I-480-4(40)162

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO	I-480-4(40)162	

1/107

CUYAHOGA COUNTY
CUY-480-8.26

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

CUY-480-8.26

CUYAHOGA COUNTY

CITY OF CLEVELAND

GRADE SEPARATION WITH THE CONSOLIDATED RAIL CORPORATION AND THE GREATER CLEVELAND REGIONIONAL TRANSIT AUTHORITY

CONVENTIONAL SIGNS

MICROFILMED DEC 14 1982

MICROFILMED JUL 6 1984

Center Line		Existing Sewer	
Existing R/W		Proposed Sewer	
Proposed R/W		Existing Manhole	
Limited Access Line	—LA—	Proposed Manhole	
Temporory 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—	Existing Guard Rail	
Water Valve		Proposed Guard Rail	
Water Hydrant		Fence	
Gas Line	—G—	Existing Retaining Wall	
Gas Valve		Railroad	
Telephone Underground	—T—	Existing Trees Removed	
Electric Underground	—E—		
Power Pole			
Light Pole			
Telephone Pole			

INDEX OF SHEETS

Sheet 8 revised 1-4-79 EBL

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Plans Prepared By
ALDEN E. STILSON & ASSOCIATES, LIMITED
Consulting Engineers
75 Public Square
Cleveland Ohio
For
STATE OF OHIO

LINE DATA

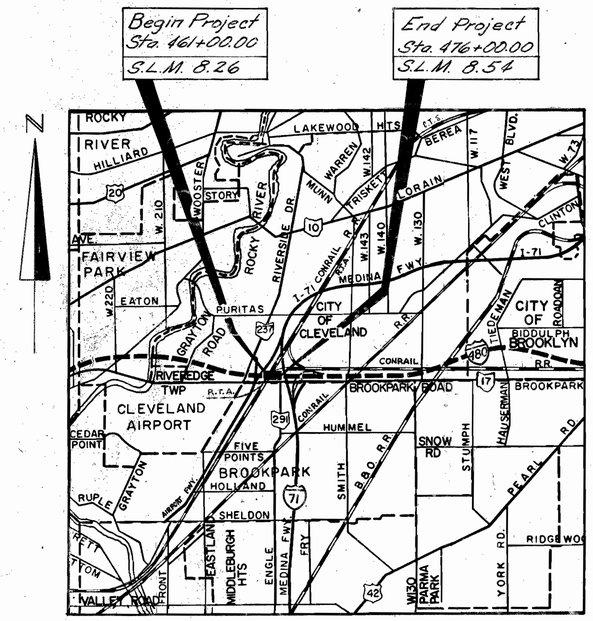
Begin Proj. Work Sta. 461+00.00
End Proj. Work Sta. 476+00.00

Net Length of Project — 1500 Lin. Ft. or 0.284 Miles

Add Work on RR Access Road - - - - 1101.00 Lin. Ft.

Net Length of Work - - - - 2601.00 Lin. Ft. or 0.492 Miles

SUPPLEMENTAL SPECIFICATIONS	
NUMBER	DATE
5625	1-11-74
5713	1-11-74
801	4-25-77
808	1-1-71
814	1-1-69
836	3-12-75
838	1-13-77
839	11-25-70
844	11-8-74
846	4-25-77
948	2-10-74
950	4-25-77
951	4-25-77
1001	1-3-77



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

SCALES

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

STANDARD DRAWINGS	
Number	Date
BP-1	6-1-65
BP-2	12-6-76
BP-3	12-6-76
BP-4	12-6-76
BP-5	8-11-75
BP-9	12-6-76
BP-10	1-3-75
CB-6	6-1-65
F-1	5-1-76
F-3	5-1-76
F-4	5-1-76
F-6	5-1-76
GR-1	12-6-76
GR-2B	12-6-76
GR-3	12-6-76
HW-4	1-1-70
I-2A	6-6-69
MC-1	5-13-69
MC-3	6-1-73
MC-4	7-26-76
MC-7	10-15-76
MC-10	5-1-76
MH-1	6-12-75
AS-1-72	6-30-72
BR-1-67	10-15-71
RB-1-55	2-2-59
SD-1-69	6-12-69
HL-1	9-6-73
HL-2	7-27-73
HL-3	7-27-73
HL-4	1-21-76
HL-5	9-6-73
HL-7	1-21-76
HL-8	1-21-76
HL-9	3-22-77
HL-10	1-21-76
HL-11	4-6-73
HL-12	4-6-73
HL-15	1-21-76
HL-16	4-6-73
HL-19	3-22-77
TC-22.20	8-19-77
TC-7.65	10-1-74
TC-12.30	10-1-74
TC-21.10	10-1-74
TC-21.40	8-19-77
TC-22.10	10-1-74
TC-31.21	8-27-76
TC-32.10	8-27-76
TC-32.11	8-27-76
TC-41.10	8-19-77
TC-41.20	4-1-77
TC-42.10	8-19-77
TC-42.20	4-1-77
TC-51.10	6-2-75
TC-51.11	6-2-75
TC-52.10	4-1-77
TC-52.20	4-1-77
TC-61.10	8-19-77
TC-72.20	8-29-77

"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 Ralph C. Taylor
Date 5-13-71 Director of Public Service, City of Cleveland

Approved Thomas M. Krall
Date 5-28-75 District Deputy Director OF TRANSPORTATION

Approved Robert B. Pfeifer
Date 8-22-77 Engineer, BUREAU OF BRIDGES AND STRUCTURAL DESIGN

Approved R. E. Bartlett
Date 11-17-77 CHIEF ENGINEER, PLANNING AND DESIGN

Approved David L. Weir
Date 11-17-77 DIRECTOR, DEPARTMENT OF TRANSPORTATION

NOTE: All references to former Cleveland Transit System appearing throughout this plan shall be considered to pertain to the Greater Cleveland Regional Transit Authority

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

DESIGN DESIGNATION	
1978 A.D.T. =	36,000
1990 A.D.T. =	47,190
D.H.V.	3,600
D. (directional distribution)	67%
T. (percent B&C trucks)	4%
V. (design speed)	60 M.P.H.

NOTE: PROJECT DESIGNATION CUY-80 APPEARING THOUGHOUT THIS PLAN SHALL BE CONSIDERED TO READ CUY-480

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE:

Rev. 12-20-77 Rev. 2-15-78

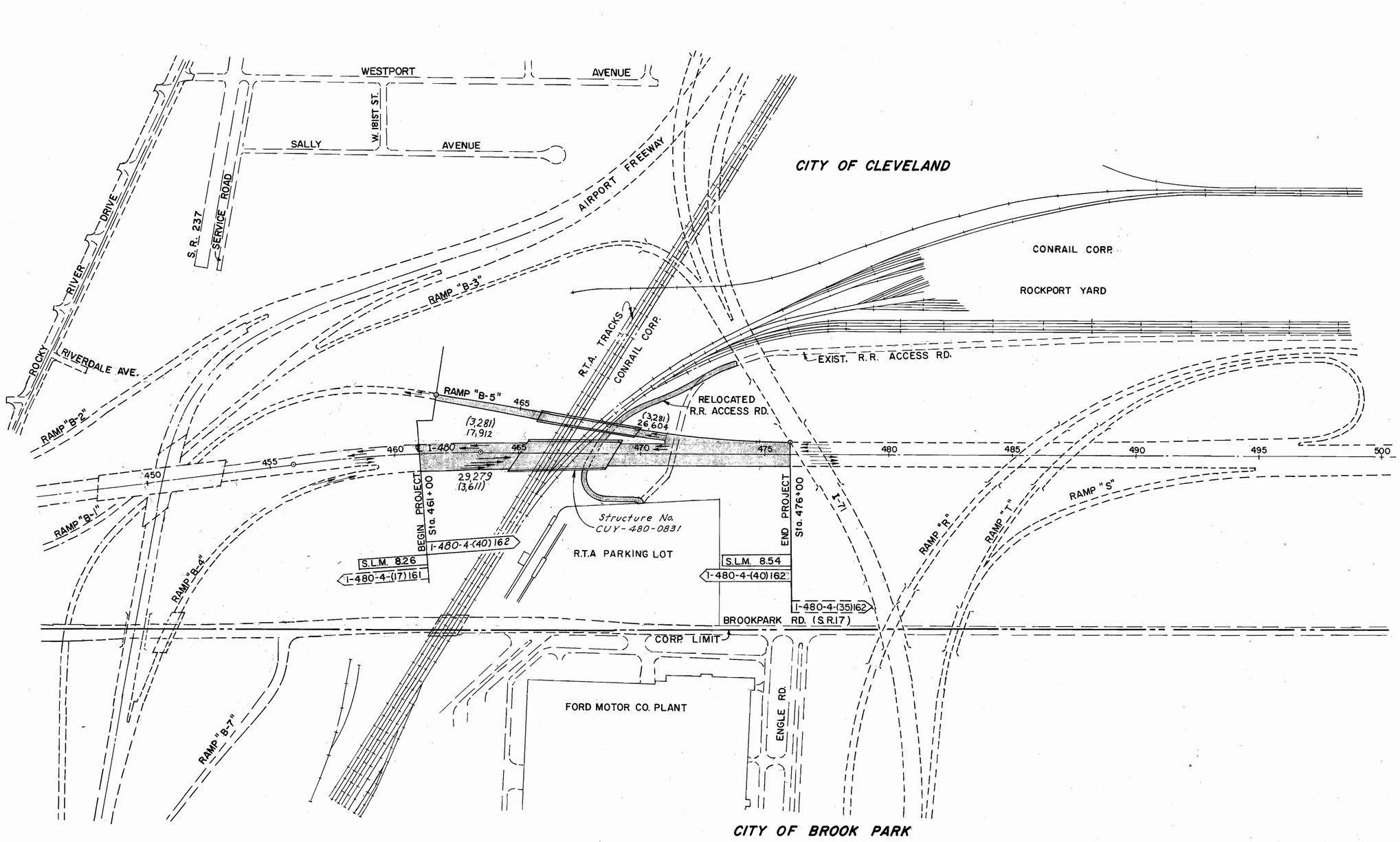
FILE NUMBER	CUYAHOGA COUNTY CUY.-480-8.26 00387
	DATE OF LETTING
	CONTRACT NUMBER

MICROFILMED
DEC 14 1982

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO		

2/107

CUYAHOGA COUNTY
CUY-480-8.26



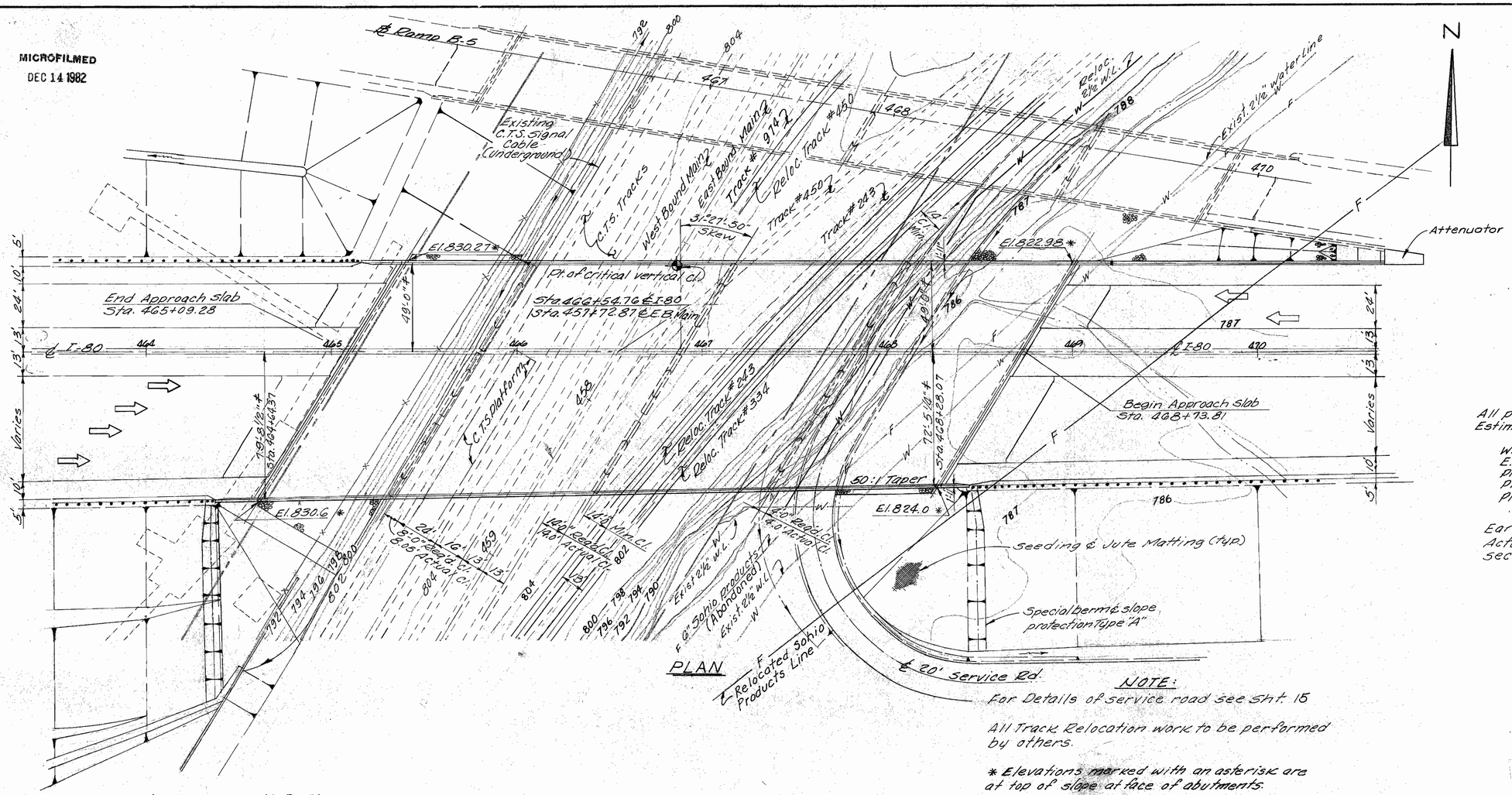
SCHEMATIC PLAN

MICROFILMED
DEC 14 1982

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS

66/107

CUYAHOGA COUNTY
CUY-80-8.26



NOTES:

All piles shall be HP 10x42 piles.
Estimated average pay lengths are:

W. Abutment	57'
E. Abutment	50'
Pier No. 1	37'
Pier No. 2	37'
Pier No. 3	29'

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

PROPOSED STRUCTURE

TYPE: Continuous steel girder with reinforced concrete deck and substructure.
SPANS: 69'-6", 100'-9", 93'-0", 90'0" ℄ Brgs.
ROADWAY: Variable width, see plan, BR-1-67 railing, Concrete barrier median
LOADING: HS20-44 and Interstate alternate loading
WEARING SURFACE: Monolithic Concrete
SKEW: 31° 27'-50" Left forward.
ALIGNMENT: Tangent
APPROACH SLABS: AS-1-72, modified 25' long

NOTE:

For Details of service road see Sht. 15

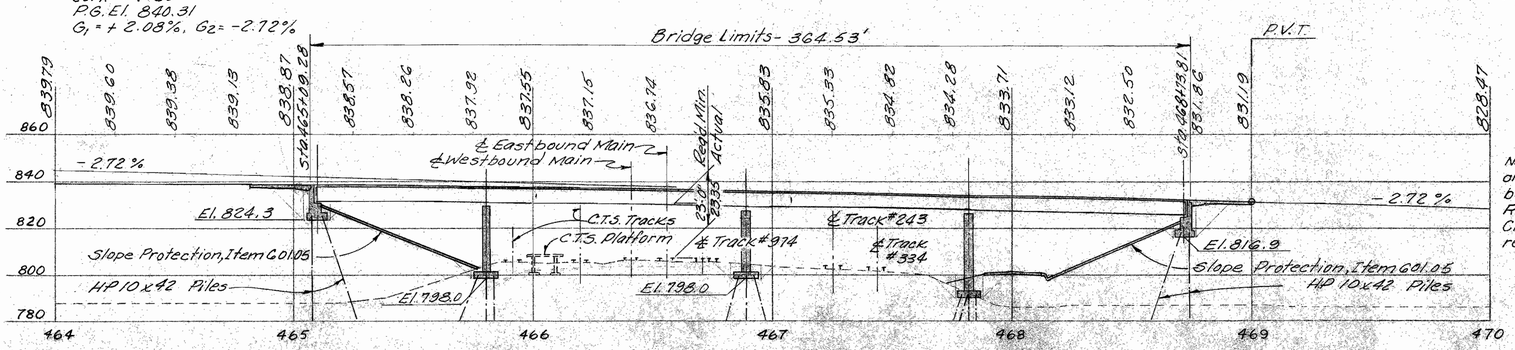
All Track Relocation work to be performed by others.

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

± Dimensions marked thus, are to the face of parapet.

VERTICAL CURVE DATA

P.V.I. Sta. 463+00
1200' V.C
El. 847.51
Corr. -7.20
P.G. El. 840.31
G_1 = + 2.08%, G_2 = -2.72%



PROFILE along ℄ I-80

Note: All references to Penn Central and Cleveland Transit System shall be considered to read Consolidated Rail Corporation and the Greater Cleveland Regional Transit Authority respectively.

TRAFFIC ESTIMATE

Design Year - 1987
Total A.D.T. - 67,295

Modify Std. Drwg. AS-1-72 by changing the cover over the top rebars from 2" to 3" & changing from full width to the width of the approach pavement. Also omit jacking holes.

1/22

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

SITE PLAN
BRIDGE No. CUY-80-0831
I-80 over PENN CENTRAL and CLEVELAND TRANSIT SYSTEM
Sta. 465+09.28
CUYAHOGA COUNTY Sta. 468+13.81

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
G.W.M.	G.W.M.	R.T.	R.S.S.	G.W.M.	9/30/69	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

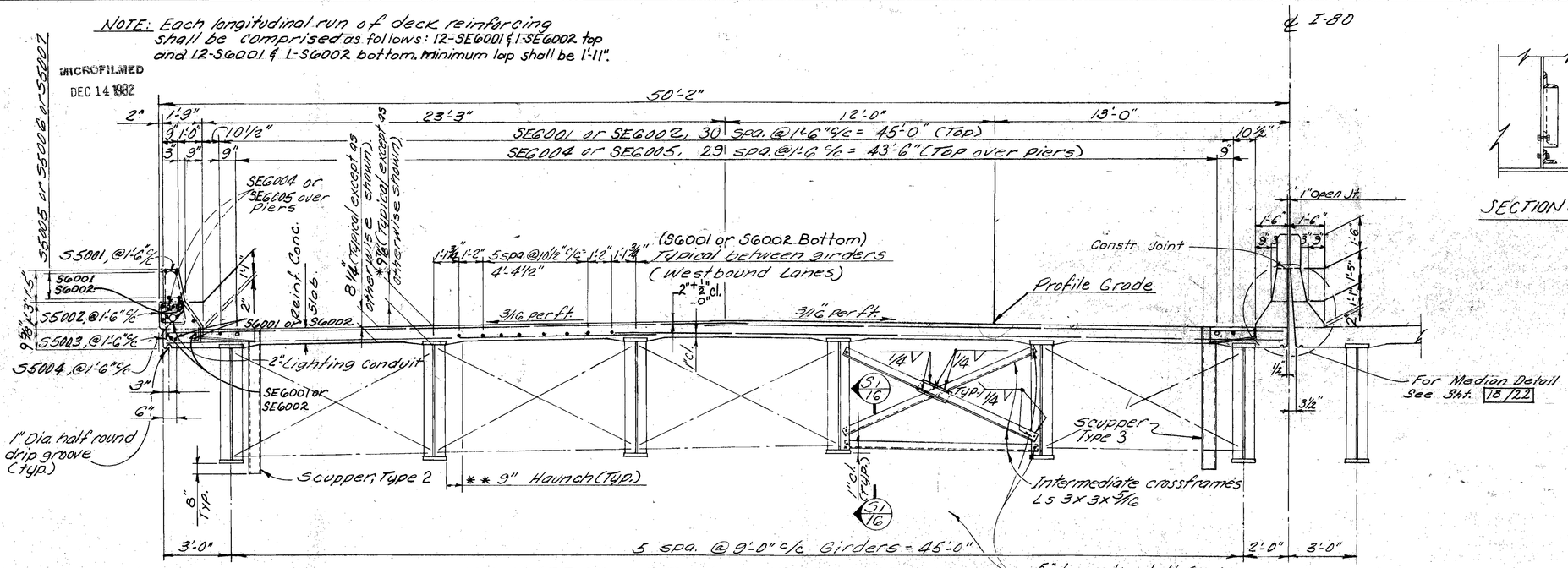
81/107

CUYAHOGA COUNTY
CUY. - 80 - 8.26

NOTES

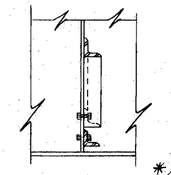
NOTE: Each longitudinal run of deck reinforcing shall be comprised as follows: 12-SE6001 & 1-SE6002 top and 12-S6001 & 1-S6002 bottom. Minimum lap shall be 1'-11".

MICROFILMED
DEC 14 1982



TRANSVERSE SECTION ~ WESTBOUND LANES

5/8" ϕ erection bolts (Typ.). Tack weld bolts in place after welding Crossframes. Slotted holes may be used in the crossframe members and the bolts shall be properly torqued and left in place.



SECTION S1-S1

*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 511.18.

** A haunch width of 9" shall be used for all girders in computing quantity of concrete. However the haunch width 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.

For transverse slab reinforcing see Sht. 17/18/22

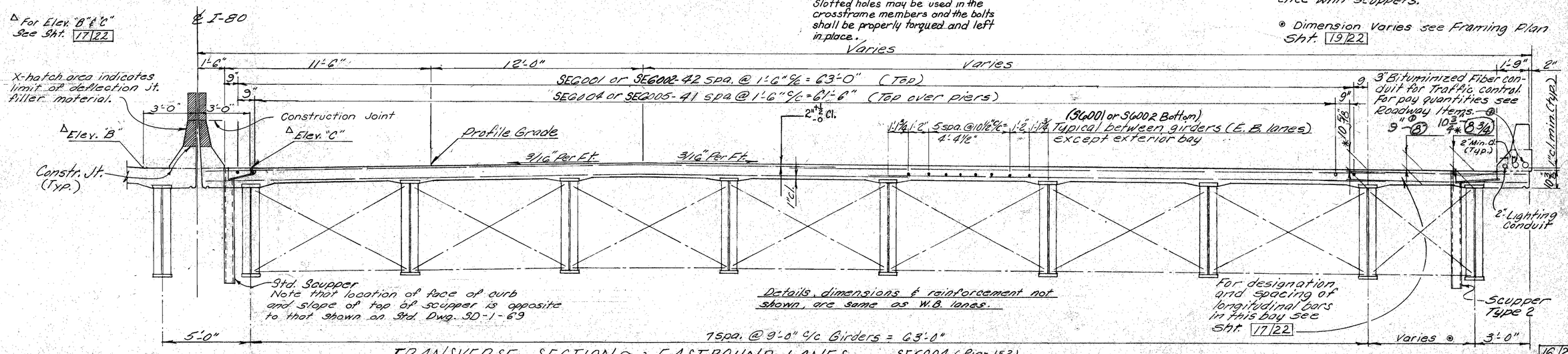
Concrete and reinforcing steel for parapets shall be included for payment with their respective items. Item 511 Superstructure Concrete and item 509 reinforcing steel.

For Scupper Details see Sht. 18/22

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

⊙ Dimension Varies see Framing Plan Sht. 19/22

△ For Elev. "B" & "C" See Sht. 17/22



TRANSVERSE SECTION ~ EASTBOUND LANES

16/22

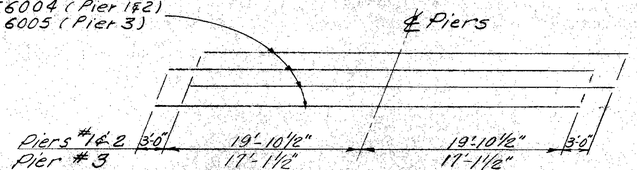


DIAGRAM SHOWING STAGGER OF SE6004 or SE6005 BARS OVER PIERS

⊙ Revisions 1-4-79

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

SUPERSTRUCTURE DETAILS

BRIDGE No CUY-80-0831
I-80 over PENN CENTRAL and CLEVELAND TRANSIT SYSTEM
CUYAHOGA COUNTY STA. 465+09.28 STA. 468+73.81

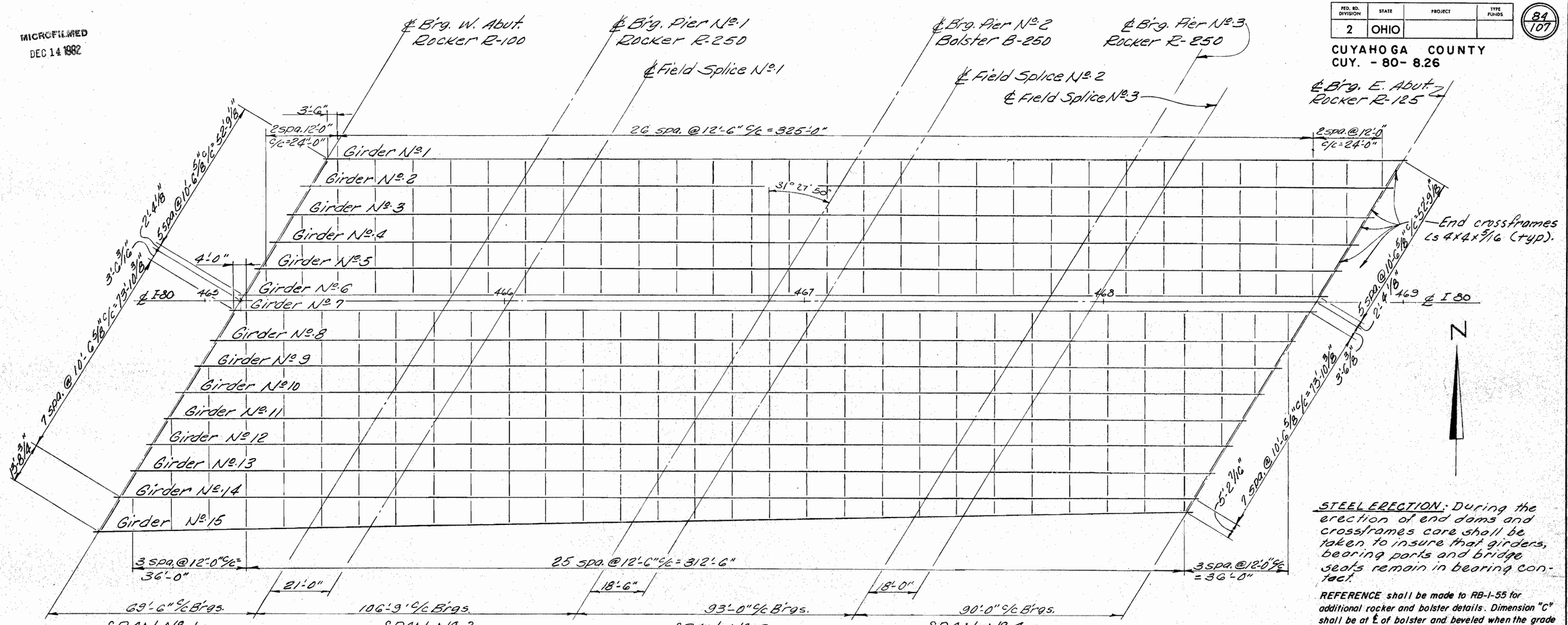
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
B.I.P.	D.T.		R.S.S.	G.W.H.	10/2/79	1-4-79

MICROFILMED
DEC 14 1982

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

84/107

CUYAHOGA COUNTY
CUY. - 80 - 8.26



FRAMING PLAN

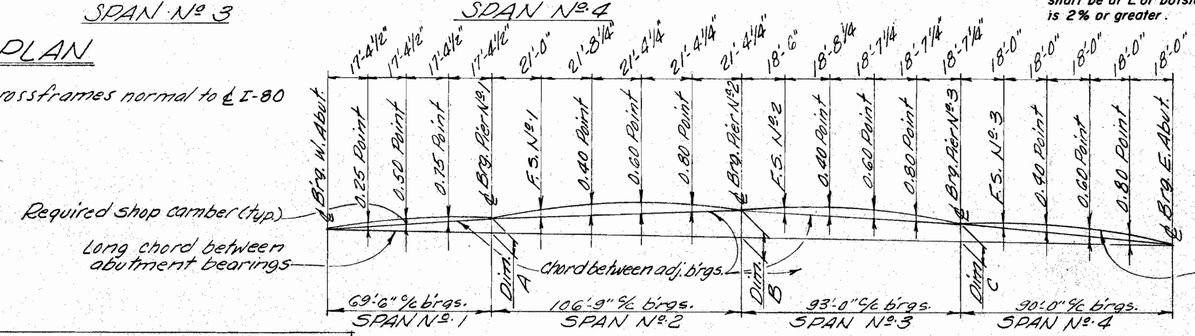
Note: Place intermediate crossframes normal to ℄ I-80

STEEL ERECTION: During the erection of end dams and crossframes care shall be taken to insure that girders, bearing parts and bridge seats remain in bearing contact.

REFERENCE shall be made to RB-1-55 for additional rocker and bolster details. Dimension "C" shall be at ℄ of bolster and beveled when the grade is 2% or greater.

SHOP DRAWINGS

After all steel fabrication is completed, the Fabricator shall furnish a 35 millimeter microfilm copy of each shop drawing mounted on a 3 1/4" x 7 3/8" aperature card. The card shall be imprinted with the bridge and project number, Fabricator's name, drawing number and details shown on the drawing (girders, beams, crossframes, etc.)



CAMBER & BLOCKING DIAGRAM

19/22

DEFLECTION AND CAMBER

Location	SPAN No. 1			SPAN No. 2				SPAN No. 3				SPAN No. 4			
Point along Girder	0.25	0.50	0.75	F.S. #1	0.40	0.60	0.80	F.S. #2	0.40	0.60	0.80	F.S. #3	0.40	0.60	0.80
Deflection due to weight of steel	0	0	0	1/16	1/8	1/8	1/16	0	0	0	0	1/16	1/8	1/8	1/16
Deflection due to remaining dead load	3/16	1/8	0	3/8	13/16	13/16	3/8	0	1/8	1/8	0	5/16	11/16	13/16	1/2
Adjust req'd. for vertical curve	3/16	1/4	3/16	7/16	5/8	5/8	7/16	5/16	1/2	1/2	5/16	5/16	7/16	7/16	5/16
Required shop camber	3/8	3/8	3/16	7/8	1 9/16	1 9/16	7/8	5/16	5/8	5/8	5/16	11/16	1 1/4	1 3/8	7/8

BLOCKING DIMENSIONS

Girder No.	Dim. A	Dim. B	Dim. C
1 thru 14	4 7/8"	7 3/4"	5 13/16"
15	4 15/16"	7 15/16"	6"

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

SUPERSTRUCTURE DETAILS
BRIDGE No CUY-80-0831
I-80 over PENN CENTRAL and CLEVELAND TRANSIT SYSTEM.
CUYAHOGA COUNTY STA. 465 + 09.28 STA. 468 + 73.81

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
B.I.P.	R.T.		R.S.S.	G.W.U.	10/1/69	