

IAN GRANT

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STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES

PROPOSED HIGHWAY PROJECT

KTN SHORELINE DRIVE CULVERT REPLACEMENT PROJECT NO. 0003228/SFH\WY00182



NO.	DATE	REVISIONS	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003228/SFH\WY00182	2018	A1	4
				CDS ROUTE: 291510	MILEPOINT: 0.4898 TO 0.5093		
				LATITUDE: 55°21'00"N	LONGITUDE: 131°40'24"W		

PROJECT SUMMARY	
	SHORELINE DRIVE
LENGTH OF PIPE	61 LF
SIZE OF ARCH PIPE	87"x63"
AREA OF PAVEMENT	90 SY

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

Jessica Pukala

December 31, 2018

AS-BUILTS
CONTRACTOR: BAM
PROJECT ENGINEER: PATTY SHULL
START: 2.25.19
END: 5.15.19



VICINITY MAP

PRINTED: 8/15/2018

USE THESE PLANS IN CONJUNCTION WITH THE STATE OF ALASKA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2017 EDITION AND THE PROJECT SPECIAL PROVISIONS.

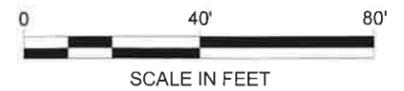
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465-1763

APPROVED: *[Signature]* 8-15-18
 REGIONAL PRECONSTRUCTION ENGINEER DATE
 L. PAT CARROLL, P.E.

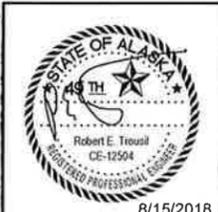
CONCUR: *[Signature]* 15 Aug 2018
 REGIONAL DIRECTOR DATE
 D. LANCE MEARIG, P.E.

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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003228/SFHwy00182	2018	A2	4



INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
A1	TITLE SHEET
A2	LAYOUT & INDEX OF SHEETS
A3	LEGEND / SYMBOLS
A4	SURVEY CONTROL PLAN
C1	ESTIMATE OF QUANTITIES
D1	SUMMARIES
E1	MISCELLANEOUS DETAILS
F1	P-1 PLAN & PROFILE
Q1	EROSION SEDIMENT CONTROL PLAN
Q2	EROSION & SEDIMENT CONTROL DETAILS
T1	TRAFFIC CONTROL PLAN



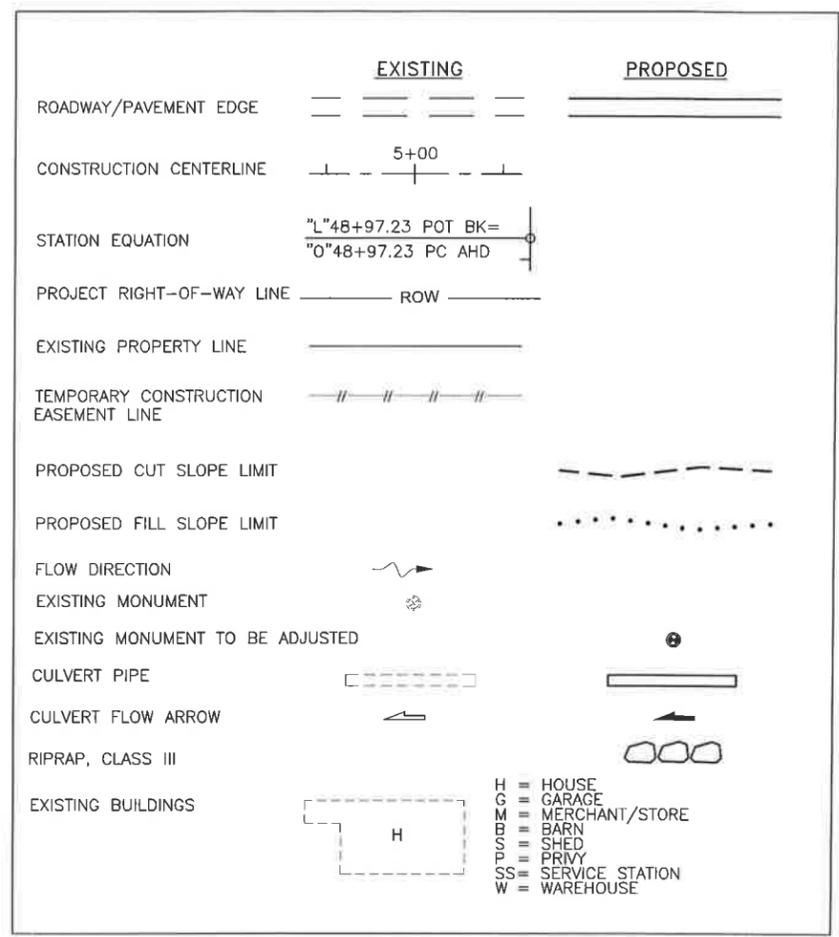
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 (907) 465-1763

**KTN SHORELINE DRIVE
 CULVERT REPLACEMENT**

LAYOUT & INDEX OF SHEETS

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003228/SFHWY00182	2018	A3	4

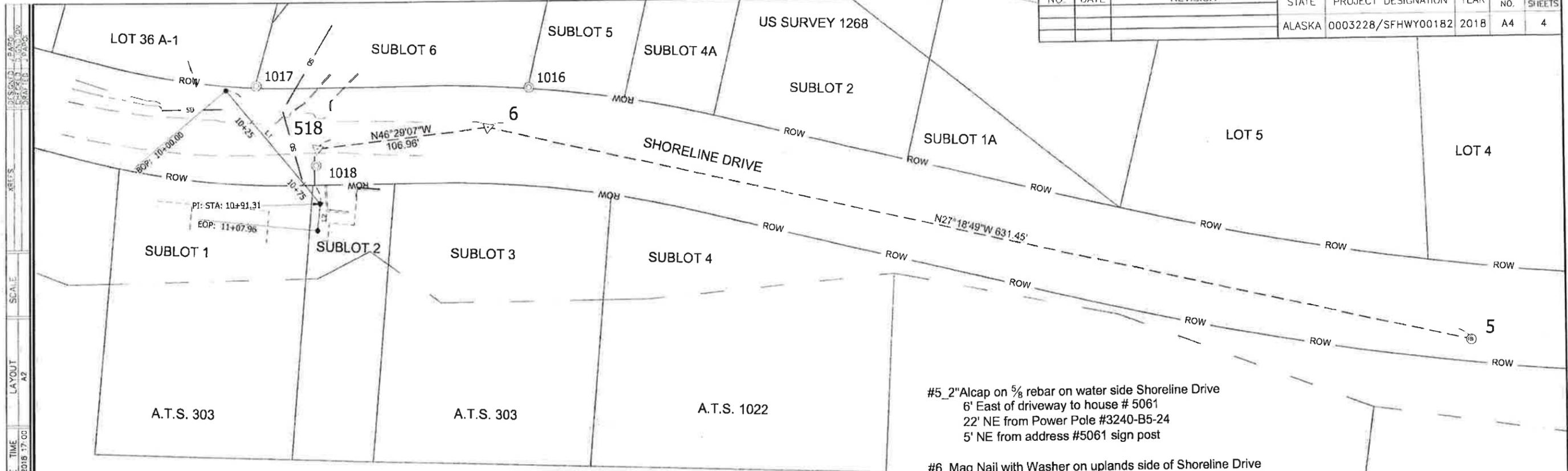
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**KTN SHORELINE DRIVE
 CULVERT REPLACEMENT**

LEGEND & SYMBOLS

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003228/SFHWY00182	2018	A4	4



#5_2"Alcap on 5/8 rebar on water side Shoreline Drive
 6' East of driveway to house # 5061
 22' NE from Power Pole #3240-B5-24
 5' NE from address #5061 sign post

#6_Mag Nail with Washer on uplands side of Shoreline Drive
 Across from house #5137
 27.1' from centerfence
 43.11' NE from SW fence post
 46.30' NW from NE fence post

#518_Mag Nail water side Shoreline Drive at Culvert.

SEGMENT	STATION	NORTHING	EASTING	DISTANCE	BEARING	STATION
L1	10+00.00	1299580.19	3089090.03	91.31	S10° 18' 19"W	10+91.31
L2	10+91.31	1299490.35	3089073.70	16.64	S55° 35' 40"W	11+07.96

Point #	Northing	Easting	Elevation	Description	Station	Offset
5	1298878.62	3089465.96	36.55	ALCAP2"_SET_DOT	N/A	N/A
6	1299439.67	3089176.21	28.14	MAG/WASH_SET_DOT	N/A	N/A
518	1299513.32	3089098.64	29.21	PK_SET	10+64.25	20.43L

ALL SURVEY CONTROL MONUMENTS IN THIS TABLE ARE PROVIDED STRICTLY FOR SURVEY CONTROL. SHOULD ANY OF THEM BE DESTROYED DURING CONSTRUCTION THEY **SHALL NOT** BE REPLACED.

NAD83(2011) AK SPCS ZONE 1. ELEVATION ABOVE MLLW = 0.00'

Point #	Northing	Easting	Description	Station	Offset
1016	1299435.63	3089211.96	PLASCAP_ON 5/8" REBAR	N/A	N/A
1017	1299567.62	3089104.20	PLASCAP_DAVIS	10+09.83	16.19L
1018	1299507.46	3089090.21	PLASCAP_GT LAND SURVEY_LS13013	10+71.53	13.18L

DO NOT RESET MONUMENT #1018 OR PREPARE MONUMENT RECORD FORM

ALL PROPERTY MONUMENTS AND BEARING OBJECTS IN THESE EXISTING PROPERTY TABLES SHALL BE PRESERVED AND/OR REFERENCED PRIOR TO DISTURBANCE AND REPLACED AT THEIR ORIGINAL HORIZONTAL POSITION.

A RECORD OF MONUMENT FORM IN ACCORDANCE WITH A.S.34.65.040 SHALL BE SUBMITTED TO DOT & PF PROJECT ENGINEER FOR REVIEW PRIOR TO RECORDING FOR EACH MONUMENT.



2-14-18

STATE OF ALASKA
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 6860 Glacier Highway Juneau Ak 99801
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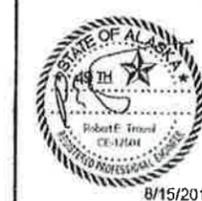
**KTN SHORELINE DRIVE
 CULVERT REPLACEMENT
 SURVEY CONTROL**

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 DATE TIME: 8/10/2018 17:00
 LAYOUT: A2
 SCALE:
 XREFS:
 DESIGNED BY: PARO
 CHECKED BY: PARO

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
1	10/26/18	REVISED ESTIMATE OF QUANTITIES	ALASKA	0003228/SFHWHY00182	2018	C1	1

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 CHECKED: DP,RT
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ESTIMATE OF QUANTITIES				
ITEM NO.	SSHC 2017 ITEM NO.	ITEM DESCRIPTION	PAY UNIT	QUANTITY
201.0009.0000	201(3B)	CLEARING AND GRUBBING	LS	ALL REQUIRED
202.0001.0000	202(1)	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	ALL REQUIRED
202.0002.0000	202(2)	REMOVAL OF PAVEMENT	SY	100 105
203.0001.0000	203(1)	COMMON EXCAVATION <i>DELETED BY CHANGE ORDER</i>	LS CY	437
203.0002.0000	203(2)	ROCK EXCAVATION	LS CY	171
203.0005.0000	203(5)	BORROW TYPE A	LS CY	145
203.0005.0000	203(5)	BORROW TYPE C	LS CY	230
204.0003.0000	204(1)	STRUCTURE EXCAVATION	LS	ALL REQUIRED
301.0001.00C1	301(1)	AGGREGATE BASE COURSE, GRADING C-1	TON	20
301.0002.00C1	301(1)	AGGREGATE BASE COURSE, GRADING D-1 <i>DELETED BY CHANGE ORDER</i>	LS CY	31
306.0001.0000	306(1)	ATB	TON	11 11
603.0021.0012	603(21)	CORRUGATED POLYETHYLENE PIPE 12 INCH	LF	6
603.2021.0000		CORRUGATED ALUMINUM PIPE ARCH, 36" X 36" 30" X 36" CAP ARCH, 12 GAGE, 3X1	LF	64.25 <i>80" X 67"</i>
611.2005.0000		SALVAGE AND REUSE RIPRAP	LS	ALL REQUIRED
621.0001.0000	621(1)	TREE, SALVAGE	EA	3
640.0001.0000	640(1)	MOBILIZATION AND DEMOBILIZATION	LS	ALL REQUIRED
640.0004.0000	640(4)	WORKER MEALS AND LODGING, OR PER DIEM	LS	ALL REQUIRED
641.0001.0000	641(1)	EROSION, SEDIMENT AND POLLUTION CONTROL ADMINISTRATION	LS	ALL REQUIRED
641.0003.0000	641(3)	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL	LS	ALL REQUIRED
641.0005.0000	641(5)	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL BY DIRECTIVE	CSUM	ALL REQUIRED
641.0006.0000	641(6)	WITHOLDING	CSUM	ALL REQUIRED
642.0003.0000	642(3A)	THREE PERSON SURVEY PARTY	HR	10
643.0002.0000	643(2)	TRAFFIC MAINTENANCE	LS	ALL REQUIRED
643.0023.0000	643(23)	TRAFFIC PRICE ADJUSTMENT	CSUM	ALL REQUIRED
643.0025.0000	643(25)	TRAFFIC CONTROL	CSUM	ALL REQUIRED



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KTN SHORELINE DRIVE
 CULVERT REPLACEMENT

ESTIMATE OF QUANTITIES

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003228/SFHWHY00182	2018	D1	1

202.0001.0000 REMOVAL OF STRUCTURES AND OBSTRUCTIONS (LS)

STATION	OFFSET	QUANTITY (FT)	REMARKS
10+40.00	LEFT	44	EXISTING = 48-INCH CMP SLIP LINED CULVERT TO BE REMOVED

202.0002.0000 REMOVAL OF PAVEMENT (SY)

STATION		AREA (SY)	REMARKS
FROM	TO		
10+30	10+56	90.00	
TOTAL =		90.00 105.0 SY	

603.0021.0012 CULVERT INSTALLATION SUMMARY

PIPE	INLET			OUTLET			LENGTH (FT)	SIZE	APPROX GRADE	REMARKS
	STATION	OFFSET	INVERT	STATION	OFFSET	INVERT				
P-2	10+08	9.17 RT	25.7	10+09	3.25 RT	25.5	6.0	12"	3.3%	ADD SECTION AT THE END OF EXISTING 12" CPP

603.2021.0000 87"x 63" CORRUGATED ALUMINUM PIPE ARCH, 12 GAGE, 3x1

PIPE	INLET			OUTLET			LENGTH (FT)	SIZE	APPROX GRADE	REMARKS
	STATION	OFFSET	INVERT	STATION	OFFSET	INVERT				
P-1	10+13	0.0	22.8	10+73	0.0	14.0	61.0 61.25	80x67" 80x67"	14.4%	INSTALL NEW ARCH PIPE manufacturer error

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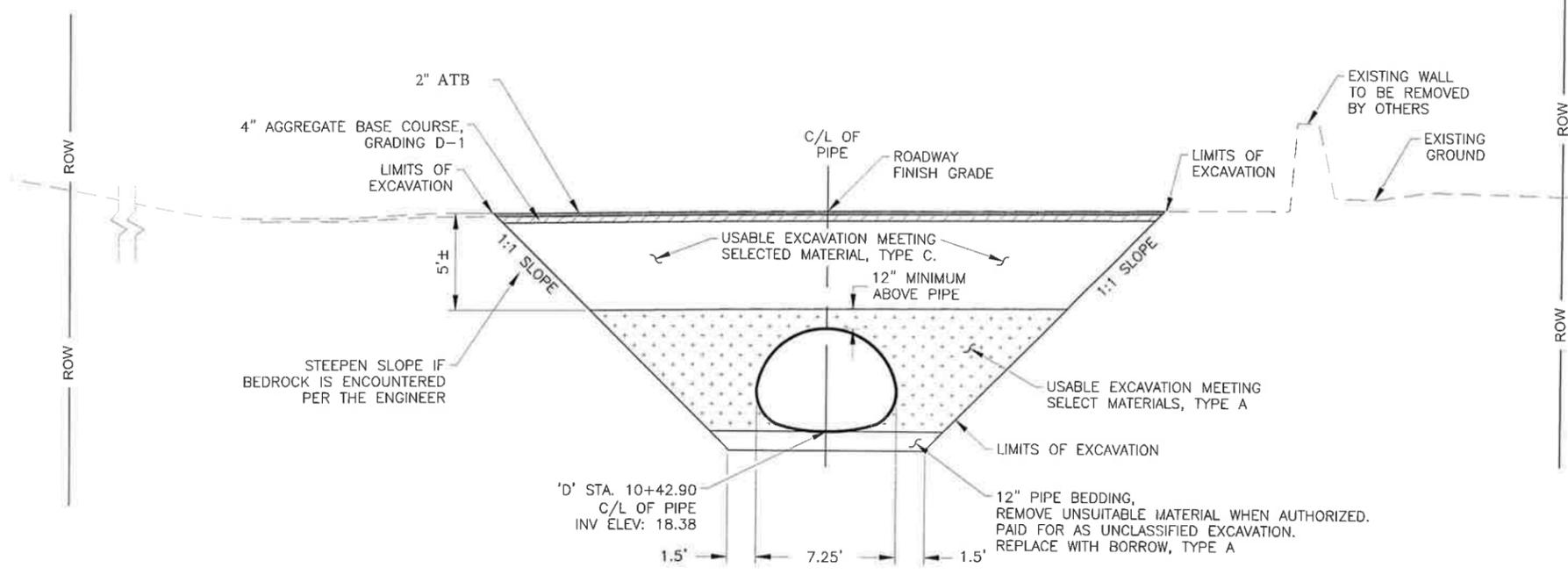
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**KTN SHORELINE DRIVE
 CULVERT REPLACEMENT**

8/15/2018

SUMMARIES

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			ALASKA	0003228/SFHWY00182	2018	E1	1



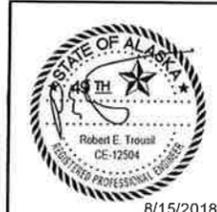
B-B PIPE BEDDING / BACKFILL SECTION
E1 SCALE: NOT TO SCALE

HYDRAULIC SUMMARY (1)		
RETURN PERIOD	FLOWRATE, (CFS)	HEADWATER ELEV, (FT)
Q2	135.62	3.60
Q5	213.79	5.06
Q10	281.39	6.52
Q25	380.17	7.19
Q50	462.16	7.41
CAPACITY		21.57 YR EVENT
DISCHARGE WHEN HwD=1, CFS		281.39
DISCHARGE RQD TO OVERTOP ROADWAY, CFS		350
ROADWAY OVERTOPPING RECURRENCE PROBABILITY		4.8% (21.57 YR)
CAPACITY OF CHANNEL DOWNSTREAM OF PIPE		200

CULVERT DATA	
CULVERT ID	SHORELINE P-1
CULVERT STATION	10+13 TO 10+73
CULVERT SPAN x RISE, IN	87" x 63"
DRAINAGE AREA, AC	542.00
LENGTH, FT	61.00
HWY C/L ELEV, FT	29.70
INLET INVERT ELEV, FT	22.80
OUTLET INVERT ELEV, FT	14.00
Hw ELEV @ Q10, FT	29.32
Hw DURATION, Q10	1.24
END TREATMENT	NONE

EXCEEDANCE/RECURRENCE PROBABILITIES:
 Q2-TWO YR = 50%
 Q5-FIVE YR = 20%
 Q10-TEN YR = 10%
 Q25-TWENTY FIVE YR = 4%

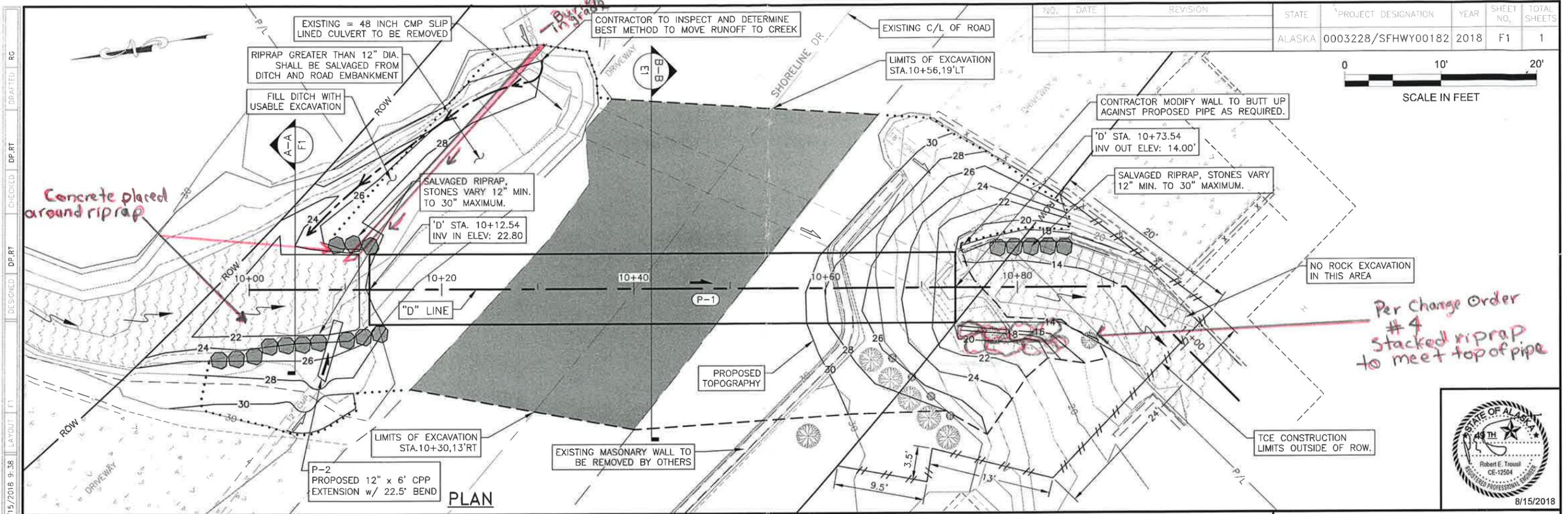
NOTES:
 1. MAXIMUM CONVEYANCE OF CHANNEL DS OF PIPE IS APPROXIMATELY 200 CFS, OR ~Q20% (FIVE YEAR) EVENT.
 2. PROPOSED CULVERT APPEARS TO OVERTOP AT ~350 CFS, OR A Q4.7969% (21.57 YEAR) EVENT.
 3. NRCS METHOD USED TO DETERMINE EXCEEDANCE/RECURRENCE PROBABILITIES.
 4. FLOWRATES ASSOCIATED WITH STATISTICALLY DERIVED EXCEEDANCE/RECURRENCE PROBABILITIES MAY BE OVERSTATED.



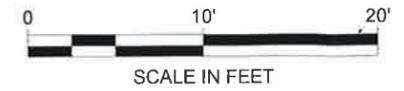
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**KTN SHORELINE DRIVE
 CULVERT REPLACEMENT**

8/15/2018

MISCELLANEOUS DETAILS

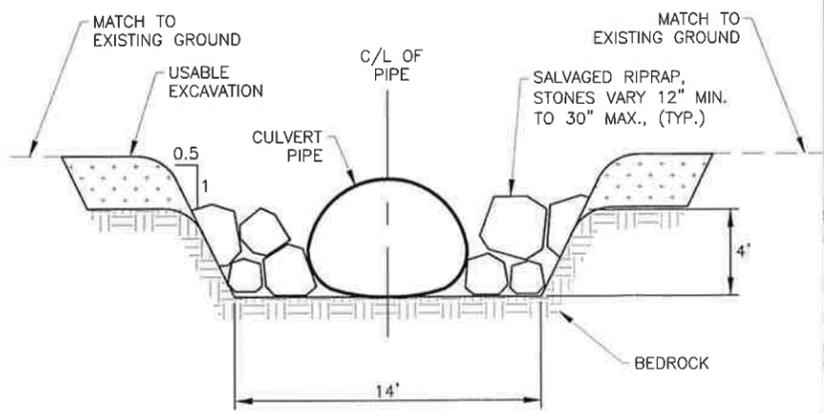
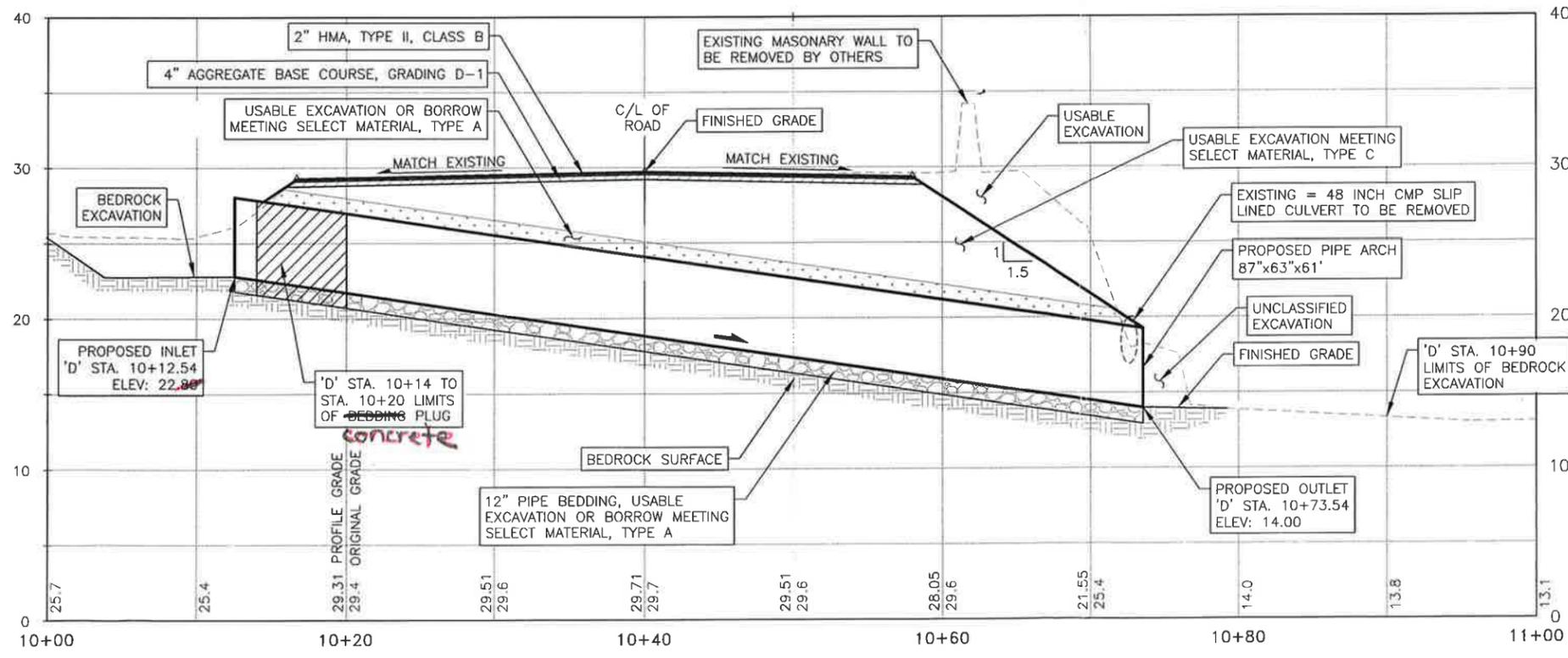


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			ALASKA	0003228/SFHXY00182	2018	F1	1



Per Change Order #4 Stacked riprap to meet top of pipe

P-1 PLAN & PROFILE



A-A RIPRAP, CLASS III, CULVERT PROTECTION SECTION
SCALE: NOT TO SCALE

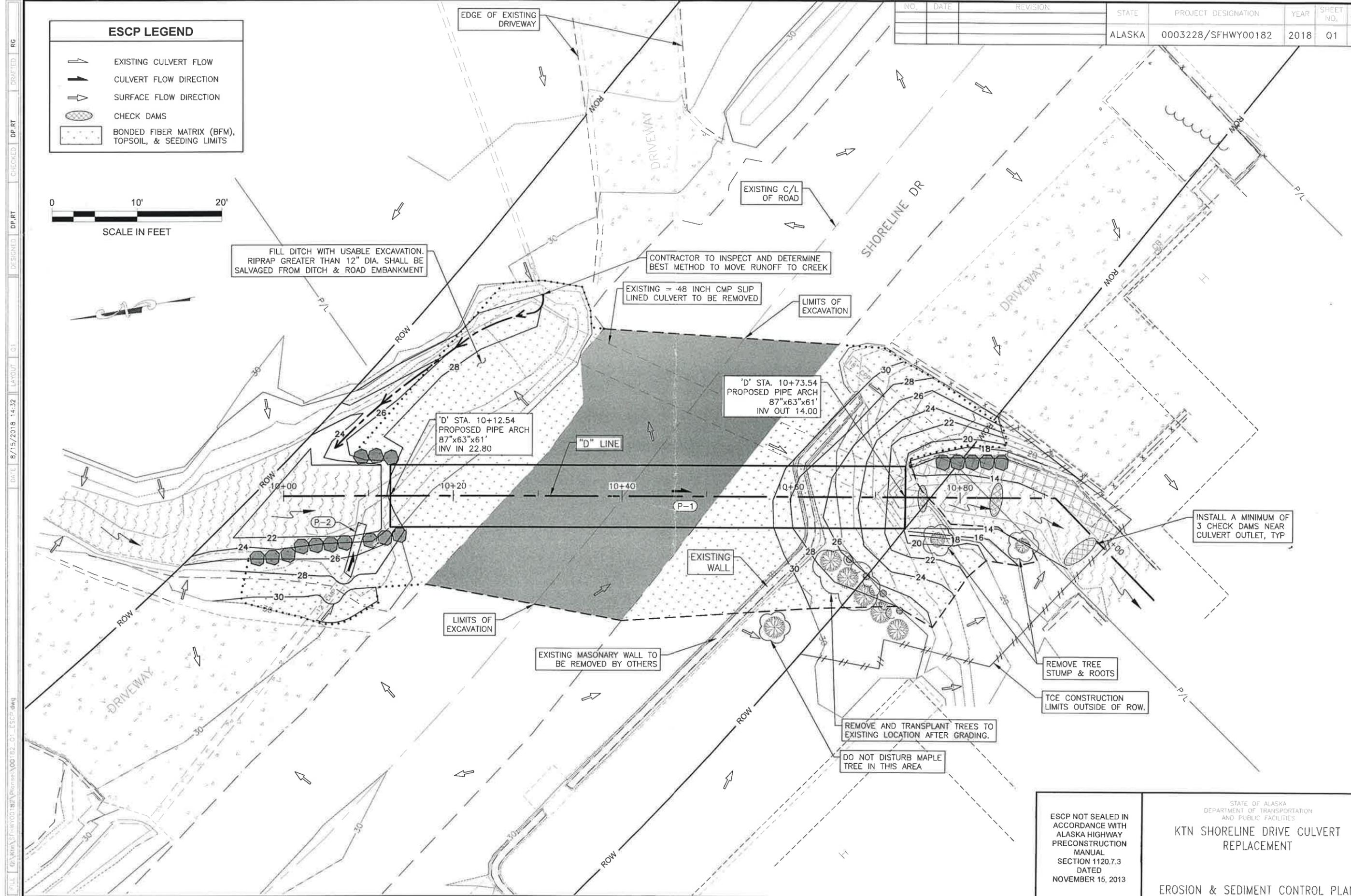
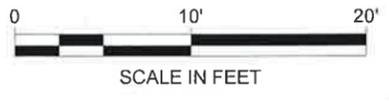
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003228/SFHWY00182	2018	Q1	2

ESCP LEGEND

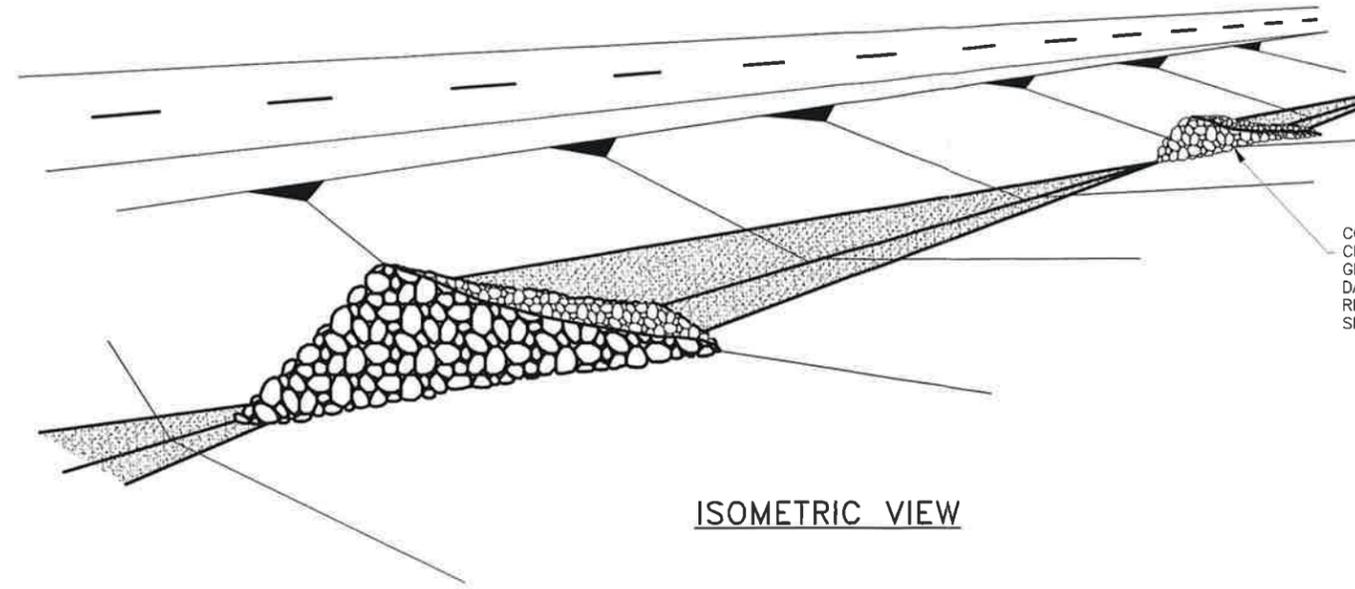
-  EXISTING CULVERT FLOW
-  CULVERT FLOW DIRECTION
-  SURFACE FLOW DIRECTION
-  CHECK DAMS
-  BONDED FIBER MATRIX (BFM), TOPSOIL, & SEEDING LIMITS



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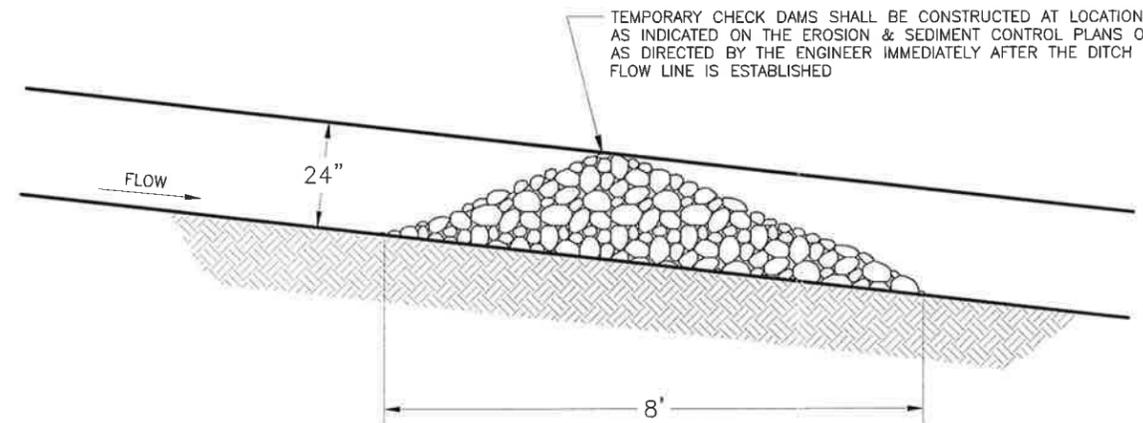
<p>ESCP NOT SEALED IN ACCORDANCE WITH ALASKA HIGHWAY PRECONSTRUCTION MANUAL SECTION 1120.7.3 DATED NOVEMBER 15, 2013</p>	<p>STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES</p> <p>KTN SHORELINE DRIVE CULVERT REPLACEMENT</p> <p>EROSION & SEDIMENT CONTROL PLAN</p>
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0003228/SFHwy00182	2018	Q2	2



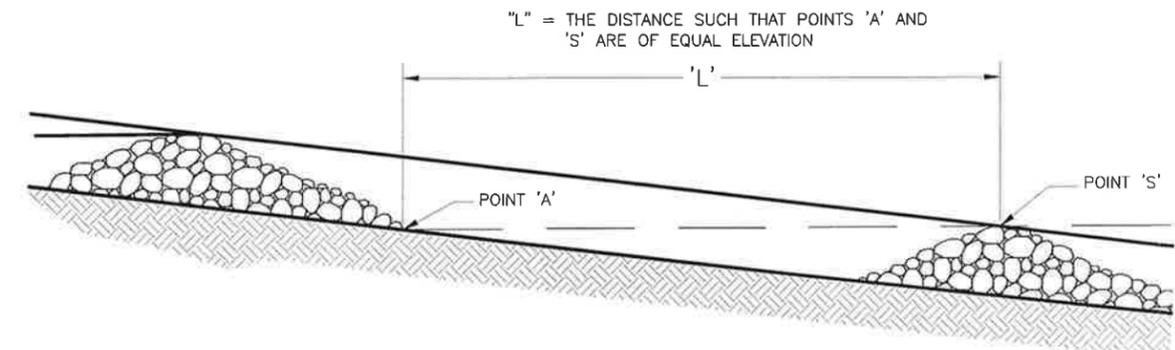
CONSTRUCT TEMPORARY CHECK DAMS WITH CLEAN SHOT ROCK OF SUFFICIENT SIZE AND GRADATION TO WORK EFFECTIVELY AS CHECK DAM MATERIAL ACCORDING TO MATERIAL REQUIREMENTS IN SECTION 641 OF THE SPECIFICATIONS, AND AS APPROVED.

ISOMETRIC VIEW



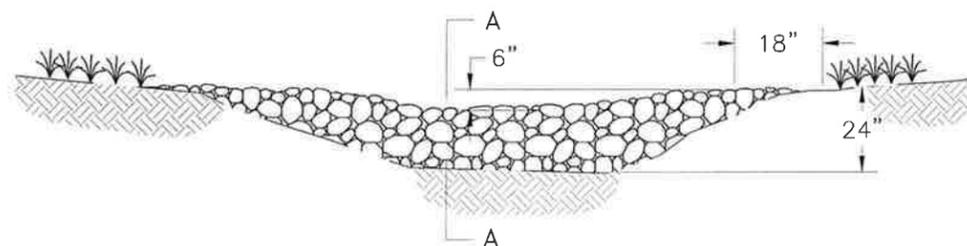
TEMPORARY CHECK DAMS SHALL BE CONSTRUCTED AT LOCATIONS AS INDICATED ON THE EROSION & SEDIMENT CONTROL PLANS OR AS DIRECTED BY THE ENGINEER IMMEDIATELY AFTER THE DITCH FLOW LINE IS ESTABLISHED

SECTION A-A



"L" = THE DISTANCE SUCH THAT POINTS 'A' AND 'S' ARE OF EQUAL ELEVATION

SPACING BETWEEN CHECK DAMS



VIEW LOOKING UPSTREAM

ESCP NOT SEALED IN ACCORDANCE WITH ALASKA HIGHWAY PRECONSTRUCTION MANUAL SECTION 1120.7.3 DATED NOVEMBER 15, 2013	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
	KTN SHORELINE DRIVE CULVERT REPLACEMENT
EROSION & SEDIMENT CONTROL DETAILS	

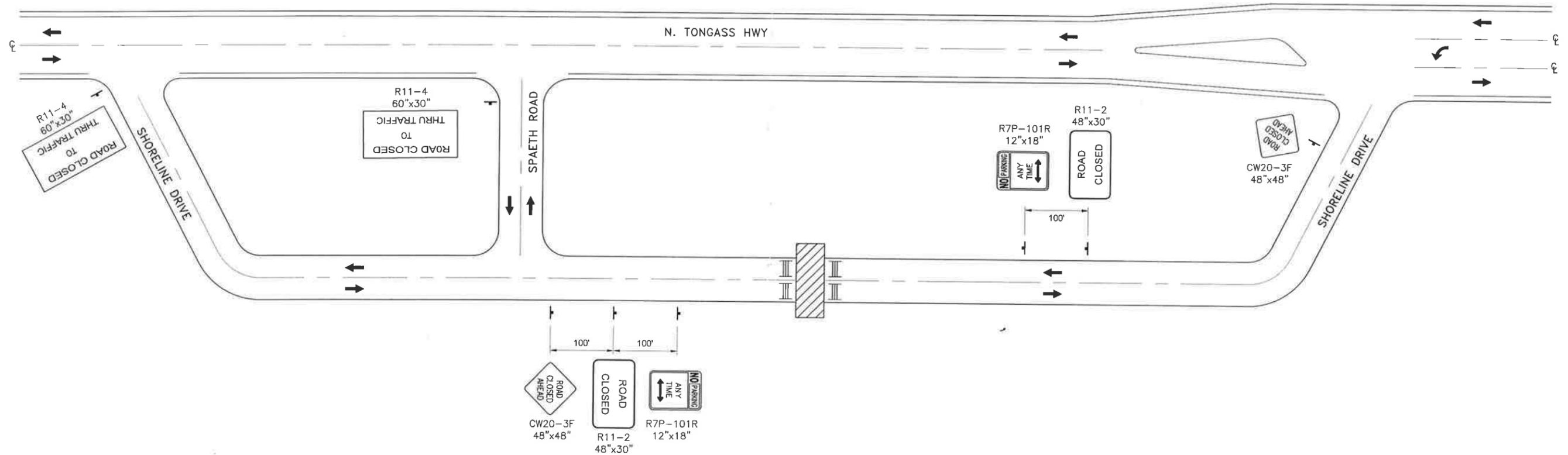
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FILE Q:\km\SFHWY00182\Plans\00182_T1_Traf.dwg DATE 8/15/2018 8:49 LAYOUT TRAFFIC CONTROL PLAN DESIGNED DP, RT CHECKED DP, RT DRAFTED RG

TRAFFIC CONTROL NOTES:

1. IT IS THE INTENT OF THIS TRAFFIC CONTROL PLAN (TCP) TO ILLUSTRATE SOME, NOT ALL, OF THE TRAFFIC CONTROL SETUPS REQUIRED ON THIS PROJECT. PLANS FOR CONFIGURATIONS SHALL BE CREATED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL.
2. TEMPORARY DRIVING LANES SHALL HAVE A MINIMUM WIDTH OF 10'-0".
3. DRIVEWAYS MAY BE CLOSED DURING ACTUAL WORK ON A GIVEN DRIVEWAY, PROVIDED THAT THE CLOSURE DOES NOT EXCEED 24 HOURS AND THE AFFECTED RESIDENTS HAVE BEEN GIVEN 24 HOURS NOTICE OF THE CLOSURE. PROVIDE RAMPS AS REQUIRED WHERE ADJOINING PAVEMENT HAS NOT BEEN CONSTRUCTED, PROTECT IN-PLACE WORK FROM DAMAGE DURING TEMPORARY ACCESS PERIODS.
4. PLACE CONSTRUCTION SO THEY DO NOT OBSCURE EXISTING TRAFFIC SIGNS.

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**TWO LANE ROADWAY—SINGLE LANE CLOSURE
NO THROUGH TRAFFIC**

LEGEND

- ↓ CONSTRUCTION SIGN
- III TYPE III BARRICADE
- ▨ WORK ZONE

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

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**KTN SHORELINE DRIVE
CULVERT REPLACEMENT**

TRAFFIC CONTROL PLAN