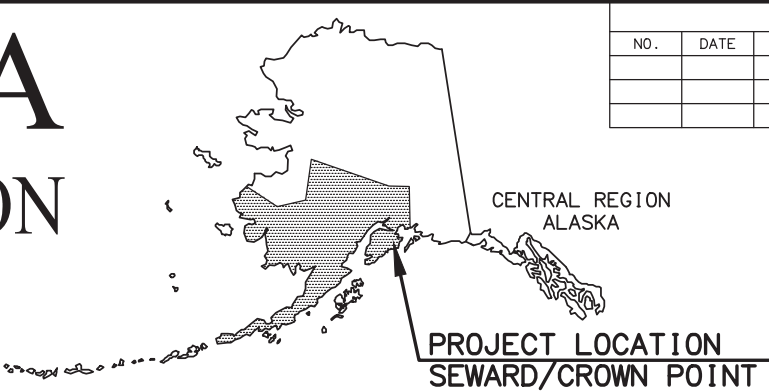


DESIGNED BY: LML/ADS/ZDK
CHECKED BY: RRH
DRAFTED BY: JVS
XREFS: NONE
SCALE: N/A
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TIME: 2:12 PM
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

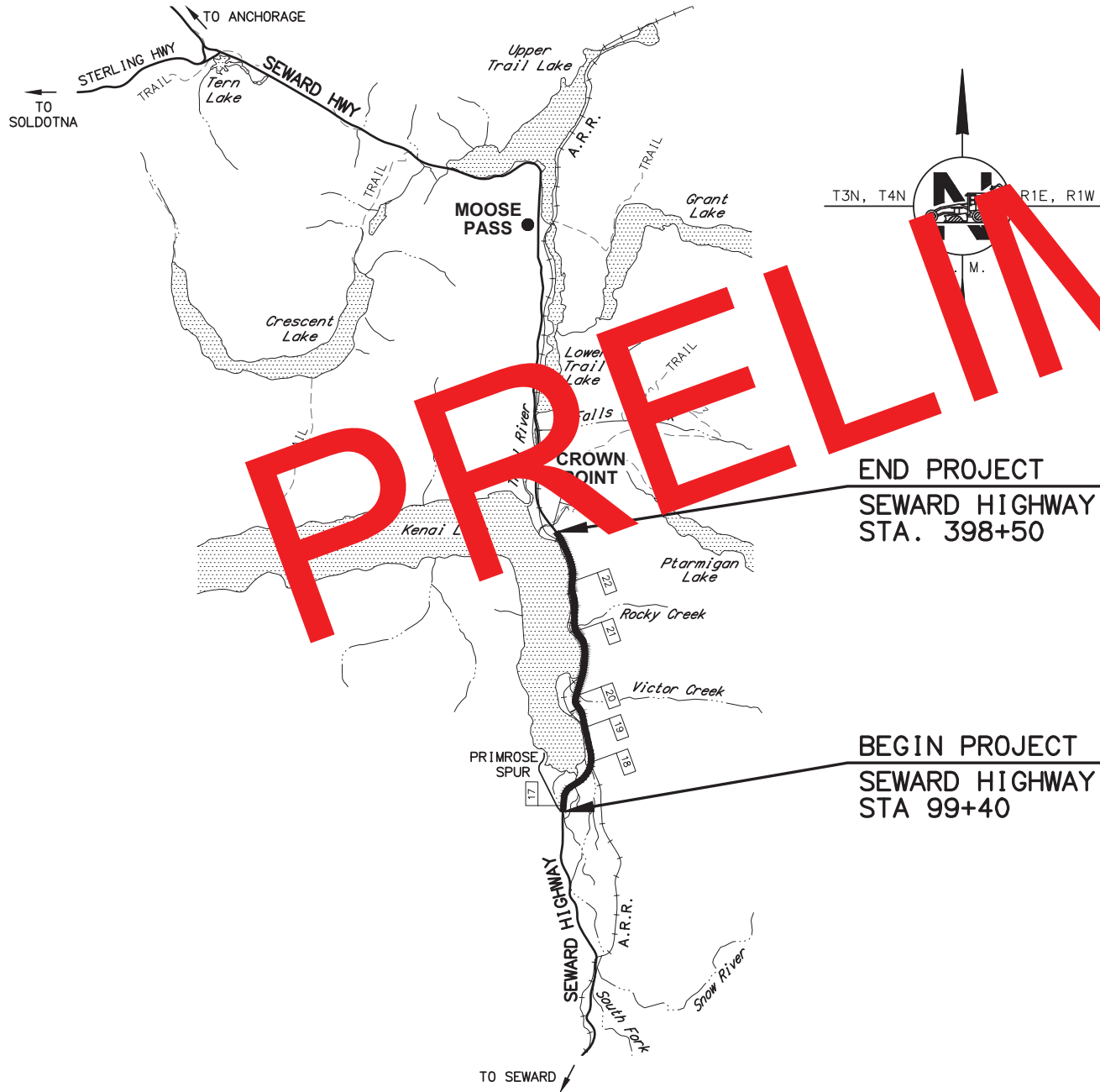
PROPOSED HIGHWAY PROJECT
SEWARD HWY: MP 17-22.5 REHABILITATION
0311032/Z536100000
GRADING, DRAINAGE, PAVING, BRIDGE, SIGNING, AND STRIPING



REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL 'A' SHEETS
NO.	DATE	DESCRIPTION				A1	A7
			ALASKA	0311032/Z536100000	2021	PLAN SET TOTAL	257
			ROUTE NO. 1020000X000		MILEPOINT: 16.953 TO 22.550		
			LATITUDE: 60°21'27.9"N		LONGITUDE: 149°21'6.7"W		

PROJECT SUMMARY		
ROADWAY SECTION	WIDTH	LENGTH
SEWARD HIGHWAY	37'-0"	5.597 MILES
SNOW RIVER WEST CHANNEL 603	35'-2"	188'-6"
SNOW RIVER CENTER CHANNEL 605	35'-2"	648'-6"
VICTOR CREEK BRIDGE 607	40'-4"	240'-0"

DESIGN DESIGNATIONS	
	SEWARD HIGHWAY
FUNCTIONAL CLASS	RURAL ARTERIAL
AADT (2020)	2,176
AADT (2031)	2,427
DESIGN SPEED (V) (MPH)	55
DHV (2020)	435
DHV (2031)	485
T-PERCENT COMMERCIAL TRUCKS (%)	9.2
D-DIRECTIONAL DISTRIBUTION (%)	55 / 45
ESALS	421,303

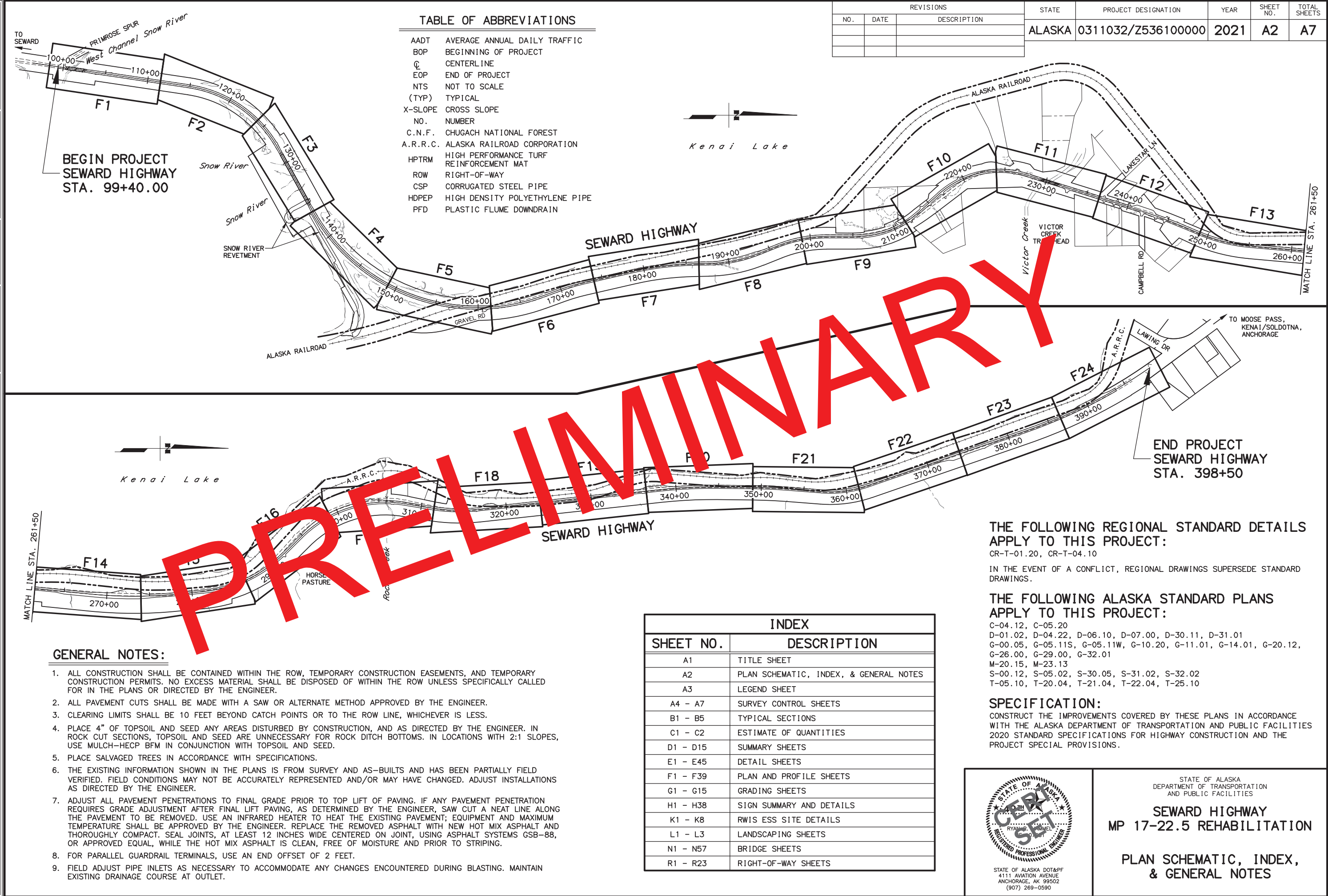


CERTIFICATION SET

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
4111 AVIATION AVENUE, ANCHORAGE, AK 99502
(907) 269-0590

APPROVED:
REGIONAL PRE-CONSTRUCTION ENGINEER DATE
CONCUR:
REGIONAL CONSTRUCTION ENGINEER DATE

DESIGNED BY: LML/ADS/ZDK
CHECKED BY: RRH
DRAFTED BY: IVS
XREFS: XR-53610-0-Border-Detail
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DESIGNED BY: N/A
CHECKED BY: N/A
DRAFTED BY: N/A
SCALE: N/A
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UTILITIES

PIPELINES:

STORM DRAIN STRUCTURE AND
PIPE NUMBERS, APPLICABLE IF
SHOWN

STORM DRAIN

MANHOLE STORM DRAIN

CURB INLET CATCH BASIN

FIELD INLET CATCH BASIN

PIPE CULVERT w/ END SECTION

CLEANOUT

SANITARY SEWER

MANHOLE SANITARY SEWER

SEPTIC VENTS

WATER

FIRE HYDRANT

WELL

VALVE OR RISER

NATURAL GAS

OIL OR GASOLINE PIPELINE

ELECTRIC
(OVERHEAD)
(DIRECT BURY)
(OVERHEAD)

UTILITY POLE

UTILITY POLE WITH LUMINAIRE

GUY POLE

GUY WIRE ANCHOR

TRANSMISSION TOWER [WOOD]

TRANSMISSION TOWER [STEEL]

ELECTRICAL PEDESTAL

ELECTRICAL TRANSFORMER

ELECTRIC METER

ELECTRICAL OUTLET

ELECTRIC MANHOLE

TELEPHONE
(OVERHEAD)
(DIRECT BURY)
(DIRECT BURY)

TELEPHONE PEDESTAL

TELEPHONE MANHOLE

FIBER OPTIC

OVERHEAD FIBER OPTIC

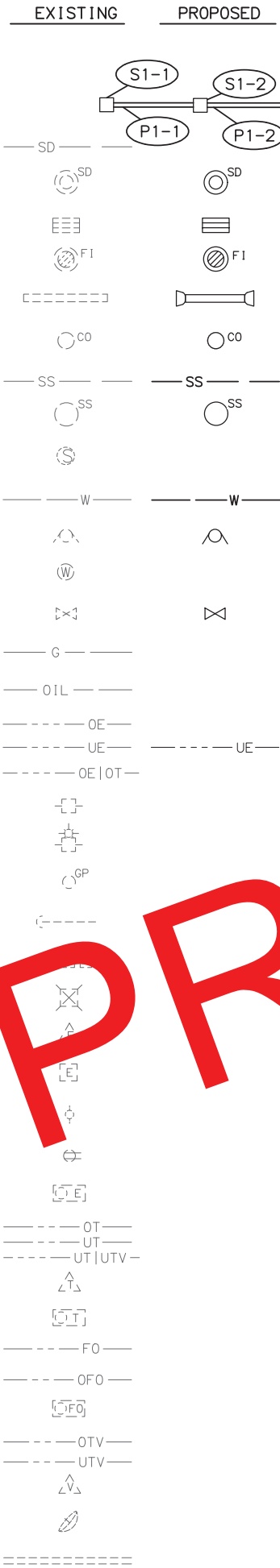
FIBER OPTIC MANHOLE

CABLE TV
(OVERHEAD)
(DIRECT BURY)

CABLE T.V. PEDESTAL

SATELLITE DISH

U.G. DUCT (E, T, FO)



UTILITIES

ELECTROLIER

HIGHTOWER

SIGNAL POLE WITH MAST

PEDESTRIAN PUSH BUTTON

LOAD CENTER

TYPE 1A JUNCTION BOX

RIGHT OF WAY

PRIMARY CENTERLINE MONUMENT

SECONDARY CENTERLINE MONUMENT

PROJECT RIGHT-OF-WAY LINES

CONTROLLED ACCESS LINE

TEMPORARY CONSTRUCTION
EASEMENT/PERMIT

PROJECT CENTERLINE

RAILROAD CENTERLINE

CONIFER TREE OR TREES

DECIDUOUS TREE OR TREES

SHRUB OR BUSHES

WETLANDS

CREEK

RIVER

LAKE / POND

DRAINAGE FLOW

CONTOURS - MAJOR

CONTOURS - MINOR

MISCELLANEOUS

BUILDING

TANKS
ABOVE GROUND
UNDERGROUND

PRIVATE SIGN

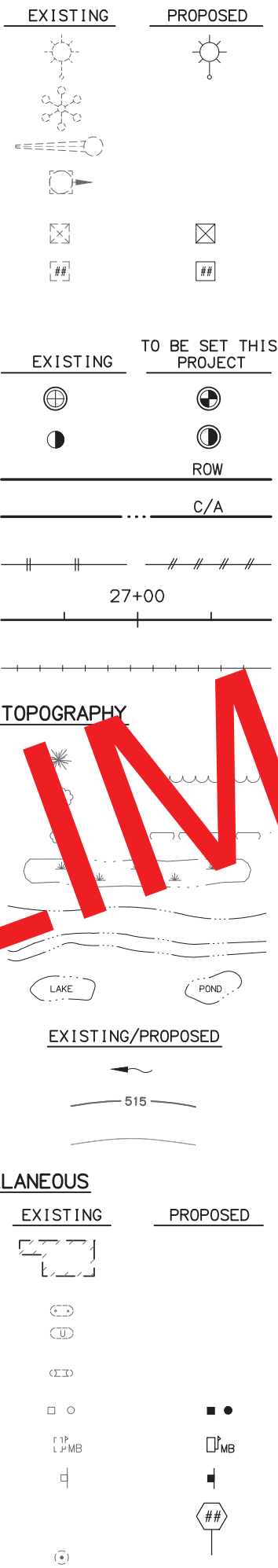
POST/BOLLARDS

MAILBOX

TRAFFIC SIGN

TRAFFIC SIGN POST #

VENT

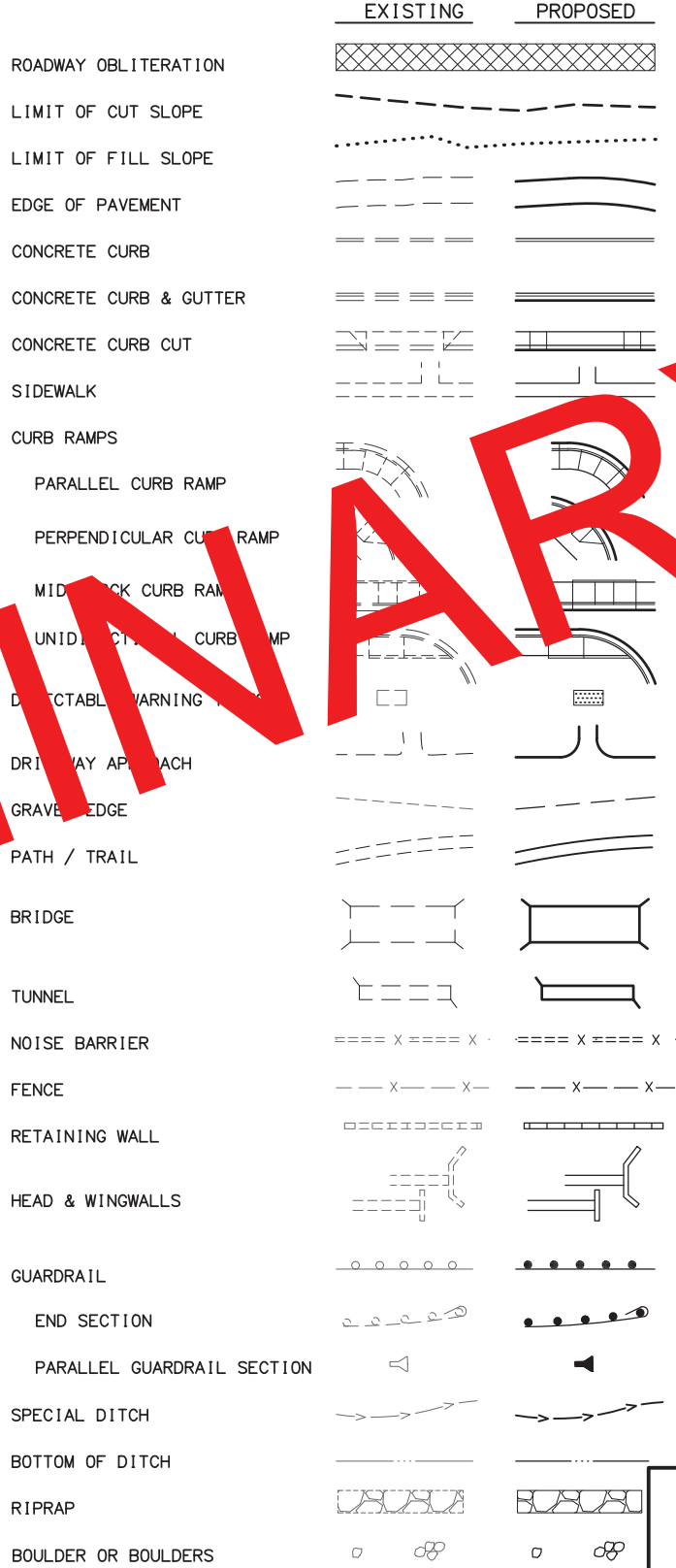


REVISIONS

NO.	DATE	DESCRIPTION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0311032/Z536100000	2021	A3	A7

ROADWAY



MISCELLANEOUS

ALASKA RAILROAD CORPORATION
RIGHT-OF-WAY LINES

PLASTIC FLUME DOWNDRAIN WITH
END SECTION

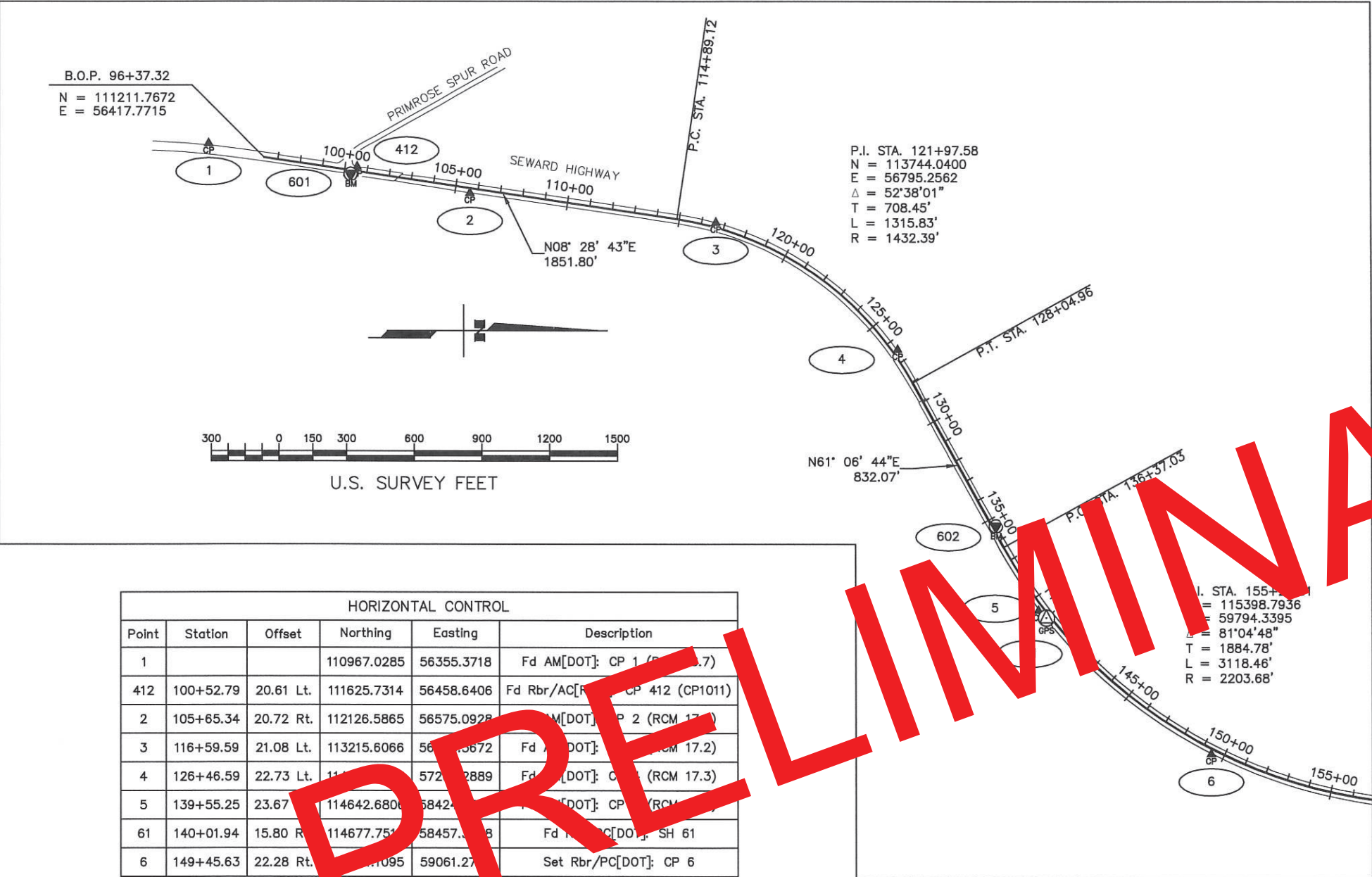
BEARING TREE



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**

LEGEND SHEET

STATE	YEAR	PROJECT DESIGNATION	SHEET NO.	TOTAL SHEETS
ALASKA	2020	0311032/Z536100000	A4	A7



HORIZONTAL CONTROL					
Point	Station	Offset	Northing	Easting	Description
1			110967.0285	56355.3718	Fd AM[DOT]: CP 1 (R 17.7)
412	100+52.79	20.61 Lt.	111625.7314	56458.6406	Fd Rbr/AC[DOT]: CP 412 (CP1011)
2	105+65.34	20.72 Rt.	112126.5865	56575.0928	Fd M[DOT]: CP 2 (RCM 17.2)
3	116+59.59	21.08 Lt.	113215.6066	56675.3672	Fd M[DOT]: CP 3 (RCM 17.2)
4	126+46.59	22.73 Lt.	114126.5865	57215.2889	Fd M[DOT]: CP 4 (RCM 17.3)
5	139+55.25	23.67 Rt.	114642.6806	58425.3672	Fd M[DOT]: CP 5 (RCM 17.3)
61	140+01.94	15.80 Rt.	114677.7514	58457.3672	Fd M[DOT]: SH 61
6	149+45.63	22.28 Rt.	115095.1095	59061.2711	Set Rbr/PC[DOT]: CP 6

VERTICAL CONTROL						
Point	Station	Offset	Northing	Easting	Elevation	Description
601	100+29.31	15.89 Rt.	111597	56491	460.36	Fd BC[DOT]: SNOW SEx Snow R. Overflow bridge
602	135+38.92	15.75 Lt.	114455	58051	457.45	Fd BC[DOT]: Y11-RESET Nx Snow R. bridge

- LEGEND
- GPS CONTROL POINT
 - CONTROL POINT
 - VERTICAL BENCHMARK

HORIZONTAL CONTROL STATEMENT

COORDINATE SYSTEM:
THIS PROJECT IS LOCATED ENTIRELY WITHIN THE SEWARD-1(86) ADJUSTMENT, A LOCAL SURFACE PLANE COORDINATE SYSTEM DEVELOPED BY THE ALASKA DEPARTMENT OF TRANSPORTATION.

BASIS OF COORDINATES:
THE BASIS OF COORDINATES IS USC&GS STATION SEWARD, A BRASS DISC SET IN THE SIDEWALK AT THE CORNER OF 3RD STREET AND JEFFERSON AVENUE. SAID STATION HAS SEWARD-1(86) COORDINATES OF 30,545.8920 NORTH, AND 42,239.6222 EAST.

BASIS OF BEARINGS:
THE BASIS OF BEARINGS IS A LOCAL PLANE BEARING BETWEEN USC&GS STATION SEWARD AND AKDOT "GPS 19", A BRASS DISC SET IN THE TOP OF A ROCK OUTCROP ON THE EAST SIDE OF RESURRECTION BAY. AKDOT "GPS 19" BEARS S86° 18' 24.2"W A DISTANCE OF 14,326.4018 U.S. SURVEY FEET FROM USC&GS STATION SEWARD. AKDOT "GPS 19" HAS SEWARD-1(86) COORDINATES OF 29,610.0516 NORTH, AND 56,536.2711 EAST.

TRANSLATION PARAMETERS:
TO CONVERT THE LOCAL SEWARD-1(86) COORDINATES TO NAD83 (86) ALASKA STATE PLANE ZONE 4, AKDOT COORDINATES, TRANSLATE USING +2,200,245.8433 FEET NORTH, +11,733.820 FEET EAST, AND SCALE USING 0.99989242.

VERTICAL CONTROL STATEMENT

BASIS OF VERTICAL CONTROL:
PROJECT VERTICAL DATUM IS NAVD88, BASED ON USC&GS BENCH MARK V-76. REFERENCE NGS P.I.D. 0369. BENCH MARK V-76 NAVD88 ELEVATION = 483.801 FEET. 3RD ORDER ACCURACIES WERE MET ON ALL LEVELS PERFORMED. LEICA DNA-10 DIGITAL LEVELS WERE USED TO TRANSFER ELEVATIONS FROM STATION V-76 TO EXISTING BENCH MARKS, ESTABLISHED BENCH MARKS, ESTABLISHED TEMPORARY BENCH MARKS AND PRIMARY HORIZONTAL CONTROL. TRIGONOMETRIC METHODS AND TOTAL STATION WERE USED TO ESTABLISH ELEVATIONS ON SECONDARY HORIZONTAL CONTROL AND TOPOGRAPHY.

VERTICAL DATUM NOTE:
THIS PROJECT'S VERTICAL DATUM WAS ORIGINALLY NGVD29 BASED ON MULTIPLE NGS BENCH MARKS. DISCREPANCIES BETWEEN NGS BENCH MARKS WERE NOTED IN 2000 WHEN LEVELS WERE FIRST RUN THROUGH THE PROJECT. ALTHOUGH 3RD ORDER ACCURACIES WERE NOT ACHIEVED IN 2000, NGS RECORD ELEVATIONS WERE HELD FIXED. 2013 LEVELS AGREED WITH 2000 LEVELS. IN 2013 DOT&PF DIRECTED THAT THE PROJECT DATUM SHIFT TO NAVD88 AND THAT A SINGLE BENCH MARK BE HELD RATHER THAN FORCE ELEVATIONS BETWEEN BENCHMARKS THAT NO LONGER RELATED WITHIN 3RD ORDER TOLERANCES. BENCH MARK V-76 WAS CHOSEN AS THE SINGLE CONSTRAINT FOR ALL PROJECT ELEVATIONS. BENCH MARK V-76 IS GROUTED INTO BEDROCK ON THE NORTH END OF THIS PROJECT AND IS COINCIDENT WITH CURRENT DOT&PF PROJECTS FURTHER NORTH WHERE IT WILL ALSO BE HELD FOR PROJECT VERTICAL CONTROL.

ALL CONTROL ELEVATIONS MUST BE FIELD VERIFIED.

SURVEY NOTES

- THE INFORMATION PROVIDED HERE IS BASED ON FIELD SURVEYS PERFORMED BY R&M CONSULTANTS, INC. 2001-2002, AND 2013.
- HORIZONTAL CONTROL VALUES FOR STATIONS 1-34 WERE PROVIDED BY DOT&PF. ALL HORIZONTAL CONTROL IS BASED ON OPTICAL TRAVERSES PERFORMED BY DOT IN 1991. R&M ADDED CONTROL STATIONS IN 2000 WHERE STATIONS WERE MISSING OR DAMAGED AND DOT ADDED CONTROL IN 2013 WHERE CONTROL WAS MISSING OR DAMAGED.
- VERTICAL CONTROL SURVEYS WERE PERFORMED USING LEICA DNA-10 DIGITAL LEVELS.
- ALL DIMENSIONS AND COORDINATES SHOWN HERE ARE IN U.S. SURVEY FEET UNLESS OTHERWISE NOTED.

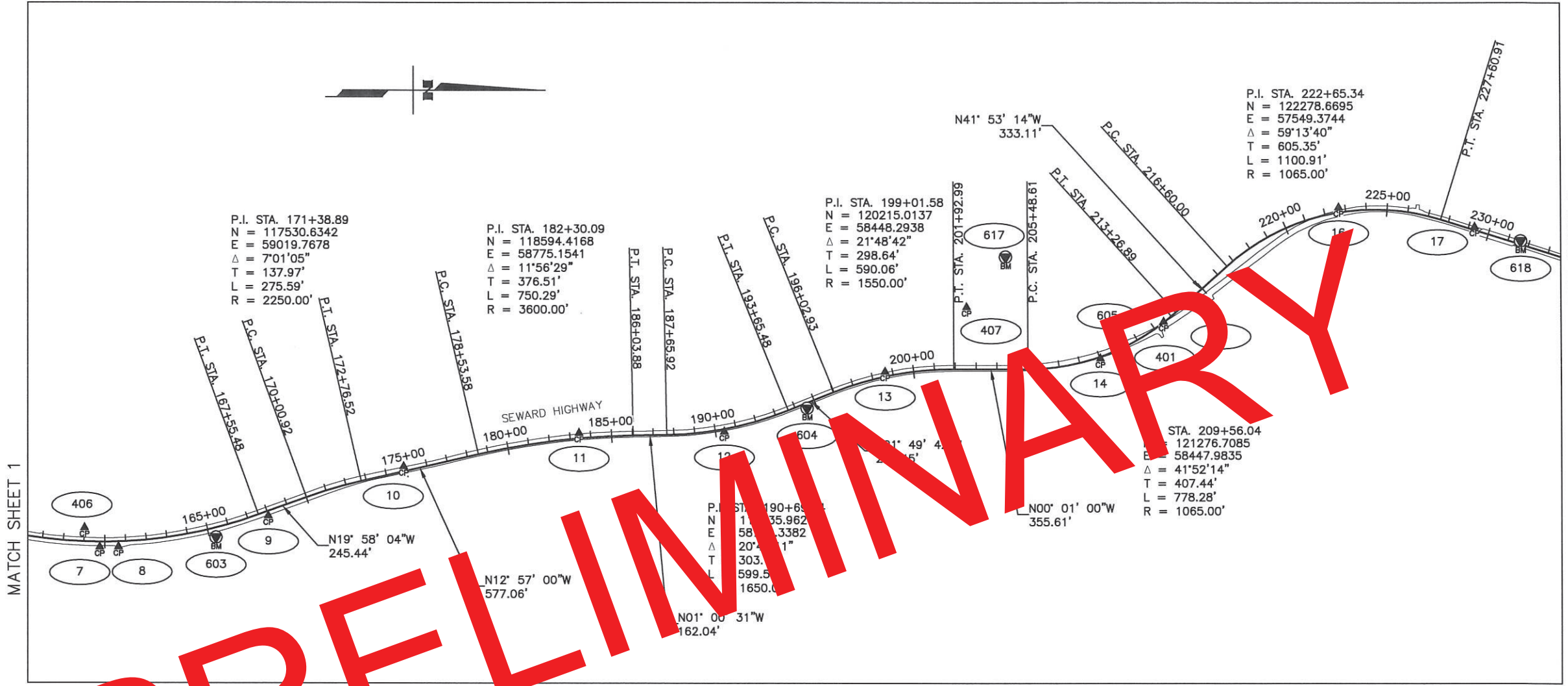
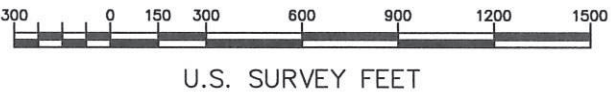
PLANS DEVELOPED BY:
STATE OF ALASKA
DOT & PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907)269-0700



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES SURVEY CONTROL SHEET FEDERAL PROJECT NO. 0311032 Z536100000 SEWARD HWY: MP 17-22.5 REHABILITATION			
DRAWN DPC	DATE 11/19/2020	SCALE 1" = 300'	SHEET 1 OF 4
CHECKED RMK	DATE 11/19/2020		

WHETHER LISTED OR NOT, ALL MONUMENTS OR PROPERTY MARKERS, CORNERS, OR ACCESSORIES, WHICH WILL BE DISTURBED OR BURIED, SHALL BE REFERENCED AND RE-ESTABLISHED IN THEIR ORIGINAL POSITION (A.S. 19.10.260) AND RECORDED (A.S. 34.65.040).

STATE	YEAR	PROJECT DESIGNATION	SHEET NO.	TOTAL SHEETS
ALASKA	2020	0311032/Z536100000	A5	A7



HORIZONTAL CONTROL					
Point	Station	Offset	Northing	Easting	Description
406	159+00.18	67.07 Lt.	116333.096	59214.4327	Set Rbr[R&M]: CP 406
7	159+75.86	24.91 Rt.	116405.9666	59308.0586	Fd AM[DOT]: CP 7 (RCM 18.0)
8	160+64.98	24.52 Rt.	116496.0628	59306.3221	Fd Rbr/AC[R&M]: CP 8 (CP1000)
9	167+98.57	21.96 Rt.	117218.2645	59156.6270	Fd Rbr/PC[DOT]: CP 9 (SH 101)
10	174+91.19	23.31 Lt.	117869.0805	58918.0293	Fd Rbr/PC[DOT]: CP 10 (SH 102)
11	183+46.02	25.88 Lt.	118711.1321	58756.5158	Set Rbr/PC[DOT]: CP 11
12	190+42.37	12.19 Rt.	119409.8383	58749.7142	Fd Rbr/PC[DOT]: CP 12 (SH 104)
13	198+65.19	22.43 Lt.	120183.5885	58460.9016	Set Rbr/PC[DOT]: CP 13
407	202+55.38	298.20 Lt.	120575.9588	58149.9904	Set Rbr[R&M]: CP 407
14	209+02.48	7.25 Rt.	121219.0179	58396.6052	Fd Rbr/PC[DOT]: CP 14 (SH 106)
401	212+54.33	2.70 Lt.	121522.7441	58220.3952	Set Rbr[R&M]: CP 401
15	214+31.73	17.67 Rt.	121669.8827	58119.1041	Set Rbr/PC[DOT]: CP 15
16	222+70.05	23.86 Lt.	122367.4814	57671.1412	Fd Rbr/PC[DOT]: CP 16 (SH 107)
17	229+26.86	15.22 Lt.	123019.4526	57764.7342	Fd Rbr/PC[DOT]: CP 17 (SH 108)

VERTICAL CONTROL						
Point	Station	Offset	Northing	Easting	Elevation	Description
603	165+30.49	45.19 Rt.	116966	59260	514.28	Set Bolt[R&M]: ROCK-8, bolt vertically set in rock face
604	194+54.32	23.97 Rt.	119809	58637	558.06	Set Bolt[R&M]: ROCK-9, bolt vertically set in rock face
617	204+43.00	538.95 Lt.	120764	57909	452.50	Fd BC[USCGS]: P-76, top of bedrock outcrop
605	210+03.01	44.77 Lt.	121291	58312	506.20	Fd RR Spike: SRY-3 RR spike in 2' diam. Spruce
618	231+57.17	16.10 Lt.	123240	57833	488.35	Fd BC[USCGS]: Q-76, bridge abut footing NWx Victor Crk. bridge

- LEGEND
- CONTROL POINT
 - VERTICAL BENCHMARK

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NOTES
1) SEE SHEET 1 FOR HORIZONTAL CONTROL, VERTICAL CONTROL AND NOTES.

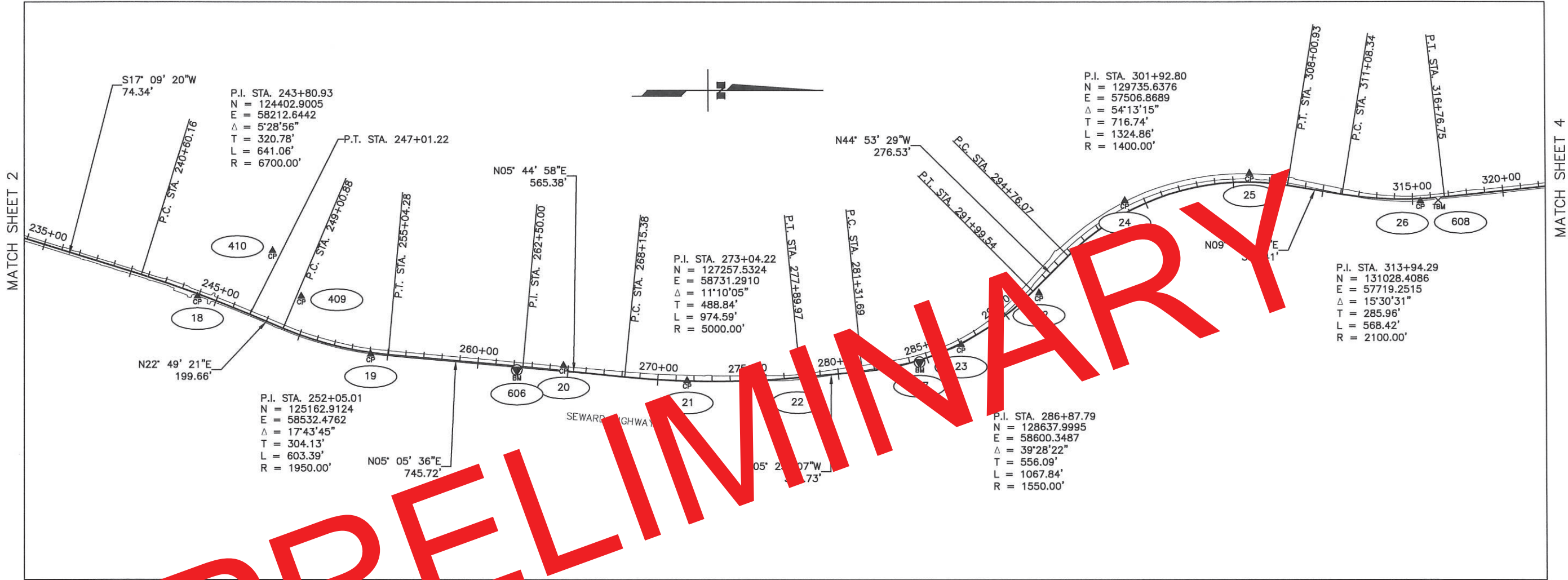
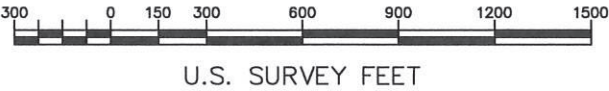
PLANS DEVELOPED BY:
STATE OF ALASKA
DOT & PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907)269-0700



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES
SURVEY CONTROL SHEET
FEDERAL PROJECT NO. 0311032
Z536100000
SEWARD HWY: MP 17-22.5 REHABILITATION

DRAWN	DPC	DATE	11/19/2020	SCALE	1" = 300'
CHECKED	RMK	DATE	11/19/2020	SHEET	2 OF 4

STATE	YEAR	PROJECT DESIGNATION	SHEET NO.	TOTAL SHEETS
ALASKA	2020	0311032/Z536100000	A6	A7



HORIZONTAL CONTROL					
Point	Station	Offset	N	E	Description
18	243+93.44	13.21 Rt.	124407.6754	58236.6100	Set Rbr/PC[DOT]: CP 18
410	246+81.26	374.22 Lt.	124824.2741	57983.9959	Set Rbr[R&M]: CP 410
409	249+28.29	202.90 Lt.	125367.4129	58236.8618	Set Rbr[R&M]: CP 409
19	254+06.42	8.79 Rt.	125367.4129	58557.0478	Set Rbr/PC[DOT]: CP 19
20	264+73.11	29.28 Lt.	126433.5357	58618.9004	Set Rbr/PC[DOT]: CP 20
21	271+61.79	2.76 Lt.	127116.8311	58702.2975	Set Rbr/PC[DOT]: CP 21
22	278+61.88	9.76 Rt.	127816.7060	58688.0546	Set Rbr/PC[DOT]: CP 22
23	287+02.03	6.33 Rt.	128632.4841	58502.5863	Set Rbr/PC[DOT]: CP 23
402	292+16.81	30.38 Rt.	129065.6420	58217.2059	Set Rbr[R&M]: CP 402
24	299+03.14	62.06 Lt.	129542.8044	57706.6510	Fd Rbr/PC[DOT]: CP 24 (SH 114)
25	305+89.59	48.40 Lt.	130233.1366	57556.2478	Fd Rbr/PC[DOT]: CP 25 (SH 115)
26	315+42.87	12.07 Rt.	131179.7611	57710.6857	Fd Rbr/PC[DOT]: CP 26 (SH 116)

VERTICAL CONTROL						
Point	Station	Offset	Northing	Easting	Elevation	Description
606	262+17.52	21.09 Rt.	126174	58644	538.38	Set Bolt[R&M]: ROCK-10, bolt vertically set in rock face
607	284+52.74	11.16 Rt.	128402	58600	517.45	Set Bolt[R&M]: ROCK-11, bolt vertically set in rock face
608	316+40.94	14.82 Rt.	131278	57707	488.20	Set Spike: JACK, spike vertically set in rock face

- Legend
- ▲ CONTROL POINT
 - VERTICAL BENCHMARK
 - ✕ TEMPORARY BENCHMARK

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NOTES
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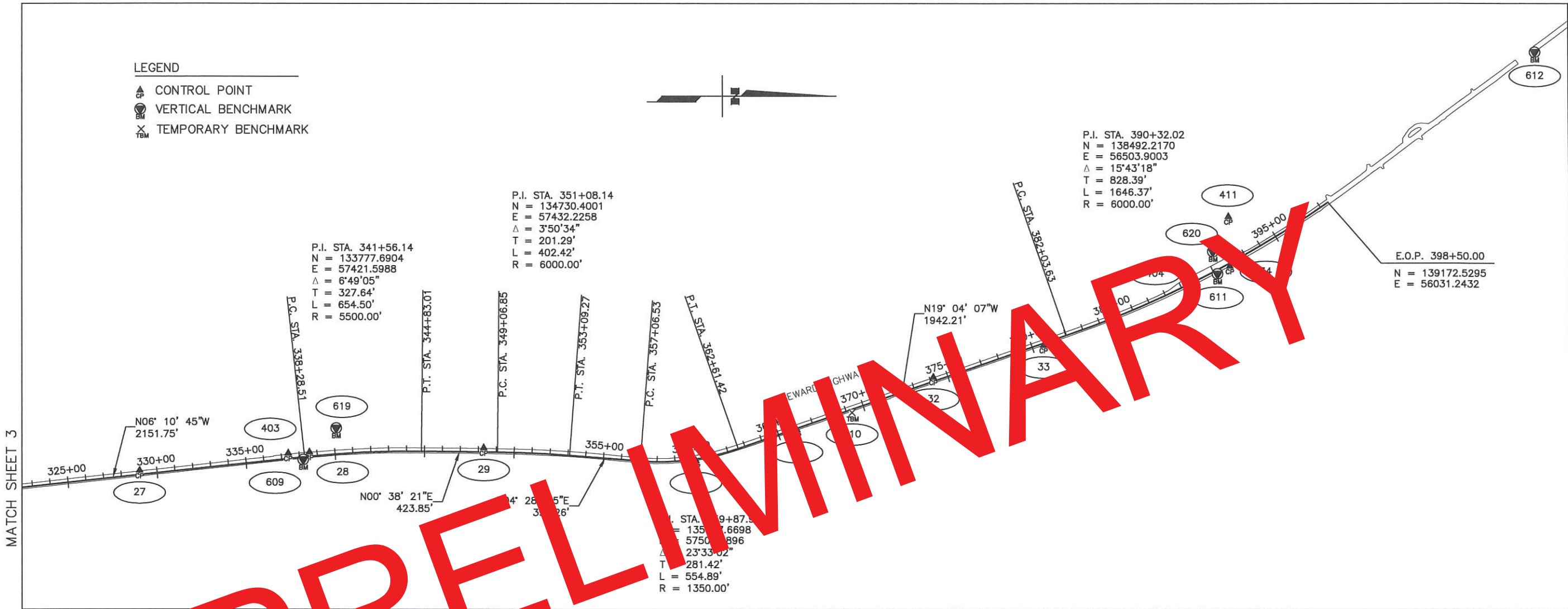
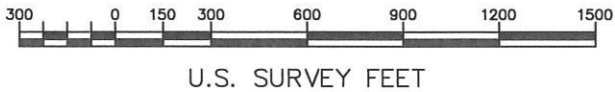
PLANS DEVELOPED BY:
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES
SURVEY CONTROL SHEET
FEDERAL PROJECT NO. 0311032
Z536100000
SEWARD HWY: MP 17-22.5 REHABILITATION

DRAWN	DPC	DATE	11/19/2020	SCALE	1" = 300'
CHECKED	RMK	DATE	11/19/2020	SHEET	3 OF 4

STATE	YEAR	PROJECT DESIGNATION	SHEET NO.	TOTAL SHEETS
ALASKA	2020	0311032/Z536100000	A7	A7



HORIZONTAL CONTROL					
Point	Station	Offset	Northing	Easting	Description
27	329+04.08	23.58 Lt.	132530.3601	57532.9004	Set Rbr/PC[DOT]: CP 27
403	337+39.27	30.40 Lt.	13359.9709	57436.2470	Set Rbr[R&M]: CP 403
28	338+58.47	24.15 Lt.	133479.2898	57429.7012	Fd Rbr/PC[DOT]: CP 28 (SH 117)
29	348+29.17	23.84 Lt.	134451.7161	57405.2807	Set Rbr/PC[DOT]: CP 29
30	360+16.01	9.20 Rt.	135637.0915	57476.8556	Set Rbr/PC[DOT]: CP 30
31	366+05.76	8.68 Rt.	136201.9258	57304.7588	Fd Rbr/PC[DOT]: CP 31 (SH 120)
32	374+21.58	22.92 Lt.	136962.6605	57008.3609	Set Rbr/PC[DOT]: CP 32
33	380+64.01	9.96 Rt.	137580.5811	56829.5546	Fd Rbr/AC[R&M]: CP 33 (CP 1005)
404	389+69.46	47.23 Lt.	138394.1932	56436.5777	Set Rbr[R&M]: CP 404
411	393+27.07	230.31 Lt.	138616.1827	56110.6736	Set Rbr[R&M]: CP 411
34	391+95.89	15.02 Rt.	138623.2592	56387.6631	Fd Rbr/AC[R&M]: CP 34 (CP 1006)

VERTICAL CONTROL						
Point	Station	Offset	Northing	Easting	Elevation	Description
609	338+19.37	13.78 Rt.	133444	57472	502.03	Set Bolt[R&M]: ROCK-12, bolt horizontally set in bedrock
619	340+16.70	145.40 Lt.	133629	57295	453.66	Fd BC[USCGS]: S-76, sloping rock face
610	369+29.03	17.12 Rt.	136510	57207	528.66	Set Spike: RIPPER, spike vertically set in rock face
620	391+50.83	101.85 Lt.	138528	56306	461.32	Fd BC[USCGS]: T-76, in top of bedrock outcrop
611	391+14.72	20.04 Rt.	138554	56431	494.18	Set Bolt[R&M]: ROCK-13, bolt horizontally set in bedrock
612			140332	55192	469.90	Set X/Bolt: PTARMY, chiseled X NE bolt NE Ptarmigan Crk. bridge

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NOTES
1) SEE SHEET 1 FOR HORIZONTAL CONTROL, VERTICAL CONTROL AND NOTES.

PLANS DEVELOPED BY:
STATE OF ALASKA
DOT & PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907)269-0700



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES SURVEY CONTROL SHEET FEDERAL PROJECT NO. 0311032 Z536100000 SEWARD HWY: MP 17-22.5 REHABILITATION			
DRAWN	DPC	DATE	11/19/2020
CHECKED	RMK	DATE	11/19/2020
SCALE		1" = 300'	
SHEET		4	OF 4

DESIGNED BY: LML\KOS\ZDK
CHECKED BY: RRH
DRAFTED BY: LML\ZDK\JJS

SCALE: 1" = 5'

LAYOUT: B1

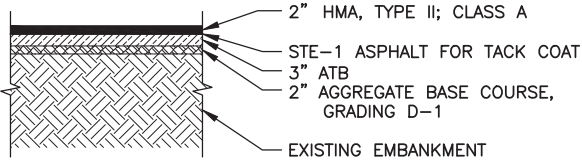
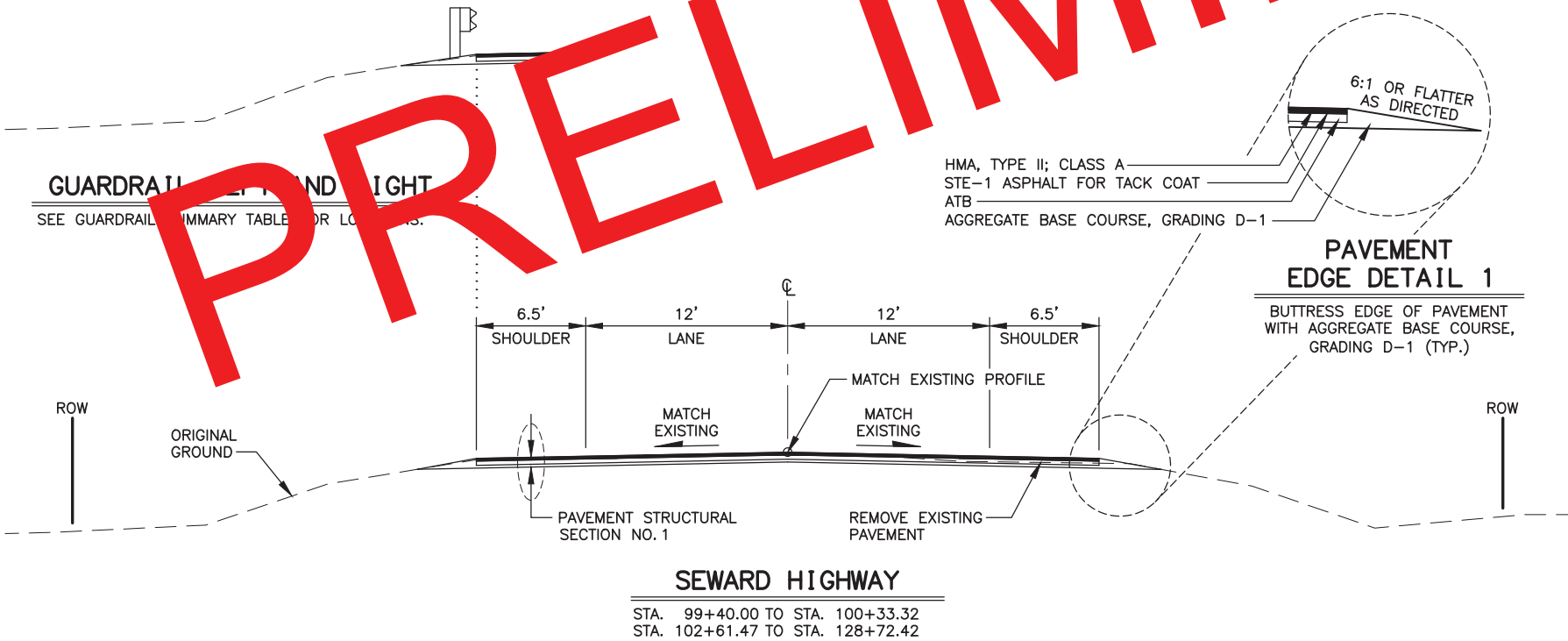
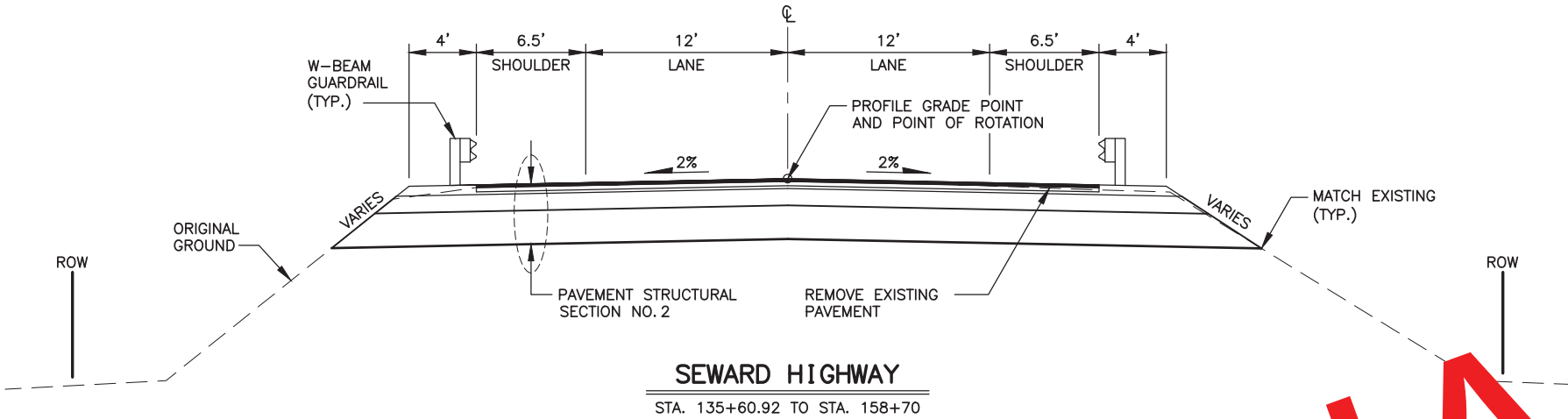
DATE: 3/15/2021 12:49 PM

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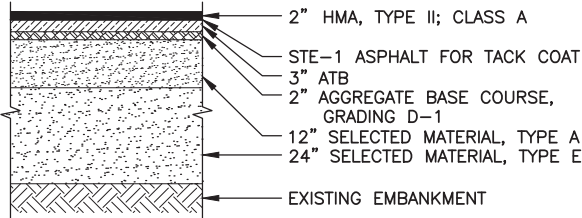
REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0311032/Z536100000	2021	B1	B5

NOTES:

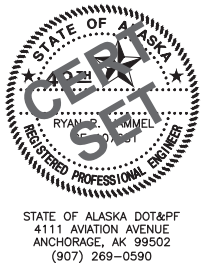
1. SHAPE AGGREGATE BASE COURSE, GRADING D-1 AT THE EDGE OF PAVEMENT WITHIN 48 HOURS OF PAVING TO ENSURE THERE IS NO DROP AT THE EDGE OF PAVEMENT. FIELD DENSITIES WILL NOT BE REQUIRED ON SHOULDER MATERIAL SHAPED AT THE EDGE OF PAVEMENT.



PAVEMENT STRUCTURAL SECTION NO. 1



PAVEMENT STRUCTURAL SECTION NO. 2



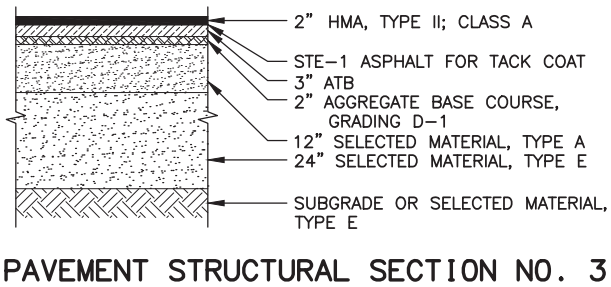
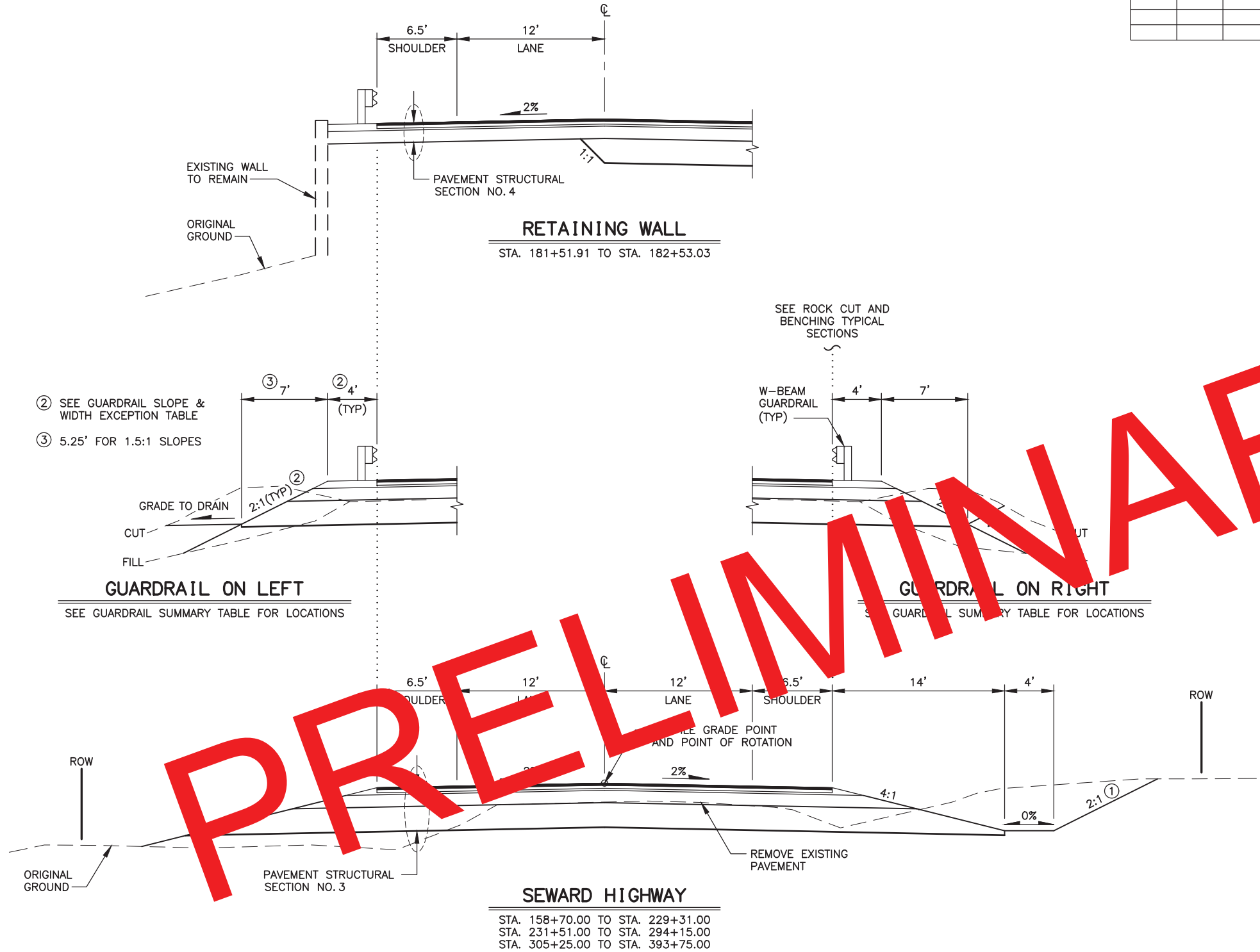
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

SEWARD HIGHWAY
MP 17-22.5 REHABILITATION

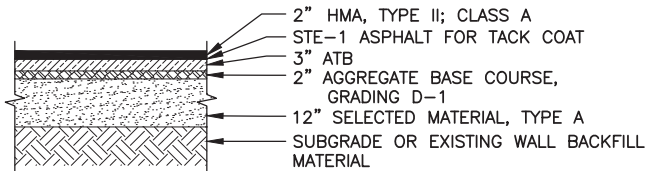
TYPICAL SECTIONS

DESIGNED BY: LML VOS:ZDK
CHECKED BY: RRH
DRAFTED BY: LML VOS:ZDK
XREFS: XR-53610-0-Border-De la J
SCALE: 1"= 5'
LAYOUT: B2
DATE: 3/15/2021 12:49 PM
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REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0311032/Z536100000	2021	B2	B5



PAVEMENT STRUCTURAL SECTION NO. 3



PAVEMENT STRUCTURAL SECTION NO. 4

② GUARDRAIL SLOPE & WIDTH EXCEPTION TABLE			
STATION TO STATION	OFFSET	WIDTH (FT)	SLOPE
158+74 TO 163+05	LT	2	2:1
167+10 TO 167+50	LT	2	2:1
169+25 TO 170+75	LT	2	1.5:1
170+75 TO 171+60	LT	2	2:1
173+95 TO 174+10	LT	2	1.5:1
175+25 TO 178+50	LT	2	1.5:1
181+25 TO 181+52	LT	2	2:1
185+65 TO 189+00	LT	2	2:1
189+00 TO 190+00	LT	2	1.5:1
194+10 TO 194+50	LT	2	1.5:1
195+75 TO 198+00	LT	2	2:1
198+00 TO 198+40	LT	2	1.5:1
198+40 TO 202+00	LT	2	2:1
202+00 TO 203+50	LT	2	1.5:1
248+00 TO 250+40	LT	2	2:1
255+00 TO 255+30	LT	2	2:1
269+25 TO 269+80	LT	2	2:1
272+25 TO 272+60	LT	2	2:1
277+10 TO 277+60	LT	2	2:1
311+75 TO 315+25	LT	2	1.5:1
322+75 TO 324+00	LT	2	2:1
326+50 TO 332+10	LT	2	2:1
336+75 TO 338+00	LT	4	4:1
338+25 TO 338+50	LT	2	2:1
338+50 TO 338+70	LT	2	1.5:1
340+75 TO 342+25	LT	2	2:1
345+40 TO 348+25	LT	2	2:1
349+50 TO 350+40	LT	2	1.5:1
352+75 TO 353+25	LT	2	2:1
355+25 TO 356+15	LT	2	2:1
356+15 TO 356+65	LT	2	1.5:1
358+25 TO 358+75	LT	2	1.5:1
363+55 TO 363+90	LT	2	2:1
365+25 TO 366+15	LT	2	1.5:1
367+70 TO 368+10	LT	2	1.5:1
368+10 TO 369+25	LT	2	2:1
369+25 TO 371+35	LT	2	1.5:1
371+35 TO 375+20	LT	2	2:1
380+15 TO 380+45	LT	2	2:1
383+35 TO 384+85	LT	2	2:1
384+85 TO 386+40	LT	2	1.5:1
393+25 TO 393+75	LT	2	1.5:1

① BACKSLOPE EXCEPTION TABLE	
STATION TO STATION	SLOPE
323+25 TO 324+50	1:1
371+35 TO 371+50	1.5:1



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**
TYPICAL SECTIONS

DESIGNED BY: LML VOS/ZDK
CHECKED BY: RRH
DRAFTED BY: LML VOS/ZDK

SCALE: 1"= 5'

LAYOUT: B3

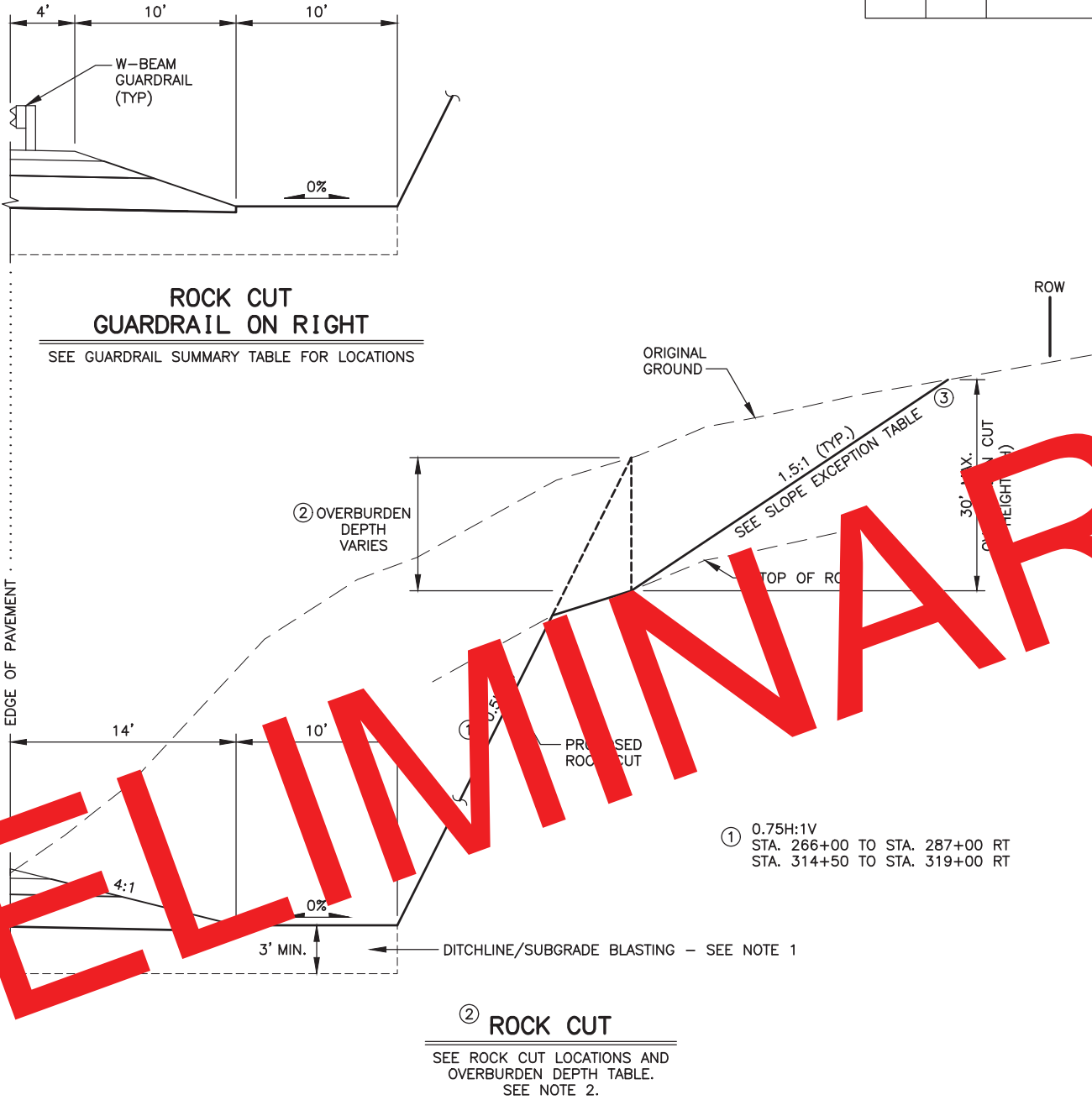
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REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0311032/Z536100000	2021	B3	B5

OVERBURDEN SLOPE CRITERIA TABLE		
OVERBURDEN CUT HEIGHT (H)	SLOPE	COMMENTS
<30'	1.5:1	SEE NOTE 3
IF H >30' AT 1.5:1	1:1	SEE NOTE 4
IF H >30' AT 1:1	0.75:1	SEE NOTE 4

OVERBURDEN SLOPE EXCEPTION TABLE	
STATION TO STATION	COMMENTS
162+00 TO 162+65	SEE NOTE 4
166+00 TO 178+50	SEE NOTE 4
180+00 TO 181+75	SEE NOTE 6
182+70 TO 187+75	SEE NOTE 4
191+50 TO 194+00	SEE NOTE 6
194+50 TO 195+25	SEE NOTE 6
196+75 TO 202+50	SEE NOTE 6
247+00 TO 250+50	SEE NOTE 6
251+75 TO 254+75	SEE NOTE 4
259+00 TO 259+50	SEE NOTE 4
262+25 TO 265+50	SEE NOTE 6
266+50 TO 267+75	SEE NOTE 6
271+25 TO 274+50	SEE NOTE 6
274+85 TO 278+00	SEE NOTE 4
284+65 TO 287+00	SEE NOTE 4
315+50 TO 317+65	SEE NOTE 6
319+25 TO 320+85	SEE NOTE 6
321+40 TO 325+25	SEE NOTE 4
326+00 TO 327+35	SEE NOTE 4
327+75 TO 333+20	SEE NOTE 4
334+50 TO 335+25	SEE NOTE 6
338+00 TO 340+00	SEE NOTE 6
345+50 TO 352+00	SEE NOTE 6
359+75 TO 362+75	SEE NOTE 4
363+50 TO 366+00	SEE NOTE 6
369+75 TO 371+25	SEE NOTE 4
376+00 TO 377+75	SEE NOTE 6
380+25 TO 381+25	SEE NOTE 4
383+00 TO 383+75	SEE NOTE 4
386+50 TO 393+75	SEE NOTE 6



- NOTES:
1. WIDTH OF DITCHLINE/SUBGRADE BLASTING IS MEASURED FROM THE OUTSIDE EDGE OF FLAT BOTTOM DITCH, TOWARDS THE CENTERLINE.
 2. ROCK CUT LOCATIONS AND OVERBURDEN DEPTHS ARE ESTIMATED AND SHALL BE FIELD VERIFIED VIA EXPLORATION PER THE SPECIFICATIONS.
 3. ON 1.5:1 SLOPES, INSTALL HIGH PERFORMANCE TURF REINFORCEMENT MAT (HPTRM).
 4. ON 1:1 AND 0.75:1 SLOPES, INSTALL HPTRM AND WIRE MESH.
 5. SEE STABILIZATION, OVERBURDEN WIRE MESH – PINNED SUMMARY TABLE FOR LOCATIONS.
 6. NO OVERBURDEN SLOPE PROTECTION REQUIRED IN AREAS WITH 2:1 SLOPES.
 7. AS APPROVED BY THE ENGINEER, IF ROCK IS ENCOUNTERED DURING CONSTRUCTION, ROCK SHALL BE EXCAVATED TO FINISHED GRADE AND NO SLOPE STABILIZATION SHALL BE REQUIRED.

ROCK CUT LOCATIONS AND OVERBURDEN DEPTH		
STATION TO STATION	OFFSET	DEPTH (FT)
160+00 TO 180+00	RT	3 TO 5
180+00 TO 182+50	RT	3
182+50 TO 183+50	RT	5
183+50 TO 185+00	RT	7
185+00 TO 191+00	RT	8
191+00 TO 196+50	RT	6
196+50 TO 199+00	RT	3
199+00 TO 202+00	RT	7
202+00 TO 206+00	RT	3
220+00 TO 225+00	RT	-
245+00 TO 247+00	RT	-
247+00 TO 263+00	RT	5
263+00 TO 266+00	RT	10
266+00 TO 270+00	RT	5
270+00 TO 278+50	RT	12
279+00 TO 284+00	RT	6
284+00 TO 287+00	RT	4
314+00 TO 317+00	RT	> 5
317+00 TO 319+00	RT	2
319+00 TO 323+00	RT	3
323+00 TO 324+75	RT	12
324+75 TO 328+00	RT	11
328+00 TO 336+50	RT	6
336+50 TO 353+00	RT	5
353+00 TO 360+25	RT	9
360+25 TO 366+00	RT	6
366+00 TO 368+50	RT	9
368+50 TO 371+00	RT	5
374+00 TO 378+00	RT	4
378+00 TO 382+00	RT	9
382+00 TO 393+50	RT	5



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

SEWARD HIGHWAY
MP 17-22.5 REHABILITATION

TYPICAL SECTIONS

DESIGNED BY: LML\KDS\ZDK
CHECKED BY: RRH
DRAFTED BY: LML\ZDK\JJS

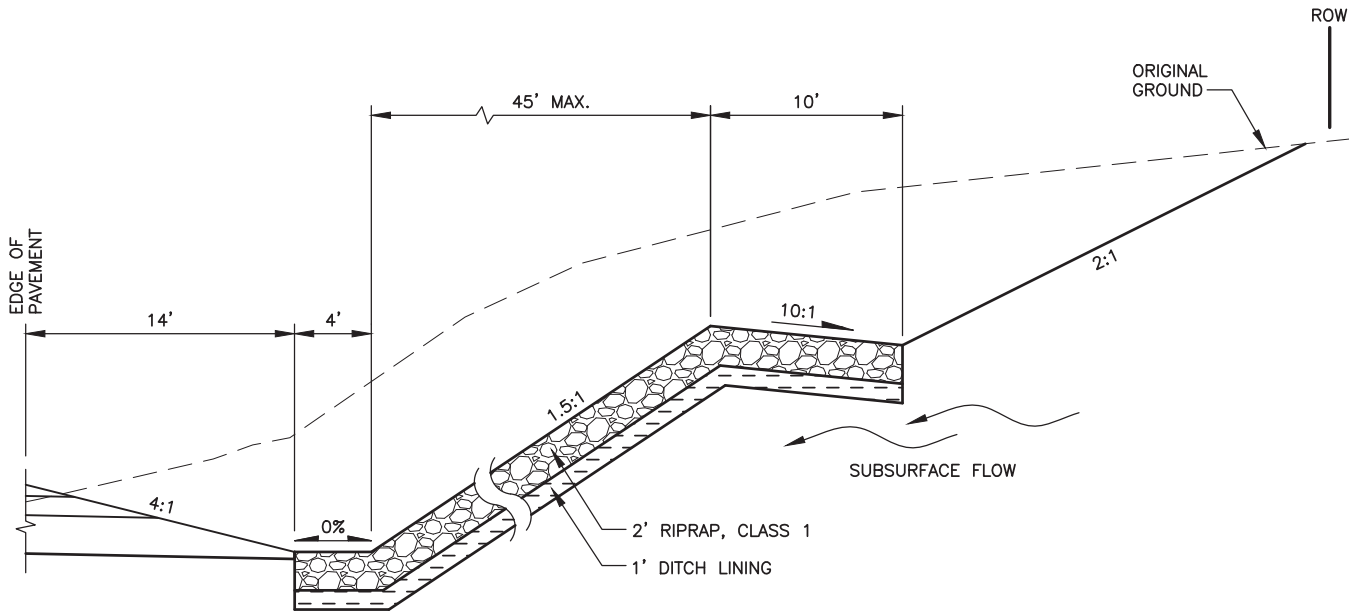
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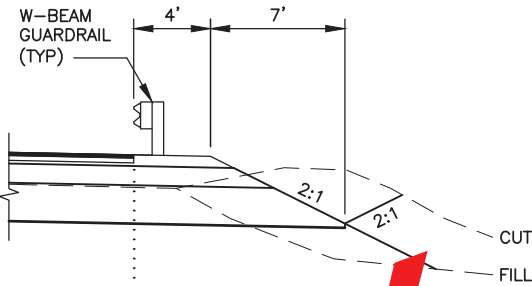
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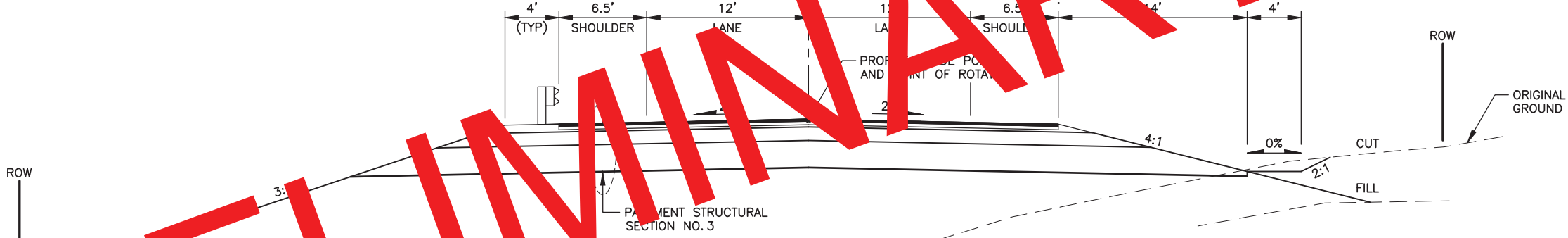
REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0311032/Z536100000	2021	B4	B5



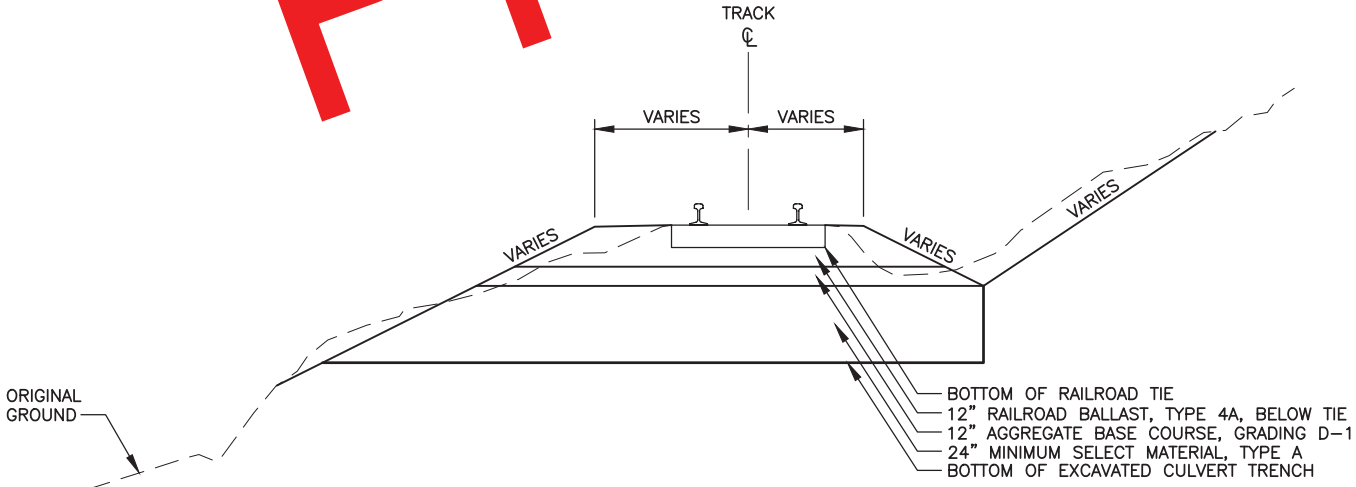
BENCHING
STA. 221+00 RT. TO STA. 224+50 RT.
SEE NOTE 7 ON SHEET B3



GUARDRAIL WIDENING
SEE GUARDRAIL SUMMARY
TABLE FOR LOCATIONS



SEWARD HIGHWAY
STA. 294+15 TO STA. 305+25



RAILROAD MAINLINE SINGLE TRACK

REFER TO THE ARRC TEMPORARY CONSTRUCTION PERMIT IN THE
CONTRACT PROVISIONS AND SPECIFICATIONS FOR ADDITIONAL
REQUIREMENTS RELATED TO ARRC FACILITIES.



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**

TYPICAL SECTIONS

DESIGNED BY: LML\KOS\ZDK
CHECKED BY: RRH
DRAFTED BY: LML\ZDK\JJS

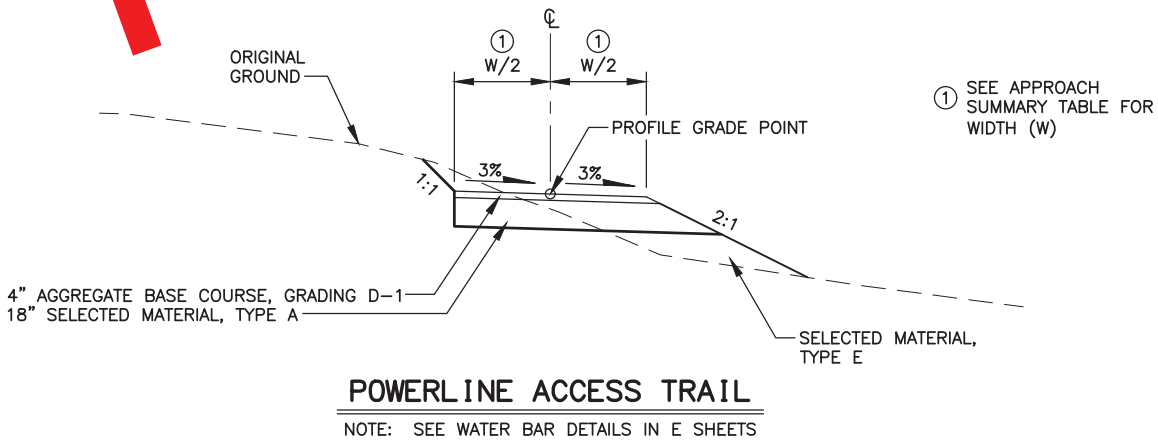
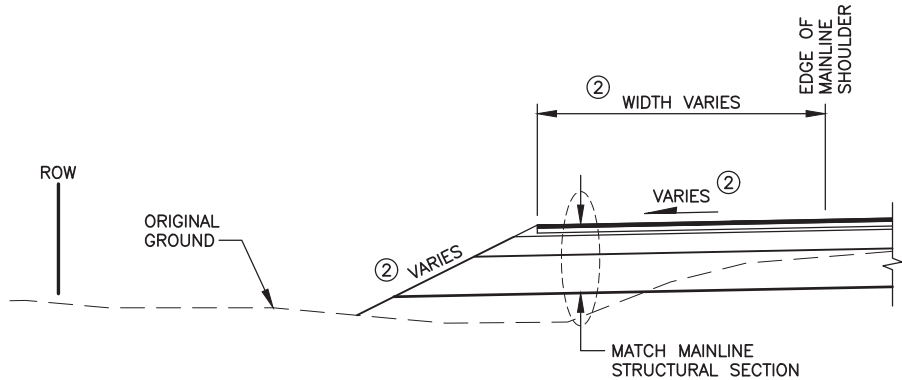
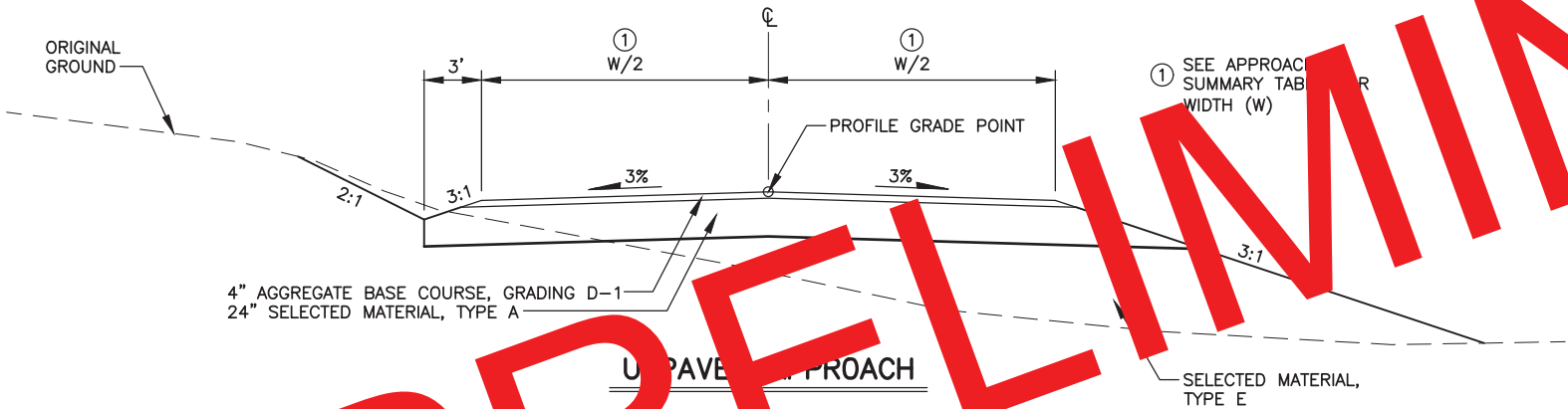
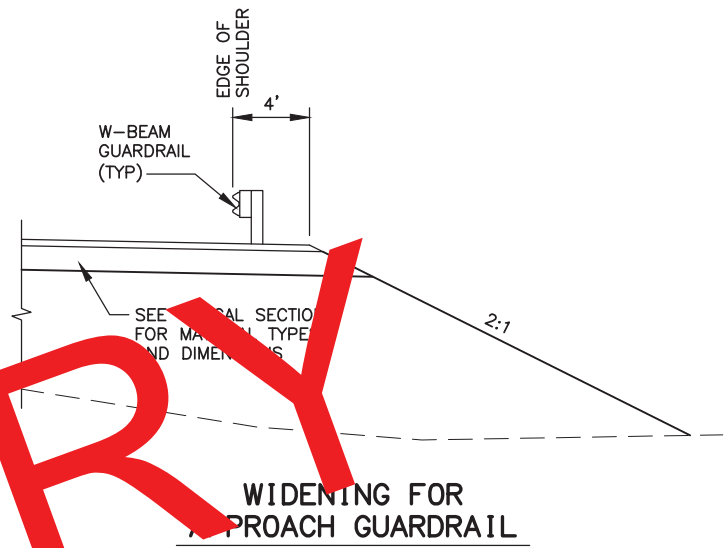
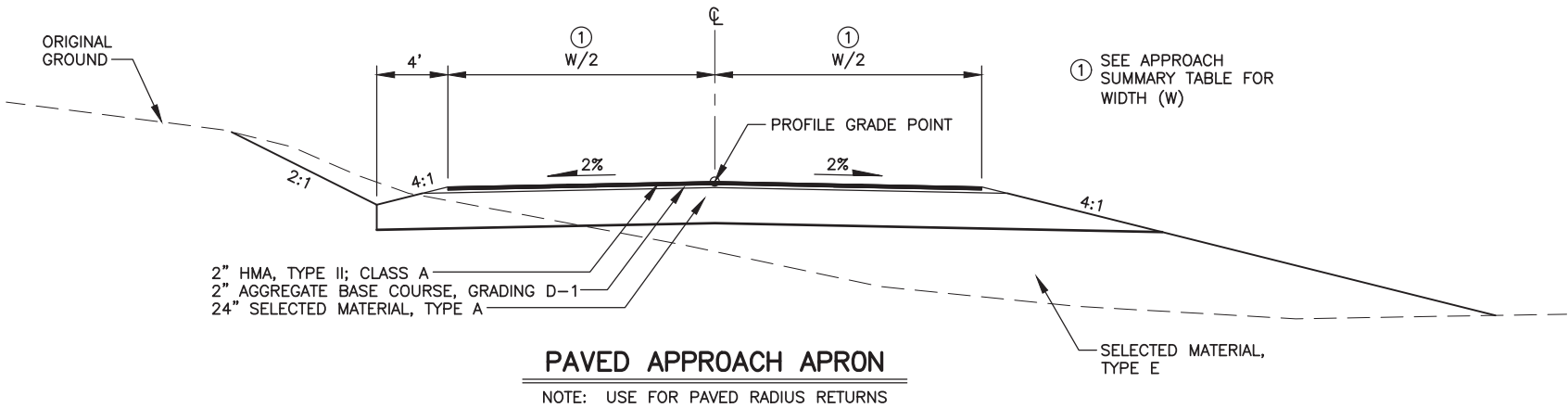
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REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0311032/Z536100000	2021	B5	B5



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

SEWARD HIGHWAY
MP 17-22.5 REHABILITATION

TYPICAL SECTIONS

DRAWING
w:\Project

ESTIMATE OF QUANTITIES			
ITEM NO.	ITEM	UNIT	TOTAL QUANTITY
201.0003.0000	CLEARING AND GRUBBING	ACRE	81.9
202.0001.0000	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	ALL REQ'D
202.0002.0000	REMOVAL OF PAVEMENT	SY	98,000
202.0004.0000	REMOVAL OF CULVERT PIPE	LF	4,485
202.0010.0000	SINGLE MAIL BOX INSTALLATION	EA	2
202.0011.0000	MULTIPLE MAIL BOX INSTALLATION	EA	2
202.0012.0000	DOUBLE MAIL BOX INSTALLATION	EA	2
202.0023.0000	REMOVAL OF EXISTING BRIDGE NO. 607	LS	ALL REQ'D
203.0003.0000	UNCLASSIFIED EXCAVATION	CY	798,000
203.0006.0000	BORROW	TON	110,000
203.0009.0000	OBLITERATION OF ROADWAY	SY	2,250
203.0011.0000	DITCHLINE/SUBGRADE BLASTING	SY	95,000
203.0013.0000	STABILIZATION - ROCK BOLT	EA	164
203.2020.0000	DEBRIS REMOVAL/EXCAVATION	LS	ALL REQ'D
203.2027.0000	STABILIZATION, OVERBURDEN WIRE MESH - PINNED	SY	18,500
205.0005.0000	CONTROLLED LOW-STRENGTH MATERIALS	CY	76
205.0006.0000	STRUCTURAL FILL	CY	1,112
206.0002.0000	FILTER BLANKET	TON	210
301.0001.00D1	AGGREGATE BASE COURSE, GRADING D-1	TON	22,900
306.0001.0000	ATB	TON	21,900
306.0002.5240	ASPHALT BINDER, GRADE PG 52-40	TON	1,200
306.2002.0000	ASPHALT MATERIAL PRICE ADJUSTMENT	CS	REQ'D
401.0001.002A	HMA, TYPE II; CLASS A	TON	4,100
401.0004.5240	ASPHALT BINDER, GRADE PG 52-40	TON	870
401.0014.0000	JOINT ADHESIVE	LF	700
401.2022.0000	COMBINED PRICE ADJUSTMENT	CS	ALL REQ'D
402.0001.STE1	STE-1 ASPHALT FOR TACK COAT	TON	400
406.0002.0000	RUMBLE STRIPS	STA	510
501.0001.0000	CLASS A CONCRETE	LS	ALL REQ'D
501.0007.0000	PRECAST CONCRETE MEMBER 10'-0" x 10'-0" x 1'-0" UNREINFORCED CONCRETE	EA	12
501.2007.0001	HEADWALL, TYPE I	EA	9
501.2007.0002	HEADWALL, TYPE II	EA	1
501.2008.0001	HEADWALL - CONTRACTOR DESIGN AND CONSTRUCT	LS	1
503.0001.0000	REINFORCING STEEL	LS	ALL REQ'D
503.0002.0000	EPOXY-COATED REINFORCING STEEL	LS	ALL REQ'D
503.0003.0000	DRILL AND BOND DOWLS	EA	444
504.2002.0000	GUN MOUNT BASE	LS	ALL REQ'D
505.0005.2405	FURNISH STRUCTURAL STEEL PILES, 2'-0" DIA. X 1/2" PIPE	LF	1,121
505.0005.4810	FURNISH STRUCTURAL STEEL PILES, 4'-0" DIA. X 1" PIPE	LF	646
505.0006.2405	DRIVE STRUCTURAL STEEL PILES, 2'-0" DIA. X 1/2" PIPE	EA	12
505.0006.4810	DRIVE STRUCTURAL STEEL PILES, 4'-0" DIA. X 1" PIPE	EA	4
507.0001.0003	STEEL BRIDGE RAILING, 3-TUBE	LF	528
507.2001.0002	STEEL BRIDGE RAILING REPLACEMENT, 2 TUBE	LF	1,750
508.0001.0000	WATERPROOFING MEMBRANE, SPRAY-APPLIED	LS	ALL REQ'D
510.0001.0000	REMOVAL OF CONCRETE BRIDGE DECK	SF	25,110
510.2000.0000	BRIDGE DECK REPAIR	SF	6,500
510.2001.0000	BRIDGE DECK REPAIR, REINFORCING STEEL	CS	ALL REQ'D

REVISIONS		
NO.	DATE	DESCRIPTION

ESTIMATE OF QUANTITIES (CON'T)			
ITEM NO.	ITEM	UNIT	TOTAL QUANTITY
513.0001.0000	FIELD PAINTING OF STEEL STRUCTURES, BEARINGS	LS	ALL REQ'D
516.0001.0000	EXPANSION JOINT, SILICONE	LF	406
520.0001.0000	TEMPORARY CROSSINGS	LS	ALL REQ'D
525.2001.0000	POLYESTER CONCRETE OVERLAY	LS	ALL REQ'D
601.0001.0000	METAL FLUME DOWNDRAIN	LF	44
601.2000.0000	PLASTIC FLUME DOWNDRAIN	LF	949
603.0001.0036	CSP 36 INCH	LF	650
603.0001.0042	CSP 42 INCH	LF	78
603.0001.0048	CSP 48 INCH	LF	140
603.0001.0060	CSP 60 INCH	LF	102
603.0001.0066	CSP 66 INCH	LF	126
603.0002.0077	77X52 INCH CSP 77 INCH	LF	240
603.0020.0018	END SECTION FOR PIPE 18 INCH	EA	2
603.0020.0024	END SECTION FOR PIPE 24 INCH	EA	14
603.0020.0036	END SECTION FOR PIPE 36 INCH	EA	50
603.0020.0042	END SECTION FOR PIPE 42 INCH	EA	3
603.2000.0024	STEEL PIPE, 24 INCH, ASTM A252 GRADE 3, 0.5 INCH THICK	LF	30
603.2000.0030	STEEL PIPE, 30 INCH, ASTM A252 GRADE 3, 0.5 INCH THICK	LF	204
603.2000.0036	STEEL PIPE, 36 INCH, ASTM A252 GRADE 3, 0.5 INCH THICK	LF	114
603.2000.0042	STEEL PIPE, 42 INCH, ASTM A252 GRADE 3, 0.5 INCH THICK	LF	46
603.2013.0603	BOX CULVERT, PRECAST REINFORCED CONCRETE, 6'-0" SPAN, 3'-0" RISE - CONTRACTOR DESIGN AND CONSTRUCT	LF	266
603.2013.1000	BOX CULVERT, PRECAST REINFORCED CONCRETE, 10'-0" SPAN, 8'-0" RISE	LS	1
603.2032.0018	CORRUGATED HDPE PIPE 18 INCH	LF	32
603.2032.0024	CORRUGATED HDPE PIPE 24 INCH	LF	251
603.2032.0036	CORRUGATED HDPE PIPE 36 INCH	LF	2,833
603.2032.0042	CORRUGATED HDPE PIPE 42 INCH	LF	201
606.0001.0000	W-BEAM GUARDRAIL	LF	27,038
606.0006.0000	REMOVING AND DISPOSING OF GUARDRAIL	LF	25,221
606.0009.0000	SHORT RADIUS GUARDRAIL	EA	5
606.0013.0000	PARALLEL GUARDRAIL TERMINAL	EA	19
606.0016.0000	TRANSITION RAIL	EA	12
606.2005.0000	ESSENTIAL REPLACEMENT PARTS	LS	ALL REQ'D
606.2006.0000	ESSENTIAL REPLACEMENT PARTS - INSTALLATION	CS	ALL REQ'D
606.2012.0000	BATTER BOARD	LF	1,400
610.0002.0000	DITCH LINING	TON	5,600



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**

ESTIMATE OF QUANTITIES

DRAWING LOCATION
w: \Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civ3D16\Planset\53610_C01_Quantities.dwg

ESTIMATE OF QUANTITIES (CON'T)			
ITEM NO.	ITEM	UNIT	TOTAL QUANTITY
611.0002.0001	RIPRAP, CLASS I	TON	6,550
611.0002.0002	RIPRAP, CLASS II	TON	5,150
611.0002.0003	RIPRAP, CLASS III	TON	27,600
611.0002.0004	RIPRAP, CLASS IV	TON	6,350
615.0001.0000	STANDARD SIGN	SF	680
615.0004.0000	DELINEATOR, RIGID	EA	14
615.0006.0000	SALVAGE SIGN	EA	43
616.0003.0000	THAW WIRE INSTALLATION	LF	4,045
617.2006.004A	RAILROAD BALLAST, TYPE 4A	TON	800
618.0002.0000	SEEDING	LB	2,700
618.0003.0000	WATER FOR SEEDING	M-GAL	1,800
619.2016.000J	MULCH - HECF BFM	SY	58,000
619.2017.0000	HIGH PERFORMANCE TURF REINFORCEMENT MAT	SY	48,500
620.0001.0000	TOPSOIL	SY	200,000
621.2005.000A	FURNISHING AND PLANTING, SEEDLINGS	EA	50
622.2002.0000	BEARPROOF GARBAGE CAN	EA	2
622.2026.0000	SINGLE CONCRETE VAULTED TOILET	EA	1
622.2028.0000	INTERPRETIVE KIOSK AND SIGNS	LS	ALL REQ'D
622.2034.0000	WOOD PARKING BUMPER	EA	12
631.0002.0001	GEOTEXTILE, EROSION CONTROL, CLASS 1	SY	650
634.0001.0000	GEOGRID, STABILIZATION, CLASS 1	SY	60
639.2000.0000	APPROACH	EA	2
640.0001.0000	MOBILIZATION AND DEMOBILIZATION	LS	ALL REQ'D
640.0004.0000	WORKER MEALS AND LODGING, OR PER	LS	ALL REQ'D
641.0001.0000	EROSION, SEDIMENT, AND POLLUTION CONTROL ADMINISTRATION	LS	ALL REQ'D
641.0005.0000	TEMPORARY EROSION, SEDIMENT, AND POLLUTION CONTROL BARRIERS	CS	ALL REQ'D
641.0006.0000	WITHHOLDING	CS	ALL REQ'D
641.0007.0000	SWPPP MANAGEMENT	LS	ALL REQ'D
642.0001.0000	CONSTRUCTION SURVEYING	LS	ALL REQ'D
642.0003.0000	THREE PERSON SURVEY PARTY	HR	500
642.2006.0000	CONTRACTOR-FURNISHED ENGINEERING TOOLS	CS	ALL REQ'D
642.2008.0000	PASSING SIGHT DISTANCE MEASUREMENT	STA	560
643.0002.0000	TRAFFIC MAINTENANCE	LS	ALL REQ'D
643.0003.0000	PERMANENT CONSTRUCTION SIGNS	LS	ALL REQ'D
643.0016.0000	PILOT CAR	HR	4,100
643.0023.0000	TRAFFIC PRICE ADJUSTMENT	CS	ALL REQ'D
643.0025.0000	TRAFFIC CONTROL	CS	ALL REQ'D
643.0032.0000	FLAGGING	CS	ALL REQ'D
643.0033.0000	DETOUR (ROCKY CREEK)	LS	ALL REQ'D
644.0001.0000	FIELD OFFICE	LS	ALL REQ'D
644.0002.0000	FIELD LABORATORY	LS	ALL REQ'D
644.0008.0000	VEHICLE (ATV)	EA	2
644.0015.0000	NUCLEAR TESTING EQUIPMENT STORAGE SHED	EA	1
644.0016.0000	STORAGE CONTAINER	EA	1
644.2003.0000	IMAGE DOCUMENTATION	LS	ALL REQ'D
644.2004.0000	ENGINEERING COMMUNICATIONS	CS	ALL REQ'D
644.2007.0000	VEHICLE (LT/SUV)	EA	4

REVISIONS		
NO.	DATE	DESCRIPTION

ESTIMATE OF QUANTITIES (CON'T)			
ITEM NO.	ITEM	UNIT	TOTAL QUANTITY
645.0001.0000	TRAINING PROGRAM, 13 TRAINEE/APPRENTICE	HR	6,500
646.0001.0000	CPM SCHEDULING	LS	ALL REQ'D
647.2002.0000	BACKHOE, 4WD, 1CY BUCKET, 75 HP MIN., 15 FT DEPTH	CS	ALL REQ'D
654.2002.0000	EAGLE MONITORING	CS	ALL REQ'D
661.0003.0000	LOAD CENTER, TYPE 2	EA	1
669.2011.0000	RWIS ESS	LS	ALL REQ'D
670.2002.0000	MMA PAVEMENT MARKINGS, INLAID	LS	ALL REQ'D
682.2000.0000	VAC-TRUCK POTHOLE	CS	ALL REQ'D
690.2007.0000	WATERWAY PLANTING WILLOW STAKES	SY	4,370

ITEM NUMBER	ITEM DESCRIPTION	ESTIMATING FACTOR
203.0006.0000	BORROW	144 LB./FT. ³
301.0001.00D1	AGGREGATE BASE COURSE, GRADING D-1	148 LB./FT. ³
306.0001.0000	ATB	151 LB./FT. ³
306.0002.5240	ASPHALT BINDER, GRADE PG 52-40	5.3% WT. OF TOTAL WEIGHT OF 306.0002.5240
401.0001.002A	HOT MIX ASPHALT, TYPE II; CLASS A	151 LB./FT. ³ 401.0001.002A
401.0004.5240	ASPHALT BINDER, GRADE PG 52-40	5.3% WT. OF TOTAL WEIGHT OF 401.0004.5240
402.0001.STE1	STE-1 ASPHALT FOR TACK COAT	0.000316 TON/YD ²
610.0002.0000	DITCH LINING	110 LB./FT. ³
611.0002.0001	RIPRAP, CLASS I	108 LB./FT. ³
611.0002.0002	RIPRAP, CLASS II	108 LB./FT. ³
611.0002.0003	RIPRAP, CLASS III	108 LB./FT. ³
618.0002.0000	SEEDING	1.5 LB./1000 FT. ²
618.0003.0000	WATER FOR SEEDING	1 GAL./FT. ²



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**

ESTIMATE OF QUANTITIES

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION	ALASKA	0311032/Z536100000	2021	D0	D15

SHEET	STATION		EXCAVATION					EMBANKMENT				
			UNCLASSIFIED EXCAVATION MAINLINE	UNCLASSIFIED EXCAVATION MISCELLANEOUS	WASTE EST. @ 15% MAINLINE	UNCLASSIFIED EXCAVATION: USABLE	*SHRUNK UNCL. EX. USABLE AS SELECTED MATERIAL, TYPE E	SELECTED MATERIAL, TYPE A MAINLINE	SELECTED MATERIAL, TYPE A MISCELLANEOUS	SELECTED MATERIAL, TYPE E MAINLINE	SELECTED MATERIAL, TYPE E MISCELLANEOUS	TOTAL EMBANKMENT
	TO	FROM	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	(CY)
F1	99+40	111+50	–	51.7	–	–	–	–	–	–	–	–
F2	111+50	124+00	–	–	–	–	–	–	–	–	–	–
F3	124+00	136+50	2,495.1	–	374.3	2,120.8	1,802.7	691.3	–	1,529.4	–	2,221.2
F4	136+50	149+00	8,416.9	–	1,262.5	7,154.3	6,081.2	2,234.2	–	4,887.0	–	7,121.2
F5	149+00	161+50	8,638.4	396.7	1,295.8	7,342.7	6,241.3	2,200.8	15.6	6,000.0	88.9	7,612.3
F6	161+50	174+00	27,176.4	–	4,076.5	23,099.9	19,634.9	2,598.9	–	6,000.0	–	8,642.0
F7	174+00	186+50	56,515.5	–	8,477.3	48,038.2	40,832.5	2,182.5	–	5,040.2	–	7,230.4
F8	186+50	199+00	45,794.1	2,089.5	6,869.1	38,925.0	33,086.2	2,300.0	105.0	5,494.0	47.6	7,983.1
F9	199+00	211+50	27,908.4	364.4	4,186.3	23,722.2	20,163.8	2,558.5	119.9	5,781.1	115.7	8,489.6
F10	211+50	224+00	21,141.6	519.1	3,171.2	17,970.4	15,274.8	2,695.7	100.7	11,415.7	217.0	14,369.1
F11	224+00	236+50	10,698.5	3,109.7	1,604.8	9,093.7	7,488.9	1,604.7	202.5	5,653.1	3,741.6	14,435.9
F12	236+50	249+00	19,024.0	1,218.6	2,853.6	16,170.4	13,316.7	2,400.0	1,006.0	6,616.9	131.4	10,506.0
F13	249+00	261+50	43,452.7	–	6,517.9	36,934.8	30,594.1	2,100.4	–	5,202.2	–	7,386.6
F14	261+50	274+00	98,673.6	–	14,801.0	83,872.6	71,001.7	3,500.6	–	7,529.1	–	10,861.8
F15	274+00	286+50	88,403.2	–	13,260.5	75,142.7	63,000.3	2,500.2	–	5,314.2	–	7,572.3
F16	286+50	299+00	5,172.8	39.3	77.0	4,396.9	3,730.4	2,354.4	81.3	36,438.2	60.4	38,934.4
F17	299+00	311+50	9,924.8	1,932.4	1,480.0	8,444.8	7,170.0	2,561.9	1,249.8	33,867.8	5,844.2	43,523.7
F18	311+50	324+00	45,351.6	–	6,802.0	38,549.6	32,766.5	2,331.8	–	7,256.6	–	9,588.4
F19	324+00	336+50	49,262.7	12.2	7,389.1	41,873.6	35,592.3	2,321.6	36.0	5,645.9	58.4	8,062.0
F20	336+50	349+00	50,575.1	–	7,586.3	42,988.8	36,540.5	2,483.8	–	6,037.8	–	8,521.6
F21	349+00	361+50	57,364.6	–	8,604.7	48,759.9	41,445.9	2,168.4	–	5,156.8	–	7,325.1
F22	361+50	374+00	36,000.8	–	5,508.0	31,211.9	26,530.1	2,318.9	–	6,132.9	–	8,451.8
F23	374+00	386+50	49,439.0	–	7,415.8	42,023.1	35,719.7	2,338.3	–	5,882.0	–	8,220.3
F24	386+50	393+75	25,410.0	–	1,100.5	21,598.7	18,358.9	1,523.4	–	3,509.3	–	5,032.7
TOTAL			797,200	–	118,134	669,425	569,011	56,284	–	195,626	–	252,385
ROUNDED TOTAL			800,000	–	119,000	670,000	570,000	57,000	–	196,000	–	253,000
TOTAL PAY ITEM QUANTITY (ROUNDED)			798,000	–	–	–	–	110,000	–	–	–	–
UNIT			(CY)	–	–	–	–	(TON)	–	–	–	–

NOTE: MISCELLANEOUS QUANTITIES INCLUDE APPROACHES, DETOURS, AND VICTOR CREEK TRAILHEAD.

THIS SHEET WILL BE REMOVED FOR ADVERTISEMENT UNLESS
THE CONSTRUCTION PROJECT MANAGER REQUIRES IT.
IF IT'S REQUIRED, THE SHEET NUMBER WILL BECOME **D1**.



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**

SUMMARY SHEETS

DRAWING LOCATION	DATE	LAYOUT	SCALE
w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\civil3D16\P1anset\53610.D01_Summaries.dwg	6/17/2021	D0	N/A
DESIGNED BY	CHECKED BY	APPROVED BY	CREATED BY
XREFS_ SR=53610-Border-Detail	XREFS_ XREF=KIOS/ZDK	XREFS_ XREF=VJIS/ZDK	XREFS_ XREF=VJIS/ZDK

DESIGNED BY: LML/ADS/ZDK
CHECKED BY: RRH
DRAFTED BY: TUS/ZDK

SCALE: N/A

LAYOUT: D2

DATE: 6/17/2021 12:23 PM
TIME: 12:23 PM

DRAWING LOCATION: w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civil3D16\PlanSet\53610_D01_Summaryies.dwg

REMOVAL & ABANDONMENT OF PIPE SUMMARY - 202.0004.0000, 205.0005.0000							
SHEET	STATION	OFFSET	PIPE LENGTH (FT)	FLUME LENGTH (FT)	REMOVAL OF CULVERT PIPE (LF)	CONTROLLED LOW-STRENGTH MATERIAL (CY)	REMARKS
F3	136+48	20.0 LT	-	39	39	-	
F4	142+21	20.0 LT	-	28.5	28.5	-	
F4	146+97	21.0 LT	-	30.5	30.5	-	
F5	151+98	22.0 LT	-	39.5	39.5	-	
F5	155+07	CL	162.5	-	-	19.0	ABANDON IN PLACE
F6	166+13	CL	65.5	95.5	161.0	-	REMOVE THAW WIRE
F6	168+61	CL	75.0	-	75.0	-	REMOVE THAW WIRE
F6	170+03	CL	61.0	-	61.0	-	REMOVE THAW WIRE
F6	172+34	CL	52.5	60.0	112.5	-	REMOVE THAW WIRE
F7	174+08	CL	48.0	38.5	86.5	-	REMOVE THAW WIRE
F7	177+87	CL	44.5	54.0	98.5	-	
F7	178+33	CL	50.0	-	50.0	-	
F7	179+49	CL	56.0	-	56.0	-	
F7	179+82	106.0 LT	33.0	-	33.0	-	ARRC CULVERT
F7	182+48	CL	48.5	-	5.0	5.0	REMOVE PIPE WITHIN STRUCTURAL SECTION. ABANDON IN PLACE REMAINING PIPE UNDER RETAINING WALL.
F7	183+39	CL	61.5	-	61.5	-	
F7	185+76	CL	53.0	-	53.0	-	
F8	187+96	CL	47.0	-	47.0	-	
F8	192+46	CL	49.0	-	49.0	-	
F8	193+07	CL	48.5	-	48.5	-	
F8	194+25	CL	47.0	-	47.0	-	
F8	196+45	CL	51.0	-	51.0	-	
F8	198+33	CL	51.0	-	51.0	-	
F9	200+71	CL	50.5	-	50.5	-	
F9	203+39	CL	47.0	-	47.0	-	
F9	209+72	CL	54.0	-	54.0	-	
F9	209+74	43.0 LT	16.5	-	16.5	-	
F10	215+77	47.0 RT	59.5	-	59.5	-	
F10	216+96	80.5 RT	-	-	32.5	-	
F12	244+10	CL	62.0	-	62.0	-	
F12	247+10	CL	48.0	-	48.0	-	REMOVE THAW WIRE
F13	249+09	CL	47.0	-	47.0	-	REMOVE THAW WIRE
F13	252+94	CL	44.0	-	44.0	-	
F13	255+14	CL	47.5	-	47.5	-	
F13	259+29	CL	47.0	-	47.0	-	
F13	260+81	CL	51.5	-	51.5	-	
F14	262+08	CL	48.5	-	48.5	-	
F14	263+46	CL	55.5	-	55.5	-	
F14	265+58	207.0 LT	30.0	-	30.0	-	ARRC CULVERT
F14	265+79	CL	52.5	63.5	116.0	-	
F14	270+23	CL	61.0	73.0	134.0	-	
F15	274+31	CL	62.0	-	62.0	-	
F15	275+13	CL	49.5	-	49.5	-	
F15	277+17	CL	51.0	-	51.0	-	
F15	278+68	CL	98.5	-	98.5	-	
F15	281+83	CL	45.5	-	45.5	-	
F15	282+78	CL	48.5	105.0	153.5	-	
F15	283+41	149.5 LT	37.5	-	37.5	-	ARRC CULVERT

REVISONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0311032/Z536100000	2021	D2	D15

REMOVAL & ABANDONMENT OF PIPE SUMMARY (CON'T) - 202.0004.0000, 205.0005.0000							
SHEET	STATION	OFFSET	PIPE LENGTH (FT)	FLUME LENGTH (FT)	REMOVAL OF CULVERT PIPE (LF)	CONTROLLED LOW-STRENGTH MATERIAL (CY)	REMARKS
F16	287+66	CL	67.0	-	67.0	-	
F16	288+61	183.5 LT	33.0	-	33.0	-	ARRC CULVERT
F16	291+30	37.0 LT	73.5	-	73.5	-	
F16	294+17	232.0 LT	20.0	-	20.0	-	
F16	295+10	57.0 LT	78.0	-	78.0	-	
F16	296+72	50.0 LT	51.5	-	51.5	-	
F17	302+14	42.5 LT	67.5	-	67.5	-	
F18	313+23	CL	86.5	-	86.5	-	
F18	314+74	CL	69.5	-	69.5	-	
F18	318+94	110.0 LT	22.5	-	22.5	-	ARRC CULVERT, TIMBER FRAMED
F18	319+01	CL	58.5	48.0	106.5	-	
F18	323+79	CL	43.5	-	43.5	-	
F19	326+83	CL	53.0	-	53.0	-	
F19	335+65	CL	55.0	-	55.0	-	
F19-2	336+50	15.0 LT	34.0	-	34.0	-	
F20	337+03	103.0 LT	28.0	-	28.0	-	ARRC CULVERT
F20	343+37	CL	55.0	-	55.0	-	
F20	345+41	CL	47.5	-	47.5	-	
F20	348+06	CL	60.5	-	60.5	-	
F20	348+25	CL	47.5	-	47.5	-	
F21	350+37	CL	45.0	-	45.0	-	
F21	353+24	CL	51.0	-	51.0	-	
F21	358+15	122.5 LT	31.0	-	8.0	3.0	ARRC CULVERT
F21	358+62	CL	47.5	-	47.5	-	
F22	363+64	CL	48.0	-	48.0	-	
F22	363+86	133.0 LT	29.0	-	29.0	-	ARRC CULVERT
F22	366+28	CL	47.0	-	47.0	-	
F22	368+10	CL	148.5	-	-	39.0	ABANDON IN PLACE
F22	368+15	CL	94.5	47.0	141.5	-	
F22	371+38	13.5 RT	40.0	-	40.0	-	
F23	374+14	13.0 RT	39.0	-	39.0	-	
F23	374+91	CL	51.0	-	51.0	-	
F23	379+96	143.0 LT	24.5	-	24.5	-	ARRC CULVERT
F23	380+35	CL	51.0	-	51.0	-	
F23	385+93	CL	86.0	-	-	10.0	ABANDON IN PLACE
ROUNDED TOTALS:				4,485	76		



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

SEWARD HIGHWAY
MP 17-22.5 REHABILITATION

SUMMARY SHEETS

DESIGNED BY: LML/KDS/ZDK
CHECKED BY: RRH
DRAFTED BY: JUS/ZDK

SCALE: N/A

LAYOUT: D3

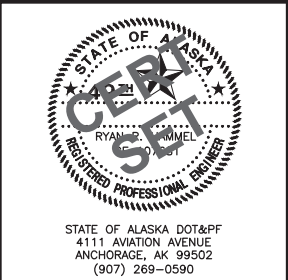
DATE: 6/17/2021 12:23 PM
TIME: 12:23 PM

DRAWING LOCATION: w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civ3D16\PlanSet\53610_D01_Summaries.dwg

DITCHLINE/SUBGRADE BLASTING - 203.0011.0000				
SHEET	STATION	WIDTH (FT)	AREA (SY)	REMARKS
F5	161+00	18.00	----	START ROCK CUT. BLAST DITCHLINE AND SHOULDER ONLY.
F6	162+00	24.00	233.3	
F6	162+00	67.00	----	ROCK IS WITHIN BLASTING DEPTH.
F6	163+00	87.00	855.6	
F6	164+00	100.00	1,038.9	
F6	165+00	109.00	1,161.1	
F6	166+00	98.00	1,150.0	
F6	167+00	91.00	1,050.0	
F6	168+00	81.50	958.3	
F6	169+00	68.50	833.3	
F6	169+00	30.50	----	ROCK IS NOT WITHIN BLASTING DEPTH. BLAST DITCHLINE AND SHOULDER ONLY.
F6	170+00	24.50	305.6	
F6	171+00	30.50	305.6	
F6	172+00	30.50	338.9	
F6	173+00	30.50	338.9	
F7	174+00	30.50	338.9	
F7	175+00	30.50	338.9	
F7	176+00	30.50	338.9	
F7	177+00	30.50	338.9	
F7	178+00	30.50	338.9	
F7	178+00	65.00	----	ROCK IS WITHIN BLASTING DEPTH.
F7	179+00	71.00	755.6	
F7	180+00	71.00	788.9	
F7	181+00	67.50	769.4	
F7	181+00	42.50	----	BLAST DITCHLINE TO CENTERLINE ONLY, TO AVOID STRUCTURAL RETAINING WALL.
F7	182+00	42.50	472.2	
F7	183+00	42.50	472.2	
F7	183+00	79.00		CLEAR OF STRUCTURAL RETAINING WALL.
F7	184+00	74.00	850.0	
F7	184+00	30.50	----	ROCK IS NOT WITHIN BLASTING DEPTH. BLAST DITCHLINE AND SHOULDER ONLY.
F7	185+00	30.50	338.9	
F7	186+00	70.00	338.9	
F8	187+00	30.50	338.9	
F8	188+00	30.50	338.9	
F8	188+00	60.00	----	ROCK IS WITHIN BLASTING DEPTH.
F8	189+00	70.00	722.2	
F8	190+00	78.00	822.2	
F8	191+00	87.50	919.4	
F8	192+00	94.00	1,008.3	
F8	193+00	87.00	1,005.6	
F8	194+00	72.00	883.3	
F8	195+00	69.00	783.3	
F8	196+00	68.00	761.1	
F8	197+00	71.00	772.2	
F8	198+00	65.00	755.6	
F8	198+00	30.50	----	ROCK IS NOT WITHIN BLASTING DEPTH. BLAST DITCHLINE AND SHOULDER ONLY.
F8	199+00	30.50	338.9	
F9	200+00	30.50	338.9	
F9	201+00	30.50	338.9	

REVISONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0311032/Z536100000	2021	D3	D15

DITCHLINE/SUBGRADE BLASTING (CON'T) - 203.0011.0000				
SHEET	STATION	WIDTH (FT)	AREA (SY)	REMARKS
F9	202+00	30.50	338.9	
F9	203+00	30.50	338.9	
F9	204+00	30.50	338.9	
F9	205+00	30.50	338.9	
F9	206+00	30.50	338.9	END ROCK CUT. NO BLASTING.
F12	247+00	30.50	----	START ROCK CUT. BLAST DITCHLINE AND SHOULDER ONLY.
F12	248+00	30.50	338.9	
F13	249+00	30.50	338.9	
F13	250+00	30.50	338.9	
F13	251+00	30.50	338.9	
F13	252+00	30.50	338.9	
F13	253+00	30.50	338.9	
F13	254+00	30.50	338.9	
F13	255+00	30.50	338.9	
F13	256+00	30.50	338.9	
F13	257+00	30.50	338.9	
F13	258+00	30.50	338.9	
F13	259+00	30.50	338.9	
F13	260+00	30.50	338.9	
F13	261+00	30.50	338.9	
F14	262+00	30.50	338.9	
F14	263+00	30.50	338.9	
F14	264+00	30.50	338.9	
F14	265+00	42.50	405.6	BLAST DITCHLINE TO EDGE OF TRAVELED WAY DUE TO PULLOUT.
F14	266+00	42.50	472.2	
F14	266+50	42.50	236.1	
F14	268+00	42.50	708.3	
F14	269+00	42.50	472.2	
F14	269+00	91.00	----	ROCK IS WITHIN BLASTING DEPTH.
F14	270+00	94.00	1,027.8	
F14	271+00	116.00	1,166.7	
F14	272+00	139.00	1,416.7	
F14	273+00	145.00	1,577.8	
F14	274+00	127.50	1,513.9	
F15	275+00	86.00	1,186.1	
F15	276+00	78.00	911.1	
F15	277+00	75.00	850.0	



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

SEWARD HIGHWAY
MP 17-22.5 REHABILITATION

SUMMARY SHEETS

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 268-0590

DRAWING LOCATION		DATE	TIME	LAYOUT	SCALE	XREFS: XR-53610-Border-Detail	DESIGNED BY CW/KDS/ZDK
w: Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civ3D\16\Planset\53610_D01_Summaries.dwg		6/17/2021	12:23 PM	D4	N/A		CHECKED BY RRH
							DRAFTED BY VJS/ZDK

DITCHLINE/SUBGRADE BLASTING (CON'T) - 203.0011.0000				
SHEET	STATION	WIDTH (FT)	AREA (SY)	REMARKS
F15	278+00	70.00	805.6	
F15	279+00	64.00	744.4	
F15	280+00	79.00	794.4	
F15	281+00	91.50	947.2	
F15	282+00	83.00	969.4	
F15	282+00	42.50	----	ROCK IS NOT WITHIN BLASTING DEPTH. BLAST DITCHLINE TO CENTERLINE ONLY.
F15	283+00	42.50	472.2	
F15	284+00	42.50	472.2	
F15	285+00	42.50	472.2	
F15	286+00	42.50	472.2	
F16	287+50	42.50	708.3	END ROCK CUT. NO BLASTING.
F18	314+50	42.50	----	START ROCK CUT. BLAST DITCHLINE TO CENTERLINE ONLY.
F18	315+00	42.50	236.1	
F18	316+00	42.50	472.2	
F18	316+00	69.00	----	ROCK IS WITHIN BLASTING DEPTH.
F18	317+00	69.50	769.4	
F18	318+00	102.00	952.8	
F18	319+50	75.00	1,475.0	
F18	319+50	30.50	----	ROCK IS NOT WITHIN BLASTING DEPTH. BLAST DITCHLINE AND SHOULDER ONLY.
F18	321+00	30.50	508.3	
F18	322+00	30.50	338.9	
F18	323+00	30.50	338.9	
F19	324+00	24.50	305.6	
F19	325+00	30.50	305.6	
F19	326+00	30.50	338.9	
F19	327+00	30.50	338.9	
F19	328+00	30.50	338.9	
F19	329+00	30.50	338.9	
F19	330+00	30.50	338.9	
F19	331+00	30.50	338.9	
F19	332+00	30.50	338.9	
F19	333+00	30.50	338.9	
F19	334+00	30.50	338.9	
F19	334+00	78.00	----	ROCK IS WITHIN BLASTING DEPTH.
F19	335+00	73.00	838.9	
F19	336+00	77.00	833.3	
F20	337+00	110.00	1,038.9	
F20	338+00	106.00	1,200.0	
F20	339+00	73.50	997.2	
F20	340+00	70.50	800.0	
F20	340+00	42.50	----	ROCK IS NOT WITHIN BLASTING DEPTH. BLAST DITCHLINE TO CENTERLINE ONLY.
F20	341+00	42.50	472.2	
F20	342+00	42.50	472.2	
F20	343+00	42.50	472.2	
F20	344+00	42.50	472.2	
F20	345+00	42.50	472.2	
F20	346+00	42.50	472.2	
F20	347+00	42.50	472.2	

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION	ALASKA	0311032/Z536100000	2021	D4	D15

DITCHLINE/SUBGRADE BLASTING (CON'T) - 203.0011.0000				
SHEET	STATION	WIDTH (FT)	AREA (SY)	REMARKS
F20	348+00	42.50	472.2	
F20	349+00	42.50	472.2	
F20	350+00	42.50	472.2	
F21	350+00	66.00	----	ROCK IS WITHIN BLASTING DEPTH.
F21	351+00	70.00	755.6	
F21	352+00	69.00	772.2	
F21	353+00	69.00	766.7	
F21	354+00	71.00	777.8	
F21	355+00	66.00	701.1	
F21	356+00	66.00	733.7	
F21	357+00	66.00	733.7	
F21	358+00	72.00	766.7	
F21	359+00	79.00	838.9	
F21	360+00	81.00	888.9	
F21	361+00	79.50	891.7	
F21	362+00	80.00	841.7	
F22	362+00	42.50	----	ROCK IS NOT WITHIN BLASTING DEPTH. BLAST DITCHLINE TO CENTERLINE ONLY.
F22	363+00	42.50	472.2	
F22	364+00	42.50	472.2	
F22	365+00	42.50	472.2	
F22	366+00	42.50	472.2	
F22	367+50	42.50	708.3	END ROCK CUT. NO BLASTING. CALHOUN CREEK.
F22	369+00	42.50	708.3	START ROCK CUT. BLAST DITCHLINE TO CENTERLINE ONLY.
F22	370+00	42.50	472.2	
F22	371+00	42.50	472.2	
F22	371+50	36.50	219.4	END ROCK CUT. NO BLASTING.
F22	374+00	18.50	----	START ROCK CUT. BLAST DITCHLINE AND SHOULDER ONLY.
F23	375+00	52.00	391.7	BLAST DITCHLINE TO EDGE OF TRAVELED WAY DUE TO PULLOUT.
F23	376+00	42.50	525.0	
F23	377+00	42.50	472.2	
F23	377+00	79.00	----	ROCK IS WITHIN BLASTING DEPTH.
F23	378+00	66.50	808.3	
F23	379+00	65.50	733.3	
F23	380+00	67.00	736.1	
F23	381+00	66.50	741.7	
F23	382+00	87.50	855.6	
F23	383+00	72.00	886.1	



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**

SUMMARY SHEETS

DRAWING LOCATION	DATE	TIME	LAYOUT	SCALE	XREFS: XR-53610-Border-Detail	DESIGNED BY CHECKED BY DRAWN BY
w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civ3D16\Plan\53610_D01_Summaries.dwg	6/17/2021	12:23 PM	D5	N/A		OML/KOS/ZDK RRH VJS/ZDK

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0311032/Z536100000	2021	D5	D15

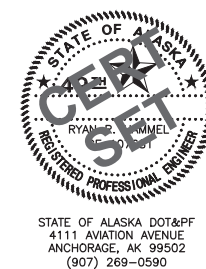
DITCHLINE/SUBGRADE BLASTING (CON'T) - 203.0011.0000				
SHEET	STATION	WIDTH (FT)	AREA (SY)	REMARKS
F23	384+00	65.00	761.1	
F23	384+00	30.50	----	ROCK IS NOT WITHIN BLASTING DEPTH. BLAST DITCHLINE AND SHOULDER ONLY.
F23	385+25	30.50	423.6	END ROCK CUT. NO BLASTING. DRAINAGE CHANNEL.
F23	386+25	30.50	----	START ROCK CUT. BLAST DITCHLINE AND SHOULDER ONLY.
F24	387+00	30.50	254.2	
F24	388+00	30.50	338.9	
F24	389+00	30.50	338.9	
F24	390+00	30.50	338.9	
F24	391+00	30.50	338.9	
F24	392+00	30.50	338.9	
F24	393+50	30.50	508.3	END ROCK CUT. NO BLASTING.
ROUNDED TOTAL :			95,000	

[illegible]

STABILIZATION - ROCK BOLT - 203.0013.0000					
SHEET	STATION		LENGTH (FT)	BOLTS (EACH)	REMARKS
	FROM	TO			
F6-F9	162+00	206+00	4400	44	
F12-F16	247+00	287+00	4000	40	
F18-F24	314+00	394+00	8000	80	
ROUNDED TOTAL :			164		

NOTE: ASSUME ONE ROCK BOLT PER STATION.

GEOGRID, STABILIZATION, CLASS 1 - 634.0001.0000					
SHEET	PIPE ID	INLET/OUTLET	OFFSET	AREA (SY)	REMARKS
F4	P4-1	INLET	RT	1108.3	
F4	P4-1	OUTLET	LT	275.0	
F7	P7-5	OUTLET	LT	585.0	
F8	P8-5	OUTLET	LT	260.0	
F9	P9-2	OUTLET	LT	315.0	
F15	P15-1	OUTLET	LT	585.0	
F16	P16-1	OUTLET	LT	510.0	
F16	P16-1	OUTLET	LT	1576.7	
F20	P18-1	OUTLET	LT	510.0	
F21	P21-3	OUTLET	LT	665.0	
F22	P22-3	OUTLET	LT	2150.0	
F23	P23-3	OUTLET	LT	298.3	
ROUNDED TOTAL:				9,600	



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

SEWARD HIGHWAY
MP 17-22.5 REHABILITATION

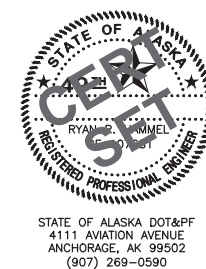
SUMMARY SHEETS

DRAWING LOCATION	DATE	TIME	LAYOUT	SCALE	XREFS: XR-53610-Border-Detail	DESIGNED BY CML/KOS/ZDK
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					DRAFTED BY VJS/ZDK	

RUMBLE STRIPS - 406.0002.0000					
SHEET	STATION		OFFSET	LENGTH (STA)	REMARKS
	FROM	TO			
F1-F3	103+60	127+40	LT	23.91	
F1-F3	103+95	127+95	RT	23.89	
F3-F5	136+40	161+24	LT	24.71	
F3-F5	136+40	159+50	RT	23.23	
F5-F8	161+60	187+94	RT	26.33	
F6	163+00	167+50	LT	4.48	
F6-F8	169+21	188+14	LT	18.97	
F8-F9	188+68	205+70	RT	17.02	
F8	189+80	193+30	LT	3.48	
F8-F9	194+92	209+75	LT	14.09	
F9-10	206+40	211+72	RT	5.38	
F9-10	212+11	213+63	LT	1.51	
F10	212+46	214+66	RT	2.21	
F10	214+37	219+13	LT	4.79	
F10	215+40	216+63	RT	1.23	
F10-F11	217+37	231+15	RT	13.66	
F10-F11	219+87	225+77	LT	5.97	
F11-F12	227+95	236+69	LT	8.74	
F11-F12	233+44	236+81	RT	3.37	
F12	237+45	238+29	LT	0.84	
F12	237+55	238+02	RT	0.47	
F12	239+03	239+71	LT	0.68	
F12	238+58	240+36	RT	0.78	
F12	240+45	244+31	LT	3.87	
F12	242+51	243+15	LT	0.64	
F12	243+95	244+31	RT	0.36	
F12-14	245+05	247+38	LT	22.30	
F12-14	245+05	253+50	RT	18.48	
F14	261+00	261+75	RT	0.75	
F14	263+00	267+75	LT	4.74	
F15-F16	275+00	294+00	LT	18.86	
F15-F17	276+20	306+00	RT	29.99	
F16-17	297+00	305+00	LT	8.07	
F17-19	306+57	332+38	LT	25.79	
F17-19	306+95	335+84	RT	28.92	
F19-20	334+00	338+50	LT	4.50	
F20-22	336+54	371+00	RT	34.49	
F20-24	340+60	387+31	LT	46.67	
F22-23	372+50	377+00	RT	4.50	
F23-24	378+50	393+75	RT	15.28	
F24	389+00	392+00	LT	3.00	
ROUNDED TOTAL:			510		

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0311032/Z536100000	2021	D8	D15

REMOVAL OF GUARDRAIL SUMMARY - 606.0006.0000					
SHEET	STATION		OFFSET	LENGTH (FT)	REMARKS
	FROM	TO			
F1	99+57.0	100+28.0	RT	71.0	
F1	100+23.5	100+60.5	LT	71.0	
F1	102+34.5	103+93.0	RT	158.5	
F1	102+67.5	104+75.5	LT	209.0	
F3	126+62.0	128+84.0	RT	220.5	
F3	127+15.0	128+84.0	LT	170.0	
F3-F5	135+40.5	160+70.0	RT	2,552.0	
F3-F9	135+40.5	209+93.0	LT	7,421.5	
F10-F11	218+31.5	229+34.0	RT/LT	777.0	
F11	228+59.0	229+34.0	RT	75.5	
F11	229+10.5	229+59.0	LT	49.5	
F11	231+30.5	231+51.5	RT	51.5	
F11	231+51.5	231+32.0	LT	77.0	
F14	247+81.5	271+18.5	LT	2,295.0	
F14	273+61.5	289+11.5	LT	1,563.5	
F15-F17	294+41.0	307+02.0	LT	1,300.0	
F17	305+21.0	306+21.0	RT	101.0	
F17-F18	311+40.5	317+22.5	LT	576.5	
F18-F19	318+75.0	333+89.0	LT	1,513.0	
F20-F24	338+65.5	398+41.0	LT	5,968.0	
ROUNDED TOTAL:			25,221		



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**

SUMMARY SHEETS

DESIGNED BY: LML/KDS/ZDK
CHECKED BY: RRH
DRAFTED BY: YUS/ZDK

SCALE: N/A

LAYOUT: D9

DATE: 6/17/2021 12:23 PM
TIME: 12:23 PM

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REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0311032/Z536100000	2021	D9	D15

GUARDRAIL SUMMARY - 606.0001.0000, 606.0009.0000, 606.0013.0000, 606.0016.0000										
SHEET	STATION		OFFSET	W-BEAM GUARDRAIL (LF)	SHORT RADIUS GUARDRAIL (SRG)			PARALLEL GUARDRAIL TERMINAL (EACH)	TRANSITION RAIL (EACH)	REMARKS
	FROM	TO			(EACH)	CURVE RADIUS (FT)	CURVE LENGTH (FT)			
F1	99+57.5	100+27.5	RT	50.0	----	----	----	----	1.0	
F1	100+18.0	100+59.5	LT	----	1.0	10.0	18.8	----	1.0	
F1	102+35.0	103+79.5	RT	75.0	----	----	----	1.0	1.0	
F1	102+68.0	105+62.0	LT	225.0	----	----	----	1.0	1.0	
F3	125+77.0	128+83.5	RT	237.5	----	----	----	1.0	1.0	
F3	127+55.5	128+83.5	LT	62.5	----	----	----	1.0	1.0	
F3-F5	135+50.0	160+49.5	RT	2,450.0	----	----	----	1.0	1.0	
F3-F9	135+50.0	210+00.0	LT	7,350.0	----	----	----	1.0	1.0	
F11	226+14.0	229+11.0	RT	225.0	----	----	----	1.0	1.0	
F11	228+00.0	229+32.0	LT	62.5	----	----	----	1.0	1.0	
F11	231+71.0	232+51.0	RT	12.5	1.0	36.0	56.6	----	1.0	
F11	231+92.0	234+86.0	LT	225.0	----	----	----	1.0	1.0	
F12-16	246+14.5	290+56.0	LT	4,337.5	----	----	----	1.0		
F16-F17	294+15.0	306+64.5	LT	1,200.0	1.0		28	----		
F17	302+39.5	306+61.0	RT	325.0	1.0	20	24	1.0	----	INSTALL LONG SPAN AT ROCKY CREEK BOX CULVERT AS NECESSARY PER STD. PLAN G-29.00
F17-F24	304+31.0	398+39.0	LT	9,325	----	----	----	1.0	----	INSTALL LONG SPAN AT ROCKY CREEK BOX CULVERT AS NECESSARY PER STD. PLAN G-29.00
F18	316+50.0	320+50.0	RT	300.0	----	----	----	2.0	----	ROCK CUT. INSTALL LONG SPAN AT P18-3 AS NECESSARY PER STD. PLAN G-29.00
F19	332+75.0	336+13.0	LT	250.0	1.0	1.0	45.4	1.0	----	ROCK CUT. INSTALL LONG SPAN AT P19-2 AS NECESSARY PER STD. PLAN G-29.00
F23	377+00.0	411+25.0	RT	325.0	----	----	----	2.0	----	ROCK CUT. INSTALL LONG SPAN AT P23-2 AS NECESSARY PER STD. PLAN G-29.00
TOTALS:				27,037.5	5.0	----	----	19.0	12.0	

NOTE: SEE SPECIFICATIONS AND STANDARD PLANS FOR POST LENGTHS.

BATTER BOARD - 606.2012.0000				
SHEET	STATION		OFFSET	LENGTH (LF)
	FROM	TO		
F4-F5	147+00	152+00	LT	500.0
F5	152+00	161+00	LT	900.0
TOTAL:				1,400

NOTE: EXTEND AND SEAL PAVEMENT TO THE FACE OF BATTER BOARD. SEE BATTER BOARD DETAILS.

- NOTES:
- INSTALL GUARDRAIL FLEXIBLE DELINEATORS AND GUARDRAIL REFLECTORS PER STANDARD PLAN G-00.05 ON ALL GUARDRAIL RUNS.
 - GUARDRAIL FLEXIBLE DELINEATORS AND GUARDRAIL REFLECTORS ARE TO BE SPACED AS FOLLOWS:
 - 50' ON TANGENTS.
 - 12.5' ON CURVES STARTING 100' BEFORE THE POINT OF CURVATURE (PC) AND 100' AFTER THE POINT OF TANGENCY (PT).
 - THE FOLLOWING STATION RANGES APPLY TO NOTE 2.2.:
- STA. 186+65 TO 203+00
STA. 204+50 TO 210+00
STA. 226+15 TO 228+60
STA. 280+30 TO 290+55
STA. 294+20 TO 309+00
STA. 356+00 TO 363+65



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

SEWARD HIGHWAY
MP 17-22.5 REHABILITATION

SUMMARY SHEETS

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 268-0590

STATE OF ALASKA DOT&PF
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ANCHORAGE, AK 99502
(907) 269-0590

DRAWING LOCATION
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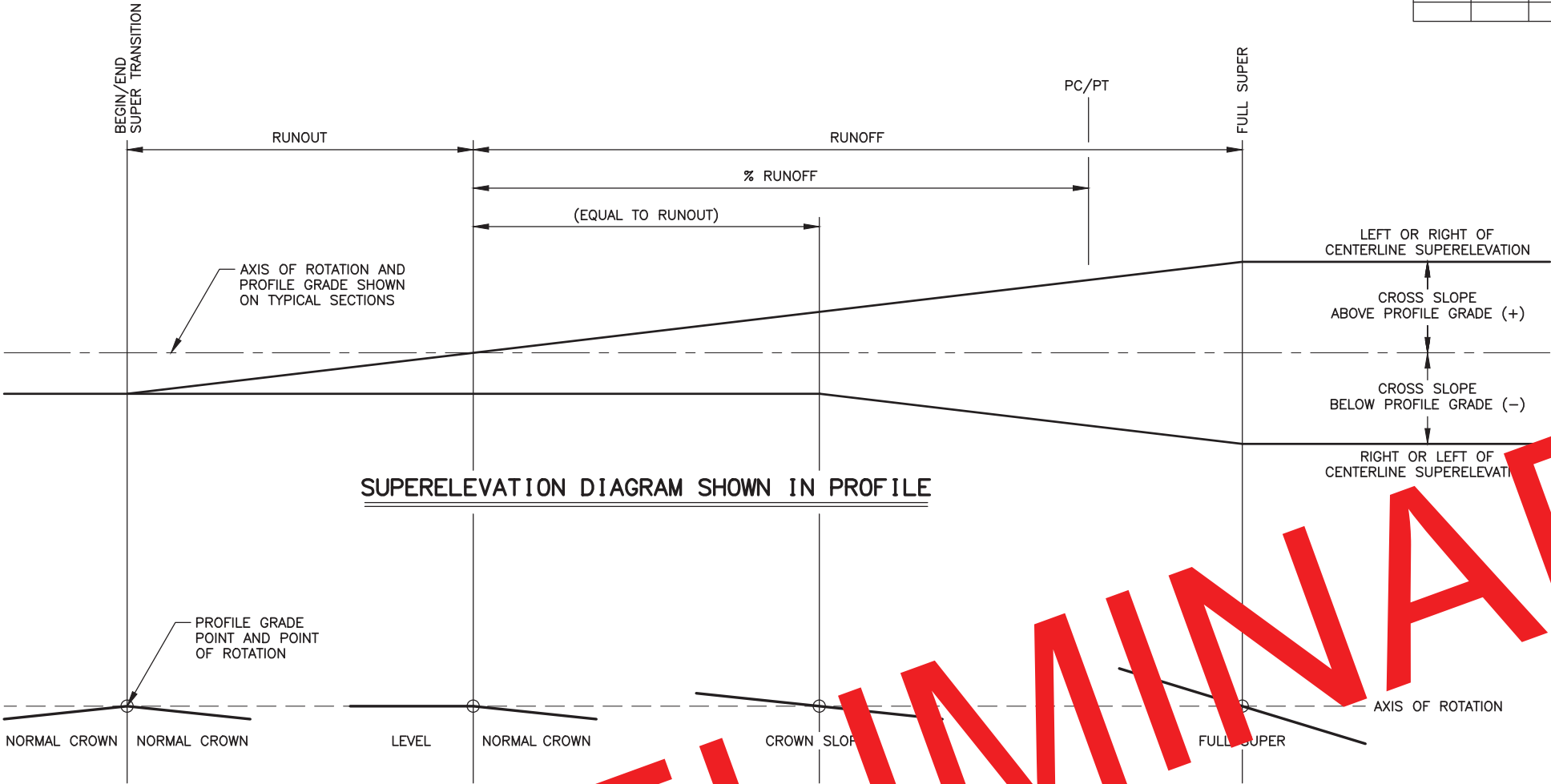
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9/30/2020 9:55 AM

LAYOUT
E1

SCALE
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DESIGNED BY: GJH/KDS
CHECKED BY: RRH
DRAFTED BY: IVS

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0311032/Z536100000	2021	E1	E45

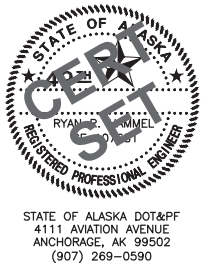


SUPERELEVATION DIAGRAM SHOWN IN PROFILE

SUPERELEVATION TRANSITION

SUPERELEVATION NOTES:

1. REFER TO PLAN AND PROFILE SHEETS FOR SUPERELEVATION VALUES AND SPECIAL CASES.
2. BUILD SUPERELEVATION INTO SUBGRADE AND CARRY THROUGH SHOULDERS.
3. % RUNOFF = PORTION OF RUNOFF ON TANGENT.
4. WIDENING FOR GUARDRAIL OR CURVATURE DOES NOT CHANGE THE LOCATION OF THE AXIS OF ROTATION.



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

SEWARD HIGHWAY
MP 17-22.5 REHABILITATION

SUPERELEVATION TRANSITION
AND CUT-FILL TRANSITION
DETAILS

DESIGNED BY: CAC/OML
CHECKED BY: RHR
DRAFTED BY: CAJ/VUS

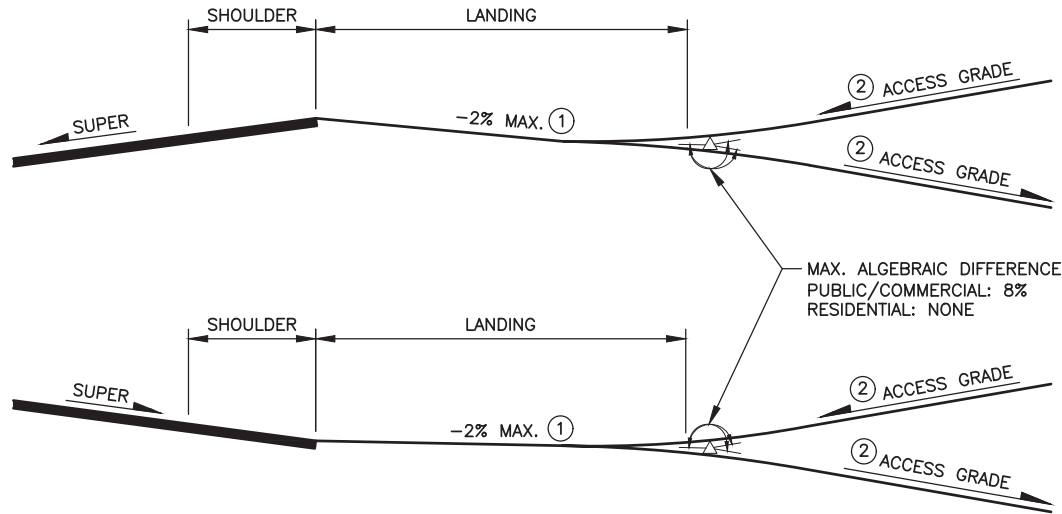
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REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0311032/Z536100000	2021	E2	E45

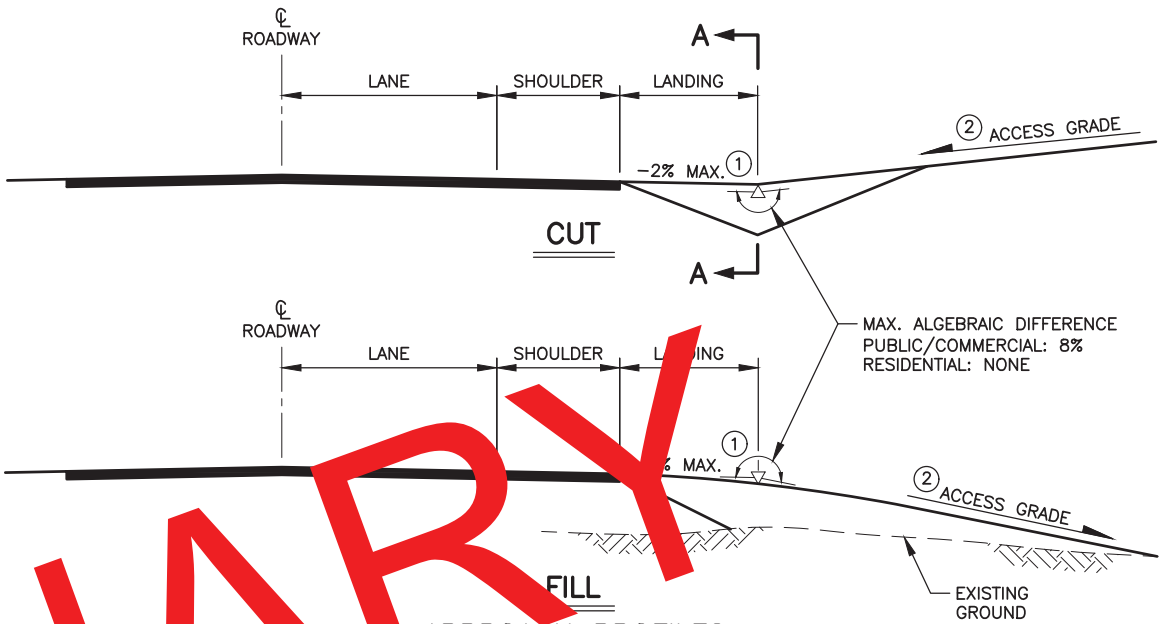


APPROACH PROFILES ON SUPER ELEVATED ROADWAY

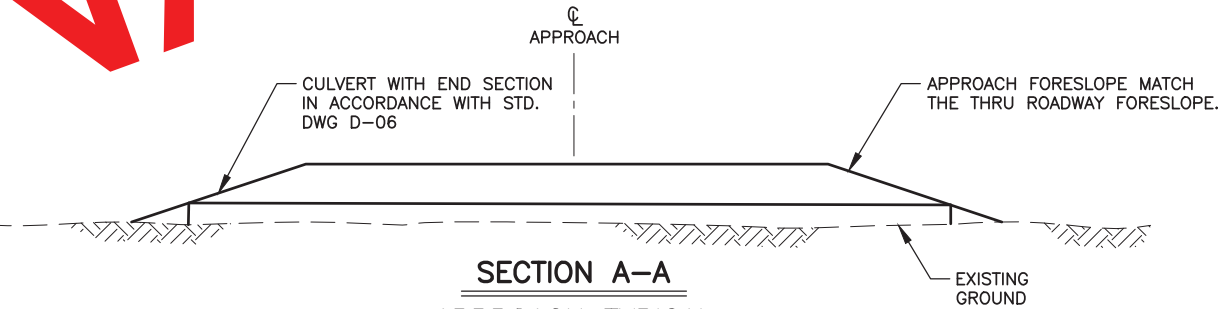
APPROACH RADIUS TABLE	
TYPE	RADIUS
RESIDENTIAL	20'
PUBLIC COMMERCIAL	40'

LANDING TABLE	
TYPE	LENGTH
RESIDENTIAL	10'
PUBLIC COMMERCIAL	30'

- ① WHEN PATHWAY IS PRESENT, MAXIMUM LANDING GRADE IS TO BE -1.5%.
- ② ACCESS GRADE MAX. 15%



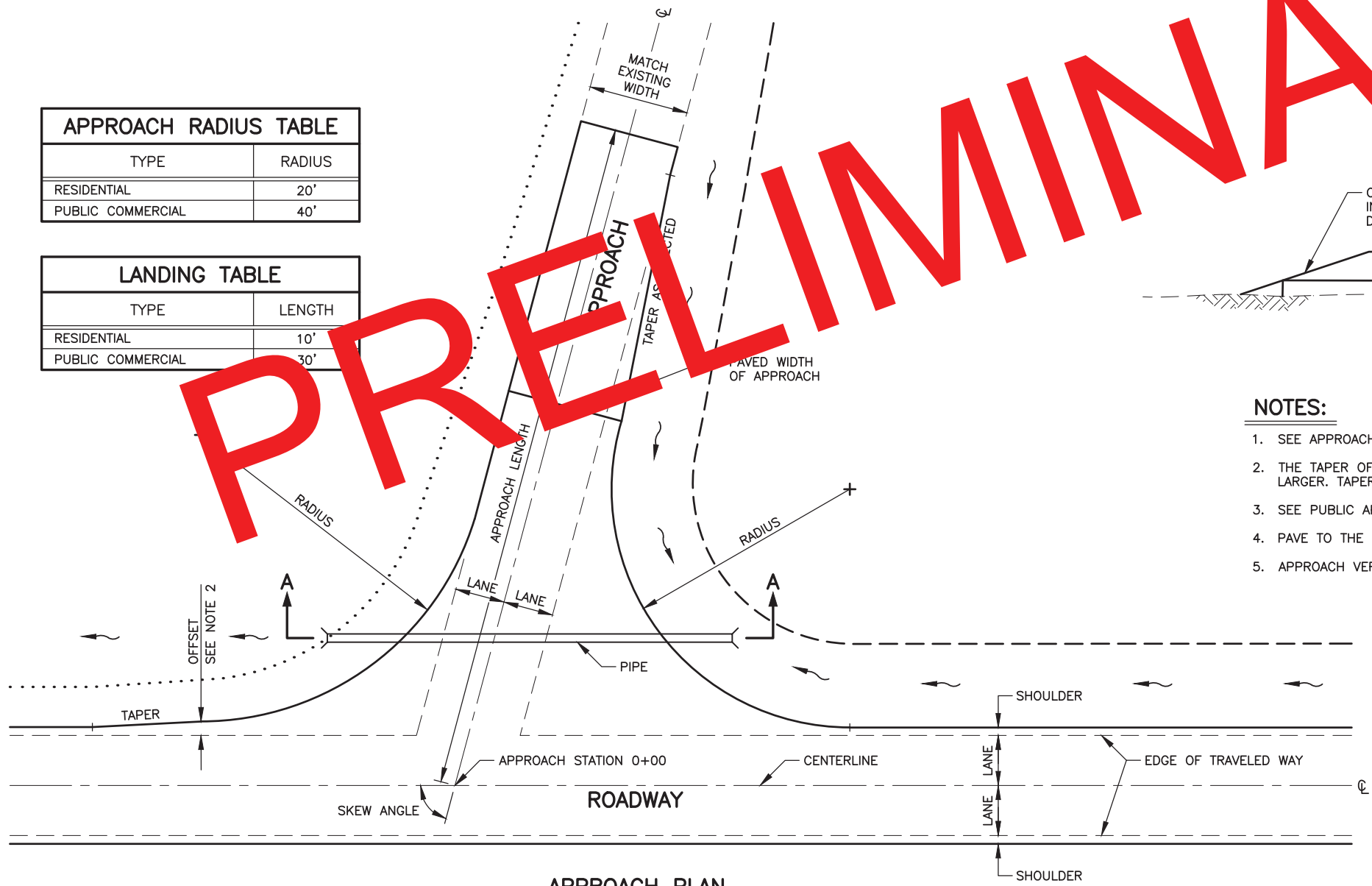
APPROACH PROFILES



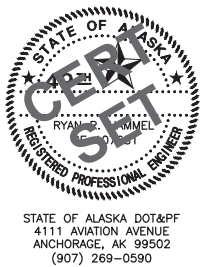
SECTION A-A
APPROACH TYPICAL

NOTES:

- SEE APPROACH SUMMARY FOR APPROACH STATION, LENGTH, WIDTH, SKEW ANGLE, AND TYPE.
- THE TAPER OFFSET FROM TRAVELED WAY = ASSIGNED VALUE OR SHOULDER WIDTH WHICHEVER IS LARGER. TAPER WILL BE 10 FEET IN LENGTH FOR EACH FOOT OF OFFSET.
- SEE PUBLIC APPROACH AND DRIVEWAY TYPICAL SECTIONS.
- PAVE TO THE END OF THE RADIUS RETURN UNLESS OTHERWISE INDICATED.
- APPROACH VERTICAL CURVE REQUIREMENTS: CREST - 2 1/2 INCH MAXIMUM IN A 10-FOOT CHORD SAG - 2 INCH MAXIMUM IN A 10-FOOT CHORD



APPROACH PLAN



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

SEWARD HIGHWAY
MP 17-22.5 REHABILITATION

UNCURBED APPROACH
DETAILS

DESIGNED BY KOS/ZDK
CHECKED BY RRH
DRAFTED BY ZDK/VJS

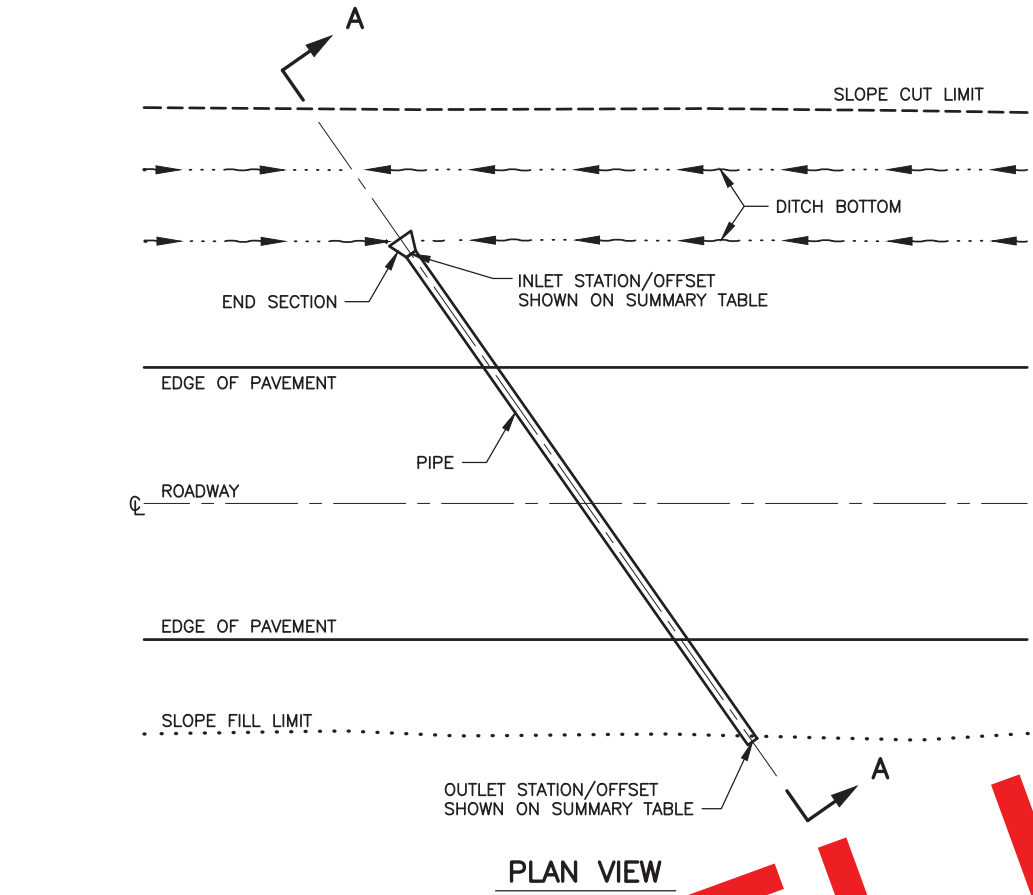
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LAYOUT
E3

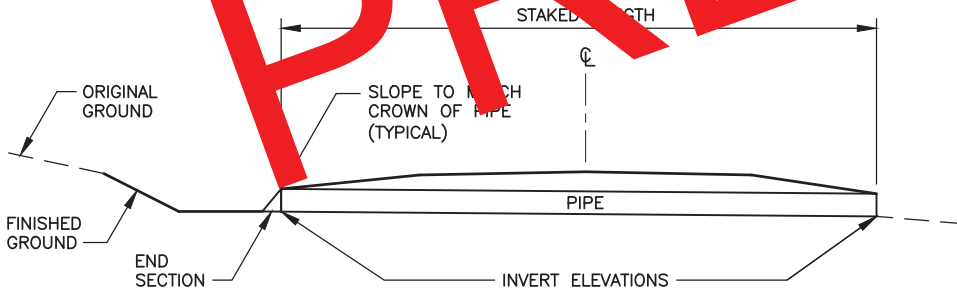
DATE TIME
2/26/2021 5:43 PM

DRAWING LOCATION
w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civil\3D16\Plan\set\53610_E03_Drainage Details.DWG

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0311032/Z536100000	2021	E3	E45

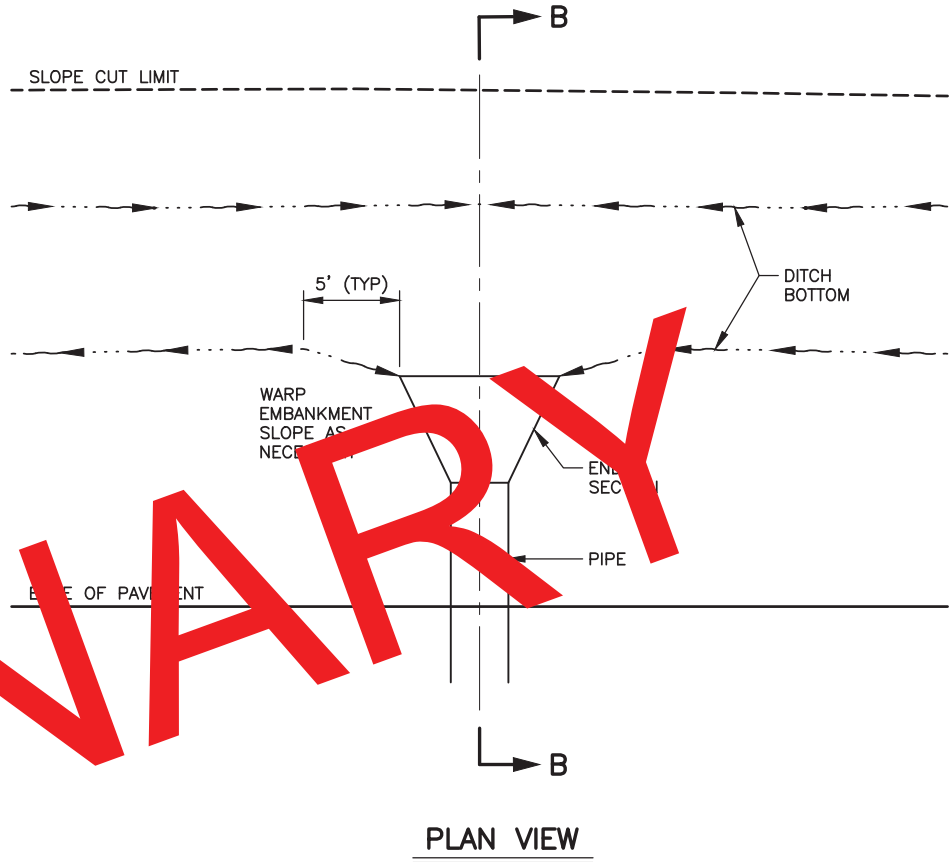


PLAN VIEW

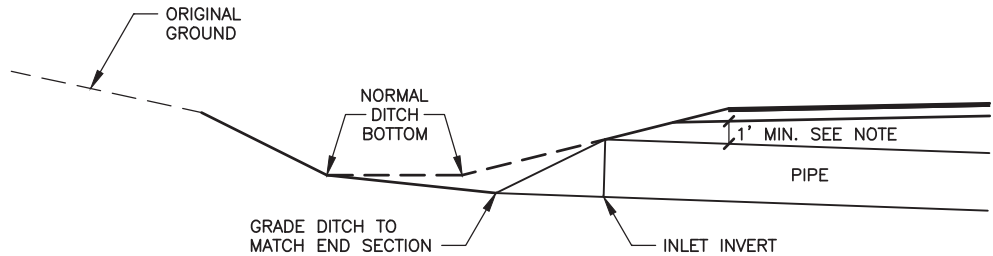


SECTION A-A
PIPE INSTALLATION DETAIL

INSTALL END SECTION AT OUTLET WHERE INDICATED ON SUMMARY TABLE.



PLAN VIEW



SECTION B-B
PIPE INLET DEPRESSION DETAIL

DEPRESS PIPE INLET AS REQUIRED TO ENSURE 1 FOOT MINIMUM COVER FROM BOTTOM OF FLEXIBLE PAVEMENT TO TOP OF PIPE.



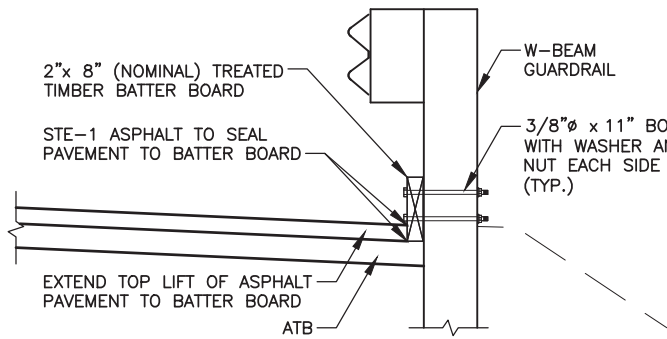
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

SEWARD HIGHWAY
MP 17-22.5 REHABILITATION

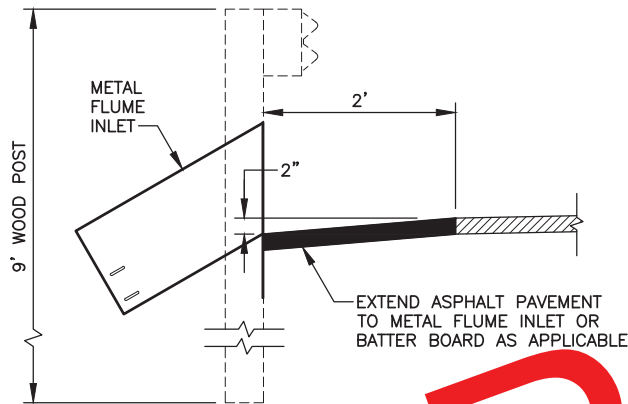
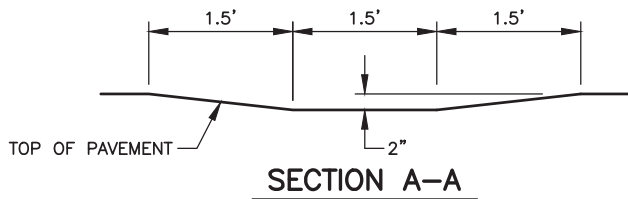
CULVERT INSTALLATION
DETAILS

DESIGNED BY: KOS/ZDK
CHECKED BY: RRH
DRAFTED BY: ZDK/VJS
XREFS: XR-53610-Barrier-Details
SCALE: 1" = 1'
LAYOUT: E4
DATE: 2/26/2021 5:43 PM
TIME: 5:43 PM
DRAWING LOCATION: w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civil\3D16\Plan\set\53610_E03_Drainage Details.DWG

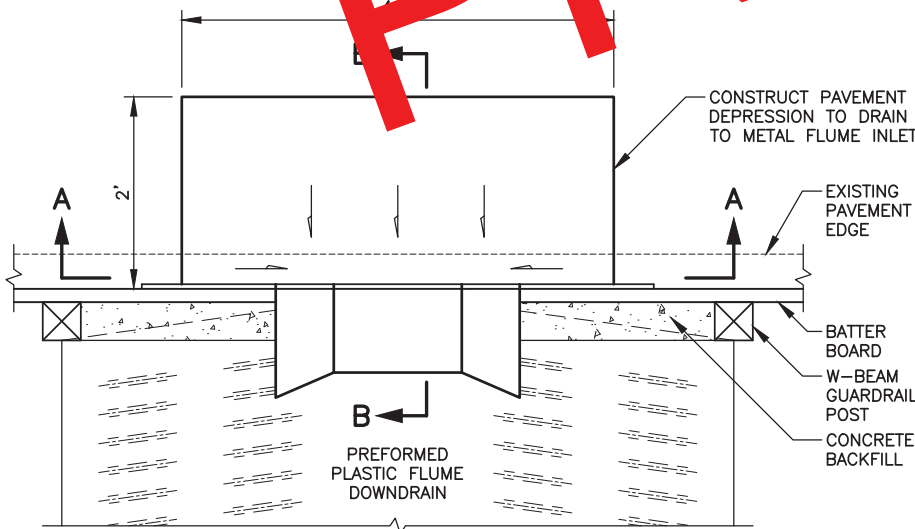
REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0311032/Z536100000	2021	E4	E45



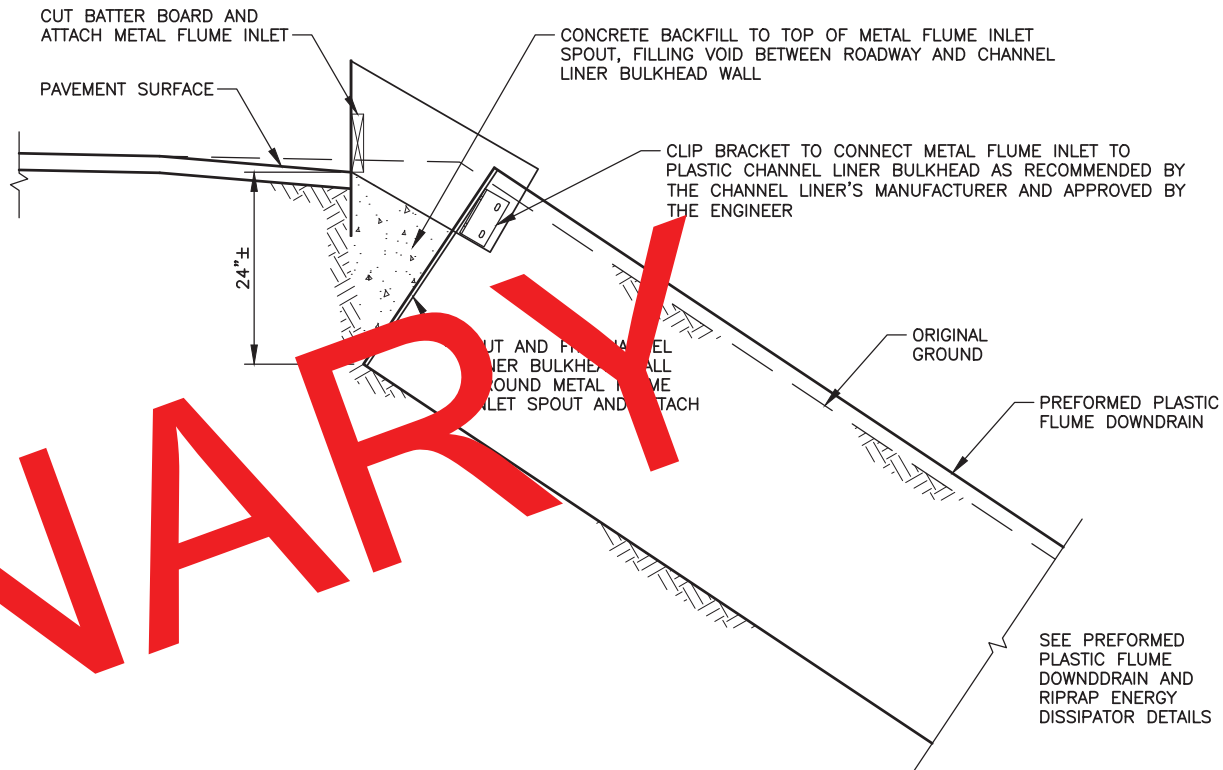
TREATED TIMBER BATTER BOARD DETAIL
INSTALL BATTER BOARD PRIOR TO PLACING TOP LIFT OF PAVEMENT.



NOTE: PLACE 9' POST AT MINIMUM OF 2' ON EITHER SIDE OF THE FLUME ATTACHMENT TO OVERRIDE THE STANDARD DETAIL

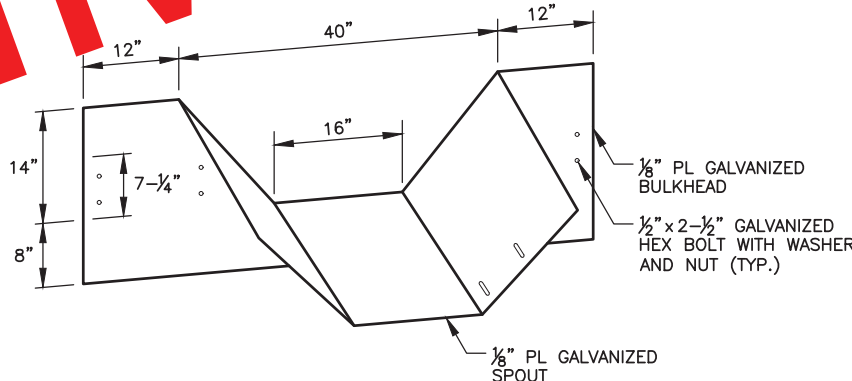


PAVEMENT DEPRESSION AT METAL FLUME INLET

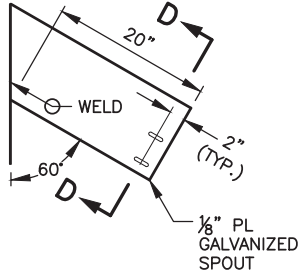


PREFORMED PLASTIC FLUME DOWN DRAIN WITH BATTERBOARD

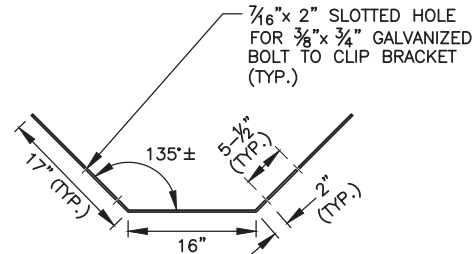
NOTE: LOCATE CENTER OF PREFORMED PLASTIC FLUME DOWN DRAIN AT MIDPOINT BETWEEN W-BEAM GUARDRAIL POSTS.



ISOMETRIC

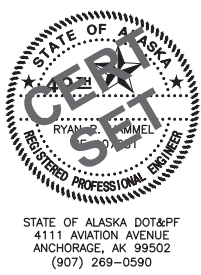


ELEVATION



SECTION D-D

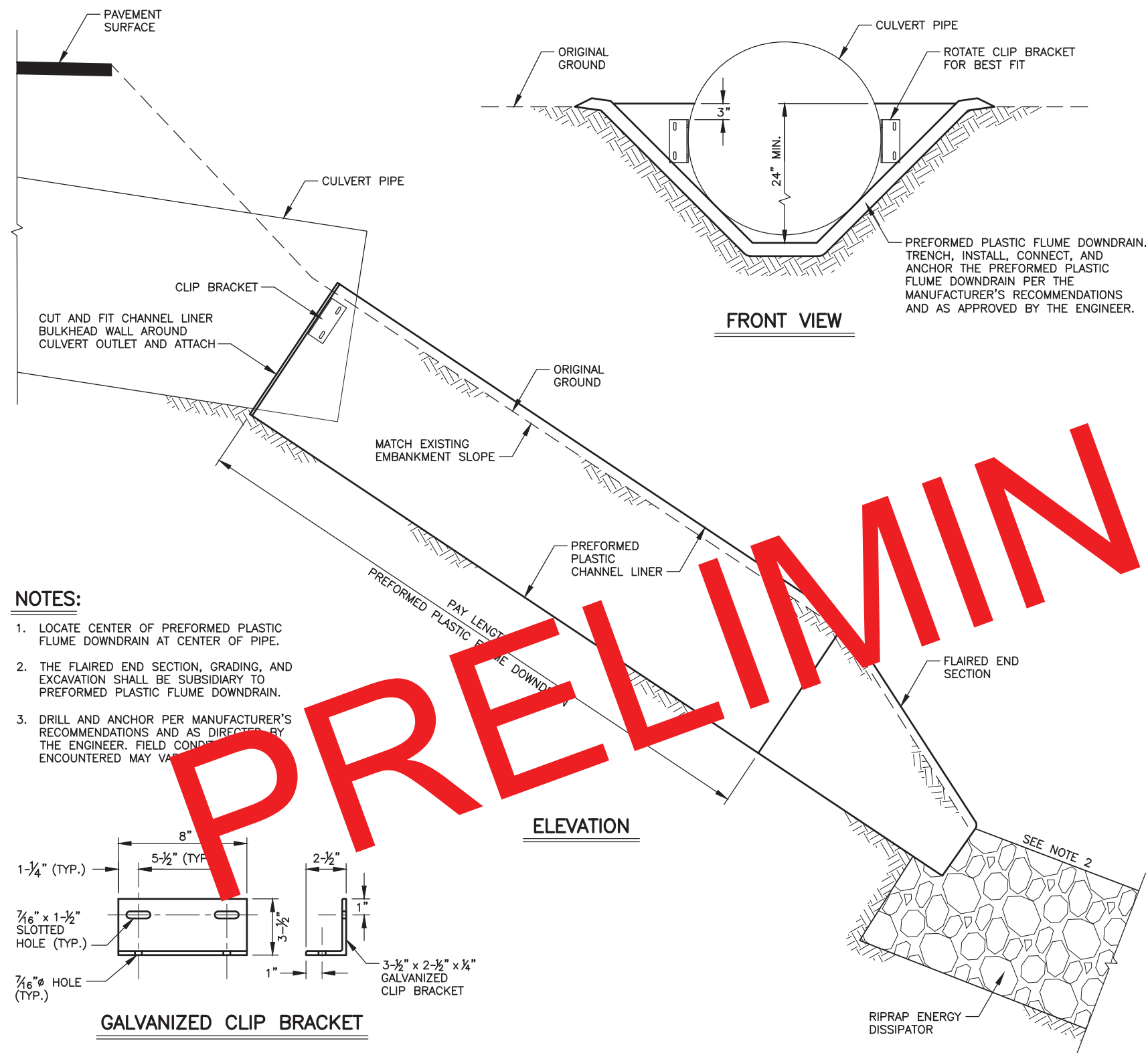
METAL FLUME INLET



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**
**PREFORMED PLASTIC
FLUME DOWN DRAIN
& BATTER BOARD DETAILS**

DRAWING LOCATION: w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civil\3D16\Plan\set\53610_E03_Drainage Details.DWG
DATE: 2/26/2021 5:43 PM
LAYOUT: E5
SCALE: 1" = 5'
DESIGNED BY: KOS/ZDK
CHECKED BY: RRH
DRAFTED BY: ZDK/VJS

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0311032/Z536100000	2021	E5	E45



PREFORMED PLASTIC FLUME DOWNDRAIN WITH CULVERT PIPE



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
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**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**

**PREFORMED PLASTIC
FLUME DOWNDRAIN DETAILS**

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 268-0590

DESIGNED BY: KOS/ZDK
CHECKED BY: RRH
DRAFTED BY: ZDK/VUS

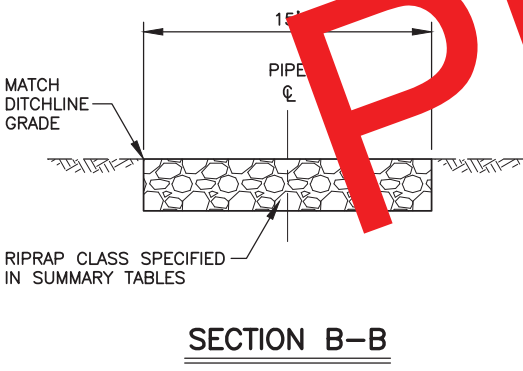
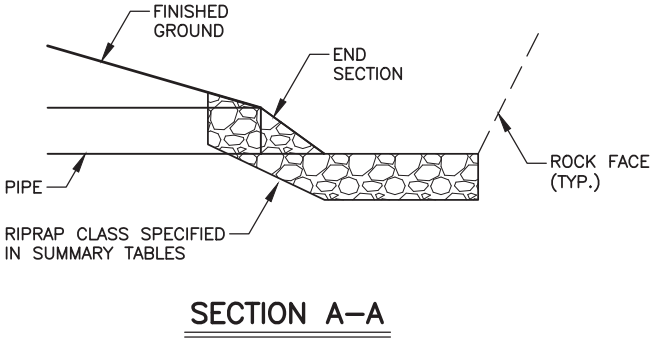
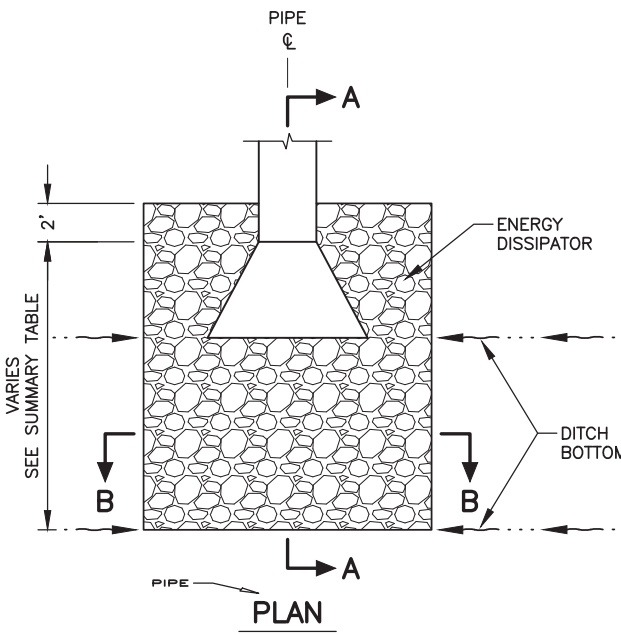
SCALE: 1" = 5'

LAYOUT: E6

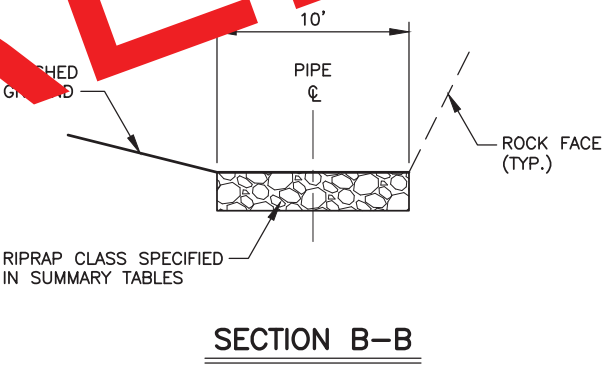
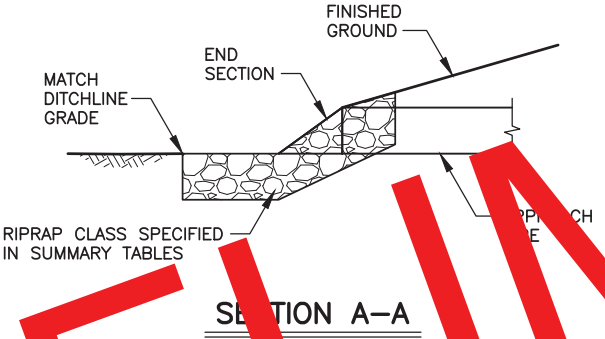
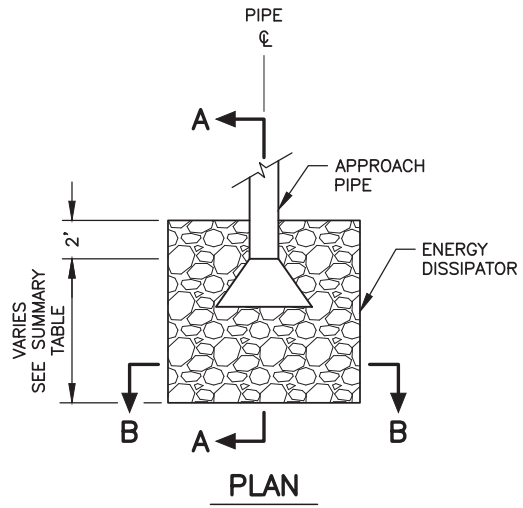
DATE: 2/26/2021 5:43 PM

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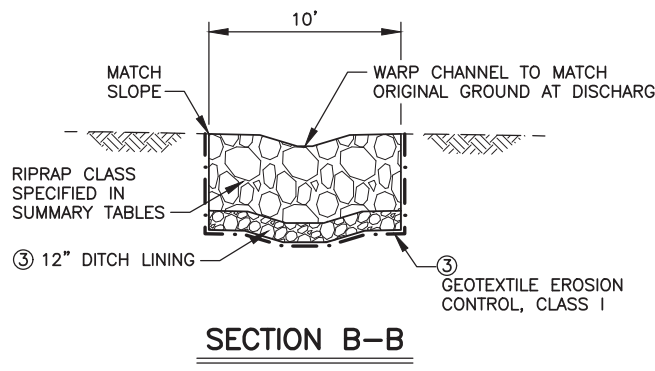
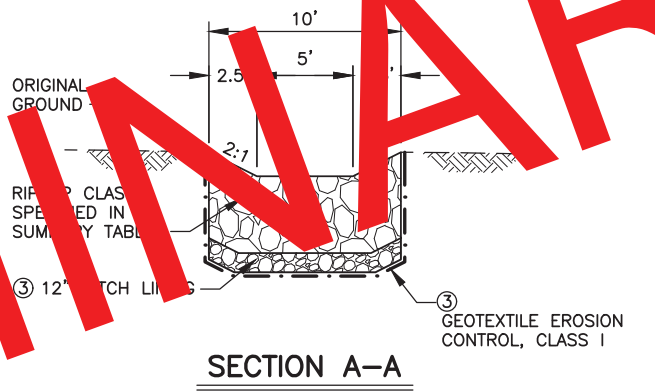
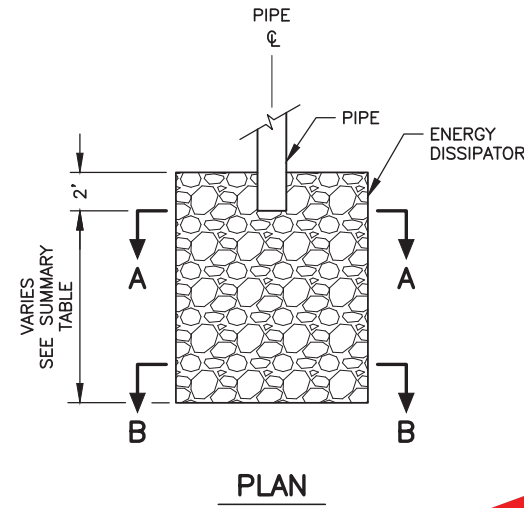
REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0311032/Z536100000	2021	E6	E45



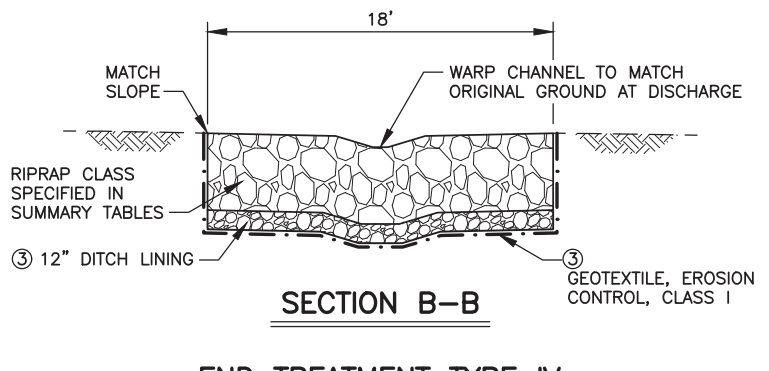
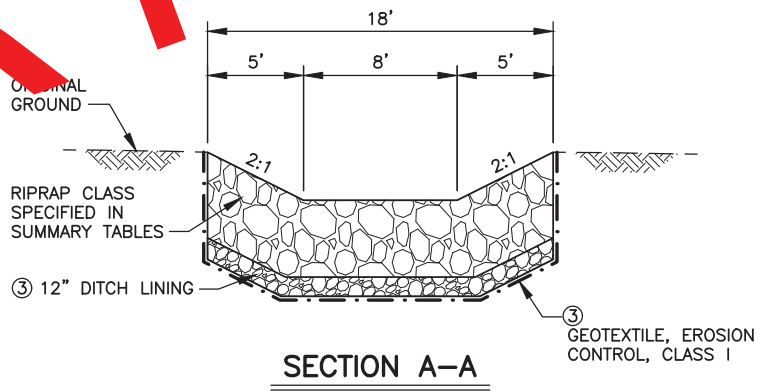
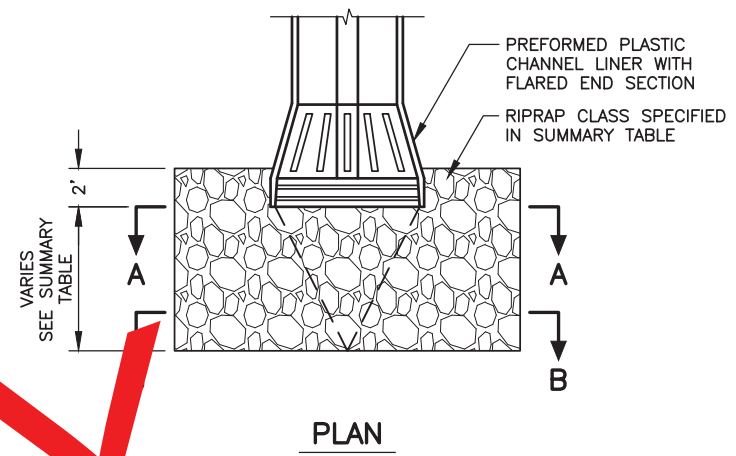
END TREATMENT TYPE I
ENERGY DISSIPATOR
WITH SPLASH PROTECTION



END TREATMENT TYPE II
APPROACH ENERGY DISSIPATOR



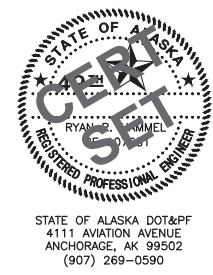
END TREATMENT TYPE III
ENERGY DISSIPATOR



END TREATMENT TYPE IV
FLUME RIPRAP ENERGY DISSIPATOR

NOTES:

1. RIPRAP SLOPE SHALL BE 1.5:1 OR FLATTER.
2. INSTALL ENERGY DISSIPATORS AND ROCK FLUME DOWNDRAINS IN CONJUNCTION WITH CULVERT OR FLUME DOWNDRAIN INSTALLATIONS WHERE SHOWN ON PLANS. ENERGY DISSIPATORS AND ROCK FLUME DOWNDRAINS ARE PERMANENT FEATURES AND SHALL BE LEFT IN PLACE.
- 3.A. WHERE 50% OR MORE OF THE SOIL PARTICLES UNDER RIPRAP ARE LARGER THAN SAND SIZE, BED RIPRAP ON DITCH LINING AS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER.
- 3.B. WHERE LESS THAN 50% OF THE SOIL PARTICLES UNDER RIPRAP ARE LARGER THAN SAND SIZE, BED RIPRAP ON GEOTEXTILE AS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER.



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

SEWARD HIGHWAY
MP 17-22.5 REHABILITATION

CULVERT INSTALLATION DETAILS
ENERGY DISSIPATORS

DESIGNED BY: KOS/ZDK
CHECKED BY: RRH
DRAFTED BY: ZDK/VUS

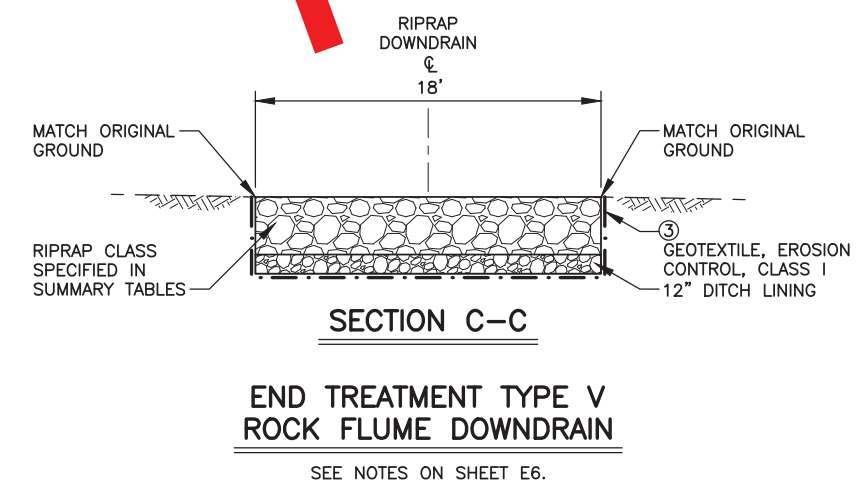
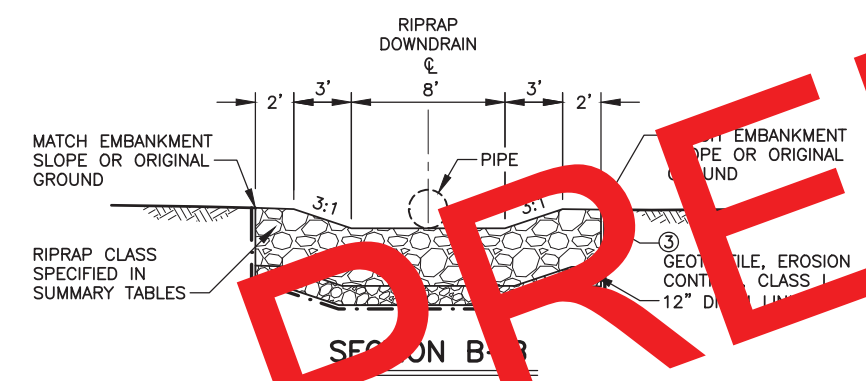
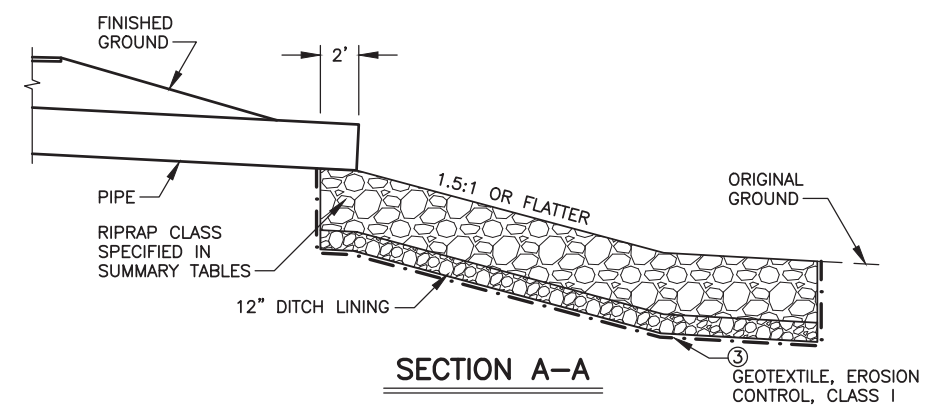
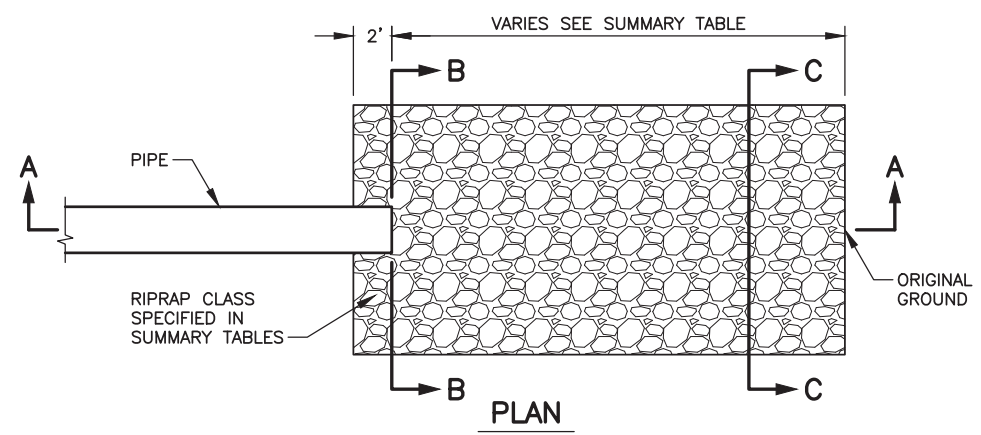
SCALE: 1" = 5'

LAYOUT: E7

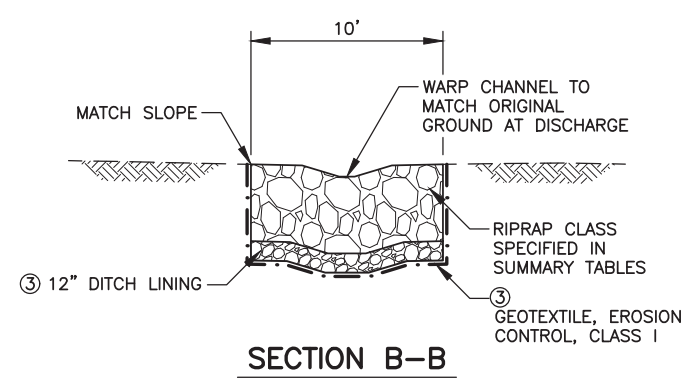
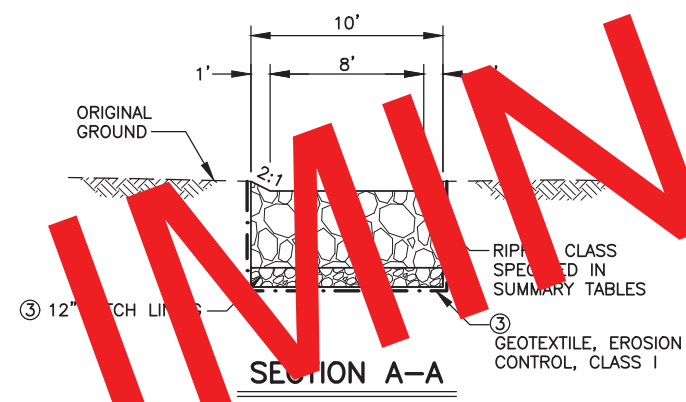
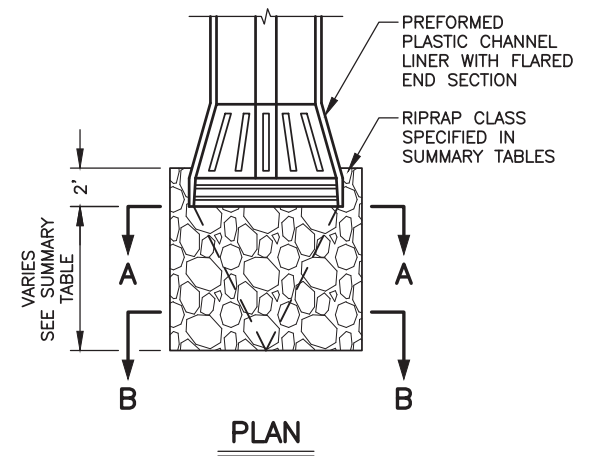
DATE: 2/26/2021 5:43 PM

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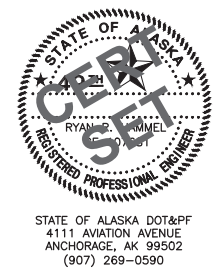
REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0311032/Z536100000	2021	E7	E45



**END TREATMENT TYPE V
ROCK FLUME DOWNDRAIN**
SEE NOTES ON SHEET E6.



**END TREATMENT TYPE VI
FLUME RIPRAP ENERGY DISSIPATOR**
SEE NOTES ON SHEET E6.



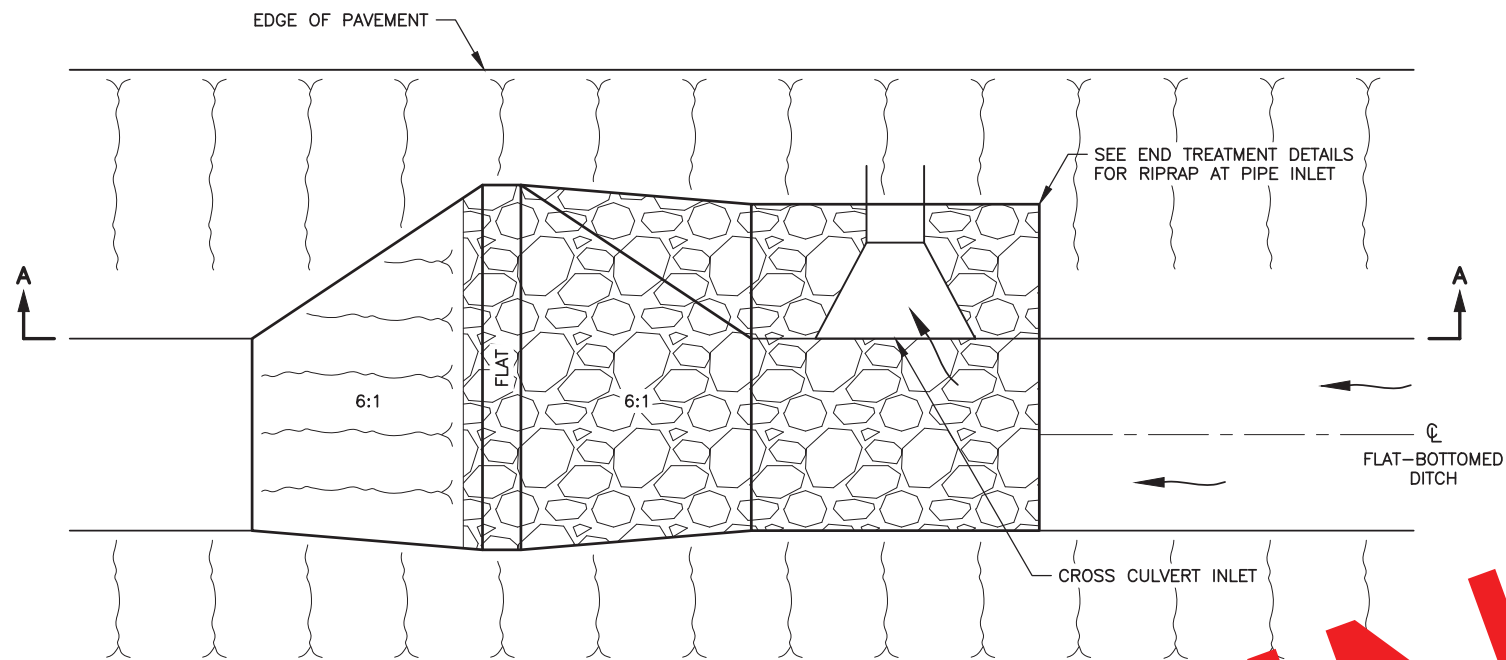
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**

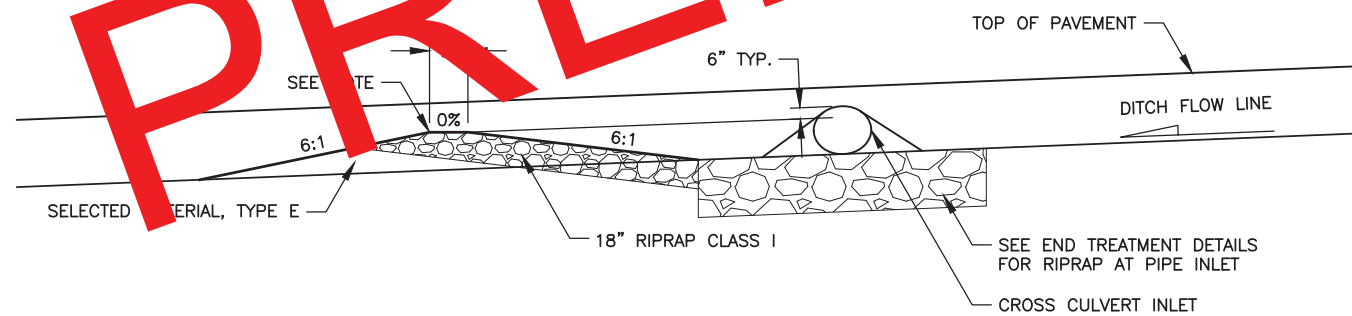
**CULVERT INSTALLATION DETAILS
RIPRAP FLUME DOWNDRAINS
OUTLET ENERGY DISSIPATORS**

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DATE: 3/2/2021 8:42 PM
LAYOUT: E9
SCALE: 1" = 5'
DESIGNED BY: KOS/ZDK
CHECKED BY: RRH
DRAFTED BY: ZDK

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0311032/Z536100000	2021	E9	E45



PLAN

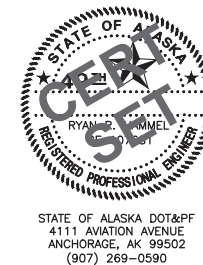


SECTION A-A

DITCH DIKE DETAIL

NOTE:

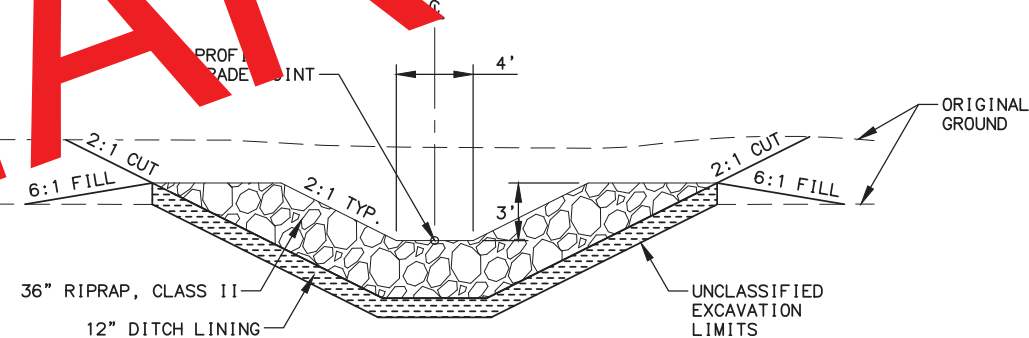
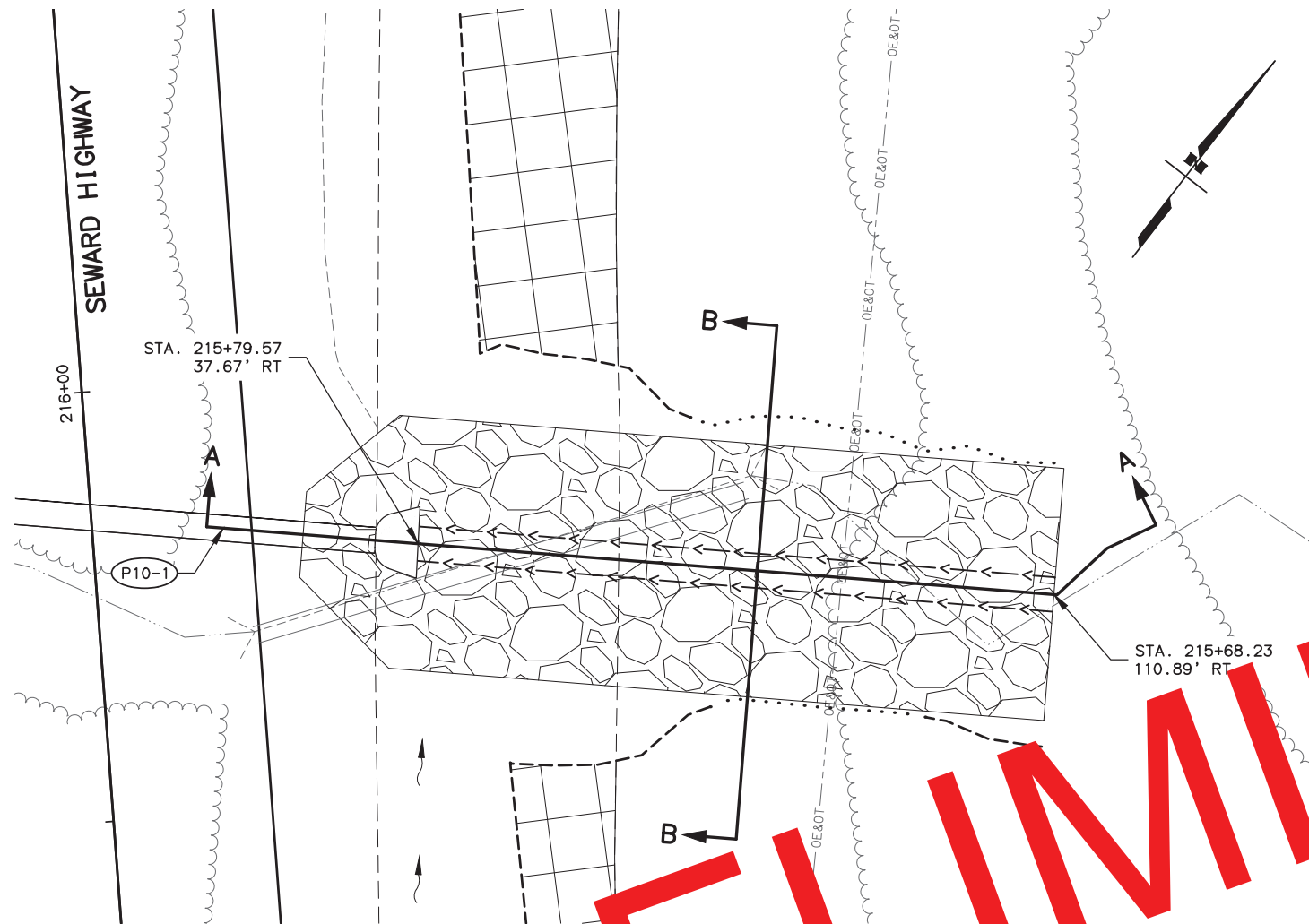
INCREASE HEIGHT OF DITCH DIKE TO MAINTAIN APPROXIMATE 6" ELEVATION DIFFERENCE BETWEEN THE TOP OF THE DIKE AND THE TOP OF THE PIPE.



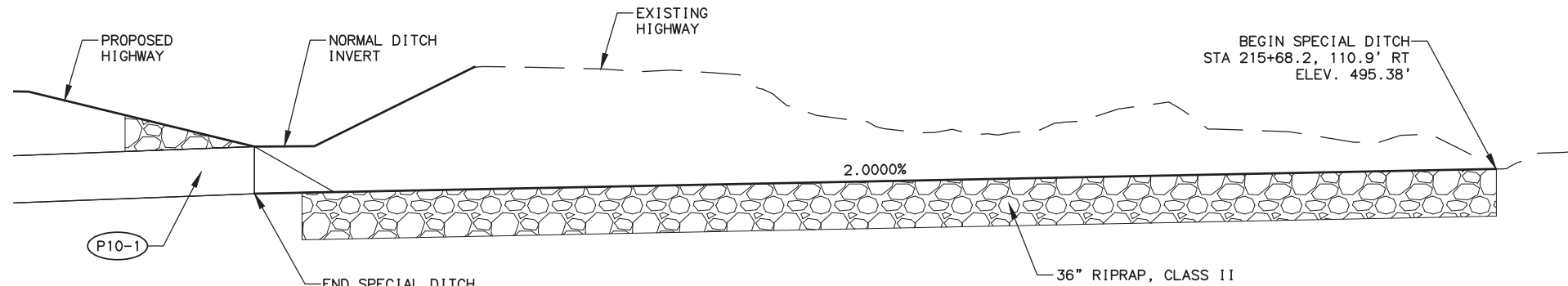
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DATE: 6/14/2021 2:16 PM
LAYOUT: E10
SCALE: 1" = 10'
DESIGNED BY: KOS/ZDK
CHECKED BY: RRH
DRAFTED BY: ZDK/VUS

REVISIONS		
NO.	DATE	DESCRIPTION

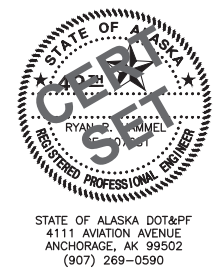
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0311032/Z536100000	2021	E10	E45



SECTION B-B



SECTION A-A



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

SEWARD HIGHWAY
MP 17-22.5 REHABILITATION

SPECIAL DITCH DETAILS
STA 215+80

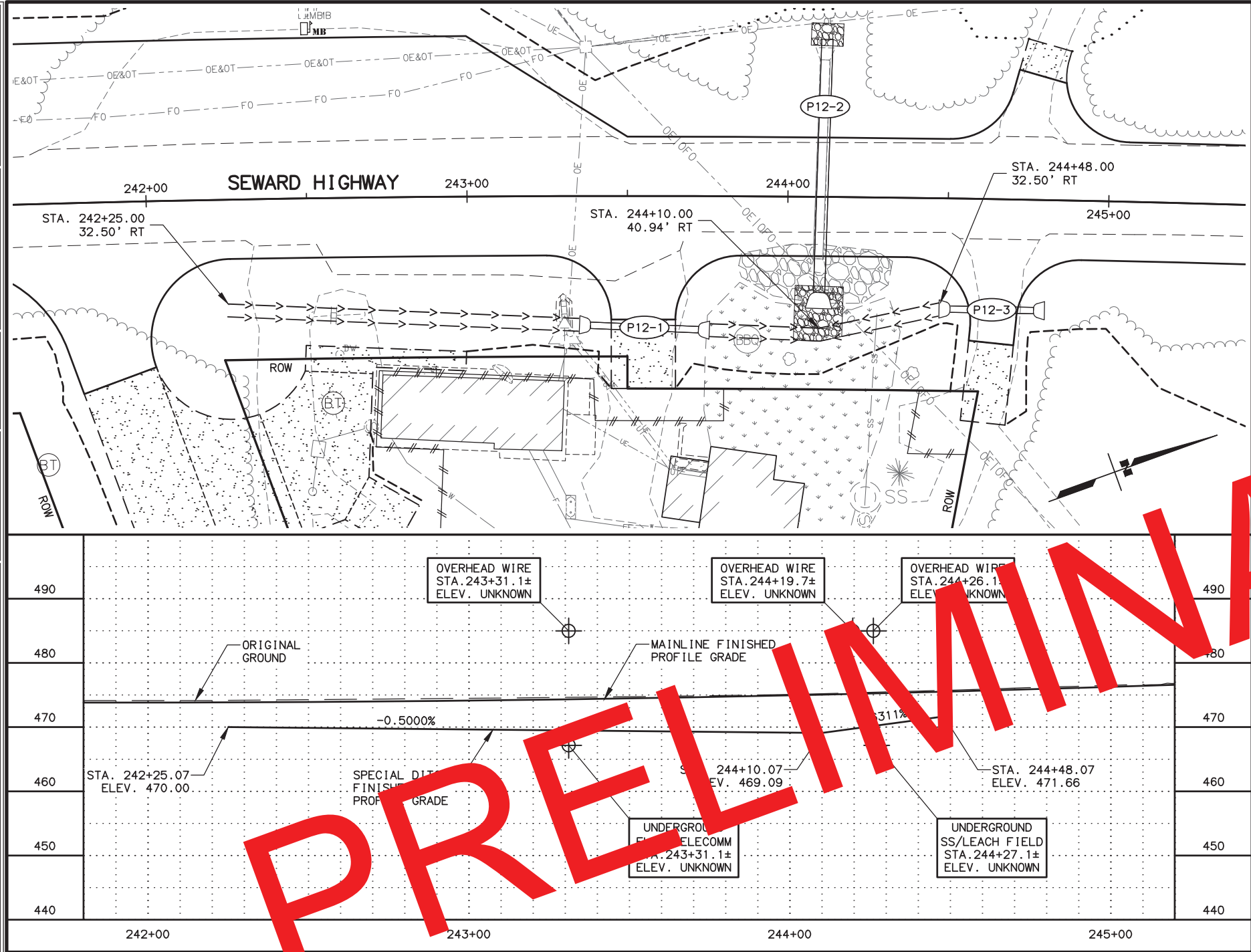
DESIGNED BY: ZDK
CHECKED BY: RHR
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SCALE: 1" = 20'

LAYOUT: E11

DATE: 2/16/2021 2:16 PM

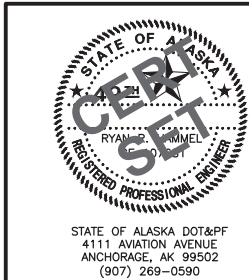
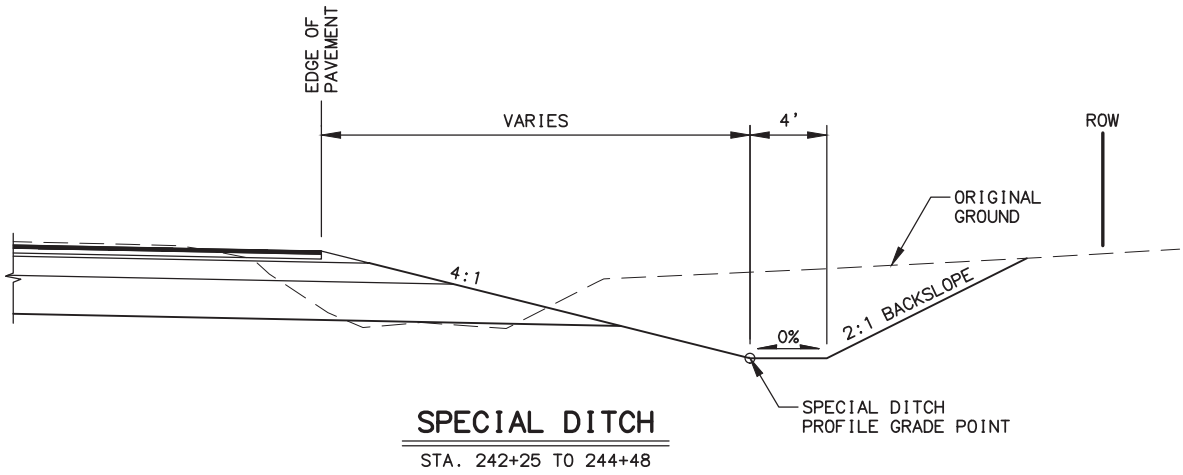
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REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0311032/Z536100000	2021	E11	E45

NOTE:
DITCH BACKSLOPE FROM STATION 242+25 TO 243+00 VARIES. TIE BACKSLOPE INTO PROPOSED PATHWAY. SEE GRADING PLAN DETAILS FOR GRADING INFORMATION.

PRELIMINARY



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**

**SPECIAL DITCH DETAILS
STA 242+25 TO 244+48**

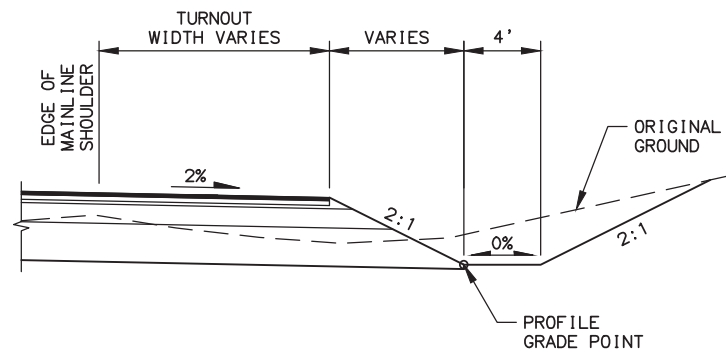
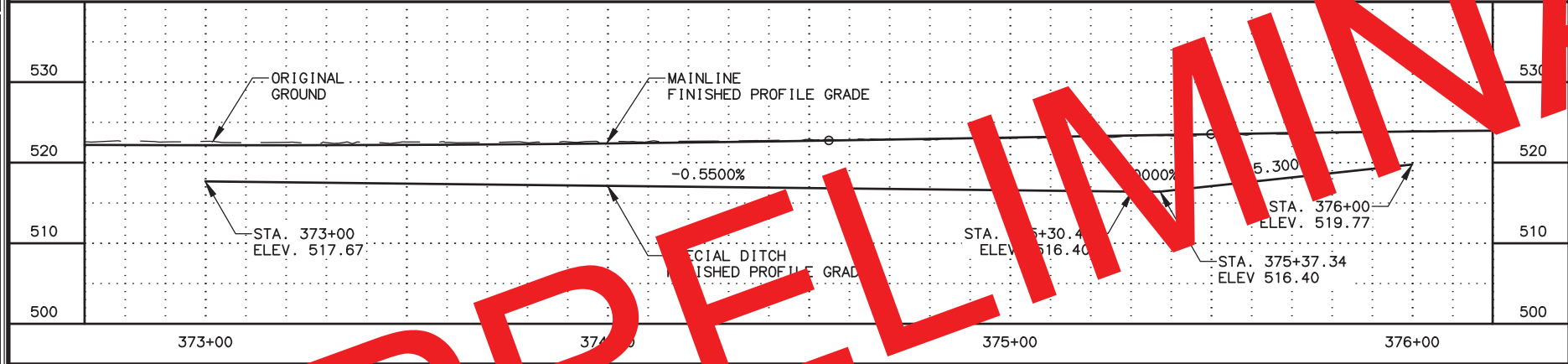
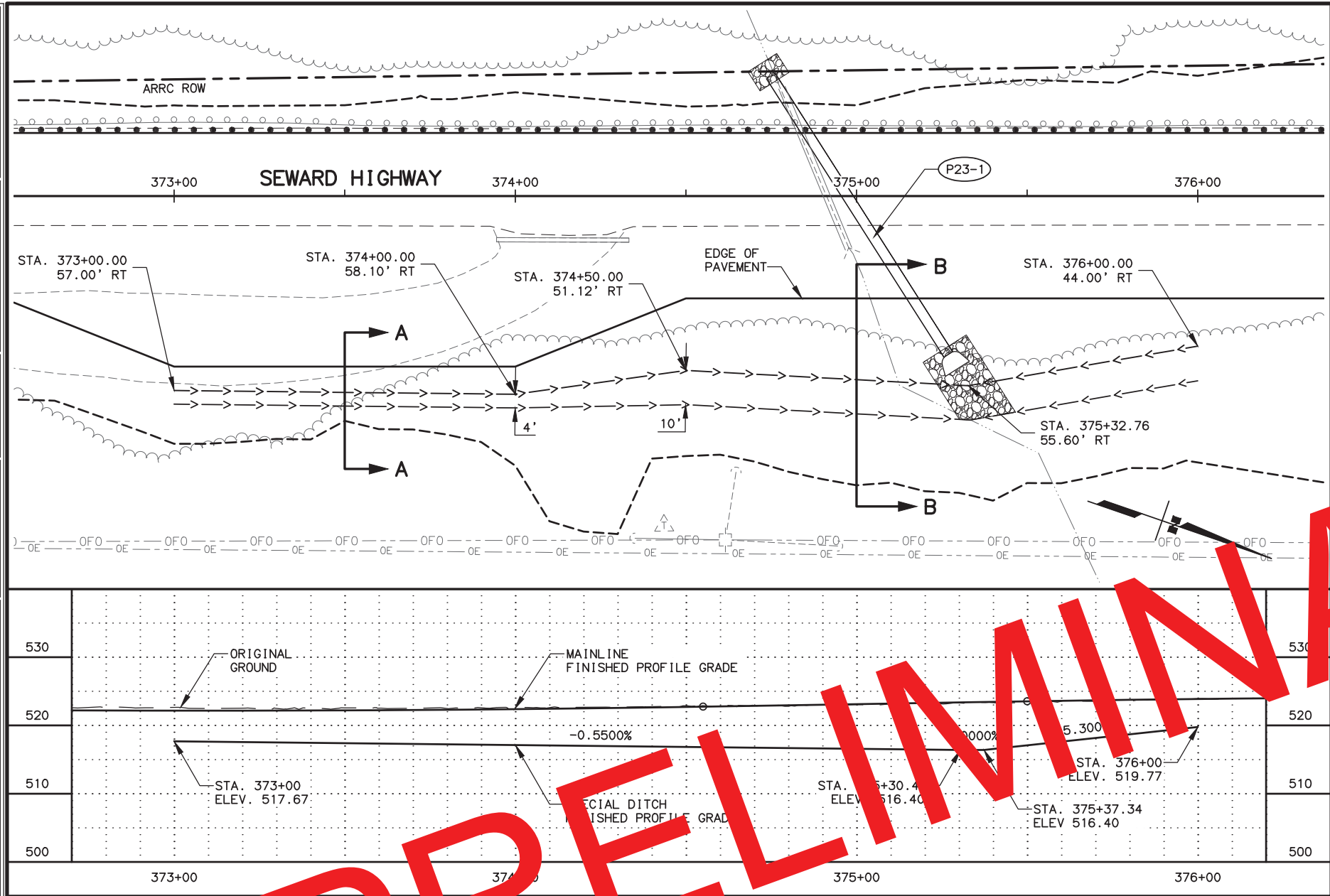
DESIGNED BY: KOS/ZDK
CHECKED BY: RRH
DRAFTED BY: ZDK/VUS

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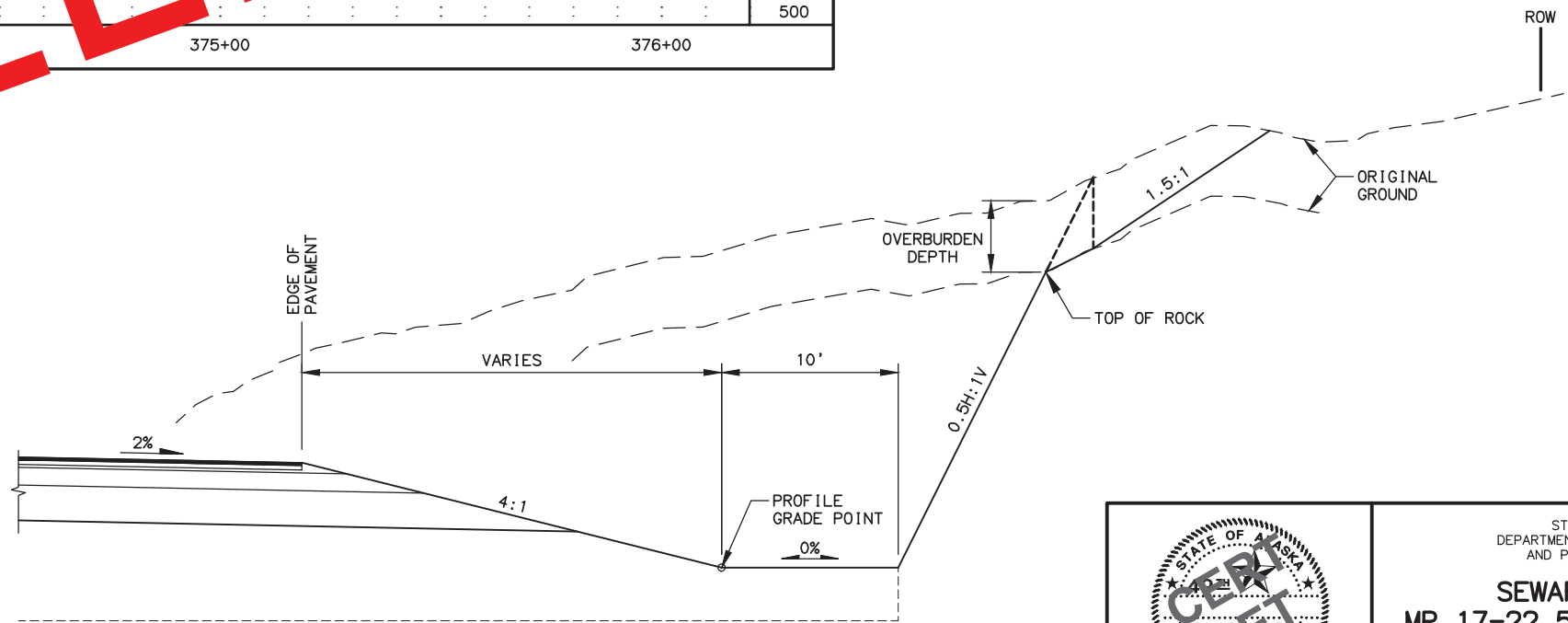
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DATE: 6/14/2021 2:16 PM

DRAWING LOCATION: w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\CIV3D16\Plan\set\53610_E10_Special Ditch Details.dwg



SECTION A-A



SECTION B-B

REVISIONS		
NO.	DATE	DESCRIPTION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0311032/Z536100000	2021	E12	E45



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**

**SPECIAL DITCH DETAILS
STA 373+00 TO 376+00**

DESIGNED BY: RHH/ZDK
CHECKED BY: RHH
DRAFTED BY: ZDK

SCALE: 1" = 4'

LAYOUT: E13

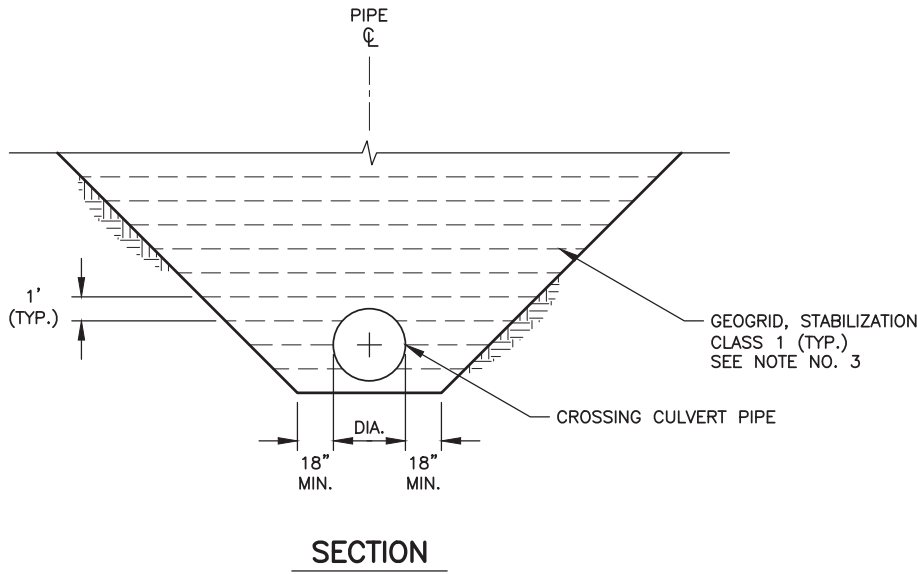
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TIME: 7:37 PM

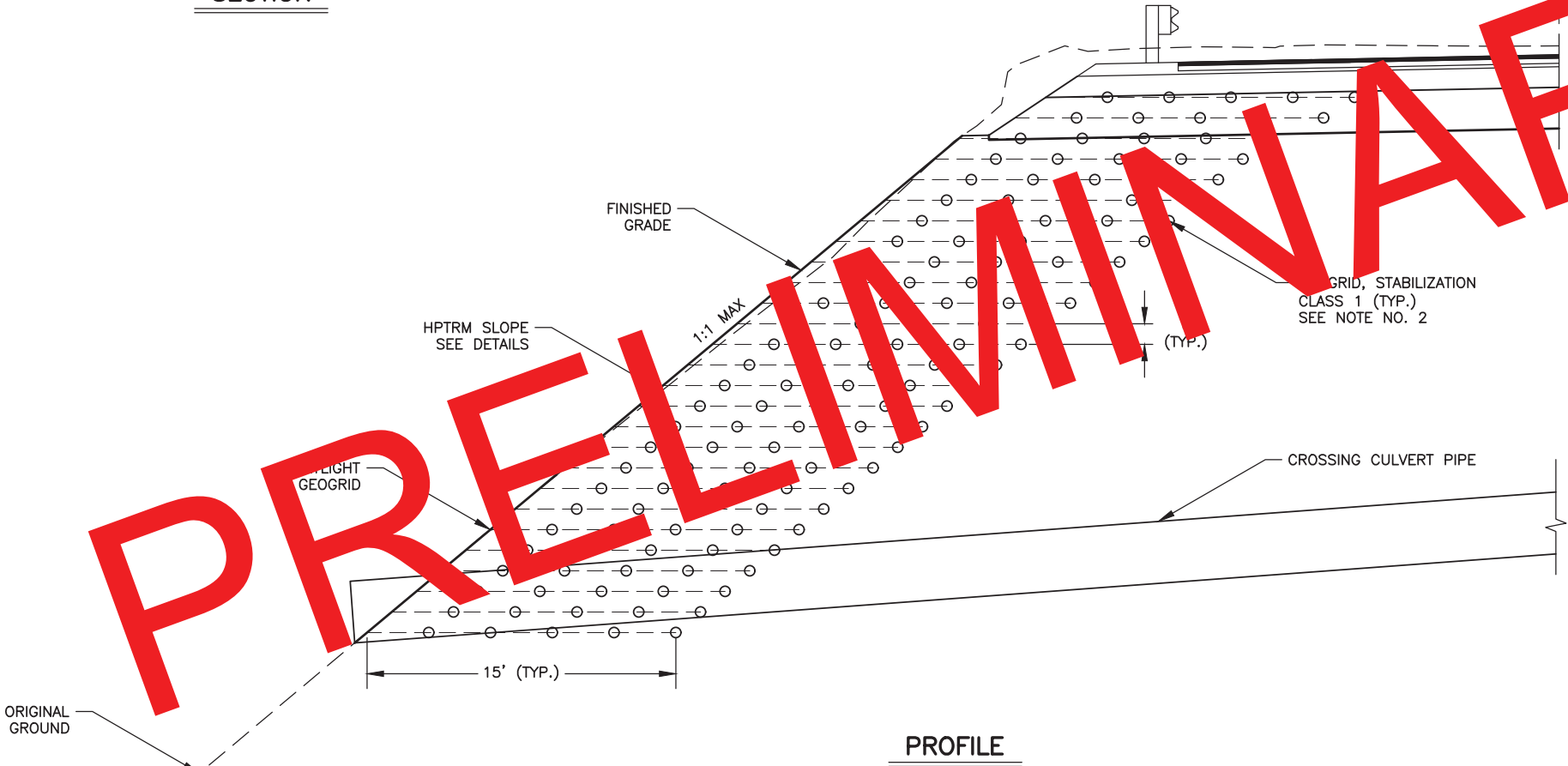
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DRAWING LOCATION

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0311032/Z536100000	2021	E13	E45



- NOTES:**
1. INSTALL GEOGRID AS DETAILED FOR THE OUTLETS OR INLETS OF PIPE LOCATIONS SPECIFIED IN THE GEOGRID LOCATION SUMMARY OR AS DIRECTED BY THE ENGINEER.
 2. INSTALL GEOGRID TRANSVERSE TO CENTERLINE. NO SPLICES PARALLEL WITH THE CENTERLINE WILL BE ALLOWED.
 3. GEOGRID LAYERS ARE TO BE FULL WIDTH OF EXCAVATED TRENCH AND LEVEL.
 4. GEOGRID LAYERS ARE TO EXTEND UP TO BOTTOM OF SELECT MATERIAL TYPE A STRUCTURAL SECTION.
 5. SLOPE MAY VARY, BUT SHALL NOT EXCEED A STEEPNESS GREATER THAN 1:1.
 6. HPTRM AND SEEDING ARE TO BE PLACED ON THE FINISHED SLOPE PER THE MANUFACTURERS RECOMMENDATIONS AND HPTRM BURDEN DETAIL SHEET.
 7. IF EXCAVATION GREATER THAN 1' IS REQUIRED BELOW THE PIPE INVERT DUE TO POOR SOIL CONDITIONS, START GEOGRID FROM BOTTOM OF EXCAVATED TRENCH.



GEOGRID LOCATION SUMMARY		
SHEET	PIPE ID	STATION / OFFSET
F4	P4-1	143+50 LT & RT
F7	P7-5	185+77 LT
F8	P8-5	198+33 LT
F9	P9-2	203+42 LT
F15	P15-4	278+89 LT
F16	P16-1	287+68 LT
F16	P16-2	291+15 LT
F18	P18-1	313+29 LT
F21	P21-3	358+53 LT
F22	P22-3	368+07 LT
F23	P23-3	385+91 LT



STATE OF ALASKA
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AND PUBLIC FACILITIES

**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**

**GEOGRID SOIL REINFORCEMENT
DETAILS**

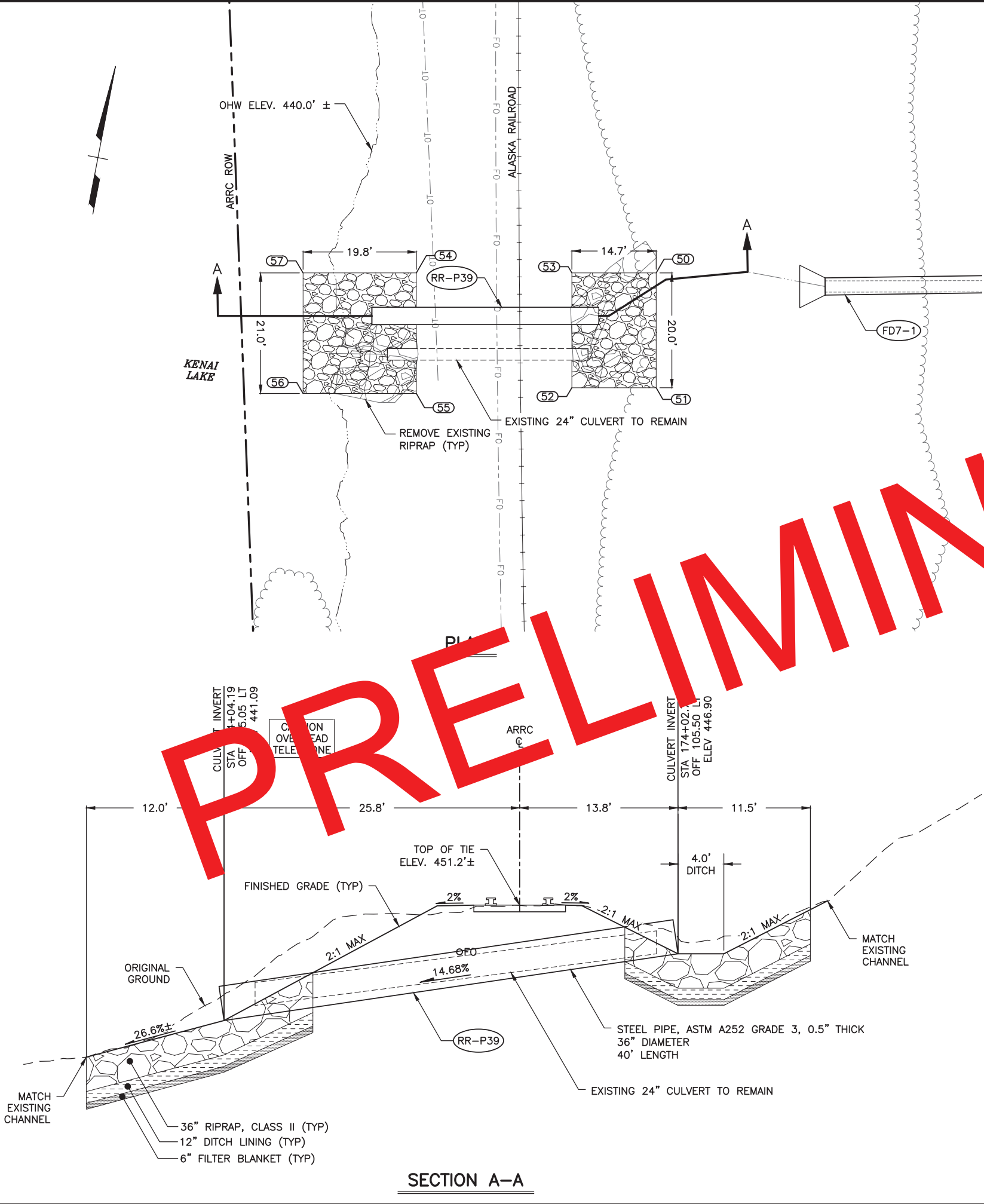
DESIGNED BY MF
CHECKED BY HRA
DRAFTED BY RDG

SCALE
VARIES

LAYOUT
EIS

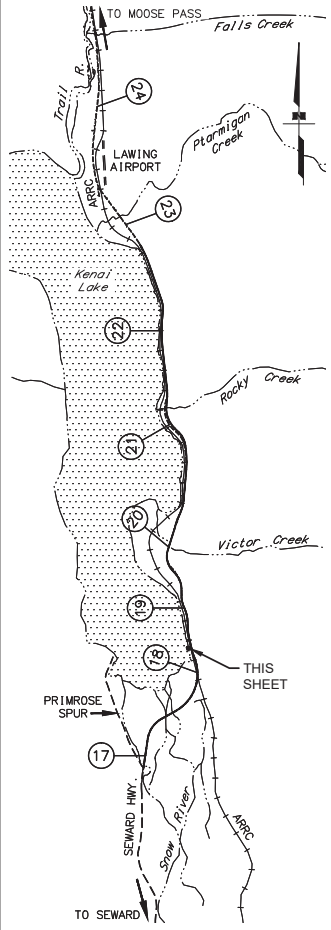
DATE TIME
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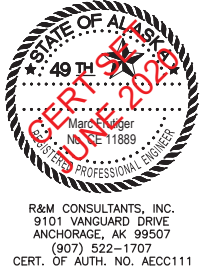


REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	311032/Z536100000	2020	E15	E43

RIPRAP TABLE			
POINT	STATION	OFFSET	ELEVATION
50	174+09.9	95.2 LT	451.2±
51	173+89.9	96.0 LT	461.5±
52	173+90.5	110.7 LT	450.1±
53	174+10.4	109.9 LT	449.8±
54	174+11.4	137.0 LT	445.3±
55	173+90.4	137.8 LT	446.0±
56	173+91.1	157.5 LT	438.9±
57	174+12.1	156.8 LT	437.2±



- NOTES:**
- ALL DIMENSIONS AND STATIONING ARE APPROXIMATE AND MAY REQUIRE ADJUSTMENTS TO FIT CURRENT CONDITIONS IN THE FIELD. PROVIDE A MINIMUM OF 1.5 FEET OF COVER BELOW THE BOTTOM OF TIE AS MEASURED AT THE HINGE POINT OF THE EMBANKMENT SHOULDER.
 - THE CONTRACTOR SHALL COORDINATE WITH THE ARRC FOR WORK TO BE PERFORMED BY ARRC FORCES WHICH INCLUDES: REMOVING AND REINSTALLING TRACK AND TIES.



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**

**PIPE DETAILS
RR-P39
STA 174+03**

DESIGNED BY: MF
CHECKED BY: HRA
DRAFTED BY: RDG

SCALE: VARIES

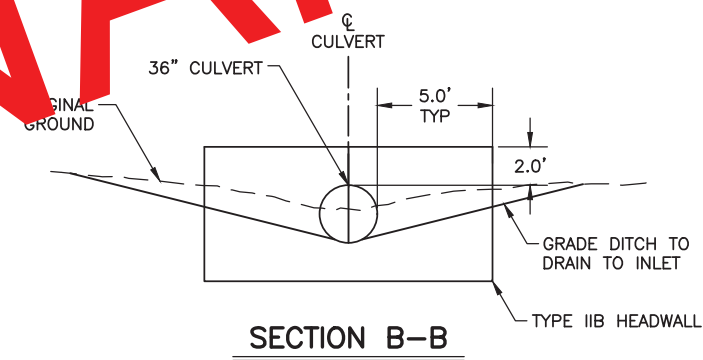
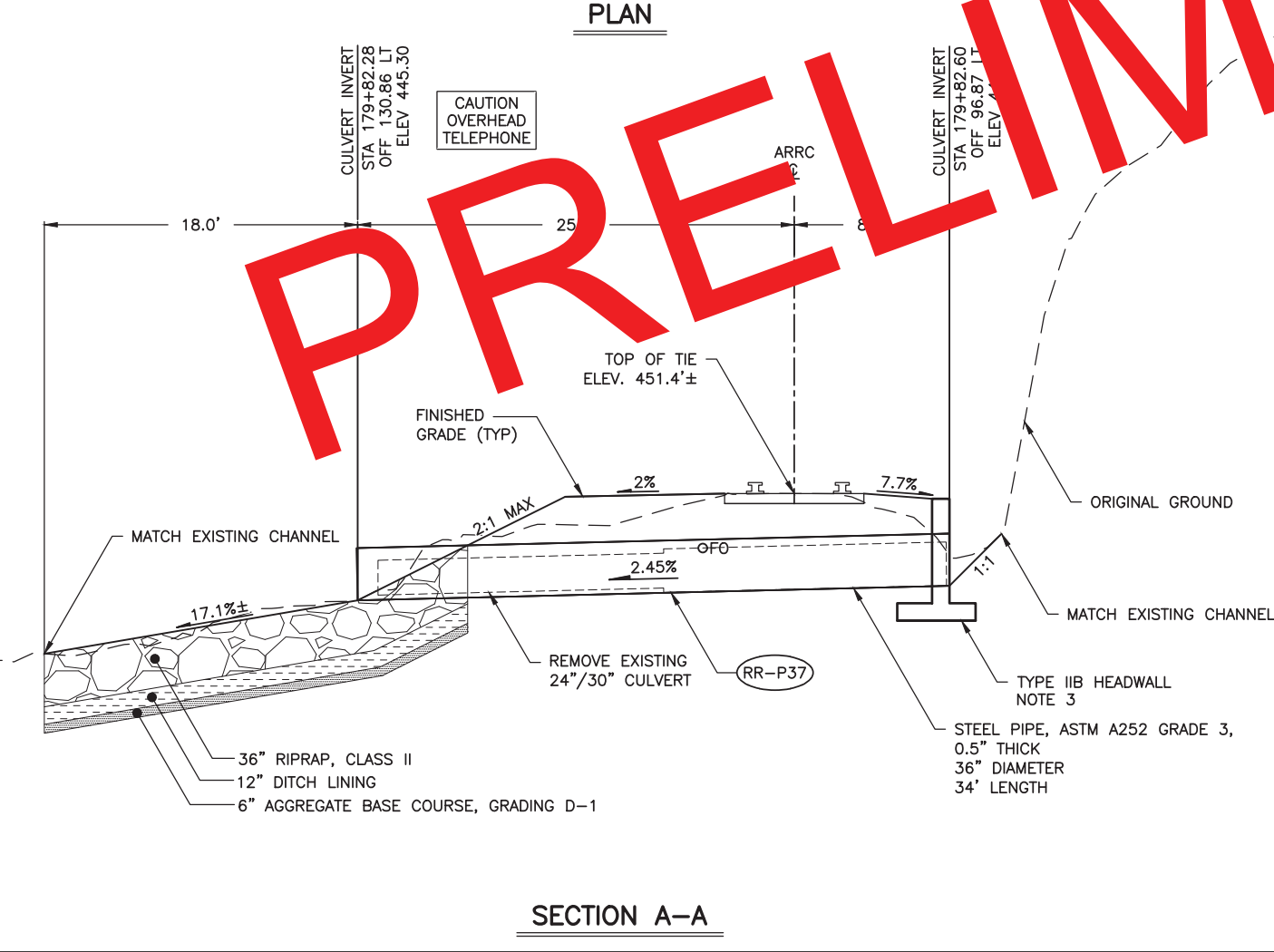
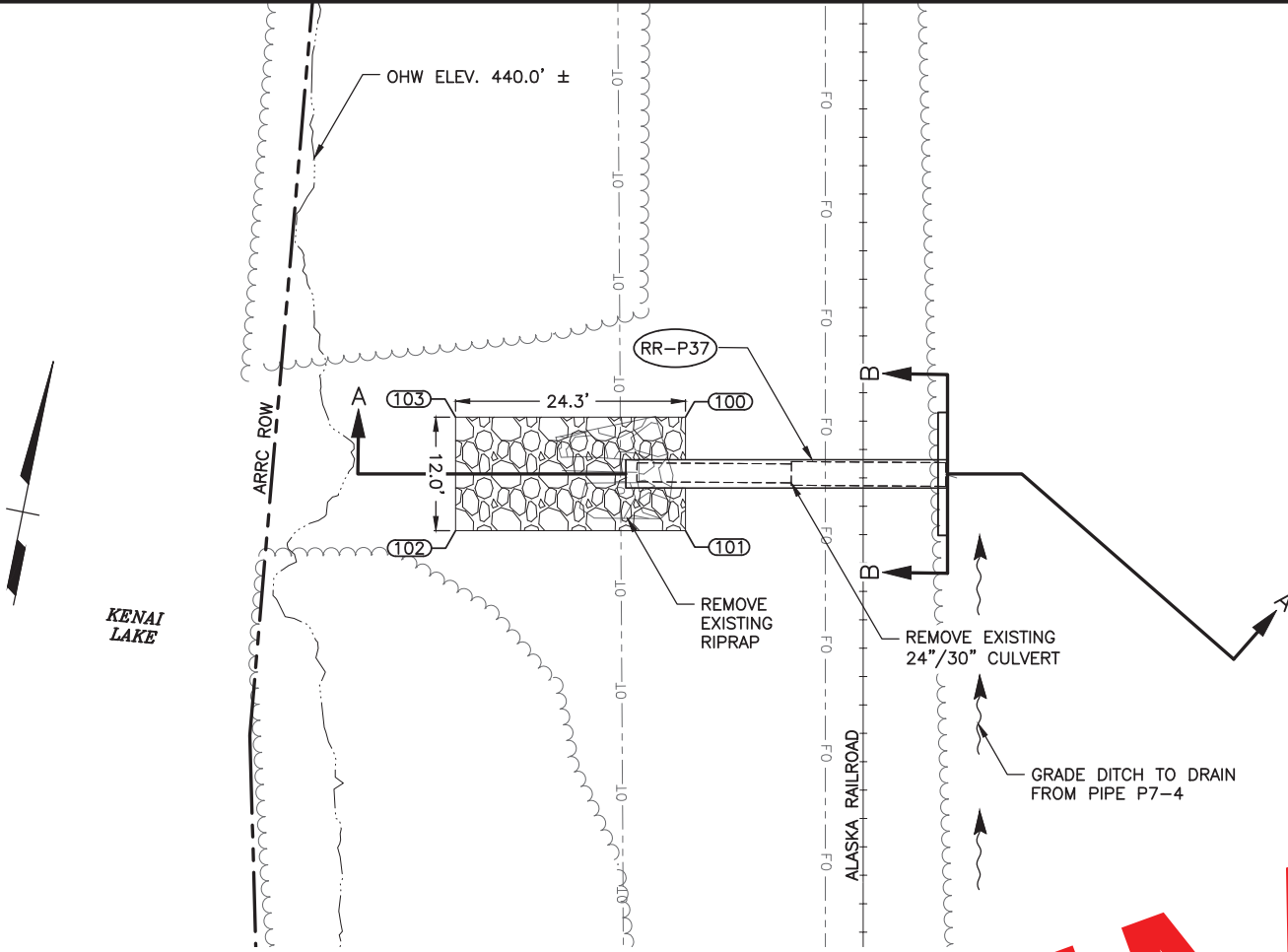
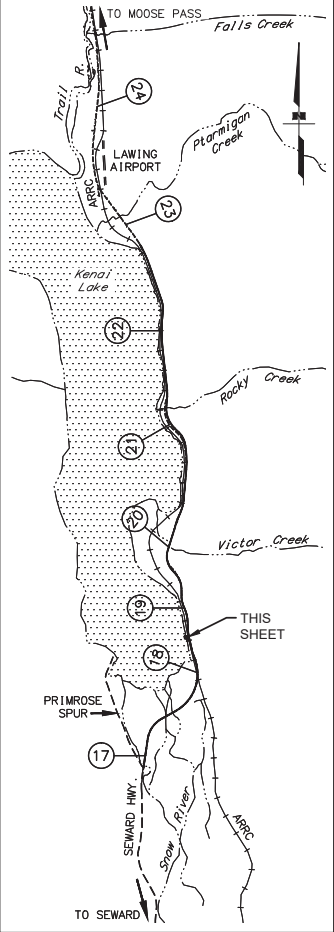
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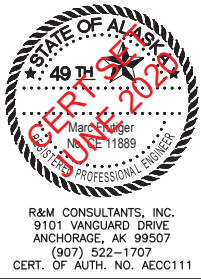
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REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	311032/Z536100000	2020	E16	E43

RIPRAP TABLE			
POINT	STATION	OFFSET	ELEVATION
100	179+88.1	124.6 LT	449.2±
101	179+76.5	124.5 LT	449.7±
102	179+76.4	148.8 LT	444.9±
103	179+87.9	148.9 LT	443.7±



- NOTES:**
- ALL DIMENSIONS AND STATIONING ARE APPROXIMATE AND MAY REQUIRE ADJUSTMENTS TO FIT CURRENT CONDITIONS IN THE FIELD. PROVIDE A MINIMUM OF 1.5 FEET OF COVER BELOW THE BOTTOM OF TIE AS MEASURED AT THE HINGE POINT OF THE EMBANKMENT SHOULDER.
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 - CONCRETE STRUCTURES SHALL BE DESIGNED AND FABRICATED TO SUPPORT RAILROAD LIVE LOADING IN ACCORDANCE WITH 2019 AREMA MANUAL FOR RECOMMENDED PRACTICE & APPROVED BY ARRC CHIEF ENGINEER.



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**

**PIPE DETAILS
RR-P37
STA 179+82**

DESIGNED BY: MF
CHECKED BY: HRA
DRAFTED BY: RDG

SCALE: VARIES

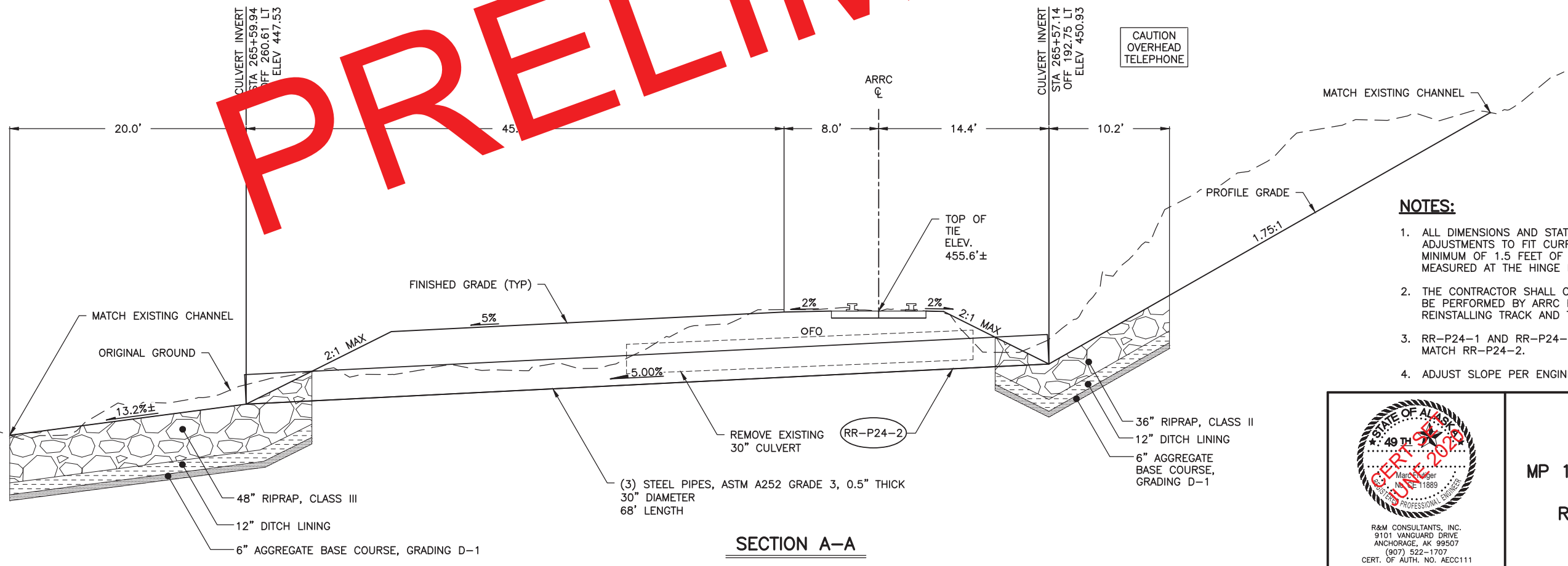
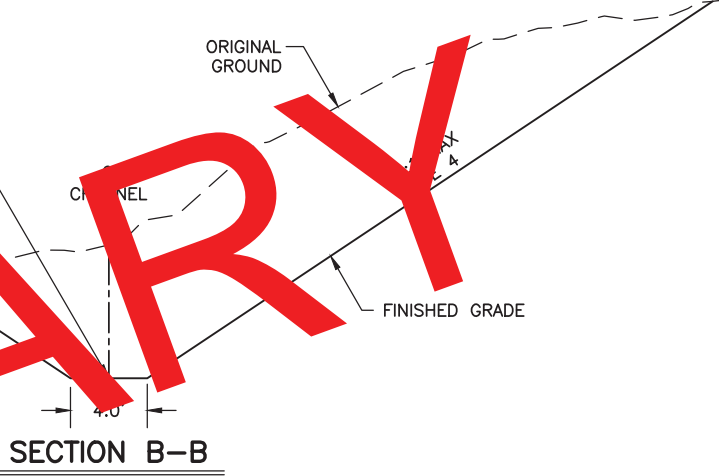
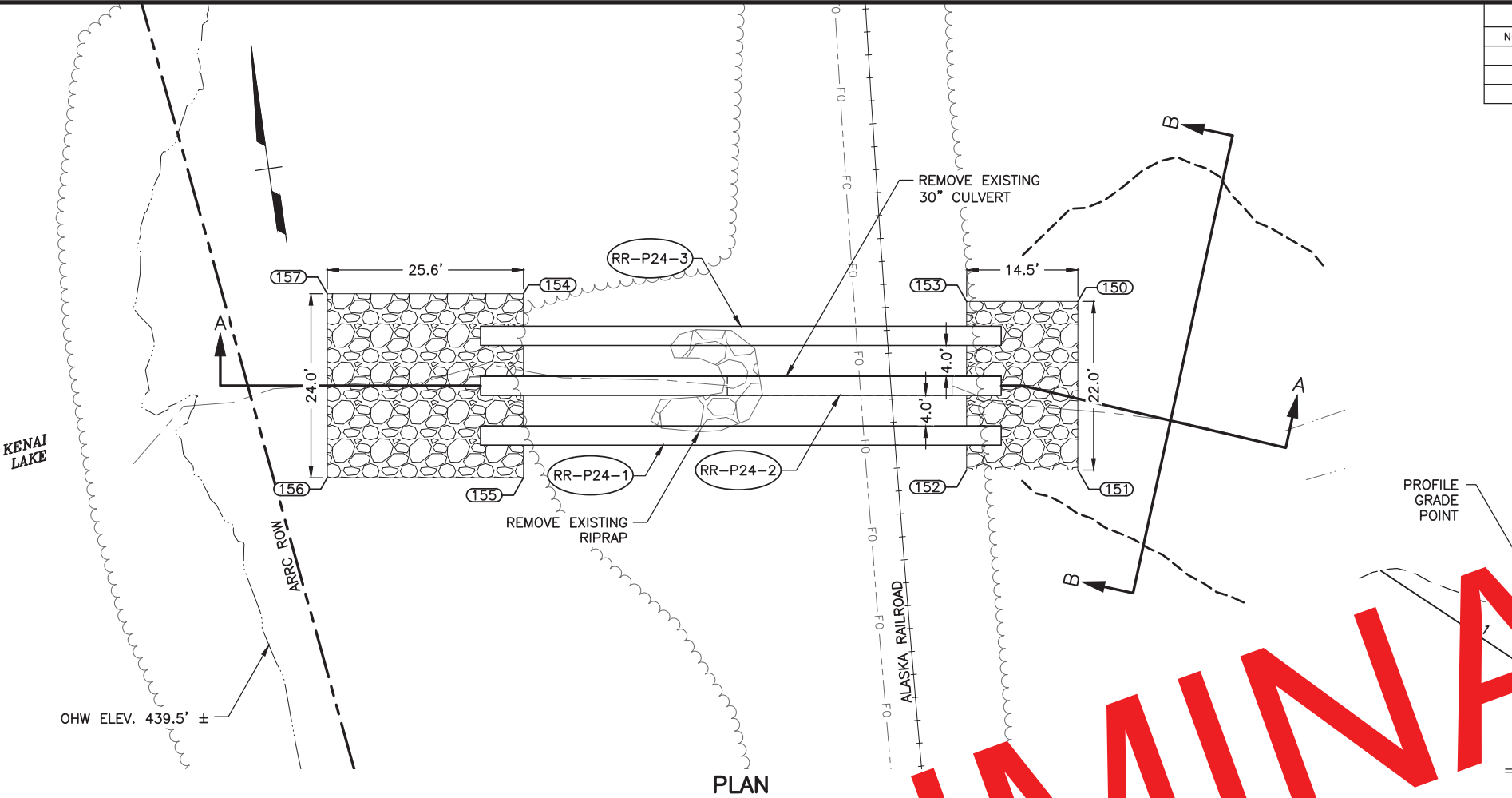
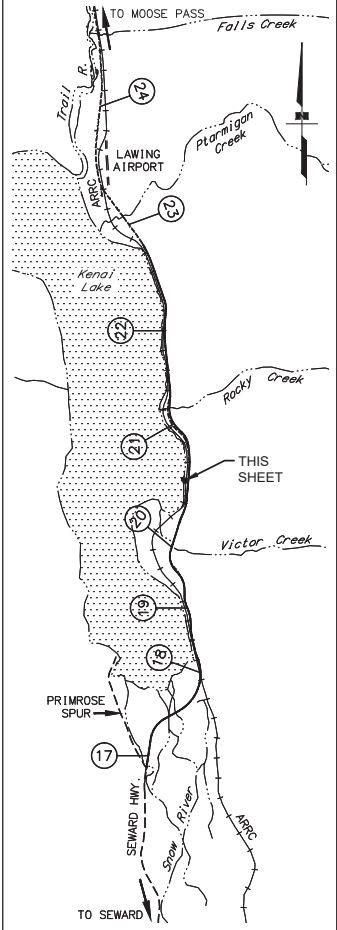
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DATE: 6/15/2020 4:52 PM

DRAWING LOCATION: Z:\p\project\2456.01 DOT C Seward Hwy MP 17-22.5\civil\ACAD\2456.01-E01 RR1.dwg

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	311032/Z536100000	2020	E17	E43

RIPRAP TABLE			
POINT	STATION	OFFSET	ELEVATION
150	265+67.7	182.3 LT	462.0±
151	265+45.7	183.2 LT	461.5±
152	265+46.3	197.7 LT	453.2±
153	265+68.3	196.8 LT	453.2±
154	265+71.7	254.5 LT	452.6±
155	265+47.7	255.5 LT	451.9±
156	265+48.8	281.1 LT	449.1±
157	265+72.8	280.1 LT	450.6±



- NOTES:**
1. ALL DIMENSIONS AND STATIONING ARE APPROXIMATE AND MAY REQUIRE ADJUSTMENTS TO FIT CURRENT CONDITIONS IN THE FIELD. PROVIDE A MINIMUM OF 1.5 FEET OF COVER BELOW THE BOTTOM OF TIE AS MEASURED AT THE HINGE POINT OF THE EMBANKMENT SHOULDER.
 2. THE CONTRACTOR SHALL COORDINATE WITH THE ARRC FOR WORK TO BE PERFORMED BY ARRC FORCES WHICH INCLUDES: REMOVING AND REINSTALLING TRACK AND TIES.
 3. RR-P24-1 AND RR-P24-3 INVERT ELEVATIONS AND SLOPES SHALL MATCH RR-P24-2.
 4. ADJUST SLOPE PER ENGINEER.



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION
PIPE DETAILS
RR-P24-1, RR-P24-2,
& RR-P24-3
STA 265+58**

DESIGNED BY: MF
CHECKED BY: HRA
DRAFTED BY: RDG

SCALE: VARIES

LAYOUT: E18

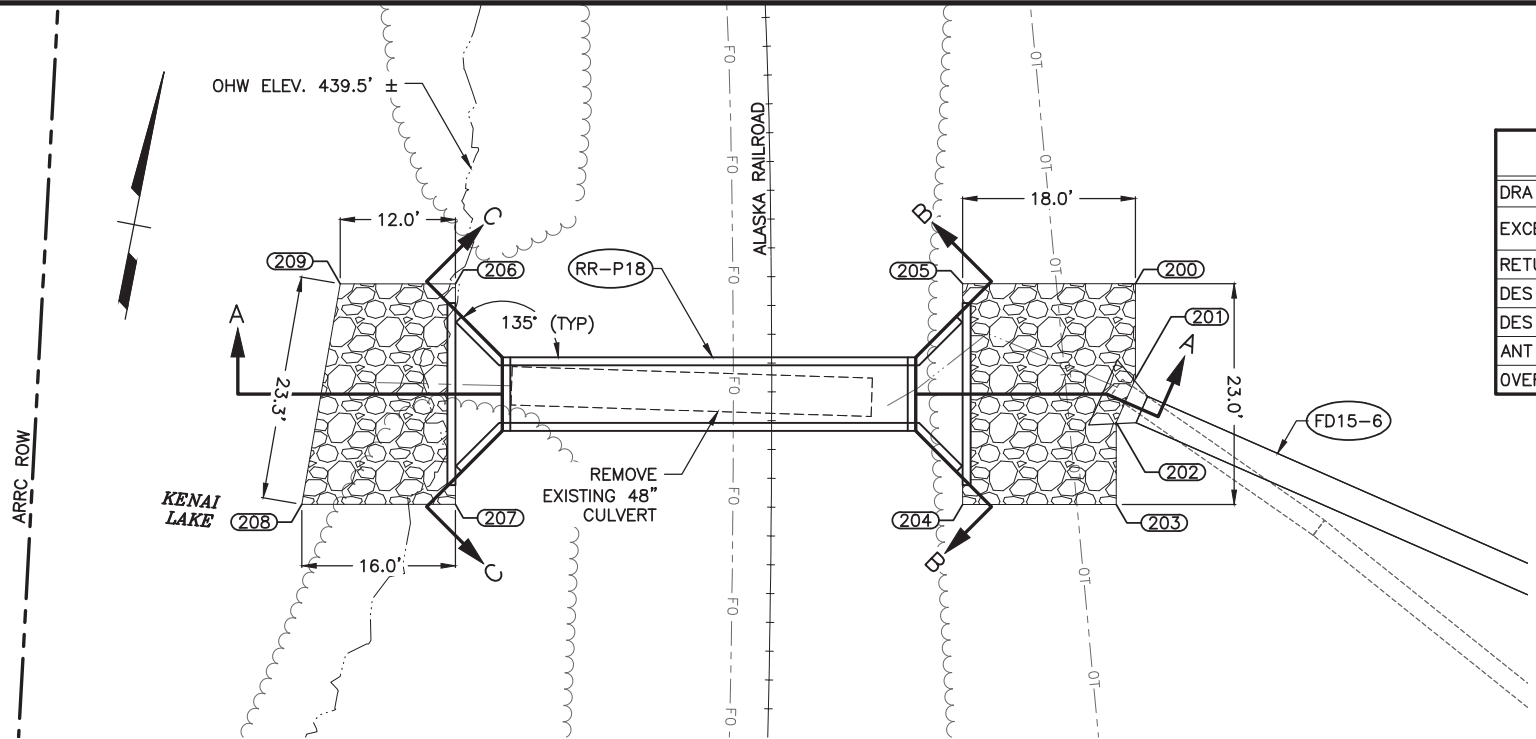
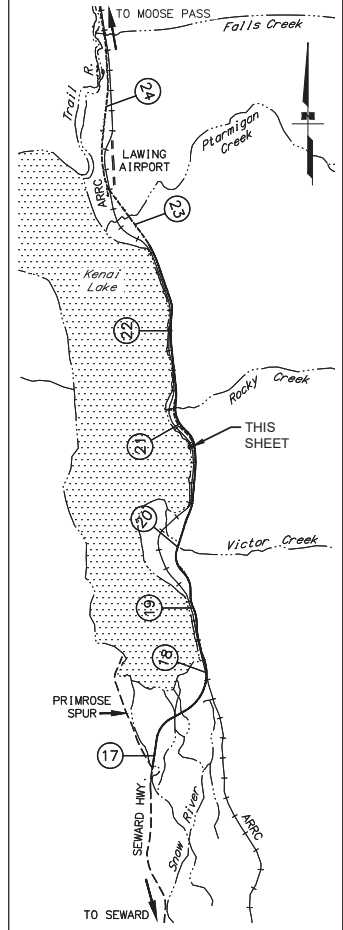
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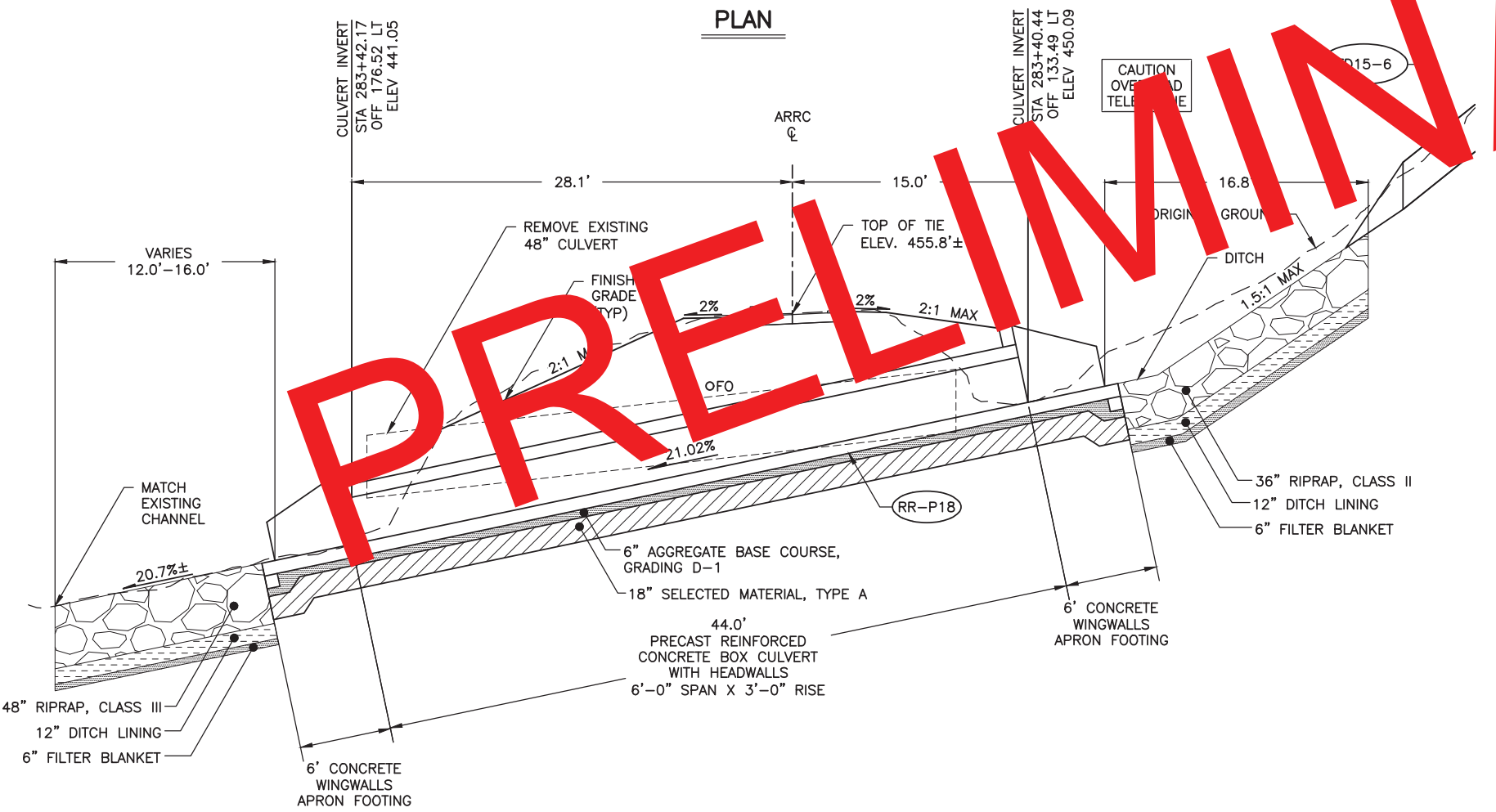
REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	311032/Z536100000	2020	E18	E43

HYDROLOGIC AND HYDRAULIC SUMMARY			
DRAINAGE AREA = 0.1 SQUARE MILES			
EXCEEDANCE PROBABILITY	2%	1%	REGULATORY DISCHARGE
RETURN PERIOD	50 YEAR (Q_{50})	100 YEAR (Q_{100})	N/A
DESIGN DISCHARGE	35	40	N/A
DESIGN HIGH WATER ELEVATION	451.4	451.5	N/A
ANTICIPATED ADDITIONAL BACKWATER AT 1% AEP = 0.0 FEET			
OVERTOPPING FLOW = 185 CFS			

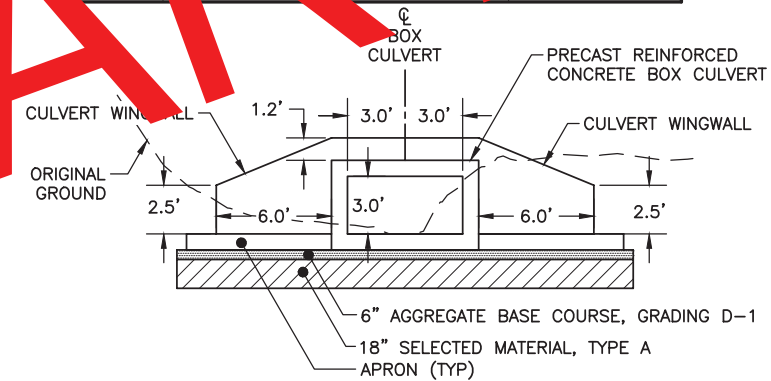
RIPRAP TABLE			
POINT	STATION	OFFSET	ELEVATION
200	283+51.9	110.2 LT	469.0±
201	283+41.3	110.6 LT	460.9±
202	283+36.5	112.7 LT	460.9±
203	283+27.2	113.0 LT	468.0±
204	283+27.7	113.0 LT	451.1±
205	283+32.7	123.0 LT	451.1±
206	283+55.4	180.9	441.1±
207	283+29.1	181.8 L	441.1±
208	283+29.1	197.8 LT	437.7±
209	283+56.1	192.9 LT	437.0±



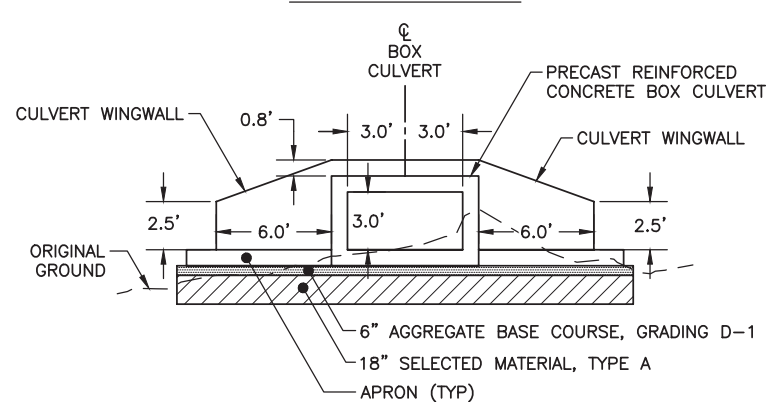
PLAN



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

- ALL DIMENSIONS AND STATIONING ARE APPROXIMATE AND MAY REQUIRE ADJUSTMENTS TO FIT CURRENT CONDITIONS IN THE FIELD. PROVIDE A MINIMUM OF 1.5 FEET OF COVER BELOW THE BOTTOM OF TIE AS MEASURED AT THE HINGE POINT OF THE EMBANKMENT SHOULDER.
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

SEWARD HIGHWAY
MP 17-22.5 REHABILITATION

PIPE DETAILS
RR-P18
STA 283+41

DESIGNED BY: MF
CHECKED BY: HRA
DRAFTED BY: RDG
SCALE: VARIES
LAYOUT: E19
DATE: 6/16/2020 3:46 PM
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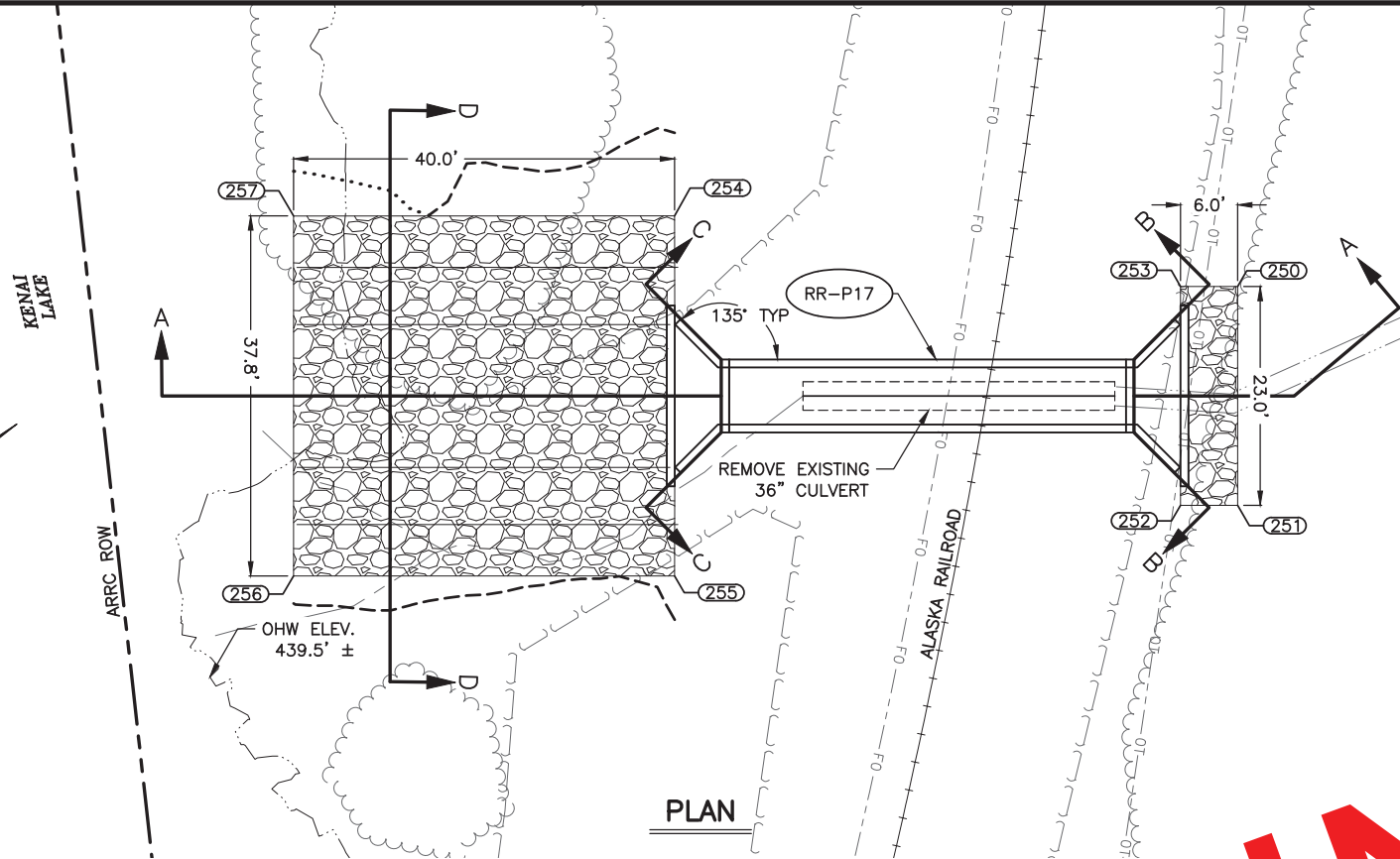
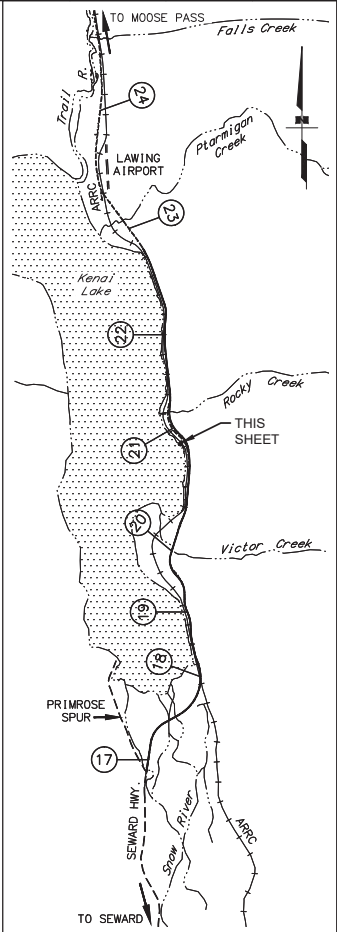
REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	311032/Z536100000	2020	E19	E43

HYDROLOGIC AND HYDRAULIC SUMMARY

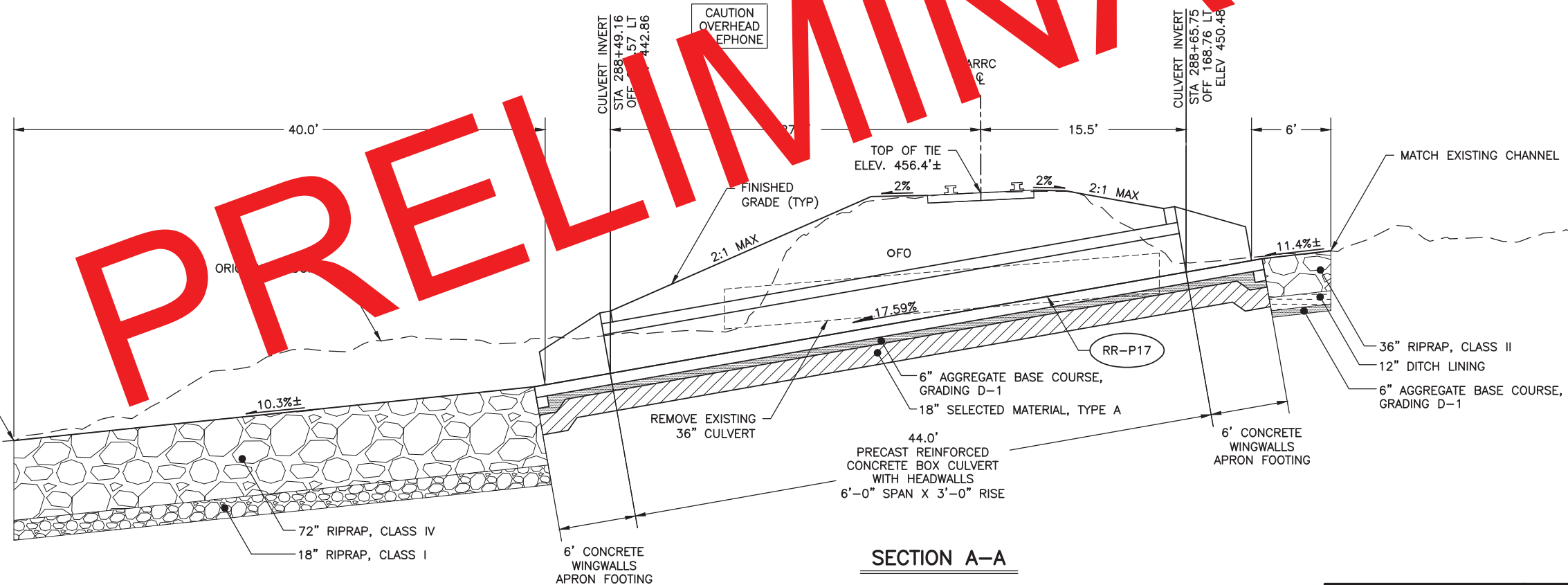
DRAINAGE AREA = 0.3 SQUARE MILES			
EXCEEDANCE PROBABILITY	2%	1%	REGULATORY DISCHARGE
RETURN PERIOD	50 YEAR (Q_{50})	100 YEAR (Q_{100})	N/A
DESIGN DISCHARGE	90	110	N/A
DESIGN HIGH WATER ELEVATION	453.2	453.7	N/A
ANTICIPATED ADDITIONAL BACKWATER AT 1% AEP = 0.0 FEET			
OVERTOPPING FLOW = 190 CFS			

RIPRAP TABLE

POINT	STATION	OFFSET	ELEVATION
250	288+81.9	162.2 LT	455.5±
251	288+57.7	154.7 LT	456.3±
252	288+55.5	160.3 LT	451.5±
253	288+79.7	167.9 LT	451.5±
254	288+81.9	162.2 LT	445.0±
255	288+26.7	207.8 LT	445.0±
256	288+09.9	244.9 LT	440.8±
257	288+52.2	258.2 LT	440.8±



PLAN



SECTION A-A

NOTES:

- ALL DIMENSIONS AND STATIONING ARE APPROXIMATE AND MAY REQUIRE ADJUSTMENTS TO FIT CURRENT CONDITIONS IN THE FIELD. PROVIDE A MINIMUM OF 1.5 FEET OF COVER BELOW THE BOTTOM OF TIE AS MEASURED AT THE HINGE POINT OF THE EMBANKMENT SHOULDER.
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**
**PIPE DETAILS
RR-P17
STA 288+60**

DESIGNED BY: MF
CHECKED BY: HRA
DRAFTED BY: RDG

SCALE: VARIES

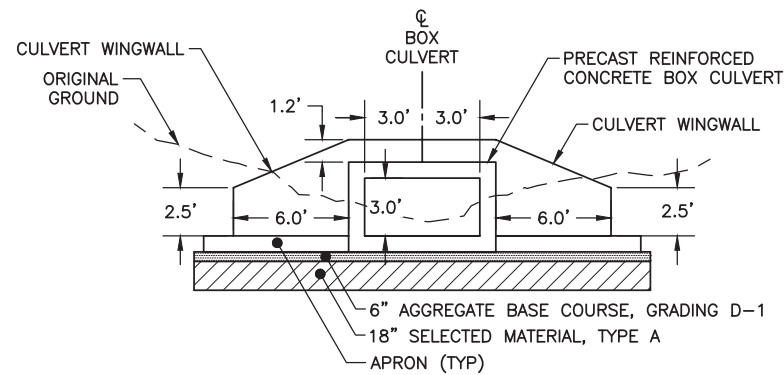
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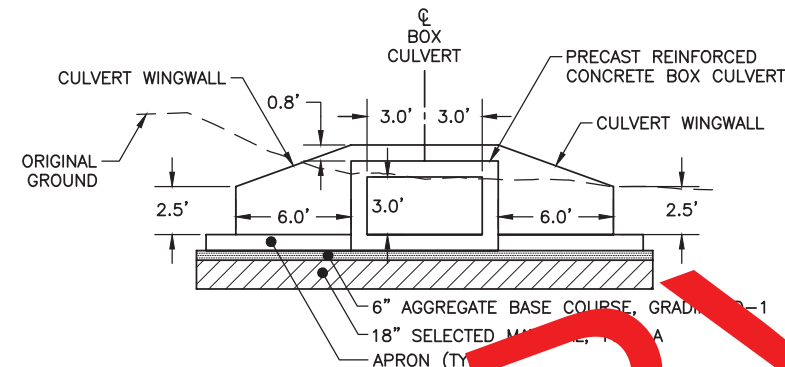
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REVISIONS		
NO.	DATE	DESCRIPTION

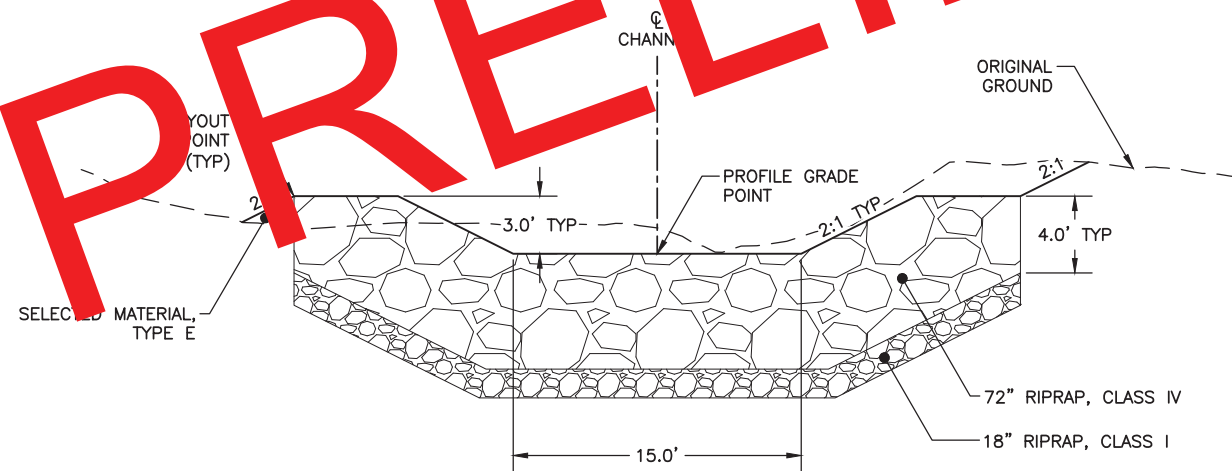
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	311032/Z536100000	2020	E20	E43



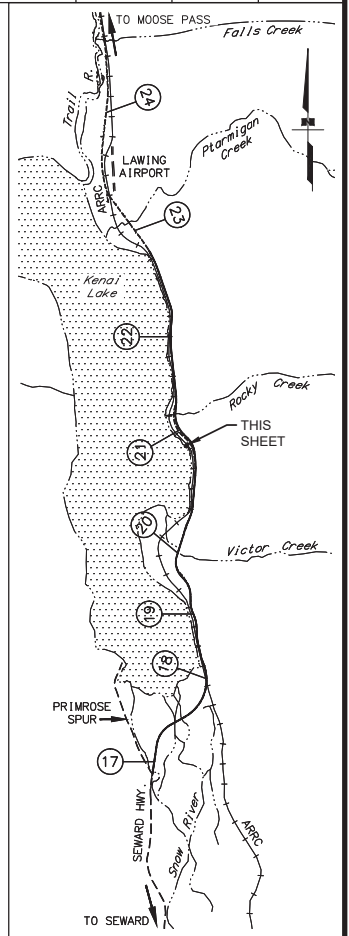
SECTION B-B



SECTION C-C



SECTION D-D



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

SEWARD HIGHWAY
MP 17-22.5 REHABILITATION

PIPE DETAILS
RR-P17
STA 288+60

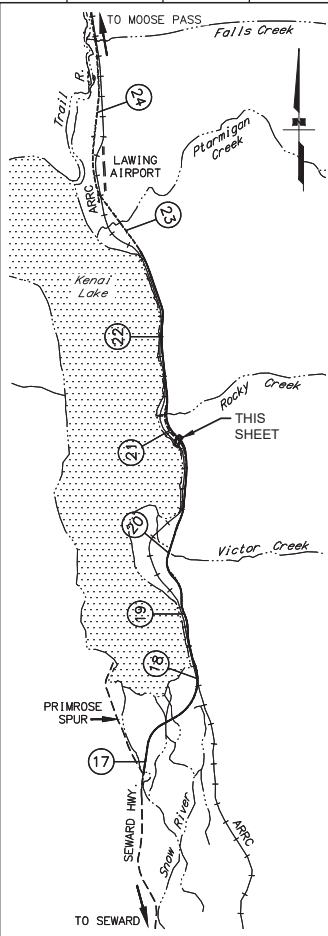
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HYDROLOGIC AND HYDRAULIC SUMMARY

DRAINAGE AREA = 0.3 SQUARE MILES			
EXCEEDANCE PROBABILITY	2%	1%	REGULATORY DISCHARGE
RETURN PERIOD	50 YEAR (Q_{50})	100 YEAR (Q_{100})	N/A
DESIGN DISCHARGE	90	110	N/A
DESIGN HIGH WATER ELEVATION	496.2	496.7	N/A
ANTICIPATED ADDITIONAL BACKWATER AT 1% AEP = 0.0 FEET			
OVERTOPPING FLOW = 200 CFS			

REVISIONS		
NO.	DATE	DESCRIPTION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	311032/Z536100000	2020	E21	E43



RIPRAP TABLE

POINT	STATION	OFFSET	ELEVATION
300	291+58.1	9.9 RT	497.6±
301	291+52.3	3.7 RT	499.7±
302	291+29.7	8.5 RT	489.7±
303	291+49.7	18.5 RT	487.9±
304	291+05.1	55.9 LT	483.1±
305	291+00.8	70.7 LT	479.5±
306	290+90.7	5.1 LT	477.0±
307	290+79.7	9.9 LT	475.7±
308	290+64.9	104.9 LT	473.7±
309	290+67.7	123.3 LT	468.2±
310	289+86.2	124.3 LT	466.0±
311	289+53.5	118.5 LT	463.1±
312	289+47.7	144.0 LT	463.1±
313	289+81.0	149.9 LT	466.0±
314	290+13.2	148.1 LT	468.2±
315	290+74.3	129.4 LT	473.7±
316	290+99.4	116.1 LT	475.7±
317	291+10.4	107.1 LT	477.0±
318	291+29.2	77.9 LT	479.5±
319	291+33.2	63.1 LT	483.1±

PLAN

NOTES:

- MATCH TYPICAL SECTION SLOPE, SEE B SHEETS.
- TAPER TO MATCH EXISTING STREAM CHANNEL, STARTING 20 FEET FROM THE END OF RIPRAP

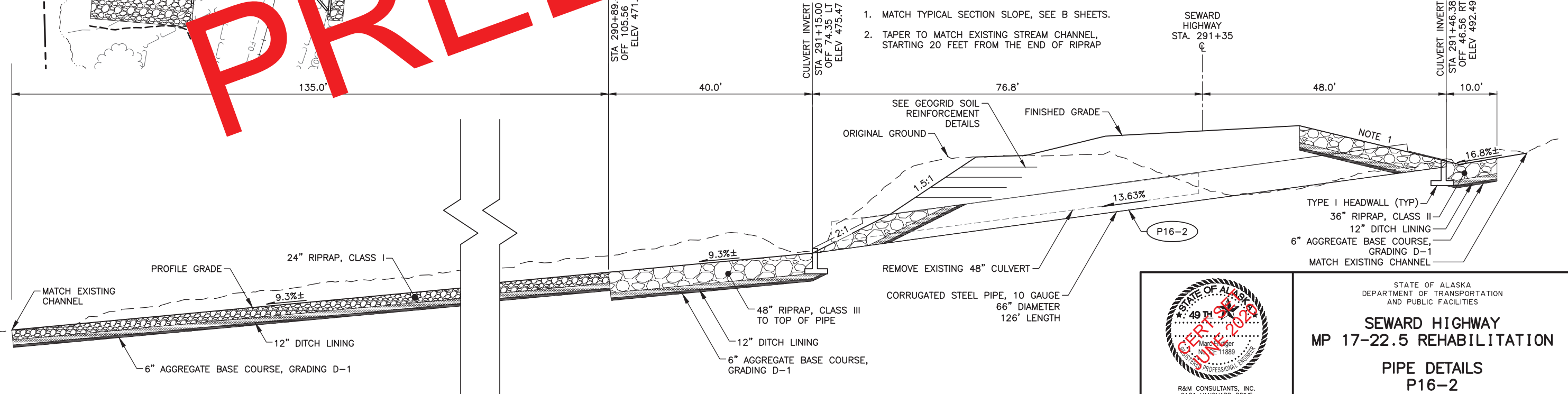
SEWARD HIGHWAY
STA. 291+35

CULVERT INVERT
STA 291+46.38
OFF 46.56 RT
ELEV 492.49

STA 290+89.4
OFF 105.56 LT
ELEV 471.71

CULVERT INVERT
STA 291+15.00
OFF 74.35 LT
ELEV 475.47

SECTION A-A



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**
**PIPE DETAILS
P16-2
STA. 291+35**

DESIGNED BY MF
CHECKED BY HRA
DRAFTED BY RDG

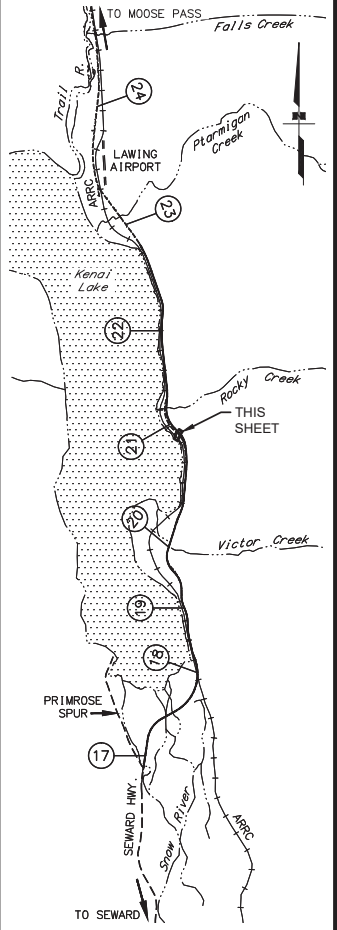
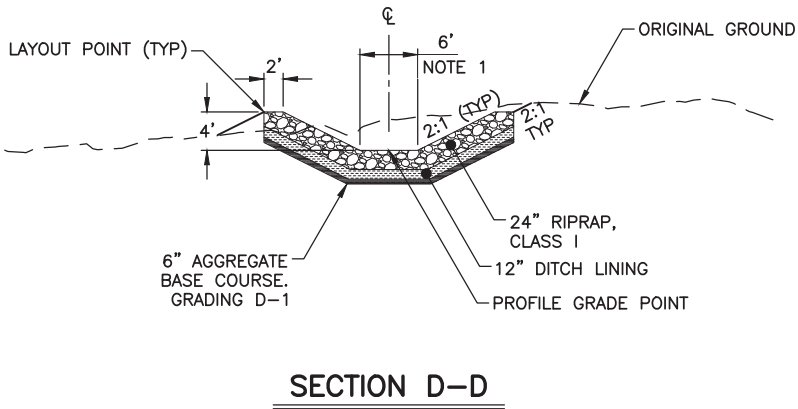
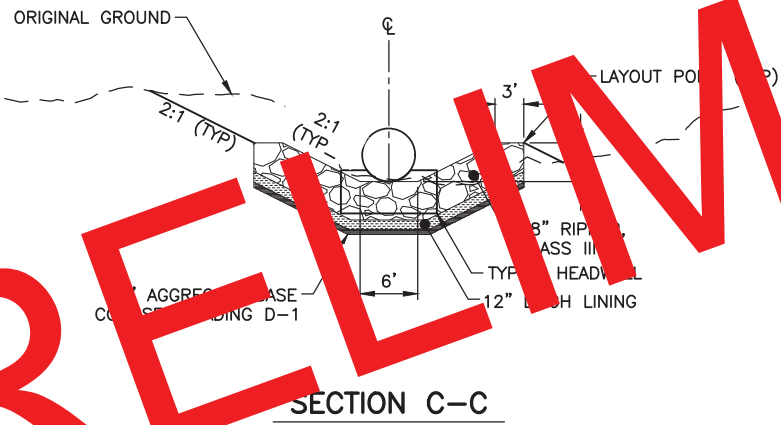
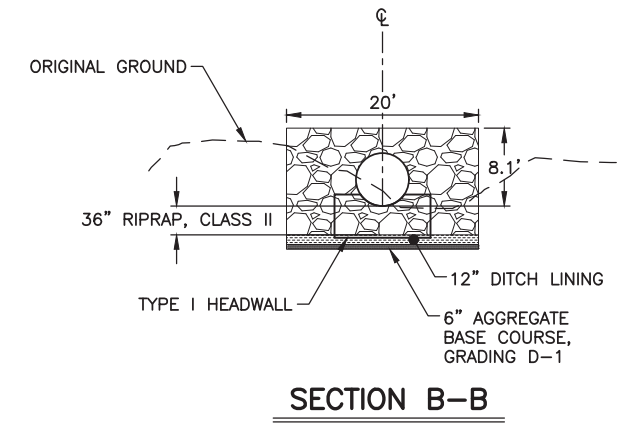
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LAYOUT
E22

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REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	311032/Z536100000	2020	E22	E43



- NOTES:**
1. TAPER TO MATCH EXISTING STREAM CHANNEL, STARTING 20 FEET FROM END OF RIPRAP



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**

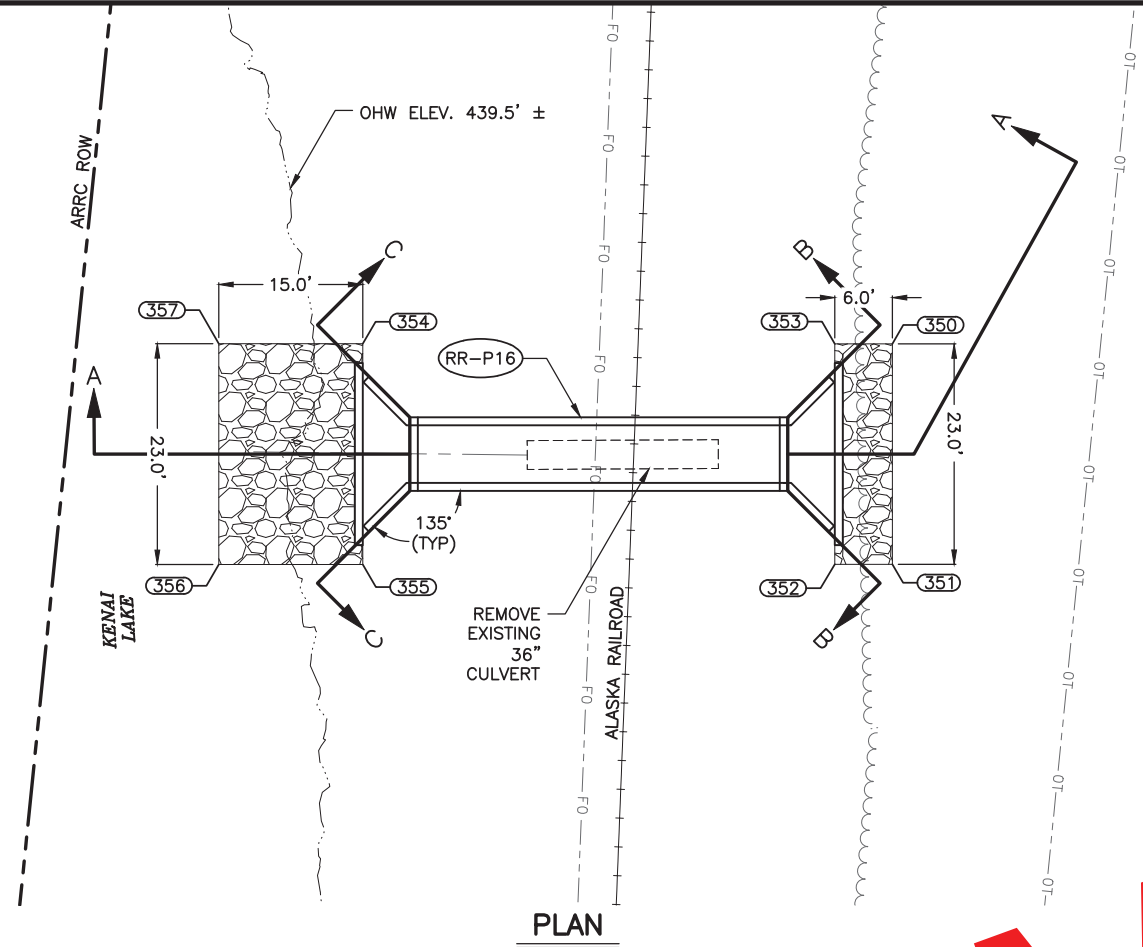
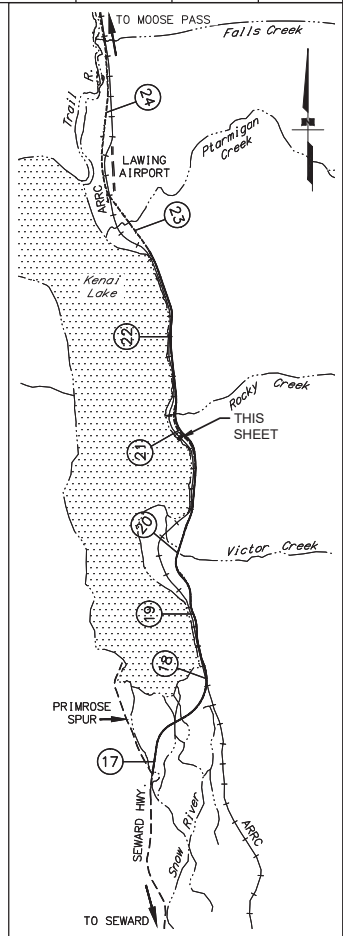
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P16-2
STA. 291+35**

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CHECKED BY: HRA
DRAFTED BY: RDG
SCALE: VARIES
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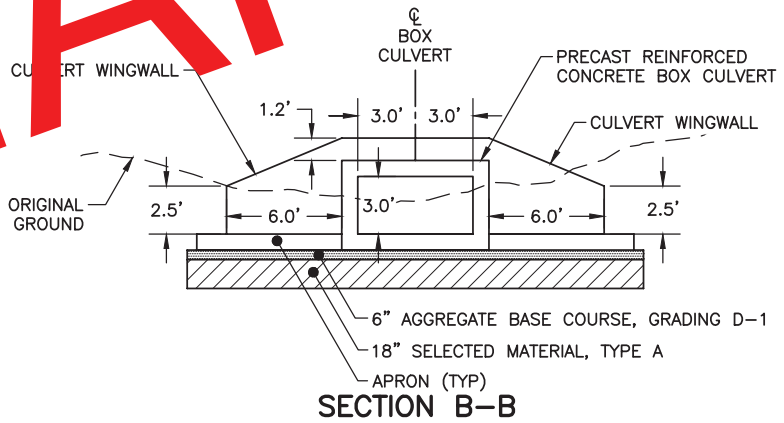
REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	311032/Z536100000	2020	E23	E43

HYDROLOGIC AND HYDRAULIC SUMMARY			
DRAINAGE AREA = 0.2 SQUARE MILES			
EXCEEDANCE PROBABILITY	2%	1%	REGULATORY DISCHARGE
RETURN PERIOD	50 YEAR (Q_{50})	100 YEAR (Q_{100})	N/A
DESIGN DISCHARGE	70	80	N/A
DESIGN HIGH WATER ELEVATION	452.4	452.6	N/A
ANTICIPATED ADDITIONAL BACKWATER AT 1% AEP = 0.0 FEET			
OVERTOPPING FLOW = 196 CFS			

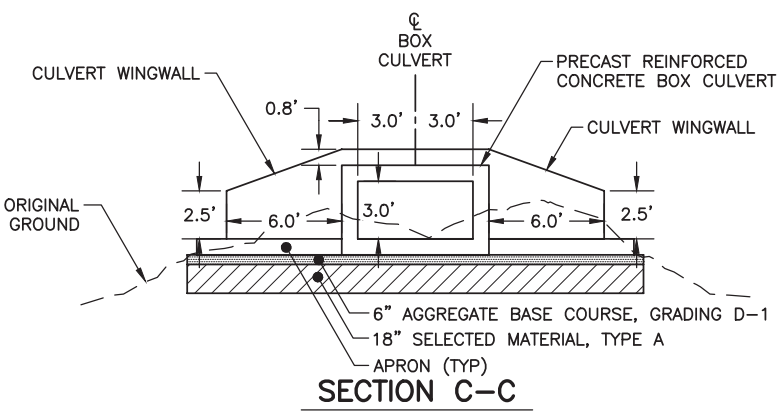
RIPRAP TABLE			
POINT	STATION	OFFSET	ELEVATION
350	294+30.5	206.0 LT	456.3±
351	294+07.6	204.1 LT	455.3±
352	294+07.1	210.1 LT	451.9±
353	294+30.0	209.2 LT	451.9±
354	294+03.2	260.0 LT	443.2±
355	294+03.2	259.1 LT	443.4±
356	294+02.0	274.1 LT	437.4±
357	294+25.0	275.9 LT	438.0±



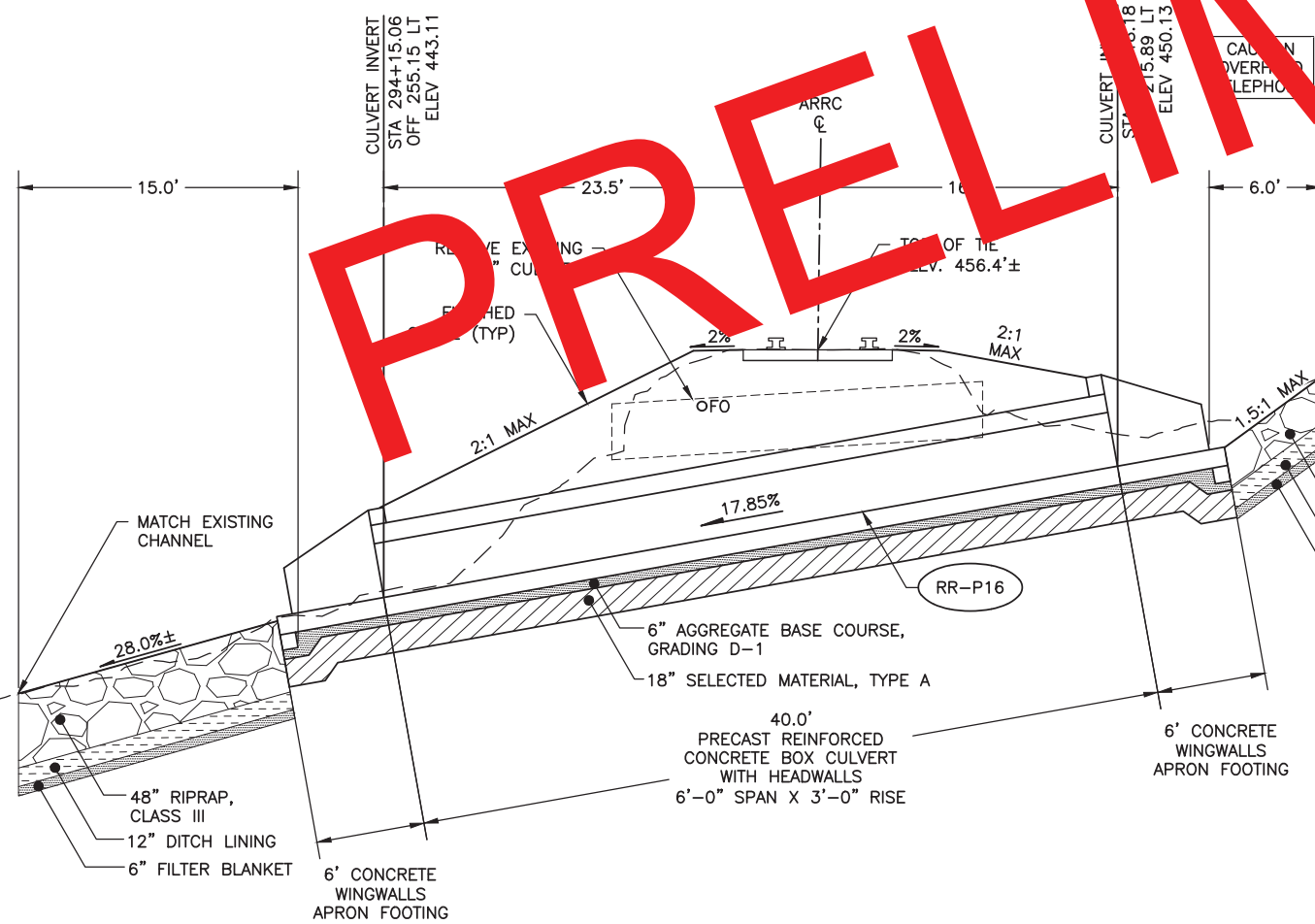
PLAN



SECTION B-B



SECTION C-C



SECTION A-A

NOTES:

- ALL DIMENSIONS AND STATIONING ARE APPROXIMATE AND MAY REQUIRE ADJUSTMENTS TO FIT CURRENT CONDITIONS IN THE FIELD. PROVIDE A MINIMUM OF 1.5 FEET OF COVER BELOW THE BOTTOM OF THE AS MEASURED AT THE HINGE POINT OF THE EMBANKMENT SHOULDER.
- THE CONTRACTOR SHALL COORDINATE WITH THE ARRC FOR WORK TO BE PERFORMED BY ARRC FORCES WHICH INCLUDES: REMOVING AND REINSTALLING TRACK AND TIES.
- CONCRETE STRUCTURES SHALL BE DESIGNED AND FABRICATED TO SUPPORT RAILROAD LIVE LOADING IN ACCORDANCE WITH 2019 AREMA MANUAL FOR RECOMMENDED PRACTICE & APPROVED BY ARRC CHIEF ENGINEER.



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**
**PIPE DETAILS
RR-P16
STA 294+16**

DESIGNED BY: MF
CHECKED BY: HRA
DRAFTED BY: HRA
SCALE: VARIES
LAYOUT: E24
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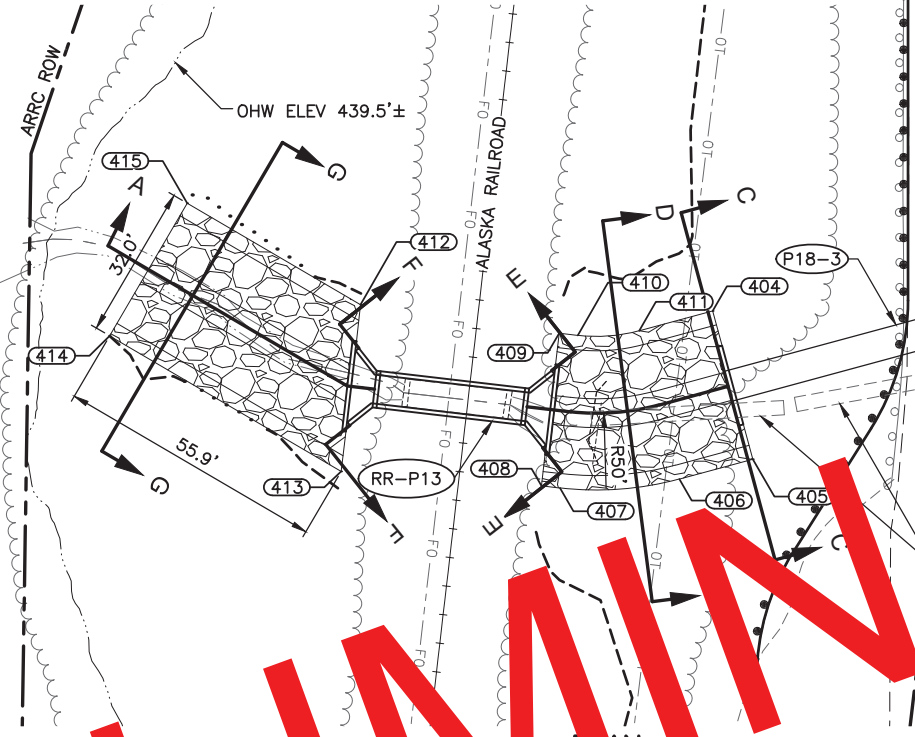
HYDROLOGIC AND HYDRAULIC SUMMARY P18-4			
DRAINAGE AREA = 0.3 SQUARE MILES			
EXCEEDANCE PROBABILITY	2%	1%	REGULATORY DISCHARGE
RETURN PERIOD	50 YEAR (Q_{50})	100 YEAR (Q_{100})	N/A
DESIGN DISCHARGE	90	110	N/A
DESIGN HIGH WATER ELEVATION	480.9	481.4	N/A
ANTICIPATED ADDITIONAL BACKWATER AT 1% AEP = 0.0 FEET			
OVERTOPPING FLOW = 160 CFS			

HYDROLOGIC AND HYDRAULIC SUMMARY RR-P13			
DRAINAGE AREA = 0.3 SQUARE MILES			
EXCEEDANCE PROBABILITY	2%	1%	REGULATORY DISCHARGE
RETURN PERIOD	50 YEAR (Q_{50})	100 YEAR (Q_{100})	N/A
DESIGN DISCHARGE	90	110	N/A
DESIGN HIGH WATER ELEVATION	452.2	452.7	N/A
ANTICIPATED ADDITIONAL BACKWATER AT 1% AEP = 0.0 FEET			
OVERTOPPING FLOW = 188 CFS			

RIPRAP TABLE			
POINT	STATION	OFFSET	ELEVATION
400	319+32.8	39.4 RT	478.8±
401	319+13.5	44.6 RT	478.8±
402	319+07.1	21.1 RT	482.5±
403	319+27.7	21.1 RT	482.2±
404	319+12.3	59.2 LT	473.1±
405	318+81.4	50.9 LT	473.1±
406	318+77.3	66.1 LT	465.6±
407	318+75.4	91.0 LT	456.1±
408	318+75.8	94.9 LT	454.6±
409	319+07.6	91.2 LT	454.6±
410	319+07.2	87.3 LT	456.1±
411	319+08.1	74.5 LT	465.6±
412	319+13.6	132.6 LT	452.0±
413	318+78.9	136.6 LT	452.9±
414	319+07.1	184.8 LT	449.0±
415	319+34.7	168.7 LT	449.0±

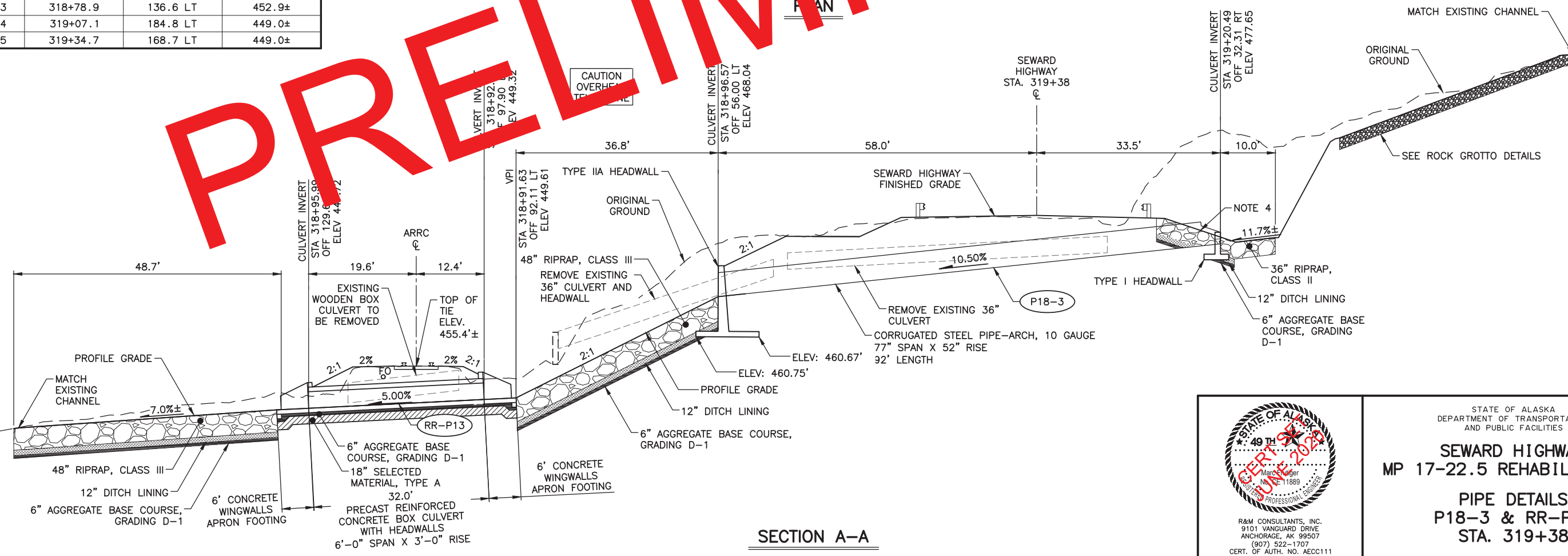
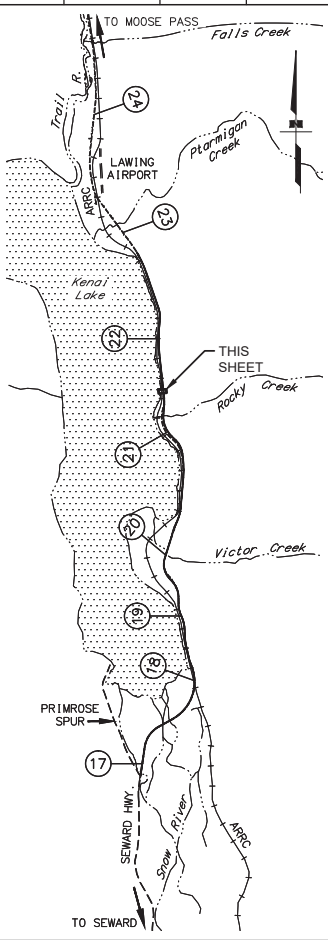
NOTES:

- ALL DIMENSIONS AND STATIONING ARE APPROXIMATE AND MAY REQUIRE ADJUSTMENTS TO FIT CURRENT CONDITIONS IN THE FIELD. PROVIDE A MINIMUM OF 1.5 FEET OF COVER BELOW THE BOTTOM OF TIE AS MEASURED AT THE HINGE POINT OF THE EMBANKMENT SHOULDER.
- THE CONTRACTOR SHALL COORDINATE WITH THE ARRC FOR WORK TO BE PERFORMED BY ARRC FORCES WHICH INCLUDES: REMOVING AND REINSTALLING TRACK AND TIES.
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- MATCH TYPICAL SECTION SLOPE, SEE B SHEETS.



REVISIONS		
NO.	DATE	DESCRIPTION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	311032/Z536100000	2020	E24	E43



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

SEWARD HIGHWAY
MP 17-22.5 REHABILITATION

PIPE DETAILS
P18-3 & RR-P13
STA. 319+38

DESIGNED BY MF
CHECKED BY HRA
DRAFTED BY RDG

SCALE
VARIES

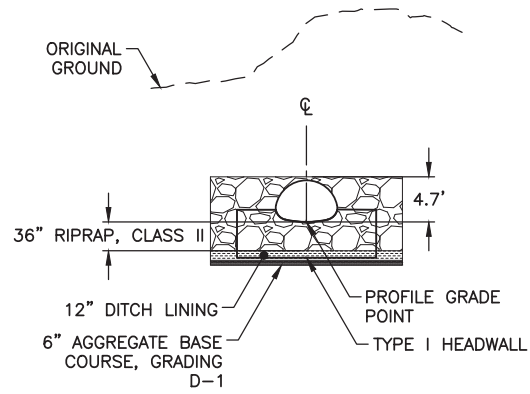
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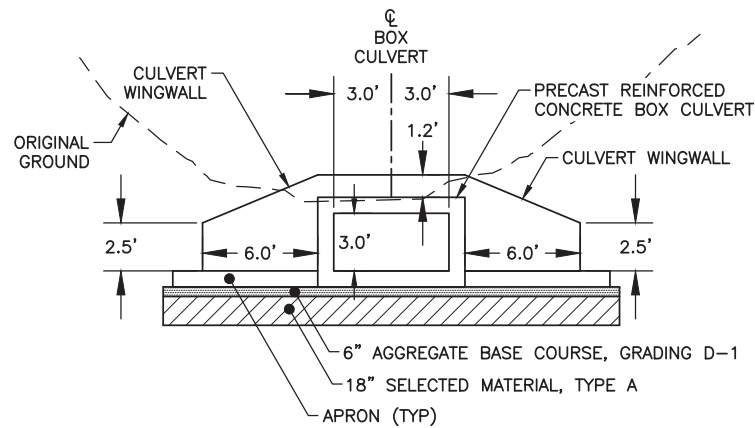
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REVISIONS		
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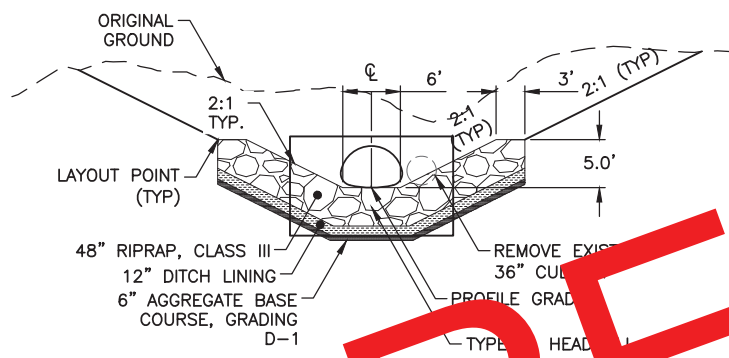
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ALASKA	311032/Z536100000	2020	E25	E43



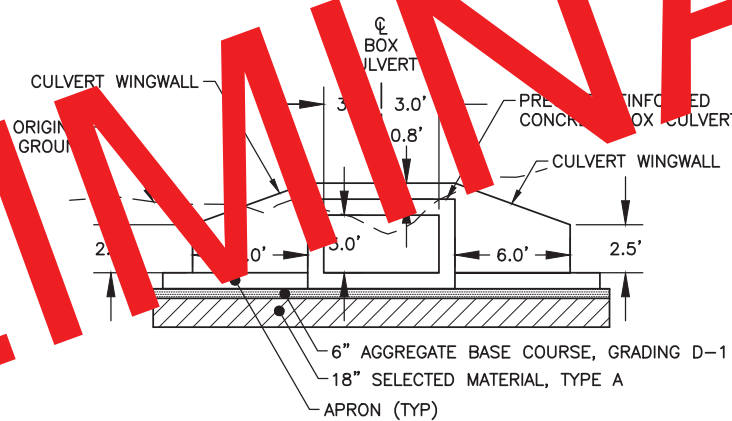
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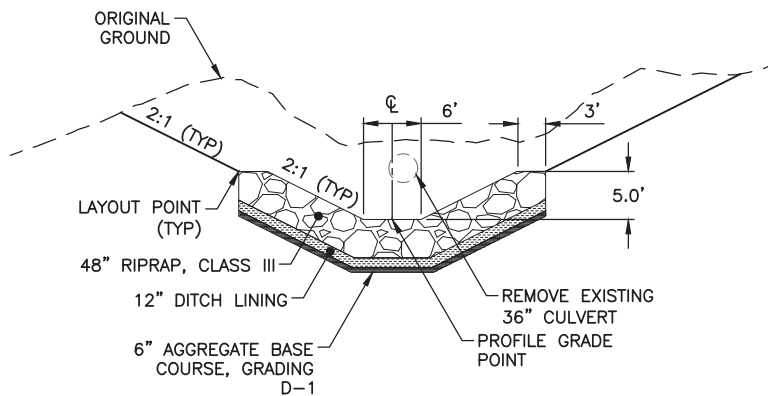
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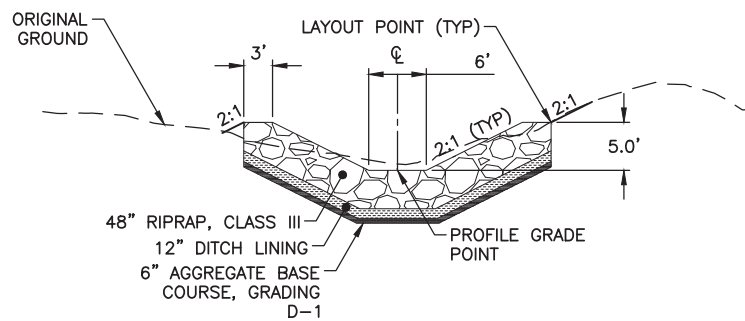
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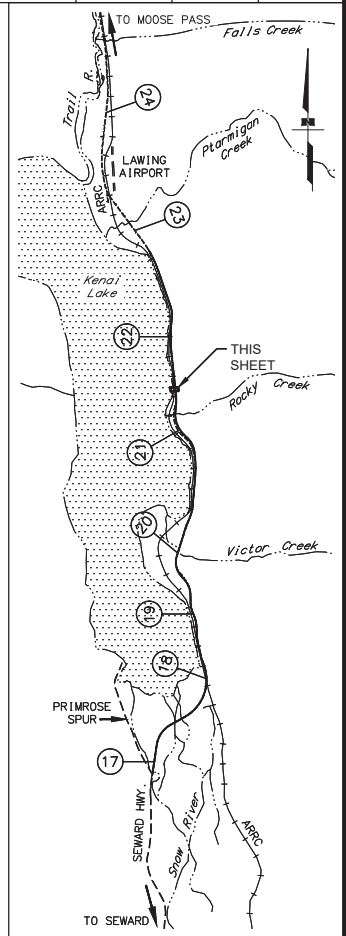
SECTION F-F



SECTION G-G



SECTION H-H



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

SEWARD HIGHWAY
MP 17-22.5 REHABILITATION

PIPE DETAILS
P18-3 & RR-P13
STA. 319+38

DESIGNED BY MF
CHECKED BY HRA
DRAFTED BY RDG

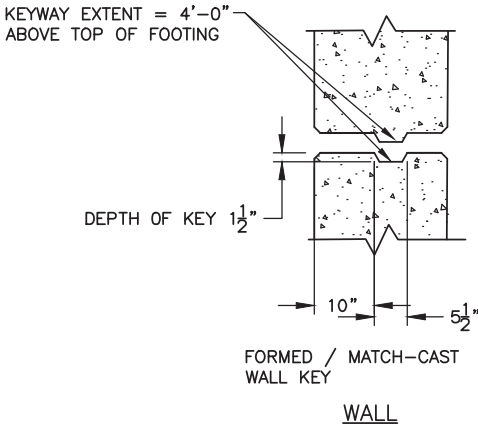
SCALE
VARIES

LAYOUT
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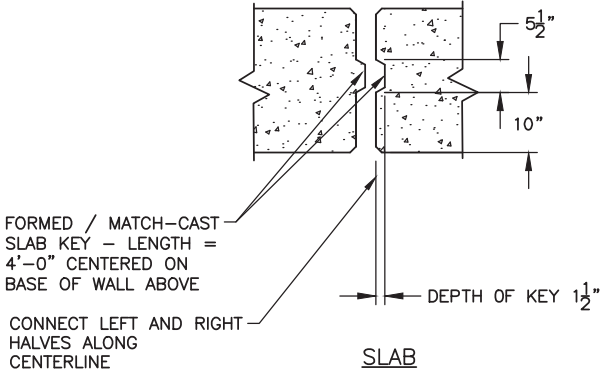
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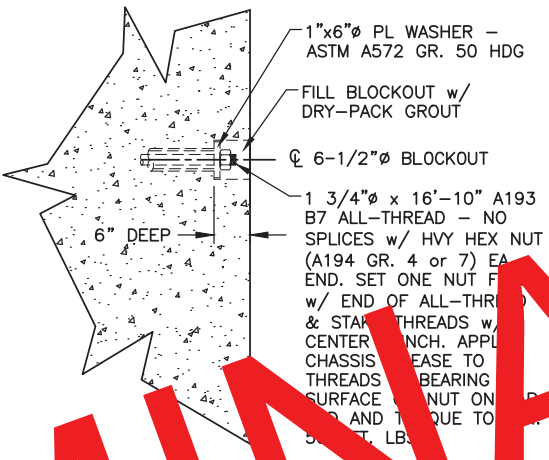
REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	311032/Z536100000	2020	E27	E43



HEADWALL SECTION - A-A
NTS



HEADWALL SECTION - E-E
NTS



TIE ROD BLOCKOUT & TERMINATION
NTS

PRELIMINARY



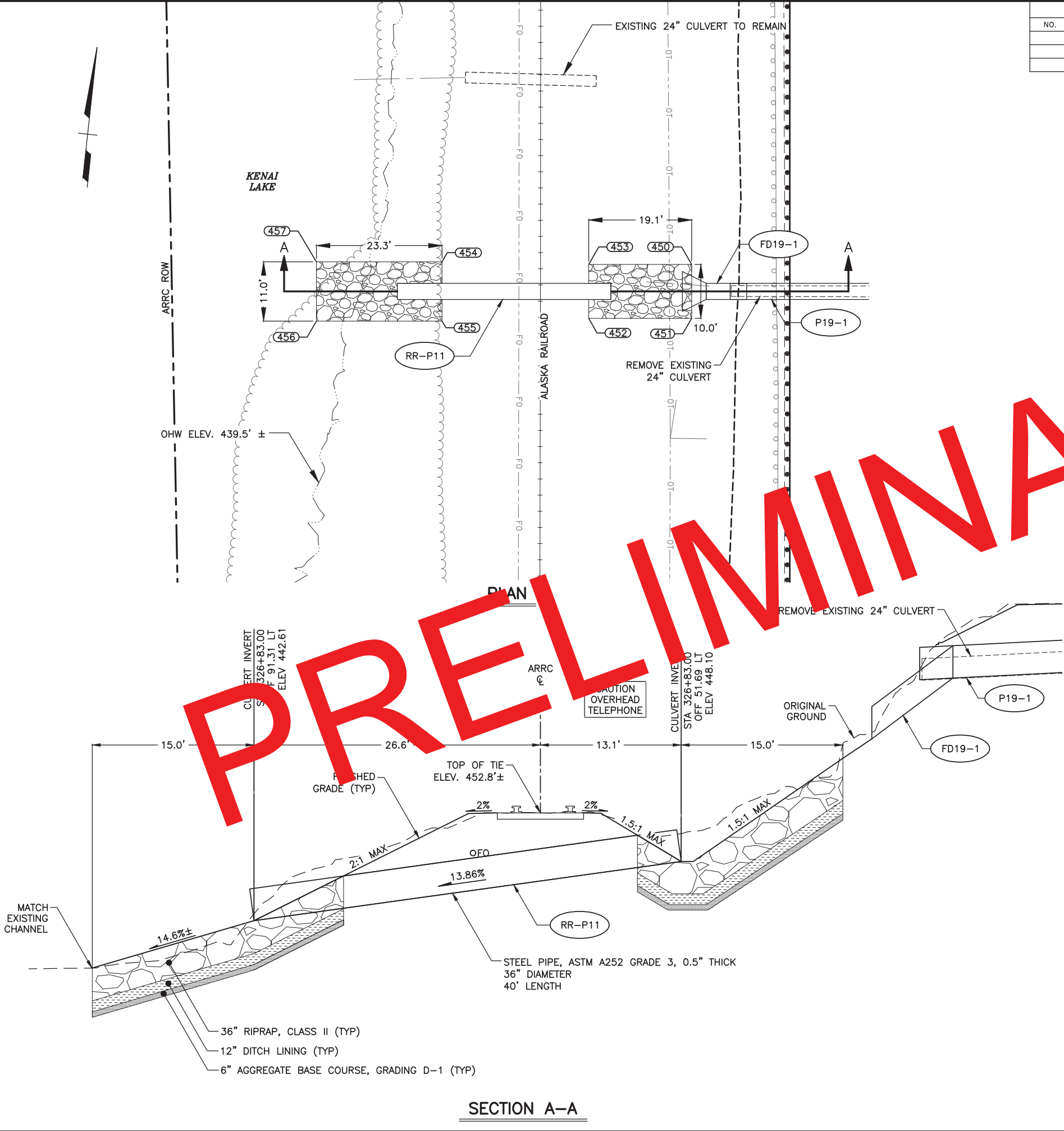
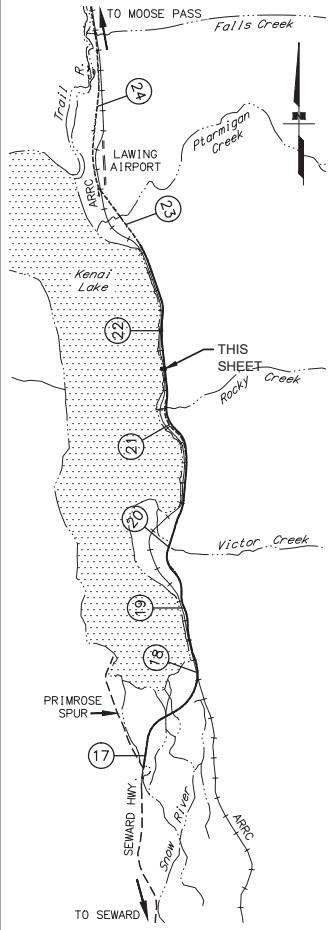
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

SEWARD HIGHWAY
MP 17-22.5 REHABILITATION

HEADWALL
PRECAST
TYPE IIA DETAILS

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	311032/Z536100000	2020	E29	E43

RIPRAP TABLE			
POINT	STATION	OFFSET	ELEVATION
450	326+88.0	36.7 LT	457.7±
451	326+78.0	36.7 LT	457.7±
452	326+78.0	55.8 LT	451.1±
453	326+88.0	55.8 LT	451.1±
454	326+88.5	83.0 LT	446.8±
455	326+77.5	83.0 LT	446.8±
456	326+77.5	106.3 LT	438.4±
457	326+88.5	106.3 LT	437.7±



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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**

**PIPE DETAILS
RR-P11
STA 326+86**

DESIGNED BY: MF
CHECKED BY: HRA
DRAFTED BY: RDG
SCALE: VARIES
LAYOUT: ESO
DATE: 6/16/2020 2:19 PM
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REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
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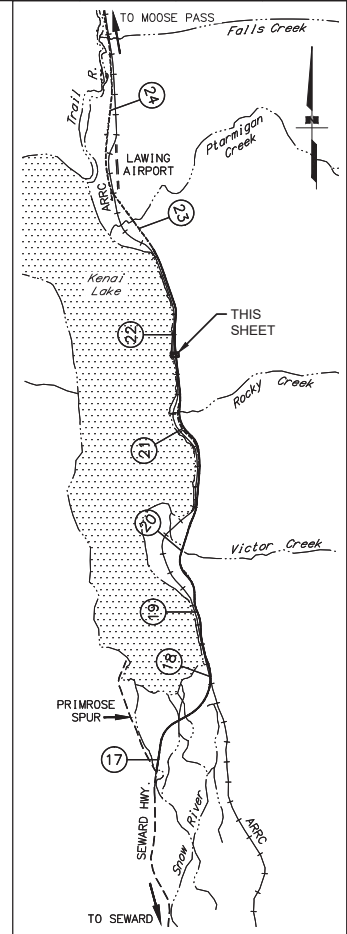
HYDROLOGIC AND HYDRAULIC SUMMARY

DRAINAGE AREA = 0.3 SQUARE MILES

EXCEEDANCE PROBABILITY	2%	1%	REGULATORY DISCHARGE
RETURN PERIOD	50 YEAR (Q_{50})	100 YEAR (Q_{100})	N/A
DESIGN DISCHARGE	80	100	N/A
DESIGN HIGH WATER ELEVATION	489.5	490.0	N/A
ANTICIPATED ADDITIONAL BACKWATER AT 1% AEP = 0.0 FEET			
OVERTOPPING FLOW = 170 CFS			

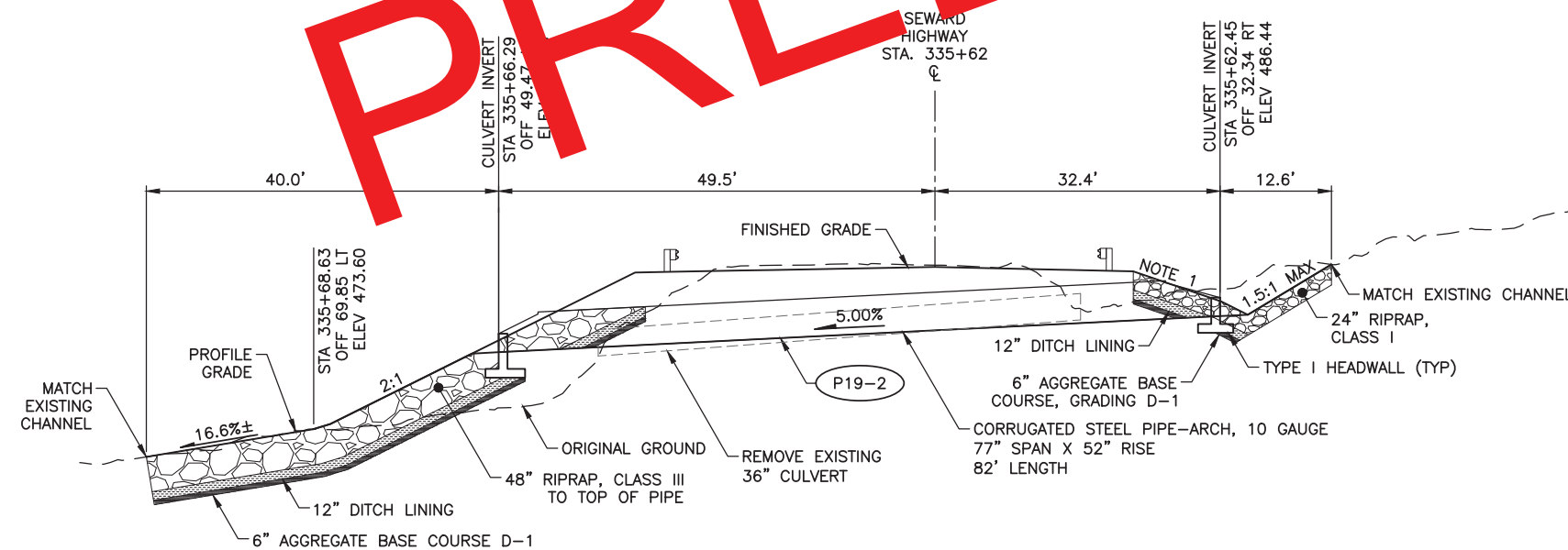
RIPRAP TABLE

POINT	STATION	OFFSET	ELEVATION
500	335+71.9	45.4 RT	495.2±
501	335+51.9	44.5 RT	496.8±
502	335+52.9	1 RT	491.2±
503	335+52.9	2 RT	491.7±
504	335+84.0	41.9 RT	488.7±
505	335+48.0	43.6 LT	488.7±
506	335+49.6	77.0 LT	481.8±
507	335+49.6	95.9 LT	476.5±
508	335+94.8	69.0 LT	476.5±
509	335+84.8	2 LT	478.7±

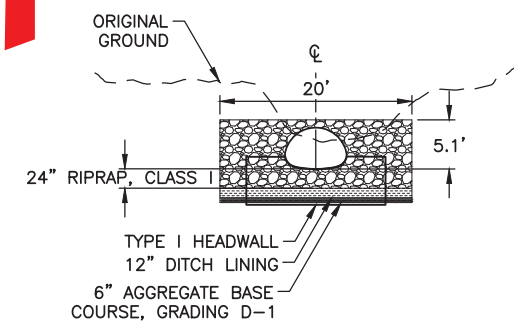


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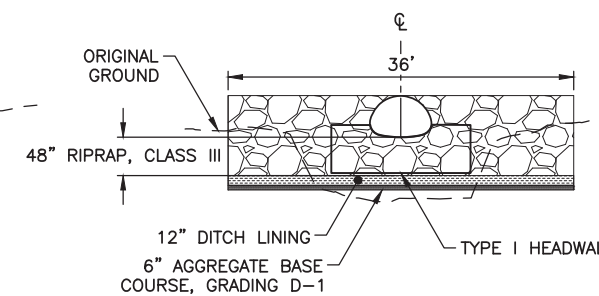
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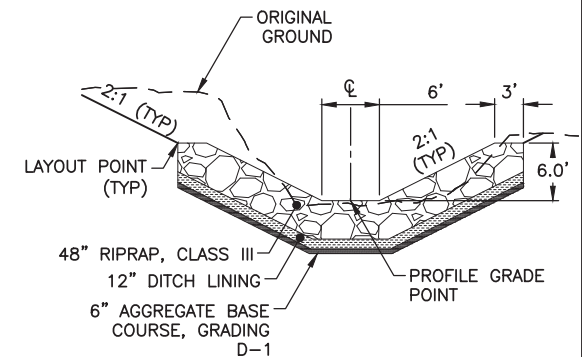
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**

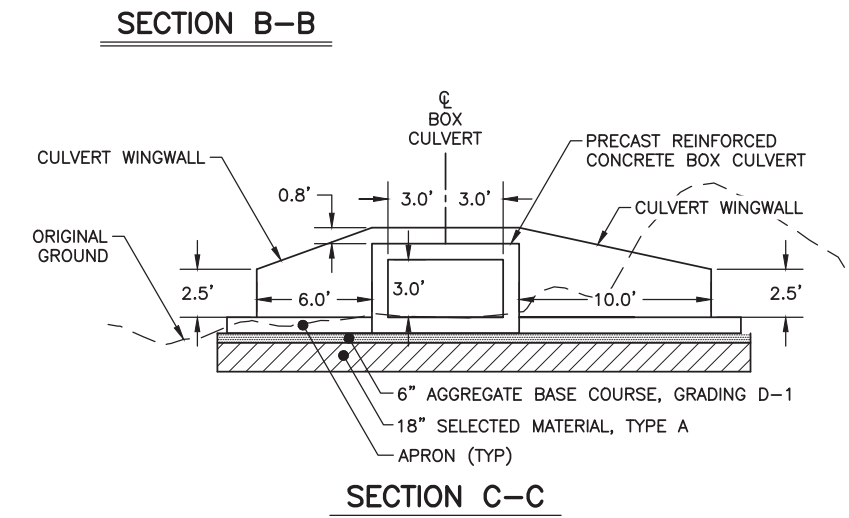
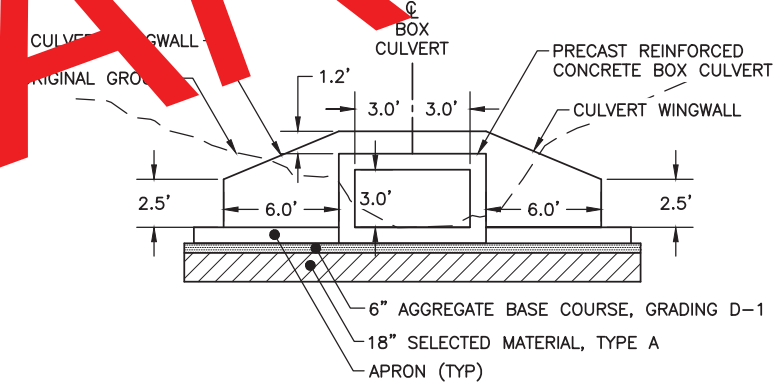
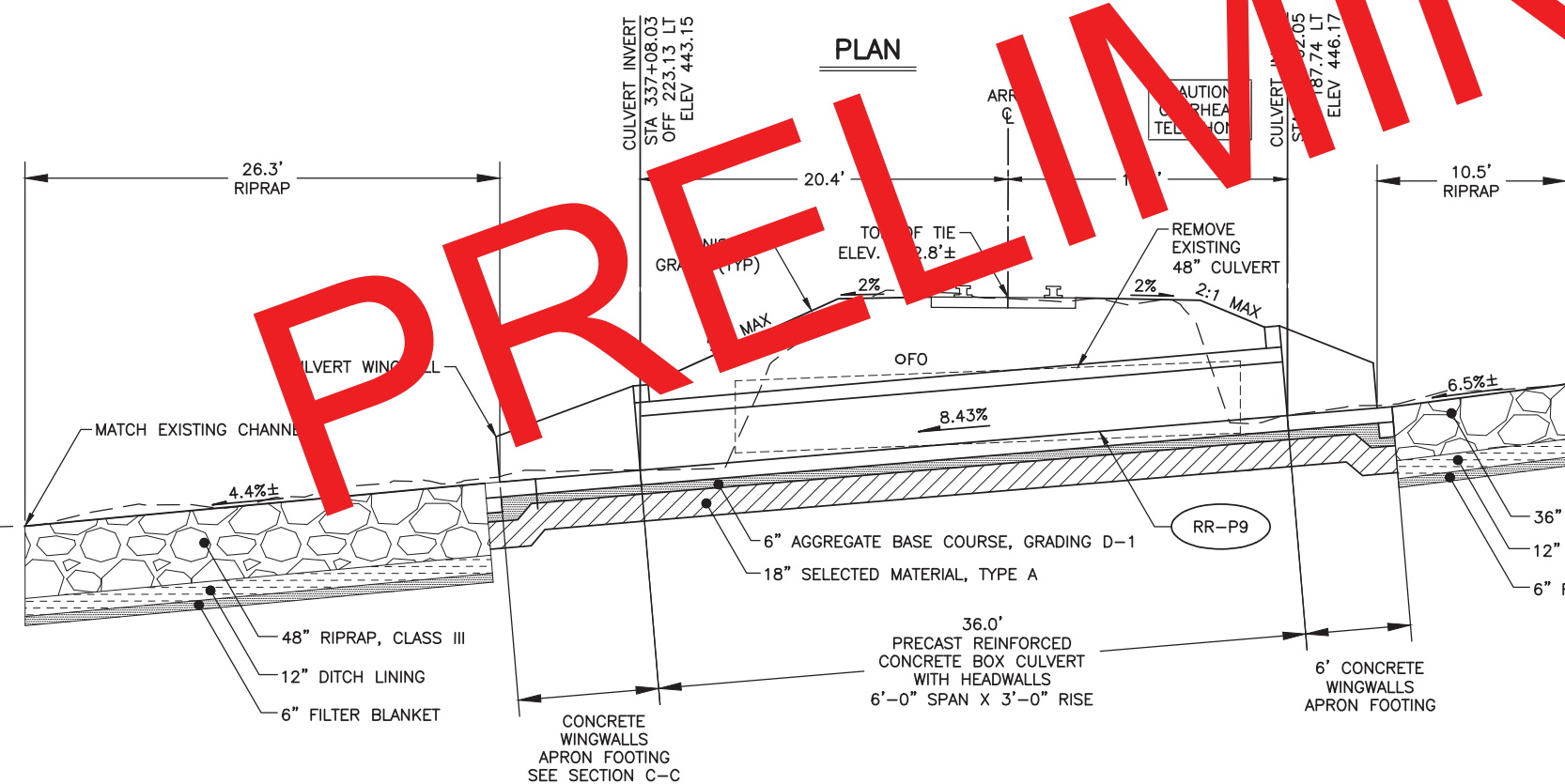
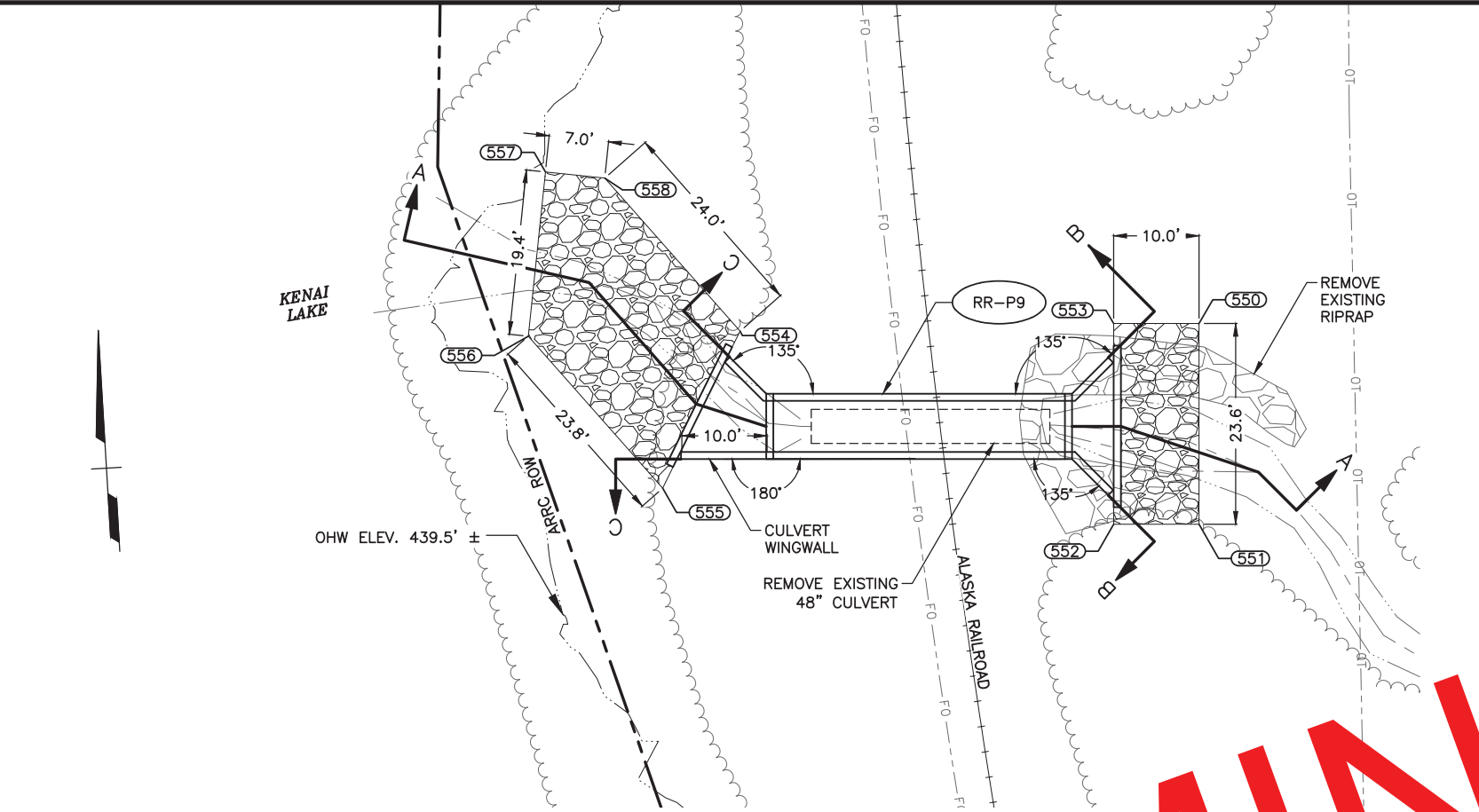
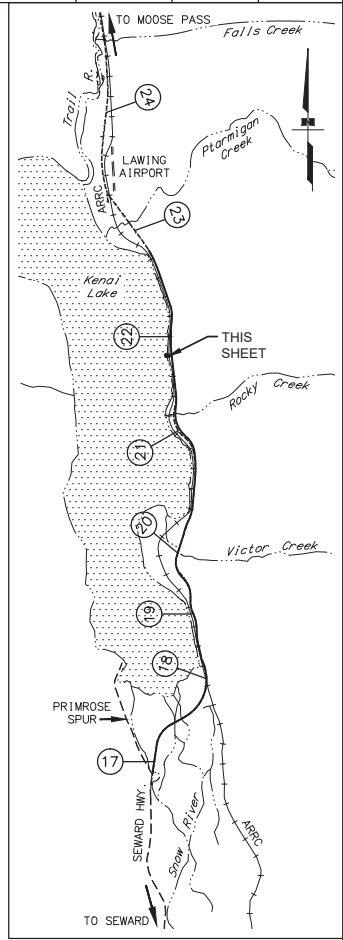
**PIPE DETAILS
P19-2
STA. 335+62**

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CHECKED BY: HRA
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REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	311032/Z536100000	2020	E31	E43

HYDROLOGIC AND HYDRAULIC SUMMARY			
DRAINAGE AREA = 0.3 SQUARE MILES			
EXCEEDANCE PROBABILITY	2%	1%	REGULATORY DISCHARGE
RETURN PERIOD	50 YEAR (Q_{50})	100 YEAR (Q_{100})	N/A
DESIGN DISCHARGE	80	100	N/A
DESIGN HIGH WATER ELEVATION	448.8	449.3	N/A
ANTICIPATED ADDITIONAL BACKWATER AT 1% AEP = 0.0 FEET			
OVERTOPPING FLOW = 200 CFS			

RIPRAP TABLE			
POINT	STATION	OFFSET	ELEVATION
550	337+11.5	171.1 LT	455.2±
551	336+88.2	175.0 L	450.9±
552	336+89.9	184.9	447.2±
553	337+13.1	180.9	447.2±
554	337+13.1	180.9	444.5±
555	337+02.5	236.0 LT	444.2±
556	337+20.0	248.9 LT	440.5±
557	337+11.5	243.7	439.7±
558	337+11.5	237.0 LT	445.9±



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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

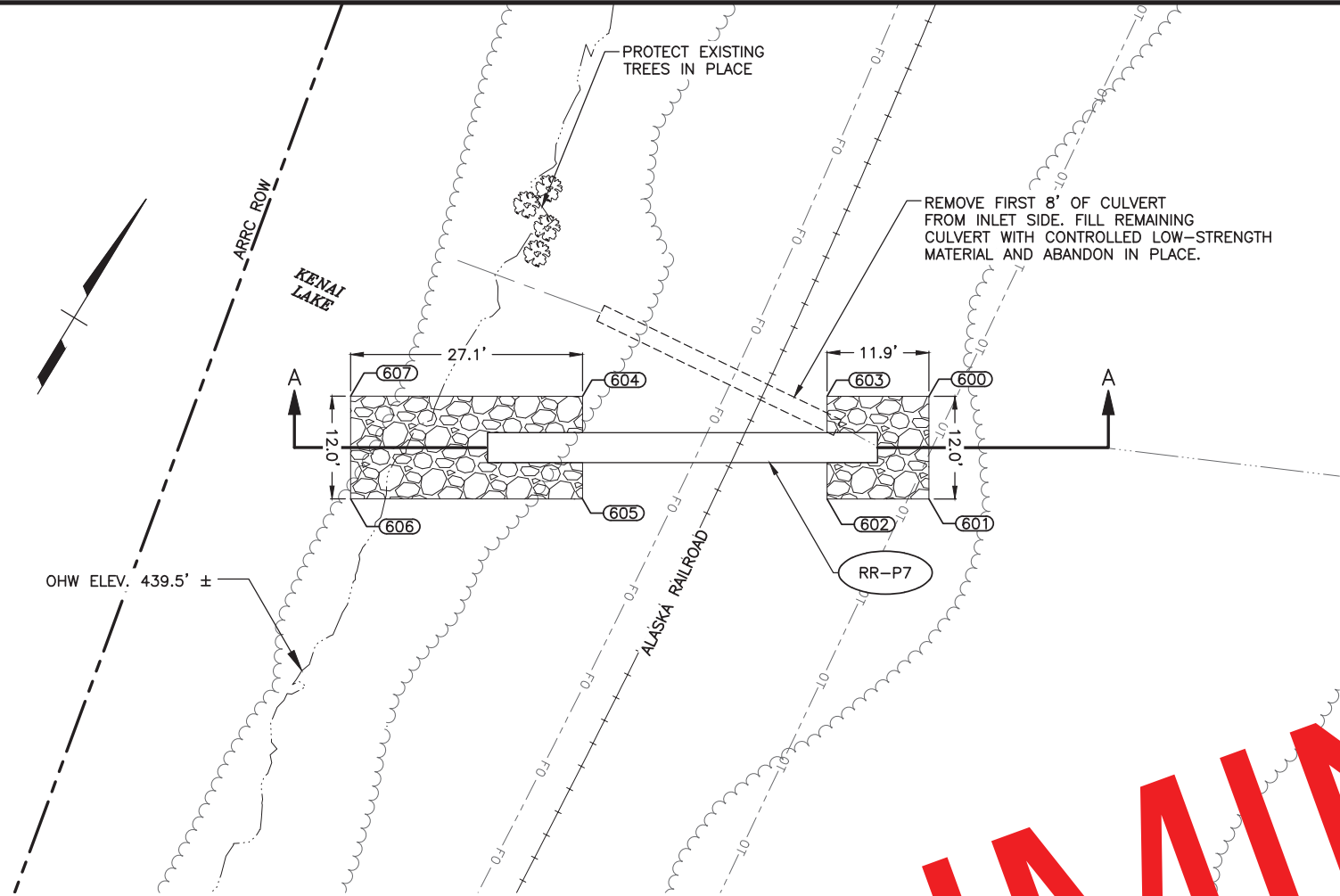
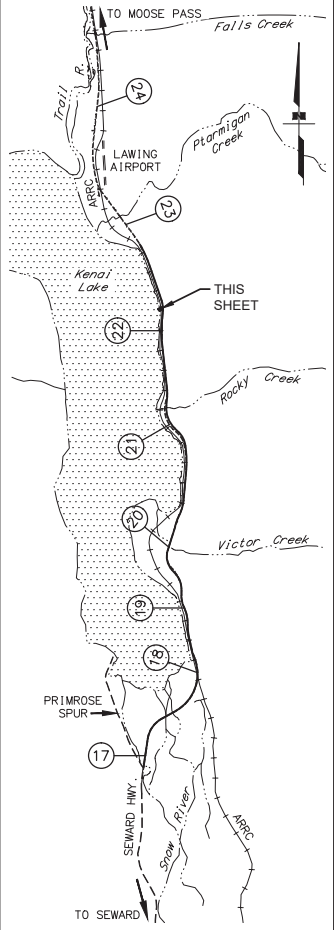
**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**

**PIPE DETAILS
RR-P9
STA 337+05**

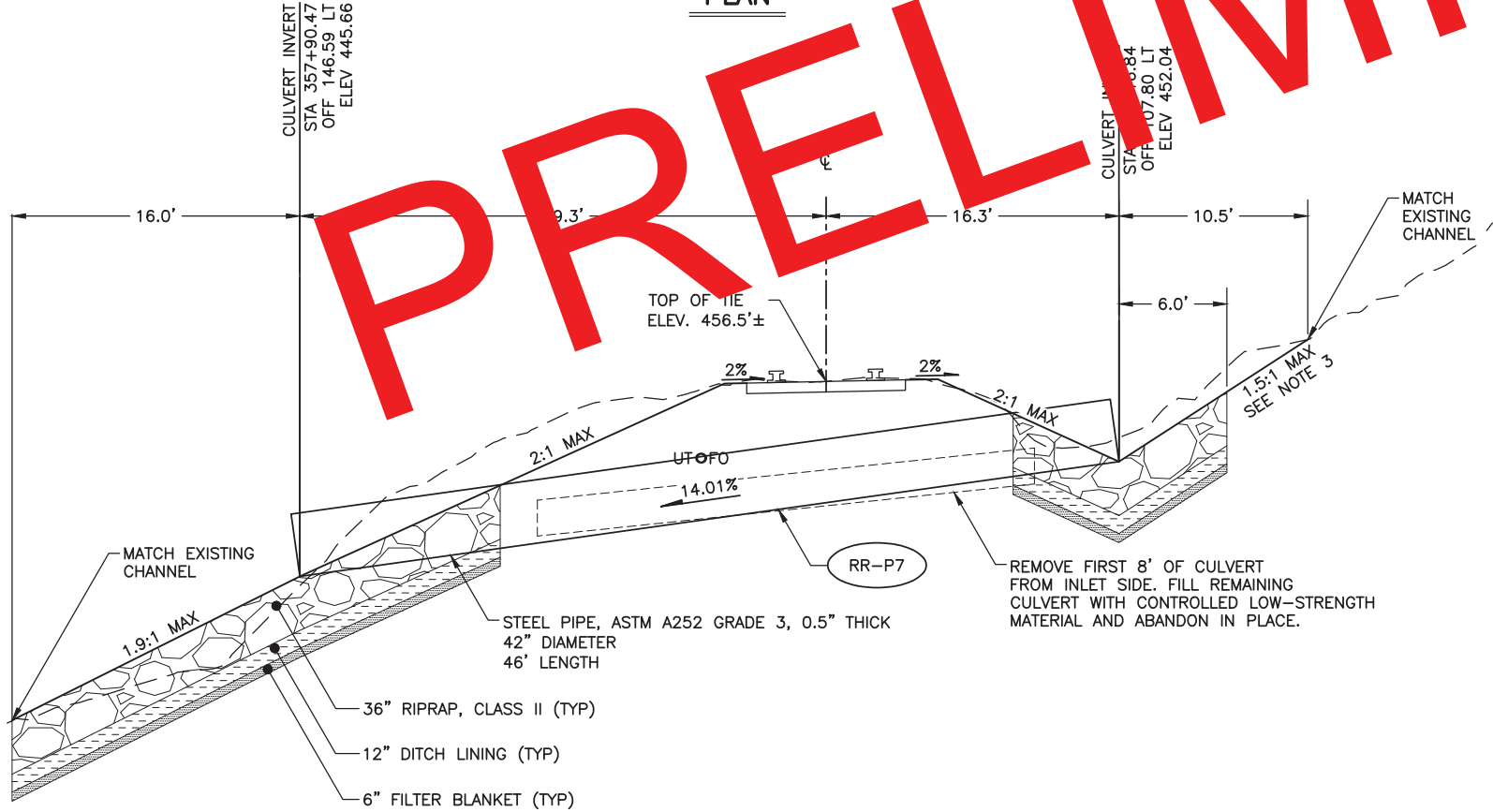
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REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	311032/Z536100000	2020	E32	E43

RIPRAP TABLE			
POINT	STATION	OFFSET	ELEVATION
600	358+25.8	105.7 LT	456.2±
601	358+14.6	99.6 LT	458.0±
602	358+07.9	109.7 LT	454.3±
603	358+19.1	115.9 LT	456.1±
604	358+02.7	140.3 LT	451.0±
605	357+91.4	134.0 LT	452.1±
606	357+75.1	156.9 LT	437.7±
607	357+86.6	163.3 LT	437.2±



PLAN



SECTION A-A

NOTES:

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- ADJUST SLOPE PER ENGINEER.



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

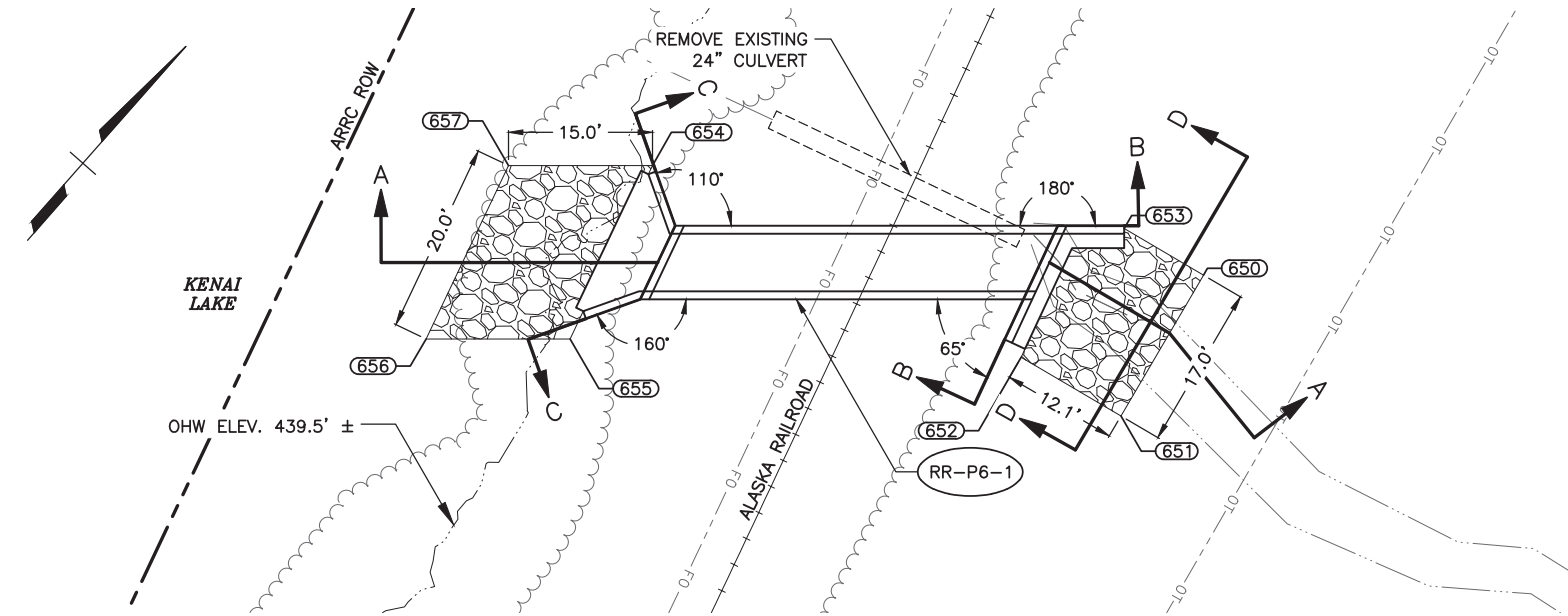
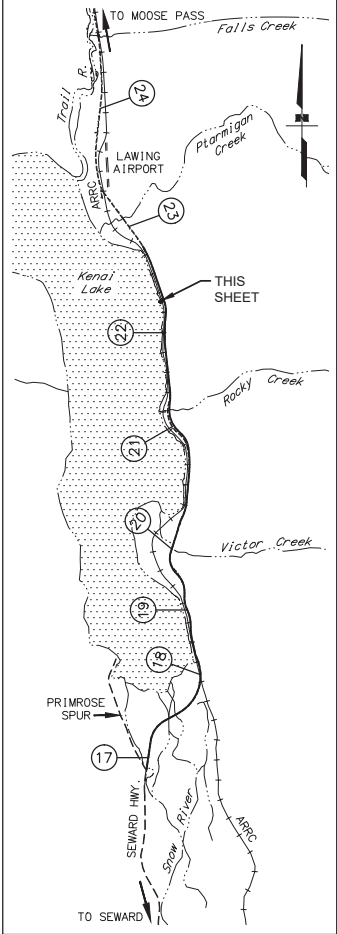
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**
**PIPE DETAILS
RR-P7
STA 358+04**

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CHECKED BY: HRA
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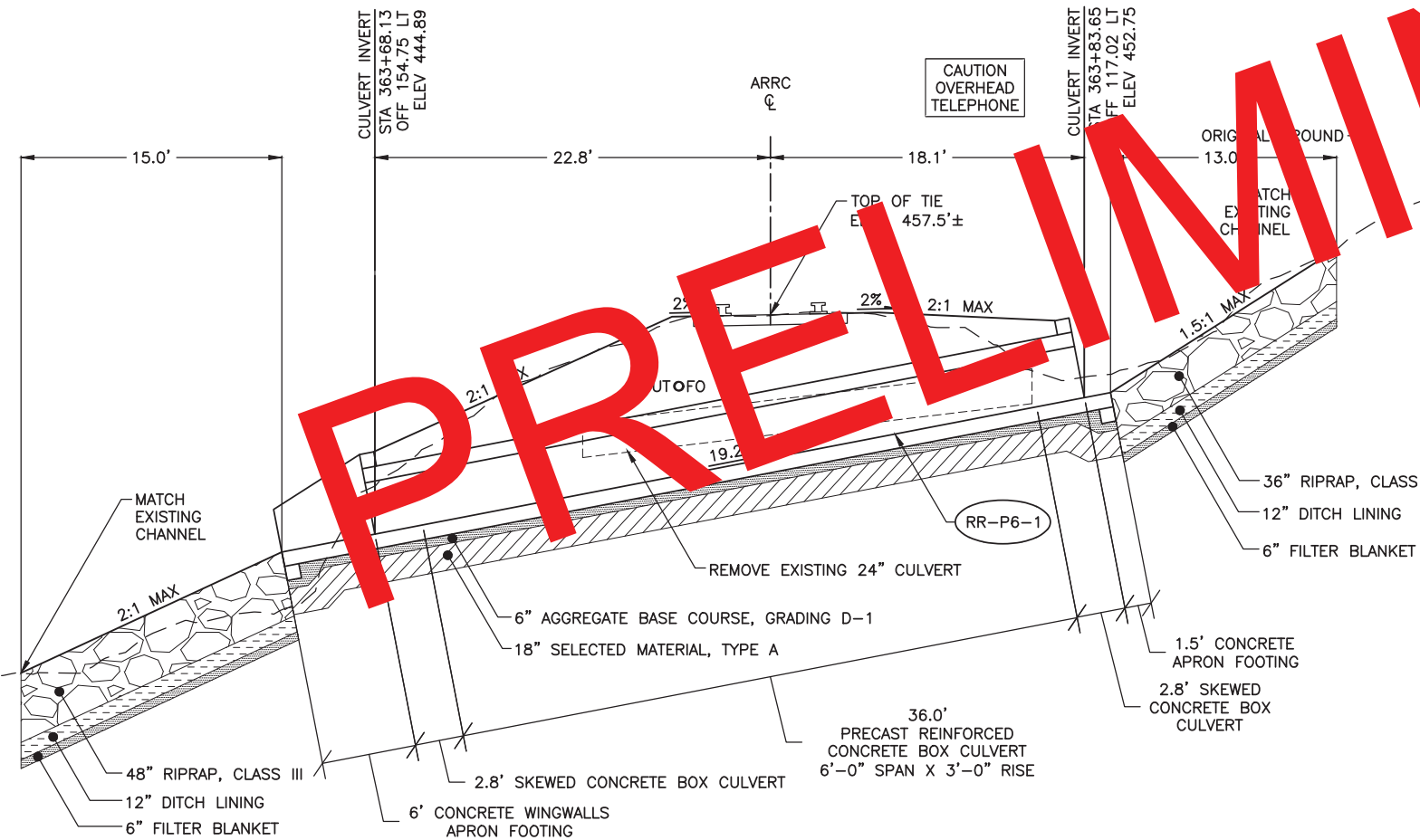
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NO.	DATE	DESCRIPTION					
			ALASKA	311032/Z536100000	2020	E33	E43

HYDROLOGIC AND HYDRAULIC SUMMARY			
DRAINAGE AREA = 0.3 SQUARE MILES			
EXCEEDANCE PROBABILITY	2%	1%	REGULATORY DISCHARGE
RETURN PERIOD	50 YEAR (Q_{50})	100 YEAR (Q_{100})	N/A
DESIGN DISCHARGE	30	35	N/A
DESIGN HIGH WATER ELEVATION	454.3	454.4	N/A
ANTICIPATED ADDITIONAL BACKWATER AT 1% AEP = 0.0 FEET			
OVERTOPPING FLOW = 141 CFS			

RIPRAP TABLE			
POINT	STATION	OFFSET	ELEVATION
650	363+88.6	101.7 LT	466.2±
651	363+71.7	104.1 LT	467.5±
652	363+73.4	116.0 LT	455.5±
653	363+80.0	112.2 LT	456.0±
654	363+77.3	159.1 LT	443.9±
655	363+57.3	160.2 LT	443.9±
656	363+51.6	174.1 LT	437.1±
657	363+40.0	173.0 LT	436.8±



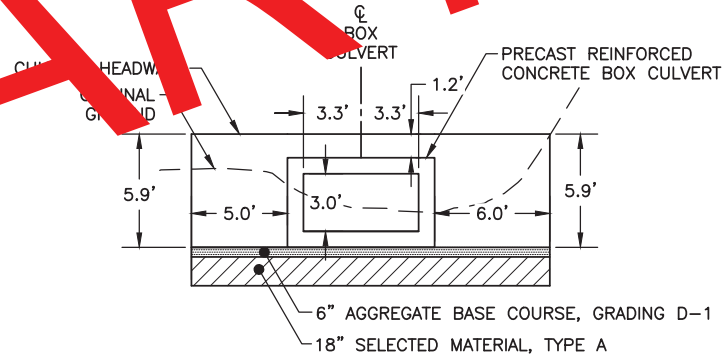
PLAN



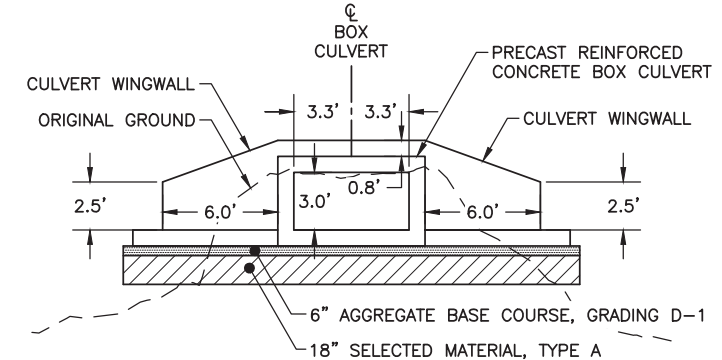
SECTION A-A

NOTES:

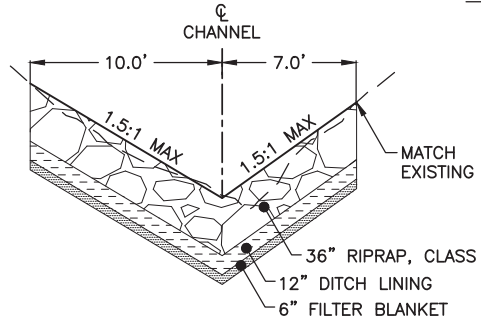
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SECTION B-B



SECTION C-C



SECTION D-D



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**
**PIPE DETAILS
RR-P6-1
STA 363+78**

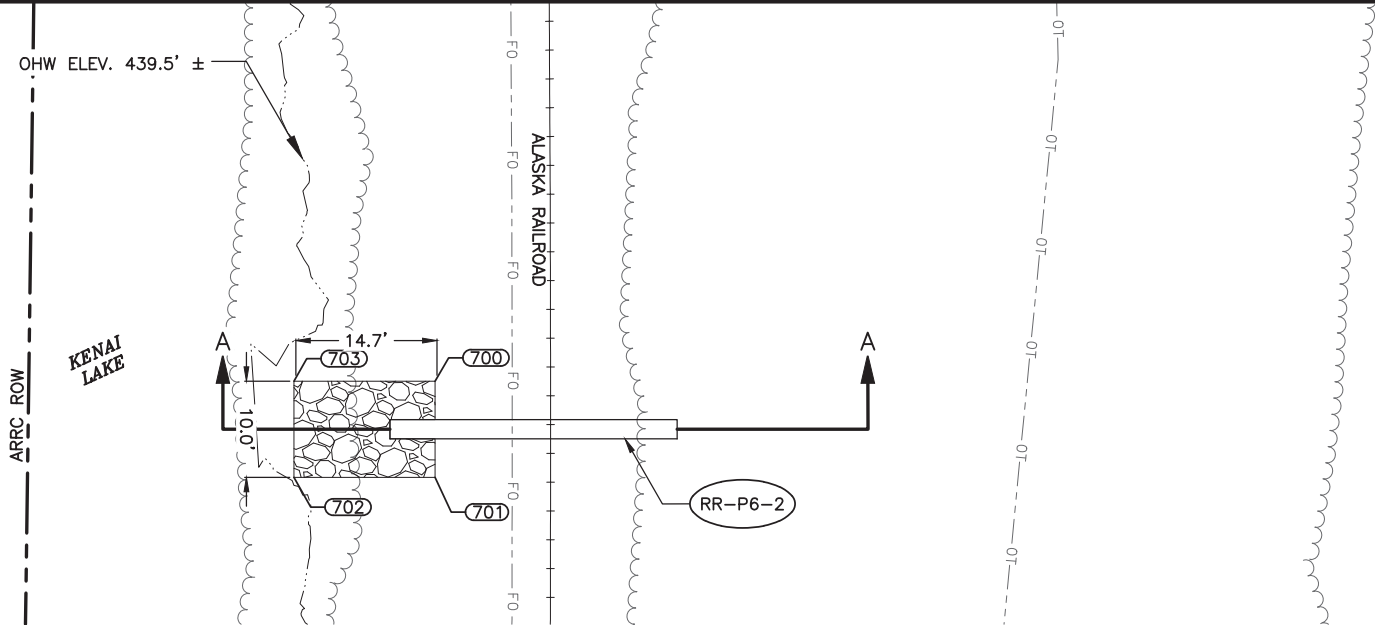
DESIGNED BY MF
CHECKED BY HRA
DRAFTED BY RDG

SCALE
VARIES

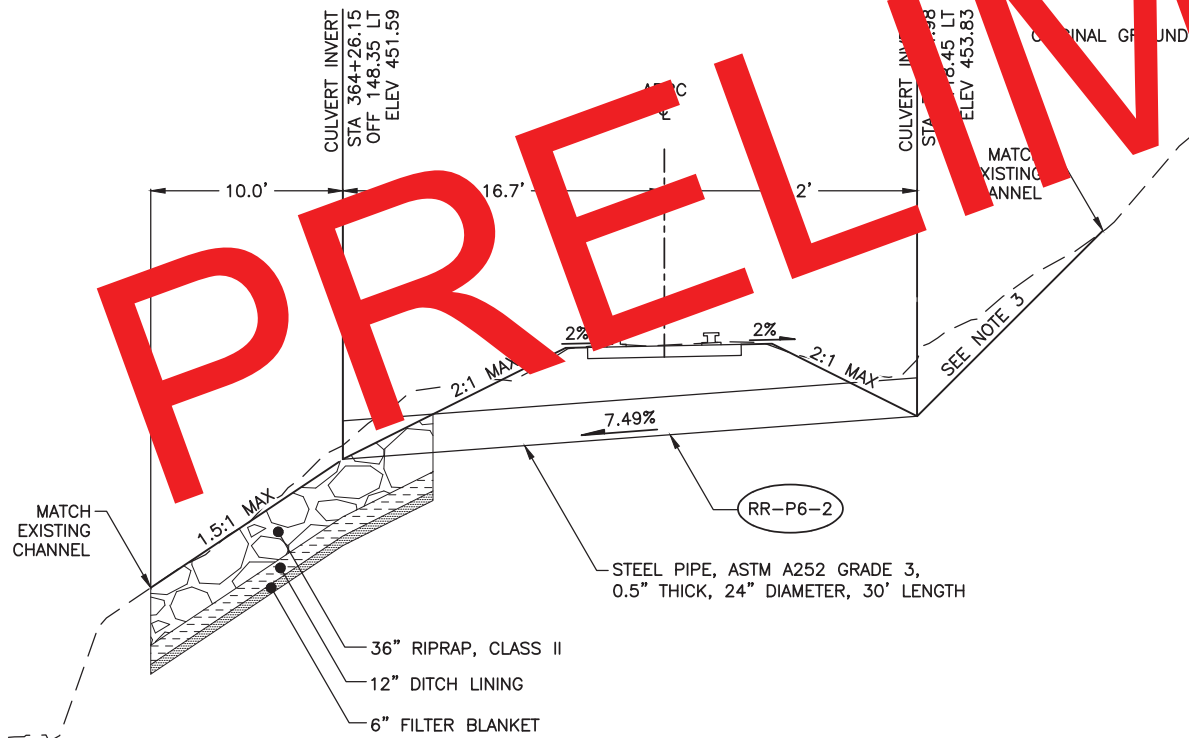
LAYOUT
E34

DATE TIME
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PLAN

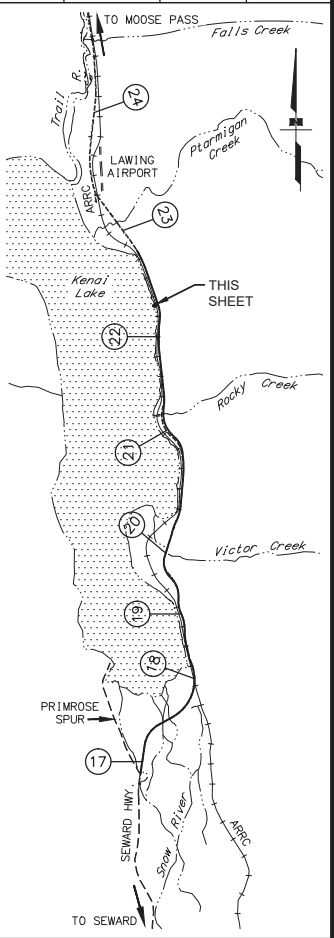


SECTION A-A

REVISIONS		
NO.	DATE	DESCRIPTION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	311032/Z536100000	2020	E34	E43

RIPRAP TABLE			
POINT	STATION	OFFSET	ELEVATION
700	364+31.0	143.5 LT	453.9±
701	364+21.0	143.9 LT	453.9±
702	364+21.6	158.5 LT	440.6±
703	364+31.5	158.1 LT	442.6±



NOTES:

- ALL DIMENSIONS AND STATIONING ARE APPROXIMATE AND MAY REQUIRE ADJUSTMENTS TO FIT CURRENT CONDITIONS IN THE FIELD. PROVIDE A MINIMUM OF 1.5 FEET OF COVER BELOW THE BOTTOM OF TIE AS MEASURED AT THE HINGE POINT OF THE EMBANKMENT SHOULDER.
- THE CONTRACTOR SHALL COORDINATE WITH THE ARRC FOR WORK TO BE PERFORMED BY ARRC FORCES WHICH INCLUDES: REMOVING AND REINSTALLING TRACK AND TIES.
- ADJUST SLOPE PER ENGINEER.



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

SEWARD HIGHWAY
MP 17-22.5 REHABILITATION

PIPE DETAILS
RR-P6-2
STA 364+25

DESIGNED BY: MF
CHECKED BY: HRA
DRAFTED BY: RDG
SCALE: VARIES
LAYOUT: E35
DATE: 6/16/2020 2:19 PM
DRAWING LOCATION: Z:\p\oject\2456.01 DOT_C Seward Hwy MP 17-22 5\Civil\1\ACAD\2456.01-E Sheets.dwg

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	311032/Z536100000	2020	E35	E43

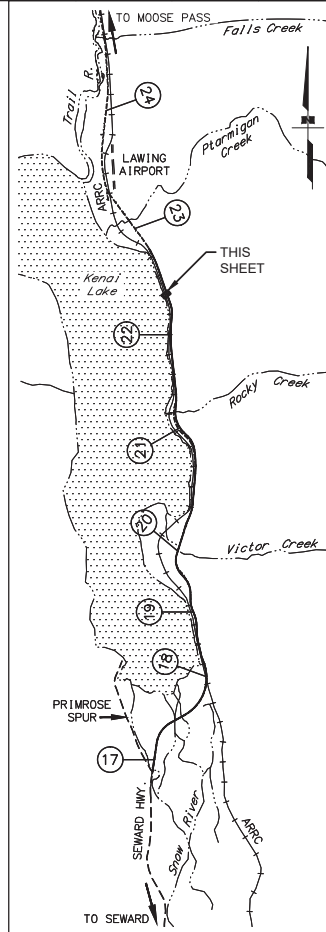
HYDROLOGIC AND HYDRAULIC SUMMARY

DRAINAGE AREA = 0.4 SQUARE MILES

EXCEEDANCE PROBABILITY	2%	1%	REGULATORY DISCHARGE
RETURN PERIOD	50 YEAR (Q_{50})	100 YEAR (Q_{100})	N/A
DESIGN DISCHARGE	100	120	N/A
DESIGN HIGH WATER ELEVATION	517.5	518.9	N/A
ANTICIPATED ADDITIONAL BACKWATER AT 1% AEP = 0.0 FEET			
OVERTOPPING FLOW = 200 CFS			

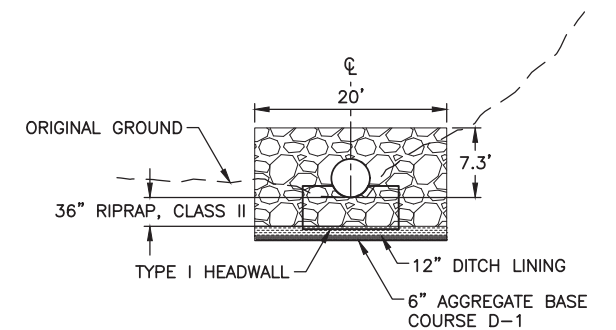
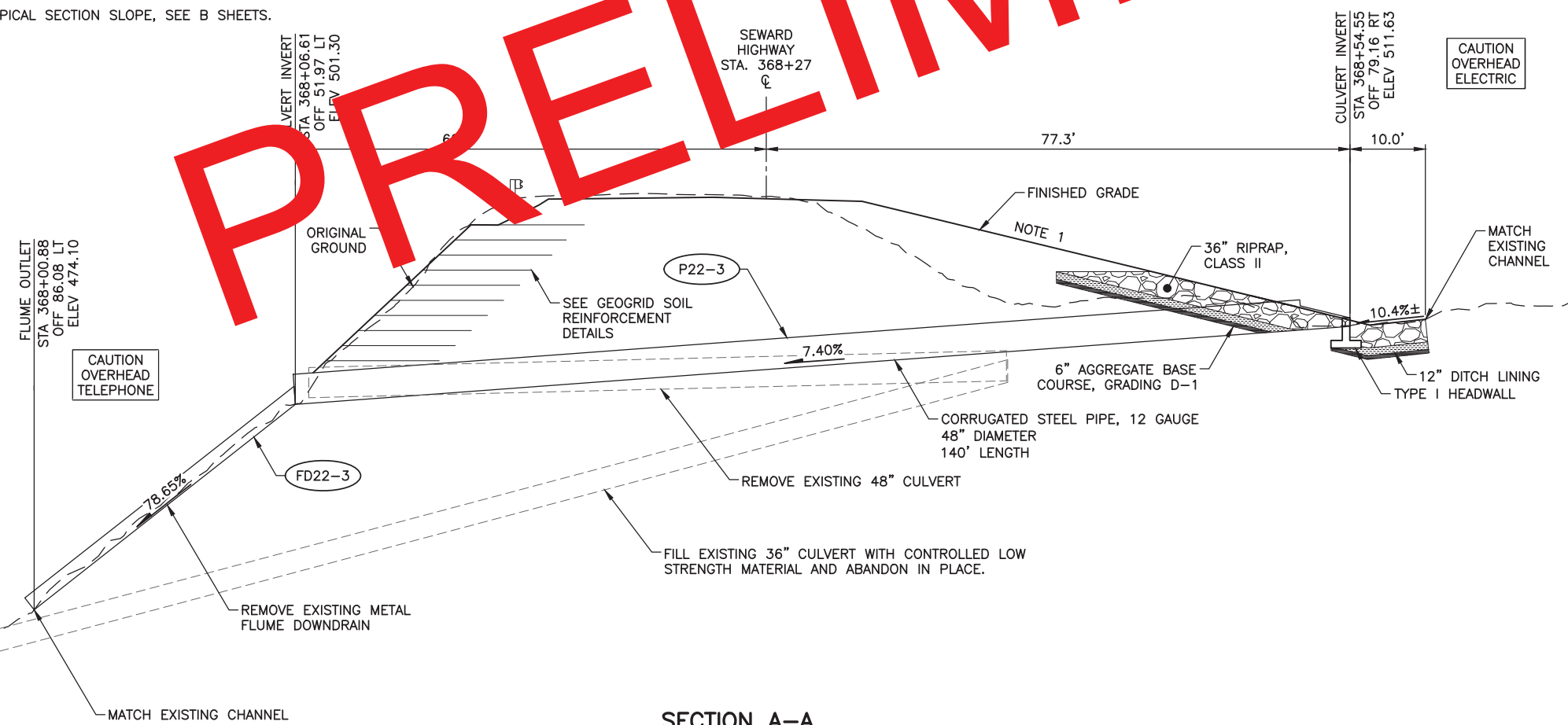
RIPRAP TABLE

POINT	STATION	OFFSET	ELEVATION
750	368+67.4	85.1 RT	515.9±
751	368+48.6	92.0 RT	515.0±
752	368+36.1	99.9 RT	518.3±
753	368+27.0	107.9 RT	519.5±

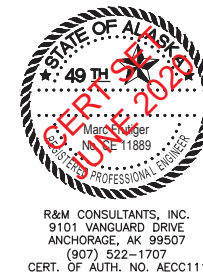


NOTES:

1. MATCH TYPICAL SECTION SLOPE, SEE B SHEETS.



SECTION B-B



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

SEWARD HIGHWAY
MP 17-22.5 REHABILITATION

PIPE DETAILS
P22-3
STA. 368+27

DESIGNED BY MF
CHECKED BY HRA
DRAFTED BY RDG

SCALE
VARIES

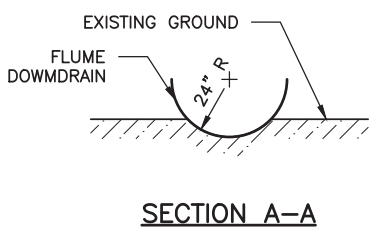
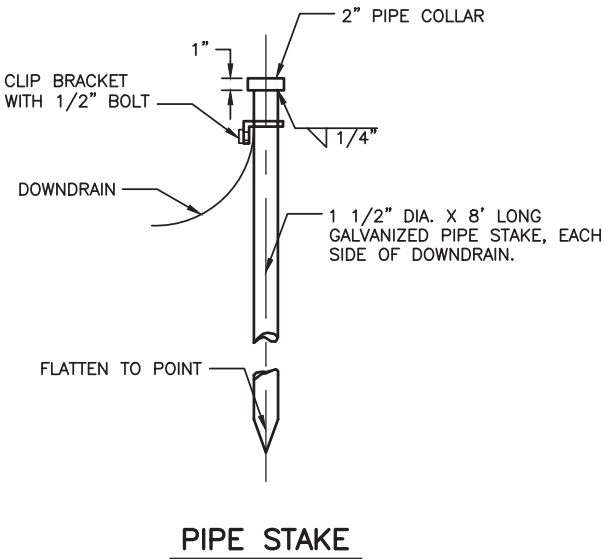
LAYOUT
E36

DATE TIME
6/16/2020 2:19 PM

DRAWING LOCATION
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REVISIONS		
NO.	DATE	DESCRIPTION

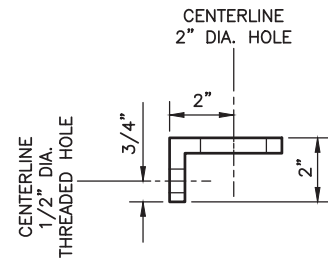
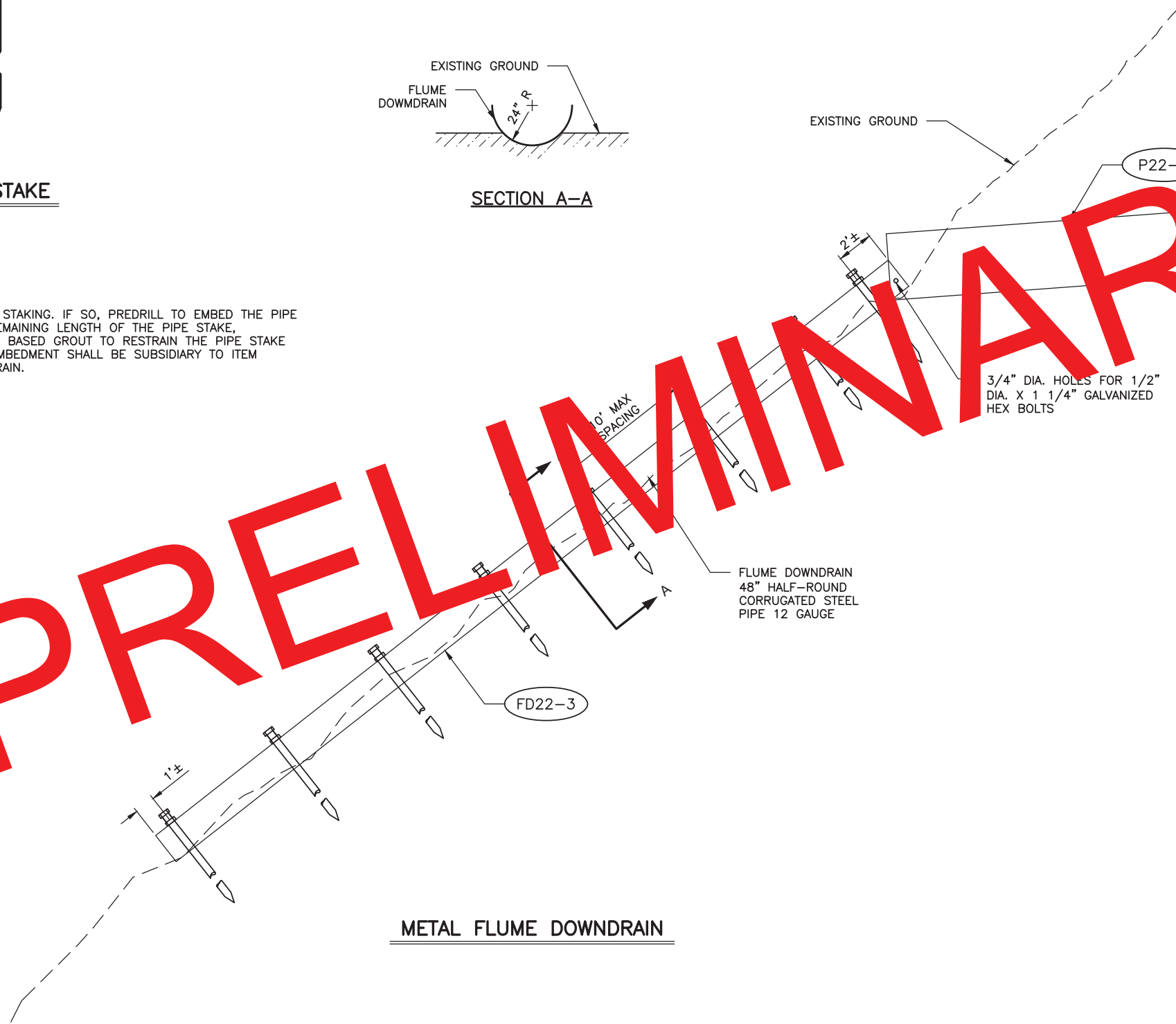
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	311032/Z536100000	2020	E36	E43



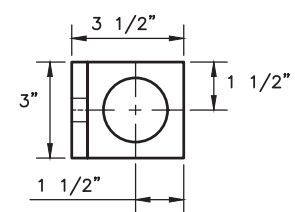
NOTES:

1. ROCK MAY BE ENCOUNTERED DURING STAKING. IF SO, PREDRILL TO EMBED THE PIPE STAKE 2 FEET INTO ROCK OR THE REMAINING LENGTH OF THE PIPE STAKE, WHICHEVER IS SHORTER. USE CEMENT BASED GROUT TO RESTRAIN THE PIPE STAKE IN THE ROCK. PAYMENT FOR ROCK EMBEDMENT SHALL BE SUBSIDIARY TO ITEM 601.0001.0000 METAL FLUME DOWNDRAIN.

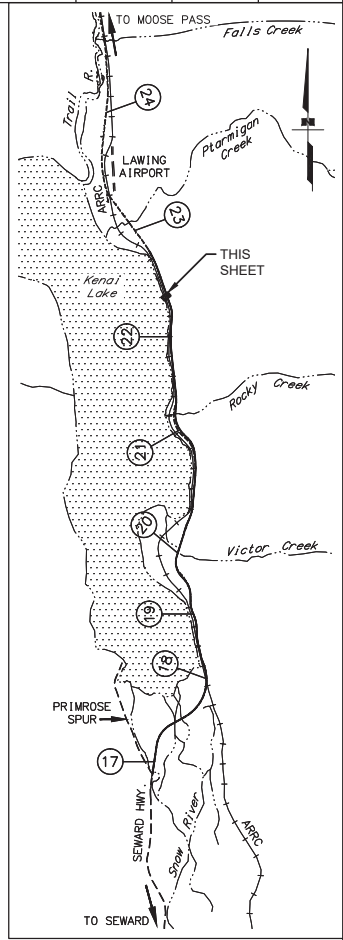
PRELIMINARY



CLIP BRACKET L 3 1/2" X 2" X 1/4" GALVANIZED



CLIP BRACKET DETAIL



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**

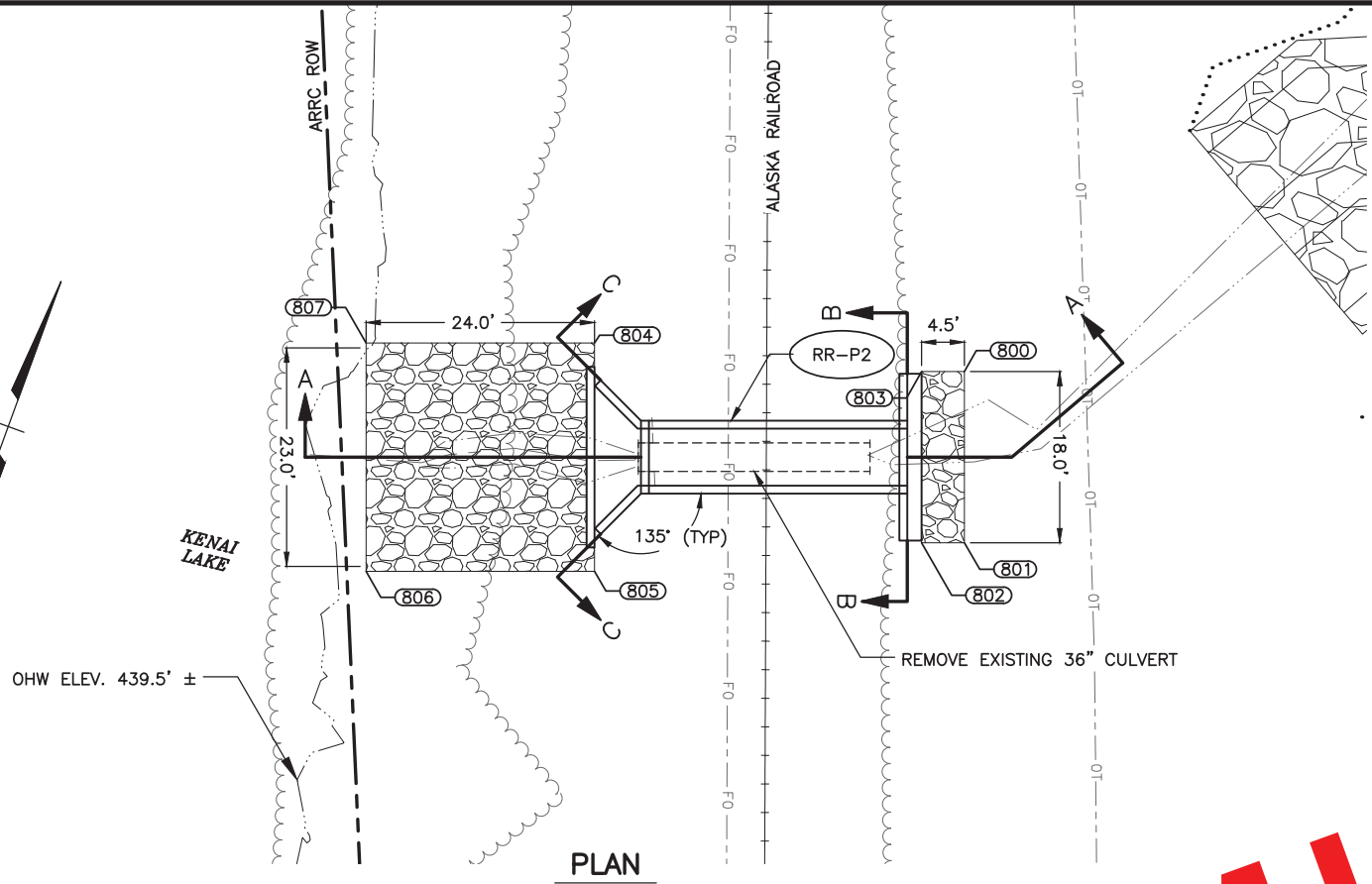
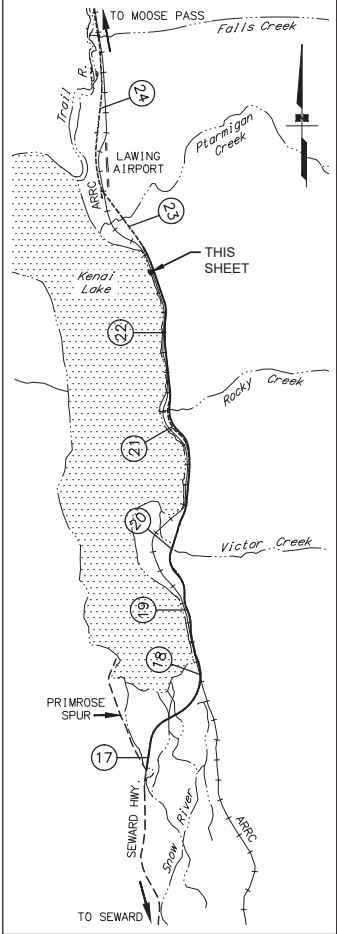
**FLUME DETAILS
FD22-3
STA. 368+27**

DESIGNED BY: MF
CHECKED BY: HRA
DRAFTED BY: RDG
SCALE: VARIES
LAYOUT: E37
DATE: 6/16/2020 11:36 AM
DRAWING LOCATION: Z:\projects\2456.01 DOT C Seward Hwy MP 17-22.5\civil\ACAD\2456.01-E01-RR2.dwg

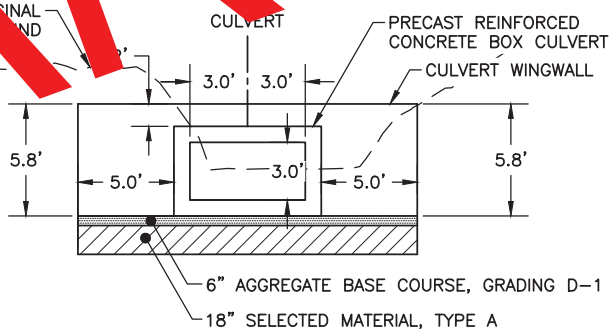
REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	311032/Z536100000	2020	E37	E43

HYDROLOGIC AND HYDRAULIC SUMMARY			
DRAINAGE AREA = 0.3 SQUARE MILES			
EXCEEDANCE PROBABILITY	2%	1%	REGULATORY DISCHARGE
RETURN PERIOD	50 YEAR (Q_{50})	100 YEAR (Q_{100})	N/A
DESIGN DISCHARGE	80	90	N/A
DESIGN HIGH WATER ELEVATION	450.8	451.0	N/A
ANTICIPATED ADDITIONAL BACKWATER AT 1% AEP = 0.0 FEET			
OVERTOPPING FLOW = 180 CFS			

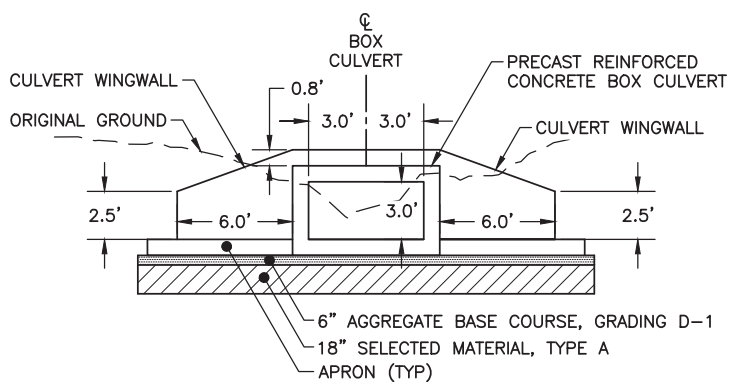
RIPRAP TABLE			
POINT	STATION	OFFSET	ELEVATION
800	380+05.5	122.1 LT	454.7
801	379+87.5	121.8 LT	454.7
802	379+87.4	126.3 LT	450.6
803	380+05.4	126.6 LT	450.6
804	380+05.5	161.1 LT	447.9
805	379+83.8	160.7 LT	447.9
806	380+07.4	185.1 LT	443.1
807	379+83.1	184.7 LT	439.0



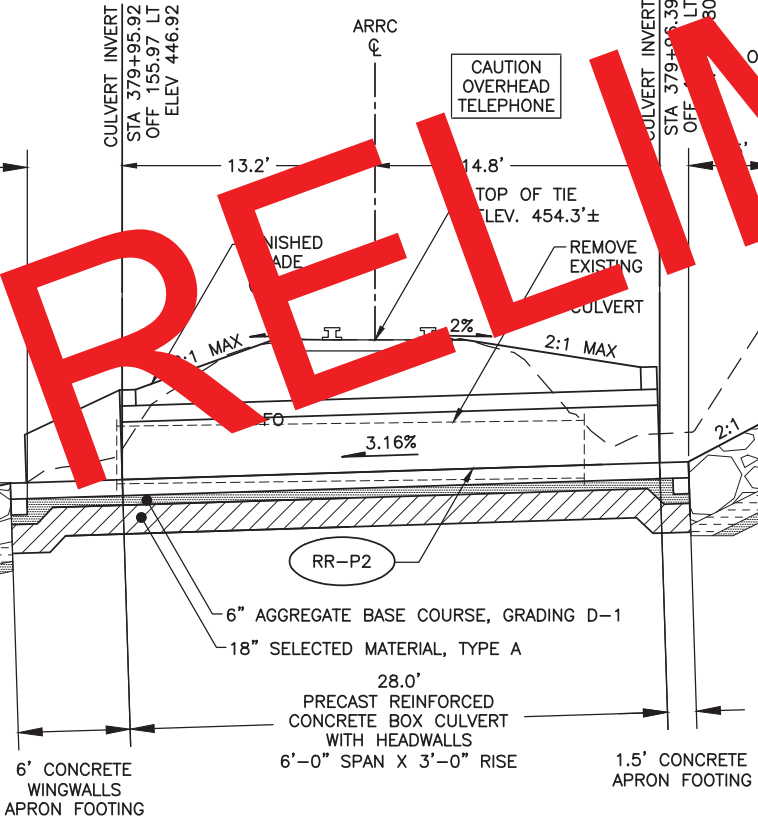
PLAN



SECTION B-B



SECTION C-C



SECTION A-A

NOTES:

- ALL DIMENSIONS AND STATIONING ARE APPROXIMATE AND MAY REQUIRE ADJUSTMENTS TO FIT CURRENT CONDITIONS IN THE FIELD. PROVIDE A MINIMUM OF 1.5 FEET OF COVER BELOW THE BOTTOM OF TIE AS MEASURED AT THE HINGE POINT OF THE EMBANKMENT SHOULDER.
- THE CONTRACTOR SHALL COORDINATE WITH THE ARRC FOR WORK TO BE PERFORMED BY ARRC FORCES WHICH INCLUDES: REMOVING AND REINSTALLING TRACK AND TIES AND REMOVING AND REPLACING BALLAST.
- CONCRETE STRUCTURES SHALL BE DESIGNED AND FABRICATED TO SUPPORT RAILROAD LIVE LOADING IN ACCORDANCE WITH 2019 AREMA MANUAL FOR RECOMMENDED PRACTICE & APPROVED BY ARRC CHIEF ENGINEER.
- ADJUST SLOPE PER ENGINEER.



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**
**PIPE DETAILS
RR-P2
STA 379+96**

DESIGNED BY: MF
CHECKED BY: HRA
DRAFTED BY: RDG
SCALE: VARIES
LAYOUT: E38
DATE: 6/16/2020 2:19 PM
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REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	311032/Z536100000	2020	E38	E43

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	311032/Z536100000	2020	E38	E43

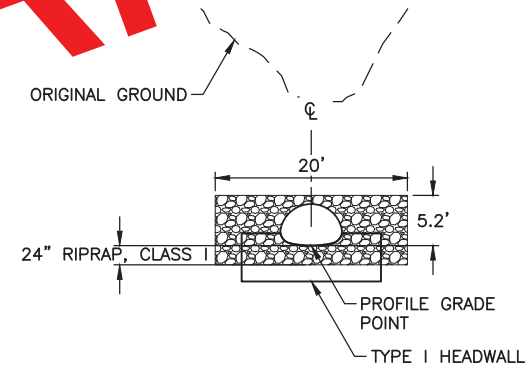
HYDROLOGIC AND HYDRAULIC SUMMARY

DRAINAGE AREA = 0.3 SQUARE MILES

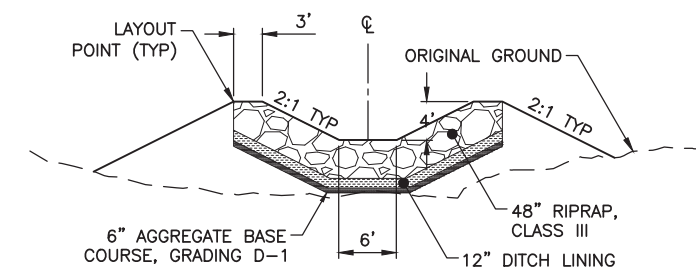
EXCEEDANCE PROBABILITY	2%	1%	REGULATORY DISCHARGE
RETURN PERIOD	50 YEAR (Q_{50})	100 YEAR (Q_{100})	N/A
DESIGN DISCHARGE	80	90	N/A
DESIGN HIGH WATER ELEVATION	518.3	518.5	N/A
ANTICIPATED ADDITIONAL BACKWATER AT 1% AEP = 0.0 FEET			
OVERTOPPING FLOW = 175 CFS			

RIPRAP TABLE

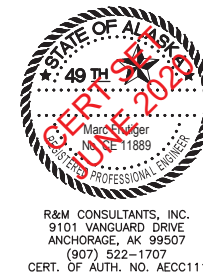
POINT	STATION	OFFSET	ELEVATION
850	380+46.0	41.8 RT	516.8±
851	380+26.0	43.2 RT	517.0±
852	380+24.6	42.2 RT	520.3±
853	380+24.6	29.9 RT	520.2±
854	380+44.9	29.9	516.7±
855	380+17.0	28.0 LT	517.3±
856	380+13.6	76.4 LT	488.0±
857	380+13.6	80.4 LT	483.9±
858	380+31.2	98.9 LT	483.9±
859	380+40.9	98.8 LT	488.5±



SECTION B-B



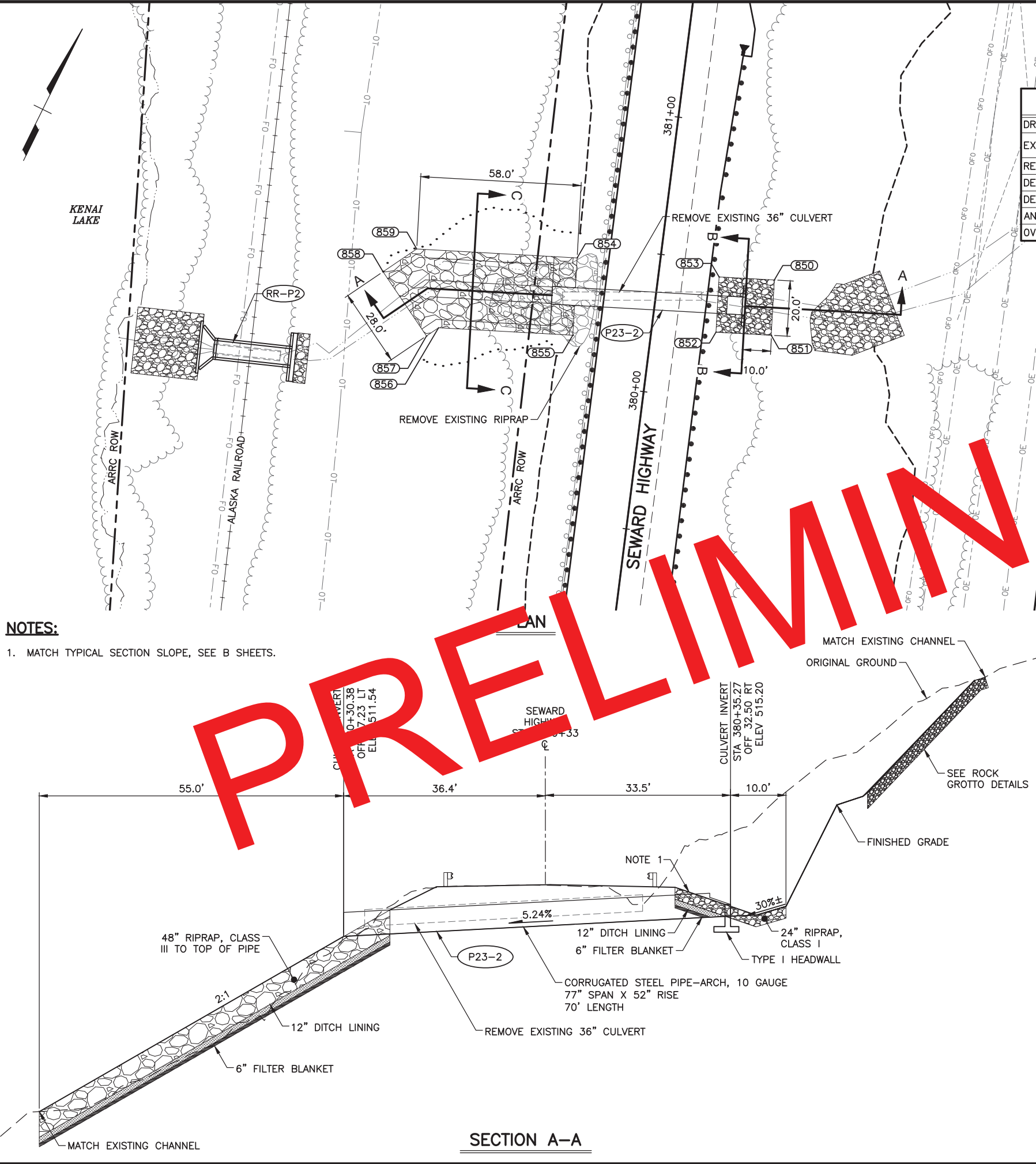
SECTION C-C



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**

**PIPE DETAILS
P23-2
STA. 380+33**



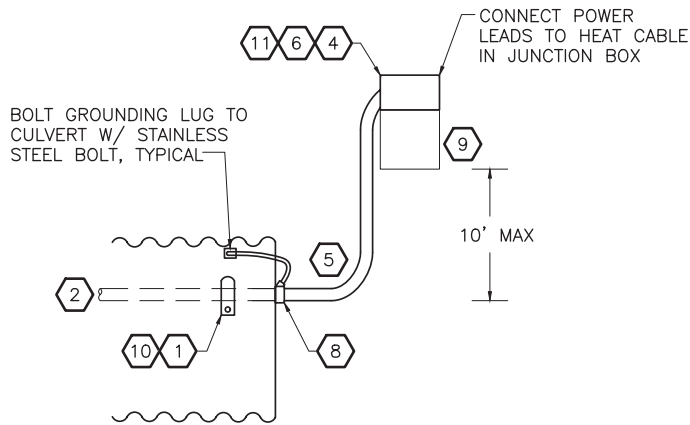
NOTES:

1. MATCH TYPICAL SECTION SLOPE, SEE B SHEETS.

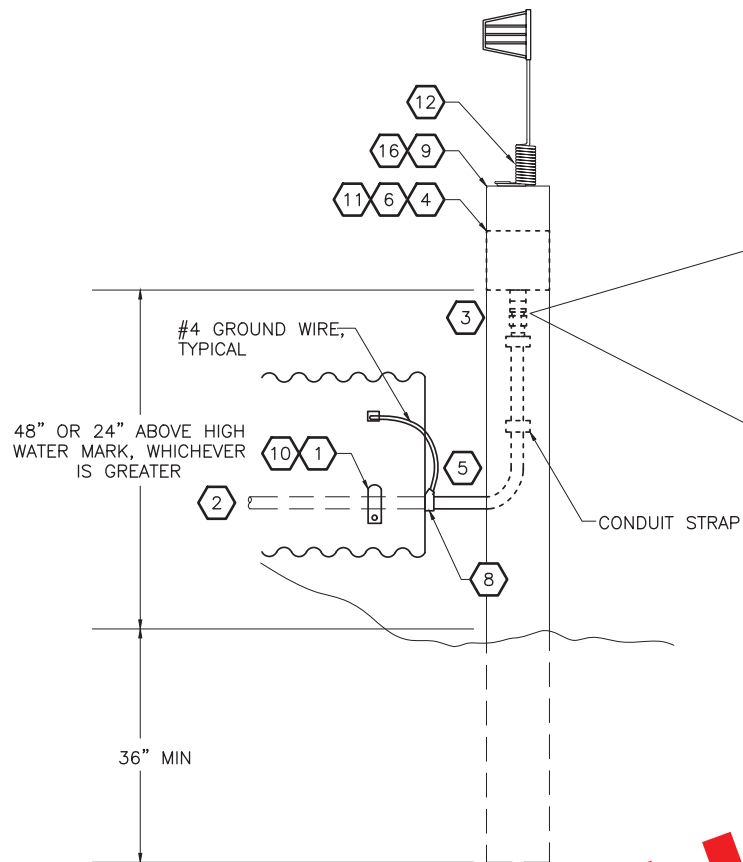
SECTION A-A

DESIGNED BY
CHECKED BY
DRAFTED BY
XREES
SCALE
LAYOUT
16811 - E39
DATE TIME
11/23/2020 2:50 PM
DRAWING LOCATION
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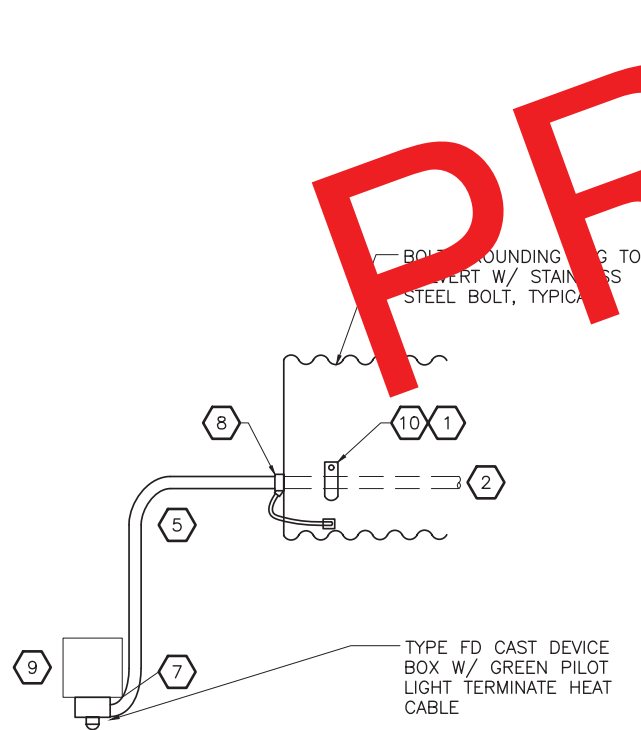
SUPPORT FOR RIGID METAL CONDUIT	
CONDUIT SIZE (INCHES)	MAXIMUM DISTANCE BETWEEN RIGID METAL CONDUIT SUPPORTS (FEET)
1	12
1.25 - 1.5	14



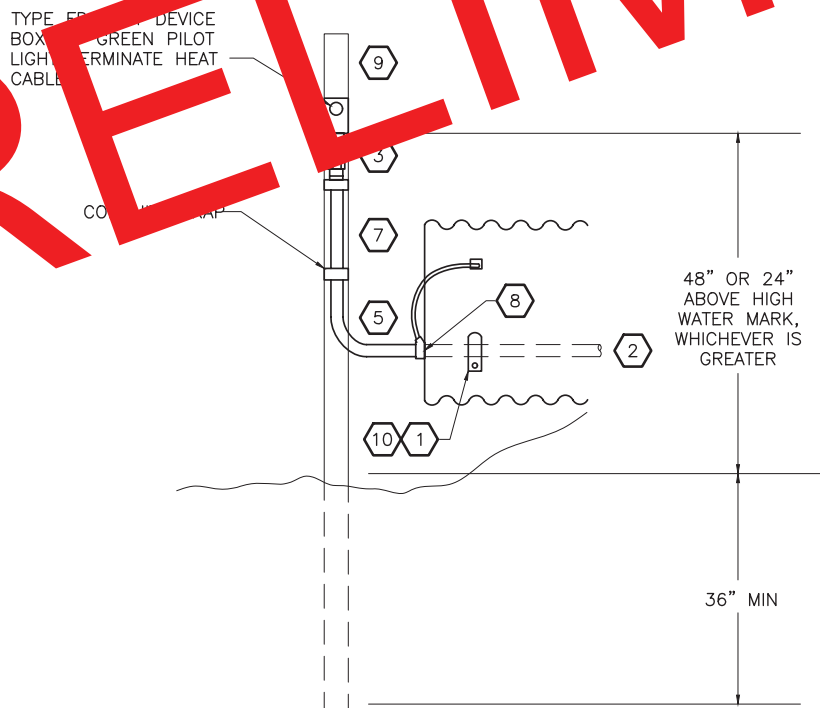
CULVERT OUTLET DETAIL - PLAN VIEW



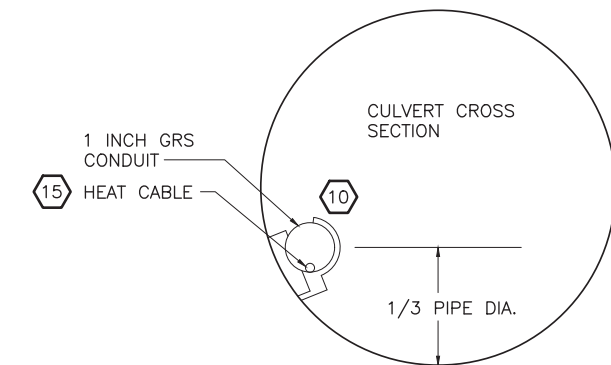
CULVERT OUTLET DETAIL - PROFILE VIEW



CULVERT INLET DETAIL - PLAN VIEW



CULVERT INLET DETAIL - PROFILE VIEW



CONDUIT FASTENING DETAIL

HEAT TRACE CABLE SEAL
STRAIN RELIEF FITTING DETAIL

REVISIONS		
NO.	DATE	DESCRIPTION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0311032/Z536100000	2020	E39	E43

SHEET NOTES

- CONDUIT SUPPORTS IN CULVERTS TO BE SPACED PER NEC TABLE 344.30 (B)(2).
- HEAT TRACE CABLE IN RIGID CONDUIT.
- STRAIN RELIEF FITTING, SEPARATES ELECTRICAL CONNECTIONS FROM WATER IN CONDUIT CONTAINING HEAT TRACE CABLE.
- WET LOCATION JUNCTION BOX 8"H X 8"W X 4"D W/ INTERFACE BETWEEN THE HEATING CONDUCTORS AND NON-HEATING CONDUCTORS - MOUNT 49 INCHES OR 24 INCHES ABOVE HIGH WATER LEVEL.
- 1 INCH COLD WEATHER RATED LIQUID TIGHT FLEXIBLE METAL CONDUIT. LEAVE ENOUGH SLACK FOR 2' MOVEMENT OF POST. ELECTRA-FLEX ATLA OR APPROVED EQUAL.
- POWER INLET LOCKING NEMA L6-30P, 240 VOLT 30 AMP.
- CONDUIT WITH HEAT TRACE CABLE TO GREEN PILOT LIGHT.
- CONNECTOR WITH GROUNDING LUG FOR #4 GROUND WIRE.
- 6" X 6" TREATED WOOD POST. PLACE AS APPROVED BY THE ENGINEER.
- TWO-HOLE MALLEABLE IRON CONDUIT CLAMP. SECURE TO CULVERT WITH SELF-TAPPING STAINLESS STEEL SCREW.
- SPLICE HEATING AND NON-HEATING CONDUCTORS IN JUNCTION BOX.
- PROVIDE 6'-0", FLEXIBLE, SPRING STEEL MARKER WITH HDPE FLAG. NORDIC FIBERGLASS FLEXI-FLAG CM-2 OR APPROVED EQUAL.
- ALL PILOT LIGHTS SHALL BE LIGHT EMITTING DIODE (LED).
- PLACE 6" X 6" POST ON HIGH GROUND OUT OF WATER AT ENGINEER'S DISCRETION, OUTSIDE OF 24 FOOT CLEAR ZONE.
- HEAT TRACE CABLE - 12 WATTS/FOOT AT 240 VOLT CURRENT SELF LIMITING, MAX TEMP 150 DEGREES FAHRENHEIT.
- PROVIDE WARNING SIGN ON POST TO CAUTION OF ELECTRICAL HEAT TRACE PRESENT. SIGN SHALL READ "CAUTION ELECTROCUTION HAZARD - ELECTRIC HEAT TRACE PRESENT" OR AS OTHERWISE RECOMMENDED BY THE HEAT TRACE MANUFACTURER AND AS REQUIRED BY NEC ARTICLE 426.13.
- PROVIDE FIVE (5) EACH 30 AMP, 240/120V, 1Ø, 3W, INLINE GROUND FAULT INTERRUPTERS FOR USE IN DEPARTMENT ICE MELTING/THAWING ACTIVITIES. CONFIGURE INLINE GROUND FAULT INTERRUPTERS FOR OPEN NEUTRAL OR GROUNDED NEUTRAL OPERATION AS REQUIRED BY THE DEPARTMENT.

PLANS DEVELOPED BY:
AMC ENGINEERS
701 EAST TUDOR ROAD
ANCHORAGE, AK 99503
(907) 257-9100
CERT. OF AUTH. NO. AECC342



AMC ENGINEERS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

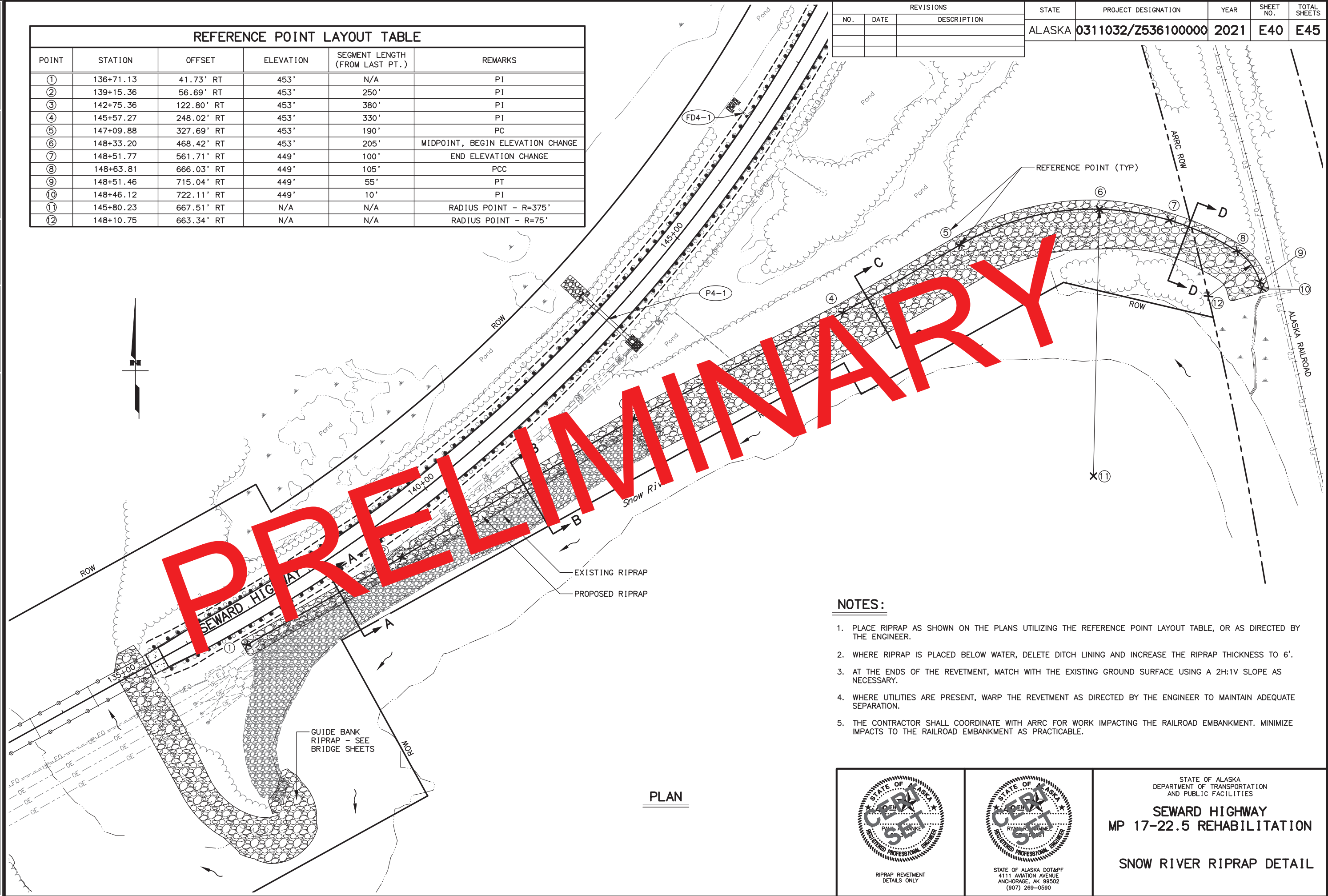
SEWARD HIGHWAY
MP 17 - 22.5
REHABILITATION

DETAILS - CULVERT THAW
WIRE

DRAWING LOCATION
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DATE TIME
4/2/2021 4:25 PM
LAYOUT
E40
SCALE
1" = 60'
DESIGNED BY
KOS/ZDK/RRH
CHECKED BY
RRH
DRAFTED BY
ZDK/VUS

REFERENCE POINT LAYOUT TABLE					
POINT	STATION	OFFSET	ELEVATION	SEGMENT LENGTH (FROM LAST PT.)	REMARKS
①	136+71.13	41.73' RT	453'	N/A	PI
②	139+15.36	56.69' RT	453'	250'	PI
③	142+75.36	122.80' RT	453'	380'	PI
④	145+57.27	248.02' RT	453'	330'	PI
⑤	147+09.88	327.69' RT	453'	190'	PC
⑥	148+33.20	468.42' RT	453'	205'	MIDPOINT, BEGIN ELEVATION CHANGE
⑦	148+51.77	561.71' RT	449'	100'	END ELEVATION CHANGE
⑧	148+63.81	666.03' RT	449'	105'	PCC
⑨	148+51.46	715.04' RT	449'	55'	PT
⑩	148+46.12	722.11' RT	449'	10'	PI
⑪	145+80.23	667.51' RT	N/A	N/A	RADIUS POINT - R=375'
⑫	148+10.75	663.34' RT	N/A	N/A	RADIUS POINT - R=75'

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0311032/Z536100000	2021	E40	E45



NOTES:

1. PLACE RIPRAP AS SHOWN ON THE PLANS UTILIZING THE REFERENCE POINT LAYOUT TABLE, OR AS DIRECTED BY THE ENGINEER.
2. WHERE RIPRAP IS PLACED BELOW WATER, DELETE DITCH LINING AND INCREASE THE RIPRAP THICKNESS TO 6'.
3. AT THE ENDS OF THE REVETMENT, MATCH WITH THE EXISTING GROUND SURFACE USING A 2H:1V SLOPE AS NECESSARY.
4. WHERE UTILITIES ARE PRESENT, WARP THE REVETMENT AS DIRECTED BY THE ENGINEER TO MAINTAIN ADEQUATE SEPARATION.
5. THE CONTRACTOR SHALL COORDINATE WITH ARRC FOR WORK IMPACTING THE RAILROAD EMBANKMENT. MINIMIZE IMPACTS TO THE RAILROAD EMBANKMENT AS PRACTICABLE.

PLAN



RIPRAP REVETMENT
DETAILS ONLY

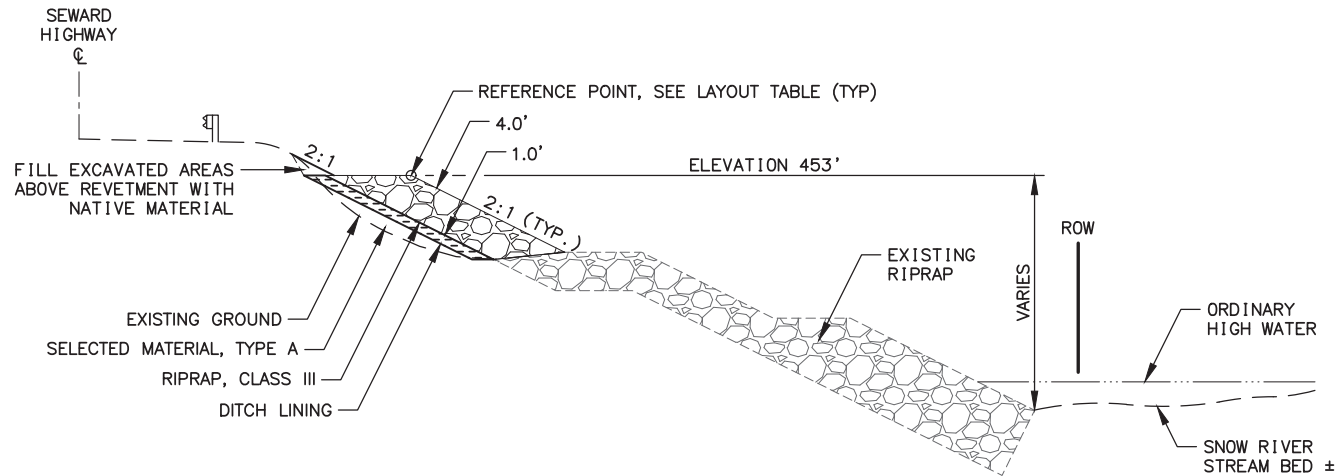


STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 268-0590

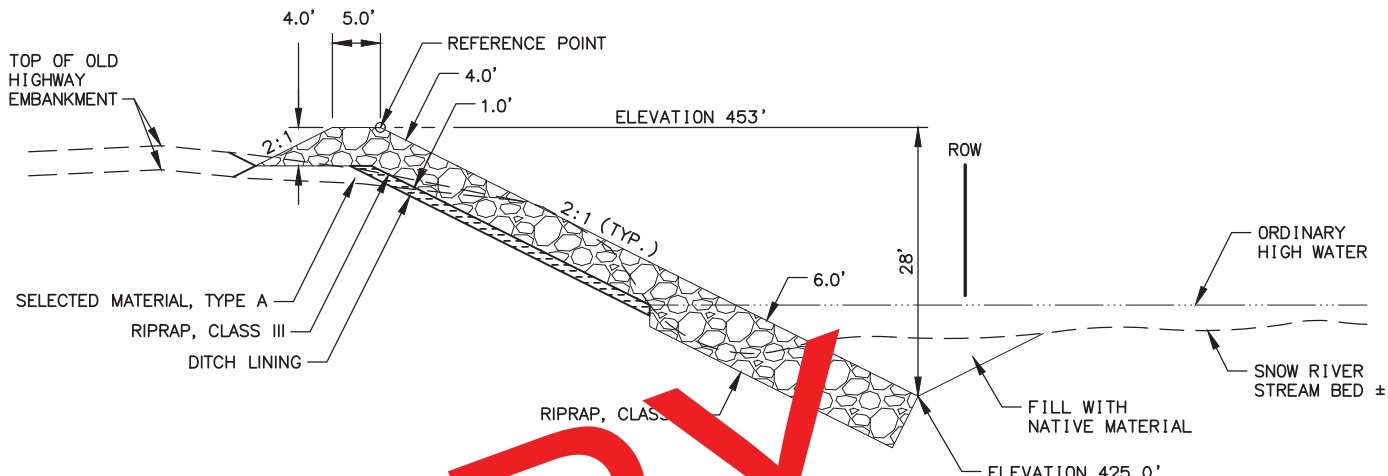
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**
SNOW RIVER RIPRAP DETAIL

DESIGNED BY: KOS/ZDK/RRH
CHECKED BY: RRH
DRAFTED BY: ZDK/VJS
XREFS: XR-53610-Base, XR-53610-Desig, XR-53610-ROW
SCALE: 1" = 10'
LAYOUT: E41
DATE: 4/2/2021 4:25 PM
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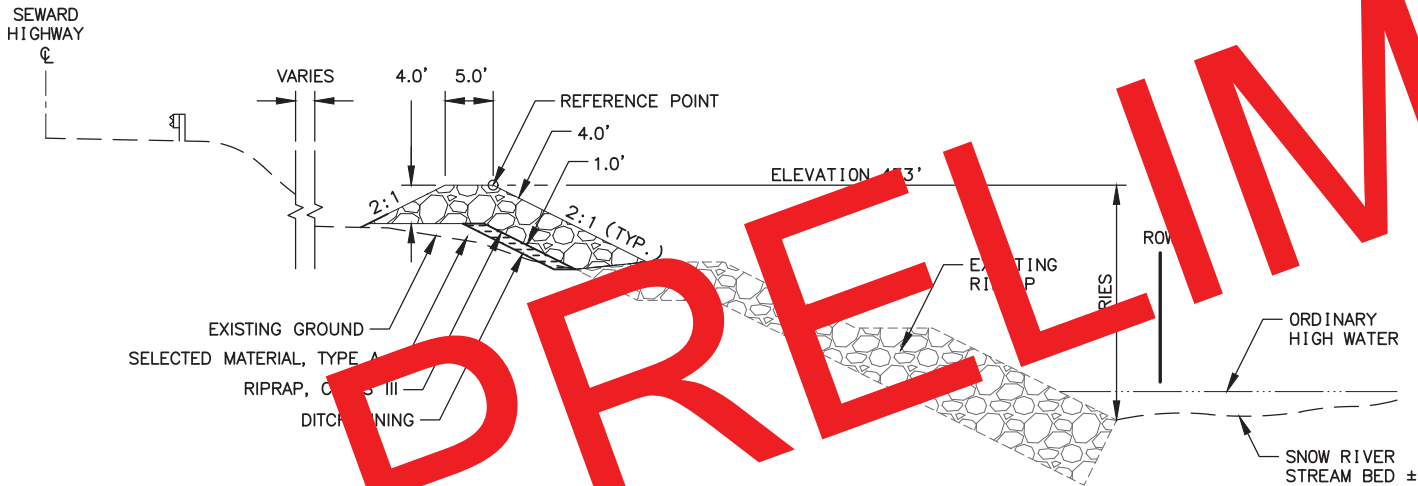
REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0311032/Z536100000	2021	E41	E45



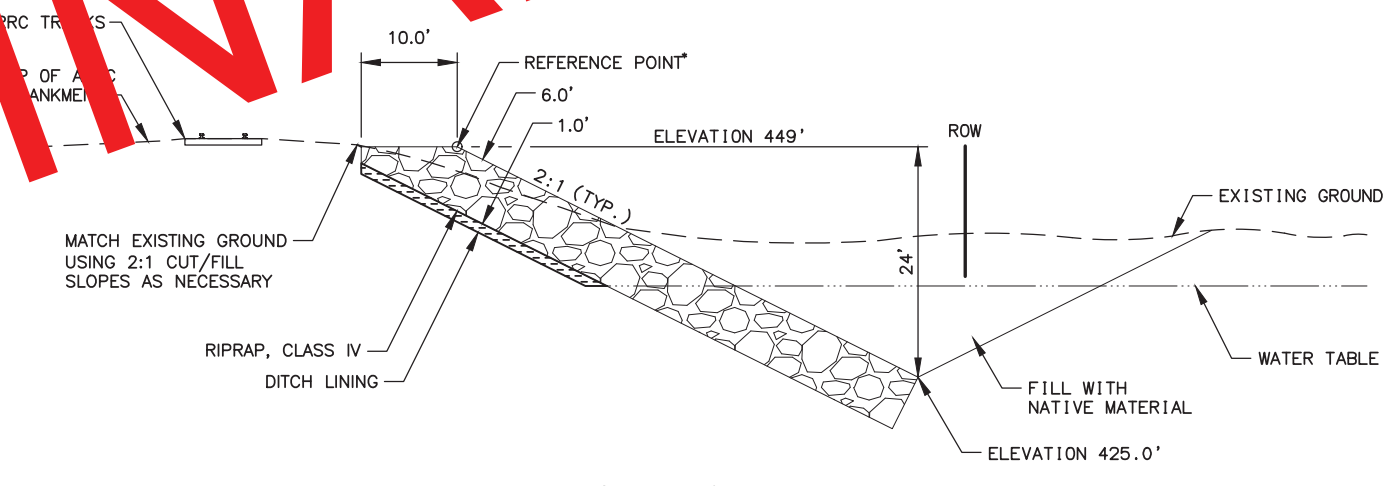
TYPICAL SECTION A-A
REFERENCE PT. 1 TO REFERENCE PT. 2



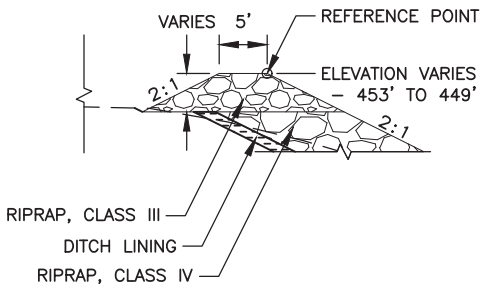
TYPICAL SECTION C-C
REFERENCE PT. 3 TO REFERENCE PT. 6



TYPICAL SECTION B-B
REFERENCE PT. 2 TO REFERENCE PT. 3



TYPICAL SECTION D-D
REFERENCE PT. 6* TO REFERENCE PT. 10
*SEE BERM TRANSITION SECTION



BERM TRANSITION SECTION
REFERENCE PT. 6 TO REFERENCE PT. 7

NOTE:

1. BETWEEN REFERENCE POINTS 6 AND 7, UNIFORMLY TRANSITION THE CLASS III RIPRAP BERM FROM A HEIGHT OF 4' TO 0'. THROUGH THE TRANSITION, USE THE BERM REFERENCE POINT AS SHOWN IN THIS SECTION TO SET THE REVETMENT LOCATION; AFTER THE TRANSITION IS COMPLETED, USE THE REFERENCE POINT AS SHOWN ON SECTION D-D.



RIPRAP REVETMENT
DETAILS ONLY



STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 268-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**
SNOW RIVER RIPRAP DETAIL

DESIGNED BY: LML\KOS\ZOK
CHECKED BY: RRH
DRAFTED BY: LML

XREFS: XR-53610-0-Border-De la J

SCALE: 1" = 1'

LAYOUT: E42

DATE: 3/2/2021 7:48 PM

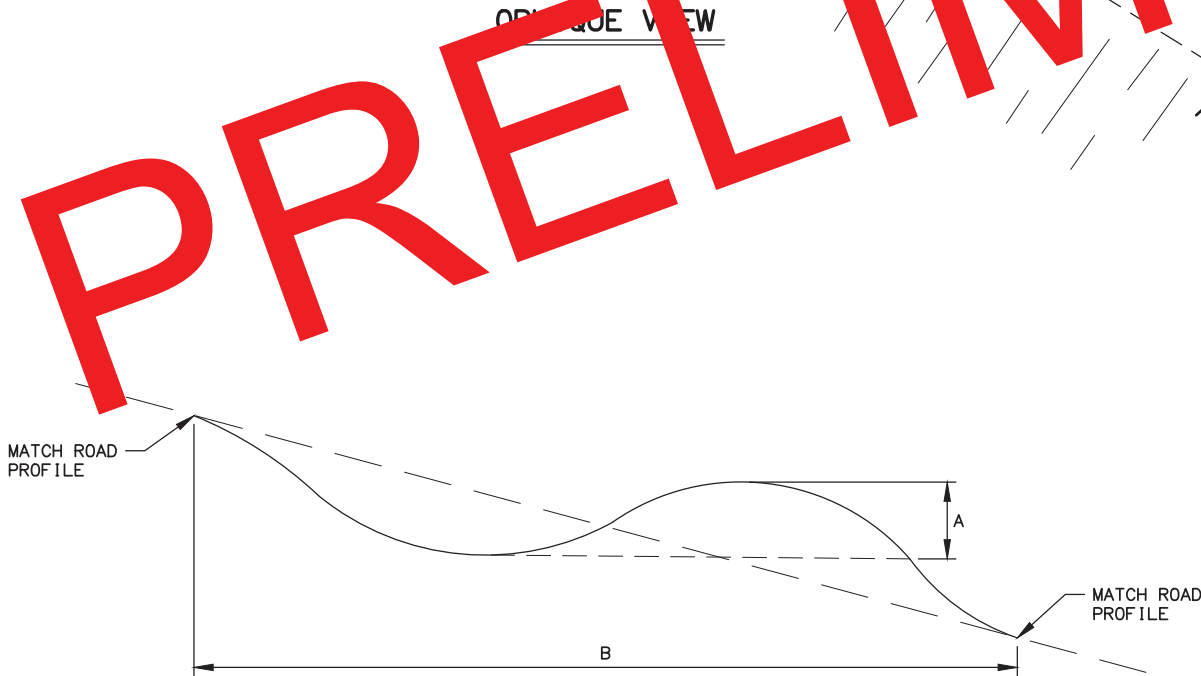
DRAWING LOCATION: w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civil\3D16\Plan\set\53610_E42_Water Bar.dwg

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0311032/Z536100000	2021	E42	E45

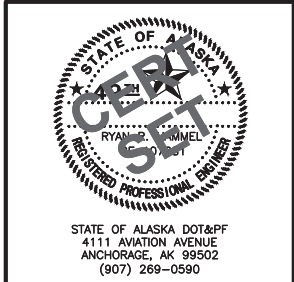


- NOTES:**
1. ALL WATER BARS SHALL BEGIN AT THE INTERSECTION OF THE ROADBED AND CUT SLOPE AND RUN ACROSS THE ENTIRE WIDTH OF THE ROADBED.
 2. ALL WATER BARS SHALL HAVE FREE FLOWING OUTLETS.
 3. SEE F SHEETS FOR ELECTRIC TRAIL WATER BAR LOCATIONS.

WATER BAR SPACING INTERVALS	
ROAD GRADE (%)	SPACING (FT)
2	250
5	135
10	80
15	60
20	45
30	35



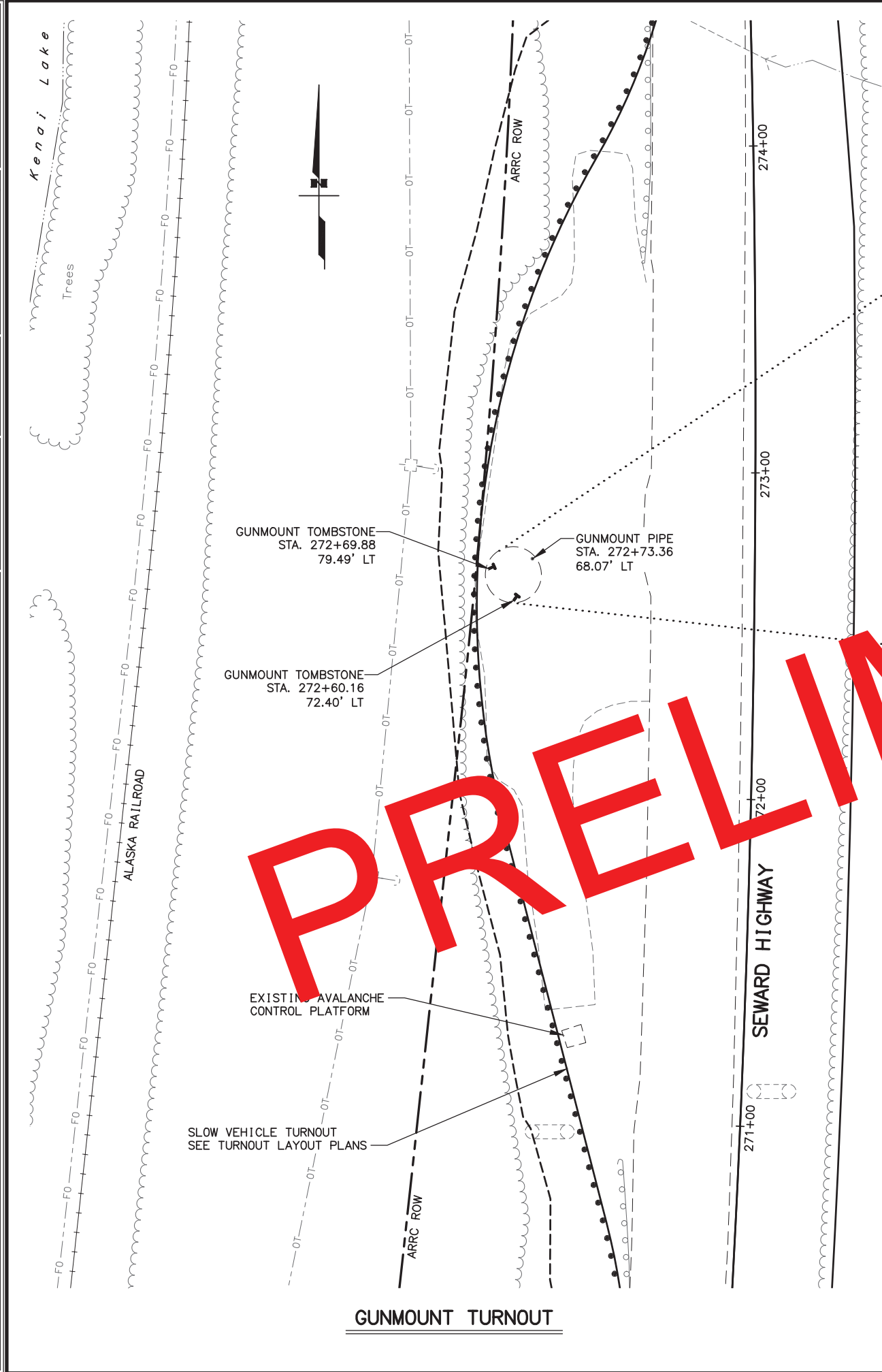
SECTION A-A
A = 8 TO 12 INCHES
B = 6 TO 12 FEET



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**

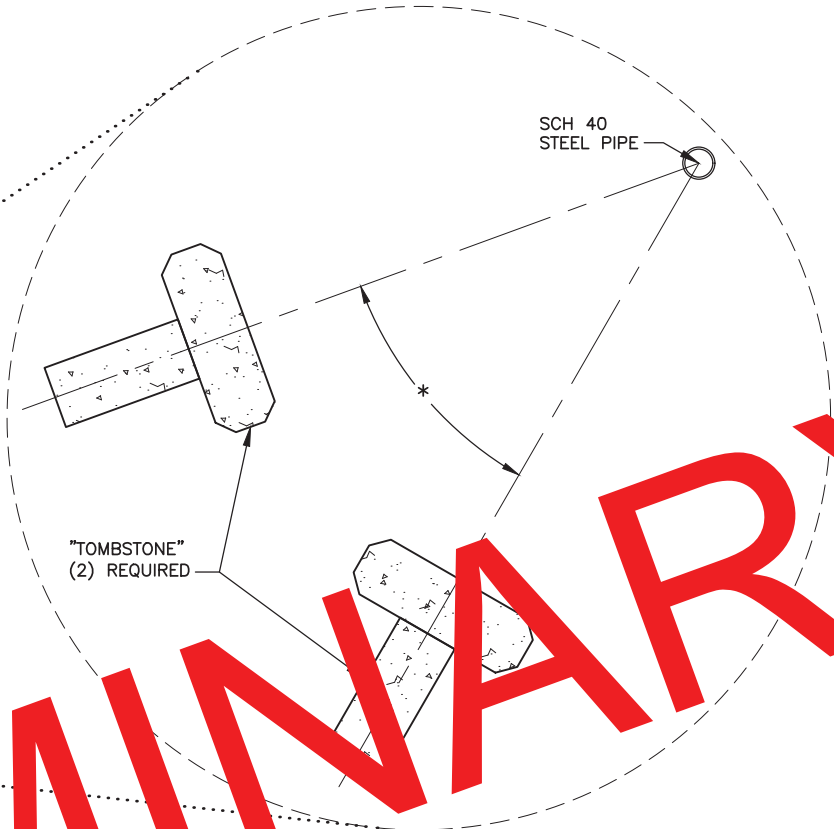
**ELECTRIC TRAIL
WATER BAR DETAIL**



REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0311032/Z536100000	2021	E43	E45

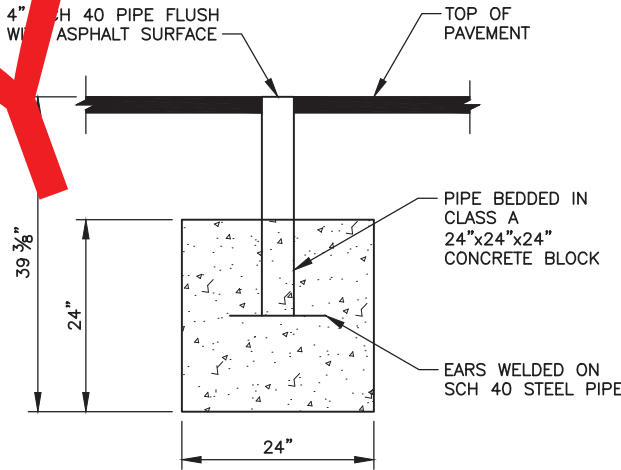
GUNMOUNT NOTES:

1. STAKE GUNMOUNT PIPE LOCATION PRIOR TO CONSTRUCTION STAKING OF PAD. FINAL LOCATION OF PAD AND GUNMOUNT LOCATION AS DIRECTED BY THE ENGINEER.
2. TOMBSTONES TO BE CONSTRUCTED FROM CONCRETE, CLASS A.
3. COORDINATE PAD PLACEMENT AND GUNMOUNT ORIENTATION WITH CENTRAL REGION M&O AVALANCHE SPECIALIST AT 907-783-2772 PRIOR TO CONSTRUCTION.
4. EXCAVATE AND POUR CONCRETE PRIOR TO PLACING ASPHALT CONCRETE PAVEMENT.
5. ANY STOCKPILED MATERIAL IN VICINITY OF GUNMOUNT SHALL BE COORDINATED WITH CENTRAL REGION M&O AVALANCHE SPECIALIST TO ENSURE IT DOES NOT INTERFERE WITH AVALANCHE MITIGATION.

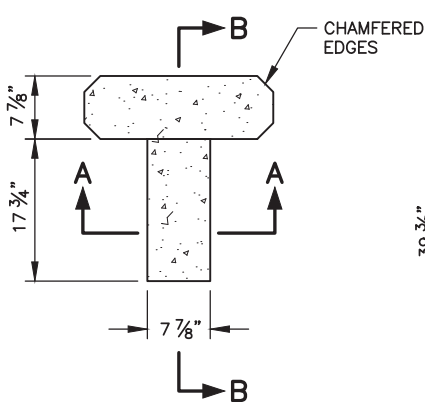


PLAN LAYOUT

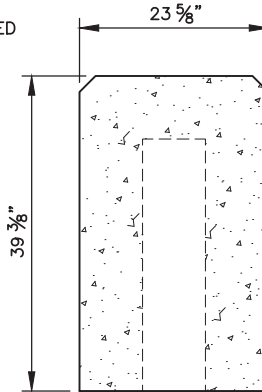
*ANGLE FIELD ORIENTATION TO BE DETERMINED BY MAINTENANCE PERSONNEL



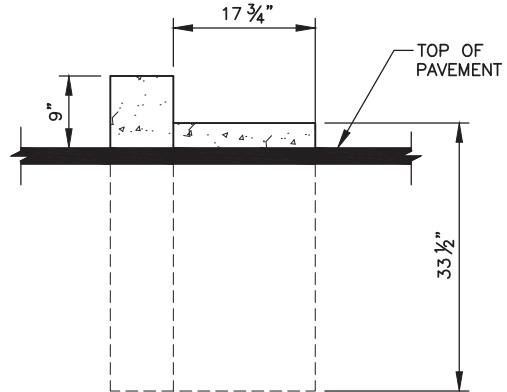
GUNMOUNT PIPE
SIDE VIEW



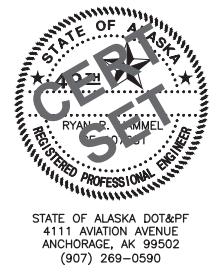
"TOMBSTONE"
PLAN VIEW



"TOMBSTONE"
SECTION A-A



"TOMBSTONE"
SECTION B-B



STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 268-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

SEWARD HIGHWAY
MP 17-22.5 REHABILITATION

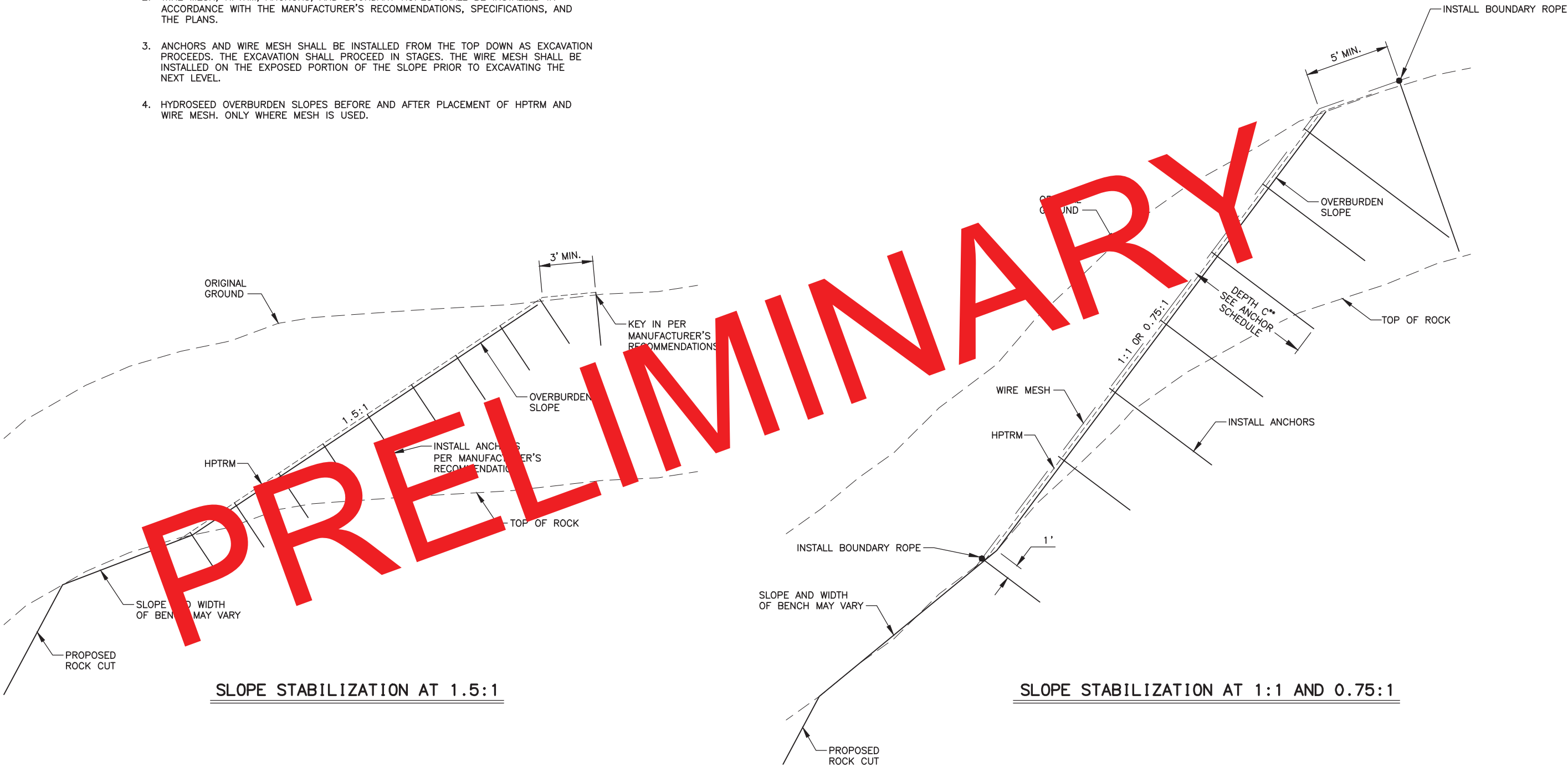
TOMBSTONE GUN MOUNT
DETAILS

DRAWING LOCATION: w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civil\3D16\Plan\set\53610_E44_DB Slope Protection.dwg DATE TIME: 4/14/2021 8:16 AM LAYOUT: E44 SCALE: 1" = 1' DESIGNED BY: RRH/ZDK CHECKED BY: RMW/RRH DRAFTED BY: RRH

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0311032/Z536100000	2021	E44	E45

NOTES:

- ON 1:1 OR 0.75:1 SLOPES, INSTALL HPTRM MAT ON THE SLOPE UNDER THE WIRE MESH OR AS INDICATED ON THE PLANS AND AS DIRECTED BY THE ENGINEER. ON 1.5:1 SLOPES, INSTALL HPTRM ONLY.
- WIRE MESH, HPTRM, ANCHORS, AND BOUNDARY ROPES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, SPECIFICATIONS, AND THE PLANS.
- ANCHORS AND WIRE MESH SHALL BE INSTALLED FROM THE TOP DOWN AS EXCAVATION PROCEEDS. THE EXCAVATION SHALL PROCEED IN STAGES. THE WIRE MESH SHALL BE INSTALLED ON THE EXPOSED PORTION OF THE SLOPE PRIOR TO EXCAVATING THE NEXT LEVEL.
- HYDROSEED OVERBURDEN SLOPES BEFORE AND AFTER PLACEMENT OF HPTRM AND WIRE MESH. ONLY WHERE MESH IS USED.



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
**SEWARD HIGHWAY
MP 17-22.5 REHABILITATION**
**OVERBURDEN SLOPE
PROTECTION DETAILS**

DESIGNED BY: MRW/ZDK
CHECKED BY: MRW/RRH
DRAFTED BY: ZDK

SCALE: VARIES

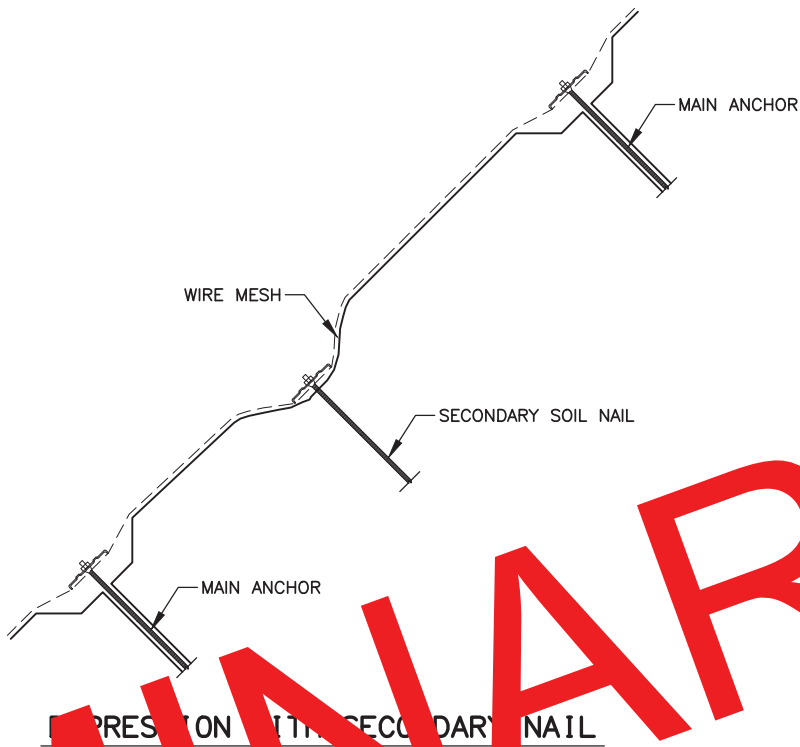
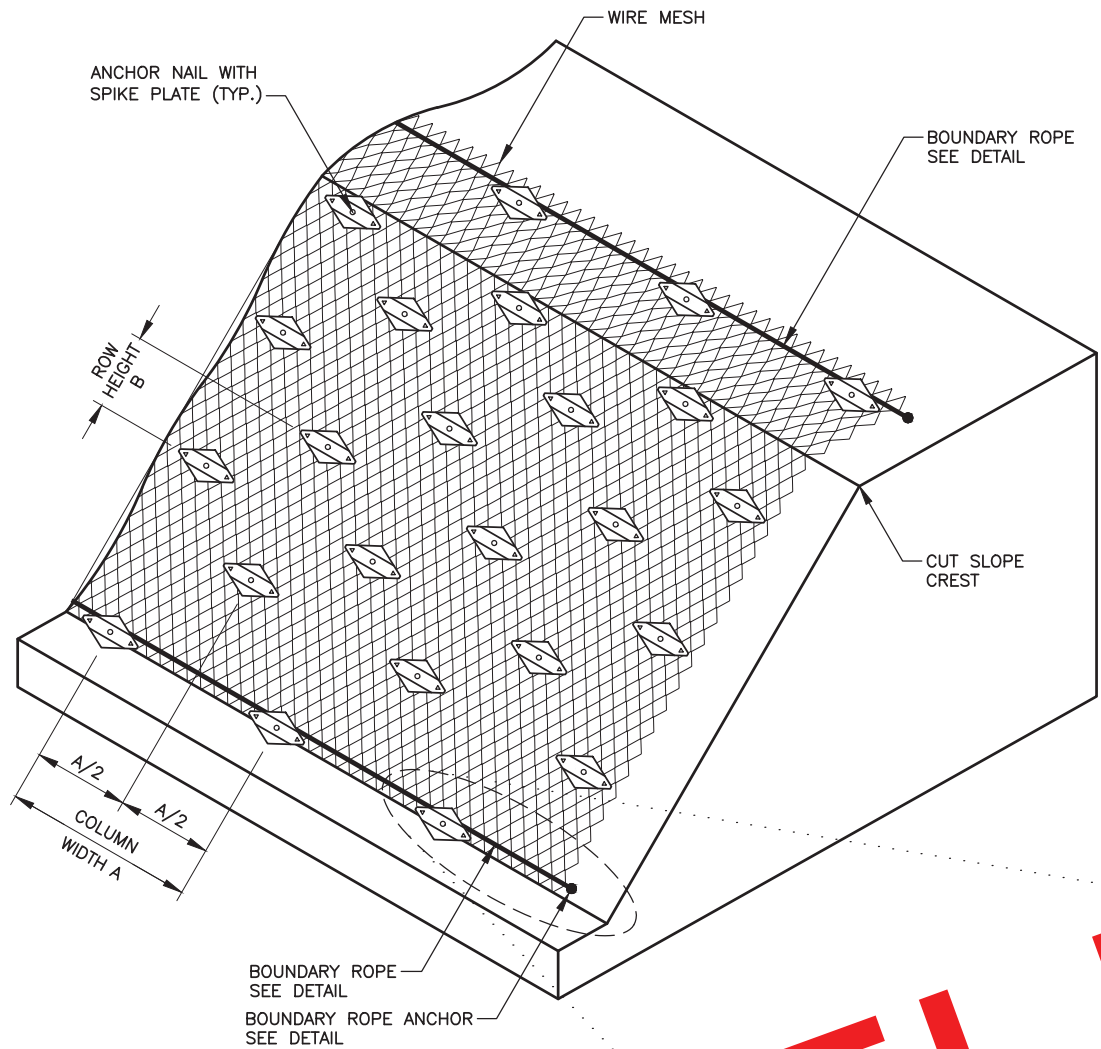
LAYOUT: E45

DATE: 4/14/2021 8:16 AM

DRAWING LOCATION: w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civil\3D16\Plan\set\53610_E44_DB Slope Protection.dwg

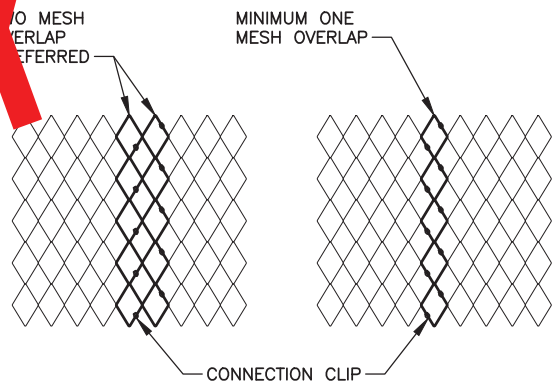
REVISIONS		
NO.	DATE	DESCRIPTION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0311032/Z536100000	2021	E45	E45



NOTES:

1. INSTALL SECONDARY SOIL NAILS AS DIRECTED BY THE ENGINEER AND WHERE DEPRESSIONS IN THE FINAL GRADE ARE GREATER THAN 0.5' AND LESS THAN 1.5'. SECONDARY SOIL NAIL DEPRESSIONS ARE NOT TO EXCEED 1.5' IN DEPTH.
2. LOCATE BOTTOM ROW OF ANCHORS 12" BELOW THE SOIL-ROCK INTERFACE. INSTALL SECONDARY SOIL NAILS AS REQUIRED TO MAINTAIN CONTACT BETWEEN THE BOUNDARY ROPE AND GROUND.
3. WRAP ANCHOR NAILS ABOVE TOP OF GROUT LIMIT SHOWN IN THE ANCHOR NAIL DETAIL, TO PREVENT GROUT FROM BONDING TO THE EXPOSED THREADS.
4. CUT NAILS SO THAT THE HEAD OF THE NAIL PROTRUDES ABOVE THE SURROUNDING FINAL GRADE.
5. EXCAVATE HOLES AROUND EACH ANCHOR AS SHOWN IN THE DETAIL PRIOR TO PLACING AND TENSIONING MESH.



LACING OF MESH SHEETS

ANCHOR SCHEDULE 1				
ANCHOR NAIL TYPE	APPLICATION AREA*	COLUMN WIDTH A (FT)	ROW HEIGHT B (FT)	DEPTH C** (FT)
TYPE I (UPPER SLOPE)	ROWS 1 AND 2	10	12	3.5
TYPE II (MID SLOPE)	AS REQ'D	10	12	10
TYPE III (LOWER SLOPE)	LAST 2 ROWS	10	14	8
ANCHOR SCHEDULE 2				
ANCHOR NAIL TYPE	APPLICATION AREA*	COLUMN WIDTH A (FT)	ROW HEIGHT B (FT)	DEPTH C** (FT)
TYPE I (UPPER SLOPE)	ROWS 1 AND 2	10	8	17
TYPE II (MID SLOPE)	AS REQ'D	10	10	12
TYPE III (LOWER SLOPE)	LAST 2 ROWS	10	12	10
ANCHOR SCHEDULE 3				
ANCHOR NAIL TYPE	APPLICATION AREA*	COLUMN WIDTH A (FT)	ROW HEIGHT B (FT)	DEPTH C** (FT)
TYPE I (UPPER SLOPE)	ROWS 1*** AND 2	10	6.5	17
TYPE II (MID SLOPE)	AS REQ'D	10	8	12
TYPE III (LOWER SLOPE)	LAST 2 ROWS	10	12	10

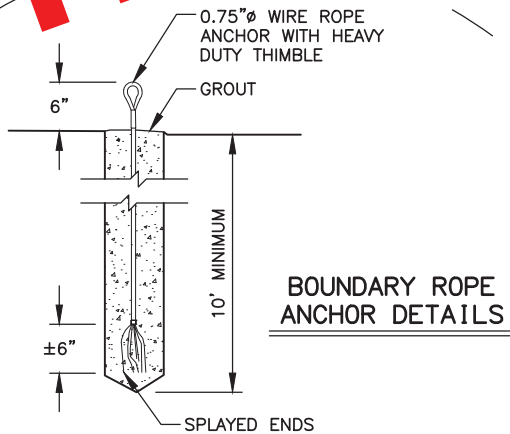
*ANCHOR SCHEDULE RETAINED OVERBURDEN SOIL LAYER THICKNESS.

ANCHOR SCHEDULE 1: THICKNESS $\leq 4'$
ANCHOR SCHEDULE 2: $4' < \text{THICKNESS} \leq 7.5'$
ANCHOR SCHEDULE 3: $7.5' < \text{THICKNESS}$

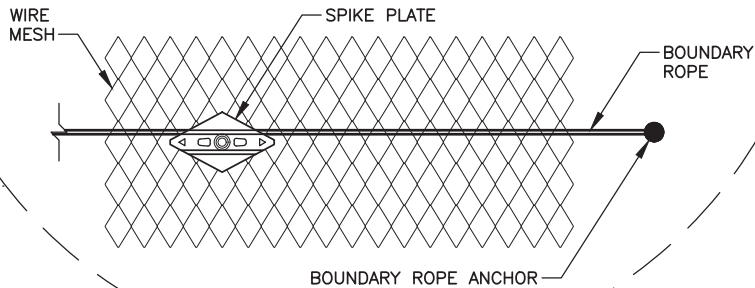
**IF BEDROCK IS ENCOUNTERED BEFORE REACHING EMBEDMENT DEPTH, ANCHORS SHALL BE ADVANCED A MINIMUM OF "X" FEET INTO ROCK OR TO THE DESIGN DEPTH, WHICHEVER OCCURS FIRST.

ANCHOR SCHEDULE 1: X = 5'
ANCHOR SCHEDULE 2 & 3: X = 6.5'

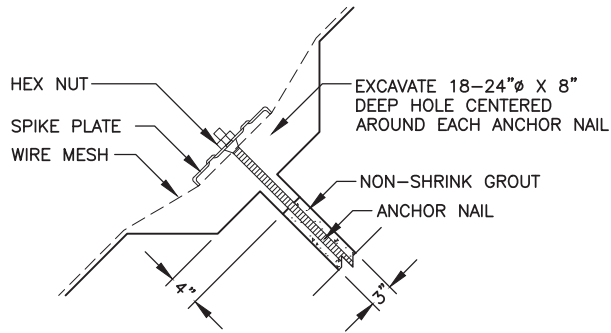
***FIRST ROW OF NAILS SHOULD BE INSTALLED 5 FEET BEYOND THE CUT SLOPE CREST.



BOUNDARY ROPE ANCHOR DETAILS



BOUNDARY ROPE DETAILS



ANCHOR NAIL DETAILS



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

SEWARD HIGHWAY
MP 17-22.5 REHABILITATION

OVERBURDEN SLOPE
PROTECTION DETAILS

DESIGNED BY: LML/ADS/ZDK/RRH
CHECKED BY: RRH
DRAFTED BY: LML/VJS/ZDK

REFERENCES: XR-53610-Barrier-Panels
XR-53610-Design-XR-53610-Base
XR-53610-Design-XR-53610-ROW

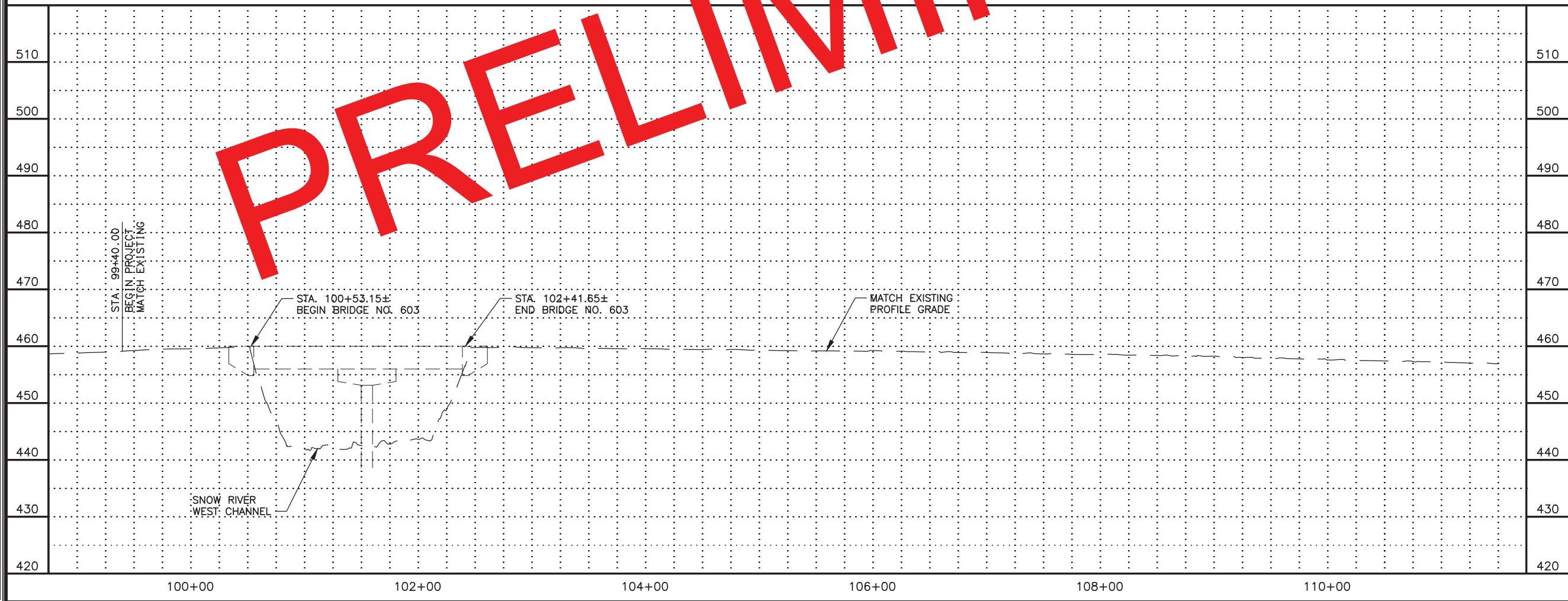
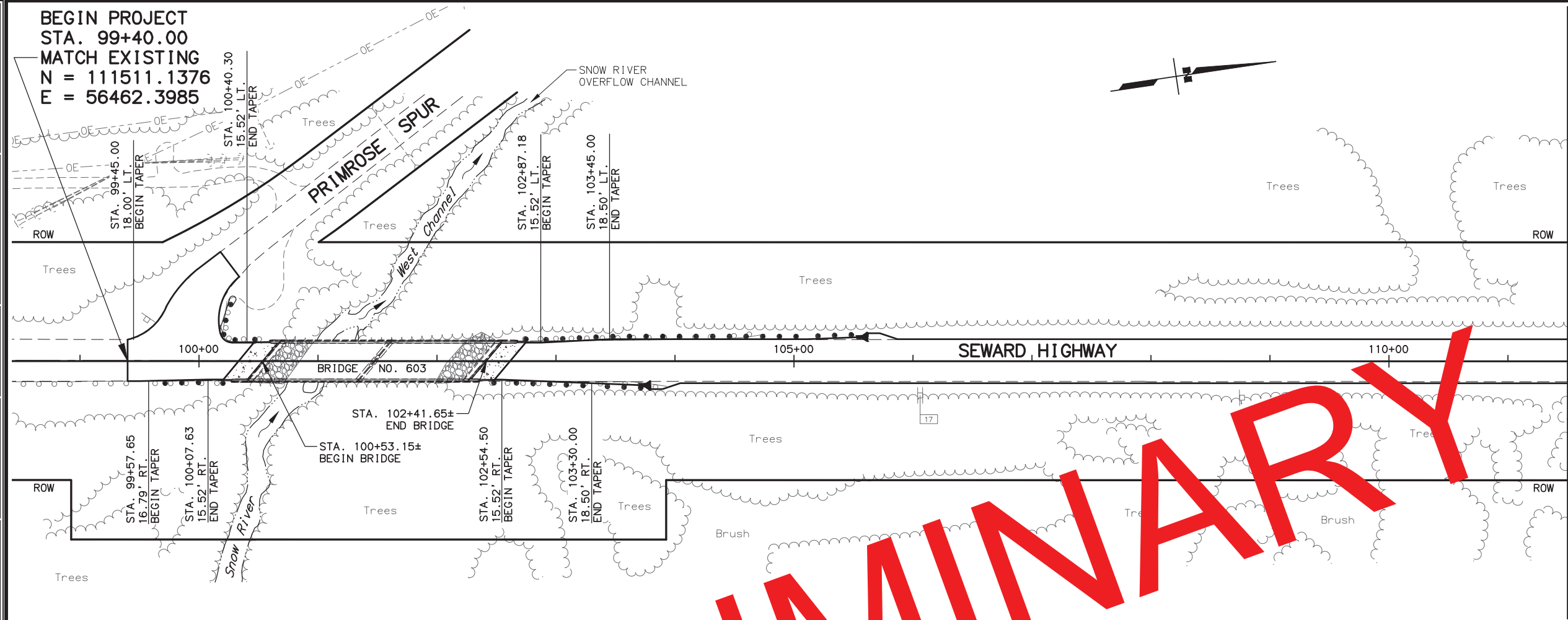
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LAYOUT: F01

DATE: 4/26/2021 9:51 AM

TIME: 9:51 AM

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SHEET NO.	TOTAL SHEETS	
F1	F38	
STATE	YEAR	
ALASKA	2021	
PROJECT DESIGNATION		
0311032/Z536100000		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

TO MOOSE PASS
Falls Creek
LAWING AIRPORT
Primrose Creek
Kenai Lake
Rocky Creek
Victor Creek
PRIMROSE SPUR
SEWARD HWY
Snow River
ARC
TO SEWARD

THIS SHEET

PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

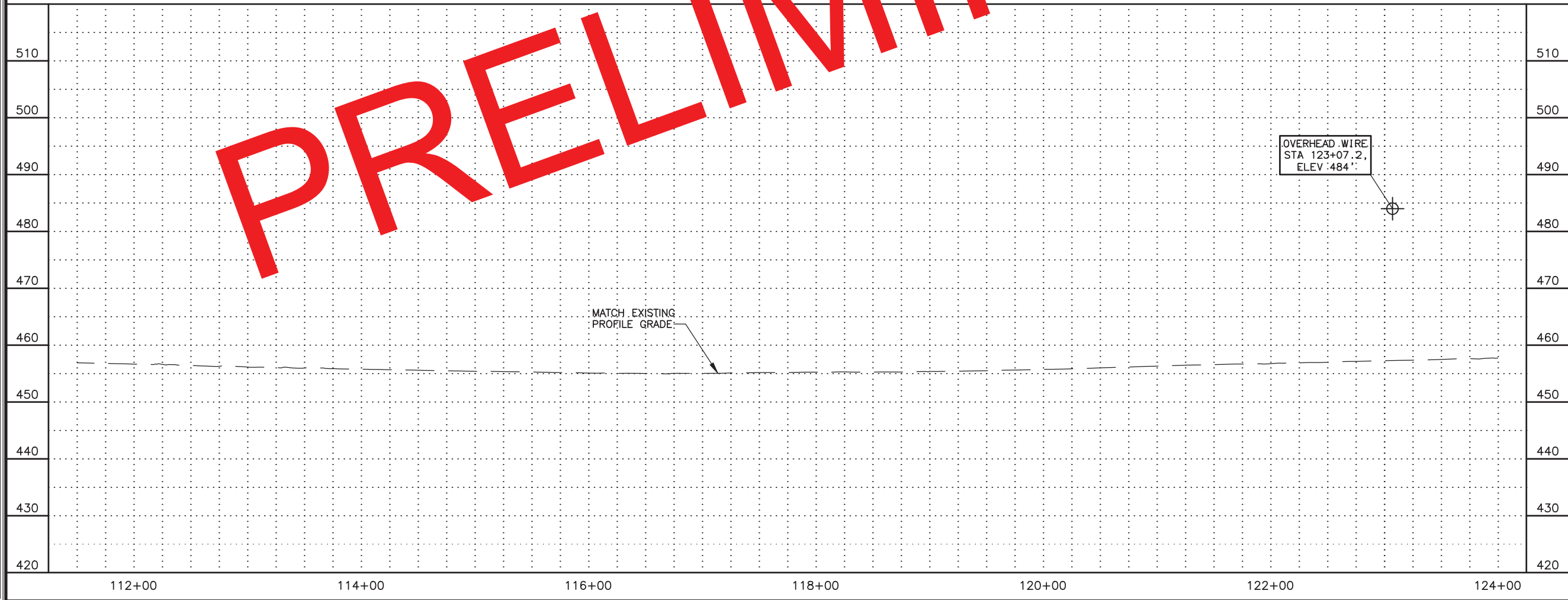
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

PLAN AND PROFILE
BOP TO 111+50

DESIGNED BY: LML/ADS/ZDK/RRH
CHECKED BY: RRH
DRAFTED BY: LML/VJS/ZDK
XREFS: XR-53610-Border_PandP
XR-53610_Desig.DWG
XR-53610_Base
XR-53610_ROW
SCALE: 1" = 50'
LAYOUT: F02
DATE: 4/26/2021 9:51 AM
TIME: 9:51 AM
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P.I. STA. 121+97.58
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MATCH EXISTING
SUPERELEVATION



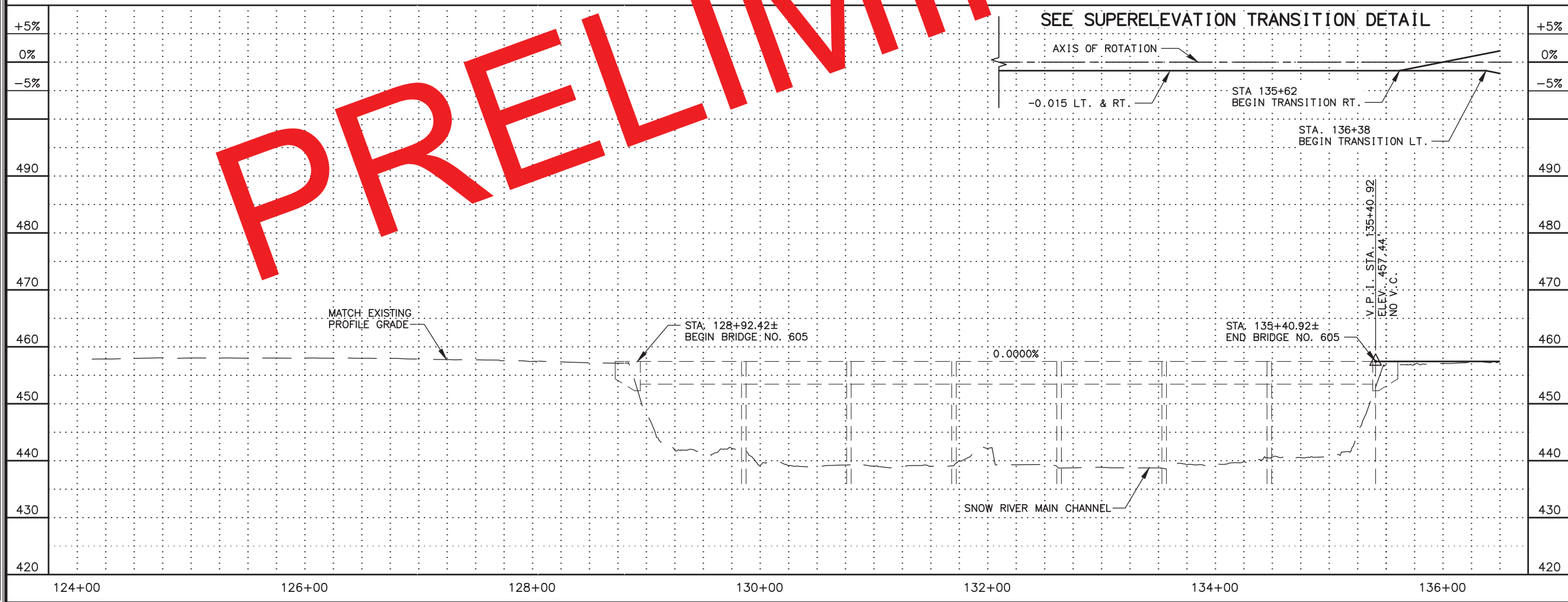
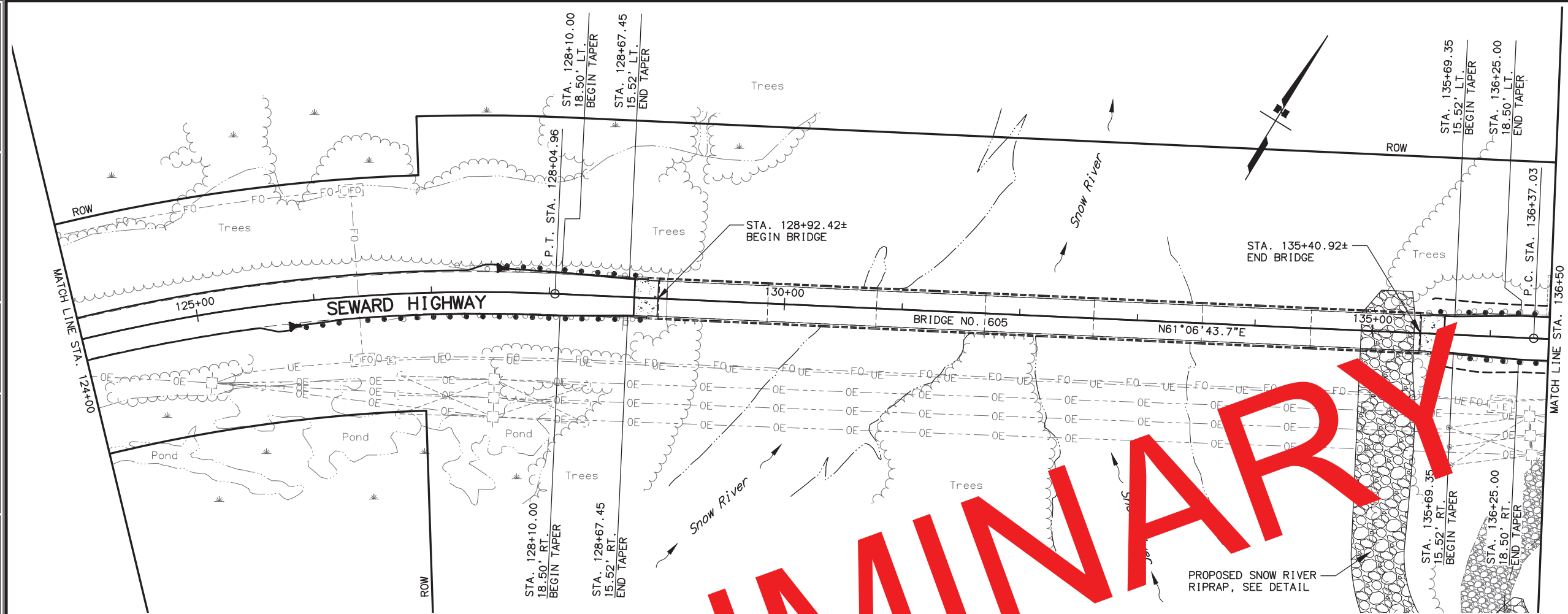
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F2		F38	
STATE		YEAR	
ALASKA		2021	
PROJECT DESIGNATION			
0311032/Z536100000			
ADDENDUM NO.			
ATTACHMENT NO.			
REVISIONS			
NO.	DATE	DESCRIPTION	

PLANS DEVELOPED BY:
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

PLAN AND PROFILE
111+50 TO 124+00

DRAWING LOCATION
w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civil\3D16\Plan\set\53610_F01-F12.dwg
DATE TIME
4/26/2021 9:51 AM
LAYOUT
F03
SCALE
1" = 50'
DESIGNED BY
LML\JDS/ZDK/RRH
CHECKED BY
RRH
DRAFTED BY
LML\JUS/ZDK



SHEET NO.	TOTAL SHEETS	
F3	F38	
STATE	YEAR	
ALASKA	2021	
PROJECT DESIGNATION		
0311032/Z536100000		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

TO MOOSE PASS
Falls Creek
Lawing Airport
Plumig Creek
Kenai Lake
Rocky Creek
Victor Creek
PRIMROSE SPUR
SEWARD HWY
Snow River
ARPC
TO SEWARD

THIS SHEET

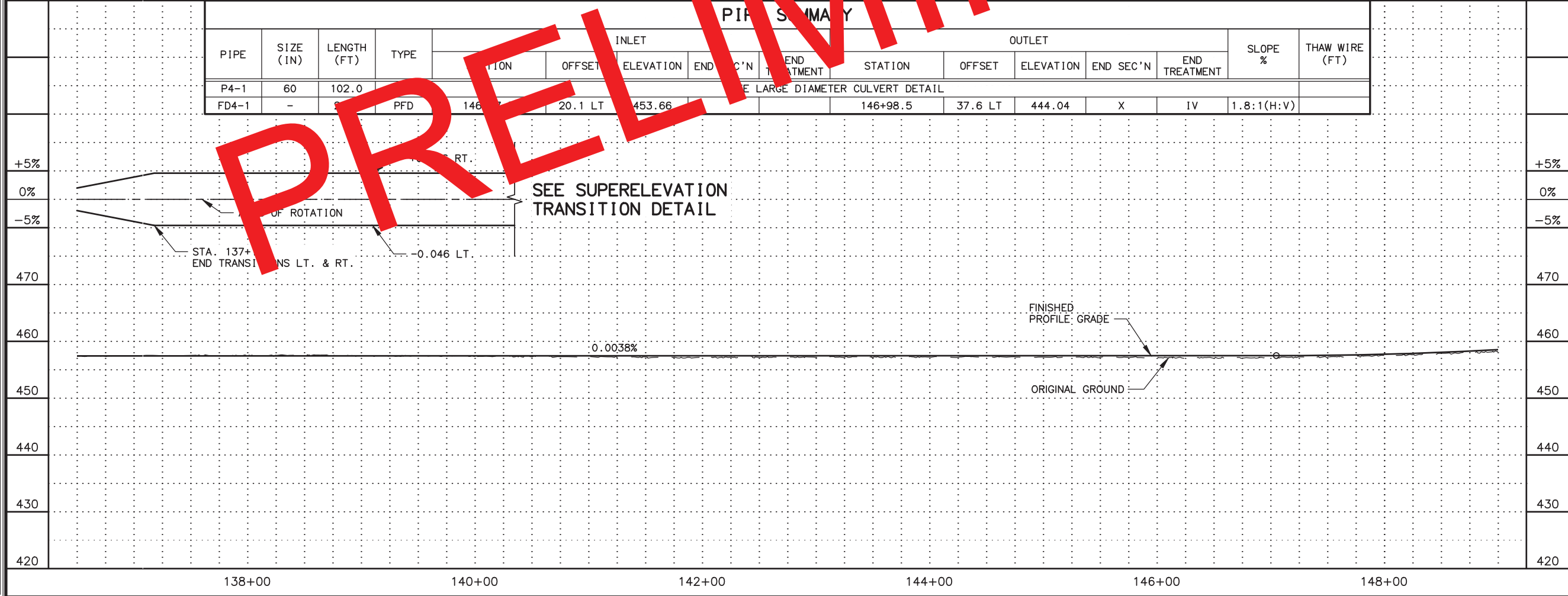
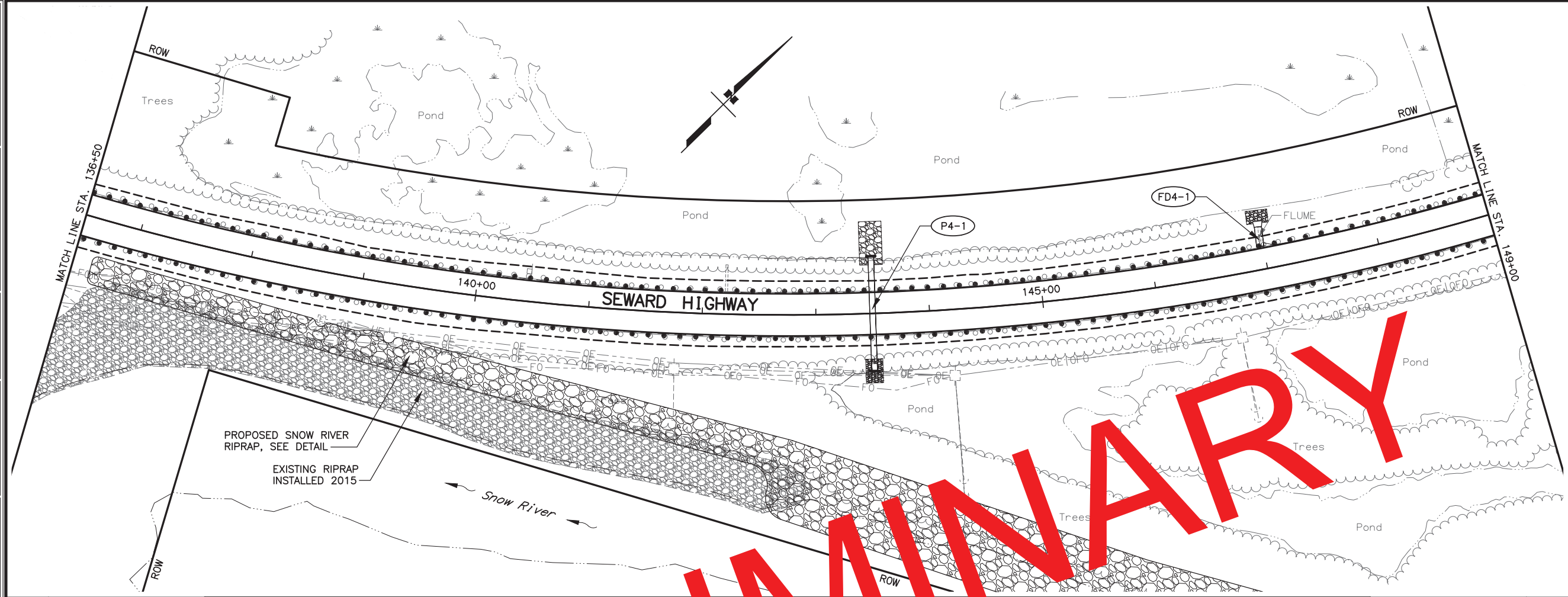
PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
CER
RYAN R. HAMME
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

PLAN AND PROFILE
124+00 TO 136+50

DESIGNED BY: LML/ADS/ZDK/RRH
CHECKED BY: RRH
DRAFTED BY: LML/VJS/ZDK
XREFS: XR-53610-Border-PondP
XR-53610-Desig.DWG
XR-53610-Base
XR-53610-ROW
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SHEET NO.	TOTAL SHEETS	
F4	F38	
STATE	YEAR	
ALASKA	2021	
PROJECT DESIGNATION		
0311032/Z536100000		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

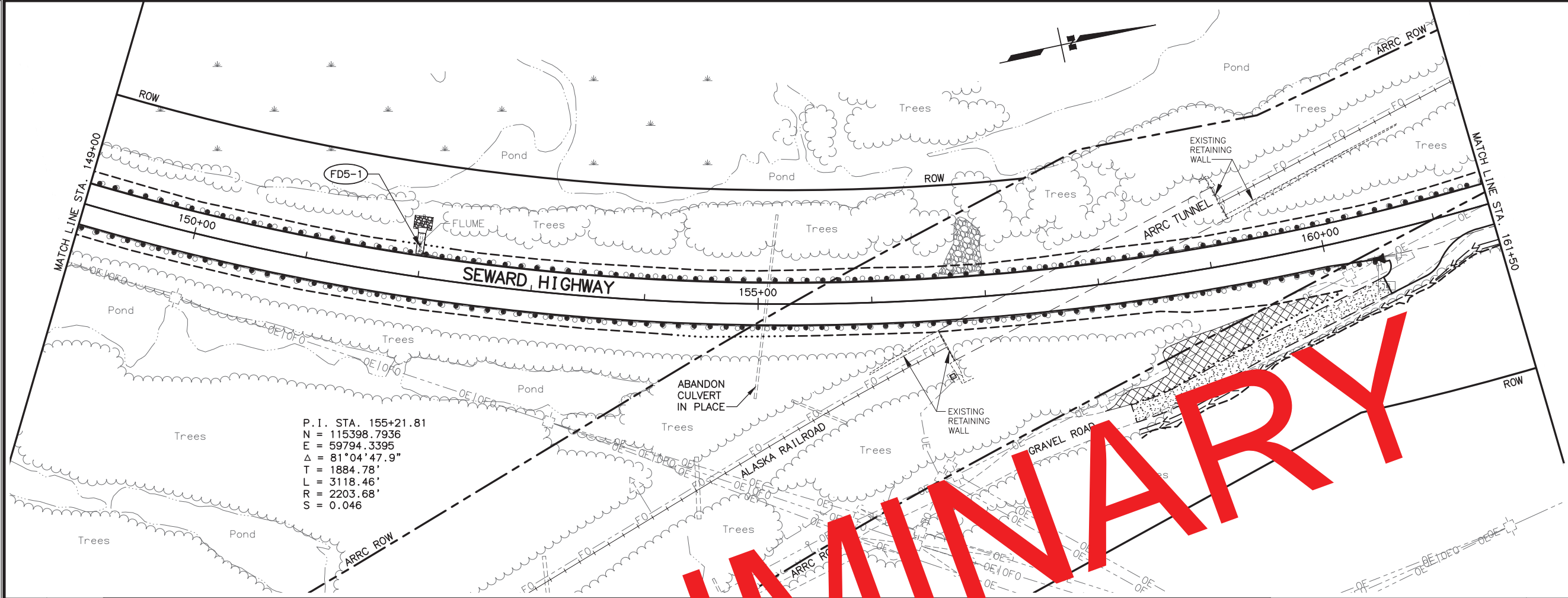
PLANS DEVELOPED BY:
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ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
CER
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

PLAN AND PROFILE
136+50 TO 149+00

DESIGNED BY: LML/ADS/ZDK/RRH
CHECKED BY: RRH
DRAFTED BY: LML/VJS/ZDK
XREFS: XR-53610-Border-Pond
XR-53610-Deslnd-XR-53610-Base
XR-53610-XR-53610-ROW
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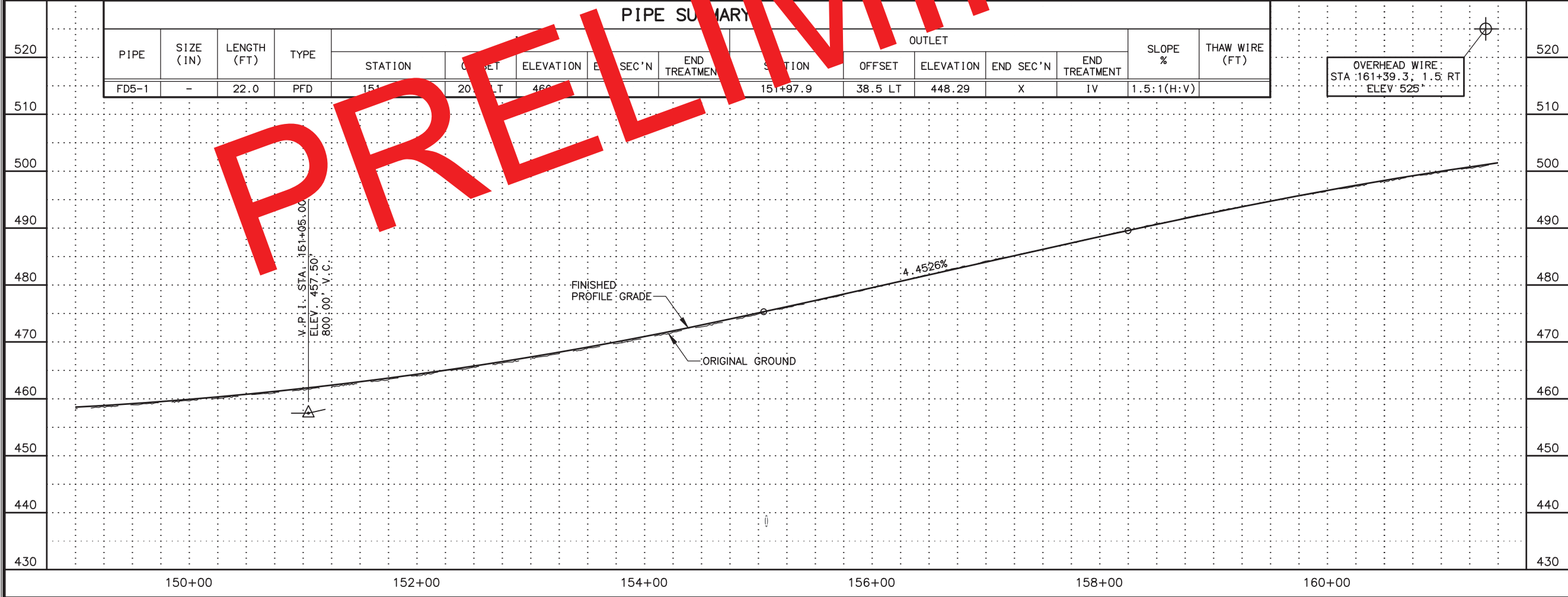


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T = 1884.78'
L = 3118.46'
R = 2203.68'
S = 0.046

PIPE SUMMARY

PIPE	SIZE (IN)	LENGTH (FT)	TYPE	OUTLET										SLOPE %	THAW WIRE (FT)
				STATION	OFFSET	ELEVATION	END SEC'N	END TREATMENT	STATION	OFFSET	ELEVATION	END SEC'N	END TREATMENT		
FD5-1	-	22.0	PFD	151+00	20' LT	460			151+97.9	38.5 LT	448.29	X	IV	1.5:1 (H:V)	

OVERHEAD WIRE:
STA 161+39.3; 1.5' RT
ELEV 525'



SHEET NO.	TOTAL SHEETS	
F5	F38	
STATE	YEAR	
ALASKA	2021	
PROJECT DESIGNATION		
0311032/Z536100000		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

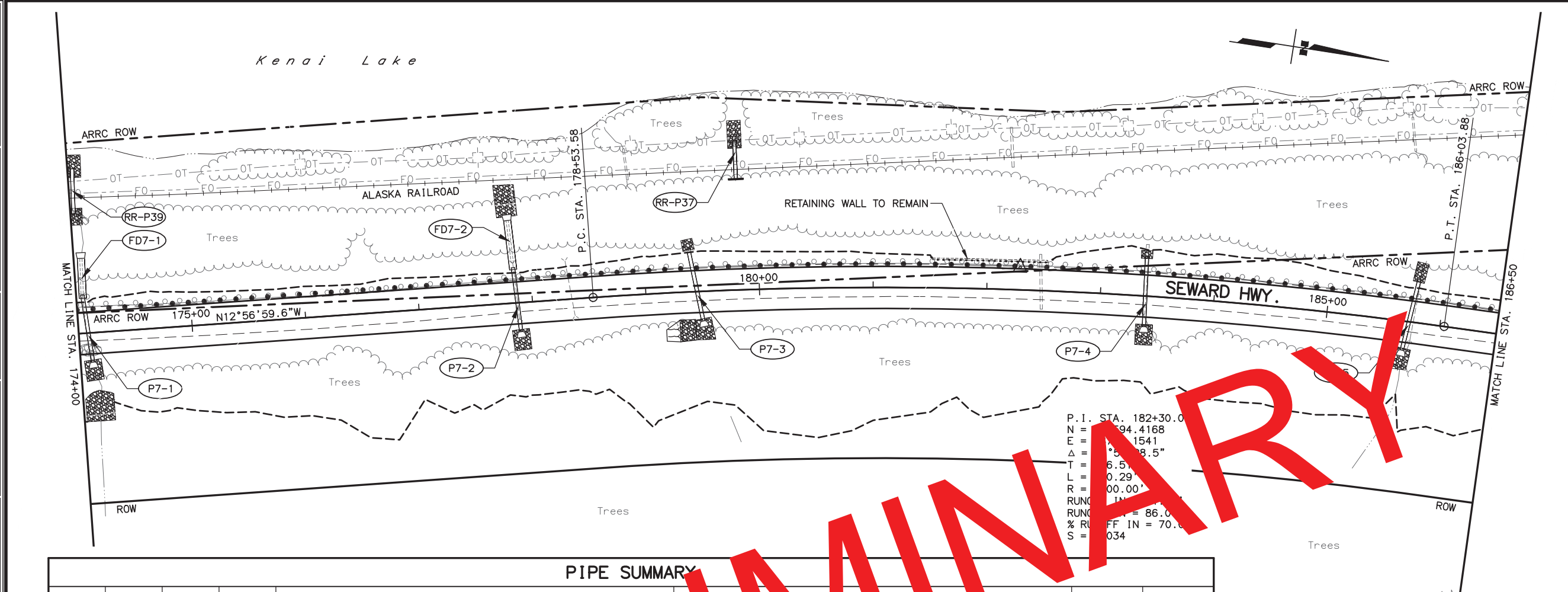
PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
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4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

PLAN AND PROFILE
149+00 TO 161+50

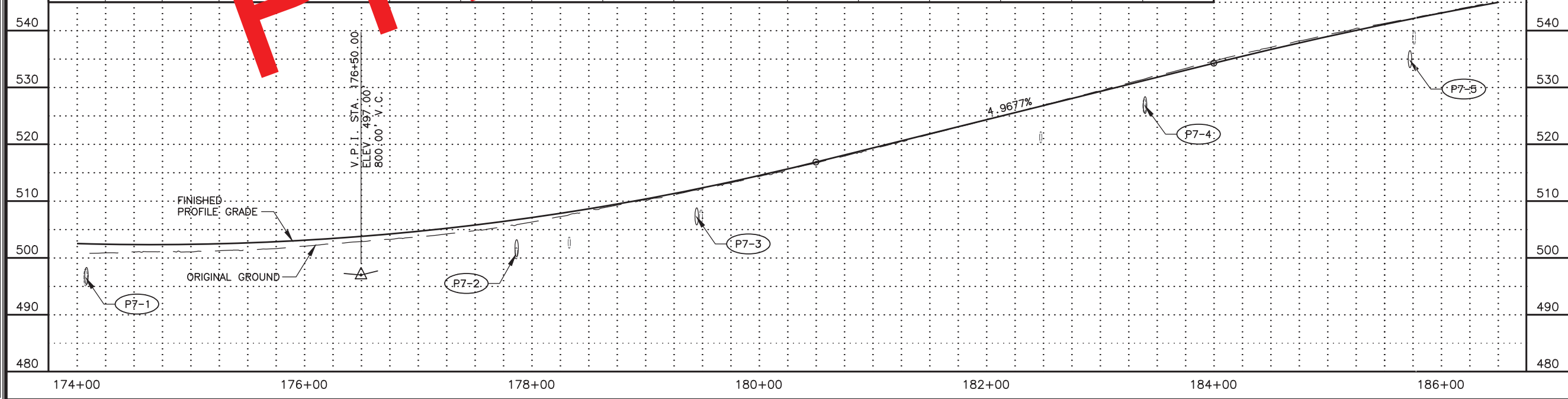
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DESIGNED BY: LML/ADS/ZDK
CHECKED BY: RRH
DRAFTED BY: LML/VUS
XREFS: XR-53610-Base, XR-53610-Base, XR-53610-Base
SCALE: 1" = 50'
LAYOUT: F07
DATE: 4/26/2021 9:51 AM
DRAWING LOCATION: w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civil\3D16\Plan\set\53610_F01-F12.dwg



PIPE SUMMARY

PIPE SUMMARY																
	PIPE	SIZE (IN)	LENGTH (FT)	TYPE	INLET				OUTLET				SLOPE %	THAW WIRE (FT)		
					STATION	OFFSET	ELEVATION	SEC	END TREATMENT	STATION	OFFSET	ELEVATION			END SEC'N	END TREATMENT
570	RR-P39	36	40.0		SEE ARRC CULVERT DETAIL											
560	P7-1	36	60.0	HDPEP	174+10.8	25.9 RT	497.94	X	I	174+55.5	33.6 LT	491.97		10.00	X	
	FD7-1	-	41.4	PFD			P7-1			174+55.5	65.9 LT	470.24	X	1.6:1(H:V)		
	P7-2	36	57.0	HDPEP	177+85.0	25.6	507.84	X	I	177+85.0	31.2 LT	497.83		7.70	X	
550	FD7-2	-	54.5	PFD			P7-2			177+82.9	72.8 LT	465.12	X	1V	1.3:1(H:V)	
	P7-3	36	65.0	HDPEP	179+49.1	26.0	507.84	X	I	179+39.1	37.9 LT	503.32		111	6.50	X
	RR-P37	36	34.0		SEE ARRC CULVERT DETAIL											
	P7-4	36	62.0	PEP	183+40.1	27.0 RT	526.24	X	I	183+38.9	35.0 LT	524.34		111	3.00	X
	P7-5	36	64.3	PEP	185+69.5	25.7 RT	526.84	X	I	185+76.9	37.7 LT	528.55		111	13.00	X



SHEET NO.	TOTAL SHEETS	
F7	F38	
STATE	YEAR	
ALASKA	2021	
PROJECT DESIGNATION		
0311032/Z536100000		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

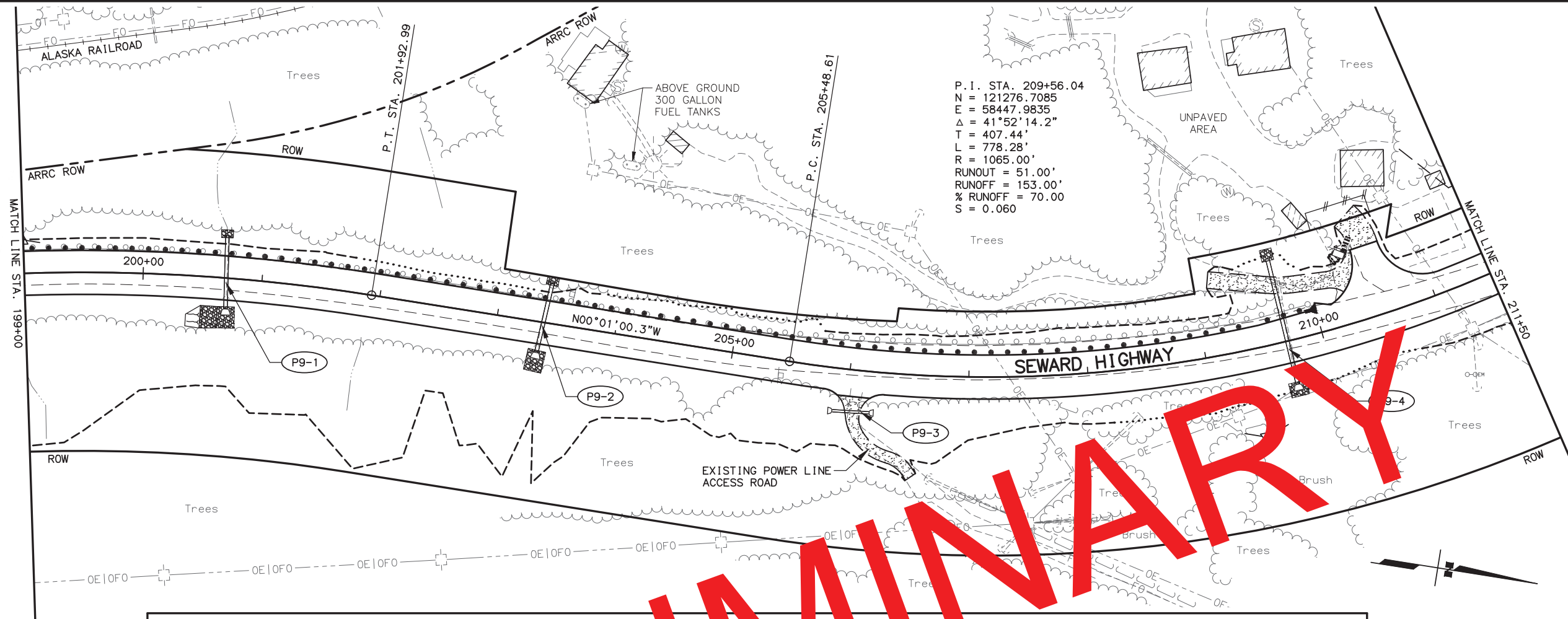
STATE OF ALASKA
CER
RYAN R. HAMMILL
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

PLAN AND PROFILE
174+00 TO 186+50

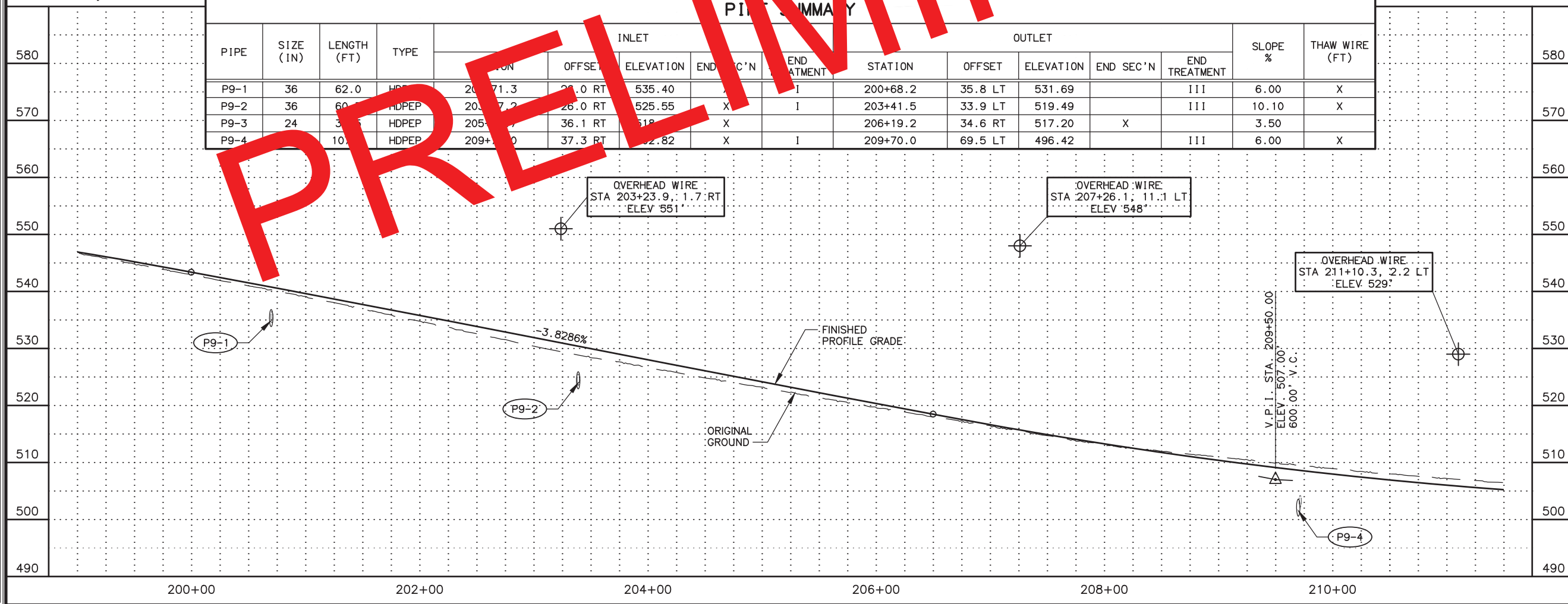
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CHECKED BY: RRH
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PIPE SUMMARY

PIPE	SIZE (IN)	LENGTH (FT)	TYPE	INLET					OUTLET					SLOPE %	THAW WIRE (FT)
				STATION	OFFSET	ELEVATION	END SEC'N	END TREATMENT	STATION	OFFSET	ELEVATION	END SEC'N	END TREATMENT		
P9-1	36	62.0	HDPEP	200+71.3	20.0 RT	535.40	X	I	200+68.2	35.8 LT	531.69		III	6.00	X
P9-2	36	60.0	HDPEP	203+27.2	26.0 RT	525.55	X	I	203+41.5	33.9 LT	519.49		III	10.10	X
P9-3	24	3.0	HDPEP	205+17.7	36.1 RT	518.00	X		206+19.2	34.6 RT	517.20	X		3.50	
P9-4	10	10.0	HDPEP	209+70.0	37.3 RT	492.82	X	I	209+70.0	69.5 LT	496.42		III	6.00	X



SHEET NO.	TOTAL SHEETS	
F9	F38	
STATE	YEAR	
ALASKA	2021	
PROJECT DESIGNATION		
0311032/Z536100000		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

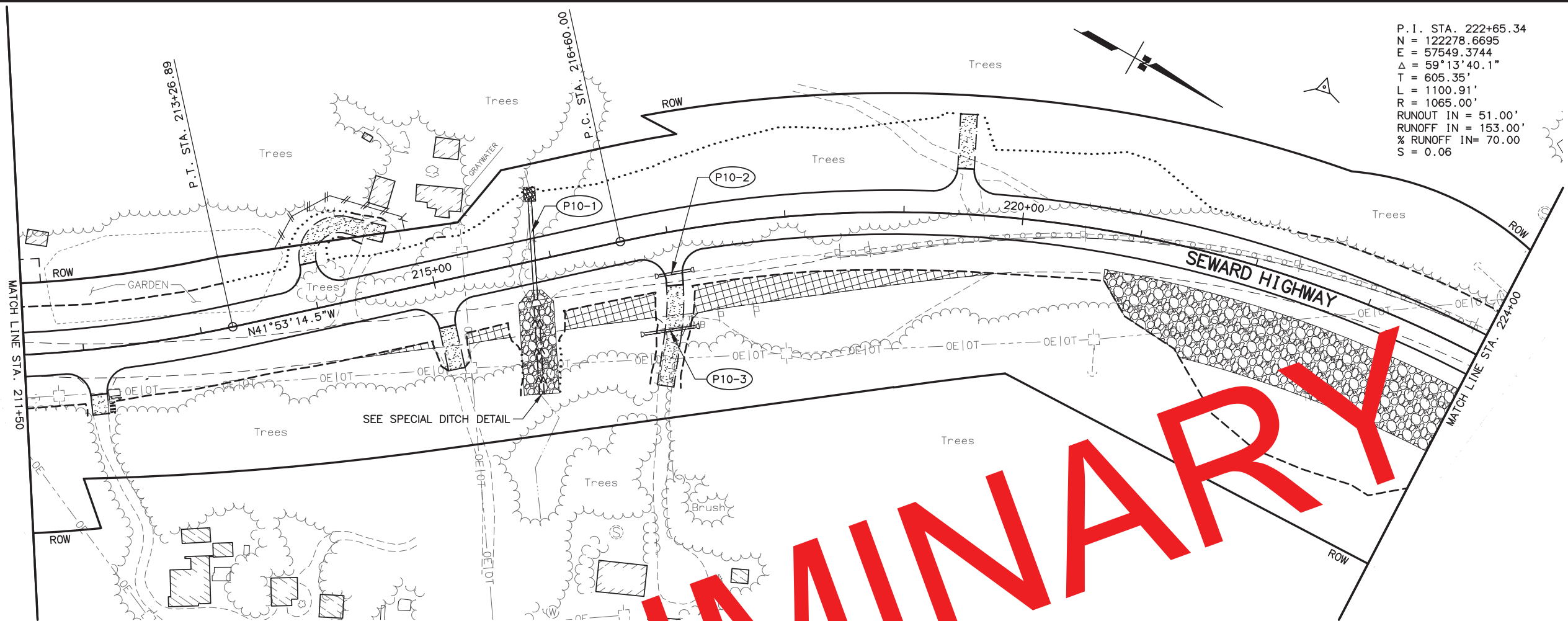
PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
CERTIFIED
RYAN R. HAMME
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

PLAN AND PROFILE
199+00 TO 211+50

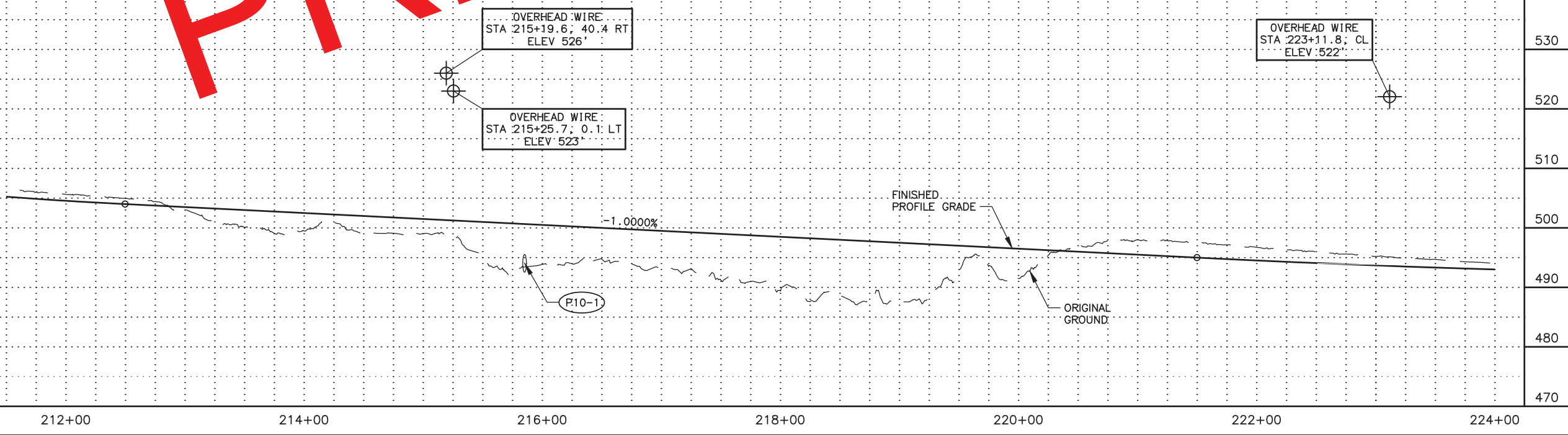
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CHECKED BY: RRH
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L = 1100.91'
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RUNOUT IN = 51.00'
RUNOFF IN = 153.00'
% RUNOFF IN = 70.00
S = 0.06

PIPE SUMMARY

PIPE	SIZE (IN)	LENGTH (FT)	TYPE	INLET					OUTLET					SLOPE %	THAW WIRE (FT)
				STA	OFFSET	ELEVATION	END SEC	END TREATMENT	STATION	OFFSET	ELEVATION	END SEC'N	END TREATMENT		
P10-1	36	85.0	HDPE	215+85.0	32.0 RT	493.80	X	SEE E SHEETS	215+93.3	51.2 LT	490.57		III	3.80	X
P10-2	24	27.6	HDPEP	216+85.0	34.7 RT	494.09			217+14.5	34.7 RT	494.74	X		1.25	
P10-3	24	44.0	HDPEP	216+63.0	80.1 RT	494.09	X		217+10.8	82.1 RT	494.87	X		0.45	

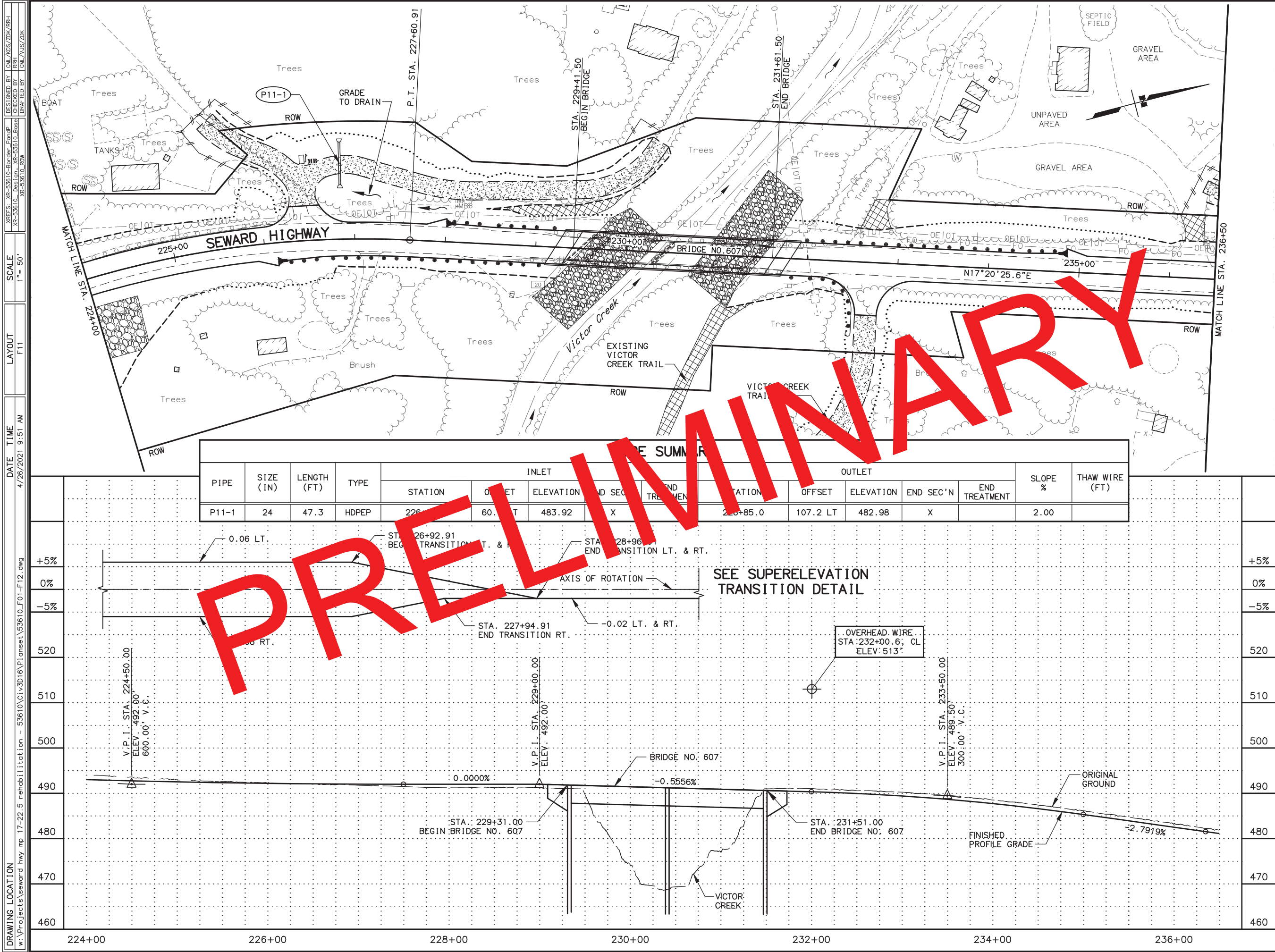


SHEET NO.	TOTAL SHEETS	
F10	F38	
STATE	YEAR	
ALASKA	2021	
PROJECT DESIGNATION		
0311032/Z536100000		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

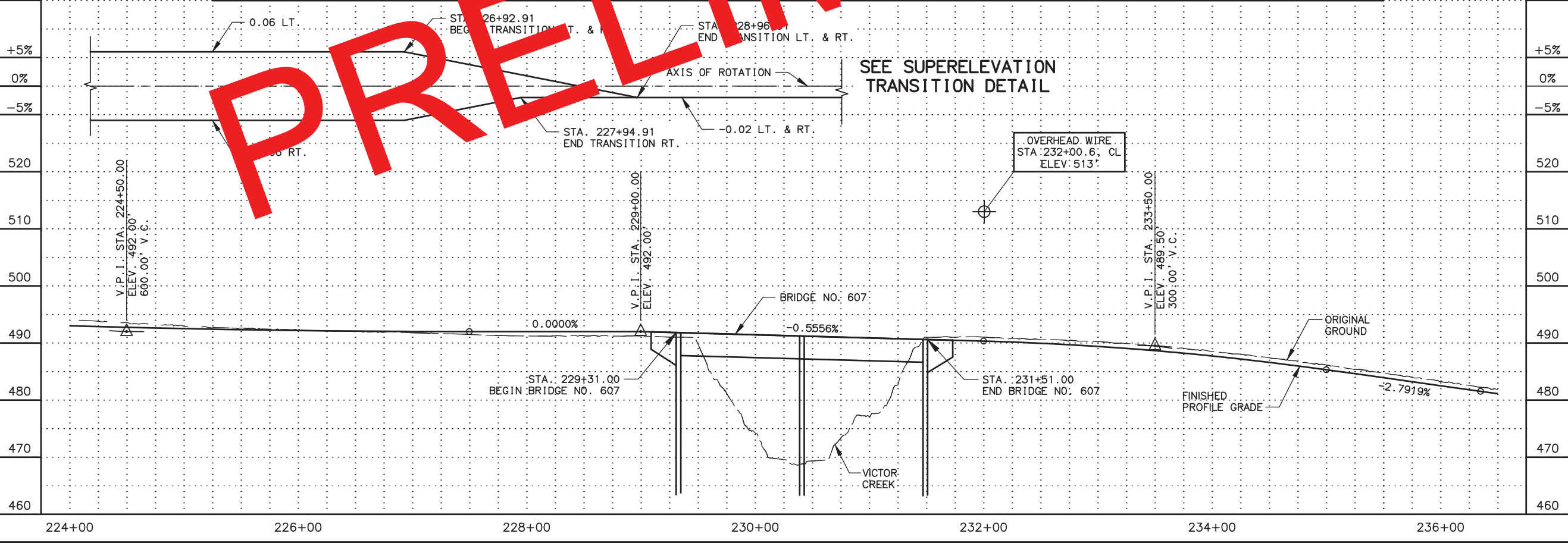
PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

PLAN AND PROFILE
211+50 TO 224+00



PIPE	SIZE (IN)	LENGTH (FT)	TYPE	INLET				OUTLET				SLOPE %	THAW WIRE (FT)
				STATION	OFFSET	ELEVATION	END SEC	STATION	OFFSET	ELEVATION	END SEC		
P11-1	24	47.3	HDPEP	226+92.91	60.1 T	483.92	X	227+40.20	107.2 LT	482.98	X	2.00	



SHEET NO.	TOTAL SHEETS	
F11	F38	
STATE	YEAR	
ALASKA	2021	
PROJECT DESIGNATION		
0311032/Z536100000		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

TO MOOSE PASS

Falls Creek

Trail River

LAWING AIRPORT

Plamigan Creek

Kenai Lake

Rocky Creek

Victor Creek

THIS SHEET

PRIMROSE SPUR

SEWARD HWY

TO SEWARD

PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
CERTIFIED
REGISTERED PROFESSIONAL ENGINEER
RYAN R. HAMME
00000001

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

PLAN AND PROFILE
224+00 TO 236+50

SHEET NO.		TOTAL SHEETS	
F12		F38	
STATE		YEAR	
ALASKA		2021	
PROJECT DESIGNATION			
0311032/Z536100000			
ADDENDUM NO.			
ATTACHMENT NO.			
REVISIONS			
NO.	DATE	DESCRIPTION	

TO MOOSE PASS
Falls Creek
Ptarmigan Creek
Rocky Creek
THIS SHEET
Victor Creek
Snow Creek
Kenai River
ARC
Lawling Airport
Primrose Spur
SEWARD HWY.
TO SEWARD

PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

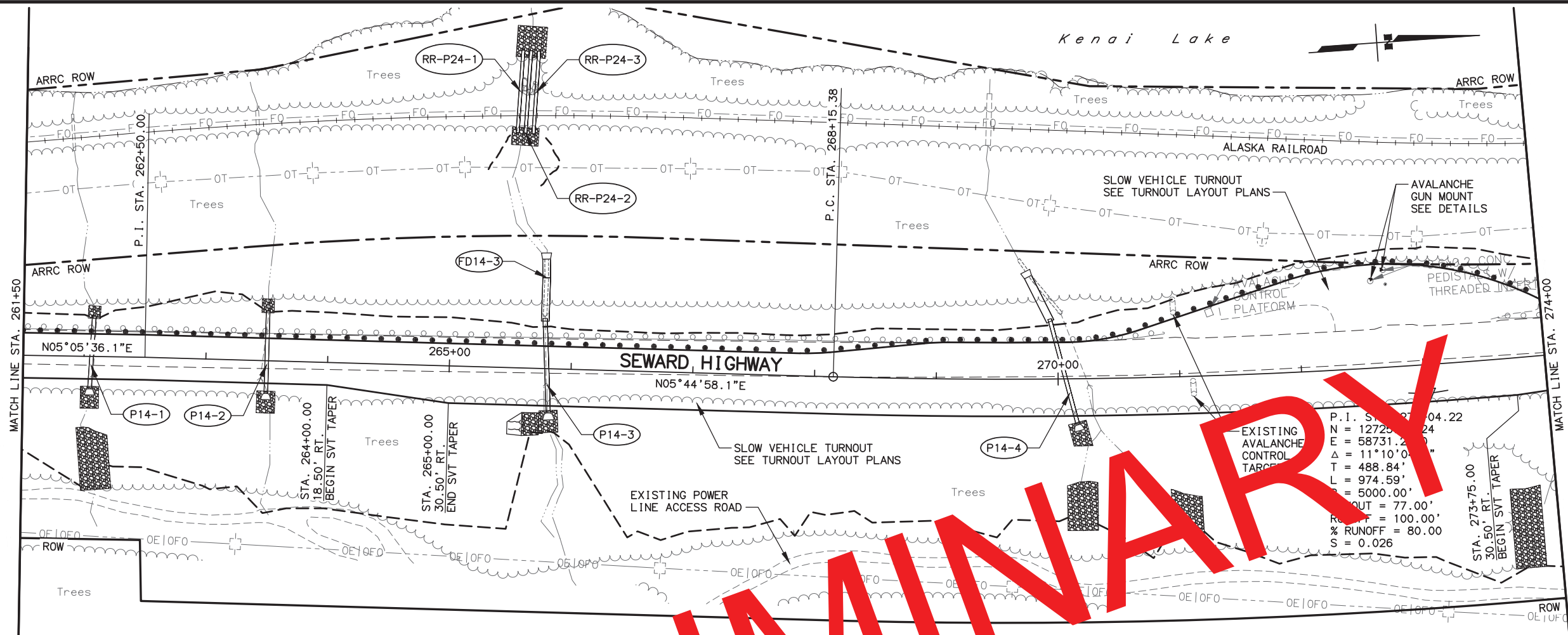
STATE OF ALASKA
ENGINEER
RYAN R. HUMMEL
LICENSE NO. 8586
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

PLAN AND PROFILE
236+50 TO 249+00

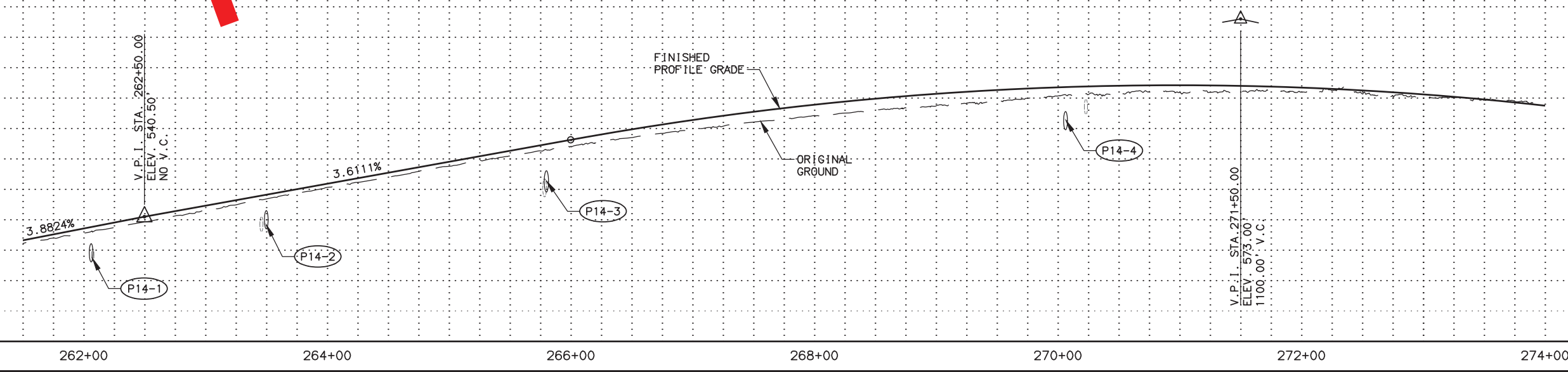
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STATE		YEAR	
ALASKA		2021	
PROJECT DESIGNATION			
0311032/Z536100000			
ADDENDUM NO.			
ATTACHMENT NO.			
REVISIONS			
NO.	DATE	DESCRIPTION	
PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES 4111 AVIATION AVENUE ANCHORAGE, AK 99502 (907) 269-0590			
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES SEWARD HIGHWAY MP 17-22.5 REHABILITATION PLAN AND PROFILE STA. 249+00 TO 261+50			

DESIGNED BY: LML/ADS/ZDK/RRH
CHECKED BY: RRH
DRAFTED BY: LML/VUS/ZDK
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XR-53610-Des. Ld., XR-53610-Base
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PIPE SUMMARY

PIPE	SIZE (IN)	LENGTH (FT)	TYPE	OUTLET										SLOPE %	THAW WIRE (FT)
				STATION	OFFSET	ELEVATION	END SEC'N	END TREATMENT	STATION	OFFSET	ELEVATION	END SEC'N	END TREATMENT		
P14-1	36	60.0	HDPEP	262+07.8	33.2 RT	531.73		I	262+07.8	33.2 LT	531.73		III	4.00	X
P14-2	36	68.0	HDPEP	263+50.0	26.9 RT	539.45		I	263+50.0	41.1 LT	537.07		III	3.50	X
RR-P24-1	30	68.0		SEE ARRC CULVERT DETAIL											
RR-P24-2	30			SEE ARRC CULVERT DETAIL											
RR-P24-3	30	68.0		SEE ARRC CULVERT DETAIL											
P14-3	42	60.0	CS	265+82.2	3 RT	547.27	X	I	265+77.5	41.2 LT	541.45			7.50	X
FD14-3	-	0		P14-3											
P14-4	36	90.0	HDPEP	269+15.9	37.8 RT	558.10	X	I	269+93.5	49.2 LT	550.46			8.50	X
FD14-4	-	49	PFD	P14-4											
									269+75.6	83.8 LT	522.12	X		1.4:1(H:V)	



SHEET NO. **F14**

TOTAL SHEETS **F38**

STATE

YEAR

ALASKA

2021

PROJECT DESIGNATION

0311032/Z536100000

ADDENDUM NO.

ATTACHMENT NO.

REVISIONS

NO.	DATE	DESCRIPTION
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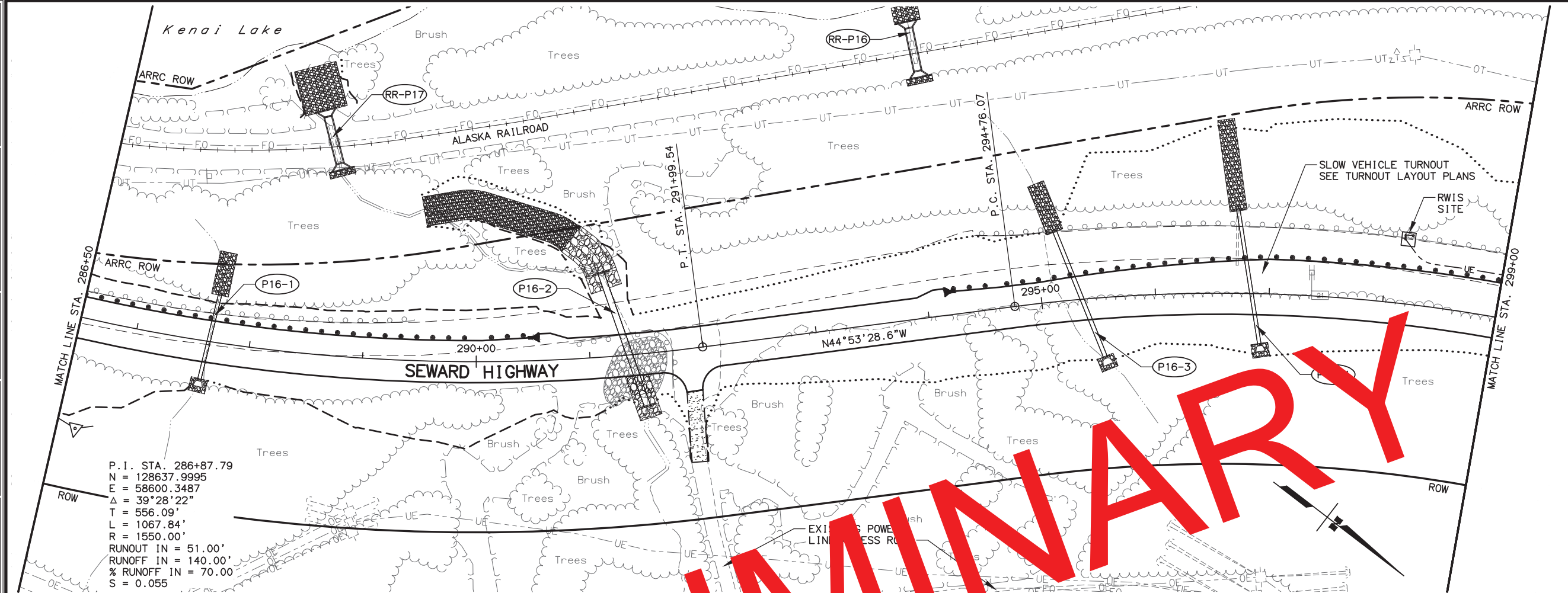
PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
**SEWARD HIGHWAY
MP 17-22.5
REHABILITATION**

PLAN AND PROFILE
STA. 261+50 TO 274+00

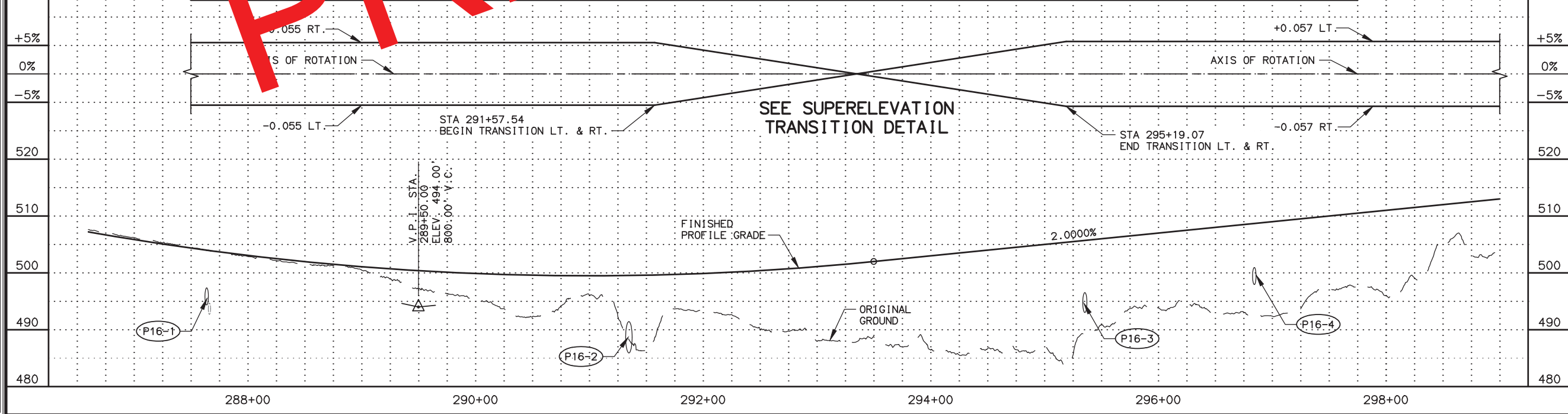
SHEET NO.		TOTAL SHEETS	
F15		F38	
STATE		YEAR	
ALASKA		2021	
PROJECT DESIGNATION			
0311032/Z536100000			
ADDENDUM NO.			
ATTACHMENT NO.			
REVISIONS			
NO.	DATE	DESCRIPTION	
PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES 4111 AVIATION AVENUE ANCHORAGE, AK 99502 (907) 269-0590			
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES SEWARD HIGHWAY MP 17-22.5 REHABILITATION			
PLAN AND PROFILE STA. 274+00 TO 286+50			

DESIGNED BY: LML/ADS/ZDK/RRH
CHECKED BY: LML/ADS/ZDK/RRH
DRAFTED BY: LML/ADS/ZDK/RRH
XREFS: XR-53610-Base, XR-53610-Base, XR-53610-Base
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R = 1550.00'
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RUNOFF IN = 140.00'
% RUNOFF IN = 70.00
S = 0.055

PIPE SUMMARY															
PIPE	SIZE (IN)	LENGTH (FT)	TYPE	INLET					OUTLET					SLOPE %	THAW WIRE (FT)
				STATION	OFFSET	ELEVATION	END SECT'N	END TREATMENT	STATION	OFFSET	ELEVATION	END SECT'N	END TREATMENT		
P16-1	36	80.0		287+68.0	43.6 RT	498.65	X		287+68.0	43.6 LT	489.12		V	12.00	X
RR-P17	72 X 36	44		SEE ARRC CULVERT DETAIL											
P16-2	66	126		SEE LARGE DIAMETER CULVERT DETAIL											
RR-P16	72 X 36	40.0		SEE ARRC CULVERT DETAIL											
P16-3	42	12.0		295+52.6	63.1 LT	494.16	X	I	295+17.1	63.1 LT	491.72		V	2.00	X
P16-4	36	12.0	DPEP	296+72.0	74.4 RT	498.89	X	I	296+72.0	74.4 LT	496.45		V	2.00	X



SHEET NO. F16

TOTAL SHEETS F38

STATE ALASKA

YEAR 2021

PROJECT DESIGNATION 0311032/Z536100000

ADDENDUM NO.

ATTACHMENT NO.

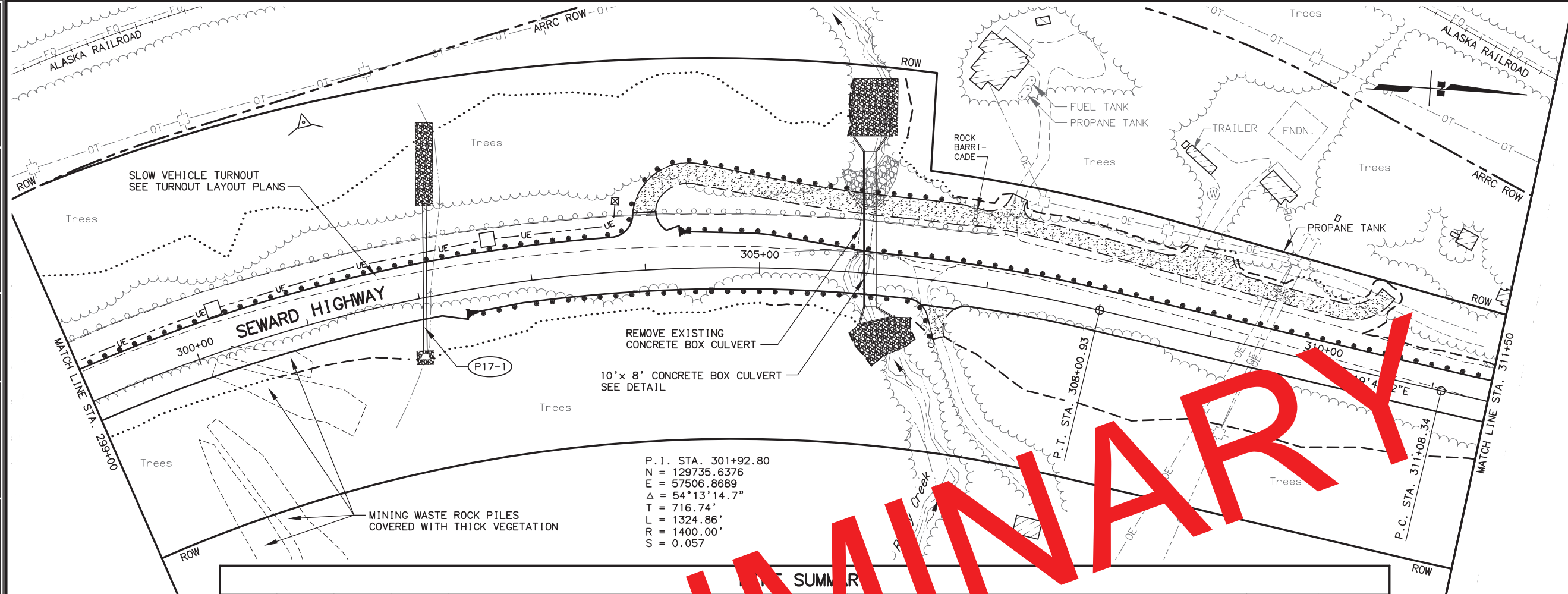
REVISIONS

NO.	DATE	DESCRIPTION
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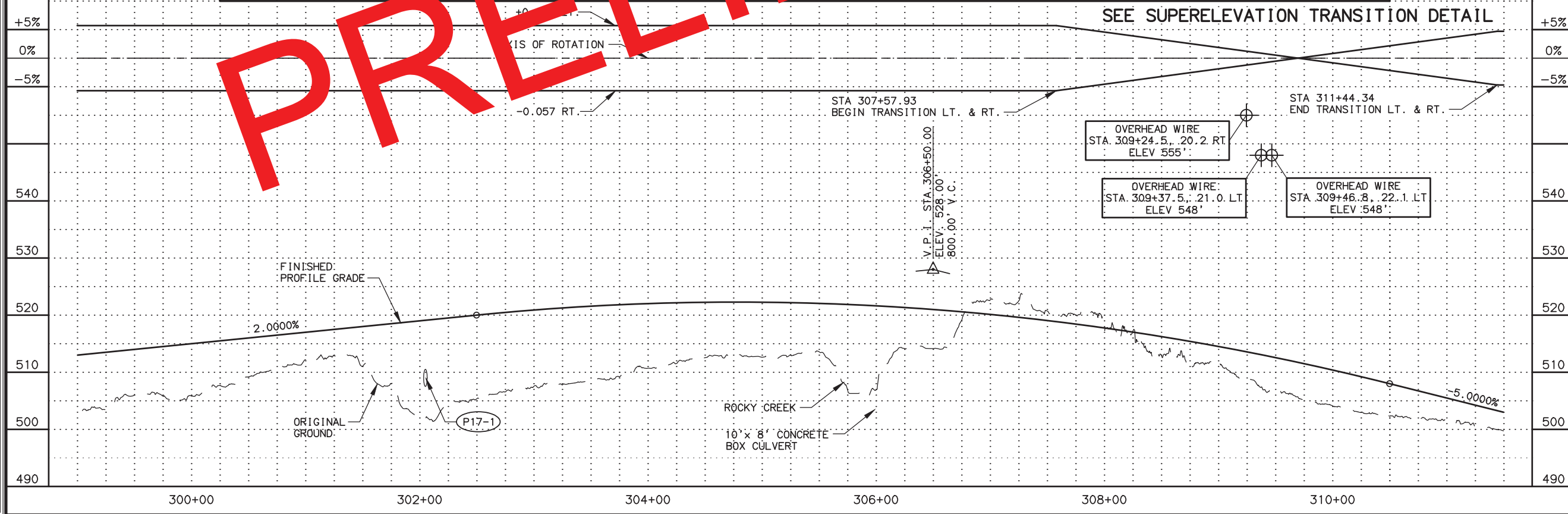
PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION
PLAN AND PROFILE
STA. 286+50 TO 299+00

DESIGNED BY: LML/ADS/ZDK/RRH
CHECKED BY: LML/ADS/ZDK/RRH
DRAFTED BY: LML/ADS/ZDK/RRH
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SUMMARY															
PIPE	SIZE (IN)	LENGTH (FT)	TYPE	INLET				OUTLET				SLOPE %	THAW WIRE (FT)		
				STATION	OFFSET	ELEVATION	DO SEC	STATION	OFFSET	ELEVATION	END SEC				
P17-1	36	131.0	HDPEP	301+95.8	47.9	508.50	X	302+19.6	80.9 LT	505.88		V	2.00	X	
P17-2	120 X 96	138.0		SEE ROCKY CREEK BRIDGE DETAIL SHEETS											



SHEET NO. F17

TOTAL SHEETS F38

STATE ALASKA

YEAR 2021

PROJECT DESIGNATION 0311032/Z536100000

ADDENDUM NO.

ATTACHMENT NO.

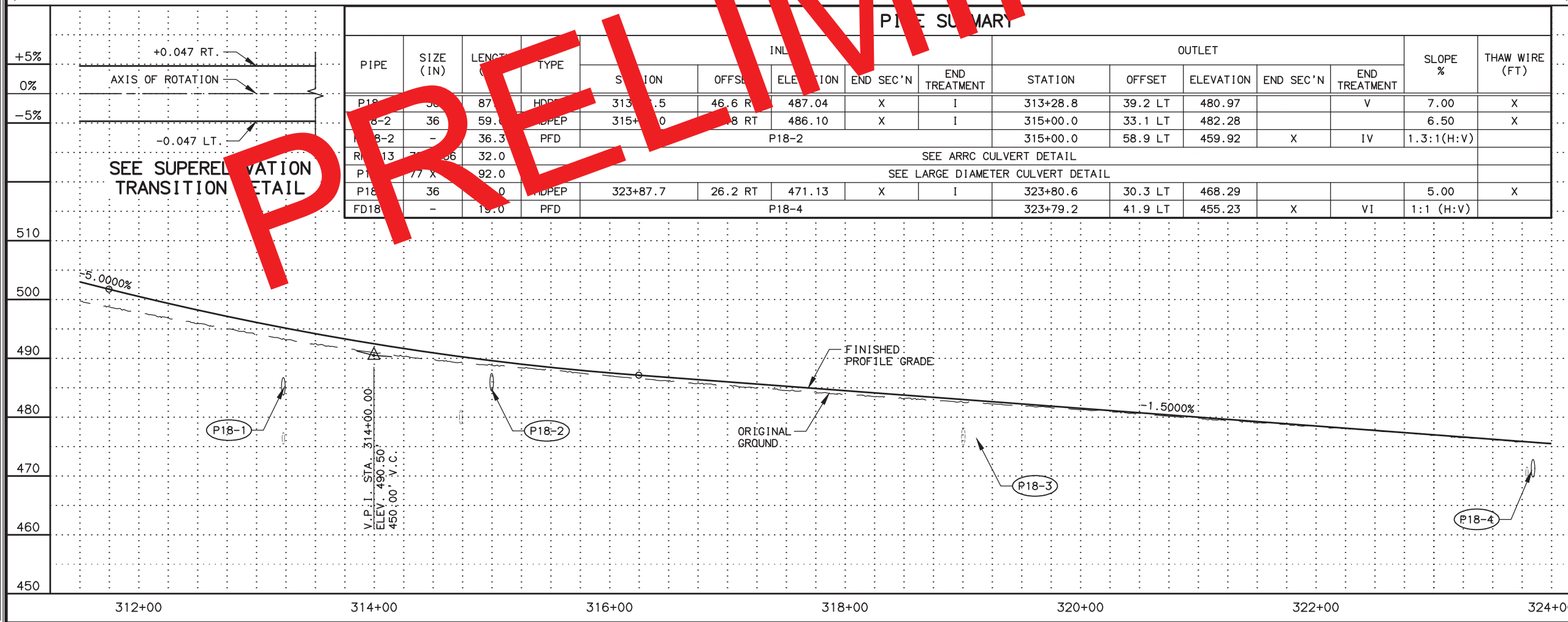
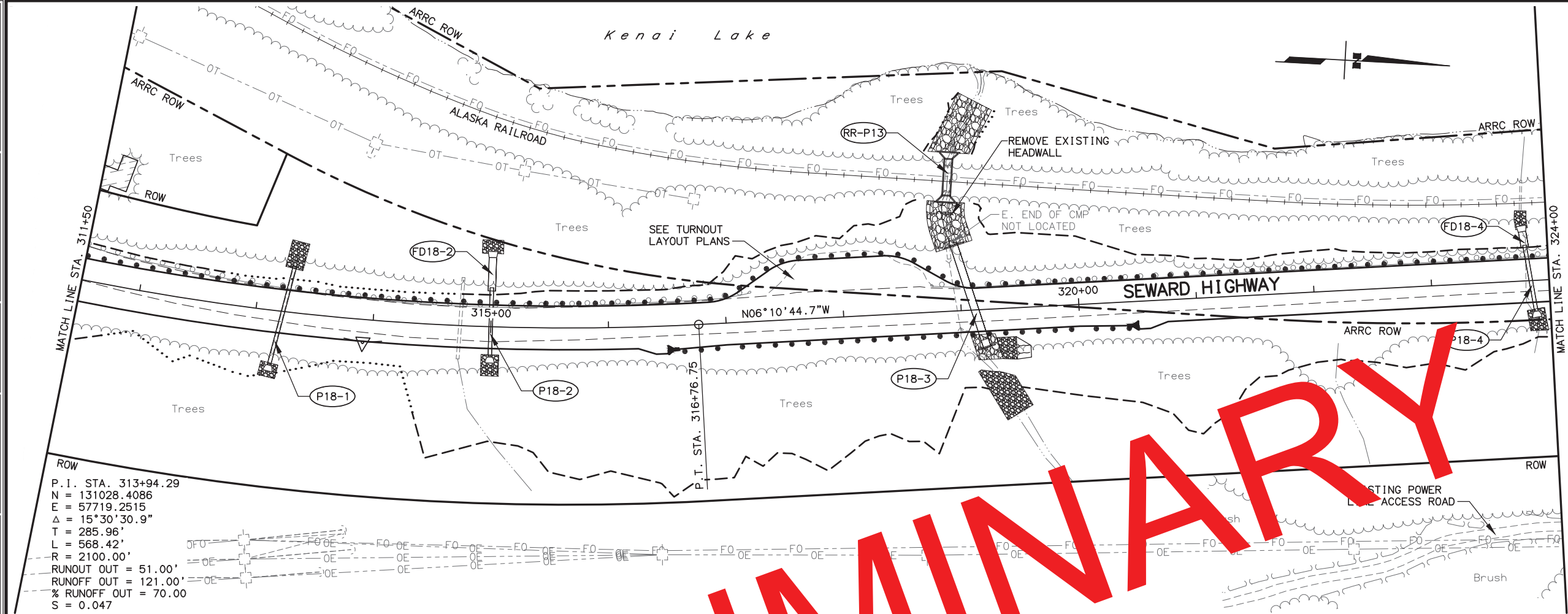
REVISIONS

NO. DATE DESCRIPTION

PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION
PLAN AND PROFILE
STA. 299+00 TO 311+50

DESIGNED BY: LML/ADS/ZDK/RRH
CHECKED BY: RRH
DRAFTED BY: LML/VUS/ZDK
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XR-53610-Des. Lg., XR-53610-Base
XR-53610-ROW
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TIME: 10:03 AM
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PIPE SUMMARY

PIPE	SIZE (IN)	LENGTH	TYPE	INLET					OUTLET					SLOPE %	THAW WIRE (FT)
				STATION	OFFSET	ELEVATION	END SEC'N	END TREATMENT	STATION	OFFSET	ELEVATION	END SEC'N	END TREATMENT		
P18-1	36	87	HDPEP	313+28.8	46.6 RT	487.04	X	I	313+28.8	39.2 LT	480.97		V	7.00	X
P18-2	36	59.1	HDPEP	315+00.0	33.1 LT	482.28	X	I	315+00.0	33.1 LT	482.28			6.50	X
P18-3	36	36.3	PFD	315+00.0	58.9 LT	459.92	X	IV	315+00.0	58.9 LT	459.92	X	IV	1.3:1 (H:V)	
FD18-2	72	32.0		SEE ARRC CULVERT DETAIL											
P18-4	36	92.0		SEE LARGE DIAMETER CULVERT DETAIL											
P18-5	36	26.2	HDPEP	323+87.7	26.2 RT	471.13	X	I	323+80.6	30.3 LT	468.29			5.00	X
FD18-4	72	15.0	PFD	323+80.6	41.9 LT	455.23	X	VI	323+79.2	41.9 LT	455.23	X	VI	1:1 (H:V)	

SHEET NO. F18TOTAL SHEETS F38

STATE ALASKAYEAR 2021

PROJECT DESIGNATION 0311032/Z536100000

ADDENDUM NO.

ATTACHMENT NO.

REVISIONS

NO. DATE DESCRIPTION

PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

PLAN AND PROFILE
STA. 311+50 TO 324+00

DESIGNED BY: LML/ADS/ZDK/RRH
CHECKED BY: RRH
DRAFTED BY: LML/VJS/ZDK

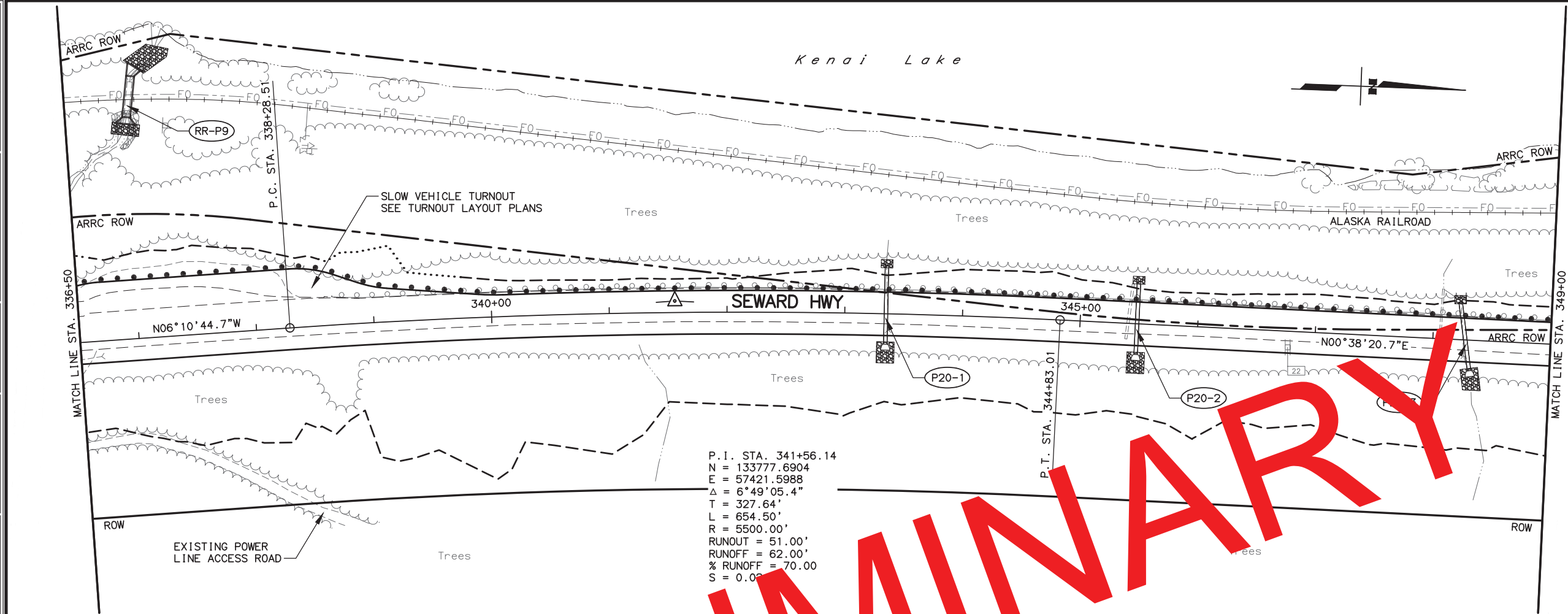
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XR-53610-Des. Lg., XR-53610-Base
XR-53610-ROW

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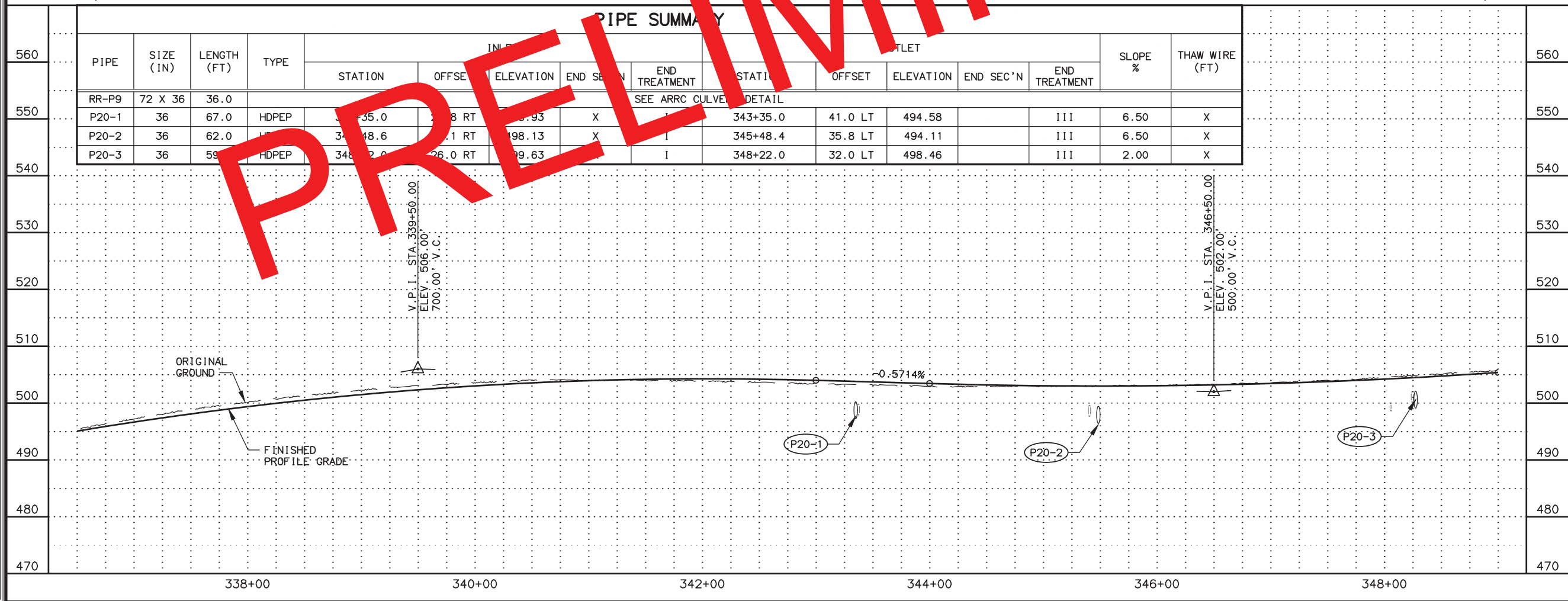
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P.I. STA. 341+56.14
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L = 654.50'
R = 5500.00'
RUNOUT = 51.00'
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% RUNOFF = 70.00
S = 0.00%

PIPE SUMMARY

PIPE	SIZE (IN)	LENGTH (FT)	TYPE	INLET				OUTLET				SLOPE %	THAW WIRE (FT)
				STATION	OFFSET	ELEVATION	END SECT'N	END TREATMENT	STATION	OFFSET	ELEVATION	END SECT'N	END TREATMENT
RR-P9	72 X 36	36.0		SEE ARRC CULVERT DETAIL									
P20-1	36	67.0	HDPEP	343+35.0	8 RT	498.93	X	I	343+35.0	41.0 LT	494.58	III	6.50
P20-2	36	62.0	HDPEP	345+48.6	1 RT	498.13	X	I	345+48.4	35.8 LT	494.11	III	6.50
P20-3	36	59.0	HDPEP	348+22.0	26.0 RT	499.63	X	I	348+22.0	32.0 LT	498.46	III	2.00



SHEET NO.	TOTAL SHEETS	
F20	F38	
STATE	YEAR	
ALASKA	2021	
PROJECT DESIGNATION		
0311032/Z536100000		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

PLAN AND PROFILE
STA. 336+50 TO 349+00

DESIGNED BY: LML/ADS/ZDK/RRH
CHECKED BY: RRH
DRAFTED BY: LML/VJS/ZDK

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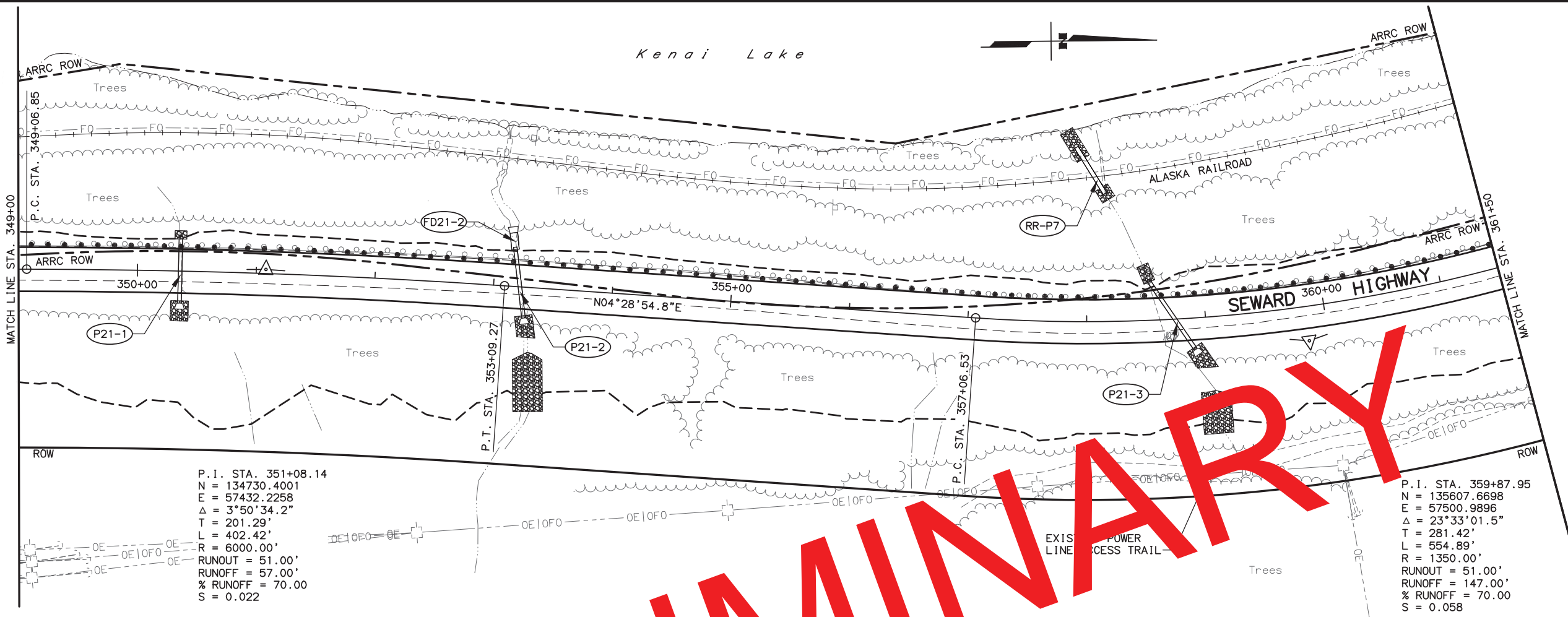
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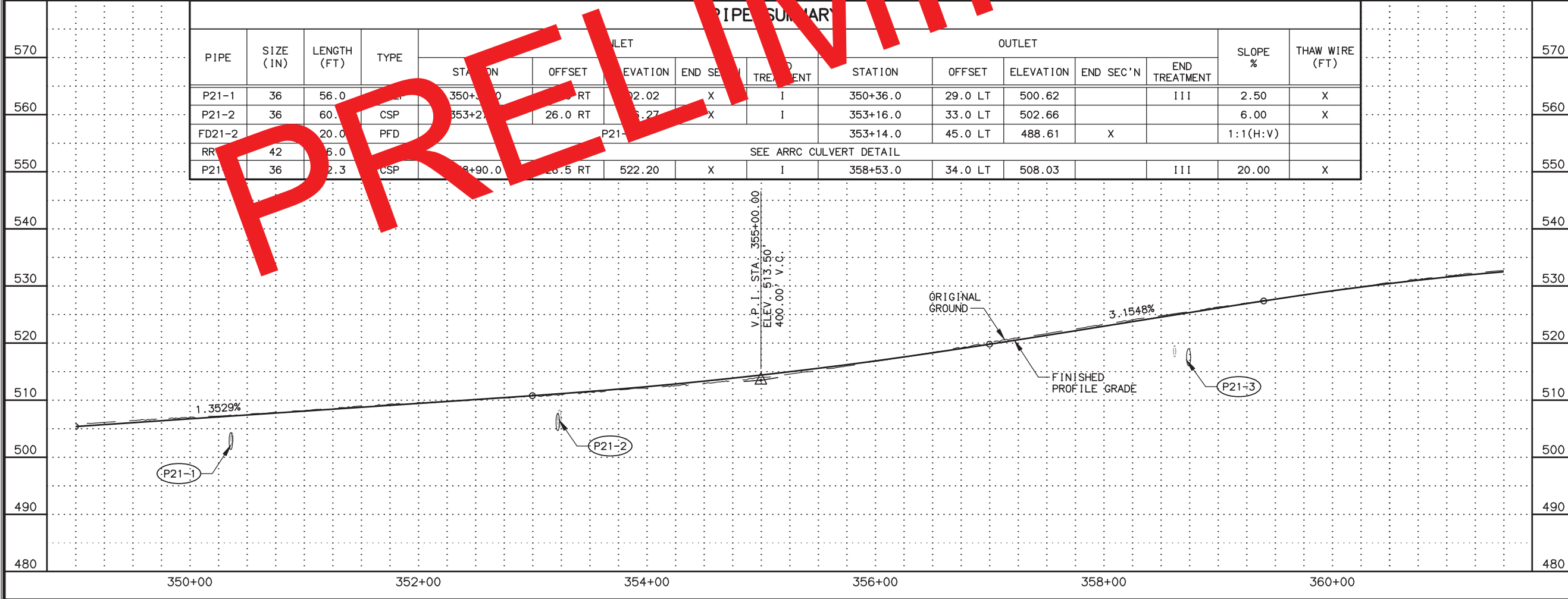
DRAWING LOCATION



P.I. STA. 351+08.14
N = 134730.4001
E = 57432.2258
Δ = 3°50'34.2\"/>
T = 201.29'
L = 402.42'
R = 6000.00'
RUNOUT = 51.00'
RUNOFF = 57.00'
% RUNOFF = 70.00
S = 0.022

P.I. STA. 359+87.95
N = 135607.6698
E = 57500.9896
Δ = 23°33'01.5\"/>
T = 281.42'
L = 554.89'
R = 1350.00'
RUNOUT = 51.00'
RUNOFF = 147.00'
% RUNOFF = 70.00
S = 0.058

PIPE SUMMARY															
PIPE	SIZE (IN)	LENGTH (FT)	TYPE	INLET				OUTLET				SLOPE %	THAW WIRE (FT)		
				STATION	OFFSET	ELEVATION	END SEC'	TREATMENT	STATION	OFFSET	ELEVATION	END SEC'	END TREATMENT		
P21-1	36	56.0	CSP	350+00.0	RT	502.02	X	I	350+36.0	29.0 LT	500.62		III	2.50	X
P21-2	36	60.0	CSP	353+20.0	RT	503.27	X	I	353+16.0	33.0 LT	502.66			6.00	X
FD21-2		20.0	PFD						353+14.0	45.0 LT	488.61	X		1:1(H:V)	
RR-P7	42	6.0													
P21	36	2.3	CSP	358+90.0	RT	522.20	X	I	358+53.0	34.0 LT	508.03		III	20.00	X
SEE ARRC CULVERT DETAIL															



SHEET NO.	TOTAL SHEETS	
F21	F38	
STATE	YEAR	
ALASKA	2021	
PROJECT DESIGNATION		
0311032/Z536100000		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

PLAN AND PROFILE
STA. 349+00 TO 361+50

DESIGNED BY: LML/ADS/ZDK/RRH
CHECKED BY: RRH
DRAFTED BY: LML/VJS/ZDK

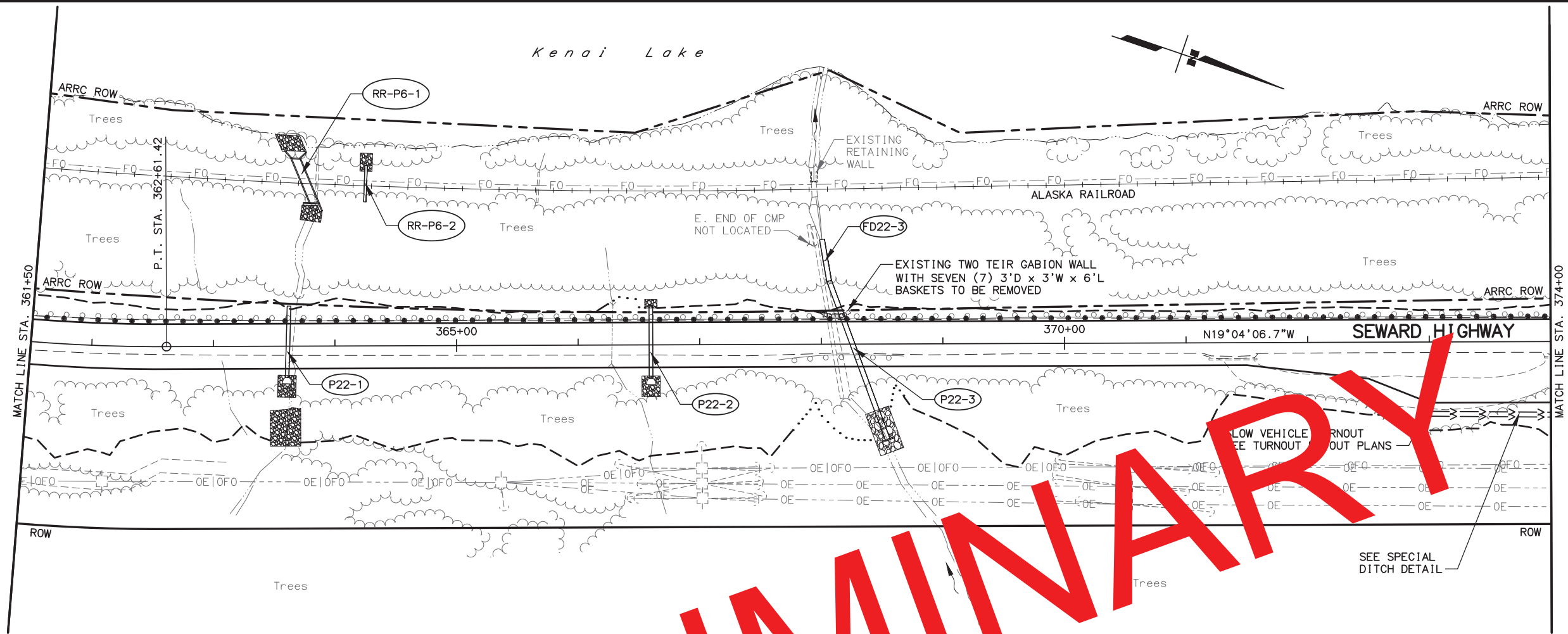
REFERENCES: XR-53610-Base-Pipe
XR-53610-Base-RRH
XR-53610-Base-RRH

SCALE: 1" = 50'

LAYOUT: F22

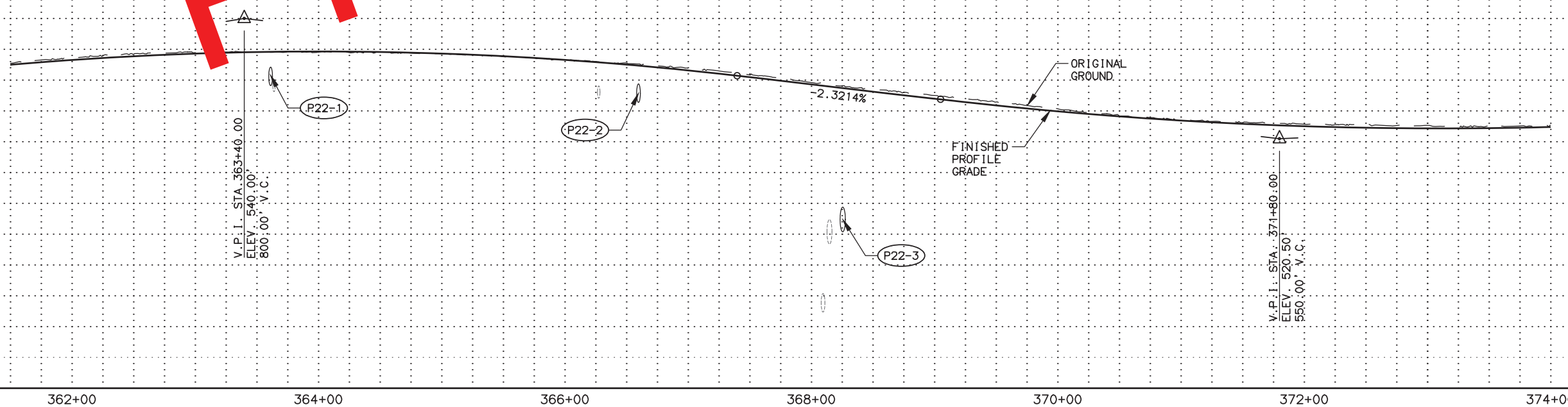
DATE: 4/26/2021 10:03 AM

DRAWING LOCATION: w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civil\3D16\Plan\set\53610_F13-F24.dwg



PIPE SUMMARY

PIPE	SIZE (IN)	LENGTH (FT)	TYPE	INLET					OUTLET					SLOPE %	THAW WIRE (FT)
				STATION	OFFSET	ELEVATION	END SEC'N	END TREATMENT	STATION	OFFSET	ELEVATION	END SEC'N	END TREATMENT		
P22-1	36	59.0	HDPE	363+62.3	0.6	530.28	X	I	363+62.3	33.0 LT	527.62			4.50	X
RR-P6-1	72 X 36	4.0	RR	SEE ARRC CULVERT DETAIL											
RR-P6-2	36	30.0	RR	SEE ARRC CULVERT DETAIL											
P22-2	36	60.0	HDPE	366+59.9	27.0	527.49	X	I	366+59.9	32.4 LT	525.09		III	4.00	X
P22-3	48	140.0	HDPE	SEE LARGE DIAMETER CULVERT DETAIL											
FD22-3	48	44.0	PFD	SEE LARGE DIAMETER CULVERT DETAIL											



SHEET NO.	TOTAL SHEETS	
F22	F38	
STATE	YEAR	
ALASKA	2021	
PROJECT DESIGNATION		
0311032/Z536100000		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

PLAN AND PROFILE
STA. 361+50 TO 374+00

DESIGNED BY: LML/ADS/ZDK/RRH
CHECKED BY: RRH
DRAFTED BY: LML/VJS/ZDK

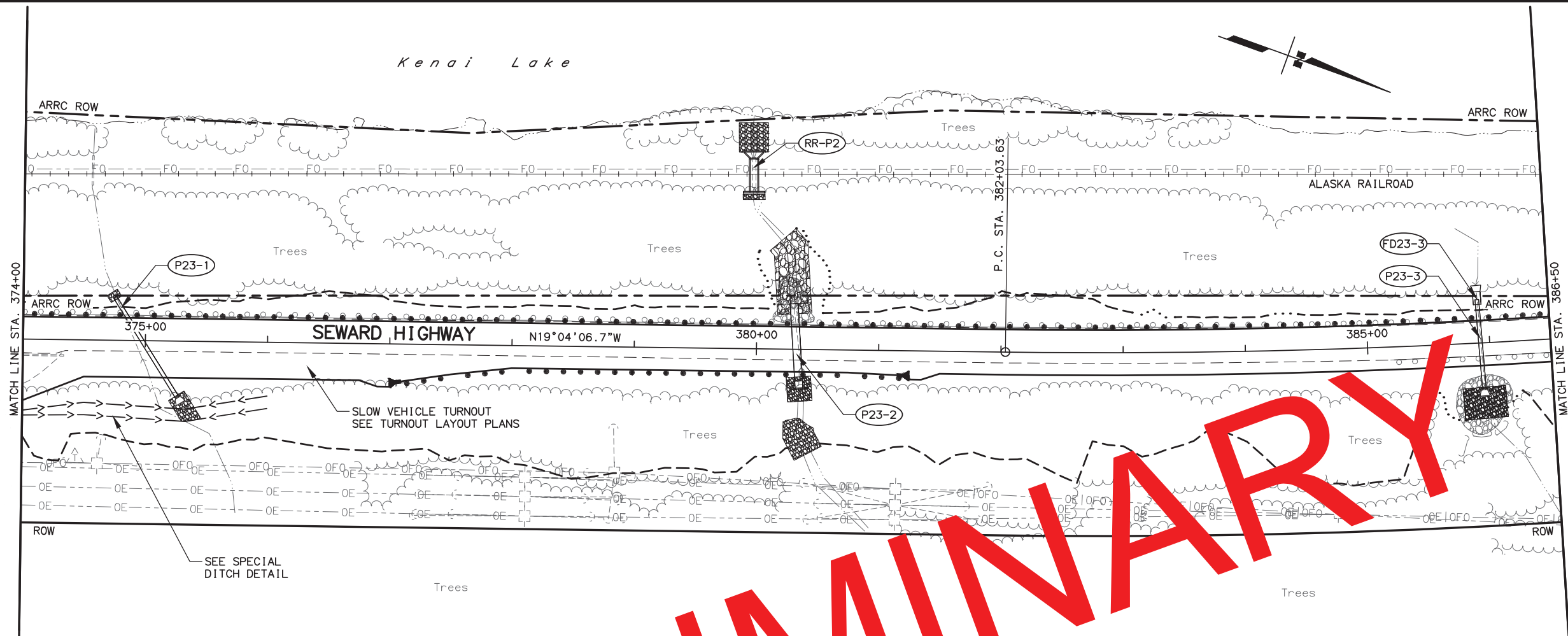
REFERENCES: XR-53610-Border-PlanP
XR-53610-DesIgn-XR-53610-Base
XR-53610-ROW

SCALE: 1" = 50'

LAYOUT: F23

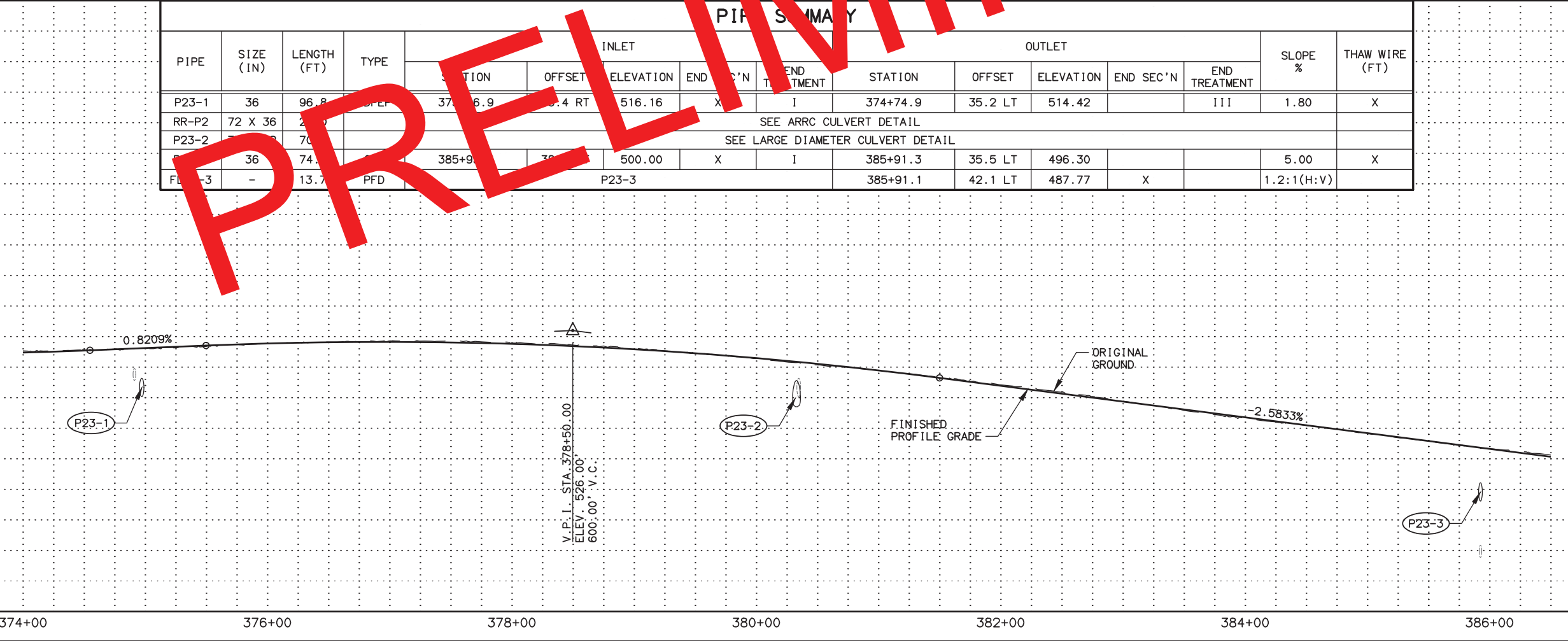
DATE: 4/26/2021 10:03 AM

DRAWING LOCATION: w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civil\3D16\PlanSet\53610_F13-F24.dwg



PIPE SUMMARY

PIPE	SIZE (IN)	LENGTH (FT)	TYPE	INLET					OUTLET					SLOPE %	THAW WIRE (FT)
				STATION	OFFSET	ELEVATION	END SEC'N	END TREATMENT	STATION	OFFSET	ELEVATION	END SEC'N	END TREATMENT		
P23-1	36	96.8	PFD	374+74.9	35.2 RT	516.16	X	I	374+74.9	35.2 LT	514.42		III	1.80	X
RR-P2	72 X 36	2		SEE ARRC CULVERT DETAIL											
P23-2	72	70		SEE LARGE DIAMETER CULVERT DETAIL											
P23-3	36	74.1	PFD	385+91.1	42.1 LT	500.00	X	I	385+91.3	35.5 LT	496.30			5.00	X
P23-3	-	13.7	PFD	385+91.1	42.1 LT	487.77		X				X		1.2:1(H:V)	



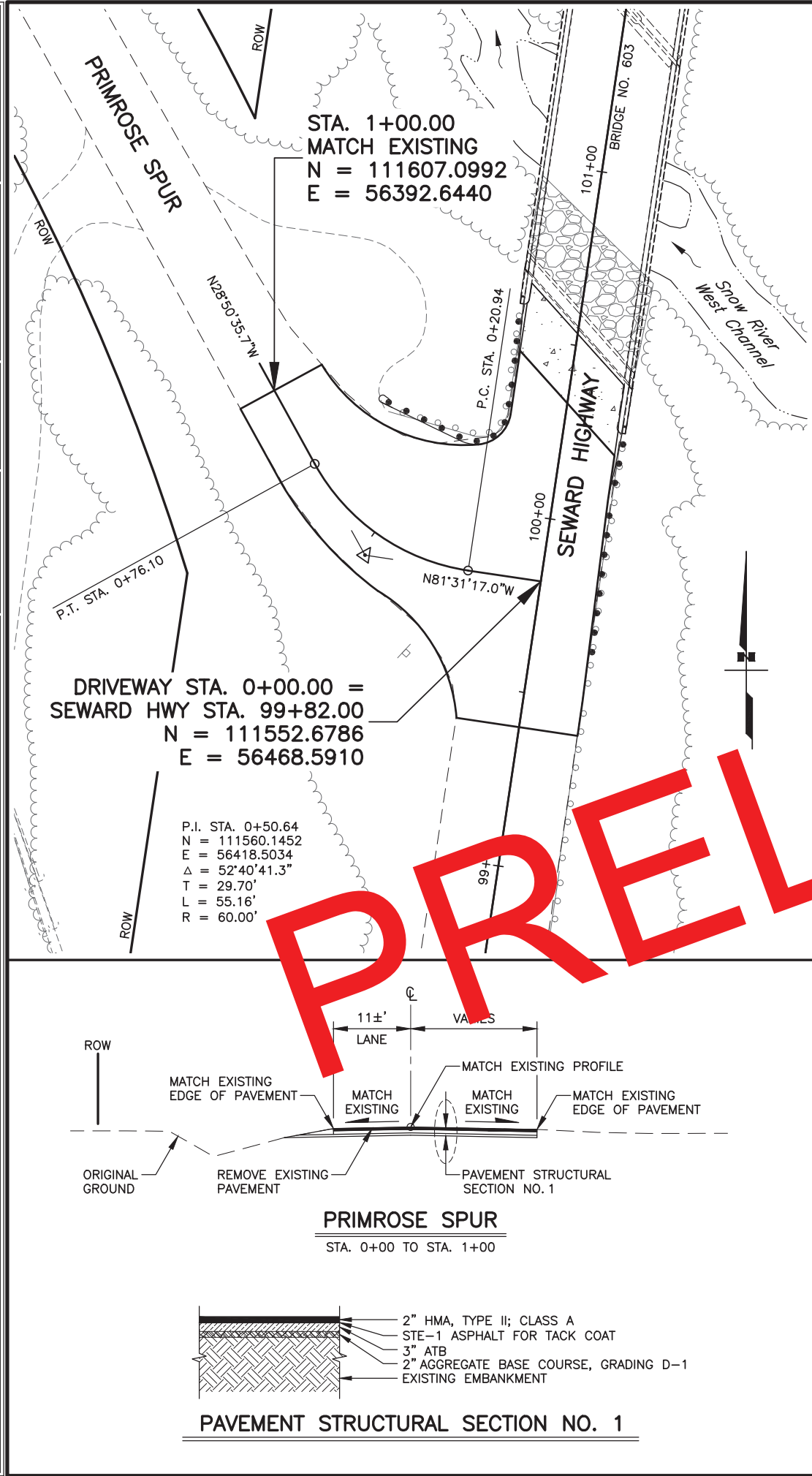
SHEET NO.	TOTAL SHEETS	
F23	F38	
STATE	YEAR	
ALASKA	2021	
PROJECT DESIGNATION		
0311032/Z536100000		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

PLANS DEVELOPED BY:
STATE OF ALASKA
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AND PUBLIC FACILITIES
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ANCHORAGE, AK 99502
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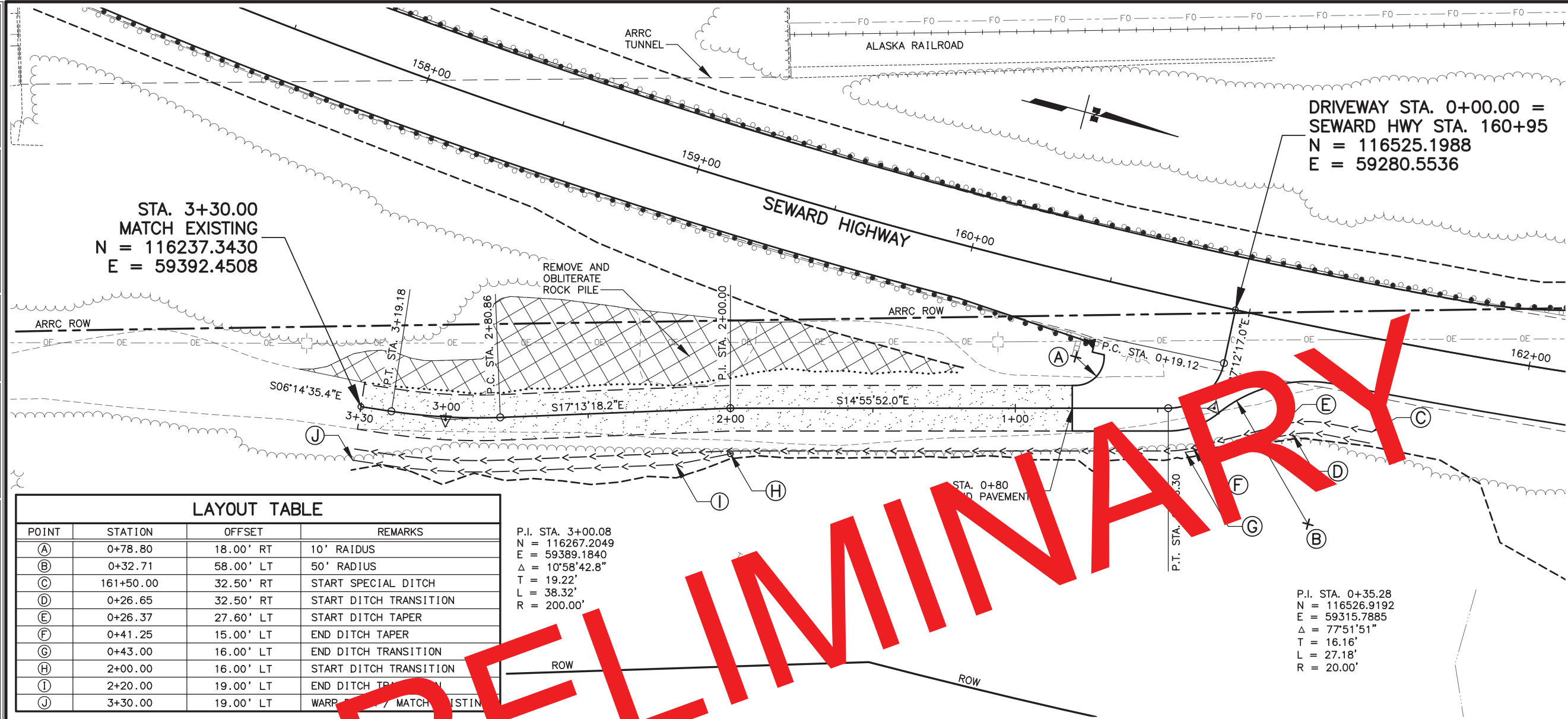
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

PLAN AND PROFILE
STA. 374+00 TO 386+50

DESIGNED BY: LML/KOS/ZDK
CHECKED BY: RRH
DRAFTED BY: LML/VUS/ZDK
XREFS: XR-53610-Barrier-PaveP
XR-53610-Design-XR-53610-Base
XR-53610-ROW
SCALE
1" = 20'/1" = 5'
LAYOUT
F25
DATE
TIME
10/14/2020 9:16 AM
DRAWING LOCATION
w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civil\3D16\Plan\set\F25-F38_Approaches.dwg



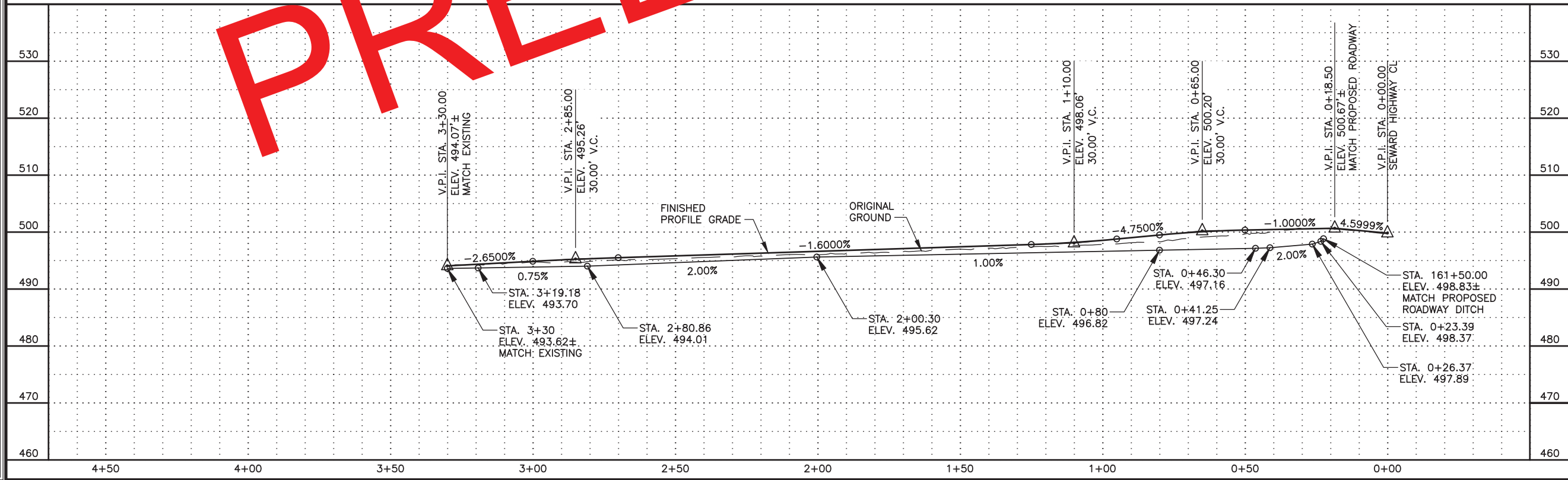
DESIGNED BY: ZDK
CHECKED BY: RRH
DRAFTED BY: ZDK
XREFS: XR-53610-Base, XR-53610-Base, XR-53610-Base
SCALE: 1" = 20'
LAYOUT: F26
DATE: 10/14/2020 9:16 AM
TIME: 9:16 AM
DRAWING LOCATION: w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civ3D16\Plan\53610_F26-F38_Approaches.dwg



LAYOUT TABLE			
POINT	STATION	OFFSET	REMARKS
(A)	0+78.80	18.00' RT	10' RAIDUS
(B)	0+32.71	58.00' LT	50' RADIUS
(C)	161+50.00	32.50' RT	START SPECIAL DITCH
(D)	0+26.65	32.50' RT	START DITCH TRANSITION
(E)	0+26.37	27.60' LT	START DITCH TAPER
(F)	0+41.25	15.00' LT	END DITCH TAPER
(G)	0+43.00	16.00' LT	END DITCH TRANSITION
(H)	2+00.00	16.00' LT	START DITCH TRANSITION
(I)	2+20.00	19.00' LT	END DITCH TRANSITION
(J)	3+30.00	19.00' LT	WARP / MATCH EXISTING

P.I. STA. 3+00.08
N = 116267.2049
E = 59389.1840
Δ = 10°58'42.8"
T = 19.22'
L = 38.32'
R = 200.00'

P.I. STA. 0+35.28
N = 116526.9192
E = 59315.7885
Δ = 77°51'51"
T = 16.16'
L = 27.18'
R = 20.00'



SHEET NO.	TOTAL SHEETS	
F26	F39	
STATE	YEAR	
ALASKA	2019	
PROJECT DESIGNATION		
0311032/Z536100000		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

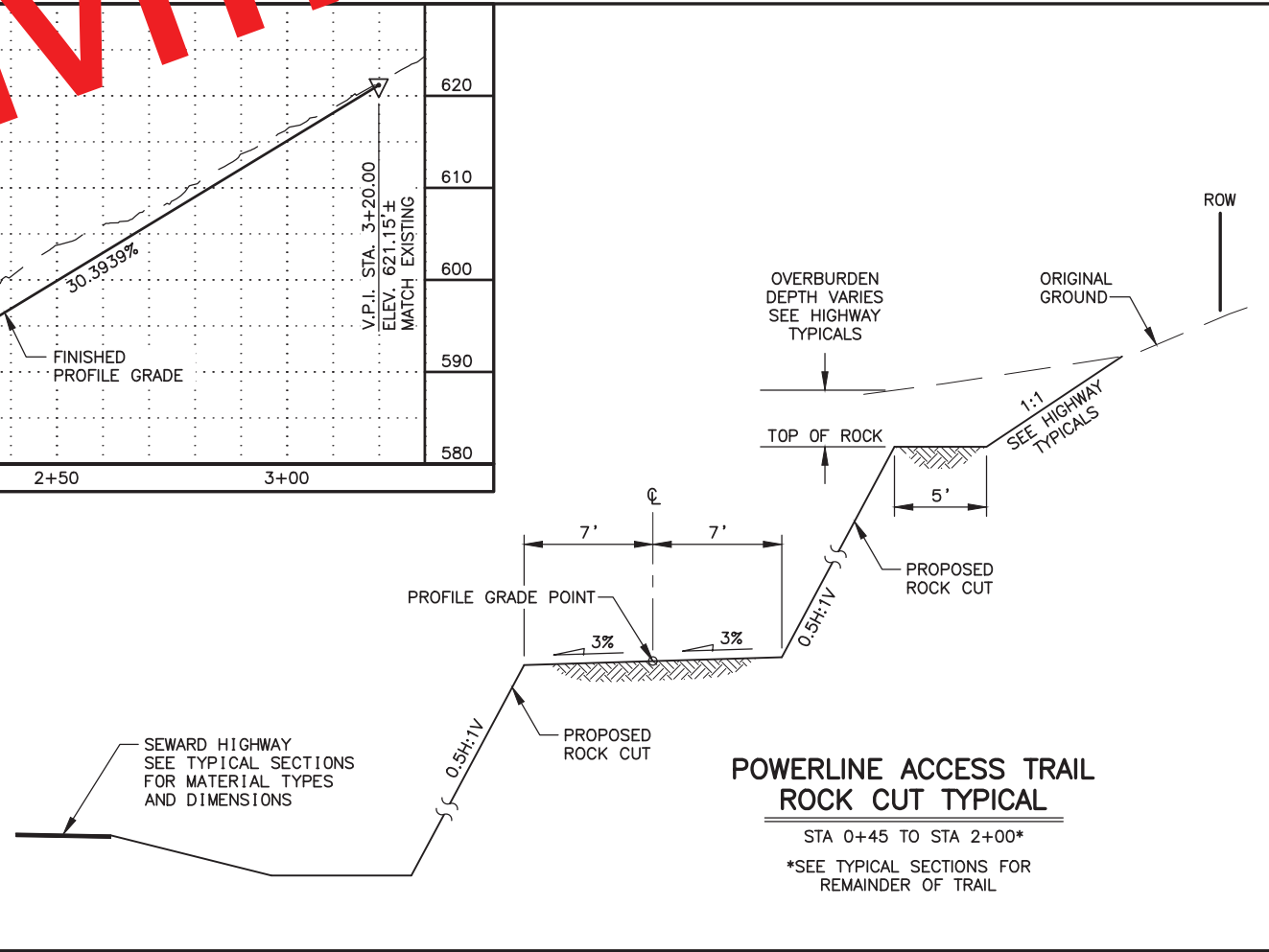
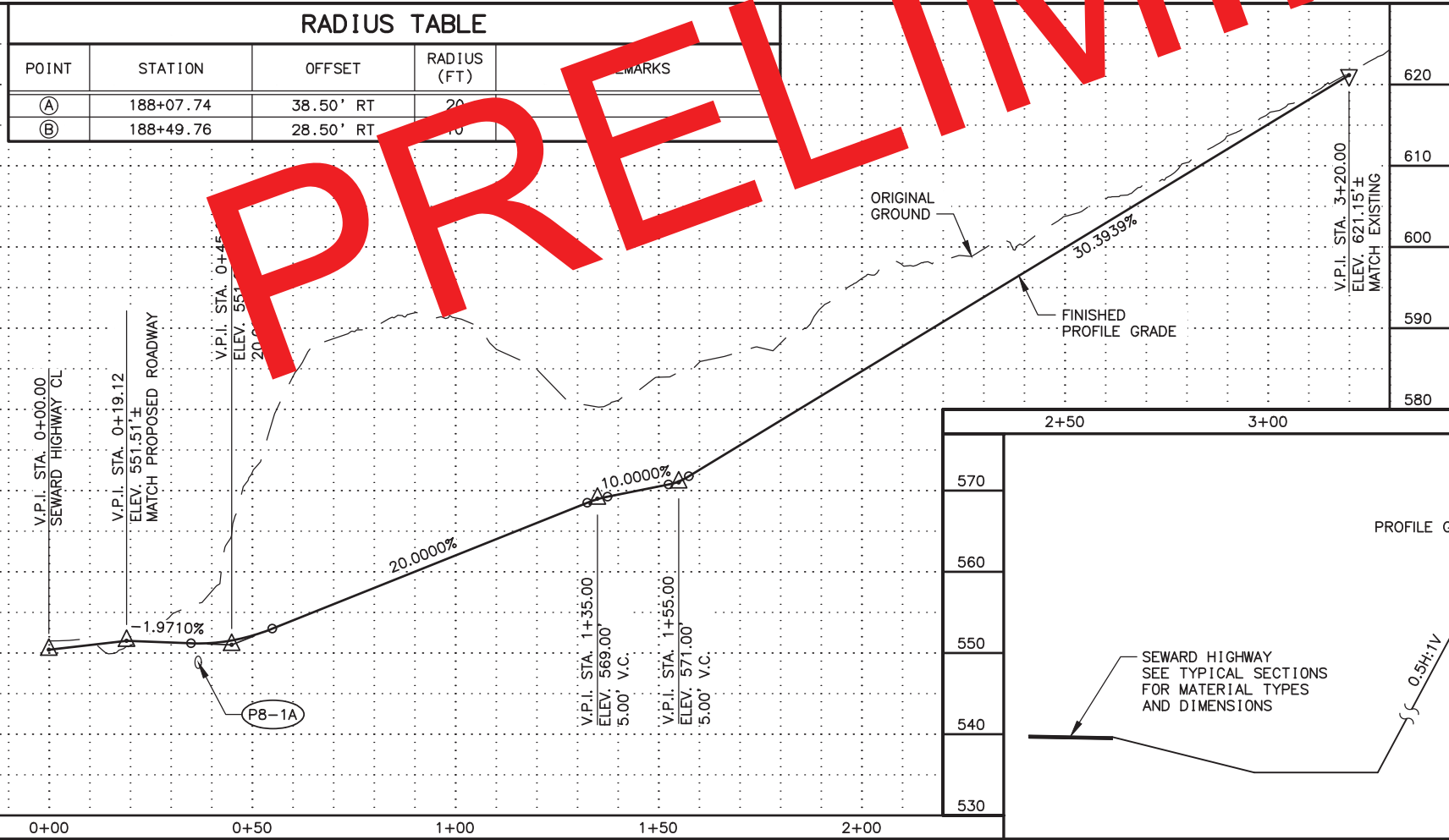
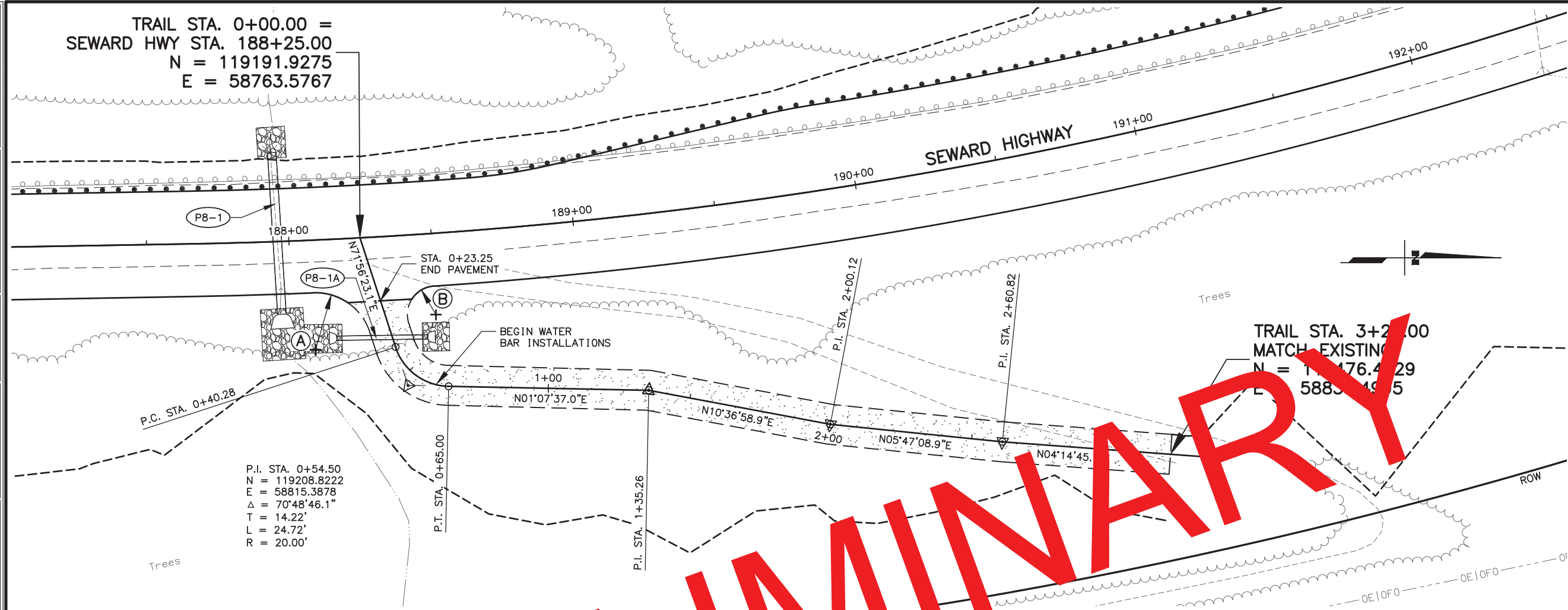
PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
CER
RYAN R. HAMMILL
REGISTERED PROFESSIONAL ENGINEER
00000001

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION
PLAN AND PROFILE
DRIVEWAY AT 160+95 RT

DESIGNED BY: LML/KOS/ZDK
CHECKED BY: RHR
DRAFTED BY: LML/VJS
XREFS: XR-53610-Border-PlanDP
XR-53610-Design-XR-53610-Bas.
XR-53610-ROW
SCALE: 1"= 20'
LAYOUT: F27
DATE: 10/14/2020 9:16 AM
TIME: 9:16 AM
DRAWING LOCATION: w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civil\3D16\Plan\set\53610_F25-F38_Approaches.dwg

TRAIL STA. 0+00.00 =
SEWARD HWY STA. 188+25.00
N = 119191.9275
E = 58763.5767



**POWERLINE ACCESS TRAIL
ROCK CUT TYPICAL**
STA 0+45 TO STA 2+00*
*SEE TYPICAL SECTIONS FOR
REMAINDER OF TRAIL

SHEET NO.	TOTAL SHEETS	
F27	F39	
STATE	YEAR	
ALASKA	2019	
PROJECT DESIGNATION		
0311032/Z536100000		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

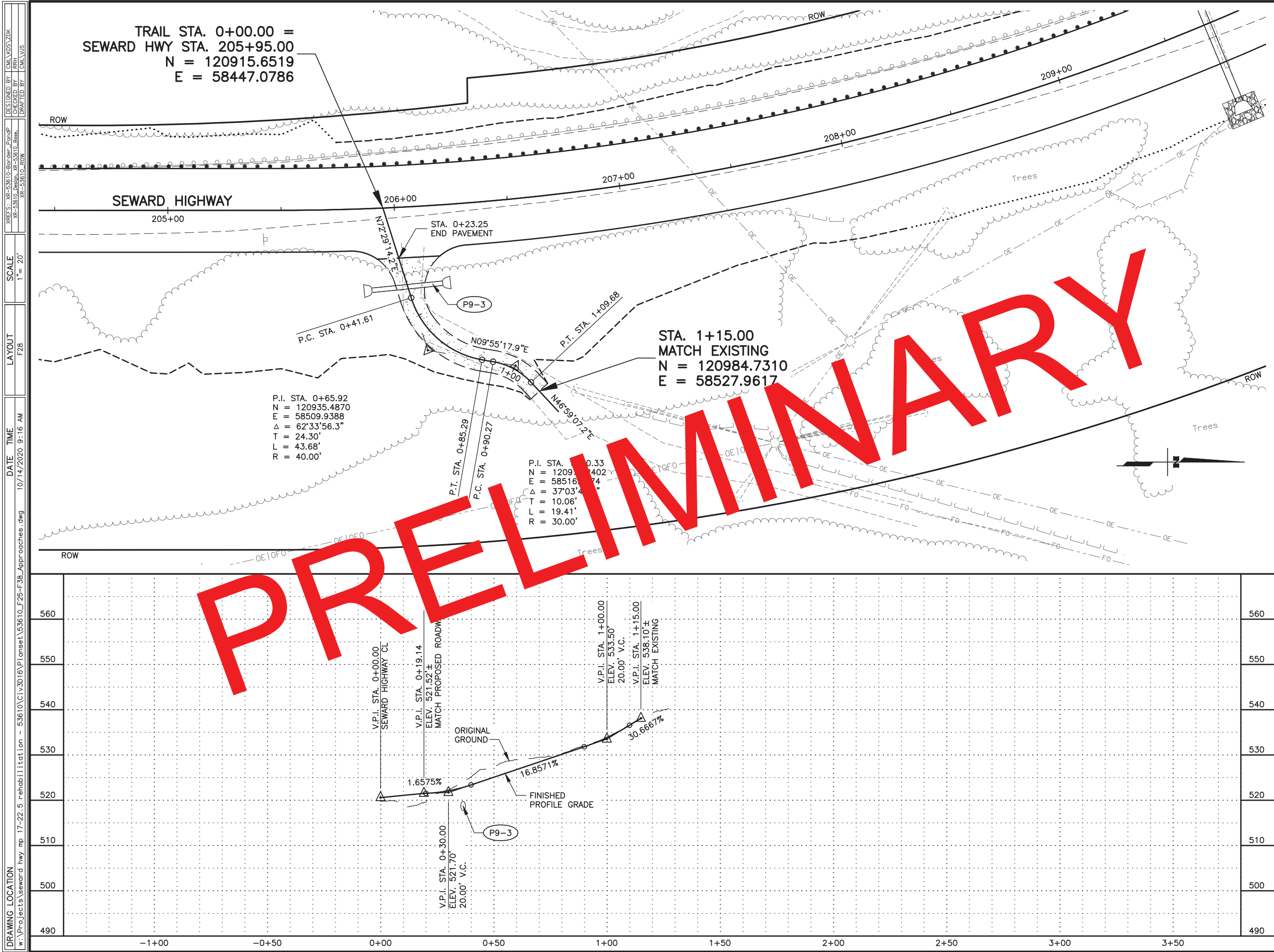
Location map showing the trail alignment relative to Seward Highway and other landmarks. Key features include:

- Trail alignment from Seward Highway to Moose Pass.
- Landmarks: Lawing Airport, Primrose Spur, Seward Hwy, Snow River, ARRC, Kenai Lake, Rocky Creek, Victor Creek, Falls Creek.
- Label: "THIS SHEET" pointing to the trail alignment.

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4111 AVIATION AVENUE
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(907) 269-0590

STATE OF ALASKA
CERI
RYAN J. HAMMILL
REGISTERED PROFESSIONAL ENGINEER
000061

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION
PLAN AND PROFILE
POWERLINE ACCESS TRAIL
AT STA. 188+25 RT



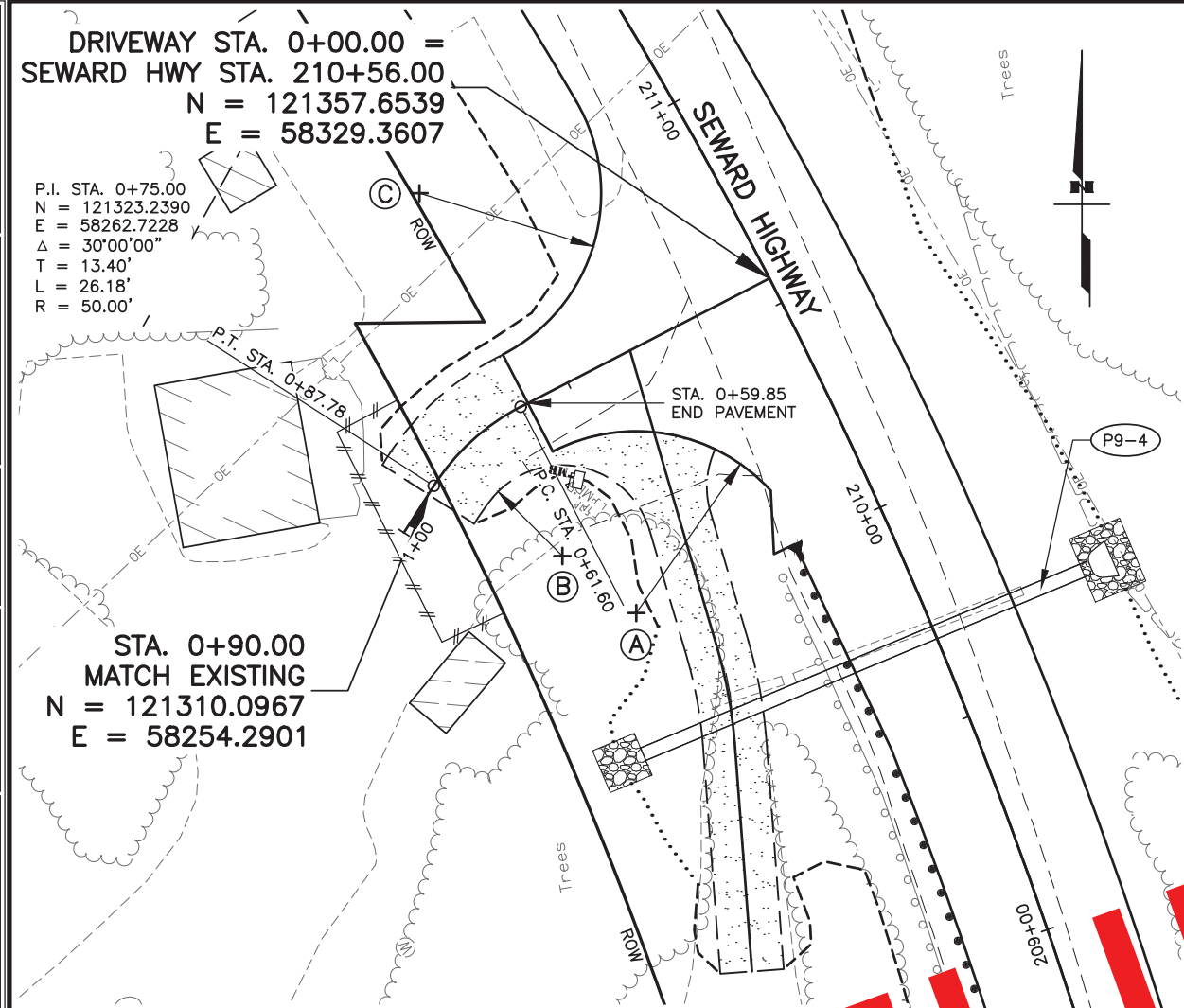
SHEET NO.		TOTAL SHEETS	
F28		F39	
STATE		YEAR	
ALASKA		2019	
PROJECT DESIGNATION			
0311032/Z536100000			
ADDENDUM NO.			
ATTACHMENT NO.			
REVISIONS			
NO.	DATE	DESCRIPTION	

PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

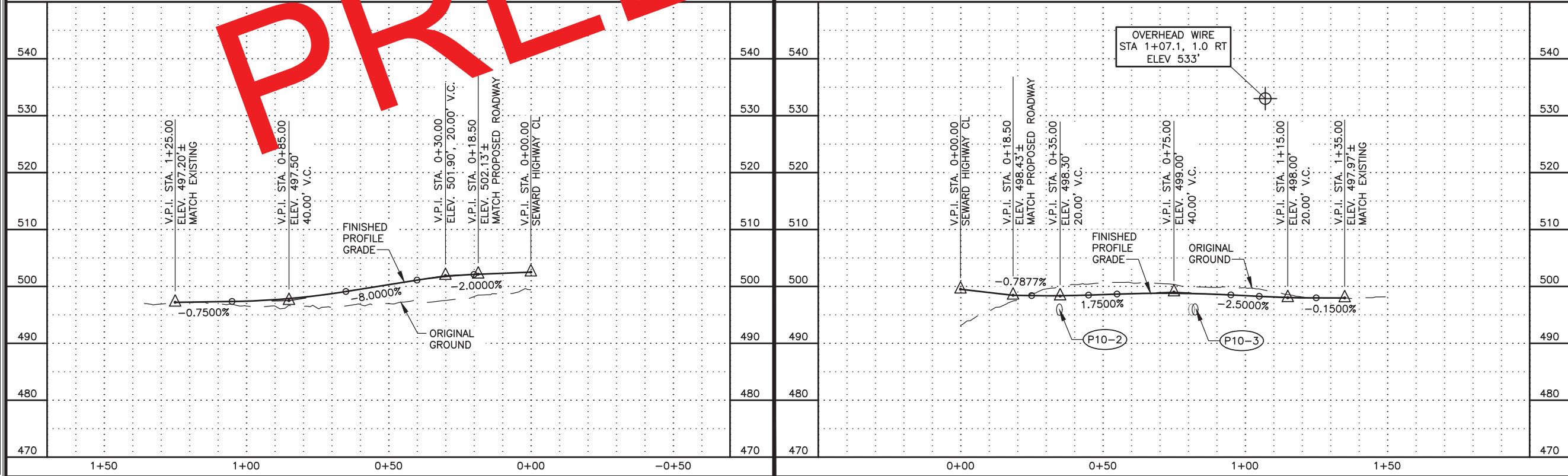
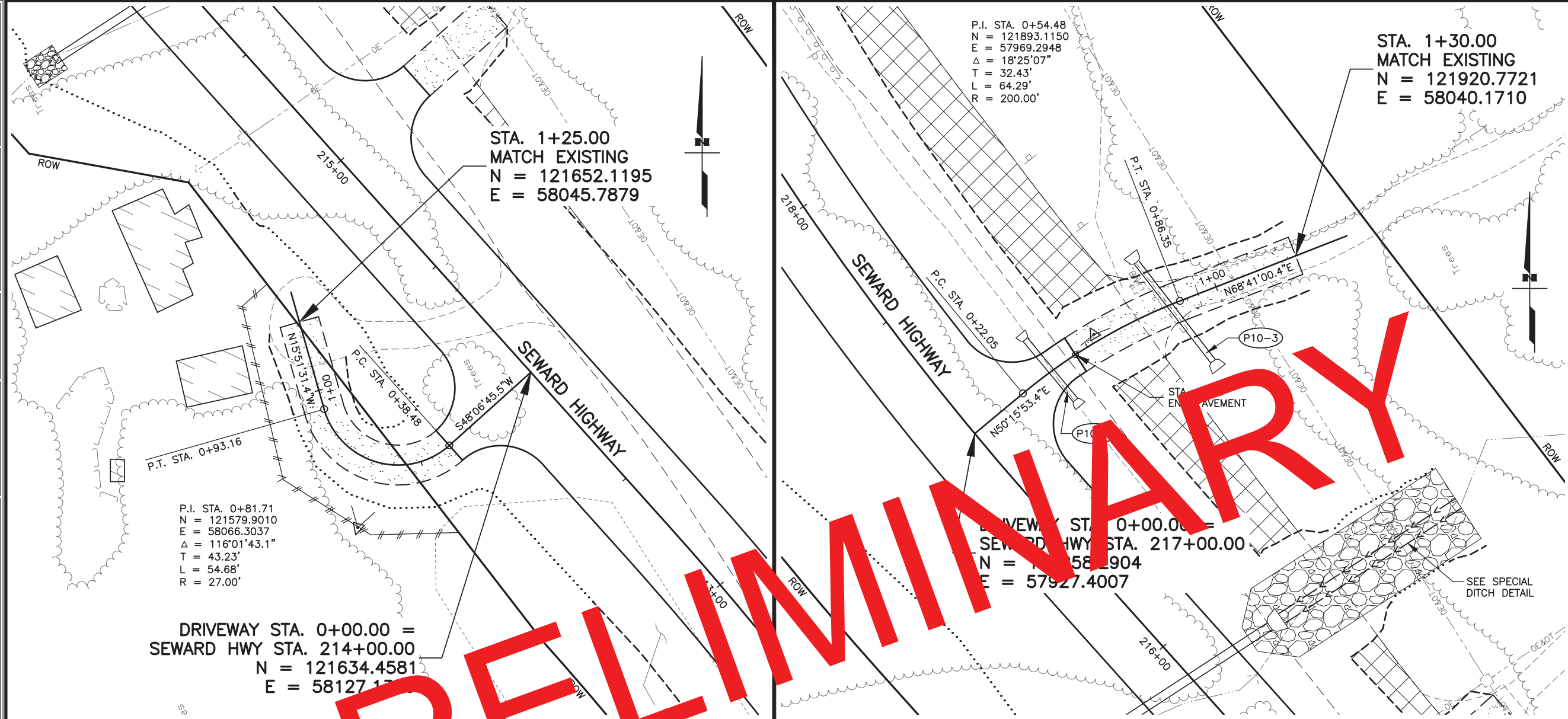
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

SEWARD HIGHWAY
MP 17-22.5
REHABILITATION
PLAN AND PROFILE
POWERLINE ACCESS TRAIL
AT STA. 205+95 RT

DESIGNED BY: LML/KOS/ZDK
CHECKED BY: RRR
DRAFTED BY: LML/VUS
XREFS: XR-53610-Border-PlanP
XR-53610-Design-XR-53610-Bases
XR-53610-ROW
SCALE: 1"= 20'
LAYOUT: F29
DATE: 10/14/2020 9:16 AM
TIME: 9:16 AM
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DESIGNED BY: LML/KOS/VZK
CHECKED BY: RRR
DRAFTED BY: LML/VUS
XREFS: XR-53610-Border-PlanP
XR-53610-Design-XR-53610-Bas
XR-53610-ROW
SCALE: 1"= 20'
LAYOUT: F30
DATE: 10/14/2020 9:16 AM
TIME: 9:16 AM
DRAWING LOCATION: w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civ3D16\Plan\set\53610_F25-F38_Approaches.dwg



SHEET NO.	TOTAL SHEETS	
F30	F39	
STATE	YEAR	
ALASKA	2019	
PROJECT DESIGNATION		
0311032/Z536100000		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

TO MOOSE PASS
Falls Creek
Plumig Creek
Lawing Airport
Kenai Lake
Rocky Creek
Victor Creek
THIS SHEET
Primrose Spur
Seward Hwy
Snow River
ARC
TO SEWARD

PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
CER
RYAN R. HAMMILL
REGISTERED PROFESSIONAL ENGINEER
000061

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION
PLAN AND PROFILE
DRIVEWAY AT 214+00 LT
DRIVEWAY AT 217+00 RT

DESIGNED BY: LML/KOS/VZDK
CHECKED BY: RRH
DRAFTED BY: LML/VUS
XREFS: XR-53610-Border-PlanDP
XR-53610-Design_XR-53610-Bas.
XR-53610-ROW
SCALE: 1"= 20'
LAYOUT: F31
DATE: 10/14/2020 9:16 AM
TIME: 9:16 AM
DRAWING LOCATION: w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civil\3D16\Plan\set\53610_F25-F38_Approaches.dwg

P.I. STA. 1+64.12
N = 122683.0404
E = 57569.6786
Δ = 25°04'52.1"
T = 22.24'
L = 43.77'
R = 100.00'

STA. 1+90.00
MATCH EXISTING
N = 122670.0557
E = 57546.4719

P.I. STA. 0+75.91
N = 122764.0774
E = 57627.8902
Δ = 65°40'58.2"
T = 51.64'
L = 91.71'
R = 80.00'

SEE SHEET F31

DRIVEWAY STA. 0+00.00 =
SEWARD HWY STA. 226+50.00
N = 122749.1075
E = 57702.3083

RADIUS TABLE

POINT	STATION	OFFSET	RADIUS (FT)	REMARKS
(A)	226+02.32	48.50' LT	30	
(B)	226+95.28	58.50' LT	40	
(C)	226+77.86	50.46' LT	20	
(D)	226+49.80	102.88' LT	20	

OVERHEAD WIRE
STA 0+25.9, 11.0 LT
ELEV 511'

V.P.I. STA. 1+90.00
ELEV. 479.38' ±
MATCH EXISTING

V.P.I. STA. 1+50.00
ELEV. 480.50'
60.00' V.C.

V.P.I. STA. 1+00.00
ELEV. 487.50'
30.00' V.C.

V.P.I. STA. 0+48.50
ELEV. 492.60'
40.00' V.C.

V.P.I. STA. 0+18.50
ELEV. 493.19' ±
MATCH PROPOSED ROADWAY

V.P.I. STA. 0+00.00
ELEV. 492.08'
SEWARD HIGHWAY CL

FINISHED
PROFILE
GRADE

ORIGINAL
GROUND

SHEET NO.

F31

TOTAL SHEETS

F39

STATE

ALASKA

YEAR

2019

PROJECT DESIGNATION

0311032/Z536100000

ADDENDUM NO.

ATTACHMENT NO.

REVISIONS

NO.	DATE	DESCRIPTION
-----	------	-------------

TO MOOSE PASS

Falls Creek

Trail River

ARC

24

23

22

21

20

19

18

17

PRIMROSE SPUR

SEWARD HWY

Seward River

ARC

TO SEWARD

THIS SHEET

PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA

CERTIFIED

RYAN J. HAMMILL

REGISTERED PROFESSIONAL ENGINEER

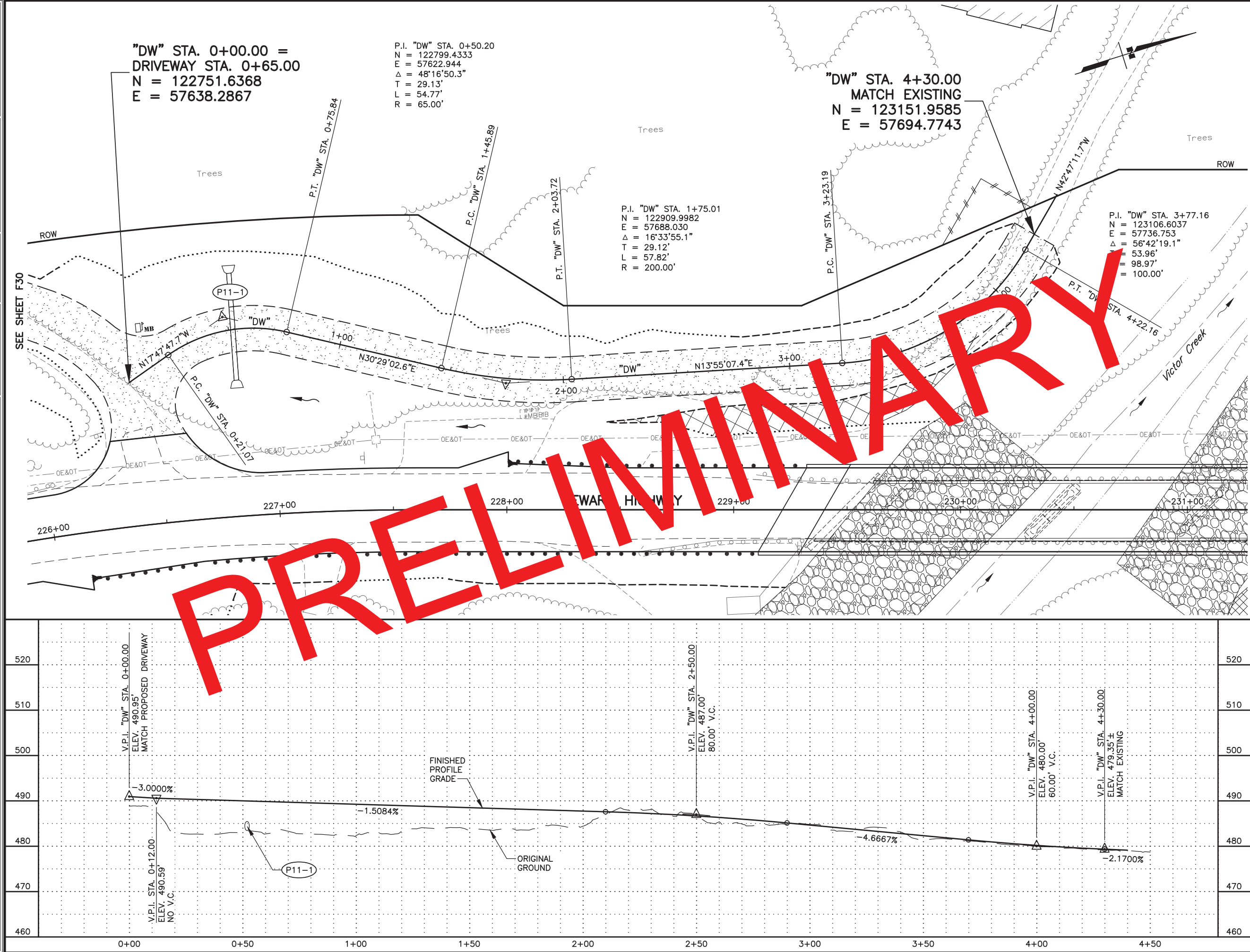
000061

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

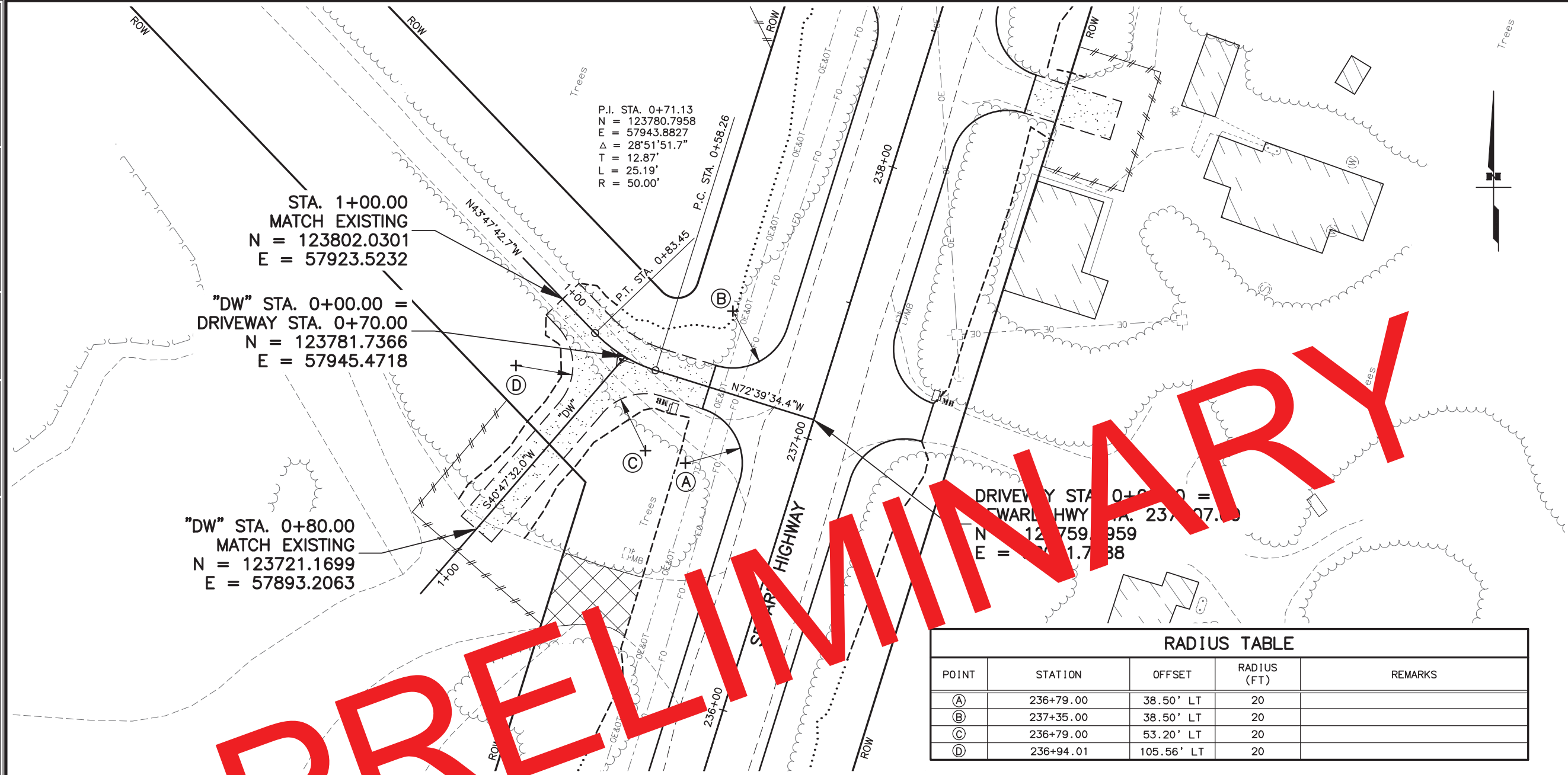
PLAN AND PROFILE
DRIVEWAY AT 226+50 LT

DESIGNED BY: LML/KOS/ZDK
CHECKED BY: RRH
DRAFTED BY: LML/VUS
XREFS: XR-53610-Border-PlanDP
XR-53610-Design_XR-53610-Bas.
XR-53610-ROW
SCALE: 1"= 20'
LAYOUT: F32
DATE: 10/14/2020 9:16 AM
TIME: 9:16 AM
DRAWING LOCATION: w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civ3D16\Plan\set\53610_F25-F38_Approaches.dwg

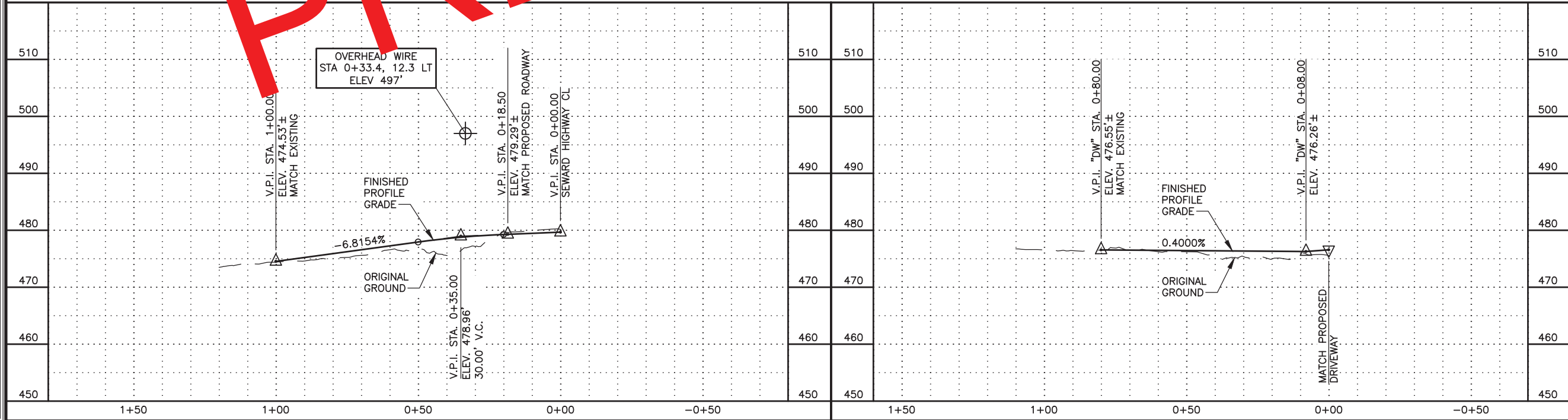


SHEET NO.		TOTAL SHEETS	
F32		F39	
STATE		YEAR	
ALASKA		2019	
PROJECT DESIGNATION			
0311032/Z536100000			
ADDENDUM NO.			
ATTACHMENT NO.			
REVISIONS			
NO.	DATE	DESCRIPTION	
PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES 4111 AVIATION AVENUE ANCHORAGE, AK 99502 (907) 269-0590			
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES SEWARD HIGHWAY MP 17-22.5 REHABILITATION PLAN AND PROFILE "DW" AT 226+40 LT			

DESIGNED BY: LML/KOS/VZDK
CHECKED BY: RRH
DRAFTED BY: LML/VUS
XREFS: XR-53610-Border_PandP
XR-53610-Design_XR-53610-Base
XR-53610-ROW
SCALE: 1"= 20'
LAYOUT: F33
DATE: 10/14/2020 9:16 AM
TIME: 9:16 AM
DRAWING LOCATION: w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civil\3D16\Plan\set\53610_F25-F38_Approaches.dwg



RADIUS TABLE				
POINT	STATION	OFFSET	RADIUS (FT)	REMARKS
(A)	236+79.00	38.50' LT	20	
(B)	237+35.00	38.50' LT	20	
(C)	236+79.00	53.20' LT	20	
(D)	236+94.01	105.56' LT	20	



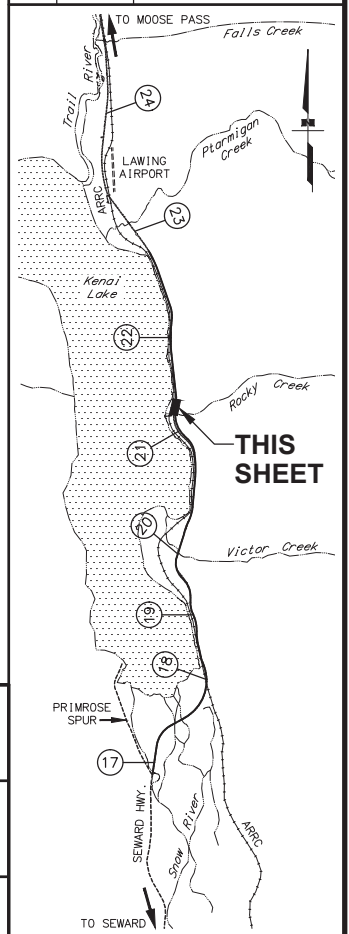
SHEET NO.	TOTAL SHEETS	
F33	F39	
STATE	YEAR	
ALASKA	2019	
PROJECT DESIGNATION		
0311032/Z536100000		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
CER
RYAN R. HAMMILL
REGISTERED PROFESSIONAL ENGINEER
0000661

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION
PLAN AND PROFILE
DRIVEWAY AT 237+07 LT
"DW" AT 237+07 LT

SHEET NO.		TOTAL SHEETS	
F35		F39	
STATE		YEAR	
ALASKA		2019	
PROJECT DESIGNATION			
0311032/Z536100000			
ADDENDUM NO.			
ATTACHMENT NO.			
REVISIONS			
NO.	DATE	DESCRIPTION	



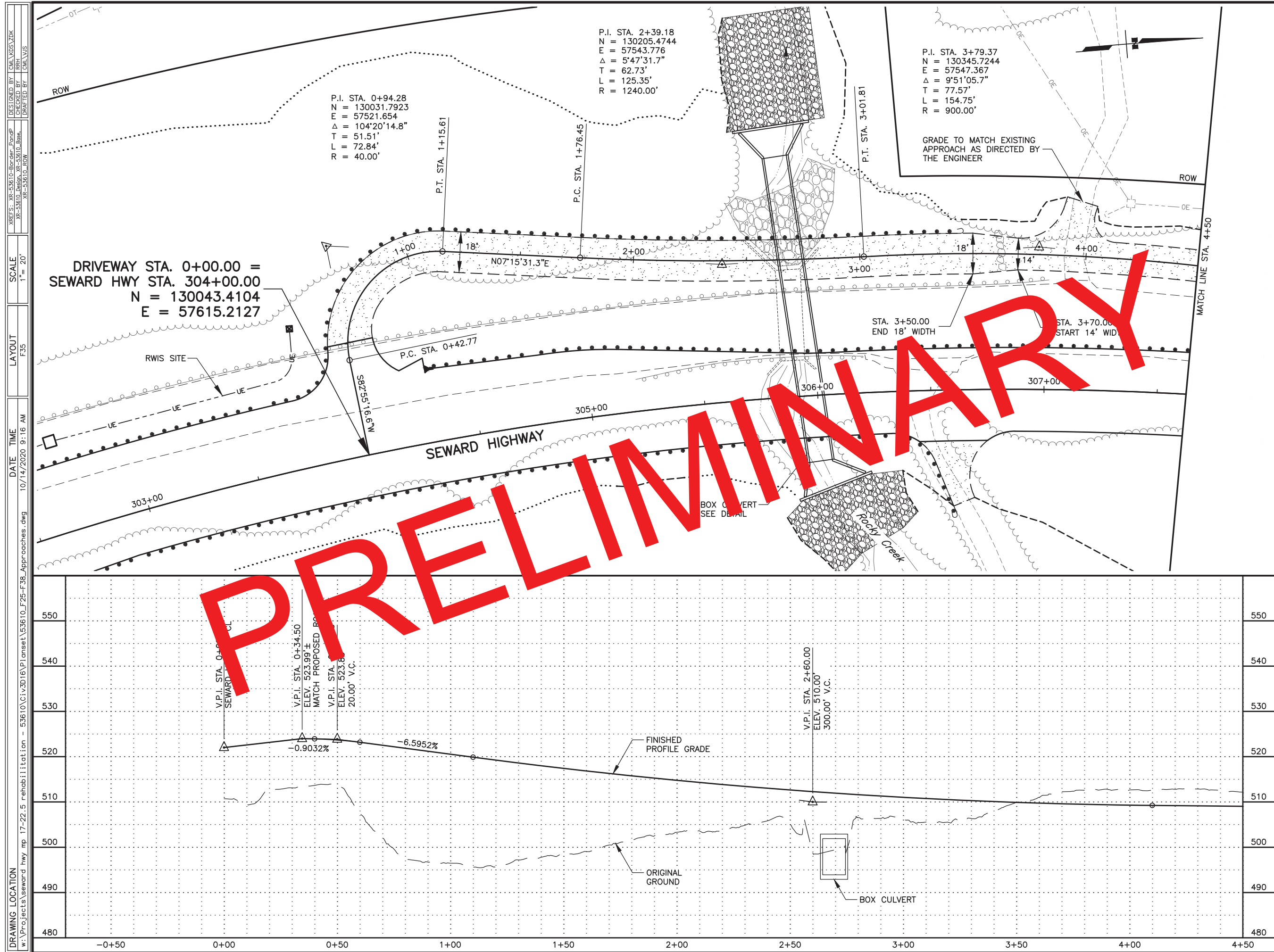
PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

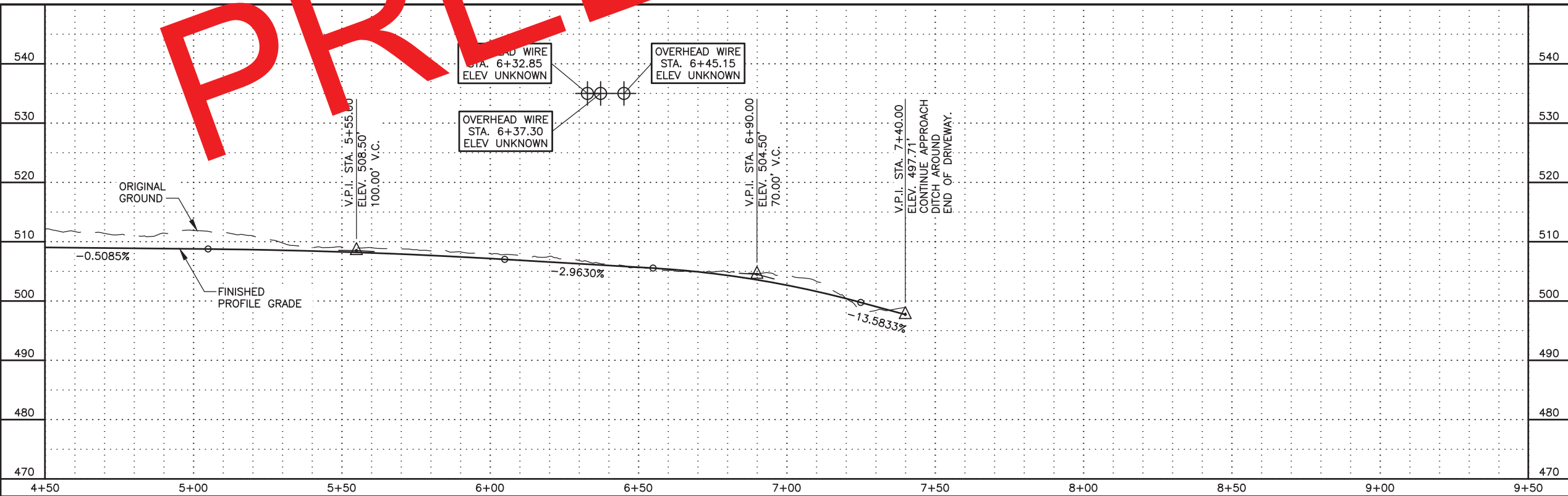
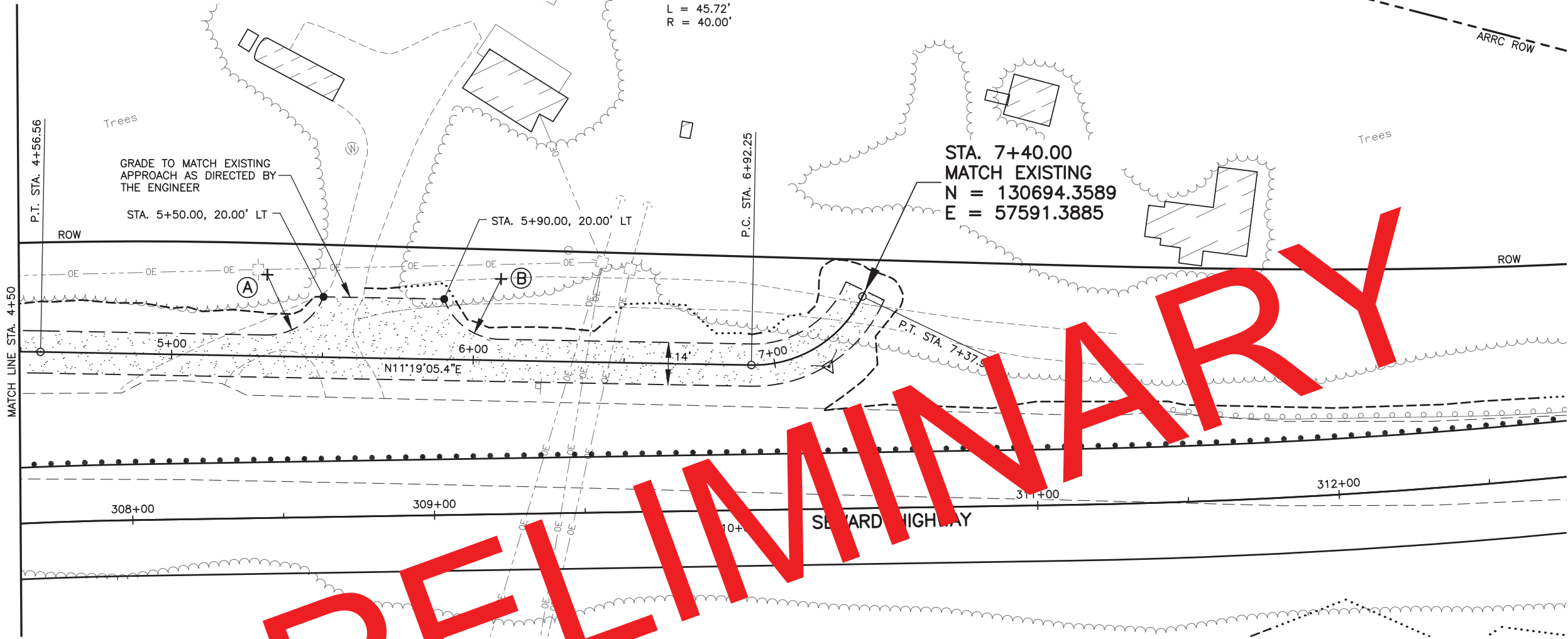
PLAN AND PROFILE
DRIVEWAY AT 304+00 LT



DESIGNED BY: LML/KOS/VZK
CHECKED BY: RRL
DRAFTED BY: LML/VUS
XREFS: XR-53610-Border-PlanDP
XR-53610-Design-XR-53610-Boss
XR-53610-ROW
DRAWING LOCATION
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SCALE
1"= 20'
LAYOUT
F36
DATE
TIME
10/14/2020 9:16 AM

RADIUS TABLE				
POINT	STATION	OFFSET	RADIUS (FT)	REMARKS
(A)	5+31.27	27.00' LT	20	
(B)	6+08.73	27.00' LT	20	

P.I. STA. 7+17.97
N = 130678.1081
E = 57613.8933
 $\Delta = 65^{\circ}29'06.2''$
T = 25.72'
L = 45.72'
R = 40.00'

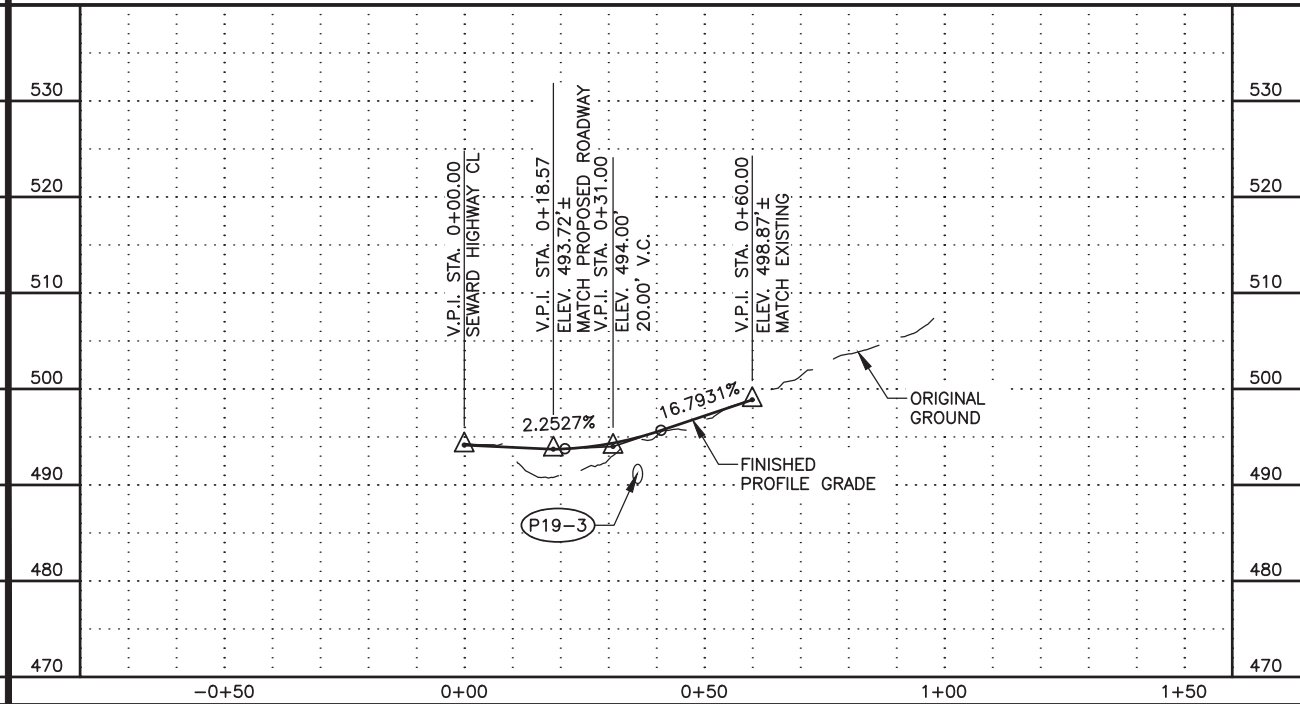
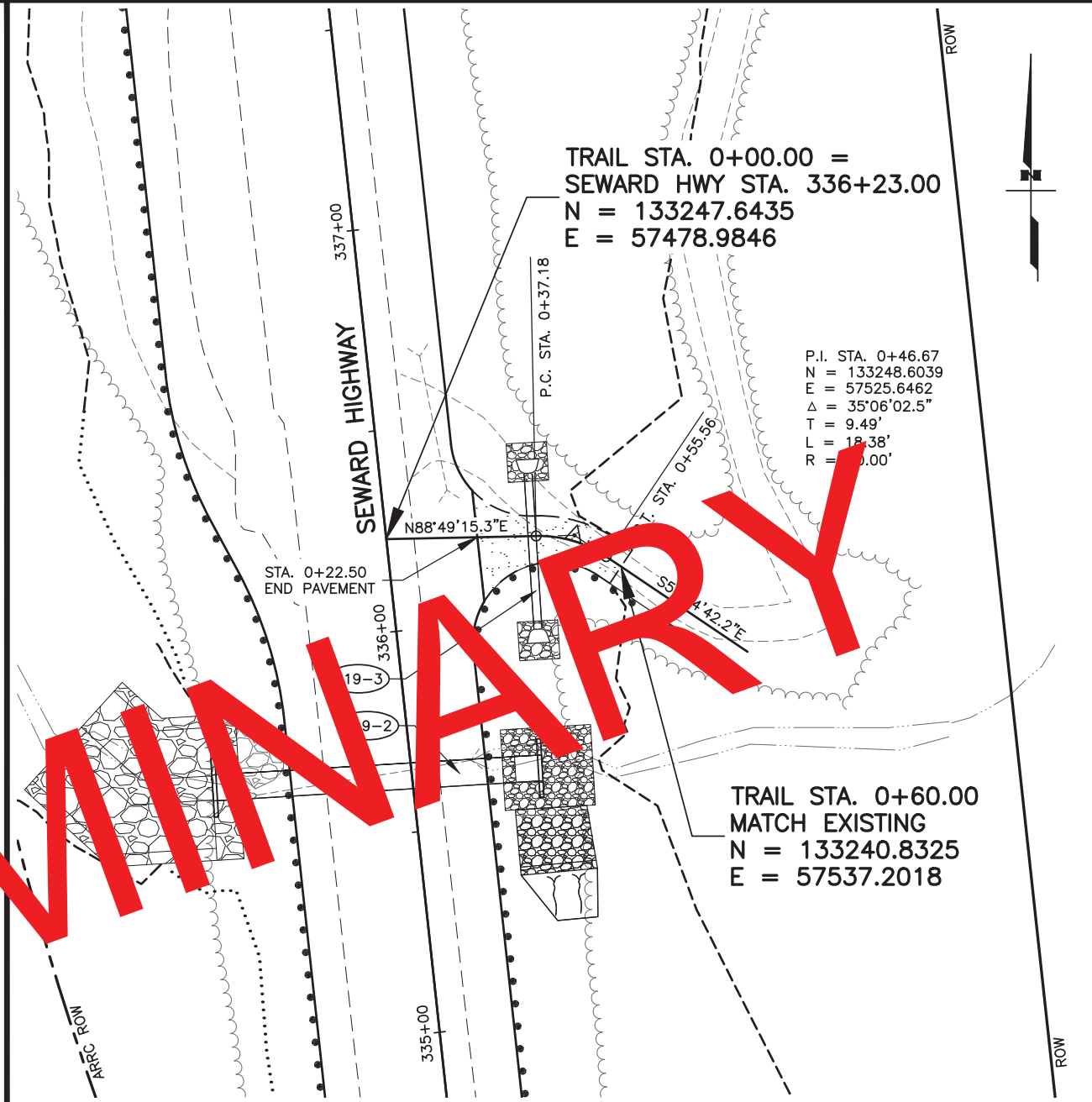
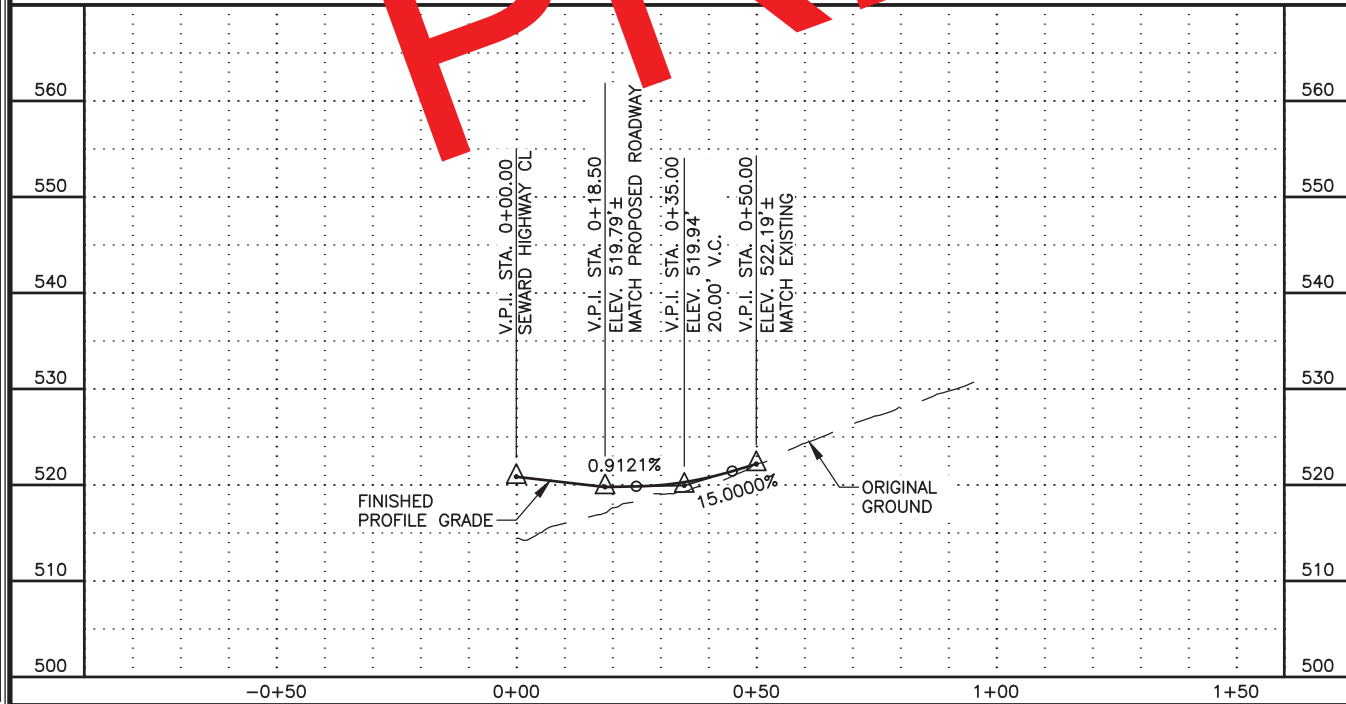
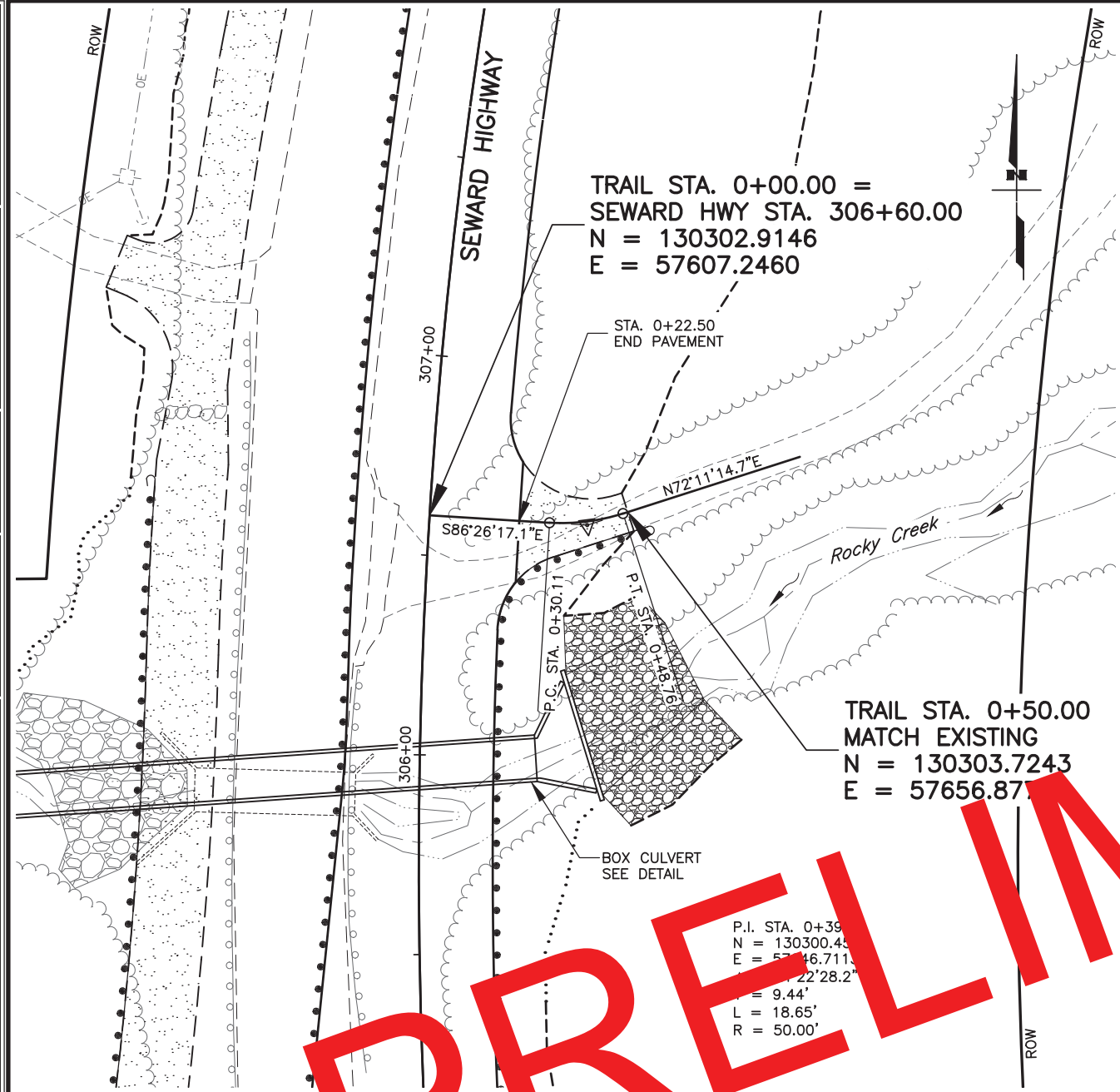


SHEET NO.	TOTAL SHEETS	
F36	F39	
STATE	YEAR	
ALASKA	2019	
PROJECT DESIGNATION		
0311032/Z536100000		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION
PLAN AND PROFILE
DRIVEWAY AT 304+00 LT
(CONTINUED)

DRAWING LOCATION
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DATE
10/14/2020 9:16 AM
TIME
9:16 AM
LAYOUT
F37
SCALE
1"= 20'
DESIGNED BY
CML/KOS/VZDK
CHECKED BY
RRH
DRAFTED BY
CML/VJS

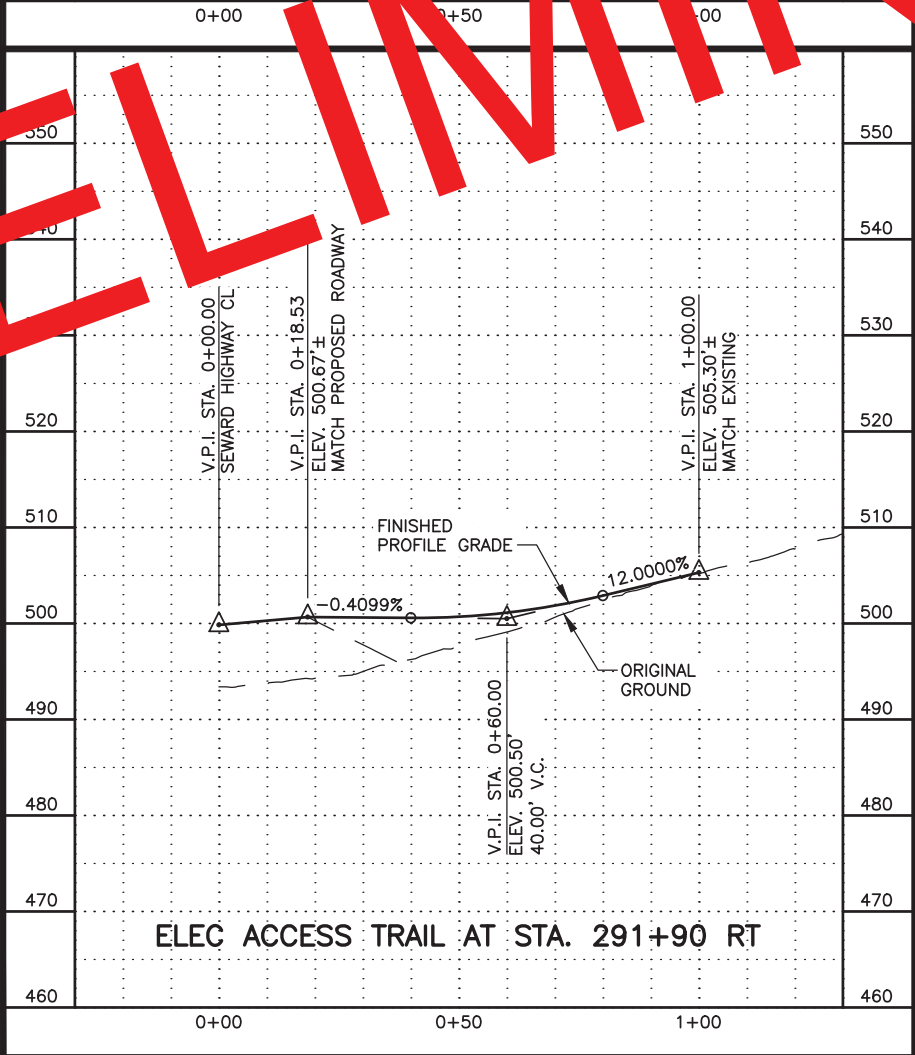
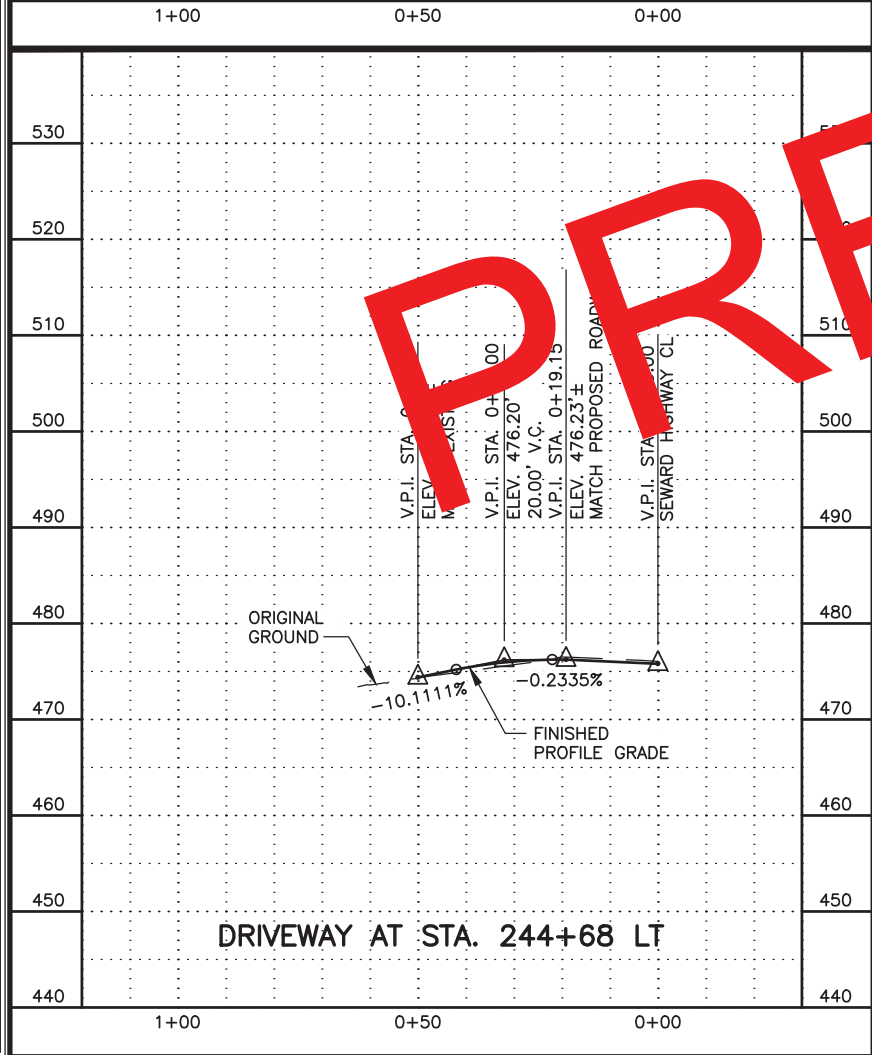
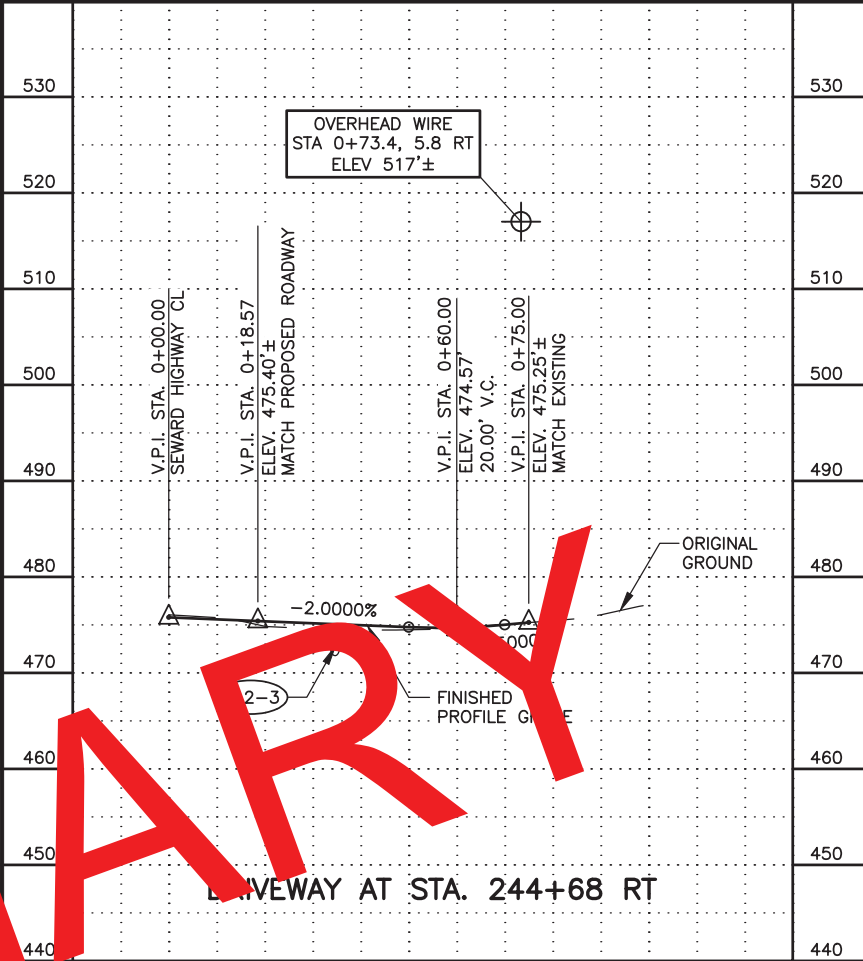
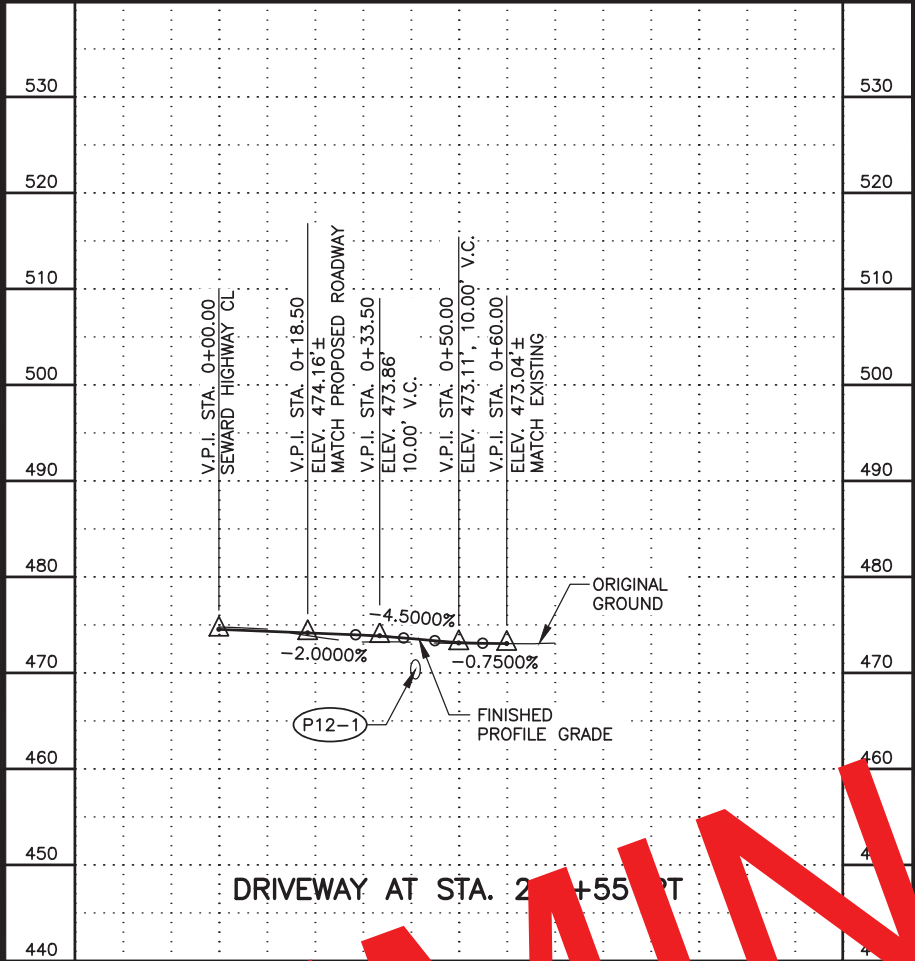
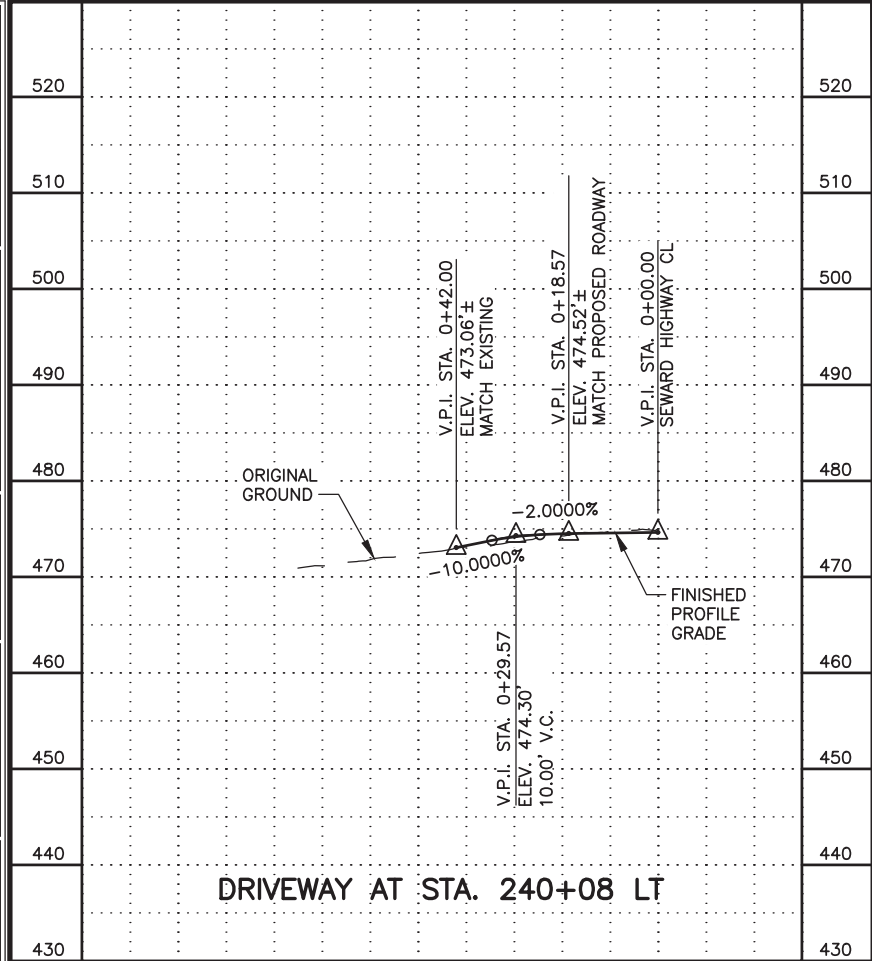


SHEET NO.	TOTAL SHEETS	
F37	F39	
STATE	YEAR	
ALASKA	2019	
PROJECT DESIGNATION		
0311032/Z536100000		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION
PLAN AND PROFILE
POWERLINE ACCESS TRAILS
AT 306+60 RT & 336+23 RT

DESIGNED BY: LML/KOS/VZK
CHECKED BY: RRH
DRAFTED BY: LML/VJS
XREFS: XR-53610-Border-PlanDP
XR-53610-Design_XR-53610-Bases
XR-53610-ROW
SCALE: 1"= 20'
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STATE		YEAR	
ALASKA		2019	
PROJECT DESIGNATION			
0311032/Z536100000			
ADDENDUM NO.			
ATTACHMENT NO.			
REVISIONS			
NO.	DATE	DESCRIPTION	

PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

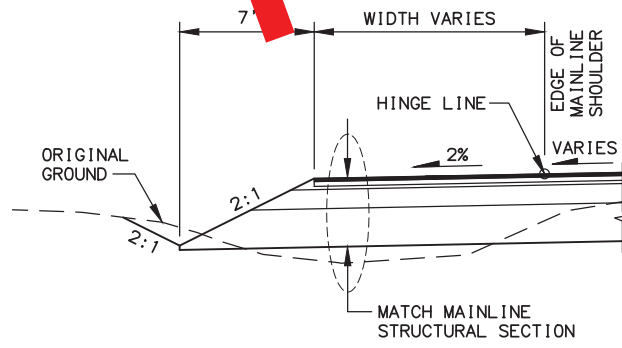
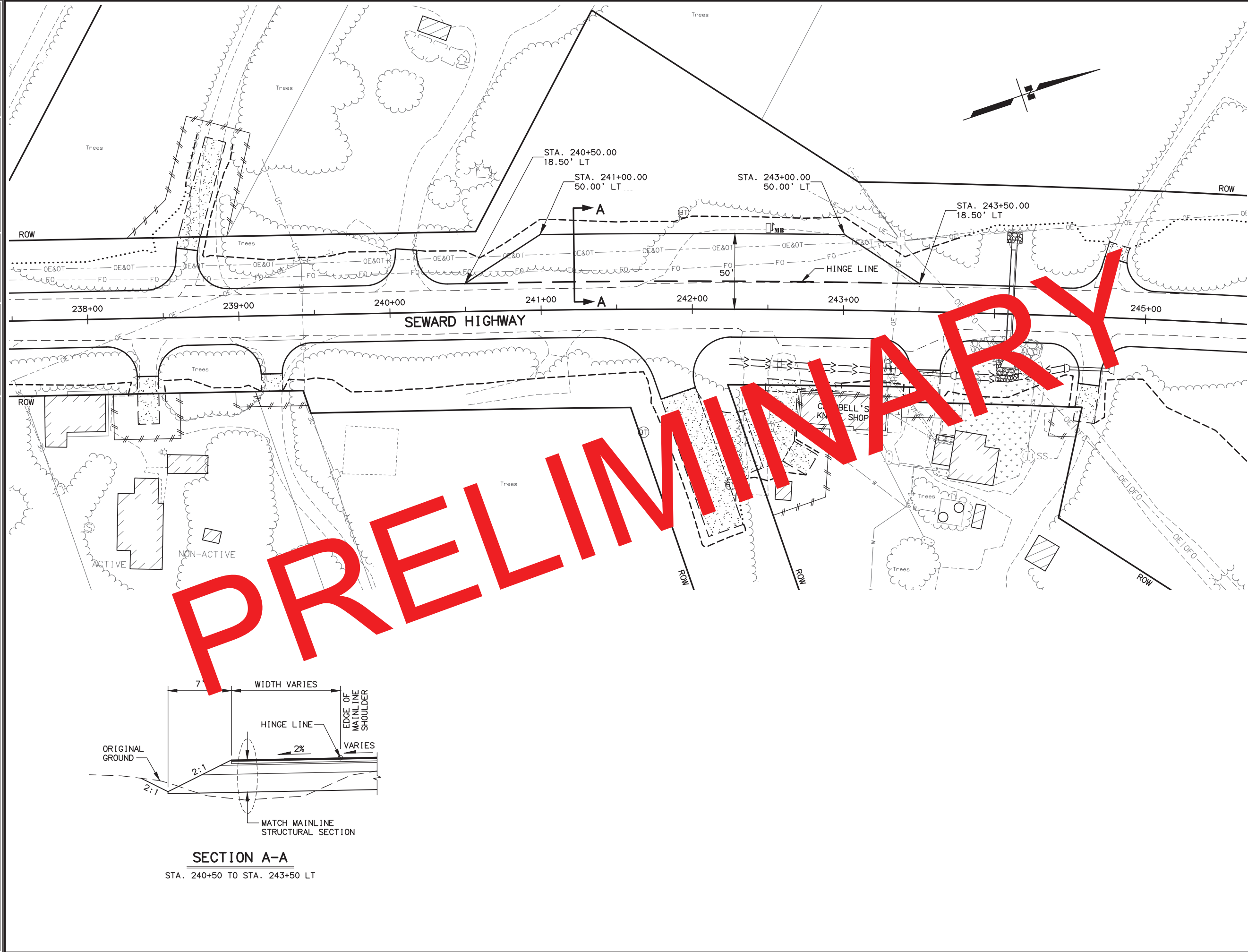
STATE OF ALASKA
CER
REGISTERED PROFESSIONAL ENGINEER
RYNOR HAMMILL
000061

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

DRIVEWAY PROFILES

[illegible]

DESIGNED BY: TML VGS
CHECKED BY: RRH
DRAFTED BY: TML VGS
XREFS: XR-53610-Border_PandP
XR-53610_Det1.DWG
XR-53610_Base
XR-53610_ROW
SCALE: 1" = 50'
LAYOUT: G2
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TIME: 10:45 AM
DRAWING LOCATION: w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civ3D16\Plan\set\53610_001-007 Pull-outs.dwg



SECTION A-A
STA. 240+50 TO STA. 243+50 LT

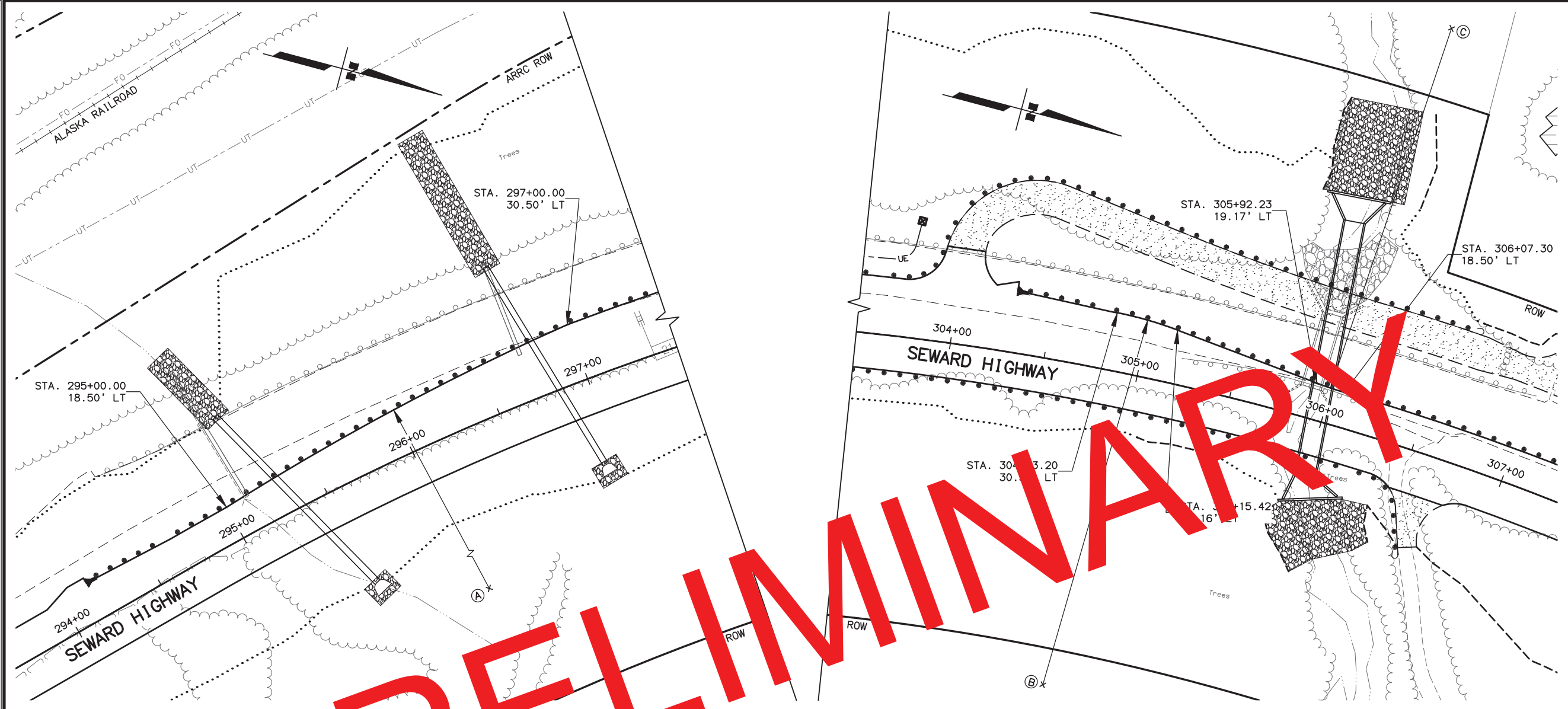
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STATE	YEAR	
ALASKA	2021	
PROJECT DESIGNATION		
0311032/Z536100000		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

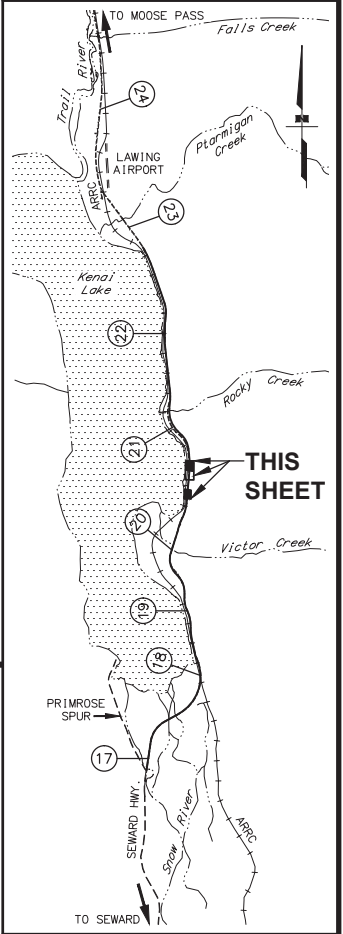
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

TURNOUT LAYOUT PLANS

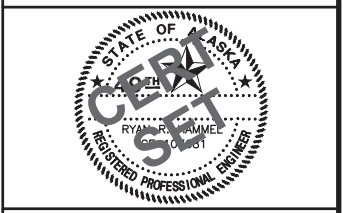
DESIGNED BY: LML VUS
CHECKED BY: LML VUS
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SCALE: 1" = 50'
LAYOUT: G4
DATE: 4/20/2021 10:45 AM
DRAWING LOCATION: w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\53610_001-007 Pull-outs.dwg



SHEET NO.	TOTAL SHEETS	
G4	G15	
STATE	YEAR	
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PROJECT DESIGNATION		
0311032/Z536100000		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION



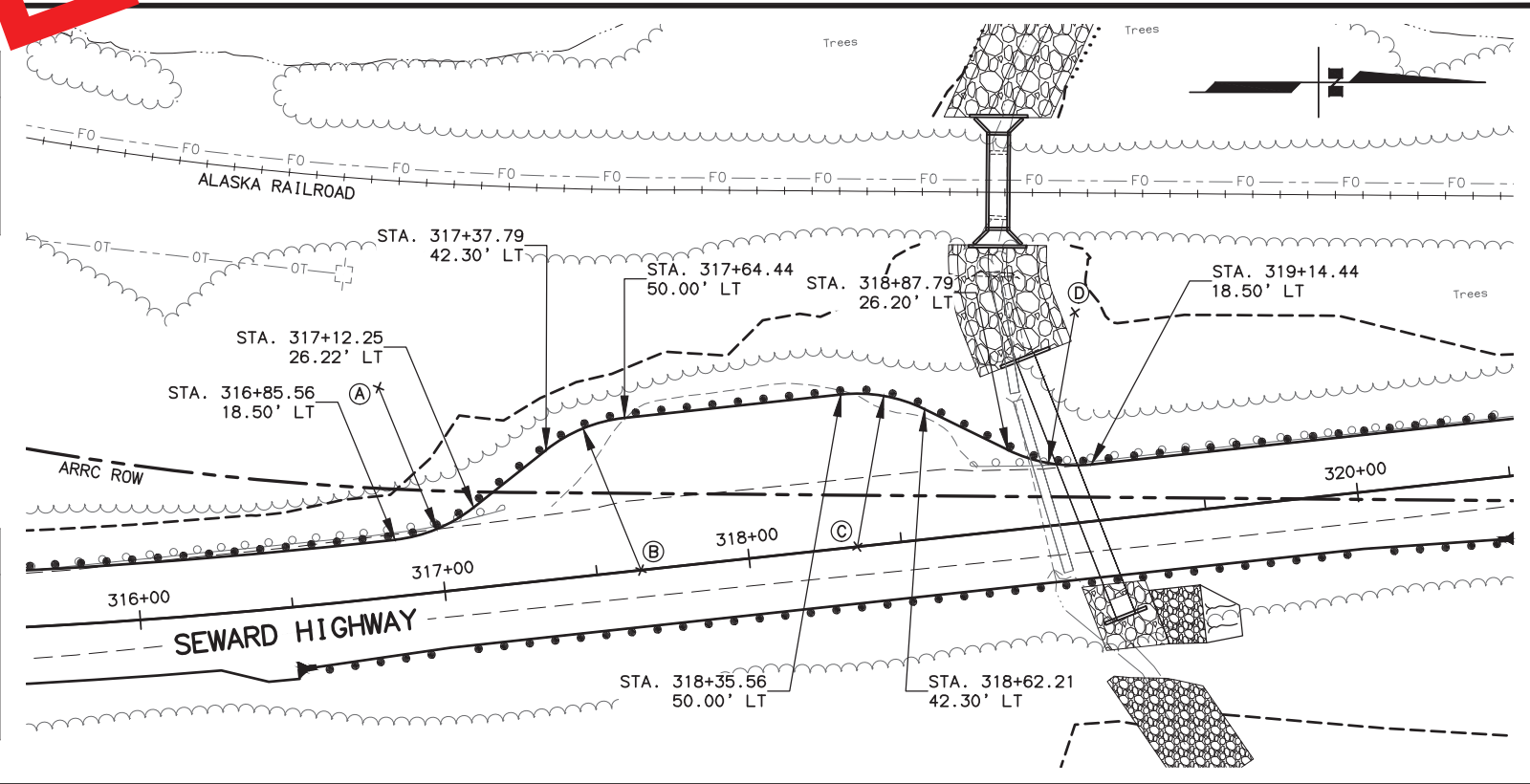
PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590



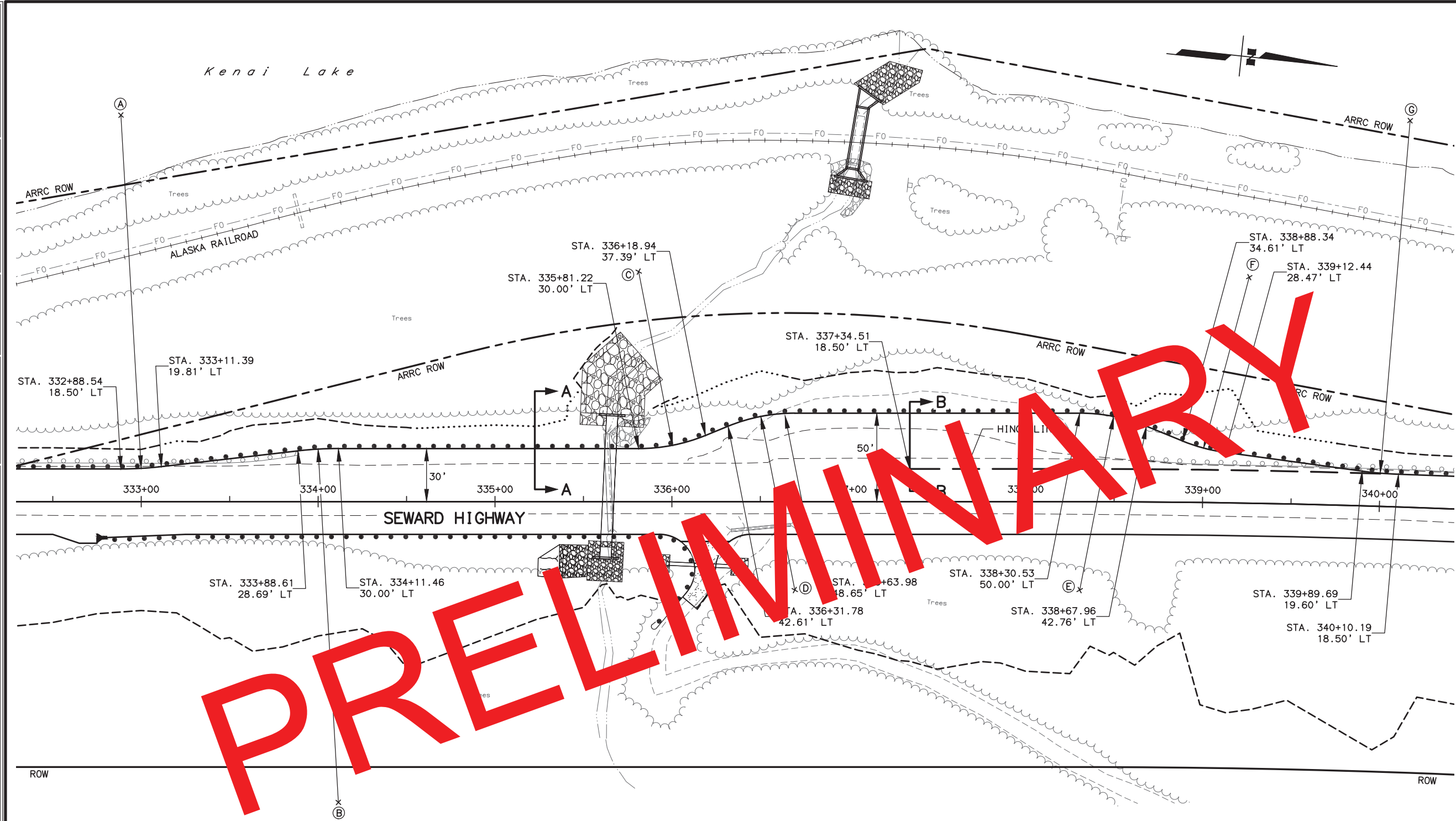
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION
TURNOUT LAYOUT PLANS

POINT	STATION	OFFSET	RADIUS (FT)	REMARKS
A	308+54.36	18.50' RT	1425	
B	267+87.77	21.00' LT	200	
C	269+10.28	170.00' RT	200	

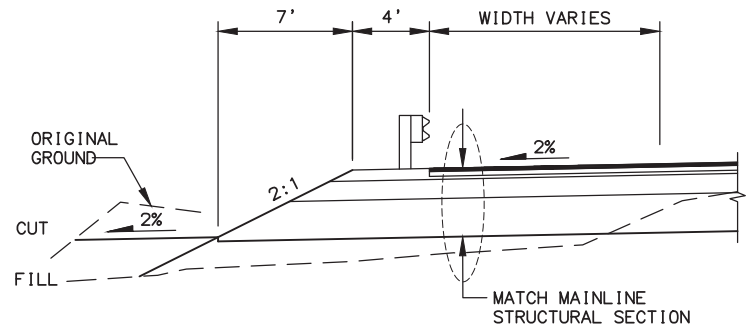
POINT	STATION	OFFSET	RADIUS (FT)	REMARKS
A	316+85.56	68.50' LT	50	
B	317+64.44	0.00'	50	
C	318+35.56	0.00'	50	
D	319+14.44	68.50' LT	50	



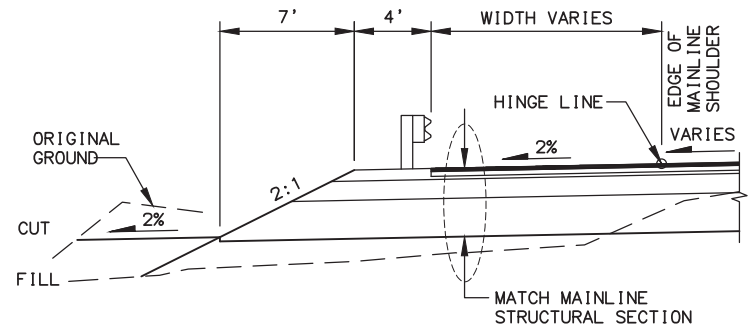
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CHECKED BY: RRH
DRAFTED BY: LML VDS
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XR-53610-Design-XR-53610-Base
XR-53610-ROW
SCALE: 1" = 30'
LAYOUT: G5
DATE: 4/20/2021 10:45 AM
TIME: 10:45 AM
DRAWING LOCATION: w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civ3D16\PlanSet\53610_001-607 Pull-outs.dwg



RADIUS TABLE				
POINT	STATION	OFFSET	RADIUS (FT)	REMARKS
(A)	332+88.54	218.50' LT	200	
(B)	334+11.46	170.00' RT	200	
(C)	335+81.22	130.00' LT	100	
(D)	336+69.50	50.00' RT	100	
(E)	338+30.57	50.00' RT	100	
(F)	339+24.22	127.75' LT	100	
(G)	340+10.19	218.50' LT	200	



SECTION A-A
STA. 332+88.54 TO STA. 337+34.51 LT



SECTION B-B
STA. 337+34.51 TO STA. 340+10.19 LT
NOTE: STA. 337+34.51 IS THE BEGINNING OF THE SUPERELEVATION TRANSITION.

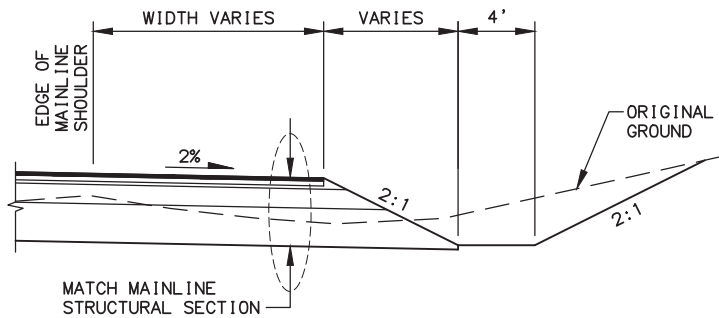
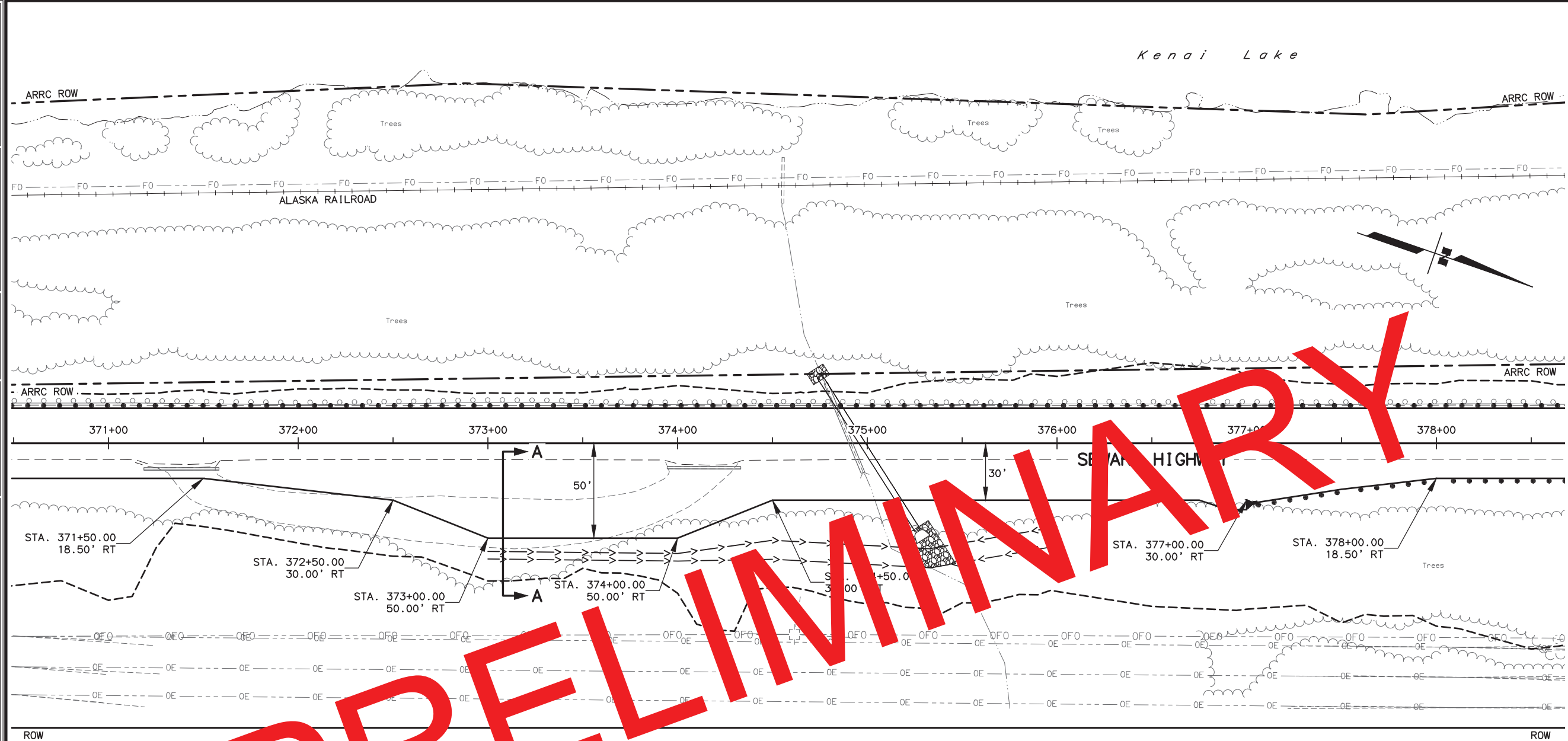
SHEET NO.	TOTAL SHEETS	
G5	G15	
STATE	YEAR	
ALASKA	2021	
PROJECT DESIGNATION		
0311032/Z536100000		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

TURNOUT LAYOUT PLANS

DRAWING LOCATION: w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civ3D16\Planset\53610_001-607 Pull-outs.dwg
DATE: 4/20/2021 10:45 AM
TIME: 10:45 AM
LAYOUT: G6
SCALE: 1" = 30'
DESIGNED BY: LML VDS
CHECKED BY: RRH
DRAFTED BY: LML VDS



SECTION A-A
SEE SPECIAL DITCH
DETAILS

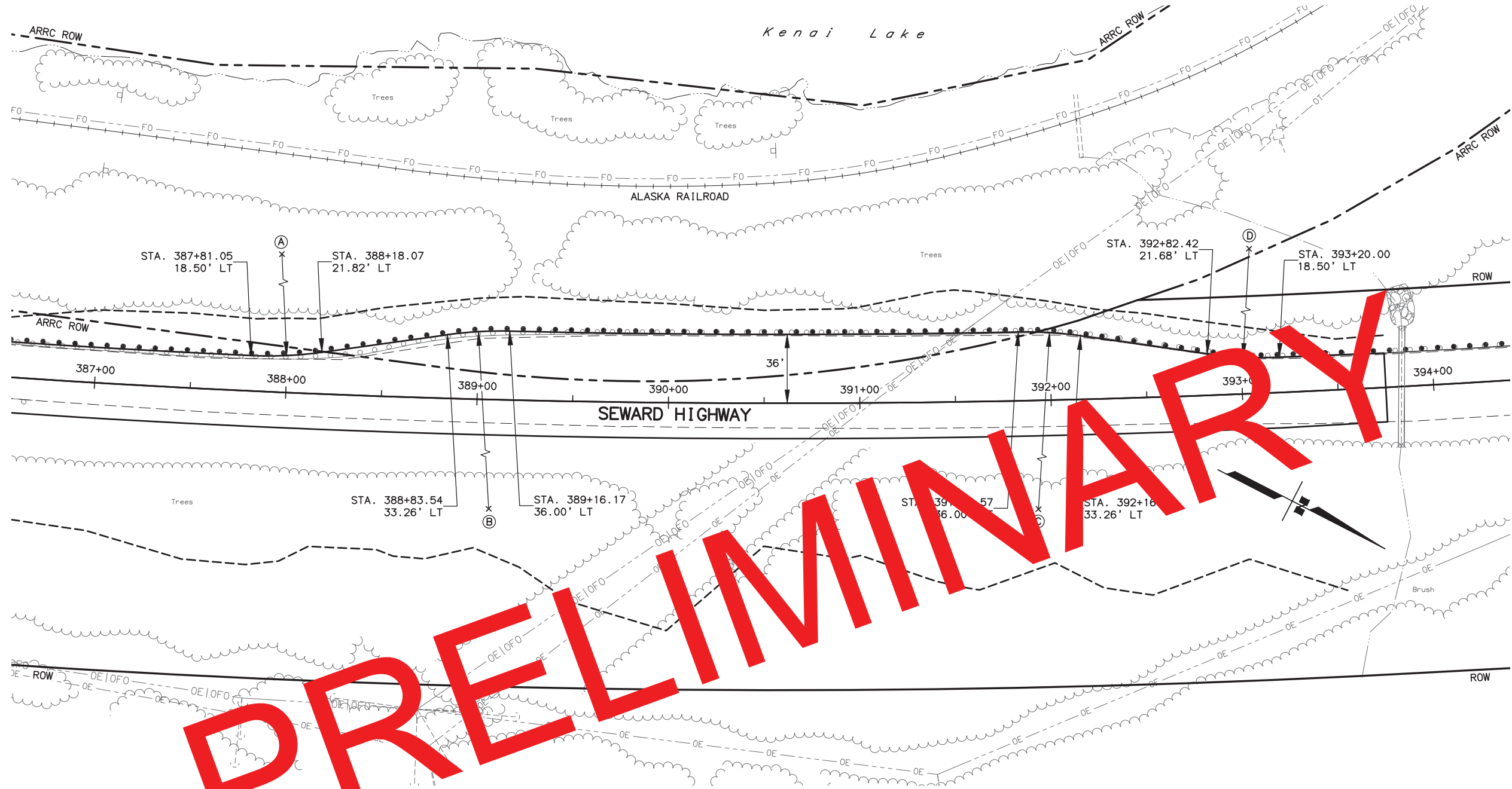
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STATE	YEAR	
ALASKA	2021	
PROJECT DESIGNATION		
0311032/Z536100000		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

TURNOUT LAYOUT PLANS

DESIGNED BY: LML VUS
CHECKED BY: RHR
DRAFTED BY: LML VUS
XREFS: XR-53610-Border-PandP
XR-53610-Debl.Dwg
XR-53610-Base
XR-53610-ROW
SCALE: 1" = 30'
LAYOUT: G7
DATE: 4/20/2021 10:45 AM
TIME: 10:45 AM
DRAWING LOCATION: w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civ3D16\Planset\53610_001-007 Pull-outs.dwg



RADIUS TABLE				
POINT	STATION	OFFSET	RADIUS (FT)	REMARKS
A	387+81.05	218.50' LT	200	
B	389+16.17	164.00' RT	200	
C	391+83.57	164.00' RT	200	
D	393+18.70	218.50' LT	200	

SHEET NO.	TOTAL SHEETS	
G7	G15	
STATE	YEAR	
ALASKA	2021	
PROJECT DESIGNATION		
0311032/Z536100000		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

TO MOOSE PASS
Falls Creek
Plum Creek
Kenai Lake
Rocky Creek
Victor Creek
PRIMROSE SPUR
SEWARD HWY
TO SEWARD

THIS SHEET

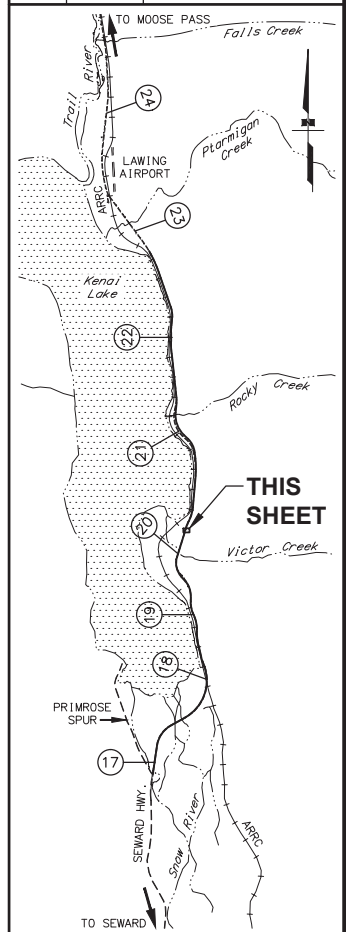
PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
CE
SEAL
RYAN R. HAMME
10001
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

TURNOUT LAYOUT PLANS

SHEET NO. G8		TOTAL SHEETS G15	
STATE		YEAR	
ALASKA		2021	
PROJECT DESIGNATION			
0311032/Z536100000			
ADDENDUM NO.			
ATTACHMENT NO.			
REVISIONS			
NO.	DATE	DESCRIPTION	



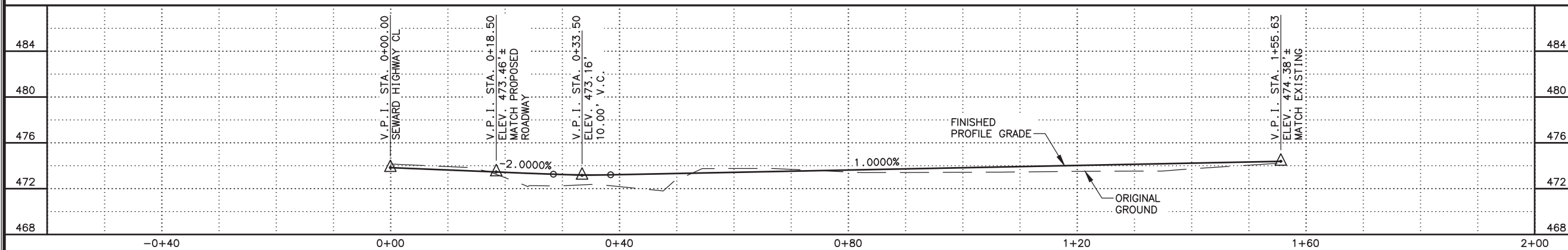
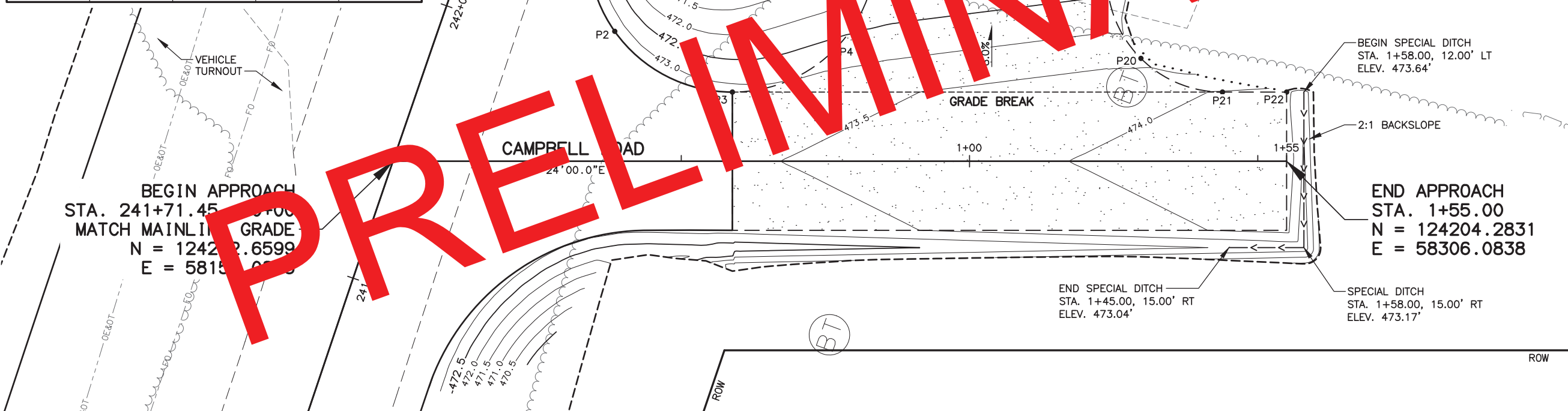
PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590



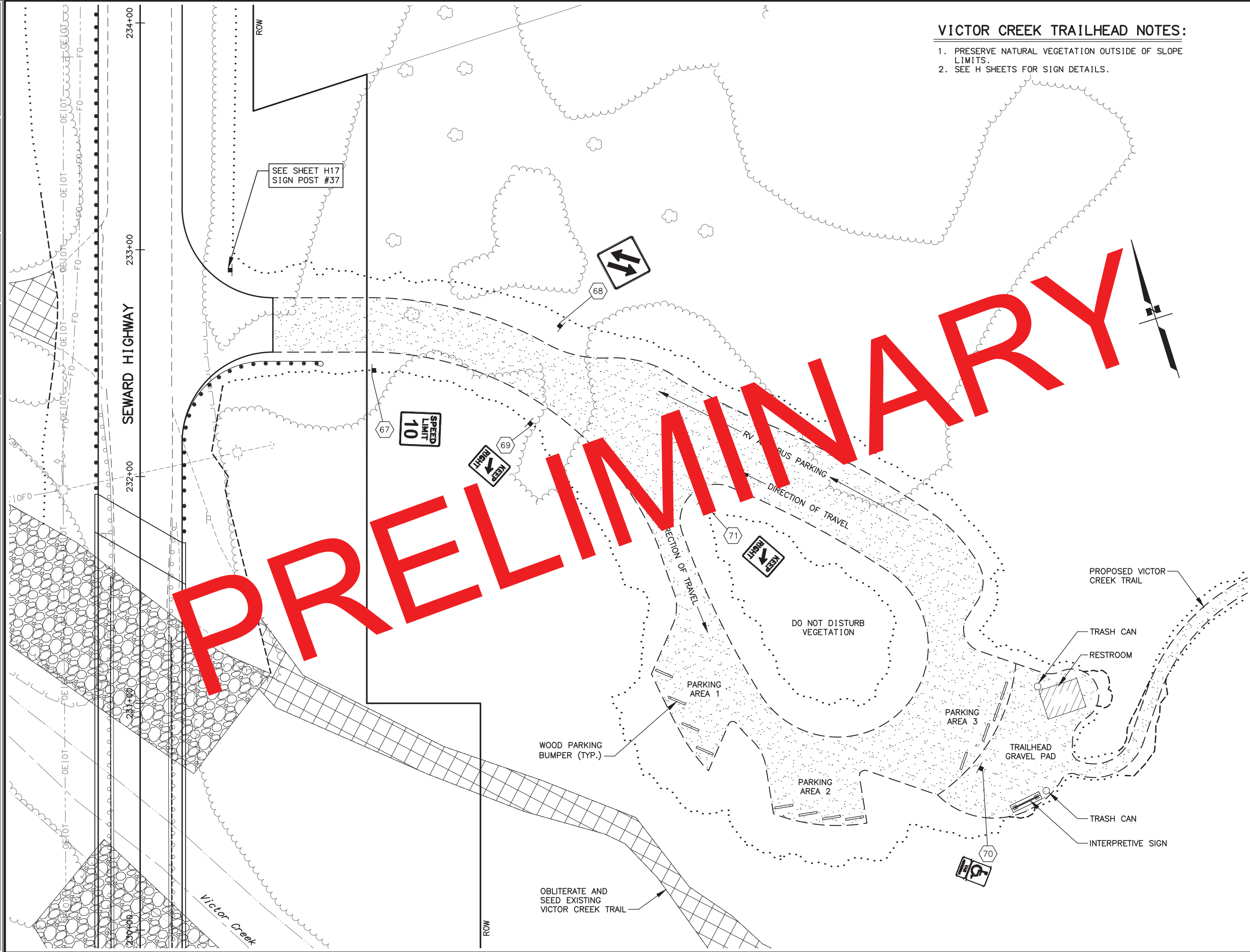
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

KNIFE SHOP
GRADING PLAN

PARKING GRADING TABLE				
POINT	DESC.	STATION	OFFSET	ELEV.
P1	PC	45.29' LT	0+35.28	473.50
P2	P0C	22.55' LT	0+38.47	473.34
P3	P0C	12.00' LT	0+58.87	473.16
P4	P0C	19.32' LT	0+76.55	472.69
P5	P0C	37.00' LT	0+83.87	471.43
P6	P0C	46.81' LT	0+81.87	471.23
P7	PT	55.04' LT	0+76.18	471.02
P8	PT	58.11' LT	0+68.79	470.90
P9	PT	81.20' LT	0+78.38	471.39
P10	PT	104.28' LT	0+87.97	471.64
P11	PT	101.98' LT	0+93.51	471.73
P12	PT	75.24' LT	0+82.41	471.44
P13	PT	70.36' LT	0+94.16	471.63
P14	PT	66.25' LT	1+04.06	471.79
P15	PT	62.11' LT	1+14.02	471.95
P16	PT	73.75' LT	1+27.71	472.23
P17	PT	62.15' LT	1+37.60	473.22
P18	PT	50.51' LT	1+23.87	472.03
P19	PC	37.00' LT	1+23.87	471.83
P20	P0C	17.86' LT	1+29.73	473.36
P21	PT	12.00' LT	1+43.87	474.03
P22	PT	12.00' LT	1+55.00	474.14



DRAWING LOCATION: w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civil\3D16\Plan\set\53610_009-G15_Victor Creek.dwg DATE TIME: 2/22/2021 11:25 AM LAYOUT: GS OVERVIEW SCALE: 1" = 20' DESIGNED BY: LML\KDS\ZDK CHECKED BY: RRH DRAFTED BY: TVUS\ZDK



VICTOR CREEK TRAILHEAD NOTES:

1. PRESERVE NATURAL VEGETATION OUTSIDE OF SLOPE LIMITS.
2. SEE H SHEETS FOR SIGN DETAILS.

SHEET NO.		TOTAL SHEETS	
G9		G15	
STATE		YEAR	
ALASKA		2021	
PROJECT DESIGNATION			
0311032/Z536100000			
ADDENDUM NO.			
ATTACHMENT NO.			
REVISIONS			
NO.	DATE	DESCRIPTION	

PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

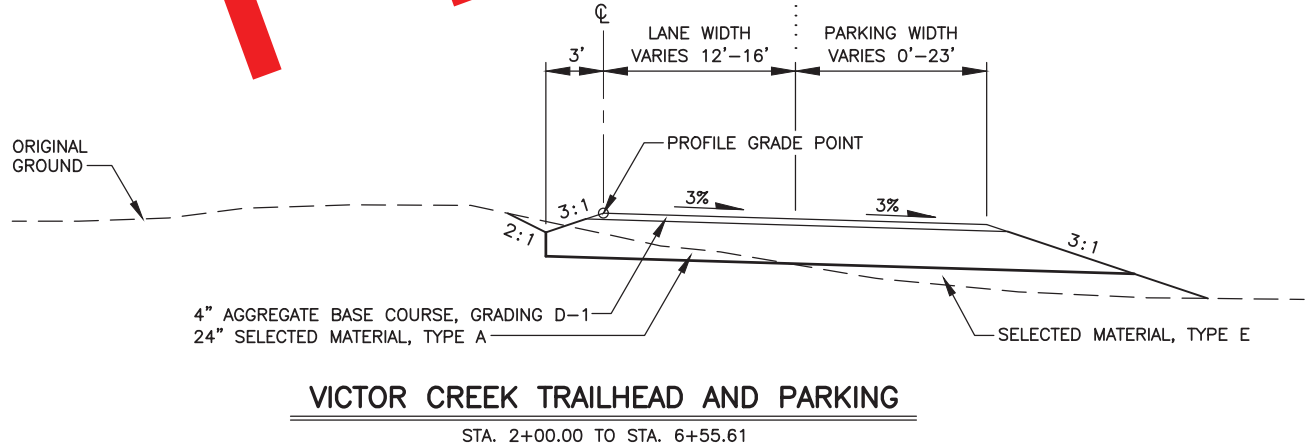
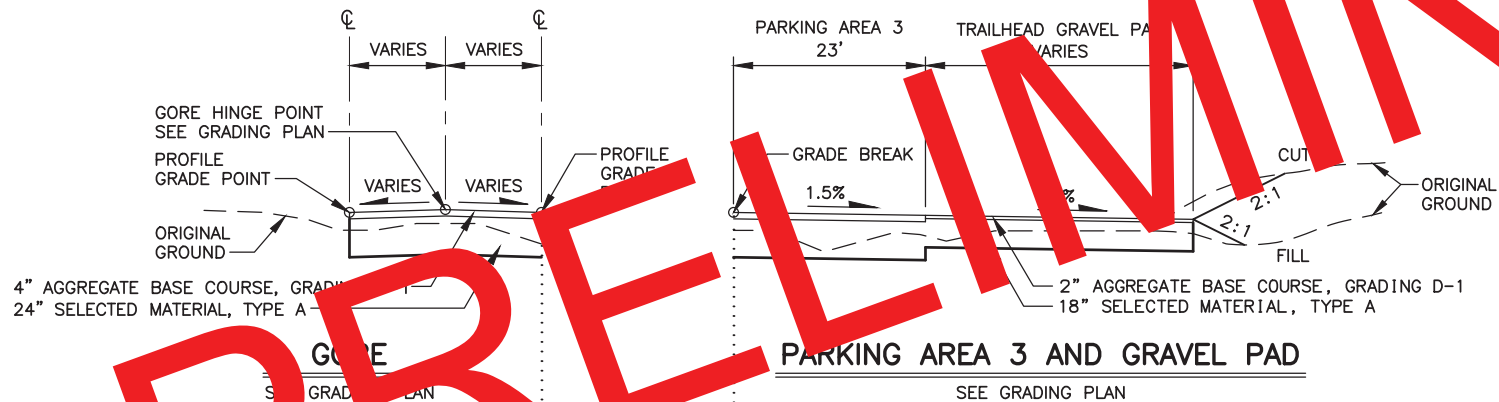
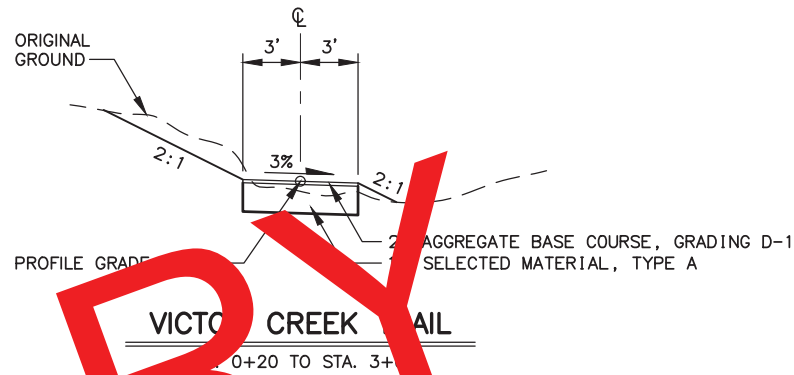
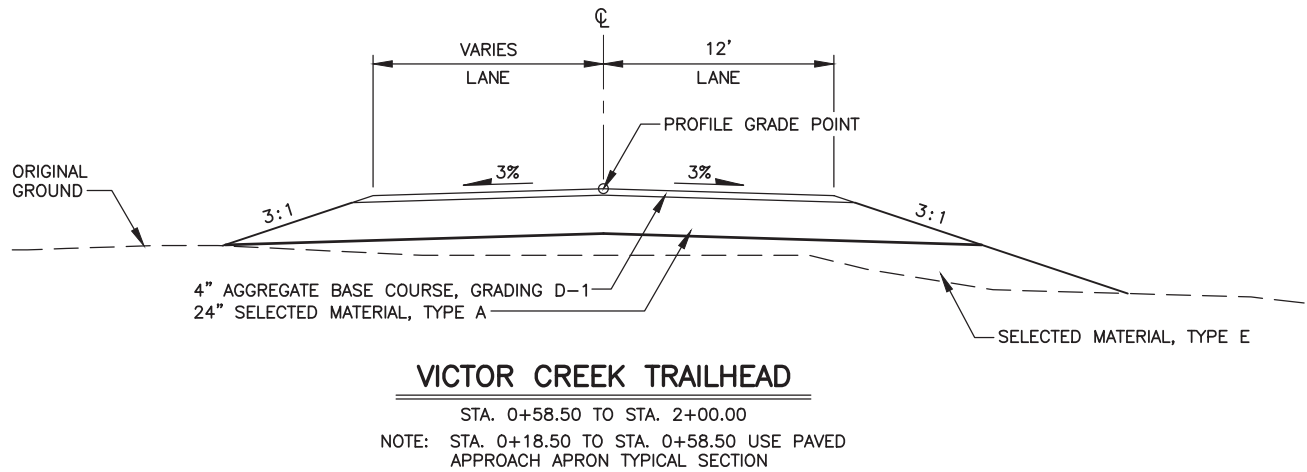
STATE OF ALASKA
CERTIFIED
REGISTERED PROFESSIONAL ENGINEER
RYAN R. HAMME
00000001

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

VICTOR CREEK TRAILHEAD
SITE PLAN

DESIGNED BY: LML\KDS\ZDK
CHECKED BY: RRH
DRAFTED BY: ZDK\JVS
XREFS: XR-53610-0-Border-Detail
XR-53610-Design-XR-53610-Base
XR-53610-RW
SCALE: 1"=45'
LAYOUT: G10 TYPICALS
DATE: 2/22/2021 11:25 AM
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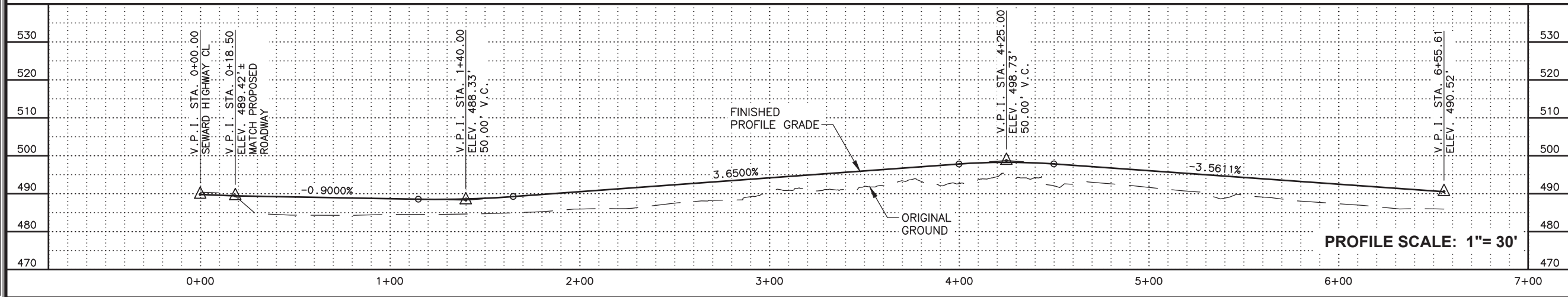
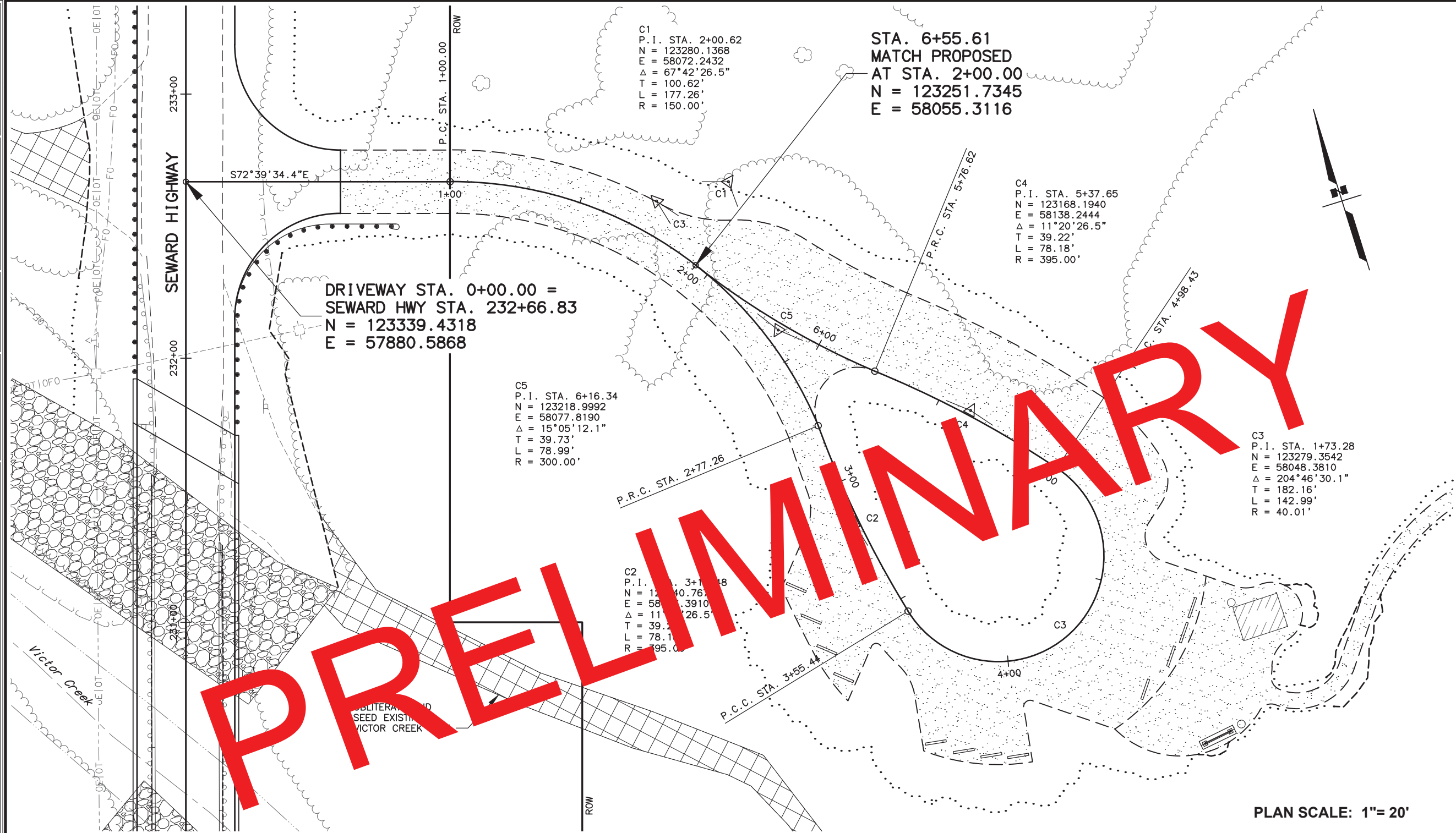
REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
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CERT
SET

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5 REHABILITATION
VICTOR CREEK TRAILHEAD
TYPICALS

DRAWING LOCATION: w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civ3D16\Plan\set\53610_009-G15-Victor Creek.dwg 2/22/2021 11:25 AM
XREFS: XR-53610-Border-PlanP DESIGNED BY: LML\KDS\ZDK
XR-53610-Design XR-53610-Base CHECKED BY: RHR
XR-53610-ROW DRAFTED BY: ZDK\JVS
SCALE: 1"=20' / 1"=30'
LAYOUT: G11 P&P



SHEET NO.		TOTAL SHEETS	
G11		G15	
STATE		YEAR	
ALASKA		2021	
PROJECT DESIGNATION			
0311032/Z536100000			
ADDENDUM NO.			
ATTACHMENT NO.			
REVISIONS			
NO.	DATE	DESCRIPTION	

TO MOOSE PASS
Falls Creek
Plumig Creek
LAWING AIRPORT
Kenai Lake
Rocky Creek
Victor Creek
THIS SHEET
PRIMROSE SPUR
SEWARD HWY
Snow River
ARPC
TO SEWARD

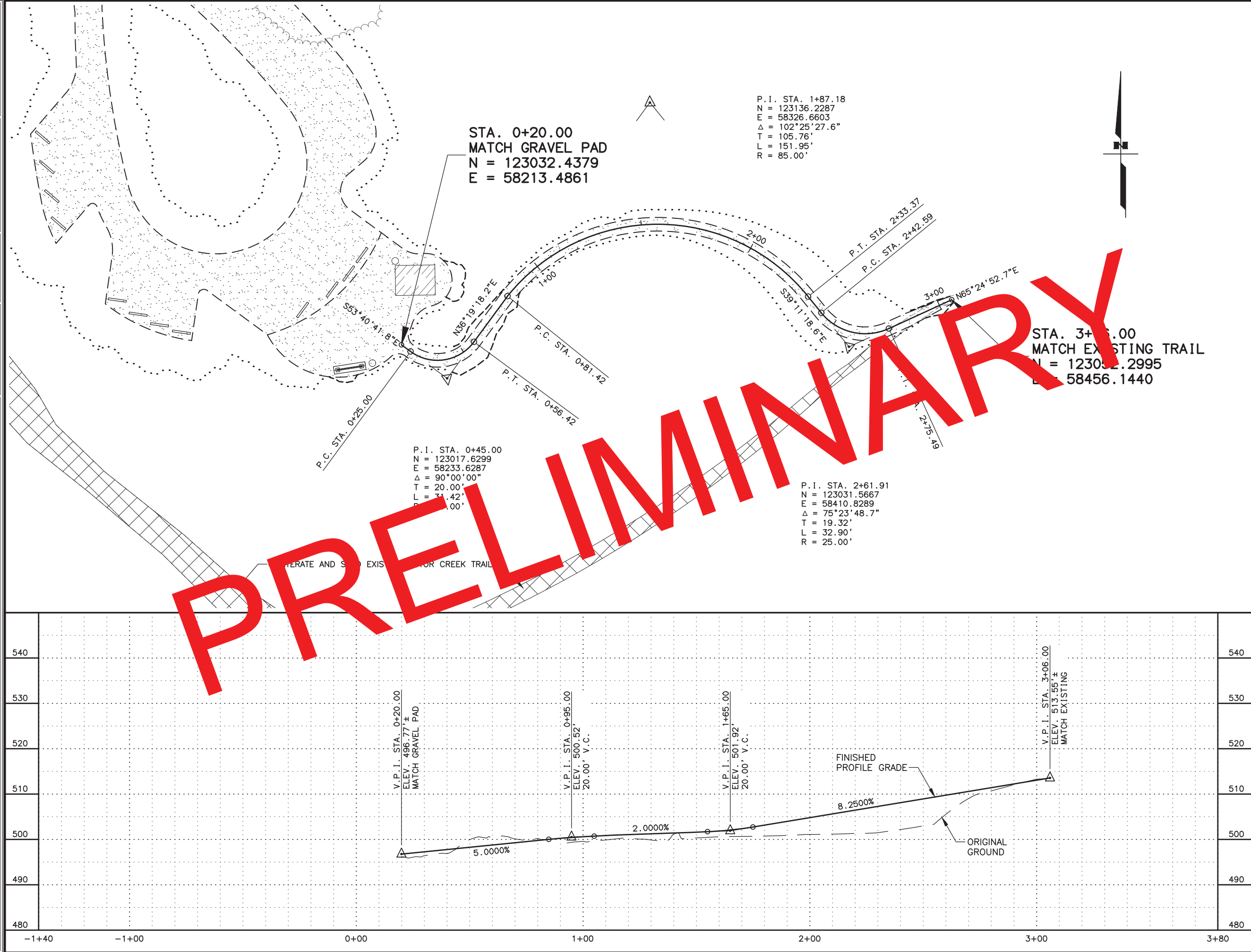
PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
CIVIL ENGINEER
RYAN HAMMER
10001

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

VICTOR CREEK TRAILHEAD
PLAN AND PROFILE

DRAWING LOCATION
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SCALE
1" = 20'
LAYOUT
G12 TRAIL P&P
DATE
TIME
DESIGNED BY KOS/ZDK
CHECKED BY RRH
DRAFTED BY ZDK/VJS



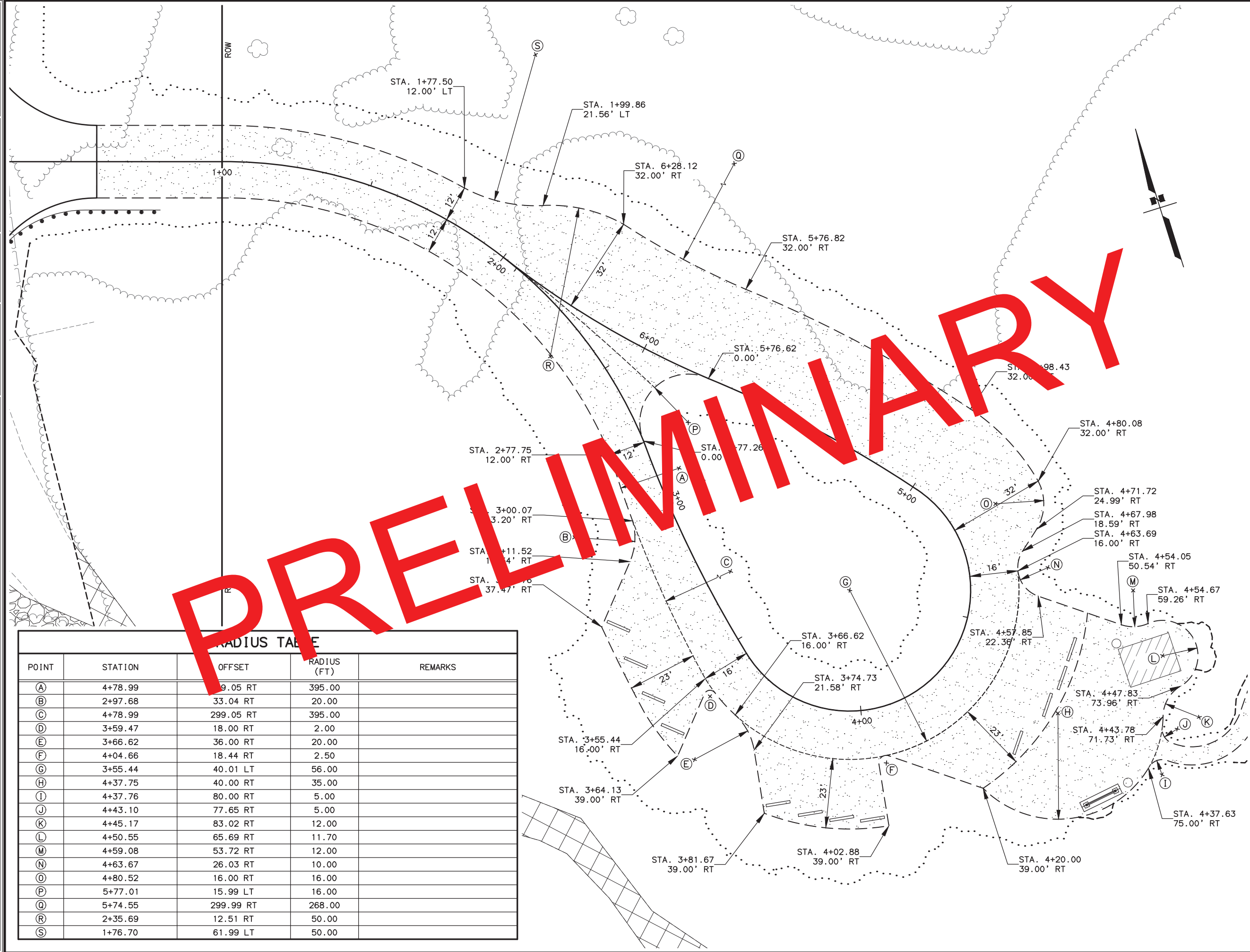
SHEET NO.		TOTAL SHEETS	
G12		G15	
STATE		YEAR	
ALASKA		2021	
PROJECT DESIGNATION			
0311032/Z536100000			
ADDENDUM NO.			
ATTACHMENT NO.			
REVISIONS			
NO.	DATE	DESCRIPTION	

PLANS DEVELOPED BY:
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

VICTOR CREEK TRAILHEAD
TRAIL PLAN & PROFILE

DESIGNED BY: ZDK
CHECKED BY: RRR
DRAFTED BY: ZDK/VUS
XREFS: XR-53610-Border-PandP
XR-53610-Design-XR-53610-Base
XR-53610-RW
SCALE: 1" = 15'
LAYOUT: G13 LAYOUT
DATE: 2/22/2021 11:25 AM
TIME: 11:25 AM
DRAWING LOCATION: w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\civil\3D16\Plan\set\53610_009-G15-Victor Creek.dwg



RADIUS TABLE				
POINT	STATION	OFFSET	RADIUS (FT)	REMARKS
A	4+78.99	9.05 RT	395.00	
B	2+97.68	33.04 RT	20.00	
C	4+78.99	299.05 RT	395.00	
D	3+59.47	18.00 RT	2.00	
E	3+66.62	36.00 RT	20.00	
F	4+04.66	18.44 RT	2.50	
G	3+55.44	40.01 LT	56.00	
H	4+37.75	40.00 RT	35.00	
I	4+37.76	80.00 RT	5.00	
J	4+43.10	77.65 RT	5.00	
K	4+45.17	83.02 RT	12.00	
L	4+50.55	65.69 RT	11.70	
M	4+59.08	53.72 RT	12.00	
N	4+63.67	26.03 RT	10.00	
O	4+80.52	16.00 RT	16.00	
P	5+77.01	15.99 LT	16.00	
Q	5+74.55	299.99 RT	268.00	
R	2+35.69	12.51 RT	50.00	
S	1+76.70	61.99 LT	50.00	

SHEET NO. G13TOTAL SHEETS G15

STATE ALASKAYEAR 2021

PROJECT DESIGNATION0311032/Z536100000

ADDENDUM NO.

ATTACHMENT NO.

REVISIONS

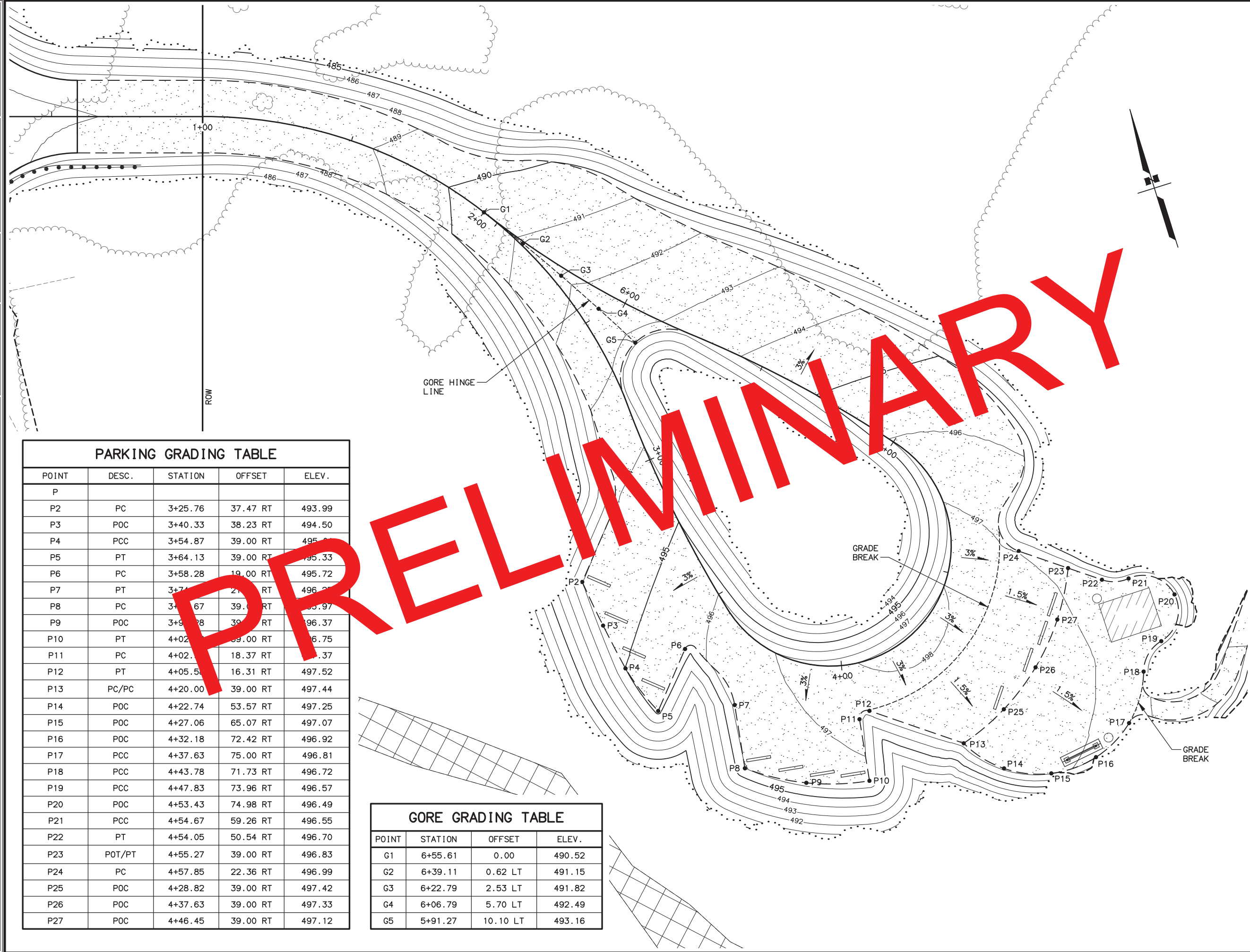
NO.	DATE	DESCRIPTION

PLANS DEVELOPED BY:
STATE OF ALASKA
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

VICTOR CREEK TRAILHEAD
LAYOUT PLAN

DESIGNED BY: ZDK
CHECKED BY: RRH
DRAFTED BY: ZDK/VJS
XREFS: XR-53610-Border-PandP
XR-53610-Design-XR-53610-Base
XR-53610-XP-53610-ROW
SCALE: 1" = 15'
LAYOUT: G14 GRADING
DATE: 2/22/2021 11:25 AM
TIME: 11:25 AM
DRAWING LOCATION: w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civil\3D16\Plan\set\53610_009-G15-Victor Creek.dwg



PARKING GRADING TABLE

POINT	DESC.	STATION	OFFSET	ELEV.
P				
P2	PC	3+25.76	37.47 RT	493.99
P3	POC	3+40.33	38.23 RT	494.50
P4	PCC	3+54.87	39.00 RT	495.01
P5	PT	3+64.13	39.00 RT	495.33
P6	PC	3+58.28	19.00 RT	495.72
P7	PT	3+71.13	21.00 RT	496.21
P8	PC	3+67.67	39.00 RT	495.97
P9	POC	3+91.28	39.00 RT	496.37
P10	PT	4+02.13	39.00 RT	496.75
P11	PC	4+02.13	18.37 RT	497.37
P12	PT	4+05.53	16.31 RT	497.52
P13	PC/PC	4+20.00	39.00 RT	497.44
P14	POC	4+22.74	53.57 RT	497.25
P15	POC	4+27.06	65.07 RT	497.07
P16	POC	4+32.18	72.42 RT	496.92
P17	PCC	4+37.63	75.00 RT	496.81
P18	PCC	4+43.78	71.73 RT	496.72
P19	PCC	4+47.83	73.96 RT	496.57
P20	POC	4+53.43	74.98 RT	496.49
P21	PCC	4+54.67	59.26 RT	496.55
P22	PT	4+54.05	50.54 RT	496.70
P23	POT/PT	4+55.27	39.00 RT	496.83
P24	PC	4+57.85	22.36 RT	496.99
P25	POC	4+28.82	39.00 RT	497.42
P26	POC	4+37.63	39.00 RT	497.33
P27	POC	4+46.45	39.00 RT	497.12

GORE GRADING TABLE

POINT	STATION	OFFSET	ELEV.
G1	6+55.61	0.00	490.52
G2	6+39.11	0.62 LT	491.15
G3	6+22.79	2.53 LT	491.82
G4	6+06.79	5.70 LT	492.49
G5	5+91.27	10.10 LT	493.16

SHEET NO.	TOTAL SHEETS	
G14	G15	
STATE	YEAR	
ALASKA	2021	
PROJECT DESIGNATION		
0311032/Z536100000		
ADDENDUM NO.		
ATTACHMENT NO.		
REVISIONS		
NO.	DATE	DESCRIPTION

TO MOOSE PASS
Falls Creek
Lawing Airport
Plumigan Creek
Kenai Lake
Rocky Creek
Victor Creek
THIS SHEET
PRIMROSE SPUR
SEWARD HWY
Snow River
ARPC
TO SEWARD

PLANS DEVELOPED BY:
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DEPARTMENT OF TRANSPORTATION
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
SEWARD HIGHWAY
MP 17-22.5
REHABILITATION

VICTOR CREEK TRAILHEAD
GRADING PLAN

DESIGNED BY: LML/KDS/ZDK
CHECKED BY: RRH
DRAFTED BY: JVS

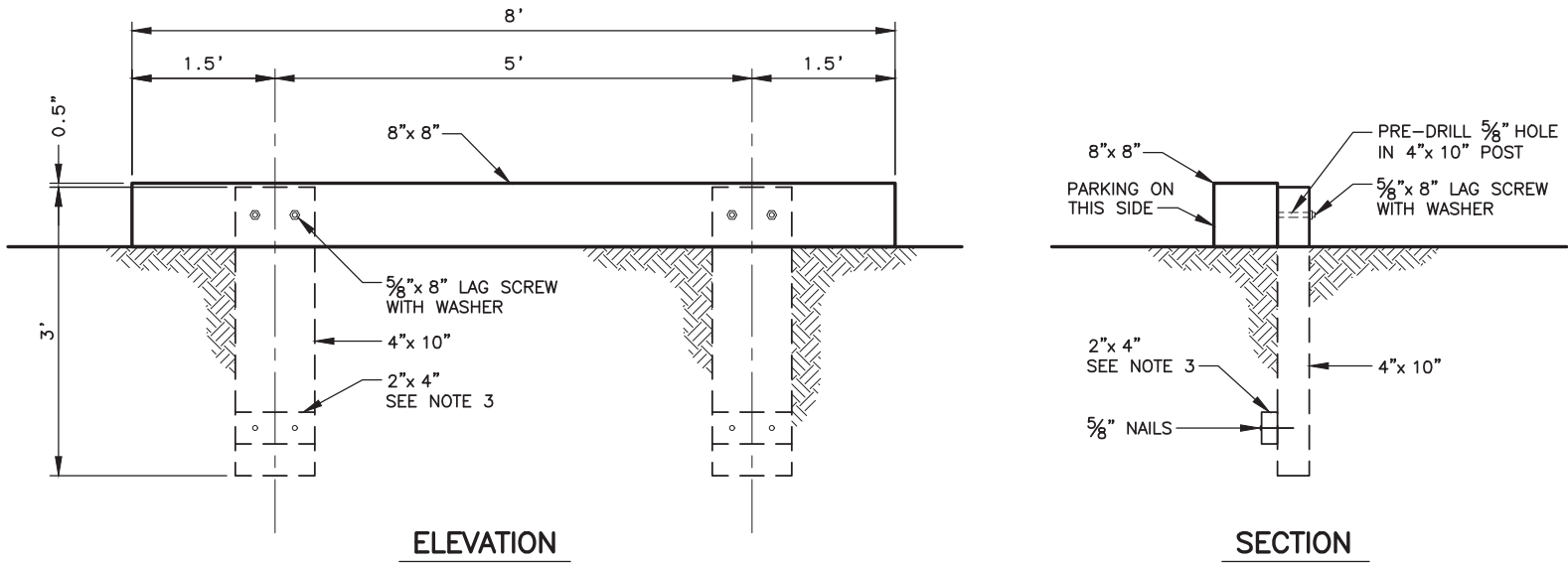
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LAYOUT: G15 DETAILS

DATE: 2/22/2021 11:25 AM
TIME: 11:25 AM

DRAWING LOCATION: w:\Projects\seward hwy mp 17-22.5 rehabilitation - 53610\Civ3D16\PlanSet\53610_009-G15-Victor Creek.dwg

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
			ALASKA	0311032/Z536100000	2021	G15	



WOOD PARKING BUMPER

WOOD PARKING BUMPER TABLE					
BUMPER	BUMPER RIGHT		BUMPER LEFT		REMARKS
	STATION	OFFSET	STATION	OFFSET	
1	3+25.82	34.65 RT	3+20.56	29.64 RT	PARKING AREA 1
2	3+37.02	35.25 RT	3+42.89	30.40 RT	PARKING AREA 1
3	3+48.89	35.84 RT	3+54.89	31.19 RT	PARKING AREA 1
4	3+58.15	36.00 RT	3+61.95	32.24 RT	PARKING AREA 1
5	3+81.38	36.05 RT	3+70.20	32.32 RT	PARKING AREA 2
6	3+87.24	36.00 RT	3+91.29	33.06 RT	PARKING AREA 2
7	3+98.14	36.01 RT	3+96.96	34.46 RT	PARKING AREA 2
8	3+98.14	36.01 RT	4+02.58	35.54 RT	PARKING AREA 2
9	4+27.65	36.39 RT	4+31.58	33.22 RT	PARKING AREA 3
10	4+35.99	36.07 RT	4+40.16	34.52 RT	PARKING AREA 3
11	4+46.61	35.94 RT	4+45.55	35.45 RT	PARKING AREA 3
12	4+46.61	35.38 RT	4+50.83	35.95 RT	PARKING AREA 3

* BUMPER NUMBER INCREASE COUNTER CLOCKWISE AROUND PARKING AREAS.

WOOD PARKING BUMPER NOTES:

- PRESERVATIVE TREATMENT. PRESERVATIVE TREAT ALL WOOD MATERIALS PER AMERICAN WOOD PRESERVER'S ASSOCIATION (AWPA) STANDARD U1 WITH PENTA IN LIGHT SOLVENTS OR WATERBORNE PRESERVATIVES AS REQUIRED FOR GROUND CONTACT AND FRESH WATER USE, COLOR LIGHT BROWN/TAN (UC4A). MARK PRESERVATIVE TREATED MATERIALS BY AN APPROVED INSPECTION AGENCY CERTIFIED TO INSPECT PRESERVATIVE-TREATED WOOD INDICATING COMPLIANCE WITH THE TREATING, DRYING, RETENTION AND PENETRATION REQUIREMENTS OF APPLICABLE AWPA STANDARDS OR EQUIVALENT CODE APPROVED PRESERVATIVE-TREATING AND QUALITY CONTROL REQUIREMENTS. FIELD TREAT CUTS PER AWPA M4.
- FASTENERS AND FRAMING HARDWARE. HOT DIP GALVANIZE ALL STEEL, INCLUDING NAILS, SCREWS, AND WASHERS PER ASTM A123, A153, AND A653. REPAIR DAMAGED GALVANIZING PER ASTM A780.
- ALL POSTS WILL BE SET PLUMB INTO HAND DUG OR AUGERED HOLES, OR DRIVEN PLUMB. DELETE 2x4 ON DRIVEN POSTS.

CERT
SET

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

SEWARD HIGHWAY
MP 17-22.5 REHABILITATION

VICTOR CREEK TRAILHEAD
DETAILS