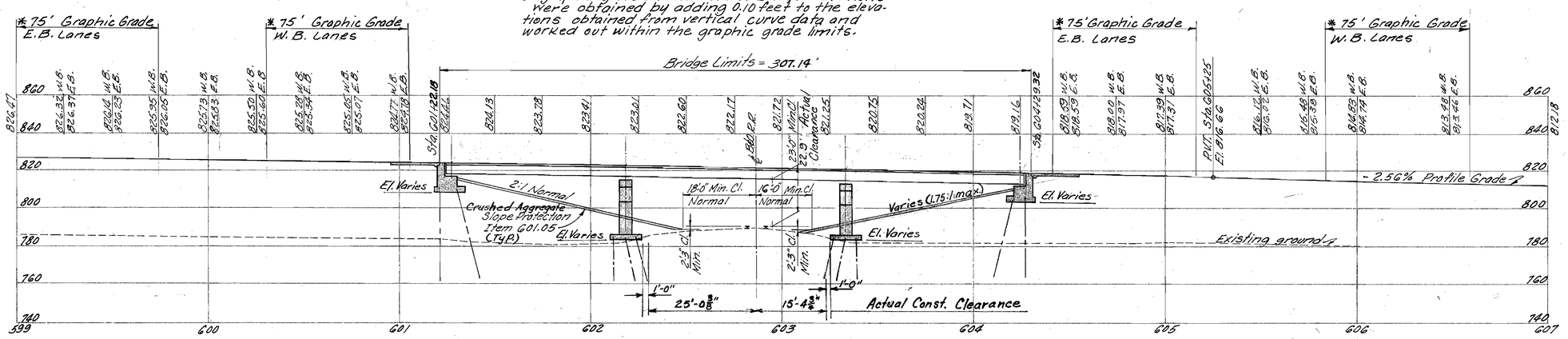
VERTICAL CURVE DATA

P.V.I.=STA. 598+75
V.C. = 1,300'
E.L. = 833.30
C.O.R. = -6.70'
P.G. EL. = 826.60
G_1 = +1.56% G_2 = -2.56%

PLAN

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

Note:
* The vertical curve data does not apply to bridge or graphic grade elevations. The bridge elevations were obtained by adding 0.10 feet to the elevations obtained from vertical curve data and worked out within the graphic grade limits.



PROFILE ALONG ℄ I-480

PROPOSED STRUCTURE

TYPE: Continuous steel girder with reinforced concrete deck and reinforced concrete substructure.
SPANS: 91'-6", 114'-6", 91'-6" 96 Brgs. along ℄ I-480
ROADWAY: W.B. - 71'-0" ℄ to face of parapet
E.B. - Average 73'-3 1/2" ℄ to face of parapet
BR-1 railing, Conc. Barrier Median
LOADING: C.F.-2000 (1957) Adequate for AASHO alternate loading.
WEARING SURFACE: 1 1/2" Latex Modified Concrete
SKEW: 62°-10'-41" Left forward
ALIGNMENT: Tangent
APPROACH SLABS: AS-1-81, 25'-0" long.

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

All piles shall be HP10×42 steel piles.

Estimated average pay lengths are:
Abutments 40'±
Piers 22'±

TRAFFIC ESTIMATE
Design Year 2000
Total A.D.T. 98,198

ALDEN E. STILSON & ASSOCIATES, LIMITED 1/25
CONSULTING ENGINEERS
CLEVELAND, OHIO COLUMBUS, OHIO WHEELING W. VA.

SITE PLAN
BRIDGE No. CUY.-480-1088
I-480 OVER B.&O. R.R.
CUYAHOGA COUNTY STA. 601+22.18 STA. 604+29.32

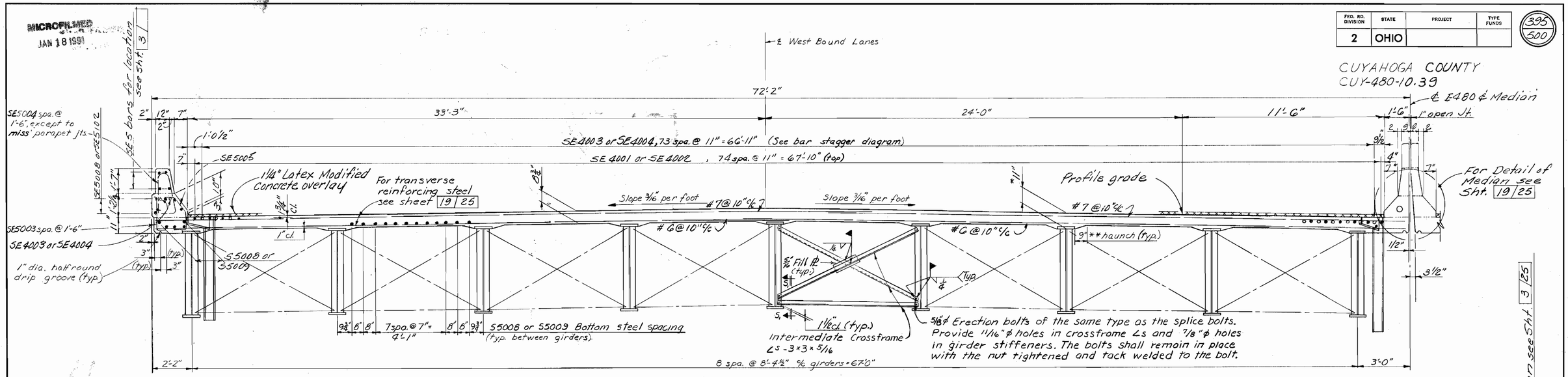
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.C.	R.J.P.		DLM	JEV	9/13/68	

MICROFILMED
JAN 18 1991

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

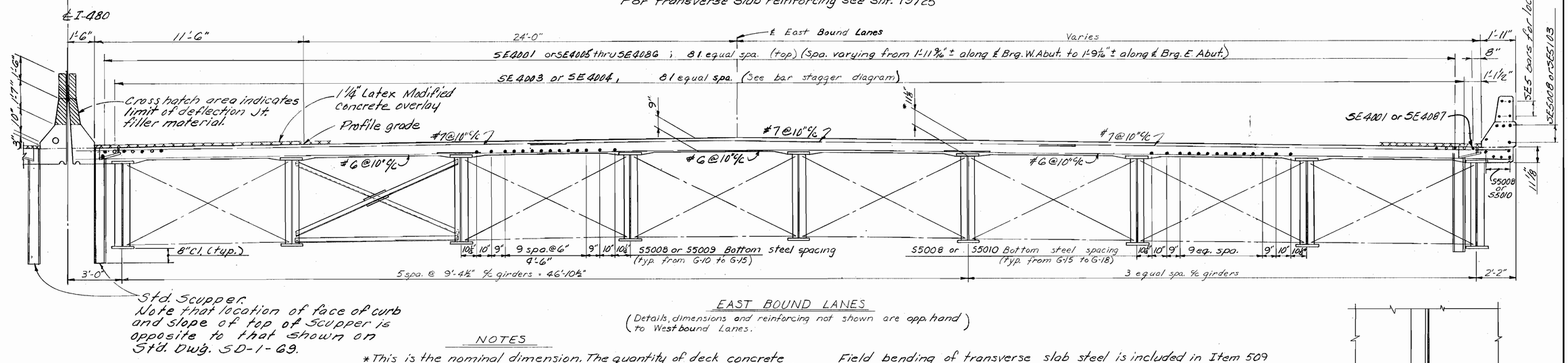
395/500

CUYAHOGA COUNTY
CUY-480-10.39



WEST BOUND LANES

For transverse slab reinforcing see sht. 19/25



Std. Scupper.
Note that location of face of curb and slope of top of Scupper is opposite to that shown on Std. Dwg. SD-1-69.

EAST BOUND LANES

(Details, dimensions and reinforcing not shown are opp. hand to West bound Lanes.)

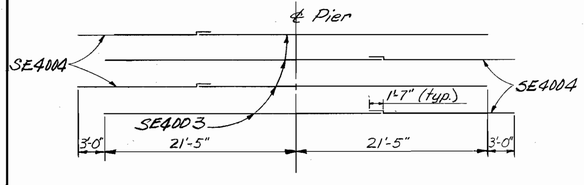


DIAGRAM SHOWING STAGGER of SE4003 & SE4004 BARS over PIERS

NOTES

* This is the nominal dimension. The quantity 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 girder may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per Section 511.19 of the Construction and Material Specifications.

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

Lap longitudinal bars 1'-7" min.

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

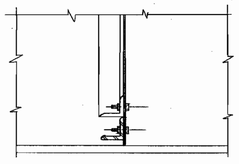
Field bending of transverse slab steel is included in Item 509 for payment.

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

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

For additional notes and details see sheets 19 thru 22 25

WELDING ATTACHMENTS: See sheet 366/500



SECTION S-S

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

18/25

TRANSVERSE SECTION

BRIDGE No. CUY-480-1088
I-480 over B&O R.R.

CUYAHOGA COUNTY

STA. 601 + 22.18
STA. 604 + 29.32

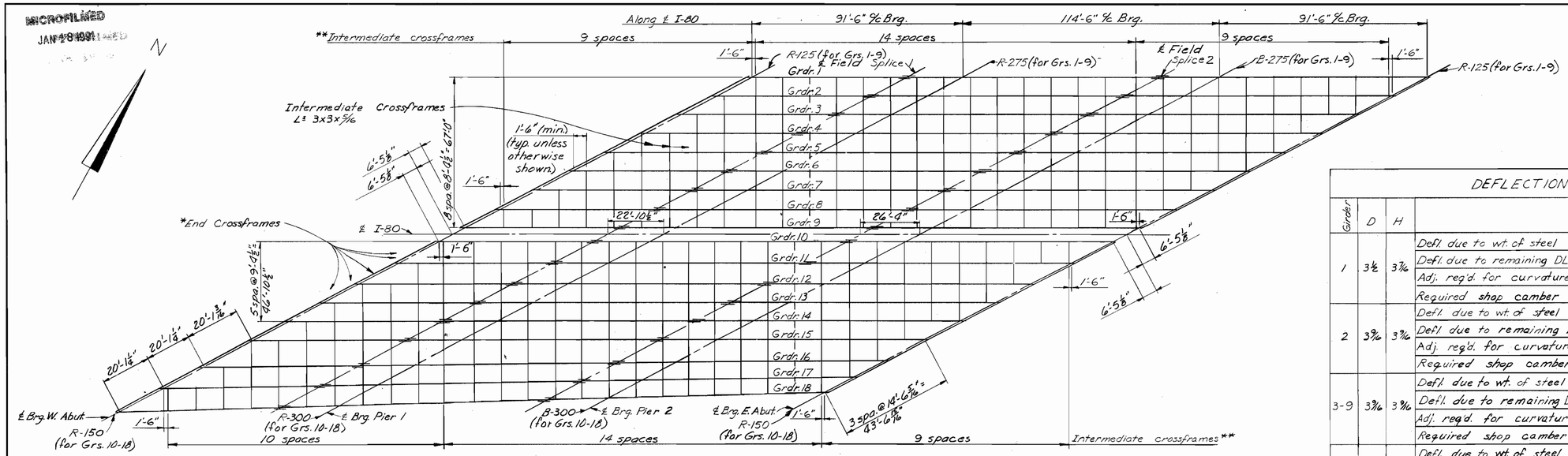
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DLM	DW		SBP	JEV	9/13/68	

MICROFILMED
JAN 28 1991

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

397/500

CUYAHOGA COUNTY
CUY-480-10.39



FRAMING PLAN

NOTES

All intermediate crossframes shall be normal to girders 1 thru 15. Place transverse ℄ of all brg. devices normal to girders 1 thru 15.

*End Crossframes: For the details of end crossframes on East Abut. between girders 15 thru 18 see Std. Dwg. SD-1-69. For the details of the remaining end crossframes see sheet 22/25.

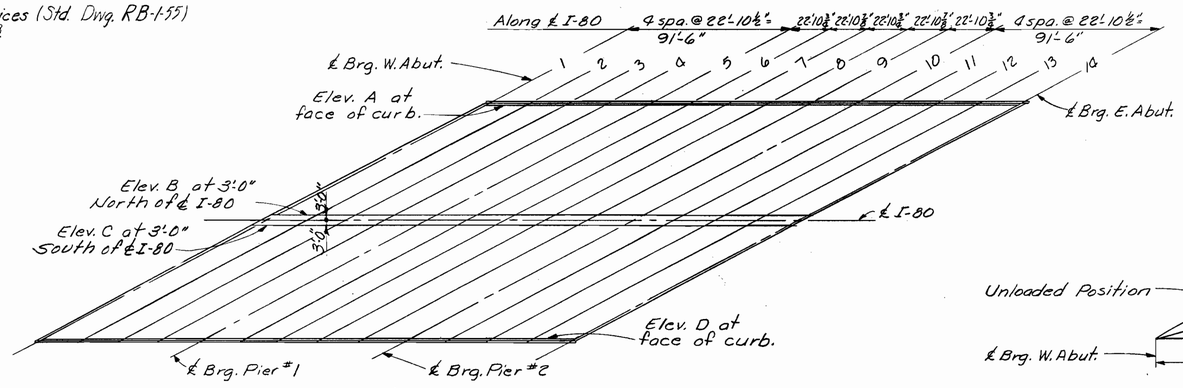
** The intermediate crossframe spacing shall not exceed 13'-0".

1/2" keeper plates shown on bearing devices (Std. Dwg. RB-1-55) shall be deleted under girders 1, 9 10 and 18.

GIRDER LENGTHS BETWEEN % BEARINGS				
Girders	1-15	16	17	18
Span 1	91'-6"	93'-0 1/4"	94'-6 9/16"	96'-1"
Span 2	114'-6"	116'-9 15/16"	118'-3 3/16"	120'-2 13/16"
Span 3	91'-6"	93'-0 1/4"	94'-6 9/16"	96'-1"

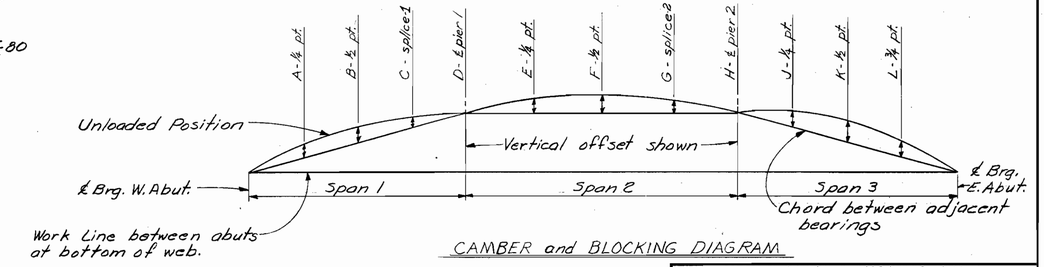
SCREED ELEVATIONS				
Line	A	B	C	D
1	822.20	824.11	824.26	825.65
2	821.83	823.84	823.99	825.49
3	821.42	823.52	823.68	825.27
4	820.96	823.15	823.32	825.02
5	820.49	822.77	822.95	824.74
6	820.04	822.42	822.60	824.48
7	819.58	822.05	822.25	824.22
8	819.08	821.64	821.84	823.91
9	818.54	821.19	821.40	823.56
10	817.98	820.72	820.95	823.20
11	817.45	820.29	820.52	822.85
12	816.91	819.84	820.07	822.49
13	816.32	819.33	819.58	822.08
14	815.70	818.79	819.04	821.63

Screed elevations shown are at face of curb and are those elevations which are required before the concrete is placed. Proper allowance has been made for the dead load deflection due to the weight of the concrete.



SCREED LINE LOCATIONS

DEFLECTION and CAMBER											
Girder	D	H		Span 1			Span 2			Span 3		
				A	B	C	E	F	G	J	K	L
1	3 1/2	3 7/16	Defl. due to wt. of steel	1/8	1/8	1/16	1/16	1/8	1/16	1/16	1/8	1/8
			Defl. due to remaining DL	7/16	1/2	9/16	5/16	9/16	1/4	3/16	1/2	7/16
			Adj. req'd. for curvature	5/16	3/8	5/16	7/16	5/8	7/16	1/4	5/16	3/16
			Required shop camber	7/8	1	7/16	13/16	1 5/16	3/4	1/2	13/16	3/4
2	3 9/16	3 7/16	Defl. due to wt. of steel	1/8	1/8	1/16	1/16	1/8	1/16	1/16	1/8	1/8
			Defl due to remaining DL	7/16	9/16	1/4	5/16	5/8	1/4	1/4	9/16	7/16
			Adj. req'd. for curvature	5/16	3/8	5/16	7/16	5/8	7/16	5/16	3/8	1/4
			Required shop camber	7/8	1 1/16	5/8	13/16	1 7/8	3/4	5/8	1 1/16	13/16
3-9	3 9/16	3 9/16	Defl. due to wt. of steel	1/8	1/8	1/16	1/16	1/8	1/16	1/16	1/8	1/8
			Defl. due to remaining DL	7/16	9/16	1/4	5/16	5/8	1/4	1/4	9/16	7/16
			Adj. req'd. for curvature	5/16	3/8	5/16	7/16	5/8	7/16	5/16	3/8	5/16
			Required shop camber	7/8	1 1/16	5/8	13/16	1 7/8	3/4	5/8	1 1/16	7/8
10	3 9/16	3 9/16	Defl. due to wt. of steel	1/8	1/8	1/16	1/16	1/8	1/16	1/16	1/8	1/8
			Defl. due to remaining DL	7/16	1/2	1/4	5/16	1/2	1/4	1/4	1/2	7/16
			Adj. req'd. for curvature	5/16	3/8	5/16	7/16	5/8	7/16	5/16	3/8	5/16
			Required shop camber	7/8	1	5/8	13/16	1 1/8	3/4	5/8	1	7/8
11-15	3 9/16	3 9/16	Defl. due to wt. of steel	1/8	1/8	1/16	1/16	1/8	1/16	1/16	1/8	1/8
			Defl. due to remaining DL	9/16	5/8	1/4	7/8	9/8	5/16	1/4	5/8	9/16
			Adj. req'd. for curvature	5/16	3/8	5/16	7/16	5/8	7/16	5/16	3/8	5/16
			Required shop camber	1	1 1/8	5/8	7/8	1 3/8	13/16	5/8	1 1/8	1
16	3 11/16	3 11/16	Defl. due to wt. of steel	1/8	1/8	1/16	1/16	1/8	1/16	1/16	1/8	1/8
			Defl. due to remaining DL	1/2	9/16	1/4	5/16	9/16	1/4	3/16	7/16	3/8
			Adj. req'd. for curvature	5/16	3/8	5/16	1/2	5/8	7/16	5/16	3/8	5/16
			Required shop camber	15/16	1 1/16	5/8	7/8	1 7/16	3/4	9/16	15/16	13/16
17	3 13/16	3 13/16	Defl. due to wt. of steel	1/8	1/8	1/16	1/16	1/8	1/16	1/16	1/8	1/8
			Defl. due to remaining DL	1/2	9/16	1/4	5/16	9/16	1/4	3/16	7/16	3/8
			Adj. req'd. for curvature	5/16	7/16	5/16	1/2	11/16	1/2	5/16	7/16	5/16
			Required shop camber	15/16	1 1/8	5/8	7/8	1 3/8	13/16	9/16	1	13/16
18	4	4	Defl. due to wt. of steel	1/8	1/8	1/16	1/16	1/8	1/16	1/16	1/8	1/8
			Defl. due to remaining DL	7/16	1/2	1/4	5/16	1/2	1/4	3/16	7/16	3/8
			Adj. req'd. for curvature	5/16	7/16	5/16	1/2	11/16	1/2	5/16	7/16	5/16
			Required shop camber	7/8	1 1/16	5/8	7/8	1 3/16	13/16	9/16	1	13/16



CAMBER and BLOCKING DIAGRAM

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

20/25

SUPERSTRUCTURE DETAILS

BRIDGE No. CUY-80-1088
I-480 over B&O R.R.

CUYAHOGA COUNTY
STA. 601+22.18
STA. 604+29.32

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DLM	DW		SBP	JEV	9/13/68	