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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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Temporary Erosion & Sediment Control	5	Relocated Big Creek Plan & Profile	111
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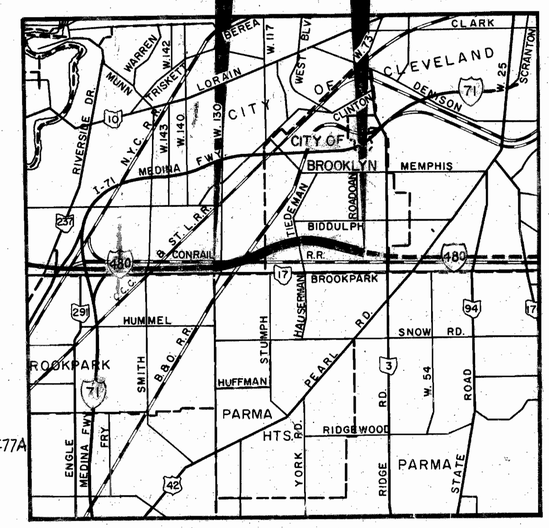
BEGIN PROJECT
STA. 573+50
S.L.M. 10.39

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

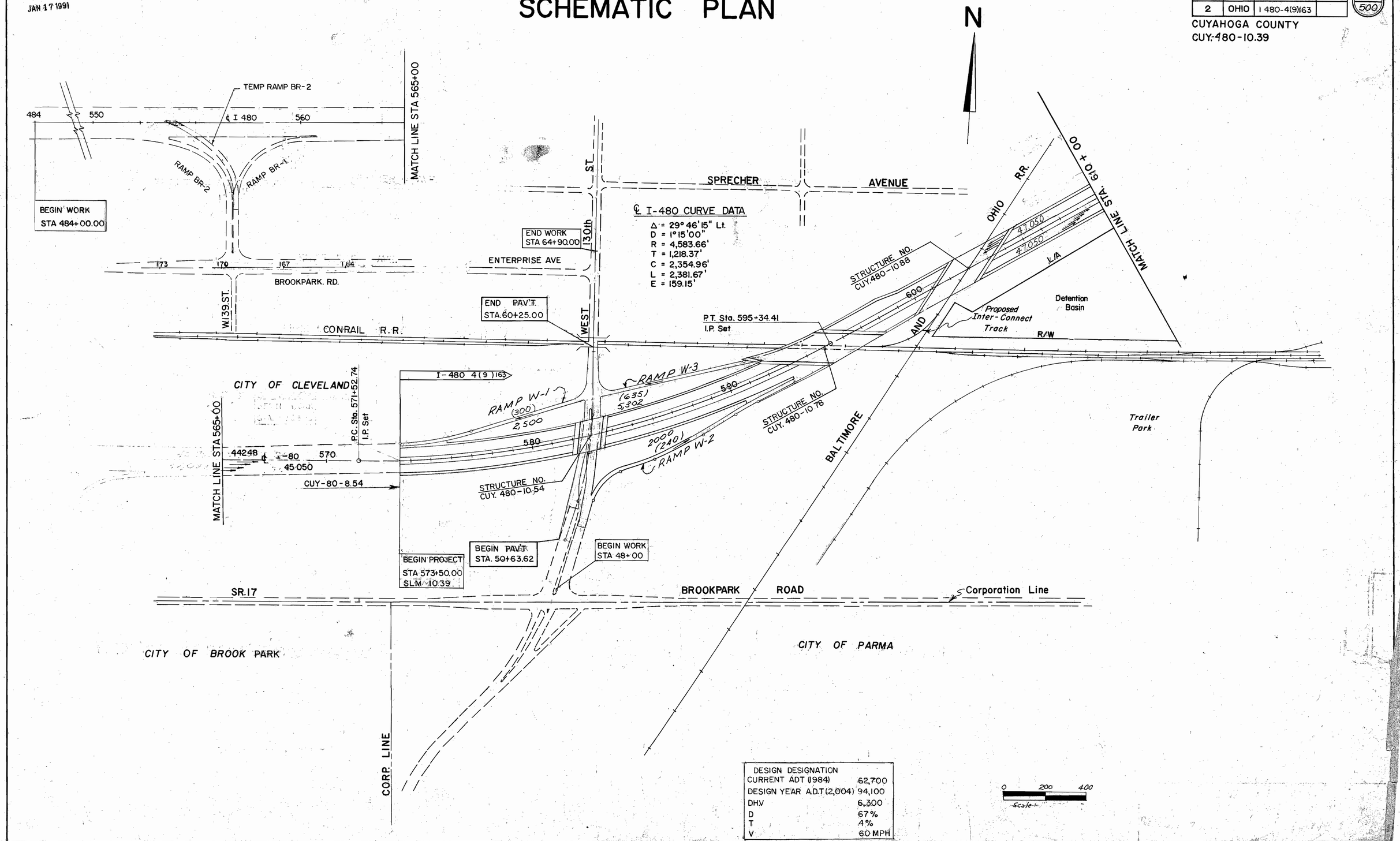
MICROFILMED
JAN 17 1991

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

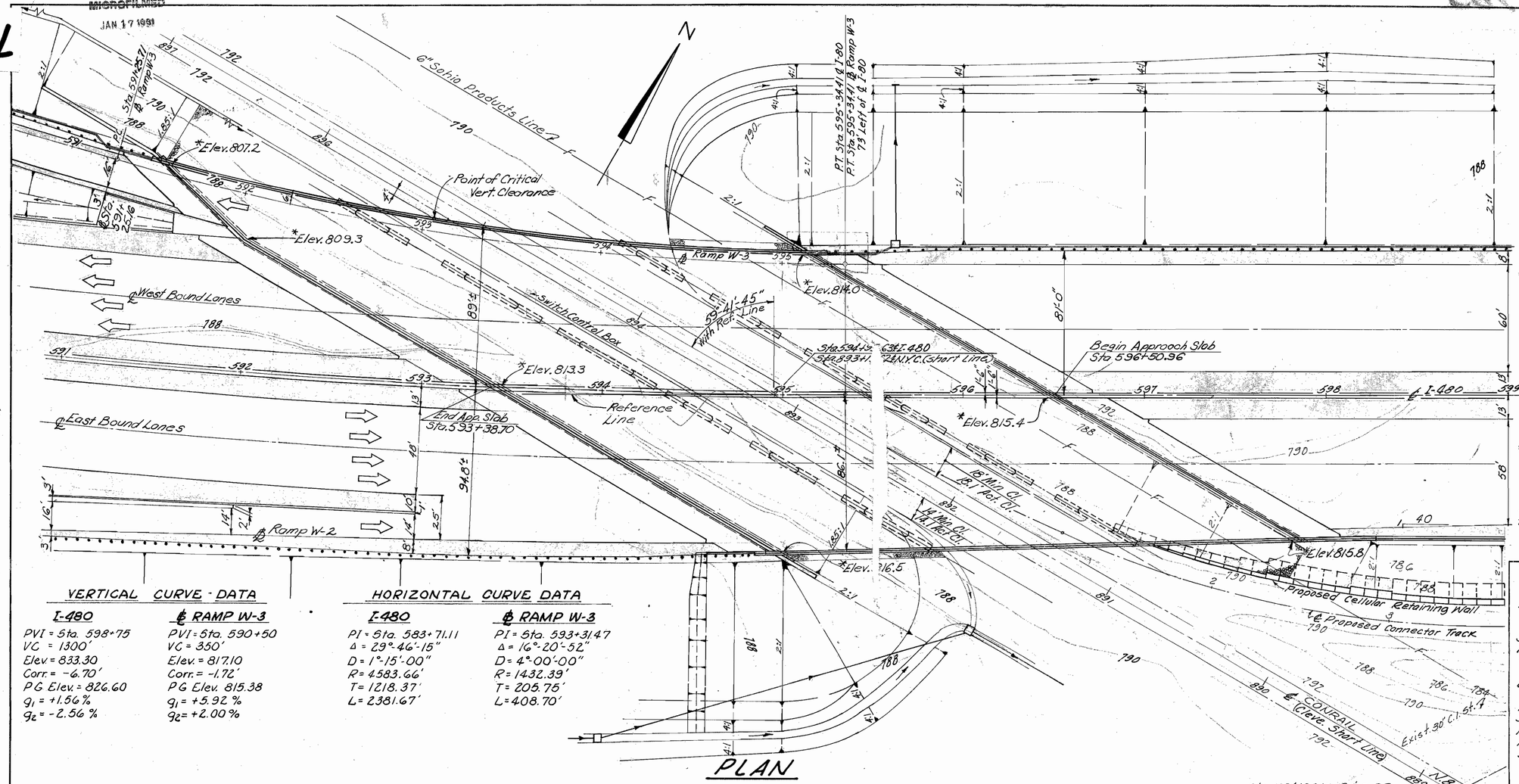
MICROFILMED
JAN 17 1991

T-10

F.A. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

332
300

CUYAHOGA COUNTY
CUY. 480-1039



PLAN

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

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

Reference line is an extension of the tangent from PT Sta. 595+34.41 on ℄ I-480

VERTICAL CURVE - DATA

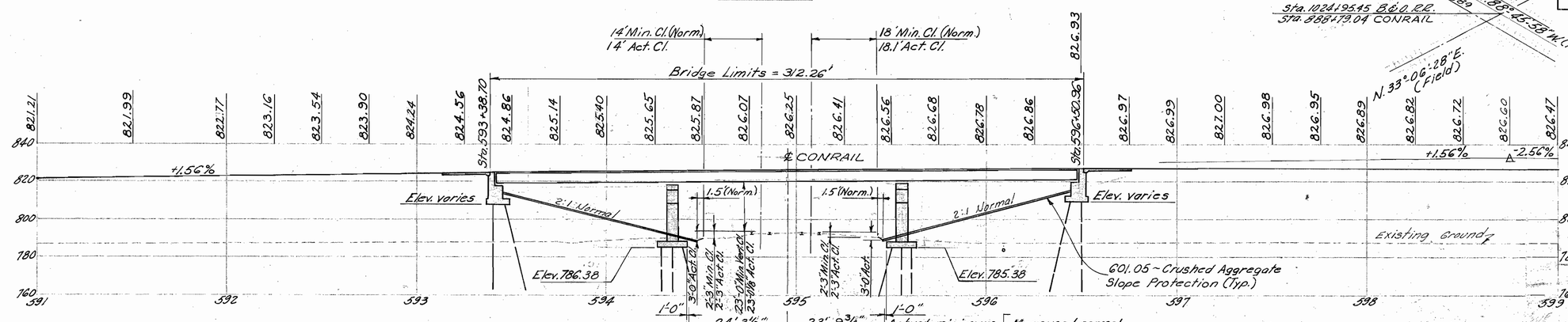
I-480	℄ RAMP W-3
PVI = Sta. 598+75	PVI = Sta. 590+50
VC = 1300'	VC = 350'
Elev. = 833.30	Elev. = 817.10
Corr. = -6.70'	Corr. = -1.72'
PG Elev. = 826.60	PG Elev. 815.38
g_1 = +1.56%	g_1 = +5.92 %
g_2 = -2.56 %	g_2 = +2.00 %

HORIZONTAL CURVE DATA

I-480	℄ RAMP W-3
PI = Sta. 583+71.11	PI = Sta. 593+31.47
Δ = 29°-46'-15"	Δ = 16°-20'-52"
D = 1°-15'-00"	D = 4°-00'-00"
R = 4583.66'	R = 1432.39'
T = 1218.37'	T = 205.75'
L = 2381.67'	L = 408.70'

PROPOSED STRUCTURE

TYPE: Continuous steel girder with reinforced concrete deck and reinforced concrete substructure.
SPANS: 91'-0"-121'-0"-91'-0" Brgs. on ℄ I-480
ROADWAY: Width varies ~~w/~~ Concrete parapets. Avg. width = 169'-0". Bridge Roadway BR-1 Railing, and concrete barrier median.
LOADING: HS 20-44 Case I and the alternate Military Loading.
WEARING SURFACE: 1½" Latex Modified Concrete
SKEW: 59°-41'-45" Right Fwd. with respect to Ref. Line
ALIGNMENT: 1°-15'-00" Curve and Tangent.
APPROACH SLABS: AS-1-81 (25' long). (Typical)
SUPERELEVATION: Varies (0.03 ft. per ft. max.)



PROFILE ALONG ℄ I-480

TRAFFIC ESTIMATE

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

All piles shall be H.P. 10x42 Steel bearing piles. Estimated average pay lengths are:

S. Abut.	45'±
Pier #1	20'±
Pier #2	20'±
N. Abut.	45'±

1 | 46

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

SITE PLAN
BRIDGE No. CUY-480-1078

I-480 OVER CONRAIL (CLEVE. SHT. LN.)
CUYAHOGA COUNTY STA. 593+38.70 STA. 596+50.96
Scale - 1" = 30'

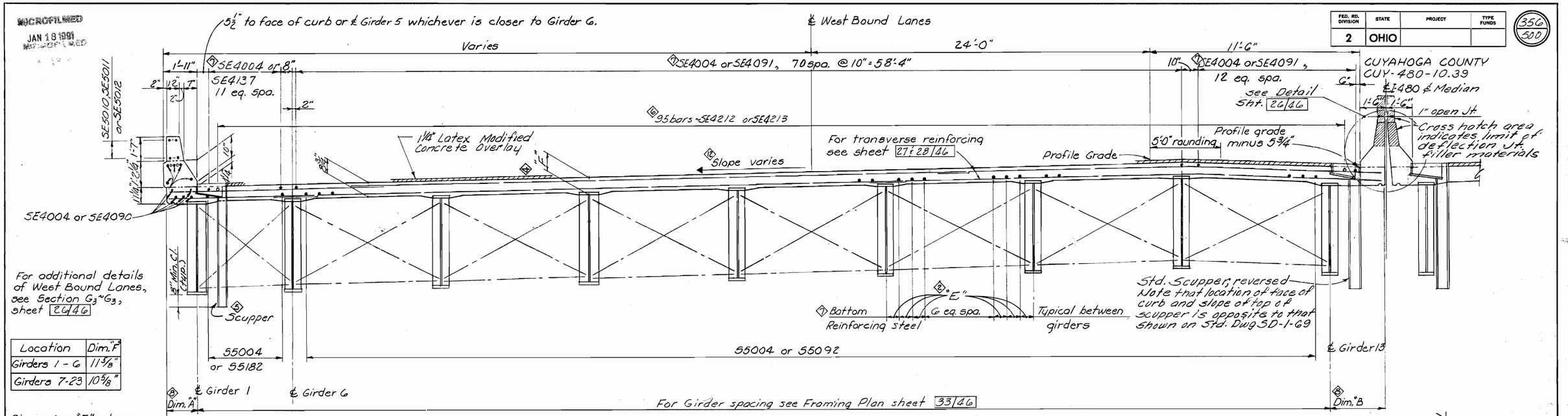
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TJ	TJ		HT	GWM	11/10/87	

MICROFILMED
JAN 18 1991

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

356
500

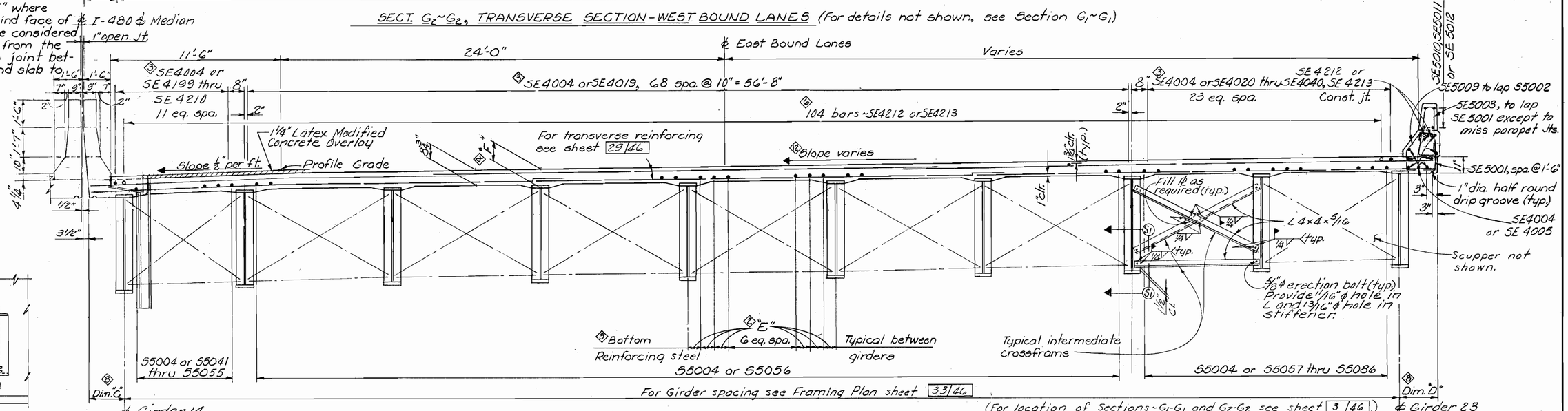
CUYAHOGA COUNTY
CUY-480-10.39



Location	Dim. "F"
Girders 1 - 6	11⅝"
Girders 7-23	10⅝"

Dimension "F" where girder is behind face of curb shall be considered as the depth from the construction joint between curb and slab to top of web.

SECT. G2~G2, TRANSVERSE SECTION - WEST BOUND LANES (For details not shown, see Section G1~G1)



SECT. S1~S1

SECT. G1~G1, TRANSVERSE SECTION - EAST BOUND LANES

(For location of Sections ~ G1-G1 and G2-G2 see sheet 3/46.)

For additional notes and details see sheet 26/46

NOTES

1. 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.
2. Dimension "E" is one-twelfth of ℄/c distance between girders.
3. Measured normal to reference line.

For details of median curb plates see Std. Dwg. SD-1-69, Sht. 2.

4. This is the design 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 Sec. 511.18 of the Construction and Material Specifications.
5. Std. scupper. For details see Std. Dwg. SD-1-69. For location see General Plan Sht. 3/46
6. Stagger bars to be spaced alternate between top longitudinal reinforcing steel. See bar stagger diagram, sheet 26/46
7. Measured normal to West Bound interior girders.
8. For dimensions A, B, C, & D, see Table of Slab Cantilevers sheet 26/46
9. Longitudinal reinforcing shall be field cut as necessary to clear scuppers.
10. Concrete parapet shall be included with Item 511, Class S concrete, for payment.
11. For slab profile see sheet 26/46

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

25/46

SUPERSTRUCTURE DETAILS
TRANSVERSE SECTION
BRIDGE Nº CUY-80-1078
I-480 over CONRAIL (CLEVE. SHT. LN.)
CUYAHOGA COUNTY
STA. 593+38.70
STA. 596+50.96

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TJ	GTR		SBP	G.W.M.	11/22/71	

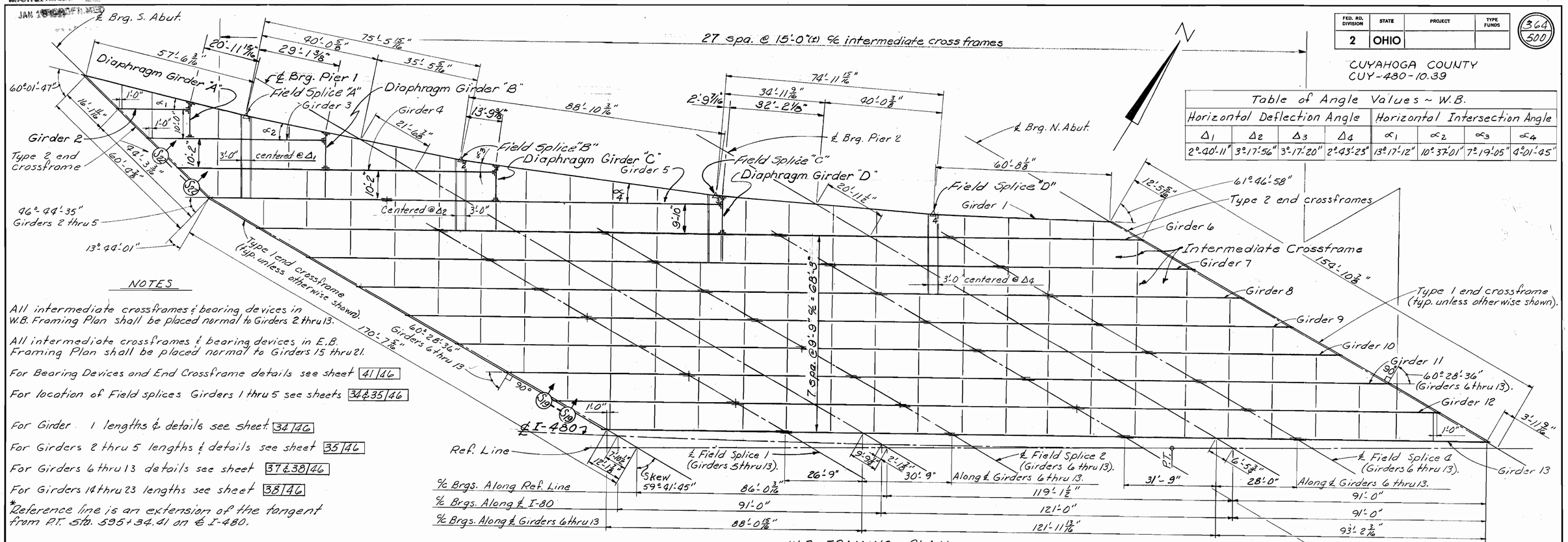
MICROFILMED
JAN 1 1 1972

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

364
600

CUYAHOGA COUNTY
CUY-480-10.39

Table of Angle Values ~ W.B.							
Horizontal Deflection Angle				Horizontal Intersection Angle			
Δ_1	Δ_2	Δ_3	Δ_4	α_1	α_2	α_3	α_4
2°-40'-11"	3°-17'-56"	3°-17'-20"	2°-43'-23"	13°-17'-12"	10°-37'-01"	7°-19'-05"	4°-01'-45"



W.B. FRAMING PLAN

NOTES

All intermediate crossframes & bearing devices in W.B. Framing Plan shall be placed normal to Girders 2 thru 13.

All intermediate crossframes & bearing devices in E.B. Framing Plan shall be placed normal to Girders 15 thru 21.

For Bearing Devices and End Crossframe details see sheet 41/46

For location of Field splices Girders 1 thru 5 see sheets 34 & 35/46

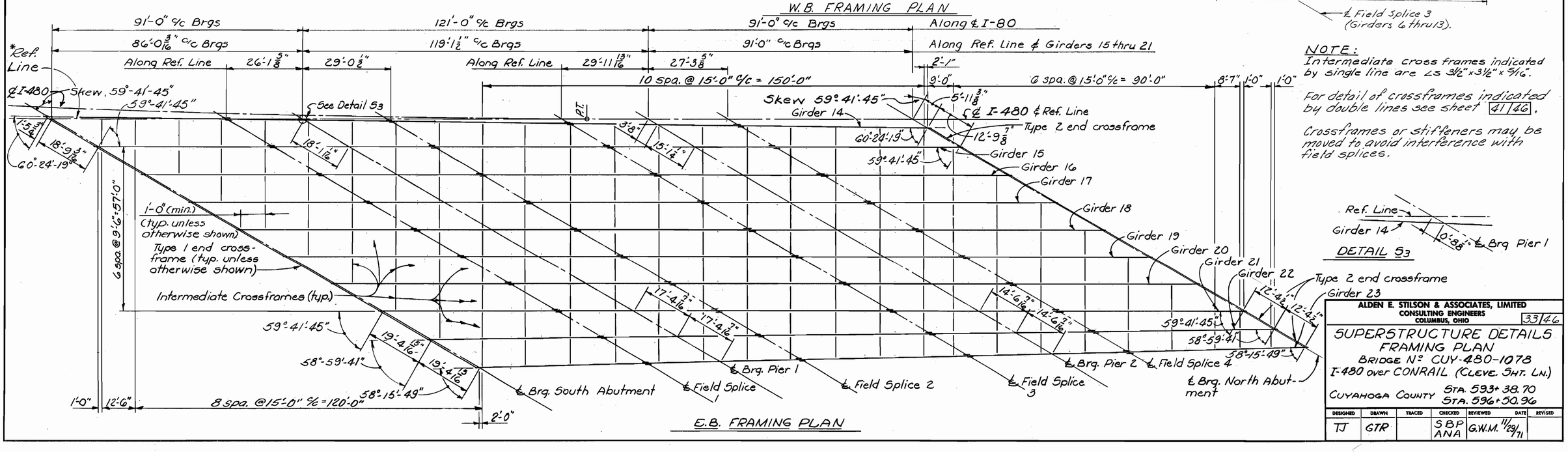
For Girder 1 lengths & details see sheet 34/46

For Girders 2 thru 5 lengths & details see sheet 35/46

For Girders 6 thru 13 details see sheet 37 & 38/46

For Girders 14 thru 23 lengths see sheet 38/46

*Reference line is an extension of the tangent from P.T. Sta. 595+34.41 on ℄ I-480.



E.B. FRAMING PLAN

NOTE:
Intermediate cross frames indicated by single line are ∠s 3½"×3½"×5/16".

For detail of crossframes indicated by double lines see sheet 41/46.

Crossframes or stiffeners may be moved to avoid interference with field splices.

DETAIL S3

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

33/46

SUPERSTRUCTURE DETAILS
FRAMING PLAN
BRIDGE No. CUY-480-1078
I-480 over CONRAIL (CLEVE. SHT. LN.)
CUYAHOGA COUNTY STA. 593+38.70 STA. 596+50.96

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TJ	GTR		SBP ANA	G.W.M.	11/29/71	