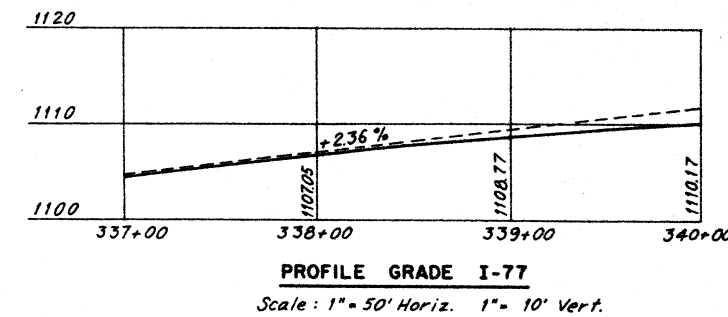
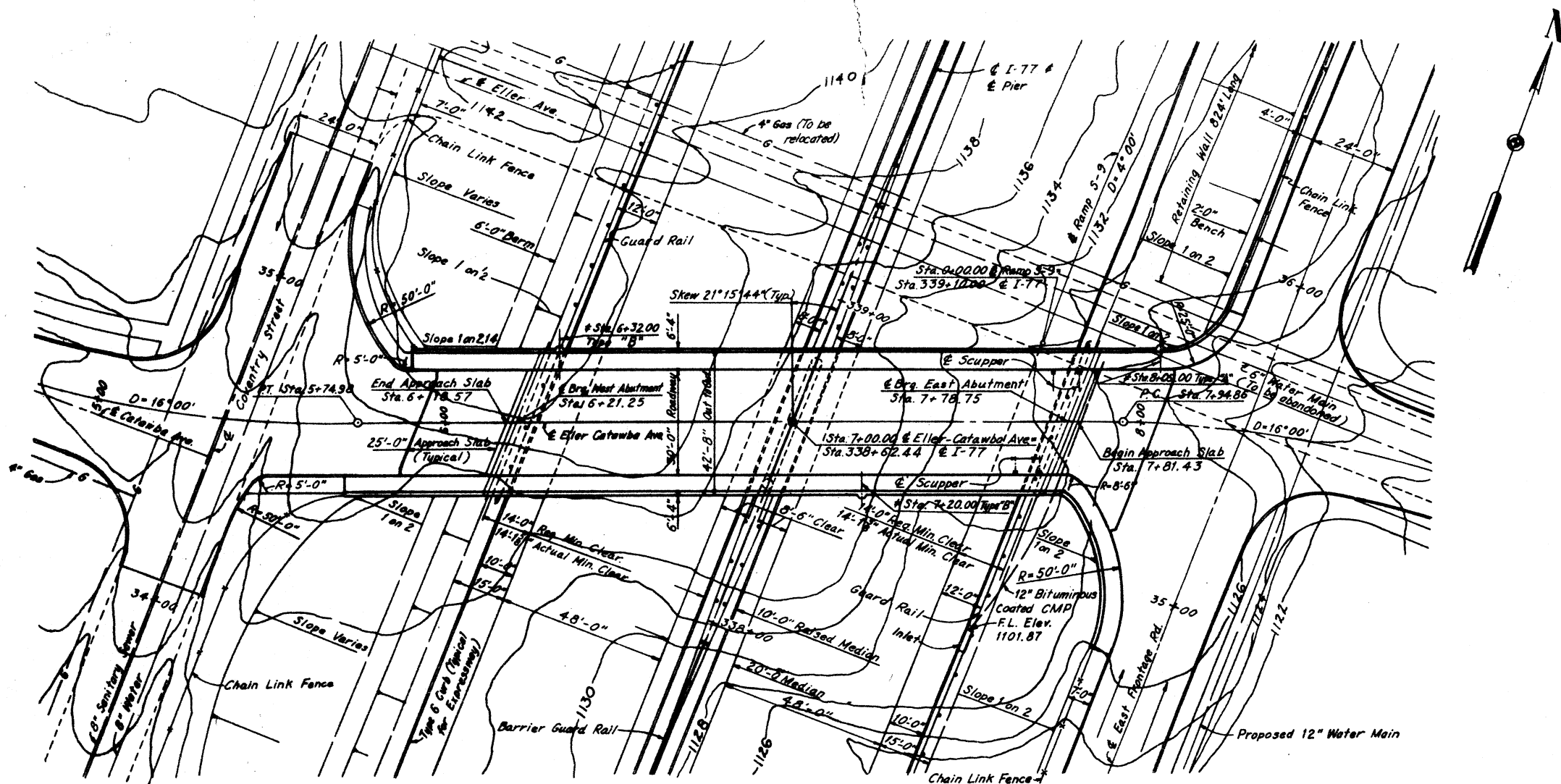


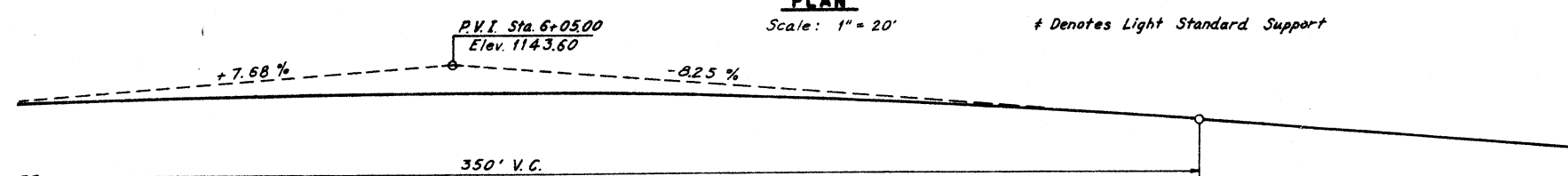
FED RD DIVISION	STATE	PROJECT	
2	OHIO		

113
147

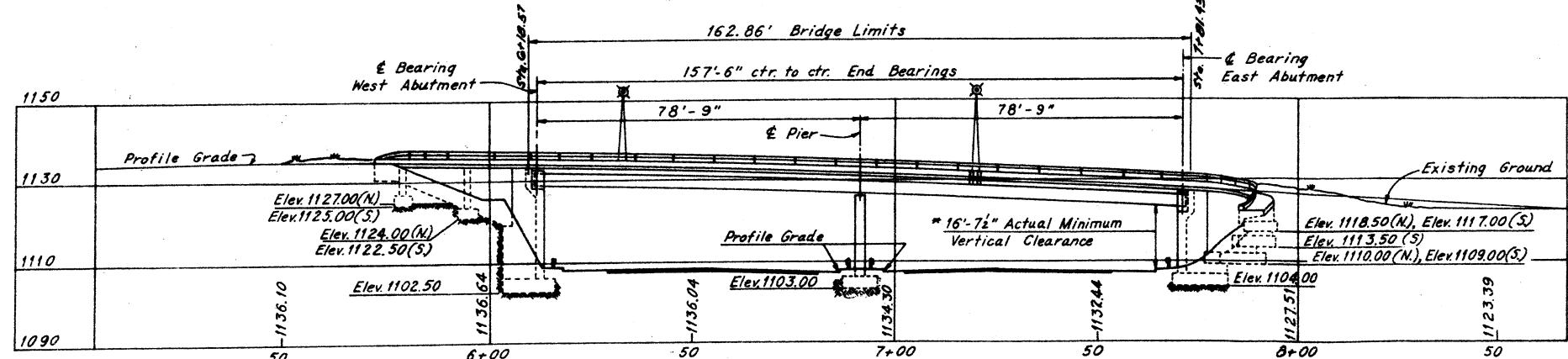
SUMMIT COUNTY
CITY OF AKRON
EXPRESSWAY SYSTEM
SUM-8-10.00



PLAN
Scale: 1" = 20'
Denotes Light Standard Support



PROFILE GRADE ELLER-CATAWBA AVENUE



Note: Rock lines shown are determined by interpolation of boring information and are approximate only.

ELEVATION
Scale: 1" = 20'

*16'-4" required minimum vertical clearance.
Point of actual minimum vertical clearance occurs at north exterior beam and east edge of Northbound I-77 paved shoulder.

Prop. 252(64)

PROPOSED STRUCTURE	
TYPE: Continuous steel beam with reinforced concrete deck and substructure.	
SPANS: 2 @ 78'-9"	
ROADWAY: 30'-0" face to face of curbs with two 5'-2" sidewalks.	
LOADING: CF 130 (57)	
SKEW: 21°15'44" Left forward.	
WEARING SURFACE: 1" Monolithic Concrete.	
ALIGNMENT: Tangent	
APPROACH SLABS: AS-1-54 (25'-0" Long)	

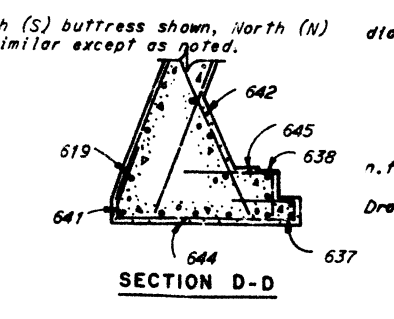
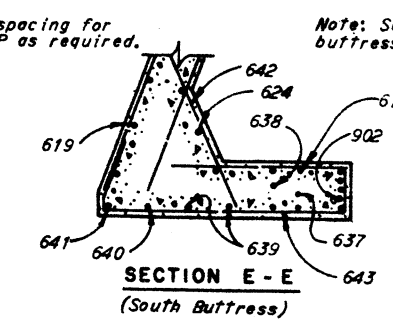
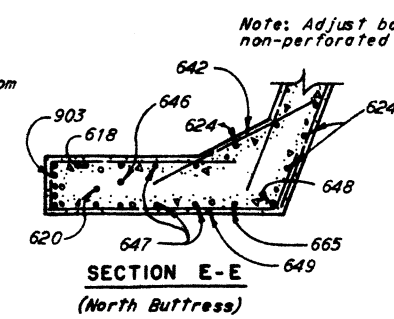
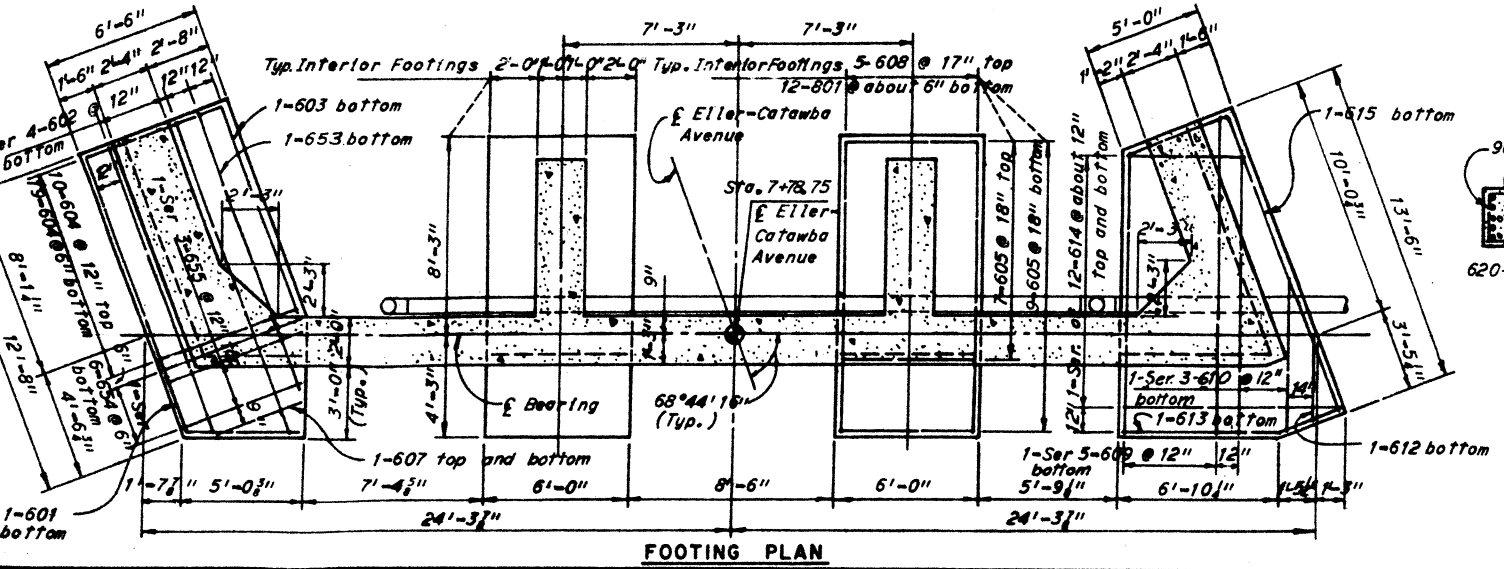
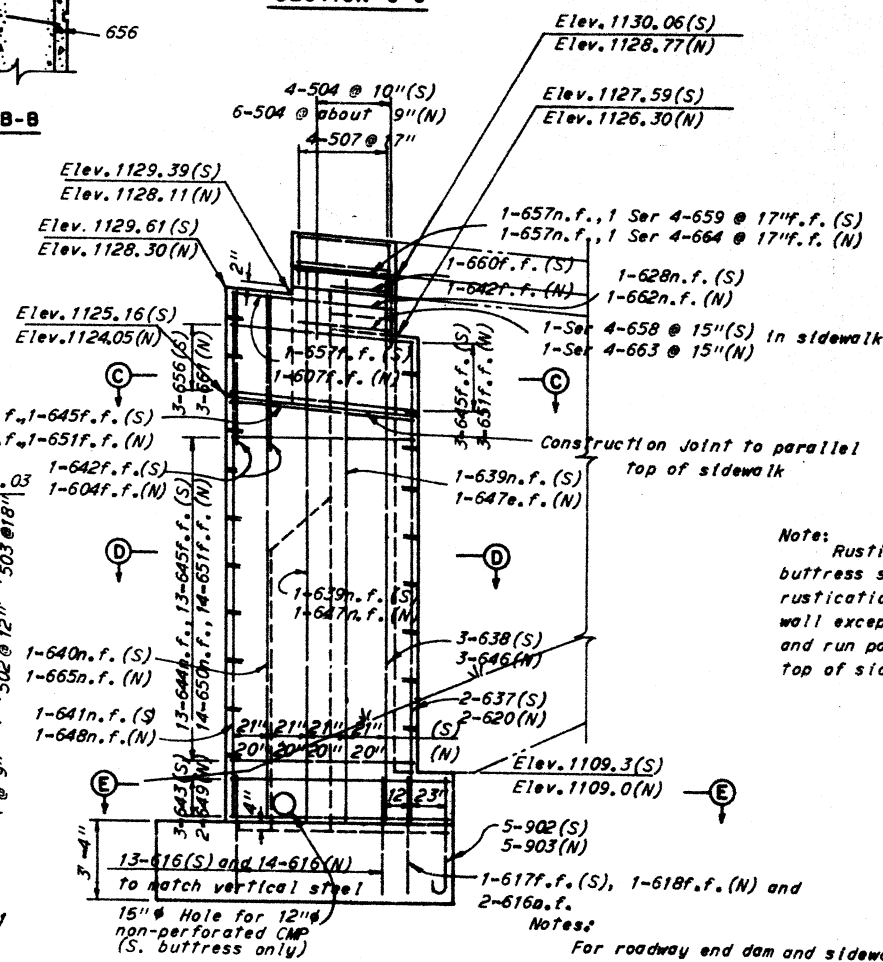
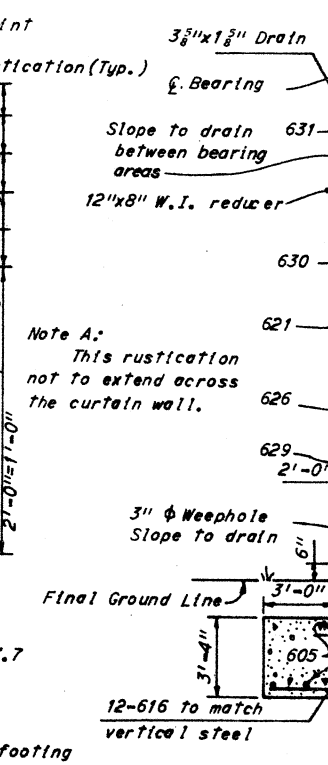
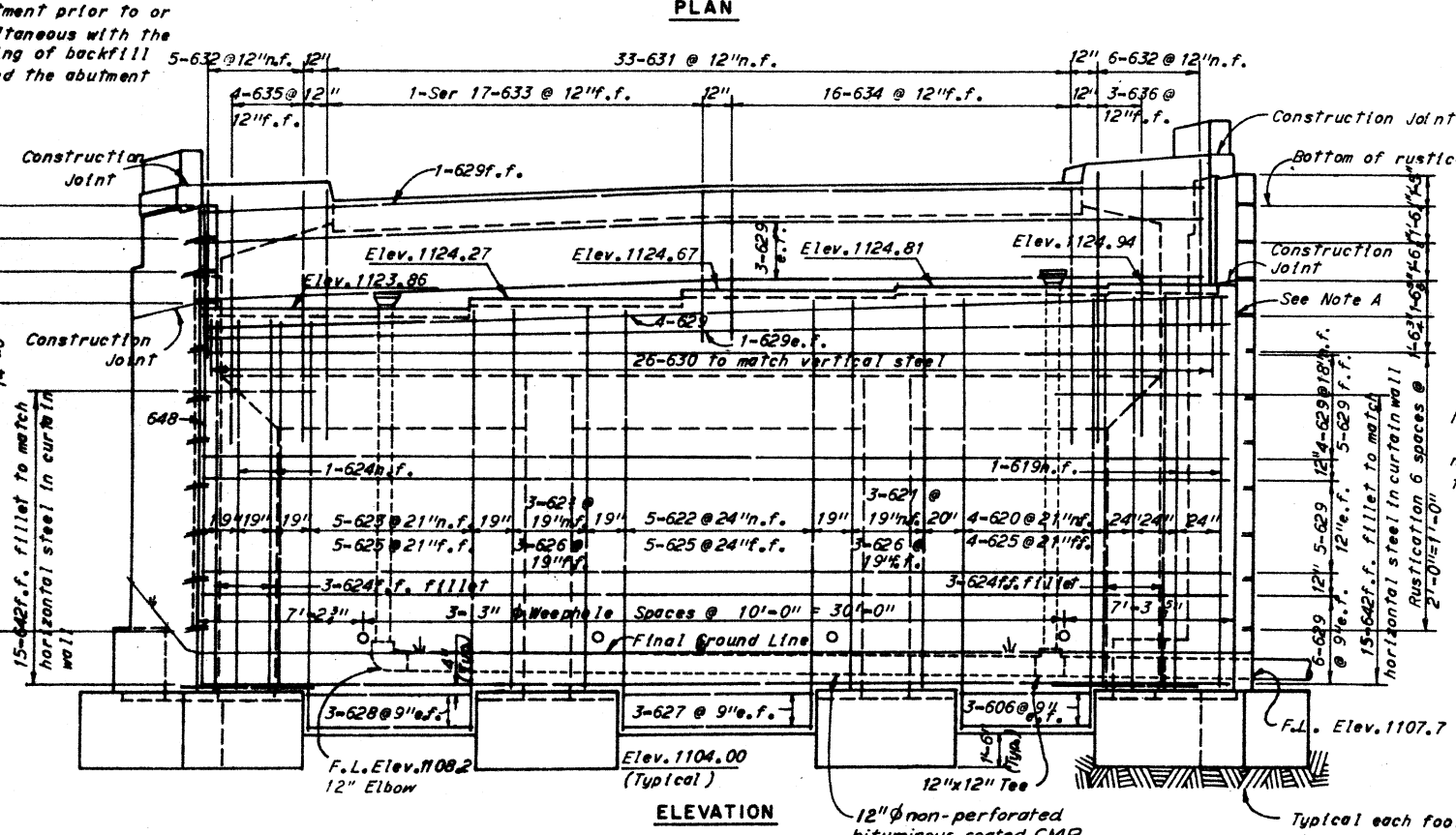
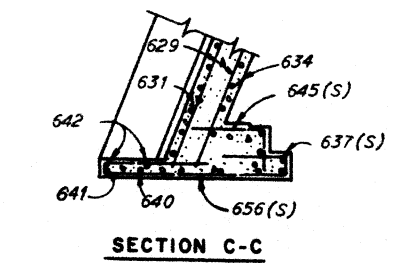
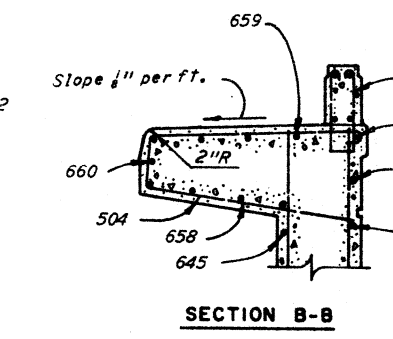
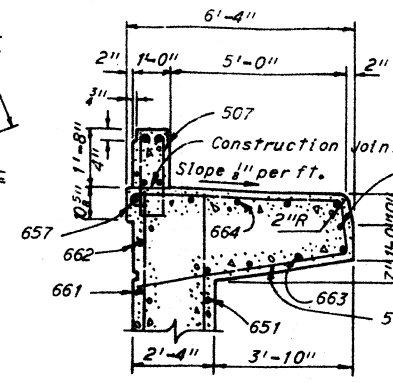
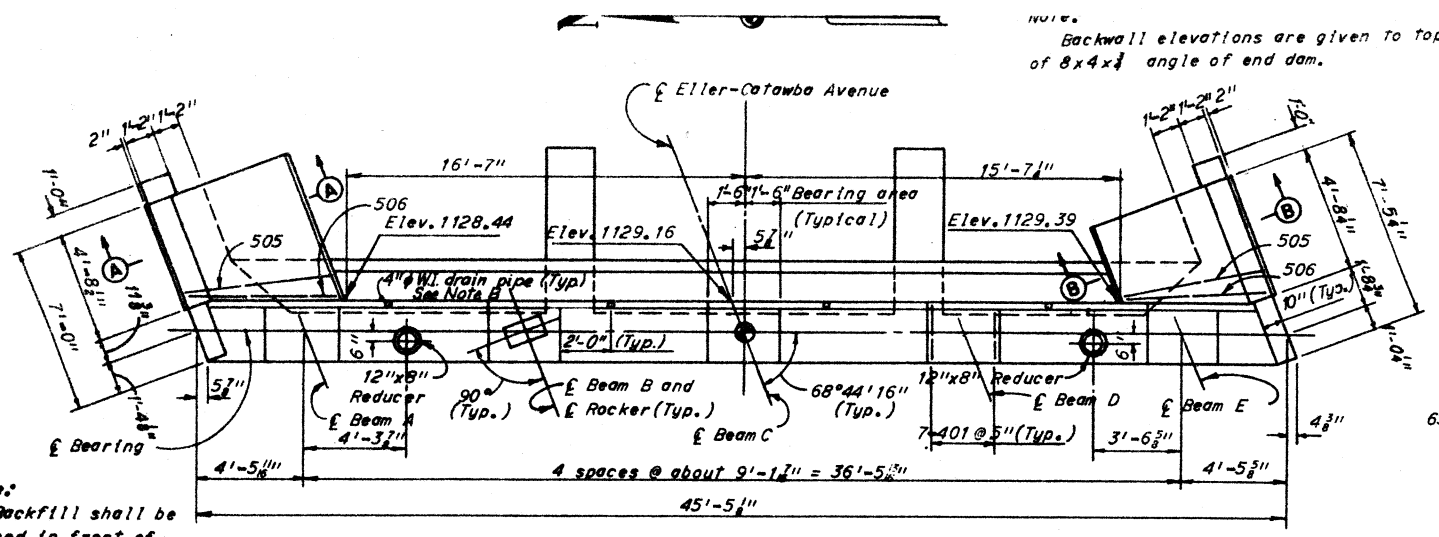
TRAFFIC DATA:
1975-560 A.D.T. (Both ways)

M.N.T.B. BRIDGE NO. 6		PART 1	
HOWARD, NEEDLES, TAMMEN & BERENSON CONSULTING ENGINEERS KANSAS CITY CLEVELAND NEW YORK			
SITE PLAN			
I-77 UNDER ELLER-CATAWBA AVENUE		BR. NO. SUM-8-1046	
STA. 6+18.57		STA. 7+81.43	
SCALE: AS NOTED			
AKRON EXPRESSWAY SYSTEM			
AKRON	SUMMIT COUNTY	OH	
DATE: 12-3-63	TRACED: CP	CHECKED: EMB	REVIEWED: JWB
DATE: 12-10-63	DATE: 1-3-64	DATE: 5-5-64	DATE: 5-5-64
			SHEET 113

SUM-77-1000 under

Note:
Backwall elevations are given to top of 8x4x4 angle of end dam.

Note B:
Bridge seat drainage details shall be the same as for the West Abutment, including the 4" φ W.I. Pipe and the 8" φ C.M.P.



Note:
All reinforcing bar marks shall be prefixed AE.

Note: Where W.I. pipe is indicated, either wrought iron or galvanized steel pipe may be used.

Note: Rustications on buttress shall match rustications on curtain wall except as noted and run parallel to top of sidewalk.

Notes:
For roadway end dam and sidewalk end dam details see Ohio Standard Drawing SD-1-63, sheets 2 and 4 of 4.
For reinforcement schedule and bar banding diagrams see sheet 121.
For expansion joint details see sheets 117 and 118.
For rustication details see sheet 118.
For southeast wingwall details see sheet 117.
For northeast wingwall details see sheet 118.
The following abbreviations are used:
n.f. = near face, f.f. = far face, e.f. = each face.
For railing details see Ohio Standard Drawing AR-1-57.

M.N.T.R. BRIDGE NO. 6 PART 17

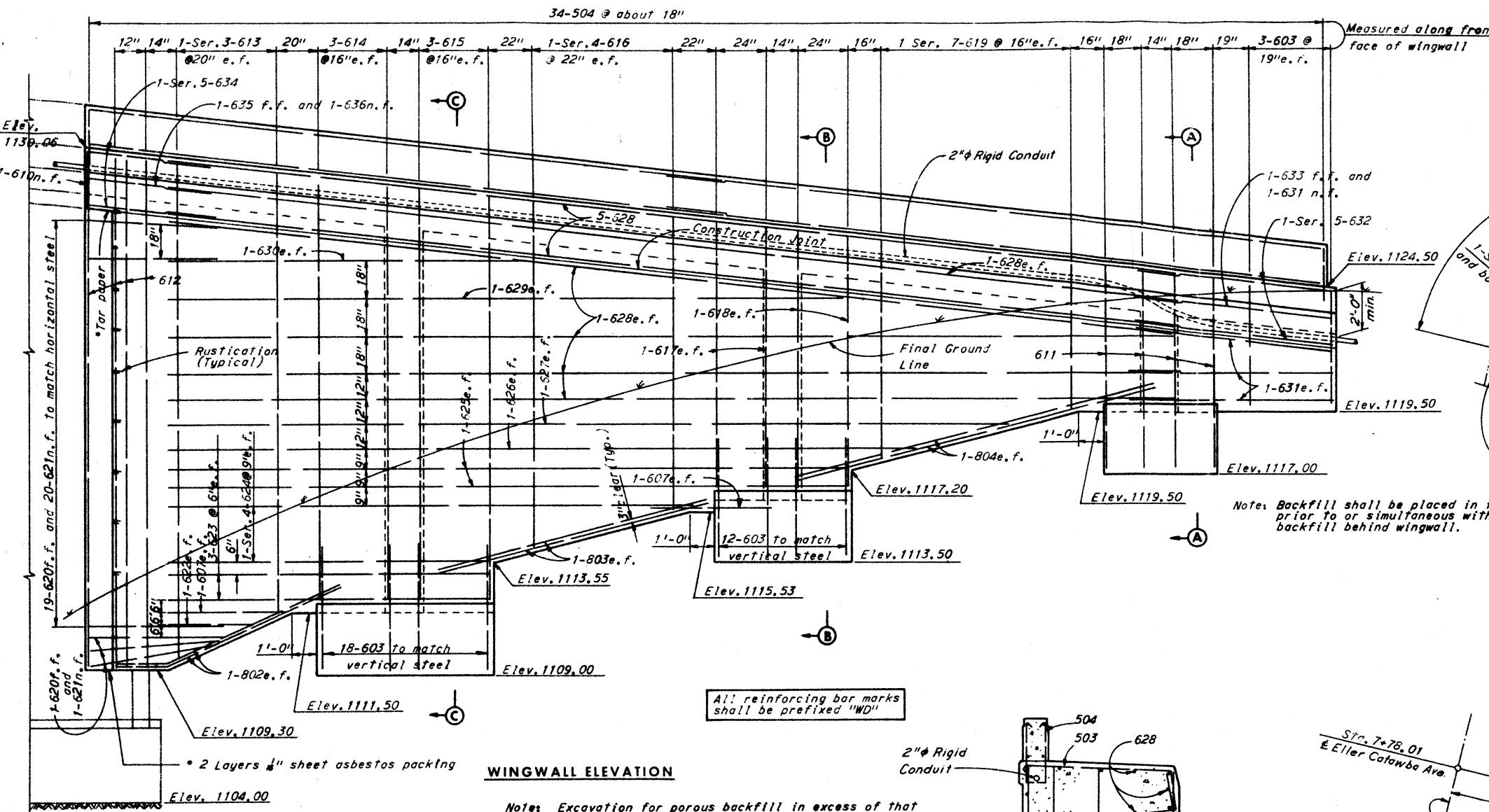
HOWARD, NEEDLES, TAMMEN & BERENSON
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

EAST ABUTMENT

1-77 UNDER ELLER-CATAWBA AVENUE
BR. NO. SUM-8-1046 STA. 6+18.57
SCALE: NONE STA. 7+81.43

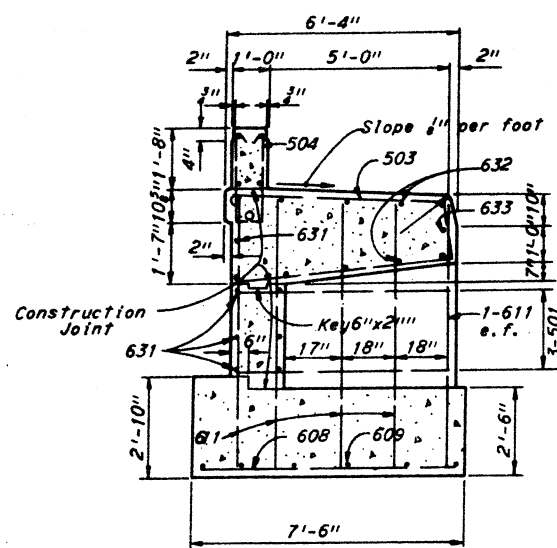
AKRON EXPRESSWAY SYSTEM

AKRON	SUMMIT COUNTY	OHIO
DATE: 11-22-64	DATE: 11-22-64	DATE: 11-22-64

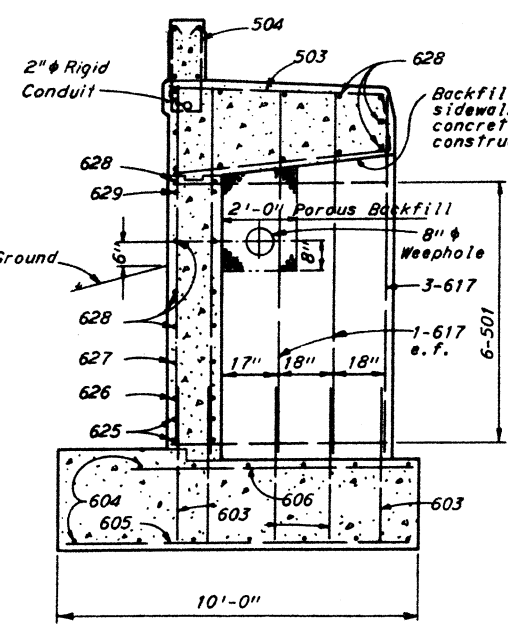


WINGWALL ELEVATION

Note: Excavation for porous backfill in excess of that required for construction of wingwalls shall be considered as paid for in bid price per cubic yard for porous backfill.

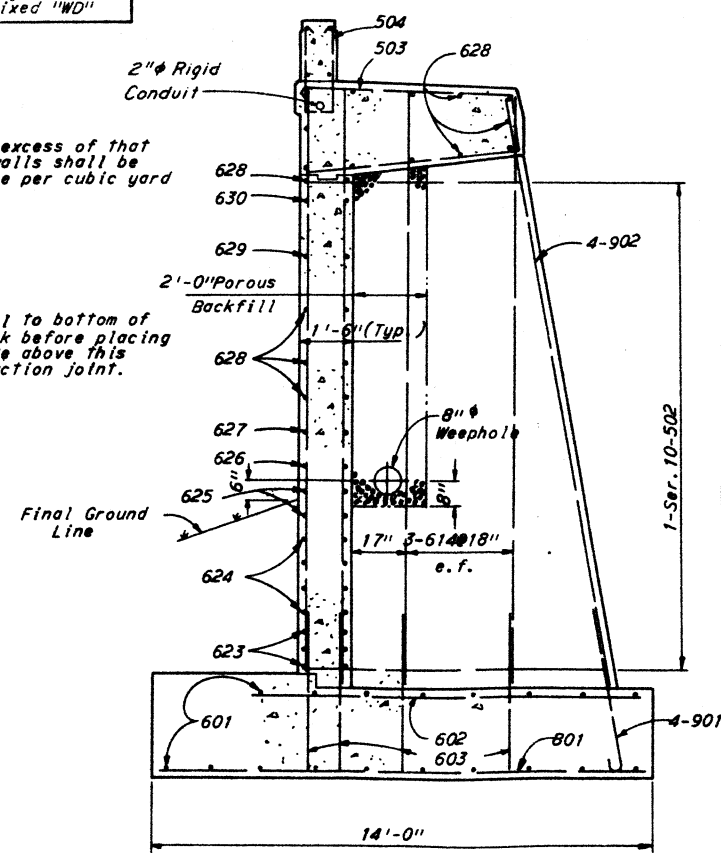


SECTION A-A

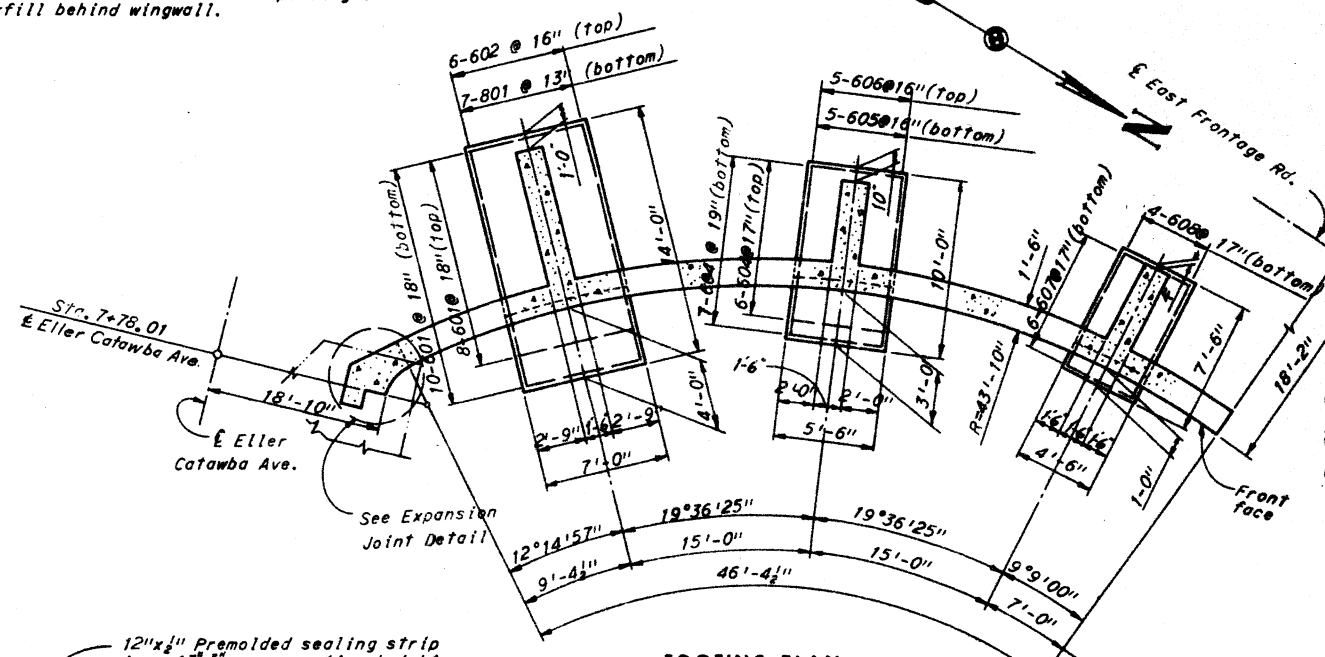
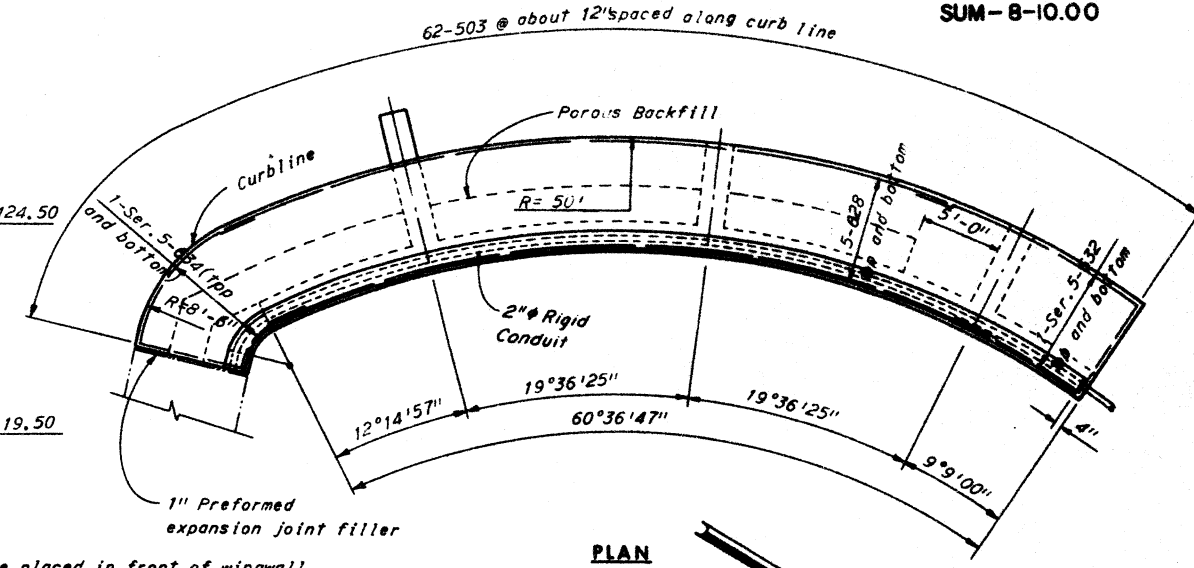


SECTION B-B

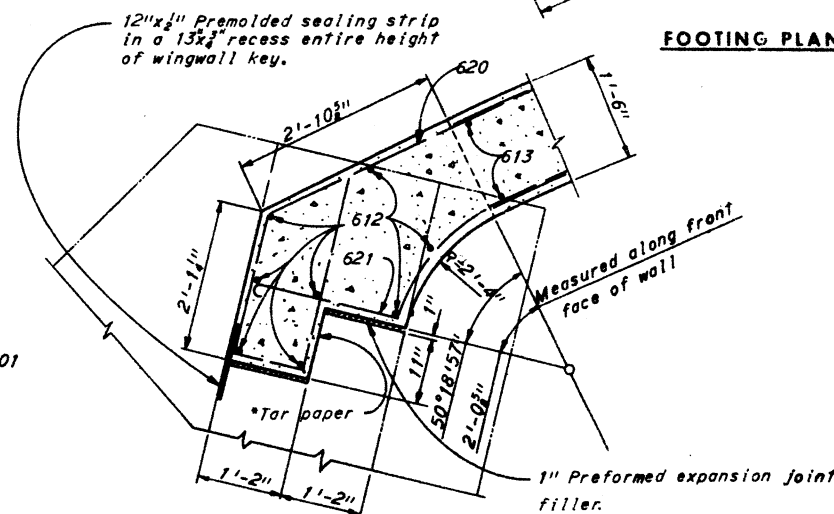
Note: Dimensions shown in Section A-A only are typical for all sections.



SECTION C-C



FOOTING PLAN

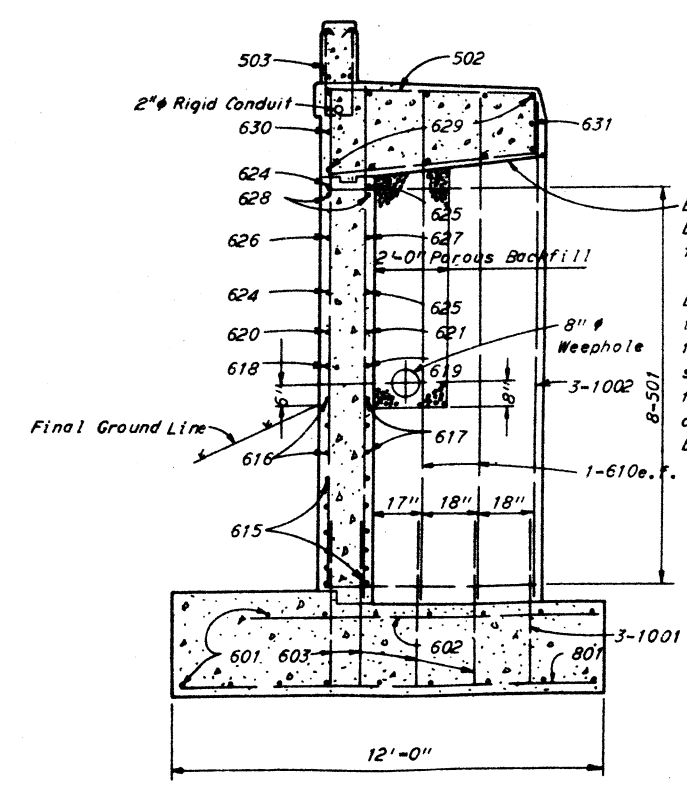
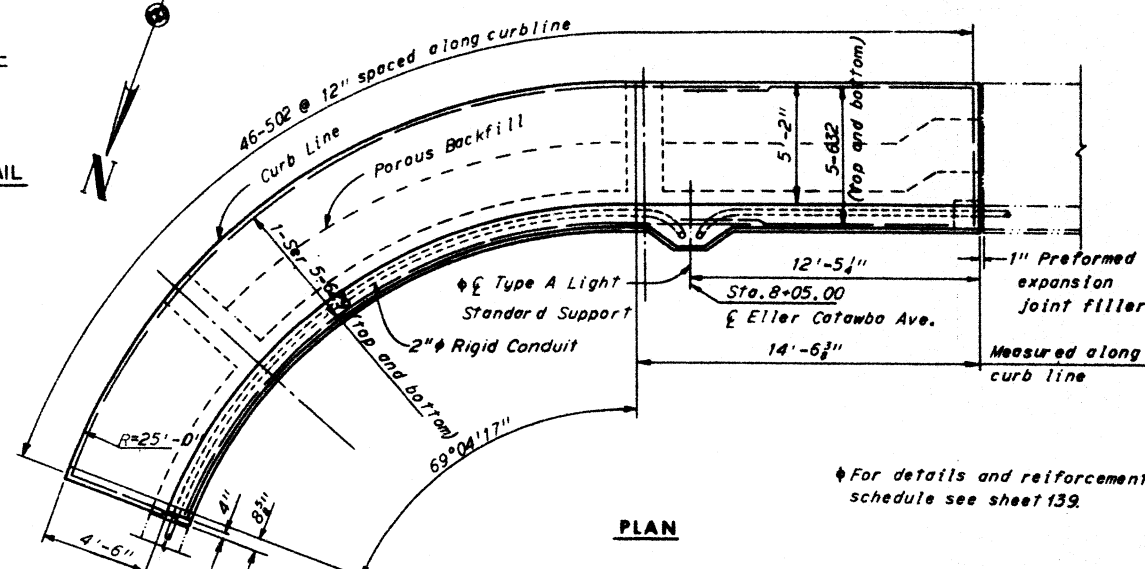
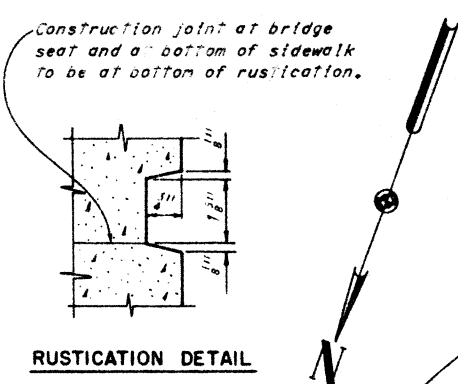
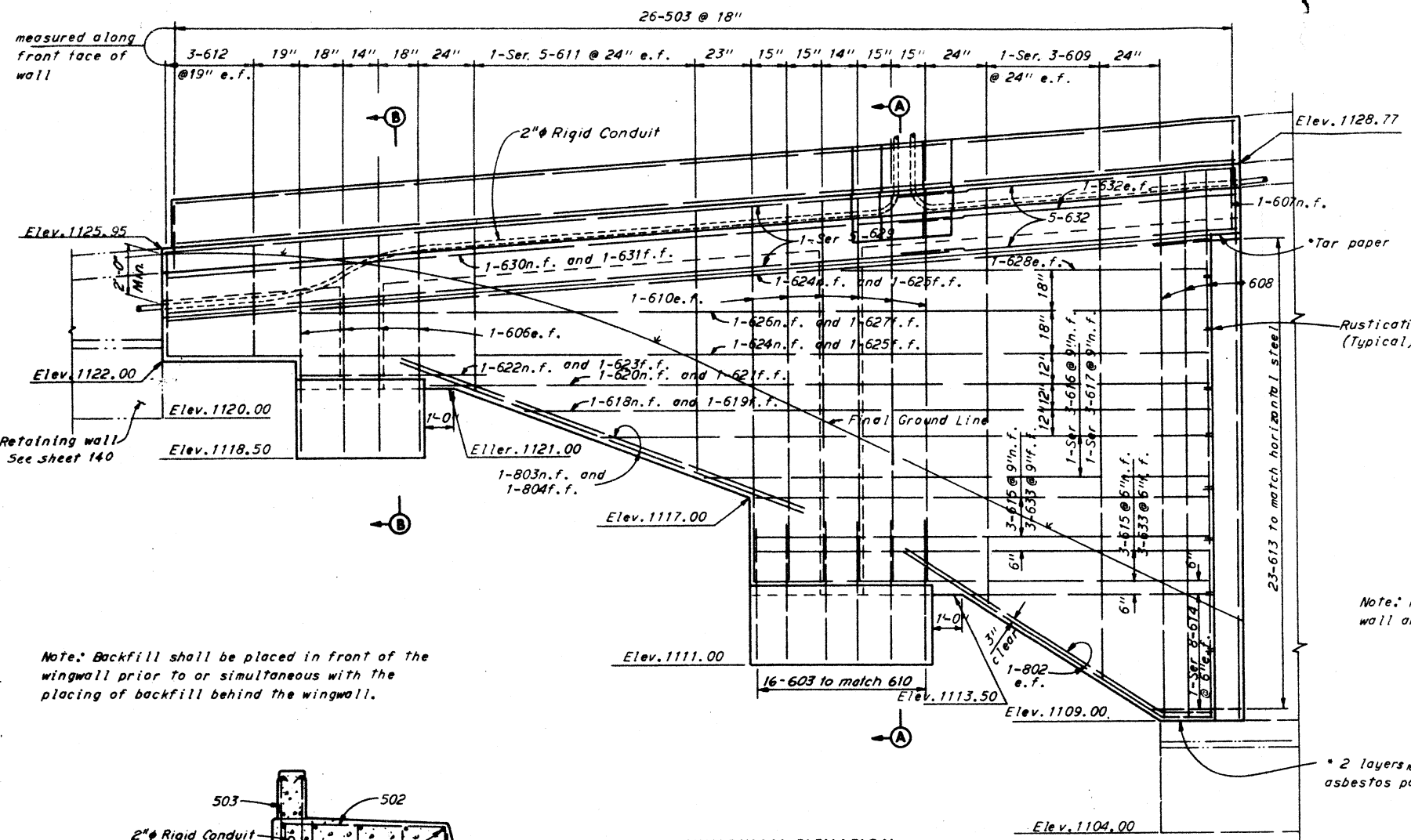


EXPANSION JOINT DETAIL

NOTES:
For rustication details see sheet 118.
For reinforcement schedule and bar bending diagrams see sheet 121.
For additional notes see sheet 116.

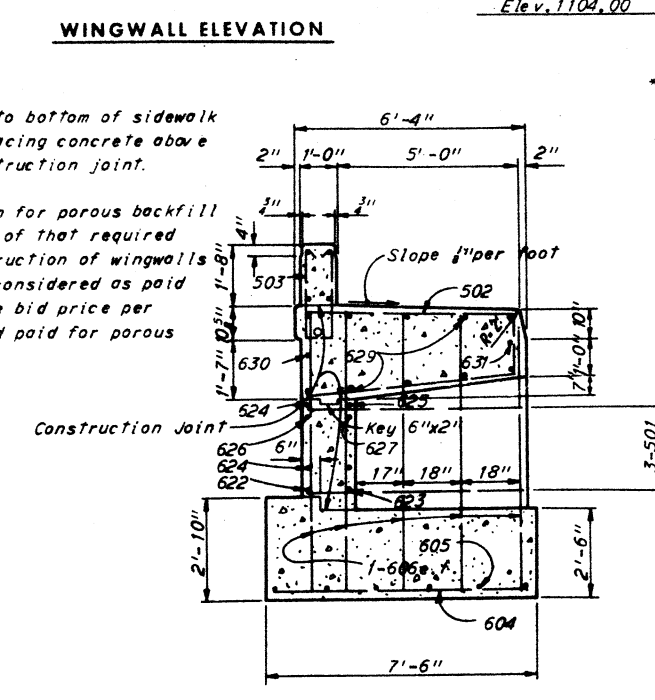
H.N.T.B. BRIDGE NO. 6		PART 1	
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS KANSAS CITY CLEVELAND NEW YORK			
SOUTHEAST WINGWALL			
1-77 UNDER ELLER-CATAWBA AVENUE		STA. 6+18.57	
BR. NOSUM-8-1046		STA. 7+81.43	
SCALE: NONE			
AKRON EXPRESSWAY SYSTEM			
AKRON	SUMMIT COUNTY	OH	
DRAWN: A.H.	TRACED	CHECKED: S.J.	REVIEWED: J.F.
DATE: 2.23.64	DATE	DATE: 3.3.64	DATE: 5.6.64

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
SUM-8-10.00

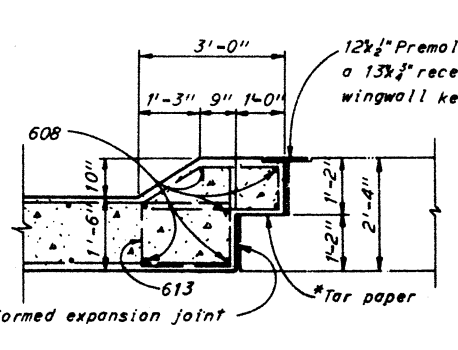


SECTION A-A

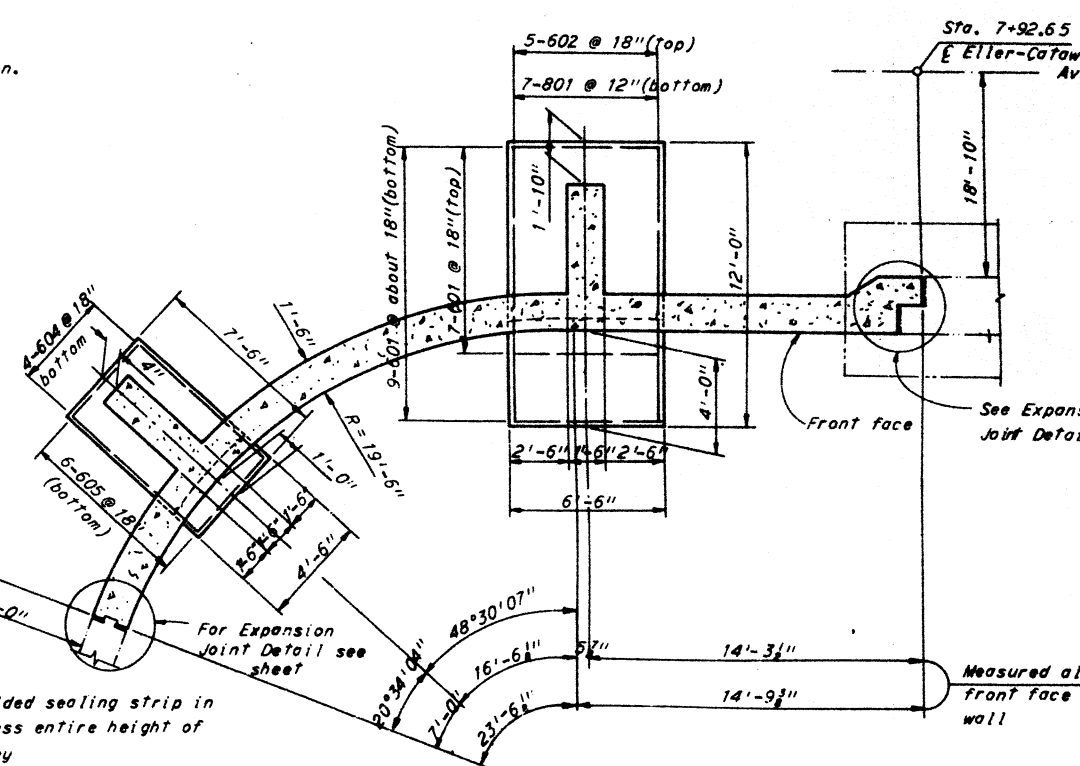
Notes: Dimensions shown in Section B-B only are typical for Section A-A also. Type "C" railing not shown.



SECTION B-B



EXPANSION JOINT DETAIL



FOOTING PLAN

Note: All reinforcing bar marks shall be prefixed WE.

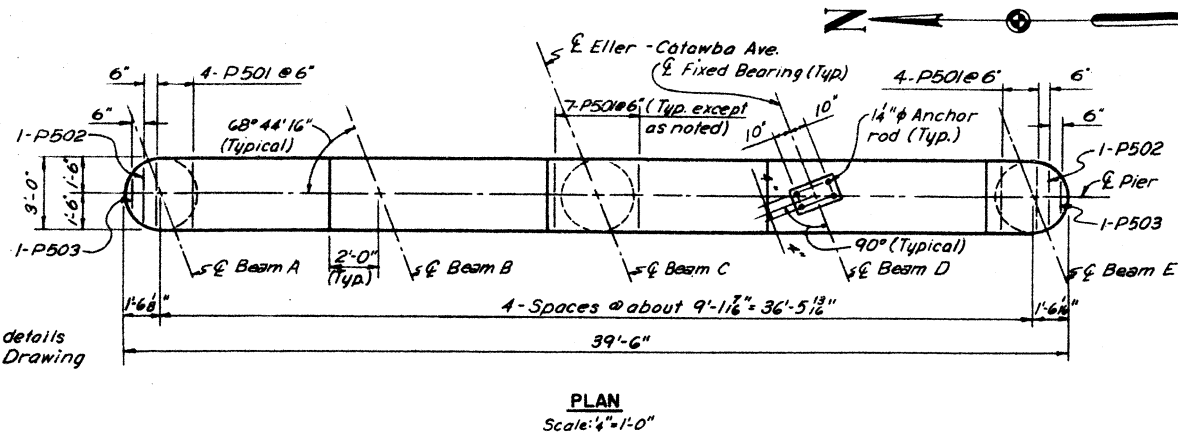
H.N.T.B. BRIDGE NO. 6		PART	
HOWARD, NEEDLES, TAMMEN & BERGENOFF CONSULTING ENGINEERS KANSAS CITY CLEVELAND NEW YORK			
NORTHEAST WINGWALL			
1-77 UNDER ELLER-CATAWBA AVENUE		STA. 6+18.57	
BR. NO. SUM-8-1046		SCALE: NONE	
AKRON		SUMMIT COUNTY	
AKRON EXPRESSWAY SYSTEM			
DRAWN J.K.H. TRACED	CHECKED R.S.D.	REVIEWED W.W.	REVISOR
DATE 12-28-64	DATE 3-3-64	DATE 5-5-64	
			SHEET 11

SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
SUM-8-10.00

REINFORCEMENT SCHEDULE				
Mark	No.	Length	Type	Weight
P 401	1	19'-7"	150	357
P 402	1	19'-11"	150	363
P 403	1	20'-3"	150	369
P 501	29	4'-7"	105	139
P 502	2	4'-5"	105	9
P 503	2	3'-9"	105	8
P 504	22	12'-2"	109	279
P 601	2	36'-6"	Str.	110
P 602	8	7'-11"	144	95
P 801	72	6'-6"	Str.	1250
P 1101	28	7'-6"	104	1116
P 1102	18	23'-6"	Str.	2247
P 1103	10	23'-0"	Str.	1222
P 1104	4	36'-6"	Str.	776
P 1105	4	39'-0"	Str.	829
P 1106	3	14'-0"	Str.	223
P 1107	6	12'-3"	Str.	391
P 1108	6	10'-10"	123	343
P 1109	4	10'-3"	Str.	218
TOTAL				10,346

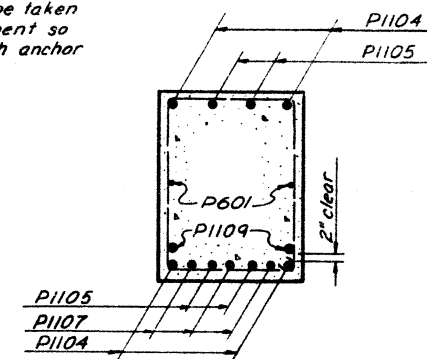
Note:
For Replacement Bar Schedule see sheet 112.

Note:
For anchor rod details
see Ohio Standard Drawing
FSB-1-62

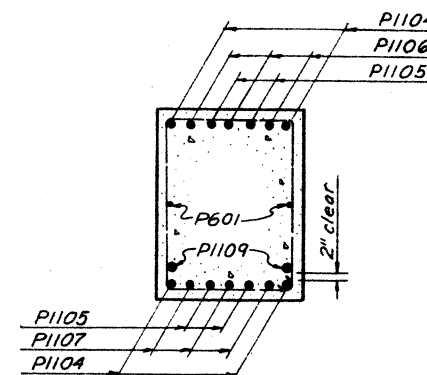


PLAN
Scale: 1/4" = 1'-0"

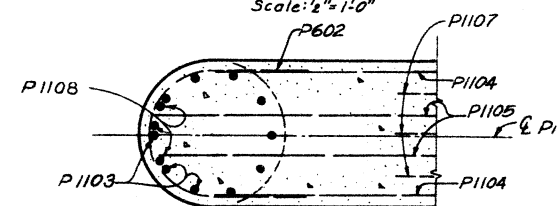
Note:
Special care shall be taken
when placing reinforcement so
as not to interfere with anchor
rod setting.



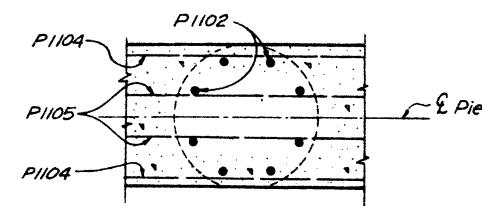
SECTION A-A
Scale: 1/2" = 1'-0"



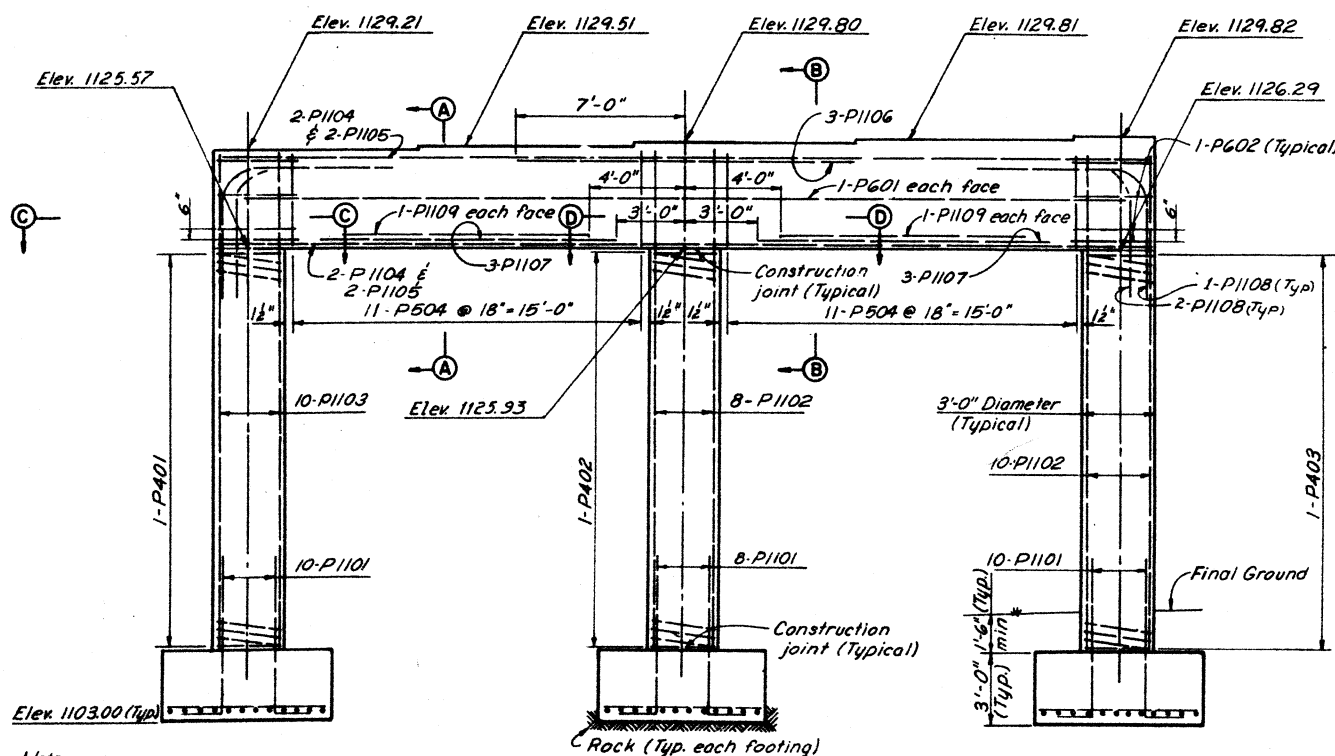
SECTION B-B
Scale: 1/2" = 1'-0"



SECTION C-C
Scale: 1/2" = 1'-0"

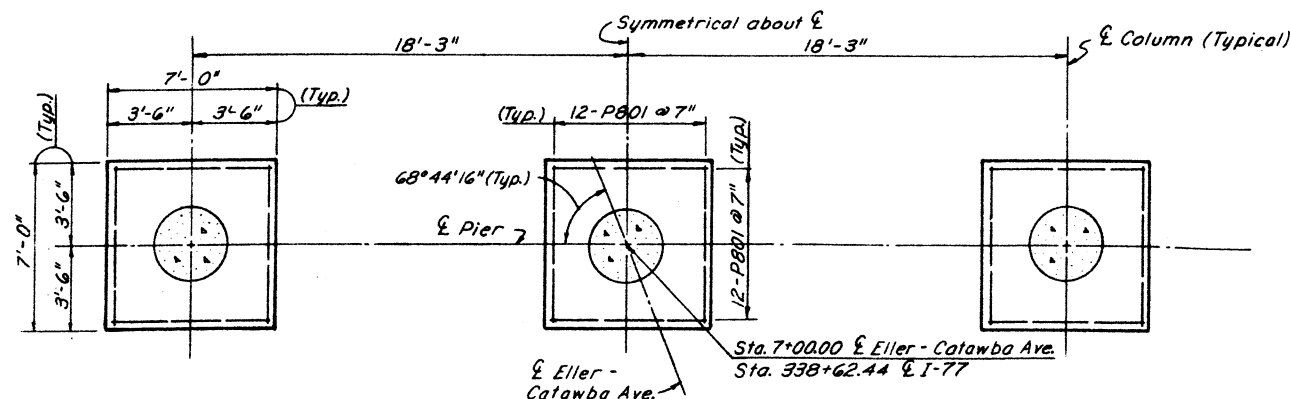


SECTION D-D
Scale: 1/2" = 1'-0"

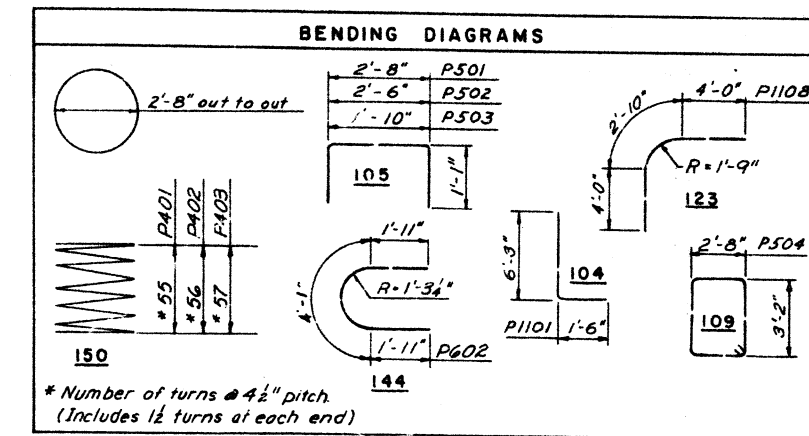


ELEVATION
Scale: 1/4" = 1'-0"

Note:
Footings shall extend a minimum of 3" into firm
rock or to elevation shown, whichever is lower. Final
elevation shall be determined by the Engineer.



FOOTING PLAN
Scale: 1/4" = 1'-0"



* Number of turns @ 4 1/2" pitch.
(Includes 1 1/2 turns at each end)

NOTES FOR SPIRAL REINFORCING BARS:

The "Length" shown in the reinforcement schedule for the spiral bars is the distance from the top of the footing to the bottom of the pier cap.

Four steel channel, tee or angle spacers, weighing approximately 0.68 lbs. per linear foot 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 lbs. per linear foot will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item S-4.

H.N.T.S. BRIDGE NO. 6 PART 17

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

PIER

1-77 UNDER ELLER-CATAWBA AVENUE
BR. NOSUM-8-1046 STA. 6+18.57
SCALE: AS NOTED STA. 7+81.43

AKRON EXPRESSWAY SYSTEM

AKRON SUMMIT COUNTY OHIO

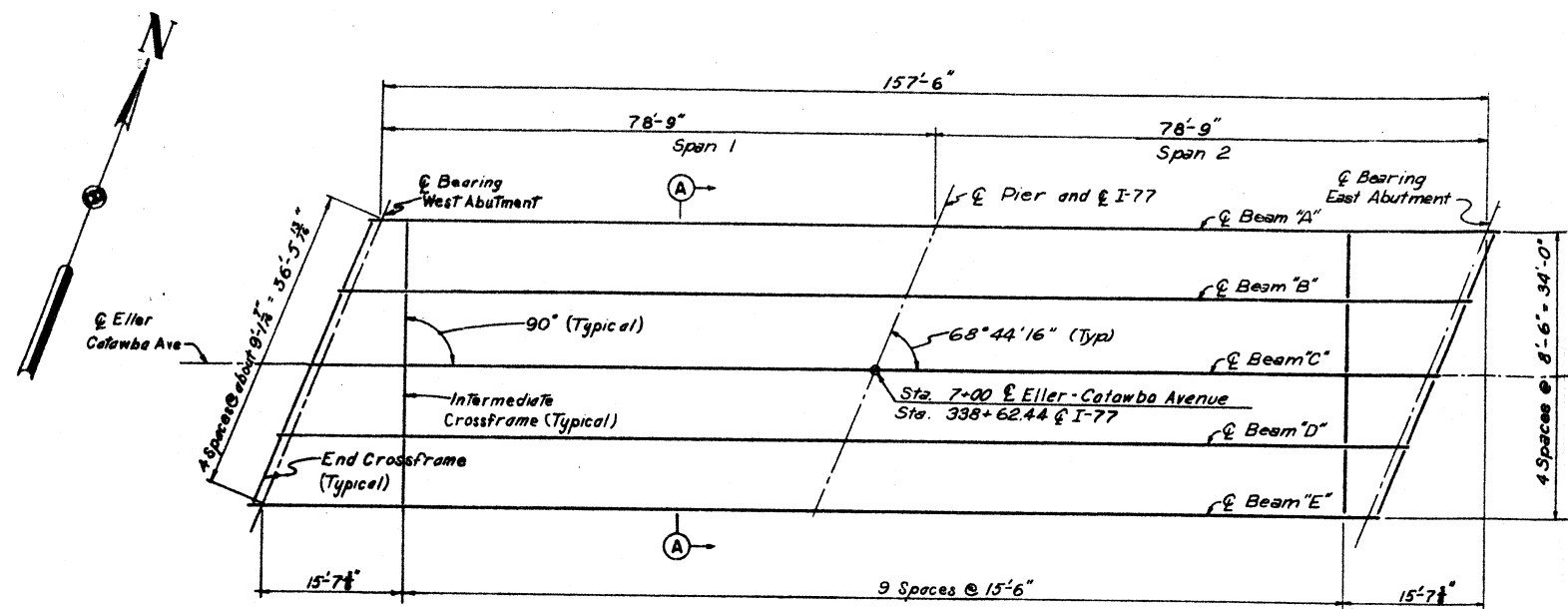
DRAWN RSD TRACED CHECKED R.C.B. REVISIONS
DATE 11-64 DATE 3-9-64 DATE 5-5-64 SHEET 119

FED. RD. DIVISION	STATE	PROJECT
7	OHIO	

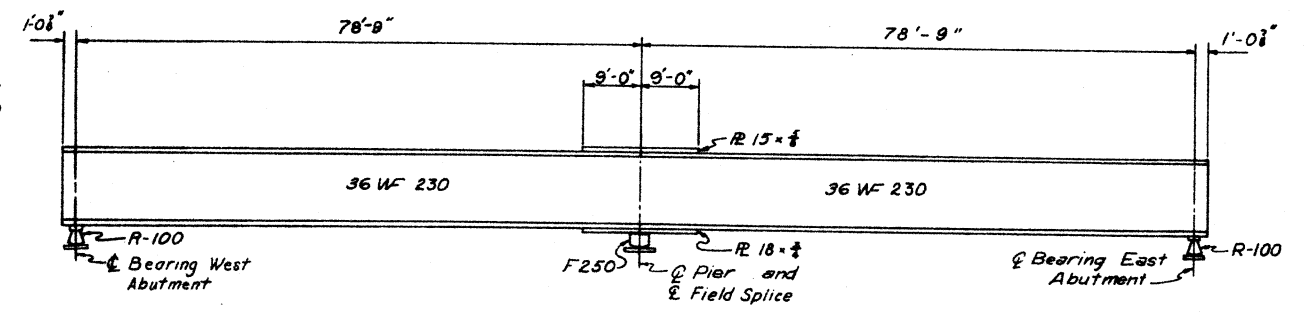
SUMMIT COUNTY
CITY OF AKRON
AKRON EXPRESSWAY SYSTEM
SUM-8-10.00

REINFORCEMENT SCHEDULE						
MARK	NO.	LENGTH	TYPE	SER. INCR.	WEIGHT (LBS.)	
S501	249	37'-6"	100		9,739	
S502	250	54'-4" to 39'-4"	101	1'-6"	891	
S503	6	5'-4"	101		33	
S504	2	40'-2"	100		84	
S505	184	5'-7"	110		1,072	
S506	180	15'-0"	156		2,816	
S507	4	15'-6"	156		65	
S508	4	15'-11"	156		66	
<hr/>						
S601	249	36'-3"	STR.		13,557	
S602	365	33'-6"	STR.		18,366	
S603	30	26'-6"	STR.		1,194	
S604	250	4'-9" to 34'-9"	STR.	1'-6"	1,246	
S605	6	4'-9"	STR.		43	
					Total	49,172

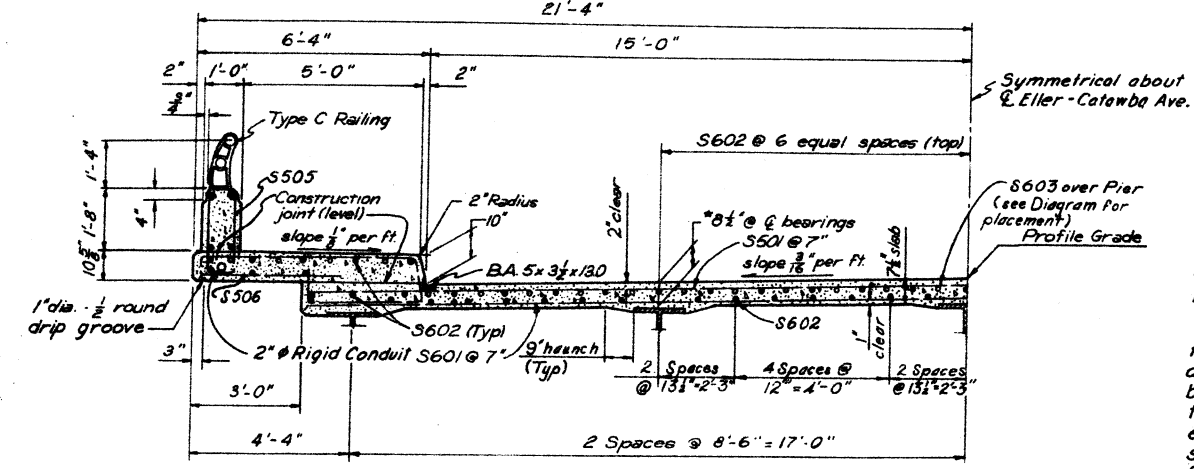
BENDING DIAGRAMS					
	36'-4"	S501	S502	4'-9" to 34'-9"	
	39'-0"	S504	S503	4'-9"	
	100			101	
S508	6'-3"				
S507	6'-1"				
S506	5'-10"				
S508	4'-4"				
S507	4'-2"				
S506	4'-0"				
	156				
	3'-0"	S506			
	3'-1"	S507			
	3'-2"	S508			



FRAMING PLAN
No Scale



TYPICAL BEAM ELEVATION
No Scale

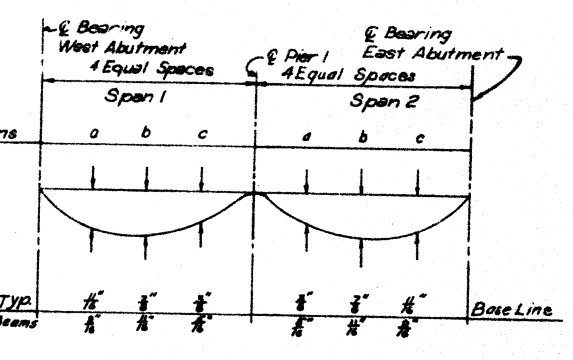


HALF SECTION A-A
Scale: 3/8" = 1'-0"

BEAM	SPAN 1					SPAN 2				
	Q Brg. W. Abut.	a	b	c	Q Pier 1	a	b	c	Q Brg. E. Abut.	
"A"	1136.18	1135.83	1135.31	1134.60	1133.73	1132.67	1131.44	1130.03	1128.45	
"B"	1136.35	1136.04	1135.54	1134.87	1134.02	1132.99	1131.79	1130.41	1128.86	
"C"	1136.52	1136.23	1135.77	1135.13	1134.31	1133.31	1132.14	1130.79	1129.27	
"D"	1136.42	1136.16	1135.73	1135.11	1134.32	1133.36	1132.21	1130.90	1129.40	
"E"	1136.32	1136.09	1135.68	1135.09	1134.34	1133.40	1132.29	1131.00	1129.53	

Note: To obtain top of beam elevations at supports, exclusive of cover plates, deduct 0.71' from respective top of pavement elevations.
* These elevations are given to extended top of pavement.

Note: Values shown above base line are total deflections due to dead load of steel and concrete.
Values shown below base line are deflections due to concrete only.
Deflections and Convexity Corrections are measured to the nearest 1/8 inch.



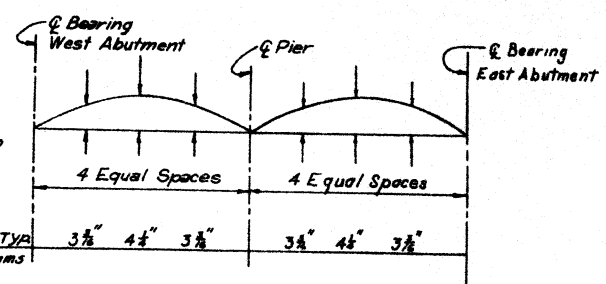
DEAD LOAD DEFLECTION DIAGRAM
No Scale

BEAM JACKING PROCEDURE

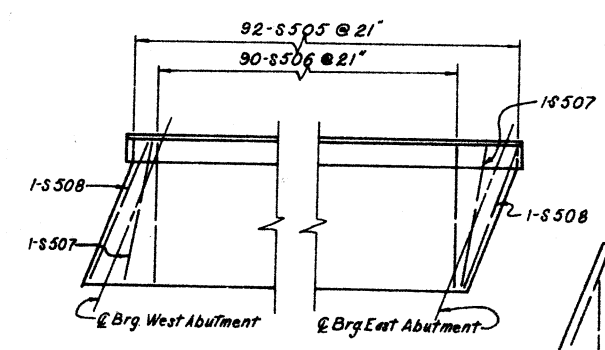
1. Raise the ends of the beams at West Abutment 2".
 2. Splice at Pier
 3. Lower beams into final position.
- For splice details and welding procedure see Ohio Standard Drawing SD-1-63, sheet 1 of 4. Replace step 1 of the above Beam Jacking Procedure.

CAMBER NOTE

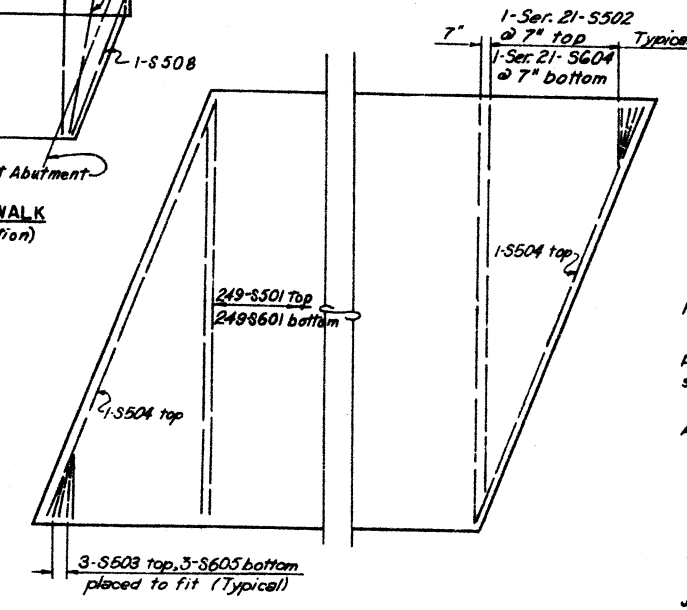
Beams shall be cambered an amount equal to the sum of the total dead load deflection and the convexity.



CONVEXITY CORRECTIONS FOR VERTICAL CURVATURE
No Scale



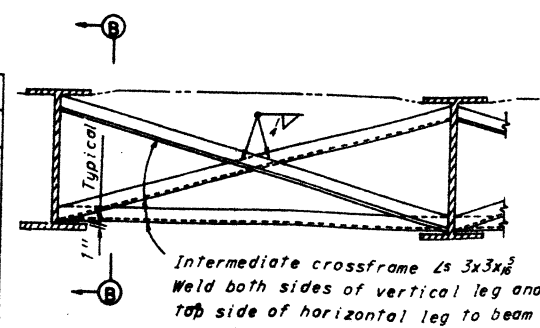
PART PLAN NORTH SIDEWALK
(South sidewalk similar by 180° rotation)
No Scale



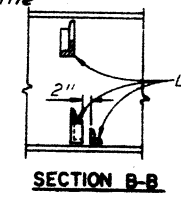
PART SLAB PLAN
No Scale

Notes: Slab thickness shown includes 1" monolithic concrete wearing surface.
* At beams "A" and "E", this dimension is measured from extended top of pavement to top of beam.

The haunch in the deck slab adjacent to the top of the beams, which is shown as 9" wide, may vary from this dimension between the limits of 6" and 12", except that the maximum slope shall not exceed 3" per foot. Payment for deck slab concrete shall be based on the 9" width.



TYPICAL INTERMEDIATE CROSSFRAME



SECTION B-B

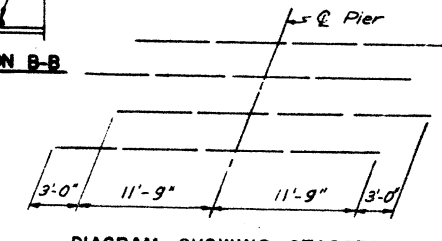


DIAGRAM SHOWING STAGGER OF S603 BARS OVER PIER
No Scale

Notes:
For longitudinal reinforcement in the parapets and railing post and parapet joint spacing see sheet 139.
For railing details see Ohio Standard Drawing AR-1-57.
For drainage details see sheet 138.
For details of roadway end dam, and crossframes end dams at sidewalks, and beveled bearing bar at East Abutment see Ohio Standard Drawing SD-1-63, sheets 2 and 4 of 4.
For Optional Transverse Slab Construction Joint see sheet 134.
For details of fixed bearings see Ohio Standard Drawing FSB-1-62.
For details of rockers see Ohio Standard Drawing RB-1-55.
For scupper locations see sheet 113.
For Replacement Bar Schedule see sheet 112.

H.M.T.B. BRIDGE NO. 6 PART 1

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

FRAMING PLAN AND CROSS SECTIONS
1-77 UNDER ELLER-CATAWBA AVENUE
BR. NO. SUM-8-1046 STA. 6+18.57
SCALE: NONE STA. 7+81.43

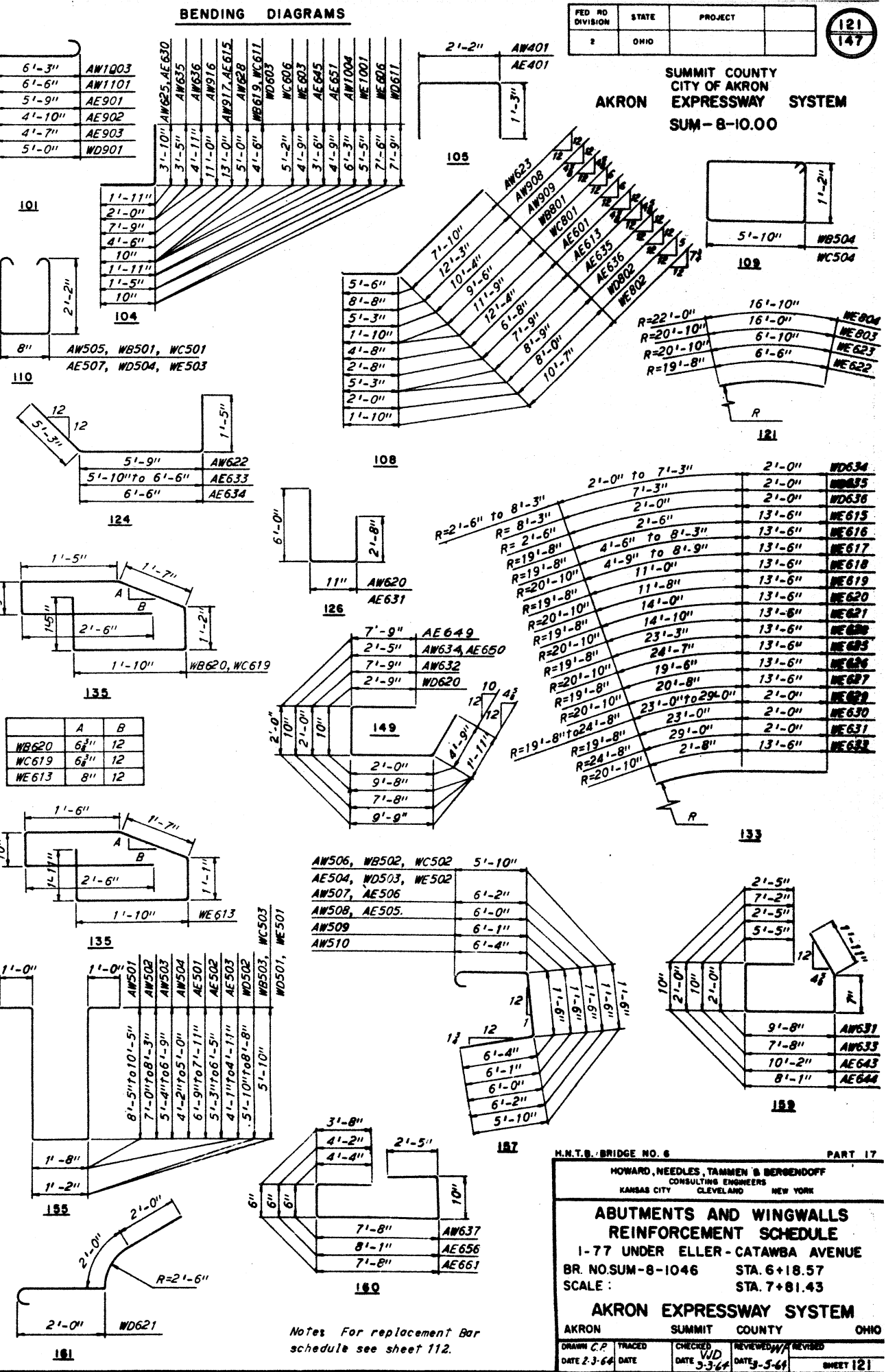
AKRON EXPRESSWAY SYSTEM
AKRON SUMMIT COUNTY OHIO

DATE 12-28-45 TRACED DATE 3-3-51 CHECKED DATE 3-3-51 REVISIONS

SHEET 120

SUMMIT COUNTY CITY OF AKRON EXPRESSWAY SYSTEM
AKRON SUM-8-10.00

Table with columns: MARK, NO., LENGTH, TYPE, SER. INCR., WEIGHT (LBS.), MARK, NO., LENGTH, TYPE, SER. INCR., WEIGHT (LBS.), MARK, NO., LENGTH, TYPE, SER. INCR., WEIGHT (LBS.), MARK, NO., LENGTH, TYPE, SER. INCR., WEIGHT (LBS.). Includes sections for WEST ABUTMENT, SOUTH WEST WINGWALL, NORTH WEST WINGWALL, NORTH EAST WINGWALL, EAST ABUTMENT, and SOUTH EAST WINGWALL.



H.N.T.B. BRIDGE NO. 6 PART 17
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK
ABUTMENTS AND WINGWALLS REINFORCEMENT SCHEDULE
1-77 UNDER ELLER-CATAWA AVENUE
BR. NO. SUM-8-1046 STA. 6+18.57
SCALE: STA. 7+81.43
AKRON EXPRESSWAY SYSTEM
AKRON SUMMIT COUNTY OHIO
DRAWN C.P. TRACED CHECKED VJD REVIEWED [] REVISOR []
DATE 2-3-64 DATE 3-3-64 DATE 3-3-64 SHEET 121