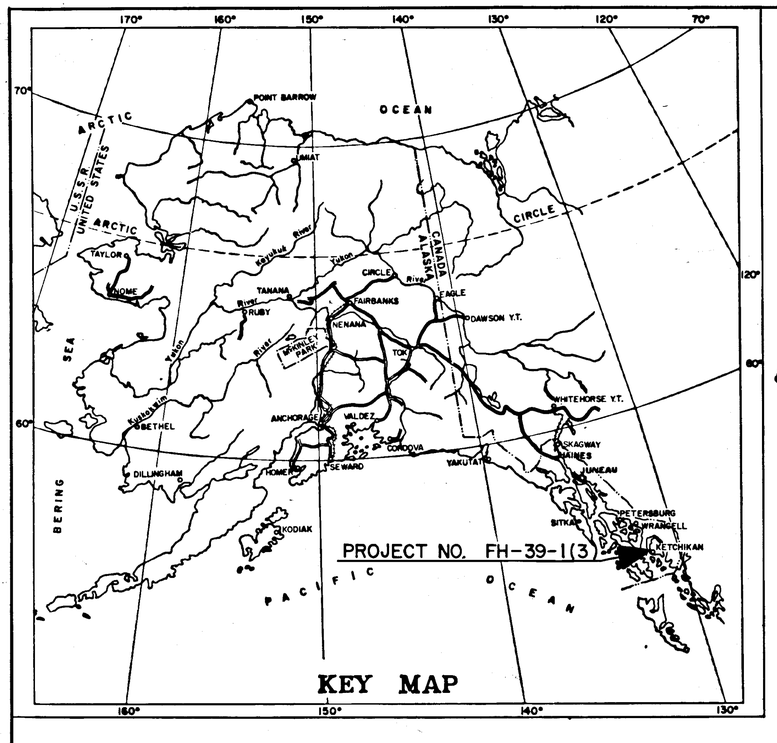
STATE	PROJECT	SHEET NO.	TOTAL SHEETS
ALASKA	FH-039-1(3)	1	11

STATE OF ALASKA
DEPARTMENT OF HIGHWAYS

PLAN AND PROFILE
PROPOSED HIGHWAY PROJECT

ALASKA FOREST HIGHWAY FH-39-1 (3)
GRADING, DRAINAGE & BRIDGE
WARD LAKE ROAD



DESIGN DESIGNATION

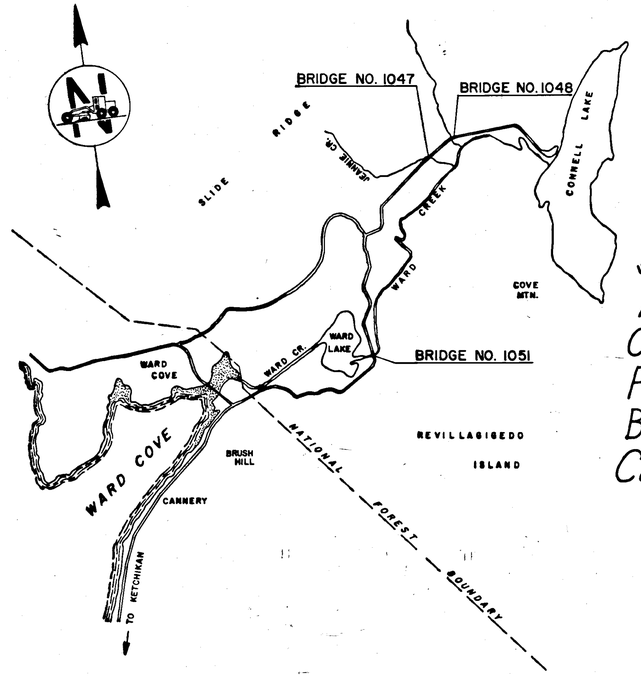
ADT (1975)	=	445
ADT (1996)	=	850
DHV (18%)	=	150
D	=	70-30
T	=	2%
V	=	30 M.P.H.

WIDTH OF SUBGRADE	=	32'
LENGTH OF GRADING	=	~~1187.58' = 0.2249 Miles~~ 1175.58' = 0.2226 MILES
LENGTH OF BRIDGE	=	125.00' = 0.0237 Miles
LENGTH OF PROJECT	=	~~1312.58' = 0.2486 Miles~~ 1300.58' = 0.2463 MILES

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	TYPICAL SECTION
2	ESTIMATE OF QUANTITIES
3	PLAN & PROFILE
4	CULVERT DETAILS
5-11	BRIDGE PLANS

The following Standard Drawings apply to this project: A-1, C-00.03, C-10.00 C-11.01, D-02.02, D-03.01, D-07.00, D-30.10, E-09.00, G-04.13 G-04.31, G-12.10, G-13.00, G-14.01, G-30.02, G-30.13, I-80.00 S-05.00, S-30.11



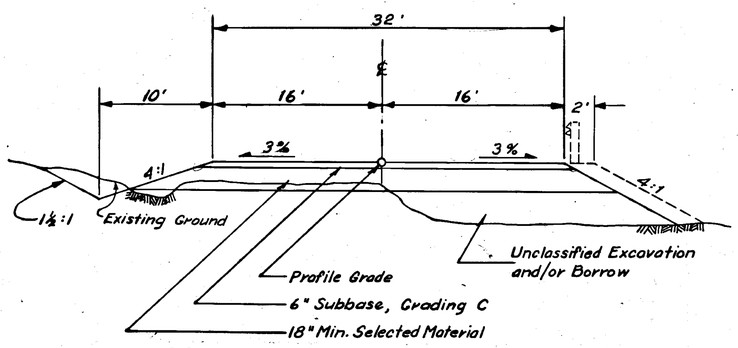
Note: See Plan & Profile Sheet for minor equations

"AS-BUILT PLANS"
CONTRACTOR: BUNO CONSTRUCTION CO.
PROJECT ENGINEER: D.F. ROBBINS
BEGINNING DATE: AUGUST 12, 1977
COMPLETION DATE: MAY 19, 1978

STATE OF ALASKA
DEPARTMENT OF HIGHWAYS
APPROVED
Louise Phillips 4/14/77
SOUTHEASTERN DIVISON ENGINEER DATE

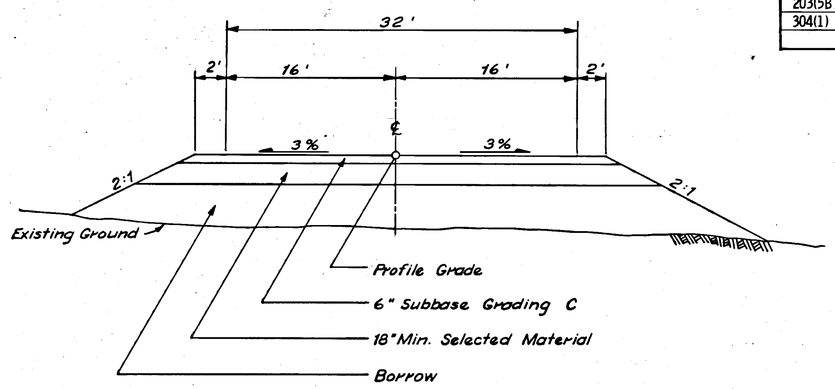
STATE OF ALASKA
DEPARTMENT OF HIGHWAYS
APPROVED
H.D. Boswell Date April 1977
COMMISSIONER OF HIGHWAYS

TYPICAL SECTION OF IMPROVEMENT



STA."O" 52+92.42 to STA."O" 65+50.00

TYPICAL SECTION OF IMPROVEMENT



STA. "AsBit" 137+13± to STA. "AsBit" 137+41±

and

STA. "AsBit" 146+56± to STA. "AsBit" 146+81±

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM	UNIT	SHEET NO. 3	4	5-11	TOTAL
1	Furnishing & Maintaining Engineering Facilities	L.S.				All Req'd.
110(1)	Mobilization	L.S.				All Req'd.
111(1)	Temporary Erosion and Pollution Control	C.S.				~~All Req'd.~~ NONE
115(1)	Traffic Maintenance	L.S.				All Req'd.
201(3B)	Clearing & Grubbing	L.S.				All Req'd.
202(1)	Removal of Structures and Obstructions	L.S.				All Req'd.
202(4)	Removal and Disposal of Culvert Pipe	L.F.	~~40~~ 107			~~40~~ 107
203(3)	Unclassified Excavation	C.Y.	~~1695~~/539			~~1695~~/539
203(5B)	Borrow	Ton	~~7601~~/2,362	759		~~8360~~/3,121
203(6B)	Selected Material	Ton	~~6370~~ 453/	480		~~6850~~ 5011
~~115(1)~~	~~Traffic Maintenance~~	~~L.S.~~				~~All Req'd.~~
304(1)	Subbase, Grading C	Ton	~~1900~~/729	~~111~~ 278		~~2011~~ 2007
501(1)	Class A Concrete	L.S.			All Req'd.	All Req'd.
502(1)	Prestressed Concrete Structural Members (Bulb-Tee) 125'	Each			5	5
503(1)	Reinforcing Steel	L.S.			All Req'd.	All Req'd.
505(3)	Structural Steel Piles, Furnished and Driven	L.F.			1043~~1104~~	~~1104~~ 1043
507(1)	Metal Bridge Railing	L.F.			250	250
602(2)	Structual Plate Pipe Arch, 8'-2" x 5'-9"	L.F.		112		112
603(22H)	30" Pipe Conduit	L.F.	64			64
603(22F)	18" Pipe Conduit E.W.O. #2	L.F.	59			59
606(2)	Beam Type Guardrail, Type II Post	L.F.	225			225
606(3B)	Treated Timber Post	Each	41			41
611(2)	Riprap, Class I	Ton		2368~~185~~		~~185~~ 2368
615(1)	Standard Sign	Sq.F.	14			14
618(1)	Seeding	1000 Sq.F.	~~52.29~~ 22.09			~~52.29~~ 22.09
618(2)	Water for Maintenance	1000 Gal.	~~71.04~~ 0			~~71.04~~ 0

BASIS OF ESTIMATE	
Item	Estimating Factor
203(5B)	1.80 Ton/C.Y.
203(5B)	1.80 Ton/C.Y.
304(1)	1.87 Ton/C.Y.

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	FH-039-1(3)	1977	2	11

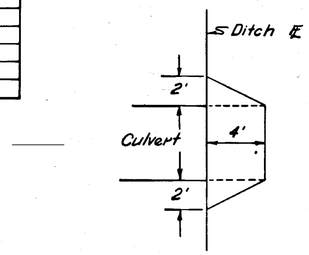
GENERAL NOTES

1. Clearing and grubbing limits shall be 10' beyond slope limits in cut areas, and 5' beyond slope limits in fill areas, or as directed by the Engineer.
2. Superelevation shall revolve about the inside shoulder.
3. All construction activity in and adjacent to the culverts at approximate stations "AsBit" 137+31 and "AsBit" 146+77 and in the stream at the bridge station "L" 60+35, shall be completed between June 15 and August 1. a.) Any work necessary before June 15 and after August 1 shall require Alaska Dept. of Fish and Game approval.
4. Treated timber post shall conform ~~to Standard Drawing G-04.31~~ on six foot (6') centers.
5. Construct all headwalls with class A concrete in lieu of class W concrete.

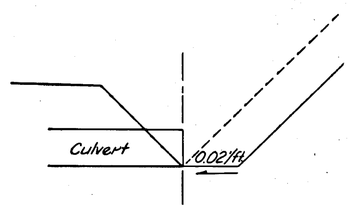
SIGNING SCHEDULE

Station	Dist. from ℄ Lt.	Dist. from ℄ Rt.	Code No.	Legend	Size	Unframed Thickness	Area in S.F.
"O" 60+00		24'	T1-1	Ward Creek	42" x 24"	.063	7.00
"O" 61+60	24'		T1-1	Ward Creek	42" x 24"	.063	7.00

Station	Post: No. of Post	Post: Type	Post: Size	Post: Length	Post: Embedment	Facing Traffic	Remarks
2	Tube	2"	10'-0"	3'-0"	N. B.		6" Upper Case, 4.5" Lower Case
	Tube	2"	10'-0"	3'-0"			
2	Tube	2"	10'-0"	3'-0"	S. B.		6" Upper Case, 4.5" Lower Case
	Tube	2"	10'-0"	3'-0"			



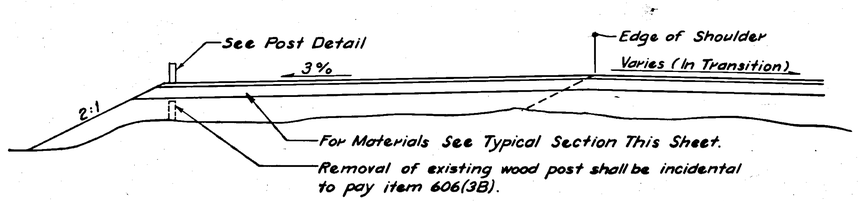
PLAN



SECTION

CULVERT INLET DETAIL

TYPICAL SECTION OF PARKING AREA



STA. "O" 62+~~20~~ 15 to STA. "O" 62+86

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	FH-039-1(3)	1977	3	11

Horizontal Control:
Basis of bearings are based upon magnetic bearing with minus 32° variation applied. Corrected bearing between "L" P.O.T. 53+50 and "L" P.I. 55+64.78 is N37°30'00"E

Vertical Control:
Vertical Control was established by setting T.B.M. WC-1 with an assumed elev. ~100.00. T.B.M. WC-2 is set from T.B.M. WC-1 with descriptions as shown on Profile this sheet.

PLAN — SURVEYED, PLOTTED, AUTOMATIC CHECKED, R/W MAP CHECKED, NOTE BOOK, No., DATE, BY

BEGIN PROJECT FH-39-0(3)
STA. "0" 52+92.42

N.37°30'00"E.

"L" P.O.T. 53+81.58 Bk*
"0" P.C. 53+81.58 Ahd.

"0" Δ=53°25'27" Lt.
D=110°30'00"
R=498.22'
T=250.71'
L=464.56'
S=5%

"L" P.C. 54+34.40

"L" Δ=48°56'30" Lt.
D=20°
R=286.48'
T=130.38'
L=244.71'

"L" P.T. 56+79.11

"0" 54+55, Remove & Dispose 40 Lin. Ft. Pipe Conduit. Install 30'+64' Pipe Conduit, Skewed 30° Lt. Ahd. 90° to Road

"L" P.I. 55+64.78
"0" 55+75 Remove & Dispose 10 L.F. Pipe Conduit

"0" P.I. 56+32.29

"0" 57+20, Construct 24' Approach, Skewed 36° Rt. Ahd.
"0" 57+25 Remove and Dispose 30 L.F. Pipe Conduit
Install 28 L.F. 18" Pipe Conduit End #2

"0" 57+75, Construct 90° Approach
Adjust by others.

"0" P.T. 58+46.14

"0" 59+60.18 Lt., Begin 50' Guardrail
Transition
"0" 59+71.82 Rt., Begin 50' Guardrail
Transition

"L" P.C. 59+57.72

"0" 59+43, Construct 24' Approach, Skewed 9°30' Lt. Ahd.
Remove & Dispose 27 L.F. Pipe Conduit
Install 33+18 Pipe Conduit End #2

"L" P.I. 59+80.14

Begin Bridge "0" 60+16.00

"L" P.T. 60+02.55

Begin Exist. Bridge "L" 60+13.50±

Bridge Structure

Remove Existing Bridge

End Exist. Bridge "L" 61+35.10±

"0" 61+62.10 Lt., Begin 50' Guardrail Transition
"0" 61+96.82 Rt., Begin 50' Guardrail Transition

"0" 61+96.82 Bridge Transition Post. See Standard Drawing G-04.31
6"x 8" Wood Post. Install See Standard Drawing Area Parking Area Details, Sheet # 2.

Adjust by others.

End Bridge "0" 61+41.00

"L" P.C. 62+01.77
"0" 62+32.36

"0" P.I. 62+20.25

"L" Δ=38°27'24" Rt.
D=19°
R=301.56'
T=105.18'
L=202.40'

"L" P.I. 63+06.95
"L" P.T. 63+37.93

"0" 64+01, Construct 24' Approach

35° 46' 12"
"0" Δ=38°27'24" Rt.
D=19°
R=301.56'
T=105.18' 97.31'
L=202.40' 188.26'
S=6%

"0" 65+08, Construct 24' Approach

"L" P.T. 64+04.17
"0" P.O.T. 64+37.13 =
"0" P.R.T. 64+08 ±
"0" P.T. 64+35.15

N.15°55'27"W.
~386.61
374.12

N.11°26'30"W

N.15°59'27"W.

~144.85
131.48

N.22°31'57"E.

Earthwork Equation:
Embankment = Excavation − Waste × Grading Factor + Borrow

Motch Exist. Grade

"L" Sta. 53+50.00
Elev. 95.90

Profile Grade

+2.657%

0.000%

"0" V.P.I. 55+00.00
Elev. 95.90
300' V.C.

"0" V.P.I. 58+50.33
Elev. 105.21
300' V.C.

Begin Bridge "0" 60+16.00
Elev. 104.38

=0.500%

End Bridge "0" 61+41.00
Elev. 103.75

"0" V.P.I. 62+50.00
Elev. 103.21
200' V.C.

-2.950%

+0.290%

"0" V.P.I. 64+50.00
Elev. 97.31
200' V.C.

"0" P.O.T. 65+50.00
Motch Exist. Grade
Approx. Elev. 97.60

"0" 65+50.00 Bk.*
"L" 65+51.98 Ahd.

Original Ground

T.B.M. WC-1 ~ Elev. 100.00	T.B.M. WC-2 ~ Elev. 100.08
"L" Sta. 59+58, 40' Lt.	"L" Sta. 61+96, 55' Lt.
Spike in 4.5" Spruce	Spike in 4.5" Spruce

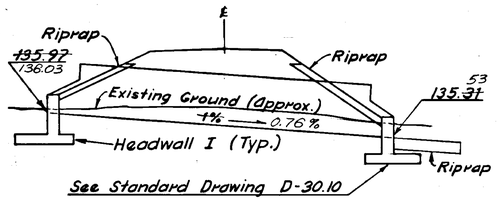
PROFILE — SURVEYED, PLOTTED, NOTE BOOK, No., DATE, BY, STRUCTURE NOTATIONS CHECKED

HIGHWAY FEDERAL AID SHEET
PLATE 1-SINGLE PLAN AND PROFILE-FULL LINE
TOLEDYNE

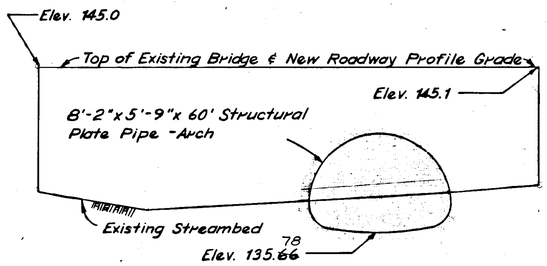
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	FH-039-1(3)	1977	4	11

CULVERT DETAILS

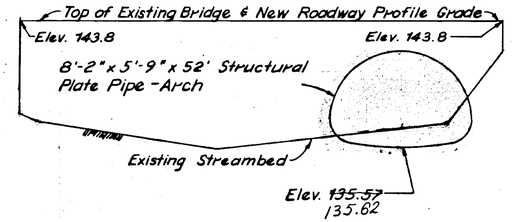
CULVERT PROFILE



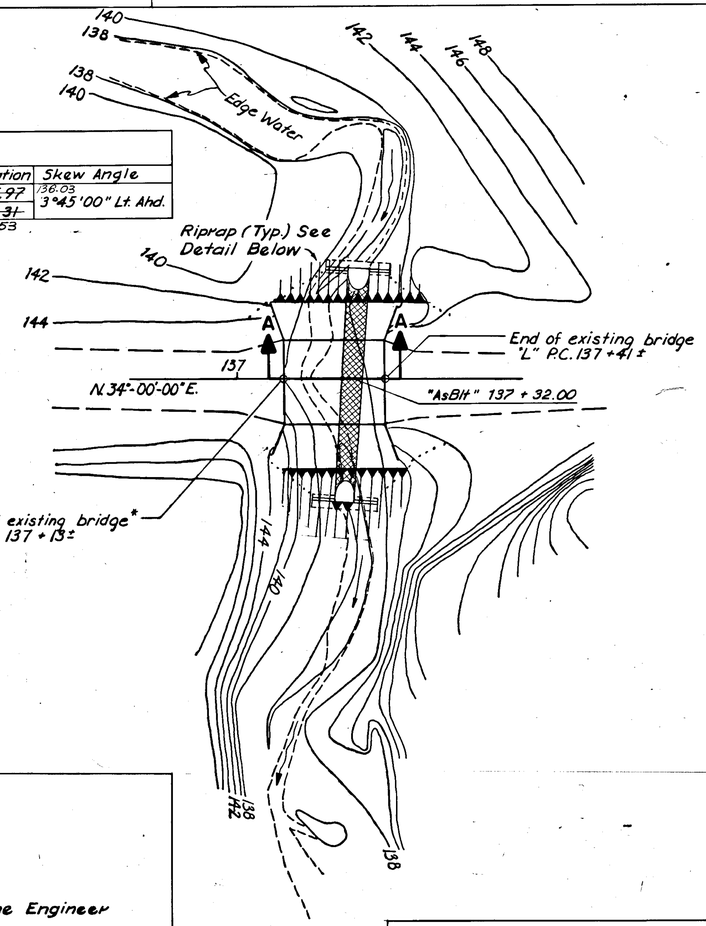
SECTION A-A



SECTION B-B



PIPE SUMMARY				
Pipe-	Station	Offset	Elevation	Skew Angle
Inlet	"AsBlt" 137+34.03	30.93 Lt.	135.97 136.03	3°45'00" Lt. Ahd.
Outlet	"AsBlt" 137+29.71	34.93 Rt.	135.31 135.53	



* Bridge No. 1047

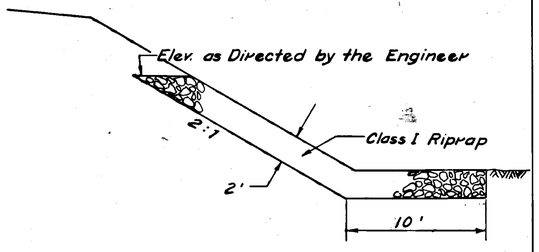
PIPE SUMMARY				
Pipe-	Station	Offset	Elevation	
Inlet	"AsBlt" 146+77.41	28.00 Lt.	136.26	136.21
Outlet	"AsBlt" 146+77.41	30.00 Rt.	134.83	135.03

"L" P.I. 144 + 85.33
Δ = 21°-11'-09" Rt.
D = 7°-40'-00"
R = 747.34'
T = 139.76'
L = 276.34'

"L" P.I. 147 + 48.99
Δ = 7°-06'-18" Rt.
D = 5°-30'-00"
R = 1041.74'
T = 64.67'
L = 129.18'

* Bridge No. 1048

RIPRAP DETAIL



TOTAL ESTIMATED QUANTITIES			
Item	Unit	Total	
Class "A" Concrete	C.Y.	13.2	12.4
Reinforcing Steel	LB.	1900	1825

CULVERT PROFILE