ACI-1097 (4) 65
F-127 (2) 1-721

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	ACI-1097(4) F-127(2)	

1/241

MONTGOMERY COUNTY
MOT - 40 - 5.98
MOT - 49 - 12.45

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
MOT-40-5.98
MOT-49-12.45
MONTGOMERY COUNTY
RANDOLPH TOWNSHIP
CLAY TOWNSHIP

"LIMITED ACCESS"

NOTE: Federal Project No. I-1097(4) appearing throughout this plan shall be considered to read ACI-1097(4).

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

The Standard Specifications of the State of Ohio, Department of Highways, 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 highways to traffic and that provisions for the maintenance and safety of traffic will be as set forth on the plans and estimates.

CONVENTIONAL SIGNS

Center Line
Section Line
Existing R/W
Proposed R/W
Slope Easement
Property Line
Fence Line
Water Line
Gas Line
Existing Sewer
Proposed Sewer
Water Valves
Existing Manholes
Proposed Manholes
Manholes Adjusted to Grade
Manholes Abandoned
Manholes Removed
Power Pole
Light Pole
Trees to be Removed
Railroads
Existing Retaining Wall
Existing Guard Rail
Proposed Guard Rail
Gas Valves
Existing Catch Basins
Proposed Catch Basins
Catch Basins Adjusted to Grade
Catch Basins Abandoned
Catch Basins Removed
Telephone Pole
Water Hydrant
Traffic Light

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Brookville-Salem Rd. Plan, Profile, & X-Sections	124-129 65
Pleasant Plain Rd. Plan, Profile, & X-Sections	130-132
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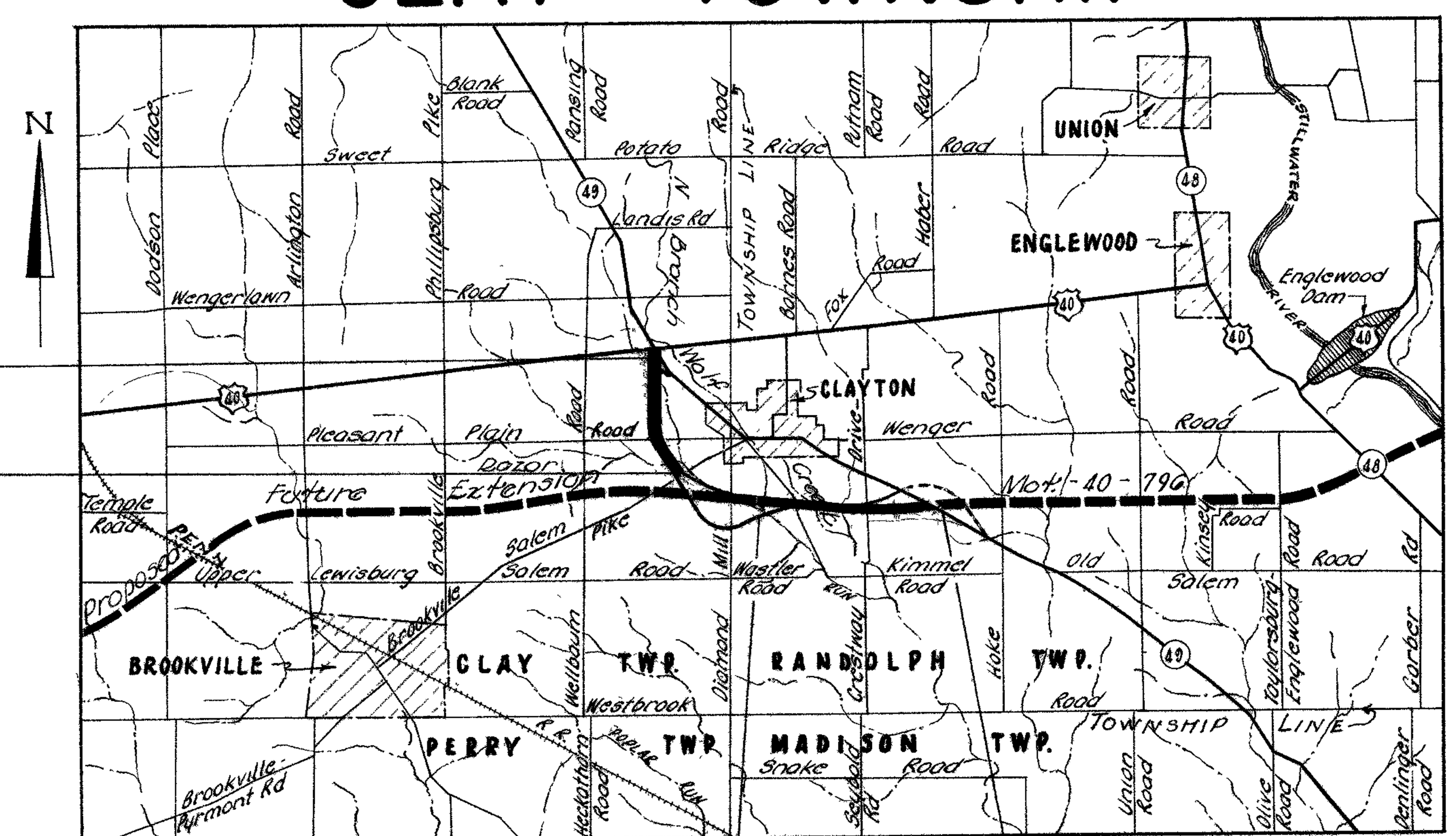
LINE DATA

Begin Project		358+00
End Project		422+25
Net Length Project ACI-1097(4)		64 25' = 1.216 mi
Work Limits: S.R. 49 Connection	280+57.52 to 295+20	= 1462.48'
Main ℄	334+00 to 426+68	= 9268
Diamond Mill Rd.	47+40 to 64+00	= 1660
Kimmel Rd.	42+50 to 58+00	= 1550
Crestway Dr.	45+00 to 54+00	= 900
Brookville Salem	73+50 to 86+00	= 1250
Net Length Work ACI-1097(4)		16,090.48 = 3.047 mi.
Begin Project		295+20
End Project		342+35.08
Net Length Project F-127(2)		47 15.08' = 0.893 mi
Work limits: Existing U.S. 40	65+32.02 to 70+16.32	= 484.30'
Existing U.S. 40	71+09 to 71+75	= 66.00'
Main ℄	295+20 to 344+74.35	= 4954.35'
Ramp C	10+44.08 to 12+57.12	= 213.04
Pleasant Plain	50+00 to 57+00	= 700.00
Ramp A	0+49.61 to 4+94.00	= 444.39
Net Length Work F-127(2)		6862.08' = 1.299 mi
Total Net Length Project		11,140.08 = 2.109 mi
Total Net Length Work		22,952.56' = 4.347 mi



DELIVERY POINT PENN SIDING BROOKVILLE, OHIO AVERAGE HAUL 4 MI.

BEGIN PROJECT MOT-40-5.98 STA 358+00 S.L.M 5.98

END PROJECT MOT-40-5.98 STA 422+25 S.L.M. 7.96 7.17

LOCATION PLAN

PORTION TO BE IMPROVED
STATE HIGHWAYS

SCALE

PLAN AND PROFILE 1" = 50'
PAVEMENT DETAILS 1" = 20'
CROSS SECTIONS 1" = 10'

Sheets 156, 157, 158 & 160 revised 7-25-58.

STANDARD DRAWINGS

NUMBER	DATE	NUMBER	DATE
B-T-50-70-		L-3-A	4-1-50
71E NO.1	10-1-47	L.J. No. 1	7-1-55
B.-T-71R	3-2-53	OS-2	12-17-56
DR-1	1-3-55	RI-1	1-3-55
G-7.07	6-1-56	S-27 P.C 3	2-20-45
I-1-2-3-4-5	4-24-58	S-27 PC 4	1-4-54
I-8CB 2-2A&B	8-1-56	T-35	1-2-56
I-8 CB No 6	5-1-52	T.J.	5-1-56
I-8 I-No.2	12-1-54	F-1	4-1-57
I-12	7-1-54	I-8MH No.1-A	1-3-55
I-14 G	1-22-52	AS-1-54	12-1-54
I-15 No.1	8-1-55	SP-53	7-21-53
I-15 No.2 A	6-1-57	CSB-2-56(6 Sheets)	3-1-58
I-15 No.2 B	6-1-57	RB-1-55	3-1-55
I-21-23	8-1-56	A-1-54	12-1-54
I-8 MH No.2	5-1-52	AR-1-57	3-1-58
L-1	4-1-50	P-1-54	12-1-54
L-3	4-1-50	CS-2-54(2 Sheets)	12-1-54
		CS-1-54(2 Sheets)	7-16-56

SUPPLEMENTAL SPECIFICATIONS

NUMBER	DATE	NUMBER	DATE
B-119 Rev.	8-11-57	M-206.14	7-15-49
18 Rev.	2-6-57		
S-114 Rev.	8-1-57		
E-101	1-1-57		
5	6-8-55		
M-206.6 (b)	5-25-56		

Approved G. D. Ackerman
Date 1/30/58 Division Deputy Director

Approved C. H. Makuver
Date 5-2-58 Deputy Director of Planning & Programming

Approved D. H. Oerrman
Date 4-24-58 Engineer of Bridges

Approved R.E. Shultz
Date 4-29-58 Engineer of Location & Design

Approved P.E. Masheter
Date 5-1-58 Deputy Director of Design & Construction

Approved
Date First Assistant Director

Approved George J. Thomas
Date 5/2/58 Acting Director of Highways

PLANS PREPARED BY
ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
245 NORTH HIGH STREET
COLUMBUS OHIO
FOR
STATE OF OHIO

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
APPROVED

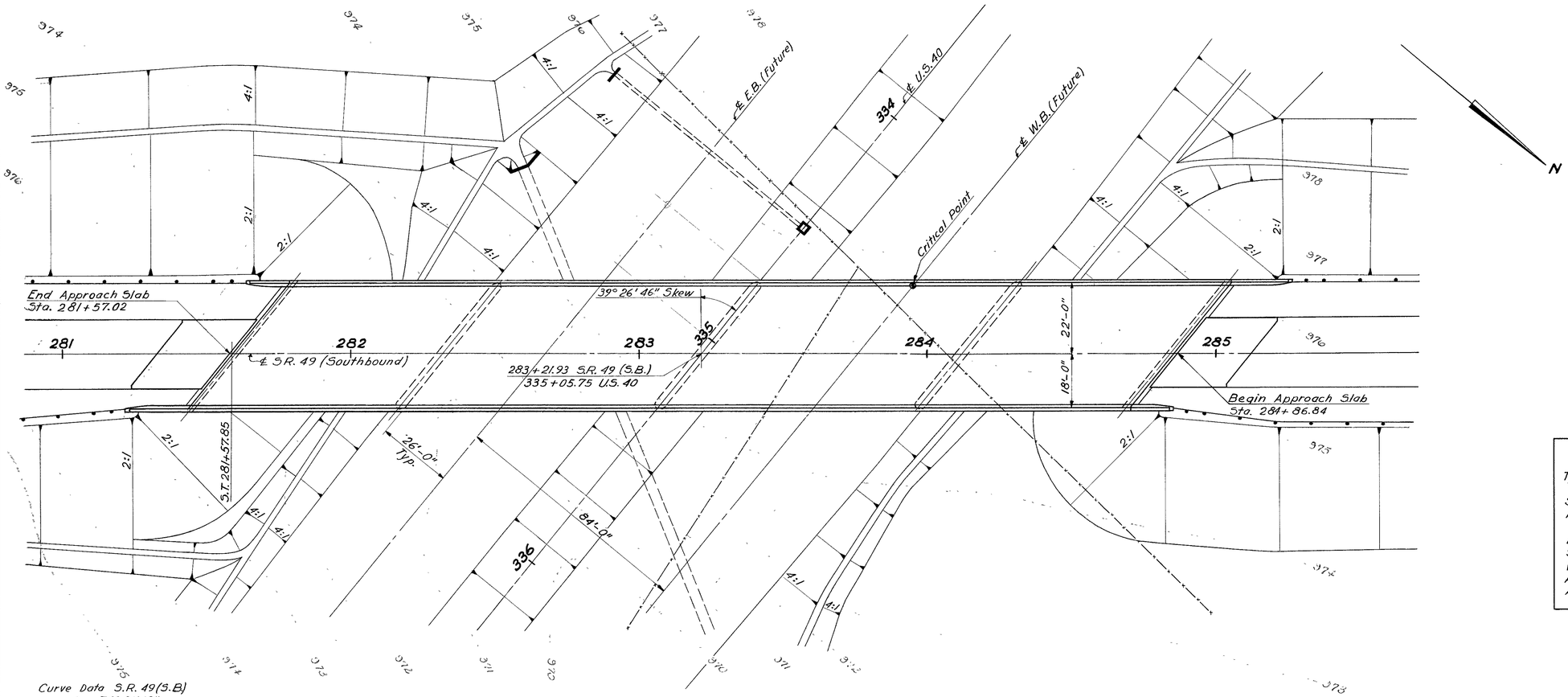
DIVISION ENGINEER DATE:

FILE NUMBER	MONTGOMERY COUNTY MOT-40-5.98 MOT-49-12.45
	DATE OF LETTING
	CONTRACT NUMBER

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

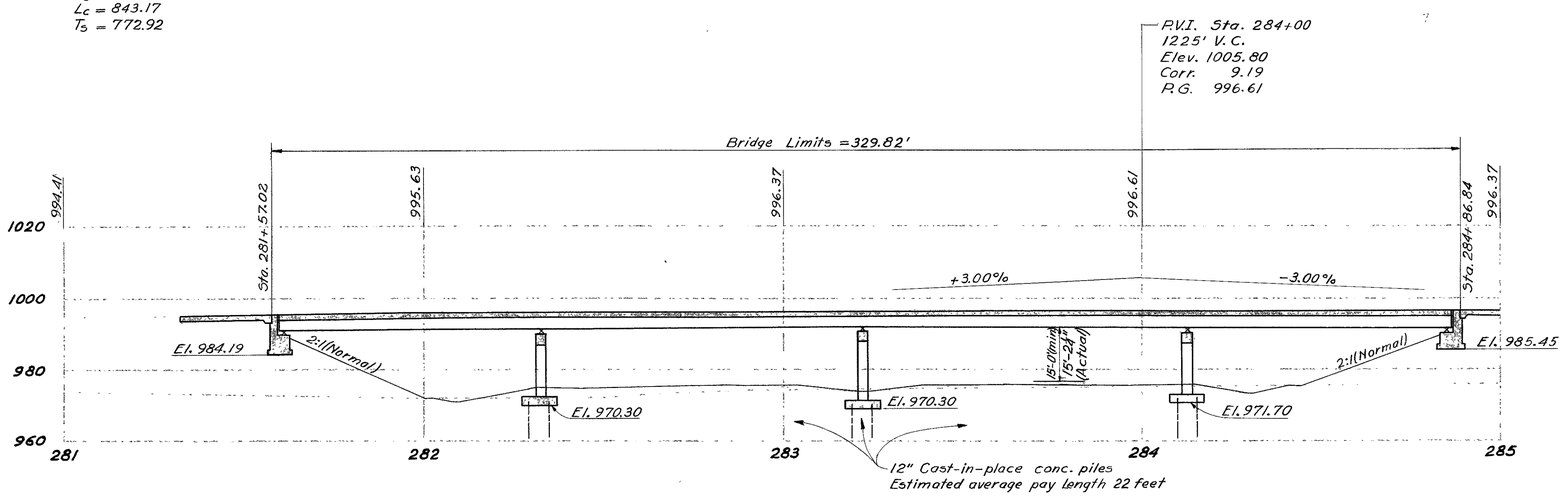
145/241

MONTGOMERY COUNTY
MOT-40-5.98
MOT-49-12.45



Curve Data S.R. 49 (S.B.)
$\Delta = 76° 31' 19"$
$D_c = 7°$
$R = 818.51'$
$L_s = 250'$
$L_c = 843.17$
$T_s = 772.92$

PLAN



PROFILE ON ℄ S.B. S.R. 49

PROPOSED STRUCTURE

Type: Continuous steel beam with reinforced concrete deck and substructure
Spans: 72'-90'-90'-72' c/c brgs
Roadway: 40'-0" f/f concrete parapets with 1'-0" curbs and aluminum railing
Loading: CF 2000 (Adequate for AASHO alternate loading)
Skew: 39° 26' 46" Lt. forward
Wearing surface: 1" monolithic concrete
Alignment: Tangent
Approach Slabs: AS-1-54 (25' long)

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

SITE PLAN

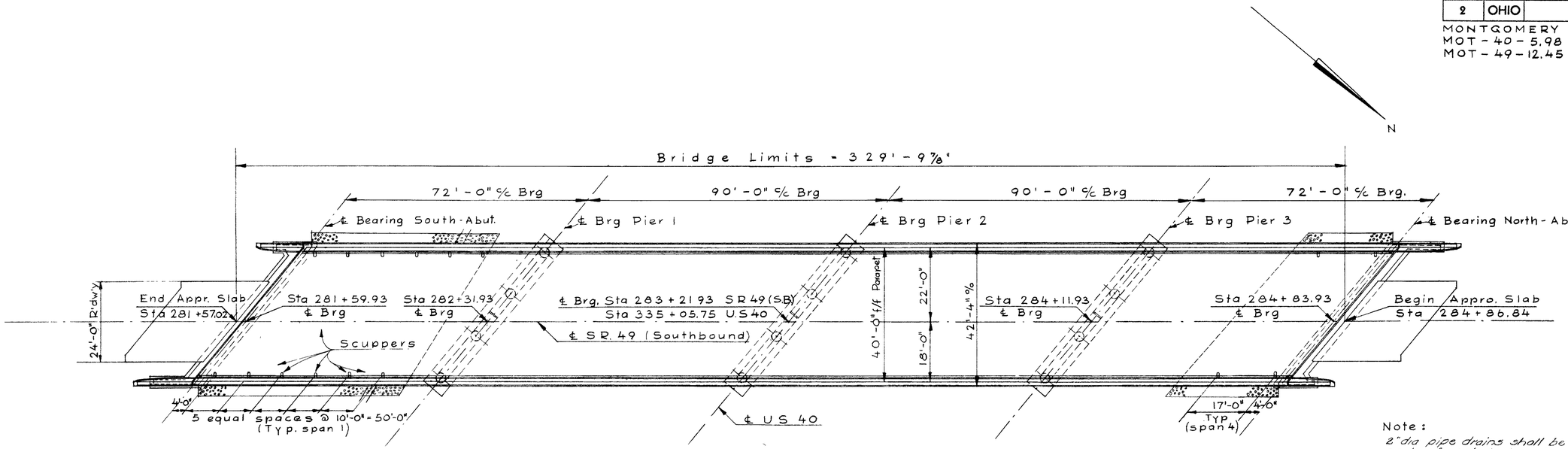
BRIDGE Nº MOT-40-0631
U.S. 40 under SOUTHBOUND S.R. 49
Montgomery County Sta. 335+05.75
ACI-1257(4)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.E.V.	J.E.V.	J.F.M.	Wisse	T.L.U.	4-3-58	

FED. RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

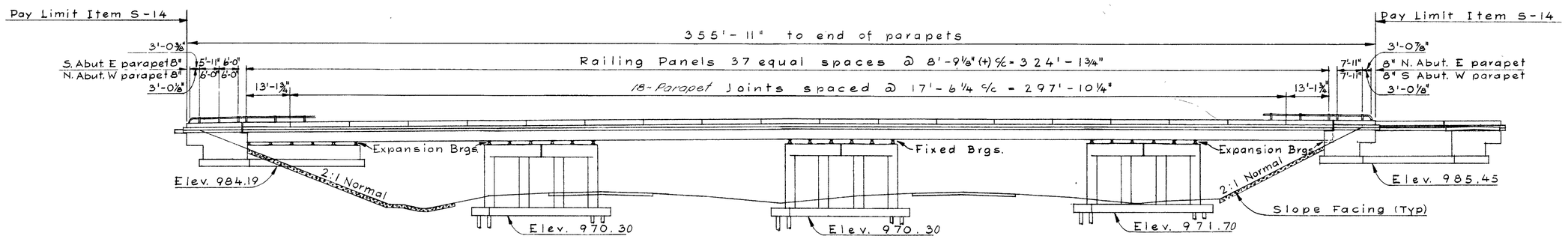
146
241

MONTGOMERY COUNTY
MOT - 40 - 5.98
MOT - 49 - 12.45



Note:
2" dia pipe drains shall be used at ends of each bulb angle gutter

GENERAL PLAN



GENERAL ELEVATION

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

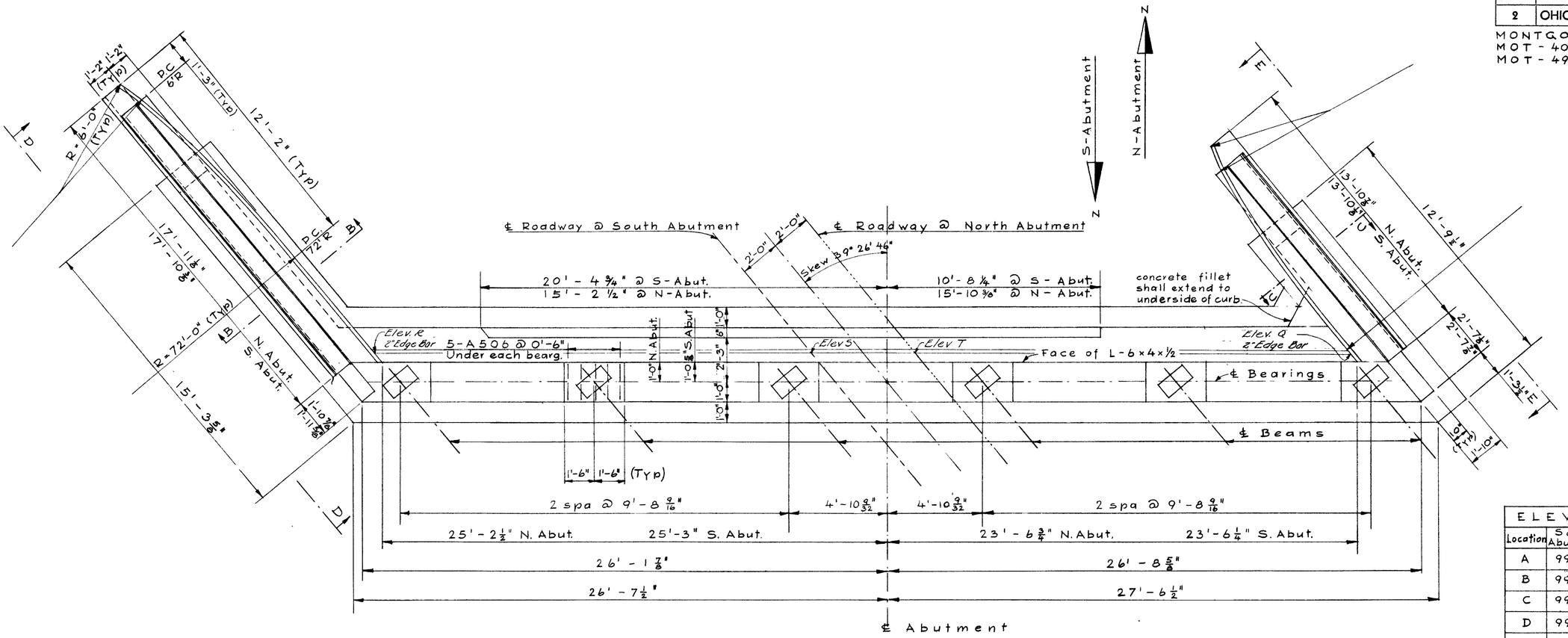
GENERAL PLAN & GENERAL ELEVATION
BRIDGE № MOT-40-0631
U.S. 40 UNDER S.B SR 49
MONTGOMERY COUNTY
ACI-1097(4) STA 335+05.75

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
H.S.	H.S.		BETTIN	TLU	4-8-58	

FED RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

147
241

MONTGOMERY COUNTY
MOT - 40 - 5.98
MOT - 49 - 12.45



ELEVATIONS		
Location	South Abutment	North Abutment
A	990.16	991.42
B	990.35	991.57
C	990.54	991.72
D	990.55	991.80
E	990.50	991.71
F	990.46	991.62
G	993.53	994.86
H	993.76	994.94
I	984.19	985.45
Q	995.05	996.22
R	994.75	996.03
S	995.18	
T		996.43

Note:
For sections A-A, B-B & C-C and Views D-D & E-E see Sheet 148

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

ABUTMENT DETAILS

BRIDGE Nº MOT-40-0631

U.S 40 UNDER S.B. SR 49

MONTGOMERY COUNTY

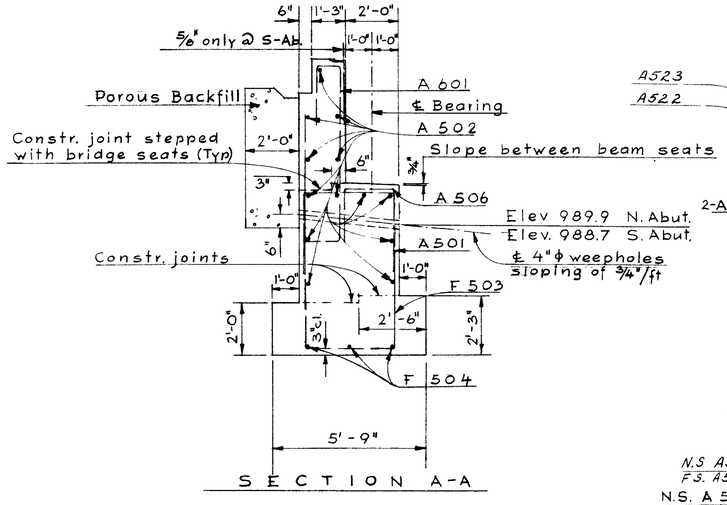
ACI-1097(4) STA 335+05.75

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
H.S.	H.S.		BETTIN	TLU	4-3-58	

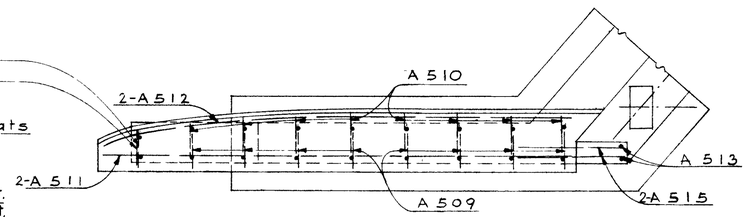
FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

148
241

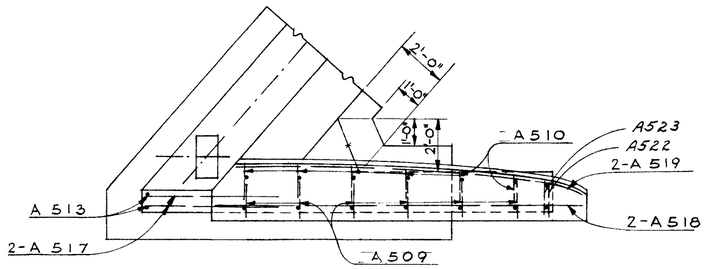
MONTGOMERY COUNTY
MOT-40-5.98
MOT-49-12.45



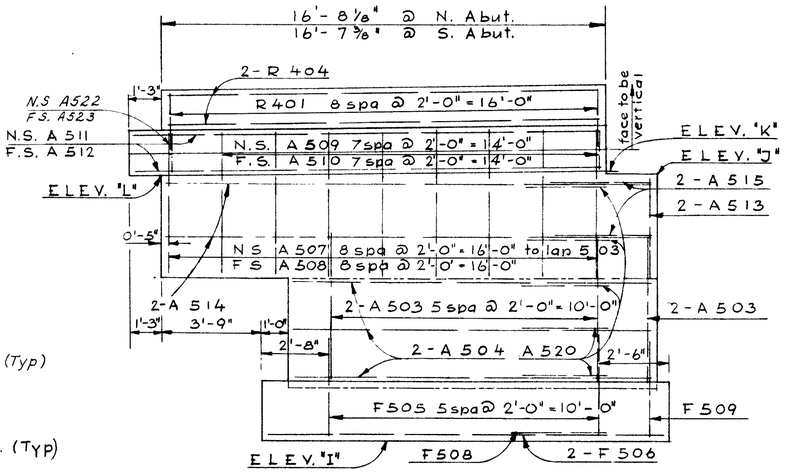
SECTION A-A



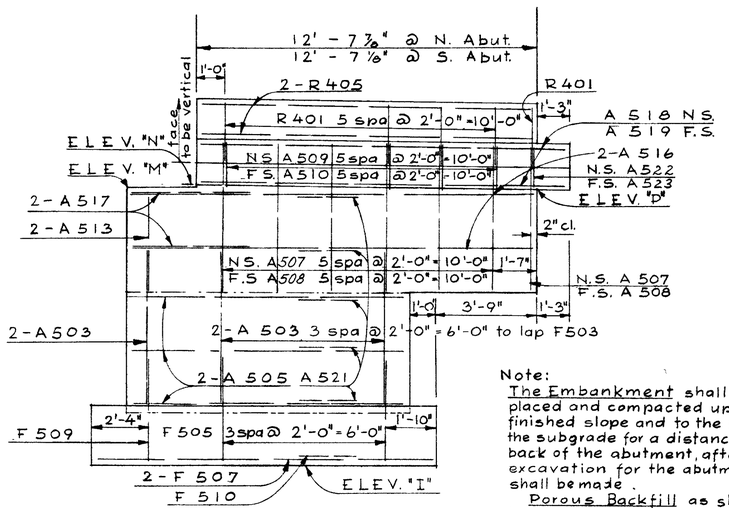
PLAN OF VIEW D-D
Parapet not shown



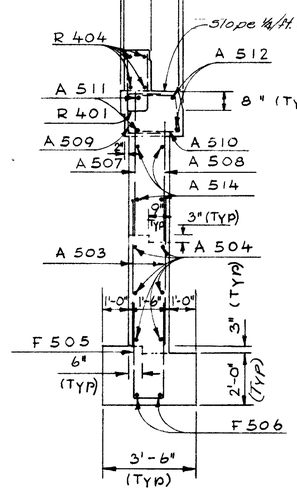
PLAN OF VIEW E-E
Parapet not shown



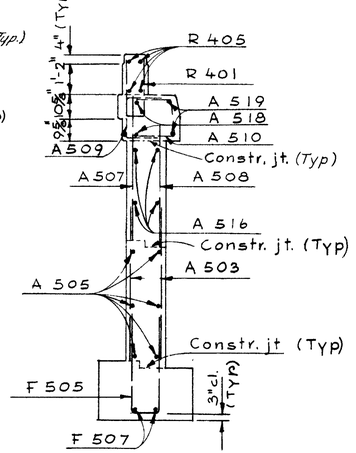
VIEW D-D



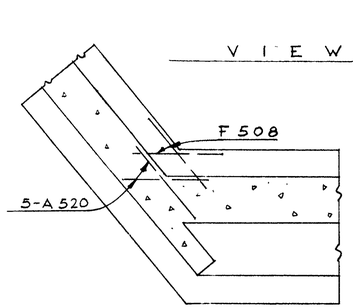
VIEW E-E

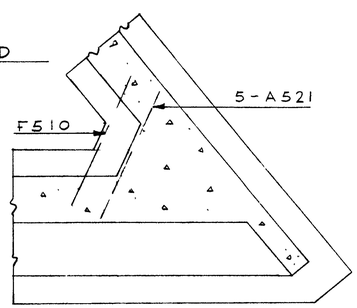


SECTION B-B



SECTION C-C





Note:
Reinforcing Steel:
N.S. indicates Near Side
F.S. indicates Far Side

ELEVATIONS		
Location	S. Abutment	N. Abutment
I	984.19	985.45
J	993.85	995.12
K	993.92	995.20
L	993.69	995.10
M	994.18	995.32
N	994.24	995.40
P	994.09	995.34

Note:
The Embankment shall be placed and compacted up to the finished slope and to the level of the subgrade for a distance of 200' back of the abutment, after which excavation for the abutment shall be made.

Porous Backfill as shown between wingwalls shall extend to underside of the approach slab or I-22.

Concrete Parapets are included in Item 511 for payment.

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

ABUTMENT DETAILS
BRIDGE No. MOT-40-0631
U.S. 40 UNDER SB. SR49

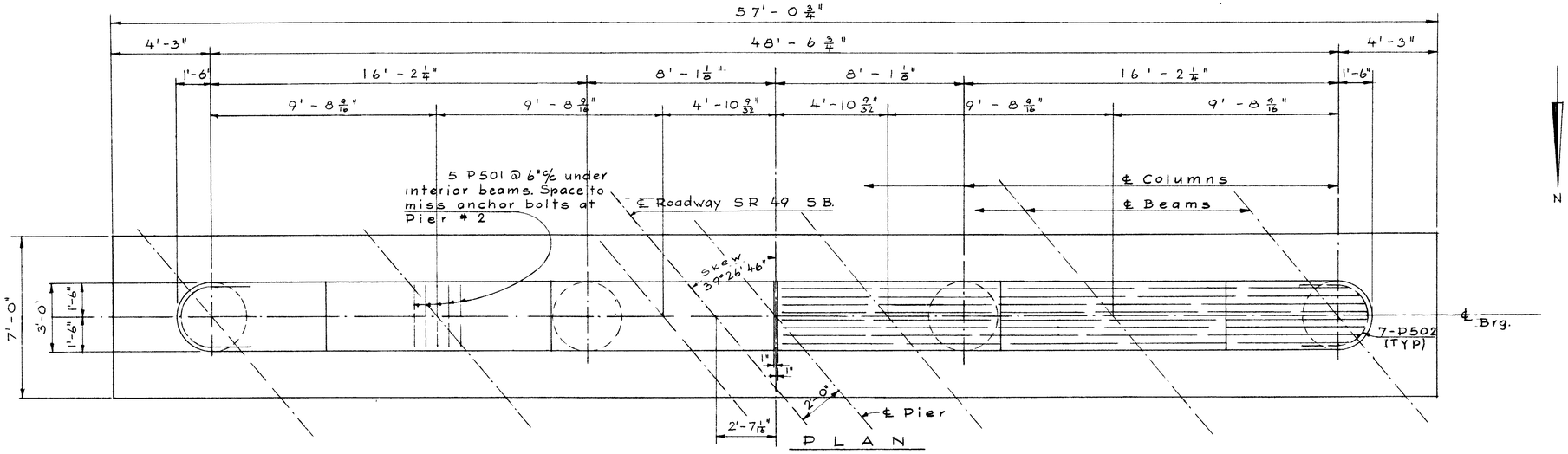
MONTGOMERY COUNTY
ACI-1097(4) STA 335+05.75

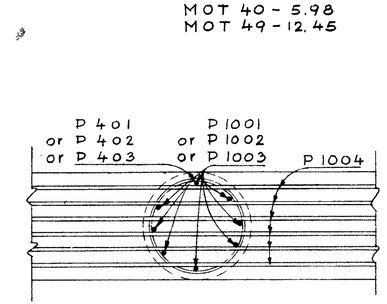
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
H.S.	H.S.		BETTIN	TZU	4-3-58	

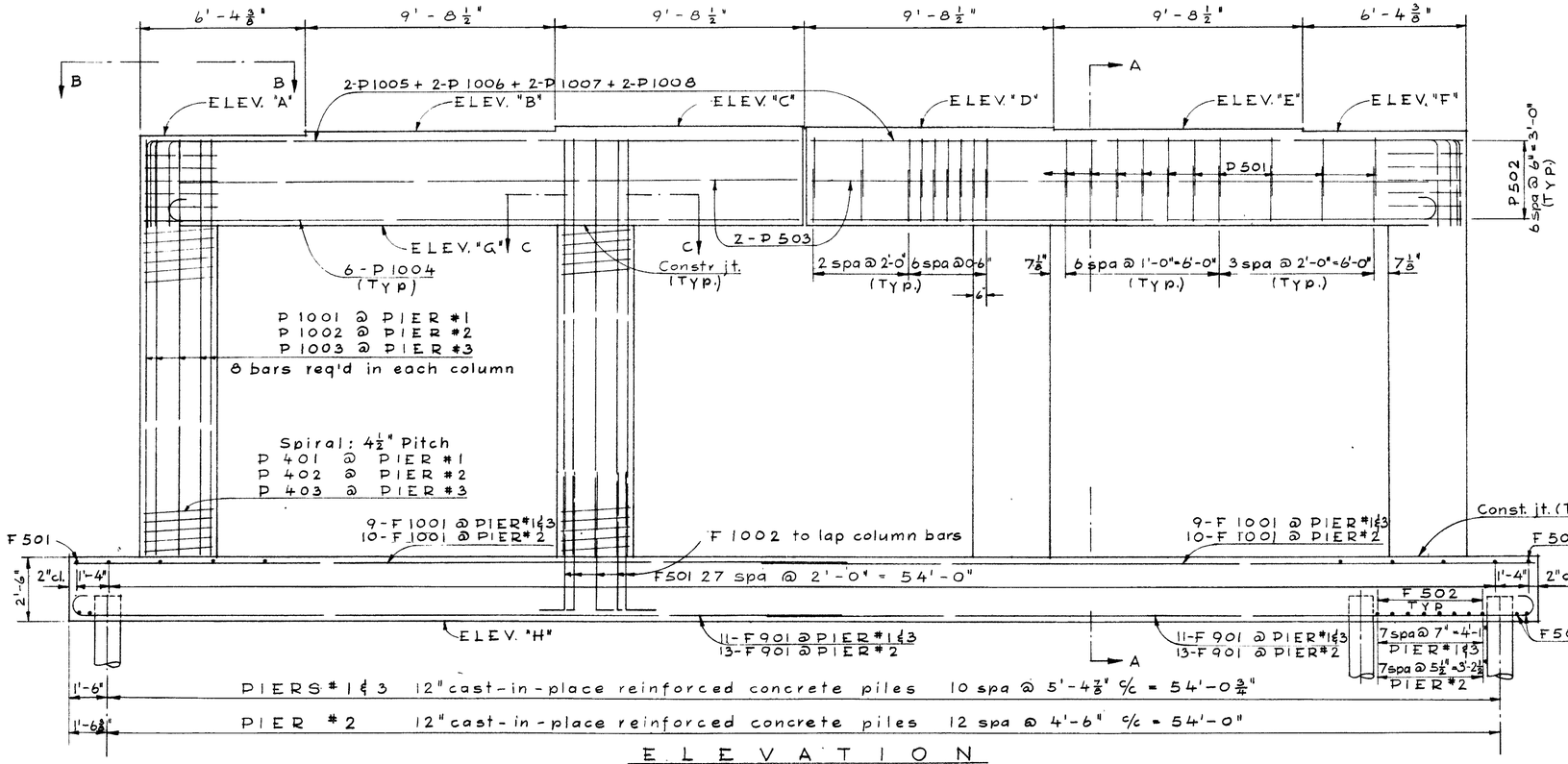
FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

149
241

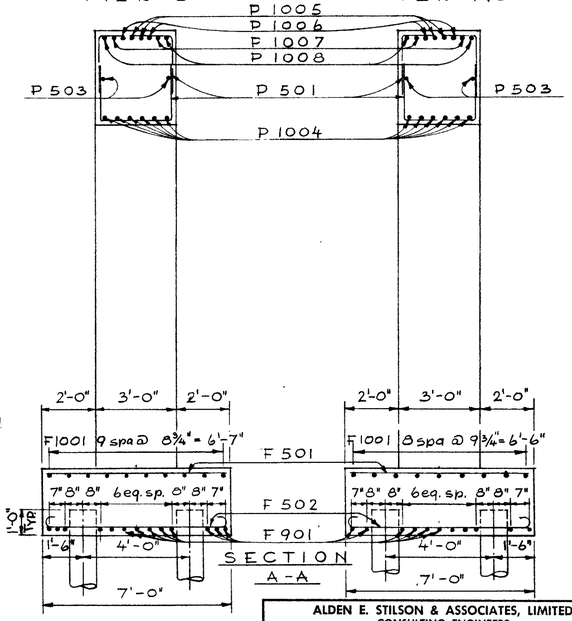
MONTGOMERY COUNTY
MOT 40 - 5.98
MOT 49 - 12.45







ELEVATIONS								
LOCATIONS	A	B	C	D	E	F	G	H
PIER # 1	990.35	990.52	990.69	990.68	990.61	990.54	986.85	970.30
PIER # 2	990.95	991.09	991.23	991.19	991.10	991.00	987.45	970.30
PIER # 3	991.16	991.27	991.39	991.32	991.20	991.07	987.57	971.70



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CONSULTING ENGINEERS
COLUMBUS, OHIO

PIER DETAILS
BRIDGE Nº MOT-40-0631
U.S. 40 UNDER SB SR49

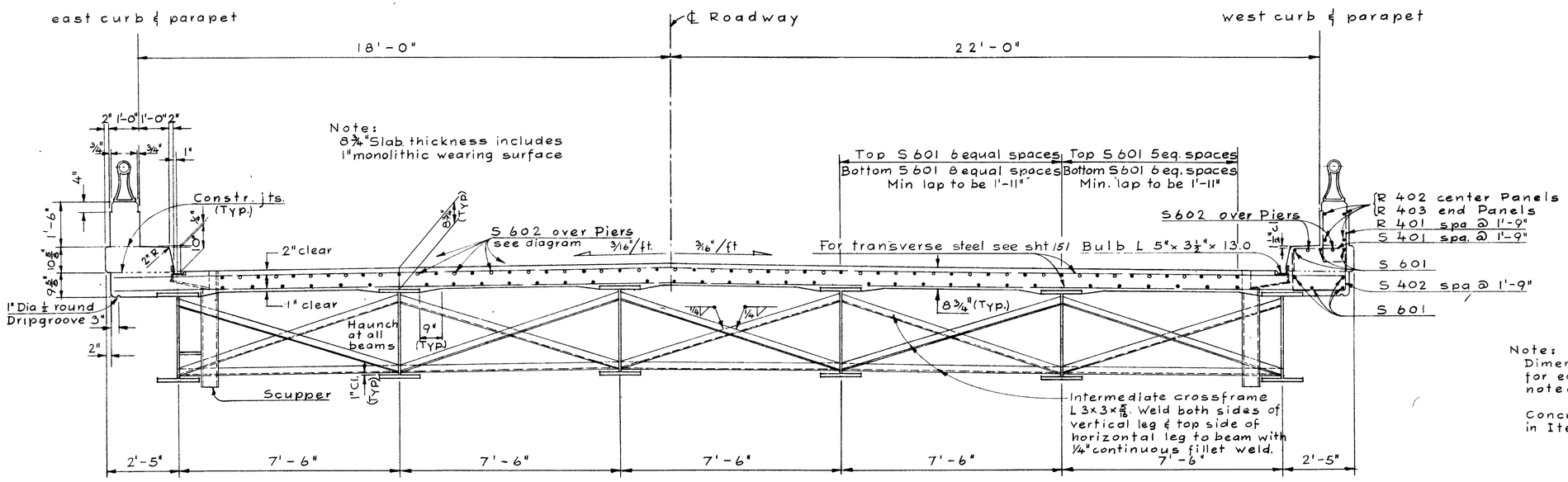
MONTGOMERY COUNTY
ACI-1097(4) STA. 335+05.75

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
H.S	H.S.		BETTIN	TLV	4-3-58	

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

150
241

MONTGOMERY COUNTY
MOT-40-5.98
MOT-49-12.45



TRANSVERSE SECTION

Note:
Dimensions and reinforcing same for each curb and parapet unless noted.

Concrete parapets are included in Item S-14 for payment.

Beam splice welding procedure

① Raise end of beam at second pier 3¾"

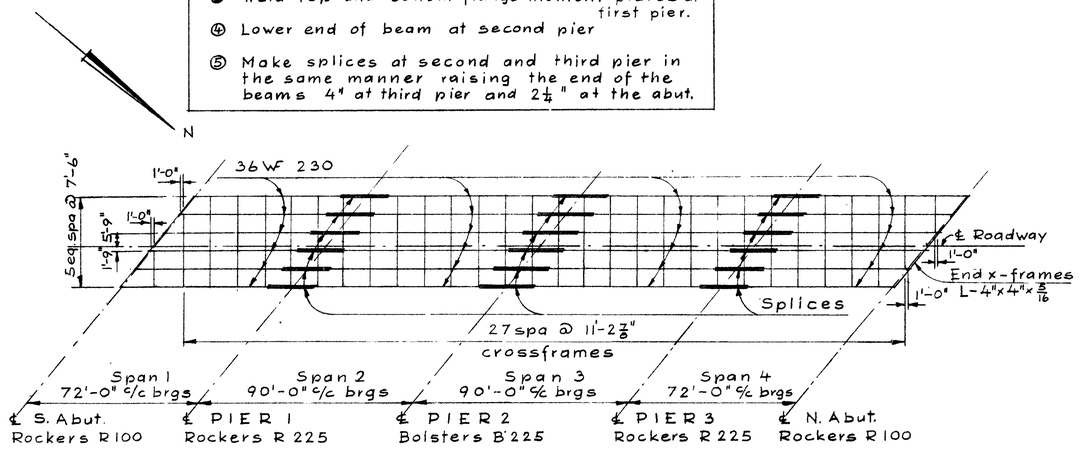
② Butt-weld beam flanges and web at first pier using the following sequence: make one pass on each flange then one on the web; repeat until welds are completed.

③ Weld top and bottom flange moment plates at first pier.

④ Lower end of beam at second pier

⑤ Make splices at second and third pier in the same manner raising the end of the beams 4" at third pier and 2¼" at the abut.

Deflection & Camber				
Location	Span 1 & 4		Span 2 & 3	
	Int.	Ext.	Int.	Ext.
Due to weight of steel	1/8"	1/8"	1/8"	1/8"
Due to remaining D.L.	7/16"	7/16"	9/16"	9/16"
Due to Vertical Curve	3/8"	3/8"	5/8"	5/8"
Total	15/16"	15/16"	1 3/8"	1 3/8"
Shop Camber req'd	1"	1"	1 3/8"	1 3/8"



FRAMING PLAN

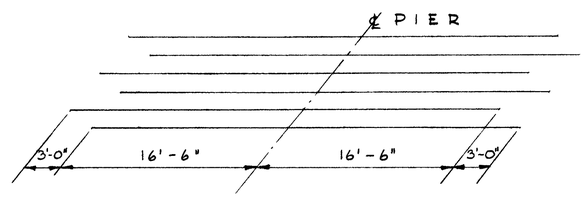


DIAGRAM SHOWING STAGGER OF S 602 BARS OVER PIERS

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

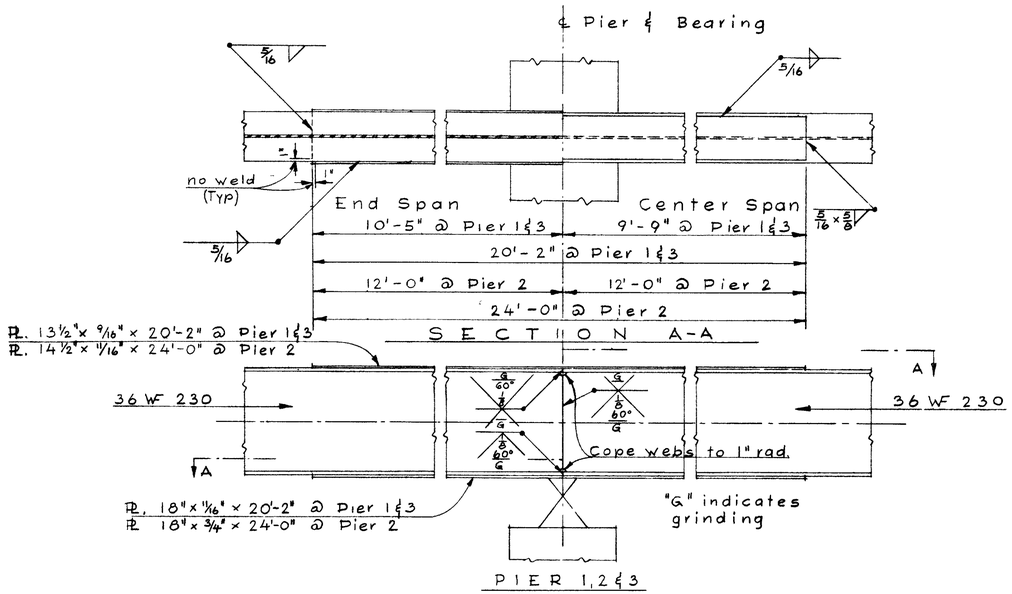
SUPERSTRUCTURE DETAILS
BRIDGE No MOT-40-0631
U.S. 40 UNDER S.B. SR 49
MONTGOMERY COUNTY
ACI-1097(4) STA 335+05.75

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
H.S.	H.S.		BETTIN	TLV	4-3-58	

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

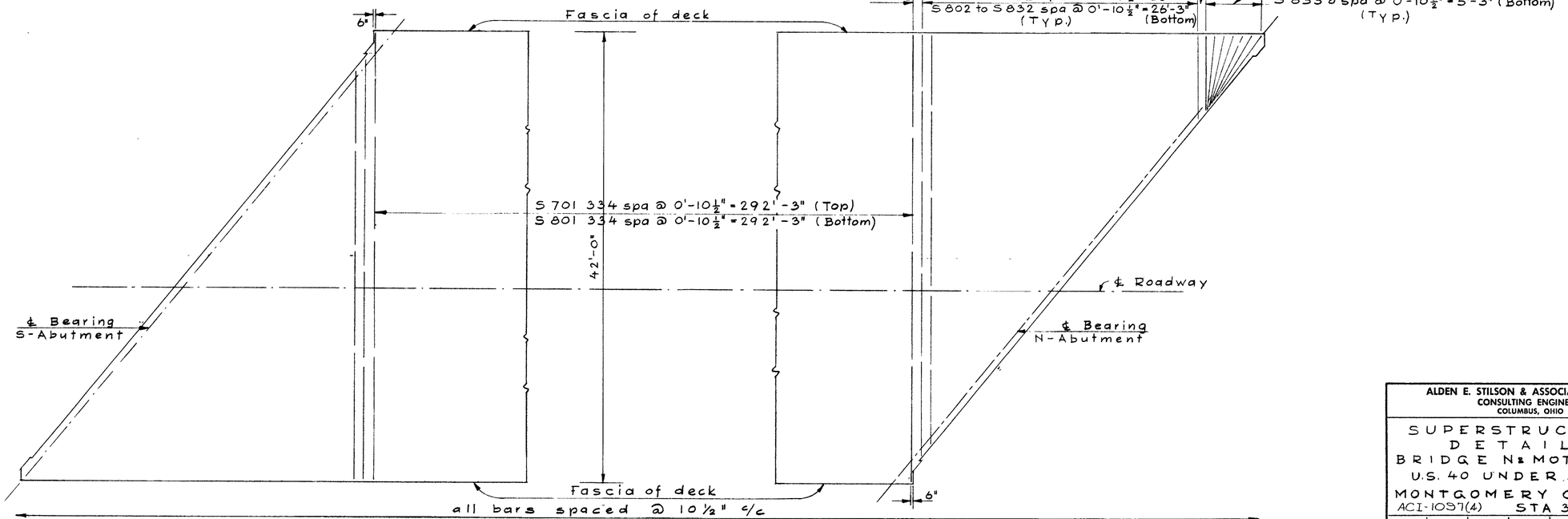
151
241

MONTGOMERY COUNTY
MOT-40 - 5.98
MOT-49 - 12.45



N

BEAM SPLICE DETAILS



PLAN SHOWING PLACEMENT OF TRANSVERSE BARS

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

SUPERSTRUCTURE DETAILS
BRIDGE No. MOT-40-0631
U.S. 40 UNDER S.B. SR 49
MONTGOMERY COUNTY
ACI-1097(4) STA 335+05.75

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
H.S.	H.S.		BETTIN	FLV	1-3-58	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

152/241

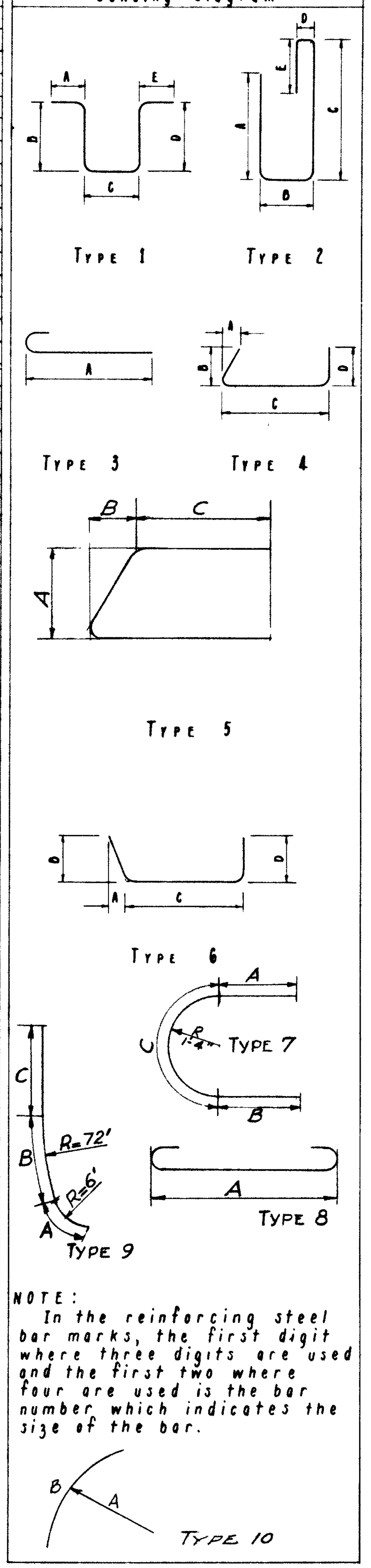
Montgomery County
Mot – 40 – 5.98
Mot – 49 – 12.45

REINFORCING STEEL LIST

Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shape
					Abutments					
A501	52	8-4	452	1		2-7	3-5	2-7		bt
A502	52	27-1	1,469							st
A503	48	5-7	280							st
A504	12	13-6	169							st
A505	12	9-9	122							st
A506	60	4-9	297	1		1-7	1-10	1-7		bt
A507	32	5-6	184							st
A508	32	4-6	150							st
A509	28	3-3	95	1		1-1	1-4	1-1		bt
A510	28	3-6	102	5	1-4	0-2	1-1			bt
A511	4	17-6	73							st
A512	4	18-4	76	9	1-2	11-0	6-2			bt
A513	8	3-6	29							st
A514	8	16-3	136							st
A515	8	3-4	28							st
A516	8	12-3	102							st
A517	8	4-5	37							st
A518	4	13-6	56							st
A519	4	12-10	54	9	1-2	11-0	0-8			bt
A520	20	3-0	63							st
A521	10	5-0	52							st
A522	4	2-9	11	1		0-10	1-4	0-10		bt
A523	4	3-0	13	5	1-4	0-2	0-10			bt
A601	102	15-9	2,413	2	5-2	1-5	6-6	0-10	2-6	bt
F503	52	13-2	714	1		5-0	3-5	5-0		bt
F504	12	28-4	355							st
F505	20	8-1	169	1		3-7	1-2	3-7		bt
F506	4	14-10	62							st
F507	4	12-0	50							st
F508	4	4-0	17							st
F509	4	7-5	31	1		3-7	0-6	3-7		bt
F510	2	5-0	10							st
R401	32	4-3	91	1		2-0	0-6	2-0		bt
R404	8	16-3	*							st
R405	8	12-3	*							st
					Piers					
F501	90	6-8	626							st
F502	268	7-10	2,190	8	6-8					bt
F901	70	31-0	7,378	3	29-9					bt
F1001	56	30-0	7,229							st
F1002	96	6-4	2,616	1	1-4	5-4				bt
P501	228	7-3	1,724	1		2-5	2-8	2-5		bt
P502	42	7-5	325	7	1-7	1-7	4-3			bt
P503	12	24-0	300							st
P1001	32	17-5	2,398							st
P1002	32	18-0	2,479							st
P1003	32	16-9	2,306							st
P1004	36	25-10	4,002	3	24-5					bt
P1005	12	28-3	1,459	1	3-4	25-3				bt
P1006	12	28-2	1,454	1	3-4	25-2				bt
P1007	12	27-11	1,442	1	3-4	24-11				bt
P1008	12	27-0	1,394	1	3-4	24-0				bt

Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shape
			Superstructure							
R401	372	4-3	1,056	1		2-0	0-6	2-0		bt
R402	136	17-2	*							st
R403	16	13-9	*							st
S401	372	2-10	704	1		0-8	1-9	0-8		bt
S402	372	4-0	994	1		1-3	1-9	1-3		bt
S601	684	37-11	38,954							st
S602	96	36-0	5,191							st
S701	335	41-8	28,531							st
S702	2	39-10	3,020							
thru		Varies by ¾ 1-0¾+								
S732	2	7-10								st
S733	14	6-9	193							st
S801	335	41-8	37,269							st
S802	2	39-10	3,945							st
thru		Varies by ¾ 1-0¾+								
S832	2	7-10								st
S833	14	6-9	252							st
					Replacement Steel					
RE401	1	5-3								st
RE501	1	5-7								st
RE601	3	5-11								st
RE701	2	6-3								st
RE801	3	6-6								st
RE901	1	6-10								st
RE1001	2	7-3								st
			Replacement Steel for Spirals							
RE402	1	5-3		10	1-3½	5-3				bt

Bending Diagram



NOTE:
In the reinforcing steel bar marks, the first digit where three digits are used and the first two where four are used is the bar number which indicates the size of the bar.

* HORIZONTAL PARAPET REINFORCING
THESE BARS ARE INCLUDED WITH THE RAILING FOR PAYMENT.

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	ABUT.	PIER	SUPERS.	GENERAL
E-2	468	cu.yd	Unclassified Excavation	281	187		
S-1	427	cu.yd	Class "C" concrete, Superstructure			427	
S-1	109	cu.yd.	Class "C" concrete, Pier Caps & Columns		109		
S-1	117	cu.yd.	Class "E" concrete, Abutments above footings	117			
S-1	168	cu.yd	Class "E" concrete footings	57	111		
S-4	170,543	l.b	Reinforcing Steel	7,962	42,472	120,109	
S-7	540,864	l.b	Structural Steel			540,864	
S-8	540,864	l.b	Field Painting of Structural Steel			540,864	
S-14	712	lin.ft	Railing (Aluminum Rails and Supports & Concrete Parapet)			712	
S-16	Lump	Sum	First Test Pile				Lump
S-18	1540	lin.ft	12" Cast-in-Place Reinforced Concrete Piles		1540		
S-29	38	cu.yd	Porous Back fill	38			
S-29	223	cu yd	Slope Facing (S-29.05 type)				223

SPIRALS - HOT ROLLED

Mark	Nº	Length	Core	Pitch	Turns	Spacers	Weight
P401	4	14-1	32	4½	41	16	1058
P402	4	14-8	32	4½	42	16	1086
P403	4	13-5	32	4½	39	16	1006

SPIRALS
THE 'LENGTH' SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP.
THE "NO. OF TURNS" SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE "LENGTH" DIVIDED BY THE PITCH, PLUS 3 TURNS (TOTAL NUMBER OF CLOSED COILS), EXPRESSED AS THE NEAREST WHOLE NUMBER.
SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS BUT SHALL IN OTHER RESPECTS CONFORM TO ITEM S-4
1½ CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT.
FOUR STEEL CHANNEL, TEE OR ANGLE SPACERS, WEIGHING APPROXIMATELY 0.68 LB. PER LIN. FT. OF SPACER, SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF THE COIL. THE NUMBER OF POUNDS OF THESE SPACERS, BASED ON 0.68 LB. PER LIN. FT., WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

REPLACEMENT BARS
IF REINFORCING BARS ARE FABRICATED FROM STOCK WHICH HAS PREVIOUSLY BEEN TESTED AND APPROVED BY THE OHIO HIGHWAY TESTING LABORATORY, TEST SAMPLES AS PROVIDED IN SEC. S-4.02 NEED NOT BE FURNISHED AND REPLACEMENT BARS WILL NOT BE REQUIRED

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

STEEL LIST & ESTIMATED QUANTITIES
BRIDGE Nº – MOT – 40 – 0631
U.S. 40 under Southbound S.R. 49
Montgomery County Sta. 335+05.75
ACI-1097(4)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
H.S.	J.F.M.		BETTIN	TLV	4-3-58	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

153
241

MONTGOMERY COUNTY
MOT 40-5.98
MOT 49-12.45

REFERENCES:

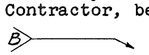
Standard Drawings:

End Finish and End Cross Frame Details	-	CSB-2-56 dated 12-3-56, *revised 3-1-58.*
Gutter and Scupper Details	-	CSB-2-56 dated 12-3-56, *revised 3-1-58.*
Rocker and Bolster Details	-	RB-1-55 dated 3-1-55
Railing Details Type A	-	AR-1-57 dated 4-9-57, *revised 3-1-58.*
Supplemental Specifications	-	S-114 rev. 8-1-57
Guardrail and Railing Details	-	Sheet 144

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, *together with revisions thereof dated 2-21-58.*

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil sampling and soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division Office, but the State assumes no responsibility for the accuracy thereof.

WELDED STEEL: The steel for the 36 WF 230 beams shall conform to ASTM Designation A-373. All other structural steel shall conform to either ASTM A-7 (as per Sec. M-7.4 (a) of the Construction and Material Specifications) or to A-373.

WELDING of structural steel shall be Class "A" except as otherwise shown. Any welds shown as field welds may, at the option of the Contractor, be made in the shop. Class "B" welding shown thus 

EXCAVATION QUANTITY includes the removal of fill material between the subgrade elevation and the bottom of the abutment footing.

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete in the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections between transverse construction joints which are parallel to the transverse slab bars and are located near the center of any span.

SLOPE FACING shall be provided under the structure at both abutments. The porous drain material shall be 12" thick and shall extend transversely to 3 ft. outside the edge of the superstructure. At the N. abutment the longitudinal limits are the face of abutment and the toe of the 2:1 slope. At the S. abutment these limits are the face of abutment and a line 10'-0" ± north of and parallel to the centerline of the ditch.

PILES shall be driven to a minimum bearing capacity of 35 tons per pile for the piers.

FOUNDATION BEARING PRESSURE:

Dead Load -
Abutments = 1.4 tons per sq. ft.

Dead Load + Vertical Live Load -
Abutments = 1.9 tons per sq. ft.

MAXIMUM PILE REACTION: The maximum calculated pile reaction including lateral loads is as follows:

Piers 1 and 3 - 42.5 tons per pile

Pier 2 - 42.4 tons per pile

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

GENERAL NOTES

BRIDGE Nº MOT-40-0631
U.S.40 UNDER S.B. SR 49
MONTGOMERY COUNTY
ACI-1097(4) STA. 335+05.75

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
				TLU	4-7-58	