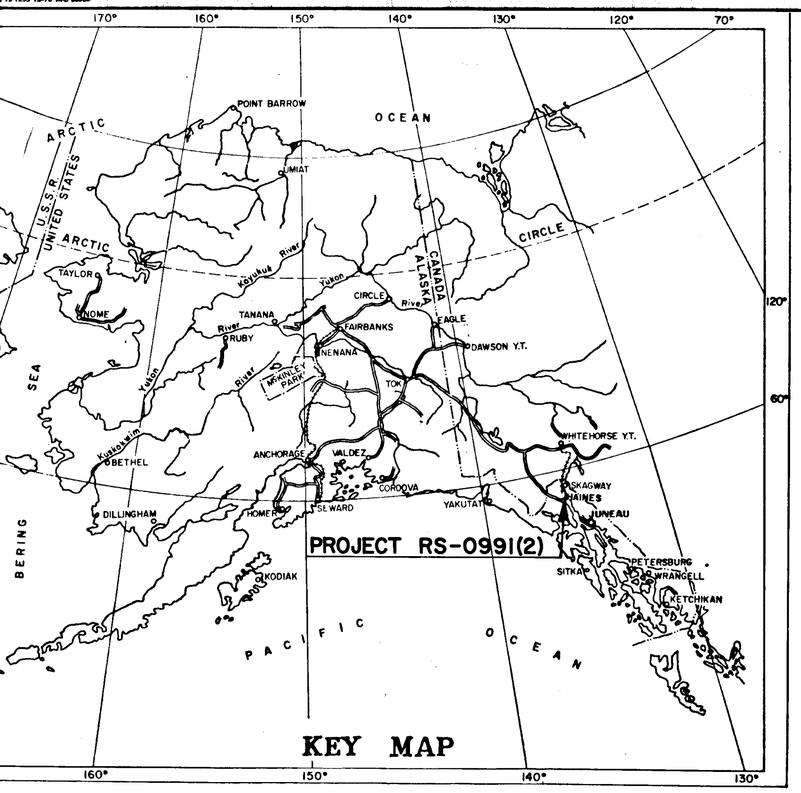
STATE	PROJECT	SHEET NO.	TOTAL SHEETS
ALASKA	RS-0991(2)	1	11

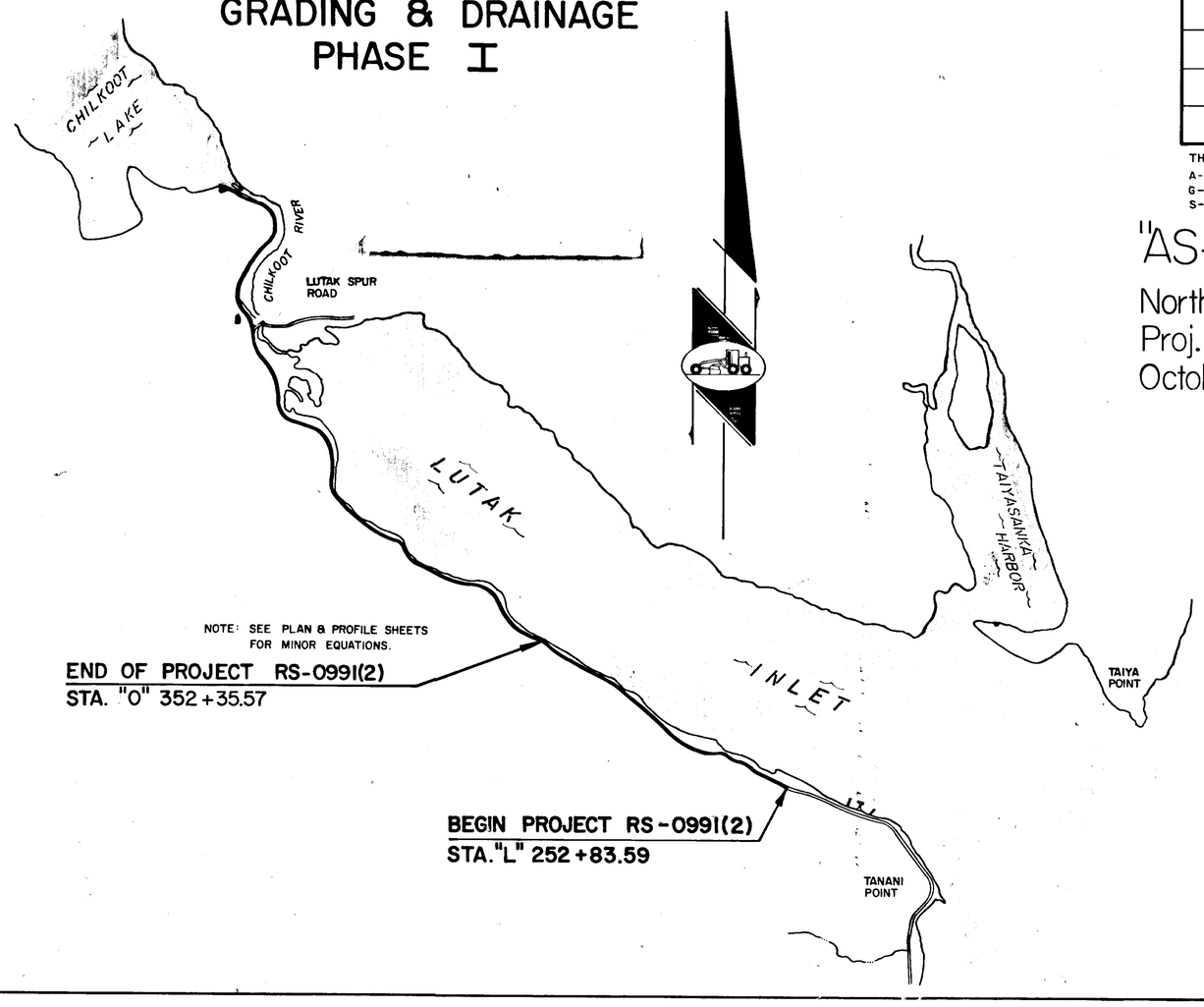
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES

PLAN AND PROFILE
PROPOSED HIGHWAY PROJECT

RS-0991(2) & 67477
LUTAK ROAD - HAINES
FROM THE FERRY TERMINAL
to
LUTAK SPUR ROAD
GRADING & DRAINAGE
PHASE I



KEY MAP



INDEX OF SHEETS

THE FOLLOWING STANDARD DRAWINGS APPLY TO THIS PROJECT:
A-1, C-01.01, C-0200, C-0301, D-01.00, D-04.01, G-04.01S, G-04.01W, G-14.02S, G-14.02W, G-18.01, I-40.00, M-16.00 S-00.00, S-05.00, S-20.00, S-30.01

"AS-BUILT" PLANS

Northern Timber Corp.
Proj. Engr.: Larry Geise
October 1985 - September 1986

DESIGN	DESIGNATION	
ADT(1984)	=	344
ADT(2,005)	=	598
DHV(15%)	=	72
D	=	45-55
T	=	4.5%
T.I.	=	6.0
V.	=	35M.P.H.

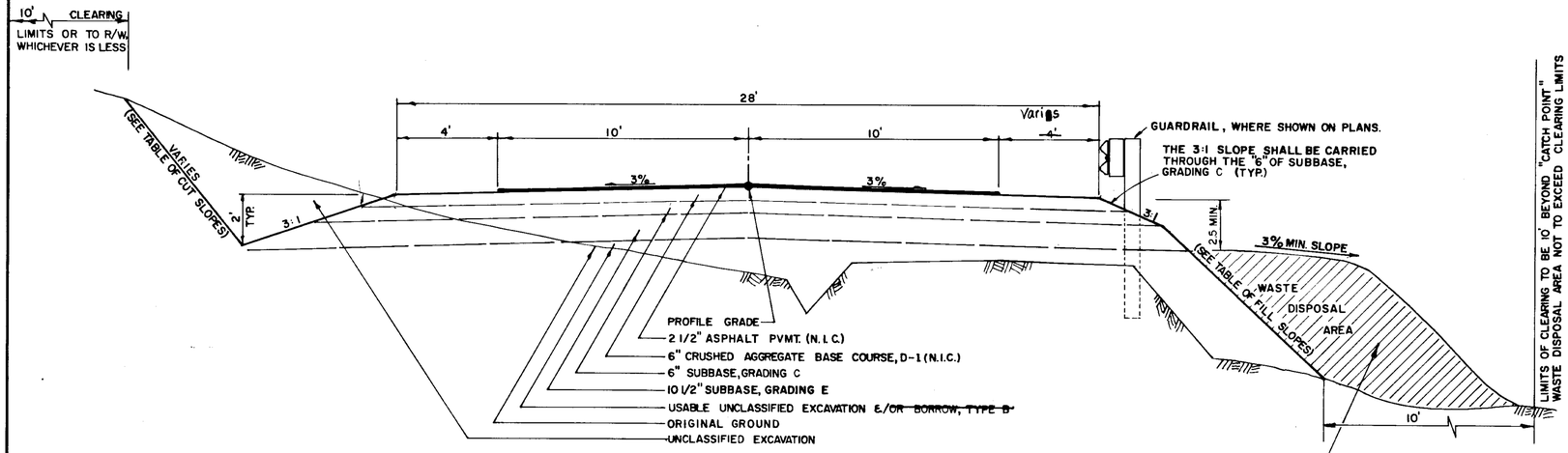
PROJECT SUMMARY

"L" 252+83.59 TO "0" 352+35.57

WIDTH OF SUBGRADE = 28' — LENGTH OF GRADING = 3,231.41 = 0.612 MILES
WIDTH OF SUBGRADE = 26' — LENGTH OF GRADING = 6,647.34' = 1.259 MILES
LENGTH OF PROJECT = 9,878.75' = 1.871 MILES

construction plans prepared by:
R & M CONSULTANTS, INC.
6 ½ Mile Glacier Highway
P.O. Box 1786
Juneau, Alaska 99801

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS-0991(2)	1983	2	11

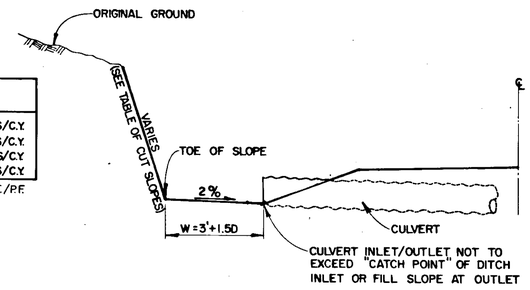


TYPICAL ROADWAY SECTION
"L" 252+83.59 to "L" 285+15.00

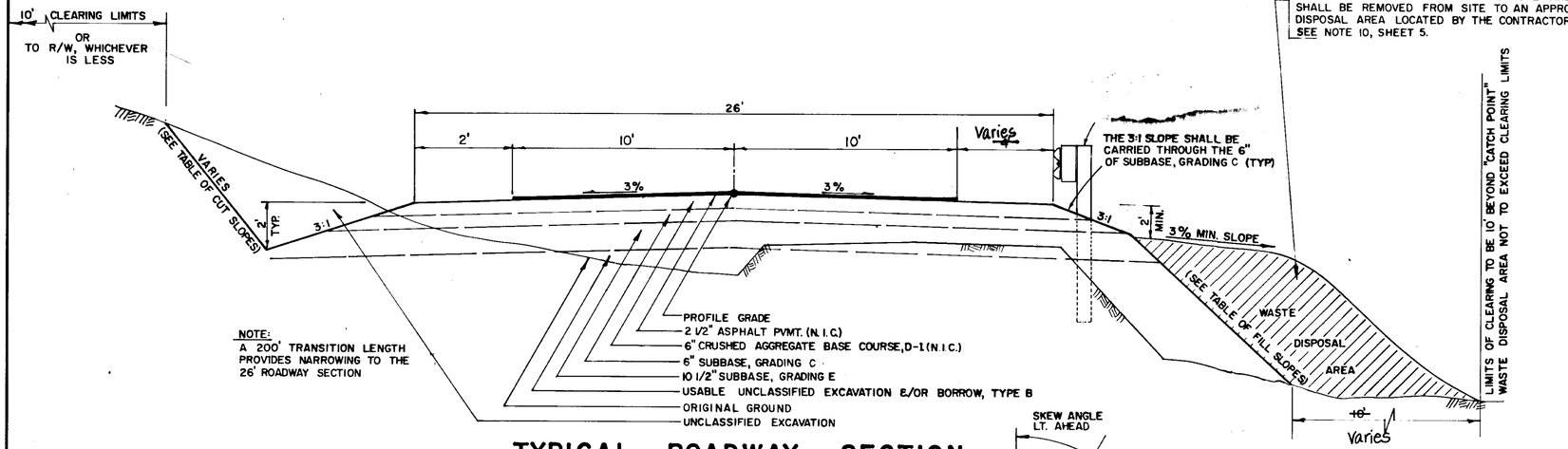
EXCESS WASTE BEYOND THE AMOUNT THAT CAN BE "SAFELY" PLACED WITHIN THIS DISPOSAL AREA SHALL BE REMOVED FROM SITE TO AN APPROVED DISPOSAL AREA LOCATED BY THE CONTRACTOR. SEE NOTE 10, SHEET 5.

CONVERSION FACTORS C.Y. TO TONS*	
SUBBASE, GRADING C	2.09 TONS/C.Y.
SUBBASE, GRADING E	2.09 TONS/C.Y.
BORROW, TYPE B	2.13 TONS/C.Y.
RIP-RAP, CLASS II	1.87 TONS/C.Y.

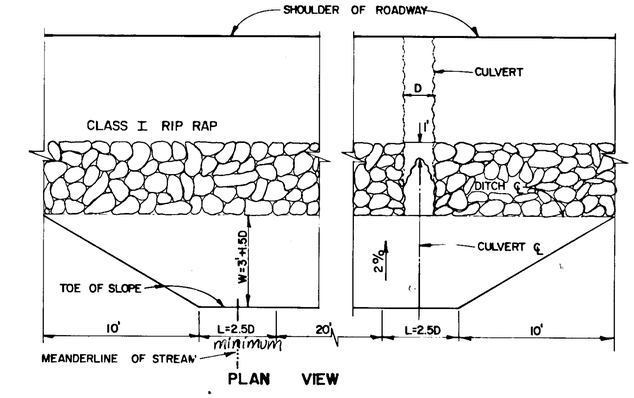
* BASED ON DATA FURNISHED BY THE D.O.T./P.F. MATERIALS SECTION, SOUTHEAST REGION.



TYPICAL SECTION

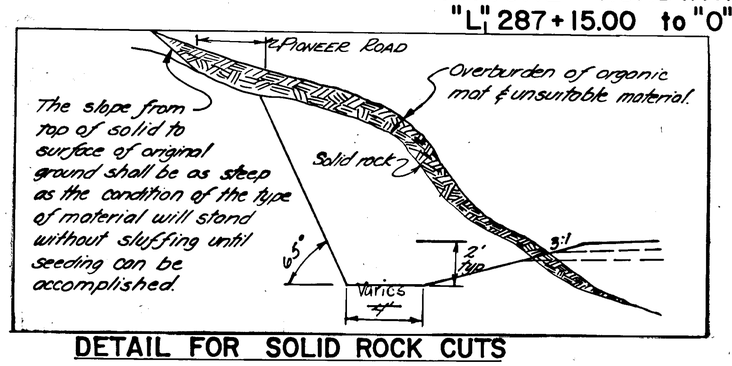


TYPICAL ROADWAY SECTION
"L" 287+15.00 to "O" 352+~~35.57~~ + 33.06

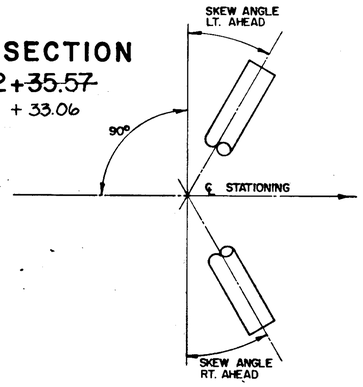


PLAN VIEW

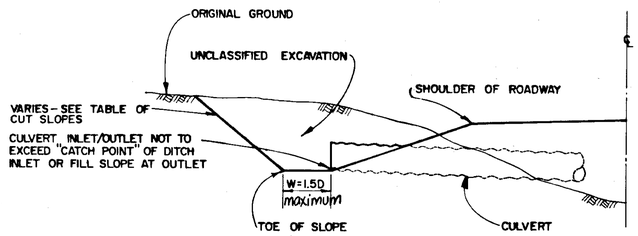
SPECIAL CULVERT INLET DETAIL



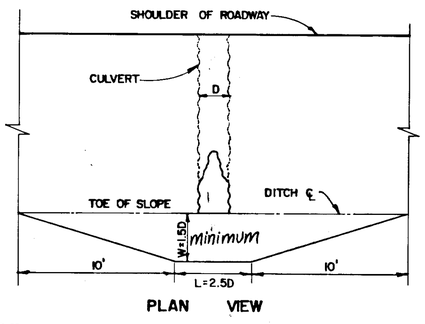
DETAIL FOR SOLID ROCK CUTS



CULVERT SKEW ANGLE.



TYPICAL SECTION



PLAN VIEW

CULVERT INLET DETAIL

DESIGN M.A.M./M.C.S.
DRAWN M.S./M.L.P.
CHECK M.A.M.
APPROVED

NO.	DATE	REVISION	BY	APRVD

LUTAK ROAD
TYPICAL SECTIONS OF ROADWAY IMPROVEMENTS AND MISCELLANOUS DETAILS

R&M CONSULTANTS, INC.
ENGINEERS GEOLOGISTS PLANNERS SURVEYORS

PROPOSED HIGHWAY PROJECT
RS-0991(2)
LUTAK ROAD - HAINES
FROM THE FERRY TERMINAL
to
CHILKOOT LAKE CAMPGROUND

DATE: DEC., 1981
R&M NO. 133134

SHEET 2
2 OF 11

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS-0991(2)	1983	3	11

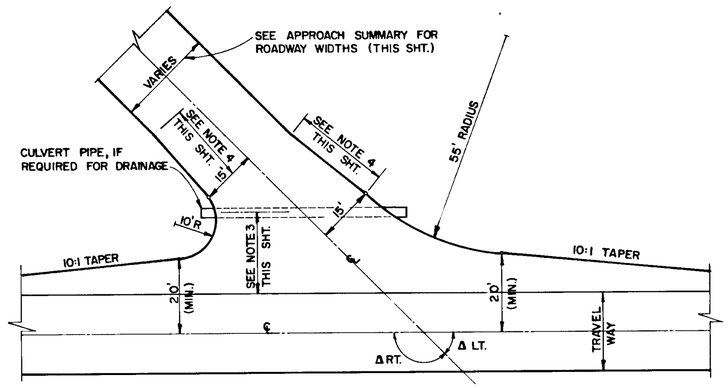
APPROACH SUMMARY

STATION	OFFSET	Δ RT.	Δ LT.	TYPE	WIDTH	CULVERT
"L" 257+24.00	RT.	90°	90°	SERVICE	24'	18" x 40'
"L" 260+54.00	RT.	90°	90°	SERVICE	24'	18" x 40
"L" 284+77.00	RT.	153°	27°	SERVICE	20'	NONE
"0" 295+50.00	LT.	168°	12°	RESIDENTIAL	24'	NONE
~~"L" 455+59.00~~	~~LT.~~	~~90°~~	~~90°~~	~~RESIDENTIAL~~	~~14'~~	~~18" x 30'~~
"L" 465+80.00	LT.	90°	90°	RESIDENTIAL	14'	18" x 30'
"0" 478+86.00	LT.	156°	24°	RESIDENTIAL	14'	18" x 30'
"0" 487+00.00	RT.	90°	90°	RESIDENTIAL	20'	18" x 36'
"0" 506+87.00	RT.	139°	45°	SERVICE	26'	NONE

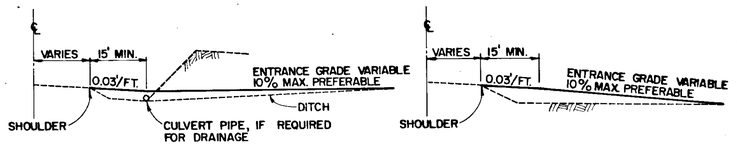
NIC

APPROACH NOTES:

1. APPROACH LOCATIONS AND DELTAS (Δ) ARE APPROXIMATE ONLY AND ARE SUBJECT TO MINOR FIELD REVISIONS.
2. APPROACH ENTRANCES SHALL BE CONSTRUCTED WITH THE SAME MATERIALS THAT ARE USED TO SURFACE THE TYPICAL ROADWAY SECTION.
3. SERVICE APPROACH ROADS SHALL BE TAPERED IN A 25' TRANSITION ZONE OR TO THE RIGHT-OF-WAY, WHICHEVER IS LESS, TO THE APPROACH WIDTH GIVEN IN THE APPROACH SUMMARY, THIS SHEET. NO WORK SHALL BE DONE OUTSIDE THE RIGHT-OF-WAY WITHOUT A PERMIT.
4. APPROACHES SHALL EXTEND 25' FROM THE ROADWAY EDGE, TYPICAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FOR WORK TO BE DONE OUTSIDE OF THE RIGHT-OF-WAY. THE COST OF OBTAINING SUCH PERMITS SHALL BE INCLUDED IN PAY ITEM 639(1), APPROACHES.

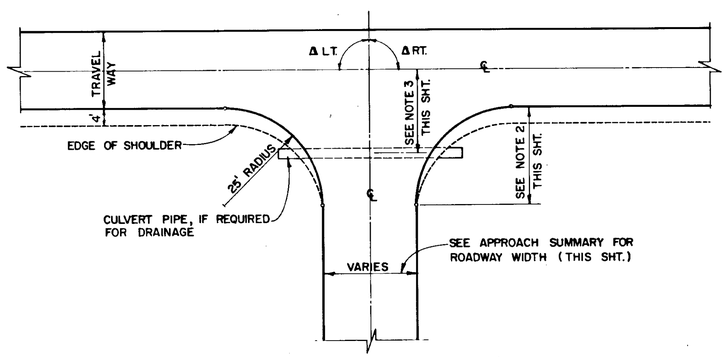


SERVICE TYPE APPROACH



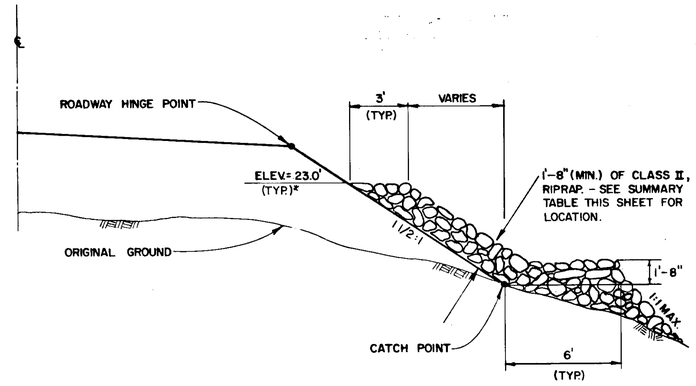
PROFILE OF DRIVEWAY EXCAVATION

PROFILE OF DRIVEWAY EMBANKMENT



RESIDENTIAL TYPE APPROACH

APPROACHS

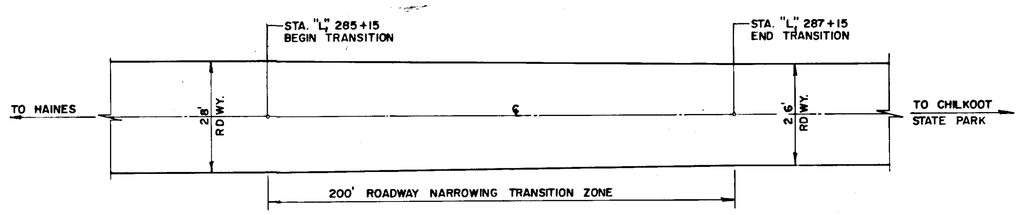


TYPICAL RIPRAP PLACEMENT DETAIL

RIPRAP, CLASS II SUMMARY

FROM	TO	OFFSET	LGTH.	REMARKS
~~"0" 274+50~~	~~"0" 276+75~~	~~RT.~~	~~225'~~	NIC
"0" 315+50	"0" 319+50	RT.	400'	
"0" 321+50	"0" 328+00	RT.	650'	
"0" 339+75	"0" 346+75	RT.	700'	
~~"0" 361+00~~	~~"0" 366+50~~	~~RT.~~	~~550'~~	
"0" 386+00	"0" 391+00	RT.	500'	
"0" 400+25	"0" 402+50	RT.	225'	
"0" 409+50	"0" 413+50	RT.	400'	
"0" 420+00	"0" 424+00	RT.	400'	
"0" 427+00	"0" 432+00	RT.	500'	
"0" 435+00	"0" 450+00	RT.	1500'	

NIC



ROADWAY NARROWING DETAIL

GUARDRAIL SUMMARY

FROM	TO	OFFSET	LGTH.	REMARKS
~~"0" 274+00~~	~~"0" 277+50~~	~~RT.~~	~~350'~~	NIC
"L" 288+26.77	"0" 299+50	RT.	1050'	
"0" 316+00	"0" 347+00	RT.	3100'	
~~"0" 361+00~~	~~"0" 365+50~~	~~RT.~~	~~450'~~	NIC

GENERAL SIGNING NOTES

1. SIGN LOCATIONS ARE APPROXIMATE ONLY AND ARE SUBJECT TO REVISIONS.
2. ALL EXISTING SIGNS AND POSTS SHALL BE REMOVED AND SALVAGED AND DELIVERED TO THE DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES MAINTENANCE YARD IN HAINES. PAYMENT FOR THIS ITEM OF WORK SHALL BE CONSIDERED INCIDENTAL TO ITEM 615(1) STANDARD SIGN, AND NO SEPARATE PAYMENT WILL BE MADE THEREFORE.
3. ALL SIGN POSTS SHALL BE TELESCOPING PERFORATED GALVANIZED STEEL, THE 2" SIZE SHALL BE USED ABOVE GROUND AND THE 2-1/4" SHALL BE USED BELOW GROUND.
4. SIGN POST LENGTH INCLUDES THE ONE FOOT TELESCOPE INSIDE THE BASE. LENGTHS ARE FOR ESTIMATING ONLY. ACTUAL LENGTHS MAY VARY.

STANDARD SIGN SUMMARY

STATION	OFFSET FROM ℄	CODE NO.	LEGEND	AREA SQ. FT.	POST SIZE	POST LGTH.	EMBED.
"L" 268+24	26' RT.	M10-2	5	0.75	2"	8'-6"	30"
"L" 282+50	26' RT.	W5-1	ROAD NARROWS	6.25	2"	10'-10"	30"
"0" 321+44	18' RT.	M10-2	6	0.75	2"	10'-6"	30"
~~"0" 337+01~~	~~26' RT.~~	~~D7-3~~	~~SCENIC VIEW POINT~~	~~4.0~~	~~2"~~	~~18'-6"~~	~~30"~~
"L" 374+49	18' RT	M10-2	7	0.75	2"	5'-6"	30"
"0" 388+20	26' LT	D7-3	SCENIC VIEW POINT	4.0	2"	6'-4"	30"
"0" 428+29	25' RT.	M10-2	8	0.75	2"	8'-6"	30"
"0" 481+19	25' RT.	M10-2	9	0.75	2"	8'-6"	30"
"0" 507+41	26.25' RT.	R1-1	STOP	6.25	2"	19'-10"	30"

NIC

DESIGN MCS/DL
DRAWN MLP
CHECK MAM
APPROVED

NO.	DATE	REVISION	BY	APRVD

LUTAK ROAD
MISCELLANEOUS TABLES & SUMMARY TABLES

R&M CONSULTANTS, INC.
ENGINEERS GEOLOGISTS PLANNERS SURVEYORS

PROPOSED HIGHWAY PROJECT
RS-0991(2)
LUTAK ROAD - HAINES
FROM THE FERRY TERMINAL
to
CHILKOOT LAKE CAMPGROUND

DATE DEC, 1981
R&M NO. 133134

SHEET 3
3 OF 11

CULVERT SUMMARY

STATION	18" CORRUGATED ALUMINUM PIPE L.F.	24" CORRUGATED ALUMINUM PIPE L.F.	30" CORRUGATED ALUMINUM PIPE L.F.	36" CORRUGATED ALUMINUM PIPE L.F.	48" CORRUGATED ALUMINUM PIPE L.F.	60" CORRUGATED ALUMINUM PIPE L.F.	72" CORRUGATED ALUMINUM PIPE L.F.	SKEW ANGLE	(1) SPECIAL CULVERT DETAILS OFFSET	CULVERT REMOVAL & DISPOSAL
"L" 257 +24	~~40'~~							—	APPROACH – RT.	
"L" 260 +54	~~40'~~							—	APPROACH – RT.	
"L" 263 +68						86'		10° RT.	RIP – RAP	X
"0" 27:1 +70						-29' 30'			RIP – RAP	
"0" 276 +80			~~16'~~ 18'					—	—	
"0" 278 +20				16'				—	—	
"0" ~~283 +91~~ 294+82		54'	~~65'~~					15° LT.	AHEAD	X
"0" ~~296 +24~~ 297+50		~~55'~~ 58'						—	—	X
"0" 304 +16		~~67'~~ 60'						—	—	X
"0" 311 +91			~~88'~~ 67'					—	CLEAN, RIP-RAP	X
"0" 316 +87		~~85'~~ 60'						20° LT.	—	X
~~"0" 318 +28~~		~~70'~~						—	—	
"0" 320 +96		~~58'~~	100'					15° RT.	—	X
"0" 323 ~~+36~~+50		~~48'~~ 57'						—	—	X
"0" 327 ~~+36~~+30		~~54'~~ 57'						—	—	X
"0" 336 ~~+32~~+10		~~49'~~ 75'						—	—	X
~~"0" 341 +05~~ 340+90		~~51'~~ 75'						—	—	X
"0" 342 +71		~~50'~~ 60'						—	—	X
"0" 344 ~~+40~~+33		~~61'~~ 60'						—	—	X
"0" 346 ~~+98~~+70			70'					—	—	X
"0" 347 +21				50'				—	AHEAD	
"0" 349 +30		44'						—	—	X
"0" 350 +59		~~46'~~ 54'						—	—	
~~"0" 353 +89~~			60'					13° RT.		X
~~"0" 356 +37~~		50'						10° RT.	—	X
"0" 358 +77		46'						—	—	X
"0" 360 +16								—	—	X
"0" 360 +43			48'					—	BACK	
"0" 363 +55		48'						—	—	X
"0" 369 +90		46'						—	—	
"L" 374 +35						2-66'		—	CLEAN, RIP-RAP	X
"0" 381 +41		80'						10° RT.	—	X
"0" 384 +72					68'			—	RIP-RAP, AHEAD	X
"0" 385 +27'				60'				—	—	X
"0" 386 +96'		65'						—	—	X
"0" 388 +82'		43'						28° RT.	—	X
"0" 390 +62		50'						—	—	X
"0" 393 +48		58'						—	—	X
"0" 397 +80			51'					—	—	X
"0" 399 +36			72'					—	AHEAD	
"0" 399 +64								—	—	X
"0" 401 +00		69'						15° RT.	—	X
"0" 402 +70		55'						20° LT.	—	X
"0" 406 +00				70'				25° LT.	—	X
"0" 409 +00		54'						—	—	X
"0" 410 +57			60'					—	AHEAD	
"0" 412 +25								—	—	X
"0" 413 +90					72'			15° LT	RIP-RAP	X
"0" 419 +07		53'						—	—	
"0" 422 +63		68'						—	—	X
"0" 425 +50				2-48'				—	CLEAN	X
"0" 427 +05		55'						—	—	X
"0" 430 +31				55'				—	AHEAD	
"0" 433 +07				47'				—	BACK	
"0" 434 +40		50'						—	—	X
"0" 438 +02		49'						—	—	X
"0" 442 +67			75'					—	—	X
"0" 449 +90		46'						—	—	
"0" 455 +59	30'							—	APPROACH – LT	
"0" 460 +61							2 – 53'	—	RIP-RAP	X
"0" 465 +80	30'							—	APPROACH – LT	

NIC

TABLE OF CUT SLOPES

FROM STATION	OFFSET	TO STATION	OFFSET	SLOPE
B.O.P.	LT	"L" 255+50	LT	3:1
B.O.P.	RT	"L" 261+50	RT	3:1
"0" 264+50	LT	"0" 269+50	LT	3:1
"0" 268+50	RT	"0" 270+75	RT	3:1
" " 269+50	LT	"0" 273+50	LT	1.5:1
"0" 277+75	LT	"0" 282+25	LT	1.5:1
"0" 293+50	LT	"0" 294+75	LT	1.5:1
"0" 327+50	LT	"0" 340+25	LT	1/4:1
"0" 347+25	LT	"0" 352+75	LT	1.5:1
~~"0" 354+50~~	~~LT~~	~~"0" 364+50~~	~~LT~~	~~1.5:1~~
"0" 359+75	RT	"0" 360+75	RT	3:1
"0" 365+50	LT	"L" 374+50	LT	1.5:1
"0" 366+75	RT	"0" 368+25	RT	3:1
"0" 382+50	LT	"0" 386+50	LT	1.5:1
"0" 383+50	RT	"0" 385+50	RT	1.5:1
"0" 387+50	LT	"0" 390+25	LT	1.5:1
"0" 391+25	LT	"0" 404+00	LT	1.5:1
"0" 405+25	LT	"0" 410+25	LT	1:1
"0" 410+25	LT	"0" 422+00	LT	1.5:1
"0" 426+00	LT	"0" 428+00	LT	1.5:1
"0" 434+00	LT	"0" 438+75	LT	1.5:1
"0" 443+25	LT	"0" 453+50	LT	1.5:1
"L" 456+00	LT	"0" 468+50	LT	1.5:1
"0 469+50	LT	"0" 471+25	LT	1.5:1
"0" 472+50	LT	"0" 484+50	LT	3:1
"0" 481+25	RT	"0" 493+00	RT	3:1
"0" 484+50	LT	"0" 486+00	LT	1.5:1
"0" 486+00	LT	"0" 503+00	LT	3:1
"0" 505+00	LT	"0" 507+50	LT	1.5:1

NIC

TABLE OF FILL SLOPES

FROM STATION	OFFSET	TO STATION	OFFSET	SLOPE
"L" 255+50	LT	"0" 264+50	LT	3:1
"L" 261+50	RT	"0" 268+50	RT	3:1
"0" 270+75	RT	"0" 359+75	RT	1.5:1
"0" 273+50	LT	"0" 277+75	LT	1.5:1
"0" 282+25	LT	"0" 293+50	LT	3:1
"0" 294+75	LT	"0" 327+50	LT	3:1
	LT			
"0" 340+25	LT	"0" 347+25	LT	3:1
~~"0" 352+75~~	~~LT~~	~~"0" 354+50~~	~~LT~~	~~3:1~~
"0" 360+75	RT	"0" 365+50	RT	1.5:1
"0" 364+50	LT	"0" 365+50	LT	3:1
"0" 365+50	RT	"0" 366+75	RT	3:1
"0" 368+25	RT	"0" 383+50	RT	3:1
"L" 374+50	LT	"0" 382+50	LT	3:1
"0" 385+50	RT	"0" 391+75	RT	1.5:1
"0" 386+50	LT	"0" 387+50	LT	3:1
"0" 390+25	LT	"0" 391+25	LT	3:1
"0" 391+75	RT	"0" 400+25	RT	3:1
"0" 400+25	RT	"0" 405+25	RT	1.5:1
"0" 404+00	LT	"0" 405+25	LT	3:1
"0" 405+25	RT	"0" 410+25	RT	3:1
"0" 410+25	RT	"0" 414+00	RT	1.5:1
"0" 414+00	RT	"0" 421+00	RT	3:1
"0" 421+00	RT	"0" 432+00	RT	1.5:1
"0" 422+00	LT	"0" 426+00	LT	3:1
"0 428+00	LT	"0" 434+00	LT	3:1
"0" 432+00	RT	"0" 481+25	RT	3:1
"0" 438+75	LT	"0" 443+25	LT	3:1
"0" 453+50	LT	"0" 455+00	LT	3:1
"0" 468+00	LT	"0" 469+50	LT	3:1
"0" 471+25	LT	"0" 472+50	LT	3:1
"0" 493+50	RT	"0" 504+00	RT	3:1
"0" 504+00	RT	"0" 507+50	RT	1.5:1
"0" 503+00	LT	"0" 505+00	LT	1.5:1

NIC

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS-0991(2)	1983	4	11

*MONUMENT CASE TO BE FURNISHED AT EACH LOCATION

MONUMENT SUMMARY

STATION	LOCATION	POINT	*MON.
"L" 262+64.87	CENTERLINE	P.O.T. BK.= P.C. AHD.	1
"L" 262+64.87			
"L" 275+08.44		P.C.	1
"L" 289+20.69		P.T. BK.= P.O.T. AHD.	1
"0" 289+93.92			
	CENTERLINE		

STATION	LOCATION	POINT	*MON.
"	CENTERLINE	P.T.	1
"0" 501+46.51		P.C.	1
"0" 502+83.85	CENTERLINE	P.C.	1

NIC

NOTE: SHOULD THE TYPICAL SECTION REQUIRE A CUT &/OR A FILL SLOPE CONTRADICTORY TO THAT CALLED FOR IN THE TABLE OF CUT & FILL SLOPES, THE CONTRACTOR SHALL BE REQUIRED TO CONSTRUCT THE 2' DITCH, CUT &/OR FILL SLOPES PER THE INTENT OF THE TYPICAL SECTIONS.

CULVERT SUMMARY (CONT.)

STATION	18" CORRUGATED ALUMINUM PIPE L.F.	24" CORRUGATED ALUMINUM PIPE L.F.	30" CORRUGATED ALUMINUM PIPE L.F.	36" CORRUGATED ALUMINUM PIPE L.F.	48" CORRUGATED ALUMINUM PIPE L.F.	60" CORRUGATED ALUMINUM PIPE L.F.	72" CORRUGATED ALUMINUM PIPE L.F.	SKEW ANGLE	(1) SPECIAL CULVERT DETAILS OFFSET	CULVERT REMOVAL & DISPOSAL
~~"0" 469+06~~			64'					—	—	X
"0" 472+00		49'						—	—	
"0" 476+70		50'						—	AHEAD	X
"0" 476+96								—		
"0" 478+86	30'							—	APPROACH – LT.	
"0" 482+88		51'						—	—	X
"0" 487+00	36'							—	APPROACH – RT.	
"0" 488+86		38'						—	—	
"0" 496+65				64'				25° LT.	—	X

NIC

(1) WHERE "CLEAN INLET" IS CALLED OUT, THE CREEK SHALL BE CLEARED FOR A MINIMUM DISTANCE OF 50' UPSTREAM FROM THE ROADWAY CENTERLINE AND A WIDTH OF 10' EITHER SIDE OF THE MEANDER LINE OR AS DIRECTED BY THE ENGINEER. PAYMENT SHALL BE INCLUDED IN PAY ITEM 201(2A), CLEARING AND GRUBBING.

WHERE "AHEAD" OR "BACK" IS CALLED OUT, IN ADDITION TO CLEARING THE INLET, CONSTRUCT A SPECIAL CULVERT INLET AS SHOWN IN THE DETAIL ON SHEET 2 IN THE DIRECTION DESIGNATED IN THE CULVERT SUMMARY.

WHERE "RIPRAP" IS CALLED OUT, A RIPRAP TYPE HEAD WALL SHALL BE PROVIDED AND INSTALLED AS END PROTECTION. (SEE SHEET 11 FOR DETAIL). PAYMENT SHALL BE INCLUDED IN THE RESPECTIVE PAY ITEM FOR THE DIAMETER OF PIPE BEING UTILIZED WITH THE HEADWALL.

WHERE "APPROACH" IS CALLED OUT, THE CULVERT SHALL BE PLACED IN THE DITCH LINE BENEATH THE DRIVEWAY (TYP.).

DESIGN MCS
DRAWN MLP
CHECK MAM
APPROVED

NO.	DATE	REVISION	BY	APRVD

LUTAK ROAD
CULVERT SUMMARY
TABLE OF CUT & FILL SLOPES
MONUMENT SUMMARY

R&M CONSULTANTS, INC.
ENGINEERS GEOLOGISTS PLANNERS SURVEYORS

PROPOSED HIGHWAY PROJECT
RS-0991(2)
LUTAK ROAD – HAINES
FROM THE FERRY TERMINAL
to
CHILKOOT LAKE CAMPGROUND

DATE: DEC., 1981
R&M NO. 133134
4
SHEET 4 OF 11

ESTIMATED QUANTITIES

PAY ITEM NO.	PAY ITEM	PAY UNIT	SHEET NUMBERS 6	7	8	9	10	*	*	*	*	*	*	*	*	TOTAL
109(2)	D.B.E. & W.B.E ADJUSTMENTS	CONT. SUM														ALL REQ'D
110(2)	MOBILIZATION & DEMOBILIZATION	LUMP SUM														ALL REQ'D
111(1)	TEMPORARY EROSION & POLLUTION CONTROL	CONT. SUM														ALL REQ'D
112(1)	Flagging E.W.O.# 2	Per Hour														108.5 Hrs.
114(1)	CONSTRUCTION SURVEYING BY CONTRACTOR	LUMP SUM														ALL REQ'D
115(1)	TRAFFIC MAINTENANCE	LUMP SUM														ALL REQ'D
115(2)	CONSTRUCTION SIGNS	LUMP SUM														ALL REQ'D
116(1)	~~FURNISHING & MAINTAINING FIELD OFFICE~~	LUMP SUM	Deleted													ALL REQ'D
116(2)	~~FURNISHING & MAINTAINING FIELD LABARATORY~~	LUMP SUM	Deleted													ALL REQ'D
116(8)	Contractor-furnished Vehicle	Veh./Month														12 Months
201(2A)	CLEARING & GRUBBING	ACRES	1.1	3.6	2.6	4.2	0.8	2.8	3.1	3.6	2.8	3.1	1.0	—	—	~~12.3~~ 4.56
201(5)	SELECTIVE TREE REMOVAL	EACH	—	10	10	—	—	—	—	—		—	—	—	—	~~20~~ 110
202(4)	REMOVAL OF CULVERT PIPE	LINEAR FOOT	90	37	184	247	57	288	288	227	84	110	—	—	—	~~615~~ 617
203(3)(1)	~~UNCLASSIFIED~~ EXCAVATION Common	CUBIC YARD	2,044	1,921	3,970	7,209	3,242	4,173	6,086	2,197	1,924	4,836	2,398	—	—	~~18,386~~ 20,941.6
203(2)	Rock Excavation	Cubic Yard														39,269.36
~~203(5B)~~	~~BORROW, TYPE B~~ Deleted	TON	0	3,500	3,514	5,604	0	0	1,644	18,069	1,708	0	0	—	—	12,618
203(8)	CONTROLLED BLASTING	LINEAR FOOT				17,579										~~17,579~~ 15,443.9
203(8A)	Rock Excavation Disposal E.W.O.# 5															7,328
304(1A)	SUBBASE, GRADING C	TON	1,580	3,344	3,308	3,189	750	2,882	2,953	3,189	3,208	3,001	957	—	—	~~12,171~~ 13,348.72
304(1B)	SUBBASE, GRADING E	TON	3,110	6,598	6,435	6,218	1,463	5,656	5,829	6,289	6,372	5,957	1,871	—	—	~~23,824~~ 24,320.75
603(13-18)	18" CORRUGATED ALUMINUM PIPE	LINEAR FOOT	80	—	—	—	—	—	—	—	60	66	—	—	—	~~80~~ 40
603(13-24)	24" CORRUGATED ALUMINUM PIPE	LINEAR FOOT	—	—	277	369	90	296	231	222	95	139	—	—	—	~~736~~ 945
603(13-30)	30" CORRUGATED ALUMINUM PIPE	LINEAR FOOT	—	81	88	—	—	—	183	75	64	—	—	—	—	~~169~~ 250
603(13-36)	36" CORRUGATED ALUMINUM PIPE	LINEAR FOOT	—	16	—	—	50	60	70	198	—	64	—	—	—	~~66~~ 86
			—	—	—	—	—	68	72	—	—	—	—	—	—	
603(13-60)	60" CORRUGATED ALUMINUM PIPE	LINEAR FOOT	86'	29'	—	—	—	132	—	—	—	—	—	—	—	~~115~~ 100
604(8)	CLEAN AND ADJUST CLEANOUT	EACH	—	2	2	—	—									4
606(1)	BEAM TYPE GUARD RAIL, TYPE II POST	LINEAR FOOT	—	300	1,050	2,700	100	—	—	—	—	—	—	—	—	~~4150~~ 4425
606(6)	END ANCHORAGES	EACH	0	3	2	0	1	—	—	—	—	—	—	—	—	6
611(2)	RIPRAP, CLASS II E.W.O. #3	~~TON~~ C.Y.	—	—	~~1,917~~	~~3,149~~	~~455~~	1,541	2,103	7,230	768	—	—	—	—	~~11,521~~ 5804.4
614(1)	SURVEY MONUMENTS	EACH	1	2	—	—	—	—	2	—	—	1	1	—	—	3
614(2)	MONUMENT CASES	EACH	1	2	—	—	—	—	2	—	—	1	1	—	—	3
615(1)	STANDARD SIGN	SQ. FOOT	—	7.0	0.75	—	—	4.75	—	0.75	—	0.75	6.25	—	—	7.75
618(1)	SEEDING	MSF.	20.9	74.7	58.5	120.7	18.2	70.1	71.4	84.4	56.5	70.8	24.9	—	—	~~293~~ 315.1
618(4)	WATER FOR MAINTENANCE	M. GAL	2.1	1.5	5.9	12.1	1.8	7.0	7.1	8.4	5.7	7.1	2.4	—	—	~~23.4~~ 0
627(1)	WATERING	M. GAL	3	4	4	4	1	4	4	4	4	4	3	—	—	~~16~~ 199.32
639(1)	APPROACHES	EACH	2	1	1	—	—	—	—	—	2	2	1	—	—	~~4~~ 5

N.I.C.

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS-0991(2)	1983	5	11

GENERAL NOTES:

1. GRADES AND ALIGNMENT SHOWN ON THESE PLANS ARE SUBJECT TO MINOR REVISIONS.
2. CULVERT LENGTHS AND LOCATIONS ARE APPROXIMATE ONLY AND ARE SUBJECT TO MINOR FIELD REVISIONS.
3. THE CLEARING LIMITS SHALL BE A NEAT ORDERLY LINE 10' BEYOND THE SLOPE LIMITS OF BOTH CUT AND FILL SECTIONS OR TO THE RIGHT-OF-WAY LINE, WHICHEVER IS THE LESSER OF THE TWO.
4. PROPERTY CORNERS/LAND MONUMENTS DISTURBED AND/OR DESTROYED BY CLEARING AND/OR OTHER CONSTRUCTION OPERATIONS SHALL BE RE-ESTABLISHED BY AN ALASKA REGISTERED LAND SURVEYOR TO THIRD ORDER SURVEY ACCURACY. NO EXTRA PAYMENT WILL BE MADE FOR SUCH LAND MONUMENT PRESERVATION OR RESTORATION AS IT SHALL BE INCIDENTAL TO PAY ITEM 201(2A), CLEARING AND GRUBBING. A PLAT REFLECTING ANY SUCH WORK SHALL BE RECORDED WITHIN THE FIRST JUDICIAL DISTRICT, HAINES RECORDING OFFICE, WITH A COPY TO THE ENGINEER.
5. A REPORT PREPARED BY THE MATERIALS SECTION, DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES, ENTITLED "ENGINEERING GEOLOGY AND SOILS REPORT--CENTERLINE SOILS," PROJECT NO. RS-0991(02), CODE NO. B59822, IS AVAILABLE FROM THE ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES. THIS REPORT REPRESENTS THE BEST AVAILABLE SUBSURFACE INFORMATION. IT IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT GUARANTEED.
6. ROCK MAY BE ENCOUNTERED IN THE CONSTRUCTION EXCAVATION. THIS MATERIAL IS CONSIDERED AS UNCLASSIFIED EXCAVATION AND WILL BE PAID FOR AS SUCH.
7. MATERIALS MAY BE AVAILABLE FROM PRIVATE LAND OWNERS ALONG THE PROJECT ROUTE. IF THE CONTRACTOR OPTS TO USE PRIVATELY OWNED MATERIAL SITES, HE OR SHE SHOULD MAKE ALL NECESSARY ARRANGEMENTS FOR CLEARING, GRUBBING, STRIPPING, ROYALTY FEES, AND RESTORATION WITH THE RESPECTIVE OWNER(S).
8. SEVERAL UTILITY POLES EXIST AND ARE TO REMAIN IN PLACE, NEAR THE PROPOSED SLOPE LIMITS BETWEEN STATION "L" 252+70 AND STATION "O" 278+00. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING AND MAINTAINING IN USE THE UTILITY POLES, GUYS, AND WIRES DURING CONSTRUCTION. ANY DAMAGE OCCURRING TO THESE UTILITIES DUE TO CONTRACTOR RELATED WORK SHALL BE REPAIRED AND/OR REPLACED WITH METHODS ACCEPTABLE TO THE RELATED UTILITY COMPANY AT THE CONTRACTOR'S EXPENSE.
9. THE "L" CENTERLINE SHOWN ON THE PLAN AND PROFILE SHEETS HAS BEEN STAKED IN SURVEY WORK PERFORMED BY STATE OF ALASKA, DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES FORCES IN 1978 AND 1979. RESTAKING OF THAT PORTION OF THE "L" CENTERLINE NEEDED FOR CONSTRUCTION WILL BE REQUIRED BY THE CONTRACTOR. PAYMENT WILL BE INCIDENTAL TO PAY ITEM 114(1), CONSTRUCTION SURVEYING BY CONTRACTOR.

   THE "O" CENTERLINE SHOWN ON THE PLAN AND PROFILE SHEETS DENOTES OFFICE DESIGNED ROUTE CENTERLINE. STAKING OF THIS CENTERLINE WILL BE REQUIRED BY THE CONTRACTOR. PAYMENT WILL BE INCIDENTAL TO PAY ITEM 114(1), CONSTRUCTION SURVEYING BY CONTRACTOR.
10. WASTE EXCAVATION MAY BE PLACED WITHIN THE AVAILABLE "WASTE DISPOSAL AREA" (AT THE OPTION OF THE CONTRACTOR), INSIDE THE CLEARING LIMITS. WASTE EXCAVATION CANNOT BE PLACED OUTSIDE THE CLEARING LIMITS; WITHIN A STREAM DRAINAGE PATTERN; WITHIN A WETLAND AREA OR WITHIN THE TIDAL INFLUENCE OF LUTAK INLET OR THE CHILKOOT RIVER. IF SUFFICIENT AREA IS NOT AVAILABLE WITHIN THE CLEARING LIMITS FOR DISPOSAL OF WASTE MATERIALS, IT SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR TO A DISPOSAL AREA OF THE CONTRACTOR'S CHOICE AS APPROVED BY THE ENGINEER AND/OR LAND OWNER. THERE WILL BE NO ADDITIONAL PAYMENT FOR THE HAULING OF UNCLASSIFIED (WASTE MATERIAL) EXCAVATION FROM THE PROJECT SITE TO A CONTRACTOR CHOSEN WASTE DISPOSAL AREA. SEE NOTE 12 BELOW
11. SEEDING, PAY ITEM NO. 618(1), WILL BE REQUIRED ON ALL FILL SLOPES CONSTRUCTED WITH MATERIAL OTHER THAN ROCK, CUT SLOPES OTHER THAN ROCK, AND ON ALL EXPOSED SURFACES OF WASTE AREAS.
12. APPROXIMATELY 5000 CUBIC YARDS OF WASTE MATERIAL SHALL BE PLACED AT THE CITY DUMP SITE AT NUKDIK POINT APPOXIMATELY 3.03 MILES FROM THE BEGINNING OF PROJECT. THE MATERIAL WILL BE SPREAD BY OTHERS. THERE WILL BE NO ADDITIONAL PAYMENT FOR THE HAULING OF WASTE MATERIAL TO THIS DESIGNATED SITE. ANY ADDITIONAL WASTE MATERIAL SHALL BE DISPOSED OF IN ACCORDANCE WITH NOTE 10 ABOVE.
13. CULVERT BEDDING SHALL BE CONSIDERED INCIDENTAL TO OTHER ITEMS AND WILL NOT BE MEASURED FOR PAY.
14. ONE LANE OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. DETOURS AROUND THE WORK AREA SHALL BE IN ACCORDANCE WITH STANDARD DRAWING C-03.01, TWO LANE ROADWAY - SINGLE LANE CLOSURE, TYPICAL LANE CLOSURE - SHORT DURATION.

DESIGN MCS/DL
DRAWN MLP
CHECK MAM
APPROVED

NO.	DATE	REVISION	BY	APRVD

LUTAK ROAD
ESTIMATED PROJECT QUANTITIES & GENERAL NOTES

R&M CONSULTANTS, INC.
ENGINEERS GEOLOGISTS PLANNERS SURVEYORS

PROPOSED HIGHWAY PROJECT
RS-0991(2)
LUTAK ROAD - HAINES
FROM THE FERRY TERMINAL
to
CHILKOOT LAKE CAMPGROUND

DATE: DEC., 1981
R&M NO. 133134
5
SHEET 5 OF 11

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS-0991(2)	1983	6	11

ADDITIONAL SYMBOLS

- 7 MILE ..... EXISTING MILEPOST
- ..... MEAN HIGH WATER
- ..... EXISTING SLOPE LIMITS
- ..... PROPOSED LIMIT OF FILL SLOPE
- ..... PROPOSED LIMIT OF CUT SLOPE
- C.O. ..... EXISTING CLEANOUTS
- ..... POWERPOLE w/ GUY POLE
- ..... PROPOSED MONUMENTS, NOT IN THIS CONTRACT UNLESS NOTED OTHERWISE ON THE PLAN SHEET.

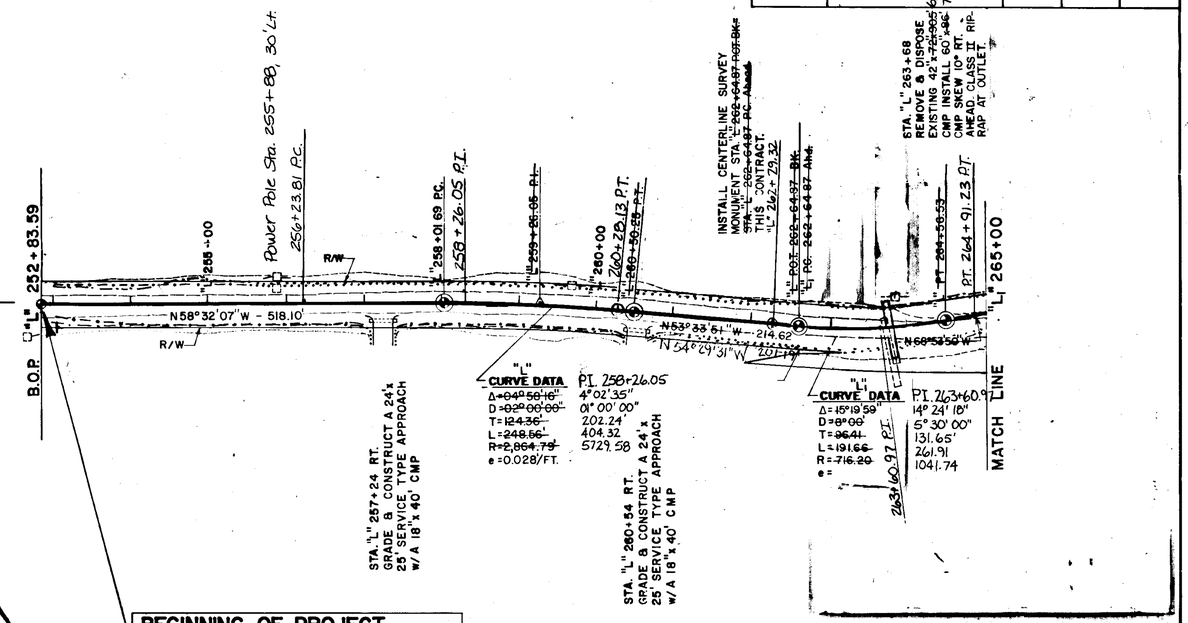
HORIZONTAL CONTROL

THE BASIS-OF-BEARING WAS DETERMINED FROM THE LINE-OF-SIGHT BETWEEN U.S.G.S. (1943) MONUMENTS "ZIS" TO "LUT" WITH A RECORD A.S.P. GRID BEARING OF S 42°49'50" E. THE ORIGIN OF COORDINATES IS U.S.G.S. STATION "LUT" WITH THE FOLLOWING DATA APPLICABLE:

Y = 2,734,013.03 N
X = 2,345,164.39 E
LAT. = 59°18'18.228 N
LONG. = 135°29'16.314" W
$\Delta\alpha$ = -01°32'01.7"
S.F.(M) = 0.9999617

THE SURVEY COURSE FROM "LUT" TO THE B.O.P. MONUMENT WAS MEASURED AS S 26°58'02" E - 9763.66' (GRID). ALL BEARINGS SHOWN HEREON ARE A.S.P. - GRID, WHILE ALL DISTANCES SHOWN ARE GEODETIC (TRUE).

TO HAINES, ALASKA

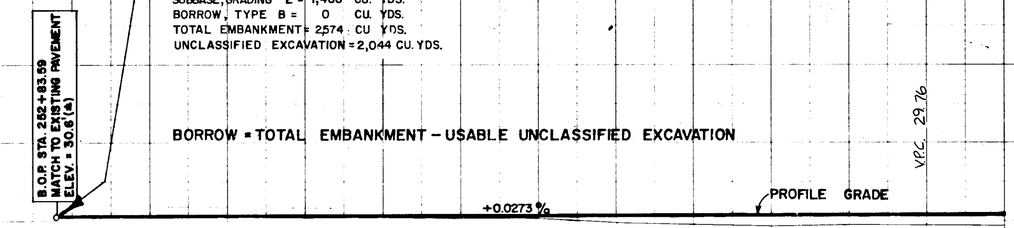


BEGINNING OF PROJECT
STATION "L" 252+83.59
LUTAK ROAD-HAINES, ALASKA

T.B.M. No. 4A, ELEV. 35.38
8" SPIKE IN POWER POLE
43.4' LT. STA. 263+83.55

SUBBASE, GRADING C = 756 CU. YDS.
SUBBASE, GRADING E = 1,488 CU. YDS.
BORROW, TYPE B = 0 CU. YDS.
TOTAL EMBANKMENT = 2,574 CU. YDS.
UNCLASSIFIED EXCAVATION = 2,044 CU. YDS.

BORROW = TOTAL EMBANKMENT - USABLE UNCLASSIFIED EXCAVATION

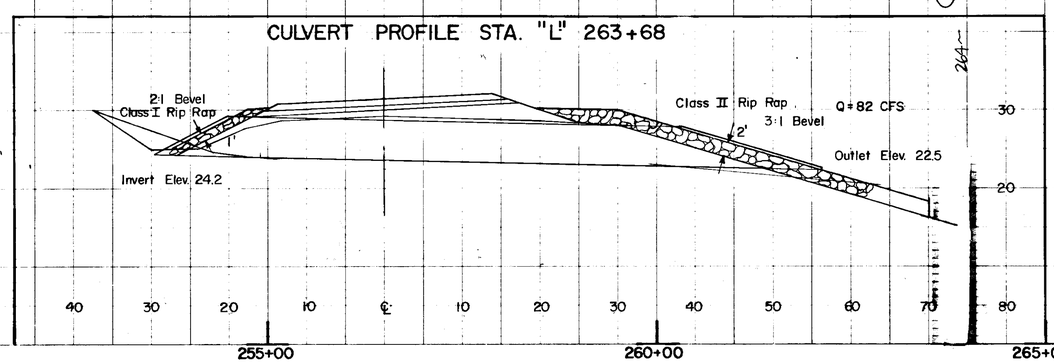


VERTICAL CONTROL

THE BASIS OF VERTICAL CONTROL FOR THIS PROJECT WAS U.S.C. & G.S. TIDAL BENCH MARK 5 (1943), HAINES, CHILKOOT INLET, LYNN CANAL, AS DESCRIBED IN COAST & GEODETIC SURVEY PUBLICATION 163 (5/16/61). THE ELEVATION OF RECORD FOR THIS MONUMENT IS 27.60', WHILE THE ELEVATION BASE EMPLOYED BY DOT/PF SURVEY TEAMS WAS 27.500'. BENCH LEVELS WERE CARRIED FORWARD BY THREE-WIRE METHODS.

THE PUBLISHED TIDAL DATA FOR THE ABOVE BENCH MARKS ARE:

MEAN HIGHER HIGH WATER:	16.80'
MEAN HIGH WATER:	15.80'
MEAN TIDE LEVEL:	8.70'
MEAN LOW WATER:	1.60'
MEAN LOWER LOW WATER:	0.00'
ESTIMATED LOWEST TIDE:	-6',
ESTIMATED HIGHEST TIDE:	22.5'



DESIGN	MCS/DL
DRAWN	MS/MLP
CHECK	MAM
APPROVED	

NO.	DATE	REVISION	BY	APRVD

LUTAK ROAD
PLAN AND PROFILE
STA. "L" 252+83.59 to STA. "L" 265+00.00

SCALE:
HORZ. 0 100' 200' 300' 1"=100'
VERT. 0 10' 20' 30' 1"=10'

R&M CONSULTANTS, INC.
ENGINEERS GEOLOGISTS PLANNERS SURVEYORS

PROPOSED HIGHWAY PROJECT
RS-0991(2)
LUTAK ROAD - HAINES
FROM THE FERRY TERMINAL
to
CHILKOOT LAKE CAMPGROUND

DATE: DEC. 198'
R&M NO. 133134

SHEET 6
6 OF 11

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS-0991(2)	1983	7	11

STA. 271+70 EXTEND EXISTING 60" CMP 15 LT. & 15 RT. PROVIDE RIP RAP END PROTECTION.

STA. 274+80 EXTEND EXISTING 30" CMP 6 LT. & 6 RT.

STA. 278+20 EXTEND EXISTING 36" CMP 8 LT. & 8 RT. 9.5'

STA "D" 283+91 REMOVE & DISPOSE EXISTING 24"x37' CMP INSTALL 36"x65' CMP 24" INSIDE 15' LT. AHEAD & CONSTRUCT SPECIAL CULVERT INLET "AHEAD"

Begin Guardrail Sta. 288~ Face of rail, 15± to 15± Rt.

SECTION 9

LOT 1

U.S.S.

U.S.

SURVEY

LOT 2

LOT 3

"L" 265+00

MATCH LINE

"D" 292+00

MATCH LINE

R/W

370A

N 68°53'00" W

1051.91'

145.1'

274+34.69 P.C.

275+63.29 P.T.

278+18.23 P.C.

278+89.39 P.T.

279+19.91

281+71.19 P.T.

282+21.56 P.T.

283+34.92 P.C.

284+23.24 P.C.

284+77.24 P.T.

287+72.94 P.C.

288+45.50 P.T. AHD.

289+35.86 P.C.

290+06.22 P.T.

292+02.32 P.C.

292+38.19

N 57°48'59" W

N 62°40'32" W

"L" CURVE DATA
PI 280+77.67
Δ = 23°21'03"
D = 8°00'
T = 148.00'
L = 291.88'
R = 716.20'

280+46.85
20°6'7"
8°00'
126.94'
251.27'
716.20

"L" CURVE DATA
Δ = 25°38'14"
D = 8°00'
T = 162.90'
L = 320.47'
R = 716.20'
e = 0.045/FT.

27°58'26"
8°00
178.40
349.67
716.20

"D" CURVE DATA
Δ = 05°35'07"
D = 06°20'00"
T = 44.13'
L = 88.19'
R = 904.67'
e = 0.045/FT.

RETAINING WALL

15.36'

N 83°24'13" E

3136-8

3136-5

24" X 100' Sta. 281+90

NOTE: IT IS REPORTED, BUT NOT VERIFIED THAT AN IRON WATER MAIN AND A TRANSITE FIRE WATER MAIN CROSS THE ROADWAY PRISM IN THIS AREA.

NOTE: MATCH FILL SLOPES TO EXISTING SLOPES WHERE POSSIBLE. STA."D" 289+00-"D" 292+00 SLOPE LIMITS NOT TO EXCEED RIGHT-OF-WAY.

EXISTING 24" CMP W/ CLEANOUTS TO REMAIN. ADJUST TOP ELEVATIONS OF CLEANOUTS AS NECESSARY. PAYMENT SHALL BE MADE UNDER PAY ITEM 60409, CLEAN AND ADJUST CLEANOUTS.

178

3749

TRACT B
A.T.S. 568

A.T.S. 695

TRACT A
A.T.S. 568

PARCEL Nº 1

PARCEL Nº 2

WILL BUILDINGS

SHED

CHIP BURNER

H

R.M. 5

U.S.C.G. MILE 271

INSTALL MILEPOST 9 15' RT. STA. 268+24

INSTALL CENTERLINE SURVEY MONUMENT STA. "L" 275+08.44 PC THIS CONTRACT.

STA. 284+77.00 RT. GRADE & CONSTRUCT A 20'x65' SERVICE TYPE APPROACH

"L" CURVE DATA
PI 275+63.83
Δ = 8°50'40"
D = 6° RT.
T = 55.39'
L = 110.56'
R = 716.20'

275+63.29
6°50'40"
3°30'00"
126.60'
252.10'
1637.02'

"L" CURVE DATA
Δ = 04°50'36"
D = 03°00'00"
T = 80.77'
L = 161.44'
R = 1909.86'

"L" CURVE DATA
Δ = 45°21'08"
D = 20°00'00"
T = 119.70'
L = 226.76'
R = 286.48'

64.91'

"L" CURVE DATA
Δ = 30°21'38"
D = 17°30'00"
T = 88.83'
L = 173.49'
R = 327.40'

"L" CURVE DATA
Δ = 06°06'47"
D = 06°20'00"
T = 48.31'
L = 96.52'
R = 904.67'

"L" N 58°43'52" W - 622.45'

"L" N 63°34'27" W - 716.12'

"L" S 71°04'24" W

"L" N 78°33'56" W - 75.70'

"L" N 57°48'59" W - 137.40'

"L" N 51°39'12" W - 413.62'

SUBBASE, GRADING C = 1,500 CU. YDS.
SUBBASE, GRADING E = 3,157 CU. YDS.
BORROW, TYPE B = 1,643 CU. YDS.
TOTAL EMBANKMENT = 5,720 CU. YDS.
UNCLASSIFIED EXCAVATION = 1,921 CU. YDS.

INCLUDES 1,114 C.Y. OF USABLE EXCAVATION FROM SHEET 8

T.B.M. No. 4B, ELEV. 29.45'
8" SPIKE IN POWER POLE
16.5' RT. STA. "D" 277+67.00

T.B.M. No. 4C, ELEV. 35.38'
8" SPIKE IN GATE POST
62' RT. STA. "L" 288+07.00

VPC Elev. 29.76
VPT 266+~ Elev. 30.96
ELEV. 30.96' 200' VC
266+00 VPI
264+~
265+~ VPT Elev. 29.99
ELEV. 37.00' 200' VC
270+00 VPI
+0.0273%
+1.51%
+0.77%
PROFILE GRADE
EXISTING GROUND LINE
ELEV. 40.85' 200' VC
275+00 VPI
ELEV. 48.25' 200' VC
280+00 VPI
+1.46%
+0.536
+2.30%
VPC 50.63
ELEV. 50.30' 200' VC
283+~
285+50 VPI
284+~ VPT
Elev. 51.79
VPT 53.84
285+~
ELEV. 59.50' 500' VC
287+50 VPI
VPC Elev. 63.63
VPT Elev. 70.79

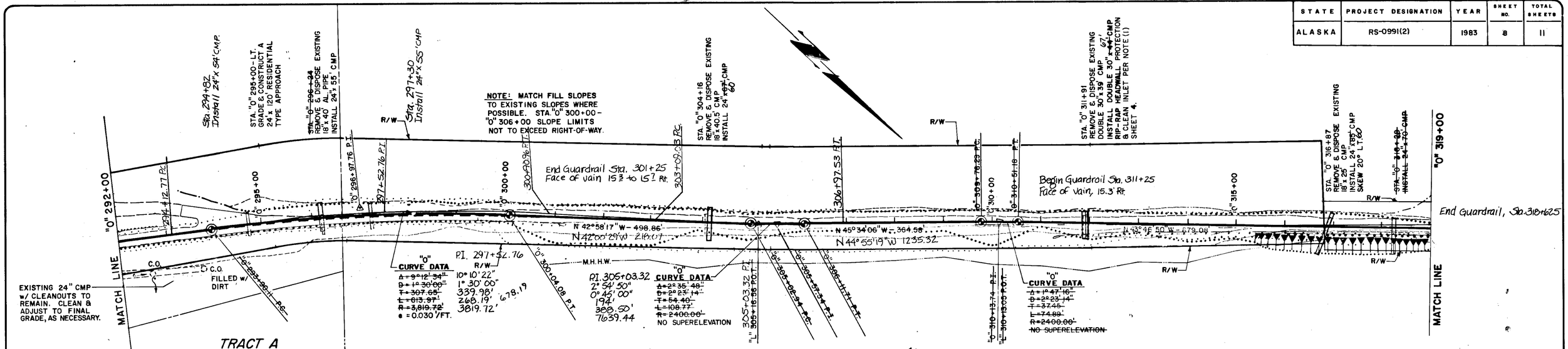
CULVERT PROFILE STA. "L" 271+70

Class I Rip Rap
3:1 Bevel
Invert Elev. 30.9
Class I Rip Rap
1 1/2:1 Bevel
Q = 135 CFS
Outlet Elev. 29.5

265+00 270+00 275+00 280+00 285+00 290+00

KEUFFEL & ESSER A KEARFOTT Company PLATE 1, PLAN-PROFILE

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS-0991(2)	1983	8	11



DESIGN MCS/DL
DRAWN MS/MLP
CHECK MAM
APPROVED

NO.	DATE	REVISION	BY	APRVD

LUTAK ROAD
PLAN AND PROFILE
STA. "0" 292+00.00 to STA. "0" 319+00.00

SCALE:
HORZ. 0 100' 200' 300' 1"= 100'
VERT. 0 10' 20' 30' 1"= 10'

R&M CONSULTANTS, INC.
ENGINEERS GEOLOGISTS PLANNERS SURVEYORS

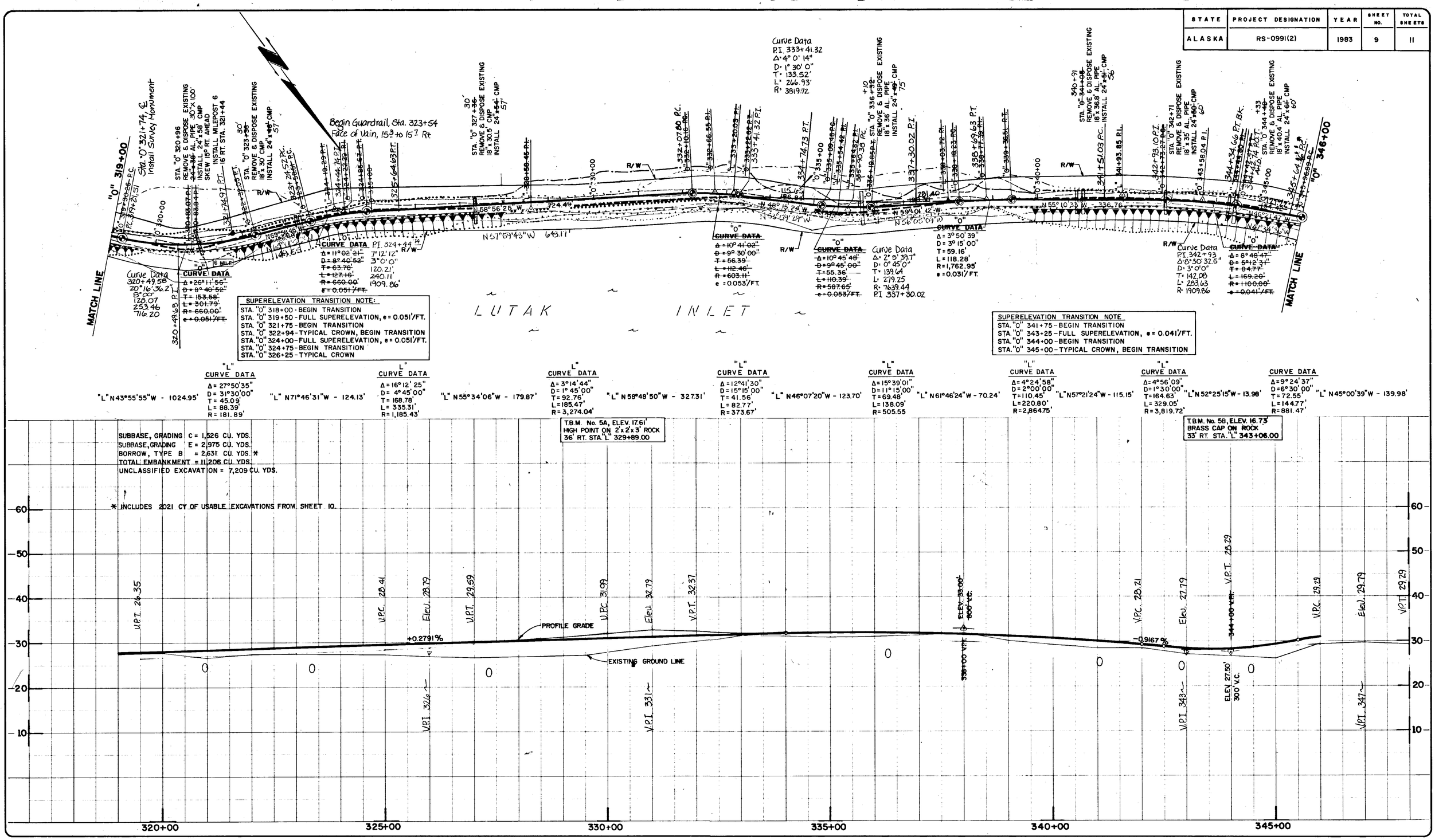
PROPOSED HIGHWAY PROJECT
RS-0991(2)
LUTAK ROAD - HAINES
FROM THE FERRY TERMINAL
to
CHILKOOT LAKE CAMPGROUND

DATE DEC. 1981
R&M NO. 1331.34

8

SHEET 8 OF 11

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS-0991(2)	1983	9	11



DESIGN MCS/DL
DRAWN MS/MLP
CHECK MAM
APPROVED

NO.	DATE	REVISION	BY	APRVD

LUTAK ROAD
PLAN AND PROFILE
STA. "0" 319+00.00 to STA. "0" 346+00.00

SCALE:
HORZ. 0 100' 200' 300' 1"=100'
VERT. 0' 10' 20' 30' 1"=10'

R&M CONSULTANTS, INC.
ENGINEERS GEOLOGISTS PLANNERS SURVEYORS

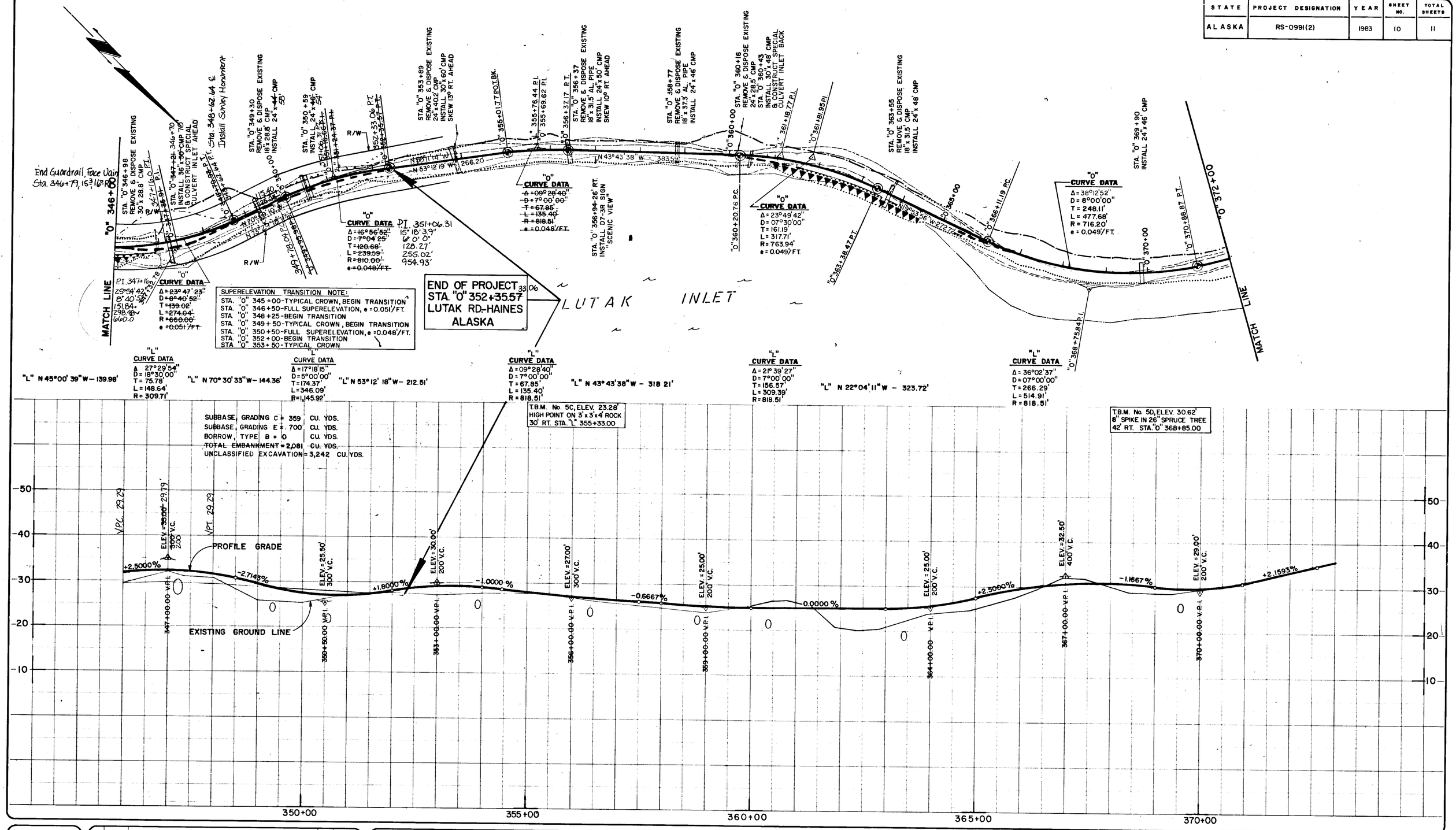
PROPOSED HIGHWAY PROJECT
RS-0991(2)
LUTAK ROAD - HAINES
FROM THE FERRY TERMINAL
to
CHILKOOT LAKE CAMPGROUND

DATE: DEC. 1981
R&M NO. 133134

9

SHEET 9 OF 11

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS-0991(2)	1983	10	11



DESIGN MCS/DL
DRAWN MS/MLP
CHECK MAM
APPROVED

NO.	DATE	REVISION	BY	APRVD

LUTAK ROAD
PLAN AND PROFILE
STA. "0" 346+00.00 to STA. "0" 372+00.00

SCALE:
HORZ. 0 100' 200' 300' 1"=100'
VERT. 0 10' 20' 30' 1"=10'

R&M CONSULTANTS, INC.
ENGINEERS GEOLOGISTS PLANNERS SURVEYORS

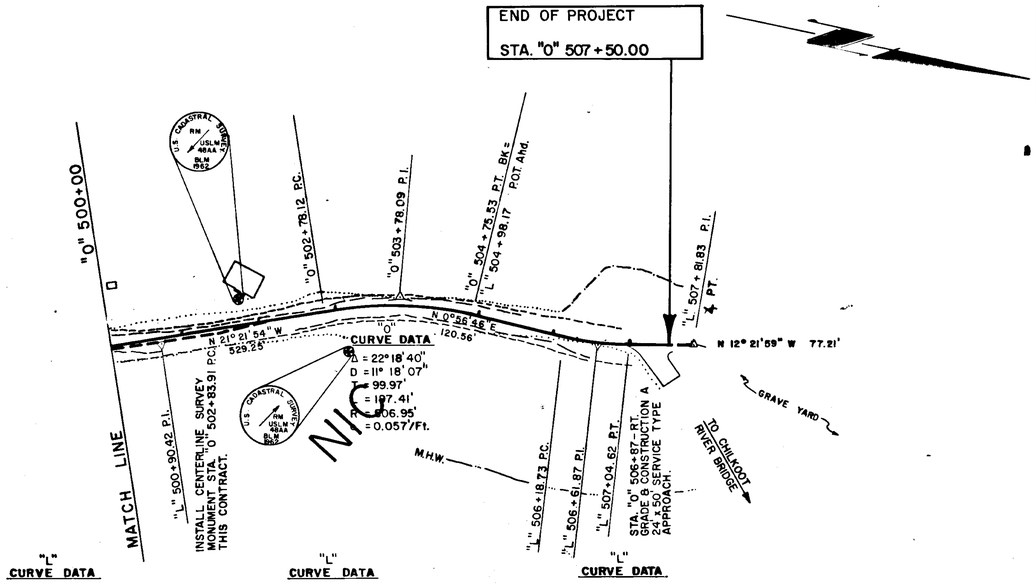
PROPOSED HIGHWAY PROJECT
RS-0991(2)
LUTAK ROAD - HAINES
FROM THE FERRY TERMINAL
to
CHILKOOT LAKE CAMPGROUND

DATE: DEC., 1981
R.B.M. NO. 133134

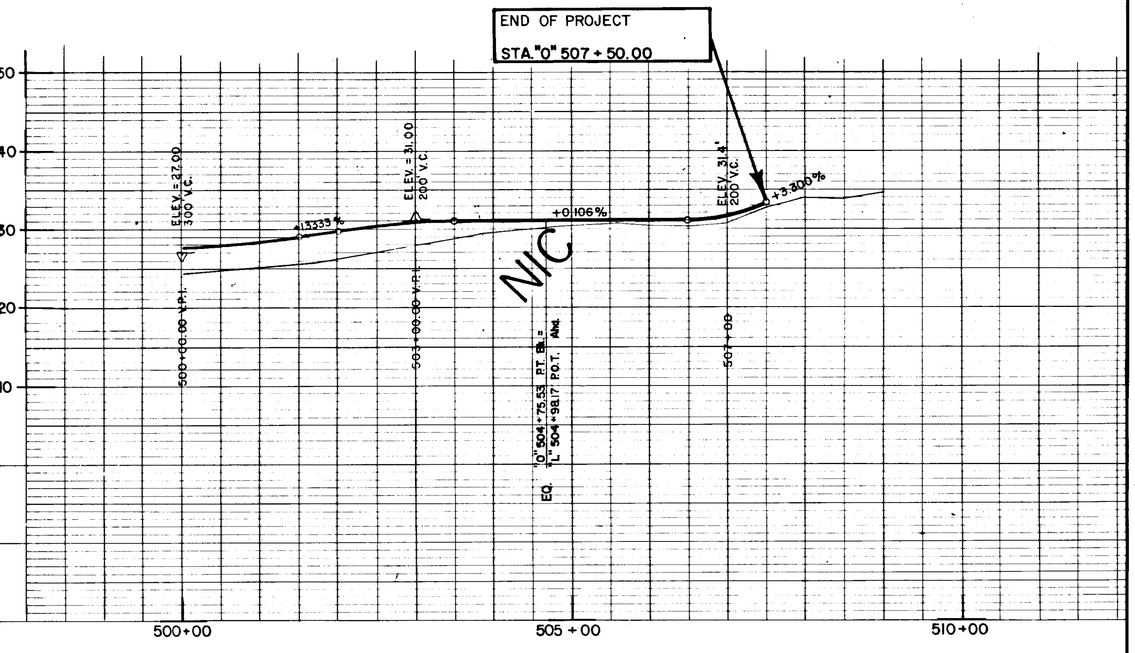
10

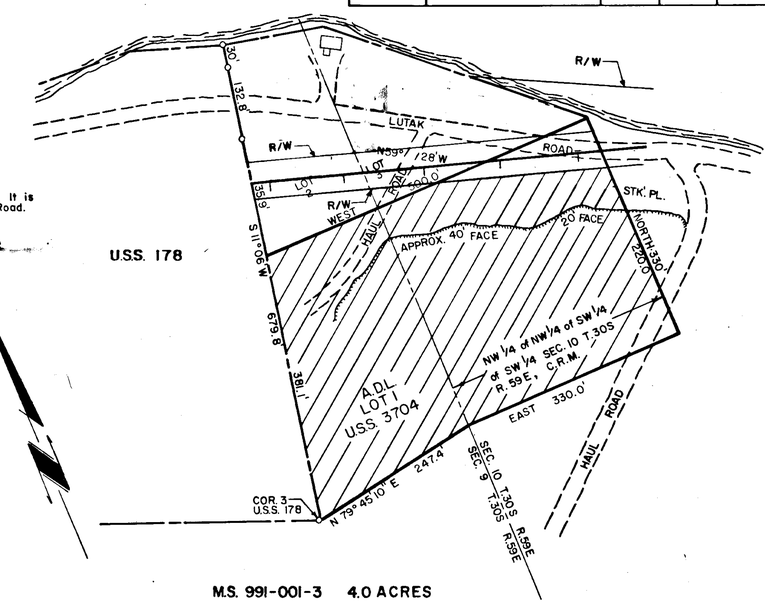
SHEET 10 OF 11

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	RS-0991(2)	1983	11	11



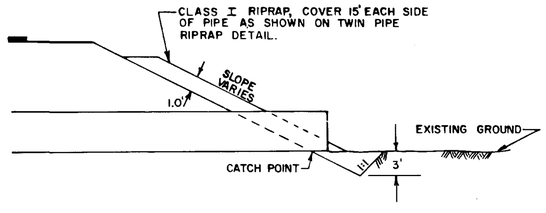
SUBBASE, GRADING B = 458 CU. YDS.
SUBBASE, GRADING E = 895 CU. YDS.
BORROW, TYPE B = 0 CU. YDS.*
TOTAL EMBANKMENT = 2,751 CU. YDS.*
UNCLASSIFIED EXCAVATION = 2,398 CU. YDS.





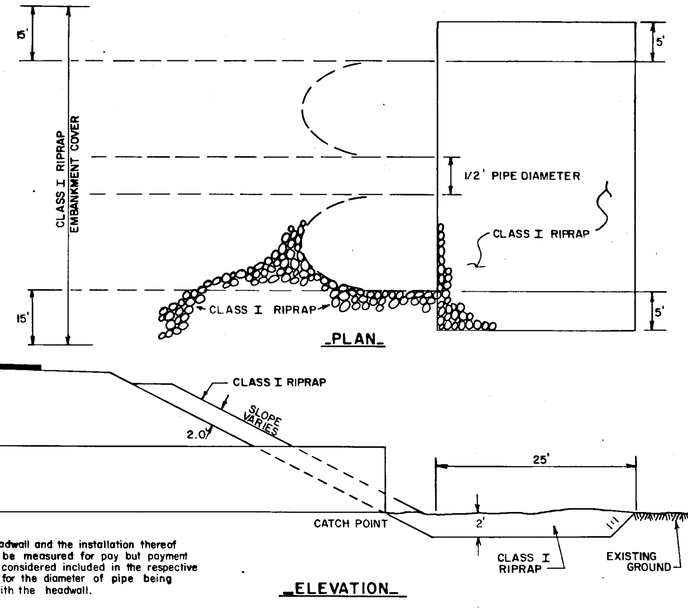
M.S. 991-001-3 4.0 ACRES

FIVE MILE MATERIALS SITE



SINGLE PIPE RIPRAP DETAIL

NOT TO SCALE



TWIN PIPE RIPRAP DETAIL

NOT TO SCALE