

KEY MAP

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

**PLAN AND PROFILE
PROPOSED HIGHWAY PROJECT
BRM-0966(15) – B-59732
MENDENHALL SPUR WEST
BRIDGES & APPROACHES**

STATE	PROJECT	SHEET NO.	TOTAL SHEETS
ALASKA	BRM-0966 (15)	1	33

INDEX OF SHEETS	
SHEET NUMBER	DESCRIPTION
1	TITLE SHEET
2	TYPICAL SECTION SHEET
3	ESTIMATE OF QUANTITIES & MISC. SUMMARY TABLES
4	WATERMAIN DETAILS
5,6	PLAN & PROFILE SHEETS MONTANA CREEK BRIDGE
7	TRAFFIC CONTROL PLAN
8,9	PLAN & PROFILE SHEETS MENDENHALL RIVER BRIDGE
10-18	MONTANA CREEK BRIDGE PLANS
19-27	MENDENHALL RIVER BRIDGE PLANS
28-29	LOG OF TEST HOLES
30-33	RIGHT OF WAY DRAWINGS

THE FOLLOWING STANDARD DRAWINGS SHALL APPLY TO THIS PROJECT: A-1, B-04.00, B-05.00, C-00.00, C-100.1, C-11.01, D-01.00, D-04.01, D-05.01, F-01.01, F-03.01, G-04.01 S, G-04.01 W, G-14.01 S, G-14.01 W, G-24.01 S, G-24.01 W, I-40.00, I-80.00, M-13.00, M-16.00, M-20.01, M-23.00, S-00.00, S-05.00, S-20.00, S-30.00, T-03.01, T-05.00, T-20.00, T-21.00.

**DESIGN DESIGNATION
MONTANA CREEK BRIDGE**

ADT 1983 = 1,529
ADT 2004 = 2,505
DHV 12% = 301

T = 3%
T.I. = 6.5
V = 40

**DESIGN DESIGNATION
MENDENHALL RIVER BRIDGE**

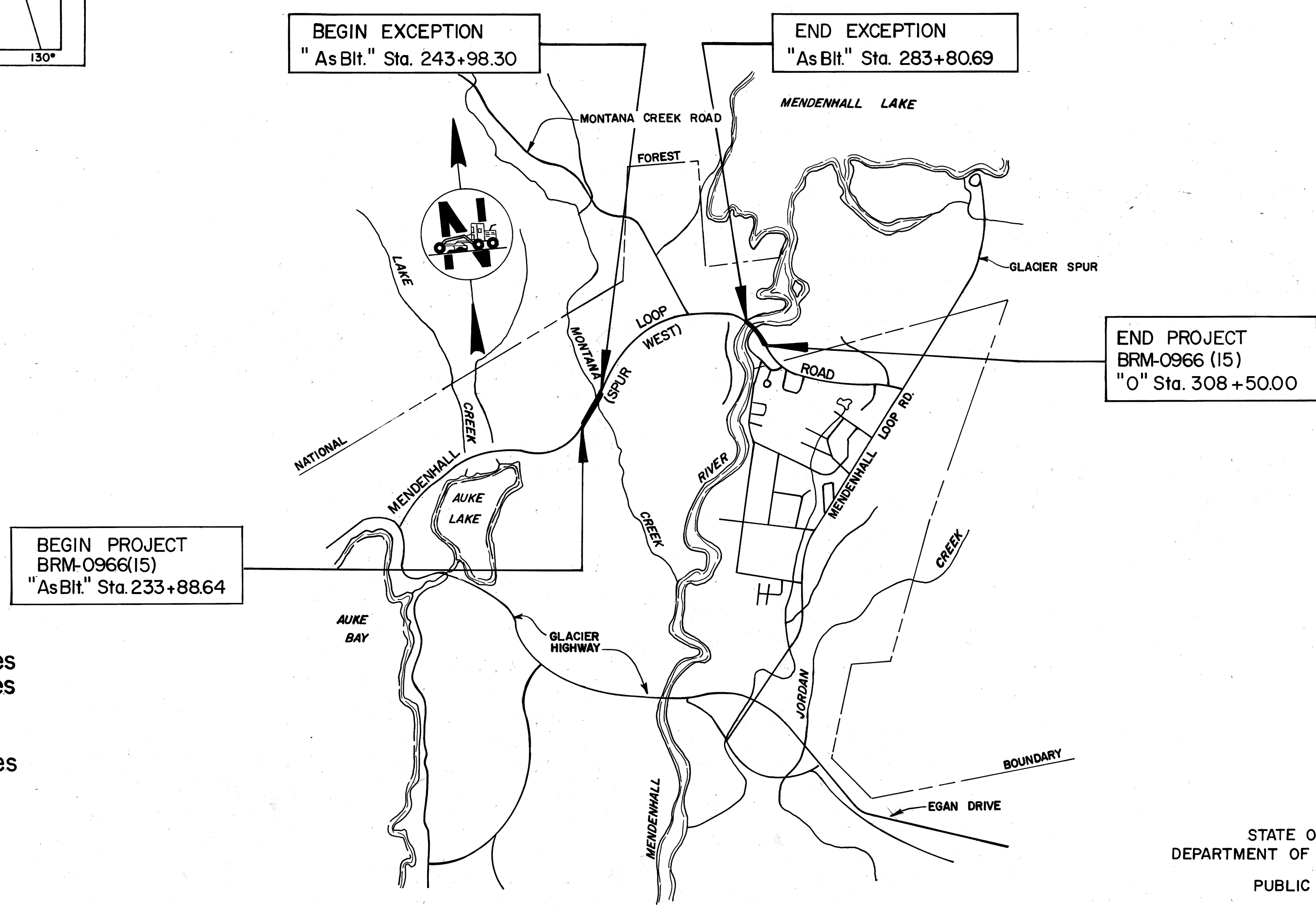
ADT 1983 = 2,551
ADT 2004 = 4,180
DHV 12% = 502

T = 3%
T.I. = 8.5
V = 40

PROJECT SUMMARY

WIDTH OF PAVEMENT = 40'
LENGTH OF PROJECT = 7,441.50' = 1.409 miles
LENGTH OF EXCEPTION = 3,982.39' = 0.754 miles

TOTAL LENGTH OF PROJECT = 3,459.11' = 0.655 miles



"As-Built Plans"

Red Samm Construction
Pat Kemp, P.E., proj. engr.
2-8-85 to 6-9-86

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES

APPROVED
W.B. Baumgartner
S.E. REGION DESIGN ENGINEER

DATE 8/2/84

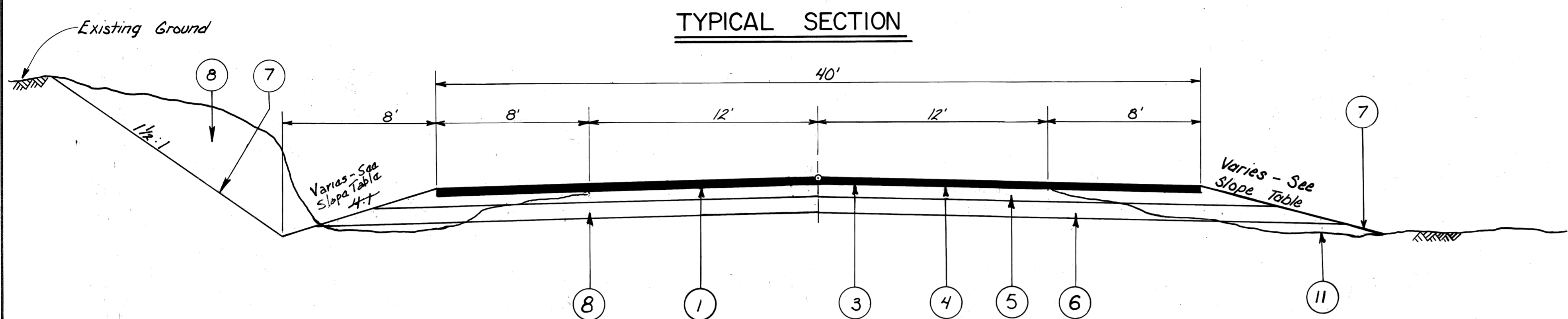
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES

APPROVED
Neil Halpin
S.E. REGION DIRECTOR, HIGHWAY DESIGN/CONST.

Date 8/2/84

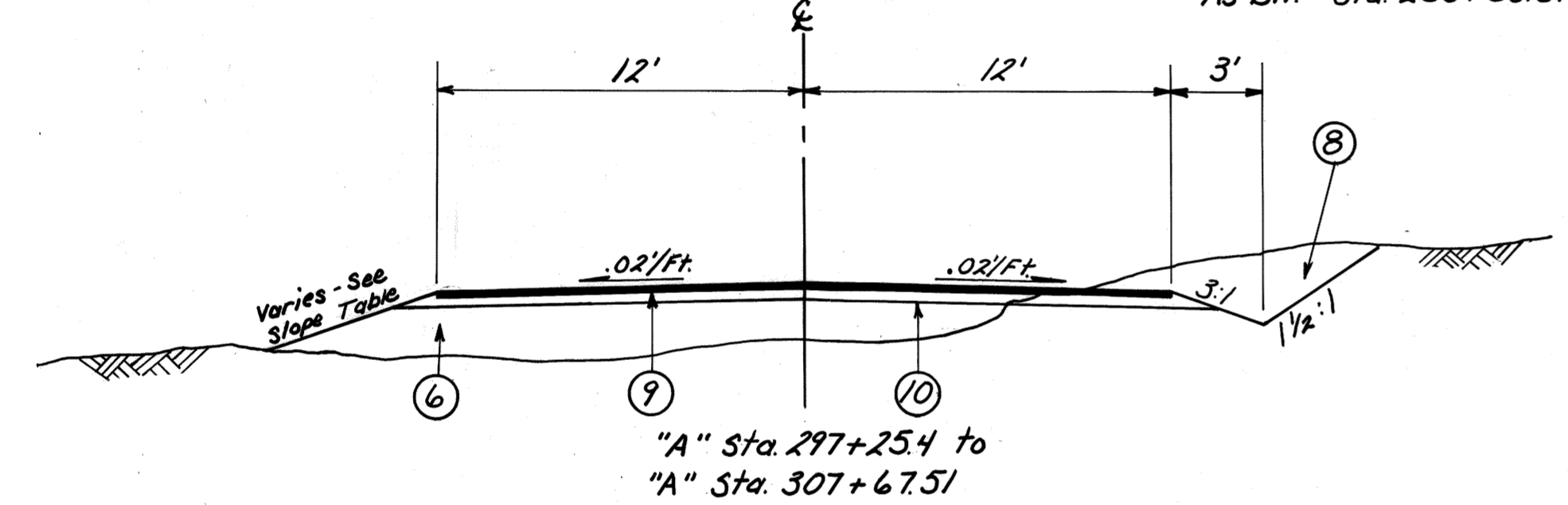
GENERAL NOTES

1. Grades & alignments shown on the plans are subject to minor revisions.
2. Culvert lengths and locations are approximate only and are subject to minor revisions.
3. All waste material shall be placed outside the R/W limits at a location approved by the Engineer.
4. Prior to any excavation in Montana Creek for the placement of rip-rap or placement of any fill material within the banks of Montana Creek, a sedimentary filter cloth shall be placed around the work area to prevent silt deposition in the Creek. This work will not be measured for payment but considered a subsidiary obligation of the contractor.
5. Clearing and grubbing shall be considered incidental to Item 203 (3) Unclassified Excavation.
6. Pavement removed under this contract shall be stockpiled at the site located at the intersection of Mendenhall Loop Road and Egan Expressway.
7. All instream work in anadromous water bodies shall be conducted between November 15, 1984 and March 15, 1985.

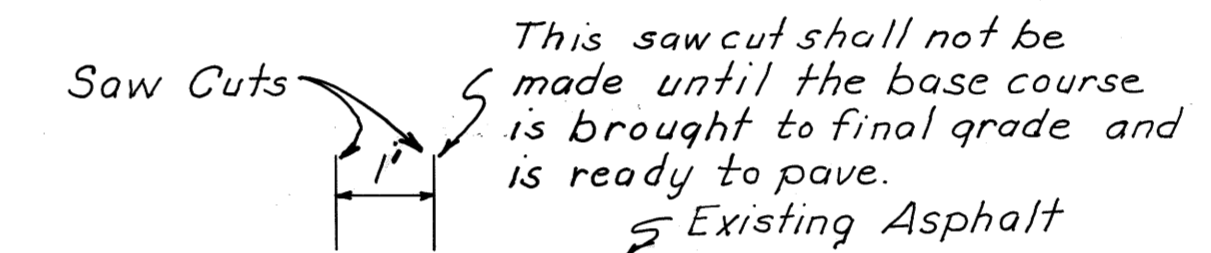


"As Bt" Sta 233+88.64 to "As Bt" Sta 243+98.30
 "As Bt" Sta 283+80.69 to "0" Sta 308+50.00

TEMPORARY



"A" Sta 297+25.4 to
 "A" Sta 307+67.51



PAVEMENT JOINT DETAIL

SLOPE TABLE

LEFT				RIGHT			
Station to Station	Cut/Fill	Slope		Station to Station	Cut/Fill	Slope	
233+89	235+50	C	- 1 1/2:1	233+89	239+00	F	3:1
236+00	-	F C	4+ 1 1/2:1				
236+50	-	F C	4+ 1 1/2:1				
237+00	-	F C	3+ 1 1/2:1				
(Montana Creek Bridge)				(Montana Creek Bridge)			
238+50	239+00	F	1 1/2:1	238+50	-	F	4+ 1 1/2:1
240+00	241+00	F	2:1	239+00	-	F	D/L
242+00	243+93	F	3:1	240+00	241+00	F	3:1
242+50	243+93	D/L	-	242+00	243+00	F	2:1
varies from 3:1 to 1 1/2:1 these stations				243+93	-	F	3+ 2:1
283+81	292+00	F	3:1	283+81	295+00	F	3:1
293+00	-	C	- 1 1/2:1	296+00	296+00	F	D/L
294+00	-	F	3:1	297+00	-	F	3+ 2:1
295+00	-	C	- 1 1/2:1	297+50	301+00	F	1 1/2:1
(Mendenhall River Bridge)				(Mendenhall River Bridge)			
296+00	297+00	F	1 1/2:1	304+00	305+50	F	4+ 1 1/2:1
297+50	301+00	F	3+ 2:1	306+00	308+50	C	- 1 1/2:1
(Mendenhall River Bridge)				(Mendenhall River Bridge)			
304+00	306+50	F	4+ 2:1	307+50	308+50	V/C	-
307+00	308+50	C	- 1 1/2:1				

TEMPORARY SLOPE TABLE

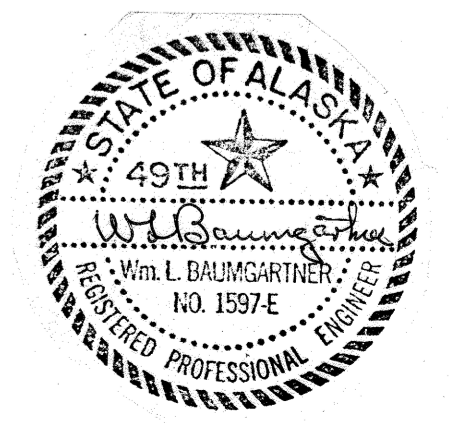
297+50	-	C	(.02/Ft)	297+18	299+50	F	2:1
298+00	299+00	F	2:1	300+00	301+00	C	-
299+50	-	C	-	(Temporary Mendenhall River Bridge)			
300+00	301+00	F	2:1	304+00	306+50	C	-
(Temporary Mendenhall River Bridge)				(Temporary Mendenhall River Bridge)			
304+00	304+50	C	-	307+00	308+04	F	2:1
305+00	308+04	F	2:1				

LABELING INDEX

①	4" Hot Asphalt Pavement
③	MC-30 Liquid Asphalt for Prime Coat
④	Existing Asphalt
⑤	6" Crushed Aggregate Base Course
⑥	10" Subbase Grading "E"
⑦	Seeding Class I
⑧	Unclassified Excavation
⑨	1/2" Hot Asphalt Pavement
⑩	4" Crushed Aggregate Base Course

BASIS OF ESTIMATE

ITEM NO.	ITEM	FACTOR
301 (1)	Crushed Aggregate Base Course	1.96 Tons/Cubic Yard
304 (1)	Subbase Grading E	1.98 Tons/Cubic Yard
401 (1)	Asphalt Concrete (Type II)	1144 lbs./Sq.Yd. 1 Inch Depth
401 (2)	Ac-5 Asphalt Cement	6% of Item 401 (1)
403 (1)	MC-30 Liquid Asphalt for Prime	0.25 Gal./Sq. Yd. & 256 Gal./Ton
	* Diluted	



ESTIMATE OF QUANTITIES

ITEM NO.	ITEM	UNIT	QUANTITY
110(1)	Mobilization	L.S.	All Req'd
111(1)	Temporary Erosion & Pollution Control	C.S.	" "
114(1)	Construction Surveying by the Contractor	L.S.	" "
115(1)	Traffic Maintenance	L.S.	" "
116(1)	Furnishing & Maintaining Field Office	L.S.	" "
116(2)	Furnishing & Maintaining Field Laboratory	L.S.	" "
202(1)	Removal of Structures and Obstruction	L.S.	All Req'd
202(2)	Removal of Pavement	Sq. Yd.	40,858
202(4)	Removal of Culvert Pipe	Lin. Ft.	464
203(3)	Unclassified Excavation	Cu. Yd.	4000
301(1)	Crushed Aggregate Base Course	Ton	5760
304(1)	Subbase, Grading E	Ton	8425
401(1)	Asphalt Concrete (Type II)	Ton	3676
401(2)	AC-5 Asphalt Cement	Ton	221
403(2)	MC-30 Liquid Asphalt for Prime Coat Deleted E.W.O. No.	Ton	18
501(1)	Class A Concrete	L.S.	All Req'd
501(2)	Class AA Concrete	L.S.	" "
502(1-A)	Prestressed Concrete Structural Member (79'-2 3/4" I Beam)	Each	9
502(1-B)	Prestressed Concrete Structural Member (97'-7" I Beam)	Each	20
503(1)	Reinforcing Steel	L.S.	All Req'd
505(5A)	Structural Steel Piles, Furnished (16" Diam.)	L.F.	530
505(5B)	Structural Steel Piles, Furnished (24" Diam.)	L.F.	1043
505(5C)	Structural Steel Piles, Furnished (36" Diam.)	L.F.	324
505(6A)	Structural Steel Piles, Driven (16" Diam.)	Each	18
505(6B)	Structural Steel Piles, Driven (24" Diam.)	Each	20
505(6C)	Structural Steel Piles, Driven (36" Diam.)	Each	4
507(1)	Metal Bridge Railing	L.F.	552.7
509(1)	Deck Protection	L.S.	All Req'd
603(22-18)	18 Inch Pipe	Lin. Ft.	108
603(22-24)	24 Inch Pipe	Lin. Ft.	114
606(1)	Beam Type Guard Rail, Type I Post	Lin. Ft.	1,075
606(4)	Removal and Reconstruction of Guard Rail Deleted E.W.O. No.1	Lin. Ft.	418.75
606(5)	Removal and Disposal of Guard Rail	Lin. Ft.	500
606(6)	End Anchorages	Each	12
607(4)	Reconstructed Fence	Lin. Ft.	200
611(1)	Riprap Class I Deleted E.W.O. No.3	C.Y.	320
614(1)	Survey Monuments	Each	8
614(2)	Monument Case	Each	6
615(1)	Standard Sign	Sq. Ft.	147.16
618(1)	Seeding	M.S.F.	97
618(4)	Water for Maintenance	M. Gal.	5
628(12)	16" Water System Complete	L.S.	All Req'd
639(1)	Approaches	Each	16
670(1)	Painted Traffic Markings	L.S.	All Req'd

GUARD RAIL SUMMARY

Station to Station		OFFSET		Length	Remarks
Lt.	Rt.	Lt.	Rt.		
"AsBlt" 236+66	"AsBlt" 237+14	X		50'	Remove & Dispose
" 236+35	" 237+18		X	75'	" " "
" 238+18	" 238+98	X		75'	" " "
" 238+22	" 238+74		X	50'	" " "
"0" 236+87	"0" 237+41	X		56.25	Install w/ End Anchorage
"0" 236+34	"0" 237+13		X	75'	" " "
"0" 238+21	"0" 239+46	X		125'	" " "
"0" 237+95	"0" 238+51.25		X	56.25	" " "
"AsBlt" 300+81	"AsBlt" 301+31	X		50'	Remove & Dispose
" 300+52	" 301+31		X	75'	" " "
" 303+75	" 304+50	X		75'	" " "
" 303+75	" 304+25		X	50'	" " "
"A" 301+46	"A" 301+83.49	X		37.5'	Install w/ End Anchorage
" 301+06.95	" 301+83.49		X	75'	" " "
" 303+63.82	" 306+13.82	X		250'	" " "
" 303+63.82	" 304+20.07		X	56.25	" " "
"A" 301+46	" 301+83.49	X		37.5'	Remove & Relocate
" 301+06.95	" 301+83.49		X	75'	" " "
" 303+63.82	" 306+13.82	X		250'	" " "
" 303+63.82	" 304+20.07		X	56.25	" " "
"0" 301+01.26	"0" 301+54.93	X		56.25	Install w/ End Anchorage
" 300+46.62	" 301+51.66		X	100'	" " "
"AsBlt" 304+40.62	" 304+21.87	X		75'	" " "
" 304+40.62	" 304+21.87		X	56.25	" " "
"0" 295+50.00	"0" 297+50.00	X		25=200'	Install w/ End Anchorage
" 297+00.00	" 299+88.86		X	275'	" " "

APPROACH SUMMARY

STATION	WIDTH	RAD.	REMARKS	STATION	WIDTH	RAD.	REMARKS
"AsBlt"				"AsBlt"			
" 234+17	14'		Rt.	" 298+77	24'	25'	Lt-View Dr.
" 235+64	14'		Rt.	" 299+90	14'		Lt.
" 236+36	14'		Lt.	" 300+09	14'		Rt-Utility Rd
" 238+86	14'		Rt-Turnout	"0" 304+68	14'		Lt-Turnout
" 239+92	14'		Rt.	"0" 305+44	24'	25'	Rt-Tournure St
" 288+91	14'		Rt.				
" 286+09	14'		Rt.	"AsBlt" 297+50	4'		Rt.
" 289+69	14'		Rt.				
" 291+98	24'	25'	Rt-River Rd.				
" 296+42	14'		Rt.				

APPROACH CULVERT SUMMARY

STATION	LEFT	RIGHT	REMOVE & DISPOSE	INSTALL		REMARKS
				18"	24"	
"AsBlt"						
" 236+36	X		32'		48'	
" 237+27	X		42'			No approach
" 288+09		X	28'		40'	
" 289+69		X	28'		40'	
" 298+77	X		34'		50'	

CULVERT EXTENSION SUMMARY

Station	Diameter	Left Extension	Right Extension
"AsBlt" 243+42	24"	12'	8'
" 287+02	18"	10'	8'
" 304+85	24"	6'	-

MONUMENT SUMMARY

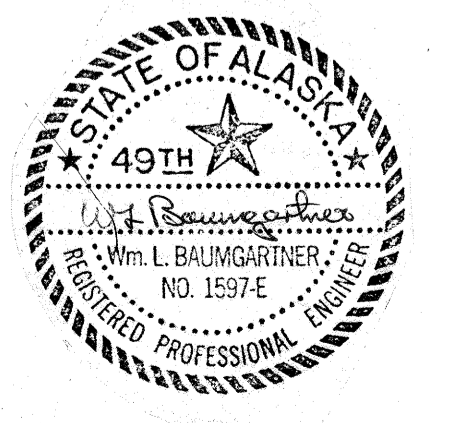
Station	Mon.	Case	Point	Remarks	Station	Mon.	Case	Point	Remarks	Station	Mon.	Case	Point	Remarks
"0" 234+75.31	X	X	P.C.		"0" 243+14.43	X	X	P.T.		"0" 296+17.81	X	X	P.C.	
"0" 237+47.76	X		P.T.		"0" 284+80.69	X	X	P.C.		"0" 301+87.31	X		P.T.	
"0" 239+94.52	X	X	P.C.		"0" 293+23.56	X	X	P.T.						

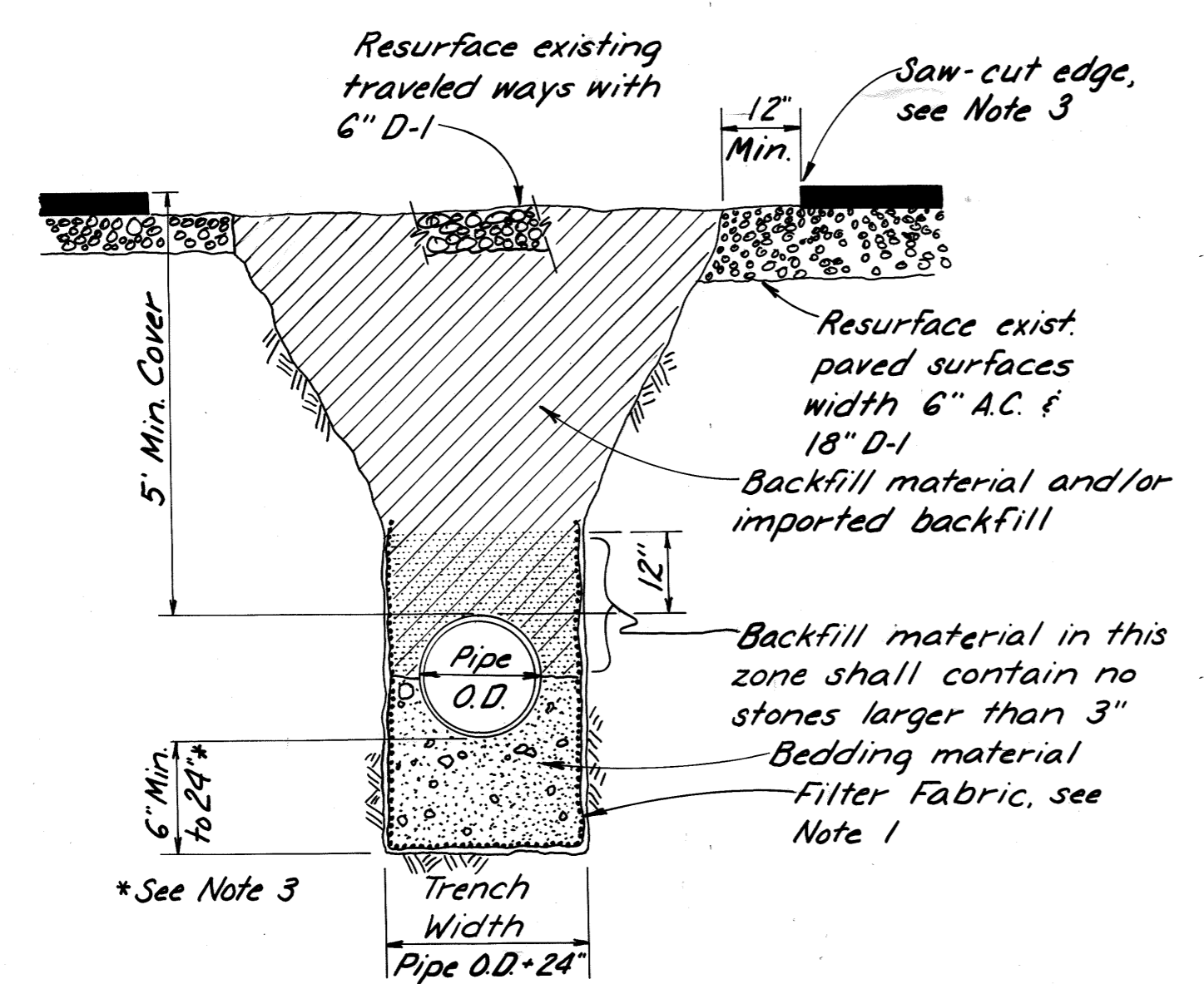
SIGNING SCHEDULE

STATION	OFFSET		CODE NO.	LEGEND	SIGN PANEL		POST			FACING TRAFFIC	REMARKS
	Lt.	Rt.			SIZE	AREA	NO.	LGTH	EMBED		
"0"											
" 236+85		28'	71-1	Montana Creek	52"x24"	90	2	11'±12'	3'	E.B.	
" 238+40	23'		71-1	Montana Creek	52"x24"	90	2	13'±10'	3'	W.B.	
" 241+07	33'		W1-4L	40 M.P.H.	36"x36"	90	1	17'	3'	W.B.	
" 285+04	33'		D1-2	Montana Creek Rd	120"x30"	25.0	2	17'	3'	W.B.	Framed
" 285+27	33'		W1-2L	Mendenhall Lake	36"x36"	90	1	19.5'	3'	W.B.	
" 290+04	33'		W1-13	45 M.P.H.	24"x24"	40				W.B.	M.B.C.S.
" 290+04	33'		D7-1A	Symbol	24"x24"	40	1	16'	3'	W.B.	
" 292+20				Camping	24"x6"	1.0				W.B.	M.B. Symbol
" 292+20	33'		D3-1	River Road	24"x9"	1.50	1	16'	3'	E.B. & W.B.	
" 292+75	33'		R1-1	Stop	30"x30"	6.25				N.B.	M.B.S.S.
" 292+75	33'		M10-2	4	6"x12"x4"	0.53	1	15'	3'	E.B. & W.B.	
" 294+25	33'		W1-2R	40 M.P.H.	36"x36"	90	1	19.5'	3'	E.B.	
" 298+55	33'		W1-13	40 M.P.H.	24"x24"	40				E.B.	M.B.C.S.
" 298+55	33'		D3-1	View Dr.	24"x9"	1.50	1	14'	3'	E.B. & W.B.	
" 301+00			R1-1	Stop	30"x30"	6.25				S.B.	M.B.S.S.
" 301+00	28'		71-1	Mendenhall River	66"x24"	11.0	2	10'±13'	3'	E.B.	Framed
"0" 304+00	28'		71-1	Mendenhall River	66"x24"	11.0	2	11'±10'	3'	W.B.	Framed
"0" 304+50	33'		W1-2L	40 M.P.H.	36"x36"	90	1	17'	3'	W.B.	
"0" 305+66	33'		W1-13	40 M.P.H.	24"x24"	40				W.B.	M.B.C.S.
"0" 305+66	33'		D3-1	Tournure St.	30"x9"	1.88	1	17'	3'	E.B. & W.B.	
"0" 305+66	33'		R1-1	Stop	30"x30"	6.25				N.B.	M.B.S.S.

Signing Schedule Notes:

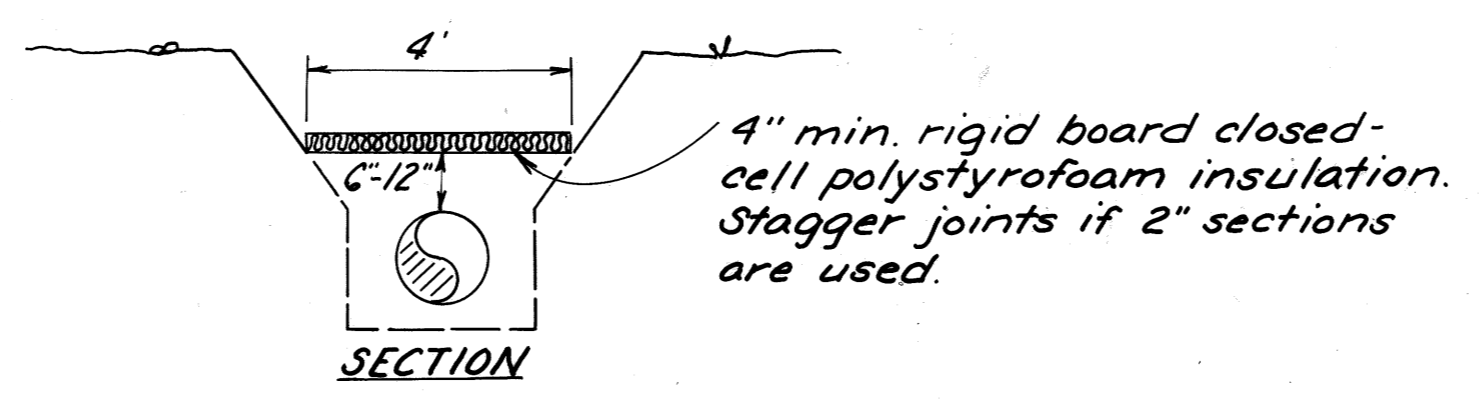
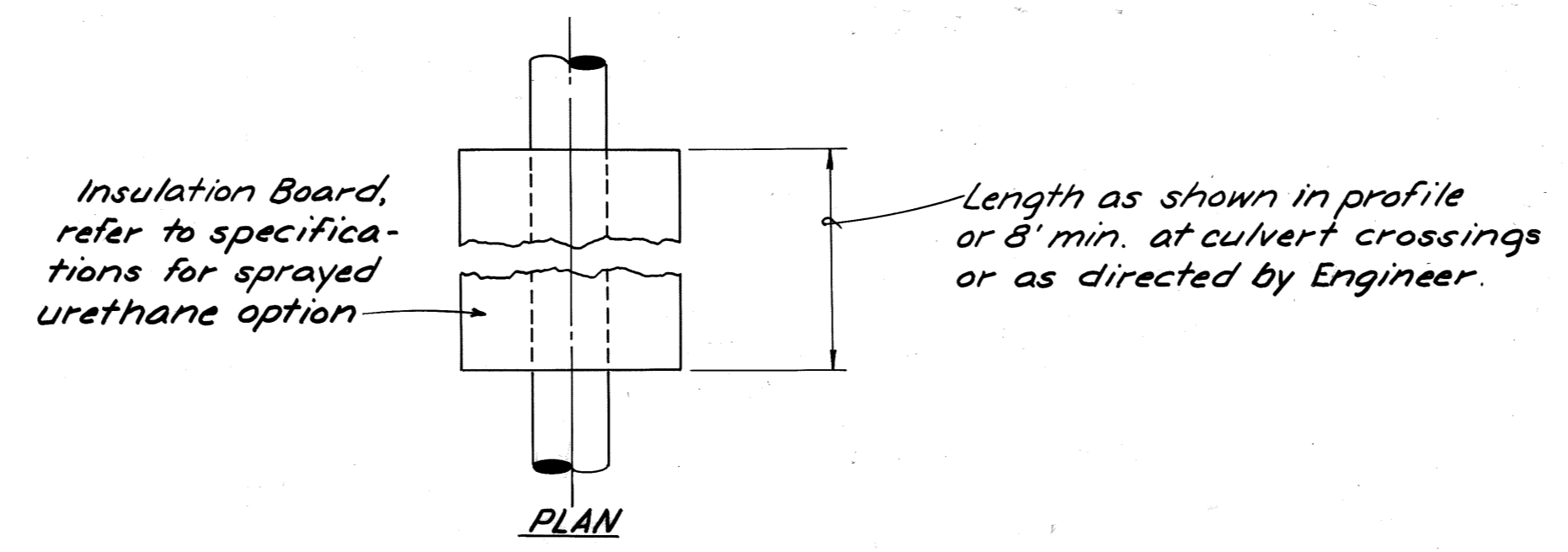
- Sign locations and post lengths are approximate only and are subject to minor revisions.
- All sign posts shall be telescoping perforated galvanized square steel posts; the 2" size shall be used above ground and the 2 1/4" size shall be used for the entire embedment depth.
- Post lengths are from the cut-off in the sleeve to the top of the sleeve to the top of the post. See Standard Drawings S-05.00 and S-30.00.
- All new signs shall be unframed unless otherwise noted.
- All signs to be replaced shall be dismantled by the contractor and stockpiled at the State of Alaska, D.O.T./P.F. Maintenance Station as directed by the Engineer. This work shall be considered incidental to Pay Item 615(1) Standard Signs, and no separate payment shall be made therefore.
- M.B.C.S. = Mount Below Curve Sign
- M.B.S.S. = Mount Below Street Sign





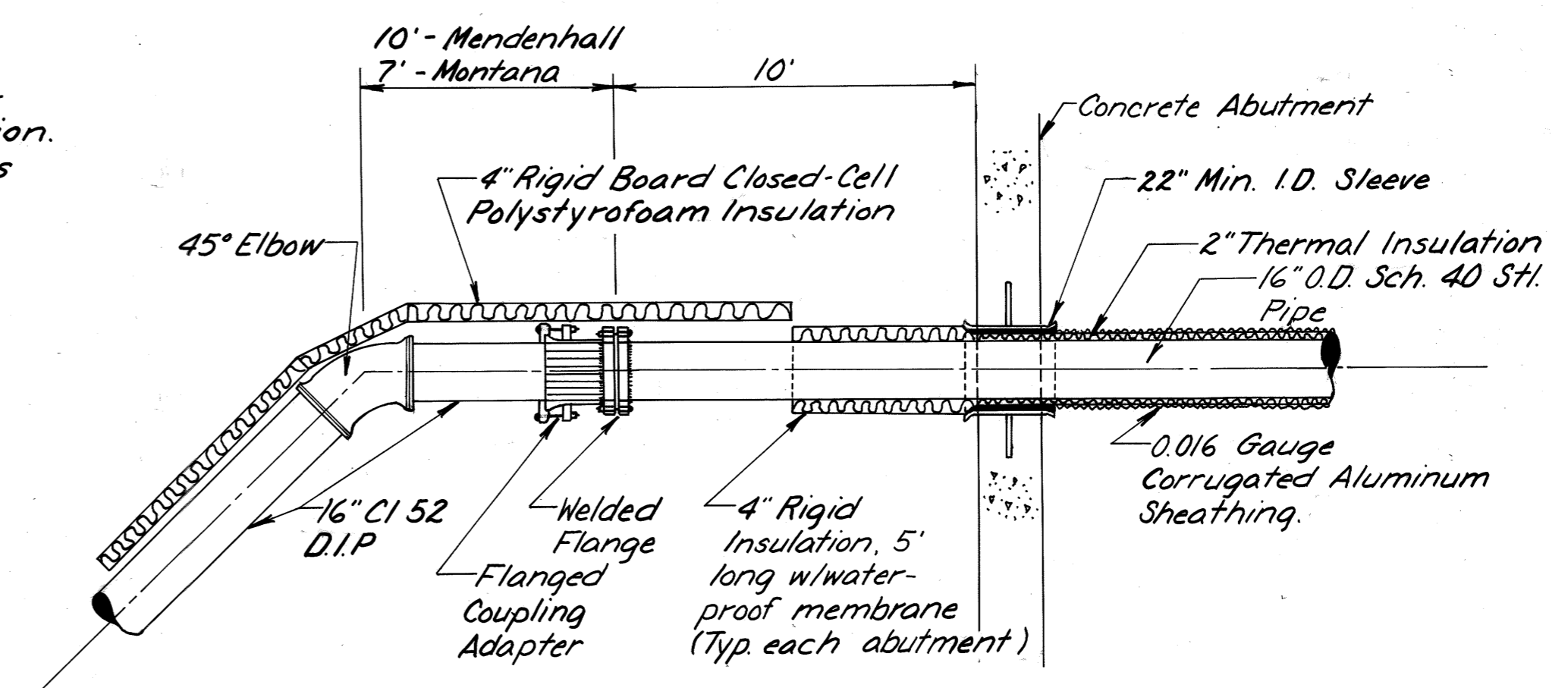
- Notes:
1. Filter Fabric shall be installed where noted on plans or as directed by the Engineer. Attach to trench sidewall a min. 12" above top of pipe.
 2. Excavation more than 24" below pipe constitutes "additional unclassified excavation" and shall be as directed by Engineer.
 3. Exist. pavement shall be sawcut prior to paving & subsequent to back-filling trench. Cut to a clean neat line that exposes 12" of undisturbed base material.
 4. Any dewatering shall be done in a manner to prevent muddy water from entering Montana Cr.

TYPICAL TRENCH SECTION & RESURFACING
N.T.S.

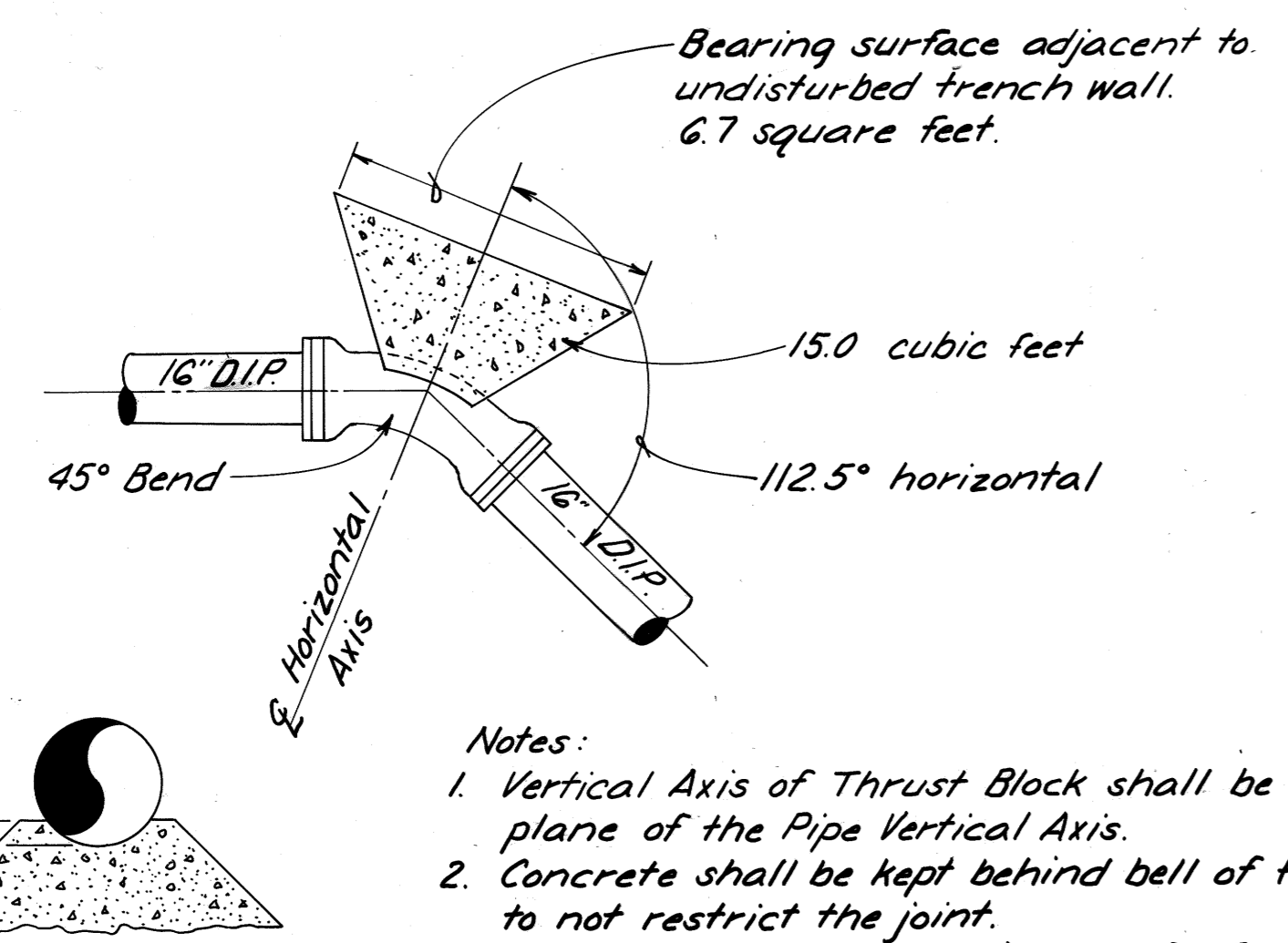


PIPE INSULATION
N.T.S.

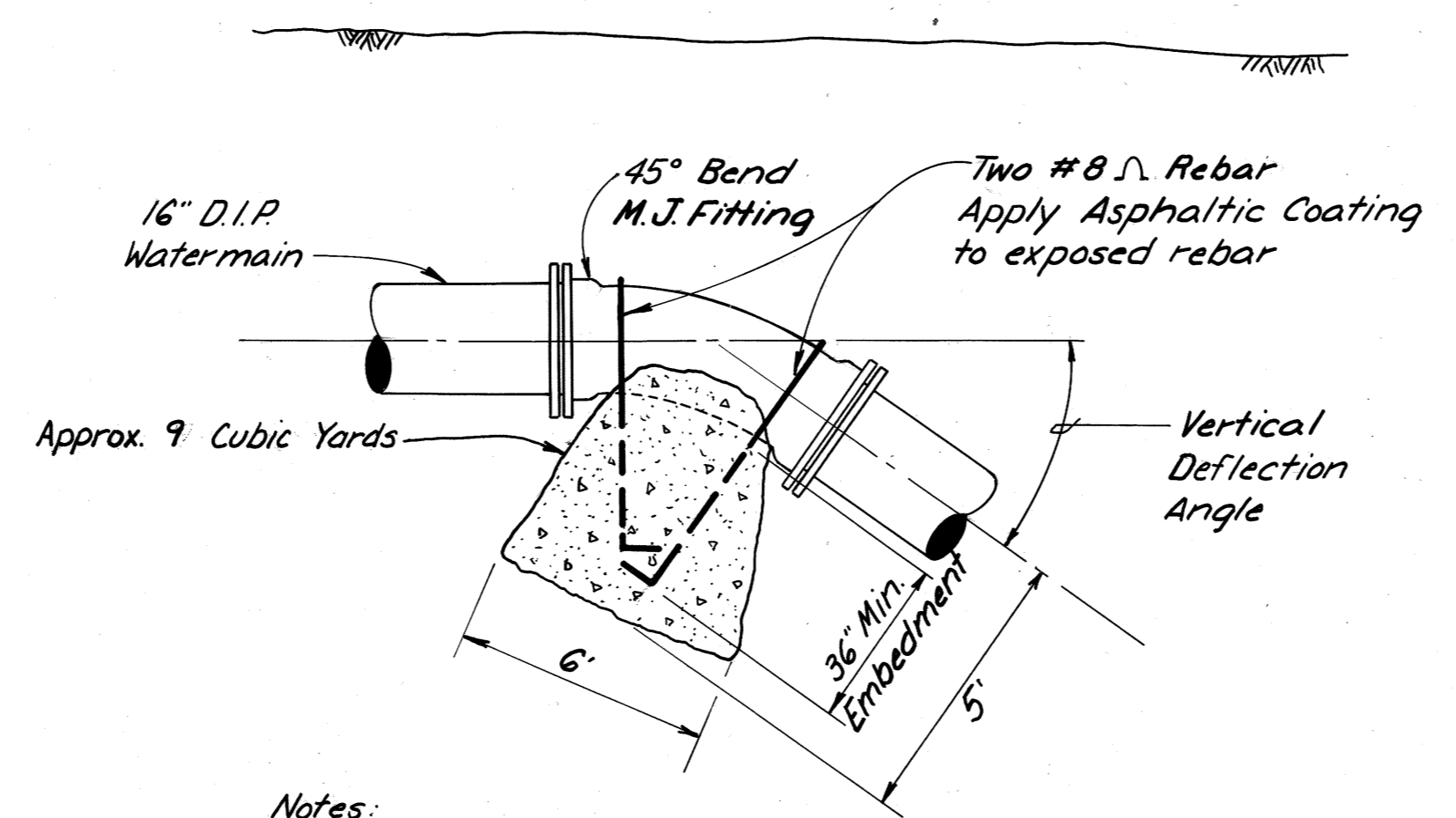
ESTIMATE OF WATERLINE QUANTITIES	
534 LF.	16" Ductile Iron Pipe
4 ea.	16" Butterfly Valves & Valve Boxes
200 LF.	4" thick by 4 ft. min. width Rigid Insulation
316 LF.	16" Sch. 40 Steel Pipe w/2" Rigid Insulation Protective Sheathing
30 LF.	Filter Fabric
16 ea.	45° Elbows
8 ea.	Pipe Brackets with Rollers
8 ea.	Pipe Covering Protection Saddles
4 ea.	Flanged Coupling Adapters
3 ea.	Mechanical Joint Plug



TYP. WATERLINE INSTALLATION AT ABUTMENT
N.T.S.

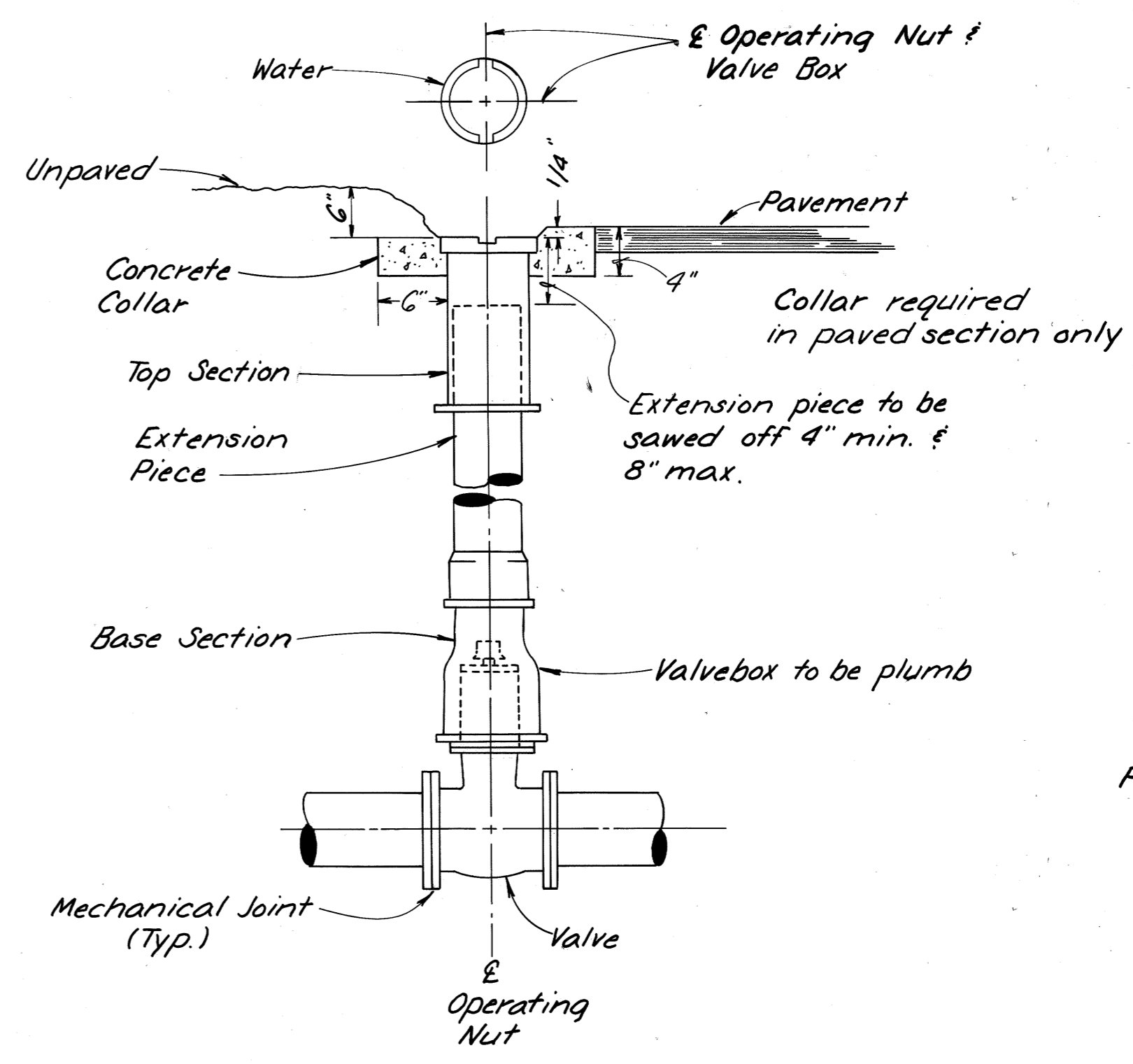


THRUST BLOCK HORIZONTAL DEFLECTION
N.T.S.

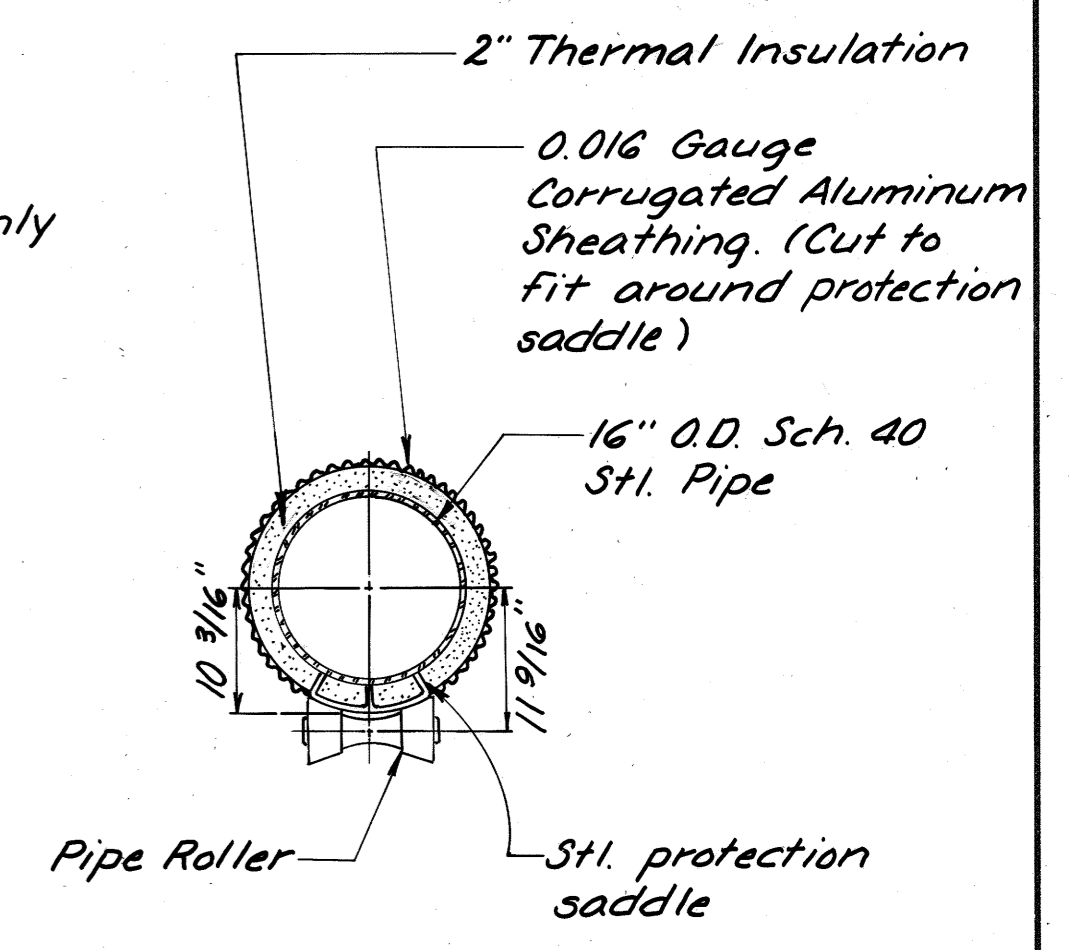


- Notes:
1. All pipe in contact with concrete shall be double wrapped with 4-mil. polyethylene sheet prior to placement of concrete.
 2. Concrete shall be a minimum of 2500 P.S.I.

THRUST BLOCK VERTICAL DEFLECTION
N.T.S.



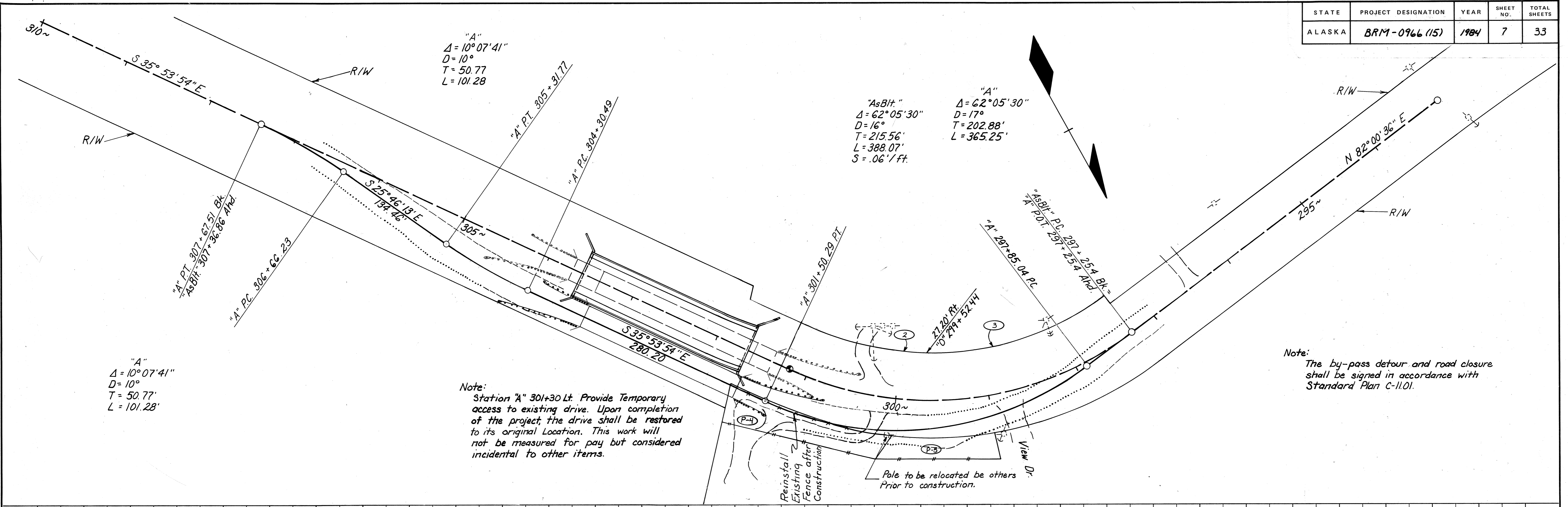
TYPICAL VALVE BOX
N.T.S.



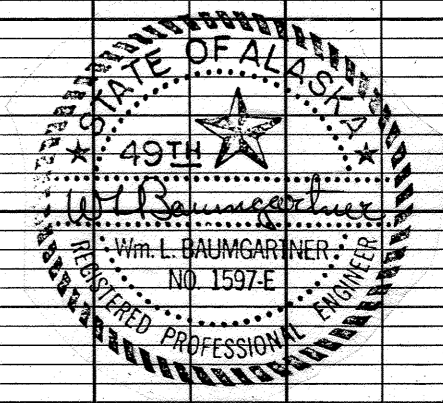
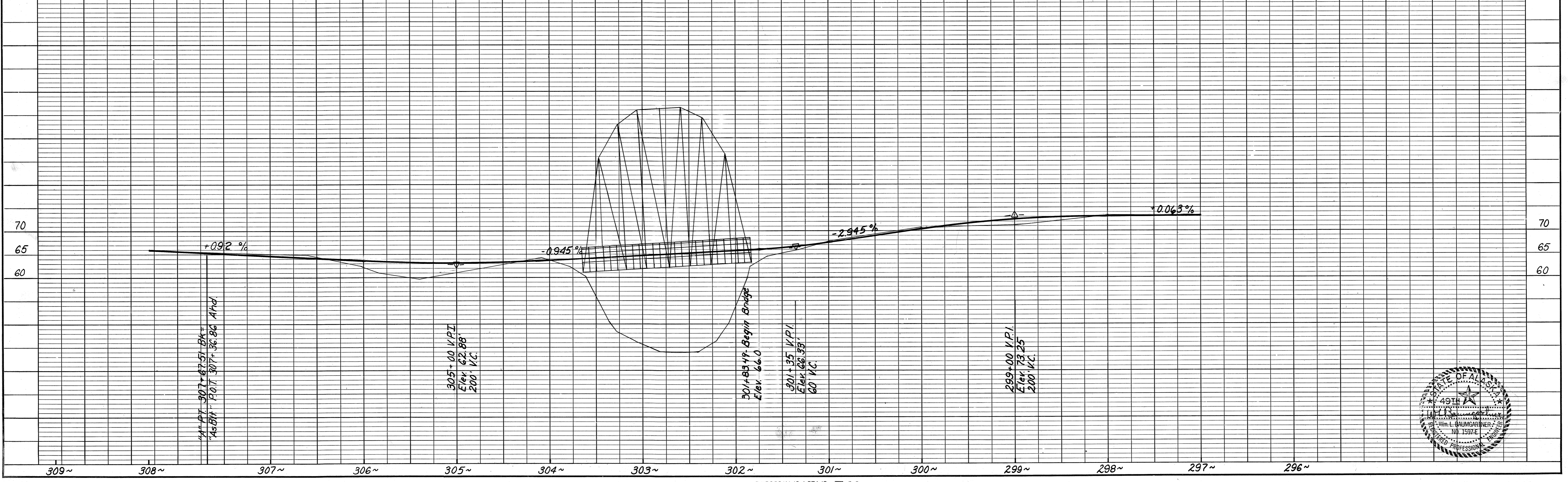
BRIDGE CROSSING PIPE DETAIL
N.T.S.



STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	BRM-0966 (15)	1984	7	33



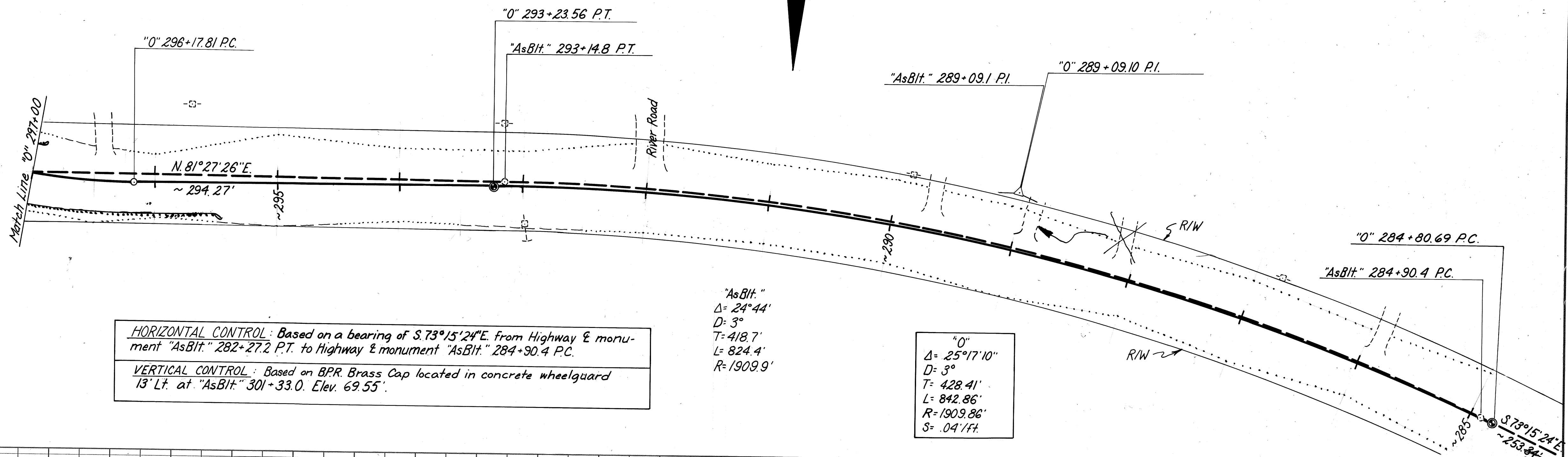
Note:
The by-pass detour and road closure shall be signed in accordance with Standard Plan C-11.01.



NO.	DATE	BY	CHKD.

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	BRM-0966 (15)	1984	8	33

"AsBlt."
 $\Delta = 62^{\circ}05'30''$
 $D = 16'$
 $T = 215.6'$
 $L = 388.1'$
 $R = 358.1'$



HORIZONTAL CONTROL: Based on a bearing of $S 73^{\circ}15'24'' E$ from Highway E monument "AsBlt." 282+27.2 P.T. to Highway E monument "AsBlt." 284+90.4 P.C.
VERTICAL CONTROL: Based on B.P.R. Brass Cap located in concrete wheelguard 13' Lt. at "AsBlt." 301+33.0. Elev. 69.55'.

DATE	
BY	
SURVEYED	
PLOTTED	
NOTE BOOK	
ALIGNMENT CHECKED	
R/L OF WAY CHECKED	
No.	

DATE	
BY	
SURVEYED	
PLOTTED	
NOTE BOOK	
GRADES CHECKED	
R. M.'S. NOTED	
STRUCTURE NOTATIONS CHECKED	
No.	

