

DESIGN DESIGNATION
 ADT (Present) = 2000
 ADT (Design Year) = 2540
 Design Year = 1988
 D.H.V. = 10% ADT
 D.D.H.V. = 55%
 % Trucks = 3

MICROFILMED
 FEB 25 1985

STATE OF OHIO
 DEPARTMENT OF HIGHWAYS
CLA-72-8.35
 CITY OF SPRINGFIELD
 CLARK COUNTY
 GRADE SEPARATION WITH
 THE PENN CENTRAL COMPANY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	US-78 (8)	1 167

CLARK COUNTY
 CLA-72-8.35

US-78 (8)

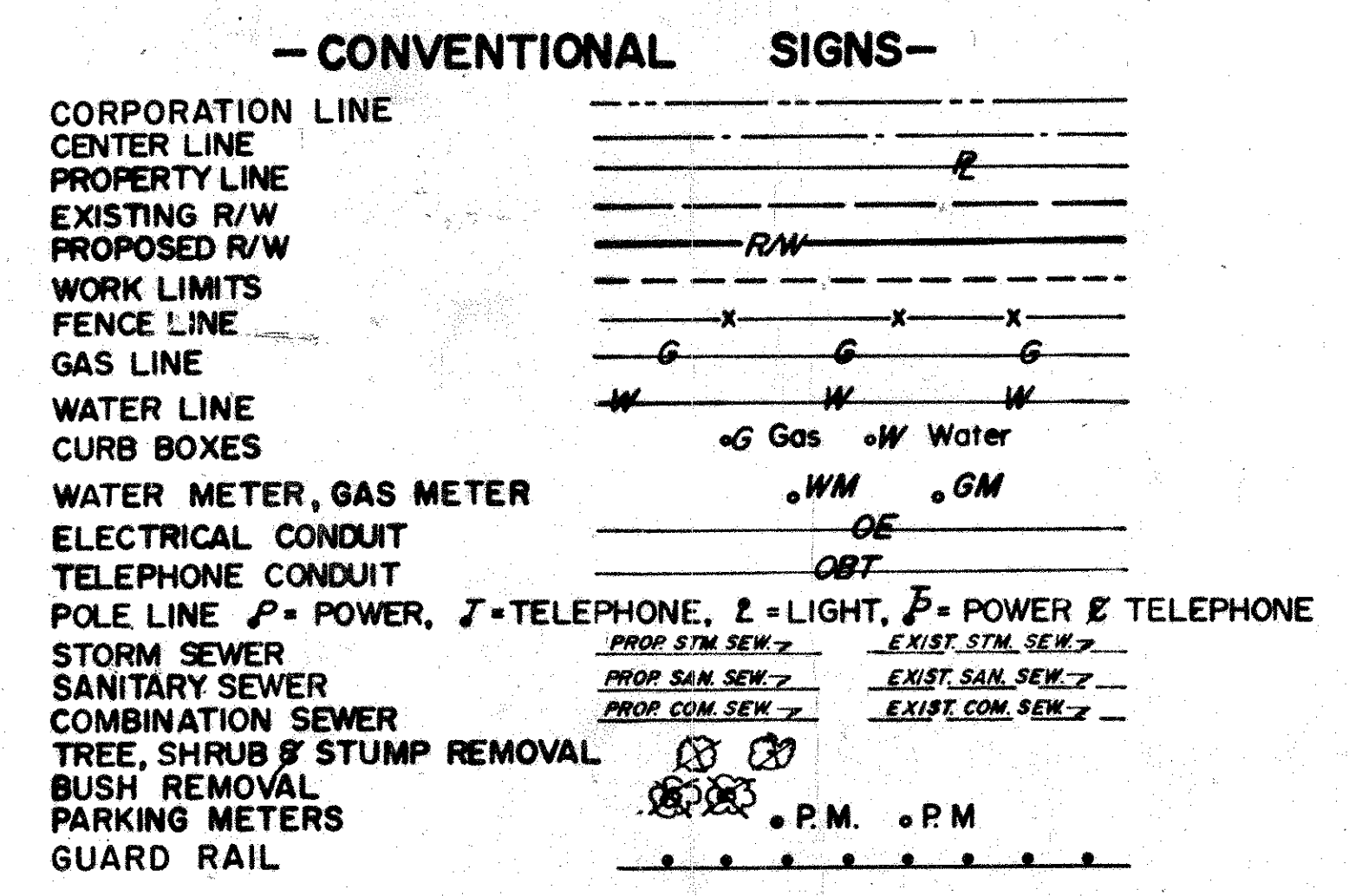
1967 SPECIFICATIONS

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.

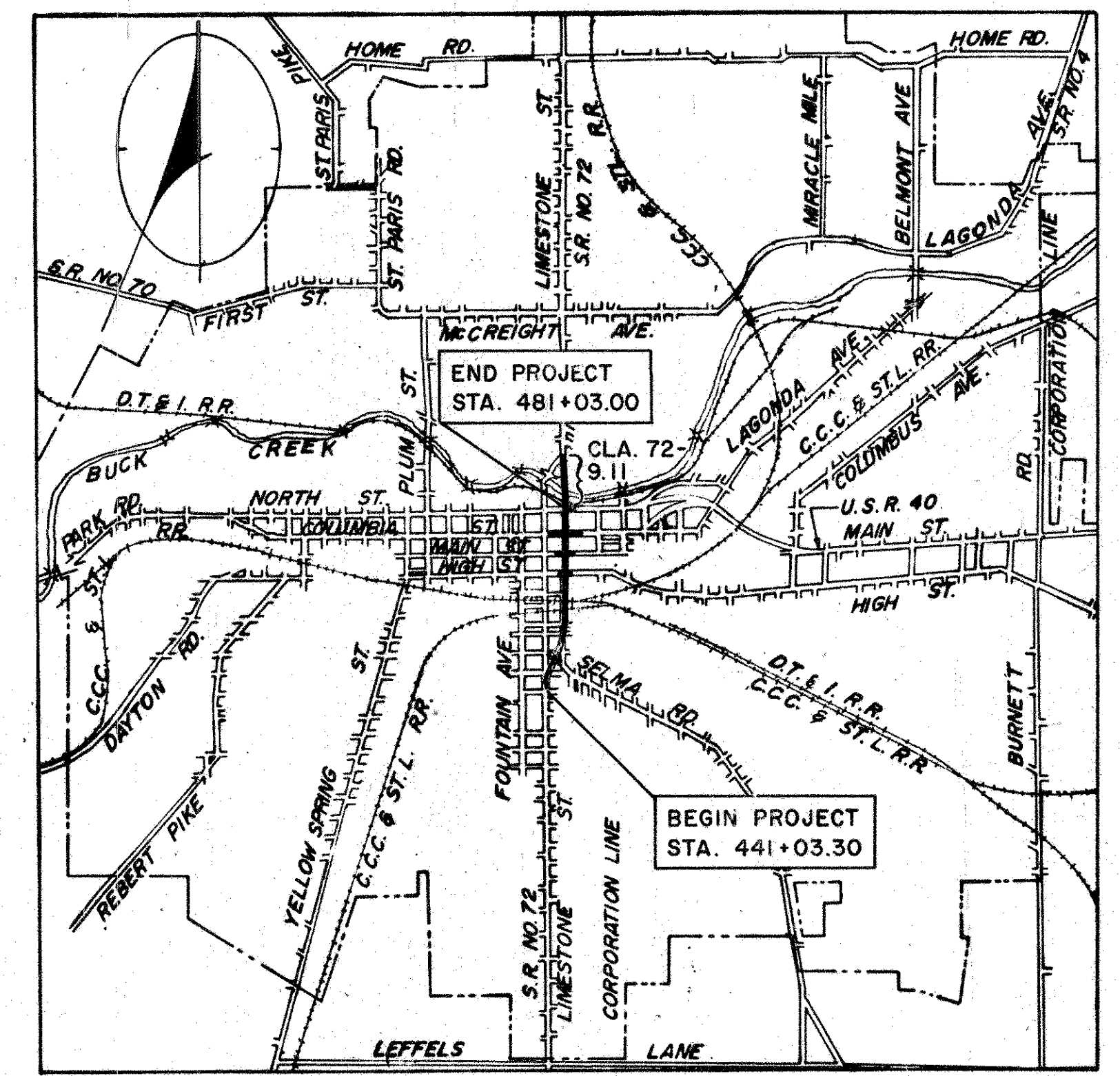
I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING OF THE HIGHWAY TO TRAFFIC EXCEPT AS NOTED ON SHEET 13, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

- APPROVED: F.M. Hughes
 DATE: 8-2-65 DIRECTOR OF PUBLIC WORKS, CITY OF SPRINGFIELD
- APPROVED: James L. Cablinger
 DATE: 8-3-65 ACTING CITY MGR, CITY OF SPRINGFIELD
- APPROVED: Marvin S. Shank
 DATE: 8-3-65 MAYOR, CITY OF SPRINGFIELD
- APPROVED: Oliver M. Lissner
 DATE: 7-31-68 DIVISION DEPUTY DIRECTOR
- APPROVED: R.E. Catlin
 DATE: 8-15-68 ENGINEER OF LOCATION AND DESIGN
- APPROVED: Benny J. Shannan
 DATE: 8-15-68 DEPUTY DIRECTOR OF DESIGN AND CONSTRUCTION
- APPROVED: Thomas M. Major
 DATE: 8-22-68 DEPUTY DIRECTOR OF PLANNING AND PROGRAMMING
- APPROVED: C.H. Allwater
 DATE: 7-18-68 ENGINEER OF BRIDGES
- APPROVED: T.H. Brown
 DATE: 8-22-68 DEPUTY DIRECTOR OF RIGHT-OF-WAY
- APPROVED: R.W. Wilson
 DATE: 8-23-68 FIRST ASSISTANT DIRECTOR
- APPROVED: R.E. Meadler
 DATE: 8-23-68 DIRECTOR OF HIGHWAYS



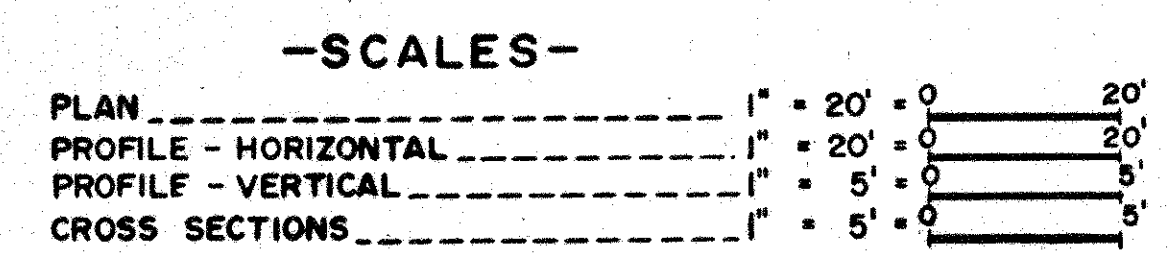
- INDEX OF SHEETS -

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- LOCATION MAP -
 SCALE 1" = 3000'

PORTION TO BE IMPROVED
 STATE HIGHWAYS
 OTHER ROADS
 DETOURS



* See Sheet No. 5 for list of 1963 and superseding 1967 Standard Drawings and Supplemental Specifications.

PREPARED AND RECOMMENDED BY
 SHAFFER, PARRETT AND ASSOCIATES
 CONSULTING ENGINEERS
 COLUMBUS, OHIO

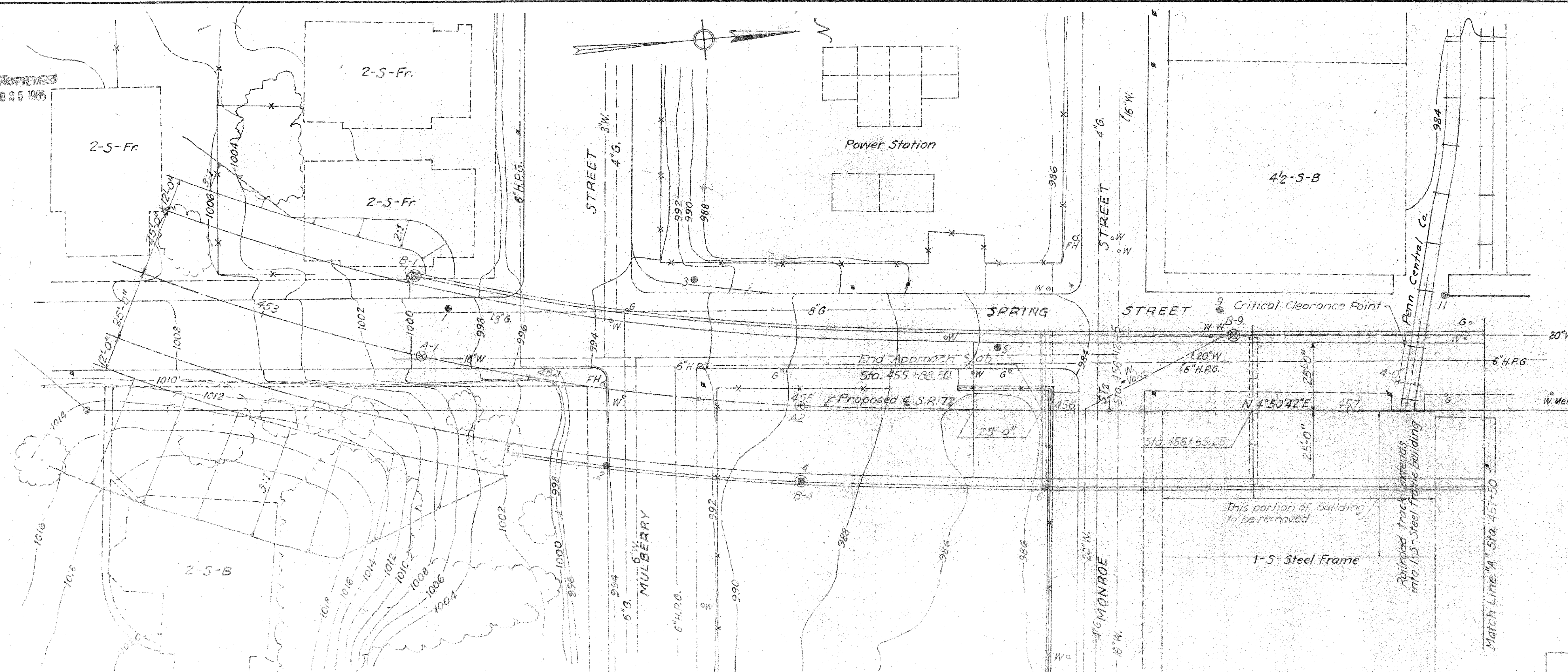
REMARKS	LINE DATA WORK	PROJECT
S.R. 72		
BEGIN	441+14.36	441+24.36 BK. = 441+03.30 AH.
END	484+00.00	481+03.00
SELMA RD.		
BEGIN	12+68.00 15+74.00	
END	15+24.00 18+88.00	
COLUMBIA ST.		
BEGIN	10+38.00	
END	18+05.00	
NET LENGTH	5,643.70 Lin. Ft. or 1.06 Miles	3,999.70 Lin. Ft. or 0.757 Miles

* STANDARD DRAWINGS								SUPPLEMENTAL SPECIFICATIONS	
BP-1	6-1-65	MC-3	5-1-66	CB-6	6-1-65	HL-4	1-1-66		
BP-2	1-17-68	MC-4	6-1-65	I-2A	6-1-65	AS-1-67	1-1-68	801	1-1-67
BP-3	5-1-68	MC-6	6-1-65	MH-1	6-1-65	SD-1-65 (Sh. 1-2-3)	11-8-65	808	1-13-67
BP-4	1-10-67	F-1	3-1-65	MH-1A	8-1-65	HL-2	11-1-65	832	5-25-68
RP-5	6-1-65	FACI-1	9-15-67	MH-2	6-1-65	RB-1-55	2-2-59	811	7-1-67
BP-7	1-1-66	FACI-2	6-1-65	GR-1	1-1-67	BR-1-65 (Sh. 2 of 2)	11-24-65	825	12-19-67
MC-1	10-1-67	HW-1	6-1-65	GR-2A	1-1-67			828	1-1-67
MC-2	6-1-65	CB-2-2 A3 B	6-1-65	L-1	6-1-65	HL-3	11-1-65	814	1-1-67
				FSB-1-62	1-15-67	BP-6	6-1-65	931	3-21-66 3-25-67

FILE NO. CLA-72-8.35
 DATE OF LETTING _____
 CONTRACT NO. _____

DEPARTMENT OF TRANSPORTATION
 BUREAU OF PUBLIC ROADS
 FEDERAL HIGHWAY ADMINISTRATION
 APPROVED: _____
 DIVISION ENGINEER DATE

REVISIONS
FEB 25 1985

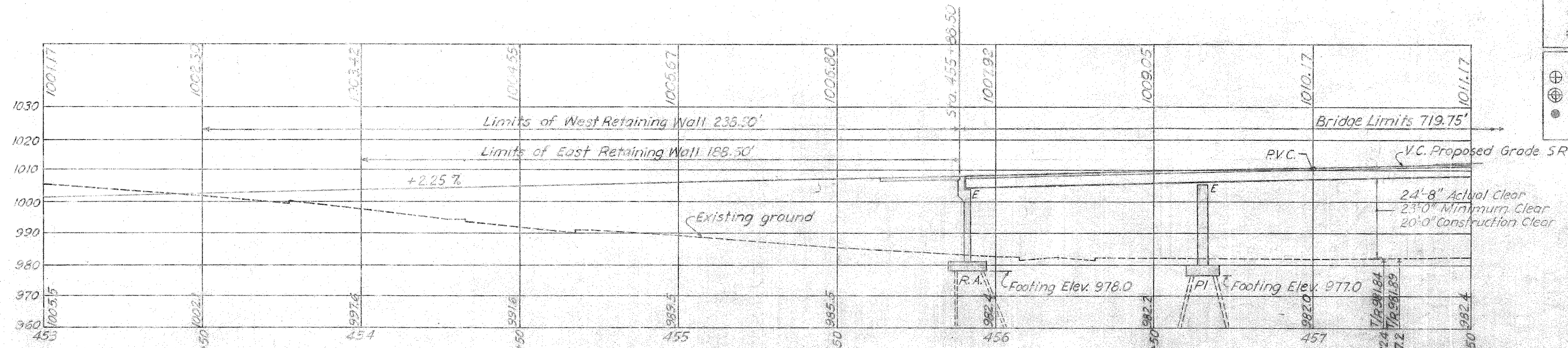


CURVE DATA S.R. 72
 P.I. Sta. 457+04.33
 $\Delta = 40^{\circ}00'00''$
 $D = 7^{\circ}00'$
 $R = 818.51'$
 $T_s = 373.31'$
 $L_c = 421.43'$
 $L_s = 150.00'$
 $E_s = 53.80'$

SPIRAL DATA
 $\theta_s = 5^{\circ}15'$
 $L_c = 119.94'$
 $L_t = 100.04'$
 $ST = 50.04'$

PROPOSED STRUCTURE
TYPE Continuous steel beam with reinforced concrete deck and substructure
SPANS 74'-6" - 93'-1 1/2" - 93'-1 1/2" - 94'-0" - 66'-3"
 66'-3" - 92'-0" - 80'-0" - 55'-0"
ROADWAY 50'-0" f/f 3'-0" safety curbs.
LOAD FREQUENCY CF-400 (57)
SKEW 0° & 8' 28" 40" L.F.
WEARING SURFACE 1" Monolithic concrete
APPROACH SLAB AS-1-67 (25' Long)
ALIGNMENT Tangent
AVERAGE DAILY TRAFFIC 22,270 - 1983 ADT

FOUNDATION INVESTIGATION LEGEND
 ⊕ Indicates Auger Boring
 ⊕ Indicates Press Drive Sample-Core Boring
 ⊙ Indicates Drive Rod Penetration Resistance Soundings



Steel piles (10BP42) at Rear Abutment and Retaining Walls. The average estimated pay lengths are 30'.
 Steel piles (12BP53) at all Piers. The average estimated pay lengths are 30' at Piers 1 and 2.

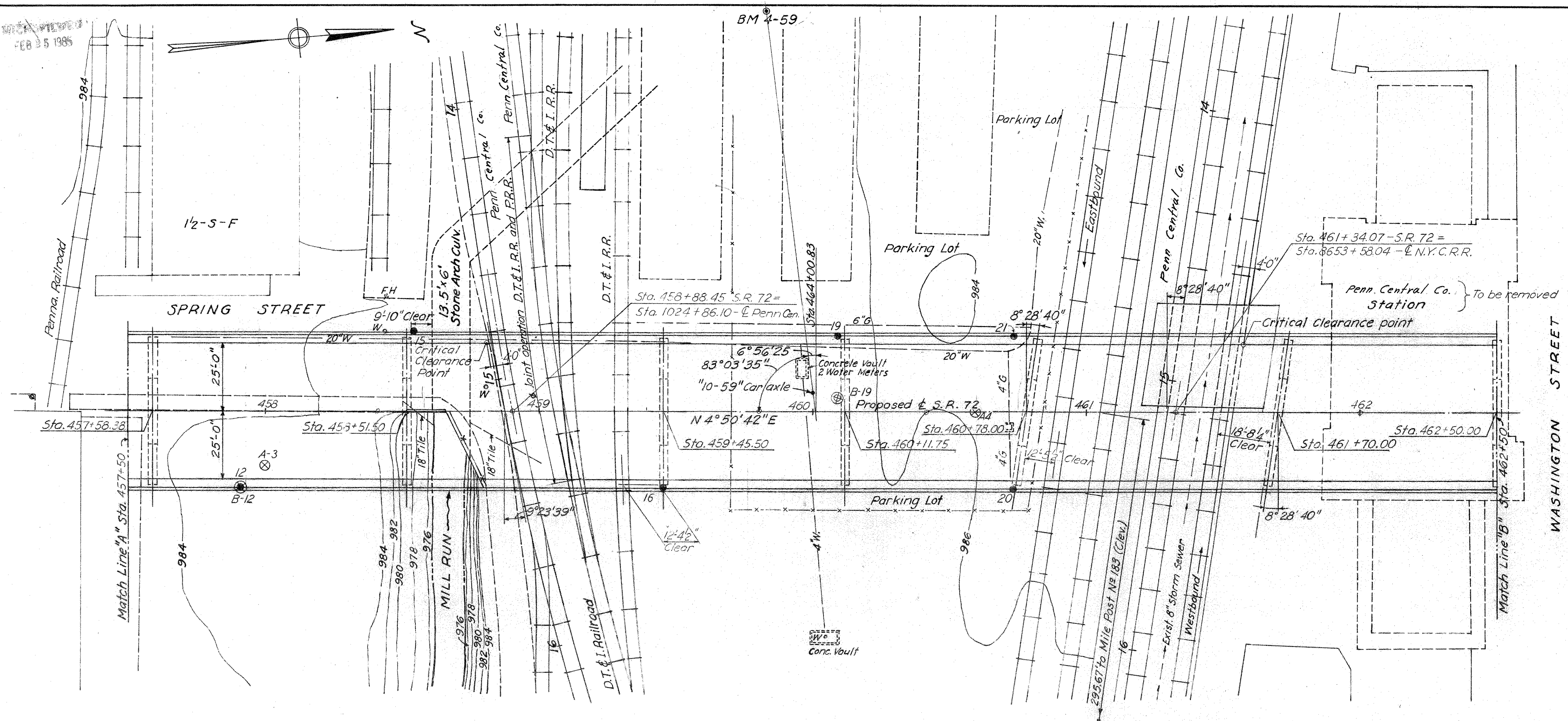
SHAFFER, PARRETT & ASSOCIATES AND BROOKHART & TYO
 CONSULTING ENGINEERS
 MANSFIELD, OHIO

SITE PLAN
 BRIDGE No CLA-72-0863
 S.R. 72 OVER CLARK CO
 D.T. & I. AND Penn Central Co
 S.R. 72
 STA 455+88.50 TO 463+08.25

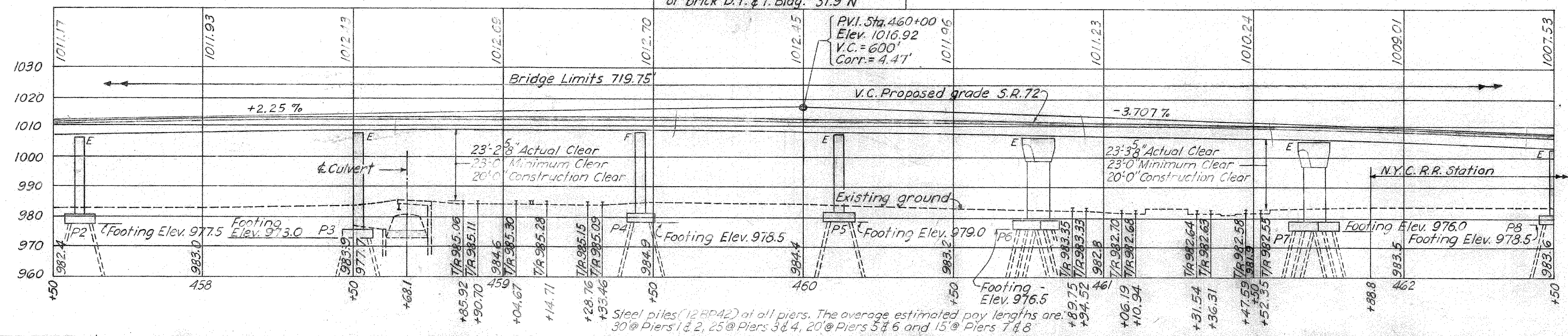
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C.W.F.	C.W.F.	C.W.F.	R.M.H.	D.R.I.	1-8-83	

FEB 15 1985

CLA-72-8.35



BENCH MARK
 B.M. 4-59, Elev. 983.85
 Conc. monument - 4.1' E. of E. line
 of brick D.T. & I. Bldg. 31.9' N



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 CONSULTING ENGINEERS
 MANSFIELD, OHIO

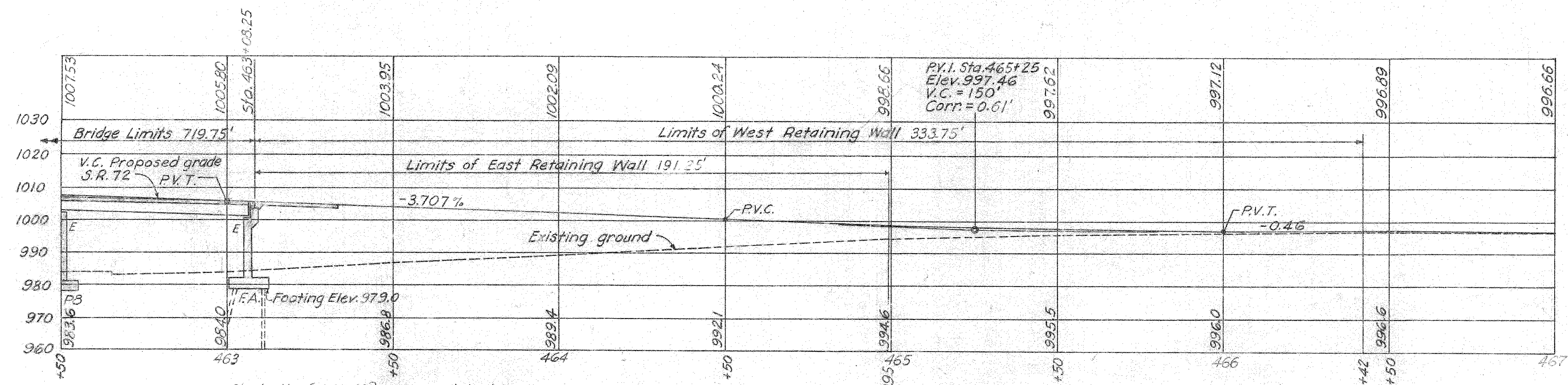
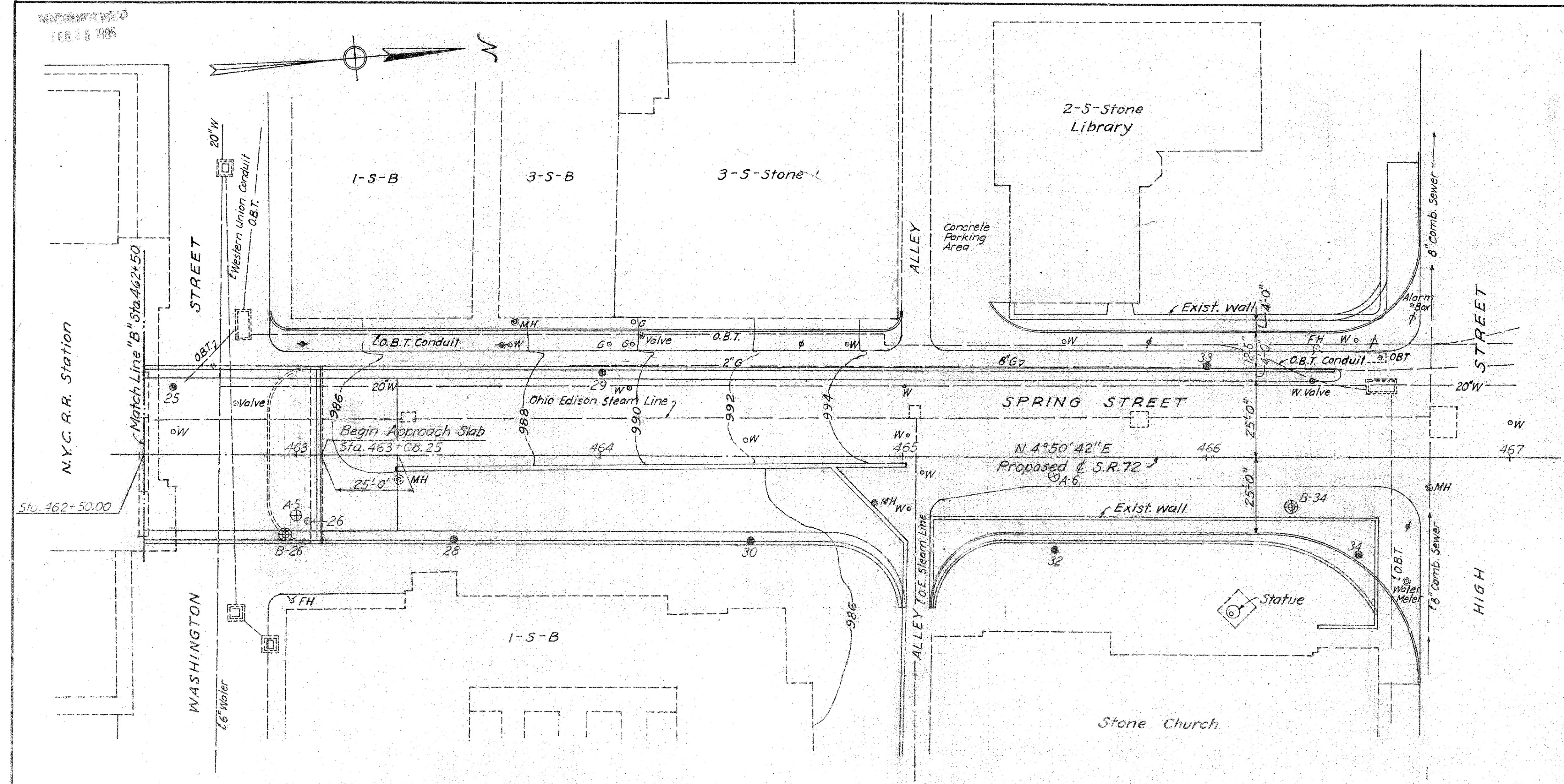
SITE PLAN
 BRIDGE No CLA - 72-0863
 S.R. 72 OVER DT. & I. AND Penn Central Co.
 CLARK CO. S R 72
 STA. 455+88.50
 TO 463+08.25

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.W.F.	C.W.F.	C.W.F.	R.M.H.	D.R.F.	1-8-65	

FEB 25 1965

FED. RD. DIVISION	STATE	PROJECT	109 167
	OHIO		

CLA-72-835



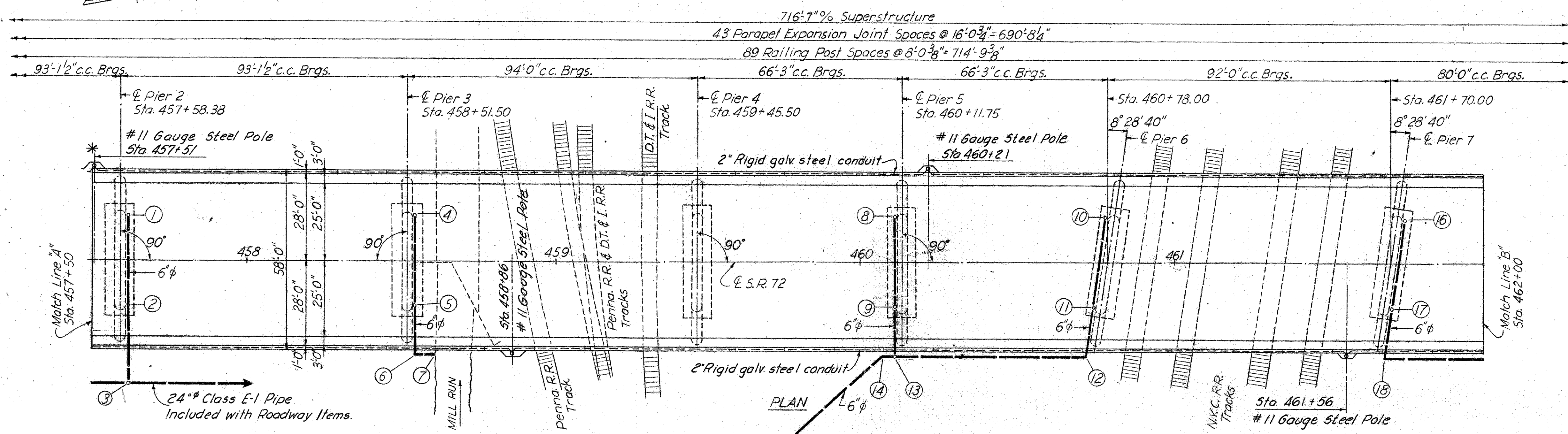
Steel piles (10BP42) at forward Abutment and Retaining Walls. The average estimated pile lengths are 15.

SHAFER, PARRETT & ASSOCIATES AND BROOKHART & TYO
CONSULTING ENGINEERS
MANSFIELD, OHIO

SITE PLAN
BRIDGE NO. CLA-72-0863
SR 72 OVER CLARK CO. D.T. & I. AND Penn Central Co.
S.R. 72
STA 455+88.50 TO 463+08.25

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.W.F.	C.W.F.	C.W.F.	R.M.H.	D.R.F.	1-8-65	

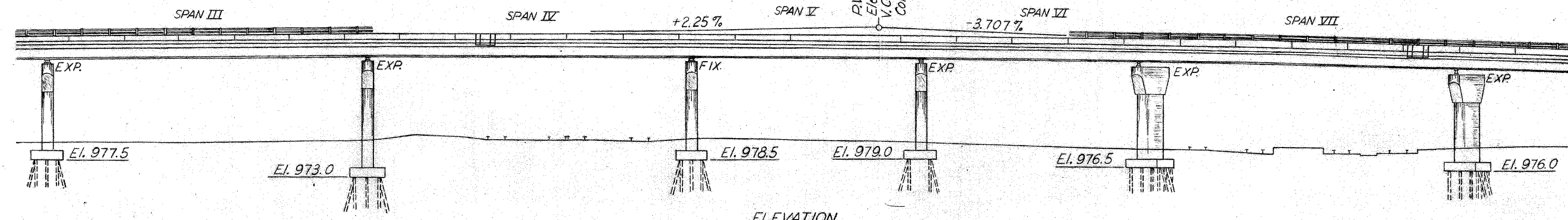
CLA-72-835



DRAINAGE DATA

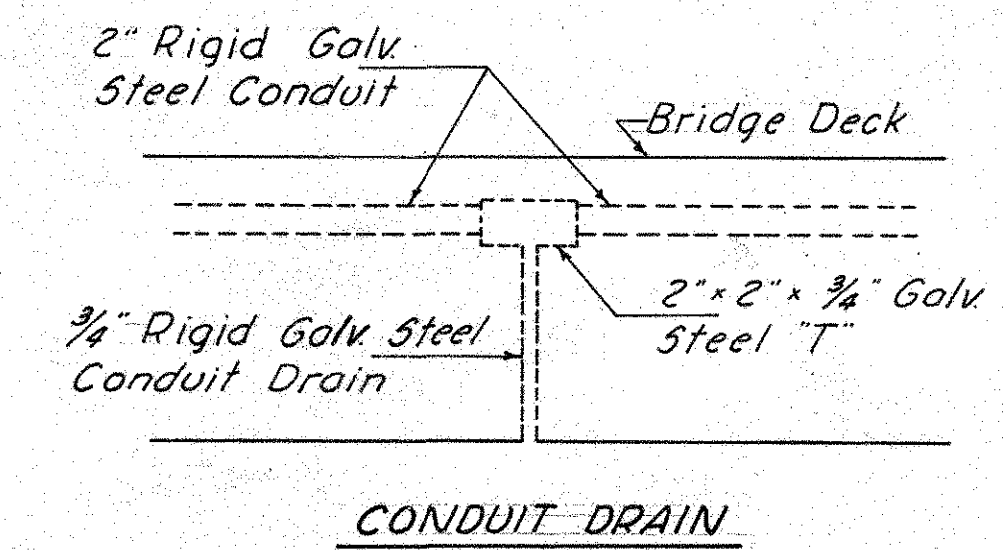
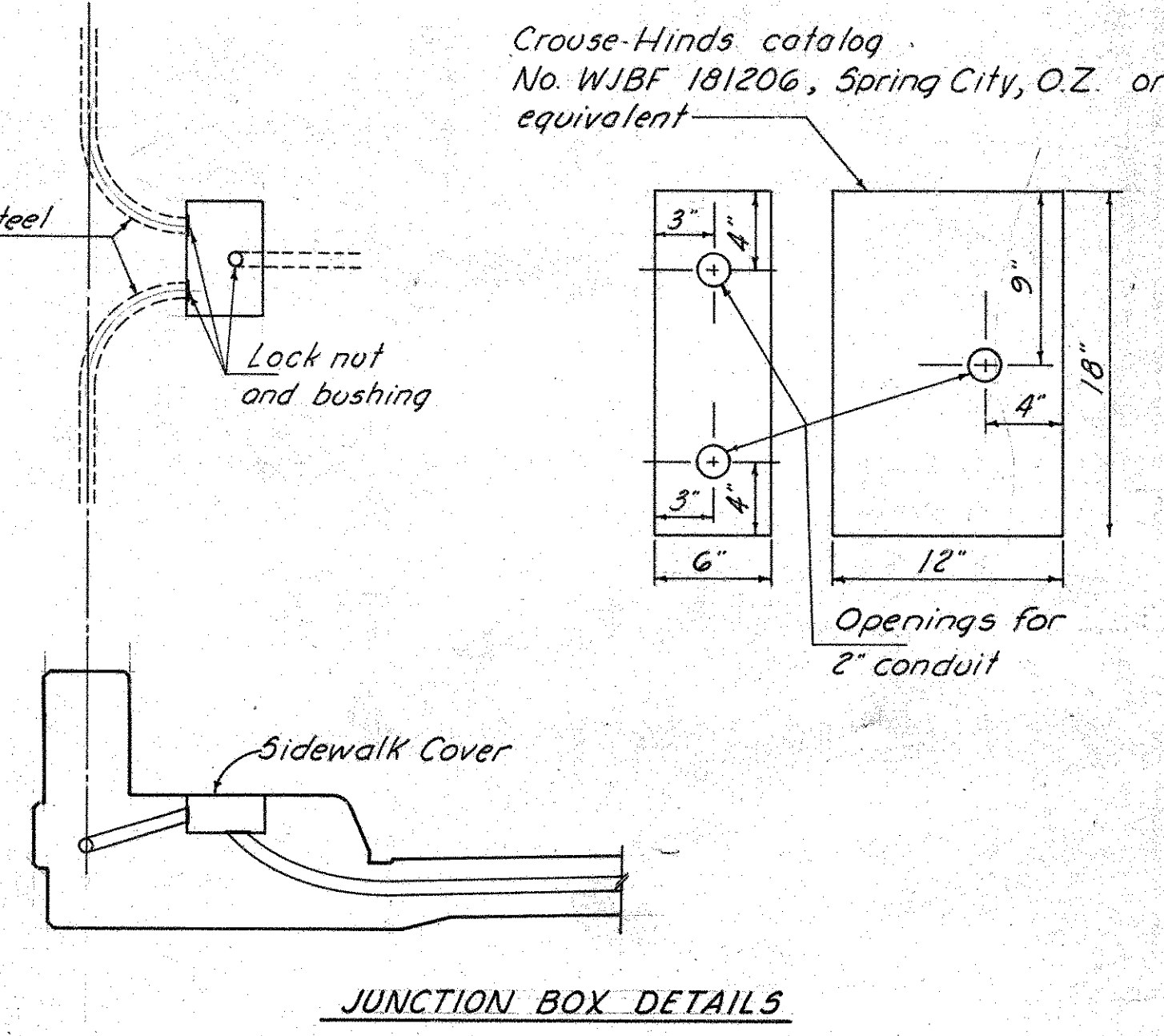
POINT	STATION	OFFSET	FLOW LINE ELEVATION
1	457+60.38	14.5 Lt.	981.00
2	457+60.38	14.5 Rt.	980.50
3	457+60.38	40' Rt.	976.72
4	458+53.50	14.5 Lt.	981.50
5	458+53.50	14.5 Rt.	981.00
6	458+53.50	31' Rt.	980.50
7	458+64.00	32' Rt.	980.40
8	460+09.75	14.5 Lt.	982.50
9	460+09.75	14.5 Rt.	982.20
10	460+78.25	14.5 Lt.	980.00
11	460+73.75	14.5 Rt.	979.70
12	460+71.38	31' Rt.	979.40
13	460+09.75	31' Rt.	979.00
14	460+07.00	31' Rt.	978.90
15	459+45.50	96' Rt.	978.00
16	461+74.25	14.5 Lt.	981.50
17	461+69.75	14.5 Rt.	981.20
18	461+67.38	31' Rt.	981.00

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FEB 25 1985



ESTIMATED QUANTITIES BRIDGE

1967 SPECS	TOTAL	UNIT	DESCRIPTION	SUPERSTR.	ABUTMENTS	PIERS	GENERAL
503	Lump	Sum	Cofferdams, cribs and sheeting				Lump Sum
503	1,316	Cu. Yds.	Unclassified excavation		531	785	
511	1,340	Cu. Yds.	Class "C" concrete, superstructure	1,340			
511	855	Cu. Yds.	Class "C" concrete, piers above footings			855	
808	1,340	Units	Water reducing, set retarding admixture	1,340			
511	292	Cu. Yds.	Class "E" concrete, abutments above footings		292		
511	478	Cu. Yds.	Class "E" concrete, footings		239	239	
518	28 1/2	Lin. Ft.	8" Bituminous coated corrugated metal pipe, including specials				28
512	47	Lin. Ft.	Waterproofing, preformed sealing strip		47		
509	475,124	Lbs.	Reinforcing steel	342,291	42,044	90,789	
513	1,340,000	Lbs.	Structural steel	1,340,000			
832	1,340,000	Lbs.	Field painting of structural steel	1,340,000			
518	706	Lin. Ft.	6" Helical corrugated metal pipe, 707.06, non-perforated				706
517	1,433.17	Lin. Ft.	Bridge Railing Type 2	1,433.17			
505	Lump	Sum	First test pile				Lump Sum
507	2,055	Lin. Ft.	Steel Piles (10BP42)		2,055		
507	4,470	Lin. Ft.	Steel Piles (12BP53)			4,470	
518	187	Cu. Yds.	Porous backfill		187		
518	18	Each	Twin scuppers-including supports	18			
518	509	Lin. Ft.	6" Standard pipe downspout, wrought iron or galvanized, including specials				509
518	106	Lin. Ft.	8" Perforated corrugated metal pipe, 707.06, including specials		106		



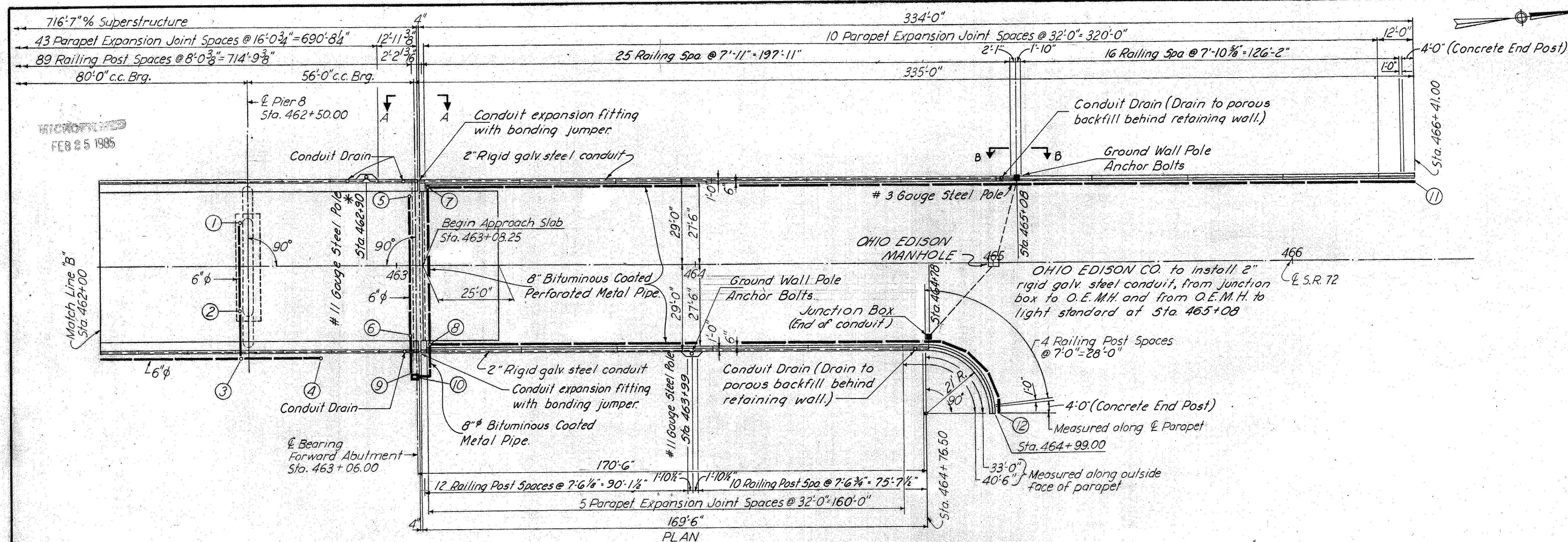
Summary of Estimated Quantities continued on next sheet.

SHAFFER, PARRETT & ASSOCIATES AND BROOKHART & TYO
 CONSULTING ENGINEERS
 MANSFIELD, OHIO

GENERAL PLAN
 BRIDGE NO. CLA-72-0863
 S.R. 72 OVER D.T. & I. AND Penn Central Co.
 CLARK CO. S. R. 72
 STA. 455+98.50
 TO 463+08.25

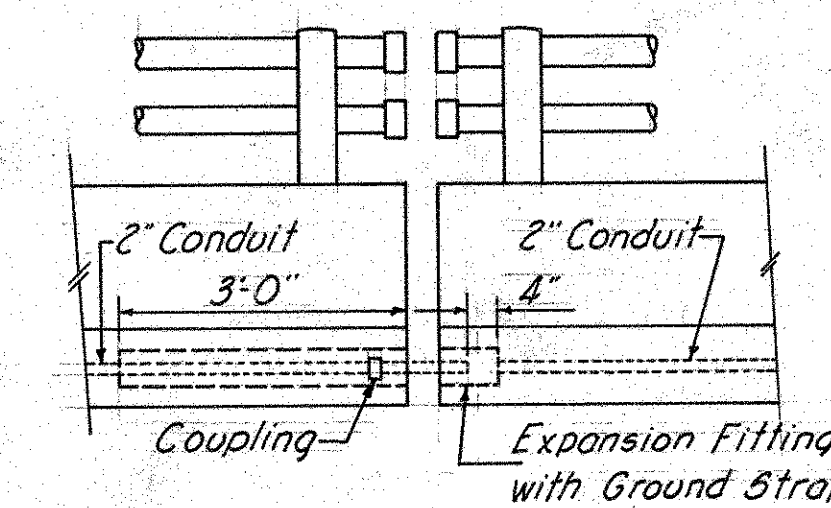
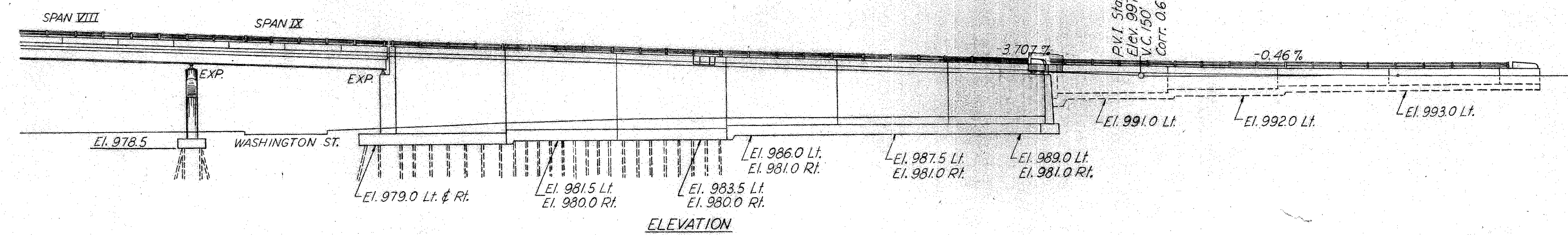
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.R.F.	M.M.N.	M.M.N.	R.M.H.	D.R.F.	1-8-65	

CLA-72-835



POINT	STATION	OFFSET	FLOW LINE ELEVATION
1	462+48.00	14.5 Lt.	982.00
2	462+48.00	14.5 Rt.	981.60
3	462+48.00	31' Rt.	980.14
4	462+75.00	33' Rt.	979.88
5	463+04.50	24' Lt.	983.00
6	463+04.50	24' Rt.	982.70
7	463+09.00	26' Lt.	983.00
8	463+09.00	26' Rt.	982.70
9	463+04.50	37' Rt.	980.50
10	463+05.00	37' Rt.	980.33
11	465+41.00	26' Lt.	995.00
12	465+00.00	50' Rt.	984.70

NOTE: Wall Pole Anchor Bolt Grounding. Ground Anchor Bolt with ¹/₁₆" Bare Copper Cable By Exothermic Weld Process To The 2" Galv. Conduit.



SUPERSTRUCTURE, ABUTMENT CONDUIT

† O.Z. "Ex", Spring City, Adolet or approved equal.

* Quantities Carried to Sh.17
 ** 2" Conduit in Retaining Walls shall be 713.04, Type 1 (galvanized steel).

ESTIMATED QUANTITIES BRIDGE (CONTINUED FROM SH. 11)				RETAINING WALLS *				1963 SPECS.	
1967 SPEC.	TOTAL	UNIT	DESCRIPTION	Superstr.	Abuts.	Piers	General	General	
G25	1	Set	Anchor Bolts U (set of two) x 1 1/4" φ	1				2	5-25
G25	5	Set	Anchor Bolts L (set of four) x 1" φ	5				1	5-25
G25	1480	Lin. Ft.	2" Galvanized Conduit - Type II or III (713.04)	1480				470 **	5-25
G25	1	Each	Bridge Junction Box	1				1	5-25
G25	Lump	Lump	Structure Ground System				Lump		5-25
B28	100	Lin. Ft.	Joint Sealer	100					
B25	48.55	Sq. Yds.	Concrete Surface Treatment				48.55		
ESTIMATED QUANTITIES RETAINING WALLS *				LEFT-REAR	RIGHT-REAR	LEFT-FORWARD	RT-FORWARD	GENERAL	
503	Lump	Sum	Cofferdams, Cribbs and Sheeting					Lump Sum	E-2
505	2,232	Cu. Yds.	Unclassified Excavation	582	573	573	504		E-2
511	1,083	Cu. Yds.	Class "E" Concrete Retaining Walls above footing	272	275	246	290		5-1
511	1,023	Cu. Yds.	Class "E" Concrete Retaining Wall Footing	257	255	242	269		5-1
512	452	Lin. Ft.	Waterproofing Premoulded Sealing Strip	118	116	108	110		5-3
509	127,645	Lbs.	Reinforcing Steel	32896	33,551	27,937	33,261		5-4
516	373	Sq. Ft.	1" Preformed expansion joint filler	105	93	90	85		5-9
517	957.27	Lin. Ft.	Bridge Railing Type 2	226.0	194.0	334.0	203.27		5-14
507	3,765	Lin. Ft.	Steel Piles (10B P 42)	1,260	1,320	570	615		5-18
518	860	Cu. Yds.	Porous Backfill	216	220	183	241		5-29
518	949	Lin. Ft.	8" φ Perforated Corrugated metal pipe, including specials	224	192	332	201		5-29

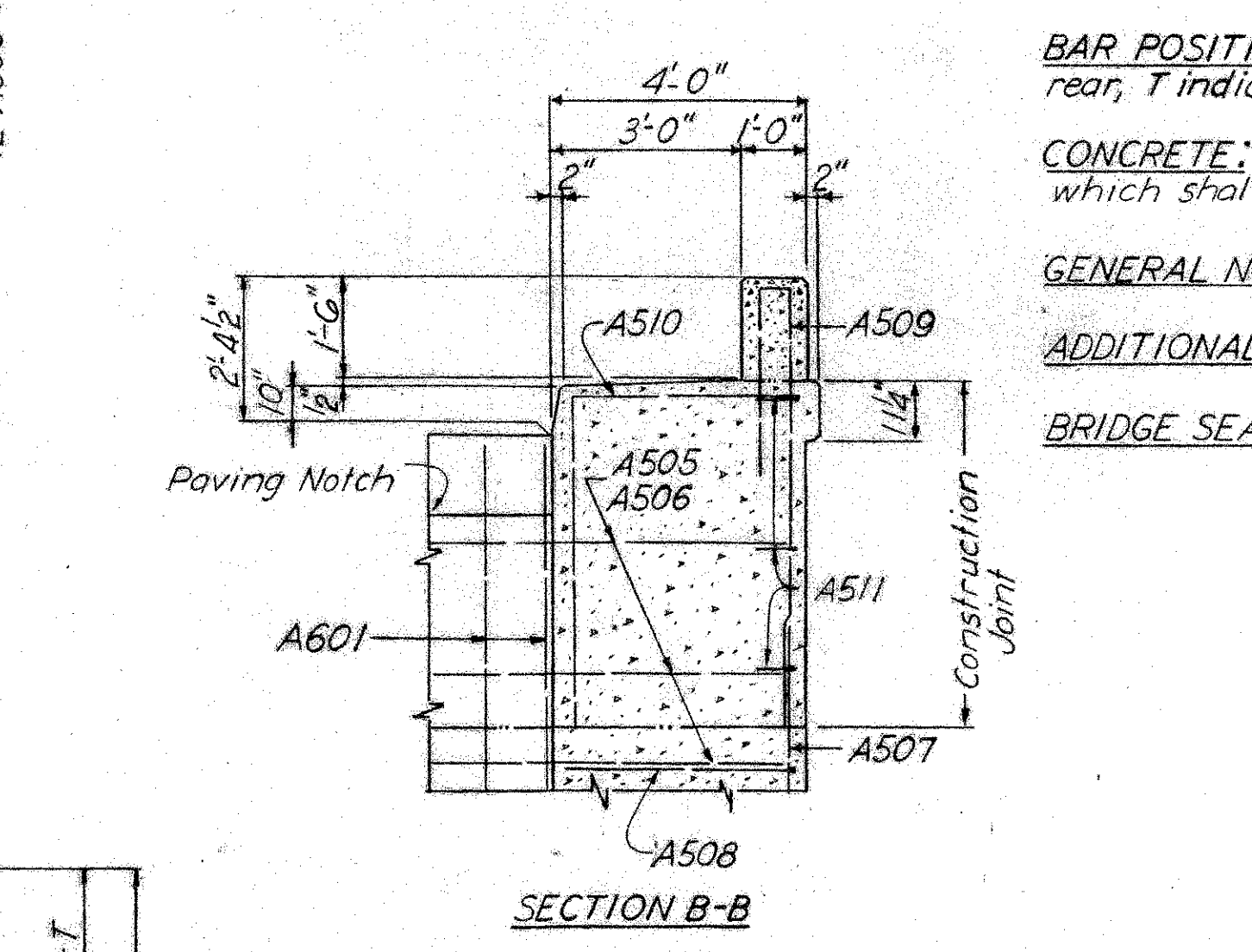
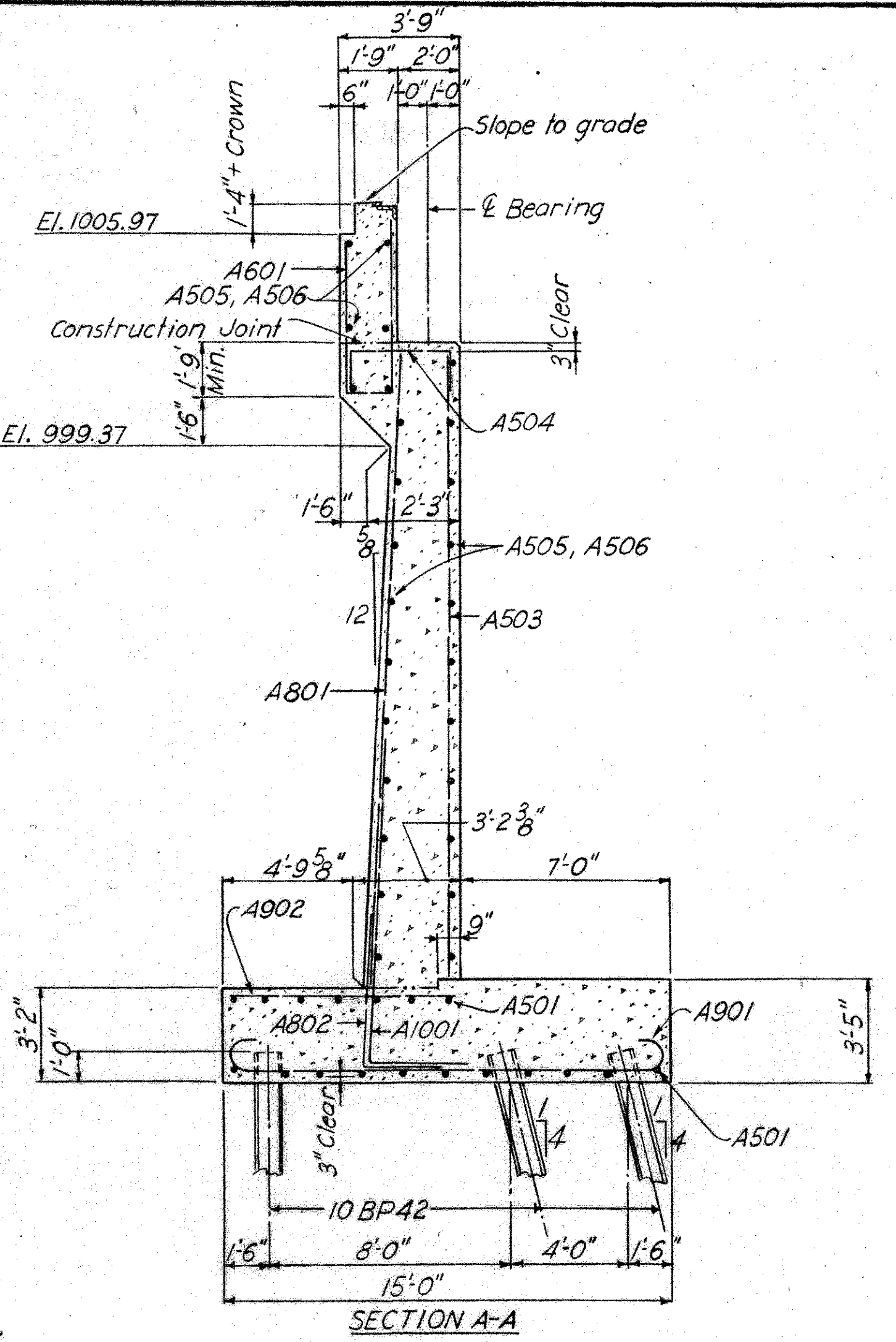
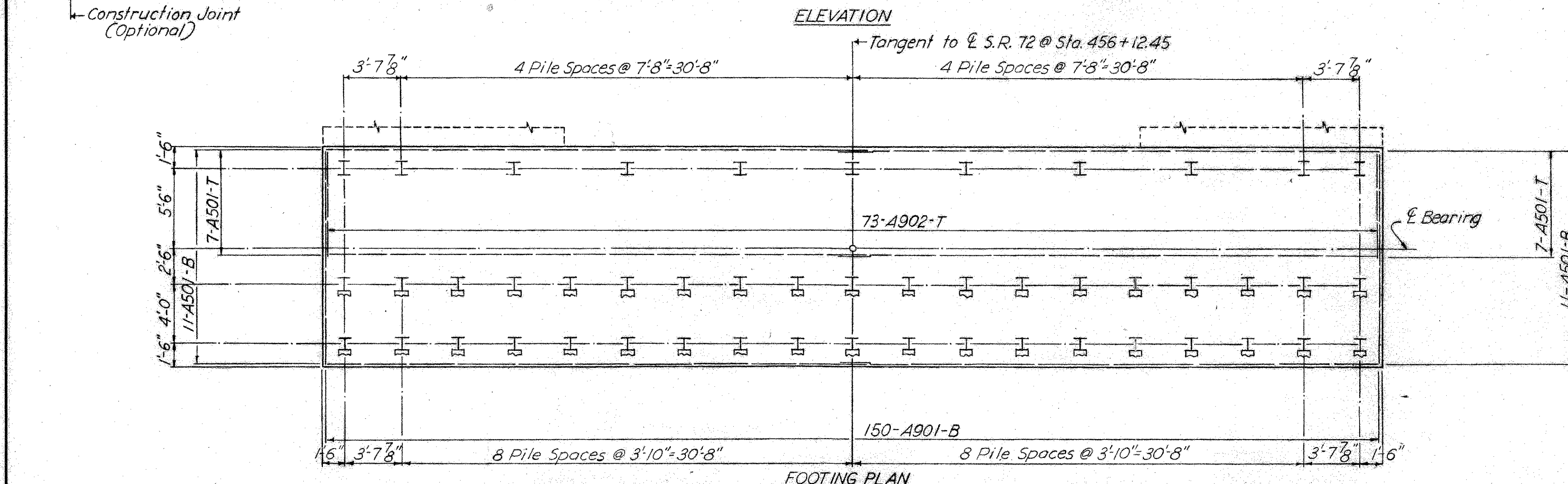
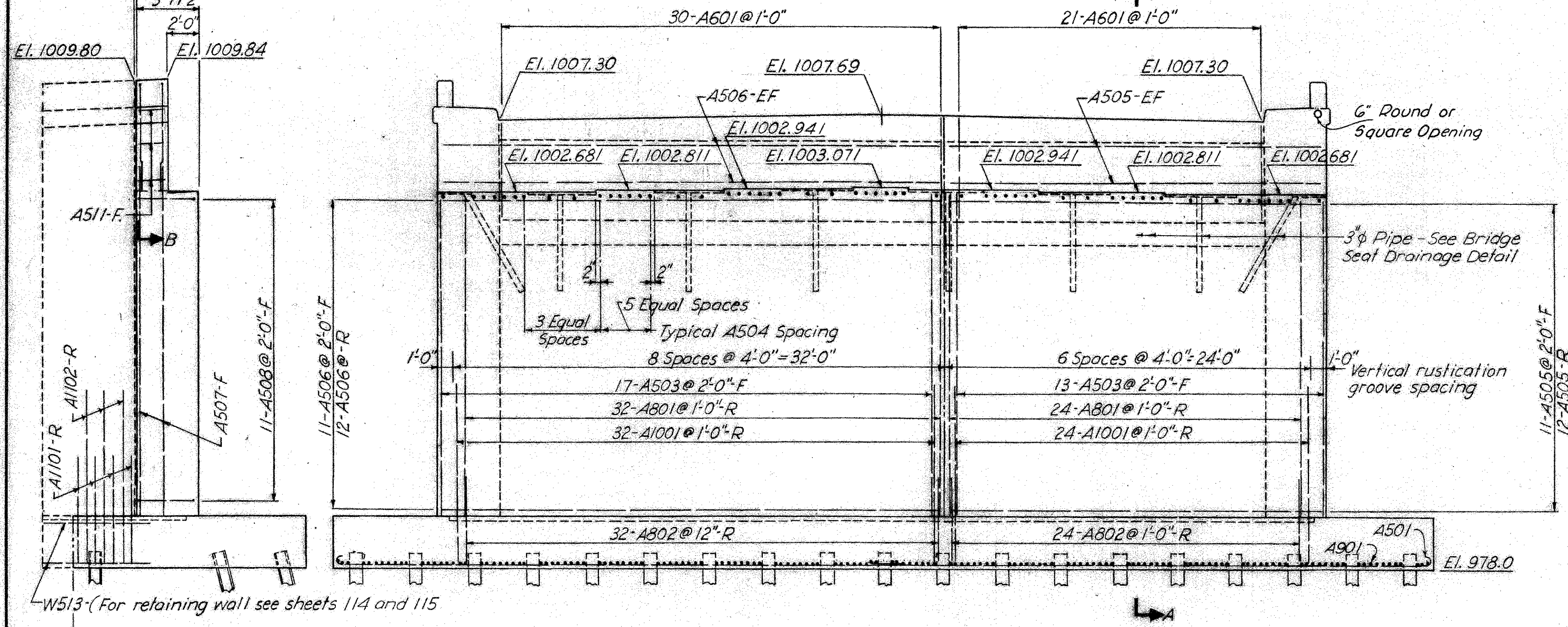
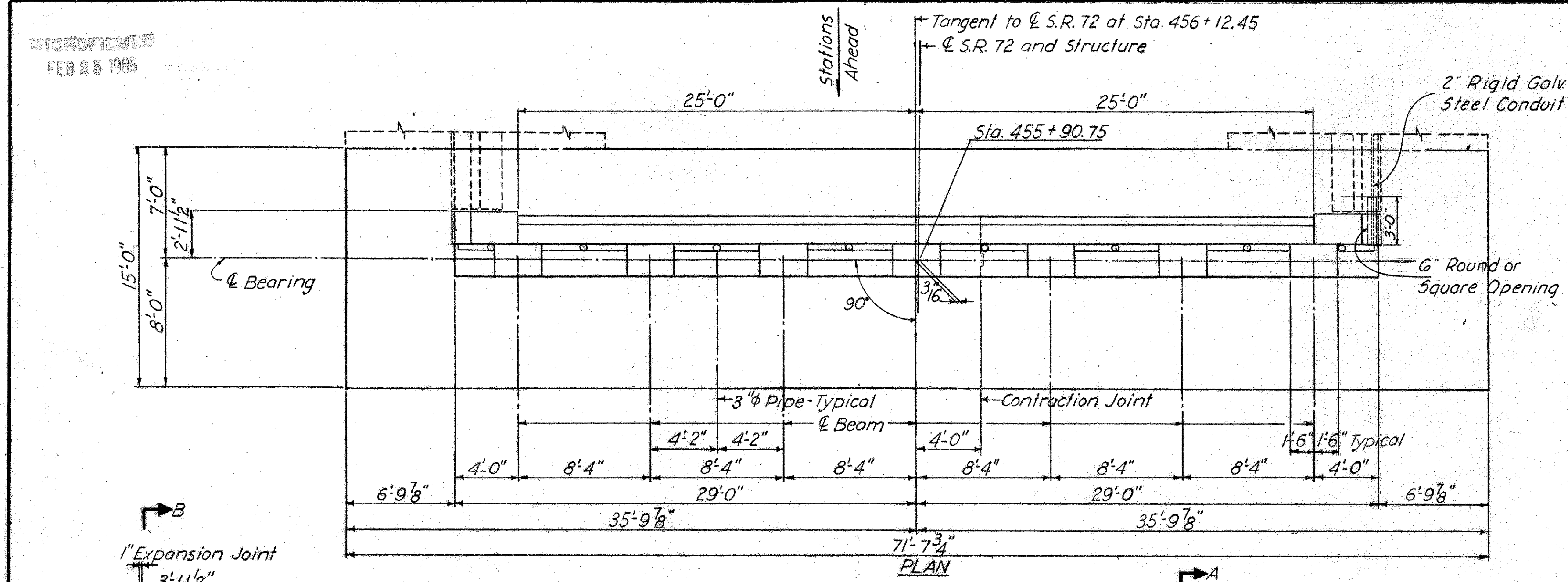
SHAFFER, PARRETT & ASSOCIATES AND BROOKHART & TYO
 CONSULTING ENGINEERS
 MANSFIELD, OHIO

GENERAL PLAN
 BRIDGE N° CLA-72-0863
 S.R. 72 OVER D.T. B.I. AND Penn. Central Co.
 CLARK CO. S.R. 72
 STA. 455+88.50
 TO 463+08.25

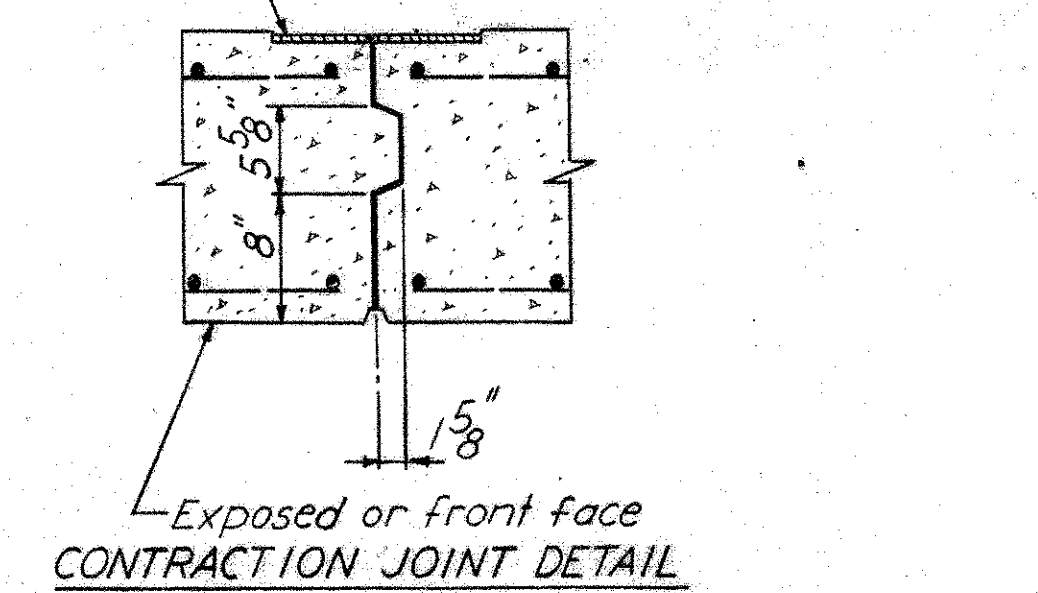
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
DR.F.	M.M.N.	M.M.N.	R.M.H.	DR.F.	1-8-65	

REVISIONS
FEB 25 1965

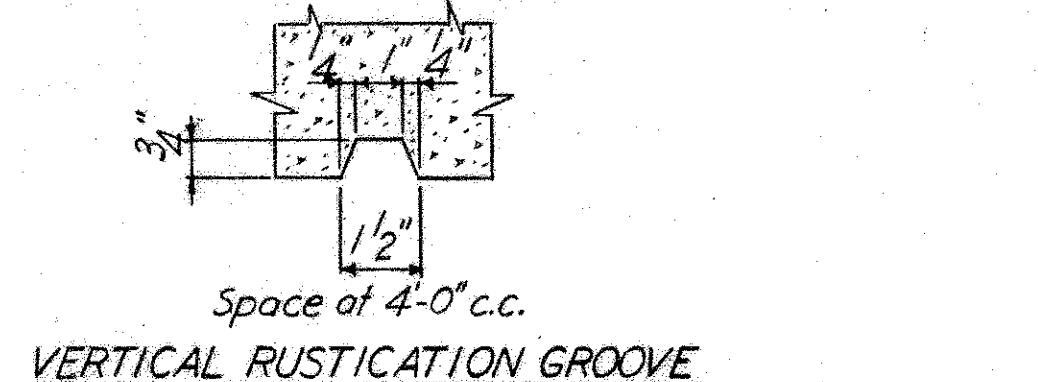
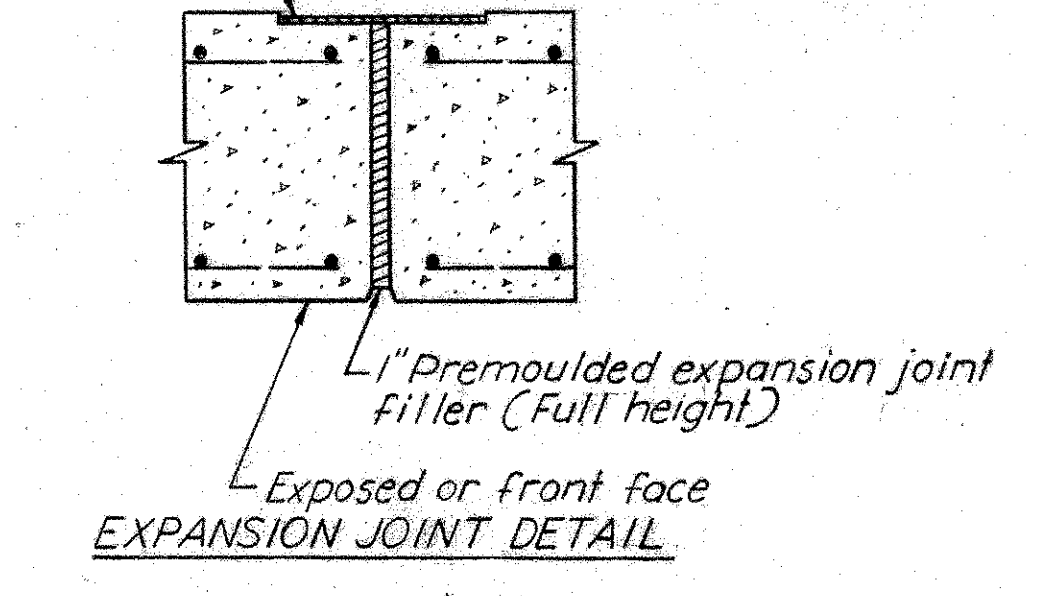
CLA-72-835



Premoulded sealing strip in 13" x 3/4" recess (top of footing to 1'-0" below top of wall)



Premoulded sealing strip in 13" x 3/4" recess (top of footing to 1'-0" below top of wall)



BAR POSITION LEGEND: EF indicates each face, F indicates front, R indicates rear, T indicates top, B indicates bottom.

CONCRETE: All concrete for the Rear Abutment shall be Class E, except parapet which shall be Class C.

GENERAL NOTES: See sheet 110.

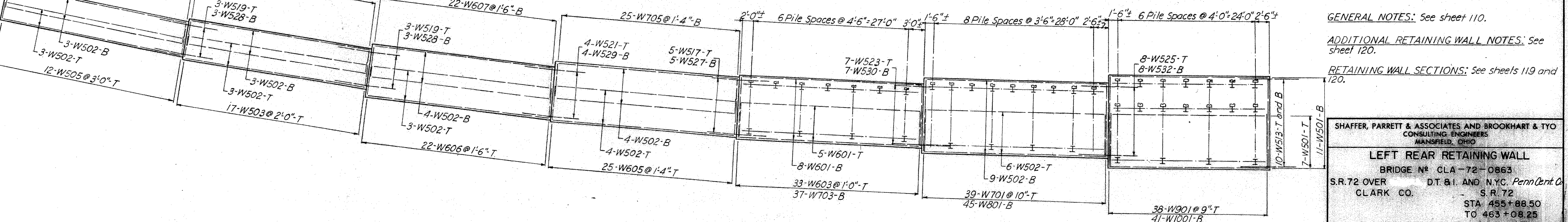
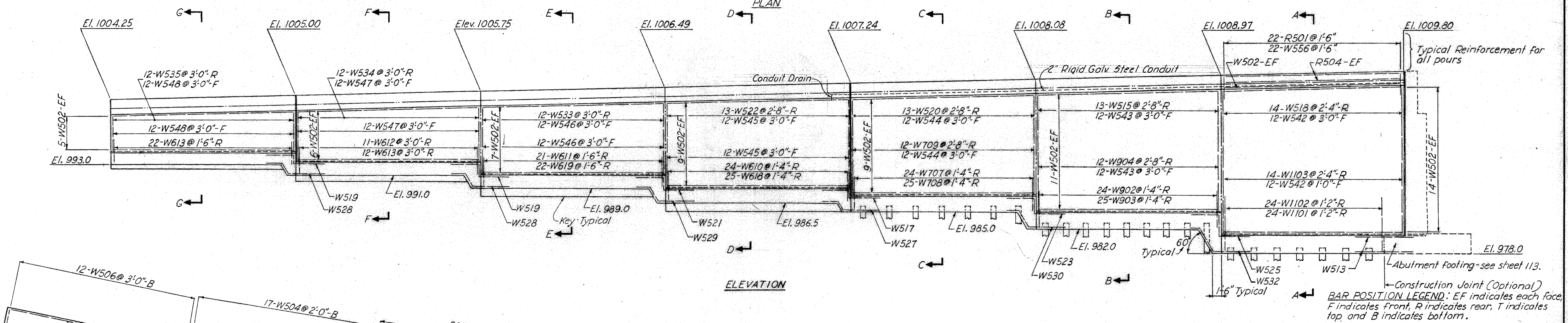
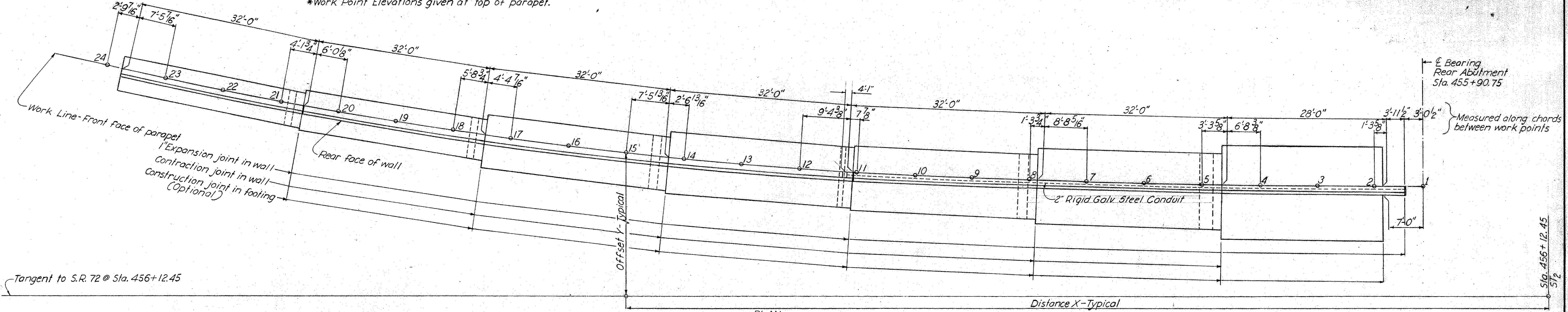
ADDITIONAL ABUTMENT NOTES: See sheet 116.

BRIDGE SEAT DRAINAGE DETAIL: See sheet 116.

SHAFFER, PARRETT & ASSOCIATES AND BROOKHART & TYO CONSULTING ENGINEERS MANSFIELD, OHIO						
REAR ABUTMENT						
BRIDGE No. CLA-72-0863						
S.R. 72 OVER			D.T. & I. AND Penn. Central Co.			
CLARK CO.			S. R. 72			
			STA. 455+88.50 TO 463+08.25			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.M.H.	M.M.N.	M.M.N.	R.M.H.	D.R.E.	1-8-63	

TABLE OF DISTANCES, OFFSETS AND ELEVATIONS																								
WORK POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
DISTANCE X	21.70'	30'	40'	50'	60'	70'	80'	90'	100'	110'	120'	130'	140'	150'	160'	170'	180'	190'	200'	210'	220'	230'	240'	250'
OFFSET Y	29.01'	29.04'	29.09'	29.17'	29.30'	29.47'	29.71'	30.01'	30.38'	30.84'	31.40'	32.06'	32.83'	33.72'	34.74'	35.88'	37.16'	38.57'	40.11'	41.78'	43.58'	45.51'	47.58'	49.79'
ELEVATIONS *	1009.86	1009.67	1009.43	1009.16	1008.88	1008.60	1008.33	1008.05	1007.77	1007.49	1007.25	1007.02	1006.79	1006.55	1006.32	1006.08	1005.85	1005.61	1005.38	1005.14	1004.90	1004.66	1004.43	1004.19

*Work Point Elevations given at top of parapet.



GENERAL NOTES: See sheet 110.
 ADDITIONAL RETAINING WALL NOTES: See sheet 120.
 RETAINING WALL SECTIONS: See sheets 119 and 120.

SHAFFER, PARRETT & ASSOCIATES AND BROOKHART & TYO
 CONSULTING ENGINEERS
 MANSFIELD, OHIO

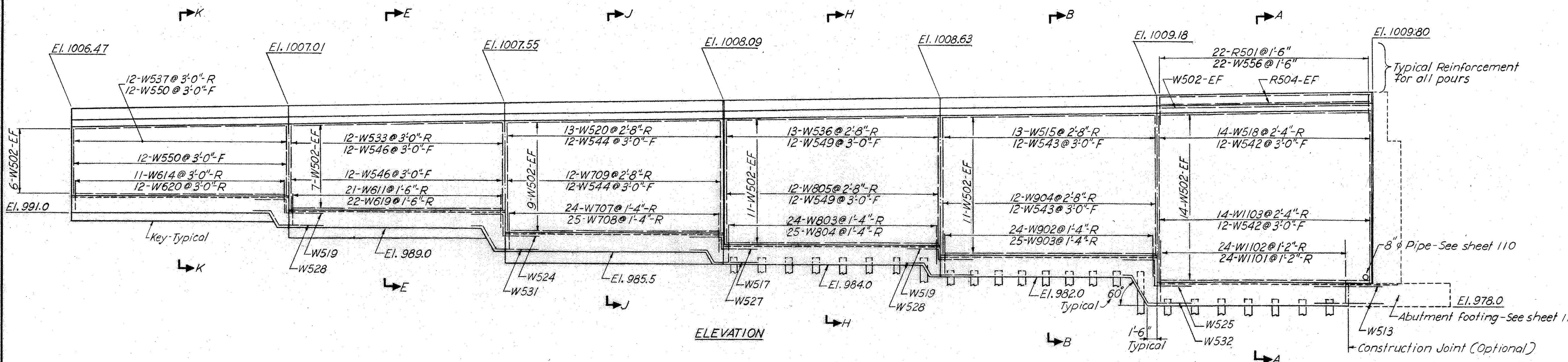
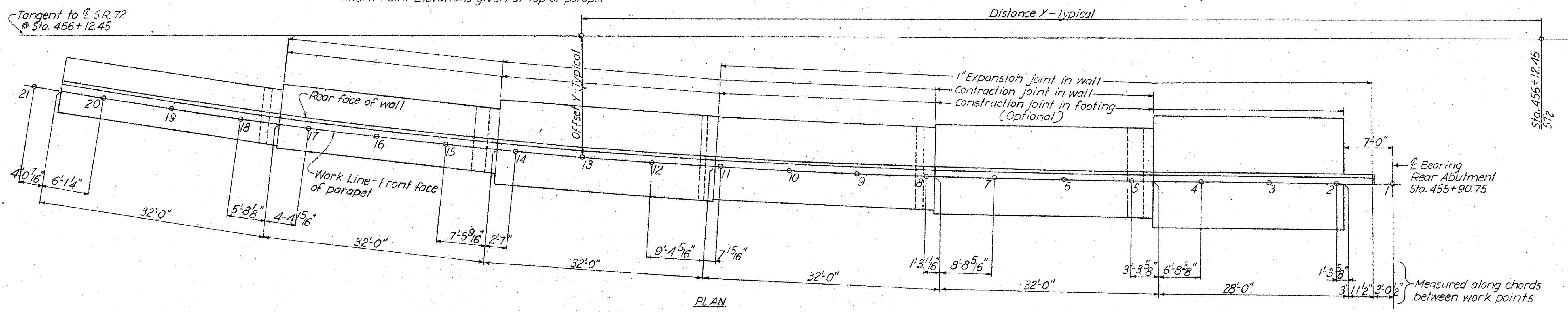
LEFT REAR RETAINING WALL
 BRIDGE # CL A-72-0863
 S.R.72 OVER CLARK CO. D.T. & I. AND N.Y.C. Penn Cent Co.
 STA 455+88.50 TO 463+08.25

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.M.H.	M.M.N.	M.M.N.	R.M.H.	D.R.F.	1-8-65	

TABLE OF DISTANCES, OFFSETS AND ELEVATIONS																					
WORK POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
DISTANCE X	21.70'	30'	40'	50'	60'	70'	80'	90'	100'	110'	120'	130'	140'	150'	160'	170'	180'	190'	200'	210'	220'
OFFSET Y	28.99'	28.96'	28.91'	28.83'	28.71'	28.54'	28.31'	28.03'	27.67'	27.23'	26.70'	26.08'	25.36'	24.53'	23.58'	22.51'	21.32'	20.01'	18.58'	17.03'	15.36'
ELEVATIONS *	1009.86	1009.68	1009.47	1009.29	1009.12	1008.95	1008.78	1008.61	1008.44	1008.27	1008.10	1007.93	1007.76	1007.59	1007.42	1007.25	1007.08	1006.91	1006.74	1006.57	1006.40

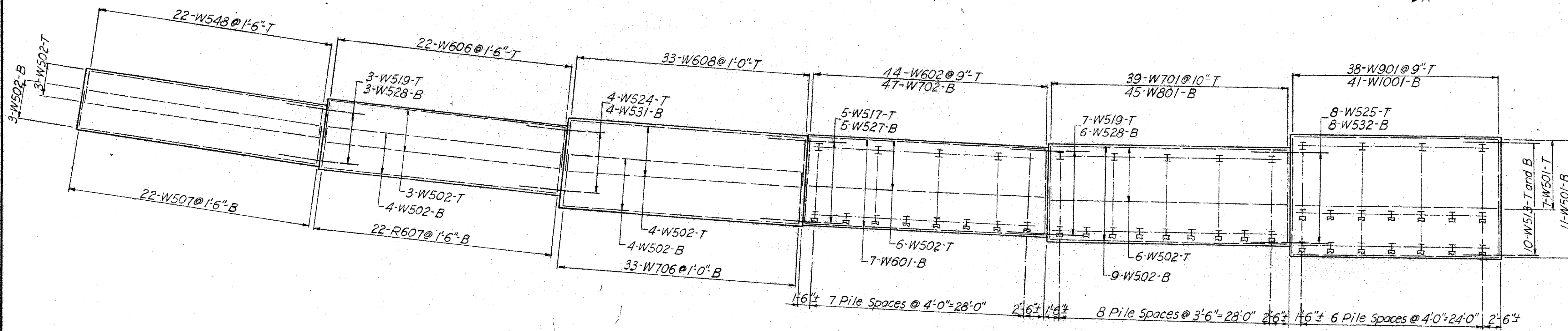
*Work Point Elevations given at top of parapet

CLA-72-8.35



BAR POSITION LEGEND: EF indicates each face, F indicates front, R indicates rear, T indicates top and B indicates bottom.

GENERAL NOTES: See sheet 110.
ADDITIONAL RETAINING WALL NOTES: See sheet 120.
RETAINING WALL SECTIONS: See sheets 119 and 120.



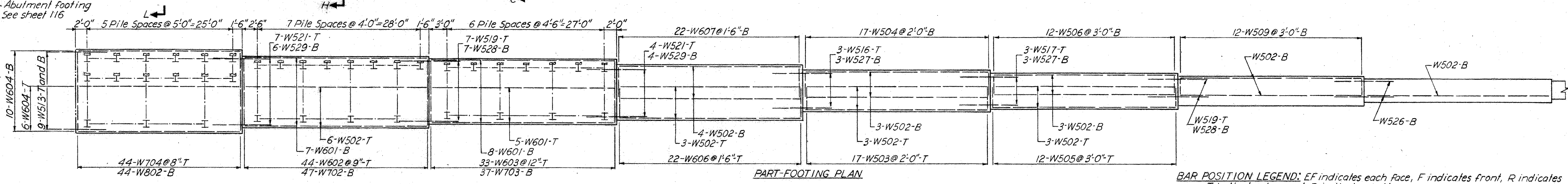
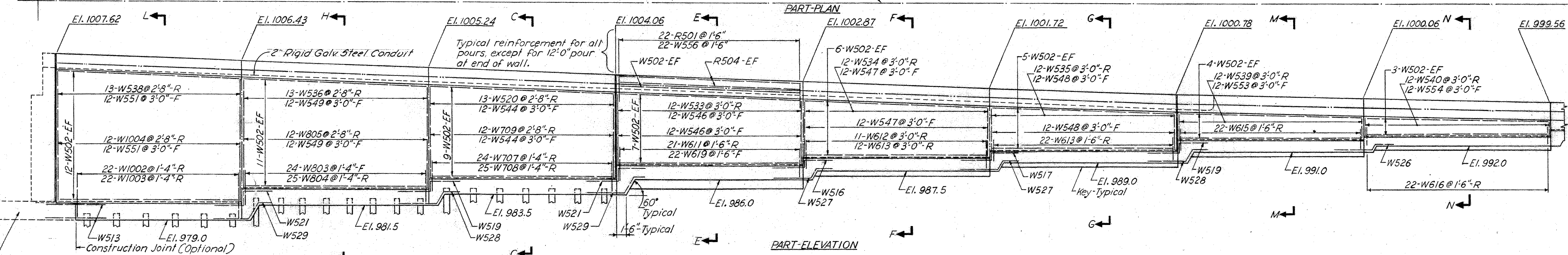
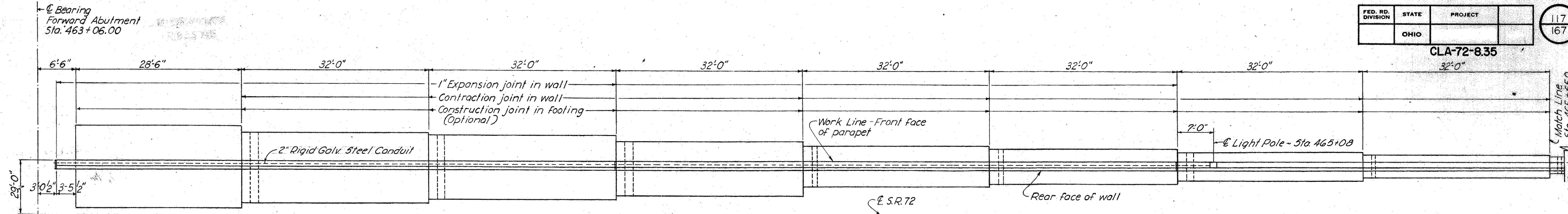
FOOTING PLAN

SHAFER, PARRETT & ASSOCIATES AND BROOKHART & TYO
CONSULTING ENGINEERS
MANSFIELD, OHIO

RIGHT REAR RETAINING WALL
BRIDGE No. CLA-72-0863
S.R.72 OVER CLARK CO. D.T. & I. AND Penn Central Co. S.R. 72
STA. 455+88.50 TO 463+08.25

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.M.H.	M.M.N.	M.M.N.	R.M.H.	D.R.F.	1-8-65	

CLA-72-8.35

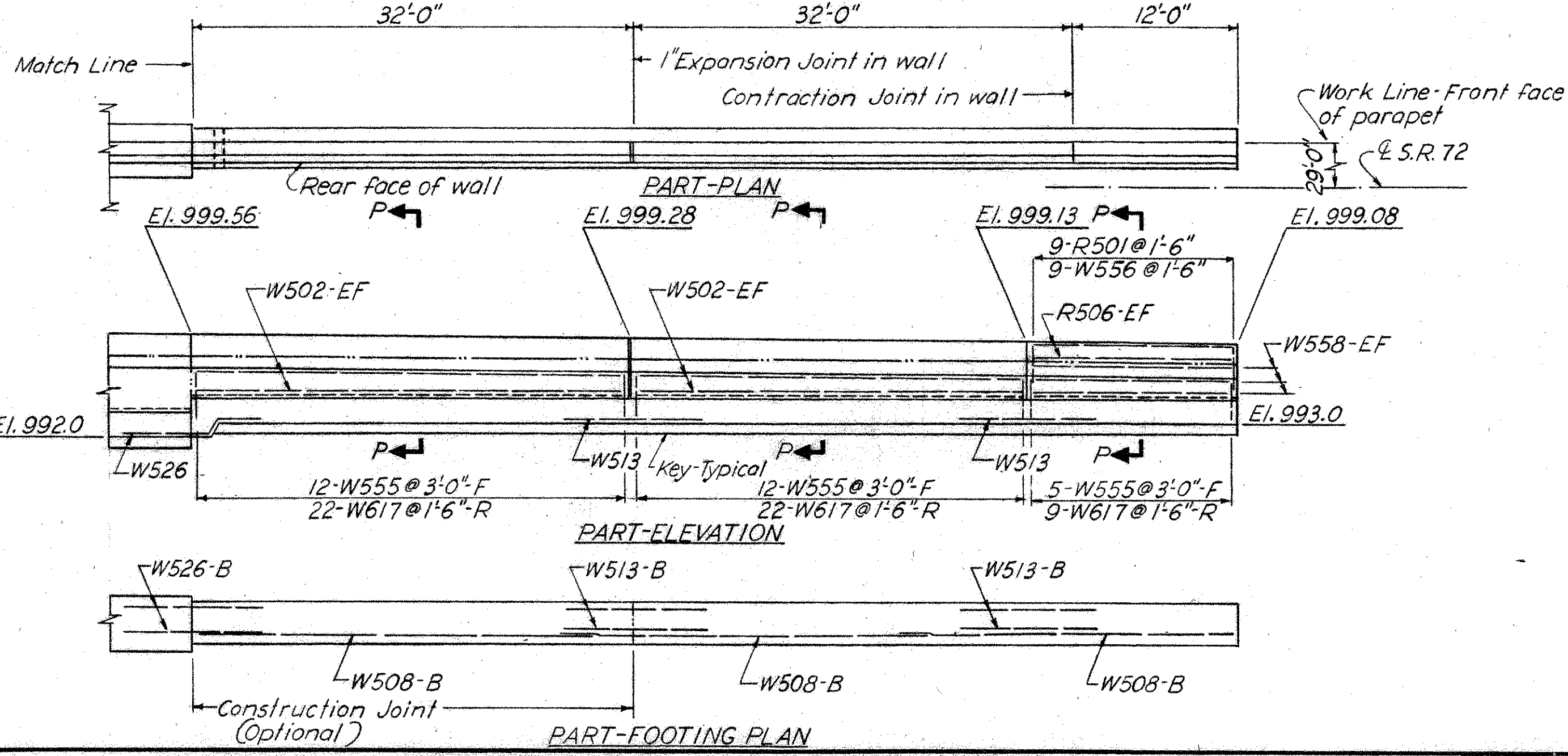


BAR POSITION LEGEND: EF indicates each Face, F indicates front, R indicates rear, T indicates top and B indicates bottom.

GENERAL NOTES: See sheet 110.

ADDITIONAL RETAINING WALL NOTES: See sheet 120.

RETAINING WALL SECTIONS: See sheets 119 and 120.



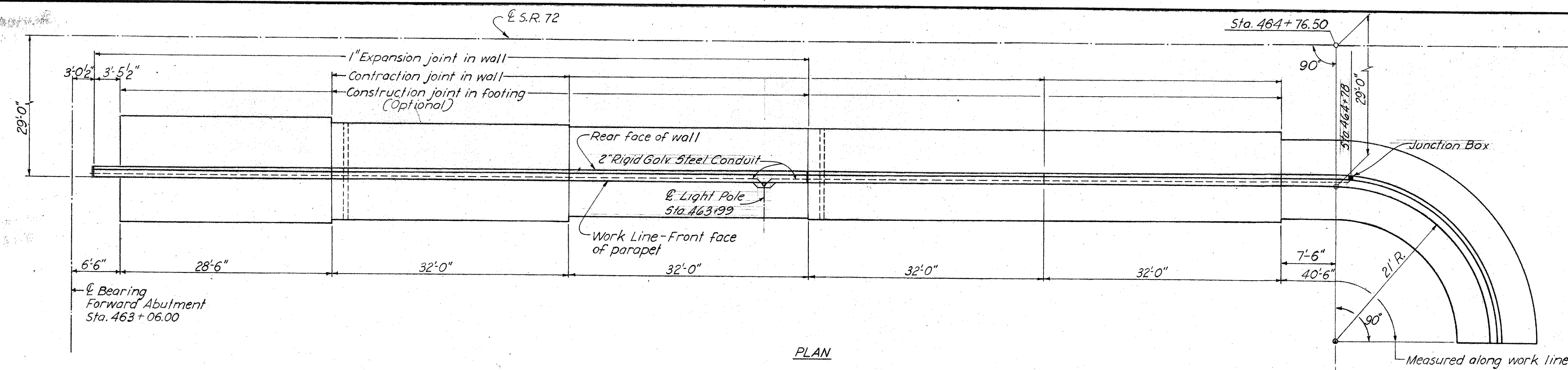
SHAFER, PARRETT & ASSOCIATES AND BROOKHART & TYO
CONSULTING ENGINEERS
MANSFIELD, OHIO

LEFT FORWARD RETAINING WALL

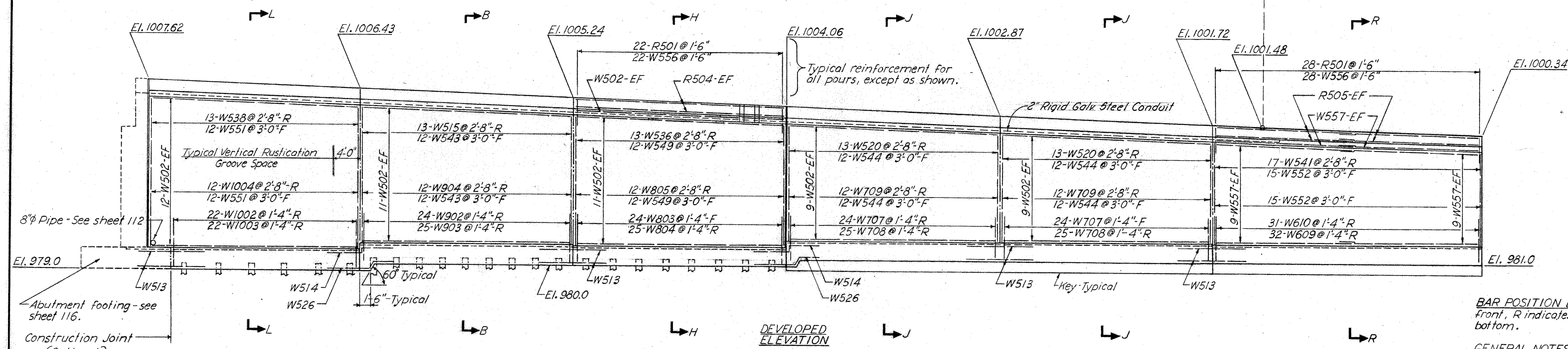
BRIDGE N° CLA-72-0863
S.R. 72 OVER CLARK CO. D.T. 81. AND Penn Central Co. S.R. 72

STA. 455+88.50 TO 463+08.25

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.M.H.	M.M.N.	M.M.N.	R.M.H.	D.R.F.	1-8-65	



PLAN



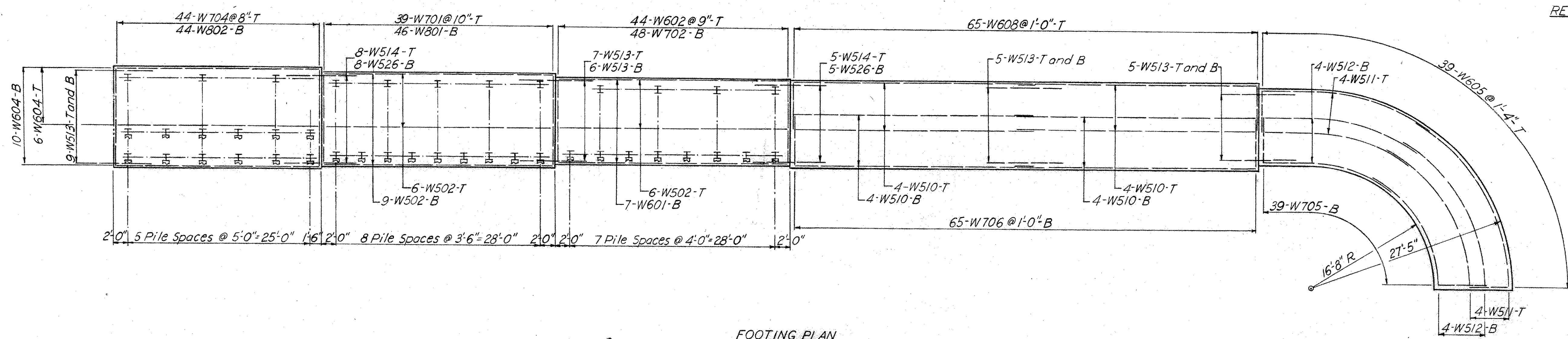
DEVELOPED ELEVATION

BAR POSITION LEGEND: EF indicates each Face, F indicates front, R indicates rear, T indicates top and B indicates bottom.

GENERAL NOTES: See sheet 110.

ADDITIONAL RETAINING WALL NOTES: See sheet 120.

RETAINING WALL SECTIONS: See sheets 119 and 120.

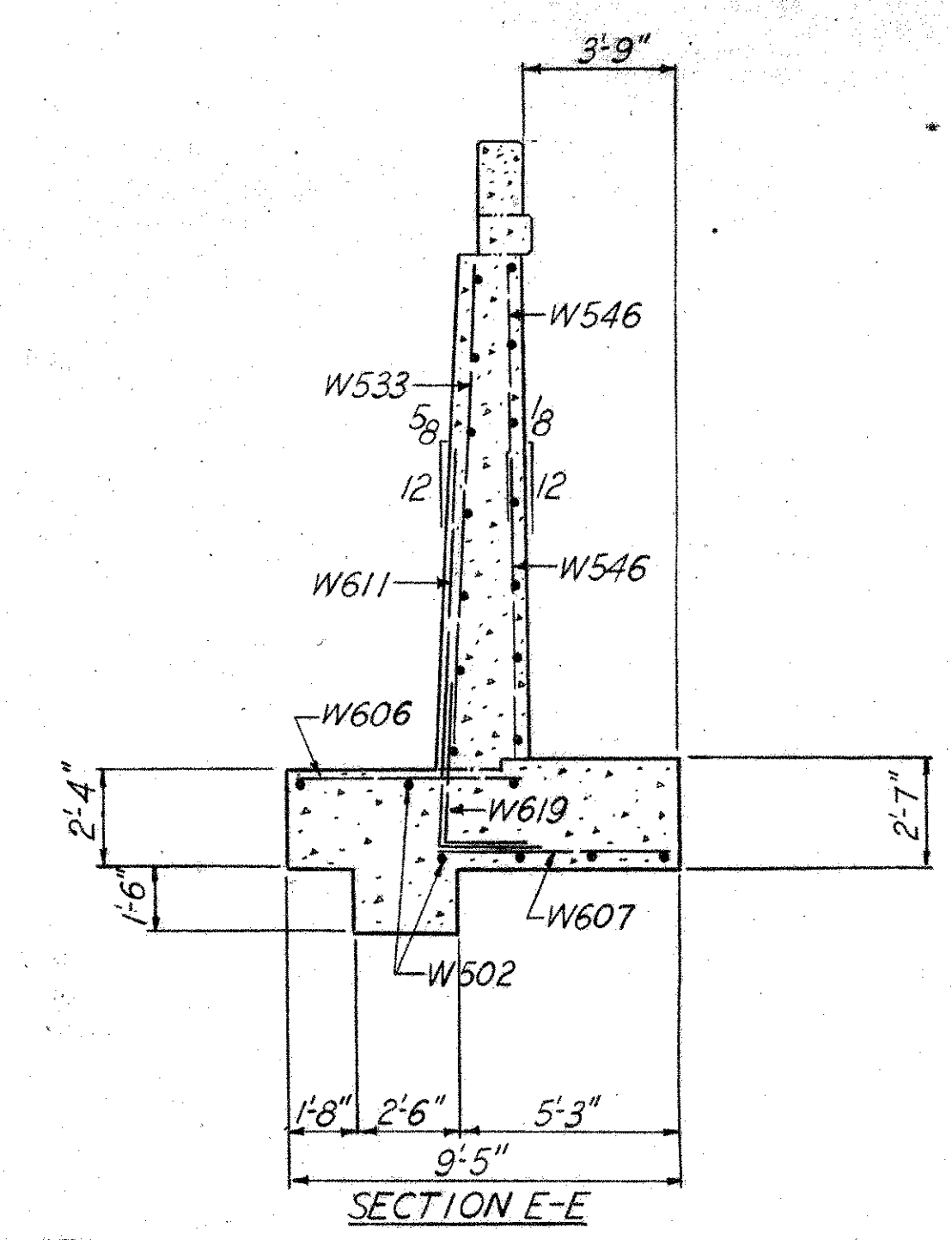
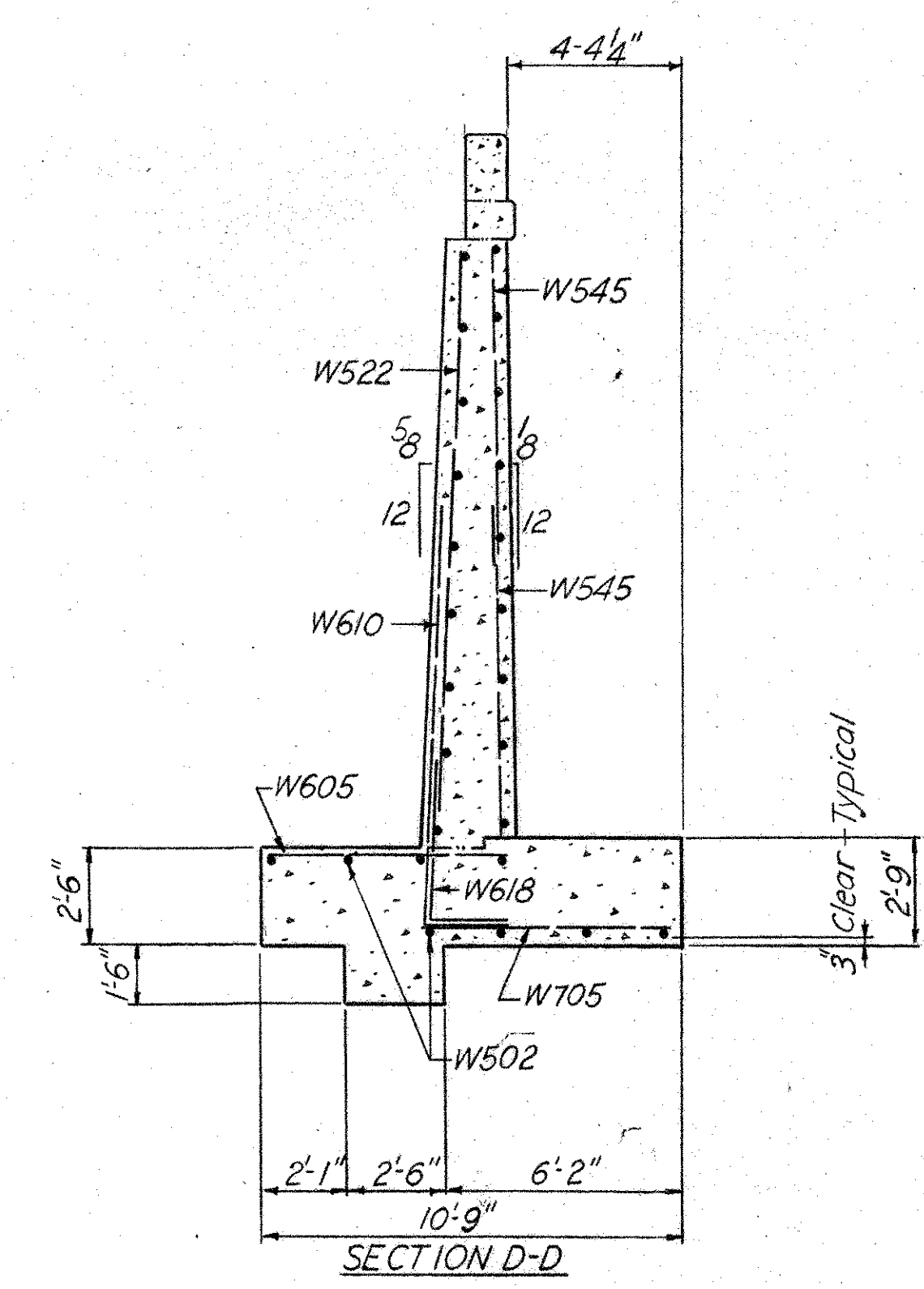
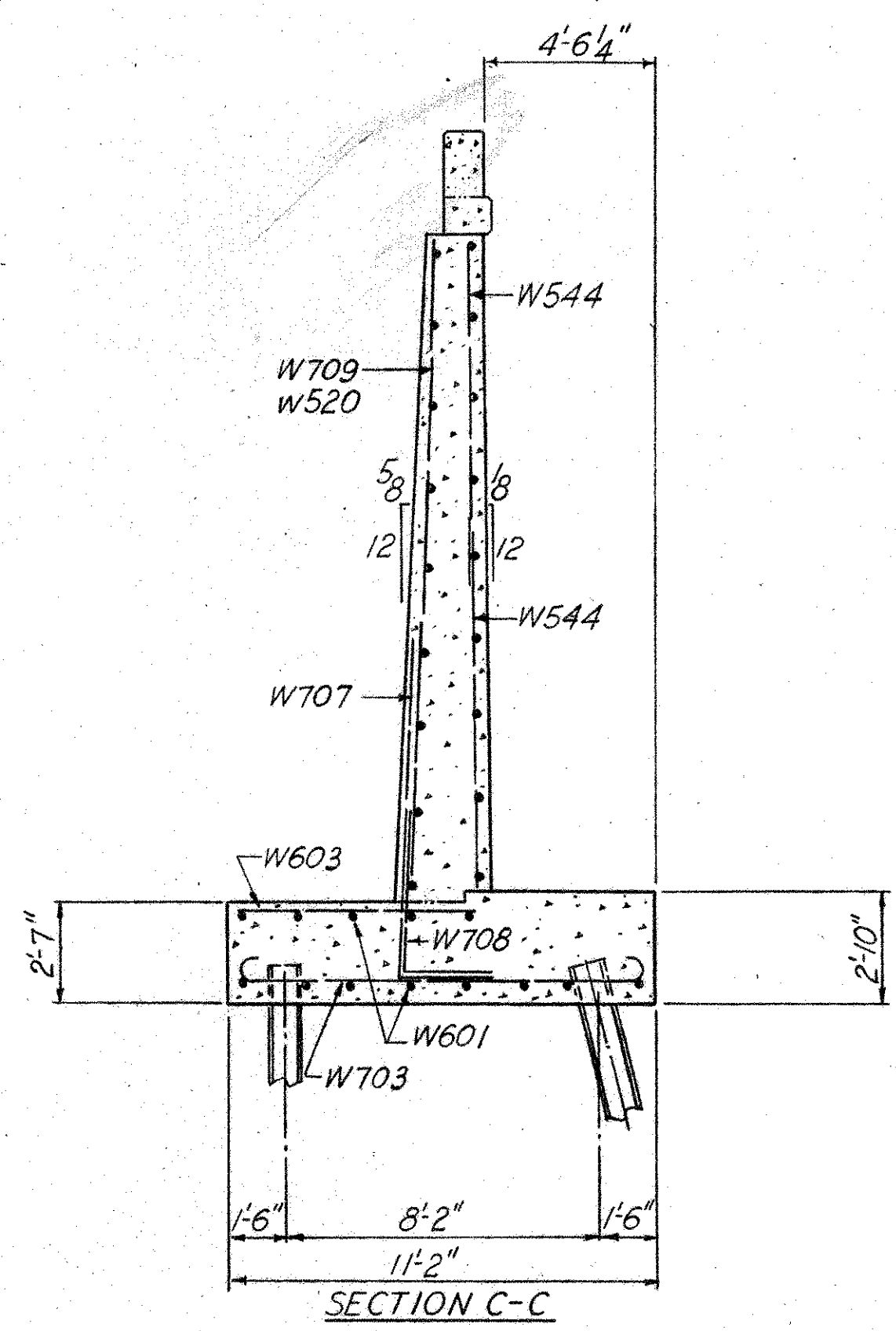
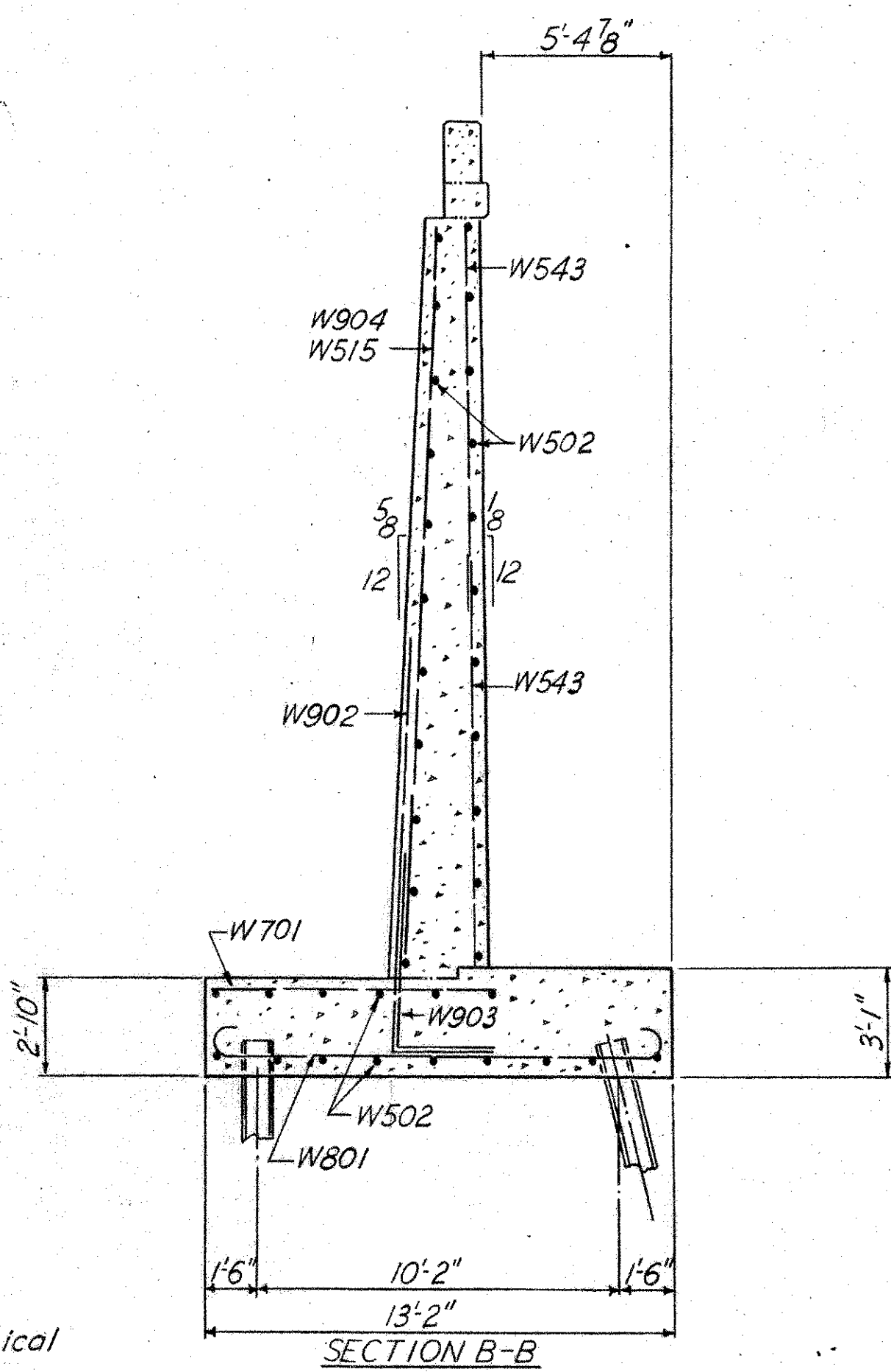
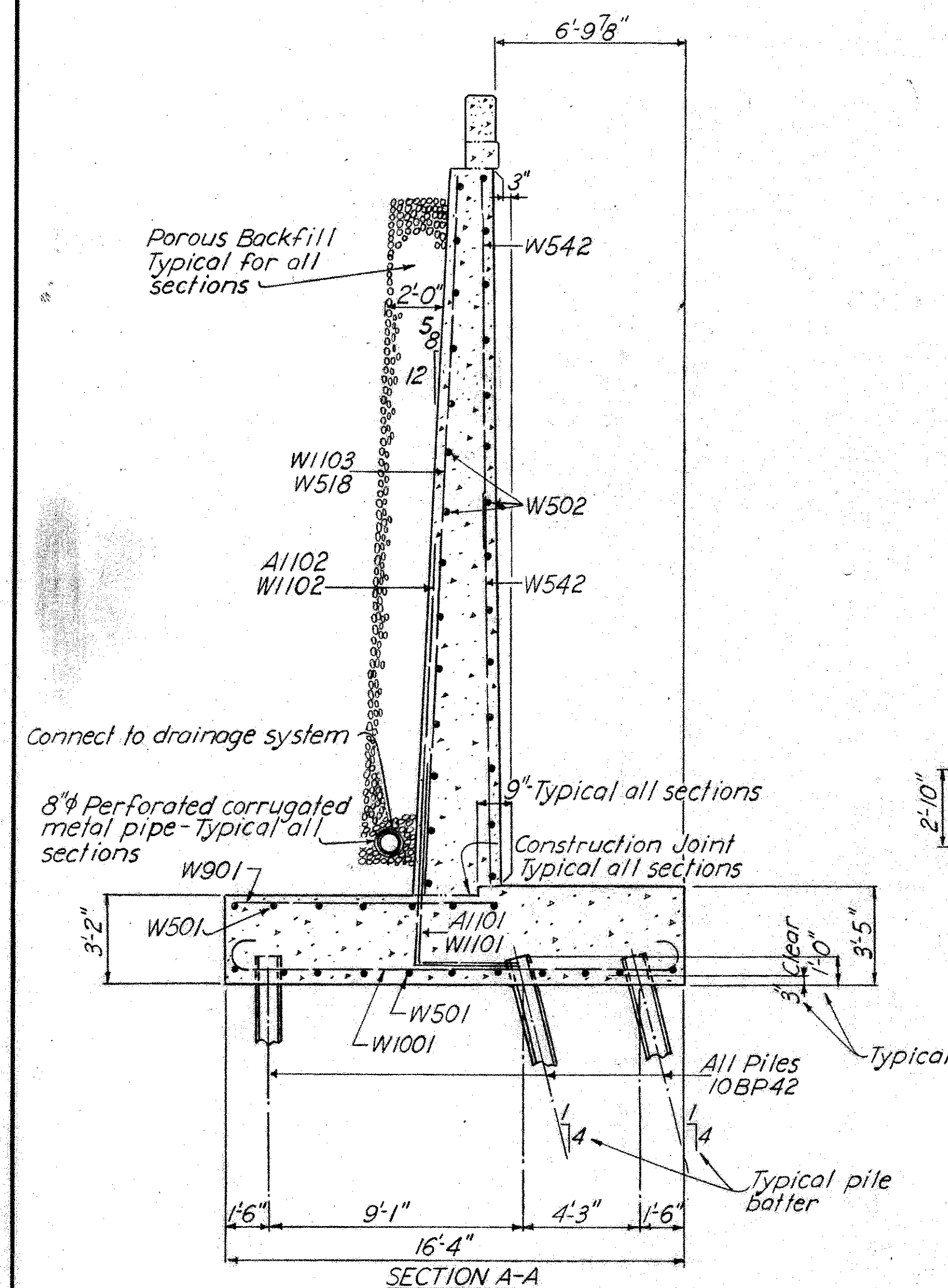


FOOTING PLAN

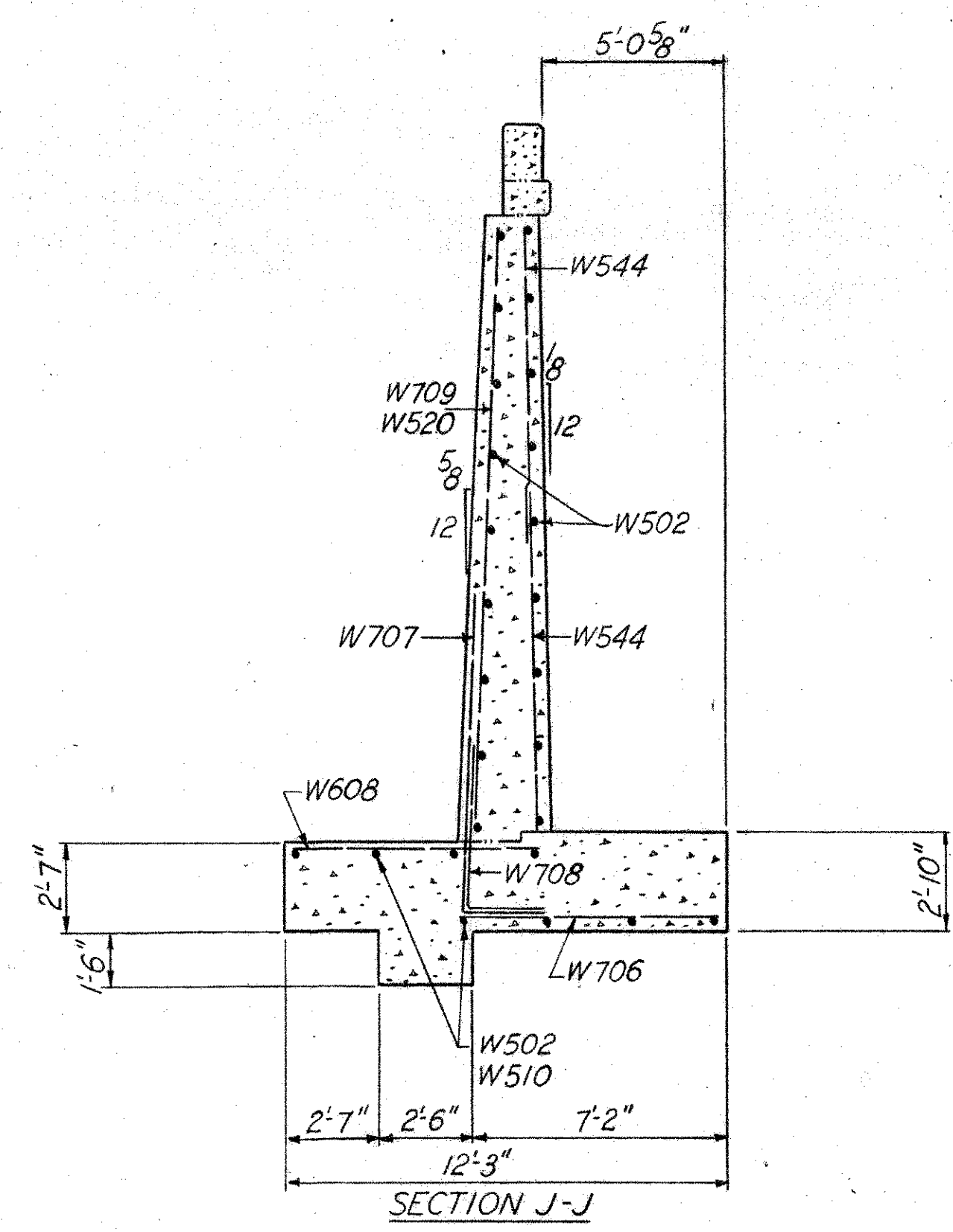
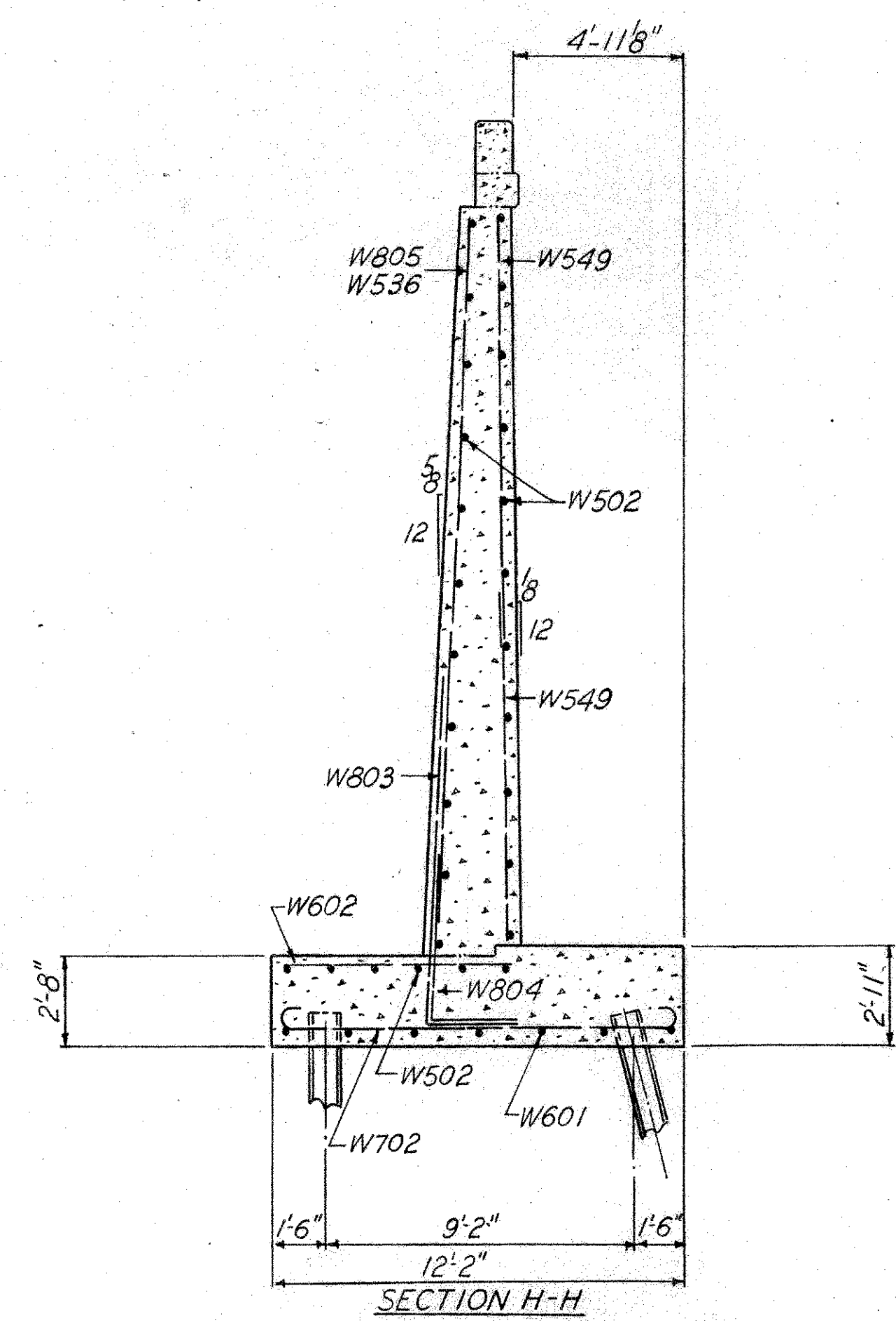
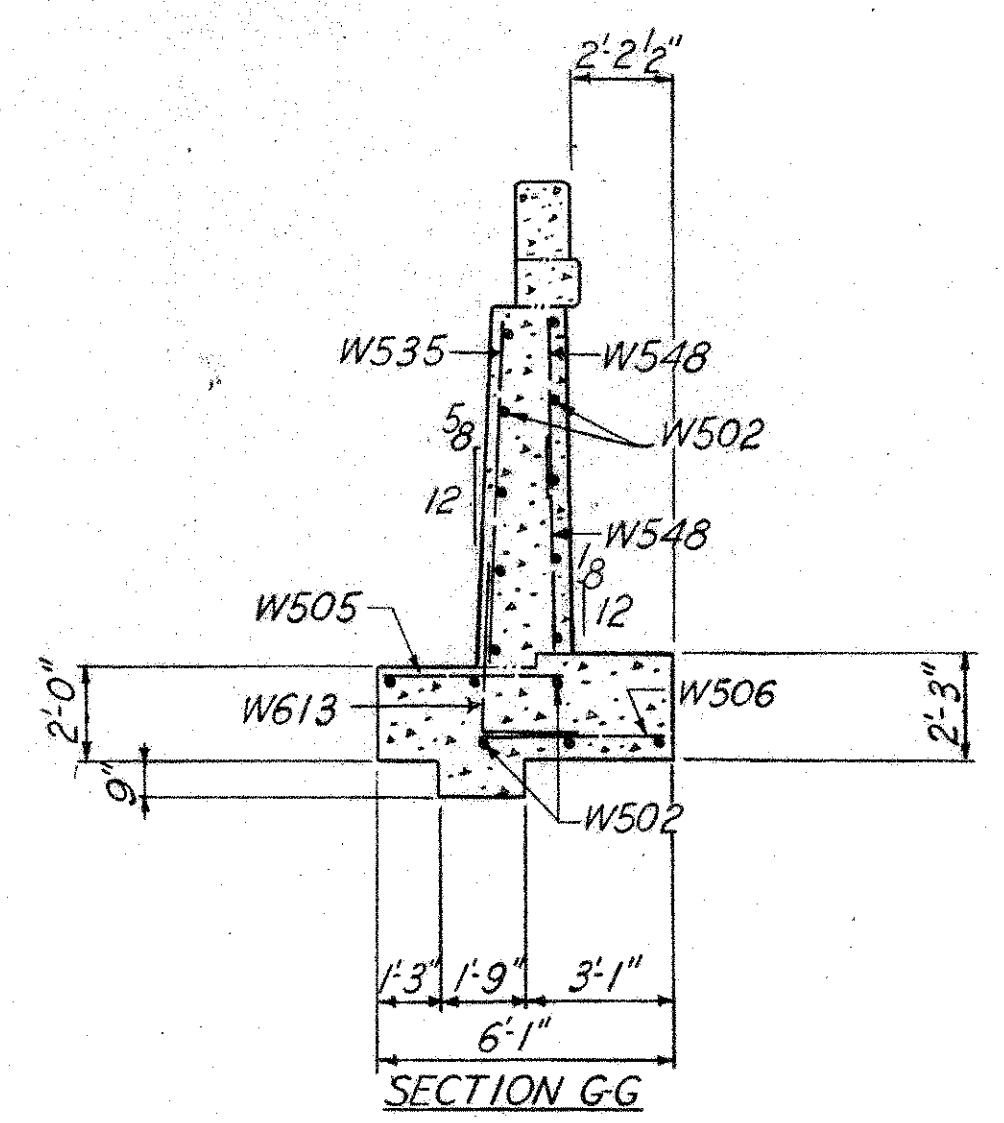
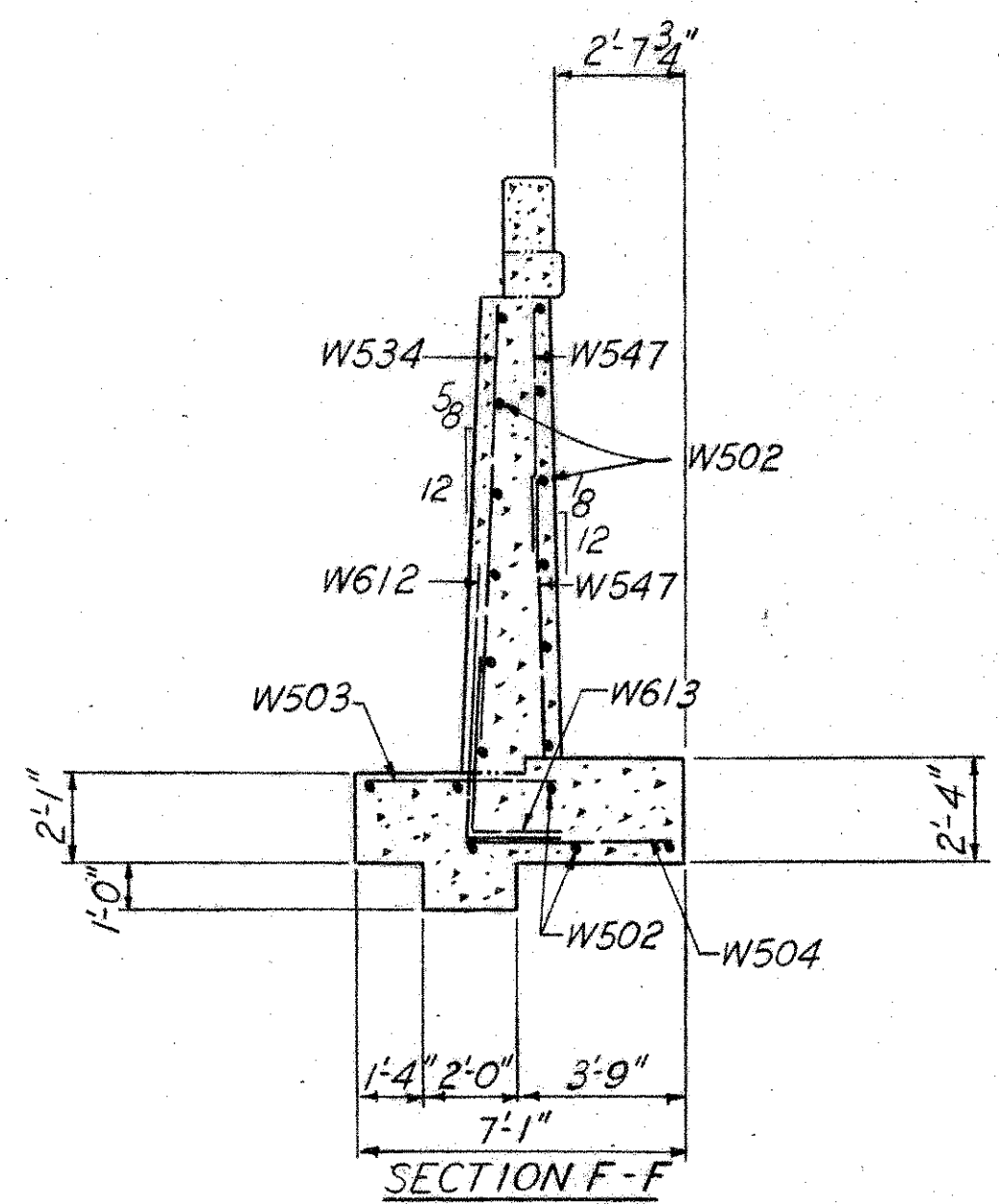
SHAFFER, PARRETT & ASSOCIATES AND BROOKHART & TYO
CONSULTING ENGINEERS
MANSFIELD, OHIO

RIGHT FORWARD RETAINING WALL
BRIDGE No. CLA-72-0863
S.R. 72 OVER D.T. & I. AND Penn Central Co.
CLARK CO. S.R. 72
STA. 455+88.50
TO 463+08.25

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R. M. H.	M. M. N.	M. M. N.	R. M. H.	DRF	1-8-65	



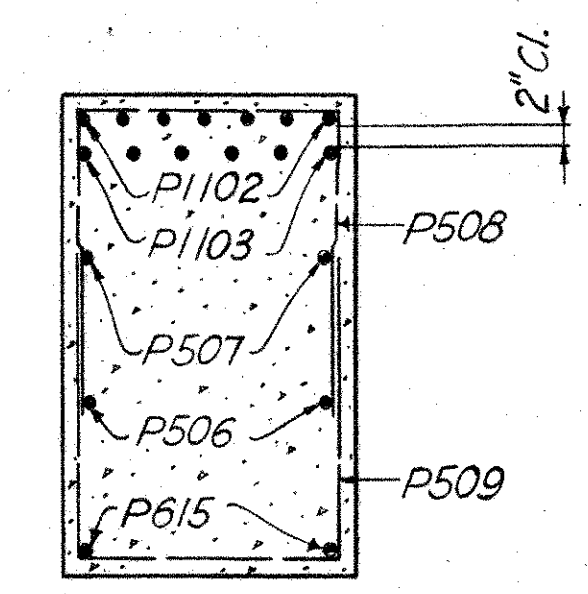
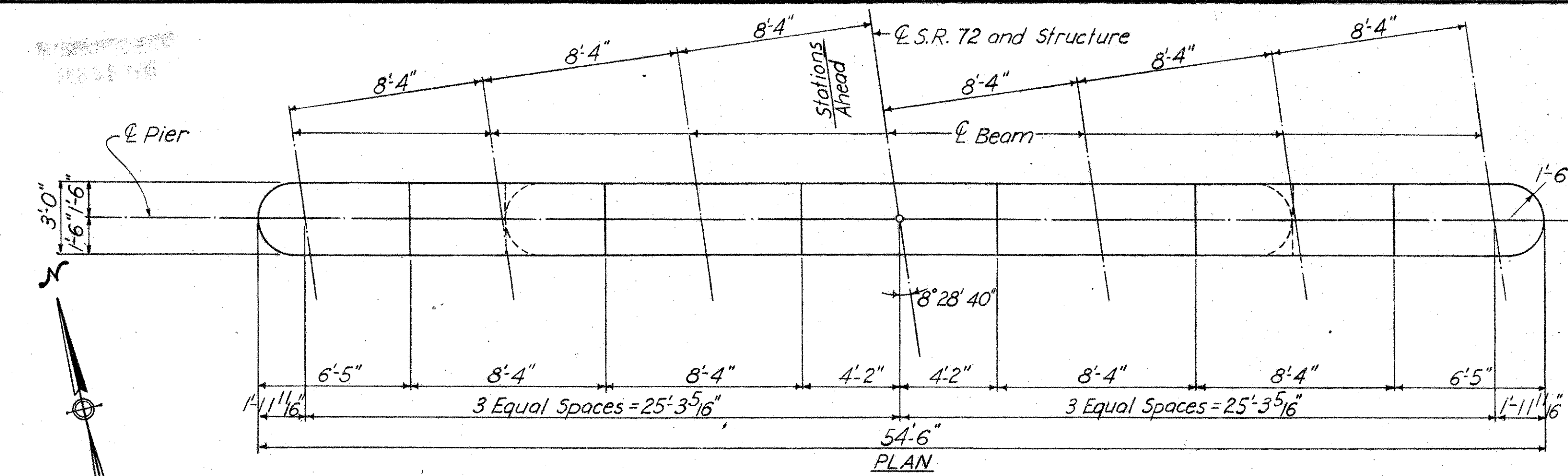
NOTES:
TYPICAL PARAPET SECTION: See sheet 120.
GENERAL NOTES: See sheet 110.
ADDITIONAL RETAINING WALL NOTES: See sheet 120.



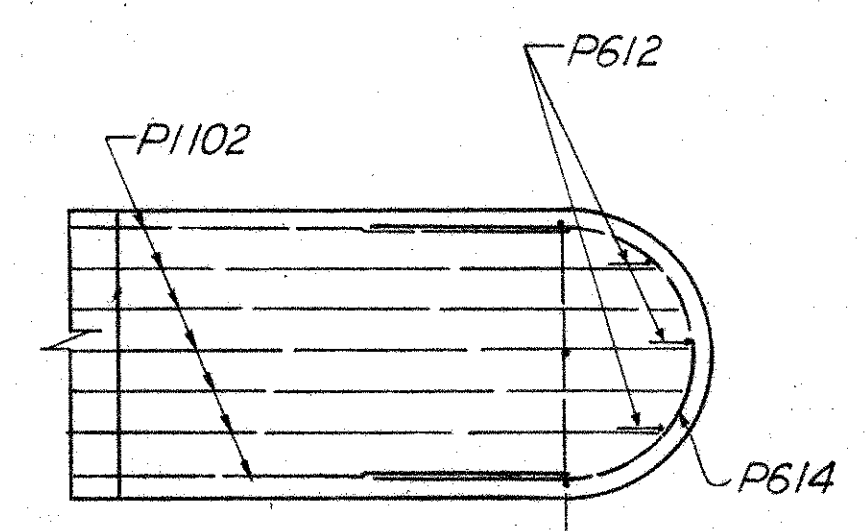
SHAFFER, PARRETT & ASSOCIATES AND BROOKHART & TYO
CONSULTING ENGINEERS
MANSFIELD, OHIO

RETAINING WALL SECTIONS
BRIDGE # CLA-72-0863
S.R. 72 OVER D.T. & I. AND Penn Central Co.
CLARK CO. S. R. 72
STA. 455+88.50
TO 463+06.25

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.M.H.	M.M.N.	M.M.N.	R.M.H.	D.R.F.	1-8-65	

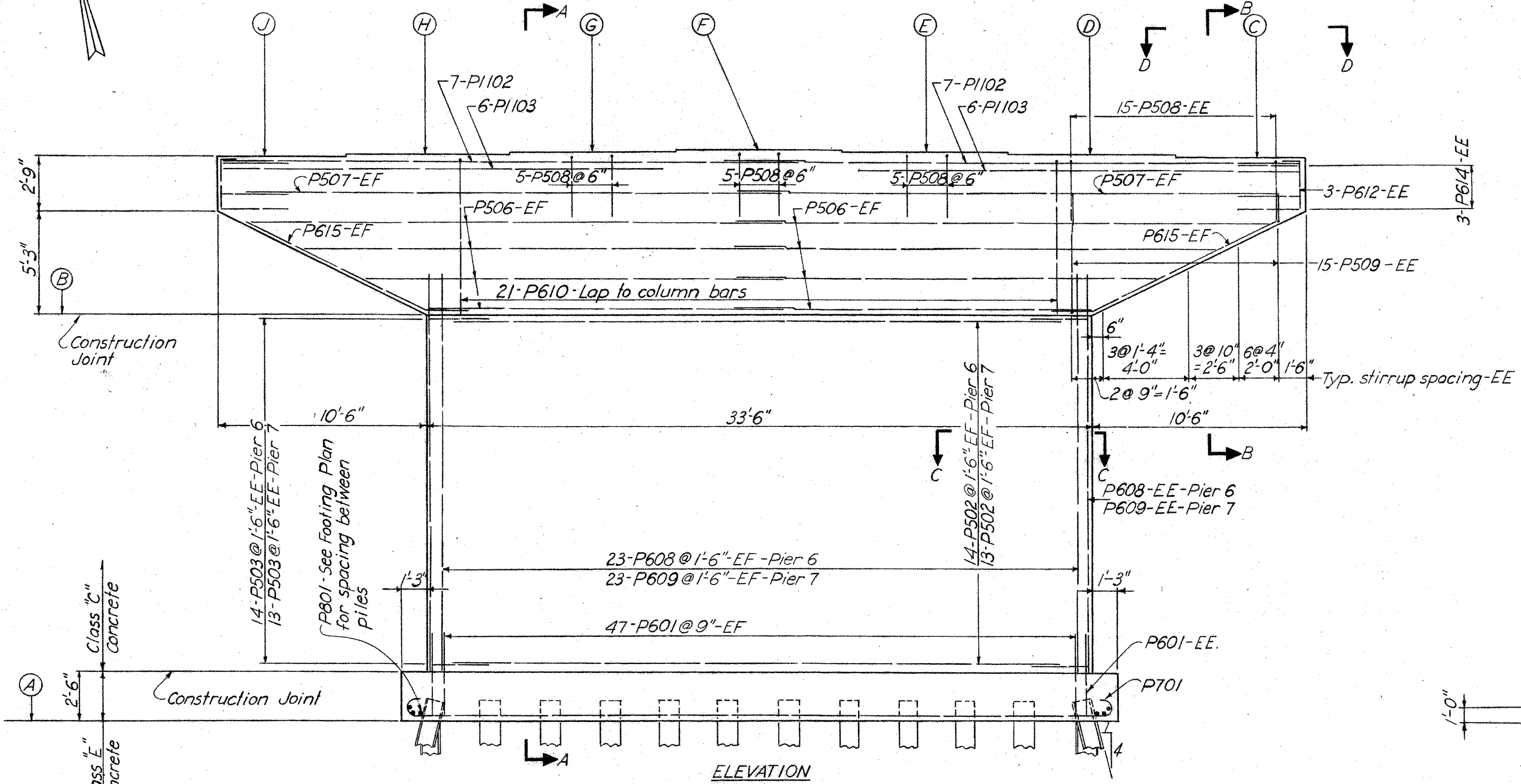


SECTION B-B

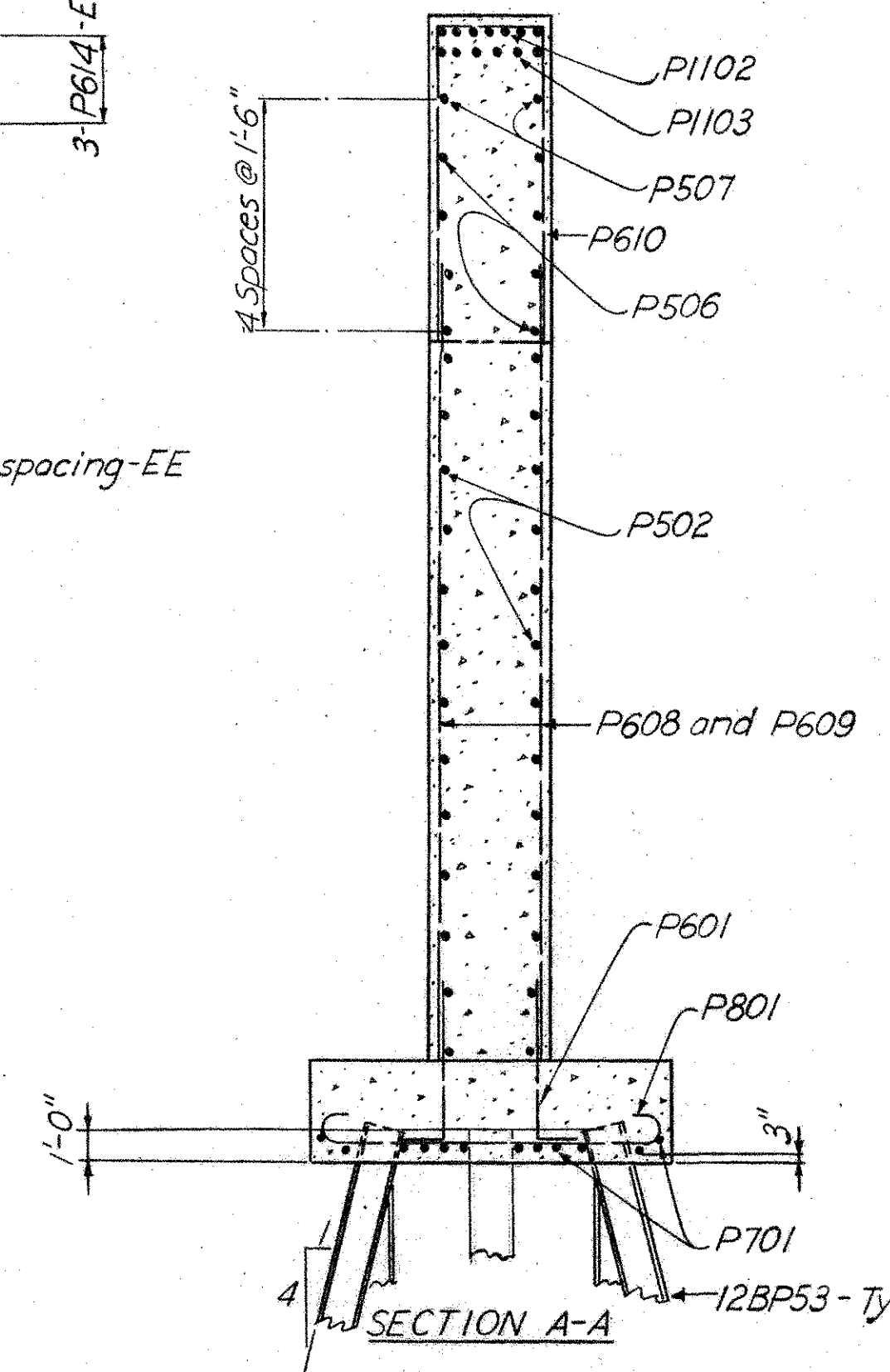


VIEW D-D

P508 - see "Elevation" for spacing



ELEVATION

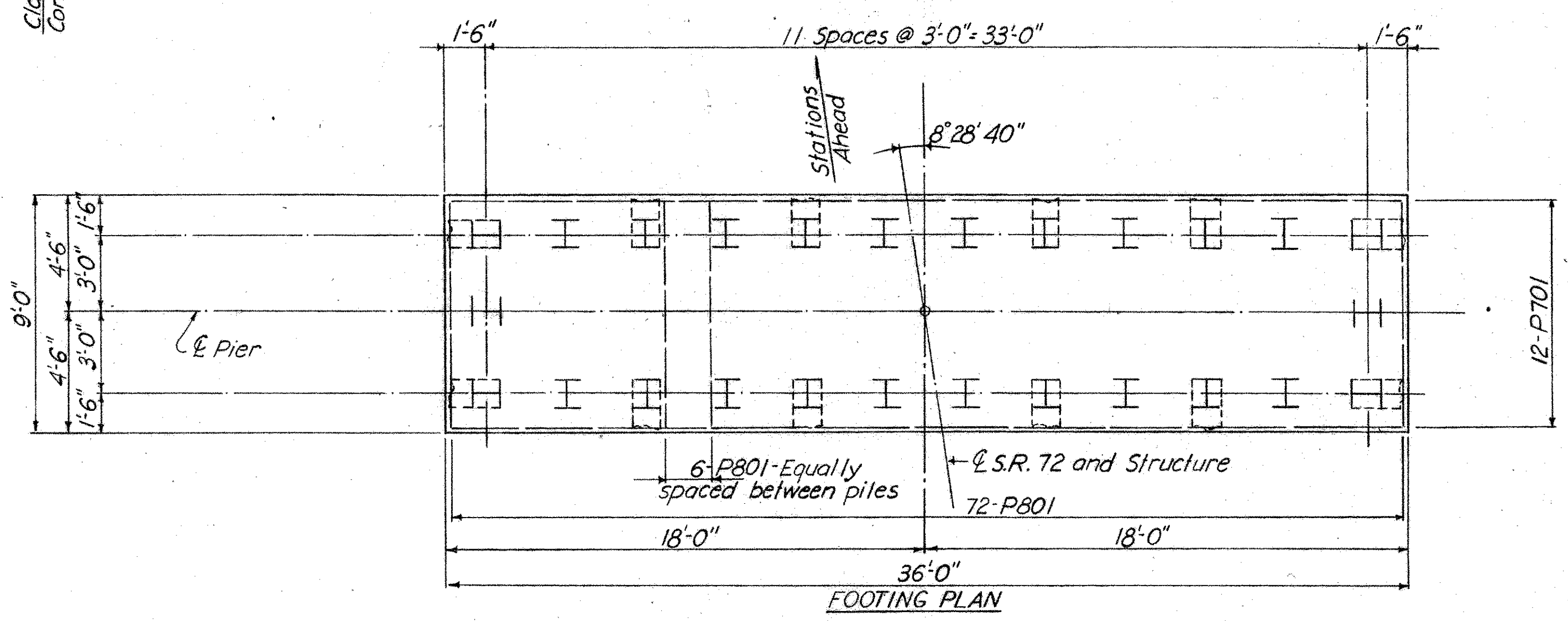


SECTION A-A

SECTION C-C

NOTES:
BAR POSITION LEGEND: EF indicates each face - EE indicates each end.
BRIDGE SEAT REINFORCEMENT: Special care shall be taken in placing reinforcing steel in the vicinity of bridge seats so as to avoid interference with the drilling of anchor bolt holes.
CONCRETE: All concrete for pier footings shall be Class E and all pier concrete above top of footing shall be Class C.
GENERAL NOTES: See sheet 110.

PIER	A	B	C	D	E	F	G	H	J
6	976.5	997.801	1005.965	1006.077	1006.189	1006.300	1006.156	1006.008	1005.858
7	976.0	995.986	1004.197	1004.297	1004.398	1004.498	1004.338	1004.177	1004.017

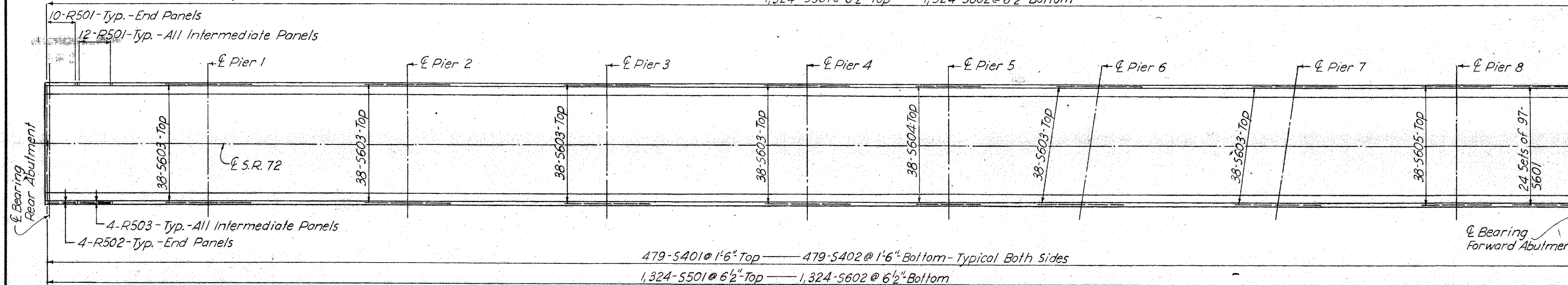


FOOTING PLAN

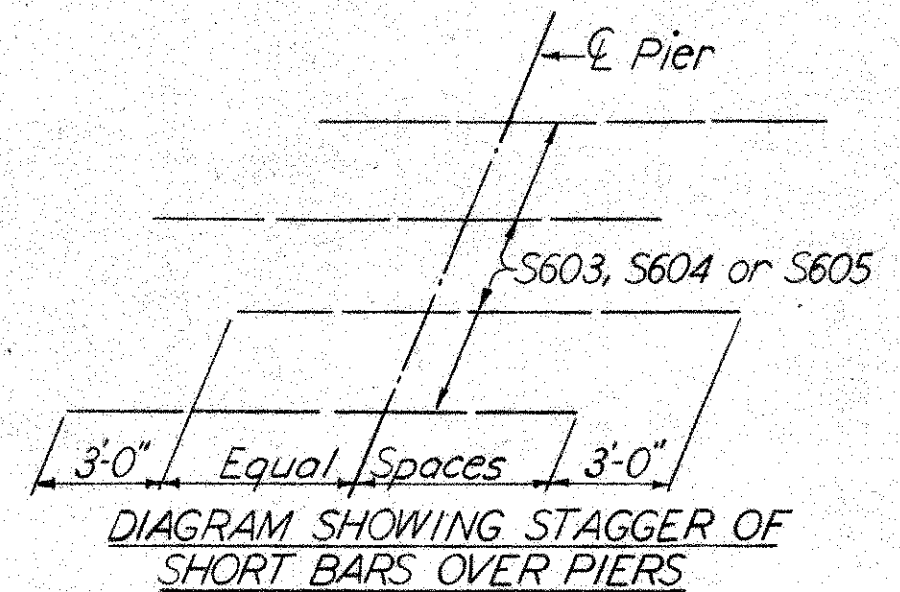
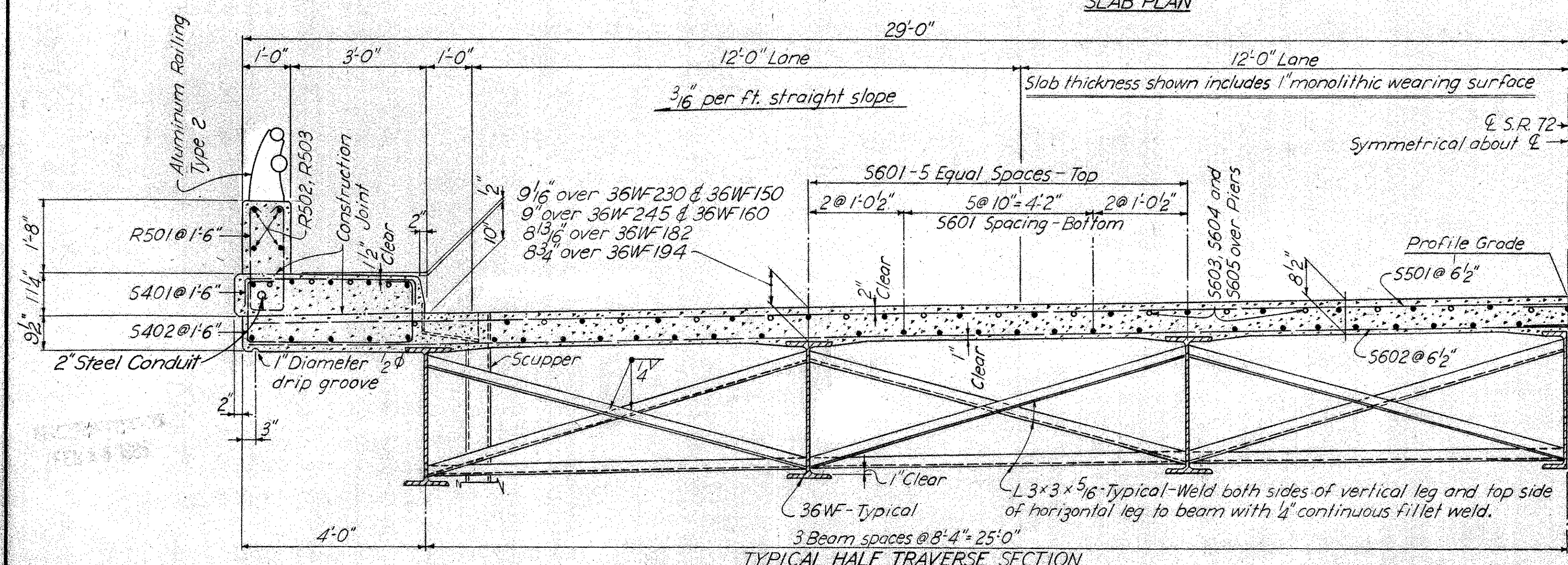
SHAFFER, PARRETT & ASSOCIATES AND BROOKHART & TYO
CONSULTING ENGINEERS
MANSFIELD, OHIO

PIERS 6 & 7
BRIDGE No. CLA-72-0863
S.R. 72 OVER D.T. & I. AND Penn Central Co.
CLARK CO. S. R. 72
STA. 455+88.50
TO 463+08.25

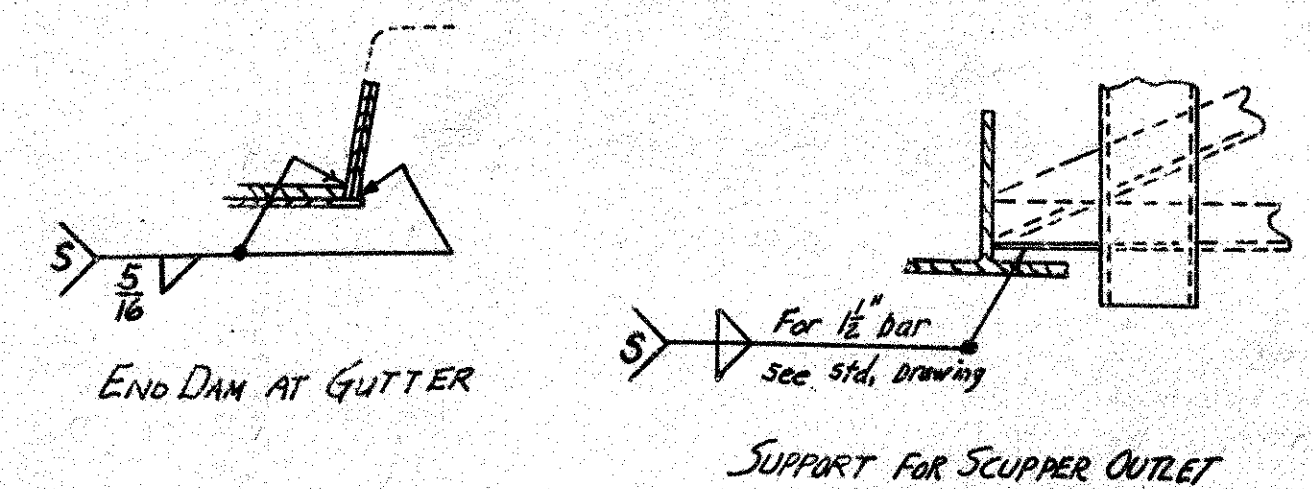
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.M.H.	M.M.N.	M.M.N.	R.M.H.	D.R.F.	1-8-65	



NOTES:
GENERAL NOTES: See sheet 110.
ADDITIONAL SUPERSTRUCTURE NOTES: See sheet 124.
RAILING: See BR-1-G5 (rev. 11-24-65) and sheets 110, 111 and 112.
SCUPPERS: See sheet 125.
*SLAB THICKNESS OVER BEAMS: Dimensions given are nominal. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam 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. 511.19 of the Construction and Material Specifications.

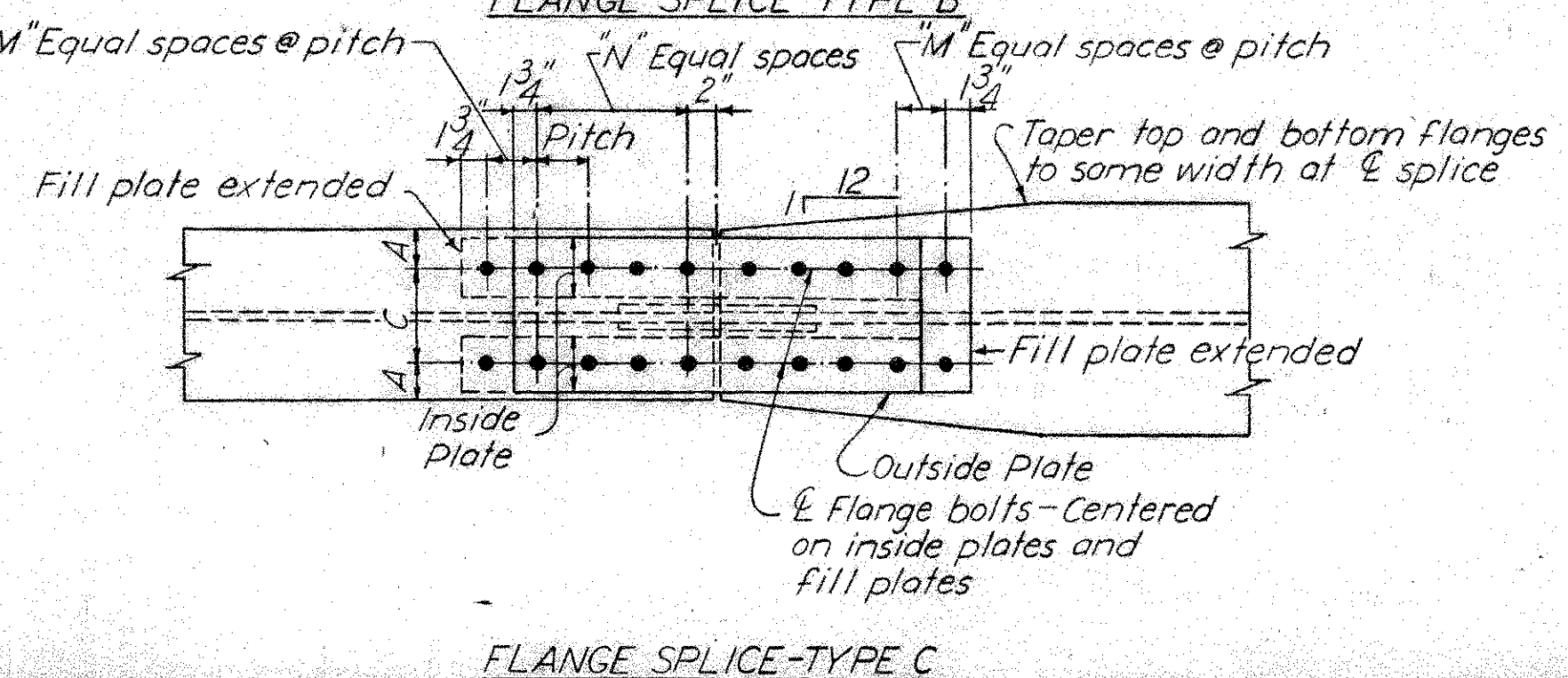
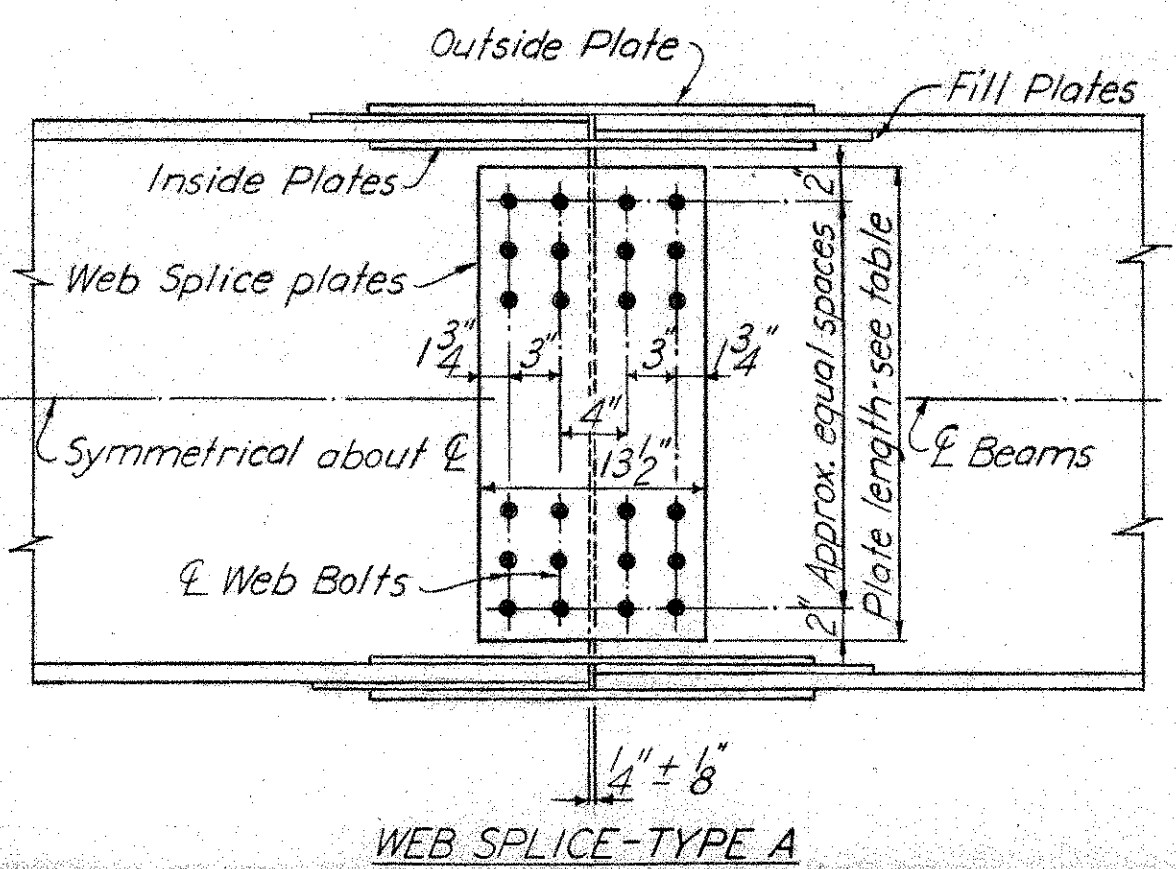
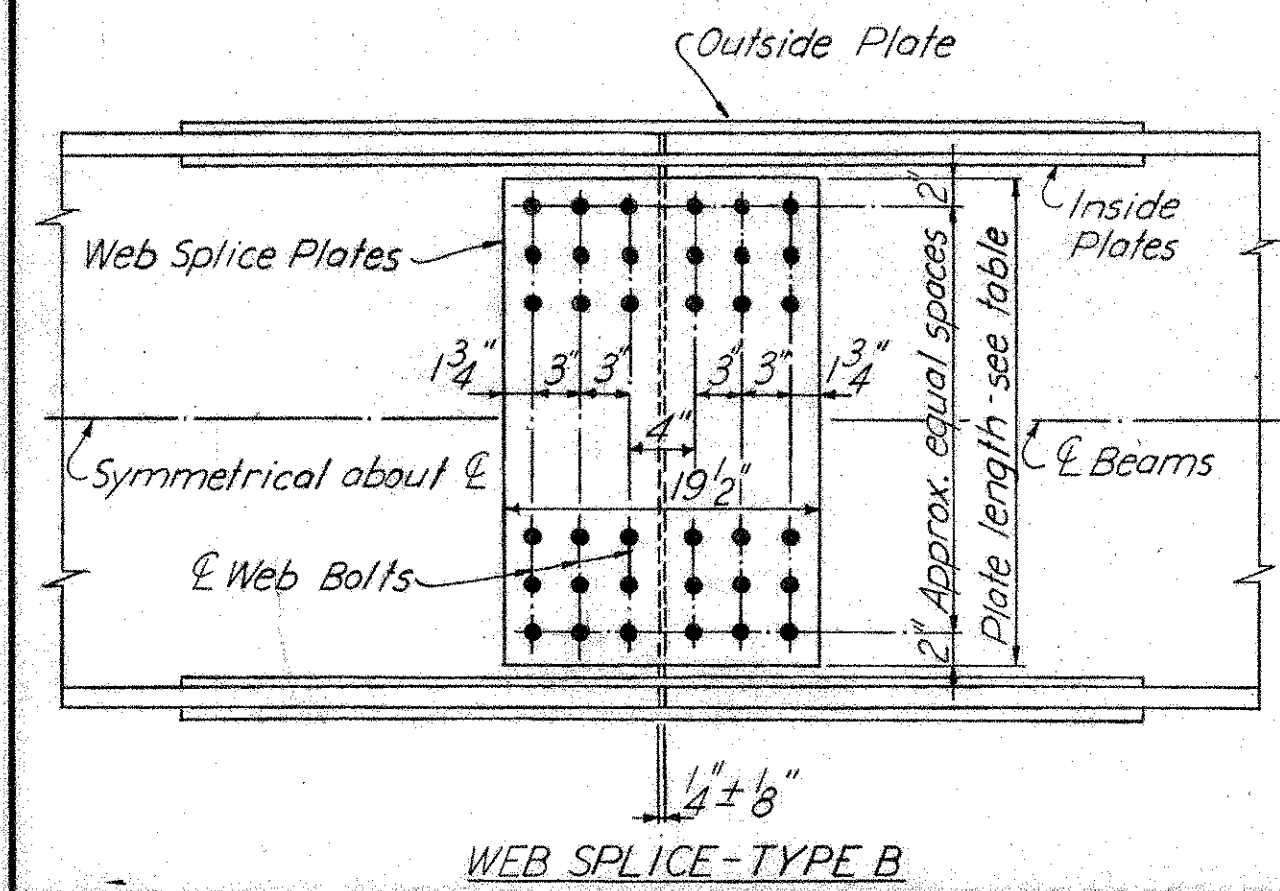
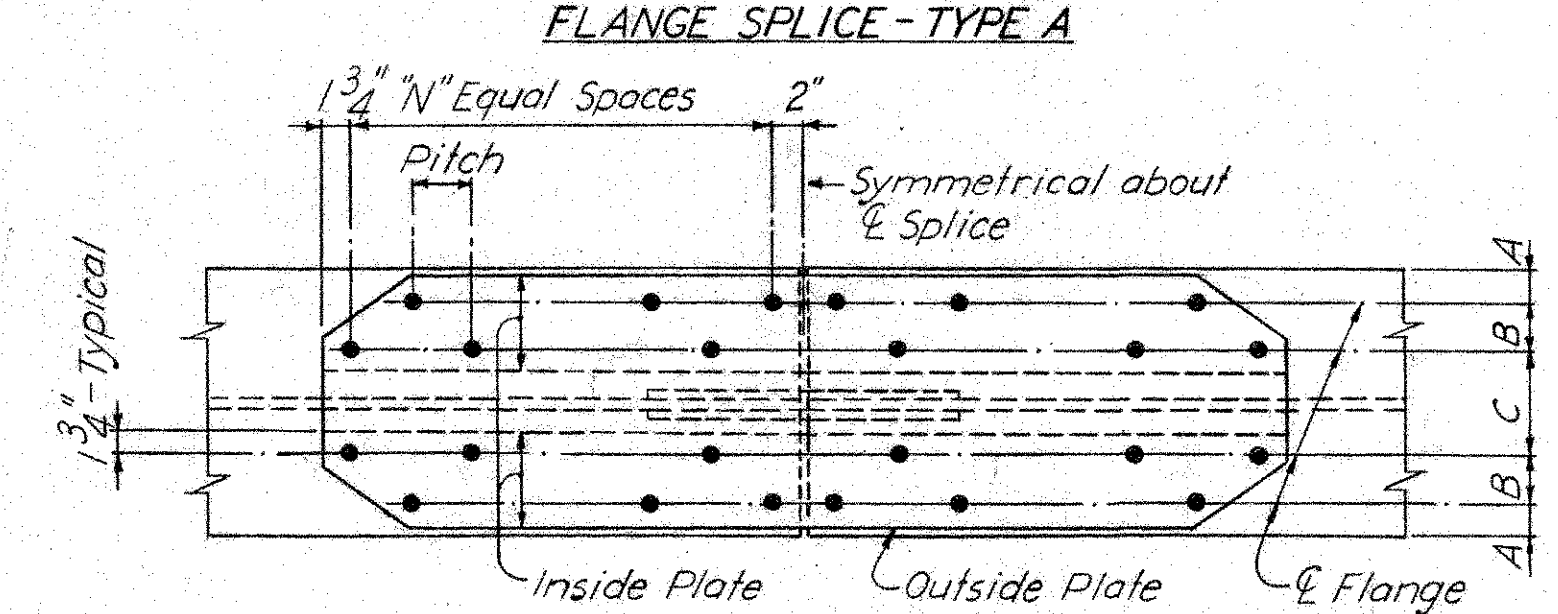
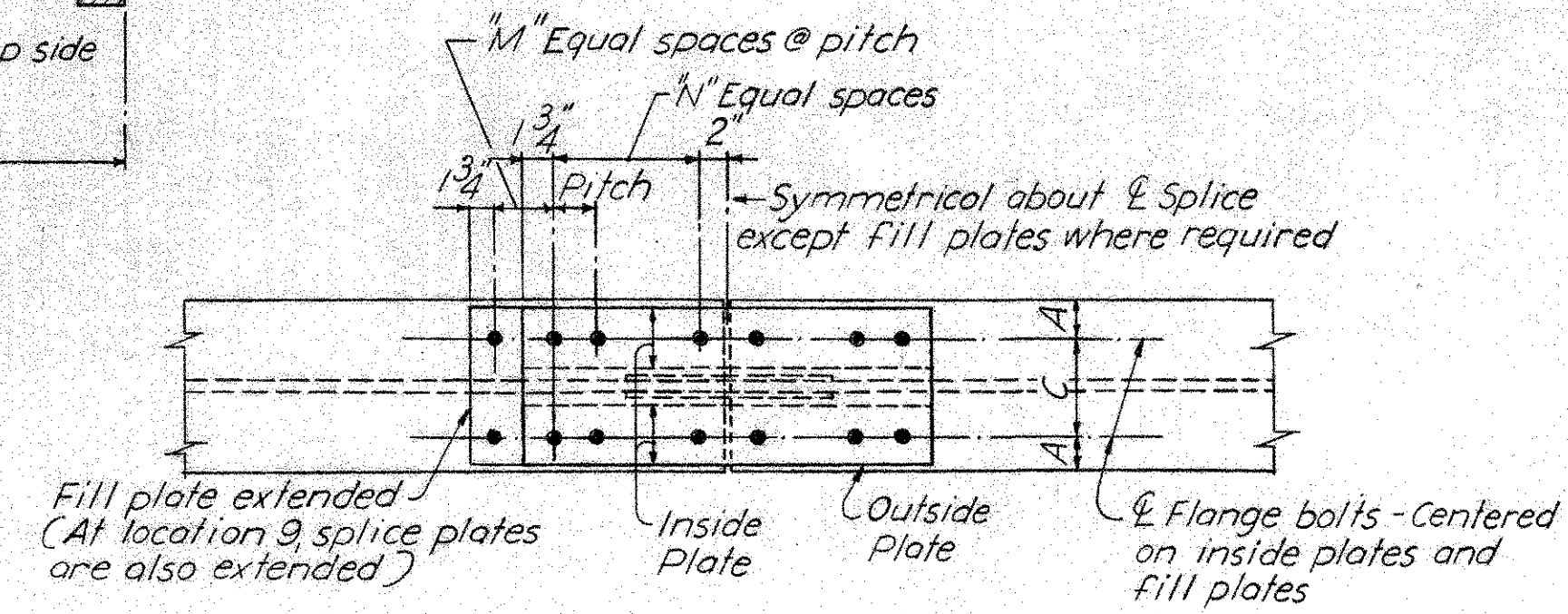


BOLTED FIELD SPLICE NOTES: See SD-1-65 (dated 11-8-65)



BEAM SPLICE DATA

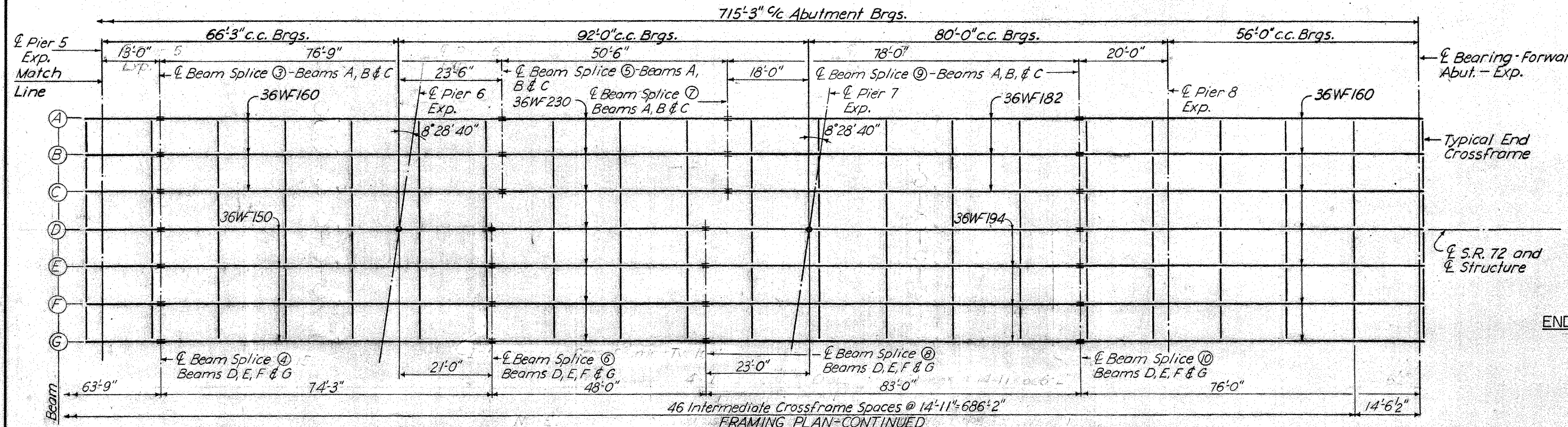
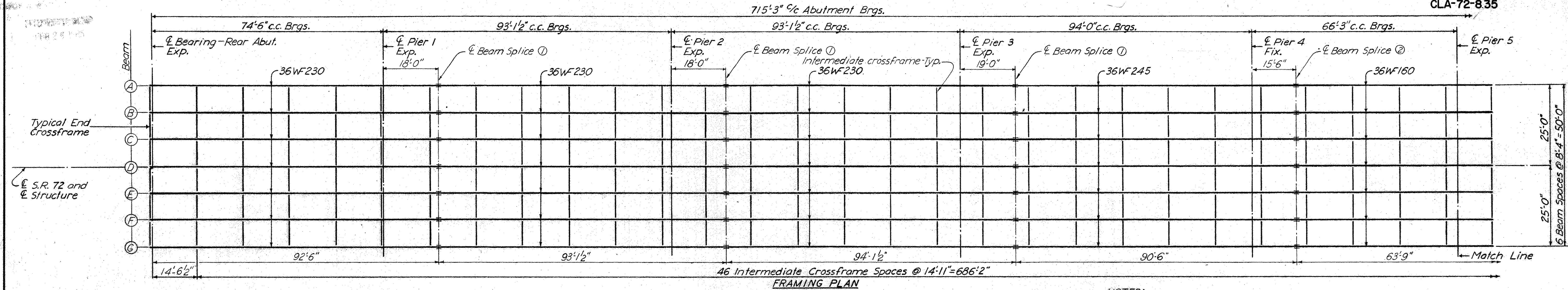
BEAM SPLICE SEE FRAMING PLAN FOR LOCATION	TYPE	FLANGE SPLICE						WEB SPLICE										
		FLANGE PLATES		FLANGE FILL PLATES		FLANGE BOLTS		WEB PLATES		WEB BOLTS								
		OUTSIDE 2 REQUIRED	INSIDE 4 REQUIRED	OUTSIDE 2 REQUIRED	BOLTS M' NO.	INSIDE 4 REQUIRED	BOLTS M' NO.	NUMBER	PITCH	A	B	C	TYPE	2 REQUIRED	WEB BOLTS NUMBER			
1	B	16x9/16x5'0"	6 1/2x3/8x5'0"					64	7	3 3/4	2	3	6 1/2	B	19 1/2x3/8x2'7"	54		
2	C	11x1/2x2'4 1/2"	4 1/2x9/16x2'4 1/2"			4 1/2x3/8x1'9"	2	8	32	3	3 1/2	2 1/2		7	B	19 1/2x3/8x2'7"	48	
3	A	11x1/2x2'4 1/2"	4 1/2x9/16x2'4 1/2"						32	3	3 1/2	2 1/2		7	B	19 1/2x3/8x2'7"	48	
4	A	11x1/16x2'4 1/2"	4 1/2x9/16x2'4 1/2"						32	3	3 1/2	2 1/2		7	A	13 1/2x3/8x2'7"	40	
5	C	11x1/2x2'4 1/2"	4 1/2x9/16x2'4 1/2"			4 1/2x5/16x1'5 1/2"	1	4	32	3	3 1/2	2 1/2		7	B	19 1/2x3/8x2'7"	48	
6	C	11x1/16x2'4 1/2"	4 1/2x9/16x2'4 1/2"			4 1/2x5/16x1'5 1/2"	1	4	32	3	3 1/2	2 1/2		7	A	13 1/2x3/8x2'7"	40	
7	C	11x9/16x2'11 1/2"	4 1/2x1/16x2'11 1/2"	11x4x2'0 1/2"	2	8	4 1/2x5/16x1'9"	1	4	40	4	3 1/2	2 9/16		7	B	19 1/2x3/8x2'7"	48
8	C	11x5/8x2'11 1/2"	4 1/2x3/8x2'11 1/2"	11x5/16x2'0 1/2"	2	8	4 1/2x5/16x1'9"	2	8	40	4	3 1/2	2 9/16		7	B	19 1/2x1/16x2'7"	54
9	A	11x1/2x2'8"	4 1/2x9/16x2'4 1/2"	11x3/16x1'5 1/2"	1	4			32	3	3 1/2	2 1/2		7	B	19 1/2x3/8x2'7"	48	
10	A	11x1/2x2'4 1/2"	4 1/2x9/16x2'4 1/2"	11x1/4x1'5 1/2"	1	4			32	3	3 1/2	2 1/2		7	B	19 1/2x3/8x2'7"	48	



SHAFFER, PARRETT & ASSOCIATES AND BROOKHART & TYO
CONSULTING ENGINEERS
MANSFIELD, OHIO

SUPERSTRUCTURE
BRIDGE No. CLA-72-0863
S.R. 72 OVER D.T. 81 AND Penn Central Co.
CLARK CO. S.R. 72
STA. 455+88.50 TO 463+08.25

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.M.H.	R.M.H.	M.M.N.	R.M.H.	D.R.F.	1-8-65	



NOTES:
BEARINGS: See RB-1-55 (dated 2-2-59) for the following: R-75@ Forward Abutment, R100 @ Rear Abutment, R175@ Pier 5, R-200@ Pier 8, R225@ Piers 1, 6 and 7, R-250@ Piers 2 and 3, B-225@ Pier 4. Beveled sole plates shall be used at the bearings where the roadway grade is 1% or greater. Where beveled sole plates are used the dimensions as shown on RB-1-55 (dated 2-2-59) shall be maintained on the center line of bearing.

RAILING: See BR-1-65.

RAILING POST AND PARAPET EXPANSION JOINT SPACING: See sheets 110, 111 and 112.

CONCRETE: All superstructure concrete shall be Class "C".

BEAM SPLICE DETAILS: See sheet 123.

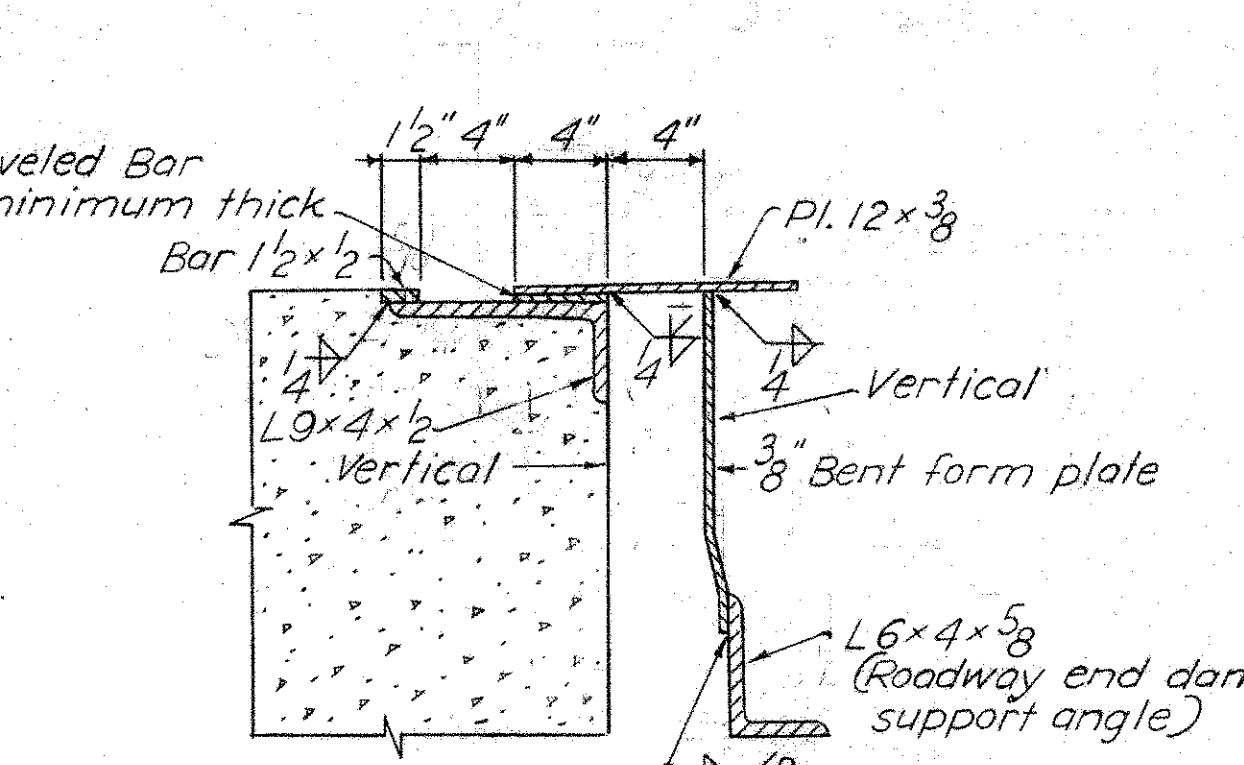
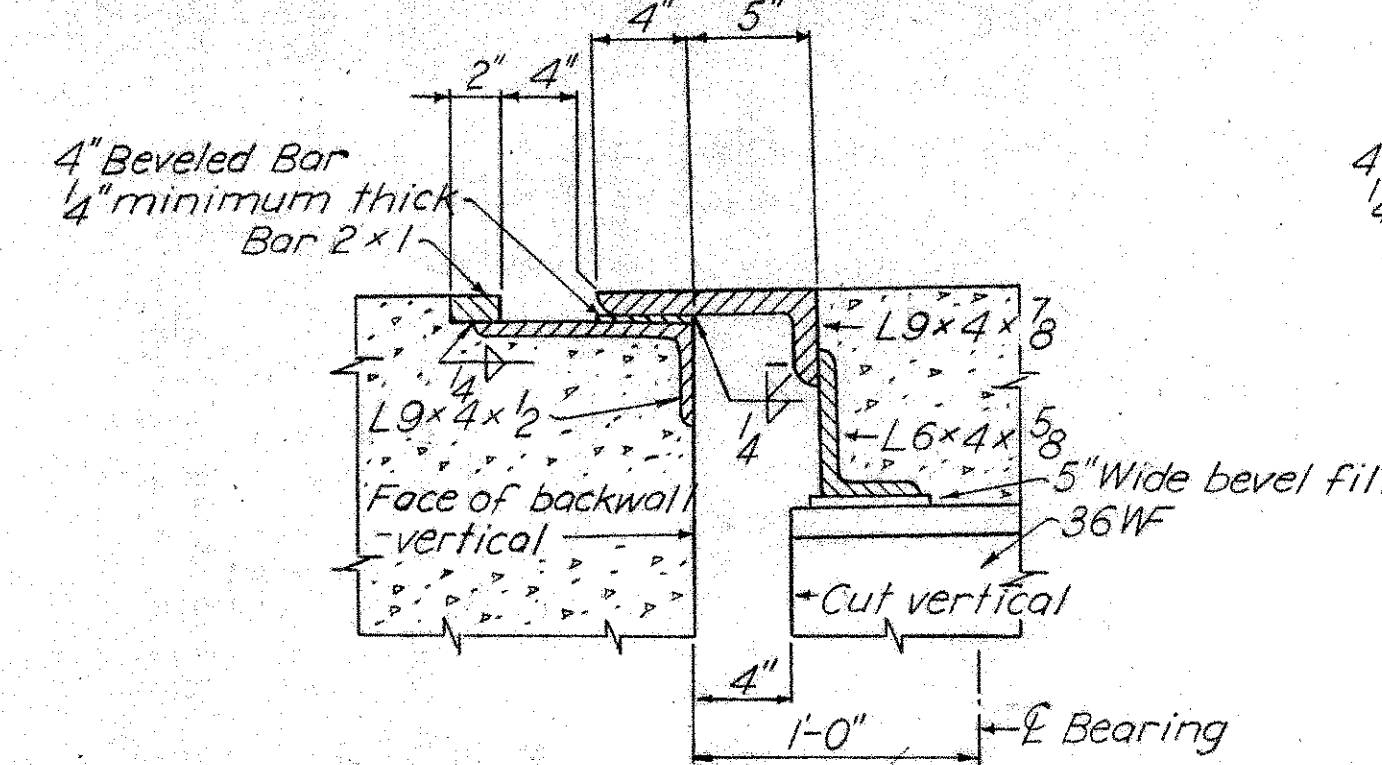
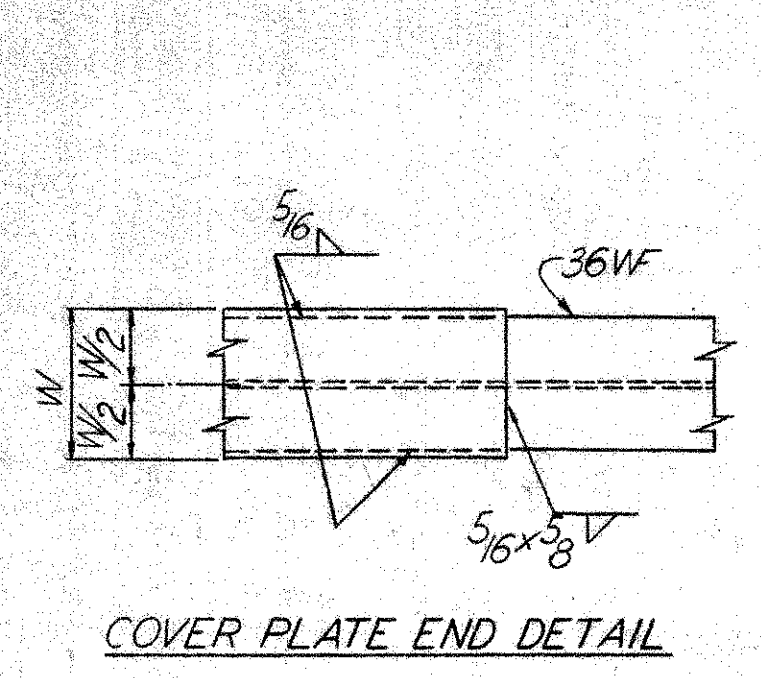
GENERAL NOTES: See sheet 110.

END CROSSFRAME, SPLICE DETAILS AND SCUPPER DETAILS: See SD-1-65 (dated 11-8-65) sheets 1, 2, & 3 of 3. For scupper locations and modified drainage details to be used with Standard Type I scuppers, see sheet 125.

END DAM DETAILS: For details, member sizes, dimensions and notes not shown on the Modified End Dam Sections, this sheet, see SD-1-65 (dated 11-8-65) sheets 1 and 2 of 3.

COVER PLATE SCHEDULE				
PIER	LOCATION SEE FRAMING PLAN	SIZE TOP AND BOTTOM	DIMENSION	
			X	Y
1	All Beams	18x3/4 x 28'-6"	14'-6"	14'-0"
2	All Beams	18x3/4 x 30'-0"	15'-0"	15'-0"
3	All Beams	18x3/8 x 32'-0"	16'-0"	16'-0"
4	All Beams	18x1/16 x 25'-0"	13'-0"	12'-0"
5	All Beams	13 1/2 x 2 x 18'-6"	9'-0"	9'-6"
6	Beams A, B, C	14 x 1 1/16 x 33'-6"	15'-6"	18'-0"
6	Beams D, E, F, G	14 x 1 1/16 x 33'-6"	15'-6"	18'-0"
7	Beams A, B, C	14 x 1 3/16 x 33'-0"	17'-0"	16'-0"
7	Beams D, E, F, G	14 x 1 3/16 x 33'-0"	17'-0"	16'-0"
8	All Beams	13 1/2 x 1 x 28'-0"	15'-0"	13'-0"

TABLE OF DEFLECTION AND REQUIRED CAMBER																			
SPAN I	SPAN II		SPAN III		SPAN IV		SPAN V		SPAN VI		SPAN VII		SPAN VIII		SPAN IX				
	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.			
Deflection due to weight of steel																			
8"	8"	8"	8"	3/32"	3/32"	3/32"	5/32"	5/32"	3/32"	16"	3/32"	3/32"	5/32"	5/32"	3/32"	1/16"	1/16"	3/32"	3/32"
Deflection due to remaining dead load																			
5/8"	1/16"	5/8"	1/16"	1/2"	1/32"	1/16"	1/16"	3/16"	8"	4"	1/16"	3/32"	2/32"	2/32"	3/16"	5/16"	1/16"	1/32"	5/32"
Convexity required for vertical curve																			
1/16"	1/16"	8"	8"	3/32"	3/32"	8"	8"	1/16"	1/16"	1/16"	1/16"	1/16"	8"	8"	1/16"	3/32"	3/32"	1/32"	1/32"
Sum of deflection and convexity																			
13/16"	3/8"	8"	1/16"	1/16"	1/32"	1/32"	9/32"	3/32"	3/8"	3/32"	3/16"	1/16"	1/16"	9/32"	1/32"	1/32"	1/32"	9/32"	1/32"
Required Camber																			
13/16"	13/16"	8"	8"	0	0	1/32"	1/32"	0	0	0	0	0	13/16"	13/16"	0	0	0	0	0



SHAFFER, PARRETT & ASSOCIATES AND BROOKHART & TYO
CONSULTING ENGINEERS
MANFIELD, OHIO

SUPERSTRUCTURE
BRIDGE No. CLA-72-0863
S.R.72 OVER CLARK CO. D.T. & I. AND Penn Central Co. S.R. 72
STA. 455+88.50 TO 463+08.25

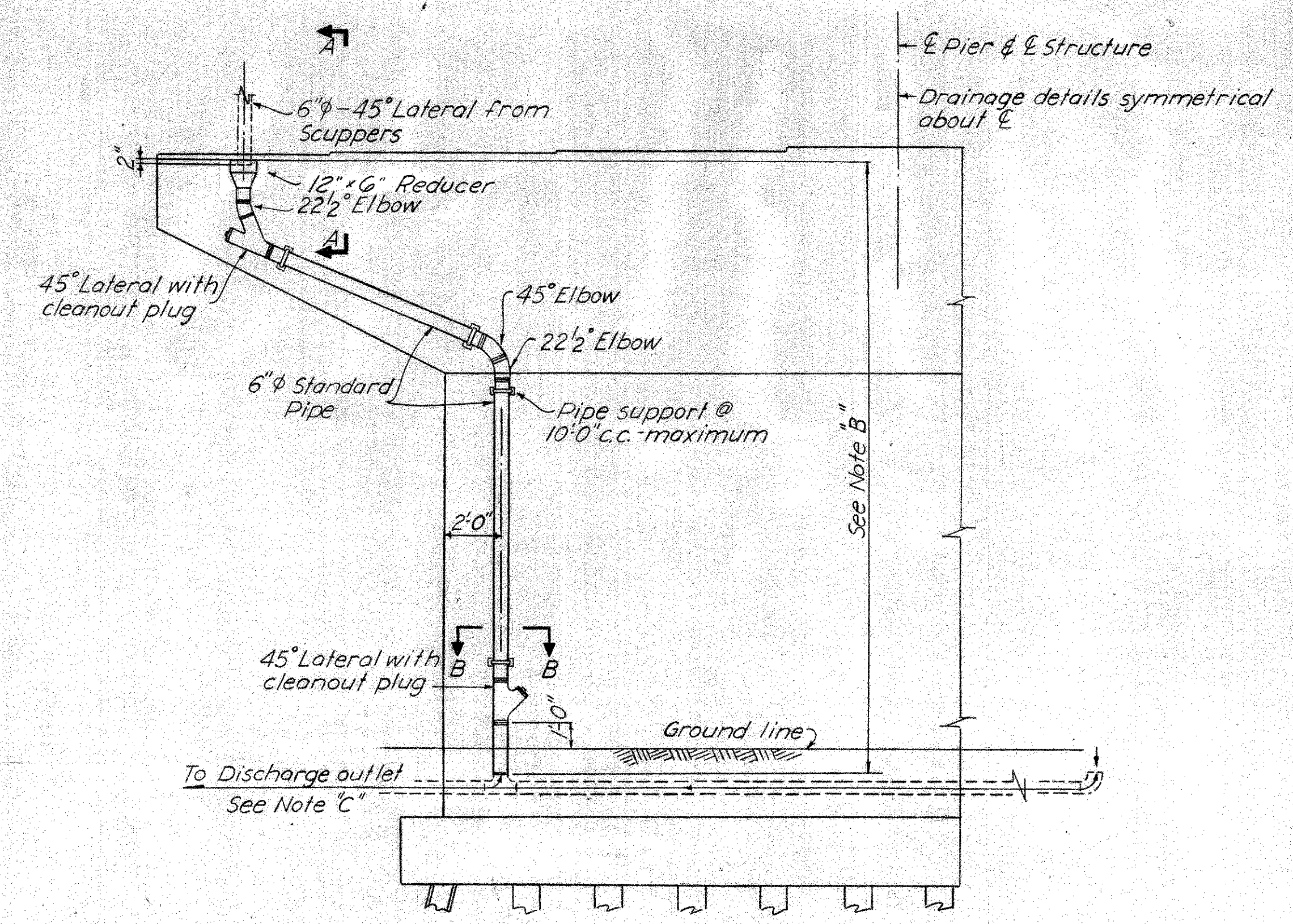
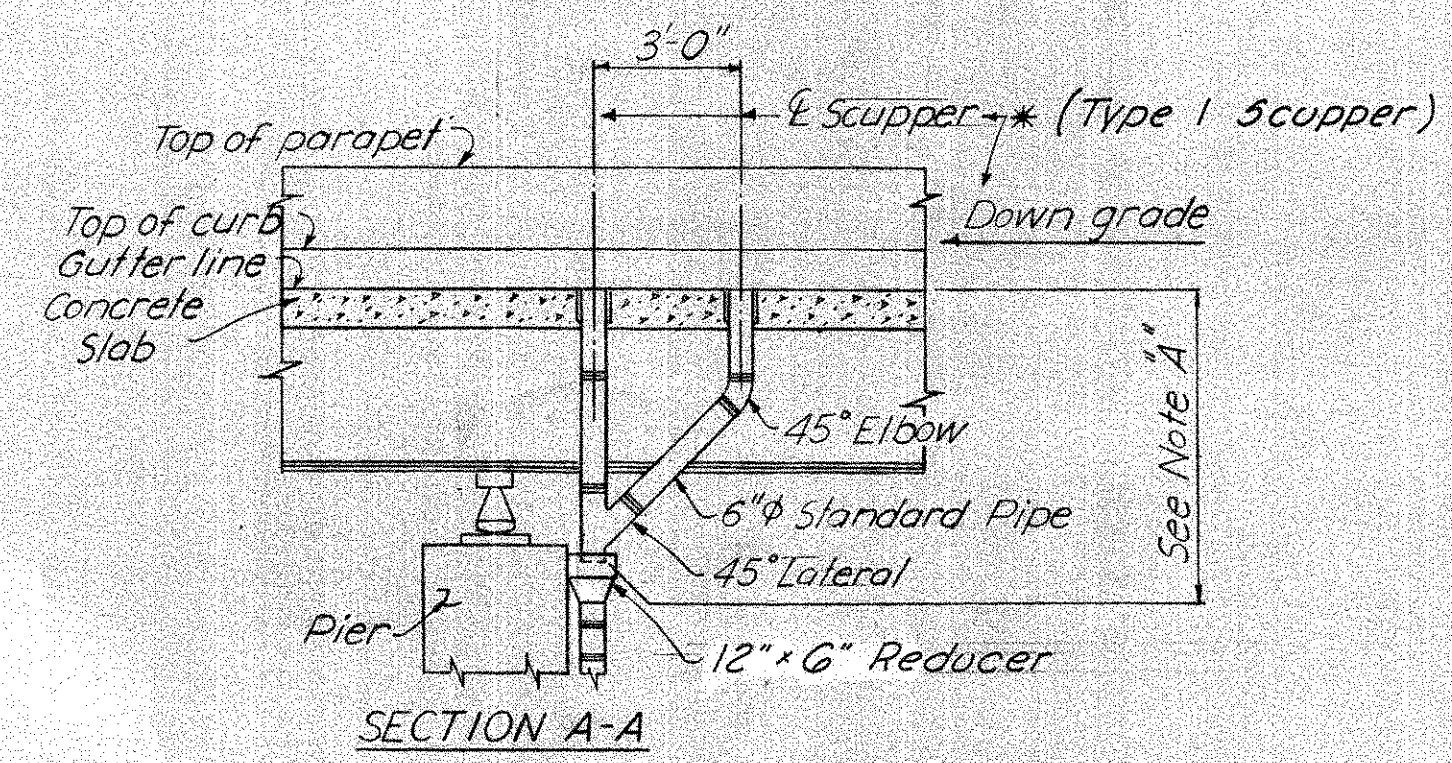
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.M.H.	M.M.N.	M.M.N.	R.M.H.	D.R.F.	1-8-65	

REPRODUCED
FEB 26 1965

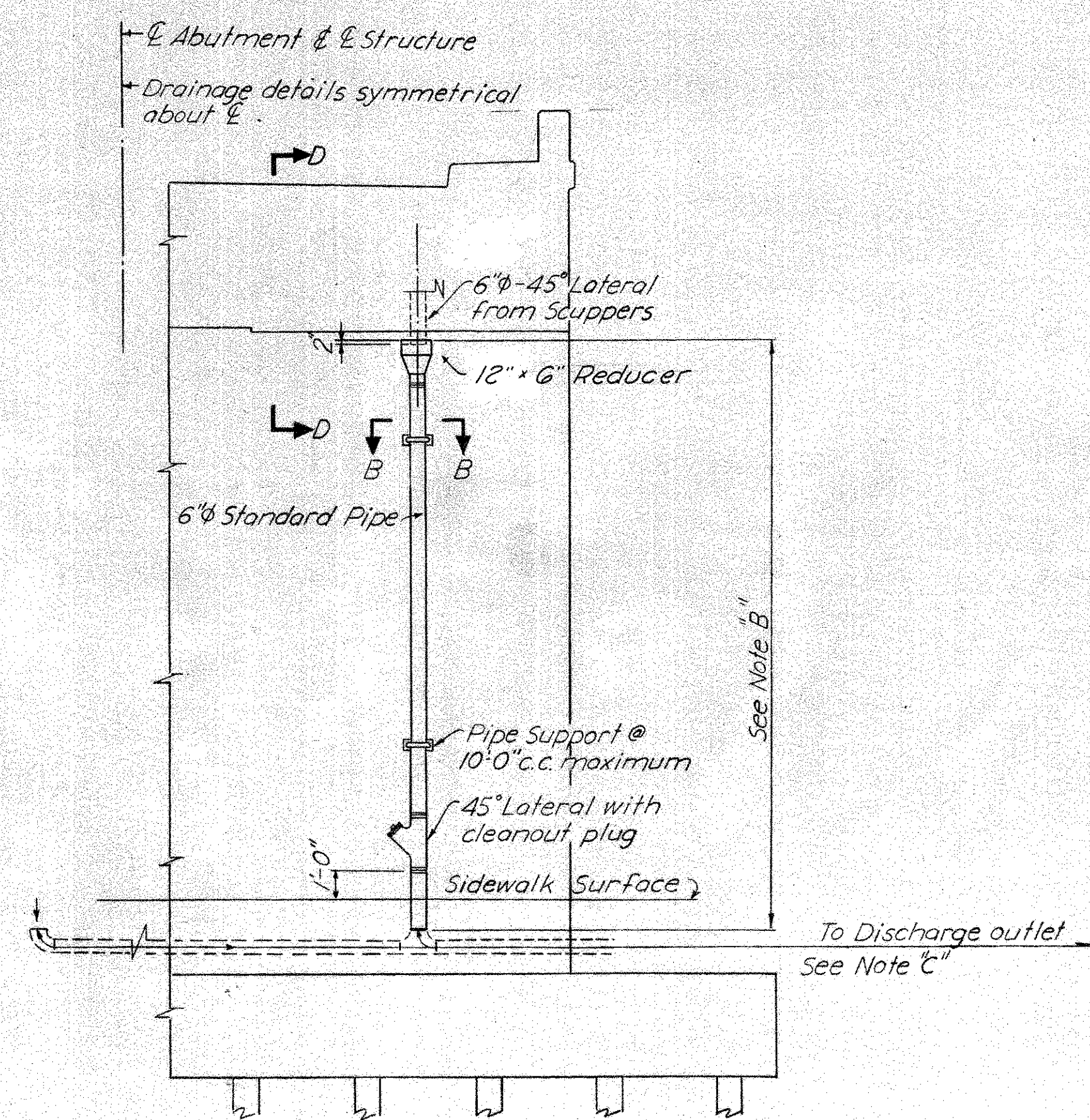
*NOTE:
Place scuppers on opposite side from
that shown, at Pier 7 only. See General Plan sheet 411.

FED. RD. DIVISION	STATE	PROJECT	125 167
	OHIO		

CLA-72-835



ELEVATION-TYPICAL DRAINAGE DETAILS AT PIERS
OMIT AT PIER 4



ELEVATION-TYPICAL DRAINAGE DETAILS AT ABUTMENT

NOTES:
GENERAL NOTES: See sheet 110.

ADDITIONAL NOTES: See sheet 124.

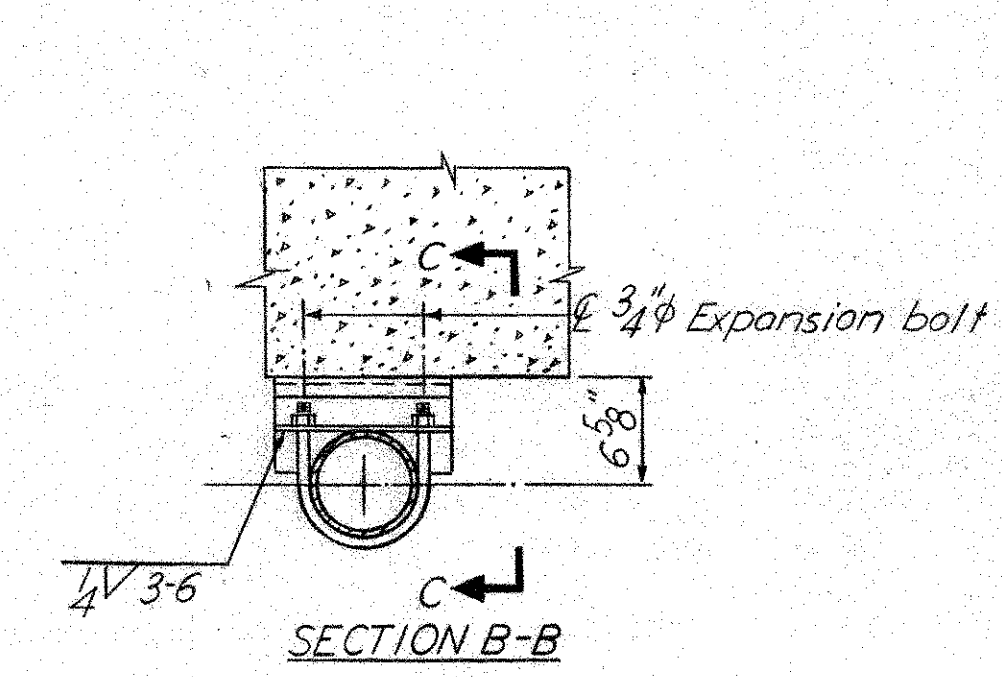
DOWNSPOUTS, FITTINGS, PIPES AND REDUCERS shall be wrought iron or hot dip galvanized steel. All joint connections shall be made by welding or by the use of a clamp-type coupling with a ring gasket. If the joint connections are welded, galvanizing shall be done after all welding has been completed. All material used for attaching the drainage system to the structure units shall be wrought iron or hot dip galvanized steel. All bolts used shall be galvanized but such galvanizing need not be hot dip.

6" BITUMINOUS COATED CORRUGATED METAL PIPE FLOWLINE ELEVATIONS AND DISCHARGE OUTLETS: See sheets 110, 111 and 112.

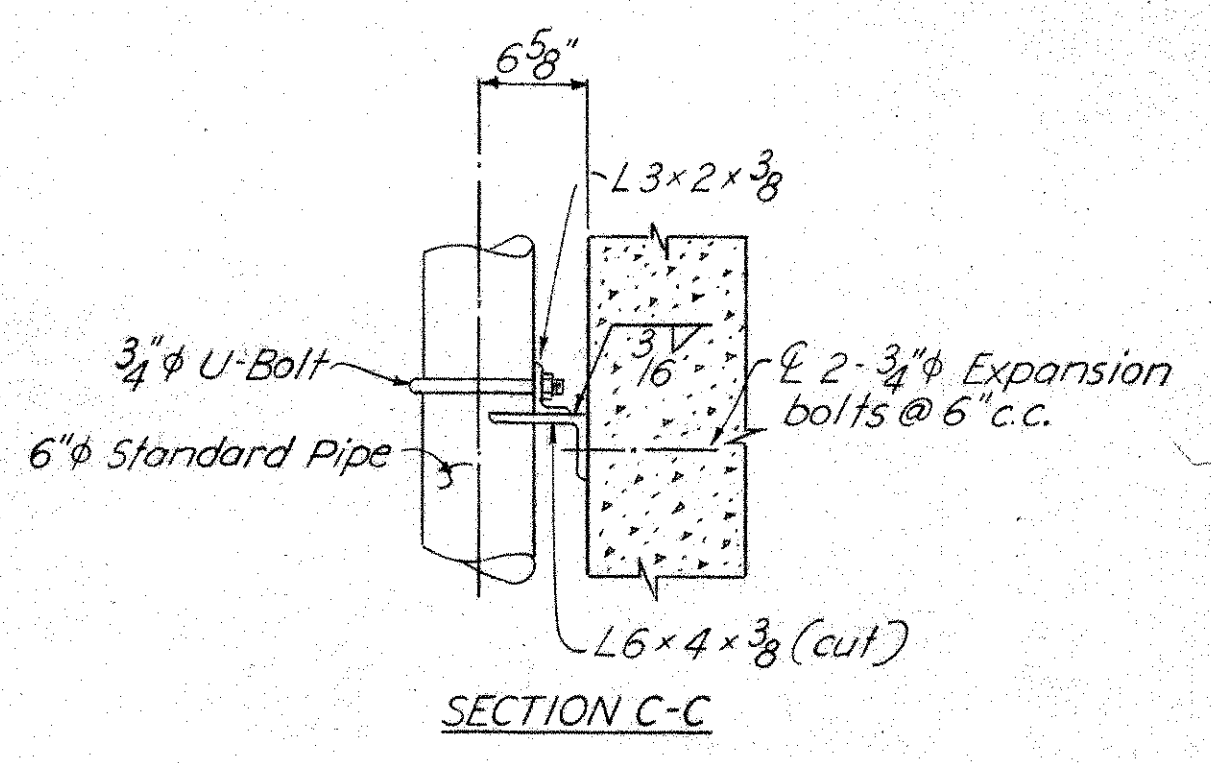
NOTE A: Pay limits for Item 518 - Twin scuppers including supports.

NOTE B: Pay limits for Item 518 - 6" Standard Pipe downspout, including specials.

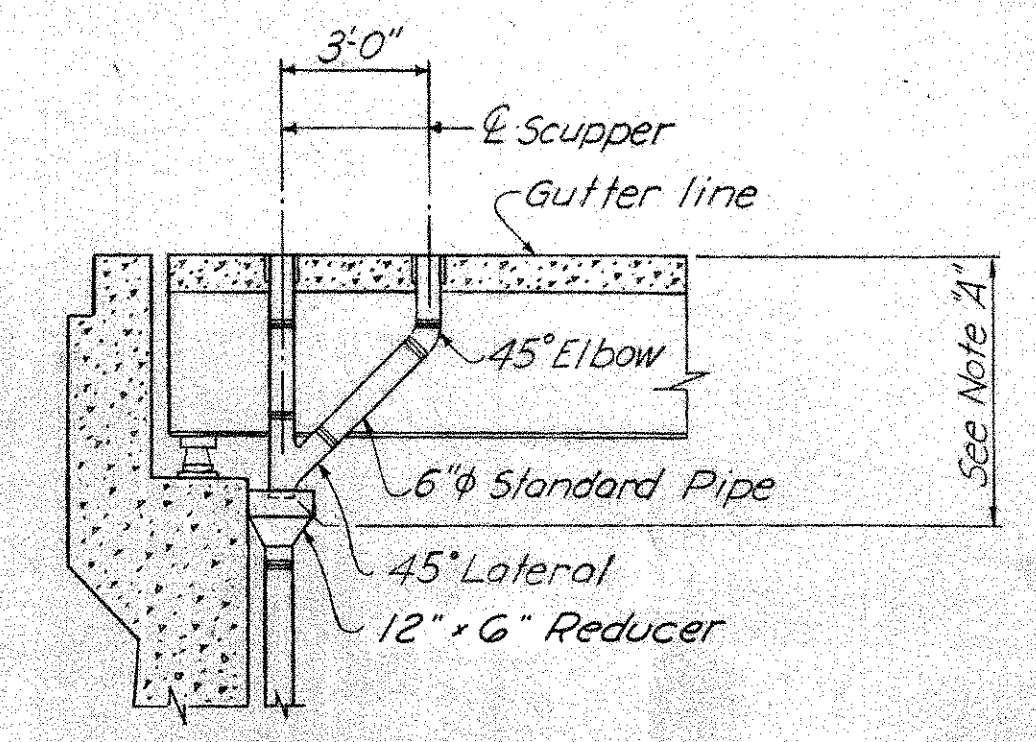
NOTE C: Pay limits for Item 518 - 6" Bituminous coated corrugated metal pipe, including specials.



SECTION B-B



SECTION C-C



SECTION D-D

SHAFFER, PARRETT & ASSOCIATES AND BROOKHART & TYO CONSULTING ENGINEERS MANSFIELD, OHIO						
DRAINAGE DETAILS						
BRIDGE # CLA-72-0863						
S.R. 72 OVER		D.T. & I. AND Penn Central Co.			S. R. 72	
CLARK CO.					STA. 455+88.50 TO 463+08.25	
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.M.H.	R.M.H.	M.M.N.	R.M.H.	D.R.F.	1-8-65	

CLA-72-835

SUPERSTRUCTURE

MARK	NUMBER	LENGTH	TYPE	A	B	C	D	E	WEIGHT
R501	1,072	5'-5"	3	2'-1"	8"	5"			6,056
R502	16	12'-9"	Str.						*
R503	344	15'-8"	Str.						*
R511	25	10'-0"	11	0'-6"	3'-0"	2'-0"	3'-0"	2'-1"	*
R512	25	3'-0"	Str.						*
S401	958	4'-7"	1	8"	3'-6"	8"			2,933
S402	958	6'-11"	2	1'-5"	3'-6"	5"			4,426
S501	2,648	29'-8"	Str.						81,935
S601	2,328	31'-9"	Str.						111,019
S602	2,648	29'-10"	Str.						118,656
S603	228	40'-0"	Str.						13,698
S604	38	29'-6"	Str.						1,684
S605	38	33'-0"	Str.						1,884
TOTAL WEIGHT									342,291

PIERS

MARK	NUMBER	LENGTH	TYPE	A	B	C	D	E	WEIGHT
P501	154	30'-0"	Str.						4,819
P502	54	30'-6"	Str.						1,718
P503	208	7'-4"	6	1'-7"	4'-2"				1,591
P504	80	①	Str.						1,822
① 17'-4" to 26'-4" - 20 sets of 4 bars - Vary each bar by 3'-0"									
P505	20	26'-4"	Str.						549
P506	32	②	Str.						737
② 17'-7" to 26'-7" - 8 sets of 4 bars - Vary each bar by 3'-0"									
P507	8	26'-7"	Str.						222
P508	344	8'-5"	1	3'-0"	2'-8"	3'-0"			3,020
P509	210	③	1	1'-9" to 6'-8 1/2"	2'-8"	1'-9" to 6'-8 1/2"			2,382
③ 5'-11" to 15'-10" - 14 sets of 15 bars - Vary each A and C dimension by 4'-4"									
P510	14	④	1	1'-9" to 6'-9"	2'-8"	1'-9" to 6'-9"			159
④ 5'-11" to 15'-11" - 2 sets of 7 bars - Vary each A and C dimension by 10"									

P601	768	4'-10"	5	8"	4'-2"				5,576
P602	48	18'-2"	Str.						1,310
P603	48	19'-6"	Str.						1,406
P604	48	25'-2"	Str.						1,814
P605	48	19'-11"	Str.						1,436
P606	48	19'-3"	Str.						1,388
P607	48	14'-10"	Str.						1,069
P608	48	20'-9"	Str.						1,496
P609	48	19'-5"	Str.						1,400
P610	168	18'-0"	1	7'-10"	2'-8"	7'-10"			4,542
P611	16	⑤	Str.						529
⑤ 17'-6" to 26'-6" - 4 sets of 4 bars - Vary each bar by 3'-0"									
P612	48	3'-2"	5	8"	2'-6"				228
P613	4	26'-6"	Str.						159
P614	48	8'-0"	6	1'-11"	4'-2"				577
P615	32	12'-0"	7	10'-1"	1'-11"	10'-4"	1'-8 3/8"		577
P701	74	37'-2"	4	10"	35'-6"	10"			5,622
P702	72	9'-2"	4	10"	7'-6"	10"			1,349
P801	430	10'-8"	4	1'-1"	8'-6"	1'-1"			12,246
P802	10	36'-8"	4	1'-1"	34'-6"	1'-1"			979
P803	8	37'-8"	4	1'-1"	35'-6"	1'-1"			805
P804	72	11'-8"	4	1'-1"	9'-6"	1'-1"			2,243
P901	4	21'-8"	Str.						295
P1001	12	22'-0"	Str.						1,136
P1101	64	28'-7"	Str.						12,756
P1102	28	28'-10"	Str.						4,289
P1103	72	22'-4"	Str.						8,543
TOTAL WEIGHT									90,789

ABUTMENTS

MARK	NUMBER	LENGTH	TYPE	A	B	C	D	E	WEIGHT
A501	36	37'-1"	4	7"	36'-6"				1,392
A502	4	20'-3"	Str.						84
A503	30	21'-0"	Str.						656
A504	112	6'-6"	1	1'-5"	3'-5"	1'-11"			759
A505	50	24'-8"	Str.						1,286
A506	50	32'-8"	Str.						1,704
A507	4	22'-10"	Str.						95
A508	40	8'-8"	1	1'-7"	3'-8"	3'-8"			362
A509	8	10'-6"	1	3'-1"	8"	7'-0"			88
A510	8	8'-11"	1	3'-8"	5'-4"				74
A511	12	2'-5"	5	6"	1'-5"	6"			30
A512	30	18'-3"	Str.						571
A601	102	12'-0"	1	4'-10"	1'-5"	6'-1"			1,838
A602	32	36'-4"	4	8"	35'-8"				1,746
A603	56	18'-6"	Str.						1,556
A604	56	6'-5"	8	4'-8"	1'-11"	1'-4"			540
A701	174	14'-10"	1	10"	13'-2"	10"			5,276
A801	56	21'-0"	Str.						3,140
A802	56	7'-9"	8	5'-5"	2'-6"	1'-2"			1,159
A803	71	6'-10"	Str.						1,295
A901	150	17'-2"	4	1'-3"	14'-8"	1'-3"			8,755
A902	73	7'-6"	Str.						1,862
A903	56	14'-4"	8	11'-9"	2'-10"	1'-3"			2,729
A1001	56	14'-5"	8	11'-5"	3'-3"	2"			3,474
A1002	6	10'-7"	8	7'-1"	3'-3"	2"			260
A1003	4	15'-6"	8	12'-6"	3'-3"	2"			267
A1101	8	10'-8"	8	7'-4"	3'-7"	2'-4"			453
A1102	6	18'-7"	8	15'-3"	3'-7"	2'-4"			592
TOTAL WEIGHT									42,044

RETAINING WALLS

MARK	NUMBER	LENGTH	TYPE	A	B	C	D	E	WEIGHT
W501	36	27'-8"	Str.						1,039
W502	653	31'-8"	Str.						21,568
W503	34	4'-0"	Str.						142
W504	34	4'-5"	Str.						157
W505	24	3'-7"	Str.						90
W506	24	3'-10"	Str.						96
W507	22	5'-0"	Str.						115
W508	3	26'-4"	Str.						82
W509	12	3'-2"	Str.						40
W510	16	32'-8"	Str.						545
W511	8	25'-11"	Str. - Bend in Field						216
W512	8	22'-9"	Str. - Bend in Field						190
W513	113	10'-0"	Str.						1,179
W514	13	10'-8"	9	5'-2"	11"	4'-10"			145
W515	39	19'-6"	Str.						793
W516	3	11'-0"	9	5'-2"	1'-3"	4'-10"			34
W517	13	11'-2"	9	5'-2"	1'-5"	4'-10"			151
W518	28	25'-1"	Str.						733
W519	25	11'-7"	9	5'-2"	1'-10"	4'-10"			302
W520	65	15'-1"	Str.						1,023
W521	15	12'-0"	9	5'-2"	2'-3"	4'-10"			188
W522	13	14'-7"	Str.						198
W523	7	12'-6"	9	5'-2"	2'-9"	4'-10"			91
W524	4	13'-0"	9	5'-2"	3'-3"	4'-10"			54
W525	16	13'-5"	9	5'-2"	3'-8"	4'-10"			224
W526	17	10'-0"	10	6'-4"	1'-2"	2'-6"	7"	1'-0"	177
W527	16	10'-0"	10	6'-4"	1'-9"	1'-11"	10 3/8"	1'-6"	167
W528	24	10'-3"	10	6'-4"	2'-4"	1'-7"	1'-1 1/8"	2'-0"	257
W529	14	10'-10"	10	6'-4"	2'-11"	1'-7"	1'-5 1/4"	2'-6"	158
W530	7	11'-5"	10	6'-4"	3'-6"	1'-7"	1'-8 3/4"	3'-0"	83
W531	4	12'-0"	10	6'-4"	4'-1"	1'-7"	2'-0 1/4"	3'-6"	50
W532	16	12'-7"	10	6'-4"	4'-8"	1'-7"	2'-3 3/4"	4'-0"	210
W533	36	11'-6"	Str.						432
W534	24	9'-0"	Str.						225
W535	24	6'-4"	Str.						159
W536	39	18'-2"	Str.						739
W537	12	10'-6"	Str.						131
W538	26	21'-7"	Str.						585
W539	12	4'-4"	Str.						54

RETAINING WALLS-CONTINUED

MARK	NUMBER	LENGTH	TYPE	A	B	C	D	E	WEIGHT
W540	12	3'-7"	Str.						39
W541	17	13'-11"	Str.						247
W542	48	13'-7"	Str.						680
W543	72	11'-6"	Str.						864
W544	120	9'-7"	Str.						1,199
W545	24	8'-5"	Str.						211
W546	72	7'-5"	Str.						557
W547	48	6'-0"	Str.						300
W548	70	4'-8"	Str.						341
W549	72	10'-7"	Str.						795
W550	24	6'-2"	Str.						154
W551	48	12'-2"	Str.						609
W552	30	8'-4"	Str.						261
W553	12	4'-11"	Str.						62
W554	12	3'-4"	Str.						42
W555	29	1'-11"	Str.						58
W556	653	5'-5"	1	2'-6"	8"	2'-6"			3,689
W557	40	21'-11"	Str.						914
W558	6	11'-8"	Str.						73</