

DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

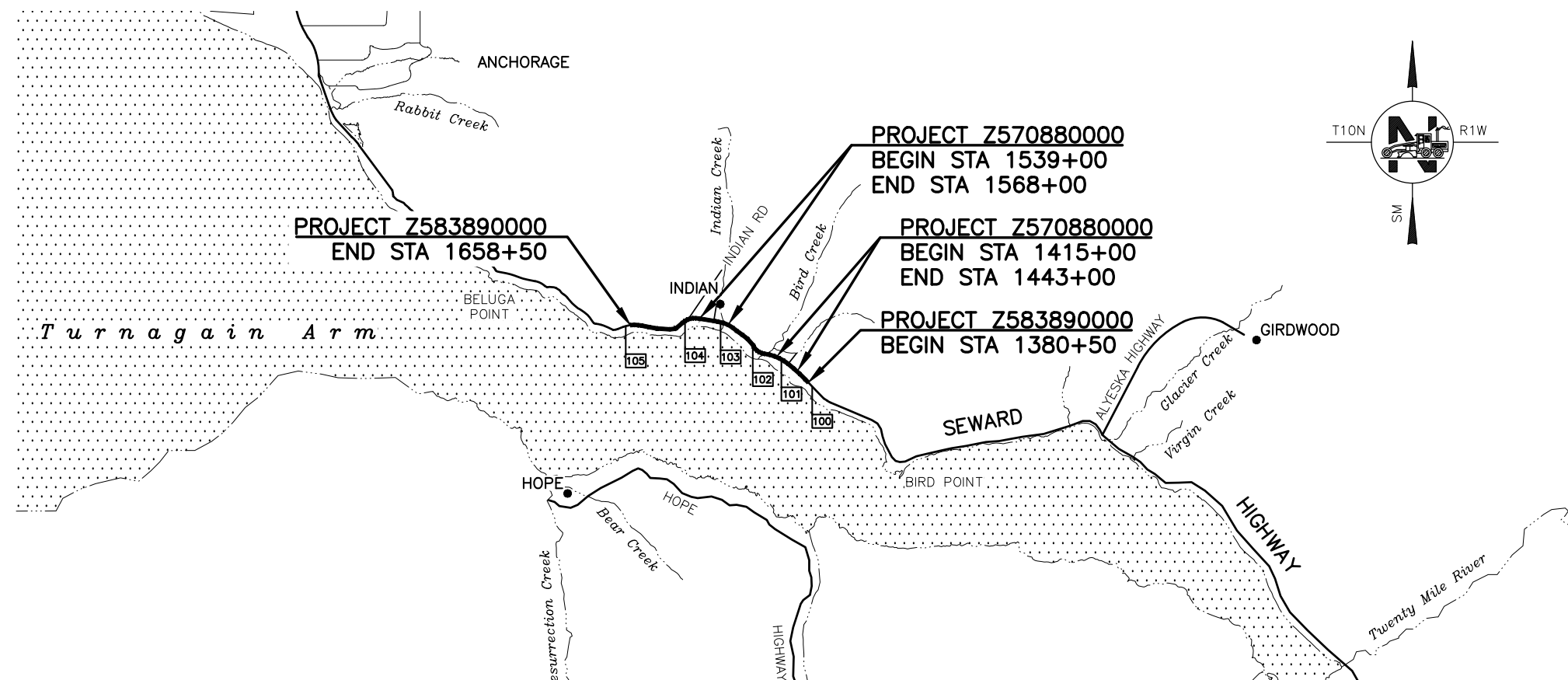
**PROJECT NO. 0A31056/Z583890000**

GRADING, DRAINAGE, BRIDGE STRUCTURES, PAVING, PATHWAYS, SIGNING, AND STRIPING

# HSIP: CR TRAFFIC SAFETY CORRIDOR LEFT TURN LANES

**PROJECT NO. 0001497/Z570880000**

## GRADING, DRAINAGE, PAVING, SIGNING, STRIPING, AND ILLUMINATION



STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL 'A' SHEETS
ALASKA	0A31056/Z583890000	2016	A1	AX
	0001497/Z570880000		TOTAL SET PLAN	149
CDS ROUTE: 130000		MILEPOINT: 100 TO 105		
LATITUDE: 60.982142		LONGITUDE: -149.488766		

PROJECT SUMMARY		
ROADWAY SECTION	WIDTH (FT)	LENGTH (MI)
SEWARD HIGHWAY	40	5.27
BRIDGE NO. 644 (INDIAN CREEK)	62.5	0.04

DESIGN DESIGNATIONS		
ROADWAY SECTION	A.A.D.T. 2012	DESIGN SPEED
SEWARD HIGHWAY	9000	65 MPH

PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DRIVE  
ANCHORAGE, AK 99507  
(907) 522-1707  
CERT. OF AUTH. NO. AECC111

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



APPROVED:

REGIONAL PRECONSTRUCTION ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

CONCUR:

DIRECTOR, DESIGN & CONSTRUCTION \_\_\_\_\_ DATE \_\_\_\_\_  
 CERTIFIED TRUE & CORRECT AS-BUILT OF ACTUAL FIELD CONDITION:

CONSTRUCTION PROJECT MANAGER \_\_\_\_\_ DATE \_\_\_\_\_

PLANS-IN-HAND AUGUST 2016

DESIGNED BY  
CHECKED BY  
DRAFTED BY  
XREES  
SCALE  
LAYOUT A2  
DATE TIME  
8/5/2016 9:08 AM  
DRAWING LOCATION  
Z:\project\2129.00 DOT\_C Seward Hwy MP 99 105\Civil\ACAD\Seward Hwy\2129.01-A02.dwg

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE CONTAINED WITHIN THE RIGHT-OF-WAY.
2. DO NOT DISPOSE OF EXCESS MATERIAL WITHIN THE RIGHT-OF-WAY, UNLESS SPECIFICALLY CALLED FOR IN THE PLANS OR DIRECTED BY THE ENGINEER.
3. ALL PAVEMENT CUTS SHALL BE MADE WITH A SAW OR ALTERNATE METHOD APPROVED BY THE ENGINEER.
4. WHEN NEW EMBANKMENT IS TO BE COMPACTED AGAINST EXISTING EMBANKMENT, BENCH SLOPES ACCORDING TO SUBSECTION 203-3.03.
5. SHAPE AGGREGATE BASE COURSE, GRADING D-1 AT THE EDGE OF PAVEMENT WITHIN 48 HOURS OF PAVING TO ENSURE THERE IS NO DROP AT THE EDGE OF PAVEMENT. FIELD DENSITIES WILL NOT BE REQUIRED ON SHOULDER MATERIAL SHAPED AT THE EDGE OF PAVEMENT.
6. PLACE 2" OF COMPOST OR 4" OF TOPSOIL AND SEED ANY AREAS WITHIN THE RIGHT-OF-WAY DISTURBED BY CONSTRUCTION, OR AS OTHERWISE DIRECTED BY THE ENGINEER.
7. EXCEPT AS NOTED OTHERWISE, CLEARING LIMITS SHALL BE 10' BEYOND THE SLOPE STAKE CATCH POINT, OR TO THE RIGHT-OF-WAY LINE, WHICHEVER IS LESS. IN WETLAND AREAS, DO NOT CLEAR BEYOND THE SLOPE STAKE CATCH POINT UNLESS OTHERWISE SHOWN IN THE PLANS.
8. GRUBBING LIMITS SHALL BE THE SLOPE STAKE CATCH POINT.

ABBREVIATIONS

Δ	DELTA ANGLE	PC	POINT OF CURVATURE
AADT	ANNUAL AVERAGE DAILY TRAFFIC	PCC	POINT OF COMPOUND CURVATURE
ASPHE	ALUMINUM STRUCTURAL PLATE HORIZONTAL ELLIPSE	PCF	POUNDS PER CUBIC FOOT
ASPP	ALUMINUM STRUCTURAL PLATE PIPE	PRC	POINT OF REVERSE CURVATURE
ASPPA	ALUMINUM STRUCTURAL PLATE PIPE-ARCH	PG	PROFILE GRADE
ATB	ASPHALT TREATED BASE	PI	POINT OF INTERSECTION
BOP	BEGINNING OF PROJECT	POR	POINT OF ROTATION
CL, CL	CENTERLINE	POC	POINT ON CURVE
CY	CUBIC YARD	POT	POINT ON TANGENT
D	DEGREE OF CURVATURE, DIAMETER	PT	POINT OF TANGENCY
DHV	DESIGN HOURLY VOLUME	ROW	RIGHT-OF-WAY
DOT&PF	DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES	R	RADIUS
DWG	DRAWING	RP	RADIUS POINT
E	EAST, EASTING	RT	RIGHT
EA	EACH	S	SUPERELEVATION
EL, ELEV	ELEVATION	SF	SQUARE FEET
EOP	END OF PROJECT	SHLD	SHOULDER
FT	FEET, FOOT	STA	STATION
HMA	HOT MIX ASPHALT	SY	SQUARE YARD
IN	INCH	T	TANGENT, TRUCKS
L	LENGTH	TYP	TYPICAL
LF	LINEAR FEET	V	DESIGN SPEED
LT	LEFT	VC	VERTICAL CURVE
ME	MATCH EXISTING	VPC	VERTICAL POINT OF CURVATURE
MI	MILE	VPI	VERTICAL POINT OF INTERSECTION
MP	MILEPOST	VPT	VERTICAL POINT OF TANGENCY
N	NORTH, NORTHING	W	WEST
NTS	NOT TO SCALE		

REVISIONS

NO.	DATE	DESCRIPTION

STATE

ALASKA

PROJECT DESIGNATION

0A31056/Z583890000  
0001497/Z570880000

YEAR

2016

SHEET NO.

A2

TOTAL SHEETS

AX

SHEET INDEX

SHEET NO.	DESCRIPTION
A1 TO A3	TITLE, ABBREVIATIONS, SHEET INDEX, SCHEMATIC LAYOUT, & LEGEND
A4 TO AX	SURVEY CONTROL (TO BE COMPLETED)
B1 TO B7	TYPICAL SECTIONS
C1 TO C2	ESTIMATE OF QUANTITIES, TABLE OF ESTIMATING FACTORS
D1 TO D7	SUMMARY TABLES
E1 TO E10	DETAILS
F1 TO F22	PLAN & PROFILE SHEETS - SEWARD HWY
F23 TO F31	PLAN & PROFILE SHEETS - PATHWAY
F32 TO F37	PLAN & PROFILE SHEETS - APPROACHES
G1 TO G4	GRADING PLANS
H1 TO H30	SIGNING & STRIPING PLANS
J1 TO J8	TRAFFIC CONTROL PLAN
H31 TO H38	UTILITIES
N1 TO N7	BRIDGE SHEETS
R1 TO R26	RIGHT-OF-WAY MAPS

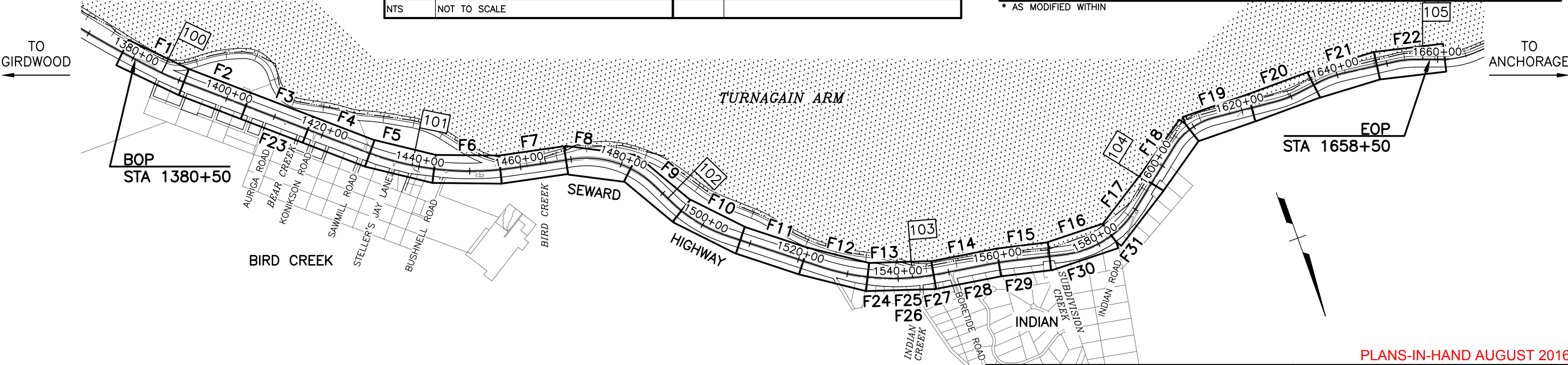
THE FOLLOWING REGIONAL DRAWINGS APPLY TO THESE PROJECTS

CR-G-04.02  
CR-T-01.02, CR-T-25.10, CR-T-26.10

THE FOLLOWING STANDARD DRAWINGS APPLY TO THESE PROJECTS

C-03.10, C-04.12, C-05.20  
D-01.02, D-04.21, D-06.10, D-11.01, D-20.03, D-22.01, D-24.00, D-30.10, D-31.00, D-36.00  
G-00.02, G-04.10S, G-04.10W, G-10.01, G-20.11, G-28.00, G-31.01, G-46.11  
I-20.15, I-30.10  
M-20.13, M-23.12  
S-00.11\*, S-05.01, S-30.03, S-31.01, S-32.00  
T-20.03, T-21.03, T-22.03

\* AS MODIFIED WITHIN



SCHEMATIC LAYOUT

PLANS-IN-HAND AUGUST 2016

PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DRIVE  
ANCHORAGE, AK 99507  
(907) 522-1707  
CERT. OF AUTH. NO. AECC111



R&M CONSULTANTS, INC.

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

SEWARD HWY: MP 100-105  
IMPROVEMENTS &  
HSIP: CR TRAFFIC SAFETY  
CORRIDOR LEFT TURN LANES  
ABBREVIATIONS, SHEET INDEX,  
AND SCHEMATIC LAYOUT

DESIGNED BY  
CHECKED BY  
DRAFTED BY  
  
XREFS  
  
SCALE  
  
LAYOUT  
A3  
  
DATE  
TIME  
8/5/2016 9:08 AM  
  
DRAWING LOCATION  
Z:\project\2129.00 DOT\_C Seward Hwy MP 99 105\Civil\ACAD\Seward Hwy\2129.01-A03.dwg

UTILITIES		
	EXISTING	PROPOSED
STORM DRAIN STRUCTURES AND PIPE NUMBERS		
STORM DRAIN		
STORM DRAIN MANHOLE		
CURB INLET CATCH BASIN		
FIELD INLET CATCH BASIN		
PIPE CULVERT w/END SECTION		
CLEANOUT		
SANITARY SEWER		
SANITARY SEWER MANHOLE		
SEPTIC VENTS		
WATER		
FIRE HYDRANT		
WELL		
VALVE OR RISER		
NATURAL GAS		
OIL OR GASOLINE PIPELINE		
ELECTRIC (OVERHEAD)		
ELECTRIC (DIRECT BURY)		
ELECTRIC (OVERHEAD WITH TELE)		
UTILITY POLE		
UTILITY POLE w/LUMINAIRE		
GUY POLE		
GUY WIRE ANCHOR		
TRANSMISSION TOWER [WOOD]		
TRANSMISSION TOWER [STEEL]		
ELECTRICAL PEDESTAL		
ELECTRICAL TRANSFORMER		
ELECTRIC METER		
ELECTRICAL OUTLET		
ELECTRIC MANHOLE		
TELEPHONE (OVERHEAD)		
TELEPHONE (DIRECT BURY)		
TELEPHONE (DIRECT BURY WITH TV)		
TELEPHONE PEDESTAL		
TELEPHONE MANHOLE		
FIBER OPTIC		
FIBER OPTIC MANHOLE		
CABLE TV (OVERHEAD)		
CABLE TV (DIRECT BURY)		
CABLE TV PEDESTAL		
SATELLITE DISH		
UG DUCT (E, T, FO)		

UTILITIES		
	EXISTING	PROPOSED
ELECTROLIER		
HIGHTOWER		
SIGNAL POLE WITH MAST		
PEDESTRIAN PUSH BUTTON		
RURAL BEACON		
SCHOOL ZONE BEACON		
RIGHT-OF-WAY		
	EXISTING	PROPOSED
PRIMARY CENTERLINE MONUMENT		
SECONDARY CENTERLINE MONUMENT		
PROJECT RIGHT-OF-WAY LINES		
CONTROLLED ACCESS LINE		
TEMPORARY CONSTRUCTION EASEMENT/PERMIT		
PROJECT CENTERLINE		
RAILROAD CENTERLINE		
EXISTING TOPOGRAPHY		
CONIFER TREE OR TREES		
DECIDUOUS TREE OR TREES		
SHRUB OR SHRUBS		
WETLANDS		
CREEK		
RIVER		
LAKE/POND		
MISCELLANEOUS		
	EXISTING	PROPOSED
BUILDING		
TANKS ABOVE GROUND UNDER GROUND		
PRIVATE SIGN		
POST/BOLLARDS		
MAILBOX		
TRAFFIC SIGN		
TRAFFIC SIGN POST #		
VENT		

ROADWAY		
	EXISTING	PROPOSED
ROADWAY OBLITERATION		
LIMIT OF CUT SLOPE		
LIMIT OF FILL SLOPE		
EDGE OF PAVEMENT		
CONCRETE CURB		
CONCRETE CURB & GUTTER		
CONCRETE CURB CUT		
SIDEWALK		
CURB RAMPS PARALLEL		
PERPENDICULAR		
MID-BLOCK		
UNIDIRECTIONAL		
DETECTABLE WARNING TILES		
DRIVEWAY APPROACH		
GRAVEL EDGE		
PATH/TRAIL		
BRIDGE		
TUNNEL		
NOISE BARRIER		
FENCE		
RETAINING WALL		
HEAD & WINGWALLS		
GUARDRAIL END SECTION PARALLEL GUARDRAIL SECTION		
SPECIAL DITCH		
BOTTOM OF DITCH		
RIPRAP		
BOULDER OR BOULDERS		
MILEPOST		

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION	ALASKA	0A31056/Z583890000 0001497/Z570880000	2016	A3	AX

PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DRIVE  
ANCHORAGE, AK 99507  
(907) 522-1707  
CERT. OF AUTH. NO. AECC111

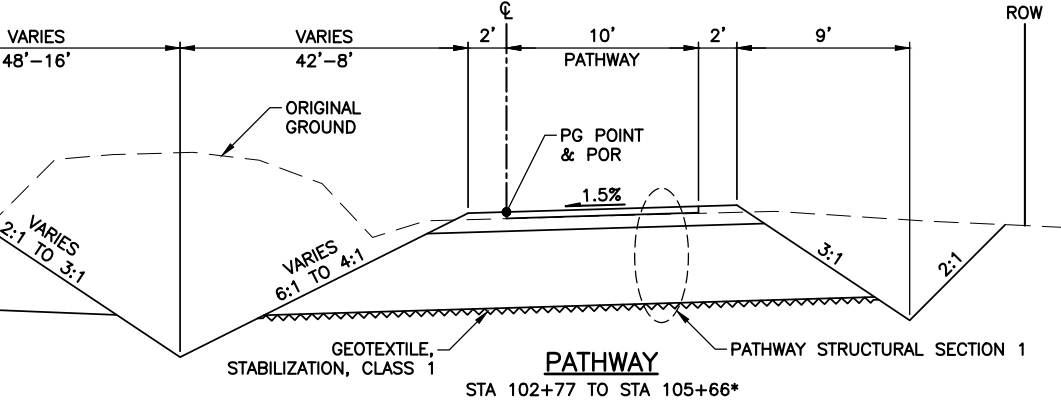
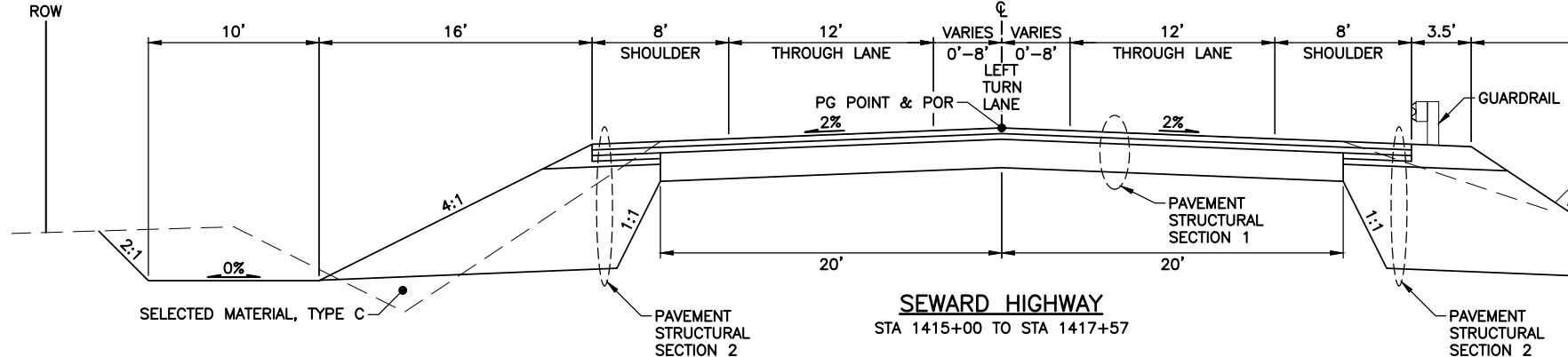
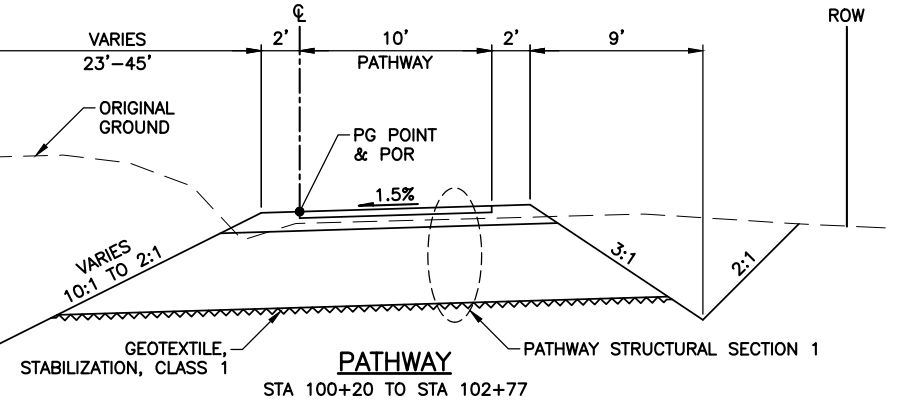
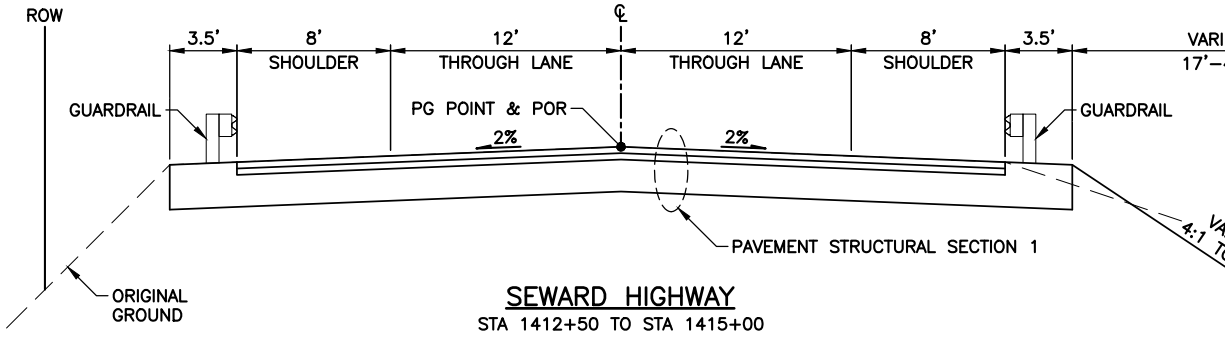
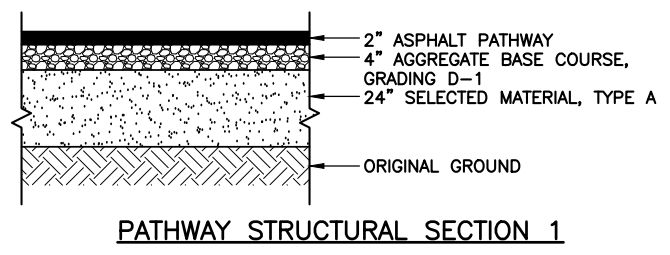
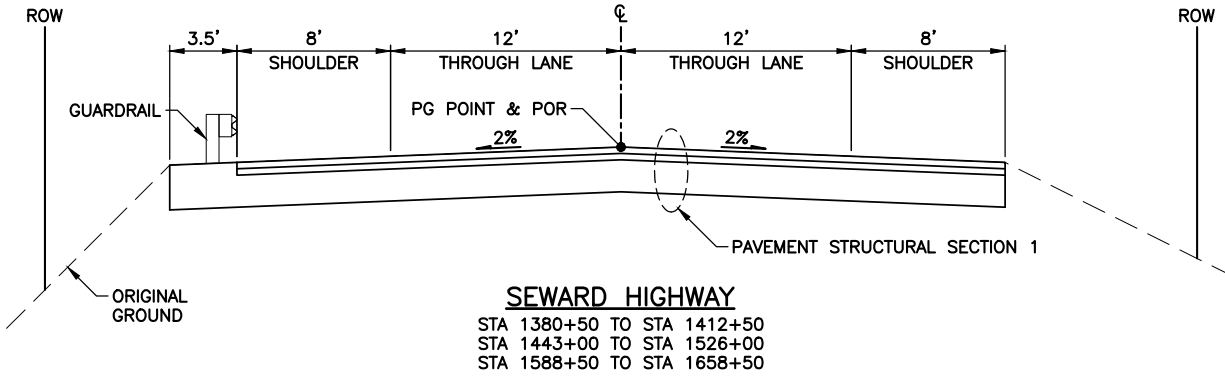
STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

SEWARD HWY: MP 100-105  
IMPROVEMENTS &  
HSIP: CR TRAFFIC SAFETY  
CORRIDOR LEFT TURN LANES  
LEGEND

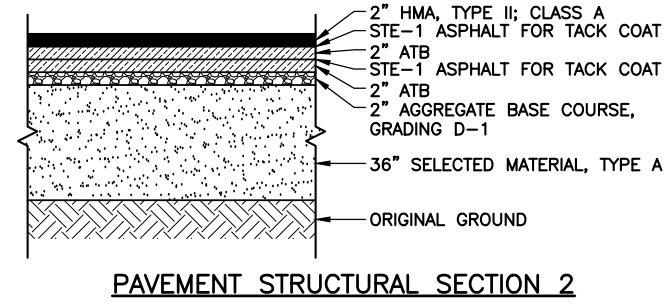
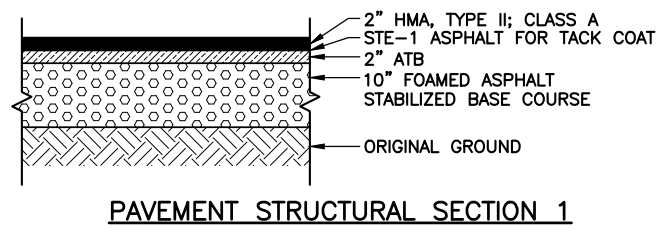
PLANS-IN-HAND AUGUST 2016

DESIGNED BY  
CHECKED BY  
DRAFTED BY  
XREFS  
SCALE  
LAYOUT  
B1  
DATE  
TIME  
8/5/2016 9:09 AM  
DRAWING LOCATION  
Z:\project\2129.00 DOT\_C Seward Hwy MP 99 105\Civil\ACAD\Seward Hwy\2129.01-B01.dwg

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION	ALASKA	0A31056/Z583890000 0001497/Z570880000	2016	B1	B7



\* NO PATHWAY WORK BETWEEN  
STA 105+66 AND STA 200+10



PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DRIVE  
ANCHORAGE, AK 99507  
(907) 522-1707  
CERT. OF AUTH. NO. AECC111



PLANS-IN-HAND AUGUST 2016

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

SEWARD HWY: MP 100-105  
IMPROVEMENTS &  
HSIP: CR TRAFFIC SAFETY  
CORRIDOR LEFT TURN LANES

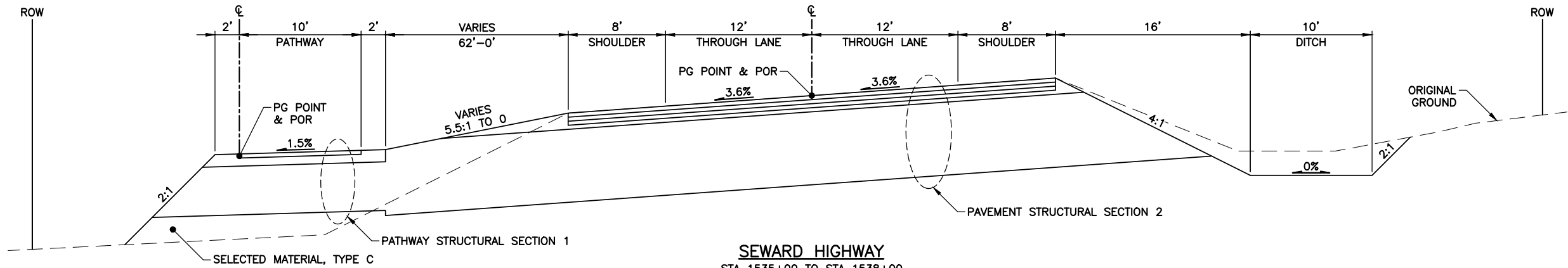
TYPICAL SECTIONS



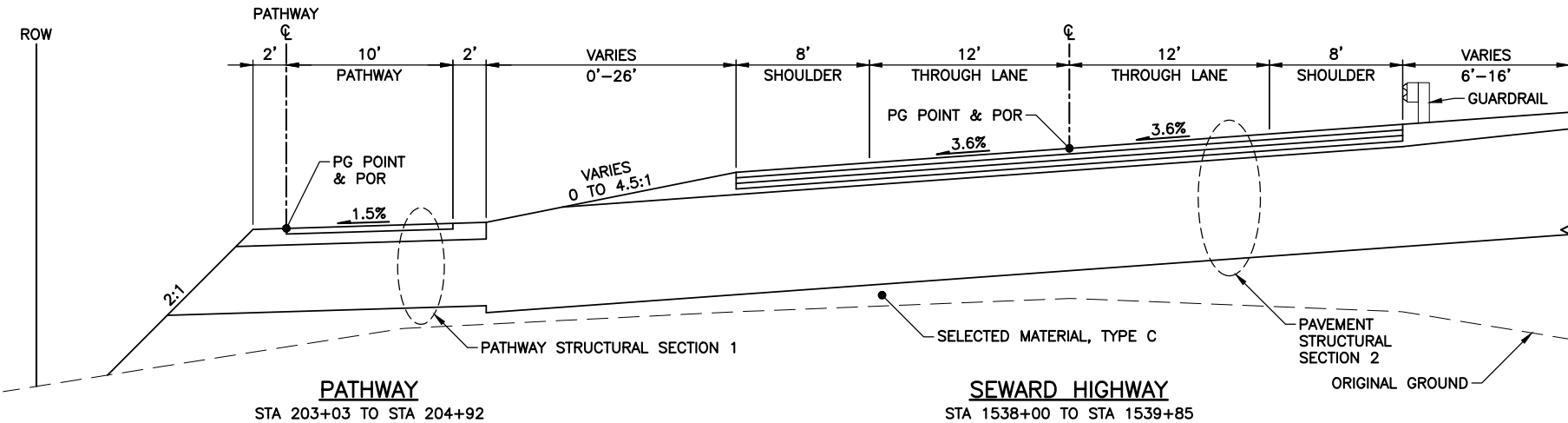
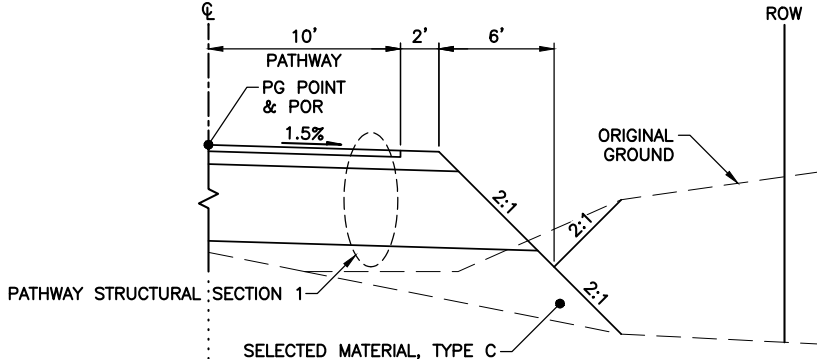
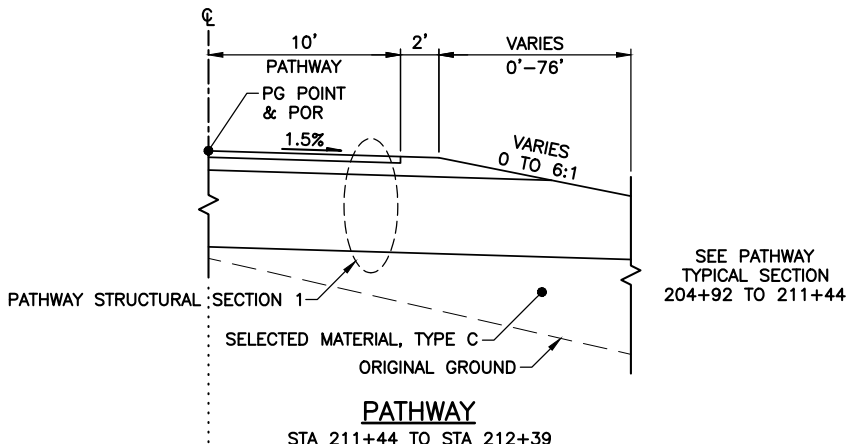
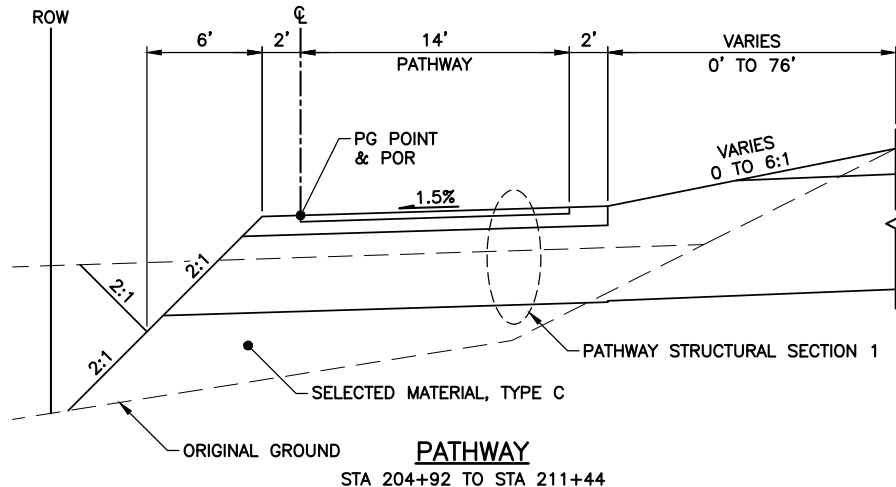


DESIGNED BY  
CHECKED BY  
DRAFTED BY  
XREES  
SCALE  
LAYOUT  
B3  
DATE  
TIME  
8/5/2016 9:10 AM  
DRAWING LOCATION  
Z:\project\2129.00 DOT\_C Seward Hwy MP 99 105\Civil\ACAD\Seward Hwy\2129.01-B01.dwg

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0A31056/Z583890000 0001497/Z570880000	2016	B3	B7



**PATHWAY**  
STA 200+10\* TO STA 203+03  
\* NO PATHWAY WORK BETWEEN  
STA 105+66 AND STA 200+10



\* NO PATHWAY WORK BETWEEN  
STA 261+46 AND STA 310+68

PLANS-IN-HAND AUGUST 2016

PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DRIVE  
ANCHORAGE, AK 99507  
(907) 522-1707  
CERT. OF AUTH. NO. AECC111



R&M CONSULTANTS, INC.

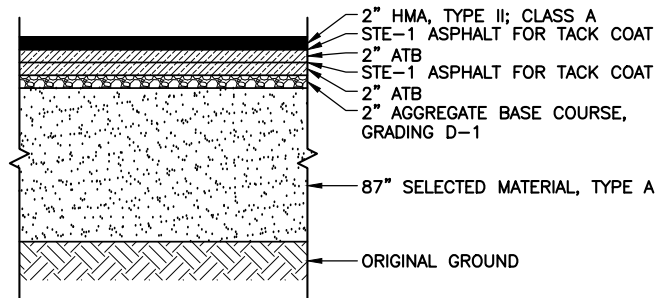
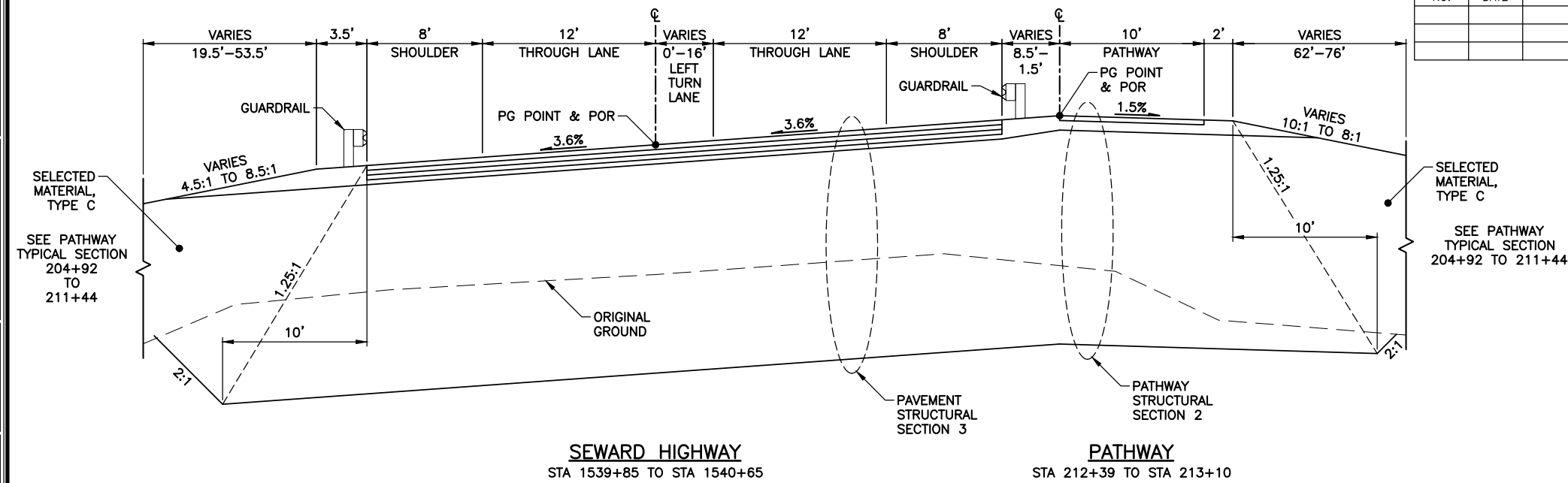
STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

**SEWARD HWY: MP 100-105  
IMPROVEMENTS &  
HSIP: CR TRAFFIC SAFETY  
CORRIDOR LEFT TURN LANES**

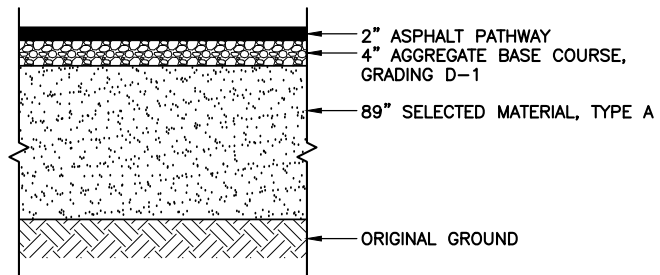
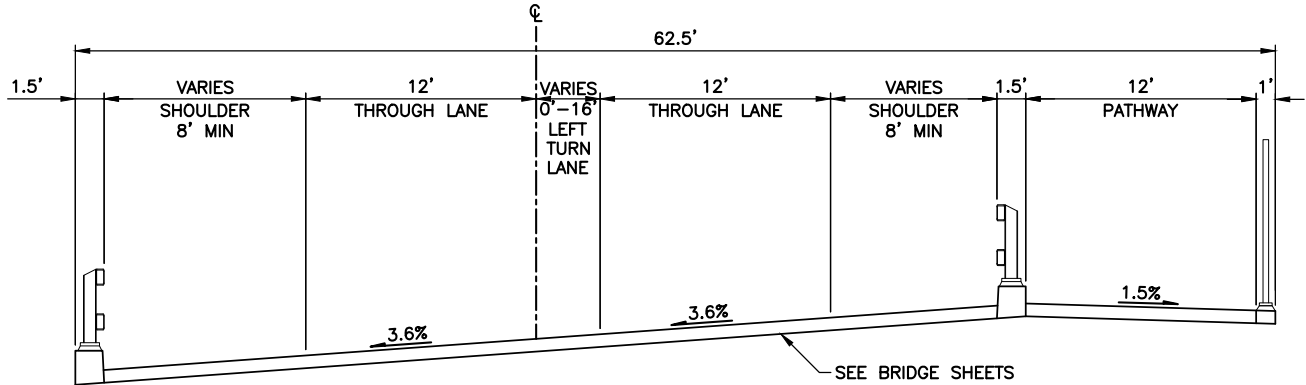
TYPICAL SECTIONS

DESIGNED BY  
CHECKED BY  
DRAFTED BY  
XREFS  
SCALE  
LAYOUT  
DATE  
TIME  
8/5/2016 9:10 AM  
DRAWING LOCATION  
Z:\project\2129.00 DOT\_C Seward Hwy MP 99 105\Civil\ACAD\Seward Hwy\2129.01-B01.dwg

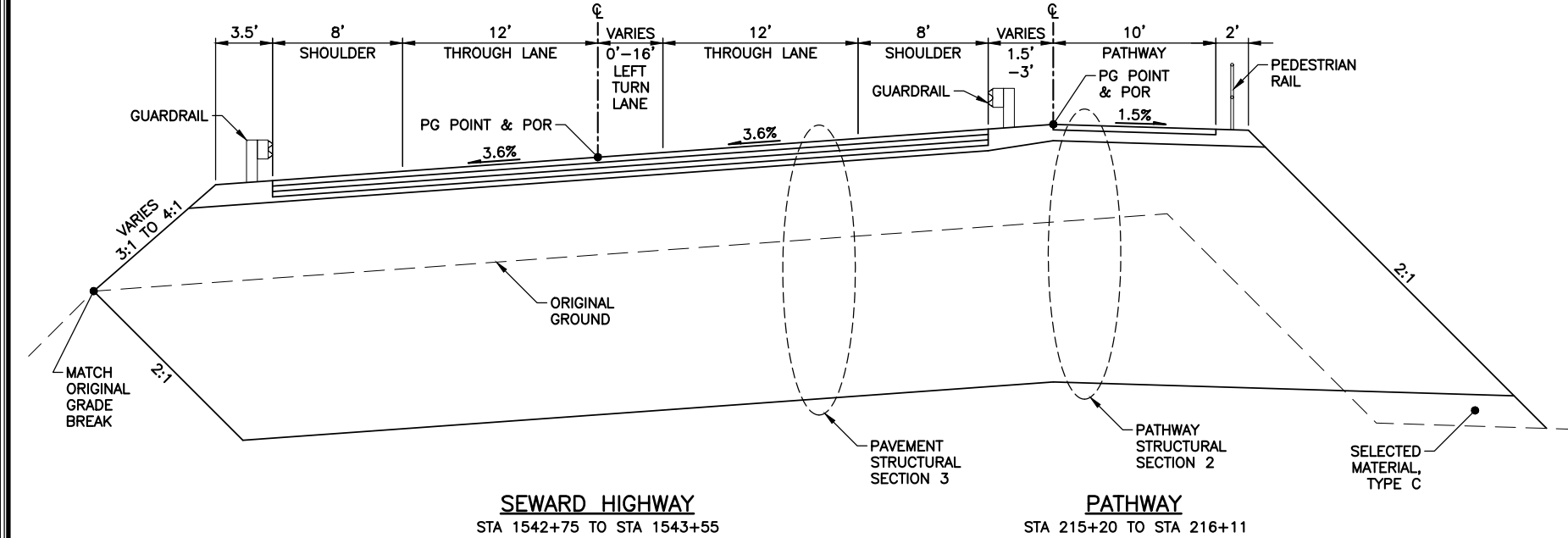
REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION	ALASKA	0A31056/Z583890000 0001497/Z570880000	2016	B4	B7



PAVEMENT STRUCTURAL SECTION 3

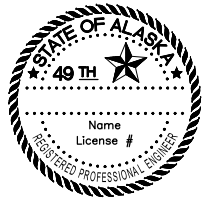


PATHWAY STRUCTURAL SECTION 2



PLANS-IN-HAND AUGUST 2016

PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DRIVE  
ANCHORAGE, AK 99507  
(907) 522-1707  
CERT. OF AUTH. NO. AECC111



R&M CONSULTANTS, INC.

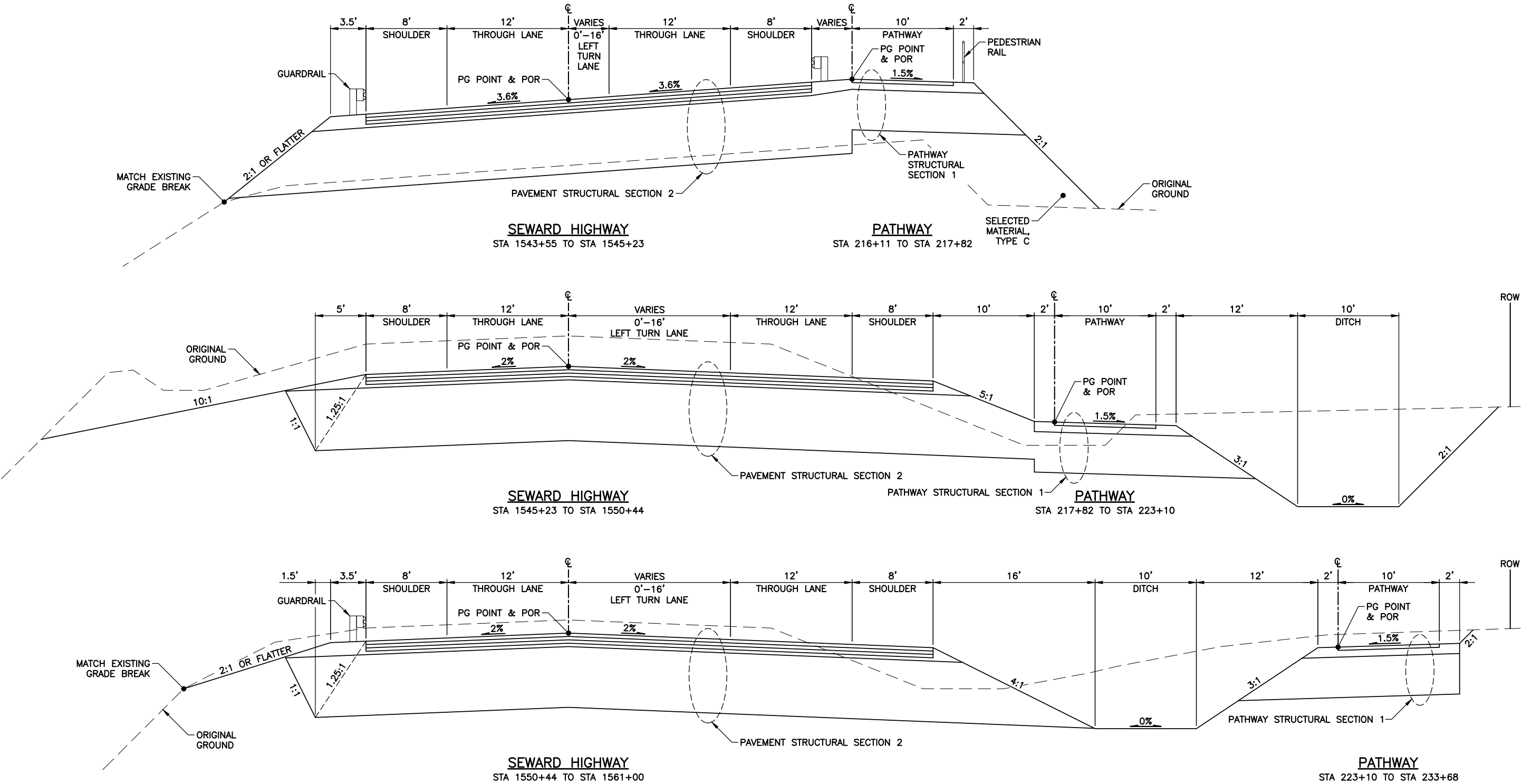
STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

**SEWARD HWY: MP 100-105  
IMPROVEMENTS &  
HSIP: CR TRAFFIC SAFETY  
CORRIDOR LEFT TURN LANES**

TYPICAL SECTIONS

DESIGNED BY  
CHECKED BY  
DRAFTED BY  
XREFS  
SCALE  
LAYOUT  
B5  
DATE  
TIME  
8/5/2016 9:10 AM  
DRAWING LOCATION  
Z:\project\2129.00 DOT\_C Seward Hwy MP 99 105\Civil\ACAD\Seward Hwy\2129.01-B01.dwg

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION	ALASKA	0A31056/Z583890000 0001497/Z570880000	2016	B5	B7



PLANS-IN-HAND AUGUST 2016

PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DRIVE  
ANCHORAGE, AK 99507  
(907) 522-1707  
CERT. OF AUTH. NO. AECC111

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

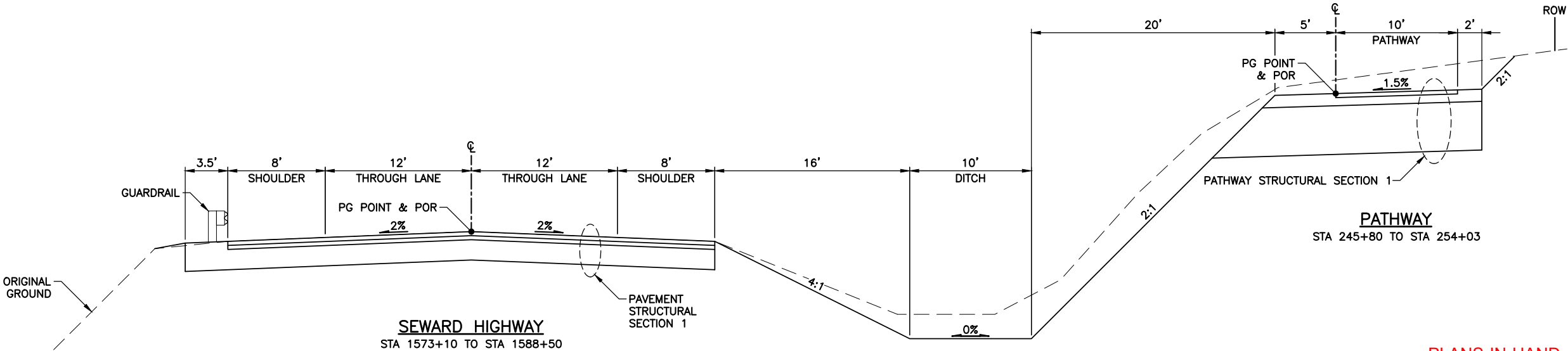
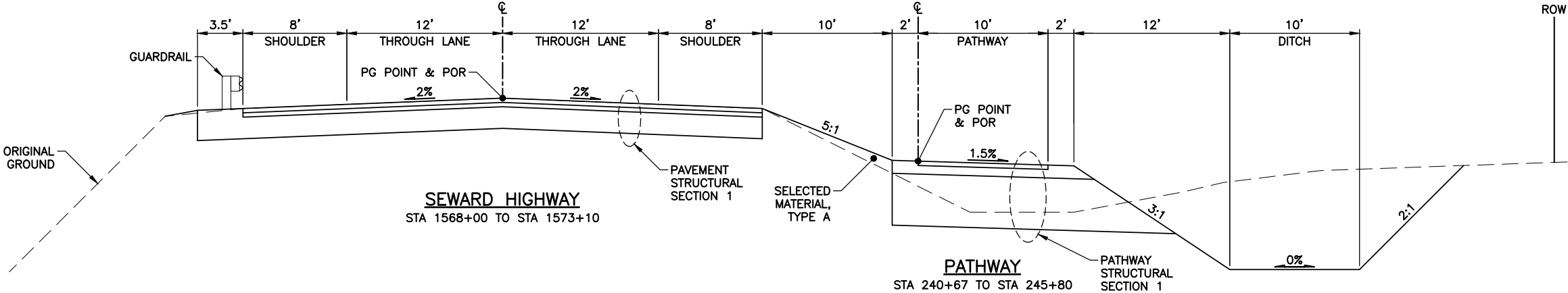
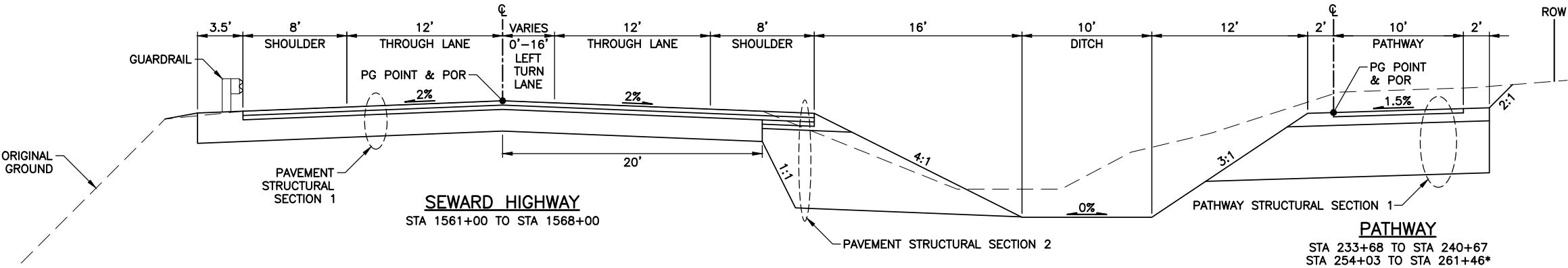
**SEWARD HWY: MP 100-105  
IMPROVEMENTS &  
HSIP: CR TRAFFIC SAFETY  
CORRIDOR LEFT TURN LANES**

TYPICAL SECTIONS




DESIGNED BY  
CHECKED BY  
DRAFTED BY  
XREES  
SCALE  
LAYOUT  
B6  
DATE  
TIME  
8/5/2016 9:10 AM  
DRAWING LOCATION  
Z:\project\2129.00 DOT\_C Seward Hwy MP 99 105\Civil\CAD\Seward Hwy\2129.01-B01.dwg

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION	ALASKA	0A31056/Z583890000 0001497/Z570880000	2016	B6	B7



PLANS-IN-HAND AUGUST 2016

PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DRIVE  
ANCHORAGE, AK 99507  
(907) 522-1707  
CERT. OF AUTH. NO. AECC111



R&M CONSULTANTS, INC.

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

**SEWARD HWY: MP 100-105  
IMPROVEMENTS &  
HSIP: CR TRAFFIC SAFETY  
CORRIDOR LEFT TURN LANES**

TYPICAL SECTIONS

DESIGNED BY  
CHECKED BY  
DRAFTED BY

XREFS

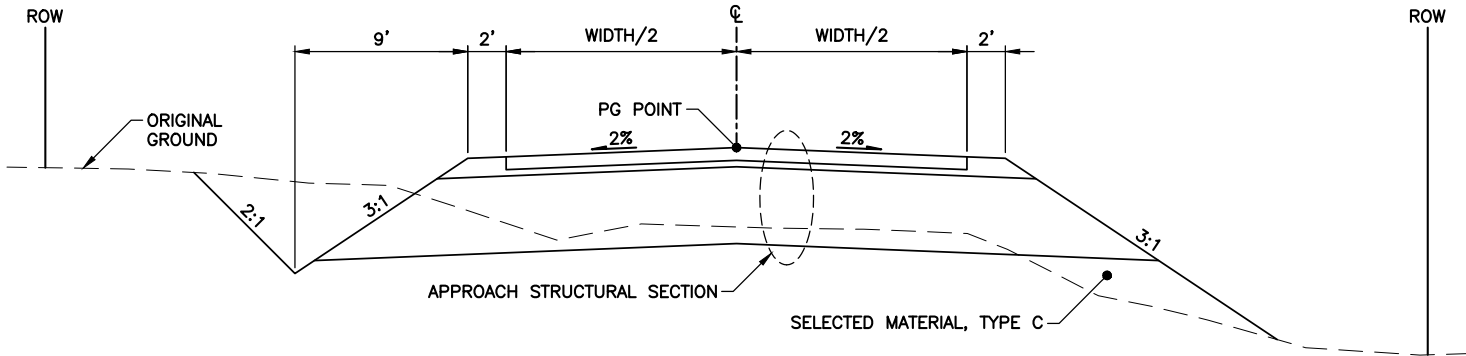
SCALE

LAYOUT  
B7

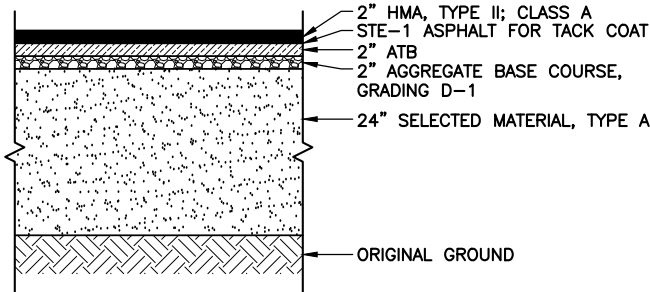
DATE TIME  
8/5/2016 9:10 AM

DRAWING LOCATION  
Z:\project\2129.00 DOT\_C Seward Hwy MP 99 105\Civil\CAD\Seward Hwy\2129.01-B01.dwg

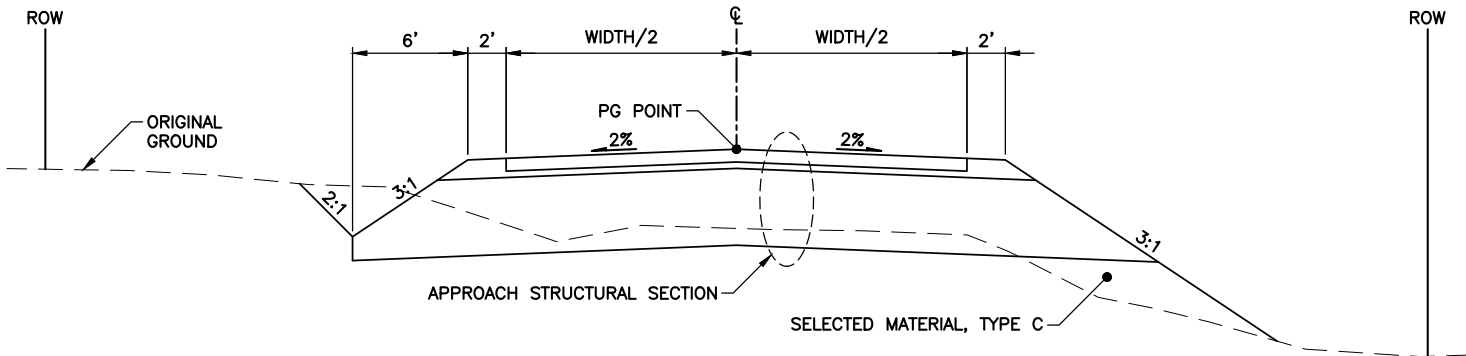
REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION	ALASKA	0A31056/Z583890000 0001497/Z570880000	2016	B7	B7



PUBLIC APPROACH



APPROACH STRUCTURAL SECTION



RESIDENTIAL APPROACH

PLANS-IN-HAND AUGUST 2016

PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DRIVE  
ANCHORAGE, AK 99507  
(907) 522-1707  
CERT. OF AUTH. NO. AECC111

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
  
SEWARD HWY: MP 100-105  
IMPROVEMENTS &  
HSIP: CR TRAFFIC SAFETY  
CORRIDOR LEFT TURN LANES  
  
TYPICAL SECTIONS

DRAWING LOCATION  
Z:\project\2129.00 DOT\_C Seward Hwy MP 99 105\Civil\ACAD\Seward Hwy\2129.01-C01.dwg

NO.	DATE	DESCRIPTION

### ESTIMATE OF QUANTITIES

### ESTIMATE OF QUANTITIES

PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DRIVE  
ANCHORAGE, AK 99507  
(907) 522-1707  
CERT. OF AUTH. NO. AECC111



STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

**SEWARD HWY: MP 100-105  
IMPROVEMENTS &  
HSIP: CR TRAFFIC SAFETY  
CORRIDOR LEFT TURN LANES**

**ESTIMATE OF QUANTITIES**

DESIGNED BY  
CHECKED BY  
DRAFTED BY

XREFS

SCALE

LAYOUT  
C2

DATE TIME  
8/5/2016 9:11 AM

DRAWING LOCATION  
Z:\project\2129.00 DOT\_C Seward Hwy MP 99 105\Civil\ACAD\Seward Hwy\2129.01-C01.dwg


ESTIMATE OF QUANTITIES					
ITEM NO.	ITEM DESCRIPTION	PAY UNIT	QUANTITY		TOTAL QUANTITY
			Z583890000	Z570880000	
640(1)	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
641(1)	EROSION, SEDIMENT, AND POLLUTION CONTROL ADMINISTRATION	LUMP SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
641(2)	TEMPORARY EROSION, SEDIMENT, AND POLLUTION CONTROL	CONTINGENT SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
641(6)	WITHHOLDING	CONTINGENT SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
641(7)	SWPPP MANAGER	LUMP SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
642(1)	CONSTRUCTION SURVEYING	LUMP SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
642(3)	THREE PERSON SURVEY PARTY	HOURL	400	200	600
642(13)	CONTRACTOR FURNISHED COMPUTATIONS	LUMP SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
642(14)	CONTRACTOR FURNISHED ENGINEERING TOOLS	LUMP SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
643(2)	TRAFFIC MAINTENANCE	LUMP SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
643(3)	PERMANENT CONSTRUCTION SIGNS	LUMP SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
643(15A)	FLAGGING	CONTINGENT SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
643(20)	DETOUR	LUMP SUM	ALL REQUIRED	–	ALL REQUIRED
643(23)	TRAFFIC PRICE ADJUSTMENT	CONTINGENT SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
643(25)	TRAFFIC CONTROL	CONTINGENT SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
644(1)	FIELD OFFICE	LUMP SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
644(2)	FIELD LABORATORY	LUMP SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
644(8)	VEHICLE (LT/SUV)	EACH	4	2	6
644(10)	ENGINEERING COMMUNICATIONS	CONTINGENT SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
644(15)	NUCLEAR TESTING EQUIPMENT STORAGE SHED	EACH	–	–	1
644(16)	STORAGE CONTAINER	EACH	–	–	1
644(17)	IMAGE DOCUMENTATION	LUMP SUM	ALL REQUIRED	–	ALL REQUIRED
645(1)	TRAINING PROGRAM, _ TRAINEES/APPRENTICES	LABOR HOUR	1,000	500	1,500
646(1)	CPM SCHEDULING	LUMP SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
647(1)	WIDE PAD DOZER, 65 HP MIN	CONTINGENT SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
660(2)	FLASHING BEACON SYSTEM COMPLETE	LUMP SUM	–	ALL REQUIRED	ALL REQUIRED
660(3A)	HIGHWAY LIGHTING SYSTEM COMPLETE – BORETIDE AND SEWARD	LUMP SUM	–	ALL REQUIRED	ALL REQUIRED
660(3B)	HIGHWAY LIGHTING SYSTEM COMPLETE – SAWMILL AND SEWARD	LUMP SUM	–	ALL REQUIRED	ALL REQUIRED
661(2)	LOAD CENTER, TYPE 1A	EACH	–	2	2
670(10D)	MMA PAVEMENT MARKINGS, LONGITUDINAL INLAID	LINEAR FOOT	92,000	34,900	126,900
670(10E)	MMA PAVEMENT MARKINGS, SYMBOLS AND ARROW(S) INLAID	EACH	4	10	14
670(10F)	MMA PAVEMENT MARKINGS, TRANSVERSE AND GORE INLAID	LINEAR FOOT	1,300	4,400	5,700
671(1)	STREAM REALIGNMENT	LINEAR FOOT	1,150	–	1,150

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0A31056/Z583890000 0001497/Z570880000	2016	C2	C2

TABLE OF ESTIMATING FACTORS		
ITEM NO.	ITEM DESCRIPTION	FACTOR
203(6A)	BORROW, TYPE A	144 PCF
301(1)	AGGREGATE BASE COURSE, GRADING D–1	144 PCF
306(1)	ATB	150 PCF
306(2)	ASPHALT BINDER, GRADE PG 52–40	5.5% OF 306(1)
318(1)	FOAMED ASPHALT STABILIZED BASE COURSE	140 PCF
318(2)	ASPHALT BINDER, GRADE PG 52–28	3% OF 318(1)
318(3)	PORTLAND CEMENT, TYPE I	1% OF 318(1)
401(1A)	HMA, TYPE II; CLASS A	153 PCF
401(4A)	ASPHALT BINDER, GRADE PG 52–40	5.5% OF 401(1A)
402(1)	STE–1 ASPHALT FOR TACK COAT	0.00035 TON/SY
608(7)	ASPHALT PATHWAY	150 PCF
611(2A)	RIPRAP, CLASS I	108 PCF
611(2B)	RIPRAP, CLASS II	108 PCF
618(2)	SEEDING	0.0020 LB/SF
618(3)	WATER FOR SEEDING	1 GAL/SF

PLANS-IN-HAND AUGUST 2016

PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DRIVE  
ANCHORAGE, AK 99507  
(907) 522–1707  
CERT. OF AUTH. NO. AECC111



R&M CONSULTANTS, INC.

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

SEWARD HWY: MP 100–105  
IMPROVEMENTS &  
HSIP: CR TRAFFIC SAFETY  
CORRIDOR LEFT TURN LANES

ESTIMATE OF QUANTITIES

DESIGNED BY  
CHECKED BY  
DRAFTED BY

XREFS

SCALE

LAYOUT  
D0.1

DATE TIME  
8/5/2016 9:13 AM

DRAWING LOCATION  
Z:\project\2129.00 DOT\_C Seward Hwy MP 99 105\Civil\ACAD\Seward Hwy\2129.01-D01.dwg

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					

203(3), 203(6A), 301(1), 306(1), 318(1)

EARTHWORK SUMMARY												
SHEET	STATION RANGE			EXCAVATION			EMBANKMENT				EXCESS USABLE EXCAVATION	WASTE
				UNCLASSIFIED	USABLE	UNUSABLE	SELECTED MATERIAL, TYPE C	SELECTED MATERIAL, TYPE A	FOAMED ASPHALT BASE COURSE	AGGREGATE BASE COURSE, GRADING D-1		
Z583890000												
F1-F3	1380+50	TO	1417+00	9,730	7,310	2,420	260	510	5,840	150		
F4-F5	1417+00	TO	1443+00	580	440	140	120	460	0	40		
F6-F12	1443+00	TO	1534+00	26,420	19,820	6,600	0	6,460	12,590	310		
F13-F15	1534+00	TO	1570+00	5,820	4,370	1,450	4,840	4,970	480	340		
F16-F22	1570+00	TO	1658+50	20,580	15,450	5,130	340	3,910	14,090	0		
ROADWAY SUBTOTAL				63,130	47,390	15,740	5,560	16,310	33,000	840		
F23	100+00	TO	105+70	4,450	3,340	1,110	310	1,100	0	150		
F24-F26	200+00	TO	213+20	1,850	1,390	460	2,280	1,980	0	320		
F27-F28	213+20	TO	228+00	10,710	8,040	2,670	1,810	1,640	0	220		
F29-F31	228+00	TO	264+00	6,910	5,190	1,720	260	3,720	0	710		
PATHWAY SUBTOTAL				23,920	17,960	5,960	4,660	8,440	0	1,400		
PROJECT SUBTOTAL				87,050	65,350	21,700	10,220	24,750	33,000	2,240	55,130	21,700
LESS USABLE EXCAVATION							10,220					
PROJECT TOTAL				87,050	65,350	21,700	0	24,750	33,000	2,240	55,130	21,700
ESTIMATE OF QUANTITIES				88,000				48,200	119,000	4,400		
				CY				TON	SY	TON		
Z570880000												
F3	1404+00	TO	1417+00	950	710	240	280	430	250	50		
F4	1417+00	TO	1430+00	17,030	12,770	4,260	260	8,930	1,760	1,050		
F5	1430+00	TO	1443+00	8,020	6,020	2,000	1,050	5,900	1,610	480		
F13	1534+00	TO	1547+00	4,570	3,430	1,140	150	5,480	0	470		
F14	1547+00	TO	1560+00	28,550	21,410	7,140	290	12,650	0	1,510		
F15	1560+00	TO	1570+00	4,680	3,510	1,170	60	3,200	1,050	180		
ROADWAY SUBTOTAL				63,800	47,850	15,950	2,090	36,590	4,670	3,740	45,760	15,950
LESS USABLE EXCAVATION							2,090					
PROJECT TOTAL				63,800	47,850	15,950	0	36,590	4,670	3,740	45,760	15,950
ESTIMATE OF QUANTITIES				64,000				72,000	16,900	7,300		
				CY				TON	SY	TON		

PLANS-IN-HAND AUGUST 2016

THIS SHEET TO BE REMOVED FOR FINAL

PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DRIVE  
ANCHORAGE, AK 99507  
(907) 522-1707  
CERT. OF AUTH. NO. AECC111



R&M CONSULTANTS, INC.

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

SEWARD HWY: MP 100-105  
IMPROVEMENTS &  
HSIP: CR TRAFFIC SAFETY  
CORRIDOR LEFT TURN LANES

SUMMARY TABLES



DESIGNED BY  
CHECKED BY  
DRAFTED BY

XREFS

SCALE

LAYOUT  
D0.2

DATE TIME  
8/5/2016 9:13 AM

DRAWING LOCATION  
Z:\project\2129.00 DOT\_C Seward Hwy MP 99 105\Civil\ACAD\Seward Hwy\2129.01-D01.dwg

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					

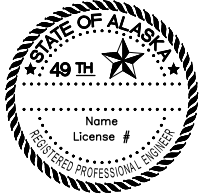
306(1), 306(2) 401(1A), 401(4), 402(1), 608(7)

SURFACING SUMMARY												
SHEET	STATION RANGE			306(1)		306(2)	401(1A)		401(4A)	402(1)	608(7)	
				ATB		ASPHALT BINDER, GRADE PG 52–40	HMA, TYPE II; CLASS A		ASPHALT BINDER, GRADE PG 52–40	STE–1 ASPHALT FOR TACK COAT	ASPHALT PATHWAY	
				AREA	WEIGHT		AREA	WEIGHT			AREA	WEIGHT
				SF	TON		TON	SF			TON	TON
Z583890000												
F1–F3	1380+50	TO	1417+00	146,569	1,855	101	148,240	1,892	104	5.77		
F4–F5	1417+00	TO	1443+00	0	0	0	0	0	0	0.00		
F6–F12	1443+00	TO	1534+00	400,408	5,433	300	400,408	5,108	281	17.20		
F13–F15	1534+00	TO	1570+00	36,580	829	45	40,108	512	28	2.57		
F16–F22	1570+00	TO	1658+50	377,107	4,716	259	377,107	4,811	264	14.65		
ROADWAY TOTAL				960,664	12,833	705	965,863	12,323	677	40.19		
F23	100+00	TO	105+70								6,719	84
F24–F26	200+00	TO	213+20								16,606	209
F27–F28	213+20	TO	228+00								13,818	173
F29–F31	228+00	TO	264+00								32,802	411
PATHWAY TOTAL											69,945	877
PROJECT TOTAL				960,664	12,833	705	965,863	12,323	677	40.19	69,945	877
ESTIMATE OF QUANTITIES					12,900	710		12,400	680	50		880
					TON	TON		TON	TON	TON		TON
Z570880000												
F3	1404+00	TO	1417+00	8,488	113	6	8,488	109	6	0.35		
F4	1417+00	TO	1430+00	83,540	1,868	103	117,895	1,504	83	5.81		
F5	1430+00	TO	1443+00	76,444	1,306	72	79,995	1,020	56	4.06		
F13	1534+00	TO	1547+00	27,568	734	40	42,398	541	30	2.72		
F14	1547+00	TO	1560+00	73,463	1,990	109	85,708	1,093	60	6.19		
F15	1560+00	TO	1570+00	36,435	561	31	36,435	465	26	1.74		
ROADWAY TOTAL				305,938	6,572	361	370,919	4,732	261	20.87		
PROJECT TOTAL				305,938	6,572	361	370,919	4,732	261	20.87		
ESTIMATE OF QUANTITIES					6,600	370		4,750	270	30		
					TON	TON		TON	TON	TON		

PLANS-IN-HAND AUGUST 2016

THIS SHEET TO BE REMOVED FOR FINAL

PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DRIVE  
ANCHORAGE, AK 99507  
(907) 522-1707  
CERT. OF AUTH. NO. AECC111



R&M CONSULTANTS, INC.

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

SEWARD HWY: MP 100–105  
IMPROVEMENTS &  
HSIP: CR TRAFFIC SAFETY  
CORRIDOR LEFT TURN LANES

SUMMARY TABLES

DESIGNED BY  
CHECKED BY  
DRAFTED BY

XREFS

SCALE

LAYOUT  
D1

DATE TIME  
8/5/2016 9:13 AM

DRAWING LOCATION  
Z:\project\2129.00 DOT\_C Seward Hwy MP 99 105\Civil\ACAD\Seward Hwy\2129.01-D01.dwg

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION	ALASKA	0A31056/Z583890000 0001497/Z570880000	2016	D1	D7

201(3B)

CLEARING AND GRUBBING							
SHEET	STATION RANGE			AREA			
				3R		HSIP	
				SF	ACRES	SF	ACRES
F1	1380+50	TO	1391+00	0	0.00	0	0.00
F2	1391+00	TO	1404+00	0	0.00	0	0.00
F3	1404+00	TO	1417+00	113,131	2.60	30,937	0.71
F4	1417+00	TO	1430+00	0	0.00	149,870	3.81
F5	1430+00	TO	1443+00	0	0.00	129,957	2.98
F6	1443+00	TO	1456+00	0	0.00	0	0.00
F7	1456+00	TO	1469+00	0	0.00	0	0.00
F8	1469+00	TO	1482+00	0	0.00	0	0.00
F9	1482+00	TO	1495+00	0	0.00	0	0.00
F10	1495+00	TO	1508+00	0	0.00	0	0.00
F11	1508+00	TO	1521+00	0	0.00	0	0.00
F12	1521+00	TO	1534+00	56,284	1.29	0	0.00
F13	1534+00	TO	1547+00	54,114	1.24	132,981	3.05
F14	1547+00	TO	1560+00	0	0.00	179,086	4.11
F15	1560+00	TO	1570+00	10,677	0.25	70,145	1.61
F16	1570+00	TO	1583+00	114,825	2.64	0	0.00
F17	1583+00	TO	1596+00	44,579	1.02	0	0.00
F18	1596+00	TO	1609+00	0	0.00	0	0.00
F19	1609+00	TO	1622+00	0	0.00	0	0.00
F20	1622+00	TO	1635+00	0	0.00	0	0.00
F21	1635+00	TO	1648+00	0	0.00	0	0.00
F22	1648+00	TO	1658+50	0	0.00	0	0.00
TOTAL				393,610	9.04	693,001	15.91
ROUNDED TOTAL				392,040	9.00	696,960	16.00
ROUNDED TOTAL (3R+HSIP)				1,089,000		25.00	

202(2)

REMOVAL OF PAVEMENT					
SHEET	STATION RANGE			AREA (SY)	
				3R	HSIP
F1	1380+50	TO	1391+00	4,647	0
F2	1391+00	TO	1404+00	5,881	0
F3	1404+00	TO	1417+00	5,078	880
F4	1417+00	TO	1430+00	0	8,595
F5	1430+00	TO	1443+00	0	6,901
F6	1443+00	TO	1456+00	6,044	0
F7	1456+00	TO	1469+00	6,026	0
F8	1469+00	TO	1482+00	8,427	0
F9	1482+00	TO	1495+00	5,983	0
F10	1495+00	TO	1508+00	5,931	0
F11	1508+00	TO	1521+00	5,752	0
F12	1521+00	TO	1534+00	5,786	0
F13	1534+00	TO	1547+00	2,577	3,911
F14	1547+00	TO	1560+00	0	7,023
F15	1560+00	TO	1570+00	882	3,503
F16	1570+00	TO	1583+00	5,925	0
F17	1583+00	TO	1596+00	6,553	0
F18	1596+00	TO	1609+00	5,861	0
F19	1609+00	TO	1622+00	6,601	0
F20	1622+00	TO	1635+00	5,617	0
F21	1635+00	TO	1648+00	5,764	0
F22	1648+00	TO	1658+50	4,569	0
TOTAL				103,905	30,812
ROUNDED TOTAL				104,000	30,900
ROUNDED TOTAL (3R+HSIP)				134,900	

406(4), 406(5)

RUMBLE STRIPS							
SHEET	STATION RANGE			LENGTH (MILE)			
				SHOULDER		CENTERLINE	
				3R	HSIP	3R	HSIP
F1	1380+50	TO	1391+00	0.37	0.00	0.18	0.00
F2	1391+00	TO	1404+00	0.46	0.00	0.25	0.00
F3	1404+00	TO	1417+00	0.38	0.08	0.19	0.04
F4	1417+00	TO	1430+00	0.00	0.39	0.00	0.17
F5	1430+00	TO	1443+00	0.00	0.41	0.00	0.16
F6	1443+00	TO	1456+00	0.45	0.00	0.20	0.00
F7	1456+00	TO	1469+00	0.42	0.00	0.21	0.00
F8	1469+00	TO	1482+00	0.47	0.00	0.22	0.00
F9	1482+00	TO	1495+00	0.49	0.00	0.25	0.00
F10	1495+00	TO	1508+00	0.47	0.00	0.23	0.00
F11	1508+00	TO	1521+00	0.49	0.00	0.25	0.00
F12	1521+00	TO	1534+00	0.47	0.00	0.23	0.00
F13	1534+00	TO	1547+00	0.13	0.19	0.05	0.08
F14	1547+00	TO	1560+00	0.00	0.47	0.00	0.23
F15	1560+00	TO	1570+00	0.05	0.30	0.02	0.15
F16	1570+00	TO	1583+00	0.47	0.00	0.23	0.00
F17	1583+00	TO	1596+00	0.44	0.00	0.22	0.00
F18	1596+00	TO	1609+00	0.48	0.00	0.25	0.00
F19	1609+00	TO	1622+00	0.49	0.00	0.25	0.00
F20	1622+00	TO	1635+00	0.49	0.00	0.25	0.00
F21	1635+00	TO	1648+00	0.49	0.00	0.25	0.00
F22	1648+00	TO	1658+50	0.40	0.00	0.20	0.00
TOTAL				7.92	1.84	3.90	0.83
ROUNDED TOTAL				8.00	2.00	4.00	1.00
ROUNDED TOTAL (3R+HSIP)				10.00		5.00	

202(3)

REMOVAL OF SIDEWALK				
SHEET	STATION RANGE			REMARKS
F3	1404+00	TO	1417+00	593.07
F4	1417+00	TO	1430+00	53.79
F12	1521+00	TO	1534+00	409.03
F13	1534+00	TO	1547+00	318.80
F14	1547+00	TO	1560+00	14.30
TOTAL			1,388.99	
ROUNDED TOTAL			1,400.00	

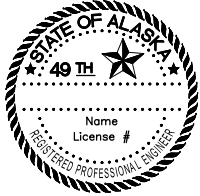
202(11)

MULTIPLE MAIL BOX INSTALLATION				
SHEET	STATION	OFFSET	QUANTITY	REMARKS
			HSIP	
F4	1426+62	RT	1	BIRD MOTEL & RV PARK
F5	1430+41	RT	1	ESSENTIAL ONE
F5	1434+99	RT	1	STELLER'S JAY LANE
F14	1550+90	RT	1	BORETIDE ROAD
TOTAL			4	

PROJECT KEY:  
3R = NO Z583890000  
HSIP = NO Z570880000

PLANS-IN-HAND AUGUST 2016

PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DRIVE  
ANCHORAGE, AK 99507  
(907) 522-1707  
CERT. OF AUTH. NO. AECC111



R&M CONSULTANTS, INC.

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

SEWARD HWY: MP 100-105  
IMPROVEMENTS &  
HSIP: CR TRAFFIC SAFETY  
CORRIDOR LEFT TURN LANES

SUMMARY TABLES

DESIGNED BY  
CHECKED BY  
DRAFTED BY

XREFS

SCALE

LAYOUT  
D2

DATE TIME  
8/5/2016 9:13 AM

DRAWING LOCATION  
Z:\project\2129.00 DOT\_C Seward Hwy MP 99 105\Civil\ACAD\Seward Hwy\2129.01-D01.dwg

202(4)


REMOVAL OF CULVERT PIPE					
SHEET	STATION	OFFSET	LENGTH (LF)		REMARKS
			3R	HSIP	
F1	1386+18.6	—	143.7		24" CMP
F1	1387+67.6	55.3 RT	40.3		24" CMP
F1	1389+47.6	51.9 RT	30.7		24" CMP
F2	1397+56.5	—	92.4		24" CMP
F2	1398+71.6	45.0 RT	38.3		24" CMP
F2	1401+43.2	40.9 RT	46.5		18" CMP
F2	1401+55.8	41.0 LT	29.8		18" CMP
F3	1405+47.6	40.0 RT	33.9		18" CMP
F3	1415+11.9	—		133.1	48" CMP
F3	1415+11.9	—		133.1	48" CMP
F4	1417+25.4	41.6 RT		65.9	24" CMP
F4	1418+58.4	41.5 RT		60.0	18" CMP
F4	1424+54.1	—		86.9	24" CMP
F4	1424+93.8	40.4 RT		24.3	18" CMP
F4	1425+83.3	39.7 RT		59.8	18" CMP
F4	1428+09.1	—		101.2	24" CMP
F4	1428+89.7	40.9 RT		58.1	18" CMP
F5	1431+43.2	—		78.3	24" CMP
F5	1431+72.8	42.1 RT		47.6	18" CMP
F5	1435+20.8	41.3 RT		39.5	18" CMP
F5	1438+55.9	—		70.7	24" CMP
F5	1439+03.5	40.7 RT		37.6	18" CMP
F6	1445+37.2	41.1 RT	44.3		18" CMP
F6	1451+60.0	40.3 RT	61.1		24" CMP
F8	1472+95.2	54.2 RT	68.6		18" CMP
F10	1497+88.3	48.4 RT	59.7		18" CMP
F12	1527+98.0	—	101.1		24" CMP
F12	1527+98.0	—	101.1		24" CMP
F12	1532+98.9	40.6 RT	50.6		18" CMP
F13	1534+93.5	40.3 RT	50.1		18" CMP
F13	1537+07.3	40.1 RT	50.6		18" CMP
F13	1537+83.1	41.3 RT	24.5		18" CMP
F13	1538+10.9	147.3 RT	114.0		24" CMP
F13	1538+10.9	147.3 RT	114.0		24" CMP
F13	1545+23.9	40.5 RT		28.9	18" CMP

REMOVAL OF CULVERT PIPE (CONTINUED)					
SHEET	STATION	OFFSET	LENGTH (LF)		REMARKS
			3R	HSIP	
F14	1547+52.2	42.1 RT		49.7	18" CMP
F14	1549+75.6	40.5 RT		48.8	18" CMP
F14	1549+75.6	40.5 RT		48.8	18" CMP
F14	1554+12.8	—		79.3	24" CMP
F15	1563+97.0	—		66.5	24" CMP
F15	1564+06.1	84.5 LT		42.4	24" CMP
F15	1569+06.1	35.6 RT	68.4		18" CMP
F16	1570+86.6	40.0 RT	39.5		18" CMP
F16	1571+74.9	62.0 RT	49.9		24" CMP
F16	1572+34.5	—	79.4		24" CMP
F16	1572+91.1	—	71.5		36" CMP
F16	1572+96.9	76.5 LT	59.8		36" CMP
F16	1573+24.5	42.3 RT	43.6		18" CMP
F16	1574+04.5	40.9 RT	30.1		24" CMP
F16	1576+80.7	39.3 RT	30.3		18" CMP
F16	1578+02.8	—	75.1		36" CMP
F16	1579+26.3	40.0 RT	32.5		24" CMP
F16	1581+72.0	40.9 RT	30.1		18" CMP
F17	1585+36.1	—	80.7		24" CMP
F17	1588+13.8	73.0 RT	62.4		18" CMP
F17	1588+99.1	40.0 RT	92.4		18" CMP
F17	1589+87.7	—	136.0		24" CMP
F17	1590+90.9	41.6 RT	50.3		18" CMP
F17	1591+54.7	—	75.8		24" CMP
F17	1594+82.3	—	136.5		24" CMP
F17	1595+15.4	38.3 RT	64.9		18" CMP
F18	1608+60.1	—	81.2		24" CMP
F19	1613+65.9	—	59.5		24" CMP
F20	1623+29.9	—	59.4		24" CMP
F21	1642+85.4	—	59.1		24" CMP
F21	1645+92.1	59.7 LT	36.1		36" CMP
F22	1652+31.0	—	64.0		24" CMP
TOTAL			2,963.8	1,360.5	
ROUNDED TOTAL			3,000.0	1,400.0	
ROUNDED TOTAL (3R+HSIP)			4,400.0		

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0A31056/Z583890000 0001497/Z570880000	2016	D2	D7

PLANS-IN-HAND AUGUST 2016

PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DRIVE  
ANCHORAGE, AK 99507  
(907) 522-1707  
CERT. OF AUTH. NO. AECC111



R&M CONSULTANTS, INC.

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

**SEWARD HWY: MP 100–105  
IMPROVEMENTS &  
HSIP: CR TRAFFIC SAFETY  
CORRIDOR LEFT TURN LANES**

SUMMARY TABLES

DESIGNED BY  
CHECKED BY  
DRAFTED BY

XREFS

SCALE

LAYOUT  
D3

DATE TIME  
8/5/2016 9:13 AM

DRAWING LOCATION  
Z:\project\2129.00 DOT\_C Seward Hwy MP 99 105\Civil\CAD\Seward Hwy\2129.01-D01.dwg

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					

603(9-18), 603(9-24), 603(9-36), 603(9-42), 603(11-18), 603(11-24), 603(11-36), 603(11-42)

PIPE SUMMARY (CULVERTS)																
PROJECT	SHEET	PIPE	PAY LENGTH (LF)				STATION RANGE						SLOPE (%)	END SECTIONS	THAW PIPE	REMARKS
			18 IN	24 IN	36 IN	42 IN	STATION	OFFSET	INVERT	STATION	OFFSET	INVERT				
3R	F1	P1-1			118.0		1386+20.0	50.0 RT	87.49	1386+20.0	67.4 LT	75.75	10.0	2	X	
3R	F1	P1-2		52.0			1387+92.4	56.4 RT	94.90	1387+41.2	56.4 RT	92.95	3.8	2		
3R	F1	P1-3		32.0			1389+63.5	51.8 RT	98.66	1389+31.6	51.9 RT	98.21	1.4	2		
3R	F2	P2-1			86.0		1397+55.0	42.7 RT	98.66	1397+55.0	43.3 LT	98.16	0.6	2	X	
3R	F2	P2-2		46.0			1398+92.7	47.3 RT	99.89	1398+46.8	48.5 RT	99.34	1.2	2		
3R	F2	P2-3	48.0				1401+19.2	40.8 RT	98.21	1401+67.2	40.8 RT	97.39	1.7	2		
3R	F2	P2-4	32.0				1401+39.8	41.1 LT	97.62	1401+71.8	41.1 LT	97.08	1.7	2		
3R	F3	P3-1	36.0				1405+65.6	40.0 RT	86.51	1405+29.6	40.0 RT	86.08	1.2	2		
HSIP	F4	P4-1	70.0				1419+03.4	43.8 RT	73.30	1418+33.4	43.0 RT	71.44	2.7	2	X	
HSIP	F4	P4-2			80.0		1424+55.0	35.1 RT	82.85	1424+55.0	44.9 LT	81.96	1.1	2	X	
HSIP	F4	P4-3	22.0				1425+05.0	49.0 RT	84.10	1424+83.0	49.1 RT	83.81	1.3	2		
HSIP	F4	P4-4	60.0				1426+41.0	49.0 RT	85.89	1425+81.1	49.0 RT	85.11	1.3	2		
HSIP	F4	P4-5			92.0		1428+10.0	47.2 RT	85.63	1428+10.0	44.8 LT	84.99	0.7	2	X	
HSIP	F4	P4-6		98.0			1429+35.6	60.6 RT	89.67	1428+37.9	59.0 RT	87.82	1.9	2	X	
HSIP	F5	P5-1			84.0		1433+00.0	37.4 RT	94.22	1433+00.0	46.5 LT	90.26	4.7	2	X	
HSIP	F5	P5-2		62.0			1434+90.0	56.0 RT	94.60	1435+51.4	56.4 RT	94.60	0.0	2	X	
HSIP	F5	P5-3			62.0		1438+55.0	30.8 RT	92.80	1438+55.0	31.2 LT	92.33	0.8	2	X	
HSIP	F5	P5-4		58.0			1438+77.8	48.4 RT	95.25	1439+35.3	47.7 RT	94.01	2.1	2	X	
3R	F6	P6-1		50.0			1445+13.0	41.3 RT	80.55	1445+62.6	41.3 RT	79.51	2.1	2	X	
3R	F6	P6-2		74.0			1451+26.4	40.4 RT	59.71	1451+99.8	40.4 RT	57.42	3.1	2		
3R	F8	P8-1	72.0				1473+31.6	56.3 RT	65.45	1472+57.4	56.5 RT	62.65	3.9	2		
3R	F10	P10-1	64.0				1497+58.5	43.4 RT	78.90	1498+20.5	54.7 RT	78.26	1.0	2		
3R	F12	P12-1				96.0	1528+00.0	43.1 RT	53.79	1528+00.0	52.9 LT	53.31	0.5	2	X	
3R	F12	P12-2	60.0				1532+68.6	40.8 RT	53.41	1533+28.0	37.6 RT	52.26	1.9	2		
3R	F13	P13-1	72.0				1534+64.5	37.8 RT	49.01	1535+35.9	37.0 RT	47.75	1.8	2		
3R	F13	P13-2	62.0				1537+49.2	41.4 RT	41.35	1538+10.5	44.2 RT	40.16	1.9	2		
3R	F13	P13-3			116.0		1537+55.2	139.5 RT	42.83	1538+66.5	155.1 RT	39.88	2.5	2		
3R	F13	P13-4	36.0				1538+15.8	89.8 LT	34.50	1537+97.7	121.2 LT	34.50	0.0	2		
HSIP	F13	P13-5		84.0			1545+65.8	57.5 RT	35.00	1544+82.8	54.7 RT	34.58	0.5	2	X	
HSIP	F14	P14-1		42.0			1550+78.0	80.3 RT	48.25	1550+36.5	86.4 RT	48.00	0.6	2	X	
HSIP	F14	P14-2		48.0			1550+36.6	202.0 RT	54.62	1550+29.7	154.6 RT	53.73	1.9	2		
HSIP	F14	P14-3			110.0		1552+59.0	43.7 RT	51.10	1552+59.0	66.1 LT	45.17	5.4	2	X	
HSIP	F15	P15-1			22.0		1563+87.0	80.9 RT	48.58	1563+87.0	58.9 RT	48.25	1.5	2		
HSIP	F15	P15-2			74.0		1563+87.0	36.2 RT	47.37	1563+87.0	37.6 LT	41.10	8.5	2	X	
HSIP	F15	P15-3			42.0		1563+87.0	63.5 LT	24.30	1563+87.0	105.5 LT	23.21	2.6	2	X	

PLANS-IN-HAND AUGUST 2016

PROJECT KEY:  
3R = NO Z583890000  
HSIP = NO Z570880000

PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DRIVE  
ANCHORAGE, AK 99507  
(907) 522-1707  
CERT. OF AUTH. NO. AECC111



R&M CONSULTANTS, INC.

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
  
SEWARD HWY: MP 100-105  
IMPROVEMENTS &  
HSIP: CR TRAFFIC SAFETY  
CORRIDOR LEFT TURN LANES  
  
SUMMARY TABLES

DESIGNED BY  
CHECKED BY  
DRAFTED BY

XREES

SCALE

LAYOUT  
D4

DATE TIME  
8/5/2016 9:13 AM

DRAWING LOCATION  
Z:\project\2129.00 DOT\_C Seward Hwy MP 99 105\Civil\ACAD\Seward Hwy\2129.01-D01.dwg

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION	ALASKA	0A31056/Z583890000 0001497/Z570880000	2016	D4	D7

PIPE SUMMARY (CULVERTS) (CONTINUED)																		
PROJECT	SHEET	PIPE	PAY LENGTH (LF)				STATION RANGE						SLOPE (%)	END SECTIONS	THAW PIPE	REMARKS		
			18 IN	24 IN	36 IN	42 IN	STATION	OFFSET	INVERT	STATION	OFFSET	INVERT						
3R	F15	P15-4	32.0				1568+18.3	36.0 RT	43.42	1568+26.6	66.9 RT	42.62	2.5	2				
3R	F15	P15-5	64.0				1568+71.8	60.2 RT	42.16	1569+35.7	60.2 RT	40.56	2.5	2				
3R	F16	P16-3	48.0				1573+33.9	60.2 RT	37.37	1572+87.4	60.1 RT	35.52	3.9	2				
3R	F16	P16-4			64.0		1578+00.0	31.3 RT	33.20	1578+00.0	32.5 LT	28.24	7.8	2	X			
3R	F17	P17-1			78.0		1585+30.0	36.9 RT	31.54	1585+30.0	40.7 LT	24.19	9.5	2	X			
3R	F17	P17-2		38.0			1588+40.5	84.5 RT	40.07	1588+31.4	47.9 RT	36.21	10.2	2	X			
3R	F17	P17-3			102.0		1588+46.6	39.4 RT	33.22	1589+46.6	39.3 RT	32.50	0.7	2	X			
3R	F17	P17-4			78.0		1589+90.0	38.0 RT	30.78	1589+90.0	39.5 LT	22.34	11.3	1	X			
3R	F17	P17-5			60.0		1589+90.0	39.5 LT	21.98	1589+90.0	99.5 LT	21.70	0.5	1	X			
3R	F17	P17-6	56.0				1590+60.9	40.6 RT	32.40	1591+16.9	41.3 RT	31.72	1.2	2				
3R	F17	P17-7			70.0		1591+55.0	35.0 RT	30.32	1591+55.0	34.7 LT	24.25	8.7	2	X			
3R	F17	P17-8			80.0		1594+55.0	34.9 RT	32.97	1594+55.0	43.9 LT	19.71	17.5	1	X			
3R	F17	P17-9			60.0		1594+55.0	43.9 LT	19.17	1594+55.0	103.9 LT	18.89	0.5	1	X			
3R	F17	P17-10	66.0				1595+48.5	38.3 RT	33.98	1594+82.5	38.3 RT	32.99	1.5	2				
3R	F18	P18-1			78.0		1608+60.0	24.2 RT	41.60	1608+60.0	53.8 LT	40.16	1.9	2	X			
3R	F19	P19-1			62.0		1613+65.0	25.5 RT	33.68	1613+65.0	36.4 LT	30.09	5.8	2	X			
3R	F20	P20-1			62.0		1625+60.0	24.7 RT	32.53	1625+60.0	37.1 LT	28.45	6.6	2	X			
3R	F21	P21-1			64.0		1641+40.0	26.5 RT	29.68	1641+40.0	37.4 LT	26.42	5.1	2	X			
3R	F21	P21-2			58.0		1642+85.0	22.3 RT	30.35	1642+85.0	35.6 LT	26.88	6.0	2	X			
3R	F21	P21-3			54.0		1645+92.0	23.8 RT	30.82	1645+92.0	30.1 LT	27.34	6.4	2	X			
3R	F22	P22-1			60.0		1652+30.0	28.6 RT	30.23	1652+30.0	31.4 LT	29.38	1.4	2	X			
TOTAL LENGTH (3R)			748.0	292.0	1,350.0	96.0											1,418.0	
TOTAL LENGTH (HSIP)			152.0	392.0	566.0	0.0											958.0	
TOTAL LENGTH (3R+HSIP)			900.0	684.0	1,916.0	96.0											2,376.0	
TOTAL END SECTIONS (3R)			28	12	32	2												
TOTAL END SECTIONS (HSIP)			6	12	16	0												
TOTAL END SECTIONS (3R+HSIP)			34	24	48	2												

604(1)

STORM SEWER MANHOLE								
PROJECT	SHEET	MANHOLE	STATION	OFFSET	TOP OF CASTING ELEV	MANHOLE TYPE	CASTING TYPE	REMARKS
3R	F17	S17-4	1589+90.00	39.50 LT	27.42	TYPE II	FIELD INLET	
3R	F17	S17-8	1594+55.00	43.92 LT	24.52	TYPE II	FIELD INLET	
TOTAL			2					

PLANS-IN-HAND AUGUST 2016

PROJECT KEY:  
3R = NO Z583890000  
HSIP = NO Z570880000

PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DRIVE  
ANCHORAGE, AK 99507  
(907) 522-1707  
CERT. OF AUTH. NO. AECC111



R&M CONSULTANTS, INC.

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
  
SEWARD HWY: MP 100-105  
IMPROVEMENTS &  
HSIP: CR TRAFFIC SAFETY  
CORRIDOR LEFT TURN LANES

SUMMARY TABLES



DESIGNED BY  
CHECKED BY  
DRAFTED BY

XREES

SCALE

LAYOUT  
D5

DATE TIME  
8/5/2016 9:13 AM

DRAWING LOCATION  
Z:\project\2129.00 DOT\_C Seward Hwy MP 99 105\Civil\ACAD\Seward Hwy\2129.01-D01.dwg

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION	ALASKA	0A31056/Z583890000 0001497/Z570880000	2016	D5	D7

501(7B), 602(1A), 602(1B), 602(2), 602(4)

PIPE SUMMARY (FISH PASSAGE CULVERTS)																
PROJECT	SHEET	PIPE	PAY LENGTH (LF)				STATION RANGE						SLOPE (%)	HEADWALL		REMARKS
			ASPP 9' DIA	ASPP 7' DIA	ASPPA 6'7"x5'8"	ASPHE 9'2"x6'8"	STATION	OFFSET	INVERT	STATION	OFFSET	INVERT		TYPE I	TYPE II	
3R	F3 & E3	P3-2			60.0		1411+28.9	134.3 RT	58.55	1411+85.2	154.9 RT	57.92	1.0	2	-	BEAR CREEK REALIGNMENT AT AURIGA ROAD
3R	F3 & E5	P3-3	68.0				1414+81.9	142.0 RT	49.40	1414+33.8	93.9 RT	45.80	5.3	-	2	BEAR CREEK REALIGNMENT AT SEWARD HWY (PATHWAY)
3R	F3 & E5	P3-4	128.0				1414+25.0	62.1 RT	44.50	1414+25.0	65.9 LT	37.74	5.3	-	2	BEAR CREEK REALIGNMENT AT SEWARD HWY (ROADWAY)
3R	F16 & E8	P16-1		126.0			1571+64.9	52.2 RT	32.70	1572+50.1	40.7 LT	26.39	5.0	2	-	SUBDIVISION CREEK REALIGNMENT (ROADWAY)
3R	F16 & E8	P16-2				58.0	1572+94.5	48.4 LT	23.58	1572+99.5	106.2 LT	22.33	2.1	-	-	SUBDIVISION CREEK REALIGNMENT (RAILROAD)
TOTAL			196.0	126.0	60.0	58.0								4	4	

606(1), 606(13), 606(16)

GUARDRAIL SUMMARY									
PROJECT	SHEET	STATION RANGE		OFFSET	GUARDRAIL LENGTH (LF)	PARALLEL GUARDRAIL TERMINAL (50' LENGTH)	TRANSITION RAIL (18.75' LENGTH)	REMARKS	
3R	F1	1385+05.00	TO 1387+56.00	LT	150.00	2	0		
3R	F3	1410+50.00	TO 1416+12.50	LT	462.50	2	0		
3R	F3	1413+00.00	TO 1416+75.00	RT	275.00	2	0		
3R	F6-F7	1452+23.25	TO 1463+33.62	RT	1,062.50	1	0	BIRD CREEK BRIDGE	
3R	F6-F7	1455+70.20	TO 1463+33.62	LT	712.50	1	0	BIRD CREEK BRIDGE	
3R	F7	1465+73.66	TO 1467+23.41	RT	100.00	1	0	BIRD CREEK BRIDGE	
3R	F7-F8	1465+73.66	TO 1470+97.37	LT	475.00	1	0	BIRD CREEK BRIDGE	
3R	F13	1538+44.67	TO 1540+37.55	RT	125.00	1	1	INDIAN CREEK BRIDGE	
3R	F13	1539+82.65	TO 1540+51.69	LT	0.00	1	1	INDIAN CREEK BRIDGE	
3R	F13	1542+84.78	TO 1544+52.51	RT	100.00	1	1	INDIAN CREEK BRIDGE	
3R	F13	1543+02.86	TO 1545+22.56	LT	150.00	1	1	INDIAN CREEK BRIDGE	
3R	F14-F17	1552+25.00	TO 1588+77.56	LT	3,537.50	2	0		
3R	F17-F20	1589+75.00	TO 1632+63.55	LT	4,212.50	2	0		
3R	F20-F22	1633+20.00	TO 1658+50.00	LT	2,487.50	1	0		
TOTAL					13,850.00	19	4		
ROUNDED TOTAL					13,900.00	19	4		

606(6)

REMOVING AND DISPOSING OF GUARDRAIL					
SHEET	STATION RANGE		OFFSET	LENGTH (LF)	
				3R	
F1	1385+05	TO 1387+60	LT	253	
F3	1410+58	TO 1416+12	LT	553	
F3	1413+88	TO 1416+79	RT	291	
F6-F7	1452+05	TO 1463+34	RT	1,131	
F6-F7	1455+81	TO 1463+34	LT	752	
F7	1465+74	TO 1467+26	RT	152	
F7-F8	1465+74	TO 1470+88	LT	515	
F13	1539+39	TO 1540+91	RT	154	
F13	1540+12	TO 1540+90	LT	78	
F13	1542+53	TO 1544+92	RT	239	
F13	1542+54	TO 1545+32	LT	277	
F13-F14	1545+49	TO 1547+22	RT	175	
F14-F17	1552+51	TO 1588+80	LT	3,614	
F17-F20	1589+83	TO 1632+71	LT	4,313	
F20-F22	1633+20	TO 1658+50	LT	2,539	
TOTAL				15,036	
ROUNDED TOTAL				15,100	

609(2)

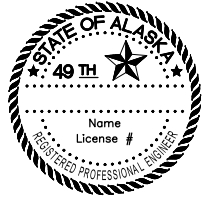
CURB AND GUTTER, TYPE 1						
SHEET	STATION RANGE			OFFSET	LENGTH (LF)	
					3R	HSIP
F5	1430+50.57	TO	1431+36.75	RT		128
F5	1431+65.97	TO	1432+57.63	RT		146
F13	1538+52.85	TO	1538+85.13	LT	38	
F13	1538+84.19	TO	1540+11.01	LT	125	
TOTAL					163	274
ROUNDED TOTAL					170	280
ROUNDED TOTAL (3R+HSIP)					450	

630(2)

GEOTEXTILE, STABILIZATION, CLASS 1					
SHEET	STATION RANGE		AREA (SY)	REMARKS	
F23	100+00	TO 105+70	2,307	BEAR CREEK PATHWAY	
TOTAL			2,307		
ROUNDED TOTAL			2,350		

PLANS-IN-HAND AUGUST 2016

PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DRIVE  
ANCHORAGE, AK 99507  
(907) 522-1707  
CERT. OF AUTH. NO. AECC111



R&M CONSULTANTS, INC.

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
  
SEWARD HWY: MP 100-105  
IMPROVEMENTS &  
HSIP: CR TRAFFIC SAFETY  
CORRIDOR LEFT TURN LANES  
  
SUMMARY TABLES

DESIGNED BY  
CHECKED BY  
DRAFTED BY

XREFS

SCALE

LAYOUT  
D6

DATE TIME  
8/5/2016 9:13 AM

DRAWING LOCATION  
Z:\project\2129.00 DOT\_C Seward Hwy MP 99 105\Civil\ACAD\Seward Hwy\2129.01-D01.dwg

611(2A), 611(2B)

RIPRAP SUMMARY									
PROJECT	SHEET	STATION RANGE			RIPRAP, CLASS I		RIPRAP, CLASS II		REMARKS
					VOLUME (CY)	WEIGHT (TON)	VOLUME (CY)	WEIGHT (TON)	
3R	F3 & E3	1408+59	TO	1412+08	144.31	210.40	–	–	BEAR CREEK REALIGNMENT AT AURIGA RD
3R	F3 & E3	1415+22	TO	1414+25	48.34	70.48	247.19	360.40	BEAR CREEK REALIGNMENT AT SEWARD HWY
3R	F13 & N3	1540+51	TO	1541+60	–	–	1,572.59	2,292.84	INDIAN CREEK BRIDGE ABUTMENT 1
3R	F13 & N4	1542+25	TO	1543+03	–	–	1,046.50	1,525.80	INDIAN CREEK BRIDGE ABUTMENT 4
3R	F16 & E8	1571+39	TO	1573+00	96.25	140.33	235.52	323.39	SUBDIVISION CREEK REALIGNMENT
TOTAL					288.90	421.22	3,101.80	4,522.42	
ROUNDED TOTAL						430.00		4,550.00	

671(1)

STREAM REALIGNMENT						
PROJECT	SHEET	STATION RANGE			LENGTH (LF)	REMARKS
3R	F3 & E3	1408+59	TO	1412+08	384.0	BEAR CREEK REALIGNMENT AT AURIGA RD
3R	F3 & E5	1415+22	TO	1414+25	308.5	BEAR CREEK REALIGNMENT AT SEWARD HWY
3R	F16 & E8	1571+39	TO	1573+00	408.0	SUBDIVISION CREEK REALIGNMENT
TOTAL					1,100.5	
ROUNDED TOTAL					1,150.0	

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION	ALASKA	0A31056/Z583890000 0001497/Z570880000	2016	D6	D7

PLANS-IN-HAND AUGUST 2016

PROJECT KEY:

3R = NO Z583890000  
HSIP = NO Z570880000

PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DRIVE  
ANCHORAGE, AK 99507  
(907) 522-1707  
CERT. OF AUTH. NO. AECC111



R&M CONSULTANTS, INC.

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
  
SEWARD HWY: MP 100–105  
IMPROVEMENTS &  
HSIP: CR TRAFFIC SAFETY  
CORRIDOR LEFT TURN LANES

SUMMARY TABLES

DESIGNED BY  
CHECKED BY  
DRAFTED BY

XREES

SCALE

LAYOUT  
D7

DATE TIME  
8/5/2016 9:13 AM

DRAWING LOCATION  
Z:\project\2129.00 DOT\_C Seward Hwy MP 99 105\Civil\ACAD\Seward Hwy\2129.01-D01.dwg

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION	ALASKA	0A31056/Z583890000 0001497/Z570880000	2016	D7	D7

639(6)

APPROACH SUMMARY

PROJECT	SHEET	REFERENCE ALIGNMENT	STATION	OFFSET	WIDTH	LENGTH	RETURN RADIUS INFORMATION						SKEW	TYPE	REMARKS
							APPROACH CL LEFT RETURN			APPROACH CL RIGHT RETURN					
							RADIUS	NORTHING	EASTING	RADIUS	NORTHING	EASTING			
3R	F1	SEWARD	1387+82.00	RT	18'	75'	40'	247361.36	429115.81	40'	247292.96	429188.85	11°52'5"	RESIDENTIAL	
3R	F1	SEWARD	1389+47.00	RT	14'	45'	20'	247449.69	428984.77	20'	247414.56	429025.78	0°0'0"	RESIDENTIAL	
3R	F2	SEWARD	1398+72.00	RT	14'	55'	20'	248054.55	428277.25	40'	248023.01	428344.91	-7°55'52"	PUBLIC	WHISPERING BIRD LANE
3R	F2	SEWARD	1401+50.00	RT	14'	50'	20'	248227.21	428075.28	20'	248191.61	428116.92	9°42'57"	RESIDENTIAL	
3R	F2	SEWARD	1401+55.00	LT	14'	45'	20'	248138.81	428055.57	20'	248173.94	428014.47	0°0'0"	RESIDENTIAL	
3R	F3	SEWARD	1405+48.00	RT	20'	42'	20'	248491.98	427765.57	20'	248452.99	427811.18	0°0'0"	RESIDENTIAL	
3R	F3 & F32	SEWARD	1412+50.00	RT	24'	200'	40'	248973.71	427232.86	40'	248894.65	427325.34	0°0'0"	PUBLIC	AURIGA ROAD
HSIP	F4 & F32	SEWARD	1418+70.00	RT	24'	250'	40'	249385.23	426761.02	40'	249316.43	426839.03	0°0'0"	PUBLIC	KONIKSON ROAD
HSIP	F4	KONIKSON	1+00.00	RT	28'	41'	20'	249382.18	426868.93	20'	249330.50	426824.74	0°0'0"	PUBLIC	CHUGACH STATE PARK PARKING LOT
HSIP	F4	KONIKSON	1+22.00	LT	14'	155'	20'	249394.13	426794.94	20'	249435.17	426830.03	0°0'0"	RESIDENTIAL	
HSIP	F4	KONIKSON	1+64.00	RT	20'	35'	20'	249427.79	426907.92	20'	249382.18	426868.93	0°0'0"	RESIDENTIAL	BIRD HOUSE GARAGE
HSIP	F4	SEWARD	1424+94.00	RT	14'	90'	20'	249760.63	426293.90	20'	249725.55	426334.94	0°0'0"	RESIDENTIAL	
HSIP	F4	SEWARD	1426+10.00	RT	38'	75'	40'	249872.01	426194.40	40'	249795.33	426284.09	0°0'0"	PUBLIC	BIRD MOTEL & RV PARK
HSIP	F4	SEWARD	1428+86.00	LT	36'	90'	40'	249868.06	425989.73	40'	249943.38	425901.51	0°0'0"	PUBLIC	BIRD CREEK CAMPGROUND
HSIP	F4 & F33	SEWARD	1428+86.00	RT	28'	470'	40'	250068.70	425982.34	50'	249967.33	426098.28	0°0'0"	PUBLIC	SAWMILL ROAD
HSIP	F4	SAWMILL	1+36.71	LT	34'	77'	40'	250068.70	425982.34	40'	250143.66	426070.10	0°0'0"	PUBLIC	ESSENTIAL ONE GAS STATION
HSIP	F4	SAWMILL	1+45.00	RT	34'	87'	40'	250079.78	426157.58	50'	249967.33	426098.28	0°0'0"	PUBLIC	BIRD MOTEL & RV PARK
HSIP	F4	SAWMILL	3+35.00	LT	34'	60'	40'	250207.73	426124.87	40'	250293.04	426200.52	0°0'0"	PUBLIC	ESSENTIAL ONE GAS STATION
HSIP	F5	SEWARD	1431+80.00	RT	28'	95'	70'	250260.65	425771.28	40'	250158.85	425865.43	14°59'60"	PUBLIC	ESSENTIAL ONE GAS STATION
HSIP	F5	SEWARD	1435+35.00	RT	24'	120'	40'	250434.84	425476.12	40'	250375.00	425563.49	10°59'37"	PUBLIC	STELLER'S JAY LANE
HSIP	F5 & F34	SEWARD	1439+01.00	RT	24'	200'	25'	250620.69	425148.02	40'	250586.97	425236.29	0°0'0"	PUBLIC	EL-ROCKO LANE
3R	F6	SEWARD	1445+40.00	RT	24'	65'	40'	250922.67	424572.17	40'	250879.99	424667.01	0°0'0"	PUBLIC	BUSHNELL ROAD
3R	F6	SEWARD	1451+62.00	RT	40'	65'	40'	251146.15	423976.52	40'	251109.05	424090.64	0°0'0"	PUBLIC	CHUGACH STATE PARK BIRD CREEK PARKING LOT
3R	F8	SEWARD	1473+00.00	RT	36'	80'	40'	251624.48	421899.20	40'	251591.78	422010.66	0°0'0"	PUBLIC	CHUGACH STATE PARK BIRD CREEK PARKING LOT
3R	F10	SEWARD	1497+91.00	RT	22'	65'	40'	253453.89	420372.94	40'	253372.72	420434.71	0°0'0"	PUBLIC	CHUGACH STATE PARK BIRD RIDGE TRAILHEAD
3R	F12	SEWARD	1532+98.00	RT	24'	75'	40'	255611.60	417589.36	40'	255563.98	417681.81	0°0'0"	PUBLIC	VALLEY BIBLE CHALET
3R	F13	SEWARD	1535+00.00	RT	34'	65'	40'	255701.24	417399.86	40'	255653.56	417503.41	0°0'0"	PUBLIC	
3R	F13 & F35	SEWARD	1537+80.00	LT	24'	318'	40'	255657.46	417195.58	40'	255695.12	417098.63	0°0'0"	PUBLIC	CHUGACH STATE PARK INDIAN CREEK PARKING LOT
3R	F13	SEWARD	1537+80.00	RT	30'	75'	40'	255808.04	417139.27	40'	255768.21	417241.81	0°0'0"	PUBLIC	DIAMOND JIM'S / BROWN BEAR SALOON & MOTEL
HSIP	F13 & F36	SEWARD	1545+23.00	RT	24'	130'	40'	256022.49	416423.53	40'	255999.05	416526.29	0°0'0"	PUBLIC	OLD JOHN'S ROAD
HSIP	F14 & F37	SEWARD	1550+44.00	RT	24'	420'	40'	256113.06	415891.60	40'	256097.87	415995.60	-8°18'21"	PUBLIC	BORETIDE ROAD
HSIP	F14 & F36	BORETIDE	1+75.00	RT	24'	90'	40'	256255.66	415995.60	40'	256151.66	415995.60	0°0'0"	PUBLIC	TURNAGAIN ARM PIT
3R	F15	SEWARD	1569+07.00	RT	34'	70'	40'	256439.26	414070.91	40'	256413.78	414182.03	0°0'0"	PUBLIC	INDIAN HOUSE
3R	F16	SEWARD	1573+10.00	RT	24'	70'	40'	256526.93	413681.90	40'	256505.16	413783.60	0°0'0"	PUBLIC	
3R	F17	SEWARD	1588+95.00	RT	23'	120'	-			19'	256214.23	412238.59	0°0'0"	PUBLIC	INDIAN ROAD
3R	F17	SEWARD	1590+90.00	RT	14'	70'	-			20'	256082.23	412060.07	0°0'0"	RESIDENTIAL	
3R	F17	SEWARD	1595+15.00	RT	18'	60'	13'	255768.00	411680.65	-			0°0'0"	PUBLIC	INDIAN VALLEY MINE
3R	F18	SEWARD	1597+01.00	RT	-	44'	40'	255657.63	411500.38	20'	255699.72	411584.60	0°0'0"	PUBLIC	INDIAN VALLEY MINE
3R	F19	SEWARD	1610+00.00	LT	-	50'	-			-			0°0'0"	PUBLIC	PULLOUT
3R	F19	SEWARD	1620+20.00	RT	26'	35'	-			-			0°0'0"	PUBLIC	PULLOUT
3R	F21	SEWARD	1644+50.00	RT	40'	41'	20'	255015.76	407040.08	20'	255006.09	407119.50	0°0'0"	PUBLIC	PULLOUT
TOTAL (3R)			24												
TOTAL (HSIP)			17												
TOTAL (3R+HSIP)			41												

PLANS-IN-HAND AUGUST 2016

PROJECT KEY:

3R = NO Z583890000  
HSIP = NO Z570880000

PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DRIVE  
ANCHORAGE, AK 99507  
(907) 522-1707  
CERT. OF AUTH. NO. AECC111

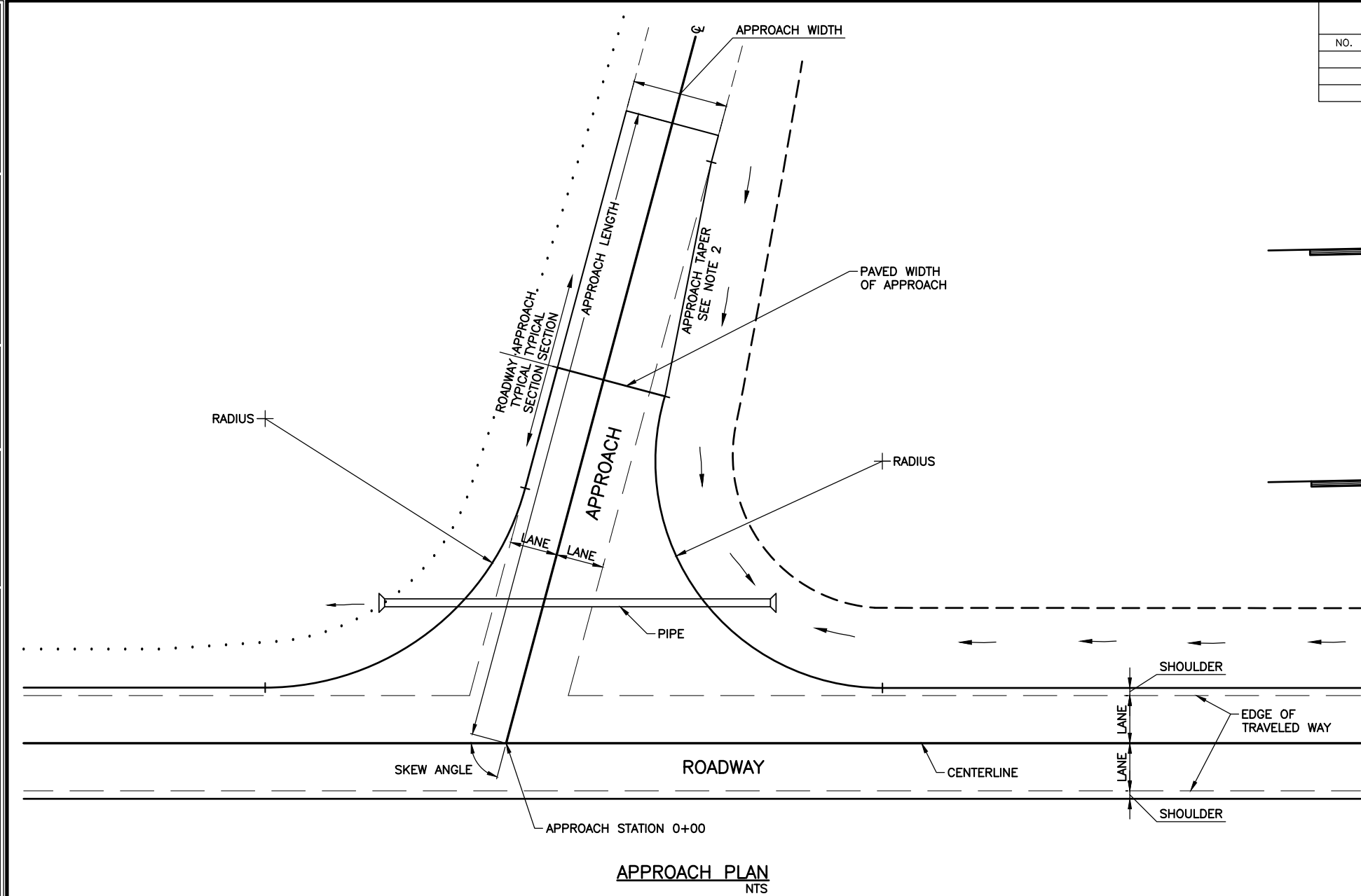


R&M CONSULTANTS, INC.

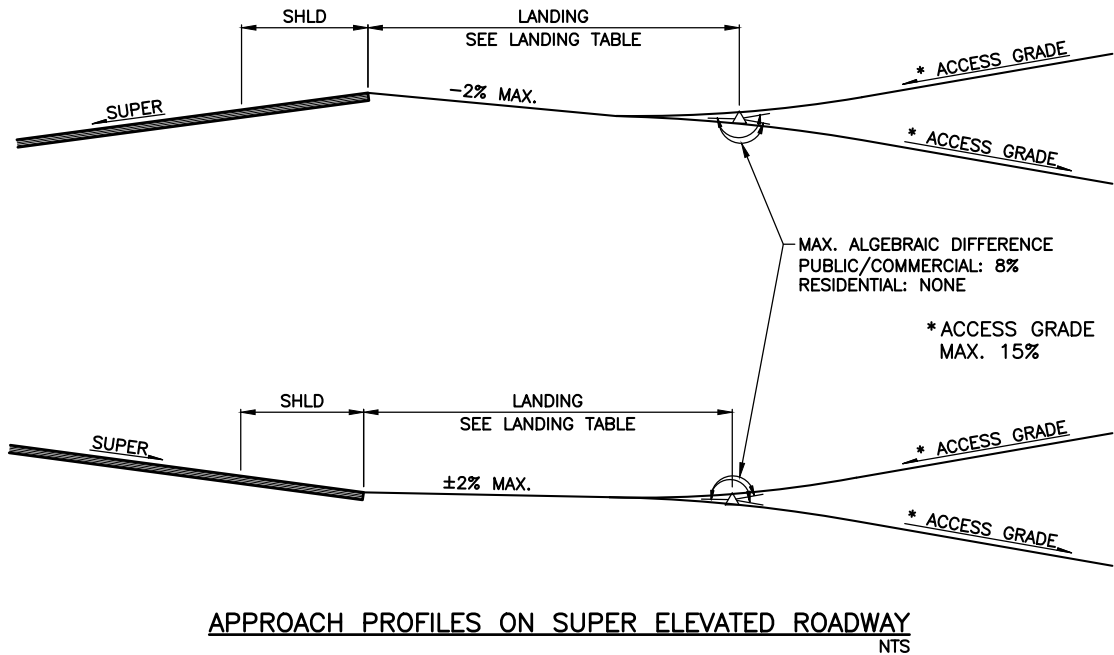
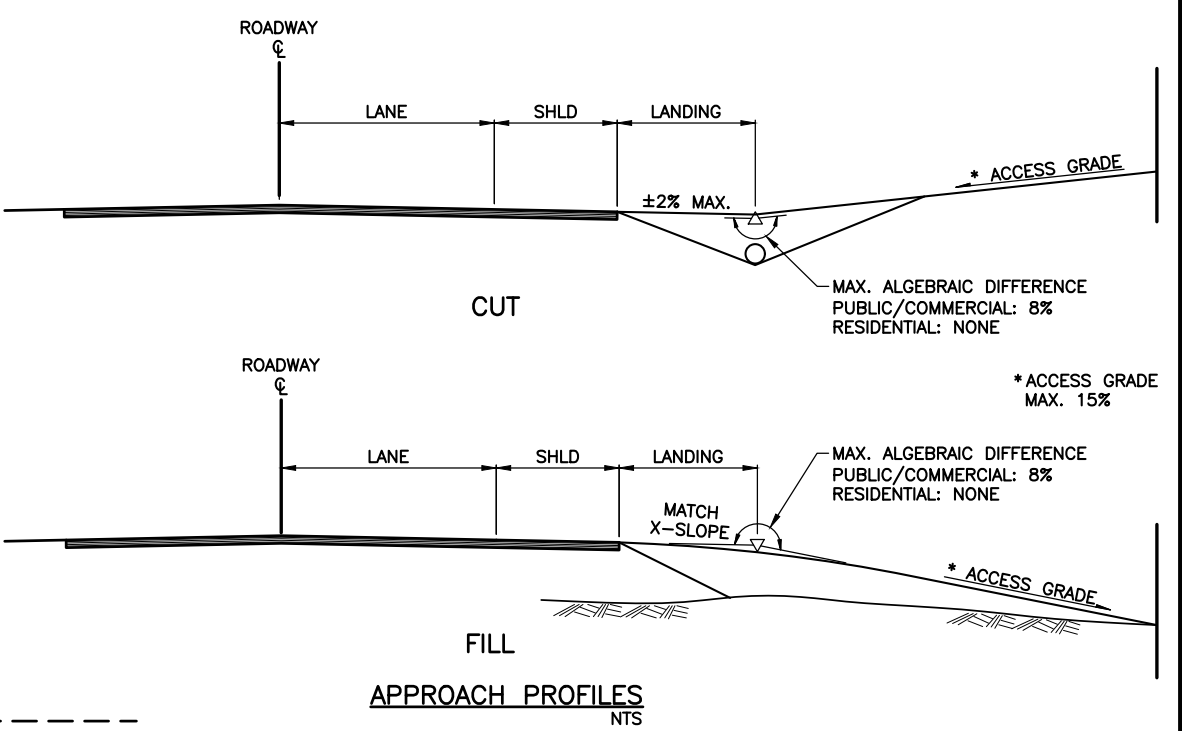
STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
  
SEWARD HWY: MP 100-105  
IMPROVEMENTS &  
HSIP: CR TRAFFIC SAFETY  
CORRIDOR LEFT TURN LANES

SUMMARY TABLES

DESIGNED BY  
CHECKED BY  
DRAFTED BY  
XREES  
SCALE  
LAYOUT  
E1  
DATE  
TIME  
8/5/2016 9:16 AM  
DRAWING LOCATION  
Z:\project\2129.00 DOT\_C Seward Hwy MP 99 105\Civil\ACAD\Seward Hwy\2129.01-E01.dwg



REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION	ALASKA	0A31056/Z583890000 0001497/Z570880000	2016	E1	E10



LANDING TABLE	
TYPE	LENGTH
RESIDENTIAL	10'
PUBLIC/COMMERCIAL	30'

- NOTES:
- SEE APPROACH SUMMARY FOR APPROACH STATION, LENGTH, WIDTH, SKEW ANGLE, RETURN RADIUS, AND TYPE.
  - APPROACH TAPERS SHALL BE 10:1.
  - THE PAVED PORTION OF THE APPROACH STRUCTURAL SECTION SHALL BE CONSTRUCTED OF THE SAME MATERIAL AS THE ROADWAY STRUCTURAL SECTION. SEE TYPICAL SECTION SHEETS FOR APPROACH AND ROADWAY TYPICAL SECTIONS.
  - PAVE TO THE END OF THE RADIUS RETURN UNLESS OTHERWISE INDICATED.
  - APPROACH VERTICAL CURVE REQUIREMENTS:  
CREST - 2 1/2" MAXIMUM IN A 10-FOOT CHORD  
SAG - 2" MAXIMUM IN A 10-FOOT CHORD

PLANS-IN-HAND AUGUST 2016

PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DRIVE  
ANCHORAGE, AK 99507  
(907) 522-1707  
CERT. OF AUTH. NO. AECC111

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

**SEWARD HWY: MP 100-105  
IMPROVEMENTS &  
HSIP: CR TRAFFIC SAFETY  
CORRIDOR LEFT TURN LANES**

DETAILS

DESIGNED BY  
CHECKED BY  
DRAFTED BY

XREFS

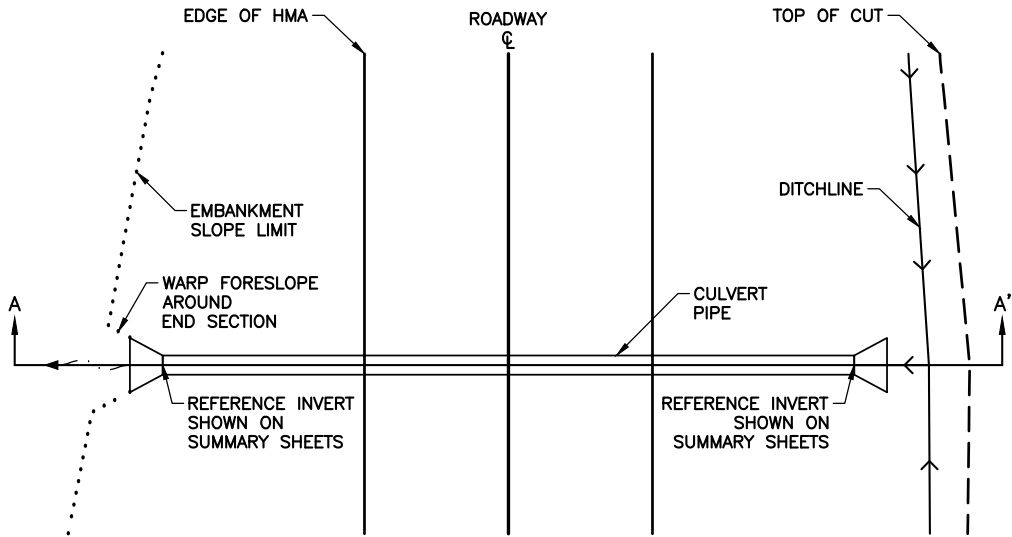
SCALE

LAYOUT  
E2

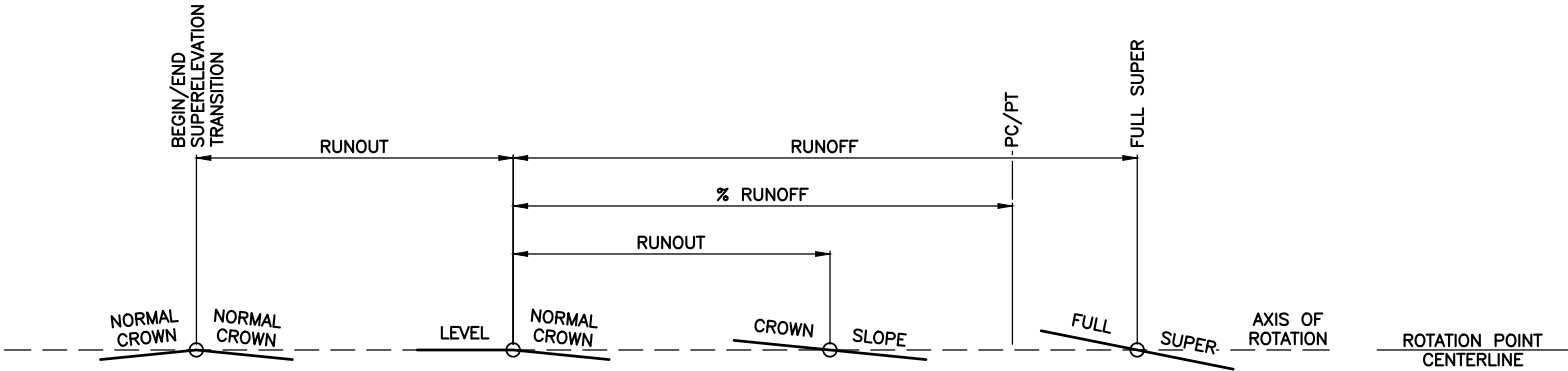
DATE TIME  
8/5/2016 9:16 AM

DRAWING LOCATION  
Z:\project\2129.00 DOT\_C Seward Hwy MP 99 105\Civil\ACAD\Seward Hwy\2129.01-E01.dwg

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0A31056/Z583890000 0001497/Z570880000	2016	E2	E10

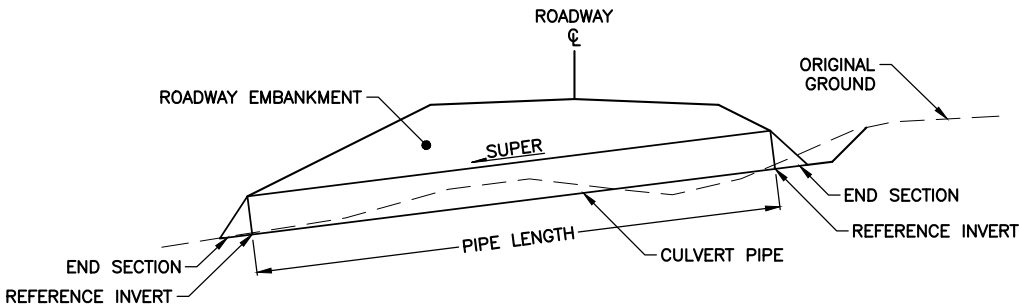


TYPICAL ROADWAY CULVERT PLAN  
NTS



SUPERELEVATION TRANSITION  
NTS

- NOTES:
1. BUILD SUPERELEVATION INTO SUBGRADE AND CARRY THROUGH SHOULDERS.
  2. % RUNOFF = PORTION OF RUNOFF ON TANGENT.
  3. WIDENING FOR GUARDRAIL OR CURVATURE DOES NOT CHANGE THE LOCATION OF THE AXIS OF ROTATION.



SECTION A-A'  
TYPICAL ROADWAY CULVERT SECTION  
NTS

PLANS-IN-HAND AUGUST 2016

PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DRIVE  
ANCHORAGE, AK 99507  
(907) 522-1707  
CERT. OF AUTH. NO. AECC111

STATE OF ALASKA  
49<sup>TH</sup>  
Name  
License #  
REGISTERED PROFESSIONAL ENGINEER

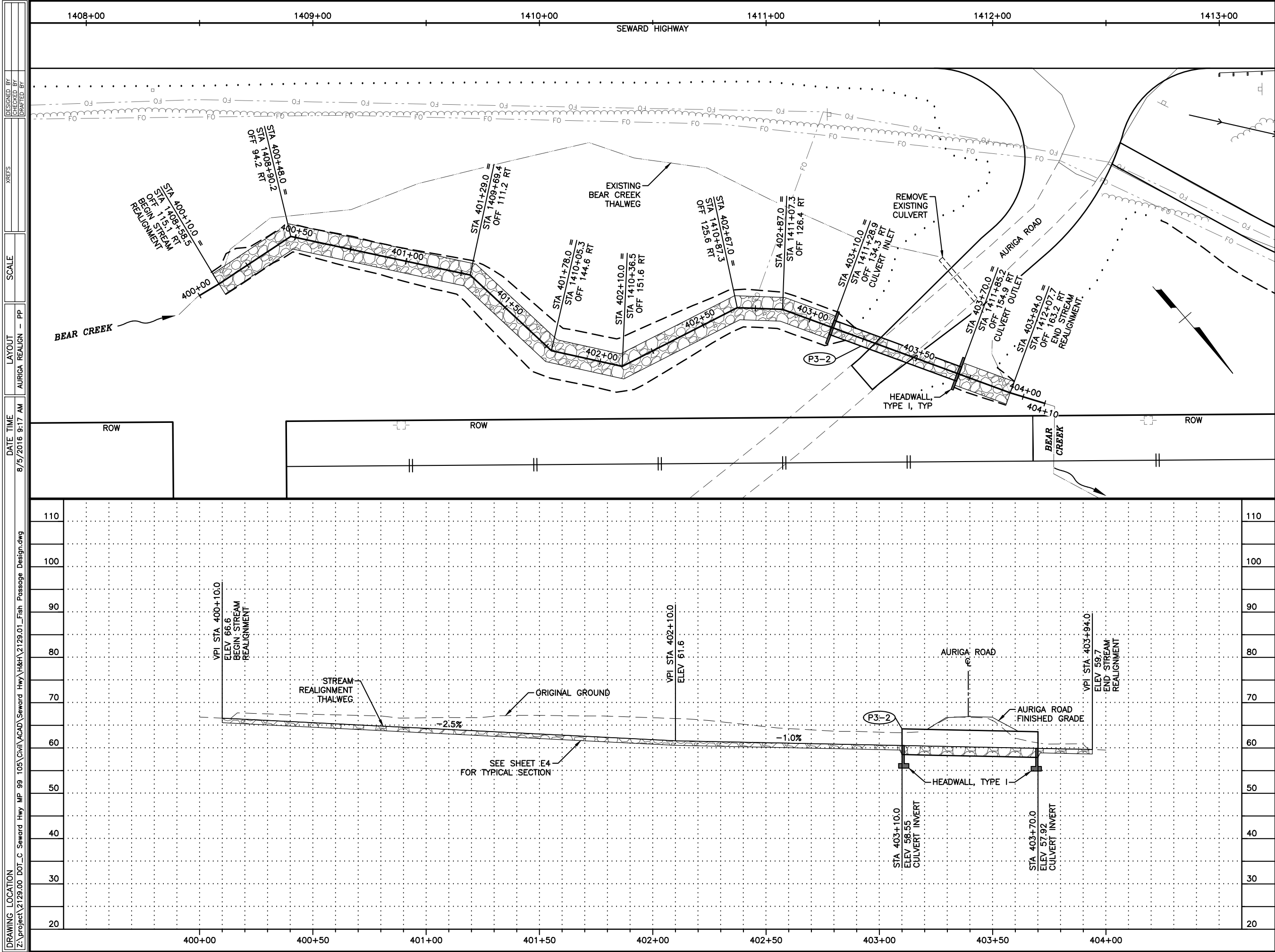
R&M CONSULTANTS, INC.

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

SEWARD HWY: MP 100-105  
IMPROVEMENTS &  
HSIP: CR TRAFFIC SAFETY  
CORRIDOR LEFT TURN LANES

DETAILS





SHEET NO.	TOTAL SHEETS	
E3	E10	
STATE	YEAR	
ALASKA	2016	
PROJECT DESIGNATION		
0A31056/Z583890000		
0001497/Z570880000		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION
PLANS-IN-HAND AUGUST 2016		

TO ANCHORAGE

TO GIRWOOD

EOP STA 1658+50

INDIAN RD

BORETIDE RD

INDIAN CREEK

SEWARD HIGHWAY

BIRD CREEK

BUSHNELL RD

SAWMILL RD

BEAR CREEK

BOP STA 1380+50

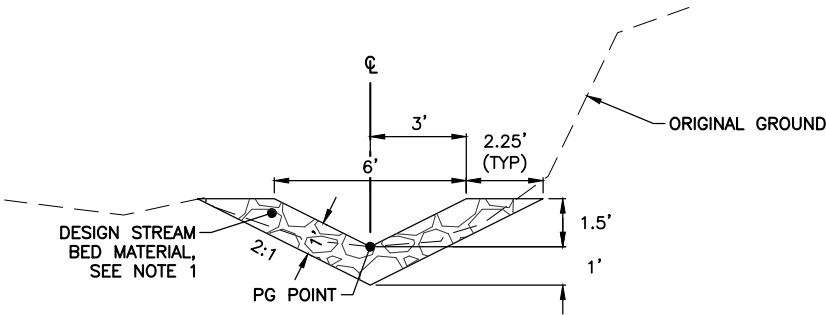
PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DR.  
ANCHORAGE, AK 99507  
(907) 522-1707  
CERT. OF AUTH. NO. AECC111

R&M CONSULTANTS, INC.

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

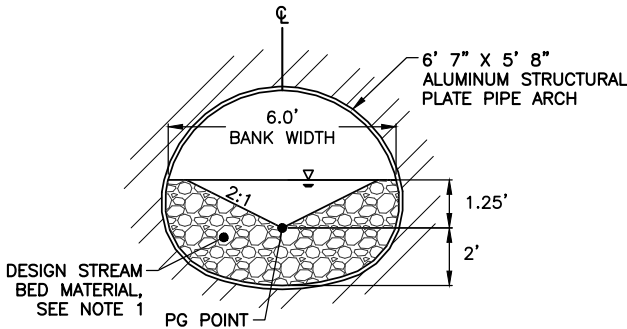
SEWARD HWY: MP 100-105  
IMPROVEMENTS &  
HSIP: CR TRAFFIC SAFETY  
CORRIDOR LEFT TURN LANES  
BEAR CREEK REALIGNMENT  
AT AURIGA ROAD  
PLAN AND PROFILE

DESIGNED BY  
CHECKED BY  
DRAFTED BY  
  
XREFS  
  
SCALE  
  
LAYOUT  
AURIGA  
  
DATE TIME  
8/5/2016 9:17 AM  
  
DRAWING LOCATION  
Z:\project\2129.00 DOT\_C Seward Hwy MP 99 105\Civil\ACAD\Seward Hwy\H&A\2129.01-Fish Passage-Details.dwg



OPEN CHANNEL SECTION

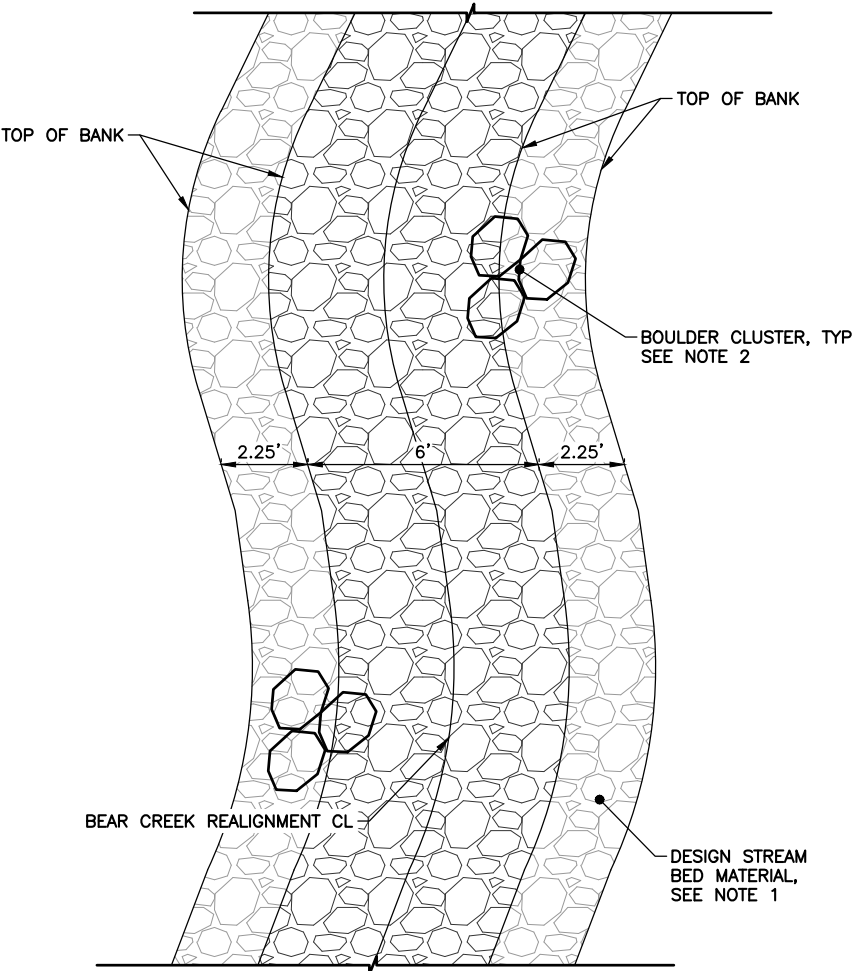
STA 400+10 TO STA 403+10  
STA 403+70 TO STA 403+94  
NTS



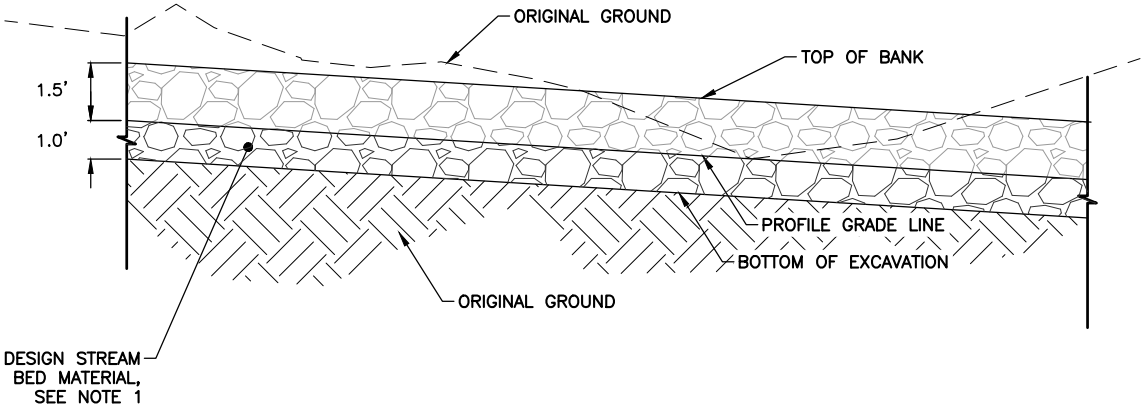
CULVERT SECTION

STA 403+10 TO STA 403+70  
NTS

BEAR CREEK REALIGNMENT AT AURIGA ROAD  
NTS



OPEN CHANNEL PLAN  
BEAR CREEK REALIGNMENT AT AURIGA ROAD  
NTS



OPEN CHANNEL PROFILE  
BEAR CREEK REALIGNMENT AT AURIGA ROAD  
NTS

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION	ALASKA	0A31056/Z583890000 0001497/Z570880000	2016	E4	E10

NOTES:

- DESIGN STREAMBED MATERIAL IS TO BE MADE UP OF RIPRAP, CLASS I WITH VOIDS FILLED IN USING SELECTED MATERIAL, TYPE A. THIS STREAMBED MATERIAL APPLIES TO THE FULL LENGTH OF BEAR CREEK REALIGNMENT AT AURIGA ROAD.
- PLACE BOULDER CLUSTERS (THREE BOULDERS) EVERY 20 FEET ALONG THE CREEK CL AS DIRECTED BY FIELD ENGINEER.
- 6'7" X 5'8" ALUMINUM STRUCTURAL PLATE PIPE ARCH SHALL BE PLACED WITH 2:1 BEVELS ON PIPE ENDS.
- INSTALL CAST-IN-PLACE TYPE I HEADWALLS AT THE INLET AND OUTLET OF THE CULVERT PER ADOT&PF STANDARD DRAWING D-30.10.

PLANS-IN-HAND AUGUST 2016

PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DRIVE  
ANCHORAGE, AK 99507  
(907) 522-1707  
CERT. OF AUTH. NO. AECC111



R&M CONSULTANTS, INC.

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
  
SEWARD HWY: MP 100-105  
IMPROVEMENTS &  
HSIP: CR TRAFFIC SAFETY  
CORRIDOR LEFT TURN LANES  
  
BEAR CREEK REALIGNMENT  
AT AURIGA ROAD DETAILS



DESIGNED BY  
CHECKED BY  
DRAFTED BY

XREFS

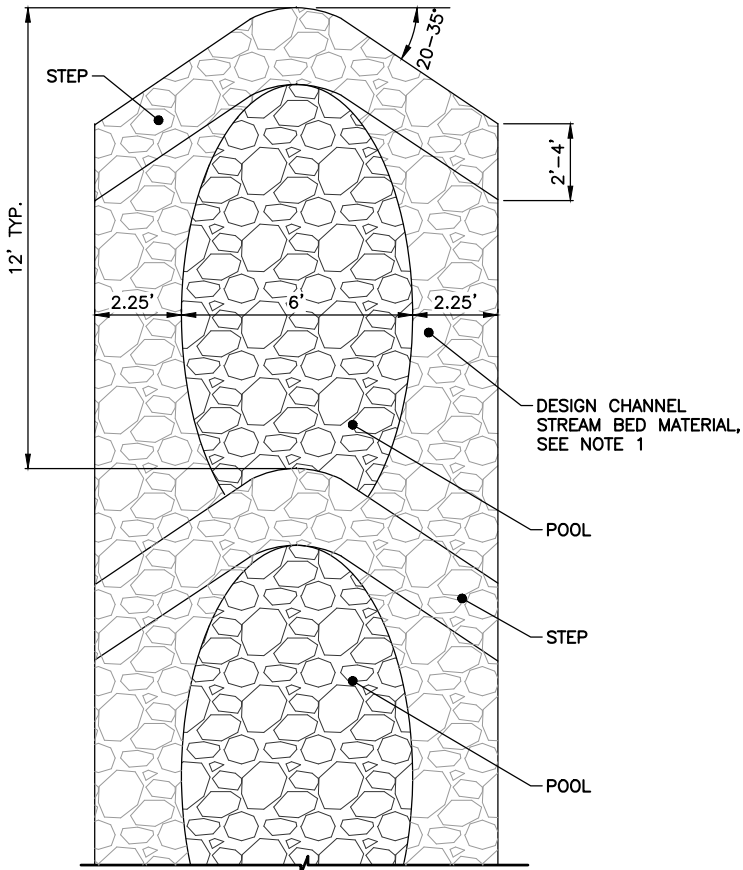
SCALE

LAYOUT  
BEARCRK01

DATE TIME  
8/5/2016 9:18 AM

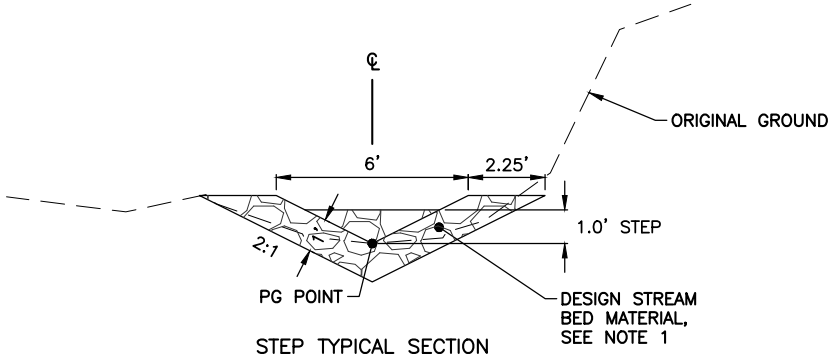
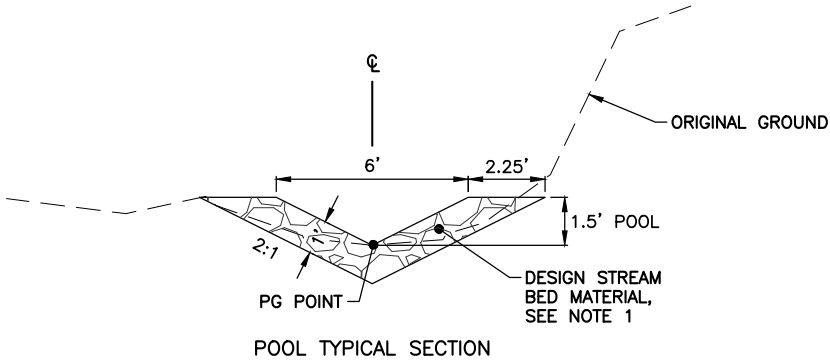
DRAWING LOCATION  
Z:\project\2129.00 DOT\_C Seward Hwy MP 99 105\Civil\ACAD\Seward Hwy\H&A\2129.01-Fish Passage-Details.dwg

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION	ALASKA	0A31056/Z583890000 0001497/Z570880000	2016	E6	E10

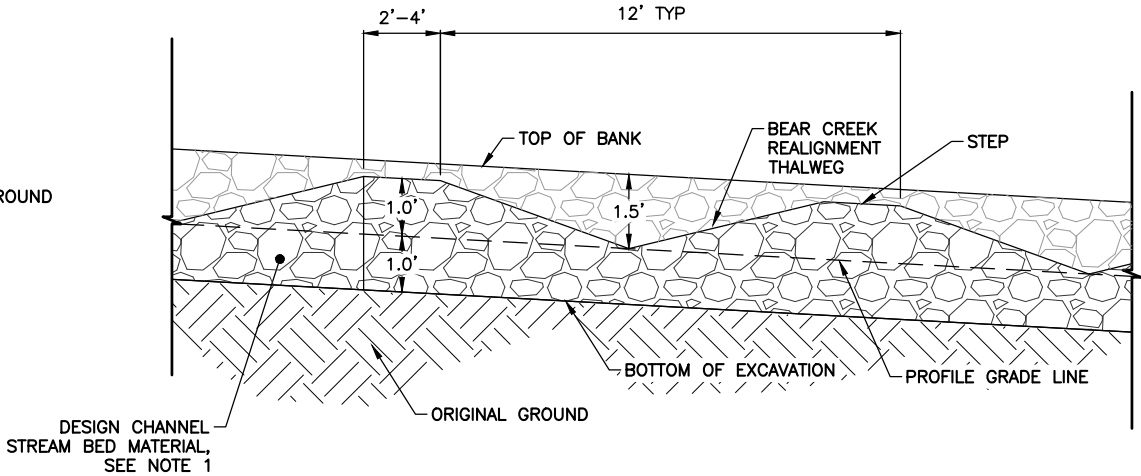


OPEN CHANNEL PLAN  
BEAR CREEK REALIGNMENT AT SEWARD HIGHWAY

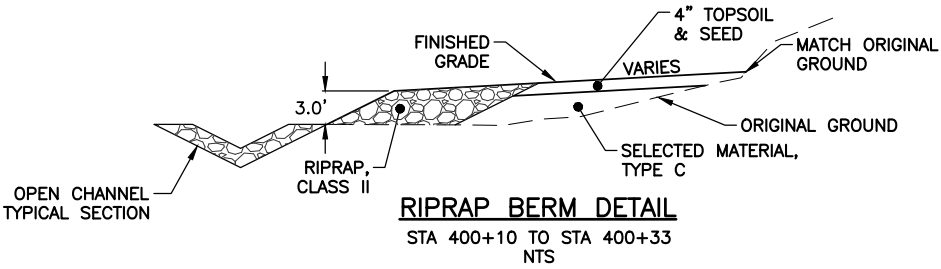
STA 400+10 TO STA 410+75  
STA 411+43 TO STA 411+78  
STA 413+06 TO STA 413+19  
NTS



OPEN CHANNEL TYPICAL SECTIONS  
BEAR CREEK REALIGNMENT AT SEWARD HIGHWAY  
NTS



OPEN CHANNEL PROFILE  
BEAR CREEK REALIGNMENT AT SEWARD HIGHWAY  
NTS



RIPRAP BERM DETAIL  
STA 400+10 TO STA 400+33  
NTS

PLANS-IN-HAND AUGUST 2016

NOTES:

1. DESIGN STREAM BED MATERIAL FOR BEAR CREEK REALIGNMENT SHALL CONSIST OF CLASS I RIPRAP WITH VOIDS FILLED IN USING SELECTED MATERIAL, TYPE A.

PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DRIVE  
ANCHORAGE, AK 99507  
(907) 522-1707  
CERT. OF AUTH. NO. AECC111



R&M CONSULTANTS, INC.

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

SEWARD HWY: MP 100-105  
IMPROVEMENTS &  
HSIP: CR TRAFFIC SAFETY  
CORRIDOR LEFT TURN LANES

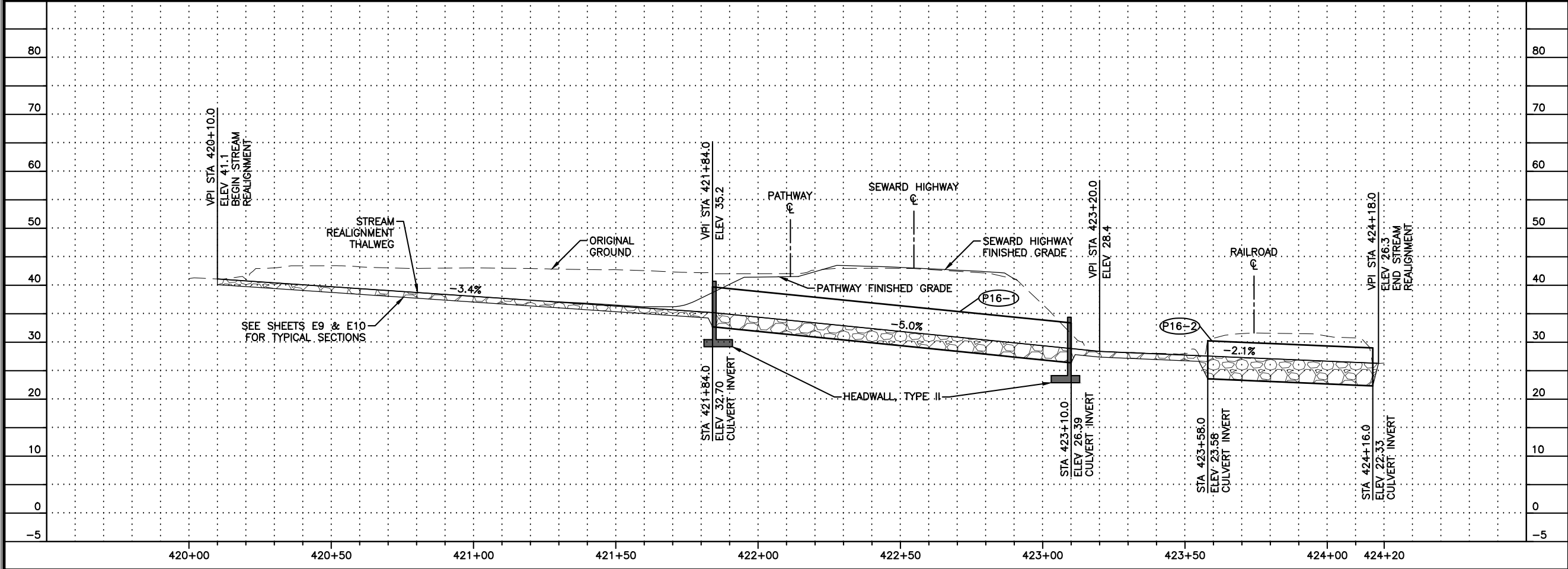
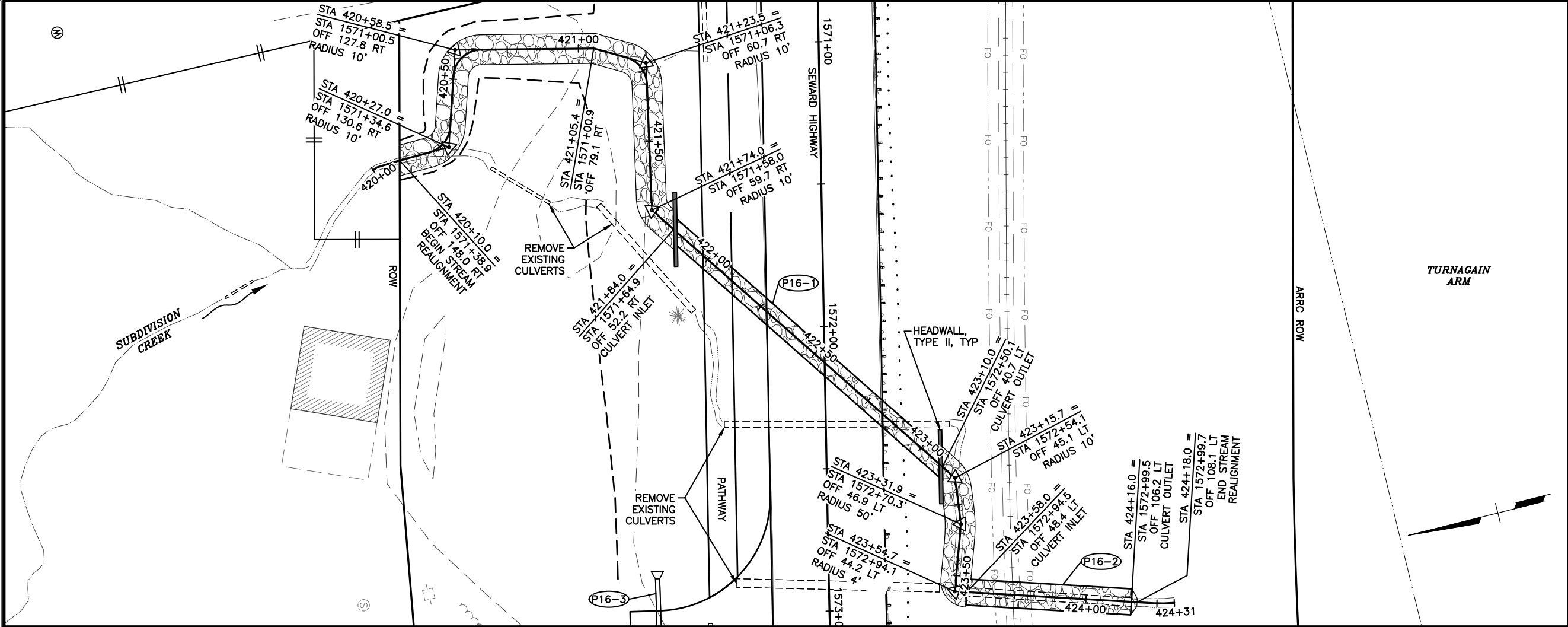
BEAR CREEK REALIGNMENT AT  
SEWARD HIGHWAY DETAILS







DRAWING LOCATION  
Z:\project\2129.00 DOT\_C Seward Hwy MP 99 105\Civil\ACAD\Seward Hwy\H&M\2129.01\_Fish Passage Design.dwg  
DATE TIME 8/5/2016 9:19 AM  
SUBDIVISION REALIGN - PH  
LAYOUT  
SCALE  
XREFS  
DESIGNED BY  
CHECKED BY  
DRAFTED BY

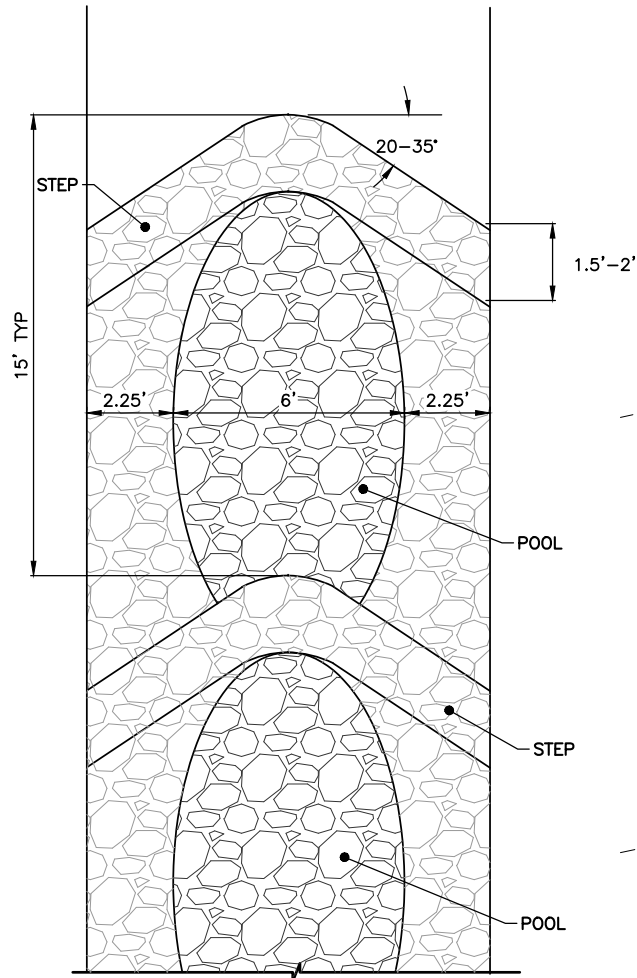


SHEET NO.	TOTAL SHEETS	
E8	E10	
STATE	YEAR	
ALASKA	2016	
PROJECT DESIGNATION		
0A31056/Z583890000		
0001497/Z570880000		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION
PLANS-IN-HAND AUGUST 2016		

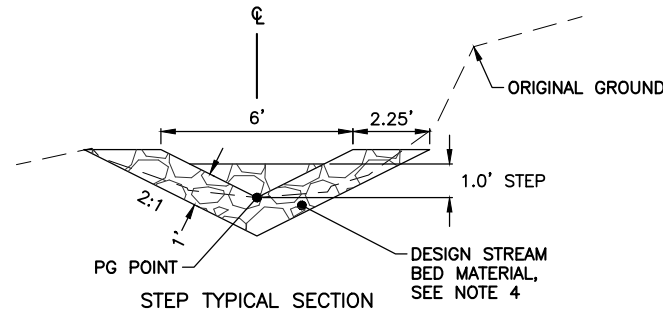
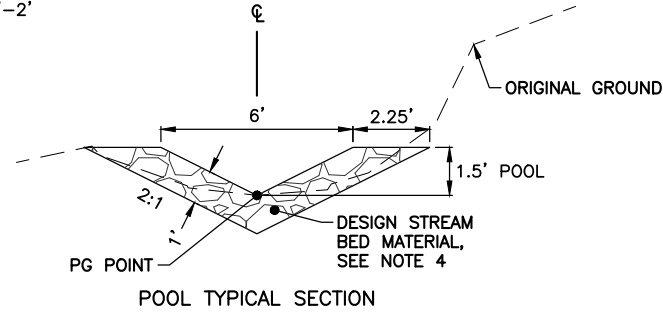
PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DR.  
ANCHORAGE, AK 99507  
(907) 522-1707  
CERT. OF AUTH. NO. AECC111

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
SEWARD HWY: MP 100-105  
IMPROVEMENTS &  
HSIP: CR TRAFFIC SAFETY  
CORRIDOR LEFT TURN LANES  
SUBDIVISION CREEK  
REALIGNMENT  
PLAN AND PROFILE

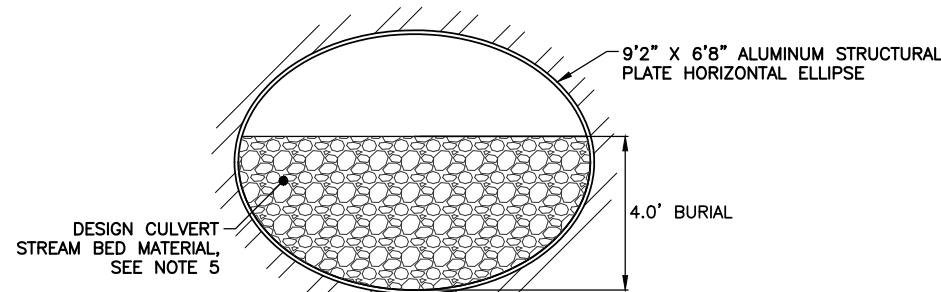
DESIGNED BY  
CHECKED BY  
DRAFTED BY  
XREES  
SCALE  
LAYOUT  
SUBDIVISION01  
DATE  
TIME  
8/5/2016 9:20 AM  
DRAWING LOCATION  
Z:\project\2129.00 DOT\_C Seward Hwy MP 99 105\Civil\ACAD\Seward Hwy\H&H\2129.01-Fish Passage-Details.dwg



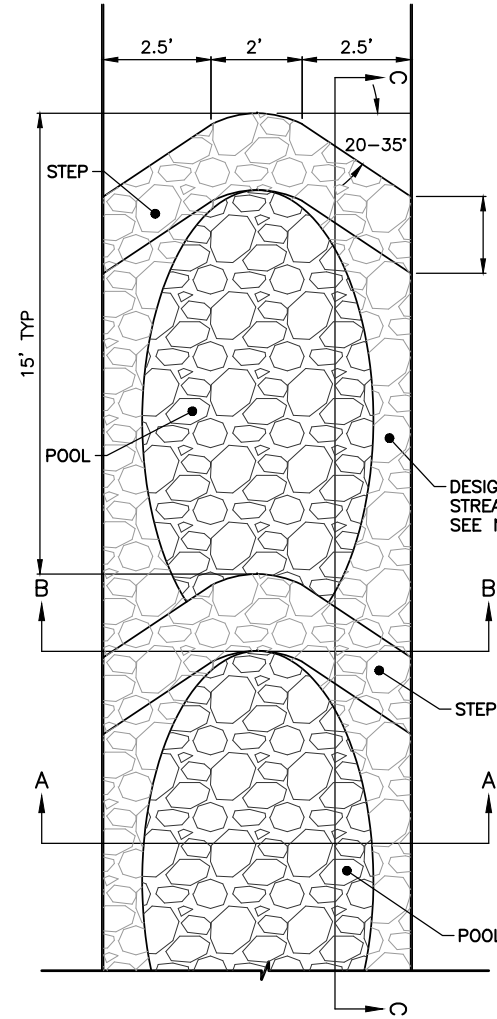
**OPEN CHANNEL PLAN  
SUBDIVISION CREEK REALIGNMENT**  
STA 420+10 TO STA 421+84  
STA 423+10 TO STA 423+58  
NTS



**TYPICAL SECTIONS  
SUBDIVISION CREEK REALIGNMENT**  
NTS



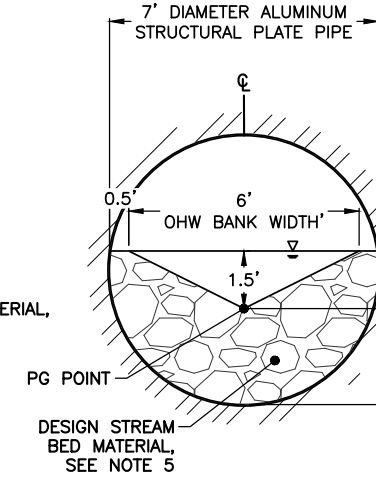
**ALASKA RAILROAD CULVERT TYPICAL SECTION  
SUBDIVISION CREEK REALIGNMENT**  
STA 423+58 TO STA 424+16  
NTS



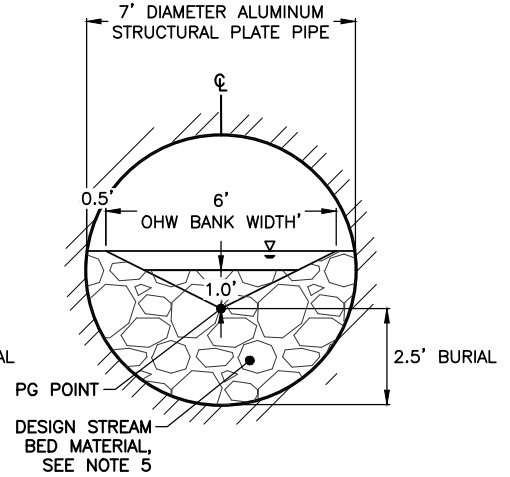
**HIGHWAY CULVERT PLAN  
SUBDIVISION CREEK REALIGNMENT**  
STA 421+84 TO STA 423+10  
NTS

REVISIONS		
NO.	DATE	DESCRIPTION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0A31056/Z583890000 0001497/Z570880000	2016	E9	E10

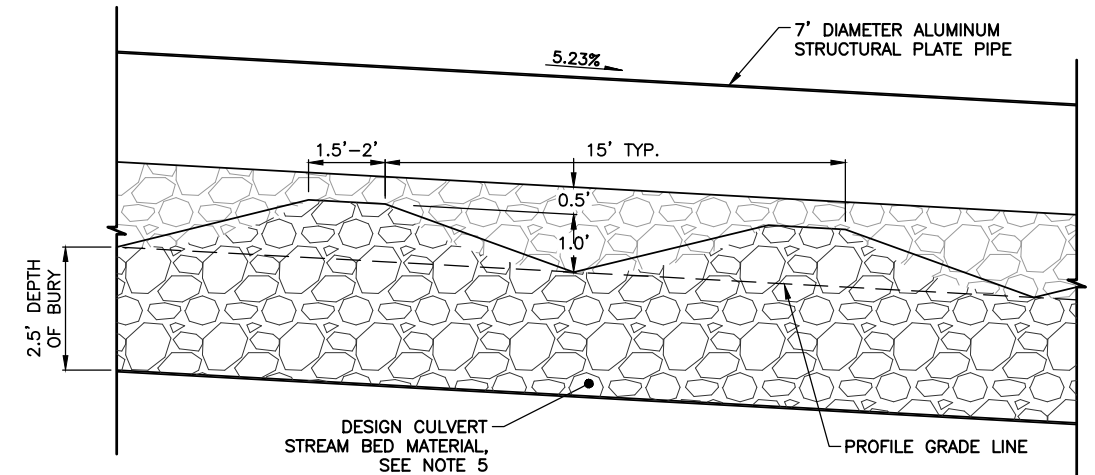


SECTION A-A - POOL



SECTION B-B - STEP

**HIGHWAY CULVERT TYPICAL SECTIONS  
SUBDIVISION CREEK REALIGNMENT**  
NTS

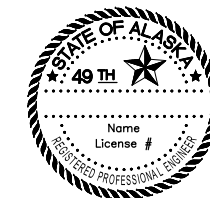


**SECTION C-C HIGHWAY CULVERT PROFILE  
SUBDIVISION CREEK REALIGNMENT**  
NTS

**NOTES:**

- SUBDIVISION CREEK HIGHWAY CULVERT SHALL BE 7' DIAMETER ALUMINUM STRUCTURAL PLATE PIPE, 0.125" THICKNESS WITH STANDARD TYPE II HEADWALLS AT BOTH INLET AND OUTLET OF THE CULVERT.
- SUBDIVISION CREEK RAILROAD CULVERT SHALL BE 9'2" X 6'8" (SPAN X RISE) ALUMINUM STRUCTURAL PLATE HORIZONTAL ELLIPSE.
- CULVERTS AND STREAM REALIGNMENT ARE DESIGNED TO TIER 1 FISH PASSAGE REQUIREMENTS.
- DESIGN STREAM BED MATERIAL FOR STREAM REALIGNMENT WILL CONSIST OF CLASS I RIPRAP WITH VOIDS FILLED IN USING SELECTED MATERIAL, TYPE A.
- DESIGN STREAM BED MATERIAL FOR CULVERTS WILL CONSIST OF CLASS II RIPRAP WITH VOIDS FILLED IN USING SELECTED MATERIAL, TYPE A.

PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DRIVE  
ANCHORAGE, AK 99507  
(907) 522-1707  
CERT. OF AUTH. NO. AECC111

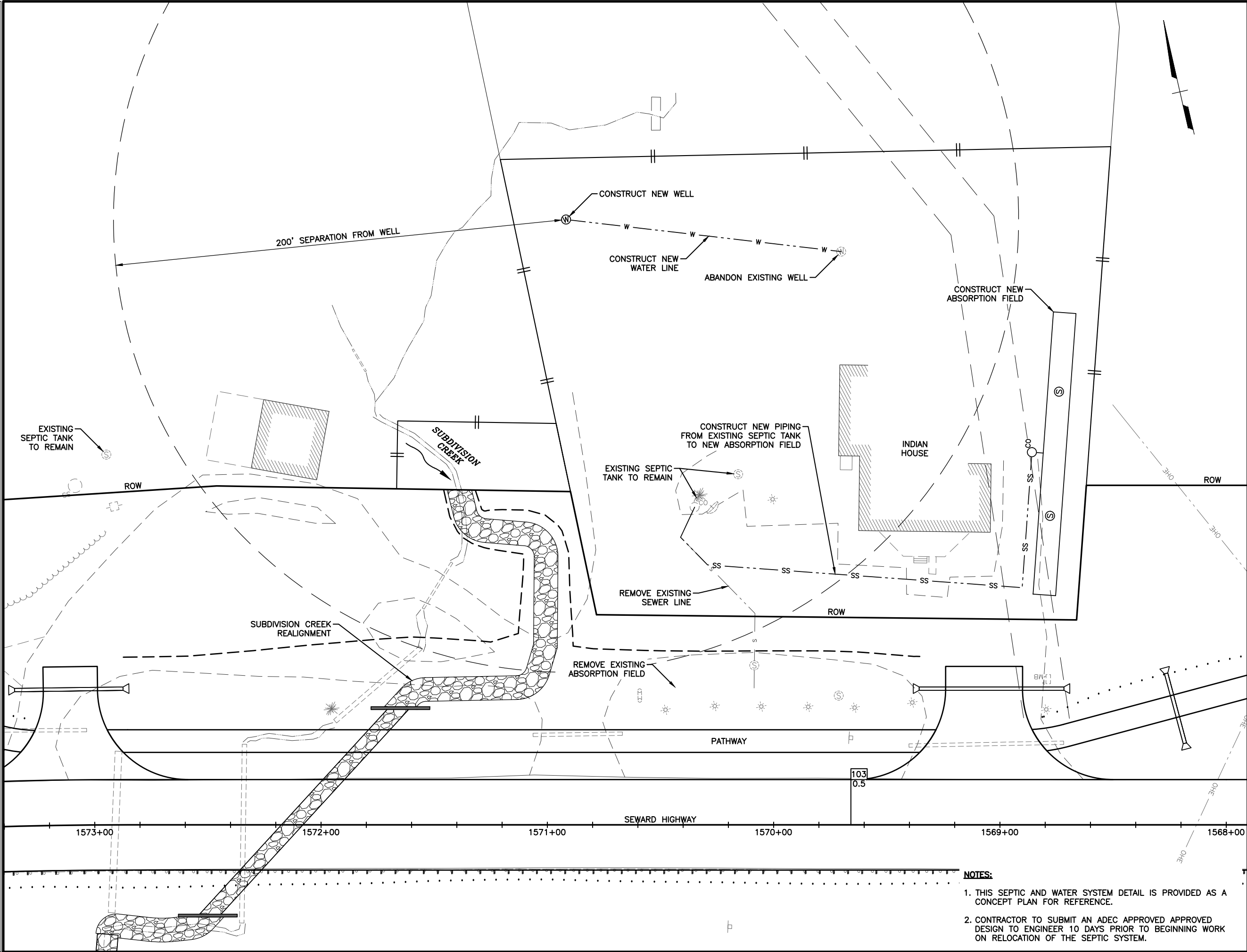


**R&M CONSULTANTS, INC.**

**PLANS-IN-HAND AUGUST 2016**

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES  
**SEWARD HWY: MP 100-105  
IMPROVEMENTS &  
HSIP: CR TRAFFIC SAFETY  
CORRIDOR LEFT TURN LANES**  
SUBDIVISION CREEK  
REALIGNMENT DETAILS

DESIGNED BY  
CHECKED BY  
DRAFTED BY  
XREFS  
SCALE  
LAYOUT  
E10  
DATE  
TIME  
8/5/2016 9:21 AM  
DRAWING LOCATION  
Z:\project\2129.00 DOT\_C Seward Hwy MP 99 105\Civil\ACAD\Seward Hwy\2129.01-E11.dwg



SHEET NO.		TOTAL SHEETS	
E10		E10	
STATE		YEAR	
ALASKA		2016	
PROJECT DESIGNATION			
0A31056/Z583890000			
0001497/Z570880000			
ADDENDUM NO.			
ATTACHMENT NO.			
REVISIONS			
NO.	DATE	DESCRIPTION	
PLANS-IN-HAND AUGUST 2016			

TO ANCHORAGE  
TO GIRDWOOD

EOP STA 1658+50  
INDIAN RD  
BORETIDE RD  
INDIAN CREEK  
SEWARD HIGHWAY  
BIRD CREEK  
BUSHNELL RD  
SAWMILL RD  
BEAR CREEK  
BOP STA 1380+50

PLANS DEVELOPED BY:  
R&M CONSULTANTS, INC.  
9101 VANGUARD DR.  
ANCHORAGE, AK 99507  
(907) 522-1707  
CERT. OF AUTH. NO. AECC111

R&M CONSULTANTS, INC.

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION  
AND PUBLIC FACILITIES

SEWARD HWY: MP 100-105  
IMPROVEMENTS &  
HSIP: CR TRAFFIC SAFETY  
CORRIDOR LEFT TURN LANES

DOMESTIC SEPTIC AND WATER  
SYSTEM RELOCATION

- NOTES:
1. THIS SEPTIC AND WATER SYSTEM DETAIL IS PROVIDED AS A CONCEPT PLAN FOR REFERENCE.
  2. CONTRACTOR TO SUBMIT AN ADEC APPROVED APPROVED DESIGN TO ENGINEER 10 DAYS PRIOR TO BEGINNING WORK ON RELOCATION OF THE SEPTIC SYSTEM.