

R/W for Pipeline 54' minimum
Grant reads: "...50 feet plus ground
occupied by pipe..."
(Modifications can be requested)
OPO - (Hubs) 272-3522 Don Hayes
BHM - Pipeline Coordinator - Joffe - 356-202

ALYESKA PIPELINE SERVICE COMPANY, AGENT

TRANS ALASKA PIPELINE SYSTEM YUKON RIVER TO PRUDHOE BAY, ALASKA

AS BUILT DRAWINGS FOR STATE HIGHWAY

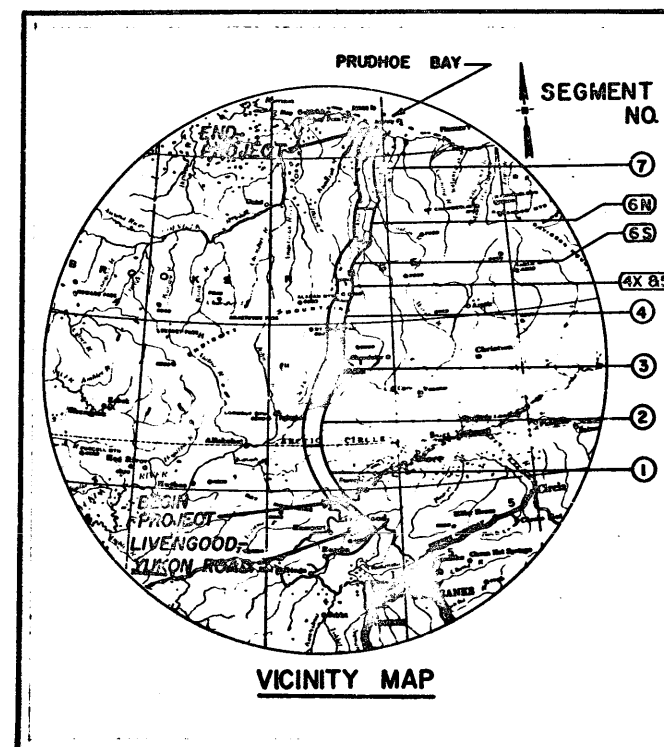
SEGMENT NO. 3

SOUTH FORK KOYUKUK TO SNOWDEN CREEK

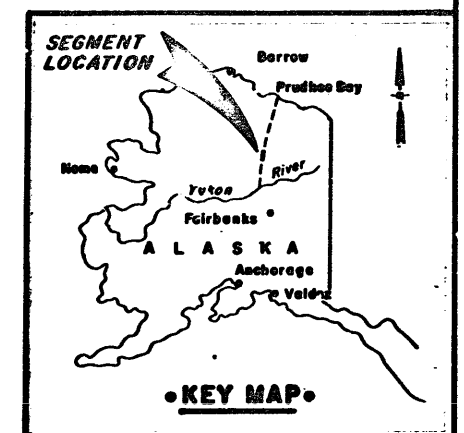
MICHAEL BAKER, JR., INC. ——— CONSULTING ENGINEERS
JACKSON, MISS. FAIRBANKS, ALASKA

INDEX TO DRAWINGS		
DESCRIPTION	DRAWING NO.	SHEET NO.
TITLE & INDEX SHEET	D-105-CIA	1
LOCATION MAP	D-105-CIA	2-2a
SUMMARY OF QUANTITIES	D-105-CIA	3-3d
TYPICAL SECTIONS & DETAILS	D-105-CIA	4, 4b, 4c & 4e-4g
PLAN & PROFILE SHEETS	D-105-CIA	5-32
BRIDGE DRAWINGS	D-105-CIA	100-107, 109-123

LENGTH OF PROJECT		
ITEM	FEET	MILES
LENGTH OF ROADWAY	296,283.56	56.12
LENGTH OF BRIDGES	1,459.02	0.28
TOTAL LENGTH	297,742.58	56.40



Note:
Construction Stationing for 48" Oil Pipeline
shown at Highway crossings.



DRAWING NO. D-105-CIA				SHEET NO. 1	
0	REV	ER 1130 As Built Issue	7-77	DATE	
REVISION	BY	DESCRIPTION	DATE		

ALYESKA PIPELINE SERVICE COMPANY, AGENT

TRANS ALASKA PIPELINE SYSTEM

YUKON RIVER TO PRUDHOE BAY, ALASKA

AS BUILT DRAWINGS FOR STATE HIGHWAY

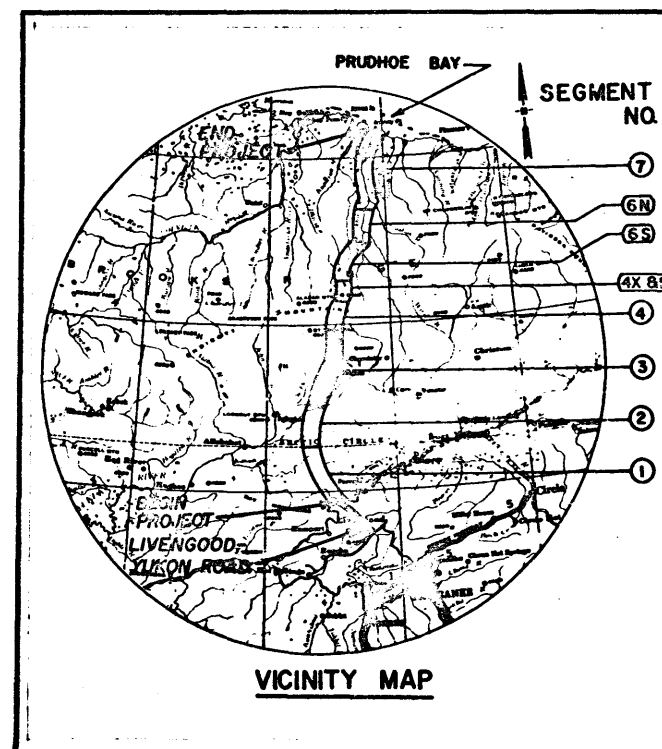
SEGMENT NO. 3

SOUTH FORK KOYUKUK TO SNOWDEN CREEK

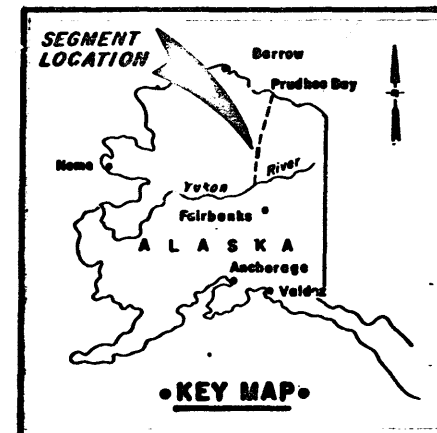
MICHAEL BAKER, JR., INC. ————— CONSULTING ENGINEERS
JACKSON, MISS. FAIRBANKS, ALASKA

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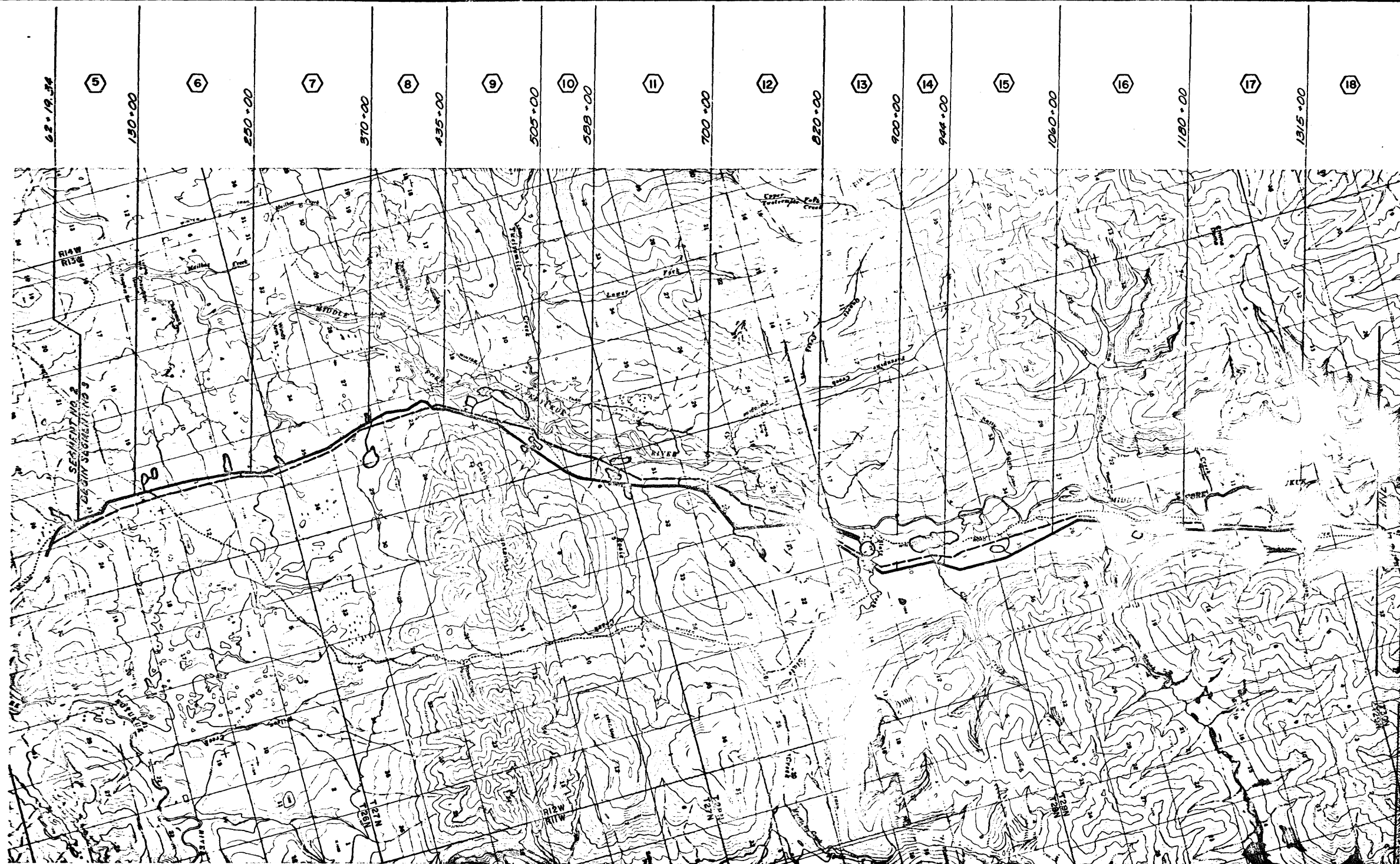
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shown at Highway crossings.



DRAWING NO. D-105-CIA			SHEET NO. 1	
O RHT ER 1130 As Built Issue			T-77	
REVISION BY		DESCRIPTION		CATE



NOTE: MAP SOURCE —

THESE DRAWINGS WERE COMPILED FROM
1:63,360 QUADRANGLE MAPS IDENTIFIED
BY NAME OF WISEMAN AND CHANDALAR
PREPARED BY U. S. GEOLOGICAL SURVEY
FOR VICINITY MAP AND KEY MAP, SEE SHEET NO. 1

LEGEND

- CENTERLINE OF STATE HIGHWAY
- - - 48" OIL PIPELINE SURVEY CENTERLINE
- PLAN & PROFILE SHEET NO.
- LOCATION OF BORROW AREA
- AIRPORT OR AIRSTRIP
- CONSTRUCTION CAMP SITE

0 0.5 1 2
SCALE IN MILES
(SCALE OF REDUCED SHEET)

REVISION	BY	DESCRIPTION
0	RNT	ER 1130 As Built Issue
ALYESKA PIPELINE SERVICE COMPANY, AG TRANS ALASKA PIPELINE SYSTEM HIGHWAY AS BUILT YUKON RIVER TO PRUDHOE BAY		
LOCATION MAP-SEGMENT NO.		
MICHAEL BAKER, JR., INC. CONSULTING ENGINEER BEAVER, PA. JACKSON, MISS. FAIRBANKS, ALASKA		
DATE: 7-77	SEGMENT NO. 3	DRAWING NO. 0-105-CIA
APPROVED <i>R.N. Baker, Jr.</i> P.E. <i>A. L. Davis</i> M.B.A., INC. ALYESKA		SHEET NO.

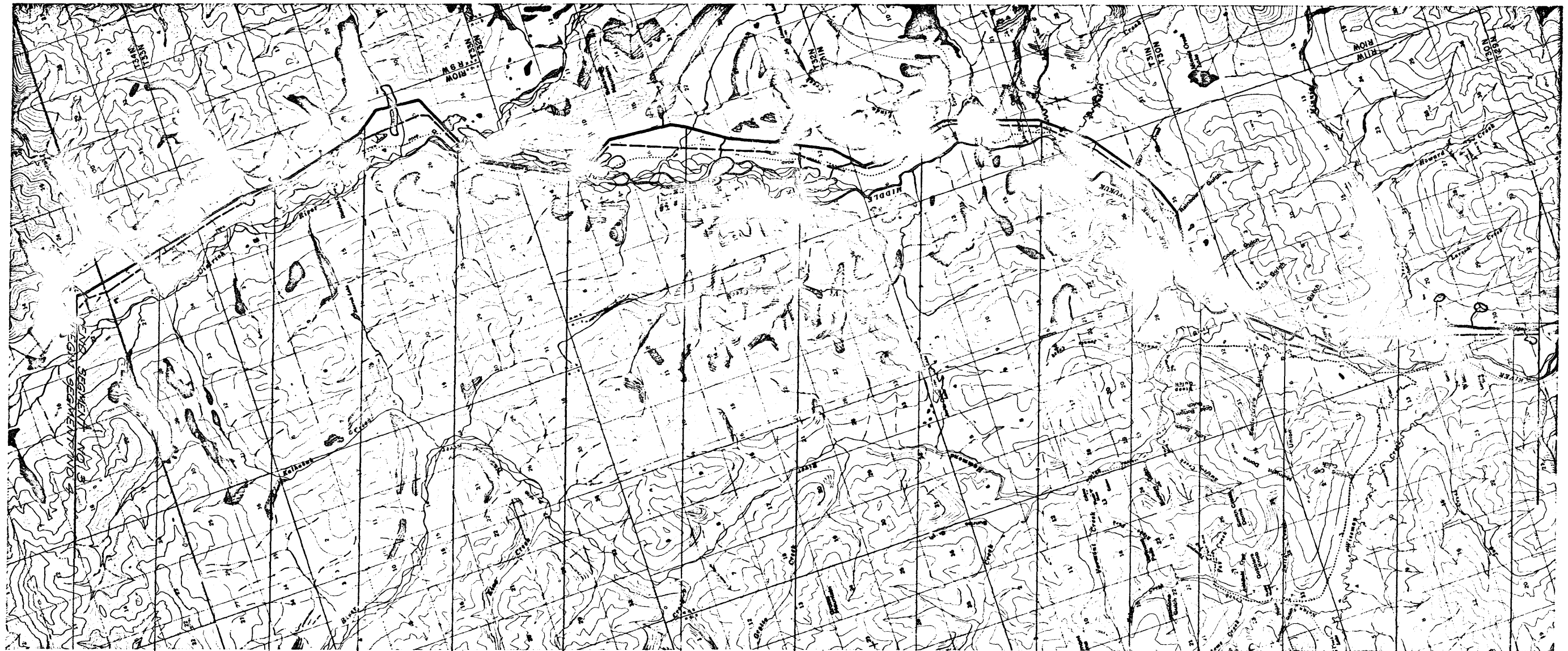
NOTICE:
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ALASKA PIPELINE SYSTEM AND THE DRAWING/DOCUMENT AND INFORMATION
CONTAINED HEREIN SHALL NOT BE REPRODUCED, COPIED OR OTHERWISE USED AS
AUTHORITY BY THE ALASKA PIPELINE SERVICE COMPANY

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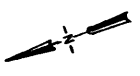
LEGEND
CENTERLINE OF STATE HIGHWAY
48" OIL PIPELINE SURVEY CENTERLINE
PLAN & PROFILE SHEET NO.
LOCATION OF BORROW AREA
AIRPORT OR AIRSTRIP
CONSTRUCTION CAMP SITE



ALYESKA PIPELINE SERVICE COMPANY, AGENT	
TRANS ALASKA PIPELINE SYSTEM	
HIGHWAY AS BUILT	
YUKON RIVER TO PRUDHOE BAY	
LOCATION MAP-SEGMENT NO. 3	
MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS	
JACKSON, MISS	
DATE: 7-77	
APPROVED	
DRAWING NO. D-105-CIA	
SHEET NO. 24	
ALYESKA	
M.B. J. INC.	
NOTES	
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REVISION	DATE
0	7-77
BY	DESCRIPTION
RHT	ER 1130 As Built Issue
SCALE IN MILES	
0 0.5 1 2	
(SCALE OF REDUCED SHEET)	



18	1410-00
19	1520-00
20	1642-00
21	1770-00
22	1890-00
23	2010-00
24	2130-00
25	2250-00
26	2370-00
27	2486-00
28	2600-00
29	2690-00
30	2810-00
31	2930-00
32	3036-00



TABULATION OF LENGTH			
STATION TO STATION	ROADWAY L.H. FT.	BRIDGES L.H. FT.	REMARKS
62+19.34 B.M.P. 180+87.07 E.L.	11,869.73		Begin
188+67.57 Ahd. 411+29.30 E.L.	22,261.73		
596+11.15 Ahd. 691+49.92 E.L.	29,538.47		
691+48.80 Ahd. 704+01.17 Bk.	1,255.37		
704+05.86 Ahd. 759+85.17 Bk.	5,580.31		
759+90.15 Ahd. 815+80.57 Bk.	5,590.42		
815+90.60 Ahd. 876+26.10 R.P.T.	6,095.40		
876+26.00 P.O.T. 877+77.83 P.O.T.		91.83	Bridge @ Slate Creek
877+77.83 P.O.T. 945+85.35 E.L.	6,807.52		
945+12.65 Ahd. 964+00.07 E.L.	2,887.42		
964+04.21 Ahd. 984+00.00 E.L.	1,995.79		
984+00.00 Ahd. 1142+53.01 E.L.	15,799.40		
1142+53.01 Ahd. 1298+53.13 E.L.	15,562.99		
1298+53.13 Ahd. 1321+75.82 E.L.	875.82		
1321+71.02 Ahd. 1358+50.28 E.L.	1,679.18		
1358+45.66 Ahd. 1519+54.00 P.O.T.	18,088.34		
1519+34.80 P.O.T. 1520+55.83 P.O.T.		121.83	Bridge @ Minnie Creek
1520+55.83 P.O.T. 1576+19.97 E.L.	5,564.14		
1580+75.36 Ahd. 1588+80.40 P.O.T.	804.64		
1588+80.00 P.O.T. 1592+13.27 P.O.T.		333.29	Bridge @ M.F. Koyukuk R.
1592+13.27 P.O.T. 1697+40.13 Bk.	10,546.84		
1709+68.86 Ahd. 1711+42.00 P.O.T.	173.14		
1711+42.00 P.O.T. 1712+53.83 P.O.T.		151.83	Bridge @ Hammond R.
1712+53.83 P.O.T. 1726+55.00 P.O.T.	1,341.17		
1726+55.00 P.O.T. 1729+08.29 P.O.T.		279.29	Bridge @ M.F. Koyukuk R.
1729+08.29 P.O.T. 1797+47.17 E.L.	6,857.60		
1797+47.17 Ahd. 1839+34.36 Ahd.	4,170.06		
1839+34.36 Ahd. 2442+52.10 E.L.	60,822.48		
2442+52.10 E.L. 2460+27.00 P.O.T.	1,770.82		
2460+27.00 P.O.T. 2461+82.33 P.O.T.		151.83	Bridge @ M.F. Koyukuk R.
2461+82.33 P.O.T. 2473+11.29 P.O.T.	1,009.17		
2473+11.29 P.O.T. 2473+11.29 P.O.T.		123.29	Bridge @ M.F. Koyukuk R.
2473+11.29 P.O.T. 2478+18.59 E.L.	575.60		
2478+18.59 E.L. 2604+66.00 P.O.T.	12,349.23		
2604+66.00 P.O.T. 2606+77.83 P.O.T.		211.83	Bridge @ Dietrich R.
2606+77.83 P.O.T. 2663+03.50 E.L.	5,625.75		
2663+03.50 Ahd. 2677+57.99 E.L.	3,130.01		
2677+57.99 Ahd. 2909+41.84 E.L.	23,019.85		
2909+41.84 Ahd. 3036+10.07 E.L.	12,678.17		
TOTALS	296,283.56	1,959.02	

37,283.26

RIP RAP QUANTITIES			
LOCATION	BAGGED BAG	STONE CU YARD	REMARKS
Br. @ Slate Cr., Sta. 876+83		216	
Br. @ Minnie Cr., Sta. 1519+54		30	
Br. @ M.F. Koyukuk R., Sta. 1588+80		1120	
Roadway embankment, Sta. 1588+80		2448	
Br. @ Hammond R., Sta. 1711+42		604	
Br. @ M.F. Koyukuk R., Sta. 1726+55		1100	
Br. @ M.F. Koyukuk R., Sta. 1729+08		430	
Br. @ M.F. Koyukuk R., Sta. 1771+53		430	
Br. @ Dietrich R., Sta. 2604+66		1360	
Roadway embankment, Sta. 2663+04		588	
Roadway embankment, Sta. 2677+58		2320	
TOTAL		11,206	

UNCLASSIFIED EXCAVATION AND BORROW			
MATERIAL SOURCE	UNCL. EXCAV. (C.Y.)		BORROW EXCAV. (C.Y.)
	USABLE	WASTE OR STRIPPING	
Roadway Excav. NS 95-2	458,013	120,752	2,668
96-1		16,100	88,750
96-2.1			10,088
96-3		10,000	304,292
96-3.1			11,562
97-2		4,540	32,629
97-3.1		4,590	177,578
98-0.1		9,310	191,147
98-1.1		50,878	195,897
98-3.1		60,453	259,583
99-1.1		250	37,188
100-1		10,180	110,915
100-1.2		2,100	① 20,976
101-1C			125,975
101-2		2,578	164,808
102-1		5,570	② 179,495
102-2			111,042
103-0			138,793
103-0.1		500	25,787
103-1A/C		58,986	158,807
103-2B		29,076	62,196
104-1A/B		140	199,500
104-2A,B,C		40,207	41,972
104-3D,E,W		97,604	47,982
105-1B		15,446	238,602
TOTALS	458,013	530,260	3,189,034

① Includes materials placed in 1976: 1938 C.Y. for detour at Minnie Creek during bridge repair and 112,988 C.Y. for grade raise between Stations 1592 and 1778.

② Includes 80,826 C.Y. placed in 1976 for grade raise between Stations 1592 and 1778.

REVISION	BY	DESCRIPTION	DATE
0	RHT	ER 1130 As Built Issue	7-77

ALYESKA PIPELINE SERVICE COMPANY, AGENT
TRANS ALASKA PIPELINE SYSTEM
HIGHWAY AS BUILT
YUKON RIVER TO PRUDHOE BAY

SUMMARY OF QUANTITIES

MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS
BEAVER, PA. JACKSON, MISS. FAIRBANKS, AK.

DATE: 7-77

SEGMENT NO. 3

DRAWING NO. D-105-C1A

SHEET NO. 3 of 3

APPROVED: R.H. Yell, P.E. ALYESKA

PIPE SUMMARY — SEGMENT NO. 3

STATION	DEGREE of SKEW	CORRUGATED METAL PIPE SIZE						REMARKS	STRUCTURAL PLATE CORRUGATED METAL ARCH PIPE								STONE PROTECTION CU. YDS.
		24"	30"	36"	42"	48"	60"		7'0"x5'1"	7'8"x5'5"	8'0"x6'1"	9'6"x6'5"	10'3"x6'9"	12'4"x7'9"	12'8"x8'1"	14'0"x14'0"	
		L.H. R.H.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.		L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	
70+27	33°																
77+59	5°		70														
98+43	6°			58													
129+69	11°				120			2 @ 60									
134+25	15°		70														
166+57	9°			52													
205+23	21°											90					
205+75				50													
206+50				52													
221+82	21°		59														
252+38	6°		66														
255+64	37°								80								
263+08	20°		70														
284+21	7°		70														
300+56	24°		70														
310+57	9°		80														
326+74	23°								80								
341+27	25°		80														
369+59	44°			110													
370+78	33°			100													
390+10	10°		78														
397+00 (And)	37°		74														
413+27							70										
451+75	30°					200'		2 @ 100									
464+90	40°			80													
477+27	52°			140													
514+00				63													
521+74	42°		144														
528+26	46°						150										
545+70	3°		90														
552+38	15°		85														
553+30	2°		70														
556+60	35°		80														
561+04	30°			110													
568+66	17°		80	80													
574+04	8°		80														
591+49	15°		70														
596+20			65														
599+00	49°											110					
656+50	10°		70														
684+46			60														
727+14	15°				140												
772+11	30°		70														
776+84	39°		80														
783+98	19°		60														
790+18	52°		160					2 @ 80									
797+62	30°		110'					1 @ 50 1 @ 60									
841+74				70													
898+63			90														
910+70	28°			80													
917+76	28°			70													
925+49	22°		60														
933+24	32°		70														
933+56				60													
941+81							60										
974+56			60														
976+70				60													
980+98	15°		70														
983+99	15°			60													
990+45	30°		70														
1010+13	50°		80														
1019+04	22°		60														
1022+00	22°		60														
1025+72			60														
1037+00	10°			70													
1048+88	40°		80														
1052+04	32°		60														
1055+54	17°						70										
1109+69	45°			110													
1110+24	30°																
1114+30	30°																
1120+33				60													
1122+30																	
1143+81	31°																
1165+85			60														
1173+40	40°		80														
1178+00	26°		60														
1186+08	21°		60														
1204+54	15°		60														
1211+61	38°		80														
1213+25	30°		70														
1230+80			60														
1232+36	5°			60													
1235+45	25°		66														
1240+63	42°		110														
1248+43				80													
1255+50	8°						120										
1266+25			60														
1270+00	35°		70														
1274+39	20°		70														
1290+72			70														
1292+53	11°			110													
1325+33	12°		50														
1330+47	11°		55														
1332+76	27°		60														
1335+38	11°		55														
1341+66				55													
1344+15	45°		80														
1361+86	39°						140	2 @ 70'									
1380+63				60													
1384+10	23°		70														
1390+23	8°		60														
1402+13			60														
1408+43				70													
1412+06	42°		80														
1417+69				60													
1426+24	39°		70														
1439+92	9°						70										
1443+50	16°			200				2 @ 100									

REVISION	BY	DESCRIPTION	DATE
0	RHT	ER 1130 As Built Issue	7-77

ALYESKA PIPELINE SERVICE COMPANY, AGENT
TRANS ALASKA PIPELINE SYSTEM
HIGHWAY AS BUILT
YUKON RIVER TO PRUDHOE BAY

SUP F QUANTITIES

W. L. BAKER, JR., INC. CONSULTING ENGINEERS
BEAVER, AL. JACKSON, MISS. FAIRBANKS, AK

DATE: 7-77 SEGMENT NO. 3 DRAWING NO. D-105-CIA
APPROVED: R.H. Baker, P.E. SHEET NO. 3b

PIPE SUMMARY — SEGMENT NO. 3

STATION	DEGREE of SKEW	CORRUGATED METAL PIPE SIZE							STRUCTURAL PLATE CORRUGATED METAL ARCH PIPE								STONE PROTECTION	CU. YDS.	STATION	DEGREE of SKEW	CORRUGATED METAL PIPE SIZE							STRUCTURAL PLATE CORRUGATED METAL ARCH PIPE								STONE PROTECTION	CU. YDS.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
		24"	30"	36"	42"	48"	60"	REMARKS	7'0"x5'1"	7'8"x5'5"	8'0"x6'1"	9'6"x6'1"	10'3"x6'9"	12'4"x7'9"	12'8"x8'1"	14'0"x14'0"					REMARKS	7'0"x5'1"	7'8"x5'5"	8'0"x6'1"	9'6"x6'1"	10'3"x6'9"	12'4"x7'9"	12'8"x8'1"	14'0"x14'0"	REMARKS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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ALYESKA PIPELINE SERVICE COMPANY, AGENT TRANS			

PIPE SUMMARY — SEGMENT NO. 3

STATION	DEGREE of SKEW		CORRUGATED METAL PIPE SIZE						REMARKS	STRUCTURAL PLATE CORRUGATED METAL ARCH PIPE										STONE PROTECTION CU. YDS.	STATION	DEGREE of SKEW		CORRUGATED METAL PIPE SIZE						REMARKS	STRUCTURAL PLATE CORRUGATED METAL ARCH PIPE						STONE PROTECTION CU. YDS.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
			24"	30"	36"	42"	48"	60"		7'0" 5'1"	7'6" 5'6"	8'0" 6'1"	8'6" 6'6"	9'0" 6'11"	9'6" 6'11"	10'0" 6'11"	10'6" 6'11"	11'0" 6'11"	11'6" 6'11"					12'0" 6'11"	12'6" 6'11"	13'0" 6'11"	13'6" 6'11"	14'0" 6'11"	14'6" 6'11"		15'0" 6'11"	15'6" 6'11"	16'0" 6'11"	16'6" 6'11"	17'0" 6'11"	17'6" 6'11"		18'0" 6'11"	18'6" 6'11"	19'0" 6'11"	19'6" 6'11"	20'0" 6'11"	20'6" 6'11"	21'0" 6'11"	21'6" 6'11"	22'0" 6'11"	22'6" 6'11"	23'0" 6'11"	23'6" 6'11"	24'0" 6'11"	24'6" 6'11"	25'0" 6'11"	25'6" 6'11"	26'0" 6'11"	26'6" 6'11"	27'0" 6'11"	27'6" 6'11"	28'0" 6'11"	28'6" 6'11"	29'0" 6'11"	29'6" 6'11"	30'0" 6'11"	30'6" 6'11"	31'0" 6'11"	31'6" 6'11"	32'0" 6'11"	32'6" 6'11"	33'0" 6'11"	33'6" 6'11"	34'0" 6'11"	34'6" 6'11"	35'0" 6'11"	35'6" 6'11"	36'0" 6'11"	36'6" 6'11"	37'0" 6'11"	37'6" 6'11"	38'0" 6'11"	38'6" 6'11"	39'0" 6'11"	39'6" 6'11"	40'0" 6'11"	40'6" 6'11"	41'0" 6'11"	41'6" 6'11"	42'0" 6'11"	42'6" 6'11"	43'0" 6'11"	43'6" 6'11"	44'0" 6'11"	44'6" 6'11"	45'0" 6'11"	45'6" 6'11"	46'0" 6'11"	46'6" 6'11"	47'0" 6'11"	47'6" 6'11"	48'0" 6'11"	48'6" 6'11"	49'0" 6'11"	49'6" 6'11"	50'0" 6'11"	50'6" 6'11"	51'0" 6'11"	51'6" 6'11"	52'0" 6'11"	52'6" 6'11"	53'0" 6'11"	53'6" 6'11"	54'0" 6'11"	54'6" 6'11"	55'0" 6'11"	55'6" 6'11"	56'0" 6'11"	56'6" 6'11"	57'0" 6'11"	57'6" 6'11"	58'0" 6'11"	58'6" 6'11"	59'0" 6'11"	59'6" 6'11"	60'0" 6'11"	60'6" 6'11"	61'0" 6'11"	61'6" 6'11"	62'0" 6'11"	62'6" 6'11"	63'0" 6'11"	63'6" 6'11"	64'0" 6'11"	64'6" 6'11"	65'0" 6'11"	65'6" 6'11"	66'0" 6'11"	66'6" 6'11"	67'0" 6'11"	67'6" 6'11"	68'0" 6'11"	68'6" 6'11"	69'0" 6'11"	69'6" 6'11"	70'0" 6'11"	70'6" 6'11"	71'0" 6'11"	71'6" 6'11"	72'0" 6'11"	72'6" 6'11"	73'0" 6'11"	73'6" 6'11"	74'0" 6'11"	74'6" 6'11"	75'0" 6'11"	75'6" 6'11"	76'0" 6'11"	76'6" 6'11"	77'0" 6'11"	77'6" 6'11"	78'0" 6'11"	78'6" 6'11"	79'0" 6'11"	79'6" 6'11"	80'0" 6'11"	80'6" 6'11"	81'0" 6'11"	81'6" 6'11"	82'0" 6'11"	82'6" 6'11"	83'0" 6'11"	83'6" 6'11"	84'0" 6'11"	84'6" 6'11"	85'0" 6'11"	85'6" 6'11"	86'0" 6'11"	86'6" 6'11"	87'0" 6'11"	87'6" 6'11"	88'0" 6'11"	88'6" 6'11"	89'0" 6'11"	89'6" 6'11"	90'0" 6'11"	90'6" 6'11"	91'0" 6'11"	91'6" 6'11"	92'0" 6'11"	92'6" 6'11"	93'0" 6'11"	93'6" 6'11"	94'0" 6'11"	94'6" 6'11"	95'0" 6'11"	95'6" 6'11"	96'0" 6'11"	96'6" 6'11"	97'0" 6'11"	97'6" 6'11"	98'0" 6'11"	98'6" 6'11"	99'0" 6'11"	99'6" 6'11"	100'0" 6'11"	100'6" 6'11"	101'0" 6'11"	101'6" 6'11"	102'0" 6'11"	102'6" 6'11"	103'0" 6'11"	103'6" 6'11"	104'0" 6'11"	104'6" 6'11"	105'0" 6'11"	105'6" 6'11"	106'0" 6'11"	106'6" 6'11"	107'0" 6'11"	107'6" 6'11"	108'0" 6'11"	108'6" 6'11"	109'0" 6'11"	109'6" 6'11"	110'0" 6'11"	110'6" 6'11"	111'0" 6'11"	111'6" 6'11"	112'0" 6'11"	112'6" 6'11"	113'0" 6'11"	113'6" 6'11"	114'0" 6'11"	114'6" 6'11"	115'0" 6'11"	115'6" 6'11"	116'0" 6'11"	116'6" 6'11"	117'0" 6'11"	117'6" 6'11"	118'0" 6'11"	118'6" 6'11"	119'0" 6'11"	119'6" 6'11"	120'0" 6'11"	120'6" 6'11"	121'0" 6'11"	121'6" 6'11"	122'0" 6'11"	122'6" 6'11"	123'0" 6'11"	123'6" 6'11"	124'0" 6'11"	124'6" 6'11"	125'0" 6'11"	125'6" 6'11"	126'0" 6'11"	126'6" 6'11"	127'0" 6'11"	127'6" 6'11"	128'0" 6'11"	128'6" 6'11"	129'0" 6'11"	129'6" 6'11"	130'0" 6'11"	130'6" 6'11"	131'0" 6'11"	131'6" 6'11"	132'0" 6'11"	132'6" 6'11"	133'0" 6'11"	133'6" 6'11"	134'0" 6'11"	134'6" 6'11"	135'0" 6'11"	135'6" 6'11"	136'0" 6'11"	136'6" 6'11"	137'0" 6'11"	137'6" 6'11"	138'0" 6'11"	138'6" 6'11"	139'0" 6'11"	139'6" 6'11"	140'0" 6'11"	140'6" 6'11"	141'0" 6'11"	141'6" 6'11"	142'0" 6'11"	142'6" 6'11"	143'0" 6'11"	143'6" 6'11"	144'0" 6'11"	144'6" 6'11"	145'0" 6'11"	145'6" 6'11"	146'0" 6'11"	146'6" 6'11"	147'0" 6'11"	147'6" 6'11"	148'0" 6'11"	148'6" 6'11"	149'0" 6'11"	149'6" 6'11"	150'0" 6'11"	150'6" 6'11"	151'0" 6'11"	151'6" 6'11"	152'0" 6'11"	152'6" 6'11"	153'0" 6'11"	153'6" 6'11"	154'0" 6'11"	154'6" 6'11"	155'0" 6'11"	155'6" 6'11"	156'0" 6'11"	156'6" 6'11"	157'0" 6'11"	157'6" 6'11"	158'0" 6'11"	158'6" 6'11"	159'0" 6'11"	159'6" 6'11"	160'0" 6'11"	160'6" 6'11"	161'0" 6'11"	161'6" 6'11"	162'0" 6'11"	162'6" 6'11"	163'0" 6'11"	163'6" 6'11"	164'0" 6'11"	164'6" 6'11"	165'0" 6'11"	165'6" 6'11"	166'0" 6'11"	166'6" 6'11"	167'0" 6'11"	167'6" 6'11"	168'0" 6'11"	168'6" 6'11"	169'0" 6'11"	169'6" 6'11"	170'0" 6'11"	170'6" 6'11"	171'0" 6'11"	171'6" 6'11"	172'0" 6'11"	172'6" 6'11"	173'0" 6'11"	173'6" 6'11"	174'0" 6'11"	174'6" 6'11"	175'0" 6'11"	175'6" 6'11"	176'0" 6'11"	176'6" 6'11"	177'0" 6'11"	177'6" 6'11"	178'0" 6'11"	178'6" 6'11"	179'0" 6'11"	179'6" 6'11"	180'0" 6'11"	180'6" 6'11"	181'0" 6'11"	181'6" 6'11"	182'0" 6'11"	182'6" 6'11"	183'0" 6'11"	183'6" 6'11"	184'0" 6'11"	184'6" 6'11"	185'0" 6'11"	185'6" 6'11"	186'0" 6'11"	186'6" 6'11"	187'0" 6'11"	187'6" 6'11"	188'0" 6'11"	188'6" 6'11"	189'0" 6'11"	189'6" 6'11"	190'0" 6'11"	190'6" 6'11"	191'0" 6'11"	191'6" 6'11"	192'0" 6'11"	192'6" 6'11"	193'0" 6'11"	193'6" 6'11"	194'0" 6'11"	194'6" 6'11"	195'0" 6'11"	195'6" 6'11"	196'0" 6'11"	196'6" 6'11"	197'0" 6'11"	197'6" 6'11"	198'0" 6'11"	198'6" 6'11"	199'0" 6'11"	199'6" 6'11"	200'0" 6'11"	200'6" 6'11"	201'0" 6'11"	201'6" 6'11"	202'0" 6'11"	202'6" 6'11"	203'0" 6'11"	203'6" 6'11"	204'0" 6'11"	204'6" 6'11"	205'0" 6'11"	205'6" 6'11"	206'0" 6'11"	206'6" 6'11"	207'0" 6'11"	207'6" 6'11"	208'0" 6'11"	208'6" 6'11"	209'0" 6'11"	209'6" 6'11"	210'0" 6'11"	210'6" 6'11"	211'0" 6'11"	211'6" 6'11"	212'0" 6'11"	212'6" 6'11"	213'0" 6'11"	213'6" 6'11"	214'0" 6'11"	214'6" 6'11"	215'0" 6'11"	215'6" 6'11"	216'0" 6'11"	216'6" 6'11"	217'0" 6'11"	217'6" 6'11"	218'0" 6'11"	218'6" 6'11"	219'0" 6'11"	219'6" 6'11"	220'0" 6'11"	220'6" 6'11"	221'0" 6'11"	221'6" 6'11"	222'0" 6'11"	222'6" 6'11"	223'0" 6'11"	223'6" 6'11"	224'0" 6'11"	224'6" 6'11"	225'0" 6'11"	225'6" 6'11"	226'0" 6'11"	226'6" 6'11"	227'0" 6'11"	227'6" 6'11"	228'0" 6'11"	228'6" 6'11"	229'0" 6'11"	229'6" 6'11"	230'0" 6'11"	230'6" 6'11"	231'0" 6'11"	231'6" 6'11"	232'0" 6'11"	232'6" 6'11"	233'0" 6'11"	233'6" 6'11"	234'0" 6'11"	234'6" 6'11"	235'0" 6'11"	235'6" 6'11"	236'0" 6'11"	236'6" 6'11"	237'0" 6'11"	237'6" 6'11"	238'0" 6'11"	238'6" 6'11"	239'0" 6'11"	239'6" 6'11"	240'0" 6'11"	240'6" 6'11"	241'0" 6'11"	241'6" 6'11"	242'0" 6'11"	242'6" 6'11"	243'0" 6'11"	243'6" 6'11"	244'0" 6'11"	244'6" 6'11"	245'0" 6'11"	245'6" 6'11"	246'0" 6'11"	246'6" 6'11"	247'0" 6'11"	247'6" 6'11"	248'0" 6'11"	248'6" 6'11"	249'0" 6'11"	249'6" 6'11"	250'0" 6'11"	250'6" 6'11"	251'0" 6'11"	251'6" 6'11"	252'0" 6'11"	252'6" 6'11"	253'0" 6'11"	253'6" 6'11"	254'0" 6'11"	254'6" 6'11"	255'0" 6'11"	255'6" 6'11"	256'0" 6'11"	256'6" 6'11"	257'0" 6'11"	257'6" 6'11"	258'0" 6'11"	258'6" 6'11"	259'0" 6'11"	259'6" 6'11"	260'0" 6'11"	260'6" 6'11"	261'0" 6'11"	261'6" 6'11"	262'0" 6'11"	262'6" 6'11"	263'0" 6'11"	263'6" 6'11"	264'0" 6'11"	264'6" 6'11"	265'0" 6'11"	265'6" 6'11"	266'0" 6'11"	266'6" 6'11"	267'0" 6'11"	267'6" 6'11"	268'0" 6'11"	268'6" 6'11"	269'0" 6'11"	269'6" 6'11"	270'0" 6'11"	270'6" 6'11"	271'0" 6'11"	271'6" 6'11"	272'0" 6'11"	272'6" 6'11"	273'0" 6'11"	273'6" 6'11"	274'0" 6'11"	274'6" 6'11"	275'0" 6'11"	275'6" 6'11"	276'0" 6'11"	276'6" 6'11"	277'0" 6'11"	277'6" 6'11"	278'0" 6'11"	278'6" 6'11"	279'0" 6'11"	279'6" 6'11"	280'0" 6'11"	280'6" 6'11"	281'0" 6'11"	281'6" 6'11"	282'0" 6'11"	282'6" 6'11"	283'0" 6'11"	283'6" 6'11"	284'0" 6'11"	284'6" 6'11"	285'0" 6'11"	285'6" 6'11"	286'0" 6'11"	286'6" 6'11"	287'0" 6'11"	287'6" 6'11"	288'0" 6'11"	288'6" 6'11"	289'0" 6'11"	289'6" 6'11"	290'0" 6'11"	290'6" 6'11"	291'0" 6'11"	291'6" 6'11"	292'0" 6'11"	292'6" 6'11"	293'0" 6'11"	293'6" 6'11"	294'0" 6'11"	294'6" 6'11"	295'0" 6'11"	295'6" 6'11"	296'0" 6'11"	296'6" 6'11"	297'0" 6'11"	297'6" 6'11"	298'0" 6'11"	298'6" 6'11"	299'0" 6'11"	299'6" 6'11"	300'0" 6'11"	300'6" 6'11"	301'0" 6'11"	301'6" 6'11"	302'0" 6'11"	302'6" 6'11"	303'0" 6'11"	303'6" 6'11"	304'0" 6'11"	304'6" 6'11"	305'0" 6'11"	305'6" 6'11"	306'0" 6'11"	306'6" 6'11"	307'0" 6'11"	307'6" 6'11"	308'0" 6'11"	308'6" 6'11"	309'0" 6'11"	309'6" 6'11"	310'0" 6'11"	310'6" 6'11"	311'0" 6'11"	311'6" 6'11"	312'0" 6'11"	312'6" 6'11"	313'0" 6'11"	313'6" 6'11"	314'0" 6'11"	314'6" 6'11"	315'0" 6'11"	315'6" 6'11"	316'0" 6'11"	316'6" 6'11"	317'0" 6'11"	317'6" 6'11"	318'0" 6'11"	318'6" 6'11"	319'0" 6'11"	319'6" 6'11"	320'0" 6'11"	320'6" 6'11"	321'0" 6'11"	321'6" 6'11"	322'0" 6'11"	322'6" 6'11"	323'0" 6'11"	323'6" 6'11"	324'0" 6'11"	324'6" 6'11"	325'0" 6'11"	325'6" 6'11"	326'0" 6'11"	326'6" 6'11"	327'0" 6'11"	327'6" 6'11"	328'0" 6'11"	328'6" 6'11"	329'0" 6'11"	329'6" 6'11"	330'0" 6'11"	330'6" 6'11"	331'0" 6'11"	331'6" 6'11"	332'0" 6'11"	332'6" 6'11"	333'0" 6'11"	333'6" 6'11"	334'0" 6'11"	334'6" 6'11"	335'0" 6'11"	335'6" 6'11"	336'0" 6'11"	336'6" 6'11"	337'0" 6'11"	337'6" 6'11"	338'0" 6'11"	338'6" 6'11"	339'0" 6'11"	339'6" 6'11"	340'0" 6'11"	340'6" 6'11"	341'0" 6'11"	341'6" 6'11"	342'0" 6'11"	342'6" 6'11"	343'0" 6'11"	343'6" 6'11"	344'0" 6'11"	344'6" 6'11"	345'0" 6'11"	345'6" 6'11"	346'0" 6'11"	346'6" 6'11"	347'0" 6'11"	347'6" 6'11"	348'0" 6'11"	348'6" 6'11"	349'0" 6'11"	349'6" 6'11"	350'0" 6'11"	350'6" 6'11"	351'0" 6'11"	351'6" 6'11"	352'0" 6'11"	352'6" 6'11"	353'0" 6'11"	353'6" 6'11"	354'0" 6'11"	354'6" 6'11"	355'0" 6'11"	355'6" 6'11"	356'0" 6'11"	356'6" 6'11"	357'0" 6'11"	357'6" 6'11"	358'0" 6'11"	358'6" 6'11"	359'0" 6'11"	359'6" 6'11"	360'0" 6'11"	360'6" 6'11"	361'0" 6'11"	361'6" 6'11"	362'0" 6'11"	362'6" 6'11"	363'0" 6'11"	363'6" 6'11"	364'0" 6'11"	364'6" 6'11"	365'0" 6'11"	365'6" 6'11"	366'0" 6'11"	366'6" 6'11"	367'0" 6'11"	367'6" 6'11"	368'0" 6'11"	368'6" 6'11"	369'0" 6'11"	369'6" 6'11"	370'0" 6'11"	370'6" 6'11"	371'0" 6'11"	371'6" 6'11"	372'0" 6'11"	372'6" 6'11"	373'0" 6'11"	373'6" 6'11"	374'0" 6'11"	374'6" 6'11"	375'0" 6'11"	375'6" 6'11"	376'0" 6'11"	376'6" 6'11"	377'0" 6'11"	377'6" 6'11"	378'0" 6'11"	378'6" 6'11"	379'0" 6'11"	379'6" 6'11"	380'0" 6'11"	380'6" 6'11"	381'0" 6'11"	381'6" 6'11"	382'0" 6'11"	382'6" 6'11"	383'0" 6'11"	383'6" 6'11"	384'0" 6'11"	384'6" 6'11"	385'0" 6'11"	385'6" 6'11"	386'0" 6'11"	386'6" 6'11"	387'0" 6'11"	387'6" 6'11"	388'0" 6'11"

REVISION	BY	DESCRIPTION	DATE
0	RNT	ER 1130 As Built Issue	7-77

ALYESKA PIPELINE SERVICE COMPANY, AGENT
 TRANS ALASKA PIPELINE SYSTEM
 HIGHWAY AS BUILT
 YUKON RIVER TO PRUDHOE BAY

SUMMARY OF QUANTITIES

MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS BEAVER, AL. JACKSON, MISS.	DATE: 7-77 APPROVED: <i>[Signature]</i> SEGMENT NO. 3	DRAWING NO. D-10 5-CIA SHEET NO. 34
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NOTICE: THIS DRAWING IS THE PROPERTY OF THE ENGINEER OF THE TRANS ALASKA PIPELINE SYSTEM AND THE ENGINEER/CONSULTANT AND INFORMATION CONTAINED HEREIN IS NOT TO BE REPRODUCED, COPIED OR OTHERWISE USED BY ANY OTHER PARTY WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER, ALYESKA PIPELINE SERVICE COMPANY.

1535' 715' 120' 130' 56' 60' 70'

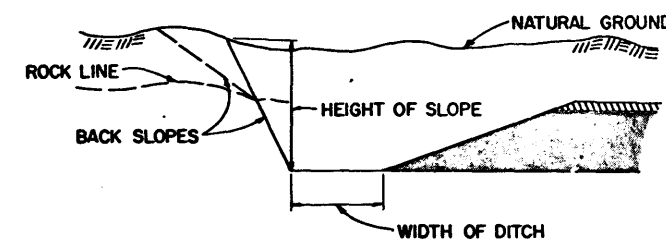
FILL SLOPE RATIO TABLE		
ROCK SOIL OR EARTH	HEIGHT OF SLOPE	FILL-SLOPE
	3' TO 5'	3:1
	5 TO 15'	2:1
	15' AND OVER	1 1/2:1



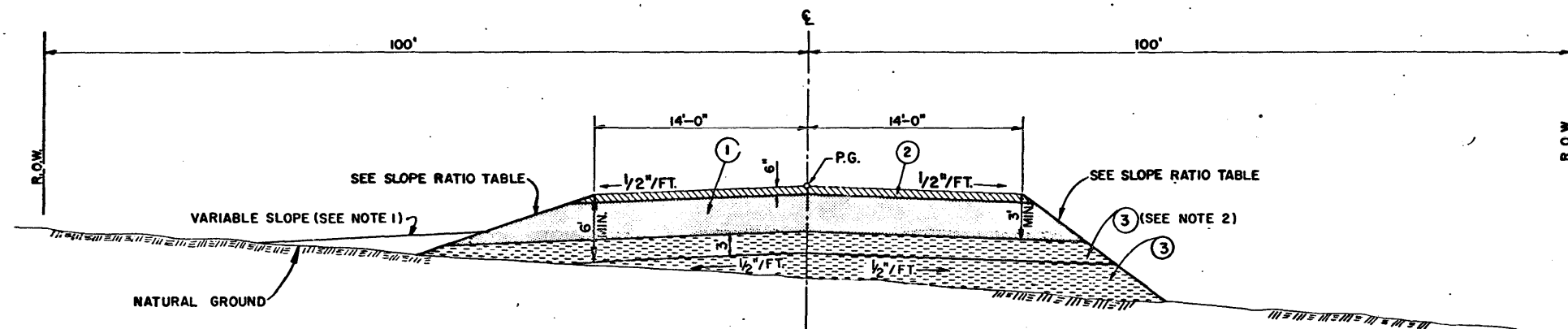
INDEX OF ROADWAY MATERIAL	
NO.	ITEM
①	SELECT MATERIAL (BORROW EXC. & UNCLASSIFIED EXC.)
②	6" SURFACE COURSE MATERIAL
③	BORROW EXCAVATION (COMMON), BORROW EXCAVATION (ROCK), SUITABLE UNCLASSIFIED EXCAVATION OR ROCK EXCAVATION.
④	AVAILABLE WASTE DISPOSAL AREA. (MAX. ELEV. NOT TO EXCEED BOTTOM OF SELECT MATERIAL)
⑤	UNCLASSIFIED EXCAVATION AND/OR ROCK EXCAVATION

CUT SLOPE RATIO TABLE		
HEIGHT OF SLOPE	WIDTH OF DITCH	BACK-SLOPE
0 TO 5'	2'	1 1/2 : 1
5' TO 15'	8'	1 : 1
15' AND OVER	14'	1/4 : 1 (FROZEN SILTS)
		1 1/2 : 1 (GRANULAR SOILS)
		2 : 1 (THAWED SILTS)
	2' TO 14'	1/4 : 1 TO 2 : 1

NOTE: SLOPES INDICATED MAY BE VARIED BY THE ENGINEER TO SUIT CONDITIONS ENCOUNTERED.

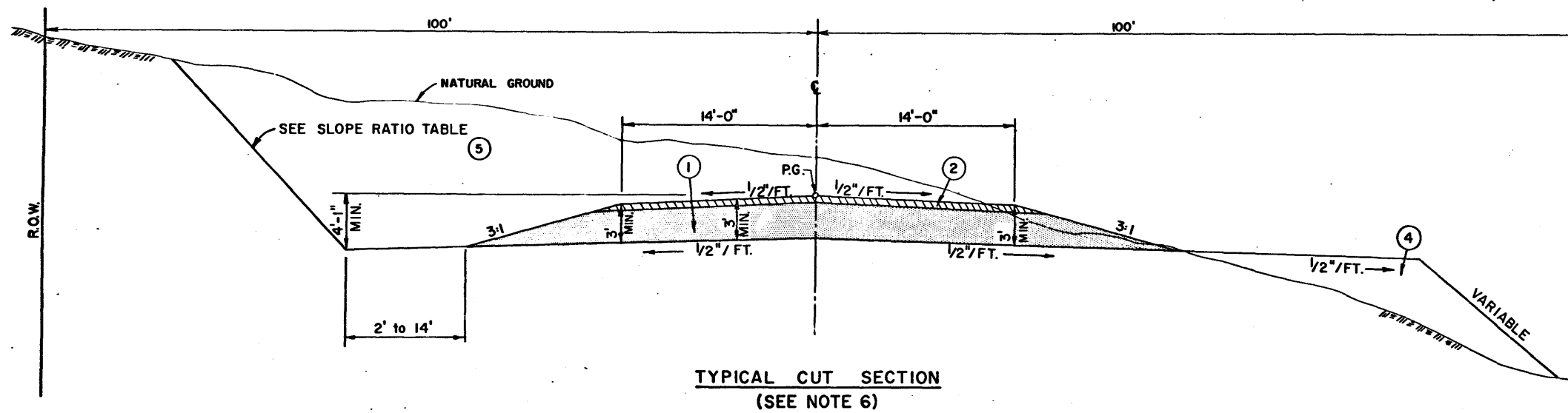


* WHEN COMPETENT BEDROCK IS ENCOUNTERED, BACK-SLOPE SHALL BE 1/4:1. OVERBURDEN BACK-SLOPE SHALL BE AS REQUIRED FOR THAT SOIL-TYPE. WHEN SEVERELY WEATHERED BEDROCK IS ENCOUNTERED, BACK-SLOPE SHALL BE AS REQUIRED FOR SOIL-TYPE OF THE OVERBURDEN MATERIAL. DITCH WIDTH TO BE DETERMINED BY THE ENGINEER.



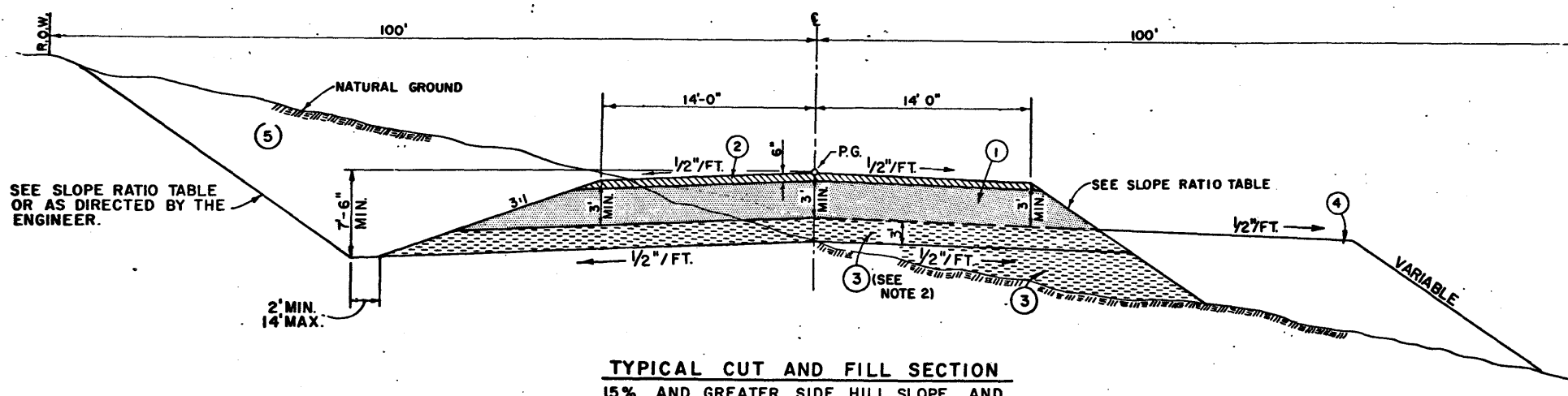
TYPICAL FILL SECTION

0% TO 15% SIDE HILL SLOPE



TYPICAL CUT SECTION

(SEE NOTE 6)



TYPICAL CUT AND FILL SECTION

15% AND GREATER SIDE HILL SLOPE, AND AS NECESSARY IN TRANSITION AREAS

NOTES:

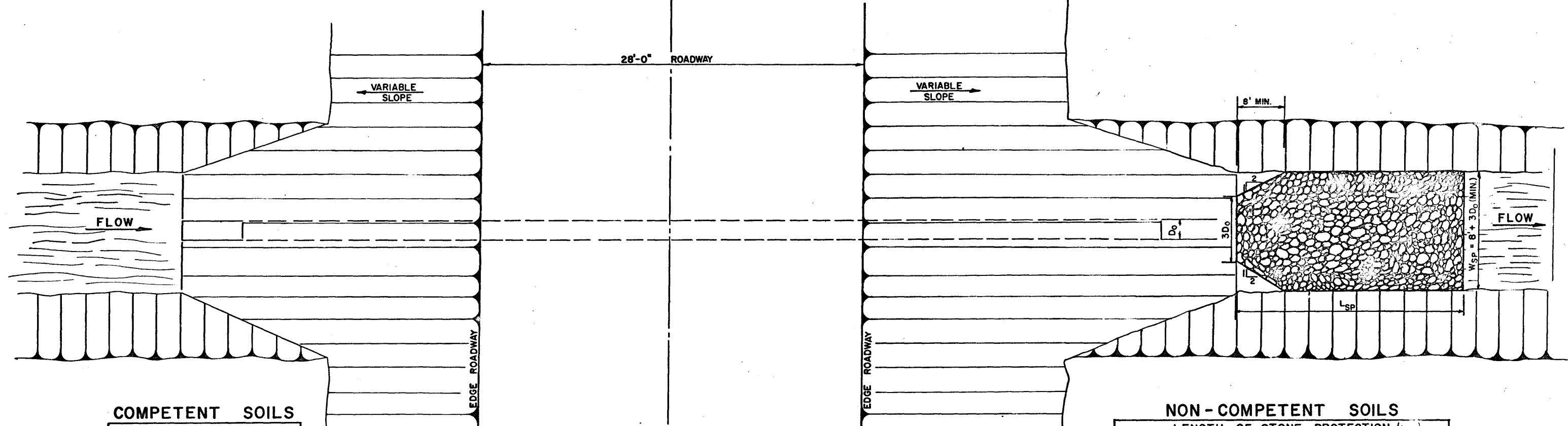
1. SLOPE AS REQUIRED TO FACILITATE DRAINAGE.
2. WHERE SOIL CONDITIONS PERMIT, THE ENGINEER MAY DELETE THE REQUIREMENT FOR 3' OF ITEM ③ UNDERLYING THE LAYER OF SELECT MATERIAL.
3. SEE SHEET 4c FOR SUPERELEVATION DETAILS.

4. 6" SURFACE COURSE MAY BE DELETED BY THE ENGINEER DURING CONSTRUCTION.
5. IN ROCK EXCAVATION AREAS THE DEPTH OF SELECT MATERIAL ① MAY BE REDUCED FROM 30" TO 6". THE LIMIT OF ROCK EXCAVATION FOR MEASUREMENT PURPOSES WILL BE TO AN ELEVATION WHICH PROVIDES FOR A MAXIMUM DEPTH OF 12" INCHES OF SELECT MATERIAL.

6. THIS SECTION APPLICABLE WHEN THE ENGINEER HAS DETERMINED THAT SUBGRADE SOIL IS STABLE AND HAS SUFFICIENT SUPPORTING CAPACITY IN A THAWED CONDITION. WHERE SUBGRADE SOIL LACKS ADEQUATE SUPPORTING CAPACITY IN A THAWED CONDITION, AS DETERMINED BY THE ENGINEER, AND SECTION MUST BE USED TO SATISFY GEOMETRIC CONSIDERATIONS, EMBANKMENT THICKNESS SHALL BE INCREASED TO PROVIDE INSULATION FOR PERMAFROST.

NOTES:
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REVISION	BY	DESCRIPTION	DATE
0	RHT	EP 1130 As Built Issue	7-77
ALYESKA PIPELINE SERVICE COMPANY, AGENT TRANS ALASKA PIPELINE SYSTEM HIGHWAY AS BUILT YUKON RIVER TO PRUDHOE BAY			
TYPICAL SECTIONS SEGMENT NUMBER 3-STATE HIGHWAY			
MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS BEAVER, PA. JACKSON, MISS. FAIRBANKS, AK.			
DATE: 7-77	SEGMENT NO. 3	DRAWING NO. D-105-GIA	
APPROVED	APPROVED	SHEET NO. 4	
R.H. P.H. P.E.	A.R. P.H. P.E.	ALYESKA	



COMPETENT SOILS

LENGTH OF STONE PROTECTION (L _{sp})		OUTLET VELOCITY (V _o) [FT./SEC.]						
PIPE SIZE (D _o) [INCHES]		10	11	12	13	14	15	
24"	8	9	10	10	11	12		
30"	11	12	13	14	15	16		
36"	14	15	16	18	19	20		
48"	20	22	23	24	26	27		
60"	26	28	29	30	32	34		
72"	31	33	35	37	38	40		
96"	41	43	46	48	50	52		
108"	46	48	50	53	56	58		
120"	50	53	56	58	61	64		

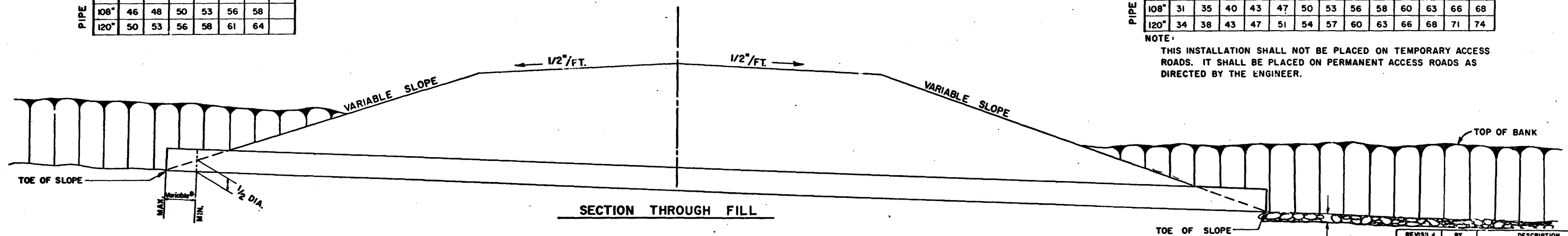
GENERAL PLAN

NON-COMPETENT SOILS

LENGTH OF STONE PROTECTION (L _{sp})		OUTLET VELOCITY (V _o) [FT./SEC.]														
PIPE SIZE (D _o) [INCHES]		3	4	5	6	7	8	9	10	11	12	13	14	15		
24"	10	12	13	14	15	16	21	27	31	35	39	43	46			
30"	12	13	15	17	18	19	20	25	31	35	42	47	51			
36"	13	15	17	19	20	22	23	24	31	37	45	49	55			
48"	16	19	22	23	26	27	29	30	32	37	45	53	59			
60"	20	22	25	27	30	32	34	36	38	39	42	52	61			
72"	22	26	29	32	34	36	39	41	43	45	47	48	60			
96"	29	33	36	39	43	46	48	51	53	56	58	60	62			
108"	31	35	40	43	47	50	53	56	58	60	63	66	68			
120"	34	38	43	47	51	54	57	60	63	66	68	71	74			

NOTE:

THIS INSTALLATION SHALL NOT BE PLACED ON TEMPORARY ACCESS ROADS. IT SHALL BE PLACED ON PERMANENT ACCESS ROADS AS DIRECTED BY THE ENGINEER.



SECTION THROUGH FILL

NOTE:

* EACH END OF THE CULVERTS SHALL BE PLACED SO THAT ENDS OF CULVERT WILL BE LOCATED BETWEEN THE TOE OF SLOPE AND THE POINT WHERE THE SLOPE INTERSECTS THE CENTER OF THE CULVERT.

NOTE:

TRENCHES AND CULVERT PIPE SHALL BE CAMBERED TO THE EXTENT DIRECTED BY THE ENGINEER. MAXIMUM CAMBER FOR FILL HEIGHT LESS THAN 10 FEET SHALL BE 10% OF TOTAL LENGTH OF PIPE. MAXIMUM CAMBER FOR FILL IN EXCESS OF 10 FEET SHALL BE 1.5% OF TOTAL LENGTH OF PIPE. WHEN EXCESSIVE VELOCITIES AND EXISTING CHANNEL GEOMETRY DICTATES, RIP RAP SHALL BE PLACED ON ROADSIDE AND CHANNEL SLOPES AS DIRECTED BY THE ENGINEER. NATURAL STREAM BED NOT TO BE DISTURBED WHEN PLACING RIP-RAP. CULVERT SHALL BE INSTALLED TO LINE AND GRADE ESTABLISHED IN THE FIELD BY THE ENGINEER.

T = 2 (Stone Diameter)

FOR VELOCITIES OF 3-5 F.P.S. T = 12"

FOR VELOCITIES OF 5-8 F.P.S. T = 18"

FOR VELOCITIES > 8 F.P.S. T = 24"

REVISION	BY	DESCRIPTION	DATE
0	RHT	LR 1130 As Built Issue	7-77

ALASKA PIPELINE SERVICE COMPANY, AGENT
TRANS ALASKA PIPELINE SYSTEM
HIGHWAY AS BUILT
YUKON RIVER TO PRUDHOE BAY

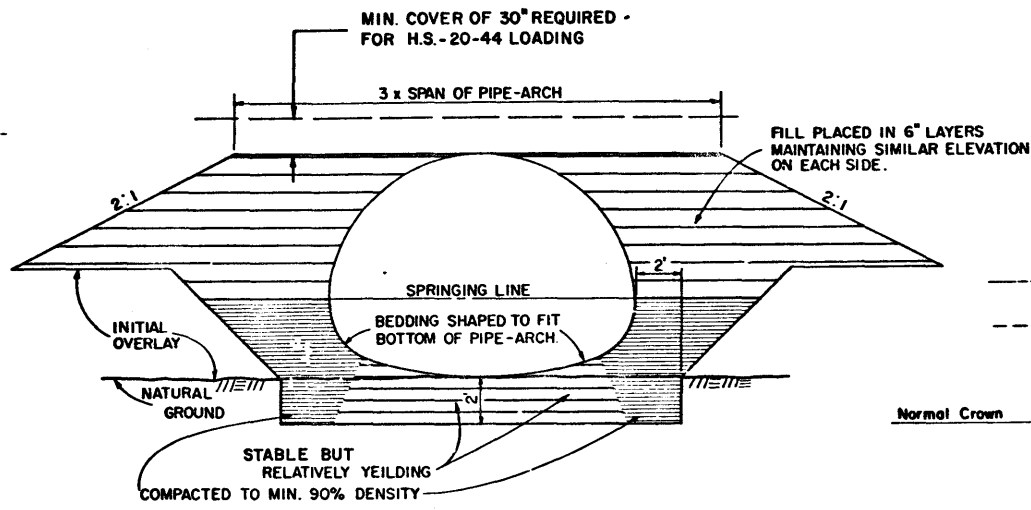
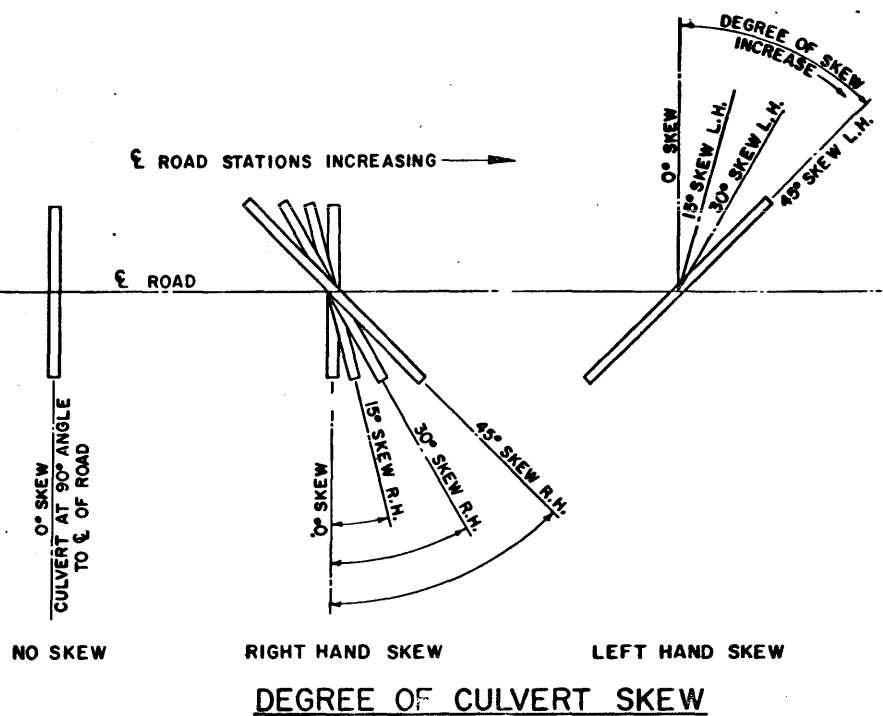
TYPICAL SECTIONS AND DETAILS CULVERT INSTALLATION

MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS
BEAVER, PA. JACKSON, MISS. FAIRBANKS, AK.

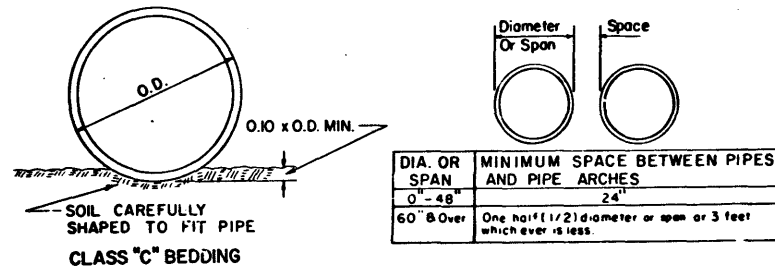
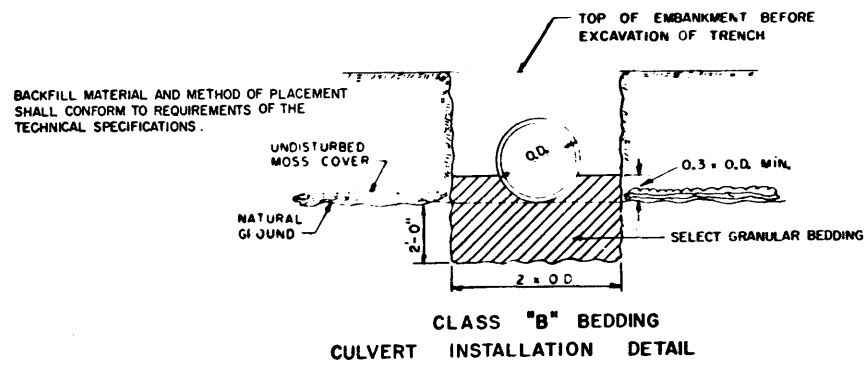
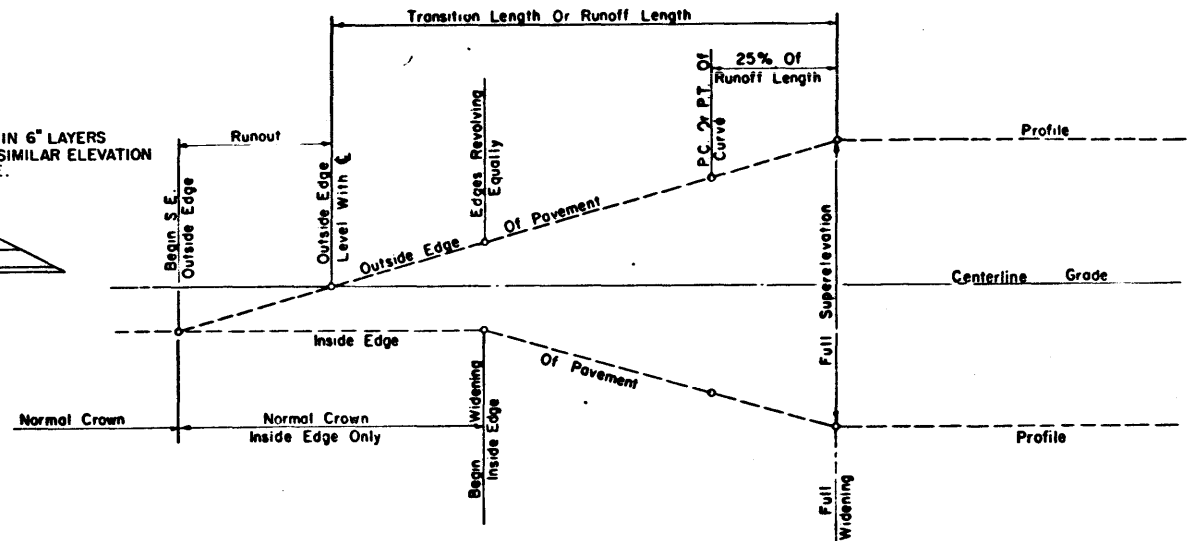
DATE	SEGMENT NO.	DRAWING NO.
7-77	3	D-105-CIA
APPROVED		SHEET NO. 4b
R.H. Loh, P.E. A. R. Davis		
U.S. ARMY		ALTESSA

NOTES:
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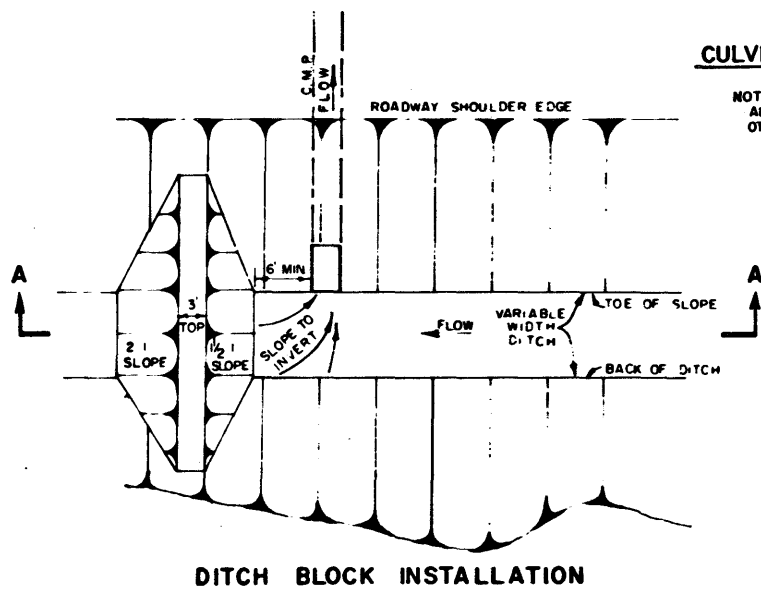
DIAGRAMMATIC PROFILE-METHOD OF ATTAINING SUPERELEVATION



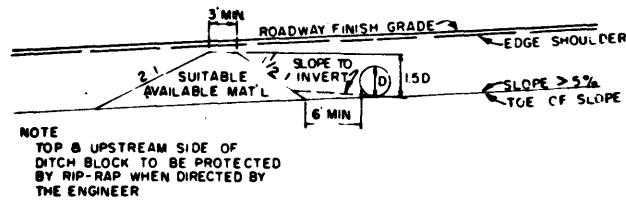
PIPE-ARCH INSTALLATION DETAIL



CULVERT INSTALLATION DETAIL MULTIPLE INSTALLATIONS DETAIL



DITCH BLOCK INSTALLATION



SECTION A-A

WHEN 48" OR LARGER PIPE IS USED, TOP
ELEV OF DITCH BLOCK IS TO BE 150 OR
SHOULDER ELEV, WHICHEVER IS LOWER

DEGREE OF CURVE	V = 30 MPH			V = 40 MPH			V = 50 MPH		
	e	L	W	e	L	W	e	L	W
0° 15'	NC	0	↑ NONE ↓	NC	0	↑ NONE ↓	NC	0	↑ NONE ↓
0° 30'	NC	0		NC	0		NC	0	
0° 45'	NC	0		NC	0		RC	0	
1° 00'	NC	0		RC	125		RC	150	
1° 30'	RC	100		RC	125		RC	150	
2° 00'	RC	100		RC	125		RC	150	
2° 30'	RC	100		RC	125		RC	150	
3° 00'	RC	100		RC	125		.044	150	
3° 30'	RC	100		RC	125		.048	150	
4° 00'	RC	100		RC	125		.051	150	
5° 00'	RC	100	.046	125	.056	150			
6° 00'	RC	100	.050	125	.059	150			
7° 00'	RC	100	.054	125	.060	150			
8° 00'	.043	100	.056	125	.060	150			
9° 00'	.046	100	.058	125					
10° 00'	.048	100	.059	125	2.0				
11° 00'	.050	100	.060	125	2.0				
12° 00'	.052	100	.060	125	2.5				
13° 00'	.053	100							
14° 00'	.055	100							
16° 00'	.058	100	2.5						
18° 00'	.059	100	3.0						
20° 00'	.060	100	3.5						

e = Superelevation cross slope, ft
L = Length of superelevation runoff
W = Widening ft

e = Superelevation cross slope, ft/ft
L = Length of superelevation runoff, ft.
W = Widening, ft.

NC= Normal crown

RC= Remove adverse crown.

Extend normal cross slope.

NOTE:

1. Superelevation shall be rotated about the centerline
2. The transition lengths may extend an equal distance into each curve where insufficient tangent distance exists between curves
3. Curve widening shall be effected on inside of curve

REVISION	BY	DESCRIPTION	DATE
0	RHT	ER 1130 As Built Issue	7-

**ALYESKA PIPELINE SERVICE COMPANY, AGENTS
TRANS ALASKA PIPELINE SYSTEM
HIGHWAY AS BUILT
YUKON RIVER TO PRUDHOE BAY**

TYPICAL SECTIONS AND DETAILS SUPERELEVATION AND DRAINAGE

MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS
BEAVER, PA. JACKSON, MISS. FAIRBANKS,

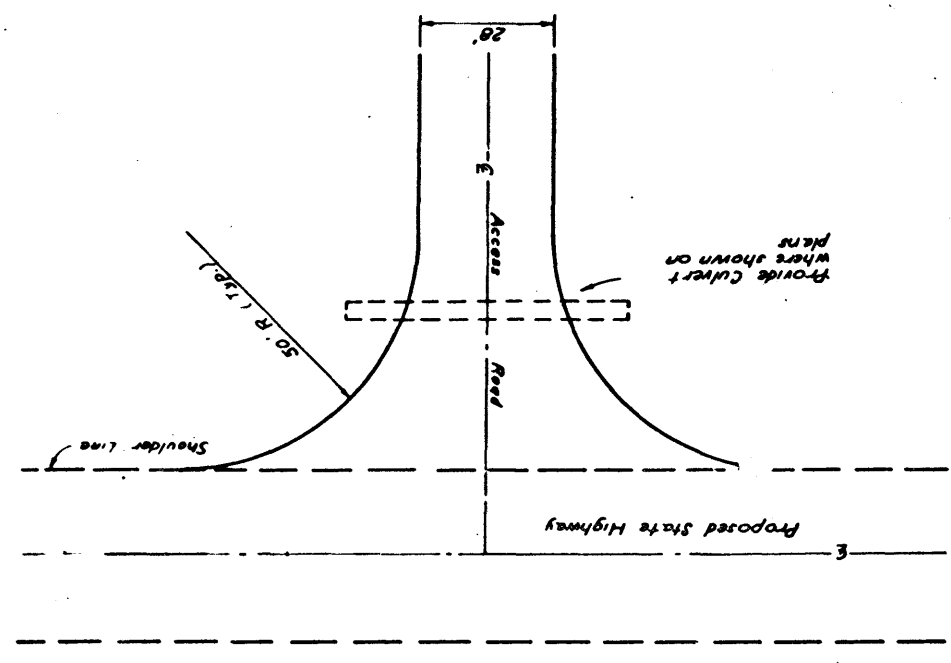
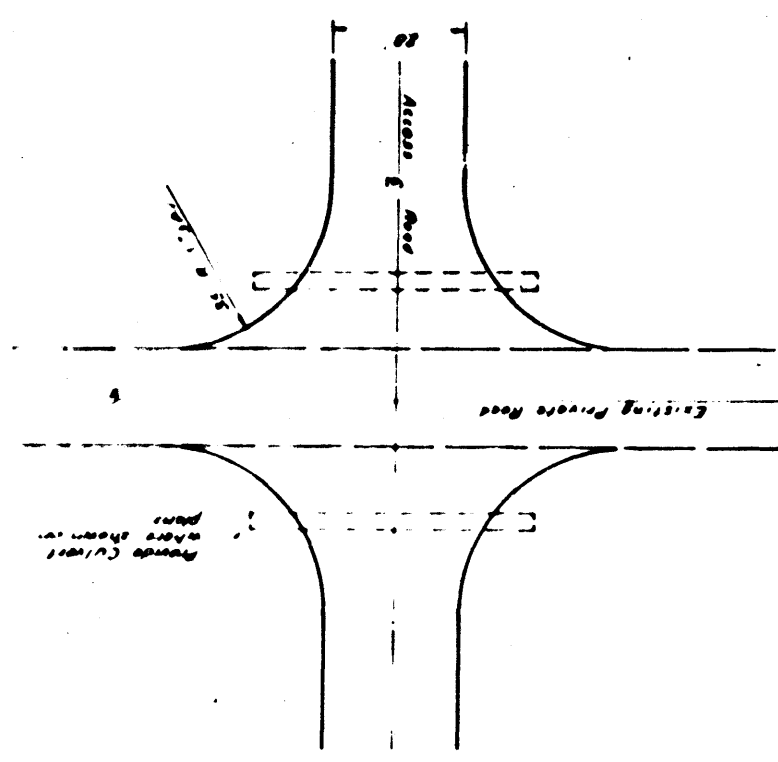
7-77	SEGMENT NO. 3	DRAWING NO.
APPROVED		D-10-CIA

K. Tilly, P.E.	W. L. Davis
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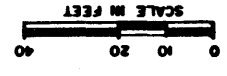
SHEET NO. 4c

U.S. DEPT. OF THE INTERIOR	ALYSSA	
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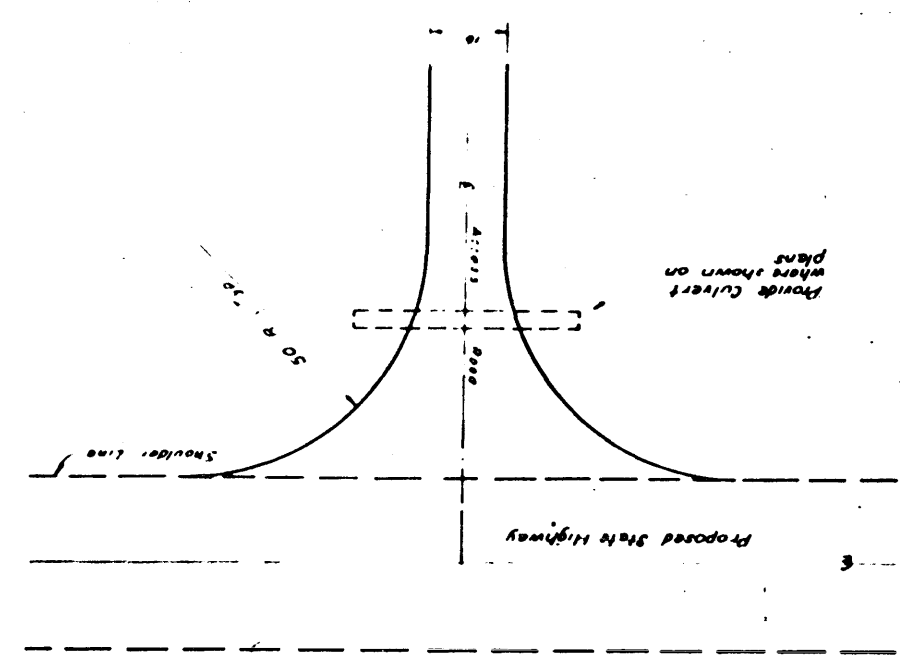
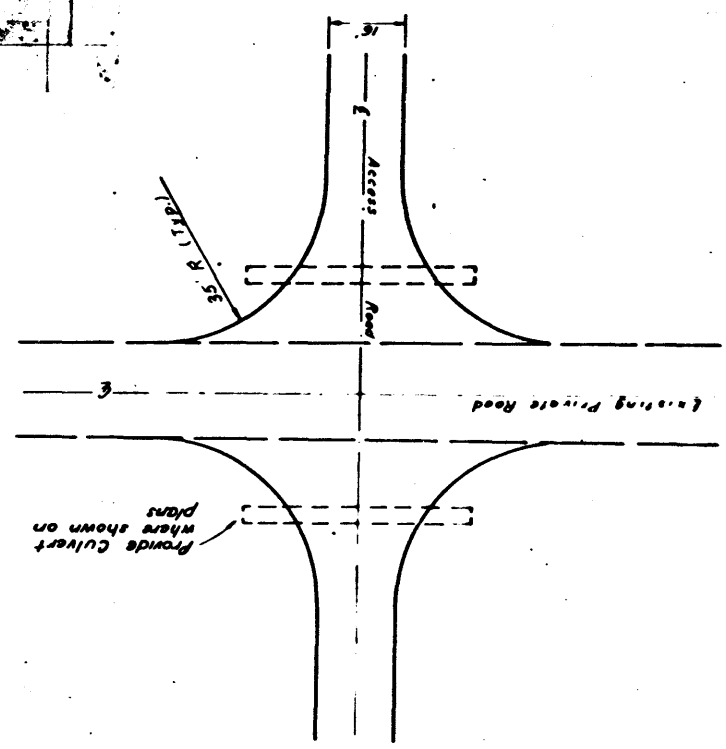
TWO LANE ROAD



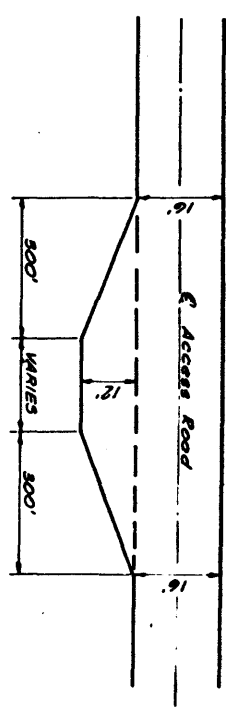
TYPICAL INTERSECTIONS



ONE LANE ROAD

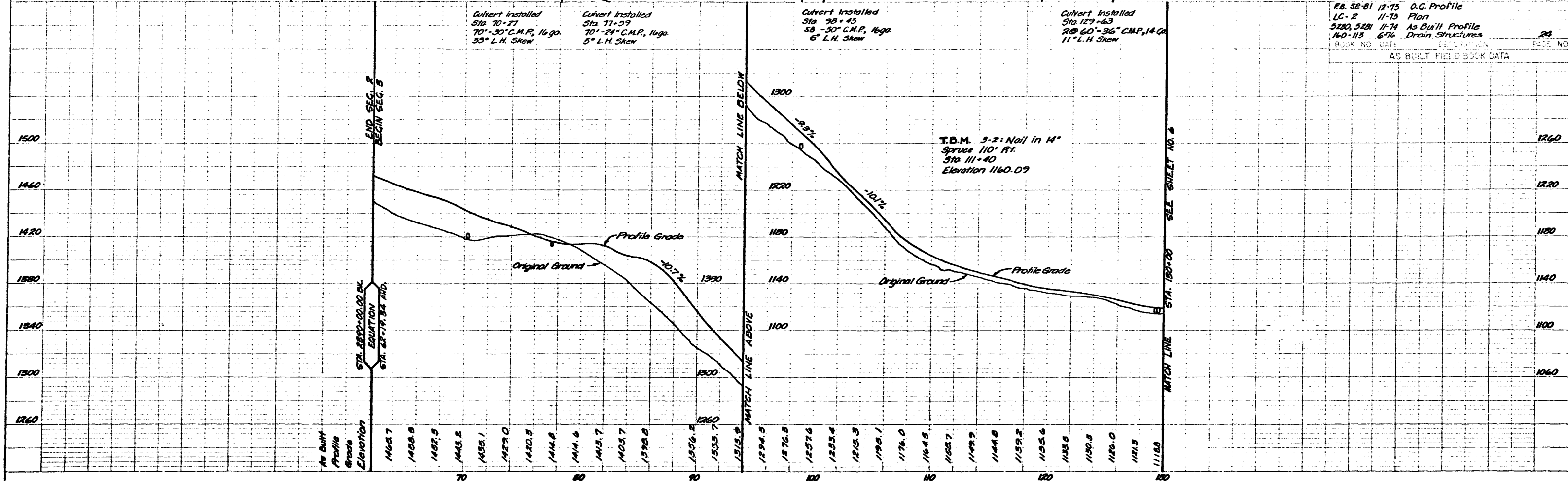
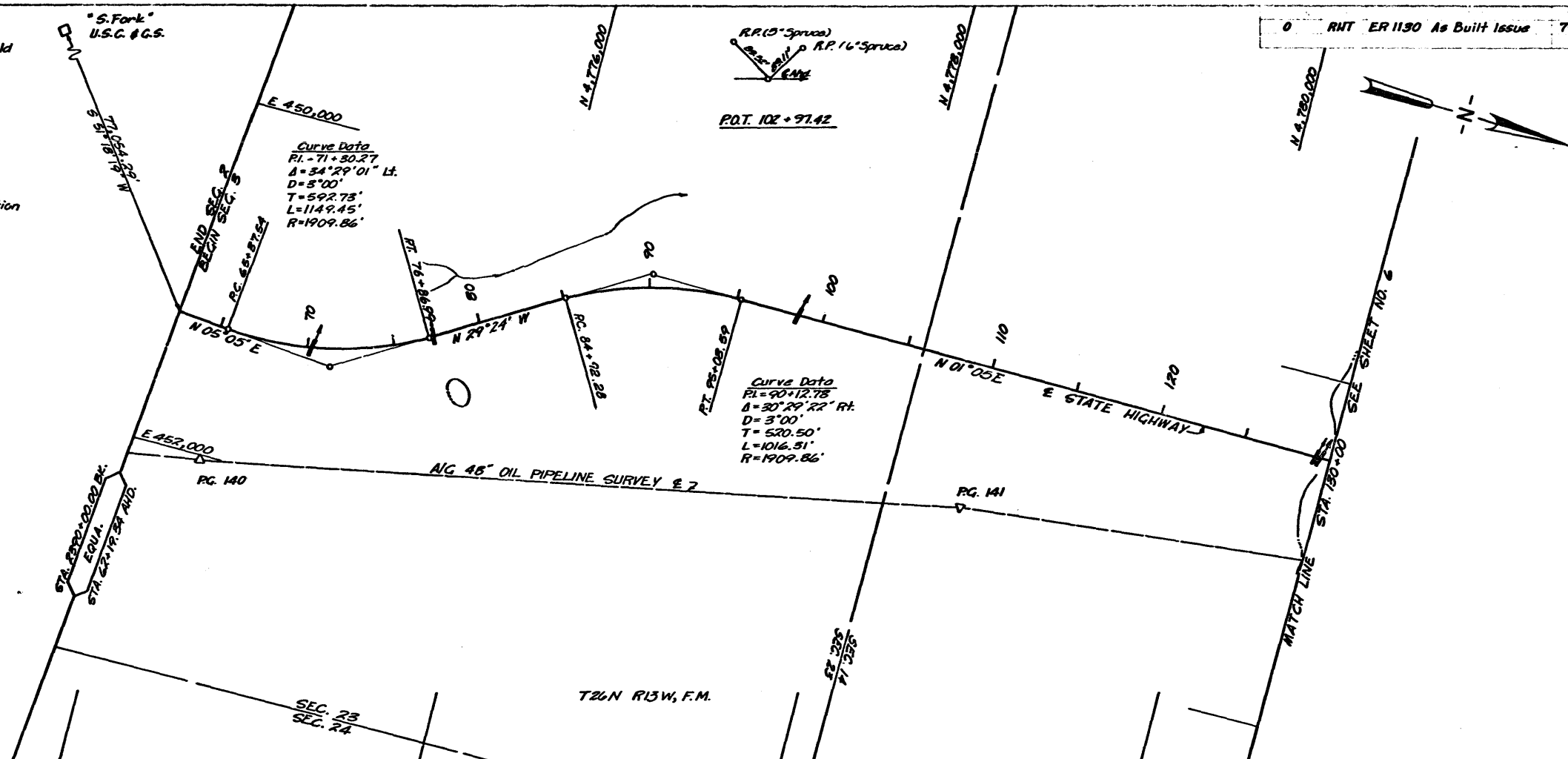


TYPICAL TURNOUT



NOTES:
 Topography taken from photogrammetric mapping, field surveys, and aerial photography.
 Plane coordinates and bearings refer to Grid North, Transverse Mercator Projection, State of Alaska, Zone 4.
 Section corners are protracted.
 Datum for elevations based on M.S.L. references.
 As Built information is based on 1974 survey information unless otherwise noted.

ALYESKA PIPELINE SERVICE COMPANY, AGENT
 TRANS ALASKA PIPELINE SYSTEM
 HIGHWAY AS BUILT
 YUKON RIVER TO FALCHOFF EAT
 MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS
 NEWYORK, NY JACKSON, MS
 7-77 3 DRAWING NO.
 105-CIA
 SHEET NO. 5
 R.H. Tally, P.E. & L. Davis
 SCALE IN FEET
 0 200 400 600



FB. 52-81 12-75 O.G. Profile
 LC-2 11-73 Plan
 5280, 5281 11-74 As Built Profile
 140-113 6-76 Drain Structures
 BOOK NO. DATE USED FOR
 AS BUILT FIELD BOOK DATA

PLAN

PROFILE

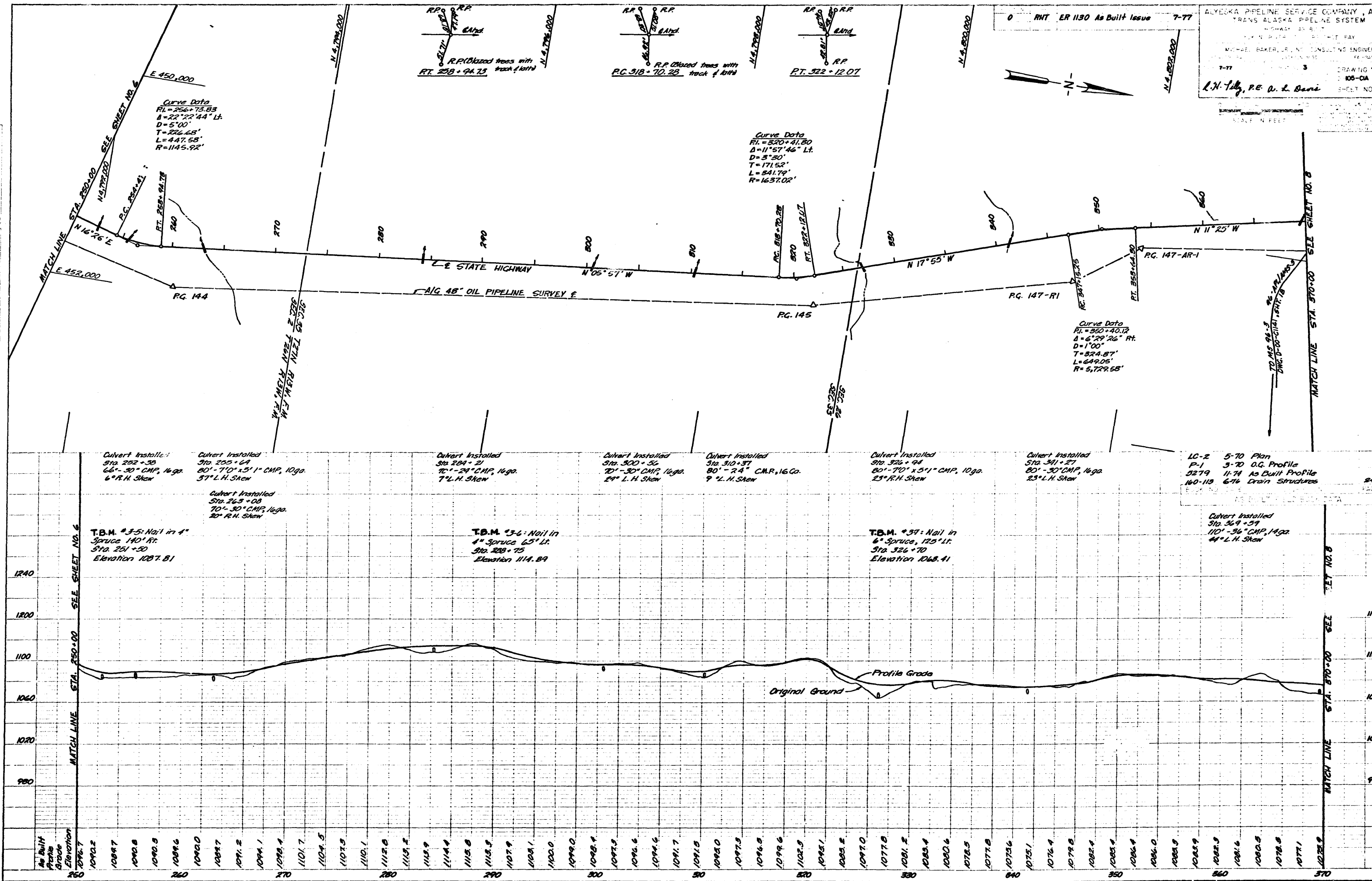
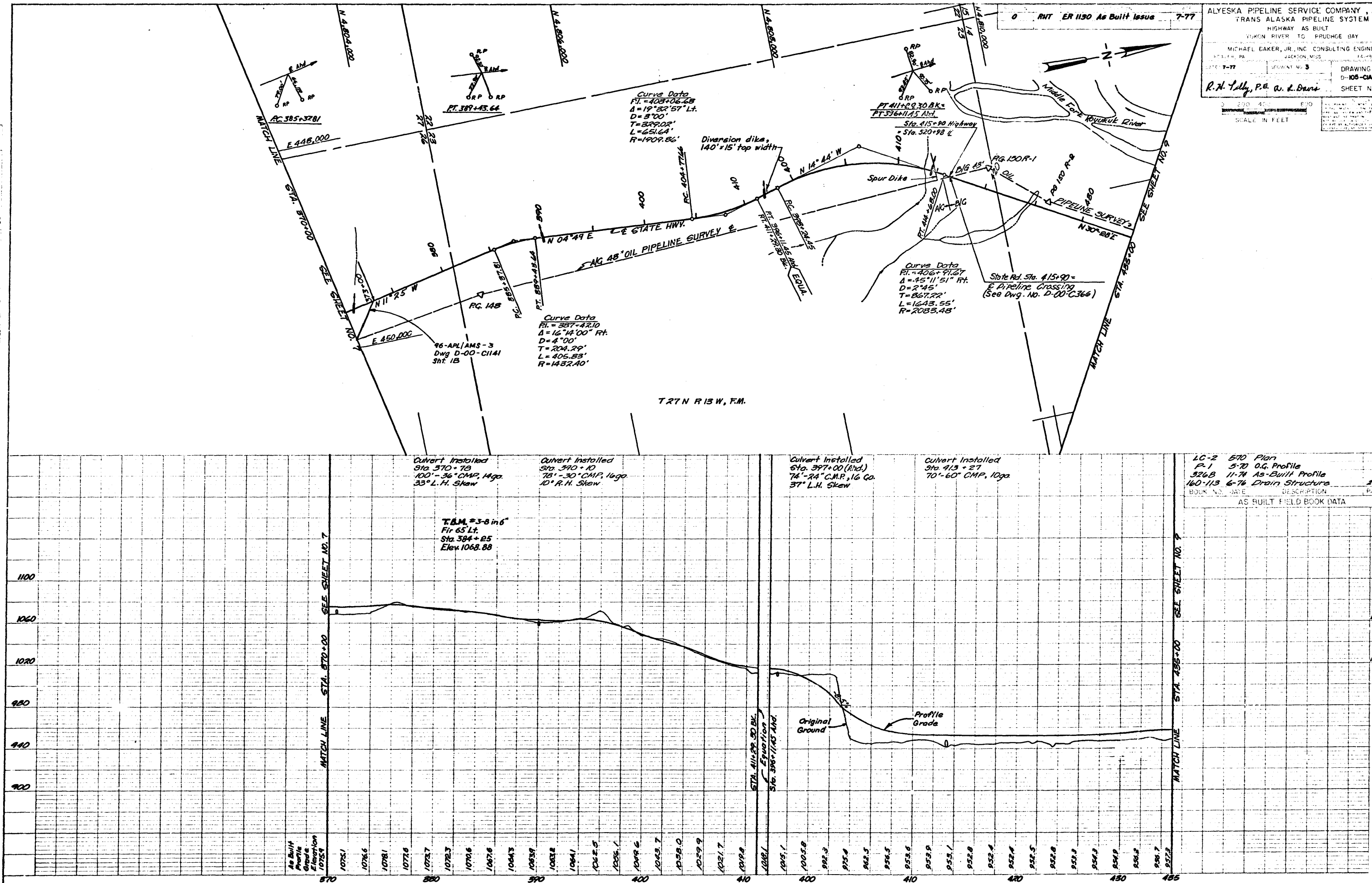
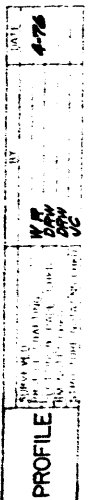


PLATE 1 PLAN, PROFILE & P.R. STANDARD
 FROM PETER C. C. N. M. 1-74

ALYSCA PIPELINE SERVICE COMPANY, AG
 TRANS ALASKA PIPELINE SYSTEM
 MICHAEL BAKER, JR., INC. CONSULTING ENGINEER
 L.H. Tilly, P.E. & A. L. Davis



PLAN

PROFILE

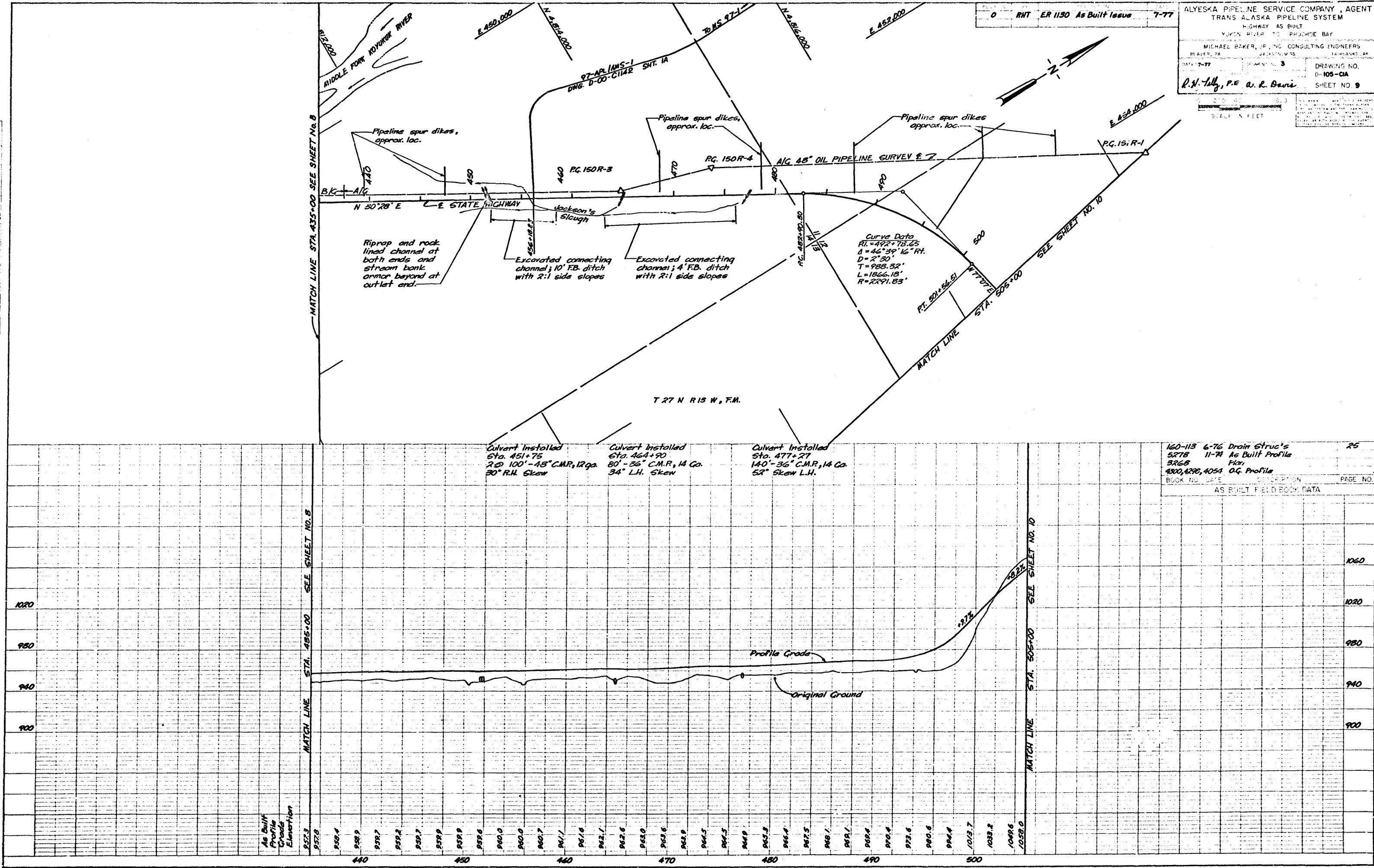
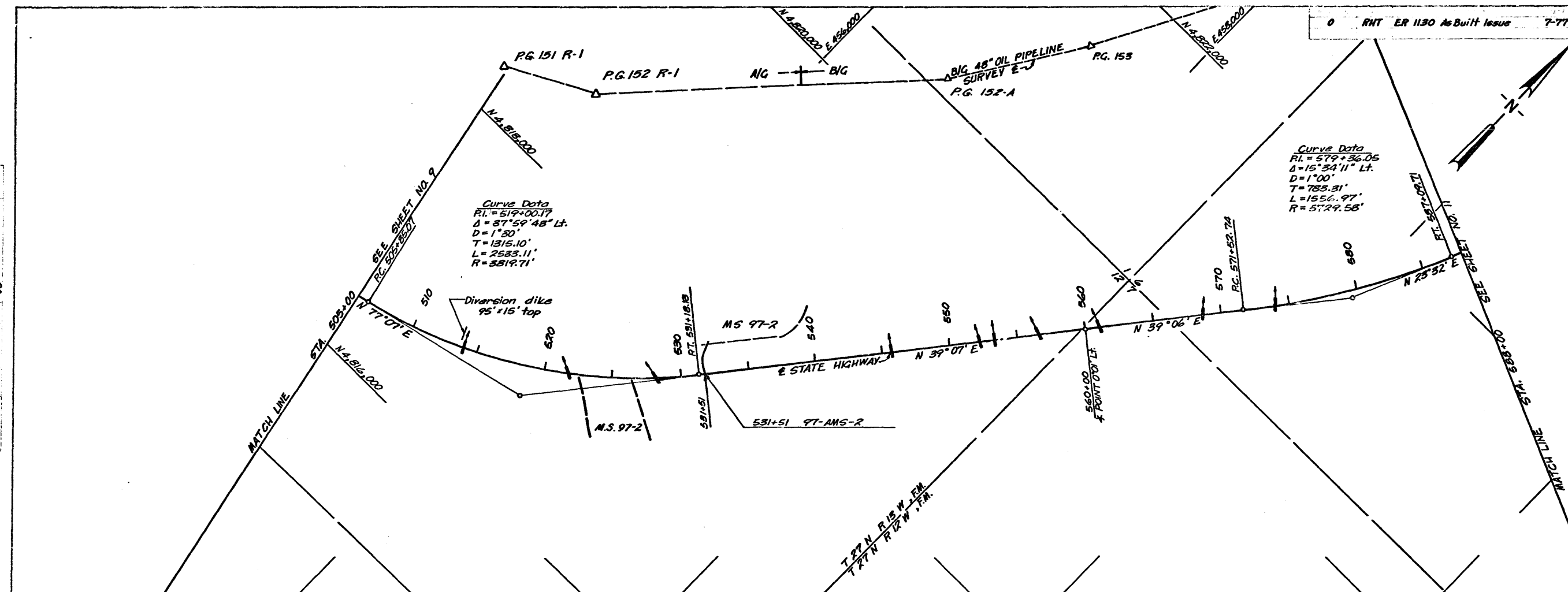
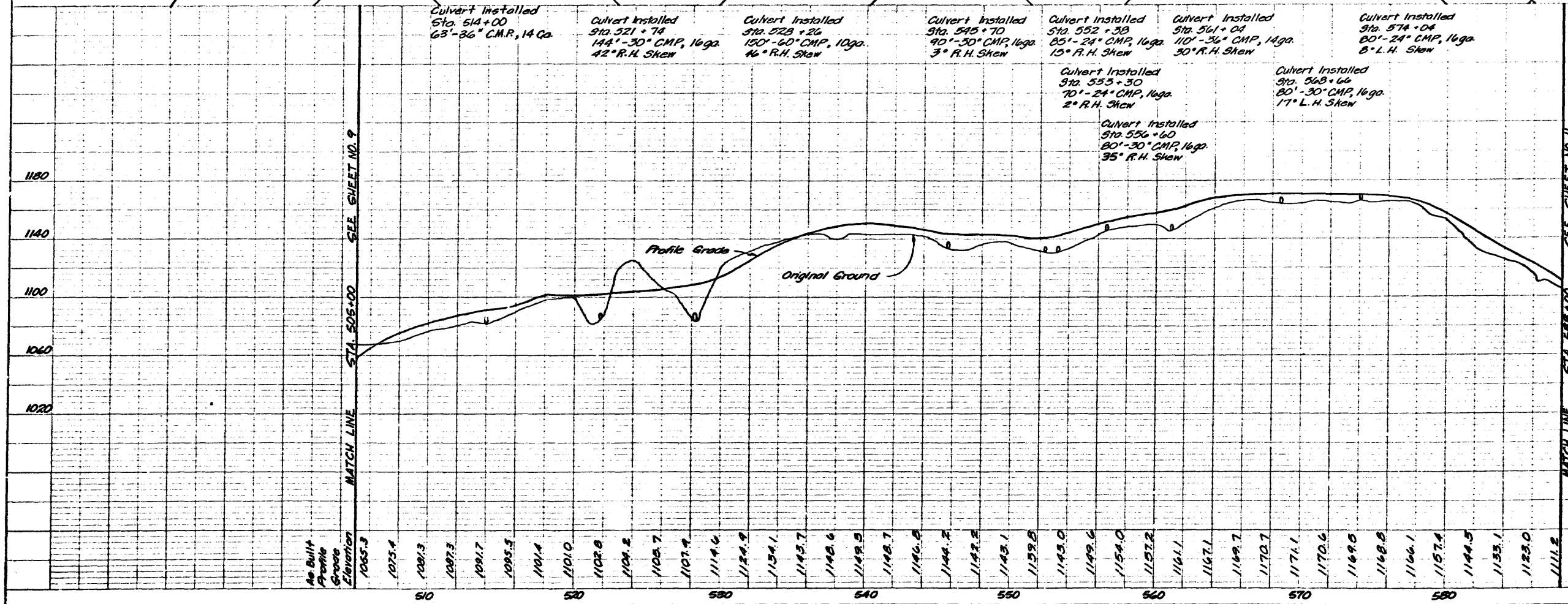


PLATE 1 PLAN-PROFILE B.P.R. STANDARD
 ENGINE DESIGNED BY: [illegible]

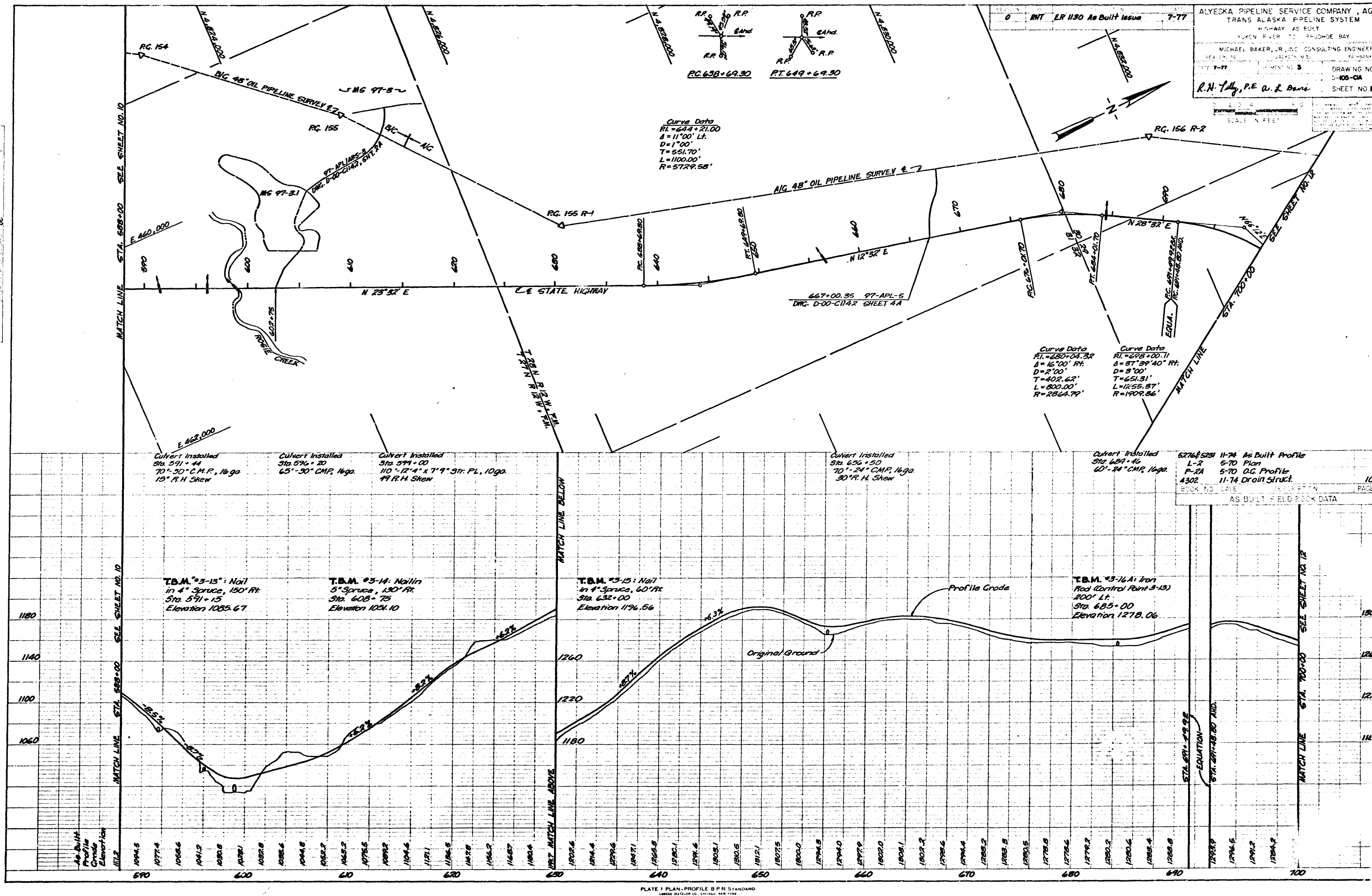
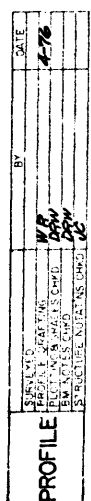
PLAN

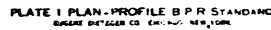
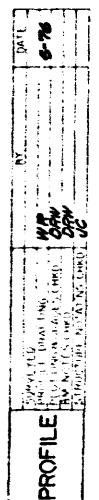


PROFILE



3268, 3123 11-74 Plan
3268, 3123 11-74 O.C. Profile
576, 528 11-74 As Built Profile
140-113 6-76 Drain Struct.
BOOK NO. DATE DESCRIPTION PAGE NO.
AS BUILT FIELD BOOK DATA



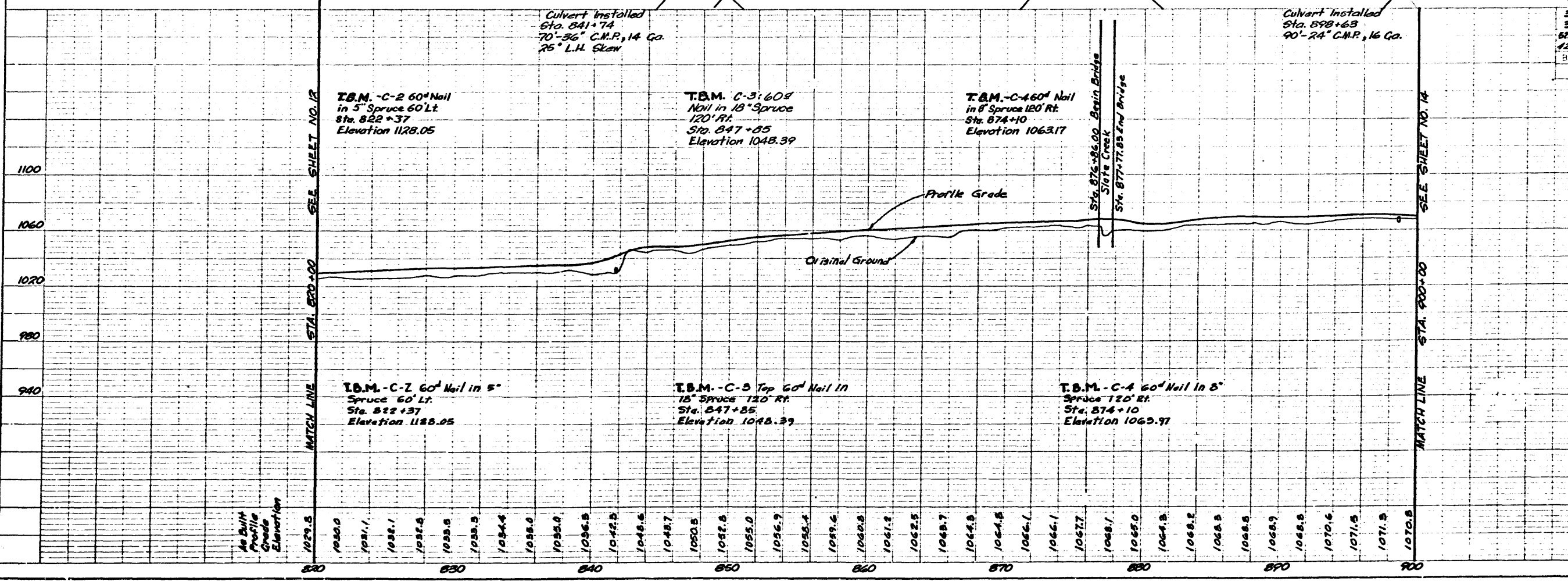
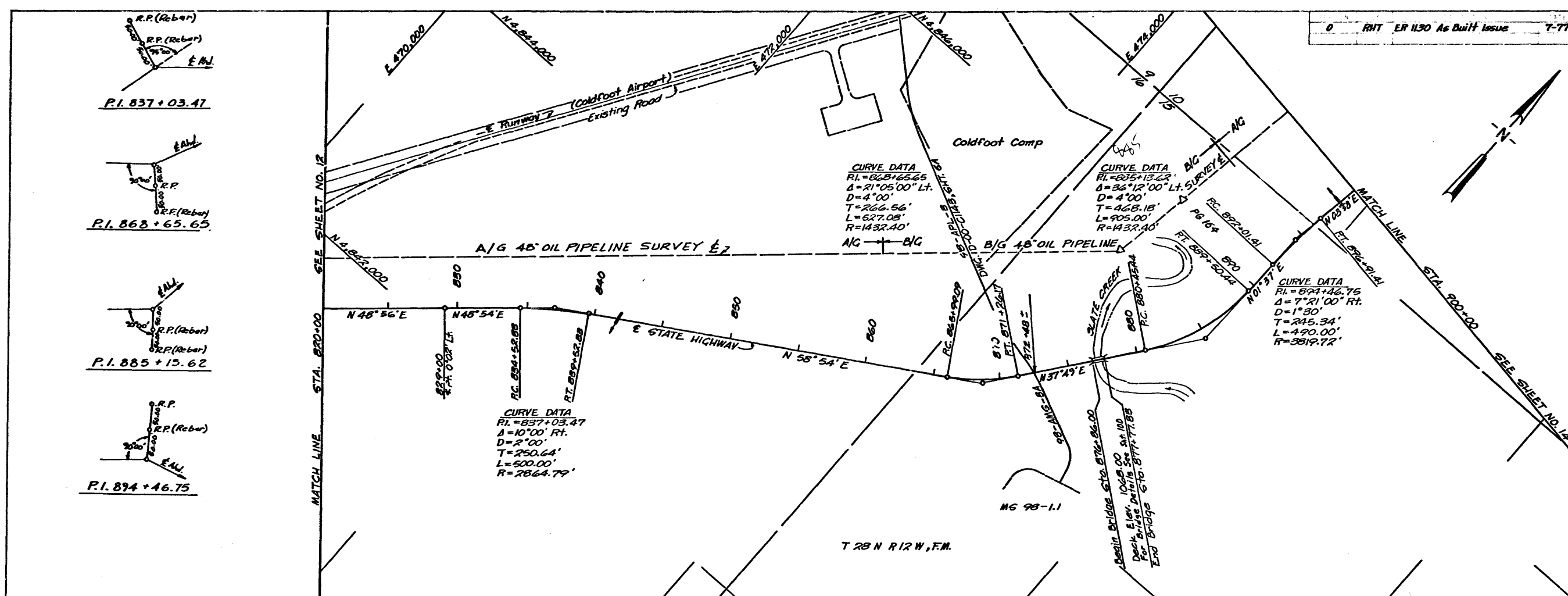


0 RHT ER 1130 As Built Issue T-77

SCALE 1" = 400'

PLAN

PROFILE



3067	9-73	Plan
3075	9-73	O.G. Profile
5201	11-74	As Built Profile
1298, 1300	-74	Drain Structures
BOOK NO.	DATE	REVISION
		AS BUILT FIELD BOOK DATA

PLAN

PROFILE

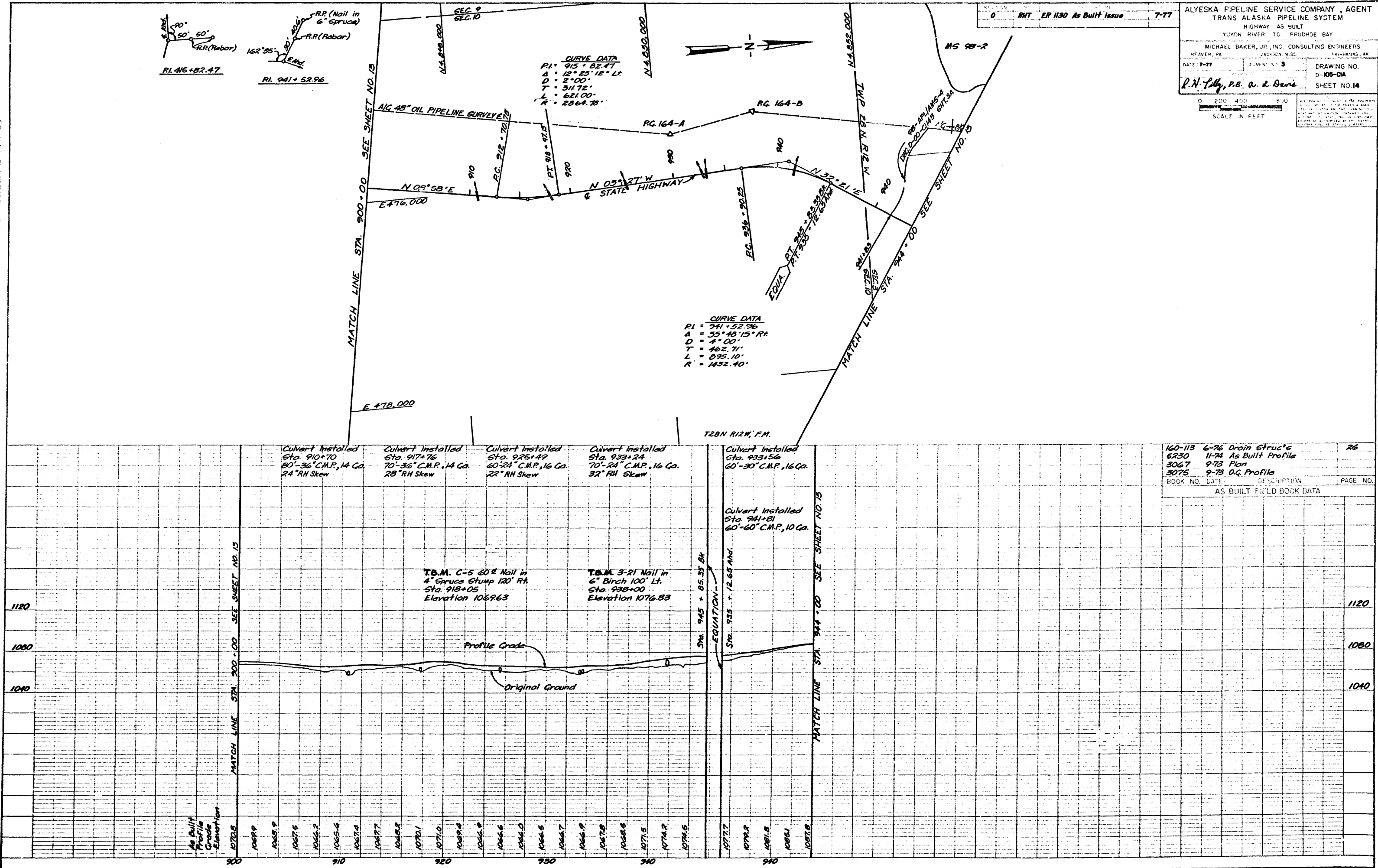
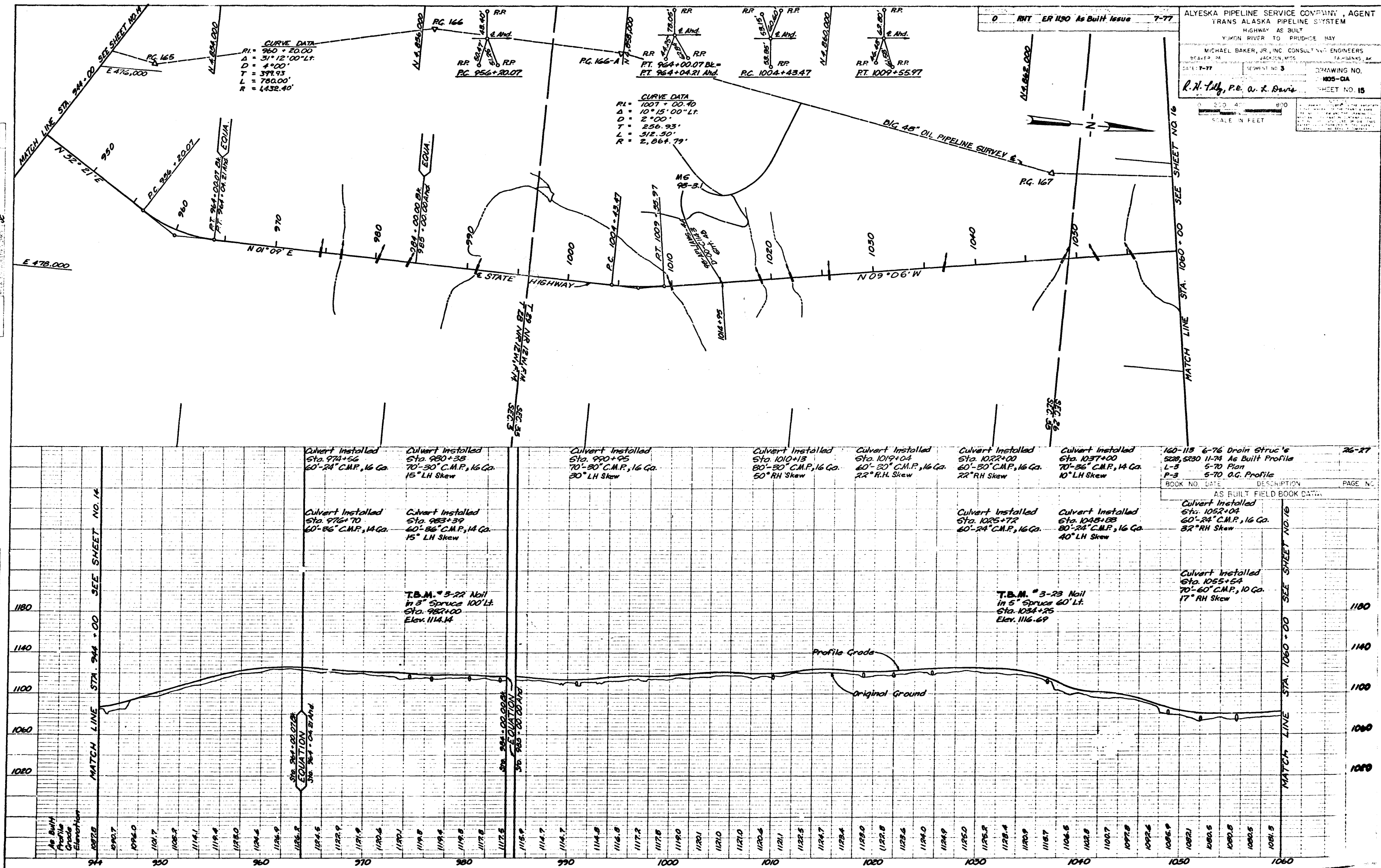


PLATE 1 PLAN-PROFILE B P R STANDARD
EUGENE BREYER CO. CHICAGO, ILL. NEW YORK

PLAN

PROFILE



PLAN

PROFILE

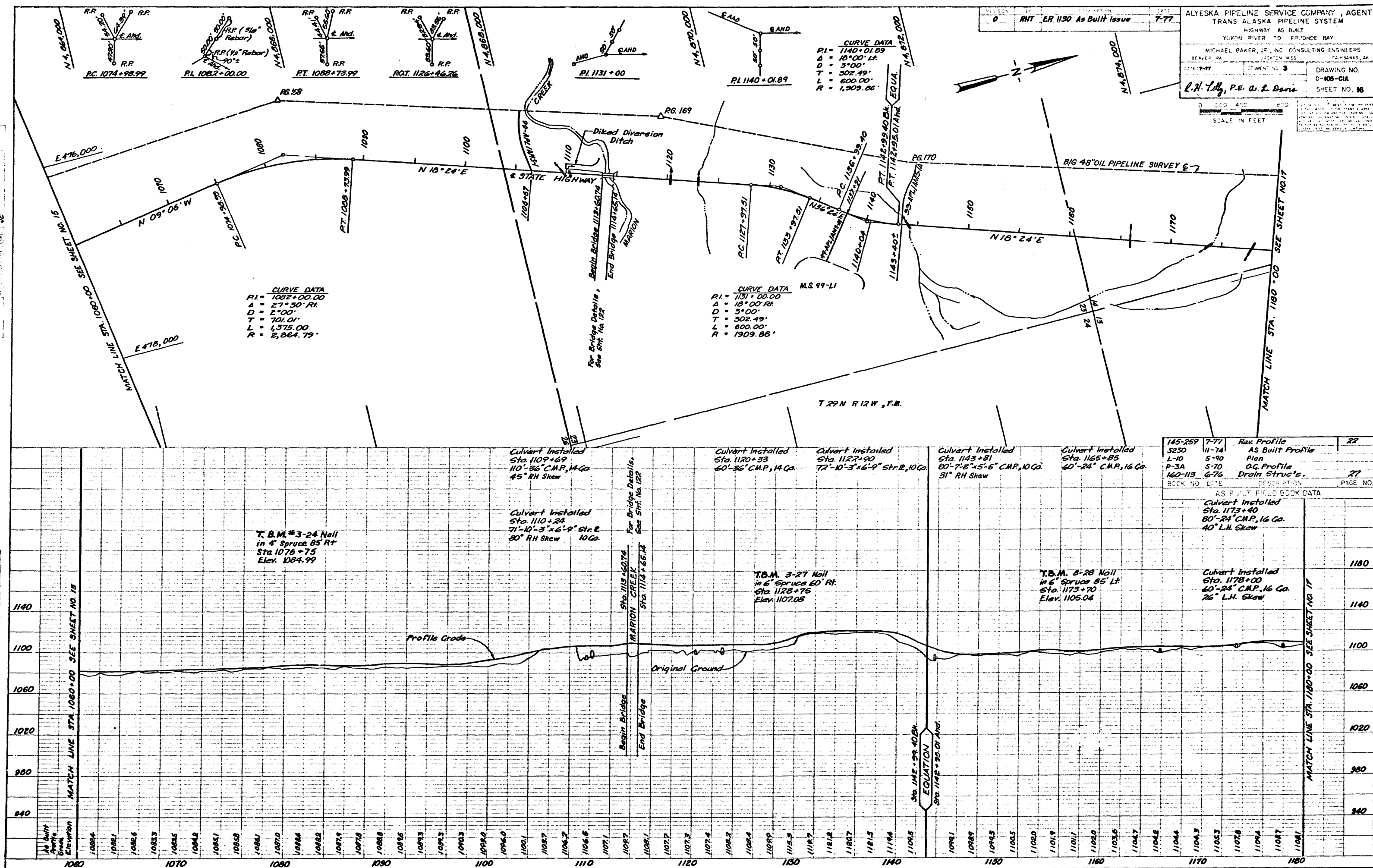
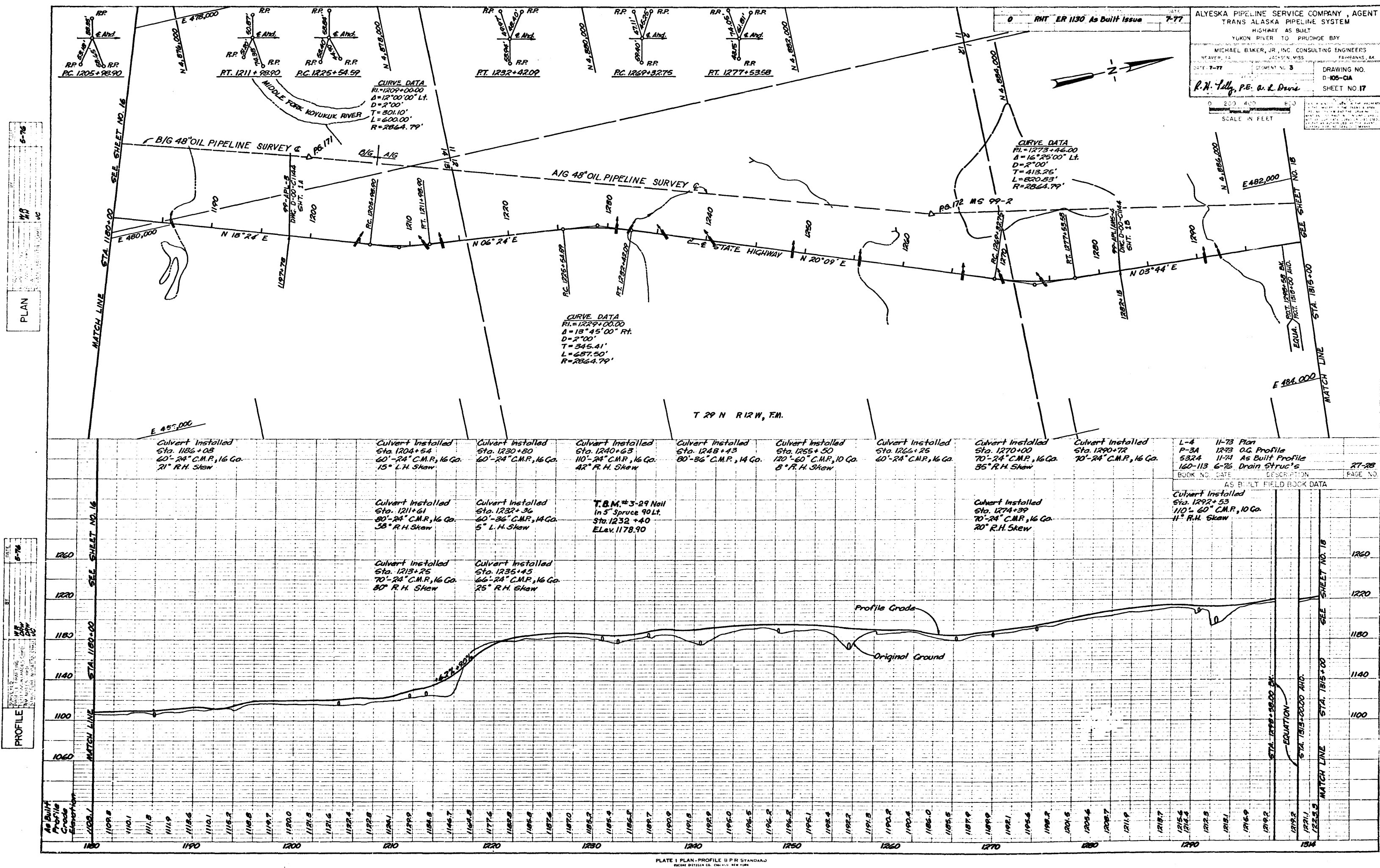
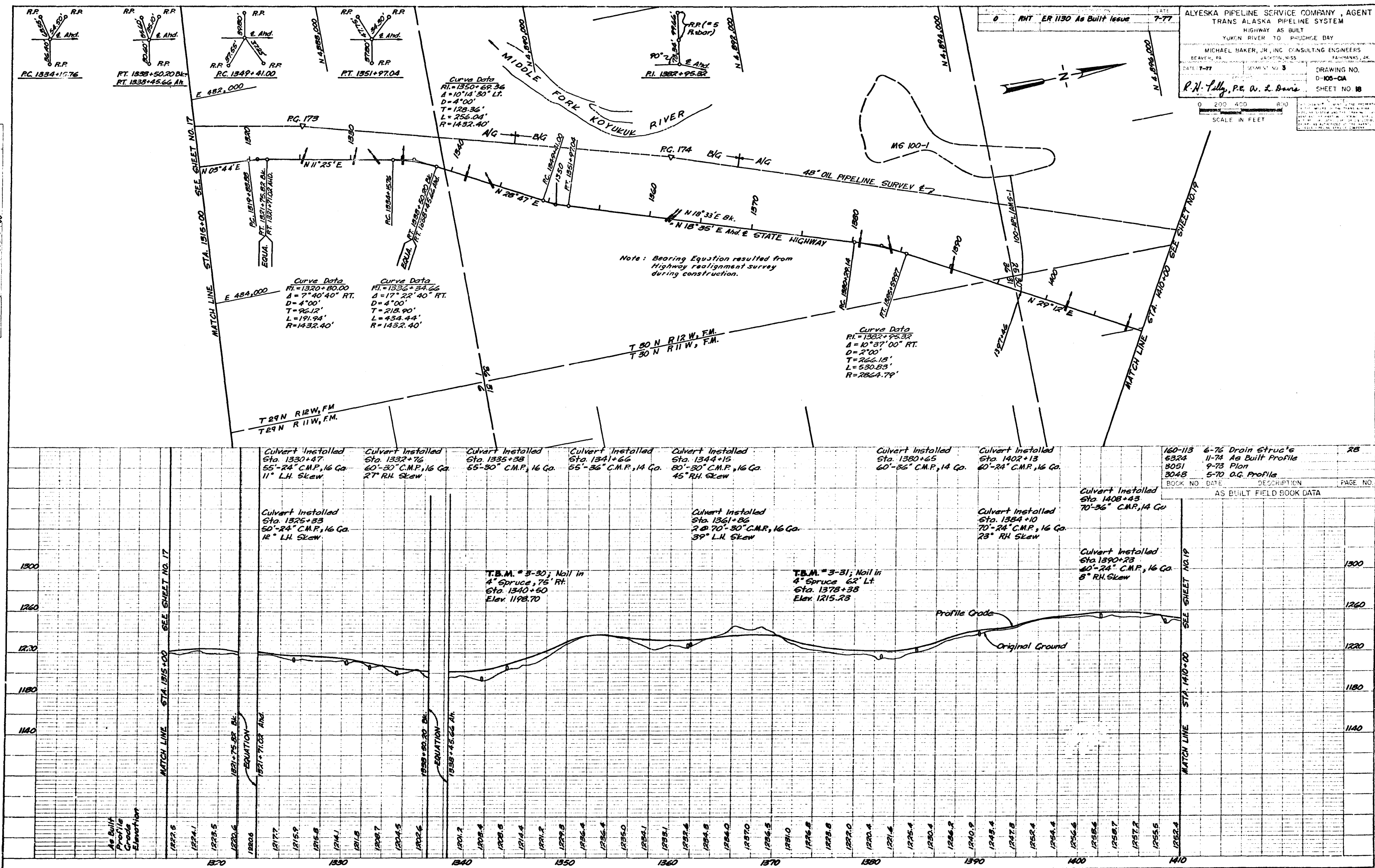


PLATE 1 PLAN-PROFILE B.P.R. STANDARD



PLAN

PROFILE



ALYESKA PIPELINE SERVICE COMPANY, AGENT
TRANS ALASKA PIPELINE SYSTEM
HIGHWAY AS BUILT
YUKON RIVER TO PRUDHOE BAY
MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS
BEAVER, PA. JACKSON, MISS. FAIRBANKS, AK.
DATE: 7-77 SHEET NO. 3 DRAWING NO. D-105-GA SHEET NO. 18
R.H. Lally, P.E., W. L. Davis

0 200 400 800
SCALE IN FEET

BOOK NO.	DATE	DESCRIPTION	PAGE NO.
160-113	6-76	Drain Struc's	RB
6324	11-74	As Built Profile	
8051	9-73	Plan	
3048	5-70	O.G. Profile	

PLATE 1 PLAN-PROFILE B.P.R. STANDARD
ENGINEERING CO. CHICAGO, ILL. 60601

PLAN

PROFILE

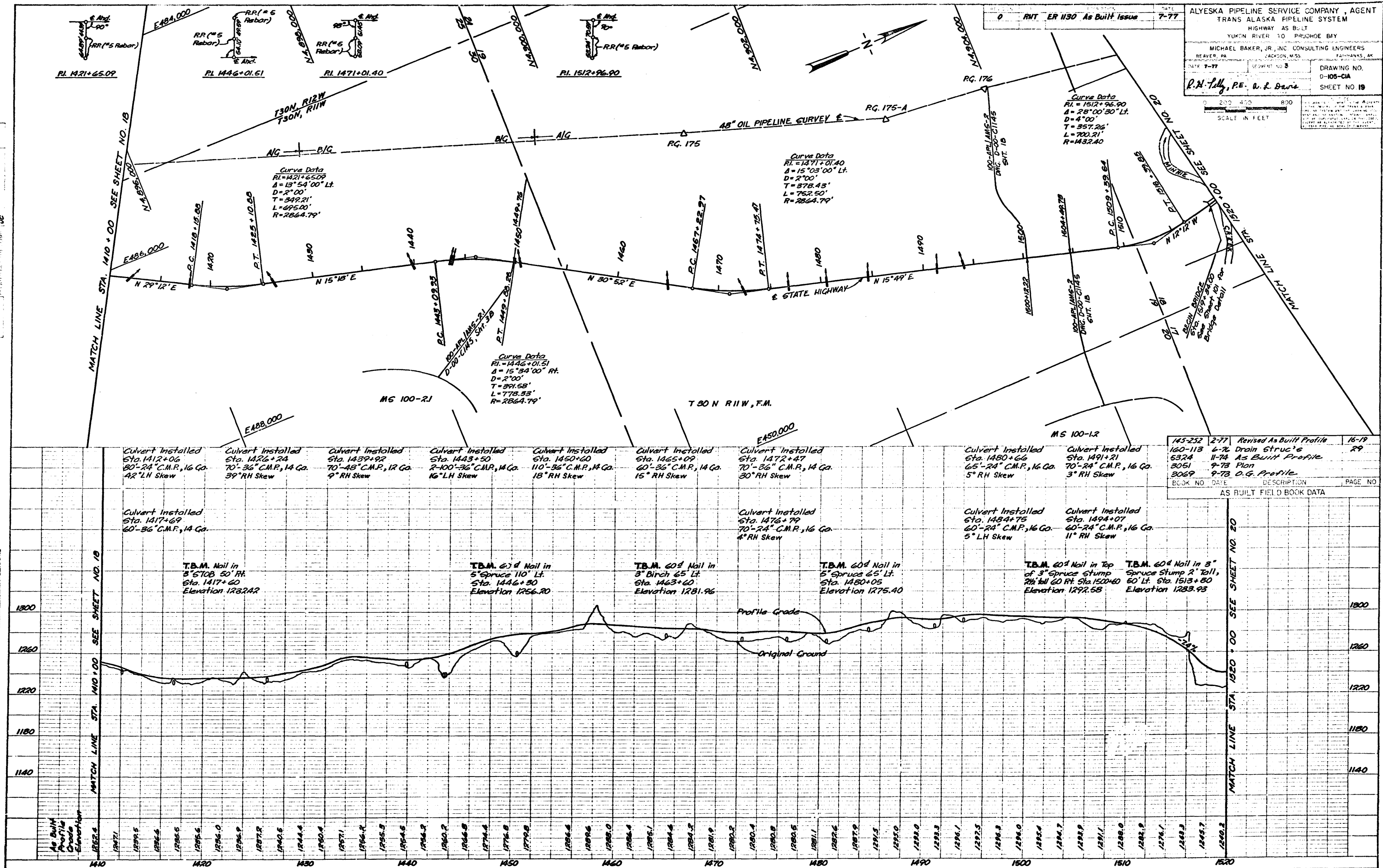
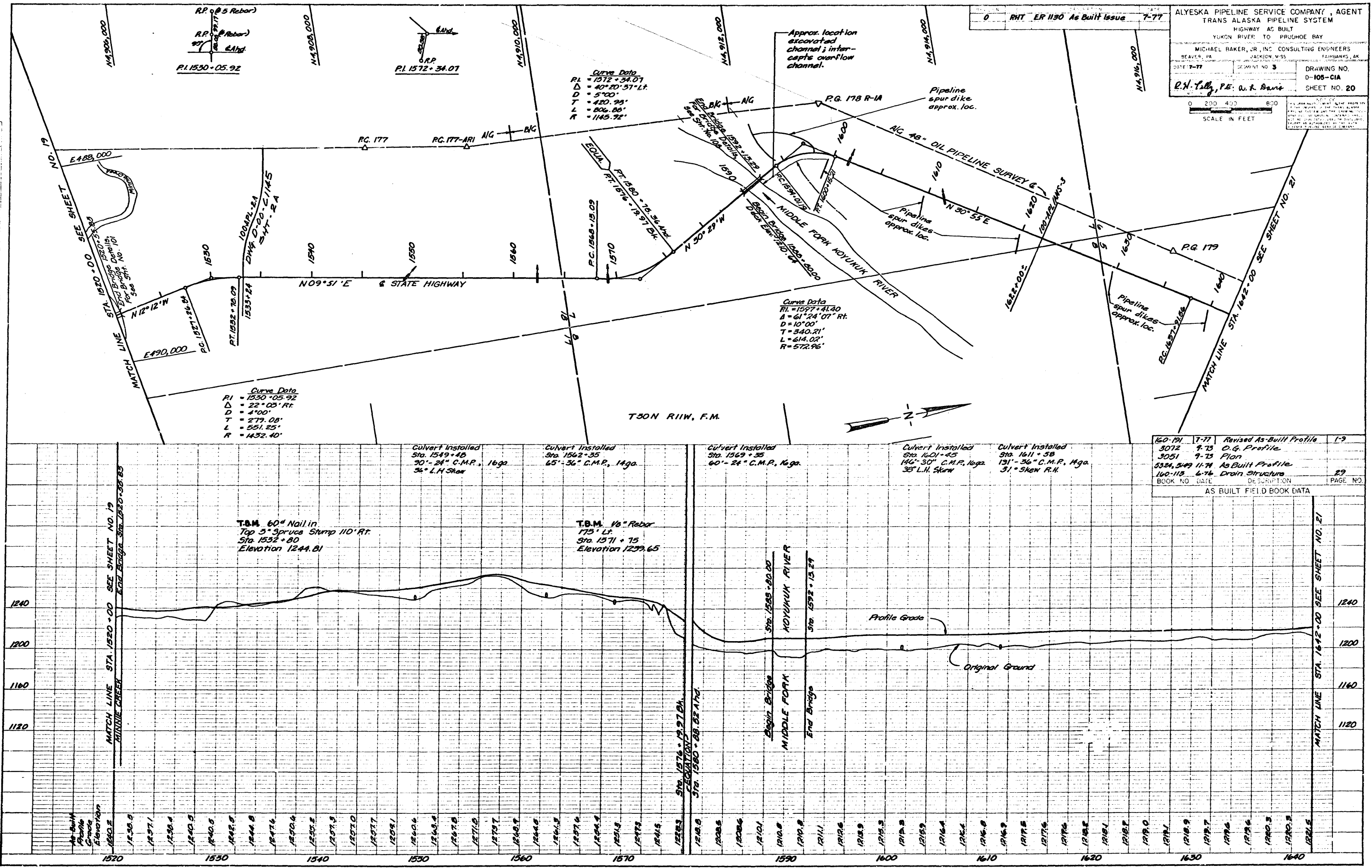


PLATE 1 PLAN-PROFILE B.P.R. STANDARD
EUGENE DETMERS CO. CHICAGO, ILL. U.S.A.

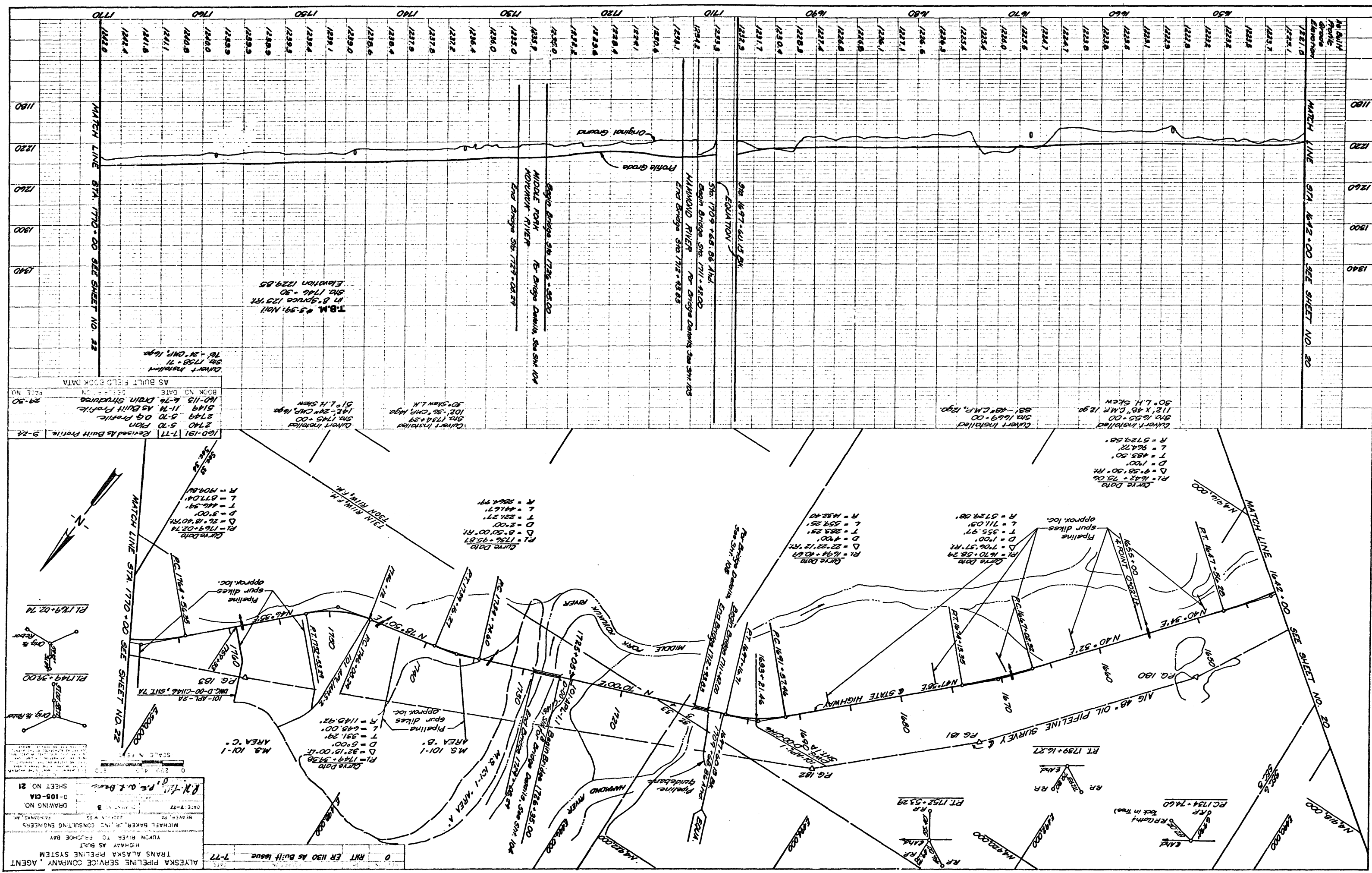
PLAN

PROFILE



BOOK NO.	DATE	DESCRIPTION	PAGE NO.
160-191	7-77	Revised As-Built Profile	1-9
3072	9-75	O.G. Profile	
3051	7-75	Plan	
5324, 5449	11-74	As-Built Profile	
160-113	6-76	Drain Structure	23
AS BUILT FIELD BOOK DATA			

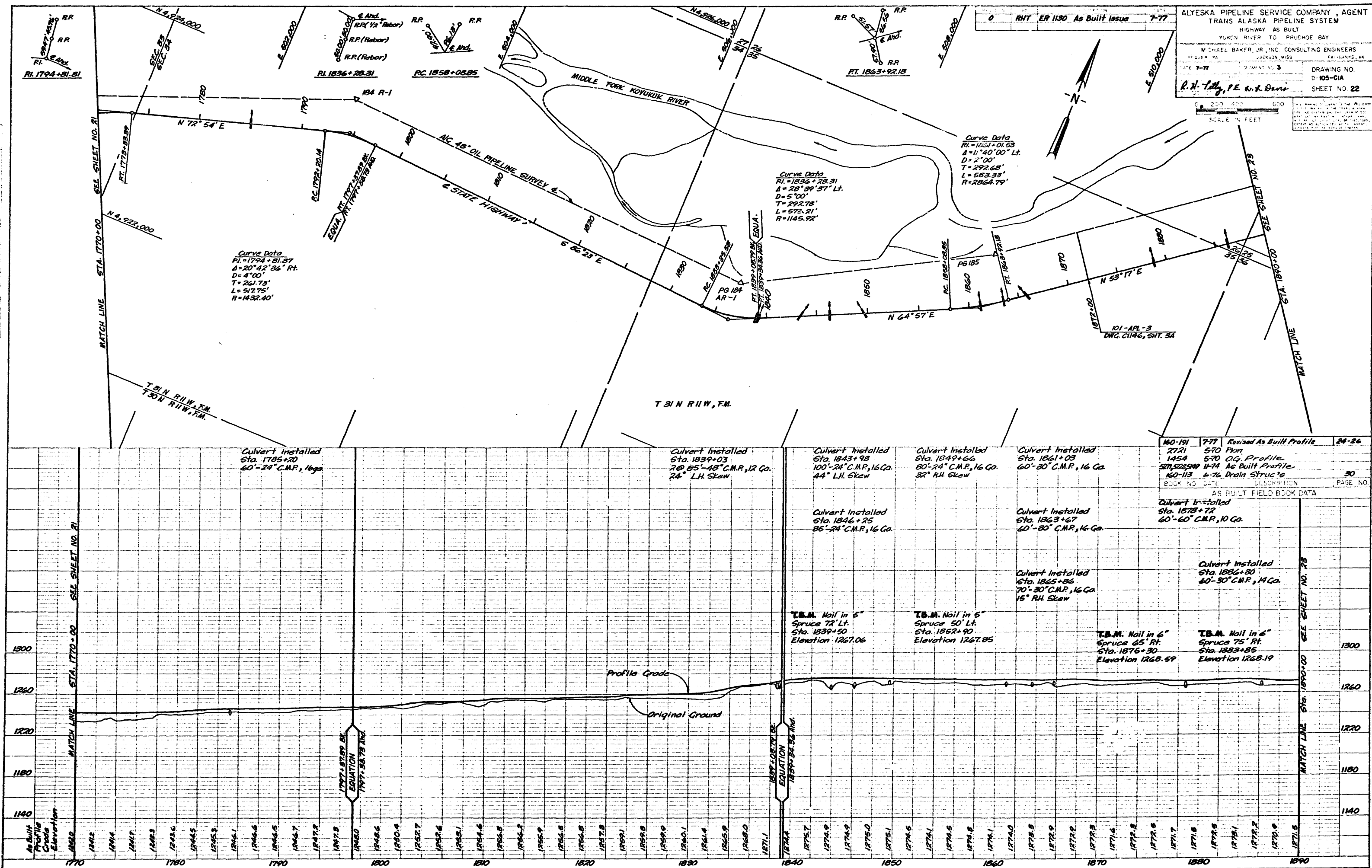
PLATE 1 PLAN-PROFILE B P R STANDARD
EAGLE BROTHER CO. CHICAGO, ILL. U.S.A.



ALYESKA PIPELINE SERVICE COMPANY, AGENT
TRANS ALASKA PIPELINE SYSTEM
HIGHWAY AS BUILT
YUKON RIVER TO PADJOSH BAY
MICHAEL BAKER, R. AND CONSULTING ENGINEERS
DATE: 7-77
DRAWING NO. 3
SHEET NO. 21
DATE: 7-77
BY: [Signature]
CHECKED: [Signature]
SCALE: 1" = 100'

PLAN

PROFILE



PLAN

PROFILE

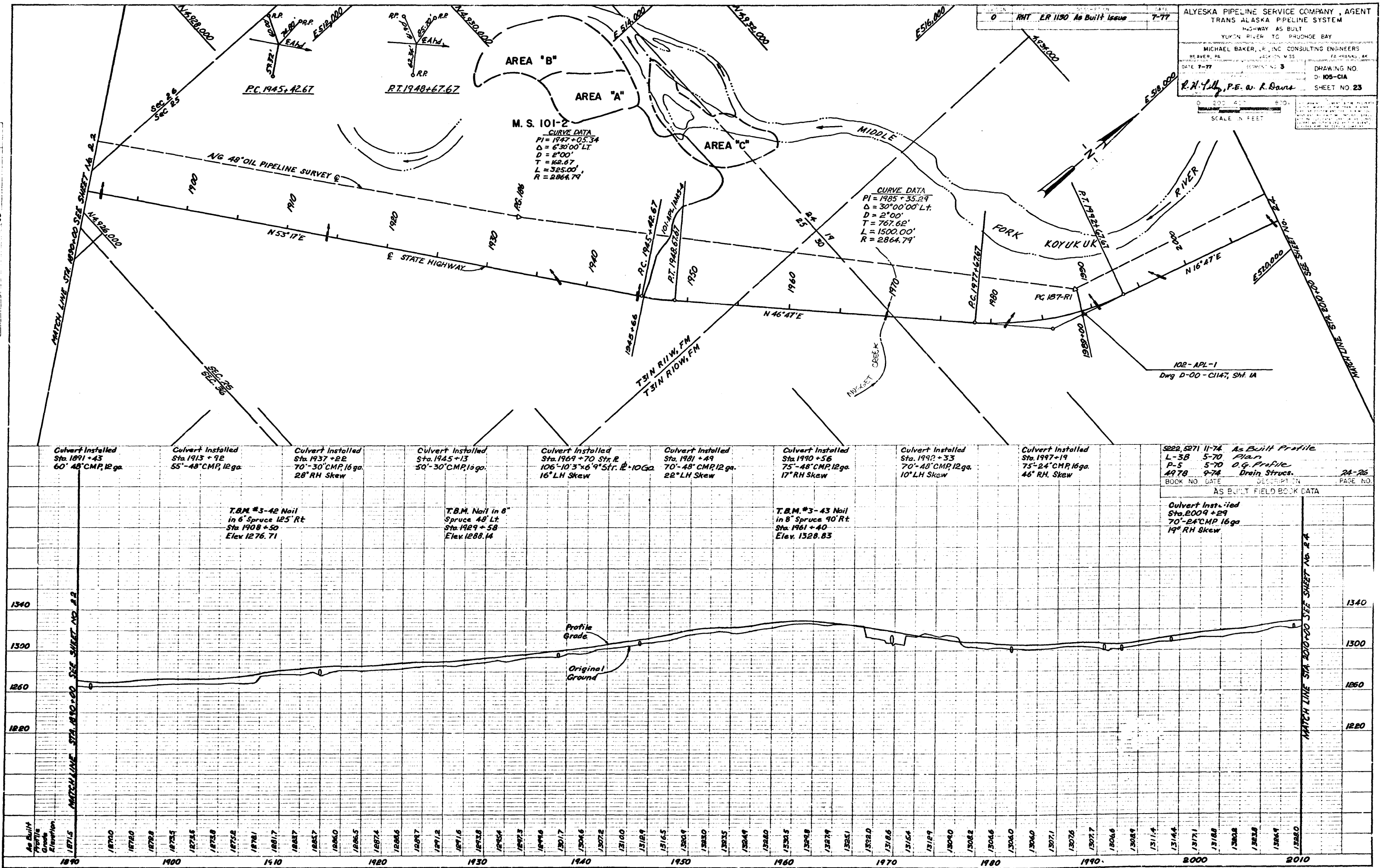
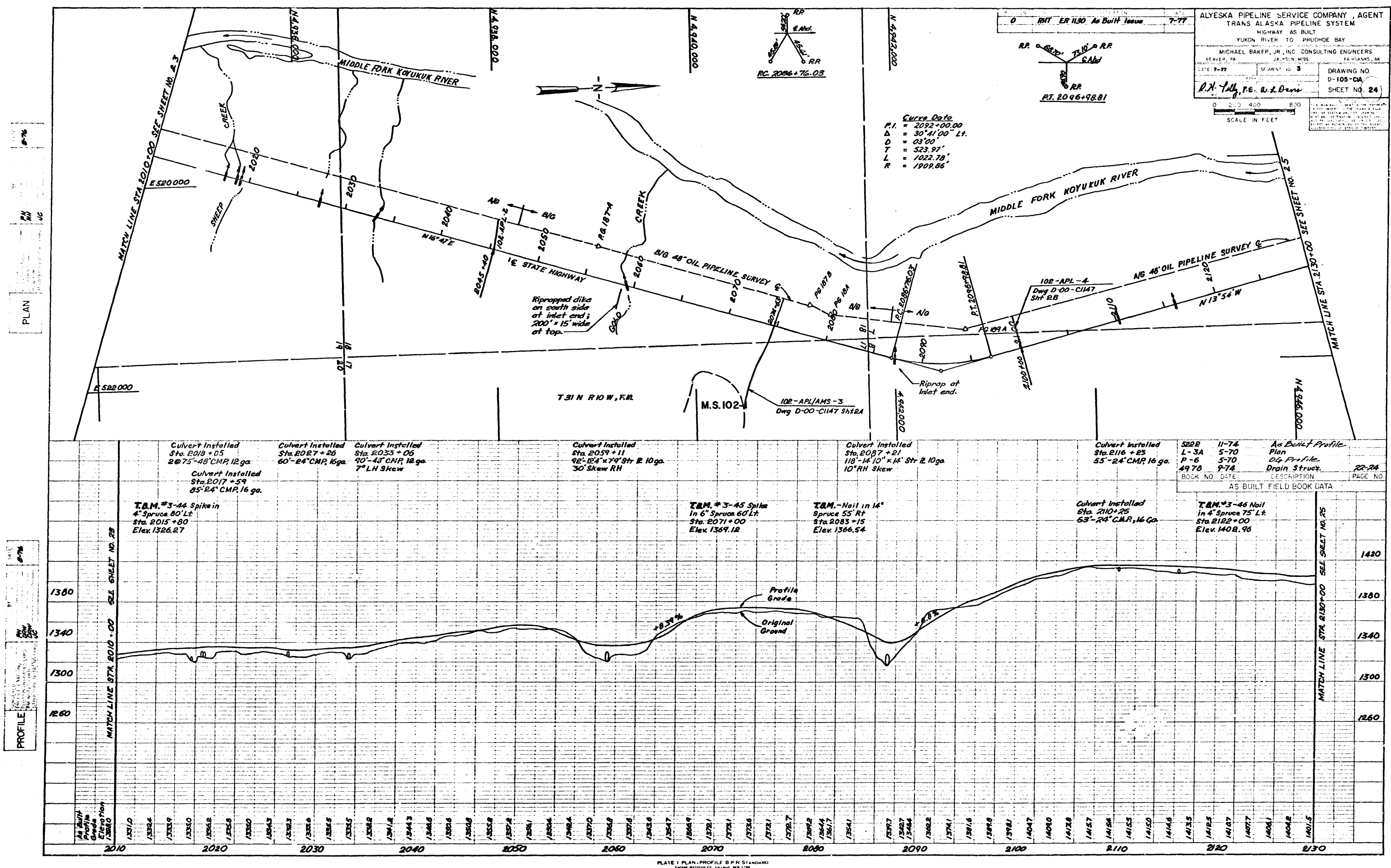
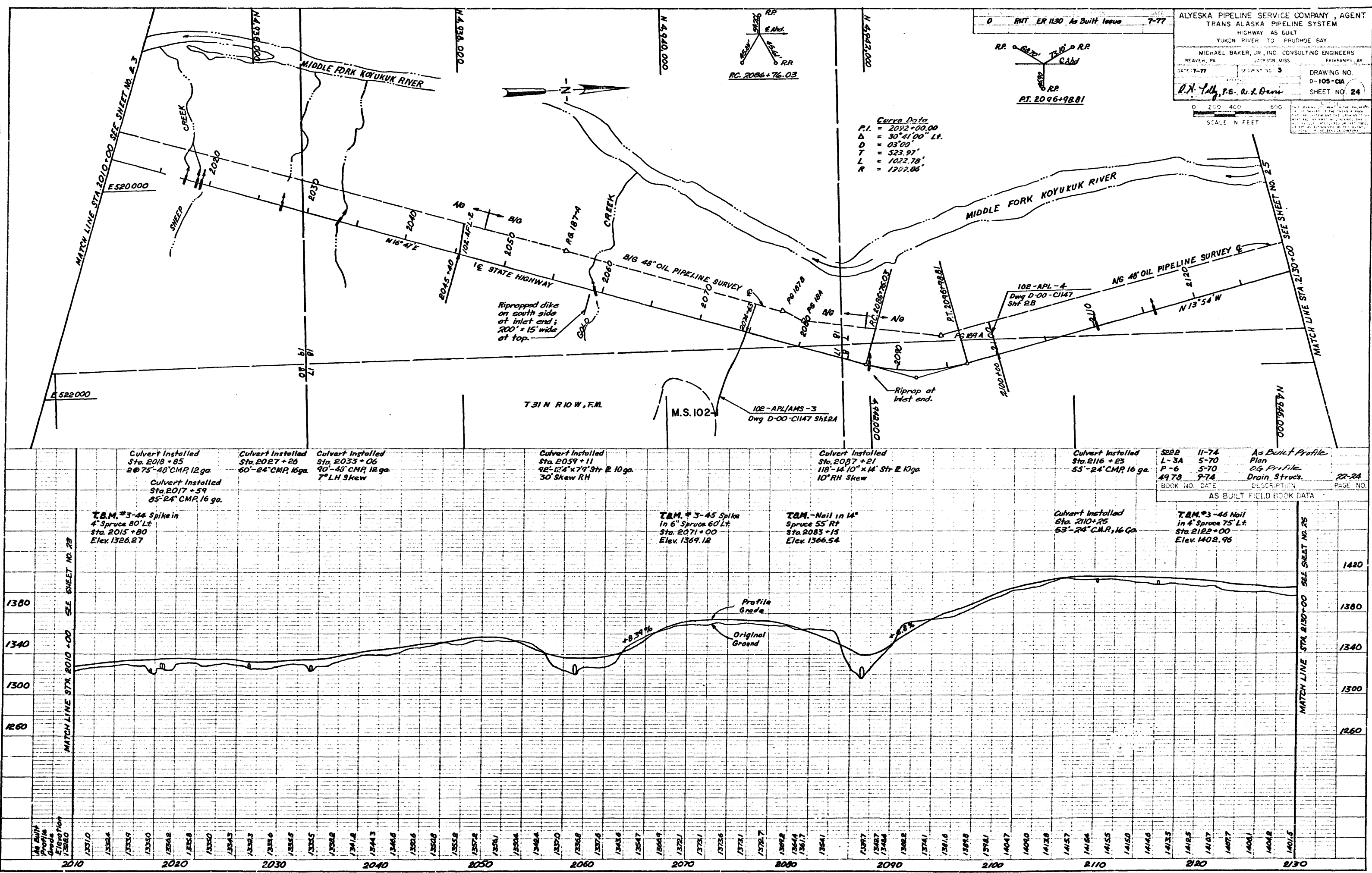


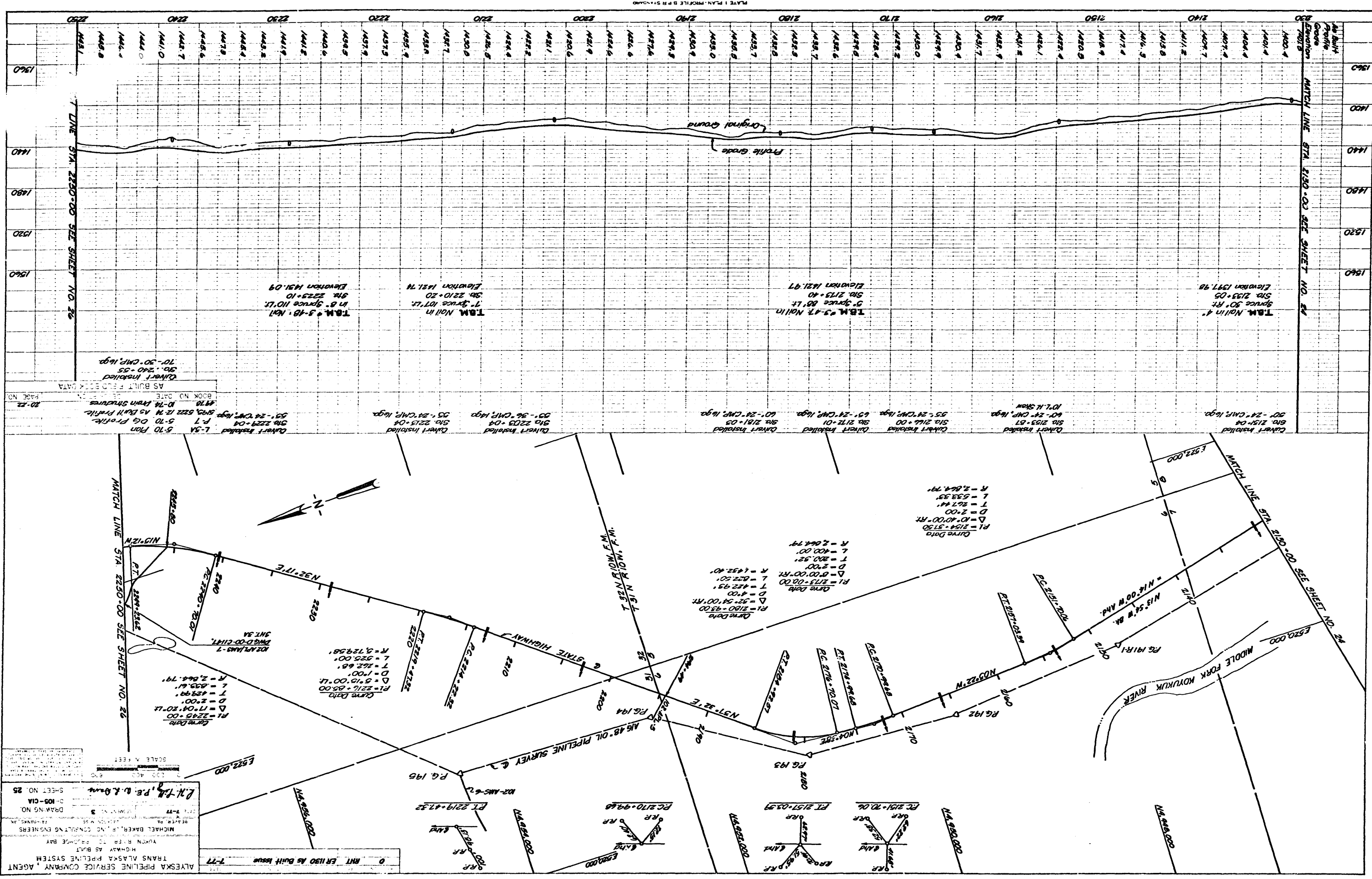
PLATE 1 PLAN-PROFILE B.P.R. STANDARD



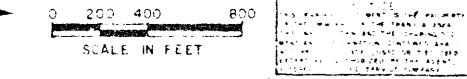
PLAN

PROFILE





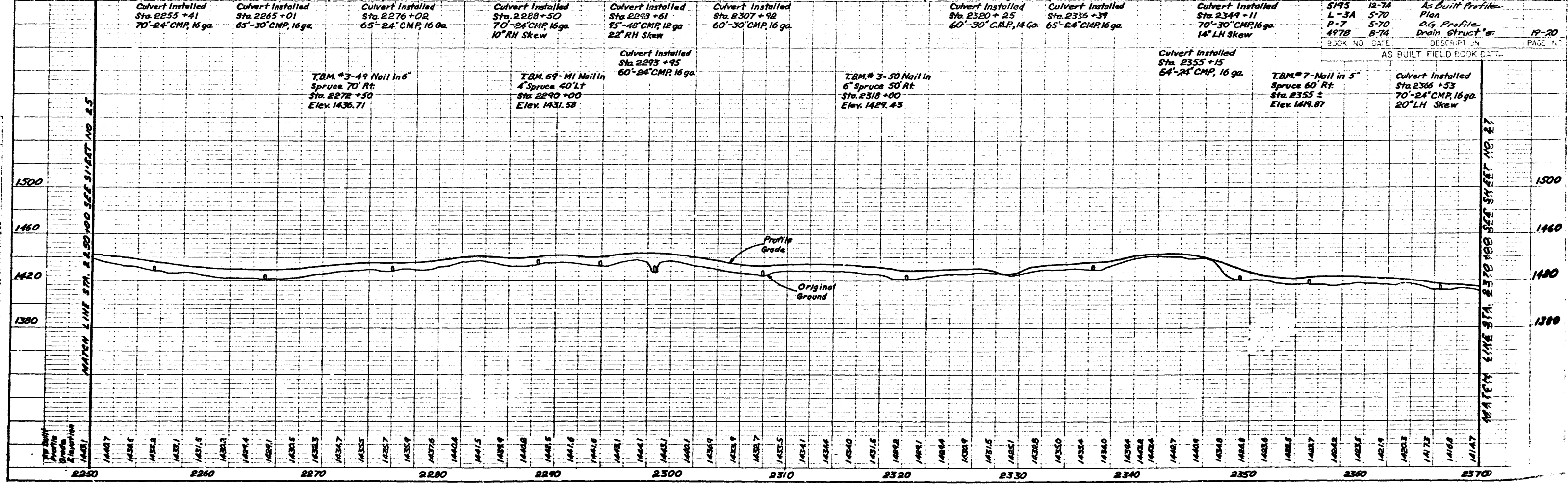
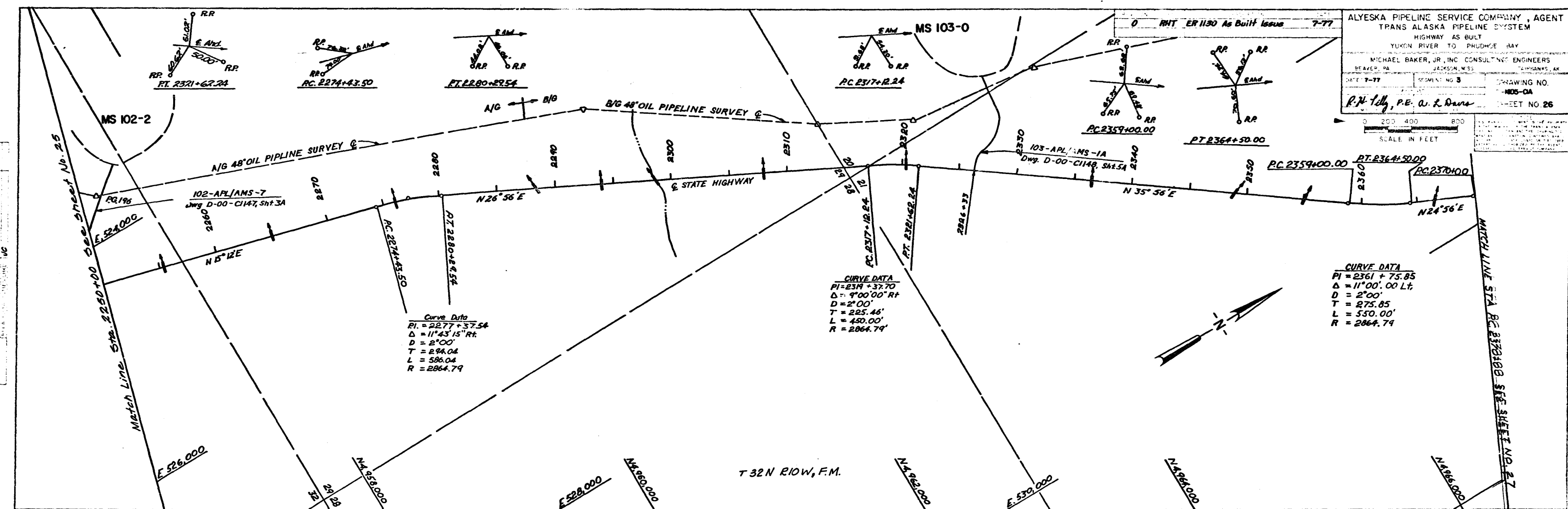
ALYESKA PIPELINE SERVICE COMPANY, AGENT
 TRANS ALASKA PIPELINE SYSTEM
 HIGHWAY AS BUILT
 YUKON RIVER TO RAJAHAY BAY
 ENGINEERS
 MICHAEL BAKER, INC.
 DRAWING NO. 0-103-CIA
 SHEET NO. 25
 L.N. T.M. P.E. D. R. B. R. R.
 SCALE: 1" = 400'



CURVE DATA
PI = 2361 + 75.85
Δ = 11° 00' 00" Lt
D = 2° 00'
T = 275.85
L = 350.00'
R = 2864.74

CURVE DATA
PI = 2319 + 37.70
Δ = 9° 00' 00" Rt
D = 2° 00'
T = 225.46'
L = 450.00'
R = 2864.74

Curve Data
PI = 2277 + 37.54
Δ = 11° 43' 15" Rt
D = 2° 00'
T = 294.04
L = 586.04
R = 2864.74



PLAN	7%
7%	

PROFILE	7%
7%	

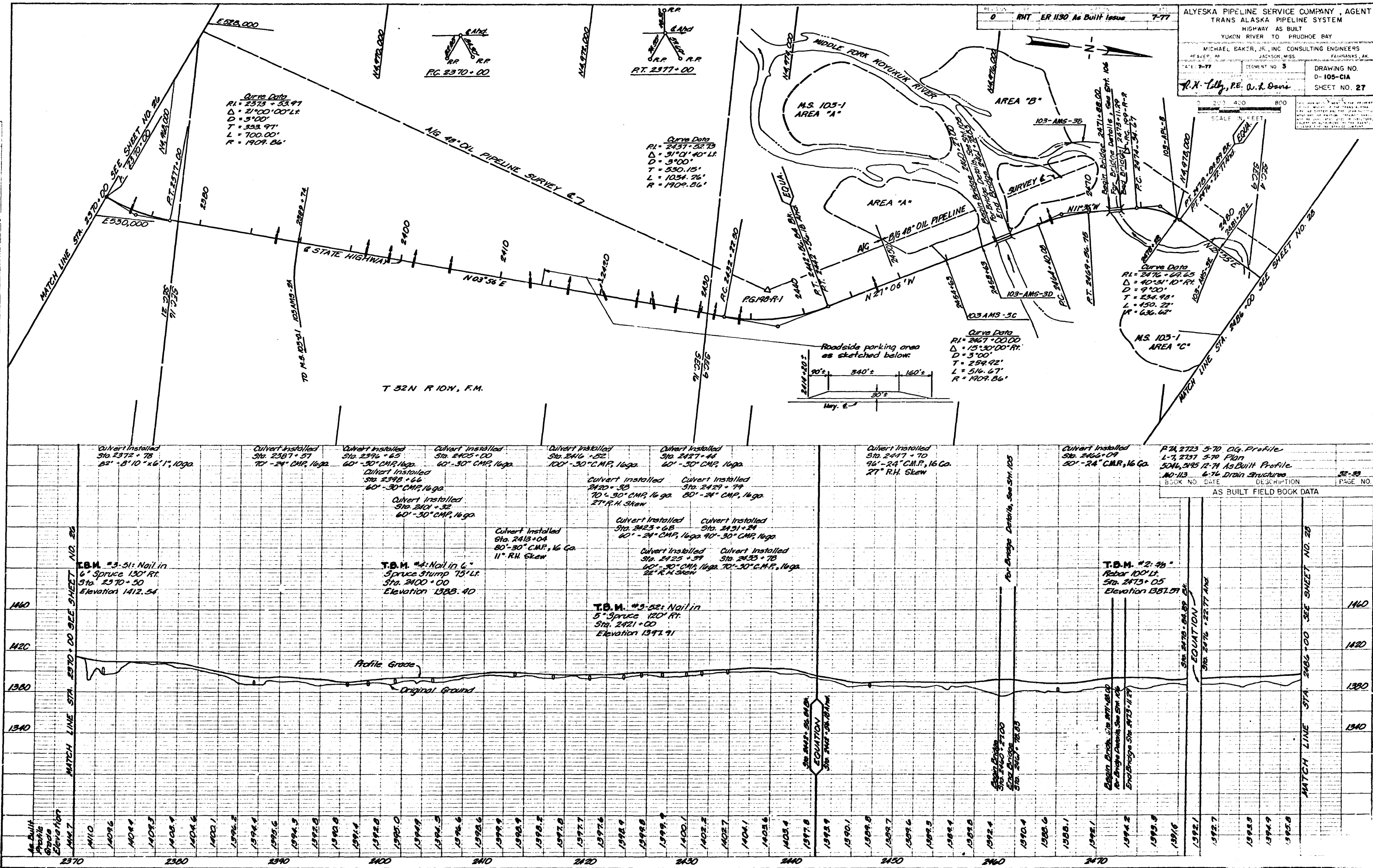
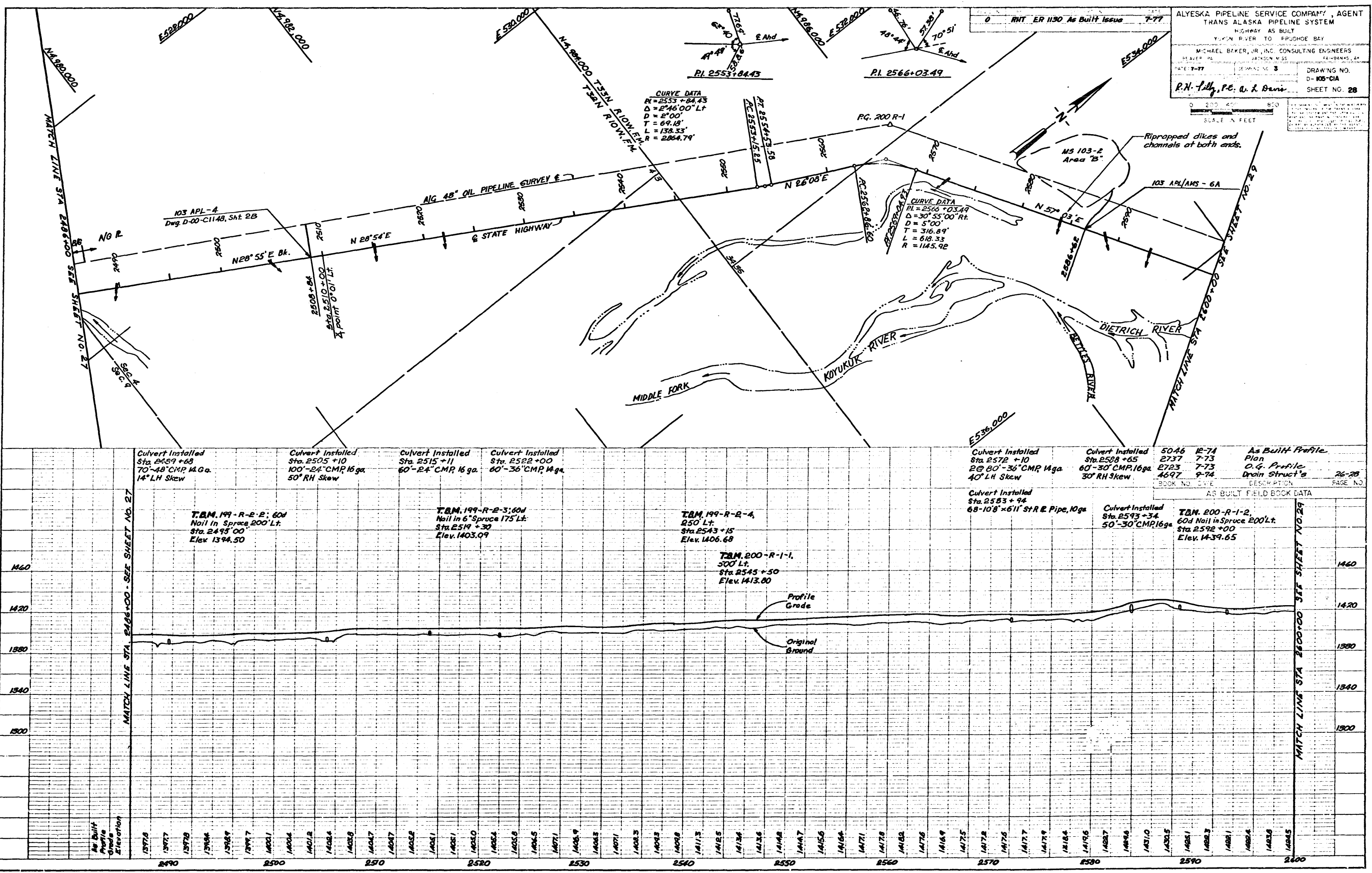


PLATE 1 PLAN-PROFILE B P R STANDARD
SOURCE: DETOUR CO. (CIVIL) - NEW YORK

PLAN

PROFILE



ALYESKA PIPELINE SERVICE COMPANY, AGENT
 TRANS ALASKA PIPELINE SYSTEM
 HIGHWAY AS BUILT
 KUYUK RIVER TO PRUDHOE BAY
 MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS
 DATE 7-77 DRAWING NO. 3 SHEET NO. 28
 P.N. Tilly, P.E. & L. Davis

PLATE 1 PLAN-PROFILE B.P.R. STANDARD

PLAN

PROFILE

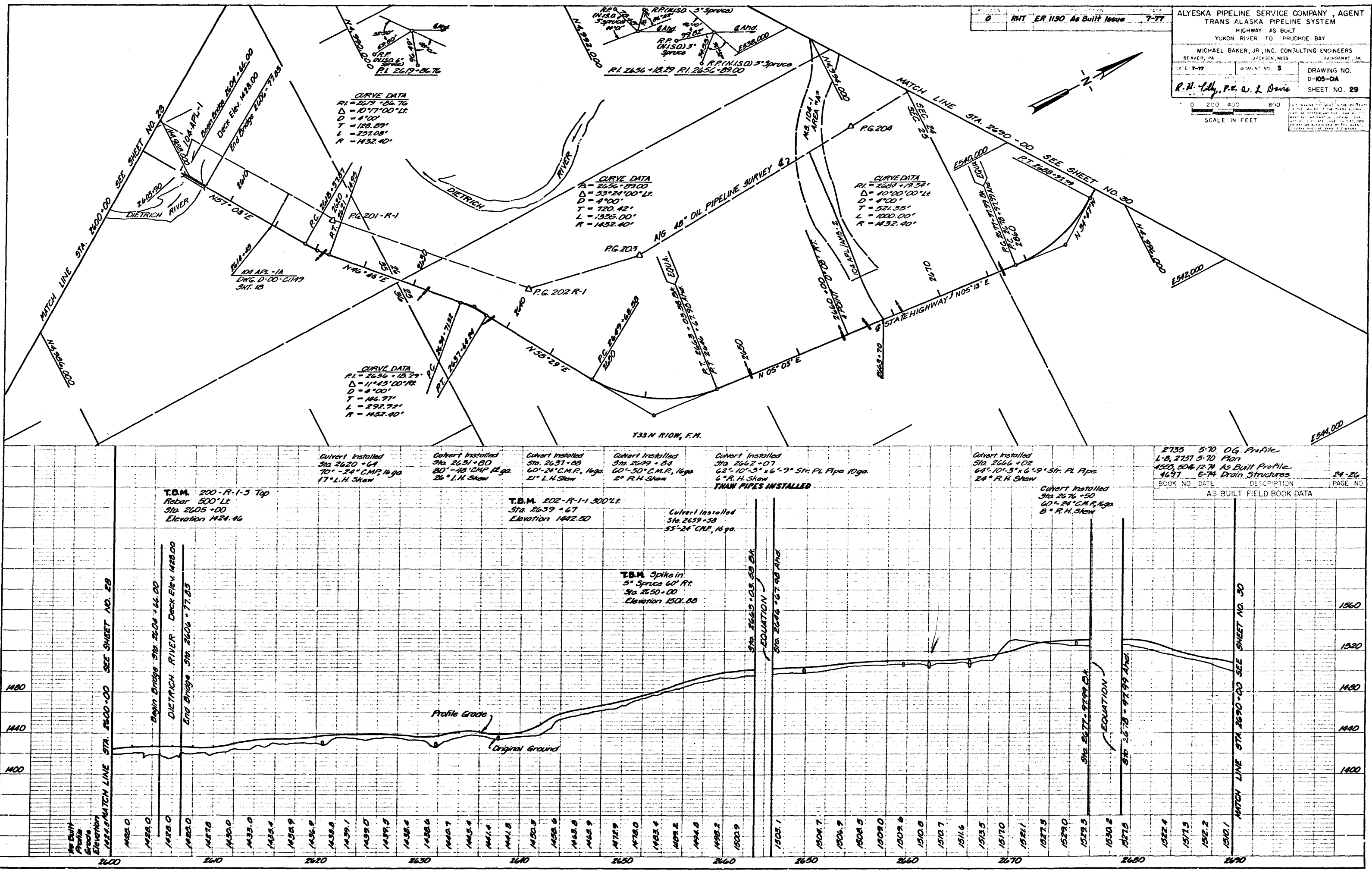


PLATE 1 PLAN-PROFILE B.P.R. STANDARD
SHEET 11 OF 12 OF CHALD N.E. 10N

PLAN

PROFILE

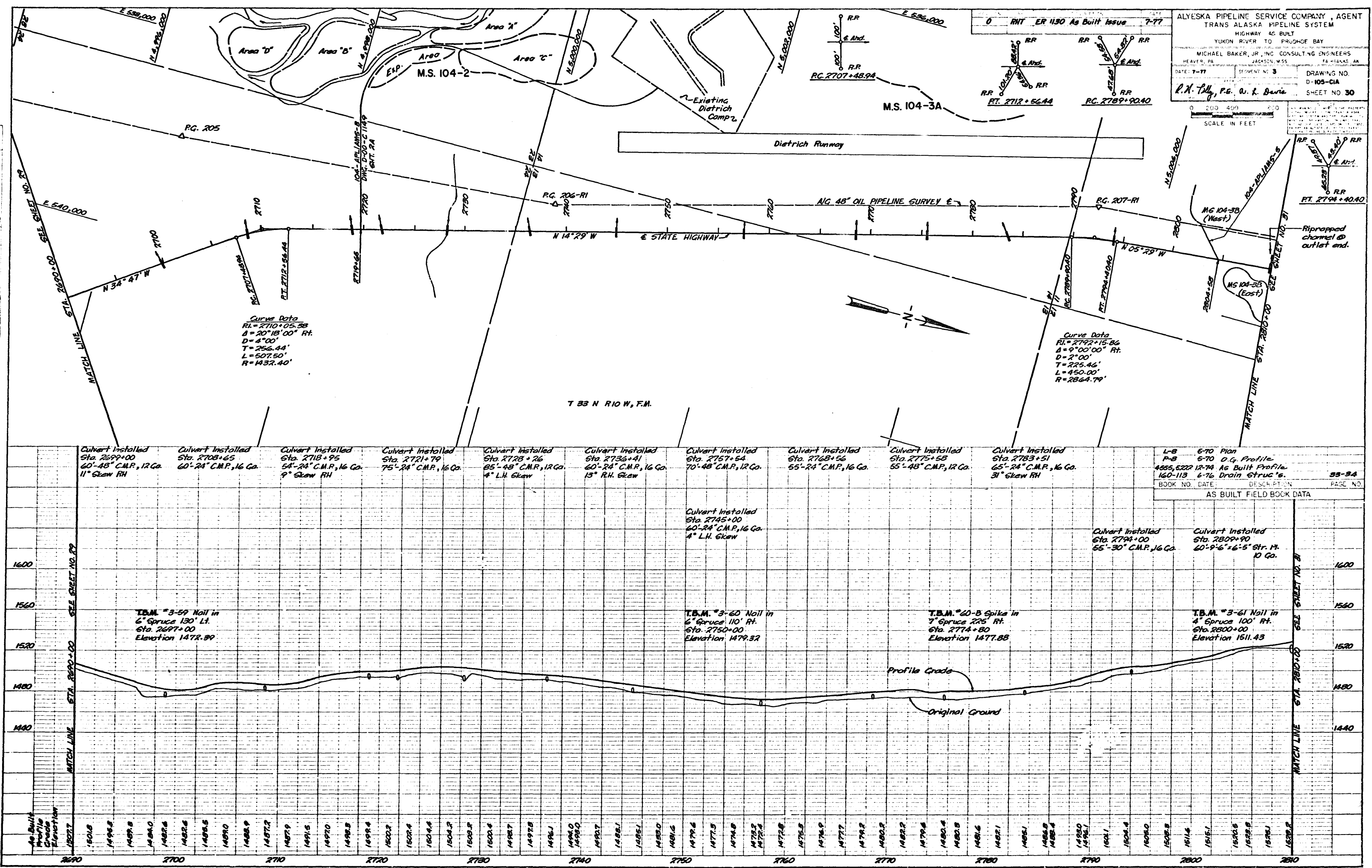


PLATE 1 PLAN-PROFILE B.P.R. STANDARD
SUGAR DETECTION CO. CHICAGO, ILL. 60604

ALYSEKA PIPELINE SERVICE COMPANY, AGENT
TRANS ALASKA PIPELINE SYSTEM
HIGHWAY 45 BUILT
YUKON RIVER TO PRUDHOE BAY
MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS
DATE: 7-77
DRAWING NO. D-105-CIA
SHEET NO. 30

PLAN

PROFILE

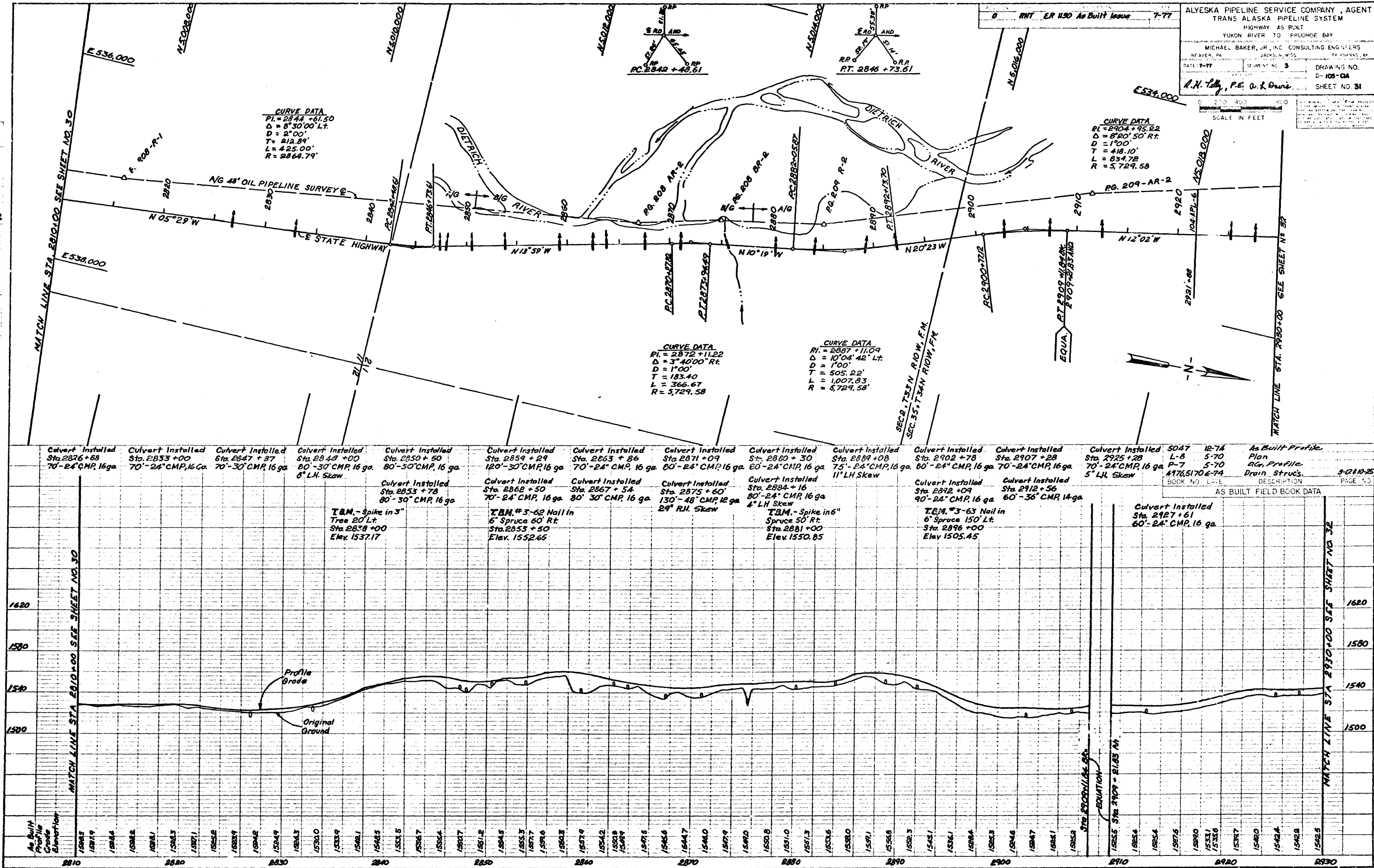


PLATE 1 PLAN - PROFILE B.P.R. STANDARD

PLAN

PROFILE

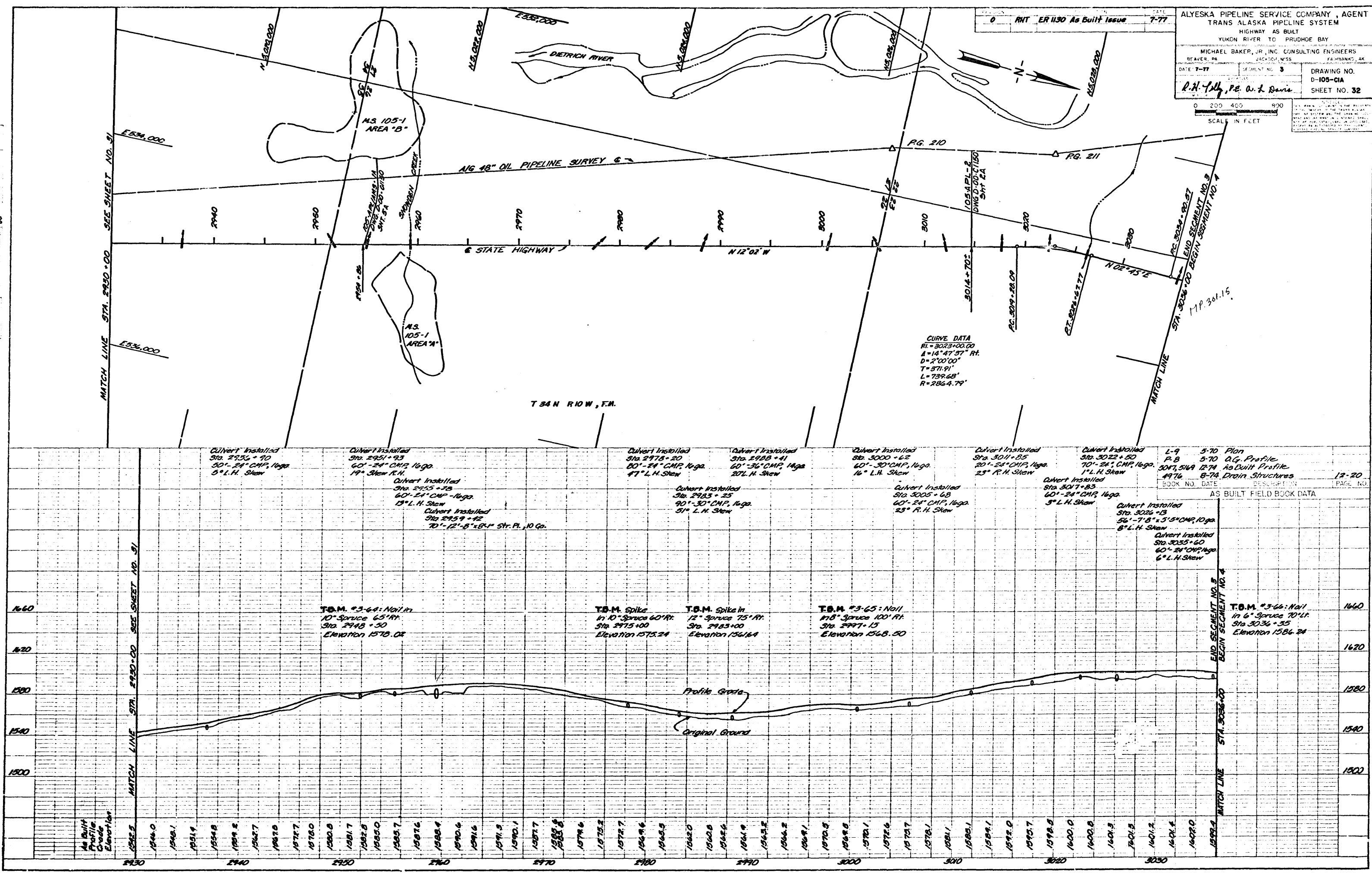
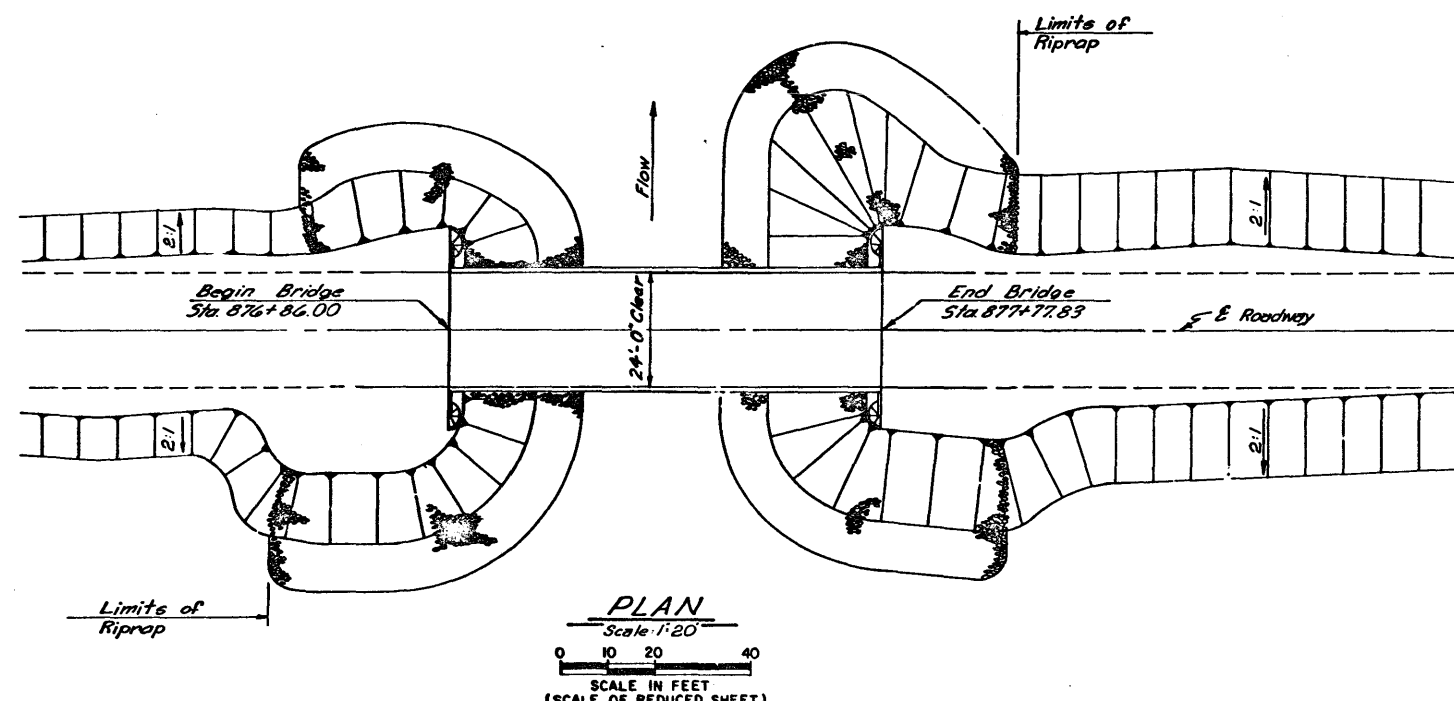
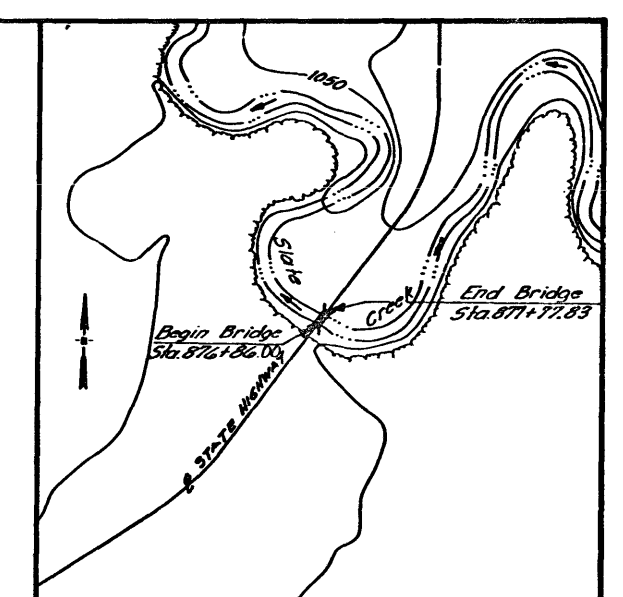


PLATE 1 PLAN-PROFILE B.P.R. STANDARD
EARTH DIVISION (S.D.) 100-100



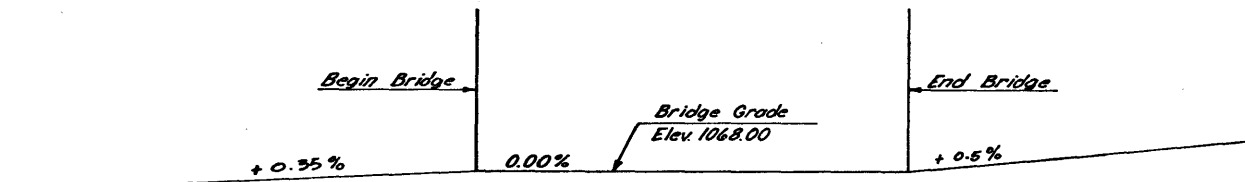
AS BUILT NOTES

- Trash Rocks per details on Sht. 181 were installed on Bents Nos. 2 & 3.
- Piles were driven into thawed soils; pile shoes were not used.
- Bridge deck elevation from field book 5225, page 9.
- Riprap configuration shown determined by 1976 field inspection.



HYDROLOGIC DATA

Drainage Area - 84 Sq. Miles
Design Discharge - 2,791 CFS
Design Velocity - 8.4 FPS
Design High Water Elev. = 1062.0
Mean High Water Elev. = 1059.2
Mean Low Water Elev. = 1058.0



Bent No.	Pile No.	Tip Elev.
1 Sta. 876+86.92	1-1	990.42
	1-2	992.3
	1-3	999.0
	1-4	992.9
2 Sta. 877+16.92	2-1	983.7
	2-2	992.6
	2-3	989.4
	2-4	989.1
3 Sta. 877+46.92	3-1	991.4
	3-2	988.6
	3-3	990.4
	3-4	990.4
4 Sta. 877+76.92	4-1	979.9
	4-2	989.0
	4-3	994.1
	4-4	992.7

NOTES

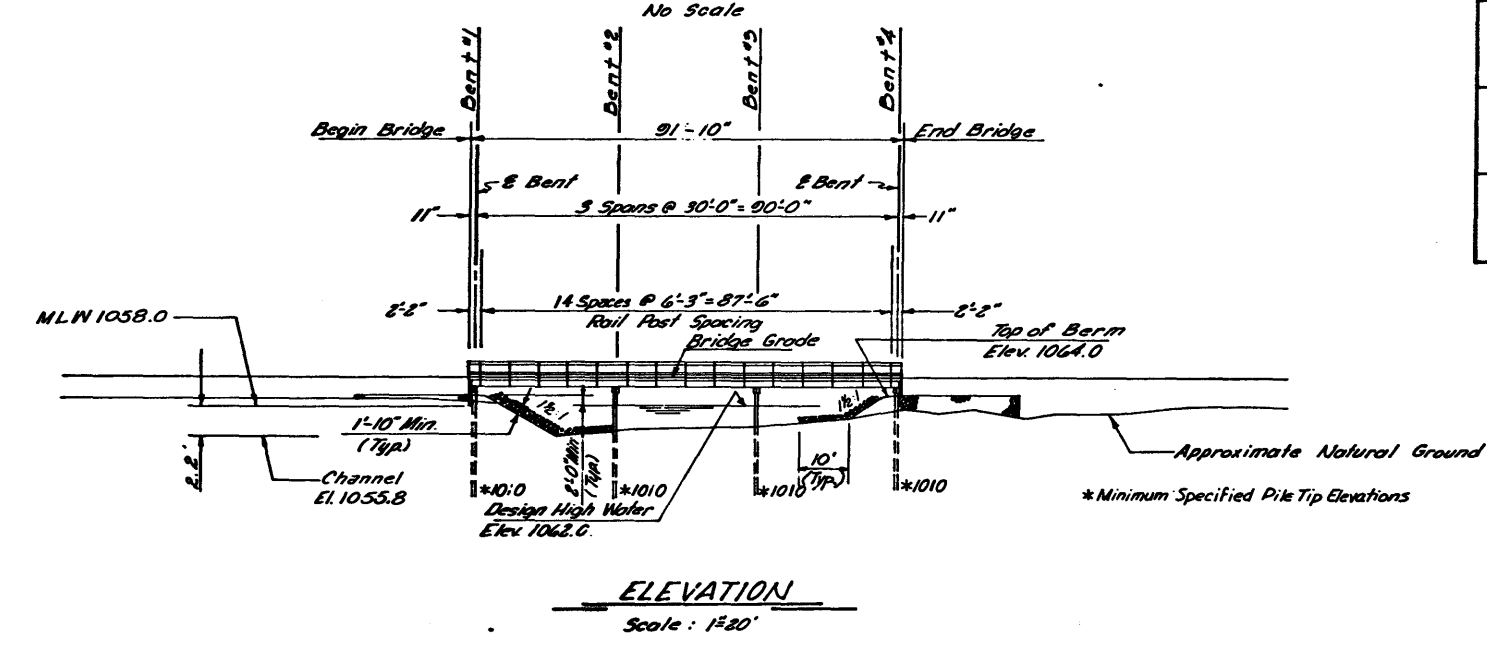
- See Sheet Nos. 109-114 for General Notes & Quantities
- See Standard Drawings:
30 Foot Spans: Abutment / Bent Details
End Span Details
Intermediate Span Details

FOUNDATION NOTES

- Piles shall be Driven 1/2 Shoes Unless Otherwise Approved By The Engineer.
- To Minimize Frost Heaving At Abutments Natural Soils shall be Excavated To A Depth Of Five Feet Below Natural Ground. The Excavation shall then be Backfilled With Free Draining, Non-Frost Susceptible, Granular Material.

DESIGN NOTES

1080
1070
1060
1050
Datum MSL

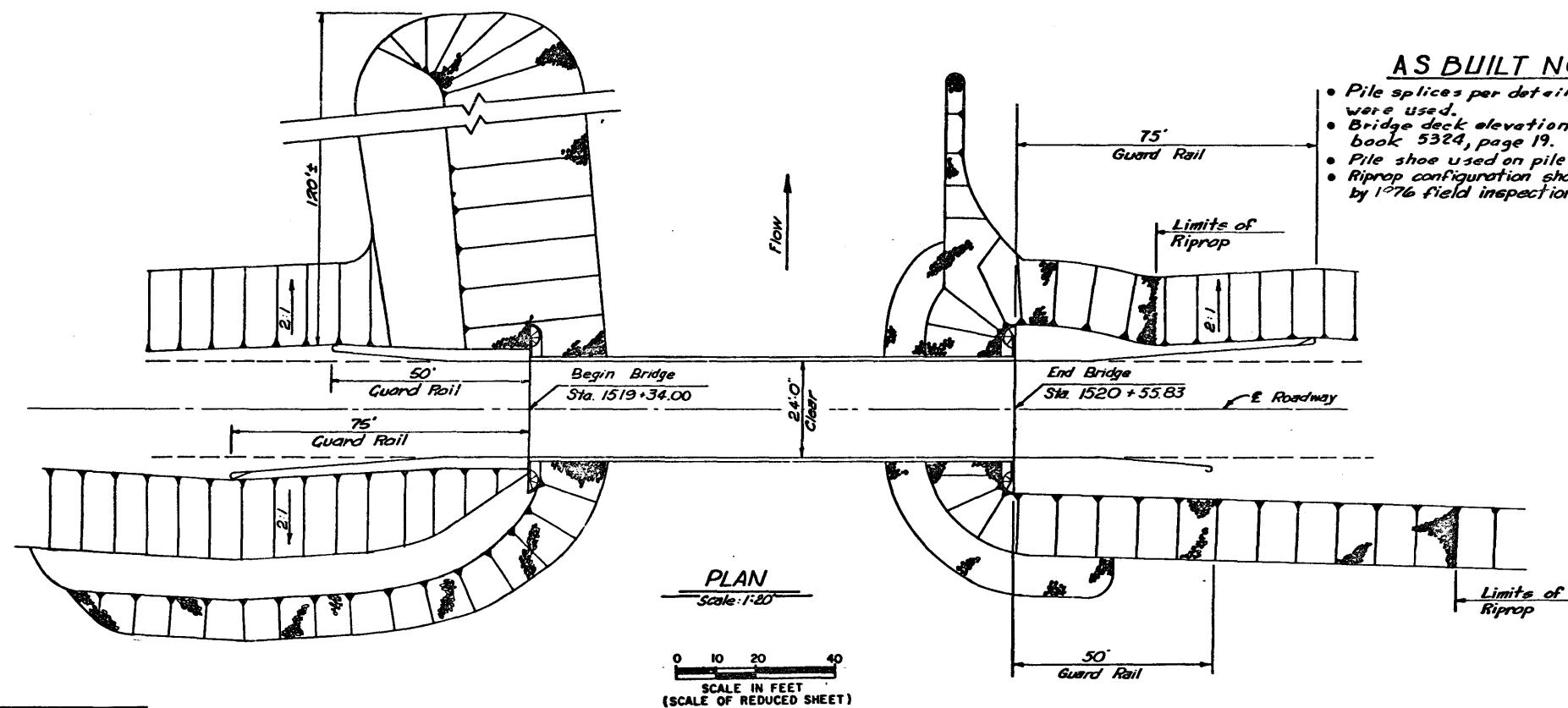


STA. 876 + 86

NOTES:
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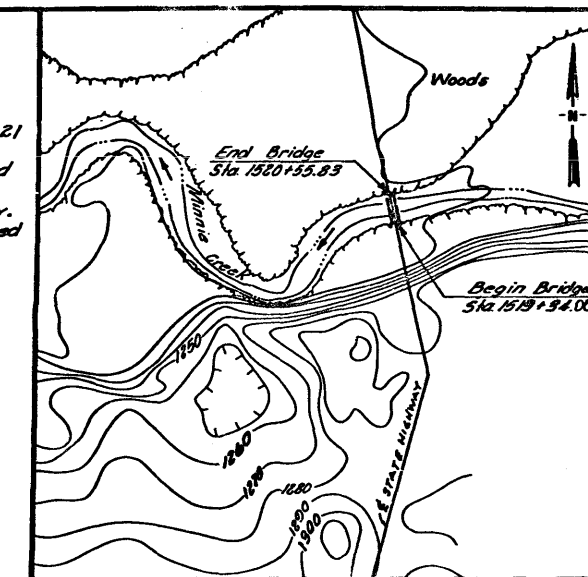
SEGMENT NO. 3

REVISION	BY	DESCRIPTION	DATE
0	RHT	ER 1130 As Built Issues	7-77
ALYESKA PIPELINE SERVICE COMPANY, AGENT TRANS ALASKA PIPELINE SYSTEM HIGHWAY AS BUILT YUKON RIVER TO PRUDHOE BAY GENERAL DRAWING SLATE CREEK			
MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS BEAVER, PA. JACKSON, WIS. FAIRBANKS, AK.			
DATE: 7-77	SEGMENT NO. 3	DRAWING NO.	
APPROVED		D-105-CIA	
R.N. Loh, P.E.		SHEET NO. 100	



AS BUILT NOTES

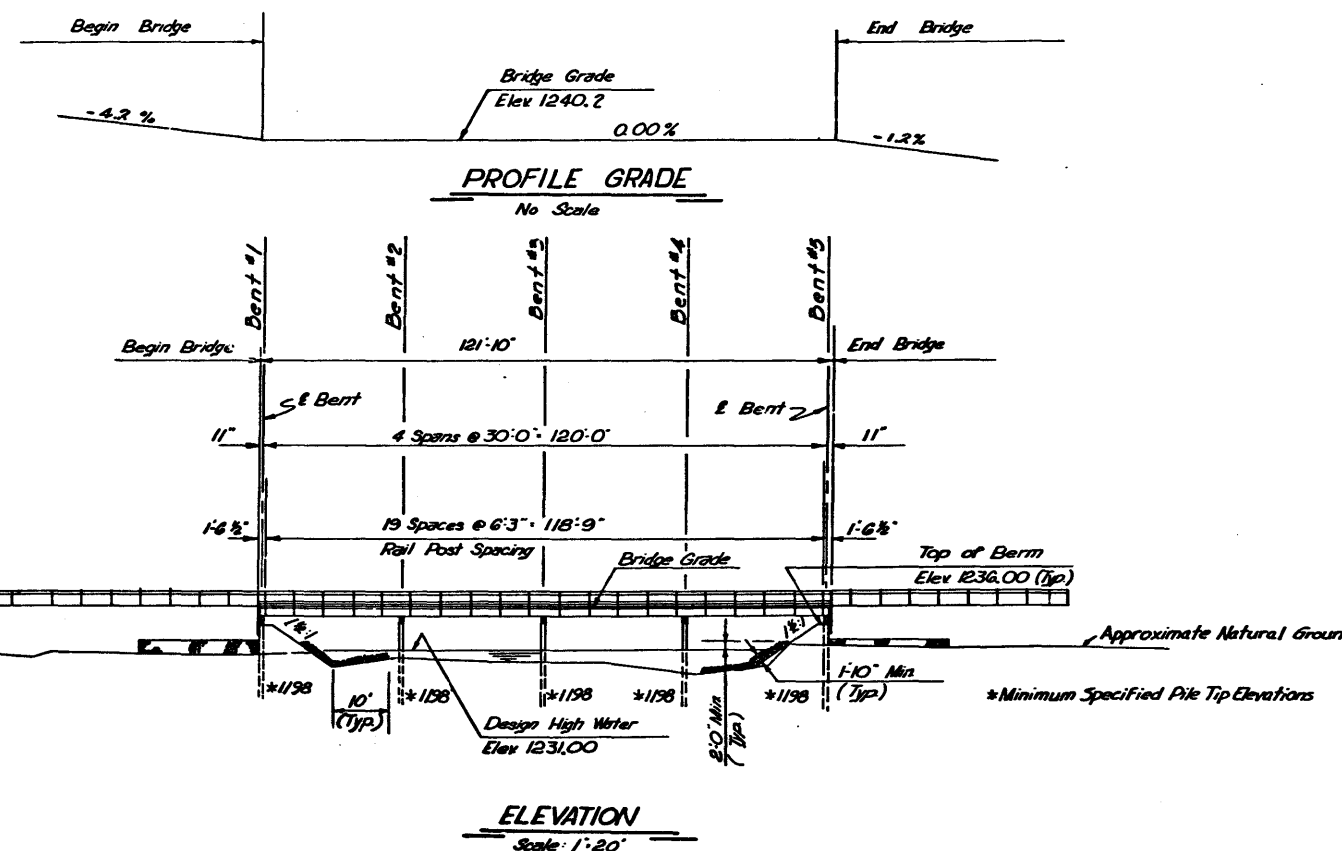
- Pile splices per details on Sht. 121 were used.
- Bridge deck elevation from field book 5324, page 19.
- Pile shoe used on pile No. 4-1 only.
- Riprap configuration shown determined by 1976 field inspection.



HYDROLOGIC DATA

Drainage Area — 53 Sq. Mi.
Design Discharge — 2655 CFS
Design Velocity — 7.9 FPS

Bent No.	Pile No.	Tip Elev.
1 Sta. 1519+34.92	1-1	1191.4
	1-2	1191.4
	1-3	1191.4
	1-4	1191.4
2 Sta. 1519+64.92	2-1	1187.4
	2-2	1187.4
	2-3	1187.4
	2-4	1187.4
3 Sta. 1519+94.92	3-1	1187.4
	3-2	1187.4
	3-3	1187.4
	3-4	1187.4
4 Sta. 1520+24.92	4-1	1184.9
	4-2	1191.4
	4-3	1185.4
	4-4	1185.4
5 Sta. 1520+54.92	5-1	1179.4
	5-2	1187.4
	5-3	1187.4
	5-4	1185.4



NOTES

- See Sheets Nos. 109-114 For General Notes & Quantities
- See Standard Drawings:
- 30 Foot Spans: Abutment / Intermediate Bent
- End Span
- Intermediate Span

FOUNDATION NOTES

- Piles Shall Be Driven 1/2 Shoes Unless Otherwise Approved By The Engineer.
- To Minimize Frost Heaving At Abutments Natural Soils Shall Be Excavated To A Depth Of Five Feet Below Natural Ground. The Excavation Shall Then Be Backfilled With Free Draining, Non-Frost Susceptible, Granular Material.

DESIGN NOTES

Elev 1260

Elev 1250

Elev 1240

Elev 1230

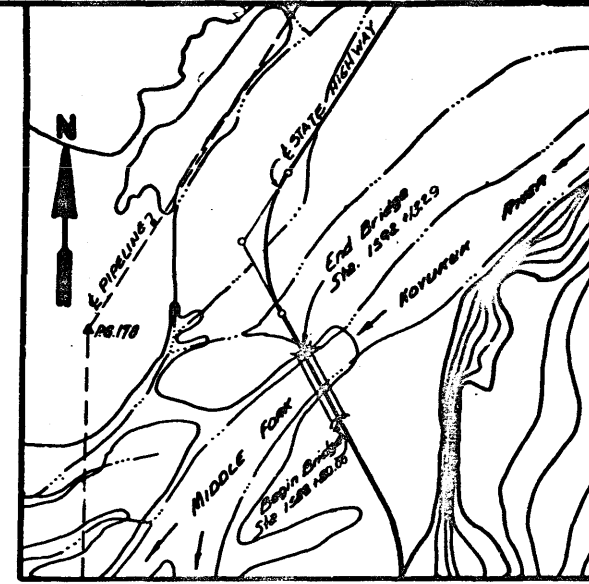
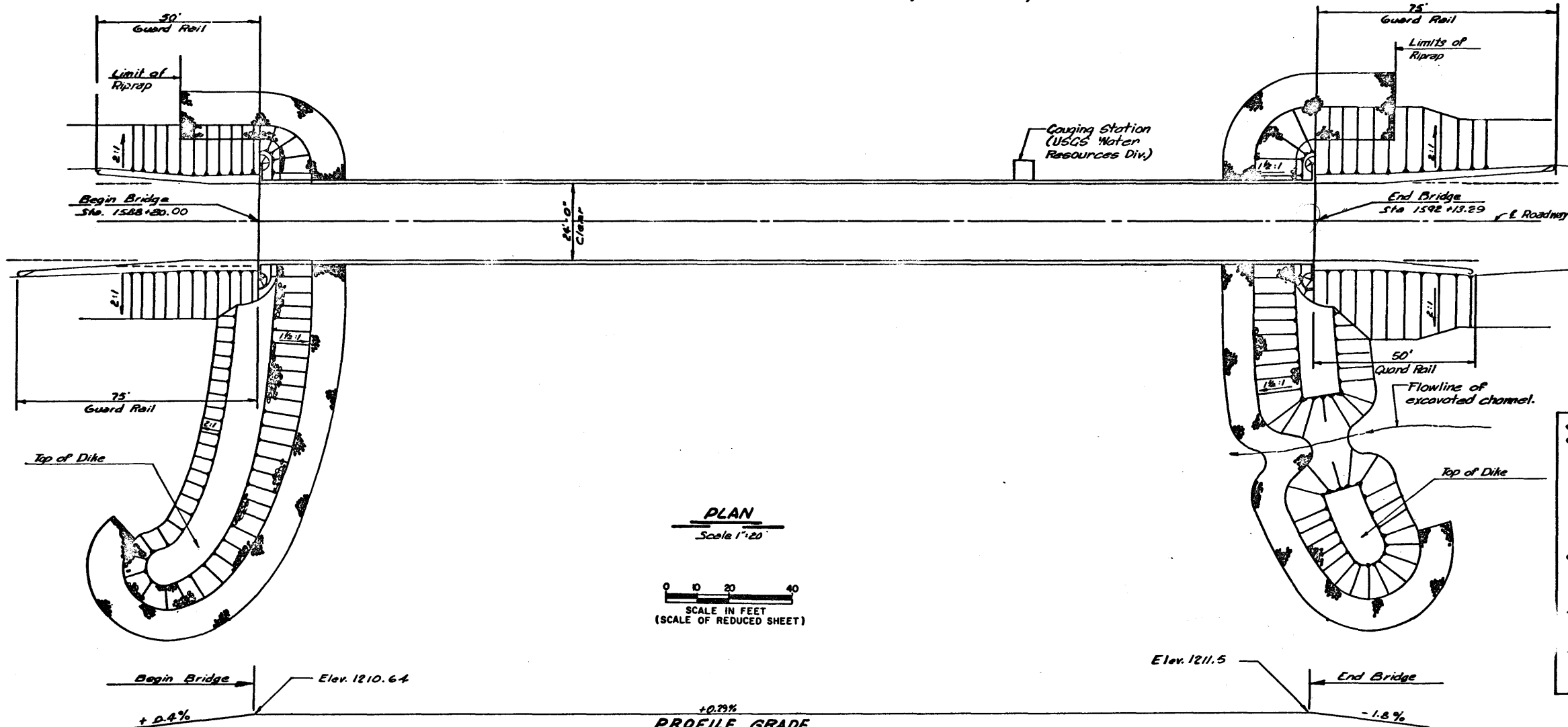
Elev 1220

STA. 1519+34

REVISION	BY	DESCRIPTION	DATE
0	RHT	ER 1130 As Built Issue	7-77
ALYESKA PIPELINE SERVICE COMPANY, AGENT TRANS ALASKA PIPELINE SYSTEM HIGHWAY AS BUILT YUKON RIVER TO PRUDHOE BAY GENERAL DRAWING MINNIE CREEK			
MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS BEAVER, PA. JACKSON, MISS. FAIRBANKS, AK.			
DATE: 7-77	SEGMENT NO. 3	DRAWING NO. D-105-CIA	SHEET NO. 101
APPROVED R.H. Baker, Jr., P.E. U.S. & Co.		ALYESKA	

SEGMENT NO. 3

- AS BUILT NOTES**
- Pile splices per details on Sht. 121 were used.
 - Bridge deck elevation from field book 5149, page 1.
 - Piles were driven into thawed soils; pile shoes were not used.
 - Riprap configuration shown determined by 1976 field inspection.



AREA MAP
Scale 1"=400'
0 200 400 800
SCALE IN FEET
(SCALE OF REDUCED SHEET)

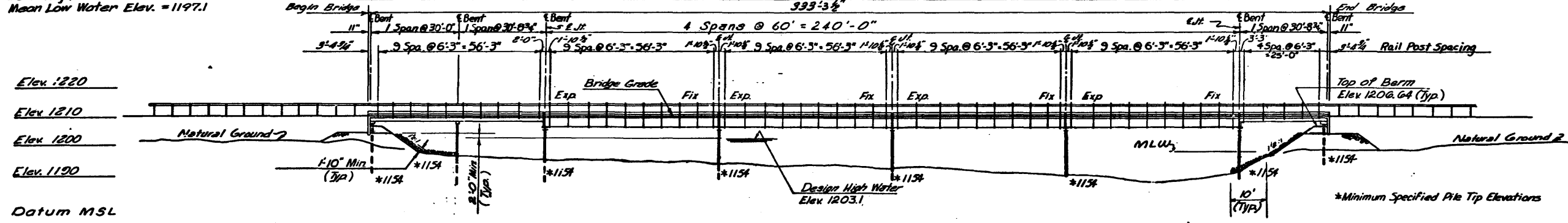
- NOTES**
- See Sheet Nos. 100-114 For General Notes & Quantities
 - See Standard Drawings:
30 Foot Spans: Abutment & Intermediate Bent
End Span
Intermediate Span
Guard Rail
Two Lane 60' Span-14520-44:
Superstructure Plan & Elevation
Superstructure Sections Details
Bent & Abutment Details
 - Work This Sheet With Plan & Profile Sheet No. 80
- FOUNDATION NOTES**
- Difficult Driving Is Anticipated Above Elevation 1185.6.
• No Driving Shoes May Be Used With The Approval Of The Engineer.
 - All Piles Shall Be Driven To 30 Tons ENR Bearing For A Minimum Of Two Feet Below Elevation 1154.0.

HYDROLOGIC DATA

Drainage Area - 1200 Sq. Mi.
Design Discharge - 50,765 CFS
Design Velocity - 10.5 FPS
Design High Water Elev. = 1203.1
Mean High Water Elev. = 1199.8
Mean Low Water Elev. = 1197.1

PROFILE GRADE
NO SCALE

Pile No.	Tip Elev.	Pile No.	Tip Elev.	Pile No.	Tip Elev.	Pile No.	Tip Elev.	Pile No.	Tip Elev.	Pile No.	Tip Elev.	Pile No.	Tip Elev.	Pile No.	Tip Elev.
1-1	1142.6	2-1	1151.1	3-1	1151.3	4-1	1151.1	5-1	1151.1	6-1	1149.9	7-1	1146.9	8-1	1150.1
1-2	1145.6	2-2	1149.8	3-2	1149.4	4-2	1151.3	5-2	1150.1	6-2	1147.6	7-2	1149.5	8-2	1148.6
1-3	1144.6	2-3	1149.3	3-3	1148.4	4-3	1151.3	5-3	1150.2	6-3	1142.1	7-3	1151.5	8-3	1137.6
1-4	1143.6	2-4	1147.5	3-4	1148.8	4-4	1151.3	5-4	1149.2	6-4	1143.9	7-4	1150.5	8-4	1140.6
				3-5	1150.3	4-5	1151.3	5-5	1148.1	6-5	1148.3	7-5	1151.5		
				3-6	1149.3	4-6	1151.3	5-6	1148.1	6-6	1145.9	7-6	1151.5		
				3-7	1151.5	4-7	1151.1	5-7	1150.1	6-7	1147.6	7-7	1150.5		



STA. 1588+80

REVISION	BY	DESCRIPTION	DATE
0	RIT	ER 1190 As Built Issue	7-77

ALYESKA PIPELINE SERVICE COMPANY, AGENT
TRANS ALASKA PIPELINE SYSTEM
HIGHWAY AS BUILT
YUKON RIVER TO PRUDHOE BAY

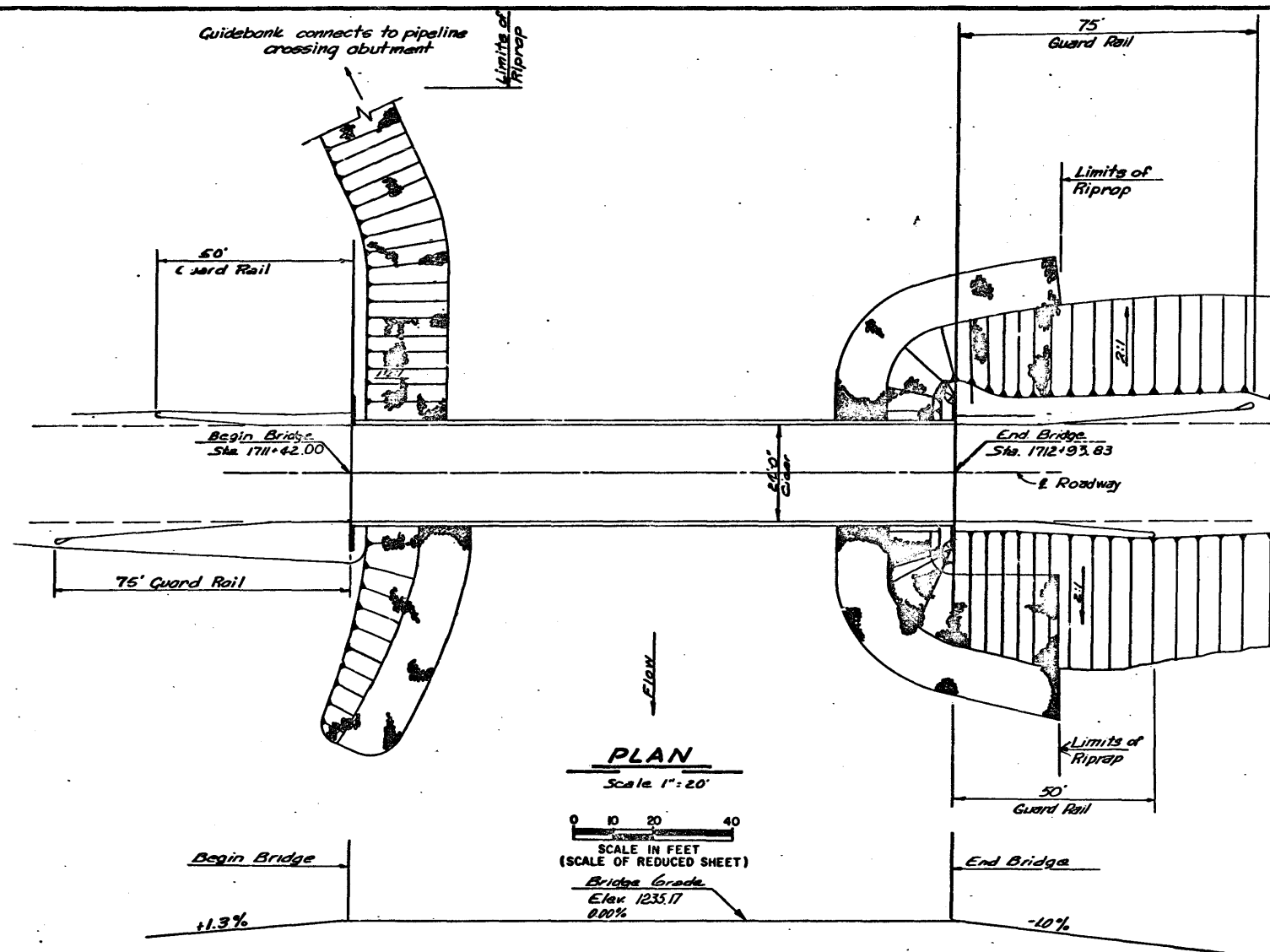
GENERAL DRAWING
MIDDLE FORK KOYUKUK RIVER

MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS
BEAVER, PA. JACKSON, MISS. FAIRBANKS, AK.

DATE: 7-77 SEGMENT NO. 3 DRAWING NO. D-105-CIA
APPROVED: R.H. Baker, Jr. D.L. Baker
S.D. Baker ALYESKA SHEET NO. 102

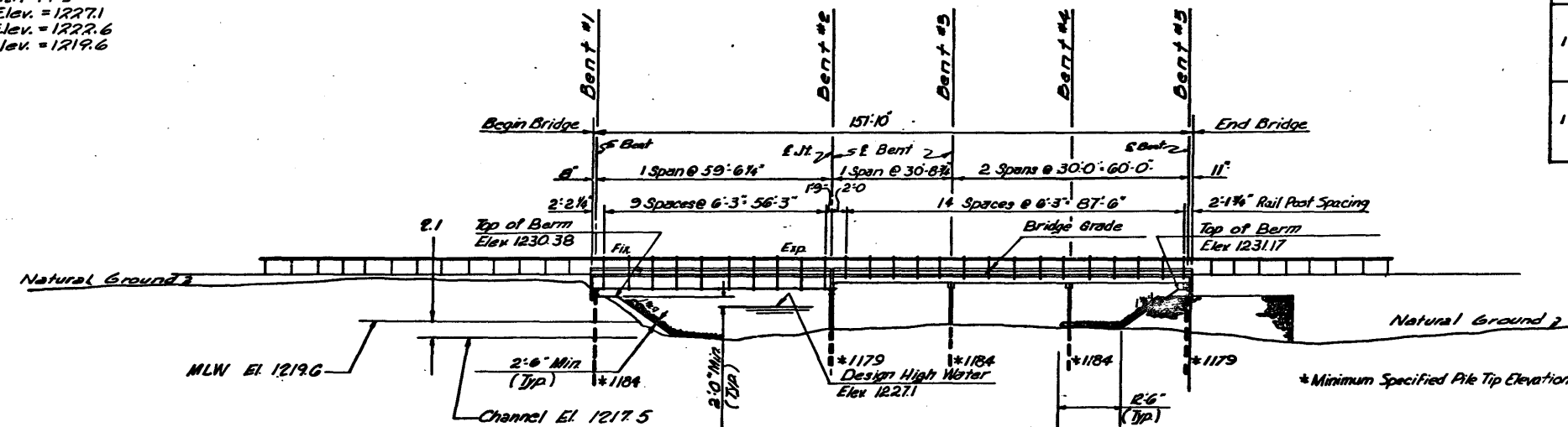
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SEGMENT NO. 3



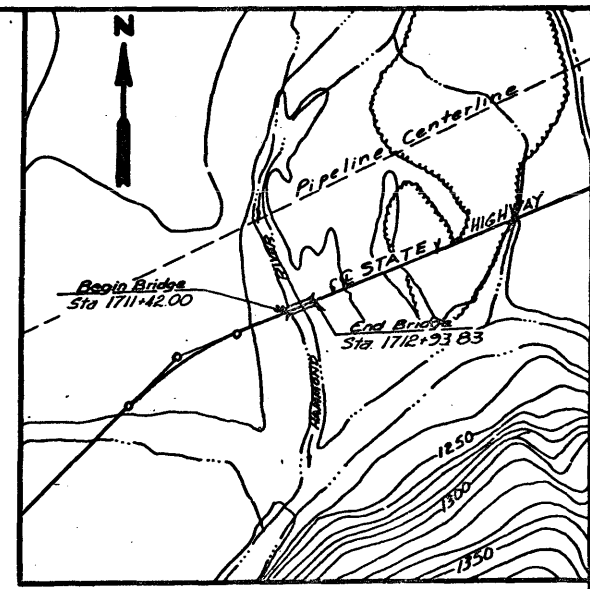
PLAN
Scale 1" = 20'

PROFILE GRADE
No Scale



ELEVATION
Scale 1" = 20'

- AS BUILT NOTES**
- Pile splices per details on Sht. 121 were used.
 - Bridge deck elevation from field book 5149, page 20.
 - Piles were driven into thawed soils; pile shoes were not used.
 - HPS 10x57 piles were driven for Bent No. 5.
 - Riprap configuration shown determined by 1976 field inspection.



AREA MAP
Scale 1" = 400'

AS-Built Pile Tip Elevations		
Bent No.	Pile No.	Tip Elev.
1 Sta. 1711+42.67	1-1	1195.7
	1-2	1185.4
	1-3	1182.9
	1-4	1183.4
	1-5	1183.9
	1-6	1183.4
	1-7	1183.9
	1-8	1183.4
	1-9	1195.7
2 Sta. 1712+02.19	2-1	1196.4
	2-2	1191.9
	2-3	1185.4
	2-4	1184.4
	2-5	1183.4
	2-6	1183.9
	2-7	1187.4
	2-8	1198.0
	2-9	1199.6
3 Sta. 1712+32.92	3-1	1199.8
	3-2	1199.8
	3-3	1199.8
4 Sta. 1712+62.92	4-1	1199.8
	4-2	1199.8
	4-3	1199.8
5 Sta. 1712+92.92	5-1	1178.6
	5-2	1127.6
	5-3	1181.6
	5-4	1127.6

- NOTES**
- See Sheet Nos. 100-104 for General Notes & Quantities
 - See Standard Drawings:
 - 30 Foot Spans: Abutment, Intermediate Bent, End Span
 - Guard Rail: Two Lane 60' Span HS-20-44
 - Superstructure Plan & Elevation
 - Superstructure Sections & Details
 - Bent & Abutment Details

FOUNDATION NOTES

- Piles Shall Be Driven w/o Shoes Unless Otherwise Approved By The Engineer.
- In Winter Conditions Seasonally Frozen Soils Shall Be Penetrated With Pilot Holes Prior To Driving Of Piles.
- In Thawed Conditions Pilot Holes Shall Penetrate To A Depth Of Five Feet Below Natural Ground.
- Diameter Of Pilot Holes Shall Not Exceed One-Half The Diagonal Measurement Of The Pile.

DESIGN NOTES

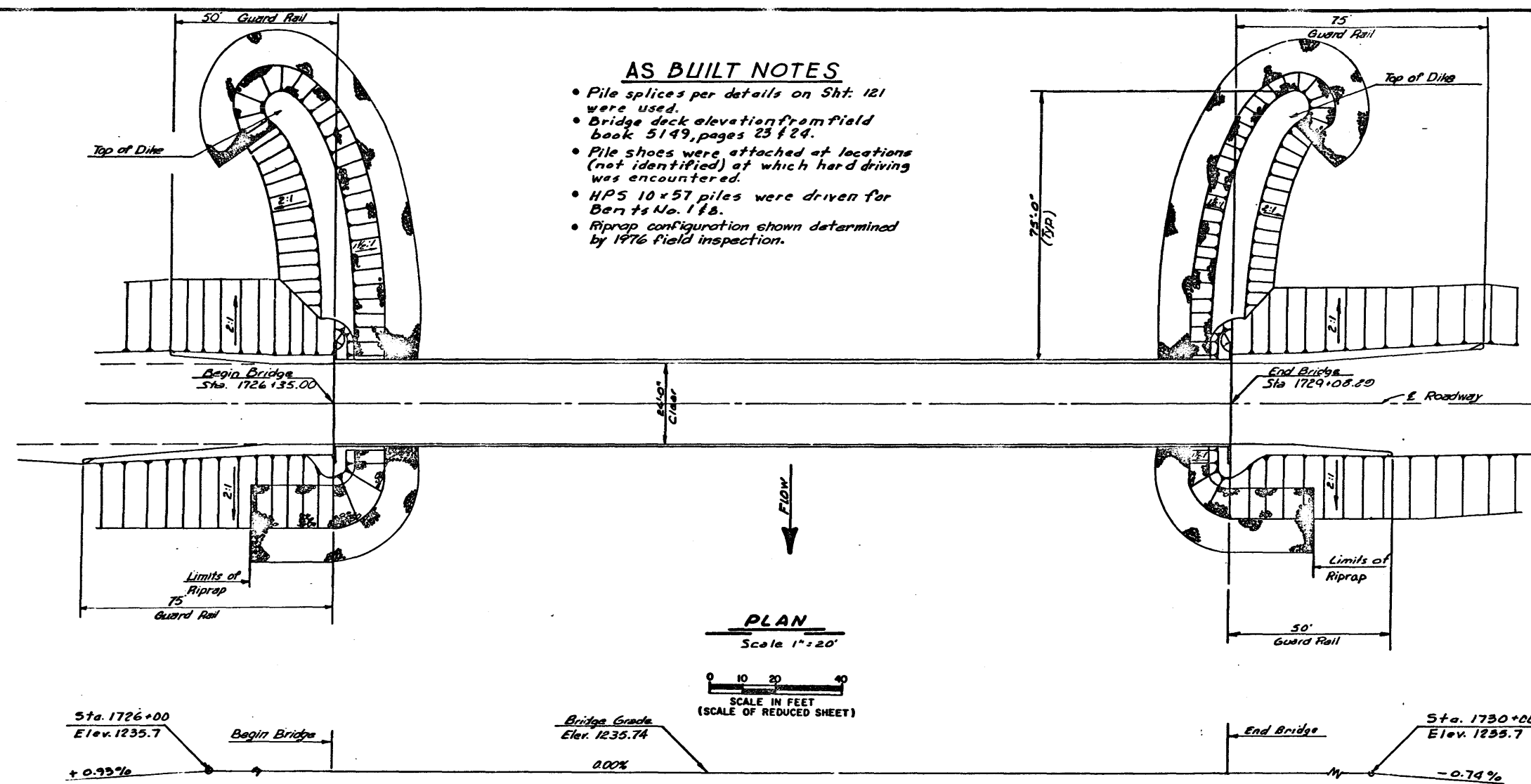
STA. 1711+42

REVISION	BY	DESCRIPTION	DATE
0	RHT	ER 1150 As Built Issue	7-77

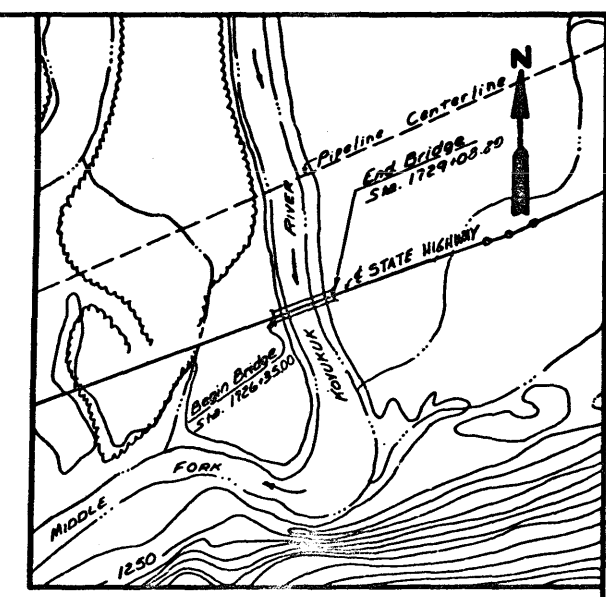
ALYESKA PIPELINE SERVICE COMPANY, AGENT	
TRANS ALASKA PIPELINE SYSTEM	
YUKON RIVER TO PRUDHOE BAY	
GENERAL DRAWING	
HAMMOND RIVER	
MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS	
BEAVER, PA. JACKSON, MISS. FAIRBANKS, AK.	
DATE: 7-77	SEGMENT NO. 3
APPROVED: R.H. P.H. P.E. W. R. Davis	DRAWING NO. D-105-GA
BY: R.H. P.H.	SHEET NO. 103

SEGMENT NO.3

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- ### AS BUILT NOTES
- Pile splices per details on Sht. 121 were used.
 - Bridge deck elevation from field book 5149, pages 23 & 24.
 - Pile shoes were attached at locations (not identified) at which hard driving was encountered.
 - HPS 10x57 piles were driven for Bents No. 1 & 8.
 - Riprap configuration shown determined by 1976 field inspection.



AREA MAP
Scale 1"=400'
0 200 400 800
SCALE IN FEET
(SCALE OF REDUCED SHEET)

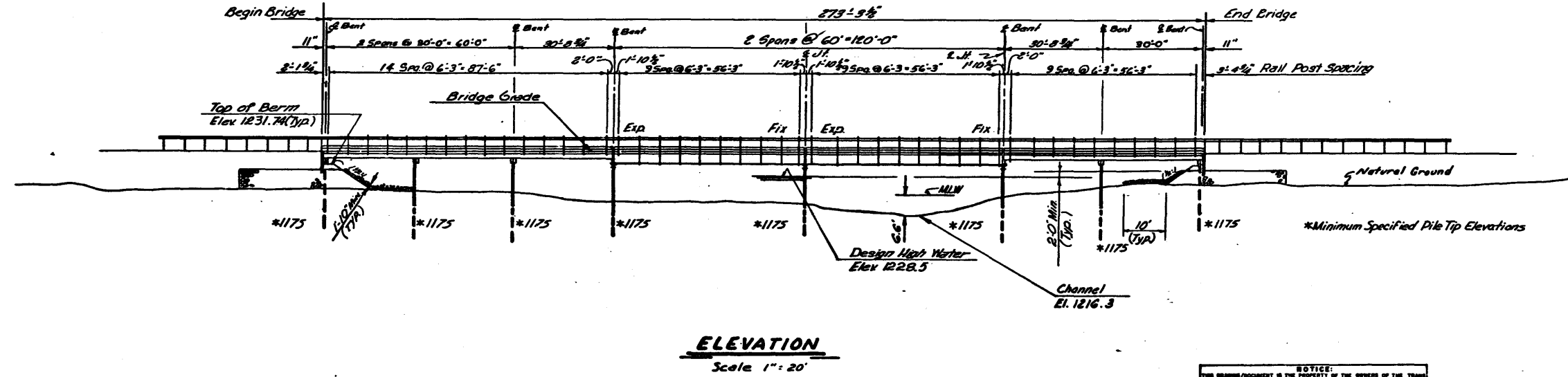
- ### NOTES
- See Sheet Nos. 109-114 For General Notes & Quantities
 - See Standard Drawings:
30 foot Span: Abutment & Intermediate Bent
End Span
Intermediate Span
 - Guard Rail
Two Lane 60' Span HS 20-44:
Superstructure Part Elevations
Superstructure Sections & Details
Bent & Abutment Details

- ### FOUNDATION NOTES
- Hard Driving Is Anticipated Above Elev. 1203.0.
Pile Driving Shoes May Be Used With The Approval Of The Engineer.
 - In Winter Conditions Seasonally Frozen Soils Shall Be Penetrated With Pilot Holes Prior To Driving Of Piles. Diameter Of Pilot Holes Shall Not Exceed One-Half The Diagonal Measurement Of The Piles.

HYDROLOGIC DATA

Drainage Area = 960 Sq. Mi.
Design Discharge = 15,500 CFS
Design Velocity = 10.6 FPS
Design High Water Elev. = 1228.5
Mean High Water Elev. = 1226.2
Mean Low Water Elev. = 1222.9

Pile No.	Tip Elev.	Pile No.	Tip Elev.	Pile No.	Tip Elev.	Pile No.	Tip Elev.	Pile No.	Tip Elev.	Pile No.	Tip Elev.
1-1	1174.3	2-1	1174.9	3-1	1174.7	4-1	1175.0	5-1	1063.5	6-1	1173.9
1-2	1174.4	2-2	1174.9	3-2	1174.6	4-2	1174.7	5-2	1131.0	6-2	1174.0
1-3	1174.6	2-3	1174.7	3-3	1174.4	4-3	1174.6	5-3	1096.0	6-3	1174.1
1-4	1161.5	2-4	1174.6	3-4	1174.8	4-4	1174.9	5-4	1057.5	6-4	1174.1
						4-5	1174.8	5-5	1108.0	6-5	1173.8
						4-6	1174.6	5-6	1093.0	6-6	1173.9
						4-7	1174.5	5-7	1094.5	6-7	1171.9



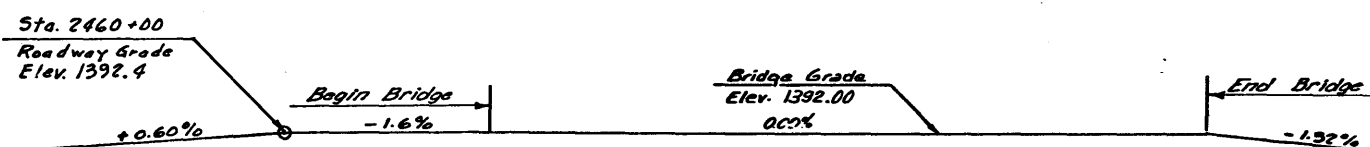
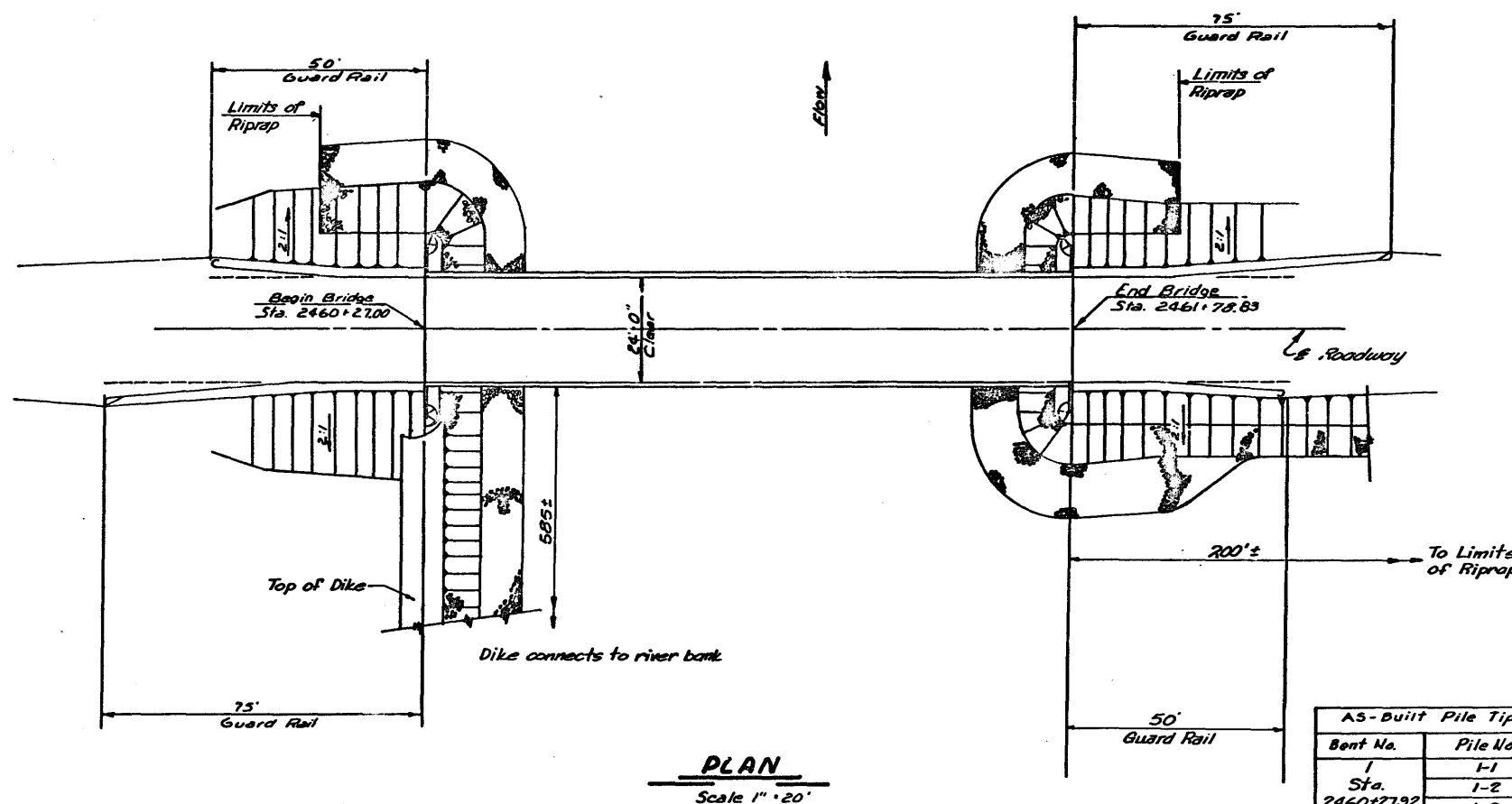
DESIGN NOTES

STA. 1726 + 35

REVISION	BY	DESCRIPTION	DATE
0	RHT	ER 1130 As Built Issue	

ALYESKA PIPELINE SERVICE COMPANY, AGENT TRANS ALASKA PIPELINE SYSTEM HIGHWAY AS BUILT YUKON RIVER TO PRUDHOE BAY	
GENERAL DRAWING MIDDLE FORK KOYUK RIVER	
MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS BEAVER, PA. JACKSON, MISS. FAIRBANKS, AK.	
DATE: 7-77	SEGMENT NO. 3
APPROVED: R. H. Baker, P.E.	APPROVED: W. L. Davis
DRAWING NO. D-105-CIA	
SHEET NO. 104	

SEGMENT NO. 3

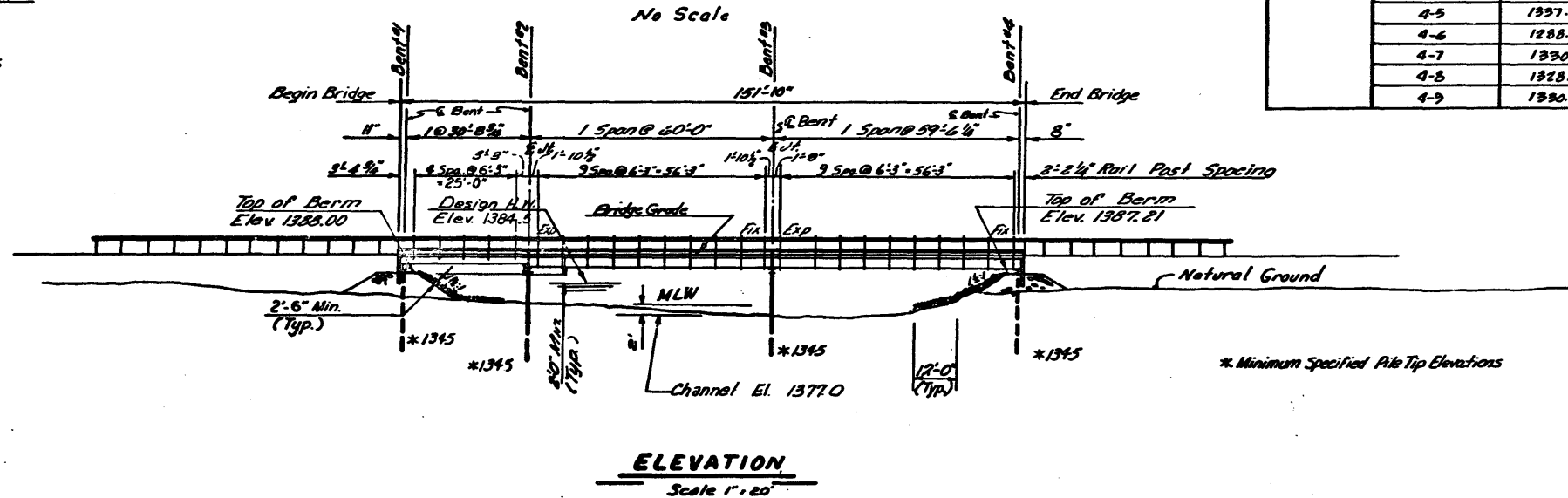


HYDROLOGIC DATA

Drainage Area = 555 Sq. Mi.
Design Discharge = 13,492 CFS
Design Velocity = 12.1 FPS
Design High Water Elev. = 1384.5
Mean High Water Elev. = 1381.4
Mean Low Water Elev. = 1379.0

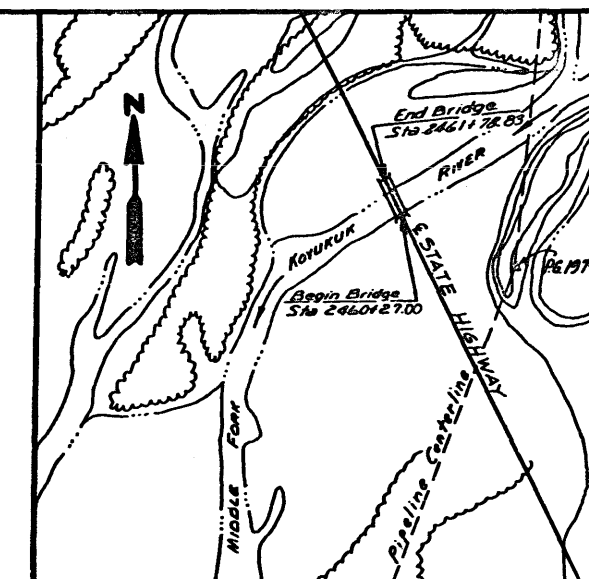
Elev. 1400
Elev. 1390
Elev. 1380
Elev. 1370

Datum MSL



AS BUILT NOTES

- Bridge deck elevation from field book 5046, page 7.
- Piles were driven into thawed soils; pile shoes were not used.
- Riprap configuration shown determined by 1976 field inspection.



AS-Built Pile Tip Elevations

Bent No.	Pile No.	Tip Elev.
1 Sta. 2460+27.92	1-1	1341.0
	1-2	1344.0
	1-3	1341.0
	1-4	1339.0
2 Sta. 2460+58.45	2-1	1344.0
	2-2	1344.0
	2-3	1344.0
	2-4	1345.0
	2-5	1345.0
	2-6	1342.0
3 Sta. 2461+18.65	3-1	1338.0
	3-2	1334.4
	3-3	1338.75
	3-4	1339.4
	3-5	1336.75
	3-6	1340.0
4 Sta. 2461+78.77	4-1	1338.4
	4-2	1283.4
	4-3	1325.0
	4-4	1341.0
	4-5	1337.0
	4-6	1288.1
	4-7	1330.1
	4-8	1328.1
	4-9	1330.6

NOTES

- See Sheet Nos. 109-114 for General Notes & Quantities
- See Standard Drawings:
- 30 Foot Span: Abutment & Intermediate Bent
- End Span
- Intermediate Span

Guard Rail
Two Lane 60' Span-HS 20-44:
Superstructure Plan & Profile
Superstructure Sections & Details
Bent & Abutment Details

FOUNDATION NOTES

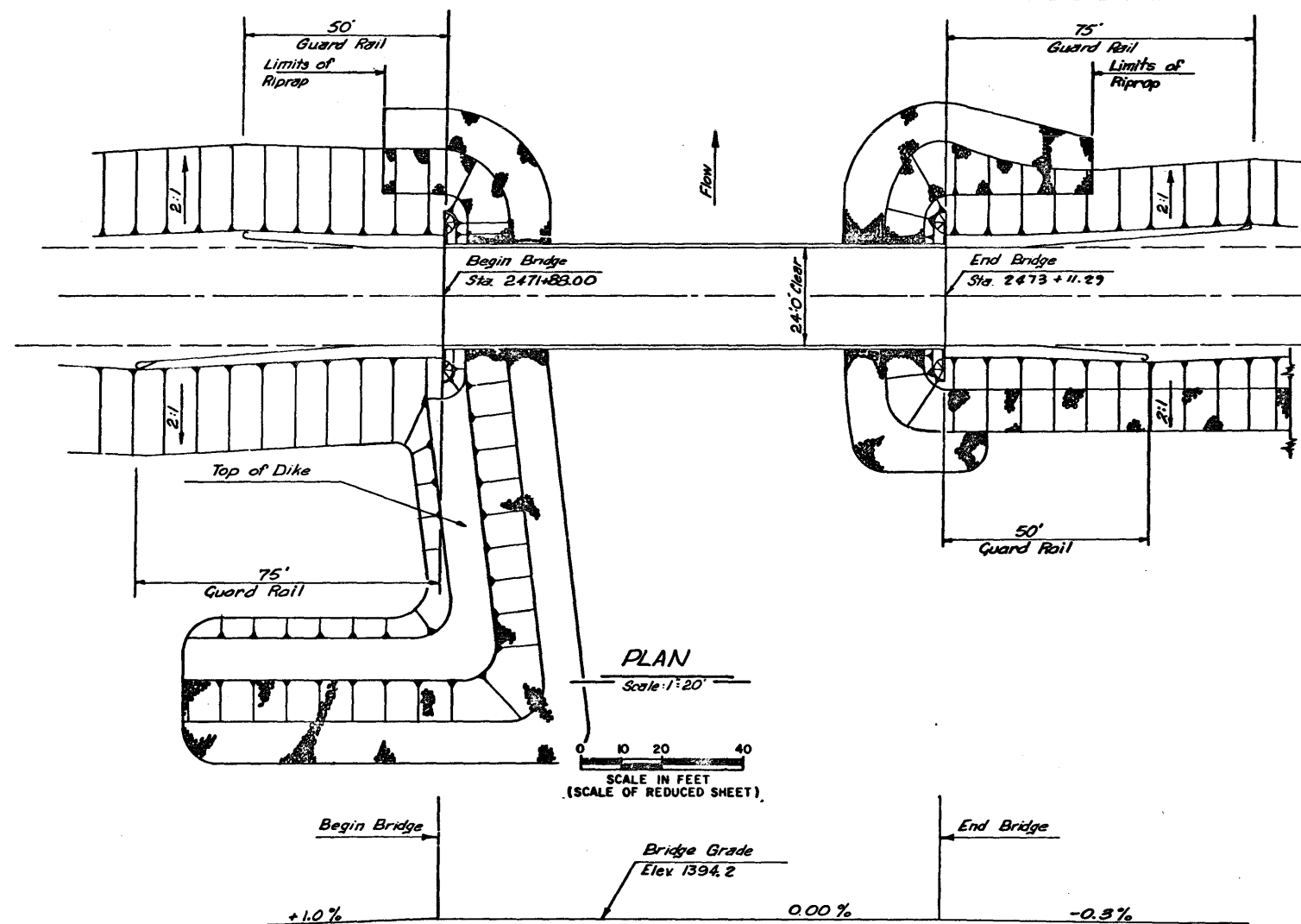
- Piles shall be driven 1/2 shoes unless otherwise approved by the Engineer.
- To Minimize Frost Heaving, Natural Soils Surrounding Each Support shall be Excavated To A Depth Of Five Feet Below Natural Ground But Not To Exceed Water Table If Encountered. The Excavation shall Then be Backfilled With Free Draining, Non-Frost Susceptible, Granular Material.
- In Winter Conditions Seasonally Frozen Soils shall be Penetrated With Pilot Holes Prior To Driving Of Piles. Diameter Of Pilot Holes shall Not Exceed One-Half The Diagonal Measurement Of The Piles.

DESIGN NOTES

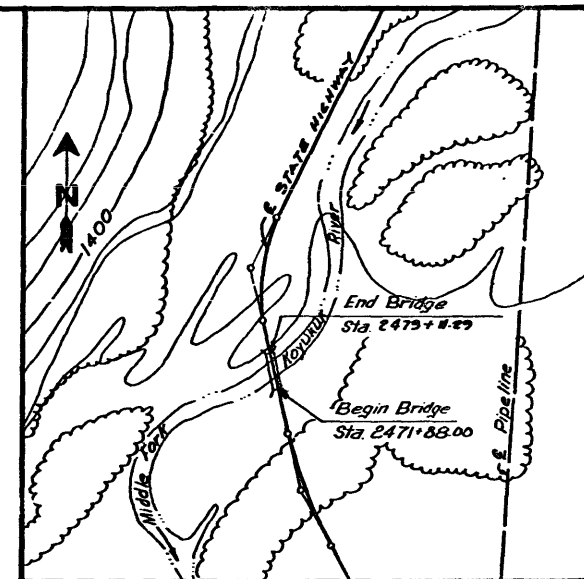
STA. 2460 + 27

REVISION	BY	DESCRIPTION	DATE
0	RNT	ER 1130 As Built Issue	7-77
ALYESKA PIPELINE SERVICE COMPANY, AGENT TRANS ALASKA PIPELINE SYSTEM HIGHWAY AS BUILT YUKON RIVER TO PRUDHOE BAY			
GENERAL DRAWING MIDDLE FORK KOYUKUK RIVER			
MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS DENVER, CO. JACKSON, MISS. FAIRBANKS, AK			
DATE: 7-77	SEGMENT NO. 3	DRAWING NO. D-105-CA	
APPROVED R. V. T. P. E. D. J. Davis		SHEET NO. 105	

SEGMENT NO. 3



- AS BUILT NOTES**
- Pile splices per details on Sht. 121 were used on Bents Nos. 2, 3 & 4.
 - Bridge deck elevation from field book 5046, page 9.
 - Riprap configuration shown determined by 1976 field inspection.



AREA MAP
Scale: 1"=400'
0 200 400 800
SCALE IN FEET
(SCALE OF REDUCED SHEET)

NOTES

- See Sheet Nos. 109-114 For General Notes & Quantities
- See Standard Drawings:
30 Foot Span: Abutment & Intermediate Bent
End Span
Intermediate Span
Guard Rail
Two Lane 60' Span-HS 20-44:
Superstructure Plan & Elevations
Superstructure Sections & Details
Bent & Abutment Details

FOUNDATION NOTES

- Piles Shall Be Driven 46 Shoes Unless Otherwise Approved By The Engineer.
- To Minimize Frost Heaving, Natural Soils Surrounding Each Support Shall Be Excavated To A Depth Of Five Feet Below Natural Ground But Not To Exceed Water Table If Encountered. The Excavation Shall Then Be Backfilled With Free Draining, Non-Frost Susceptible, Granular Material.
- In Winter Conditions Seasonally Frozen Soils Shall Be Penetrated With Pilot Holes Prior To Driving Of Piles. Diameter Of Pilot Holes Shall Not Exceed One-Half The Diagonal Measurement Of The Piles.

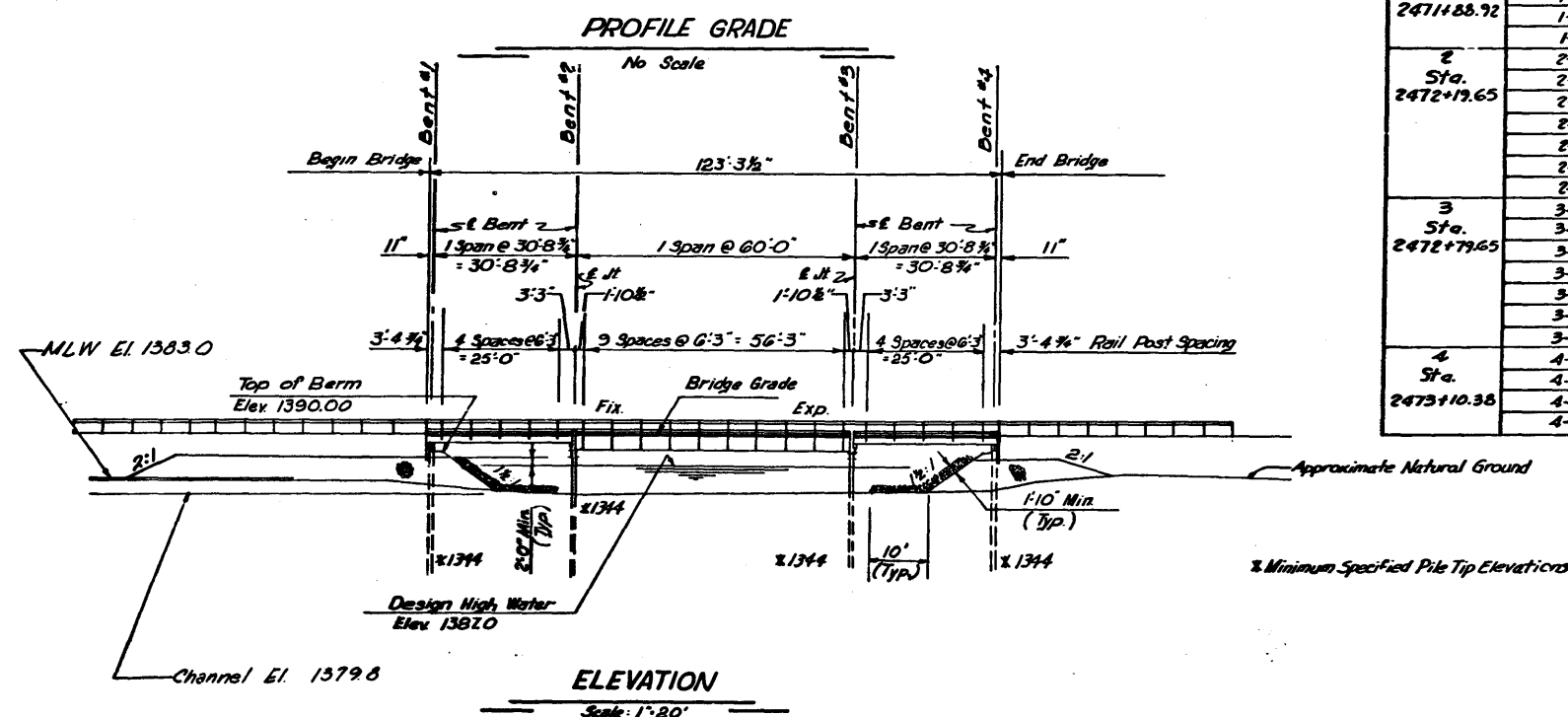
DESIGN NOTES

STA. 2471+88

As-Built Pile Tip Elevations		
Bent No.	Pile No.	Tip Elev.
1 Sta. 2471+88.92	1-1	1275.75
	1-2	1258.28
	1-3	1259.84
	1-4	1258.84
2 Sta. 2472+19.65	2-1	1268.63
	2-2	1264.15
	2-3	1274.67
	2-4	1269.42
3 Sta. 2472+79.65	3-1	1270.46
	3-2	1266.33
	3-3	1270.17
	3-4	1271.25
4 Sta. 2473+10.38	4-1	1256.17
	4-2	1285.24
	4-3	1280.34
	4-4	1280.23

HYDROLOGIC DATA

Drainage Area — 257 Sq. Miles
Design Discharge — 6,748 CFS
Design Velocity — 10.0 FPS
Design High Water Elev. = 1397.0
Mean High Water Elev. = 1395.0
Mean Low Water Elev. = 1393.0

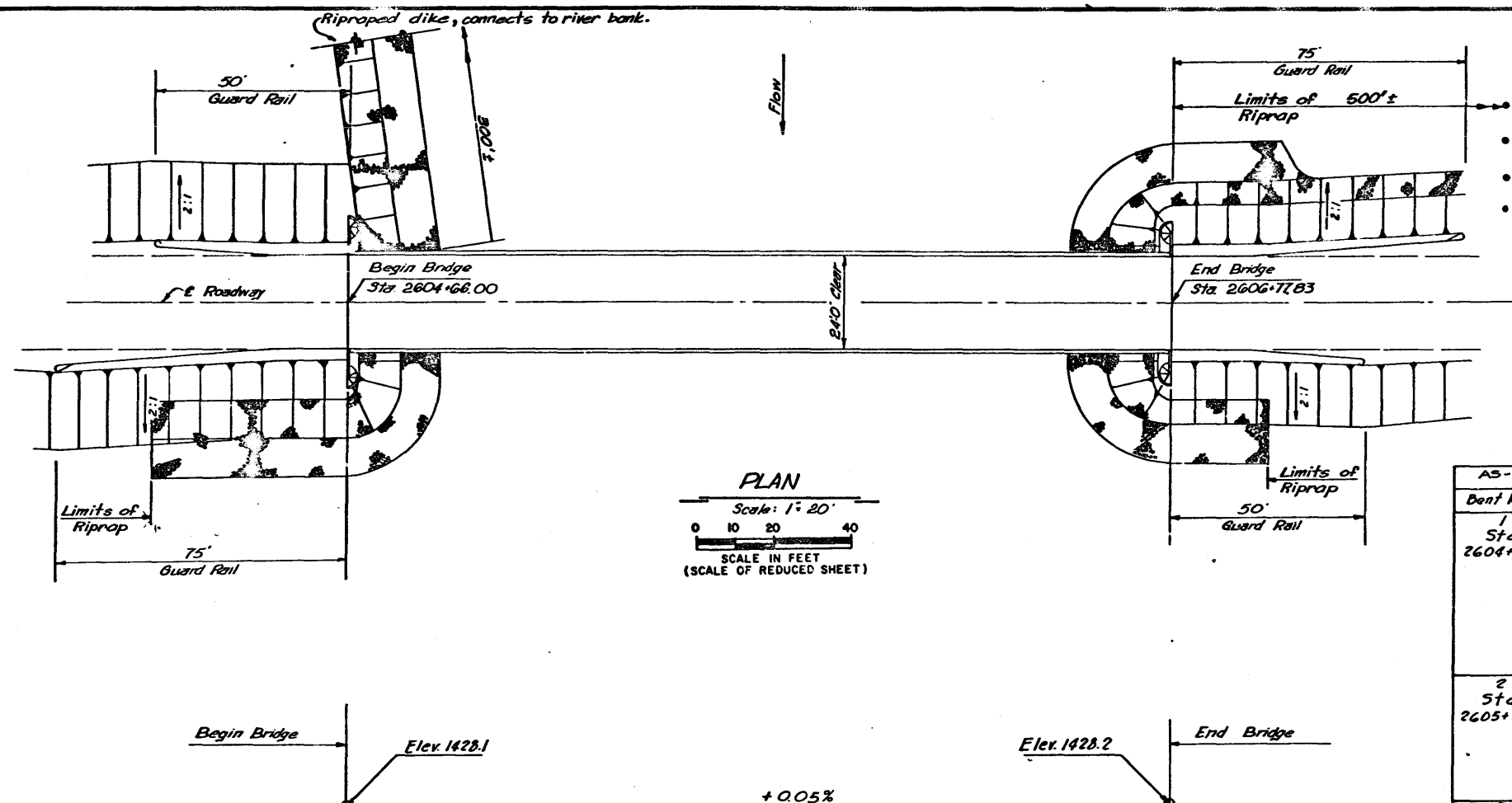


Elev. 1400
Elev. 1390
Elev. 1380
Elev. 1370
Elev. 1360
Datum MSL

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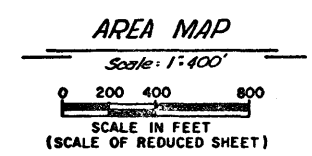
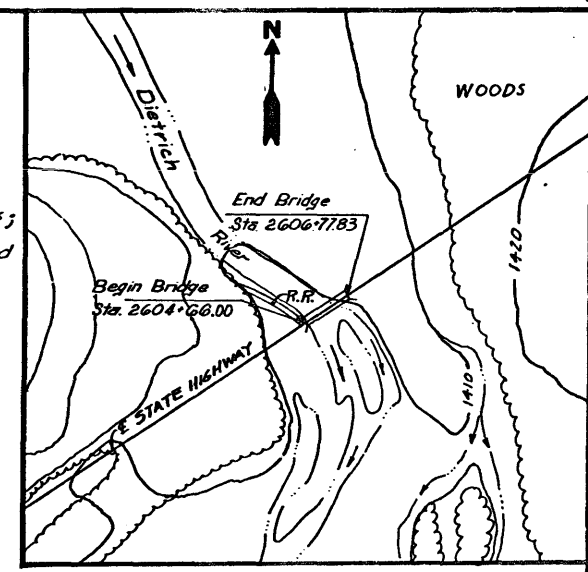
SEGMENT NO. 3

REVISION	BY	DESCRIPTION	DATE
0	RHT	ER 1130 As Built Issue	7-77
ALYSEKA PIPELINE SERVICE COMPANY, AGENT TRANS ALASKA PIPELINE SYSTEM HIGHWAY AS BUILT YUKON RIVER TO PRUDHOE BAY			
DATE: 7-77			
DRAWING NO. D-105-CIA			
SHEET NO. 106			



AS BUILT NOTES

- Pile cap per details on Sht. 121 were used at Bents Nos. 2 & 5.
- Bridge deck elevation from field book 5046, page 23.
- Piles were driven into thawed soils; pile shoes were not used.
- Riprap configuration shown determined by 1976 field inspection.



AS-Built Pile Tip Elevations		
Bent No.	Pile No.	Tip Elev.
1 Sta. 2604+66.47	1-1	1390.1
	1-2	1325.1
	1-3	1309.1
	1-4	1271.6
	1-5	1262.1
	1-6	1259.1
	1-7	1270.1
	1-8	1278.1
	1-9	1328.1
2 Sta. 2605+26.19	2-1	1374.9
	2-2	1339.9
	2-3	1339.9
	2-4	1386.9
	2-5	1294.9
	2-6	1266.9
3 Sta. 2605+86.19	3-1	1324.5
	3-2	1314.5
	3-3	1389.5
	3-4	1369.5
	3-5	1301.5
	3-6	1374.5
	3-7	1389.0
4 Sta. 2606+16.92	4-1	1329.0
	4-2	1346.0
	4-3	1345.0
	4-4	1321.0
5 Sta. 2606+46.92	5-1	1279.5
	5-2	1269.5
	5-3	1291.5
	5-4	1327.5
6 Sta. 2606+76.92	6-1	1390.0
	6-2	1356.0
	6-3	1321.0
	6-4	1312.0

NOTES

- See Sheet Nos. 102-114 For General Notes & Quantities
- See Standard Drawings:
- 30 Foot Spans: Abutment & Intermediate Bent
- End Span
- Intermediate Span
- Guard Rail
- Two Lane 60' Span - HS-20-44:
- Superstructure Plan & Elevations
- Superstructure Sections & Details
- Bent & Abutment Details

FOUNDATION NOTES

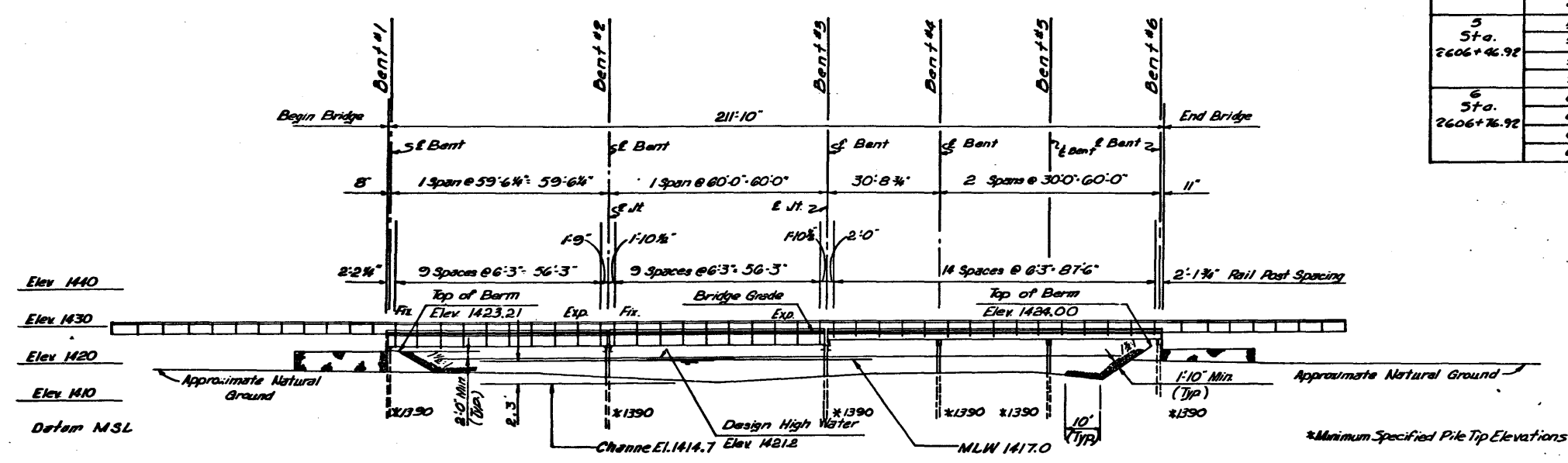
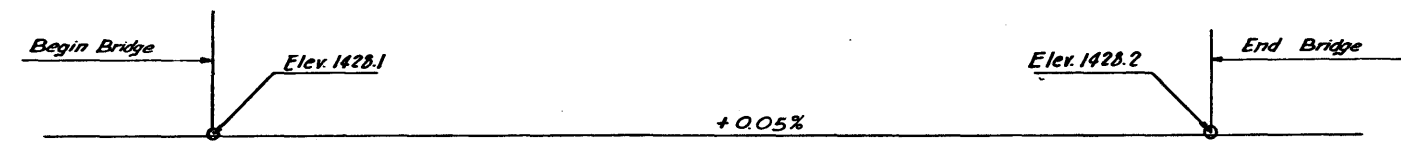
- Hard Driving Is Anticipated At The Site. Pile Driving Shoes May Be Used With The Approval Of The Engineer.
- All Piles Shall Be Driven To A Minimum Of 30 Tons ENR Bearing For A Minimum Of Three Consecutive Feet At Or Below Elevation 1354.

DESIGN NOTES

HYDROLOGIC DATA

Drainage Area - 347 Sq. Miles
Design Discharge - 10,564 CFS.
Design Velocity - 9.4 FPS.
Design High Water Elev. = 1421.2
Mean High Water Elev. = 1418.9
Mean Low Water Elev. = 1417.0

PROFILE GRADE



ELEVATIONS

STA. 2604 + 66

REVISION	BY	DESCRIPTION	DATE
0	RNT	ER 1130 As Built Issue	7-77
ALYESKA PIPELINE SERVICE COMPANY, AGENT TRANS ALASKA PIPELINE SYSTEM HIGHWAY AS BUILT YUKON RIVER TO PRUDHOE BAY			
GENERAL DRAWING DIETRICH RIVER			
MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS BEAVER, WY. JACKSON, MISS. FAIRBANKS, AK.			
DATE: 7-77	SEGMENT NO. 3	DRAWING NO. D-105-CIA	
APPROVED		SHEET NO. 107	
R. H. P. P.E.		A. K. Davis	
S.B. & Co., Inc.		ALYESKA	

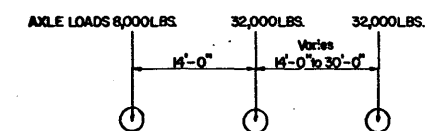
SEGMENT NO. 3

RECAPITULATION OF QUANTITIES FOR BRIDGES ON SEGMENT NO. 3

					STATION 876+86 SLATE CREEK		STATION 1519+34 MINNIE CREEK		STATION 1588+80 MIDDLE FORK KOYUKUK RIVER		STATION 1726+35 MIDDLE FORK KOYUKUK RIVER		STATION 2460+27 MIDDLE FORK KOYUKUK RIVER		STATION 2471+48 MIDDLE FORK KOYUKUK RIVER		STATION 1711+42 HAMMOND RIVER	
					TWO LANE PERMANENT		TWO LANE PERMANENT		TWO LANE PERMANENT		TWO LANE PERMANENT		TWO LANE PERMANENT		TWO LANE PERMANENT		TWO LANE PERMANENT	
					HS 20 - 44		HS 20 - 44		HS 20 - 44		HS 20 - 44		HS 20 - 44		HS 20 - 44		HS 20 - 44	
ITEM	DESCRIPTION	SIZE	LENGTH	UNITS	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES
TREATED TIMBER	BENT CAPS	8" X 18"	26'-0"	EA.	8	2.496	10	3.120	6	1.872	10	3.120	2	0.624	4	1.248	6	1.872
	BACKING PLANKS	3" X 12"	36'-0"	EA.	12	1.296	12	1.296	12	1.296	12	1.296	6	0.648	12	1.296	6	0.648
	STRINGERS	10" X 20"	31'-4"	EA.	30	15.667	40	20.889	32	16.710	50	26.111	12	6.267	24	12.533	30	15.667
		10" X 20"	30'-8"	EA.	4	2.044	4	2.044	4	2.044	8	4.088					4	2.044
		10" X 20"	30'-0"	EA.	2	1.000	4	2.000			2	1.000					2	1.000
	CROSS BRIDGING	2" X 6"	1'-11 1/2"	EA.	108	0.212	144	0.282	108	0.212	180	0.353	36	0.071	72	0.142	108	0.212
		2" X 6"	1'-10 3/4"	EA.	12	0.023	16	0.030	12	0.023	20	0.038	4	0.008	8	0.015	12	0.023
	SPACER BLOCKS	4" X 6"	1' - 8"	EA.	6	0.020	8	0.027	6	0.020	10	0.033	2	0.007	4	0.013	6	0.020
	DECK PLANKS	4" X 12"	26'-0"	EA.	88	9.152	118	12.272	89	9.256	147	15.288	30	3.120	60	6.240	88	9.152
	RUNNER PLANKS	3" X 12"	31'-7"	EA.					12	1.137			12	1.137	24	2.274		
		3" X 12"	30'-11"	EA.	24	2.226	24	2.226	12	1.113	24	2.226					12	1.113
		3" X 12"	30'-8"	EA.					12	1.212	24	2.424					12	1.212
		3" X 12"	30'-0"	EA.	12	1.080	24	2.160			12	1.080					12	1.080
	WHEEL GUARDS	6" X 12"	31'-7"	EA.					2	0.379			2	0.379	4	0.758		
		6" X 12"	30'-11"	EA.	4	0.742	4	0.742	2	0.371	4	0.742					2	0.371
		6" X 12"	30'-8"	EA.					2	0.368	4	0.736					2	0.368
		6" X 12"	30'-0"	EA.	2	0.360	4	0.720			2	0.360					2	0.360
	RAIL POST	6" X 6"	4'-5 1/2"	EA.	30	0.401	40	0.535	30	0.401	50	0.669	10	0.134	20	0.268	30	0.401
	SCUPPER BLOCKS	4" X 12"	2'-0"	EA.	30	0.240	40	0.320	30	0.240	50	0.400	10	0.064	20	0.160	30	0.240
		4" X 12"	1'-6"	EA.	32	0.192	42	0.252	30	0.180	50	0.300	10	0.050	20	0.120	30	0.180
	FILLER BLOCKS	6" X 12"	1'-11 1/2"	EA.	30	0.203	40	0.270	30	0.203	50	0.338	10	0.076	20	0.152	30	0.203
	FILLER PLANKS	3" X 10"	2'-9"	EA.	8	0.055	8	0.055	8	0.055	8	0.055	4	0.028	8	0.055	4	0.028
	BRACING PLANKS	2" X 6"	6'-0"	EA.	4	0.024	4	0.024	4	0.024	4	0.024	2	0.012	4	0.024	2	0.012
	TOTAL 30' SPAN TIMBER					37.433 MFBM		49.264 MFBM		37.116 MFBM		60.681 MFBM		12.635 MFBM		25.298 MFBM		36.266 MFBM
	ABUT. BACKING PLANKS	3" X 12"	38'-0"	EA.									8	0.912			8	0.912
	TIMBER BENT CAP	8" X 8"	27'-0"	EA.					2	0.288	2	0.288	1	0.144	2	0.288	1	0.144
	DECK PLANKS	2" X 6"	26'-0"	EA.					1,412	36.712	706	18.356	706	18.356	353	9.128	353	9.128
	END TIMBERS	6" X 6"	26'-0"	EA.					8	0.624	4	0.312	4	0.312	2	0.156	2	0.156
	LATERAL BRACING	2" X 6"	12'-6"	EA.					192	2.400	96	1.200	96	1.200	48	0.600	48	0.600
60 FT. SPANS	RUNNER PLANKS	3" X 12"	30'-11 1/2"	EA.									12	1.084			12	1.084
		3" X 12"	30'-0"	EA.					48	4.320	24	2.160	24	2.160	12	1.080	12	1.080
		3" X 12"	29'-10 1/2"	EA.					48	4.304	24	2.152	12	1.076	12	1.076		
	WHEEL GUARDS	6" X 12"	30'-11 1/2"	EA.									2	0.362			2	0.362
		6" X 12"	30'-0"	EA.					8	1.440	4	0.720	4	0.720	2	0.360	2	0.360
		6" X 12"	29'-10 1/2"	EA.					8	1.436	4	0.718	2	0.359	2	0.359		
	RAIL POST	6" X 6"	6'-10"	EA.					80	1.640	40	0.820	40	0.820	20	0.410	20	0.410
	SCUPPER BLOCK	4" X 12"	2'-0"	EA.					80	0.640	40	0.320	40	0.320	20	0.160	20	0.160
	SCUPPER BLOCK	4" X 12"	1'-6"	EA.					82	0.492	42	0.252	42	0.252	22	0.132	22	0.132
	TOTAL 60' SPAN TIMBER								54.296 MFBM		27.298 MFBM		28.077 MFBM		13.749 MFBM		14.528 MFBM	
GUARD-RAIL	GUARDRAIL			LIN. FT.		184 LF		244 LF		666 LF		546 LF		304 LF		246 LF		304 LF

GENERAL NOTES

- Specifications: AASHTO Standard Specifications For Highway Bridges, 1969 Edition & Int. 70, 71, 72.
- Live Load: HS 20-44
- Unit Stresses:
Timber For Stringers And Bent Caps;
Bending = 1750 PSI, Horizontal Shear = 120 PSI.
Other Timber;
Bending = 1200 PSI, Horizontal Shear = 100 PSI.
- Timber: All Timber May Be Rough Cut To The Dimensions Shown On The Plans. Sizes Shown Are Minimum And May Be Adjusted With Approval Of The Engineer.
- Hardware: Hardware May Be Black Iron. Machine Bolts And Drift Bolts May Be Wrought Iron Or Medium Steel. Washers In Contact With Timber May Be Cast Iron Or Malleable Iron, With Minimum Diameter 3.5 Times That Of The Bolt With Which They Are Used. Washers In Contact With Steel May Be Cut From Medium Steel.
- Piles: Material For Piles And Miscellaneous Steel Shall Conform To ASTM A-441. Piles Shall Be Driven To Minimum Bearing Capacities Of 30 Tons For HS 20-44 Loading Bridges. Where Required, Piles Shall Be Set In Predrilled Holes In Accordance With Plans And Specifications.
- All Bridge Material Will Be Furnished By The Owners.



HS 20-44 LOADING

AS BUILT NOTES

- QUANTITIES FOR MINOR ITEMS ARE APPROXIMATE; EXACT AS BUILT INFORMATION WAS OBTAINED ONLY FOR PRINCIPAL STRUCTURAL MEMBERS.
- SEE SHEET 121 FOR ACCEPTABLE MATERIAL ALTERNATES.

NOTES:
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REVISION	BY	DESCRIPTION	DATE
0	R/T	ER 1130 As Built Issue	7-77

ALYESKA PIPELINE SERVICE COMPANY, AGENT
TRANS ALASKA PIPELINE SYSTEM
HIGHWAY AS BUILT
YUKON RIVER TO PRUDHOE BAY

SEGMENT NO. 3
SUMMARY OF QUANTITIES

MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS
BEAVER, PA. JACKSON, MISS. FAIRBANKS, AK.

DATE: 7-77 SEGMENT NO. 3 DRAWING NO. D-105-GA
APPROVED: *[Signature]* SHEET NO. 109

RECAPITULATION OF QUANTITIES FOR BRIDGES ON SEGMENT NO. 3 (CONTINUED)

					STATION 2611+ 95 DIETRICH RIVER												TOTAL SEGMENT NO. 3			
					TWO LANE PERMANENT															
					HS 20-44															
ITEM	DESCRIPTION	SIZE	LENGTH	UNITS	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES		
TREATED TIMBER	30 FT. SPANS	BENT CAPS	8" X 18"	26'-0"	EA.	6	1.872										52	16.224		
		BACKING PLANKS	3" X 12"	36'-0"	EA.	6	0.648										78	8.424		
		STRINGERS	10" X 20"	31'-4"	EA.	30	15.637											248	129.511	
			10" X 20"	30'-8"	EA.	4	2.044											28	14.308	
			10" X 20"	30'-0"	EA.	2	1.000											12	6.000	
		CROSS BRIDGING	2" X 6"	1'-11 1/2"	EA.	108	0.212											864	1.696	
			2" X 6"	1'-10 3/4"	EA.	12	0.023											96	0.183	
		SPACER BLOCKS	4" X 6"	1'-8"	EA.	6	0.020											48	0.160	
		DECK PLANKS	4" X 12"	26'-0"	EA.	88	9.152											708	73.632	
		RUNNER PLANKS	3" X 12"	31'-7"	EA.														48	4.548
			3" X 12"	30'-11"	EA.	12	1.113												108	10.017
			3" X 12"	30'-8"	EA.	12	1.212												60	6.060
			3" X 12"	30'-0"	EA.	12	1.080												72	6.480
		WHEEL GUARDS	6" X 12"	31'-7"	EA.														8	1.516
			6" X 12"	30'-11"	EA.	2	0.371												18	3.339
	6" X 12"		30'-8"	EA.	2	0.368												10	1.840	
	6" X 12"		30'-0"	EA.	2	0.360												12	2.160	
	RAIL POST	6" X 6"	4'-5 1/2"	EA.	30	0.401												240	3.210	
	SCUPPER BLOCKS	4" X 12"	2'-0"	EA.	30	0.240												240	1.904	
		4" X 12"	1'-6"	EA.	30	0.180												244	1.464	
		FILLER BLOCKS	6" X 12"	1'-11 1/2"	EA.	30	0.203											240	1.648	
		FILLER PLANKS	3" X 10"	2'-9"	EA.	4	0.028											52	0.359	
		BRACING PLANKS	2" X 6"	6'-0"	EA.	2	0.012											26	0.156	
	TOTAL 30' SPAN TIMBER						36.206 MFBM											294.839 MFBM		
	60 FT. SPANS	ABUT. BACKING PLANKS	3" X 12"	38'-0"	EA.	8	0.912											24	2.736	
		TIMBER BENT CAP	8" X 8"	27'-0"	EA.	1	0.144											9	1.296	
		DECK PLANKS	2" X 6"	26'-0"	EA.	706	18.356											4,236	110.036	
		END TIMBERS	6" X 6"	26'-0"	EA.	4	0.312											24	1.872	
		LATERAL BRACING	2" X 6"	12'-6"	EA.	96	1.200											576	7.200	
RUNNER PLANKS		3" X 12"	30'-11 1/2"	EA.	12	1.084												36	3.252	
		3" X 12"	30'-0"	EA.	24	2.160												144	12.960	
		3" X 12"	29'-10 1/2"	EA.	12	1.076												108	9.684	
WHEEL GUARDS		6" X 12"	30'-11 1/2"	EA.	2	0.362												6	1.086	
		6" X 12"	30'-0"	EA.	4	0.720												24	4.320	
		6" X 12"	29'-10 1/2"	EA.	2	0.359												18	3.231	
RAIL POST		6" X 6"	6'-10"	EA.	40	0.820												240	4.920	
SCUPPER BLOCK		4" X 12"	2'-0"	EA.	40	0.320												240	1.920	
SCUPPER BLOCK		4" X 12"	1'-6"	EA.	42	0.252												252	1.512	
TOTAL 60' SPAN TIMBER						28.077 MFBM											166.025 MFBM			
GUARD-RAIL	GUARDRAIL			LIN. FT.		424 L.F.												2,918 L.F.		

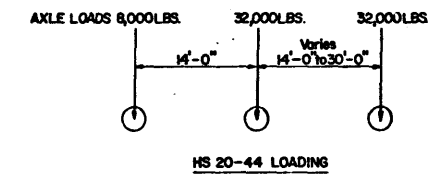
GENERAL NOTES

- Specifications: AASHTO Standard Specifications For Highway Bridges, 1969 Edition & Int. 70, 71, 72.
- Live Load: HS 20-44
- Unit Stresses:
Timber For Stringers And Bent Caps;
Bending = 1750 PSI, Horizontal Shear = 120 PSI.
Other Timber;
Bending = 1200 PSI, Horizontal Shear = 100 PSI.
- Timber: All Timber May Be Rough Cut To The Dimensions Shown On The Plans. Sizes Shown Are Minimum And May Be Adjusted With Approval Of The Engineer.
- Hardware: Hardware May Be Black Iron. Machine Bolts And Drift Bolts May Be Wrought Iron Or Medium Steel. Washers In Contact With Timber May Be Cast Iron Or Malleable Iron, With Minimum Diameter 3.5 Times That Of The Bolt With Which They Are Used. Washers In Contact With Steel May Be Cut From Medium Steel.
- Piles: Material For Piles And Miscellaneous Steel Shall Conform To ASTM A-441. Piles Shall Be Driven To Minimum Bearing Capacities Of 30 Tons For HS 20-44 Loading Bridges. Where Required, Piles Shall Be Set In Predrilled Holes In Accordance With Plans And Specifications.
- All Bridge Material Will Be Furnished By The Owner.

AS BUILT NOTES

- QUANTITIES FOR MINOR ITEMS ARE APPROXIMATE; EXACT AS BUILT INFORMATION WAS OBTAINED ONLY FOR PRINCIPAL STRUCTURAL MEMBERS.
- SEE SHEET 121 FOR ACCEPTABLE MATERIAL ALTERNATES.

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REVISION	BY	DESCRIPTION	DATE
0	RHT	ER 1130 As Built Issue	7-77

ALYESKA PIPELINE SERVICE COMPANY, AGENT TRANS ALASKA PIPELINE SYSTEM HIGHWAY AS BUILT YUKON RIVER TO PRUDHOE BAY			
SEGMENT NO. 3 SUMMARY OF QUANTITIES			
MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS BEAVER, PA. JACKSON, MISS. FAIRBANKS, AK.			
DATE: 7-77	SEGMENT NO. 3	DRAWING NO. D-105-CIA	SHEET NO. 110

RECAPITULATION OF QUANTITIES FOR BRIDGES ON SEGMENT NO. 3 (CONTINUED)

					STATION 876+86 SLATE CREEK		STATION 1519+34 MINNIE CREEK		STATION 1588+80 MIDDLE FORK KOYUKUK RIVER		STATION 1726+35 MIDDLE FORK KOYUKUK RIVER		STATION 2460+27 MIDDLE FORK KOYUKUK RIVER		STATION 2471+48 MIDDLE FORK KOYUKUK RIVER		STATION 1711+42 HAMMOND RIVER		
					TWO LANE PERMANENT		TWO LANE PERMANENT		TWO LANE PERMANENT		TWO LANE PERMANENT		TWO LANE PERMANENT		TWO LANE PERMANENT		TWO LANE PERMANENT		
					HS 20 - 44		HS 20 - 44		HS 20 - 44		HS 20 - 44		HS 20 - 44		HS 20 - 44		HS 20 - 44		
ITEM	DESCRIPTION	SIZE	LENGTH	UNITS	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	
HARDWARE	BENT PLATE	6"x1/4"	1'-3"	EA.					80		40		40		20		20		
	DRIFT BOLTS	3/4"	2'-3"		78		100		78		130		26		52		78		
	LAG BOLTS	5/8"	1'-2"						436		218		216		109		109		
	CARRIAGE BOLTS	5/8"	7"						118		58		58		29		29		
	HOOB BOLTS	5/8"	2'-1"						84		41		41		21		21		
	MACHINE BOLTS	3/4"	2'-7"			63		85		63		105		21		42		63	
		3/4"	1'-8"			68		84		51		84		17		34		51	
		3/4"	1'-7"			61		79		54		90		18		36		54	
		3/4"	1'-5"			126		168		130		210		42		84		126	
		5/8"	8 1/2"			17		17		101		59		51		38		30	
		5/8"	7 1/2"			26		26		26		26		13		26		13	
		5/8"	5 1/2"											92				92	
	TIMBER CAP STUDS	1"	6"						28		28		14		28		14		
	FLAT WASHERS	3/4"			68		85		50		85		17		34		51		
		5/8"			18		18		882		450		538		234		357		
	OGEE WASHERS	3/4"			567		746		544		900		189		360		546		
		5/8"			68		68		284		196		239		152		195		
BOAT SPIKES	3/8"	8"		2,297		3,063		2,350		3,881		792		1,584		2,324			
	1/4"	6"		832		1,109		3,050		2,495		1,386		1,109		1,386			
NAILS	60d				247		251		247		256		136		242		132		
	30d				580		775		72,371		36,903		36,083		18,350		18,554		
SUPERSTRUCTURE STRUCTURAL STEEL	STRINGERS	W36x135	59'-10 1/2"						28	226,328	14	113,164	14	113,164	7	56,582	7	56,582	
	SOLE PLATES	5" x 1"	10"						56	792	28	396	28	396	14	198	14	198	
	BEARING PLATES	6" x 1"	1'-0"						56	1,144	28	572	28	572	14	286	14	286	
	END DIAPHRAGMS	W18x45	4'-1"						48	8,820	24	4,410	24	4,410	12	2,205	12	2,205	
	ANGLES	4 x 3 1/2 x 3/8	1'-0"						192	1,748	96	874	96	874	48	437	48	437	
	DIAPHRAGM ANGLES	3 1/2 x 3 1/2 x 3/8	4'-9"						96	3,876	48	1,938	48	1,938	24	969	24	969	
		3 1/2 x 3 1/2 x 3/8	4'-4"						48	1,768	24	884	24	884	12	442	12	442	
	LATERAL BRACING ANGLES	4 x 4 x 5/16	8'-3"						32	2,164	16	1,082	16	1,082	8	541	8	541	
		4 x 4 x 5/16	7'-9"						32	2,032	16	1,016	16	1,016	8	508	8	508	
	INTERMEDIATE STIFFENER PLATES	5 1/4 x 3/8"	2'-9 3/4"						96	1,807	48	903	48	903	24	452	24	452	
		5 1/4 x 3/8"	2'-0"						48	642	24	321	24	321	12	161	12	161	
	CONNECTION PLATES	11" x 3/8"	2'-10"						56	2,222	28	1,111	28	1,111	14	555	14	555	
		11" x 3/8"	1'-2"						16	260	8	130	8	130	4	65	4	65	
	FILL PLATES	3 1/2 x 3/8"	7"						72	188	36	94	36	94	18	47	18	47	
	TOTAL A441 STEEL									253,791 LBS.		126,895 LBS.		126,895 LBS.		63,448 LBS.		63,448 LBS.	
	HIGH STRENGTH BOLTS	H.S. BOLTS	3/4"	2 1/2"						336	216	168	108	168	108	84	54	84	54
3/4"			2"						1,277	748	639	374	639	374	320	187	320	187	
3/4"			2 1/4"						210	132	105	66	105	66	53	33	53	33	
HARDENED FLAT WASHERS		3/4"		EA.					1,908	152	954	76	954	76	477	38	477	38	
TOTAL H.S. BOLTS & WASHERS										1,248 LBS.		624 LBS.		624 LBS.		312 LBS.		312 LBS.	

AS BUILT NOTES

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- SEE SHEET 121 FOR ACCEPTABLE MATERIAL ALTERNATES.

BY: **ALYESKA PIPELINE SERVICE COMPANY, AGENT**
TRANS ALASKA PIPELINE SYSTEM
HIGHWAY AS BUILT
YUKON RIVER TO PRUDHOE BAY

REVISION	BY	DESCRIPTION	DATE
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ALYESKA PIPELINE SERVICE COMPANY, AGENT
TRANS ALASKA PIPELINE SYSTEM
HIGHWAY AS BUILT
YUKON RIVER TO PRUDHOE BAY

SEGMENT NO. 3
SUMMARY OF QUANTITIES

MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS
BEAVER, PA. JACKSON, MISS. FAIRBANKS, AK.

DATE: 7-77
DRAWING NO. D-103-CIA
SHEET NO. III

RECAPITULATION OF QUANTITIES FOR BRIDGES ON SEGMENT NO. 3 (CONTINUED)																			
					STATION 2611 +95 DIETRICH RIVER												TOTAL SEGMENT NO.3		
					TWO LANE PERMANENT														
					HS 20 - 44														
ITEM	DESCRIPTION	SIZE	LENGTH	UNITS	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	
HARDWARE	BENT PLATE	6"x1/4"	1'-3"	EA.	40												240		
	DRIFT BOLTS	3/4"	2'-3"		78												620		
	LAG BOLTS	1"	1'-2"		216												1,308		
	CARRIAGE BOLTS	5/8"	7"		58												350		
	HOOK BOLTS	5/8"	2'-1"		42												250		
	MACHINE BOLTS	3/4"	2'-7"		63													505	
		3/4"	1'-8"		51													440	
		3/4"	1'-7"		54													446	
		3/4"	1'-5"															1,012	
		5/8"	8 1/2"		51													364	
		5/8"	7 1/2"		13													169	
		5/8"	5 1/2"		93													277	
	TIMBER CAP STUDS	1" x 6"			14													126	
	FLAT WASHERS	3/4" x 5/8"			51													441	
		5/8" x 3/4"			538													3,035	
	OGEE WASHERS	3/4" x 5/8"			557													4,409	
		5/8" x 3/4"			239													1,441	
	BOAT SPIKES	3/8" x 1/4"	8" x 6"		2,324													18,615	
					1,941													13,308	
	NAILS	60 d			144													1655	
	30 d			36,493													220,109		
SUPERSTRUCTURE STRUCTURAL STEEL	A441	STRINGERS	W36x135	59'-10 1/2"	14	113,164											84	678,984	
		SOLE PLATES	5" x 1"	10"	28	396												168	2,376
		BEARING PLATES	6" x 1"	1'-0"	28	572												168	3,432
		END DIAPHRAGMS	W18x45	4'-1"	24	4,410												144	26,460
		ANGLES	4 x 3 1/2 x 3/8	1'-0"	96	874												576	5,244
		DIAPHRAGM ANGLES	3 1/2 x 3 1/2 x 3/8	4'-9"	48	1,938												288	11,628
			3 1/2 x 3 1/2 x 3/8	4'-4"	24	884												144	5,304
		LATERAL BRACING ANGLES	4 x 4 x 5/16	8'-3"	16	1,082												96	6,492
			4 x 4 x 5/16	7'-9"	16	1,016												96	6,096
		INTERMEDIATE STIFFENER PLATES	5 1/4 x 3/8"	2'-9 3/4"	48	903												288	5,420
			5 1/4 x 3/8"	2'-0"	24	321												144	1,927
		CONNECTION PLATES	11" x 3/8"	2'-10"	28	1,111												168	6,665
			11" x 3/8"	1'-2"	8	130												48	780
		FILL PLATES	3 1/2 x 3/8"	7"	36	94												216	564
		TOTAL A441 STEEL					126,895 LBS.												761,372 LBS.
	HIGH STRENGTH BOLTS	H.S. BOLTS	3/4"	2 1/2"		168	108											1,008	648
			3/4"	2"		639	374											3,834	2,244
			3/4"	2 1/4"		105	66											631	396
		HARDENED FLAT WASHERS	3/4"		EA.	954	76											5,724	456
		TOTAL H.S. BOLTS & WASHERS					624 LBS.												3,744 LBS.

AS BUILT NOTES

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- SEE SHEET 121 FOR ACCEPTABLE MATERIAL ALTERNATES.

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REVISION	BY	DESCRIPTION	DATE
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ALYESKA PIPELINE SERVICE COMPANY, AGENT
TRANS ALASKA PIPELINE SYSTEM
HIGHWAY AS BUILT
YUKON RIVER TO PRUDHOE BAY

SEGMENT NO. 3
SUMMARY OF QUANTITIES

MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS
BEAVER, PA. JACKSON, MISS. FAIRBANKS, AK.

DATE: 7-77
APPROVED
R.H. Baker, P.E. A. L. Davis
S.D., M.E., INC. ALYESKA

DRAWING NO.
D-105-CIA
SHEET NO. 112

RECAPITULATION OF QUANTITIES FOR BRIDGES ON SEGMENT NO. 3																			
					STATION 876+86 SLATE CREEK		STATION 1519+34 MINNIE CREEK		STATION 1588+80 MIDDLE FORK KOYUKUK RIVER		STATION 1726+35 MIDDLE FORK KOYUKUK RIVER		STATION 2460+27 MIDDLE FORK KOYUKUK RIVER		STATION 2471+48 MIDDLE FORK KOYUKUK RIVER		STATION 1711+42 HAMMOND RIVER		
					TWO LANE PERMANENT		TWO LANE PERMANENT		TWO LANE PERMANENT		TWO LANE PERMANENT		TWO LANE PERMANENT		TWO LANE PERMANENT		TWO LANE PERMANENT		
					HS 20 - 44		HS 20 - 44		HS 20 - 44		HS 20 - 44		HS 20 - 44		HS 20 - 44		HS 20 - 44		
ITEM	DESCRIPTION	SIZE	LENGTH	UNITS	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	
SUBSTRUCTURE A441 STRUCTURAL STEEL	CAP PLATES	20"x1"	1'-1"	EA.					35	2,578	21	1,548	14	1,032	14	1,032	7	516	
		16"x1"	1'-6"		16	1,306	20	1,632	12	979	20	1,632	4	326	8	653	12	979	
		14"x1"	1'-1"										7	361			7	361	
	BASE PLATE *	10"x3/4"	0'-10"		16	340	20	425	47	999	41	872	27	574	22	468	28	595	
	PILE DRIVING * SHOE PLATES	61/2"x3/8"	2'-6"		32	663	40	829	94	1,947	82	1,699	54	1,119	44	912	56	1,160	
		9"x5/8"	2'-6"		32	1,528	40	1,910	94	4,492	82	3,919	54	2,582	44	2,103	56	2,677	
	UPPER CHANNEL STRUT	C12 x 20.7	27'-0"						10	5,590	6	3,354	5	2,795	4	2,236	3	1,677	
	BENT CAP	W12 x 40	27'-0"						2	2,160	2	2,160	1	1,080	2	2,160	1	1,080	
	BENT CAP STIFFENER R	3/8"x3/8"	11"						28	126	28	126	14	63	28	126	14	63	
	PILE STIFFENER R	4" x 1/2"	1'-6"										14	143			14	143	
	LOWER CHANNEL STRUTS	C12x20.7	21'-10"			4	1,808	6	2,712	2	904	6	2,712					4	1,808
		C12x20.7	26'-3"																
		C12x20.7	26'-5"						10	5,468			4	2,187	4	2,187			
		C12x20.7	26'-6"								6	3,292					2	1,097	
		C12x20.7	27'-1"																
		C12x20.7	27'-5"																
	DEFLECTOR ANGLE	C12x20.7	27'-9"																
		8"x6"x7/16"	10'-0"			2	404	3	606			4	808	1	202	2	404	3	606
		8"x6"x7/16"	11'-0"									1	222						
		8"x6"x7/16"	12'-0"									1	242	1	242				
		8"x6"x7/16"	13'-0"						2	485									
		8"x6"x7/16"	13'-0"						1	263									
		8"x6"x7/16"	14'-0"																
		8"x6"x7/16"	15'-0"						1	303									
		8"x6"x7/16"	16'-0"						1	323									
		8"x6"x7/16"	17'-0"						1	343									
	BRACING ANGLES	8"x6"x7/16"	21'-0"																
		4"x4"x7/16"	13'-8"									2	309	2	309	4	618	2	309
		4"x4"x7/16"	14'-0"									2	316	2	316	4	633	2	316
		4"x4"x7/16"	14'-1"									2	318						
		4"x4"x7/16"	14'-6"						2	328	4	655	2	328					
		4"x4"x7/16"	15'-0"						4	678	2	339	2	339					
		4"x4"x7/16"	15'-7"						2	352									
		4"x4"x7/16"	16'-2"						2	365									
		4"x4"x7/16"	16'-10"						4	761									
		4"x4"x7/16"	17'-6"						4	791									
		4"x4"x7/16"	18'-3"						2	412									
		4"x3"x3/8"	22'-6"			4	765	6	1,148			6	1,148					4	765
		4"x3"x3/8"	22'-9"																
		4"x3"x3/8"	23'-1"								2	392							
		4"x3"x3/8"	23'-5"																
		4"x3"x3/8"	23'-9"																
		4"x3"x3/8"	24'-3"																
		4"x3"x3/8"	24'-8"																
		4"x3"x3/8"	25'-2"																
		4"x3"x3/8"	27'-4"	EA.															
TOTAL A 441 STEEL						6,814 LBS.		9,262 LBS.		31,039 LBS.		25,671 LBS.		13,998 LBS.		13,532 LBS.		14,152 LBS.	
SUBSTRUCTURE HARDWARE	H.S. STUDS W/2 NUTS	1 1/4" x 6"	6 11/16"	EA.					112	404 LBS.	56	202 LBS.	56	202 LBS.	28	101 LBS.	28	101 LBS.	
	FELT WASHERS	1 1/4" x 6"	-	EA.					112		56		56		28		28		
A441 STEEL	STEEL PILES	HPI0x57	25'-0"																
		HPI0x57	35'-0"																
		HPI0x57	40'-0"																
		HPI0x57	50'-0"																
		HPI0x57	55'-0"																
		HPI0x57	60'-0"																
		HPI0x57	65'-0"																
		HPI0x57	70'-0"																
TOTAL PILE QUANTITIES																			
						16	186 LF.	20	1007 LF.	47	2590 LF.	41	2965 LF.	27	1392 LF.	22	2701 LF.	28	2271 LF.
							(67,602 LB.)		(57,399 LB.)		(147,630 LB.)				(169,005 LB.)		(153,957 LB.)		(129,447 LB.)

* Provide base plates or pile driving shoe plates as required.

AS BUILT NOTES
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 • SEE SHEET 121 FOR ACCEPTABLE MATERIAL ALTERNATES.

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REVISION	BY	DESCRIPTION	DATE
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ALYESKA PIPELINE SERVICE COMPANY, AGENT
 TRANS ALASKA PIPELINE SYSTEM
 HIGHWAY AS BUILT
 YUKON RIVER TO PRUDYOE BAY

SUMMARY OF QUANTITIES

MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS
 BEAVER, PA. JACKSON, MISS. FAIRBANKS, AK.

DATE: 7-77
 APPROVED: R.H. Baker, Jr.
 SEGMENT NO. 3
 D-105-CIA
 DRAWING NO.
 SHEET NO. 113

RECAPITULATION OF QUANTITIES FOR BRIDGES ON SEGMENT NO. 3

					STATION 2611+95												TOTAL		
					DIETRICH RIVER												SEGMENT NO. 3		
					TWO LANE PERMANENT														
					HS 20-44														
ITEM	DESCRIPTION	SIZE	LENGTH	UNITS	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	PIECES	QUANTITIES	
SUBSTRUCTURE A441 STRUCTURAL STEEL	CAP PLATES	20"x1"	1'-1"	EA.	14	1,032											105	7,738	
		10"x1"	1'-6"		12	979											104	8,486	
		14"x1"	1'-1"		7	361											21	1,083	
	BASE PLATE *	10"x3/4"	0'-10"		35	744											236	5,017	
	PILE DRIVING * SHOE PLATES	6 1/2"x3/8"	2'-6"		70	1,450												472	9,779
		9"x5/8"	2'-6"		70	3,346												472	22,557
	UPPER CHANNEL STRUT	C12 x 20.7	27'-0"		5	2,795												33	18,447
	BENT CAP	W12 x 40	27'-0"		1	1,080												9	9,720
	BENT CAP STIFFENER R.	3 7/8"x3/8"	11"		14	63												126	567
	PILE STIFFENER R.	4"x 1/2"	1'-6"		14	143												42	429
	LOWER CHANNEL STRUT	C2x20.7	21'-10"		4	1,808												26	11,752
		C2x20.7	26'-3"																
		C2x20.7	26'-5"															18	9,842
		C2x20.7	26'-6"															8	4,389
		C2x20.7	27'-1"																
		C2x20.7	27'-5"		4	2,270												4	2,270
	DEFLECTOR ANGLE	8"x6"x7/16"	10'-0"															15	3,030
		8"x6"x7/16"	11'-0"		2	444												3	666
		8"x6"x7/16"	12'-0"		1	242												5	1,211
		8"x6"x7/16"	13'-0"															1	263
		8"x6"x7/16"	14'-0"																
		8"x6"x7/16"	15'-0"		1	303												2	606
		8"x6"x7/16"	16'-0"															1	323
		8"x6"x7/16"	17'-0"															1	343
		8"x6"x7/16"	21'-0"																
	BRACING ANGLES	4"x4"x7/16"	13'-8"															10	1,545
		4"x4"x7/16"	14'-0"															10	1,581
		4"x4"x7/16"	14'-1"															2	318
		4"x4"x7/16"	14'-6"		2	328												10	1,639
		4"x4"x7/16"	15'-0"		2	339												10	1,695
		4"x4"x7/16"	15'-7"															2	352
		4"x4"x7/16"	16'-2"		2	365												4	730
		4"x4"x7/16"	16'-10"		2	380												6	1,141
		4"x4"x7/16"	17'-6"															4	791
		4"x4"x7/16"	18'-3"															2	412
		4"x3"x3/8"	22'-6"															20	3,826
		4"x3"x3/8"	22'-9"		2	387												2	387
		4"x3"x3/8"	23'-1"		2	392												4	784
		4"x3"x3/8"	23'-5"																
		4"x3"x3/8"	23'-9"																
		4"x3"x3/8"	24'-3"																
		4"x3"x3/8"	24'-8"																
		4"x3"x3/8"	25'-2"																
4"x3"x3/8"		27'-4"	EA.																
TOTAL A 441 STEEL						19,251 LBS.											133,719 LBS.		
SUBSTRUCTURE HARDWARE	H.S. STUDS W/2 NUTS	1/4"x4"	6 11/16"	EA.	56	202 LBS.											336	1212 LBS.	
	FELT WASHERS	1/4"x4"	-	EA.	56												336		
A441 STEEL	STEEL PILES	HP10x57	25'-0"	EA.															
		HP10x57	35'-0"	EA.															
		HP10x57	40'-0"	EA.															
		HP10x57	50'-0"	EA.															
		HP10x57	55'-0"	EA.															
		HP10x57	60'-0"	EA.															
		HP10x57	65'-0"	EA.															
		HP10x57	70'-0"	EA.															
	TOTAL PILE QUANTITIES		HP10x57		Lin. Ft.	35	3397 LF. (193,629 LB.)											236	17,509 L.F. (998,013 L.B.)

* Provide base plates or pile driving shoe plates as required.

AS BUILT NOTES

- QUANTITIES FOR MINOR ITEMS ARE APPROXIMATE; EXACT AS BUILT INFORMATION WAS OBTAINED ONLY FOR PRINCIPAL STRUCTURAL MEMBERS.
- SEE SHEET 121 FOR ACCEPTABLE MATERIAL ALTERNATES.

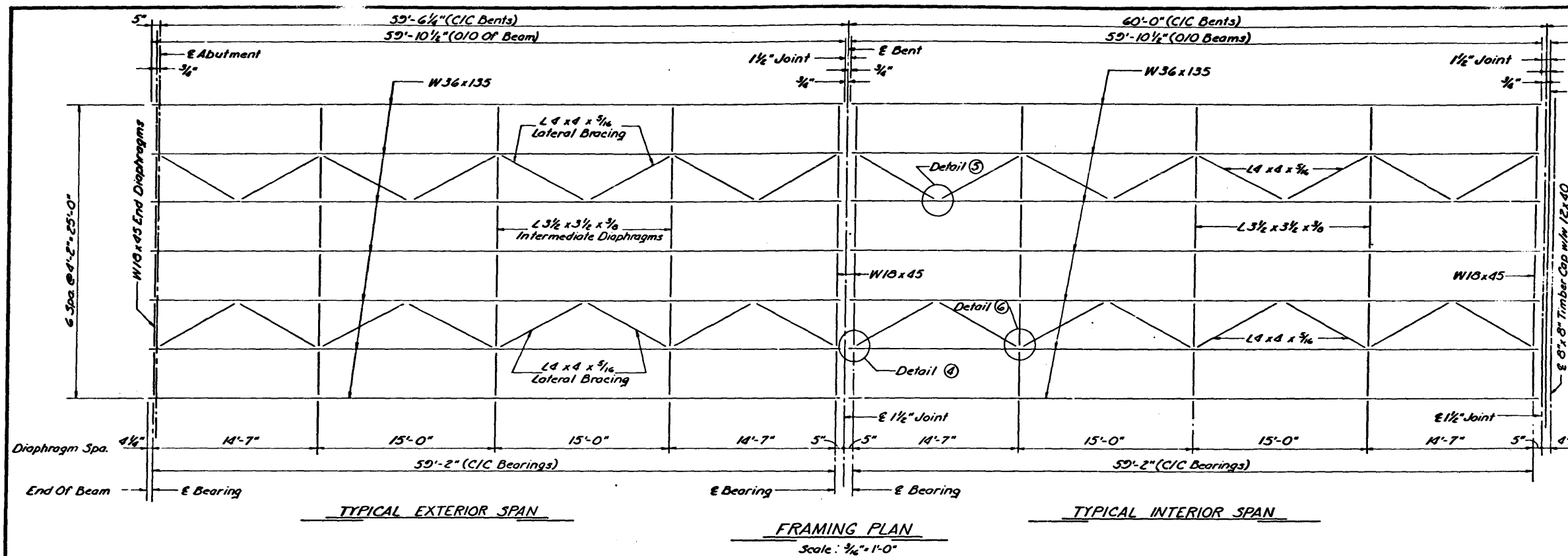
NOTES:
THIS DRAWING/REVISION IS THE PROPERTY OF THE ENGINEER OF THE TRANS ALASKA PIPELINE SYSTEM AND THE DRAWING/REVISION AND INFORMATION CONTAINED HEREIN ARE NOT TO BE REPRODUCED, COPIED OR OTHERWISE USED BY ANY OTHER PARTY WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER.

REVISION	BY	DESCRIPTION	DATE
0	RHT	ER 1130 As Built Issue	7-77

ALYESKA PIPELINE SERVICE COMPANY, AGENT
TRANS ALASKA PIPELINE SYSTEM
HIGHWAY AS BUILT
YUKON RIVER TO PRUDHOE BAY
SEGMENT NO.3
SUMMARY OF QUANTITIES

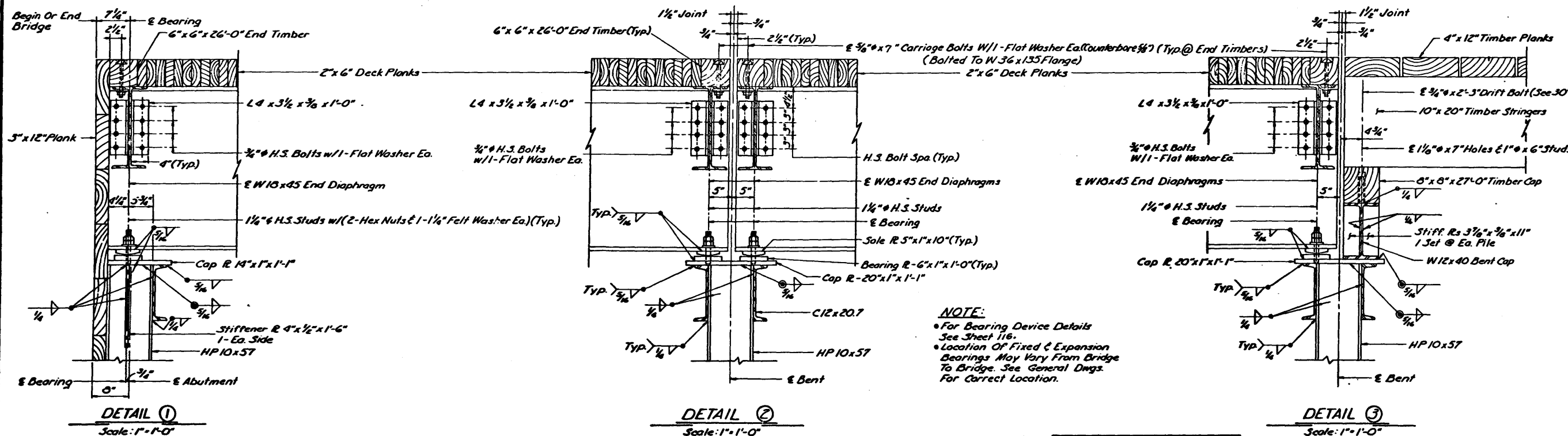
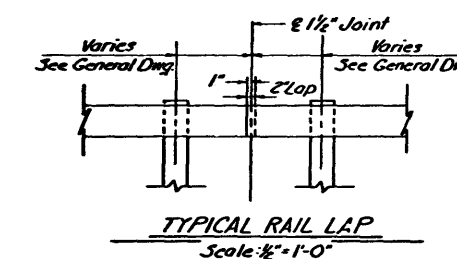
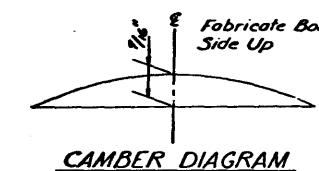
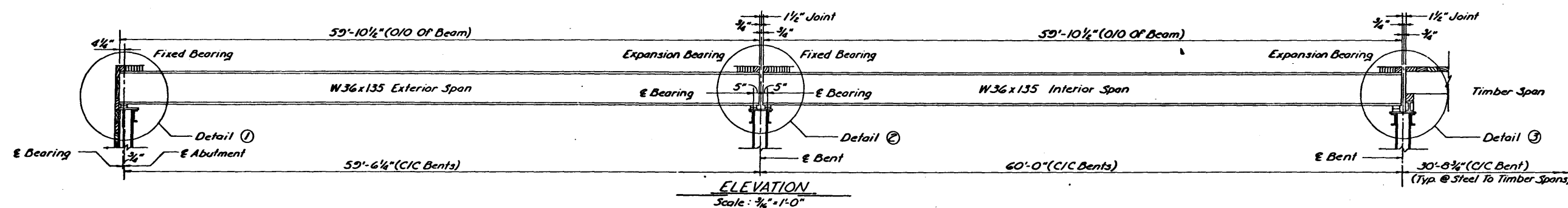
MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS
SEASIDE, PA. JACKSON, MISS. FAIRBANKS, AK.

DATE: 7-77	SEGMENT NO. 3	DRAWING NO. D-105-C1A
APPROVED R.H. Baker, Jr. <i>R.H. Baker</i> S.E., P.E.		SHEET NO. 114



NOTES:

- All Structural Steel Shall Conform To ASTM Designation A441 Unless Noted.
- High Strength Bolts Shall Conform To ASTM Designation A320, Including Suitable Nuts And Plain Hardened Washers.
- Field Connections To Be 3/4" High Strength Bolts Unless Noted Otherwise.
- All Welding Shall Conform To The A.W.S. Structural Welding Code 1972 Edition.
- Shop Paint: All Structural Steel Except Machine Finished Surfaces Shall Be Given First Coat Of Red Lead Tinted With Lampblack Oil And A Second Coat Of Red Lead Tinted With Lampblack.
- Machine Finished Surfaces Shall Receive One Coat Of Rust Inhibitive Petroleum.
- Field Paint: Spot Coat - Red Lead Tinted With Lampblack. Second Coat - Aluminum Paint.
- No Shop Paint Shall Be Applied Within 3" Of High Strength Bolted Connections.
- Timber Shown May Be Rough Cut To The Dimensions Shown On The Plans. Sizes Shown Are Minimum And May Be Adjusted With The Approval Of The Engineer.
- Timber Hardware - Refer To Specifications.
- Timber Shall Be Creosote Treated And Penetration As Required By The Specifications.
- Shop Drawings Shall Be Made In Accordance With The Specifications, Submitted And Approved Before Fabrication Is Begun.



AS BUILT NOTE

- Data presented hereon is general and may not incorporate design changes approved for final construction.

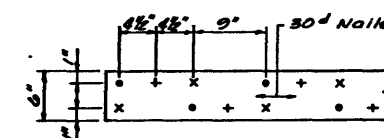
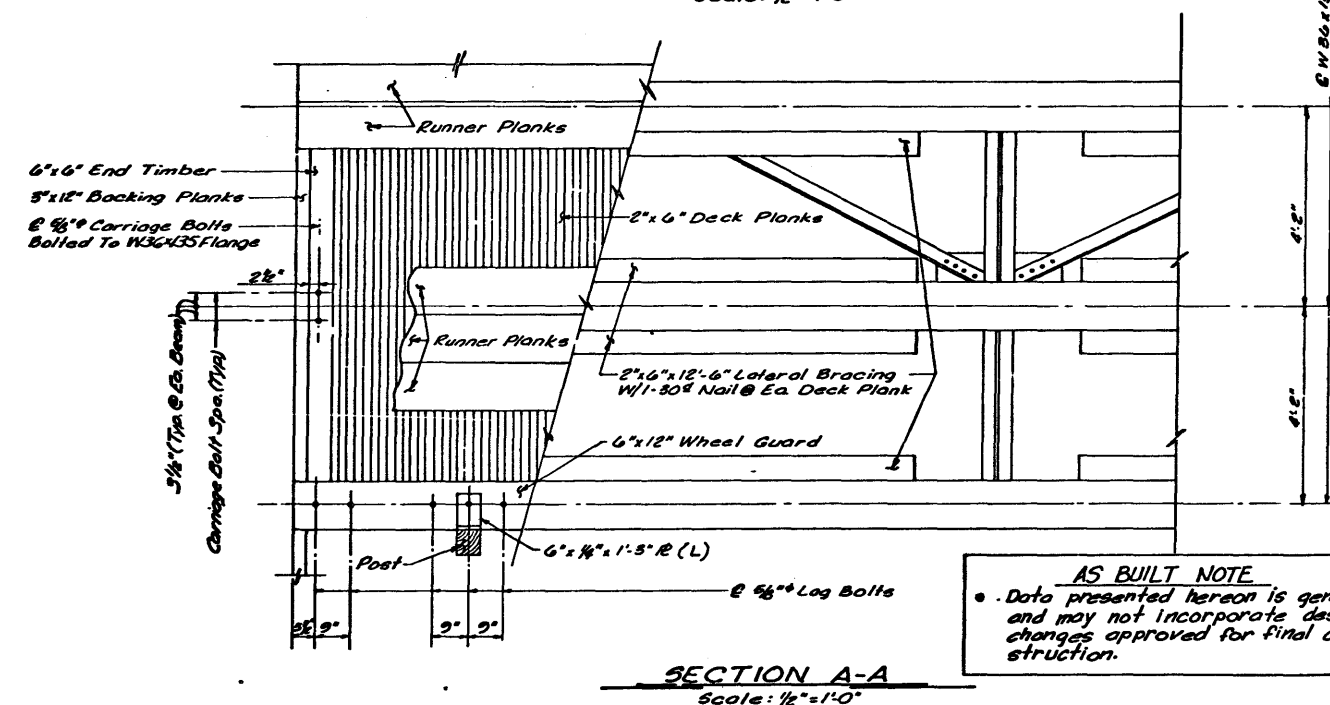
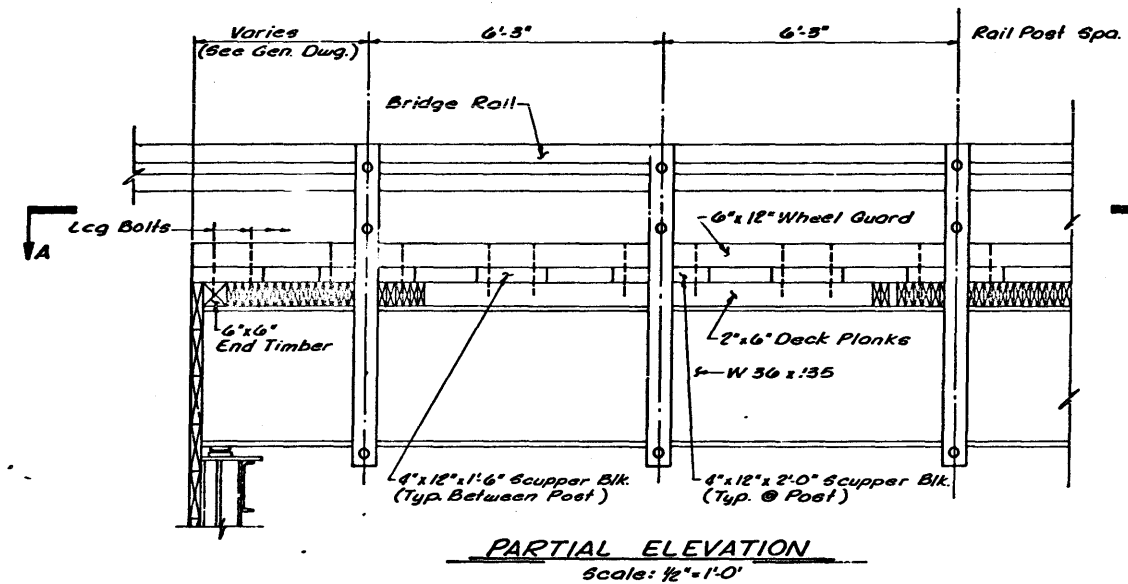
NOTE:

- For Bearing Device Details See Sheet 116.
- Location Of Fixed & Expansion Bearings May Vary From Bridge To Bridge. See General Dwg. For Correct Location.

REVISION	BY	DESCRIPTION	DATE
0	RMT	ER 1130 As Built Issue	7-77

ALYESKA PIPELINE SERVICE COMPANY, AGENT			
TRANS ALASKA PIPELINE SYSTEM			
HIGHWAY AS BUILT			
YUKON RIVER TO PRUDHOE BAY			
TWO LANE - 60' SPAN - HS 20-44			
SUPERSTRUCTURE PLAN & ELEVATIONS			
MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS			
BEAVER, PA. JACKSON, MISS. FAIRBANKS, AK			
DATE: 7-77	SEGMENT NO. 3	DRAWING NO. D-105-CIA	
APPROVED: L.H. Baker, Jr.		O.R. Baker	
U.S. & INC.		ALYESKA	

SEGMENT NO. 3



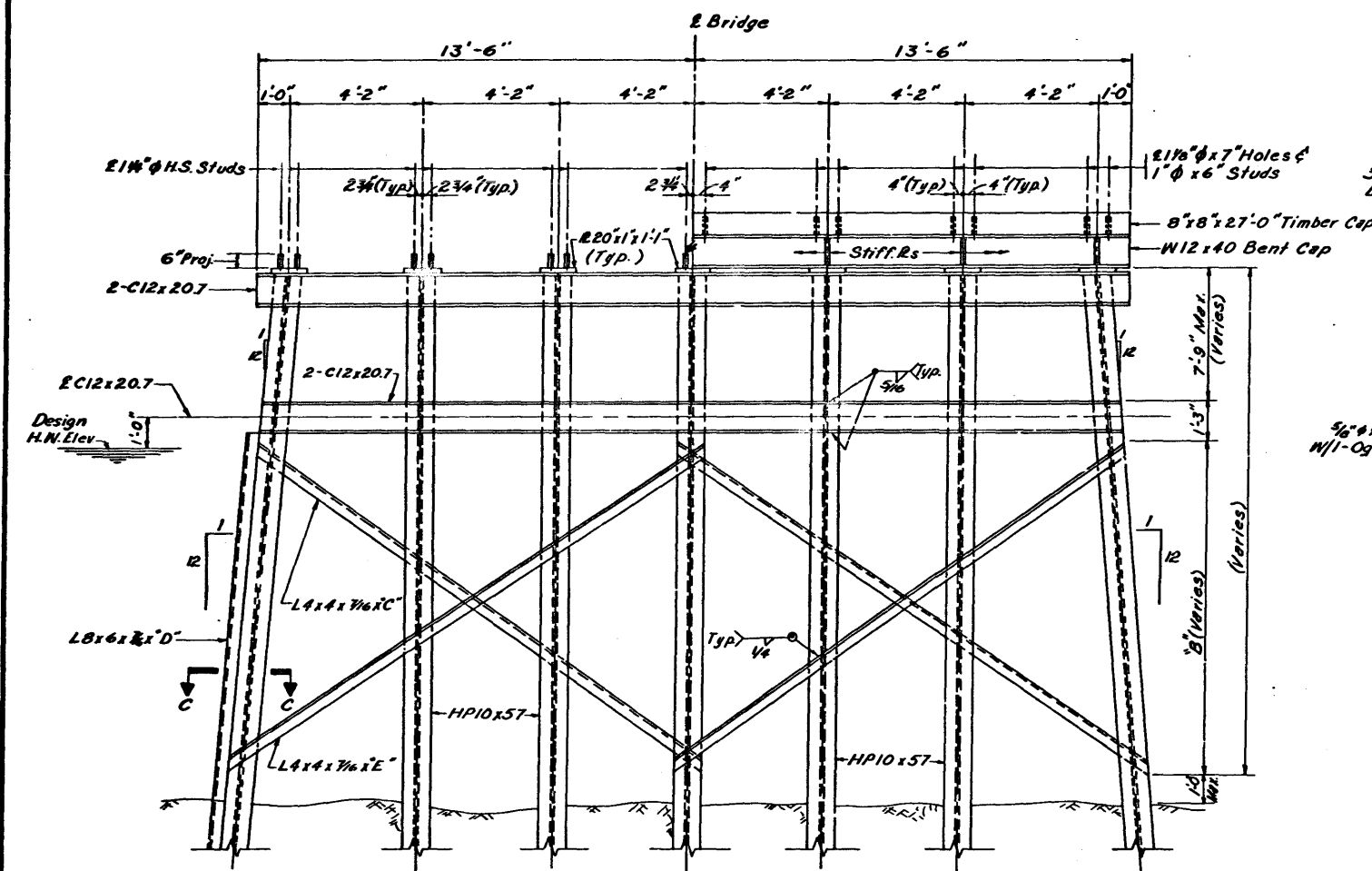
REVISION	BY	DESCRIPTION	DATE
0	INT	ER 1130 As Built Issue	7-71

ALYESKA PIPELINE SERVICE COMPANY, AGENT
TRANS ALASKA PIPELINE SYSTEM
 HIGHWAY AS BUILT
 YUKON RIVER TO PRUDHOE BAY

TWO LANE - 60' SPAN - HS 20-44
SUPERSTRUCTURE SECTIONS & DETAILS

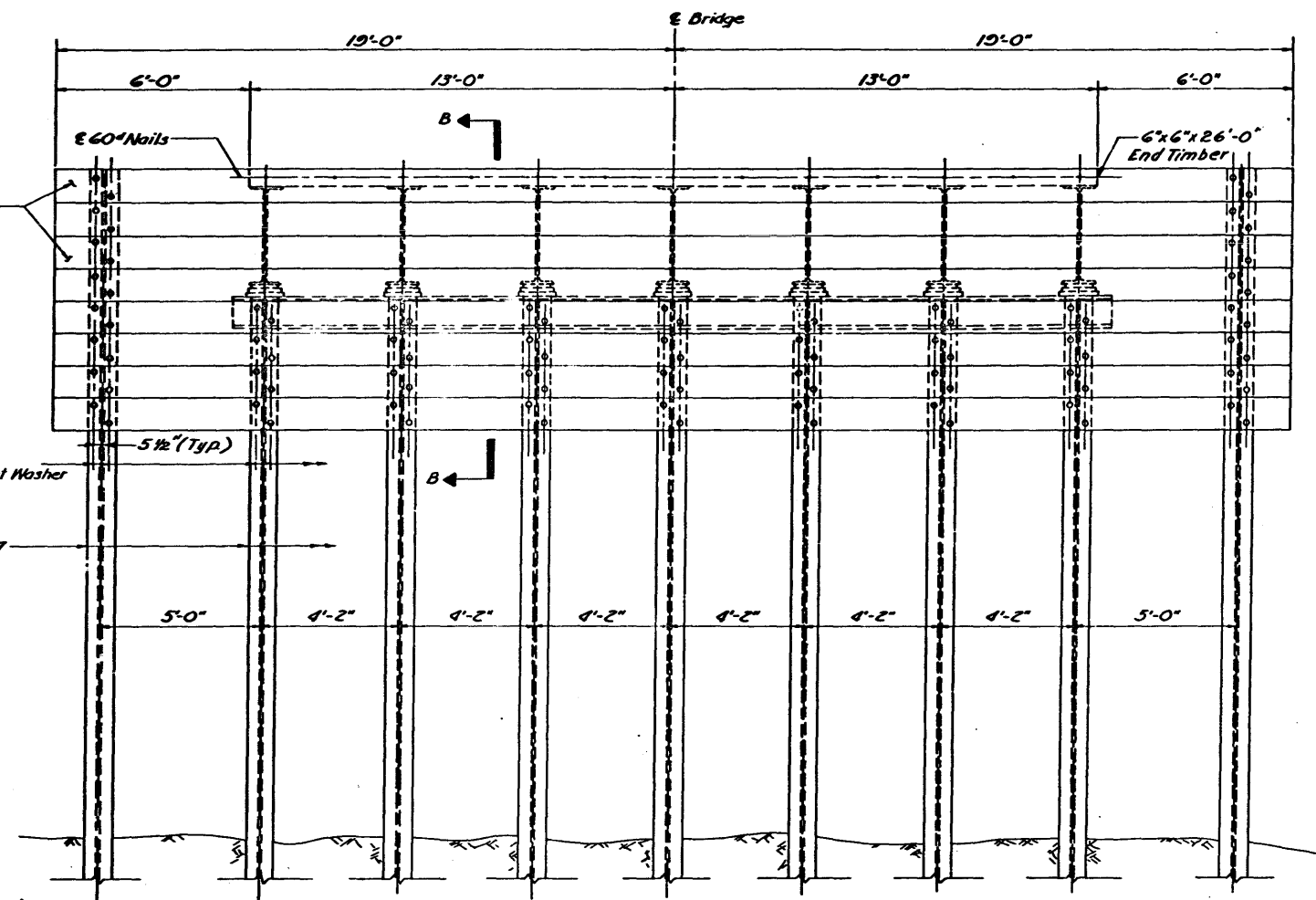
MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS
 DEAVER, CO. JACKSON, MISS. FAIRBANKS, AK.

DATE: 7-77	SEGMENT NO. 3	DRAWING NO. D-105-C1A
APPROVED		SHEET NO. 116
<i>L.H. GIBB, INC.</i> <i>N.L. Davis</i> P.E. ALYESKA		



STEEL SPAN - STEEL SPAN
STEEL SPAN - TIMBER SPAN
BENT ELEVATIONS
Scale: $\frac{3}{8}'' = 1'-0''$

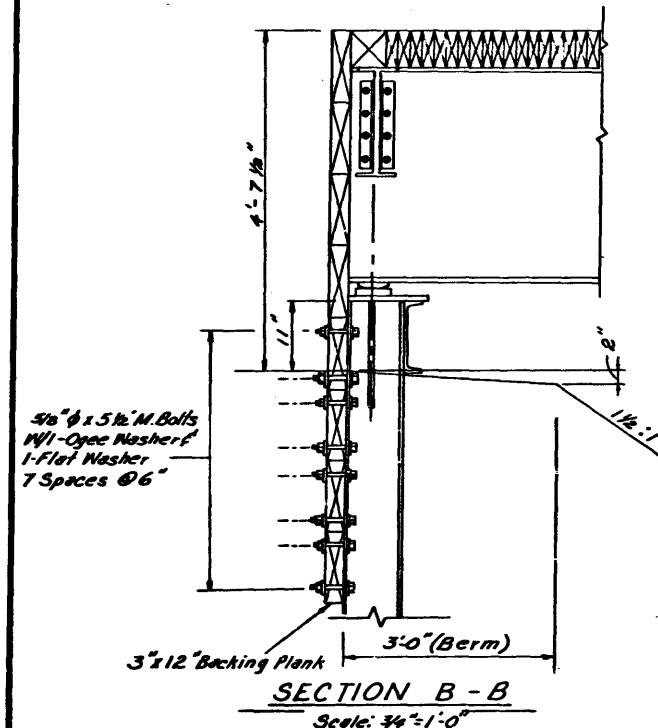
FLAME CUT WEB AND FLANGE OF UPPER SECTION AS SHOWN. BUTT WELD JOINTS. SEE SPECIFICATION FOR PREHEATING REQUIREMENTS FOR WELDING WHEN AMBIENT TEMPERATURE IS BELOW 35°F. PREHEATING REQUIREMENTS FOR CUTTING AND BURNING OF STEEL SHALL BE THE SAME AS THOSE FOR WELDING.



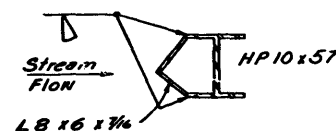
ABUTMENT ELEVATION
Scale: $\frac{3}{8}'' = 1'-0''$

NOTES:

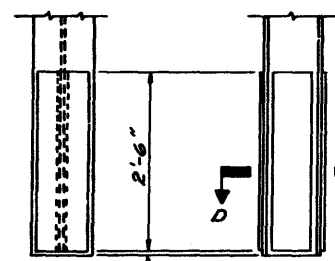
- All Structural Steel Shall Conform To A.S.T.M. Designation A441 Unless Noted.
- High Strength Bolts Shall Conform To A.S.T.M. Designation A320, Including Suitable Nuts And Plain Hardened Washers.
- All Timber May Be Rough Cut To The Dimensions Shown On The Plans. Sizes Shown Are Minimum And May Be Adjusted With The Approval Of The Engineer. Timber Shall Be Creosote Treated And Penetration As Required By The Specifications.
- Hardware May Be Black Iron. Machine Bolts May Be Wrought Iron Or Medium Steel. Washers In Contact With Timber May Be Cast Iron Or Malleable Iron, With Minimum Diameter 3.5 Times That Of The Bolt With Which They Are Used. Washers In Contact With Steel May Be Cut From Medium Steel.
- Piles Shall Be Driven To A Minimum Bearing Capacity Of 30 Tons. Where Required, Piles Shall Be Set In Predrilled Holes In Accordance With The Plans And Specifications.



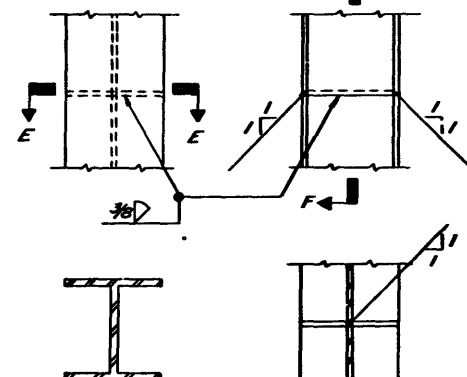
SECTION B-B
Scale: $\frac{3}{8}'' = 1'-0''$



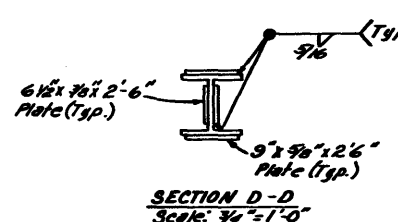
SECTION C-C
No Scale



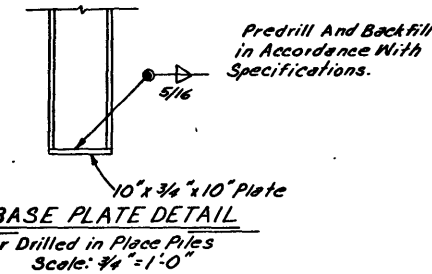
PILE SHOE DETAIL
For Driven Piles
Scale: $\frac{3}{8}'' = 1'-0''$



SECTION E-E
SECTION F-F
TYPICAL PILE SPLICE
No Scale



SECTION D-D
Scale: $\frac{3}{8}'' = 1'-0''$

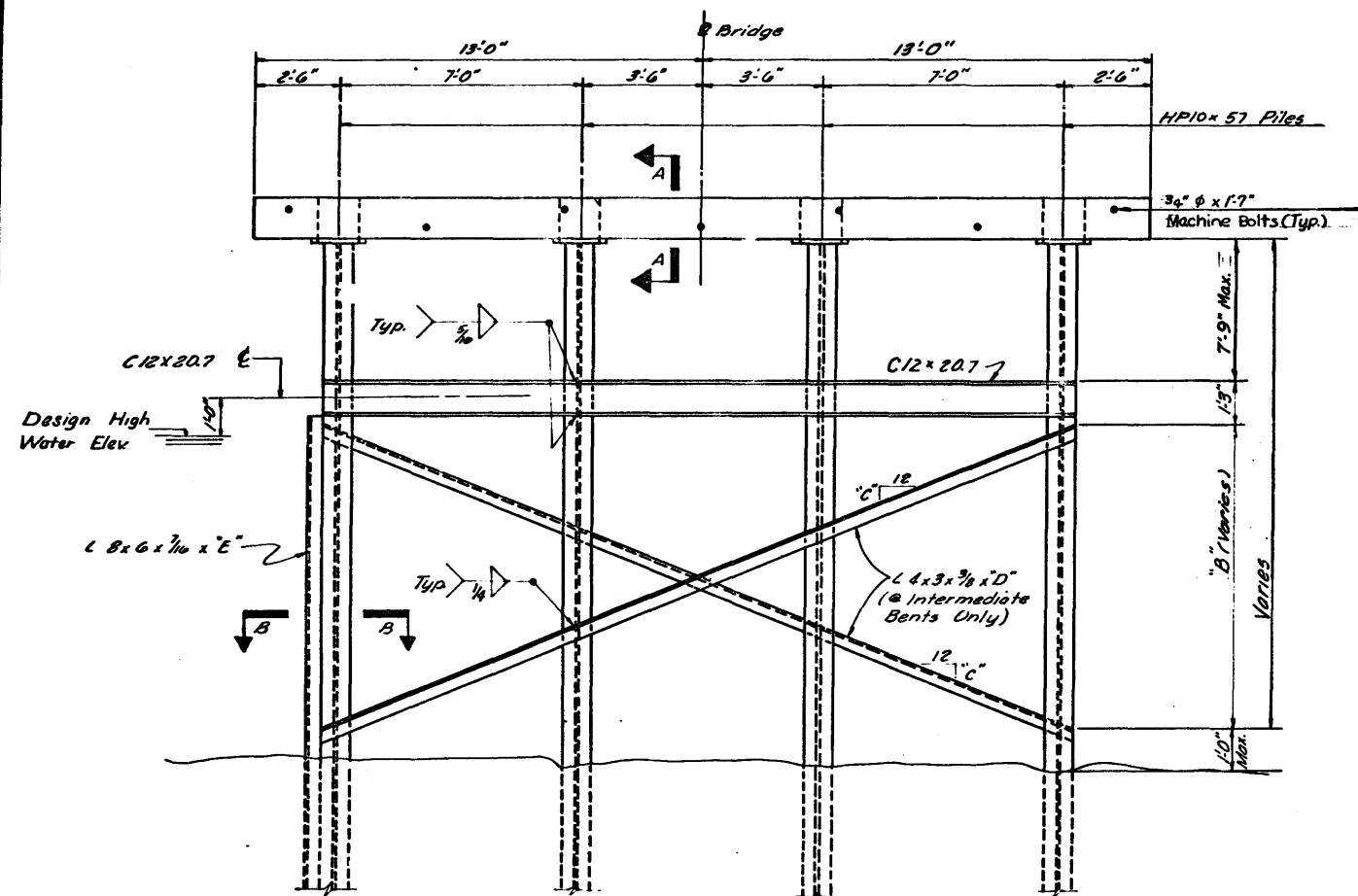


BASE PLATE DETAIL
For Drilled in Place Piles
Scale: $\frac{3}{8}'' = 1'-0''$

TABLE OF DIMENSIONS				
B	C	D	E	
15'-0"	18'-8"	20'-0"	20'-6"	
14'-0"	18'-11"	19'-0"	19'-0"	
13'-0"	18'-2"	18'-0"	18'-11"	
12'-0"	17'-6"	17'-0"	18'-3"	
11'-0"	16'-10"	16'-0"	17'-6"	
10'-0"	16'-2"	15'-0"	16'-10"	
9'-0"	15'-7"	14'-0"	16'-2"	
8'-0"	15'-0"	13'-0"	15'-7"	
7'-0"	14'-6"	12'-0"	15'-0"	
6'-0"	14'-1"	11'-0"	14'-6"	
5'-0"	13'-8"	10'-0"	14'-0"	

AS BUILT NOTE
Data presented hereon is general and may not incorporate design changes approved for final construction.

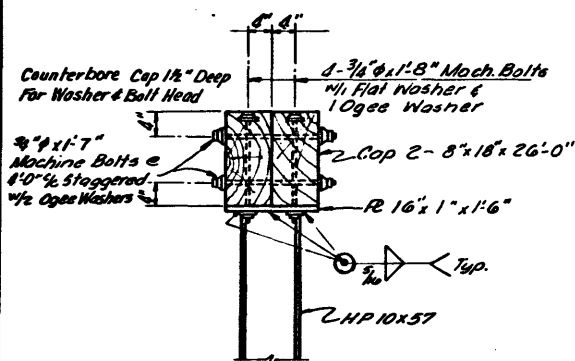
REVISION	BY	DESCRIPTION	DATE
0	RHT	ER 1130 As Built Issue	7-77
ALYESKA PIPELINE SERVICE COMPANY, AGENT TRANS ALASKA PIPELINE SYSTEM HIGHWAY AS BUILT YUKON RIVER TO PRUDHOE BAY			
TWO LANE - 60' SPAN - HS 20-44 BENT & ABUTMENT DETAILS			
MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS BEAVER, PA. JACKSON, MISS. FAIRBANKS, AK			
DATE: 7-77	SEGMENT NO. 3	APPROVED	DRAWING NO. D-105-CIA
SHEET NO. 117			



BENT ELEVATION

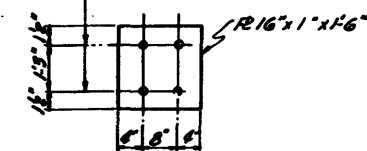
Scale: 3/8" = 1'-0"

SCALE IN FEET
(SCALE OF REDUCED SHEET)



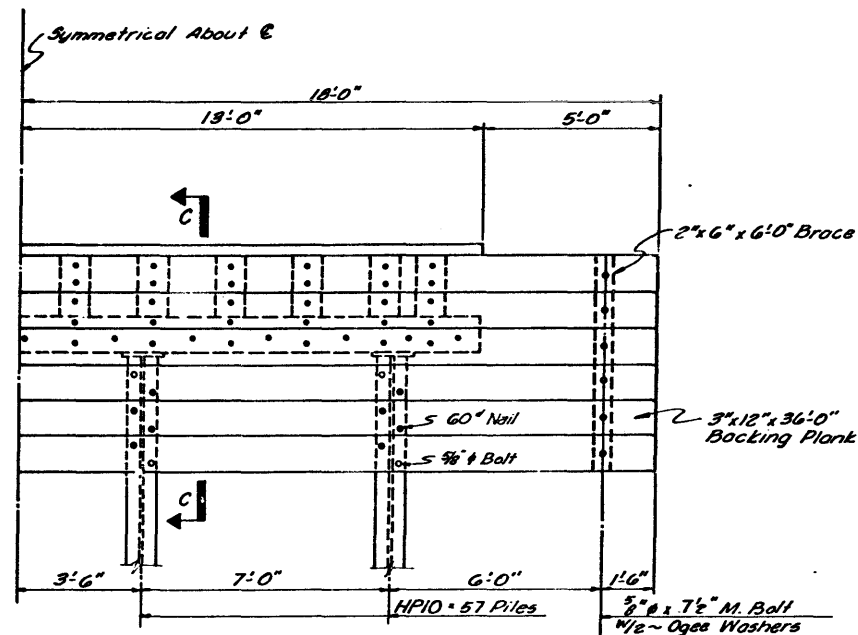
SECTION A-A

No Scale



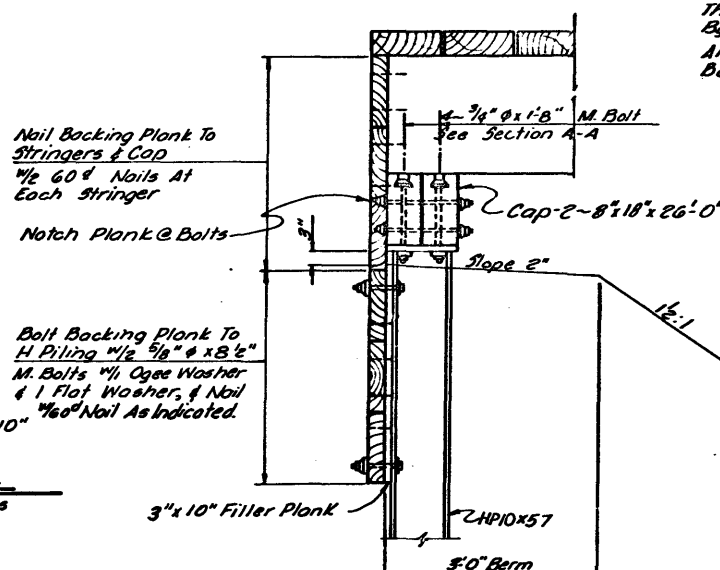
CAP PLATE DETAIL

B	C	D	E
16'	8 1/4"	27'-4"	21'-0"
15'	8 1/4"	26'-9"	20'-0"
14'	7 3/4"	26'-2"	19'-0"
13'	7 3/4"	25'-8"	18'-0"
12'	6 5/8"	25'-2"	17'-0"
11'	6 1/4"	24'-8"	16'-0"
10'	5 1/2"	24'-3"	15'-0"
9'	4 1/4"	23'-9"	14'-0"
8'	4 3/8"	23'-5"	13'-0"
7'	3 7/8"	23'-1"	12'-0"
6'	3 1/4"	22'-9"	11'-0"
5'	2 3/4"	22'-6"	10'-0"



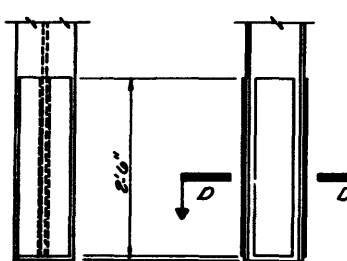
HALF ABUTMENT ELEVATION

Scale: 3/8" = 1'-0"



SECTION C-C

No Scale



PILE SHOE DETAIL

For Driven Piles
Scale: 3/8" = 1'-0"

* Pile Lengths Are Subject To Variation To Suit Field Conditions.
** Provide Pile Shoe Plates Or Base Plates As Required.
Location Of Driven Piles And Drilled In Place Piles Shall Be As Indicated On The General Drawings Or As Directed By The Engineer.
All Piles Shall Be Driven To A Minimum Bearing Capacity Of 30 Tons.

**SECTION E-E
TYPICAL PILE SPLICE**

No Scale

FOR ONE INTERMEDIATE BENT (30')			
DESCRIPTION	No	Size	LENGTH
Bent Cap	2	8'x18'	26'-0"
Deflector Angle	1	L8x6x3/4"	5'-0"
Cap Plate	4	16'x1'	1'-6"
Channel Strut	2	12x20.7	21'-10"
Cross Bracing	2	L8x3x3/4"	1'-0"
Machine Bolts	8	3/4"	1'-7"
Machine Bolts	17	3/4"	1'-8"
Flat Washer	17	3/4"	
Ogee Washer	33	3/4"	
Pile Shoe Plate **	8	6'x1'	2'-6"
Pile Shoe Plate **	8	9'x1'	2'-6"
Base Plate **	4	10'x3/4"	1'-0"
FOR ONE ABUTMENT (30' SPAN)			
DESCRIPTION	No	Size	LENGTH
Bent Cap	2	8'x18'	26'-0"
Backing Plank	6	3'x12'	36'-0"
Filler Plank	4	3'x10'	2'-0"
Bracing Plank	2	2'x6'	6'-0"
Cap R	4	16'x1'	1'-6"
Machine Bolts	17	3/4"	1'-8"
Machine Bolts	9	3/4"	8'-0"
Machine Bolts	13	3/4"	7'-0"
Machine Bolts	8	3/4"	1'-7"
Flat Washer	17	3/4"	
Ogee Washer	33	3/4"	
Ogee Washer	35	3/4"	
Nails	100	60d	
Pile Shoe Plate **	8	6'x1'	2'-6"
Pile Shoe Plate **	8	9'x1'	2'-6"
Base Plate **	4	10'x3/4"	1'-0"

SUMMARY OF QUANTITIES

One Intermediate Bent (30' Span)
Timber: 0.624 MBFM
* Steel Piles: 4 @ 40' = 160 Lin. Ft.
One Abutment
Timber: 1.312 MBFM
* Steel Piles: 4 @ 40' = 160 Lin. Ft.

NOTE:
Quantities Include An Excess Allowance Of 5% On Bolts & Washers And 10% On Nails.

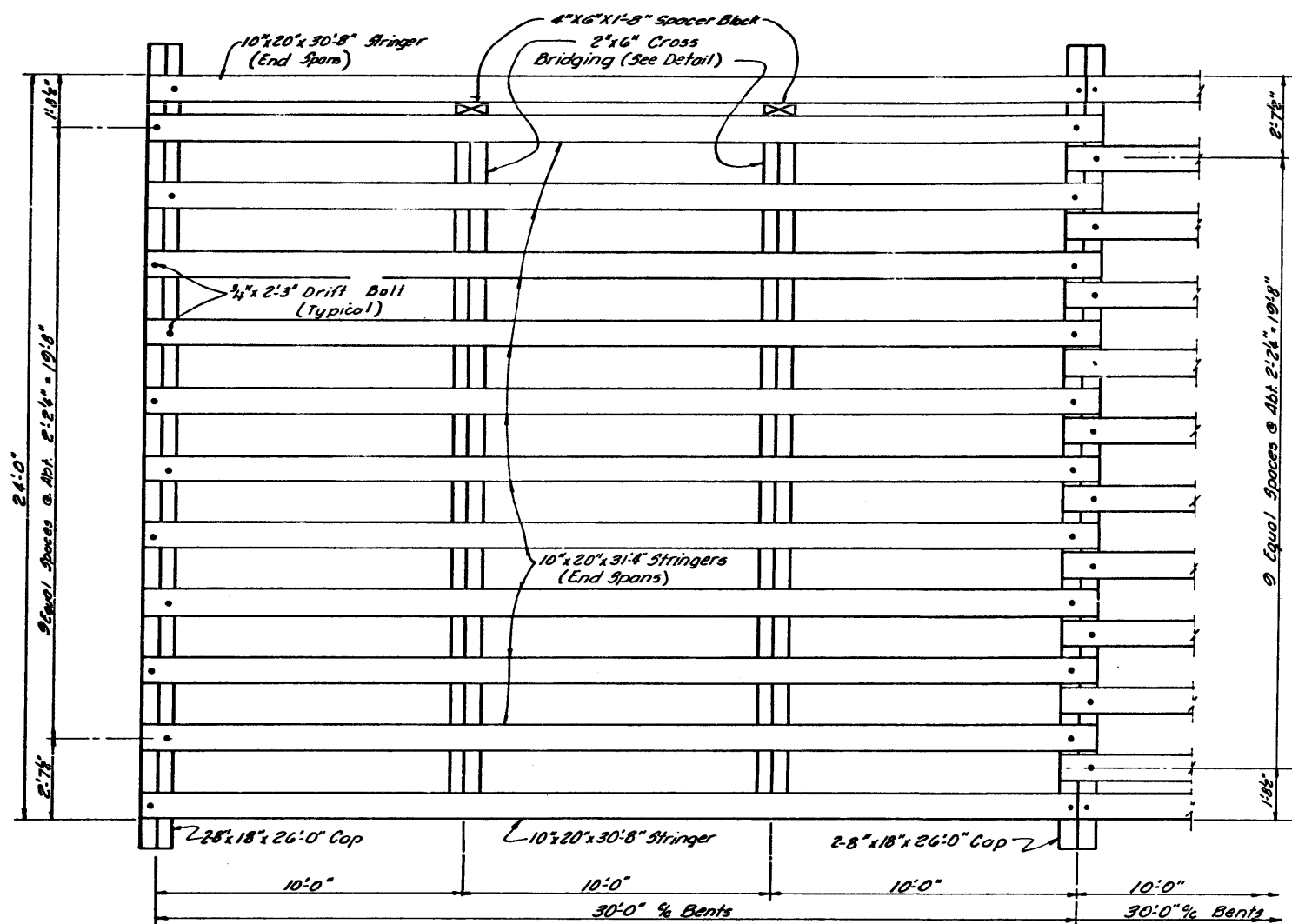
FLAME CUT WEB AND FLANGE OF UPPER SECTION AS SHOWN BUTT WELD JOINTS. SEE SPECIFICATION FOR PREHEATING REQUIREMENTS FOR WELDING WHEN AMBIENT TEMPERATURE IS BELOW 32°F. PREHEATING REQUIREMENTS FOR CUTTING AND BURNING OF STEEL SHALL BE THE SAME AS THOSE FOR WELDING.

NOTES:
THIS DRAWING IS THE PROPERTY OF THE ENGINEER OF THE ROAD DISTRICT. IT IS TO BE USED ONLY FOR THE PROJECT AND NOT BE REPRODUCED OR COPIED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER.

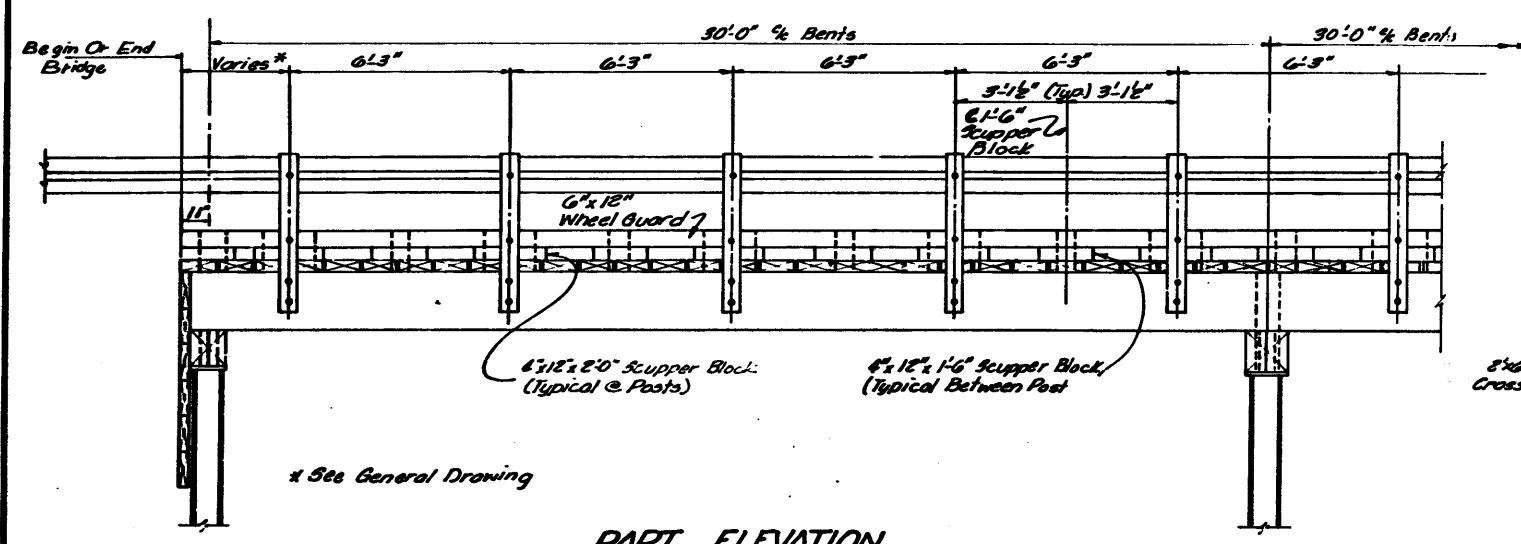
REVISION	BY	DESCRIPTION	DATE
0	RHT	ER 1130 As Built Issue	7-77
ALYESKA PIPELINE SERVICE COMPANY, AGENT TRANS ALASKA PIPELINE SYSTEM HIGHWAY AS BUILT YUKON RIVER TO PRUDHOE BAY			
30 FOOT SPAN ABUTMENT & INTERMEDIATE BENT			
MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS SEAFORD, DE. JACKSON, MISS. FAIRBANKS, AK.			
DATE: 7-77	SEGMENT NO. 3	DRAWING NO. D-105-CIA	SHEET NO. 118

AS BUILT NOTE
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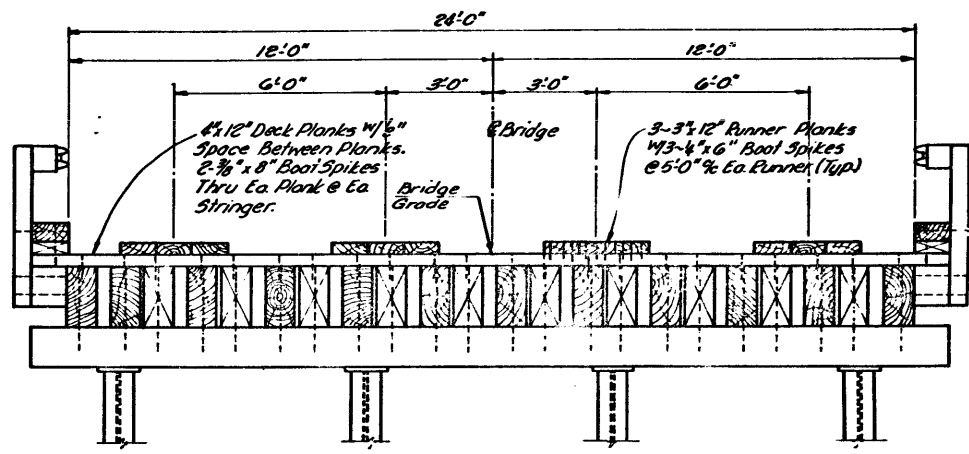
SEGMENT NO. 3



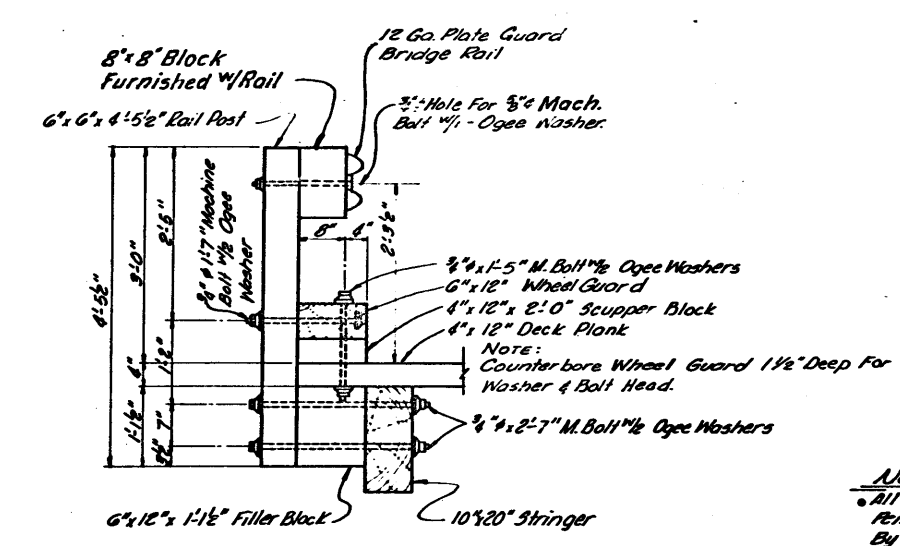
STRINGER LAYOUT
Scale: 3/8" = 1'-0"



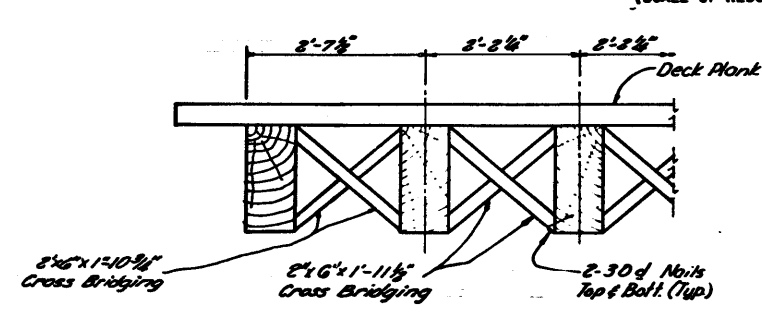
PART ELEVATION
Scale: 3/8" = 1'-0"



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



RAIL AND WHEEL GUARD DETAILS
Scale: 3/4" = 1'-0"



CROSS BRIDGING DETAIL
No Scale

BILL OF MATERIALS			
FOR ONE 30 FOOT END SPAN			
DESCRIPTION	No.	SIZE	LENGTH
Interior Stringer	10	10x20	31'-4"
Exterior Stringer	2	10x20	30'-8"
Cross Bridging	36	2x6	1'-11 1/2"
Deck Plank	30	4x12	26'-0"
Runner Plank	12	3x12	30'-11"
Wheel Guard	2	6x12	30'-11"
Scupper Block	10	4x12	2'-0"
Scupper Block	10	4x12	1'-6"
Rail Post	10	6x6	4'-5 1/2"
Filler Block	10	6x12	1'-1 1/2"
Spacer Block	2	4x6	1'-3"
Drift Bolts	26	3/4"	2'-3"
Boot Spikes	756	3/4"	0'-8"
Boot Spikes	265	3/4"	0'-6"
Machine Bolts	21	3/4"	2'-7"
Machine Bolts	11	3/4"	1'-7"
Machine Bolts	62	3/4"	1'-5"
C.I. Ogee Washer	147	3/4"	
Nails	205	30d	

SUMMARY OF QUANTITIES
Timber: 11,275 MBFM

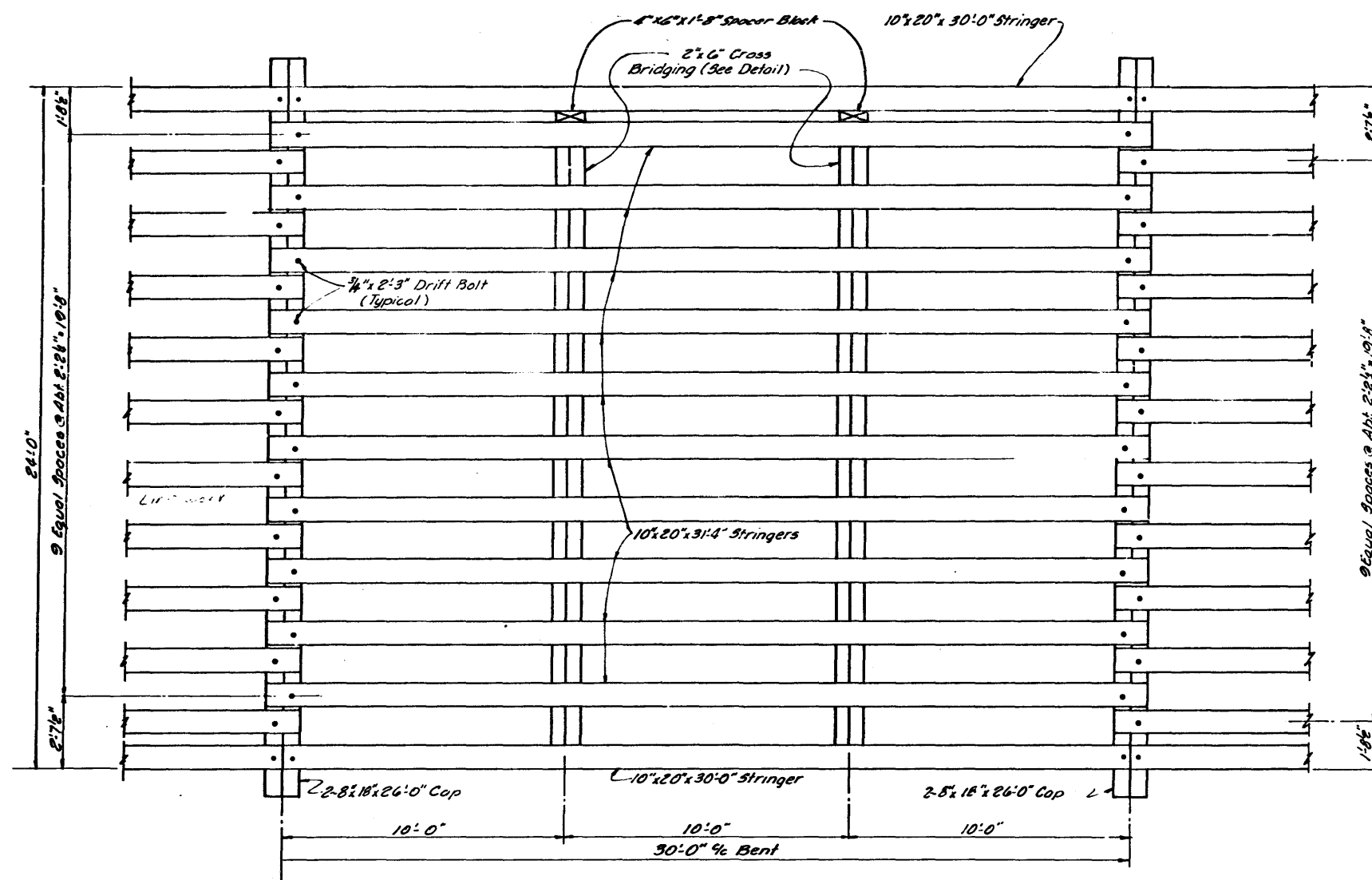
- NOTES**
- All Timber Shall Be Creosote Treated. Penetration Shall Be As Required By The Specifications.
 - All Dimensions & Bolt Lengths Based On Nominal Size Of Timber.
 - Guard Rail And Guard Rail Hardware Are Furnished And Installed Under A Separate Bid Item.
 - Quantities Include An Excess Allowance Of 5% On Bolts & Washers And 10% On Nails

THE ENGINEER/ARCHITECT IS NOT RESPONSIBLE FOR THE DESIGN OF THE BRIDGE. THE DESIGNER SHALL BE RESPONSIBLE FOR THE DESIGN. THE DESIGNER SHALL BE RESPONSIBLE FOR THE DESIGN. THE DESIGNER SHALL BE RESPONSIBLE FOR THE DESIGN.

REVISION	BY	DESCRIPTION	DATE
0	RNT	ER 1130 As Built Issue	7-77
ALYESKA PIPELINE SERVICE COMPANY, AGENT TRANS ALASKA PIPELINE SYSTEM HIGHWAY AS BUILT YUKON RIVER TO PRUDHOE BAY			
30 FOOT END SPAN			
MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS BEAVER, PA. JACKSON, MISS. FAIRBANKS, AK			
DATE: 7-77		SEGMENT NO. 3	DRAWING NO.
APPROVED			D-105-CIA
R.H. Tamm, P.E.		A.L. Davis	SHEET NO. 119
M.B. Co., Inc.		ALYESKA	

AS BUILT NOTE
Data presented hereon is general and may not incorporate design changes approved for final construction.

SEGMENT NO. 3

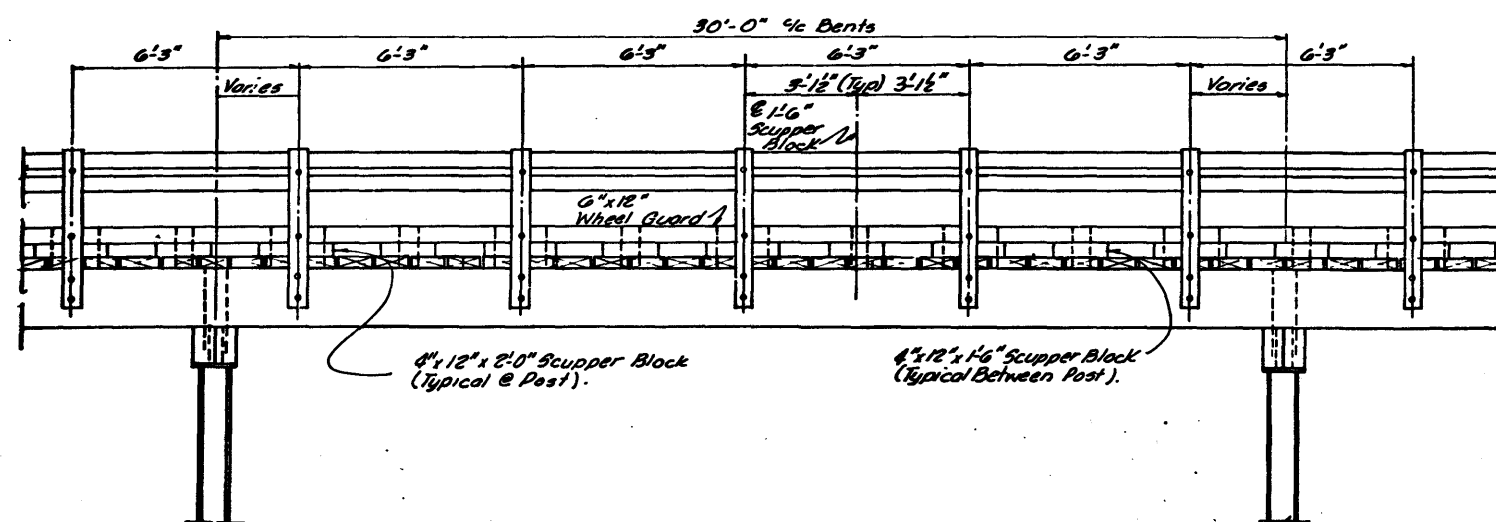


STRINGER LAYOUT

Scale 3/8" = 1'0"

0 1 2 3 4 5

SCALE IN FEET
(SCALE OF REDUCED SHEET)



PART ELEVATION

Scale 3/8" = 1'0"

BILL OF MATERIALS

FOR ONE 30 FOOT INTERMEDIATE SPAN

DESCRIPTION	No.	SIZE	LENGTH
Interior Stringer	10	10x20"	31'-4"
Exterior Stringer	2	10x20"	30'-0"
Cross Bridging	36	2x6"	1'-11 1/2"
Cross Bridging	4	2x6"	1'-10 1/2"
Deck Planks	29	6x12"	24'-0"
Runner Plank	12	3x12"	30'-0"
Scupper Block	10	4x12"	2'-0"
Scupper Block	10	6x12"	1'-0"
Wheel Guard	2	6x12"	30'-0"
Rail Post	10	6x6"	4'-5"
Filler Block	10	6x12"	1'-1 1/2"
Spacer Block	2	4x6"	1'-8"

Drift Bolts	36	3/4"	2'-3"
Boat Spikes	730	3/4"	0'-8"
Boat Spikes	265	1/4"	0'-6"

Machine Bolts	21	3/4"	2'-7"
Machine Bolts	11	3/4"	1'-7"
Machine Bolts	42	3/4"	1'-5"

C.I. Ogee Washer	147	3/8"	
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Nails	205	30d	
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SUMMARY OF QUANTITIES
Timber: 11.04 MBFM

NOTES

- All Timber Shall Be Crossed Treated. Penetration Shall Be As Required By The Specifications.
- All Dimensions & Bolt Lengths Based On Nominal Size Of Timber.
- Guard Rail And Guard Rail Hardware Are Furnished And Installed Under A Separate Bid Item.
- See End Span For Sections And Details Not Shown
- Quantities Include An Excess Allowance Of 5% On Bolts & Washers And 10% On Nails.

NOTICE:
THIS DRAWING IS THE PROPERTY OF THE OWNER OF THE YUKON RIVER PIPELINE SYSTEM AND THE UNDERSIGNED ENGINEER. IT IS TO BE KEPT IN THE OFFICE OF THE ENGINEER AND NOT TO BE REPRODUCED, COPIED OR OTHERWISE USED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.

REVISION	BY	DESCRIPTION	DATE
0	RHT	ER 1130 As Built Issue	7-77

ALYESKA PIPELINE SERVICE COMPANY, AGENT
TRANS ALASKA PIPELINE SYSTEM
HIGHWAY AS BUILT
YUKON RIVER TO PRUDHOE BAY

30 FOOT INTERMEDIATE SPAN

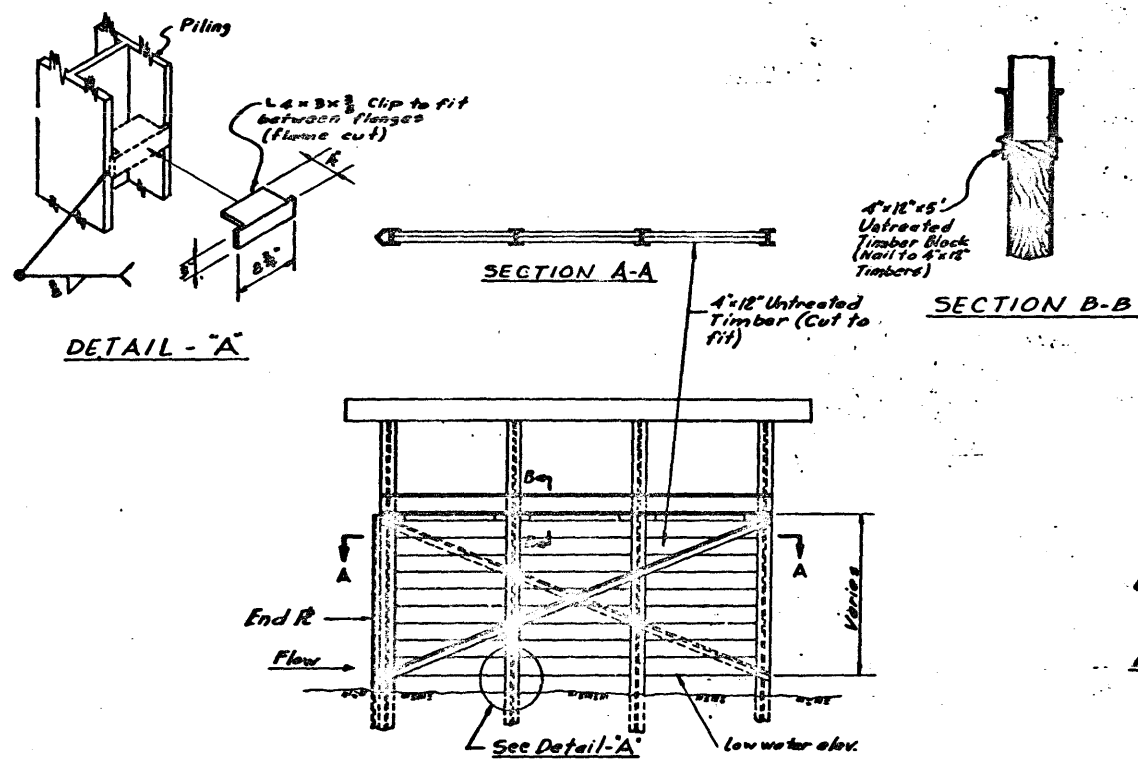
MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS
SEASIDE, CA JACKSON, MISS. FAIRBANKS, AK.

DATE: 7-77 SEGMENT NO. 3 DRAWING NO. D-105-CIA

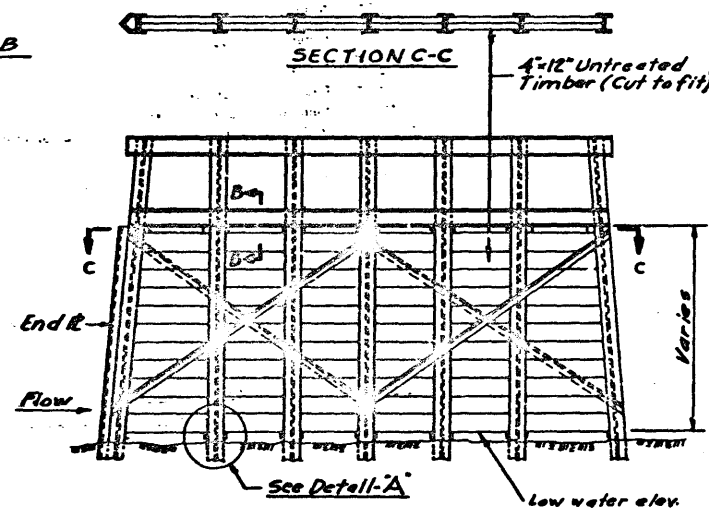
APPROVED: E.H. Telford, P.E. W. J. Davis, P.E. SHEET NO. 120

AS BUILT NOTE
• Data presented hereon is general and may not incorporate design changes approved for final construction.

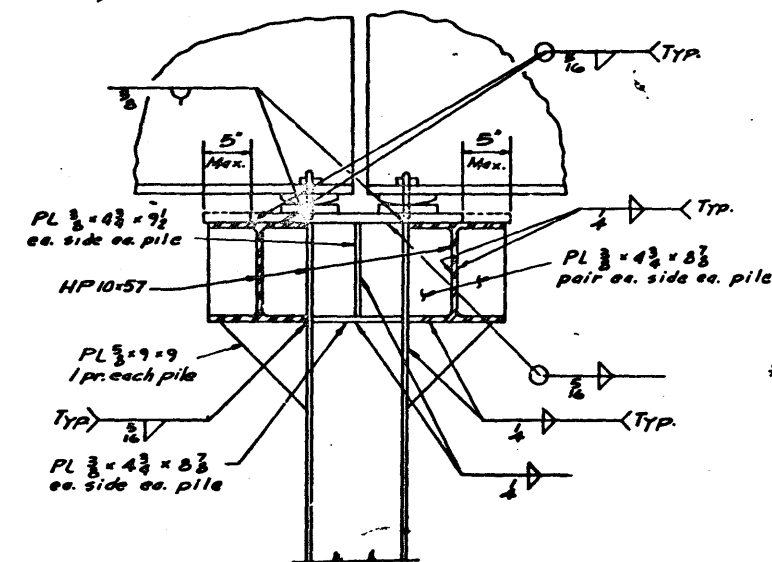
SEGMENT NO. 3



BENT ELEVATION
30 FOOT SPAN



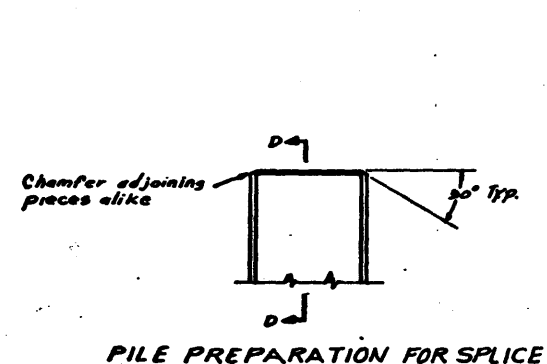
BENT ELEVATION
60 FOOT SPAN



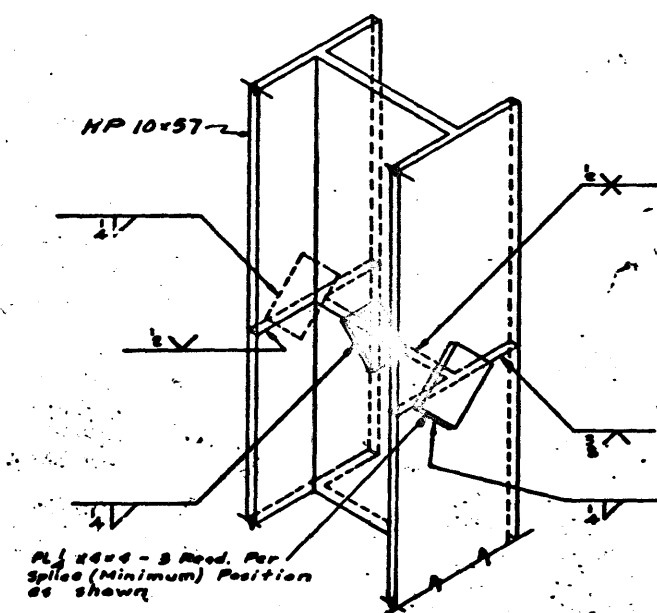
* These details apply only at locations identified in the As Built Notes on the General Drawings for individual bridges.

TRASH BARRIER *

NO SCALE



ALTERNATE PILE SPLICE
NO SCALE



- ALLOWABLE MATERIAL ALTERNATES
- During construction, the following material alternates were allowed by Design Changes approved by the Alaska Dept. of Highways and Alyeska:
- A. Timber
- Decking for 60' bridge spans. Alternates listed in order of decreasing desirability.
 - Alt. 1 - Materials as shown and described in the approved plans and specifications.
 - Alt. 2 - In lieu of Alternate No. 1, ripped, treated 4" x 12" x 26'-0" may be used providing: (1) ripping is performed in such a manner to produce planking which is square and of consistent dimensions; (2) the ripped surfaces are painted with two coats of hot creosote oil prior to placement; (3) the ripped surfaces will be placed downward away from exposure to weather and traffic; and (4) nailing pattern will be as shown on the approved plans utilizing nails of sufficient length to completely penetrate the adjacent planks.
 - Alt. 3 - In lieu of Alternates No. 1 and 2, untreated timber of the same dimensions as shown on the approved plans may be used providing it is painted with two coats of hot creosote oil prior to placement in structure.
 - Cross-bridging, spacer blocks, runner planks, wheel guards, rail posts, scupper blocks and filler planks. These types of bridge timber are not required to be creosote treated.
- B. Steel
- Piles and miscellaneous steel shall conform to ASTM A-441 and/or A-36. Welding of steel shall not be restricted as pertains to either allowable steel type.

REVISION	BY	DESCRIPTION	DATE
0	RHT	ER 1130 As Built Issuance	7-77

ALYESKA PIPELINE SERVICE COMPANY, AGENT
TRANS ALASKA PIPELINE SYSTEM
HIGHWAY AS BUILT
YUKON RIVER TO PRUDHOE BAY

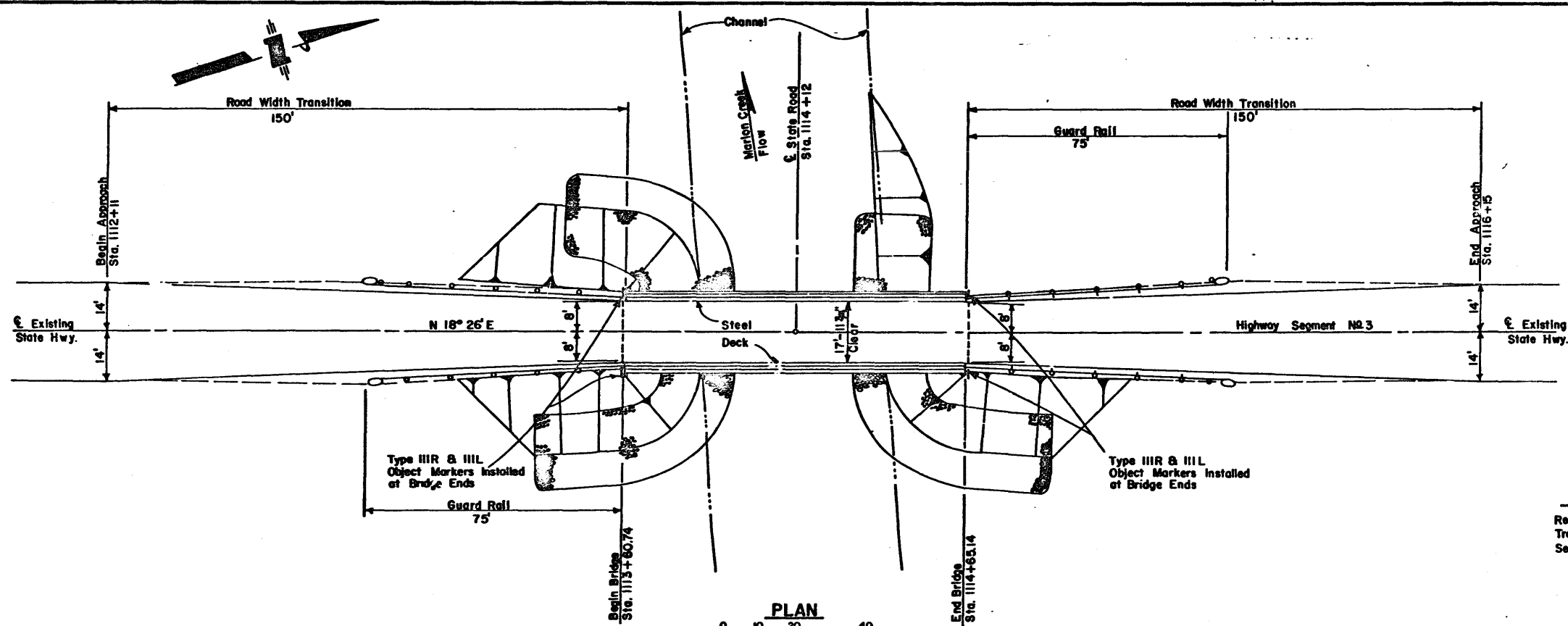
TRASH BARRIER &
ALTERNATE DETAILS

MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS
SEAFER, IN. JACKSON, MISS. PROJECT NO. 80

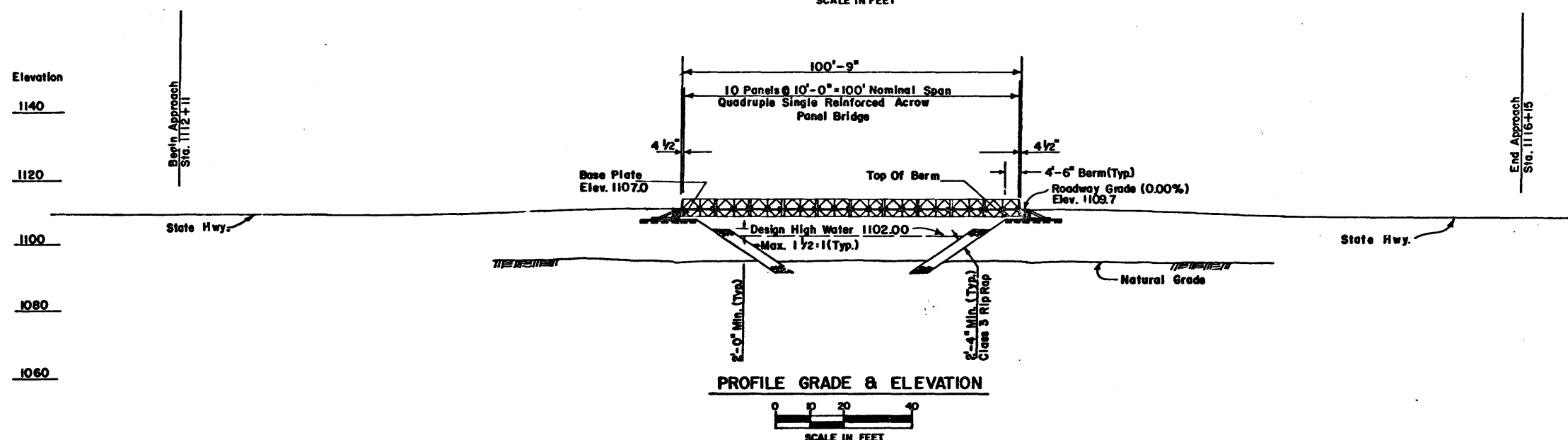
DATE: 7-77

SEGMENT NO. 3

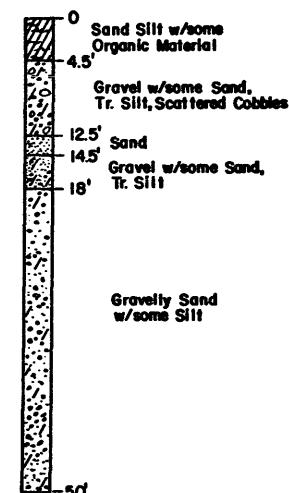
APPROVED
R.H. Tilly, P.E. A.L. Davis
SHEET NO. 181



PLAN
SCALE IN FEET

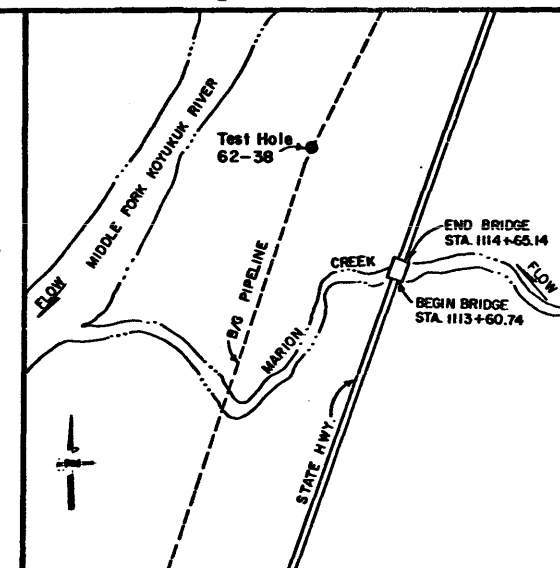


PROFILE GRADE & ELEVATION
SCALE IN FEET



TEST HOLE 62-38

Refer to Borehole Logs For The
Trans-Alaska Pipeline Route
See Area Map for Location



AREA MAP
SCALE IN FEET

HYDROLOGIC DATA

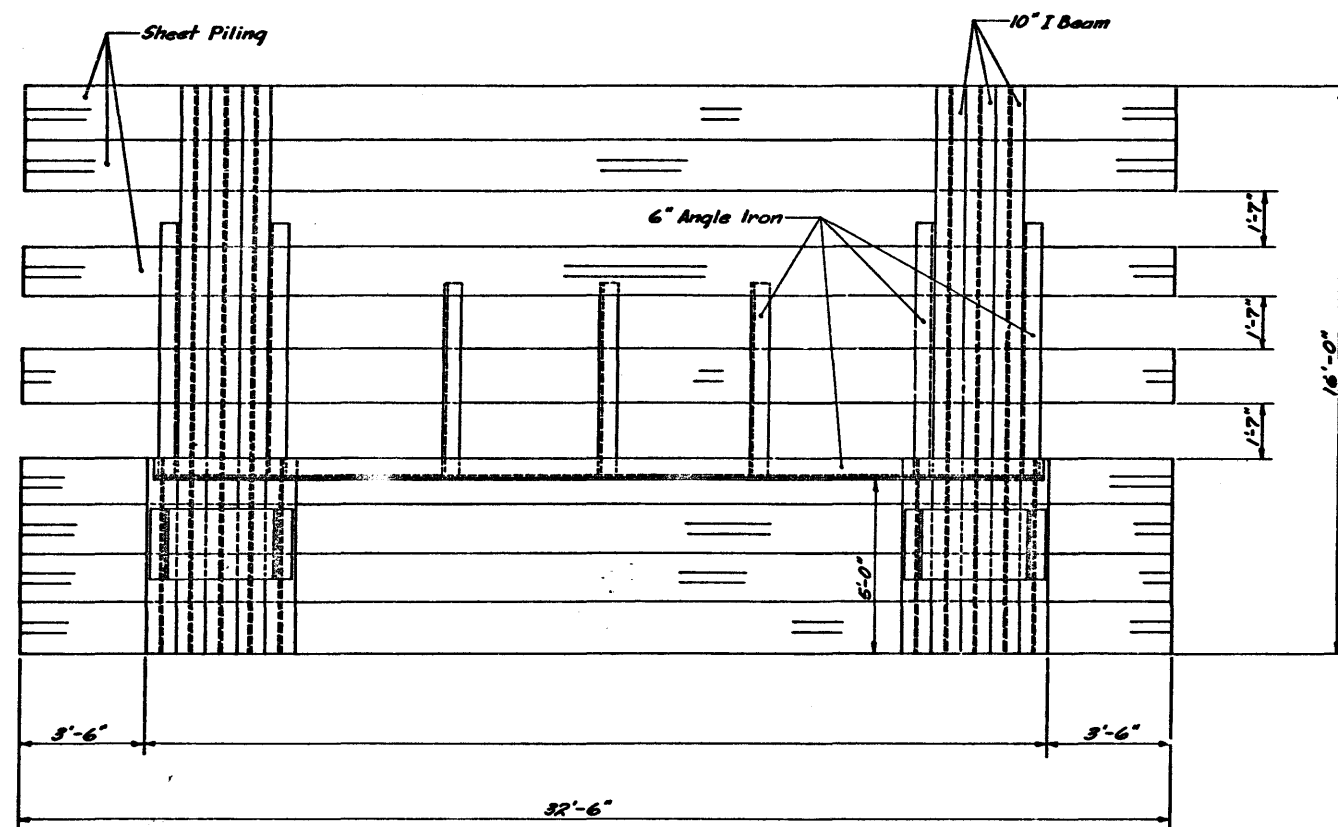
Drainage Area = 49.5 Sq. Mi.
Design Discharge = 2,921 C.F.S.
Design Velocity = 11.3 F.P.S.
Design High Water Elev. = 1102.0

NOTES

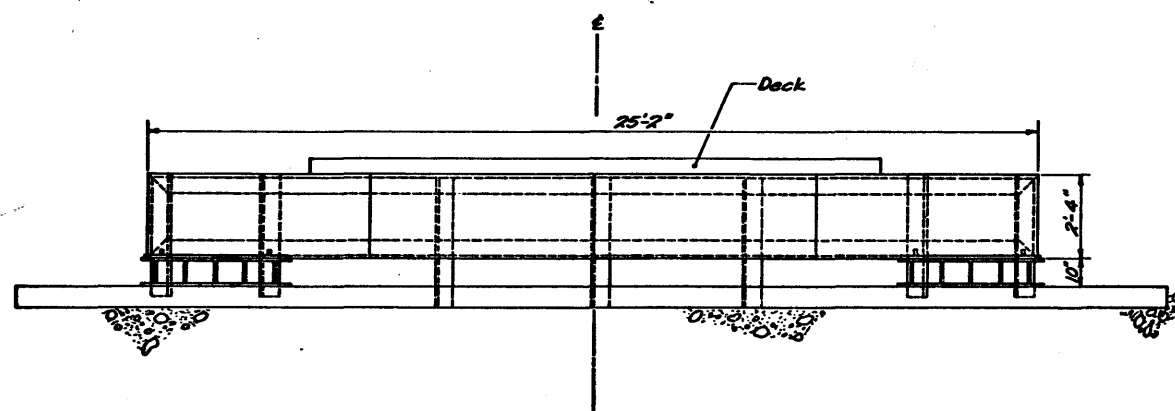
1. Live Load - HS-20-44
2. See Dwg. D-105-CIA Sht. No. 123, For Abutment Details.

STANDARD SUMMARY OF SIGNS & MARKERS			
ITEM	DESCRIPTION	TYPE	QUANTITY
1	One Lane Bridge @ 30 M.P.H.	W5-3 W13-1	2
2	One Lane Bridge	W5-3	2
3	Object Marker	IIIR	4

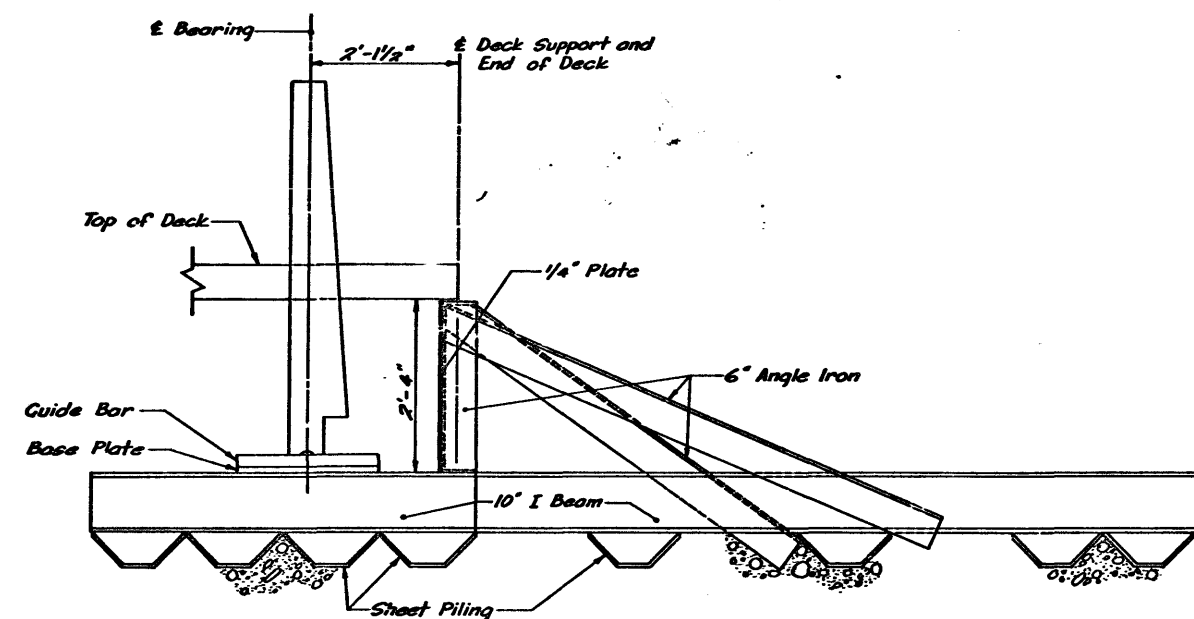
NOTES:			
REVISION	BY	DESCRIPTION	DATE
0	RHT	ER 1130 As Built Issue	7-77
ALYESKA PIPELINE SERVICE COMPANY, AGENT TRANS ALASKA PIPELINE SYSTEM HIGHWAY AS BUILT-YUKON RIVER TO PRUDHOE BAY			
GENERAL DRAWING STATE HWY. BRIDGE AT THE MARION CREEK CROSSING			
MICHAEL BAKER, JR., INC. CONSULTING ENGINEERS BEAVER, PA. JACKSON, MISS. FAIRBANKS, AK.			
DATE: 7-77	ALIGN. SHT. NO. 99	DRAWING NO. D-105-CIA	
APPROVED	APPROVED	SHEET NO. 122	



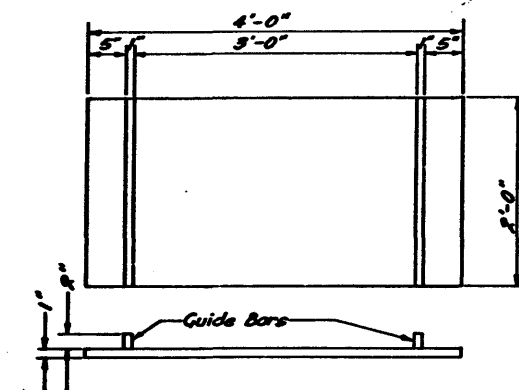
PLAN
Scale: 3/8" = 1'



FRONT
Scale: 3/8" = 1'



SIDE
Scale: 3/4" = 1'



BASE PLATE DETAIL
Scale: 1" = 1'

- NOTES:**
1. All sub-structure steel conforms to A.S.T.M. designation A36 unless otherwise noted.
 2. All connections are welded in accordance with the specifications unless otherwise noted.
 3. Abutments for temporary bridge were field engineered and fabricated.

REVISION	BY	DESCRIPTION	DATE
0	RHT	ER 1130 As Built Issue	7-77
ALYESKA PIPELINE SERVICE COMPANY, AGENT TRANS ALASKA PIPELINE SYSTEM HIGHWAY AS BUILT YUKON RIVER TO PRUDHOE BAY			
STATE HIGHWAY BRIDGE AT THE MARION CREEK CROSSING			
MICHAEL BAKER JR., INC. CONSULTING ENGINEERS BEAVER, PA. JACKSON, MISS. FAIRBANKS, AK.			
DATE: 7-77	ALIGN. SHT. NO. 99	DRAWING NO.	
APPROVED		D-105-CIA	
R.H. Tilly, P.E. <i>R.H. Tilly</i> D. S. J. P.E. <i>D. S. J.</i>		SHEET NO. 123	

NOTES:
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