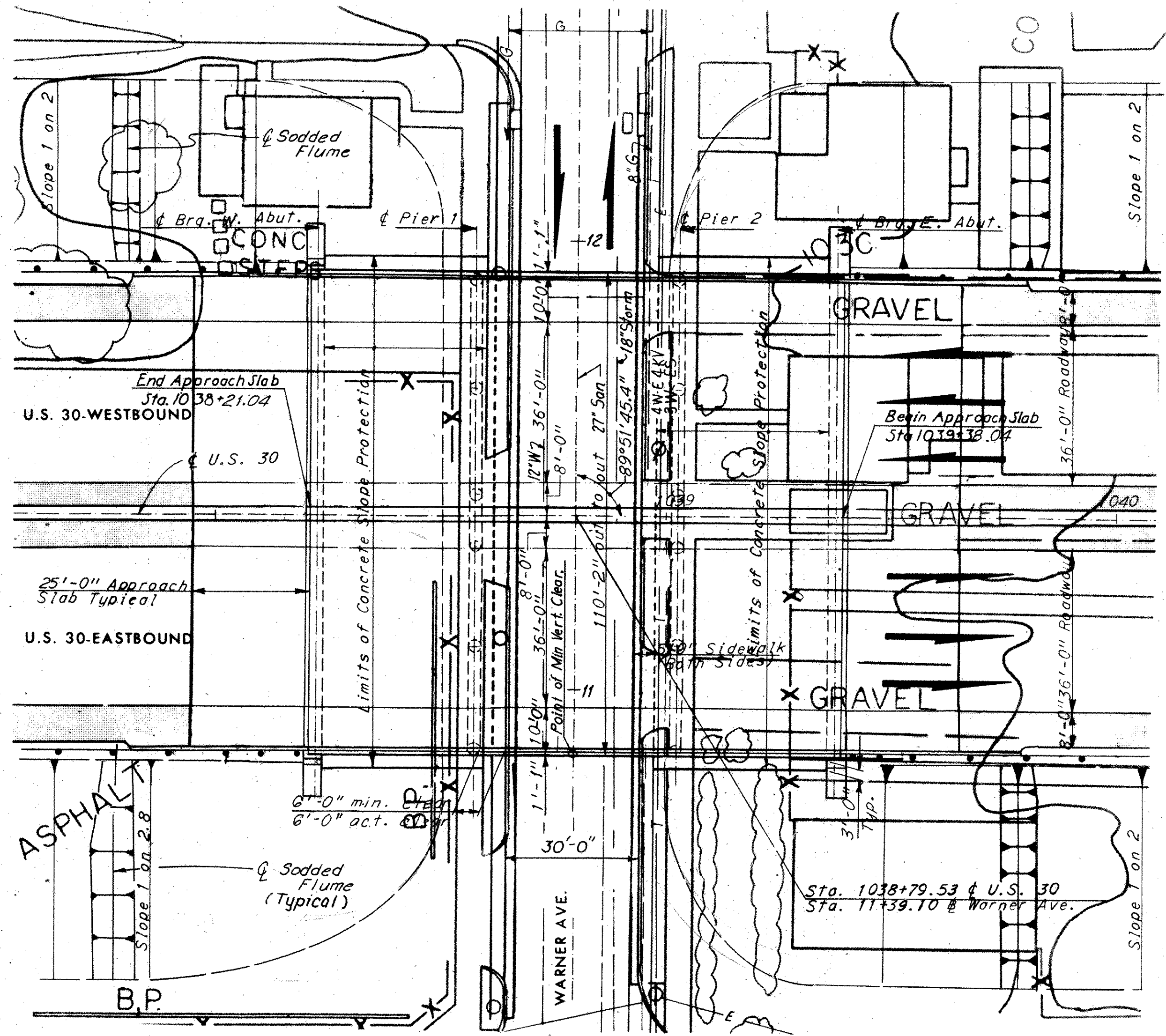
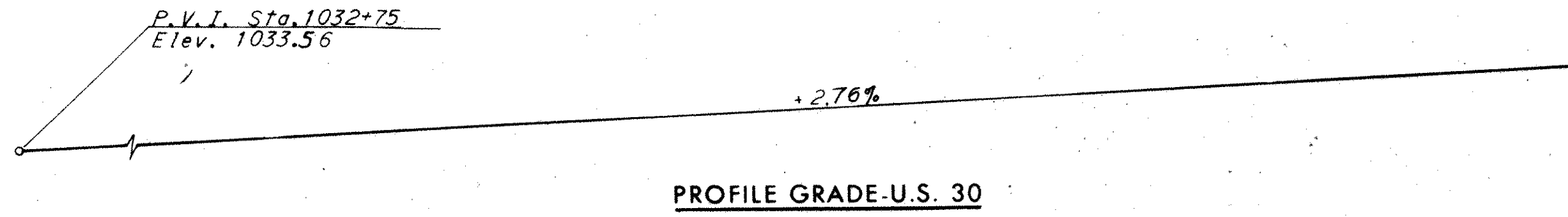


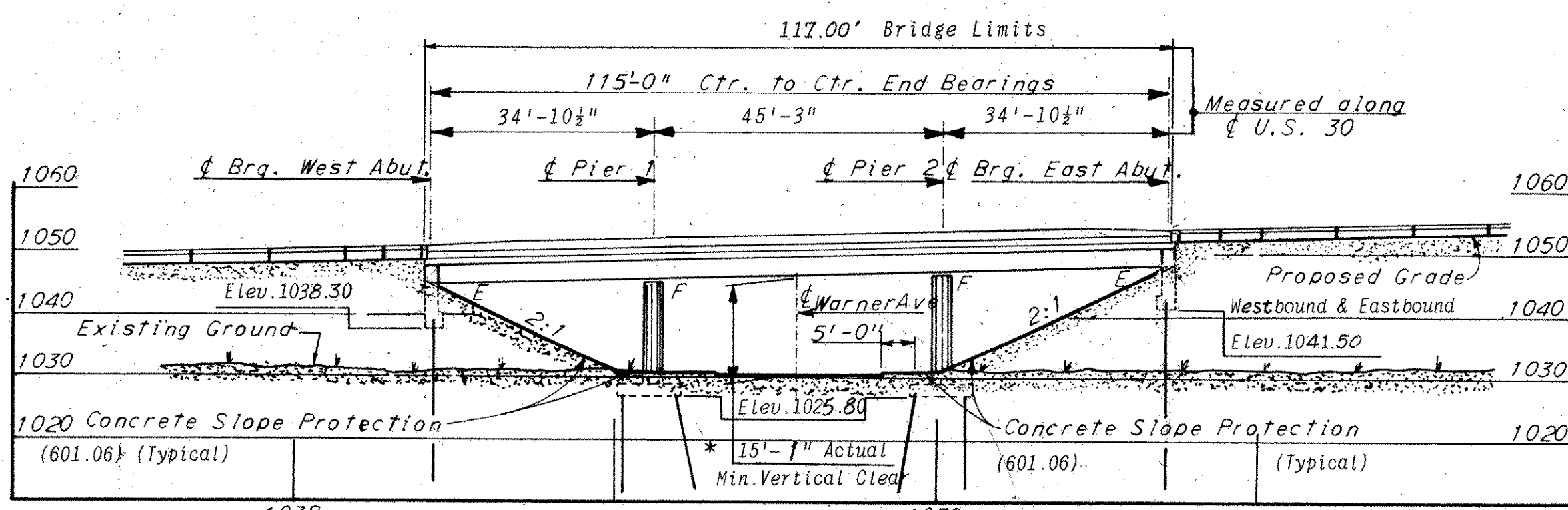
STARK COUNTY
STA-30-15.66



PLAN



PROFILE GRADE-U.S. 30



ELEVATION

* NOTE:
15'-0" Required Minimum Vertical Clearance.
Minimum Vertical Clearance occurs at outside edge of south exterior beam and the center of Warner Avenue.

Notes:
For Estimated Quantities, see Sheet E2.
All Piles are 12" dia cast-in-place Concrete with estimated average pile lengths as follows:

West Abutment	74'
Pier 1	63'
Pier 2	63'
East Abutment	71'

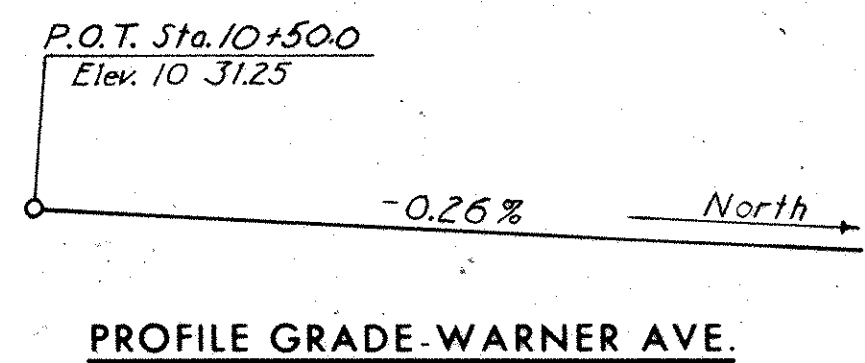
EXISTING UTILITY LEGEND

- 4" G-2 --- GAS
- 4" W-7 --- WATER
- 16" Storm --- STORM SEWER
- 8" San --- SANITARY SEWER
- T --- TELEPHONE
- E --- POWER LINES
- 4W-E4KV [4 WIRE, PRIMARY
4 KILOVOLT
- 3W-Es [3 WIRE, SECONDARY
- W [WATER HYDRANT
- o [MANHOLE
- [CATCH BASIN

These estimates are based on boring data and are approximate only. The contractor shall assume full responsibility for the length of pile selected for driving.

PROPOSED STRUCTURE
Type: Continuous Rolled Beams with Reinforced Concrete Slab.
Spans: 34'-10 1/2", 45'-3", 34'-10 1/2" = 115'-0"
Roadway: 108'-0" Face to face of parapet including 2'-6" median barrier.
Loading: HS20-44, Case I and the Alternate Military Loading.
Skew: None
Wearing Surface: 2 1/2" Asphalt Concrete
Approach Slabs: AS-1-72 (25' long) (Modified)
Alignment: Tangent.
1987 ADT: 25,235 Directional

Modify Std. Drwg. AS-1-72 by providing 3" Clear over the top rebars instead of the 2" shown on the Std. Drwg. The jacking holes as called for on Std. Drwg. AS-1-72 are not required.



PROFILE GRADE-WARNER AVE.

H.N.T.B. BRIDGE NO. 19 Revised 10-16-78 By: RAS

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

SITE PLAN

U.S. 30 OVER WARNER AVE.
BR. NO. STA. 30-16.36 STA. 1038+21.04
SCALE: STA. 1039+38.04

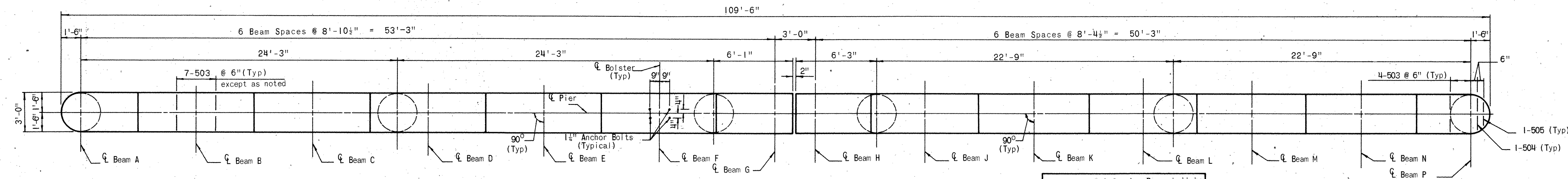
RELOCATED U.S. 30

CANTON STARK COUNTY OHIO

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FEB 15 1985

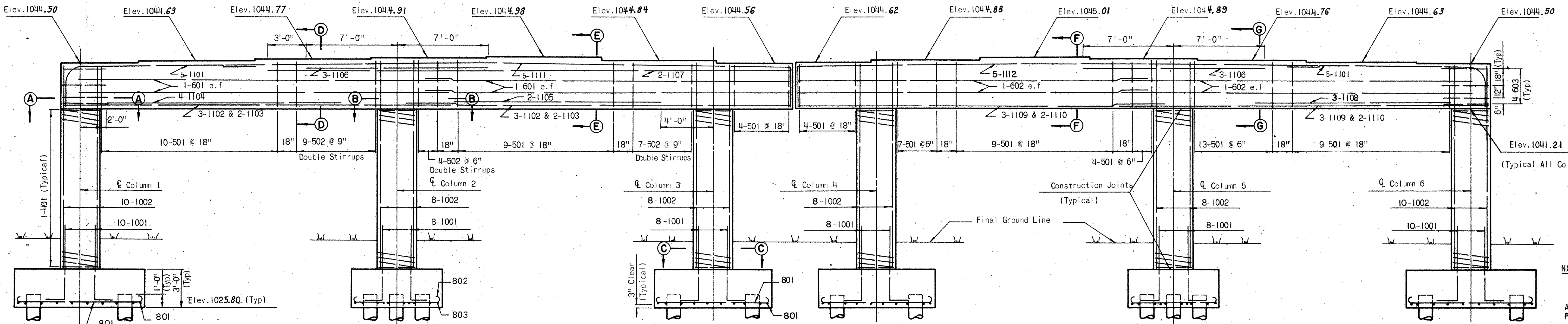
DRAWN	TRACED	CHECKED	REVIEWED	REVISED
C.M.G.	J.M.W.	K.T.B.	M.J.F.	
DATE 2-5-67	DATE 5-26-69	DATE 5-29-69	DATE 11-22-71	

STARK COUNTY
STA-30-15.66

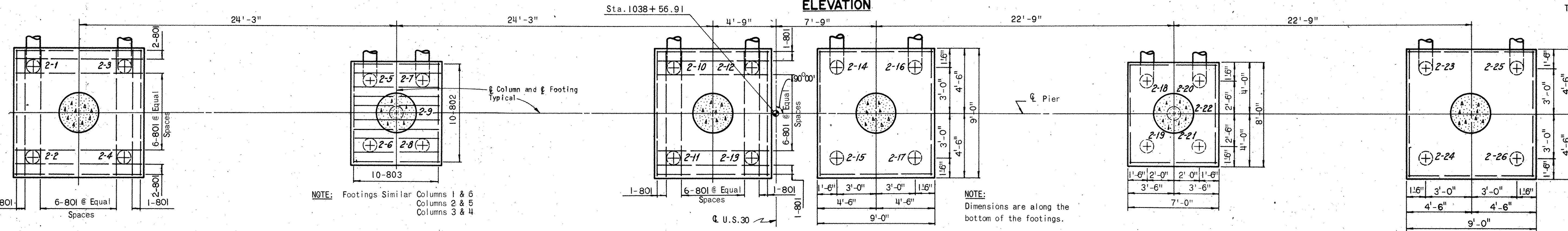


NOTE: All Reinforcing Bars shall be Prefixed PA

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

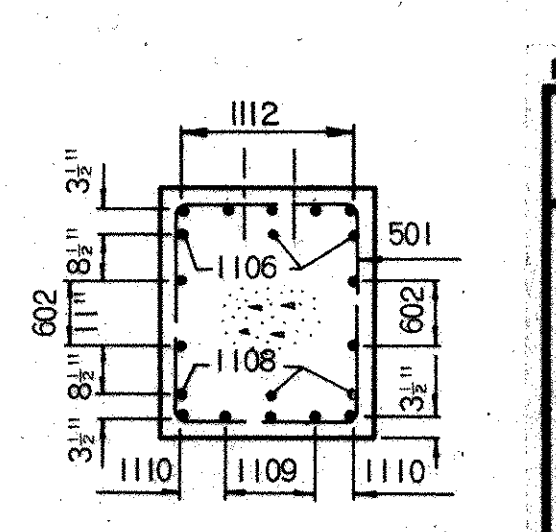
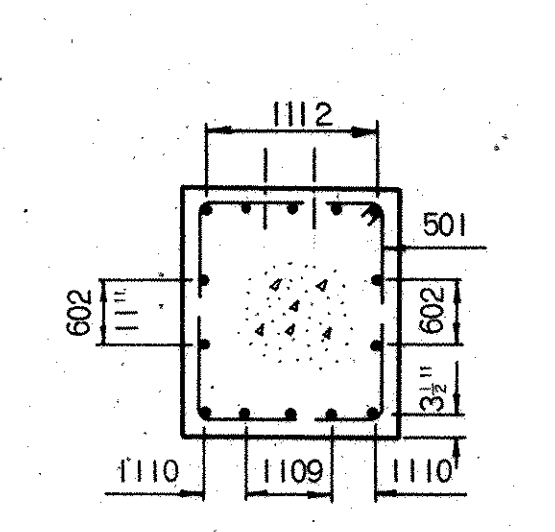
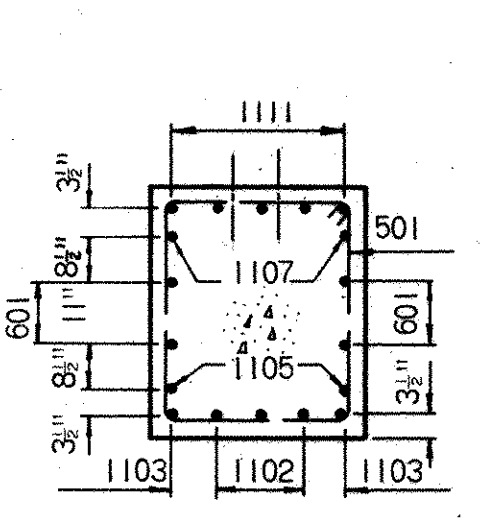
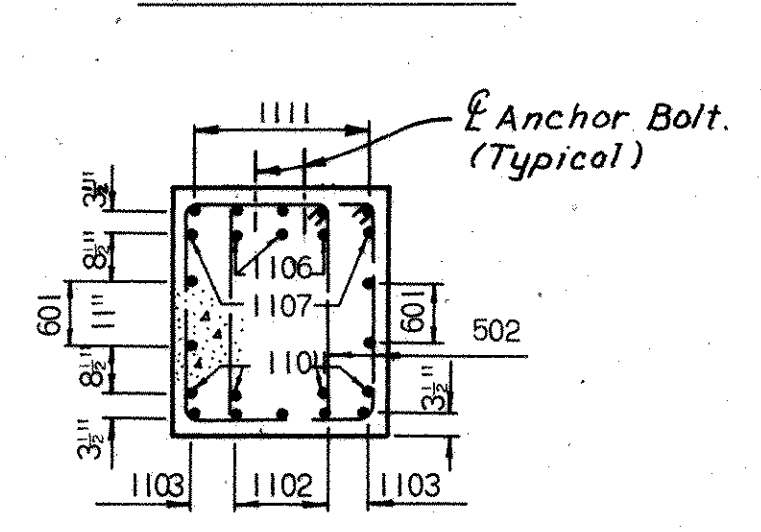
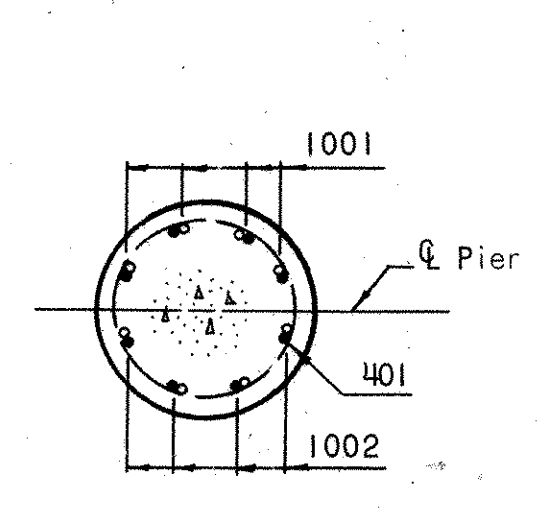
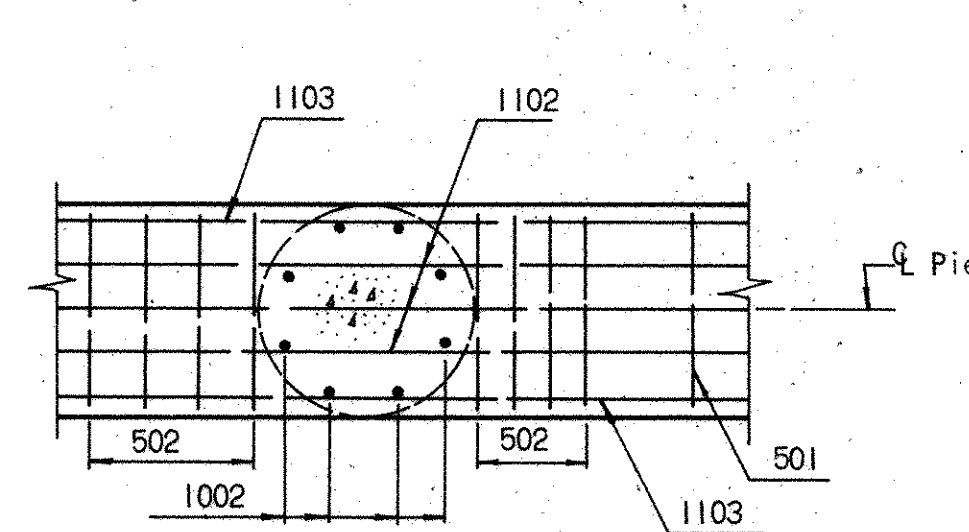
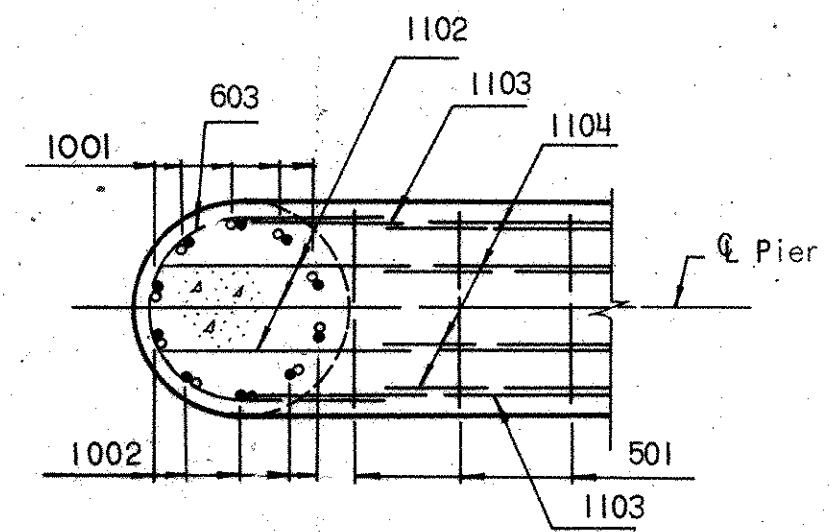


NOTES:
All Piles shall be 12" Cast-in-Place Reinforced Concrete Piles.
All Piles shall be battered 3 in 12 in the direction shown.
The following abbreviation is used:
e.f. = each face
Open corner of stirrup bars shall be placed at the bottom of capbeam within 1/4 span length from center of column, and in cantilevers.
Minimum reinforcing bar laps shall be 30 bar diameters.



NOTE: Footings Similar Columns 1 & 6
Columns 2 & 5
Columns 3 & 4

NOTE:
Dimensions are along the bottom of the footings.



SECTION 'A-A'

SECTION 'B-B'

SECTION 'C-C'

SECTION 'D-D'

SECTION 'E-E'

SECTION 'F-F'

SECTION 'G-G'

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H.N.T.S. BRIDGE NO. 19
Revised 10-16-78 By RAS

HOWARD, NEEDLES, TAMMEN & BERGENOFF 3/7
CONSULTING ENGINEERS
KANSAS CITY CLEVELAND NEW YORK

PIER 1

U.S. 30 OVER WARNER AVE.
BR. NO. STA. 30-15.66 STA. 1038+21.04
SCALE: 1/4" = 1'-0" STA. 1039+38.04

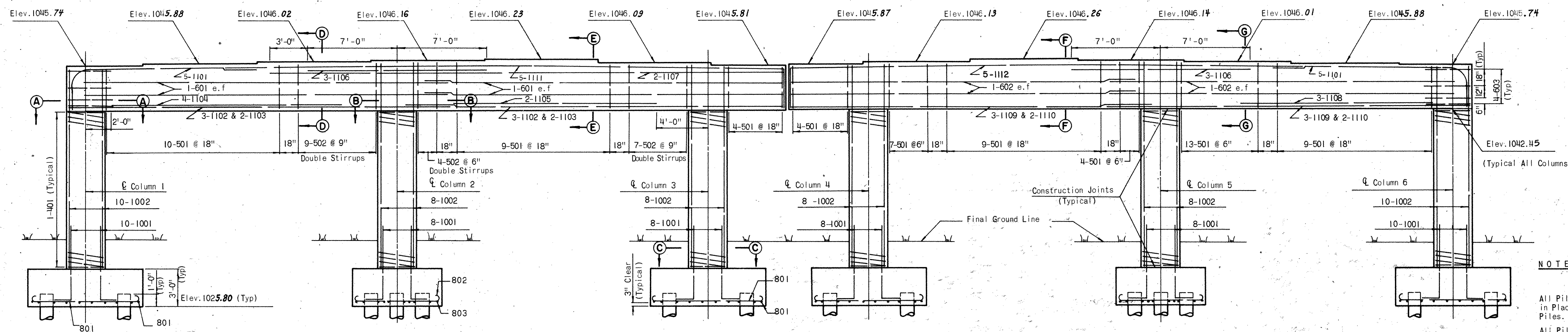
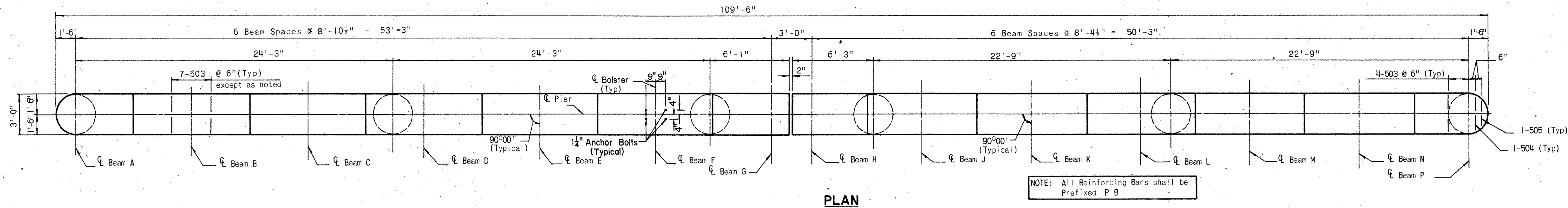
RELOCATED U.S. 30

CANTON STARK COUNTY OHIO

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
J.A.H.	J.H.B.	J.B.C.	R.A.K.	
DATE 9-15-69	DATE 9-15-69	DATE 9-15-69	DATE 11-22-71	

1668

STARK COUNTY
STA-30-15.66



NOTES:

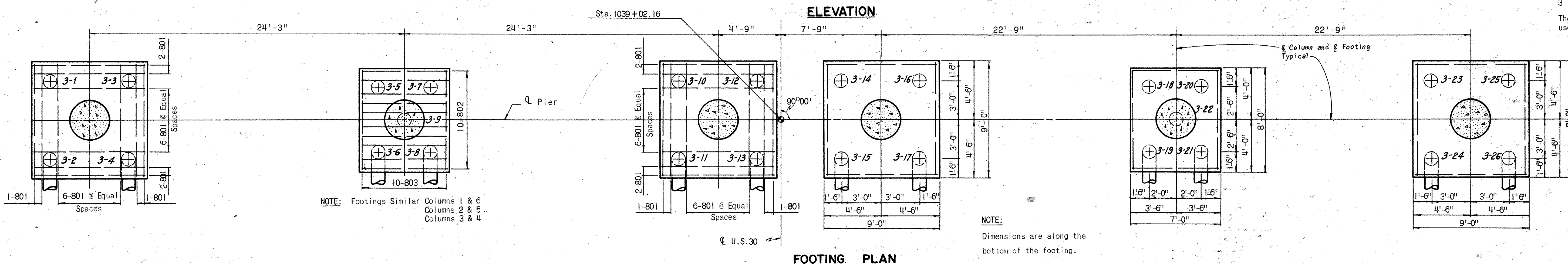
All Piles shall be 12" Cast in Place Reinforced Concrete Piles.

All Piles shall be battered 3 in 12 in the direction shown.

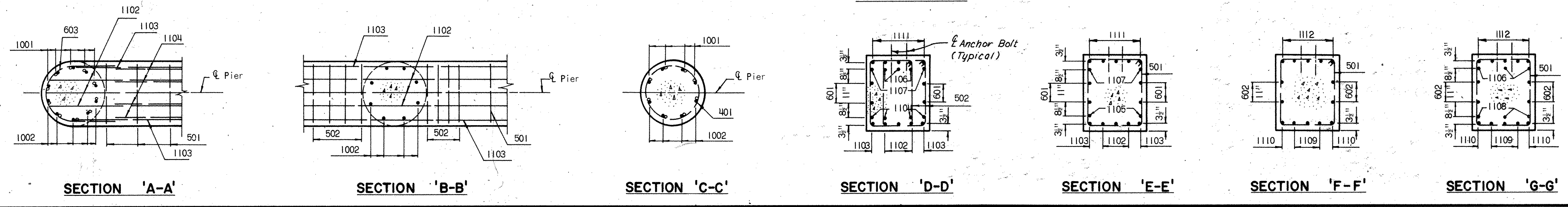
The following abbreviation is used:

e.f. = each face

Open corner of stirrup bars shall be placed at the bottom of capbeam within a span length from e of column, and in cantilevers. Minimum reinforcing bar laps shall be 30 bar diameters.



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H.N.T.B. BRIDGE NO. 19 Revised: 10-16-78 By: RAS

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KANSAS CITY CLEVELAND NEW YORK

PIER 2

U.S. 30 OVER WARNER AVE.
BR. NO. STA-30-16 36 STA. 1038+21.04
SCALE: 1/4" = 1'-0" STA. 1039+38.04

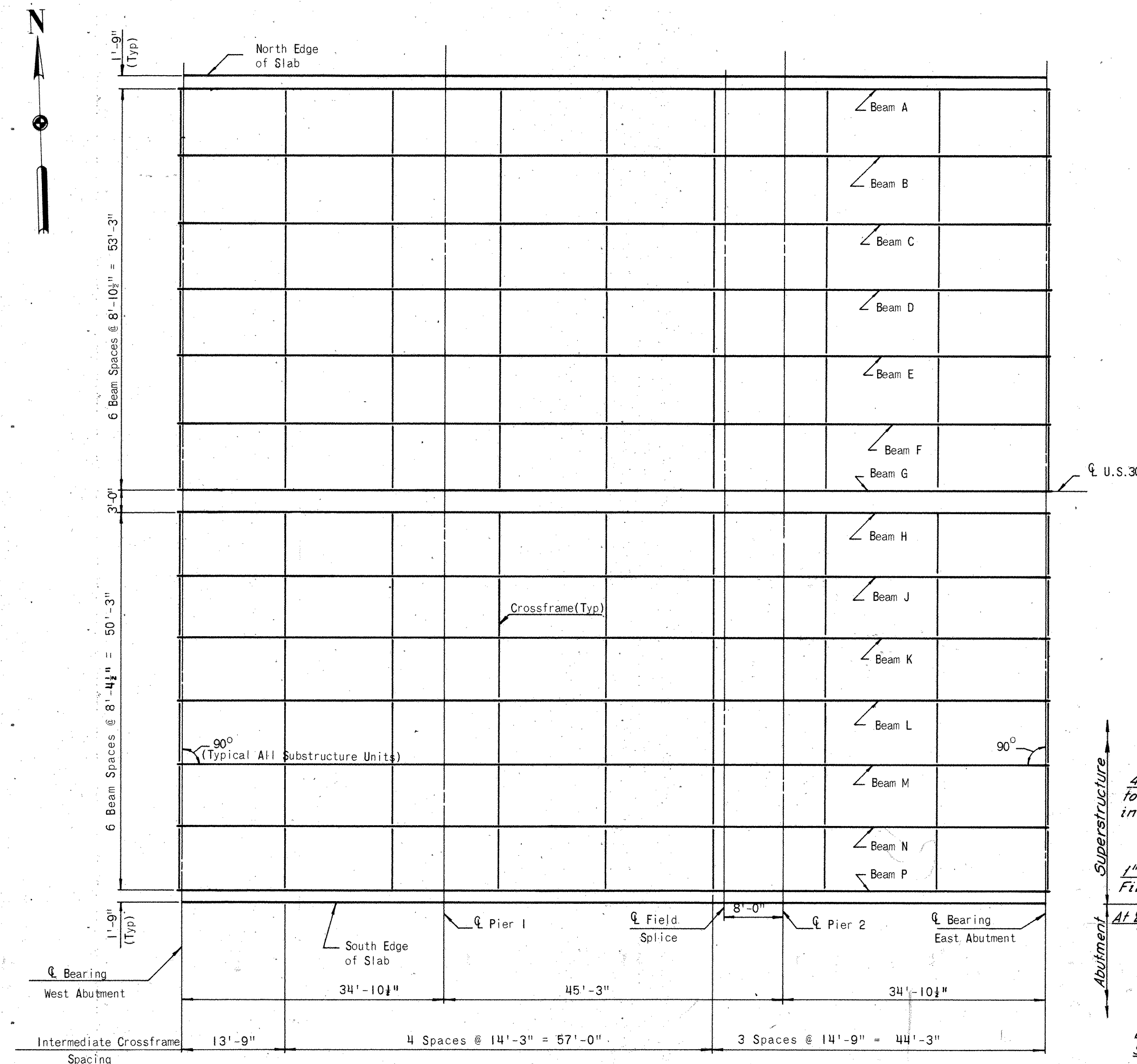
RELOCATED U.S. 30

CANTON STARK COUNTY OHIO

DRAWN	TRACED	CHECKED	REVIEWED	REVISION
J.A.H.	J.M.W.	J.B.C.	M.J.A.	
DATE: 9-69	DATE: 10-69	DATE: 9-15-69	DATE: 7-22-71	

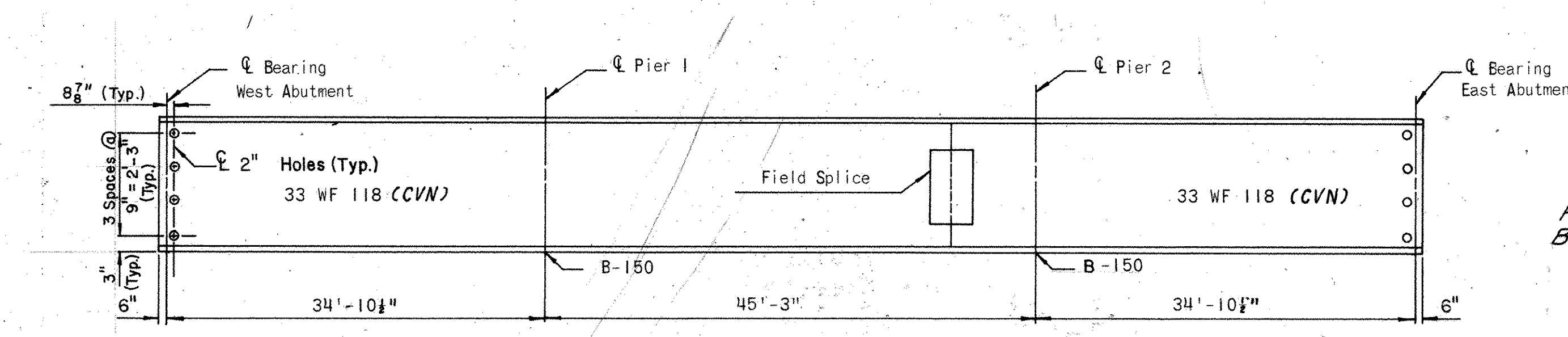
1668

STARK COUNTY
STA-30-15.66



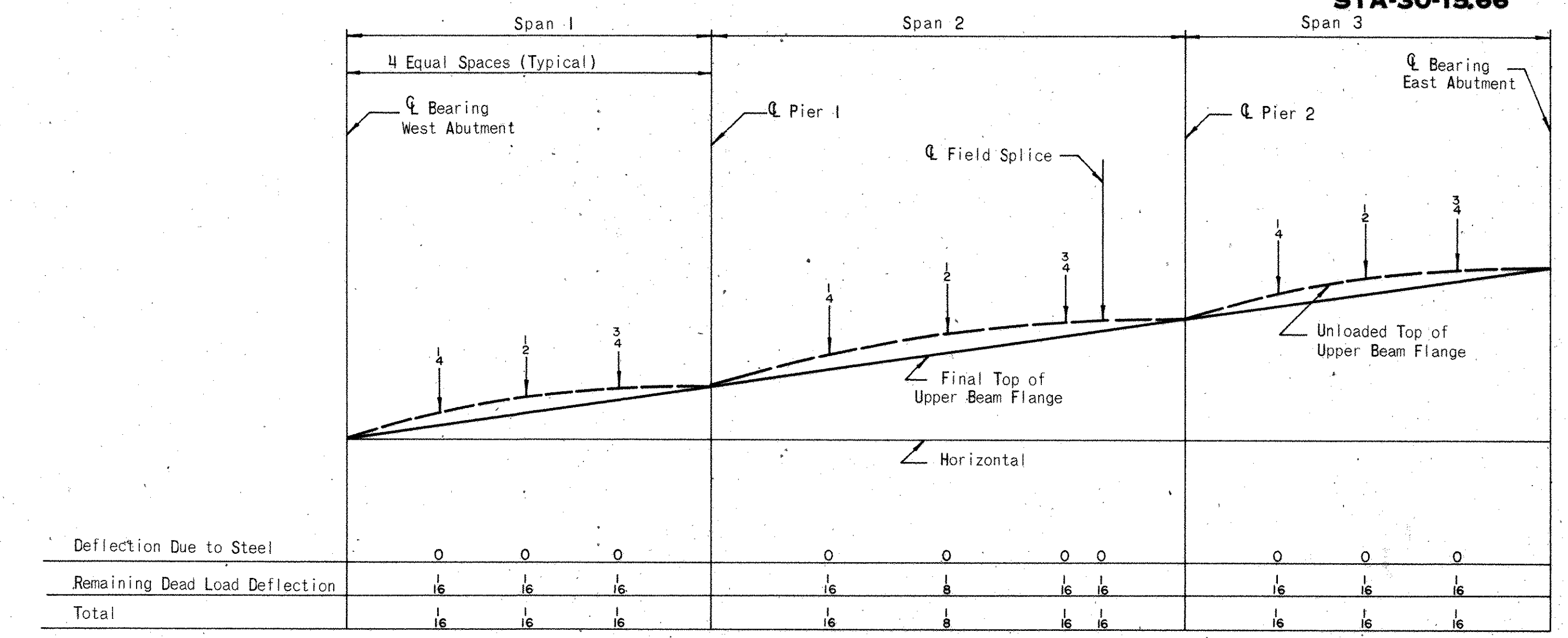
FRAMING PLAN

Note: Welded attachments can be made on the top flange of fascia girders for the full length of the span.

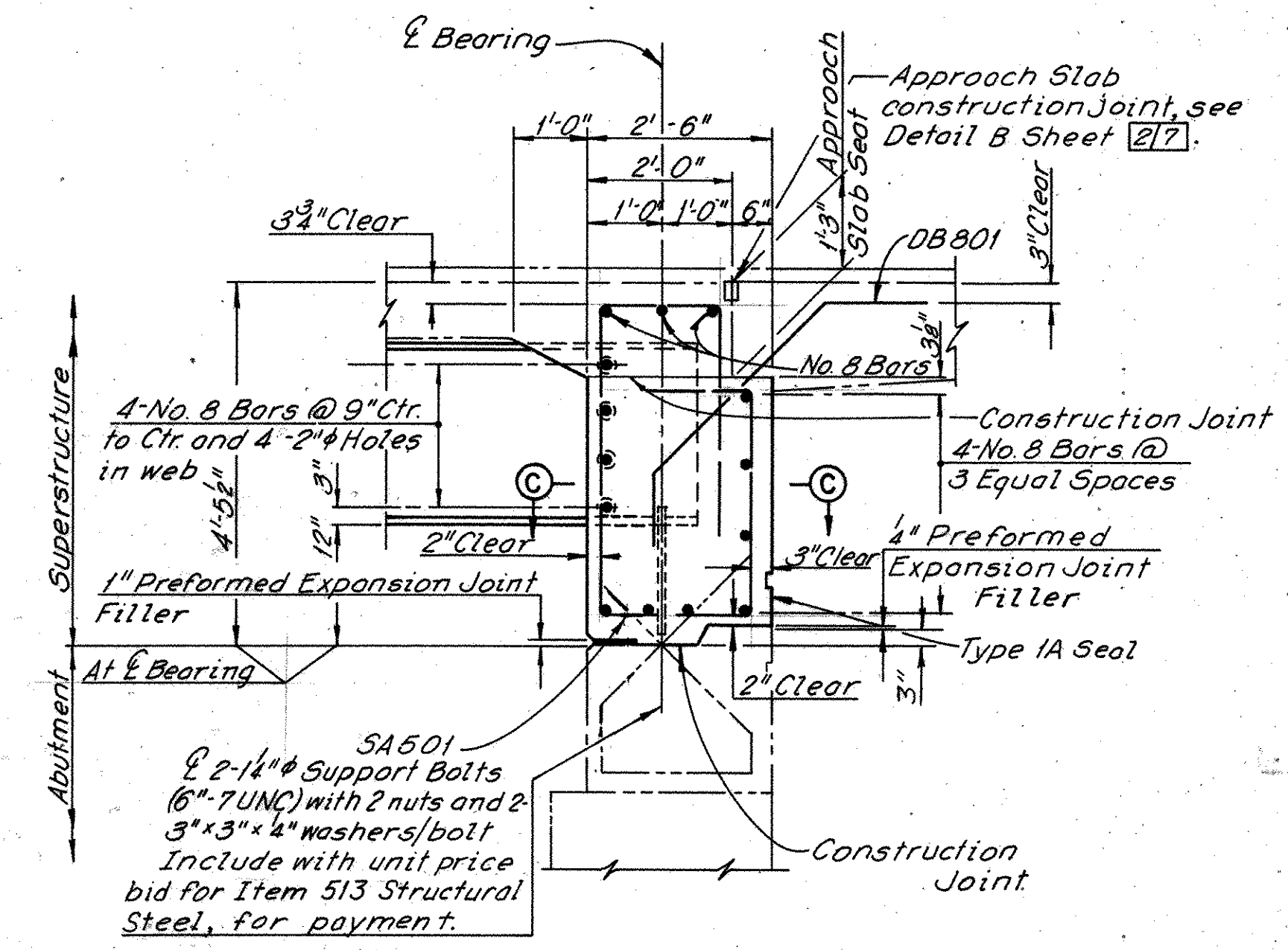


TYPICAL BEAM ELEVATION

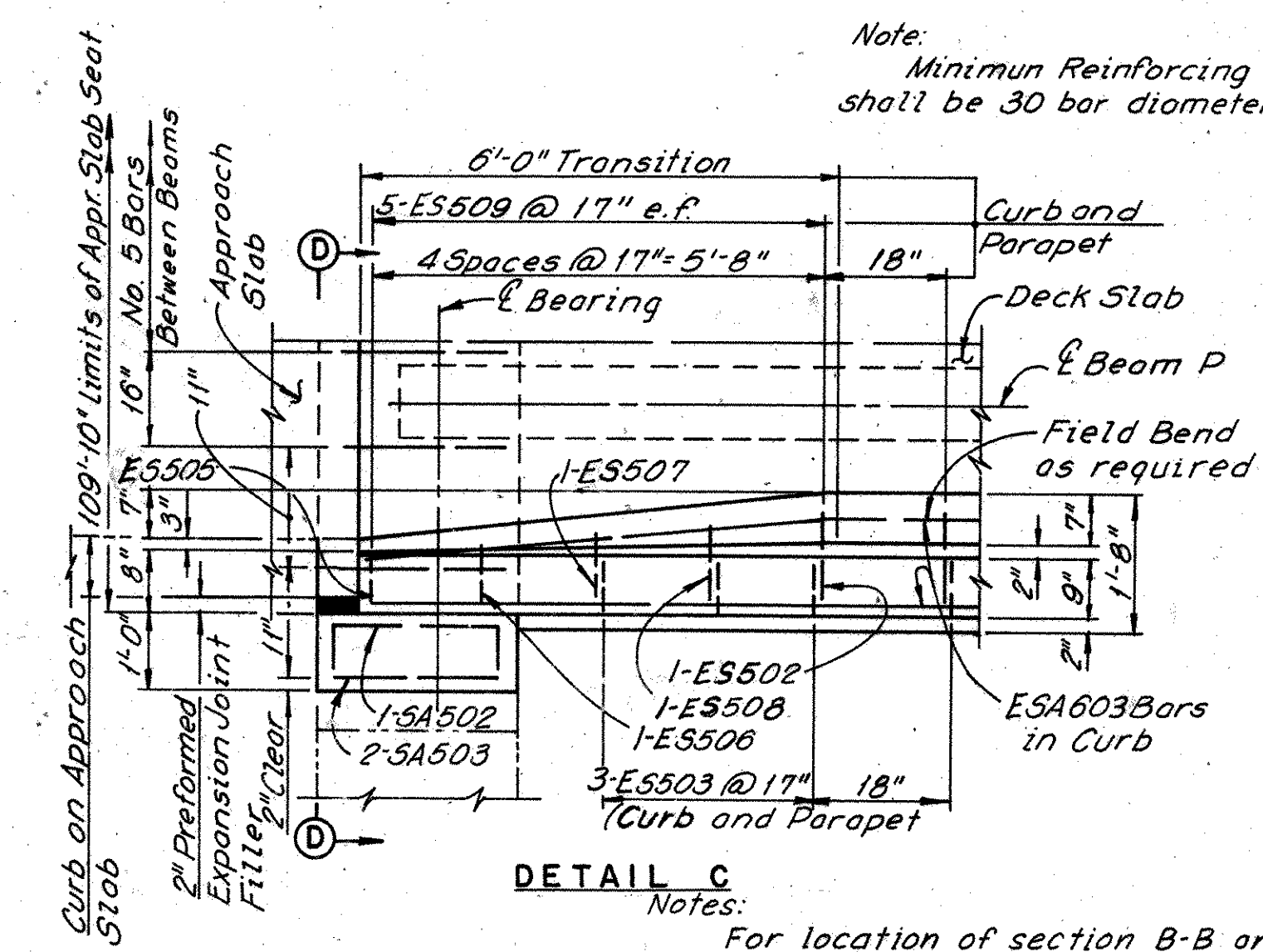
CVN - See Sheet 6N/1



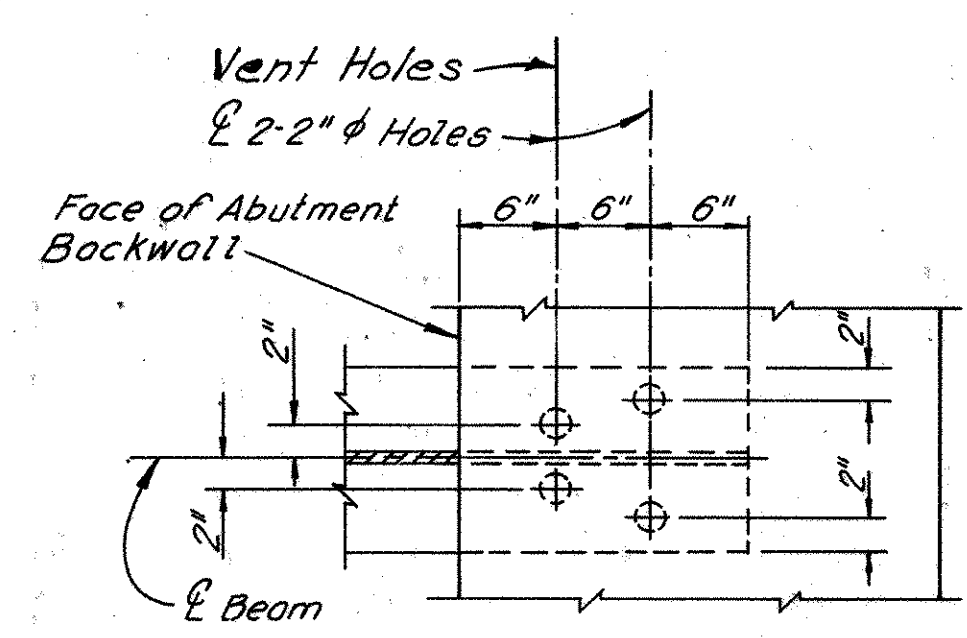
CAMBER DIAGRAM



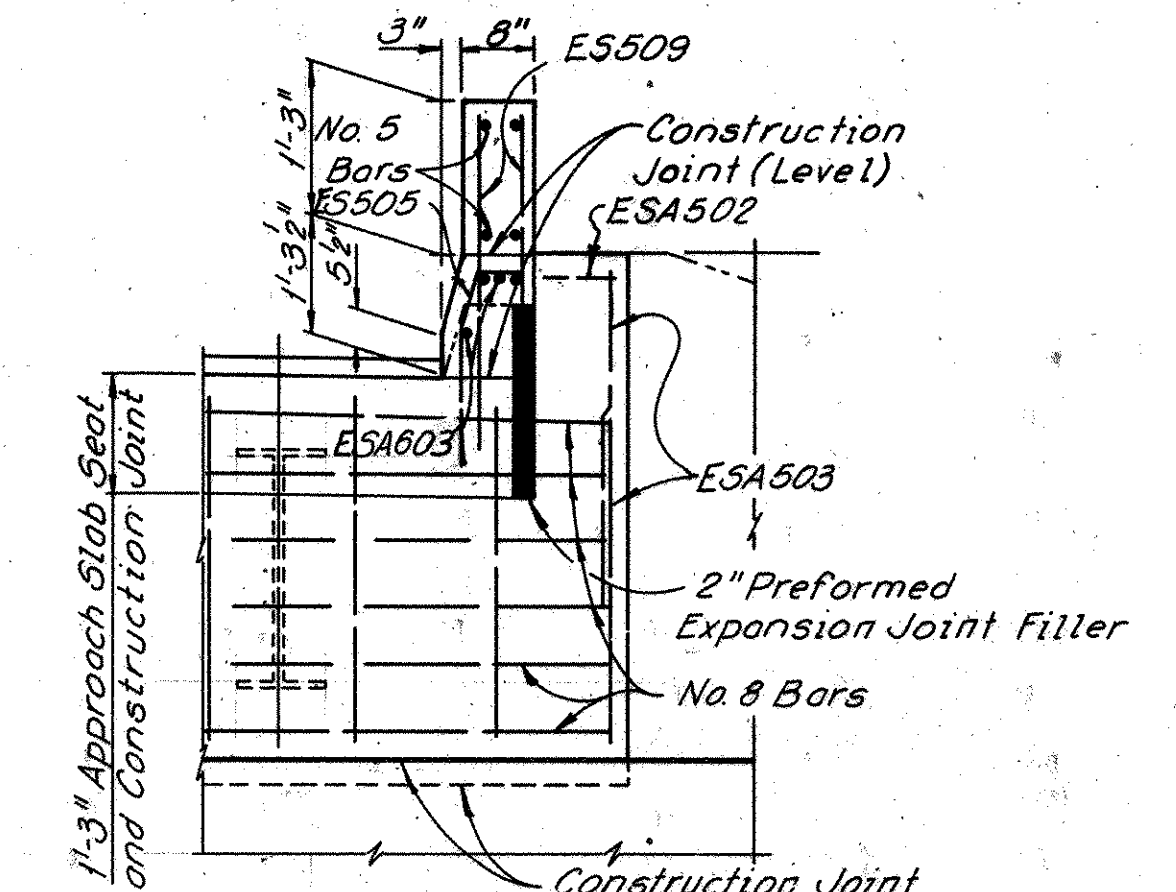
SECTION B-B
(Slab Reinforcement not shown)



DETAIL C
Notes:
For location of section B-B and Detail C, see Sheet 6T/7.
For details of Bolsters, see Ohio Standard Drawing No. RB-155.
For typical Intermediate Crossframe details, see Sheet 6T/7.
For details of Standard scupper see Ohio Standard Drawing SD-1-69, Sheet 3 of 4.
For details of Beam Field Splices, see Ohio Standard Drawing SD-1-69, Sheet 4 of 4.



SECTION C-C
(Support Bolts not shown)



VIEW D-D
(Slab Reinforcement not shown)

H.N.T.B. BRIDGE NO. 19
Revised 10-16-78 By: RAS

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

FRAMING PLAN & INTEGRAL BACKWALL DETAILS

U.S. 30 OVER WARNER AVE.
BR. NO. STA-30-16 36 STA. 1038+21.04
SCALE: 1" = 10'-0" STA. 1039+38.04

RELOCATED U.S. 30

CANTON STARK COUNTY OHIO

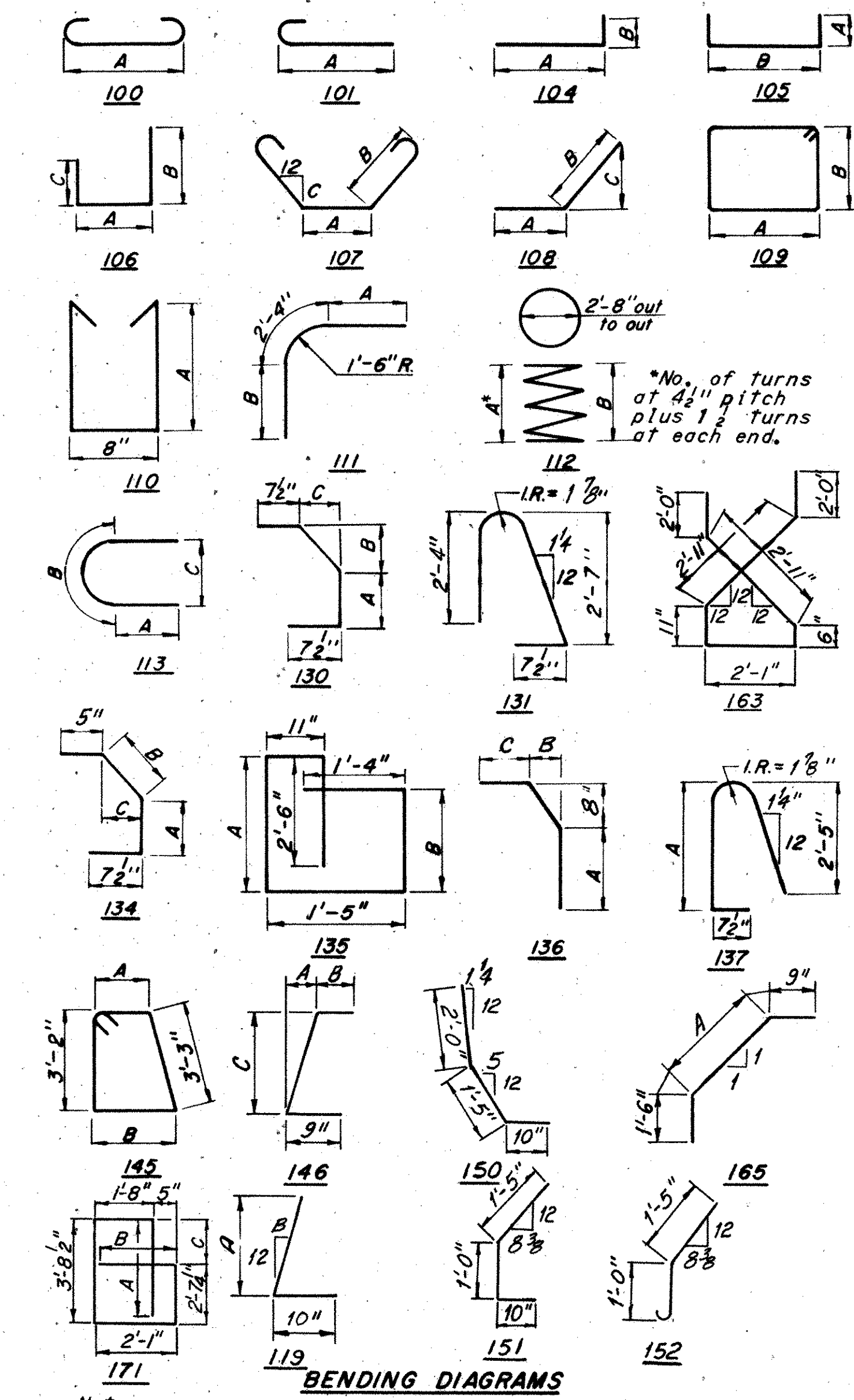
DRAWN	J.M.W.	TRACED	J.B.C.	CHECKED	J.B.C.	REVIEWED	M.J.F.	REVISED	
DATE	2-27-69	DATE	6-6-69	DATE	3-28-69	DATE	5-71		1668

**STARK COUNTY
STA-30-15.66**

250
328

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS			SERIES INCR.	WEIGHT POUNDS
				A	B	C		
WEST ABUTMENT								
AW401	88	4'-1"	105	1'-5"	1'-5"			240
AW501	109	11'-0"	109	2'-7"	2'-7"			1,251
AW502	75	9'-3"	105	3'-8"	2'-1"			724
AW503	4	10'-2"	104	9'-5"	10"			42
AW504	4 Ser. 5	9'-10" to 6'-11"	104	9'-1" to 6'-2"	10"		8 3/4"	175
AW505	4	3'-3"	Str.					14
AW506	4	6'-0"	Str.					25
AW507	4	7'-3"	Str.					30
AW508	6	8'-0"	108	4"	7'-8"	3'-6"		50
AW509	12	4'-10"	105	1'-5"	2'-2"			60
AW601	112	12'-8"	163					2,131
AW801	24	44'-0"	Str.					2,820
AW802	12	32'-6"	Str.					1,041
AW803	12	33'-3"	Str.					1,065
Total West Abutment =								9,668
EAST ABUTMENT								
AE401	88	4'-1"	105	1'-5"	1'-5"			240
AE501	109	11'-0"	109	2'-7"	2'-7"			1,251
AE502	75	9'-3"	105	3'-8"	2'-1"			724
AE503	4	10'-2"	104	9'-5"	10"			42
AE504	4 Ser. 5	9'-10" to 6'-11"	104	9'-1" to 6'-2"	10"		8 3/4"	175
AE505	4	3'-3"	Str.					14
AE506	4	6'-0"	Str.					25
AE507	4	7'-3"	Str.					30
AE508	6	8'-0"	108	4"	7'-8"	3'-6"		50
AE509	12	4'-10"	105	1'-5"	2'-2"			60
AE601	112	12'-8"	163					2,131
AE801	24	44'-0"	Str.					2,820
AE802	12	33'-3"	Str.					1,041
AE803	12	32'-6"	Str.					1,065
Total East Abutment =								9,668
PIER 1								
PA401	6	288'-0"	112	34.9	12'-1"			1,386
PA501	69	12'-2"	109	2'-8"	3'-2"			876
PA502	40	11'-0"	109	2'-1"	3'-2"			459
PA503	92	4'-7"	105	1'-1"	2'-8"			440
PA504	2	4'-5"	105	1'-1"	2'-6"			9
PA505	2	3'-9"	105	1'-1"	1'-10"			8
PA601	8	28'-3"	Str.					339
PA602	8	26'-9"	Str.					321
PA603	8	7'-11"	113	1'-11"	4'-1"	2'-8"		95
PA801	80	10'-8"	100	8'-6"				2,278
PA802	20	8'-8"	100	6'-6"				463
PA803	20	9'-8"	100	7'-6"				516
PA1001	52	7'-6"	104	6'-5"	1'-4 1/2"			1,678
PA1002	52	15'-6"	Str.					3,468
PA1101	10	18'-7"	111	14'-6"	1'-9"			987
PA1102	6	29'-6"	Str.					940
PA1103	4	29'-0"	Str.					617
PA1104	4	18'-0"	Str.					383
PA1105	2	16'-0"	Str.					170
PA1106	6	14'-0"	Str.					446
PA1107	2	40'-0"	Str.					425
PA1108	3	15'-0"	Str.					239
PA1109	6	28'-3"	Str.					900
PA1110	4	27'-6"	Str.					585
PA1111	5	46'-2"	104	43'-6"	3'-0"			1,226
PA1112	5	42'-8"	104	40'-0"	3'-0"			1,133
Total Pier 1 =								20,387

MARK	NUMBER	LENGTH	TYPE	DIMENSIONS			SERIES INCR.	WEIGHT POUNDS
				A	B	C		
PIER 2								
PB401	6	315'-6"	112	38.2	13'-4"			1,521
PB501	69	12'-2"	109	2'-8"	3'-2"			876
PB502	40	11'-0"	109	2'-1"	3'-2"			459
PB503	92	4'-7"	105	1'-1"	2'-8"			440
PB504	2	4'-5"	105	1'-1"	2'-6"			9
PB505	2	3'-9"	105	1'-1"	1'-10"			8
PB601	8	28'-3"	Str.					339
PB602	8	26'-9"	Str.					321
PB603	8	7'-11"	113	1'-11"	4'-1"	2'-8"		95
PB801	80	10'-8"	100	8'-6"				2,278
PB802	20	8'-8"	100	6'-6"				463
PB803	20	9'-8"	100	7'-6"				516
PB1001	52	7'-6"	104	6'-5"	1'-4 1/2"			1,678
PB1002	52	16'-9"	Str.					3,748
PB1101	10	18'-7"	111	14'-6"	1'-9"			987
PB1102	6	29'-6"	Str.					940
PB1103	4	29'-0"	Str.					617
PB1104	4	18'-0"	Str.					383
PB1105	2	16'-0"	Str.					170
PB1106	6	14'-0"	Str.					446
PB1107	2	40'-0"	Str.					425
PB1108	3	15'-0"	Str.					239
PB1109	6	28'-3"	Str.					900
PB1110	4	27'-6"	Str.					585
PB1111	5	46'-2"	104	43'-6"	3'-0"			1,226
PB1112	5	42'-8"	104	40'-0"	3'-0"			1,133
Total Pier 2 =								20,802
Epoxy Coated Reinforcing Steel								
ER501	48	13'-9"	Str.					688
ER502	48	7'-0"	Str.					350
ER503	24	14'-9"	Str.					369
ES501	138	2'-1"	104	1'-7"	7 1/2"			300
ES502	142	2'-11"	130	1'-0"	8 1/2"	5 1/2"		432
ES503	150	2'-0"	105	7 1/2"	11"			313
ES504	138	5'-6"	131					792
ES505	4	2'-6"	136	1'-6"	2 3/4"	4"		10
ES506	4	2'-7"	136	1'-6"	3 1/4"	5 3/4"		11
ES507	4	2'-11"	130	1'-0"	8 1/2"	4 1/4"		12
ES508	4	2'-11"	130	1'-0"	8 1/2"	5 1/4"		12
ES509	40	3'-0"	Str.					125
ES606	201	4'-1"	150					1,233
ES607	201	3'-1"	152					931
ES608	201	3'-4"	119	2'-8"	1 1/4"			1,006
ES609	201	3'-1"	151					931
ES610	201	3'-1"	119	2'-3"	5"			931
ESAG03	246	30'-0"	Str.					11,085
ESAG04	201	25'-7"	101	24'-11"				7,724
ESAG05	128	18'-0"	Str.					3,461
ESAG06	201	33'-2"	101	32'-6"				10,013
ESAG07	82	32'-6"	Str.					4,003
ESAG08	201	33'-2"	101	32'-6"				10,013
ESAG09	201	24'-2"	101	23'-6"				7,296
DECK								
SA501	156	14'-2"	171	3'-1 1/4"	1'-5"	1'-1 1/4"		2,305
SA502	4	3'-3"	105	8"	2'-1"			14
SA503	8	9'-1"	105	3'-7"	2'-1"			76
SA601	402	28'-9"	Str.					17,359
SA602	402	27'-9"	Str.					16,756
SA610	345	30'-0"	Str.					15,540
DBB01	156	5'-5"	165	3'-3"				2,250
SA611	115	32'-6"	Str.					5,614
SA801	56	24'-9"	Str.					3,701
SA802	28	32'-6"	Str.					2,430
SA803	28	34'-6"	Str.					2,579
TOTAL								62,041
TOTAL								68,636



Notes:
 All bar dimensions are given out to out.
 All bars of a series shall vary in length by a constant increment.

Four steel channels, tee or angle spacers, weighing approximately 0.80 pounds per linear foot shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. An allowance of 0.80 pounds per linear foot for spacers is included with the weight of the spiral bars and paid for as reinforcing steel.

REINFORCING STEEL SAMPLES

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

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H.N.T.B. BRIDGE NO. 19 Revised 10-16-78 By: RAS

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

REINFORCEMENT SCHEDULE

U.S. 30 OVER WARNER AVE.
BR. NO. STA-30-16.36 STA. 1038+21.04
SCALE: STA. 1039+38.04

RELOCATED U.S. 30

CANTON STARK COUNTY OHIO

DRAWN	TRACED	J.M.W.	CHECKED	J.A.H.	REVIEWED	REVISION
DATE 5-23-69	DATE 5-28-69	DATE 5-30-69	DATE 7-22-71			1668