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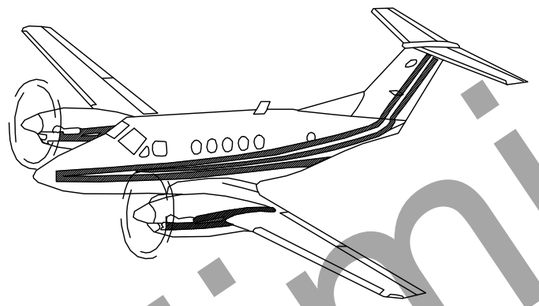
PROPOSED AIRPORT PROJECT

SHISHMAREF AIRPORT

SHISHMAREF AIRPORT EROSION CONTROL

AIP NO. 3-02-0404-XXX-XXXX

PROJECT NO. NFAPT00370

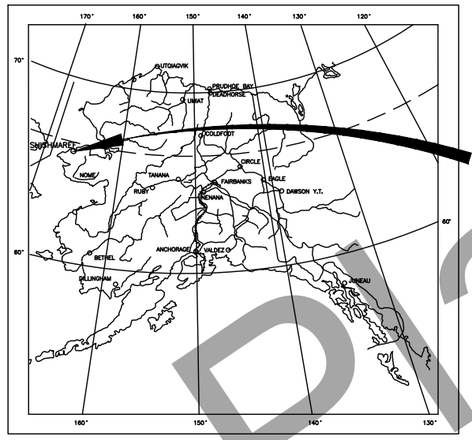


JONATHAN J. HUTCHINSON, P.E., PROJECT MANAGER
THOMAS C. HUGHES, DESIGNER
KAILING CHANG, ENGINEERING ASSISTANT

SPONSORED BY THE STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
NORTHERN REGION

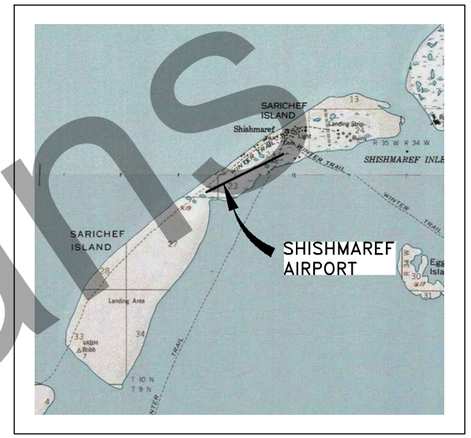
APPROVED BY: _____ DATE _____
SARAH E. SCHACHER, P.E., PRECONSTRUCTION ENGINEER, NORTHERN REGION

ACCEPTED FOR CONSTRUCTION: _____ DATE _____
JOSEPH P. KEMP, P.E., ACTING REGIONAL DIRECTOR, NORTHERN REGION



LOCATION MAP

PROJECT LOCATION



VICINITY MAP

INDEX OF SHEETS

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ABBREVIATIONS:

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY TRANSPORTATION OFFICIALS
ASOS	AUTOMATED SURFACE OBSERVING SYSTEM
ATO	AIR TRAFFIC ORGANIZATION
AVG	AVERAGE
BOP	BEGINNING OF PROJECT
BMP	BEST MANAGEMENT PRACTICES
CGP	CONSTRUCTION GENERAL PERMIT
C/L, ℄	CENTERLINE
CSPP	CONSTRUCTION SAFETY AND PHASING PLAN
CY	CUBIC YARD
D	DEPTH
DEG	DEGREE
EG	EXISTING GROUND
ELE, ELEV	ELEVATION
EOP	END OF PROJECT
FAA	FEDERAL AVIATION ADMINISTRATION
FG	FINISHED GRADE
FOD	FOREIGN OBJECT DEBRIS
', FT	FOOT, FEET
H	HEIGHT
", IN	INCH, INCHES
LT	LEFT
LVC	LENGTH OF VERTICAL CURVE
MAX	MAXIMUM
MHW	MEAN HIGH WATER
MISC	MISCELLANEOUS
MIN	MINIMUM
MLLW	MEAN LOWER LOW WATER
MPH	MILE PER HOUR
MR	MAINTENANCE ROAD
N	NORTH, NORTHING
NO.	NUMBER
NTS	NOT TO SCALE
OFA	OBJECT FREE AREA
OFZ	OBJECT FREE ZONE
PAC	PRIMARY AIRPORT CONTROL
PC	POINT OF CURVATURE
POT	POINT ON TANGENT
PT	POINT OF TANGENCY
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
RCO	REMOTE COMMUNICATIONS OUTLET
RT	RIGHT
ROFA	RUNWAY OBJECT FREE AREA
ROFZ	RUNWAY OBJECT FREE ZONE
RPZ	RUNWAY PROTECTION ZONE
RSA	RUNWAY SAFETY AREA
RW, RWY, R/W	RUNWAY
SAC	SECONDARY AIRPORT CONTROL
SPCD	SAFETY PLAN COMPLIANCE DOCUMENT
SPEC(S)	SPECIFICATION(S)
STA.	"L" ALIGNMENT STATIONING
T	TANGENT
TOFA	TAXIWAY OBJECT FREE AREA
TSA	TAXIWAY SAFETY AREA
TWY	TAXIWAY
TYP	TYPICAL
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
USACE	UNITED STATES ARMY CORPS OF ENGINEERS
USFWS	UNITED STATES FISH AND WILDLIFE SERVICE

ESTIMATE OF QUANTITIES

ITEM NUMBER	PAY ITEM	PAY UNIT	QUANTITY
G100.010.0000	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	ALL REQUIRED
G115.010.0000	WORKER MEALS AND LODGING, OR PER DIEM	LUMP SUM	ALL REQUIRED
G130.010.0000	FIELD OFFICE	LUMP SUM	ALL REQUIRED
G130.040.0000	MEAL	EACH	180
G130.050.0000	LODGING	EACH	30
G131.010.0000	ENGINEERING TRANSPORTATION (TRUCK)	EACH	1
G131.020.0000	ENGINEERING TRANSPORTATION (ATV)	EACH	2
G135.010.0000	CONSTRUCTION SURVEYING BY THE CONTRACTOR	LUMP SUM	ALL REQUIRED
G135.020.0000	EXTRA THREE PERSON SURVEY PARTY	HOUR	100.00
G210.010.0000	CONTRACTOR SAFETY PLAN COMPLIANCE DOCUMENT	LUMP SUM	ALL REQUIRED
P152.010.0000	UNCLASSIFIED EXCAVATION	CUBIC YARD	500.00
P152.210.0000	BORROW – MODIFIED BORROW B	LUMP SUM	ALL REQUIRED
P185.010.0000	PRIMARY ARMOR STONE, CLASS I (PA–1600)	TON	9,810
P185.090.0000	UNDERLAYER STONE, CLASS I (UL–160LB)	TON	5,754
P299.020.0000	CRUSHED AGGREGATE SURFACE COURSE	TON	2,000
P641.010.0000	EROSION, SEDIMENT, AND POLLUTION CONTROL ADMINISTRATION	LUMP SUM	ALL REQUIRED
P641.030.0000	TEMPORARY EROSION, SEDIMENT, AND POLLUTION CONTROL	LUMP SUM	ALL REQUIRED
P641.040.0000	TEMPORARY EROSION, SEDIMENT, AND POLLUTION CONTROL ADDITIVES	CONTINGENT SUM	ALL REQUIRED
P641.060.0000	WITHHOLDING	CONTINGENT SUM	ALL REQUIRED
P641.070.0000	SWPPP MANAGER	LUMP SUM	ALL REQUIRED
P682.020.0000	GEOTEXTILE, EROSION CONTROL	SQUARE YARD	6,032.00
T901.080.0000	SEEDING	LUMP SUM	ALL REQUIRED

TABLE OF ESTIMATING FACTORS

ITEM NO.	DESCRIPTION	FACTOR
P152.210.0000	BORROW – MODIFIED BORROW B	2 TON/CY
P185.010.0000	PRIMARY ARMOR STONE, CLASS I (PA–1600)	1.5 TON/CY
P185.090.0000	UNDERLAYER STONE, CLASS I (UL–160LB)	1.6 TON/CY
P299.010.0000	CRUSHED AGGREGATE SURFACE COURSE	2 TON/CY

ESTIMATE OF LUMP SUM QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY
P152.210.0000	BORROW – MODIFIED BORROW B	10,543.00 CY

GENERAL NOTE:

1. EXISTING LOCAL ACCESS IS LIMITED TO SINGLE LANE ROADS, TRAILS, AND UNDEVELOPED BEACH. ALL ACCESS AND HAUL ROUTES ARE TO BE IDENTIFIED AND VERIFIED FOR SUITABILITY BY CONTRACTOR. MAINTENANCE AND ANY NECESSARY IMPROVEMENTS OF ACCESS ROUTES, HAUL ROUTES, STOCKPILE AREAS, AND STAGING AREAS IS SUBSIDIARY TO OTHER CONTRACT ITEMS.
2. CONTRACTOR SHALL ALLOW ACCESS TO THE COMMUNITY LANDFILL SITE AT ALL TIMES.
3. ALL HAUL ROUTES, MATERIAL SOURCES, AND STAGING AREAS ARE CONTRACTOR FURNISHED. NO STAGING/STOCKPILING AREAS ARE ANTICIPATED WITHIN AIRPORT PROPERTY.
4. CONTRACTOR SHALL OBTAIN ANY NECESSARY BARGE LANDING PERMITS, IF REQUIRED, AT ITS OWN EXPENSE.
5. FOR BASIS OF PROJECT ITEM QUANTITIES, SEE QUANTITY NOTE BOOK, INCLUDED AS SUPPLEMENTAL INFORMATION.

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
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DESIGN TCH
DRAWN KC
CHECKED JJH

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
NORTHERN REGION–DESIGN AND CONSTRUCTION–AVIATION

BY	DATE	REVISIONS

SHISHMAREFAIRPORT
SHISHMAREF AIRPORT EROSION CONTROL
AIP 3–02–0404–XXX–XXXX/NFAPT00370
ESTIMATE OF QUANTITIES

SHEET 2 OF 12

1/12/2022 9:45 AM

GENERAL NOTES

1. VERIFY HORIZONTAL AND VERTICAL CONTROL PRIOR TO USE. ON MULTI YEAR PROJECTS, VERIFY ALL CONTROL ON A SEASONAL BASIS.

2. BACKGROUND MAPPING IS SHOWN FOR ORIENTATION PURPOSES ONLY. THIS SHEET DOES NOT PURPORT TO DEPICT RIGHT OF WAY.

3. ALL DISTANCES SHOWN ARE GROUND DISTANCES, IN U.S. SURVEY FEET.

4. COORDINATE SYSTEM DEFINITION.

THIS PROJECT IS LOCATED ENTIRELY WITHIN A MODIFIED STATE PLANE PROJECTION.
ORIGINALLY DESIGNED BY USING:
STATE PLANE ZONE 8
SCALED FROM POINT 1002, "SAC", N 4477977.717 SFT, E 1628468.862 SFT
USING THE INVERSE COMBINED SCALE FACTOR, 1/CSF
COMBINED SCALE FACTOR (CSF) = 0.99989926

RESULTING IN THE FOLLOWING COORDINATE REFERENCE SYSTEM

PROJECTION DEFINITION:
NAME: SHISHMAREF SPZ8 MOD
LINEAR UNIT: U.S. SURVEY FOOT (SFT)
DATUM: NAD83(2011)
PROJECTION: TRANSVERSE MERCATOR
CENTRAL MERIDIAN AND GRID ORIGIN: 166°W
LATITUDE OF ORIGIN: 54°N
FALSE NORTHING: −451.157 SFT
FALSE EASTING: 1640417.870 SFT
SCALE FACTOR AT ORIGIN: 1.00000074 (EXACT)

BASIS OF VERTICAL IS NAVD88, GEOID 12A
BASIS OF BEARING IS STATE PLANE ZONE 8

BASIS OF COORDINATES ARE FROM OPUS AVERAGED POSITION OF POINT 1002, A NGS SAC (SECONDARY AIR CONTROL) WHICH IS A ROD INSIDE A CASING. THIS IS ALSO THE BASIS OF ELEVATION.

POINTS 1001, 1002, AND 1003 ARE PRIMARY CONTROL. OTHER POINTS GIVEN AS BACKUP.

LEGEND

- PRIMARY MONUMENT FOUND
- REBAR AND CAP FOUND

GRAPHIC SCALE

0 200 400 Feet

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DESIGN TMH
DRAWN TMH
CHECKED TMH

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
NORTHERN REGION–DESIGN AND CONSTRUCTION–AVIATION

BY	DATE	REVISIONS

SHISHMAREFAIRPORT
SHISHMAREF AIRPORT EROSION CONTROL
AIP 3-02-0404-XXX-XXXX/NFAPT00370
SURVEY CONTROL PLAN 1 OF 3

SHEET 3 OF 12

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
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LEGEND

- PRIMARY MONUMENT FOUND
- REBAR AND CAP FOUND

GRAPHIC SCALE

0 200 400 Feet

DESIGN TMH
DRAWN TMH
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
NORTHERN REGION–DESIGN AND CONSTRUCTION–AVIATION

BY	DATE	REVISIONS

SHISHMAREFAIRPORT

SHISHMAREF AIRPORT EROSION CONTROL
AIP 3-02-0404-XXX-XXXX/NFAPT00370

SURVEY CONTROL PLAN 2 OF 3

SHEET 4 OF 12

CONTROL POINTS

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION	LATITUDE	LONGITUDE
106	4478723.16	1628991.67	9.09	PRIM MON FND C9 TRVI 4922–S 1992	N66° 15' 14.5739"	W166° 04' 38.9107"
107	4478425.62	1628334.79	9.29	REBAR CAP FND PI 12+37.95 9232–S 1999	N66° 15' 11.6378"	W166° 04' 54.9353"
150	4478209.64	1628876.73	11.32	PRIM MON FND SACE–1 6714–S 2006	N66° 15' 09.5194"	W166° 04' 41.7007"
903	4478343.75	1629250.76	9.67	REBAR CAP FND SHH CP5 9235–S 2010	N66° 15' 10.8436"	W166° 04' 32.5750"
1001	4476953.46	1626500.28	9.65	PRIM MON FND PAC	N66° 14' 57.1262"	W166° 05' 39.6596"
1002	4477977.72	1628468.86	10.61	PRIM MON FND SAC	N66° 15' 07.2321"	W166° 04' 51.6487"
1003	4476413.51	1625360.84	10.78	PRIM MON FND SAC	N66° 14' 51.7954"	W166° 06' 07.4462"
1004	4477939.25	1628040.92	12.28	PRIM MON FND TR6 C7 4922–S 1992	N66° 15' 06.8481"	W166° 05' 02.0926"
1005	4478190.12	1627916.54	10.32	PRIM MON FND C8TR6 L14B1 4922–S 1992	N66° 15' 09.3150"	W166° 05' 05.1366"
1006	4478190.82	1627920.31	9.37	REBAR CAP FND B1 L14 L15 4922–S	N66° 15' 09.3219"	W166° 05' 05.0446"
1007	4477530.99	1627267.92	11.65	PRIM MON FND 1992 4922–S B1 L2	N66° 15' 02.8202"	W166° 05' 20.9454"
1008	4477516.00	1627227.28	11.94	PRIM MON FND 1992 4922–S B1 L2	N66° 15' 02.6721"	W166° 05' 21.9368"
1011	4477139.63	1626429.22	9.44	PRIM MON FND WP TR6 4922–S 1992	N66° 14' 58.9570"	W166° 05' 41.4009"
11005	4478431.39	1630050.91	8.03	NGS MON RAYMARE 1961	N66° 15' 11.7151"	W166° 04' 13.0470"
11006	4478120.04	1628996.77	10.98	REBAR CAP FND TSM–1 9235–S 2010	N66° 15' 08.6391"	W166° 04' 38.7680"
11007	4476009.63	1625369.97	10.72	REBAR CAP FND SHH TSM2 9235–S 2010	N66° 14' 47.8214"	W166° 06' 07.2074"
11015	4475810.06	1624574.28	9.30	REBAR CAP FND SHH CP3 9235–S 2010	N66° 14' 45.8445"	W166° 06' 26.6159"
11016	4478081.44	1629644.53	9.69	REBAR CAP FND PANP SHH CP4 9235–S 2010	N66° 15' 08.2670"	W166° 04' 22.9562"
11031	4475714.42	1624456.33	9.31	PRIM MON FND G 163+00 S4922 1992	N66° 14' 44.9013"	W166° 06' 29.4901"
11047	4475516.87	1624050.34	10.90	PRIM MON FND SNC L1 B1 4922–S 1992	N66° 14' 42.9505"	W166° 06' 39.3884"
11049	4474875.59	1623662.43	11.40	REBAR CAP FND PI 73+39.26 9232–S 1999	N66° 14' 36.6333"	W166° 06' 48.8254"

ALIGNMENT POINTS

POINT NO.	NORTHING	EASTING	DESCRIPTION
1	4478816.17	1629424.59	BP 0+49.29
2	4478839.45	1629313.87	PC 1+62.43
3	4478814.61	1629118.79	PT 3+62.79
4	4478476.49	1628437.34	PC 11+23.52
5	4478311.33	1628340.32	PT 13+26.20
6	4478234.63	1628344.00	PC 14+02.99
7	4478069.48	1628246.99	PT 16+05.67
8	4476975.34	1626041.87	PC 40+67.31
9	4476962.23	1626019.71	PT 40+93.09
10	4475659.58	1624147.43	PI 63+73.94
11	4475245.66	1623748.84	PC 69+48.58
12	4475044.21	1623662.33	PT 71+72.65
13	4475012.62	1623661.71	PC 72+04.25
14	4474792.68	1623556.01	PT 74+55.90
15	4474741.84	1623494.96	END 75+35.35

LEGEND

- PRIMARY MONUMENT FOUND
- REBAR AND CAP FOUND

GRAPHIC SCALE

0 200 400 Feet

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DESIGN TMH
DRAWN TMH
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
NORTHERN REGION–DESIGN AND CONSTRUCTION–AVIATION

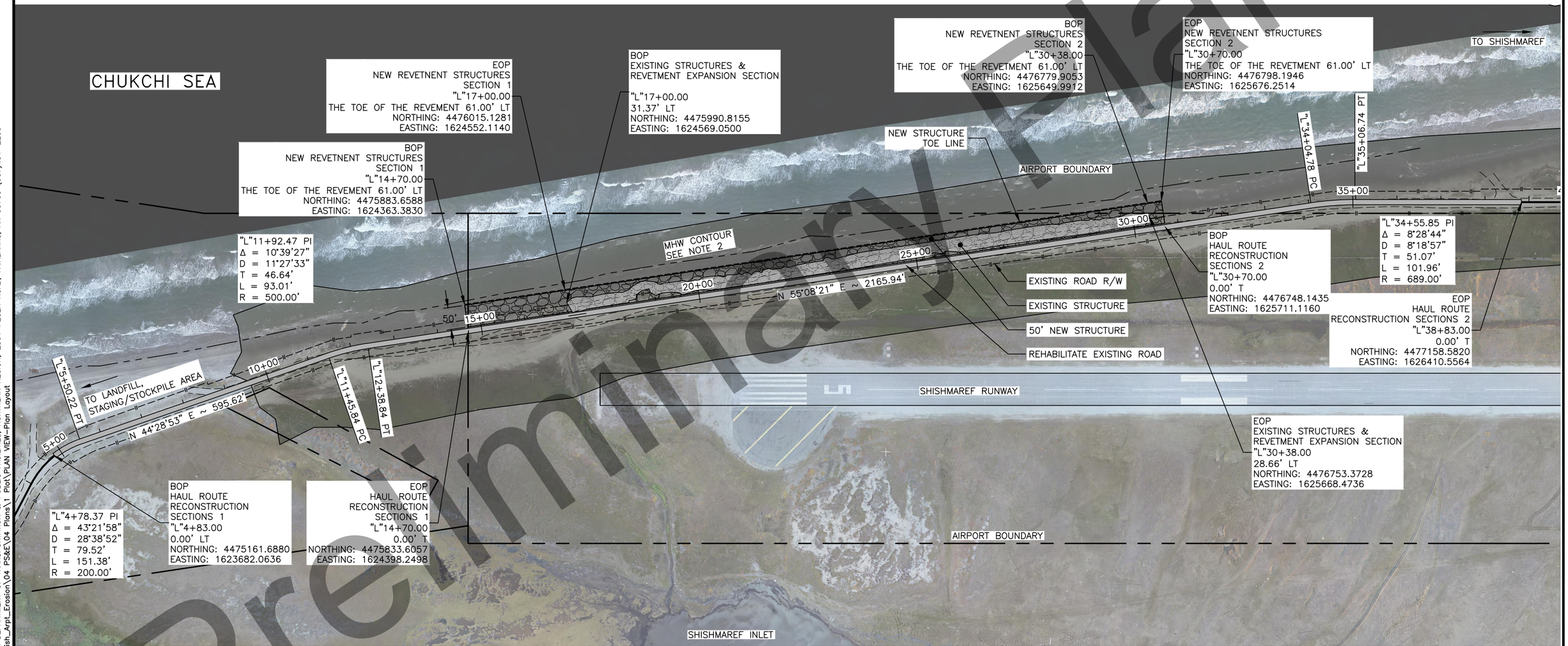
BY	DATE	REVISIONS

SHISHMAREFAIRPORT
SHISHMAREF AIRPORT EROSION CONTROL
AIP 3–02–0404–XXX–XXXX/NFAPT00370
SURVEY CONTROL PLAN 3 OF 3

SHEET 5 OF 12

PROJECT TASK:

1. THERE IS AN EXISTING REVETMENT STRUCTURE CONSTRUCTED IN 2018 AT THE LOCATIONS AS SHOWN. SEE AS-BUILT DRAWINGS, INCLUDED AS SUPPLEMENTAL INFORMATION. THIS STRUCTURE IS TO REMAIN.
2. THE MEAN HIGH WATER (MHW) ELEVATION IS 4'. THE LOCATION OF THE MHW CONTOUR IS VARIABLE, DUE TO ACTIVE COASTAL EROSION AND ACCRETION. CONTRACTOR SHALL PERFORM ALL WORK OUTSIDE OF THE MHW LIMITS.
3. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING AND PERFORMING ALL CONSTRUCTION ACTIVITY TO MINIMIZE RISK OF STORM DAMAGE, AND PERFORM WORK IN A SEQUENTIAL MANNER TO LIMIT THE ACTIVE CONSTRUCTION AREA.



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CHECKED	JJH

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
NORTHERN REGION-DESIGN AND CONSTRUCTION-AVIATION

BY	DATE	REVISIONS

SHISHMAREFAIRPORT

SHISHMAREF AIRPORT EROSION CONTROL
AIP 3-02-0404-XXX-XXXX/NFAPT00370

PROJECT LAYOUT PLAN

CSPP GENERAL NOTE:

1. SUBMIT A SAFETY PLAN COMPLIANCE DOCUMENT (SPCD) TO THE ENGINEER FOR REVIEW WITHIN 30 DAYS OF RECEIVING NOTICE TO PROCEED. CONSTRUCTION ACTIVITIES CANNOT START UNTIL A SPCD HAS BEEN APPROVED BY THE ENGINEER. FOLLOWING APPROVAL OF THE SPCD, IF SUBSEQUENT CHANGES ARE NEEDED, SUBMIT A REVISION TO THE ENGINEER FOR REVIEW AND APPROVAL.
2. DEVELOP A CONSTRUCTION SCHEDULE COMPLYING WITH CONDITIONS OF THE CONSTRUCTION SAFETY PHASING PLAN (CSPP). PROJECT PERMITS STIPULATIONS, AND CONTRACT PROVISIONS. PROVIDE SUFFICIENT DETAIL TO ADDRESS REQUIRED SUBMITTALS, REVIEW PERIODS, PROCUREMENT OF MATERIALS, WORK, AND COORDINATION REQUIREMENTS. ALLOW SUFFICIENT TIME FOR COORDINATION AND APPROVALS WITHIN THE SCHEDULE.
3. 30 DAYS PRIOR TO STARTING WORK IN SHISHMAREF, NOTIFY FAA AIR TRAFFIC ORGANIZATION OF POTENTIAL IMPACTS TO ASOS OPERATION FROM CONSTRUCTION ACTIVITIES.
4. FOR SHISHMAREF AIRPORT DATA, SEE THE AIRPORT LAYOUT PLAN APPROVED ON JUNE 23rd, 2015 INCLUDED AS SUPPLEMENTAL INFORMATION.
5. THIS SHEET SHOWS THE AIRPORT LAYOUT IN ITS EXISTING CONDITION. PARTICULAR RESTRICTIONS ARE PROVIDED IN THE PHASE-SPECIFIC PLAN VIEW. SEE THE CSPP-DETAILS SHEET OF PHASE DEPENDENT AIRPORT SAFETY DIMENSIONS.
6. SPEED IS RESTRICTED TO 20 MPH ON AIRPORT PROPERTY.
7. THE CONTRACTOR MUST REPORT ANY SAFETY ISSUES TO THE ENGINEER AND AIRPORT MANAGER UPON DISCOVERY. THE CONTRACTOR MUST TAKE IMMEDIATE ACTION TO RESOLVE SAFETY ISSUES AS DIRECTED.
8. PROVIDE WATER FOR DUST CONTROL. DUST OR OTHER AIRBORNE PARTICULATES RESULTING FROM CONTRACTOR ACTIVITIES MAY BE A SAFETY ISSUE. WATER PAY ITEM SUBSIDIARY AND PAID BY PAY P641.030.0000.
9. FOREIGN OBJECT AND DEBRIS (FOD) IS A SAFETY ISSUE. REMOVE ALL FOD IMMEDIATELY UPON DISCOVERY OR NOTIFICATION.
10. KEEP ALL ACTIVE ACCESS ROUTES, HAUL ROUTES, AND AIRPORT SURFACES CLEAN OF MATERIAL. REMOVE SPILLED OR TRACKED MATERIAL IMMEDIATELY TO AVOID VEHICLE ACCIDENTS OR AIRCRAFT DAMAGE.
11. MONITOR TEMPORARY MARKERS FREQUENTLY AND TAKE ACTION TO CORRECT DEFICIENCIES IMMEDIATELY UPON DISCOVERY OR NOTIFICATION.
12. THE TERM "ACTIVE RUNWAY" REFERS TO A RUNWAY OPEN TO LANDING, TAKEOFF AND TAXIING OPERATIONS.
13. NO CONSTRUCTION ACTIVITY IS ALLOWED WITHIN THE RUNWAY SAFETY AREA (RSA) OF THE ACTIVE RUNWAY.
14. NO CONSTRUCTION ACTIVITY IS ALLOWED WITHIN THE TAXIWAY SAFETY AREA (TSA) OR TAXIWAY OBJECT FREE AREA (TOFA) WHILE THE TAXIWAY IS OPEN FOR AIRCRAFT OPERATIONS.
15. DO NOT PARK EQUIPMENT WITHIN THE OBJECT FREE AREA (OFA) OF ACTIVE RUNWAY,
16. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ACCESS ROUTES, HAUL ROUTES, STOCKPILE AREAS, AND STAGING AREAS.
17. ALL STAGING AREA AND STOCKPILES ARE NOT TO EXCEED HEIGHT RESTRICTIONS PER C.F.R. PART 77 OBJECTS AFFECTING NAVIGABLE AIRSPACE. STOCKPILES WITHIN THE OFA SHALL NOT PENETRATE THE OFA PLANE.
18. STAGING AREA SHOWN MAY BE USED TO STAGE, STOCKPILE MATERIAL, OR PARK EQUIPMENT.
19. THE CONTRACTOR SHALL PROPOSE, IN A SPCD SUBMITTAL, STAGING AREA AND STOCKPILE AREAS UTILIZING THE CONSTRUCTION AREA, EXISTING BEACH, PROVIDED STAGING AREA, OR ALTERNATIVES.
20. THE CONTRACTOR SHALL PROPOSE, IN A SPCD SUBMITTAL HAUL ROUTES UTILIZING THE CONSTRUCTION AREA, EXISTING BEACH, STAGING AREA ACCESS ROAD, OR ALTERNATIVES.
21. THE CONTRACTOR SHALL VERIFY SUITABILITY OF STAGING AREA ACCESS ROUTE AND STAGING AREA SHOWN. THE STAGING AREA ACCESS ROUTE, EXISTING BEACH, CONSTRUCTION AREA, AND STAGING AREA MAY REQUIRE IMPROVEMENT TO SUPPORT CONTRACTOR OPERATIONS.

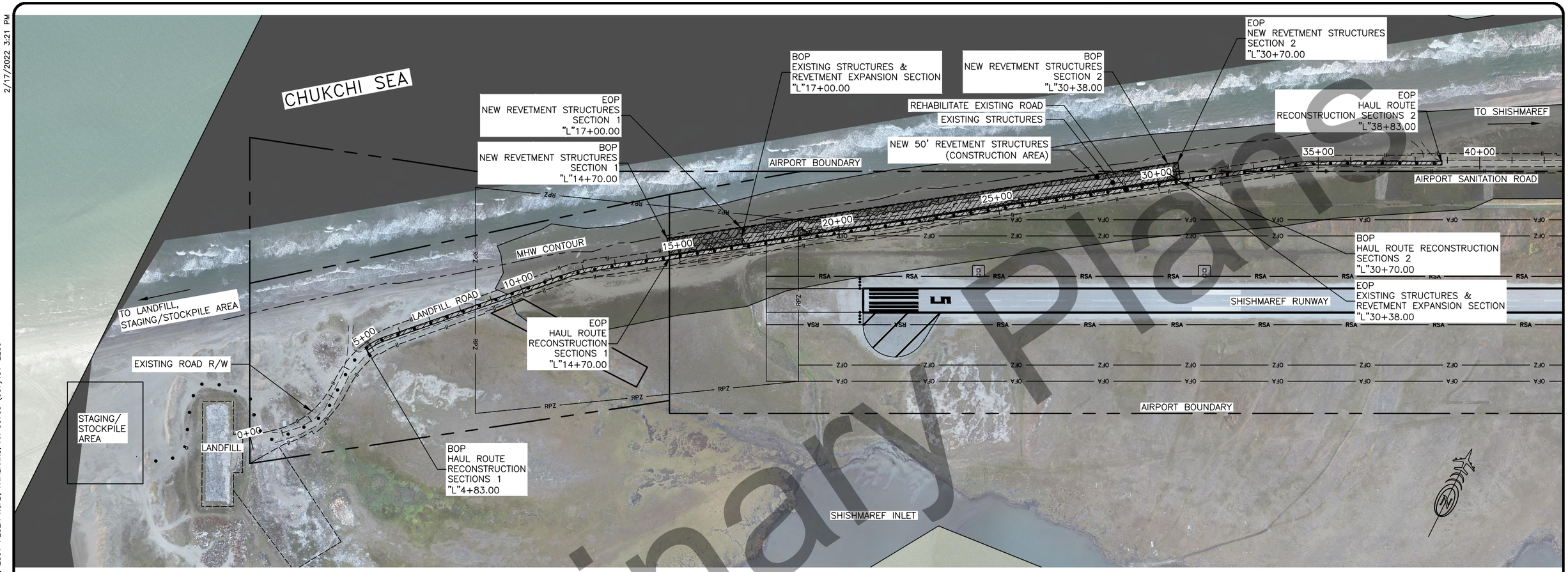
DESIGN TCH
DRAWN KC
CHECKED JJH

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
NORTHERN REGION-DESIGN AND CONSTRUCTION-AVIATION

BY	DATE	REVISIONS

SHISHMAREFAIRPORT
SHISHMAREF AIRPORT EROSION CONTROL
AIP 3-02-0404-XXX-XXXX/NFAPT00370
CONSTRUCTION SAFETY AND PHASING PLAN - GENERAL NOTE

SHEET 7 OF 12



PROJECT NOTE:

1. THIS PROJECT INCLUDED NIGHTTIME CLOSURES OF THE PROJECT AREA. COORDINATE THROUGH THE ENGINEER WITH THE AIRPORT MANAGER AND FAA PRIOR TO START OF WORK. COORDINATE THROUGH THE ENGINEER WITH AIRPORT USERS, AIR CARRIERS, AND AIRPORT MANAGER FOR AIRPORT CLOSURES, AFTER THE LAST SCHEDULED FLIGHT ARRIVAL OR DEPARTURE, AND HAVE WORK COMPLETED AND SERVICE RESTORED NOT LESS THAN ONE HOUR PRIOR TO THE FIRST SCHEDULED FLIGHT ARRIVAL OR DEPARTURE THE FOLLOWING MORNING.
2. CONSTRUCTION ACTIVITY, WHILE THE AIRPORT IS OPEN, IS PERMITTED WITH AN APPROVED SPCD AND SUBJECT TO THE PHASING REQUIREMENTS AND RESTRICTIONS.
3. THE MAIN ELEMENTS OF THIS PROJECT INCLUDE:
   A. INSTALLATION, REMOVAL, AND MAINTENANCE OF HAZARD MARKING AND SIGNING ON THE LANDFILL ROAD.
   B. UTILITIES – NO UTILITY WORK IS ANTICIPATED.
   C. STAKE WORK LIMITS
   D. DELINEATE AND IMPROVE HAUL ROUTE(S), ACCESS ROUTE(S), STAGING AREA(S), AND STOCKPILE AREA(S).
   E. SEQUENCED SALVAGE OF EXISTING EROSION CONTROL STRUCTURES.
   F. SEQUENTIAL EXCAVATION, GRADING, AND CONSTRUCTION OF NEW REVETMENT STRUCTURE AND IMPROVEMENTS TO EXISTING ROAD
   G. SEEDING, RESTORATION, AND CLEAN–UP.
4. AT THE END OF THE PROJECT, COMPLETE INSPECTION OF ALL SURFACES WITH THE ENGINEER AND AIRPORT MANAGER. COMPLETE ANY PUNCH LIST ITEMS THAT ARE BROUGHT TO ATTENTION DURING THE INSPECTION WITHIN 24 HOURS OF THE INSPECTION.

LEGEND:

- CONSTRUCTION AREA
- HAUL ROAD
- RUNWAY SAFETY AREA (RSA)
- RUNWAY OBJECT FREE ZONE (OFZ)
- RUNWAY OBJECT FREE AREA (OFA)
- RUNWAY PROTECTION ZONE (RPZ)

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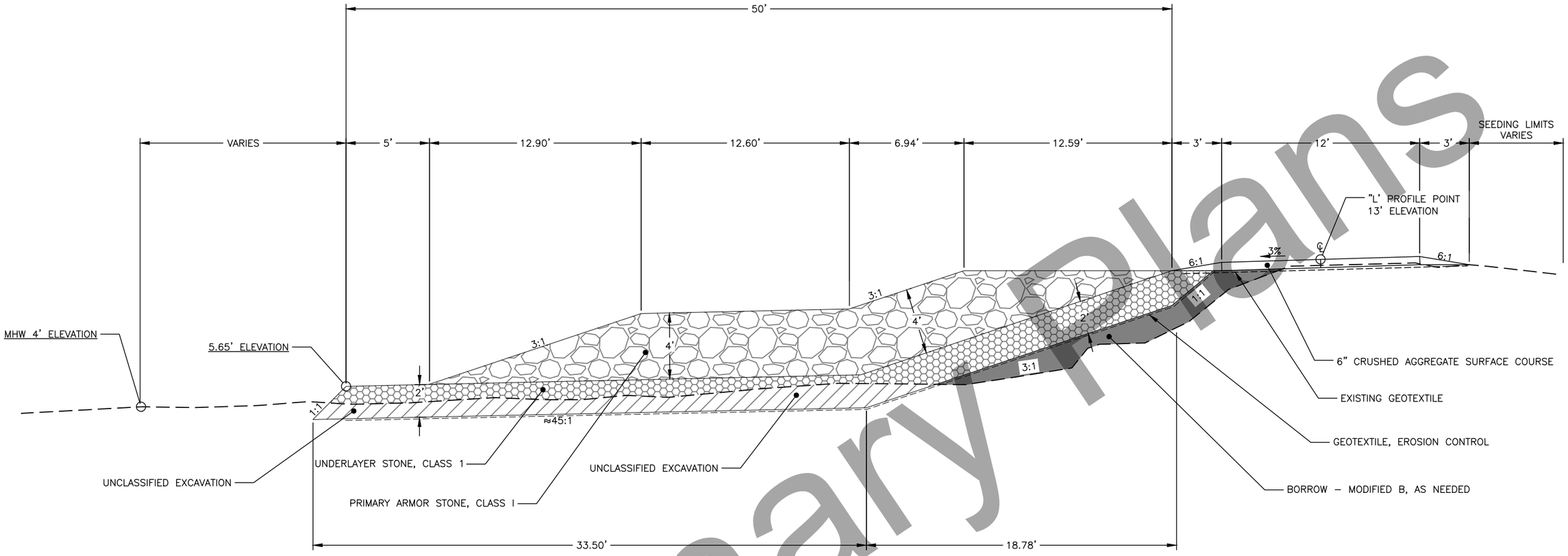
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
NORTHERN REGION–DESIGN AND CONSTRUCTION–AVIATION

BY	DATE	REVISIONS

SHISHMAREFAIRPORT
SHISHMAREF AIRPORT EROSION CONTROL
AIP 3–02–0404–XXX–XXXX/NFAPT00370
CONSTRUCTION SAFETY AND PHASING PLAN

SHEET 8 OF 12



REVETMENT SECTION
STA "L" 14+70 TO 17+00
STA "L" 30+38 TO 30+70

NOTE:

1. SEE SURVEY CONTROL FOR BASIS OF VERTICAL AND HORIZONTAL CONTROL.
2. THE CONTRACTOR SHALL LIMIT THE AREA UNDER CONSTRUCTION AT ANY GIVEN TIME. AT A MINIMUM, ACCEPTABLY INSTALL GEOTEXTILE FABRIC AND UNDERLAYER STONE FOR THE AREA BEFORE THE END OF EACH WORK SHIFT.
3. EXCAVATION SHALL BE PERFORMED IN A MANNER TO SELECTIVELY SEPARATE MATERIAL WITH ORGANICS AND VEGETATION FROM BEACH SAND. MINIMIZE MIXING OF MATERIALS.
4. EXCAVATED MATERIAL WITH ORGANICS & VEGETATION SHALL BE STOCKPILED SEPARATELY AND USED AS FINISH GRADING MATERIAL IN AREAS TO BE SEEDED, OR AS DIRECTED BY THE ENGINEER. THIS WORK IS SUBSIDIARY TO ITEM P–152.190.0000.
5. FILL OR EXCAVATE AND GRADE BEHIND REVETMENT, DAYLIGHTING TO EXISTING GROUND. THE FINISHED GRADE SHALL NOT EXCEED 12.5%.
6. USE BEACH SAND FROM EXCAVATION TO PREPARE REVETMENT SUBGRADE, FILL BEHIND REVETMENT, AND BACKFILL/PLACE REMAINING MATERIAL IN FRONT OF THE REVETMENT STRUCTURE, THIS WORK INCLUDED IN ITEM P–152.010.0000.
7. PLACE ARMOR AND UNDERLAYER STONE IN A MANNER THAT PRODUCES A WELL–KEYED MASS OF STONE, WITH EACH INDIVIDUAL STONE HAVING FOUR POINTS OF CONTACT. PLACE STONE IN A MANNER THAT AVOIDS DISPLACING UNDERLAYING MATERIALS. SEE SPECS SECTION P–185.
8. ANY DAMAGE TO THE NATURAL VEGETATIVE MAT OUTSIDE OF THE PLAN GRADING LIMITS SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.
9. PLAN GRADING LIMITS AND MHW SHALL BE MARKED AND MAINTAINED IN THE FIELD BY THE CONTRACTOR TO THE EXTENT PRACTICAL. CONTRACTOR ACTIVITY BELOW MHW IS PROHIBITED, EXCEPT THAT SAND BERMS MAY BE TEMPORARILY PLACED BELOW MHWM AS A BMP MEASURE, WITHIN THE LIMITS OF THE USAGE NATIONWIDE PERMIT, INCLUDED IN APPENDIX A OF THE SPECS.

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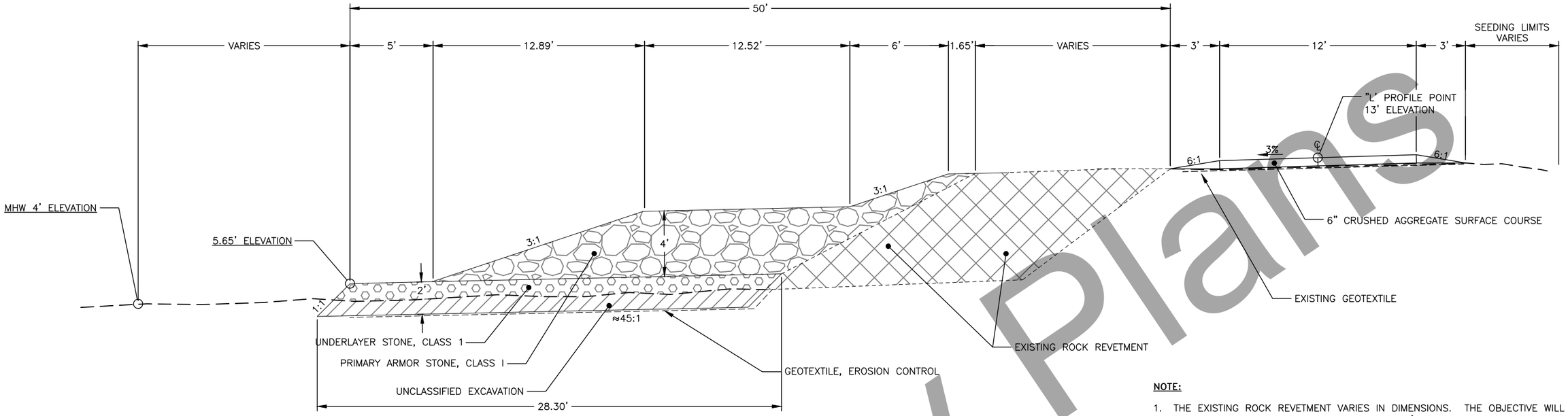
NORTHERN REGION–DESIGN AND CONSTRUCTION–AVIATION

BY	DATE	REVISIONS

SHISHMAREF AIRPORT
SHISHMAREF AIRPORT EROSION CONTROL
AIP 3–02–0404–XXX–XXXX/NFAPT00370
TYPICAL SECTIONS 1 OF 2

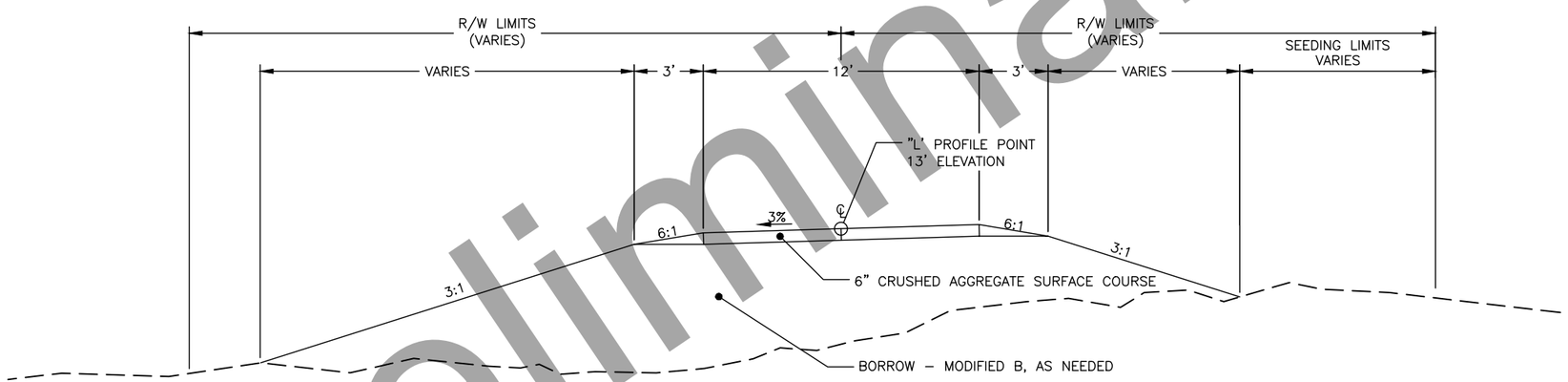
SHEET 9 OF 12



REVETMENT EXPANSION SECTION
STA. "L" 17+00 TO 30+38

NOTE:

1. THE EXISTING ROCK REVETMENT VARIES IN DIMENSIONS. THE OBJECTIVE WILL TO EXPAND THE EXISTING ROCK REVETMENT TO 50' LENGTH AS SHOWN ON TYPICAL SECTIONS.
2. WORK NEEDED TO PLACE FILTER STONE AND GEOTEXTILE SHOWN, WILL REQUIRE DISPLACEMENT AND REPLACEMENT OF EXISTING ARMOR STONE. THAT WORK WILL BE SUBSIDIARY TO P185.010.0000.



LANDFILL HAUL ROUTE RECONSTRUCTION SECTIONS
STA. "L" 4+83 TO 14+70
STA. "L" 30+70 TO 38+83

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TYPICAL SECTIONS 2 OF 2

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ESCP GENERAL NOTES

GENERAL

1. SHISHMAREF IS LOCATED ON SARICHEF ISLAND, A BARRIER ISLAND OFF THE NORTHWEST COAST OF THE SEWARD PENINSULA. IT IS A CLASSIC BARRIER BEACH, COMPOSED PRIMARILY OF SAND DEPOSITED BY THE WAVES AND CONTINUALLY BEING ERODED AND BUILT UP AT DIFFERENT POINTS.

2. DISCONTINUOUS PERMAFROST UNDERLIES PARTS OF SARICHEF ISLANDS AT DEPTHS OF 2 TO 4 FT AND IS CRITICAL TO ISLAND'S STABILITY. THE EROSION PROBLEM IS CAUSED BY STORM–DRIVEN WAVES BEATING AGAINST THE SANDY ISLAND SHORE. THE STABILITY OF A BAR IS BELIEVED TO BE PARTIALLY A FUNCTION OF SEASONALLY AND PERMANENTLY FROZEN GROUND (1980 USCOE COMMUNITY MAP)

3. PROJECT CORRIDOR IS ABOUT 2,900' LONG ON THE COASTAL LANDFILL ROAD ON SARICHEF ISLAND IN SHISHMAREF, ALASKA. MORE SPECIFIALLY IT RUNS PARALLEL TO THE SHISHMAREF AIRPORT RUNWAY 5 AND EXTENDS TOWARDS THE LANDFILL SITE. GROWING SEASON IS FROM MAY 23 TO OCTOBER 3 FOR NORTHERN ALASKA SEWARD PENINSULA/COASTAL PLAIN ECO–REGION (USACE WETLANDS DELINEATION MANUAL: ALASKA REGION, VERSION 2). TYPE OF FOREST : COASTAL TUNDRA.

4. A REVIEW OF THE ALASKA DEPARTMENT OF CONSERVATION (ADEC) DATABASE OF CONTAMINATED SITES IN JUNE 14, 2018 INDICATED NO RELEASE, SPILLS, OR UNDERGROUND STORAGE TANK LEAKS HAVE BEEN REPORTED WITHIN THE PROJECT AREA ON THE WEST SIDE OF SARICHEF ISLAND. NORTH–WEST SIDE OF ISLAND HAD A SPILL REPORTED ON 6–2014 TO ADEC (#13289913501, ICEPACK GASOLINE SHEEN).

5. A SEARCH OF THE ADEC DRINKING WATER PROTECTION AREAS (DWPA) MAP LOCATED AT HTTP://DEC.ALASKA.GOV /DAS/GIS/APPS.HTM SHOWED THIS PROJECT AREA DOES NOT INTERSECT WITH A DRINKING WATER PROTECTION AREA THAT IS LOCATED ON THE OPPOSITE SIDE OF THE ISLAND.

6. PROJECT INVOLVES REPAIR OF SEVERAL DAMAGED SECTIONS OF EMBANKMENT AND SLOPE REPAIRS AND UPGRADES.

7. PROJECT AREA: 3.0 ACRES.

8. ESTIMATED AREA DISTURBED: 1.1 ACRE.

9. SHISHMAREF HAS A TRANSITIONAL CLIMATE BETWEEN THE COLD FROZEN ARCTIC AND THE CONTINENTAL INTERIOR. WINTER TEMPERATURES AVERAGE BETWEEN 2°F AND –12°F, SUMMERS CAN BE FOGGY WITH WEST WINDS PREVAILING AND TEMPERATURES AVERAGING BETWEEN 47°F AND 54°F. AVERAGE PRECIPITATION WAS ESTIMATED AT 8.02 INCHES (1980 USCOE STUDY). WINDS FROM THE WEST AND NORTH PREDOMINATE AT SHISHMAREF.

10. AVERAGE ANNUAL PRECIPITATION IS 11.48 IN (WALES STATION (50–9739), LAT. 65.6167; LONG. –1 66.0500, PER WESTERN REGIONAL CLIMATE DATE CENTER WEBSITE, SEE APPENDIX B.

11. PROBABLE MAXIMUM PRECIPITATION FOR 2 YEAR, 24 HOUR IS 0.97 IN AT THE SHISHMAREF STATION (50–8437), LAT. 66.2506; LONG. –166.0821 PER HTTPS://HDSC.NWS.NOAA.GOV/HDSC/PFDS/PFDS_MAP_AK.HTML

12. NAME(S) OF RECEIVING WATERS: SHISHMAREF INLET AND CHUKCHI SEA.

13. IMPAIRED WATERS: NONE. HTTPS://DEC.ALASKA.GOV/WATER/WATER–QUALITY/IMPAIRED–WATERS/

14. SOILS CONSISTS OF SILTY SAND AND GRAVEL.

15. PERMIT CONDITIONS: REFER TO APPENDIX A. COMPLY WITH CONDITIONS OF THE THREATENED AND ENDANGERED SPECIES ACT AND WETLANDS WORK COMMITMENTS.

16. MIGRATORY BIRD TREATY: ALL CONSTRUCTION ACTIVITIES SHALL COMPLY WITH THE MIGRATORY BIRD TREATY ACT TO PREVENT THE KILLING OR TAKING OF MIGRATORY BIRDS OR ANY PART, NEST OR EGG OF SUCH BIRDS.

17. HISTORIC PLACES: NO HISTORIC PROPERTIES HAVE BEEN IDENTIFIED WITHIN THE PROJECT LIMITS.

18. RUN–OFF COEFFICIENTS: SEE TABLE BELOW

NOTES:

1. CONTRACTOR SHALL COMPLY WITH REQUIREMENTS OF THE ADEC CONSTRUCTION GENERAL PERMIT AKR100000.
2. THE CONTRACTOR WILL BE REQUIRED TO HAVE A SWPPP MANAGER/STORMWATER LEAD WHO IS RESPONSIBLE FOR IMPLEMENTING THE SWPPP.
3. TIMING OF BMP INSTALLATION SHALL MATCH REQUIREMENTS OF THE CONSTRUCTION GENERAL PERMIT (CGP). STABILIZATION MUST BE IN ACCORDANCE WITH CGP SECTION 4.5. (PP. 27–28).
4. SEDIMENT CONTROL MEASURES AND TEMPORARY EROSION CONTROL FEATURES SHALL BE BASED ON LATEST BEST MANAGEMENT PRACTICES AS CONTAINED IN THE "CONTRACTOR GUIDANCE FOR PREPARING AND EXECUTING STORM DEPARTMENT MANUAL WATER POLLUTION PREVENTION PLANS".
5. INSTALL PERIMETER SEDIMENT PROTECTION AT ALL LOCATIONS WHERE EXCAVATION OCCURS BELOW CURRENT BEACH BOTTOM ELEVATION.
6. IDENTIFY, LOCATE AND PROTECT ALL OTHER LOCATIONS THAT MAY NEED TO BE PROTECTED FROM THE PROJECT–GENERATED SEDIMENTS; THIS REQUIREMENT ALSO INCLUDES MATERIAL SITES IF THEY ARE DESIGNATED AS AVAILABLE AND ARE SUBJECT TO MATERIAL SALES AGREEMENTS WHERE STATE OF ALASKA HAS A LEGAL INVOLVEMENT.
7. IF EXCAVATION DEWATERING IS ANTICIPATED, COMPLY WITH THE DEC EXCAVATION DEWATERING PERMIT.

TIMING OF BMP INSTALLATION:

1. THE EROSION PREVENTION AND SEDIMENT CONTROL BMP'S WILL BE INSTALLED PRIOR TO START OF CONSTRUCTION, AS NECESSARY TO MINIMIZE EROSION FROM DISTURBED SURFACES AND CAPTURE SEDIMENT ON SITE.
2. TEMPORARY PERIMETER CONTROL BMP'S WILL BE INSTALLED BEFORE ANY SOIL DISTURBANCE OCCURS.
3. BEFORE ANY HYDRAULIC CONVEYANCE OR DEWATERING PROCEDURES OCCURS, AN APPROPRIATE PLAN TO ISOLATE WORK FROM FLOWING WATERS OF THE U.S. MUST BE APPROVED BY THE PROJECT ENGINEER.

PRIMARY ARMOR/UNDERLAYER STONE NOTES:

1. SEE CONTRACT SPECIAL PROVISIONS P185 ITEMS FOR ANY ARMOR/UNDERLAYER STONE PLACEMENT REQUIREMENTS. AT NO TIME WILL EMBANKMENT BE LEFT EXPOSED TO THE ERODIBLE FORCES
2. THE PLACEMENT OF ALL PRIMARY ARMOR/UNDERLAYER STONE SHALL BE TIMED IN ACCORDANCE WITH ALASKA SEASONAL LOW WATER WHERE APPLICABLE.

MATERIAL SITE NOTES:

1. NO MATERIAL SITES ARE DESIGNATED AS "AVAILABLE" FOR THE PROJECT AT THIS TIME. ALL MATERIALS SHALL BE CONTRACTOR–FURNISHED.

DITCH PROTECTION AND CONCENTRATED FLOWS:

1. WHEN POSSIBLE AVOID CONDITIONS WHICH PROMOTE CONCENTRATED FLOWS. WHEN CONCENTRATED FLOWS OCCUR, INSTALL VELOCITY CONTROL BMP'S (E.G. ROCK CHECK DAMS) OR NON–ERODIBLE CHANNEL LINING (E.G. RIPRAP, TYPE A LINING, CONCRETE CHANNEL LINING ETC).

HYDROLOGIC DATA

TYPE OF SURFACE	RUNOFF COEFFICIENT
GRAVEL ROADWAY OR SHOULDERS	0.4–0.6
CUT AND FILL SLOPES	0.5–0.7
GRASSED AREAS	0.1–0.7

HYDROLOGIC NOTES:

1. FROM HYDRAULIC CIRCULAR #12, "DRAINAGE OF HIGHWAY PAVEMENTS", MARCH 1984, PAGE 12. FOR FLAT SLOPES AND/OR PERMEABLE SOILS, USE LOWER VALUE. FOR STEEP SLOPES AND/OR IMPERMEABLE SOILS, USE HIGHER VALUES.

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SHISHMAREFAIRPORT
SHISHMAREF AIRPORT EROSION CONTROL
AIP 3–02–0404–XXX–XXXX/NFAPT00370
EROSION AND SEDIMENT CONTROL PLAN 1 OF 2

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LEGEND

- PERIMETER CONTROL
- MEAN HIGH WATER CONTOUR
- SHEET FLOW DIRECTION
- WETLAND AREA
- REVETMENT FOOTPRINT
- NEW ROAD

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SHISHMAREFAIRPORT
SHISHMAREF AIRPORT EROSION CONTROL
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EROSION AND SEDIMENT CONTROL PLAN 2 OF 2

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