

No PID
C No. 780059

STATE OF OHIO

DEPARTMENT OF TRANSPORTATION

I-480-3 (4) 153

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO	I-480-3(4)153	1 375

LORAIN COUNTY
LOR. - 480-0.00

"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 A. D. Reader
Date 1-30-76 District Deputy Director of Transportation
Approved Robert B. Pfeiffer
Date 12-21-77 Engineer, Bureau of Bridges and Structures
Approved R. E. Guthrie
Date 12-22-77 Chief Engineer, Planning and Design
Approved David L. Wein
Date 12-22-77 Director, Department of Transportation

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Sheets 274 & 275 revised 5.11.78 EBL

LINE DATA

Begin Project ~ Sta. 975+50.00 to Sta. 998+03.01 (Bk) @ I-480 E.B. = 2,253.01 L.F.
Sta. 0+301.74(h) to Sta. 32+31.00 (Toll Plaza) @ I-480 E.B. = 3,200.83 L.F.
Sta. 37+31.00 (Toll Plaza) to Sta. 74+11.39 @ I-480 E.B. = 3,680.39 L.F.
Sta. 74+11.39 to Sta. 100+00.00 @ I-480 End Project = 2,588.61 L.F.

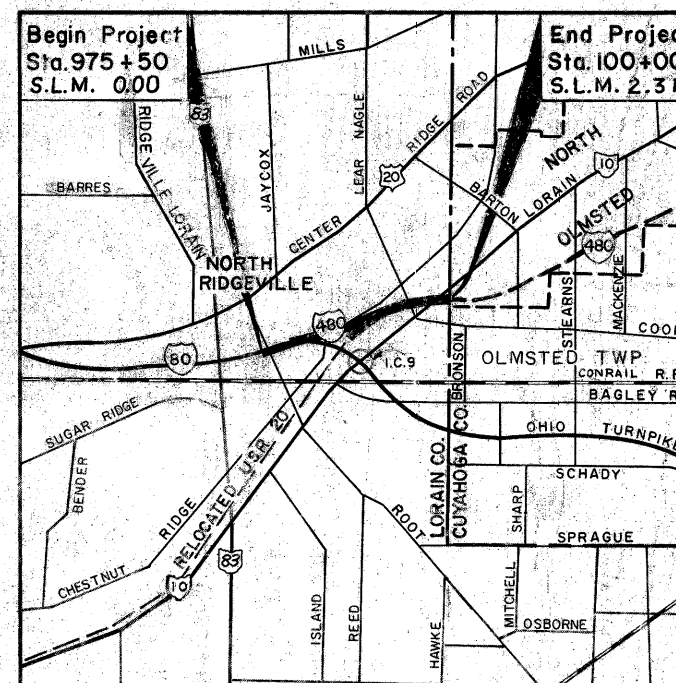
LENGTH OF PROJECT = 11,722.84 LF or 2.220 MILES

ADD FOR WORK
Lorain Rd. (S.R.10)
Sta. 1137+30.00 to Sta. 1153+80.00 = 1,650.00 L.F.

I-480
Sta. 973+35.00 to Sta. 975+50.00 = 215.00 L.F.
Sta. 100+25.34 to Sta. 105+37.00 = 511.66 L.F.
LENGTH OF ADDITIONAL WORK = 2,376.66 L.F.
ADD PROJECT LENGTH = 11,722.84 L.F.

LENGTH OF WORK = 14,099.50 L.F. or 2.670 MILES

SUPPLEMENTAL SPECIFICATIONS	
NUMBER	DATE
801	4-25-77
808	1-1-77
814	1-1-69
836	3-12-76
838	1-13-77
839	11-25-70
844	11-8-74
846	4-25-77
948	2-19-74
950	4-25-77
951	4-25-77
5625	1-11-74
5713	1-11-74
10001	1-3-77



LOCATION MAP

SCALE OF MILES

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

PLAN
PROFILE: HORIZ.
VERT.
CROSS SECTIONS
PAVEMENT DETAILS

SCALES

0 50
0 50
0 10-20
0 10
0 20

1" = 50'
1" = 50'
1" = 20'
1" = 10'
1" = 10'

STANDARD DRAWINGS
Number _____ Date _____

BP-1	6-1-6
BP-2	12-6-76
BP-3	12-6-76
BP-4	12-6-76
BP-5	8-11-76
BP-7	12-6-76
BP-9	12-6-76
BP-10	1-3-76
CB-3	1-1-76
CB-3A	1-1-76
CB-5	9-1-63
CB-6	6-1-63
F-1	5-1-76
BP-6	6-1-6
F-3	5-1-76
F-5	5-1-76
F-6	5-1-76
GR-1	12-6-76
GR-2B	12-6-76
GR-3	12-6-76
GR-4	12-6-76
GR-4A	7-26-76
GR-5	1-1-71
GR-6	1-1-71

HW-4	1-1-70
MC-1	6-13-61
MC-3	6-1-73
MC-4	7-26-71
MC-6	6-1-65
MC-7	10-15-70
MC-8	6-12-75
MC-10	5-1-76
MH-1	6-12-75
MH-3	6-12-73
MH-5	6-12-75
I-1	6-1-71

AS-1-72	6-30-6
BR-1-67	10-15-7
RB-1-55	2-2-5
SD-1-69	6-12-6
SP-53	6-30-6

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-6	3-22-73
HL-7	1-21-73
HL-8	1-21-76
HL-9	3-22-73
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	3-22-73

STANDARD DRAWINGS

<i>Number</i>	<i>Date</i>	<i>Number</i>	<i>Date</i>	<i>Number</i>	<i>Date</i>
		TC-32.11	8-27-76	TC-61.10	8-19-77
		TC-41.10	8-19-77		
TC-22.20	8-19-77	TC-41.20	4-1-77	TC-71.10	12-1-77
TC-76.5	10-1-74	TC-41.50	4-1-77	TC-72.20	8-29-77
TC-12.30	10-1-74	TC-42.10	8-19-77		
TC-21.10	10-1-74	TC-42.20	4-1-77		
TC-21.40	8-19-77	TC-51.10	6-2-75		
TC-22.10	10-1-74	TC-51.11	6-2-75		
TC-31.21	8-27-76	TC-52.10	4-1-77		
TC-32.10	8-27-76	TC-52.20	4-1-77		

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

DESIGN DESIGNATION	
1970 A.D.T. =	18.00
1987 A.D.T. =	40.00
D.H.V. =	2.00
D. (directional distribution)	6
T. (percent B&C trucks)	5
V. (design speed) 60 M.P.H.	

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR

DATE: _____

FILE NUMBER	LORAIN COUNTY	LOR- 480-000
	DATE OF LETTING	
	CONTRACT NUMBER	

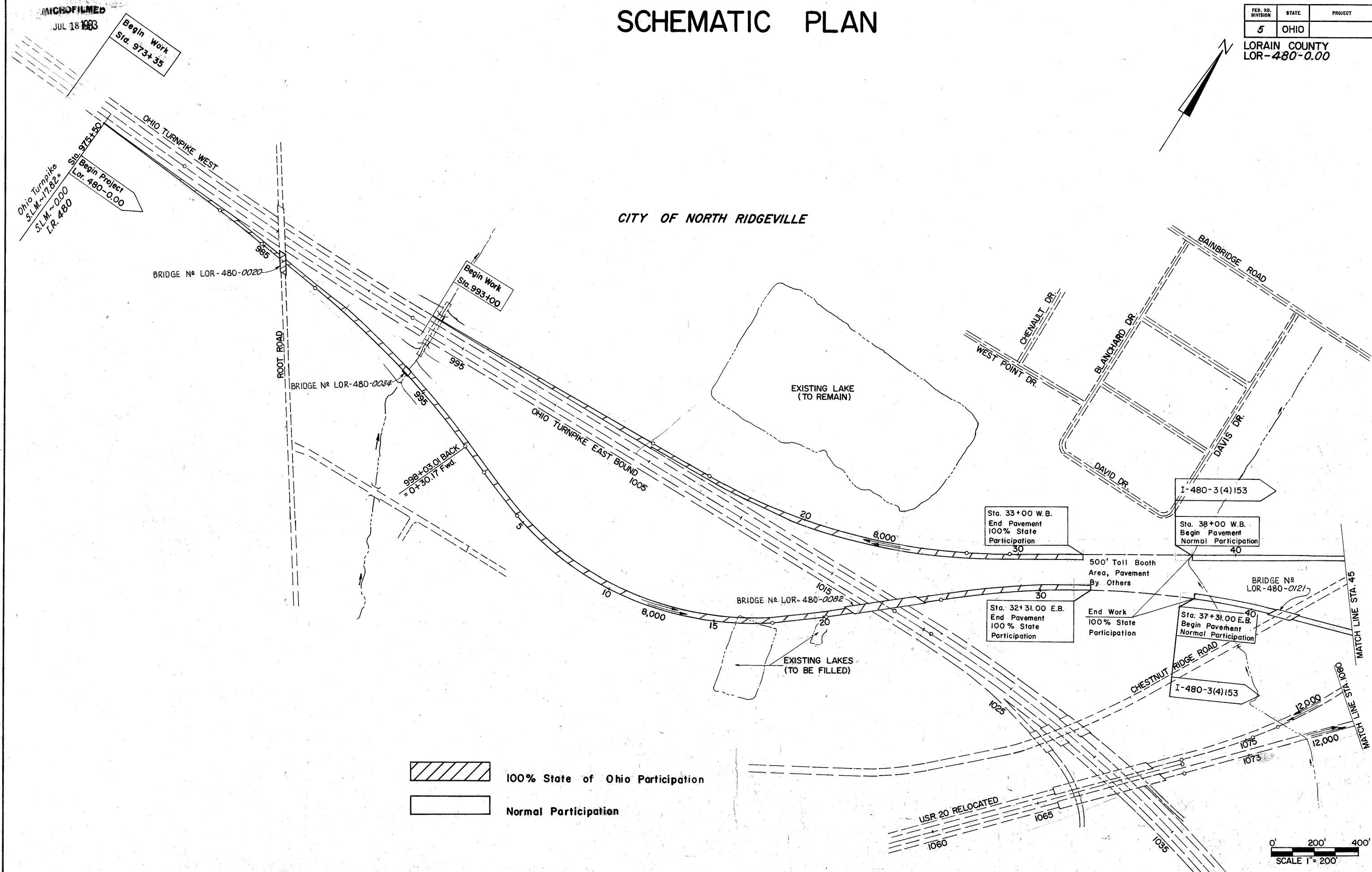
SCHEMATIC PLAN

FED. RD. DIVISION	STATE	PROJECT
5	OHIO	

2
375

LORAIN COUNTY
LOR-480-0.00

CITY OF NORTH RIDGEVILLE



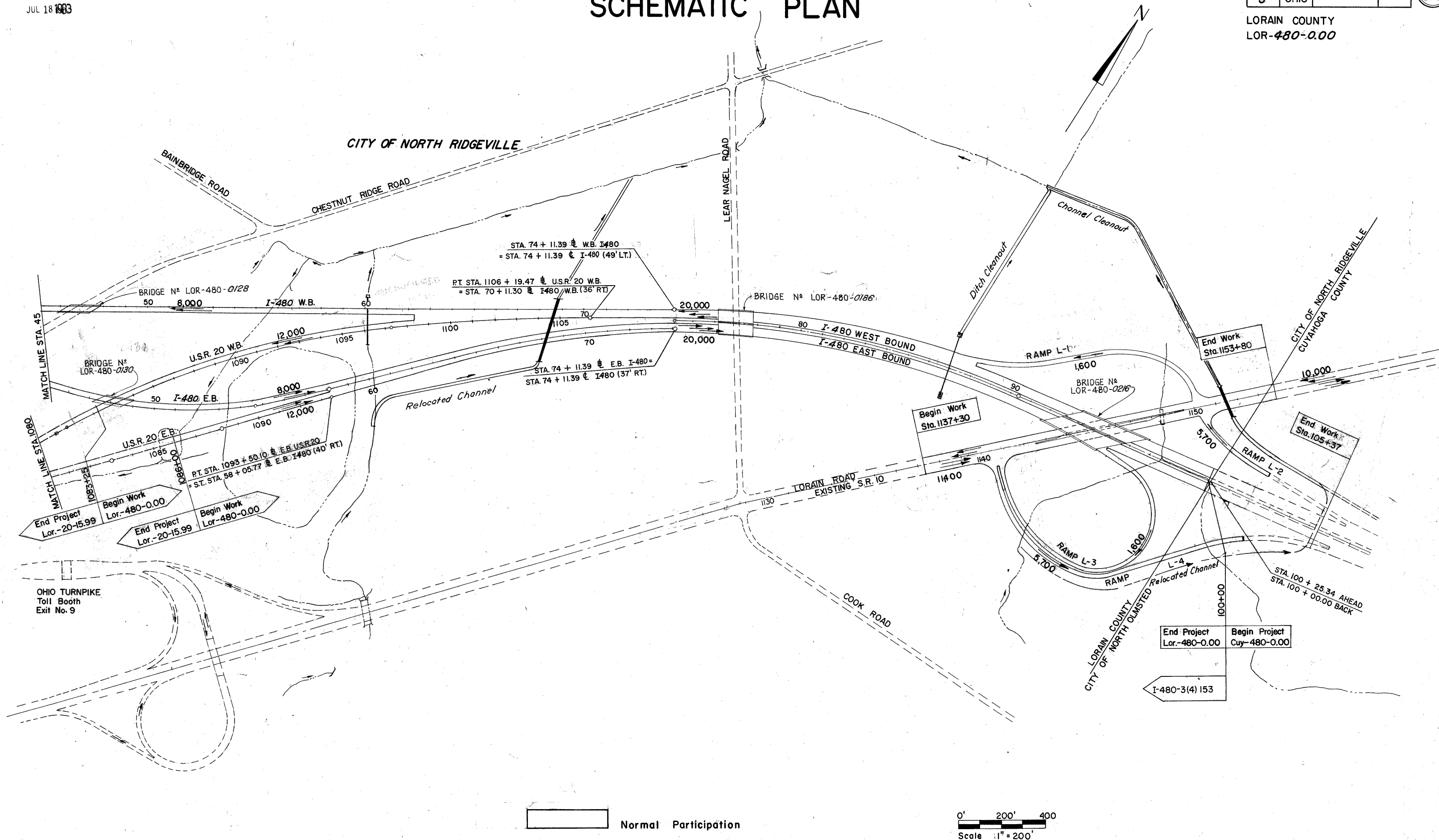
MICROFILMED
JUL 18 1983

SCHEMATIC PLAN

FED. RD. DIVISION	STATE	PROJECT
5	OHIO	

3
375

LORAIN COUNTY
LOR-480-0.00



Normal Participation

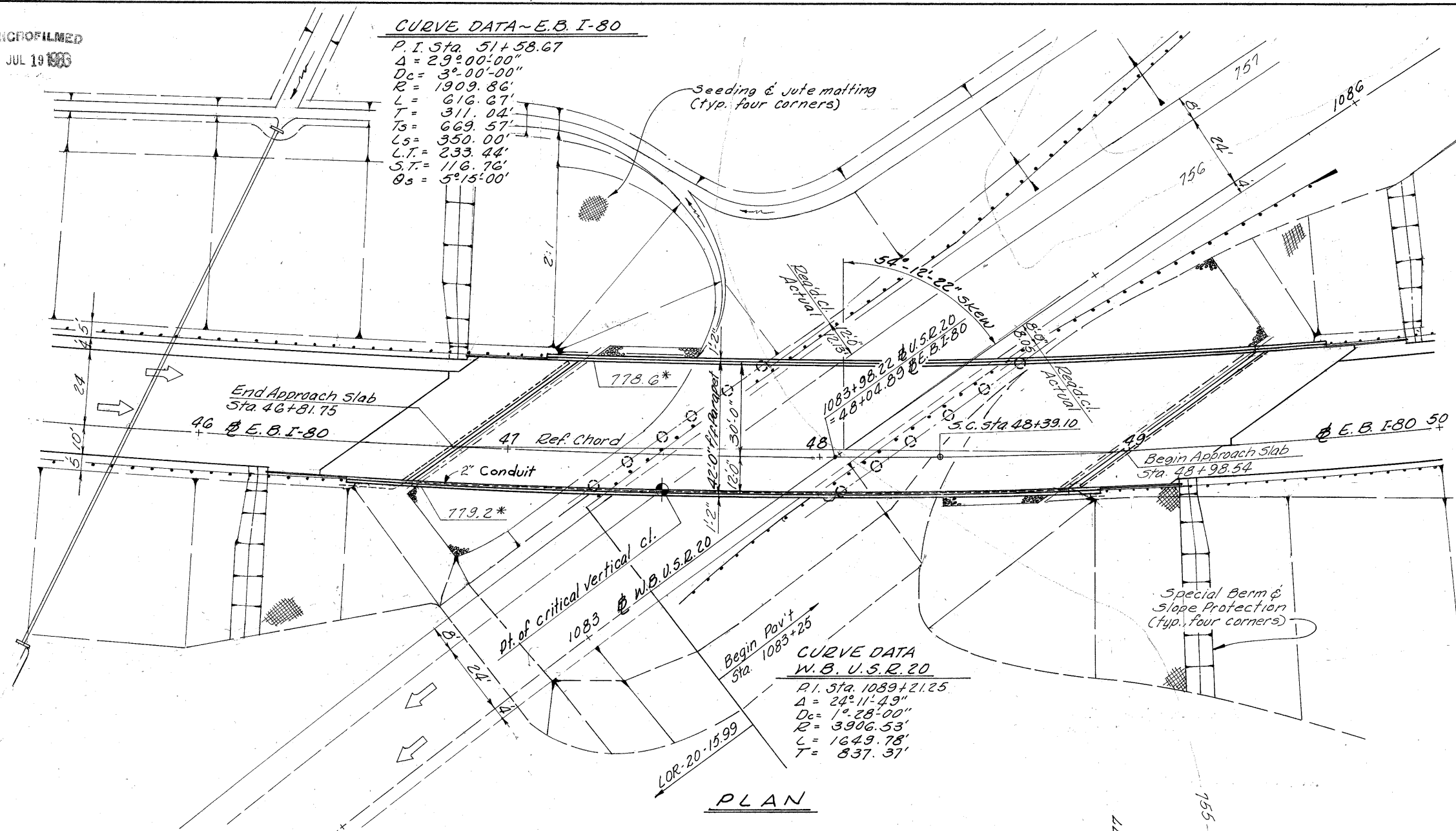
0' 200' 400
Scale 1" = 200'

MICROFILMED
JUL 19 1983

CURVE DATA - E.B. I-80

P.I. Sta. 51+58.67
Δ = 29°00'00"
Dc = 3°00'00"
R = 1909.86'
L = 616.67'
T = 311.04'
Ts = 669.57'
Ls = 350.00'
C.T. = 233.44'
S.T. = 116.76'
θs = 5°15'00"

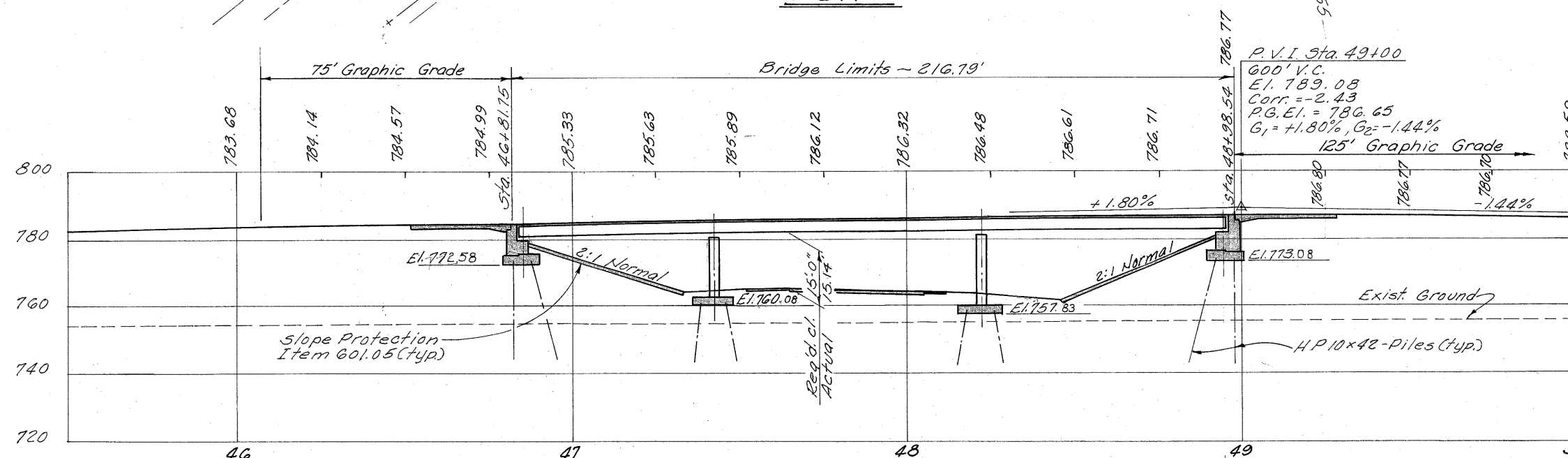
Seeding & Jute matting
(typ. four corners)



PLAN

**CURVE DATA
W.B. U.S.R. 20**

P.I. Sta. 1089+21.25
Δ = 24°11'49"
Dc = 1°28'00"
R = 3906.53'
L = 1649.78'
T = 837.37'



PROFILE ALONG EAST BOUND I-80

Piling Estimated Average pay length:
Abutments - 25'
Piers - 16'

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

LORAIN COUNTY
LOR-480-000

304
375

BRIDGE NO. LOR-80-1912 APPEARING THROUGHOUT
THIS BRIDGE PLAN SHALL BE CONSIDERED TO READ
BRIDGE NO. LOR-480-0130

NOTE:

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

* Elevation of slope at face of abutment.

The vertical data does not apply to bridge or graphic grade elevations. The bridge elevations were obtained by adding 0.12 feet to the elevations obtained from vertical curve data.

PROPOSED STRUCTURE

TYPE: Continuous steel beam with reinforced concrete deck & substructure.
SPANS: 56'-0", 81'-0", 72'-0" brgs. on 4
ROADWAY: 42'-0" f/f parapets of BR-1-67 rolling.
LOADING: HS 20-44 plus Interstate Alternate.
WEARING SURFACE: Monolithic conc.
SKEW: 54°12'22" (with ref. chord)
ALIGNMENT: 350' spiral and 3°00'00" curve left.
APPROACH SLABS: AS-1-72 (Mod.) 30'-0" long.
SUPERELEVATION: Varies, 0.071% max.

TRAFFIC ESTIMATE

Design Year: 1987
Total A.D.T.: 8000

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

SITE PLAN

BRIDGE NO. LOR-80-1912
E.B. I-80 OVER W.B. U.S.R. 20

LORAIN COUNTY STA. 46+81.75
STA. 48+98.54

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
G.W.M.	P.T.		B.I.P.	G.W.M.	4/29/70	

STANDARD DRAWING REFERENCES CONT			
DESCRIPTION	DWG. NO.	SHT	DATE
POLE BASE DETAILS	HL-3	I	7-27-73
STRUCTURE LIGHTING I	HL-4	I	1-21-76
STRUCTURE LIGHTING II	HL-5	I	9-6-73
STRUCTURE GROUNDING	HL-7	I	1-21-76

SUPPLEMENTAL SPECIFICATION REFERENCES-CONT		
DESCRIPTION	NO.	DATE
PAINTING FOR NEW STRUCTURAL STEEL	846	4-25-77
INORGANIC ZINC SILICATE PAINT	950	4-25-77
BLUE GREEN VINYL PAINT	951	4-25-77

STANDARD DRAWING REFERENCES				
DESCRIPTION	DWG. NO.	SHT.	DATE	
END DAM AND END CROSSFRAME	SD-1-69	1-2	6-12-69	
CURB PLATES	SD-1-69	2	6-12-69	
SCUPPERS	SD-1-69	3	6-12-69	
MOMENT PLATES	SD-1-69	3	6-12-69	
BOLTED SPLICES	SD-1-69	4	6-12-69	
BRIDGE ROADWAY RAILING	BR-1-67	1	10-15-71 R	
ROCKERS AND BOLSTERS	RB-1-55		2- 2-59 R	
APPROACH SLABS	AS-1-72 (MOD.)*		6-30-72	

(R INDICATES REVISED DATE)

SUPPLEMENTAL SPECIFICATION REFERENCES			
DESCRIPTION	NO.	DATE	
CHEMICAL ADMIXTURE FOR CONCRETE, TYPE A, B OR D	808	1- 1-71	
CONCRETE CURING AND PROTECTIVE MEMBRANE	836	3-12-75	
SPECIAL PILE TESTS	838	1-13-77	

COMMON DETAIL REFERENCES
CONTRACTION JOINTS & END DAMS SHEET 354
DECK DRAINAGE DETAILS SHEET 355
DESIGN SPECIFICATIONS
THIS STRUCTURE CONFORMS TO THE 'STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES' ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS, 1969, INCLUDING THE OHIO 'SUPPLEMENT' TO THESE SPECIFICATIONS.

DESIGN DATA
DESIGN LOADING - HS20-44 AND THE INTERSTATE ALTERNATE LOADING
CONCRETE CLASS C - UNIT STRESS 1200 PSI FOR SUPERSTRUCTURE
UNIT STRESS 1333 PSI FOR SUBSTRUCTURE
STRUCTURAL STEEL - ASTM A36 - UNIT STRESS 20000 PSI
REINFORCING STEEL - ASTM A615, A616 OR A617 - UNIT STRESS 20000 PSI.
SPIRAL REINFORCEMENT MAY BE PLAIN BARS ASTM A82, OR A615.

EMBANKMENT CONSTRUCTION
THE EMBANKMENTS SHALL BE CONSTRUCTED TO THE LEVEL OF THE SUBGRADE FROM THE EXISTING EMBANKMENT AT STATION 1082+00 TO STATION 1086+00 (MIN.) ON U.S.R. 20 AND FOR A MINIMUM OF 200 FEET BACK OF THE ABUTMENTS ON E.B.1-80. EXCAVATION SHALL THEN BE MADE FOR THE ABUTMENTS AND PIERS.

PILES
PILES SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF-
35 TONS PER PILE FOR THE ABUTMENTS AND WINGWALLS
35 TONS PER PILE FOR THE PIERS

LAPS
MINIMUM BAR LAPS SHALL BE 30 DIAMETERS.

ATTACHMENT OF GUARDRAIL TO CONCRETE PARAPETS: * Std. Dwg. AS-1-72 shall be modified to provide concrete insert anchor assemblies per Standard Construction Drawings GR-3 and GR-1 shall be placed during parapet construction
3" clearance to the top re-bars instead of the 2" shown and jacking holes shall be omitted.

ITEM	TOTAL	UNIT	DESCRIPTION	ABUTS	PIERS	SUPER	GENERAL			
503	603	C.Y.	UNCLASSIFIED EXCAVATION	376	227					
503	LUMP	SUM	COFFERDAMS, CRIBS AND SHEETING				LUMP			
505	LUMP	SUM	TEST PILE				LUMP			
507	1582	L.F.	STEEL PILES, HP10X42	750	832					
509	90744	LB	REINFORCING STEEL	21085	32114	37545				
511	305	C.Y.	CLASS C CONCRETE, SUPERSTRUCTURE(SEE PROPOSAL NOTE)			305				
511	60	C.Y.	CLASS C CONCRETE, PIERS ABOVE FOOTINGS		60					
511	169	C.Y.	CLASS C CONCRETE, ABUTMENTS ABOVE FOOTINGS	169						
511	236	C.Y.	CLASS C CONCRETE, FOOTINGS	127	109					
512	17	L.F.	PREMOLDED SEALING STRIP	17						
513	304600	LB	STRUCTURAL STEEL,PRIMER PER 846(SEE PROPOSAL NOTES)			304600				
846	304600	LB	FIELD PAINTING OF STRUCTURAL STEEL			304600				
518	107	C.Y.	POROUS BACKFILL	107						
518	7	EA	SCUPPERS INCLUDING SUPPORTS			7				
518	128	L.F.	6 INCH PERFORATED, HELICAL CSP, 707.01	128						
518	84	L.F.	6 INCH NON-PERFORATED, HELICAL CSP, INCLUDING SPECIALS, 707.01	84						
601	854	S.Y.	CRUSHED AGGREGATE SLOPE PROTECTION				854			
808	305	UNIT	CHEMICAL ADMIXTURE FOR CONCRETE, TYPE A, B OR D							
838	3	HR	SPECIAL PILE TESTS				3			
COLD APPLIED LIQUID										
SPEC	44967	LB	EPOXY COATED REINFORCING STEEL(SEE PROPOSAL NOTE)	1490		43477				

MONOLITHIC WEARING SURFACE THICKNESS IS ASSUMED TO BE 1" DECK PROTECTION
METHOD: EPOXY COATED REINFORCING STEEL, TOP MAT ONLY

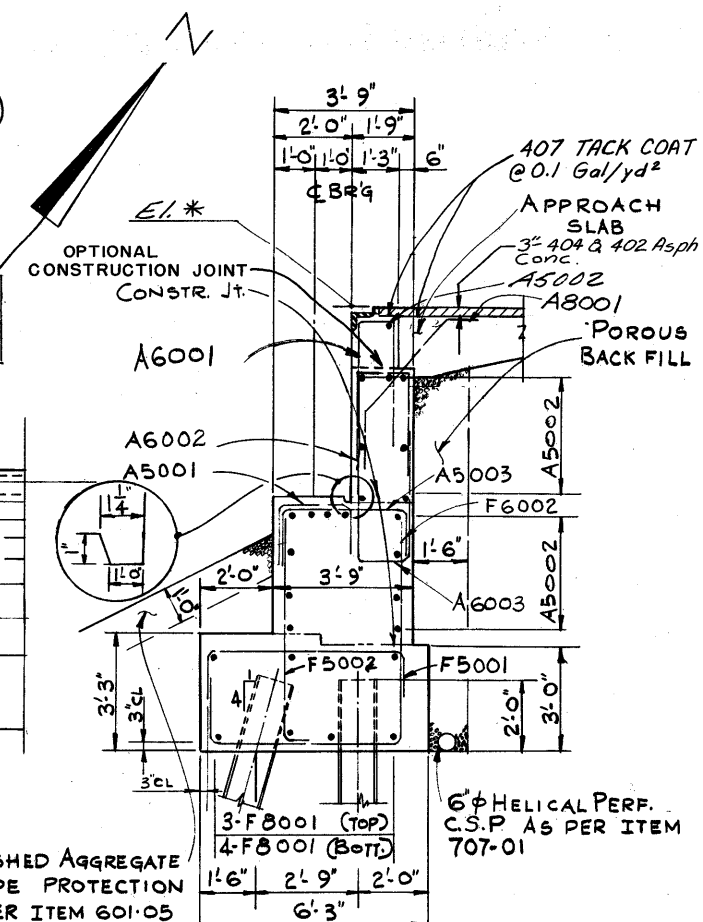
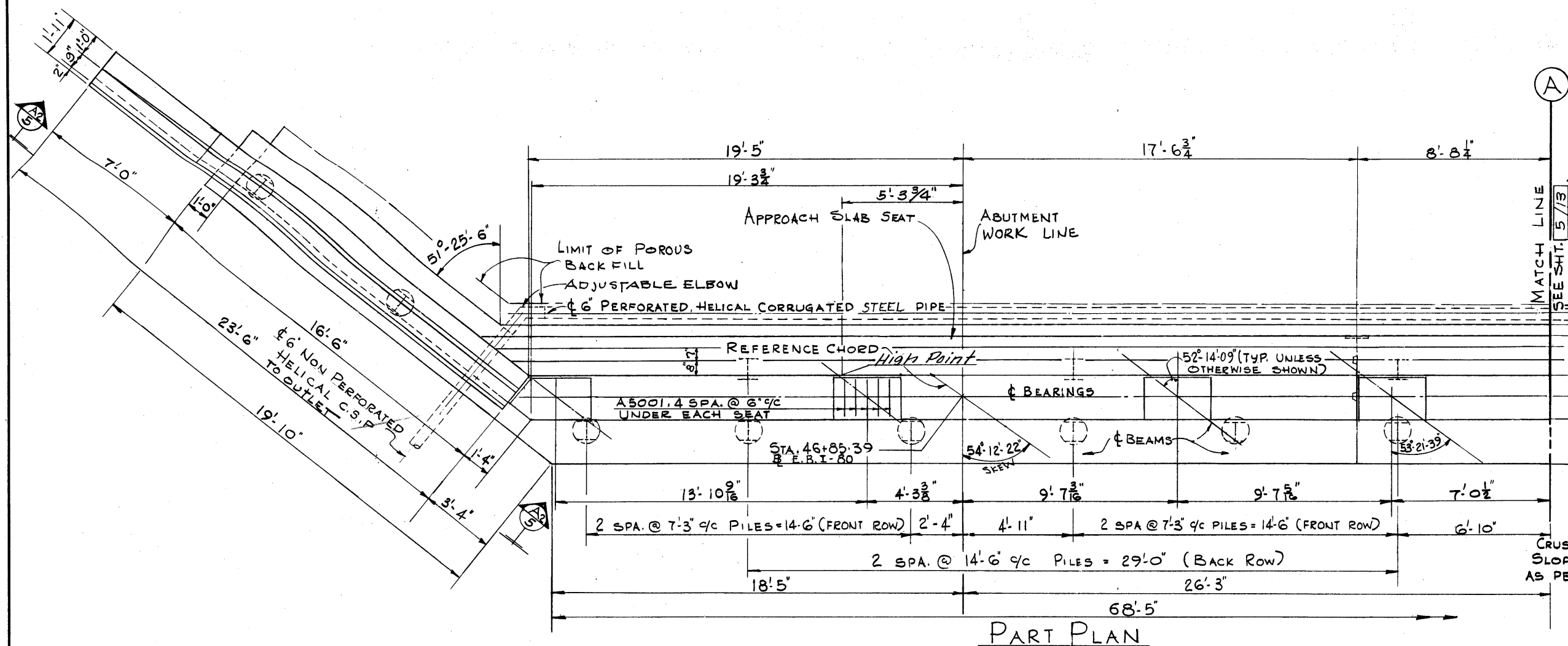
ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS CLEVELAND, OHIO COLUMBUS, OHIO WHEELING, W. VA.							
GENERAL NOTES AND ESTIMATED QUANTITIES BRIDGE NO. LOR-80-1912 E.B. I-80 OVER W.B. U.S.R. 20 LORAIN COUNTY STA. 46+81.75 STA. 48+98.54							
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
B.D.			M.M.A. 3-12-70	G.W.M. 4/29/70			

NOT FILLED
JUL 19 1983

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

LORAIN COUNTY
LOR-480-0.00

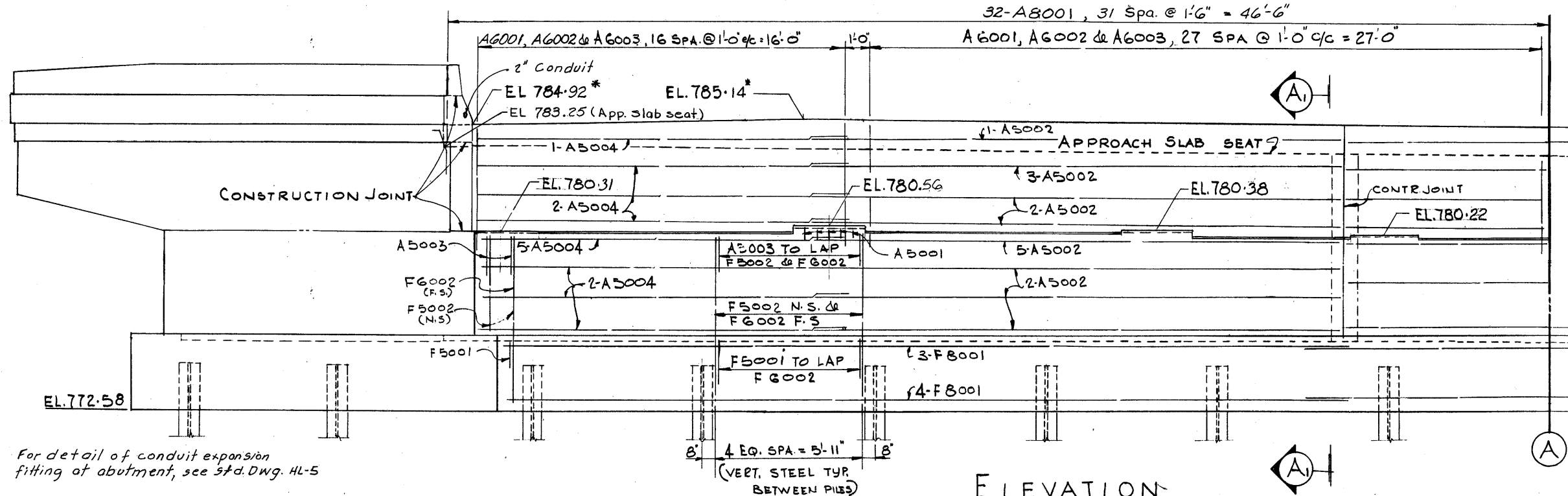
307
375



SECTION A1-A1
(TYPICAL EXCEPT FOR BAR CALLOUTS)
NOTES:
ALL PILES ARE HP 10x42 - PILES
I INDICATES VERTICAL PILES.
⊙ INDICATES PILES BATTERED 1:4

IN REINFORCING BAR CALLOUTS
N.S. INDICATES NEAR SIDE
F.S. INDICATES FAR SIDE
* ELEVATIONS SHOWN THUS ARE PAVEMENT ELEVATIONS AT THE FACE OF BACKWALL AND THE POINT INDICATED, SEE SECTION A1-A1

FOR ADDITIONAL NOTES SEE SHT. 5/13
ADJUSTABLE TYPE ELBOWS MEETING SPECIFICATION REQUIREMENTS FOR GAGE AND COATING ARE ACCEPTABLE FOR MAKING BENDS IN C.S.P. ELBOW NEED NOT BE PERFORATED.



For detail of conduit expansion fitting at abutment, see Std. Dwg. HL-5

ALDEN E. STILSON & ASSOCIATES, LIMITED						
CONSULTING ENGINEERS			COLUMBUS, OHIO WHEELING, W. VA.			
CLEVELAND, OHIO						
WEST ABUTMENT DETAILS						
BRIDGE NO LOR-80-1912						
E. B. 1-80 OVER W.B. U.S.R. 20						
LORAIN COUNTY						
STA. 46+81.75						
STA. 48+98.54						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
B.I.P.	B.S.		B.I.P.	G.W.M.	4/29/70	
DALAL	DALAL					

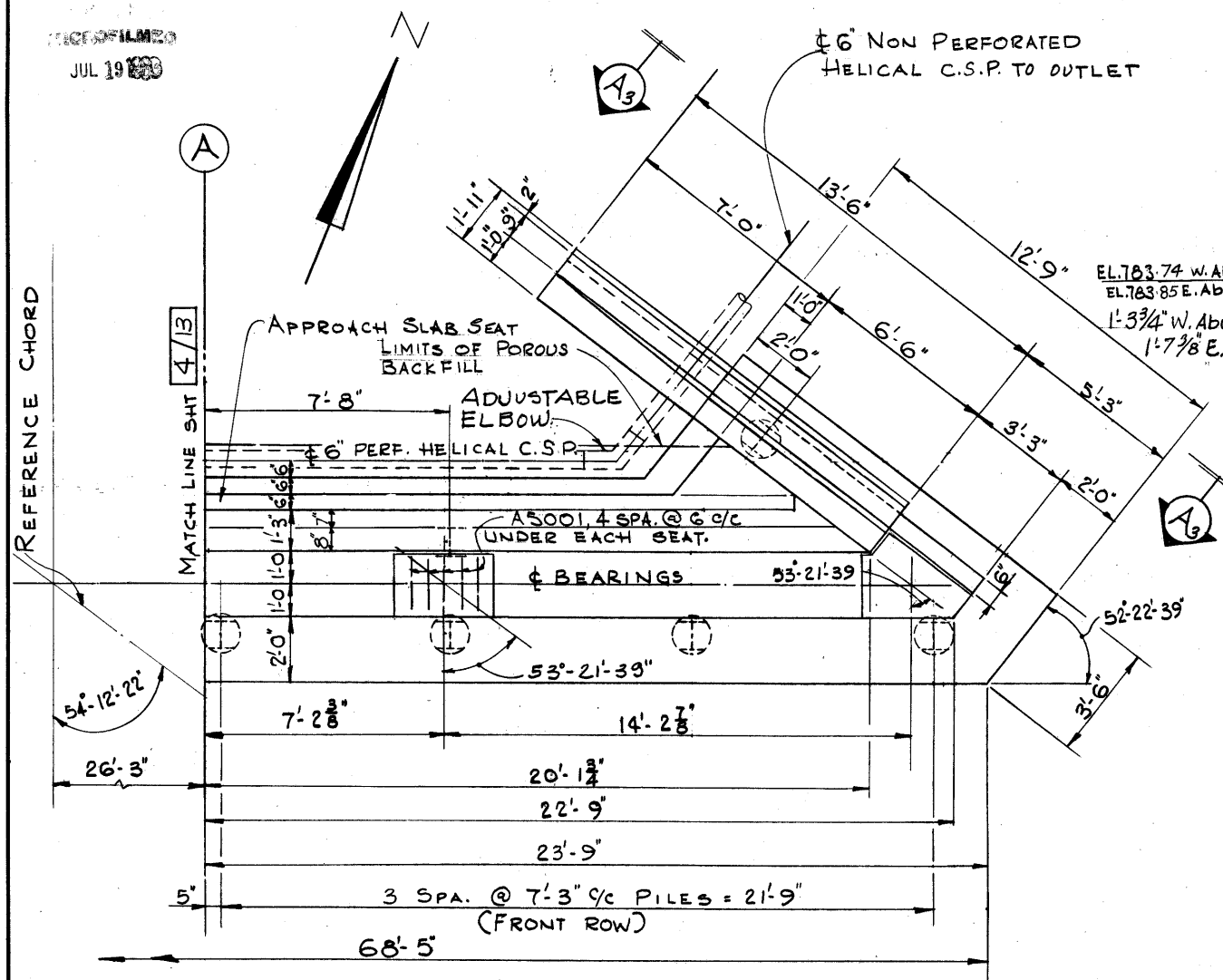
RECEIVED
JUL 19 1960

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

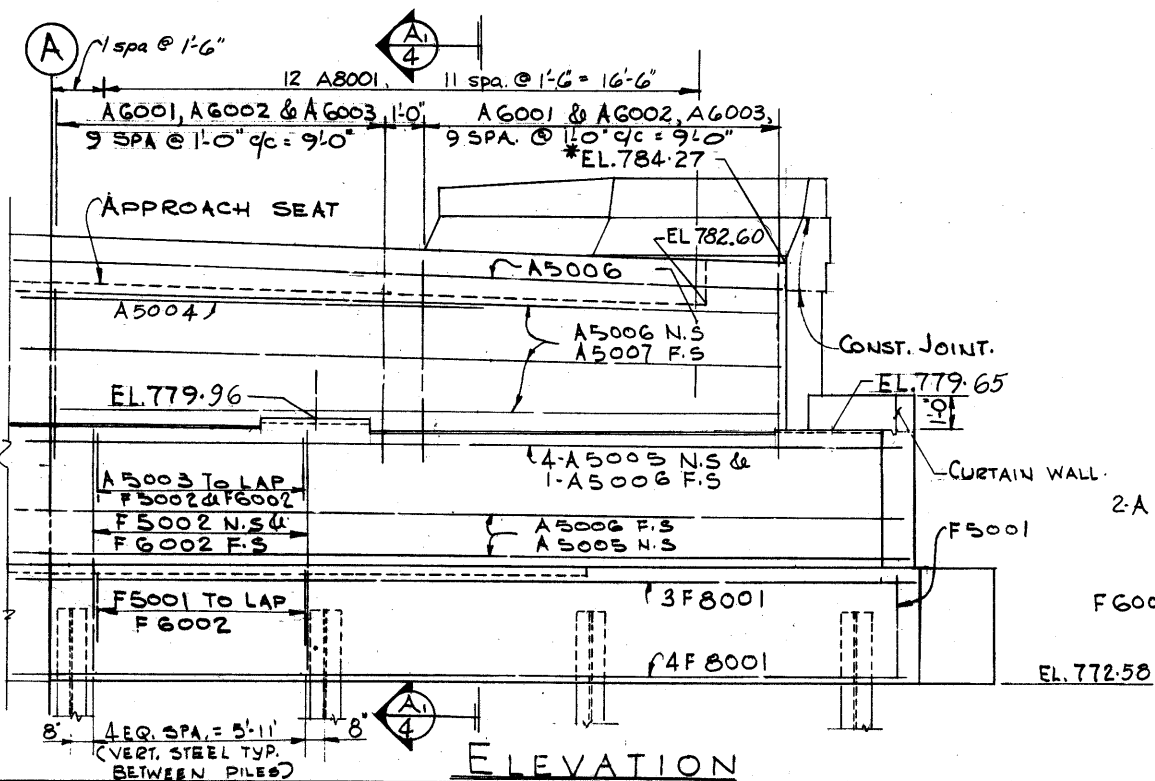
308
375

LORAIN COUNTY
LOR-480-0.00

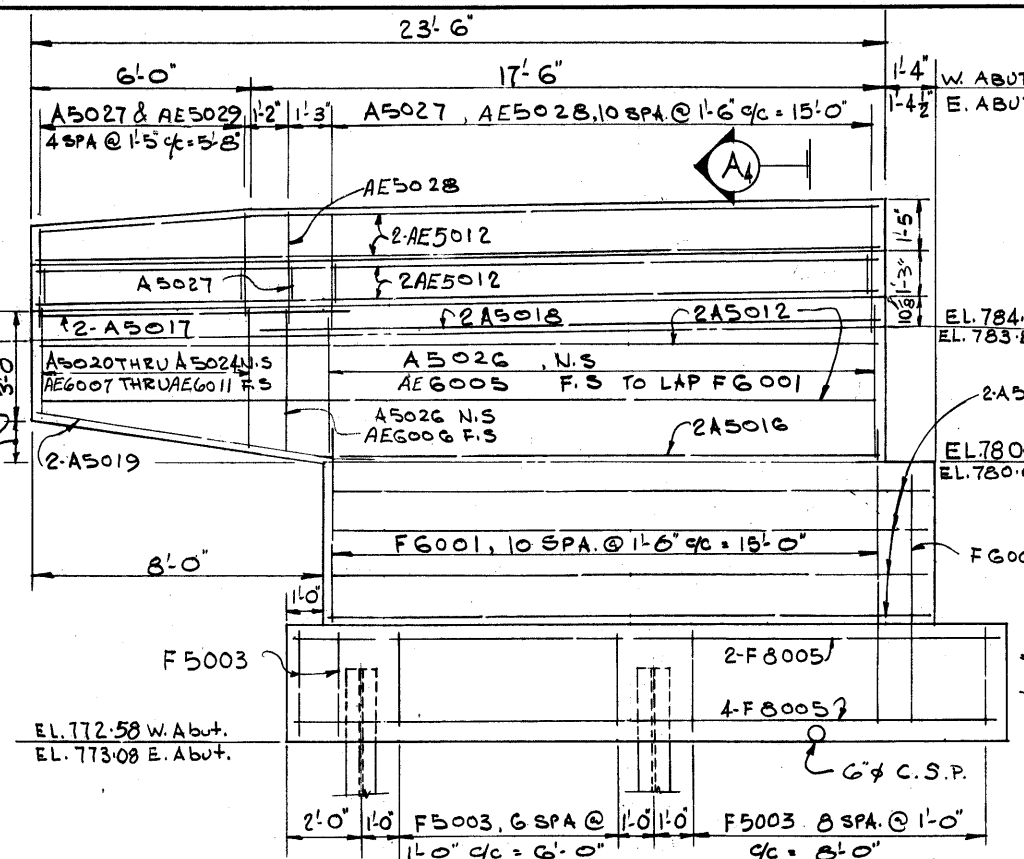
REFERENCE CHORD



PART PLAN



ELEVATION



VIEW A2-A2

For details of electrical fitting, coupling and conduit in wingwall, See Sht. HL-5

SECTION A4-A4

NOTES

ALL PILES ARE HP 10x42 - PILES.

INDICATES VERTICAL PILES

INDICATES PILES BATTERED 1:4

IN REINFORCING BAR CALLOUTS.

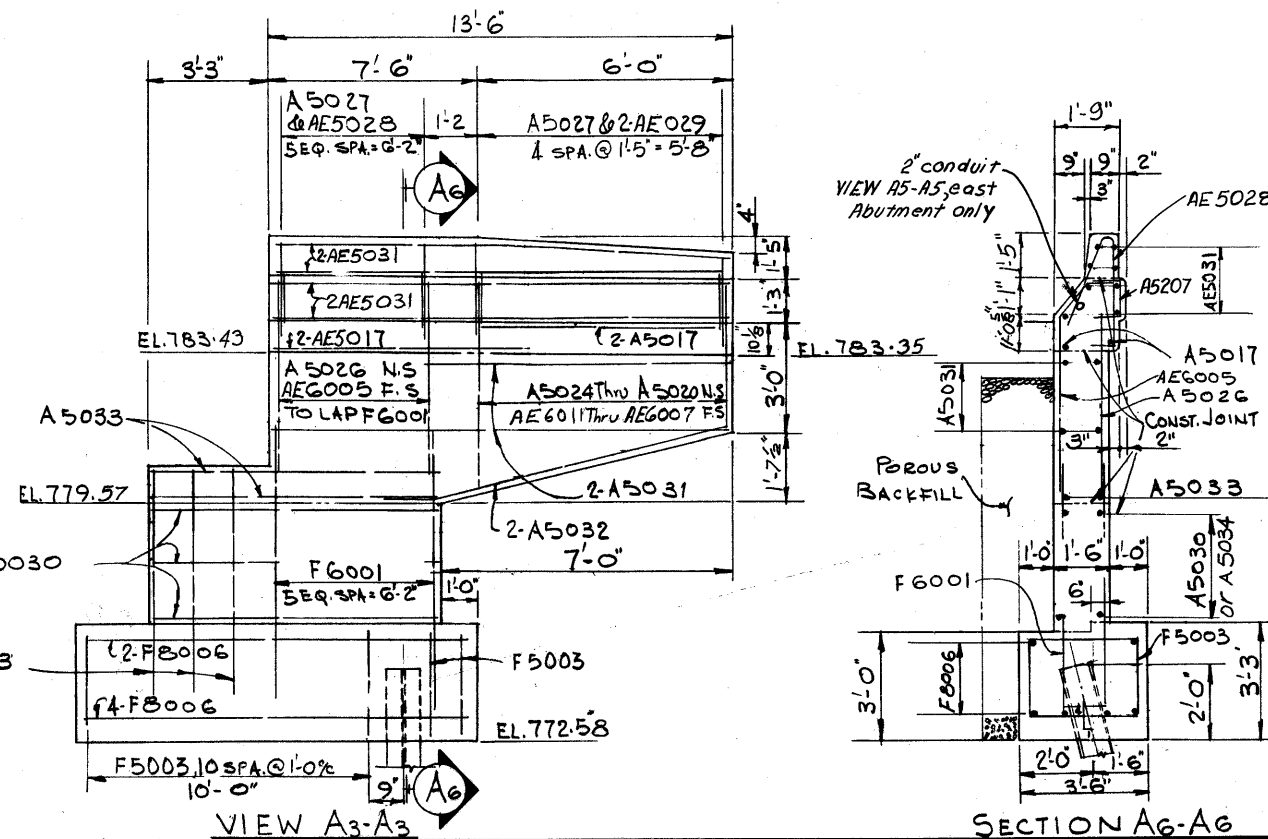
N.S. INDICATES NEAR SIDE

F.S. INDICATES FAR SIDE

*ELEVATIONS SHOWN THUS ARE PAVEMENT ELEVATIONS AT FACE OF BACKWALL AND POINT INDICATED.

POROUS BACKFILL 1'-6" THICK, FULL LENGTH OF ABUTMENT AND 2'-0" THICK FULL LENGTH OF WINGS AS SHOWN, SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE.

FOR DETAILS OF CONTRACTION JTS. SEE COMMON DETAILS SHT. NO. 354
FOR DETAILS OF C.S.P. TERMINUS SEE COMMON DETAILS SHT. NO. 354
FOR ADDITIONAL NOTES SEE SHT. 4/13 & 6/13.

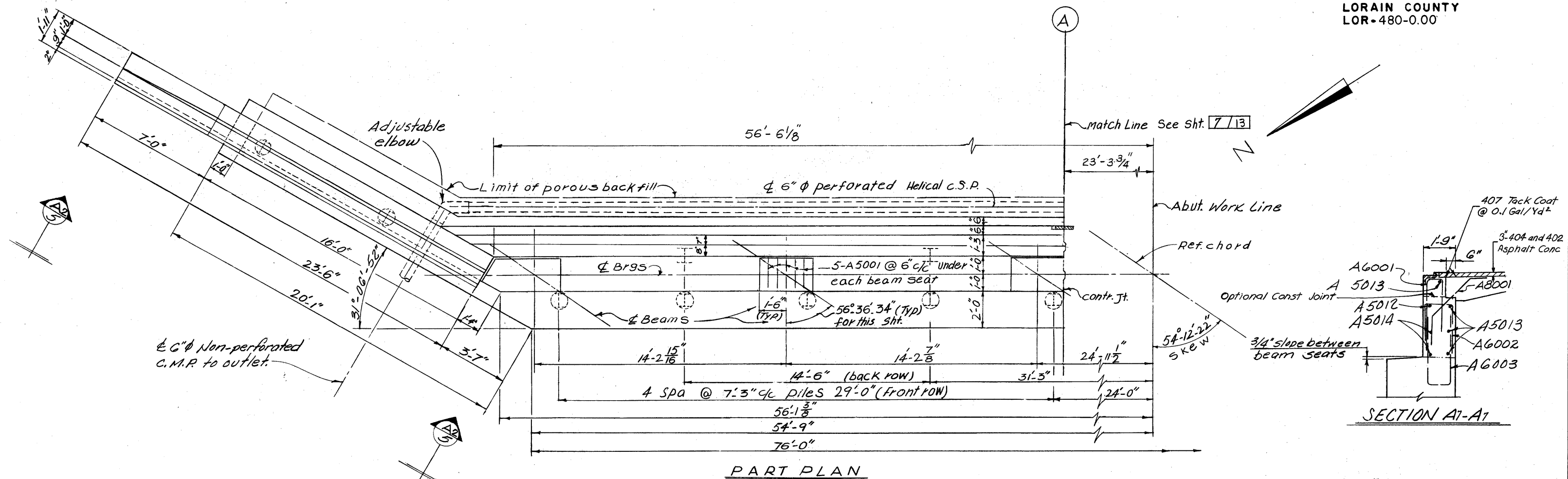


VIEW A3-A3

SECTION A6-A6

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS CLEVELAND, OHIO COLUMBUS, OHIO WHEELING, W. VA.						
WEST ABUTMENT DETAILS						
BRIDGE NO. LOR-80-1912						
E.B. I-80 OVER W.B. U.S.R. 20						
LORAIN COUNTY						
STA. 46 + 81.75						
STA. 48 + 98.54						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	BY
B.P.L.	B.P.L.		B.I.P.	G.W.M.	4/20/70	
DALAL	DALAL					

LORAIN COUNTY
LOR-480-0.00



NOTES

- All piles are HP 10x42-piles
- I indicates Vertical piles
- ⊖ indicates piles battered 1:4
- in reinforcing bar callouts
- N.S. indicates near side
- F.S. indicates far side
- * Elevations Shown thus are pavement elevations at the face of backwall and the point indicated.

For additional notes See Sht. 4/13 &
Sht. 5/13

BACKWALL CONCRETE: No backwall concrete shall be placed above the level of the optional construction joint at the approach slab seat until after the deck concrete in the span adjacent to the abutment has been placed.

6/13

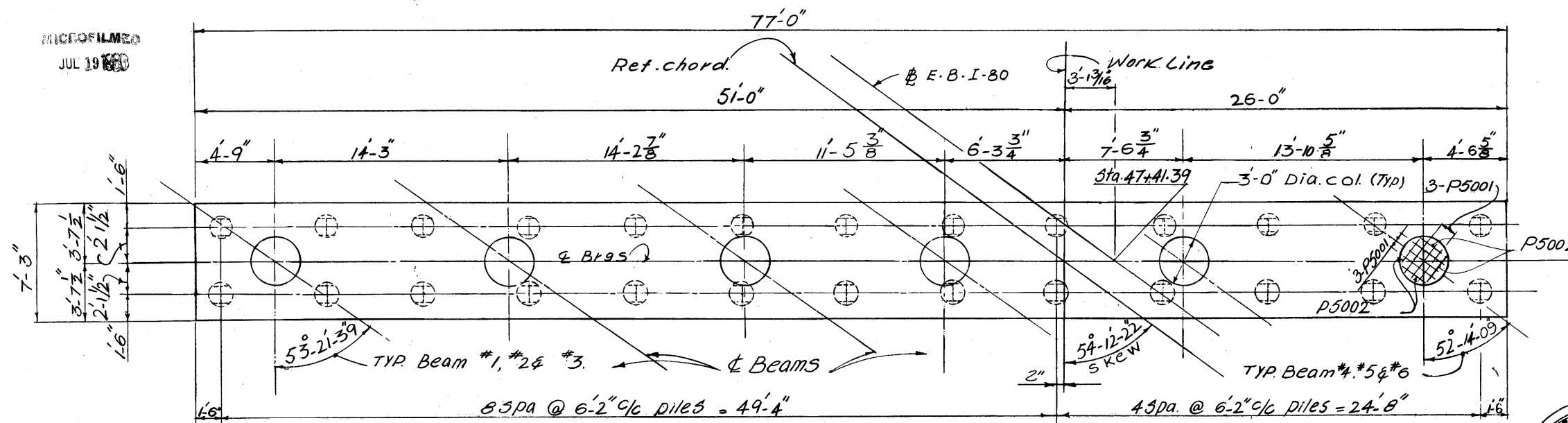
ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS CLEVELAND, OHIO COLUMBUS, OHIO WHEELING, W. VA.						
EAST ABUTMENT DETAILS BRIDGE NO LOR-80-1912 E B. 1-80 OVER W.B.U.S.R. 20 LORAIN COUNTY STA. 46+81.75 STA. 48+98.54						
DESIGNED	DRAWN	TRACED	CHECKED	REVISED	DATE	REVISION
SPIN DALAL	MMA		B.I.P.	G.W.M.	4/30/70	

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SPIN DALAL	M.M.A		B.I.P.	G.W.M.	4/30/78	

MICROFILMED
JUL 19 1980

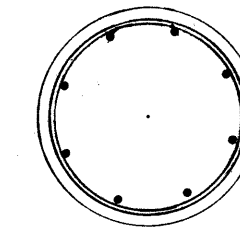
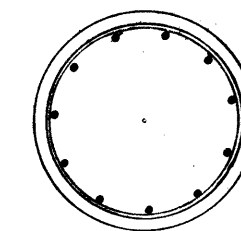
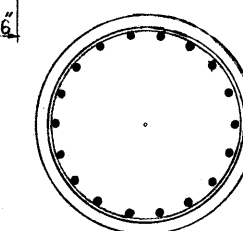
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		311 375

LORAIN COUNTY
LOR-480-0.00



PLAN

NOTE:
P5001 & P5002 bar are
spaced 6" c/c and are
TYP for all columns.

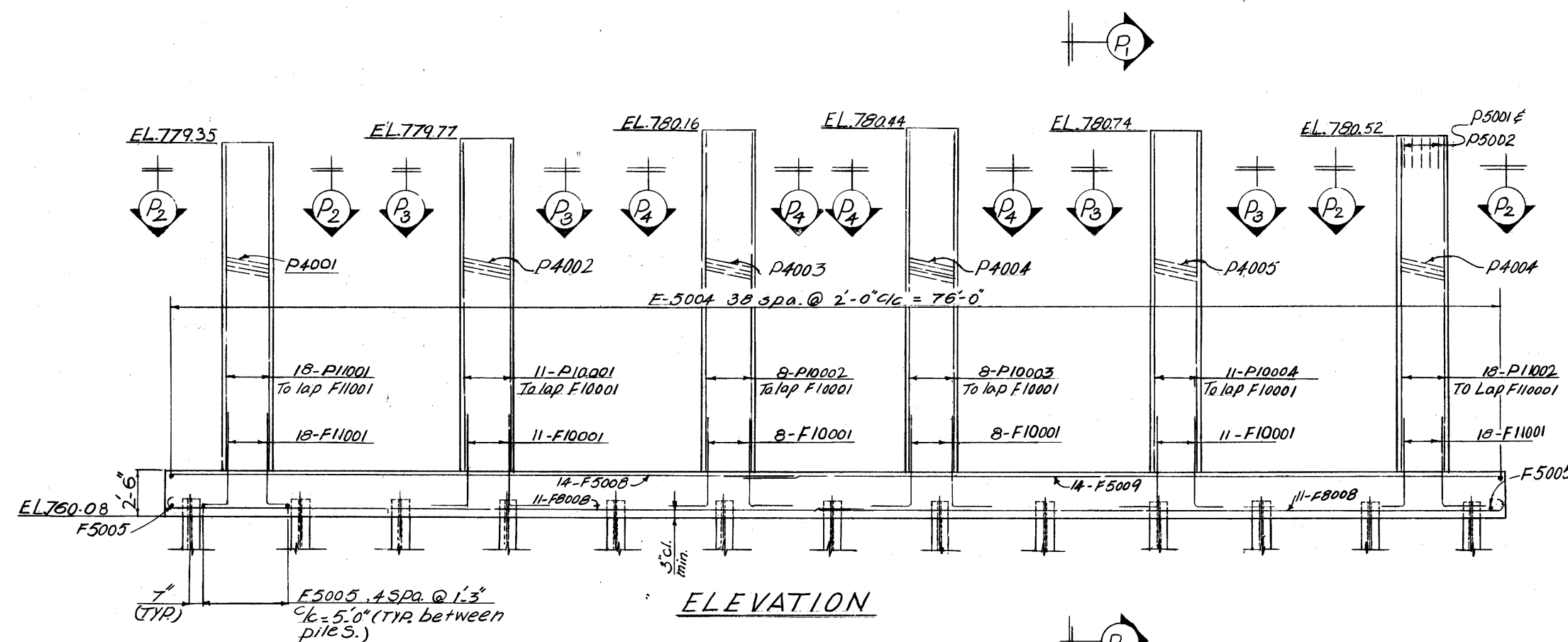


SECTION P₂-P₂

SECTION P₃-P₃

SECTION P₄-P₄

All vertical column bars are P11 or P10 and all spirals are P4 as indicated on the elevation view.



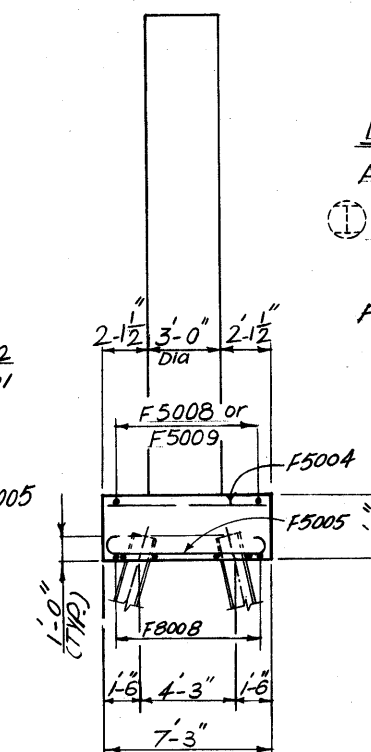
ELEVATION

NOTES:

All piles are HP 10x42-piles

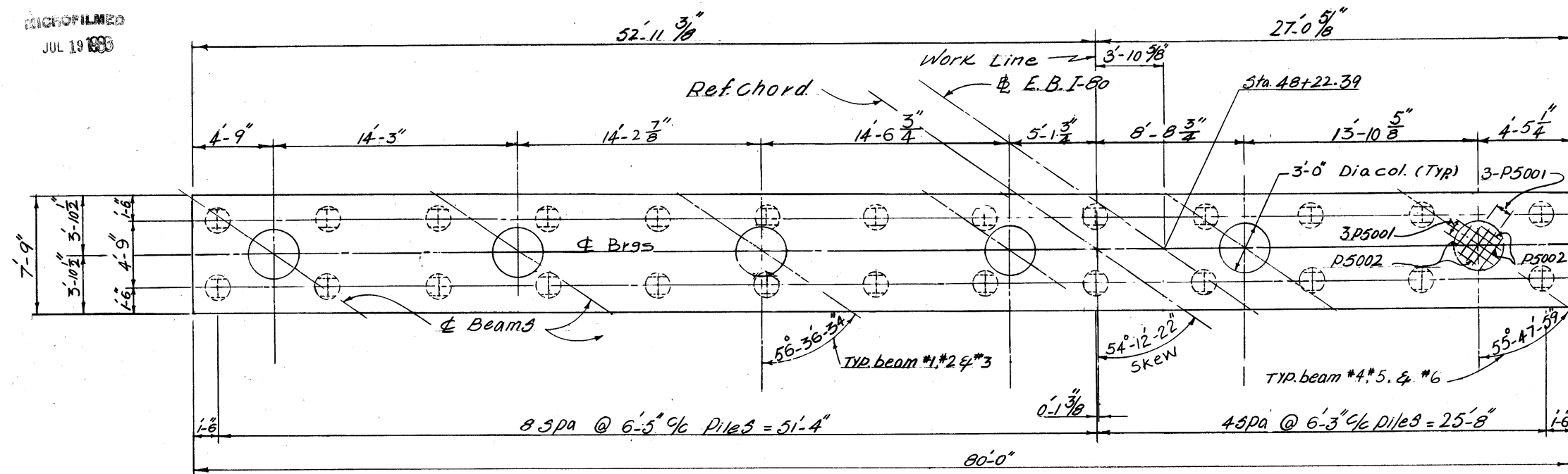
① Indicates pile battered 1:4

For location of beams see sheet 12/13



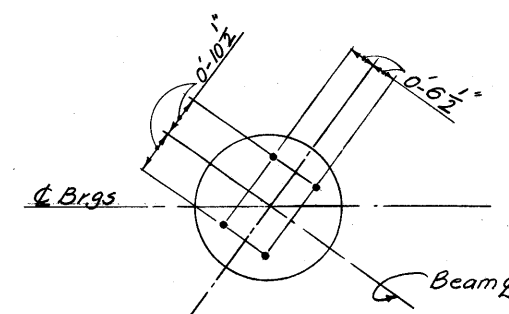
SECTION P-P

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS CLEVELAND, OHIO COLUMBUS, OHIO WHEELING, W. VA.							
PIER N ^o 1 DETAILS							
BRIDGE N ^o LOR-80-1912							
E. B. I-80 OVER W.B. U.S.R. 20							
LORAIN COUNTY STA. 46+81.75							
STA. 48+98.54							
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
B. D. L.	M. M. H.		B. I. P.	G. W. M.	4/15/70		



P L A N

NOTE
P5001 & P5002 bars
are spaced 6" c/c
& are TYP for all
columns.



TYPICAL ANCHOR BOLT HOLE
LOCATION DETAIL

NOTES

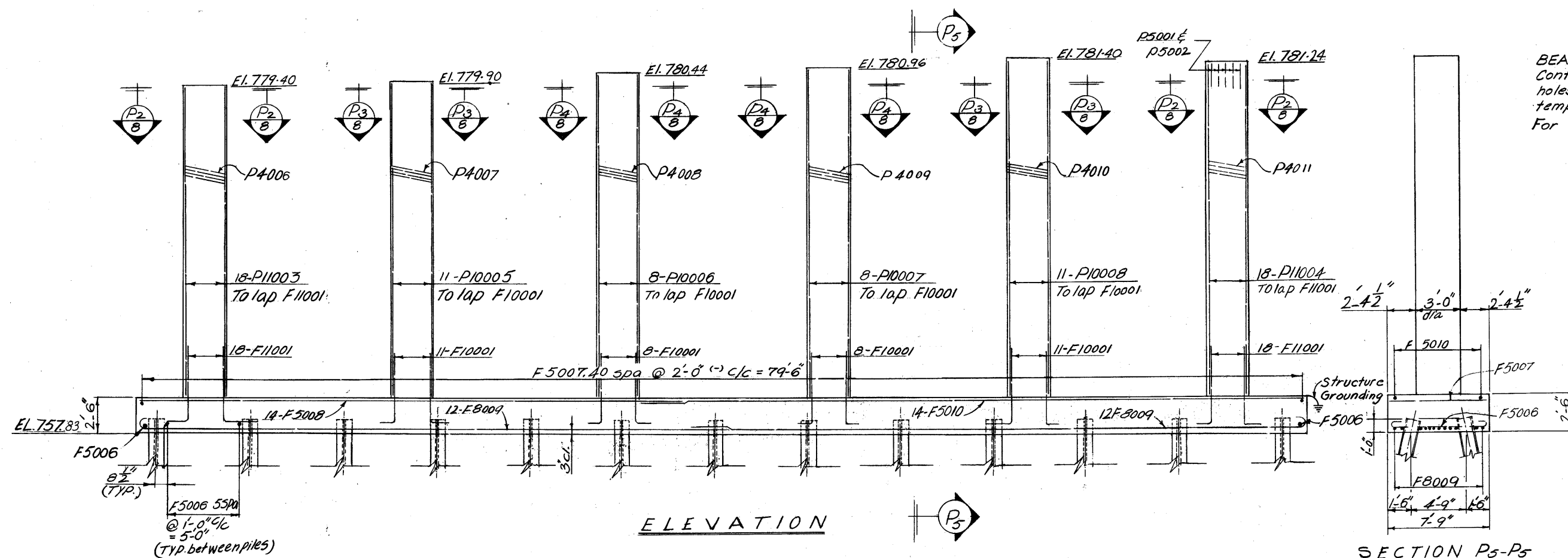
All piles are HP10x42-piles

Ⓢ indicates piles battered 1:4

Special care shall be taken at pier No.2 in placing reinforcing steel in the top of the columns so as to avoid interference with the drilling of anchor bar holes or the pre-setting of bearing anchors.

For location of beams see sht. 12/13

BEARING ANCHORS : At the option of the Contractor, bearing anchors (or formed holes), located and supported by templates, may be cast in place.
For Grounding Details see std. Dwg HL-7



SECTION P5-P5

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

PIER NO 2 DETAILS

BRIDGE NO LOR-80-1912

E B 1-80 OVER W.B. U.S.R. 20

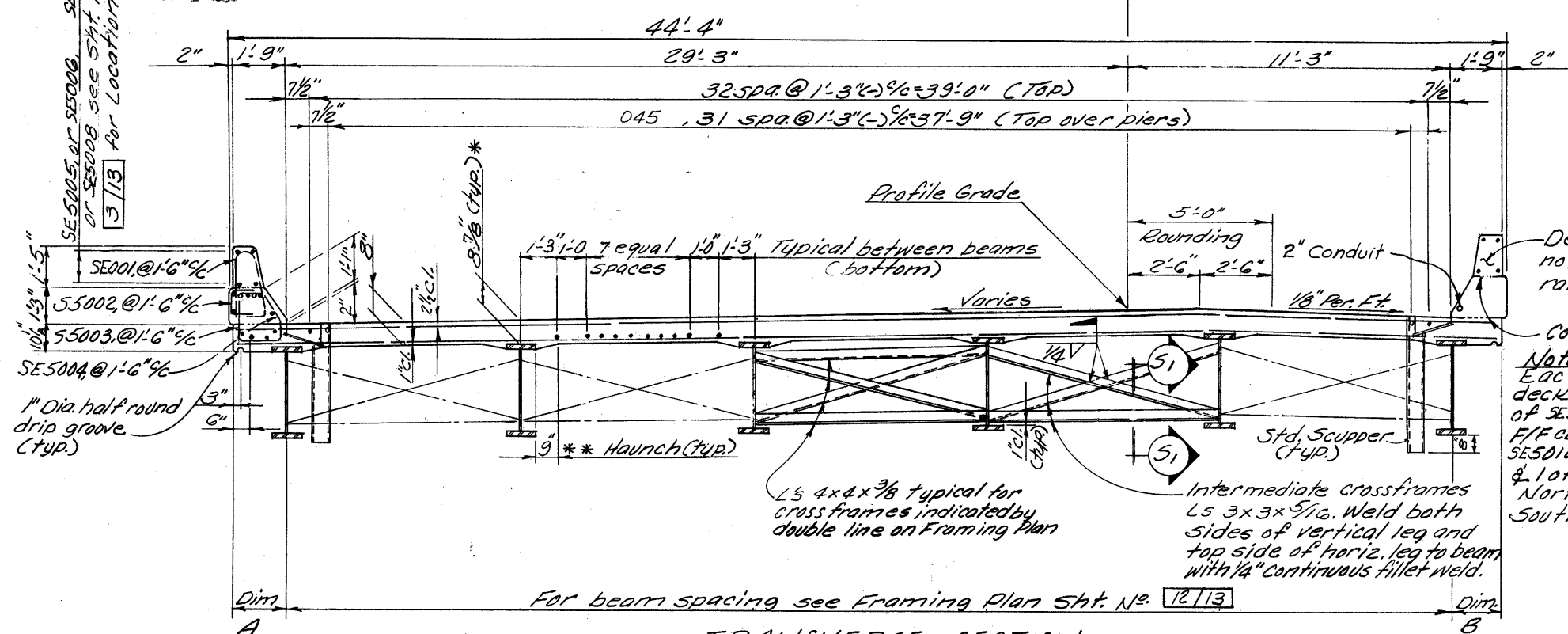
LORAIN COUNTY

STA. 46 + 81.75
STA. 48 + 98.54

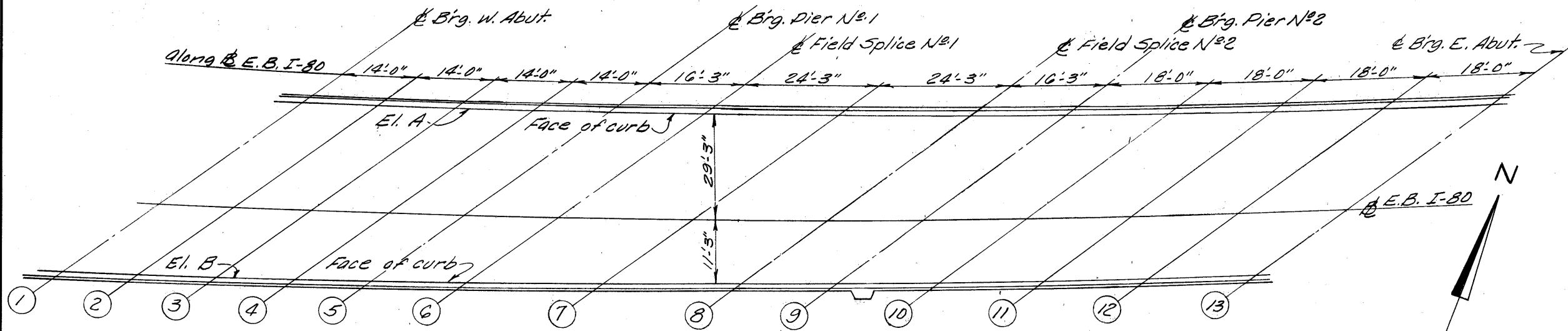
DESIGNED	DRAWN	TRACED	CHECKED	REVISED	DATE	REVISED
EDWIN DALAL	M.M.A		B.I.P.	G.W.M.	4/30/70	

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SE5005, or SE5006, SE5007
or SE5008 see Sht. No.
3/13 for location



TRANSVERSE SECTION

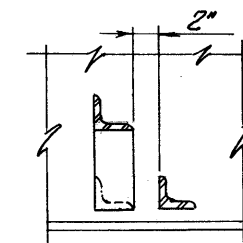


DECK ELEVATION LOCATIONS

The deck elevations shown are those which are required prior to placing of the concrete deck. Proper allowance has been made for the dead load deflection caused by the weight of the concrete.

NOTES (cont.)
For details of pilaster, anchor bolts and pilaster see Std. Dwg. HL-3 & HL-4.
L-bars shall be epoxy coated LE-bars.

TABLE OF DECK ELEVATIONS													
Line	1	2	3	4	5	6	7	8	9	10	11	12	13
Elev. A	784.28	784.37	784.43	784.47	784.50	784.55	784.59	784.55	784.60	784.68	784.74	784.75	784.72
Elev. B	784.94	785.15	785.34	785.51	785.67	785.87	786.13	786.32	786.43	786.57	786.70	786.77	786.80

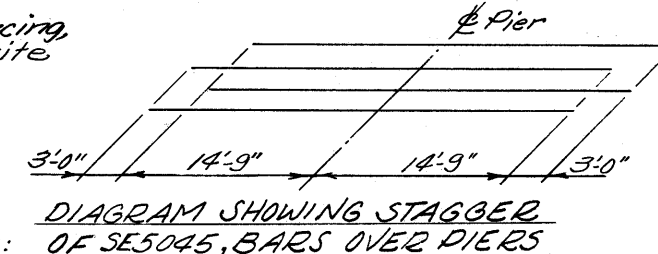


SECTION SI-SI

Details, dimensions and reinforcing, not shown same as for opposite railing.

Constr. Jt. (typ.)

Note:
Each run of longitudinal deck reinforcing, with exception of SE5045 over Pier, shall be as follows:
F/F curbs: top, 7SE5009 & 1 of series SE5010 thru SE5042. Bottom, 7-55009 & 1 of series 55046 thru 55095.
North curb: 7SE5009 & 1SE5044
South curb: 7SE5009 & 1SE5043



NOTES:

* 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 beam may not have the exact number or conformation required to place it parallel to the finished grade.

** A haunch width of 9" shall be used for all beams 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. 11/13
Concrete and reinforcing steel for railing shall be included for payment with their respective items, Item 511 superstructure concrete and Item 509 reinforcing steel.
Longitudinal reinforcing steel shall be field cut as necessary to avoid interference with scuppers.

For scupper details std. Dwg. SD-1-69.

For end dam details see Sht. #354.

END DAMS AND SCUPPERS: Steel bar stock utilized for end dams and scuppers may be any weldable grade of low or mild carbon steel available commercially. This material is to be excluded from the requirements of 501.07 for test reports.

TABLE OF SLAB CANTILEVERS		
LOCATION	Dim. A	Dim. B
@ Brigs. W. Abut.	1'-9"	1'-9"
1/4 Point	1'-7"	1'-10 1/2"
1/2 Point	1'-5 7/8"	1'-11 3/8"
3/4 Point	1'-5 3/4"	1'-11 1/2"
@ Brigs. Pier No. 1	1'-6 3/8"	1'-10 3/4"
Field Splice Pt.	1'-9"	1'-9"
1/2 Point	1'-7 1/8"	1'-10 3/8"
Field Splice Pt.	1'-9"	1'-9"
@ Brigs. Pier No. 2	1'-6 3/4"	2'-2 1/4"
1/4 Point	1'-6 3/8"	2'-6 1/8"
1/2 Point	1'-8 1/8"	2'-8 1/8"
3/4 Point	2'-0"	2'-8"
@ Brigs. E. Abut.	2'-6"	2'-6"

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

SUPERSTRUCTURE DETAILS
BRIDGE NO. LOR-80-1912
E. B. I-80 OVER W.B. U.S.R. 20

LORAIN COUNTY STA. 46+81.75
STA. 48+98.54

DESIGNED: B.P. DRAWN: R.T. TRACED: B.I.P. CHECKED: G.W.M. 4/10

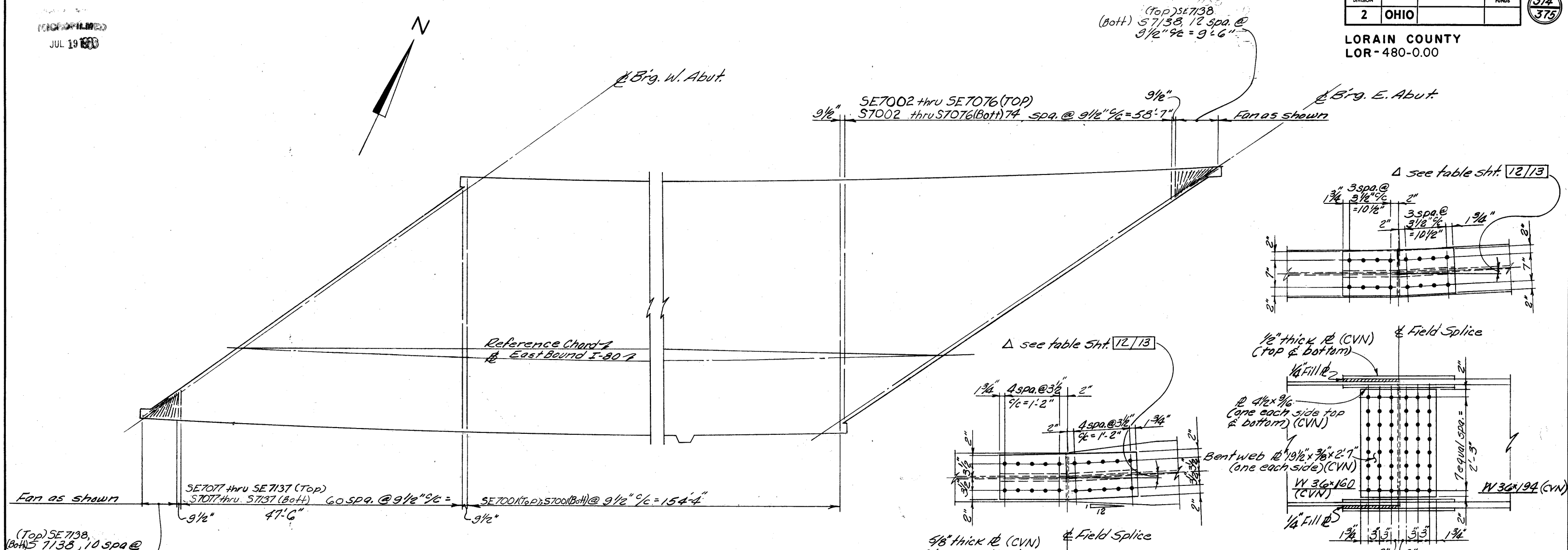
NOT FILLED

JUL 19 1983

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

314
375

LORAIN COUNTY
LOR-480-0.00



TRANSVERSE SLAB REINFORCING

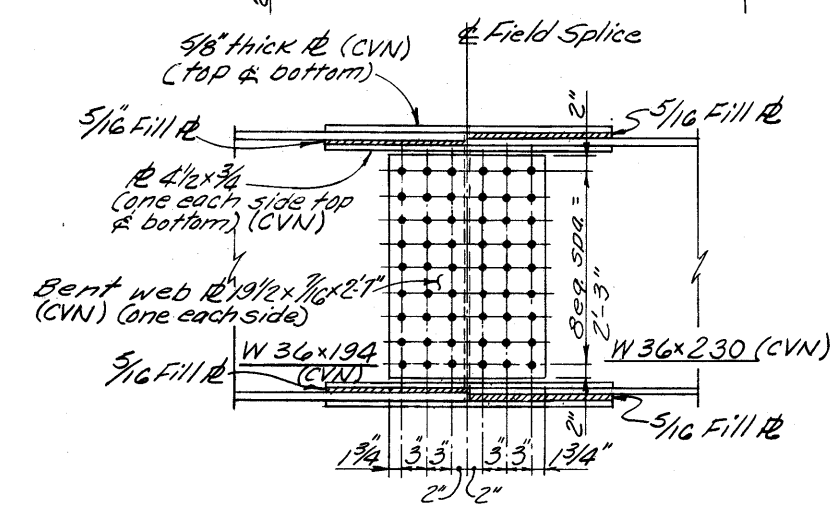
NOTE:

Transverse reinforcing steel shall be placed normal to the reference chord except at acute corners of slab.

NOTES

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

FIELD SPLICE DETAIL NO. 1



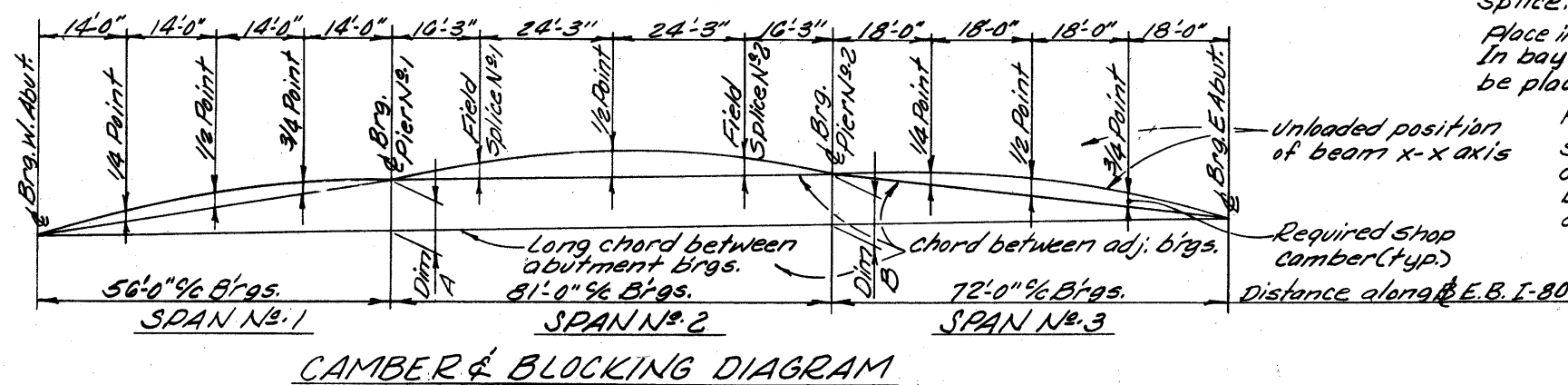
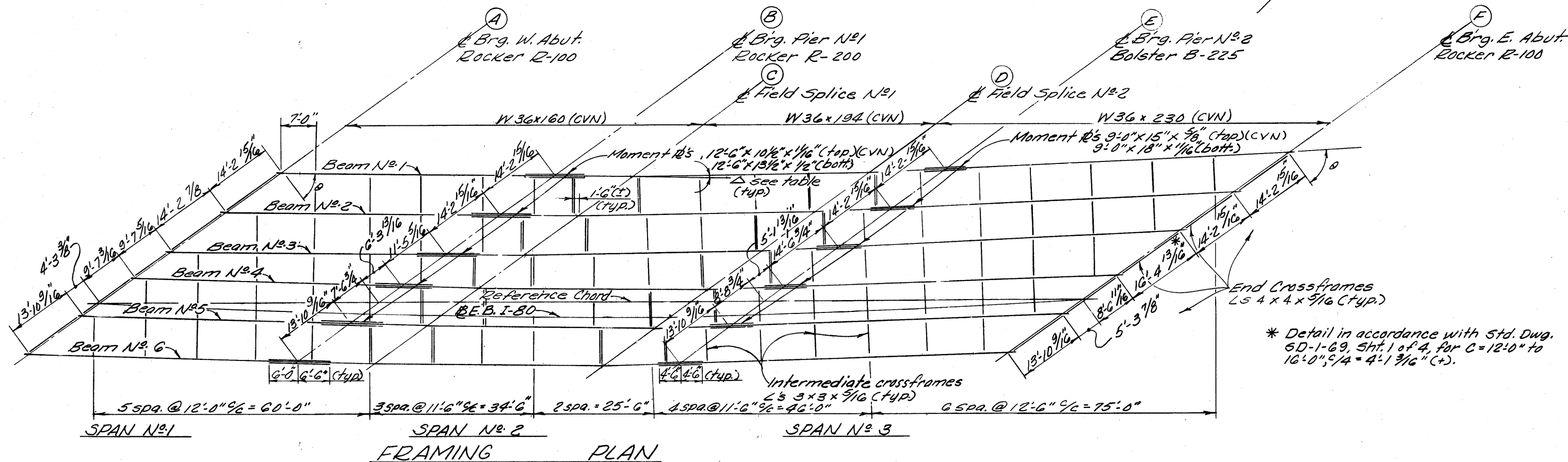
FIELD SPLICE DETAIL NO. 2

NOTE:

1" high strength bolts shall be used at the field splice. Bolt heads shall be placed on fascia side of exterior beam web and bottom side of bottom flange. Bolts shall conform to A-325 steel.

177-75

ALDEN E. STILSON & ASSOCIATES, LIMITED CONSULTING ENGINEERS CLEVELAND, OHIO COLUMBUS, OHIO WHEELING, W. VA.						
SUPERSTRUCTURE DETAILS						
BRIDGE NO LOR-80-1912 E. B. I-80 OVER W.B.U.S.R. 20						
LORAIN COUNTY				STA. 46+81.75 STA. 48+98.54		
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
BIPIN DALAL	<i>R.T.</i>		B.I.P.	G.W.M.	<i>4/30/70</i>	



NOTES: Crossframes may be shifted if necessary to avoid field splice.

Place intermediate crossframes normal to beams. In bay between beam lines 3 & 4, crossframes shall be placed normal to beam line 3.

For additional notes see sht. 11/13

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

TABLE OF BLOCKING DIMENSIONS						
Beam No.	1	2	3	4	5	6
Dim. A	1 1/8"	1 1/16"	2 3/8"	2 3/8"	2 1/2"	2 1/2"
Dim. B	-1/16"	1/2"	1 1/16"	2 5/8"	3 5/16"	3 1/4"

TABLE OF DEFLECTION ANGLES & BEAM LENGTHS		
	Beam No. 1, 2 & 3	Beam No. 4, 5 & 6
A Length A-B	53'-21'-39"	52'-14'-09"
B Length B-C	57'-3'-13/16"	55'-10'-1/4"
C Length C-D	16'-4'-1/4"	15'-11'-1/4"
D Length D-E	49'-9'-15/16"	48'-0'-7/8"
E Length E-F	17'-0'-1/16"	16'-8'-3/8"
F Length F-G	17'-0'-1/16"	16'-8'-3/8"
G Length G-H	73'-1'-9/16"	71'-7'-3/16"
H Length H-I	56'-36'-34"	55'-47'-59"

DEFLECTION AND CAMBER																												
Location	SPAN No. 1			SPAN No. 2												SPAN No. 3												
	1/4 Pt.	1/2 Pt.	3/4 Pt.	Splice Point						1/2 Point						Splice Point			1/4 Point			1/2 Point			3/4 Point			
Beam No.	thru 6	thru 6	thru 6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3 4	5 6	1 2	3 4	5 6	1 2	3 4	5 6	1 2	3 4	5 6
Deflection due to weight of steel	1/16	1/16	0	1/16	1/16	1/16	1/16	1/16	1/16	1/8	1/8	1/8	1/8	1/8	1/8	1/16	1/16	1/16	1/16	1/16	1/16	1/16	1/8	1/8	1/8	1/8	1/8	
Deflection due to remaining dead load	3/16	3/16	1/16	3/16	1/4	1/4	1/4	1/4	3/16	7/16	1/2	1/2	1/2	1/2	7/16	1/4	5/16	5/16	5/16	1/4	1/4	1/4	1/2	1/2	1/2	7/16	7/16	
Adjustment required for vertical curve	3/16	5/16	1/4	3/16	1/2	9/16	7/16	5/16	5/16	1/16	9/16	11/16	5/8	1/2	1/2	-1/2	7/16	5/8	5/16	3/16	-1/16	7/16	3/16	0	9/16	1/8	3/8	
Required Shop Camber	7/16	9/16	5/16	7/16	13/16	7/8	3/4	5/8	9/16	5/8	13/16	13/16	1 1/4	1 1/8	1 1/16	-3/16	13/16	1	11/16	1/2	1/4	3/4	13/16	5/8	13/16	1 1/16	15/16	

LORAIN COUNTY
LOR-480-0.00

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NOTES

- INDICATES SERIES BAR. EACH BAR VARIES FROM ADJACENT BAR(S) BY TABULATED AMOUNT(S). CALCULATED TO NEAREST 1/8 INCH. WEIGHT SHOWN IS FOR ENTIRE SERIES UTILIZING AVERAGE LENGTH.
- BARS INCLUDED WITH ITEM 517, RAILING, FOR PAYMENT.
- COST OF FIELD BENDING SHALL BE INCLUDED WITH ITEM 509.
- LIGHT POLE SUPPORT BARS INCLUDED WITH ITEM 509 FOR PAYMENT.
- END PREPARATION AND FIELD WELDING INCLUDED WITH ITEM 509.
- 'LENGTH' SHOWN FOR SPIRAL BARS IS DISTANCE FROM TOP OF FOOTING TO BOTTOM OF PIER CAP. 'NO. TURNS' SHOWN IS 'LENGTH' DIVIDED BY PITCH. PLUS 3 TURNS (NUMBER OF CLOSED COILS). EXPRESSED AS NEAREST WHOLE NUMBER.

1 1/2 CLOSED COILS SHALL BE PROVIDED AT ENDS OF EACH SPIRAL UNIT. FOUR STEEL CHANNEL, TEE OR ANGLE SPACERS, WEIGHING APPROXIMATELY 0.80 LB. PER LIN. FT. OF SPACER SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG PERIPHERY OF COIL. WEIGHT OF SPACERS, AT 0.80 LB. PER LIN. FT. WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN TABULATED WEIGHT.

BAR DIMENSIONS ARE OUT TO OUT.

Refer to CMS Sections 106.03, 700, 709.01 through 709.05 and 709.08. Sufficient additional reinforcing steel shall be provided for sampling. Random samples shall be replaced in the structures by the additional steel, spliced in accordance with 509.08.

BAR SIZE DESIGNATION

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE FOUR DIGITS ARE USED, AND FIRST TWO DIGITS WHERE FIVE DIGITS ARE USED, INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE, A7001 IS A NO. 7 SIZE BAR AND A10140 IS A NO. 10 SIZE.

MARK	NUM.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	NOTE
ABUTMENT										
A 5001	60	4-11	308	2	1- 6	2- 2	1- 6			
A 5002	19	22- 0	436	ST						
A 5003	100	7-10	817	2	2- 4	3- 5	2- 4			
A 5004	19	18- 6	367	ST						
A 5005	6	31- 0	194	ST						
A 5006	8	26- 2	218	ST						
A 5007	3	28- 6	89	ST						
A 5008	6	32- 5	203	ST						
A 5009	6	35-11	225	ST						
A 5010	3	32-10	103	ST						
A 5011	14	22- 4	326	ST						
A 5012	9	23- 4	219	ST						
A 5013	18	20- 5	383	ST						
A 5014	2	21-10	46	ST						
A 5015	16	16- 6	275	ST						
A 5016	4	15- 2	63	ST						
A 5017	12	7- 5	93	ST						
A 5018	4	17- 4	72	ST						
A 5019	4	9- 8	40	12		8- 0	1- 7	1- 4		
A 5020	4	3- 2		ST						1
THRU			76		VARY	LENGTH	BY	0- 3		
A 5024	4	4- 2		ST						1
A 5025	2	4- 6	9	ST						
A 5026	34	4- 7	163	ST						
A 5027	58	1- 9	106	2	0- 6	1- 0	0- 6			
A 5030	6	9- 5	59	ST						
A 5031	8	13- 2	110	ST						
A 5032	4	8- 9	37	12		7- 0	1- 7	1- 6		
A 5033	1	10- 6	11	ST						
A 5034	8	8- 2	68	ST						
A 5035	2	6- 2	13	ST						
A 6001	140	8- 1	1700	2	3- 9	0-11	3- 9			
A 6002	140	6- 5	1349	2	2- 8	1- 5	2- 8			
A 6003	140	9-11	2085	2	4- 5	1- 5	4- 5			
								</		