

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

FA ROUTE 553
SECTION 125 BR (Includes Soils Report)
DEKALB COUNTY
PROJECT BR-F-553(5)

C-92-029-81

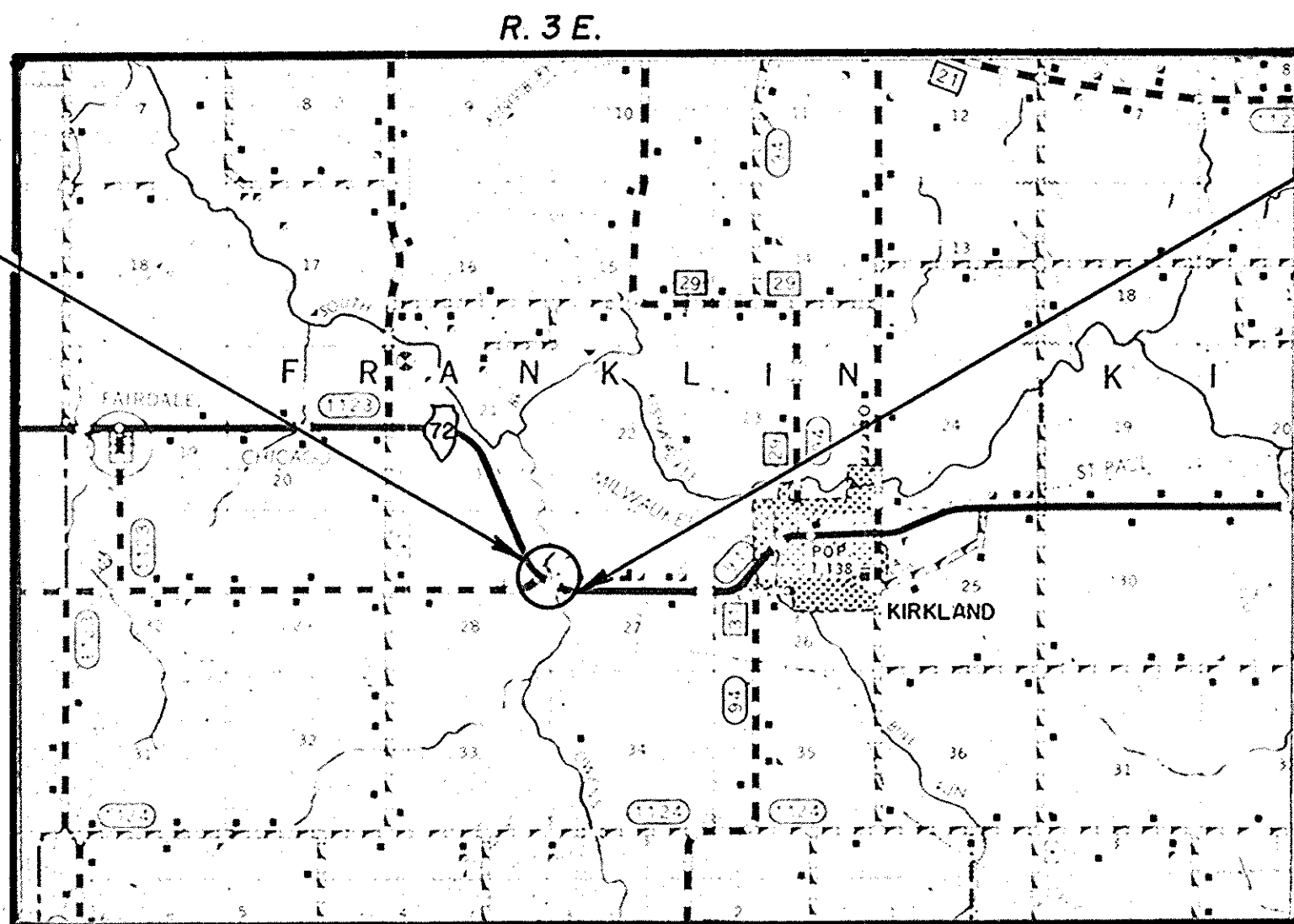
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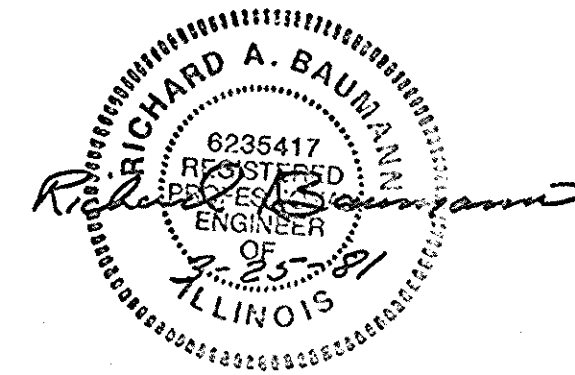
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PROJECT BEGINS
STA. 288 + 98.06



PROJECT ENDS
STA. 313 + 87.32

SECTION 125-BR INCLUDES A 3 SPAN CONTINUOUS
WF BEAM BRIDGE WITH R.C. DECK. (CARRYING FA ROUTE
553 OVER OWENS CREEK) ON PILE BENT PIERS WITH
CONCRETE ENCASEMENT & PILE BENT ABUTMENTS,
2 SPANS at 49'-6", 1 SPAN at 57'-11", at STA. 303 + 30



LENGTH OF PROJECT = 1370 FEET ILL. RTE. 72 = 0.259 MILE
= 400 FEET QUARRY RD. = 0.076 MILE

PLAN 1"=50'
PROFILE, HORIZ. 1"=50'
SCALE: PROFILE, VERT. 1"=5'
CROSS SECTIONS 1"=5'
LAYOUT 1"=1 MILE

CALL J.U.L.I.E BEFORE YOU DIG 800-892-0123

FRANKLIN TOWNSHIP

CONTRACT NO. 35042

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 553	125-BR	DEKALB	18	1
ILLINOIS PROJECT BR-F-553(5)				



LOCATION OF SECTION INDICATED THUS:—

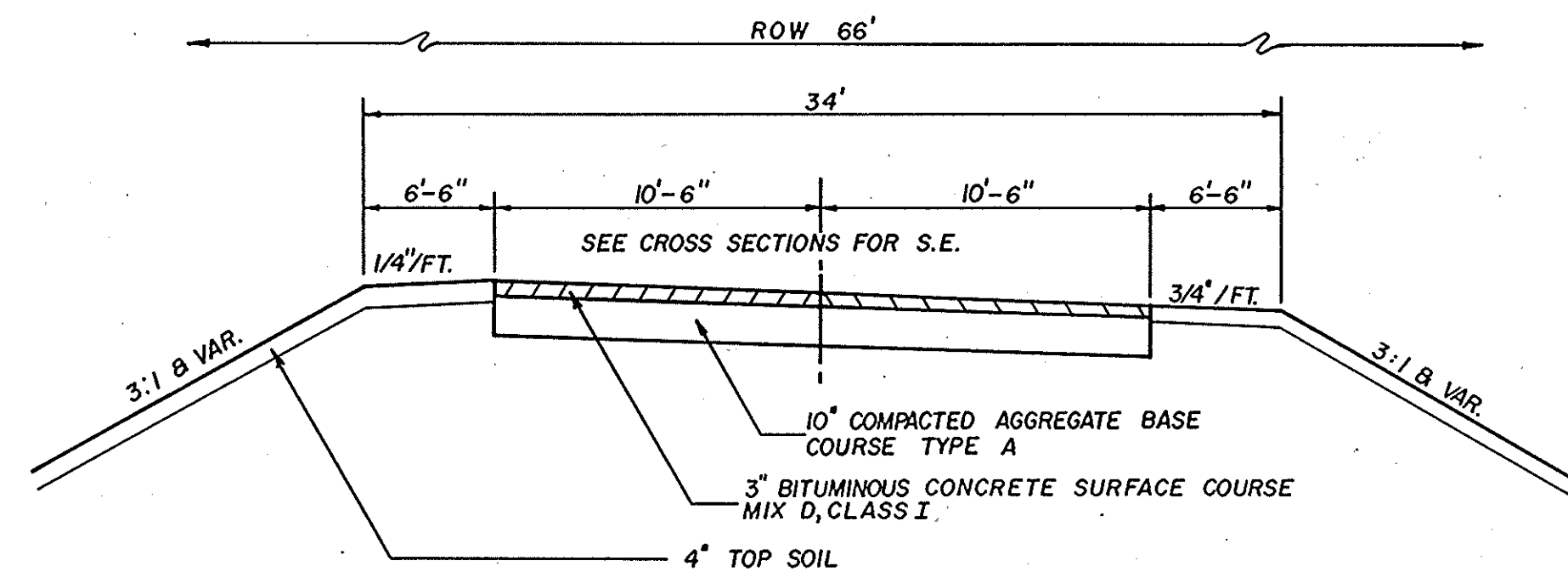
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS	
SUBMITTED	4-8 1981
EXAMINED	5-15 1981
PASSED	5-15 1981
APPROVED	5-15 1981
DISTRICT ENGINEER	
ENGINEER OF PLANS AND CONTRACTS	
ENGINEER OF DESIGN	
DIRECTOR, DIVISION OF HIGHWAYS	

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION	
APPROVED	DATE
DIVISION ADMINISTRATOR	

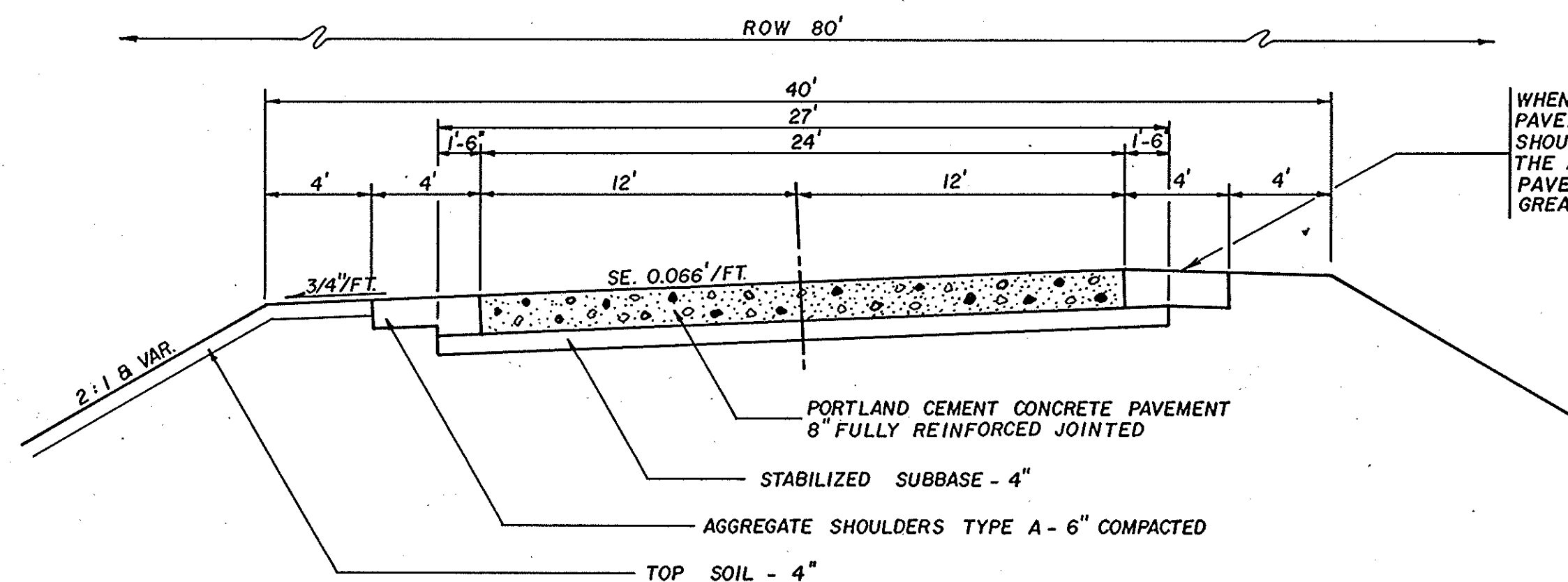
NOTE: THE THICKNESS OF BITUMINOUS MIXTURE SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE BITUMINOUS MIXTURE IS PLACED.

P. I. STA.	EXIST. SUPER FT./FT.	PROP. SUPER FT./FT.	TRANSITIONS STA. — STA.	FULL SUPER STA. — STA.	THICK- NESS OUTSIDE E.O.P INCHES	LEVELING BINDER MACHINE METHOD TONS
302+ 94.32	0.045	0.066	288+98.06— 290+76.26 312+09.12— 313+87.32	290+76.26— 312+09.12		415

STA. 300+96.52 MAINLINE =
STA. 10+00 SIDEROAD



STA. 10+12 - STA. 14+00



STA. 296 + 30 - STA. 301 + 48.23
STA. 305 + 11.48 - STA. 310 + 00

STRUCTURAL DESIGN TRAFFIC YEAR 1989
P.C. 2155, S.U. 560, M.U. 85 CLASS II

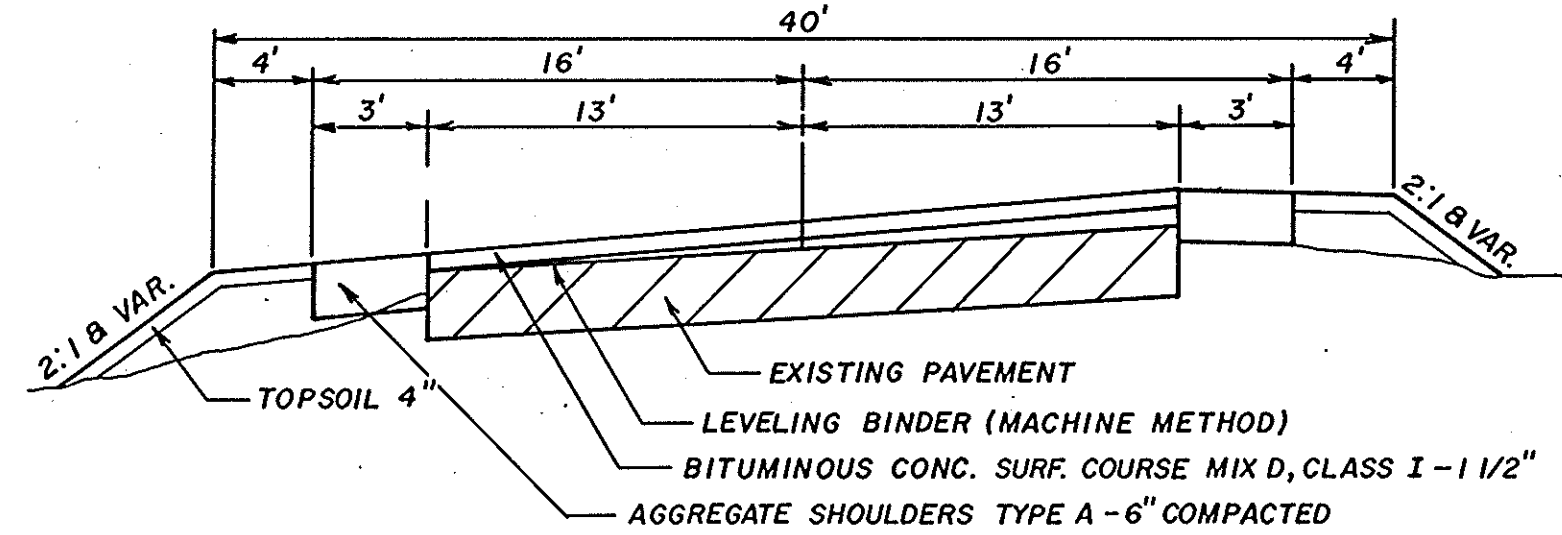
PERCENT OF S.D.T. IN DESIGN LANE
 $U_p = 50$ $U_s = 50$ $U_m = 50$

T.F. = 0.6167 CBR = 3.0 R.J.P.C.C.

PAVEMENT STRUCTURE MATERIALS

SURFACE COURSE : P.C.C. PAVEMENT 8"
REINFORCED JOINTED

BASE COURSE : STABILIZED SUBBASE 4"



STA. 288 + 98.06 - STA. 296 + 30
STA. 310 + 00 - STA. 313 + 87.32

202001
203001
204001

215001
216003
218001
301001
406001
406005
406013
408003
408012
503003
504003
501001
502001
502003
502005
503001
503004
504003
507001
511005
511877
511886
512001
512002
513014
514013
514001
601001
607031
607035
607086
612454
612470
612473
628013
628021
628031
632001
X64201
X64203
X64204
X64804
X648037
X40812
X62837
X62844
XZ1232
X21079
X21096
X53027
X53040
X710029
X04748

STRUCTURAL DESIGN TRAFFIC YEAR 1989
P.C. 231, S.U. 60, M.U. 9 CLASS IV

PERCENT OF S.D.T. IN DESIGN LANE
 $U_p = 50$ $U_s = 50$ $U_m = 50$

T.F. = 0.0133 CBR = 3.0 $D_f = 2.1$

PAVEMENT STRUCTURE MATERIALS

SURFACE COURSE : BITUMINOUS MIX CO
CLASS B 3" $a_1 =$

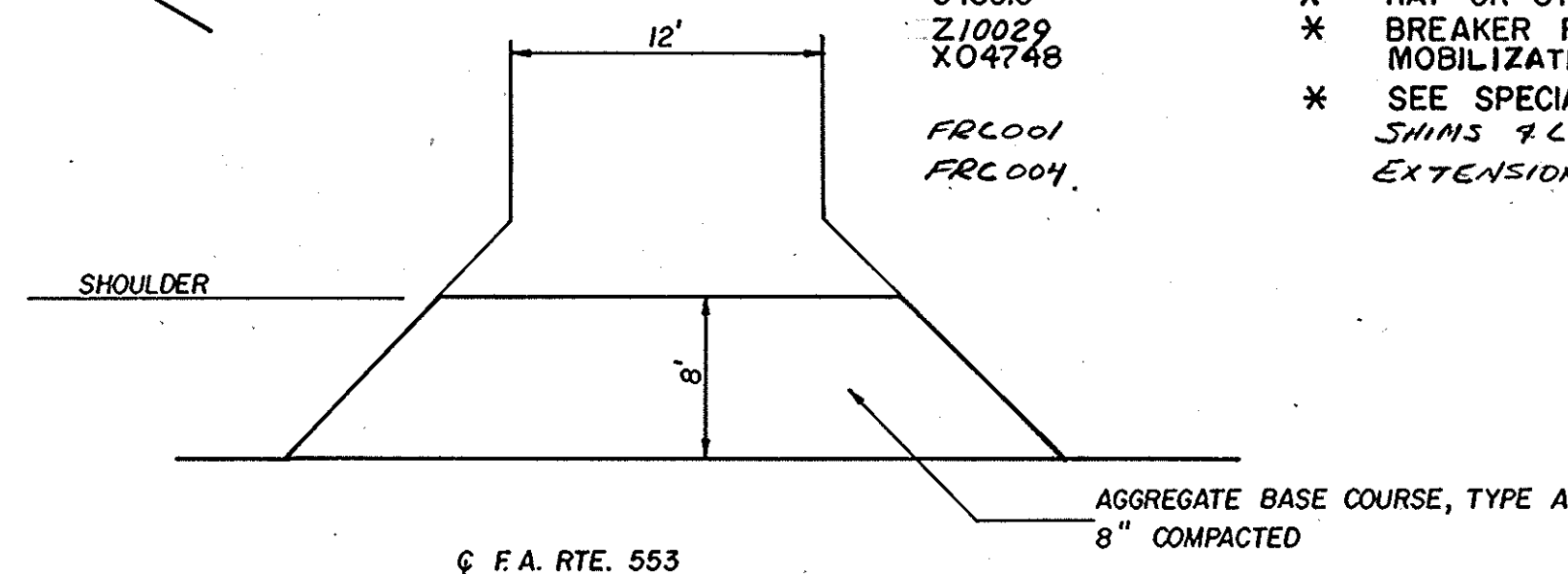
BASE COURSE : AGGREGATE BASE CO
10" COMPACTED a_2

ITEM	UNIT	QUANTITY
EARTH EXCAVATION	CU. YD.	499 479
CHANNEL EXCAVATION	CU. YD.	197 81
BORROW EXCAVATION	CU. YD.	7847 7919
AGGREGATE SHOULDERS, TYPE A	TON	651 647
TOP SOIL PLACEMENT - 4"	SQ. YD.	7506 8051
STABILIZED SUB-BASE - 4"	SQ. YD.	3429
AGGREGATE BASE COURSE, TYPE A	TON	434 578
BITUMINOUS MATERIALS (PRIME COAT)	GALLON	337 561
LEVELING BINDER (MACHINE METHOD)	TON	445 420
BITUMINOUS CONCRETE SURFACE COURSE, MIX D, CLASS I	TON	455 435
PORTLAND CEMENT CONCRETE PAVEMENT 8"	SQ. YD.	3047 3048
PAVEMENT FABRIC	SQ. YD.	3047 3048
PROTECTIVE COAT	SQ. YD.	717 3969
P.C.C. BRIDGE APPROACH SHOULDER PAVEMENT	SQ. YD.	243 30
REMOVAL OF EXISTING STRUCTURES	EACH	190
STRUCTURE EXCAVATION	CU. YD.	137 181
COFFERDAM EXCAVATION	CU. YD.	137 112
COFFERDAMS	EACH	2
FLOOR DRAINS	EACH	12
CONCRETE HEADWALL FOR PIPE DRAINS	EACH	1
CLASS X CONCRETE	CU. YD.	3548 362.6
FURNISHING & ERECTING STRUCTURAL STEEL	LUMP SUM	1
PIPE CULVERT TYPE 2, 42" DIA.	LIN. FT.	66
METAL END SECTIONS 12"	EACH	1
METAL END SECTIONS 42"	EACH	2
REINFORCEMENT BARS	POUND	36980 43350
REINFORCEMENT BARS (EPOXY COATED)	POUND	26930
FURNISHING STEEL PILES (HP 10x42)	LIN. FT.	674 1058
TEST PILES STEEL (HP 10x42)	EACH	2
NAME PLATES	EACH	1
STONE RIP RAP	SQ. YD.	680 546
PIPE DRAINS, CORRUGATED STEEL 4"	LIN. FT.	20
PIPE DRAINS, CORRUGATED STEEL 12"	LIN. FT.	21 25
PIPE UNDERDRAINS PERFORATED CORRUGATED STEEL PIPE 4"	LIN. FT.	32
INLET BOX STANDARD 2247	EACH	1
TYPE C INLET BOX, STANDARD 2324	EACH	1
PAVEMENT REMOVAL	SQ. YD.	1527
REMOVAL AND REINSTALLATION OF EXISTING STEEL PLATE BEAM GUARD RAIL, SINGLE RAIL	LIN. FT.	900 1187.5
REMOVAL AND REINSTALLATION OF EXISTING TERMINAL SECTION-SINGLE RAIL	EACH	4
TRAFFIC BARRIER TERMINAL, TYPE I	EACH	2
DELINATORS	EACH	6
SEEDING, CLASS II, MODIFIED	ACRE	13 1.78
EXCELSIOR BLANKET	SQ. YD.	1395 760
ENGINEERS FIELD OFFICE, TYPE A	CAL. MO.	7 6
TRAFFIC CONTROL COMPLETE	LUMP SUM	1
BRIDGE APPROACH PAVEMENT (STANDARD 2382)	SQ. YD.	171 174
STEEL PLATE BEAM GUARD RAIL, TYPE A	LIN. FT.	162.5
TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4
CONCRETE THRUST BLOCKS	EACH	1
NEOPRENE EXPANSION JOINTS (2")	LIN. FT.	96
PERMANENT BENCHMARKS TYPE I	EACH	1
DRIVING STEEL PILES	LIN. FT.	874 850
HAY OR STRAW BALES	LIN. FT.	200 56
BREAKER RUN CRUSHED STONE	TON	888 735
MOBILIZATION	LUMP SUM	1
SEE SPECIAL PROVISIONS		
SHIMS & LABOR		389.96
EXTENSION OF 42" RCUL.		3168.06

LOCATION OF UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. THE EXACT LOCATIONS SHOULD BE DETERMINED BY THE CONTRACTOR DURING CONSTRUCTION.

THE SIDEROAD CROSS SECTION SHALL BE CONSTRUCTED FULL DEPTH UNTIL THE BOTTOM OF THE AGGREGATE BASE COURSE CONTACTS THE EXISTING ROAD SURFACE. THE SIDEROAD SHALL BE TAPERED WITH LEVELING BINDER AND BITUMINOUS SURFACE COURSE FROM THIS POINT TO STATION 14+00. A BUTT JOINT SIMILAR TO THAT SHOWN FOR THE MAINLINE SHALL BE USED AT STA. 14+00. NO EXCAVATION IN THE EXISTING ROADWAY SURFACE WILL BE REQUIRED EXCEPT FOR THE BUTT JOINT CONNECTION.

**F.A. RTE. 553
OVER OWENS CREEK
SEC. 125 BR
DEKALB COUNTY**



TYPICAL ENTRANCE DETAIL

<i>R. C. Davis</i>	4-8-81
DISTRICT ENGINEER OF DESIGN	DATE
<i>W. R. Kervon</i>	4-7-81
DISTRICT ENGINEER OF PLANNING	DATE
<i>W. W. Dickson</i>	4/17/81
DISTRICT ENGINEER OF RIGHT OF WAY	DATE
<i>James H. McGee</i>	4-8-81
DISTRICT ENGINEER OF TRAFFIC	DATE
<i>W. H. Woodcock</i>	4-7-81
DISTRICT ENGINEER OF CONSTRUCTION	DATE
<i>Frank J. Scharde</i>	4-7-81
DISTRICT ENGINEER OF MAINTENANCE	DATE
<i>Harold E. Tracy</i>	4-7-81
DISTRICT ENGINEER OF MATERIALS	DATE

U.S.G.S. DATUM
5TH GA. (1929)

FA RTE. 553
SEC. 125-BR
BEGINS STA. 288+98.06

FA RTE. 553
SEC. 125-BR
ENDS STA. 313+87.32

TRAFFIC BARRIER TERMINAL TYPE I
LOCATION EACH
RT. STA. 298+49.68 - 298+76.62 1
RT. STA. 300+39.12 - 300+66.06 1
TOTAL 2 EACH

TRAFFIC BARRIER TERMINAL TYPE 6
LOCATION EACH
LT. STA. 302+01.30 - 302+41.12 1
RT. STA. 302+27.78 - 302+67.60 1
LT. STA. 303+88.94 - 304+28.76 1
RT. STA. 304+27.68 - 304+67.50 1
TOTAL 4 EACH

REMOVAL & REPLACEMENT OF STEEL PLATE BEAM GUARD RAIL, SINGLE RAIL
LOCATION LIN. FT. SQ. YD.
LT. STA. 300+01.30 - 302+01.30 209.0 162.5
RT. STA. 301+52.78 - 302+27.78 75.0
LT. STA. 304+28.76 - 306+91.26 262.5 312.5
RT. STA. 304+67.50 - 308+27.86 362.5 350
TOTAL 900.0 LIN. FT. 1182.5 SQ. YD.

STEEL PLATE BEAM GUARD RAIL, TYPE A
LOCATION LIN. FT. SQ. YD.
RT. STA. 298+76.62 - 300+39.12 162.5
TOTAL 162.5 LIN. FT. 162.5 SQ. YD.

REMOVAL AND REINSTALLATION OF EXISTING TERMINAL SECTION, SINGLE RAIL
LOCATION EACH
LT. STA. 299+74.36 - 300+01.30 1
RT. STA. 301+25.84 - 301+52.78 1
LT. STA. 306+91.26 - 307+18.20 1
RT. STA. 308+27.68 - 308+54.62 1
TOTAL 4 EACH

PAVEMENT REMOVAL
LOCATION SQ. YD.
STA. 296+30 - 298+52 641
STA. 302+45.86 - 302+69 67
STA. 303+90.40 - 304+13.86 68
STA. 307+40 - 310+00 751
TOTAL 1527 SQ. YD.

METAL END SECTIONS 42"
LOCATION EACH
RT. STA. 300+63.52 1
RT. STA. 301+29.52 1
TOTAL 2 EACH

DELINEATORS

LOCATION EACH
RT. STA. 298+49.68 1
LT. STA. 299+74.36 1
RT. STA. 300+39.12 1
RT. STA. 301+25.84 1
LT. STA. 307+18.20 1
RT. STA. 308+27.68 1
TOTAL 6 EACH

CONCRETE HEADWALL FOR PIPE DRAINS 4"
LT. STA. 296+35 1 EACH

LEVELING BINDER (MACHINE METHOD)
288+98.06 - 296+30 2370 TON
310+00 - 313+87.32 1250 TON
TOTAL 3620 TON 420

BITUMINOUS CONC. SURF COURSE, MIX D, CLASS I
288+98.06 - 296+30 187.0 TON
310+00 - 313+87.32 99.0 TON
TOTAL 286.0 TON

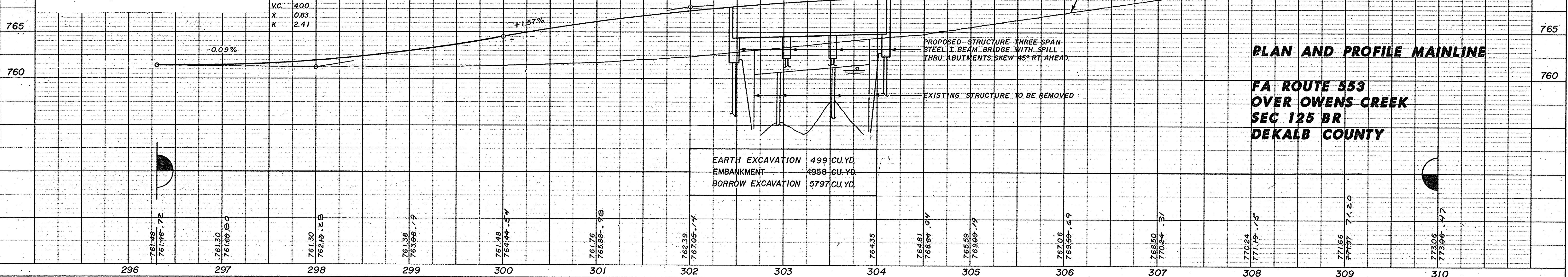
QUARRY RUN GRANULAR EMBANKMENT
STA. 296+30 - 298+52 888 TON

PIPE UNDERDRAINS, PERFORATED CORRUGATED STEEL PIPE 4"
LT. & RT. STA. 296+35 32 LIN. FT.

PIPE DRAINS, CORRUGATED STEEL 4"
LT. STA. 296+35 20 LIN. FT.

PERMANENT BENCHMARKS TYPE I
LOCATED BY ENGINEER IN FIELD 1 EACH

P.I. 298+00
ELEV. 761.30
V.C. 400
X 0.83
K 2.41



PLAN AND PROFILE MAINLINE

FA ROUTE 553
OVER OWENS CREEK
SEC 125 BR
DEKALB COUNTY

EARTH EXCAVATION 499 CU. YD.
EMBANKMENT 4958 CU. YD.
BORROW EXCAVATION 5797 CU. YD.

CURVE DATA

CORD DEF
PI 302+94.32
Δ 67°-33'-00"
D 3°-0'
R 1910.08'
T 1277.46'
L 2251.66'
E 387.82
P.C. 290+16.86
P.T. 312+68.52
S.E. 0.0667
SE TRANSITIONS:
288+98.06 - 290+76.26
312+08.12 - 313+87.32

SEEDING CLASS II, MODIFIED

LOCATION ACRE
STA. 288+98.06 - 302+48 0.54
STA. 304+12 - 313+87.32 0.46
TOTAL 1.00 ACRE 1.78

ENGINEER'S FIELD OFFICE, TYPE A
STA. 296+30 - 310+00 7 CAL. MO.

TOP SOIL PLACEMENT 4"

LOCATION SQ. YD.
LT. STA. 288+98.06 - 302+48 1710
RT. STA. 288+98.06 - 302+48 1780
LT. STA. 304+12 - 313+87.32 869
RT. STA. 304+12 - 313+87.32 1476
TOTAL 5835 SQ. YD. 8051

INLET BOX STD. 2247

LT. STA. 307+56 1 EACH

REMOVE CONCRETE HEADWALL & INSTALL INLET BOX STD. 2247-7

STABILIZED SUB-BASE 4"

LOCATION SQ. YD.
STA. 296+30 - 302+16.26 1759 1753.6
STA. 304+43.51 - 310+00 1670 1675.4
TOTAL 3429 SQ. YD. 3429

BRIDGE APPROACH PAV'T (STD. 2382)

LOCATION SQ. YD.
STA. 302+16.59 - 302+48.59 -85.5 92.7
STA. 304+11.18 - 304+43.18 -85.5 81.2
TOTAL 171.0 SQ. YD. 171

REMOVAL OF EXISTING STRUCTURE

STA. 303+30 1 EACH

UTILITIES

CONTINENTAL TELEPHONE OF ILL. (815) 785-7404 (DEKALB)
COMMONWEALTH EDISON COMPANY (815) 756-9541 (DEKALB)

PORTLAND CEMENT CONC. PAV'T 8"

LOCATION SQ. YD.
STA. 296+30 - 302+16.26 1563 1559
STA. 304+43.51 - 310+00 1484 1487
TOTAL 3047 SQ. YD. 3048

PAVEMENT FABRIC

LOCATION SQ. YD.
STA. 296+30 - 302+16.26 1563 1559
STA. 304+43.51 - 310+00 1484 1487
TOTAL 3047 SQ. YD. 3048

PIPE CULVERT, TYPE 2 CSCP 42" Ø

SIDEROAD RT. STA. 300+96.52 66 LIN. FT.
TOTAL 66 LIN. FT.

P.C.C. BRIDGE APPROACH SHLD. PAV'T

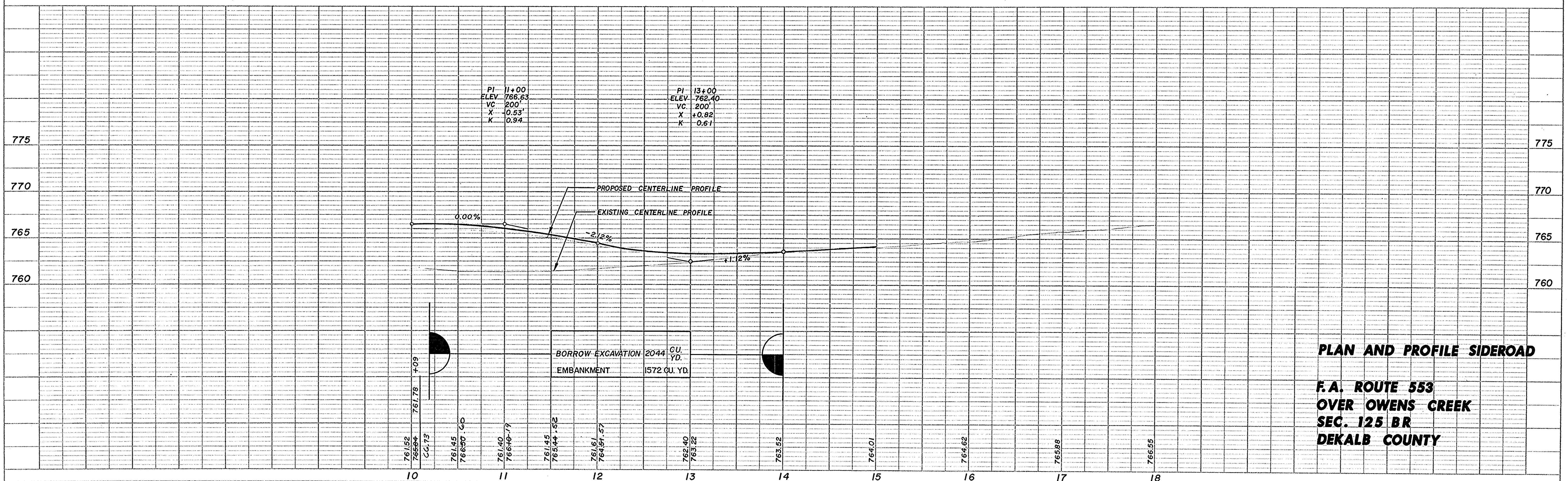
LOCATION SQ. YD.
LT. STA. 302+13.19 - 302+24.16 87 7.8
RT. STA. 302+48.31 - 302+65.30 62 6.5
LT. STA. 303+94.07 - 304+10.25 62 6.5
RT. STA. 304+20.25 - 304+41.43 62 6.5
TOTAL 243 SQ. YD. 243

Pipe was extended 6.5' on West End 2.5' on East End

PROFILE	SURVEYED	BY	DATE
	PLOTTED		
NOTE BOOK	GRADES CHECKED		
	B. M. NOTED		
NO.	STRUCTURE NOTED AS CHANGED		



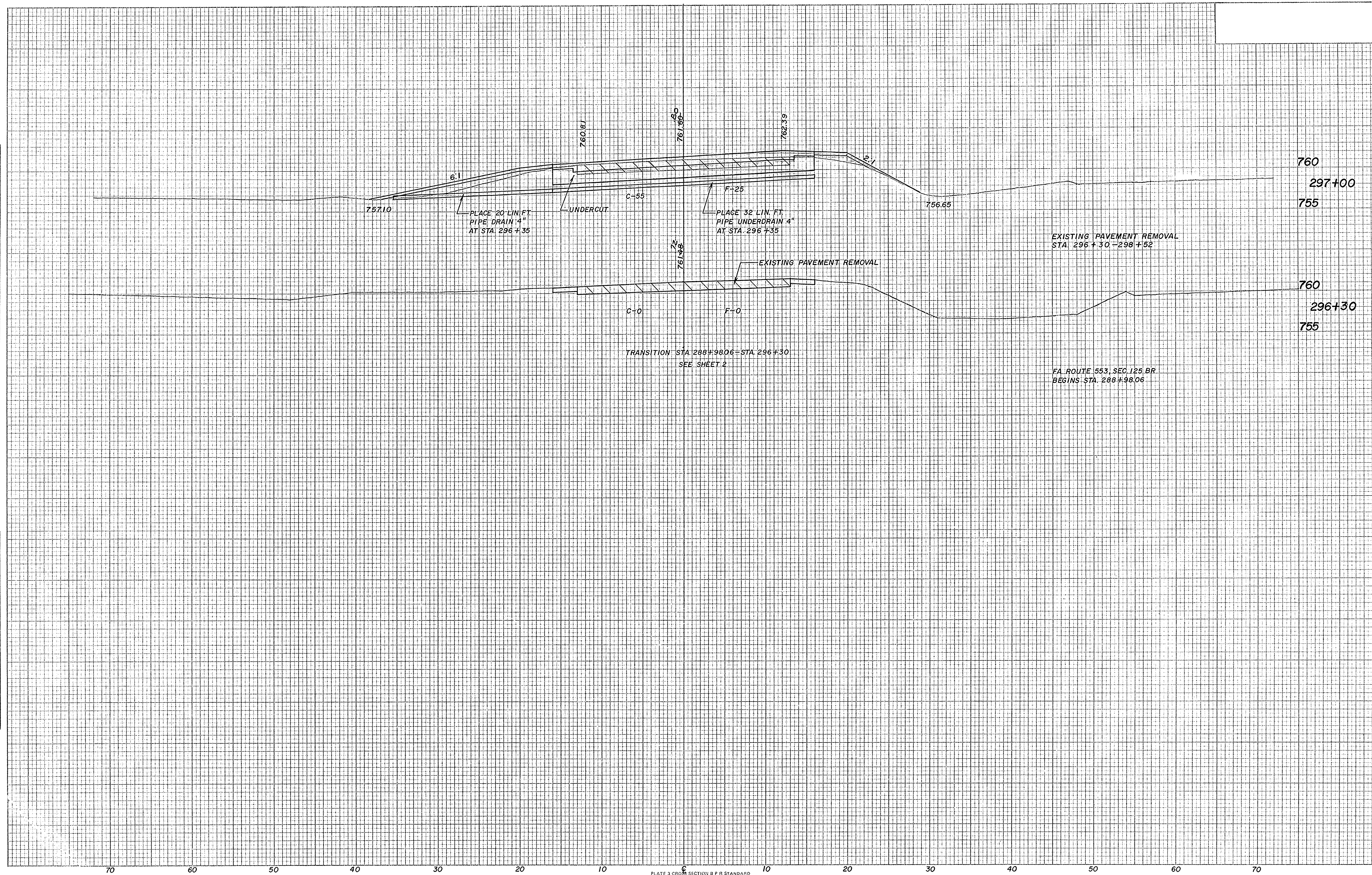
<u>LOCATION</u>	<u>ACRES</u>
STA. 10+40 - STA. 14+00	0.3
<u>TOTAL</u>	<u>0.3</u>



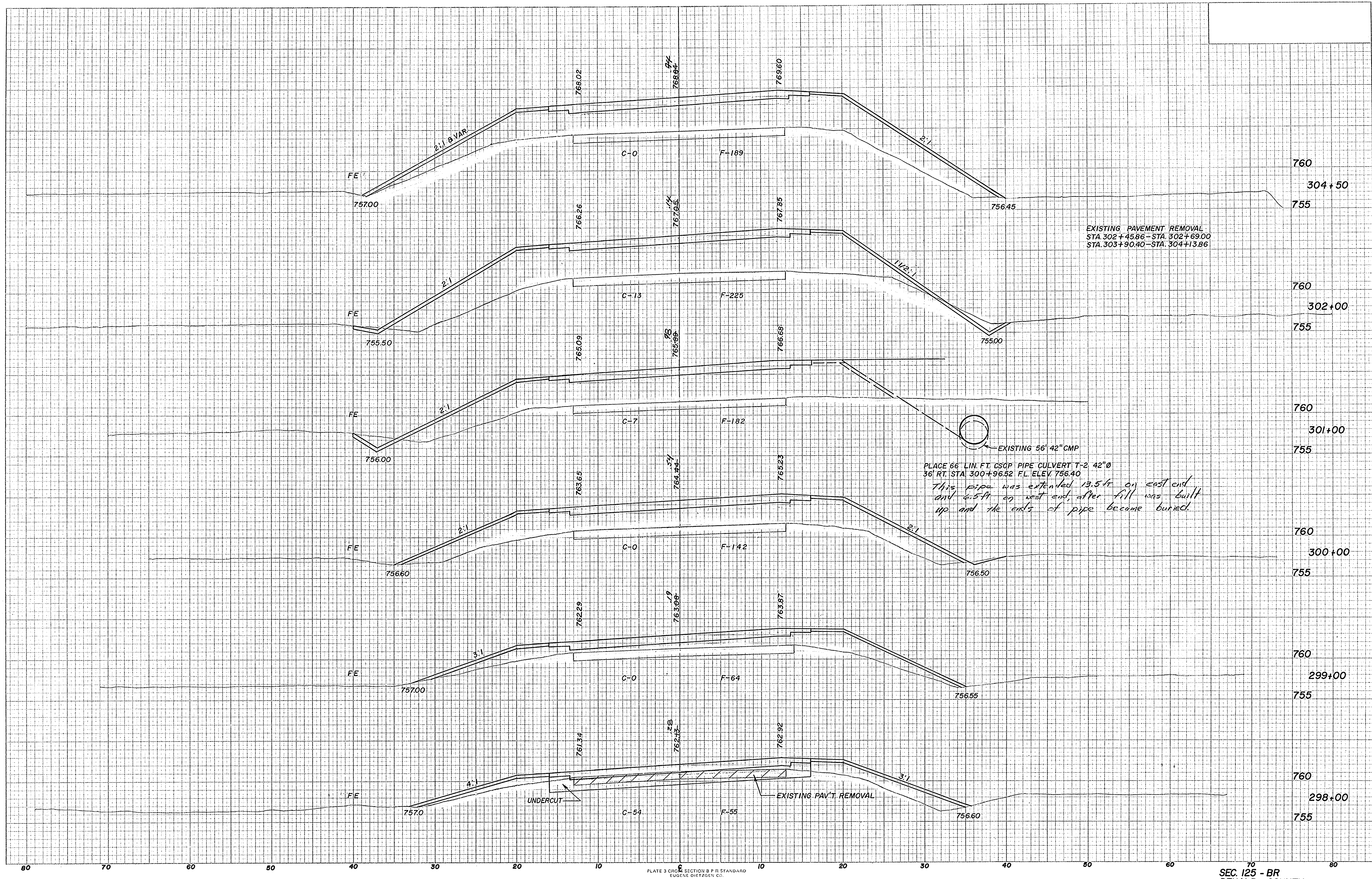
**F.A. ROUTE 553
OVER OWENS CREEK
SEC. 125 BR
DEKALB COUNTY**

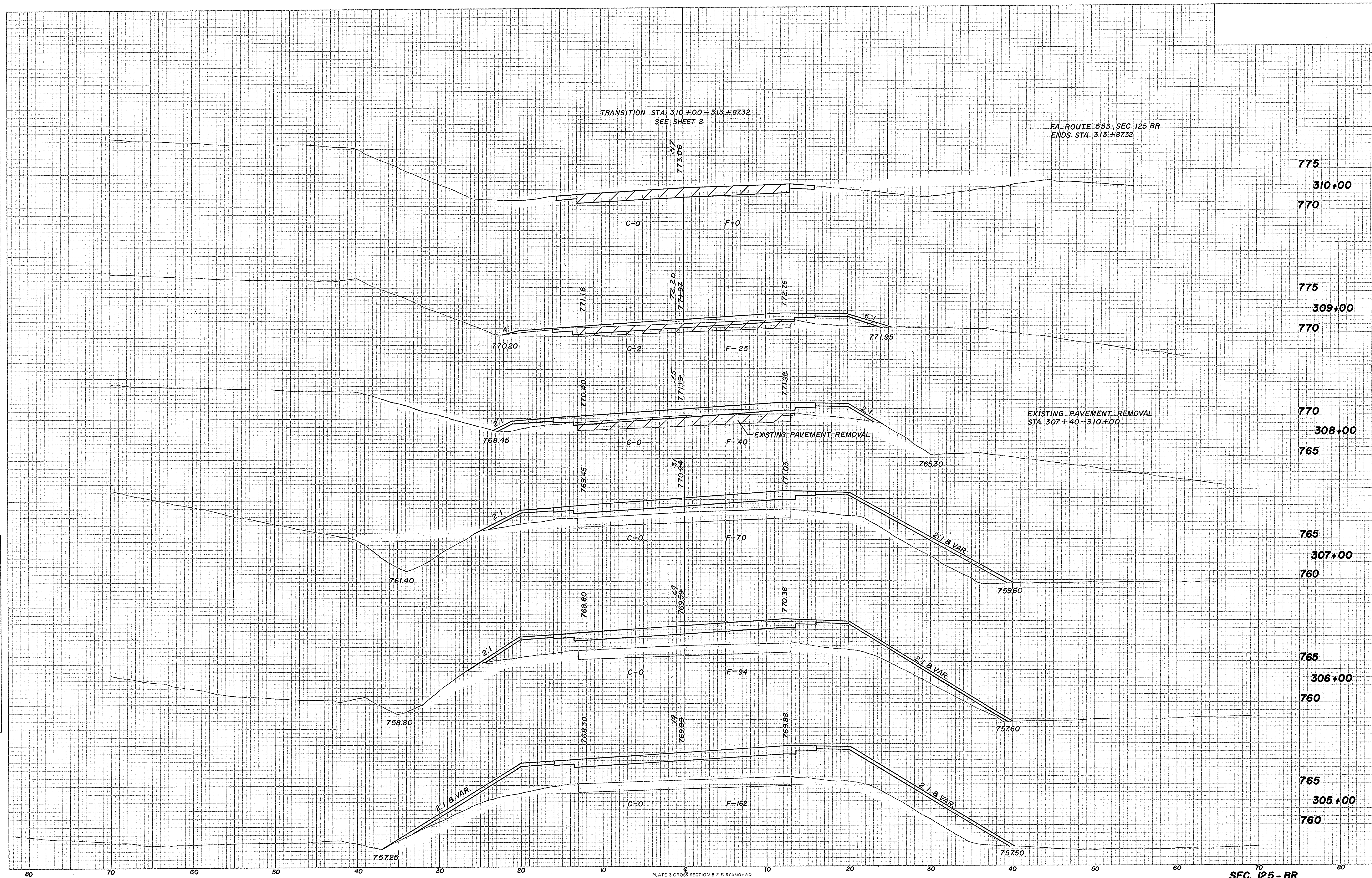
FINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEST PLATE		
NO.	AREAS CHECKED		

ORIGINAL	SURVEYED	BY	DATE
SURVEY	PLOTTED		
NOTE BOOK	TEST PLATE		
NO.	AREAS CHECKED		

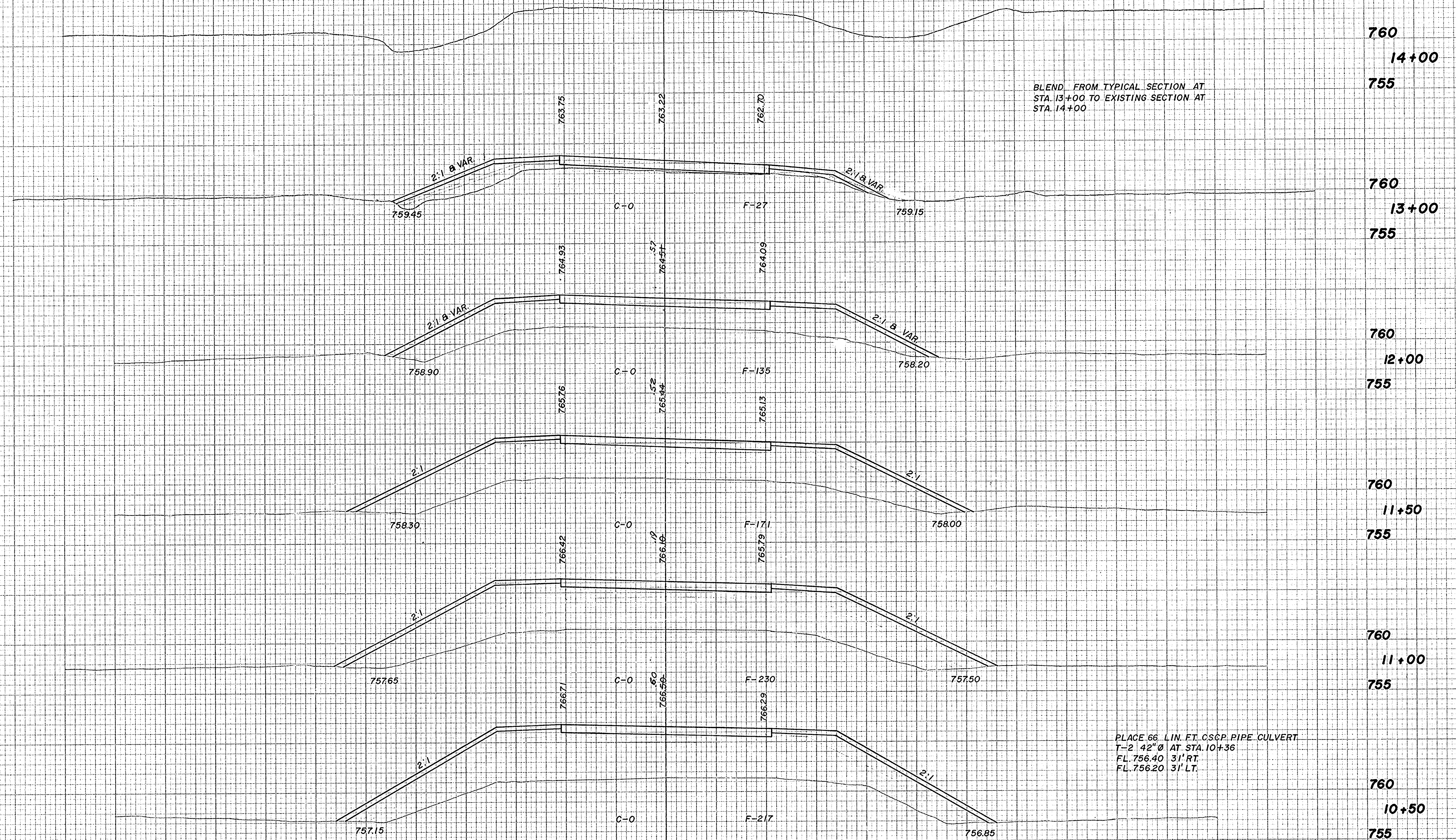
PLATE 3 CROSS SECTION B P R STANDARD
EUGENE DIETZEN COSEC. 125 BR
DEKALB COUNTY

ORIGINAL SURVEY					
NOTE BOOK					
	SURVEYED		BY		DATE
	PLOTTED				
	TEMP. DATE				
	AREAS				
	AREAS CHECKED				
NO					



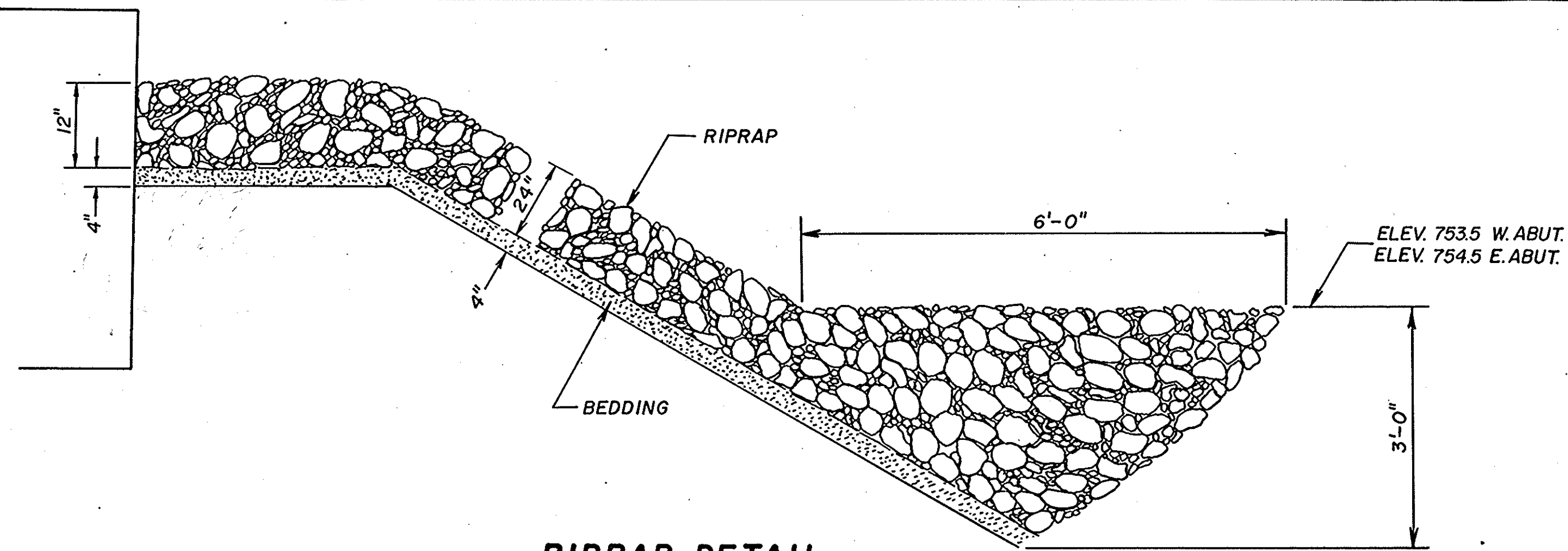


ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
	TEMPLATE		
	AREAS		
	AREAS CHECKED		



PLACE 66 LIN. FT. CSCP PIPE CULVERT
T-2 42"Ø AT STA. 10+36
FL. 756.40 31' RT.
FL. 756.20 31' LT.

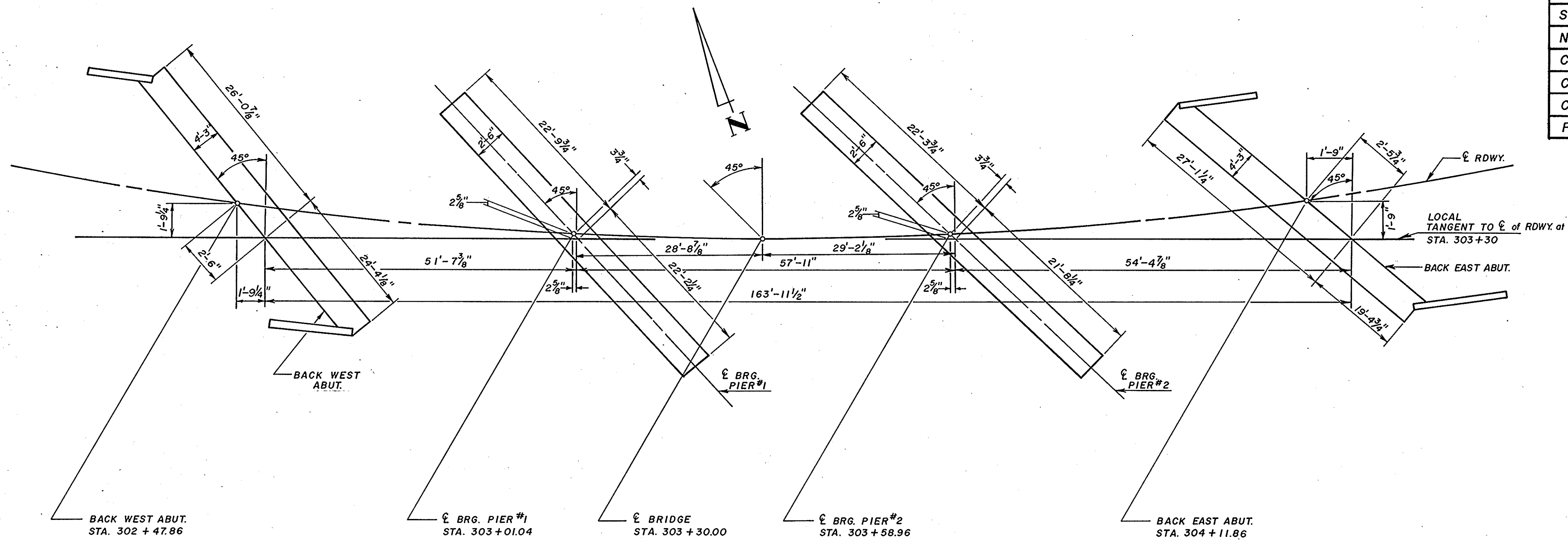
NOTE - 42" C.M.P. - A.R. at 10+36 (EXISTING)
SEE CROSS SECTION AT STA. 301+00



RIPRAP DETAIL

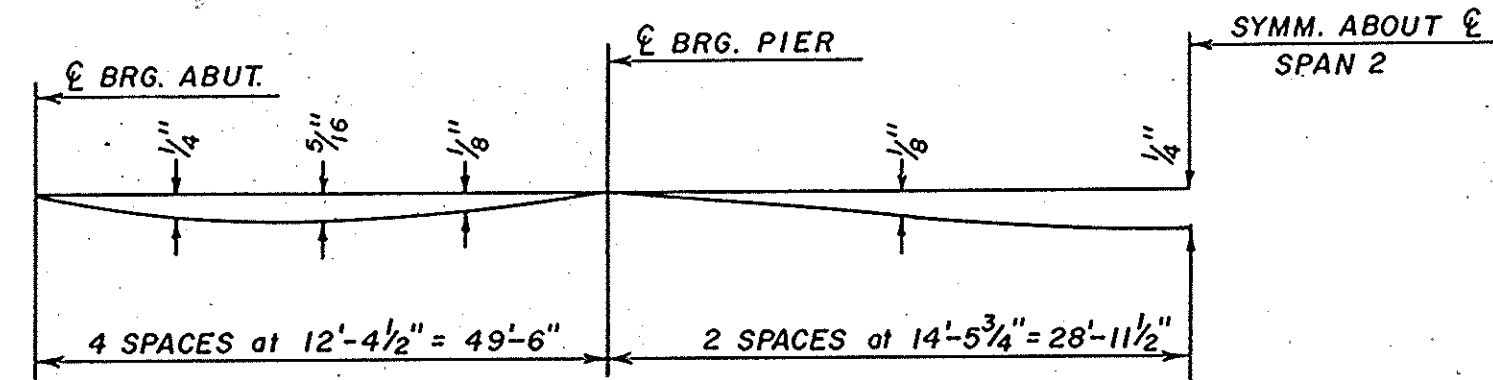
TOTAL BILL OF MATERIAL - BRIDGE

ITEM	UNIT	SUPER	SUB.	TOTAL
REMOVAL OF EXISTING STRUCTURE	EACH			1
STRUCTURE EXCAVATION	CU. YDS.		+90/8/	+90/8/
FLOOR DRAINS	EACH	12		12
CLASS X CONCRETE	CU. YDS.	172.4	182.4	354.8
STRUCTURAL STEEL	LUMP SUM	1		1
REINFORCEMENT BARS	POUND	20,340	16,640	36,980
REINFORCEMENT BARS (EPOXY COATED)	POUND	26,930		26,930
STEEL PILES (HP10X42)	LIN. FT.		874	874
TEST PILES - STEEL (HP 10 X 42)	EACH		2	2
NAME PLATES	EACH	1		1
STONE RIPRAP	SQ. YDS.		-680 5/16	-680 5/16
NEOPRENE EXPANSION JOINTS (2")	LIN. FT.	96		96
COFFERDAM	EACH		2	2
COFFERDAM EXCAVATION	CU. YD.		+137 1/2	+137 1/2
CHANNEL EXCAVATION	CU. YD.		+197 8/1	+197 8/1
PROTECTIVE COAT	SQ. YD.	717		717



FOOTING LAYOUT

SUBSTRUCTURE LAYOUT
FA ROUTE 553
OVER OWENS CREEK
SECTION 125 BR
DEKALB COUNTY
STA. 303 + 30



BEAM #1

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL ELEV. ADJ. FOR DEAD LOAD DEFLECTION
BK WEST ABUT	302+31.746	14.583	766.407	766.407
E BRG W. ABUT	302+35.517	14.583	766.443	766.443
A	302+45.594	14.583	766.536	766.554
B	302+55.671	14.583	766.627	766.653
C	302+65.748	14.583	766.715	766.737
D	302+75.825	14.583	766.800	766.809
E BRG PIER 1	302+85.835	14.583	766.882	766.882
E	302+95.912	14.583	766.962	766.968
F	303+05.989	14.583	767.039	767.054
G	303+16.066	14.583	767.113	767.132
H	303+26.143	14.583	767.185	767.199
I	303+36.220	14.583	767.254	767.258
E BRG PIER 2	303+44.653	14.583	767.309	767.309
J	303+54.730	14.583	767.373	767.382
K	303+64.807	14.583	767.434	767.456
L	303+74.884	14.583	767.493	767.519
M	303+84.961	14.583	767.549	767.567
E BRG E. ABUT	303+94.882	14.583	767.601	767.601
BK EAST ABUT	303+98.329	14.583	767.619	767.619

BEAM #2

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL ELEV. ADJ. FOR DEAD LOAD DEFLECTION
BK WEST ABUT	302+39.849	17.292	766.965	766.965
E BRG W. ABUT	302+43.579	7.292	767.000	767.000
A	302+53.617	7.292	767.090	767.108
B	302+63.655	7.292	767.179	767.205
C	302+73.693	7.292	767.264	767.286
D	302+83.731	7.292	767.347	767.356
E BRG PIER 1	302+93.483	7.292	767.425	767.425
E	303+03.521	7.292	767.502	767.508
F	303+13.559	7.292	767.577	767.592
G	303+23.597	7.292	767.649	767.668
H	303+33.635	7.292	767.718	767.732
I	303+43.673	7.292	767.785	767.789
E BRG PIER 2	303+51.847	7.292	767.837	767.837
J	303+61.885	7.292	767.899	767.908
K	303+71.923	7.292	767.958	767.980
L	303+81.961	7.292	768.014	768.040
M	303+91.999	7.292	768.068	768.085
E BRG E. ABUT	304+01.708	7.292	768.118	768.118
BK EAST ABUT	304+05.131	7.292	768.135	768.135

BEAM #3 & RDWY. (PG)

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL ELEV. ADJ. FOR DEAD LOAD DEFLECTION
BK WEST ABUT	302+47.852	0	767.520	767.520
E BRG W. ABUT	302+51.540	0	767.553	767.553
A	302+61.540	0	767.641	767.659
B	302+71.540	0	767.727	767.752
C	302+81.540	0	767.810	767.831
D	302+91.540	0	767.890	767.899
E BRG PIER 1	303+01.040	0	767.964	767.964
E	303+11.040	0	768.039	768.044
F	303+21.040	0	768.112	768.127
G	303+31.040	0	768.182	768.201
H	303+41.040	0	768.249	768.262
I	303+51.040	0	768.313	768.317
E BRG PIER 2	303+58.957	0	768.362	768.362
J	303+68.957	0	768.422	768.431
K	303+78.957	0	768.479	768.501
L	303+88.957	0	768.533	768.558
M	303+98.957	0	768.585	768.602
E BRG E. ABUT	304+08.457	0	768.632	768.632
BK EAST ABUT	304+11.853	0	768.649	768.649

BEAM #4

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL ELEV. ADJ. FOR DEAD LOAD DEFLECTION
BK WEST ABUT	302+55.749	7.292	768.071	768.071
E BRG W. ABUT	302+59.409	7.292	768.104	768.104
A	302+69.371	7.292	768.190	768.207
B	302+79.333	7.292	768.273	768.298
C	302+89.295	7.292	768.354	768.375
D	302+99.257	7.292	768.432	768.440
E BRG PIER 1	303+08.513	7.292	768.502	768.502
E	303+18.475	7.292	768.574	768.579
F	303+28.437	7.292	768.645	768.660
G	303+38.399	7.292	768.712	768.730
H	303+48.361	7.292	768.777	768.790
I	303+58.323	7.292	768.839	768.842
E BRG PIER 2	303+65.992	7.292	768.885	768.885
J	303+75.954	7.292	768.943	768.952
K	303+85.916	7.292	768.998	769.019
L	303+95.878	7.292	769.050	769.075
M	304+05.840	7.292	769.100	769.116
E BRG E. ABUT	304+15.137	7.292	769.147	769.147
BK EAST ABUT	304+18.512	7.292	769.164	169.164

BEAM #5

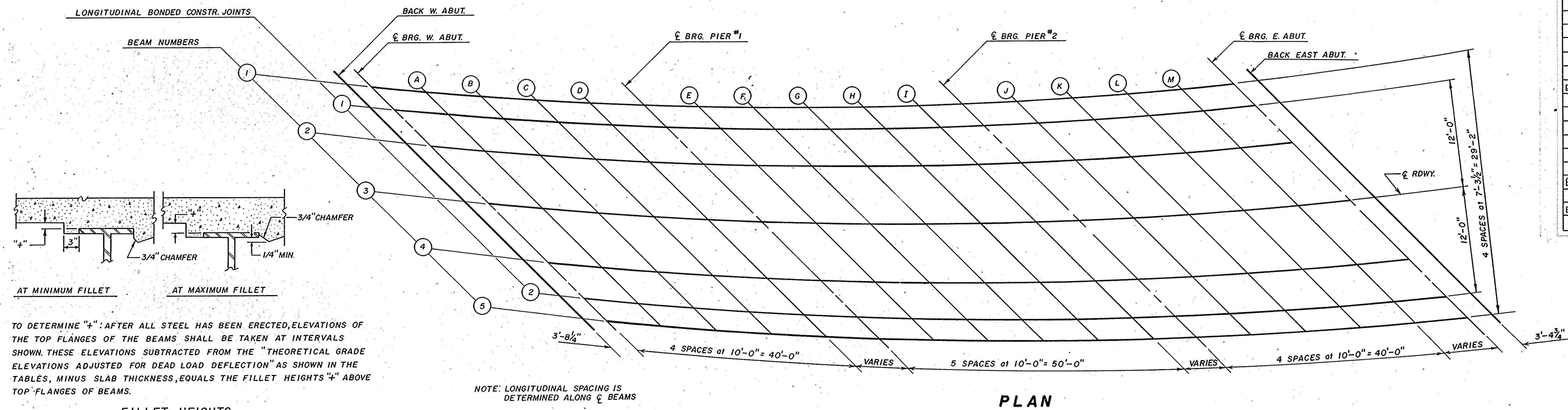
LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL ELEV. ADJ. FOR DEAD LOAD DEFLECTION
BK WEST ABUT	302+63.553	14.583	768.622	768.622
E BRG W. ABUT	302+67.183	14.583	768.653	768.653
A	302+77.107	14.583	768.737	768.754
B	302+87.031	14.583	768.817	768.842
C	302+96.955	14.583	768.896	768.916
D	302+06.879	14.583	768.971	768.979
E BRG PIER 1	303+15.898	14.583	769.038	769.038
E	303+25.822	14.583	769.109	769.114
F	303+35.746	14.583	769.177	769.192
G	303+45.670	14.583	769.242	769.260
H	303+55.594	14.583	769.305	769.318
I	303+65.518	14.583	769.365	769.368
E BRG PIER 2	303+72.947	14.583	769.408	769.408
J	303+82.871	14.583	769.463	769.472
K	303+92.795	14.583	769.516	769.537
L	304+02.719	14.583	769.567	769.592
M	304+12.643	14.583	769.616	769.632
E BRG E. ABUT	304+21.744	14.583	769.662	769.662
BK EAST ABUT	304+25.095	14.583	769.678	769.678

LONGITUDINAL BONDED CONST. JOINT #1

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL ELEV. ADJ. FOR DEAD LOAD DEFLECTION
BK WEST ABUT	302+34.640	12.000	766.605	766.605
E BRG W. ABUT	302+38.382	12.000	766.641	766.641
A	302+48.445	12.000	766.733	766.751
B	302+58.508	12.000	766.823	766.849
C	302+68.571	12.000	766.910	766.932
D	302+78.634	12.000	766.994	767.003
E BRG PIER 1	302+88.552	12.000	767.075	767.075
E	302+98.615	12.000	767.154	767.160
F	303+08.678	12.000	767.230	767.245
G	303+18.741	12.000	767.303	767.322
H	303+28.804	12.000	767.374	767.388
I	303+38.867	12.000	767.442	767.446
E BRG PIER 2	303+47.209	12.000	767.497	767.497
J	303+57.272	12.000	767.560	767.569
K	303+67.335	12.000	767.620	767.642
L	303+77.398	12.000	767.678	767.704
M	303+87.461	12.000	767.733	767.751
E BRG E. ABUT	303+97.307	12.000	767.784	767.784
BK EAST ABUT	304+00.746	12.000	767.802	767.802

LONGITUDINAL BONDED CONST. JOINT #2

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATIONS	THEORETICAL ELEV. ADJ. FOR DEAD LOAD DEFLECTION
BK WEST ABUT	302+60.795	12.000	768.427	768.427
E BRG W. ABUT	302+64.435	12.000	768.548	768.458
A	302+74.373	12.000	768.543	768.560
B	302+84.311	12.000	768.625	768.650
C	302+94.249	12.000	768.704	768.724
D	303+04.187	12.000	768.780	768.788
E BRG PIER 1	303+13.294	12.000	768.848	768.848
E	303+23.232	12.000	768.919	768.924
F	303+33.170	12.000	768.988	769.003
G	303+43.108	12.000	769.054	769.072
H	303+53.046	12.000	769.118	769.131
I	303+62.984	12.000	769.179	769.182
E BRG PIER 2	303+70.494	12.000	769.223	769.223
J	303+80.432	12.000	769.279	769.288
K	303+90.370	12.000	769.333	769.354
L	304+00.308	12.000	769.384	769.409
M	304+10.246	12.000	769.433	769.449
E BRG E. ABUT	304+19.414	12.000	769.479	769.479
BK EAST ABUT	304+22.774	12.000	769.496	769.496



DECK ELEVATIONS
FA ROUTE 553
OVER OWENS CREEK
SECTION 125 BR
DEKALB COUNTY
STA. 303+30

NOTE: ALL TRANSVERSE DIMENSIONS ARE RADIAL
DIMENSIONS AND ALL TRANSVERSE BARS
SHALL BE PLACED RADIALLY.

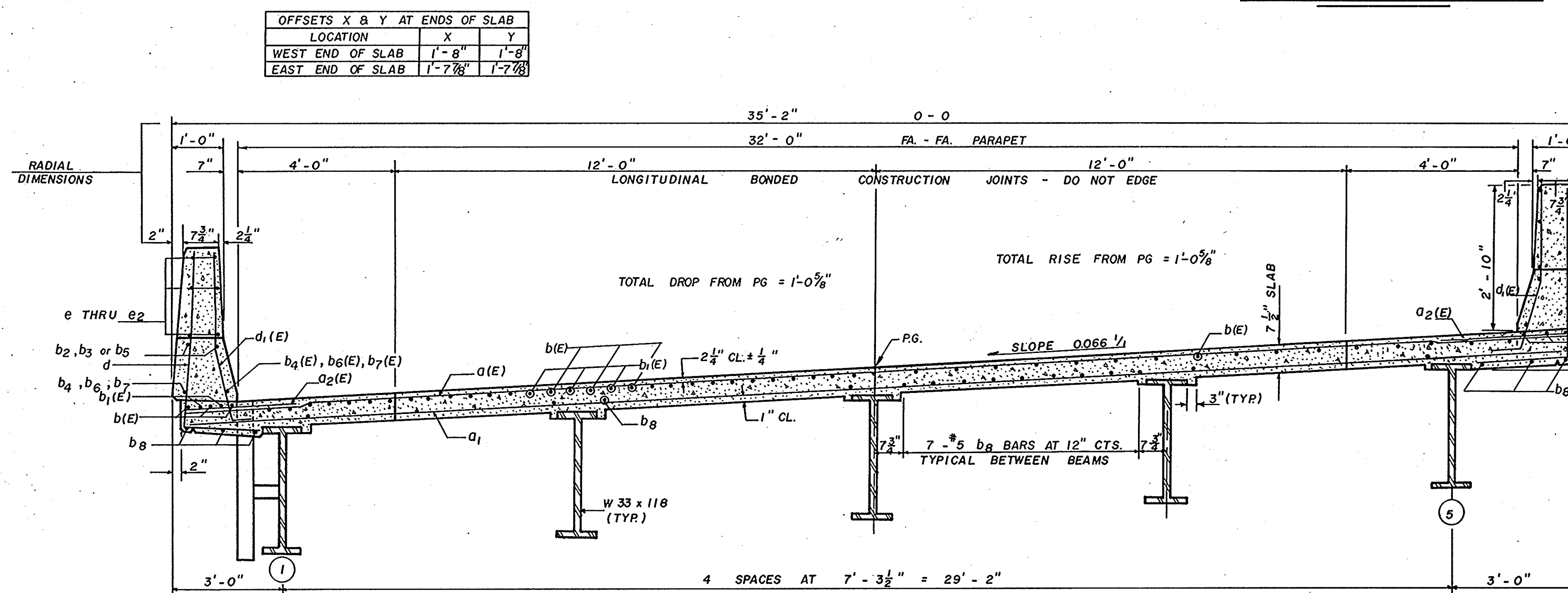
BILL OF MATERIAL

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY
COATED. SEE SPECIAL PROVISIONS

BARS INDICATED THUS : 32 x 5 -#5 ETC. INDICATES 32 LINES OF BARS WITH 5 LENGTHS PER LINE.

**SUPERSTRUCTURE
FA. RTE. 553
OVER OWENS CREEK
SEC. 125 BR
DEKALB COUNTY
STA. 303 + 30**

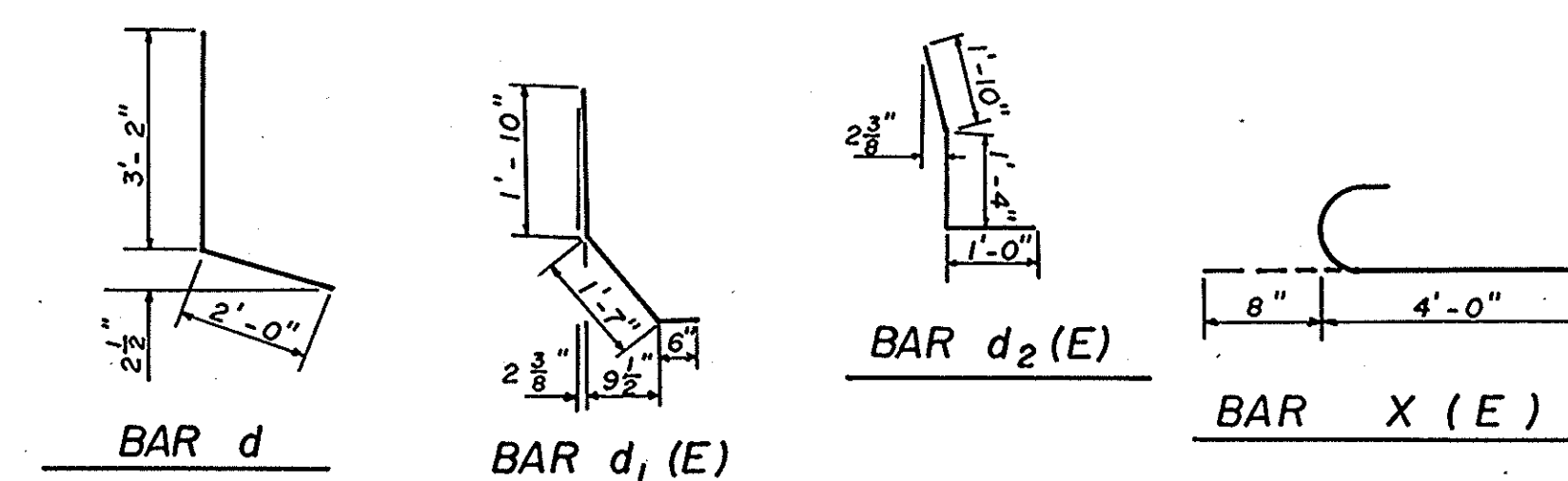
HALF PLAN

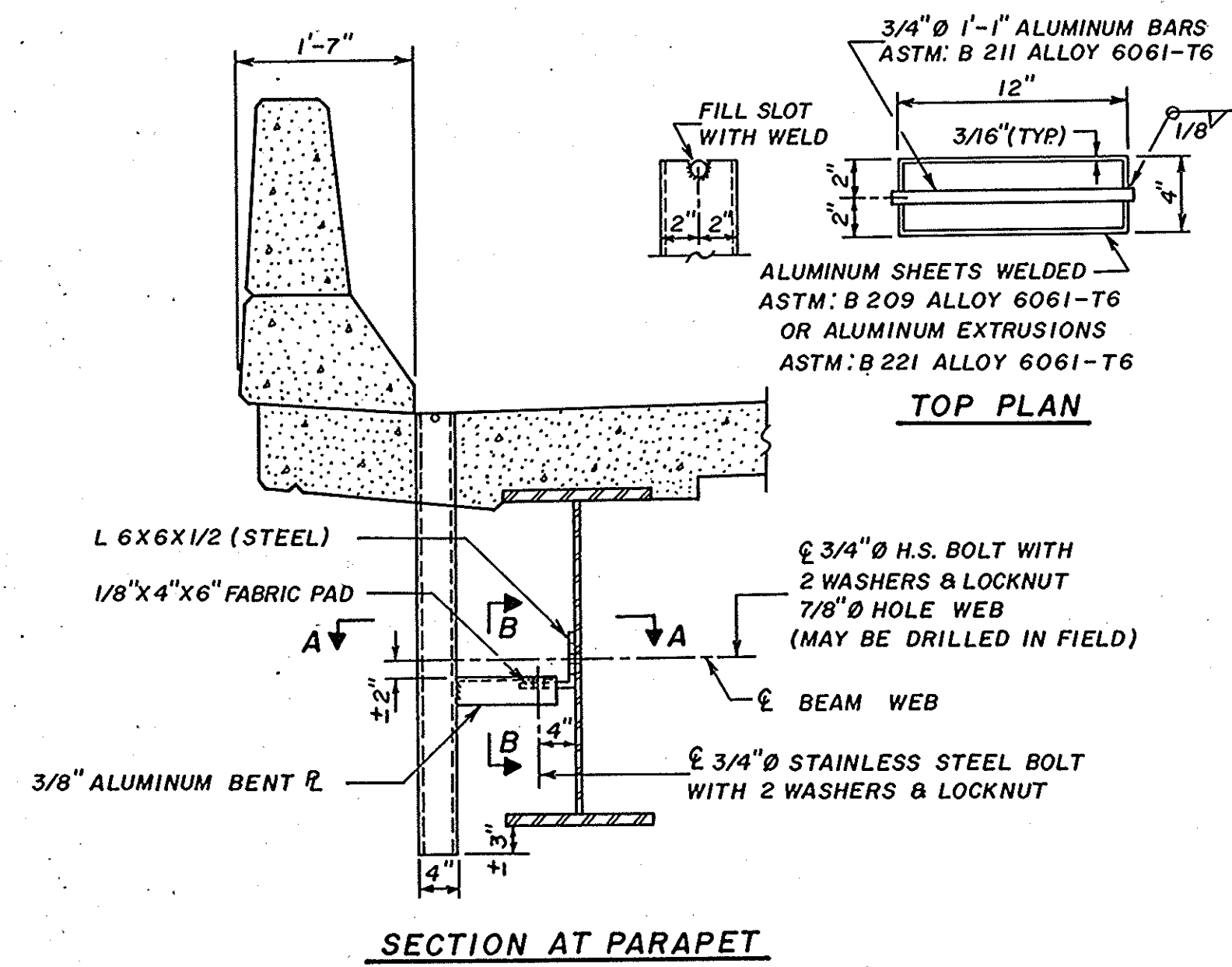


CROSS SECTION

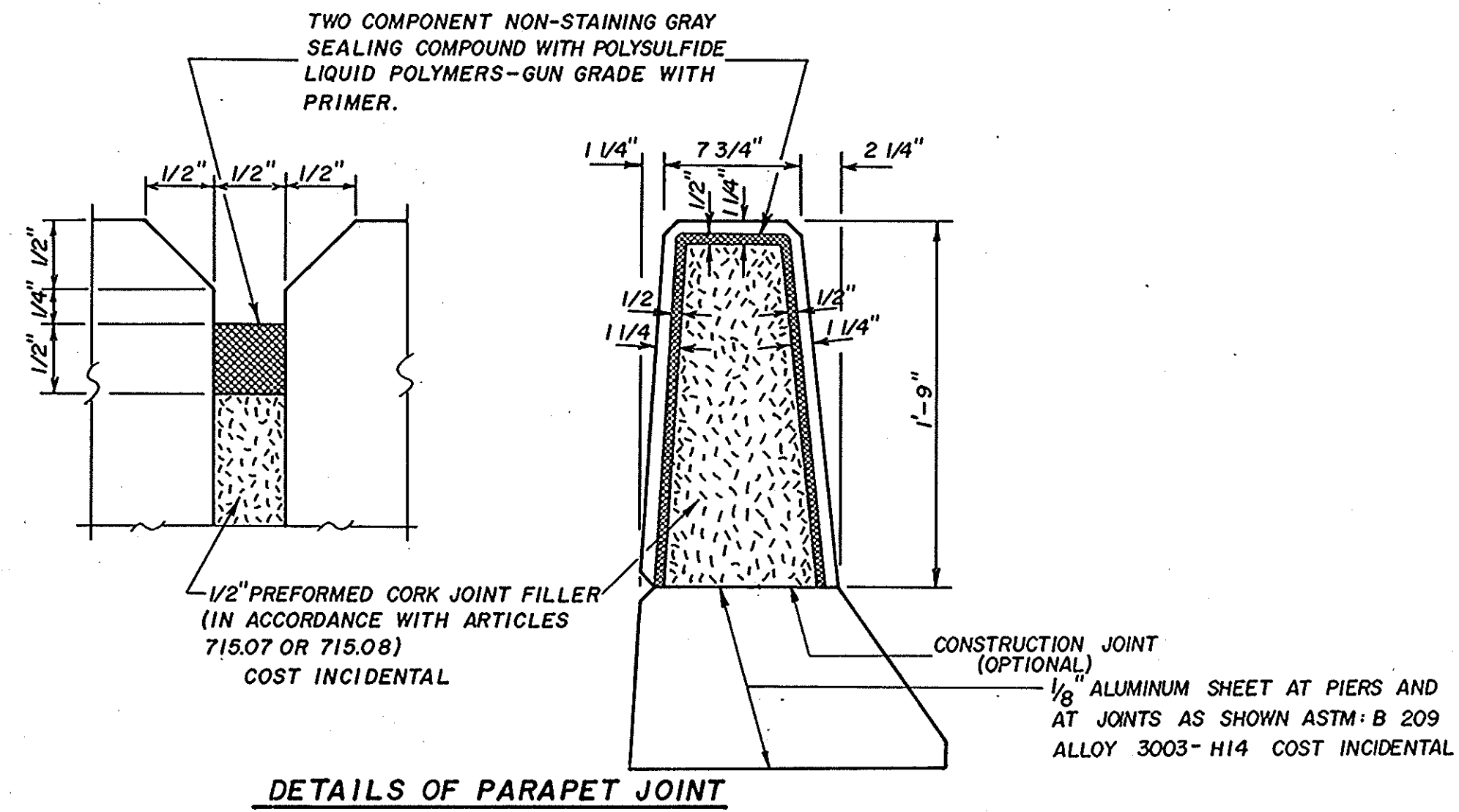
LOOKING EAST

CURB SECTION

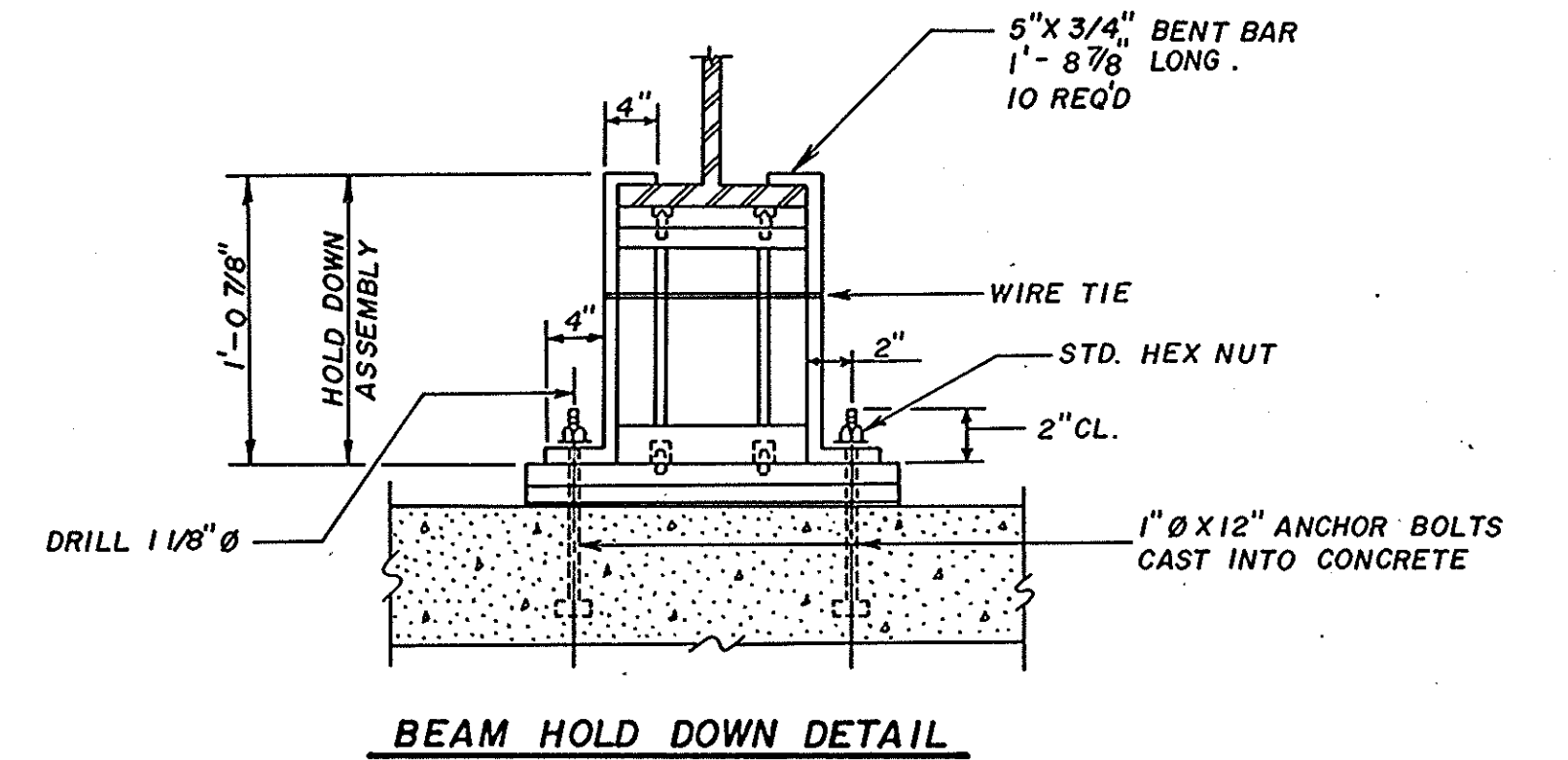




SECTION AT PARAPET

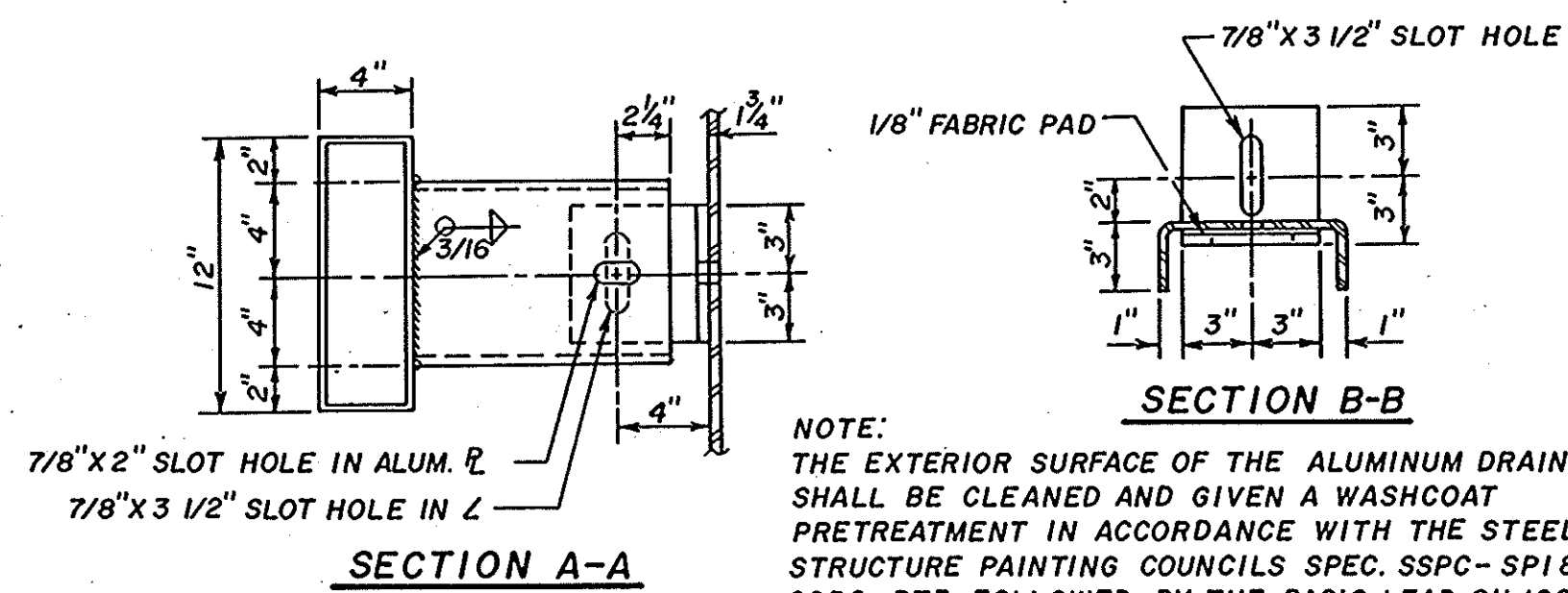


DETAILS OF PARAPET JOINT

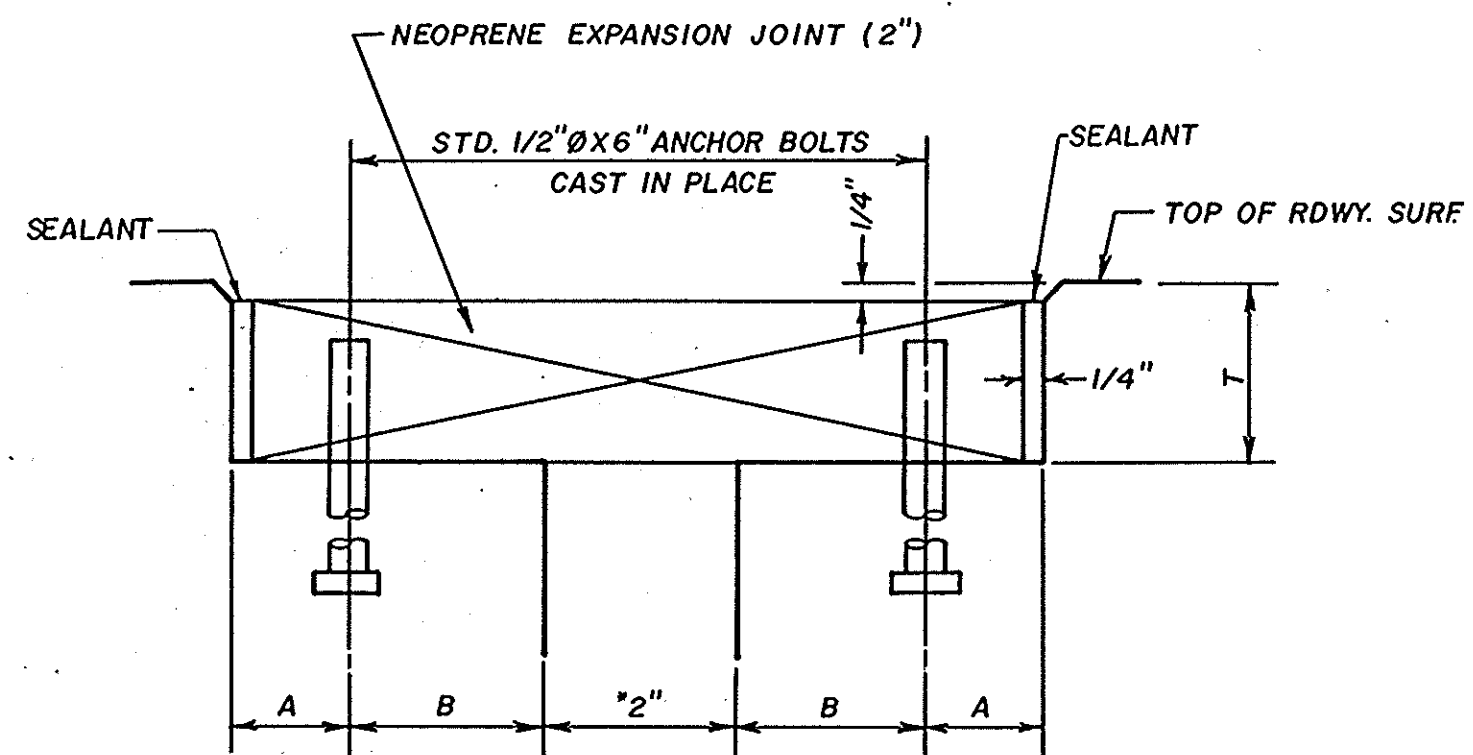


BEAM HOLD DOWN DETAIL

NOTE: BEAMS SHALL BE HELD DOWN AT THE ABUTMENT ON THE OPPOSITE END OF BRIDGE FROM WHICH THE DECK POUR IS COMMENCED. AFTER POURING IS COMPLETED THE HOLD DOWN ASSEMBLY SHALL BE REMOVED AND NUTS PLACED ON ANCHOR BOLTS. COST OF HOLD DOWN ASSEMBLY, INCIDENTAL TO CLASS X CONCRETE.



SECTION A-A

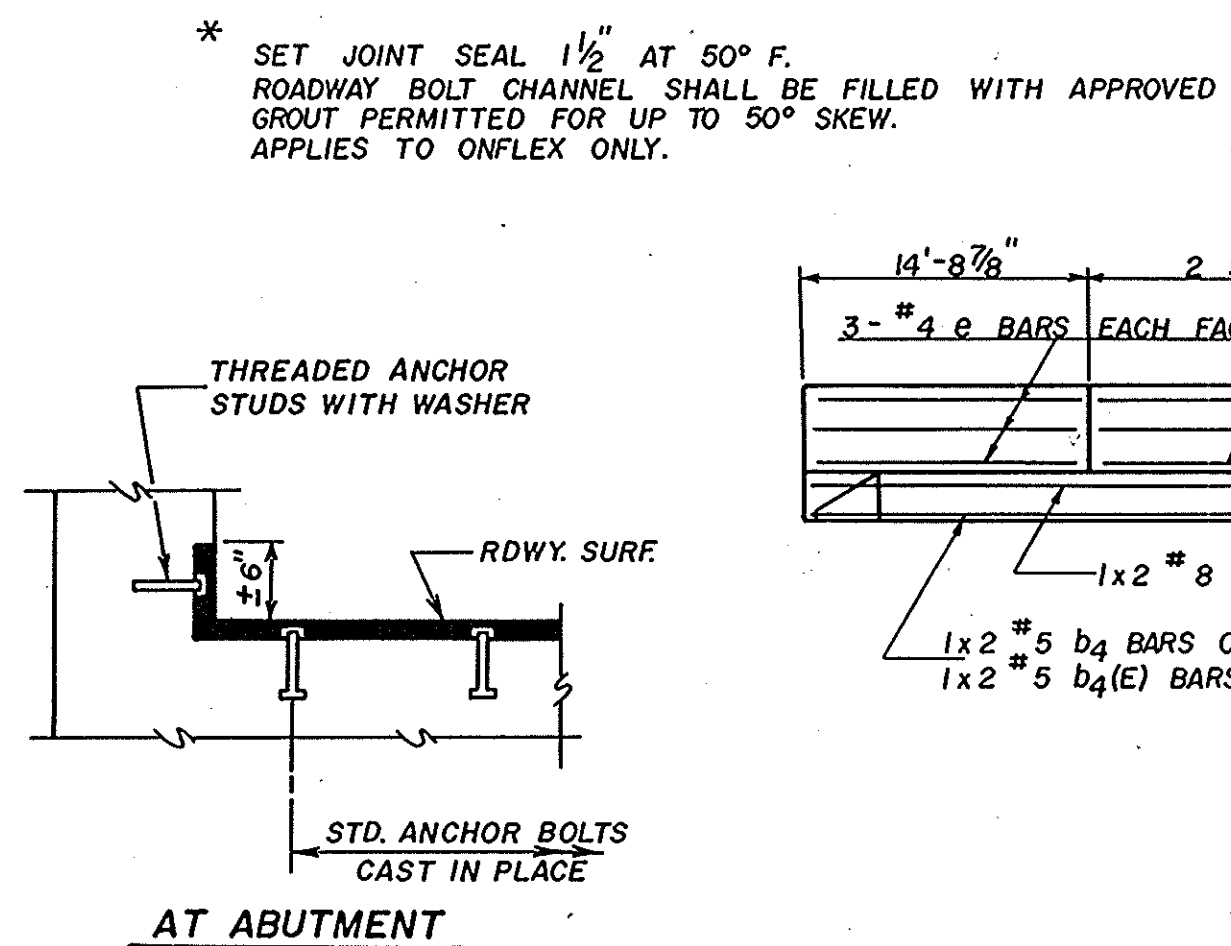


CROSS SECTION

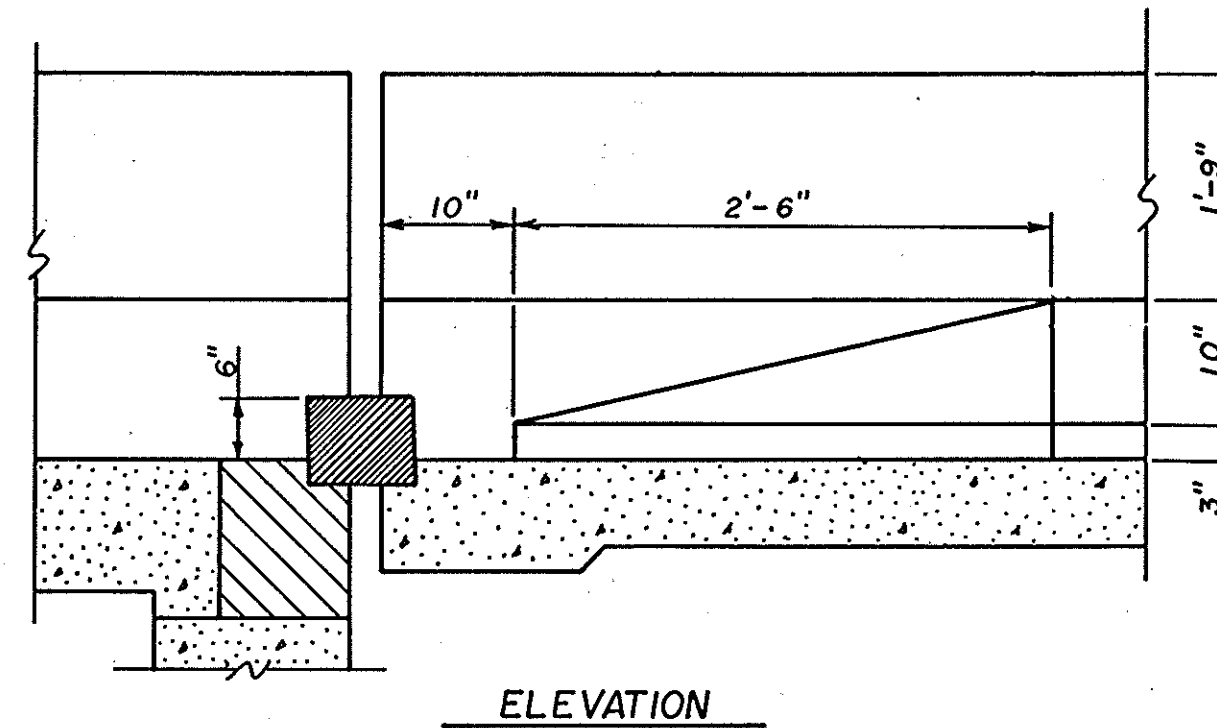
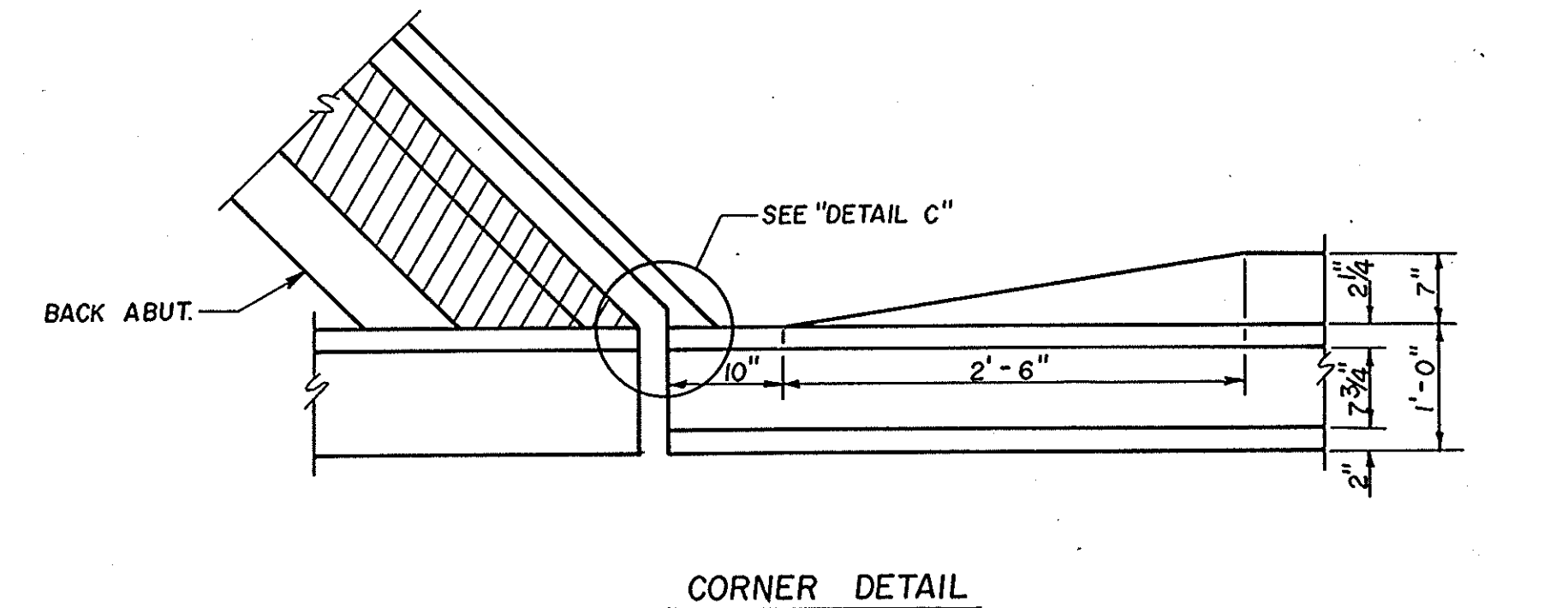
* AT 50°F
DIMENSIONS ARE AT RT ∠'s
NEOPRENE EXPANSION JOINTS (2")

NOTE: JOINT OPENINGS SHALL BE ADJUSTED IN ACCORDANCE WITH ARTICLE 503.07 (c) OF THE STD. SPECS. WHEN THE DECK IS POURED AT AN AMBIENT TEMPERTURE OTHER THAN 50° F.

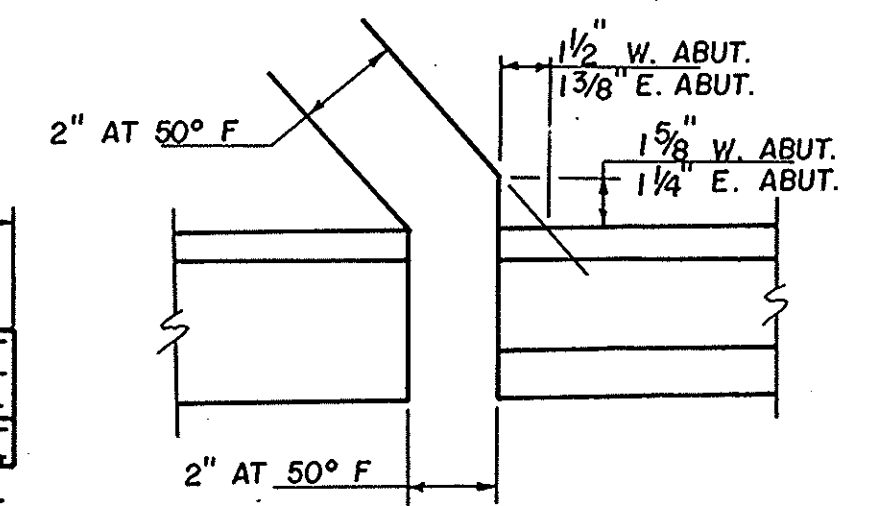
DETAIL A



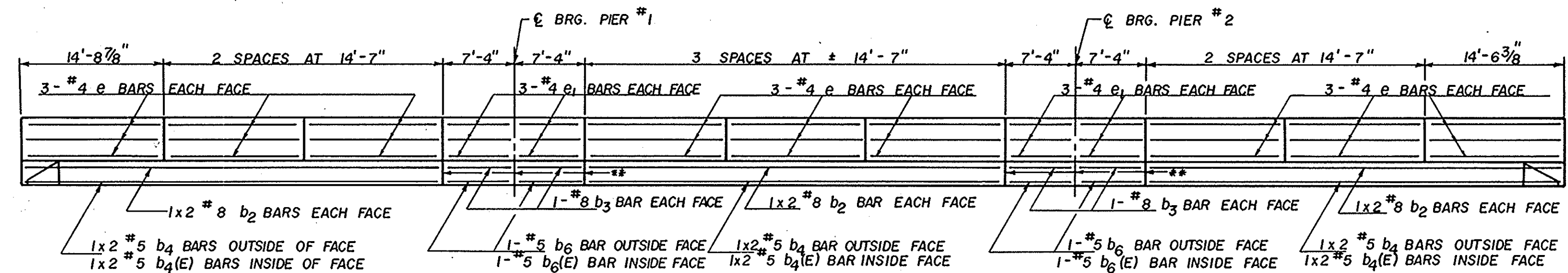
AT ABUTMENT

ELEVATION

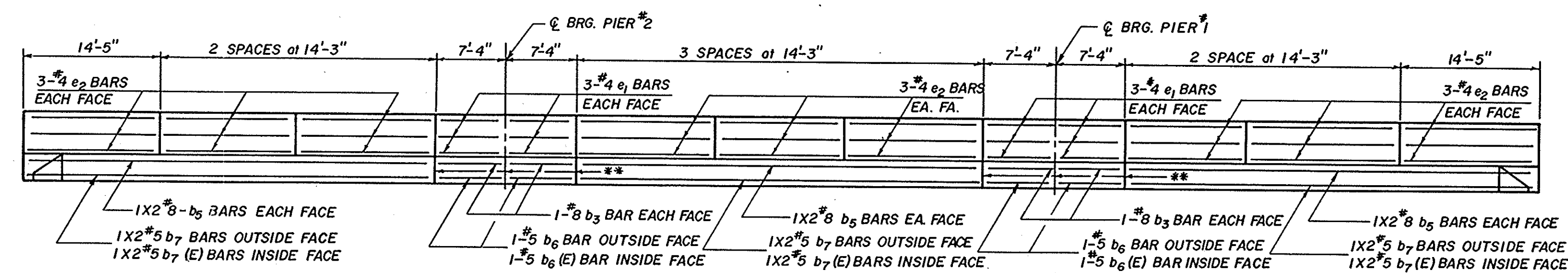
CORNER DETAIL



DETAIL C



PARAPET JOINT SPACING - NORTH PARAPET ALONG INSIDE FACE



PARAPET JOINT SPACING - SOUTH PARAPET ALONG INSIDE FACE

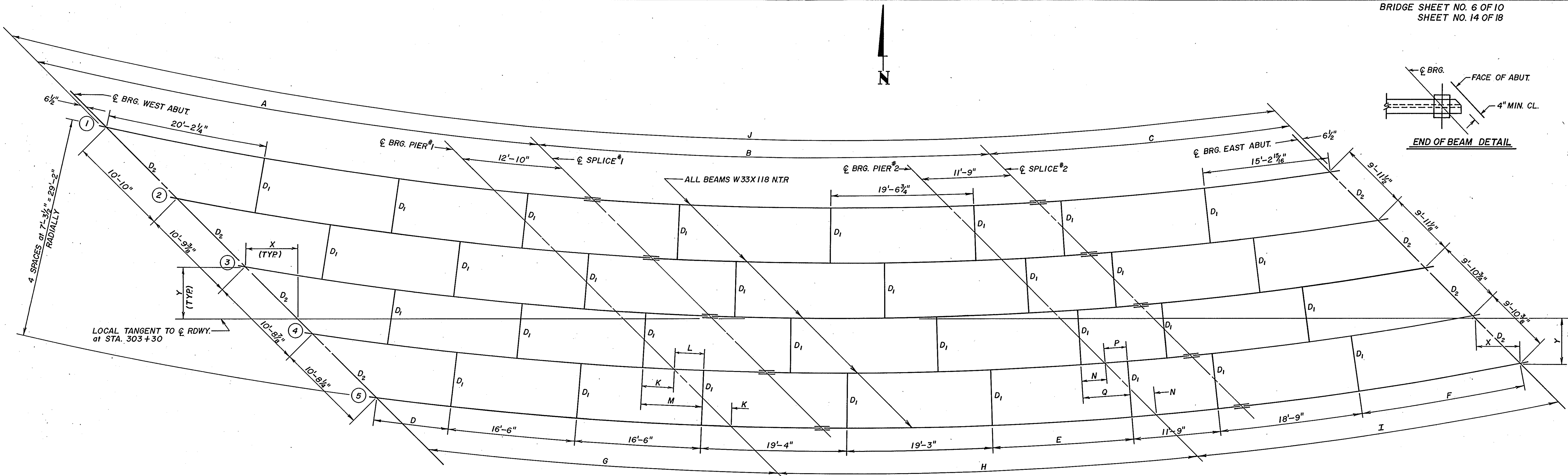
** " 1/8" ALUMINUM SHEET JOINT IN BASE OF PARAPET"

BARS INDICATED THUS 1x2 #8 b5 ETC.
INDICATES 1 LINE OF BARS WITH 2
LENGTHS PER LINE.

MIN. LAP REQ'D

- #4 BAR - 1'-4"
- #5 BAR - 1'-8"
- #8 BAR - 3'-8"

SUPERSTRUCTURE DETAILS
FA. RTE. 553
OVER OWENS CREEK
SEC. 125 BR
DEKALB COUNTY
STA. 303+30



PLAN
N.T.R. INDICATES
NOTCH TOUGHNESS REQUIREMENTS

NOTE: ALL INTERIOR DIAPHRAGMS
ARE PLACE RADIALLY.

TABLE OF DIMENSIONS					
DIMENSION	BEAM 1	BEAM 2	BEAM 3	BEAM 4	BEAM 5
A	63'-3 3/4"	63'-1 1/8"	62'-10 1/2"	62'-8"	62'-5 5/8"
B	57'-3 3/8"	57'-0 5/8"	56'-10"	56'-7 3/8"	56'-4 7/8"
C	38'-7 3/4"	38'-5 1/2"	38'-3 1/2"	38'-1 1/2"	37'-1 1/8"
D		12'-10 7/8"	12'-8 5/8"	12'-6 1/2"	12'-4 1/2"
E		19'-9 3/8"	19'-6 5/8"	19'-4"	19'-1 1/2"
F		22'-9"	22'-6 5/8"	22'-4 3/8"	22'-2 1/8"
G	49'-11 1/4"	49'-8 5/8"	49'-6"	49'-3 1/2"	49'-1 1/8"
H	58'-4 3/8"	58'-1 5/8"	57'-11"	57'-8 3/8"	57'-5 7/8"
I	49'-10 1/4"	49'-8 1/8"	49'-6"	49'-4"	49'-2 1/8"
J	159'-2 7/8"	158'-7 1/4"	158'-0"	157'-4 7/8"	156'-10 1/8"

INTERIOR BEAM MOMENT TABLE			
	0.4 PT. SP 1 or 3	PIER 1 or 2	0.5 PT. SP 2
I (in ⁴)	5900	5900	5900
S (in ³)	359	359	359
Q (K/FT)	1.187	1.187	1.187
M _D (FT-K)	215	348	157
f _s Q (KSI)	719	11.63	525
M _L (FT-K)	329	281	317
IMP (FT-K)	94	79	85
M _L + I (FT-K)	423	360	402
f _s L + I (KSI)	14.14	12.03	13.44
f _s TOTAL (KSI)	21.33	23.67	18.69

I AND S ARE THE MOMENT OF INERTIA AND
SECTION MODULUS OF THE STEEL SECTION
USED IN COMPUTING f_s TOTAL.

INTERIOR BEAM REACTION TABLE		
	ABUT.	PIER
R _D (K)	22.4	70.7
R _L (K)	36.8	44.9
IMP (K)	10.5	12.6
R TOTAL (K)	69.7	128.2

LOCATION	BEAM	ELEVATION TOP OF FLANGE *				
		1	2	3	4	5
CL BRG. WEST ABUT.		765.78	766.33	766.89	767.44	767.99
CL BRG. PIER #1		766.16	766.70	767.24	767.78	768.32
CL SPLICE #1		766.26	766.80	767.34	767.87	768.41
CL BRG. PIER #2		766.59	767.12	767.64	768.16	768.69
CL SPLICE #2		766.66	767.19	767.71	768.23	768.75
CL BRG. EAST ABUT.		766.93	767.45	767.97	768.48	769.00

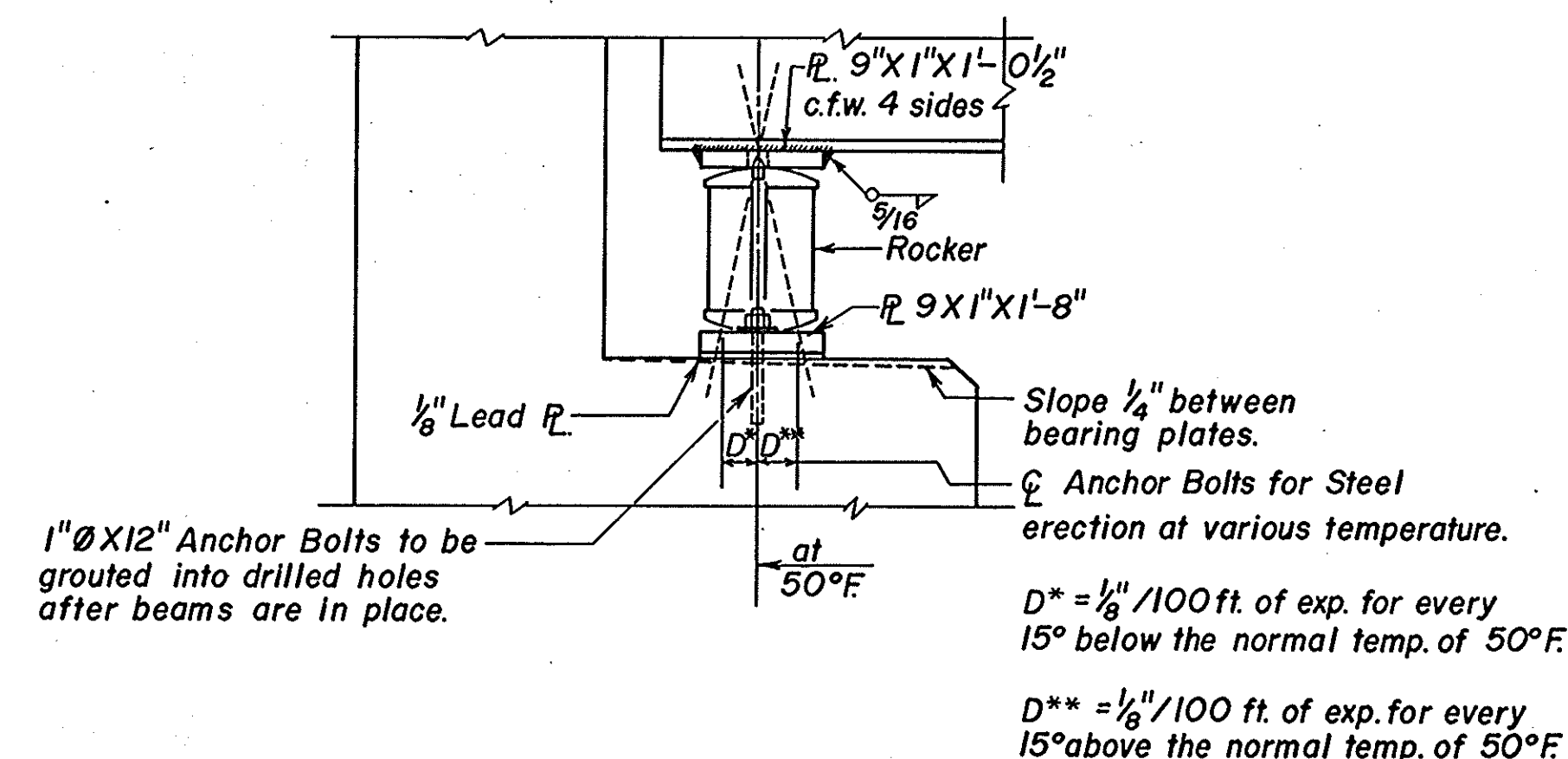
* PRIOR TO Q DEFLECTION - FOR FABRICATION ONLY

DIAPHRAGM OFFSETS					
DIMENSION	BEAM 1	BEAM 2	BEAM 3	BEAM 4	BEAM 5
PIER No. 1					
K		3'-9 3/4"	3'-9 3/8"	3'-9"	3'-8 5/8"
L	3'-9 1/2"	3'-9 1/8"	3'-8 1/8"	3'-8 1/2"	
M		7'-6 7/8"	7'-6 1/4"	7'-5 1/2"	
PIER No. 2					
N		3'-7"	3'-6 5/8"	3'-6 3/8"	3'-6"
P	3'-6 7/8"	3'-6 1/2"	3'-6 1/4"	3'-5 7/8"	
Q		7'-1 1/2"	7'-0 7/8"	7'-0 1/4"	

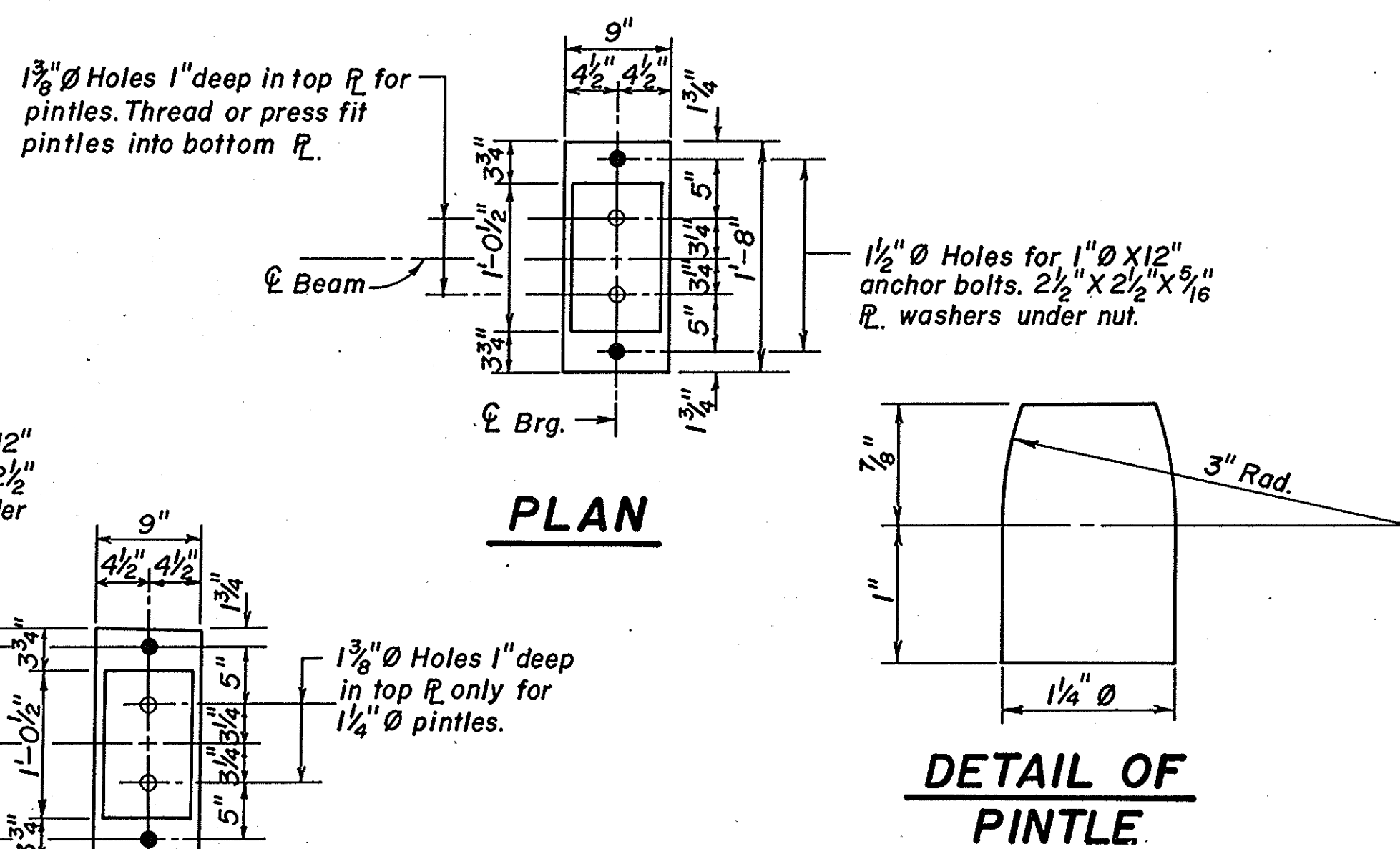
LAYOUT DIMENSIONS											
BEAM	CL BRG. W. ABUT.		CL BRG. PIER #1		CL SPLICE #1		CL BRG. PIER #2		CL SPLICE #2		CL BRG. E. ABUT.
	X	Y	X	Y	X	Y	X	Y	X	Y	X
1	16.8985'	16.8985'	15.0867'	15.0867'	14.8351'	14.8351'	14.6358'	14.6358'	14.7668'	14.7668'	15.6735'
2	9.2373'	9.2373'	7.6377'	7.6377'	7.4367'	7.4367'	7.4145'	7.4145'	7.5876'	7.5876'	8.6307'
3	1.6111'	1.6111'	0.2195'	0.2195'	0.0681'	0.0681'	0.2195'	0.2195'	0.4338'	0.4338'	1.6111'
4	5.9808'	5.9808'	7.1687'	7.1687'	7.2716'	7.2716'	6.9497'	6.9497'	6.6949'	6.6949'	5.3858'
5	13.5393'	13.5393'	14.5276'	14.5276'	14.5828'	14.5828'	14.0936'	14.0936'	13.7990'	13.7990'	12.3604'

RADII				
BEAM 1	BEAM 2	BEAM 3	BEAM 4	BEAM 5
1895.50'	1902.79'	1910.08'	1917.37'	1924.66'

STRUCTURAL STEEL
FA. RTE. 553
OVER OWENS CREEK
SEC. 125 BR
DEKALB COUNTY
STA. 303 + 30

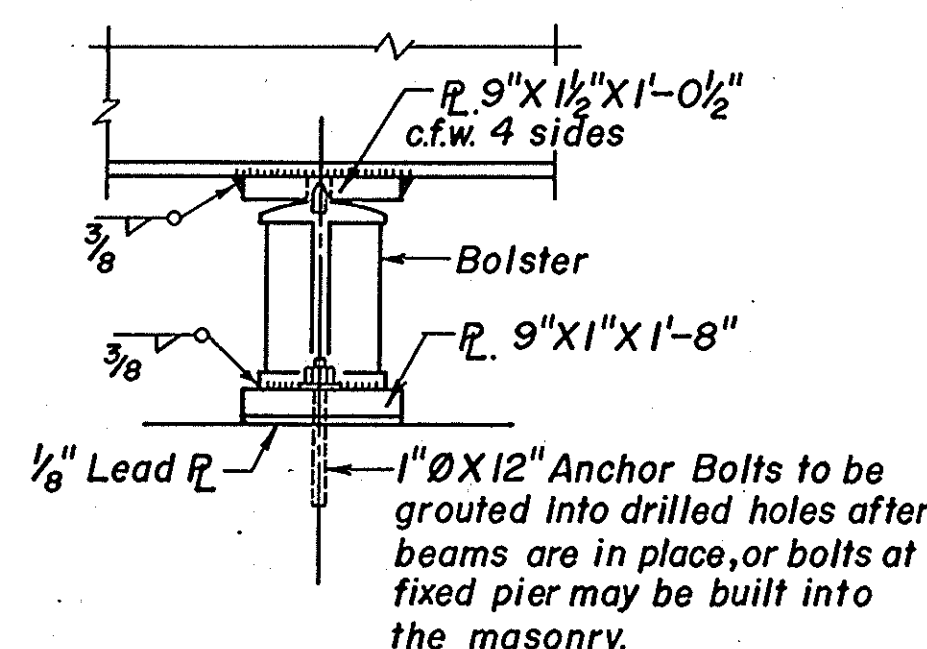


SECTION AT ABUTMENT

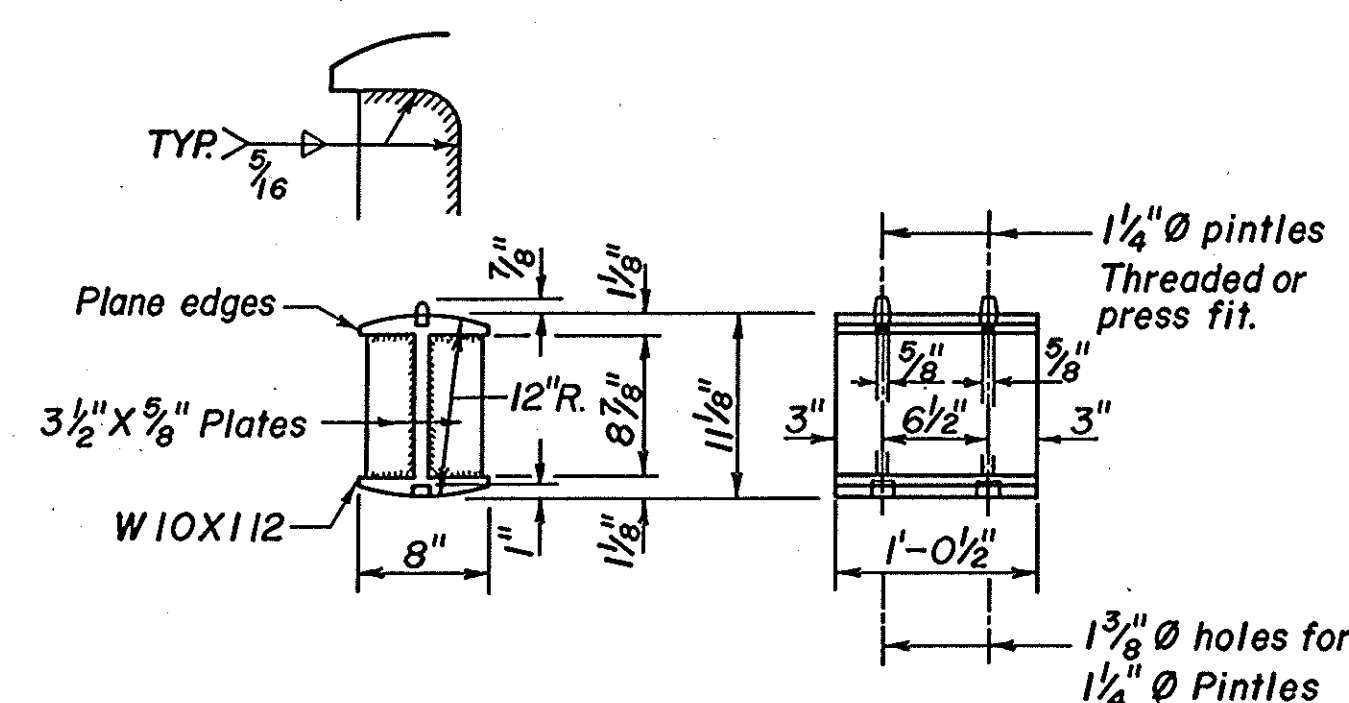
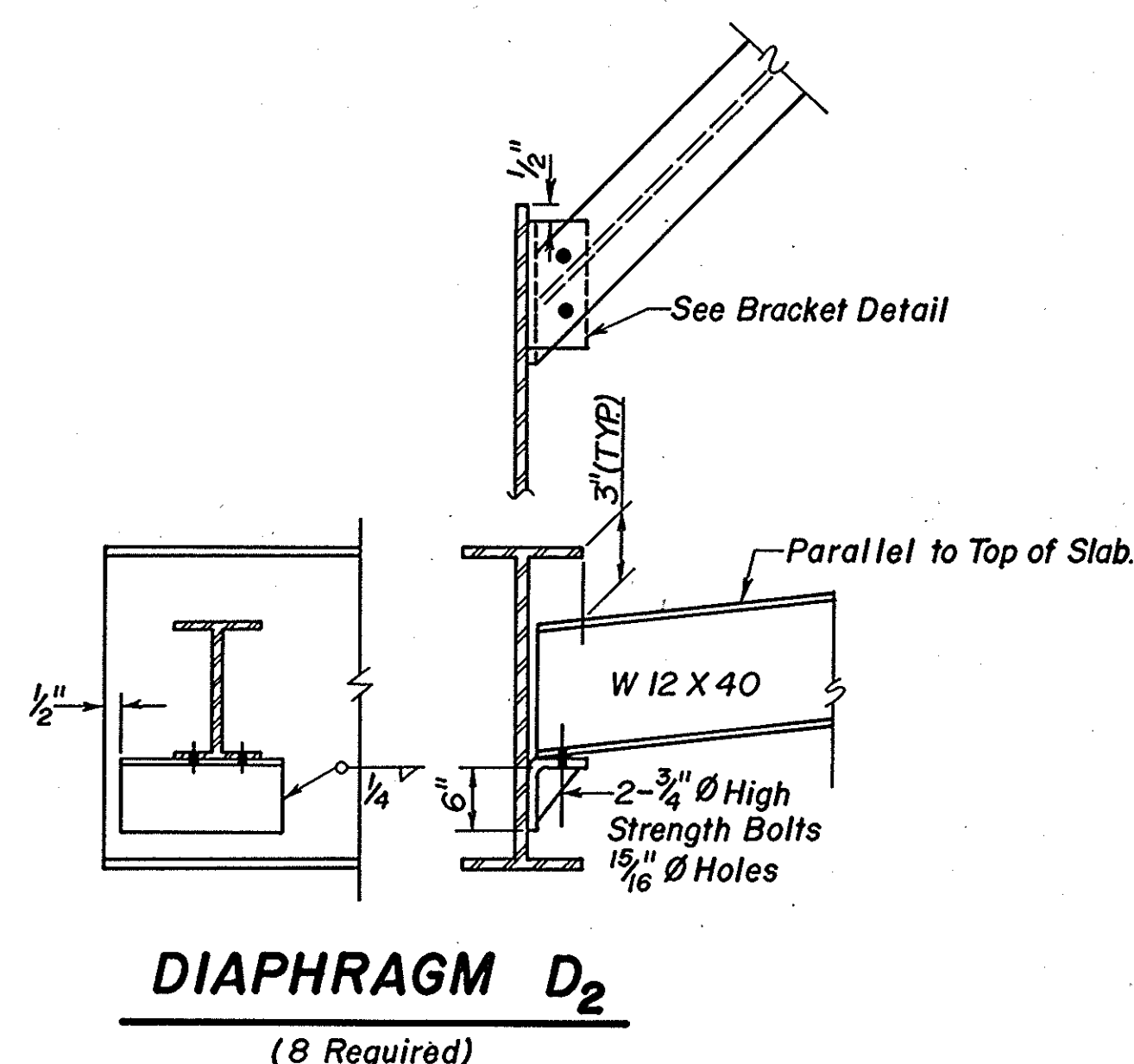


DETAIL OF PINTLE

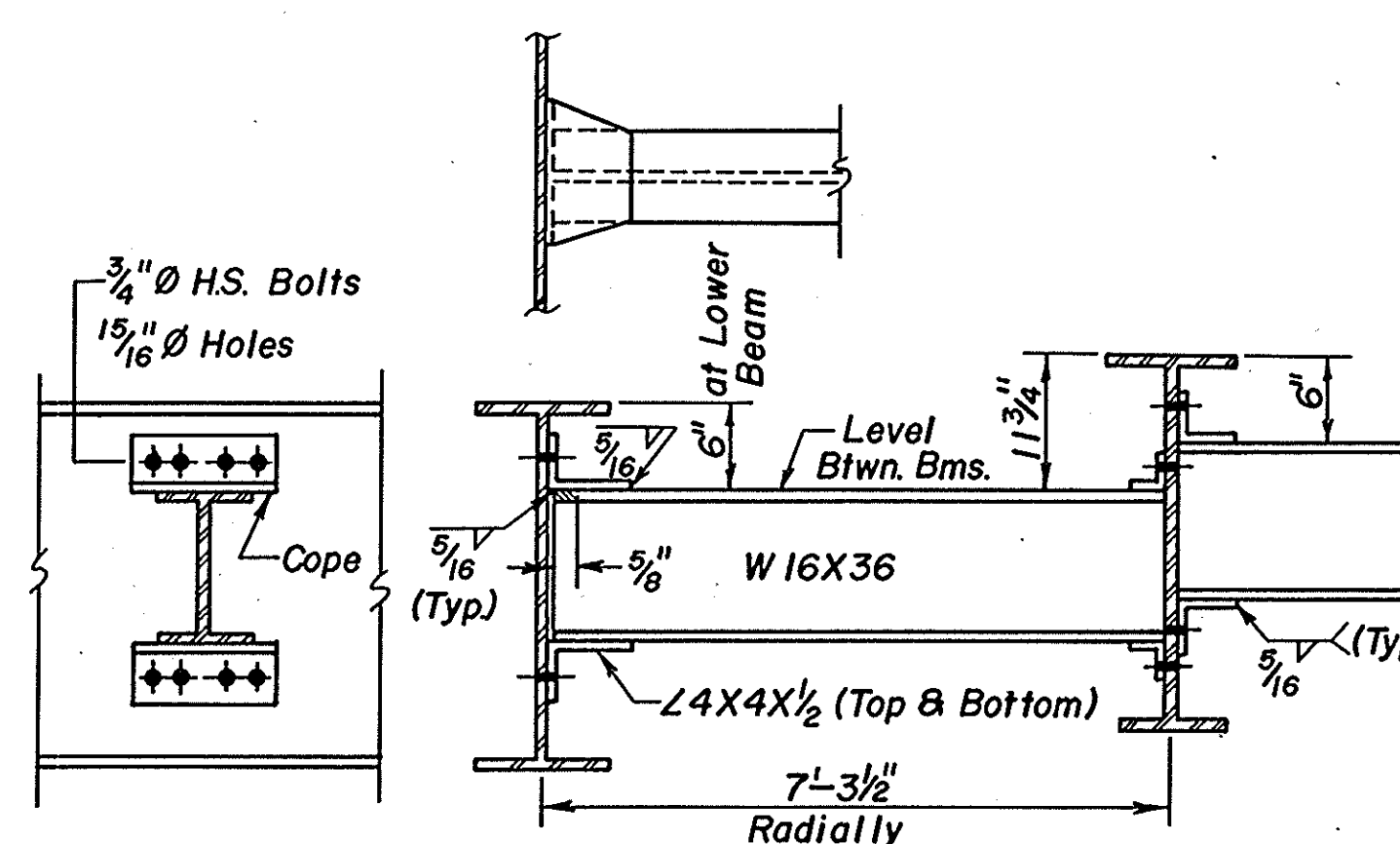
PLAN PIER BRG.



SECTION AT PIERS



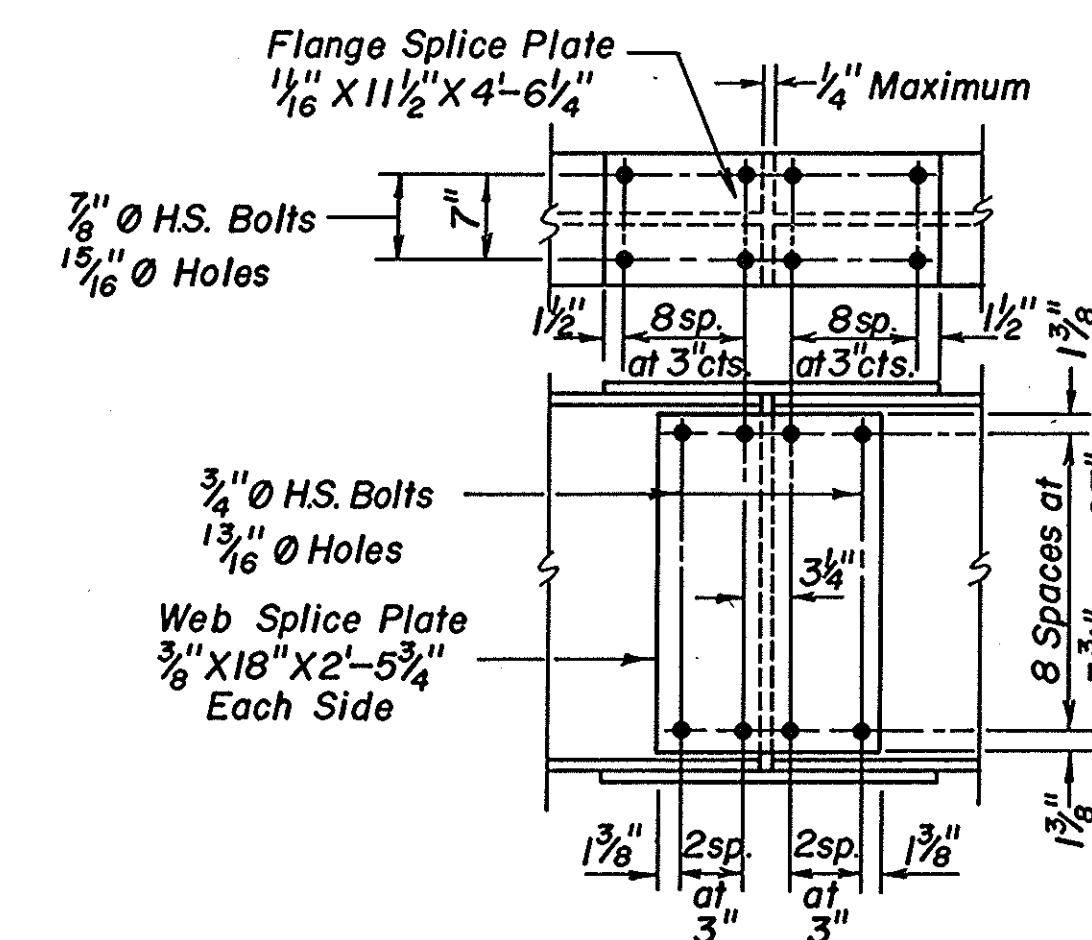
DETAIL OF ROCKER AT ABUTMENTS



NOTE: All contact surfaces of joints for the diaphragms shall be free of paint or lacquer.

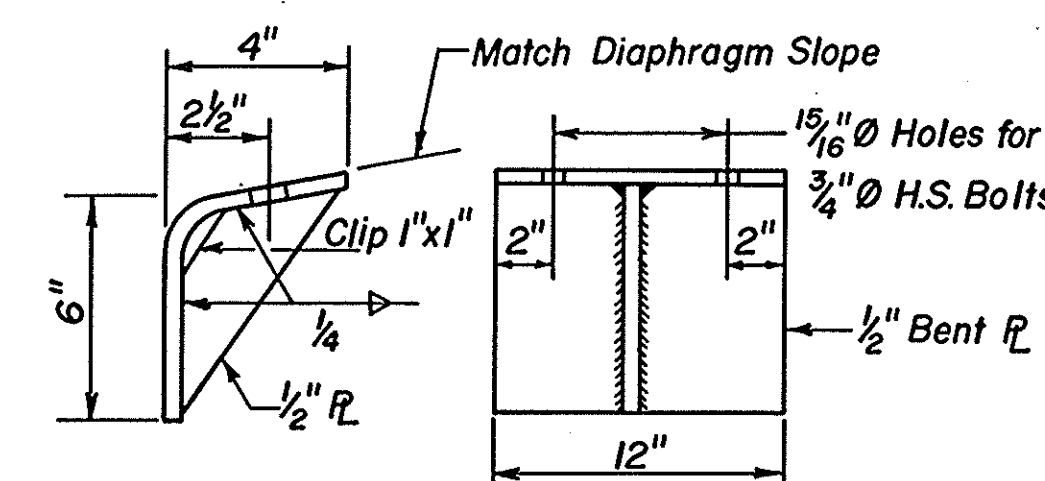
NOTE: Hardened washers shall be required over 1 5/16" Ø holes for diaphragm connections. (2 per bolt)

NOTE: N.T.R. indicates Notch Toughness Requirements.



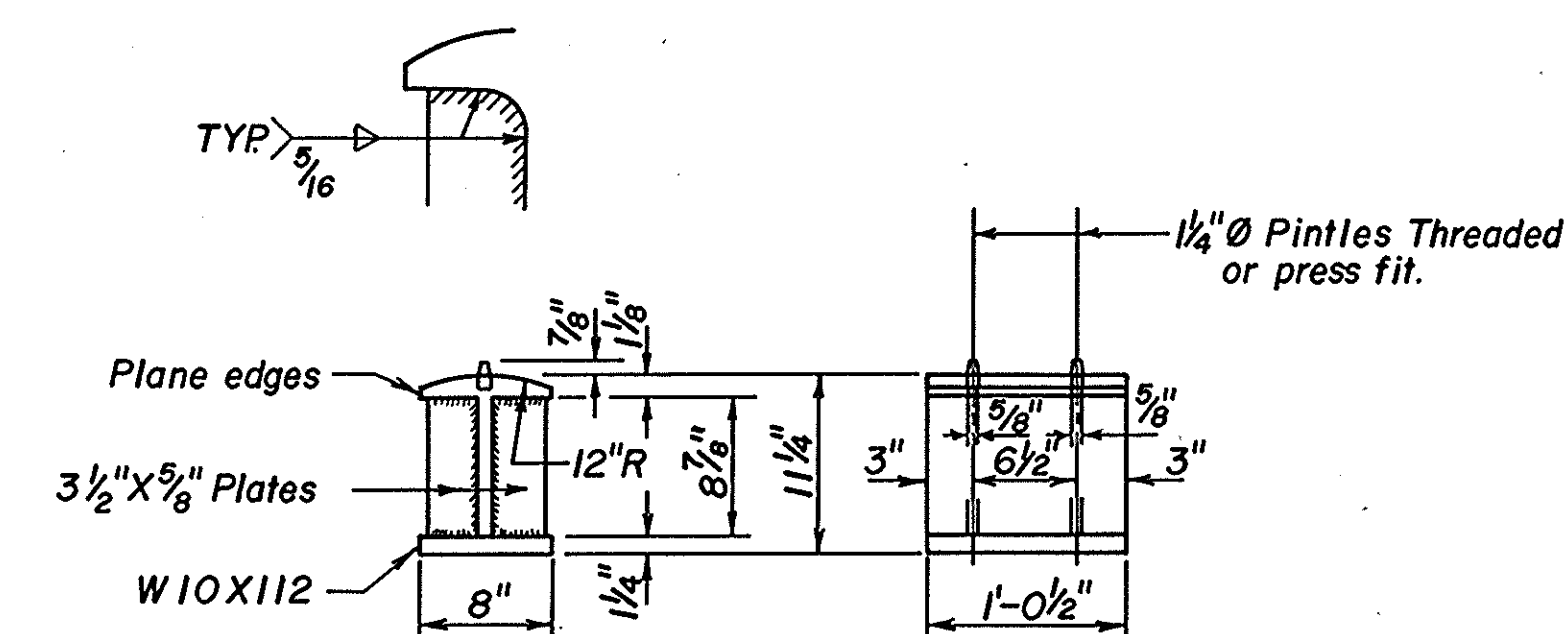
DETAIL OF SPLICE

(All Splice Plates = N.T.R.)



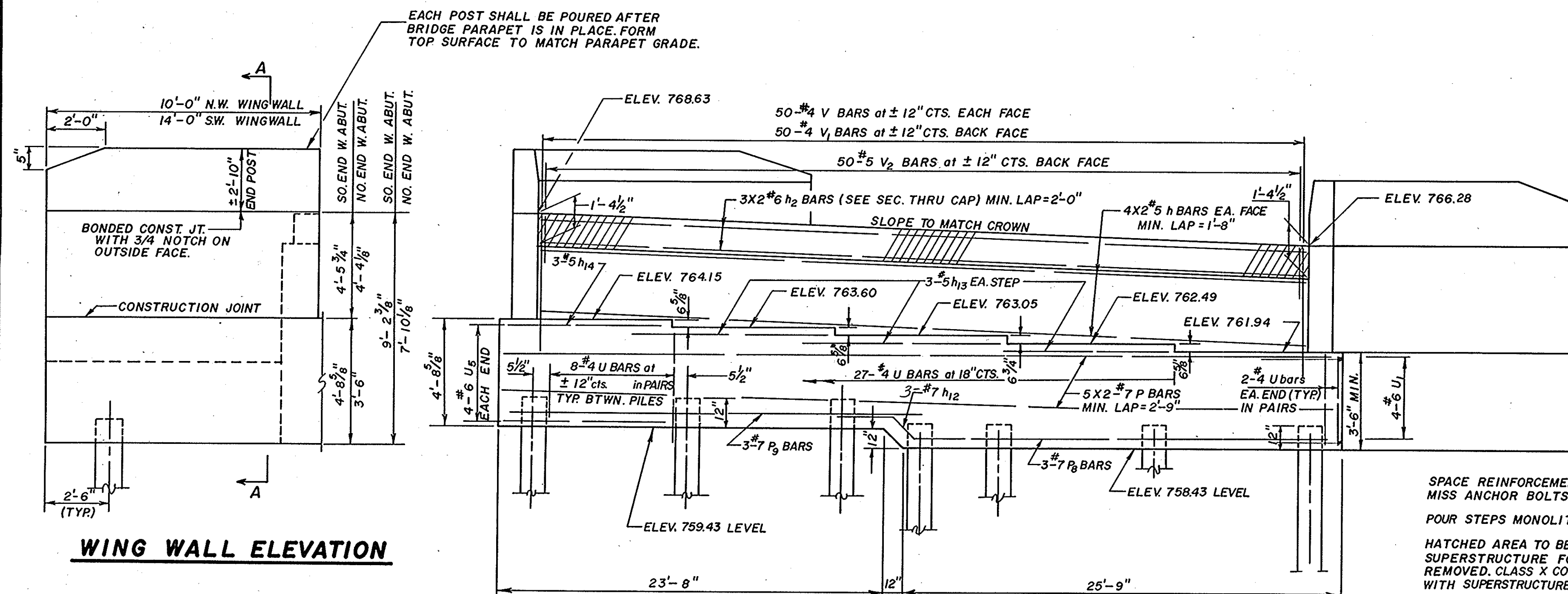
BRACKET DETAIL

(16 Required)

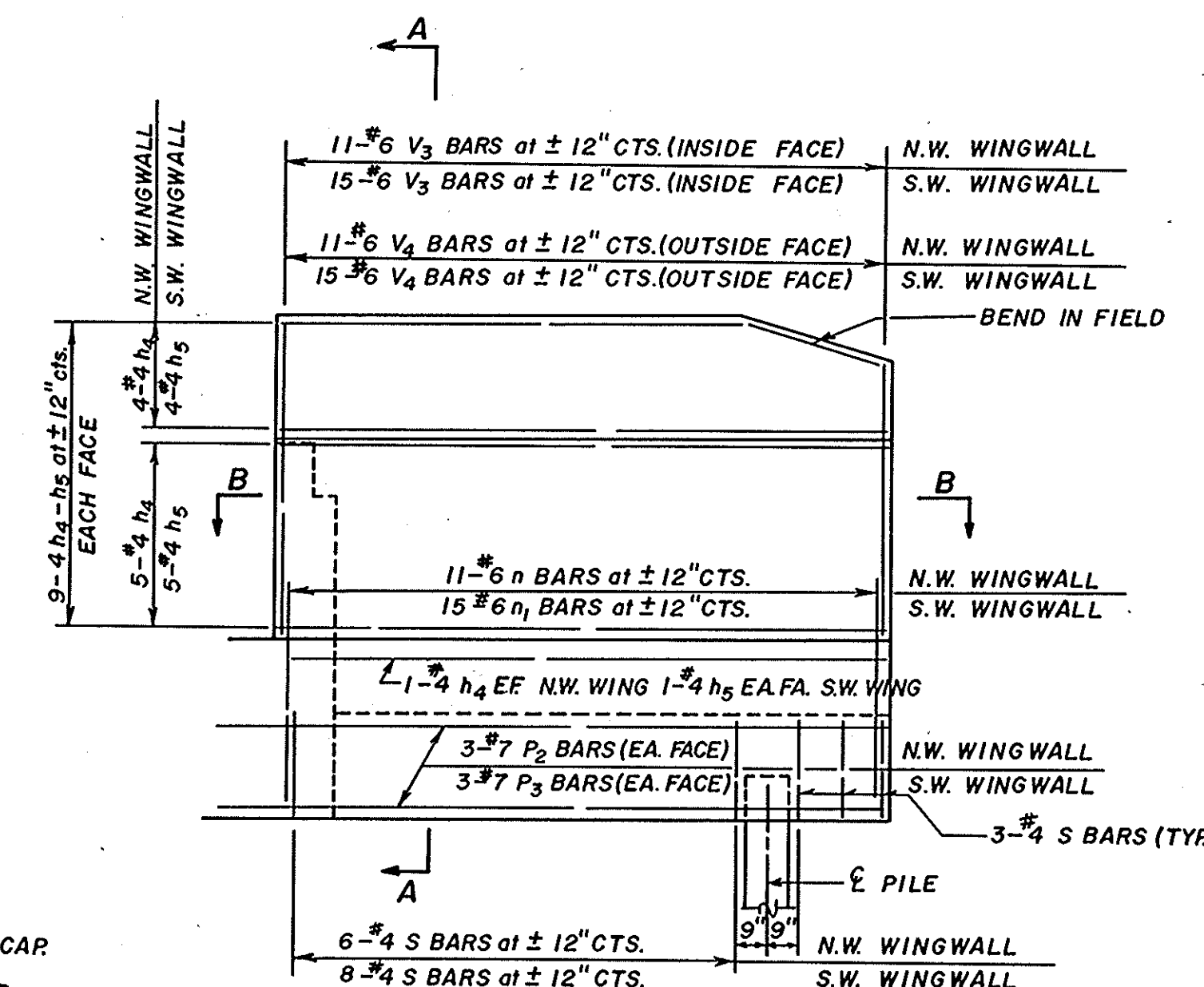


DETAIL OF BOLSTER AT PIERS

STRUCTURAL STEEL DETAILS
FA ROUTE 553
OVER OWENS CREEK
SECTION 125 BR
DEKALB COUNTY
STA. 303 + 30



WING WALL ELEVATION



WING WALL ELEVATION REINFORCEMENT

NOTE: ALL EXPOSED EDGES
SHALL HAVE A 3/4"
CHAMFER. EXCEPT
AS NOTED.

BILL OF MATERIAL-WEST ABUT.

BAR	NO.	SIZE	LENGTH	SHAPE
h	16	#5	24'-10"	—
h_2	6	#6	24'-10"	—
h_4	20	#4	9'-6"	—
h_5	20	#4	12'-6"	—
h_8	20	#5	5'-0"	∠
h_9	20	#5	5'-0"	—
h_{12}	3	#7	6'-11"	—
h_{13}	9	#5	12'-6"	—
h_{14}	3	#5	7'-7"	—
n	11	#6	9'-7"	□
n_1	15	#6	12'-7"	□

P	10	#7	26'-0"	—
P_2	6	#7	11'-0"	—
P_3	6	#7	13'-6"	—
P_8	3	#7	25'-6"	—
P_9	3	#7	23'-6"	—

S	20	#4	9'-5"	
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U	131	#4	9'-3"	
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U ₅	4	#6	11'-10"	2
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V	100	#4	5-6	—
V ₁	50	#4	4'-0"	

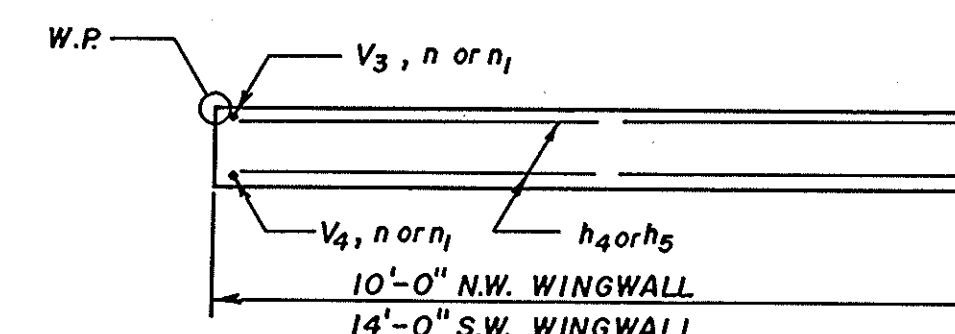
V_2	50	#5	2'-3"	—
V_3	26	#6	7'-0"	—

V_4	26	#6	7-1	—

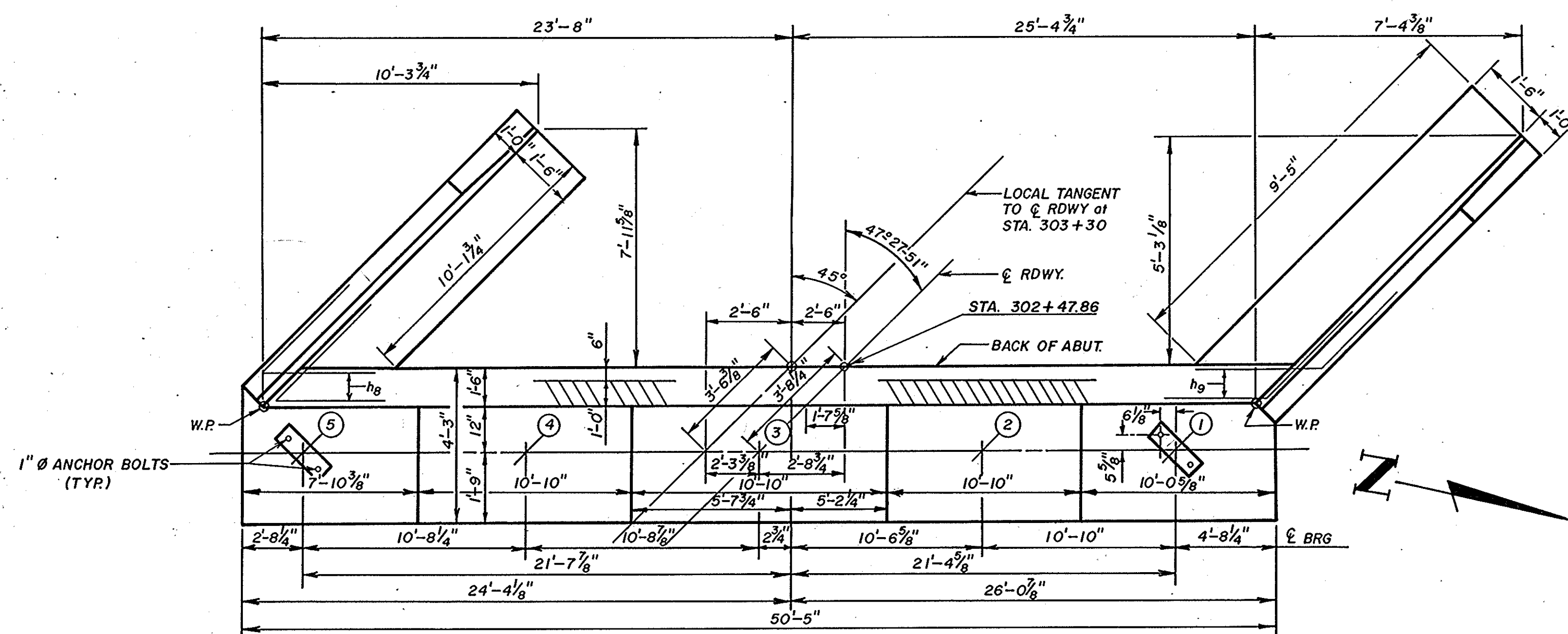
CLASS X CONCRETE	CU. YDS.	50.0
REINFORCEMENT BARS	POUNDS	5020

STEEL PILES (HP10X42)	LIN. FT.	296
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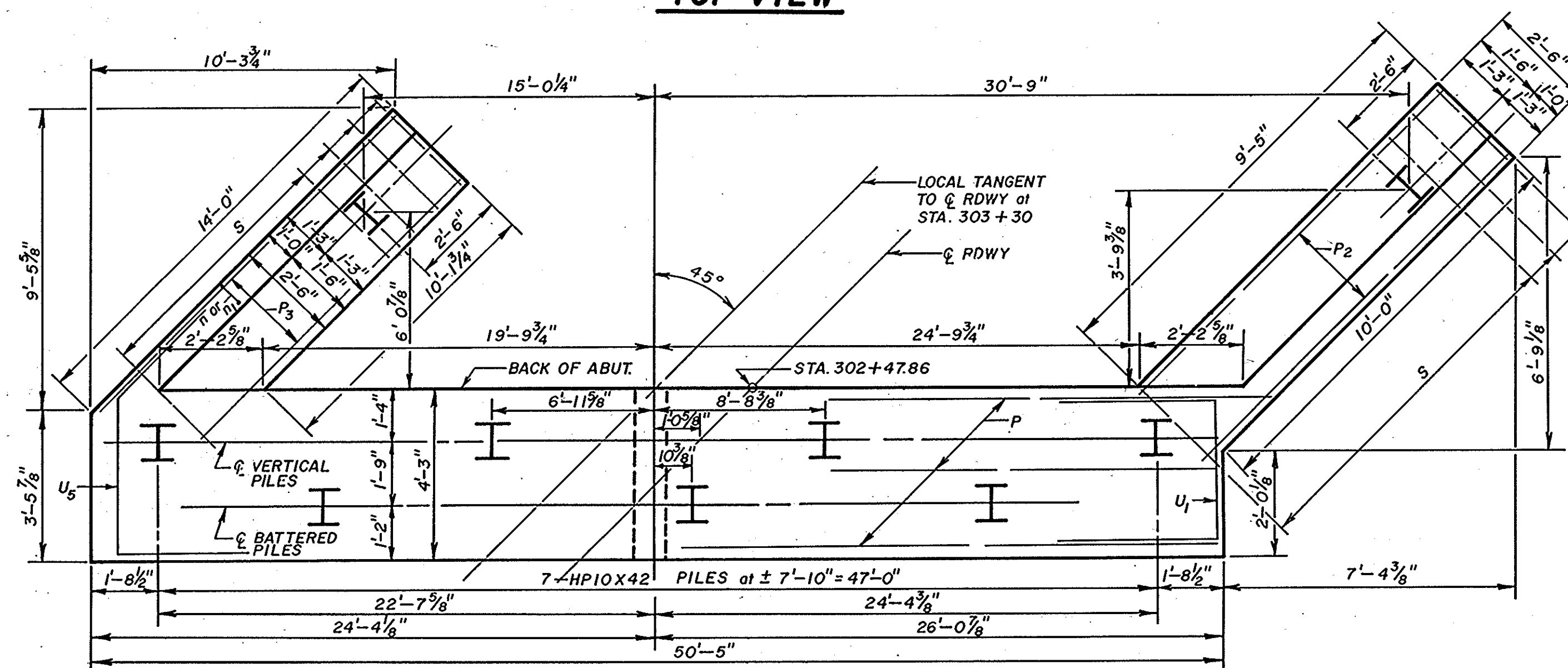
TEST PILE-STEEL (HP 10 X 42)	EACH	1
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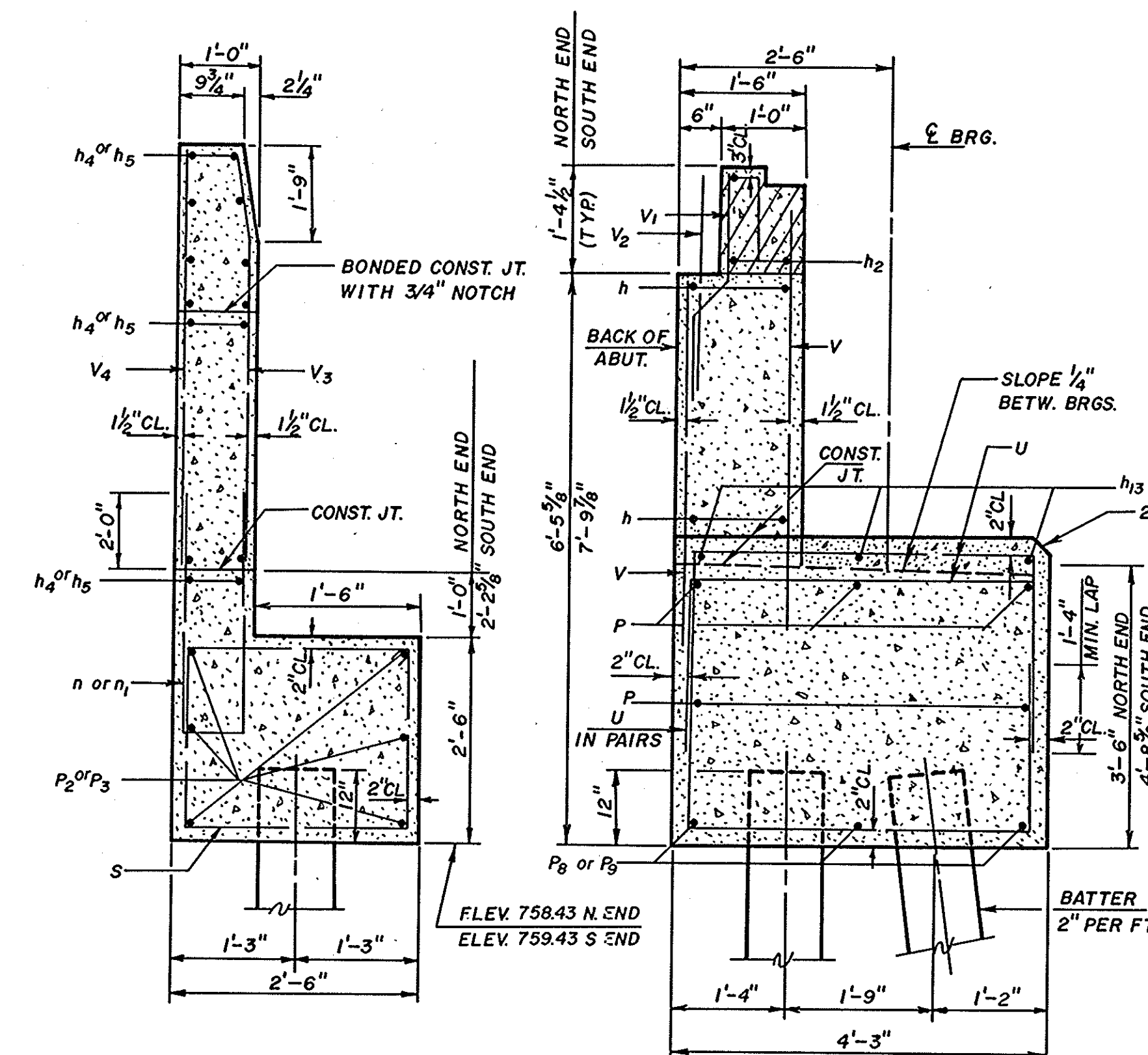
SECTION B-B



TOP VIEW



PLAN-PILE CAP

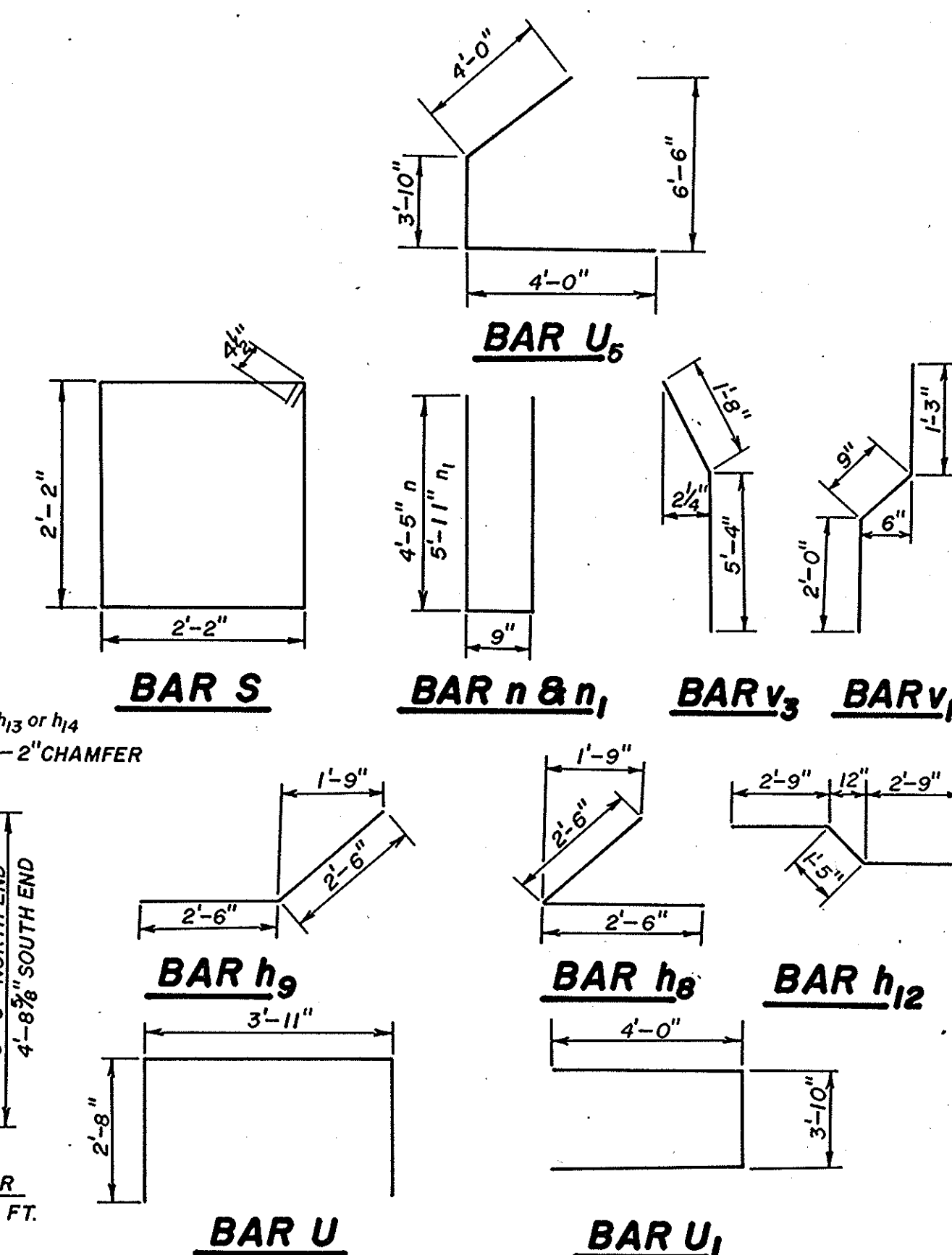


SECTION A-A

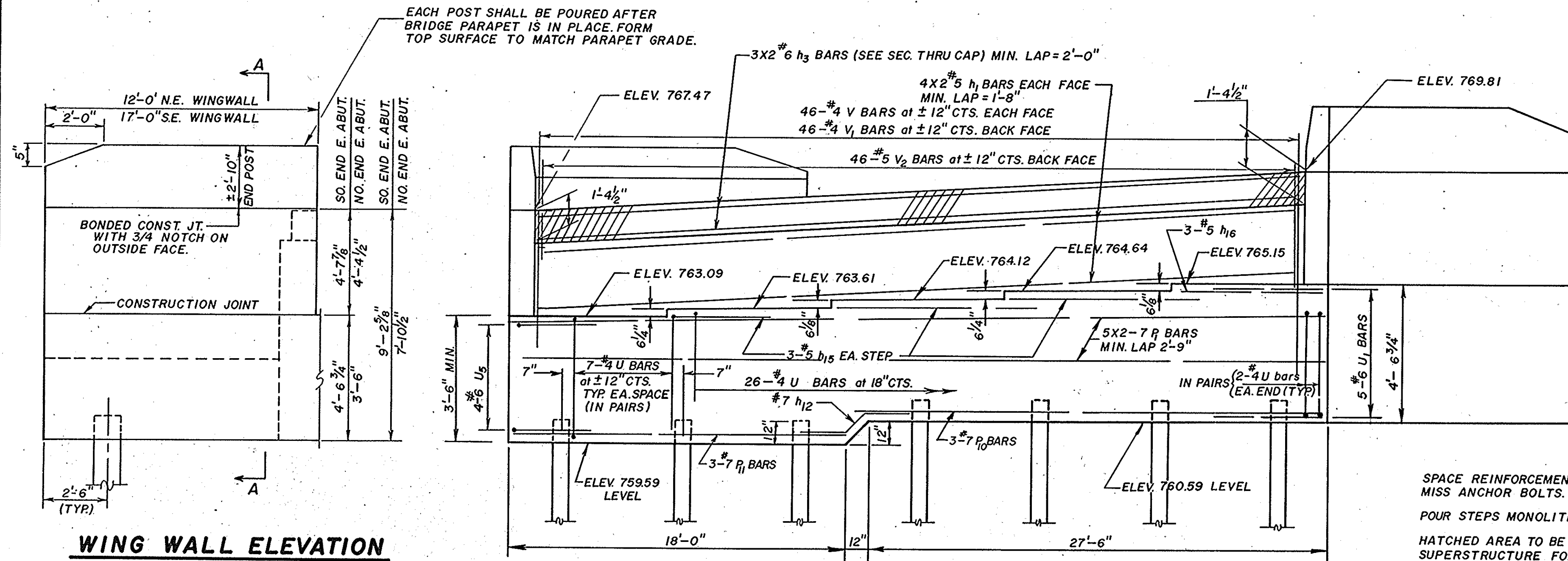
SECTION THRU ABUT.

PILE DATA

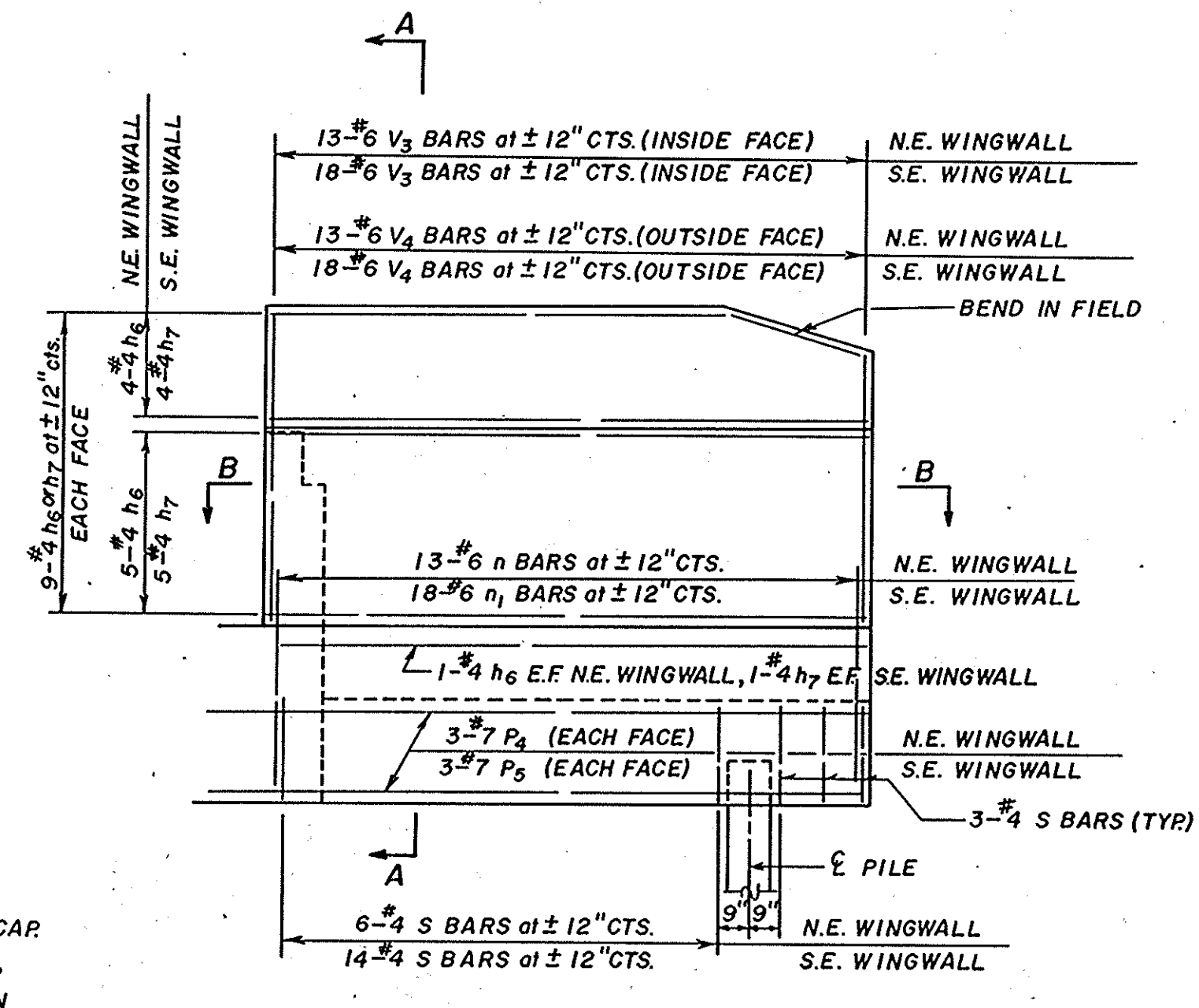
TYPE	HP 10 X 42
CAPACITY	45 TON
EST. LENGTH	37 FT.
NO. REQUIRED	8+1 TEST PILE



**WEST ABUTMENT
FA ROUTE 553
OVER OWENS CREEK
SECTION 125 BR
DEKALB COUNTY
STA. 303+30**



WING WALL ELEVATION



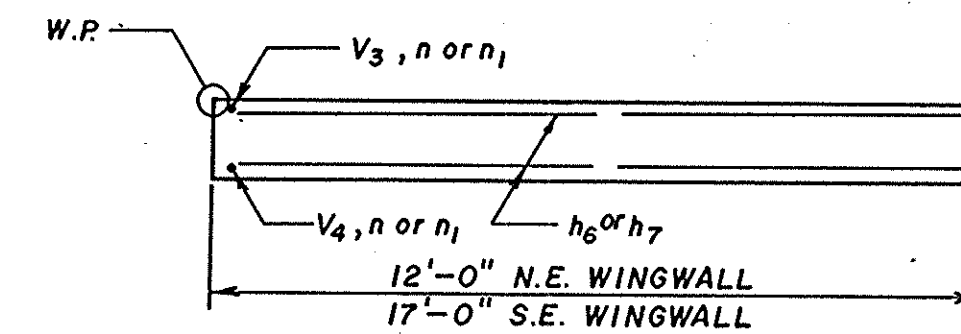
WING WALL ELEVATION REINFORCEMENT

NOTE: ALL EXPOSED EDGES
SHALL HAVE A 3/4"
CHAMFER. EXCEPT
AS NOTED.

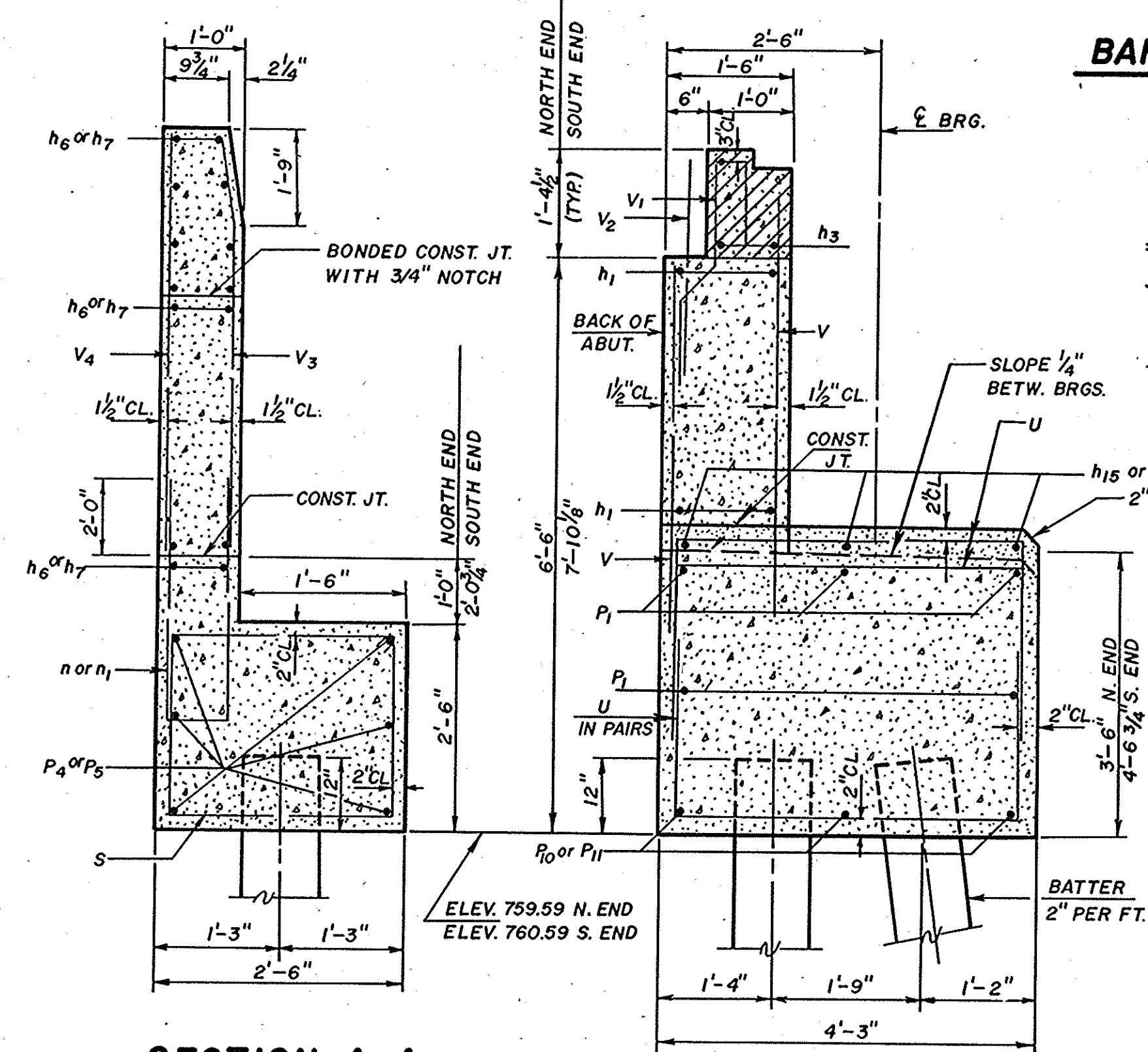
BILL OF MATERIAL EAST ABUT.

BAR	NO.	SIZE	LENGTH	SHAPE
h_1	16	# 5	22'-10"	—
h_3	6	# 6	22'-10"	—
h_6	20	# 4	11'-6"	—
h_7	20	# 4	15'-6"	—
h_8	20	# 5	5'-0"	—
h_9	20	# 5	5'-0"	—
h_{12}	3	# 7	6'-11"	—
h_{15}	9	# 5	11'-7"	—
h_{16}	3	# 5	8'-10"	—
n	13	# 6	9'-7"	—
n_1	17	# 6	12'-7"	—
P_1	10	# 7	24'-6"	—
P_2	6	# 7	12'-6"	—
P_5	6	# 7	17'-0"	—
P_{10}	3	# 7	28'-0"	—
P_{11}	3	# 7	17'-6"	—
S	26	# 4	9'-5"	—
U	118	# 4	9'-3"	—
U_1	5	# 6	11'-10"	—
U_5	4	# 6	11'-10"	—
V	92	# 4	5'-6"	—
V_1	46	# 4	4'-0"	—
V_2	46	# 5	2'-3 $\frac{1}{2}$ "	—
V_3	31	# 6	7'-0"	—
V_4	31	# 6	7'-1"	—

CLASS X CONCRETE	CU. YDS.	49.4
REINFORCEMENT BARS	POUNDS	5250
STEEL PILES (HP 10X42)	LIN. FT.	153

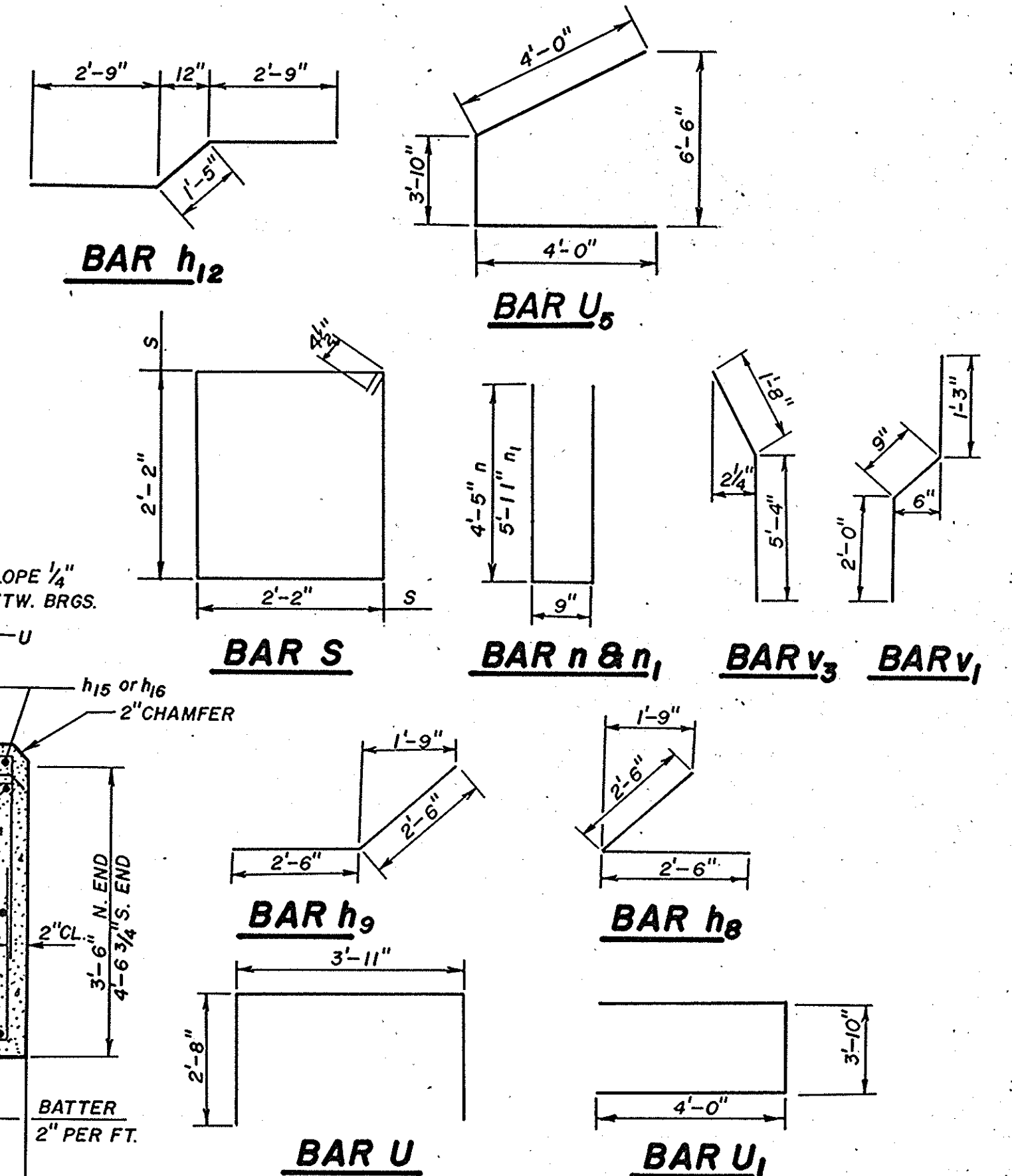


SECTION B-B

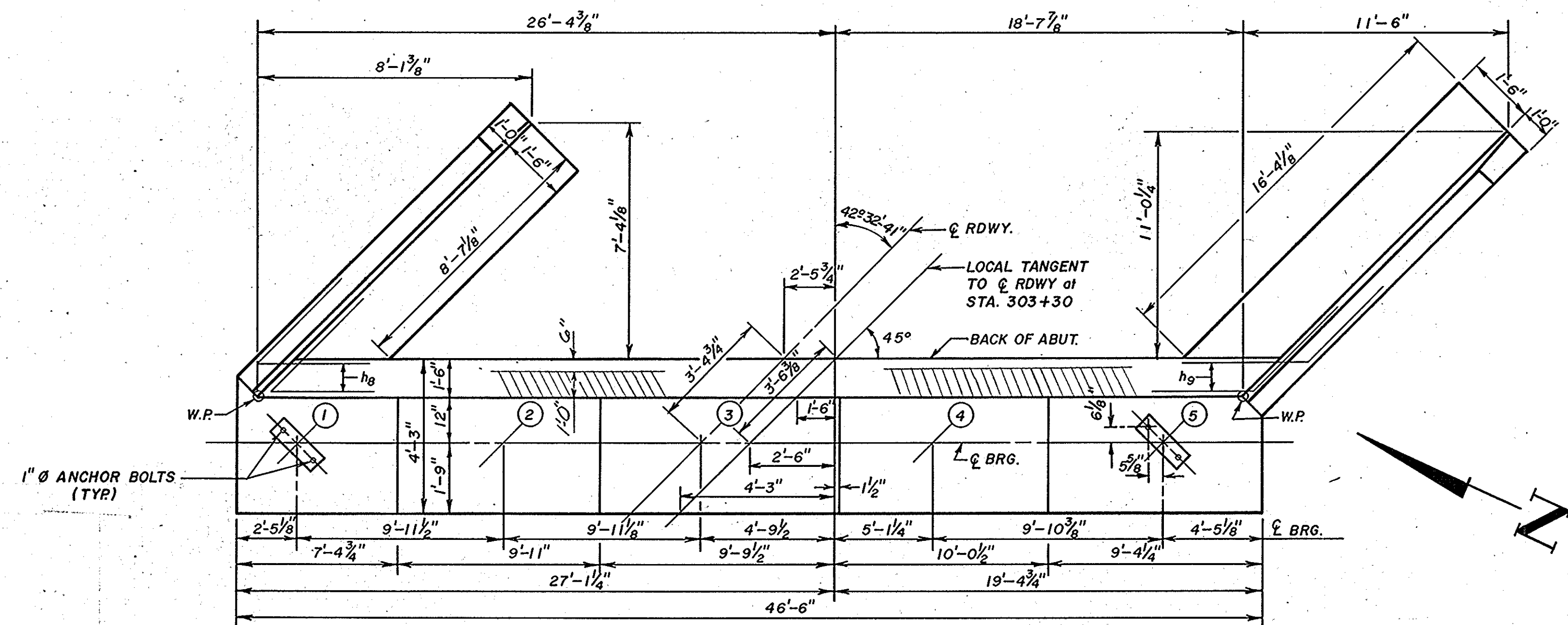


SECTION A-A

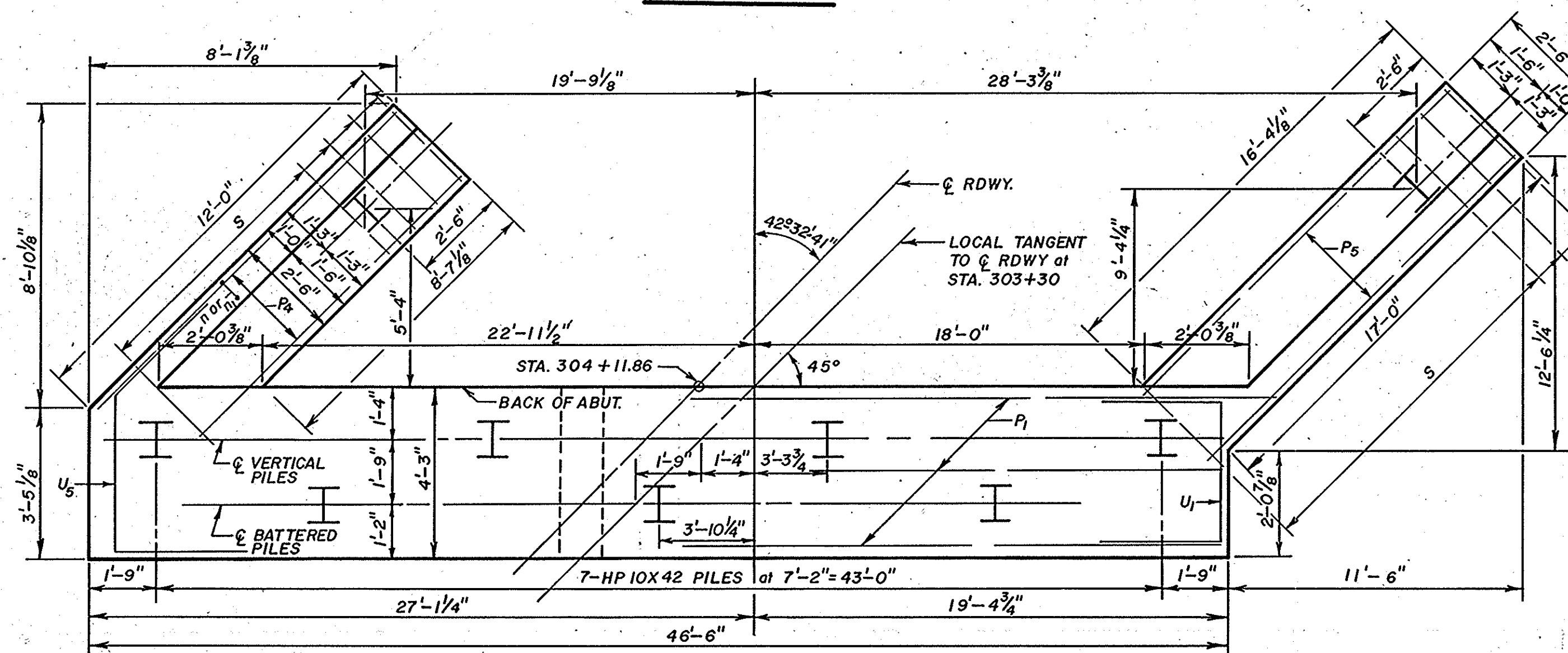
SECTION THRU ABUT.



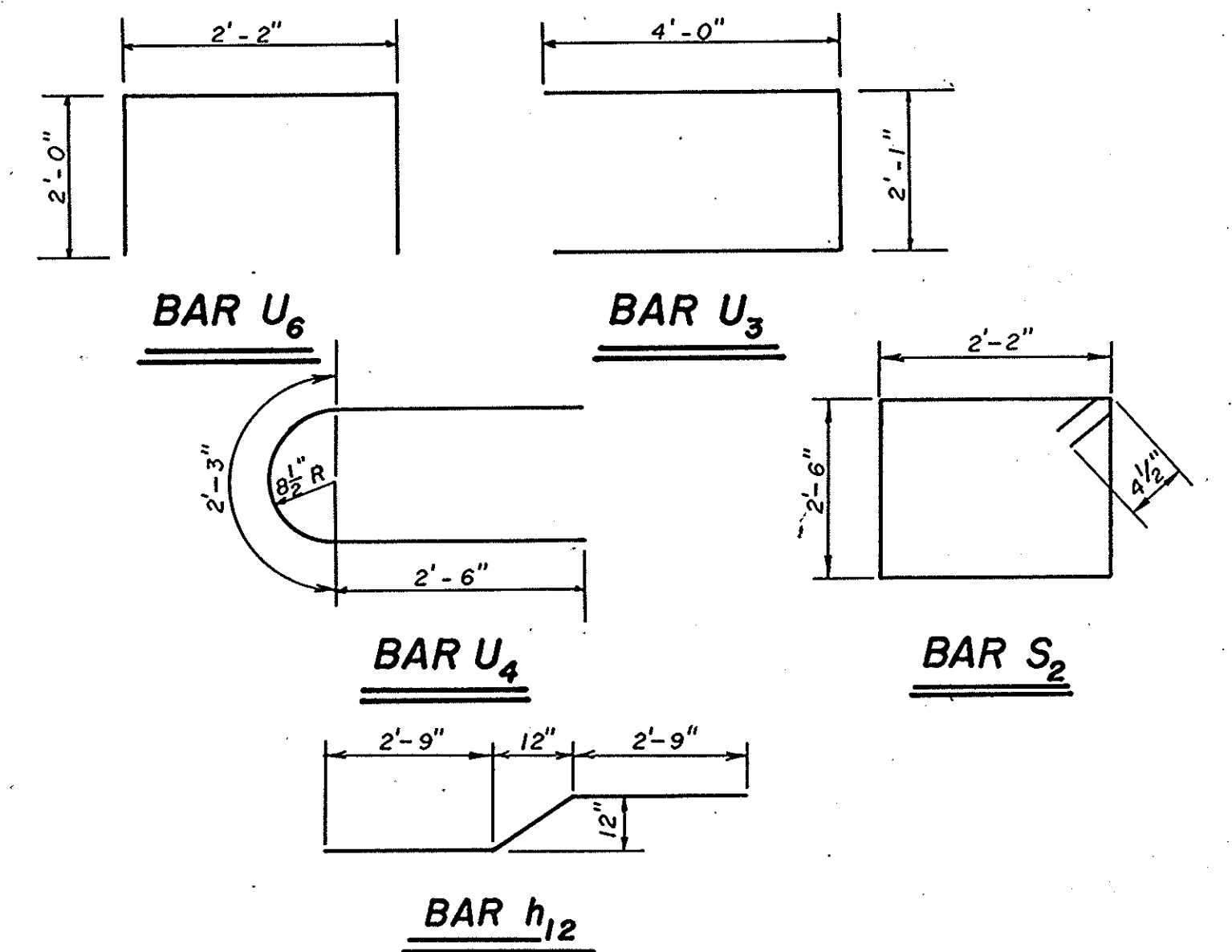
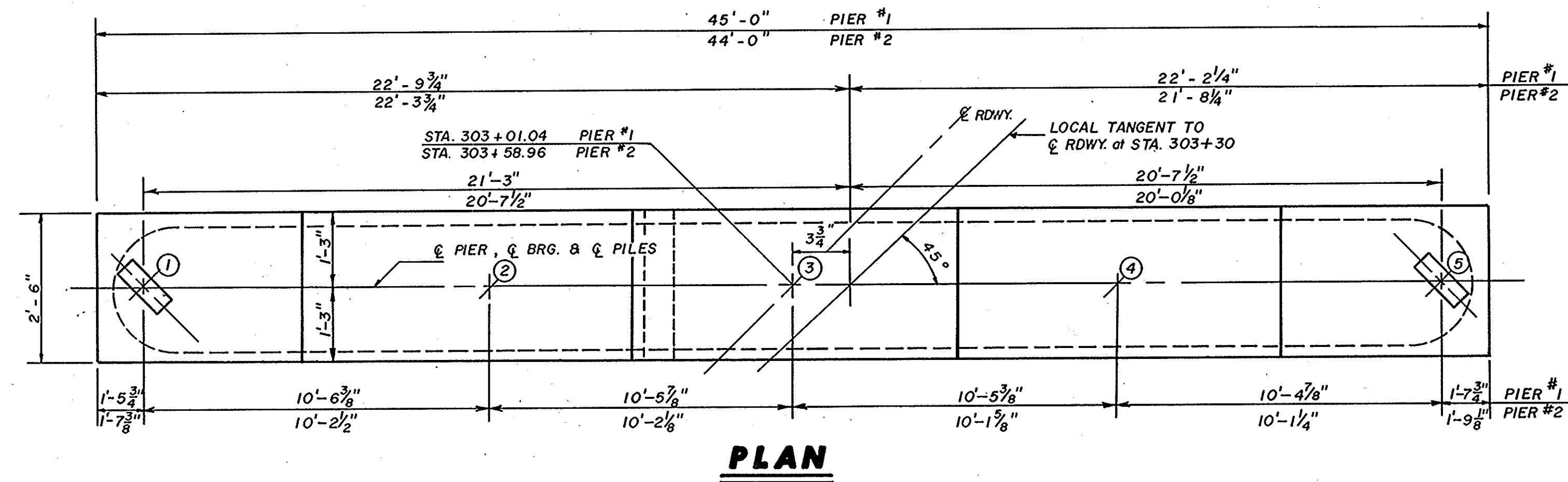
**EAST ABUTMENT
FA ROUTE 553
OVER OWENS CREEK
SECTION 125 BR
DEKALB COUNTY
STA. 303 +30**



TOP VIEW



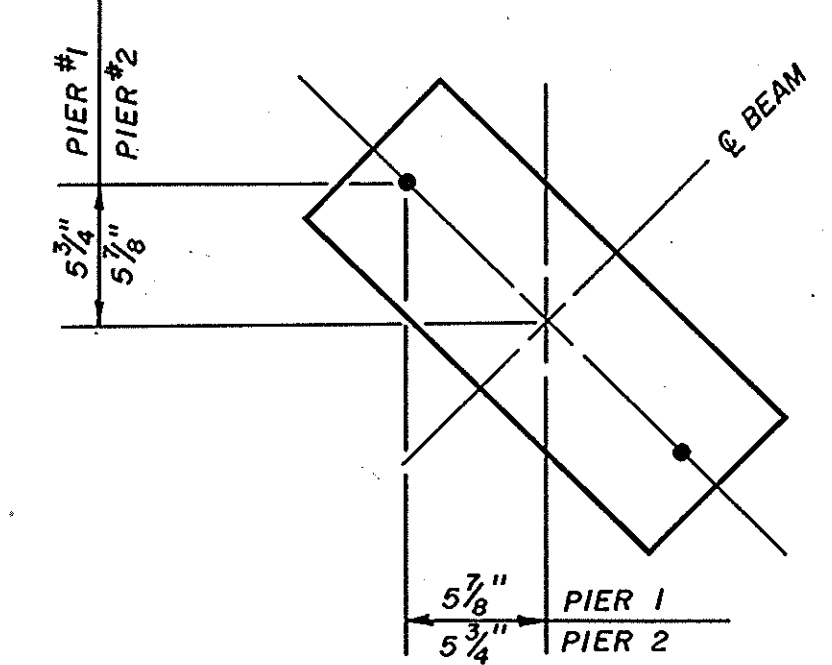
PLAN-PILE CAP



BILL OF MATERIAL PIERS

BAR	NO.	SIZE	LENGTH	SHAPE
h ₁₀	80	#4	21'-6"	
h ₁₂	4	#7	6'-11"	
h ₁₇	18	#5	11'-6"	
h ₁₉	6	#5	6'-4"	
P ₇	24	#7	23'-3"	
P ₁₂	8	#7	16'-8"	
P ₁₃	8	#7	26'-0"	
U ₄	18	#6	10'-1"	
U ₆	40	#4	7'-3"	
U ₆	51	#4	6'-2"	
V ₆	182	#5	9'-4"	
S ₂	92	#4	10'-1"	
CLASS X CONCRETE			CU. YD.	83.0
REINFORCEMENT BARS			POUND	6370
STEEL PILES (HP 10X42)			LIN. FT.	425
TEST PILES - STEEL HP 10x42			EACH	1

NOTE: ALL EXPOSED EDGES SHALL BE CHAMFERED 1/2 INCHES



ANCHOR BOLT LOCATIONS

NOTES

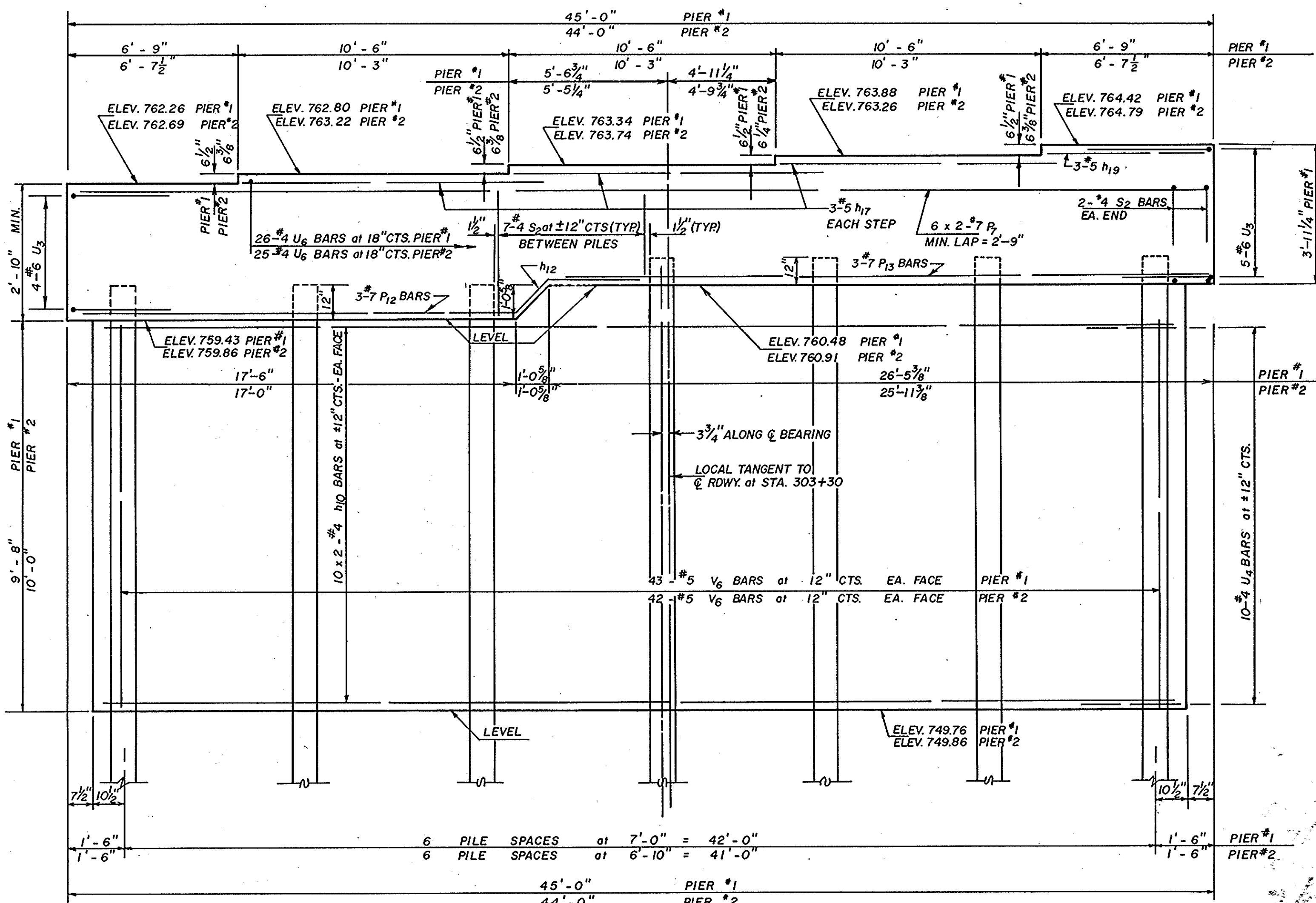
SPACE REINFORCEMENT IN CAP TO MISS ANCHOR BOLTS.
THE DESIGNATION 11X2-#4 ETC. INDICATES 11 LINES OF BARS WITH TWO LENGTHS PER LINE.
POUR STEPS MONOLITHICALLY WITH CAP

PIERS
FA RTE 553
OVER OWENS CREEK
SEC. 125
DEKALB COUNTY
STA. 303 +30

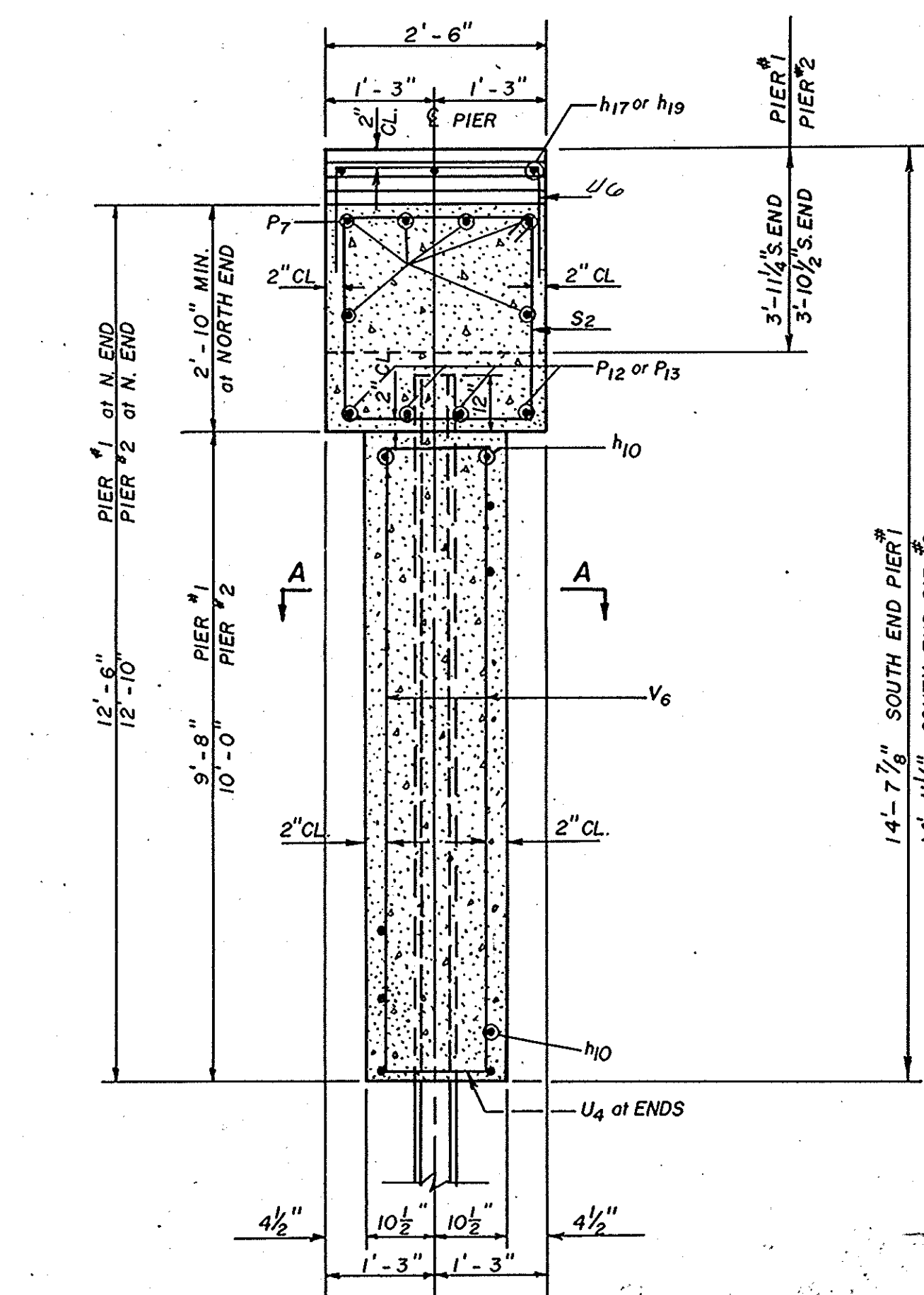
PILE DATA

TYPE HP 10 X 42
CAPACITY 50 TON
EST. LENGTH 35' PIER #1, 30' PIER #2
NO. REQ'D. 7 at PIER #1
6+1 TEST PILE at PIER #2

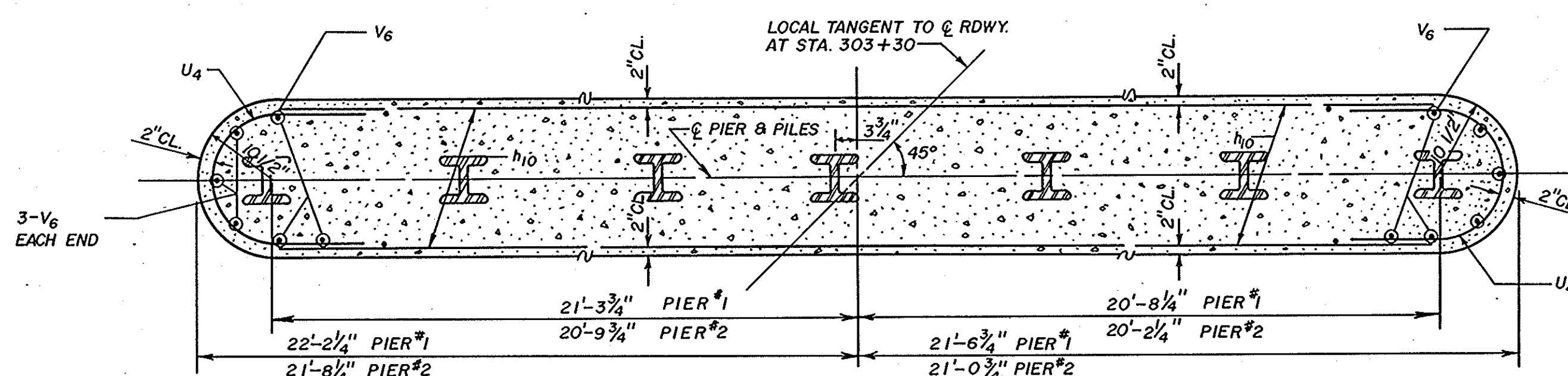
ELEVATION
LOOKING EAST



SECTION THRU PIER
LOOKING SOUTH



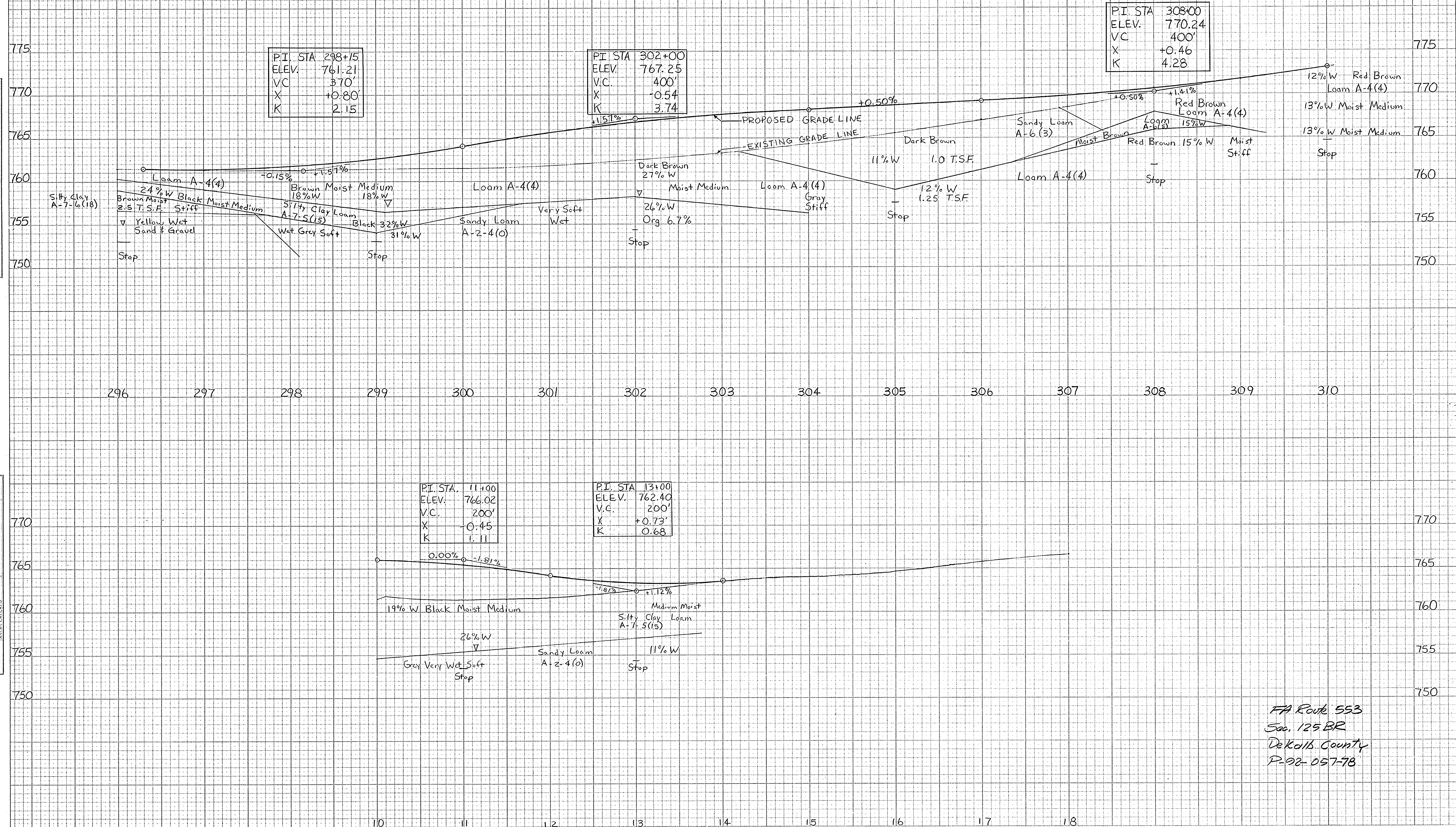
SEC. A-A



DATE	BY
SURVEYED	
PLOTTER	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	BY
SURVEYED	
PLOTTER	
NOTE BOOK	
AREAS CHECKED	
NO.	

ROUTE NO.	SECTION	COUNTY	TOTAL SHEET	SHEET NO.
STA.	PCD. ROAD DIST. NO. 7	BLANKS	FED. AID DEC. PROJECT--	



FA Route 553
Sec. 125 BR
DeKalb County
P-92-057-78