

MICROFILMED
JAN 8 1988

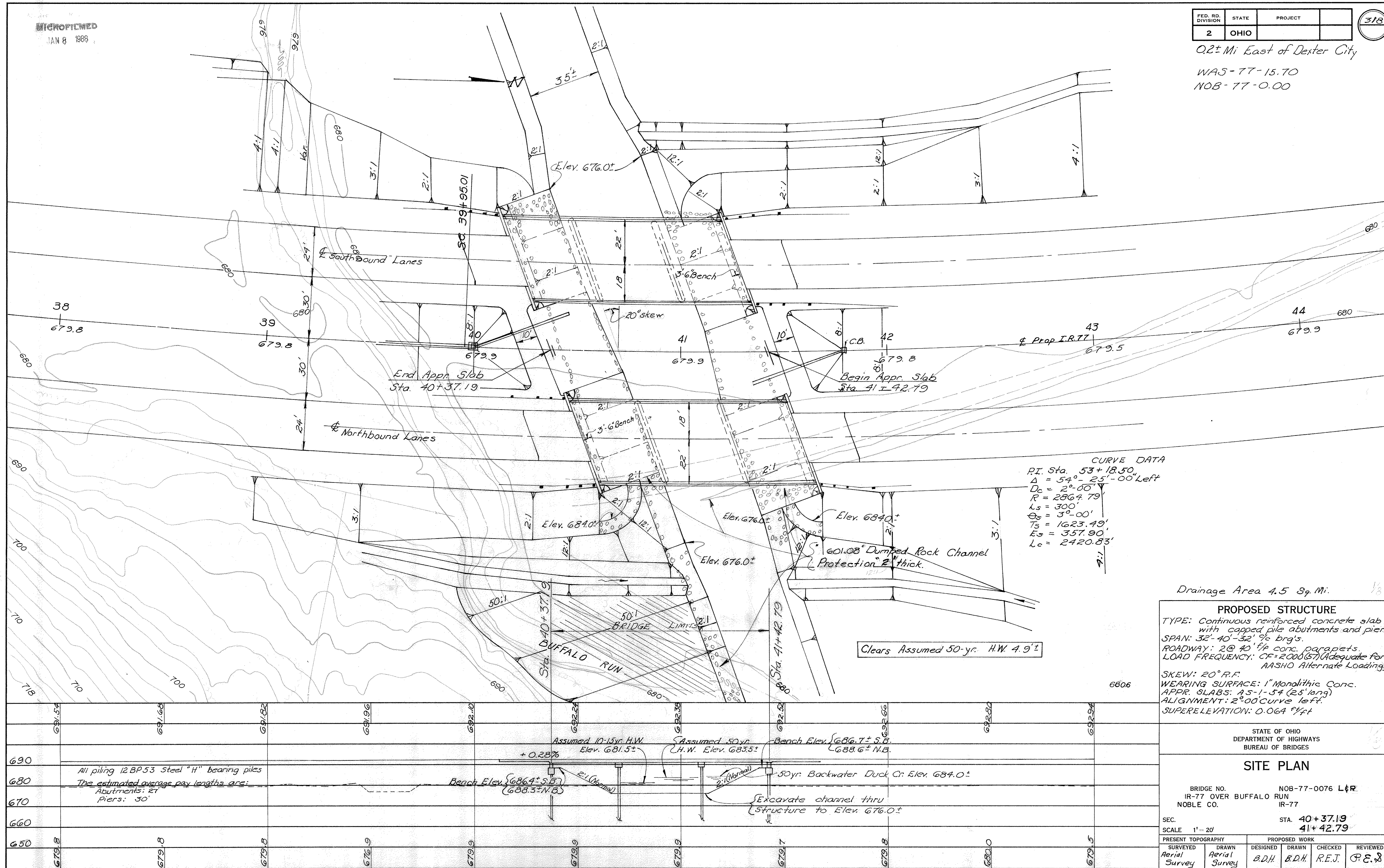
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

318

0.2± Mi East of Dexter City

WAS-77-15.70

NOB-77-0.00



WAS-77-15.70
NOB-77-0.00

GENERAL NOTES

REFERENCE shall be made to Standard Drawings P-1-54 revised 2-2-59, BR-1-65 sheet dated 2-1-65, and to Supplemental Specification 808 dated 7-14-65.

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 current revisions thereof.

DESIGN LOADING - CF 2000 (57)

CONCRETE CLASS C - basic unit stress 1,333 p.s.i.
CONCRETE CLASS E - basic unit stress 1,133 p.s.i.

STRUCTURAL STEEL - ASTM A36 - basic unit stress 20,000 p.s.i. (except piling) (ASTM A7 and A373 steel not permitted)
REINFORCING STEEL - ASTM A15, A16, A160, Deformed, Intermediate or Hard Grade. Basic unit stress 20,000 p.s.i.

EARTH EMBANKMENT shall be placed up to the elevation of the earth bench, after which the excavation shall be made for the abutments and piles driven.

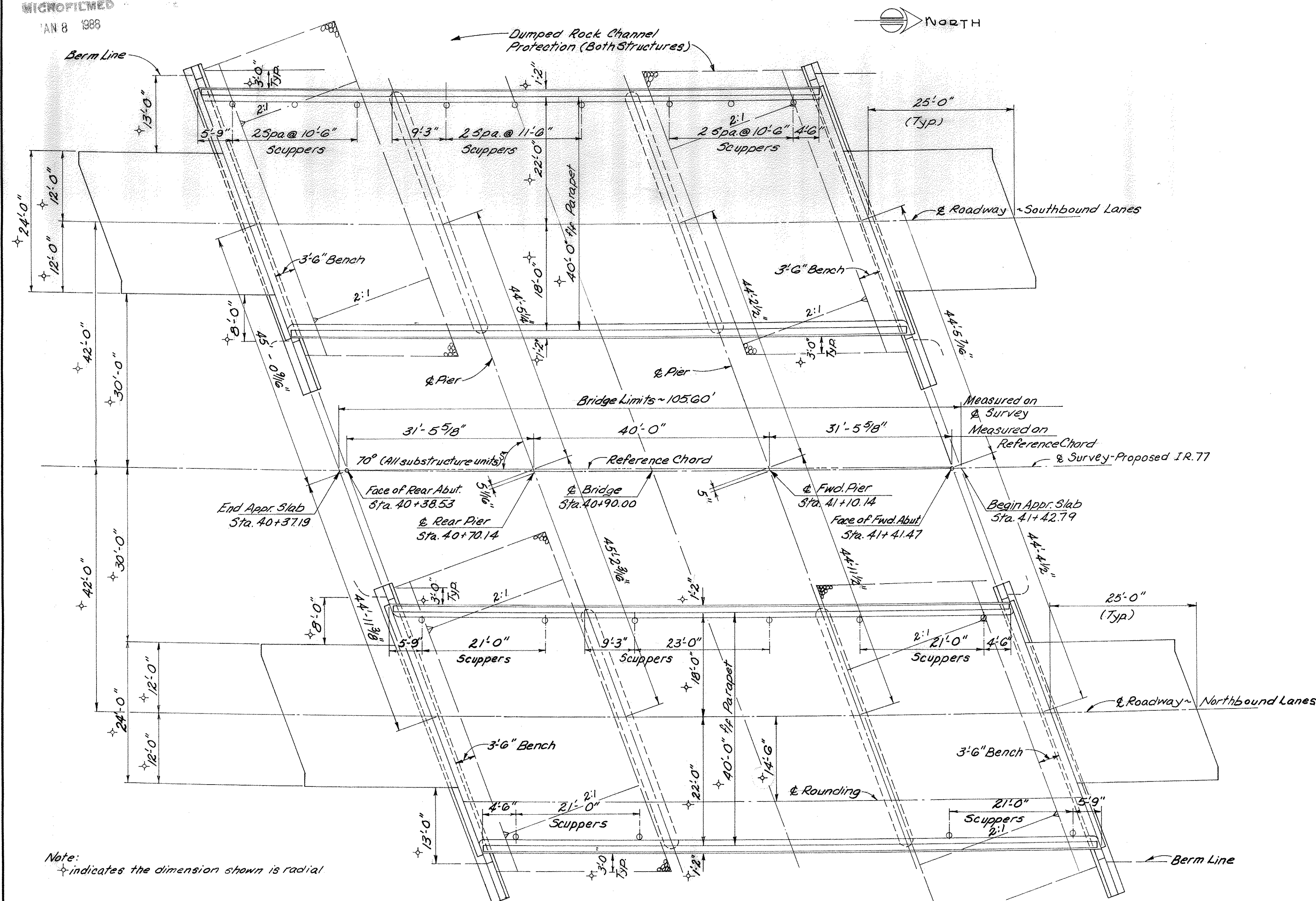
EXCAVATION QUANTITY includes the removal of fill material between the top of the earth bench and the bottom of the abutment crossbeam.

PILES shall be driven to firm contact with rock. If the length of penetration is approximately equal to the depth to rock according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. 507.05 is not less than the following value for a pile hammer of the indicated energy rating:

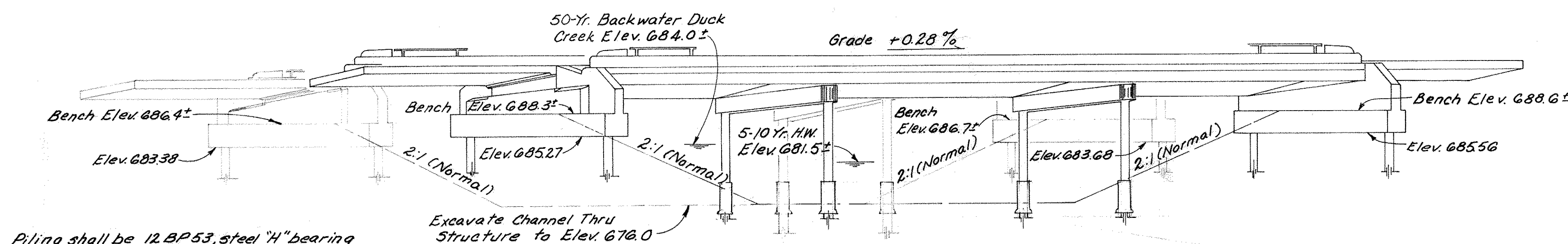
55 tons per pile using a 7,000 ft. lb. hammer
50 tons per pile using a 11,000 ft. lb. hammer

If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 31 tons per pile for the abutment piles and 35 tons per pile for the pier piles.

PIER PILE ENCASEMENT as shown in these Plans is required. The painting of the piles shall extend to low water elevation or, if the proposed surface of the ground is above low water, it shall extend to at least one foot below the proposed surface of the ground. Pile encasement shall be 21" Vitritified Sewer Pipe filled with concrete. The pile encasement shall extend 3'-0" above the flowline.



GENERAL PLAN



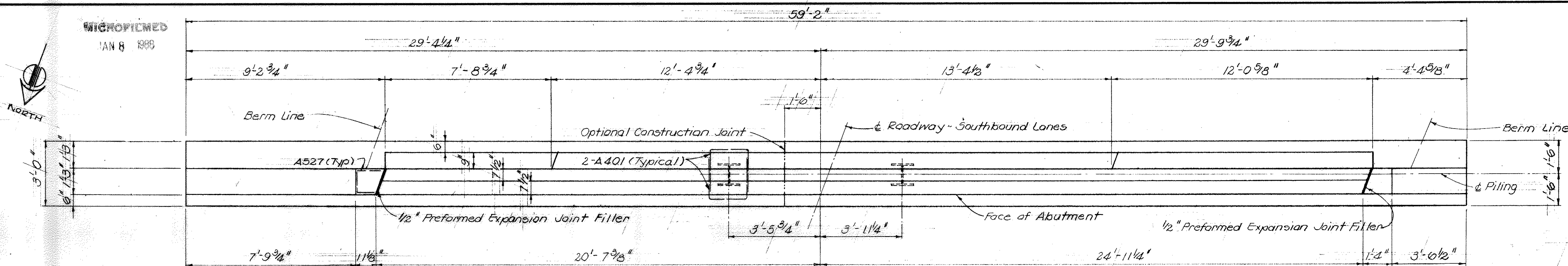
ELEVATION

Piling shall be 12 BP 53, steel "H" bearing piles

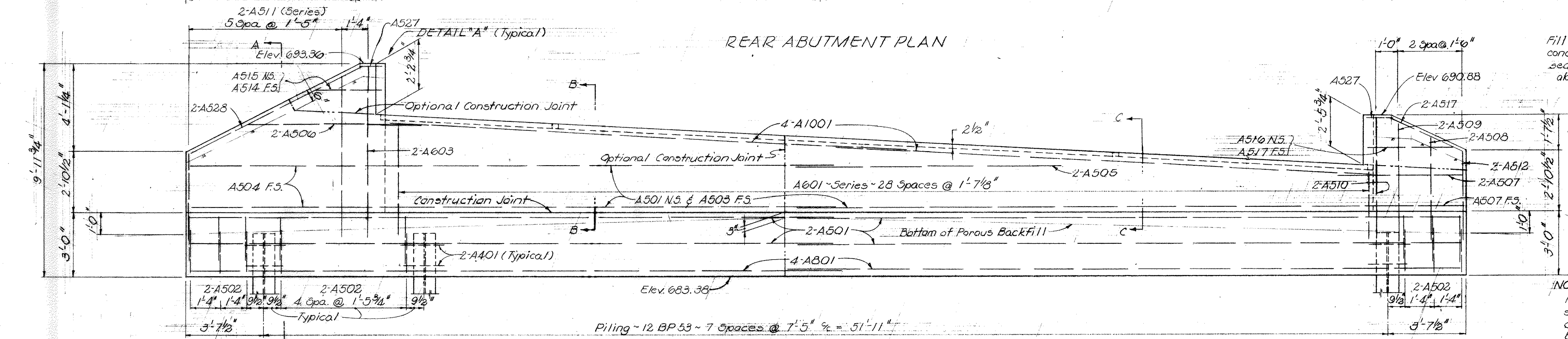
Piling not all shown

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES					
GENERAL PLAN & ELEVATION, AND GENERAL NOTES					
BRIDGE No. NOB-77-0076 L&R OVER BUFFALO RUN					
NOBLE COUNTY			STA. 40 + 37.19 STA. 41 + 42.79		
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
J.E.F.	J.E.F.	J.F.	J.V.G.	B.F.G.	5-19-65

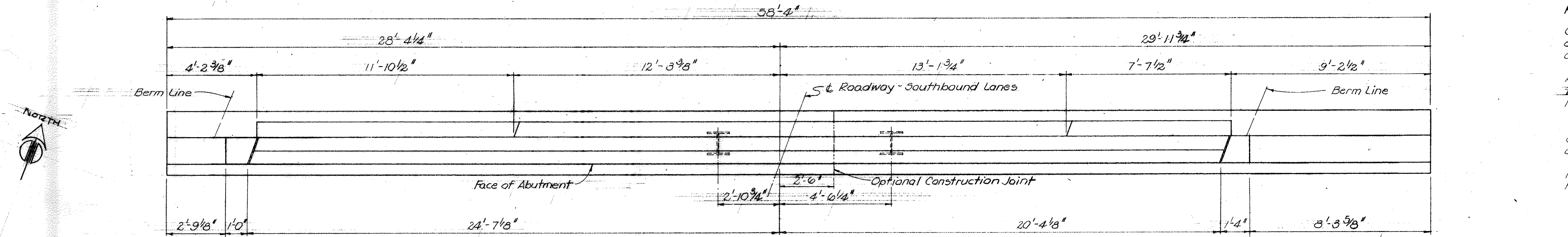
WAS-77-15.70
NOB-77-0.00



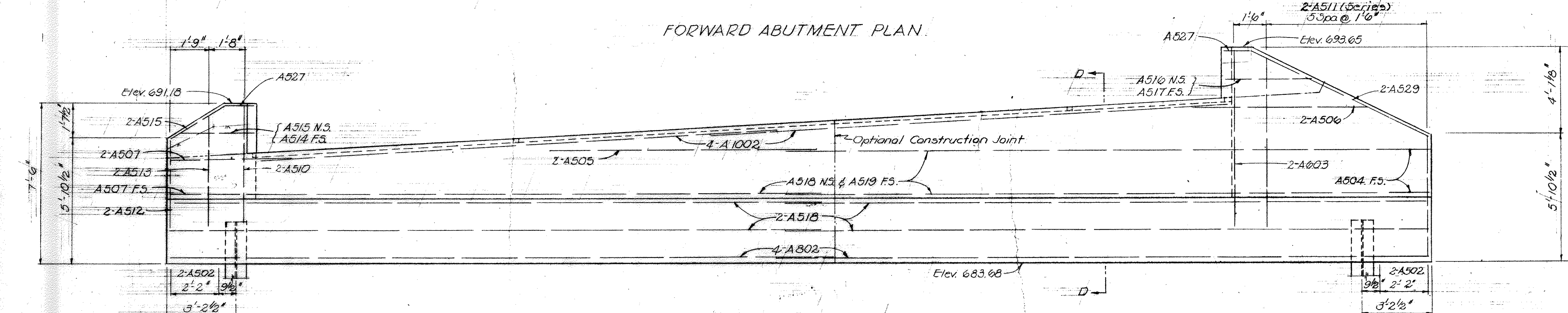
REAR ABUTMENT PLAN



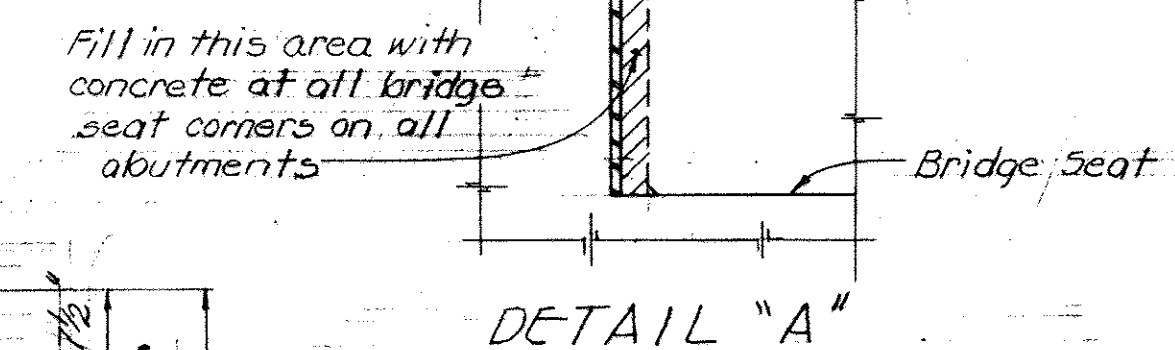
REAR ABUTMENT ELEVATION



FORWARD ABUTMENT PLAN



FORWARD ABUTMENT ELEVATION



DETAIL "A"

NOTES
POROUS BACKFILL shall extend upward to the approach slab and to the surface of the earth shoulders and outward to the surface of the embankment slopes. Excavation therefor, in excess of that required for construction of the footing, shall be considered as paid for in the bid price per Cu. Yd. paid for porous backfill.

CONCRETE shall be Class "E" and payment will be made on this basis, but Class "C" concrete may be used for any or all parts of the abutments.

ADDITIONAL DETAILS: For details of Section A-A, B-B, C-C and D-D, see ABUTMENT DETAILS, Sheet No. 322.

FORWARD ABUTMENT DETAILS, unless otherwise shown, are the same as REAR ABUTMENT DETAILS except opposite hand.

N.S. denotes near side
F.S. denotes far side

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
ABUTMENT DETAILS SOUTHBOUND LANES						
BRIDGE No. NOB-77-0070 L & R OVER BUFFALO RUN						
NOBLE COUNTY			STA. 40+37.19 STA. 41+42.79			
DESIGNED E F	DRAWN E F	TRACED	CHECKED JVG.	REVIEWED BFG	DATE 5-19-65	REVISED

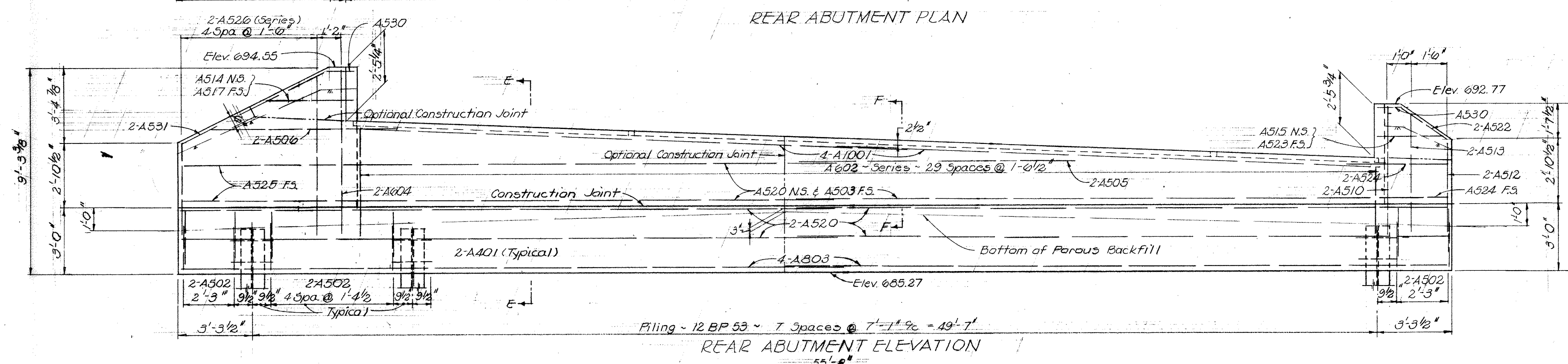
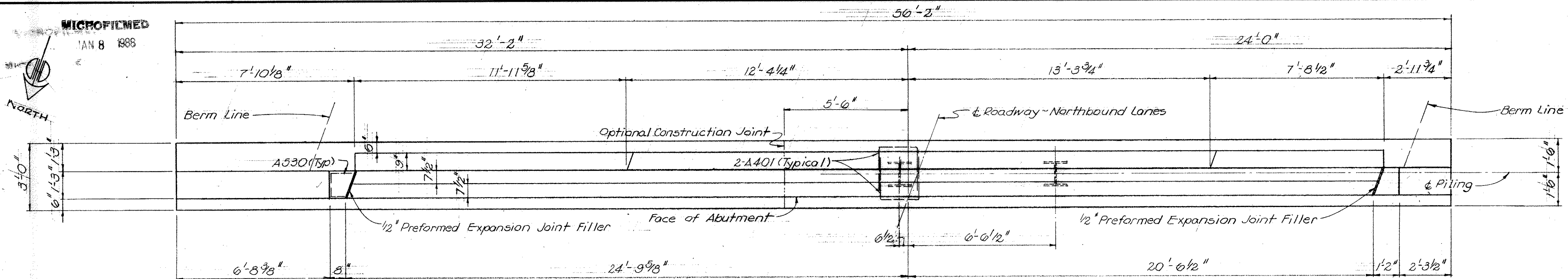
MICROFILMED

JAN 8 1988

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

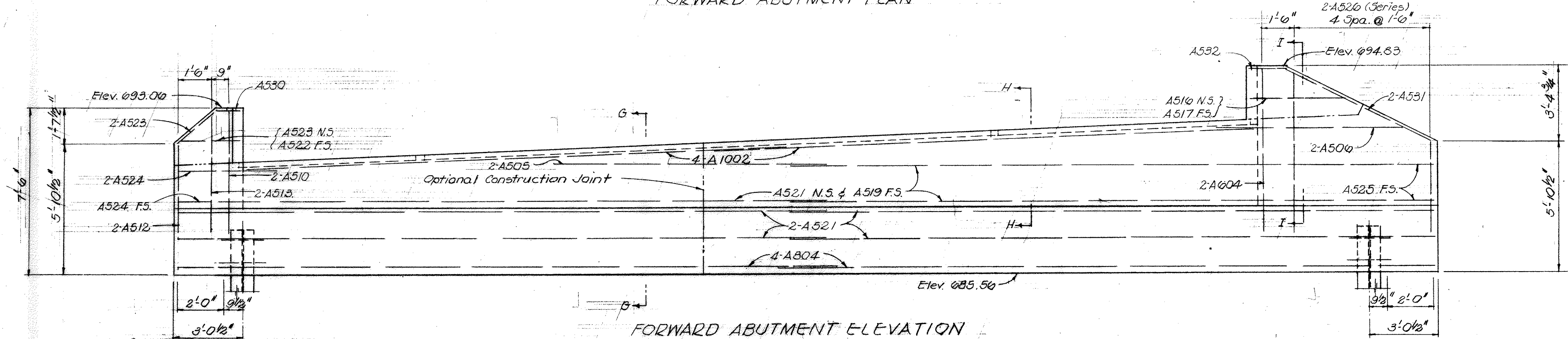
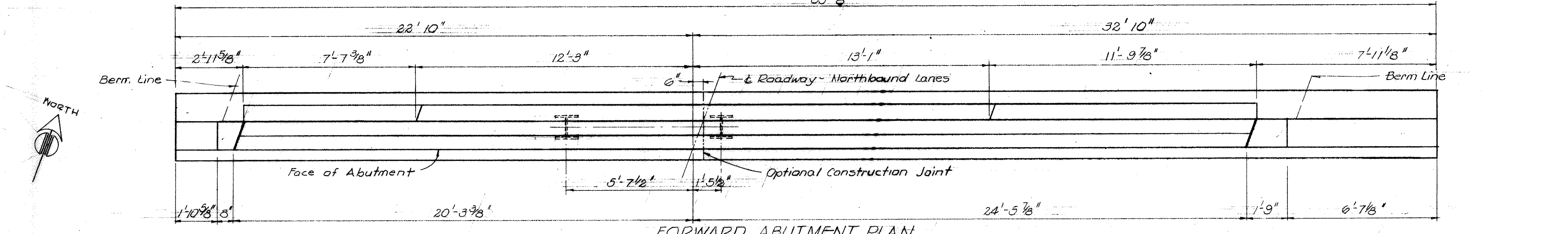
321

WAS-77-15.70
NOB-77-0.00



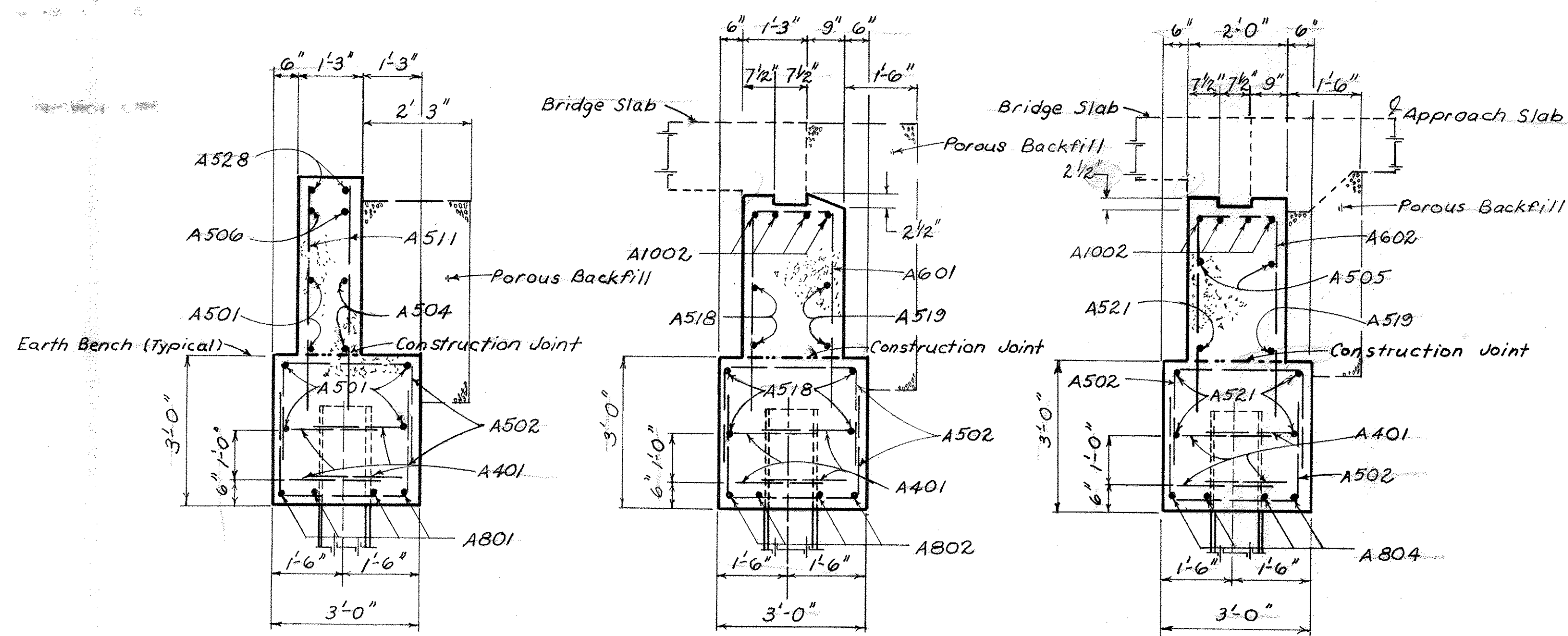
ADDITIONAL DETAILS: For additional notes and details see ABUTMENT DETAILS, SOUTHBOUND LANES, Sheet No. For Sections E-E, F-F, G-G, H-H and I-I, see ABUTMENT DETAILS, Sheet No. 322.

FORWARD ABUTMENT DETAILS, unless otherwise shown, are the same as REAR ABUTMENT DETAILS except opposite hand.



STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
ABUTMENT DETAILS NORTHBOUND LANES BRIDGE No. NOB-77-0076 L & R OVER BUFFALO RUN						
NOBLE COUNTY				STA. 40+37.19 STA. 41+42.79		
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.E.F.	J.E.F.		JVG.	BFG	5-19-65	

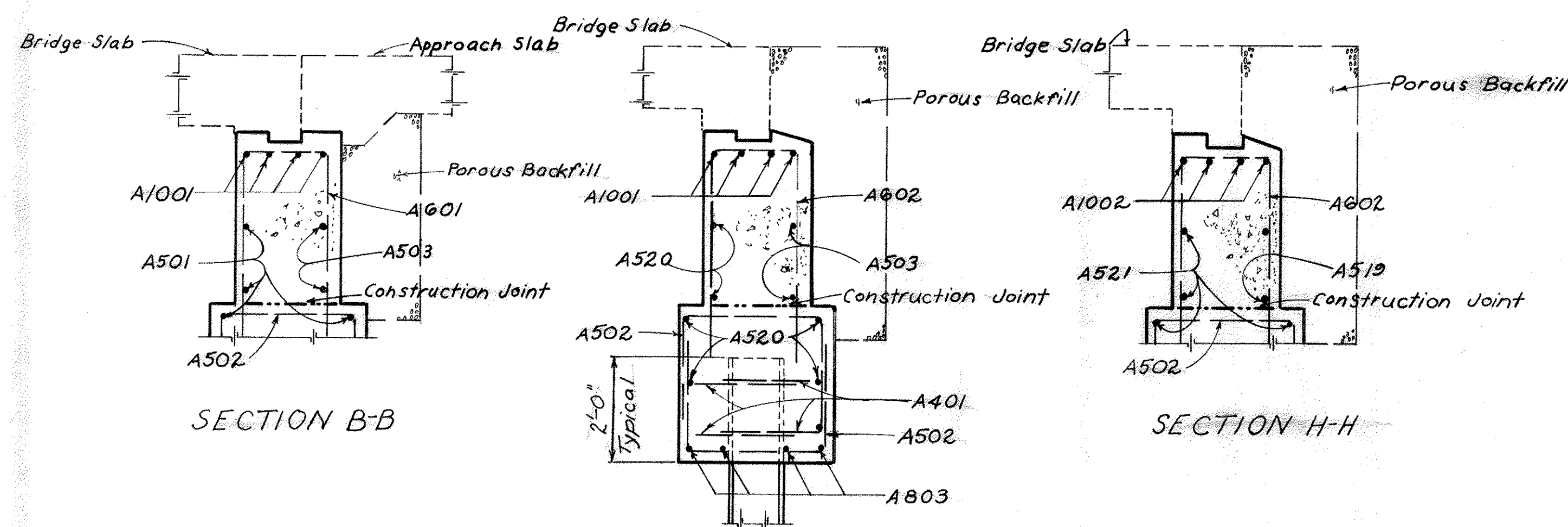
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SECTION A-A

SECTION D-D

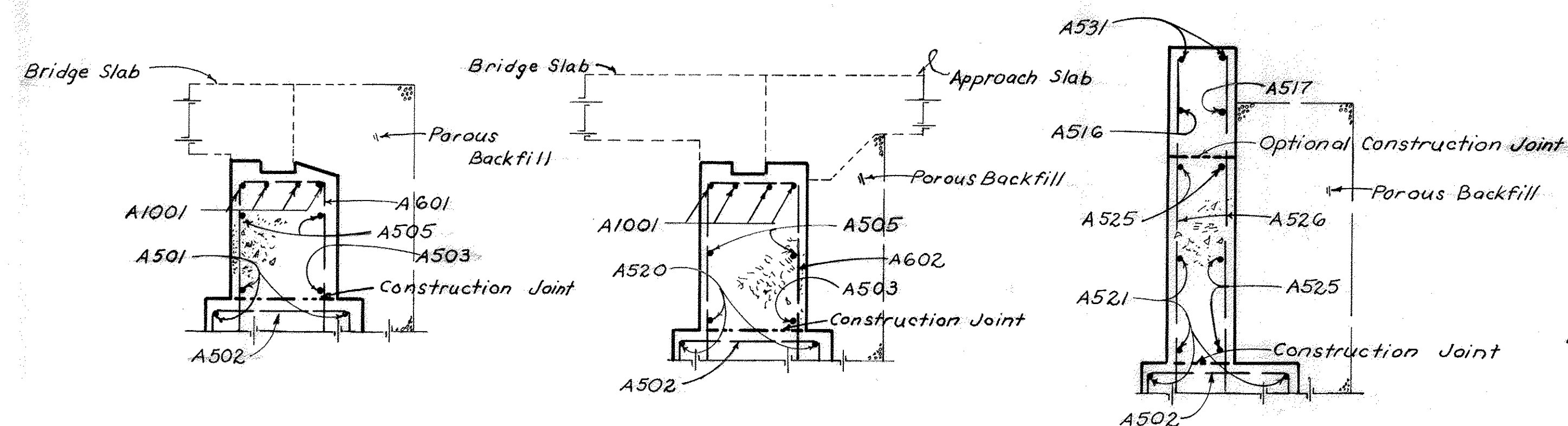
SECTION G-G



SECTION B-B

SECTION E-E

SECTION H-H



SECTION C-C

SECTION F-F

SECTION I-I

REINFORCING STEEL LIST

Mark	No.	Length	Weight	Shp
Superstructures				
S1001	210	37'-2"	33585	S
S1002	68	27'-3"	7973	B
S1003	68	24'-2"	7071	B
S1004	34	18'-8"	2,731	S
S1005	34	24'-4"	3,560	S
S1006	156	31'-6"	21,145	S
S1007	76	16'-6"	5,396	S
S1008	76	12'-11"	4,224	S
S901	40	22'-0"	2,992	S
S701	396	23'-2"	18,752	S
S601	80	20'-5"	2,453	S
S602	40	13'-1"	786	S
S603	268	23'-1"	9,292	S
S501	12	21'-2"	265	S
S502	24	23'-2"	580	S
S503	480	5'-9"	2,879	B
S504	480	2'-6"	1,252	B
S505	312	5'-7"	1,817	B
Railing				
R501	80	13'-3"	—	S
R502	18	18'-0"	—	S
R503	24	4'-2"	—	B
R504	16	5'-4"	—	B
R505	8	18'-2"	—	S
R506	8	18'-4"	—	S
Piers				
P1001	32	23'-7"	3,247	S
P901	32	22'-2"	2,412	S
P501	18	21'-5"	357	S
P502	136	9'-0"	1,277	B
P503	16	6'-4"	106	B
P401	144	5'-5"	521	B
Abutments				
A1001	16	24'-2"	1,664	S
A1002	16	23'-10"	1,691	S
A801	8	30'-8"	655	S
A802	8	30'-3"	646	S
A803	8	29'-2"	623	S
A804	8	28'-11"	618	S
2	7'-10"			
A601	Series of 29	to 13'-8"	937	B
2	7'-10"			
A602	Series of 30	to 11'-5 1/2"	869	B
A603	4	8'-4"	50	S
A604	4	7'-8"	46	S

Mark	No.	Length	Weight	Shp
Bending Diagrams				
Abutments (continued)				
A501	11	30'-3"	347	S
A502	316	6'-7"	2170	B
A503	6	23'-5"	147	S
A504	4	10'-10"	45	S
A505	8	17'-0"	142	S
A506	8	8'-2"	68	S
A507	6	5'-11"	37	S
A508	2	4'-9"	10	S
A509	2	5'-4"	11	S
A510	8	5'-7"	47	S
	4	3'-11"		
A511	Series of 6	to 7'-8"	145	S
A512	8	3'-11"	33	S
A513	6	5'-2"	32	S
A514	3	3'-4"	10	S
A515	5	2'-10"	15	S
A516	3	4'-2"	13	S
A517	6	3'-8"	23	S
A518	11	29'-10"	342	S
A519	6	23'-1"	144	S
A520	11	28'-9"	330	S
A521	11	28'-6"	327	S
A522	3	2'-8"	8	S
A523	4	2'-3"	9	S
A524	6	4'-6"	28	S
A525	4	9'-5"	39	S
	4	3'-11"		
A526	Series of 5	to 7'-3"	116	S
A527	4	2'-7"	11	B
A528	2	8'-7"	18	S
A529	2	9'-0"	19	S
A530	3	2'-1"	7	B
A531	4	7'-2"	30	S
A532	1	3'-5"	4	B
A401	128	5'-5"	463	B
Replacement Bars				
RE1001	5	7'-2"	—	S
RE901	1	6'-10"	—	S
RE801	1	6'-6"	—	S
RE701	1	6'-2"	—	S
RE601	1	5'-11"	—	S
RE501	1	5'-7"	—	S
RE401	1	5'-5"	—	B

NOTES

Dimensions and details for Section I-I are the same as those shown for Section A-A unless otherwise indicated.

Dimensions and details for Sections C-C, E-E and H-H are the same as those shown for Section D-D unless otherwise indicated.

Dimensions and details for Sections B-B and FF are the same as those shown for Section G-G unless otherwise indicated.

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example, A801 is a No. 8 size bar and A1001 is a No. 10 size.

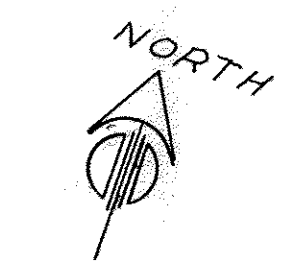
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

ABUTMENT DETAILS &
REINFORCING STEEL LIST
BRIDGE No. NOB-77-0076 L&R
OVER BUFFALO RUN

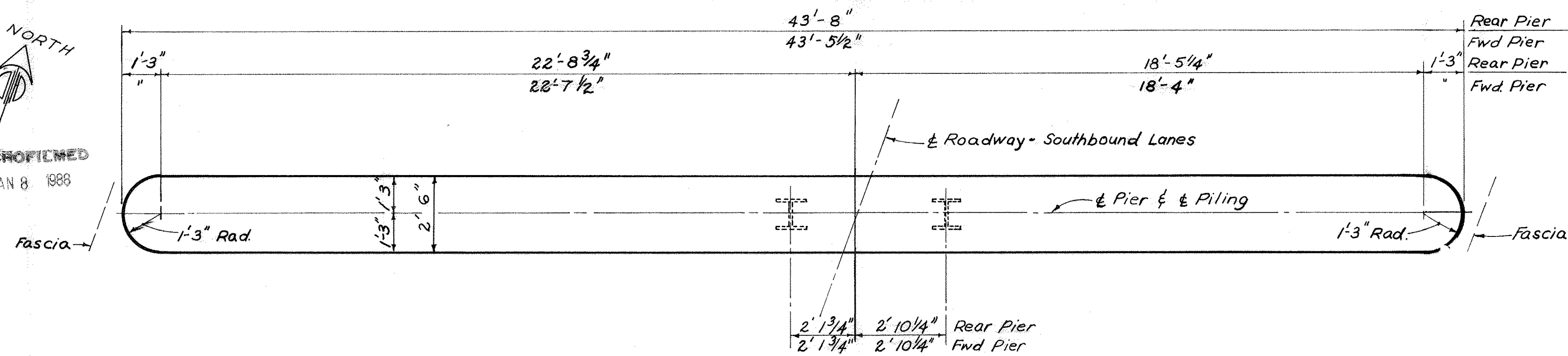
NOBLE COUNTY

STA. 40+37.19
STA. 41+42.79

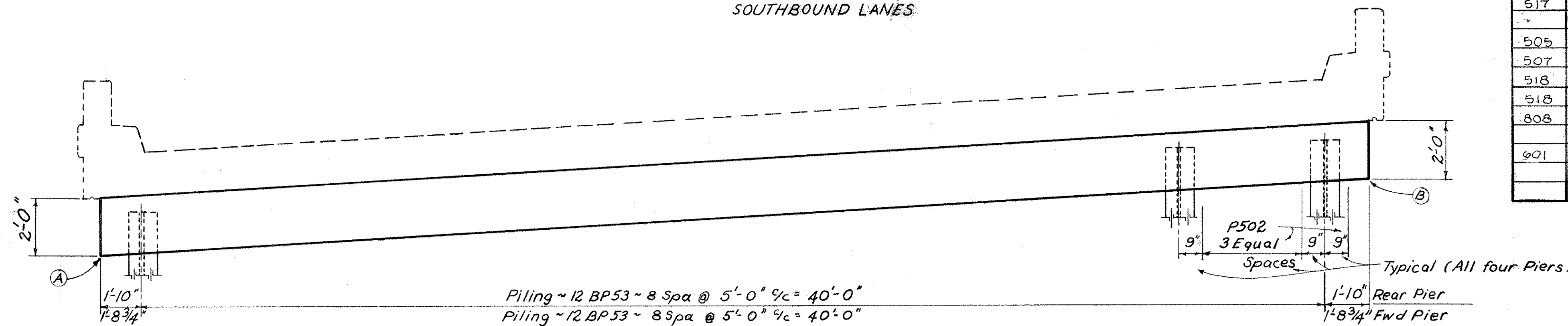
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J E F	J E F	JVA	J.V.G.	BFG	5-19-65	



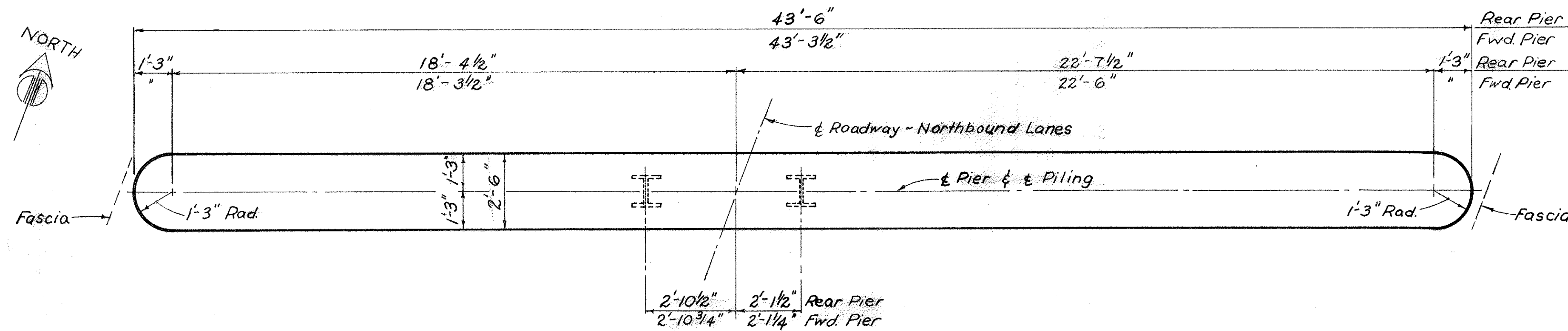
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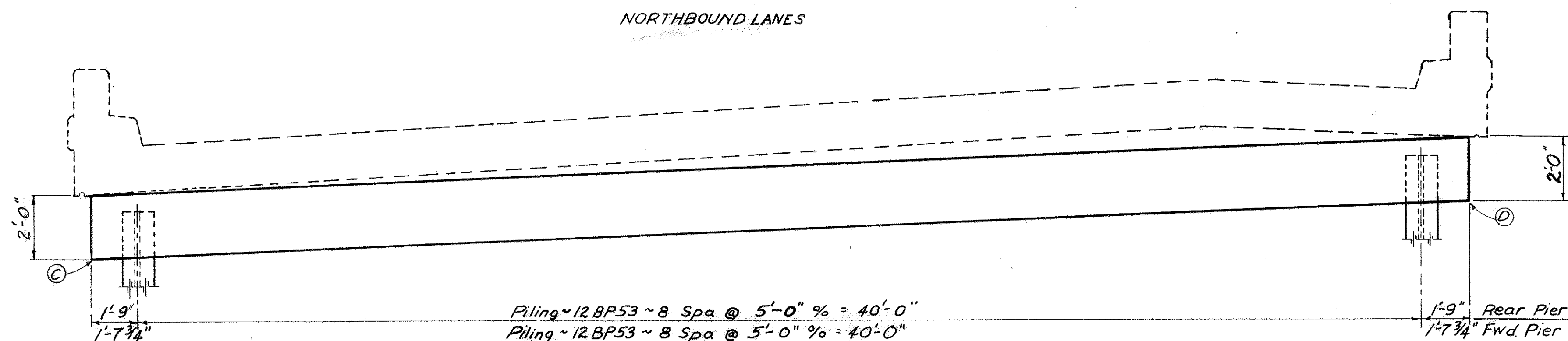
PIER PLAN
SOUTHBOUND LANES



PIER ELEVATION
SOUTHBOUND LANES



PIER PLAN
NORTHBOUND LANES



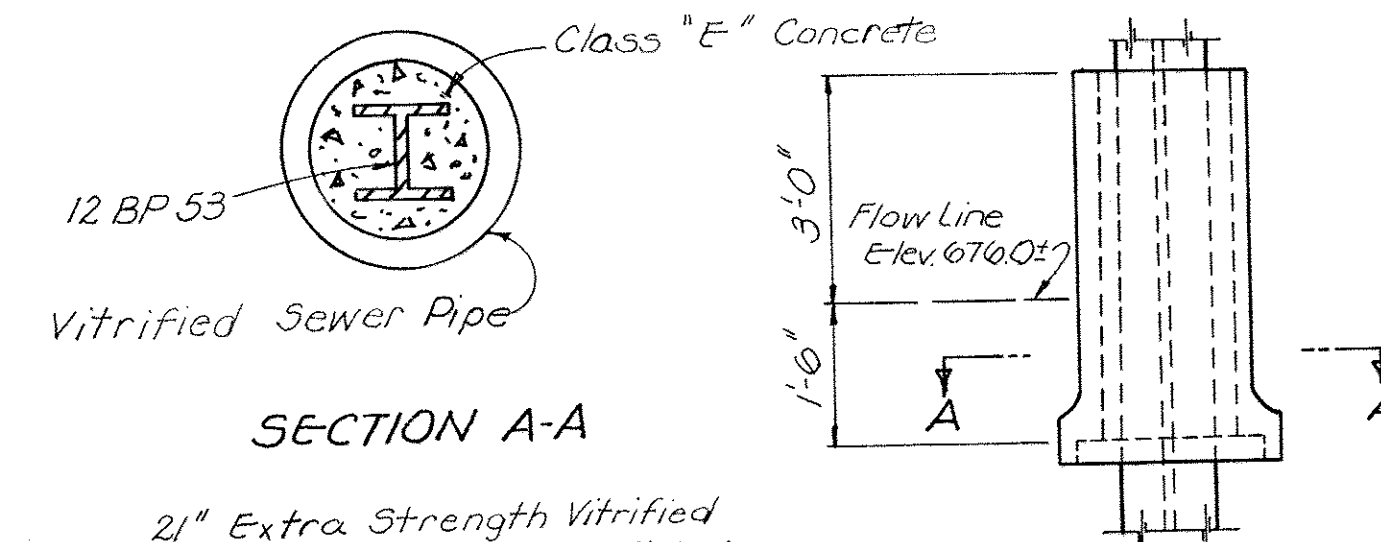
PIER ELEVATION
NORTHBOUND LANES

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

323

WAS-77-15.70
NOB-77-0.00

ESTIMATED QUANTITIES									
Item	Total	Unit	Description	Superstr	Piers	Abut.	Gen'l		
503	132	Cu.Yds.	Unclassified excavation			132			
203	518.2	Cu.Yds.	Excavation not including embankment construction (Channel).				518.2		
511	558	Cu.Yds.	Class "C" concrete, superstructures and pier caps	526	32				
511	128	Cu.Yds.	Class "E" concrete, abutments			128			
509	147,612	Lbs.	Reinforcing steel	126,753	7920	12939			
510	26	Sq.Ft.	1/2 Preformed expansion joint filler, AASHTO, M-155.			26			
517	418.50	Lin.Ft.	Railing, Type 1 and end posts	418.50					
505	Lump	Sum	First test pile				Lump		
507	1940	Lin.Ft.	Steel piles, 12 BP53, including encasement.		1080	860			
518	56	Cu.Yds.	Porous backfill			56			
518	19	Each	Scuppers	19					
808	55.8	Each	Water-reducing, set-retarding admixture	526	32				
901	72.7	Cu.Yds.	Dumped rock channel protection				72.7		



SECTION A-A

21" Extra Strength Vitriified
Sewer Pipe, Sec. 106.08, filled
with concrete around pier piles.
Include with piles for payment.

PILE ENCASEMENT
(Typical for all pier piles)

ELEVATIONS				
Location	Southbound Lanes	Northbound Lanes		
	A	B	C	D
Rear Pier	686.52	689.19	688.40	690.22
Forward Pier	686.64	689.30	688.52	690.33

Notes
REFERENCE shall be made to Standard Drawing P-1-54 for details
and notes not shown on this sheet.

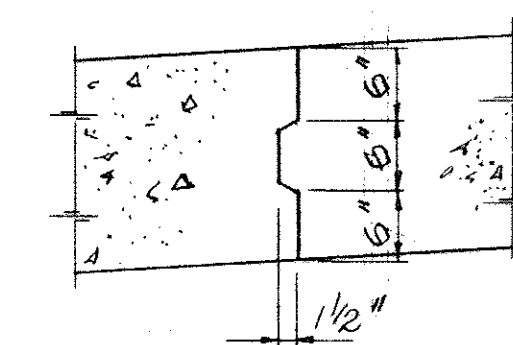
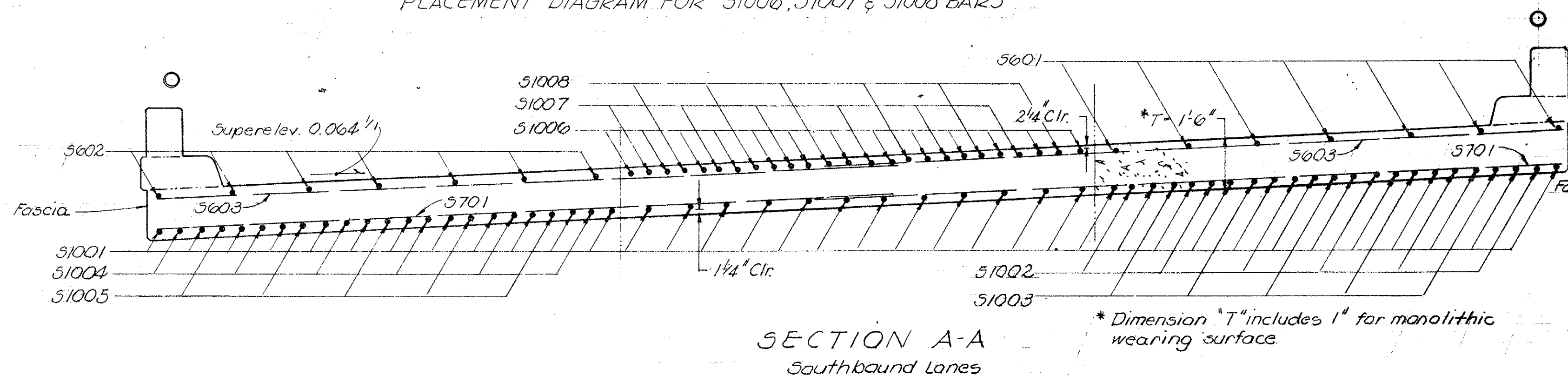
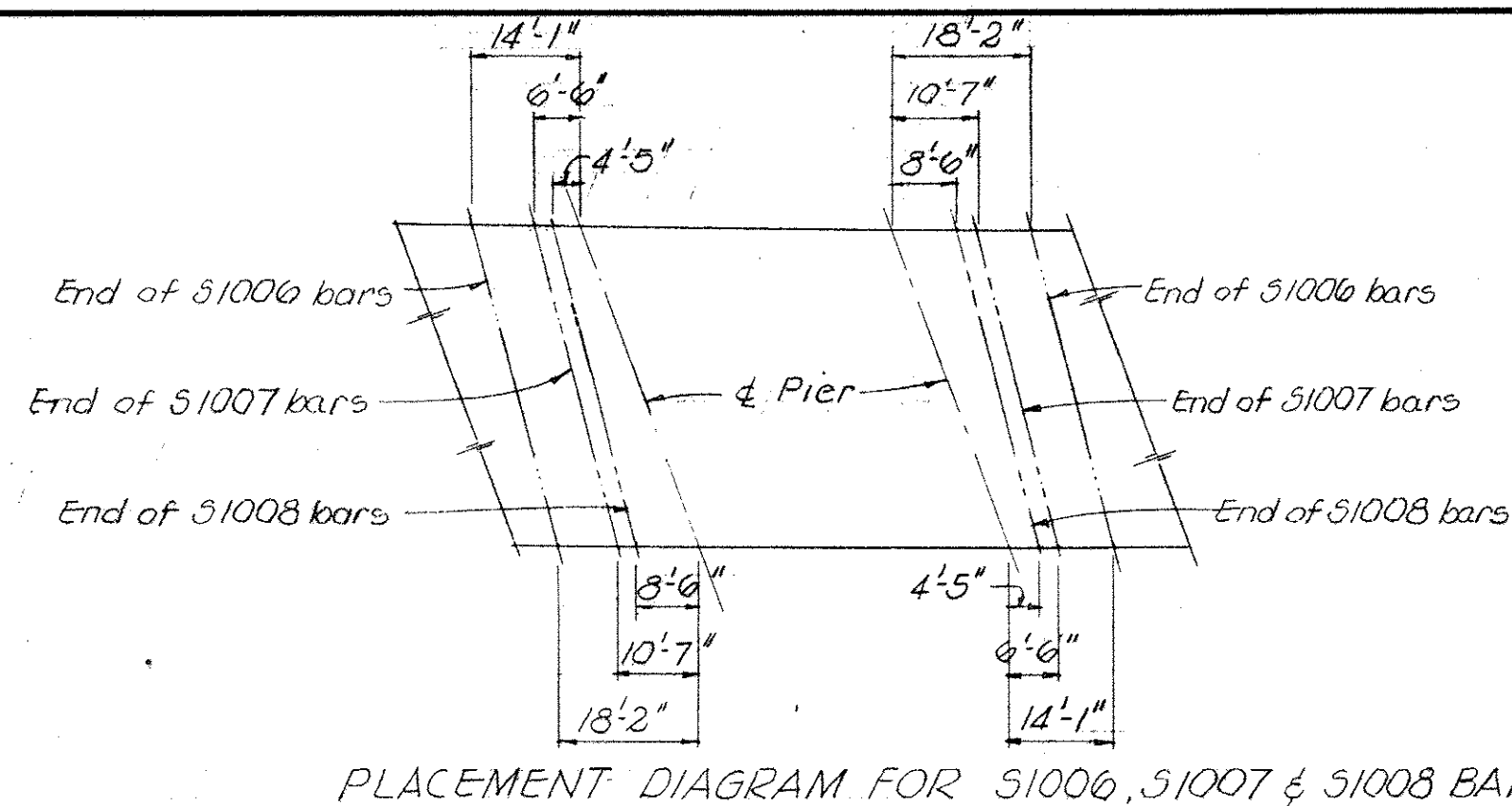
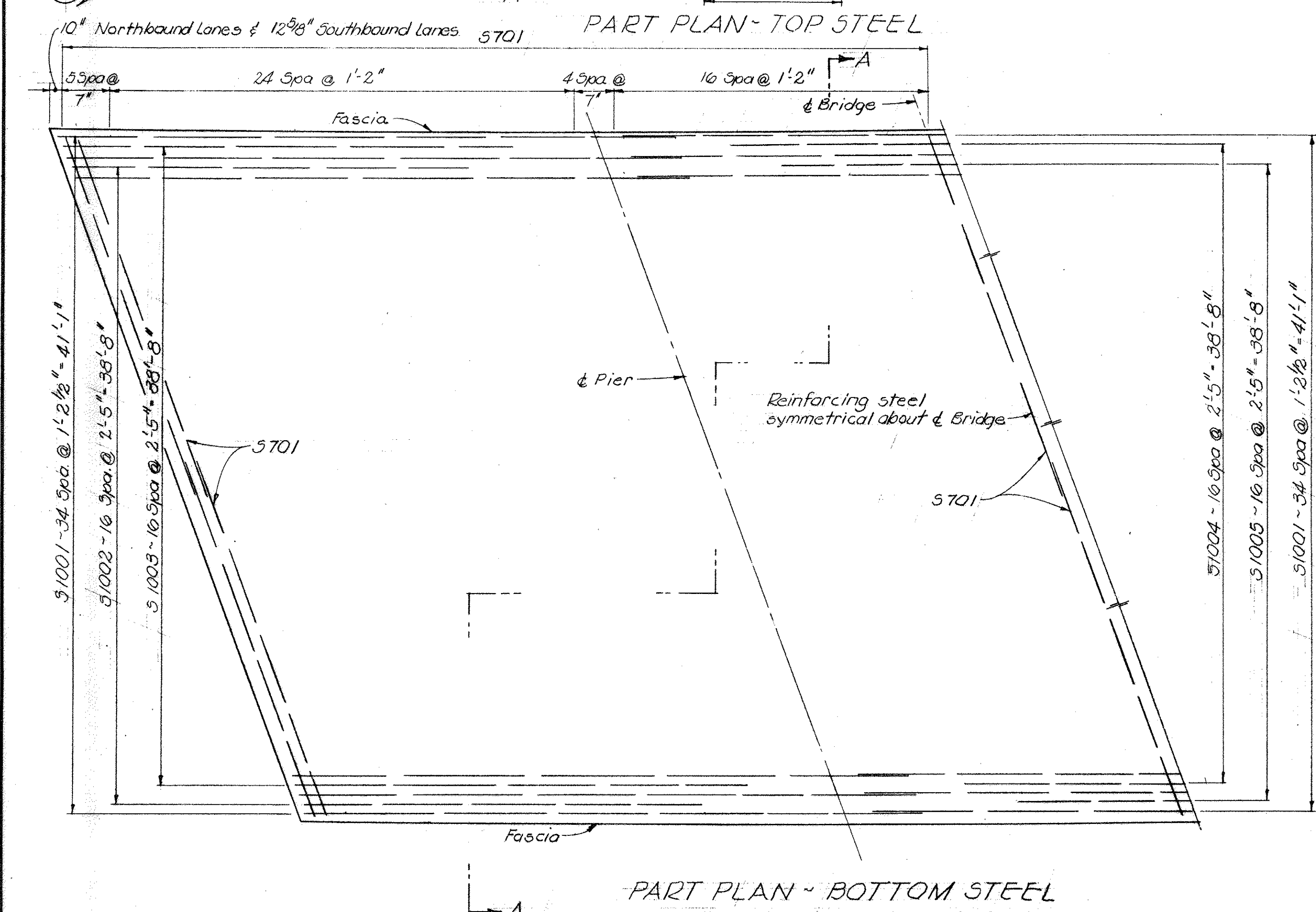
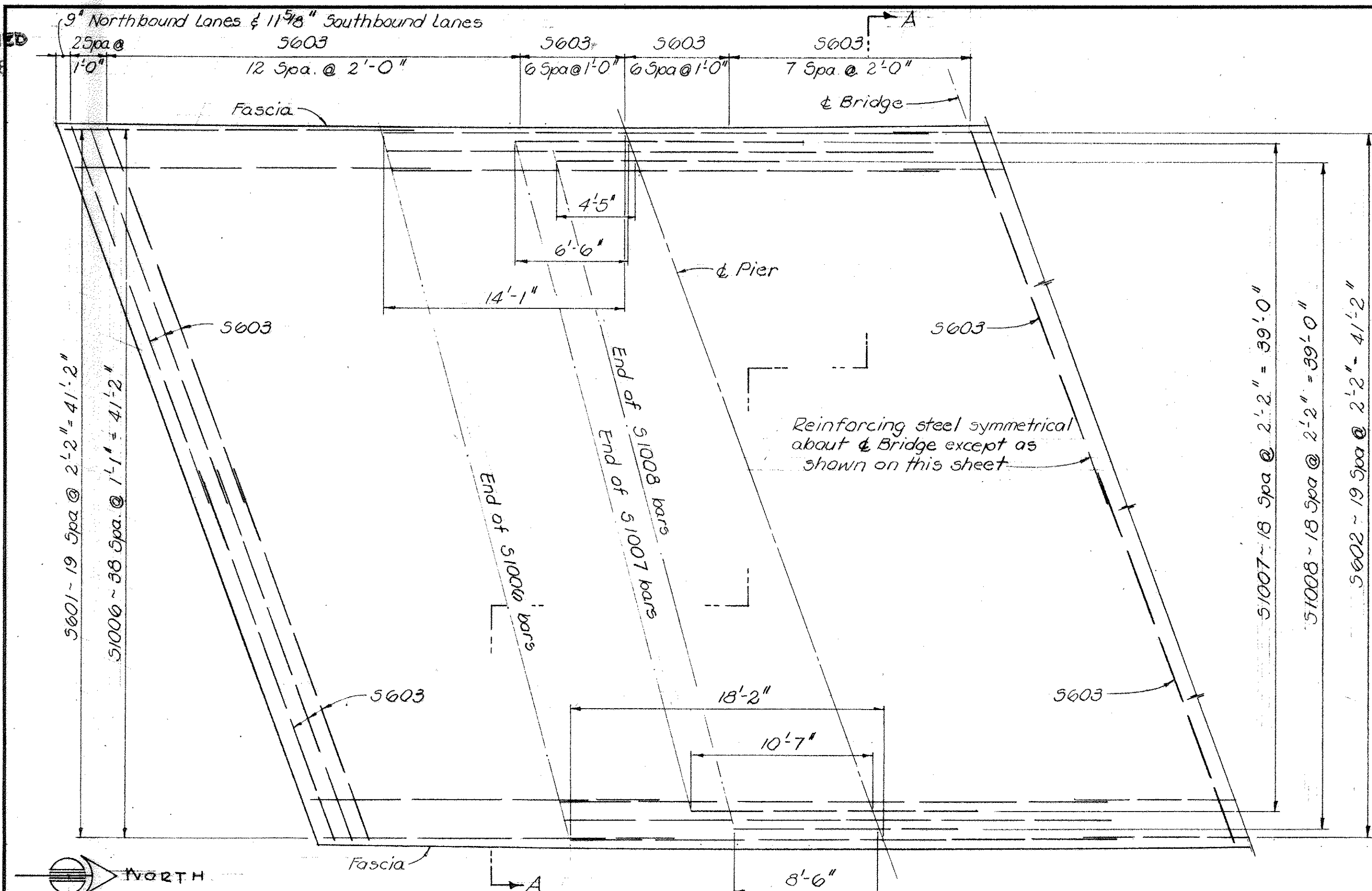
- Lap P901 bars 2'-10" minimum
- Lap P501 bars 1'-7" minimum
- Lap P1001 bars 3'-2" minimum

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

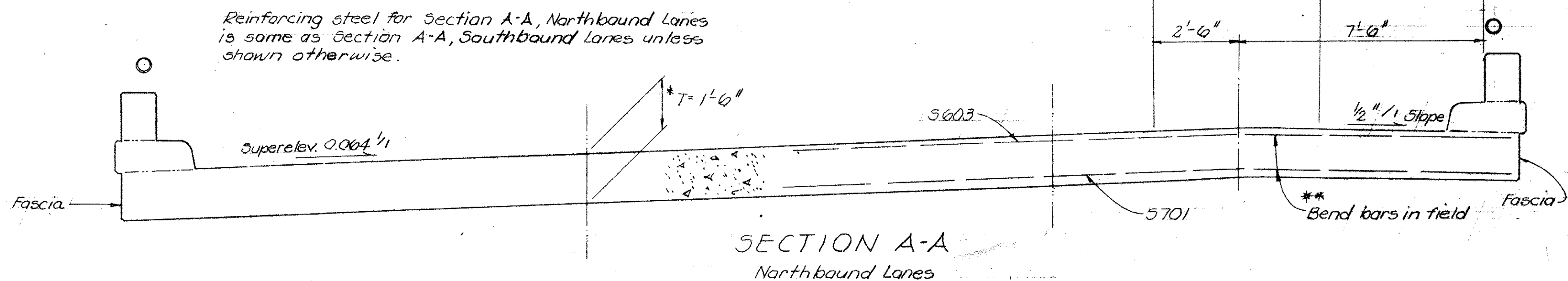
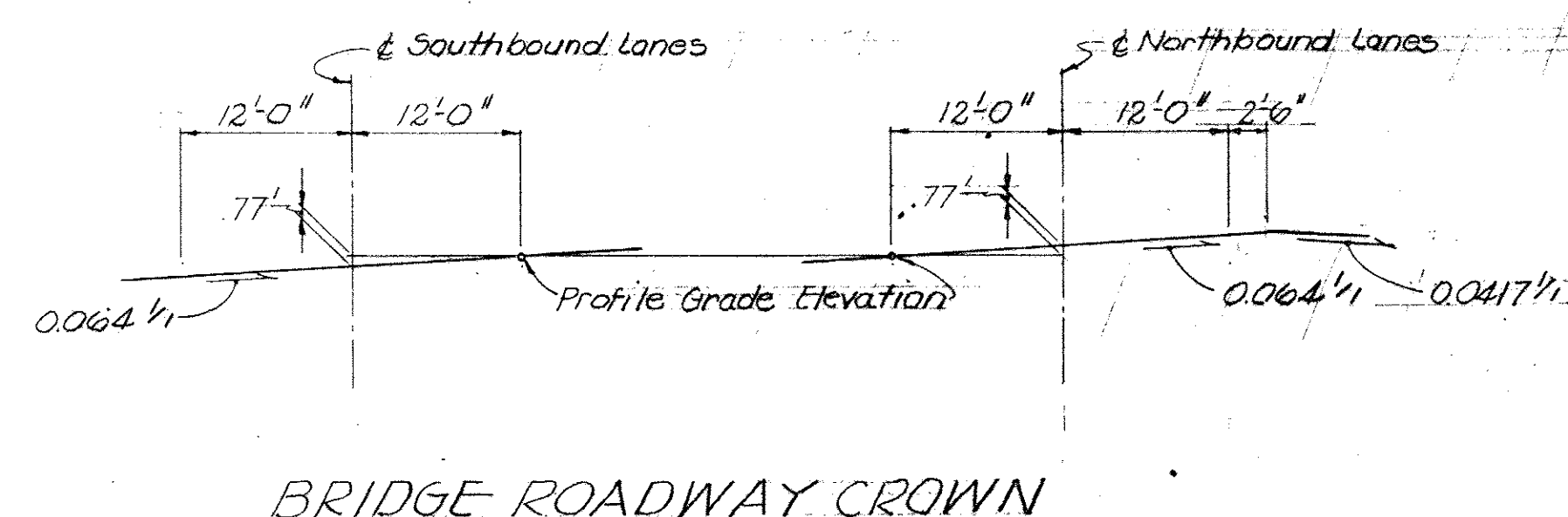
PIER DETAILS &
ESTIMATED QUANTITIES
BRIDGE No. NOB-77-0076 L&R
OVER BUFFALO RUN
NOBLE COUNTY
STA. 40+37.19
STA. 41+42.79

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.E.F.	J.E.F.	J.V.A.	J.V.G.	BFG	5-19-65	

WAS-77-15.70
NOB-77-0.00



CONSTRUCTION JOINT



** PAYMENT for the field bending of 5601 and 5701 shall be included in Item 509.

CONCRETE shall be Class "C"

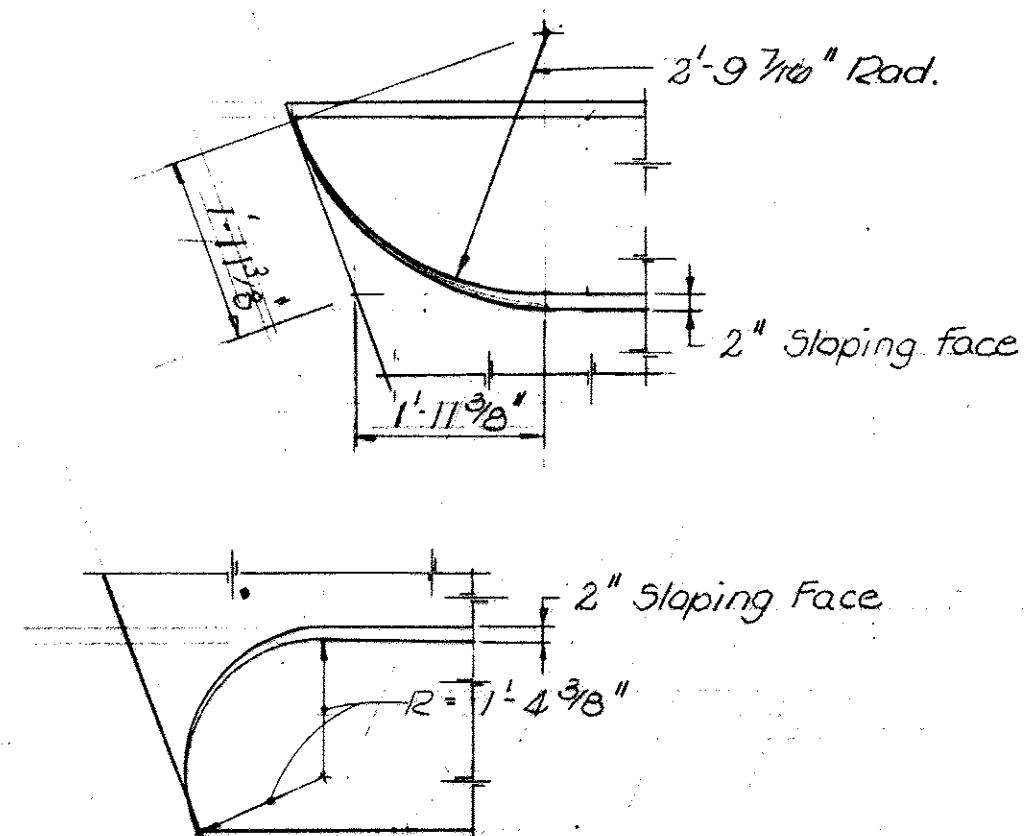
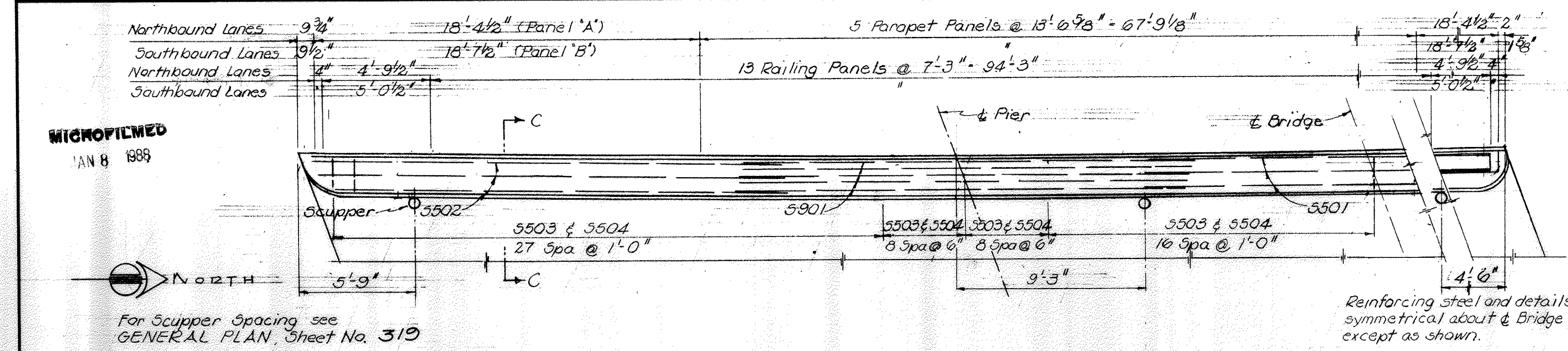
CONSTRUCTION JOINT: One construction joint in the bridge slab shall be placed on the transverse centerline of the middle span or 1'-0" off the transverse centerline if necessary to miss railing posts and transverse reinforcing bars. One longitudinal joint on the centerline of roadway will be permitted. A horizontal construction joint shall be placed between each curb and the top of the slab.

CAMBER of 1/800 span shall be provided in each span to allow for dead load deflection. This is the amount of camber required before the falsework is released. To obtain this, proper allowance shall be made for the deflection of falsework members.

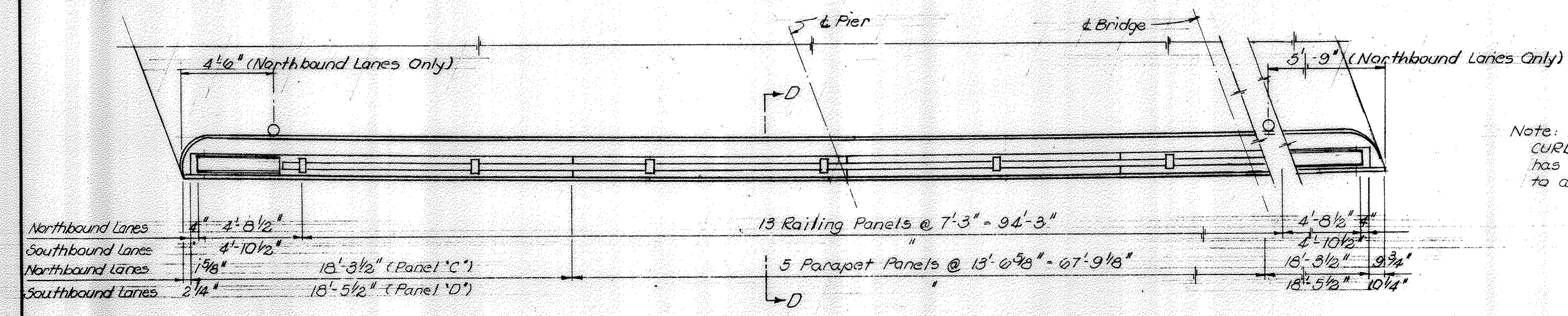
STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES						
SUPERSTRUCTURE DETAILS						
BRIDGE No. NOB-77-0070 L&R						
Over BUFFALO RUN						
NOBLE COUNTY			STA. 40+37.19 STA. 41+42.79			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J E F	J E F		JVG.	BFG	5-19-65	

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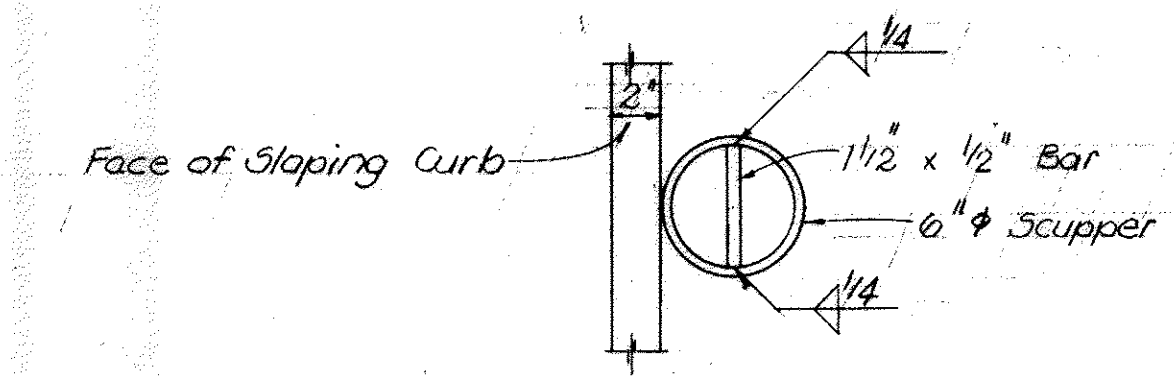
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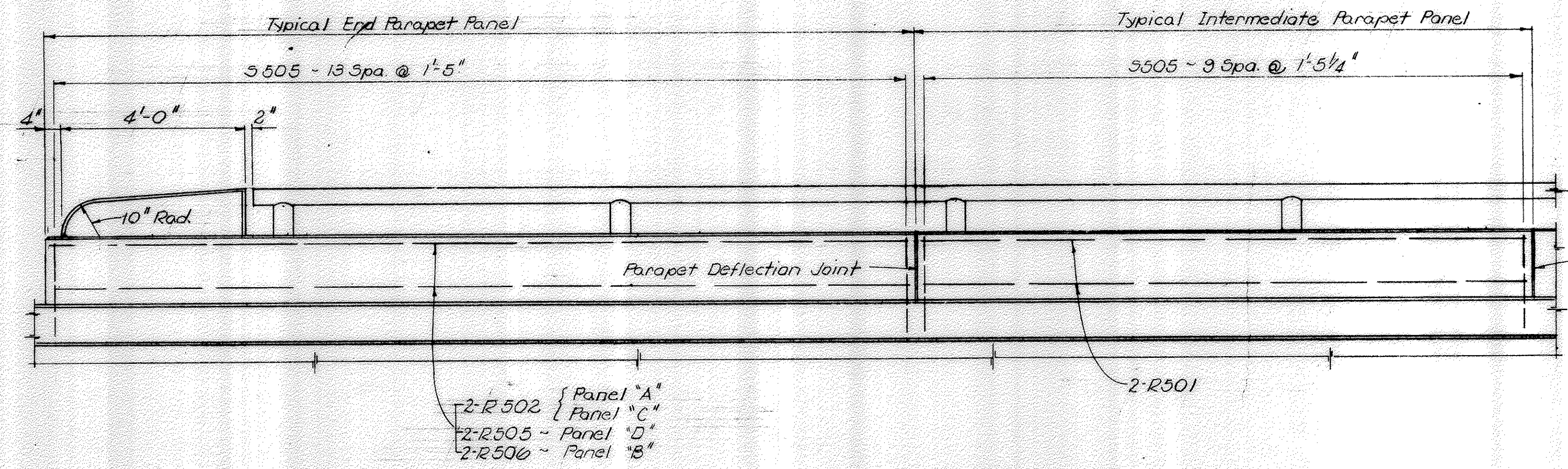
Note:
CURBS shall be placed after the shoring under the slab has been released sufficiently to permit the slab spans to attain full dead load deflection.



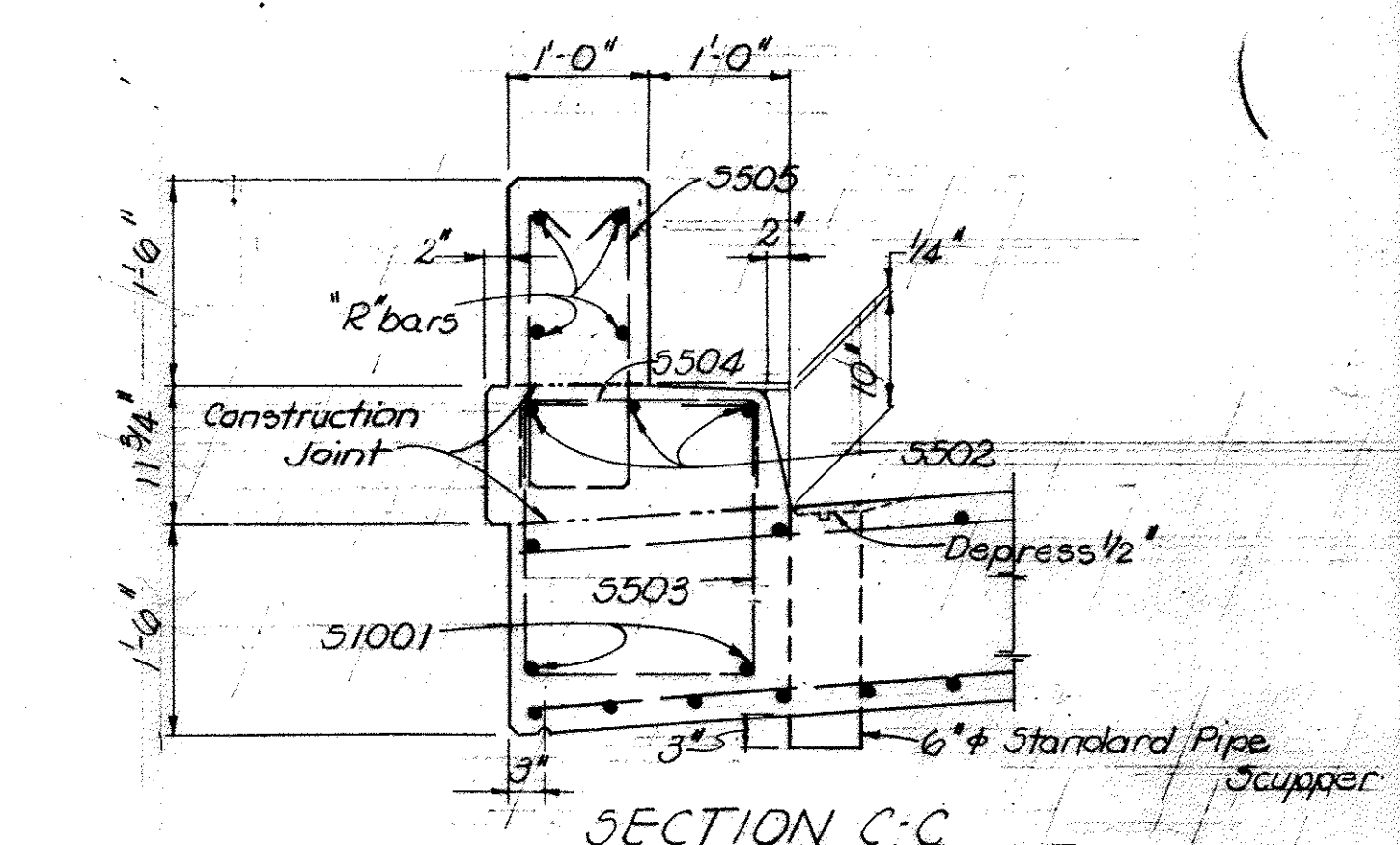
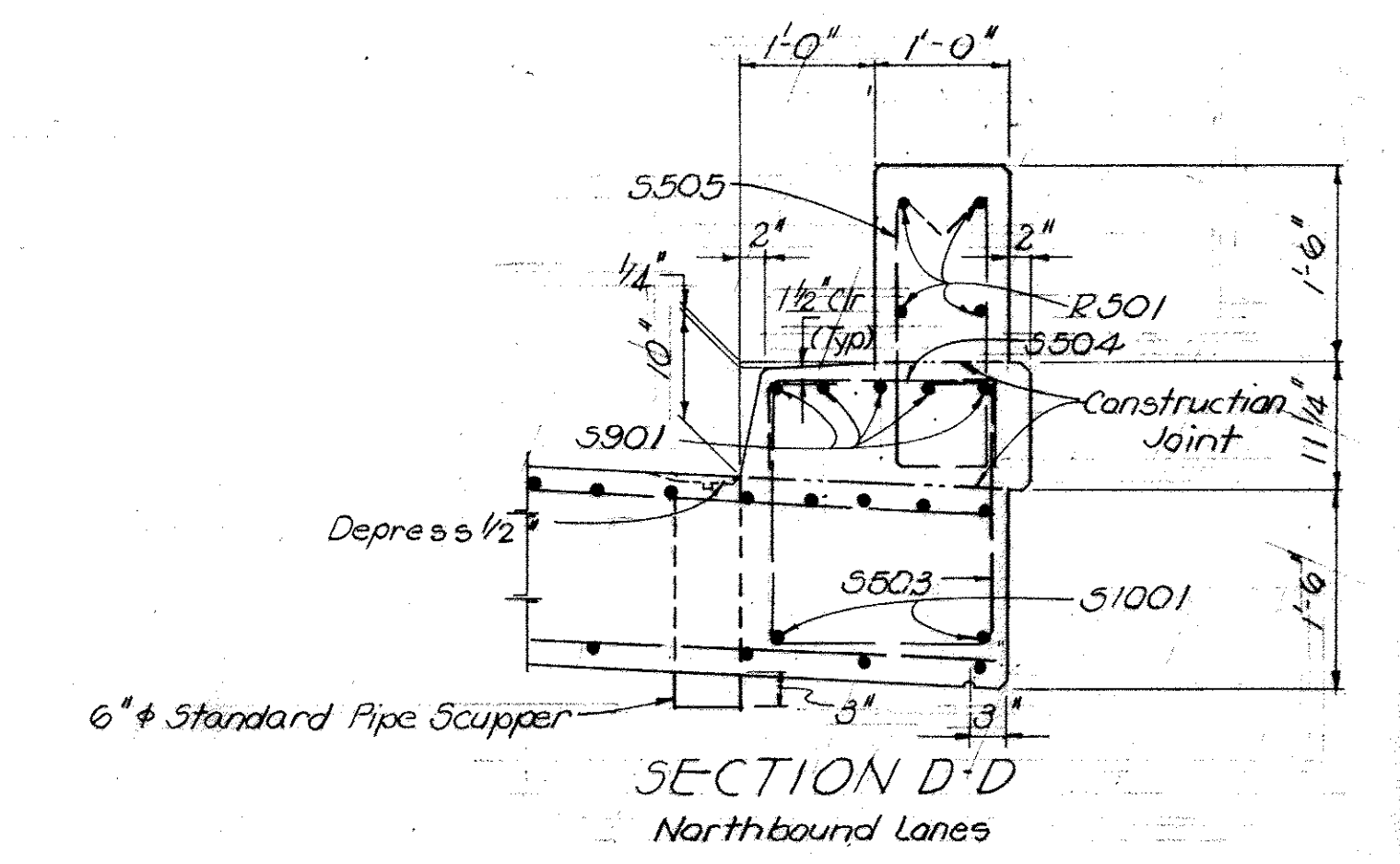
PART PLAN - CURB STEEL & RAILING



SCUPPER PLAN



PART ELEVATION - PARAPET
For additional railing details see Standard Drawing BR-1-65



Reinforcing steel for Section D-D, Southbound Lanes is same as Section D-D, Northbound Lanes.

