

**STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
&  
PUBLIC FACILITIES**

**PLAN AND PROFILE  
PROPOSED HIGHWAY PROJECT  
RS-0943(19), FH-16-1(2)  
WRANGELL  
ZIMOVIA HIGHWAY  
UPGRADING & PAVING**

STATE	PROJECT	SHEET NO.	TOTAL SHEETS
ALASKA	RS-0943(19) FH-16-1(2)	1	11

INDEX OF SHEETS	
1	TITLE SHEET
2	TYPICAL SECTION, ESTIMATE OF QUANTITIES, SUMMARY TABLES
3-11	PLAN AND PROFILE

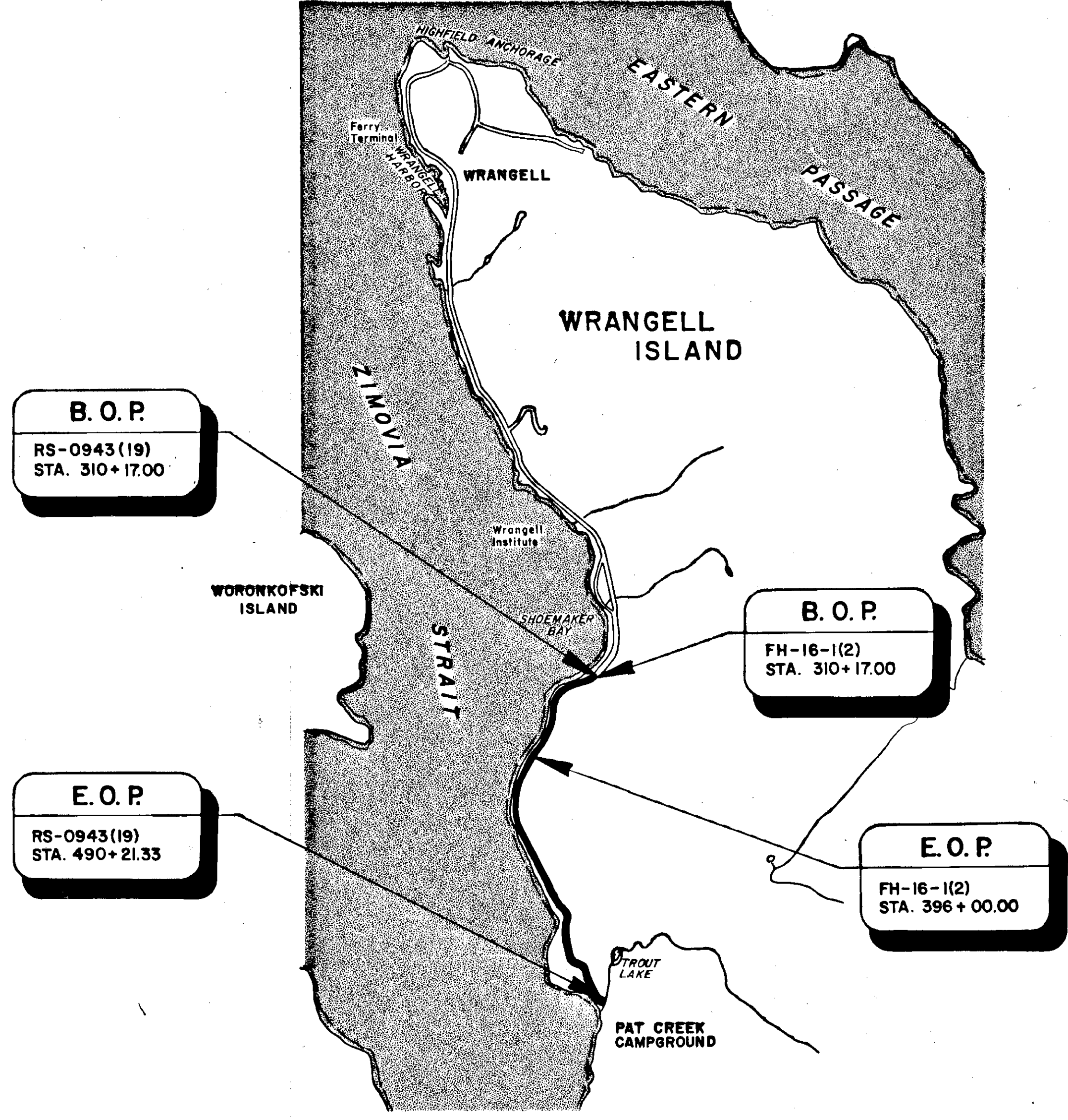
The following Standard Drawings shall apply to this project: A-1, C-01.01, C-02.00, C-03.01, D-01.00, D-04.01, G-04.01S, G-14.02S, G-18.01, G-24.02S, I-40.00, M-16.00, S-00.00, S-05.00, S-30.01, T-21.00

**PROJECT SUMMARY**

Width of Paving	.....24'
Length of Project	.....22,608.11' = 4.282 mi.
Length of Paving	.....22,608.11' = 4.282 mi.

**DESIGN DESIGNATION**

V	.....	30 mph
ADT (1983)	.....	202
ADT (2004)	.....	286
DHV (11 %)	.....	31
% T	.....	2.0%
TI	.....	5.0



**"As-Built" PLANS**

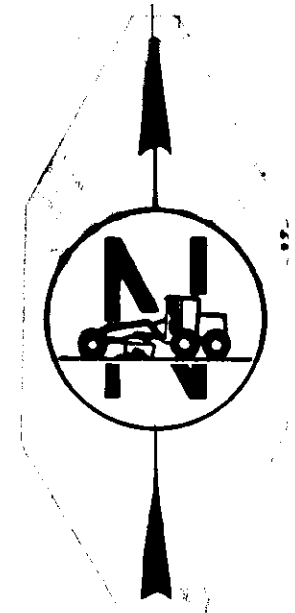
CONTRACTOR	RED SAMM CONSTRUCTION
PROJECT ENGR.	PAUL JONES, DALE ROBBINS
BEGIN CONST.	JULY 7, 1985
END CONST.	JULY 3, 1986

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
&  
PUBLIC FACILITIES

APPROVED  
*Wallace K. Williams* Date 2/25/85  
Southeastern Region Design Chief

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
&  
PUBLIC FACILITIES

APPROVED  
*D. Dickman* Date 2-25-85  
Director, Highway Design / Const.

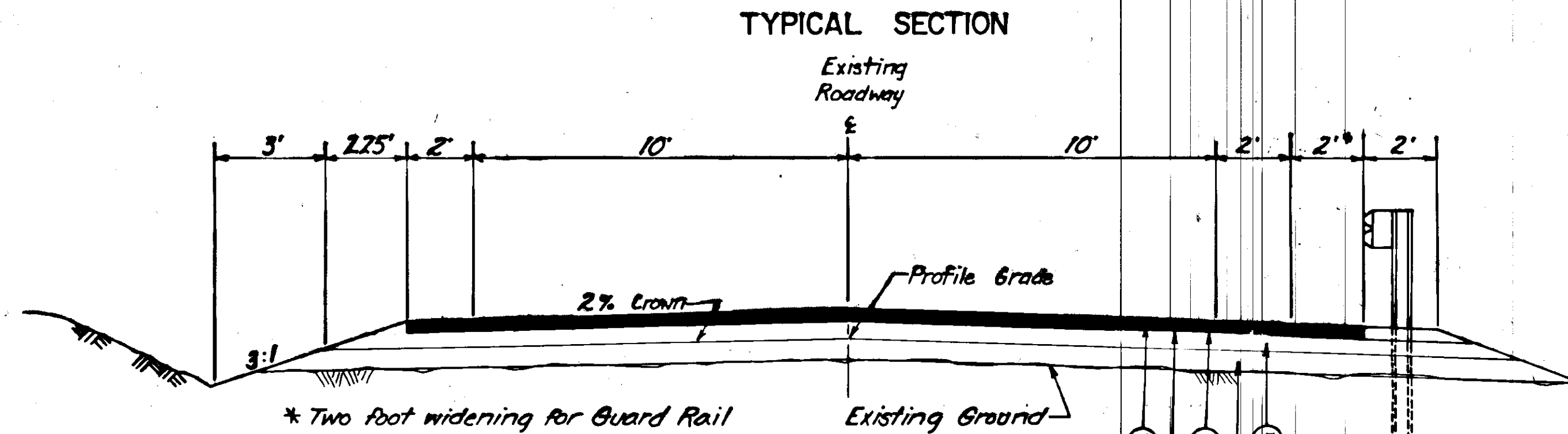


SEE ATTACHED APPROACH SUMMARY

SEE ATTACHED CULVERT SUMMARY

ESTIMATE OF QUANTITIES				
ITEM NO.	ITEM	UNIT	QUANTITY	
109(2)	DBE & WBE Adjustments	C.S.	All Req'd	
110(2)	Mobilization & Demobilization	L.S.	All Req'd	
111(1)	Temporary Erosion & Pollution Control	C.S.	"0"	
114(1)	Construction Surveying by the Contractor	L.S.	All Req'd	
115(1)	Traffic Maintenance	EW0#4	" "	
116(1)	Furnishing & Maintaining Field Office	EW0#4	" "	
116(2)	Furnishing & Maintaining Field Laboratory	EW0#4	" "	
116(6)	Furnishing & Maintaining Engineering Transportation	EW0#4	" "	
201-1A	Clearing	Acre	2.64	
203(9)	Linear Grading	Sta.	226	
203(10)	Horizontal Drain Holes	L.F.	14,100	5862
203(11)	Rock Scaling	CYVM	400	5031
203(12)	CULVERT ROCK EXC.	EW0#3	All Req'd	
203(13)	ROADWAY WIDENING	EW0#5	All Req'd	
301(1)	Crushed Aggregate Base Course	Ton	23,067	23,005
304(1)	Subbase Grading A	Ton	23,264	18,500
401(1)	Asphalt Concrete, Type I	Ton	11,308	13,458
401(7)	ASPHALT CONCRETE CREDIT	L.S.	L.S.	
401(2)	Asphalt Cement, AC-5	Ton	679	704
402(1)	CSS-1 Asphalt for Tack Coat	Ton	27	10.6
403(2)	MC-30 Liquid Asphalt for Prime Coat	Ton	64	36.5
603(14)	18 INCH CORRUGATED ALUMINUM PIPE	EW0#1	L.F. 173	
603(13)	24 Inch Corrugated Aluminum Pipe	L.F.	400	1,053
606(1)	Beam Type Guard Rail, Type I Post	L.F.	150	
606(1A)	Beam Type Guard Rail	L.F.	1,000	
606(1B)	Type I Post	Ea.	160	235
606(4)	Removal & Reconstruction of Guard Rail	L.F.	10,363	10,387.5
606(6)	End Anchorages	Ea.	20	18
614(1)	Survey Monuments	Ea.	63	62
614(2)	Monument Cases	Ea.	63	62
615(1)	Standard Signs	S.F.	25	110.75
627(1)	Watering	M.Gal.	500	37.6
639(1)	Approaches	Ea.	21	46
603(17)	72" x 48" CORRUGATED ALUMINUM PIPE ARCH	EW0#2	L.F. 12	
670(1)	Painted Traffic Markings	L.S.	All Req'd	

APPROACH SUMMARY				
STATION	WIDTH		RADIUS	REMARKS
	LEFT	RIGHT		
"0" 349+00	14'			
"0" 349+50		14'		
"0" 350+50		14'		
"0" 351+40		14'		
"0" 419+42		14'		
"0" 420+25	14'			
"0" 420+85		14'		
"0" 421+10	14'			
"0" 425+75	14'			
"0" 434+40		14'		Skew
"0" 434+90		14'		Skew
"0" 436+30	14'			Skew
"0" 439+10		14'		
"0" 440+30	14'			Skew
"0" 443+70		14'		
"L" 412+50		14'		Skew
"L" 413+65		14'		Skew



3 1/2" LABELING INDEX	
(A)	3" Asphalt Concrete (Type II) TYPE I
(B)	CSS-1 Asphalt for Tack Coat
(C)	MC-30 Liquid Asphalt for Prime Coat
(D)	6" Crushed Aggregate Base Course
(E)	6" Subbase Grading "A"

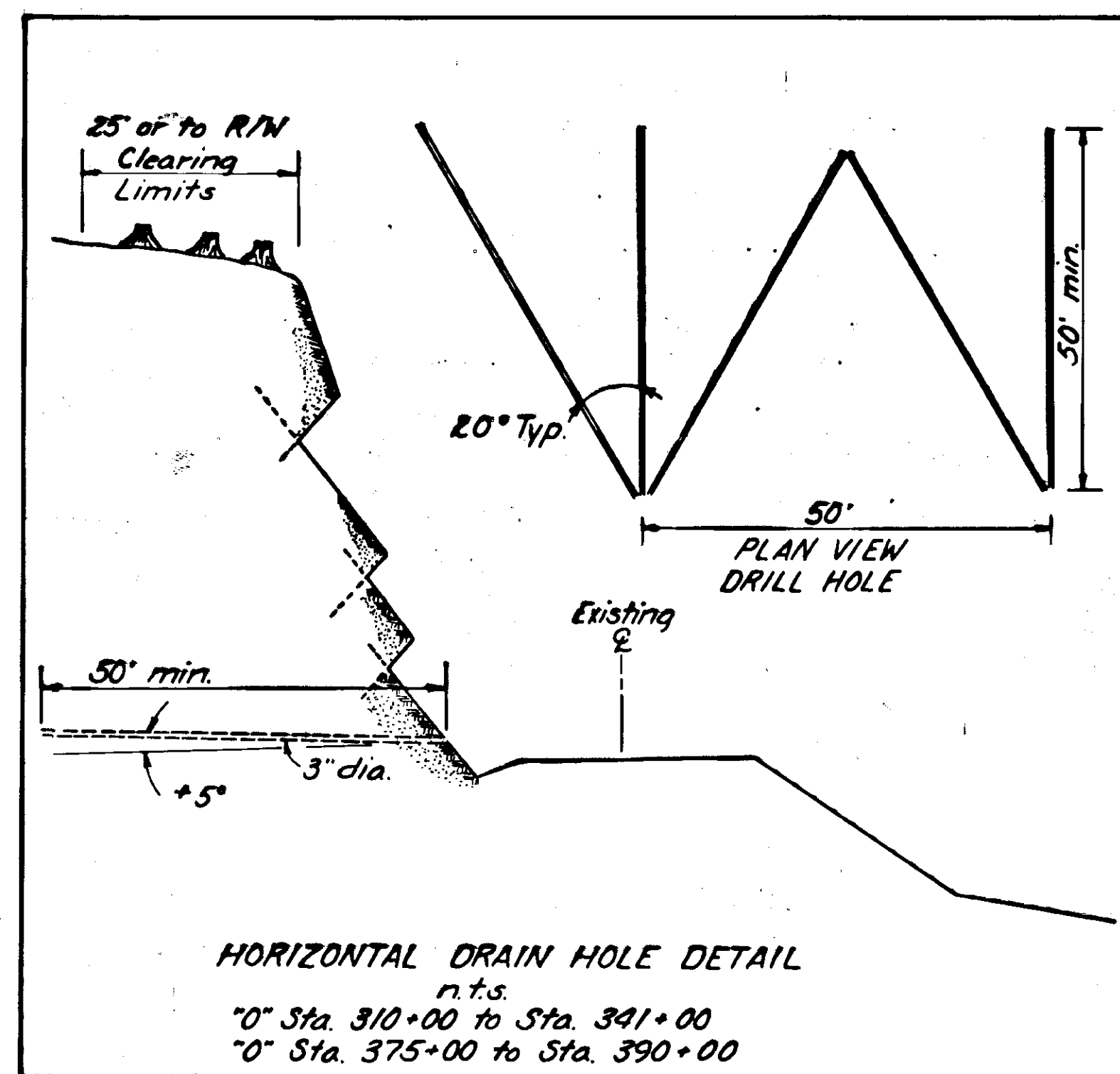
SEE ATTACHED SIGNING SCHEDULE

SIGNING SCHEDULE												
SIGN NO.	STATION	OFFSET		CODE NO.	LEGEND	SIGN PANEL		POST			FACING TRAFFIC	REMARKS
		LEFT	RIGHT			SIZE	AREA	NO. POSTS	LENGTH	EMBED.		
1	308+00		15/24	W 16-B	Rocks	30"x30"	6.25	1	13'11/8"	3'	S.B.	
2	342+00	24'		W 16-B	Rocks	30"x30"	6.25	1	14'	3'	N.B.	
3	368+00		15'	W 16-B	Rocks	30"x30"	6.25	1	13'	3'	S.B.	
4	403+00	24'		W 16-B	Rocks	30"x30"	6.25	1	14'	3'	N.B.	

\* See Standard Drawing S-05.00 for offset

SIGNING SCHEDULE NOTES:

- Sign locations and post lengths are approximate only and are subject to minor revisions.
- All sign posts shall be telescoping perforated galvanized square steel posts; the 2" size shall be used above ground and the 2 1/4" size shall be used below ground for sleeve.
- All posts shall be installed with sleeve type embedment in accordance with Standard Drawing S-30.00 except that the 2 1/4" size shall be used for the entire embedment depth.
- Post lengths are from the cut-off in the sleeve to the top of the post. See Standard Drawings S-05.00 and S-30.01.

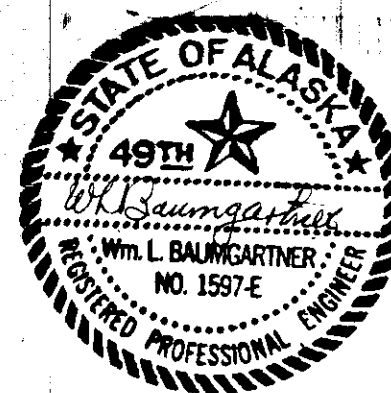
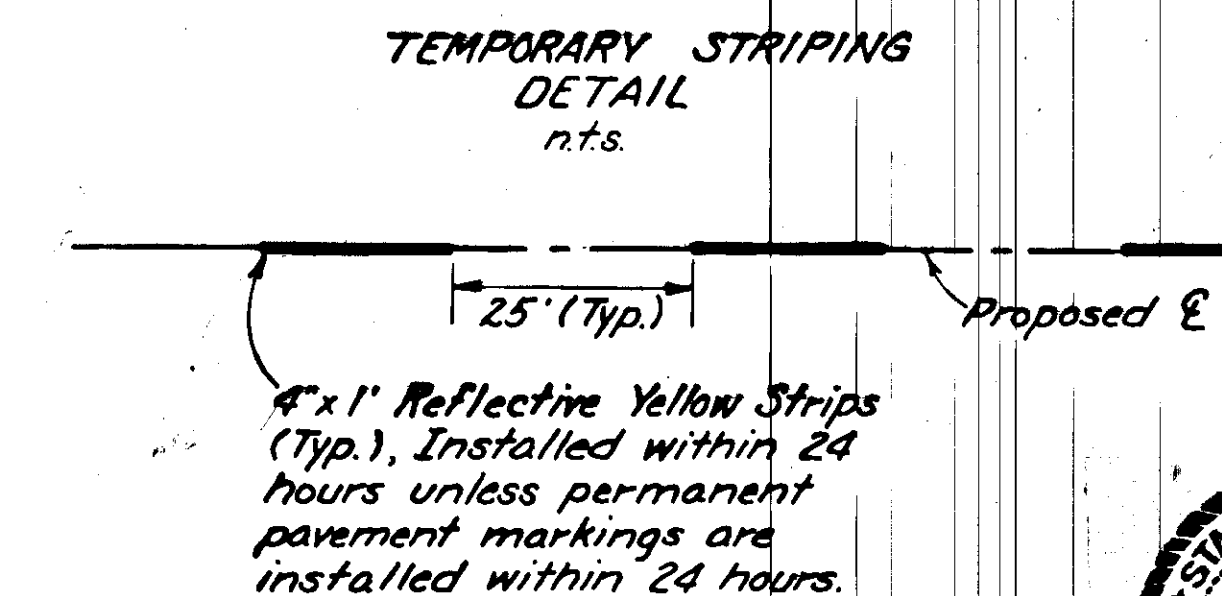


GENERAL NOTES:

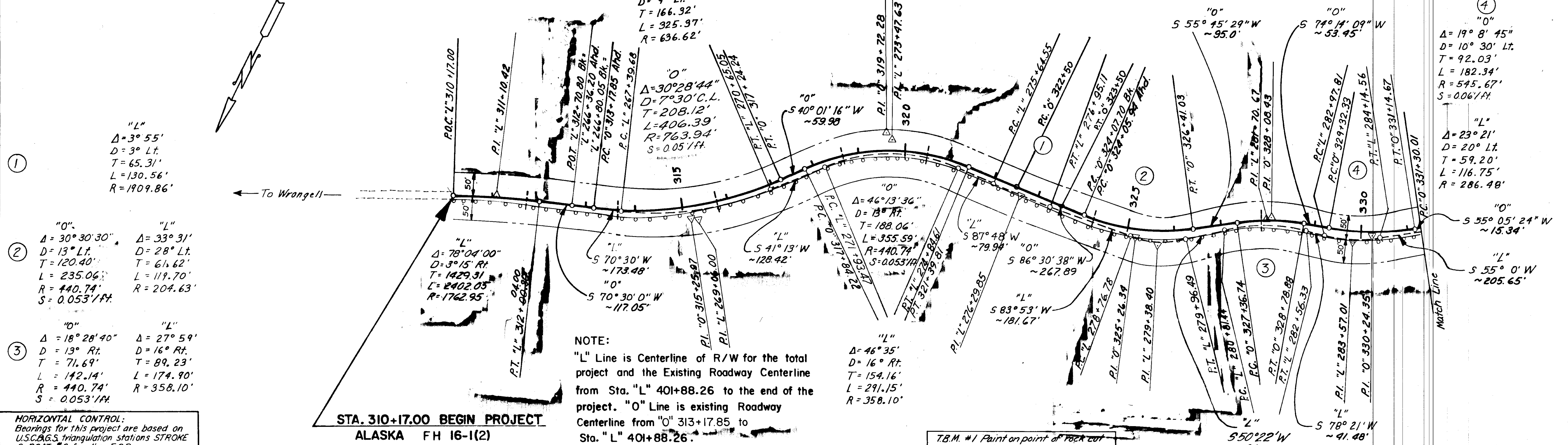
- Grades and alignment shown on the plans are subject to minor revisions.
- Culvert requirements shall consist of replacement of damaged end sections or replacement of existing pipes not functioning properly or the installation of new pipe as directed. The removal and disposal of culvert shall be incidental to the installation of the new pipe.
- The survey monuments and monument cases shall be installed at all the P.C.'s and P.T.'s along the existing roadway centerline. The "O" Line alignment shall be used from the B.O.P. to "O" Line Sta. 448+11.56 Back. The "L" Line alignment shall be used from "L" Line Sta. 401+93.63 Ahead to the E.O.P. An additional monument and cases shall be installed at "O" Line Sta. 440+00 P.O.T.
- One lane of traffic shall be maintained at all times. Detours around the work area shall be accordance with Standard Drawing C-03.01. Two lane roadway - single lane closure, Typical lane closure - short duration.
- Suitable excavation shall be wasted in areas of guard rail flares as directed by the Engineer.

BASIS OF ESTIMATE		
ITEM NO.	ITEM	ESTIMATING FACTOR
301(1)	Crushed Aggregate Base Course	1.96 Tons/C.Y.
304(1)	Subbase Grading A	1.86 Tons/C.Y.
401(1)	Asphalt Concrete, Type II	116.0 lbs./Sq. Yds./In Depth
401(2)	AC-5 Asphalt Cement	6% of Item 401(1)
402(1)	CSS-1 Asphalt for Tack Coat	*0.10 Gal./Sq. Yd. - 240 Gal./Ton
403(2)	MC-30 Liquid Asphalt for Prime Coat	0.25 Gal./Sq. Yd. - 25 Gal./Ton @ 60°F

GUARD RAIL			
STATION TO STATION	LEFT	RIGHT	REMARKS
"As Built"			
"L" 310+17	"0" 339+17	2,900/2,912.5	Remove & Reconstruct
"0" 353+38	"0" 400+94 97	4,753/4,762.5	Remove & Reconstruct
"L" 405+75	"L" 409+50	375	Remove & Reconstruct
"L" 412+00	"L" 416+75	475	Remove & Reconstruct
"L" 418+75	"L" 422+00	325	Remove & Reconstruct
"L" 424+00	"L" 426+50	250	Remove & Reconstruct
"L" 422+00	"L" 437+75	575/587.5	Remove & Reconstruct
"L" 445+50	"L" 452+50	700	Remove & Reconstruct
"L" 489+46	"L" 490+21	75'	New Bridge Rail
"L" 489+46 46	"L" 490+21	75'	New Bridge Rail



STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS-0943(19) FH-16-1(2)	1985	3	11

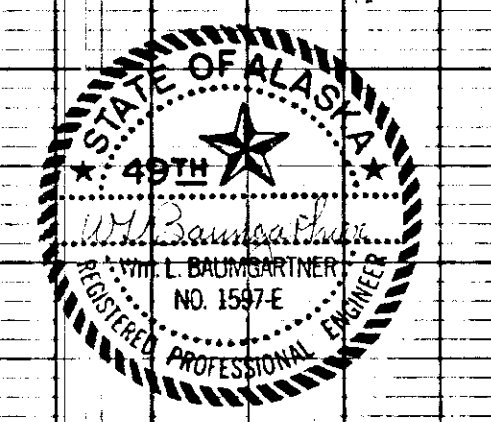
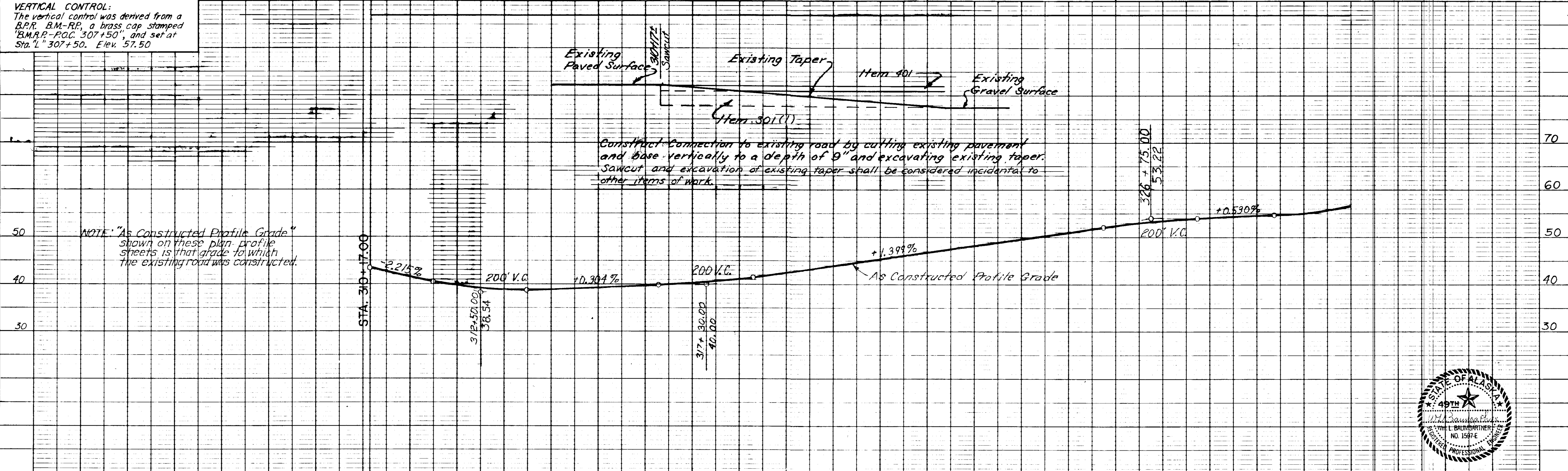


**HORIZONTAL CONTROL:**  
Bearings for this project are based on U.S.C.G.S. triangulation stations STROKE & BOAT #2 for the E.O.P.

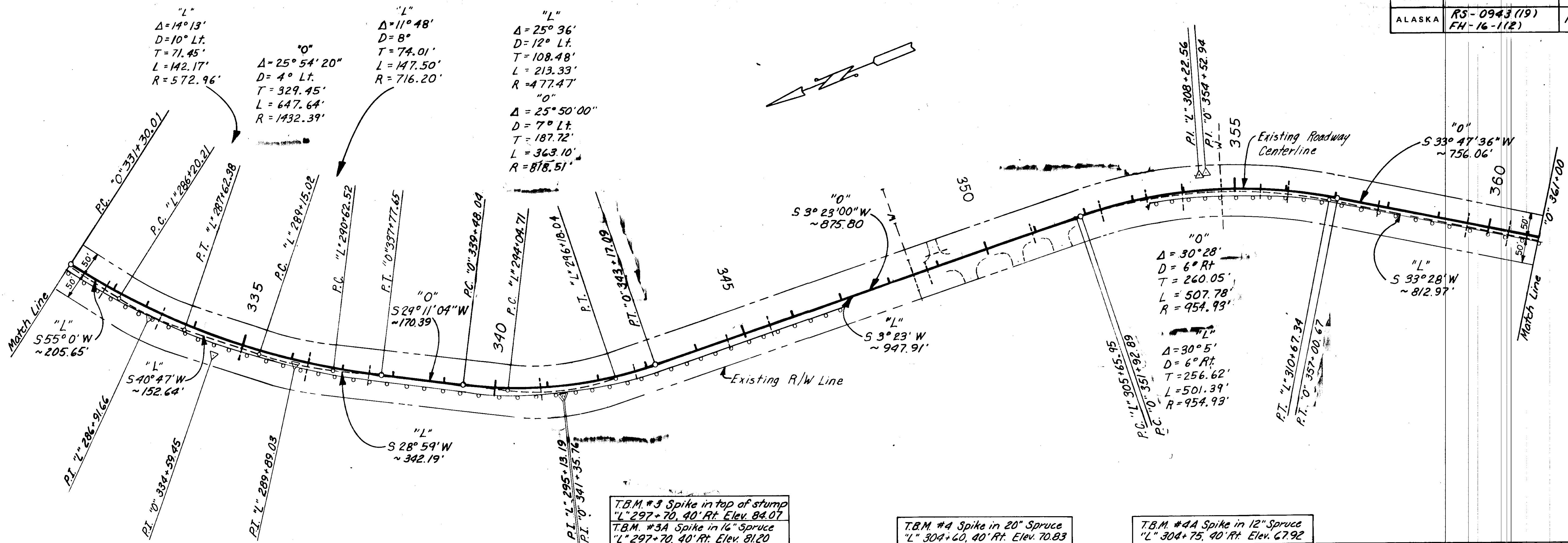
**VERTICAL CONTROL:**  
The vertical control was derived from a B.P.R. B.M.-RF, a brass cap stamped "B.M.R.P.-P.O.C. 307+50", and set at Sta. "L" 307+50. Elev. 57.50

**NOTE:**  
"L" Line is Centerline of R/W for the total project and the Existing Roadway Centerline from Sta. "L" 401+88.26 to the end of the project. "O" Line is existing Roadway Centerline from "O" 313+17.85 to Sta. "L" 401+88.26.

T.B.M. #1 Paint on point of rock cut "L" 279+00±, Elev. 52.80



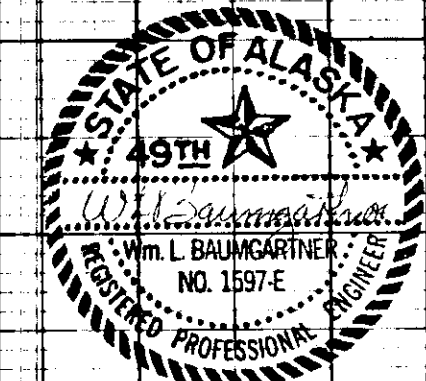
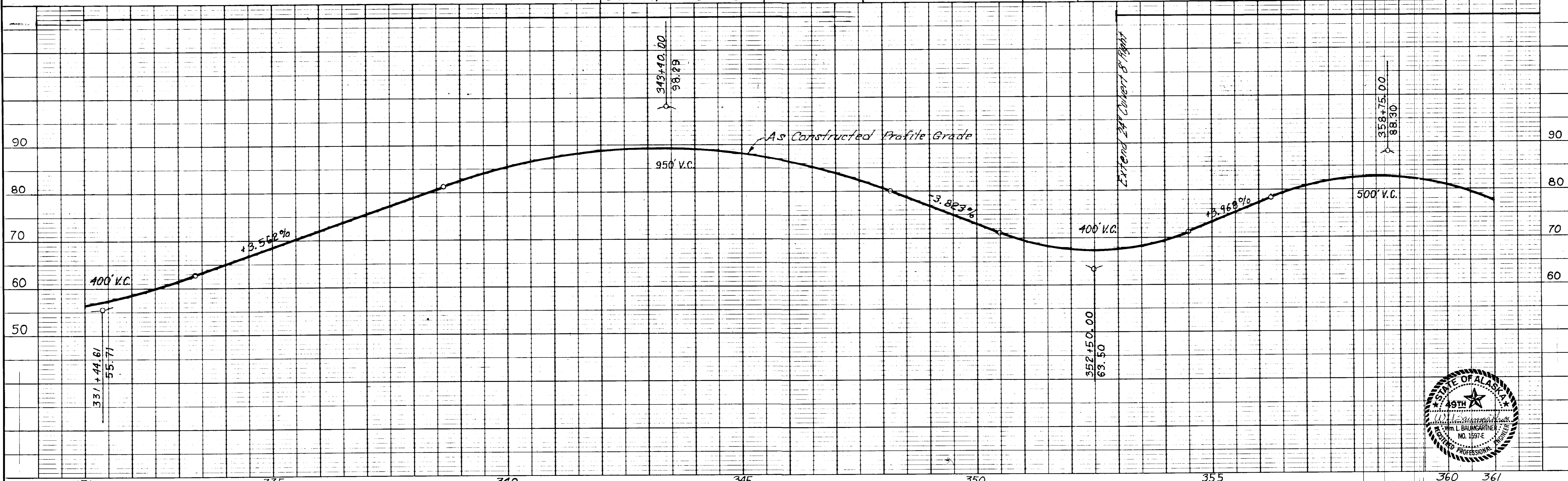
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS-0943 (19) FH-16-1(2)	1985	4	11



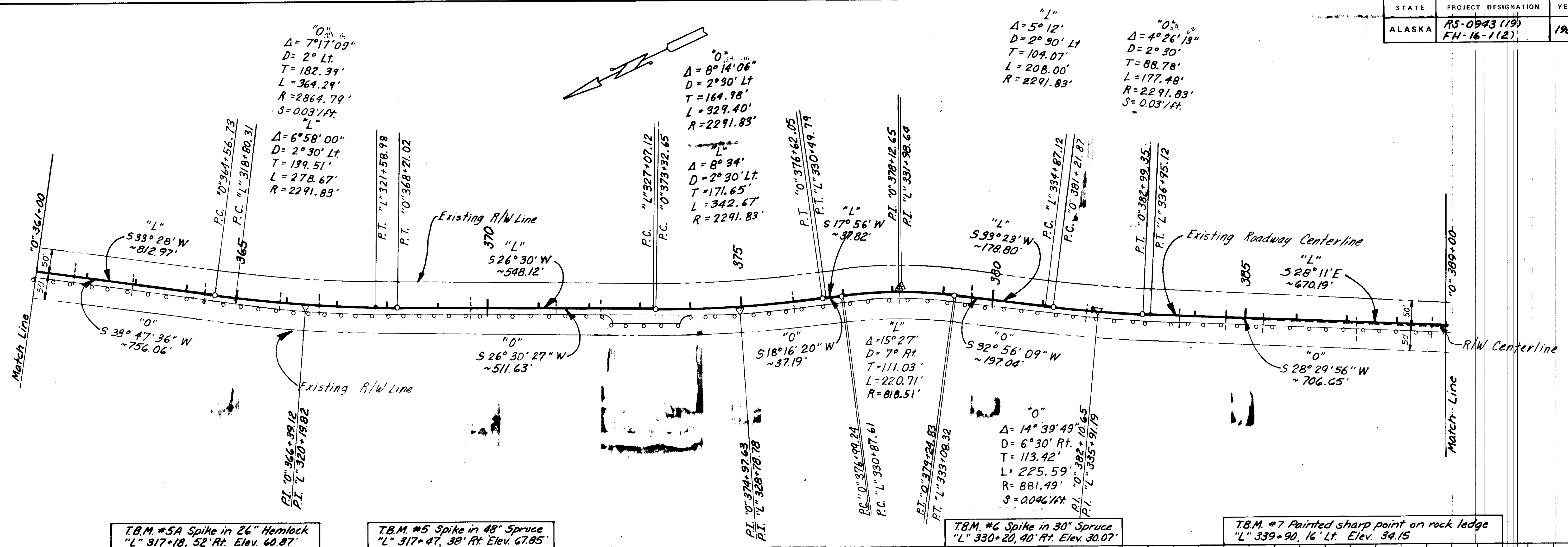
T.B.M. #3 Spike in top of stump  
"L" 297+70, 40' Rt. Elev. 84.07  
T.B.M. #3A Spike in 16" Spruce  
"L" 297+70, 40' Rt. Elev. 81.20

T.B.M. #4 Spike in 20" Spruce  
"L" 304+60, 40' Rt. Elev. 70.83

T.B.M. #4A Spike in 12" Spruce  
"L" 304+75, 40' Rt. Elev. 67.92



STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	AS-0943 (19) FH-16-1(2)	1985	5	11

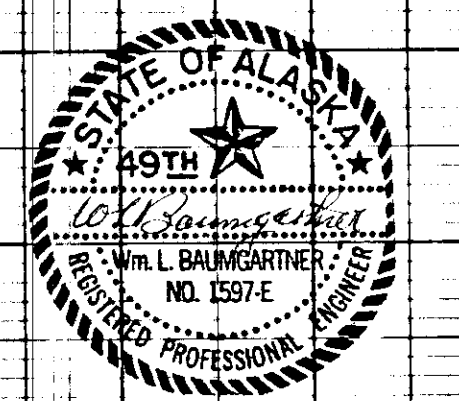
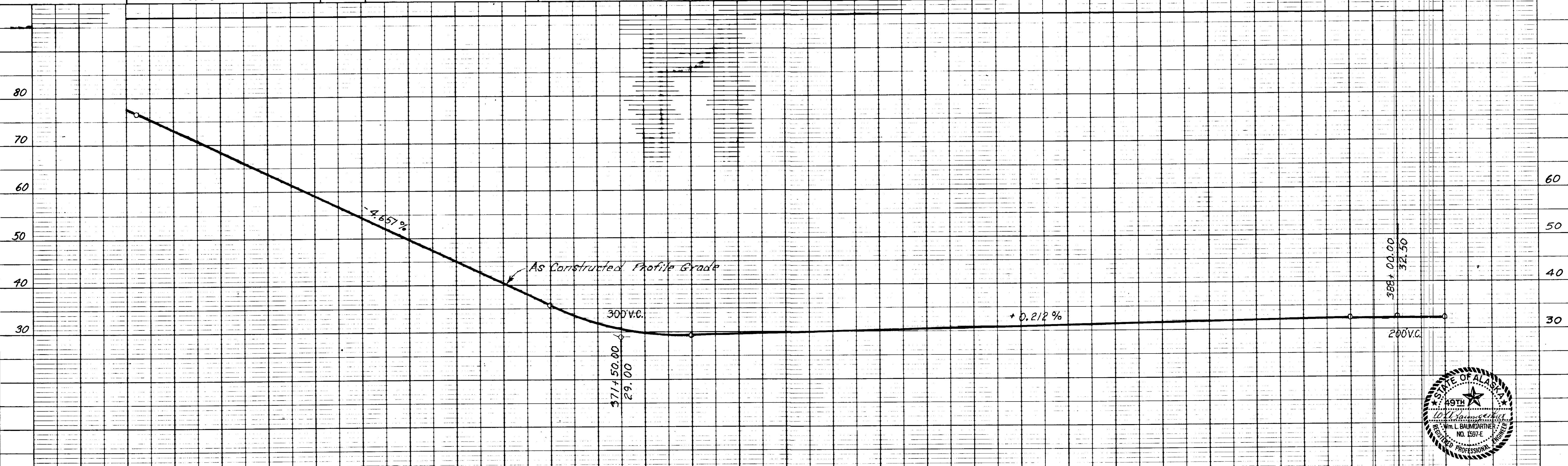


T.B.M. #5A Spike in 26" Hemlock  
"L" 317+18, 52' Rt. Elev. 60.87'

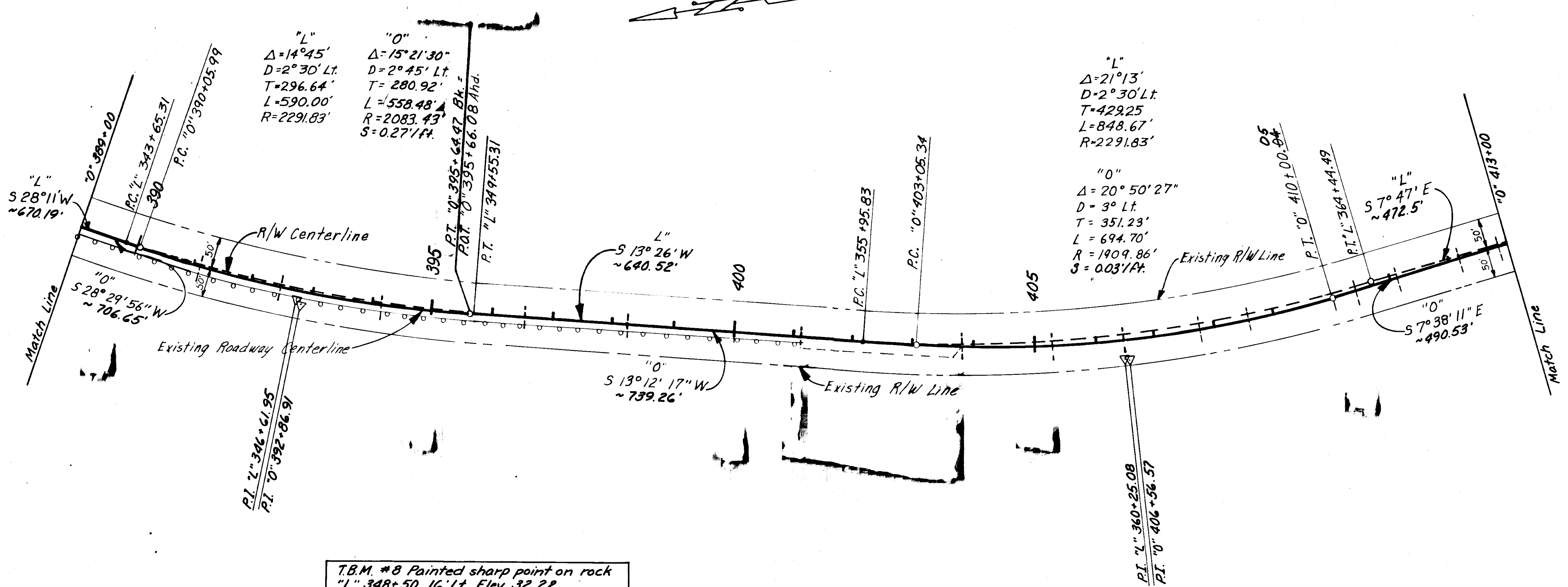
T.B.M. #5 Spike in 48" Spruce  
"L" 317+47, 38' Rt. Elev. 67.85'

T.B.M. #6 Spike in 30" Spruce  
"L" 330+20, 40' Rt. Elev. 30.07'

T.B.M. #7 Painted sharp point on rock ledge  
"L" 339+90, 16' Lt. Elev. 34.15'



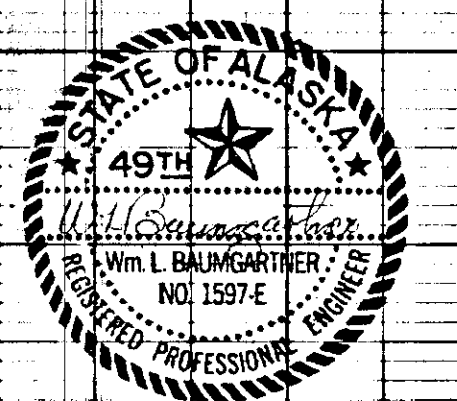
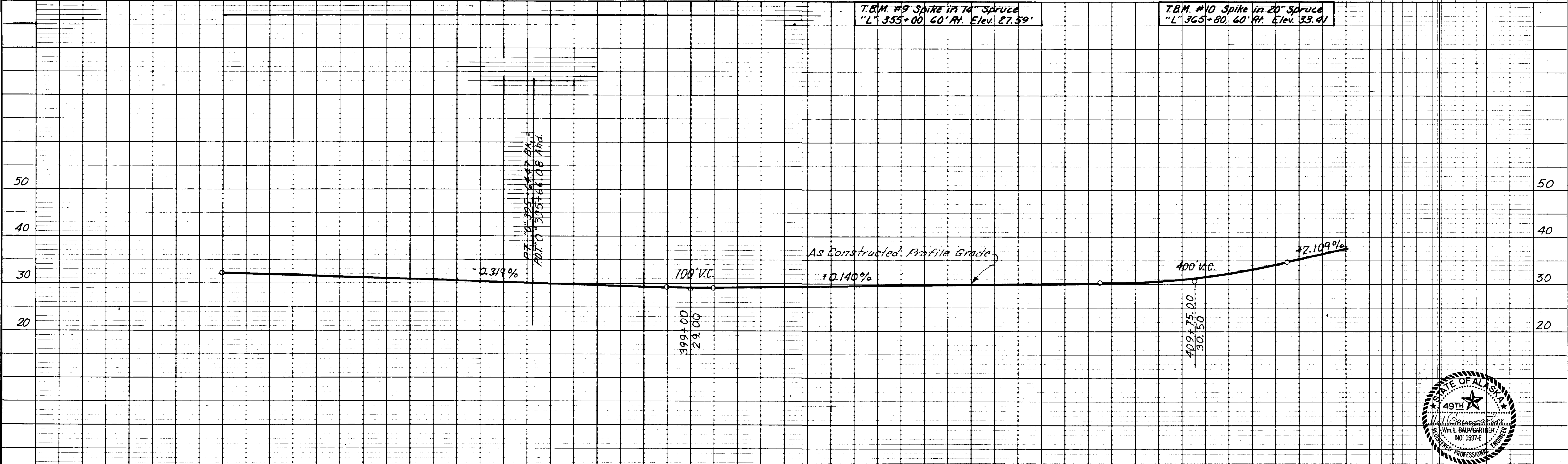
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS-0943 (19) FH-16-1(2)	1985	6	11



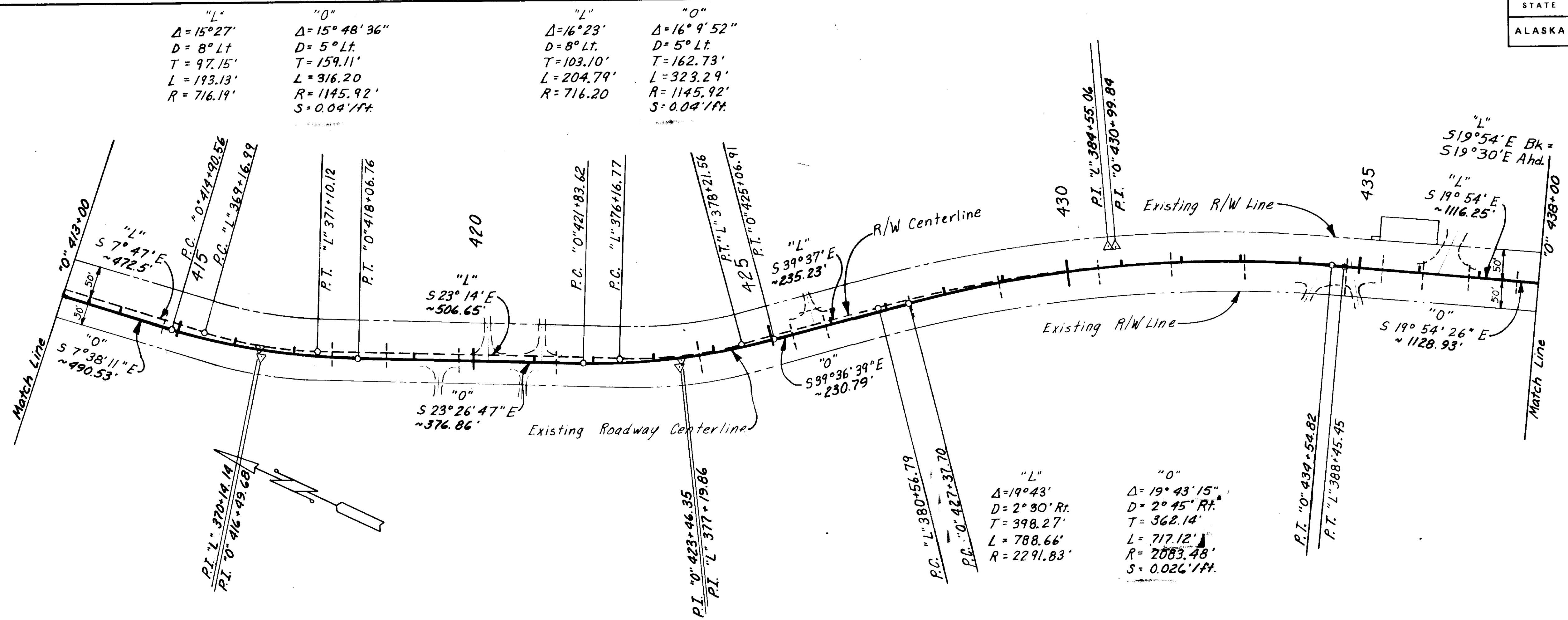
T.B.M. #8 Painted sharp point on rock  
"L" 348+50.16 Lt. Elev. 32.22

T.B.M. #9 Spike in 14" Spruce  
"L" 355+00.60 Rt. Elev. 27.59

T.B.M. #10 Spike in 20" Spruce  
"L" 365+80.60 Rt. Elev. 33.41



STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS-0943 (19) FH-16-1(2)	1985	7	11



"L"  
 $\Delta = 150.27'$   
 $D = 8.0 \text{ Lt}$   
 $T = 97.15'$   
 $L = 193.13'$   
 $R = 716.19'$

"O"  
 $\Delta = 150.48'36''$   
 $D = 5.0 \text{ Lt}$   
 $T = 159.11'$   
 $L = 316.20$   
 $R = 1145.92'$   
 $S = 0.04'/ft$

"L"  
 $\Delta = 160.23'$   
 $D = 8.0 \text{ Lt}$   
 $T = 103.10'$   
 $L = 204.79'$   
 $R = 716.20$

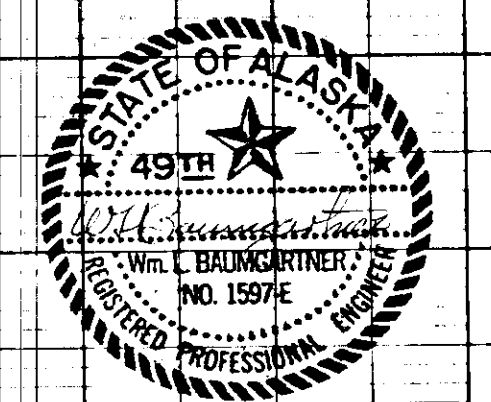
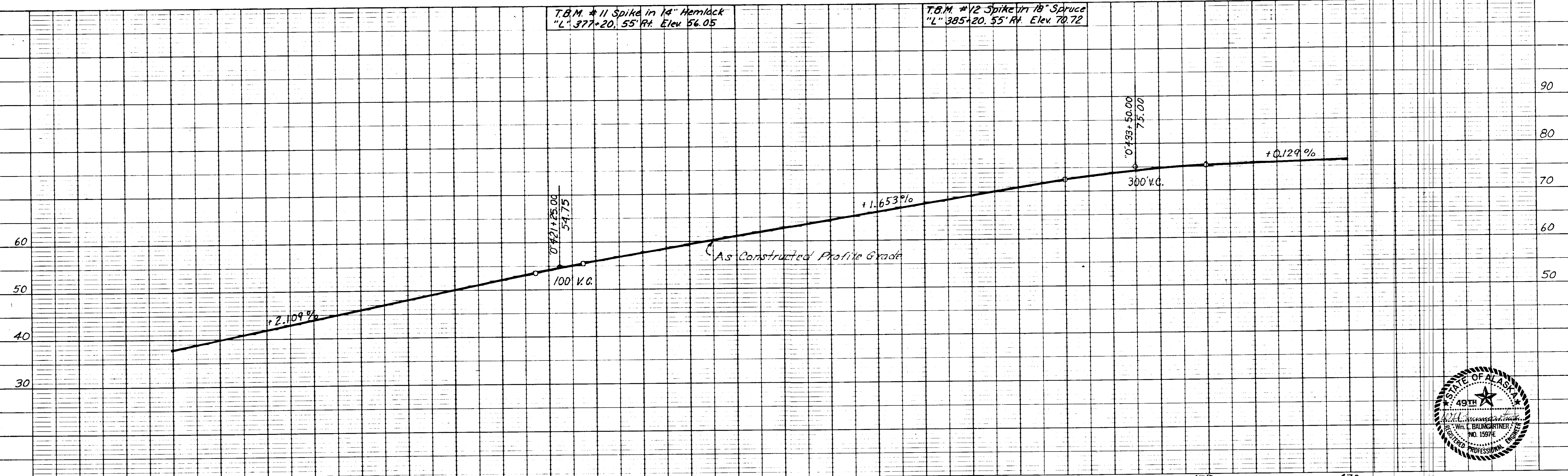
"O"  
 $\Delta = 160.9'52''$   
 $D = 5.0 \text{ Lt}$   
 $T = 162.73'$   
 $L = 323.29'$   
 $R = 1145.92'$   
 $S = 0.04'/ft$

"L"  
 $\Delta = 190.43'$   
 $D = 2.80 \text{ Rt}$   
 $T = 398.27'$   
 $L = 788.66'$   
 $R = 2291.83'$

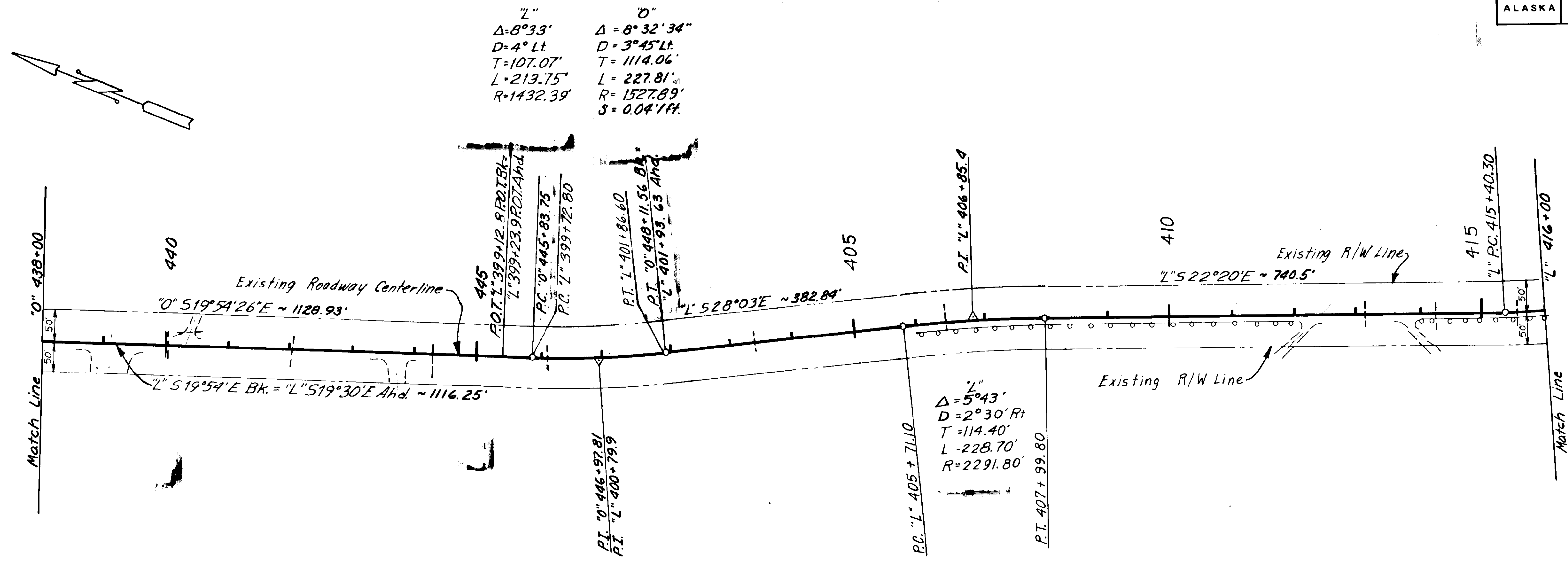
"O"  
 $\Delta = 190.43'15''$   
 $D = 2.45 \text{ Rt}$   
 $T = 362.14'$   
 $L = 717.12'$   
 $R = 2083.48'$   
 $S = 0.026'/ft$

T.B.M. #11 Spike in 14" Hemlock  
 "L" 377+20, 55' Rt. Elev. 56.05

T.B.M. #12 Spike in 18" Spruce  
 "L" 385+20, 55' Rt. Elev. 70.72



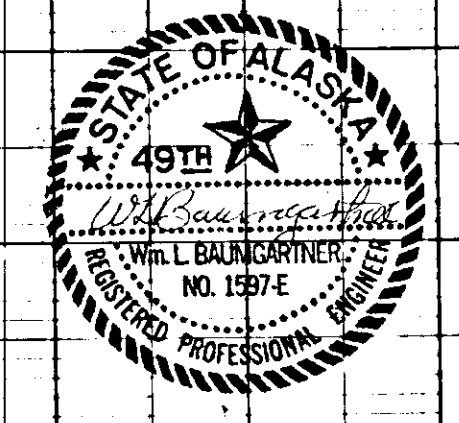
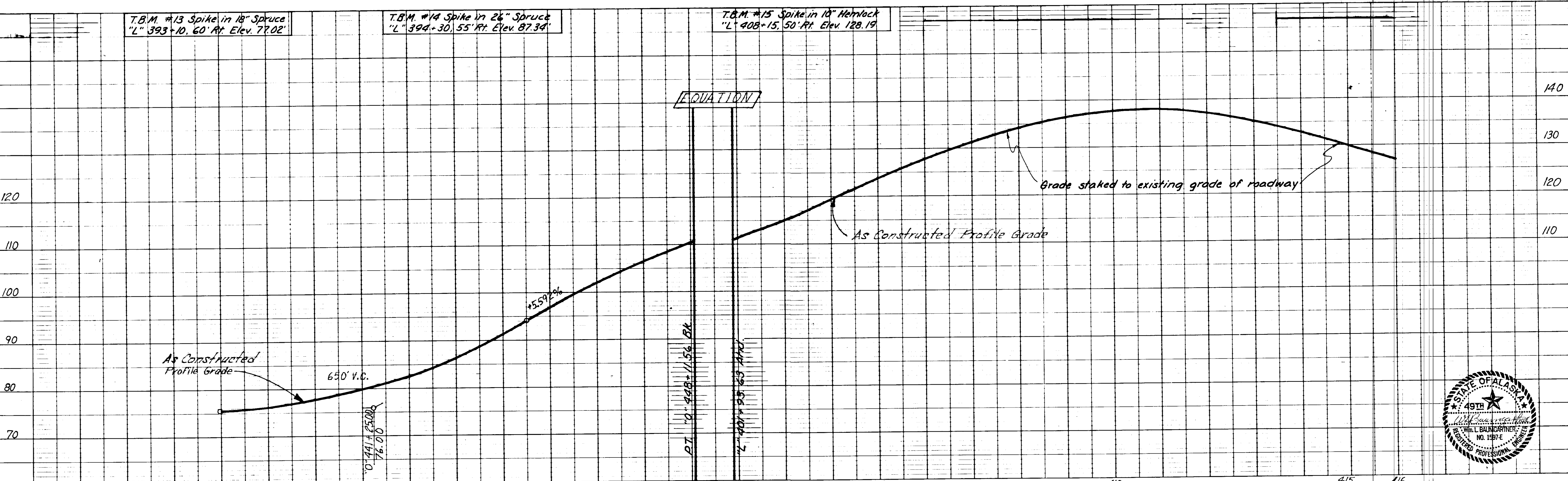
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS-0943(19) FH-16-1(2)	1985	8	11



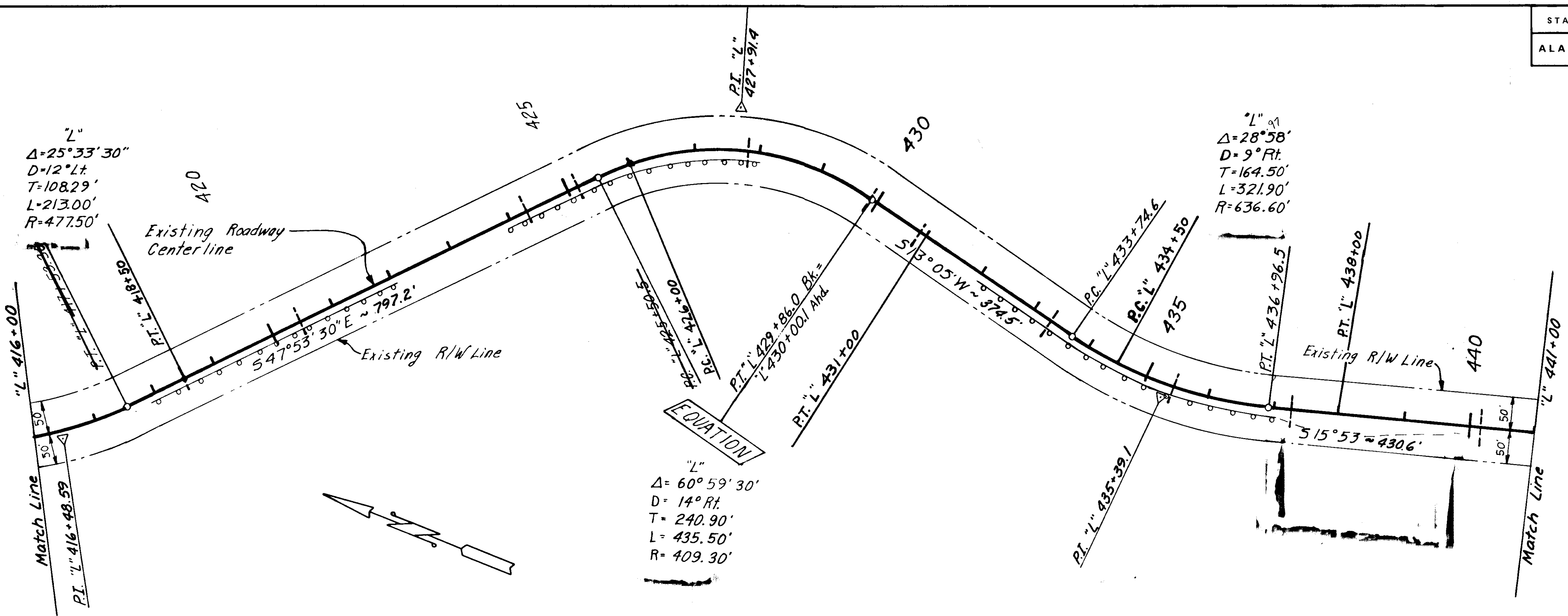
T.B.M. #13 Spike in 18" Spruce  
"L" 393+10.60 Rt. Elev. 77.02'

T.B.M. #14 Spike in 26" Spruce  
"L" 394+30.55 Rt. Elev. 87.34'

T.B.M. #15 Spike in 10" Hemlock  
"L" 408+15.50 Rt. Elev. 128.19'



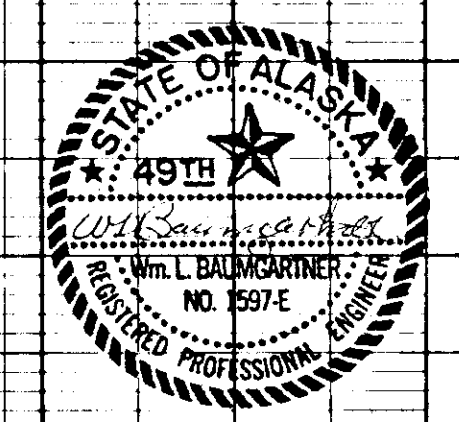
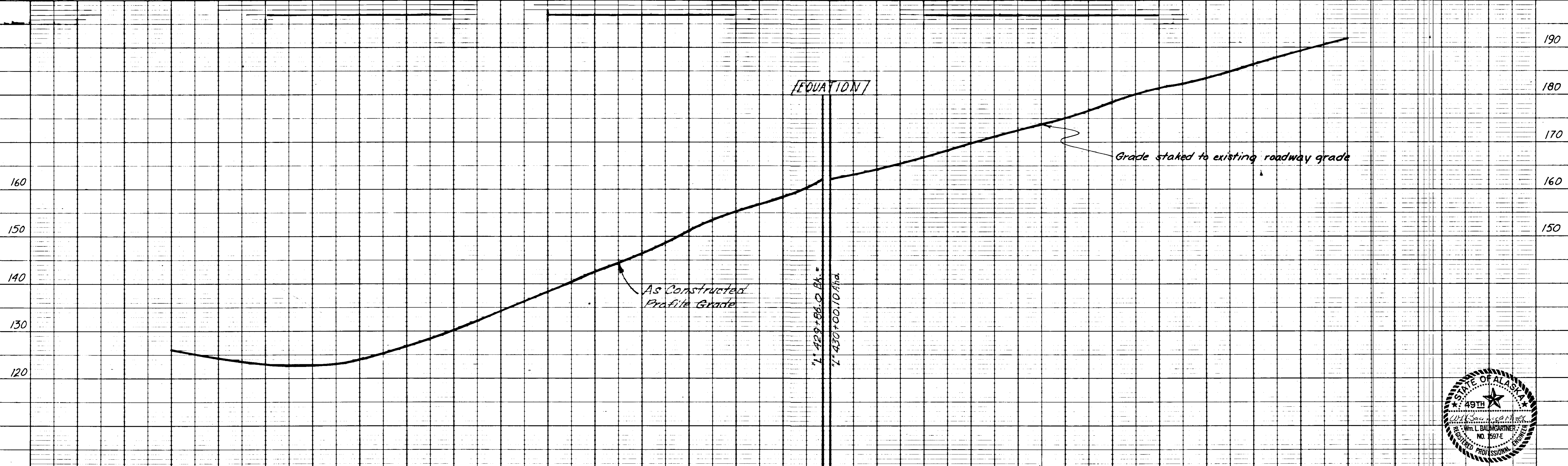
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS-0943 (19) FH-16-1(2)	1985	9	11



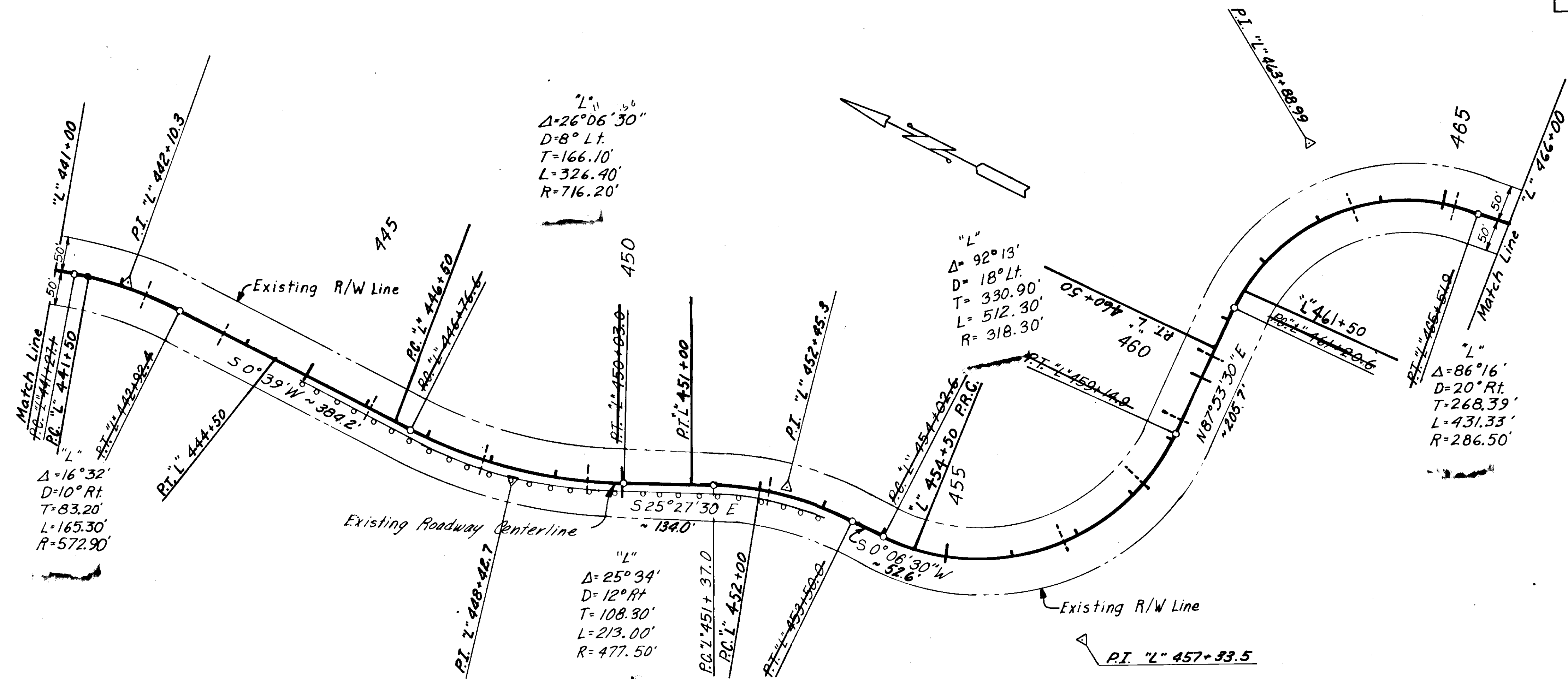
T.B.M. #16 Spike in 20' Hemlock  
"L" 417+20, 30' Rt. Elev. 125.09

T.B.M. #17 Spike in 16' Hemlock  
"L" 423+30, 50' Rt. Elev. 137.01

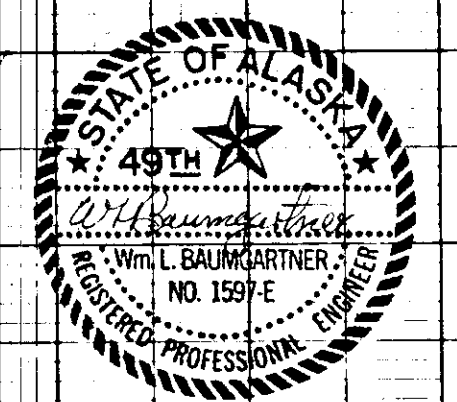
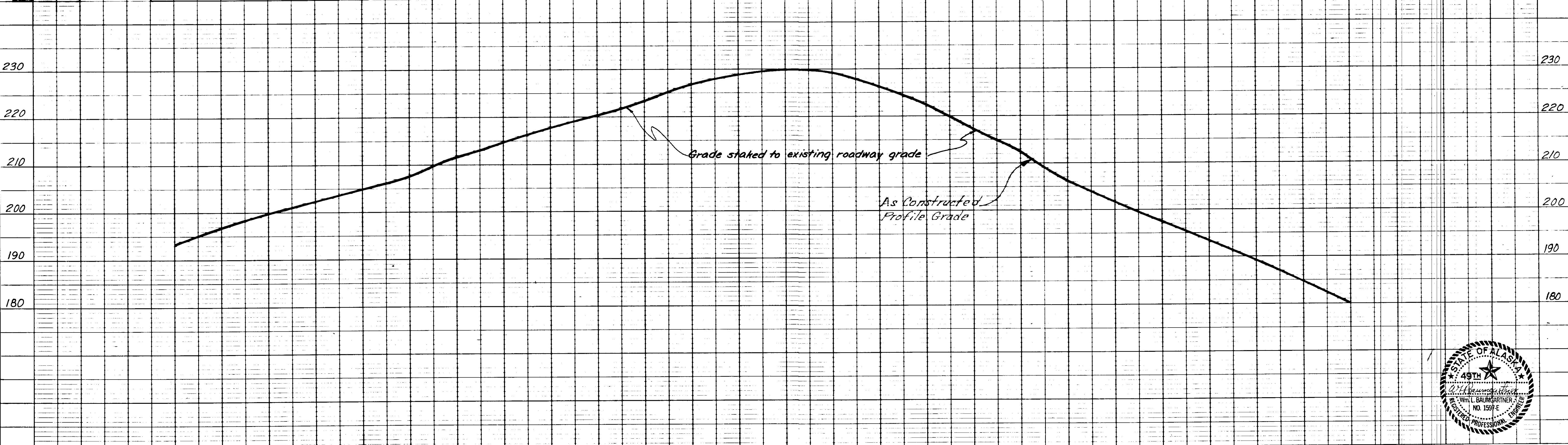
T.B.M. #18 Spike in cut off to 10" Hemlock  
"L" 439+20, 55' Rt. Elev. 182.43



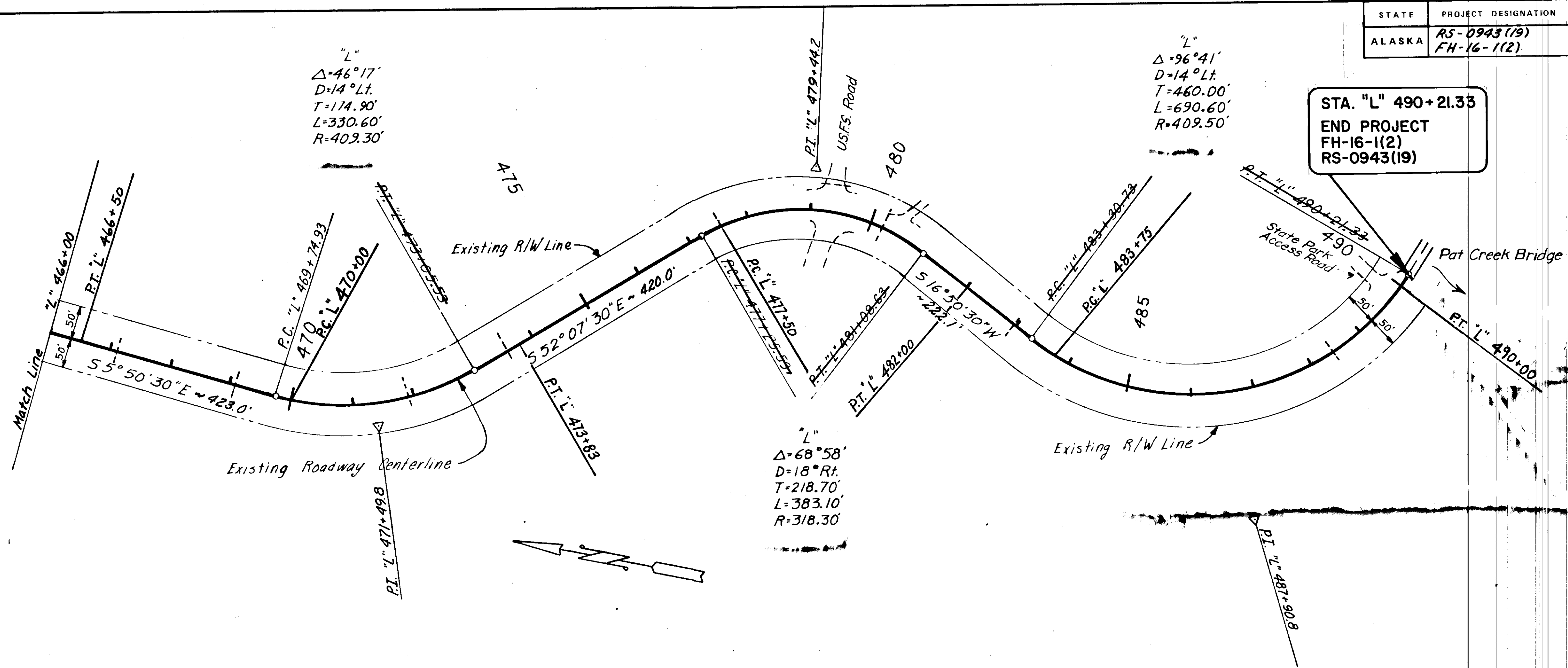
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS-0943(19) FH-16-1(2)	1985	10	11



T.B.M. #19 Spike in 10" Hemlock "L" 445+50, 60' Rt. Elev. 200.60'      T.B.M. #20 Spike in 14" Hemlock "L" 454+30, 45' Rt. Elev. 231.90'      T.B.M. #21 Spike in 14" Hemlock "L" 457+60, 40' Rt. Elev. 210.54'      T.B.M. #22 Spike in 24" Hemlock "L" 463+20, 30' Rt. Elev. 190.41'



STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS-0943(19) FH-16-1(2)	1985	11	11



STA. "L" 490+21.33  
END PROJECT  
FH-16-1(2)  
RS-0943(19)

T.B.M. #23 Spike in 24" Spruce "L" 468+75.40' Rt. Elev. 106.81'  
T.B.M. #24 Spike in 12" Hemlock "L" 473+60.45' Lt. Elev. 106.91'  
T.B.M. #25 Spike in 16" Hemlock "L" 477+25.60' Rt. Elev. 115.62'  
T.B.M. #26 Spike in 12" Hemlock "L" 484+85.35' Lt. Elev. 78.26'  
T.B.M. #27 Spike in 18" Hemlock "L" 489+20.40' Rt. Elev. 53.87'

