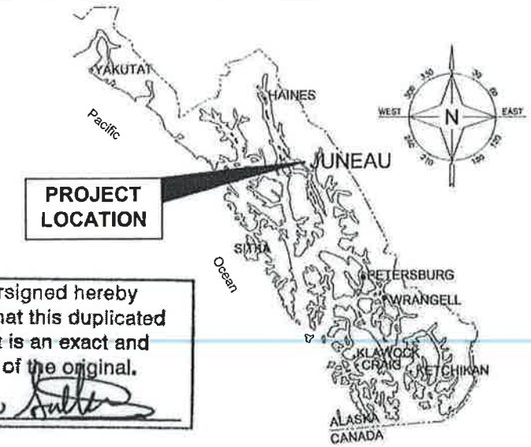
STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHEAST REGION

JUNEAU, ALASKA

JNU: MENDENHALL VALLEY DUST CONTROL - PAVING
CMG-000S(751) ~ 69549

October 16, 2014

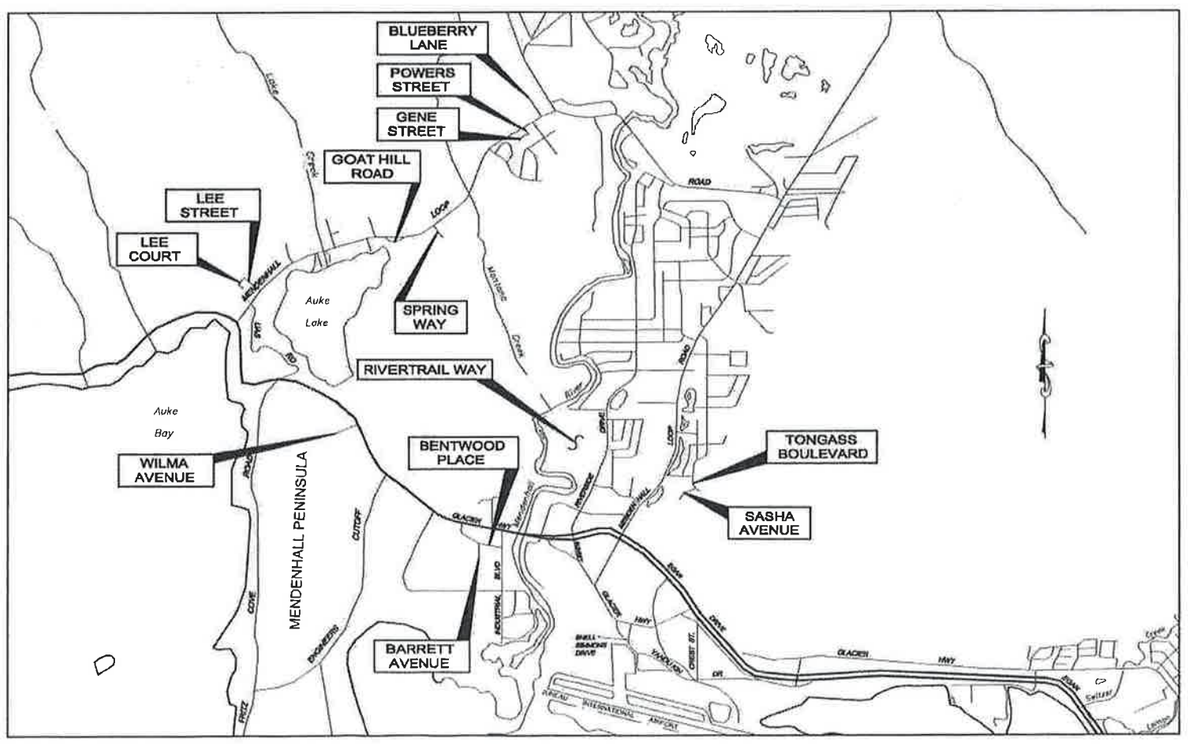


The undersigned hereby certifies that this duplicated document is an exact and true copy of the original.

Cody Sutton

SOUTHEAST ALASKA REGION

AS-BUILT PLANS
CONTRACTOR: SECON
PROJ ENGINEER: T. BERGAM
BEGIN CONSTRUCTION: 6/4/15
END CONSTRUCTION: 10/17/15



VICINITY MAP

DESIGN DESIGNATION

A.D.T.	=	VARIES
V	=	20 MPH

LOCAL ROADS - NO TRAFFIC DATA

PROJECT SUMMARY

LENGTH OF PAVING	=	1.30 MILES
WIDTH OF PAVING	=	24-30 FEET
LENGTH OF PROJECT	=	1.30 MILES

THE FOLLOWING STANDARD DRAWINGS APPLY TO THIS PROJECT:

A-1	D-01.02	I-20.14
C-05.20	D-04.21	M-13.01
		M-16.01

THE FOLLOWING STANDARD CBJ DRAWINGS APPLY TO THIS PROJECT:

310

INDEX

SHEET NO.	DESCRIPTION
A1	TITLE SHEET
A2-A8	SURVEY CONTROL
B1	TYPICAL SECTIONS
C1	ESTIMATE OF QUANTITIES
D1	SUMMARY TABLES
E1-E2	MISCELLANEOUS DETAILS
E3	BENTWOOD PLACE DRAINAGE IMPROVEMENT DETAILS
E4	LEE COURT DRAINAGE IMPROVEMENT DETAILS
F1-F3	BENTWOOD PLACE PLAN AND PROFILE SHEETS
F4	BARRETT AVENUE PLAN AND PROFILE SHEET
F5	BLUEBERRY LANE PLAN AND PROFILE SHEET
F6	TONGASS BOULEVARD PLAN AND PROFILE SHEET
F7-F8	SASHA AVENUE PLAN AND PROFILE SHEETS
F9	SPRING WAY PLAN AND PROFILE SHEET
F10	POWERS STREET PLAN AND PROFILE SHEET
F11	GENE STREET PLAN AND PROFILE SHEET
F12	LEE STREET AND LEE COURT PLAN AND PROFILE SHEET
F13-F14	GOAT HILL ROAD PLAN AND PROFILE SHEETS
F15	RIVERTRAIL WAY PLAN AND PROFILE SHEET
F16	WILMA AVENUE PLAN AND PROFILE SHEET
P1-P2	EROSION AND SEDIMENT CONTROL DETAILS
S1	TRAFFIC CONTROL PLAN

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHEAST REGION

STATE OF ALASKA 49th Chad J. Howard CE-10835 REGISTERED PROFESSIONAL ENGINEER 6/5/14

APPROVED: Pat Carroll 7/3/14
L. PAT CARROLL, P.E. — DATE
REGIONAL PRECONSTRUCTION ENGINEER

APPROVED: Chuck Cowan 7/8/14
for ALBERT H. CLOUGH, CPG — DATE
DIRECTOR, S.E. REGION

CERTIFIED TRUE & CORRECT AS-BUILT OF ACTUAL FIELD CONDITION:
CONSTRUCTION PROJECT MANAGER — DATE 3/30/2016

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	CMG-000S(751)	2014	A1	34

27

EXISTING CONTROL LEE STREET				
Point #	Northing	Easting	Elevation	Description
27	512288.84	485662.99	146.16	GPS_BC2"
32	512008.99	486122.09	124.21	SH_MON2.5"_DOT
33	512382.41	486606.24	119.14	SH_MON2.5"_DOT

All monuments in this table are provided strictly for survey control. 32 and 33 shall be preserved or referenced prior to disturbance and replaced at their original horizontal position.

EXISTING PROPERTY LEE STREET			
Point #	Northing	Easting	Description
1200	512162.88	486264.22	PLASCAP_4382S
1201	512246.34	486360.99	PLASCAP_3650S
1202	512350.77	486492.96	GLO_BC2.5"_S2891-L7-C1/ROW
1203	512312.61	486437.38	PLASCAP_4382S
1204	512118.20	486212.54	PLASCAP_4382S
1205	512267.90	486509.27	PLASCAP_3136S
1206	512572.16	486050.30	PLASCAP_3650S
1207	512590.65	486069.73	PLASCAP_6277S
1208	512525.16	486002.61	PLASCAP_3650S
1209	512503.46	485981.31	PLASCAP_3650S
1210	512448.26	485997.37	PLASCAP_1410S
1211	512401.74	486049.91	PLASCAP/TACK_1410S
1212	512356.59	486124.27	PLASCAP_3650S
1213	512448.76	486113.09	PLASCAP/TACK_4382S
1244	512414.63	486306.11	PLASCAP1.25"/TACK
1245	512548.84	486254.91	REBAR1/2"

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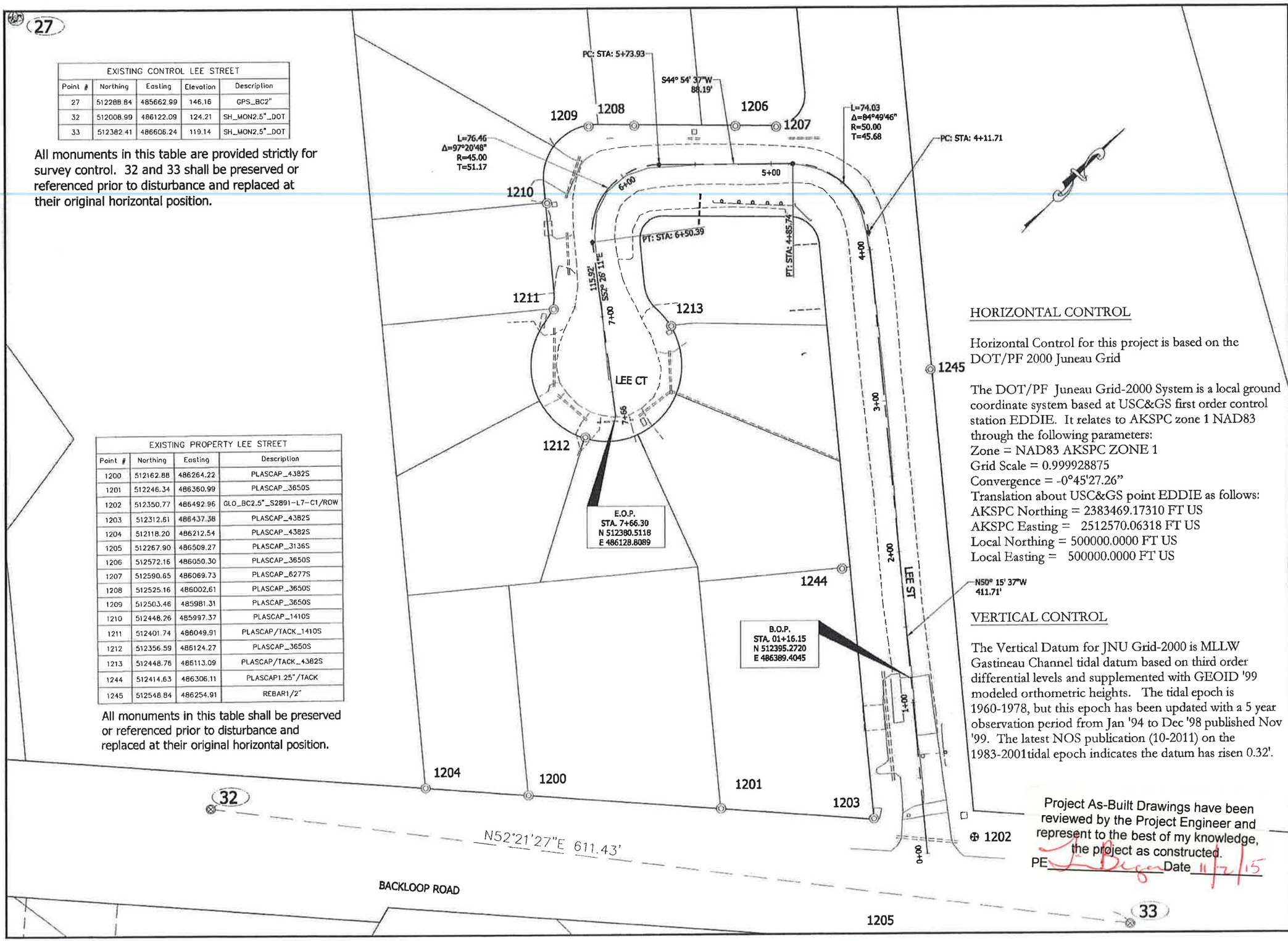

HORIZONTAL CONTROL

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 through the following parameters:
Zone = NAD83 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

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'.

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 11/12/15

PATH: Q:\JNU\69549\PLANSET\69549_A2_SURVEY CONTROL.DWG

TAB: A2

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

STATE OF ALASKA 49 TH Daniel M. Ignotov No. 11296 REGISTERED PROFESSIONAL LAND SURVEYOR

DESIGNED BY: J.PAPOI

DRAWN BY: J.PAPOI

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHEAST REGION

JNU: MENDENHALL VALLEY
DUST CONTROL-PAVING
PROJECT #69549

SURVEY CONTROL

PROJECT DESIGNATION
CMG-000S(751)

STATE	YEAR
ALASKA	2014
SHEET NUMBER	TOTAL SHEETS
A2	34

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EXISTING PROPERTY GOAT HILL			
Point #	Northing	Easting	Description
1236	513210.46	490687.01	PLASCAP1.25"_3650S
1237	513457.73	490899.48	PLASCAP1.25"_3650S
1238	513726.97	491052.57	PLASCAP1.25"_3650S
1239	513476.88	491328.38	PLASCAP1.25"_6277S
1240	513647.98	491025.96	PLASCAP1.25"_3650S
1241	513565.12	491146.82	PLASCAP1.25"_3650S
1242	513158.34	490565.63	PLASCAP1.25"_3650S
1243	513125.05	490427.35	REBAR

All monuments in this table shall be preserved or referenced prior to disturbance and replaced at their original horizontal position.

EXISTING CONTROL GOAT HILL				
Point #	Northing	Easting	Elevation	Description
37	513290.17	490333.02	121.65	SH_MON2.5"_DOT
38	513254.68	490493.64	125.28	SH_MON2.5"_DOT
39	513327.52	490737.14	123.66	SH_MON2.5"_DOT
40	514002.53	491140.01	112.10	SH_MON2.5"_DOT

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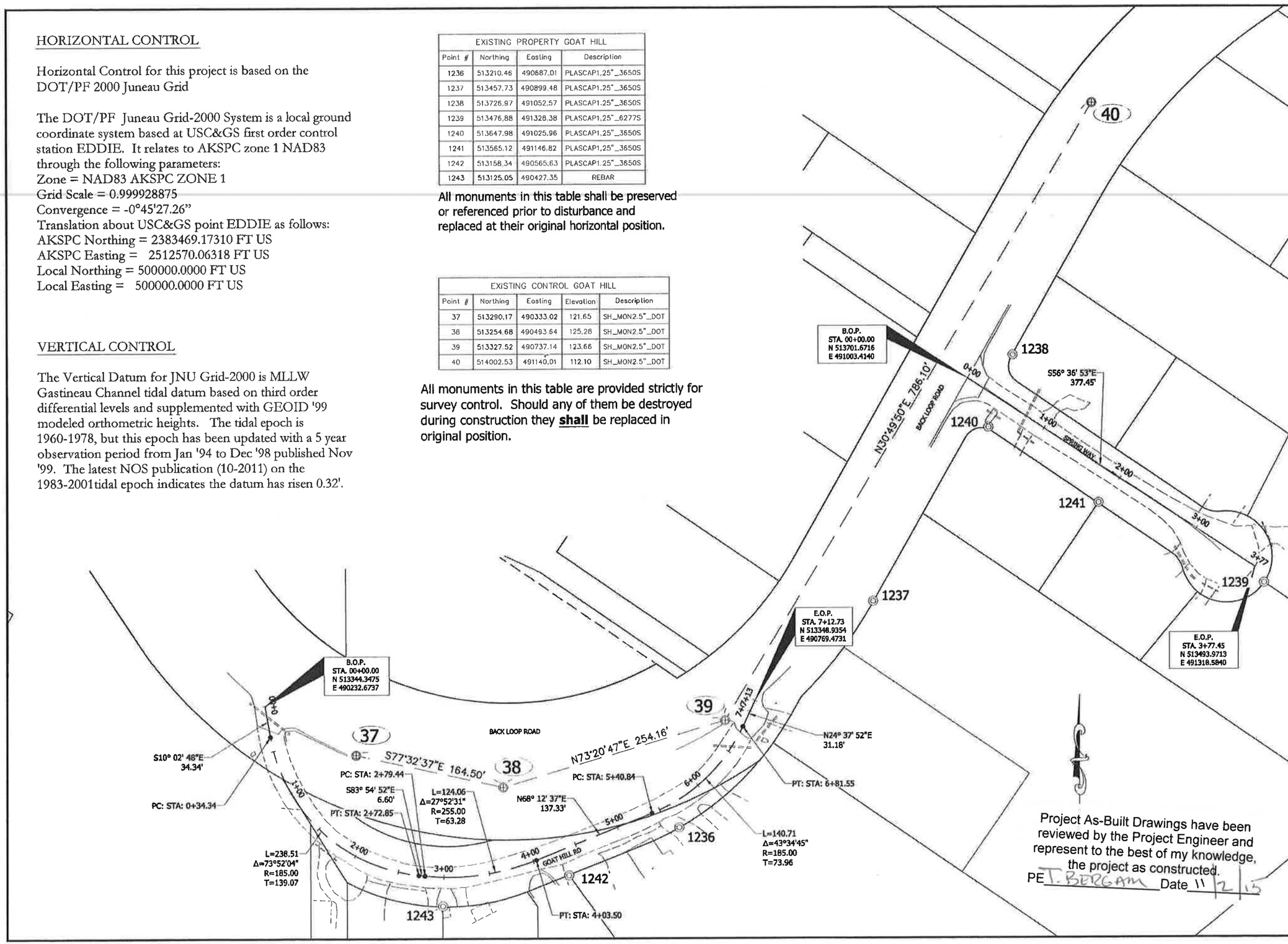

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.
PE T. BERGAM Date 11/2/15

PATH: Q:\JNU\69549\PLANSET\69549_A2_SURVEY CONTROL.DWG

TAB: A3

ADDENDUM NUMBER
ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

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CHECKED BY: D.IGNOTOV

STATE OF ALASKA 49TH Daniel M. Ignotov No. 11296 REGISTERED PROFESSIONAL LAND SURVEYOR

DESIGNED BY: J.PAPOI

DRAWN BY: J.PAPOI

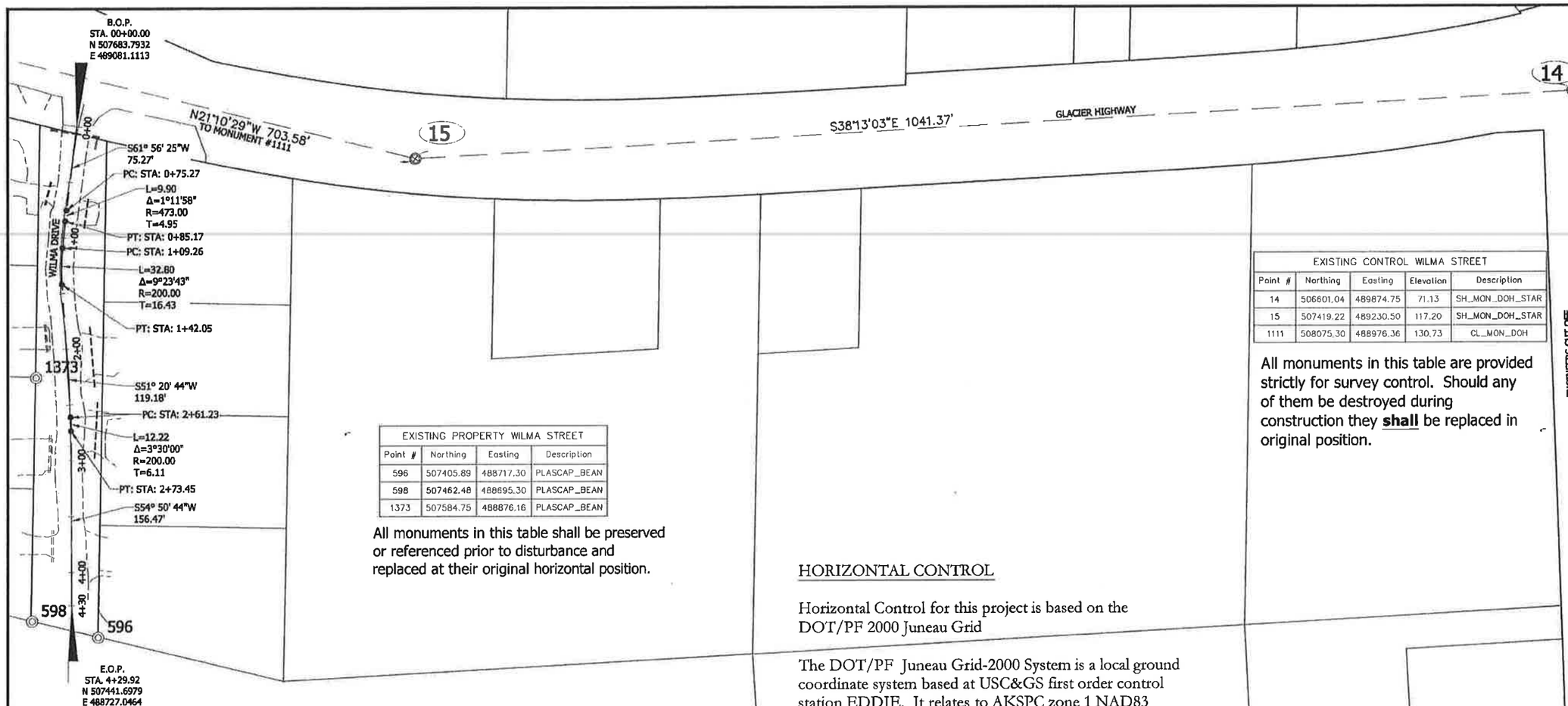
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHEAST REGION

JNU: MENDENHALL VALLEY
DUST CONTROL-PAVING
PROJECT #69549

SURVEY CONTROL

PROJECT DESIGNATION
CMG-000S(751)

STATE	YEAR
ALASKA	2014
SHEET NUMBER	TOTAL SHEETS
A3	34



EXISTING PROPERTY WILMA STREET			
Point #	Northing	Easting	Description
596	507405.89	488717.30	PLASCAP_BEAN
598	507462.48	488695.30	PLASCAP_BEAN
1373	507584.75	488876.16	PLASCAP_BEAN

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EXISTING CONTROL WILMA STREET				
Point #	Northing	Easting	Elevation	Description
14	506601.04	489874.75	71.13	SH_MON_DOH_STAR
15	507419.22	489230.50	117.20	SH_MON_DOH_STAR
1111	508075.30	488976.36	130.73	CL_MON_DOH

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HORIZONTAL CONTROL

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VERTICAL CONTROL

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Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.
PE T. BERGAM Date 11/2/15

ENGINEERS CUT OFF

PATH: Q:\JNU\69549\PLANSET\69549_A2_SURVEY CONTROL.DWG

TAB: A4

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

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CHECKED BY: D.IGNOTOV

STATE OF ALASKA 49TH Daniel M. Ignotov No. 11296 REGISTERED PROFESSIONAL LAND SURVEYOR

DESIGNED BY: J.PAPOI

DRAWN BY: J.PAPOI

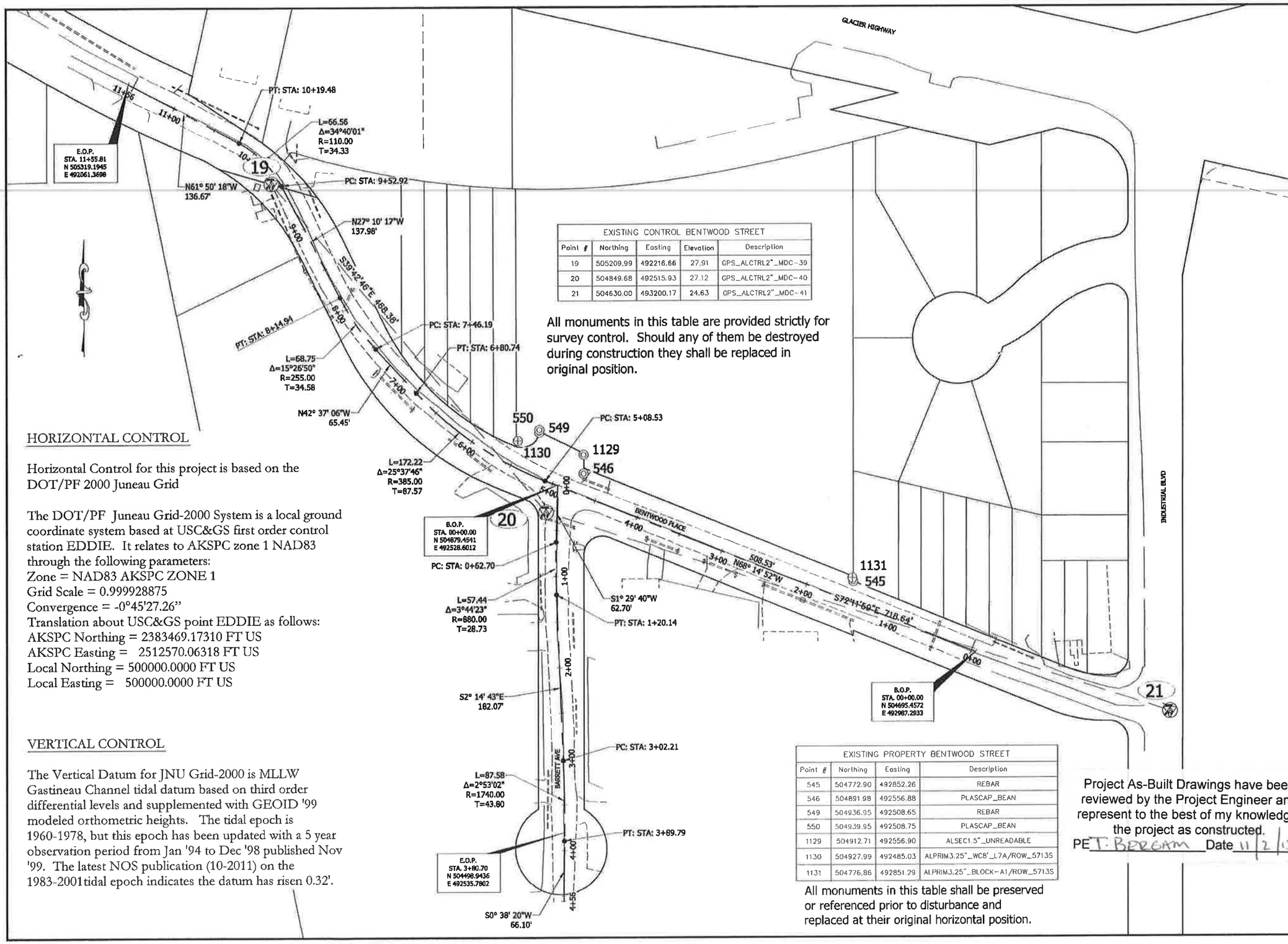
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHEAST REGION

JNU: MENDENHALL VALLEY
DUST CONTROL-PAVING
PROJECT #69549

SURVEY CONTROL

PROJECT DESIGNATION
CMG-000S(751)

STATE	YEAR
ALASKA	2014
SHEET NUMBER	TOTAL SHEETS
A4	34



EXISTING CONTROL BENTWOOD STREET				
Point #	Northing	Easting	Elevation	Description
19	505209.99	492216.66	27.91	GPS_ALCTRL2"_MDC-39
20	504849.68	492515.93	27.12	GPS_ALCTRL2"_MDC-40
21	504630.00	493200.17	24.63	GPS_ALCTRL2"_MDC-41

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EXISTING PROPERTY BENTWOOD STREET			
Point #	Northing	Easting	Description
545	504772.90	492852.26	REBAR
546	504891.98	492556.88	PLASCAP_BEAN
549	504936.95	492508.65	REBAR
550	504939.95	492508.75	PLASCAP_BEAN
1129	504912.71	492556.90	ALSEC1.5"_UNREADABLE
1130	504927.99	492485.03	ALPRIM3.25"_WC8'_L7A/ROW_5713S
1131	504776.86	492851.29	ALPRIM3.25"_BLOCK-A1/ROW_5713S

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PE T. BERGAM Date 11/2/15

PATH: Q:\JNU\69549\PLANSET\69549_A2_SURVEY CONTROL.DWG

TAB: A5

ADDENDUM NUMBER
ATTACHMENT NUMBER

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No.	DATE	DESCRIPTION

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CHECKED BY: D.IGNOTOV

STATE OF ALASKA 49TH Daniel M. Ignotov No. 11296 REGISTERED PROFESSIONAL LAND SURVEYOR

DESIGNED BY: J.PAPOI

DRAWN BY: J.PAPOI

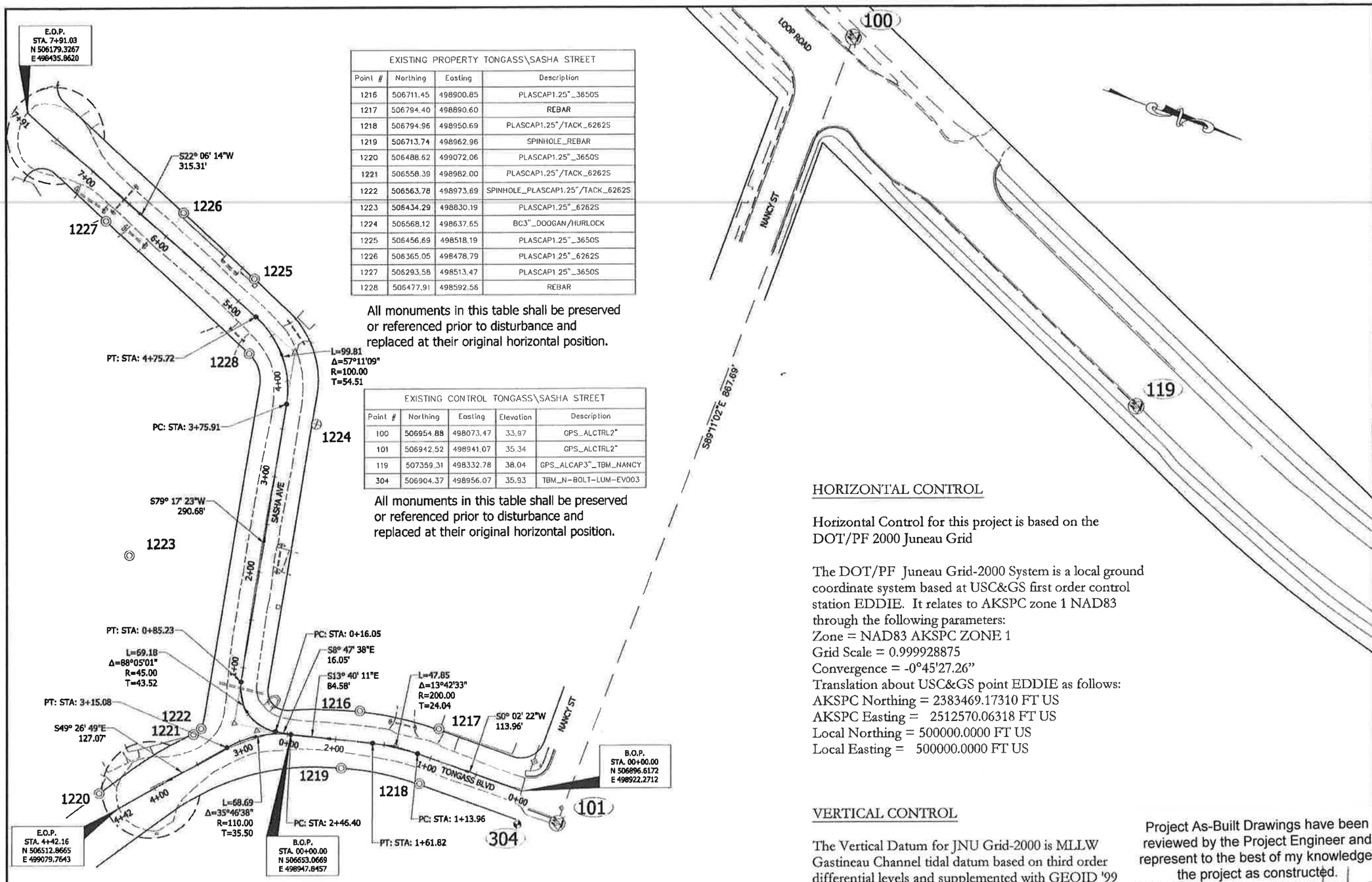
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHEAST REGION

JNU: MENDENHALL VALLEY
DUST CONTROL-PAVING
PROJECT #69549

SURVEY CONTROL

PROJECT DESIGNATION
CMG-000S(751)

STATE	YEAR
ALASKA	2014
SHEET NUMBER	TOTAL SHEETS
A5	34



EXISTING PROPERTY TONGASS\SASHA STREET			
Point #	Northing	Easting	Description
1216	506711.45	498900.85	PLASCAP1.25"_3650S
1217	506794.40	498890.60	REBAR
1218	506794.96	498950.69	PLASCAP1.25"/TACK_6262S
1219	506713.74	498962.96	SPINHOLE_REBAR
1220	506488.62	499072.06	PLASCAP1.25"_3650S
1221	506558.39	498982.00	PLASCAP1.25"/TACK_6262S
1222	506563.78	498973.69	SPINHOLE_PLASCAP1.25"/TACK_6262S
1223	506434.29	498830.19	PLASCAP1.25"_6262S
1224	506568.12	498637.65	BC3"_DOOGAN/HURLOCK
1225	506456.69	498518.19	PLASCAP1.25"_3650S
1226	506365.05	498478.79	PLASCAP1.25"_6262S
1227	506293.58	498513.47	PLASCAP1.25"_3650S
1228	506477.91	498592.56	REBAR

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EXISTING CONTROL TONGASS\SASHA STREET				
Point #	Northing	Easting	Elevation	Description
100	506954.88	498073.47	33.97	GPS_ALCTRL2"
101	506942.52	498941.07	35.34	GPS_ALCTRL2"
119	507359.31	498332.78	38.04	GPS_ALCAP3"_TBM_NANCY
304	506904.37	498956.07	35.93	TBM_N-BOLT-LUM-EV003

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HORIZONTAL CONTROL

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VERTICAL CONTROL

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Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.
PE T. BERGAM Date 11/2/15

PATH: Q:\JNU\69549\PLANSET\69549_A2_SURVEY CONTROL.DWG

TAB: A6

ADDENDUM NUMBER
ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

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CHECKED BY: D.IGNOTOV

STATE OF ALASKA 49TH Daniel M. Ignotov No. 11298 REGISTERED PROFESSIONAL LAND SURVEYOR

DESIGNED BY: J.PAPOI

DRAWN BY: J.PAPOI

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHEAST REGION

JNU: MENDENHALL VALLEY DUST CONTROL-PAVING
PROJECT #69549

SURVEY CONTROL

PROJECT DESIGNATION
CMG-000S(751)

STATE	YEAR
ALASKA	2014
SHEET NUMBER	TOTAL SHEETS
A6	34

HORIZONTAL CONTROL

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EXISTING PROPERTY BLUEBERRY\POWERS STREET

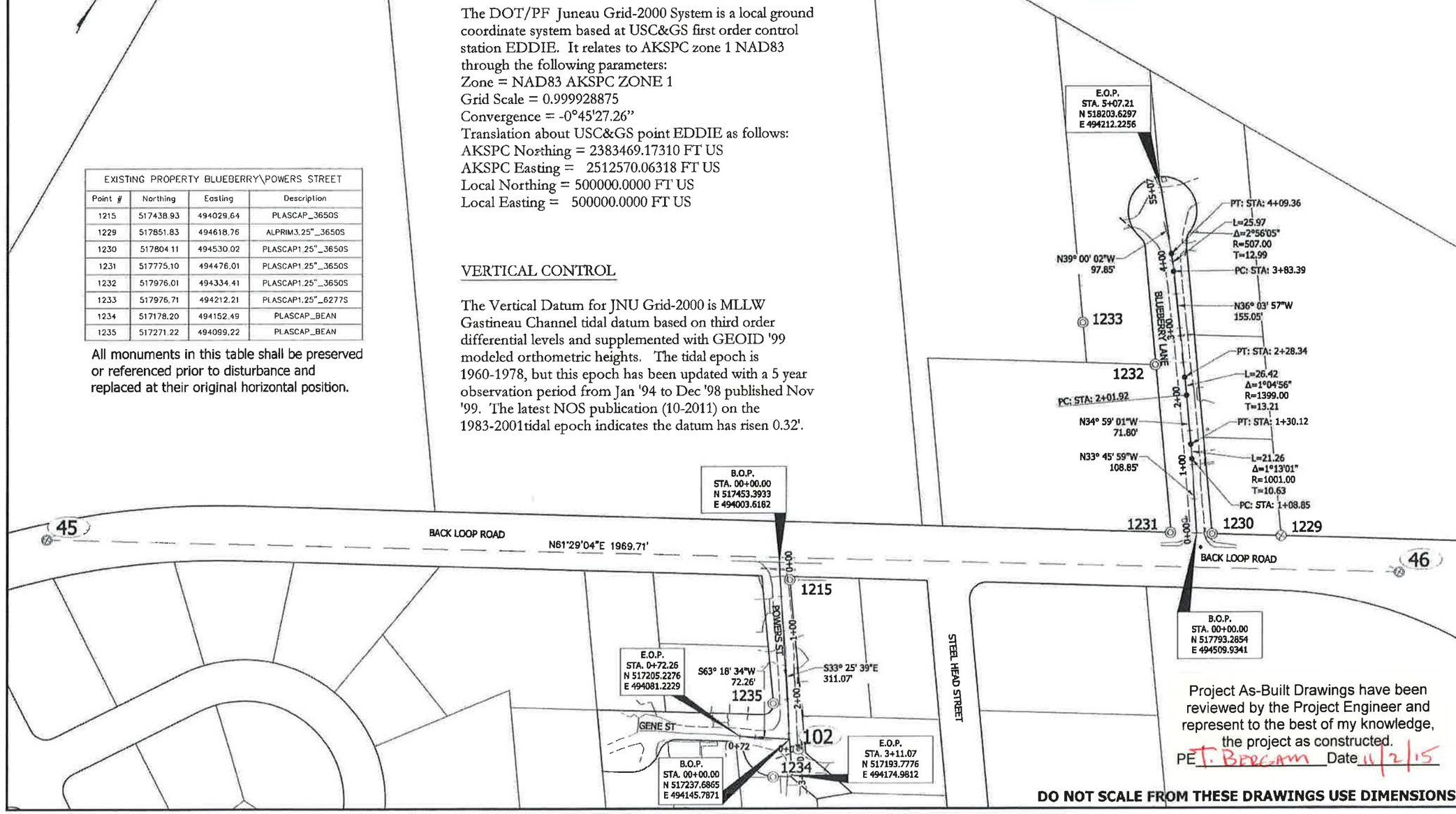
Point #	Northing	Easting	Description
1215	517438.93	494029.64	PLASCAP_3650S
1229	517851.83	494618.76	ALPRIM3.25"_3650S
1230	517804.11	494530.02	PLASCAP1.25"_3650S
1231	517775.10	494476.01	PLASCAP1.25"_3650S
1232	517976.01	494334.41	PLASCAP1.25"_3650S
1233	517976.71	494212.21	PLASCAP1.25"_6277S
1234	517178.20	494152.49	PLASCAP_BEAN
1235	517271.22	494099.22	PLASCAP_BEAN

All monuments in this table shall be preserved or referenced prior to disturbance and replaced at their original horizontal position.

EXISTING CONTROL BLUEBERRY\POWERS STREET

Point #	Northing	Easting	Elevation	Description
44	516544.39	492774.91	54.59	SH_MON2.5"_DOT
45	516951.16	493064.53	56.60	SH_MON2.5"_DOT
46	517891.50	494795.29	68.98	SH_MON2.5"_DOT
47	517708.65	495762.57	66.18	SH_MON2.5"_DOT
102	517231.49	494164.08	59.11	ALCTRL2"

All monuments in this table are provided strictly for survey control. Should 102 be destroyed during construction it shall not be replaced. Shoulder Monuments 44-47 are to be preserved and not disturbed.



Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.
PE T. BERGAM Date 11/2/15

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69549\PLANSET\69549_A2_SURVEY CONTROL.DWG

TAB: A7

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

STATE OF ALASKA 49TH Daniel M. Ignotov No. 11299 Registered Professional Land Surveyor

DESIGNED BY: J.PAPOI

DRAWN BY: J.PAPOI

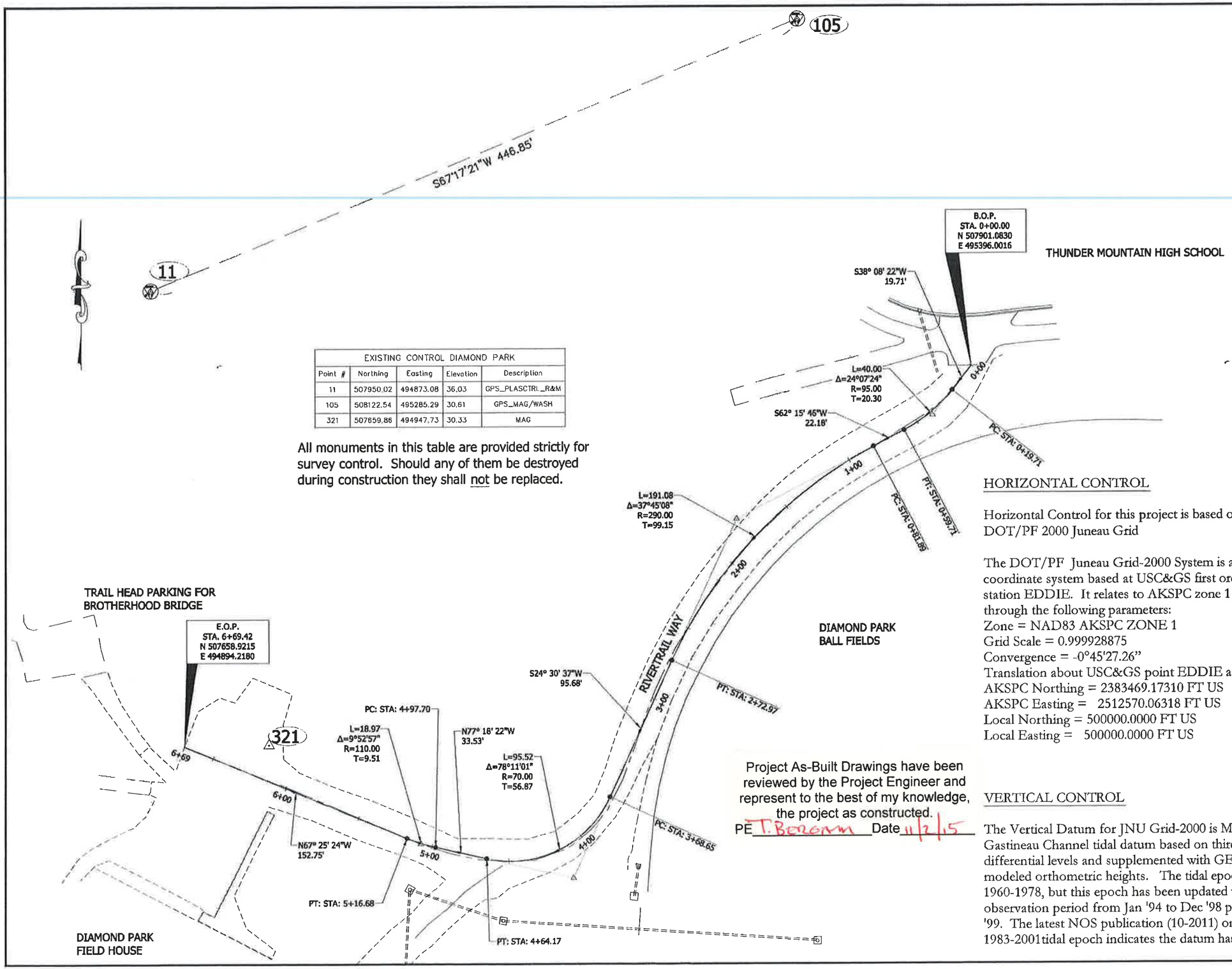
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

SURVEY CONTROL

PROJECT DESIGNATION: CMG-000S(751)

STATE	YEAR
ALASKA	2014
SHEET NUMBER	TOTAL SHEETS
A7	34



EXISTING CONTROL DIAMOND PARK				
Point #	Northing	Easting	Elevation	Description
11	507950.02	494873.08	36.03	GPS_PLASCTRL_R&M
105	508122.54	495285.29	30.61	GPS_MAG/WASH
321	507659.86	494947.73	30.33	MAG

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

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

PE T. Berggren Date 11/2/15

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 through the following parameters:
Zone = NAD83 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

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'.

PATH: Q:\JNU\69549\PLANSET\69549_A2_SURVEY CONTROL.DWG

TAB: A8

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

STATE OF ALASKA 49TH Daniel M. Ignotov No. 11298 REGISTERED PROFESSIONAL LAND SURVEYOR

DESIGNED BY: J.PAPOI

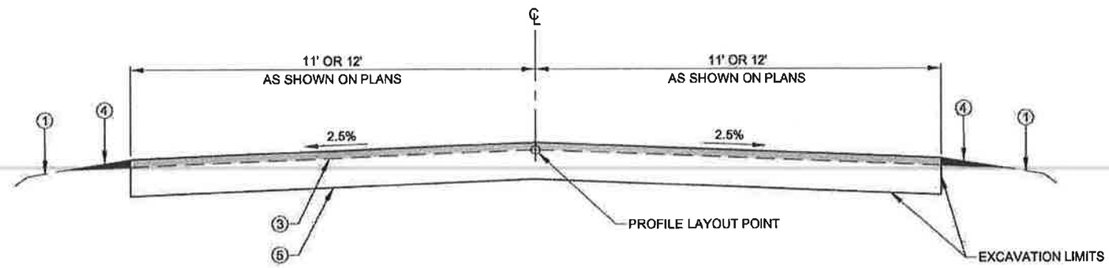
DRAWN BY: J.PAPOI

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHEAST REGION

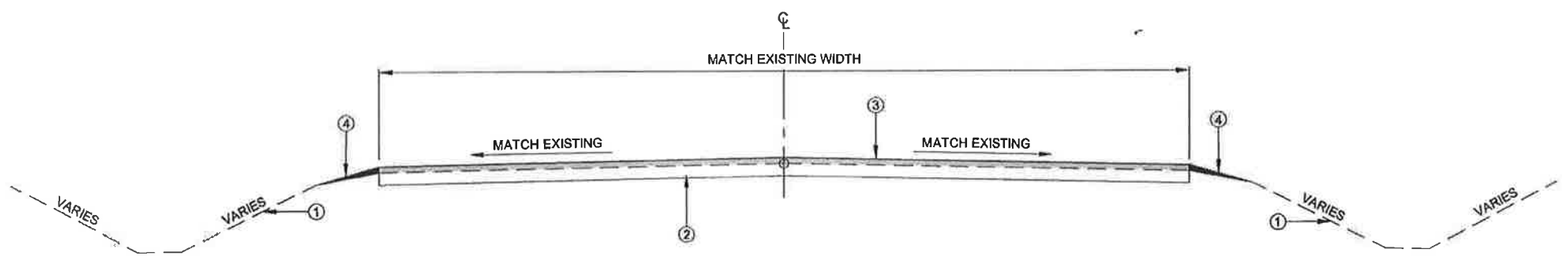
JNU: MENDENHALL VALLEY
DUST CONTROL-PAVING
PROJECT #69549

SURVEY CONTROL

PROJECT DESIGNATION	
CMG-000S(751)	
STATE	YEAR
ALASKA	2014
SHEET NUMBER	TOTAL SHEETS
A8	34



STREET PAVING TYPICAL SECTION



DRIVEWAY TYPICAL SECTION

2 1/2" ASPHALT PAVEMENT OVERLAY

LEGEND

1	EXISTING GROUND
2	SCARIFY, GRADE AND COMPACT USING EXISTING ROAD BASE MATERIAL
3	2-1/2" ASPHALT CONCRETE TYPE II, CLASS B
4	LINEAR GRADING
5	9-1/2" 2 INCH MINUS SHOT ROCK/BASE COURSE

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.
PE T. BERGRAM Date 11/2/15

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

CHECKED BY: C. HOWARD

STATE OF ALASKA
Chad J. Howard
CE-10635
REGISTERED PROFESSIONAL ENGINEER
6/5/14

DESIGNED BY: C. HOWARD
DRAWN BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHEAST REGION

JNU: MENDENHALL VALLEY
DUST CONTROL - PAVING
PROJECT # 69549

TYPICAL SECTIONS

PATH: Q:\JNU\69549\PLANSET\69549_B1_TYP SECTION.DWG
TAB: B1

REVISIONS			PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION	CMG-000S(751)	2014	B1	34

ESTIMATE OF QUANTITIES

ITEM NUMBER	MATERIAL DESCRIPTION	PAY UNIT	QUANTITY	
202 (4)	REMOVAL OF CULVERT PIPE	LINEAR FOOT	~~115.5~~	115
203 (3)	UNCLASSIFIED EXCAVATION	CUBIC YARD	~~5,150~~	4322
301 (5)	2 INCH MINUS SHOT ROCK/BASE COURSE	CUBIC YARD	~~5,300~~	4110
303 (3)	LINEAR GRADING	STATION	~~132.6~~	129.8
401 (1)	ASPHALT CONCRETE, TYPE II, CLASS B	TON	~~3,300~~	3303
401 (2)	ASPHALT CEMENT, GRADE PG 58-28	TON	~~198~~	168.4
401 (6)	ASPHALT PRICE ADJUSTMENT	CONTINGENT SUM	ALL REQUIRED	
603 (1-18)	18 INCH CSP	LINEAR FOOT	~~184~~	181.5
603 (22)	SLOTTED DRAIN	LINEAR FOOT	42	✓
604 (4)	ADJUST EXISTING MANHOLE	EACH	28	✓
604 (5)	INLET, TYPE A	EACH	3	✓
627 (10)	ADJUSTMENT OF VALVE BOX	EACH	10	✓
639 (3)	APPROACH	EACH	68	64
640 (1)	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	ALL REQUIRED	
641 (1)	EROSION, SEDIMENT AND POLLUTION CONTROL ADMINISTRATION	LUMP SUM	ALL REQUIRED	
641 (3)	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL	LUMP SUM	ALL REQUIRED	
641 (4)	TEMPORARY EROSION,SEDIMENT AND POLLUTION CONTROL ADDITIVES	CONTINGENT SUM	ALL REQUIRED	
641 (6)	WITHHOLDING	CONTINGENT SUM	ALL REQUIRED	
642 (1)	CONSTRUCTION SURVEYING	LUMP SUM	ALL REQUIRED	
643 (2)	TRAFFIC MAINTENANCE	LUMP SUM	ALL REQUIRED	
643 (15)	FLAGGING	CONTINGENT SUM	ALL REQUIRED	
643 (23)	TRAFFIC PRICE ADJUSTMENT	CONTINGENT SUM	ALL REQUIRED	
643 (25)	TRAFFIC CONTROL	CONTINGENT SUM	ALL REQUIRED	
644 (6)	VEHICLES	LUMP SUM	ALL REQUIRED	

BASIS OF ESTIMATE

	PAY ITEM	ESTIMATING FACTOR
301 (5)	2 INCH MINUS SHOT ROCK/BASE COURSE	2.0 TON/CY
401 (1)	ASPHALT CONCRETE, TYPE II, CLASS B	120 LB/SY-IN
401 (2)	ASPHALT CEMENT, GRADE PG 58-28	6.0% OF ITEM 401 (1)
641 (3)	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL	INLET PROTECTION - 4
641 (3)	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL	TEMPORARY CHECK DAM - 68

GENERAL NOTES

1. VERTICAL AND HORIZONTAL PIPE ALIGNMENTS SHOWN ON THESE PLANS ARE SUBJECT TO MINOR REVISIONS.
2. WHEN WAQTC FOP FOR AASHTO T180 IS SPECIFIED, METHOD D WILL BE PERFORMED UNLESS OTHERWISE STATED.
3. WHEN WAQTC FOP FOR AASHTO T27/T11 IS SPECIFIED, METHOD A OR B WILL BE PERFORMED ON ALL CRUSHED AGGREGATE AND ON MATERIAL CONTAINING 3/4" NOMINAL MAXIMUM SIZE AGGREGATE OR LESS.

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.
PE T. BERGAM Date 3/8/16

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: G:\JNU\69549\PLANSET\69549_C1.DWG

TAB: C1

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

JNU: MENDENHALL VALLEY DUST CONTROL - PAVING PROJECT #69549

ESTIMATE OF QUANTITIES

CHECKED BY: C. HOWARD

STATE OF ALASKA 49TH PROFESSIONAL ENGINEER Chad J. Howard CE-10835

DESIGNED BY: C. HOWARD

DRAWN BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHEAST REGION

JNU: MENDENHALL VALLEY DUST CONTROL - PAVING PROJECT #69549

ESTIMATE OF QUANTITIES

PROJECT DESIGNATION: CMG-000S(751)

STATE	YEAR
ALASKA	2014

SHEET NUMBER	TOTAL SHEETS
C1	34

MANHOLE ADJUSTMENT SUMMARY TABLE

STATION	OFFSET	REMARKS
BENTWOOD PLACE		
1+68.47	6.99' LT.	
4+78.59	2.57' LT.	
5+85.34	9.00' LT.	
7+01.49	1.11' RT.	THIS IS EXISTING WV. NOT MH
10+17.85	7.85' RT.	ADD MH @ 8+50 LT
BLUEBERRY LANE		
2+28.05	1.25' LT.	
4+69.41	9.99' RT.	
SASHA AVENUE		
0+51.95	1.23' LT.	
4+22.49	5.33' RT.	
7+46.09	3.79' LT.	
SPRING WAY		
0+77.14	5.50' RT.	
1+57.45	7.65' RT.	
3+62.36	13.11' RT.	
POWERS STREET		
1+09.20	6.58' RT.	
2+44.77	11.33' RT.	
LEE STREET		
2+50.92	12.55' LT.	MIGHT BE OFF PAVEMENT AREA
4+29.20	12.21' LT.	MIGHT BE OFF PAVEMENT AREA
4+54.15	7.51' RT.	
LEE COURT		
6+20.74	7.94' RT.	
7+35.49	0.98' RT.	
GOAT HILL ROAD		
2+36.32	7.13' RT.	
4+14.07	4.19' RT.	
6+17.69	7.96' LT.	
WILMA AVENUE		
0+15.14	4.16' RT.	
0+68.32	9.09' RT.	
2+57.41	11.73' RT.	
4+05.50	11.09' RT.	

CULVERT INSTALLATION

PIPE	INLET			OUTLET			LENGTH (FT)	SIZE	REMARKS	APPROX. GRADE
	NORTHING	EASTING	INVERT	NORTHING	EASTING	INVERT				
BENTWOOD PLACE										
P-4	505061.23	492289.04	25.23'±	505058.24	492287.63	25.18'	3.3	18"	CSP	1.5%
P-5	505064.54	492281.89	25.13'±	505057.34	492286.09	25.10'	8.7	18"	CSP	0.4%
P-6	505056.28	492287.80	25.09'	505009.68	492324.36	24.89'	59.6	18"	CSP	0.35%
P-7	505007.46	492326.36	24.69'	504955.96	492377.14	24.63'	72.4	18"	CSP	0.36%
P-8	504953.96	492379.38	24.63'	504929.51	492410.93	24.52±	40.0±	18"	CSP	0.26%

SLOTTED DRAIN INSTALLATION

PIPE	INLET			OUTLET			LENGTH (FT)	REMARKS
	NORTHING	EASTING	INVERT	NORTHING	EASTING	INVERT		
LEE COURT								
D-1	512363.62	486093.52	170.55'	512365.15	486115.42	170.15	22	SEE SHEET E4
D-2	512370.53	486124.40	170.11'	512385.64	486137.50	170.00'	20	SEE SHEET E4

INLET, TYPE A

STRUCT. NO.	NORTHING	EASTING	SUMP ELEV.	TOP OF GRATE ELEV.	REMARKS
BENTWOOD PLACE					
S-2	505056.89	492286.98	23.60'	~~27.73~~ 27.63	
S-3	505008.53	492325.33	23.39'	~~27.50~~ 27.47	
S-4	504954.89	492378.20	23.13'	27.33 27.33 ✓	

ADJUSTMENT OF VALVE BOX SUMMARY TABLE

STATION	OFFSET	REMARKS
BENTWOOD PLACE		
4+67.95	14.40' LT.	
4+87.64	7.86' RT.	
4+97.41	3.19' RT.	
10+65.72	15.72' LT.	
BARRETT AVENUE		
1+01.55	8.17' RT.	
1+02.28	1.64' RT.	
1+89.13	6.09' RT.	
3+31.12	7.85' RT.	
POWERS STREET		
0+13.35	7.30' LT.	
GOAT HILL ROAD		
2+54.99	2.64' RT.	AIR RELIEF VALVE
RIVERTRAIL WAY		
5+97.03	14.53' LT.	OFF PAVEMENT

REMOVAL OF CULVERT PIPE

INLET			OUTLET			LENGTH (FT)	SIZE	REMARKS
NORTHING	EASTING	INVERT	NORTHING	EASTING	INVERT			
LEE COURT								
512363.48	486091.52	170.48'	512365.27	486117.14	169.83'	26	12"	CPP
512369.03	486123.10	170.54'	512387.22	486138.86	170.63'	24	8"	CPP
BENTWOOD PLACE								
505064.54	492281.89	25.13'	505062.81	492282.90	25.12'	2	18"	CMP
505061.23	492289.04	25.23'±	505059.42	492288.19	25.18'	2	18"	CMP
505004.33	492329.43	24.86'	504961.76	492371.03	24.50'	59.5	18"	CMP
504930.73	492409.34	24.53'	504929.51	492410.93	24.52'	2	18"	CMP

TOTAL = 115.5

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.
PE T. BERGAM Date 11/2/15

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69549\PLANSET\69549_D1 SUMMARY TABLES.DWG

TAB: D1

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

SUMMARY TABLES

CHECKED BY: C. HOWARD

STATE OF ALASKA 4900 Chad J. Howard PE-10835 REGISTERED PROFESSIONAL ENGINEER 2/6/14

DESIGNED BY: C. HOWARD

DRAWN BY: D. STEVENS

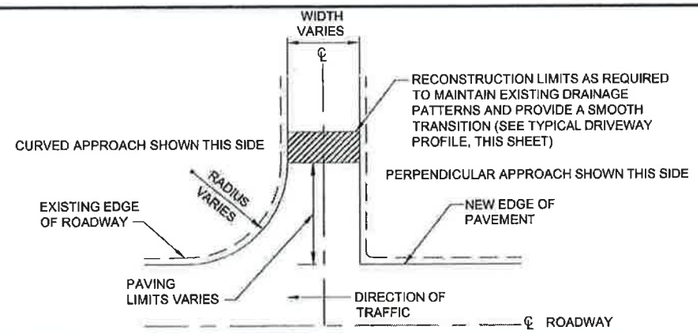
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

SUMMARY TABLES

PROJECT DESIGNATION: CMG-000S(751)

STATE	YEAR
ALASKA	2014
SHEET NUMBER	TOTAL SHEETS
D1	34

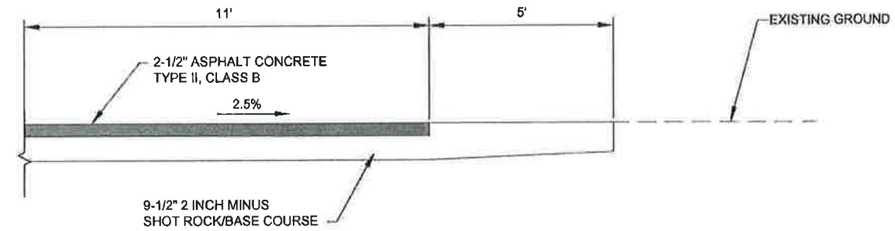


APPROACH/DRIVEWAY PLAN VIEW

N.T.S.

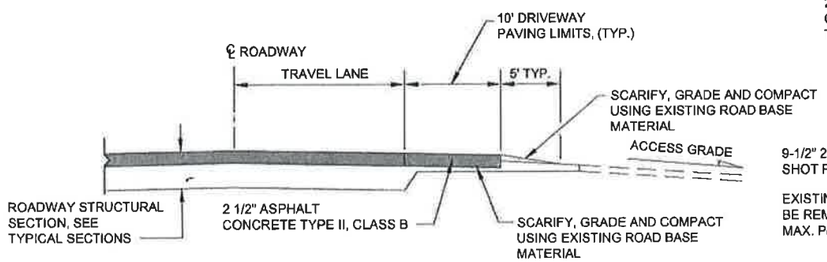
DRIVEWAY NOTES

1. DRIVEWAY WIDTHS SHALL BE CONSTRUCTED TO MATCH EXISTING, UNLESS OTHERWISE SHOWN IN THE PLANS OR SHALL BE AS DIRECTED BY THE ENGINEER.
2. DRIVEWAY PAVING LIMITS MEASURED FROM THE EDGE OF ROADWAY PAVING SHALL BE 10' OR TO THE ROW WHICHEVER IS LESS, UNLESS OTHERWISE SHOWN IN THE PLANS OR SHALL BE AS DIRECTED BY THE ENGINEER.
3. DRIVEWAYS SHALL BE SLOPED TO DRAIN AND MAINTAIN EXISTING DRAINAGE PATTERNS.
4. DRIVEWAY WORK LIMITS SHALL BE STAKED FOR APPROVAL OF THE ENGINEER PRIOR TO WORK BEGINNING.
5. SEE TRAFFIC CONTROL NOTES FOR WORK RESTRICTIONS ON DRIVEWAYS.



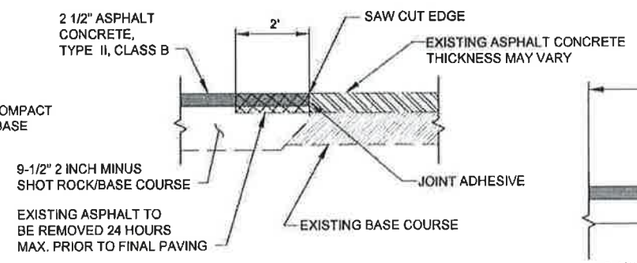
RIVERTRAIL WAY PARKING LOT SHOULDER DETAIL

STA. 3+50 LT. TO STA. 4+50 LT. AND STA. 6+00 LT. TO STA. 6+69 LT.
N.T.S.



EXISTING UNPAVED DRIVEWAY PROFILE VIEW

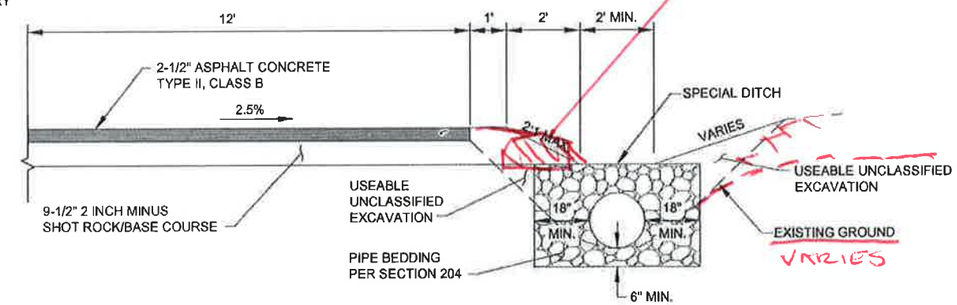
N.T.S.



ROADWAY MATCH JOINT DETAIL

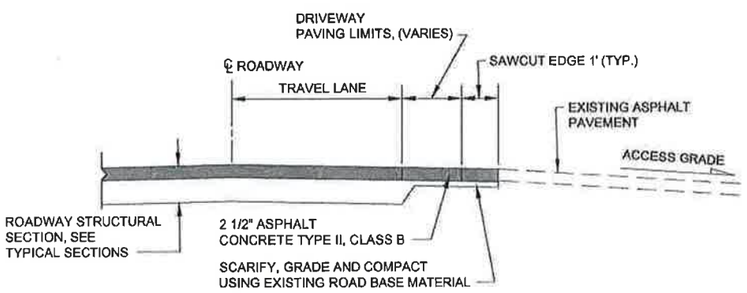
N.T.S.

ADDED ASPHALT SWALE TO PROTECT INLET



BENTWOOD PLACE SPECIAL DITCH DETAIL

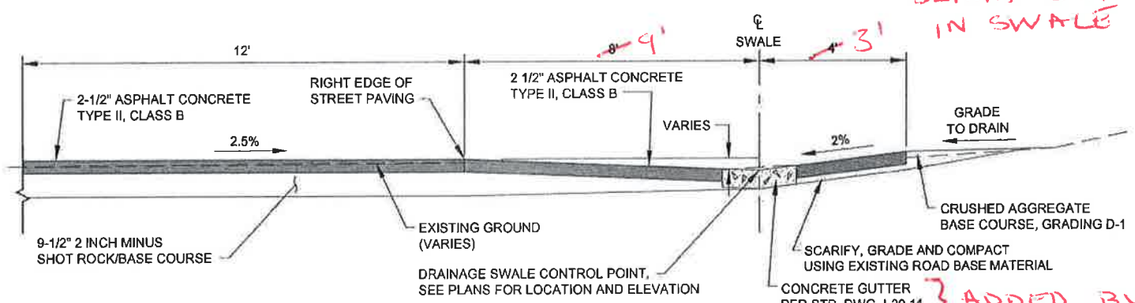
STA. 6+25 LT. TO STA. 8+00 LT.
N.T.S.



EXISTING ASPHALT DRIVEWAY PROFILE VIEW

N.T.S.

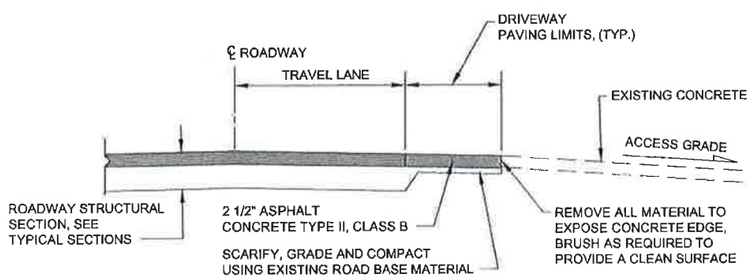
SLIGHT SHIFT IN SWALE



ADDED BY CHANGE ORDER NO PAY ITEM IN CONTRACT

BENTWOOD PLACE ASPHALT DRAINAGE SWALE DETAIL

STA. 6+00 RT. TO STA. 7+75 RT.



EXISTING CONCRETE DRIVEWAY PROFILE VIEW

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: T. BERGAM Date 11/2/15

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

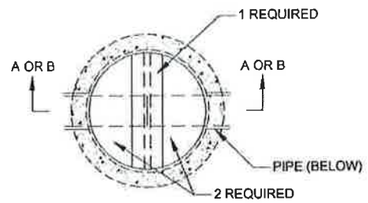
CHECKED BY: C. HOWARD
STATE OF ALASKA, Chad J. Howard, CS-10635, REGISTERED PROFESSIONAL ENGINEER, 6/5/14
DESIGNED BY: C. HOWARD
DRAWN BY: D. STEVENS
PATH: Q:\JNU\69549\PLANSET\69549_E1_MISC DETS.DWG
TAB: E1

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHEAST REGION

JNU: MENDENHALL VALLEY DUST CONTROL - PAVING
PROJECT # 69549

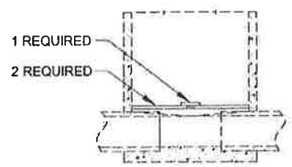
MISCELLANEOUS DETAILS

REVISIONS			PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION	CMG-000S(751)	2014	E1	34



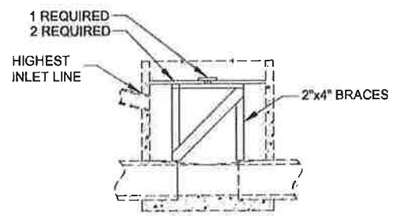
INVERT COVER PLAN

(INVERT COVER IN PLACE)



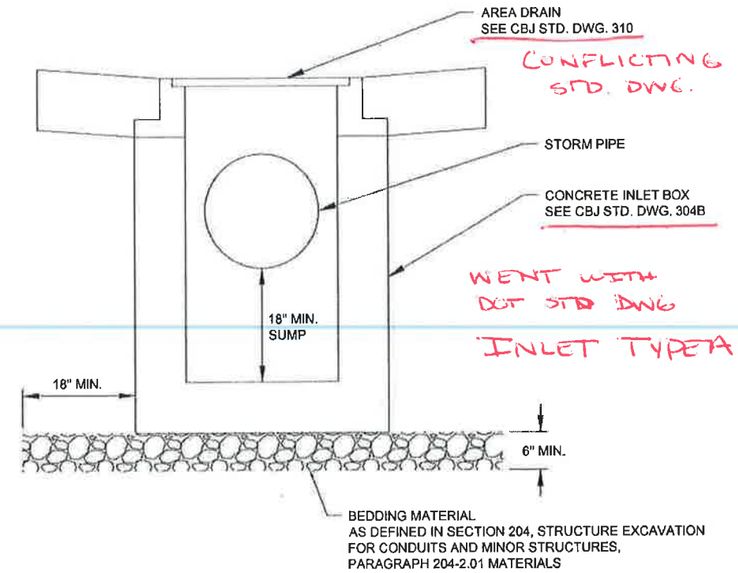
SECTION A-A

OPTION 1



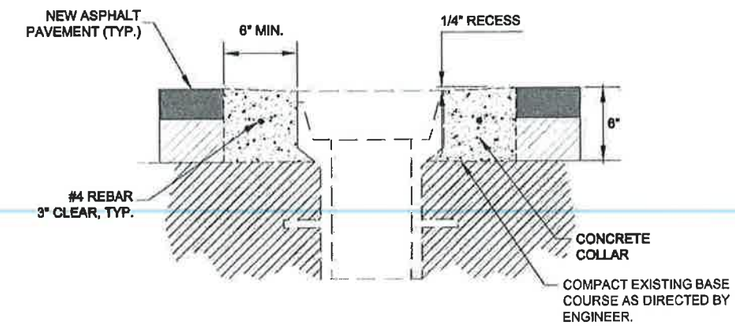
SECTION B-B

OPTION 2



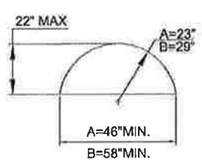
INLET BOX DETAIL

N.T.S.

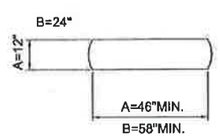


VALVE BOX ADJUSTMENT DETAIL

N.T.S.

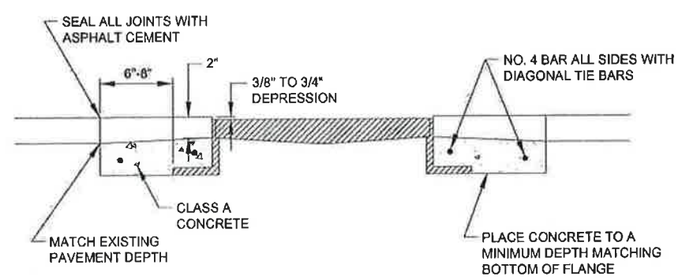


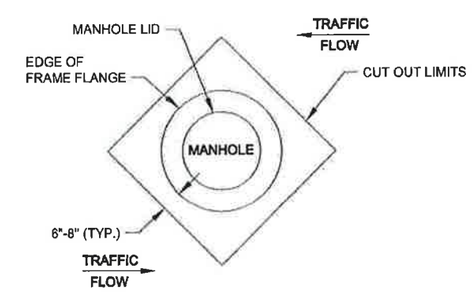
2 REQUIRED



1 REQUIRED

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





CONCRETE TRANSITION SLAB DETAILS

N.T.S.

MANHOLE FRAME SHALL BE RAISED TO FINISH GRADE PRIOR TO PAVING OPERATIONS. IF NOT WITHIN ALLOWABLE TOLERANCES AFTER PAVING OPERATION THE ABOVE DETAILS SHALL BE USED. CONFLICT.

MANHOLE ADJUSTMENT CONSTRUCTION SEQUENCING NOTES

1. LOCATE AND MARK MANHOLES PRIOR TO EXCAVATING THE ROADWAY SO THEY ARE NOT INADVERTENTLY DAMAGED.
2. INSTALL INVERT COVER PER SECTION 604-3.01 OF THE SPECIFICATIONS.
3. REMOVE EXISTING MANHOLE FRAMES AND LIDS. ADJUST HEIGHT USING GRADE RINGS SO FRAME AND LID WILL BE RECESSED 3/8" TO 3/4" BELOW THE PAVED SURFACE. SEE SECTION 604 OF THE SPECIFICATIONS.
4. IF, AFTER PAVING, THE MANHOLE FRAME OR LID DO NOT MEET THE RECESS TOLERANCE, SAWCUT, RESET, AND CONSTRUCT A CONCRETE COLLAR AS SHOWN IN THE CONCRETE TRANSITION SLAB DETAILS ON THIS SHEET.

MANHOLE ADJUSTMENT NOTES

1. ADJUSTING RINGS SHALL BE REPLACED IN ACCORDANCE TO EACH MANHOLE INVESTIGATION, CONDUCTED BY THE PROJECT ENGINEER.
2. MANHOLE CASTING SHALL BE ADJUSTED TO CONFORM WITH SLOPE AND GRADE OF PROPOSED PAVEMENT.
3. ADJUSTING RINGS SHALL BE PROPERLY SIZED FOR THE EXISTING CONE OR FLAT TOP OPENING, AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
4. INSTALLATION OF FRAME, COVER, AND ADJUSTMENT RINGS, ONTO THE EXISTING STRUCTURE SHALL BE WATER-TIGHT.
5. ADJUSTMENT RINGS SHALL BE INFRA RISER RINGS OR APPROVED EQUAL.

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.
PE T. BERGMAN Date 11/2/15

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

CHECKED BY: C. HOWARD

STATE OF ALASKA
Chad J. Howard
CE-10635
REGISTERED PROFESSIONAL ENGINEER
6/5/14

DESIGNED BY: C. HOWARD
DRAWN BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHEAST REGION

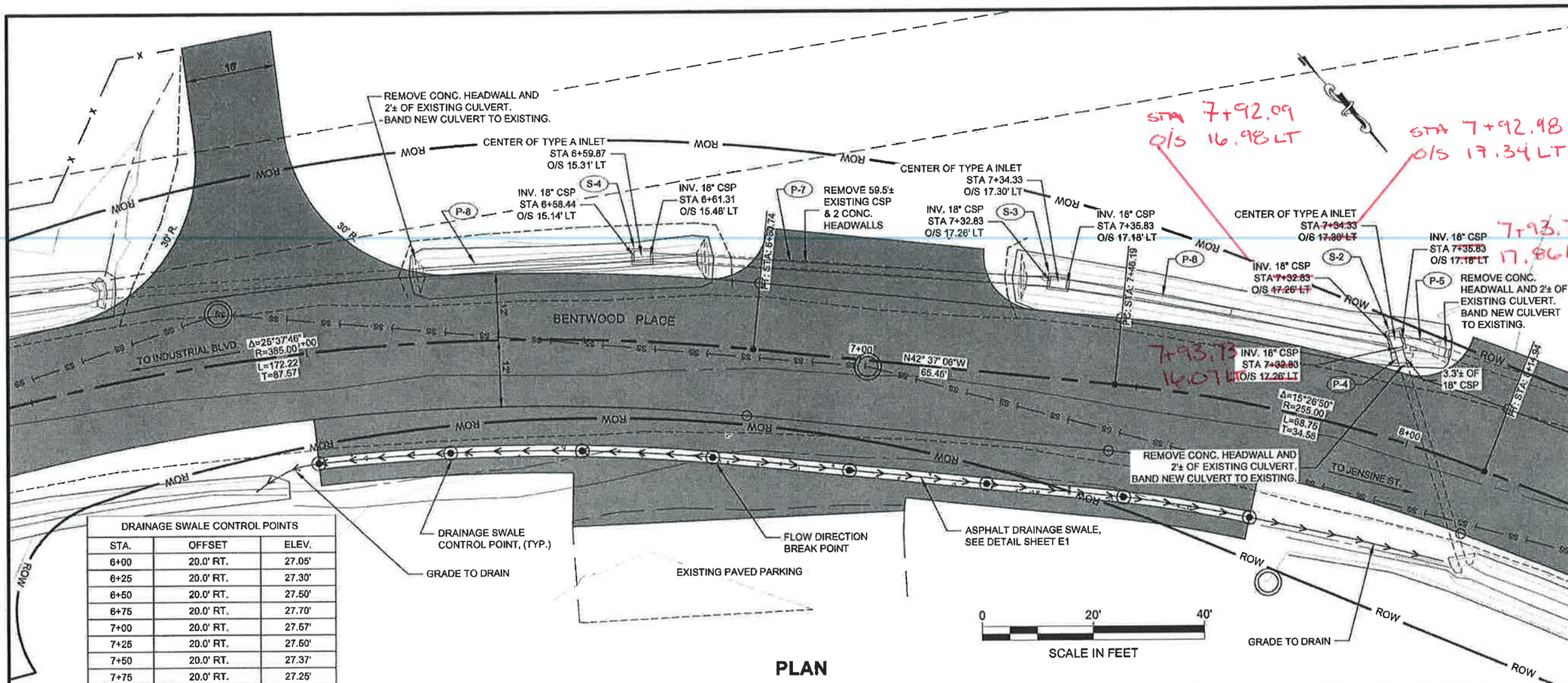
JNU: MENDENHALL VALLEY DUST CONTROL - PAVING
PROJECT # 69549

MISCELLANEOUS DETAILS

PATH: Q:\JNU\69549\PLANSET\69549_E1_MISC DETS.DWG
TAB: E2

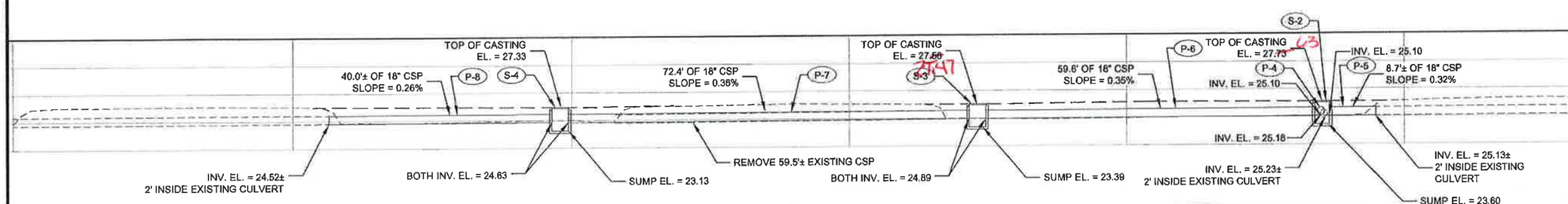
REVISIONS		
NO.	DATE	DESCRIPTION

PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
CMG-000S(751)	2014	E2	34



DRAINAGE SWALE CONTROL POINTS		
STA.	OFFSET	ELEV.
6+00	20.0' RT.	27.05'
6+25	20.0' RT.	27.30'
6+50	20.0' RT.	27.50'
6+75	20.0' RT.	27.70'
7+00	20.0' RT.	27.57'
7+25	20.0' RT.	27.60'
7+50	20.0' RT.	27.37'
7+75	20.0' RT.	27.25'

PLAN



NOTES:
1. FILL IN DITCHES WITH 1' MIN. COVER OVER CSP, GRADE TO DRAIN TO NEW INLETS.
2. INLET FRAMES AND GRATES TO MEET STD. DWG. D-25.00

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 T. Bergam Date 11/2/15

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69549\PLANSET\BENTWOOD_STORM.DR

TAB: E3

ADDENDUM NUMBER
ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

BENTWOOD PLACE DRAINAGE

CHECKED BY: C. HOWARD

STATE OF ALASKA 49th Chad G. Howard CE-10635 REGISTERED PROFESSIONAL ENGINEER 6/5/14

DESIGNED BY: C. HOWARD

DRAWN BY: D. STEVENS

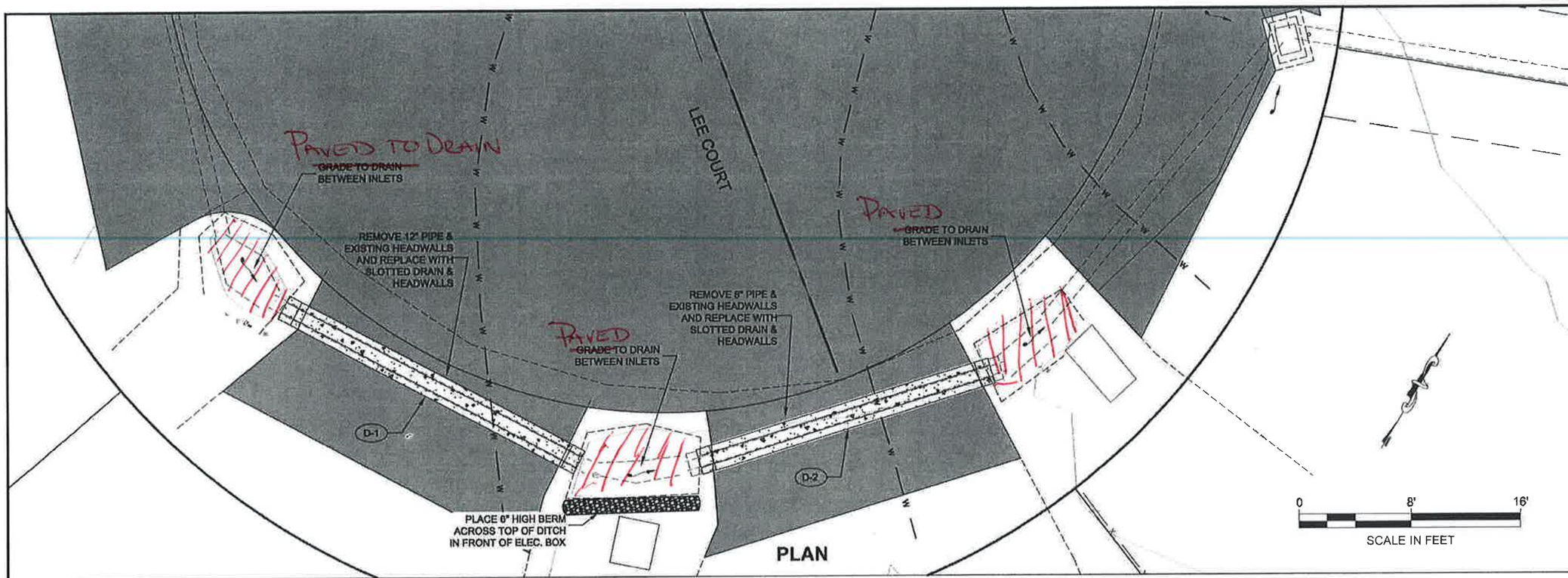
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

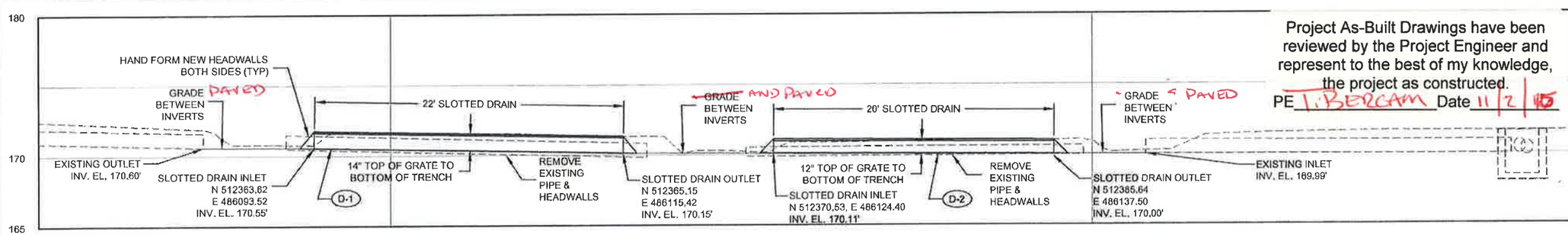
BENTWOOD PLACE DRAINAGE

PROJECT DESIGNATION: CMG-000S(751)

STATE	YEAR
ALASKA	2014
SHEET NUMBER	TOTAL SHEETS
E3	34

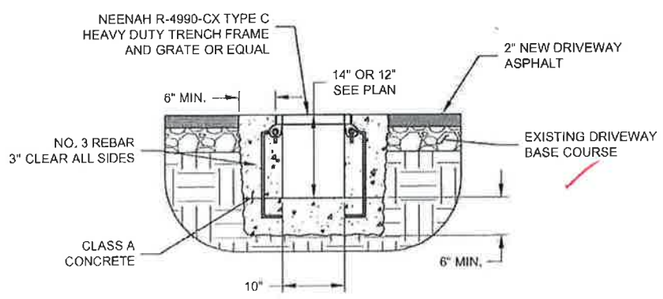


PLAN

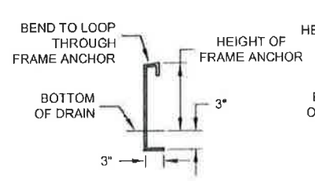


PROFILE

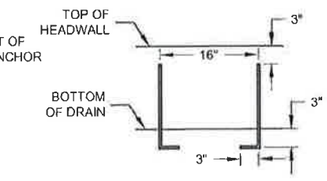
Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.
PE T. BERGAM Date 11/2/15



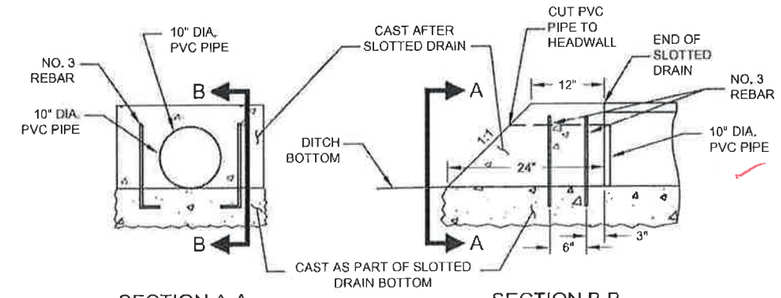
SLOTTED DRAIN DETAIL



SLOTTED DRAIN REBAR DETAIL



HEADWALL REBAR DETAIL



SECTION A-A

SECTION B-B

SLOTTED DRAIN HEADWALL DETAILS

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69549\PLANSET\LEE_COURT DRAINAGE WITH SLOTTED DRAINS.DWG

TAB: E4

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

LEE COURT DRAINAGE IMPROVEMENT PLAN AND PROFILE

CHECKED BY: C. HOWARD

STATE OF ALASKA 49th Chad J. Howard CE-10836 CERTIFIED PROFESSIONAL ENGINEER 6/5/14

DESIGNED BY: C. HOWARD

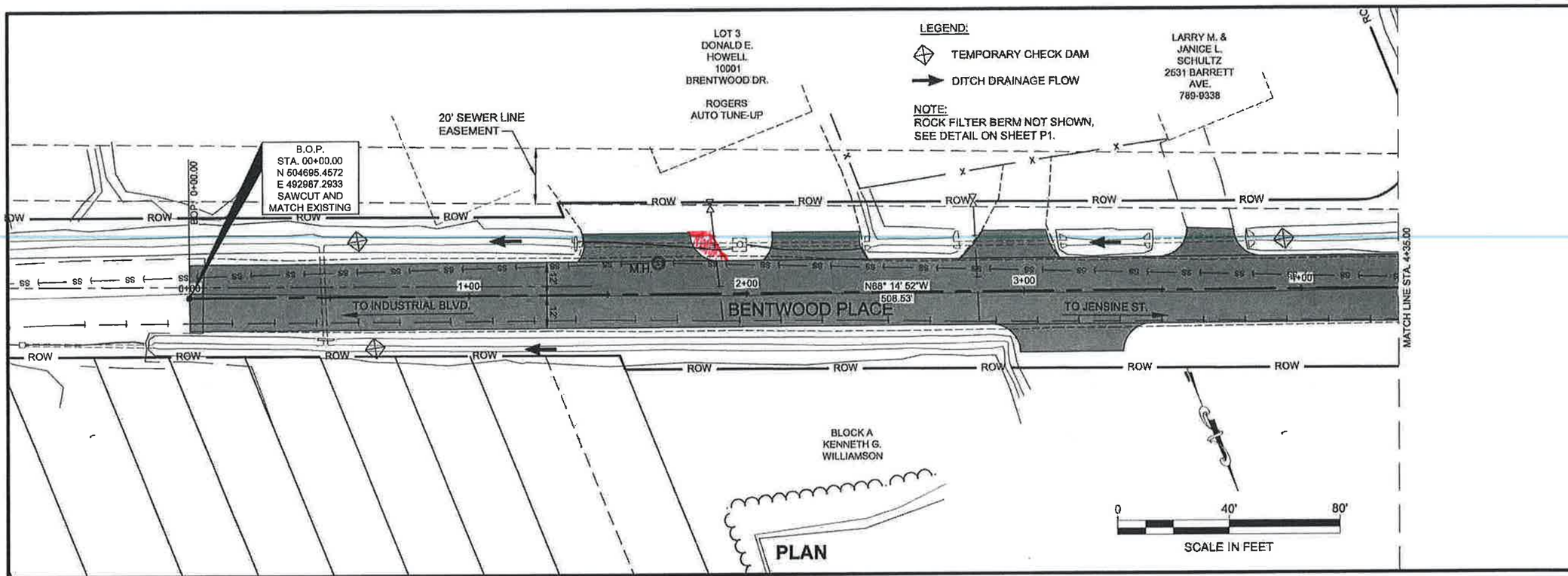
DRAWN BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

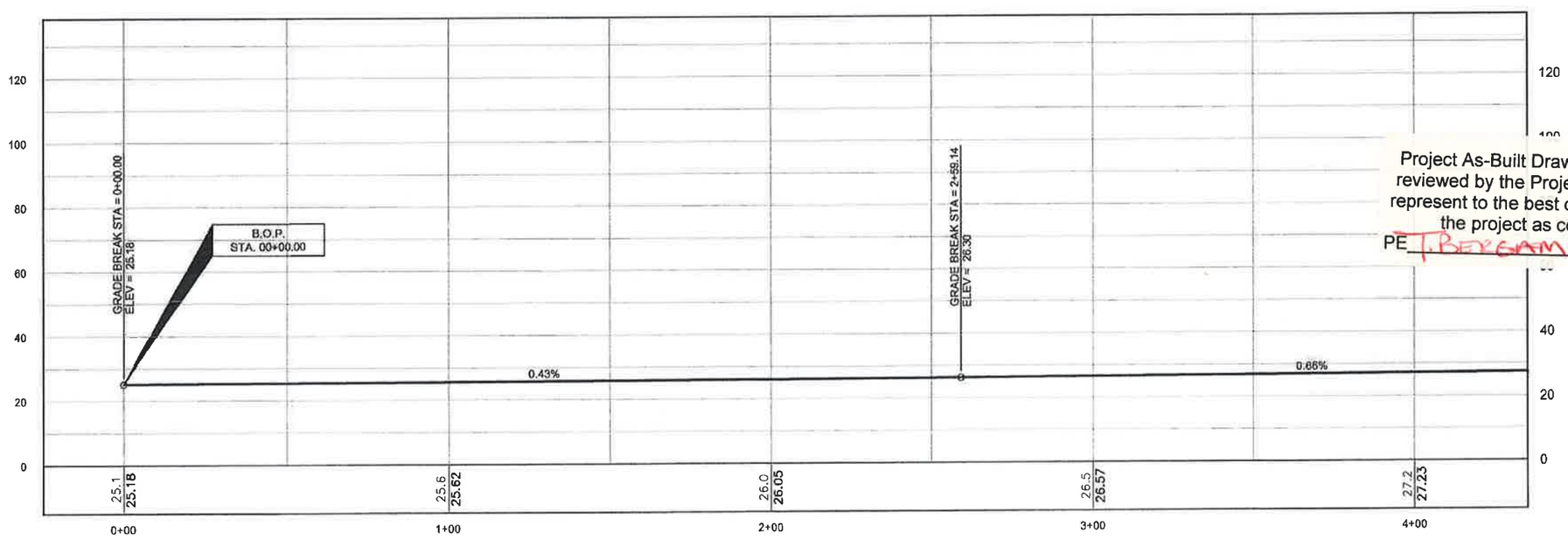
JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

PLAN AND PROFILE

PROJECT DESIGNATION	
CMG-000S(751)	
STATE	YEAR
ALASKA	2014
SHEET NUMBER	TOTAL SHEETS
E4	34



PLAN



PROFILE

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 T. BERGAM Date 11/2/15

PATH: Q:\JNU\69549\PLANSET\BENTWOOD_P AND P.DWG

TAB: F1

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

BENTWOOD PLACE PLAN AND PROFILE

CHECKED BY: C. HOWARD

STATE OF ALASKA 49TH Chad J. Howard CE-10835 REGISTERED PROFESSIONAL ENGINEER 6/5/14

DESIGNED BY: C. HOWARD

DRAWN BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

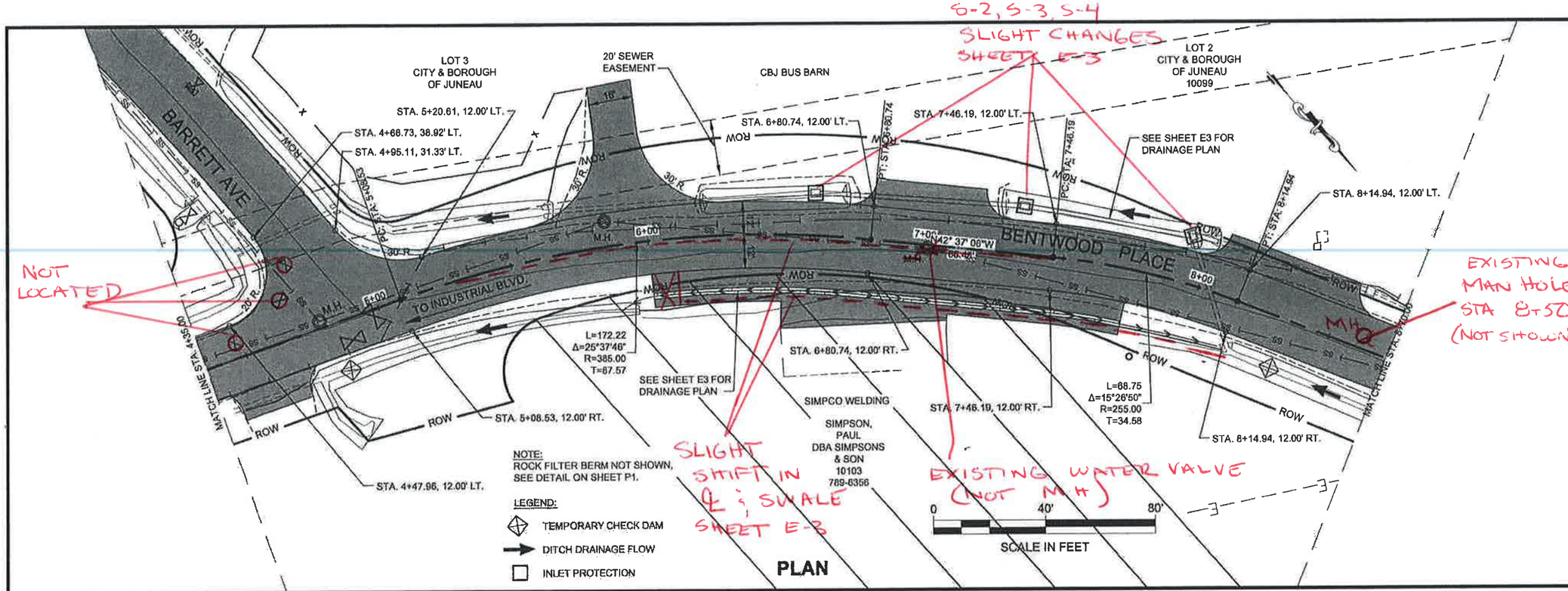
PLAN AND PROFILE

PROJECT DESIGNATION

CMG-000S(751)

STATE	YEAR
ALASKA	2014
SHEET NUMBER	TOTAL SHEETS
F1	34

S-2, S-3, S-4
SLIGHT CHANGES
SHEET E-3

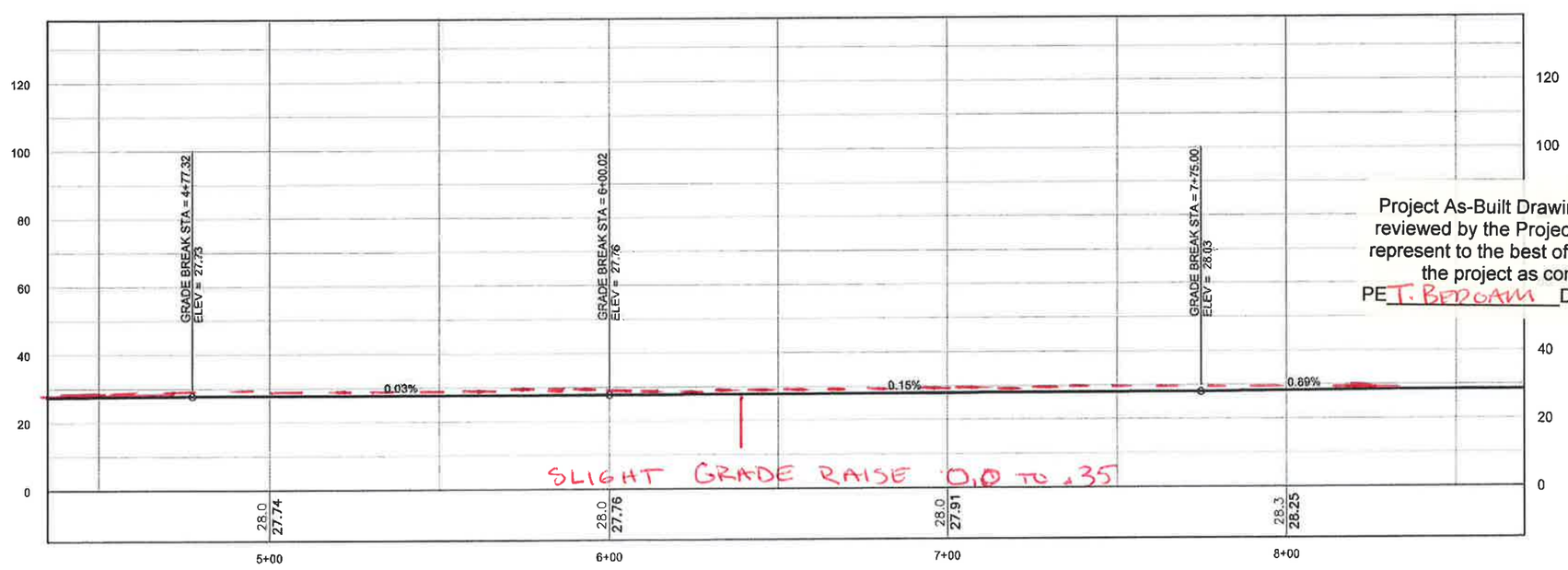


NOT LOCATED

SLIGHT SHIFT IN ℄ & SWALE SHEET E-3

EXISTING WATER VALVE (NOT M.H.)

EXISTING MAN HOLE STA 8+50 LT (NOT SHOWN ON PLANS)



SLIGHT GRADE RAISE 0.0 TO .35

PROFILE

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PE T. BERGAM Date 11/2/15

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69549\PLANSET\BENTWOOD_P AND P.DWG

TAB: F2

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

JNU: MENDENHALL VALLEY
DUST CONTROL-PAVING
PROJECT #69549

BENTWOOD PLACE
PLAN AND PROFILE

CHECKED BY: C. HOWARD

STATE OF ALASKA
Chad J. Howard
CE-10835
REGISTERED PROFESSIONAL ENGINEER
6/5/14

DESIGNED BY: C. HOWARD

DRAWN BY: D. STEVENS

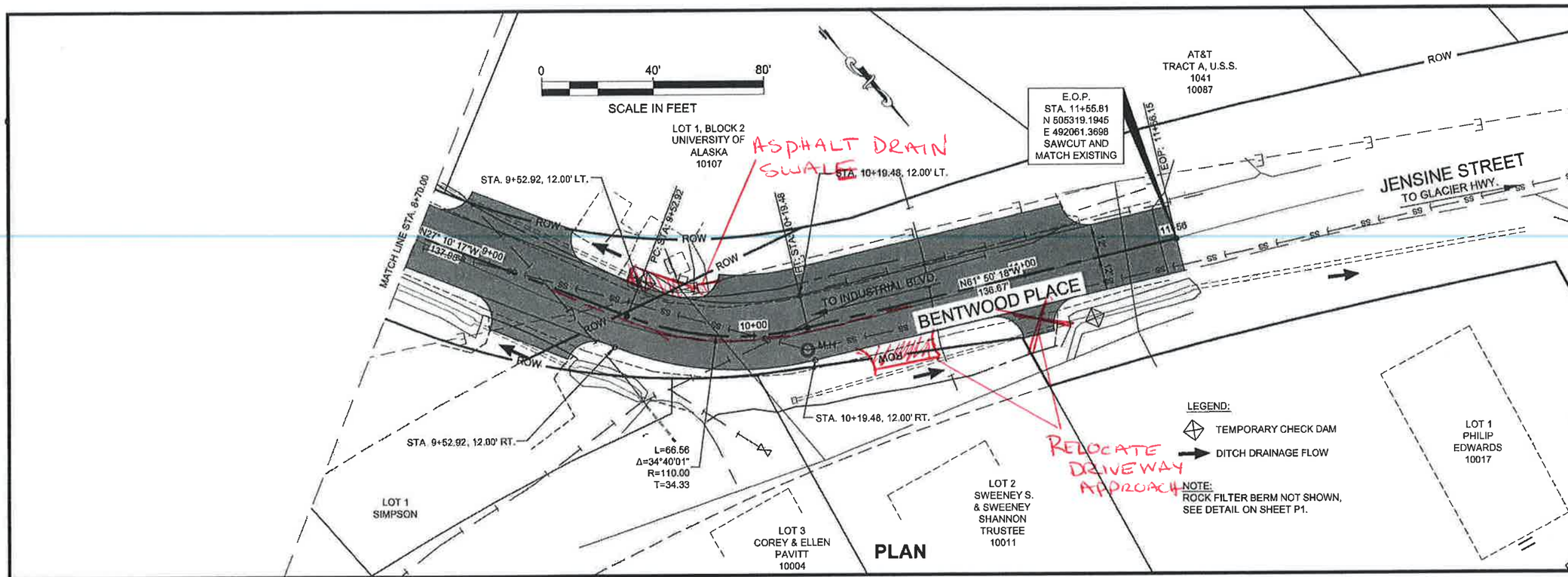
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHEAST REGION

JNU: MENDENHALL VALLEY
DUST CONTROL-PAVING
PROJECT #69549

PLAN AND
PROFILE

PROJECT DESIGNATION
CMG-000S(751)

STATE	YEAR
ALASKA	2014
SHEET NUMBER	TOTAL SHEETS
F2	34



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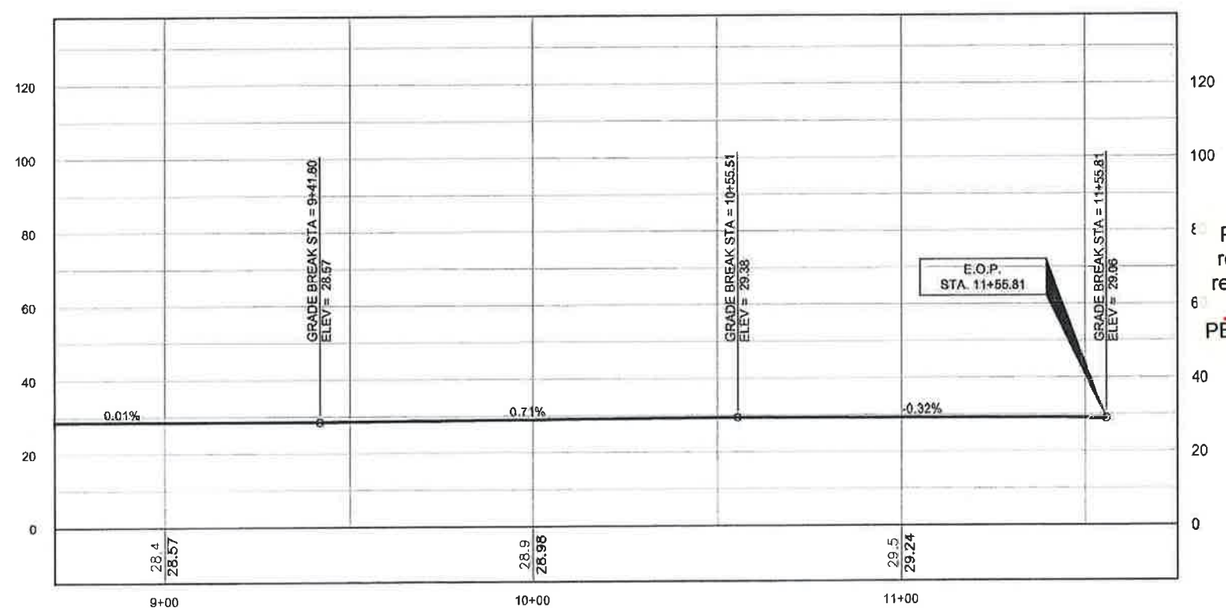


PROFILE

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 T. Bergam Date 11/2/15

PATH: Q:\JNU\69549\PLANSET\BENTWOOD_P AND P.DWG

TAB: F3

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

BENTWOOD PLACE PLAN AND PROFILE

CHECKED BY: C. HOWARD

STATE OF ALASKA 49th Chad J. Howard CE-10835 REGISTERED PROFESSIONAL ENGINEER 6/5/14

DESIGNED BY: C. HOWARD

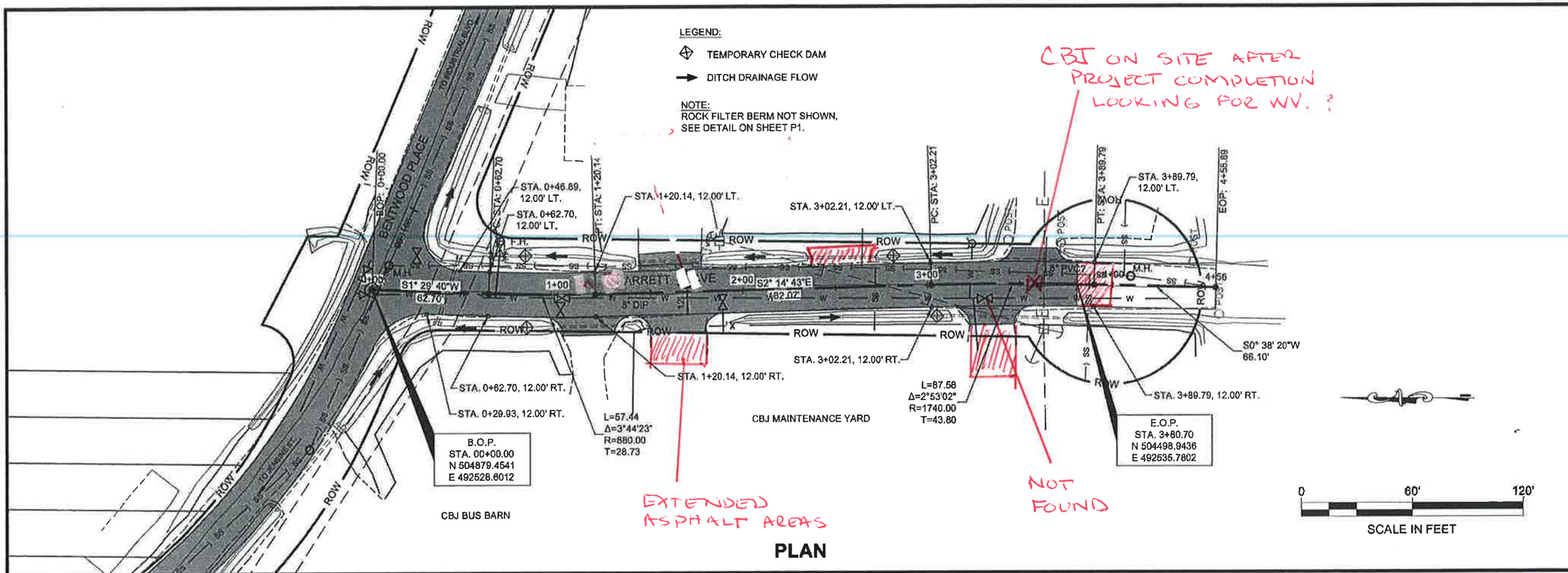
DRAWN BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHEAST REGION

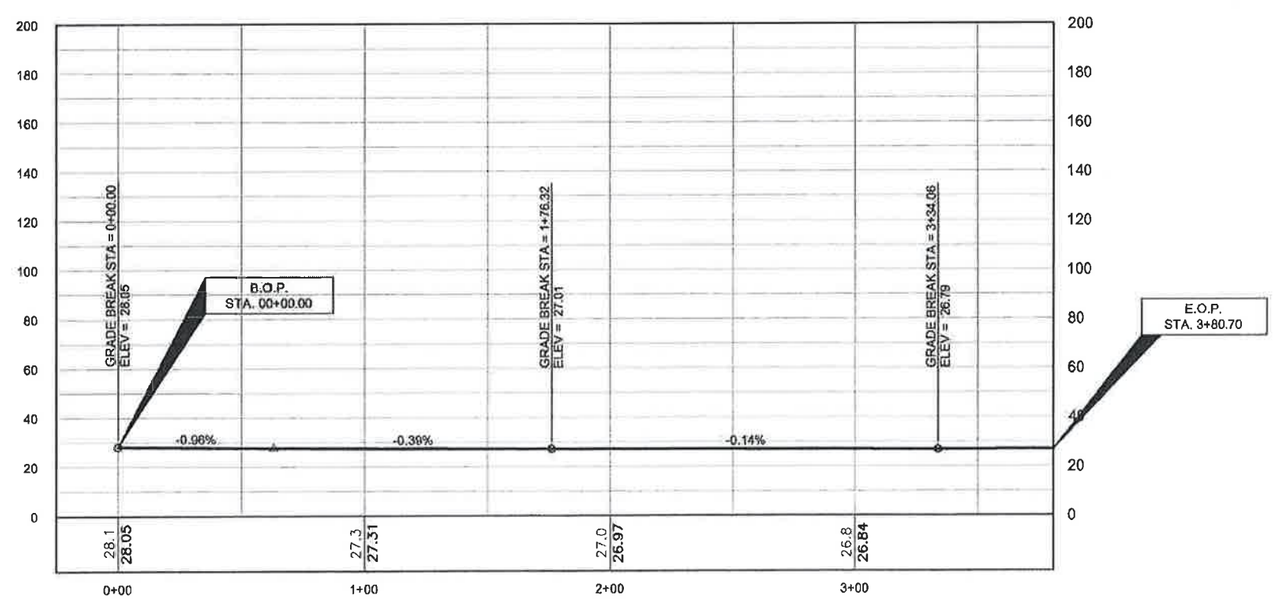
JNU: MENDENHALL VALLEY
DUST CONTROL-PAVING
PROJECT #69549

PLAN AND PROFILE

PROJECT DESIGNATION	
CMG-000S(751)	
STATE	YEAR
ALASKA	2014
SHEET NUMBER	TOTAL SHEETS
F3	34



PLAN



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 T. Burgam Date 11/2/15

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69549\PLANSET\BARRETT_P AND P.DWG

TAB: F4

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

BARRETT AVENUE PLAN AND PROFILE

CHECKED BY: C. HOWARD

STATE OF ALASKA 49th Craig T. Howard PE-10835 REGISTERED PROFESSIONAL ENGINEER 6/5/14

DESIGNED BY: C. HOWARD

DRAWN BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

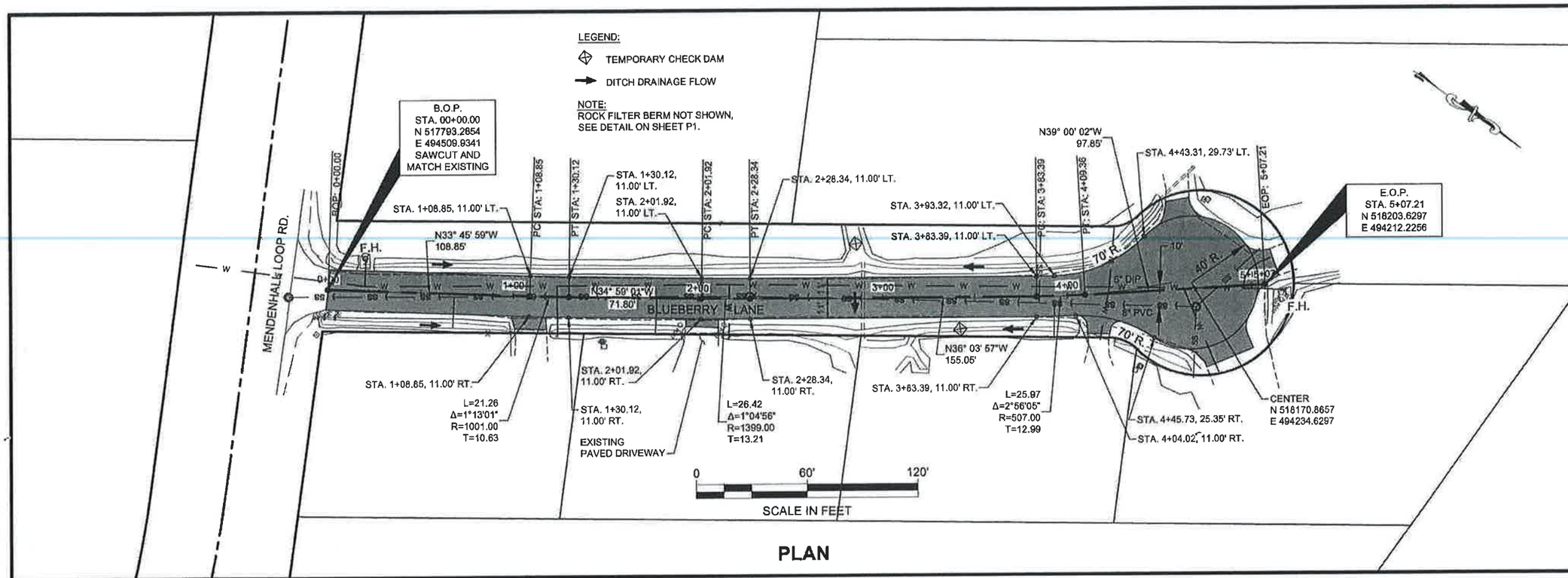
JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

PLAN AND PROFILE

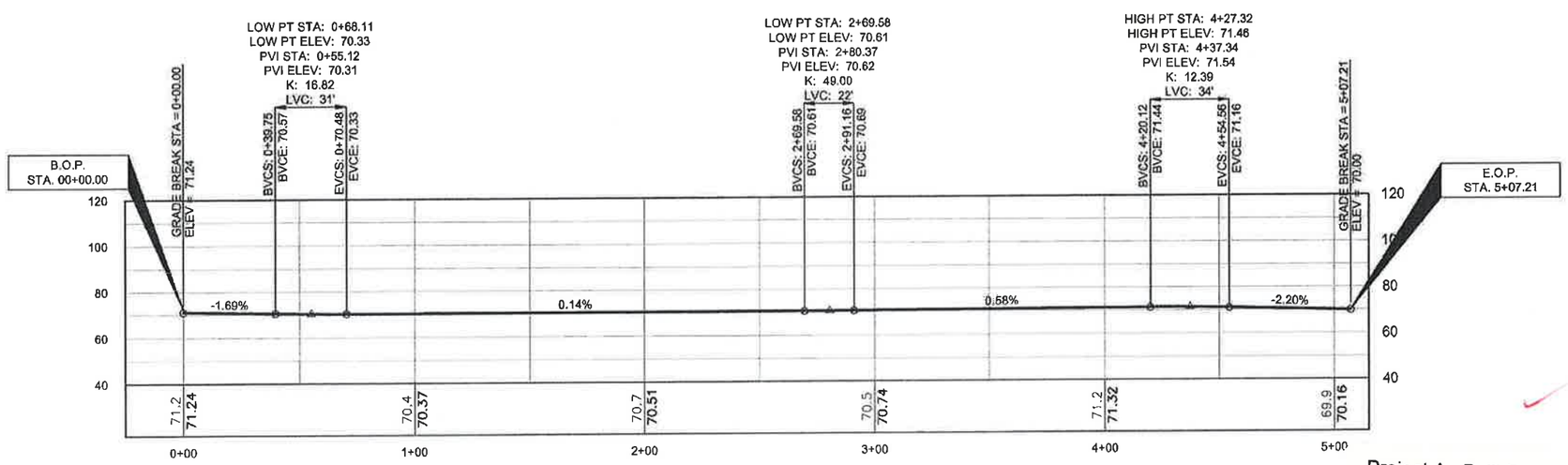
PROJECT DESIGNATION: CMG-000S(751)

STATE	YEAR
ALASKA	2014

SHEET NUMBER	TOTAL SHEETS
F4	34



PLAN



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 T. BORGAM Date 3/9/16

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69549\PLANSET\BLUEBERRY_P AND P.DWG

TAB: F5

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

BLUEBERRY LANE PLAN AND PROFILE

CHECKED BY: C. HOWARD

STATE OF ALASKA 49TH Chad J. Howard PE-10835 REGISTERED PROFESSIONAL ENGINEER 6/5/14

DESIGNED BY: C. HOWARD

DRAWN BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

PLAN AND PROFILE

PROJECT DESIGNATION

CMG-000S(751)

STATE	YEAR
ALASKA	2014

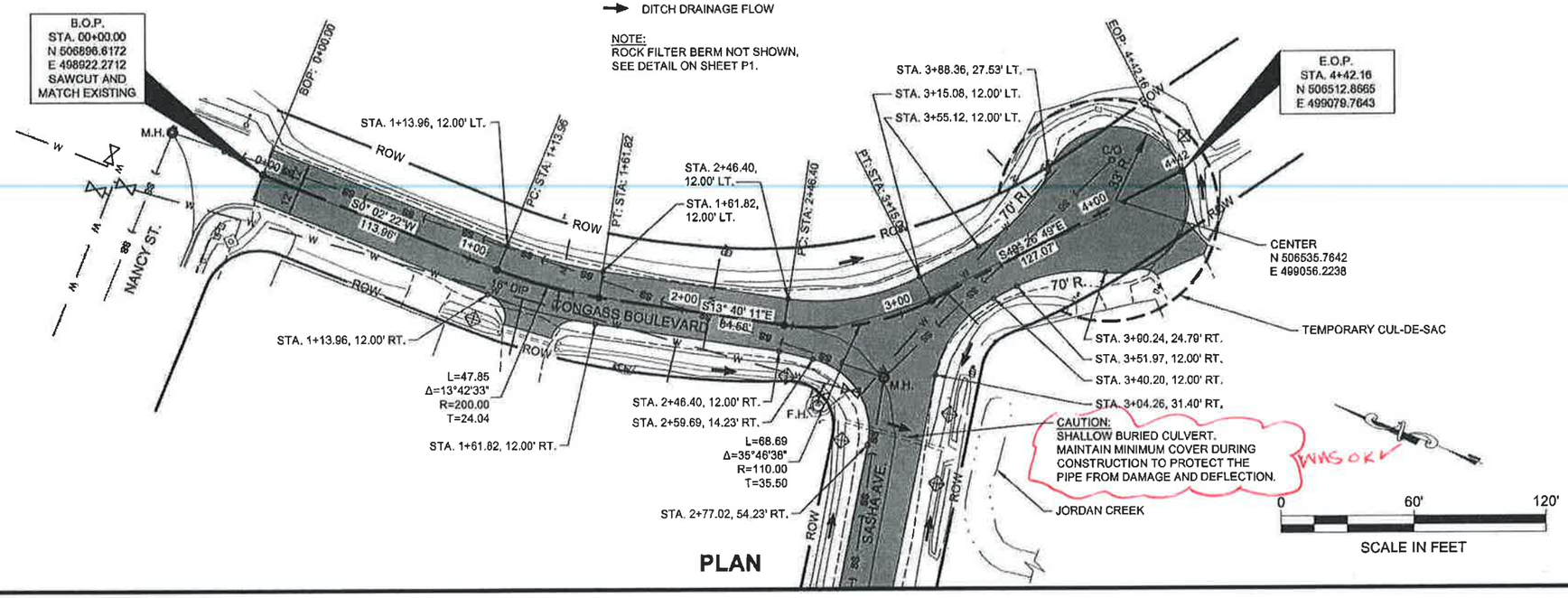
SHEET NUMBER	TOTAL SHEETS
F5	34

LEGEND:

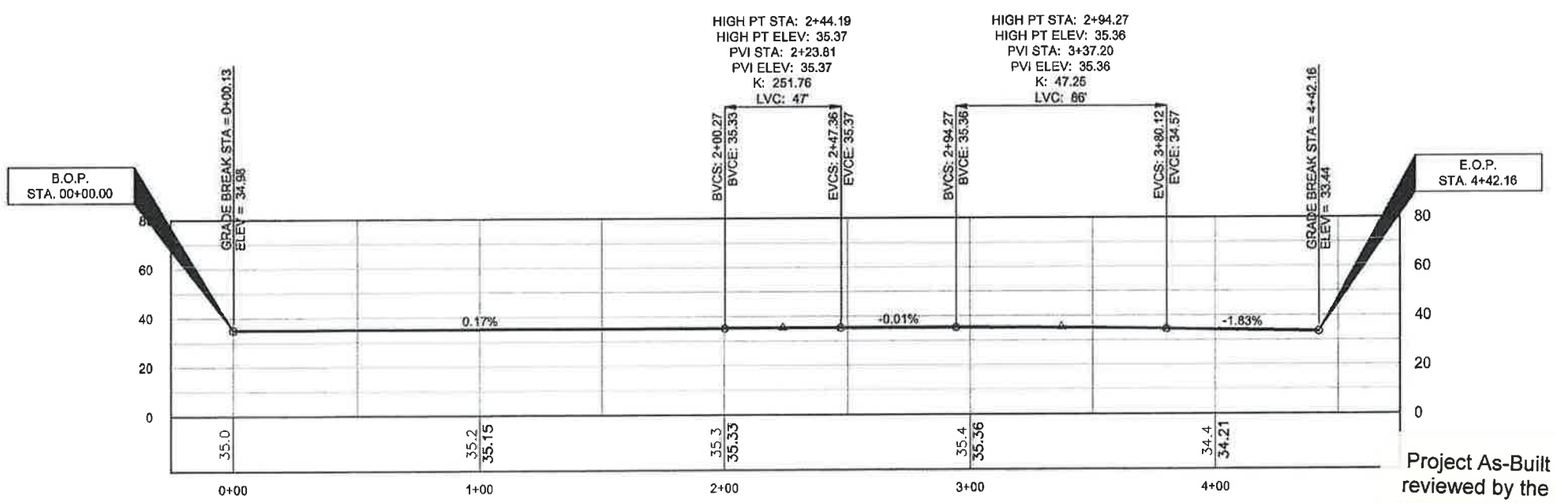
TEMPORARY CHECK DAM

DITCH DRAINAGE FLOW

NOTE:
ROCK FILTER BERM NOT SHOWN, SEE DETAIL ON SHEET P1.



PLAN



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 T. Bergstrom Date 8/9/16

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69549\PLANSET\TONGASS_P AND P.DWG

TAB: F6

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

TONGASS BOULEVARD PLAN AND PROFILE

CHECKED BY: C. HOWARD

STATE OF ALASKA 49th Chad J. Howard PE-10835 REGISTERED PROFESSIONAL ENGINEER 6/5/14

DESIGNED BY: C. HOWARD

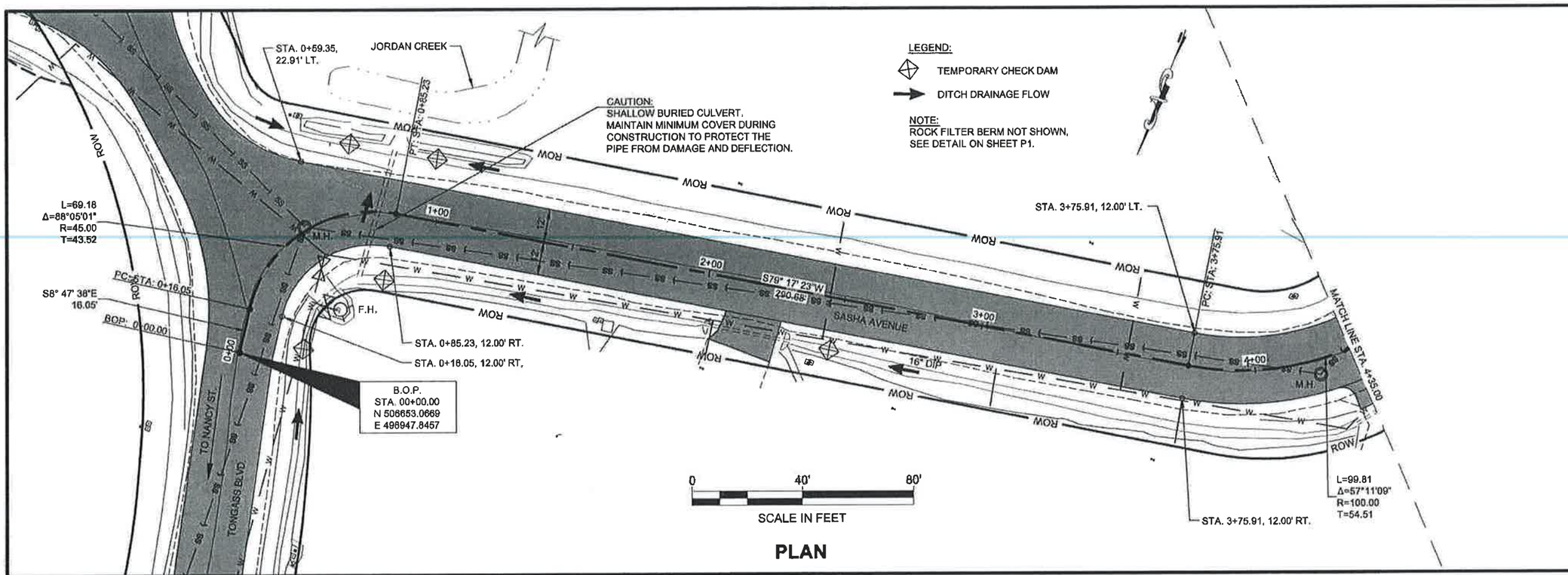
DRAWN BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

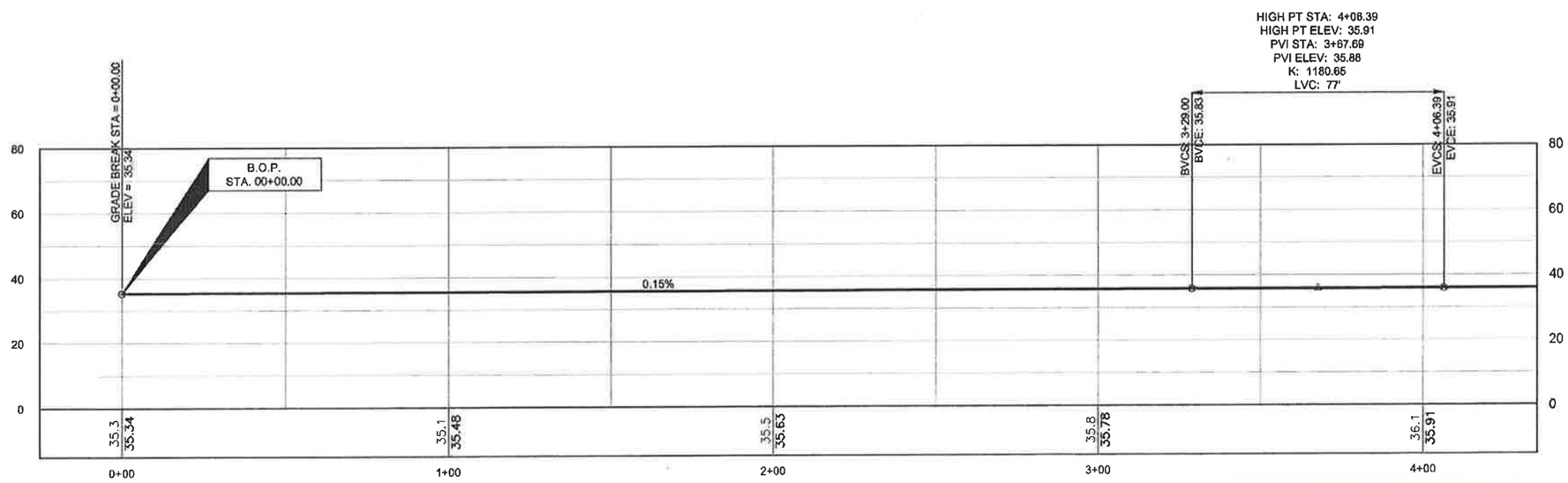
JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

PLAN AND PROFILE

PROJECT DESIGNATION	
CMG-000S(751)	
STATE	YEAR
ALASKA	2014
SHEET NUMBER	TOTAL SHEETS
F6	34



PLAN



PROFILE

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

T. Berzam Date 3/9/16

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69549\PLANSET\SASHA_P AND P.DWG

TAB: F7

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

SASHA AVENUE PLAN AND PROFILE

CHECKED BY: C. HOWARD

STATE OF ALASKA 49th Chad J. Howard PE-10835 REGISTERED PROFESSIONAL ENGINEER 6/5/14

DESIGNED BY: C. HOWARD

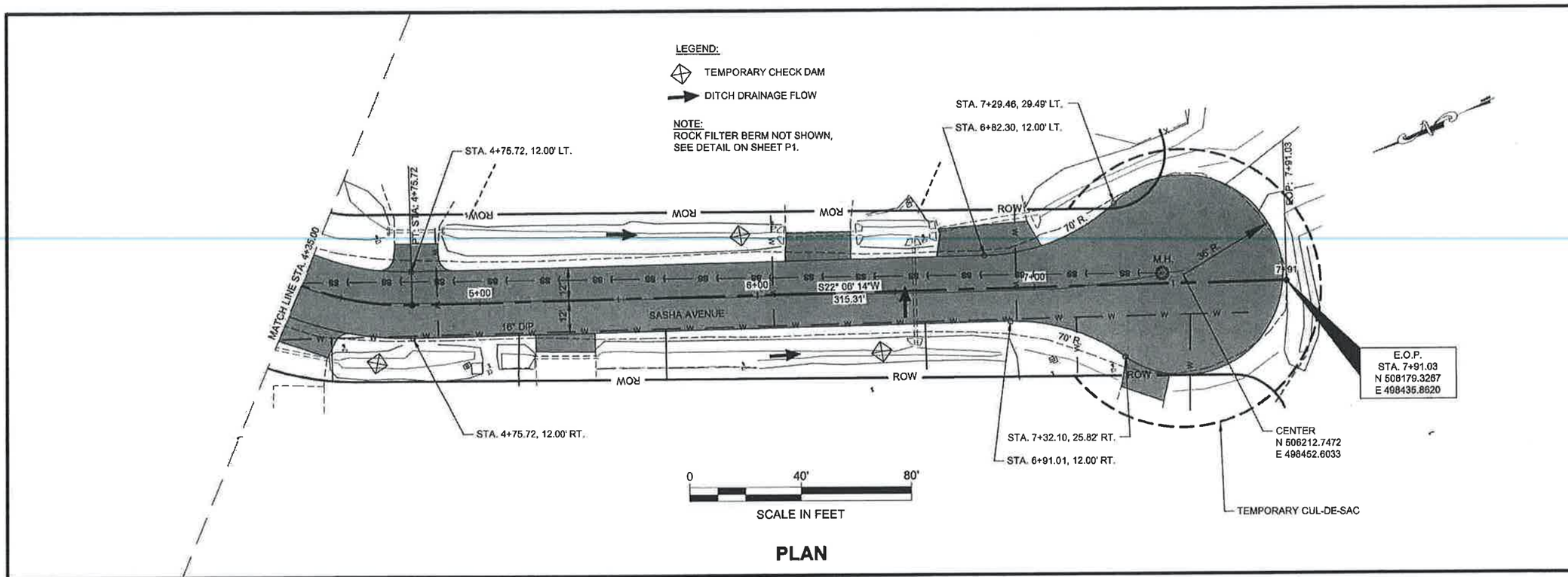
DRAWN BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

PLAN AND PROFILE

PROJECT DESIGNATION	
CMG-000S(751)	
STATE	YEAR
ALASKA	2014
SHEET NUMBER	TOTAL SHEETS
F7	34



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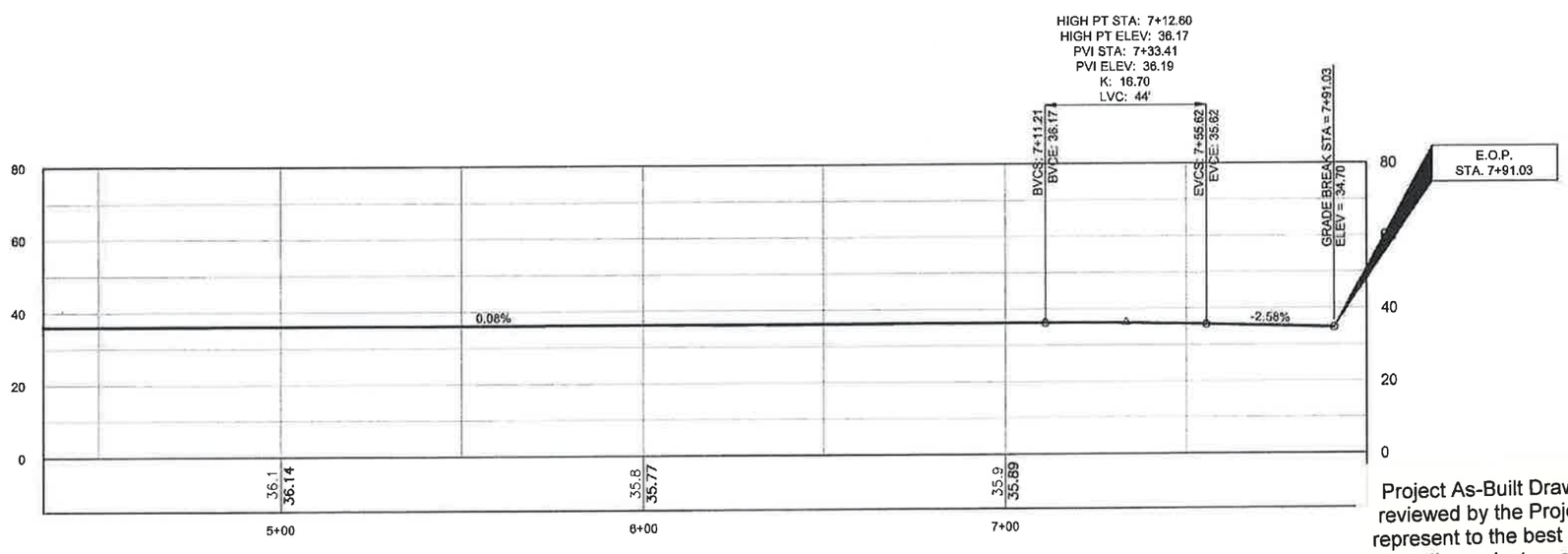


PROFILE

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.
PE T. BERGAM Date 3/4/16

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69549\PLANSET\SASHA_P AND P.DWG

TAB: F8

ADDENDUM NUMBER
ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

JNU: MENDENHALL VALLEY
DUST CONTROL-PAVING
PROJECT #69549

SASHA AVENUE
PLAN AND PROFILE

CHECKED BY: C. HOWARD

STATE OF ALASKA
49th
Chad J. Howard
PE-10835
REGISTERED PROFESSIONAL ENGINEER
6/5/14

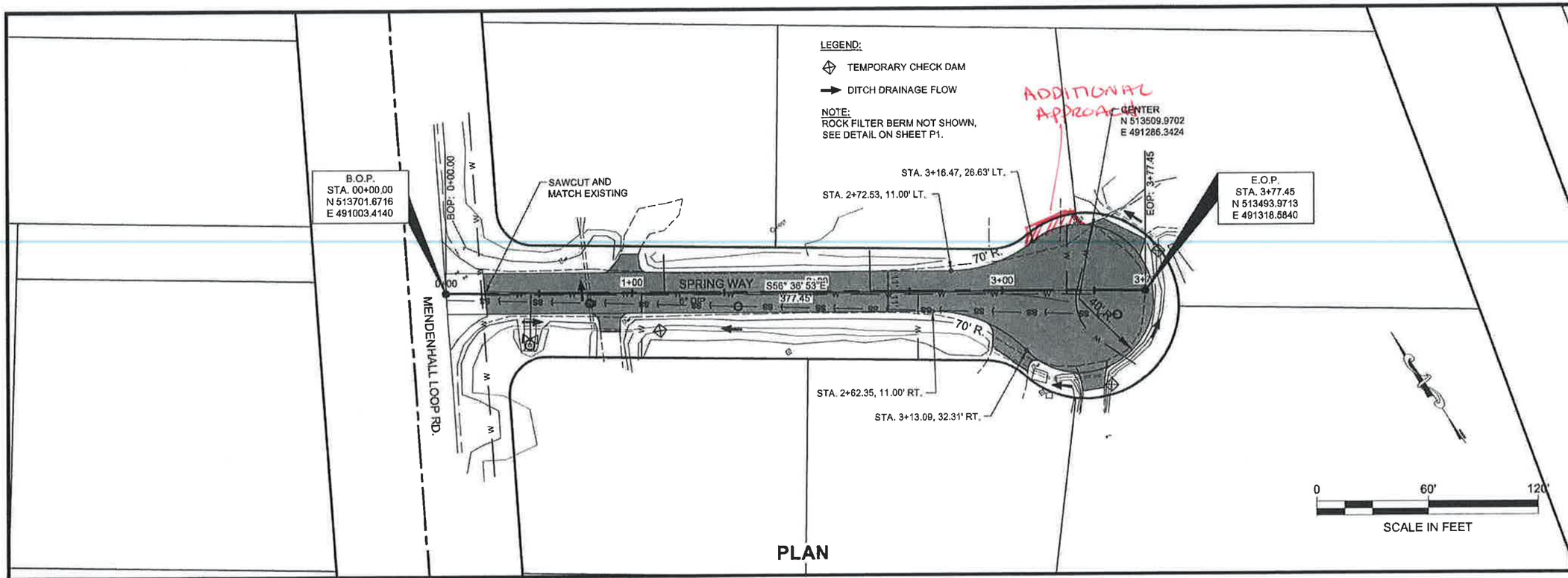
DESIGNED BY: C. HOWARD
DRAWN BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHEAST REGION

JNU: MENDENHALL VALLEY
DUST CONTROL-PAVING
PROJECT #69549

PLAN AND PROFILE

PROJECT DESIGNATION	
CMG-000S(751)	
STATE	YEAR
ALASKA	2014
SHEET NUMBER	TOTAL SHEETS
F8	34



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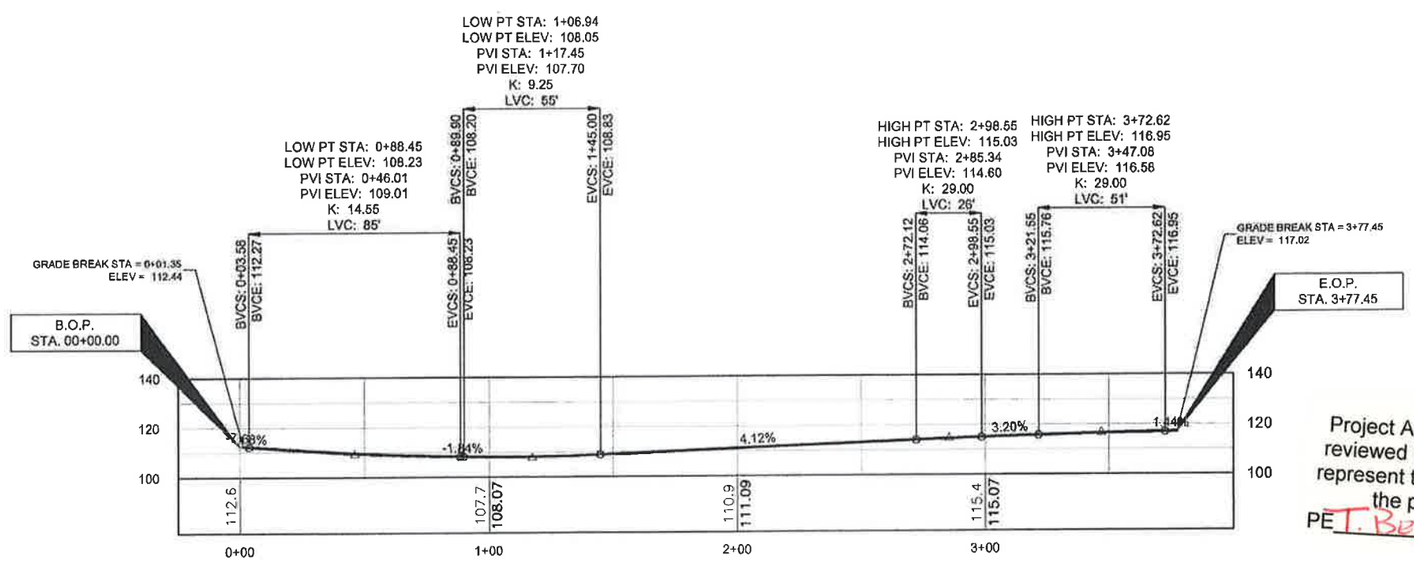

PROFILE

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.
PE T. Bergam Date 3/9/16

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69549\PLANSET\SPRING_P AND P.DWG

TAB: F9

ADDENDUM NUMBER
ATTACHMENT NUMBER
RECORD OF REVISIONS

No.	DATE	DESCRIPTION

JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

SPRING WAY PLAN AND PROFILE

CHECKED BY: C. HOWARD

STATE OF ALASKA 49th Chad J. Howard PE-10655 REGISTERED PROFESSIONAL ENGINEER 6/5/14

DESIGNED BY: C. HOWARD

DRAWN BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

PLAN AND PROFILE

PROJECT DESIGNATION	
CMG-000S(751)	
STATE	YEAR
ALASKA	2014
SHEET NUMBER	TOTAL SHEETS
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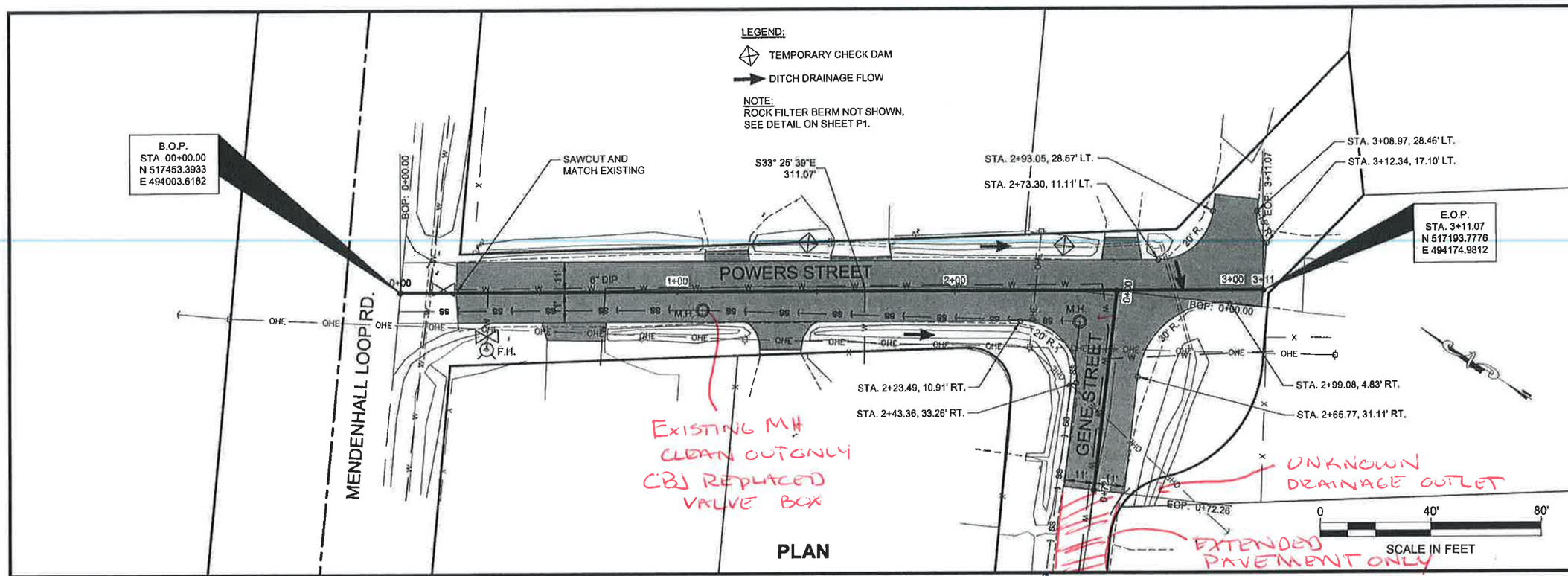

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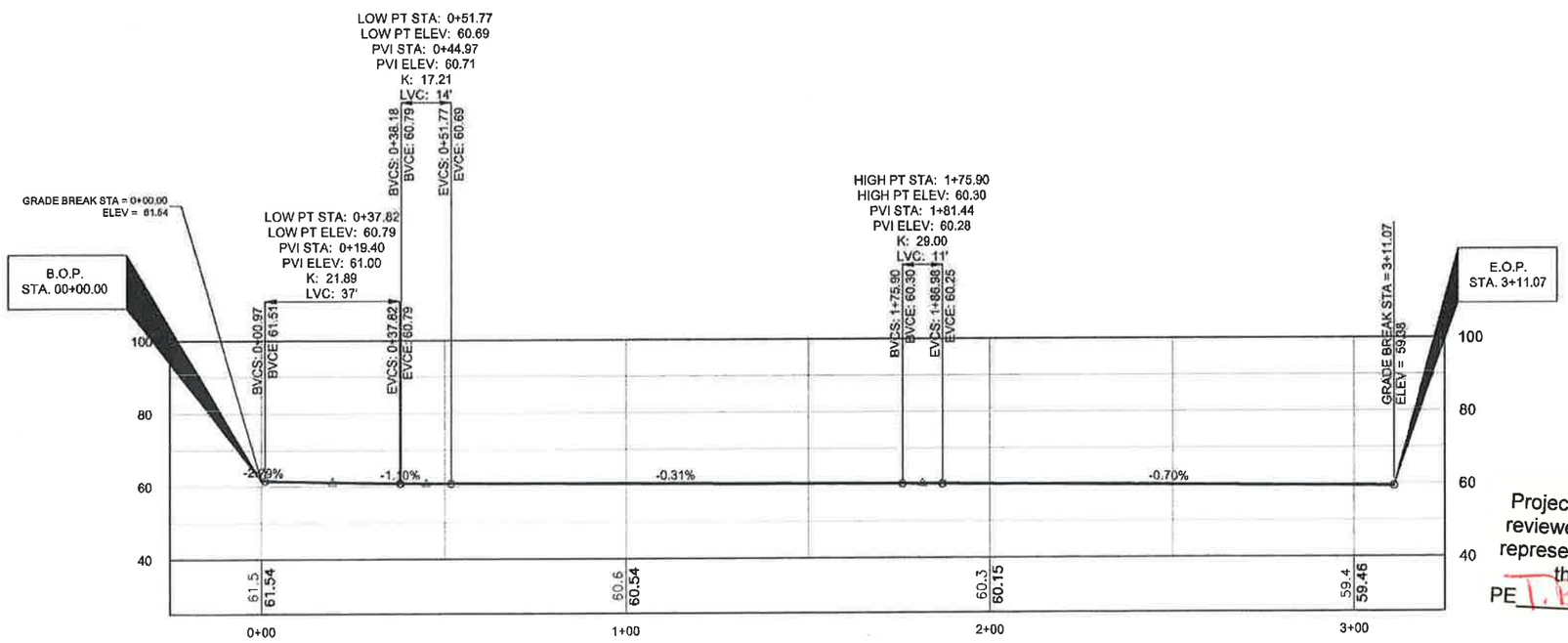

PROFILE

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 T. Bercotm Date 3/9/14

PATH: Q:\JNU\69549\PLANSET\POWERS_P AND P.DWG

TAB: F10

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

POWERS STREET PLAN AND PROFILE

CHECKED BY: C. HOWARD

STATE OF ALASKA 49th Chad J. Howard PE-10635 REGISTERED PROFESSIONAL ENGINEER 6/5/14

DESIGNED BY: C. HOWARD

DRAWN BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

PLAN AND PROFILE

PROJECT DESIGNATION
CMG-000S(751)

STATE	YEAR
ALASKA	2014
SHEET NUMBER	TOTAL SHEETS
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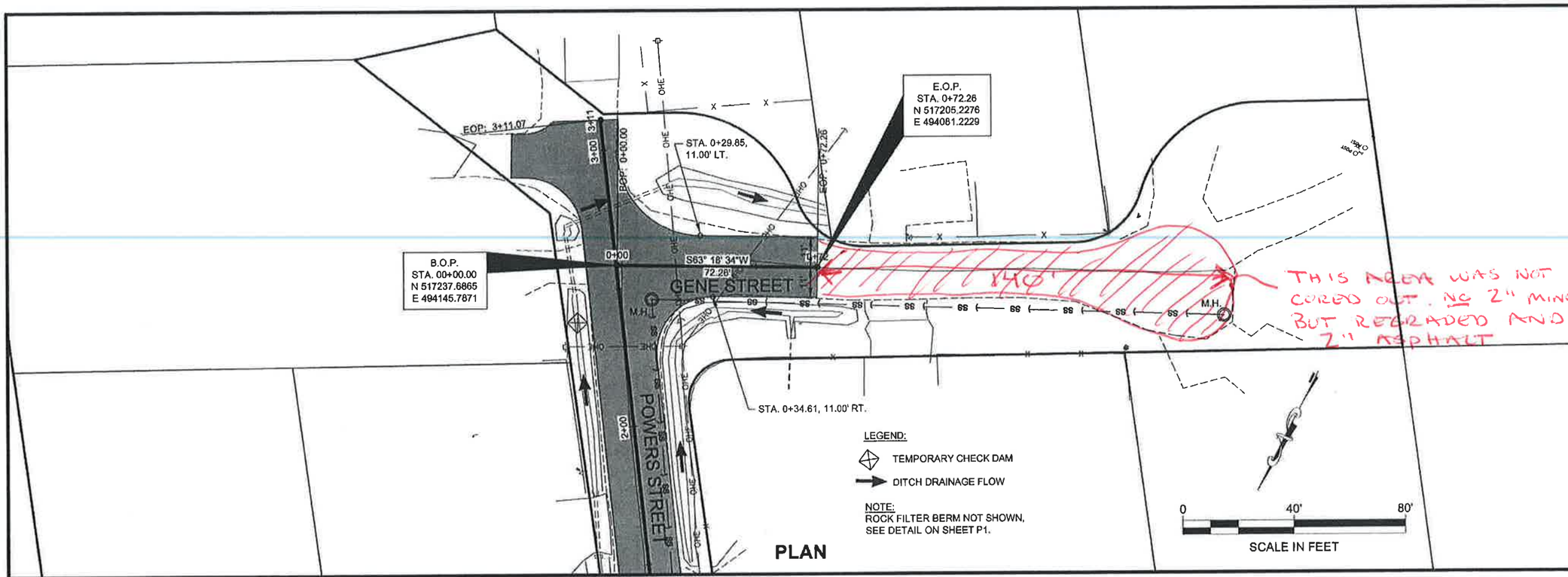

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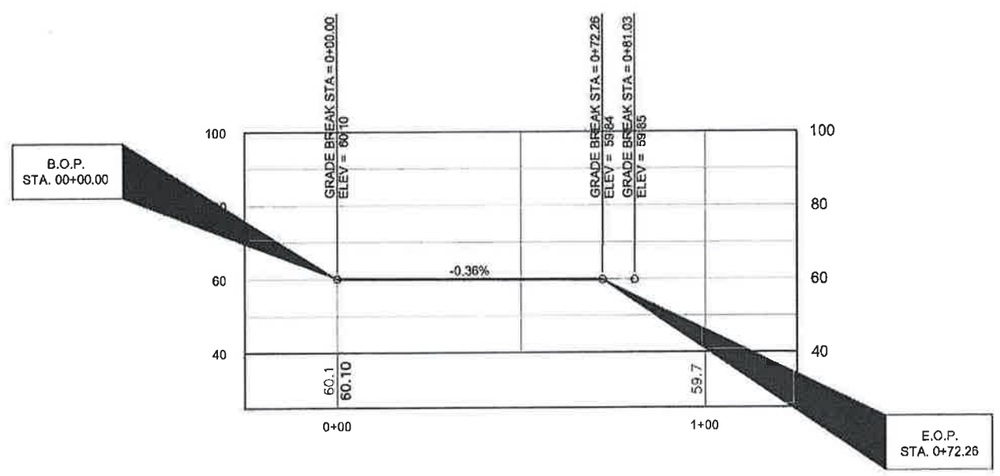

PROFILE

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PE T. Bizeam Date 3/9/14

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69549\PLANSET\GENE_P AND P.DWG

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ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

JNU: MENDENHALL VALLEY
DUST CONTROL-PAVING
PROJECT #69549

GENE STREET
PLAN AND PROFILE

CHECKED BY: C. HOWARD

STATE OF ALASKA
49th
Chad J. Howard
CE-10835
REGISTERED PROFESSIONAL ENGINEER
6/5/14

DESIGNED BY: C. HOWARD

DRAWN BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHEAST REGION

JNU: MENDENHALL VALLEY
DUST CONTROL-PAVING
PROJECT #69549

PLAN AND PROFILE

PROJECT DESIGNATION

CMG-000S(751)

STATE	YEAR
ALASKA	2014
SHEET NUMBER	TOTAL SHEETS
F11	34

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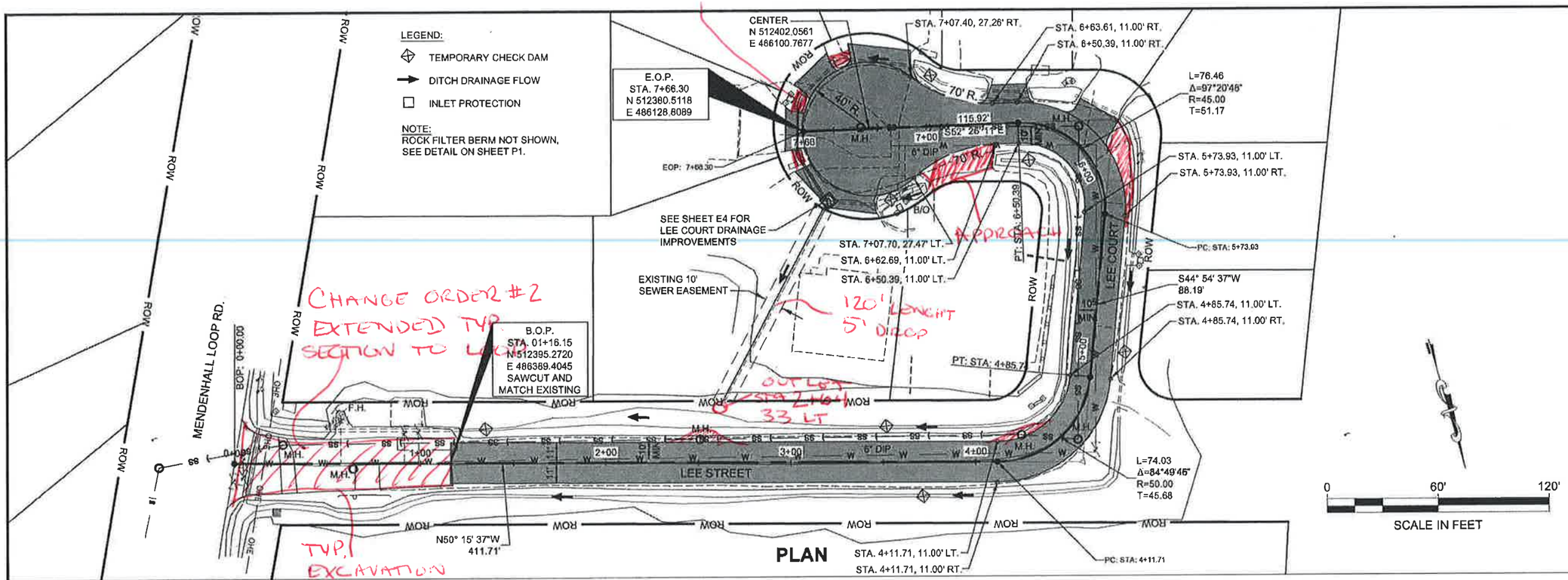
ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION



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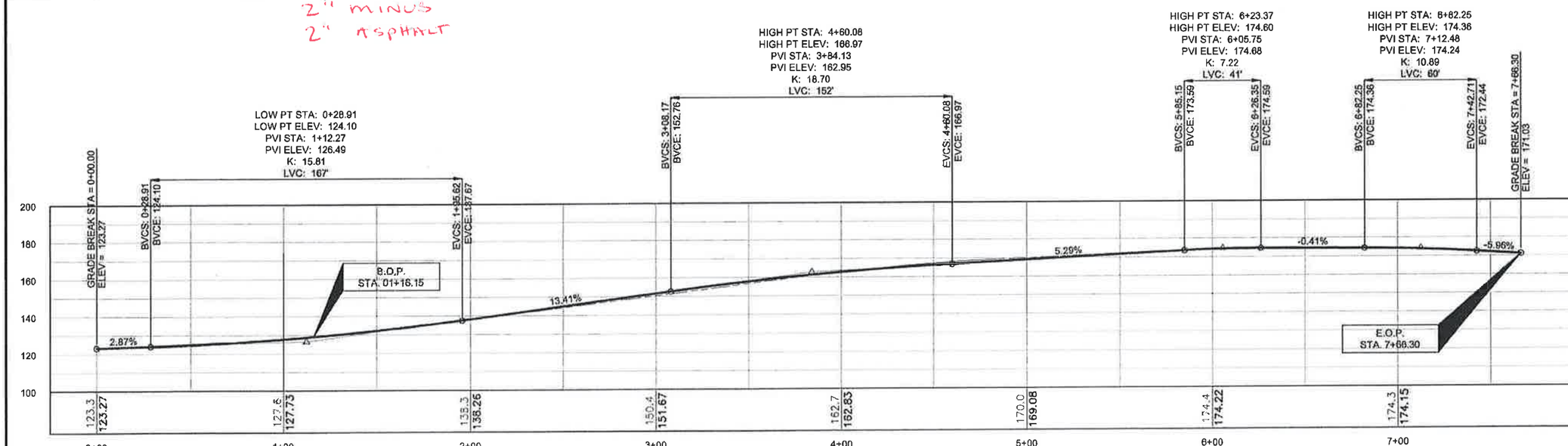


PROFILE

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

PE T. BERGAN Date 3/9/14

AWINGS USE DIMENSIONS

JNU: MENDENHALL VALLEY
DUST CONTROL-PAVING
PROJECT #69549

LEE STREET AND LEE COURT PLAN AND PROFILE

CHECKED BY: C. HOWARD

STATE OF ALASKA 49th Chad J. Howard CE-10635 REGISTERED PROFESSIONAL ENGINEER 6/5/14

DESIGNED BY: C. HOWARD

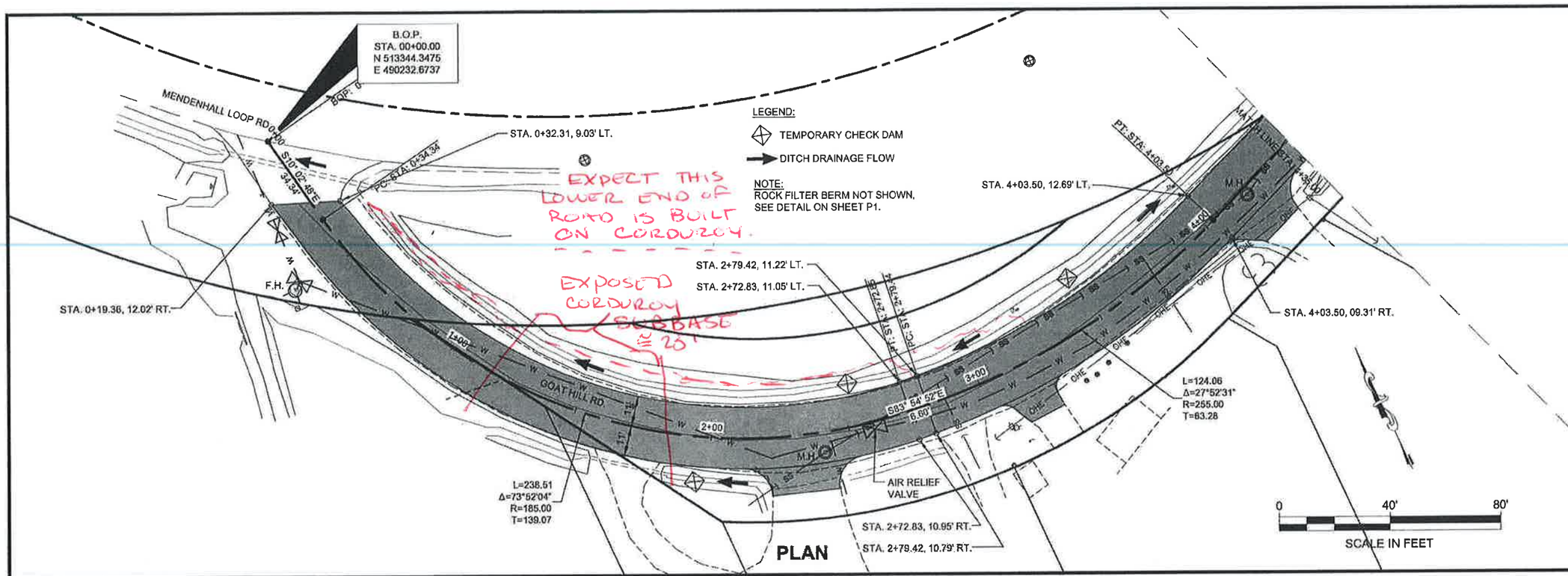
DRAWN BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHEAST REGION

JNU: MENDENHALL VALLEY
DUST CONTROL-PAVING
PROJECT #69549

PLAN AND PROFILE

PROJECT DESIGNATION	
CMG-000S(751)	
STATE	YEAR
ALASKA	2014
SHEET NUMBER	TOTAL SHEETS
F12	34



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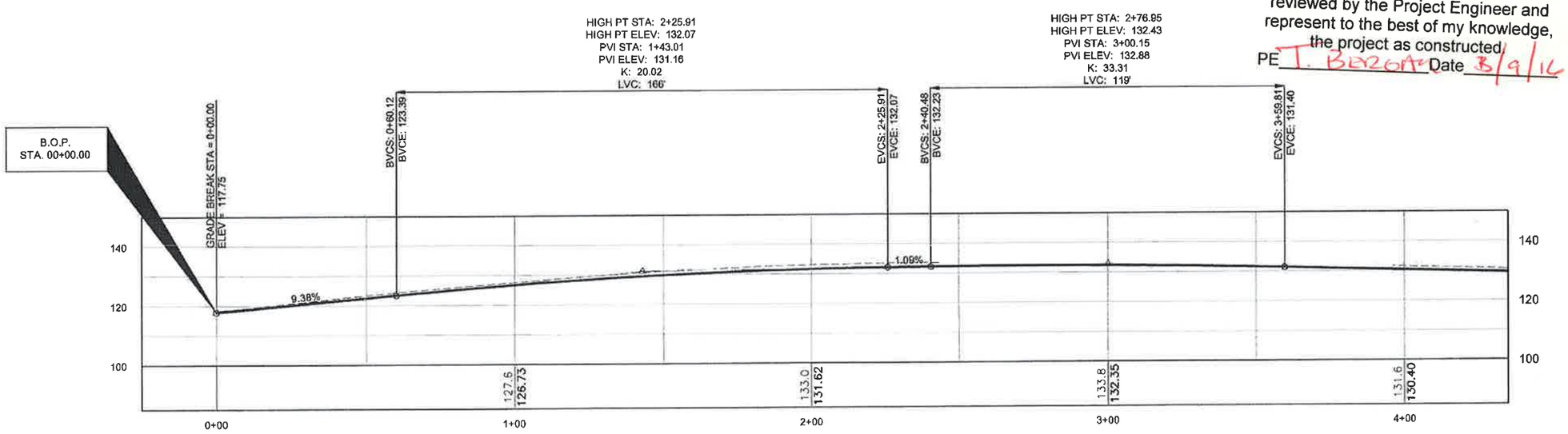

PROFILE

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PE J. Bergate Date 3/9/16

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69549\PLANSET\GOATHILL_P AND P.DWG

TAB: F13

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

GOAT HILL ROAD PLAN AND PROFILE

CHECKED BY: C. HOWARD

STATE OF ALASKA 40th Chad J. Howard CE-10635 REGISTERED PROFESSIONAL ENGINEER 6/5/14

DESIGNED BY: C. HOWARD

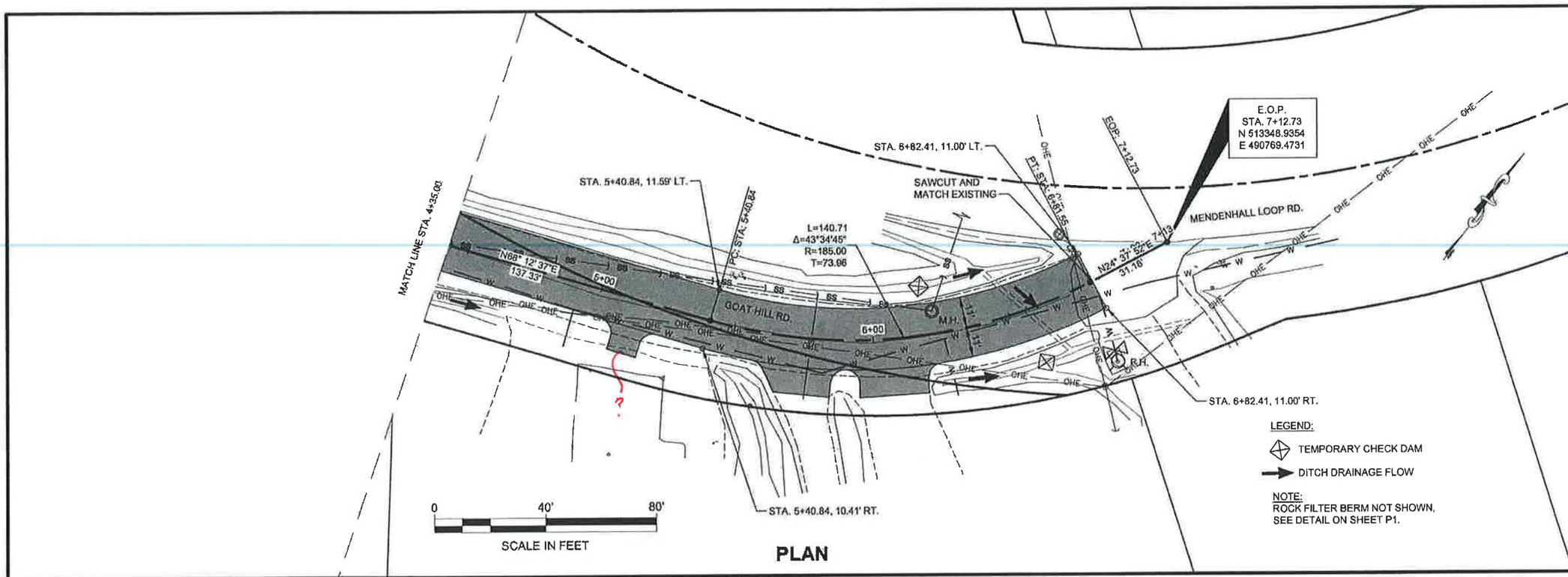
DRAWN BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

PLAN AND PROFILE

PROJECT DESIGNATION	
CMG-000S(751)	
STATE	YEAR
ALASKA	2014
SHEET NUMBER	TOTAL SHEETS
F13	34



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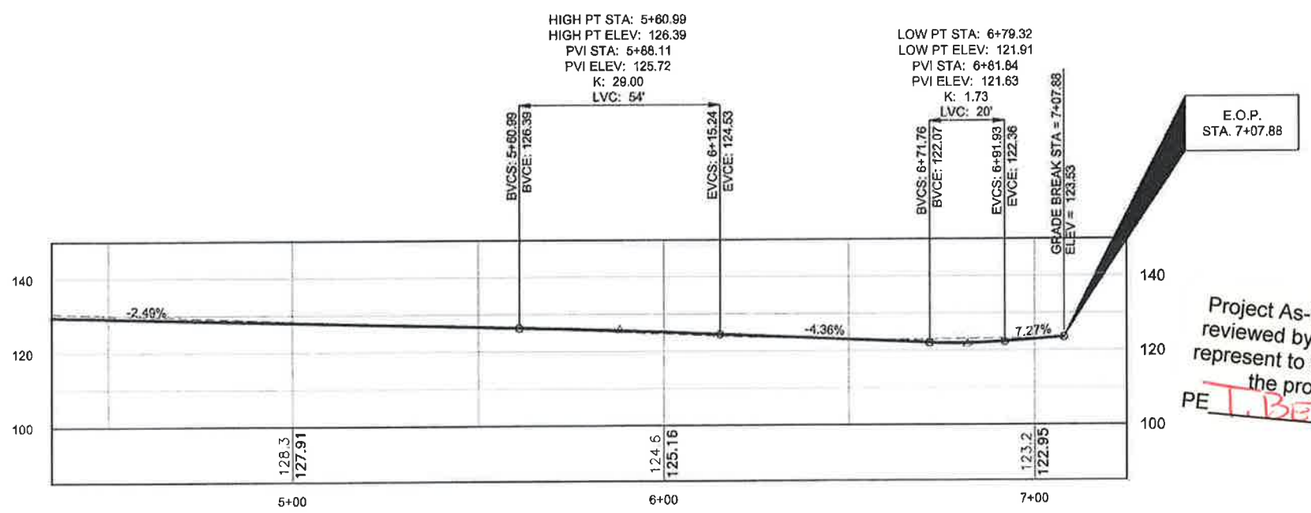

PROFILE

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PE T. BERGAN Date 3/9/16

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69549\PLANSET\GOATHILL_P AND P.DWG

TAB: F14

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

GOAT HILL ROAD PLAN AND PROFILE

CHECKED BY: C. HOWARD

STATE OF ALASKA 49th Chad J. Howard CE-10635 REGISTERED PROFESSIONAL ENGINEER 6/5/14

DESIGNED BY: C. HOWARD

DRAWN BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHEAST REGION

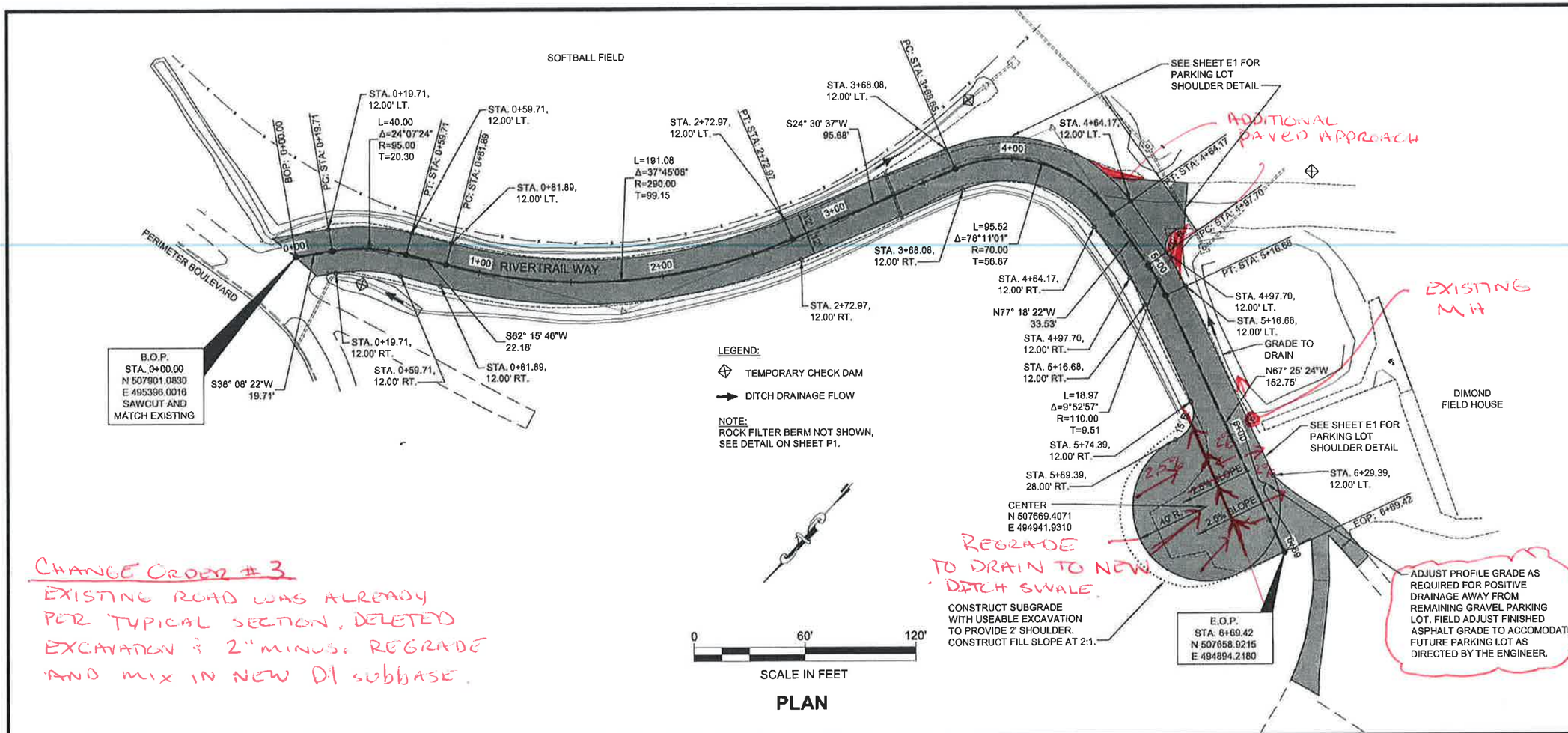
JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

PLAN AND PROFILE

PROJECT DESIGNATION

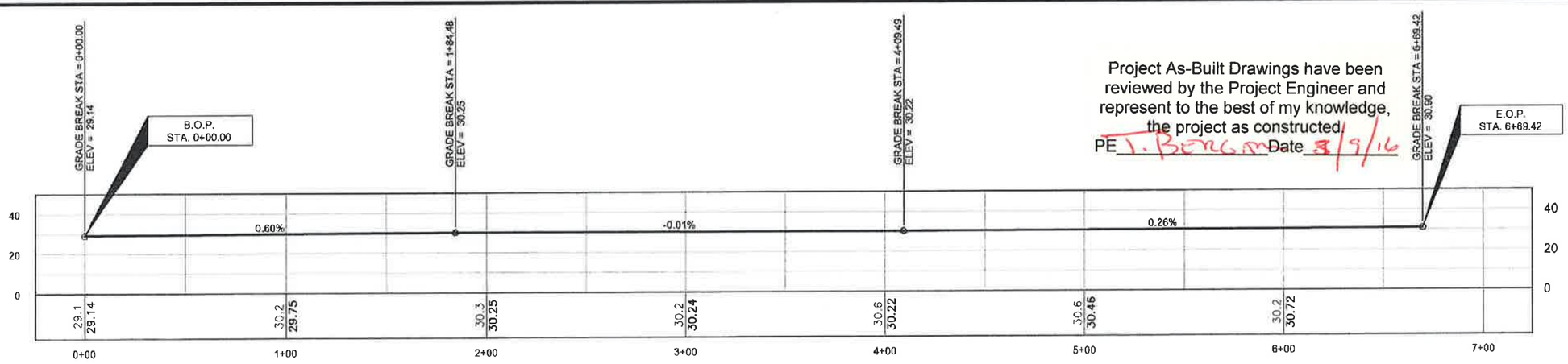
CMG-000S(751)

STATE	YEAR
ALASKA	2014
SHEET NUMBER	TOTAL SHEETS
F14	34



CHANGE ORDER #3
EXISTING ROAD WAS ALREADY PER TYPICAL SECTION. DELETED EXCAVATION & 2" MINUS. REGRADE AND MIX IN NEW D1 SUBBASE.

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 J. BERGM Date 8/9/16

PROFILE

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69549\PLANSET\RIVERTRAIL_P AND P.DWG

TAB: F15

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

JNU: MENDENHALL VALLEY
DUST CONTROL-PAVING
PROJECT #69549

RIVERTRAIL WAY
PLAN AND PROFILE

CHECKED BY: C. HOWARD

STATE OF ALASKA
49th
Chad J. Howard
CE-10835
REGISTERED PROFESSIONAL ENGINEER
6/5/14

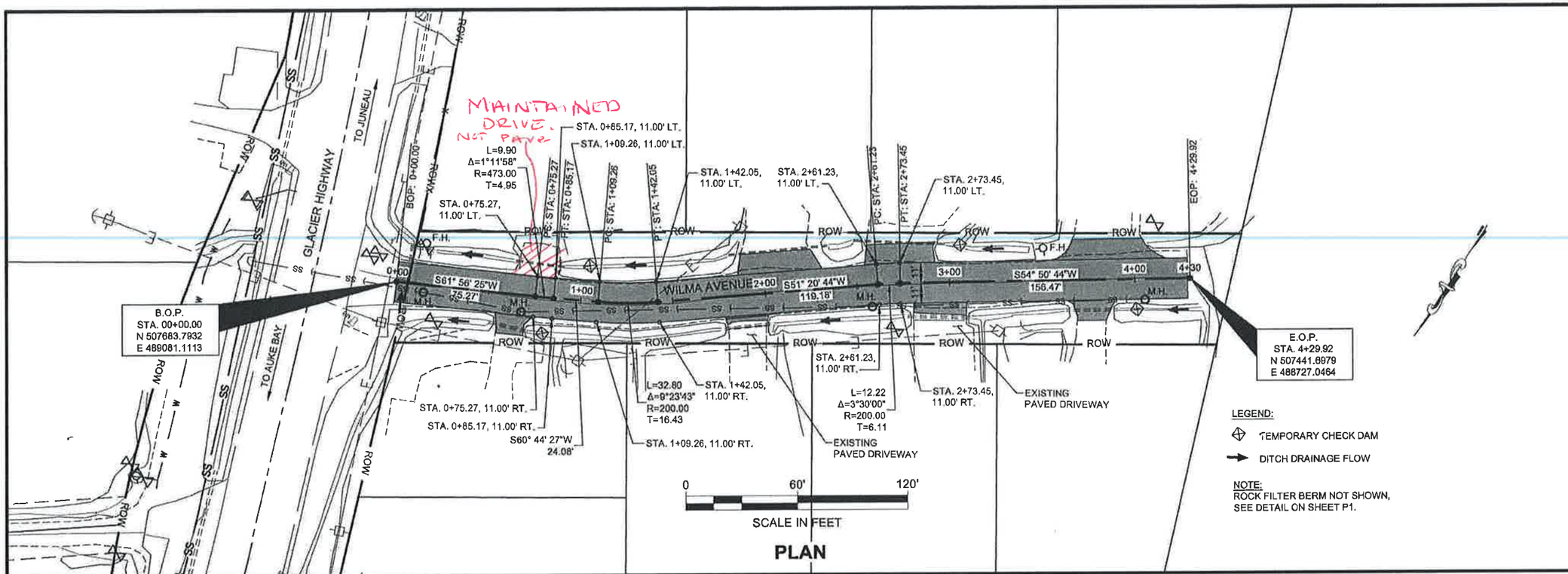
DESIGNED BY: C. HOWARD
DRAWN BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
SOUTHEAST REGION

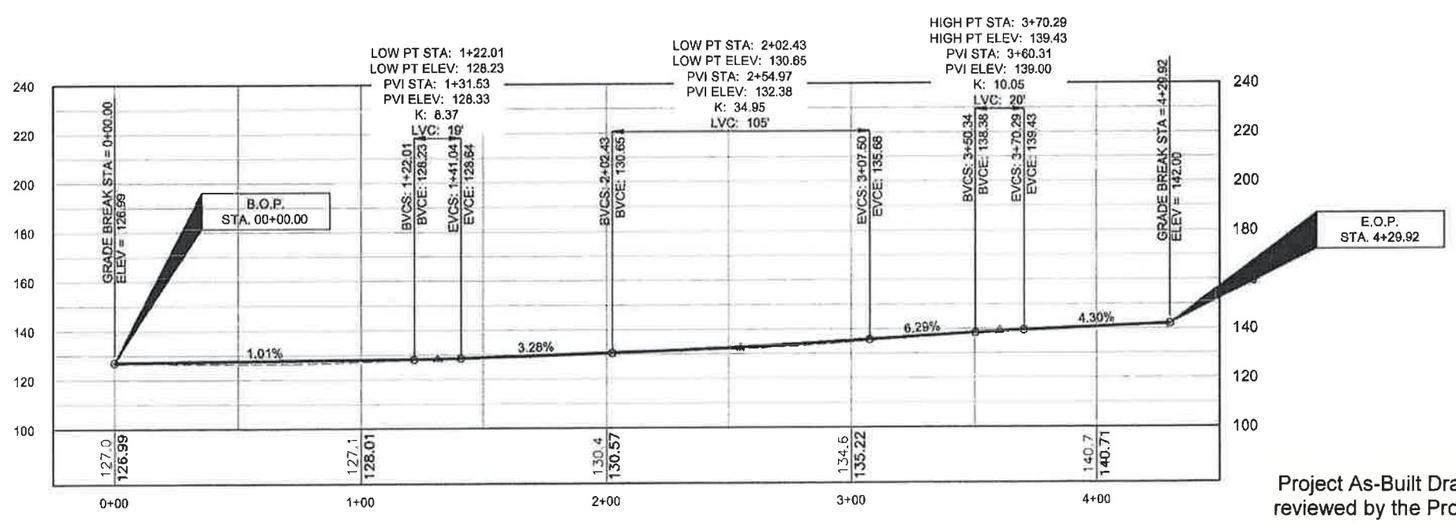
JNU: MENDENHALL VALLEY
DUST CONTROL-PAVING
PROJECT #69549

PLAN AND
PROFILE

PROJECT DESIGNATION	
CMG-000S(751)	
STATE	YEAR
ALASKA	2014
SHEET NUMBER	TOTAL SHEETS
F15	34



PLAN



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 J. BERGAM Date 3/9/16

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

PATH: Q:\JNU\69549\PLANSET\WILMA_P AND P.DWG

TAB: F16

ADDENDUM NUMBER

ATTACHMENT NUMBER

RECORD OF REVISIONS

No.	DATE	DESCRIPTION

JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

WILMA AVENUE PLAN AND PROFILE

CHECKED BY: C. HOWARD

STATE OF ALASKA 49th Chad J. Howard PE-10635 REGISTERED PROFESSIONAL ENGINEER 6/5/14

DESIGNED BY: C. HOWARD

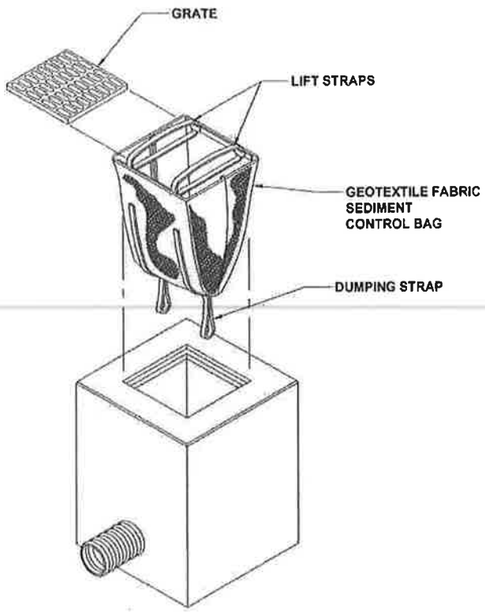
DRAWN BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
SOUTHEAST REGION

JNU: MENDENHALL VALLEY DUST CONTROL-PAVING PROJECT #69549

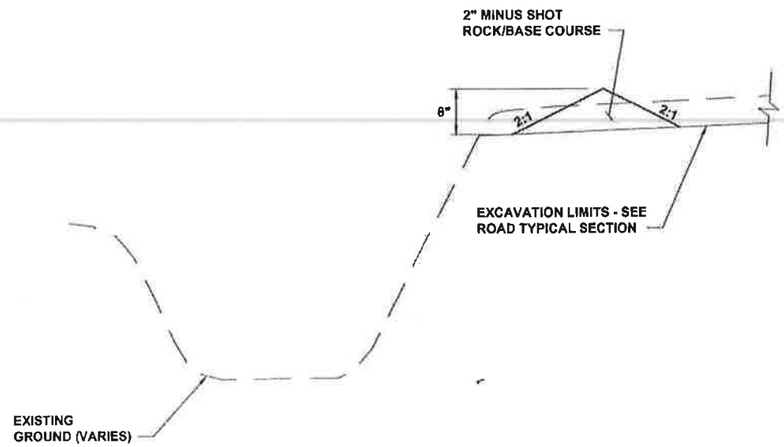
PLAN AND PROFILE

PROJECT DESIGNATION	
CMG-000S(751)	
STATE	YEAR
ALASKA	2014
SHEET NUMBER	TOTAL SHEETS
F16	34



INLET PROTECTION DETAIL

N.T.S.

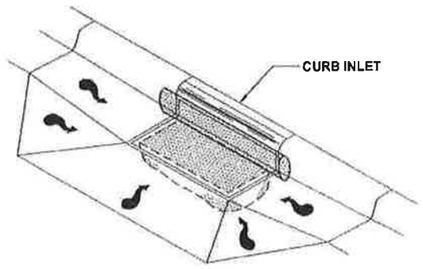


ROCK FILTER BERM SHOULDER DETAIL - BOTH SIDES

N.T.S.

EROSION & SEDIMENT CONTROL NOTES:

1. REFER TO APPENDIX B OF THE CONTRACT DOCUMENTS FOR THE ENVIRONMENTAL COMMITMENTS.
2. THE LOCATIONS OF TEMPORARY EROSION & SEDIMENT POLLUTION CONTROLS SHOWN ON F-SHEETS ARE RECOMMENDATIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PREPARE AND IMPLEMENT A WATER QUALITY CONTROL PLAN (WQCP) ACCORDING TO SECTION 641 OF THE SPECS.
3. INSTALL EROSION AND SEDIMENT CONTROL DEVICES BEFORE BEGINNING EARTH DISTURBING ACTIVITIES AND COLD PLANING OR AS SPECIFIED ELSEWHERE.
4. IF INSPECTION REVEALS SEDIMENT IS DISCHARGED BEYOND THE PROJECT WORK LIMITS. IMMEDIATELY IMPLEMENT CORRECTIVE ACTION. ADDITIONAL BMP'S MAY BE REQUIRED.



INLET PROTECTION DETAIL

N.T.S.

NOTES:

1. AFTER EXCAVATION, CONSTRUCT A ROCK FILTER BERM ALONG THE EDGE OF THE ROAD WITH 2" MINUS SHOT ROCK/BASE COURSE.
2. THE ROCK FILTER BERM IS A PERIMETER CONTROL DEVICE TO PREVENT SILT-LADEN STORM WATER FROM LEAVING THE WORK AREA.
3. INSPECT THE ROCK FILTER BERM REGULARLY AND AFTER RAINFALL. REPAIR AT THE FIRST SIGN OF DETERIORATION. REMOVE AND DISPOSE SEDIMENT BUILDUP AND REPLACE FILTER MATERIAL WHEN NECESSARY.
4. GRADE AND PERMANENTLY INCORPORATE ROCK FILTER BERM INTO THE 2" MINUS SHOT ROCK/BASE COURSE LAYER, AS SHOWN IN THE TYPICAL SECTIONS, AFTER EXPOSED SUBGRADE HAS BEEN COMPLETELY COVERED WITH THE 2" MINUS SHOT ROCK/BASE COURSE MATERIAL.

INLET PROTECTION INSTALLATION AND MAINTENANCE

1. INSTALLATION: REMOVE THE GRATE FROM CATCH BASIN. IF USING OPTIONAL OIL ABSORBENTS; PLACE ABSORBENT PILLOW IN UNIT. STAND THE GRATE ON END. MOVE THE TOP LIFTING STRAPS OUT OF THE WAY AND PLACE THE GRATE INTO THE SEDIMENT BAG SO THAT THE GRATE IS BELOW THE TOP STRAPS AND ABOVE THE LOWER STRAPS. HOLDING THE LIFTING DEVICES, INSERT THE GRATE INTO THE INLET.
2. MAINTENANCE: REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM VICINITY OF UNIT AFTER EACH STORM EVENT. AFTER EACH STORM EVENT AND AT REGULAR INTERVALS, LOOK INTO THE SEDIMENT BAG. IF THE CONTAINMENT AREA IS MORE THAN 1/3 FULL OF SEDIMENT, THE UNIT MUST BE EMPTIED. TO EMPTY UNIT, LIFT THE UNIT OUT OF THE INLET USING THE LIFTING STRAPS AND REMOVE THE GRATE. IF USING OPTIONAL OIL ABSORBENTS; REPLACE ABSORBENT WHEN NEAR SATURATION.
3. INSTALL INLET PROTECTION AT LOCATIONS PRIOR TO EARTH DISTURBING ACTIVITIES AND COLD PLANING.

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.
PE T. Boroom Date 3/9/16

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

CHECKED BY: C. HOWARD

STATE OF ALASKA
Chad J. Howard
CE-10835
REGISTERED PROFESSIONAL ENGINEER
6/5/14

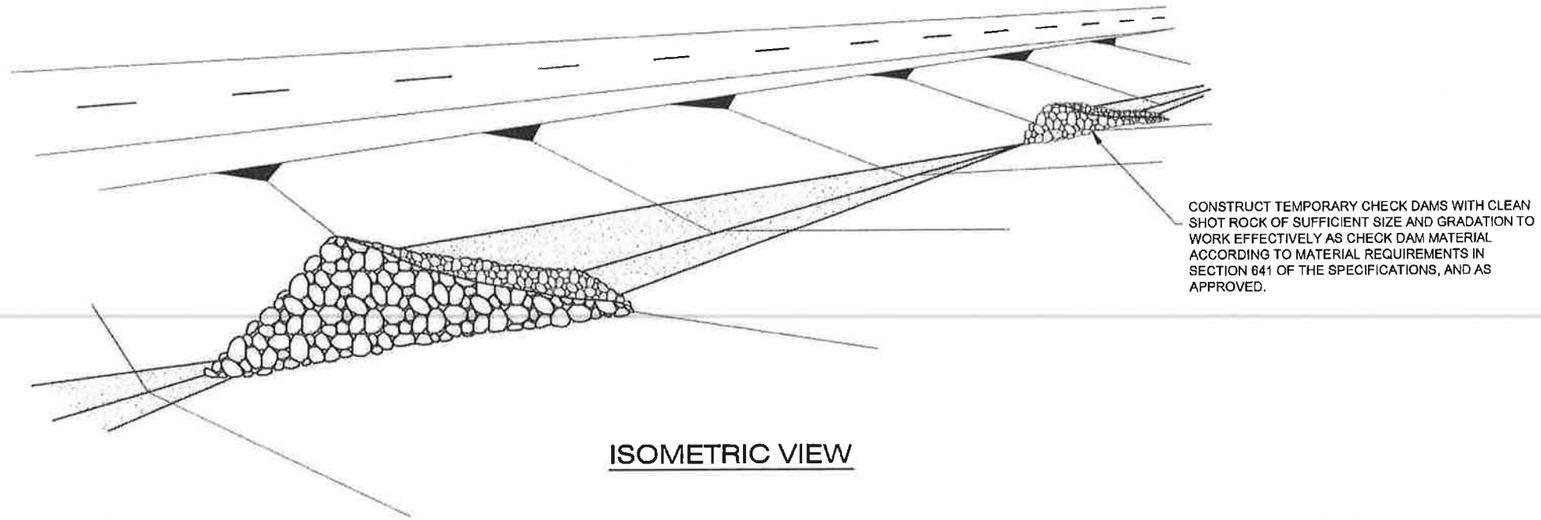
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SOUTHEAST REGION

JNU: MENDENHALL VALLEY
DUST CONTROL - PAVING
PROJECT # 69549

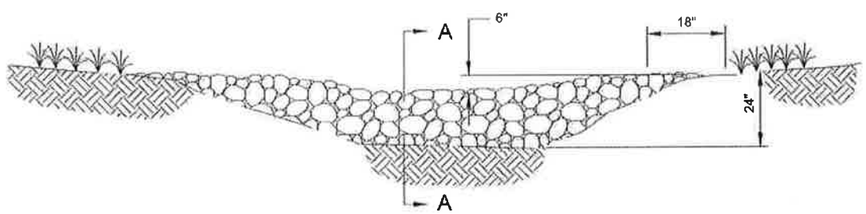
EROSION AND SEDIMENT CONTROL DETAILS

DESIGNED BY: C. HOWARD
DRAWN BY: D. STEVENS
PATH: Q:\JNU\69540\PLANSET\69540_P1_ESC DETS.DWG
TAB: P1

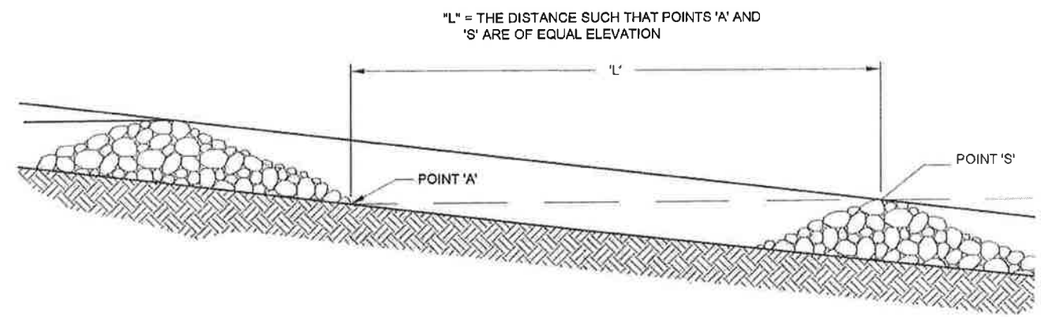
REVISIONS			PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION	CMG-000S(751)	2014	P1	34



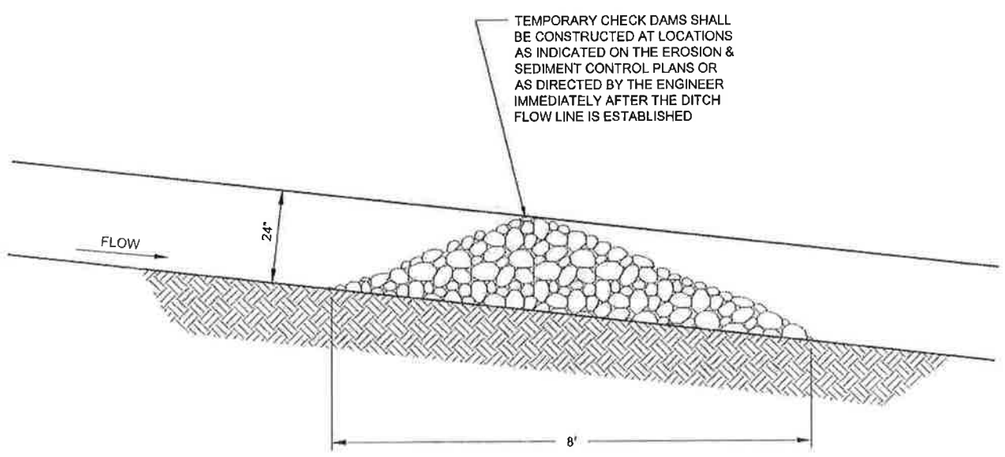
ISOMETRIC VIEW



VIEW LOOKING UPSTREAM



SPACING BETWEEN CHECK DAMS



SECTION A-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 T. BERGAN Date 3/9/16

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

CHECKED BY: C. HOWARD

STATE OF ALASKA
Chad J. Howard
CE-10835
REGISTERED PROFESSIONAL ENGINEER
6/5/14

DESIGNED BY: C. HOWARD
DRAWN BY: D. STEVENS

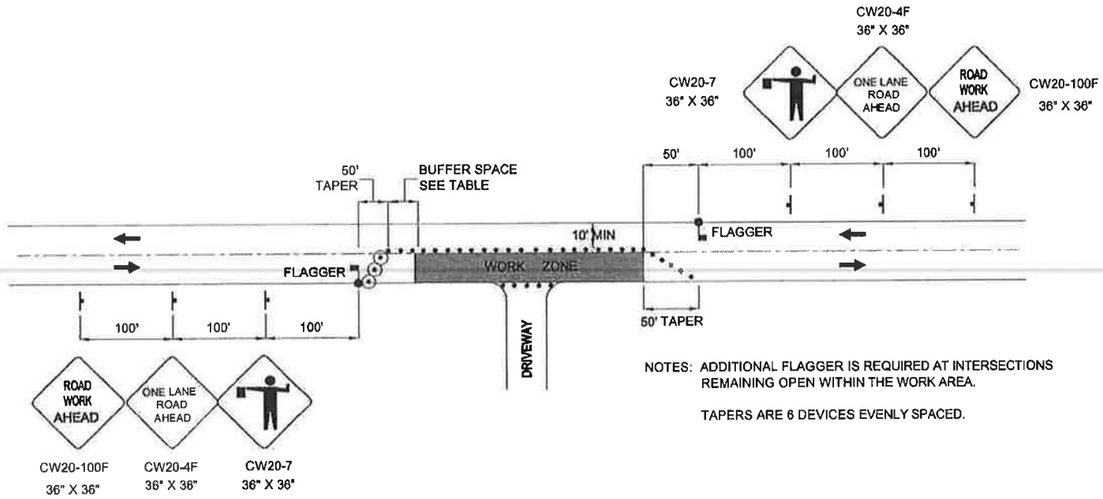
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHEAST REGION

JNU: MENDENHALL VALLEY DUST CONTROL - PAVING
PROJECT # 69549

TEMPORARY CHECK DAM DETAILS

PATH: Q:\JNU\69549\PLANSET\69549_P1_ESC DETS.DWG
TAB: P2

REVISIONS			PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION	CMG-000S(751)	2014	P2	34



NOTES: ADDITIONAL FLAGGER IS REQUIRED AT INTERSECTIONS REMAINING OPEN WITHIN THE WORK AREA.

TAPERS ARE 6 DEVICES EVENLY SPACED.

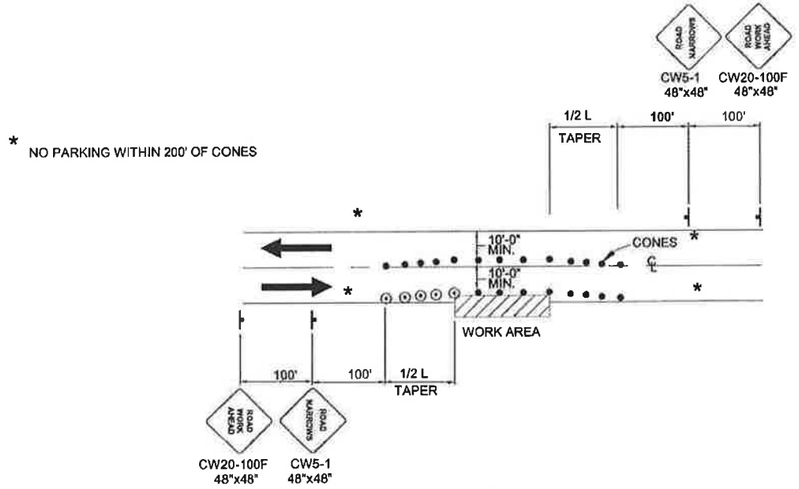
TWO LANE ROADWAY-SINGLE LANE CLOSURE

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. CONSTRUCTION SIGNING SHALL BE IN PLACE ONLY WHEN THE CONDITIONS EXIST FOR WHICH THE SIGNS ARE INTENDED.
4. CHANNELIZATION DEVICES IF USED AT NIGHT SHALL BE LIT IN ACCORDANCE WITH THE ALASKA TRAFFIC MANUAL.
5. DRIVEWAYS MAY BE CLOSED DURING ACTUAL WORK ON A GIVEN DRIVEWAY, PROVIDED THAT THE CLOSURE DOES NOT EXCEED 8 HOURS AND THE AFFECTED RESIDENTS HAVE BEEN GIVEN 24 HOURS NOTICE OF THE CLOSURE.
6. IT IS THE INTENT OF THIS TRAFFIC CONTROL PLAN (TCP) TO ILLUSTRATE SOME, NOT ALL, OF THE TRAFFIC CONTROL SETUPS WHICH WILL BE REQUIRED ON THIS PROJECT. PLANS FOR CONFIGURATIONS NOT COVERED BY THE TCP SHALL BE CREATED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL. WHERE APPROPRIATE, THEY SHALL INCORPORATE APPLICABLE DETAILS FROM THESE SHEETS. SEE 643-1.03.
7. PROVIDE AND MAINTAIN SAFE ROUTES FOR PEDESTRIANS AND BICYCLISTS THROUGH OR AROUND TRAFFIC CONTROL ZONES AT ALL TIMES, EXCEPT WHEN REGULATIONS PROHIBIT PEDESTRIANS OR BICYCLISTS.
8. THE CONTRACTOR SHALL KEEP THE PUBLIC INFORMED OF HIS CONSTRUCTION ACTIVITIES THROUGH THE USE OF THE LOCAL NEWS MEDIA. NEWS RELEASES SHALL BE APPROVED BY THE PROJECT ENGINEER PRIOR TO THEIR RELEASE. NEWS RELEASES WILL BE REQUIRED BUT NOT LIMITED TO, THE ONSET OF WORK, GRINDING, PAVING, AND CHANGES IN THE LANE CONFIGURATIONS.
9. THE CONTRACTOR SHALL NOT BEGIN WORK ON ANOTHER ROADWAY UNTIL THE ROADWAY THEY ARE CURRENTLY WORKING ON IS COMPLETED AND ACCEPTED, INCLUDING PAVING. SEE 643-3.08.

LEGEND

- ..... SIGN
- ..... CONE
- ..... DRUM
- ..... FLAGGING STATION



ROADWAY ENCROACHMENT

NOTE: IF ONLY ONE LANE IS EFFECTED 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.

TCP SETUP TABLE

	MIN MERGING TAPER LENGTH (L) IN FEET WIDTH OF OFFSET (W) IN FEET			MIN NUMBER OF DEVICES WIDTH OF OFFSET (W) IN FEET			MAX DEVICE SPACING IN FEET		BUFFER SPACE
SPEED (MPH)	10'	11'	12'	10'	11'	12'	ALONG TAPER	ALONG TANGENT	(FT)
25 OR BELOW	105	115	125	6	6	6	25	50	155
30	150	165	180	6	7	7	30	60	200

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

PE J. Bragaw Date 3/5/14

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

CHECKED BY: C. HOWARD

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

DESIGNED BY: C. HOWARD
DRAWN BY: D. STEVENS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHEAST REGION

JNU: MENDENHALL VALLEY DUST CONTROL - PAVING
PROJECT # 69549

TRAFFIC CONTROL PLAN

PATH: Q:\JNU\69549\PLANSET\69549_S1_TRAFFIC CONTROL PLAN.DWG
TAB: S1

REVISIONS		
NO	DATE	DESCRIPTION

PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
CMG-000S(751)	2014	S1	34

A-1

SHEET 1 of 1

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 PDT — Pen #1
SECTION LINE INTERSECTION — S 23° 30'W — 1936' 51+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 — SS SANITARY SEWER — G GAS — W WATER
PROPOSED UTILITY PIPELINES — OIL — SANITARY SEWER — GAS — WATER
EXISTING STORM DRAIN — SD STORM DRAIN
PROPOSED STORM DRAIN STRUCTURE AND PIPE NO'S APPLICABLE IF SHOWN — S-1 SD S-2 — 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.
RIVERS OR CREEK — RIVER — 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 — 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	2	2
JUNCTION BOX, TYPE I	1	1
JUNCTION BOX, TYPE II	2	2
JUNCTION BOX, TYPE III	3	3
DETECTOR, LOOP	4	4
DETECTOR, MAGNETOMETER	6	6
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

FOR STRIPING PLANS:
SOLID WHITE STRIPE — W
SOLID YELLOW STRIPE — Y
BROKEN WHITE or YELLOW STRIPE — W Y
DASH YELLOW STRIPE — Y
SOLID YELLOW STRIPE with BROKEN YELLOW STRIPE — Y

842 — R.R. 2580+60 — HWY. 126+38
RAILROAD MILE POST

143 — 121+25
HIGHWAY MILE POST

T.BERGATM 3/9/16

REVISIONS

Date	Description	By

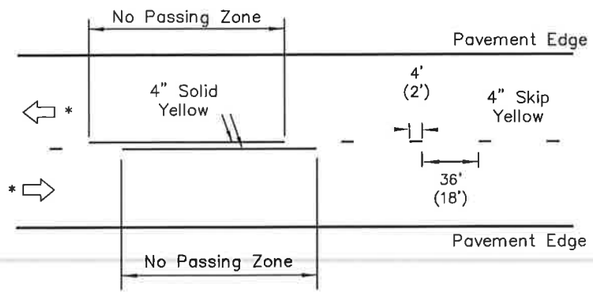
State of Alaska
Department of Transportation & Public Facilities

SYMBOLS

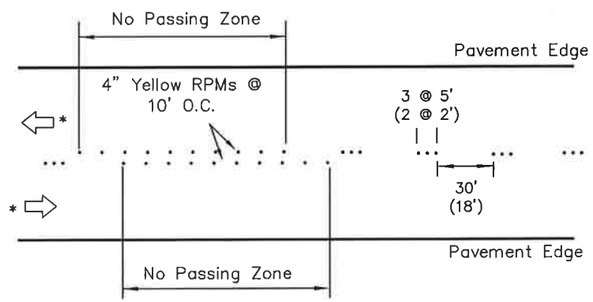
APPROVED — 49th — Carin L. Rasmussen — CE-2295 — Alaska

Date

A-1



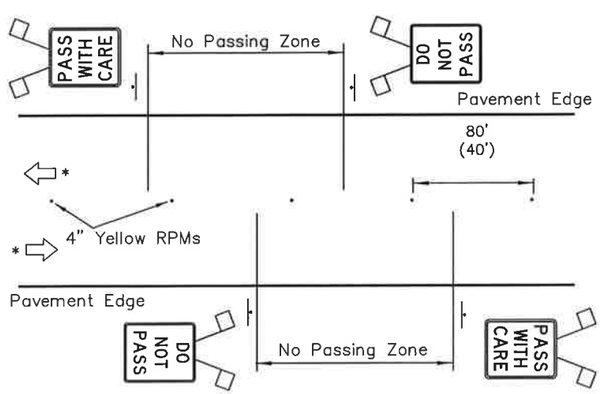
Striping



Temporary Raised Pavement Markers

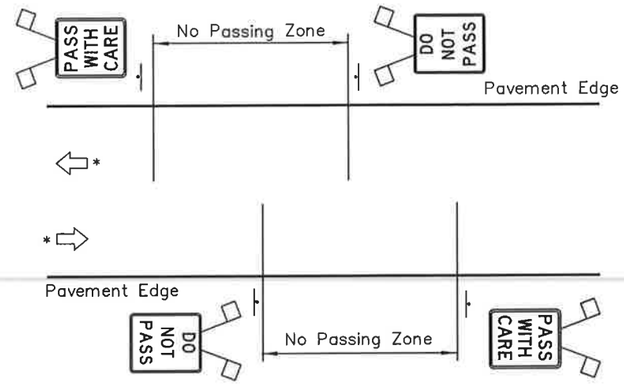
DETAIL A

Two-lane road: No Passing Zones indicated with pavement markings.



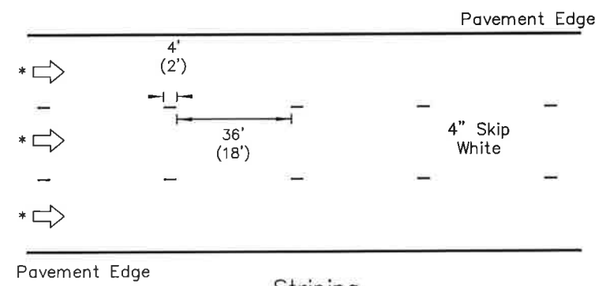
DETAIL B

Two-lane road: No Passing Zones indicated by signs only. Raised pavement markers for centerline delineation.

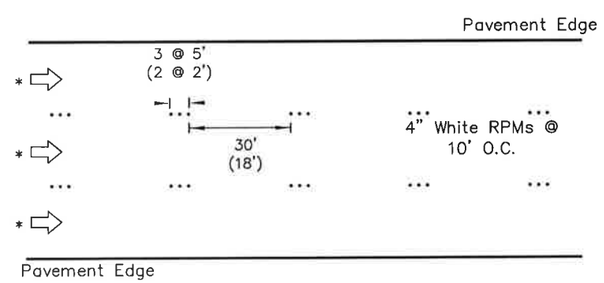


DETAIL C

Two-lane road: No Passing Zones indicated by signs only (see Note 2c). No centerline delineation.



Striping



Temporary Raised Pavement Markers

DETAIL D

Multilane one-way road: Lane dividing lines

* Direction of Travel

C-05.20

GENERAL NOTES:

1. Final pavement markings conforming to Part 3 of the Alaska Traffic Manual should be installed before paved roads are open to public travel. If that is not practical, install interim pavement markings as shown on this drawing. Maintain interim pavement markings until final pavement markings are installed.

2. No interim pavement markings are required:
   a. on projects that will not have permanent markings when finished.
   b. in work zones that are open to public travel for no more than one work shift during daytime or for no more than one hour at night.
   c. where DO NOT PASS and PASS WITH CARE signs are installed on two lane roads as shown in Detail C, no pavement markings are required:
      1) for 3 days if seasonal ADT is above 2000, or
      2) for 1 month if seasonal ADT is below 2000.

3. Interim pavement markings should not be in place longer than 14 calendar days before being replaced with permanent markings conforming to Part 3 of the Alaska Traffic Manual unless the Engineer provides written approval.

4. Where R4-1 DO NOT PASS signs are used, install at the beginning of no passing zones and at no more than 1500' spacings within no passing zones.

5. Install high level warning devices on all DO NOT PASS and PASS WITH CARE signs.

6. Offset temporary markings 8"-12" from the future location of permanent markings if applied on the same lift of pavement.

7. Dimensions in parenthesis apply to curves with a radius of 1000 feet or less or where posted speed limit is 30 mph or less.

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.
PE TB Date 3/9/16

REVISIONS		
Date	Description	By
4/28/10	RPM spacing, signs	KJS

Sheet 1 of 1

State of Alaska
Department of Transportation & Public Facilities

INTERIM PAVEMENT MARKINGS

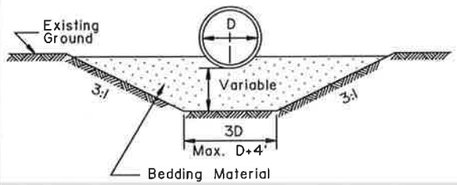
APPROVED 49TH Curtis J. Smith 4/28/10

Date 5/31/12

C-05.20

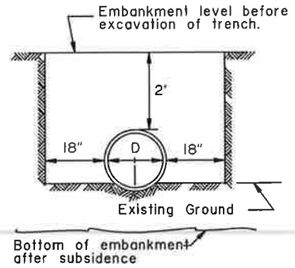
D-01.02

SHEET 1 of 1

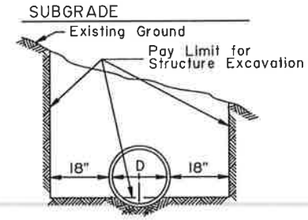


TYPE "A"
FOUNDATION STABILIZATION

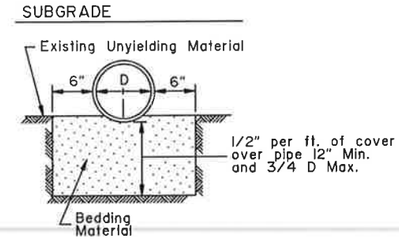
To be used in unstable areas as directed by the Engineer.



TYPE "B"



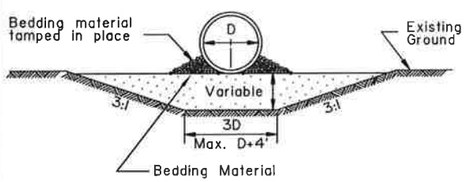
TYPE "C"



TYPE "D"
ROCK OR UNYIELDING MATERIAL

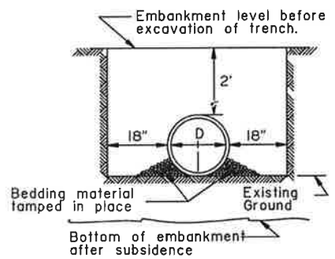
GENERAL NOTES:

1. Sidefill shall be placed and compacted with care under haunches of pipe and shall be brought up evenly and simultaneously on both sides of pipe to 1 foot above the top of the full length of the pipe.
2. Alternate installation methods may only be used when specified or approved by the Engineer.

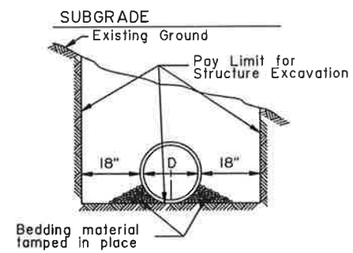


'ALTERNATE'
TYPE "A"
FOUNDATION STABILIZATION

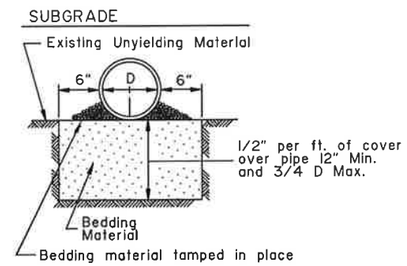
To be used in unstable areas as directed by the Engineer.



'ALTERNATE'
TYPE "B"

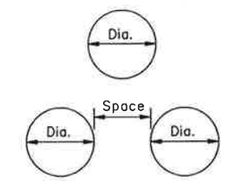


'ALTERNATE'
TYPE "C"



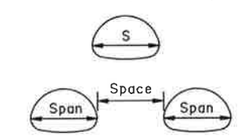
'ALTERNATE' TYPE "D"
ROCK OR UNYIELDING MATERIAL

D = Nominal Pipe Diameter



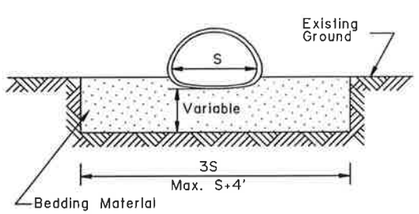
MULTIPLE INSTALLATIONS	
Dia.	Minimum Space Between Pipes
0" - 42"	24"
48" & Over	1/2 Dia. of pipe or 3', whichever is less.

S = Nominal Pipe Arch Span



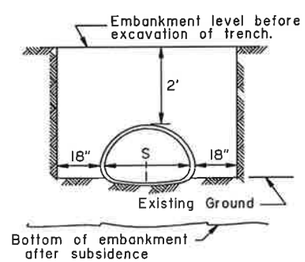
MULTIPLE INSTALLATIONS	
Dia.	Minimum Space Between Pipes
0" - 42"	24"
48" & Over	1/2 Span of pipe arch or 3', whichever is less.

CULVERT PIPE

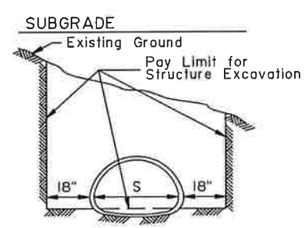


TYPE "A"
FOUNDATION STABILIZATION

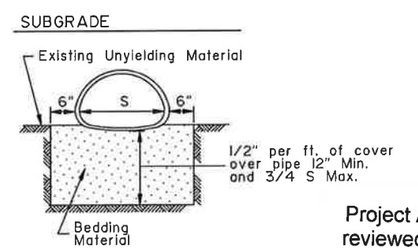
To be used in unstable areas as directed by the Engineer.



TYPE "B"



TYPE "C"



TYPE "D"
ROCK OR UNYIELDING MATERIAL

ARCH

REVISIONS		
Date	Description	By
12/1/87	Delete ref. to Specs.	Gdo
4/1/93	Delete Alt. Arch	Gdo

State of Alaska
Department of Transportation
& Public Facilities

CULVERT PIPE & ARCH INSTALLATION DETAILS

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

PE TB K Date 3/9/16

APPROVED

Date 7/15/82

D-01.02

D-04.21

CORRUGATED CIRCULAR ALUMINUM PIPE

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" 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)
30	12	52	12	65						
36	12	43	12	54	12	100+	12	100+	12	100+
42	12	36	12	46	12	65	12	100+	12	100+
48	12	32	12	40	12	57	12	73	12	100+
54	15	28	15	35	15	50	12	65	12	100+
60	15	25	15	32	15	45	15	58	15	72
66	18	23	18	28	18	41	18	53	18	65
72	18	21	18	26	18	37	18	48	18	59
78			21	24	21	34	21	44	21	55
84					21	31	21	41	21	57
90					24	29	24	38	21	47
96					24	27	24	36	24	44
102							24	33	24	41
108							24	31	24	39
114									24	37
120									24	35

Minimum & Maximum Cover For 9" x 2 1/2" Aluminum Structural Plate Pipe*

GAGE	0.100"		0.125"		0.150"		0.175"		0.200"		0.225"		0.250"	
Dia. (In)	Min. (In)	Max. (Ft)	Min. (In)	Max. (Ft)	Min. (In)	Max. (Ft)	Min. (In)	Max. (Ft)	Min. (In)	Max. (Ft)	Min. (In)	Max. (Ft)	Min. (In)	Max. (Ft)
60	12	29 31	12	38 45	12	49 60	12	58 70	12	58 81	12	58 92	12	58 100+
66	12	26 28	12	35 41	12	44 54	12	53 64	12	53 74	12	53 84	12	53 94
72	13	24 25	12	32 37	12	41 50	12	48 58	12	48 67	12	48 77	12	48 86
78	14	22 23	12	29 35	12	37 46	12	45 54	12	45 62	12	45 71	12	45 79
84	15	20 22	13	27 32	12	35 42	12	41 50	12	41 58	12	41 66	12	41 73
90	16	19 20	14	25 30	13	32 40	12	39 47	12	39 54	12	39 61	12	39 68
96	17	18 19	15	24 28	14	30 37	13	36 44	12	36 50	12	36 57	12	36 64
102	18	17 18	16	22 26	15	29 35	14	34 41	13	34 47	13	34 54	13	34 60
108	19	16 17	17	21 25	16	27 33	14	32 39	14	32 45	14	32 51	14	32 57
114	20	15 16	18	20 23	16	25 31	15	30 37	15	30 42	15	30 48	15	30 54
120	21	14 15	19	19 22	17	24 30	16	29 35	15	29 40	15	29 46	15	29 51
126	22	13 14	20	18 21	18	23 28	17	27 33	16	27 38	16	27 44	16	27 49
132	23	13 14	21	17 20	19	22 27	18	26 32	17	26 37	17	26 42	17	26 47
138	24	12 13	22	16 19	20	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 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 2 1/2" 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.

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".

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

PE TJB Date 3/9/16

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.

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

Date 10/31/03

D-04.21

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			18	35	18	49	18	63	18	77
114			18	32	18	45	18	58	18	71
120			18	30	18	41	18	54	18	66
126					18	39	18	50	18	62
132					18	36	18	47	18	57
138					18	33	18	43	18	53
144							18	39	18	49
150									19	47

*Table for pipe with helical lockseams or helical welded seams ONLY.

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
132	18	21	31	40	46	56	66	72
138	18	20	29	39	44	54	63	69
144	18	19	28	37	43	51	61	66
150	24	18	27	36	41	49	58	64
156	24	17	26	34	39	47	56	61
162	24	17	25	33	38	46	54	59
168	24	16	24	32	36	44	52	57
174	24	16	23	31	35	42	50	55
180	24	15	22	30	34	41	48	53
186	24	15	22	29	33	40	47	51
192	24		21	28	32	38	45	50
198	30		20	27	31	37	44	48
204	30		20	26	30	36	43	47
210	30		19	25	29	35	41	45
216	30			25	28	34	40	44
222	30			24	27	33	39	43
228	30			23	27	32	38	42
234	30			23	26	31	37	41
240	30				25	31	36	40
246	36				25	30	35	39
252	36					29	34	38
258	36					28	34	37
264	36					28	33	36
270	36					27	32	35
276	36						31	34
282	36						31	34
288	42						30	33
294	42							32
300	42							32
306	42							31
312	42							30

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

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

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

PE TB Date 3/9/10

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

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.

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.
PE TB Date 3/9/14

REVISIONS		
Date	Description	By
10/31/03	New Sheet 4.	LRG

Sheet 3 of 4

State of Alaska
Department of Transportation
& Public Facilities

PIPE AND ARCH TABLES

APPROVED
Date 10/31/03

STATE OF ALASKA 49TH Lars R. Gregovich CE-8063 Registered

D-04.21

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".

Minimum & Maximum Cover For Aluminum Spiral Rib Circular Pipe*

GAGE	0.060"		0.075"		0.105"		0.135"	
Dia. (In)	Min. (In)	Max. (Ft)	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	24	82
30	24	19	24	28	24	50	24	65
36	24	15	24	24	24	41	24	54
42			24	19	24	35	24	46
48			24	17	24	30	24	40
54			24	14	24	27	24	35
60			24	12	24	24	24	30

*¾ x ¾ x 7½ in. or ¾ x 1 x 1½ in. Corrugations

Minimum & Maximum Cover For Aluminum Spiral Rib Pipe-Arch*

Span x Rise (In. x In.)	Min. Cover (In.)	Soil Corner Bearing Capacity of 2 Tons/ s.f. 0.060" Max. Cover (ft.)	0.075" Max. Cover (ft.)	0.105" 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

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*

Span x Rise (In. x In.)	Min. Cover (In.)	Soil Corner Bearing Capacity of 2 Tons/ s.f. 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

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge, the project as constructed.
PE T.B Date 3/1/14

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

Sheet 4 of 4

State of Alaska
Department of Transportation
& Public Facilities

PIPE AND ARCH TABLES

APPROVED

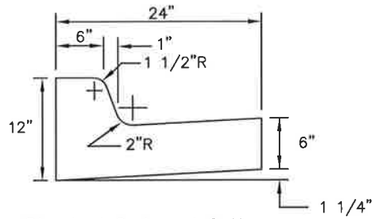
49TH STATE OF ALASKA
Lars R. Gregevich
CE-8065
Registered

Date 10/31/03

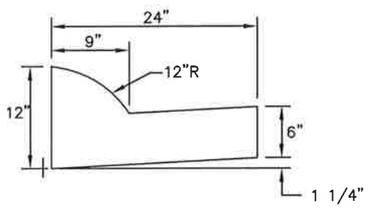
D-04.21

I-20.14

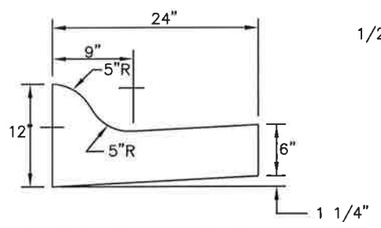
SHEET 1 of 1



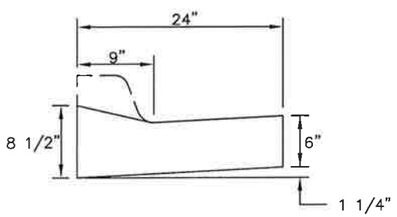
Standard Curb and Gutter



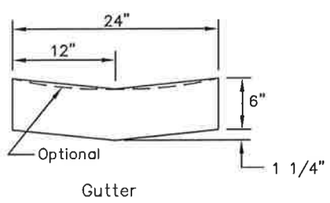
Expressway Curb and Gutter



Mountable Curb and Gutter

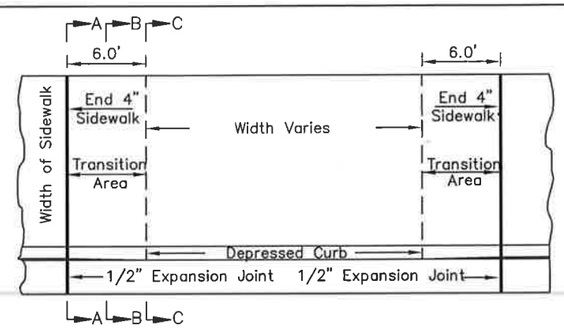


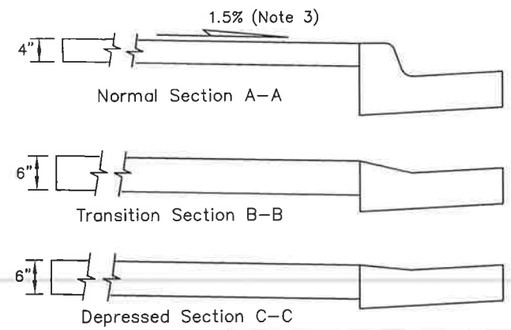
Depressed Curb and Gutter



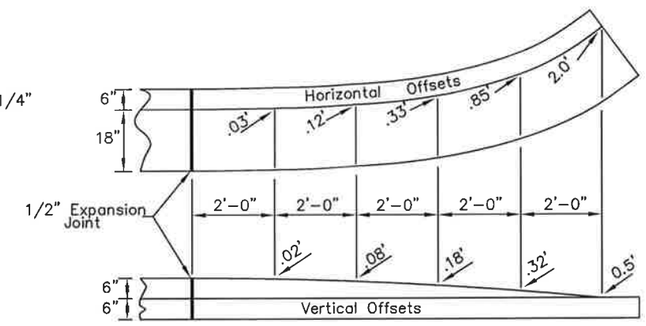
Gutter

CURB and GUTTER DETAILS

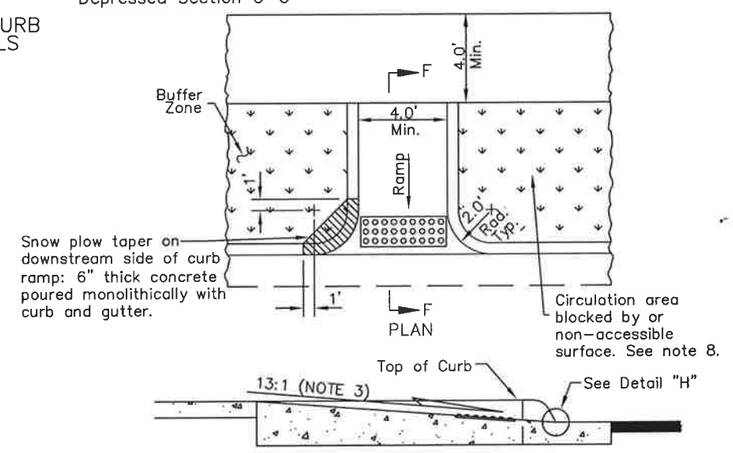




VEHICULAR CURB CUT DETAILS

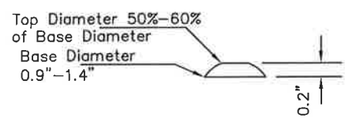


CURB and GUTTER TERMINATION TRANSITIONS



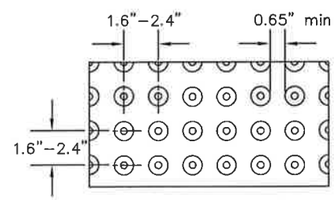
SECTION F–F

RETURNED CURB RAMP for PEDESTRIANS

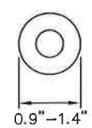


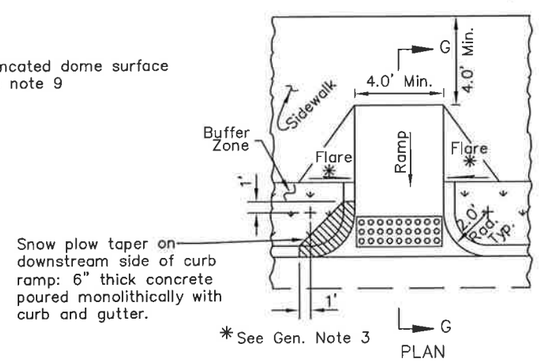
TRUNCATED DOME DETAIL

Truncated dome surface see note 9



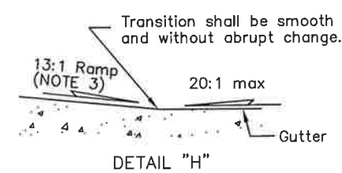
TEXTURE PATTERN DETAIL





SECTION G–G

RETURNED CURB RAMP with SIDEWALK for PEDESTRIANS



DETAIL "H"

GENERAL NOTES:

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, GUTTER AMP DETAILS

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

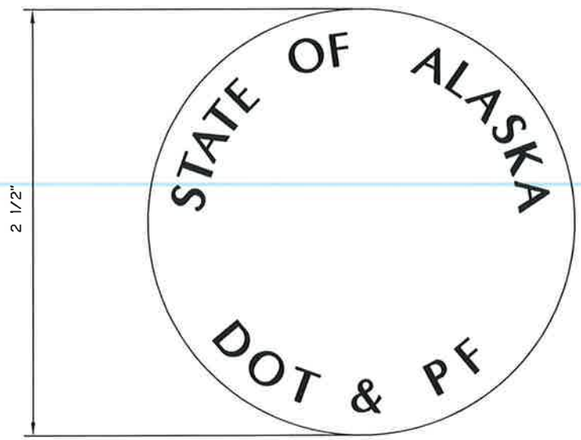
PE TB Date 3/9/16

APPROVED

Date 5/31/12

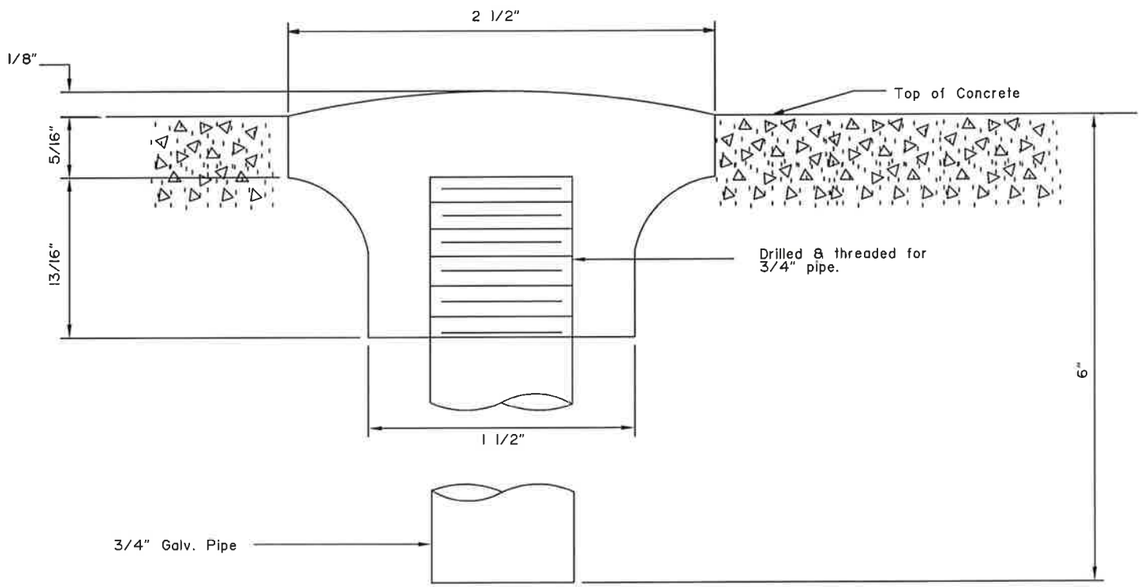
I–20.14

M-13.01	SHEET 1 of 1



GENERAL NOTES:

1. For Structures under 200' total length: provide 1 monument.
2. For Structures 200' or over: provide 2 Monuments.
3. Monuments shall be located as directed by the Engineer.



SURVEY MONUMENT

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

PE TB Date 3/9/16

REVISIONS		
Date	Description	By
5/15/89	Revised Cap Markings	Gdo

State of Alaska
Department of Transportation
& Public Facilities

SURVEY MONUMENT

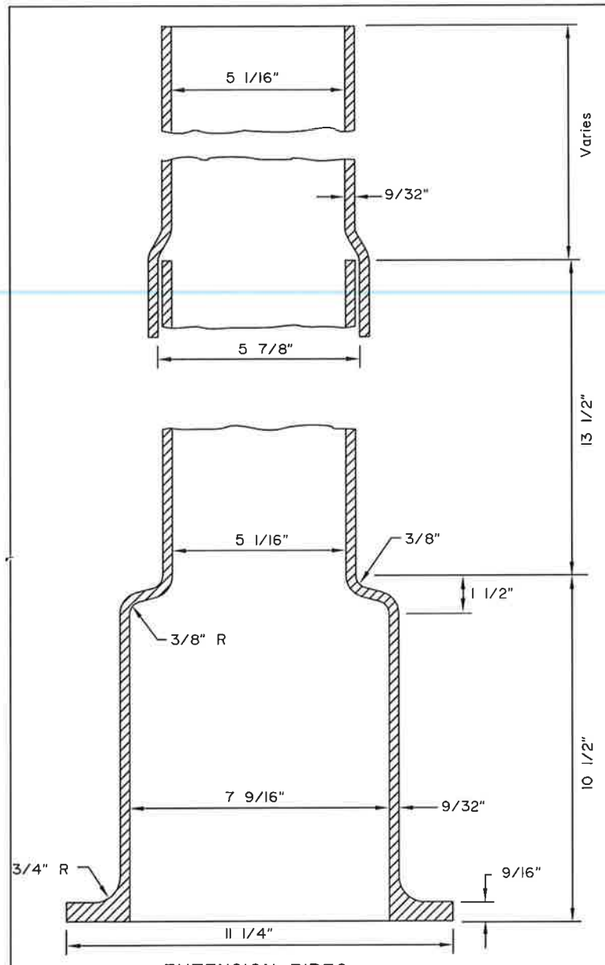
APPROVED

Date 7/15/82

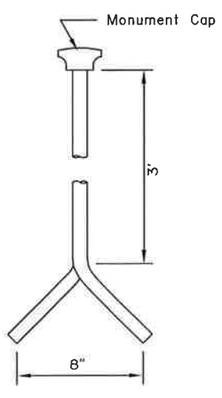
M-13.01

M-16.01

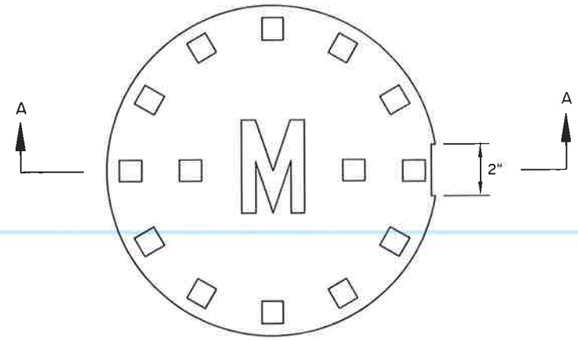
SHEET 1 of 1



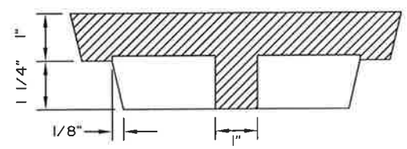
EXTENSION PIPES



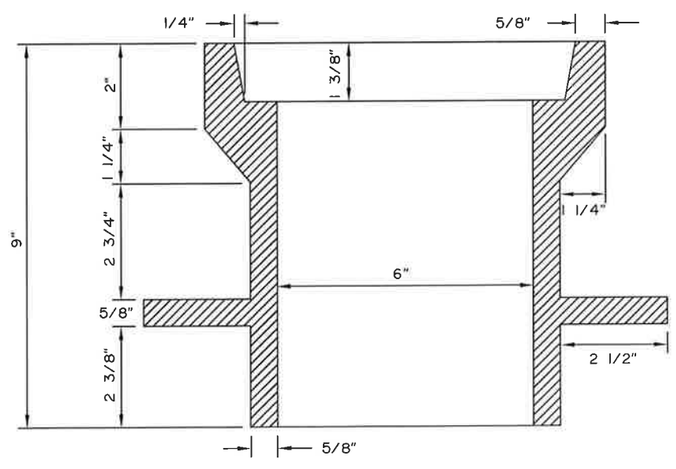
MONUMENT DETAIL



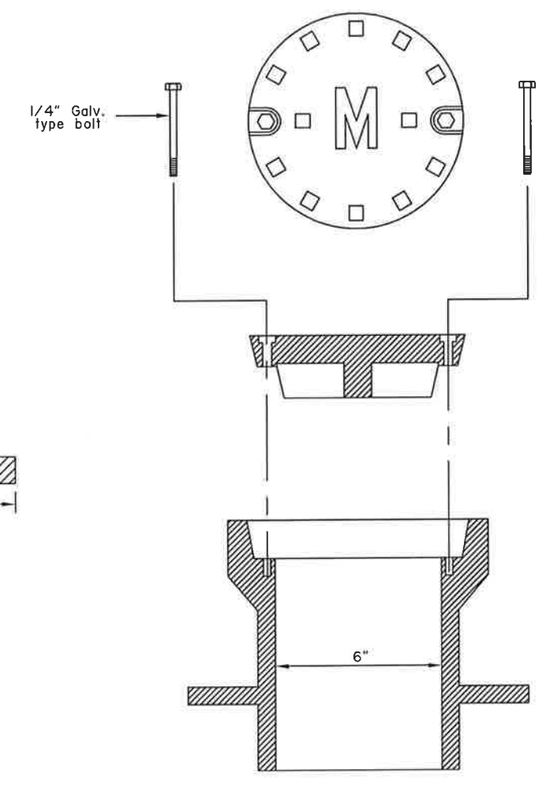
PLAN VIEW ACCESS COVER



SECTION A-A



MONUMENT CASE



BOLTING MONUMENT CASE ASSEMBLY
(See Note 2)

GENERAL NOTES:

1. Details shown are to indicate general design only. Dimensions and design may vary among the manufacturers.
2. Where monument cases are to be placed in paved area of a roadway or sidewalk, the top of the case and/or cover shall be the same elevation as the top of the finish surface with bolting type access cover.
3. Where monument cases are to be placed in a gravel surfaced roadway, the top of the case shall be placed 1'-0" below the top of the surface of the roadway.
4. In solid rock, drill a 2" Dia. hole a minimum of 1'-0" deep, fill with mortar and set cap. 3/4"x9" galvanized pipe, designated length when set in mortar.
5. The top of the monument cap shall be placed 1' ± above the bottom of the monument case.

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

PE TB Date 3/9/16

REVISIONS		
Date	Description	By
5/15/89	Revised Cap Markings	Gdo

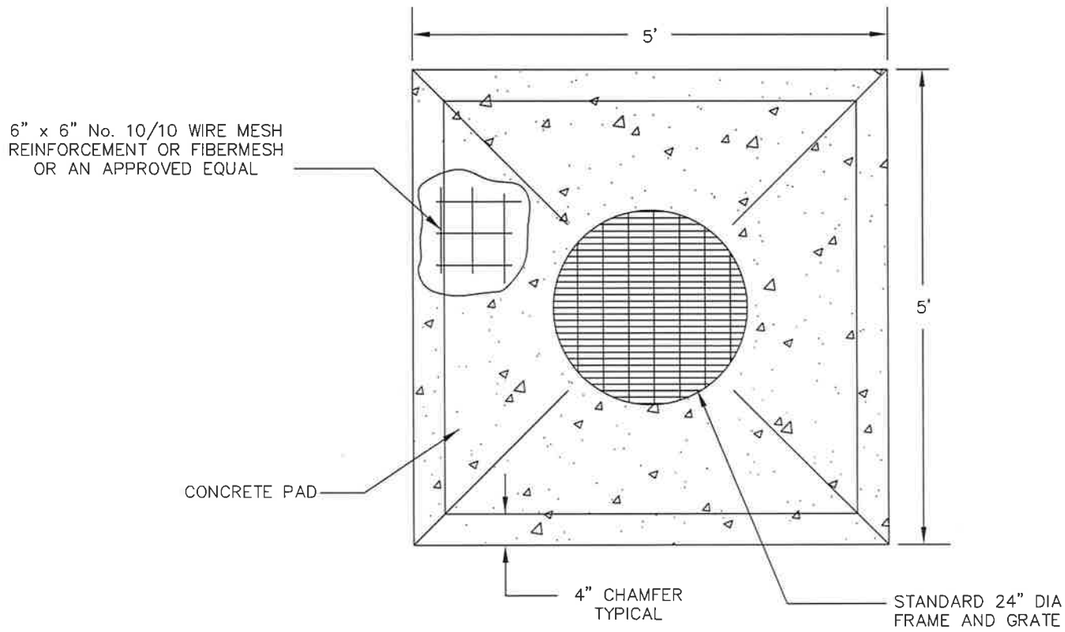
State of Alaska
Department of Transportation
& Public Facilities

BRASS CAP MONUMENTS
& MONUMENT CASE

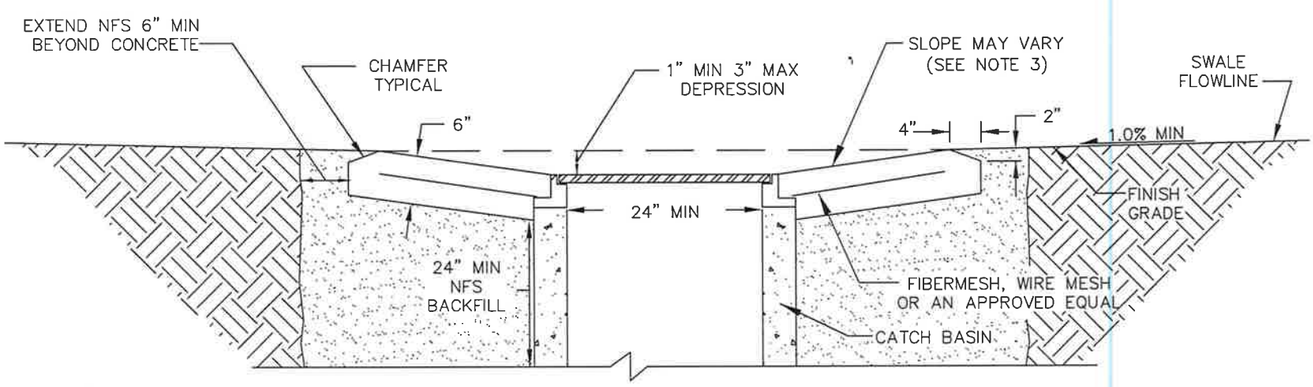
APPROVED

Date July 15, 1982

M-16.01



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.

Project As-Built Drawings have been reviewed by the Project Engineer and represent to the best of my knowledge the project as constructed.
PE TB
Date 3/9/16

NTS	DATE: 12/12/96	CITY AND BOROUGH OF JUNEAU, ALASKA AREA DRAIN DETAIL
DRAWN BY: DRW	CHECKED BY: STAFF	
APPROVED BY: DRW	REVISED: 8/14/2011	STANDARD 310