State of Alaska

Department of Transportation and Public Facilities Southcoast Region

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS

PROJECT No. 0933037 ~ 69500

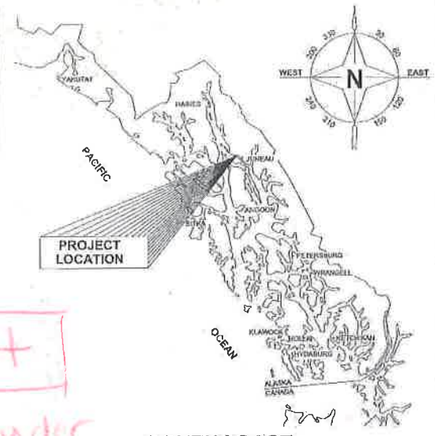
The undersigned hereby certifies that this duplicated document is an exact and true copy of the original.

Cody Sutton

September 30, 2015

As-built

Project Engineer: Danielle Ryder
Contractor: SECON
Begin Work: 10-12-15
End Work: 10-27-16



SOUTHCOAST ALASKA REGION

VICINITY MAP

DESIGN DESIGNATION
ENGINEERS CUTOFF TO AUKE LAKE

DESIGN CRITERIA	=	MULTI-USE PATH
FACILITY TYPE	=	B & C
DESIGN SPEED	=	20 M.P.H.

PROJECT SUMMARY

LENGTH OF PATH	=	0.73 MILES
WIDTH OF PATH	=	10 FT
GLACIER HIGHWAY		
FUNCTIONAL CLASSIFICATION	=	URBAN PRINCIPAL ARTERIAL
A.D.T. 2010	=	8180
POSTED SPEED	=	40/50 M.P.H.
DIRECTIONAL DISTRIBUTION	=	55/45
TRUCKS (%)	=	5.7%

THE FOLLOWING STANDARD DRAWINGS APPLY TO THIS PROJECT:

A-1	G-00.02	I-20.14	S-00.11
D-04.21	G-04.10S	L-03.10	S-01.00
D-22.01	G-20.11	L-30.10	S-05.01
D-26.02	G-46.11	M-23.12	S-20.10
E-13.00			S-30.03

THE FOLLOWING CITY AND BOROUGH OF JUNEAU STANDARD DETAILS APPLY TO THIS PROJECT:

203	304A	403	405
206A	310	404	406A

INDEX

SHEET NO.	DESCRIPTION
A1	TITLE SHEET
A2-A3	SURVEY CONTROL
A4	LAYOUT PLAN
B1-B2	TYPICAL SECTIONS
C1	ESTIMATE OF QUANTITIES
D1-D2	MISCELLANEOUS SUMMARIES
E1-E6	DETAILS
F1-F10	PLAN AND PROFILES
G1-G2	DRIVEWAY PLAN & PROFILE
H1-H5	SIGNING & STRIPING
J1	WAYSIDE GRADING & DRAINAGE
L1	WAYSIDE LANDSCAPING PLAN
L2-L3	WAYSIDE HABITAT BENCH PLAN
M1	MSE RETAINING WALL
P1-P6	EROSION AND SEDIMENT CONTROL PLAN
Q1-Q4	ILLUMINATION
R1-R4	RIGHT OF WAY PLAN
T1-T3	TRAFFIC CONTROL PLAN

PATH: Q:\JNU\69500\PLANSET\69500_A1.DWG TAB:A1
Thursday, June 05, 2014 3:21:48 PM
PLOT: PSPACE OR MSPACE: 1=1(F)

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

STATE OF ALASKA 49TH
James L. Brown July 20, 2015 CE-14083 REGISTERED PROFESSIONAL ENGINEER

APPROVED: _____ 8/20/15
REGIONAL PRE-CONSTRUCTION ENGINEER L. PAT CARROLL, P.E. DATE

APPROVED: Chuck Correa 8/20/15
DIRECTOR OF DESIGN & CONSTRUCTION CHUCK CORREA, P.E. DATE

CERTIFIED TRUE & CORRECT AS-BUILT OF ACTUAL FIELD CONDITION:

CONSTRUCTION PROJECT MANAGER DATE

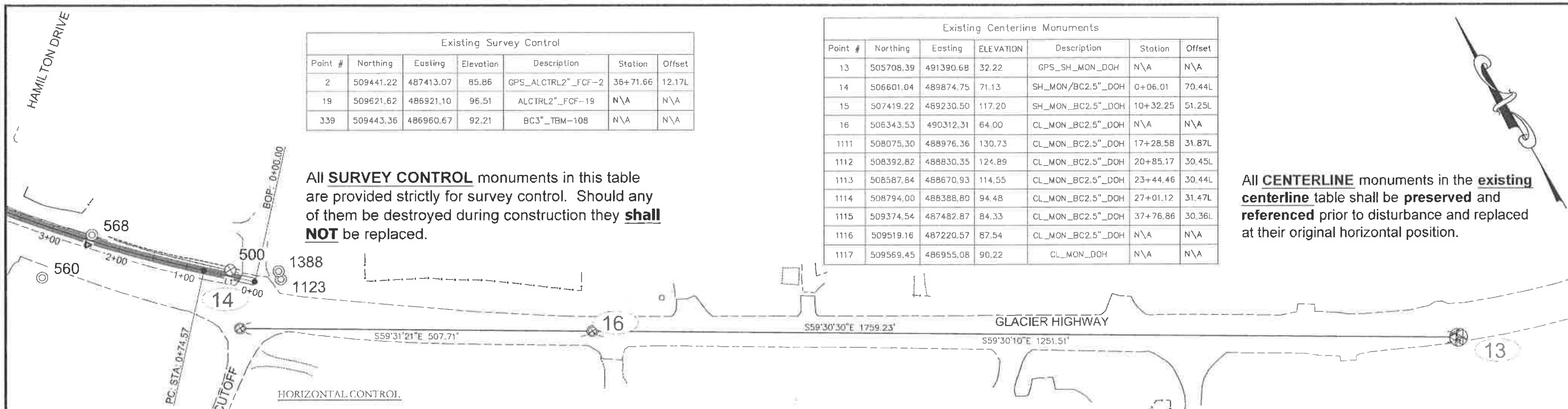
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0933037 ~ 69500	2015	A1	54

Existing Survey Control						
Point #	Northing	Easting	Elevation	Description	Station	Offset
2	509441.22	487413.07	85.86	GPS_ALCTRL2"_FCF-2	38+71.66	12.17L
19	509621.62	486921.10	96.51	ALCTRL2"_FCF-19	N\A	N\A
339	509443.36	486960.67	92.21	BC3"_TBM-108	N\A	N\A

All **SURVEY CONTROL** monuments in this table are provided strictly for survey control. Should any of them be destroyed during construction they **shall NOT** be replaced.

Existing Centerline Monuments						
Point #	Northing	Easting	ELEVATION	Description	Station	Offset
13	505708.39	491390.68	32.22	GPS_SH_MON_DOH	N\A	N\A
14	506601.04	489874.75	71.13	SH_MON/BC2.5"_DOH	0+06.01	70.44L
15	507419.22	489230.50	117.20	SH_MON_BC2.5"_DOH	10+32.25	51.25L
16	506343.53	490312.31	64.00	CL_MON_BC2.5"_DOH	N\A	N\A
1111	508075.30	488976.36	130.73	CL_MON_BC2.5"_DOH	17+28.58	31.87L
1112	508392.82	488830.35	124.89	CL_MON_BC2.5"_DOH	20+85.17	30.45L
1113	508587.84	488670.93	114.55	CL_MON_BC2.5"_DOH	23+44.46	30.44L
1114	508794.00	488388.80	94.48	CL_MON_BC2.5"_DOH	27+01.12	31.47L
1115	509374.54	487482.87	84.33	CL_MON_BC2.5"_DOH	37+76.86	30.36L
1116	509519.16	487220.57	87.54	CL_MON_BC2.5"_DOH	N\A	N\A
1117	509569.45	486955.08	90.22	CL_MON_DOH	N\A	N\A

All **CENTERLINE** monuments in the **existing centerline** table shall be **preserved** and **referenced** prior to disturbance and replaced at their original horizontal position.



HORIZONTAL CONTROL

Horizontal Control for this project is based on the DOT/PF 2000 Juneau Grid

The DOT/PF Juneau Grid-2000 System is a local ground coordinate system based at USC&GS first order control station EDDIE. It relates to AKSPC zone 1 NAD83 (1992) through the following parameters:
Zone = NAD83 (1992) AKSPC ZONE 1
Grid Scale = 0.999928875
Convergence = -0°45'27.26"
Translation about USC&GS point EDDIE as follows:
AKSPC Northing = 2383469.17310 FT US
AKSPC Easting = 2512570.06318 FT US
Local Northing = 500000.0000 FT US
Local Easting = 500000.0000 FT US

Project Specific Horizontal Control

13: PI monument in well case in south shoulder Glacier Highway. Point bears S68E 156.5' +\- from the North East corner of the bus shelter, East of Sherwood Lane.
JNU Grid N 505708.39 FT US, E 491390.68 FT US
AKSPC ZONE1 N 2389290.48 FT US , E 2504037.58 FT US

14: PI monument in well case in south side Glacier Highway. Monument case lies in the intersection of Engineers Cutoff Road and Glacier Highway.
JNU Grid N 506601.04 FT US, E 489874.75 FT US
AKSPC ZONE1 N 2390203.03 FT US , E 2502533.69 FT US

VERTICAL CONTROL

The Vertical Datum for JNU Grid-2000 is MLLW Gastineau Channel tidal datum based on third order differential levels and supplemented with GEOID '99 modeled orthometric heights. The tidal epoch is 1960-1978, but this epoch has been updated with a 5 year observation period from Jan '94 to Dec '98 published Nov '99. The latest NOS publication (10-2011) on the 1983-2001tidal epoch indicates the datum has risen 0.32'.

The Project Specific Basis of Vertical Control is point # 517 "TBM BROTHER". Which is a 3.5" brass cap located in the north east abutment of Brotherhood Bridge. TBM-Brother has an observed elevation of 39.41 feet above MLLW.

BIKE PATH ALIGNMENT TABLE

SEGMENT	STATION	NORTHING	EASTING	DISTANCE	BEARING	STATION	RADIUS	LENGTH	DELTA
L1	0+00.00	506648.84	489926.85	74.57	N47° 24' 28"W	0+74.57			
C1	0+74.57	506699.31	489871.95			4+15.67	2102.13	341.10	9°17'49"
L2	4+15.67	506949.47	489640.62	302.49	N38° 06' 39"W	7+18.16			
C2	7+18.16	507187.48	489453.93			8+47.28	2990.59	129.12	2°28'26"
L3	8+47.28	507290.76	489376.45	60.17	N35° 38' 14"W	9+07.45			
C3	9+07.45	507339.66	489341.40			10+00.00	1000.00	92.54	5°18'08"
L4	10+00.00	507417.26	489291.03	46.55	N30° 20' 05"W	10+46.55			
C4	10+46.55	507457.44	489267.52			11+69.05	1000.00	122.51	7°01'09"
L5	11+69.05	507566.69	489212.27	79.53	N23° 18' 57"W	12+48.58			
C5	12+48.58	507639.73	489180.79			13+44.11	2500.00	95.53	2°11'22"
L6	13+44.11	507728.15	489144.67	506.64	N21° 07' 35"W	18+50.75			
C6	18+50.75	508200.74	488962.06			25+83.32	1150.00	732.57	36°29'54"
L7	25+83.32	508757.50	488505.13	391.02	N57° 37' 29"W	29+74.34			
L8	29+74.34	508966.87	488174.90	713.87	N57° 21' 06"W	36+88.21			
L9	36+88.21	509351.99	487573.82	204.68	N57° 10' 12"W	38+92.88			

A2 Existing Property					
Point #	Northing	Easting	Description	Station	Offset
500	506681.30	489904.83	BC3.25'_S2386_LA/C4_L9/C1_L10_S3260	0+38.18	9.00R
560	505806.38	489665.76	IP_1.5"	2+91.75	72.31L
568	506824.26	489758.42	PLASCAP_BEAN	2+43.57	8.40R
570	507095.68	489535.54	PLASCAP_BEAN	5+95.57	7.56R
571	507156.46	489395.72	GLO_BC2.5"_C3_L6/C4_LH/S2386	7+29.44	64.96L
572	507383.81	489321.15	BPR_BC3"_L3B/L4C/S2386	9+55.54	8.12R
573	507501.94	489157.84	GLO_BC2.5"_C3_LF/C4_L6/S2386	11+33.81	76.28L
574	507734.92	489175.22	GLO_BC2.5"_C3_LC/C4_LD_S2386	13+39.35	30.93R
575	507887.84	489006.09	BPR_BC3"_L4F/L3F/ROW_S2386	15+43.01	71.71L
576	508070.06	489031.90	BPR_BC3"_C15_S3406/ROW_S2386	17+03.68	18.04R
577	507975.24	488970.97	PLASCAP	16+37.20	72.96L
579	508052.16	488939.32	PLASCAP	17+20.35	74.76L
580	508171.26	488869.80	PLASCAP	18+57.03	96.67L
581	508532.58	488657.35	PLASCAP_BEAN	23+13.48	79.10L
582	508550.42	488637.85	PLASCAP_BEAN	23+41.85	80.33L
583	508592.73	488590.94	PLASCAP_BEAN	24+09.78	81.06L
584	508711.90	488427.11	GLO_BC2.5"_C3_LK/C4_LJ_S2386	26+24.81	80.29L
585	508782.17	488308.25	BC2.5"_PAR1/PAR2/ROW_WVH	27+62.82	84.58L
586	508858.55	488178.24	GLO_BC2.5"_C3_L-L/C4_L-K_S2386	29+13.52	89.69L
593	507160.01	489630.97	PLASCAP_BEAN	5+87.28	122.35R
1123	506633.17	489961.02	ALSEC2"_6350S_RESET_7712S	N\A	N\A
1388	506644.80	489964.05	ALCAP2"_ROW/L-7/LS10811	N\A	N\A

All **PROPERTY** monuments in the **existing property** table shall be **preserved** and **referenced** prior to disturbance and replaced at their original horizontal position.

PATH:Q:\JNU\69500\PLANSET\69500_A2-A3 CONTROL.DWG

CHAMBERS, LUCAS M (DOT)
TAB A2 Friday, August 14, 2015 4:56:21 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

MONUMENT NOTES:

1. If any pair of control points disagrees from published value by more than 1:10,000 horizontally or vertically then a third network point must be tied to ascertain which point is in error or has been disturbed.

2. Whether listed or not, all monuments, property markers, or accessories that will be disturbed or buried shall be referenced prior to being disturbed, and re-established in their original position and a record of monument form in accordance with A.S.34.65.040 shall be submitted to the construction engineer for review prior to recording. Coordinate values listed are for informational purposes and should be used to reset monuments only as a last resort.

CHECKED BY: D.IGNOTOV

DESIGNED BY: J.PAPOI

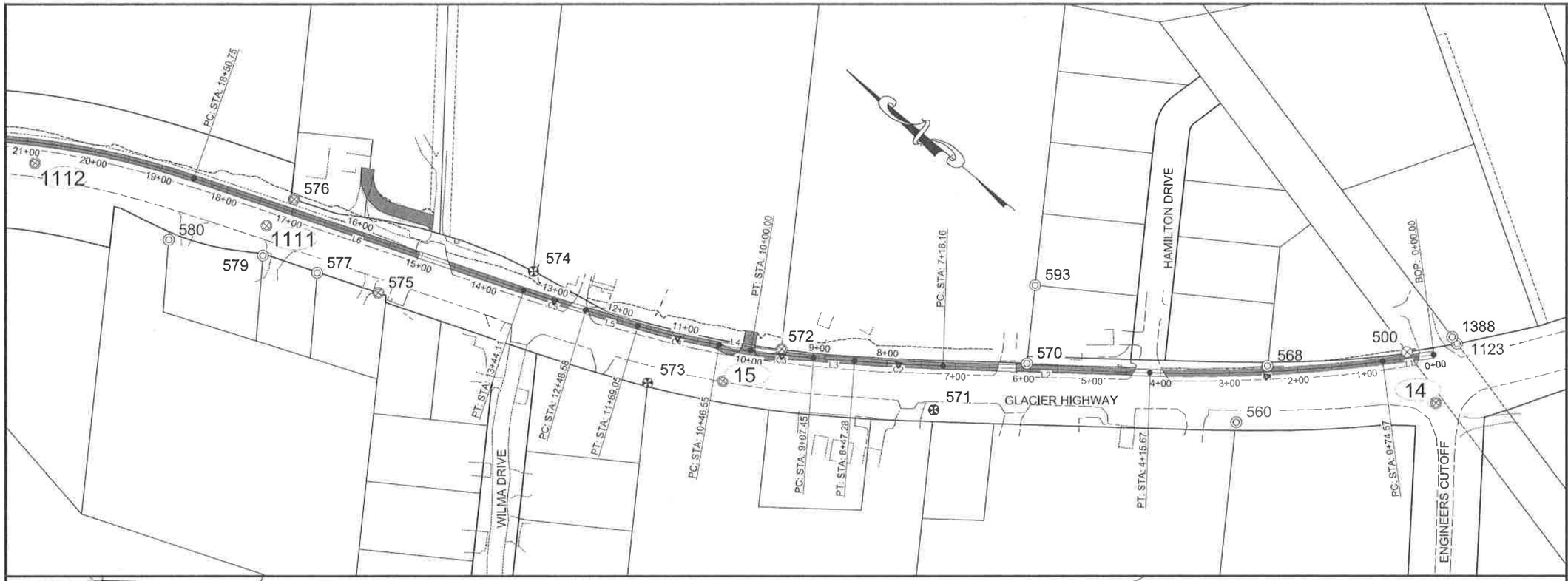
DRAWN BY: J.PAPOI

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHCOAST REGION

JNU:GLACIER HIGHWAY MULTI-USE SEPERATED PATH TO UAS PROJECT# 69500

SURVEY CONTROL

PROJECT DESIGNATION	
0933037~69500	
STATE	YEAR
ALASKA	2014
SHEET NUMBER	TOTAL SHEETS
A2	54



TBM 58 is a 2" BC Set in Small Boulder.
Bollards at corners of Auke Lake boat Ramp
Bear S88E 11.4' and N55E 25.1'.
Station 37+58
Offset 75', Rt
Elevation 84.95'

PATH:Q:\JNU\69500\PLANSET\69500_A2-A3 CONTROL.DWG

CHAMBERS, LUCAS M (DOT)
TAB: A3 Friday, August 14, 2015 4:56:54 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

MONUMENT NOTES:

1. If any pair of control points disagrees from published value by more than 1:10,000 horizontally or vertically then a third network point must be tied to ascertain which point is in error or has been disturbed.

2. Whether listed or not, all monuments, property markers, or accessories that will be disturbed or buried shall be referenced prior to being disturbed, and re-established in their original position and a record of monument form in accordance with A.S.34.65.040 shall be submitted to the construction engineer for review prior to recording. Coordinate values listed are for informational purposes and should be used to reset monuments only as a last resort.

CHECKED BY: D.IGNOTOV

8.14.15

DESIGNED BY: J.PAPOI

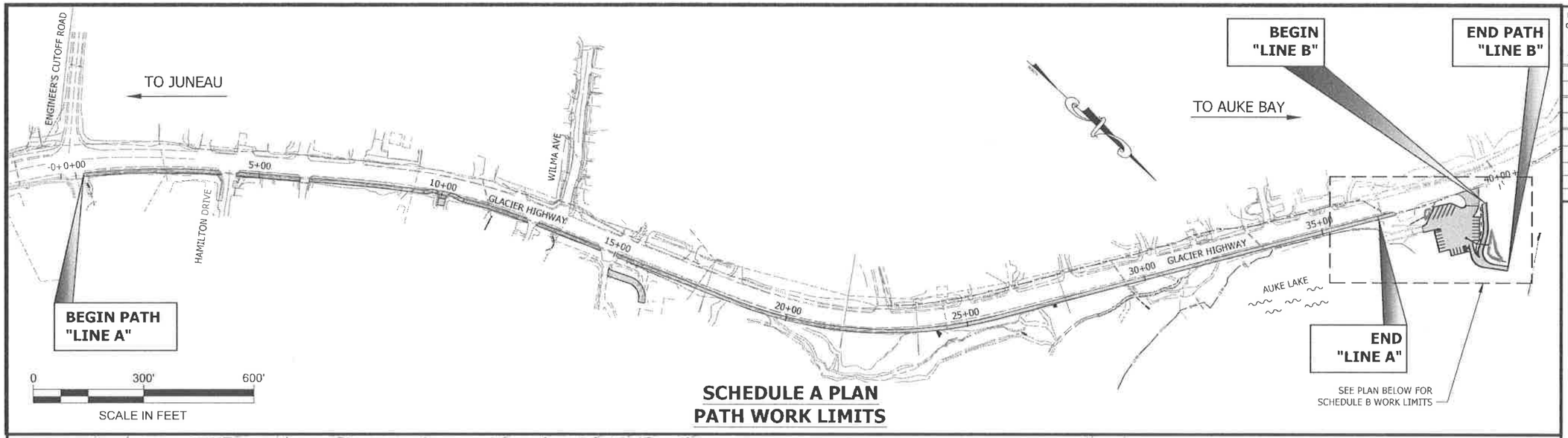
DRAWN BY: J.PAPOI

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES
DIVISION-SOUTHCOAST REGION

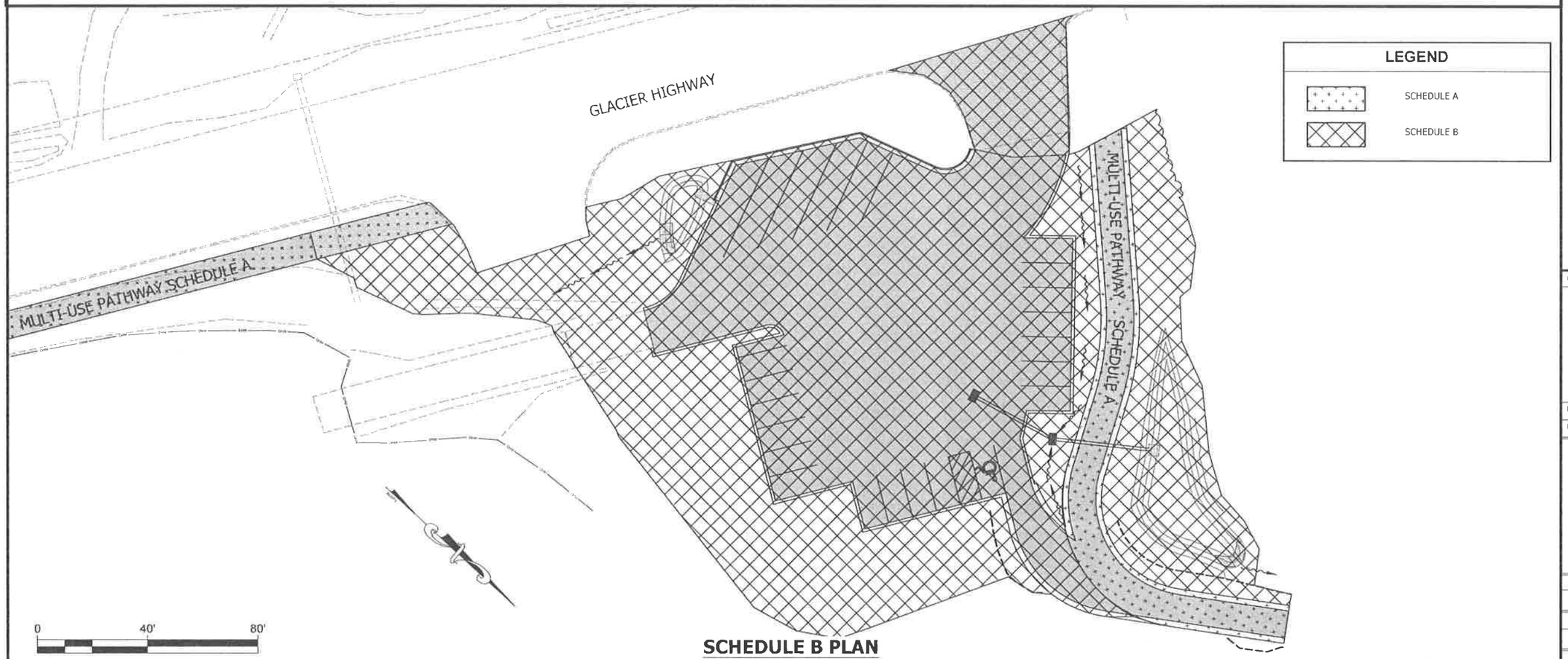
JNU:GLACIER HIGHWAY MULTI-USE SEPERATED PATH TO UAS
PROJECT# 69500

SURVEY CONTROL

PROJECT DESIGNATION	
0933037~69500	
STATE	YEAR
ALASKA	**2014**
SHEET NUMBER	TOTAL SHEETS
A3	**54**



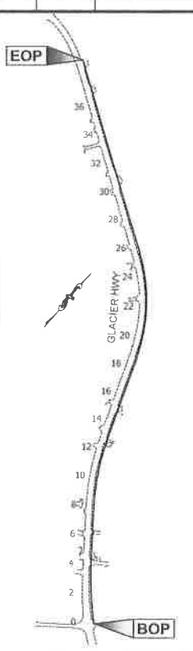
SCHEDULE A PLAN
PATH WORK LIMITS



SCHEDULE B PLAN
WAYSIDE WORK LIMITS

LEGEND

- SCHEDULE A
- SCHEDULE B



PLAN LEGEND

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69500\PLANSET\69500_A4_LAYOUT.DWG

GRANTHAM, RICK L (DOT)
TAB: A4 Monday, July 20, 2015 12:06:04 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

CHECKED BY: J. BROWN

STATE OF ALASKA 49 TH James L. Brown July 20, 2015 CE-14083 PROFESSIONAL ENGINEER

DESIGNED BY: J. BROWN

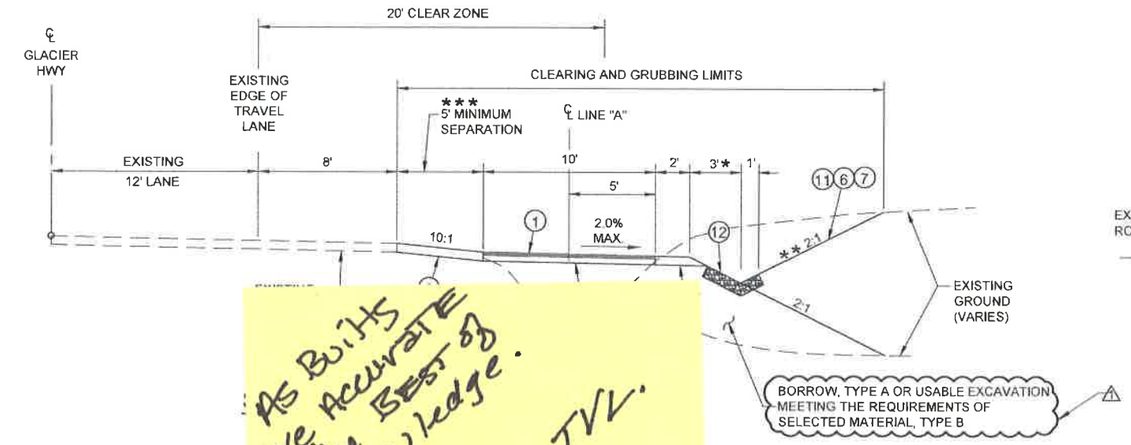
DRAWN BY: R. GRANTHAM

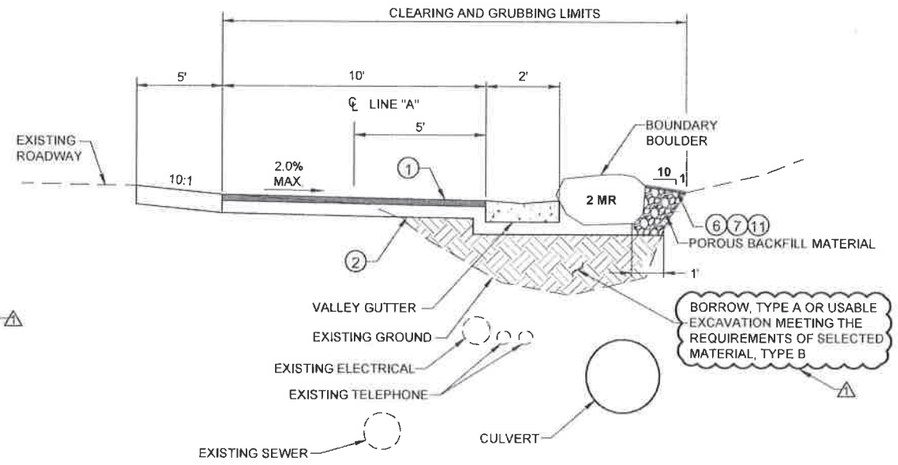
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

LAYOUT PLAN

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
A4	54



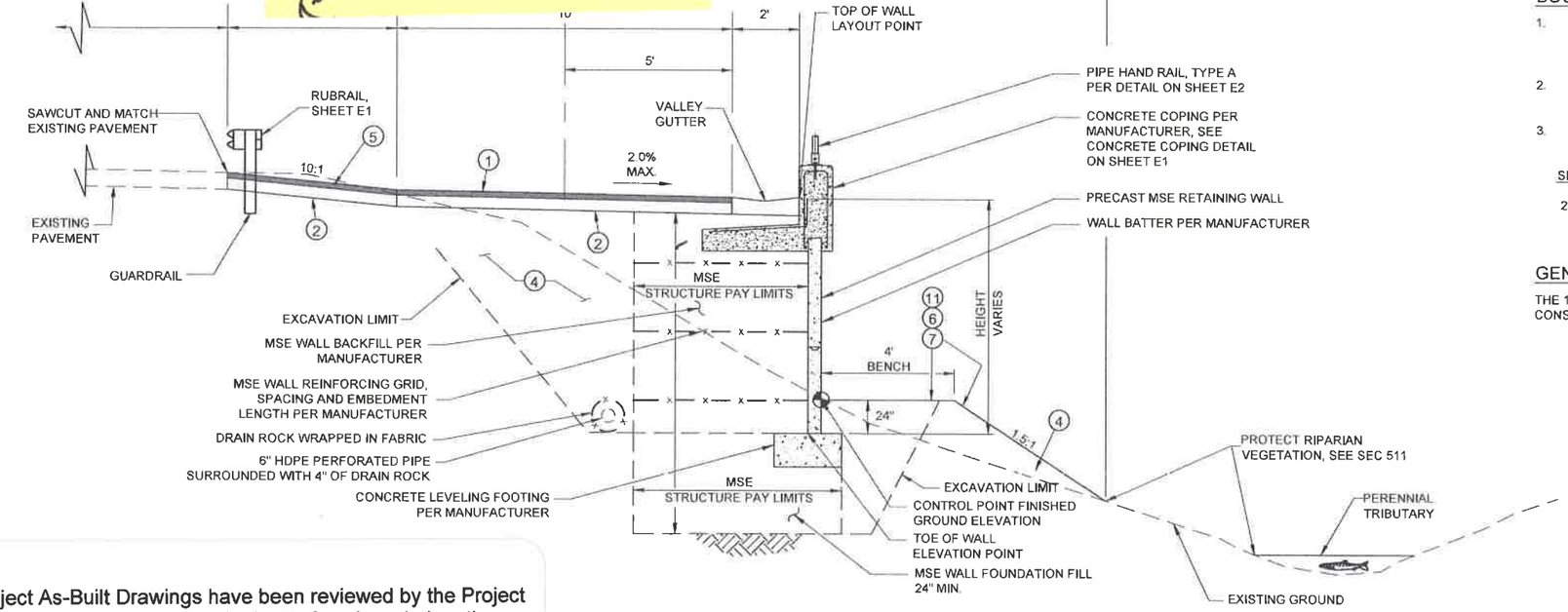


VALLEY GUTTER / BOUNDARY BOULDER SECTION

STA. 2+20 TO STA. 6+10
LINE "A"

As Built's are Accurate to the Best of my Knowledge.
4/2/19
Reviewed By: TVL.
@ AK DOT.

SEE REVERSE SIDE for CHANGE ORDER #20 Price Reduct. for D-1.



MSE WALL TYPICAL

STA. 24+20 TO STA. 27+40
LINE "A"

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 2/7/2018

BOUNDARY BOULDER NOTES:

1. BOUNDARY BOULDER LOCATION & OFFSETS SHALL BE APPROVED BY THE PROJECT ENGINEER. SEE F SHEETS AND SUMMARY TABLE FOR BOULDER LOCATIONS.
2. LONG DIMENSION OF ROCKS SHALL EXTEND BACK TOWARDS THE CUT OR FILL FACE.
3. THE SIZE CATEGORY FOR ROCK SHALL BE AS FOLLOWS:

SIZE	APPROXIMATE WEIGHT	DIMENSIONS
2MR	150 TO 250 LBS	12-18 INCHES

GENERAL NOTES:

THE 10:1 SLOPE FROM THE EXISTING ROADWAY IS APPROXIMATE. CONSTRUCT PATH ACCORDING TO PROFILE.

LEGEND:

1. 2" ASPHALT SIDEWALK
2. 4" BED COURSE MATERIAL, GRADING D-1
3. 6" BED COURSE MATERIAL, GRADING D-1
4. SELECT MATERIAL, TYPE A
5. GUARDRAIL PAVING
6. 2" TOPSOIL
7. SEEDING
8. 3" ASPHALT CONCRETE, TYPE II, CLASS B
9. 6" AGGREGATE BASE COURSE, GRADING D-1
10. 15" SELECTED MATERIAL, TYPE A
11. BONDED FIBER MATRIX (BFM)
12. 8" DITCH LINING

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69500\PLANSET\69500_B1-B4_TYP SEC.DWG
CHAMBERS, LUCAS M (DOT)
TAB: B1 Monday, January 04, 2016 1:56:25 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION
1	01/04/16	MATERIAL TYPE MODS.

PLAN LEGEND

CHECKED BY: J. BROWN

STATE OF ALASKA 49TH James L. Brown 01-04-2016 CE-14089 PROFESSIONAL ENGINEER

DESIGNED BY: J. BROWN, L. CHAMBERS
DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

TYPICAL SECTIONS

PROJECT DESIGNATION
0933037 ~ 69500

STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
B1	56

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHCOAST REGION

Change Order

Project No.: 69500/0933037

Change Order No. 20

Project Name: JNU-Glacier Highway Multi-Use Path to UAS

		Change Order Summary:	
Contractor:	Secon, Inc.		
Address:	P.O. Box 32159	Calendar Days (+ / -):	N/A
	Juneau, AK 99803	New Completion Date:	N/A
		Amount of Change Order:	-$4,868.40

Recommended By: _____ Date: 5 Dec 2017

Title: Project Engineer

Approved By: _____ Date: 5-Dec-17

Title: Project Manager

This change order constitutes agreement to terms, conditions and prices stated below.

Accepted By: _____ Date: ____

Contractor's Representative

Acknowledgement indicates only receipt of Change Order and not mutual agreement for basis of payment or time allowance. If a the matter cannot be resolved within 7 days from signature date, an Intent to Claim form must be submitted to the engineer within 14 days.

Acknowledged By: _____ Date: 5.31.18

Contractor's Representative

Permission for previously submitted subcontractor(s) to perform all or portions of the work described herein is as checked: ☒ Yes ☐ No ☐ N/A

Seal of Alaskan Professional Engineer *(if required)*

STATE OF ALASKA 49 TH James L. Brown CE-14083 REGISTERED PROFESSIONAL ENGINEER

The following change(s) in the above Contract are hereby made in accordance with the terms of the Contract and under the terms and conditions stated below. Price adjustments resulting from inaccurate cost and pricing data are subject to the provisions of AS 36.30.400(c). This document shall become an amendment to the Contract and all provisions of the Contract will be applicable.

DESCRIPTION OF CHANGE (Use Continuation Sheet 25D-065 as Required)

In accordance with Subsection 104-1.02 of the Standard Specifications, the following changes are hereby made:

Establish New Item 301(1A)A Aggregate Base Course, Grading D-1 Price Reduction

Description: This item authorizes 1,167.11 tons of non-conforming Aggregate Base Course, grading D-1 from Item 301(1)A Aggregate Base Course Grading D-1 material on Bid Schedule A, for the main path, to remain in place with a price reduction in accordance with Subsection 105-1.03.

Materials: See new Table 703-2 for tolerance changes.

Construction Requirements: No changes.

Method of Measurement: This item is Lump Sum and in accordance with Subsection 109-1.01 is not measured for

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHCOAST REGION

Change Order

Project No.: 69500/0933037

Change Order No. 21

Project Name: JNU-Glacier Highway Multi-Use Path to UAS

		Change Order Summary:	
Contractor:	Secon, Inc.		
Address:	P.O. Box 32159	Calendar Days (+ / -):	N/A
	Juneau, AK 99803	New Completion Date:	N/A
		Amount of Change Order:	-$2,418.12

Recommended By: _____ Date: 2/2/2018

Title: Project Engineer

Approved By: _____ Date: 2/2/18

Title: Project Manager

This change order constitutes agreement to terms, conditions and prices stated below.

Accepted By: _____ Date: 2/2/18

Contractor's Representative

Acknowledgement indicates only receipt of Change Order and not mutual agreement for basis of payment or time allowance. If a the matter cannot be resolved within 7 days from signature date, an Intent to Claim form must be submitted to the engineer within 14 days.

Acknowledged By: _____ Date: ____

Contractor's Representative

Permission for previously submitted subcontractor(s) to perform all or portions of the work described herein is as checked: ☐ Yes ☐ No ☒ N/A

Seal of Alaskan Professional Engineer *(if required)*

STATE OF ALASKA 49TH 2.5.18 Robert E. Trousil Jr. CE 12504

The following change(s) in the above Contract are hereby made in accordance with the terms of the Contract and under the terms and conditions stated below. Price adjustments resulting from inaccurate cost and pricing data are subject to the provisions of AS 36.30.400(c). This document shall become an amendment to the Contract and all provisions of the Contract will be applicable.

DESCRIPTION OF CHANGE (Use Continuation Sheet 25D-065 as Required)

In accordance with Subsection 104-1.02 of the Standard Specifications, the following changes are hereby made:

Reduce Existing Item 630(1)A Geotextile, Separation by 2,259 square yards.

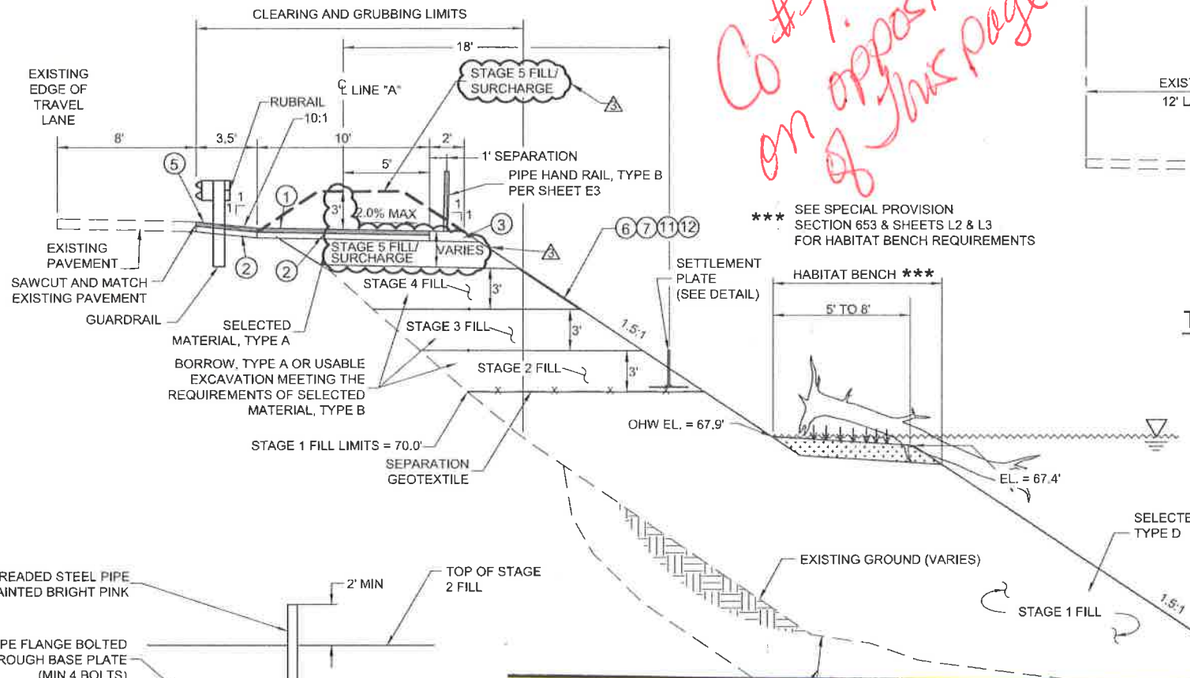
Establish New Item 630(3)A Geotextile, Separation (200)

Description: This item is for geotextile separation fabric meeting the requirements of 200 lb grab tensile strength (Class 3), but not the Class 1+ specifications required for Item 630(1)A Geotextile, Separation on Bid Schedule A, for the main path.

Materials: *Modify as follows:*

729-2.01 GEOTEXTILE, SEPARATION AND STABILIZATION

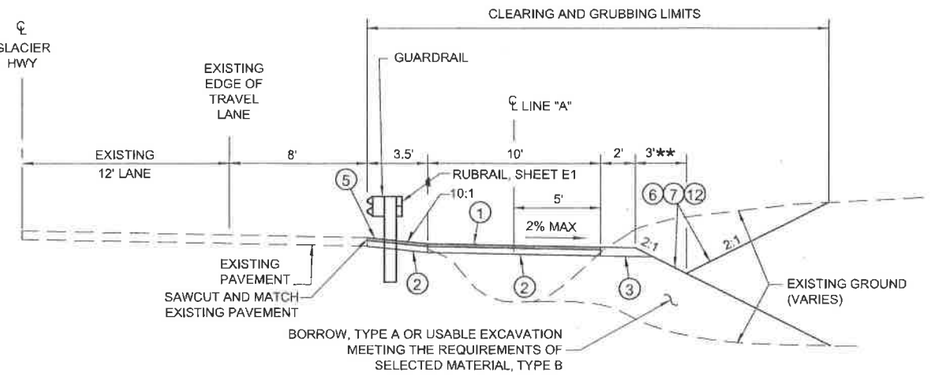
Co #1. on opposite side of this page.

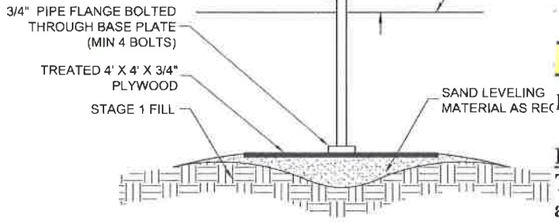


TYPICAL SHARED USE PATH WITH GUARDRAIL SECTION

STA. 23+00 TO 24+20, 27+40 TO 32+50
LINE "A"

** SEE PLAN AND PROFILE SHEETS FOR SPECIAL DITCH.





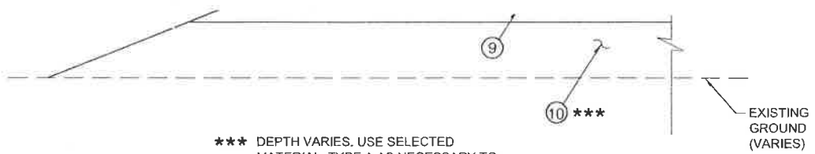
SETTLEMENT PLATE DETAIL

SETTLEMENT PLATFORM NOTES

1. INSTALL SETTLEMENT PLATFORM PRIOR TO PLACEMENT OF STAGE
2. 3/4" STEEL SHALL NOT EXTEND MORE THAN 3' ABOVE THE FILL SURF ANY TIME.
3. SETTLEMENT PLATFORMS SHALL BE PROTECTED FROM CONSTRUC EQUIPMENT.

LEGEND:

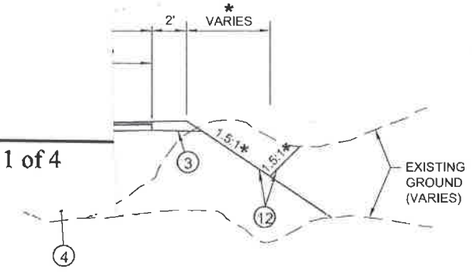
1. 2" ASPHALT SIDEWALK
2. 4" BED COURSE MATERIAL, GRADING D-1
3. 6" BED COURSE MATERIAL, GRADING D-1
4. SELECT MATERIAL, TYPE A
5. GUARDRAIL PAVING
6. 2" TOPSOIL
7. SEEDING
8. 3" ASPHALT CONCRETE, TYPE II, CLASS B
9. 6" AGGREGATE BASE COURSE, GRADING D-1
10. SELECTED MATERIAL, TYPE A
11. MATTING
12. BONDED FIBER MATRIX (BFM)



*** DEPTH VARIES. USE SELECTED MATERIAL, TYPE A AS NECESSARY TO MEET GRADE.

WAYSIDE PARKING AREA TYPICAL

SEE SHEETJ1 FOR GRADES AND LAYOUT



LINE "B" PATH TYPICAL SECTION

STA. 0+36.56 TO STA. 2+70.51
LINE "B"

* DITCH SLOPE AND WIDTH VARIES. SEE SHEET F10 FOR LAYOUT. USE 3' WIDTH AND 1.5:1 SLOPE WHEN NOT SPECIFIED ON F10 LAYOUT. SEE SHEET L1 FOR LANDSCAPING.

DESCRIPTION OF CHANGE (Use Continuation Sheet 25D-065 as Required)

In accordance with Subsection 104-1.02 of the Standard Specifications, the following changes are hereby made:

Reason for Change Order

This is a material change to a major bid item. The original MSE Wall design had to be completely replaced to accommodate a new typical section and avoid conflict with the adjacent fish stream. The new section increases the depth, increases the block quantities, requires additional excavation, shoring, sheeting, a stepped footing, larger blocks, additional engineering, and additional ESCP control.

Replace **Sheet B3 and M1** *with the attached* **Sheet B3 and M1.**

Delete Item 511(1A)a MSE Concrete Wall – Pattern Finish

AYER

B"

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 2/7/2018

Summary of Quantities

ITEM NO.	ITEM	UNIT	QUANTITY (+ or -)	PRICE	AMOUNT (+ or -)
511(1A)a	MSE Concrete Wall-Pattern Finish	S.F.	-2,216.0	$100.00	-$221,600.00
511(1B)a	MSE Concrete Wall-Pattern Finish	S.F.	+3,490.0	$124.00	+$432,760.00
				TOTAL THIS CHANGE ORDER	**+$211,160.00**

Change Order

Change Order No. 8

Pay Unit Square Foot

PATH: Q:\JNU\69500\PLAI SEC.DWG
CHAMBERS,
TAB: B2 Wednesd
ADDI
ATTA
RECO

No.	DATE
1	01/04/1
2	01/11/1
3	01/27/1

DESIGNED BY: J. BROWN, L. CHAMBERS
DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

TYPICAL SECTIONS

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
B2	56

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

Change Order

Change Order No. 7

DESCRIPTION OF CHANGE (Use Continuation Sheet 25D-065 as Required)

In accordance with Subsection 104-1.02 of the Standard Specifications, the following changes are hereby made:

Reason for Change Order
The elevations shown in Section 203 and on the Typical Section Sheet B2 vary from the profile elevations. This change modifies the plans and specifications to provide a three foot surcharge on the fill during Stage 5 and eliminates the need for the Stage 6 surcharge.

Delete Item 203(19)a Stage 6 Temporary Surcharge

Replace **Sheet B2** *with the attached* **Sheet B2.**

Subsection 203-3.03; Stage 2 through 5: Above OHW Embankment Construction, *modify as follows:*

Summary of Quantities

ITEM NO.	ITEM	UNIT	PRICE	QUANTITY (+ or -)	AMOUNT (+ or -)
203(19)a	Stage 6 Temporary Surcharge	Ton	$20.00	-1,226	-$24,520.00
		TOTAL THIS CHANGE ORDER			**-$24,520.00**

This Change Order **decreases** the Contract Amount by **$24,520.00**.

The Contract Completion Date is not affected by this Change Order.

PLEASE INDICATE YOU ACCEPTANCE OR ACKNOWLEDGEMENT BY SIGNING AND DATING THE APPROPRIATE SIGNATURE LINE, AND THEN RETURN THE ORGINAL DOCUMENT TO THIS OFFICE.

Change Order

Change Order No. 9

DESCRIPTION OF CHANGE (Use Continuation Sheet 25D-065 as Required)

In accordance with Subsection 104-1.02 of the Standard Specifications, the following changes are hereby made:

Reason for Change Order
The Department performed test pit investigation to determine the quantity of useable excavation within the excavation limits for use as fill.

Establish New Item 203(21)a Test Pit Investigation

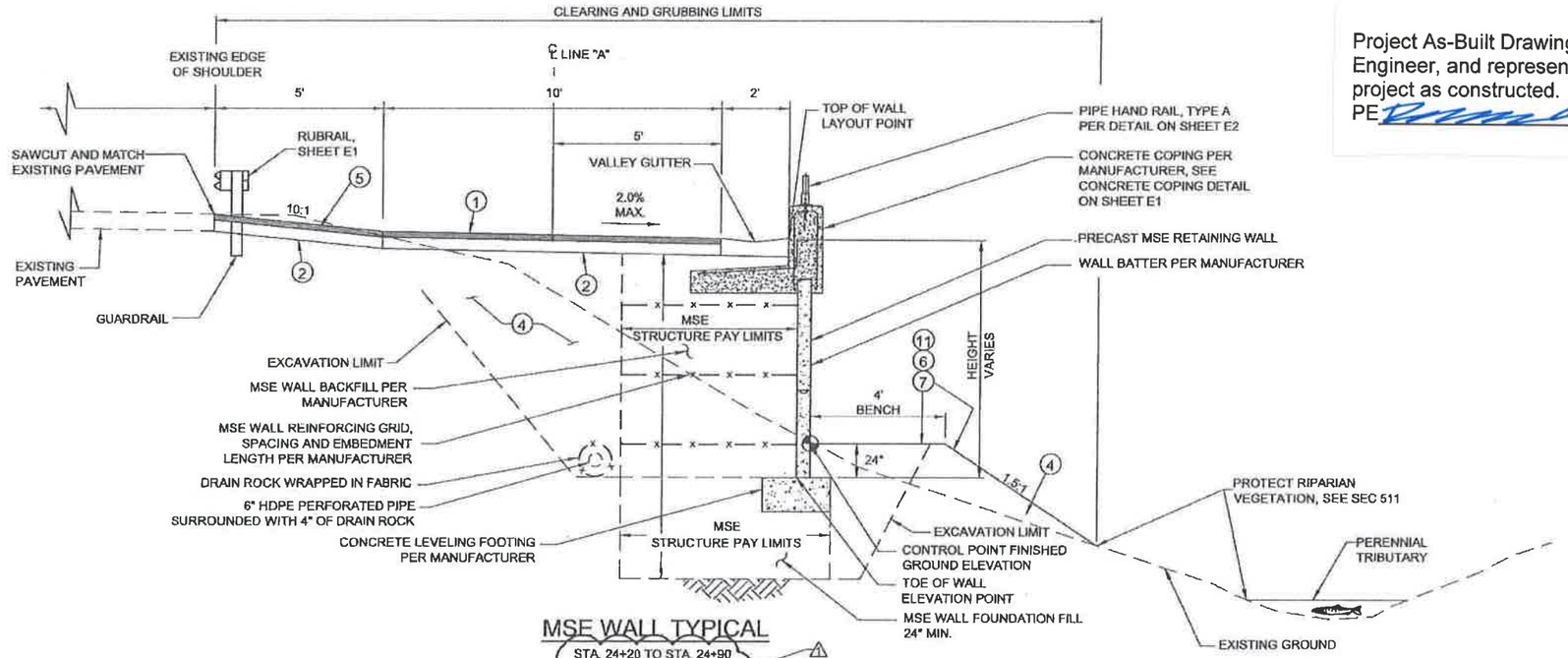
Description: Provide test pits in the existing ground where unclassified excavation is called for on the plans at a frequency of 300 feet or as designated by the Engineer. Test pits will be used to sample the existing material and evaluate the amount of useable excavation within project limits.

Materials: None.

Summary of Quantities

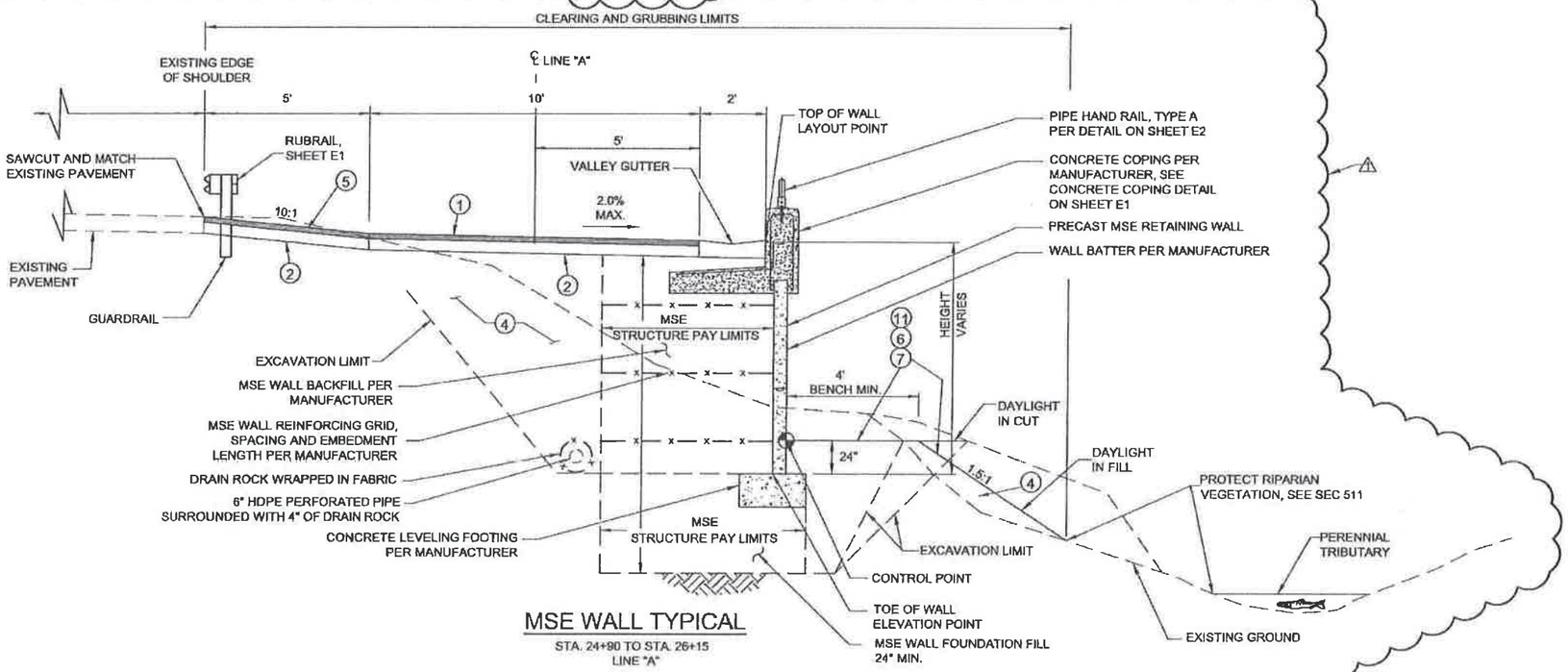
ITEM NO.	ITEM	UNIT	PRICE	QUANTITY (+ or -)	AMOUNT (+ or -)
203(21)a	Test Pit Investigation	L.S.	$1,593.41	+1.0	+$1,593.41
		TOTAL THIS CHANGE ORDER			**+$1,593.41**

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE [signature] Date 2/7/2018



MSE WALL TYPICAL

STA. 24+20 TO STA. 24+90
STA. 26+15 TO STA. 27+40
LINE "A"



MSE WALL TYPICAL

STA. 24+90 TO STA. 26+15
LINE "A"

LEGEND:

1. 2" ASPHALT SIDEWALK
2. 4" BED COURSE MATERIAL, GRADING D-1
3. 6" BED COURSE MATERIAL, GRADING D-1
4. SELECT MATERIAL, TYPE A
5. GUARDRAIL PAVING
6. 2" TOPSOIL
7. SEEDING
8. 3" ASPHALT CONCRETE, TYPE II, CLASS B
9. 6" AGGREGATE BASE COURSE, GRADING D-1
10. 15" SELECTED MATERIAL, TYPE A
11. BONDED FIBER MATRIX (BFM)
12. 8" DITCH LINING

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69500\PLANSET\69500_B1-B3_TYP SEC.DWG
GRANTHAM, RICK L (DOT)
TAB: B3 Monday, November 23, 2015 1:11:57 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION
1	11/23/15	RETAINING WALL MODS

PLAN LEGEND

CHECKED BY: J. BROWN

STATE OF ALASKA 49 TH — James L. Brown — 11-23-15 — CE-14063 — Licensed Professional Engineer

DESIGNED BY: J. BROWN, L. CHAMBERS

DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

TYPICAL SECTIONS

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
B3	54

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHCOAST REGION

Change Order

Project No.: 69500/0933037 Change Order No. 22

Project Name: JNU-Glacier Highway Multi-Use Path to UAS

		Change Order Summary:	
Contractor:	Secon, Inc.		
Address:	P.O. Box 32159	Calendar Days (+ / -):	N/A
	Juneau, AK 99803	New Completion Date:	N/A
		Amount of Change Order:	+$13,394.21

Recommended By: _____ Date: 8/1/2018

Title: Project Engineer

Approved By: _____ Date: _____

Title: Project Manager

This change order constitutes agreement to terms, conditions and prices stated below.

Accepted By: _____ Date: ____

Contractor's Representative

Acknowledgement indicates only receipt of Change Order and not mutual agreement for basis of payment or time allowance. If a the matter cannot be resolved within 7 days from signature date, an Intent to Claim form must be submitted to the engineer within 14 days.

Acknowledged By: _____ Date: ____

Contractor's Representative

Permission for previously submitted subcontractor(s) to perform all or portions of the work described herein is as checked: ☐ Yes ☐ No ☒ N/A

Seal of Alaskan Professional Engineer *(if required)*
N/A

The following change(s) in the above Contract are hereby made in accordance with the terms of the Contract and under the terms and conditions stated below. Price adjustments resulting from inaccurate cost and pricing data are subject to the provisions of AS 36.30.400(c). This document shall become an amendment to the Contract and all provisions of the Contract will be applicable.

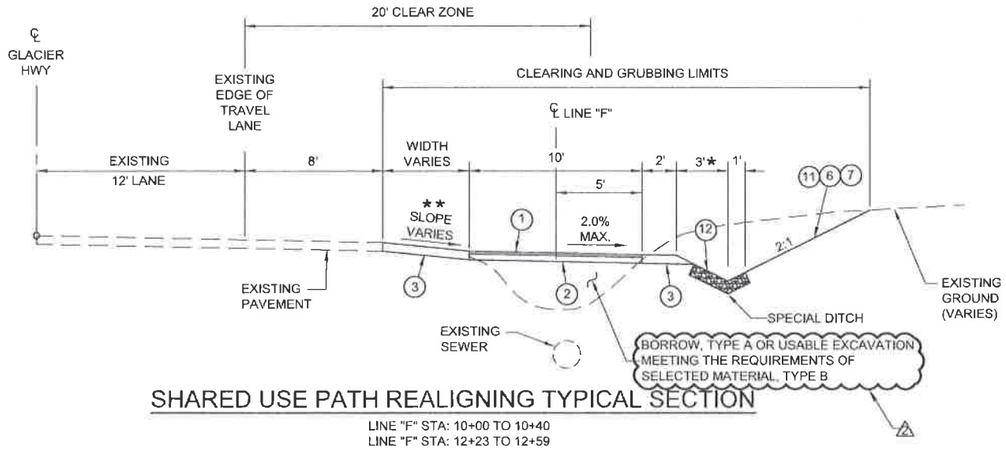
DESCRIPTION OF CHANGE (Use Continuation Sheet 25D-065 as Required)

In accordance with Subsection 104-1.02 of the Standard Specifications, the following changes are hereby made:

Establish New Item 641(8)A Drainage and Slope Stability Improvements
Description: This item improved drainage and slope stability throughout the project where erosion issues were prevalent. The work was initiated under Item 641(5)A Temporary Erosion and Pollution Control By Directive, but the work became permanent repairs and improvements. This item includes these permanent erosion and pollution control work items.

Materials: Comply with all applicable material sections for the installed material.

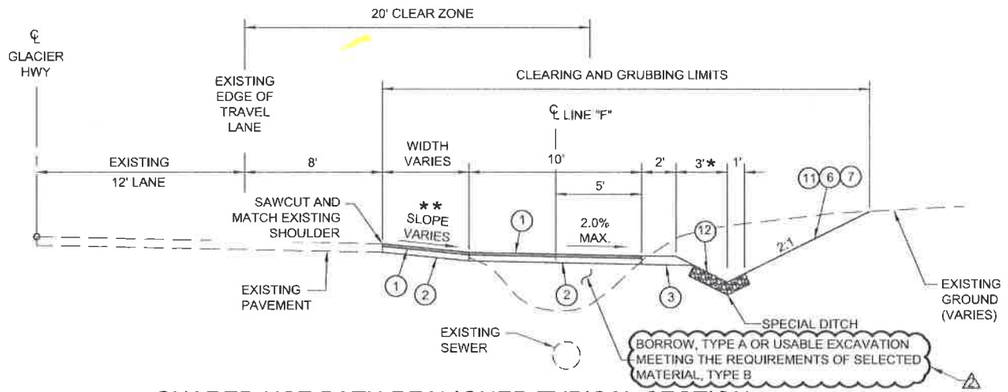
Construction Requirements:
Install the following for the provided plans and directives:



SHARED USE PATH REALIGNING TYPICAL SECTION

LINE "F" STA: 10+00 TO 10+40
LINE "F" STA: 12+23 TO 12+59

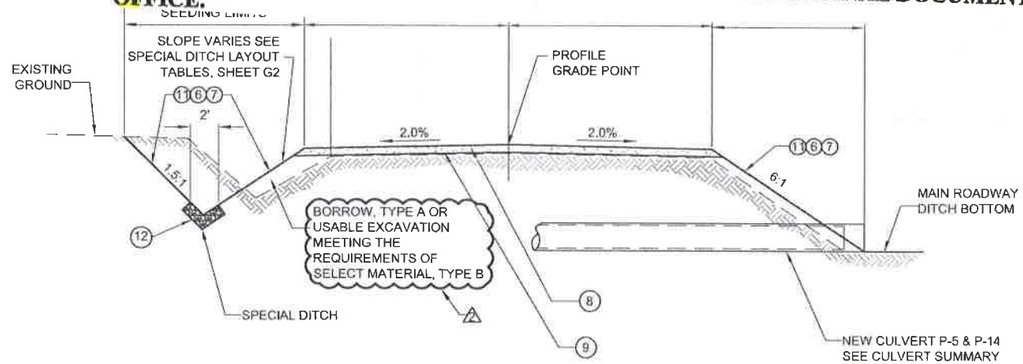
* SEE SHEET G1 FOR SPECIAL DITCH PROFILE.
** CONSTRUCT PATH ACCORDING TO PROFILE. IF NECESSARY ADJUST CROSS SLOPE TO 1.0% MIN. OR LOWER PROFILE TO AVOID CREATING A BERM WITH OUTSIDE EDGE OF PATH.



SHARED USE PATH REALIGNED TYPICAL SECTION

LINE "F" STA: 10+40 TO 12+23

* SEE SHEET G1 FOR SPECIAL DITCH PROFILE.
** CONSTRUCT PATH ACCORDING TO PROFILE. IF NECESSARY ADJUST CROSS SLOPE TO 1.0% MIN. OR LOWER PROFILE TO AVOID CREATING A BERM WITH OUTSIDE EDGE OF PATH.



PAVED DRIVEWAY TYPICAL SECTION

LINE "D" STA: 0+11 TO 0+38
LINE "E" STA: 0+10 TO 0+44

Change Order

Change Order No. 4

PATH: Q:\JNU\69500\PLANSET\69500_B1-B4_TYP SEC.DWG
CHAMBERS, LUCAS M (DOT)
TAB: B4 Monday, January 04, 2016 1:57:49 PM

ADDENDUM NUMBER
ATTACHMENT NUMBER

REVISIONS

DESCRIPTION
DED NEW SHEET
TERIAL TYPE MODS.

DESCRIPTION OF CHANGE (Use Continuation Sheet 25D-065 as Required)

In accordance with Subsection 104-1.02 of the Standard Specifications, the following changes are hereby made:

Reason for Change Order
Additional locations for useable excavation were identified in the plans to avoid safety risks during winter excavation.

SHEET B1, B2 and B4. *Delete and replace with the attached SHEET B1, B2, and B4.*

This Change Order does not affect the Contract Amount.

The Contract Completion Date is not affected by this Change Order.

PLEASE INDICATE YOU ACCEPTANCE OR ACKNOWLEDGEMENT BY SIGNING AND DATING THE APPROPRIATE SIGNATURE LINE, AND THEN RETURN THE ORGINAL DOCUMENT TO THIS OFFICE.

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 2/7/2018

LEGEND:

1. 2" ASPHALT SIDEWALK
2. 4" BED COURSE MATERIAL, GRADING D-1
3. 6" BED COURSE MATERIAL, GRADING D-1
4. SELECT MATERIAL, TYPE A
5. GUARDRAIL PAVING
6. 2" TOPSOIL
7. SEEDING
8. 3" ASPHALT CONCRETE, TYPE II, CLASS B
9. 6" AGGREGATE BASE COURSE, GRADING D-1
10. 15" SELECTED MATERIAL, TYPE A
11. BONDED FIBER MATRIX (BFM)
12. 8" DITCH LINING

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PLAN LEGEND

CHECKED BY: J. BROWN

STATE OF ALASKA 49TH — James L. Brown — CE-14083 — Professional Engineer

DESIGNED BY: J. BROWN, L. CHAMBERS
DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

TYPICAL SECTIONS

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
B4	56

69500 REVIEWED BY TVL. 3-29-18. SOA.

ESTIMATE OF QUANTITIES - SCHEDULE A

ITEM NO	ITEM DESCRIPTION	PAY UNIT	QUANTITY
201(3A)a	CLEARING AND GRUBBING	ACRE	~~3.3~~ 2.439
201(7)a	INVASIVE SPECIES CONTROL, REMOVAL AND DISPOSAL	SQUARE YARD	~~2,968~~ 3414.95
202(2)a	REMOVAL OF PAVEMENT	SQUARE YARD	~~752~~ 868.00
202(4)a	REMOVAL OF CULVERT PIPE Actual: 336.5 L.F.	LINEAR FOOT	~~385~~
202(10)a	SINGLE MAILBOX INSTALLATION	EACH	2
202(12)a	DOUBLE MAILBOX INSTALLATION	EACH	1
203(3)a	UNCLASSIFIED EXCAVATION	CUBIC YARD	4,460
203(6A)a	BORROW, SELECTED MATERIAL, TYPE A Actual: 14,492.70	TON	~~5,151~~
203(6B)a	BORROW, SELECTED MATERIAL, TYPE B	TON	200
203(6D)a	BORROW, SELECTED MATERIAL, TYPE D Actual: 7285.57	TON	~~6,842~~
203(19)a	STAGE 6 TEMPORARY SURCHARGE	TON	1,226
203(20)a	GAUGES AND MONITORING DEVICES 1-MONITOR STATION.	LUMP SUM	ALL REQ'D 1 ✓
301(1)a	AGGREGATE BASE COURSE, GRADING D-1 ACTUAL: 2,534.20	TON	~~2,110~~
511(1)a	MECHANICALLY STABILIZED EARTH WALL	SQUARE FOOT	2,216
514(1)a	BOUNDARY BOULDERS	LINEAR FOOT	110
603(1)-18a	18 INCH CORRUGATED STEEL PIPE	LINEAR FOOT	6
603(1)-24a	24 INCH CORRUGATED STEEL PIPE	LINEAR FOOT	59
603(21)-18a	18 INCH CORRUGATED POLYETHYLENE PIPE	LINEAR FOOT	130
603(21)-24a	24 INCH CORRUGATED POLYETHYLENE PIPE 606' L.F.	LINEAR FOOT	~~438~~
604(3)a	RECONSTRUCT EXISTING MANHOLE	EACH	4
604(4)a	ADJUST EXISTING MANHOLE ACTUAL: 3 ADJUSTED	EACH	~~1~~
604(5)a	INLET, TYPE A	EACH	1
606(1)a	W-BEAM GUARDRAIL ACTUAL: 1304.10 L.F.	LINEAR FOOT	1,285
606(6)a	REMOVING AND DISPOSING OF GUARDRAIL Actual: 1351.00 LF	LINEAR FOOT	~~1,283~~
606(13)a	PARALLEL GUARDRAIL TERMINAL Actual = 3 PGT.S	EACH	~~2~~
608(3)a	ASPHALT SIDEWALK ACTUAL: 5,239.3	SQUARE YARD	~~4,350~~
609(2)a	CURB AND GUTTER, TYPE 1	LINEAR FOOT	~~420~~ 669.30'
610(3)a	DITCH LINING Actual: 16.6 STATIONS	STATION	~~17.2~~
611(2)a	RIPRAP, CLASS II ACTUAL: 2,381.43	TON	~~1,881~~
615(1)a	STANDARD SIGN	SQUARE FOOT	~~67~~ 59
618(2)a	SEEDING ACTUAL: 111.50 Pounds.	POUND	~~176~~
619(2)a	MATTING	SQUARE YARD	1,117
619(3)a	BONDED FIBER MATRIX (BFM) Actual 3,700.0 LBS.	POUND	~~4,630~~
620(1)a	TOPSOIL Actual 495 YARDS.	SQUARE YARD	~~5,090~~
625(1)a	PIPE HAND RAIL, TYPE A	LINEAR FOOT	325
625(2)a	PIPE HAND RAIL, TYPE B	LINEAR FOOT	410
627(10)a	ADJUSTMENT OF VALVE BOX	EACH	3
627(11)a	SHUT-OFF VALVE RELOCATION	LUMP SUM	ALL REQ'D
629(1)a	GUARDRAIL PAVING ACTUAL: 1,358.30 LF.	LINEAR FOOT	~~1,385~~
630(1)a	GEOTEXTILE, SEPARATION ACTUAL: 3,006.70	SQUARE YARD	~~752~~
635(2)a	INSULATION BOARD	CONTINGENT SUM	ALL REQ'D
639(1)a	RESIDENCE DRIVEWAY	EACH	~~2~~ 7.
640(1)a	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	ALL REQ'D
641(1)a	EROSION, SEDIMENT AND POLLUTION CONTROL ADMINISTRATION	LUMP SUM	ALL REQ'D
641(3)a	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL	LUMP SUM	ALL REQ'D
641(5)a	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL BY DIRECTIVE	CONTINGENT SUM	ALL REQ'D
641(6)a	WITHHOLDING	CONTINGENT SUM	ALL REQ'D
641(7)a	SWPPP MANAGER	LUMP SUM	ALL REQ'D
642(1)a	CONSTRUCTION SURVEYING	LUMP SUM	ALL REQ'D
642(4)a	SET PRIMARY MONUMENT	EACH	4
642(9)a	REFERENCE EXISTING MONUMENT	EACH	~~4~~ 5.
643(2)a	TRAFFIC MAINTENANCE	LUMP SUM	ALL REQ'D
643(3)a	PERMANENT CONSTRUCTION SIGNS	LUMP SUM	ALL REQ'D
643(12)a	PORTABLE BARRIER ACTUAL: 51.3 LF.	LINEAR FOOT	~~50~~
643(15)a	FLAGGING	CONTINGENT SUM	ALL REQ'D
643(23)a	TRAFFIC PRICE ADJUSTMENT	CONTINGENT SUM	ALL REQ'D
643(25)a	TRAFFIC CONTROL	CONTINGENT SUM	ALL REQ'D
643(24)a	PORTABLE CHANGEABLE MESSAGE BOARD SIGN	DAY	30
646(1)a	CPM SCHEDULING	LUMP SUM	ALL REQ'D
653(1)a	HABITAT BENCH	LUMP SUM	ALL REQ'D
654(1)a	LANDSCAPE SUPERINTENDENT	LUMP SUM	ALL REQ'D
660(3)a	HIGHWAY LIGHTING SYSTEM COMPLETE	LUMP SUM	ALL REQ'D
661(3)a	LOAD CENTER, TYPE 2	EACH	1

ESTIMATE OF QUANTITIES - SCHEDULE B

ITEM NO	ITEM DESCRIPTION	PAY UNIT	QUANTITY
201(3A)b	CLEARING AND GRUBBING	ACRE	0.4
201(7)b	INVASIVE SPECIES CONTROL, REMOVAL AND DISPOSAL	SQUARE YARD	176
203(3)b	UNCLASSIFIED EXCAVATION	CUBIC YARD	1172
203(6A)b	BORROW, SELECTED MATERIAL, TYPE A	TON	100
301(1)b	AGGREGATE BASE COURSE, GRADING D-1	TON	650
401(1)b	HMA, TYPE II; CLASS B	TON	320
401(4)b	ASPHALT BINDER, GRADE 58-28	TON	20
402(1)b	STE-1 ASPHALT FOR TACK COAT	TON	0.5
603(1)-12b	12 INCH CORRUGATED ~~STEEL PIPE~~ POLYETHYLENE PIPE	LINEAR FOOT	73
604(5)b	INLET, TYPE A	EACH	2
607(7)b	WAYSIDE WOOD FENCE	LINEAR FOOT	105
609(2)b	CURB AND GUTTER, TYPE I	LINEAR FOOT	109
620(1)b	TOPSOIL	SQUARE YARD	1695
621(1)b	EXTERIOR PLANTS	LUMP SUM	ALL REQ'D
621(2)b	WAYSIDE BOULDERS	EACH	13
630(1)b	GEOTEXTILE, SEPARATION	SQUARE YARD	25
640(1)b	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	ALL REQ'D
641(1)b	EROSION, SEDIMENT AND POLLUTION CONTROL ADMINISTRATION	LUMP SUM	ALL REQ'D
641(3)b	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL	LUMP SUM	ALL REQ'D
641(5)b	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL BY DIRECTIVE	CONTINGENT SUM	ALL REQ'D
641(6)b	WITHHOLDING	CONTINGENT SUM	ALL REQ'D
641(7)b	SWPPP MANAGER	LUMP SUM	ALL REQ'D
642(1)b	CONSTRUCTION SURVEYING	LUMP SUM	ALL REQ'D
643(2)b	TRAFFIC MAINTENANCE	LUMP SUM	ALL REQ'D
643(23)b	TRAFFIC PRICE ADJUSTMENT	CONTINGENT SUM	ALL REQ'D
643(25)b	TRAFFIC CONTROL	CONTINGENT SUM	ALL REQ'D
646(1)b	CPM SCHEDULING	LUMP SUM	ALL REQ'D
654(1)b	LANDSCAPE SUPERINTENDENT	LUMP SUM	ALL REQ'D
670(1)b	PAINTED TRAFFIC MARKINGS	LUMP SUM	ALL REQ'D

BASIS OF ESTIMATE

ITEM NO.	ITEM	ESTIMATING FACTOR/QUANTITY
203(6A)	BORROW, SELECTED MATERIAL, TYPE A	1.81 TONS/CY
203(6B)	BORROW, SELECTED MATERIAL, TYPE B	1.81 TONS/CY
203(6D)	BORROW, SELECTED MATERIAL, TYPE D	1.81 TONS/CY
203(19)	STAGE 6 TEMPORARY SURCHARGE	1.81 TONS/CY
301(1)	AGGREGATE BASE COURSE, GRADING D-1	1.95 TON/CY
401(1)	HMA, TYPE II; CLASS B	120 LBS/SY/IN
401(2)	ASPHALT BINDER, GRADE 58-28	6% OF ITEM 401(1)
402(1)	STE-1 ASPHALT FOR TACK COAT	0.1 GAL/SY, 243 GAL/TON
611(2)	RIPRAP, CLASS II	1.41 TONS/CY
618(2)	SEEDING	50 LBS/ACRE
619(3)	BONDED FIBER MATRIX	4000 LB/ACRE
621(1)	EXTERIOR PLANTS	0.3 ACRES OF WAYSIDE SEEDING, 216 PLANTS
653(1)	HABITAT BENCH	410 LINEAR FOOT

Please see reverse side for summary of QTY's and summary of change orders.

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69500\PLANSET\69500_C1 EST QTY.DWG
CHAMBERS, LUCAS M (DOT)
TAB: C1 Tuesday, July 28, 2015 11:34:58 AM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

PLAN LEGEND

CHECKED BY: J. BROWN

STATE OF ALASKA 49TH James L. Brown July 20, 2015 CE-14084 REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY: J. BROWN

DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

ESTIMATE OF QUANTITIES

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
C1	54

25D-025
12/82 DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

FINAL ESTIMATE
SUMMARY OF QUANTITIES

Projec 69500/0933037 JNU Glacier Hwy Multi-
Projec Use Path to UAS

ITEM NO.	FA CODE	ACT. CODE	ITEM	UNIT	UNIT PRICE	QUANTITY	ANITICPATED AMOUNT
201(3A)a	28	450	CLEARING AND GRUBBING	ACRE	11,000.00	2.439	$ 26,829.00
201(7)a	28	450	INVASIVE SPECIES CONTROL, REMOVAL AN	SY	5.00	3414.95	$ 17,074.75
202(2)a	28	450	REMOVAL OF PAVEMENT	SY	5.00	868.00	$ 4,340.00
202(4)a	28	450	REMOVAL OF CULVERT PIPE	LF	30.00	336.50	$ 10,095.00
202(10)a	28	450	SINGLE MAILBOX INSTALLATION	EA	500.00	2.00	$ 1,000.00
202(12)a	28	450	DOUBLE MAILBOX INSTALLATION	EA	600.00	1.00	$ 600.00
203(3)a	28	450	UNCLASSIFIED EXCAVATION (CO#18)	CY	20.00		$ -
203(6A)a	28	450	BORROW, SELECTED MATERIAL, TYPE A	TON	20.00	14492.70	$ 289,854.00
203(6B)a	28	450	BORROW, SELECTED MATERIAL, TYPE B (CO#3)	TON	30.00		$ -
203(6D)a	28	450	BORROW, SELECTED MATERIAL, TYPE D	TON	20.00	7285.57	$ 145,711.40
203(19)a	28	450	STAGE 6 TEMPORARY SURCHARGE (CO#7)	TON	20.00		$ -
203(20)a	28	450	GAUGES AND MONITORING DEVICES	LS	10,000.00	1.00	$ 10,000.00
301(1)a	28	450	AGGREGATE BASE COURSE, GRADING D-1	TON	30.00	2334.20	$ 70,026.00
511(1A)a	28	450	MSE CONCRETE WALL-PATTERN FINISH	SF	100.00		$ -
514(1)a	28	450	BOUNDARY BOULDERS	LF	50.00		$ -
603(1-18)a	28	450	18 INCH CORRUGATED STEEL PIPE	LF	120.00		$ -
603(1-24)a	28	450	24 INCH CORRUGATED STEEL PIPE	LF	130.00	66.00	$ 8,580.00
603(21)-18a	28	450	18 INCH CORRUGATED POLYETHYLENE PIPE	LF	120.00	277.00	$ 33,240.00
603(21-24)a	28	450	24 INCH CORRUGATED POLYETHYLENE PIPE	LF	130.00	429.00	$ 55,770.00
604(3)a	28	450	RECONSTRUCT EXISTING MANHOLE	EA	2,000.00	4.00	$ 8,000.00
604(4)a	28	450	ADJUST EXISTING MANHOLE	EA	1,200.00	3.00	$ 3,600.00
604(5)a	28	450	INLET, TYPE A	EA	2,500.00	1.00	$ 2,500.00
606(1)a	28	450	W-BEAM GUARDRAIL	LF	36.00	1304.10	$ 46,947.60
606(6)a	28	450	REMOVING AND DISPOSING OF GUARDRAIL	LF	5.00	1351.00	$ 6,755.00
606(13)a	28	450	PARALLEL GUARDRAIL TERMINAL	EA	3,200.00	3.00	$ 9,600.00
608(3)a	28	450	ASPHALT SIDEWALK	SY	22.00	5239.3	$ 115,264.60
609(2B)a	28	450	CURB AND GUTTER, DEPRESSED CURB AND	LF	40.00	669.30	$ 26,772.00
610(3)a	28	450	DITCH LINING	STA.	1,000.00	16.60	$ 16,600.00
611(2)a	28	450	RIPRAP, CLASS II	TON	25.00	2387.43	$ 59,685.75
615(1)a	28	450	STANDARD SIGN	SF	80.00	59.00	$ 4,720.00
618(2)a	28	450	SEEDING	LBS.	60.00	111.50	$ 6,690.00
619(2)a	28	450	MATTING	SY	4.00		$ -
619(3)a	28	450	BONDED FIBER MATRIX (BFM)	LBS.	2.00	3200.00	$ 6,400.00
620(1)a	28	450	TOPSOIL	SY	7.00	495.40	$ 3,467.80
625(1)a	28	450	PIPE HAND RAIL, TYPE A	LF	110.00	325.00	$ 35,750.00
625(2)a	28	450	PIPE HAND RAIL, TYPE B	LF	120.00	410.00	$ 49,200.00
627(10)a	28	450	ADJUSTMENT OF VALVE BOX	EA	350.00	3.00	$ 1,050.00
627(11)a	28	450	SHUT-OFF VALVE RELOCATION	REQ'D	3,000.00		$ -
629(1)a	28	450	GUARDRAIL PAVING	LF	20.00	1358.30	$ 27,166.00
630(1)a	28	450	GEOTEXTILE, SEPARATION (CO#21)	SY	2.00	3006.70	$ 6,013.40
635(2)a	28	450	INSULATION BOARD	CONT	10,000.00	1.37	$ 13,680.61
639(1)a	28	450	RESIDENCE DRIVEWAY	EA	1,200.00	7.00	$ 8,400.00
640(1)a	28	450	MOBILIZATION AND DEMOBILIZATION	LS	135,000.00	1.00	$ 135,000.00
641(1)a	28	450	EROSION, SEDIMENT AND POLLUTION CONT	LS	5,000.00	1.00	$ 5,000.00
641(3)a	28	450	TEMPORARY EROSION, SEDIMENT AND POL	LS	40,000.00	1.00	$ 40,000.00
641(5)a	28	450	TEMPORARY EROSION, SEDIMENT AND POL	CONT	15,000.00	0.02	$ 351.68
641(6)a	28	450	WITHHOLDING	CONT			$ -
641(7)a	28	450	SWPPP MANAGER	LS	5,000.00	1.00	$ 5,000.00
642(1)a	28	450	CONSTRUCTION SURVEYING	LS	40,000.00		$ -
642(4)a	28	450	SET PRIMARY MONUMENT	EA	1,500.00	4.00	$ 6,000.00
642(9)a	28	450	REFERENCE EXISTING MONUMENT	EA	500.00	5.00	$ 2,500.00
643(2)a	28	450	TRAFFIC MAINTENANCE	LS.	60,000.00	1.00	$ 60,000.00
643(3)a	28	450	PERMANENT CONSTRUCTION SIGNS(CO#16	LS	5,000.00		$ -
643(12)a	28	450	PORTABLE CONCRETE BARRIER	LF	90.00	51.30	$ 4,617.00
643(15)a	28	450	FLAGGING	CONT	50,000.00	0.03	$ 1,643.00
643(23)a	28	450	TRAFFIC PRICE ADJUSTMENT	CONT			$ -
643(25)a	28	450	TRAFFIC CONTROL	CONT	60,000.00	0.41	$ 24,781.00
646(1)a	28	450	CPM SCHEDULING	LS	10,000.00	1.00	$ 10,000.00
653(1)a	28	450	HABITAT BENCH	LS	95,000.00	1.00	$ 95,000.00
654(1)a	28	450	LANDSCAPE SUPERINTENDENT	LS	20,000.00	1.00	$ 20,000.00
660(3)a	28	450	HIGHWAY LIGHTING SYSTEM COMPLETE	LS	85,000.00	1.00	$ 85,000.00
661(3)a	28	450	LOAD CENTER, TYPE 2	EA	10,000.00	1.00	$ 10,000.00
			TOTAL ORIGINAL SCHEDULE "A" BID ITEMS				**$ 1,636,275.59**
			CHANGE ORDER ITEMS				
201(6)a	28	450	Selective Tree Removal (CO #17)	;LS	5,811.55	1.00	$ 5,811.55
202(9)a	28	450	Removal of Curb & Gutter (CO #10)	L.F	29.57	38.50	$ 1,138.45
202(13)a	28	450	Removal of Existing Floats (CO #2)	LS.	1,811.25	1.00	$ 1,811.25
202(14)	28	450	Removal of Existing Fence (CO #6)	LS.	2,160.00	1.00	$ 2,160.00
202(15)a	28	450	Removal of Existing Septic Tank (CO#19)	LS.	201.22	1.00	$ 201.22
203(3a)a	28	450	Unclassified Excavation (CO #18)	LS.	78,384.00	1.00	$ 78,384.00
203(21)A	28	450	Test Pit Investigation (CO #9)	LS.	1,593.41	1.00	$ 1,593.41
203(22)a	28	450	Piezometer Backfill (CO #5)	LS.	2,705.00	1.00	$ 2,705.00
203(23)a	28	450	Utility Conflict Excavation (CO #15 & 19)	LS.	2,953.53	1.00	$ 2,953.53
203(24)a	28	450	Excavation Bench (CO #17)	LS.	1,063.63	1.00	$ 1,063.63
511(1B)a	28	450	MSE Wall (CO #8)	SF	124.00	3503.77	$ 434,467.48
514(2a)a	28	450	Backfill for Boundary Boulders (CO#15)	LS.	2,676.63	1.00	$ 2,676.63
604(8)a	28	450	Modify Drainage Modification (CO #17)	LS.	93.82	1.00	$ 93.82
605(8)a	28	450	Underdrain Extension (CO#15)	LS.	3,455.57	1.00	$ 3,455.57
606(1)a	28	450	Parallel Guardrail Terminal Grading	LS.	10,258.00	1.00	$ 10,258.00
608(7)	28	450	Temporary Asphalt Sidewalk (CO #13)	SY	40.00	56.00	$ 2,240.00
609(7)a	28	450	Concrete Spillway (CO #13)	LS.	2,541.50	1.00	$ 2,541.50
620(1A)a	28	450	6" Topsoil (CO #11)	SY	17.33	1535.00	$ 26,601.55
626(3)a	28	450	Relocate the Existing Sewer Line (CO #19)	LS.	4,893.44	1.00	$ 4,893.44
627(12)a	28	450	Relocate the Existing Water Line (CO #19)	LS.	14,405.65	1.00	$ 14,405.65
627(13)a	28	450	Water Main Conflict Avoidance (CO#17)	LS.	401.85	1.00	$ 401.85
630(3)a	28	450	Geotextile, Separation (200) CO #21	LS.	3,298.14	1.00	$ 3,298.14
641(8)a	28	450		LS.	13,394.21	1.00	$ 13,394.21
642(1a)a	28	450	Construction Surveying (CO #11)	LS.	38,000.00	1.00	$ 38,000.00
642(3)a	28	450	Three Person Survey Party (CO #1)	HR.	325.50	15.56	$ 5,064.78
653(2)a	28	450	Habitat Bench Adjustment (CO #16)	LS.	25,780.56	1.00	$ 25,780.56
			TOTAL CHANGE ORDER ITEMS				**$ 685,395.22**
			TOTAL SCHEDULE "A" ITEMS				**$ 2,321,670.81**

Prepared by: _____ Date: _____ Checked By: _____ Date: _____

Item 607

Item 607(1) Cedar Rail Fence @ 147.3' LF. 48' over planned QTY.

Project No.: 69500/0933037 — Summary of Quantities — Change Order

ITEM NO.	ITEM	UNIT	PRICE	QUANTITY (+ or -)	AMOUNT (+ or -)
203(6)a	Borrow, Selected Material, Type B	Ton	$30.00	-200	-$6,000.00
	NET CHANGE THIS ORDER				-$6,000.00

Change Order No. 3

202(2) REMOVAL OF PAVEMENT - SCHEDULE A

BEGIN STATION	BEGIN LINE	BEGIN OFFSET	END STATION	END LINE	END OFFSET	REMARKS
38+85	A	10.0' LT & RT	39+40	A	10' LT & RT	REMOVE EXISTING DRIVEWAY APPROACH

202(2) Removal of Pavement 868 SY.

202 (4) REMOVAL OF CULVERT PIPE - SCHEDULE A

STATION	LINE	OFFSET LEFT	OFFSET RIGHT	DIAMETER (IN)	LENGTH (FT)	REMARKS
0+00	A		10	24	50	HAMILTON STREET
3+86	A	1		24	60	HAMILTON STREET
5+05	A		1	6	20	
5+39	A		2	4	3	
6+06	A	4		18	40	
8+66	A	5		18	60	
9+89	A	3		18	30	
12+32	A	3		18	52	
14+46	A	4		18	80	

58.5' LF Below Planned QTY.

PLANNED LENGTH of REMOVAL: 395' LF.
ACTUAL LENGTH: 336.5' LF.

202(10) SINGLE MAILBOX INSTALLATION - SCHEDULE A

STATION	LINE	OFFSET	REMARKS
6+46	A	7.7' LT	
12+80	A	7.2' LT	MAILBOX FOR HOUSE # 10650

ok

202(12) DOUBLE MAILBOX INSTALLATION - SCHEDULE A

STATION	LINE	OFFSET	REMARKS
15+09	A	7' LT	MAILBOX FOR HOUSE # 10670 AND 10691

ok

CO# 8

511(1) MECHANICALLY STABILIZED EARTH WALL - SCHEDULE A

WALL NO.	START STATION	LINE	OFFSET	END STATION	LINE	OFFSET	MSE AREA (SQ. FT.)	REMARKS
1	24+20	A	7.0' RT	27+40	A	7.0' RT	2537	

Actual for 511(1) → 3503.77 SF.

514(1) BOUNDARY BOULDERS - SCHEDULE A

START STATION	LINE	OFFSET	END STATION	LINE	OFFSET	LENGTH (FT)	REMARKS
2+30	A	RT	2+80	A	RT	50	
5+50	A	RT	6+10	A	RT	60	

603 CULVERT INSTALLATION SUMMARY

PIPE	INLET STA	INLET LINE	INLET OFFSET		INLET INVERT	OUTLET STA	OUTLET LINE	OUTLET OFFSET		OUTLET INVERT	LENGTH (FT)	SIZE (IN.)	MATERIAL	APPROX. GRADE	REMARKS
P-2	S-1	A		RT	81.1	2+11.6	A	10.5	RT	70.8	239	24	CPP	4.31%	BID SCHEDULE A. SEE DRAINAGE DETAIL, SHEET E6
P-3	06+46.8	A	14.8	RT	91.8	S-1	A		RT	81.1	195	24	CPP	5.50%	
P-4	04+48.5	A	11.1	RT	MATCH EXISTING	S-1	A		RT	83.0	6	18	CSP	0.00%	
P-5	10+25.4	A	10.2	RT	112.7	9+68.9	A	12.5	RT	109.8	57	18	CPP	-5.13%	BID SCHEDULE A
P-6	12+80.2	A	11.8	RT	122.0	12+40.2	A	11.8	RT	120.7	40	18	CPP	3.26%	BID SCHEDULE A
P-7	15+20.2	A	12.9	RT	127.6	14+60.2	A	11.7	RT	127.1	60	18	CPP	-0.85%	BID SCHEDULE A
P-8	11+30.9	A	5.9	LT	116.5	11+41.4	A	11.0	RT	117.2	20	24	CSP	-3.73%	BID SCHEDULE A
P-9	24+43.3	A	3.7	RT	102.1	24+43.5	A	8.0	RT	102.0	4	24	CPP	2.00%	BID SCHEDULE A
P-10	29+52.2	A	12.5	RT	73.5	29+56.7	A	25.0	RT	73.2	13	24	CSP	2.00%	BID SCHEDULE A
P-11	33+37.0	A	8.2	RT	66.9	33+50.2	A	30.6	RT	66.4	26	24	CSP	2.00%	BID SCHEDULE A
P-12	S-2	B		RT	78.9	S-3	B		RT	77.3	37	12	CPP	5.06%	BID SCHEDULE B. SEE WAYSIDE DRAINAGE DETAIL, SHEET E6
P-13	S-3	B		RT	77.0	1+47.9	B	20.5	LT	76.6	36	12	CPP	1.11%	
P-14	09+19.8	A	12.1	RT	107.2	08+47.8	A	12.1	RT	103.5	72	18	CPP	-5.07%	BID SCHEDULE A

PLANNED	ACTUAL
24" CPP 497' LF.	429' LF.
18" CPP 235' LF.	277' LF.
12" CPP. 73.0' LF.	NO CO. Found.

604 (3) RECONSTRUCT EXISTING MANHOLE - SCHEDULE A

STATION	LINE	OFFSET	TYPE	REMARKS
1+89	A	1.8' LT	SSMH	4 INSTALLED
7+50	A	1.8' LT	SSMH	
10+94	A	3.7' LT	SSMH	
13+32	A	2.8' LT	SSMH	

JL. 3/14/19.

604 (4) ADJUST EXISTING MANHOLE - SCHEDULE A

STATION	LINE	OFFSET	TYPE	REMARKS
17+29	A	2.5' RT	SSMH	

604(4) ACTUAL M/H. Adj. = 3 total. ✓ JL 3/14/19.

604 (5) DRAINAGE STRUCTURE SUMMARY

STRUCT. NO.	STATION	LINE	OFFSET	INSERTION RIM ELEVATION	STRUCT. TYPE	REMARKS
S-1	4+51.70	A	6.1' RT	86.1	INLET, TYPE A	INTERCEPT EXISTING OUTLET PIPE, SCHEDULE A
S-2	1+47.9	B	47.0' RT	81.9	INLET, TYPE A	SCHEDULE B
S-3	1+55.00	B	15.0' RT	79.5	INLET, TYPE A	SCHEDULE B

STATION AND OFFSET TAKEN TO CENTER OF STRUCTURE

ALL TYPE A INLET BOXES SHALL HAVE 18" MIN. SUMP

604(5) DRAIN STRUCTURE Actual Count = 1. ✓ JL 3/14/19

Reviewed By TVL @ AKDOT. 3-29-19

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

Summary of Quantities — Change Order

ITEM NO.	ITEM	UNIT	PRICE	QUANTITY (+ or -)	AMOUNT (+ or -)
202(13)	Removal of Existing Floats	Lump Sum	$1,811.25	+1.0	+$1,811.25
	NET CHANGE THIS ORDER				+$1,811.25

Change Order No. 2

JNU: C SEP

SUMMARIES

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
D1	56

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHCOAST REGION

Change Order

Project No.: 69500/0933037 Change Order No. 5

Project Name: JNU-Glacier Highway Multi-Use Path to UAS

		Change Order Summary:	
Contractor:	Secon, Inc.		
Address:	P.O. Box 32159	Calendar Days (+ / -):	N/A
	Juneau, AK 99803	New Completion Date:	N/A
		Amount of Change Order:	+$2,705.00

Recommended By: _____ Date: 11 Jan 2016

Title: Project Engineer

Approved By: _____ Date: 11 Jan 2016

Title: Project Manager

This change order constitutes agreement to terms, conditions and prices stated below.

Accepted By: _____ Date: ____

Contractor's Representative

Acknowledgement indicates only receipt of Change Order and not mutual agreement for basis of payment or time allowance. If a the matter cannot be resolved within 7 days from signature date, an Intent to Claim form must be submitted to the engineer within 14 days.

Acknowledged By: _____ Date: ____

Contractor's Representative

Permission for previously submitted subcontractor(s) to perform all or portions of the work described herein is as checked: ☒ Yes ☐ No ☐ N/A

Seal of Alaskan Professional Engineer *(if required)*

N/A

The following change(s) in the above Contract are hereby made in accordance with the terms of the Contract and under the terms and conditions stated below. Price adjustments resulting from inaccurate cost and pricing data are subject to the provisions of AS 36.30.400(c). This document shall become an amendment to the Contract and all provisions of the Contract will be applicable.

DESCRIPTION OF CHANGE (Use Continuation Sheet 25D-065 as Required)

In accordance with Subsection 104-1.02 of the Standard Specifications, the following changes are hereby made:

Reason for Change Order

The piezometer conduits required backfill to protect them from equipment damage after they were relocated. This change order provides that cover.

Establish New Item 203(22)a Piezometer Backfill

Description: Provide backfill to protect both piezometers installed in the fill.

Materials: Provide bedding material meeting the requirements of Subsection 204-2.01 for corrugated polyethylene pipe. Provide backfill material meeting the requirements of Borrow Type B with 100% passing the 3 inch sieve.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

Project No.: 69500/0933037 JNU-Glacier Hwy. Multi-Use Path to UAS
Change Order No. 5

Continuation Sheet

Construction Requirements: Provide one foot of bedding material around the conduits. Provide two feet of cover four feet wide over the two installed piezometer conduits running horizontally over the fill. Ramp the backfill material from the top of the backfill to the Stage 1fill, providing a six foot long ramp. Conform to Subsection 203-3.05 for compaction of bedding and backfill.

Method of Measurement: This a lump sum and in accordance with Subsection 109-1.01 is not measured for payment.

Basis of Payment: This item is paid at the agreed upon amount of $2,705.00 and includes the resources required to provide bedding and backfill cover for the installed piezometer conduits. This item includes the bedding 1 foot around the conduit and backfill required to complete the work. Full compensation is made in accordance with Subsection 109-1.03.

Payment will be made under:

Pay Item	Pay Unit
203(22)a Piezometer Backfill	Lump Sum

Summary of Quantities

ITEM NO.	ITEM	UNIT	PRICE	QUANTITY (+ or -)	AMOUNT (+ or -)
203(22)a	Piezometer Backfill	Lump Sum	$2,705.00	+1.0	+2,705.00
		NET CHANGE THIS ORDER			**+2,705.00**

This Change Order **increases** the Contract Amount by **$2,705.00**.

The Contract Completion Date is not affected by this Change Order.

PLEASE INDICATE YOU ACCEPTANCE OR ACKNOWLEDGEMENT BY SIGNING AND DATING THE APPROPRIATE SIGNATURE LINE, AND THEN RETURN THE ORGINAL DOCUMENT TO THIS OFFICE.

Reviewed By SOA.DOT
TVL. 3-29-18

606 (1) W-BEAM GUARDRAIL INSTALLATION - SCHEDULE A

FROM	LINE	TO	LINE	OFFSET	LENGTH	REMARKS
23+50	A	36+35	A	LEFT	1,285	Actual Length: 1,304.10'

✓ By Jh. 3/14/19.

606 (13) PARALLEL GUARDRAIL TERMINAL - SCHEDULE A

STATION	LINE	OFFSET	REMARKS
23+00	A	LT	50' LENGTH, 0' END OFFSET
36+85	A	LT	50' LENGTH, 0' END OFFSET

Actual Count Installed = 3
606(12) P.E.T. ✓ By Jh. 3/14/19.

609 (2) CURB AND GUTTER, TYPE 1

FROM		TO		LENGTH	REMARKS
2+20	A	6+10	A	420	VALLEY, SCHEDULE A
PARKING LOT				109	STANDARD, SCHEDULE B

Actual Count Installed
669.30 LF. ✓ JL 3/14.

610(3) DITCH LINING - SCHEDULE A

FROM		TO		LENGTH (FT)	REMARKS
0+30	A	2+12	A	182	Actual Length
6+46	A	9+90	A	344	By Stationing:
10+20	A	11+35	A	115	
11+41	A	12+40	A	99	.60 Station

JL. 3/14/19.

606 (6) REMOVING AND DISPOSING OF GUARDRAIL - SCHEDULE A

FROM		TO		OFFSET	LENGTH (FT)	REMARKS
15+09.0	LINE A	16+37.0	LINE A	RIGHT	128	Actual 1359'
22+98.9	LINE A	27+91.3	LINE A	LEFT	493	
31+34.3	LINE A	37+10.3	LINE A	LEFT	591	
36+91.5	LINE A	37+65.7	LINE A	RIGHT	71	

1283 Ft.

✓ By Jh. 3/14/19.

642(4) SET PRIMARY MONUMENT - SCHEDULE A

STATION	LINE	OFFSET	REMARKS
0+38.2	A	9.0' RT	BC3.25'_S2386_LA/C4_L9/C1_L10_S3260
9+55.5	A	8.1' RT	BPR_BC3"_L3B/L4C/S2386
13+39.4	A	30.9' RT	BC2.5"_C3_LC/C4_LD_S2386
17+03.7	A	18.0' RT	BPR_BC3"_C15_S3406/ROW_S2386

OK ✓ By TVL. @ AKDOT 19. 3-14

642(9) REFERENCE EXISTING MONUMENT - SCHEDULE A

STATION	LINE	OFFSET	REMARKS
0+38.2	A	9.0' RT	BC3.25'_S2386_LA/C4_L9/C1_L10_S3260
9+55.5	A	8.1' RT	BPR_BC3"_L3B/L4C/S2386
13+39.4	A	30.9' RT	GLO_BC2.5"_C3_LC/C4_LD_S2386
17+03.7	A	18.0' RT	BPR_BC3"_C15_S3406/ROW_S2386

Over Plan Est.

Actual = 5 Referenced Monuments

643(30) DELINEATE REMOVED GUARDRAIL - SCHEDULE A

START			END			LENGTH (FT)	REMARKS
STA.	LINE	OFFSET	STA.	LINE	OFFSET		
15+09.0	LINE A	RIGHT	16+37.0	LINE A	RIGHT	128	
22+98.9	LINE A	LEFT	27+91.3	LINE A	LEFT	493	
31+34.3	LINE A	LEFT	37+10.3	LINE A	LEFT	591	
36+91.5	LINE A	RIGHT	37+65.7	LINE A	RIGHT	71	

✓ JL. OK.

627 (10) ADJUSTMENT OF VALVE BOX - SCHEDULE A

STATION	LINE	OFFSET	REMARKS
8+89.3	A	7.4' RT	3:3
12+99.9	A	9.5' RT	
15+47.9	A	0.4' RT	

639 (3) DRIVEWAY

LINE "A"			DRIVEWAY	REMARKS
STATION	OFFSET		WIDTH	
10+02.4	11.9'	LT	18'	SEE G-SHEETS FOR DETAILS
15+00.8	52.7'	RT	18'	SEE G-SHEETS FOR DETAILS

36' LF.

639 (3) Driveways. Actual Installation: 7.0
✓ Jh. 3/14/19.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHCOAST REGION

Change Order

Project No.: 69500/0933037 Change Order No. 1

Project Name: JNU-Glacier Highway Multi-Use Path to UAS

					LENGTH	REMARKS
32+50	A	36+60	A	RIGHT	410	

✓ JL. 3/14/19

Construction Requirements: Comply with Section 642.
Method of Measurement: Conforms to Section 642-4.01.

Basis of Payment: This item includes the resources required to provide a survey required on the project in addition to what is shown on the plans. This item will be authorized by the Engineer. Full compensation for Item 642(3) is made in accordance with Section 109-1.03.

This item does not affect other lump sum items.

Payment will be made under:

Pay Item	Pay Unit
642(3) Three Person Survey Party	Hour

RD SIGN SUMMARY - SCHEDULE A

											COMMENTS
											6" UC / 4" LC B FONT
											MOUNT BELOW SIGN 2
											MOUNT BELOW SIGN 5
9	NO PARKING ANY TIME <->	30+31	A	RT	R7P-101	12	18	1.50	PST	SW	
10	SPEED ZONE AHEAD	33+07	A	RT	R2-5C	30	36	7.50	PST	E	
11					7P-101	12	18	1.50	PST	S	
12					'P-101R	12					
13											
14	JUNEAU 11 ^ (BICYCLE SYMBOL) AIRPORT	38+76	A	RT	D1-2	24	18	3.00	PST	W	
15	UAS (BICYCLE SYMBOL) ->	00+38	B	LT	D1-1B	24	6	1.00	PST	SW	4" UC / 3" LC B Font

NOTE: EXISTING SIGNS IN PATH SHALL BE REMOVED.

635-5.01 Basis of Payment, *Add the following*:

Pay Item	Pay Unit
635(2)a Insulation Board	Contingent S

Total Paid 59.57. 3/14/19. ✓ Jh.

SEE REVERSE For Change Order # 18.

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH
Q:\JNU\69500\PLANSET\69500_D1-D2 SUMS.DWG
GRANTHAM, RICK L (DOT)
TAB: D2 Monday, July 20, 2015 12:13:37 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

PLAN LEGEND

CHECKED BY: J. BROWN

STATE OF ALASKA 49TH James L. Brown July 20, 2015 CE-14083 PROFESSIONAL

DESIGNED BY: J. BROWN
DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

SUMMARIES

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
D2	54

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHCOAST REGION

Change Order

Project No.: 69500/0933037 Change Order No. 18

Project Name: JNU-Glacier Highway Multi-Use Path to UAS

Contractor:	Secon, Inc.	**Change Order Summary:**	
Address:	P.O. Box 32159	Calendar Days (+ / -):	N/A
	Juneau, AK 99803	New Completion Date:	N/A
		Amount of Change Order:	-$3,604.00

Recommended By: _____ Date: 7/12/2017

Title: Project Engineer

Approved By: _____ Date: 12 · Jul · 2017

Title: Project Manager

This change order constitutes agreement to terms, conditions and prices stated below.

Accepted By: _____ Date: ____
Contractor's Representative

Acknowledgement indicates only receipt of Change Order and not mutual agreement for basis of payment or time allowance. If a the matter cannot be resolved within 7 days from signature date, an Intent to Claim form must be submitted to the engineer within 14 days.

Acknowledged By: _____ Date: ____
Contractor's Representative

Permission for previously submitted subcontractor(s) to perform all or portions of the work described herein is as checked: ☒ Yes ☐ No ☐ N/A

Seal of Alaskan Professional Engineer *(if required)*

N/A

The following change(s) in the above Contract are hereby made in accordance with the terms of the Contract and under the terms and conditions stated below. Price adjustments resulting from inaccurate cost and pricing data are subject to the provisions of AS 36.30.400(c). This document shall become an amendment to the Contract and all provisions of the Contract will be applicable.

DESCRIPTION OF CHANGE (Use Continuation Sheet 25D-065 as Required)

In accordance with Subsection 104-1.02 of the Standard Specifications, the following changes are hereby made:

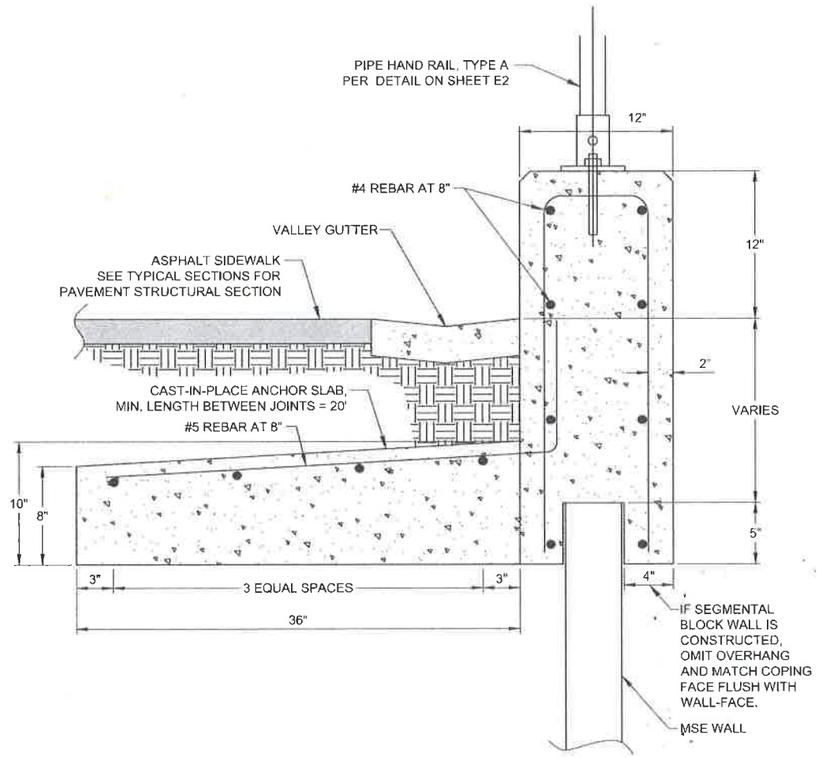
Delete Item 203(3)a Unclassified Excavation

Establish New Item: 203(3a)a Unclassified Excavation
DESCRIPTION: This item replaces Item 203(3)a Unclassified Excavation.

MATERIALS REQUIREMENTS: No material changes are required for this item.

CONSTRUCTION REQUIREMENTS: No construction requirement changes are required for this item.

METHOD OF MEASURMENT: This item is a lump sum item and in accordance with Section 109-1.01 is



CONCRETE COPING DETAIL

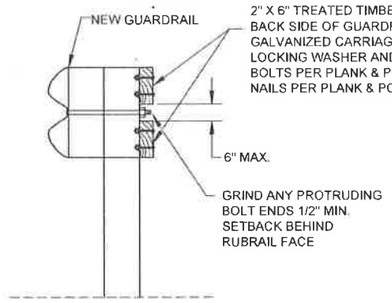
N.T.S.

GENERAL NOTES:

1. MSE WALL AND COPING DETAILS SHOWN ARE FOR CONCEPTUAL PURPOSES ONLY. DEVELOP SPECIFIC COPING DETAILS FOR THE CONTRACTOR SELECTED WALL SYSTEM. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER IN ACCORDANCE WITH 511-2.01.4.
2. DETAILS ON THIS SHEET ARE CONCEPTUAL AND TO BE USED IN DEVELOPMENT OF SPECIFIC DETAILS FOR MOUNTING PIPE HAND RAIL ON MSE WALLS. SEE SHEET E2 FOR PIPE HAND RAIL DETAILS.
3. PRECASTING OF THE COPING WILL BE ALLOWED. THE ANCHOR SLAB SHALL BE CAST-IN-PLACE.

CAST IN-PLACE COPING NOTES:

1. CASTING OF THE COPING DIRECTLY AGAINST THE PRECAST PANEL SIDES WILL NOT BE PERMITTED, AS THIS MAY RESULT IN PANEL CRACKING. THE CONTRACTOR SHALL USE A 1/4" (MIN.) COMPRESSIBLE MATERIAL ON BOTH SIDES OF THE PANEL TO ISOLATE THE COPING FROM THE PRECAST PANEL.
2. COPING JOINTS SHALL BE PROVIDED AT 33' MAXIMUM SPACING AND SHALL BE PLACED TO COINCIDE WITH PRECAST PANEL JOINTS.
3. PRECAST COPING SHALL BE PROVIDED IN 10' MINIMUM LENGTHS.



RUBRAIL DETAILS

RUBRAIL NOTES:

1. TREATED TIMBER MAY BE ROUGH SAWN HEM-FIR OR LARCH, ACZA PRESERVATIVE OR EQUIVALENT TREATED 0.4 PCF RETENTION BY ASSAY IN ACCORDANCE WITH AWPA-C2 STANDARDS MINIMUM BOARD ALLOWABLE STRESS f_c 1200 PSI.
2. 45° BEVEL LEADING AND TRAILING EXPOSED EDGES.
3. RUBRAIL IS TO BE INSTALLED ON ALL GUARDRAIL WITH THE EXCEPTION OF PARALLEL GUARDRAIL TERMINALS.

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 2/7/18

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH:
Q:\JNU\69500\PLANSET\69500_E1-E7_DETAILS.DWG

GRANTHAM, RICK L (DOT)
TAB: E1 Monday, July 20, 2015 12:14:18 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No	DATE	DESCRIPTION

PLAN LEGEND

CHECKED BY: J. BROWN

STATE OF ALASKA 49 TH James L. Brown July 20, 2015 CE-14083 Professional Engineer

DESIGNED BY: J. BROWN

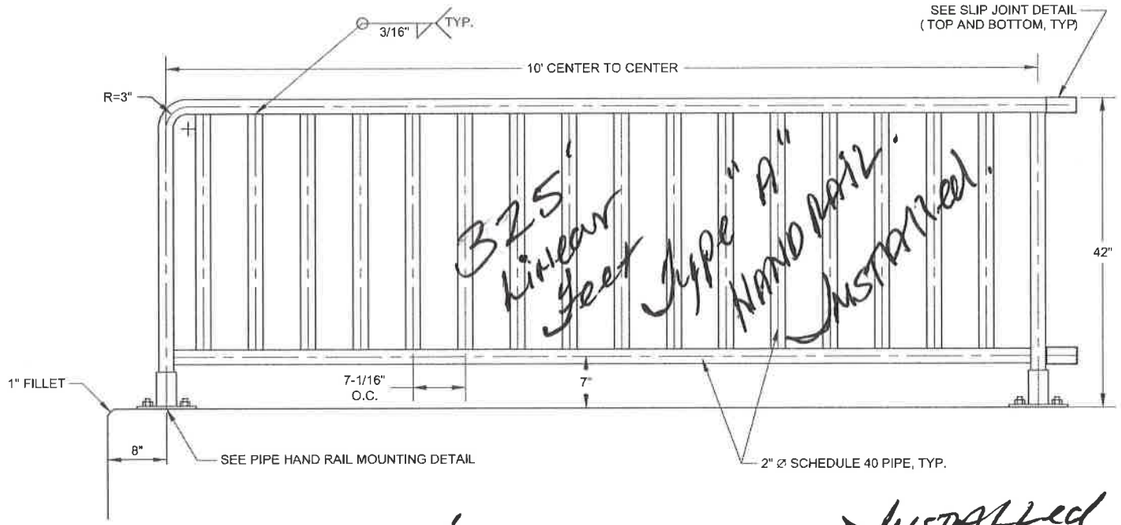
DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

COPING DETAIL

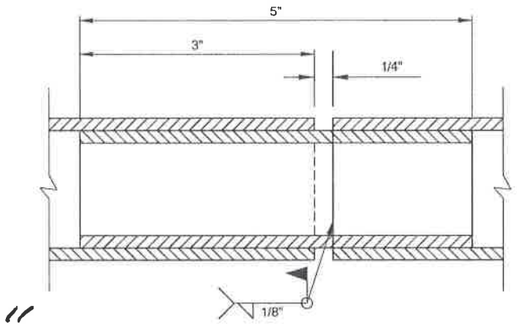
PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
E1	54



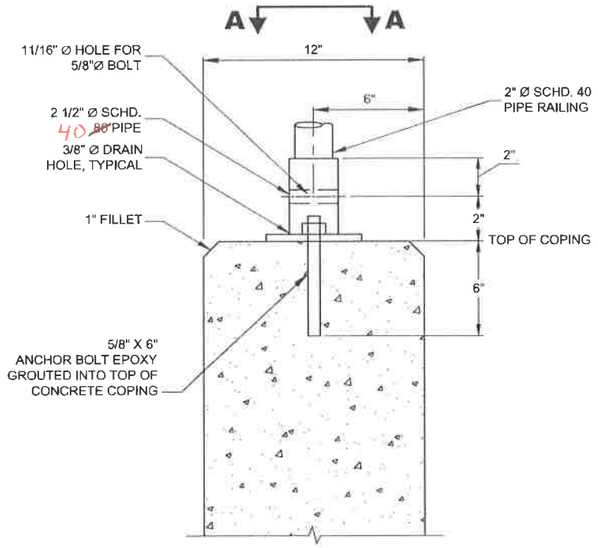
325' Linear Feet Type "A" HAND RAIL. INSTALLED.

325' PIPE HAND RAIL, TYPE A
ELEVATION VIEW
N.T.S.

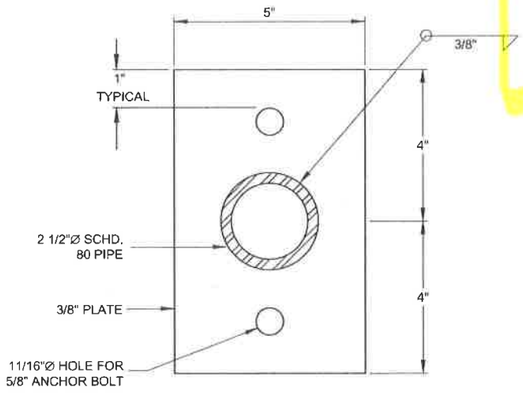
INSTALLED over "Key-STONE MSE-WALL"



SLIP JOINT DETAIL
N.T.S.



PIPE HAND RAIL, TYPE A MOUNTING DETAIL
N.T.S.



SECTION A-A
N.T.S.

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 2/7/2018

PIPE HANDRAIL NOTES:

1. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF ALL PIPE HAND RAIL PRIOR TO FABRICATION FOR THE ENGINEER'S REVIEW AND APPROVAL.
2. ASSURE VERTICAL RAILING IS PLUMB.
3. RAILING PANELS SHALL BE SPLICED USING SLIP JOINT TO PROVIDE CONTINUOUS RAILING. SEE DETAIL.
4. OVERALL LENGTH OF RAILING SEGMENT MAY BE LIMITED DUE TO CONFIGURATION OF WALL. SEE SHEET M1 FOR MSE WALL PLANS.
5. ALL RAILING MEMBERS AND ASSOCIATED HARDWARE SHALL BE GALVANIZED.
6. RAILING SHALL BE CENTERED IN TOP OF COPING.
7. ALL VERTICAL MEMBERS SHALL BE SPACED TO MAINTAIN A UNIFORM GAP.
8. VERIFY ALL CONTROLLING DIMENSIONS IN THE FIELD BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH
Q:\JNU\69500\PLANSET\69500_E1-E7_DETAILS.DWG
GRANTHAM, RICK L (DOT)
TAB: E2 Monday, July 20, 2015 12:14:22 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

PLAN LEGEND

CHECKED BY: J. BROWN

STATE OF ALASKA 49 TH James L. Brown July 20, 2015 EE-14085 PROFESSIONAL ENGINEER

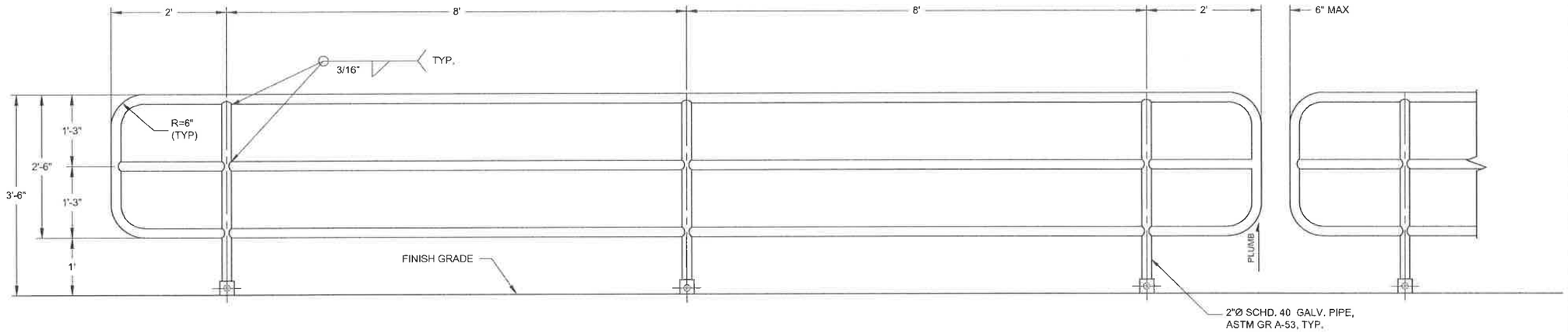
DESIGNED BY: J. BROWN
DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

PIPE HAND RAIL, TYPE A DETAILS

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
E2	54

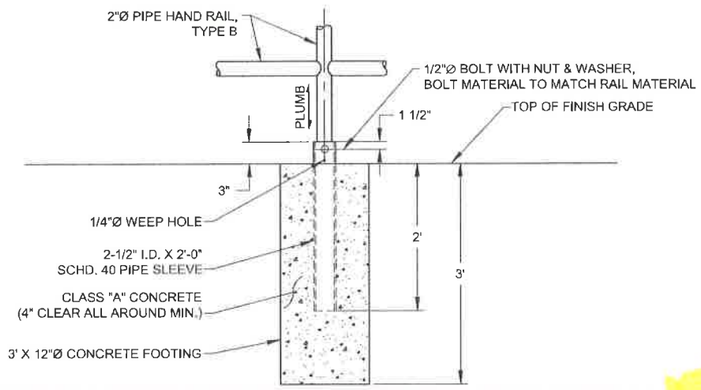


410' L.F. Installed.

PIPE HAND RAIL, TYPE B ELEVATION VIEW

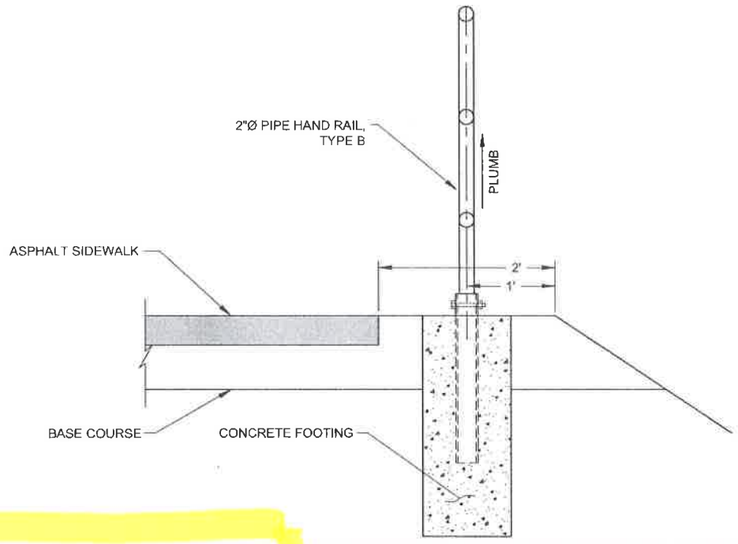
N.T.S.

Installed on Portion of Multi-use path that's parallel to Auke Lake.



PIPE SLEEVE AND FOOTING DETAIL

N.T.S.



LAYOUT DETAIL

N.T.S.

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE ~~Date~~ Date 2/7/2018

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69500\PLANSET\69500_E1-E7_DETAILS.DW(

GRANTHAM, RICK L (DOT)
TAB: E3 Monday, July 20, 2015 12:14:26 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

PLAN LEGEND

CHECKED BY: J. BROWN

STATE OF ALASKA 49TH James L. Brown July 20, 2015 CE-14083 PROFESSIONAL ENGINEER

DESIGNED BY: J. BROWN

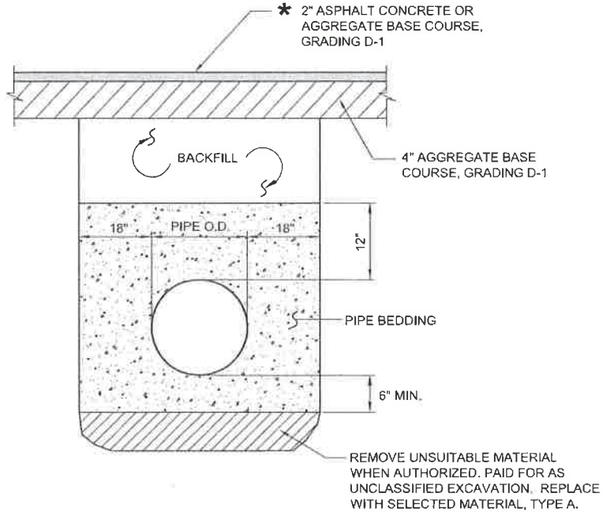
DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

PIPE HAND RAIL, TYPE B DETAILS

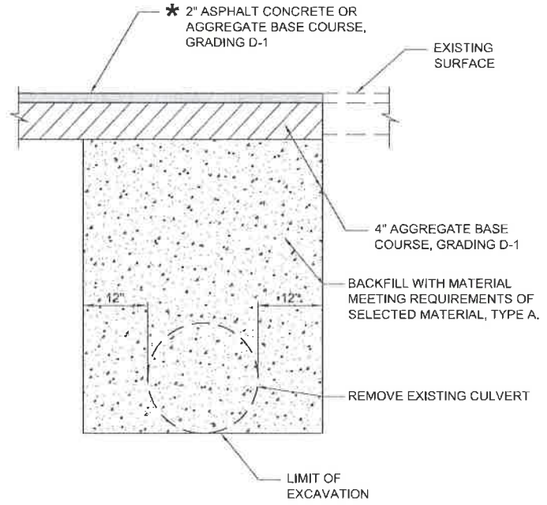
PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
E3	54



CULVERT BEDDING/BACKFILL DETAIL

N.T.S.

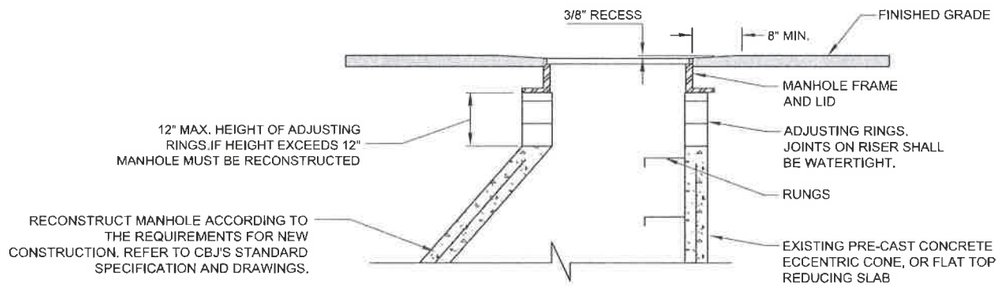
* REPLACE IN KIND WITH EXISTING DRIVE MATERIAL.



DRIVEWAY CULVERT REMOVAL & PATCH DETAIL

N.T.S.

* REPLACE IN KIND WITH EXISTING DRIVE MATERIAL.

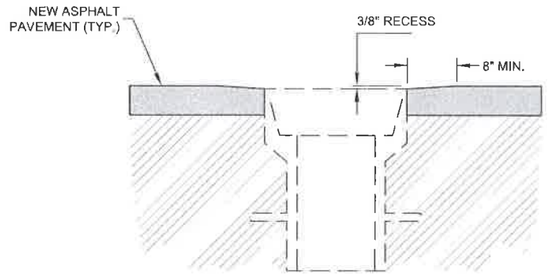


MANHOLE ADJUSTMENT / RECONSTRUCT DETAIL

N.T.S.

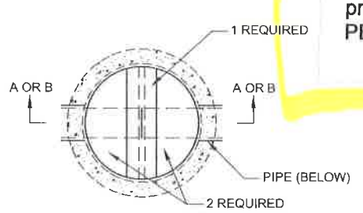
MANHOLE ADJUST/RECONSTRUCT NOTES:

1. INSTALL INVERT COVER PRIOR TO ADJUSTING/ RECONSTRUCTING MANHOLE, SEE DETAIL THIS SHEET. MAINTAIN INVERT COVER DURING ADJUSTMENT/ RECONSTRUCTION TO PREVENT MATERIAL AND DEBRIS FROM ENTERING THE SEWER SYSTEM.
2. ENSURE MANHOLES REMAIN ACCESSIBLE DURING CONSTRUCTION.
3. RAISE, LOWER, OR RECONSTRUCT MANHOLES AS REQUIRED IN ACCORDANCE WITH SECTION 604 OF THE SPECIFICATIONS AND SECTION 02402 OF THE CITY AND BOROUGH OF JUNEAU'S (CBJ) STANDARD SPECIFICATIONS AND DRAWINGS. INSTALL STEEL PLATE OVER MANHOLE OPENING AS A TEMPORARY MEASURE WHEN THE LID AND FRAME ARE REMOVED.
4. COORDINATE WITH CBJ FOR REPLACEMENT OF FRAMES AND LIDS. REUSE EXISTING FRAME AND LID IF NOT DAMAGED.
5. ADJUSTING RINGS SHALL BE REPLACED IN ACCORDANCE TO EACH MANHOLE INVESTIGATION, CONDUCTED BY THE PROJECT ENGINEER.
6. MANHOLE CASTING SHALL BE ADJUSTED TO CONFORM WITH SLOPE AND GRADE OF PROPOSED PAVEMENT.
7. ADJUSTING RINGS SHALL BE PROPERLY SIZED FOR THE EXISTING CONE OR FLAT TOP OPENING, AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
8. INSTALLATION OF FRAME, LID, AND ADJUSTMENT RINGS, ONTO THE EXISTING STRUCTURE SHALL BE WATER-TIGHT.
9. MANHOLE RUNGS ARE TO BE PLACED 12" O.C. FROM UNOBSTRUCTED SIDE OF MANHOLE. LAST RUNG PLACED 18" MAX. FROM BOTTOM OF MANHOLE, OVER SMALLEST PIPE.
10. AFTER MANHOLE ADJUSTMENT/ RECONSTRUCTION IS COMPLETE REMOVE INVERT COVER. REMOVE MATERIAL COLLECTED ON TOP OF INVERT COVER PRIOR TO ITS REMOVAL. REMOVE ANY MATERIAL THAT HAS FALLEN INTO THE MANHOLE AS A RESULT OF MANHOLE ADJUSTMENT/ RECONSTRUCTION.



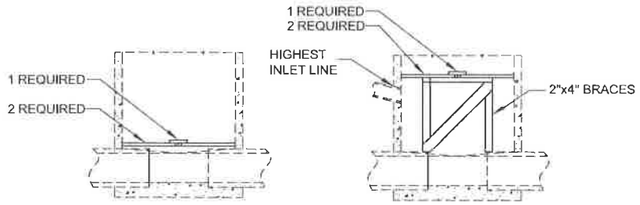
VALVE BOX ADJUSTMENT DETAIL

WHERE VALVE BOX ADJUSTMENT IS REQUIRED IN AN UNPAVED AREA, RECESS VALVE BOX 6" BELOW FINISHED GRADE.



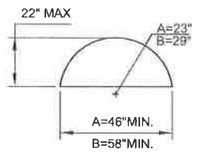
INVERT COVER PLAN

(INVERT COVER IN PLACE)



SECTION A-A

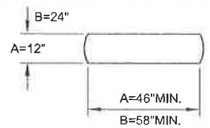
OPTION 1



2 REQUIRED

SECTION B-B

OPTION 2



1 REQUIRED

USE DIMENSION A FOR 48" MANHOLES
USE DIMENSION B FOR 60" MANHOLES

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69500\PLANSET\69500_E1-E7_DETAILS.DWG

CHAMBERS, LUCAS M (DOT)
TAB: E4 Tuesday, August 04, 2015 9:36:35 AM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 2/7/2018

PLAN LEGEND

CHECKED BY: J. BROWN

STATE OF ALASKA
49 TH
James L. Brown
July 20, 2015
CE-14083
REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY: J. BROWN

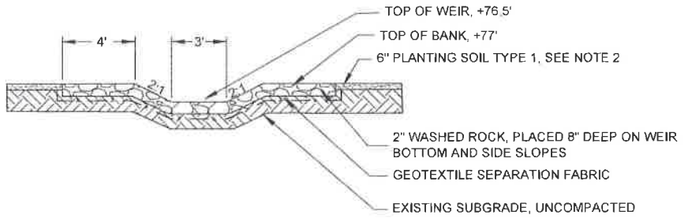
DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

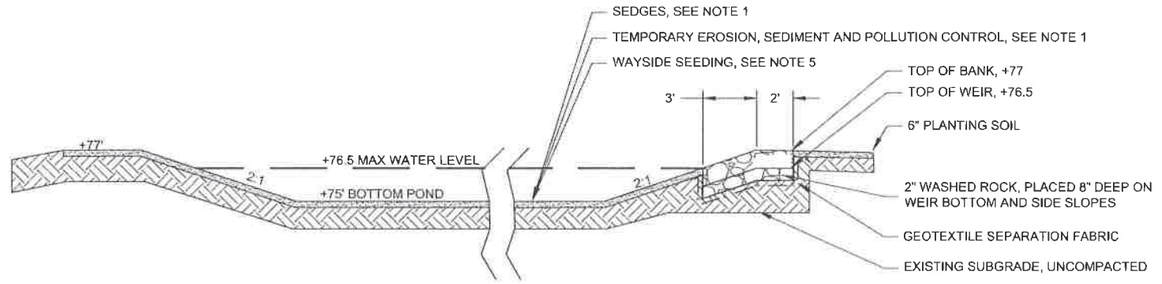
MISCELLANEOUS DETAILS

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
E4	54



STORMWATER WETPOND 'A' WEIR ELEVATION

NTS

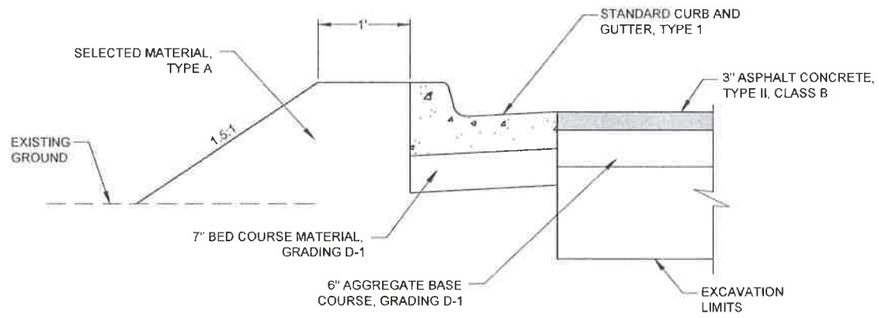


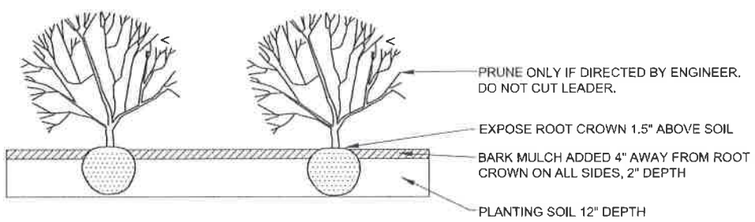
STORMWATER WETPOND 'A' TYPICAL SECTION

NTS

WETPOND NOTES:

1. WETPONDS MAY BE USED AS A TEMPORARY SEDIMENT TRAP DURING CONSTRUCTION, EITHER WITH VEGETATION ESTABLISHED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES OR WITH FILTER FABRIC UNDER WASHED GRAVEL AND COARSE AGGREGATE. IF THE PONDS ARE USED AS CONSTRUCTION BMPS, THE TRAP MUST BE CLEANED OUT PRIOR TO USE AS A PERMANENT WETPOND. POND SEEDING EFFORTS SHALL BE SUPPLEMENTED WITH THE SPECIFIED SEDGE PLANTINGS FROM SECTION 621. 70% PLANT COVERAGE MUST BE OBTAINED PRIOR TO USE OF FINAL WETPONDS. PLANTING OF SAGES DOES NOT GUARANTEE 70% COVERAGE.
2. WETPOND 'B' IS A SIMILAR SECTION WITH ELEVATIONS SHOWN ON SITE PLAN.
3. THE CULVERT PIPE OUTLET IN WETPOND 'A' SHALL BE PROTECTED WITH 2" WASHED ROCK.
4. SHRUBS AND GROUND COVER PLANTS SHALL BE PLANTED ABOVE THE MAX WATER LEVEL OF THE PONDS, SEDGES SHALL BE PLANTED BELOW THE MAX WATER LEVEL OF THE PONDS.
5. THE SUBGRADE OF THE WETPONDS SHALL NOT BE COMPACTED. EQUIPMENT, MACHINERY, AND MATERIALS SHALL NOT BE PLACED IN THIS AREA PRIOR TO OR DURING CONSTRUCTION. IF THE SUBGRADE IS FOUND TO BE COMPACTED DURING CONSTRUCTION OF THE WETPONDS, BREAK UP AND LOOSEN THE SOIL TO A DEPTH OF 24" TO ALLOW FOR MAXIMUM INFILTRATION.
6. ALL SEEDING SHALL BE PERFORMED AS SHOWN ON THE PLANS.





WAYSIDE PLANTING DETAIL

NTS

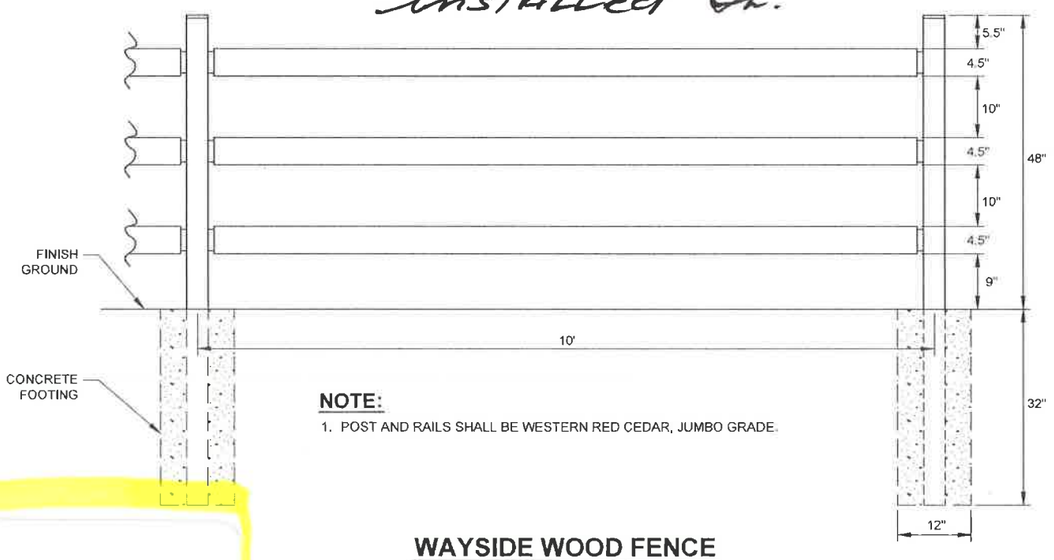
PLANTING NOTES:

1. REMOVE AND DISPOSE OF ALL METAL, PLASTIC, AND NON BIODEGRADABLE MATERIALS COMPLETELY FROM ROOTBALL.
2. LOOSEN AND SCARIFY SOIL GENTLY ON SURFACE OF ROOTBALL WITHOUT DAMAGING ROOTS. AFTER PLACING THE ROOTBALL IN THE SOIL, STRIP AWAY BURLAP OR OTHER BIODEGRADABLE COVERING TO EXPOSE ALL SIDES OF ROOTBALL TO SOIL.
3. SCARIFY/LOOSEN SOIL TO A DEPTH OF 24" IN SHRUB BEDS. REMOVE 12" OF EXISTING FILL AND REPLACE WITH 12" OF PLANTING SOIL.
4. BARK MULCH ADDED TO SHRUB BEDS ONLY. DO NOT ADD BARK MULCH TO WET PONDS.

WAYSIDE CURB AND GUTTER DETAIL

N.T.S.

installed 4.



NOTE:

1. POST AND RAILS SHALL BE WESTERN RED CEDAR, JUMBO GRADE.

WAYSIDE WOOD FENCE

NTS

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 2/7/2018

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69500\PLANSET\69500_E1-E7_DETAILS.DWG
GRANTHAM, RICK L (DOT)
TAB: E5 Monday, July 20, 2015 12:14:35 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

PLAN LEGEND

CHECKED BY: J. BROWN

STATE OF ALASKA 49TH James L. Brown July 20, 2015 CE-14083 REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY J. BROWN

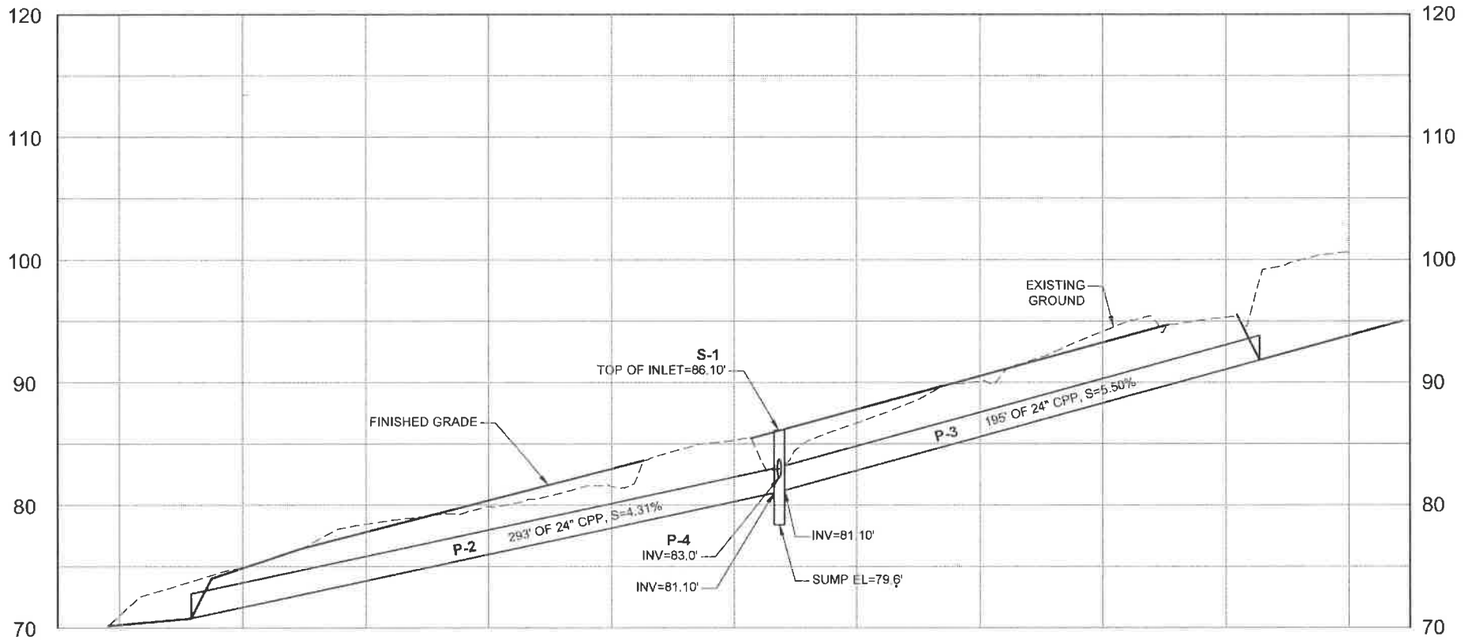
DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

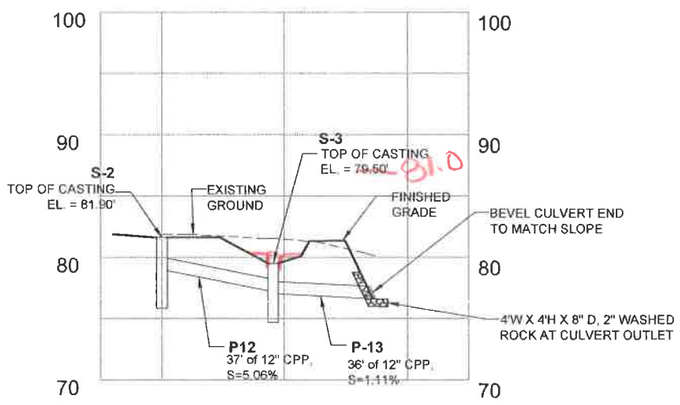
WAYSIDE DETAILS

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
E5	54



DRAINAGE DETAIL

N.T.S.



WAYSIDE DRAINAGE DETAIL

N.T.S.

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 2/7/2018

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH:
Q:\JNU\69500\PLANSET\69500_E1-E7_DETAILS.DWG

GRANTHAM, RICK L (DOT)
TAB: E6 Monday, July 20, 2015 12:14:40 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

PLAN LEGEND

CHECKED BY: J. BROWN

STATE OF ALASKA
49 TH
James L. Brown
July 20, 2015
CE-14083

DESIGNED BY: J. BROWN

DRAWN BY: R. GRANTHAM

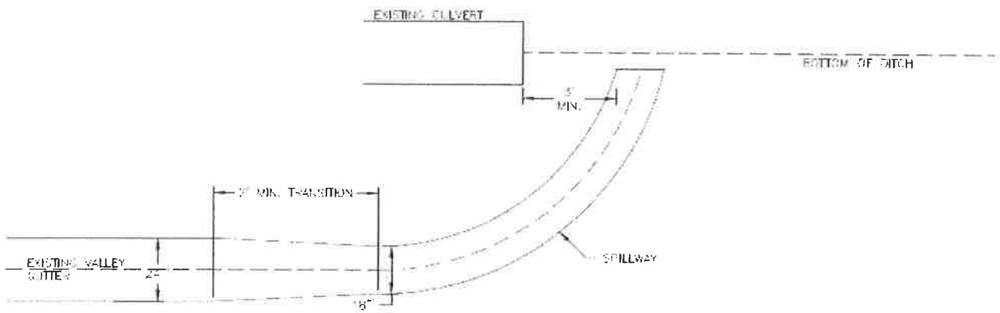
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE
SEPARATED PATH TO UAS
PROJECT NO. 69500

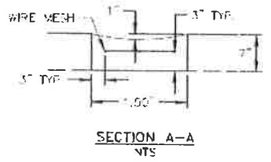
DRAINAGE DETAILS

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
E6	54

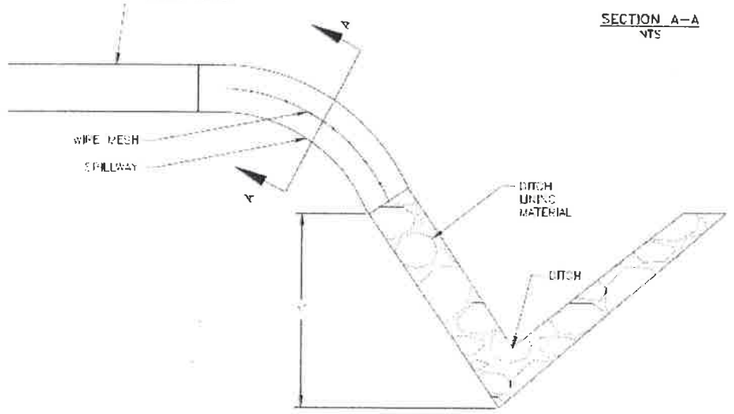
Valley gutter spillway @ Sta. 2+20 RT



PLAN
NTS.

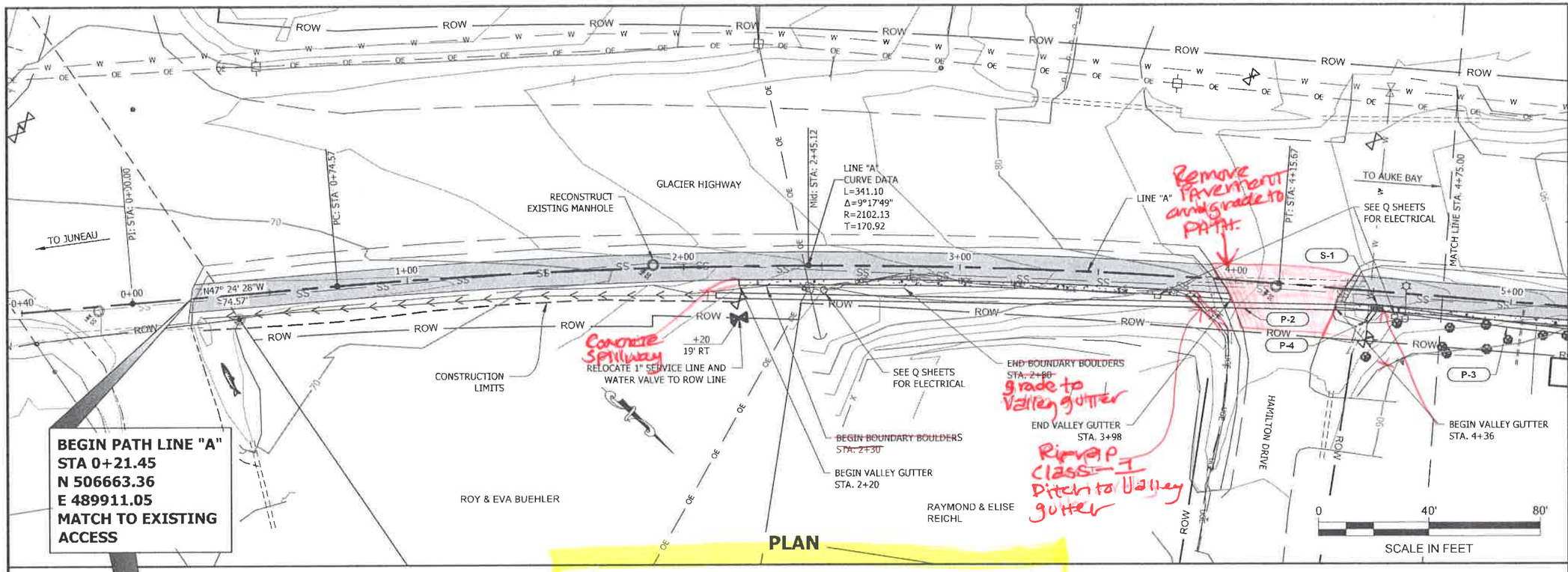


SECTION A–A
NTS



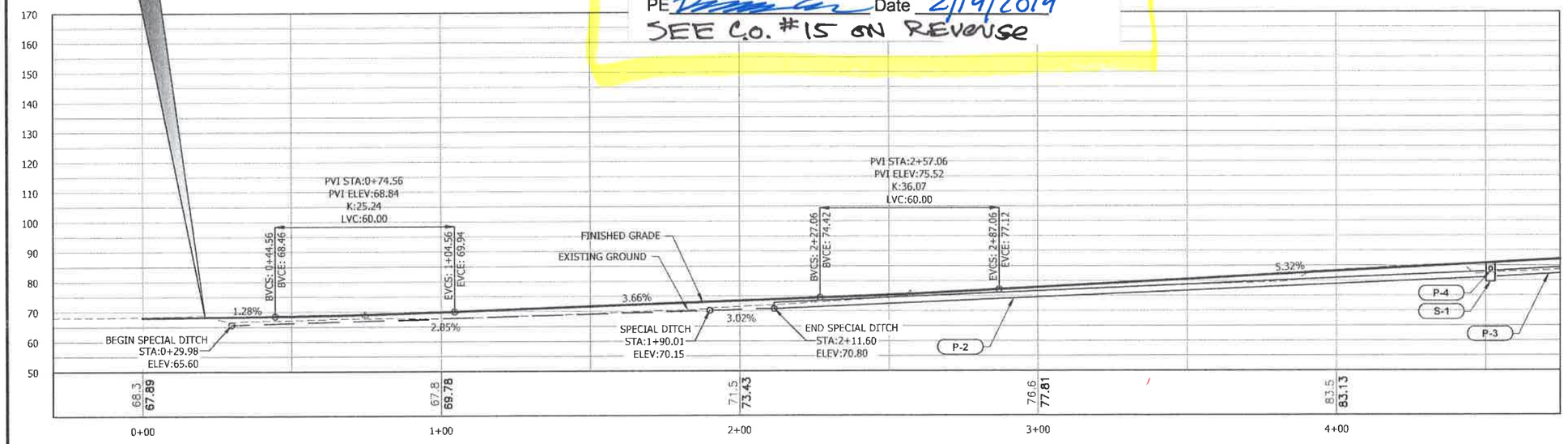
PROFILE
NTS.

EC6.1



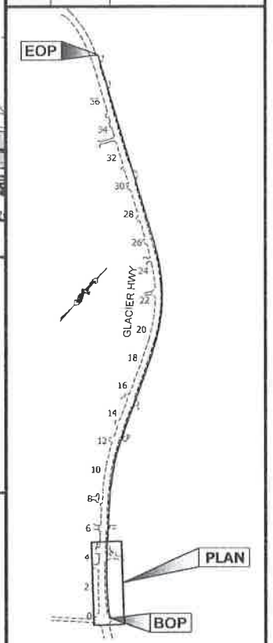
PLAN

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 2/19/2019
SEE C.O. #15 ON REVERSE



LINE "A" PROFILE

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS



PLAN LEGEND

PATH: Q:\JNU\69500\PLANSET\69500_F1-F9_P-P.DWG
GRANTHAM, RICK L (DOT)
TAB: F1 Monday, July 20, 2015 12:33:28 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

CHECKED BY: J. BROWN

STATE OF ALASKA 49TH James L. Brown July 20, 2015 CE-14083

DESIGNED BY: J. BROWN

DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

PLAN & PROFILE

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
F1	54

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHCOAST REGION

Change Order

Project No.: 69500/0933037

Change Order No. 15

Project Name: JNU-Glacier Highway Multi-Use Path to UAS

		Change Order Summary:	
Contractor:	Secon, Inc.		
Address:	P.O. Box 32159	Calendar Days (+ / -):	N/A
	Juneau, AK 99803	New Completion Date:	N/A
		Amount of Change Order:	+$4,030.55

Recommended By: _____ Date: 27 Dec 2016

Title: Project Engineer

Approved By: _____ Date: 30 Dec 2016

Title: Project Manager

This change order constitutes agreement to terms, conditions and prices stated below.

Accepted By: _____ Date: 1/4/2017

Contractor's Representative

Seal of Alaskan Professional Engineer *(if required)*

N/A

Acknowledgement indicates only receipt of Change Order and not mutual agreement for basis of payment or time allowance. If a the matter cannot be resolved within 7 days from signature date, an Intent to Claim form must be submitted to the engineer within 14 days.

Acknowledged By: _____ Date: ____

Contractor's Representative

Permission for previously submitted subcontractor(s) to perform all or portions of the work described herein is as checked: ☒ Yes ☐ No ☐ N/A

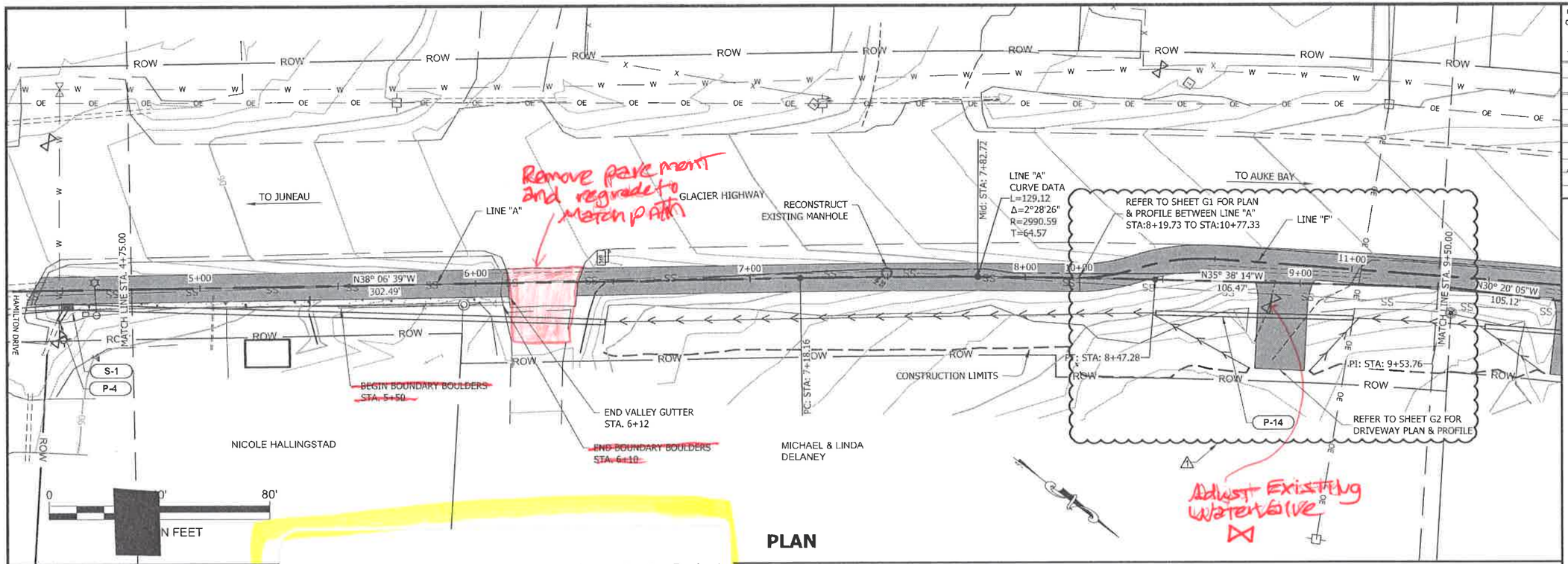
The following change(s) in the above Contract are hereby made in accordance with the terms of the Contract and under the terms and conditions stated below. Price adjustments resulting from inaccurate cost and pricing data are subject to the provisions of AS 36.30.400(c). This document shall become an amendment to the Contract and all provisions of the Contract will be applicable.

DESCRIPTION OF CHANGE (Use Continuation Sheet 25D-065 as Required)

Reason for Change Order The following is a brief description of the rationale for this change order:

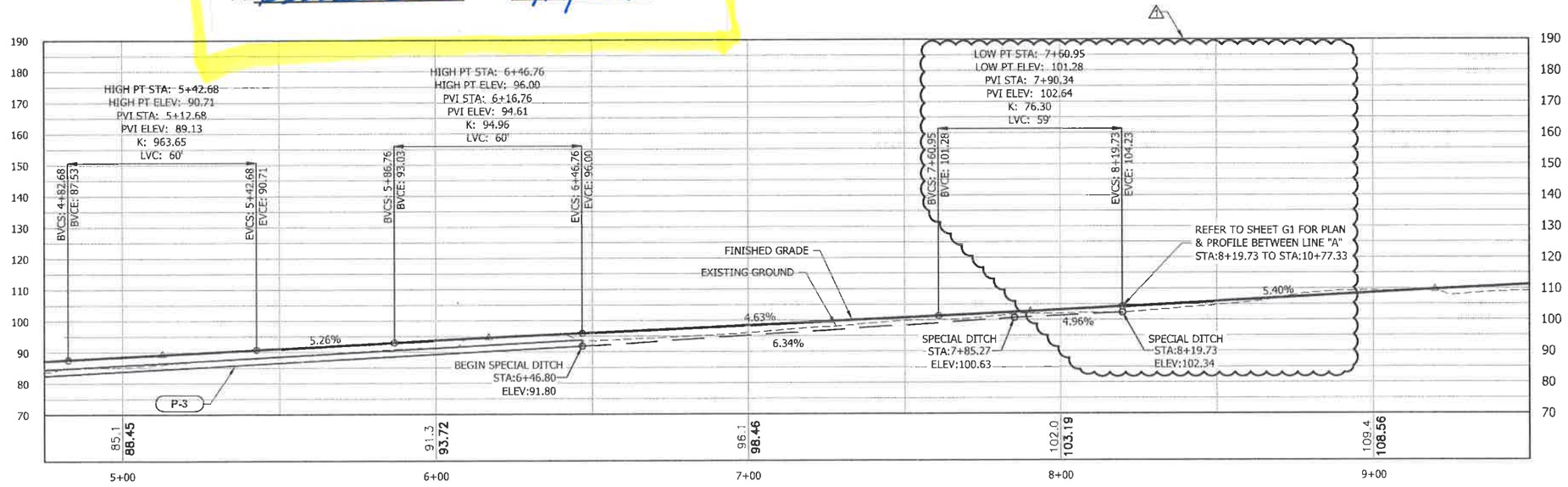
1) Existing utilities were encountered from Station 16+75 to 17+45. This change order is required to excavate around the existing utilities from Station 16+75 to 17+45 to the grades shown on the plans.
2) A buried electrical ground line was uncovered during excavation of the existing Wayside Parking Lot and additional resources were required to work around the buried electrical line during excavation efforts.
3) The boundary boulders from Station 2+20 to 2+80 and from Station 5+50 to 6+10 were replaced with material to allow drainage to the valley gutter and shaping around the utility pole and load center. This work provides for a backfilled slope at these locations instead of the boundary boulders.
4) During excavation two existing underdrains were uncovered within the fill area of the path. The existing underdrains were extended to provide drainage underneath the new multi-use pathway into the new ditch line.

In accordance with Subsection 104-1.02 of the Standard Specifications, the following changes are hereby made:



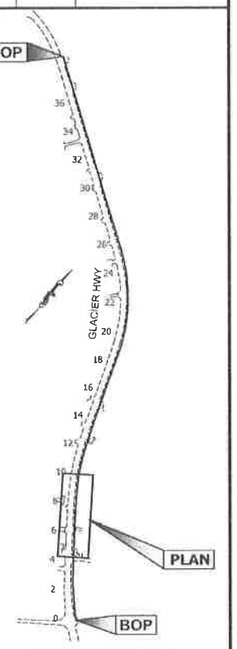
PLAN

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 2/19/2019



LINE "A" PROFILE

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS



PLAN LEGEND

PATH: Q:\JNU\69500\PLANSET\69500_F1-F9_P-P.DWG
CHAMBERS, LUCAS M (DOT)
TAB: F2 Wednesday, January 27, 2016 9:34:13 A

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION
1	01/27/16	REALIGNMENT FOR DRIVES

CHECKED BY: J. BROWN

STATE OF ALASKA 49 TH James L. Brown 01-27-2016 CE-14083 Professional Engineer

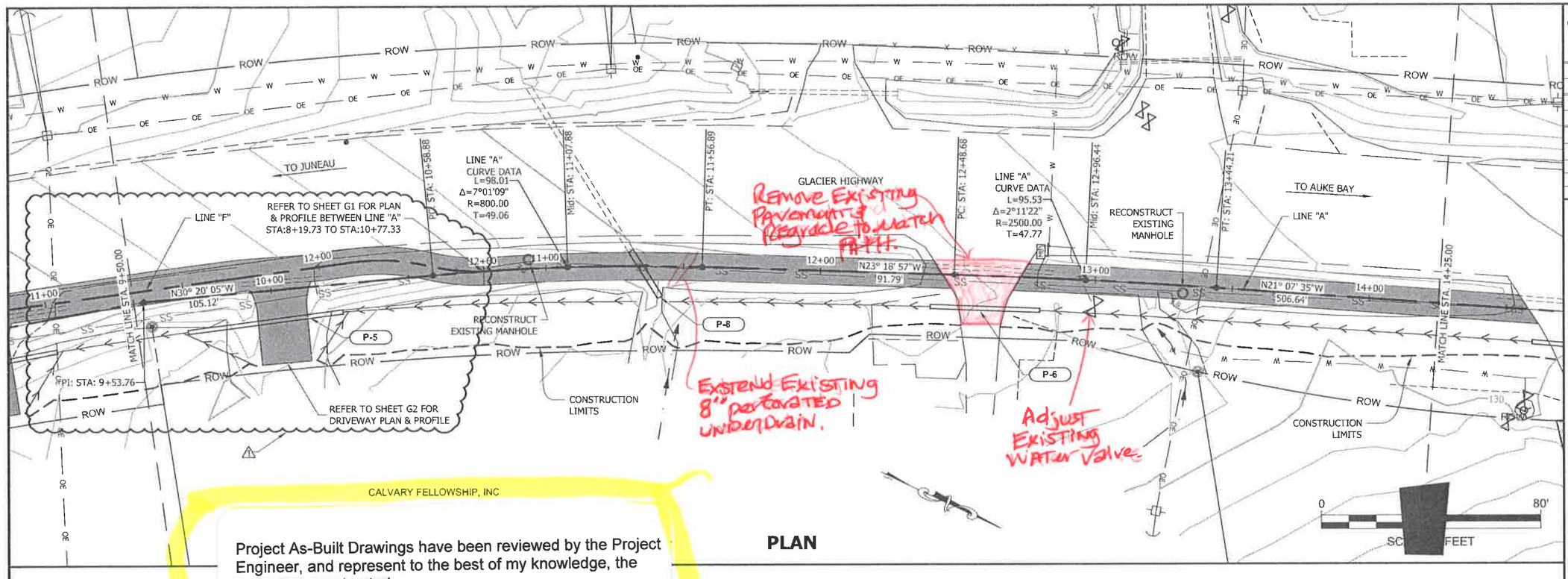
DESIGNED BY: J. BROWN, L. CHAMBERS
DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

PLAN & PROFILE

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
F2	54

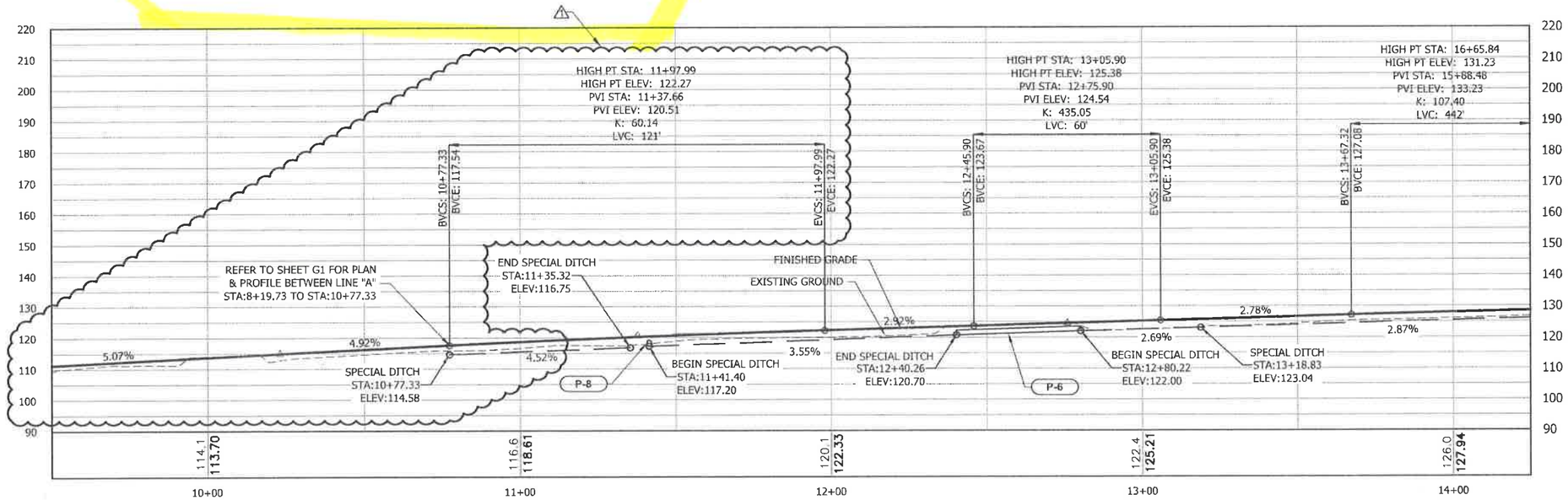


PLAN

CALVARY FELLOWSHIP, INC

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.

PE _____ Date 2/19/2019



LINE "A" PROFILE

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69500\PLANSET\69500_F1-F9_P-P.DWG

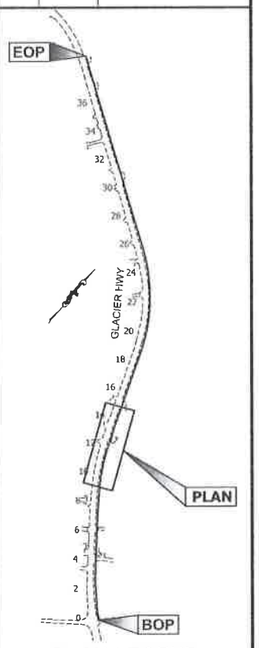
CHAMBERS, LUCAS M (DOT)
TAB: F3 Wednesday, January 27, 2016 9:35:38 A

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION
1	01/27/16	REALIGNMENT FOR DRIVES



PLAN LEGEND

CHECKED BY: J. BROWN

STATE OF ALASKA 49 TH James L. Brown 01-27-2016 CE-14083 REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY: J. BROWN, L. CHAMBERS

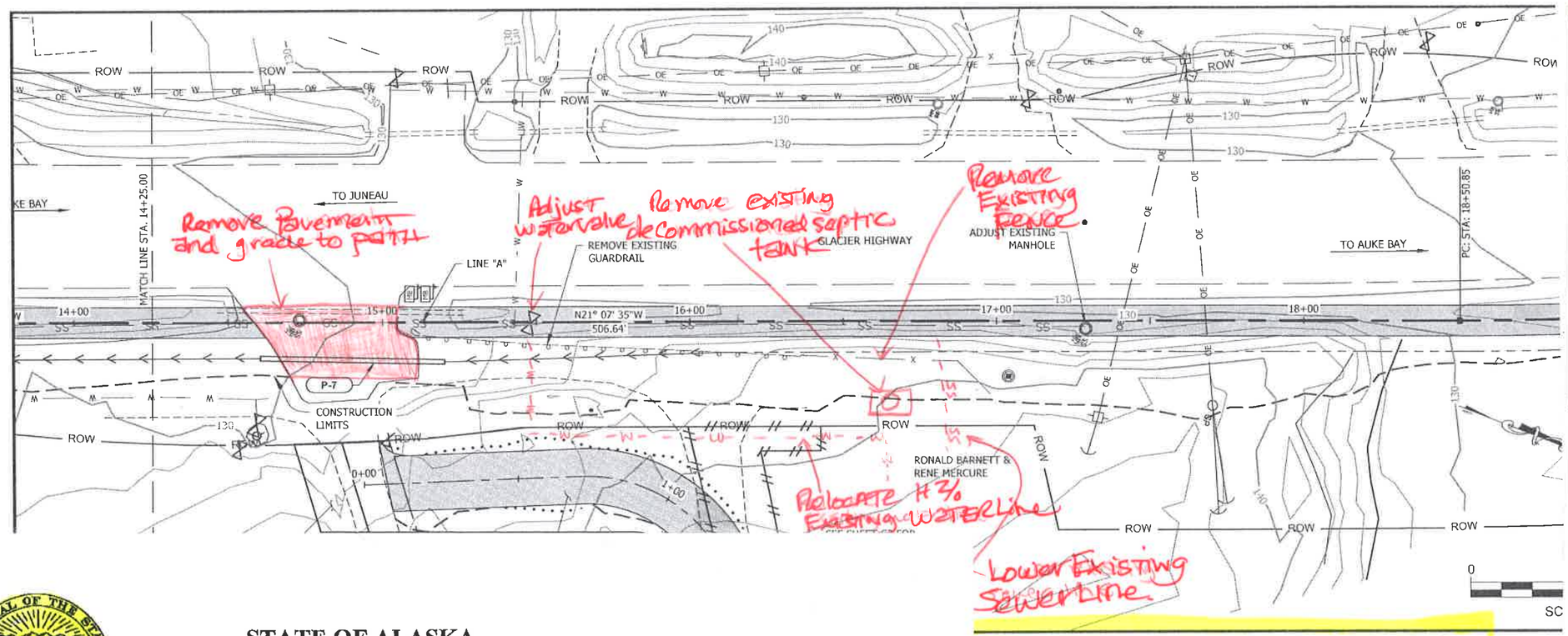
DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

PLAN & PROFILE

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
F3	54



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHCOAST REGION

Change Order

Project No.: 69500/0933037

Change Order No. 19

Project Name: JNU-Glacier Highway Multi-Use Path to UAS

		Change Order Summary:	
Contractor:	Secon, Inc.		
Address:	P.O. Box 32159	Calendar Days (+ / -):	N/A
	Juneau, AK 99803	New Completion Date:	N/A
		Amount of Change Order:	+$22,453.84

DESCRIPTION OF CHANGE (Use Continuation Sheet 25D-065 as Required)

In accordance with Subsection 104-1.02 of the Standard Specifications, the following changes are hereby made:

Establish New Item 202(15)a Removal of Existing Septic Tank

Description: Remove and dispose of the existing decommissioned septic tank at Station 16+75 RT to lay the slope back to the planned slope.

Materials: Conform to Section 202 and as approved by the Engineer.

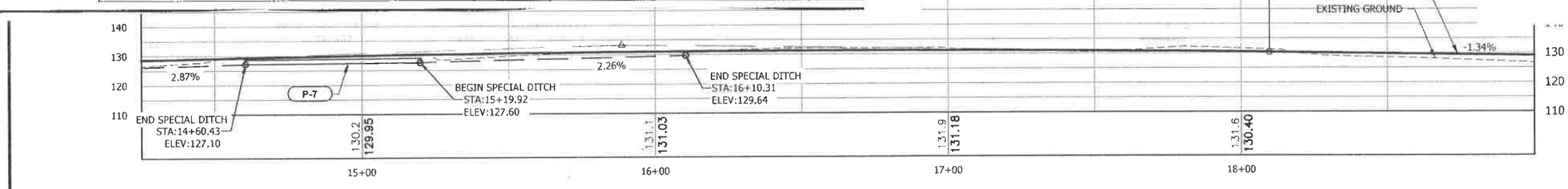
Construction Requirements: Conform to Section 202 and as directed by the Engineer.

Method of Measurement: This item is lump Sum and in accordance with Subsection 109-1.01 is not measured for payment.

Form 25D-068 (Revised 04/12) C.O. No. 19

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.

PE _____ Date 2/19/2019



LINE "A" PROFILE

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

SEPARATED PATH TO UAS
PROJECT NO. 69500

PLAN & PROFILE

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
F4	54

See C.O. #15 opposite side. Regarding Buried Utilities.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHCOAST REGION

Change Order

Project No.: 69500/0933037
Change Order No. 15

Project Name: JNU-Glacier Highway Multi-Use Path to UAS

		Change Order Summary:	
Contractor:	Secon, Inc.		
Address:	P.O. Box 32159	Calendar Days (+ / -):	N/A
	Juneau, AK 99803	New Completion Date:	N/A
		Amount of Change Order:	+$4,030.55

Recommended By: _____ Date: 27 Dec 2016
Title: Project Engineer

Approved By: _____ Date: 30 Dec 2016
Title: Project Manager

This change order constitutes agreement to terms, conditions and prices stated below.

Accepted By: _____ Date: 1/4/2017
Contractor's Representative

Seal of Alaskan Professional Engineer *(if required)*
N/A

Acknowledgement indicates only receipt of Change Order and not mutual agreement for basis of payment or time allowance. If a the matter cannot be resolved within 7 days from signature date, an Intent to Claim form must be submitted to the engineer within 14 days.

Acknowledged By: _____ Date: ____
Contractor's Representative

Permission for previously submitted subcontractor(s) to perform all or portions of the work described herein is as checked: ☒ Yes ☐ No ☐ N/A

The following change(s) in the above Contract are hereby made in accordance with the terms of the Contract and under the terms and conditions stated below. Price adjustments resulting from inaccurate cost and pricing data are subject to the provisions of AS 36.30.400(c). This document shall become an amendment to the Contract and all provisions of the Contract will be applicable.

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHCOAST REGION

Change Order

Project No.: 69500/0933037
Change Order No. 19

Project Name: JNU-Glacier Highway Multi-Use Path to UAS

		Change Order Summary:	
Contractor:	Secon, Inc.		
Address:	P.O. Box 32159	Calendar Days (+ / -):	N/A
	Juneau, AK 99803	New Completion Date:	N/A
		Amount of Change Order:	+$22,453.84

Recommended By: _____ Date: 8/4/2017
Title: Project Engineer

Approved By: _____ Date: 4 Aug 2017
Title: Project Manager

This change order constitutes agreement to terms, conditions and prices stated below.

Accepted By: _____ Date: 8/14/2017
Contractor's Representative

Seal of Alaskan Professional Engineer *(if required)*
N/A

Acknowledgement indicates only receipt of Change Order and not mutual agreement for basis of payment or time allowance. If a the matter cannot be resolved within 7 days from signature date, an Intent to Claim form must be submitted to the engineer within 14 days.

Acknowledged By: _____ Date: ____
Contractor's Representative

Permission for previously submitted subcontractor(s) to perform all or portions of the work described herein is as checked: ☒ Yes ☐ No ☐ N/A

The following change(s) in the above Contract are hereby made in accordance with the terms of the Contract and under the terms and conditions stated below. Price adjustments resulting from inaccurate cost and pricing data are subject to the provisions of AS 36.30.400(c). This document shall become an amendment to the Contract and all provisions of the Contract will be applicable.

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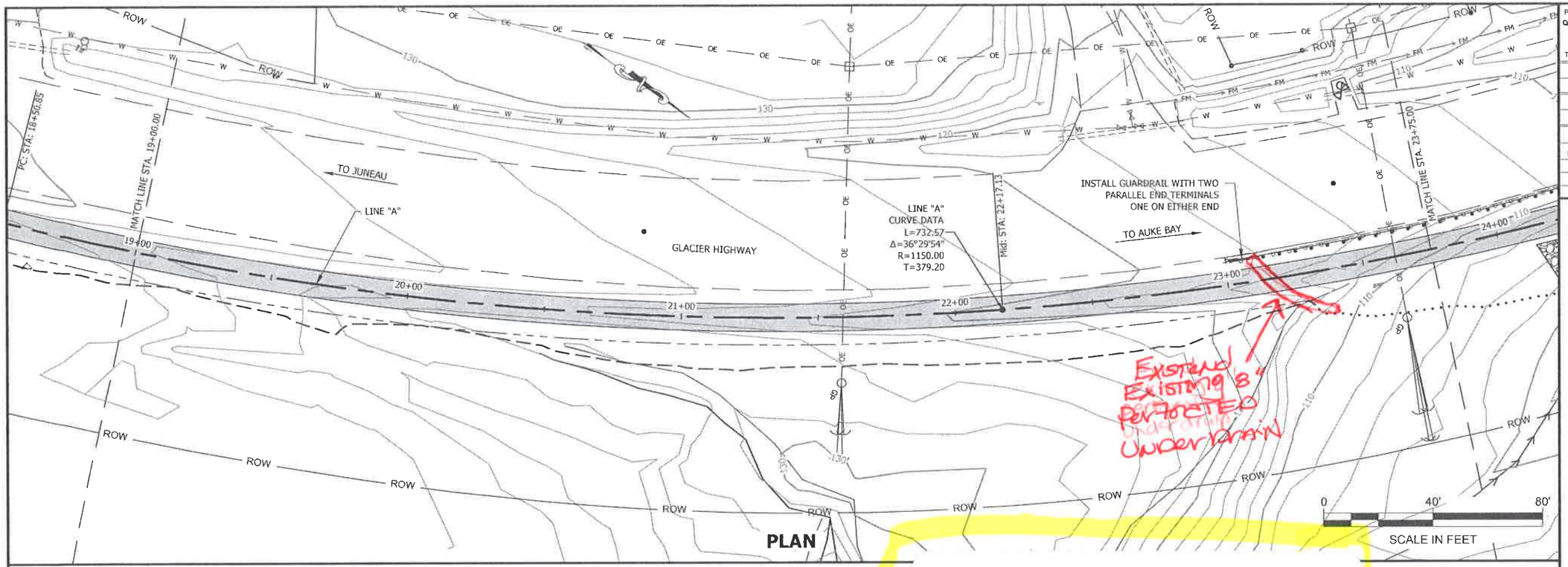
Description: Remove and dispose of the existing decommissioned septic tank at Station 16+75 RT to lay the slope back to the planned slope.

Materials: Conform to Section 202 and as approved by the Engineer.

Construction Requirements: Conform to Section 202 and as directed by the Engineer.

Method of Measurement: This item is lump Sum and in accordance with Subsection 109-1.01 is not measured for payment.

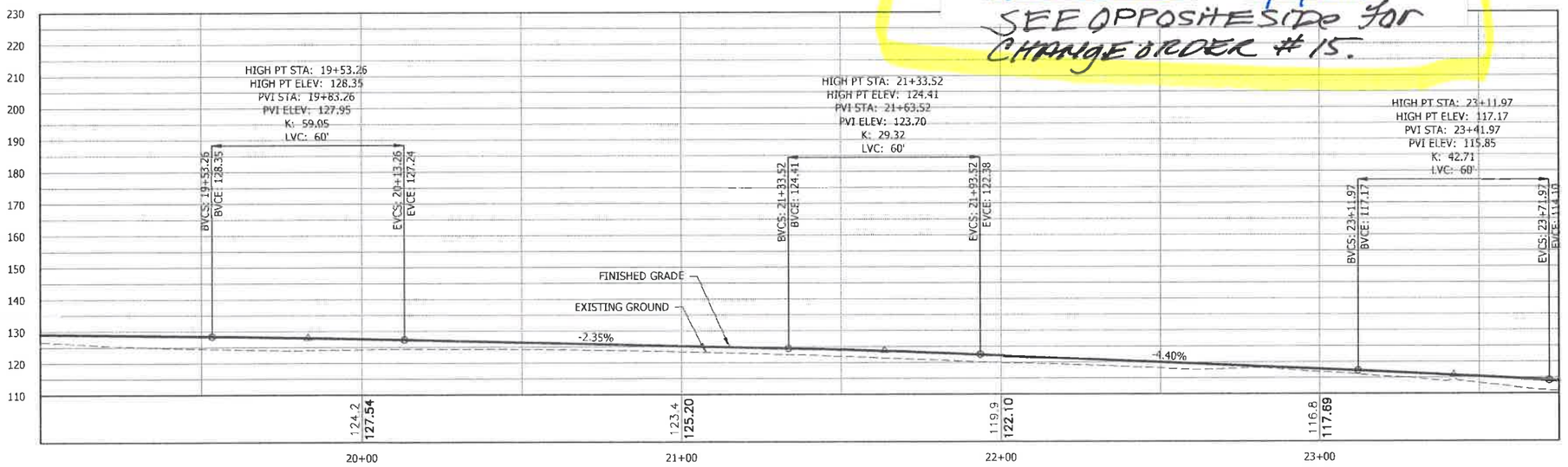


PLAN LEGEND

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.

PE _____ Date 2/19/2019

SEE OPPOSITE SIDE FOR CHANGE ORDER #15.



LINE "A" PROFILE

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69500\PLANSET\69500_F1-F9_P-P.DWG

GRANTHAM, RICK L (DOT)

TAB: F5 Monday, July 20, 2015 12:34:24 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

CHECKED BY: J. BROWN

STATE OF ALASKA 49 TH James L. Brown July 20, 2015 CE-14083 PROFESSIONAL ENGINEER

DESIGNED BY: J. BROWN

DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

PLAN & PROFILE

PROJECT DESIGNATION
0933037 ~ 69500

STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
F5	54

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHCOAST REGION

Change Order

Project No.: 69500/0933037

Change Order No. 15

Project Name: JNU-Glacier Highway Multi-Use Path to UAS

		Change Order Summary:	
Contractor:	Secon, Inc.		
Address:	P.O. Box 32159	Calendar Days (+ / -):	N/A
	Juneau, AK 99803	New Completion Date:	N/A
		Amount of Change Order:	+$4,030.55

Recommended By: _____ Date: 27 Dec 2016

Title: Project Engineer

Approved By: _____ Date: 30 Dec 2016

Title: Project Manager

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Contractor's Representative

Acknowledgement indicates only receipt of Change Order and not mutual agreement for basis of payment or time allowance. If a the matter cannot be resolved within 7 days from signature date, an Intent to Claim form must be submitted to the engineer within 14 days.

Acknowledged By: _____ Date: ____

Contractor's Representative

Permission for previously submitted subcontractor(s) to perform all or portions of the work described herein is as checked: ☒ Yes ☐ No ☐ N/A

Seal of Alaskan Professional Engineer *(if required)*

N/A

The following change(s) in the above Contract are hereby made in accordance with the terms of the Contract and under the terms and conditions stated below. Price adjustments resulting from inaccurate cost and pricing data are subject to the provisions of AS 36.30.400(c). This document shall become an amendment to the Contract and all provisions of the Contract will be applicable.

DESCRIPTION OF CHANGE (Use Continuation Sheet 25D-065 as Required)

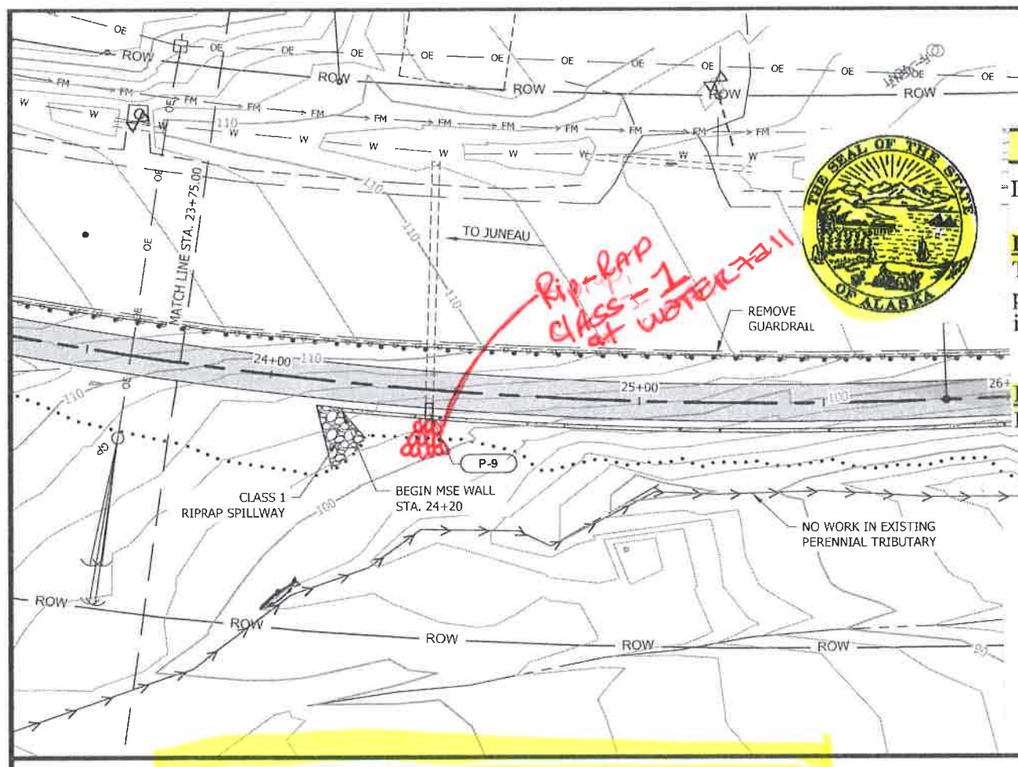
Reason for Change Order The following is a brief description of the rationale for this change order:

1) Existing utilities were encountered from Station 16+75 to 17+45. This change order is required to excavate around the existing utilities from Station 16+75 to 17+45 to the grades shown on the plans.
2) A buried electrical ground line was uncovered during excavation of the existing Wayside Parking Lot and additional resources were required to work around the buried electrical line during excavation efforts.
3) The boundary boulders from Station 2+20 to 2+80 and from Station 5+50 to 6+10 were replaced with material to allow drainage to the valley gutter and shaping around the utility pole and load center. This work provides for a backfilled slope at these locations instead of the boundary boulders.
4) During excavation two existing underdrains were uncovered within the fill area of the path. The existing underdrains were extended to provide drainage underneath the new multi-use pathway into the new ditch line.

In accordance with Subsection 104-1.02 of the Standard Specifications, the following changes are hereby made:

Change Order

Change Order No. 11



DESCRIPTION OF CHANGE (Use Continuation Sheet 25D-065 as Required)

In accordance with Subsection 104-1.02 of the Standard Specifications, the following changes are hereby made:

Reason for Change:
The inlet in the Auke Lake Parking Lot was much lower than the rest of the grade. The drainage system was installed per plan, but the inlet elevation for S-3 required adjustment to avoid a hazardous drop off. This change order adjusts the inlet to provide proper drainage while eliminating a potential hazard.

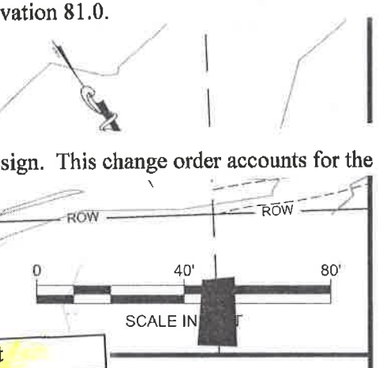
Establish New Item 604(8)b Adjust Inlet
Description: Provide resources to adjust Inlet S-3 from Elevation 79.5 to Elevation 81.0.

Reason for Change:
The MSE Wall was changed in design significantly from the initial design. This change order accounts for the additional survey for the new MSE Wall.

Delete Item 642(1)a Construction Surveying

Establish New Item 642(1a)a Construction Surveying

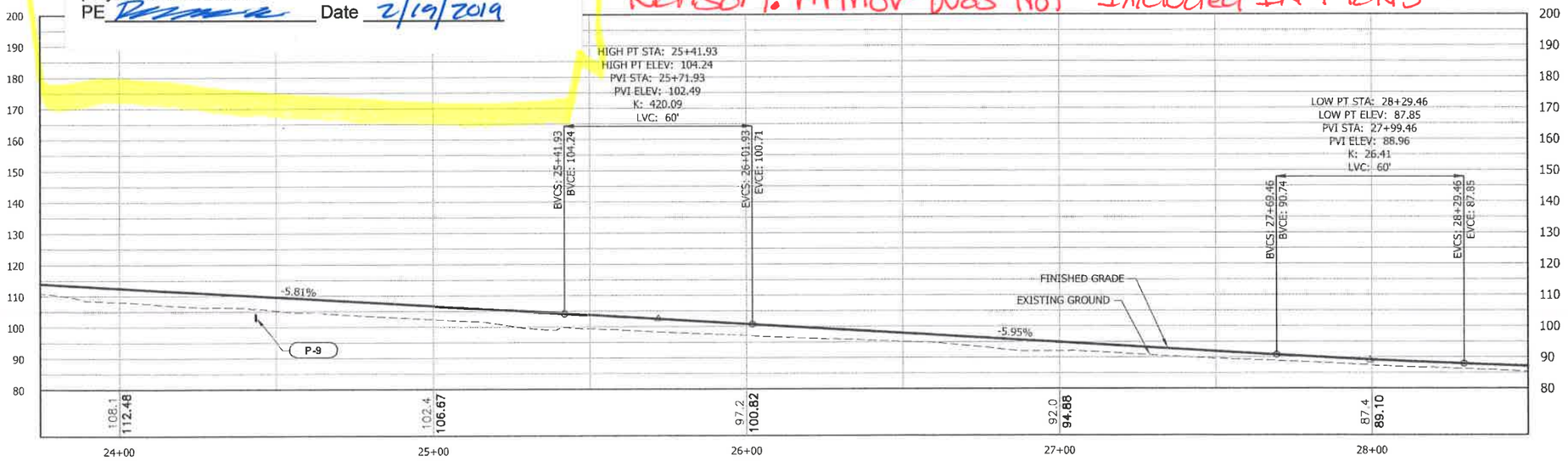
PLAN



Pay item Description	Pay Unit
620(1A)a Topsoil	Square Yard

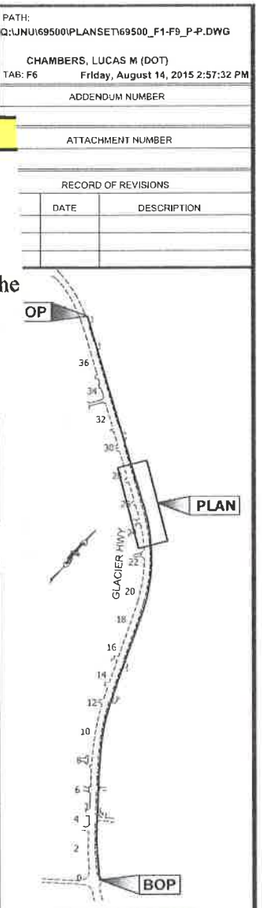
Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 2/19/2019

REASON: "Armor Was Not Included In Plans"



LINE "A" PROFILE

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS



PLAN LEGEND

PATH: Q:\JNU\69500\PLANSET\69500_F1-F9_P-P.DWG
CHAMBERS, LUCAS M (DOT)
TAB: F6 Friday, August 14, 2015 2:57:32 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

DATE	DESCRIPTION

CHECKED BY: J. BROWN

STATE OF ALASKA 49 TH James L. Brown July 20, 2015 CE-14083 PROFESSIONAL ENGINEER

DESIGNED BY: J. BROWN

DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

PLAN & PROFILE

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
F6	54

See Reverse for CO #12.

NOTE: # 12 Co. WAS Miss Labeled as #11. ON THE "Q" Drive.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHCOAST REGION

#12.

Change Order

Project No.: 69500/0933037

Project Name: JNU-Glacier Highway Multi-Use Path to UAS

Change Order No. ~~11~~

Contractor:	Secon, Inc.	**Change Order Summary:**	
Address:	P.O. Box 32159	Calendar Days (+ / -):	N/A
	Juneau, AK 99803	New Completion Date:	**July 15, 2016**
		Amount of Change Order:	**+$0.00**

Recommended By: _____ Date: 6/30/16

Title: Construction Group Chief

Approved By: _____ Date: 6/30/16

Title: Regional Construction Engineer

This change order constitutes agreement to terms, conditions and prices stated below.

Accepted By: _____ Date: _____

Contractor's Representative

Acknowledgement indicates only receipt of Change Order and not mutual agreement for basis of payment or time allowance. If a the matter cannot be resolved within 7 days from signature date, an Intent to Claim form must be submitted to the engineer within 14 days.

Acknowledged By: _____ Date: _____

Contractor's Representative

Permission for previously submitted subcontractor(s) to perform all or portions of the work described herein is as checked: ☐ Yes ☐ No ☒ N/A

Seal of Alaskan Professional Engineer *(if required)*

N/A

The following change(s) in the above Contract are hereby made in accordance with the terms of the Contract and under the terms and conditions stated below. Price adjustments resulting from inaccurate cost and pricing data are subject to the provisions of AS 36.30.400(c). This document shall become an amendment to the Contract and all provisions of the Contract will be applicable.

DESCRIPTION OF CHANGE (Use Continuation Sheet 25D-065 as Required)

In accordance with Subsection 104-1.02 of the Standard Specifications, the following changes are hereby made:

Reason for Change Order

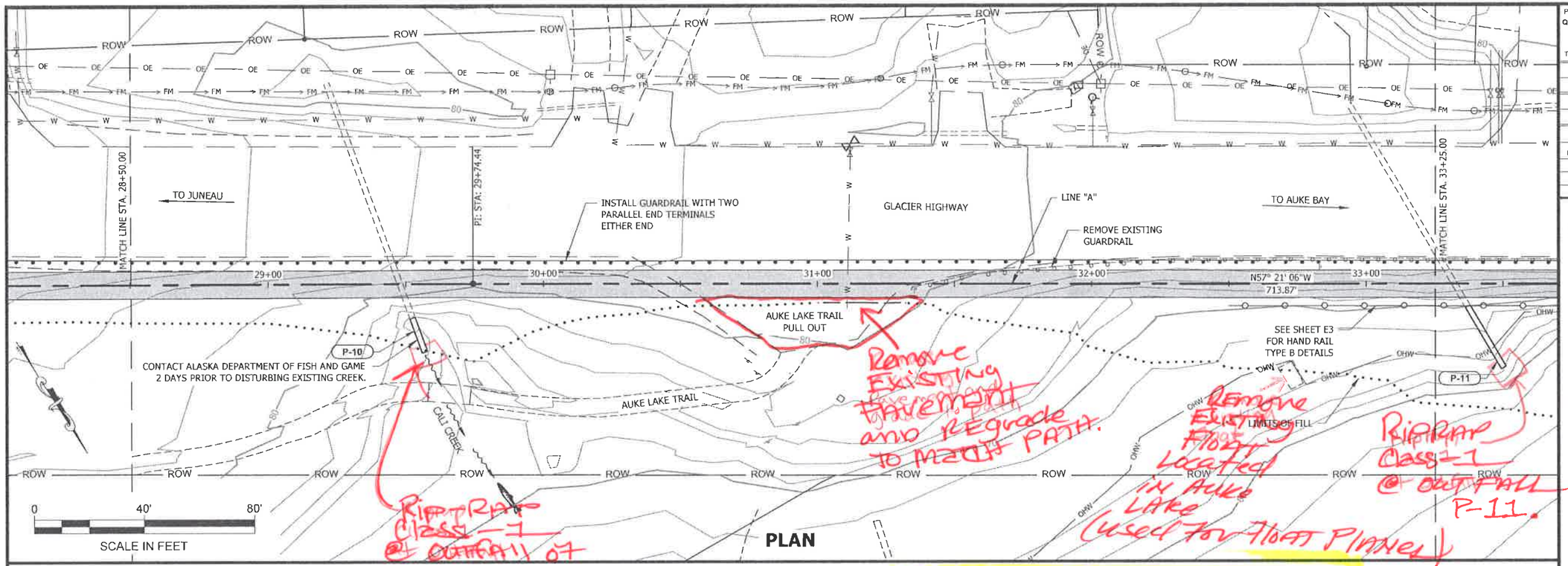
During the Final Inspection new items of work were proposed. This change order provides time for Department and Contractor negotiations on the new work.

Construction Contract (Form 25D-7). *Change the Completion Date* from June 30, 2016 to *July 15, 2016*.

The Contract Amount is not affected by this Change Order.

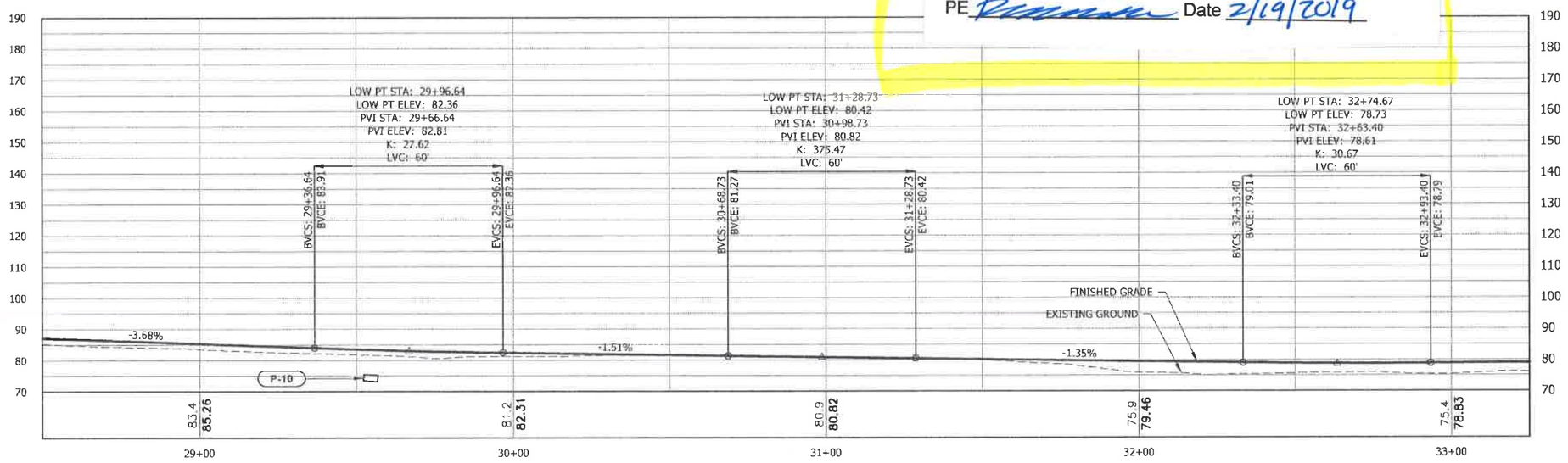
The Contract Completion Date is extended to **July 15, 2016**.

PLEASE INDICATE YOU ACCEPTANCE OR ACKNOWLEDGEMENT BY SIGNING AND DATING THE APPROPRIATE SIGNATURE LINE, AND THEN RETURN THE ORIGINAL DOCUMENT TO THIS OFFICE.



Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.

PE _____ Date 2/19/2019



LINE "A" PROFILE

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69500\PLANSET\69500_F1-F9_P-P.DWG

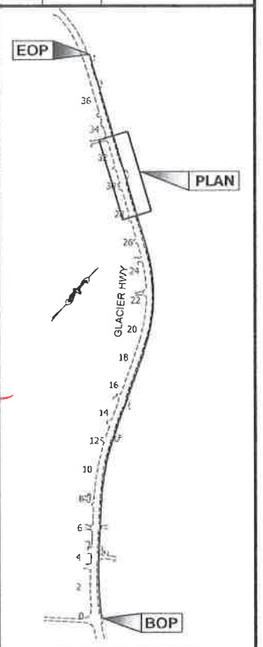
GRANTHAM, RICK L (DOT)

TAB: F7 Monday, July 20, 2015 12:34:52 PM

ADDENDUM NUMBER
ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION



PLAN LEGEND

CHECKED BY: J. BROWN

STATE OF ALASKA 49TH James L. Brown July 20, 2015 CE-14083 REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY: J. BROWN

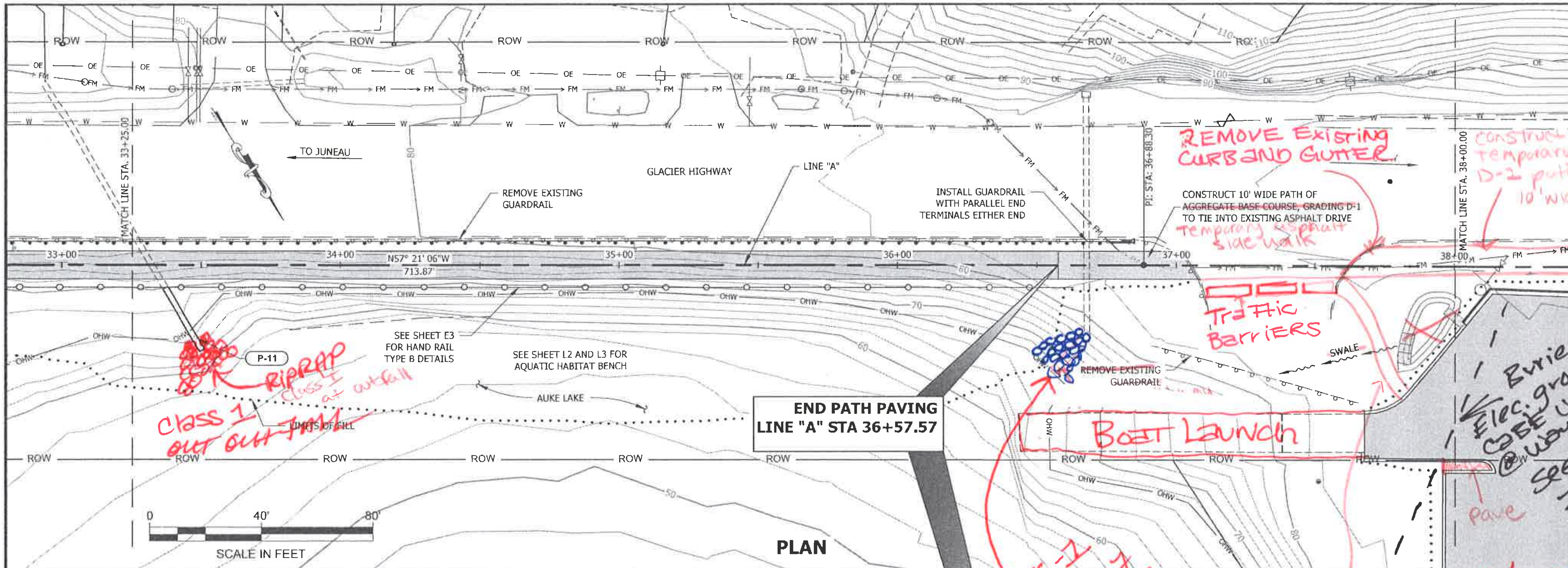
DRAWN BY: R. GRANTHAM

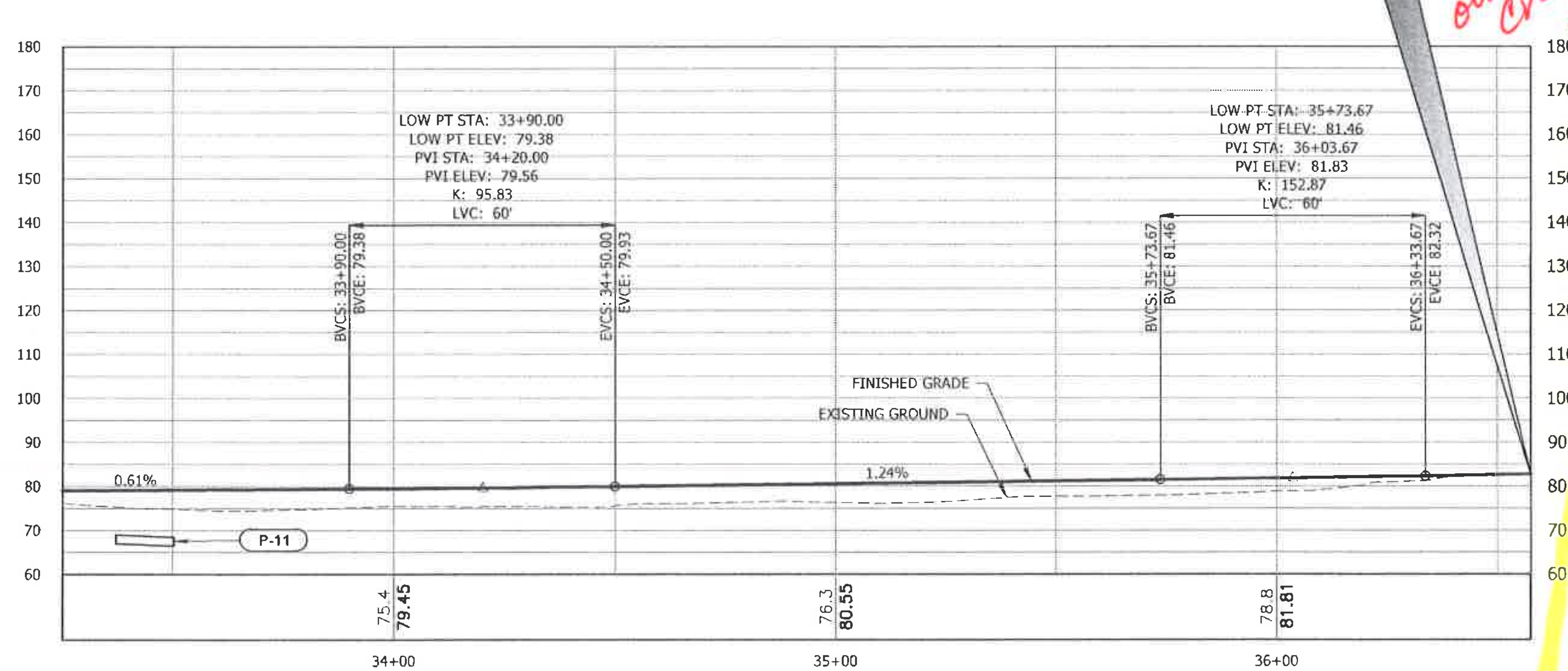
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

PLAN & PROFILE

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
F7	54


TO JUNEAU
GLACIER HIGHWAY
LINE "A"
REMOVE EXISTING GUARDRAIL
INSTALL GUARDRAIL WITH PARALLEL END TERMINALS EITHER END
PI: STA: 36+88.30
CONSTRUCT 10' WIDE PATH OF AGGREGATE BASE COURSE, GRADING D-1 TO TIE INTO EXISTING ASPHALT DRIVE
MATCH LINE STA. 33+25.00
MATCH LINE STA. 38+00.00
N57° 21' 06"W
713.87'
33+00
34+00
35+00
36+00
37+00
38+00
P-11
SEE SHEET E3 FOR HAND RAIL TYPE B DETAILS
SEE SHEET L2 AND L3 FOR AQUATIC HABITAT BENCH
AUKE LAKE
LIMITS OF FILL
END PATH PAVING
LINE "A" STA 36+57.57
REMOVE EXISTING GUARDRAIL
SWALE
SCALE IN FEET
0
40'
80'
PLAN
REMOVE Existing CURB and GUTTER
Temporary Asphalt side walk
construct temporary D-2 path 10' wide
Traffic Barriers
RIPRAP Class I at outfall
Class 1 out outfall
Boat Launch
Buried Elec. ground cable uncovered @ wayside park-lot
See Reverse side for change order #15
pave
Class-1 R.R. @ out fall of cross pipe to Auke Lake
Foot path added to way-side parking area by C.B.J.


LOW PT STA: 33+90.00
LOW PT ELEV: 79.38
PVI STA: 34+20.00
PVI ELEV: 79.56
K: 95.83
LVC: 60'
BVCS: 33+90.00
BVCE: 79.38
EVCS: 34+50.00
EVCE: 79.93
LOW PT STA: 35+73.67
LOW PT ELEV: 81.46
PVI STA: 36+03.67
PVI ELEV: 81.83
K: 152.87
LVC: 60'
BVCS: 35+73.67
BVCE: 81.46
EVCS: 36+33.67
EVCE: 82.32
FINISHED GRADE
EXISTING GROUND
0.61%
1.24%
P-11
75.4
79.45
76.3
80.55
78.8
81.81
34+00
35+00
36+00
180
170
160
150
140
130
120
110
100
90
80
70
60

LINE "A" PROFILE

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.

PE [signature] Date 2/19/2019

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

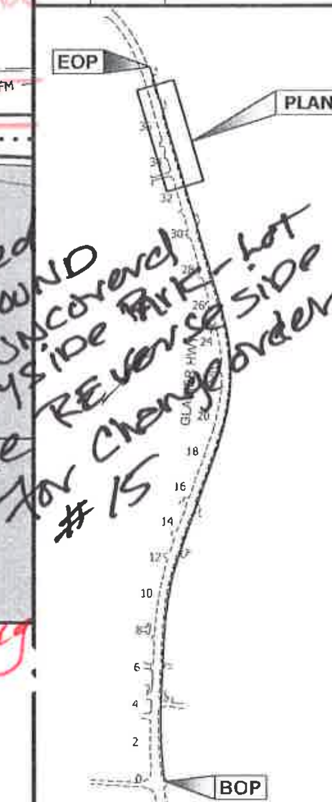
PATH Q:\JNU\69500\PLANSET\69500_F1-F9_P-P.DWG
GRANTHAM, RICK L (DOT)
TAB: F8 Monday, July 20, 2015 12:35:05 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION



PLAN LEGEND

CHECKED BY: J. BROWN

STATE OF ALASKA 49TH James L. Brown July 20, 2015 CE-14083 PROFESSIONAL ENGINEER

DESIGNED BY: J. BROWN

DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

PLAN & PROFILE

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
F8	54

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHCOAST REGION

Change Order

Project No.: 69500/0933037 Change Order No. 15

Project Name: JNU-Glacier Highway Multi-Use Path to UAS

Contractor:	Secon, Inc.	**Change Order Summary:**	
Address:	P.O. Box 32159	Calendar Days (+ / -):	N/A
	Juneau, AK 99803	New Completion Date:	N/A
		Amount of Change Order:	+$4,030.55

Recommended By: _____ Date: 27 Dec 2016

Title: Project Engineer

Approved By: _____ Date: 30 Dec 2016

Title: Project Manager

This change order constitutes agreement to terms, conditions and prices stated below.

Accepted By: _____ Date: 1/4/2017

Contractor's Representative

Acknowledgement indicates only receipt of Change Order and not mutual agreement for basis of payment or time allowance. If a matter cannot be resolved within 7 days from signature date, an Intent to Claim form must be submitted to the engineer within 14 days.

Acknowledged By: _____ Date: ____

Contractor's Representative

Permission for previously submitted subcontractor(s) to perform all or portions of the work described herein is as checked: ☒ Yes ☐ No ☐ N/A

Seal of Alaskan Professional Engineer *(if required)*

N/A

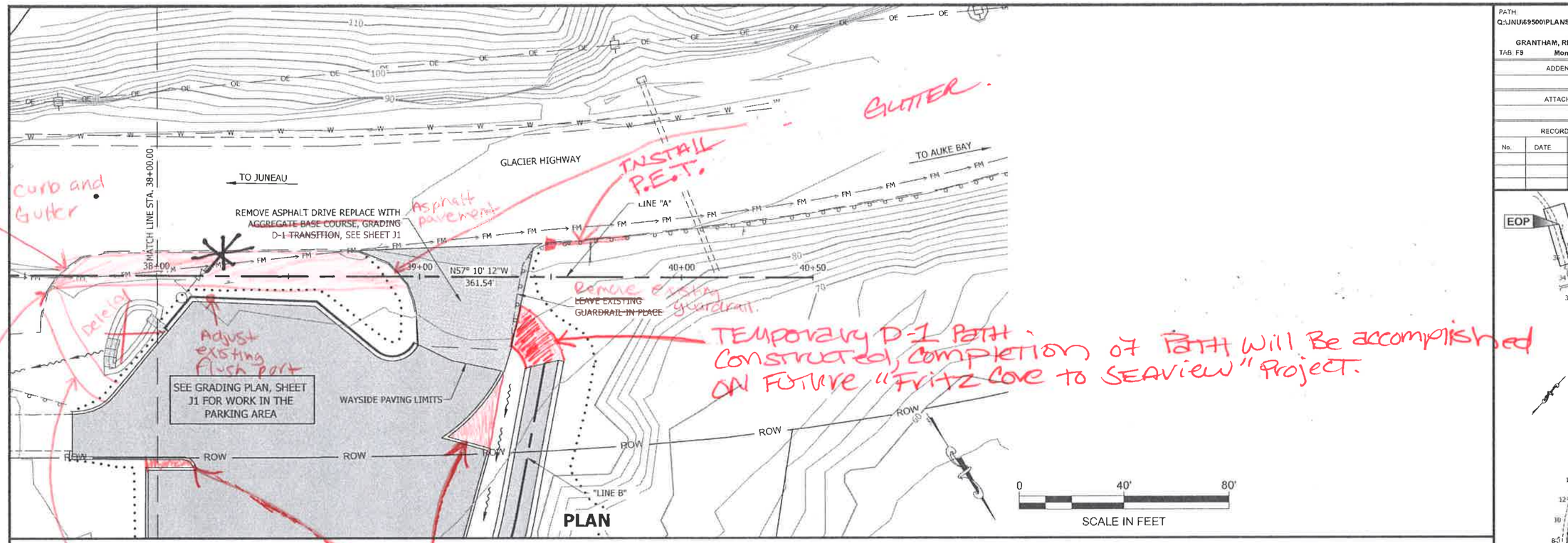
The following change(s) in the above Contract are hereby made in accordance with the terms of the Contract and under the terms and conditions stated below. Price adjustments resulting from inaccurate cost and pricing data are subject to the provisions of AS 36.30.400(c). This document shall become an amendment to the Contract and all provisions of the Contract will be applicable.

DESCRIPTION OF CHANGE (Use Continuation Sheet 25D-065 as Required)

Reason for Change Order The following is a brief description of the rationale for this change order:

1) Existing utilities were encountered from Station 16+75 to 17+45. This change order is required to excavate around the existing utilities from Station 16+75 to 17+45 to the grades shown on the plans.
2) A buried electrical ground line was uncovered during excavation of the existing Wayside Parking Lot and additional resources were required to work around the buried electrical line during excavation efforts.
3) The boundary boulders from Station 2+20 to 2+80 and from Station 5+50 to 6+10 were replaced with material to allow drainage to the valley gutter and shaping around the utility pole and load center. This work provides for a backfilled slope at these locations instead of the boundary boulders.
4) During excavation two existing underdrains were uncovered within the fill area of the path. The existing underdrains were extended to provide drainage underneath the new multi-use pathway into the new ditch line.

In accordance with Subsection 104-1.02 of the Standard Specifications, the following changes are hereby made:



PATH:
Q:\JNU\69500\PLANSET\69500_F1-F9_P-P.DWG

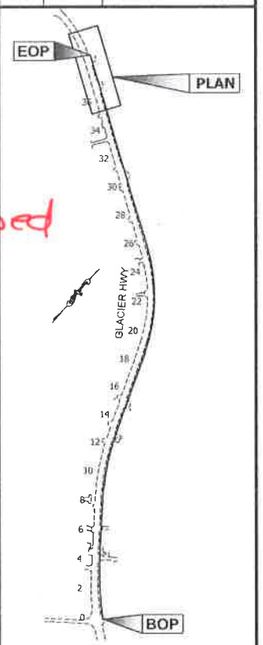
GRANTHAM, RICK L (DOT)
TAB: F9 Monday, July 20, 2015 12:35:17 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION



PLAN LEGEND

CHECKED BY: J. BROWN

DESIGNED BY: J. BROWN

DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

PLAN & PROFILE

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
F9	54

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE Date 2/19/2019

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHCOAST REGION

Change Order

Project No.: 69500/0933037

Change Order No. 13

Project Name: JNU-Glacier Highway Multi-Use Path to UAS

		Change Order Summary:	
Contractor:	Secon, Inc.		
Address:	P.O. Box 32159	Calendar Days (+ / -):	N/A
	Juneau, AK 99803	New Completion Date:	**August 12, 2016**
		Amount of Change Order:	**+$4,741.50**

Recommended By: T Dale C. Noffke Date: 7-11-16

Title: Construction Group Chief

Approved By: Victor Westhus Date: 7-11-16

Title: Regional Construction Engineer

This change order constitutes agreement to terms, conditions and prices stated below.

Accepted By: [signature] Date: 7/12/16

Contractor's Representative

Seal of Alaskan Professional Engineer *(if required)*

N/A

Payment will be made under:

Pay item Description	Pay Unit
608(7)a Temporary Asphalt Sidewalk	Square Yard

Payment will be made under:

Pay item Description	Pay Unit
609(7)a Concrete Spillway	Lump Sum

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

Continuation Sheet

Project No.: 69500/0933037 JNU-Glacier Hwy. Multi-Use Path to UAS
Change Order No. 13

Summary of Quantities

ITEM NO.	ITEM	UNIT	PRICE	QUANTITY (+ or -)	AMOUNT (+ or -)
608(7)a	Temporary Asphalt Sidewalk	S.Y.	$40.00	+55.0	+$2,200.00
609(7)a	Concrete Spillway	L.S.	$2,541.50	+1.0	+$2,541.50
				TOTAL THIS CHANGE ORDER	**+$4,741.50**

This Change Order **increases** the Contract Amount by **$4,741.50**.

The Contract Completion Date is extended to **August 12, 2016**.

PLEASE INDICATE YOU ACCEPTANCE OR ACKNOWLEDGEMENT BY SIGNING AND DATING THE APPROPRIATE SIGNATURE LINE, AND THEN RETURN THE ORIGINAL DOCUMENT TO THIS OFFICE.

NEW END TERMINAL end terminal and P-1

606(6)a. REMOVAL & Guard RAIL

Remove existing guardrail

BEGIN PATH LINE "B"
MATCH TO PJ# 68471
SIDEWALK
LINE "B"STA 0+36.56 =
LINE "A" STA. 39+48.21, OFF: 29.73' RT

Remove existing curb and gutter

Removal of CURB & GUTTER 2021/22

GRADE BORROW TO EXISTING GROUND. PJ# 68471 WILL TIE INTO PATH LINE "B" IN THE FUTURE.

LINE "B"

PC: STA: 0+97.62

LINE "B" CURVE DATA
L=36.79
Δ=21°04'49"
R=100.00
T=18.61

PT: STA: 1+34.41

PC: STA: 1+60.86

N43° 11' 31"E
77.75'

N64° 16' 21"E
36.45'

N34° 10' 43"W
40.91'

SEE L SHEETS FOR WAYSIDE LANDSCAPING

EXISTING FOOT BRIDGE

AUKE CREEK

END PATH
LINE "B"
STA 2+70.51
TIE INTO EXISTING PAVEMENT

Deleted

PT: STA: 2+29.60

DIRECT DRAINAGE TO S-3

P-13

S-3

P-12

S-2

LINE "A"

LINE "B" CURVE DATA
L=68.73
Δ=98°27'04"
R=40.00
T=46.38

Deleted

Adjust existing flush port

SEE GRADING PLAN, SHEET J1 FOR WORK IN THE PARKING AREA

ROW

0 40' 80'
SCALE IN FEET

PLAN

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 2/19/2019

Deleted Ditch Swale

GRADE BREAK STA = 0+34.56
ELEV = 97.810

GRADE BREAK STA = 2+71.46
ELEV = 77.216

FINISHED GRADE
EXISTING GROUND

-4.47%

100
90
80
70

80.8
84.88
80.3
80.41

1+00 2+00 3+00

LINE "B" PROFILE

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH Q:\JNU\69500\PLANSET\69500_F10.DWG

GRANTHAM, RICK L (DOT)
TAB: F10 Monday, July 20, 2015 12:42:02 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

PLAN LEGEND

CHECKED BY: J. BROWN

STATE OF ALASKA
49TH
James L. Brown
July 20, 2015
CE-14083
PROFESSIONAL ENGINEER

DESIGNED BY: J. BROWN

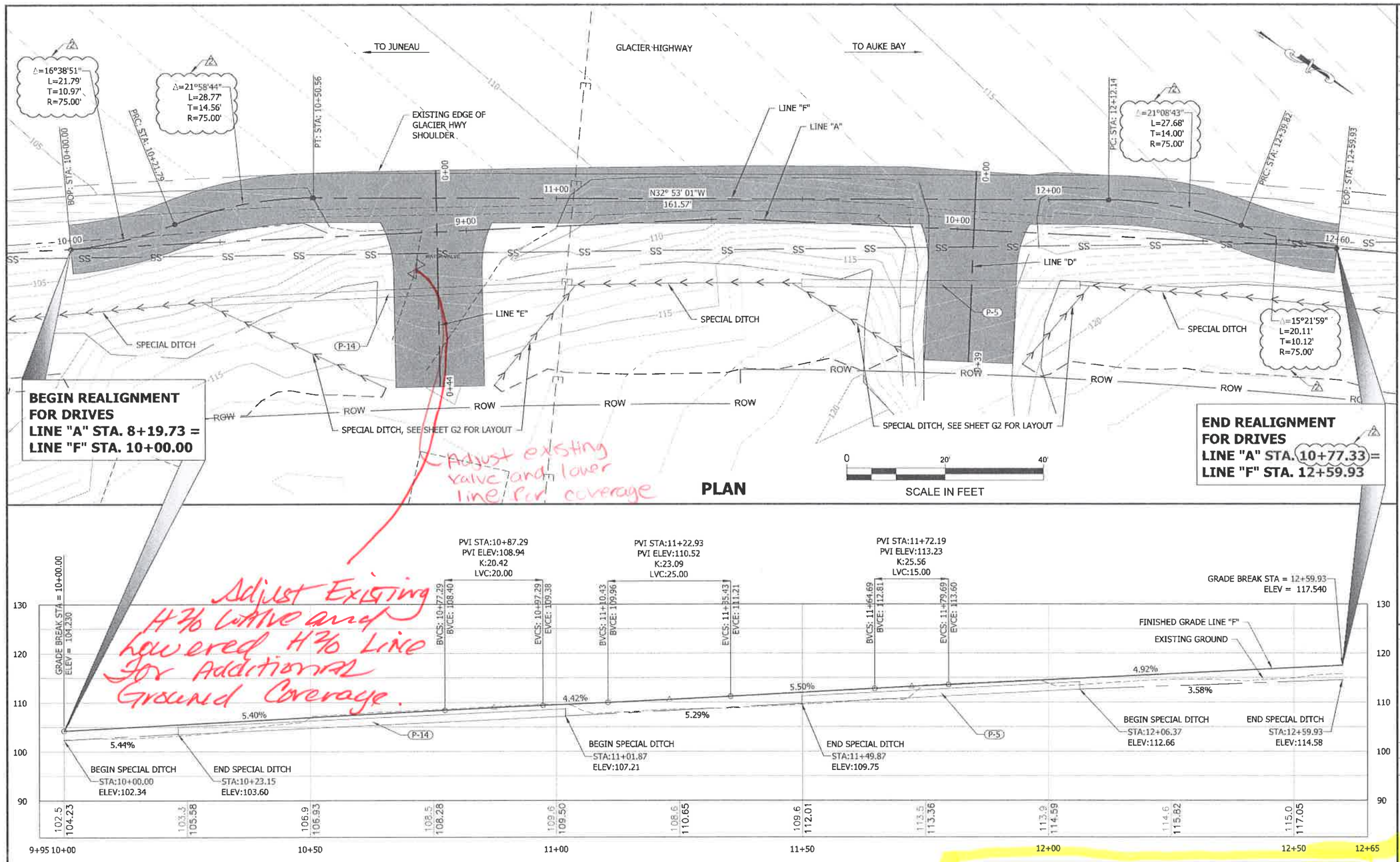
DRAWN BY: G. AMUNDSEN

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

**LINE "B"
PLAN & PROFILE**

PROJECT DESIGNATION	
0933037-69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
F10	54



LINE "F" PROFILE

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 2/19/2019

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69500\PLANSET\69500_G1_REALIGNMENT.DWG

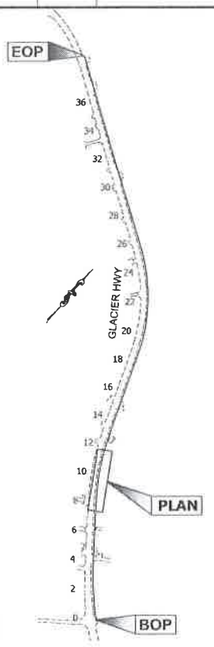
CHAMBERS, LUCAS M (DOT)
TAB: G1 Wednesday, January 27, 2016 9:33:05 A

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION
1	12/9/15	REPLACED ENTIRE SHEET
2	01/27/16	CURVE DATA, TIE IN STA.



PLAN LEGEND

CHECKED BY: J. BROWN

STATE OF ALASKA 49 TH James L. Brown 01-27-2016 CE-14083 REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY: L. CHAMBERS

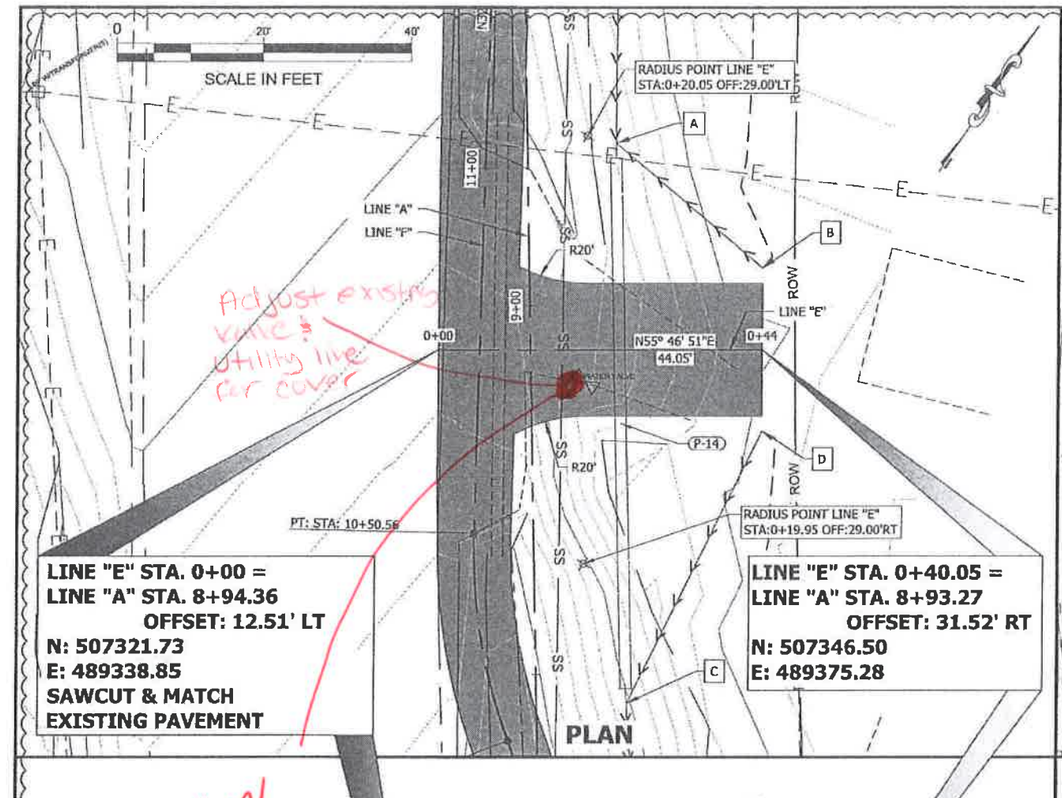
DRAWN BY: R. GRANTHAM, L. CHAMBERS

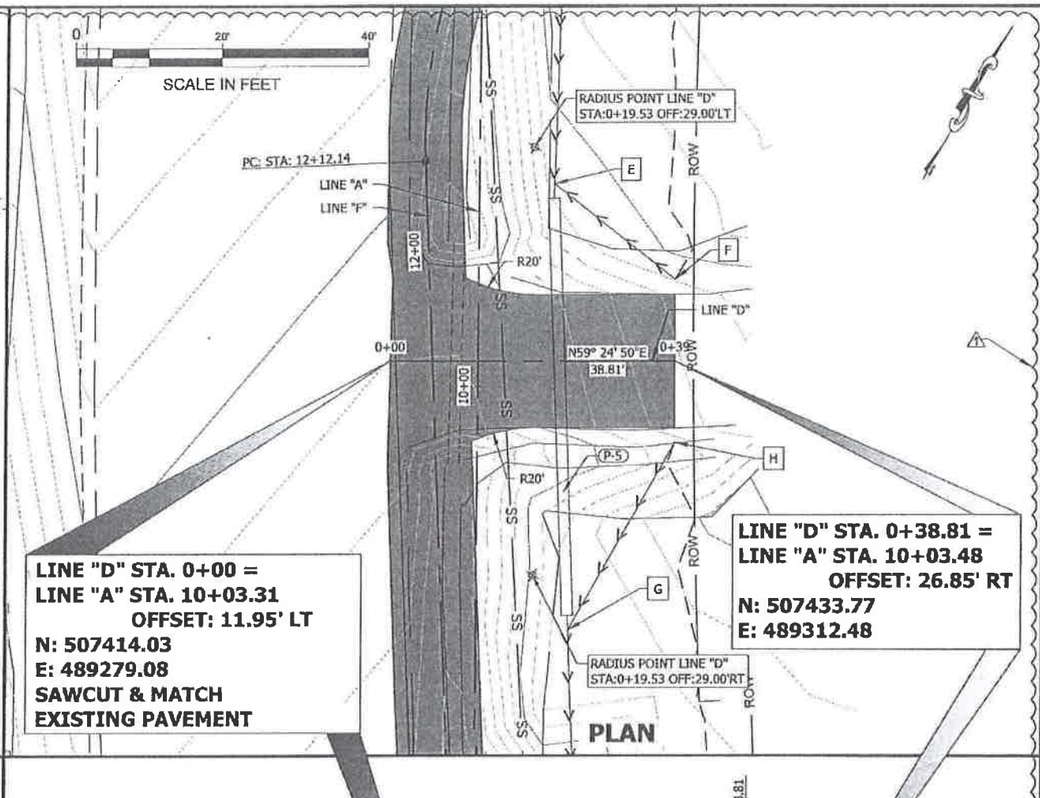
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

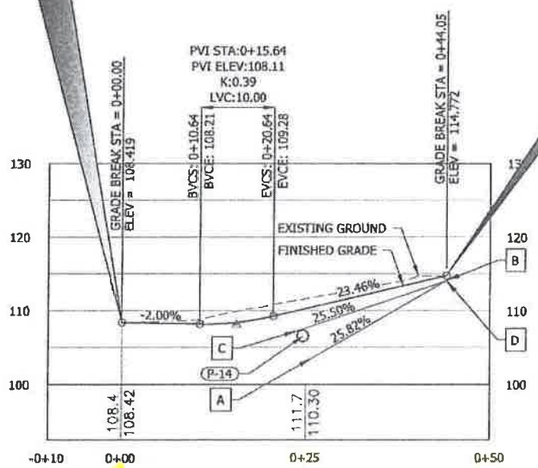
JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

PLAN & PROFILE

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
G1	56

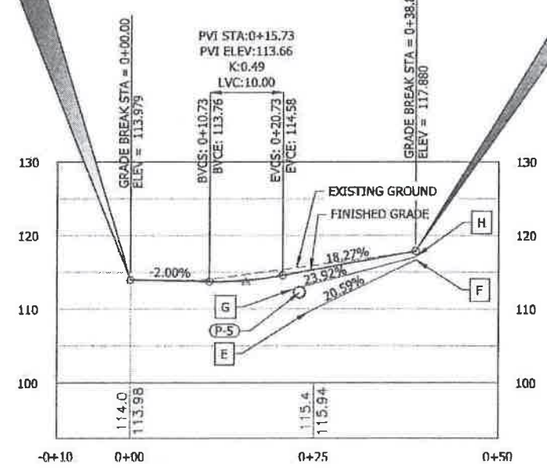






Adjust Existing H2O Valve

LINE "E" PROFILE



LINE "D" PROFILE

SPECIAL DITCH LAYOUT TABLE

	LINE "E" STA	OFFSET (FT)	ELEV. (FT)
A	0+25.9	48.0 RT	103.6
B	0+44.1	11.0 RT	114.1
C	0+23.9	28.0 LT	107.3
D	0+44.1	11.0 LT	114.1

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 2/19/2019

SPECIAL DITCH LAYOUT TABLE

	LINE "D" STA	OFFSET (FT)	ELEV. (FT)
E	0+24.3	36.5 RT	109.7
F	0+38.8	11.0 RT	116.7
G	0+22.3	24.0 LT	112.7
H	0+38.8	11.0 LT	117.1

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

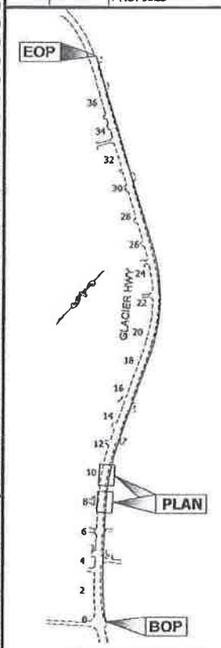
PATH: Q:\JNU\69500\PLANSET\69500_G2_APPROACH.DWG
CHAMBERS, LUCAS M (DOT)
TAB: G2 Wednesday, December 09, 2015 3:5[illegible]:43

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION
1	12/9/15	REPLACED ENTIRE SHEET WITH DRIVEWAY PLAN & PROFILES



PLAN LEGEND

CHECKED BY: J. BROWN

STATE OF ALASKA 49 TH James L. Brown 12-4-15 CE-14083 REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY: L. CHAMBERS
DRAWN BY: R. GRANTHAM, L. CHAMBERS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

DRIVEWAY PLAN & PROFILE

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
G2	56

REMOVE EXISTING FENCE.

REMOVE EXISTING PAVEMENT AND GRADE TO PATH.

ADJUST EXISTING VALVE.

LOWER H2O LINE FOR ADDITIONAL COVERAGE

REMOVE EXISTING SEPTIC TANK

RELOCATE EXISTING H2O LINE

ROW

SS

W

TEMPORARY CONSTRUCTION PERMIT

P-7

R=10'

EASEMENT 6

EASEMENT 7

N23° 17' 00"W
70.29'

LINE "C"
CURVE DATA
L=72.18
Δ=82°42'56"
R=50.00
T=44.02

N59° 25' 56"E
3.64'

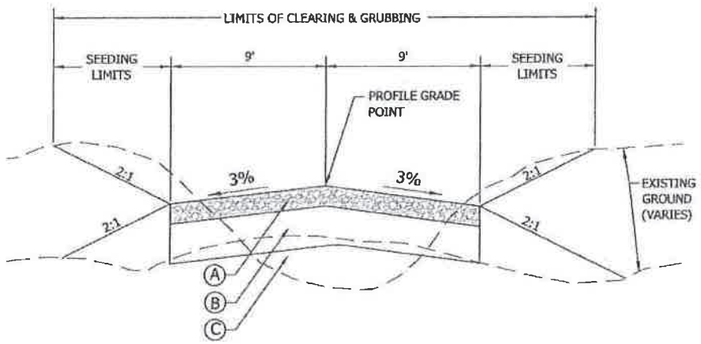
PT: STA: 1+42.47

END DRIVEWAY RECONSTRUCTION. MATCH EXISTING. STA. 1+46

BEGIN DRIVEWAY RECONSTRUCTION. MATCH EXISTING
LINE "C"STA 0+06.75 =
LINE "A" STA. 15+00.8, OFF: 52.72' RT

0 40' 80'
SCALE IN FEET

PLAN

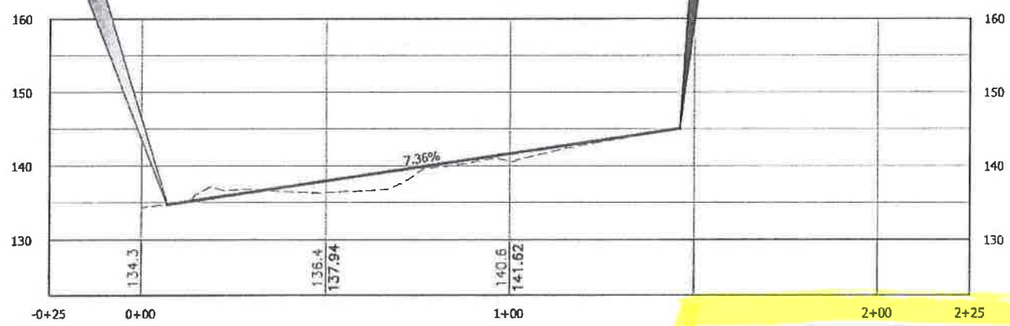


RECONSTRUCTED DRIVEWAY TYPICAL SECTION

LINE "C", STA. 0+06.76 TO STA. 1+46.10

LEGEND:

Ⓐ 6" AGGREGATE BASE COURSE, GRADING D-1
Ⓑ 12" SELECT MATERIAL, TYPE A
Ⓒ SELECT MATERIAL, TYPE A *
* AS NECESSARY



LINE "C" PROFILE

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 2/19/2019

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH:
Q:\JNU\69500\PLANSET\69500_G3_APPROACH.DWG

CHAMBERS, LUCAS M (DOT)
TAB: G3 Wednesday, December 09, 2015 3:58:59 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION
1	12/9/15	RENUMBERED SHEET FROM G2 TO G3

PLAN LEGEND

CHECKED BY: J. BROWN

STATE OF ALASKA 19 TH James L. Brown 12-9-15 CE-14043 PROFESSIONAL ENGINEER

DESIGNED BY: J. BROWN, L. CHAMBERS

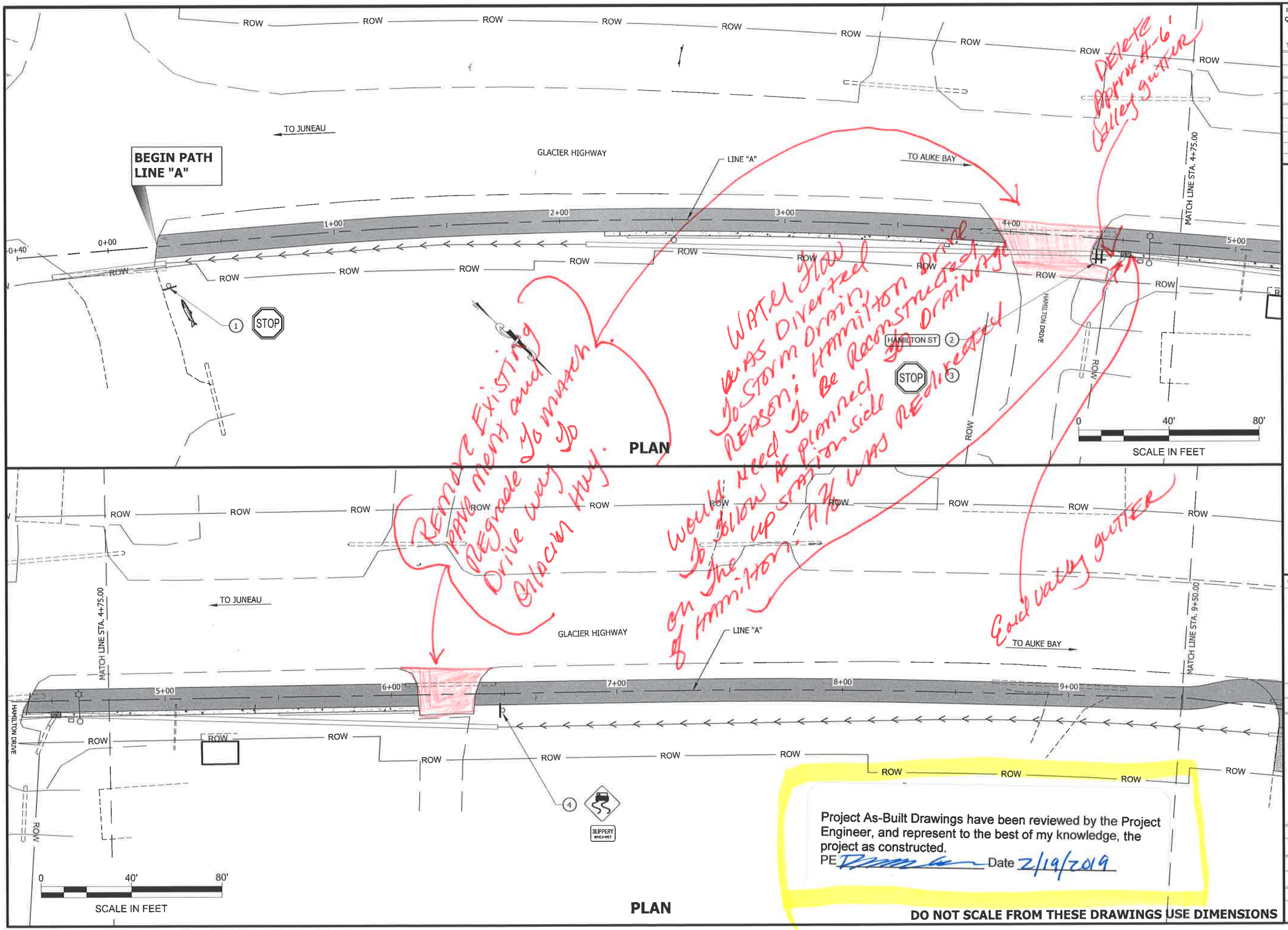
DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

DRIVEWAY PLAN & PROFILE

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
G3	56



PATH:
Q:\JNU\69500\PLANSET\69500_H1-H5_SIGN.DWG

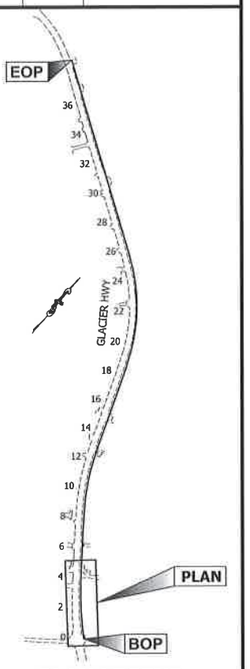
GRANTHAM, RICK L (DOT)
TAB: H1 Monday, July 20, 2015 12:44:56 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION



PLAN LEGEND

CHECKED BY: D. EPSTEIN

STATE OF ALASKA
49 TH
James L. Brown
July 20, 2015
CE-14083
REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY: J. BROWN

DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

SIGNING & STRIPING

PROJECT DESIGNATION
0933037 ~ 69500

STATE	YEAR
ALASKA	2015

SHEET NUMBER	TOTAL SHEETS
H1	54

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 2/19/2019

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

Change Order

Change Order No. 6

DESCRIPTION OF CHANGE (Use Continuation Sheet 25D-065 as Required)

In accordance with Subsection 104-1.02 of the Standard Specifications, the following changes are hereby made:

Reason for Change Order
An existing fence at station 16+50 RT required removal as it was within the project cut limits.

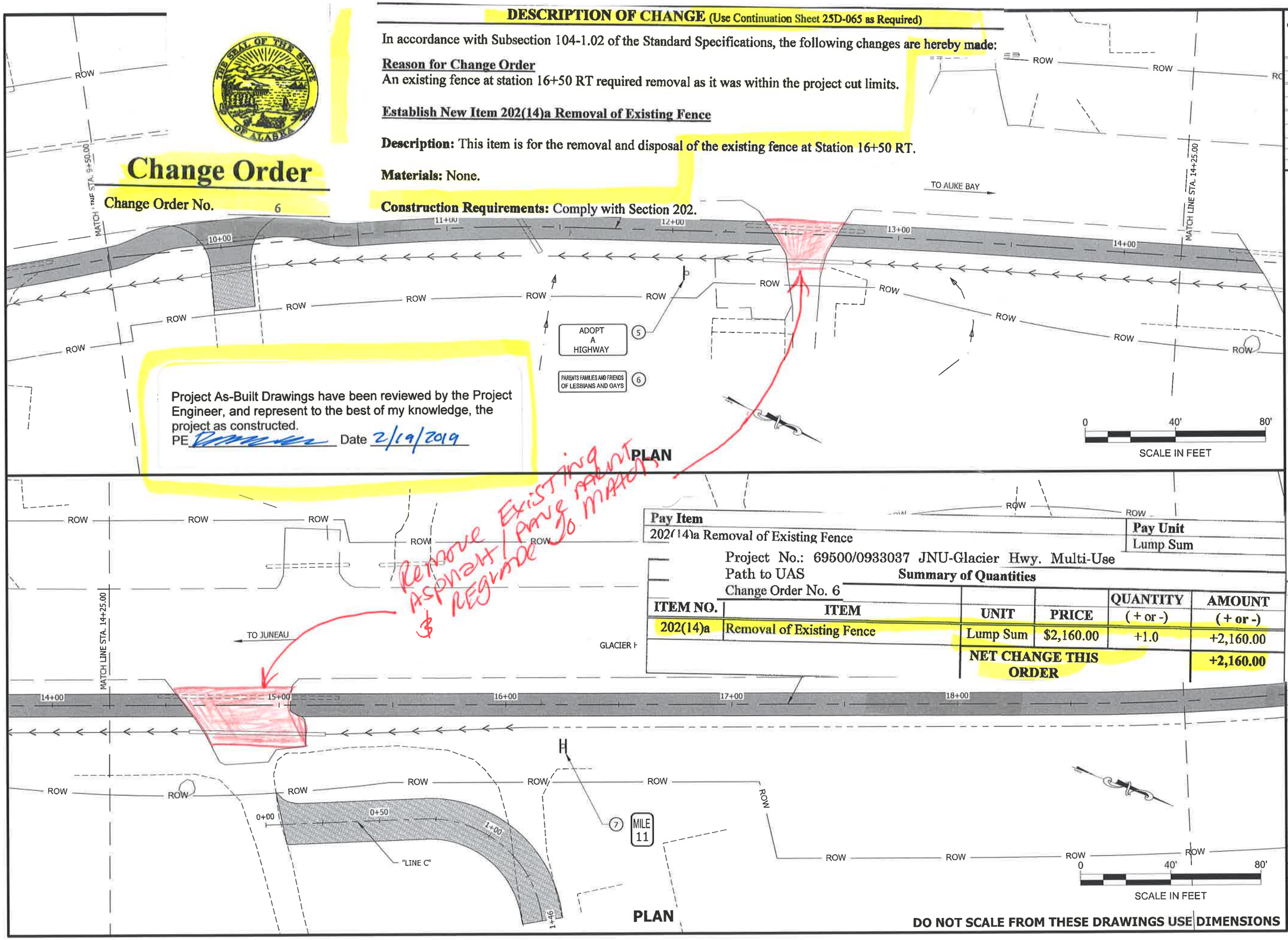
Establish New Item 202(14)a Removal of Existing Fence

Description: This item is for the removal and disposal of the existing fence at Station 16+50 RT.

Materials: None.

Construction Requirements: Comply with Section 202.

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 2/19/2019



Pay Item	Pay Unit
202(14)a Removal of Existing Fence	Lump Sum

Project No.: 69500/0933037 JNU-Glacier Hwy. Multi-Use Path to UAS
Change Order No. 6

Summary of Quantities

ITEM NO.	ITEM	UNIT	PRICE	QUANTITY (+ or -)	AMOUNT (+ or -)
202(14)a	Removal of Existing Fence	Lump Sum	$2,160.00	+1.0	+2,160.00
			NET CHANGE THIS ORDER		+2,160.00

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

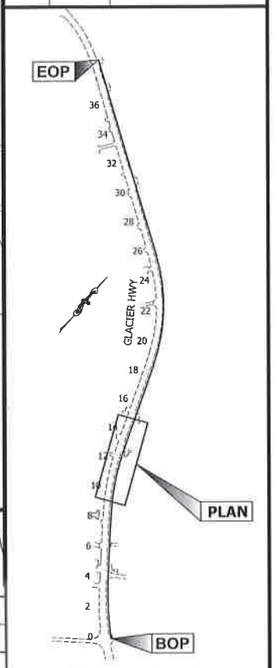
PATH: Q:\JNU\69500\PLANSET\69500_H1-H5_SIGN.DWG
GRANTHAM, RICK L (DOT)
TAB: H2 Monday, July 20, 2015 12:45:08 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION



PLAN LEGEND

CHECKED BY: D. EPSTEIN

STATE OF ALASKA 49TH James L. Brown July 20, 2015 CE-14083 REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY: J. BROWN
DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

SIGNING & STRIPING

PROJECT DESIGNATION
0933037 ~ 69500

STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
H2	54

DESCRIPTION OF CHANGE (Use Continuation Sheet 25D-065 as Required)

In accordance with Subsection 104-1.02 of the Standard Specifications, the following changes are hereby made:

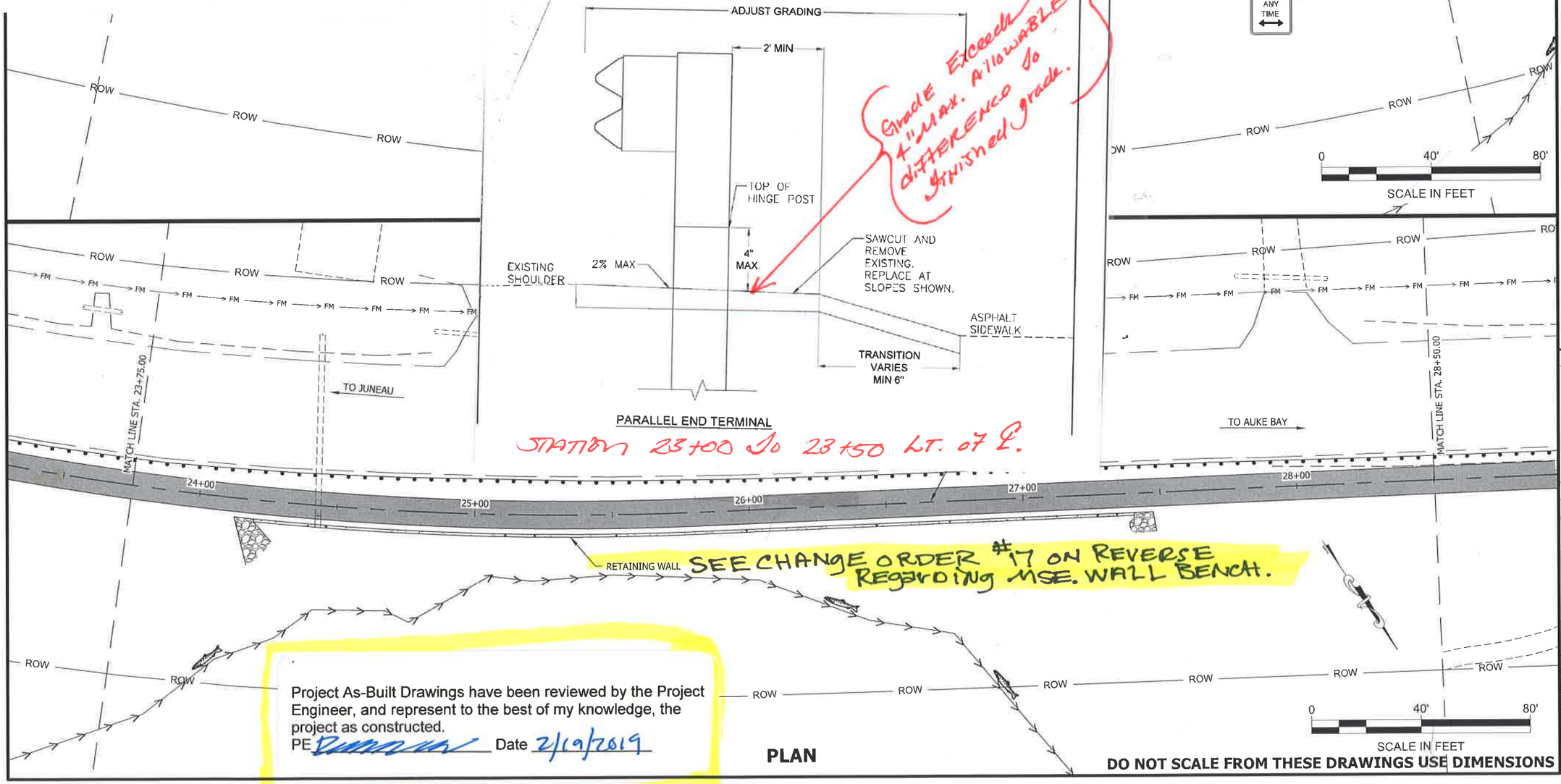
Reason for Change Order:

The SKT parallel end terminal lower hinge post height exceeded 4 inches in relation to surrounding ground surface. New Item 606(17)a Parallel Guardrail Terminal Grading corrects this safety issue. The Department and Contractor mutually agreed to extend the Contract Completion Date in order to add extra work to the Contract and research solutions to the issue.

Extension of Contract Completion Date:

Construction Contract (Form 25D-7). *Change the Completion Date* from August 12, 2016 to *October 31, 2016*.

Form 25D-068 (Revised 04/12) **C.O. No. 14**



Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.

PE _____ Date 2/19/2019

PATH: Q:\JNU\69500\PLANSET\69500_H1-H5_SIGN.DWG

CHAMBERS, LUCAS M (DOT)

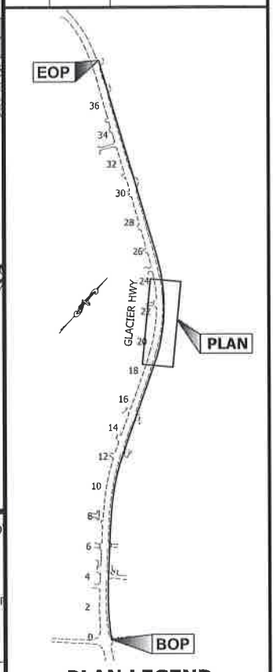
TAB: H3 Tuesday, July 28, 2015 11:46:12 AM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION



PLAN LEGEND

CHECKED BY: D. EPSTEIN

STATE OF ALASKA 49 TH James L. Brown July 20, 2015 CE-14083 REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY: J. BROWN

DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

SIGNING & STRIPING

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
H3	54

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHCOAST REGION

Change Order

Project No.: 69500/0933037 Change Order No. 17

Project Name: JNU-Glacier Highway Multi-Use Path to UAS

Contractor:	Secon, Inc.	**Change Order Summary:**	
Address:	P.O. Box 32159	Calendar Days (+ / -):	N/A
	Juneau, AK 99803	New Completion Date:	N/A
		Amount of Change Order:	+$7,672.52

Recommended By: _____ Date: 3 January 2017
Title: Project Engineer

Approved By: _____ Date: 3 Jan 2017
Title: Project Manager

This change order constitutes agreement to terms, conditions and prices stated below.

Accepted By: Maureen A Hansen Date: 1/4/2017
Contractor's Representative

Acknowledgement indicates only receipt of Change Order and not mutual agreement for basis of payment or time allowance. If a the matter cannot be resolved within 7 days from signature date, an Intent to Claim form must be submitted to the engineer within 14 days.

Acknowledged By: _____ Date: ____
Contractor's Representative

Permission for previously submitted subcontractor(s) to perform all or portions of the work described herein is as checked: ☒ Yes ☐ No ☐ N/A

Seal of Alaskan Professional Engineer *(if required)*
N/A

The following change(s) in the above Contract are hereby made in accordance with the terms of the Contract and under the terms and conditions stated below. Price adjustments resulting from inaccurate cost and pricing data are subject to the provisions of AS 36.30.400(c). This document shall become an amendment to the Contract and all provisions of the Contract will be applicable.

DESCRIPTION OF CHANGE (Use Continuation Sheet 25D-065 as Required)

In accordance with Subsection 104-1.02 of the Standard Specifications, the following changes are hereby made:

Reason for Change Order Items:

1. Selective Tree Removal was required to reduce safety hazards with undermined trees throughout the project.
2. Material was needed for the bench in front of the MSE Wall. Material was taken from the MSE Wall during excavation operations and placed in front of the MSE Wall to fill in the bench in front the MSE Wall in lieu of bringing in new material.
3. Modification was required to the new inlet to accommodate the planned 24 inch culvert.
4. A conflict between a planned culvert and a force water main was encountered and this change order compensates the Contractor for standby time while adjustments were made.

PATH:
Q:\JNU\69500\PLANSET\69500_H1-H5_SIGN.DWG

GRANTHAM, RICK L (DOT)
TAB: H4 Monday, July 20, 2015 12:45:32 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

TO JUNEAU

MATCH LINE STA. 28+50.00

GLACIER HIGHWAY

LINE "A"

TO AUKE BAY

MATCH LINE STA. 33+25.00

29+00 30+00 31+00 32+00 33+00

NO PARKING ANY TIME

9

SPEED ZONE AHEAD

10

ROW FM OHW

0 40' 80'

SCALE IN FEET

PLAN

TO JUNEAU

MATCH LINE STA. 33+25.00

GLACIER HIGHWAY

LINE "A"

MATCH LINE STA. 38+00.00

33+00 34+00 35+00 36+00 37+00 38+00

TO JUNEAU

11

NO PARKING ANY TIME

AUKE LAKE

13

NO PARKING ANY TIME

Traffic Barrier

0 40' 80'

SCALE IN FEET

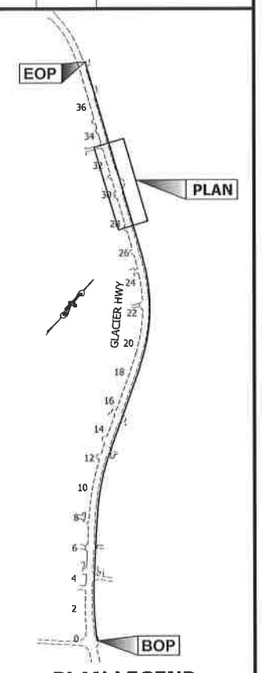
PLAN

Traffic Barriers Added during the next phase of construction "Fritz Cove Road To Service"

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 2/19/2019

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

SEE CHANGE ORDER # 7 ON REVERSE for Selective Tree Removal.



PLAN LEGEND

CHECKED BY: D. EPSTEIN

STATE OF ALASKA 49 TH
James L. Brown
July 20, 2015
CE-14083
REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY: J. BROWN

DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

SIGNING & STRIPING

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
H4	54

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHCOAST REGION

Change Order

Project No.: 69500/0933037

Change Order No. 17

Project Name: JNU-Glacier Highway Multi-Use Path to UAS

Contractor:	Secon, Inc.	**Change Order Summary:**	
Address:	P.O. Box 32159	Calendar Days (+ / -):	N/A
	Juneau, AK 99803	New Completion Date:	N/A
		Amount of Change Order:	+$7,672.52

Recommended By: _____ Date: 3 January 2017
Title: Project Engineer

Approved By: _____ Date: 3 Jan 2017
Title: Project Manager

This change order constitutes agreement to terms, conditions and prices stated below.

Accepted By: Maureen A Hansen Date: 1/4/2017
Contractor's Representative

Seal of Alaskan Professional Engineer *(if required)*
N/A

Acknowledgement indicates only receipt of Change Order and not mutual agreement for basis of payment or time allowance. If a the matter cannot be resolved within 7 days from signature date, an Intent to Claim form must be submitted to the engineer within 14 days.

Acknowledged By: _____ Date: ____
Contractor's Representative

Permission for previously submitted subcontractor(s) to perform all or portions of the work described herein is as checked: ☒ Yes ☐ No ☐ N/A

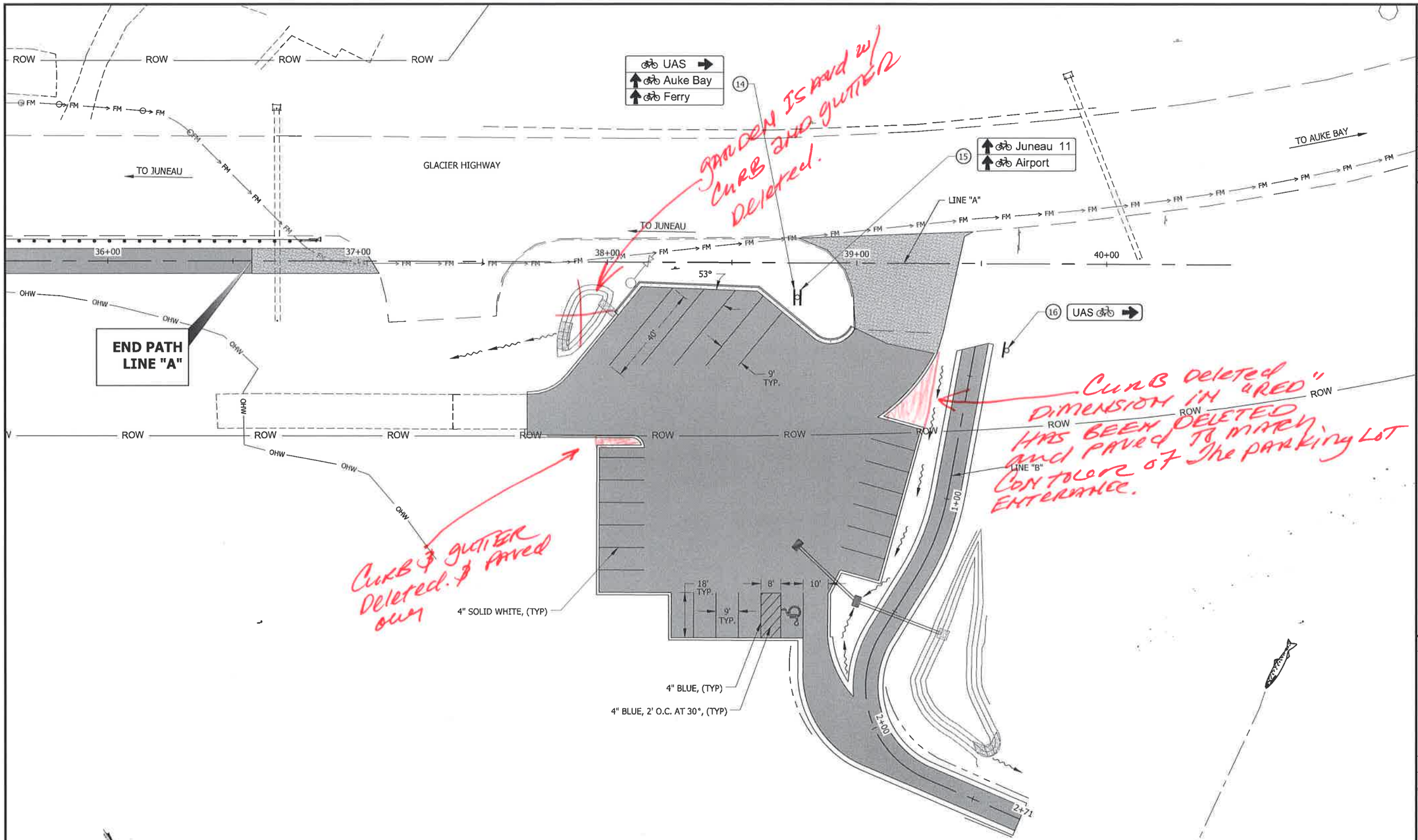
The following change(s) in the above Contract are hereby made in accordance with the terms of the Contract and under the terms and conditions stated below. Price adjustments resulting from inaccurate cost and pricing data are subject to the provisions of AS 36.30.400(c). This document shall become an amendment to the Contract and all provisions of the Contract will be applicable.

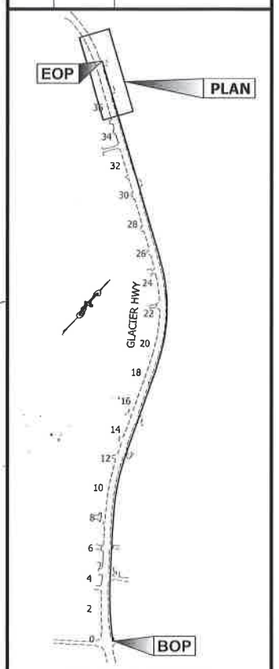
DESCRIPTION OF CHANGE (Use Continuation Sheet 25D-065 as Required)

In accordance with Subsection 104-1.02 of the Standard Specifications, the following changes are hereby made:

Reason for Change Order Items:

1. Selective Tree Removal was required to reduce safety hazards with undermined trees throughout the project.
2. Material was needed for the bench in front of the MSE Wall. Material was taken from the MSE Wall during excavation operations and placed in front of the MSE Wall to fill in the bench in front the MSE Wall in lieu of bringing in new material.
3. Modification was required to the new inlet to accommodate the planned 24 inch culvert.
4. A conflict between a planned culvert and a force water main was encountered and this change order compensates the Contractor for standby time while adjustments were made.





PLAN LEGEND

0 40' 80'

SCALE IN FEET

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 2/19/2019

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69500\PLANSET\69500_H1-H5_SIGN.DWG

GRANTHAM, RICK L (DOT)
TAB: H5 Monday, July 20, 2015 12:45:41 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

CHECKED BY: D. EPSTEIN

STATE OF ALASKA 49 TH James L. Brown July 20, 2015 CE-14083 REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY: J. BROWN

DRAWN BY: R. GRANTHAM

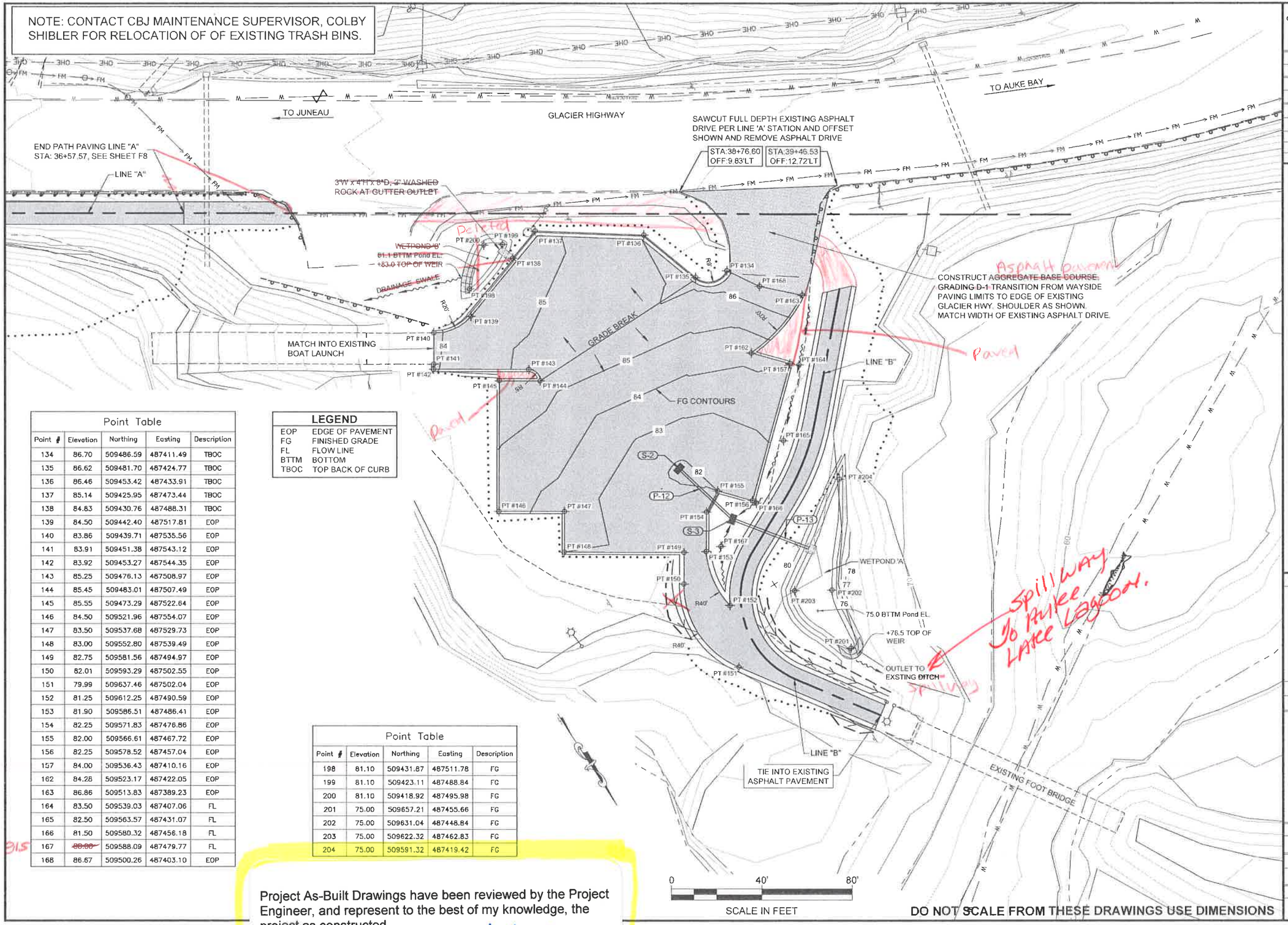
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

WAYSIDE SIGNING & STRIPING

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
H5	54

NOTE: CONTACT CBJ MAINTENANCE SUPERVISOR, COLBY SHIBLER FOR RELOCATION OF OF EXISTING TRASH BINS.



Point Table

Point #	Elevation	Northing	Easting	Description
134	86.70	509486.59	487411.49	TBOC
135	86.62	509481.70	487424.77	TBOC
136	86.46	509453.42	487433.91	TBOC
137	85.14	509425.95	487473.44	TBOC
138	84.83	509430.76	487488.31	TBOC
139	84.50	509442.40	487517.81	EOP
140	83.86	509439.71	487535.56	EOP
141	83.91	509451.38	487543.12	EOP
142	83.92	509453.27	487544.35	EOP
143	85.25	509476.13	487508.97	EOP
144	85.45	509483.01	487507.49	EOP
145	85.55	509473.29	487522.64	EOP
146	84.50	509521.96	487554.07	EOP
147	83.50	509537.68	487529.73	EOP
148	83.00	509552.80	487539.49	EOP
149	82.75	509581.56	487494.97	EOP
150	82.01	509593.29	487502.55	EOP
151	79.99	509637.46	487502.04	EOP
152	81.25	509612.25	487490.59	EOP
153	81.90	509586.51	487486.41	EOP
154	82.25	509571.83	487476.86	EOP
155	82.00	509566.61	487467.72	EOP
156	82.25	509578.52	487457.04	EOP
157	84.00	509536.43	487410.16	EOP
162	84.28	509523.17	487422.05	EOP
163	86.86	509513.83	487389.23	EOP
164	83.50	509539.03	487407.06	FL
165	82.50	509563.57	487431.07	FL
166	81.50	509580.32	487456.18	FL
167	~~80.00~~ 81.5	509588.09	487479.77	FL
168	86.67	509500.26	487403.10	EOP

LEGEND

EOP	EDGE OF PAVEMENT
FG	FINISHED GRADE
FL	FLOW LINE
BTTM	BOTTOM
TBOC	TOP BACK OF CURB

Point Table

Point #	Elevation	Northing	Easting	Description
198	81.10	509431.87	487511.78	FG
199	81.10	509423.11	487488.84	FG
200	81.10	509418.92	487495.98	FG
201	75.00	509657.21	487455.66	FG
202	75.00	509631.04	487448.84	FG
203	75.00	509622.32	487462.83	FG
204	75.00	509591.32	487419.42	FG

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE Date 2/19/2019

PATH
Q:\JNU\69500\PLANSET\69500_J1_WAYSIDE_G-D.DWG

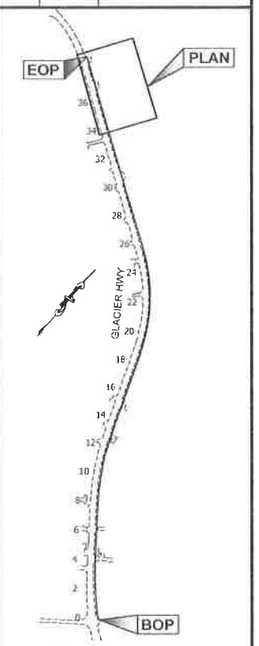
GRANTHAM, RICK L (DOT)
TAB: J1 Monday, July 20, 2015 12:46:57 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION



PLAN LEGEND

CHECKED BY: J. BROWN

STATE OF ALASKA 49TH James L. Brown July 20, 2015 CE-14083

DESIGNED BY: J. BROWN, L. CHAMBERS

DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

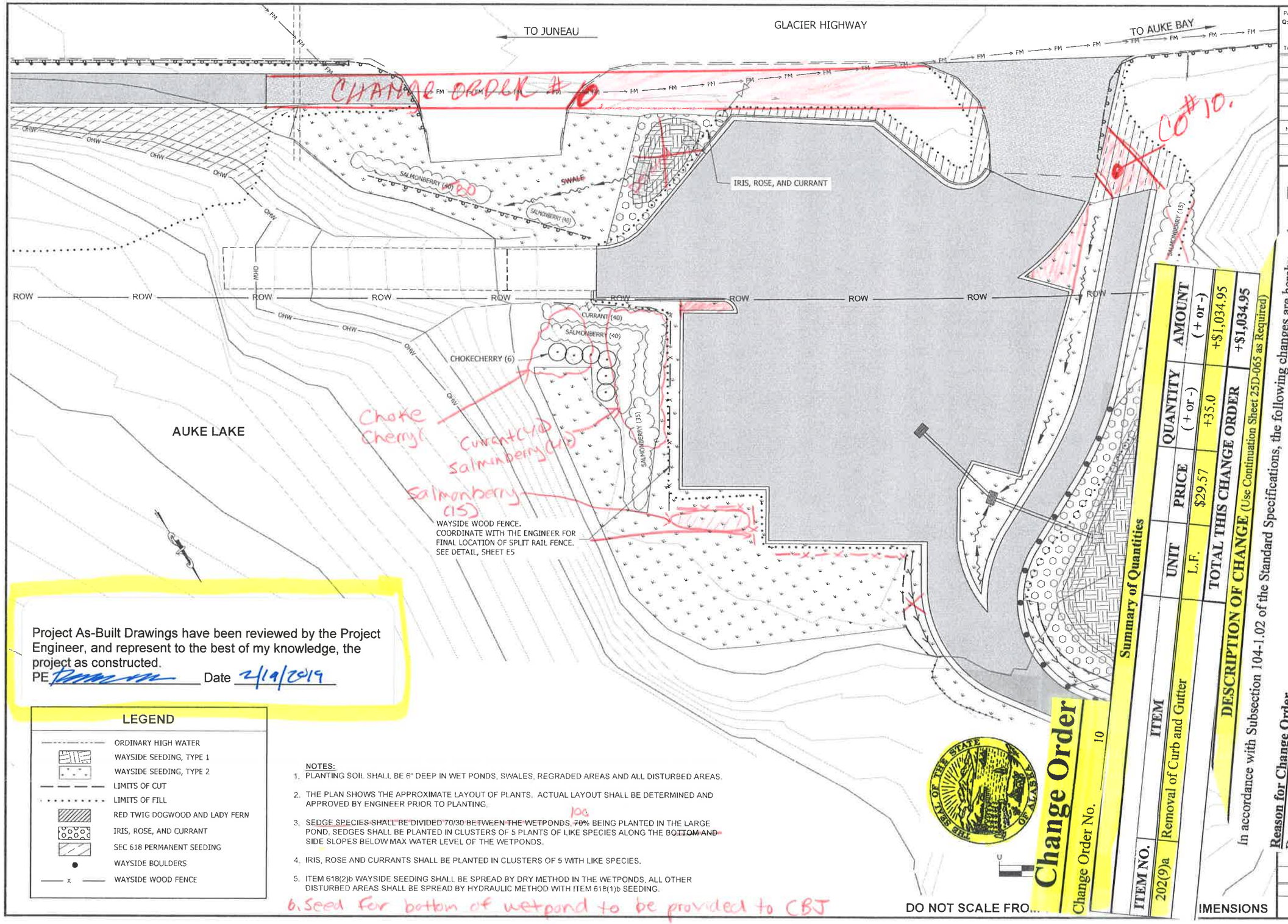
WAYSIDE GRADING & DRAINAGE

PROJECT DESIGNATION
0933037 ~ 69500

STATE	YEAR
ALASKA	2015

SHEET NUMBER	TOTAL SHEETS
J1	54

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS



Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.

PE _____ Date 2/19/2019

LEGEND

- ORDINARY HIGH WATER
- WAYSIDE SEEDING, TYPE 1
- WAYSIDE SEEDING, TYPE 2
- LIMITS OF CUT
- LIMITS OF FILL
- RED TWIG DOGWOOD AND LADY FERN
- IRIS, ROSE, AND CURRANT
- SEC 618 PERMANENT SEEDING
- WAYSIDE BOULDERS
- x WAYSIDE WOOD FENCE

NOTES:

1. PLANTING SOIL SHALL BE 6" DEEP IN WET PONDS, SWALES, REGRADED AREAS AND ALL DISTURBED AREAS.
2. THE PLAN SHOWS THE APPROXIMATE LAYOUT OF PLANTS. ACTUAL LAYOUT SHALL BE DETERMINED AND APPROVED BY ENGINEER PRIOR TO PLANTING.
3. SEDGE SPECIES SHALL BE DIVIDED 70/30 BETWEEN THE WETPONDS, 70% BEING PLANTED IN THE LARGE POND. SEDGES SHALL BE PLANTED IN CLUSTERS OF 5 PLANTS OF LIKE SPECIES ALONG THE BOTTOM AND SIDE SLOPES BELOW MAX WATER LEVEL OF THE WETPONDS.
4. IRIS, ROSE AND CURRANTS SHALL BE PLANTED IN CLUSTERS OF 5 WITH LIKE SPECIES.
5. ITEM 618(2)b WAYSIDE SEEDING SHALL BE SPREAD BY DRY METHOD IN THE WETPONDS, ALL OTHER DISTURBED AREAS SHALL BE SPREAD BY HYDRAULIC METHOD WITH ITEM 618(1)b SEEDING.

6. Seed for bottom of wetpond to be provided to CBJ

DO NOT SCALE FRO...

PATH: Q:\JNU\69500\PLANSET\69500_L1_LSCP.DWG
GRANTHAM, RICK L (DOT)
TAB: L1 Thursday, July 23, 2015 8:45:05 AM

ADDENDUM NUMBER
ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

Change Order

Change Order No. 10

Summary of Quantities

ITEM NO.	ITEM	UNIT	PRICE	QUANTITY (+ or -)	AMOUNT (+ or -)
202(9)a	Removal of Curb and Gutter	L.F.	$29.57	+35.0	+$1,034.95
	TOTAL THIS CHANGE ORDER				+$1,034.95

DESCRIPTION OF CHANGE (Use Continuation Sheet 25D-065 as Required)

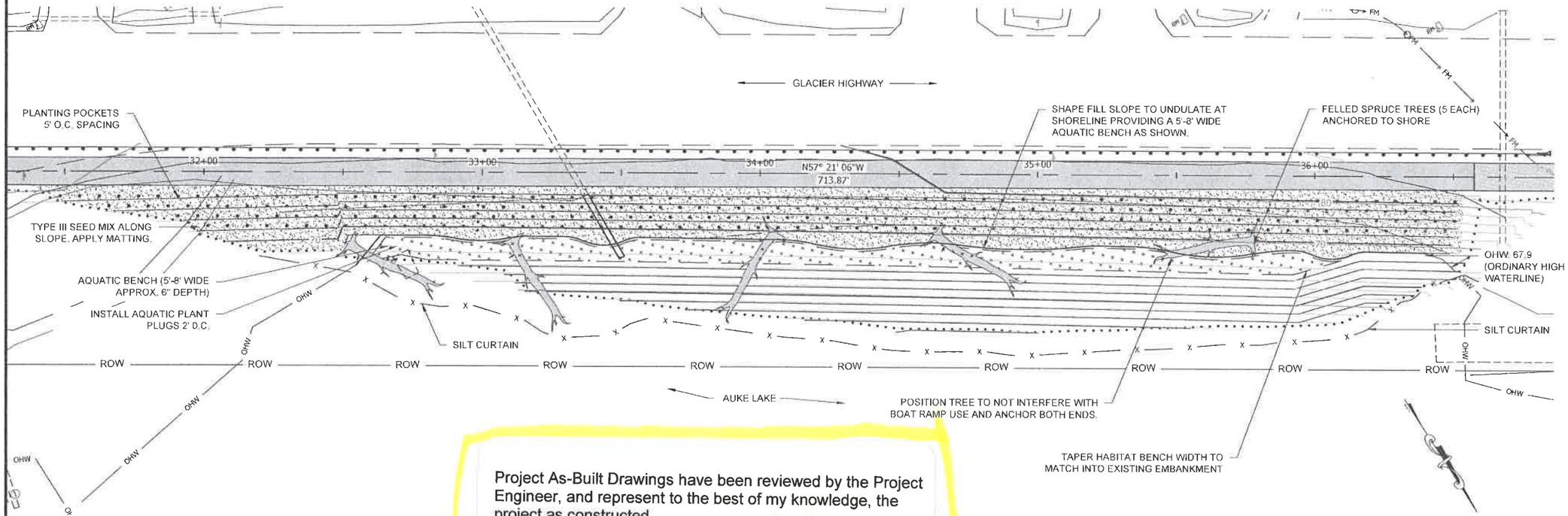
In accordance with Subsection 104-1.02 of the Standard Specifications, the following changes are hereby made:

Reason for Change Order
Due to delays on an adjacent project the connection in the Wayside parking lot was not established. This change order removes the curb and gutter in the existing driveways to allow for a connection to be established and provide a useable path from the beginning of the project to the end of the project.

Establish New Item 202(9)a Removal of Curb and Gutter
Description: Provide resources to remove the existing curb from approximate Station 37+60 RT and approximate Station 37+60 RT to Station 37+70 LT.

Materials: Comply with the plans and Section 202.

STATE	
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
L1	54



Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 2/19/2019

PLANTING SCHEDULE

WOODY PLANTS FOR PLANT POCKETS ALONG SLOPE

SYMBOL	BOTANICAL NAME	COMMON NAME	NOTES	SIZE	SPACING	QTY
*	ALNUS VIRIDIS	SITKA ALDER	SALVAGED LOCALLY	24"-36"	60"	25%
	ARUNCUS SYLVESTER	GOAT'S BEARD	SALVAGED LOCALLY	PLUGS	60"	30%
	CORNUS STOLONIFERA	RED TWIG DOGWOOD	PURCHASED	18"	60"	20%
	PICEA SITCHENSIS	SITKA SPRUCE	SALVAGED LOCALLY	SAPLING	60"	5%
	SALIX SITCHENSIS	SITKA WILLOW	PURCHASED	18"	60"	20%

INTERMIX PLANTS IN PLANTING POCKETS ALONG SLOPE. 275 POCKETS AT 5' O.C. SPACING.

AQUATIC PLUGS FOR BENCH

SYMBOL	BOTANICAL NAME	COMMON NAME	DESCRIPTION	SOURCE LOCATION
	EQUISETUM FLUVIATILE	SWAMP HORSETAIL	PLUG PLANTING	ROW*
	CARIX SITCHENSIS	SITKA SEDGE	PLUG PLANTING	ROW
	CALTHA PALUSTRIS	MARSH MARIGOLD	PLUG PLANTING	ROW
	SCIRPUS MICROCARPUS	SMALL LEAVED BULLRUSH	PLUG PLANTING	ROW

INTERMIX 775 PLANTING PLUGS ALONG AQUATIC BENCH AT 2' O.C. SPACING.
PLANT OVER 2,675 SQ.FT. OF 12" DEPTH PEAT TOPSOIL.

TYPE III SEED MIX FOR SLOPE ABOVE WATER LINE

SYMBOL	BOTANICAL NAME	COMMON NAME	PROPORTION BY WEIGHT	APPLICATION RATE
	CALAMAGROSTIS CANADENSIS	BLUEJOINT REEDGRASS	20%	3 LBS. PER 1000 S.F.
	DESCHAMPSIA CESPITOSA	TUFTED HAIRGRASS	20%	
	BECKMANNIA SYZIGACHNE	AMERICAN SLOUGHGRASS	10%	
	LOLIUM MULTIFLORUM	ANNUAL RYE	10%	
	FESTUCA RUBRA	RED FESCUE	40%	

SEED AND COVER SLOPE WITH JUTE MESH. FILL SLOPE ABOVE THE OHW LINE IS APPROXIMATELY 10350 SQ.FT.

LEGEND

SYMBOL	NOTES	DESCRIPTION	QTY
— x — x —	SILT CURTAIN	SEE DETAIL & SPECS	480 L.F.

NOTES

SPRUCE TREES ARE AVAILABLE ON SITE WITHIN THE AREA OF CLEARING AND GRUBBING.

*DONOR SITE FOR PLANT PLUGS IS LOCATE WITHIN THE RIGHT OF WAY AT THE SOUTHEAST END OF THE AQUATIC BENCH.

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH
Q:\JNU\69500\PLANSET\69500_L2-L3_HABITAT BENCH.DWG
GRANTHAM, RICK L (DOT)
TAB: L2 AUGUST 2014

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

PLAN LEGEND

CHECKED BY: J. BROWN

STATE OF ALASKA 49 TH James L. Brown July 20, 2015 CE-14083 PROFESSIONAL ENGINEER

DESIGNED BY: J. BROWN

DRAWN BY: G. AMUNDSEN

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

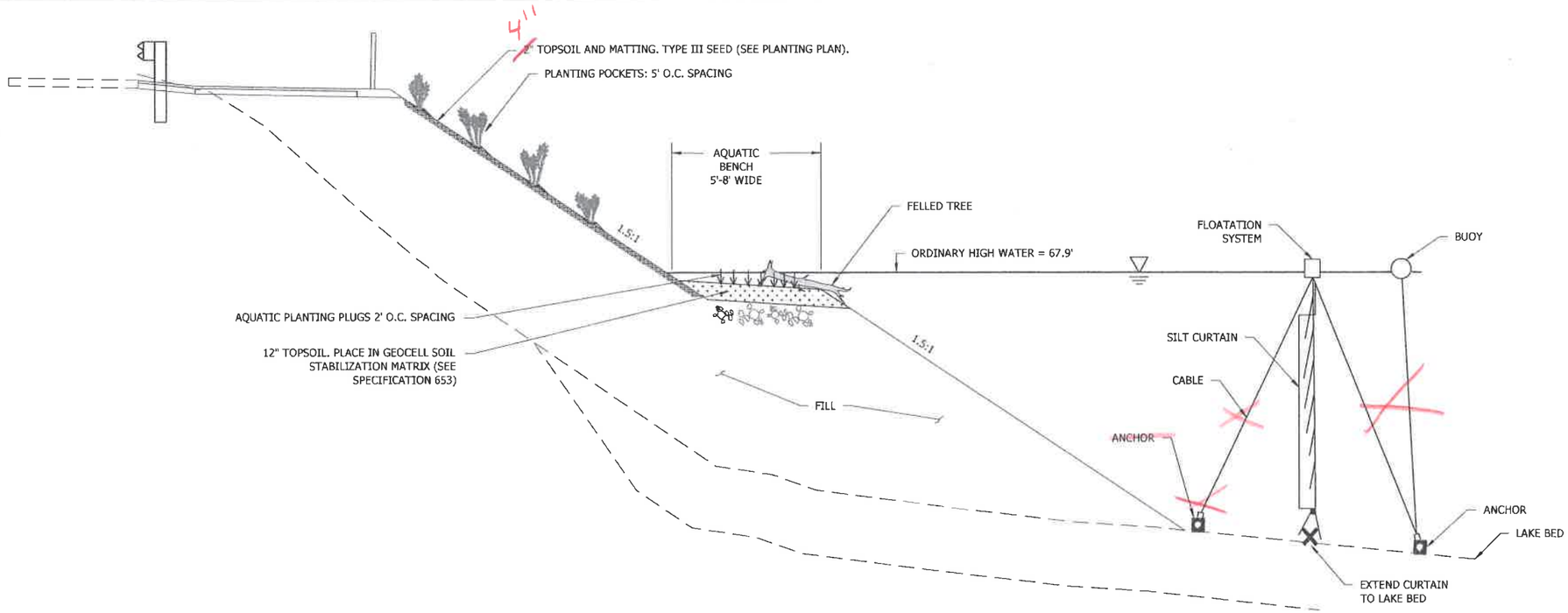
JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

AUKE LAKE FILL AND PLANTINGS

PROJECT DESIGNATION
0933037 ~ 69500

STATE	YEAR
ALASKA	2015

SHEET NUMBER	TOTAL SHEETS
L2	54



PLAN LEGEND

SEE REVERSE for C.O. #16.

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.

PE _____ Date 2/19/2019

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69500\PLANSET\69500_L2-L3_HABITAT BENCH.DWG

GRANTHAM, RICK L (DOT)

TAB: L3 AUGUST 2014

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

CHECKED BY: T.S.

STATE OF ALASKA 49TH James L. Brown July 20, 2015 CE-14083 PROFESSIONAL ENGINEER

DESIGNED BY: T.S.

DRAWN BY: B.K.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

AQUATIC BENCH

PROJECT DESIGNATION

0933037 ~ 69500

STATE	YEAR
ALASKA	2015

SHEET NUMBER	TOTAL SHEETS
L3	54

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHCOAST REGION

Change Order

Project No.: 69500/0933037

Change Order No. 16

Project Name: JNU-Glacier Highway Multi-Use Path to UAS

Contractor:	Secon, Inc.	**Change Order Summary:**	
Address:	P.O. Box 32159	Calendar Days (+ / -):	N/A
	Juneau, AK 99803	New Completion Date:	N/A
		Amount of Change Order:	+$20,780.56

Recommended By: _____ Date: 27 Dec 2016

Title: Project Engineer

Approved By: _____ Date: 29 Dec 2016

Title: Project Manager

This change order constitutes agreement to terms, conditions and prices stated below.

Accepted By: Maureen A Hansen Date: 1/4/2017

Contractor's Representative

Seal of Alaskan Professional Engineer *(if required)*

N/A

Acknowledgement indicates only receipt of Change Order and not mutual agreement for basis of payment or time allowance. If a the matter cannot be resolved within 7 days from signature date, an Intent to Claim form must be submitted to the engineer within 14 days.

Acknowledged By: _____ Date: ____

Contractor's Representative

Permission for previously submitted subcontractor(s) to perform all or portions of the work described herein is as checked: ☐ Yes ☐ No ☒ N/A

The following change(s) in the above Contract are hereby made in accordance with the terms of the Contract and under the terms and conditions stated below. Price adjustments resulting from inaccurate cost and pricing data are subject to the provisions of AS 36.30.400(c). This document shall become an amendment to the Contract and all provisions of the Contract will be applicable.

DESCRIPTION OF CHANGE (Use Continuation Sheet 25D-065 as Required)

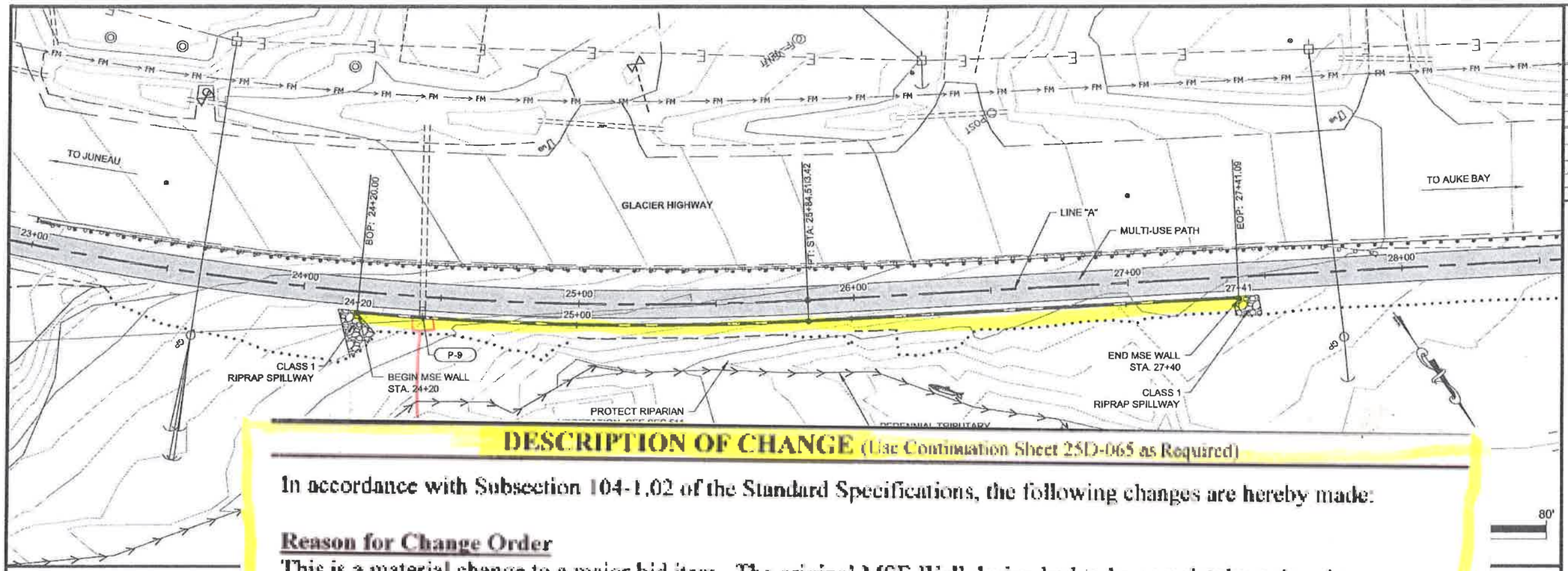
In accordance with Subsection 104-1.02 of the Standard Specifications, the following changes are hereby made:

Reason for Change Order

1) The Contractor and the Department discussed the use of permanent signs rather than daily traffic signs and agreed to delete the permanent construction signs and pay for the signs per day. This change order deletes the lump sum item for permanent signs.
2) The geocell on the habitat bench was installed per plan, but the face of the geocell was plastic and there were environmental concerns about the long term effects on the fish habitat. This change order makes adjustments to the habitat bench in order to create suitable fish habitat.

Delete Item 643(2)a Permanent Construction Signs.

Establish New Item 653(2)a Habitat Bench Adjustment



DESCRIPTION OF CHANGE (Use Continuation Sheet 25D-065 as Required)

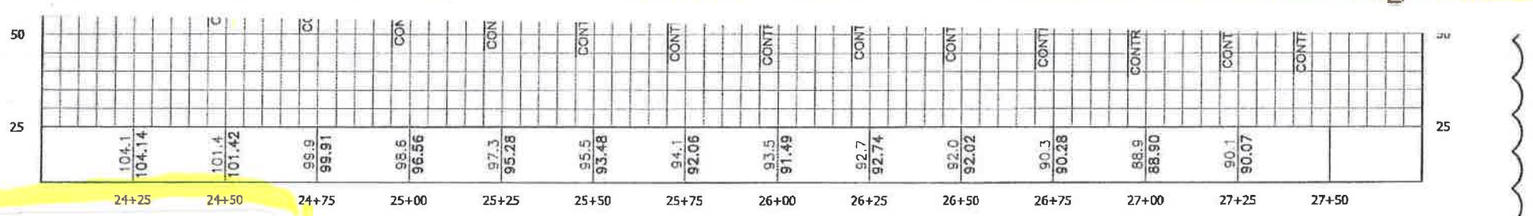
In accordance with Subsection 104-1.02 of the Standard Specifications, the following changes are hereby made:

Reason for Change Order

This is a material change to a major bid item. The original MSE Wall design had to be completely replaced to accommodate a new typical section and avoid conflict with the adjacent fish stream. The new section increases the depth, increases the block quantities, requires additional excavation, shoring, sheeting, a stepped footing, larger blocks, additional engineering, and additional ESCP control.

Replace **Sheet B3 and M1** *with the attached* **Sheet B3 and M1.**

Delete Item 511(1A)a MSE Concrete Wall – Pattern Finish



MSE WALL PROFILE

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 2/19/2019

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH:
Q:\JNU\69500\PLANSET\69500_M1_RETAINING WALL.DWG
GRANTHAM, RICK L (DOT)
TAB: M1 Monday, November 23, 2015 1:09:11 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION
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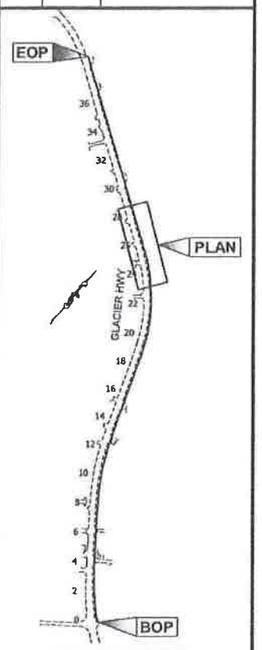


PLAN LEGEND

CHECKED BY: J. BROWN

DESIGNED BY: J. BROWN, L. CHAMBERS

DRAWN BY: R. GRANTHAM

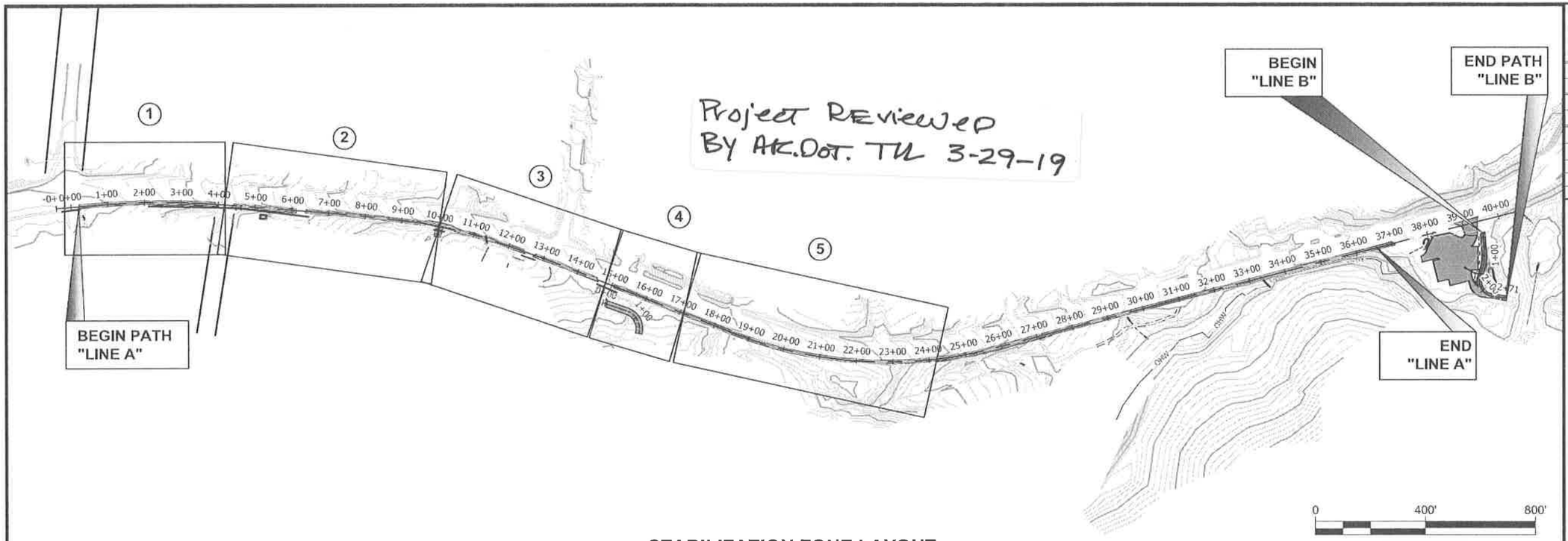
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

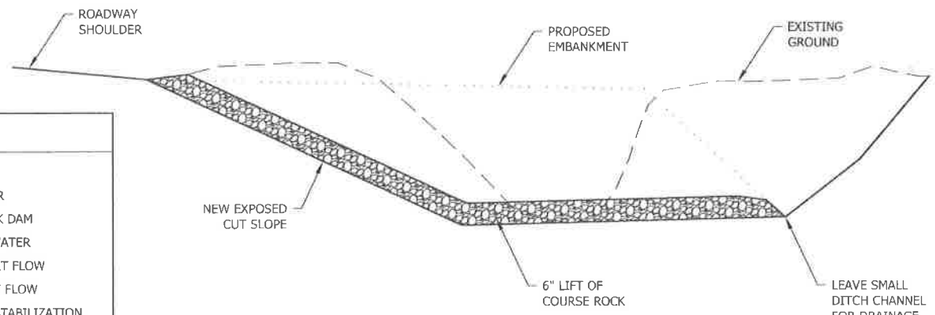
MSE RETAINING WALL

PROJECT DESIGNATION
0933037 ~ 69500

STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
M1	54



STABILIZATION ZONE LAYOUT



ASPHALT SIDEWALK CONSTRUCTION TEMPORARY STABILIZATION DETAIL

NTS

1. DURING ASPHALT SIDEWALK CONSTRUCTION ONCE AREA HAS BEEN CLEARED GRUBBED AND EXCAVATED TO GRADE TEMPORARILY STABILIZE EXPOSED CUTS WITH COURSE ROCK TO PREVENT EROSION OF EXPOSED GROUND.
2. COURSE ROCK SHALL BE 1" TO 6" SIZED STONES WITH 5% OR LESS FINES.
3. THE 6" COURSE ROCK LIFT MAY BE INCORPORATED INTO THE FINAL EMBANKMENT.
4. CONTRACTOR SHALL STABILIZE DOWN STREAM STABILIZATION ZONES WITH COURSE ROCK PRIOR TO DISTURBING THE SUBSEQUENT UPSTREAM ZONE.
5. ASPHALT SIDEWALK CONSTRUCTION TEMPORARY STABILIZATION SHALL BE PAID FOR UNDER ITEM 641(3)a.

LEGEND

- PROFILE FLOW
- SB — SB — SEDIMENT BARRIER
- TEMPORARY CHECK DAM
- ORDINARY HIGH WATER
- PROPOSED CULVERT FLOW
- EXISTING CULVERT FLOW
- SLOPE/SPILLWAY STABILIZATION
- PERMANENT SEEDING
- LIMITS OF FILL
- LIMITS OF CUT
- DITCH CENTERLINE
- SILT/TURBIDITY CURTAIN
- INLET PROTECTION
- SURFACE FLOW
- WATERS OF THE U.S.
- WETLAND
- IDENTIFIED INVASIVE PLANT SITE
- WAYSIDE SEEDING

INVASIVE PLANT SUMMARY				INVASIVE PLANT SUMMARY			
SITE	TYPE	AREA (SQ FT)	SCHEDULE	SITE	TYPE	AREA (SQ FT)	SCHEDULE
NT1	REED CANARY GRASS	8000	A	NT24	REED CANARY GRASS	65	A
NT2	CANADA THISTLE	2	A	NT25	REED CANARY GRASS	100	A
NT3	ORANGE HAWK WEED	0.25	A	NT26	REED CANARY GRASS	9	A
NT4	REED CANARY GRASS	1125	A	NT27	REED CANARY GRASS	275	A
NT5	REED CANARY GRASS	80	A	NT28	OXEYE DAISY	9	A
NT6	REED CANARY GRASS	6000	A	NT29	REED CANARY GRASS	40	A
NT7	OXEYE DAISY, ORANGE HAWK WEED	16	A	NT30	REED CANARY GRASS	2	A
NT8	ORANGE HAWK WEED	3	A	NT31	OXEYE DAISY	125	A
NT9	REED CANARY GRASS	4	A	NT32	REED CANARY GRASS	30	A
NT10	REED CANARY GRASS	4	A	NT33	OXEYE DAISY	3	A
NT11	REED CANARY GRASS	4000	A	NT34	OXEYE DAISY	1	A
NT12	JAPANESE KNOT WEED	20	A	NT35	REED CANARY GRASS	150	A
NT13	JAPANESE KNOT WEED	200	A	NT36	OXEYE DAISY	1	A
NT14	JAPANESE KNOT WEED	250	A	NT37	OXEYE DAISY	0.25	A
NT15	REED CANARY GRASS	2000	A	NT38	OXEYE DAISY	0.5	A
NT16	OXEYE DAISY, ORANGE HAWK WEED	1	A	NT39	OXEYE DAISY	40	A
NT17	REED CANARY GRASS	600	A	NT40	REED CANARY GRASS	28	A
NT18	JAPANESE KNOT WEED	6	A	NT41	OXEYE DAISY	1290	B
NT19	OXEYE DAISY	9	A	NT42	REED CANARY GRASS	4	B
NT20	REED CANARY GRASS	120	A	NT43	OXEYE DAISY	240	B
NT21	REED CANARY GRASS	50	A	NT44	OXEYE DAISY	25	B
NT22	REED CANARY GRASS	8	A	NT45	REED CANARY GRASS	25	B
NT23	OXEYE DAISY	600	A	NT46	REED CANARY GRASS	2	B

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

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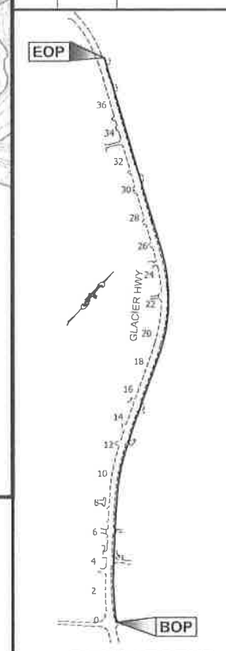
CHAMBERS, LUCAS M (DOT)
TAB: P1 Monday, July 27, 2015 10:52:37 AM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION



PLAN LEGEND

CHECKED BY: J. BROWN

ESCP NOT SEALED IN ACCORDANCE WITH ALASKA HIGHWAY PRECONSTRUCTION MANUAL SECTION 1120.7.3 DATED NOVEMBER 15, 2013

DESIGNED BY: G. AMUNDSEN

DRAWN BY: G. AMUNDSEN

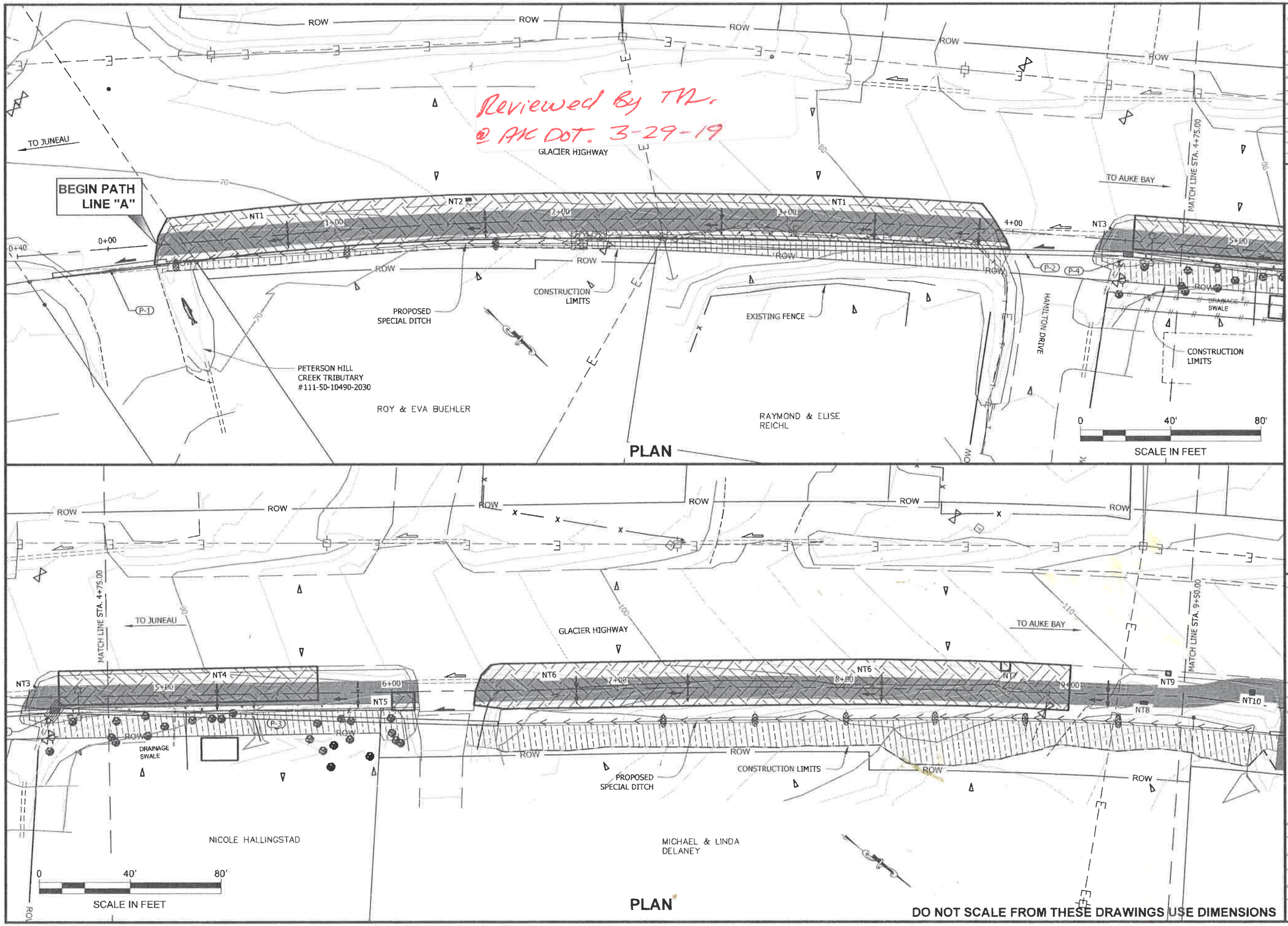
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

ESCP PLAN

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
P1	54

Reviewed By TM.
@ AK DOT. 3-29-19



PATH:
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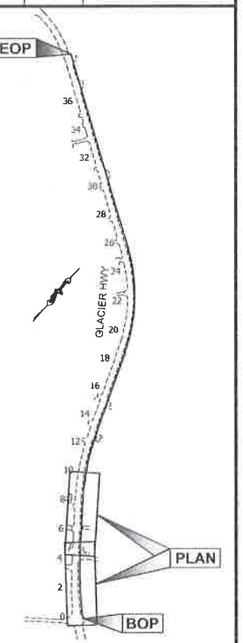
GRANTHAM, RICK L (DOT)
TAB: P2 Monday, July 20, 2015 12:52:26 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION



PLAN LEGEND

CHECKED BY: J. BROWN

ESCP NOT SEALED IN ACCORDANCE WITH ALASKA HIGHWAY PRECONSTRUCTION MANUAL SECTION 1120.7.3 DATED NOVEMBER 15, 2013

DESIGNED BY: G. AMUNDSEN

DRAWN BY: G. AMUNDSEN

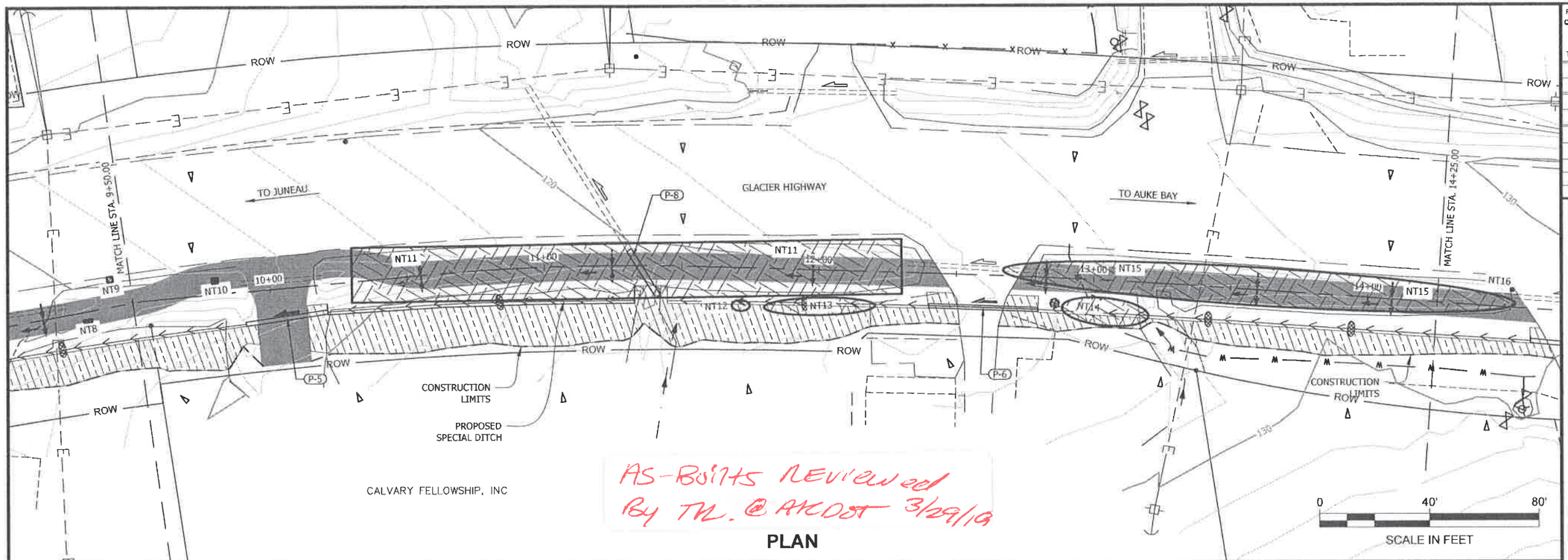
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

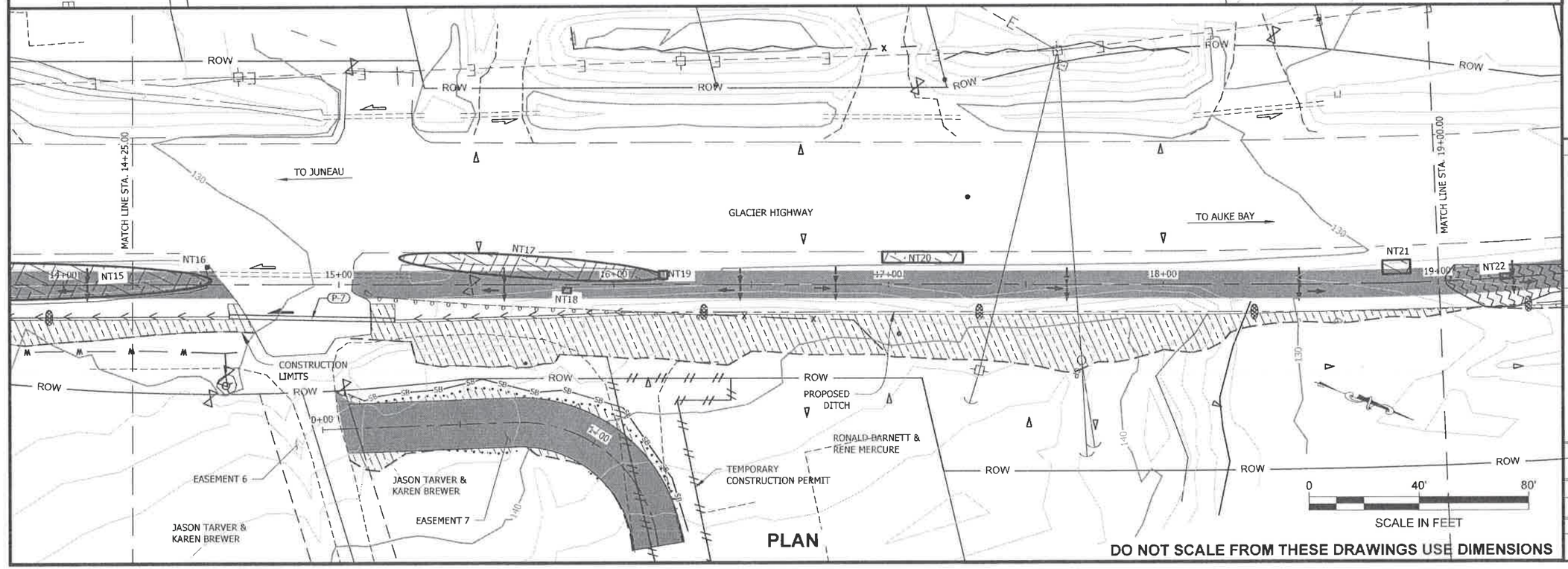
ESCP PLAN

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
P2	54

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

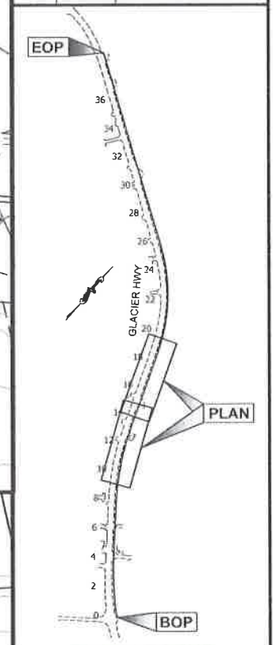


PLAN



PLAN

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS



PLAN LEGEND

PATH: Q:\JNU\69500\PLANSET\69500_P2-P6_ESCP.DWG

GRANTHAM, RICK L (DOT)
TAB: P3 Monday, July 20, 2015 12:52:45 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

CHECKED BY: J. BROWN

ESCP NOT SEALED IN ACCORDANCE WITH ALASKA HIGHWAY PRECONSTRUCTION MANUAL SECTION 1120.7.3 DATED NOVEMBER 15, 2013

DESIGNED BY: G. AMUNDSEN

DRAWN BY: G. AMUNDSEN

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

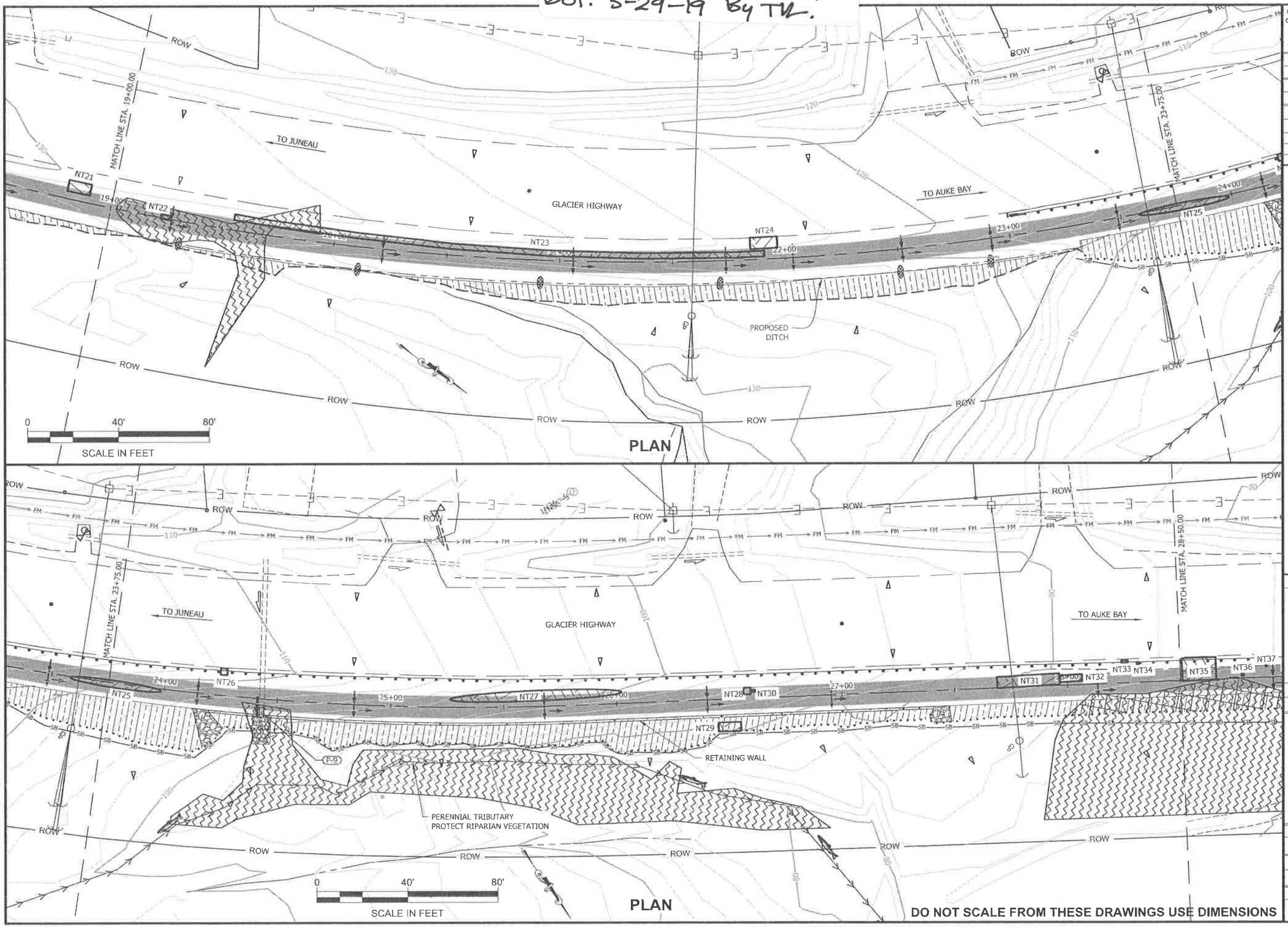
JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

ESCP PLAN

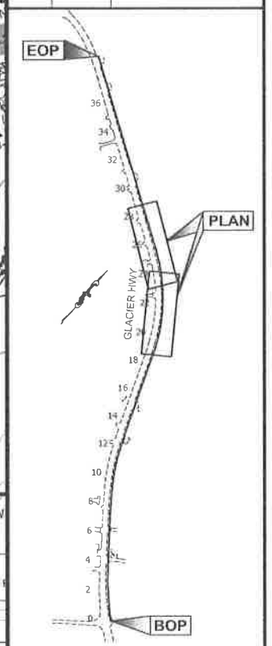
PROJECT DESIGNATION
0933037 ~ 69500

STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
P3	54

As Builts Reviewed By DOT. 3-29-19 By TL.



DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS



PLAN LEGEND

PATH:
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CHAMBERS, LUCAS M (DOT)
TAB: P4 Friday, August 14, 2015 2:59:18 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

CHECKED BY: J. BROWN

ESCP NOT SEALED IN ACCORDANCE WITH ALASKA HIGHWAY PRECONSTRUCTION MANUAL SECTION 1120.7.3 DATED NOVEMBER 15, 2013

DESIGNED BY: G. AMUNDSEN

DRAWN BY: G. AMUNDSEN

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

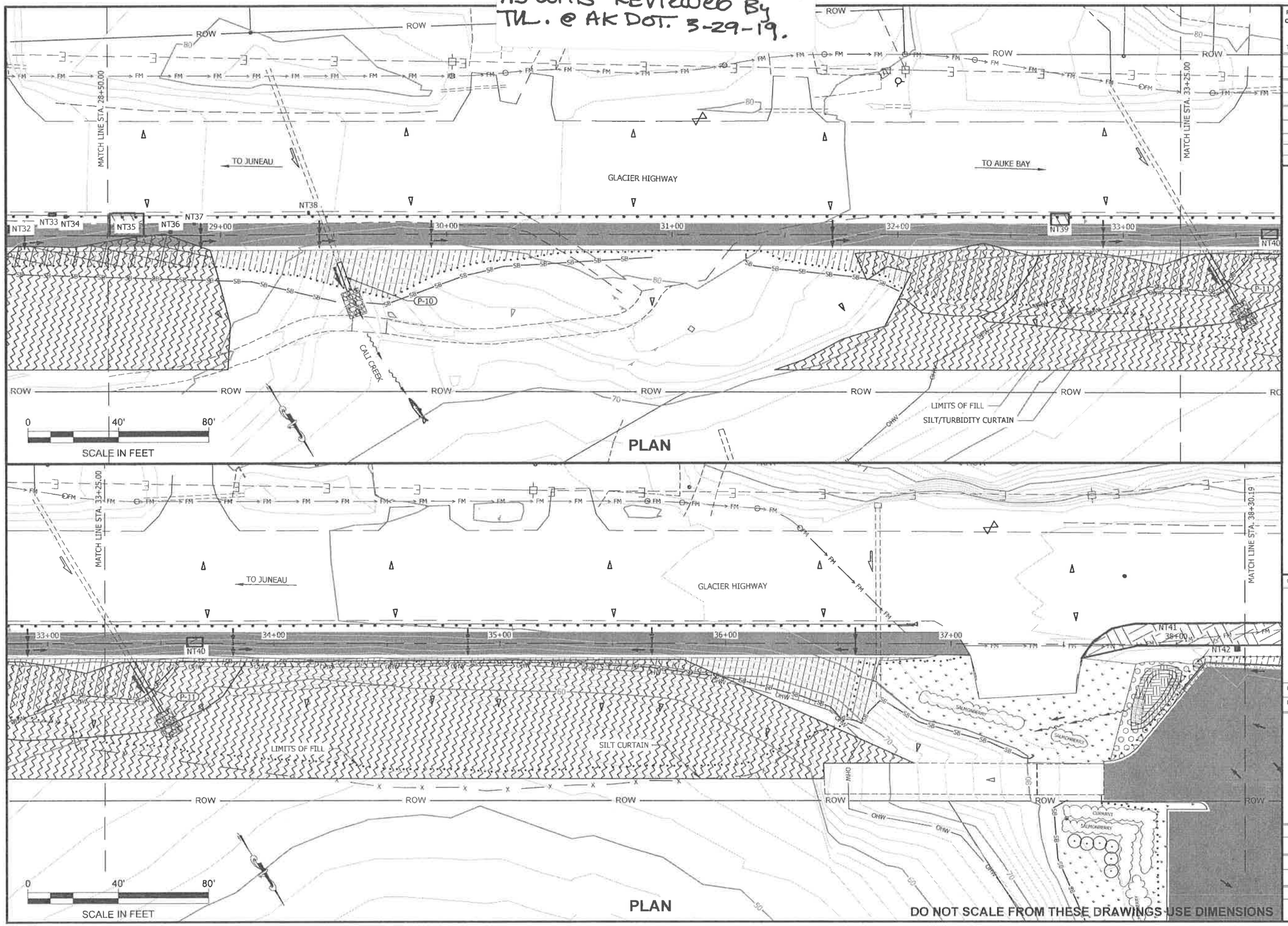
JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

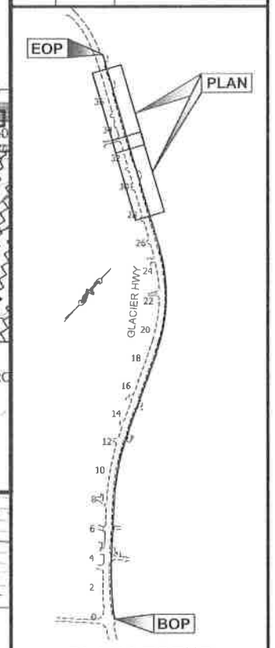
ESCP PLAN

PROJECT DESIGNATION
0933037 ~ 69500

STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
P4	54

As Builts Reviewed By TM. @ AK DOT. 5-29-19.





PLAN LEGEND

PATH: Q:\JNU\69500\PLANSET\69500_P2-P5_ESCP.DWG

GRANTHAM, RICK L (DOT)
TAB: P5 Monday, July 20, 2015 12:53:22 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

CHECKED BY: J. BROWN

ESCP NOT SEALED IN ACCORDANCE WITH ALASKA HIGHWAY PRECONSTRUCTION MANUAL SECTION 1120.7.3 DATED NOVEMBER 15, 2013

DESIGNED BY: G. AMUNDSEN

DRAWN BY: G. AMUNDSEN

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

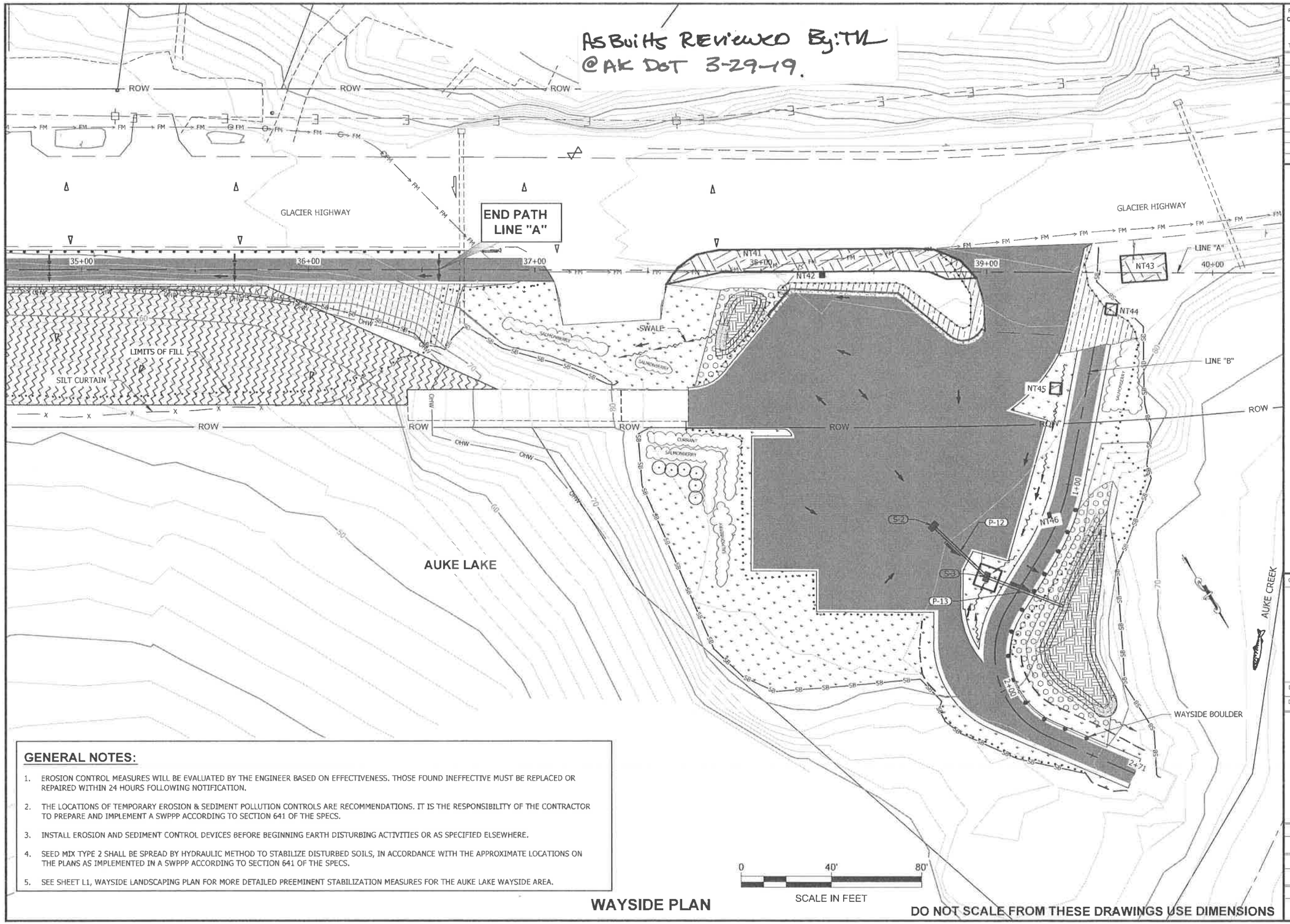
JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

ESCP PLAN

PROJECT DESIGNATION
0933037 ~ 69500

STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
P5	54

As Built's Reviewed By: TM
@ AK DOT 3-29-19.



GENERAL NOTES:

1. EROSION CONTROL MEASURES WILL BE EVALUATED BY THE ENGINEER BASED ON EFFECTIVENESS. THOSE FOUND INEFFECTIVE MUST BE REPLACED OR REPAIRED WITHIN 24 HOURS FOLLOWING NOTIFICATION.
2. THE LOCATIONS OF TEMPORARY EROSION & SEDIMENT POLLUTION CONTROLS ARE RECOMMENDATIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PREPARE AND IMPLEMENT A SWPPP ACCORDING TO SECTION 641 OF THE SPECS.
3. INSTALL EROSION AND SEDIMENT CONTROL DEVICES BEFORE BEGINNING EARTH DISTURBING ACTIVITIES OR AS SPECIFIED ELSEWHERE.
4. SEED MIX TYPE 2 SHALL BE SPREAD BY HYDRAULIC METHOD TO STABILIZE DISTURBED SOILS, IN ACCORDANCE WITH THE APPROXIMATE LOCATIONS ON THE PLANS AS IMPLEMENTED IN A SWPPP ACCORDING TO SECTION 641 OF THE SPECS.
5. SEE SHEET L1, WAYSIDE LANDSCAPING PLAN FOR MORE DETAILED PREEMINENT STABILIZATION MEASURES FOR THE AUKE LAKE WAYSIDE AREA.

WAYSIDE PLAN

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH:
Q:\JNU\69500\PLANSET\69500_P2-P6_ESCP.DWG

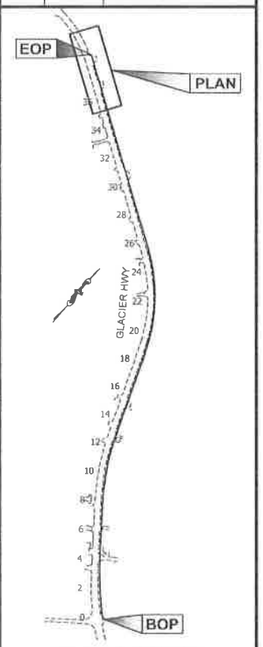
GRANTHAM, RICK L (DOT)
TAB: P6 Monday, July 20, 2015 12:53:34 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION



PLAN LEGEND

CHECKED BY: J. BROWN

ESCP NOT SEALED IN ACCORDANCE WITH ALASKA HIGHWAY PRECONSTRUCTION MANUAL SECTION 1120.7.3 DATED NOVEMBER 15, 2013

DESIGNED BY: G. AMUNDSEN

DRAWN BY: G. AMUNDSEN

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

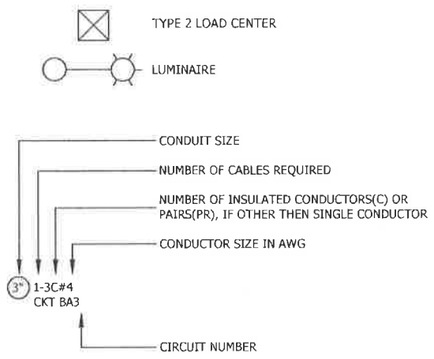
ESCP PLAN

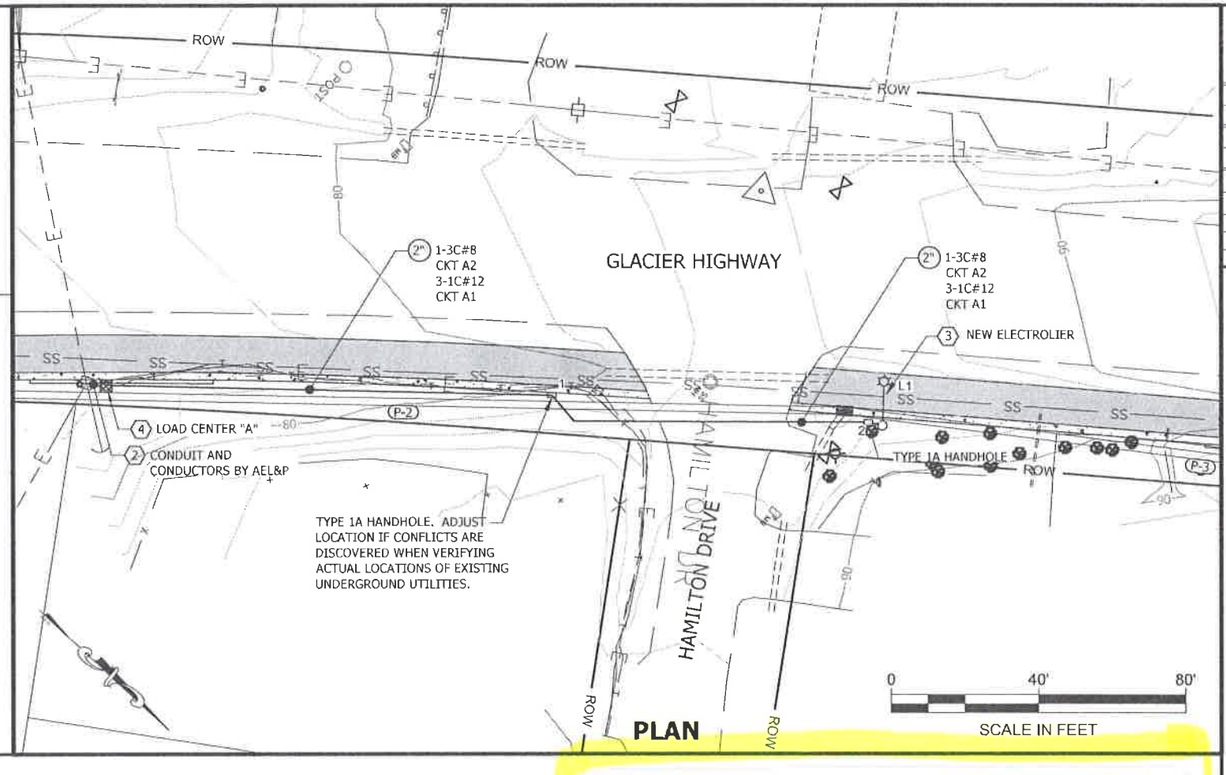
PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
P6	54

SHEET NOTES:

1. USE TWO CONDUCTORS FOR POWER AND ONE AS A SPARE. MAINTAIN CONDUIT SEPARATION PER TRENCH DETAIL.
2. COORDINATE WITH ALASKA ELECTRIC LIGHT & POWER TO PROVIDE NEW ELECTRICAL SERVICES TO LOAD CENTER.
3. PROVIDE NEW ELECTROLIER AS SHOWN IN PLANS, AND ORIENT ELECTROLIER PERPENDICULAR TO TRAVELED WAY.
4. PROVIDE NEW LOAD CENTER WHERE SHOWN. ADJUST LOCATION IF CONFLICTS ARE DISCOVERED WHEN VERIFYING ACTUAL LOCATIONS OF EXISTING UNDERGROUND UTILITIES. DO NOT GO OUTSIDE OF RIGHT OF WAY WHICH IS APPROXIMATELY 14' FROM PATH CENTERLINE. SEE RIGHT OF WAY SHEETS FOR EXACT LOCATION.

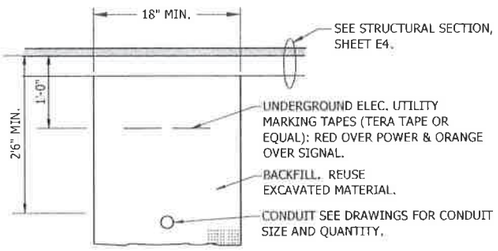
SYMBOL LEGEND:



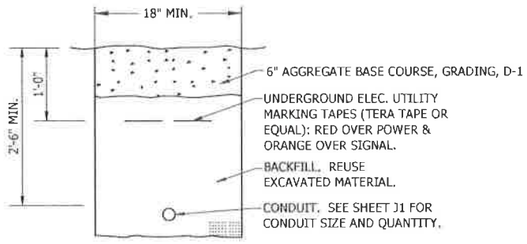


PLAN

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 2/19/2019



ROADWAY/SIDEWALK AREAS
NTS



NON-PAVED AREAS
NTS

CONDUIT TRENCH DETAIL

NOTES:

1. SEE SHEET B1 FOR TYPICAL SECTION UNDER ROADWAY/SIDEWALK AREAS. PROVIDE BACKFILL PER SECTION 204 OF THE SPECIAL PROVISIONS.
2. THE LOCATION OF ALL EXISTING PIPING, CONDUIT, ETC MAY NOT BE WHERE SHOWN AND MAY NOT BE SHOWN. ALL LOCATIONS THAT ARE SHOWN ARE APPROXIMATE AND SHOULD BE FIELD VERIFIED. OBTAIN UTILITY LOCATES PRIOR TO DIGGING. DIG WITH CAUTION. AVOID WATER, SEWER, DRAINAGE PIPES AND OTHER CONFLICTS.
3. MAINTAIN 12 INCHES MINIMUM SEPARATION (ALL DIRECTIONS) BETWEEN POWER AND OTHER EXISTING CONDUITS, PIPES, ETC.
4. SAWCUT EXISTING ASPHALT BACK 18"ON EACH SIDE OF TRENCH. LEAVE 18" UNDISTURBED SOIL BETWEEN EDGE OF SAWCUT AND EXCAVATION LIMITS. REPAVE SAWCUT AREAS PER PAVING SPECIFICATION.

ELECTROLIER SUMMARY

NO.	*STATION	*OFFSET (FT)	**ELEV. (FT)	LUMINAIRE	REMARKS
L1	4+62.3	9.3 LT	86.0	GE, NO M-250A3, CATALOG NUMBER M2AC25S0M2GMC3 OR APPROVED EQUAL	12' MAST ARM & 35' POLE SHAFT LENGTH. PROVIDE HOUSE SIDE SHIELD. MOUNT PHOTO CELL ON TOP LUMINAIRE.

*STATION AND OFFSET GIVEN TO CENTER OF ELECTROLIER FOUNDATION
** ELEVATIONS GIVEN TO TOP OF ELECTROLIER FOUNDATION

JUNCTION BOX SUMMARY

NO.	*STATION	*OFFSET (FT)	TYPE	REMARKS
1	3+72.1	8.0' RT	1A	INSTALL AT SAME ELEV. AS LIP OF VALLEY GUTTER
2	4+58.4	8.7' RT	1A	INSTALL AT SAME ELEVATION AS ELECTROLIER BASE

*STATION AND OFFSET ARE APPROXIMATE FIELD ADJUST AS REQUIRED. ALL ADJUSTMENTS SHALL BE APPROVED BY THE ENGINEER AND BE WITHIN RIGHT-OF-WAY.

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH:
Q:\JNU\69500\PLANSET\69500_Q1-Q4_ELECTRICAL.DWG

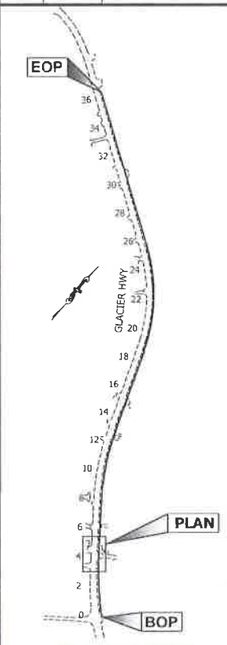
GRANTHAM, RICK L (DOT)
TAB: Q1 Monday, July 20, 2015 12:54:42 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION



PLAN LEGEND

CHECKED BY: J. BROWN

DESIGNED BY: J. BROWN
DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

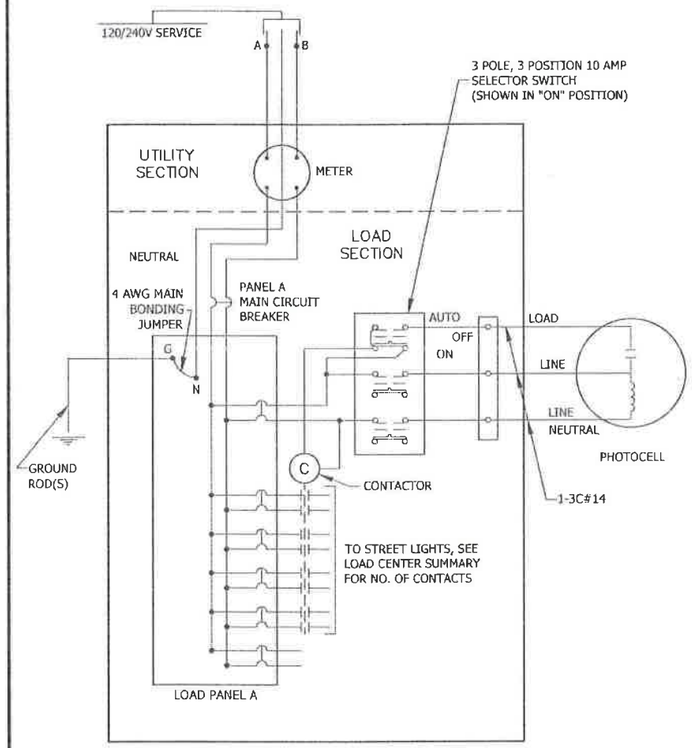
JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

HIGHWAY ILLUMINATION PLAN

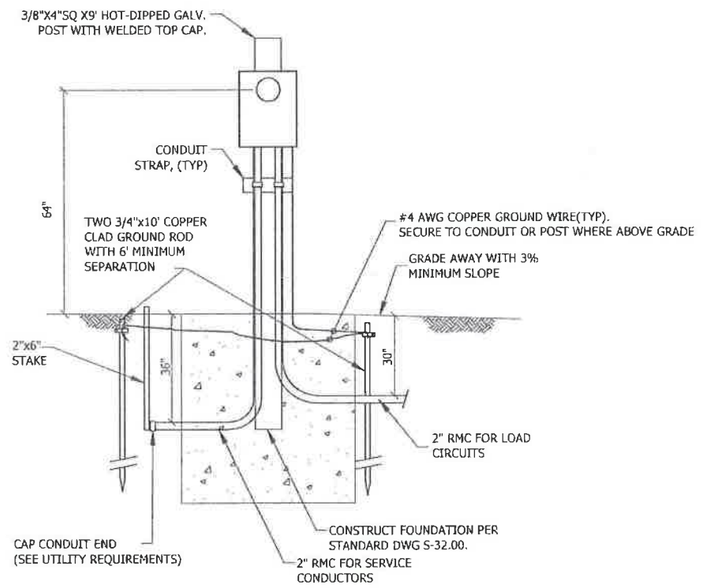
PROJECT DESIGNATION
0933037 ~ 69500

STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
Q1	54

As Builts Reviewed By: TVL.
@ AK DOT. 5-29-19.



LOAD CENTER ONE LINE DIAGRAM
AND SELECTOR SWITCH WIRING



TYPE 2 LOAD CENTER

SUMMARY OF LOAD CENTER A

LOAD CENTER TYPE:	TYPE 2
SERVICING UTILITY	AEL&P
SERVICE CONDUIT TYPE:	RIGID METAL CONDUIT
LOCATION DATA	
LOAD CENTER:	8.7 FEET RIGHT OF STATION 2+50.7
POWER SOURCE:	UTILITY POLE ADJACENT LOAD CENTER
PHOTOELECTRIC CONTROL:	TOP OF LUMINAIRE, L1
SERVICE VOLTAGE	1 PHASE, 3 WIRE, 120/240 VOLTS AC WITH GROUNDED NEUTRAL
PROVIDE METER SOCKET?	YES SERVICE AMPS: 100A
MAIN BREAKER A:	240 VOLT, 2 POLE, 100 AMPERES
CONTACTOR:	600 VOLT, 4 POLE, 30 AMPERES
AIC RATING OF CIRCUIT BKRS:	10,000 AMPS

PANEL A

CIRCUIT NUMBER	DESCRIPTION	KVA LOAD	BREAKER AMPS	BREAKER POLES
A1	P.E. CELL	0.1	15	2
A2*	LUMINAIRE L1	0.3	20	2
A3	SPARE	0.0	20	2
A4	SPACE	0.0	---	---
TOTAL CONNECTED KVA LOAD		0.4	1.7	
TOTAL DEMAND KVA LOAD (@125%)		0.5	2.1	

* CIRCUIT THROUGH CONTACTOR

LOAD CENTER NOTES:

1. PROVIDE FAULT CURRENT LABEL ON LOAD CENTER DEAD-FRONT: "AVAILABLE FAULT CURRENT = 3677A, CALCULATED ON 18 AUG 2014."
2. CALCULATED FAULT CURRENT IS BASED ON LOAD CENTER BEING SERVED FROM A 15 KVA UTILITY TRANSFORMER. FIELD VERIFY CONDITIONS AND NOTIFY ENGINEER IF DIFFERENT PRIOR TO PRINTING FAULT CURRENT LABEL.
3. THE LIGHTING CONTACTOR SHALL BE CONTROLLED BY THE P.E. CELL WHEN THE HOA SWITCH IS IN "AUTOMATIC".

WIRING NOTES:

1. FURNISH ALL EQUIPMENT NOTED IN THE LOAD CENTER SUMMARY. SEE SUMMARIES FOR LOAD PANEL VOLTAGES, CURRENT RATINGS, SHORT CIRCUIT INTERRUPTING RATINGS, AND THE NAME OF THE SERVING UTILITY.
2. SIZE THE TYPE 2 LOAD CENTER CABINETS TO HOLD THE EQUIPMENT SHOWN IN THE WIRING DIAGRAM AND DETAILED IN EACH LOAD CENTER SUMMARY, ALLOWING SPACE FOR WIRING PER THE NATIONAL ELECTRICAL CODE. INSTALLING A METER BASE AND MAIN BREAKER IN A SEPARATE ENCLOSURE IS ALLOWABLE. HOWEVER IN THIS CASE, FURNISH A BREAKER PANEL WITH A MAIN BREAKER.
3. THE VOLTAGE FOR THE PHOTOELECTRIC CONTROL EQUIPMENT SHALL BE 240-VOLT, DERIVED FROM THE SERVICE VOLTAGE.
4. LABEL ALL CIRCUIT BREAKERS AS TO FUNCTION AND POSITION. LABEL THE SELECTOR SWITCH "LIGHTING" AND ITS POSITIONS "ON-OFF-AUTO".
5. STORE A SCHEMATIC DIAGRAM, A CIRCUIT DIRECTORY, AND A MATERIALS LIST INCLUDING THE MANUFACTURERS' NAMES AND PART/CATALOG NUMBERS, ALL LAMINATED IN PLASTIC, IN A METAL POCKET ATTACHED TO THE INSIDE OF THE LOAD CENTER.

UTILITY REQUIREMENTS:

1. INSTALL A PULL ROPE IN THE SERVICE CONDUIT AND A CAP ON THE BURIED END. MARK THE BURIED END WITH A 2"X6" STAKE.

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 2/19/2019

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

CHECKED BY: EE
STATE OF ALASKA 49TH Lucas Schneider July 20, 2015 PE-11399 7/20/15
DESIGNED BY: N. GEARY
DRAWN BY: N. GEARY
PATH: Q:\JNU\69500\PLANSET\69500_Q1-Q4_ELECTRICAL.DWG
TAB: Q2
GRANTHAM, RICK L (DOT)

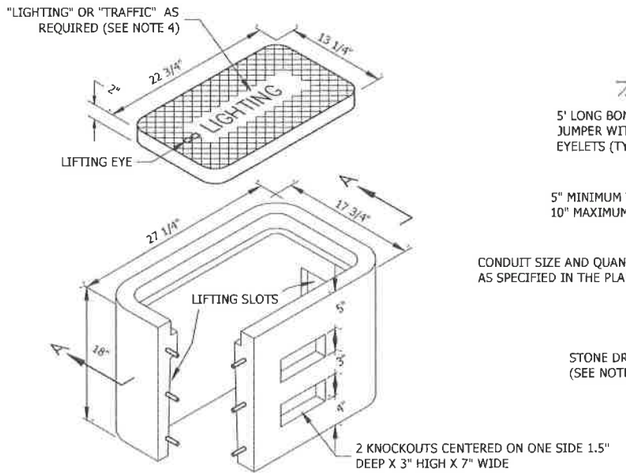
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

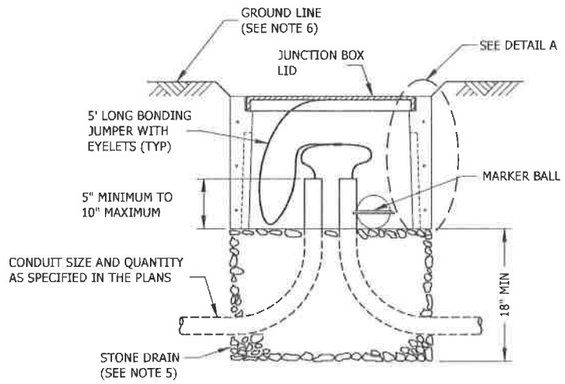
JNU: GLACIER HWY
MULTI-USE SEPARATED PATH TO UAS
PROJECT #69500

LOAD CENTER SUMMARY & DETAILS

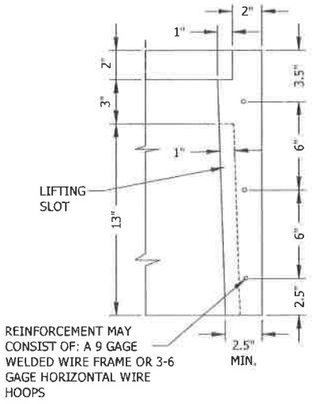
REVISIONS NO.	DATE	DESCRIPTION

PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
0933037 ~ 69500	2015	Q2	54



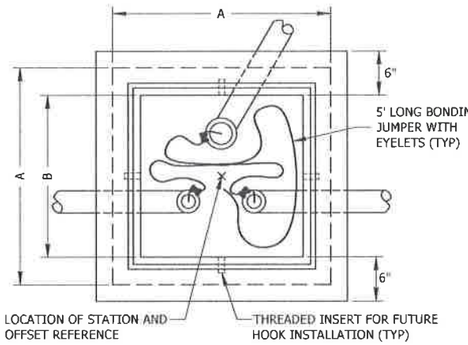


SECTION A-A

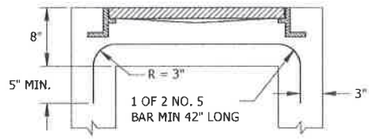


DETAIL A

TYPE IA JUNCTION BOX



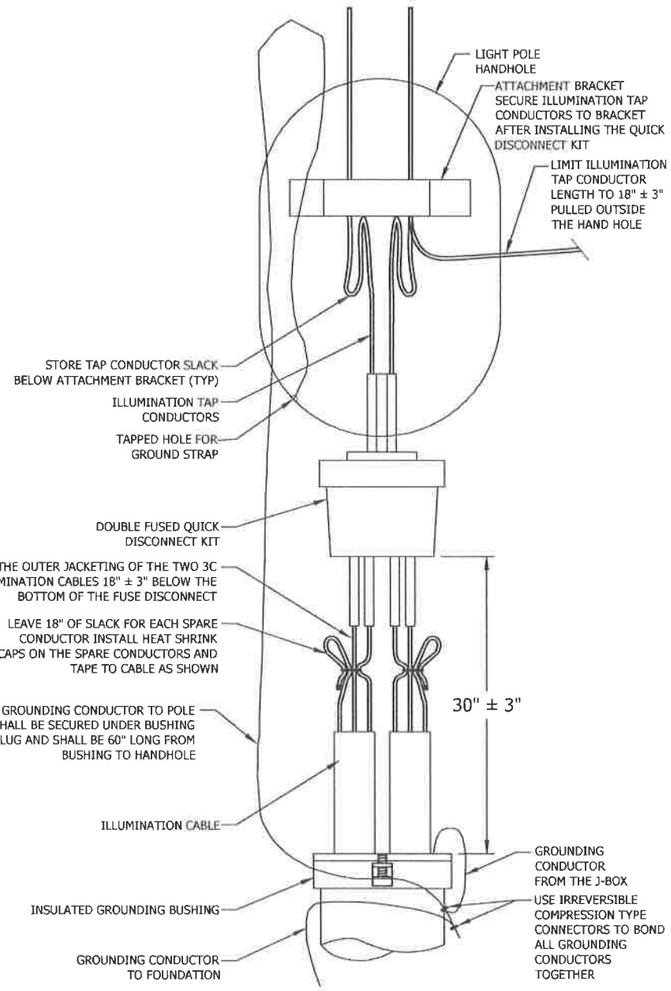
PLAN



SECTION B-B

NOTES:

1. AVOID INSTALLING TYPE IA JUNCTION BOXES IN DRIVEWAYS OR IN LOCATIONS SUBJECT TO USE BY HEAVY TRUCKS. INSTALL JUNCTION BOXES ONLY AT THE LATERAL LOCATIONS ALLOWED IN SUBSECTION 660-3.04.
2. FURNISH TYPE IA JUNCTION BOXES WITH CAST IRON LIDS THAT WEIGH A MINIMUM OF 50 POUNDS.
3. CONSTRUCT JUNCTION BOXES ACCORDING TO SECTION 501 USING CLASS A CONCRETE. REINFORCE TYPE IA JUNCTION BOXES AS SHOWN. SYNTHETIC STRUCTURAL FIBER-REINFORCED CONCRETE THAT MEETS ASTM C 1116 AND CONTAINS FIBER IN PROPORTIONS AS RECOMMENDED BY THE FIBER MANUFACTURER MAY BE ADDED FOR STRENGTH.
4. FOR JUNCTION BOXES THAT CONTAIN ILLUMINATION CONDUCTORS EXCLUSIVELY, FURNISH LIDS WITH THE WORD "LIGHTING" INSCRIBED INTO THEM. FOR OTHER JUNCTION BOXES, FURNISH LIDS WITH THE WORD "TRAFFIC" INSCRIBED INTO THEM.
5. UNDER JUNCTION BOXES, INSTALL STONE DRAINS THAT CONSIST OF POROUS BACKFILL MATERIAL CONFORMING TO SUBSECTION 703-2.10.
6. SET THE TOPS OF JUNCTION BOXES WITH THE FOLLOWING DIMENSIONS BELOW THE FINISHED SURROUNDING SURFACE:
   - 1" IN PAVED MEDIANS AND ADJACENT TO PEDESTRIAN FACILITIES
   - 1/4" IN PEDESTRIAN FACILITIES AND ROADWAY
   - 2" IN ALL OTHER AREAS
7. BOND JUNCTION BOX LIDS TO THE SYSTEM OF EQUIPMENT GROUNDING CONDUCTORS ACCORDING TO SUBSECTION 660-3.06. ATTACH BONDING JUMPERS TO THE JUNCTION BOX LIDS WITH BRASS OR STAINLESS STEEL HARDWARE.
8. INSTALL LOOP DETECTOR TAILS THROUGH ONE OF THE KNOCKOUTS OF TYPE 1A JUNCTION BOXES. AFTER SETTING THE BOXES TO GRADE, INSTALL GROUT IN THE GAPS THAT REMAIN IN THE KNOCKOUT.
9. INSTALL A 1/2" THICK PREFORMED BITUMINOUS JOINT MATERIAL AROUND JUNCTION BOXES INSTALLED IN PORTLAND CEMENT CONCRETE WALKWAYS.
10. INSTALL AN ELECTRONIC MARKER BALL IN ALL JUNCTION BOXES PER SUBSECTION 660-3.04.



LIGHT POLE HANDHOLE WIRING DETAIL

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 2/19/2019

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

CHECKED BY: N. GEARY
DESIGNED BY: N. GEARY
DRAWN BY: N. GEARY

STATE OF ALASKA 49TH — James L. Brown — July 20, 2015 — CE-14083 — PROFESSIONAL ENGINEER

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

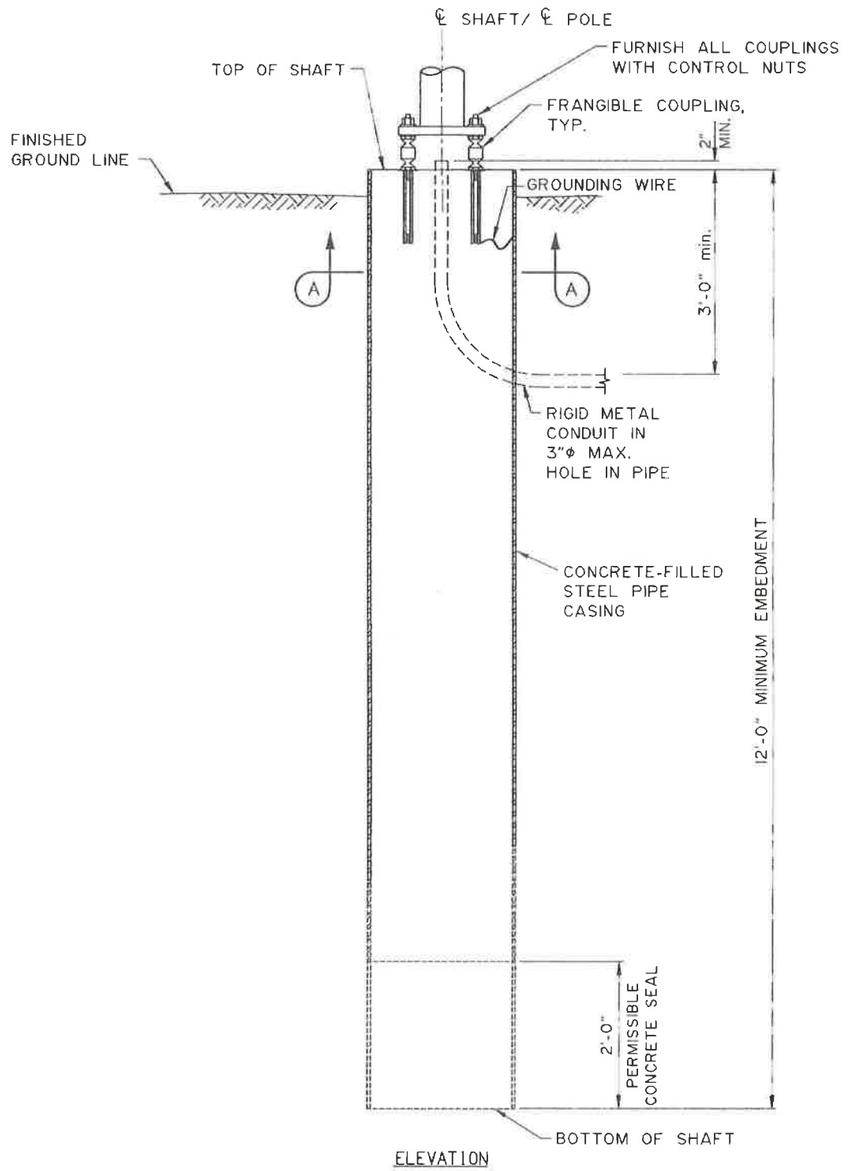
JNU: GLACIER HWY
MULTI-USE SEPARATED PATH TO UAS
PROJECT #69500

JUNCTION BOX DETAILS

PATH: Q:\JNU\69500\PLANSET\69500_Q1-Q4_ELECTRICAL.DWG
TAB: Q3 Monday, July 20, 2015 12:54:56 PM GRANTHAM, RICK L (DOT)

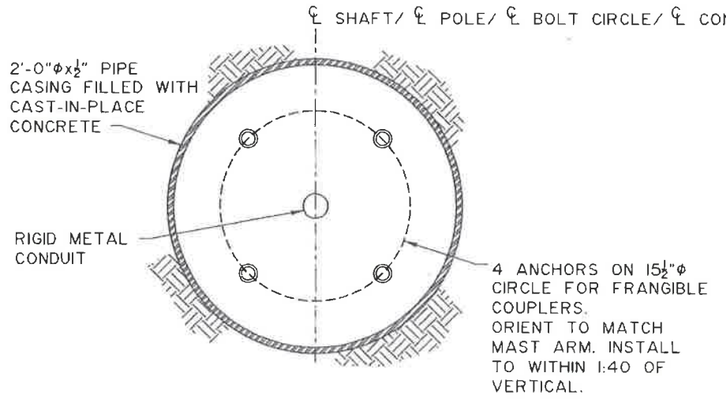
REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			0933037 ~ 69500	2015	Q3	54

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA		2015	04	54

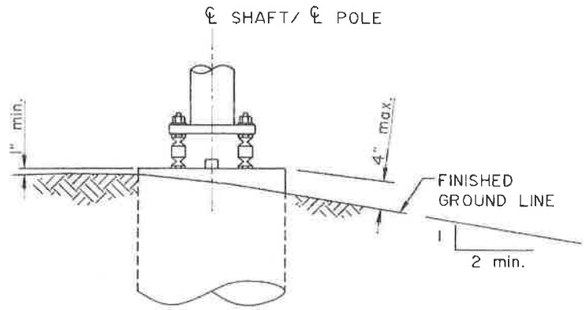


ELEVATION

CONCRETE-FILLED STEEL PIPE CASING WITH FRANGIBLE COUPLINGS
(SKIRT NOT SHOWN)



SECTION A-A



SOIL CLEARANCE DETAIL
(SKIRT NOT SHOWN)

GENERAL NOTES

FRANGIBLE COUPLING DATA

Use frangible Coupling Breakaway System, meeting NCHRP 350 test level 3 criteria, designed for impacts from any direction and having no specific torque requirements. Install components of the Frangible Coupling System in accordance with the manufacturer's written instructions.

Use this drawing when frangible couplings have the following properties:

Ultimate Shear Capacity = Vu = 5.5 kips
Ultimate Tensile Capacity = Tu = 49.8 kips

Foundation Design based on 120% of coupling ultimate capacities.

MATERIALS

CONCRETE.....Class ~~DS~~ A f'c = 4,000 psi.

PIPE PILE.....API 5L X52, Fy = 52,000 psi or ASTM A709, GR 50, Fy = 50,000 psi.

POLE DATA

Pole Height = 50' maximum
Mast Arm Length = 22' maximum
Luminaire = 50 lbs. maximum
Luminaire Projected Area = 2 square feet maximum
Pole, Arm and Luminaire Dead load <= 950 lbs.

INSTALLATION

Predrilling required.

Grout annual space between casing and soil with DS grout if not in direct contact.

Submit grounding wire details for approval.

Project As-Built Drawings have been reviewed by the Project Engineer, and represent to the best of my knowledge, the project as constructed.
PE _____ Date 2/19/2019

DESIGNED BY: Elmer Marx	CHECKED: Mary McRae	
DRAWN BY: Sam Sollie	CHECKED: Elmer Marx	
QUANTITIES BY: Elmer Marx	CHECKED: Mary McRae	

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
BRIDGE SECTION

Elmer L. Marx III No. CE 9490

HAMILTON STREET LIGHT

HAMILTON STREET

POLE FOUNDATION

BRIDGE NO. NA
DWG. NO. 04

PROJECT DESIGNATION	SHEET NO.	TOTAL SHEETS
69500	R1	54

As Builts
Reviewed
By: TVL. @ AKDOT.
3 – 29 — 18
Plans are Accurate
@ the Best of my
Ability.

EASEMENT	OWNER	AREA	PURPOSE	RECORDING DATA
E-1	Roy & Elva Buehler	1797 SF	Ditch & Slope Maint.	
E-4	Michael V. & Linda M. Delaney	8684 SF	Ditch & Slope Maint.	
E-5	Calvary Fellowship, Inc.	6251 SF	Ditch & Slope Maint.	
E-6	Jason B Tarver & Karen Jane Brewer Tarver	448 SF	Access Easement for Ptn Lot D	
E-7	Jason B Tarver & Karen Jane Brewer Tarver	4444 SF	Access Easement for Ptn Lot D	

PARCEL	OWNER	AREA	REMAIN	RECORDING DATA
7	Jason B Tarver & Karen Jane Brewer Tarver	186 SF		
8	Ronald A Barnett & Rene Mercure	1638 SF		

TEMPORARY CONSTRUCTION PERMIT			
TCP NO.	OWNER	AREA	PURPOSE
TCP-8	Ronald A Barnett & Rene Mercure	1809 SF	Driveway Reconstruction

6-6-14	Delete E-9	RJG
4-1-14	Edit Esmts. – Des. Changes, add parcels 7&8	RJG
3-12-14	Add E-6 thru E-8 & TCP-8, Edit E-5, E-9	RJG
DATE	REVISIONS	BY

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES
RIGHT OF WAY MAP
ALASKA PROJECT
0933037 / 69500

JNU GLACIER HWY MULTI-USE SEPARATED PATH TO UAS

DRAWN RJG	DATE 08/23/2013	SCALE 1"=200'
CHECKED	DATE	SHEET R1 OF 54

Q:\JNU\69500\RW\C3D14\SOURCE DWGS\BASEMAP\69500_ROW_PLANSET.DWG

AS Built Reviewed 3-29-19
By AK. DOT. TRL. INSP.

PROJECT DESIGNATION	SHEET NO.	TOTAL SHEETS
69500	R2	54

Line Table		
Line #	Direction	Length
L1	N43°39'27"W	29.87'
L2	N42°34'39"W	32.02'
L3	N41°37'03"W	29.34'
L4	N40°46'39"W	32.13'
L5	N40°03'27"W	28.56'
L6	N39°27'27"W	32.49'
L7	N38°58'39"W	27.02'
L8	N38°37'03"W	33.61'
L9	N38°22'39"W	20.14'
L10	N38°15'27"W	40.07'

Line Table		
Line #	Direction	Length
L11	N38°10'39"W	40.07'
L12	N38°03'27"W	20.14'
L13	N37°49'03"W	33.61'
L14	N37°27'27"W	27.02'
L15	N36°58'39"W	32.49'
L16	N36°22'39"W	28.56'
L17	N35°39'27"W	32.13'
L18	N34°49'03"W	29.34'
L19	N33°51'27"W	32.02'
L20	N32°46'39"W	29.87'

Line Table		
Line #	Direction	Length
L21	N26°36'53"W	29.87'
L22	N25°32'05"W	32.02'
L23	N24°34'29"W	29.34'
L24	N23°44'05"W	32.13'
L25	N23°00'53"W	28.56'
L26	N22°24'53"W	32.49'
L27	N21°56'05"W	27.02'
L28	N21°34'29"W	33.61'
L29	N21°20'05"W	20.14'
L30	N21°12'53"W	40.07'

Line Table		
Line #	Direction	Length
L57	N43°39'27"W	27.91'
L58	N42°34'39"W	30.20'
L59	N41°37'03"W	27.80'
L60	N40°46'39"W	30.73'
L61	N40°03'27"W	27.44'
L62	N39°27'27"W	31.51'
L63	N38°58'39"W	26.32'
L64	N38°37'03"W	33.05'
L65	N38°22'39"W	19.86'
L66	N38°15'27"W	39.53'

Line Table		
Line #	Direction	Length
L67	N38°10'39"W	39.91'
L68	N38°03'27"W	19.86'
L69	N37°49'03"W	33.14'
L70	N37°27'27"W	26.36'
L71	N36°58'39"W	31.64'
L72	N36°22'39"W	27.52'
L73	N35°39'27"W	30.90'
L74	N34°49'03"W	27.93'
L75	N33°51'27"W	30.42'
L76	N32°47'11"W	28.14'

Line Table		
Line #	Direction	Length
L77	N25°30'53"W	29.29'
L78	N24°33'17"W	29.37'
L79	N23°42'53"W	29.46'
L80	N23°12'57"W	9.54'
L81	N11°01'36"W	107.66'

EASEMENT	OWNER	AREA	PURPOSE	RECORDING DATA
E-1	Roy & Elva Buehler	1797 SF	Ditch & Slope Maint.	
E-4	Michael V. & Linda M. Delaney	8684 SF	Ditch & Slope Maint.	
E-5	Calvary Fellowship, Inc.	6251 SF	Ditch & Slope Maint.	

DATE	REVISIONS	BY
4-1-14	Edit Esmts. – Des. Changes, add parcels 7&8	RJG
3-12-14	Edit E-5	RJG

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES
RIGHT OF WAY MAP
ALASKA PROJECT
0933037 / 69500

JNU GLACIER HWY MULTI-USE SEPERATED PATH TO UAS

DRAWN RJG	DATE 08/23/2013	SCALE 1"=50'	
CHECKED	DATE	SHEET R2	OF 54

Q:\JNU\69500\RW\CJD14\SOURCE DWGS\BASEMAP\69500_ROW_PLANSET.DWG

AS-BUILTS REVIEWED
BY: T.VL @ AKDOT.
3-29-19

PROJECT DESIGNATION	SHEET NO.	TOTAL SHEETS
69500	R3	54

Line Table		
Line #	Direction	Length
L27	N21°56'05"W	27.02'
L28	N21°34'29"W	33.61'
L29	N21°20'05"W	20.14'
L30	N21°12'53"W	40.07'

Line Table		
Line #	Direction	Length
L31	N24°50'08"W	10.44'
L32	N25°10'17"W	19.03'
L33	N26°14'41"W	27.64'
L34	N27°41'05"W	27.33'
L35	N29°18'14"W	26.99'

Line Table		
Line #	Direction	Length
L36	N47°51'46"W	33.24'
L37	N49°45'08"W	33.44'
L38	N51°25'56"W	33.62'
L39	N52°54'08"W	33.81'
L40	N54°09'44"W	33.99'

Line Table		
Line #	Direction	Length
L41	N55°12'44"W	34.17'
L42	N56°03'08"W	34.36'
L43	N56°40'56"W	34.54'
L44	N57°06'08"W	34.71'
L45	N57°16'48"W	2.71'

Line Table		
Line #	Direction	Length
L82	S21°10'29"E	31.50'
L83	N21°12'17"W	30.10'
L84	N21°23'04"W	30.50'
L85	N21°44'41"W	30.79'
L86	N22°17'05"W	31.10'
L87	N23°00'17"W	31.41'
L88	N23°54'17"W	31.73'
L89	N24°59'05"W	32.04'
L90	N26°14'41"W	32.36'
L91	N27°41'05"W	32.67'
L92	N29°18'19"W	33.01'

Line Table		
Line #	Direction	Length
L93	N47°51'42"W	38.51'
L94	N49°45'08"W	38.11'
L95	N51°25'56"W	37.75'
L96	N52°54'08"W	37.38'
L97	N54°09'44"W	37.02'

Line Table		
Line #	Direction	Length
L98	N55°12'44"W	36.65'
L99	N56°03'08"W	36.28'
L100	N56°40'56"W	35.92'
L101	N57°06'09"W	35.58'
L102	N57°20'20"W	35.12'

EASEMENT	OWNER	AREA	PURPOSE	RECORDING DATA
E-6	Jason B Tarver & Karen Jane Brewer Tarver	448 SF	Access Easement for Ptn Lot D	
E-7	Jason B Tarver & Karen Jane Brewer Tarver	4444 SF	Access Easement for Ptn Lot D	

TEMPORARY CONSTRUCTION PERMIT			
TCP NO.	OWNER	AREA	PURPOSE
TCP-8	Ronald A Barnett & Rene Mercure	1809 SF	Driveway Reconstruction

PARCEL	OWNER	AREA	REMAIN	RECORDING DATA
7	Jason B Tarver & Karen Jane Brewer	186 SF		
8	Ronald A Barnett & Rene Mercure	1638 SF		

4-1-14	Edit Esmts. - Des. Changes, add parcels 7&8	RJG
3-12-14	Add E-6 thru E-8, TCP-8	RJG
DATE	REVISIONS	BY

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES
RIGHT OF WAY MAP
ALASKA PROJECT
0933037 / 69500

JNU GLACIER HWY MULTI-USE SEPARATED PATH TO UAS

DRAWN RJG	DATE 08/23/2013	SCALE 1"=50'	
CHECKED	DATE	SHEET R3	OF 54

Q:\JNU\69500\RW\C3D14\SOURCE DWGS\BASEMAP\69500_ROW_PLANSET.DWG

PROJECT DESIGNATION	SHEET NO	TOTAL SHEETS
69500	R4	54

AS BUILTS REVIEWED
BY: TVL. 3-29-19.

Line Table		
Line #	Direction	Length
L46	N57°20'52"W	21.77'
L47	N57°25'40"W	39.72'
L48	N57°40'04"W	19.44'
L49	N58°08'52"W	32.22'
L50	N58°52'04"W	25.27'
L51	N59°49'40"W	30.04'
L52	N61°01'40"W	25.77'
L53	N62°28'04"W	28.63'
L54	N64°08'52"W	25.50'
L55	N66°04'04"W	27.48'
L56	N68°13'40"W	24.98'

Line Table		
Line #	Direction	Length
L103	N57°25'40"W	40.26'
L104	N57°40'04"W	20.56'
L105	N58°08'52"W	34.45'
L106	N58°52'04"W	28.06'
L107	N59°49'40"W	33.95'

Line Table		
Line #	Direction	Length
L108	N61°01'40"W	30.23'
L109	N62°28'04"W	34.22'
L110	N64°08'52"W	31.64'
L111	N66°04'04"W	34.74'
L112	N68°13'40"W	32.80'

EASEMENT	OWNER	AREA	PURPOSE	'RECORDING DATA

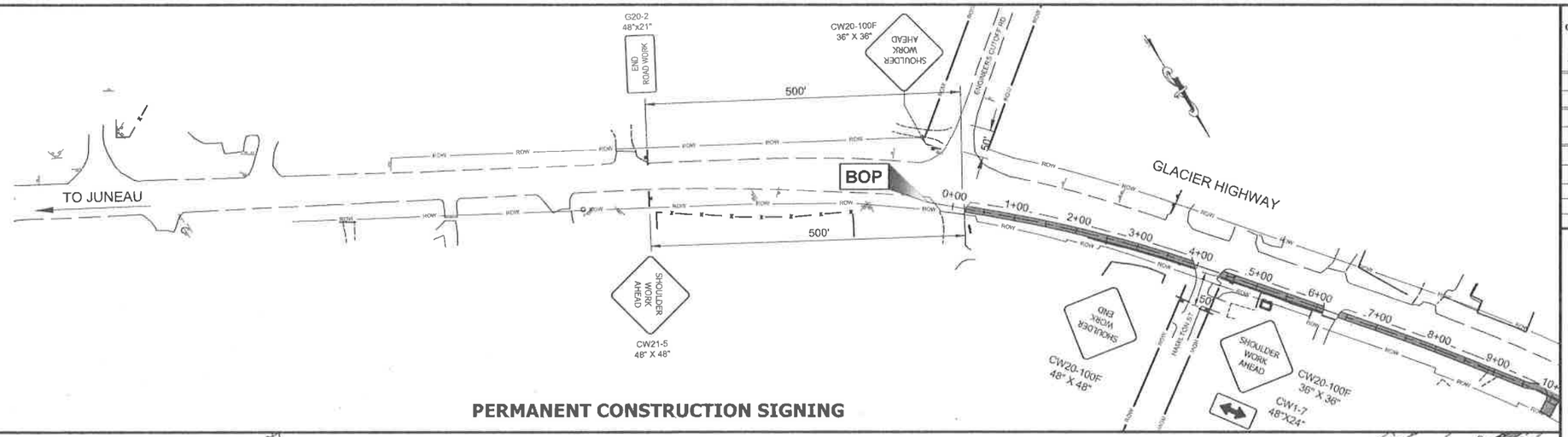
DATE	REVISIONS	BY
6-6-14	Delete E-9	RJG
4-1-14	Edit Esmts. - Des. Changes, add parcels 7&8	RJG
3-12-14	Edit E-9	RJG

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES
RIGHT OF WAY MAP
ALASKA PROJECT
0933037 / 69500

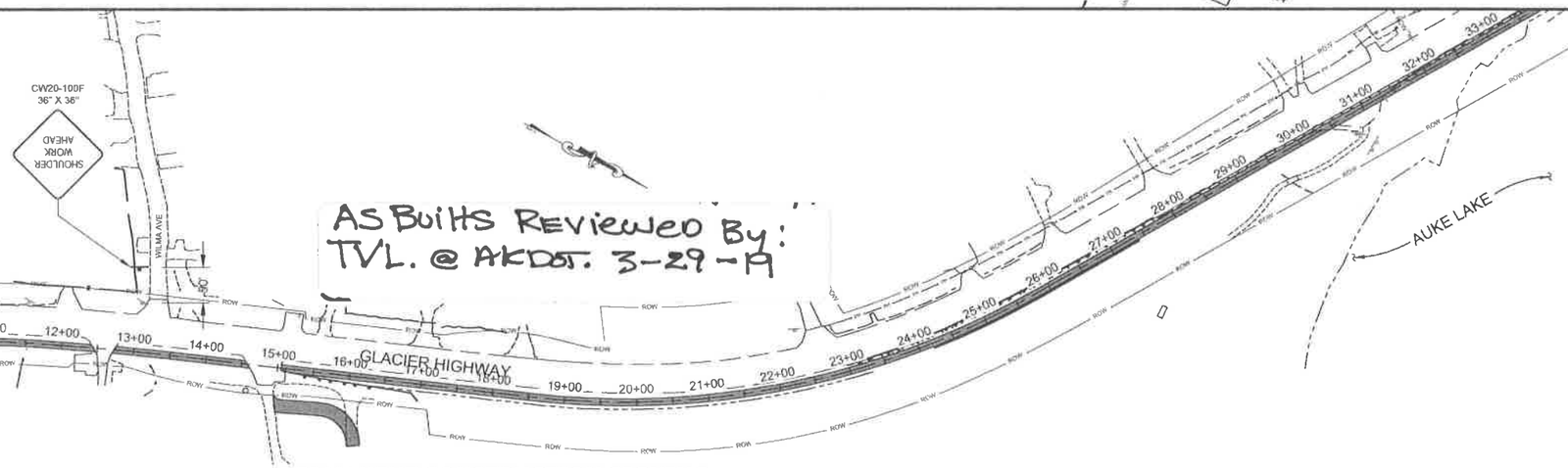
JNU GLACIER HWY MULTI-USE SEPARATED PATH TO UAS

DRAWN RJG	DATE 08/23/2013	SCALE 1"=50'
CHECKED	DATE	SHEET R4 OF 54

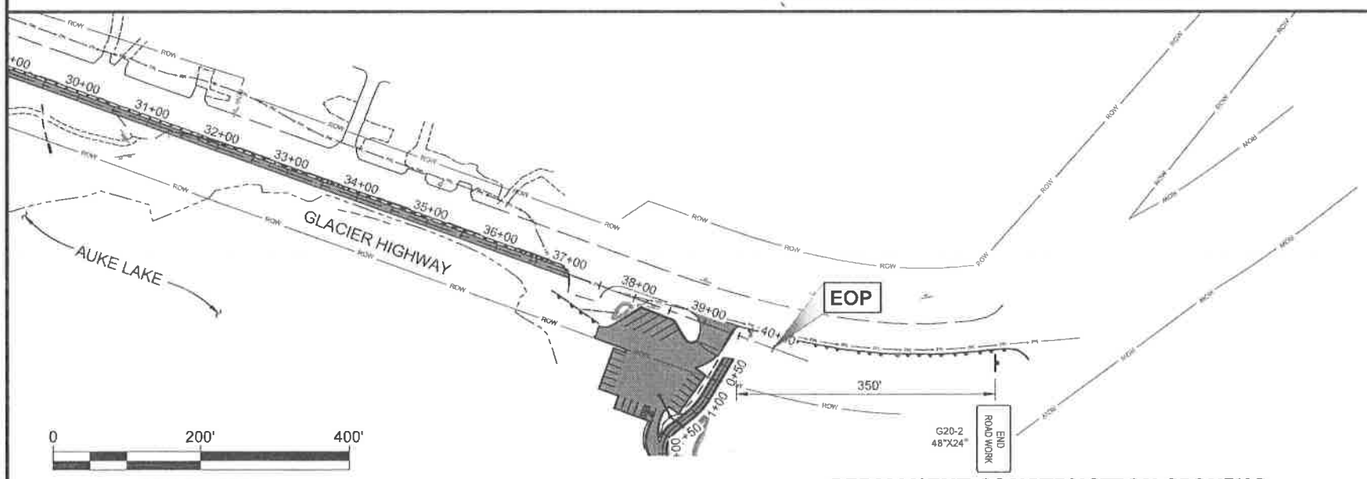
Q:\JNU\69500\RW\C3D14\SOURCE DWGS\BASEMAP\69500_ROW_PLANSET.DWG



PERMANENT CONSTRUCTION SIGNING



PERMANENT CONSTRUCTION SIGNING



PERMANENT CONSTRUCTION SIGNING

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH:
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GRANTHAM, RICK L (DOT)
TAB: T1 Monday, July 20, 2015 12:55:58 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

PLAN LEGEND

CHECKED BY: D. EPSTEIN

TCP NOT SEALED IN ACCORDANCE WITH ALASKA HIGHWAY PRECONSTRUCTION MANUAL SECTION 1400.3.5 DATED JANUARY 30, 2012.

DESIGNED BY: J. BROWN

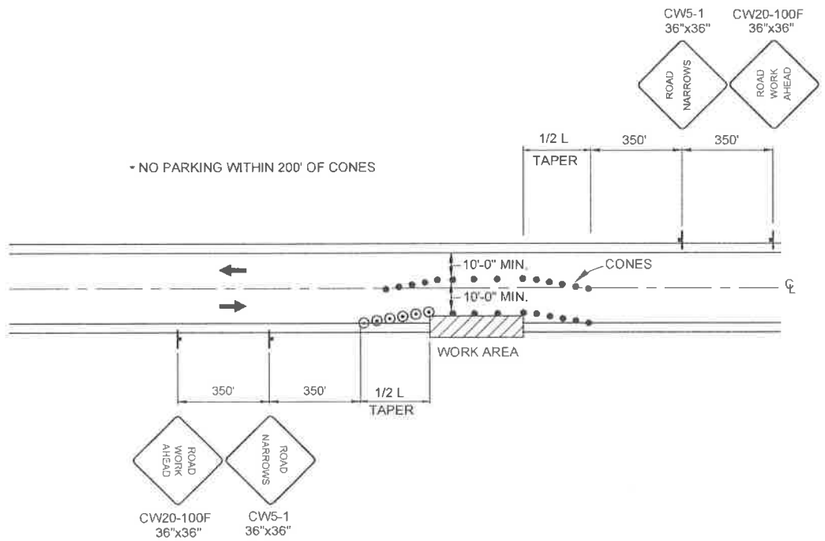
DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

TRAFFIC CONTROL PLAN

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
T1	54



ROADWAY ENCROACHMENT

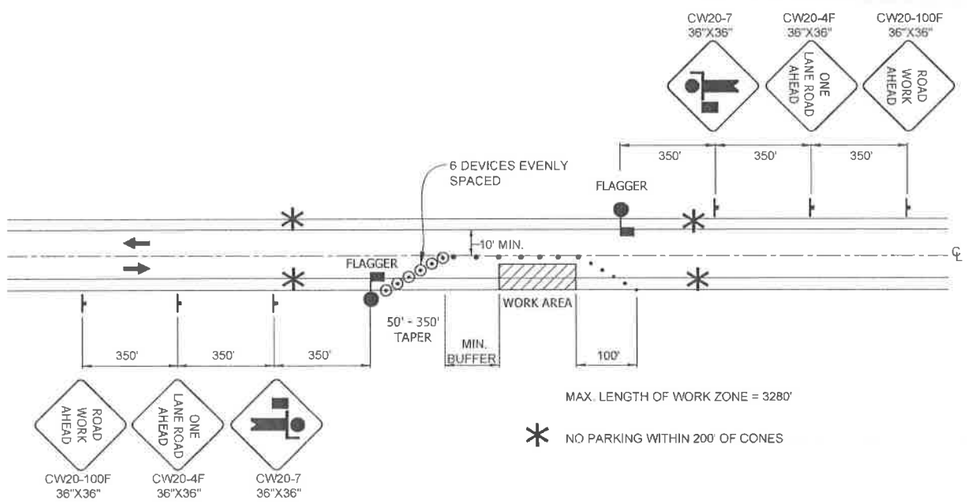
NOTES:

1. IF ONLY ONE LANE IS AFFECTED BY ROAD WORK (THAT IS, THE CONES ALONG THE WORK AREA ARE NO CLOSER THAN 10' TO CENTERLINE) THE CENTERLINE CONES FOR THE OPPOSING LANE MAY BE DELETED.

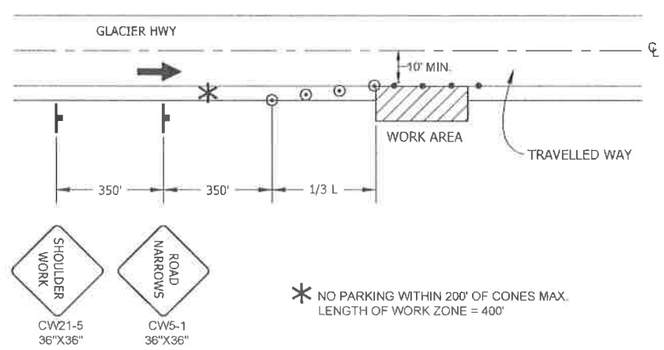
LEGEND

- SIGN
- CONE
- DRUM
- FLAGGING STATION

TCP'S REVIEWED BY T.VL @ AKDOT. ON 3-29-19



SINGLE LANE CLOSURE
TWO LANE ROAD



SHOULDER WORK

TCP SETUP TABLE										
	MIN MERGING TAPER LENGTH (L) IN FEET WIDTH OF OFFSET (W) IN			MIN NUMBER OF DEVICES WIDTH OF OFFSET (W) IN FEET			MAX DEVICE SPACING IN FEET		BUFFER SPACE	BUFFER SPACE PER THE ATTSA GUIDE
SPEED (MPH)	10'	11'	12'	10'	11'	12'	ALONG TAPER	ALONG TANGENT	(FT)	(FT)
										35 FT FOR 20 MPH
25 OR BELOW	105	115	125	6	6	6	25	50	155	55
30	150	165	180	6	7	7	30	60	200	85
35	205	225	245	7	8	8	35	70	250	120
40	270	295	320	8	9	9	40	80	305	170
45	450	495	320	11	12	13	45	90	360	220

TRAFFIC CONTROL NOTES:

1. MINIMUM OF ONE LANE SHALL REMAIN OPEN AT ALL TIMES IN WORK AREAS.
2. TEMPORARY DRIVING LANES SHALL HAVE A MINIMUM WIDTH OF 10'-0".
3. THE CONTRACTOR SHALL ORGANIZE CONSTRUCTION OPERATIONS SO THE TOTAL OF ALL STOPPAGES EXPERIENCED BY A VEHICLE TRAVELING THROUGH THE PROJECT DOES NOT EXCEED 20 MINUTES.
4. PROVIDE FOR CONTINUED ACCESS FOR BUSES AND USERS AT BUS STOPS AT ALL TIMES.
5. CONSTRUCTION SIGNING SHALL BE IN PLACE ONLY WHEN THE CONDITIONS EXIST FOR WHICH THE SIGNS ARE INTENDED.
6. CHANNELIZATION DEVICES IF USED AT NIGHT SHALL BE LIT IN ACCORDANCE WITH THE ALASKA TRAFFIC MANUAL.
7. DRIVEWAYS MAY BE CLOSED DURING ACTUAL WORK ON A GIVEN DRIVEWAY, PROVIDED THAT THE CLOSURE DOES NOT EXCEED 4 HOURS AND THE AFFECTED RESIDENTS HAVE BEEN GIVEN 24 HOURS NOTICE OF THE CLOSURE.
8. IT IS THE INTENT OF THIS TRAFFIC CONTROL PLAN (TCP) TO ILLUSTRATE SOME, NOT ALL, OF THE TRAFFIC CONTROL DEVICES WHICH WILL BE REQUIRED ON THIS PROJECT. ALL TRAFFIC CONTROL PLANS SHALL BE CREATED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL. WHERE APPROPRIATE, THEY SHALL INCORPORATE APPLICABLE DETAILS FROM THESE SHEETS.
9. THE CONTRACTOR SHALL PROVIDE PUBLIC NOTICE PRIOR TO EACH ROAD OR PATH CLOSURE. THIS WILL INCLUDE SIGNS POSTING SPECIFIC DATES AND DURATION OF ROAD OR PATH CLOSURE.

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69500\PLANSET\69500_T1-T3_TRAFF-CNTL.DWG

GRANTHAM, RICK L (DOT)
TAB: T2 Monday, July 20, 2015 12:56:02 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

PLAN LEGEND

CHECKED BY: D. EPSTEIN

TCP NOT SEALED IN ACCORDANCE WITH ALASKA HIGHWAY PRECONSTRUCTION MANUAL SECTION 1400.3.5 DATED JANUARY 30, 2012.

DESIGNED BY: J. BROWN

DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

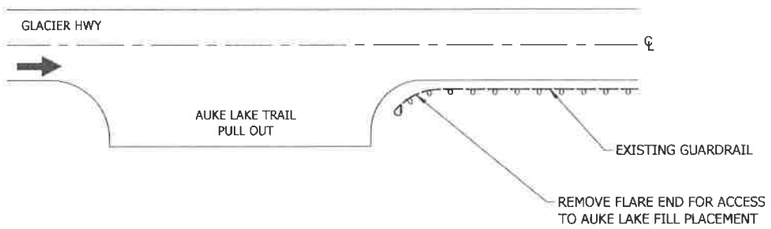
JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

TRAFFIC CONTROL PLAN

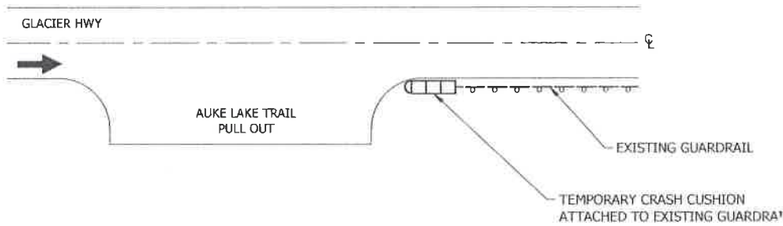
PROJECT DESIGNATION
0933037 ~ 69500

STATE	YEAR
ALASKA	2015

SHEET NUMBER	TOTAL SHEETS
T2	54

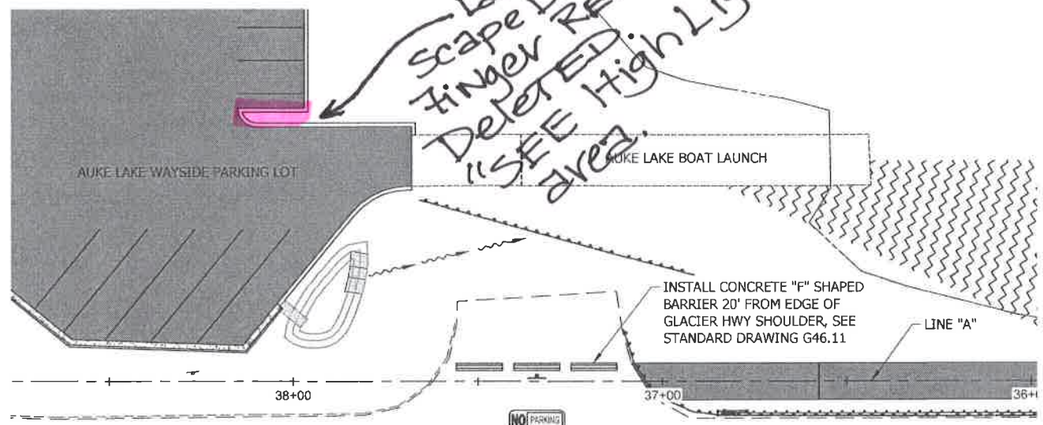


EXISTING STA. 31+50



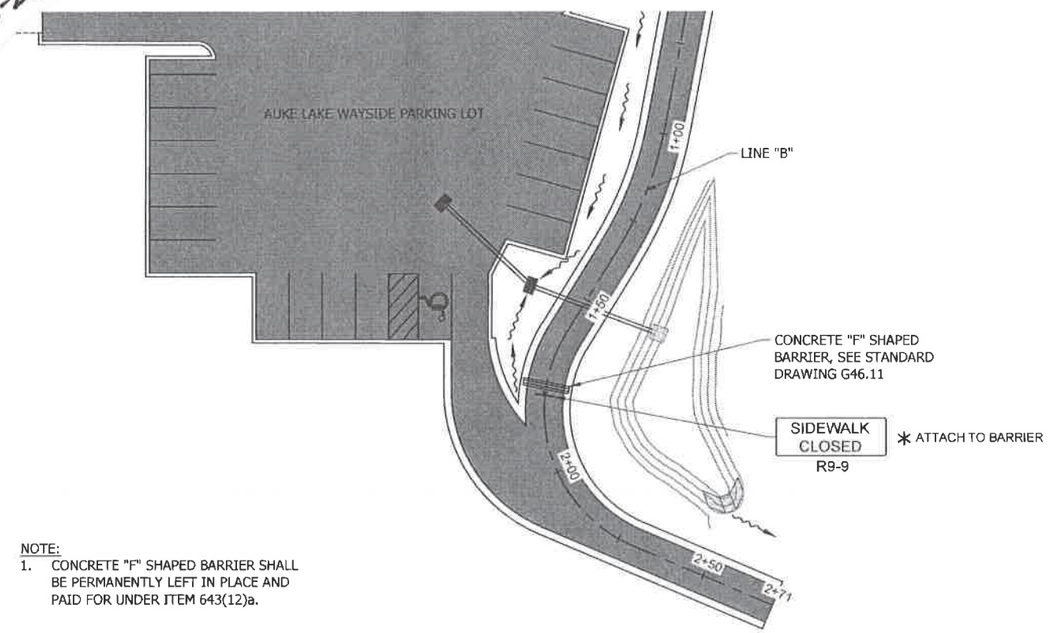
AUKE LAKE FILL REPLACEMENT STA. 31+50

AS-Built Reviewed By TVL. @ R/C DOT. 3-29-19



NOTE:
1. CONCRETE "F" SHAPED BARRIERS SHALL BE PERMANENTLY LEFT IN PLACE AND PAID FOR UNDER ITEM 643(12)a.

AUKE LAKE DRIVE PERMANENT CLOSURE



NOTE:
1. CONCRETE "F" SHAPED BARRIER SHALL BE PERMANENTLY LEFT IN PLACE AND PAID FOR UNDER ITEM 643(12)a.

UAS PATH LINE "B" PERMANENT CLOSURE

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69500\PLANSET\69500_T1-T3_TRAFF-CNTL.DWG

GRANTHAM, RICK L (DOT)
TAB: T3 Monday, July 20, 2015 12:56:13 PM

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

PLAN LEGEND

CHECKED BY: D. EPSTEIN

TCP NOT SEALED IN ACCORDANCE WITH ALASKA HIGHWAY PRECONSTRUCTION MANUAL SECTION 1400.3.5 DATED JANUARY 30, 2012.

DESIGNED BY: J. BROWN

DRAWN BY: R. GRANTHAM

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHCOAST REGION

JNU: GLACIER HWY MULTI-USE SEPARATED PATH TO UAS
PROJECT NO. 69500

TRAFFIC CONTROL PLAN

PROJECT DESIGNATION	
0933037 ~ 69500	
STATE	YEAR
ALASKA	2015
SHEET NUMBER	TOTAL SHEETS
T3	54

A-1

SHEET | of |

INTERNATIONAL BOUNDARY LINE — ALASKA / CANADA — Pen #4

CORPORATED OR CITY LIMITS — Pen #1

TOWNSHIP & RANGE LINE — T.17N., R.2W., SM / T.16N., R.2W., SM — Pen #1

SECTION LINE OR BLOCK LINE, NOT ABUTTING STREET IN SUBDIVISIONS — Pen #1

1/4 SECTION LINE — Pen #1

1/16 SECTION LINE OR LOT LINE IN SUBDIVISIONS — Pen #1

CONTROLLED ACCESS — Pen #3 C/A

EASEMENT LINE (PROPOSED) — Pen #1

EASEMENT LINE (EXISTING) — Pen #00

SET BACK LINE — Pen #0

PROJECT RIGHT-OF-WAY LINE — Pen #3 R/W

STAKED CENTERLINE — Pen #2

CONSTRUCTION CENTERLINE — Pen #3

EXISTING CENTERLINE — Pen #1

STATION EQUATIONS — "L" 48+94.70 PT = "L" 48+32.05 POT — Pen #1

SECTION LINE INTERSECTION — S 23° 30'W — 193.6' — 5+41.3

ROAD CLOSURE — 115 — Pen #3

LIMIT OF CUT SLOPE — Pen #0

LIMIT OF FILL SLOPE — Pen #1

OBLITERATE ROADWAY — Pen #0

	RECOVERED MONUMENT	RECORD MONUMENT
TOWNSHIP CORNER		
SECTION CORNER	6 5 7 8	6 5 7 8
1/4 SECTION CORNER	6 5	6 5
CENTERLINE SURVEY MONUMENT		

P. K. NAIL

MISCELLANEOUS FOUND CORNER

MAILBOX — MB

SATELLITE DISH — SAT. DISH

PVC CONDUIT

RIGID METAL CONDUIT (EXISTING)

RIGID METAL CONDUIT (PROPOSED)

RAILROAD TRACKS--- SINGLE--

MULTIPLE or DOUBLE--

RAILROAD PROTECTIVE DEVICES

ADVANCE WARNING — X-BUCK — FLASHING LIGHT — CANTILEVER

EXISTING UTILITY PIPELINES (Direction or flow indicated by bell)

OIL — SANITARY SEWER — GAS — WATER

PROPOSED UTILITY PIPELINES

OIL — O

SANITARY SEWER — SS

GAS — G

WATER — W

EXISTING STORM DRAIN — SD STORM DRAIN

PROPOSED STORM DRAIN STRUCTURE AND PIPE NO'S APPLICABLE IF SHOWN — S-1, S-2, SD, P-1, P-2

	EXISTING	PROPOSED
FIRE HYDRANT		
METER		
VALVE or RISER		
POWER POLE		
JOINT USE POWER & TELEPHONE		
TELEPHONE or TELEGRAPH POLE		
TRANSMISSION TOWERS	Steel, Wood	Steel, Wood
POLE ANCHOR		
STUB POWER or TELEPHONE		
TELEPHONE DUCT	T	T
ELECTRIC DUCT	E	E
TELEPHONE MANHOLE	TMH	TMH
ELECTRIC MANHOLE	EMH	EMH
LUMINAIRE (MAST ARM MOUNTED)	5	5
LUMINAIRE (SPAN WIRE MOUNTED)	4	4
TELEPHONE PEDESTAL	T	T
ELECTRICAL TRANSFORMER	E	E
BURIED CABLE MARKER		
CATCH BASIN or DROP INLET		
MANHOLE	MH.	MH.

INTERMITTENT DRAINAGE

INTERCEPTOR DITCH

TUNNEL

EXISTING ROADWAY

DAM

FORD

FERRY

HEAD & WINGWALLS

LAKE & RESERVOIRS — LAKE, RES. — RIVER, CREEK

RIVERS OR CREEK

BUILDINGS: H=HOUSE, M=MERCHANT/STORE, S=SHED, SS=SERVICE STATION; G=GARAGE, B=BARN, P=PRIVY, W=WAREHOUSE — PROPOSED H — EXISTING H

FOUNDATIONS — FD

WETLANDS

STUMPS

TANK (ABOVE GROUND) — 550 GAL. FUEL OIL TANK

TANK (BELOW GROUND) — 550 GAL. FUEL OIL TANK

GAS PUMP — GAS PUMP

DELINEATOR--GUIDE MARKER (FACING →)

RETAINING WALL

STONE FENCE

	EXISTING	PROPOSED
DECIDUOUS TREE		
CONIFER TREE		
CONIFER TREE SHRUB		
SIGN (FACING →)		
RIPRAP		
BRIDGE		
PIPE CULVERTS		
NOISE BARRIER		
FENCE LINE		
GUARDRAIL		
GUIDE POST		
SIDEWALK		
CONCRETE CURB		
CONCRETE CURB GUTTER		
DRIVEWAYS, APPROACHES		

	EXISTING	PROPOSED
SIGNAL FACE, VEHICULAR	9	9
SIGNAL FACE, BACKPLATE	9	9
SIGNAL FACE, LEFT TURN, BACKPLATE	9	9
SIGNAL FACE, PEDESTRIAN	24	24
JUNCTION BOX, TYPE I		
JUNCTION BOX, TYPE II		
JUNCTION BOX, TYPE III		
DETECTOR, LOOP	4	4
DETECTOR, MAGNETOMETER	M	M
DETECTOR, RADAR	R	R
DETECTOR, SONIC	S	S
DETECTOR, OPTICOM		
DETECTOR, PUSH BUTTON (DIRECTION →)	5	5
SIGNAL CONTROLLER		
LOAD CENTER		
SIGNAL POLE	2	4
SIGNAL POLE w/MASTARM	3	5

SOLID WHITE STRIPE

SOLID YELLOW STRIPE

BROKEN WHITE or YELLOW STRIPE

DASH YELLOW STRIPE

SOLID YELLOW STRIPE with BROKEN YELLOW STRIPE

FOR STRIPING PLANS — W, Y, W, Y, Y, Y

842 — RR 2580+60 / HWY. 126+38

RAILROAD MILE POST

143 — 121+25

HIGHWAY MILE POST

REVISIONS		
Date	Description	By

State of Alaska
Department of Transportation
& Public Facilities

SYMBOLS

APPROVED — 49TH STATE — Chief, Design and Construction

Date _____

A-1

Minimum & Maximum Cover For 2 2/3" x 1/2" Aluminum Pipe

GAGE	0.060"		0.075"		0.105"		0.135"		0.164"	
Dia. (in)	Min. (in)	Max. (Ft)	Min. (in)	Max. (Ft)	Min. (in)	Max. (Ft)	Min. (in)	Max. (Ft)	Min. (in)	Max. (Ft)
12	12	100+	12	100+	12	100+	12	100+	12	100+
15	12	94	12	100+	12	100+	12	100+	12	100+
18	12	75	12	94	12	100+	12	100+	12	100+
21	12	65	12	82	12	100+	12	100+	12	100+
24	12	56	12	71	12	99	12	100+	12	100+
27	12	48	12	63	12	89	12	100+	12	100+
30			12	56	12	79	12	100+	12	100+
36			12	47	12	66	12	85	12	100+
42			12	55	12	56	12	73	12	100+
48			12	47	12	49	12	63	12	78
54					15	43	15	56	15	69
60							15	50	15	62
66							18	44	18	56
72									18	45

Minimum & Maximum Cover For 3" x 1" Aluminu

GAGE	0.060"		0.075"		0.105	
Dia. (in)	Min. (in)	Max. (Ft)	Min. (in)	Max. (Ft)	Min. (in)	
30	12	52	12	65		
36	12	43	12	54	12	
42	12	36	12	46	12	
48	12	32	12	40	12	
54	15	28	15	35	15	
60	15	25	15	32	15	
66	18	23	18	28	18	
72	18	21	18	26	18	
78			21	24	21	
84					21	
90					24	
96					24	
102						
108						
114						24 37
120						24 35

Burial DEPTHS for Culverts REVIEWED By: TH @ AKDOT. 3-29-19.

& Maximum Cover For Aluminum Structural Plate Pipe *

	0.150"		0.175"		0.200"		0.225"		0.250"	
	Max. (Ft)	Min. (in)	Max. (Ft)	Min. (in)	Max. (Ft)	Min. (in)	Max. (Ft)	Min. (in)	Max. (Ft)	Min. (in)	Max. (Ft)
	49 60	12	58 70	12	58 81	12	58 92	12	58 100+		
	44 54	12	53 64	12	53 74	12	53 84	12	53 94		
	41 50	12	48 58	12	48 67	12	48 77	12	48 86		
	37 46	12	45 54	12	45 62	12	45 71	12	45 79		
	35 42	12	41 50	12	41 58	12	41 66	12	41 73		
	32 40	12	39 47	12	39 54	12	39 61	12	39 68		
	30 37	13	36 44	12	36 50	12	36 57	12	36 64		
	29 35	14	34 41	13	34 47	13	34 54	13	34 60		
	27 33	14	32 39	14	32 45	14	32 51	14	32 57		
	25 31	15	30 37	15	30 42	15	30 48	15	30 54		
	24 30	16	29 35	15	29 40	15	29 46	15	29 51		
	23 28	17	27 33	16	27 38	16	27 44	16	27 49		
	22 27	18	26 32	17	26 37	17	26 42	17	26 47		
	21 26	18	25 30	18	25 35	18	25 40	18	25 44		
144	25 12 12	22	16 18	21	20 25	19	24 29	18	24 33	18	24 38	18	24 43
150		23	15 18	21	19 24	20	23 28	19	23 32	19	23 36	19	23 41
156		24	14 17	22	18 23	21	22 27	20	22 31	20	22 35	20	22 39
162				23	18 22	21	21 26	21	21 30	21	21 34	21	21 38
168				24	17 21	22	20 25	21	20 29	21	20 33	21	20 36
174				25	17 20	23	20 24	22	20 28	22	20 31	22	20 35
180						24	19 23	23	19 27	23	19 30	23	19 34

*Longitudinal seams use (5 1/3) 3/4" dia. bolts per foot.

58 — Upper figure for pipe with aluminum bolts.
100+ — Lower figure for pipe with galvanized steel bolts.
(FOR TABLE ABOVE ONLY.)

CORRUGATED CIRCULAR ALUMINUM PIPE

CORRUGATED ALUMINUM PIPE-ARCH

Minimum & Maximum Cover For 2 2/3" x 1/2" Aluminum Pipe-Arch

Span x Rise (In. x In.)	Corner Radius (In)	Minimum Gage (In)	Min. Cover (In)	Max. Cover (Ft) 2 Tons Corner Bearing Pressure	Max. Cover (Ft) 3 Tons Corner Bearing Pressure ©
17 x 13	3	0.060	12	13	20
21 x 15	3	0.060	12	12	19
24 x 18	3	0.060	12	11	16
28 x 20	3	0.075	12	10	16
35 x 24	3	0.075	12	9	14
42 x 29	3 1/2	0.105	12	7	13
49 x 33	4	0.105	15	6	12
57 x 38	5	0.135	15	6	12
64 x 43	6	0.135	18	6	12
71 x 47	7	0.164	18	6	12

Minimum & Maximum Cover For 3" x 1" Aluminum Pipe-Arch

Span x Rise (In. x In.)	Corner Radius (In)	Minimum Gage (In)	Min. Cover (In)	Max. Cover (Ft) 2 Tons Corner Bearing Pressure	Max. Cover (Ft) 3 Tons Corner Bearing Pressure ©
40 x 31	5	0.075	30	8	12
46 x 36	6	0.075	24	8	13
53 x 41	7	0.075	24	8	13
60 x 46	8	0.075	24	13	20
66 x 51	9	0.075	18	13	20
73 x 55	12	0.075	18	16	24
81 x 59	14	0.105	18	14	22
87 x 63	14	0.105	18	13	20
95 x 67	16	0.105	18	12	18
103 x 71	16	0.135	24	11	17
112 x 75	18	0.164	24	10	16
117 x 79	18	0.164	24	10	15

Minimum & Maximum Cover For 9" x 2½" Aluminum Structural Plate Pipe-Arch*

Span x Rise (Ft-In x Ft-In)	Corner Radius (In)	Minimum Gage (In)	Min. Cover (Ft)	Max. Cover In Feet For Soil Bearing Capacity of: 2 Tons/ft²	3 Tons/ft²
5 - 11 x 5 - 5	31.8	0.100	2	24**	24**
6 - 11 x 5 - 9	31.8	0.100	2	22**	22**
7 - 3 x 5 - 11	31.8	0.100	2	20**	20**
7 - 9 x 6 - 0	31.8	0.100	2	28**	18**
8 - 5 x 6 - 3	31.8	0.100	2	17**	17**
9 - 3 x 6 - 5	31.8	0.100	2	15**	15**
10 - 3 x 6 - 9	31.8	0.100	2	14**	14**
10 - 9 x 6 - 10	31.8	0.100	2	13**	13**
11 - 5 x 7 - 1	31.8	0.100	2	12**	12**
12 - 7 x 7 - 5	31.8	0.125	2	14	16**
12 - 11 x 7 - 6	31.8	0.150	2	13	14**
13 - 1 x 8 - 2	31.8	0.150	2	13	18**
13 - 11 x 8 - 5	31.8	0.150	2	12	17**
14 - 8 x 9 - 8	31.8	0.175	2	12	18
15 - 4 x 10 - 0	31.8	0.175	2	11	17
16 - 1 x 10 - 4	31.8	0.200	2	10	16
16 - 9 x 10 - 8	31.8	0.200	2.17	10	15
17 - 3 x 11 - 0	31.8	0.225	2.25	10	15
18 - 0 x 11 - 4	31.8	0.255	2.25	9	14
18 - 8 x 11 - 8	31.8	0.250	2.33	9	14

*Longitudinal seams use (5 1/3) 3/4" dia. bolts per foot.
**Fill limited by the seam strength of the bolts. 3/4" dia. bolts per foot.

METAL THICKNESSES & GAGES

ALUMINUM	GAGE NO. (For Info Only)
0.060	16
0.075	14
0.105	12
0.135	10
0.164	8

© This column shall not be used unless specified on the plans or approved by the Regional Geotechnical Engineer.

GENERAL NOTES:

1. All material and workmanship shall be in accordance with the State of Alaska, Standard Specifications for Highway Construction.
2. The contractor shall select only pipes that meet specific height of cover criteria shown on the plans or in the special provisions.
3. No more than one type of pipe may be used on any single installation or installation grouping.
4. All structural plate pipes shall be placed on a pre-shaped foundation conforming to the depth of the bottom plates with clearance for assembling to the adjacent plates allowed.
5. See Standard Drawing "Culvert Pipe & Arch Installation Details" for foundation and structural backfill details.
6. Minimum cover shall be measured from the top of pipe to the top of rigid pavement or to the top of flexible pavement subgrade. In all cases, the minimum cover shall not be less than 12". Minimum cover during construction shall be that required to protect the pipe from damage or deflecton.
7. These tables have been developed for an H-20 live load and for compacted soil weighing 120 lbs. per cubic foot or less. If compacted soil cover exceeds 120 lbs. per cubic foot, the contractor shall use the depth of cover shown in the plans for the specific pipe. Where compacted soil cover exceeds 120 lbs. per cubic foot and no specific cover requirements are provided in the plans, the contractor shall determine the required minimum pipe cover in accordance with Section 12 of the 2000 AASHTO "LRFD Bridge Design Specifications".

REVISIONS		
Date	Description	By
8/10/00	Pipe Tables & G. Notes.	DFD
10/31/03	Pipe Table Updates & New Sheet 4	LRG

Sheet 1 of 4

State of Alaska
Department of Transportation & Public Facilities

PIPE AND ARCH TABLES

APPROVED — STATE OF ALASKA 49TH LRS Lois R. Gregovich CE-8065

Date 10/31/03

D-04.21

Minimum & Maximum Cover For 2 2/3" x 1/2" Steel Pipe

GAGE	0.064"		0.079"		0.109"		0.138"		0.168"	
Dia. (in)	Min. (in)	Max. (Ft)	Min. (in)	Max. (Ft)	Min. (in)	Max. (Ft)	Min. (in)	Max. (Ft)	Min. (in)	Max. (Ft)
12	12	100+	12	100+	12	100+	12	100+	12	100+
15	12	100+	12	100+	12	100+	12	100+	12	100+
18	12	100+	12	100+	12	100+	12	100+	12	100+
21	12	100+	12	100+	12	100+	12	100+	12	100+
24	12	100+	12	100+	12	100+	12	100+	12	100+
27	12	100+	12	100+	12	100+	12	100+	12	100+
30	12	99	12	100+	12	100+	12	100+	12	100+
36	12	83	12	100+	12	100+	12	100+	12	100+
42	12	71	12	88	12	100+	12	100+	12	100+
48	12	62	12	77	12	100+	12	100+	12	100+
54			12	66	12	93	12	100+	12	100+
60					12	79	12	100+	12	100+
66					12	68	12	88	12	100+
72							12	75	12	93
78									12	79
84									12	66

Minimum & Maximum Cover For 3" x 1" Steel Pipe

GAGE	0.064"		0.079"		0.109"		0.138"		0.168"	
Dia. (in)	Min. (in)	Max. (Ft)	Min. (in)	Max. (Ft)	Min. (in)	Max. (Ft)	Min. (in)	Max. (Ft)	Min. (in)	Max. (Ft)
36	12		12		12	100+	12	100+	12	100+
42	12		12		12	100+	12	100+	12	100+
48	12		12	76	12	100+	12	100+	12	100+
54	12	63	12	79	12	100+	12	100+	12	100+
60	12	56	12	71	12	99	12	100+	12	100+
66	12	52	12	64	12	90	12	100+	12	100+
72	12	47	12	59	12	82	12	100+	12	100+
78	12	44	12	54	12	77	12	98	12	100+
84	12	41	12	51	12	71	12	92	12	100+
90	12	37	12	47	12	67	12	86	12	100+
96	12	35	12	44	12	62	12	80	12	98
102	18	33	18	42	18	59	18	76	18	93
108			18	40	18	55	18	71	18	87
114			18	36	18	51	18	66	18	80
120			18	34	18	46	18	61	18	75
126					18	44	18	56	18	70
132					18	41	18	53	18	64
138					18	37	18	49	18	60
144							18	44	18	55
150									18	52

Minimum & Maximum Cover For 5" x 1" Steel Pipe*

GAGE	0.064"		0.079"		0.109"		0.138"		0.168"	
Dia. (in)	Min. (in)	Max. (Ft)	Min. (in)	Max. (Ft)	Min. (in)	Max. (Ft)	Min. (in)	Max. (Ft)	Min. (in)	Max. (Ft)
36	12	81	12	90	12	100+	12	100+	12	100+
42	12	71	12	77	12	100+	12	100+	12	100+
48	12	62	12	68	12	100+	12	100+	12	100+
54	12	56	12	70	12	98	12	100+	12	100+
60	12	50	12	63	12	88	12	100+	12	100+
66	12	46	12	57	12	80	12	100+	12	100+
72	12	42	12	52	12	73	12	95	12	100+
78	12	39	12	48	12	68	12	87	12	100+
84	12	36	12	45	12	63	12	81	12	99
90	12	33	12	42	12	59	12	76	12	93
96	12	31	12	39	12	55	12	71	12	87
102	18	29	18	37	18	52	18	67	18	82
108										
114										
120										
126										
132										
138										
144										
150										

*Table
helic

Minimum & Maximum Cover For 6" x 2" Steel Structural Plate Pipe**

GAGE	ALL	0.111"	0.140"	0.170"	0.188"	0.218"	0.249"	0.280"
Dia. (in)	Min. (in)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
60	12	46	68	90	100+	100+	100+	100+
66	12	42	62	81	93	100+	100+	100+
72	12	38	57	75	86	100+	100+	100+
78	12	35	52	69	79	95	100+	100+
84	12	33	49	64	73	88	100+	100+
90	12	31	45	60	68	82	97	100+
96	12	29	43	56	64	77	91	100+
102	18	27	40	52	60	73	86	94
108	18	25	38	50	57	69	81	88
114	18	24	36	47	54	65	77	84
120	18	23	34	45	51	62	73	80
126	18	22	32	42	49	59	69	76
		21	31	40	46	56	66	72
		20	29	39	44	54	63	69
		19	28	37	43	51	61	66
		18	27	36	41	49	58	64
		17	26	34	39	47	56	61
		17	25	33	38	46	54	59
		16	24	32	36	44	52	57
		16	23	31	35	42	50	55
		15	22	30	34	41	48	53
		15	22	29	33	40	47	51
			21	28	32	38	45	50
			20	27	31	37	44	48
			20	26	30	36	43	47
			19	25	29	35	41	45
				25	28	34	40	44
				24	27	33	39	43
				23	27	32	38	42
				23	26	31	37	41
					25	31	36	40
					25	30	35	39
						29	34	38
						28	34	37
						28	33	36
						27	32	35
							31	34
							31	34
							30	33
								32
								32
								31
								30

al seams use (4)
bolts per foot.

Required
Burial Depths
for Culvert
Installations
Reviewed
3-29-19
for State of Alaska.

GENERAL NOTES

1. All material and workmanship shall be in accordance with the State of Alaska, Standard Specifications for Highway Construction.
2. The contractor shall select only pipes that meet specific height of cover criteria shown on the plans or in the special provisions.
3. No more than one type of pipe may be used on any single installation or installation grouping.
4. All structural plate pipes shall be placed on a pre-shaped foundation conforming to the depth of the bottom plates with clearance for assembling to the adjacent plates allowed.
5. See Standard Drawing "Culvert Pipe & Arch Installation Details" for foundation and structural backfill details.
6. Minimum cover shall be measured from the top of pipe to the top of rigid pavement or to the top of flexible pavement subgrade. In all cases, the minimum cover shall not be less than 12". Minimum cover during construction shall be that required to protect the pipe from damage or deflecton.
7. These tables have been developed for an H-20 live load and for compacted soil weighing 120 lbs. per cubic foot or less. If compacted soil cover exceeds 120 lbs. per cubic foot, the contractor shall use the depth of cover shown in the plans for the specific pipe. Where compacted soil cover exceeds 120 lbs. per cubic foot and no specific cover requirements are provided in the plans, the contractor shall determine the required minimum pipe cover in accordance with Section 12 of the 2000 AASHTO "LRFD Bridge Design Specifications".

CORRUGATED CIRCULAR STEEL PIPE

CORRUGATED STEEL PIPE-ARCH

Minimum & Maximum Cover For 2 2/3" x 1/2" Steel Pipe-Arch

Span x Rise (In. x In.)	Corner Radius (In)	Minimum Gage (In)	Min. Cover (In)	Max. Cover (Ft) 2 Tons Corner Bearing Pressure	Max. Cover (Ft) 3 Tons Corner Bearing Pressure ⊘
17 x 13	3	0.064	12	16	18
21 x 15	3	0.064	12	15	14
24 x 18	3	0.064	12	15	13
28 x 20	3	0.064	12	15	11
35 x 24	3	0.064	12	15	7
42 x 29	3 1/2	0.064	12	15	7
49 x 33	4	0.079	12	15	6
57 x 38	5	0.109	12	15	8
64 x 43	6	0.109	12	15	9
71 x 47	7	0.138	12	15	10
77 x 52	8	0.168	12	15	10
83 x 57	9	0.168	12	15	10

Minimum & Maximum Cover For 3" x 1" Steel Pipe-Arch

Span x Rise (In. x In.)	Corner Radius (In)	Minimum Gage (In)	Min. Cover (In)	Max. Cover (Ft) 2 Tons Corner Bearing Pressure	Max. Cover (Ft) 3 Tons Corner Bearing Pressure ⊘
40 x 31	5	0.079	12	25	12
46 x 36	6	0.079	12	25	13
53 x 41	7	0.079	12	25	13
60 x 46	8	0.079	15	25	13
66 x 51	9	0.079	15	25	13
73 x 55	12	0.079	18	24	16
81 x 59	14	0.079	18	21	17
87 x 63	14	0.079	18	20	16
95 x 67	16	0.079	18	20	17
103 x 71	16	0.079	18	20	15
112 x 75	18	0.079	21	20	16
117 x 79	18	0.109	21	19	15
128 x 83	18	0.138	24	19	14
137 x 87	18	0.138	24	19	13
142 x 91	18	0.138	24	19	12
150 x 96	18	0.138	30	19	
157 x 96	18	0.138	30	19	
164 x 105	18	0.138	30	19	
171 x 110	18	0.138	30	19	

Minimum & Maximum Cover For 5" x 1" Steel Pipe-Arch

Span x Rise (In. x In.)	Corner Radius (In)	Minimum Gage (In)	Min. Cover (In)	Max. Cover (Ft) 2 Tons Corner Bearing Pressure	Max. Cover (Ft) 3 Tons Corner Bearing Pressure ⊘
40 x 31	5	0.109	12	25	12
46 x 36	6	0.109	15	25	13
53 x 41	7	0.109	15	25	13
60 x 46	8	0.109	18	25	13
66 x 51	9	0.109	18	25	13
73 x 55	12	0.109	18	24	16
81 x 59	14	0.109	18	21	17
87 x 63	14	0.109	18	20	16
95 x 67	16	0.109	18	20	17
103 x 71	16	0.109	18	20	15
112 x 75	18	0.109	21	20	16
117 x 79	18	0.109	21	19	15
128 x 83	18	0.109	24	19	14
137 x 87	18	0.109	24	19	13
142 x 91	18	0.109	24	19	12
150 x 96	18	0.138	30	19	
157 x 96	18	0.138	30	19	
164 x 105	18	0.138	30	19	
171 x 110	18	0.138	30	19	

Minimum & Maximum Cover For 6" x 2" Steel Structural Plate Pipe-Arch**

Span x Rise (Ft-In x Ft-In)	Corner Radius (In)	Minimum Gage (In)	2 Tons Corner Bearing Pressure Min. Cover (In)	2 Tons Corner Bearing Pressure Max. Cover (Ft)	3 Tons Corner Bearing Pressure ⊘ Min. Cover (In)	3 Tons Corner Bearing Pressure ⊘ Max. Cover (Ft)
6-1 x 4-7	18	0.111	18	16	12	24
7-0 x 5-1	18	0.111	18	14	12	21
7-11 x 5-7	18	0.111	18	13	12	19
8-10 x 6-1	18	0.111	24	11	18	17
9-9 x 6-7	18	0.111	24	10	18	15
10-11 x 7-1	18	0.111	24	9	18	14
11-10 x 7-7	18	0.111	24	7	18	13
12-10 x 8-4	18	0.111	30	6	24	12
14-1 x 8-9	18	0.111	30	5	24	11
15-4 x 9-3	18	0.111	NS	NS	24	10
15-10 x 9-10	18	0.111	NS	NS	24	9
16-7 x 10-1	18	0.111	NS	NS	24	9
13-3 x 9-4	31	0.111	24	13	24	17
14-2 x 9-10	31	0.111	24	12	24	16
15-4 x 10-4	31	0.111	24	11	24	15
16-3 x 10-10	31	0.111	24	11	24	14
17-2 x 11-4	31	0.111	30	10	30	13
18-1 x 11-10	31	0.111	30	10	30	12
19-3 x 12-4	31	0.111	30	9	30	13
19-11 x 12-10	31	0.140	30	9	30	13
20-7 x 13-2	31	0.140	36	7	36	13

NS = Not Suitable

⊘ This column shall not be used unless specified on the plans or approved by the Region Geotechnical Engineer.

** Longitudinal seams use (4) 3/4" dia. bolts per foot.

METAL THICKNESSES & GAGES

STEEL ZINC COATED	STEEL UNCOATED	GAGE NO. (For Info Only)
0.064	0.0598	16
0.079	0.0747	14
0.109	0.1047	12
0.138	0.1345	10
0.168	0.1644	8
0.188	0.1838	7
0.218	0.2145	5
0.249	0.2451	3
0.280	0.2758	1

REVISIONS		
Date	Description	By
8/10/00	Pipe Tables & G. Notes.	DFD
10/31/03	Pipe Table Updates & New Sheet 4.	LRG

Sheet 2 of 4

State of Alaska
Department of Transportation & Public Facilities

PIPE AND ARCH TABLES

APPROVED
Date 10/31/03

D-04.21

STATE OF ALASKA D.O.T. 3-29-19 By: Th. Reviewed

Maximum Cover for Type S Corrugated Polyethelene Pipe	
Size (In.)	Max. Cover (ft.)
12	30.0
15	30.0
18	30.0
24	30.0
30	30.0
36	30.0
40	20.0
48	20.0

GENERAL NOTES

1. All materials and workmanship shall be in accordance with the State of Alaska Standard Specifications for Highway Construction.
2. For foundation and structural backfill details see Standard Drawing "Culvert Pipe & Arch Installation Details".
3. Pipe cover height is measured from top of the pipe to top of rigid pavement, or to the top of subgrade for flexible pavement. In all cases the minimum cover shall be no less than 2 ft. Where loads traverse the culvert during construction minimum cover shall be no less than 4 ft.

REVISIONS		
Date	Description	By
10/31/03	New Sheet 4.	LRG

State of Alaska
Department of Transportation
& Public Facilities

PIPE AND ARCH TABLES

APPROVED
Date 10/31/03

D-04.20

AKDOT. Reviewed 3-29-19 By: TVL. As Built's are to the best of knowledge are true & correct.

Minimum & Maximum Cove
Aluminum Spiral Rib Circula

GAGE	0.060"		0.075"		0.105"	
Dia. (in)	Min. (in)	Max. (Ft)	Min. (in)	Max. (Ft)	Min. (in)	Max. (Ft)
12	24	35	24	50		
18	24	34	24	49		
24	24	25	24	36	24	63
30	24	19	24	28	24	50
36	24	15	24	24	24	41
42			24	19	24	35
48			24	17	24	30
54			24	14	24	27
60			24	12	24	24

*¾ x ¾ x 7½ in. or ¾ x 1 x 1½ in. (

num & Maximum Cover For
minum Spiral Rib Pipe-Arch*

		Soil Corner Bearing Capacity of 2 Tons/ s.f.		
lse	Min. Cover (in.)	0.060" Max. Cover (ft.)	0.075" Max. Cover (ft.)	0.105" Max. Cover (ft.)
	12	13		
	12	14		
	12	13		
	12	13		
	12	13		
	12	14		
	18		13	
	18		20	
	18		21	
	18			21
	18			17
	18			17
	18			17

x 7½ in. or ¾ x 1 x 1½ in. Corrugations

ALUMINUM SPIRAL RIB PIPE

STEEL SPIRAL RIB PIPE

Minimum & Maximum Cover For
Steel and Aluminized Steel
Spiral Rib Circular Pipe*

GAGE	0.064"		0.079"		0.109"		0.138"**	
Dia. (in)	Min. (in)	Max. (Ft)	Min. (in)	Max. (Ft)	Min. (in)	Max. (Ft)	Min. (in)	Max. (Ft)
18	12							
24	12	51	12	72	12	121		
30	12	41	12	58	12	97		
36	12	34	12	48	12	81		
42	12	29	12	41	12	69		
48	12	26	12	36	12	61		
54	18	23	18	32	18	54		
60	18	21	18	29	18	49	18	73
66	18	19	18	26	18	44	18	65
72			18	24	18	40	18	59
78			24	22	24	37	24	55
84			24	21	24	35	24	52
90					24	32	24	47
96					24	30	24	44
102					30	29	30	43
108					30	27	30	41

*¾ x ¾ x 7½ in. or ¾ x 1 x 1½ in. Corrugations
**¾ x ¾ x 7½ in. Corrugations Only.

Minimum & Maximum Cover For
Steel Spiral Rib Arch-Pipe*

		Soil Corner Bearing Capacity of 2 Tons/ s.f.		
Span x Rise (in. x in.)	Min. Cover (in.)	0.064" Max. Cover (ft.)	0.079" Max. Cover (ft.)	0.109" Max. Cover (ft.)
20 x 16	12	13		
23 x 19	12	14		
27 x 21	12	13		
33 x 26	12	13		
40 x 31	12	13		
46 x 36	12	14		
53 x 41	18		13	
60 x 46	18		20	
66 x 51	18		21	
73 x 55	18			21
81 x 59	18			17
87 x 63	18			17
95 x 67	18			17

*¾ x ¾ x 7½ in. or ¾ x 1 x 1½ in. Corrugations

GENERAL NOTES

1. All material and workmanship shall be in accordance with the State of Alaska, Standard Specifications for Highway Construction.
2. The contractor shall select only pipes that meet specific height of cover criteria shown on the plans or in the special provisions.
3. No more than one type of pipe may be used on any single installation or installation grouping.
4. All structural plate pipes shall be placed on a pre-shaped foundation conforming to the depth of the bottom plates with clearance for assembling to the adjacent plates allowed.
5. See Standard Drawing "Culvert Pipe & Arch Installation Details" for foundation and structural backfill details.
6. Minimum cover shall be measured from the top of pipe to the top of rigid pavement or to the top of flexible pavement subgrade. In all cases, the minimum cover shall not be less than 12". Minimum cover during construction shall be that required to protect the pipe from damage or deflecton.
7. These tables have been developed for an H-20 live load and for compacted soil weighing 120 lbs. per cubic foot or less. If compacted soil cover exceeds 120 lbs. per cubic foot, the contractor shall use the depth of cover shown in the plans for the specific pipe. Where compacted soil cover exceeds 120 lbs. per cubic foot and no specific cover requirements are provided in the plans, the contractor shall determine the required minimum pipe cover in accordance with Section 12 of the 2000 AASHTO "LRFD Bridge Design Specifications".

REVISIONS		
Date	Description	By
8/10/00	Pipe Tables & G. Notes.	DFD
10/31/03	New Sheet 4	LRG

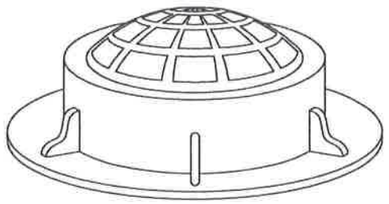
State of Alaska
Department of Transportation
& Public Facilities

PIPE AND ARCH TABLES

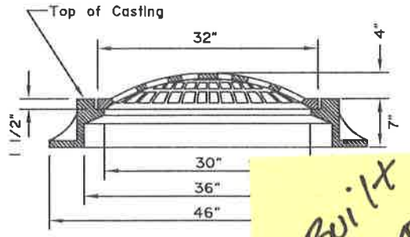
APPROVED
Date 10/31/03

D-04.21

D-22.01

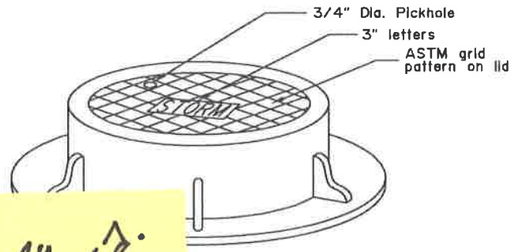


Surround field inlets with a 24" wide rock rubble collar 10" deep, 3" maximum size rock.



FIELD INLET FRAME

To be supplied for storm
where field inlets are sp
Field inlet frame and gra
a Minimum total weight o

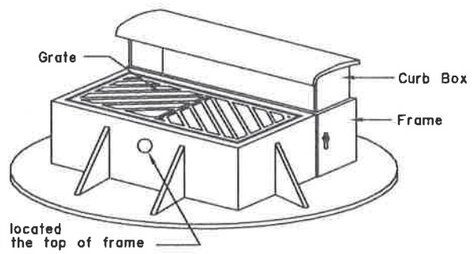


D FRAME AND GRATE

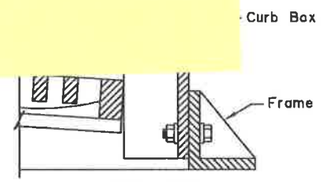
As Built
STANDARD
project 69500
Reviewed 3/29/19 By
Travis VanJensen & S.O.A.
for Danielle Ryder.

NOTES:

1. Details shown are to indicate general design only. Dimensions and design may vary among the manufacturers, except that inlet grate shall be within ¼"± of dimensions shown on this drawing.
2. Manhole lids shall be 32" in diameter and may be used with field inlet frames.
3. Type A field inlet frame inside dimensions shall be 24" x 36". Lugs will not protrude outside the concrete surface of the inlet box.
4. Grates shall be bicycle safe. Where high capacity grates are called for on the plans, they shall conform to Std. Dwg. D-25.
5. Frame and grate casting types are identified by the following abbreviations:
   C.I. = Curb Inlet
   F.I. = Field Inlet
   M.H. = Manhole
6. Flowline depression shall conform to Std. Dwg. D-23 for an on grade or sag point conditions.
7. These are the default frames and grates to be used unless shown otherwise on the drainage plans or drainage structure summary.

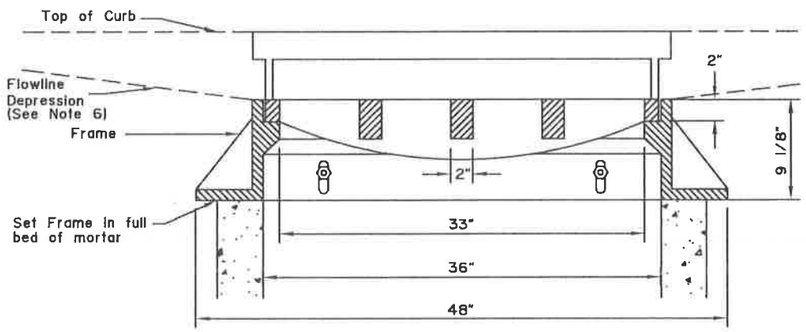


NOTE:
Curb Box, Grate and frame shall have a minimum total weight of 725 lb.

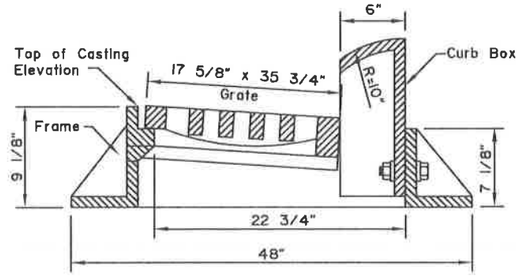


SIDE VIEW
MOUNTABLE CURB AND GUTTER

REQUIRED FRAME AND GRATES (See Note 7)			
STRUCTURE	INLET TYPE	CURB TYPE	TYPE FRAME AND GRATE
INLET BOX, TYPE A	Curb	Mountable	Standard Curb Inlet
	Curb	Expressway	Mountable Curb Inlet
	Curb	Rolled Curb	Depressed Inlet
	Field	-------	Field Inlet
STORM DRAIN MANHOLES, TYPE I, II AND III	Curb	Mountable	Mountable Curb Inlet
	Curb	Expressway	Expressway Curb Inlet
	Curb	Rolled Curb	Depressed Inlet
	Field	-------	Field Inlet
	Manhole Lids	-------	Field Inlet Frame, Solid MH. Lid



FRONT VIEW



SIDE VIEW
EXPRESSWAY CURB AND GUTTER

CURB INLET FRAME AND GRATE

To be supplied for storm drain manholes Type I, Type II and Type III where curb inlets are specified.

NOT TO SCALE

REVISIONS		
Date	Description	By
10/31/03	Misc. Revisions/ Corrections	LRG

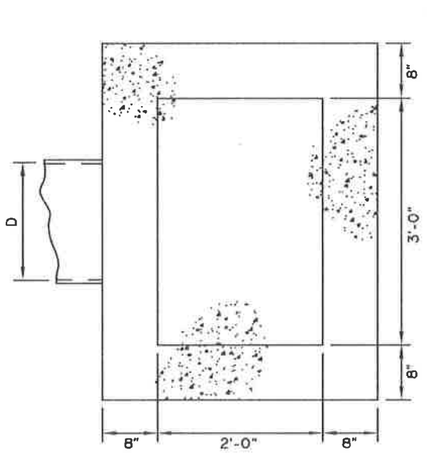
Sheet 1 of 1

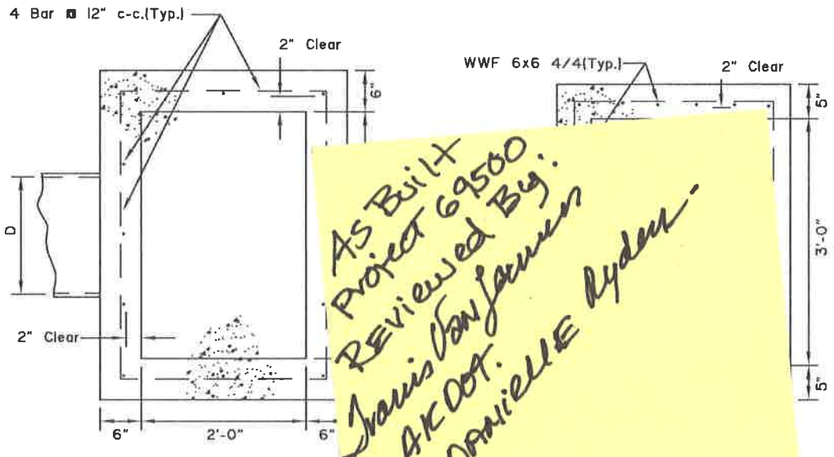
State of Alaska
Department of Transportation & Public Facilities

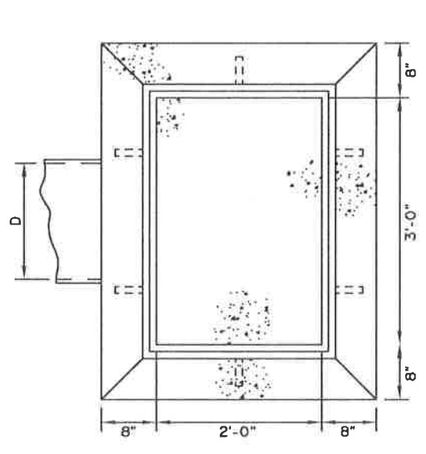
STORMDRAIN MANHOLE FRAME AND GRATE DETAILS

APPROVED
Date 10/31/03

D-22.01



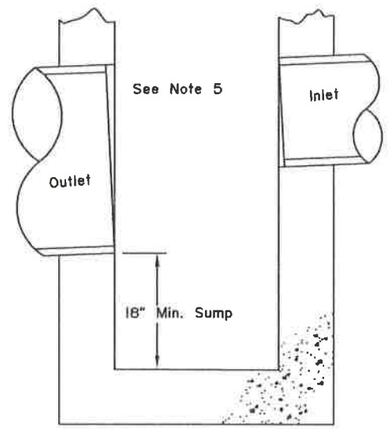


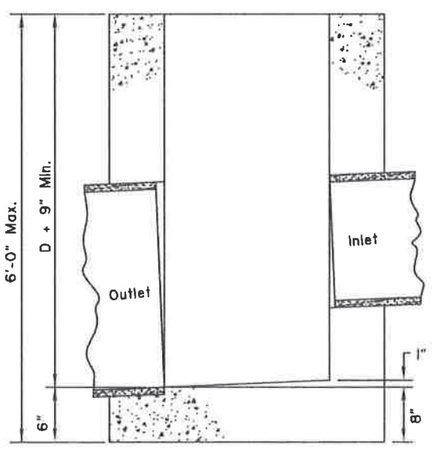


As Built
Project 69500
Reviewed By:
Travis VanJarmen
@ AKDOT.
for Danielle Ryden

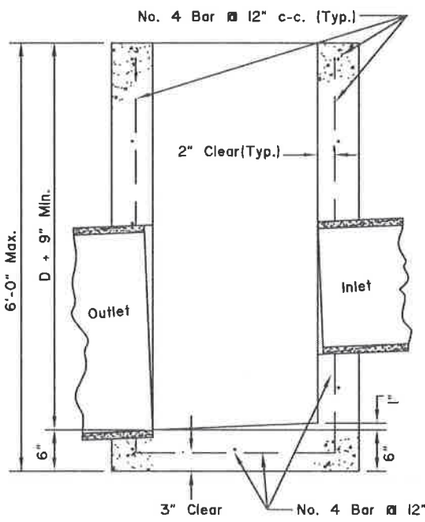
GENERAL NOTES:

1. Cast in Place Concrete Inlet Box shall be Class "W" Concrete.
2. Concrete Inlet Box depth and location shall be shown on the plans, or as directed by the Engineer.
3. Shape floors to drain.
4. Concrete Inlet Box shall be parallel to roadway centerline unless directed otherwise by the Engineer.
5. Shall be specified on plans when inlets require a sump.

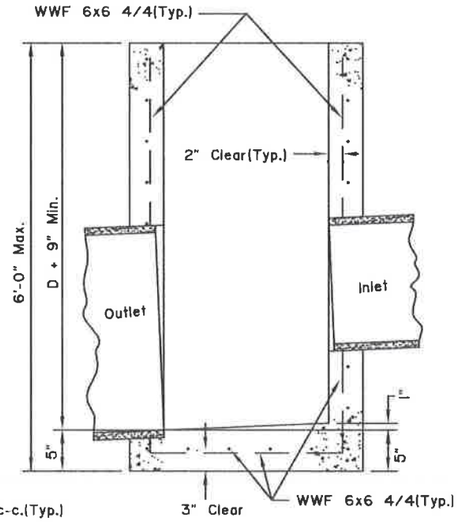




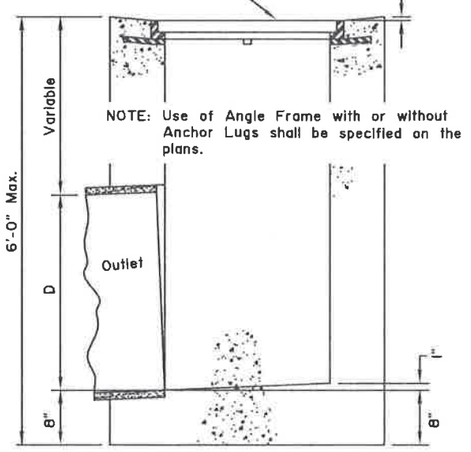
CAST IN PLACE



REINFORCED
CAST IN PLACE



PRECAST



NOTE: Use of Angle Frame with or without Anchor Lugs shall be specified on the plans.

FIELD INLET BOX
CAST* IN PLACE

* May be Precast or Reinforced Cast-In-Place Box.

TYPE "A" CONCRETE INLET BOXES

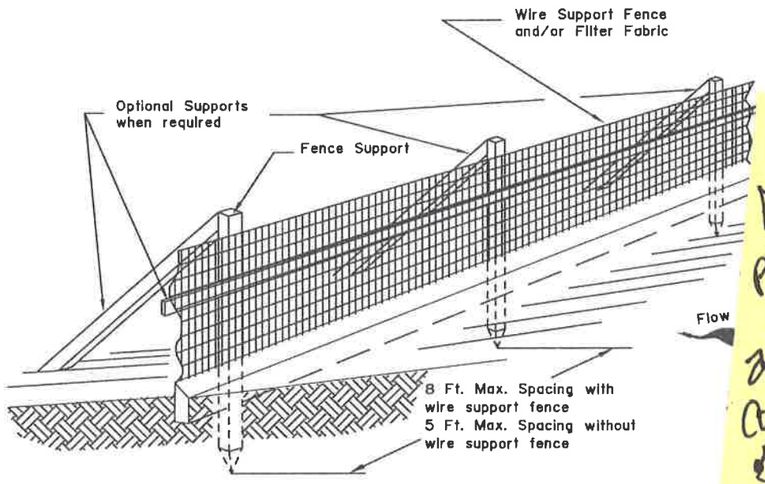
REVISIONS		
Date	Description	By
3/1/83	Gen. Note Revision	WJF/HK
1/1/96	Add 6'-0" Box Ht.	Gdo

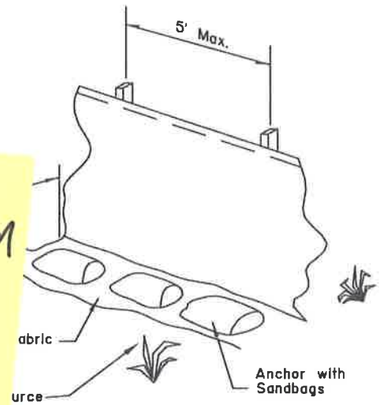
State of Alaska
Department of Transportation
& Public Facilities

TYPE "A"
INLET BOXES

APPROVED
Date 7/15/82

D-26.02



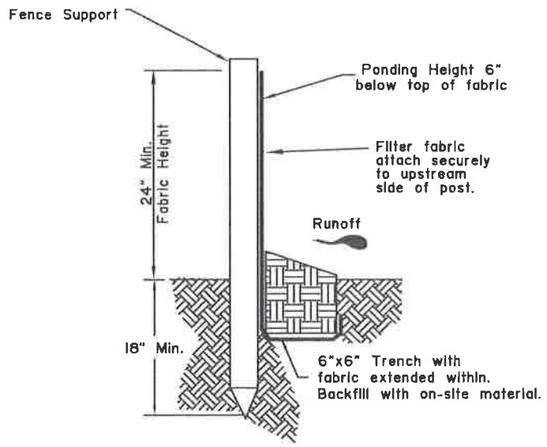


SANDBAG SUPPORT DETAIL

As Built
project
#69500
are Accurate &
Correct To The Best
of my Knowledge
Reviewed By Travis VanZanten
3-29-19.

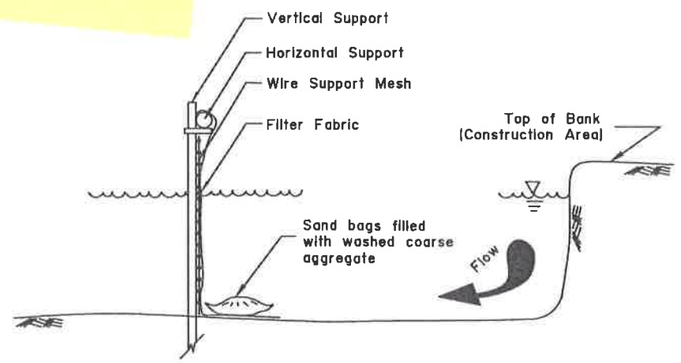
GENERAL NOTES:

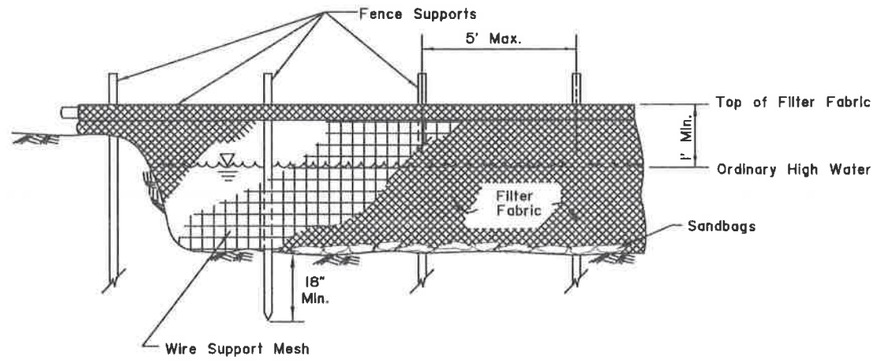
1. Silt Fence Supports shall be 2-inch PVC pipe reinforced with iron pipe or No. 6 rebar, wood posts, or as approved.
2. For Water Installations, secure the ends of the silt fence to the stream bank by staking.
3. Use approved Wire Support Mesh to keep filter fabric in place in water installations.
4. For Land Installations, fence shall be placed at the toe of embankment or excavation areas, or as directed.
5. Fence anchored in standing water shall have the bottom anchored with sandbags or equivalent to prevent gaps.
6. Installation and application shall be in accordance with the practices as outlined in the Erosion and Sediment Control Plan.
7. Filter fabric shall be overlapped 6 inches at fence supports.
8. Filter fabric shall be hung taut, not loose or folded.



TRENCH SUPPORT DETAIL

TYPICAL LAND INSTALLATION





TYPICAL WATER INSTALLATION

REVISIONS		
Date	Description	By

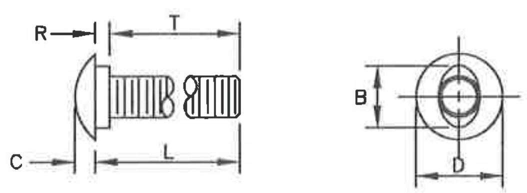
State of Alaska
Department of Transportation
& Public Facilities

SEDIMENT CONTROL
SYSTEM
(SILT FENCE)

APPROVED 1/1/96

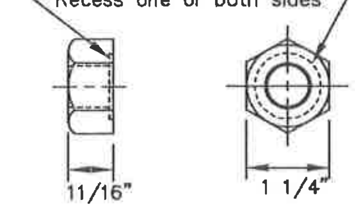
Date

E-13.00

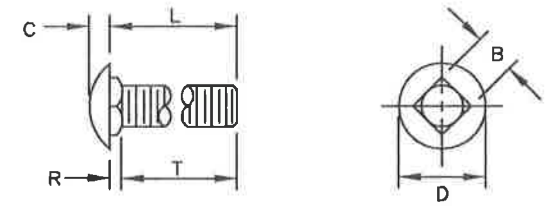


B	C	D	L (Length)	R	T (Thread Length)
15/16"	5/16"	1 5/16" or 1 7/16"	As Required	7/32"	As Required

5/8" BUTTONHEAD BOLT

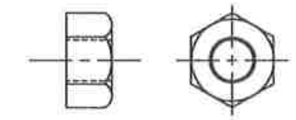


5/8" Dia. RECESSED HEX NUT



B	C	D	L (Length)	R	T (Thread Length)
5/8"	5/16"	1 5/16"	As Required	3/16"	As Required

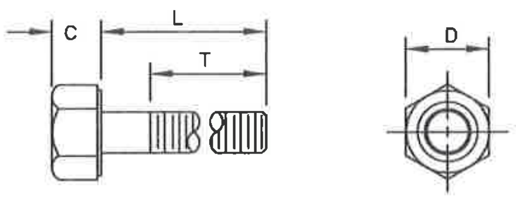
5/8" Dia. CARRIAGE BOLT



STANDARD HEX NUT

GENERAL NOTES:

1. All covered hardware shall comply with the AASHTO/AGC/ARTBA "A Guide to Standardized Highway Barrier Hardware", latest edition.



Bolt Size	C	D	L (Length)	T (Thread Length)
5/16"	—	—	1 1/2"	7/8"
5/16"	—	—	1"	1"
3/8"	—	—	7 1/2"	1 1/2"
1/2"	—	—	1 1/2"	1 1/2"
1/2"	—	—	1 1/4"	1 1/4"
5/8" H.S.	5/16"	7/8"	8"	1 1/2"
5/8"-11	—	—	1 1/2"	1 1/2"
3/4"	—	—	1 1/2"	1 1/2"
3/4"	—	—	As Required	2"
3/4" H.S.	15/32"	1 1/4"	2"	1 1/2"

STANDARD HEX BOLTS

Guard Rail As Builts are as True and Accurate to The Best of my Ability
Th. AK. DOT.
3-29-19.

For[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
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1/[illegible]	[illegible]	[illegible]	[illegible]
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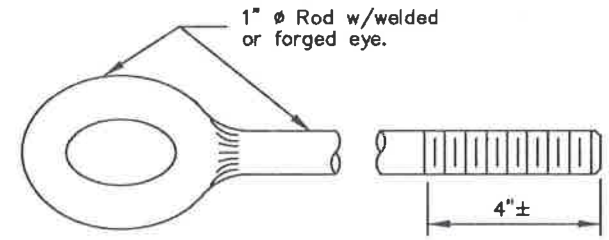
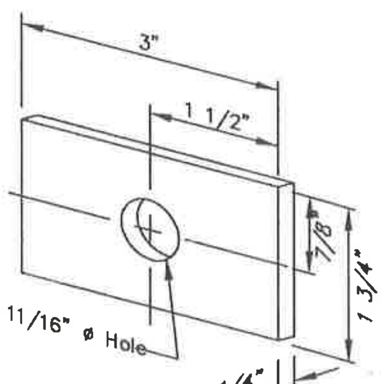
[illegible]	[illegible]	[illegible]	[illegible]
3/[illegible]	[illegible]	[illegible]	[illegible]
1	1 1/16	2	9/64

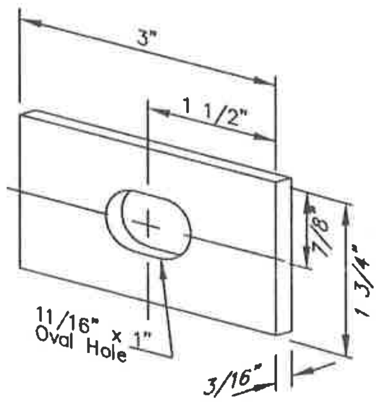
STANDARD STEEL WASHERS



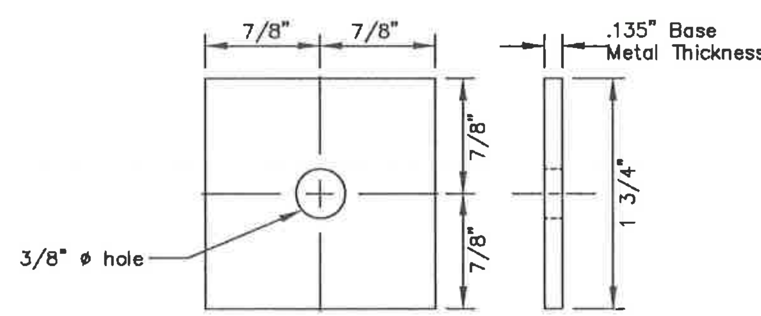
EYE BOLT



FLAT PLATE WASHER



RECTANGULAR POST BOLT WASHER



SQUARE STEEL WASHER

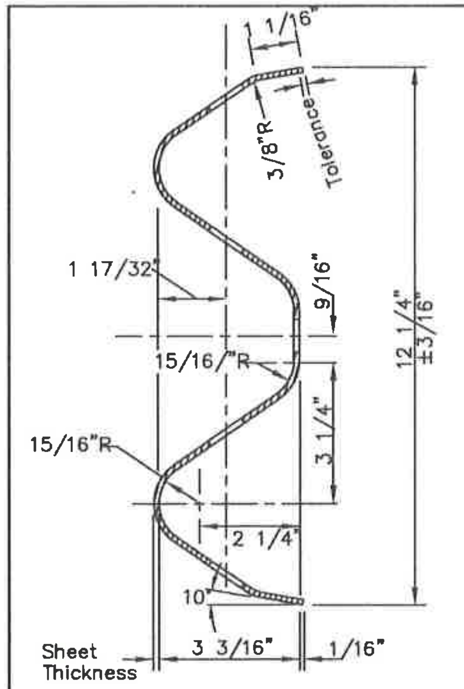
REVISIONS		
Date	Description	By
3/15/99	Delete BCT Hardware	KJS

State of Alaska
Department of Transportation & Public Facilities

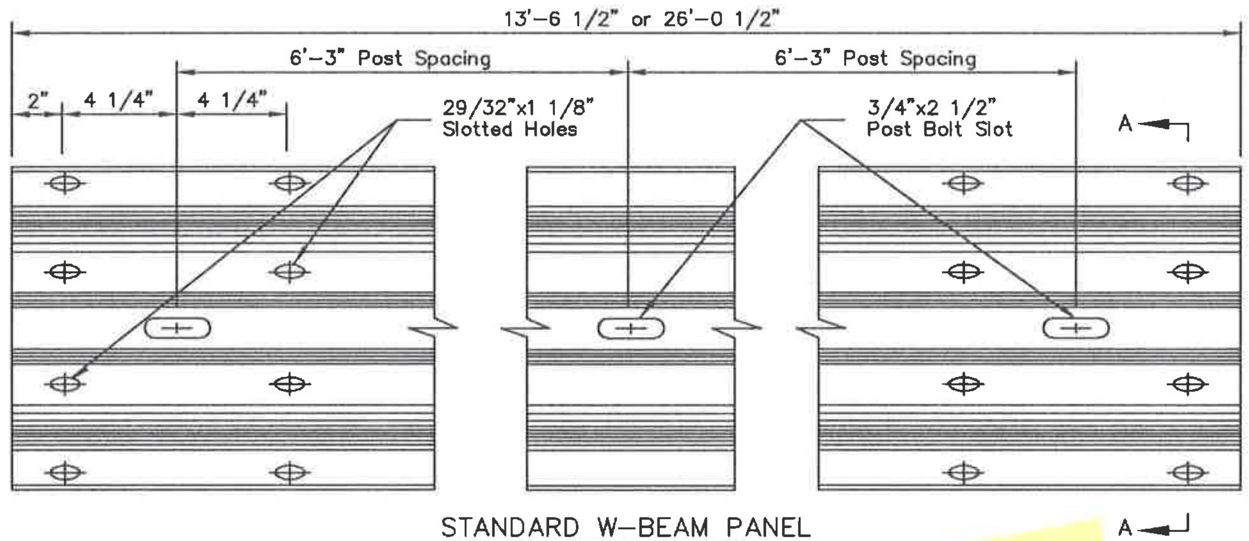
STANDARD GUARDRAIL HARDWARE (NUTS, BOLTS, WASHERS)

APPROVED

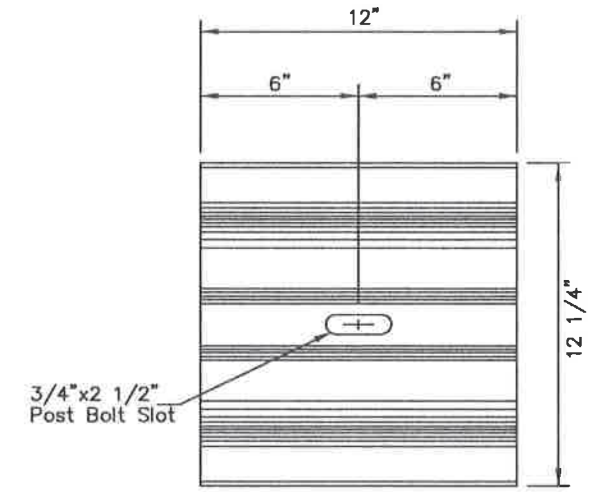
Date 5/31/12



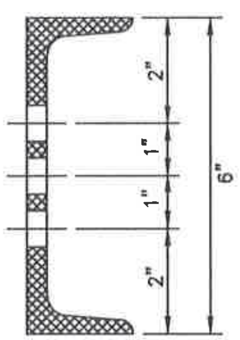
SECTION A–A



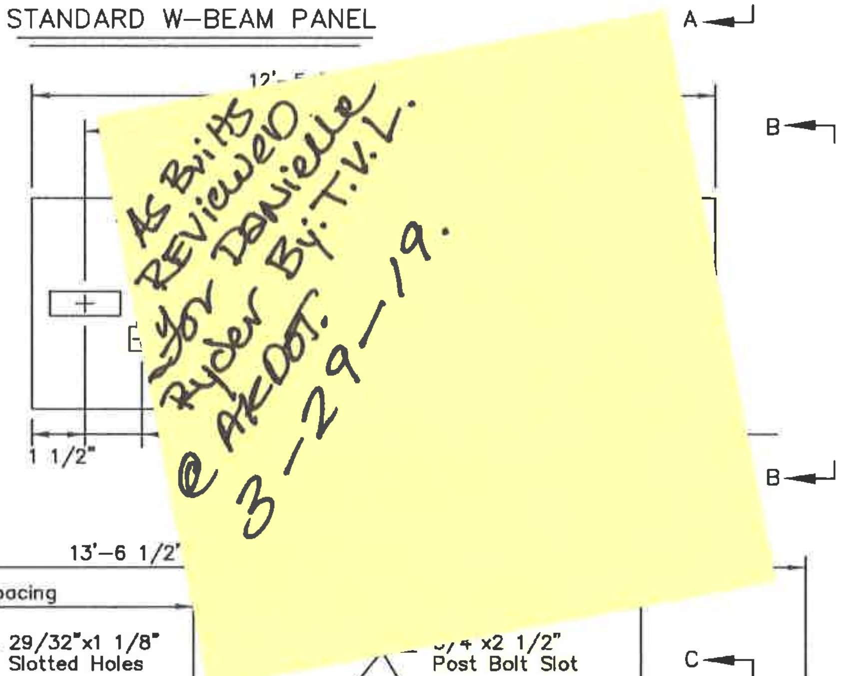
STANDARD W–BEAM PANEL

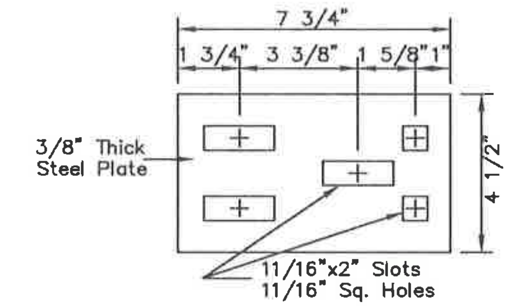


W–BEAM BACKUP PLATE

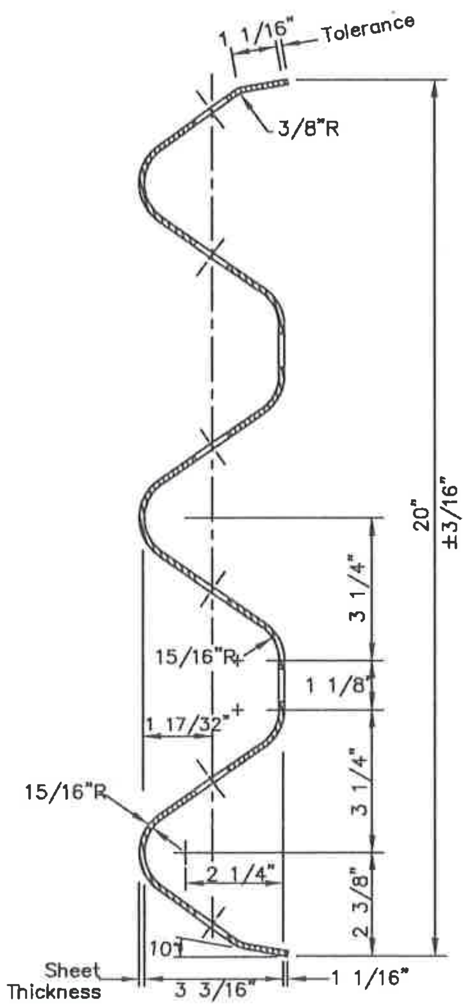


SECTION B–B

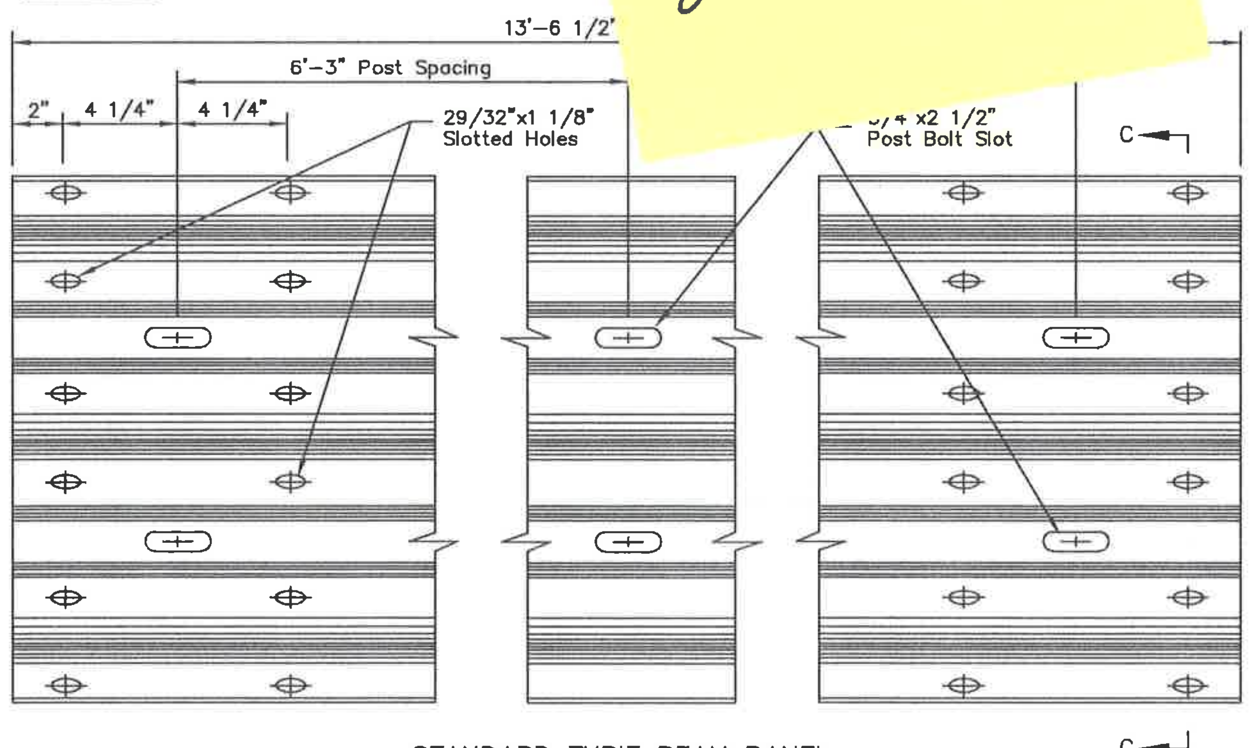




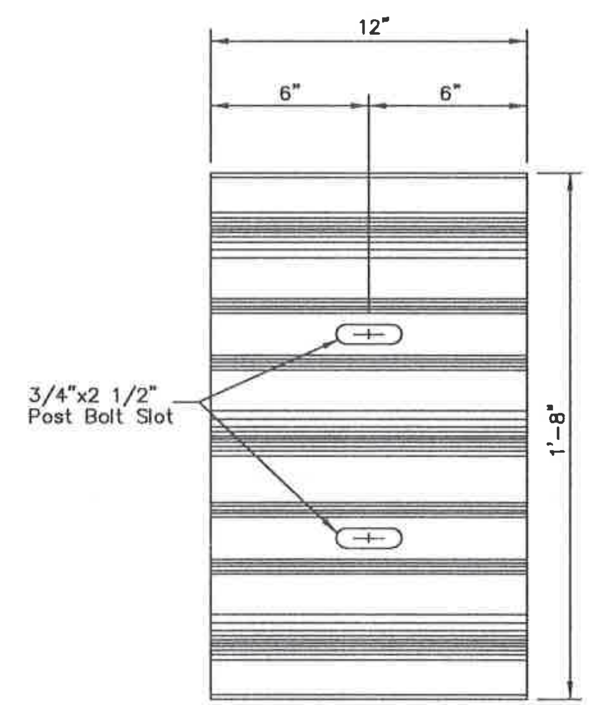
SPLICE PLATE
ASTM A36 STEEL



SECTION C–C



STANDARD THRIE BEAM PANEL



THRIE BEAM BACKUP PLATE

GENERAL NOTES:

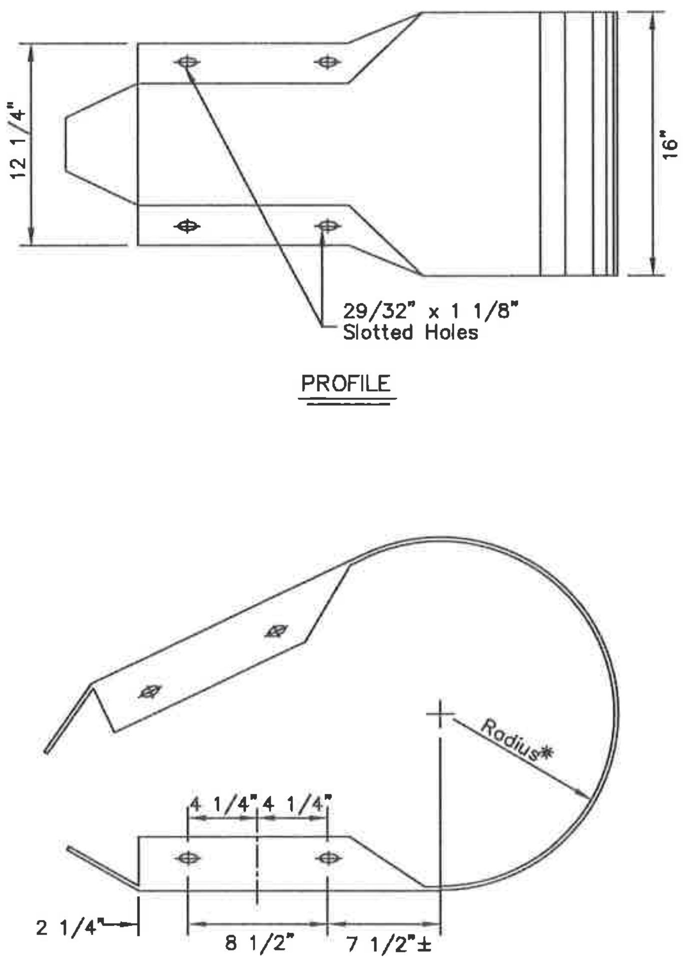
1. Provide hardware compliant with the AASHTO/AGC/ARTBA "A Guide to Standardized Highway Barrier Hardware, latest edition.
2. Install back–up plates between blockouts and w–beam or thrie–beam rail at intermediate (non–splice) posts when steel blockouts are used but not with wood, rubber, plastic, or other approved blockouts.
3. Provide Thrie beam and W–beam compliant with AASHTO M180A. Use 12 gauge (0.105") thick steel for both.

REVISIONS		
Date	Description	By
4/28/10	Revise General Notes	KJS

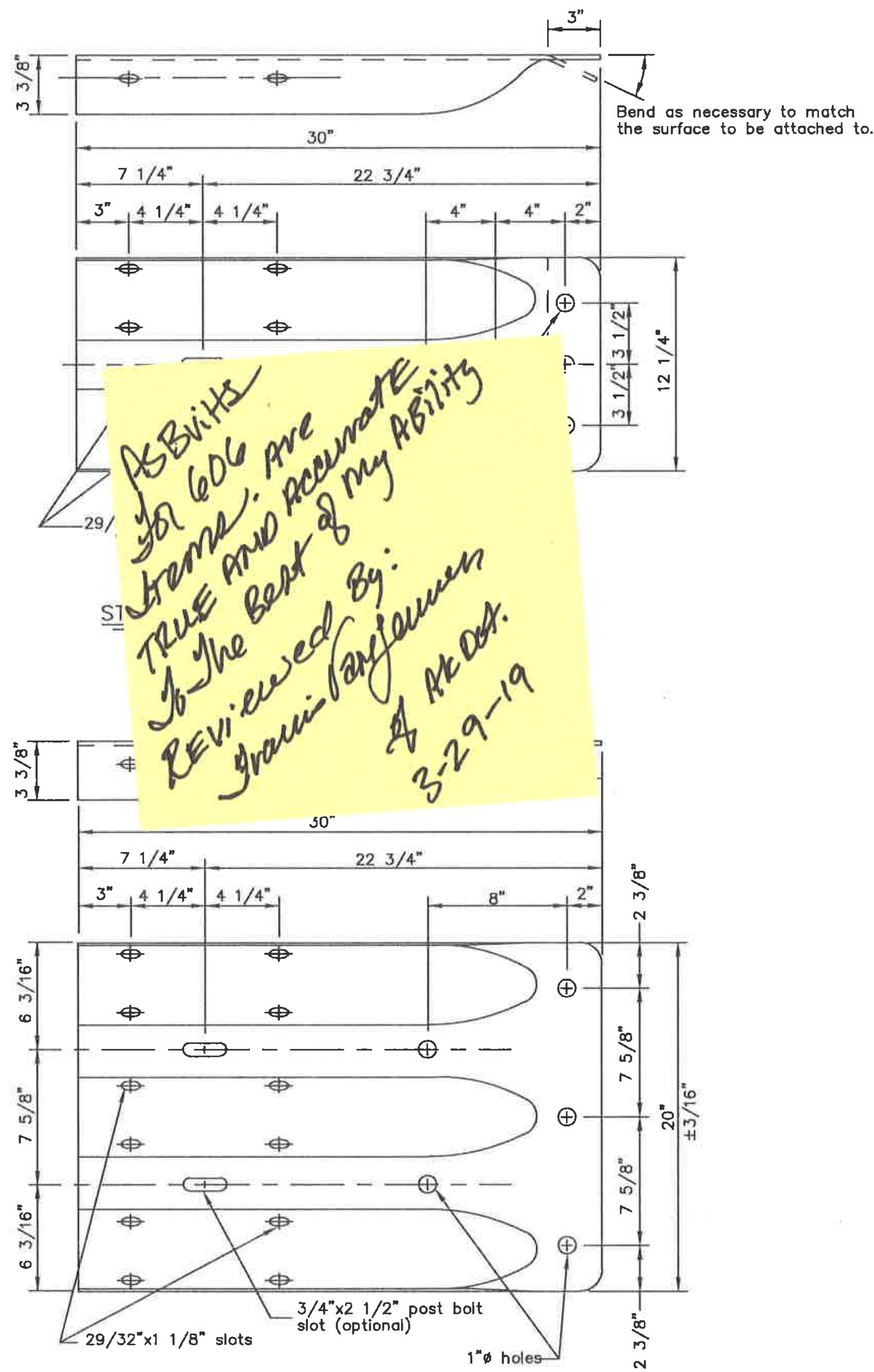
State of Alaska
Department of Transportation & Public Facilities

STANDARD GUARDRAIL HARDWARE (RAILS AND SPLICES)

APPROVED
Date 5/31/12



STANDARD W-BEAM END SECTION



STANDARD THRIE BEAM TERMINAL CONNECTOR

ASBuilts for 606 are True and Accurate to the Best of my Ability
Reviewed By: [signature] of AK DOT 3-29-19

GENERAL NOTES:

1. W-Beam and Thrie Beam Terminal Connectors shall conform to AASHTO M180, Class B, Type 2.
2. W-Beam end sections shall conform to AASHTO M180, Class A, Type 2.
3. All covered hardware shall comply with the AASHTO/AGC/ARTBA "A Guide to Standardized Highway Barrier Hardware", latest edition.

REVISIONS

Date	Description	By
3/15/99	Delete Thrie End Sect.	KJS

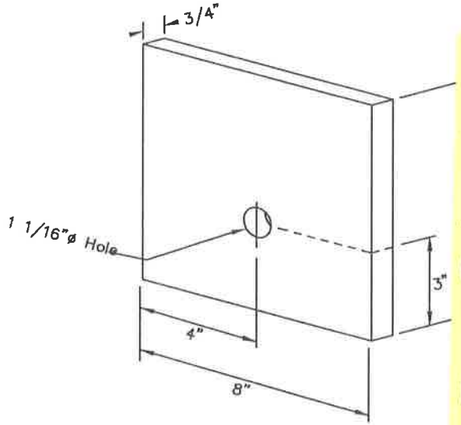
State of Alaska
Department of Transportation & Public Facilities

STANDARD GUARDRAIL HARDWARE (TERMINAL CONNECTORS)

APPROVED [seal]

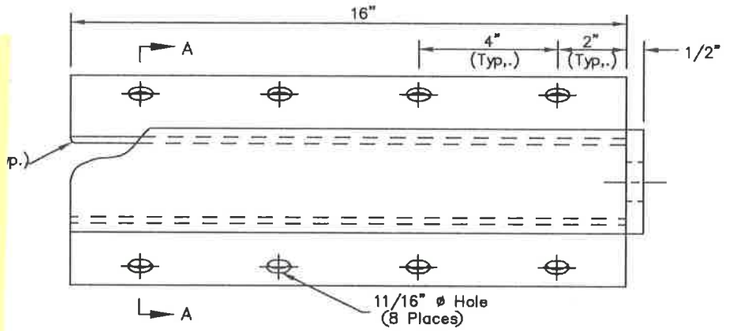
Date 5/31/12

G-00.02

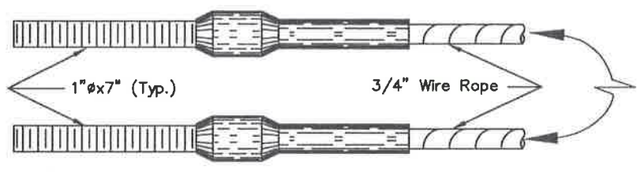


BEARING PLATE for CRT TERMINAL ANC

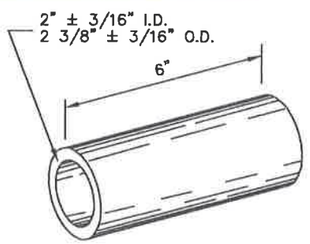
As Builts
In Item -
606. Accurate and
Complete To The Best
of my Ability.
T.V.L. 3-29-19



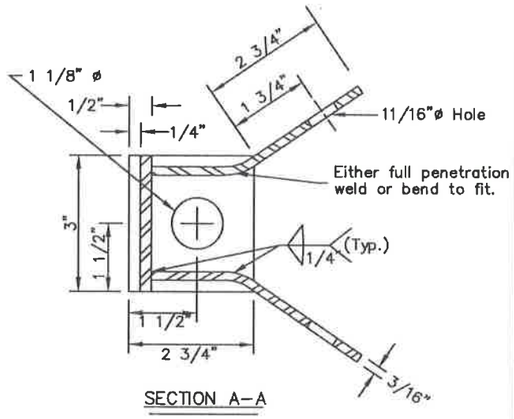
CABLE ANCHOR PLATE



SWAGED FITTING DETAIL

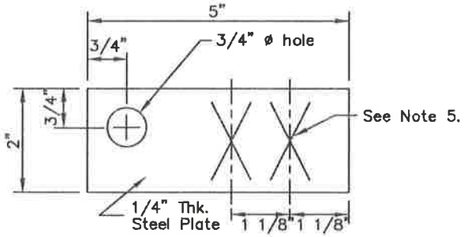


SLEEVE DETAIL

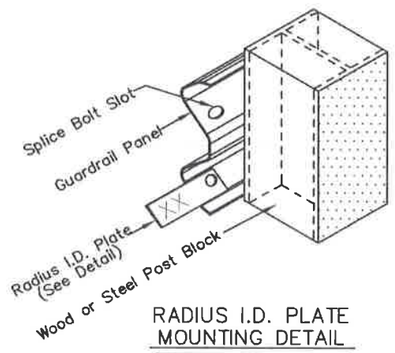


SECTION A–A

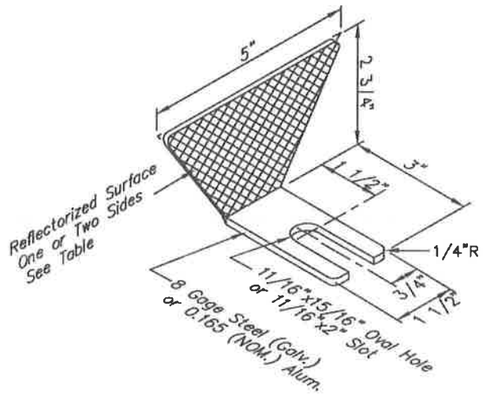
CONTROLLED RELEASE TERMINAL HARDWARE DETAILS



RADIUS I.D. PLATE



RADIUS I.D. PLATE
MOUNTING DETAIL



GUARDRAIL REFLECTOR

Guardrail Reflectors		
Type	Color	Reflectorized
A	White	Front & Rear
B	White	Front
C	Yellow	Front
D	Yellow	Front & Rear

GENERAL NOTES:

1. Cable Anchor Plate may be formed in single unit or welded fabrication.
2. Anchor Cable Assembly shall conform to AASHTO M–30 with Type II Wire Rope.
3. Sleeve for Wood Posts shall conform to the requirements of ASTM A120 and shall be of 2–inch galvanized standard pipe. Sleeve shall be a tight, pressed fit in post.
4. Bolts, nuts and washers shall conform to ASTM A–325 and galvanized in accordance with ASTM A–153.
5. Radius ID plates shall be attached to all shop–bent guardrail sections. They shall be bolted to the back side of the guardrail panel with the lower splice bolt nearest the P.C. of the radius.
6. Rail bend radius in feet shall be shown as "XX" on the radius ID plate. Digits shall be etched or stamped and have a min. height of 1 1/2" and a max. width of 3/4". The plate shall be galvanized after digits are marked.
7. All covered hardware shall comply with the AASHTO/AGC/ARTBA "A Guide to Standardized Highway Barrier Hardware", latest edition.

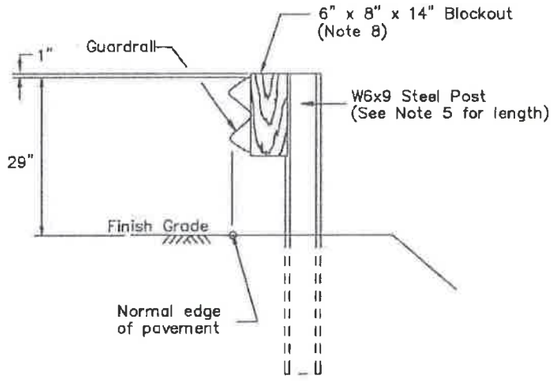
REVISIONS		
Date	Description	By
3/15/99	Delete BCT Hardware	KJS

State of Alaska
Department of Transportation
& Public Facilities

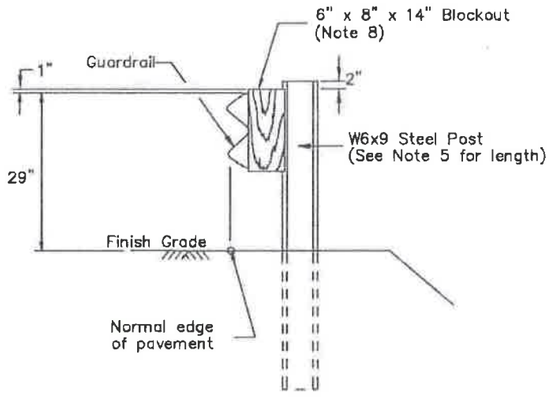
STANDARD GUARDRAIL HARDWARE (MISCELLANEOUS)

APPROVED
Date 5/31/12

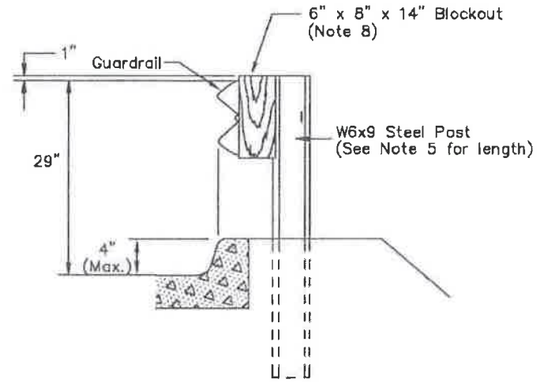
G–00.02



TYPE I POST INSTALLATION



TYPE II POST INSTALLATION

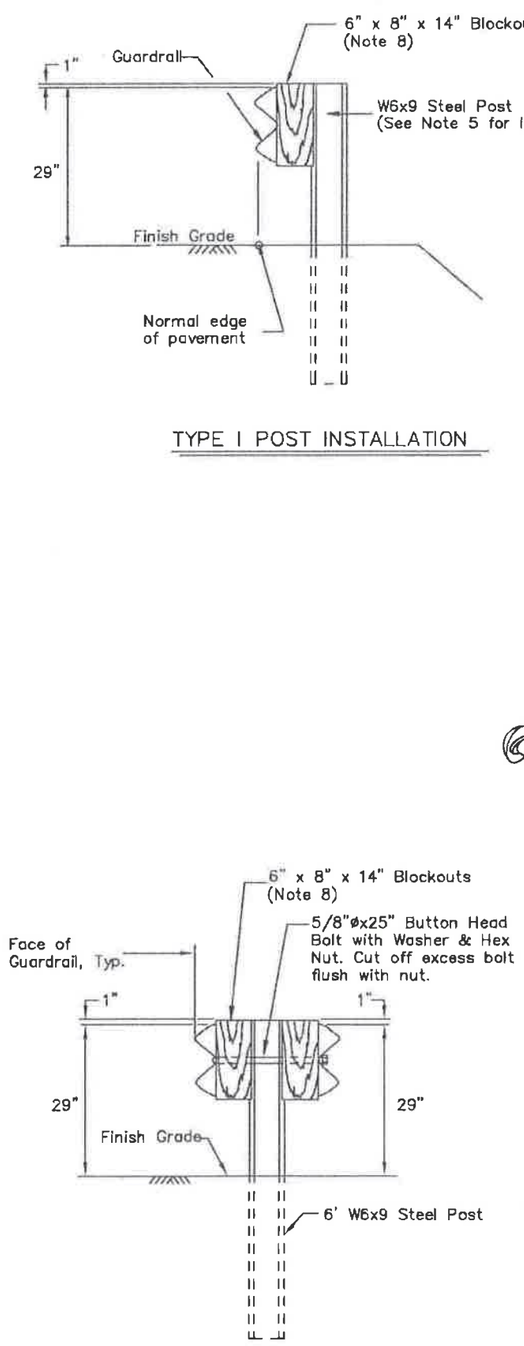


CURB DETAIL

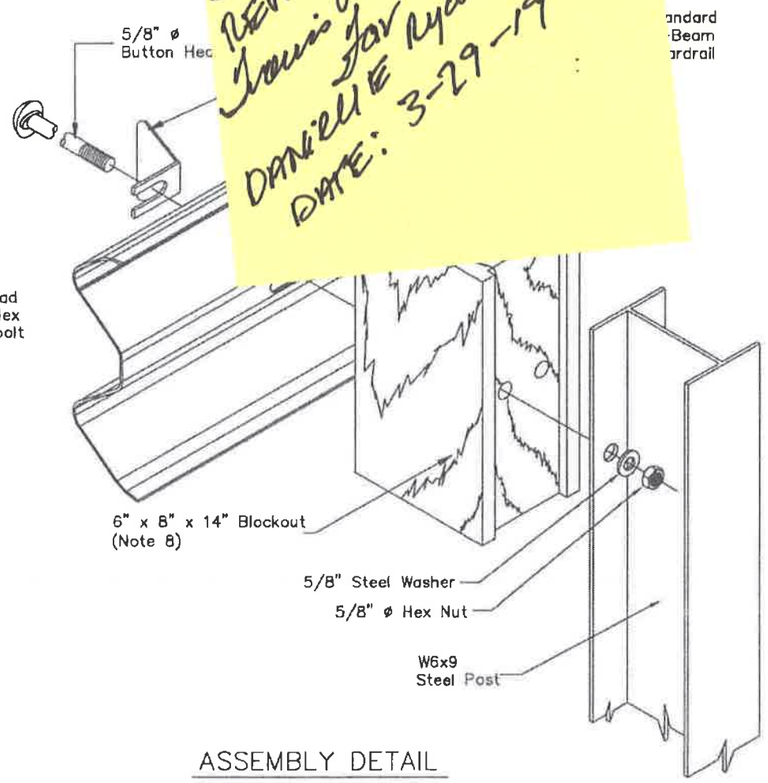
TYPE III POST INSTALLATION

NOTE: Curb should not be installed with guardrail when the speed limit exceeds 40 mph.

As Built
for 606 Item
Review'd By:
Travis VanJaarsveld
for
Daniel E Ryder
Date: 3-29-19

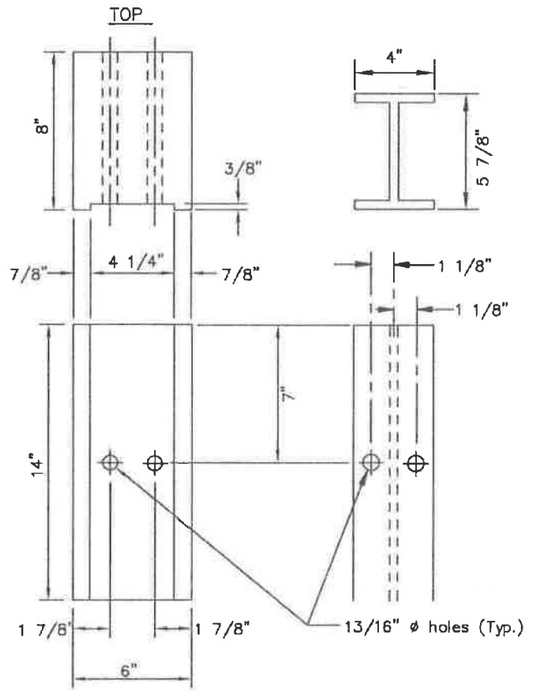


TYPE IV DOUBLE SIDED INSTALLATION



ASSEMBLY DETAIL

(Type I post shown)



BACK

6" x 8"
WOOD BLOCK

FACE

W6x9
STEEL POST

GENERAL NOTES:

1. Attach guardrail reflectors at 50' centers beginning with the first post. Use Type A reflectors unless specified otherwise.
2. Provide hardware compliant with the AASHTO/AGC/ARTBA "A Guide to Standardized Highway Barrier Hardware," latest edition.
3. See Standard Drawing G-00 for hardware details.
4. Mount rail to block with bolt on approaching traffic side of block web.
5. See Standard Drawing G-10 for post lengths corresponding to different combinations of slope and behind-post embankment width.
6. Typical post spacing is 6'-3" center to center.
7. This barrier is acceptable under NCHRP 350, TL-3.
8. Use wood, rubber, plastic, or other NCHRP 350 or MASH approved blockouts designed to be used with steel posts
9. Use 25 linear foot transition to match height of existing or new rail elements and end treatments.
10. W6x8.5 steel post may be substituted for W6x9 steel post.

REVISIONS		
Date	Description	By
3/1/83	Revised gen. notes	Gdo
1/1/86	Revised hanger detail	Gdo
3/15/99	Block and post length	KJS
4/1/13	Add double-sided detail and increase g.r. height	JCJ

State of Alaska
Department of Transportation
& Public Facilities

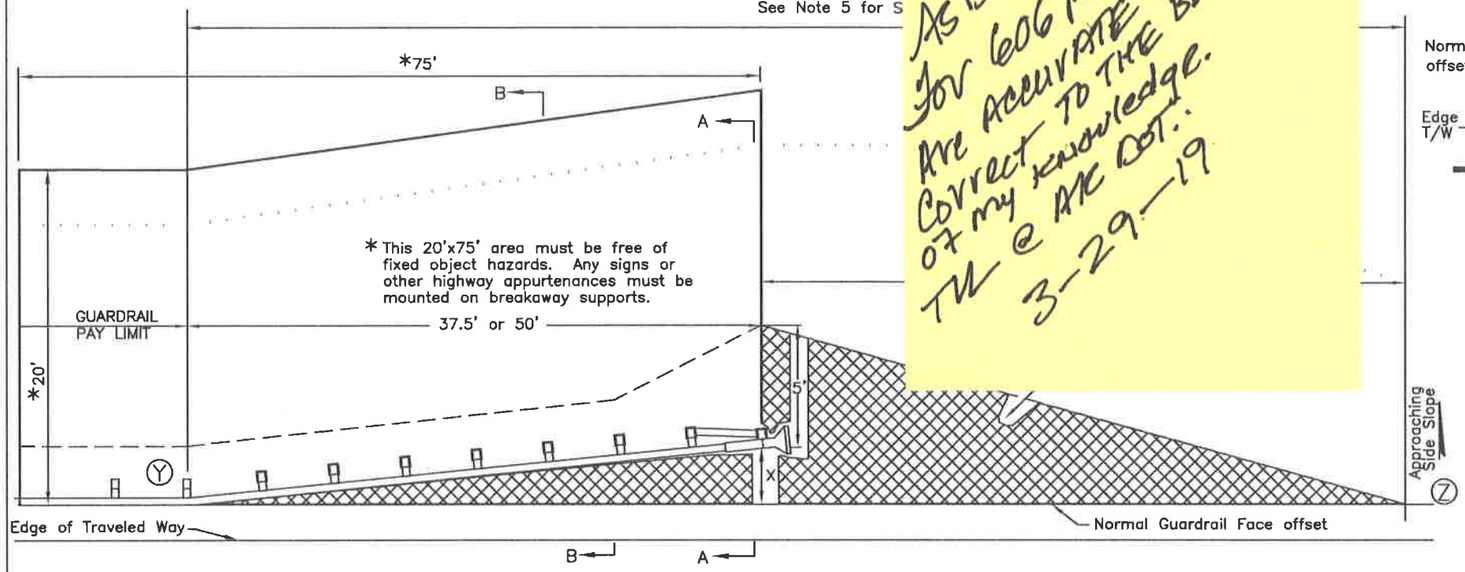
STEEL POST
W-BEAM GUARDRAIL

APPROVED

Date 05/15/13

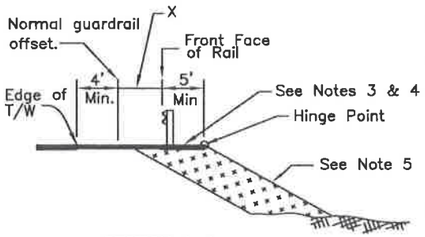
G-04.10S

G-20.11

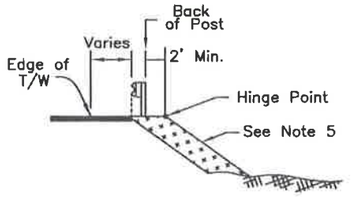


STANDARD GUARDRAIL TERMINAL WIDENING DETAIL

As Built's for 606 pad are accurate & correct to the best of my knowledge.
TM @ AKE DOT.
3-29-19



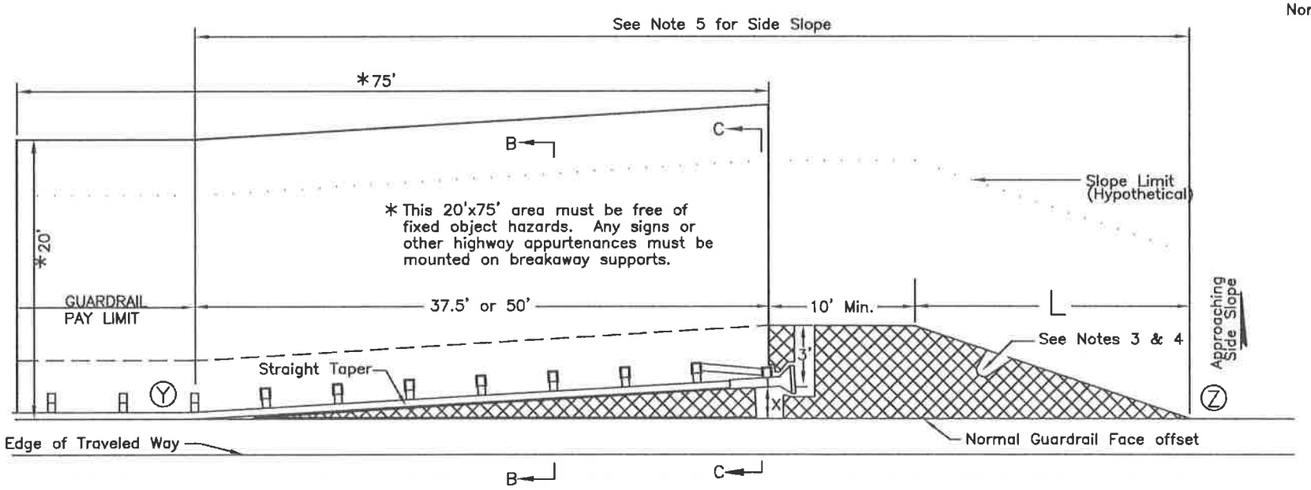
SECTION A–A



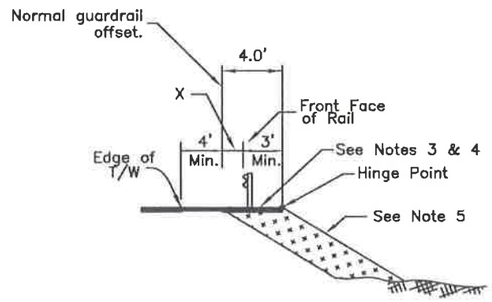
SECTION B–B
(Applies to both drawings)

GENERAL NOTES:

1. The standard detail applies to all approved guardrail terminals, including those with parabolic flares. The alternate detail may only be used with straight terminals. The terminal details shown are for illustration only – see manufacturer's drawings for actual post, rail, etc. drawings.
2. Use the standard detail for all terminals except when upgrading existing non–NCHRP 350 or MASH compliant terminals to NCHRP 350 or MASH compliant terminals where site conditions make the use of the standard detail infeasible. In that case, use the alternate detail.
3. Construct the hatched areas to match the slope of the adjacent shoulder to a maximum slope of 10:1. Maintain 10:1 for steeper shoulders. Match the slope when the shoulder slopes toward the road as well as away from the road.
4. On paved roads, the hatched areas shall be paved. On gravel roads, surface the hatched areas with the same materials used to surface the travel lanes.
5. From point Ⓨ to point Ⓩ make the side slope match the approaching side slope except where it is flatter than 4:1. In that case, the slope may be steepened to 4:1.
6. Attach a flexible marker to the first point (where the flare begins) and the end post of each terminal.
7. The maximum allowable height for foundation tubes or other steel components of terminal post breakaway systems is 4 inches above the surrounding grade.
8. The details on this sheet do not apply to Controlled Release Terminals (G–25) or Downstream End Anchors (G–13).
9. On two–way undivided roads, the details on this sheet do apply to NCHRP 350 or MASH compliant guardrail terminals on both the approach and downstream ends.



ALTERNATE GUARDRAIL TERMINAL WIDENING DETAIL



SECTION C–C

X: End offset. See manufacturer's information for the range of acceptable (NCHRP 350 or MASH compliant) end offsets for each terminal.

Taper Lengths (L) for Common End Offsets (X)		
End Offset	Standard Detail	Alternate Detail
0'	15.0'	10.0'
1'	17.0'	10.0'
1.5'	20.0'	15.0'
2'	22.0'	15.0'
2.5'	25.0'	15.0'
4'	30.0'	20.0'
Interpolate if the end offset falls between table values		

REVISIONS		
Date	Description	By
3/6/02	Change ET Offset	KJS
2/28/03	Major Revisions	KJS
4/28/10	Revise General Notes	KJS

Sheet 1 of 1

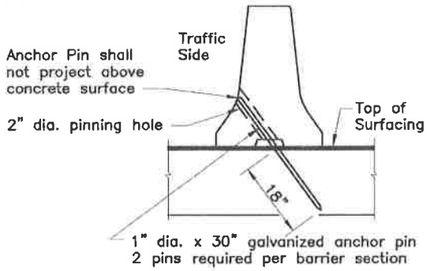
State of Alaska
Department of Transportation & Public Facilities

WIDENING FOR GUARDRAIL END TERMINALS

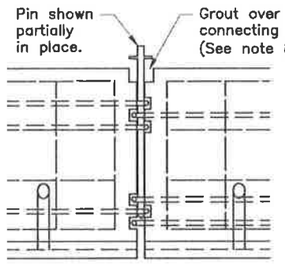
APPROVED
Date 5/31/12

G-20.11

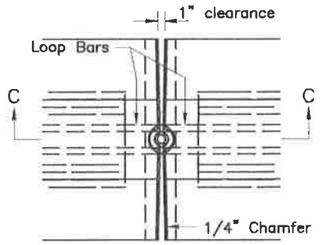
G-46.11



PINNING CONCRETE BARRIER TO ROADWAY
(Use when required by plans or as directed)

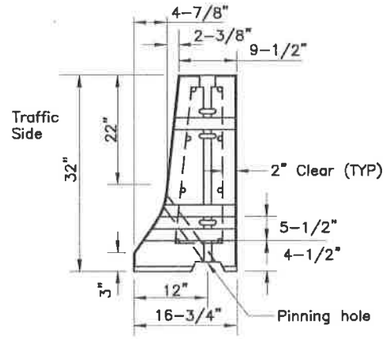


SECTION C–C
For details not shown see End Views A–A and B–B



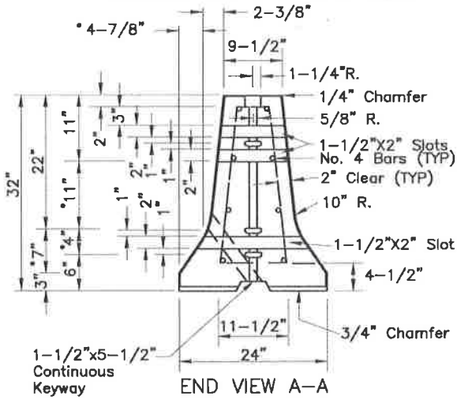
PLAN
For details not shown see End Views A–A and B–B

CONNECTING PIN AND LOOP CONNECTION

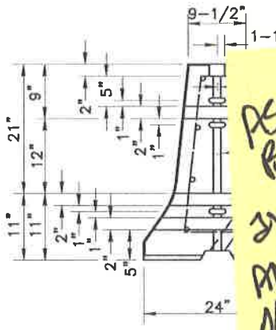


SHOULDER BARRIER

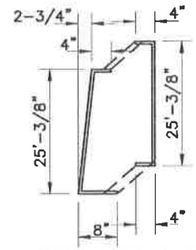
* Dimensions marked thus are to the Intersection point of the barrier slopes.



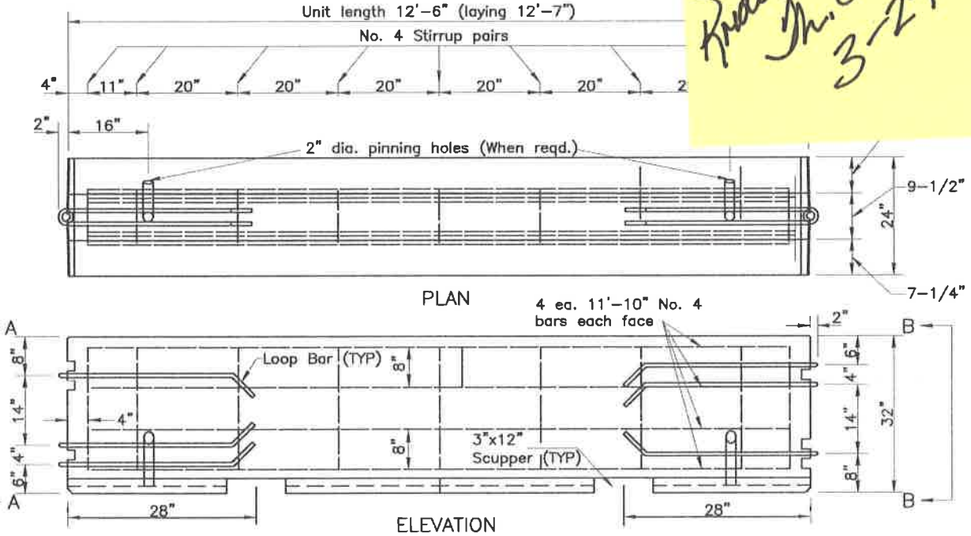
END VIEW A–A



END VIEW

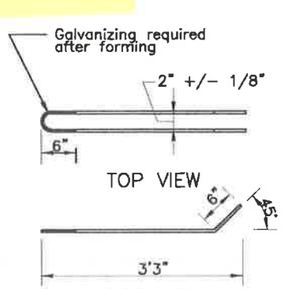


SHOULDER BARRIER STIRRUP
No. 4 REBAR



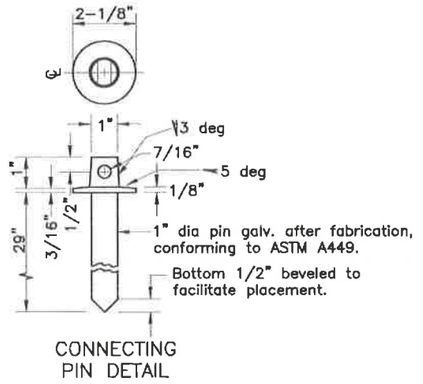
PLAN

ELEVATION
MEDIAN BARRIER



TOP VIEW

SIDE VIEW
LOOP BAR
3/4" DIA. (A36)
LOOP BAR DETAIL



CONNECTING PIN DETAIL

GENERAL NOTES

1. Barriers may be used for temporary and permanent applications.
2. Provide 36" unobstructed smooth deflection area behind barrier for unanchored applications. Provide 12" unobstructed smooth deflection area behind barrier for anchored applications.
3. When anchored, install anchor pins on the side facing traffic. Precast barrier used as permanent median barrier in medians less than 8' in width shall be anchored to the roadway. When anchored in medians, install anchor pins on both sides of the barrier.
4. Provide 2" clearance between all metal reinforcement and the nearest face of concrete unless otherwise shown.
5. Normal use of precast barrier units is restricted to curvatures with radii greater than 770'.
6. Use narrow base shoulder barrier only at locations with full height backfill or equivalent structural support placed behind barrier.
7. When scuppers are not required plug them with a minimum 2" of grout.
8. Concrete grout for grouting over pins, pinning holes or grouting of scuppers shall be a non–shrinking grout, weak in strength and of thick consistency.
9. This precast concrete barrier is NCHRP 350 TL–3 approved.

As Builds
We Acquire and Time to the best of my knowledge.
Th. @ AK DOT.
3-29-19

REVISIONS		
Date	Description	By
4/28/10	Correct Dims, Note 1	KJS

Sheet 1 of 2

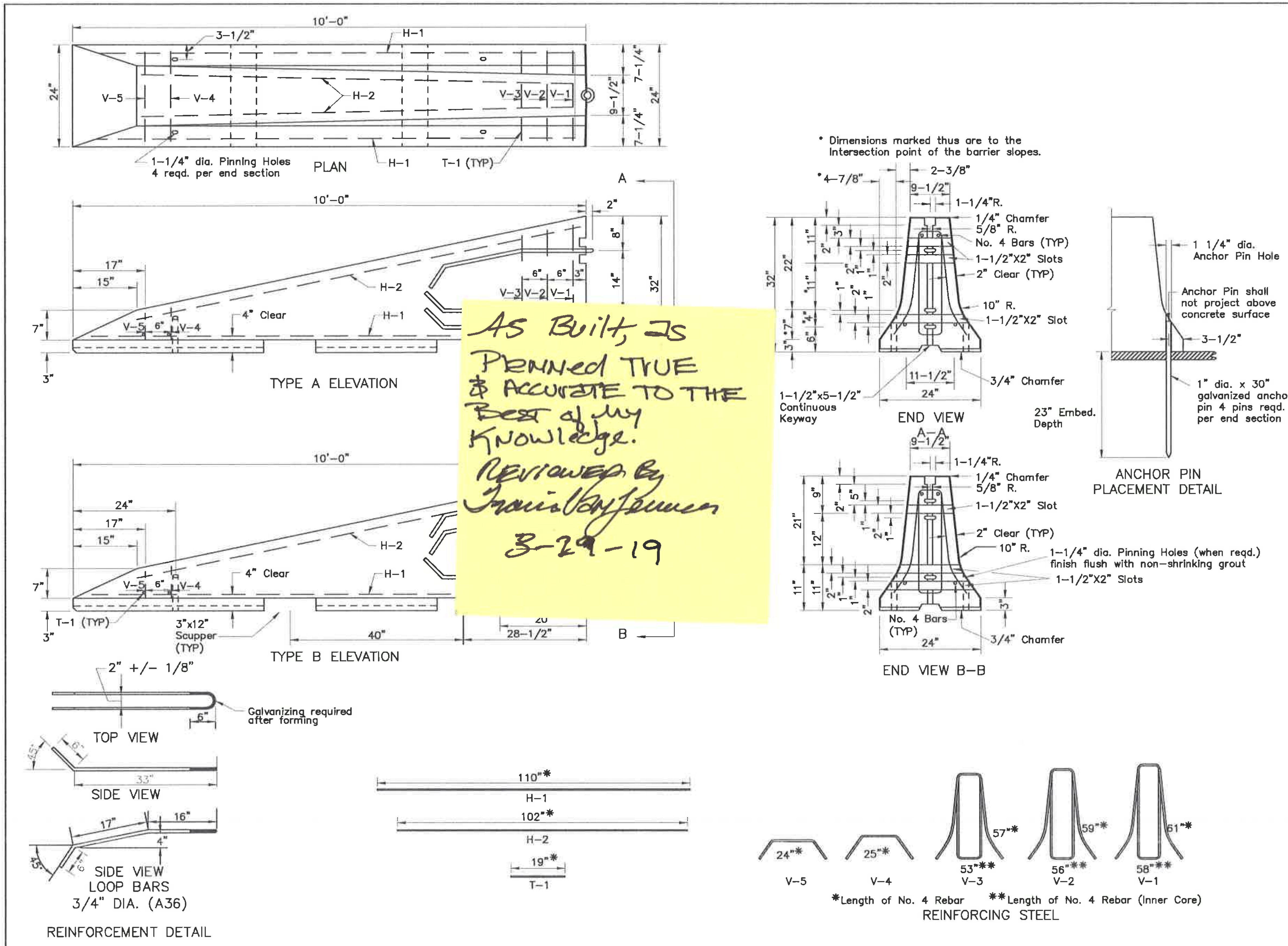
State of Alaska
Department of Transportation & Public Facilities

PRECAST CONCRETE "F" SHAPE BARRIER

APPROVED
Date 5/31/12

G-46.11 Sheet 1 of 2

G-46.11



As Built, Is Penned True & Accurate to the Best of My Knowledge.
Reviewed By [signature]
3-29-19

GENERAL NOTES

1. Use tapered end sections only where:
   a. Barriers terminate outside the clear zone, or
   b. The regulatory speed limit is 25 MPH or below, or 30 MPH if the Engineer determines NCHRP 350 or MASH compliant end treatments are unfeasible.
2. Use air entrained concrete with minimum compressive strength of 3,000 p.s.i.
3. Provide a minimum of two inches clear cover for reinforcing steel bars except as shown otherwise.
4. Galvanize all exposed hardware in accordance with AASHTO M 232.
5. Provide reinforcing steel bars conforming to AASHTO M 31-86, grade 60.
6. Provide anchor pins conforming to AASHTO M 183 steel.
7. Provide connecting pins conforming to AASHTO M 164-86.
8. Provide four anchor pins per unit.

REVISIONS

Date	Description	By
4/28/10	Correct dimensioning	KJS

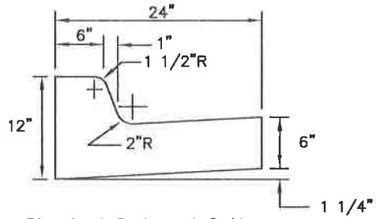
Sheet 2 of 2

State of Alaska
Department of Transportation & Public Facilities

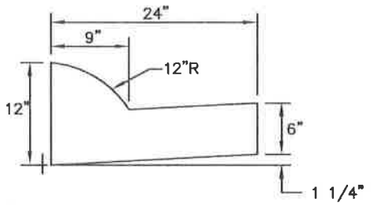
PRECAST CONCRETE "F" SHAPE BARRIER TAPERED END SECTION

APPROVED
Date 5/31/12

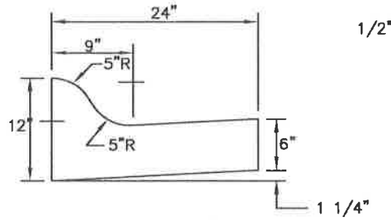
G-46.11 Sheet 2 of 2



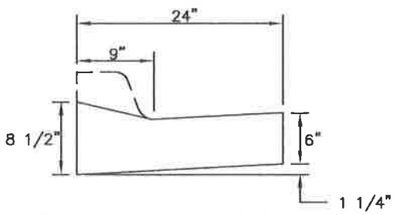
Standard Curb and Gutter



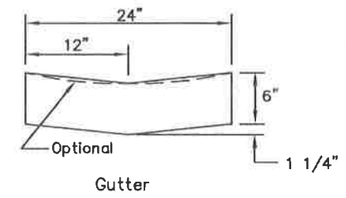
Expressway Curb and Gutter



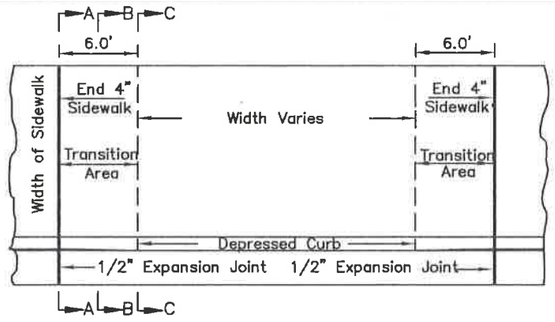
Mountable Curb and Gutter

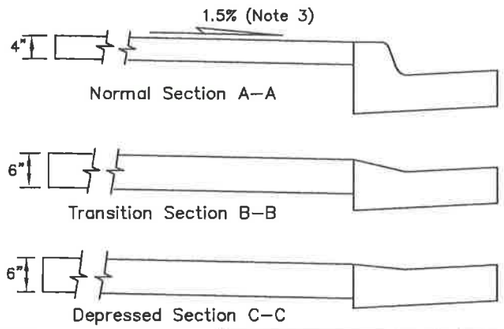


Depressed Curb and Gutter

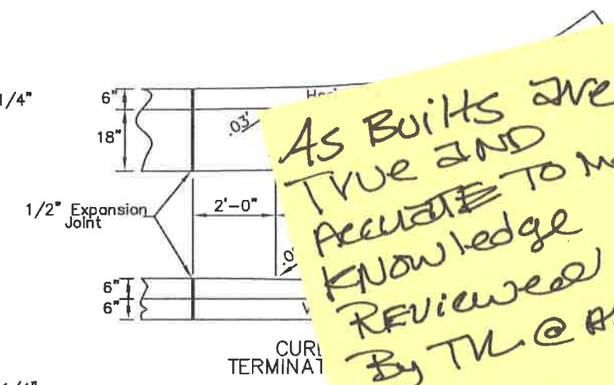


CURB and GUTTER DETAILS

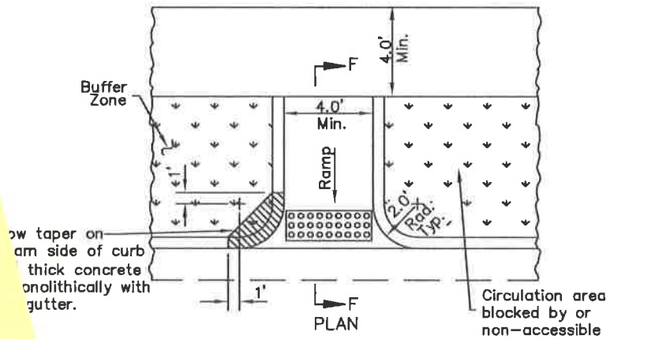


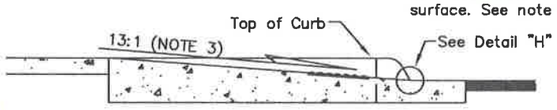


VEHICULAR CURB CUT DETAILS



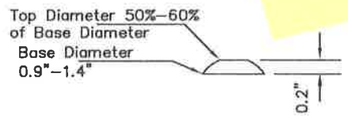
CURB TERMINAT



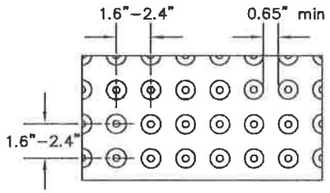


SECTION F–F

RETURNED CURB RAMP for PEDESTRIANS

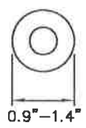


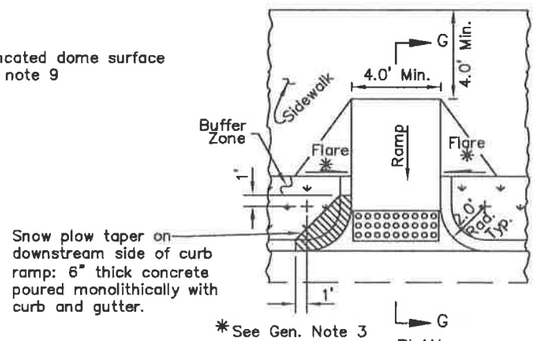
TRUNCATED DOME DETAIL

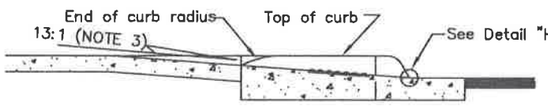


TEXTURE PATTERN DETAIL

Truncated dome surface see note 9

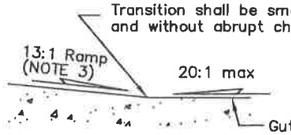






SECTION G–G

RETURNED CURB RAMP with SIDEWALK for PEDESTRIANS



DETAIL "H"

GENERAL NOTES:

1. Use the type of curb and/or gutter specified on the plans.
2. Use Mountable or Expressway curbs on medians and traffic islands.
3. Construct ramp runs and landings of concrete, regardless of whether the sidewalk is asphalt or concrete.
4. Construct ramp slopes 13:1 or flatter, flare slopes 12:1 or flatter, and sidewalk cross slopes 1.5% or flatter. If conditions require, the Engineer may increase ramp slopes to 12:1 maximum. Construct grade breaks perpendicular to ramp runs.
5. Do not construct flare slopes steeper than 10:1 measured parallel to the curb line, ramp slopes steeper than 12:1, or sidewalk cross slopes steeper than 2% (50:1), except as provided under Note 6. These are the steepest slopes allowed by law.
6. Where sidewalk slope makes it necessary to lengthen a ramp run to avoid exceeding the allowable ramp slope, do not exceed a ramp length of 15 feet. The slope resulting from that run length is acceptable, even if it exceeds the maximum slope shown.
7. Provide a coarse broomed finish on ramp runs perpendicular to the ramp slope.
8. When approved by the Engineer, curb returns may be replaced with flares at locations where access to the side of a ramp run is free of poles, utility boxes, other obstructions, or non–accessible surfaces such as a dirt planter strips. See Standard Drawing I–22 for details.
9. Install 24" detectable warning tiles for the full width of the ramp. Domes shall be in a square pattern. Align truncated dome pattern in the predominant direction of wheelchair travel to permit wheels to roll between domes.
10. 10. Construct curb ramps and detectible warning tiles in accordance with requirements for the American with Disabilities Act (ADA).

REVISIONS		
Date	Description	By
5/15/89	Added Curb Ramps	Gdo
4/1/93	Revised Detail "H"	Gdo
1/1/96	Gen. Note 3	Gdo
12/1/99	Delete Flared Ramp	KJS
5/31/12	ADA Updates	JCJ

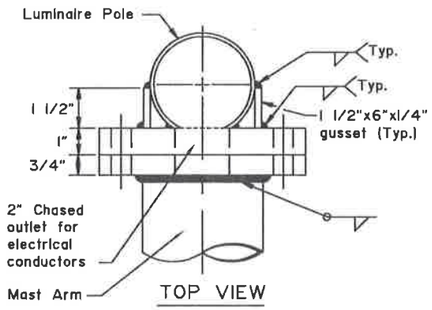
State of Alaska
Department of Transportation & Public Facilities

CURB CUT, CURB & GUTTER AND CURB RAMP DETAILS

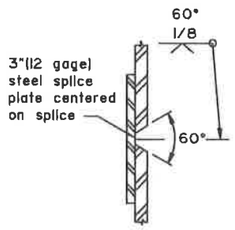
APPROVED
Date 5/31/12

I-20.14

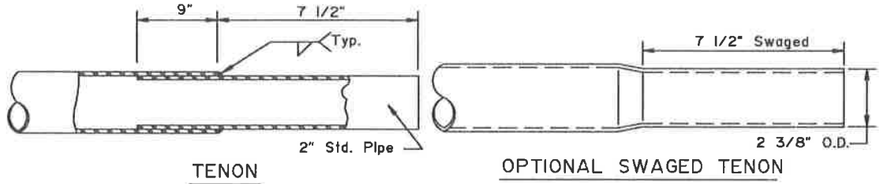
As Builts are True and Accurate to my Knowledge Reviewed By TL @ AK DOT 3-29-19



TOP VIEW



SPLICE DETA

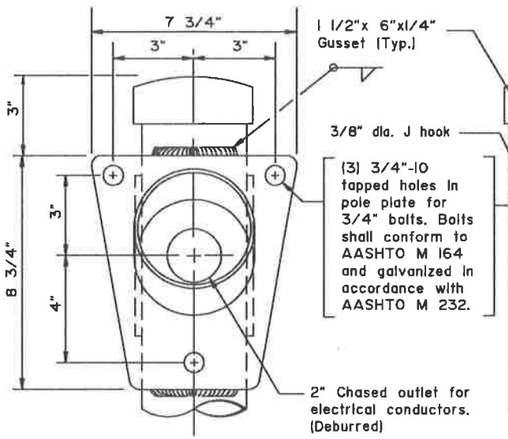


TENON

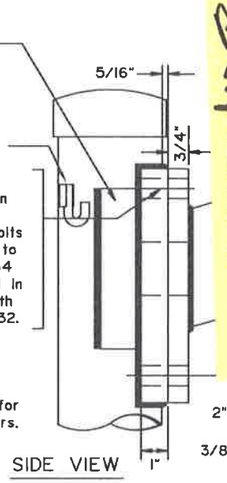
OPTIONAL SWAGED TENON

END OF MAST ARM DETAIL

As Built
for Lighting
are true &
accurate to the
best of my knowledge.
T/L @ AKDOT.
3-29-19

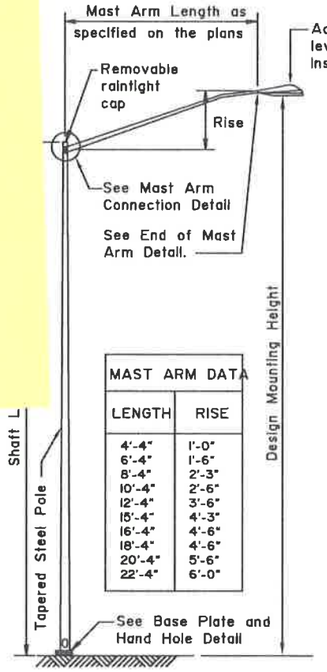


FRONT VIEW



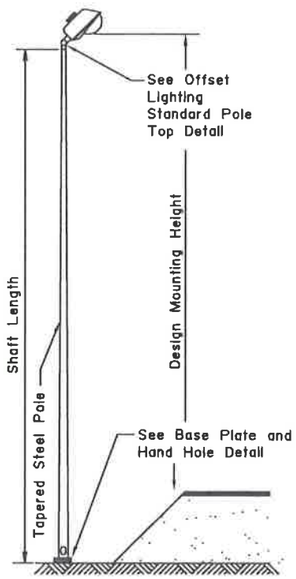
SIDE VIEW

MAST ARM CONNECTION DETAIL

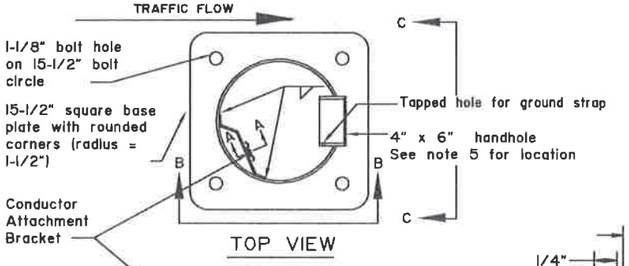


MAST ARM DATA	
LENGTH	RISE
4'-4"	1'-0"
6'-4"	1'-6"
8'-4"	2'-3"
10'-4"	2'-6"
12'-4"	3'-6"
15'-4"	4'-3"
16'-4"	4'-6"
18'-4"	4'-6"
20'-4"	5'-6"
22'-4"	6'-0"

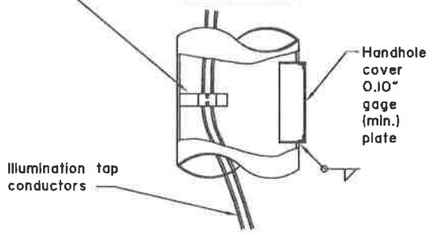
ELECTROLIER ELEVATION
COBRA HEAD



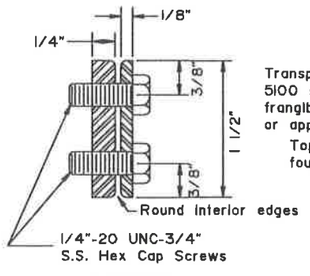
ELECTROLIER ELEVATION
OFFSET



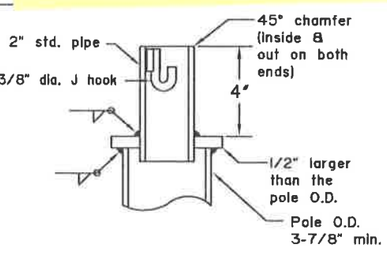
TOP VIEW



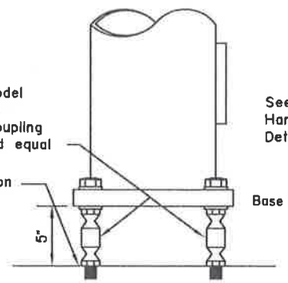
BASE PLATE AND HAND HOLE DETAIL



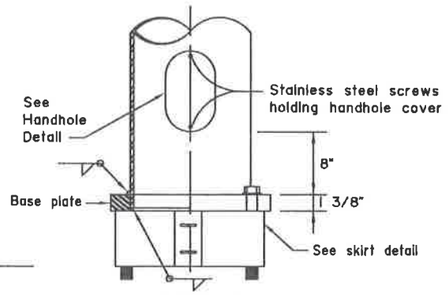
SECTION A-A



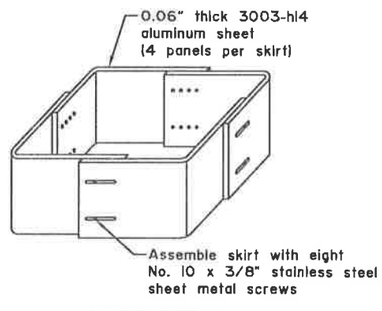
OFFSET LIGHTING STANDARD POLE TOP DETAIL
(CUTAWAY FOR CLARITY)



VIEW B-B



VIEW C-C



SKIRT DETAIL

GENERAL NOTES

1. Design and fabricate all shafts to support a mast arm 22' long with luminaire. Assume each offset fixture weighs 60 lbs. and has an effective projected area of 2.8 SF. Assume each Cobra head weighs 55 lbs. and has an effective projected area of 1.2 square feet. With this dead load, limit the angular rotation of the pole top to 1° 40' maximum.
2. Weld size to be determined by manufacturer.
3. Mounting height, if specified in the plans, refers to the height of luminaire above the roadway. Adjust each pole's shaft length to maintain this difference in elevation whenever slope and/or offset varies.
4. Minimum outside diameter at the top of pole equals 3-7/8". Pole diameter shall taper uniformly from the top of pole to the base plate, with a maximum taper rate of 0.15" per foot.
5. Mast arm rise may vary ±0.5ft from the values listed in the table.
6. Locate the handhole at 90 degrees to the mast arm on the side of pole downstream from traffic flow.
7. Furnish all poles with a j-hook to support the illumination tap conductors. Furnish all mast arm poles with a removable raintight cap.
8. Frangible couplings shall be NCHRP 350, Test Level 3 compliant and have no measured torque requirement.
9. Frangible couplings shall be installed into flush mounted female anchors so that no fixed hardware extends above the foundation top.
10. Install all components of the breakaway support system in accordance with the manufacturer's written instructions.
11. Fabricate the skirt from four pieces of 0.06" thick 3003 h-14 aluminum sheet. Bend each plate to provide corners with a 3/4" radius. Assemble the skirt with #10 x 3/8" self tapping stainless screws or pop rivets. The assembled skirt measures about 12-7/8" square.

REVISIONS		
Date	Description	By

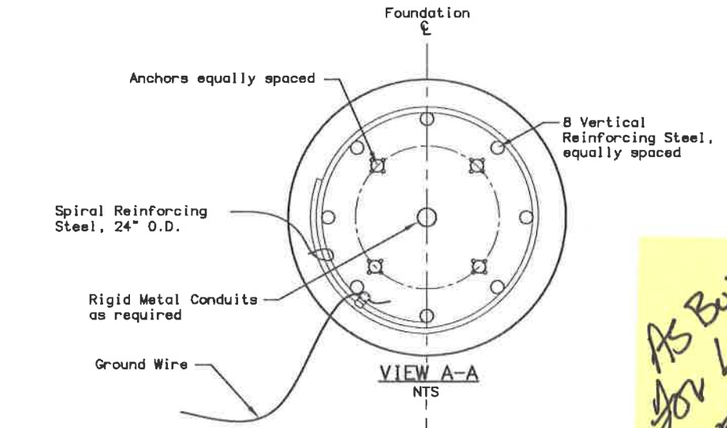
Sheet 1 of 1

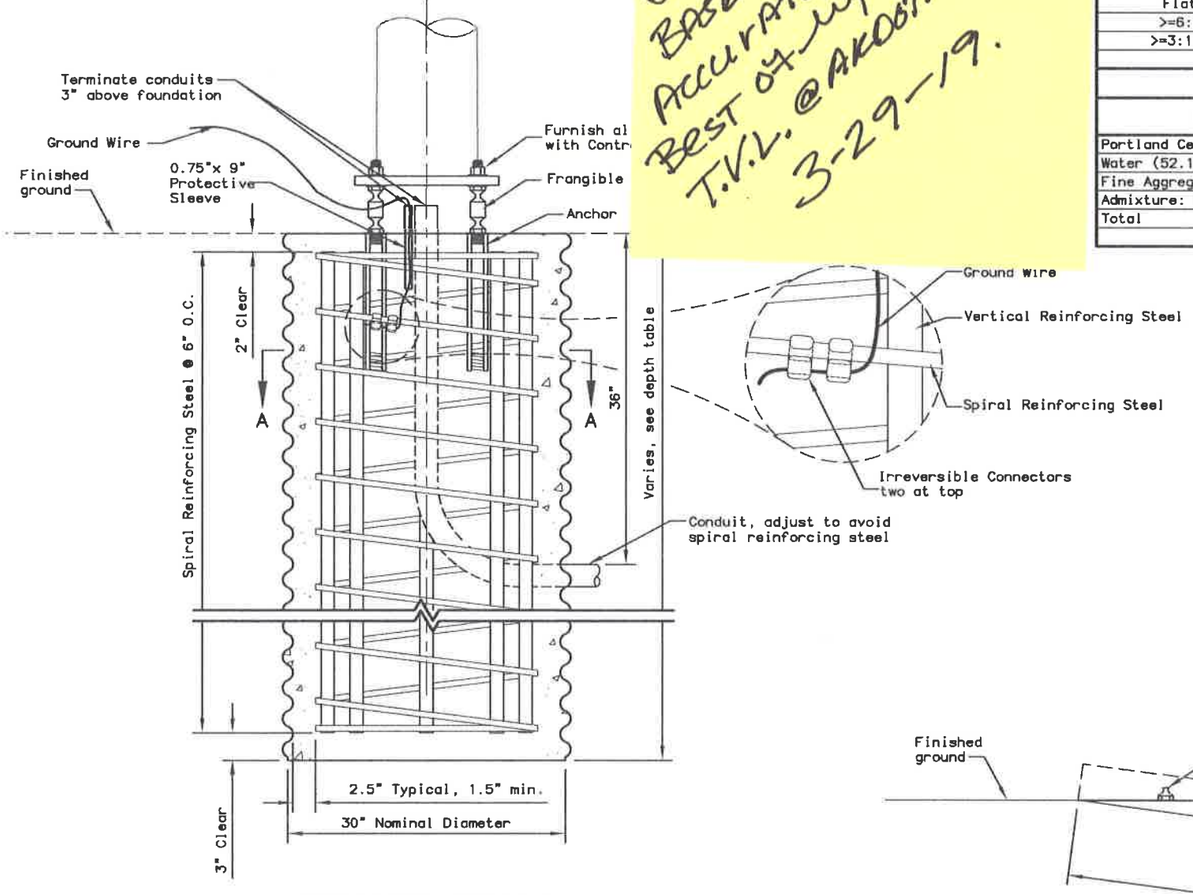
State of Alaska
Department of Transportation
& Public Facilities

LIGHTING STANDARD

APPROVED
Date 2/28/03

L-03.10





FOUNDATION DETAILS

NTS
(Skirt omitted for clarity)

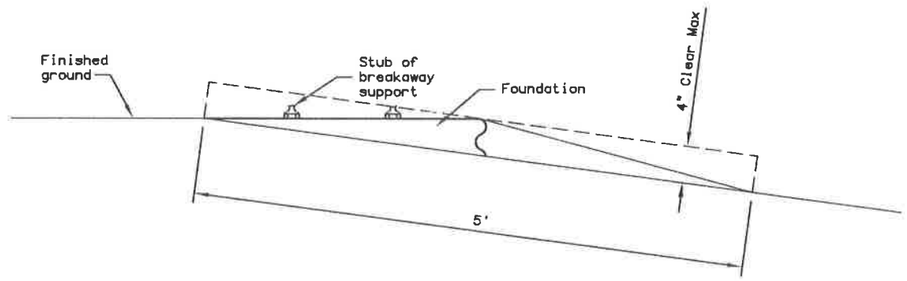
As Built for Lighting Base, IS Accurate to the best of my knowledge T.V.L. @ AKDOT. 3-29-19.

MATERIAL REQUIREMENTS		
Concrete	Class A	f'c = 4000 psi
CMP	AASHTO M218	14 ga.
Vertical Reinforcing Steel	AASHTO M31 #11	GR 60
Spiral Reinforcing Steel	AASHTO M31 #5	GR 60
Ground Wire		#4 awg
Frangible Coupling	NCHRP 350 TL3 Frangible Coupling	Vu = 5.5 kips Tu = 43.2 kips
Anchor	NCHRP 350 TL3 Frangible Coupling Anchor	
Conduit	Sch 40	RMC
Protective Sleeve	Sch 40	PVC

DEPTH TABLE		
GRADE	FOUNDATION DEPTH BY APPLICATION (ft.)	
	ELECTROLIER * SEE NOTE 9	BREAKAWAY TRAFFIC SIGNAL
Flat to 6:1	8	6
>=6:1 to 3:1	9	7
>=3:1 to 1.5:1	10	8

SAND SLURRY MIX DESIGN		
ITEM	BATCHING QUANTITIES PER CYD BATCH (lbs.)	APPLICABLE SPECS.
Portland Cement Concrete	188	701-2.01
Water (52.1 gal.)	435	712-2.01
Fine Aggregate SSD	3041	703-2.01
Admixture: Microair	2.0 oz.	711-2.02
Total	3664	

BOLT CIRCLE	
REGION	DIAMETER
Northern Region Projects	14.5"
Central Region Projects	15.5"
Southeast Region Projects	15.5"



CLEARANCE DETAIL

NTS

DESIGN NOTES:

Design Standard: 2001 Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals with 2006 interim.

Design Load: 1,000 lbs axial, 2,000 lbs shear, 50,000 ft-lbs moment.

Construction Standard: Latest edition of the State Of Alaska Standard Specifications for Highway Construction with Special Provisions.

NOTES:

1. This foundation is approved for electrolier and breakaway traffic signal applications in cohesionless soils with an N1-60 value of 10 or greater per AASHTO T-206, "Standard Penetration Test" (SPT). This foundation shall not be used if any of the following are encountered; water table above the bottom of foundation, very loose soils, organic soils, cohesive soils (clay), or soils susceptible to frost jacking. If any of these conditions are encountered, stop foundation work and contact the Engineer.
2. Place foundation in drilled or excavated hole with centerline of foundation located at the station, offset, and elevation specified in plans. Set foundation to satisfy the conditions depicted in clearance detail.
3. Form the foundation in corrugated metal pipe conforming to Subsection 707-2.01 of the Specifications.
4. Provide 1.5 extra turns at each end of the spiral reinforcing steel. Reinforcing steel shall not be spliced. Tie vertical reinforcing steel to each intersection of the spiral reinforcing steel.
5. Connect ground wire near the top of spiral reinforcing steel with two irreversible connectors as shown. Fasten connectors according to the manufacturers' recommendations including the use of manufacturer specified tools. The ground wire may be bare solid, stranded, or braided copper. Protect ground wire with protective sleeve as shown and fill with silicon sealant.
6. Complete all concrete work in conformance with Sections 501, 503, and 660 of the Specifications. Use a tube with a hopper head or other approved device when dropping concrete more than 5 feet per Subsection 501-3.08. Vibrate concrete during placement by mechanical vibration per Subsection 501-3.08. Ensure anchor threads are protected from contact with concrete during pour.
7. Backfill and compact according to Section 205, and Subsections 203-3.04 and 660-3.01 of the Specifications. Use select material, Type A or sand slurry as backfill material. Ensure area below foundation meets compaction requirements and is free of loose material and debris prior to concrete work.
8. Install all anchors according to the manufacturer's written installation instructions. Anchors shall be installed plumb. Anchors greater than 1:40 out-of-plumb will result in foundation rejection.
9. When used for electrolier reduce the foundation depth 1 foot when there is no luminaire arm or the luminaire arm is less than or equal to 12 feet.
10. Grade in depth table refers to fill slopes. If foundation is in a cut slope assume flat grade in table. To determine grade in fill slopes, use the most severe grade found within an 8 foot radius of the center of the foundation. Slopes steeper than 1.5:1 require engineered depth calculation.

REVISIONS		
Date	Description	By

SHEET 1 OF 1

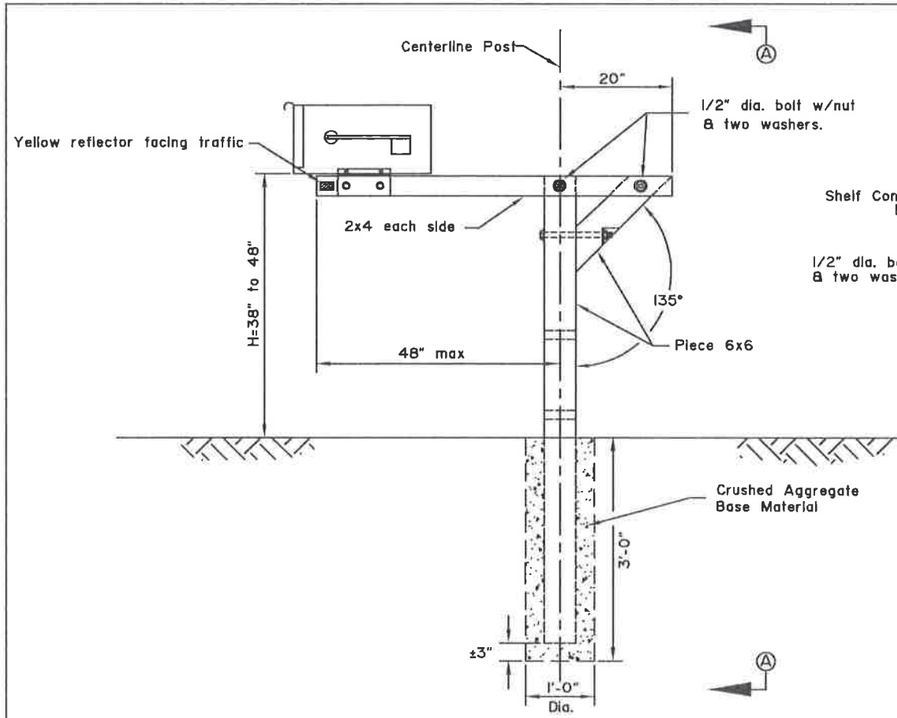
State of Alaska
Department of Transportation
& Public Facilities

CONCRETE STREET LIGHT POLE FOUNDATION

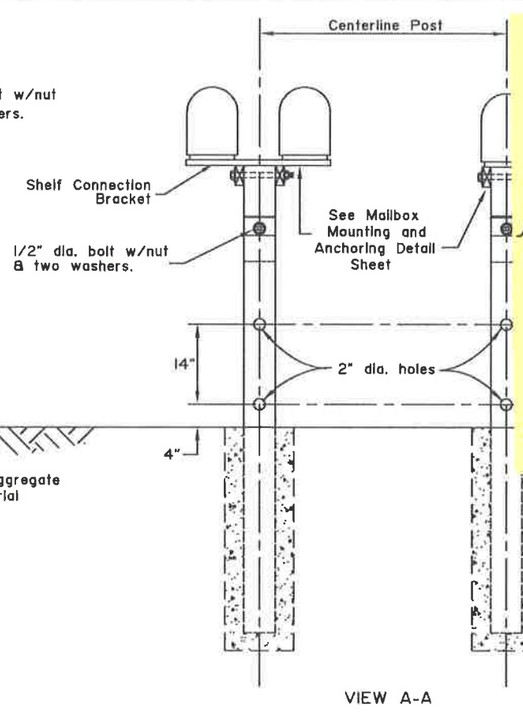
APPROVED

Date 05/31/12

L-30.10



TYPICAL WOOD CANTILEVER INSTALLATION

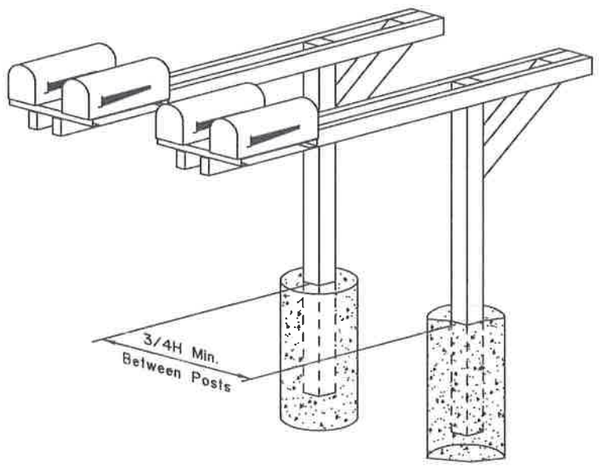


VIEW A-A

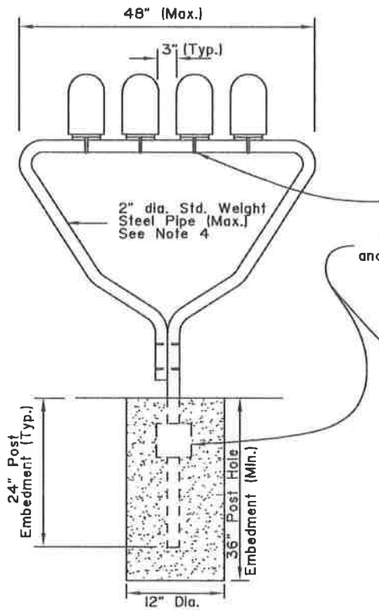
MAIL BOXES AS-BUILTS ARE ACCURATE & TRUE TO THE BEST OF MY KNOWLEDGE JW @ AKDOT. 3-29-19.

GENERAL NOTES:

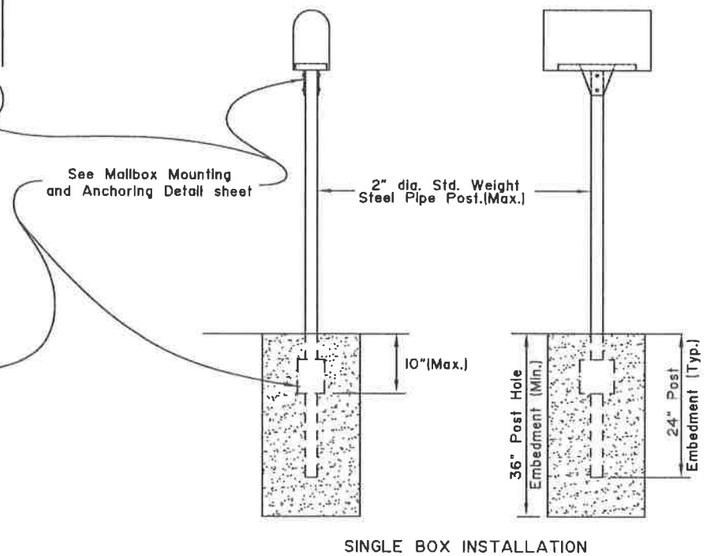
1. See Standard Drawing, 'Mailbox Location', for locating posts and boxes along roadway.
2. Posts shall be 6"x6" Treated Wood Post S4S or 2" (Max.) Standard Weight Steel Pipe.
3. Each support structure shall not accomodate more than two mailboxes unless the support structure conforms to the requirements of the U.S. Postal Service and is approved by the Engineer.
4. Other steel or aluminum structural sections may be used except, the stiffness properties equivalent to the 2" dia. standard weight steel pipe shall not be exceeded.
5. Reflectors shall have a minimum area of 4.5 sq. in.



TYPICAL GANG BOX INSTALLATION



MULTIPLE BOX INSTALLATION (U.S.P.S. Approved)



SINGLE BOX INSTALLATION

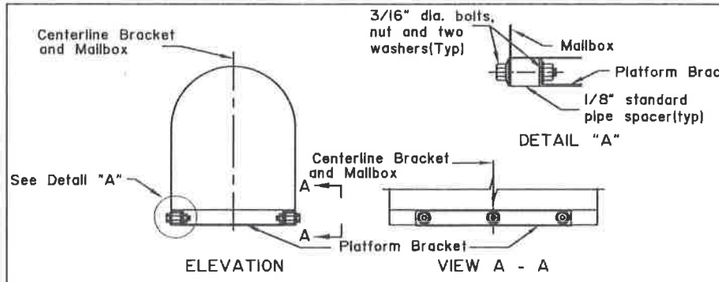
METAL POST SUPPORTS (URBAN ONLY)

REVISIONS		
Date	Description	By
9/15/91	Mod w/USPS specs.	Gdo
4/1/93	Revise Embedment Depth	Gdo
1/1/96	Del. Specs./Min. Height	Gdo

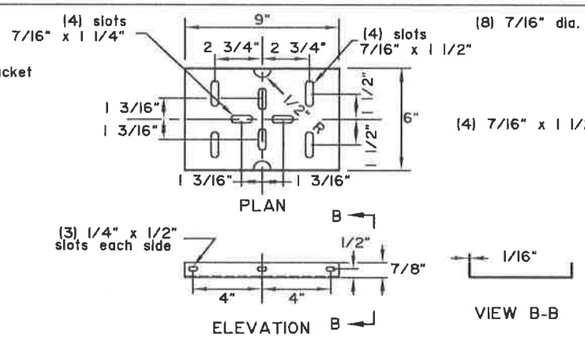
State of Alaska
Department of Transportation & Public Facilities

MAILBOX INSTALLATION

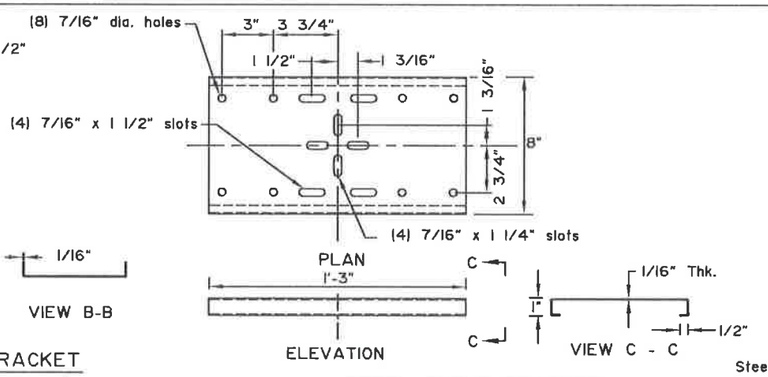
APPROVED
Date 12/1/97



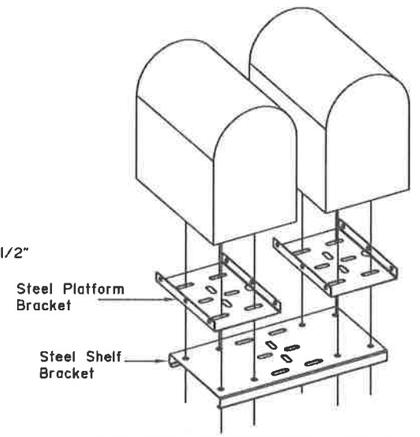
MAILBOX SUPPORT PLATFORM ASSEMBLY



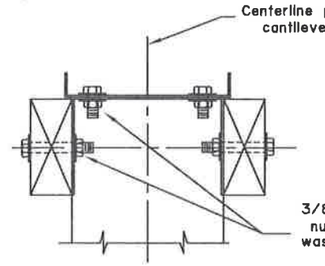
STEEL PLATFORM BRACKET



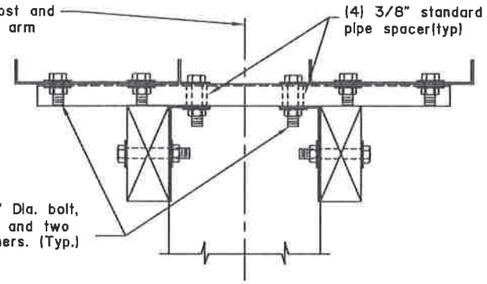
STEEL SHELF BRACKET



MAILBOX CONNECTION DETAIL

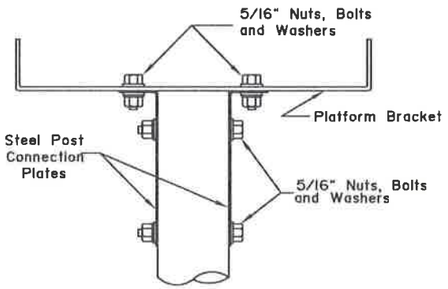


WOOD CANTILEVER ARM PLATFORM CONNECTION

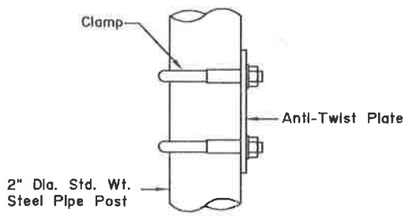


WOOD CANTILEVER ARM SHELF CONNECTION

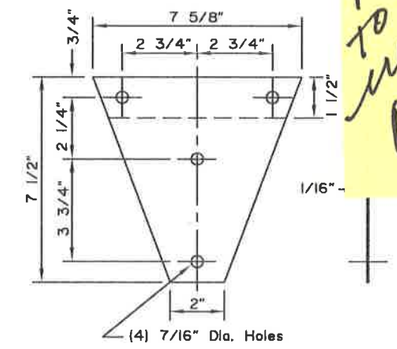
MAIL BOX AS BUILT ARE ACCURATE TO THE BEST OF MY KNOWLEDGE. This Reviewed By 3-29-19.



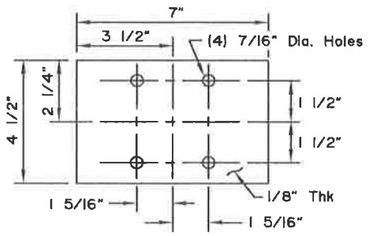
BRACKET ASSEMBLY DETAIL



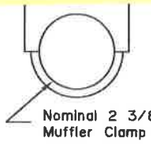
ANTI-TWIST PLATE ASSEMBLY DETAIL



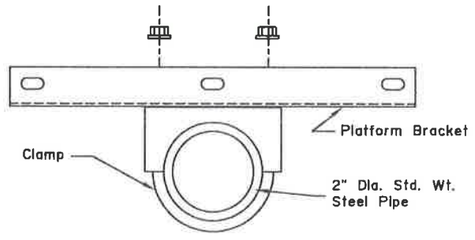
STEEL POST CONNECTION PLATES for STEEL PIPE POST



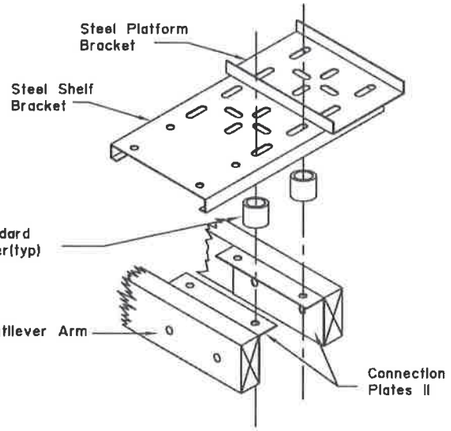
ANTI-TWIST PLATE for STEEL PIPE POST



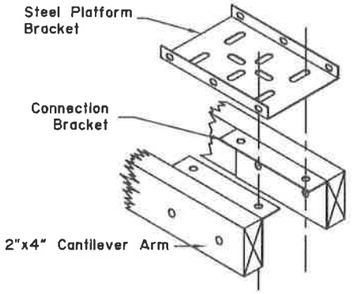
CLAMP



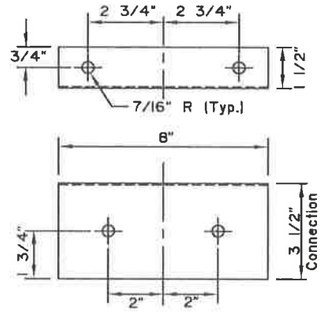
MULTIPLE BOX CLAMP ASSEMBLY DETAIL



SHELF BRACKET CONNECTION DETAIL



PLATFORM BRACKET CONNECTION DETAIL



CONNECTION PLATES for WOOD CANTILEVER ARM

1/16"

REVISIONS		
Date	Description	By

State of Alaska
Department of Transportation & Public Facilities

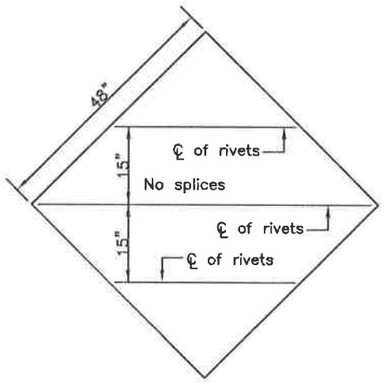
MAILBOX MOUNTING AND ANCHORING DETAILS

APPROVED 4/1/93

Date

M-23.12

S-00.11



TUBE SIGN POST SPACING								
Sign Width (feet)	No. of Posts	Distance Between Posts	Sign Overhang	Post Type				Notes
				P.S.T.	Wood	Steel Tube	W–Shape	
0.5 to 4.0	1	–	0.5W	X	X	X		See Note 2.
4.5 to 10.0	2	0.6W	0.2W	X	X	X		See Note 3.
10.5 to 11.0	2	6	Varies	X	X	X		See Note 3.
11.5 to 13.0	2	8	Varies				X	
13.5 to 20.0	2	0.6W	0.2W				X	
20.5 to 22.5	3	8	Varies				X	
23.0 to 29.5	3	0.35W	0.15W				X	
30.0 to 31.5	4	8	Varies				X	
32.0 to 40.0	4	0.25W	0.125W				X	

SIGN POST SPACING NOTES:

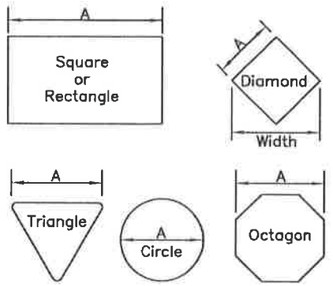
1. Install sign support in accordance with the table above, unless otherwise required by plans or specifications.
2. Exceptions:
   a. Use one post for all E5–1 gore signs, regardless of width.
   b. Use one 2.5" P.S.T. for all STOP signs, with or without street name signs.
3. Supports placed within 7' of each other must be acceptable for that use. See Standard Drawing S–30 for the sizes of wood posts and P.S.T.s that may ...r's documentation for breakaway couplings ...7'.

...gible couplings, hinges, and foundations ...

SIGN POST SPACING AS-BUILTS ARE CORRECT TO THE BEST OF MY KNOWLEDGE. REVIEWED BY: T.V.L. 3-29-19

GENERAL NOTES

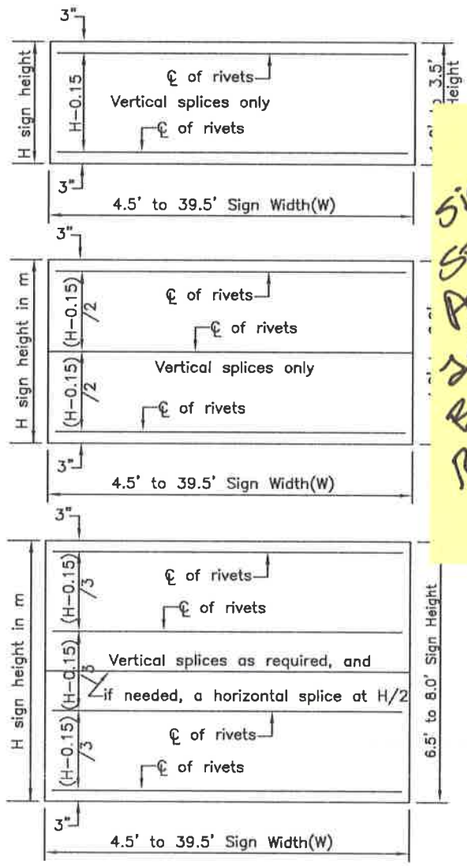
1. See the standard specifications for the aluminum alloys that you may use for sign sheeting and wind framing members.
2. Fabricate all signs from 0.125" thick aluminum sheeting.
3. Sign fabricators may use alternates to the zee shaped framing member with approval of the engineer, if the frame manufacturer certifies their design equals or exceeds the strength of the zee shaped design.
4. Install one piece wind framing members on all signs up to 23.5' wide. Use one splice in each wind frame on all signs wider than 23.5'. Locate splices at least 18" from all posts and panel edges. Stagger splices in adjacent framing members at least 8.0' apart.
5. Attach wind framing members with rivets or with an engineer approved, double sided, high strength, adhesive tape. Clean and handle sheeting and framing members and apply tape in accordance with the tape manufacturer's written instructions. Install two rivets in both ends of each framing member.
6. Use 3/16" diameter rivets conforming to aluminum alloy 6061–T6 for cold driven rivets, or aluminum alloy 6061–T43 for hot driven rivets.
7. Sign fabricators may use sign panels extruded with integral framing with approval of the engineer, if the manufacturer certifies their design equals or exceeds the strength of the 0.125" thick panel with framing attached to it.
8. Frame all signs taller than 8.0' with five wind framing members located (H–0.15)/4 spaces. If needed, make a horizontal splice at the middle wind frame.
9. Do not use round pipes for sign supports.



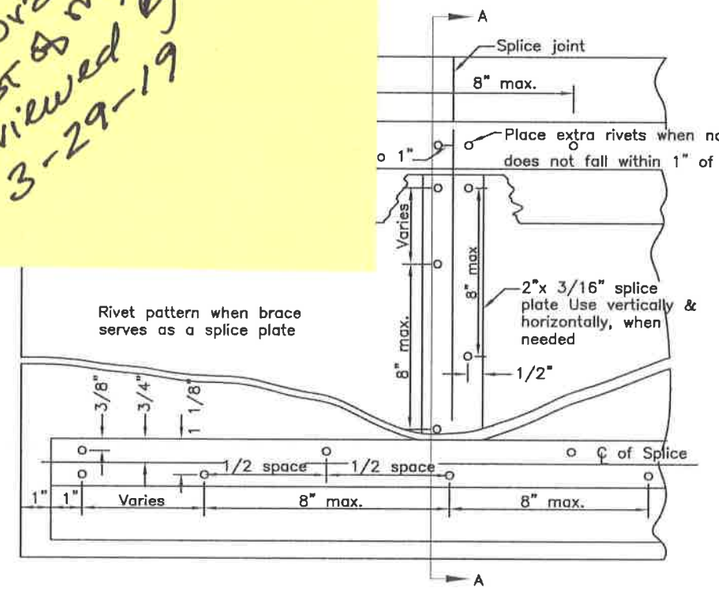
Maximum size unframed signs using 0.125" thick aluminum sheeting.	
Sign Shape	A
Squares, Shields, and Route Markers	48"
Rectangles	48"
Diamonds	48"
Triangles	48"
Rounds and Octagons	48"

Install wind framing on all signs that exceed the dimensions listed.

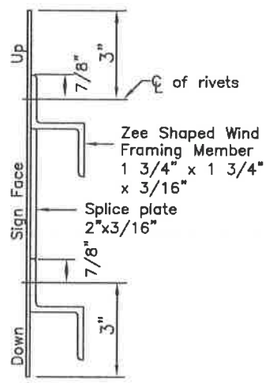
LIGHT SIGNS



WIND FRAMING LOCATIONS



RIVET DETAIL FOR ZEE SHAPED WIND FRAMING & SPLICE PLATE



SECTION A–A

REVISIONS		
Date	Description	By
4/28/10	Delete pipe, rev notes	KJS

Sheet 1 of 1

State of Alaska
Department of Transportation & Public Facilities

SIGN FRAMING AND POST SPACING

APPROVED 4/28/10

Date 5/31/12

S–00.11

SEE REVERSE SIDE for CO. #16.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHCOAST REGION

Change Order

Project No.: 69500/0933037

Change Order No. 16

Project Name: JNU-Glacier Highway Multi-Use Path to UAS

		Change Order Summary:	
Contractor:	Secon, Inc.		
Address:	P.O. Box 32159	Calendar Days (+ / -):	N/A
	Juneau, AK 99803	New Completion Date:	N/A
		Amount of Change Order:	+$20,780.56

Recommended By: _____ Date: 27 Dec 2016

Title: Project Engineer

Approved By: _____ Date: 27 Dec 2016

Title: Project Manager

This change order constitutes agreement to terms, conditions and prices stated below.

Accepted By: Maureen A Hansen Date: 1/4/2017

Contractor's Representative

Seal of Alaskan Professional Engineer *(if required)*

N/A

Acknowledgement indicates only receipt of Change Order and not mutual agreement for basis of payment or time allowance. If a the matter cannot be resolved within 7 days from signature date, an Intent to Claim form must be submitted to the engineer within 14 days.

Acknowledged By: _____ Date: ____

Contractor's Representative

Permission for previously submitted subcontractor(s) to perform all or portions of the work described herein is as checked: ☐ Yes ☐ No ☒ N/A

The following change(s) in the above Contract are hereby made in accordance with the terms of the Contract and under the terms and conditions stated below. Price adjustments resulting from inaccurate cost and pricing data are subject to the provisions of AS 36.30.400(c). This document shall become an amendment to the Contract and all provisions of the Contract will be applicable.

DESCRIPTION OF CHANGE (Use Continuation Sheet 25D-065 as Required)

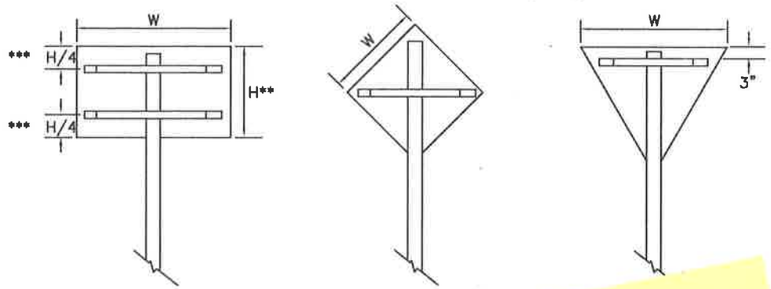
In accordance with Subsection 104-1.02 of the Standard Specifications, the following changes are hereby made:

Reason for Change Order

1) The Contractor and the Department discussed the use of permanent signs rather than daily traffic signs and agreed to delete the permanent construction signs and pay for the signs per day. This change order deletes the lump sum item for permanent signs.
2) The geocell on the habitat bench was installed per plan, but the face of the geocell was plastic and there were environmental concerns about the long term effects on the fish habitat. This change order makes adjustments to the habitat bench in order to create suitable fish habitat.

Delete Item 643(2)a Permanent Construction Signs.

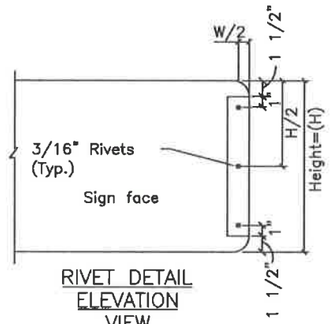
Establish New Item 653(2)a Habitat Bench Adjustment



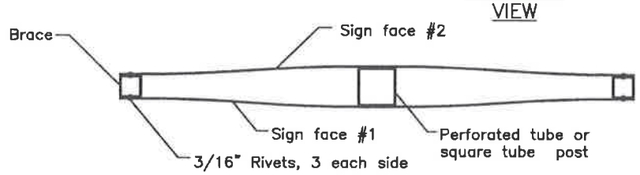
*** Use one brace when
Use two
Use
** Posi
Pred

SIG

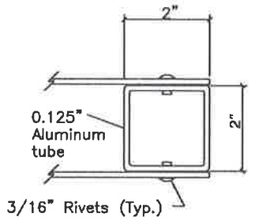
SIGN POST
AS Builds
ARE TRUE &
ACCURATE TO THE
BEST of My knowledge.



RIVET DETAIL
ELEVATION
VIEW

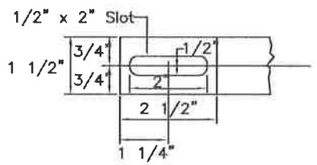


PLAN VIEW

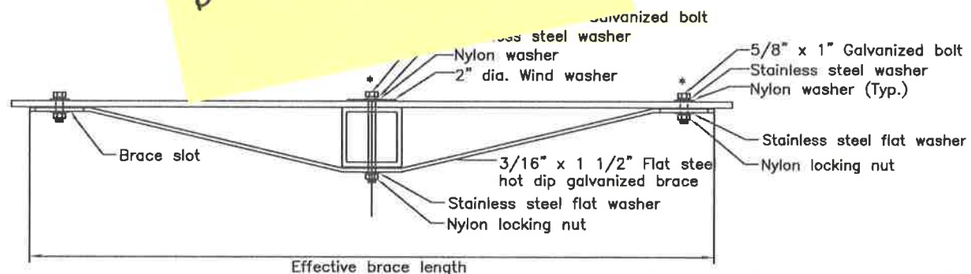


END BRACE DETAIL

SMALL STREET NAME SIGN (D3-1, D3-1A, D3-1D) BRACING DETAILS



DETAIL OF BRACE SLOT
Elevation view



* Adjust location of bracing so that bolts and washers will miss the sign legend

TUBE POST SIGN BRACING
Plan view

SIGN WIDTH(W)	EFFECTIVE BRACE LENGTH		
	WARNING	YIELD	OTHER
30"	36"	24"	24"
36"	42"	30"	30"
42"	48"	–	36"
48"	TWO POSTS	36"	42"

< 30" No bracing required and use square tube

REVISIONS		
Date	Description	By

Sheet 1 of 1

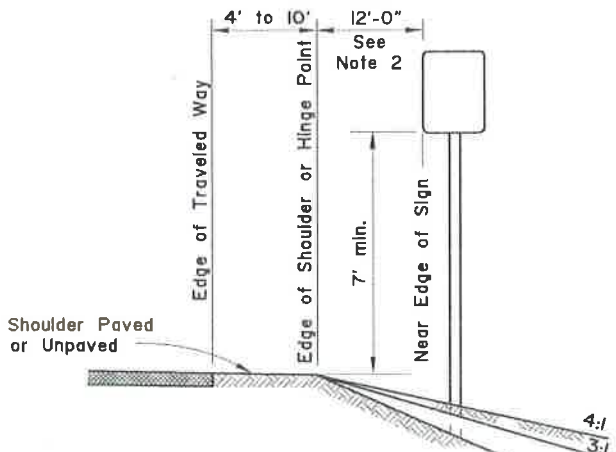
State of Alaska
Department of Transportation
& Public Facilities

BRACING FOR SIGNS MOUNTED ON SINGLE POST

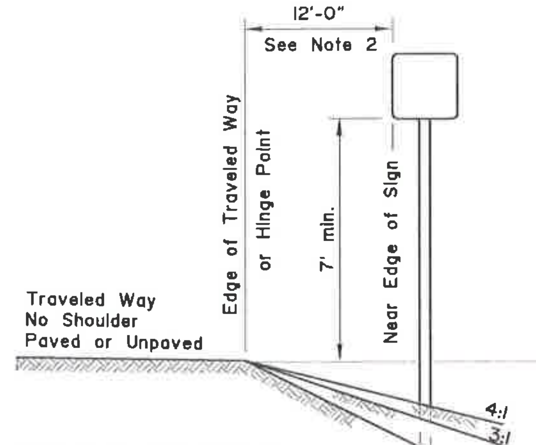
APPROVED
Date 2/28/03

S-01.00

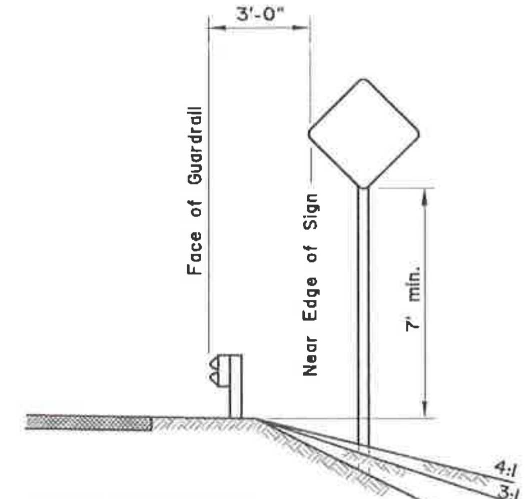
S-05.01



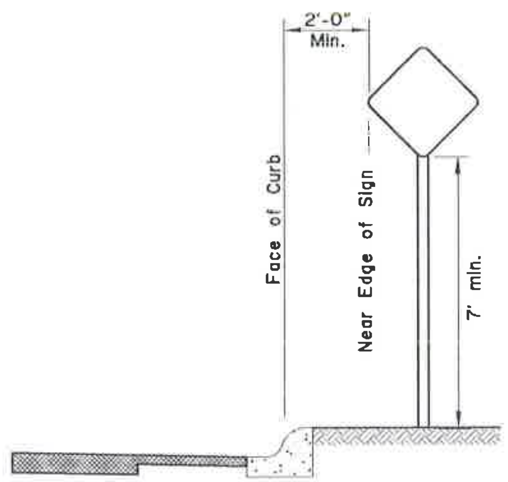
WITHOUT GUARDRAIL
SUBGRADES OVER 28', ALL SLOPES



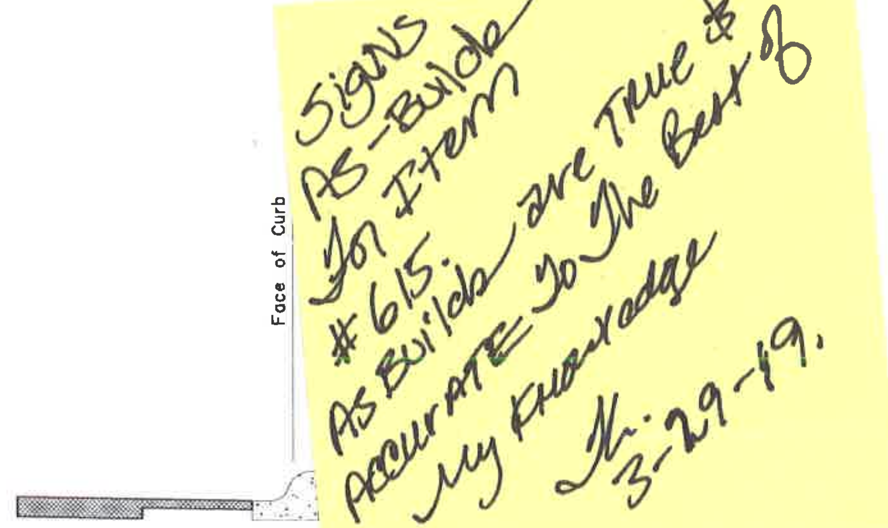
WITHOUT GUARDRAIL
SUBGRADES 24' TO 28', ALL SLOPES



WITH GUARDRAIL
ALL SUBGRADES, ALL SLOPES

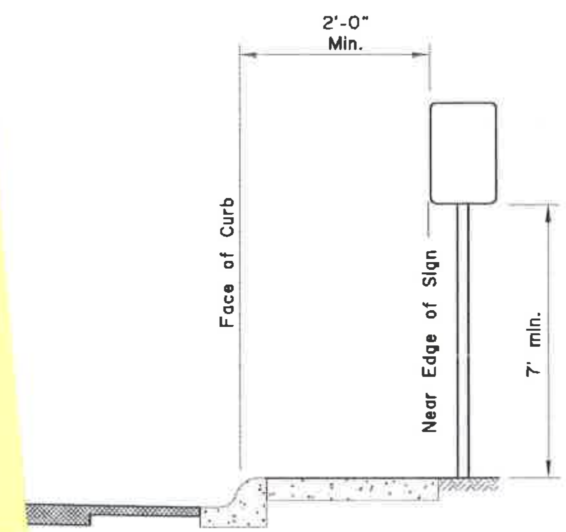


CURB WITHOUT SIDEWALK

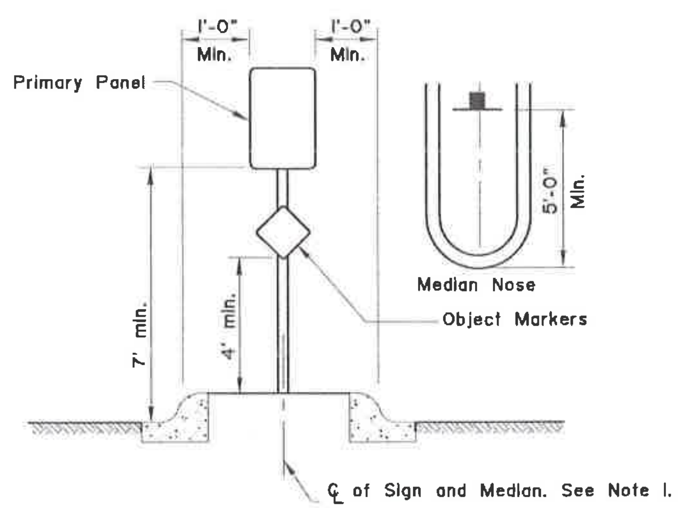


CURB WITH PARKWAY
(If R/W width permits, signs s... be placed behind sidewalk.)

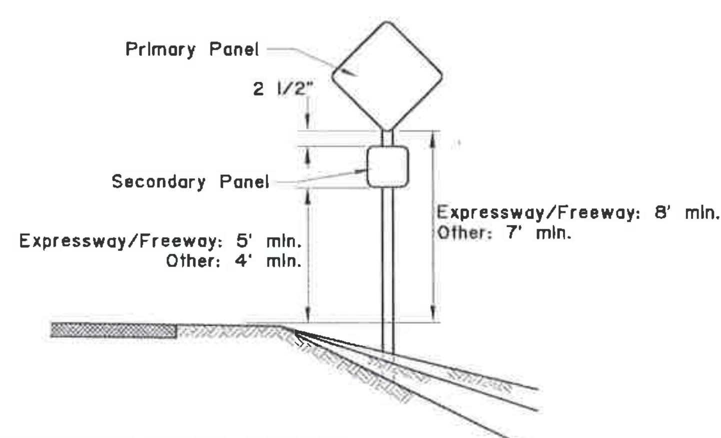
Signs As-Builds for Item #615. As Builds are True & Accurate to the Best of My Knowledge
[initials] 3-29-19.



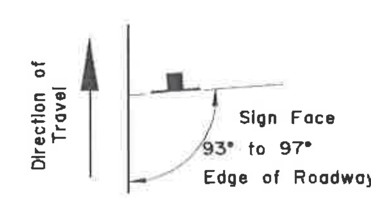
CURB WITH SIDEWALK WITHOUT PARKWAY



RAISED MEDIANS
Minimum 4' Width for Signing



SECONDARY PANEL HEIGHT
ALL TWO PANEL MOUNTING



SIGN POSITIONING

GENERAL NOTES

1. Unless shown otherwise on the plans, the standard sign offset is 12'. The minimum is 6'.
2. If signs extend over sidewalks, the minimum vertical clearance is 7'-0".
3. Add 6" to mounting height on unpaved roads.
4. If signs extend over bike paths, the minimum vertical clearance is 8' 0".
5. When signs are placed 30' or more from the edge of traveled way, mount them with the bottom of the sign at least 5' above the road surface at the near edge of the road.
6. When multiple hinged sign supports are used, mount hinges at least 7' above the ground.

REVISIONS		
Date	Description	By
4/3/01	Revised Sign Heights	KJS

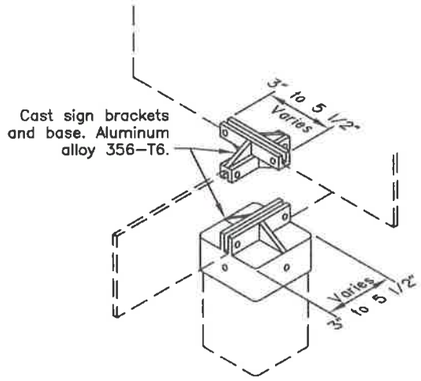
Sheet 1 of 1

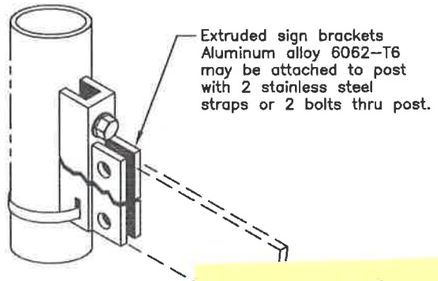
State of Alaska
Department of Transportation & Public Facilities

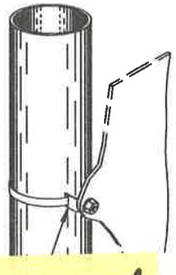
POST MOUNTED SIGN OFFSET AND HEIGHT

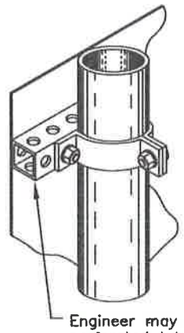
APPROVED Kurtis J. Smith
Date 7/15/82

S-05.01







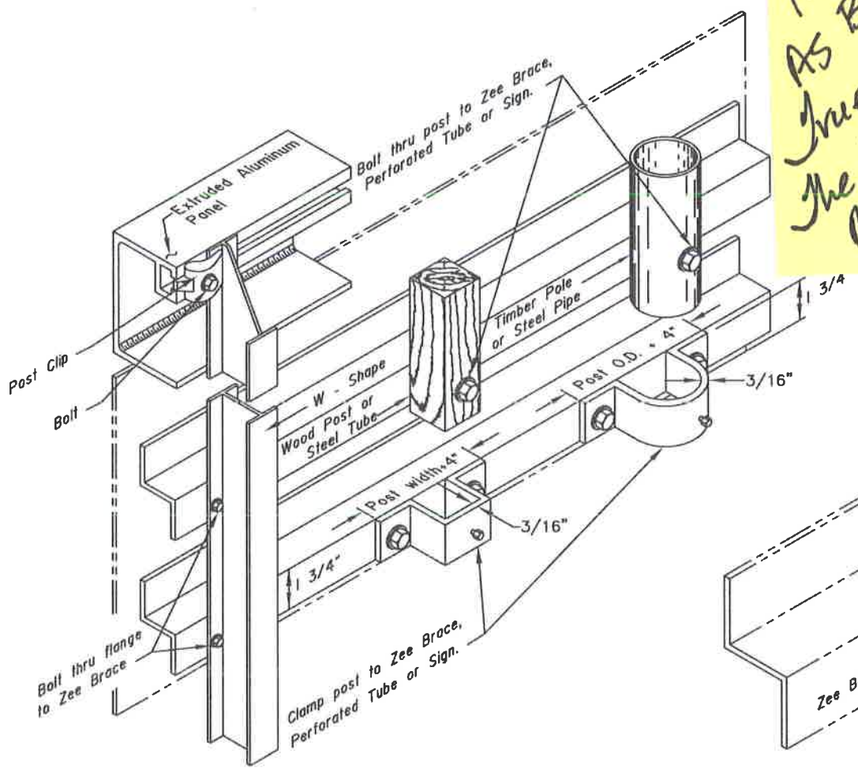


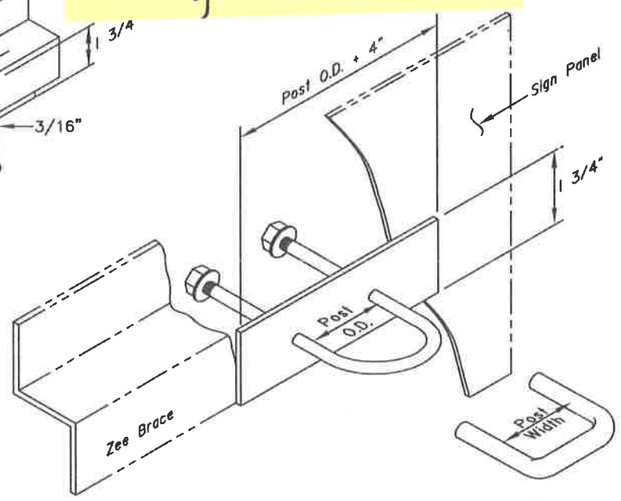
lounting

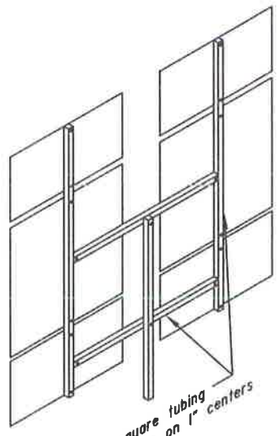
5/16" Bolt With Flat Washer

Steel Band

SIGN HARDWARE AS BUILT WE TRUE & ACCURATE TO THE BEST OF MY KNOWLEDGE REVIEWED BY T.V.L. FOR ODELL & RYELEA







GENERAL NOTES

1. Details shown indicate general design only. Dimensions and design may vary among the manufacturers.
2. Install weather tight caps on all pipe and tube post (except perforated tubing).
3. Protect sign posts installed using driving methods with drive caps during installation.
4. Bolt braces to posts at each point where they cross posts.
5. Install signs with top of post, mounting brackets, etc. with a minimum of 3" below top of sign.
6. Paint all sign mounting fasteners on sign face a color closely matching the sign face.
7. Attach all signs, zees and braces mounted to the posts with 5/16" bolts.
8. Furnish all aluminum nuts, bolts and washers with anodized finish.

FASTENER SPECIFICATION TABLE				
FASTENERS		ALUMINUM	STEEL	STAINLESS STEEL
BOLTS	MACHINE CARRIAGE "U"	2024–T4	A–307	A–276
NUTS	REGULAR	6061–T6	A–307	A–276
	LOCK	2017–T4		
WASHERS		2024–T4	A–36	A–276
POST CLIP		356–T6		

REVISIONS		
Date	Description	By

Sheet 1 of 1

State of Alaska
Department of Transportation
& Public Facilities

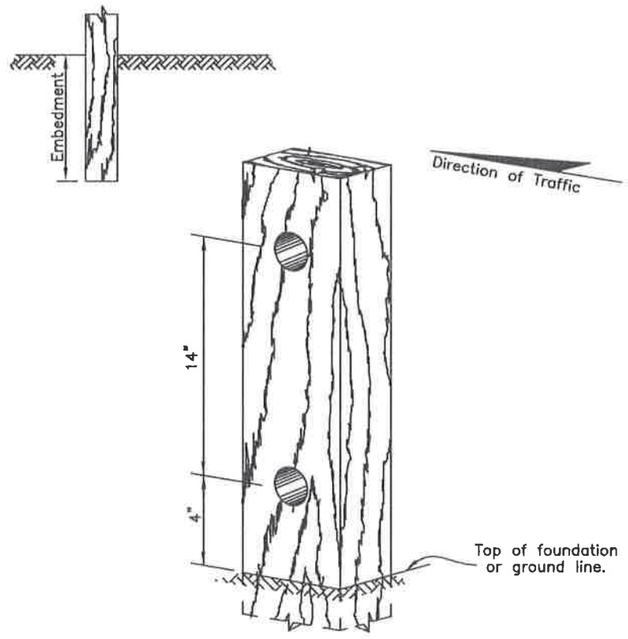
SIGN TO SIGN POST CONNECTIONS

APPROVED

Date 2/28/03

S-20.10

S-30.03

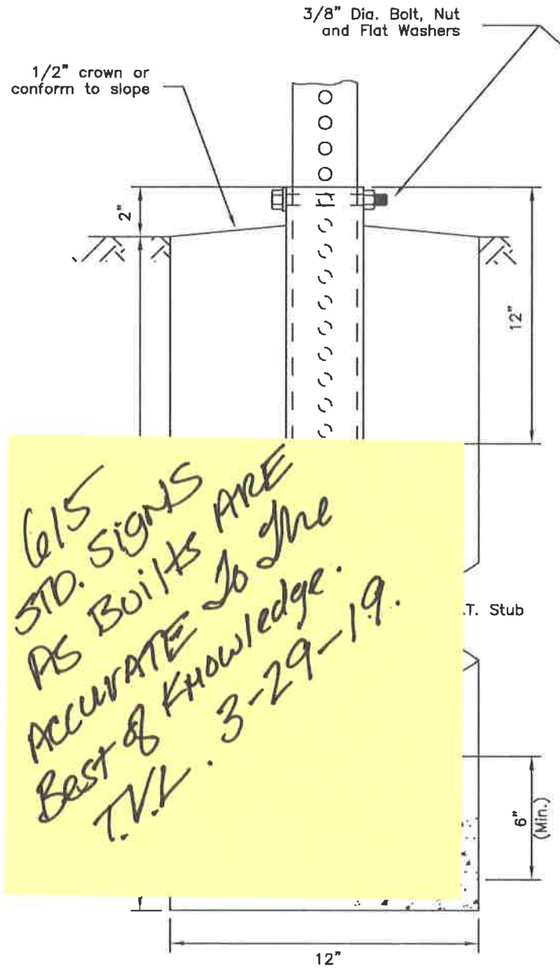


Note: If holes are field drilled after post has been treated, the holes shall be thoroughly swabbed with a 5% solution of pentachlorophenol and mineral spirits.

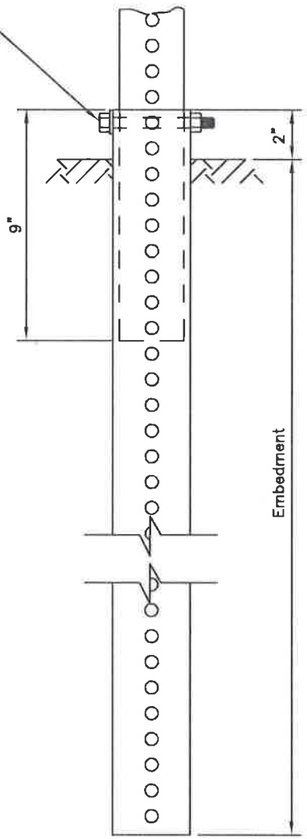
WOOD POSTS			
SIZE	HOLE DIA.	EMBEDMENT*	NUMBER OF POSTS WITHIN 7 Ft. PATH
4"x4"	NONE	36"	2
4"x6"	1 1/2"	36"	2
6"x6"	1 1/2"	40"	1
6"x8"	3"	48"	1

* Embedment depth applies in both strong and weak soil.

WOOD POSTS



SLEEVE TYPE
-CONCRETE FOUNDATION-



SLEEVE TYPE *
-SOIL EMBEDMENT-

615 STD. SIGNS AS BUILTS ARE ACCURATE To the Best of Knowledge. T.V.L. 3-29-19.

PERFORATED STEEL TUBES (P.S.T.) (12 ga. – .105" Wall Thickness)		
POST SIZE (inch)	Embedment Depth	No. of P.S.T.s permitted within 7 ft path
1 1/2" x 1 1/2"	3'-0"	2
1 3/4" x 1 3/4"	3'-0"	2
2" x 2"	3'-6"	2
2 1/4" x 2 1/4"	4'-0"	1
2 1/2" x 2 1/2"	4'-6"	1

* Use 3"x3"x3/16" Stub for 2 1/2"x2 1/2" PST Applications.

PERFORATED STEEL TUBE (PST) POSTS

GENERAL NOTES:

1. Refer to Standard Drawing "Sheet Aluminum Sign and Framing" for light sign details.
2. See plans for type of post, size and embedment type.
3. To maintain crashworthiness, install no more than the number of P.S.T.s or wood posts specified in the tables within 7' of each other.
4. Do not install wood posts larger than 6"x8".
5. Use larger posts than shown on this sheet, with hinges, for multiple support signs where the supports are separated by more than 7 feet.

REVISIONS		
Date	Description	By
1/1/85	Redraft–Delete Post	Gdo
4/2/01	Revised PST table	Kjs
	Added note 3	
2/12/02	Revised Wood Posts	Kjs

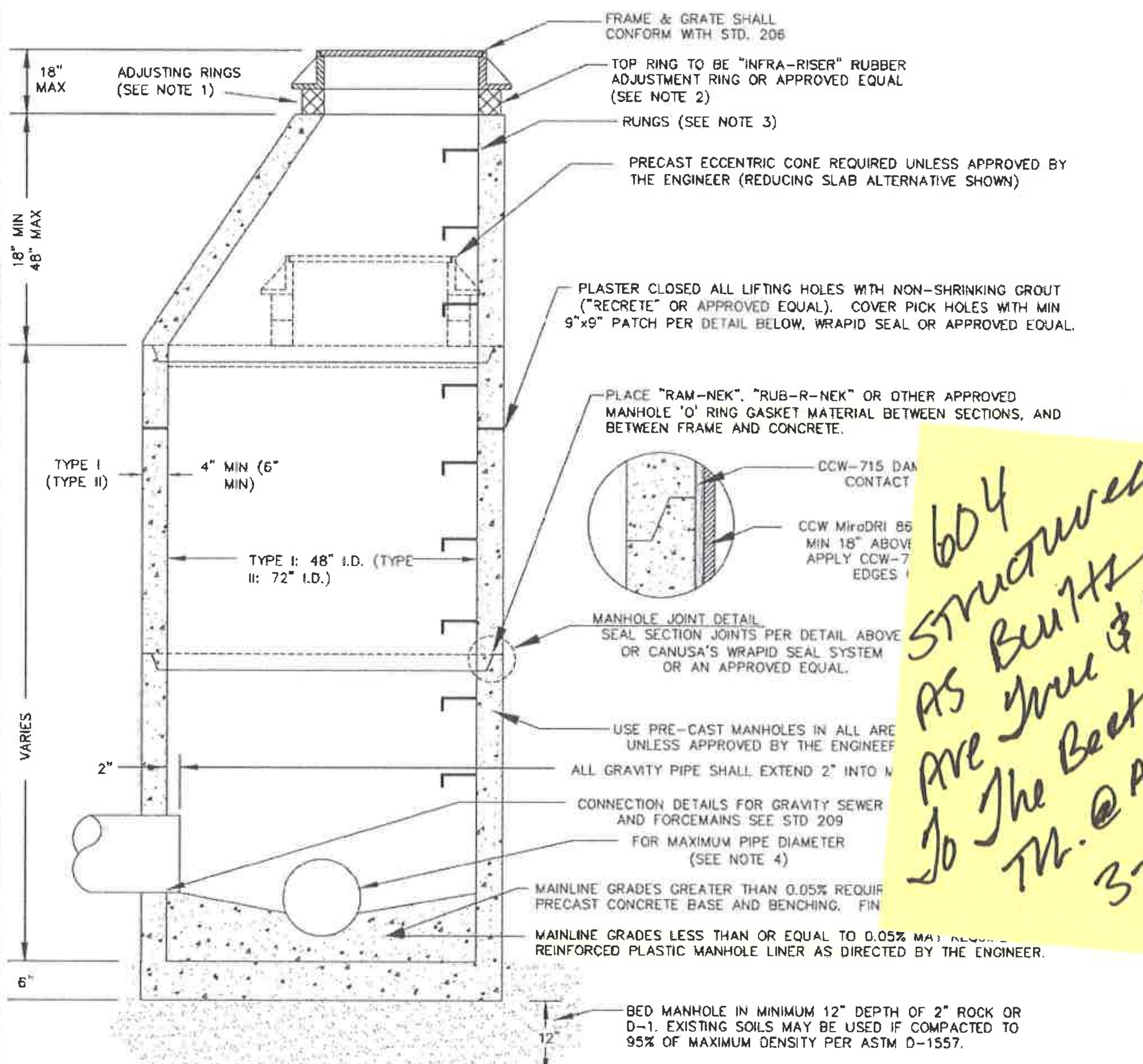
Sheet 1 of 1

State of Alaska
Department of Transportation
& Public Facilities

LIGHT SIGN
STRUCTURE POST
EMBEDMENT

APPROVED
Curtis J. Smith CE-7347
Date 7/15/82

S-30.03

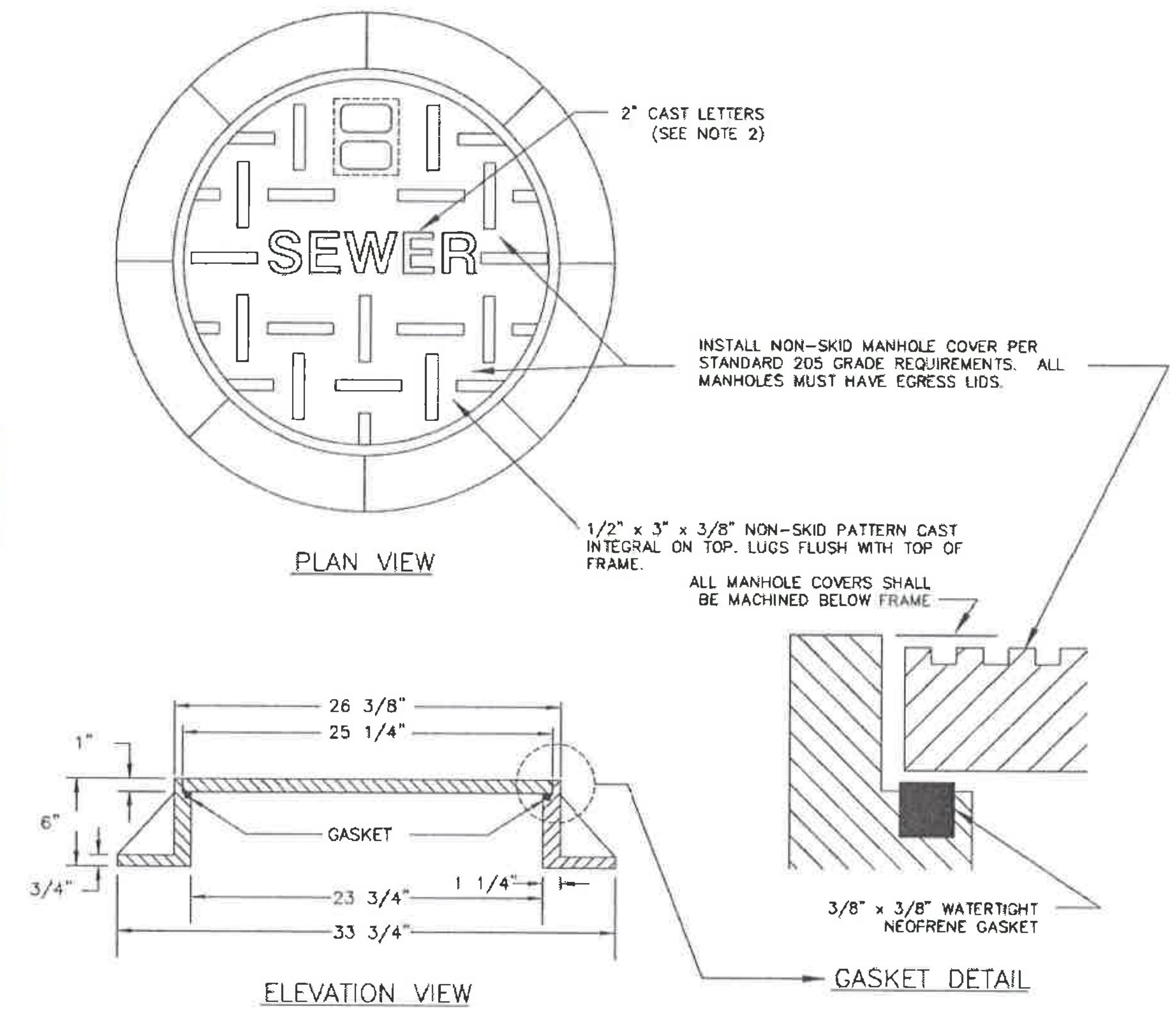


604
Structural
As Built
Are True & Accurate
To The Best of Knowledge
TM. @ AK DOT.
3-29-19.

NOTES

1. USE NO MORE THAN ONE 4" ADJUSTING RING FOR NEW CONSTRUCTION OR UNPAVED ROADS. USE NO MORE THAN THREE 4" RINGS FOR RECONSTRUCTION OF PAVED OR CHIPSEAL ROADS. TOP ADJUSTING RINGS SHALL BE AN "INFRA-RISER" RUBBER ADJUSTING RING OR APPROVED EQUAL. MATCH FINAL GRADE PER TABLE CBJ STANDARD 205.
2. USE "PL POLYURETHANE SELF-LEVELING CONCRETE CRACK SEALANT" OR APPROVED EQUAL FOR "INFRA-RISER" INSTALLATION.
3. RUNGS TO BE PLACED 12" O.C. ON UNOBSTRUCTED SIDE OF MANHOLE. LAST RUNG SHALL BE 18" MAX FROM BOTTOM OF MANHOLE, AND TOP RUNG SHALL BE 6" MAXIMUM FROM TOP OF CONE. IF UNOBSTRUCTED SIDE NOT AVAILABLE, LAST RUNG SHALL BE PLACED 6" OVER SMALLEST PIPE. RUNGS SHALL BE LANE POLYETHYLENE 14" LADDER STEPS OR AN APPROVED EQUAL.
4. MAXIMUM PIPE DIAMETER SHALL BE 20" FOR A TYPE I MANHOLE. FOR LARGER PIPES, USE A TYPE II MANHOLE. MANHOLES INTERSECTED BY MORE THAN 2 PIPES, 15" DIAMETER OR LARGER, USE A TYPE II MANHOLE. MINIMUM MAINLINE DIAMETER SHALL BE 8".
5. REFER TO A.S.T.M. C-478 FOR DESIGN REQUIREMENTS AND C-478-69 FOR MINIMUM STEEL FOR BARREL AND BASE. BLOCKOUTS SHALL BE FORMED.
6. IF MANHOLE IS WITHIN A ROADWAY, COMPACTION TESTS MUST BE TAKEN ON BACKFILL EVERY 3'. DENSITY SHALL BE 95% OF MAXIMUM PROCTOR DENSITY.
7. MANHOLE FRAMES MAY BE RAISED TO ACCOMMODATE PAVEMENT OVERLAYS PROVIDED THE DISTANCE FROM THE TOP OF THE FRAME TO THE FIRST RUNG IS LESS THAN 36".

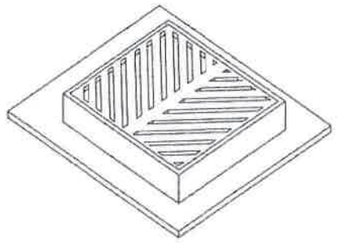
SCALE: NTS	DATE: 10/16/96	CITY AND BOROUGH OF JUNEAU, ALASKA SANITARY SEWER MANHOLE TYPES I & II
DRAWN BY: DRW	CHECKED BY: STAFF	
APPROVED BY:	REVISED: 8/14/2011	STANDARD 203



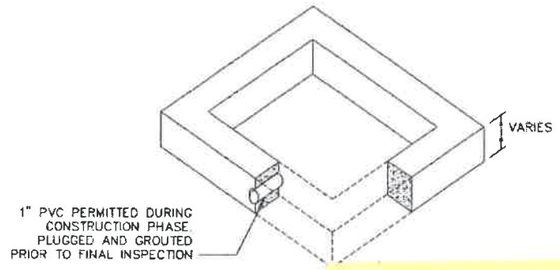
NOTES:

1. FRAME MUST BE MACHINED TO FIT WATERTIGHT NEOPRENE GASKET.
2. MANHOLE COVER SHALL BE WATER TIGHT WITH NO HOLES, SHALL HAVE THE WORD "SEWER", "WATER" OR "STORM DRAIN" CAST IN COVER AND SHALL BE PROVIDED WITH AN INTEGRAL POCKET LIFT HANDLE.
3. FRAME AND MANHOLE COVER DIMENSIONS SHALL BE IN ACCORDANCE WITH OLYMPIC CONSTRUCTION CASTINGS NO. MH30A WITH EGRESS LID, OR AN APPROVED EQUAL.
4. FRAME AND MANHOLE COVER SHALL BE DUCTILE OR CAST IRON AND A TYPE THAT WILL NOT CREATE A HAZARD FOR BICYCLE TRAFFIC.
5. IF MAINLINE IS 20" OR GREATER, PROVIDE MANHOLE WITH 30" OPENING IN COVER & FRAME.
6. ALL MANHOLE COVERS SHALL BE MACHINED BELOW FRAME AS SHOWN IN GASKET DETAIL ABOVE.

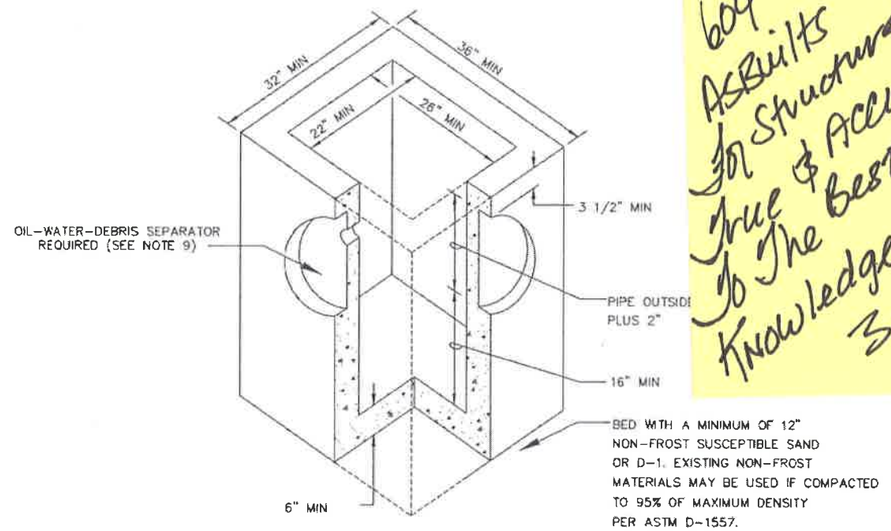
SCALE: NTS	DATE: 2/28/98	CITY AND BOROUGH OF JUNEAU, ALASKA STANDARD MANHOLE COVER & FRAME
DRAWN BY: DRW	CHECKED BY: STAFF	
APPROVED BY:	REVISED: 8/14/2011	STANDARD 206A



FRAME & GRATE



CONCRETE SE



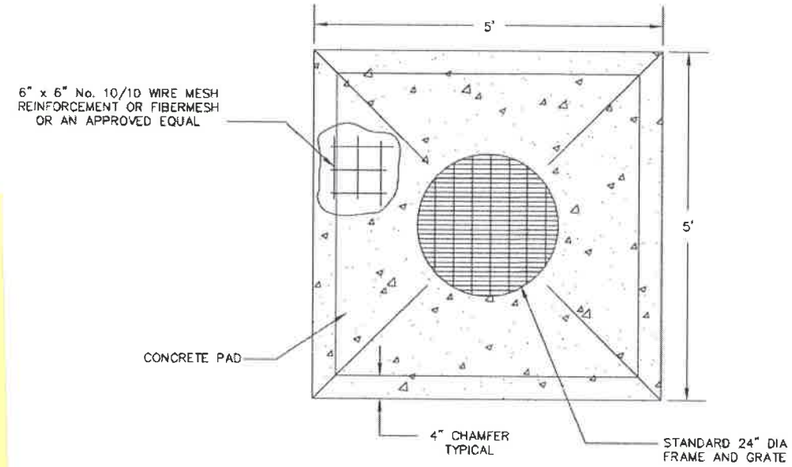
CATCH BASIN

NOTES

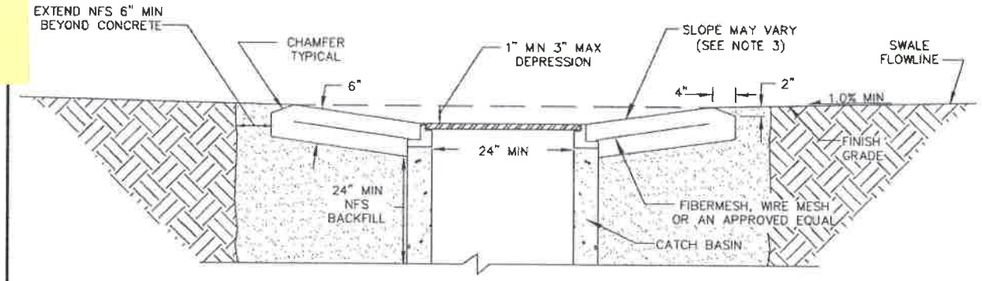
1. FOR USE WITH TWO INLET/OUTLET PIPES OF DIAMETER 12" OR SMALLER. FOR LARGER AND/OR MORE INLET/OUTLET PIPES OR IF CATCH BASIN IS DEEPER THAN 4' FROM FINISH GRADE TO SUMP, INSTALL A TYPE I OR TYPE II STORM DRAIN MANHOLE (SEE STANDARD 303).
2. ENTIRE KNOCKOUT IS TO BE REMOVED AND SEALED SHUT AROUND PIPE. ALL PIPES ARE TO EXTEND MIN 1" AND MAX 3" INTO CATCH BASIN. GROUT INTERIOR AND EXTERIOR BETWEEN FRAME, SECTIONS, AND CATCH BASIN.
3. FRAME AND GRATE SHALL BE DUCTILE IRON. FRAME MAY BE CAST INTO THE TOP UNIT OR PLACED OVER THE OPENING AS APPROVED BY THE ENGINEER. FRAME AND GRATE SHALL BE OF A TYPE THAT WILL NOT CREATE A HAZARD FOR BICYCLE TRAFFIC.
4. CATCH BASIN SHALL MEET HIGHWAY STANDARD-20 LOAD REQUIREMENTS.
5. MINIMUM STEEL SHALL BE SPECIFIED BY ASTM C-478-69.
6. MINIMUM SUMP DEPTH SHALL BE 16".
7. ADJUSTING RING SHALL BE THE SAME SIZE AS THE CATCH BASIN.
8. THE AREA BETWEEN THE TOP OF THE CATCH BASIN AND THE FRAME SHALL BE FORMED AND FILLED WITH CONCRETE MEETING THE REQUIREMENTS OF CBJ SPECIFICATION 03302 – CONCRETE STRUCTURES. NO BRICKS, WOOD OR OTHER MATERIALS PERMITTED FOR ADJUSTING GRADE.
9. ALL CATCH BASINS THAT EMPTY INTO AN OPEN DRAINAGE SHALL BE FITTED WITH AN OIL-WATER-DEBRIS SEPARATOR DEVICE AS DIRECTED BY THE ENGINEER.

SCALE: NTS	DATE: 12/6/96	CITY AND BOROUGH OF JUNEAU, ALASKA	
DRAWN BY: DRW	CHECKED BY: STAFF	TYPE III CATCH BASIN	
APPROVED BY: DRWM	REVISED: 8/14/2011	STANDARD 304A	

604
As Builts
For Structures
True & Accurate
To The Best of my
Knowledge. TVL.
3-29-19.



PLAN VIEW

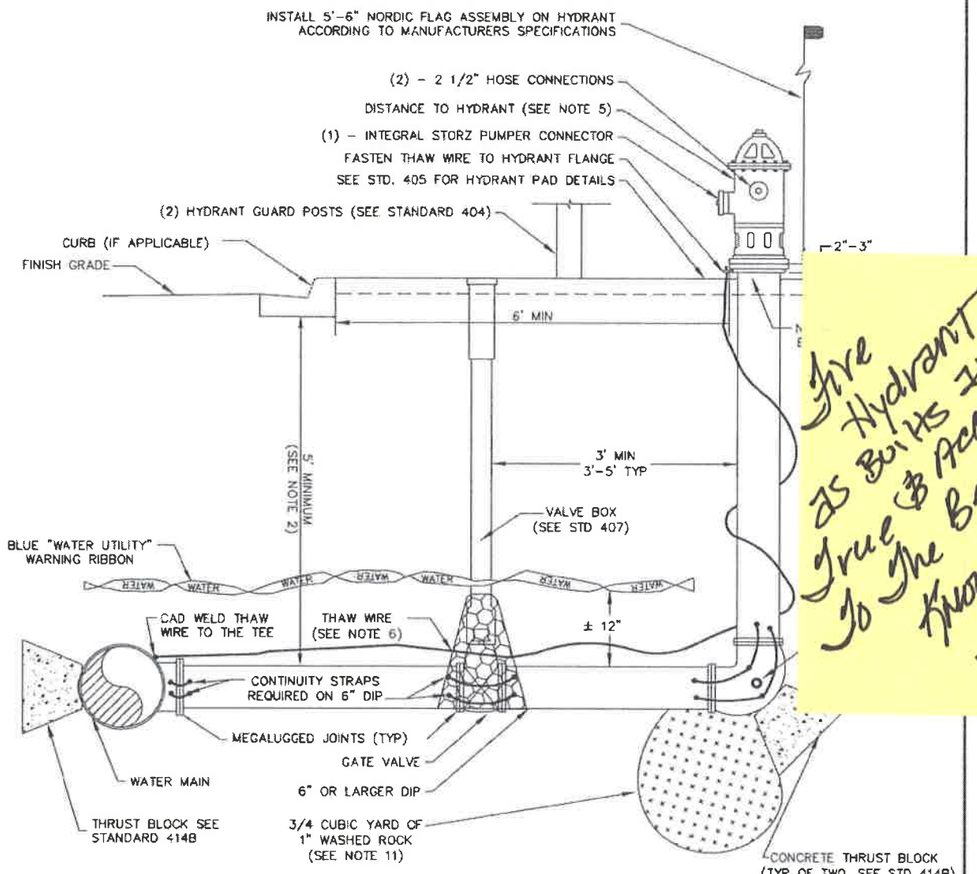


ELEVATION VIEW

NOTES:

1. FRAME AND GRATE TODD BE DUCTILE IRON AND A TYPE THAT WILL NOT CREATE A HAZARD FOR A BICYCLE TRAFFIC.
2. COMPACT NON FROST SUSCEPTIBLE (NFS) BACKFILL TO 95% OF MAXIMUM DENSITY.
3. SLOPE MAY VARY TO MATCH SWALE FLOWLINE. FINAL GRADE AS DIRECTED BY THE ENGINEER.

SCALE: NTS	DATE: 12/12/96	CITY AND BOROUGH OF JUNEAU, ALASKA	
DRAWN BY: DRW	CHECKED BY: STAFF	AREA DRAIN DETAIL	
APPROVED BY: DRWM	REVISED: 8/14/2011	STANDARD 310	

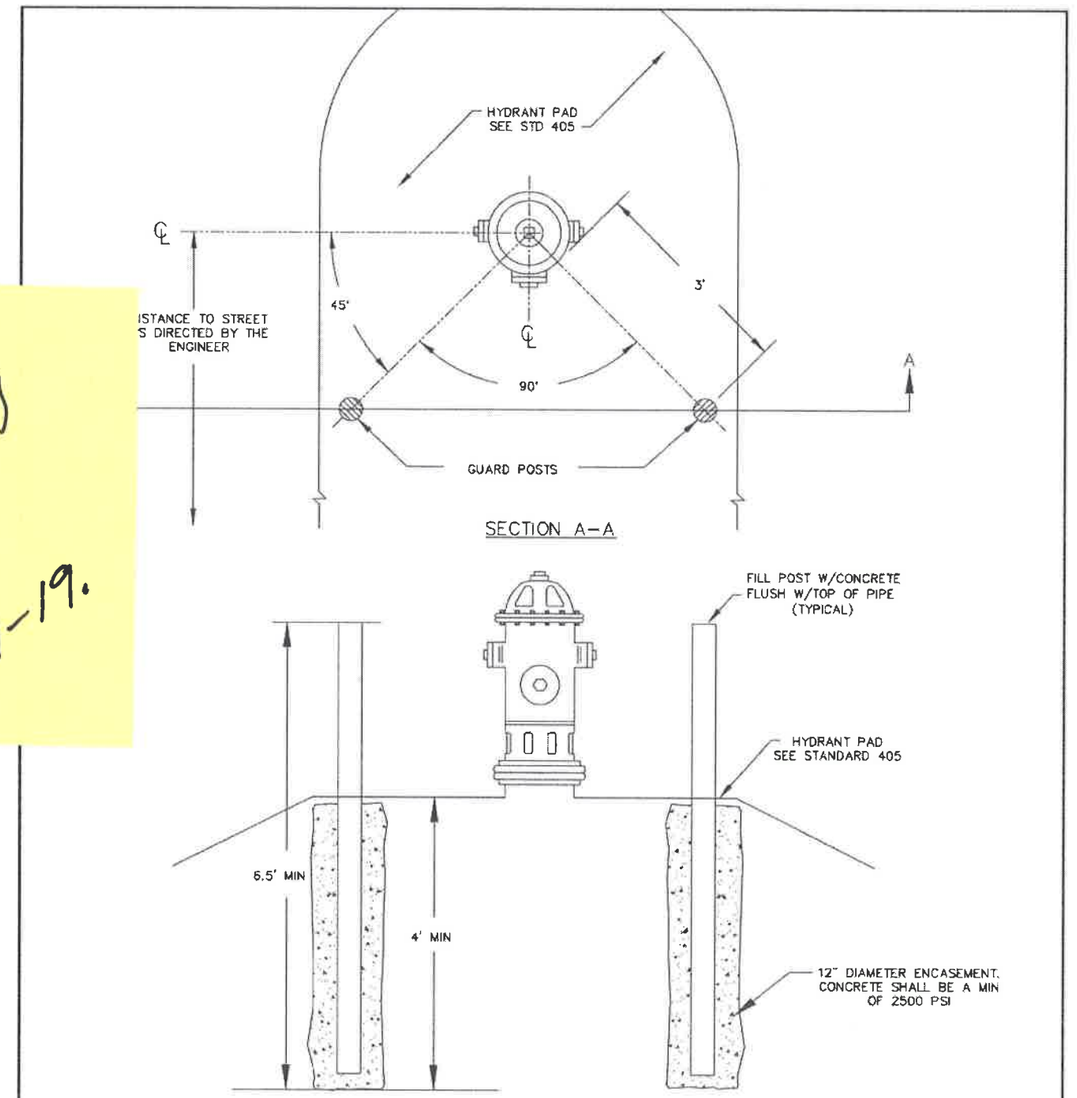


Give Hydrant As Built Is True & Accurate To The Best of My Knowledge. JVL 3-29-19.

NOTES

1. HYDRANT BARREL AND VALVE BOX SHALL BE PLUMB.
2. GROUND COVER SHALL BE 5' MINIMUM. ADDITIONAL COVER (MORE THAN 5') MAY BE REQUIRED BY THE ENGINEER.
3. WATER PIPE SHALL BE 6" MIN. D.I.P. AND ALL CONNECTIONS SHALL BE MEGALUGED OR CONNECTED WITH LOCKING FIELD GASKETS.
4. BENDS BETWEEN THE HYDRANT AND THE MAIN SHALL NOT EXCEED 11 1/4° UNLESS APPROVED BY ENGINEER.
5. ALL HYDRANTS SHALL BE PAINTED CATERPILLAR YELLOW, AND THE NUMBER OF FEET TO VALVE SHALL BE PRINTED IN BLACK 1/2" BLOCK LETTERS JUST BELOW TOP BONNET. PORT CAPS SHALL BE COLOR CODED PER NFPA STANDARD 291 AS DIRECTED BY THE CBJ WATER UTILITIES DEPARTMENT.
6. THAW WIRE SHALL BE #2 COPPER WITH TYPE THW INSULATION. THAW WIRE SHALL BE BOLTED OR CAD WELDED TO THE TEE AT THE MAIN. CONTINUITY STRAPS ARE REQUIRED ON 6" DIP. CONTINUITY AND ARRANGEMENT FOR TESTING BY CBJ WATER UTILITIES IS THE RESPONSIBILITY OF THE INSTALLER/CONTRACTOR.
7. INSTALL A PAVED HYDRANT PAD PER STANDARD 405 AND GUARD POSTS PER STANDARD 404.
8. HYDRANT SHALL BE MUELLER CENTURION 200 OR 250 WITH INTEGRAL STORZ PUMPER CONNECTION OR APPROVED EQUAL. CLOW F2500 SERIES HYDRANTS ARE NO LONGER ACCEPTED BY CBJ.
9. THIS STANDARD TO BE USED FOR ALL HYDRANTS AND BLOW-OFFS. ALTERNATE BLOW-OFF TYPE HYDRANTS ARE NO LONGER ACCEPTED BY CBJ.
10. FIRE HYDRANT TO THE VALVE SHALL BE TESTED TO A MINIMUM OF 200 PSI FOR TWO (2) HOURS PER STANDARD SPECIFICATION SECTION 02601 ARTICLE 3.5 PARAGRAPH B 2.
11. CBJ WATER UTILITIES DEPARTMENT SHALL DETERMINE FOR EACH HYDRANT INSTALLATION IF HYDRANT PLUGS SHALL BE REMOVED FOR SELF DRAINING. DO NOT BLOCK PLUG WITH THE THRUST BLOCK.

SCALE: NTS	DATE: 11/20/96	CITY AND BOROUGH OF JUNEAU, ALASKA	
DRAWN BY: DRW	CHECKED BY: STAFF	FIRE HYDRANT	
APPROVED BY: DRW	REVISED: 8/14/2011	STANDARD 403	



ELEVATION VIEW

NOTES

1. GUARD POST ARE REQUIRED ON ALL HYDRANTS EXCEPT THOSE IN SIDEWALKS, ALONG STATE HIGHWAYS OR AS DIRECTED BY THE ENGINEER.
2. GUARD POST SHALL BE 4" DIAMETER, SCHEDULE 40 STEEL PIPE WITH A MINIMUM 4 FEET OF BURIAL AND 2-1/2 FEET OF EXPOSURE.
3. POSTS SHALL BE FILLED FLUSH WITH CONCRETE AND PAINTED WITH 4C-184 CATERPILLAR YELLOW ENAMEL AFTER INSTALLATION.
4. POSTS SHALL NOT BLOCK OPERATION OF VALVE.

SCALE: NTS	DATE: 11/20/96	CITY AND BOROUGH OF JUNEAU, ALASKA	
DRAWN BY: DRW	CHECKED BY: STAFF	HYDRANT GUARD POSTS	
APPROVED BY: DRW	REVISED: 8/14/2011	STANDARD 404	

PROJECT No. 69500
Multi Use Path
Findings Summary

ADMIN FILES FINDINGS

A02 – Subcontracts is Complete-(First Tier).
(Sub Contractor – "Trucano" is Second Tier and is not listed in the Specs Book or anywhere else)
A04 - Labor Compliance Interviews – is Complete (3 prime and 5 subs)
A05 - Certified Payrolls is ordered by Dates – No in order by CPRs number.
A08 - Directives are 32. #32 needs Sub signature
A09 - RFP total: 18
A10 - IWA total: 9
A16 – Scales certs are not available
B07 – Safety Meetings is incomplete

Change of Orders –

- COs Summary Audit page is Incomplete
- #16 have a $$$ difference of 0.56
- **CO#8, #09, #10, #20 needs Contractor Signatures (not signatures in digital form).**
- Back-up files is Incomplete.

-CO Labeled as #12, in the filed form appears as #11. In CO#12 Final Date is extended to July 15 2016

-CO#22 appears in the Q Drive, but is not filed in the Admin Files folder box. Needs Signatures also.

Note:
bundle with multiple (3) "COs #11" and Directives 5 and 7 shown conflictive Numbers in COs existing list.

PAY ITEMS FINDINGS

- Estimate #18 is divided in two (2) sections: - "Line A" Multi Use Path (pages 1 to 4 in a total of 7pages)

-"Line B" Auke Lake Parking Lot (pages 5 to 6 in a total of 7pages)

- Item "# 203(3)a" and "# 203(3)b" are in conflict in CO# 18.

- Item "# 203(25)B" or "CO # 15" is not listed in the present Estimate #18.

- Item "# 604(8)a", Dollar Value $93.82, related to "CO # 17" is not listed in the present Estimate #18.

- Item "# 630(3)b", Item Created by CO #21 is not included in the present Estimate #18.