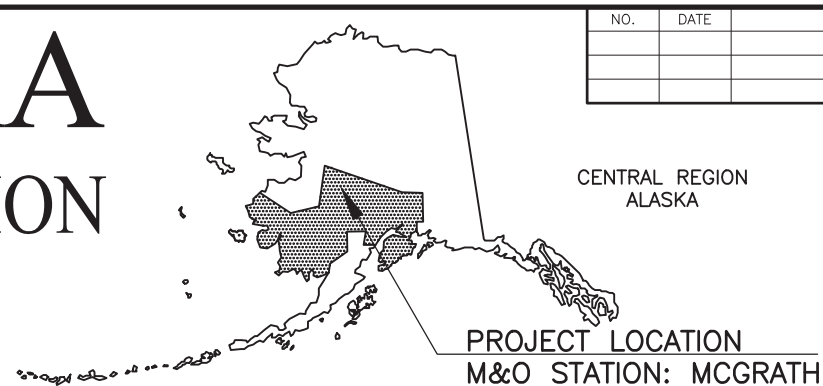


STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

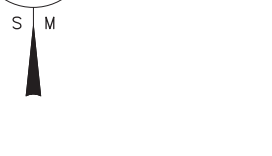
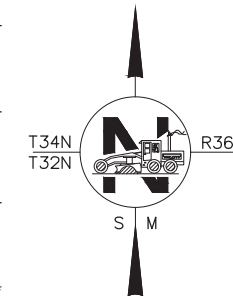
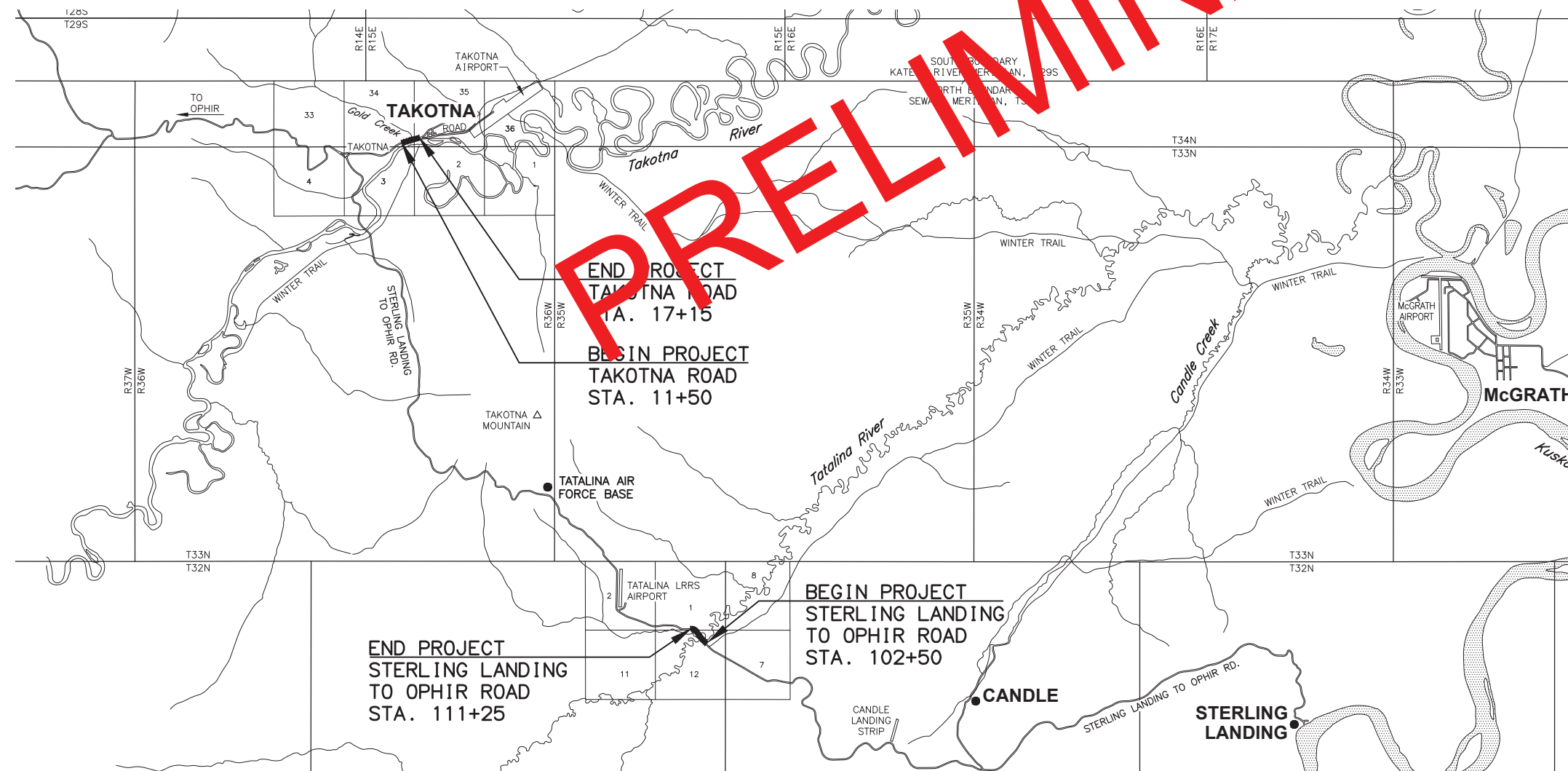


NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	000S783/Z516210000	2022	A01	A04
CENTRAL REGION ALASKA			ROUTE	8241004X000	MILEPOINT	11.800—12.600	
			LATITUDE	62°59' 14. 16"N	LONGITUDE	156°04'6.02"W	
			ROUTE	8241001X000	MILEPOINT	0.9000—1.200	
			LATITUDE	62°53' 03. 92"N	LONGITUDE	155°56'35.09"W	

DESIGN DESIGNATIONS			
ROADWAY SECTION	FUNCTIONAL CLASS	A.A.D.T. 2019	DESIGN SPEED
STERLING LANDING TO OPHIR ROAD	MINOR COLLECTOR	58	30 MPH
TAKOTNA ROAD	MINOR COLLECTOR	111	30 MPH

PROJECT SUMMARY						
BRIDGE NAME	BRIDGE #	BRIDGE LENGTH	BRIDGE WIDTH	ROADWAY SECTION	WIDTH	LENGTH
TOTALA RIVER BRIDGE	462	N/A	N/A	STERLING LANDING TO OPHIR ROAD	18 FT±	0.2 MILES
GOLD CREEK BRIDGE	473	90.5 FT	19 FT	TAKOTNA ROAD	18 FT±	0.1 MILES

PROPOSED HIGHWAY PROJECT
**TAKOTNA: GOLD CR BRIDGE &
TATALINA BRIDGE REPLACEMENT**
PROJECT NO. 000S783/Z516210000
BRIDGE, GRADING, DRAINAGE, AND SIGNING



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

APPROVED:

REGIONAL PRECONSTRUCTION ENGINEER	DATE
-----------------------------------	------

CONCUR:

REGIONAL CONSTRUCTION ENGINEER _____ DATE _____

DESIGNED BY
CHECKED BY
DRAFTED BY

SCALE
X" = XX'

DATE
8/10/2022 3:31 PM

DRAWING LOCATION
W:\PROJECTS\TAKOTNA GOLD CREEK BRIDGE - 51621\CIV3D\PLANSET\51621_A01NA02_TTL.DWG

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	000S783/Z516210000	2022	A02	A04

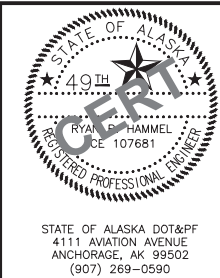
INDEX	
SHEET NO.	DESCRIPTION
A01	TITLE SHEET
A02	SHEET LAYOUT, INDEX, AND GENERAL NOTES
A03	LEGEND
A04	SURVEY CONTROL SHEET
B01	TYPICAL SECTIONS
C01	ESTIMATE OF QUANTITIES
D01-D02	SUMMARY TABLES
E01-E06	DETAIL SHEETS
F01-F06	PLAN AND PROFILE SHEETS
H01-H03	TRAFFIC SHEETS
N1-N14	BRIDGE SHEETS

THE FOLLOWING ALASKA STANDARD PLANS APPLY TO THIS PROJECT:
D-01.02, D-04.22, D-07.00
G-00.05, G-05.11S, G-05.11W, G-10.20, G-14.01, G-20.12, G-31.01, G-32.01
S-00.12, S-05.02, S-05.05, S-30.04, S-31.02, S-32.02

GENERAL NOTES:

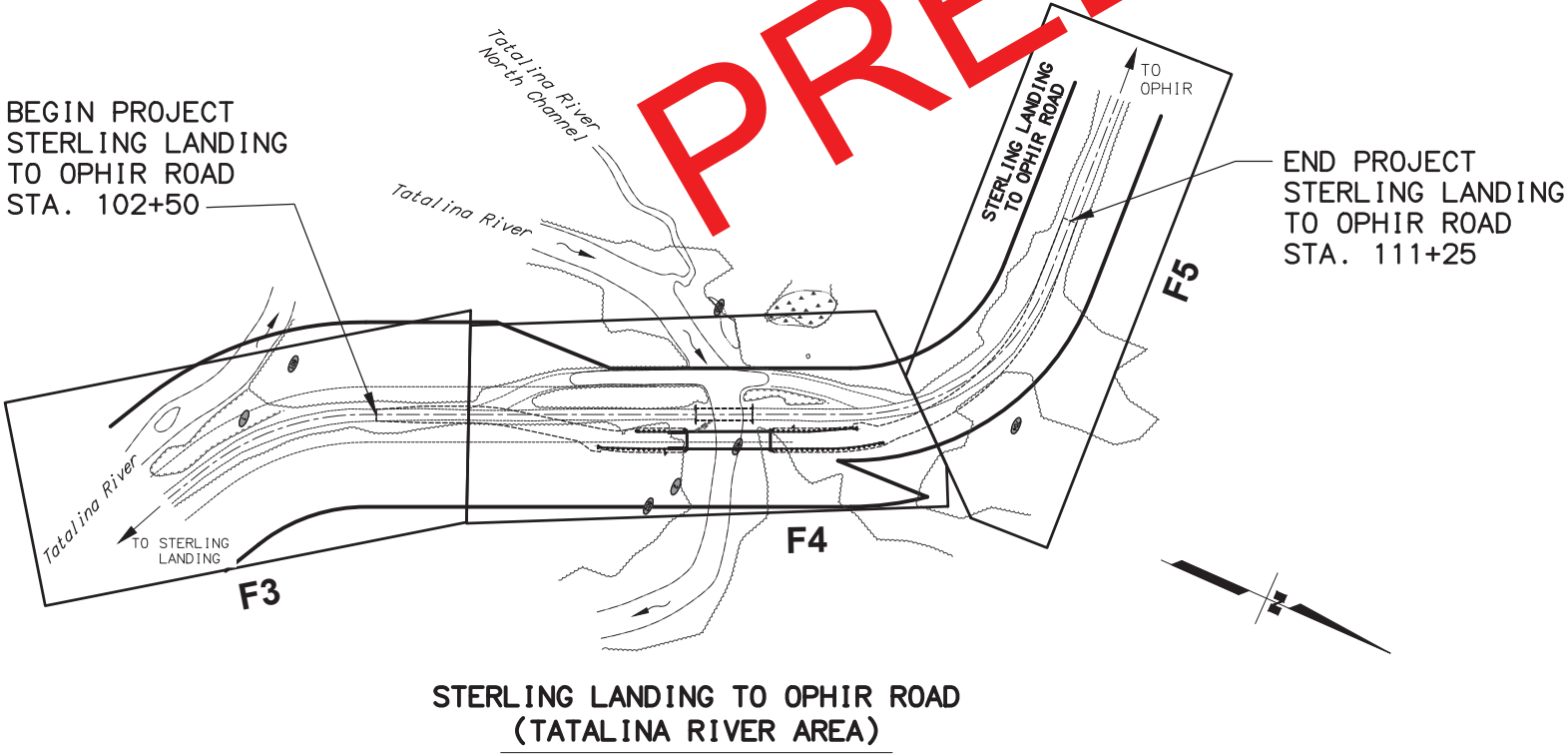
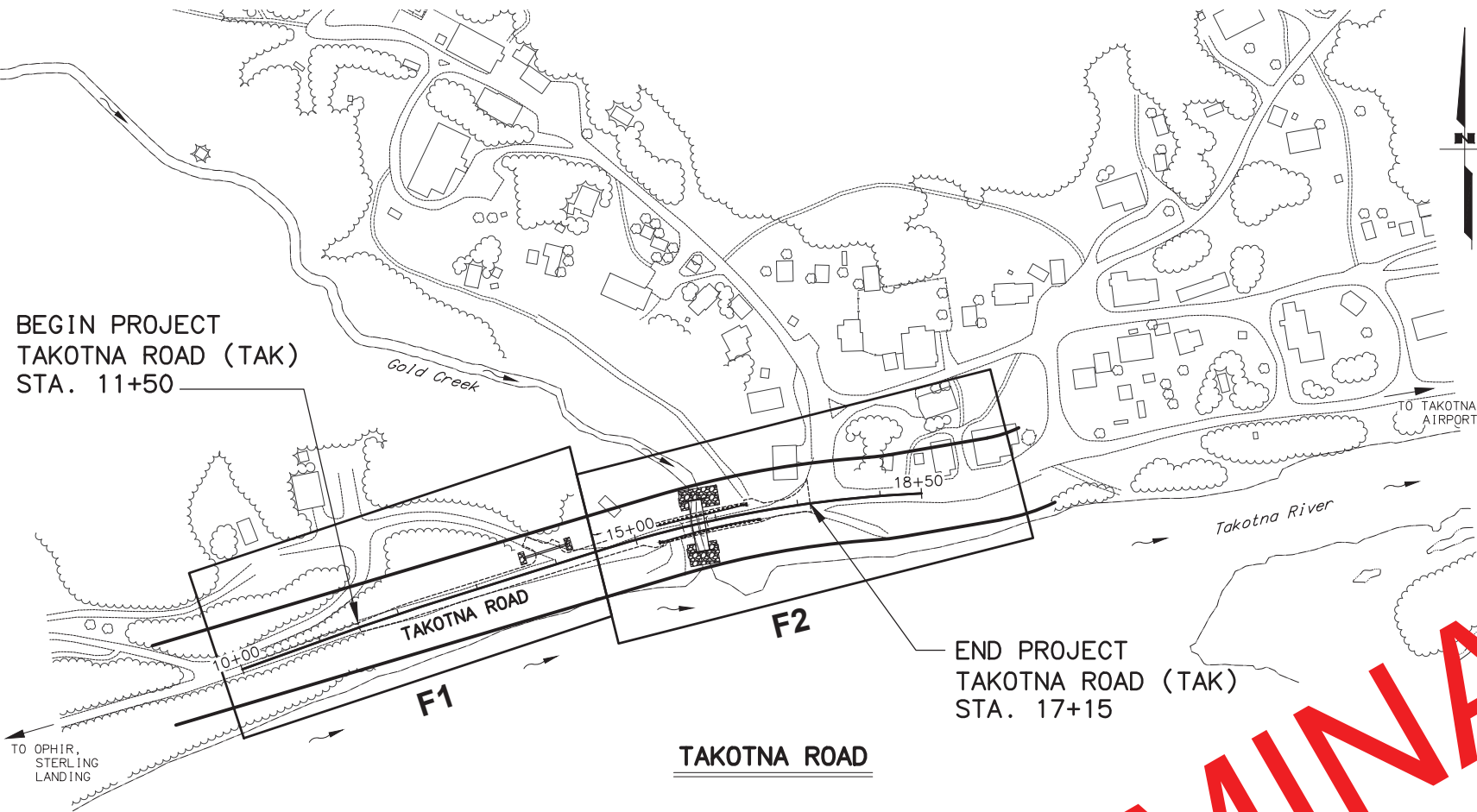
- ALL CONSTRUCTION SHALL BE CONTAINED WITHIN THE RIGHT-OF-WAY, TEMPORARY CONSTRUCTION EASEMENTS, AND TEMPORARY CONSTRUCTION PERMITS. NO EXCESS MATERIAL SHALL BE DISPOSED OF WITHIN THE RIGHT-OF-WAY, UNLESS SPECIFICALLY CALLED FOR IN THE PLANS OR DIRECTED BY THE ENGINEER.
- THE ROW LINES SHOWN WERE DRAWN ON THE PLANS USING INFORMATION FROM DOT&PF, PLATTED SUBDIVISIONS, AND SURVEYED MONUMENTS ON THE GROUND. THE ROW LINES WERE INSERTED USING A COMMON COORDINATE SYSTEM.
- CLEARING LIMITS SHALL BE 5 FEET BEYOND SLOPE CATCH POINTS OR TO THE RIGHT-OF-WAY LINE, WHICHEVER IS LESS. IN WETLAND AREAS, DO NOT CLEAR BEYOND THE SLOPE STAKE CATCH POINT UNLESS APPROVED BY THE ENGINEER.
- PLACE 4 INCH TOPSOIL AND SEED ANY AREAS DISTURBED BY CONSTRUCTION AND AS DIRECTED BY THE ENGINEER.
- ALL SLOPES STEEPER THAN 2:1 SHALL HAVE HIGH PERFORMANCE TURF REINFORCEMENT IN ADDITION TO TOPSOIL AND SEEDING.
- FOR PARALLEL GUARDRAIL TERMINALS, USE AN END OFFSET OF 0-2 FEET.

SPECIFICATION:
CONSTRUCT THE IMPROVEMENTS COVERED BY THESE PLANS IN ACCORDANCE WITH THE ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES 2020 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND THE PROJECT SPECIAL PROVISIONS.



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
**TAKOTNA: GOLD CREEK BRIDGE &
TATALINA BRIDGE REPLACEMENT**

**SHEET LAYOUT, INDEX,
AND GENERAL NOTES**



ROADWAY		UTILITIES		TRAFFIC		NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
									ALASKA	000S783/Z516210000	2022	A03	A04
EXISTING		PROPOSED		EXISTING		PROPOSED		EXISTING		PROPOSED		RIGHT-OF-WAY	
EDGE OF PAVEMENT		CUT FILL		STORM DRAIN		LOAD CENTER		TRAFFIC & BEACON CONTROLLER		RECOVERED		SET THIS PROJECT	
LIMIT OF CUT SLOPE & FILL SLOPE		CUT FILL		STORM DRAIN MANHOLE, CLEANOUT		TYPE 1A, II, III, IV JUNCTION BOX		FIBER OPTIC VAULT		FEDERAL GOV'T SURVEY MONUMENT		GOV'T CONTROL STATION	
GRAVEL EDGE		CUT FILL		CURB INLET CATCH BASIN FIELD INLET CATCH BASIN		ELECTROLIER		HIGHTOWER		PRIMARY MONUMENT (BRASS/AL CAP)		MISC SECONDARY CORNER	
DRIVEWAY APPROACH		CUT FILL		PIPE CULVERT WITH END SECTION		HIGHTOWER		SIGNAL POLE WITH MASTARM		PRIMARY CENTERLINE MONUMENT		SECONDARY CENTERLINE MONUMENT	
SIDEWALK AND PATH/TRAIL		CUT FILL		SANITARY SEWER		PEDESTRIAN PUSH BUTTON & SIGNAL		VEHICULAR SIGNAL		RANDOM CONTROL MONUMENT		PRIMARY GPS CONTROL POINT	
CONCRETE CURB & GUTTER		CUT FILL		SANITARY SEWER MANHOLE, CLEANOUT		VEHICULAR SIGNAL LEFT & RIGHT		OPTICAL, CAMERA, RADAR, AND GPS DETECTOR		SECONDARY CONTROL POINT		VERTICAL BENCHMARK	
CONCRETE CURB CUT		CUT FILL		SEPTIC VENT, SEWER SERVICE CONNECTION		LOOP DETECTOR		COMMUNICATION ANTENNA		TEMPORARY BENCHMARK		TOWNSHIP AND RANGE LINES	
PARALLEL CURB RAMP PERPENDICULAR CURB RAMP		CUT FILL		WATER		COMMUNICATION ANTENNA		MASTARM BEACON		SECTION LINE		1/4 SECTION LINE	
UNIDIRECTIONAL CURB RAMP & MID-BLOCK CURB RAMP		CUT FILL		FIRE HYDRANT, VALVE OR RISER		MURAL & SCHOOL ZONE BEACON		MURAL & SCHOOL ZONE BEACON		1/16 SECTION LINE		CORPORATE or CITY LIMITS	
DETECTABLE WARNING TILE		CUT FILL		WELL, WATER SERVICE CONNECTION		LOOP DETECTOR CONDUIT		SIGNAL CONDUIT		EXISTING RIGHT-OF-WAY (HATCH "R" SHEETS ONLY)		RIGHT-OF-WAY or EASEMENT REQUIRED	
BRIDGE		CUT FILL		NATURAL GAS		SIGNAL CONDUIT		LIGHTING CONDUIT		PROJECT RIGHT-OF-WAY LINE (HATCH "R" SHEETS ONLY)		EXISTING RIGHT-OF-WAY EASEMENT	
TUNNEL		CUT FILL		OIL OR GASOLINE PIPELINE		LIGHTING CONDUIT		SIGNAL & LIGHTING CONDUIT		PROPOSED RIGHT-OF-WAY DRAINAGE EASEMENT		EXISTING PROPERTY LINE	
GUARDRAIL		CUT FILL		TANKS (ABOVE GROUND, UNDERGROUND)		SIGNAL & LIGHTING CONDUIT		CONDUIT BORING		EXISTING UTILITY EASEMENT		PROPOSED UTILITY EASEMENT	
END & PARALLEL END SECTIONS		CUT FILL		ELECTRIC		CONDUIT BORING		CONDUIT SIZE IN INCHES		EXISTING CENTERLINE		RAILROAD CENTERLINE	
ROADWAY OBLITERATION		CUT FILL		(OVERHEAD) (UNDERGROUND) (OVERHEAD)		CONDUIT SIZE IN INCHES		INTERCONNECT		TEMPORARY CONSTRUCTION EASEMENT		TEMPORARY CONSTRUCTION PERMIT	
FENCE		CUT FILL		UTILITY POLE, POLE WITH LUMINAIRE		INTERCONNECT		SIGN POST					
STONE FENCE		CUT FILL		GUY POLE, GUY WIRE ANCHOR		SIGN POST							
NOISE BARRIER		CUT FILL		TRANSMISSION TOWER (WOOD, STEEL)									
RETAINING WALL		CUT FILL		ELECTRIC PEDESTAL, TRANSFORMER									
HEADWALL & WINGWALL		CUT FILL		ELECTRIC MANHOLE, METER									
BOTTOM OF DITCH		CUT FILL		ELECTRIC OUTLET, LANDSCAPE LIGHT									
SPECIAL DITCH		CUT FILL		TELEPHONE									
FLAT BOTTOM DITCH		CUT FILL		TELEPHONE MANHOLE, PEDestal									
BERM		CUT FILL		FIBER OPTIC									
RIPRAP		CUT FILL		FIBER OPTIC MANHOLE									
BOULDER OR BOULDERS		CUT FILL		CABLE									
PRIVATE SIGN, MAILBOX		CUT FILL		CABLE TV PEDESTAL, SATELLITE DISH									
POST, BOLLARD		CUT FILL		UNDERGROUND DUCT, UTILIDOR (ELECTRIC, TELEPHONE, FIBER OPTIC)									
		CUT FILL		VENT									
EXISTING		PROPOSED		EXISTING		PROPOSED		PAVEMENT MARKINGS		PROPOSED			
LAKE OR POND, WETLANDS		CONTOUR, MAJOR OR MINOR		520		520		TRAFFIC PROJECT CENTERLINE		8" & 4" WHITE SOLID STRIPE			
TREE (CONIFER/DECIDUOUS) TREELINE (EDGE OF VEGETATION)		DRAINAGE FLOW						8" & 4" WHITE SOLID STRIPE		4" WHITE SKIP STRIPE 10' STRIPES AND 30' SPACES			
PLANTER		CREEK (CENTERLINE)						4" WHITE SKIP STRIPE 10' STRIPES AND 30' SPACES		8" WHITE LANE GUIDE SKIP LANE CONTINUATION OR TURN SKIP 1" STRIPES AND 3' SPACES			
BUILDING OR FOUNDATION		RIVER (EDGE OF WATER)						8" WHITE LANE GUIDE SKIP LANE CONTINUATION OR TURN SKIP 1" STRIPES AND 3' SPACES		8" & 4" YELLOW SOLID STRIPE			
								4" YELLOW SKIP STRIPE 10' STRIPES AND 30' SPACES		STRIPING CHANGE STATION INTERVAL			
								STRIPING CHANGE STATION INTERVAL		2' CROSSWALK OR STOPBAR			
								2' CROSSWALK OR STOPBAR		LADDER CROSSWALK LAYOUT 2' WIDE RUNGS WITH 2' SPACES ALIGNED TO AVOID TIRE PATHS			
								LADDER CROSSWALK LAYOUT 2' WIDE RUNGS WITH 2' SPACES ALIGNED TO AVOID TIRE PATHS		TYPICAL PAINTED MEDIAN			
								TYPICAL PAINTED MEDIAN					

STATE OF ALASKA
49th
RYAN P. HAMMEL
REGISTERED PROFESSIONAL ENGINEER
CE 107681

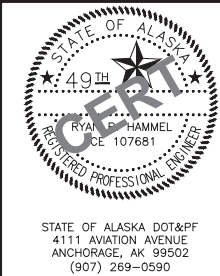
STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
**TAKOTNA: GOLD CREEK BRIDGE &
TATALINA BRIDGE REPLACEMENT**

LEGEND SHEET

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	000S783/Z516210000	2022	A04	A04

PRELIMINARY
PLACEHOLDER

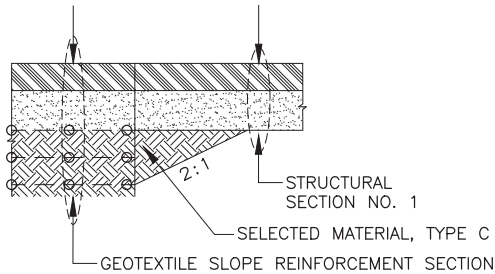


STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

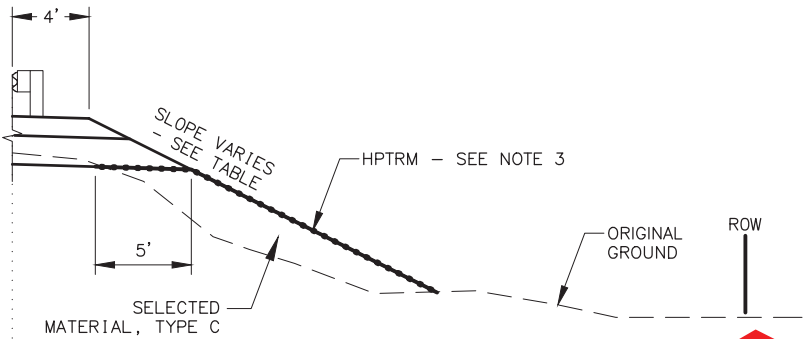
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
**TAKOTNA: GOLD CREEK BRIDGE &
TATALINA BRIDGE REPLACEMENT**

SURVEY CONTROL

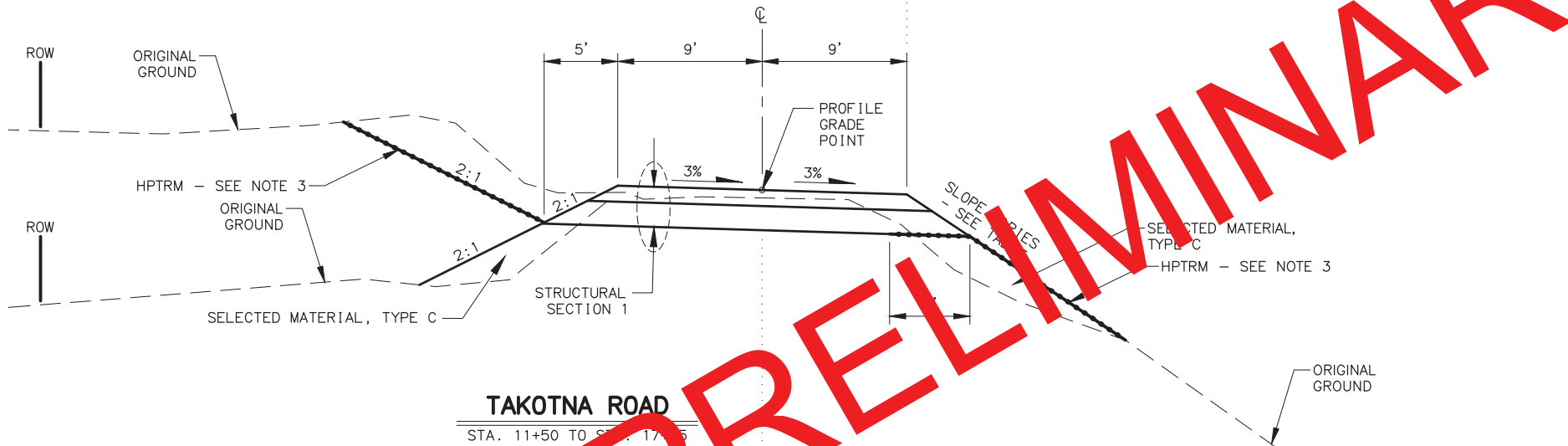
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	000S783/Z516210000	2022	B01	B02



GEOGRID SLOPE REINFORCEMENT – LONGITUDINAL TRANSITION

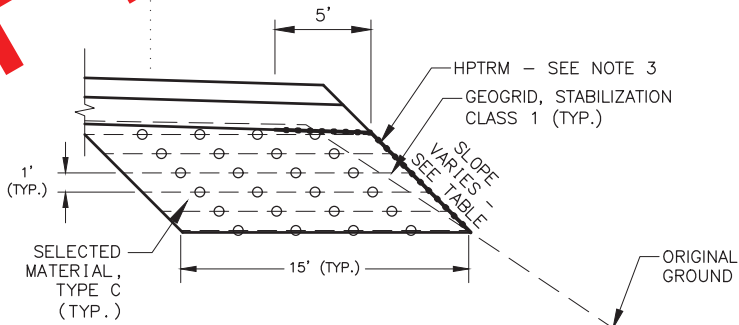


GUARDRAIL DETAIL
SEE GUARDRAIL SUMMARY TABLE



TAKOTNA ROAD
STA. 11+50 TO STA. 17+50

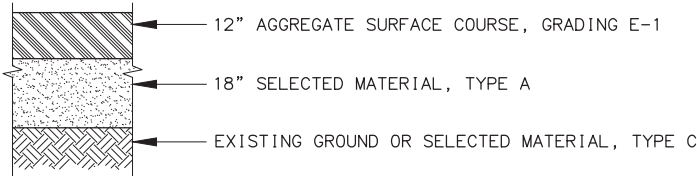
SLOPE TABLE		
STATION TO STATION	SLOPE	
BOP TO 12+50	1:1-2:1	MATCH EXISTING SLOPE AT THE BOTTOM OF SELECTED MATERIAL, TYPE A LAYER
12+50 TO 14+50	1:1	
14+50 TO 14+75	1.33:1	
14+75 TO 15+50	1.5:1	
15+50 TO EOP	2:1	



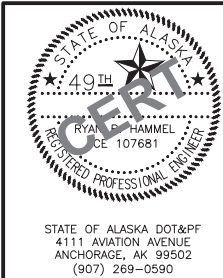
GEOGRID SLOPE REINFORCEMENT DETAIL
STA. 12+50 TO STA. 14+75

NOTES:

1. INSTALL GEOGRID AS DETAILED TO STABILIZE SLOPES STEEPER THAN 1.5:1, OR AS DIRECTED BY THE ENGINEER. PLACE AS MANY LAYERS AS NECESSARY FROM THE BOTTOM OF DISTURBED GROUND TO THE BOTTOM OF THE SELECTED MATERIAL, TYPE A LAYER.
2. INSTALL GEOGRID TRANSVERSE TO CENTERLINE. NO SPLICES PARALLEL WITH THE CENTERLINE WILL BE ALLOWED.
3. INSTALL HIGH PERFORMANCE TERF REINFORCEMENT MATTING (HPTRM) ON SLOPES STEEPER THAN 2:1, GREATER THAN 10' IN HIEGHT, OR AS DIRECTED BY THE ENGINEER. INSTALL THE HPTRM AS SHOWN AND PER MANUFACTURER'S RECOMMENDATIONS.



STRUCTURAL SECTION 1
N.T.S.



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
**TAKOTNA: GOLD CREEK BRIDGE &
TATALINA BRIDGE REPLACEMENT**

TAKOTNA TYPICAL SECTIONS

DESIGNED BY
KDS/SLH

CHECKED BY
RRH

DRAFTED BY
VJS

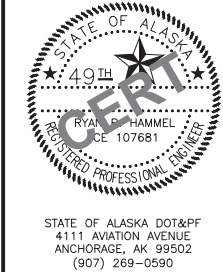
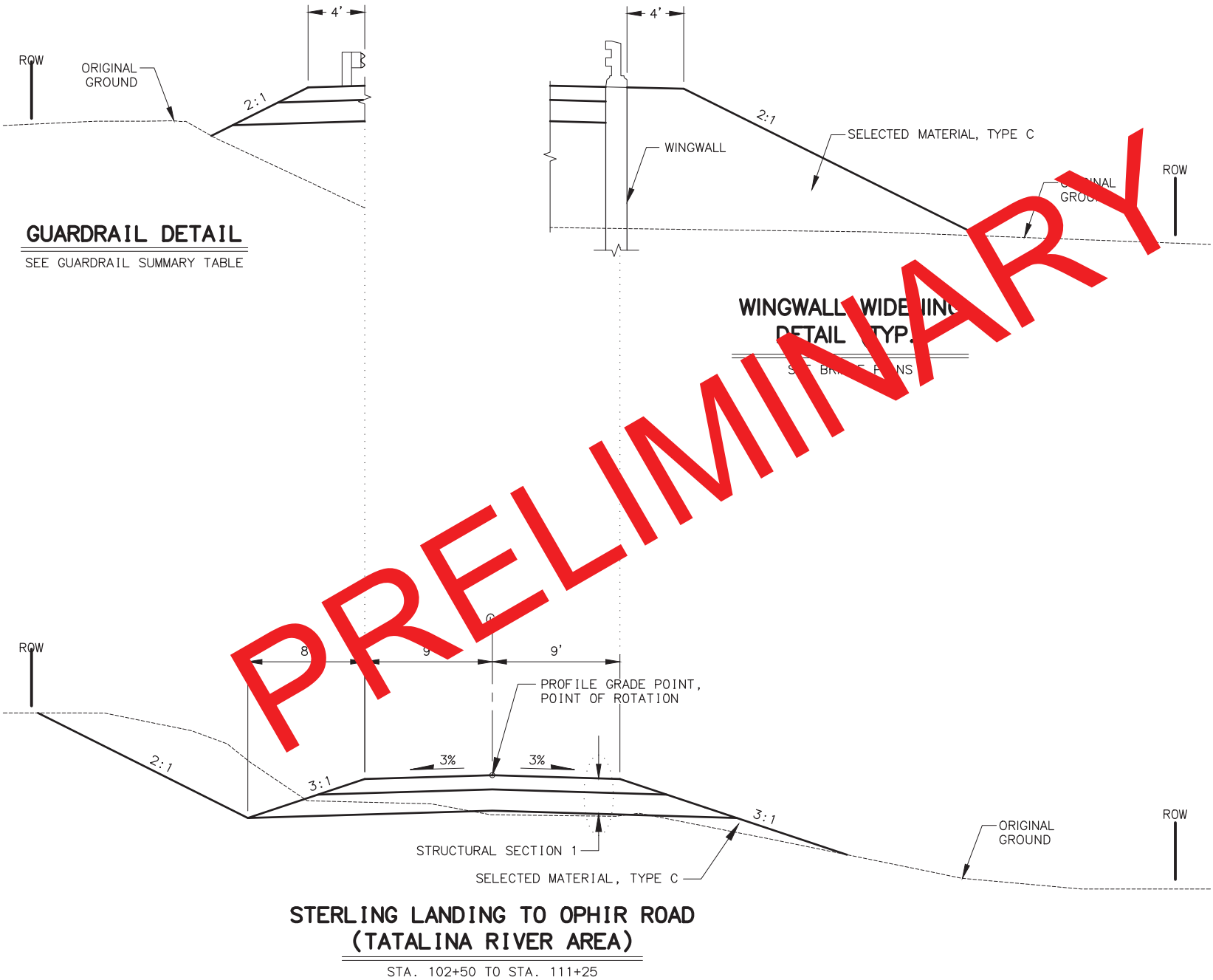
DATE
8/10/2022

TIME
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SCALE
1" = 5'

DRAWING LOCATION
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	000S783/Z516210000	2022	B02	B02



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

**TAKOTNA: GOLD CREEK BRIDGE &
TATALINA BRIDGE REPLACEMENT**

TATALINA TYPICAL SECTIONS

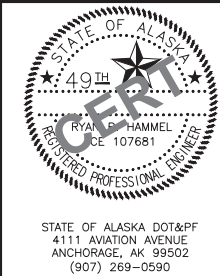
ESTIMATE OF QUANTITIES			
ITEM NO.	ITEM	TOTAL QUANTITY	UNIT
201.0003.0000	CLEARING AND GRUBBING	1.2	ACRE
202.0023.0000	REMOVAL OF BRIDGE NO. 0462	ALL REQ'D	LS
202.0023.0000	REMOVAL OF BRIDGE NO. 0473	ALL REQ'D	LS
203.0003.0000	UNCLASSIFIED EXCAVATION	1,750	CY
203.0006.000A	BORROW, TYPE A	4,600	TON
203.0006.000C	BORROW, TYPE C	7,700	TON
203.0009.0000	OBLITERATION OF ROADWAY	435	SY
205.0006.0000	STRUCTURAL FILL	175	CY
301.0003.00E1	AGGREGATE SURFACE COURSE, GRADING E-1	2,250	TON
501.0001.0000	CLASS A CONCRETE	ALL REQ'D	LS
501.0007.0000	PRECAST CONCRETE MEMBER, DECK PANEL	17	EACH
501.2007.0001	HEADWALL, TYPE I	1	EACH
503.0001.0000	REINFORCING STEEL	ALL REQ'D	LS
503.0002.0000	EPOXY-COATED REINFORCING STEEL	ALL REQ'D	LS
504.0001.0000	STRUCTURAL STEEL	ALL REQ'D	LS
505.0005.0001	FURNISH STRUCTURAL STEEL PILES, HP14X117	400.4	LF
505.0006.0001	DRIVE STRUCTURAL STEEL PILES, HP14X117	6	EACH
507.0001.0002	STEEL BRIDGE RAILING, 2-TUBE	249	LF
520.0001.0000	TEMPORARY CROSSINGS	ALL REQ'D	LS
602.0001.0186	STRUCTURAL PLATE PIPE 186" DIAMETER, 10 GAGE	62	LF
603.2032.0024	CORRUGATED HDPE PIPE 24 INCH	55	LF
606.0001.0000	W-BEAM GUARDRAIL	12.5	LF
606.0013.0000	PARALLEL GUARDRAIL TERMINAL	4	EACH
606.0016.0000	TRANSITION RAIL	4	EACH
610.0001.0000	DITCH LINING	75	CY
611.0001.0002	RIPRAP, CLASS II	1,200	CY
615.0001.0000	STANDARD SIGN	27	SF
616.0004.0000	THAW WIRE INSTALLATION	2	EACH
618.0002.0000	SEEDING	90	LB
619.2017.0000	HIGH PERFORMANCE TURF REINFORCEMENT MAT	1,100	SY
620.0001.0000	TOPSOIL	4,800	SY
634.0001.0001	GEOGRID STABILIZATION, CLASS I	1,650	SY
639.2000.0000	APPROACH	1	EACH

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	000S783/Z516210000	2022	C01	C01

ESTIMATE OF QUANTITIES			
ITEM NO.	ITEM	TOTAL QUANTITY	UNIT
640.0001.0000	MOBILIZATION AND DEMOBILIZATION	ALL REQ'D	LS
640.0004.0000	WORKER MEALS AND LODGING, OR PER DIEM	ALL REQ'D	LS
641.0001.0000	EROSION, SEDIMENT AND POLLUTION CONTROL ADMINISTRATION	ALL REQ'D	LS
641.0005.0000	TEMPORARY EROSION, SEDIMENT, AND POLLUTION CONTROL BY DIRECTIVE	ALL REQ'D	CS
641.0006.0000	WITHHOLDING	ALL REQ'D	CS
641.0007.0000	SWPPP MANAGER	ALL REQ'D	LS
642.0001.0000	CONSTRUCTION SURVEYING	ALL REQ'D	LS
642.0003.0000	THREE PERSON SURVEY PARTY	100	HR
643.0002.0000	TRAFFIC MAINTENANCE	ALL REQ'D	LS
643.0003.0000	PERMANENT CONSTRUCTION SIGNS	ALL REQ'D	LS
643.0023.0000	TRAFFIC PRICE ADJUSTMENT	ALL REQ'D	CS
643.0025.0000	TRAFFIC CONTROL	ALL REQ'D	CS
643.0032.0000	FLAGGING	ALL REQ'D	CS
644.0001.0000	FIELD OFFICE	ALL REQ'D	LS
644.0002.0000	FIELD LABORATORY	ALL REQ'D	LS
644.0015.0000	NUCLEAR TESTING EQUIPMENT STORAGE SHED	1	EACH
644.0016.0000	STORAGE CONTAINER	1	EACH
644.0004.0000	ENGINEERING COMMUNICATIONS	ALL REQ'D	CS
644.0007.0000	VEHICLE (LT/SUV)	2	EACH
645.0001.0000	TRAINING PROGRAM, _ TRAINEES/APPRENTICE	*	LH
646.0001.0000	CPM SCHEDULING	ALL REQ'D	LS
647.2000.0000	WIDE PAD DOZER, 65-HP MINIMUM	ALL REQ'D	CS

TABLE OF ESTIMATING FACTORS		
ITEM NO.	ITEM DESCRIPTION	UNIT
203.0006.000A	BORROW, TYPE A	144 LB/CF
203.0006.000C	BORROW, TYPE C	144 LB/CF
205.0006.0000	STRUCTURAL FILL	138 LB/CF
301.0003.00E1	AGGREGATE SURFACE COURSE, GRADING E-1	148 LB/CF
610.0001.0000	DITCH LINING	110 LB/CF
611.0001.0002	RIPRAP, CLASS II	108 LB/CF

* ITEM 645.0001.0000 TRAINING PROGRAM, 2 TRAINEES/APPRENTICES IS FOR THE TOTAL CONTRACT COMPRISED OF 000S783/Z516210000 TAKOTNA: GOLD CREEK AND TATALINA RIVER BRIDGE REPLACEMENT AND 0001569/CFHWY00129 TAKOTNA RIVER BRIDGE REPLACEMENT. LABOR HOURS MAY BE ACCRUED THROUGH EITHER OF THE PROJECTS.



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
**TAKOTNA: GOLD CREEK BRIDGE &
TATALINA BRIDGE REPLACEMENT**

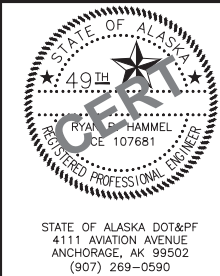
ESTIMATE OF QUANTITIES

610.0001.0000 & 611.0001.0002 - DITCH LINING & RIPRAP, CLASS II					
SHEET	STATION	OFFSET	DITCH LINING (CY)	RIPRAP CLASS II (CY)	REMARKS
F1	"TAK" 13+65	19.0 LT	--	12	P-01 INLET
F1	"TAK" 14+19	19.0 LT	--	12	P-01 OUTLET
F2	"TAK" 15+76	33.0 RT	13	147	GOLD CREEK OUTLET
F2	"TAK" 15+78	CL	--	51	GOLD CREEK, IN PIPE
F2	"TAK" 15+80	29.0 LT	17	176	GOLD CREEK INLET
F4	106+35	CL	--	775	TATALINA BRIDGE
TOTAL =			30	1,173	
PAY ITEM QUANTITY =			35	1,200	

634.0001.0001 - GEOGRID, STABILIZATION, CLASS 1				
SHEET	STATION		AREA (SY)	REMARKS
	FROM	TO		
F1	"TAK" 12+50	"TAK" 12+75	167	4 LAYERS
F1	"TAK" 12+75	"TAK" 13+00	250	6 LAYERS
F1	"TAK" 13+00	"TAK" 13+25	250	6 LAYERS
F1	"TAK" 13+25	"TAK" 13+50	250	6 LAYERS
F1	"TAK" 13+50	"TAK" 13+75	125	3 LAYERS
F1	"TAK" 13+75	"TAK" 14+00	125	3 LAYERS
F1	"TAK" 14+00	"TAK" 14+25	125	3 LAYERS
F1	"TAK" 14+25	"TAK" 14+50	167	4 LAYERS
F2	"TAK" 14+50	"TAK" 14+75	167	4 LAYERS
TOTAL =			1,626	
PAY ITEM QUANTITY =			1,650	

619.2017.0000 - HIGH PERFORMANCE TURF REINFORCEMENT MAT					
SHEET	STATION		OFFSET	AREA (SY)	REMARKS
	FROM	TO			
F1	"TAK" 11+50	"TAK" 11+75	LT	81	BACKSLOPE
F1	"TAK" 11+75	"TAK" 12+00	LT	58	BACKSLOPE
F1	"TAK" 12+00	"TAK" 12+25	LT	58	BACKSLOPE
F1	"TAK" 12+25	"TAK" 12+50	LT	58	BACKSLOPE
F1	"TAK" 12+50	"TAK" 12+75	RT	33	BACKSLOPE
F1	"TAK" 12+75	"TAK" 13+00	RT	33	BACKSLOPE
F1	"TAK" 13+00	"TAK" 13+25	RT	33	BACKSLOPE
F1	"TAK" 13+25	"TAK" 13+50	RT	33	BACKSLOPE
F1	"TAK" 13+50	"TAK" 13+75	RT	25	BACKSLOPE
F1	"TAK" 13+75	"TAK" 14+00	RT	22	BACKSLOPE
F1	"TAK" 14+00	"TAK" 14+25	RT	22	BACKSLOPE
F1	"TAK" 14+25	"TAK" 14+50	RT	28	BACKSLOPE
F2	"TAK" 14+50	"TAK" 14+75	RT	31	BACKSLOPE
F2	"TAK" 14+75	"TAK" 15+00	RT	36	BACKSLOPE
F2	"TAK" 15+00	"TAK" 15+25	RT	94	BACKSLOPE
F2	"TAK" 15+25	"TAK" 15+60	LT, RT	226	BACKSLOPE
F2	"TAK" 16+00	"TAK" 16+25	LT, RT	153	BACKSLOPE
F2	"TAK" 16+25	"TAK" 16+50	LT	47	BACKSLOPE
TOTAL =				1,064	
PAY ITEM QUANTITY =				1,100	

639.2000.0000 - APPROACH SUMMARY					
SHEET	STATION	OFFSET	TYPE		REMARKS
			PUB.	RES.	
F1	"TAK" 14+18	LT	1		
PAY ITEM QUANTITY =			1		



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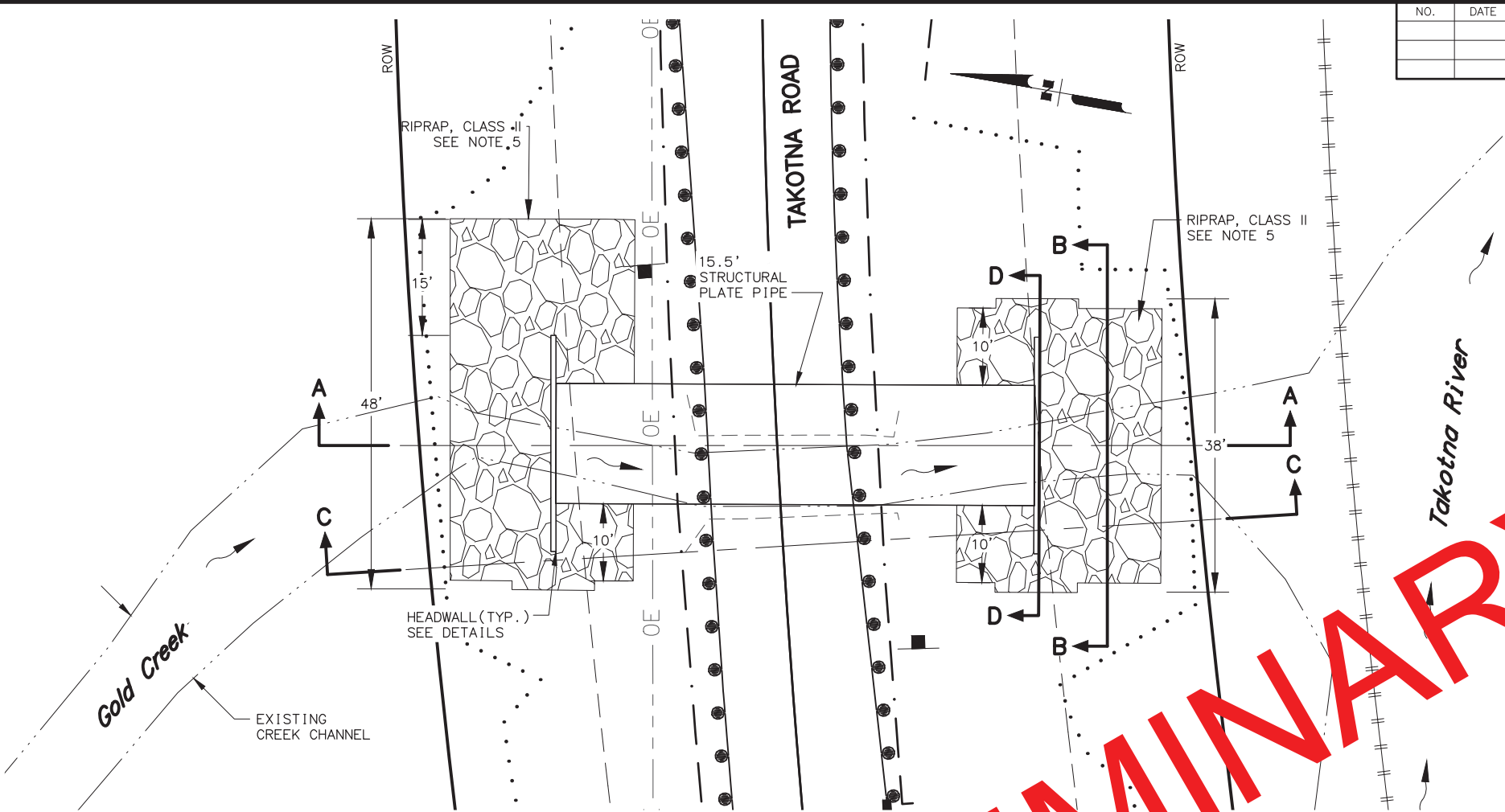
TAKOTNA: GOLD CREEK BRIDGE &
TATALINA BRIDGE REPLACEMENT

SUMMARY TABLES

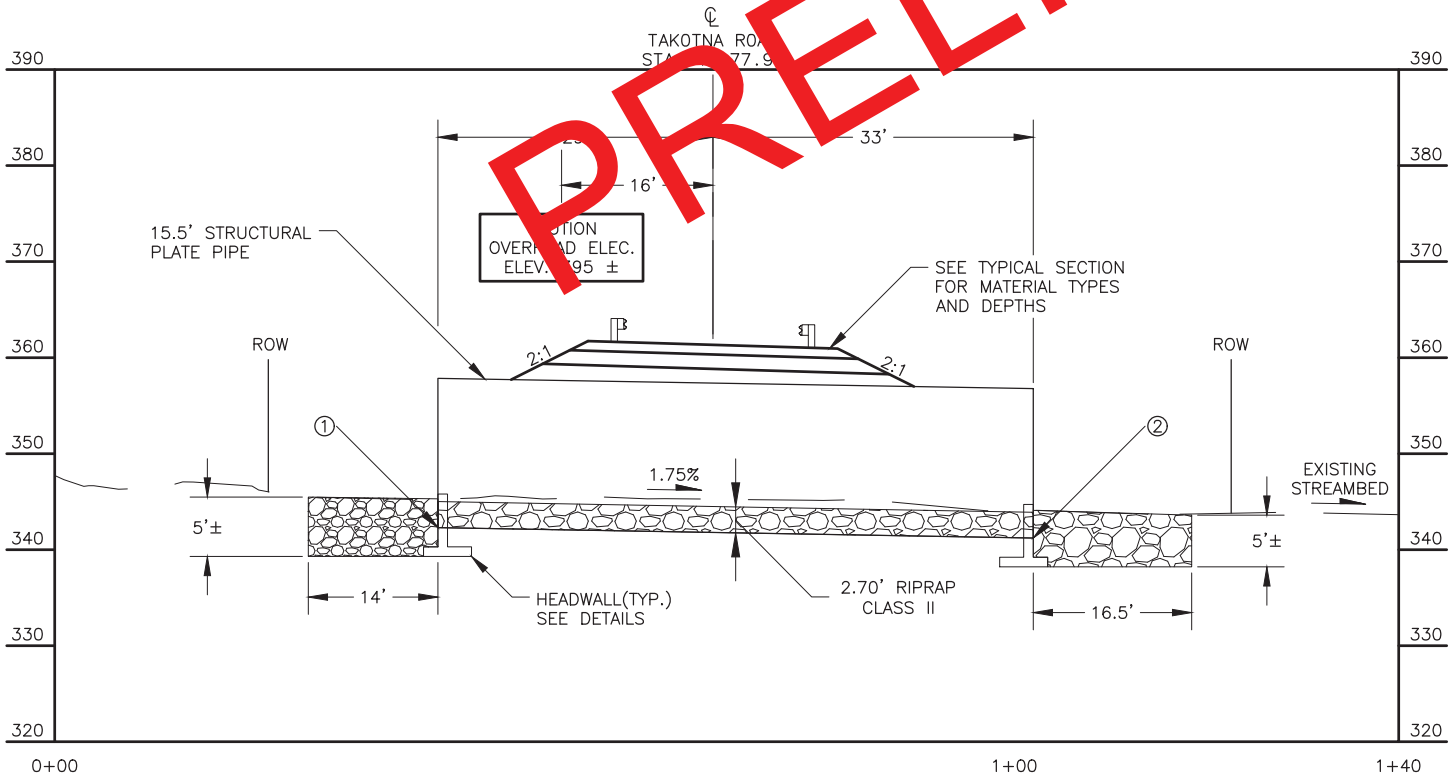
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	000S783/Z516210000	2022	E01	E06

NOTES:

1. THE TOP ELEVATION OF RIPRAP IN CULVERT SHOULD MATCH THE EXISTING STREAMBED ELEVATION.ADD FINER MATERIAL TO FILL THE VOIDS IN ALL RIPRAP PLACED IN THE CULVERT.
2. ADD AN 8" THICK LAYER OF DITCH LINING MATERIAL UNDER RIPRAP PLACED ON THE ROAD EMBANKMENT, OR AS DIRECTED BY THE ENGINEER.
3. USE RIPRAP, TYPE II. WARP RIPRAP TO ALLOW FOR STRUCTURAL FILL. DO NOT PLACE RIPRAP BELOW THE HEADWALL.



PLAN



SECTION A-A

GOLD CREEK CULVERT				
NUMBER	INLET/OUTLET	STATION	OFFSET	ELEVATION(FT)
①	INLET	15+79.54	LT	342.32
②	OUTLET	15+76.23	RT	341.24

HYDROLOGIC AND HYDRAULIC SUMMARY			
DRAINAGE AREA = 6.3 SQ. MI.			
EXCEEDANCE PROBABILITY	2%	1%	REGULATORY FLOOD
RETURN PERIOD	50 - YEAR (Q50)	100 -YEAR (Q100)	N/A
DESIGN DISCHARGE	126 CFS	145 CFS	N/A
DESIGN HIGH WATER ELEVATION	346.9 FT	347.1 FT	N/A
ANTICIPATED ADDITIONAL BACKWATER AT Q100 = 0.0 FT			



WATER RELATED WORK ONLY

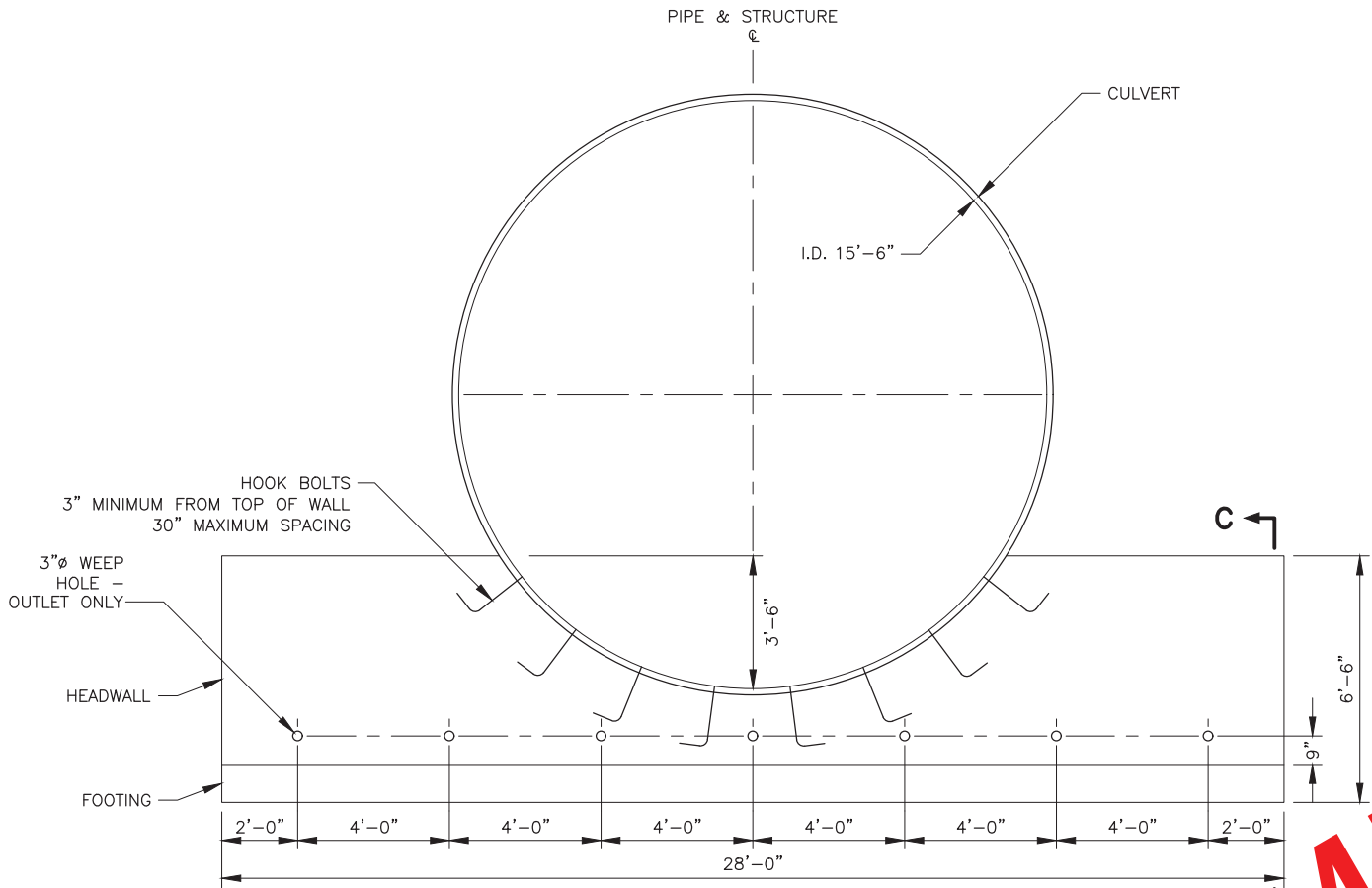


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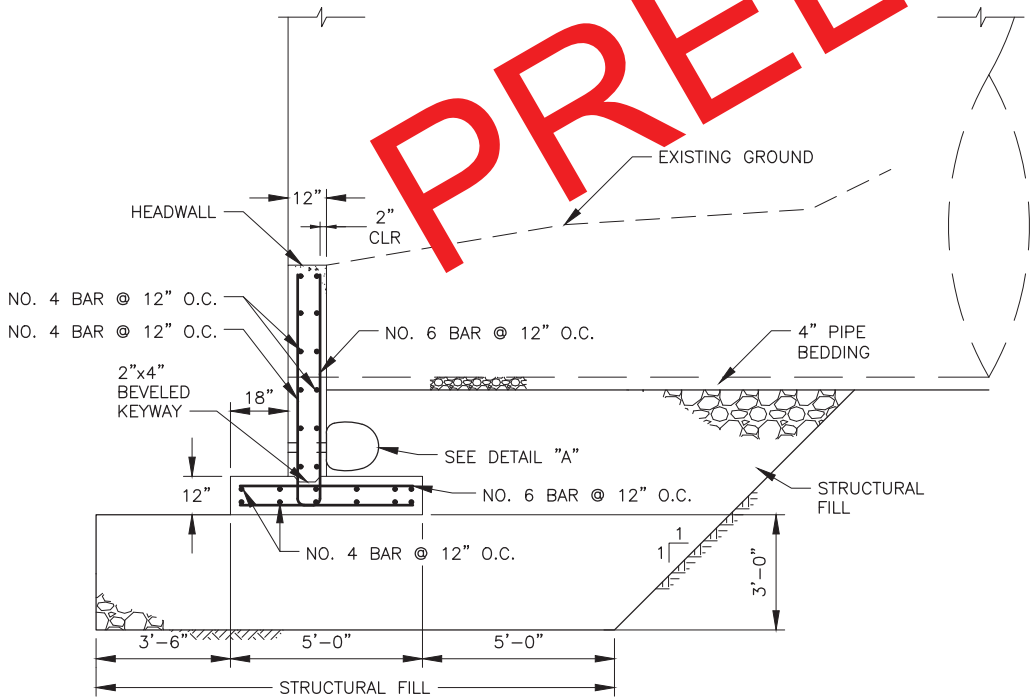
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
**TAKOTNA: GOLD CREEK BRIDGE &
TATALINA BRIDGE REPLACEMENT**

**GOLD CREEK
CULVERT DETAILS**

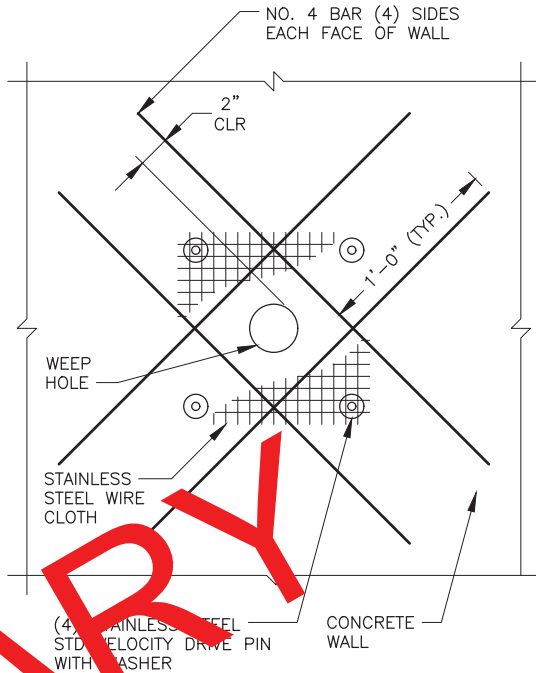
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			ALASKA	000S783/Z516210000	2022	E03	E06



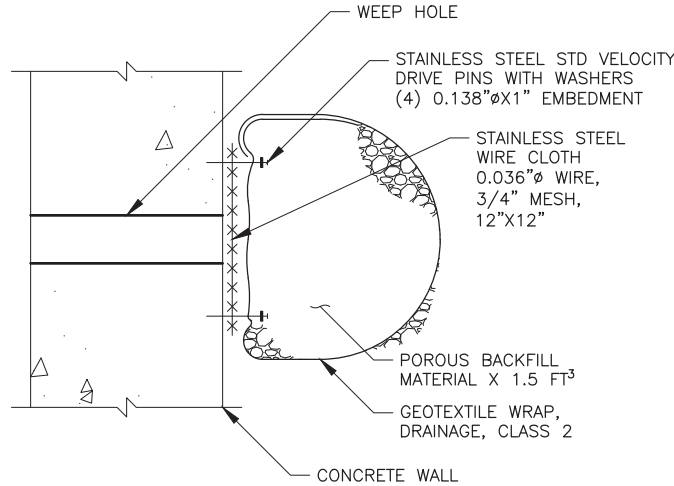
ELEVATION



SECTION C-C
PIPE HEADWALL INSTALLATION



DETAIL "A"
WEEP HOLE

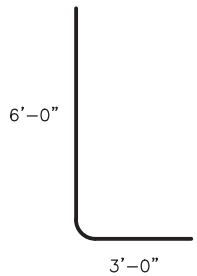


NOTE:

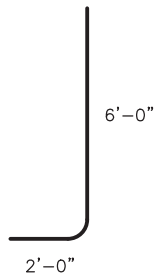
1. PLACED CENTERED ON EACH WEEP HOLE; STAINLESS STEEL WIRE CLOTH, POROUS BACKFILL MATERIAL, AND GEOTEXTILE.
2. INSTALL WEEP HOLES ONLY ON THE OUTLET SIDE OF THE PIPE.

HEADWALL NOTES:

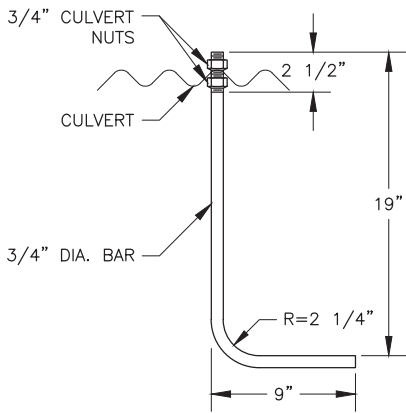
1. CLASS A CONCRETE.
2. EPOXY-COATED ASTM A706, GRADE 60 REINFORCING STEEL
FY = 60,000 PSI.
3. PLACE REINFORCEMENT 3" CLEAR FROM SURFACE OF CONCRETE UNLESS OTHERWISE NOTED.
4. CHAMFER ALL EXPOSED CONCRETE CORNERS 3/4".
5. FURNISHING AND INSTALLING HOOK BOLTS IN PLACE IS INCIDENTAL TO CLASS A CONCRETE.
6. GALVANIZED ASTM A307 HOOK BOLTS AND NUTS. TORQUE CULVERT NUTS TO 140 FT-LBS.



NO. 4 BAR



NO. 6 BAR



HOOK BOLT

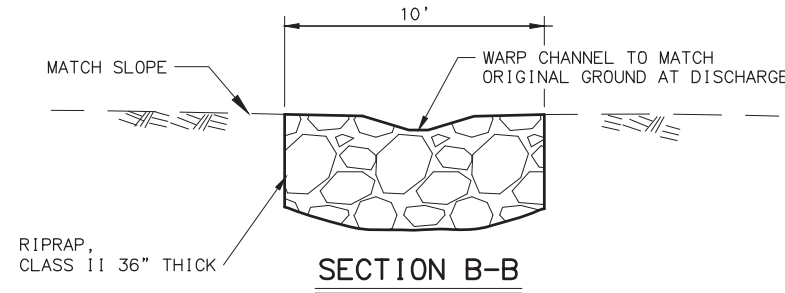
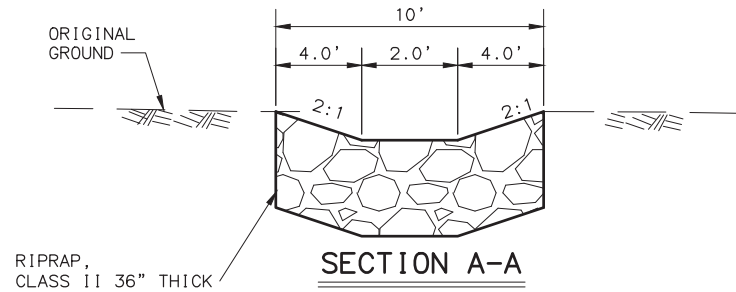
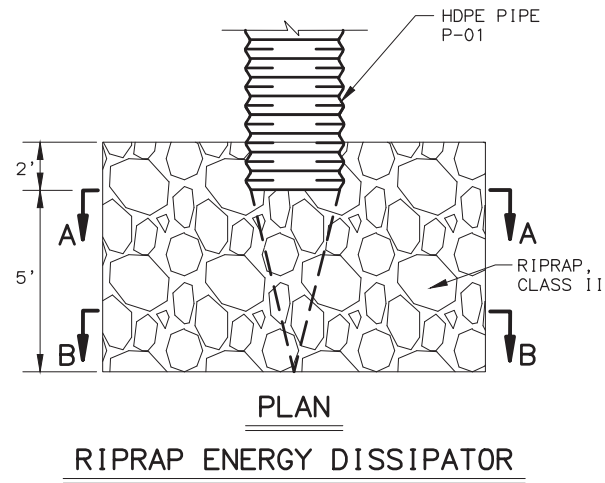


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**TAKOTNA: GOLD CREEK BRIDGE &
TATALINA BRIDGE REPLACEMENT**

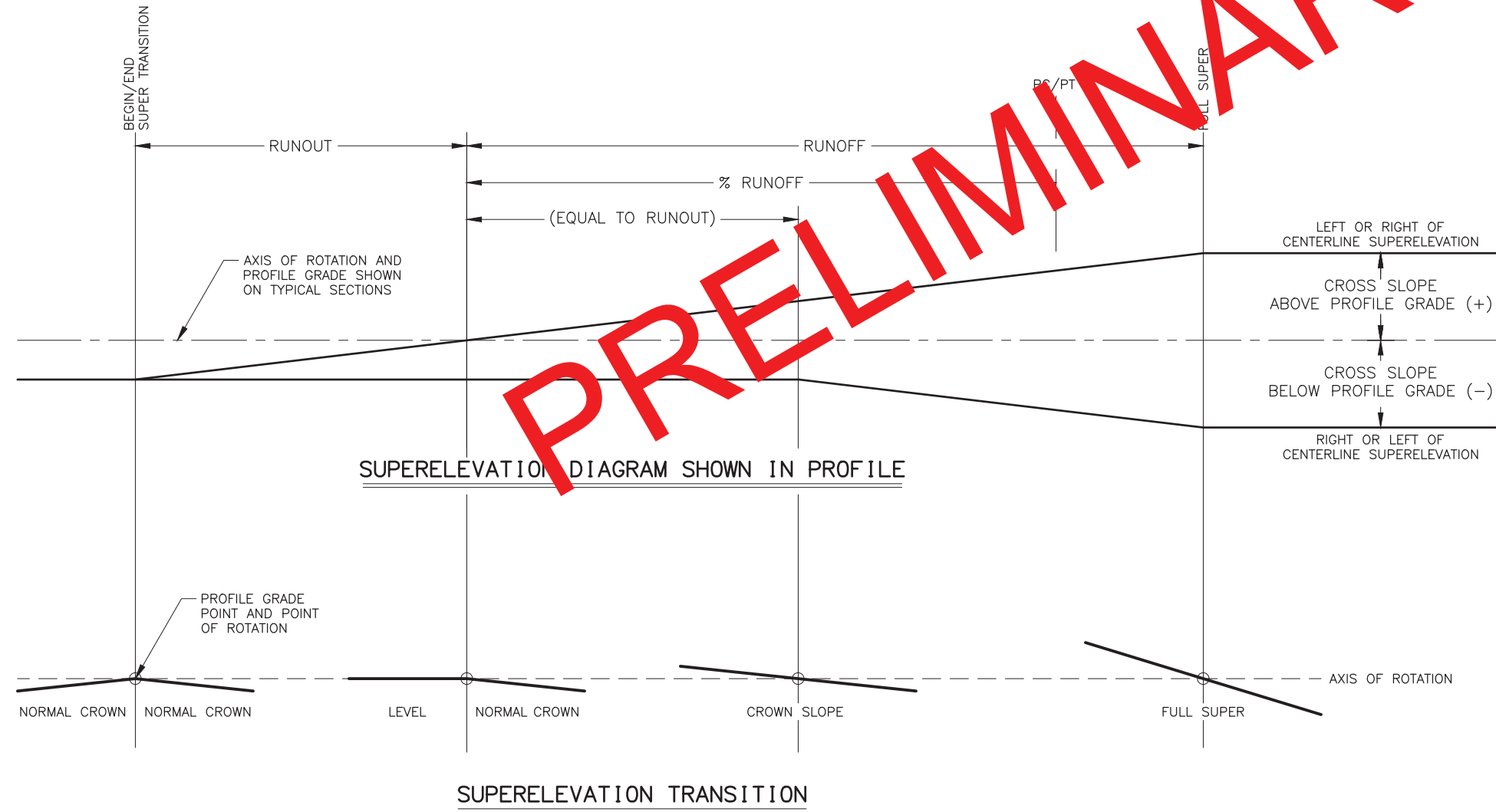
**GOLD CREEK CULVERT
HEADWALL INSTALLATION DETAILS**

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	000S783/Z516210000	2022	E04	E06



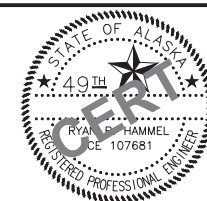
NOTES:

1. PLACE RIPRAP AT A 2:1 SLOPE OR FLATTER OR AS DIRECTED BY THE ENGINEER.
2. INSTALL AN ENERGY DISSIPATOR AT THE OUTLET/INLET IN CONJUNCTION WITH CULVERTS AND FLUME DOWNDRAINS INSTALLATION WHERE SHOWN ON PLANS. ENERGY DISSIPATORS ARE PERMANENT FEATURES AND SHALL BE LEFT IN PLACE.



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.



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**TAKOTNA: GOLD CREEK BRIDGE &
TATALINA BRIDGE REPLACEMENT**

**RIPRAP ENERGY DISSIPATOR
& SUPERELEVATION DETAILS**

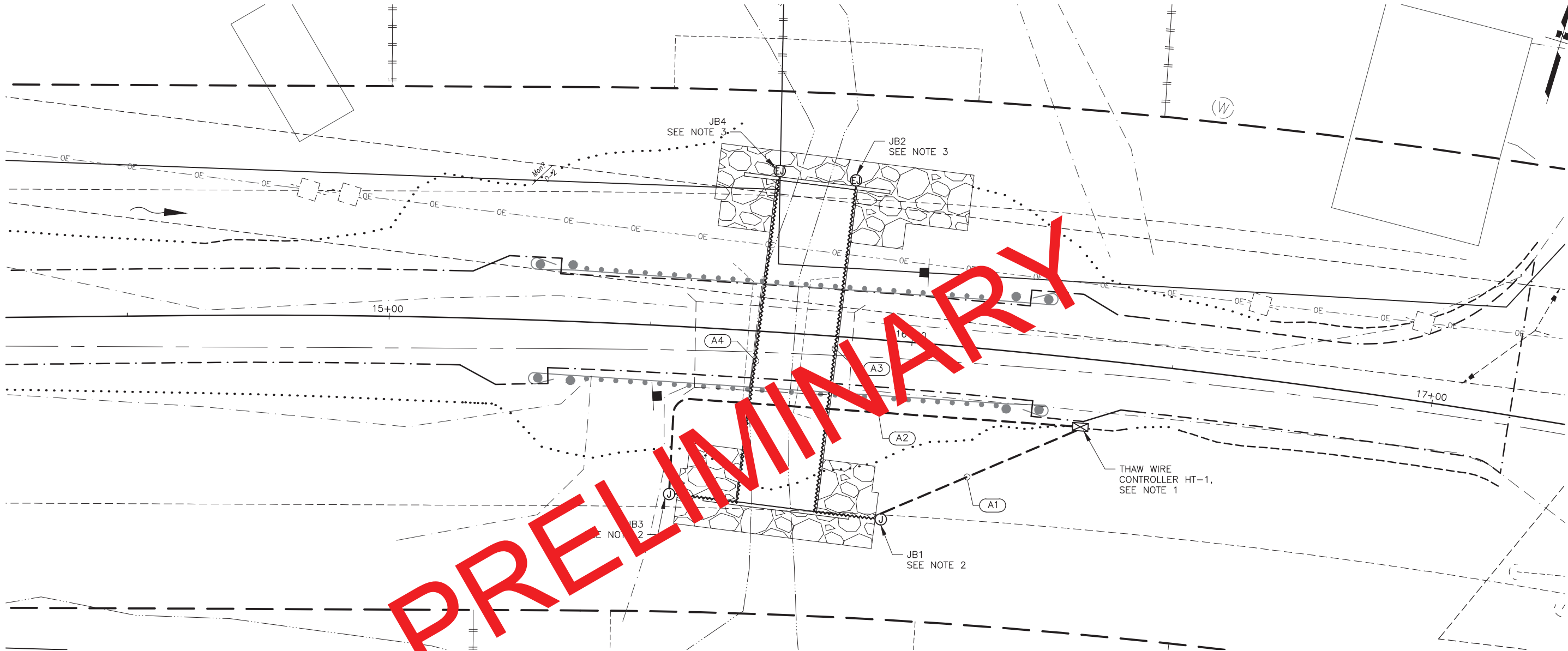
DESIGNED BY
CHECKED BY
DRAFTED BY

SCALE
N/A

DATE
7/14/2020 1:43 AM

DRAWING LOCATION
J:\JOBS\DATA 30108.00 TAKOTNA BRIDGE REPLACEMENT\00 CADD 2019\01 WORKING SET\03 ELECTRICAL\51621_H01_HEATTRACE_TATLINA.DWG

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	000S(783)/Z516210000	2020	E05	E06



CONTROLLER AND JUNCTION BOX TABLE			
ITEM	STATION	OFFSET	TYPE
HT-1	16+33.7	13.00 RT	-
JB1	15+96.8	31.20 RT	ABOVE GRADE
JB2	15+87.0	30.00 LT	EXPLOSION PROOF
JB3	15+55.2	32.00 RT	ABOVE GRADE
JB4	15+72.6	31.00 LT	EXPLOSION PROOF

CONDUIT SUMMARY					
CONDUIT	FROM	TO	SIZE	CONTAINS	LENGTH (FT)
A1	HT-1	JB1	3/4" RMC	2-1c#10, 1-1c#10 BARE GND	45
A2	HT-1	JB3	3/4" RMC	2-1c#10, 1-1c#10 BARE GND	95
A3	JB1	JB2	1" RMC	THAW WIRE	80
A4	JB3	JB4	1" RMC	THAW WIRE	80

NOTES:

1. POST MOUNTED THAW WIRE CONTROLLER, SEE SHEET E7 FOR DETAILS.
2. ABOVE GRADE JUNCTION BOX WITH THAW WIRE POWER CONNECTION PER MANUFACTURER, SEE SHEET E7 FOR DETAILS.
3. EXPLOSION PROOF CONDULET, EATON #GUA24 OR EQUAL WITH THAW WIRE END KIT PER MANUFACTURER.
4. ATTACH THAW WIRE CONDUIT TO CULVERT, SEE SHEET E7 FOR DETAILS.

THAW WIRE PLAN LEGEND	
	PROPOSED UNDERGROUND CONDUIT
	PROPOSED THAW WIRE
	ABOVE GRADE JUNCTION BOX
	EXPLOSION PROOF JUNCTION BOX
	THAW WIRE CONTROLLER WITH MOTOR OUTLET
	CONDUIT TAG



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**TAKOTNA: GOLD CREEK BRIDGE
& TATLINA BRIDGE REPLACEMENT**

**ELECTRIC THAW WIRE –
TAKOTNA CREEK BRIDGE**

DESIGNED BY
CHECKED BY
DRAFTED BY

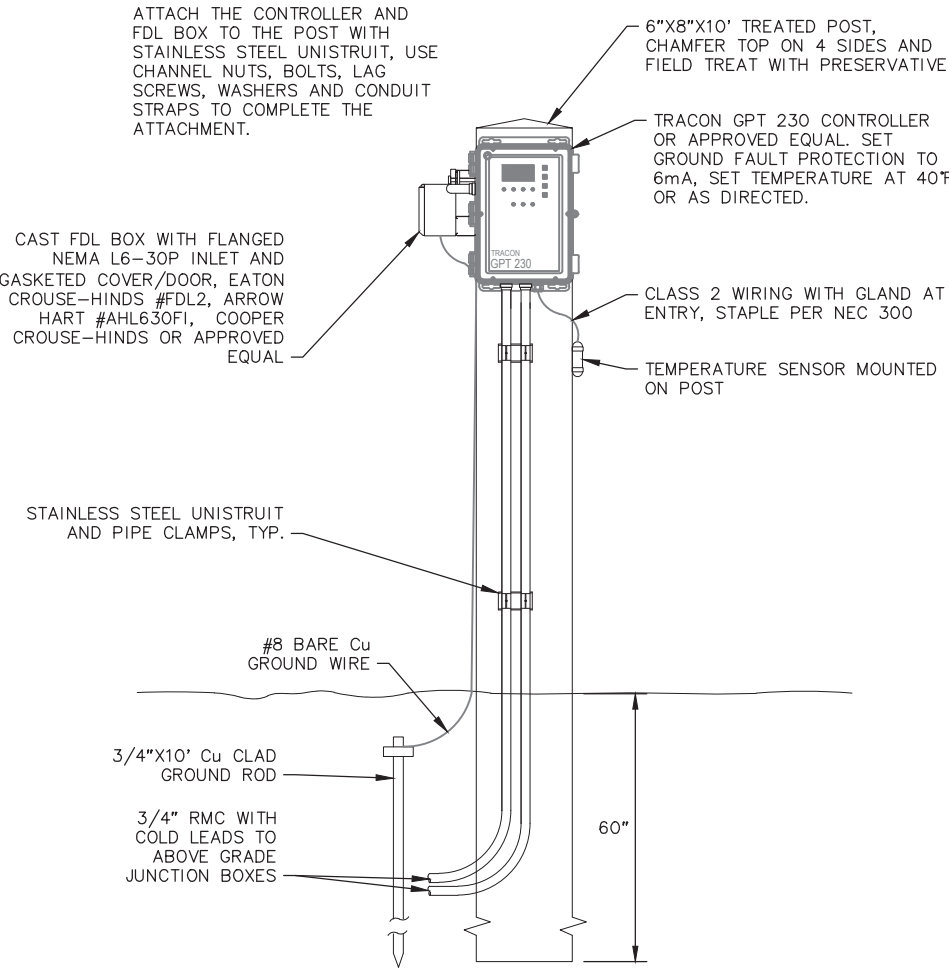
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TIME
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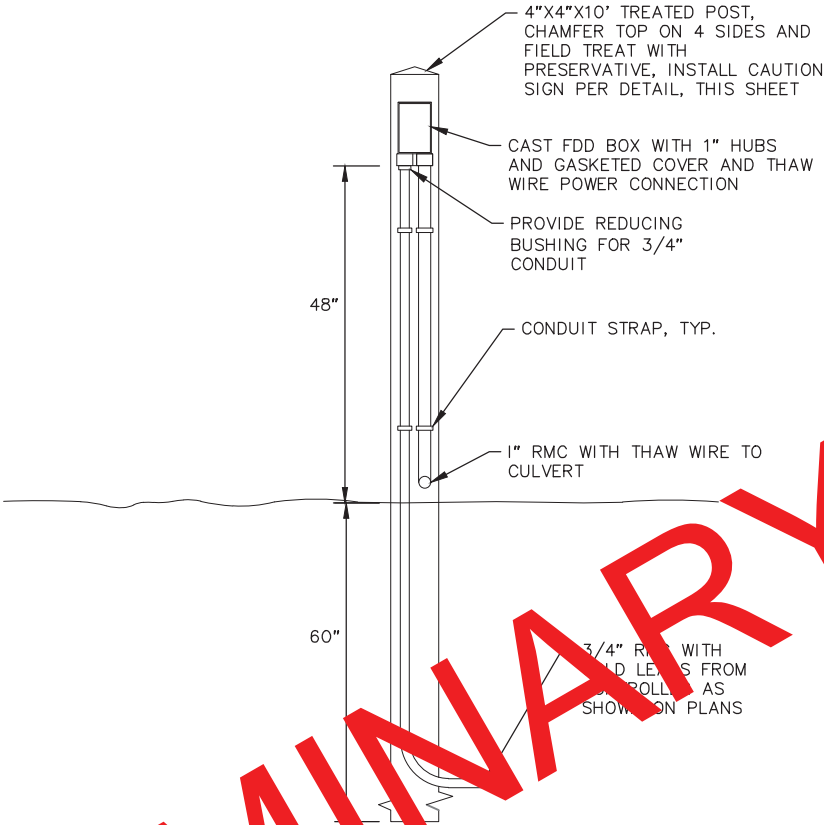
DATE
7/14/2020

DRAWING LOCATION
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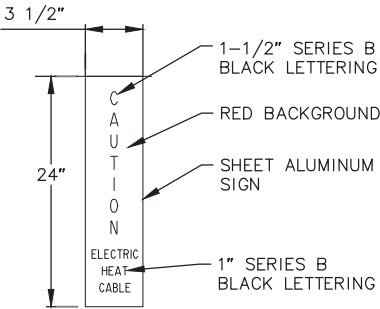
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	000S(783)/Z516210000	2020	E06	E06



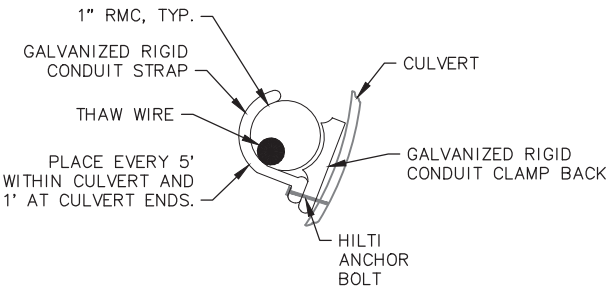
THAW WIRE CONTROLLER & INLET POST DETAILS



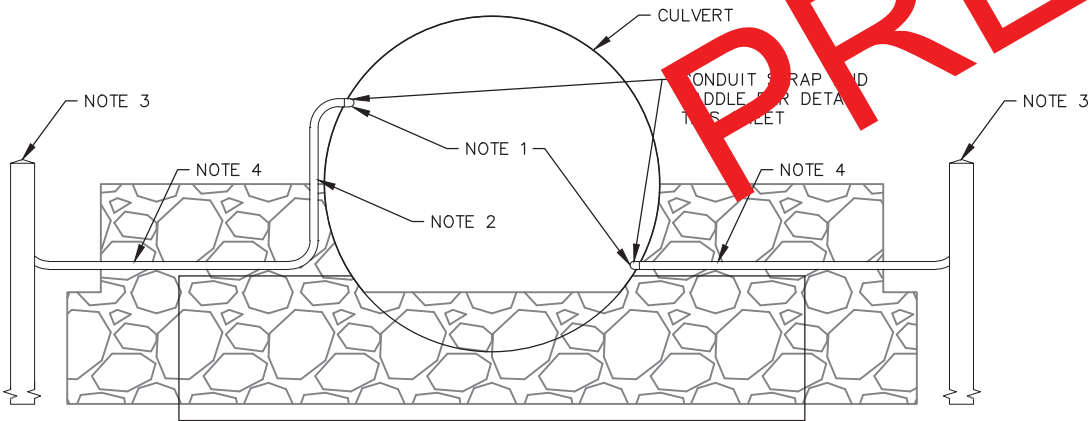
ABOVE GRADE JUNCTION BOX WITH THAW WIRE POWER CONNECTION DETAILS



CAUTION SIGN



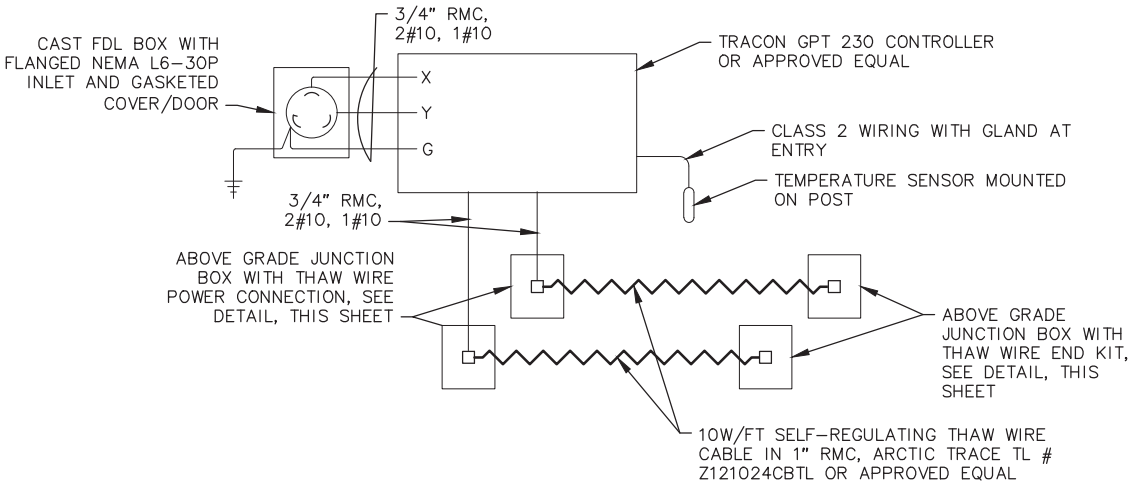
CULVERT CONDUIT SADDLE & STRAP



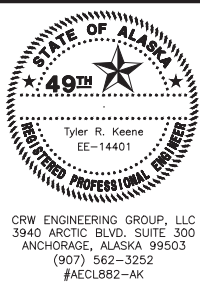
CULVERT THAW WIRE MOUNTING DETAILS

NOTES:

1. TRANSITION DOWN CULVERT USING OE EXPLOSION PROOF CONDUIT OUTLET BODY WITH COVER, EATON CROUSE-HINDS #OELB2 OR APPROVED EQUAL. INSTALL CONDUIT AT 4:00 AND 10:00.
2. SUPPORT CONDUIT TO UPPER THAW WIRE CONDUIT WITH GALVANIZED STAINLESS STEEL UNISTRUIT BOLTED TO THE OUTSIDE OF THE CULVERT. INSTALL STAINLESS STEEL HARDWARE.
3. ABOVE GRADE JUNCTION BOX WITH THAW WIRE POWER CONNECTION, SEE DETAILS THIS SHEET.
4. RUN CONDUIT BETWEEN ABOVE GRADE JUNCTION BOX AND CULVERT ON TOP OF RIPRAP.



WIRING SCHEMATIC



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**TAKOTNA: GOLD CREEK BRIDGE
& TATLINA BRIDGE REPLACEMENT**

**ELECTRIC THAW WIRE
DETAILS**

DESIGNED BY
KDS/SLH

CHECKED BY
RRH

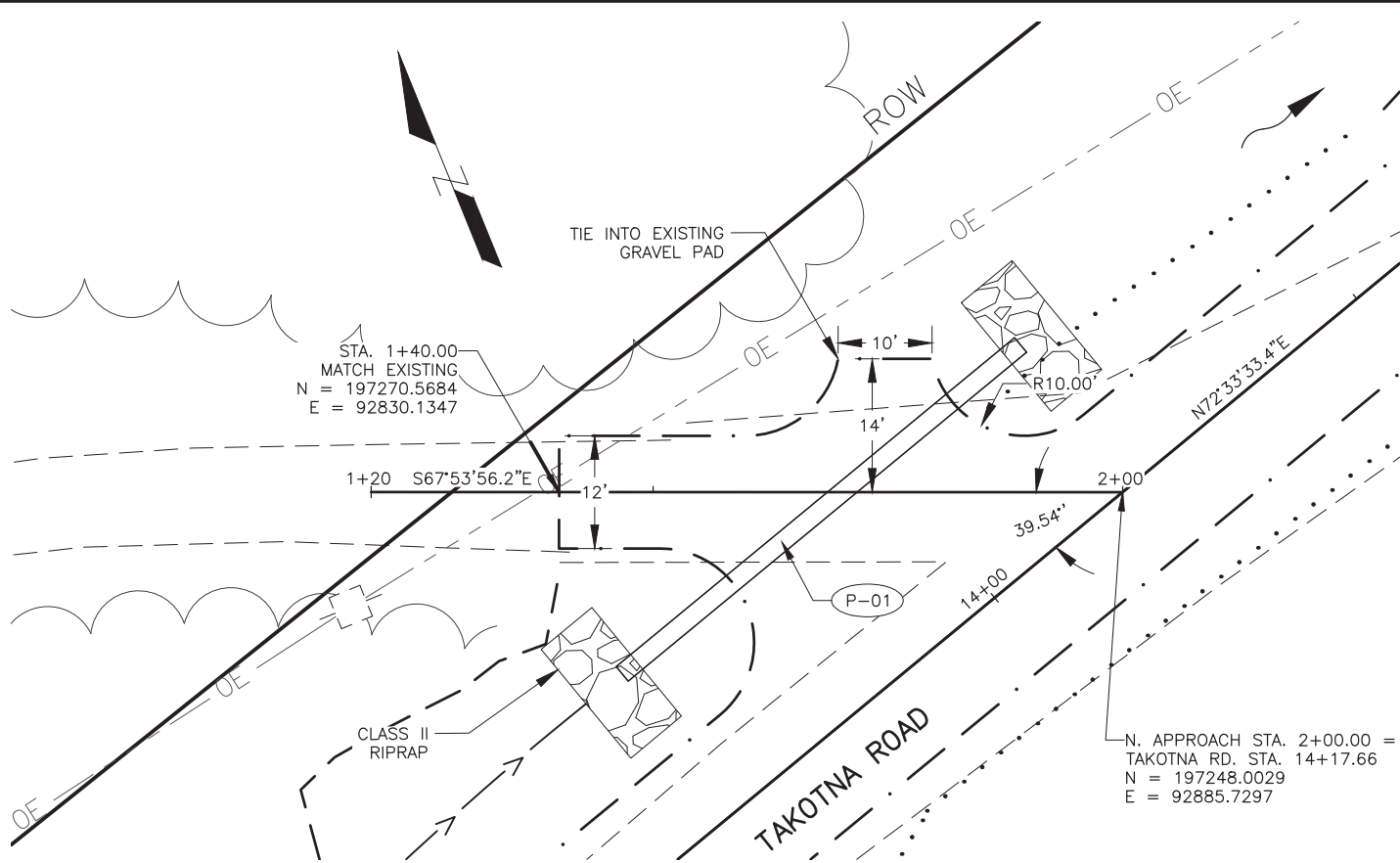
DRAFTED BY
VJS

SCALE
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DATE
8/10/2022

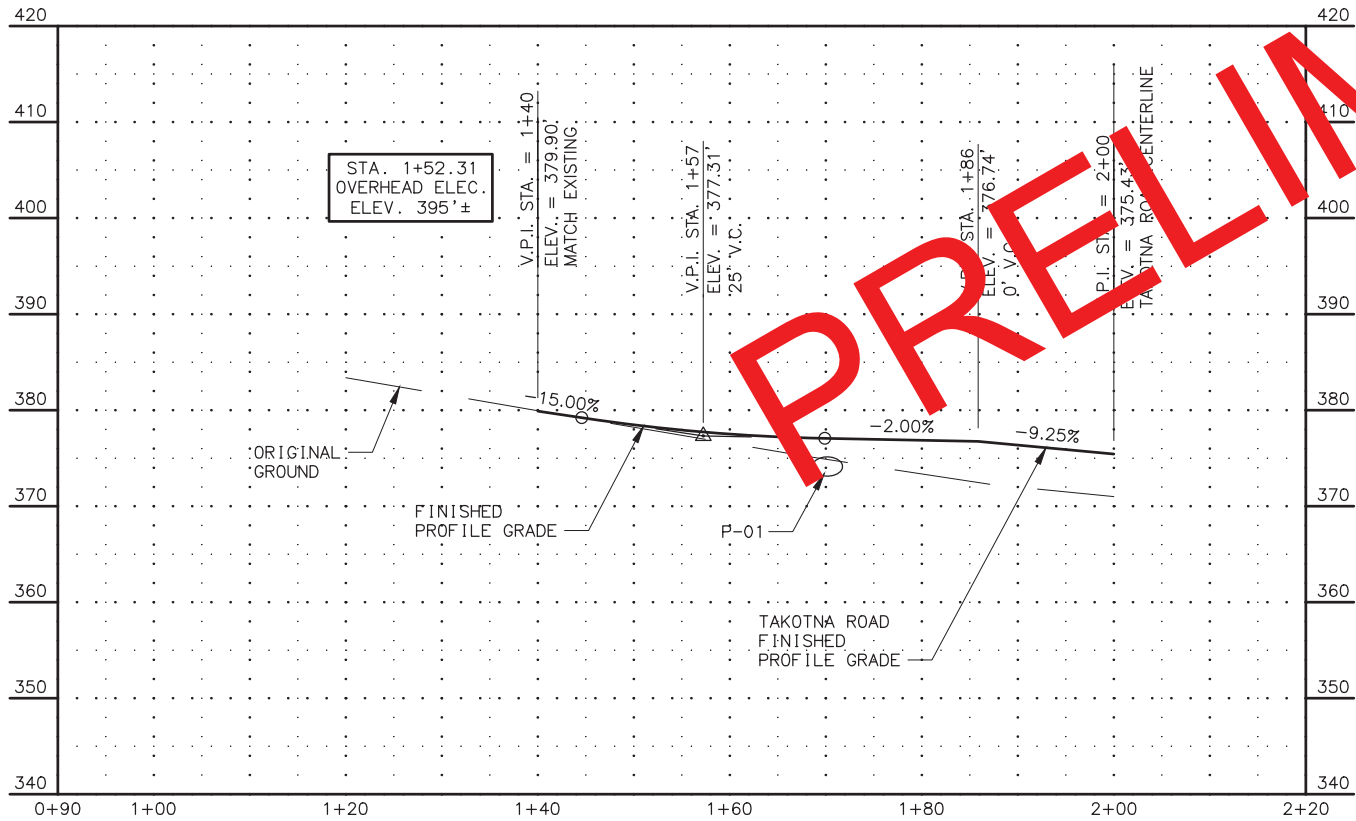
TIME
3:32 PM

DRAWING LOCATION
W:\PROJECTS\TAKOTNA GOLD CREEK BRIDGE - 51621\CV3D\PLANSET\51621_F03_APPROACHES.DWG



NOTES:

1. USE MAIN LINE STRUCTURAL SECTION FOR APPROACH.



PIPE SUMMARY

PIPE	SIZE (IN)	LENGTH (FT)	START STATION	START OFFSET	START INVERT ELEV. (FT)	END STATION	END OFFSET	END INVERT ELEV. (FT)	% GRADE	REMARKS
P-01	24	55.00	13+64.25	-19.00' LT	376.01	14+19.25	-19.00' LT	370.79	9.49%	

SHEET NO.
F03

TOTAL SHEETS
F06

STATE
ALASKA

YEAR
2022

PROJECT DESIGNATION
000S783/
Z516210000

NO.

REVISION

DATE

NO.

REVISION

DATE

NO.

REVISION

DATE

Map of the project location showing Takotna, Tatalina, and surrounding features. Key locations include:

- Takotna
- Tatalina
- Takotna Mountain
- Tatalina LRRS Airport
- Takotna River
- Seward Meridian
- Kateel River Meridian
- Sterling Landing to Ophir Road
- Takotna Road
- Takotna Airport

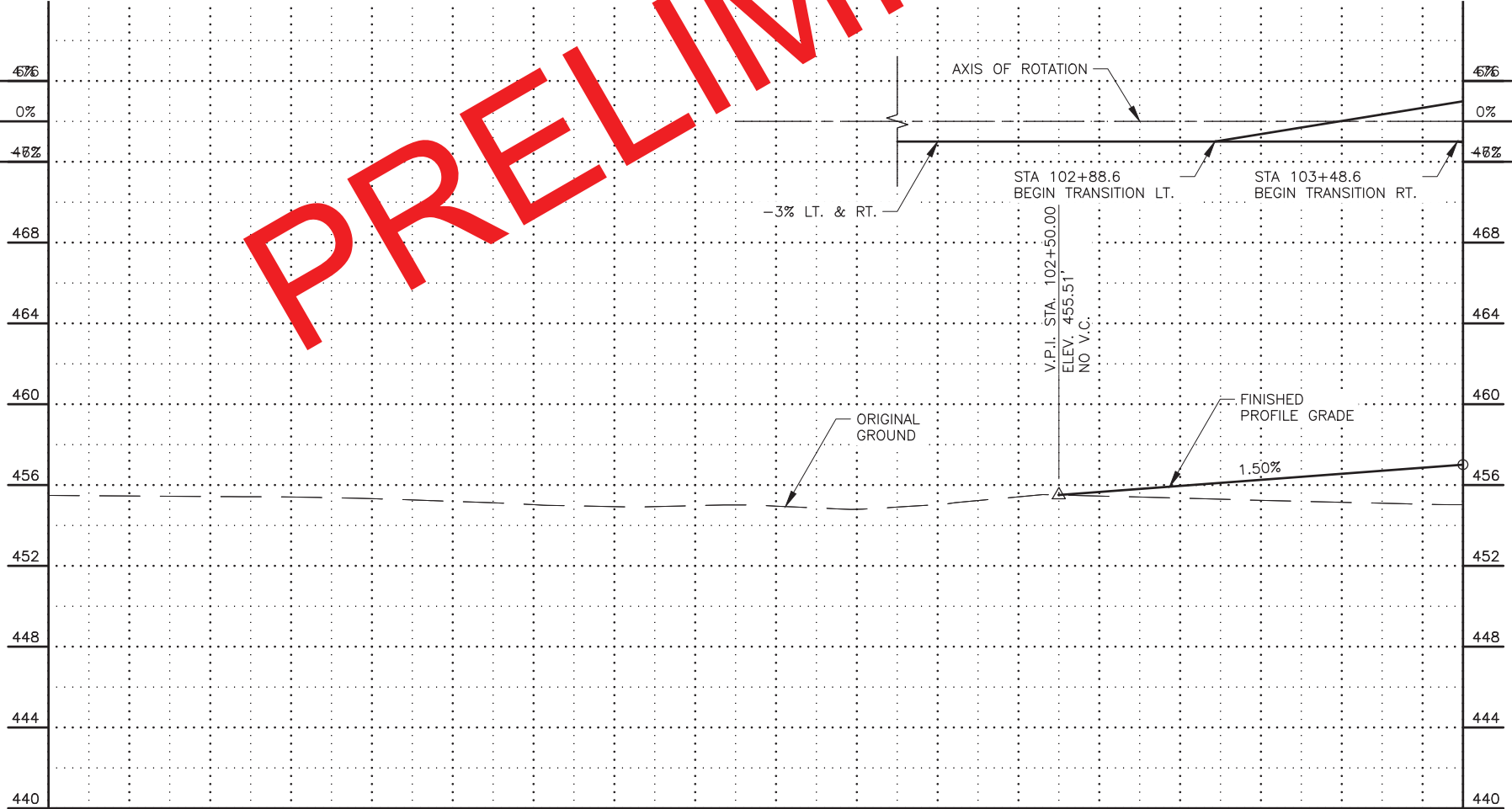
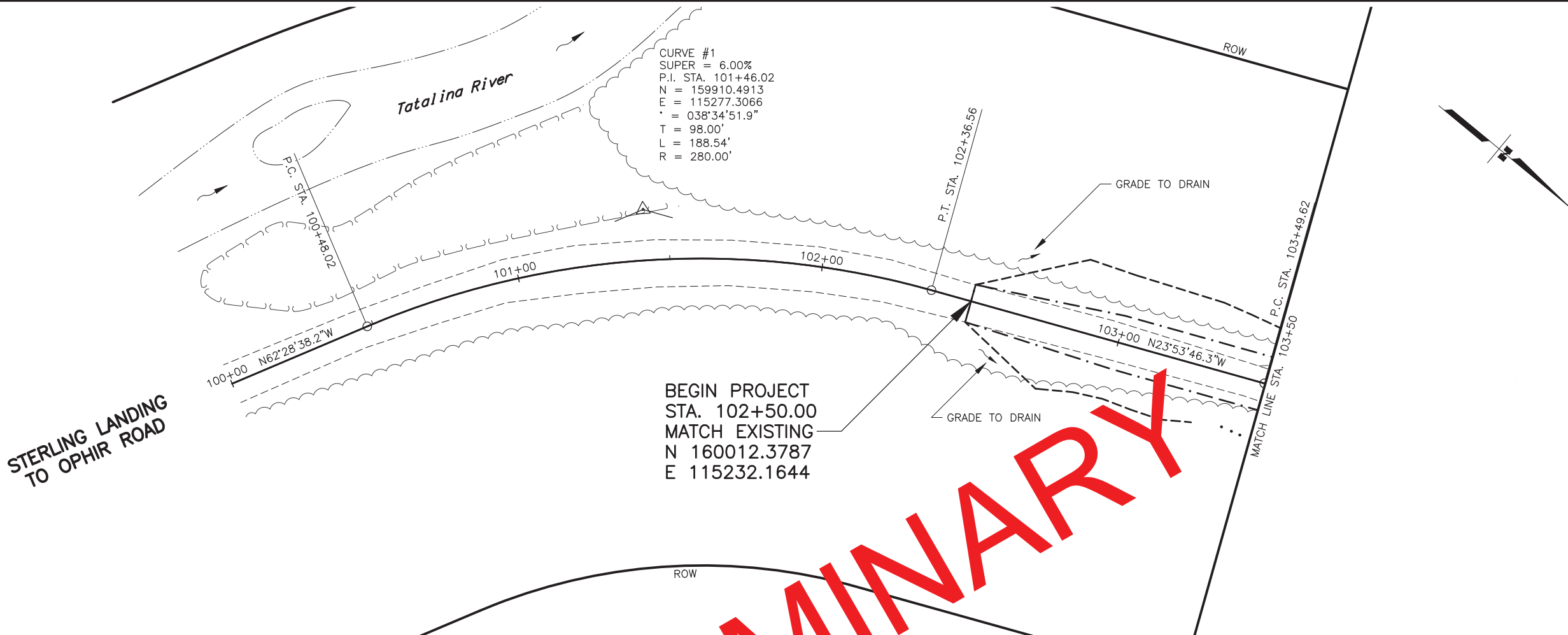
Professional Engineer Seal for Ryan Hammel, State of Alaska, License 107681.

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TAKOTNA: GOLD CREEK
BRIDGE & TATALINA
BRIDGE REPLACEMENT

DRIVEWAY
PLAN AND PROFILE
STA. 14+18 LT



SHEET NO.	TOTAL SHEETS
F04	F06
STATE	YEAR
ALASKA	2022
PROJECT DESIGNATION	
000S783/ Z516210000	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	

KATEEL RIVER MERIDIAN
SEWARD MERIDIAN
TAKOTNA
TAKOTNA AIRPORT
TAKOTNA MOUNTAIN
TATALINA AIR FORCE BASE
TATALINA LRRS AIRPORT
Tatalina River
STERLING LANDING TO OPHIR ROAD
THIS SHEET

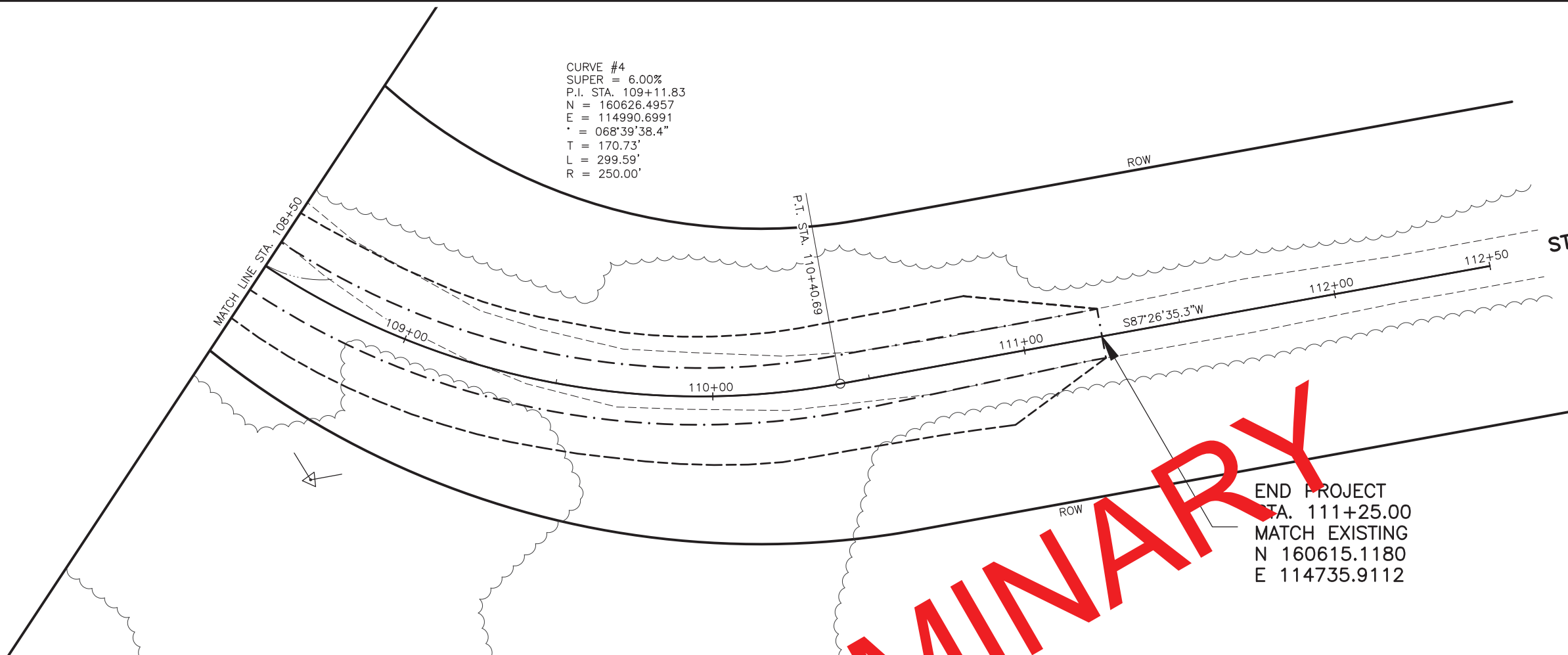
STATE OF ALASKA
49TH
RYAN HAMMEL
LICENSE 107681
REGISTERED PROFESSIONAL ENGINEER

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ANCHORAGE, AK 99502
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TAKOTNA: GOLD CREEK
BRIDGE & TATALINA
BRIDGE REPLACEMENT

PLAN AND PROFILE
STA. 100+00 TO 103+50



SHEET NO.	TOTAL SHEETS
F06	F06
STATE	YEAR
ALASKA	2022
PROJECT DESIGNATION	
000S783/ Z516210000	
NO.	REVISION
DATE	
NO.	REVISION
DATE	
NO.	REVISION
DATE	

KATEEL RIVER MERIDIAN
SEWARD MERIDIAN
TAKOTNA RIVER
TAKOTNA AIRPORT
TAKOTNA MOUNTAIN
TATALINA AIR FORCE BASE
TATALINA LRSS AIRPORT
THIS SHEET
STERLING LANDING TO OPHIR ROAD

STATE OF ALASKA
49th
CERT
RYAN HAMMEL
LICENSE 107681
REGISTERED PROFESSIONAL ENGINEER

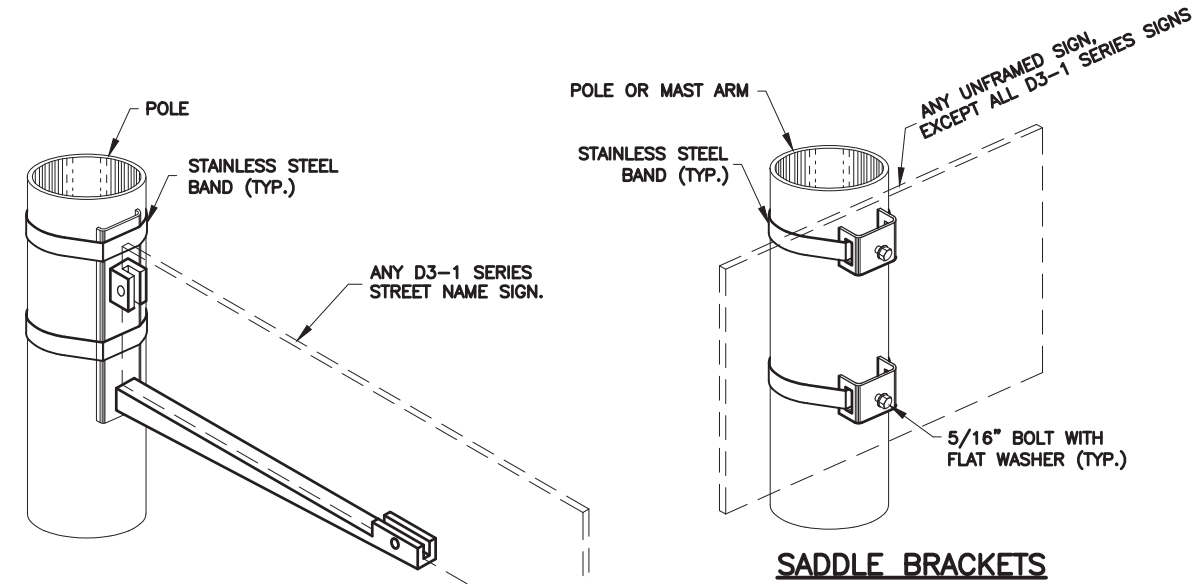
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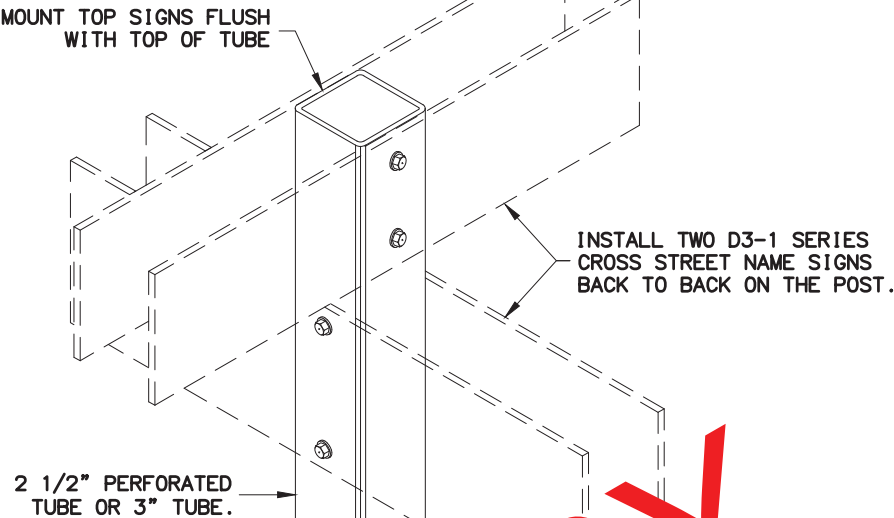
TAKOTNA: GOLD CREEK
BRIDGE & TATALINA
BRIDGE REPLACEMENT

PLAN AND PROFILE
STA. 108+50 TO 112+50

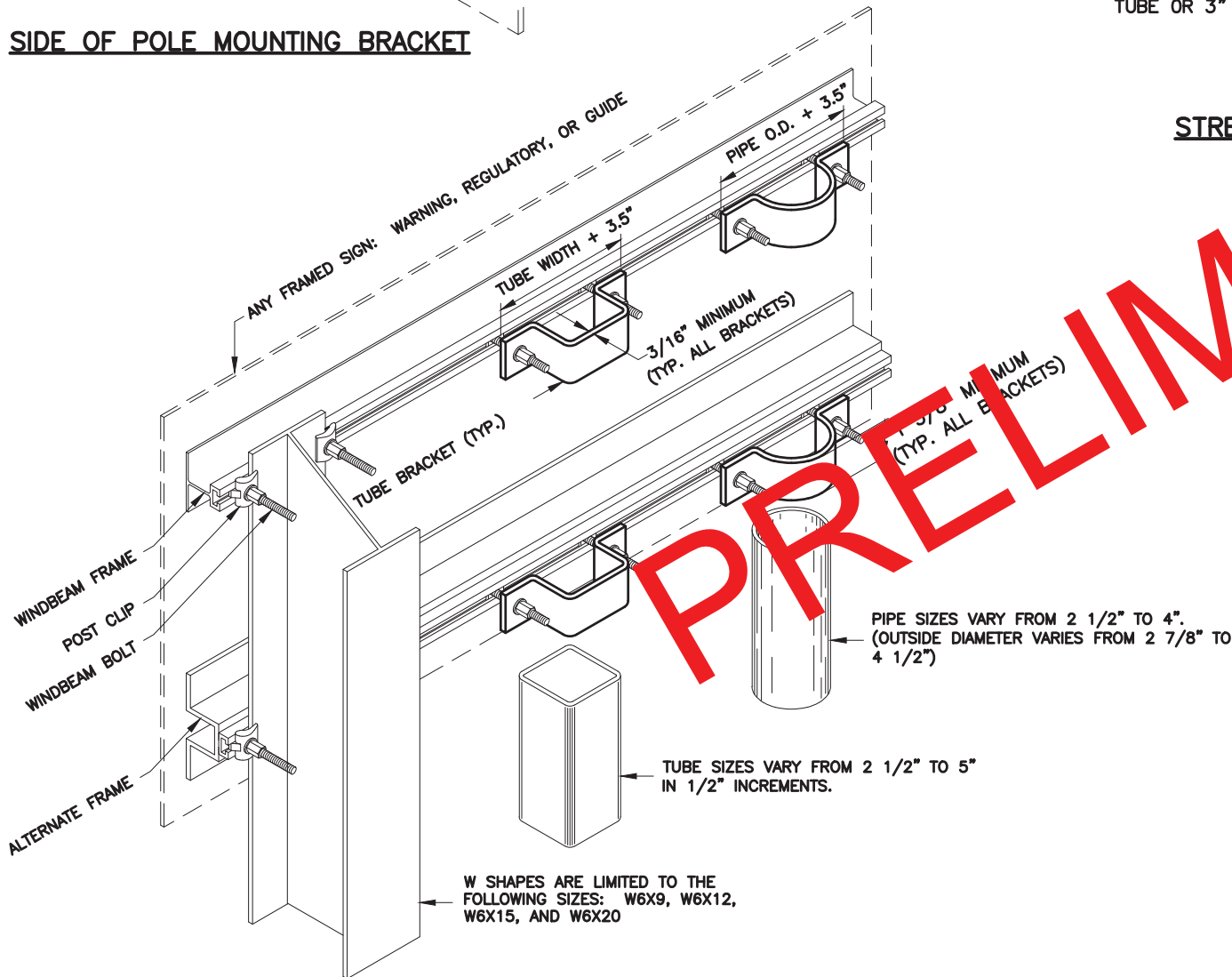
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			ALASKA	000S783/Z516210000	2022	H01	H03



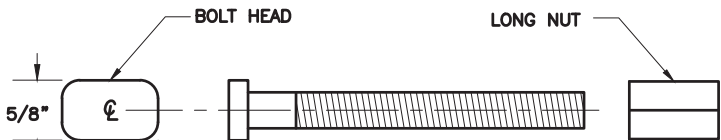
SIDE OF POLE MOUNTING BRACKET



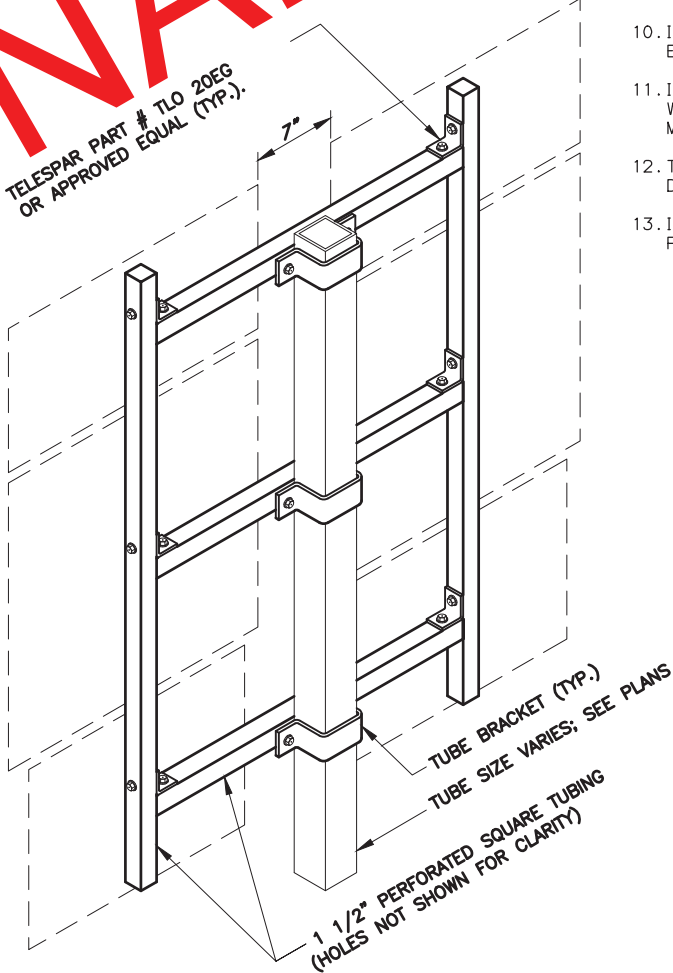
STREET NAME SIGN INSTALLATION



FRAMED SIGN ATTACHMENT BRACKETS



3/8" WINDBEAM BOLT AND LONG NUT

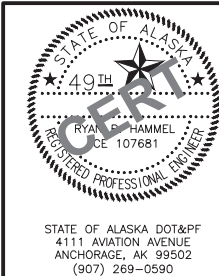


ROUTE MARKER TREE

NOTES:

- EXCEPT FOR POLES AND MASTARMS, ONLY USE TUBES TO SUPPORT SIGNS MOUNTED ON ONE POST.
- ATTACH SIGNS, FRAMED AND UNFRAMED TO THEIR SUPPORTS WITH ZINC PLATED 3/8" BOLTS, EXCEPT ATTACH UNFRAMED SIGNS TO PERFORATED TUBES WITH ACCESSORY DRIVE RIVETS AND TO SADDLES WITH 5/16" BOLTS.
- BOLT UNFRAMED SIGNS DIRECTLY TO TUBES IN TWO LOCATIONS, NEAR TOP AND NEAR BOTTOM OF MATING SURFACE. ATTACH THEM TO POLES AND MASTARMS WITH TWO SADDLES.
- ATTACH BRACKETS TO POLES AND MASTARMS WITH DOUBLE WRAPS OF 3/4" WIDE BY 0.020" THICK STAINLESS STEEL BANDING MATERIAL. TIGHTEN EACH BAND UNTIL IT STOPS MOVING THROUGH THE BUCKLE.
- ATTACH FRAMED SIGNS TO POSTS WHEREVER THE FRAMES CROSS THE POSTS. AT EACH CROSSING, ATTACH THE SIGN USING TWO POST CLIPS ON W-SHAPE POSTS, A U-SHAPED BRACKET ON PIPES, AND A BRACKET WITH SQUARE CORNERS ON TUBES.
- THE TUBE BRACKETS USED ON EVEN INCH SIZE TUBES MAY ALSO BE USED ON TUBES 1/2" SMALLER IN SIZE.
- ONLY USE THE SPECIAL WINDBEAM BOLTS TO ATTACH SIGNS FRAMED WITH THE WINDBEAM FRAMING MATERIAL.
- ATTACH FRAMED SIGNS TO POLES AND MASTARMS USING POLE PLATES INSTALLED ACCORDING TO ALASKA STANDARD PLAN S-23.
- FOR ROUTE MARKER TREES, CUT PERFORATED TUBES TO ENSURE TIGHT FITTING JOINTS. ASSEMBLE THE PIECES WITH ACCESSORY ELL-SHAPED ANGLE BRACKETS.
- INSTALL THE TOP EDGE OF SIGNS 1" ABOVE THE TOPS OF POSTS, EXCEPT FOR THE D3-1 STREET NAME SIGNS.
- INSTALL THE TOP EDGE OF SIGNS 3" BELOW THE TOP OF POST, WHENEVER THEY ARE MOUNTED BELOW SIGNS SECURED BY POST TOP MOUNTING BRACKETS.
- THE BRACKET DETAILS SHOWN INDICATE GENERAL DESIGNS ONLY. DESIGNS MAY VARY BY MANUFACTURER.
- INSTALL WEATHER TIGHT CAPS ON ALL PIPE AND TUBE POSTS, EXCEPT PERFORATED TUBING.

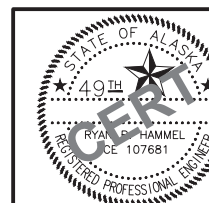
FASTENER SPECIFICATION TABLE			
FASTENERS		STEEL	STAINLESS STEEL
BOLTS		ASTM A 307	ASTM F 593
	REGULAR LOCK	ASTM A 563	ASTM F 594
WASHERS		ASTM A 36	ASTM A 480
POST CLIPS			



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
**TAKOTNA: GOLD CREEK BRIDGE &
TATALINA BRIDGE REPLACEMENT**

SIGN ATTACHMENT DETAILS

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	000S783/Z516210000	2022	H02	H03



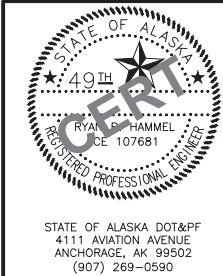
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

TAKOTNA: GOLD CREEK BRIDGE & TATALINA BRIDGE REPLACEMENT

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	000S783/Z516210000	2022	H03	H03

SIGN SUMMARY													
PAGE NO.	SIGN NO.	STATION ALIGNMENT	CL REF	TYPE	LEGEND	SIZE (IN)		AREA (SQ.FT)	SIGN FACES	POSTS	FRAMED?		REMARKS
						WIDTH	HEIGHT			NO., SIZE, & TYPE	YES	NO	
TAKOTNA: GOLD CREEK & TATALINA BRIDGE													
F2	1	15+52	RT	1-3 GOLD CREEK		24	18	3.00	W	1-3.0" T		X	
F2	2	16+01	LT	1-3 GOLD CREEK		24	18	3.00	E	1-3.0" T		X	
F4	3	105+90	LT	OM3-L		12	36	3.00	S	1-2.5" P.T.		X	
F4	4	105+90	RT	OM3-R		12	36	3.00	S	1-2.5" P.T.		X	
F4	5	105+65	RT	1-3 TATALINA		36	18	4.50	S	1-3.0" T	X		
F4	6	107+05	LT	1-3 TATALINA		36	18	4.50	N	1-3.0" T	X		
F4	7	106+80	LT	OM3-L		12	36	3.00	N	1-2.5" P.T.		X	
F4	8	106+80	RT	OM3-R		12	36	3.00	N	1-2.5" P.T.		X	

PRELIMINARY



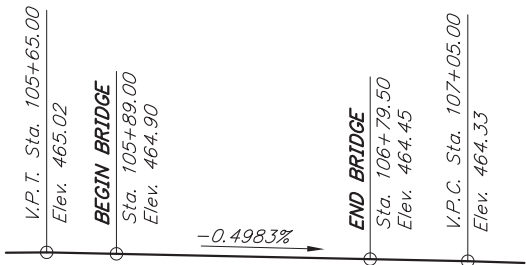
STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
**TAKOTNA: GOLD CREEK BRIDGE &
TATALINA BRIDGE REPLACEMENT**

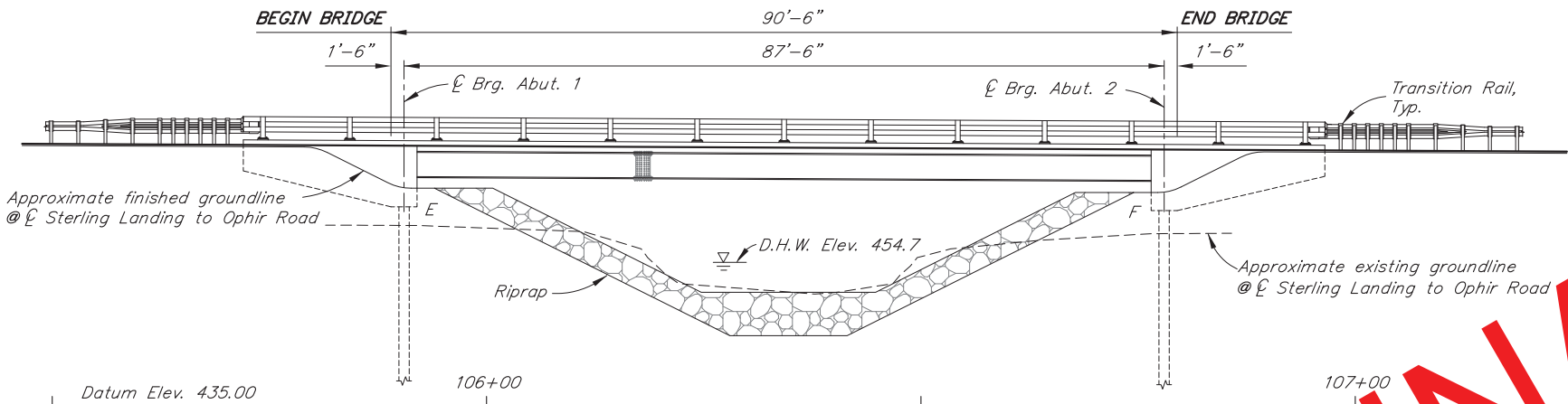
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R:\cad\462\462-GEN Frt. Feb/21/20 09:41am

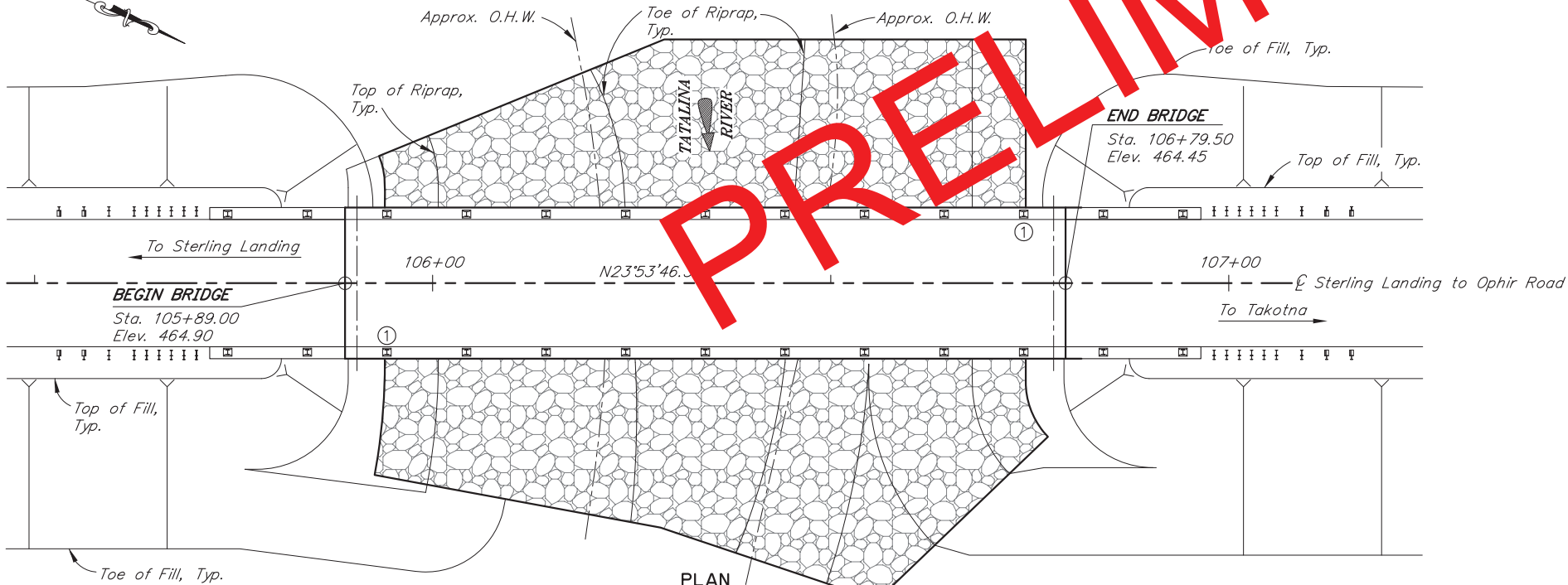
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	000S783/Z516210000	2020	N1	TtlShts



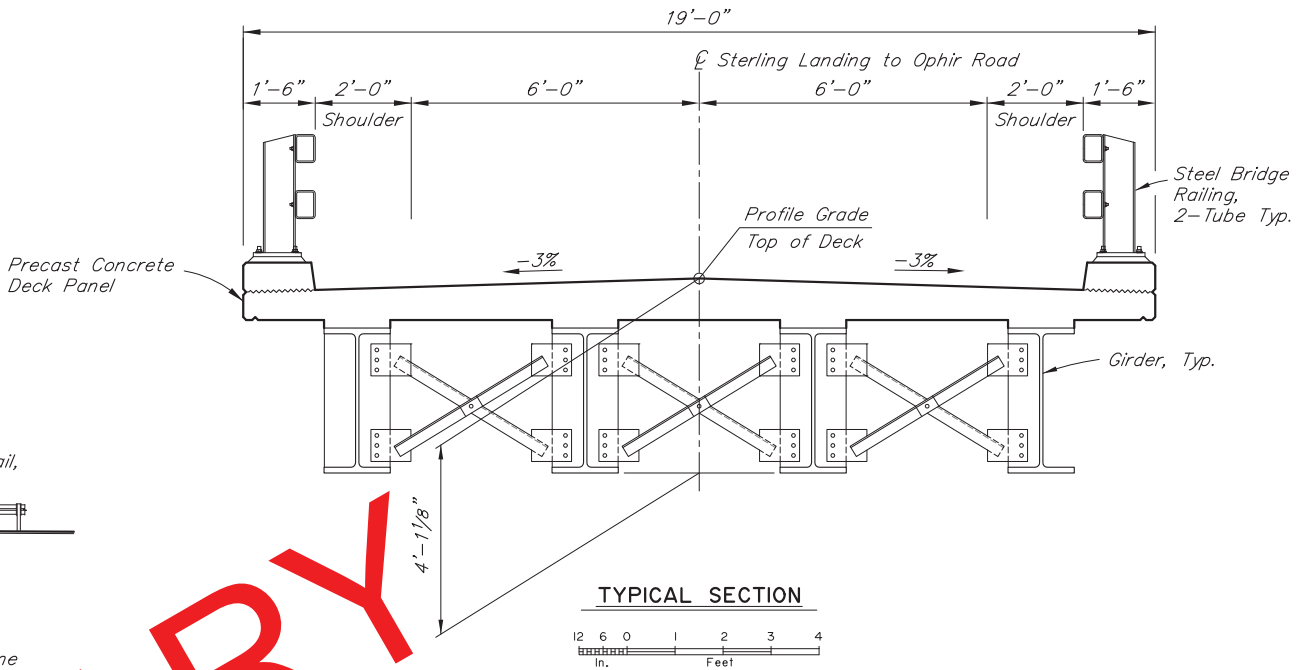
PROFILE GRADE DATA
No Scale



ELEVATION



PLAN



TYPICAL SECTION



BRIDGE DRAWING INDEX

TITLE	DWG. NO.
GENERAL LAYOUT	1
SITE PLAN	2
RIPRAP LAYOUT	3
ABUTMENT 1	4
ABUTMENT 2	5
WINGWALLS	6
TYPICAL SECTION AND FRAMING PLAN	7
GIRDERS	8
GIRDER DETAILS	9
OPTIONAL BOLTED FIELD SPLICE	10
CAMBER DETAIL	11
DECK PANELS	12
STEEL BRIDGE RAILING, 2-TUBE	13
TRANSITION RAIL	14
TEST HOLE LOGS AND LOCATIONS	15-

PRELIMINARY PLAN

NOTES:

① Approximate location of Bridge No. Plate.

DESIGNED BY: Elmer Marx	CHECKED: Checker	LAYOUT BY: Elmer Marx	CHECKED BY: Checker
DRAWN BY: Michael Foster	CHECKED: Elmer Marx	SPECIFICATIONS BY: Elmer Marx	P S & E COMPARED: Checker
QUANTITIES BY: Elmer Marx	CHECKED: Checker	APPROVAL RECOMMENDED BY: Rich Pratt	

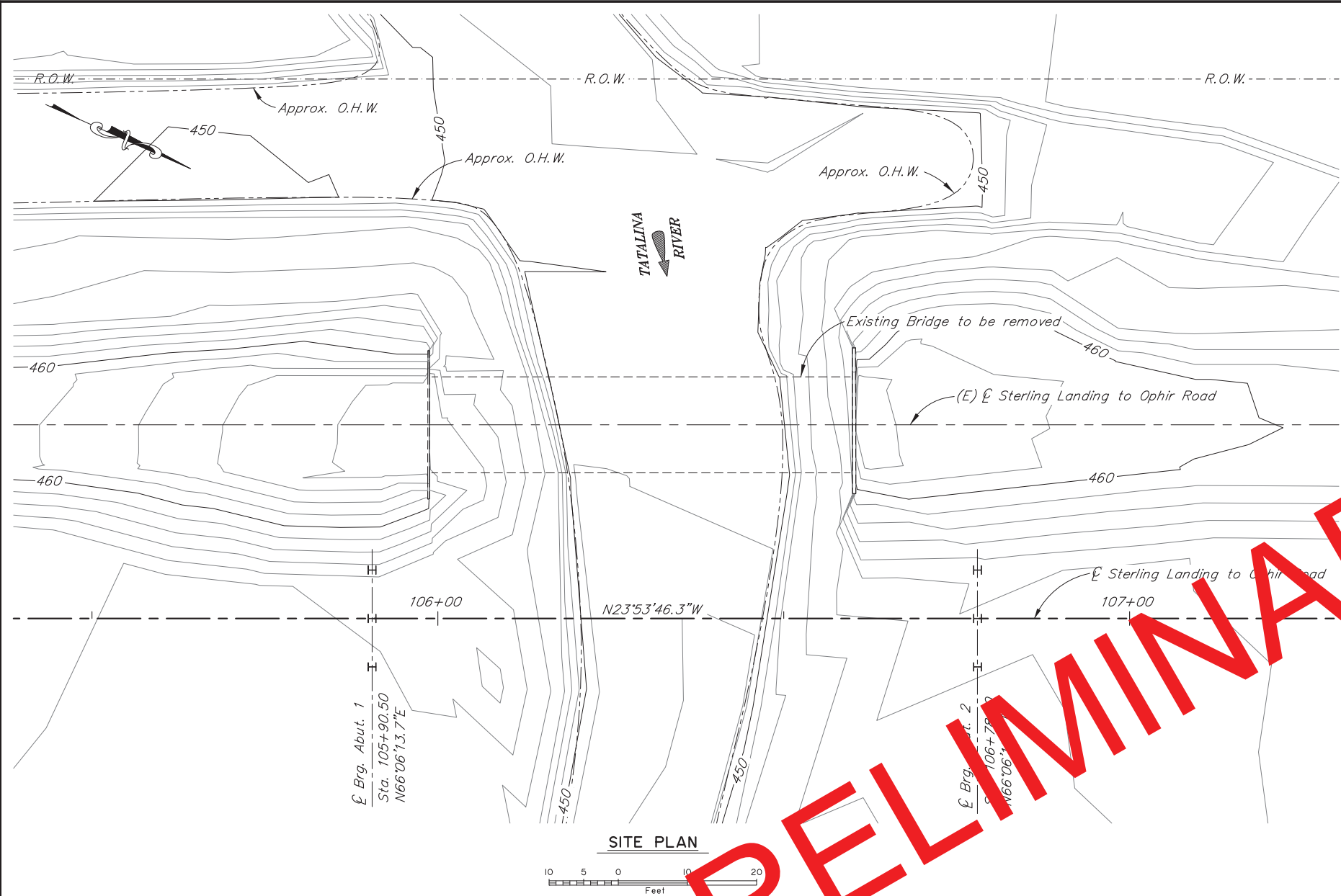
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
BRIDGE SECTION
3132 Channel Drive
Juneau, Alaska 99801
907-465-2975

TATALINA RIVER BRIDGE
STERLING LANDING TO OPHIR ROAD
GENERAL LAYOUT



BRIDGE NO. 462
DWG. NO. 1

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GENERAL NOTES

DESIGN:..... AASHTO LRFD Bridge Design Specifications, 2020 Edition, with latest interim specifications.

Seismic design per AASHTO Guide Specifications for LRFD Seismic Bridge Design, 2011 with latest interim revisions.

LIVE LOAD:..... HL-93

DEAD LOAD:..... Includes 50 psf for all wearing surfaces.

SEISMIC PARAMETERS:..... PGA = 0.12
S_s = 0.27
S_i = 0.11
Site Class = D
Liquefaction Potential = Moderate
AASHTO 7% probability of exceedance in 75 years.

REINFORCEMENT:..... ASTM A706, Grade 60, F_y = 60,000 psi
Space reinforcement evenly unless otherwise noted.

CONCRETE:..... Class A Concrete unless otherwise noted, f'c = 4000 psi
Class P Concrete for precast deck panels, f'c = 5,000 psi.
Provide rubbed finish on all exposed vertical surfaces.

STRUCTURAL STEEL:..... ASTM A709, Grade 50T3, F_y = 50,000 psi
Galvanize structural steel in accordance with AASHTO M111 or SSPC CS23.00 unless noted otherwise.
All steel in main members subject to tension.

HIGH STRENGTH BOLTS:..... Galvanized ASTM F3125 Grade A325 or F1852, F_u = 120,000 psi.
Exclude threads from shear plane. Do not use punched holes.

STRUCTURAL STEEL PILING:..... ASTM A709, GR50T3, F_y = 50,000 psi.
Pile Tip reinforcing is required.

SHEAR STUD CONNECTORS:..... ASTM A108, F_u = 60,000 psi

PILE DATA TABLE							
		DRIVING CRITERIA			DESIGN DATA		
LOCATION	PILE TYPE	MINIMUM PENETRATION (ft)	ESTIMATED PILE TIP ELEVATION (ft)	DRIVING RESISTANCE (K)	STRENGTH FACTORED LOAD (K)	NOMINAL RESISTANCE (K)	RESISTANCE FACTOR, ϕ
Abutment 1	HP14x117	59	391	385	250	385	0.65
Abutment 2	HP14x117	59	391	385	250	385	0.65

ESTIMATE OF QUANTITIES						
ITEM NO.	ITEM	PAY UNIT	ESTIMATING UNIT	SUBST.	SUPERST.	TOTAL QUANTITY
202.0023.0000	Removal of Bridge	LS	LS	All Req'd	All Req'd	All Req'd
203.0003.0000	Unclassified Excavation	CY	CY	128	---	128
205.0006.0000	Structural Fill	CY	CY	175	---	175
501.0001.0000	Class A Concrete	LS	CY	38.1	17.1	55.2
501.0007.0000	Precast Concrete Member, Deck Panel	EA	EA	---	17	17
503.0001.0000	Reinforcing Steel	LS	LBS	2,485	---	2,485
503.0002.0000	Epoxy-Coated Reinforcing Steel	LS	LBS	---	1,315	1,315
504.0001.0000	Structural Steel	LS	LBS	---	95,825	95,825
505.0005.1417	Furnish Structural Steel Piles, HP 14x117	LF	LF	400.4	---	400.4
505.0006.1417	Drive Structural Steel Piles, HP 14x117	EA	EA	6	---	6
507.0001.0002	Steel Bridge Railing, 2-Tube	LF	LF	---	249	249
606.0016.0000	Transition Rail	EA	EA	---	4	4
611.0001.0002	Riprap, Class II	CY	CY	775	---	775

Item numbers are for reference only. Quantities shown are not necessarily the pay quantities nor the total quantity of the particular item.

ABBREVIATIONS:

CL = centerline
Pl = plate
& = and
@ = at
Ø = diameter
± = approximate
AASHTO = American Association of State Highway and Transportation Officials
ASTM = American Society for Testing and Materials
Abut. = abutment
Approx. = approximate
b.f. = back/dirt face
bot. = bottom
Br. = bridge
btwn. = between
Brg. = bearings
C.G. = center of gravity
C.I.P. = cast in place
CJP = complete joint penetration
Clr. = clear, clearance
CY = cubic yard
D.H.W. = design high water

dia. = diameter
Dwg. = drawing
E = expansion
(E) = existing
EA = each
Elev. = elevation
Ext. = exterior
e.f. = each face
e.w. = each way
F = fixed
f.f. = front/air face
f'c = specified concrete compressive strength
Fy = yield stress
Galv. = galvanize
Hwy. = highway
Int. = interior
Jt. = joint
K = 1,000 pounds
ksf = 1,000 pounds per square foot
ksi = 1,000 pounds per square inch
LB = pound
LF = linear foot
LS = lump sum

Lt. = left
max. = maximum
min. = minimum
n.f. = near face
No. = number
o.c. = on center
O.H.W. = ordinary high water
pcf = pounds per cubic foot
psf = pounds per square foot
psi = pounds per square inch
R.O.W. = right of way
Rt. = right
Rd. = road
RT = radiographic testing
spc. = space, spaces
Sta. = station
SF = square feet
Symm. = symmetric
Typ. = typical
UT = ultrasonic testing
V.P.C. = point of vertical curve
V.P.I. = point of vertical intersection
V.P.T. = point of vertical tangent
w/ = with

DESIGNED BY: Elmer Marx	CHECKED: Checker	PRELIMINARY PLAN	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES BRIDGE SECTION 3132 Channel Drive Juneau, Alaska 99801 907-465-2975	TATALINA RIVER BRIDGE STERLING LANDING TO OPHIR ROAD SITE PLAN	 BRIDGE NO. 462 DWG. NO. 2
DRAWN BY: Michael Foster	CHECKED: Elmer Marx				
QUANTITIES BY: Elmer Marx	CHECKED: Checker				

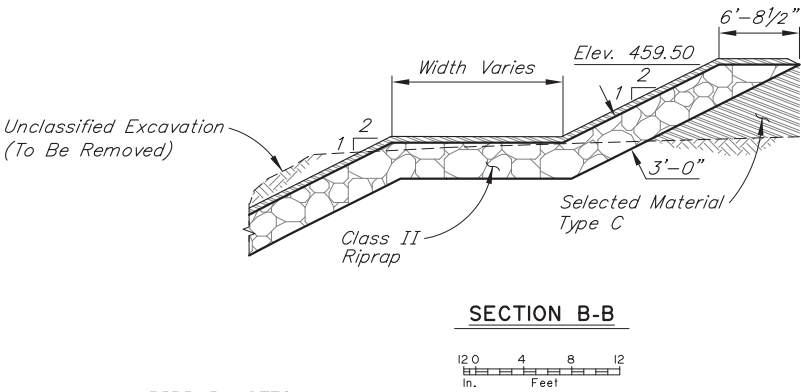
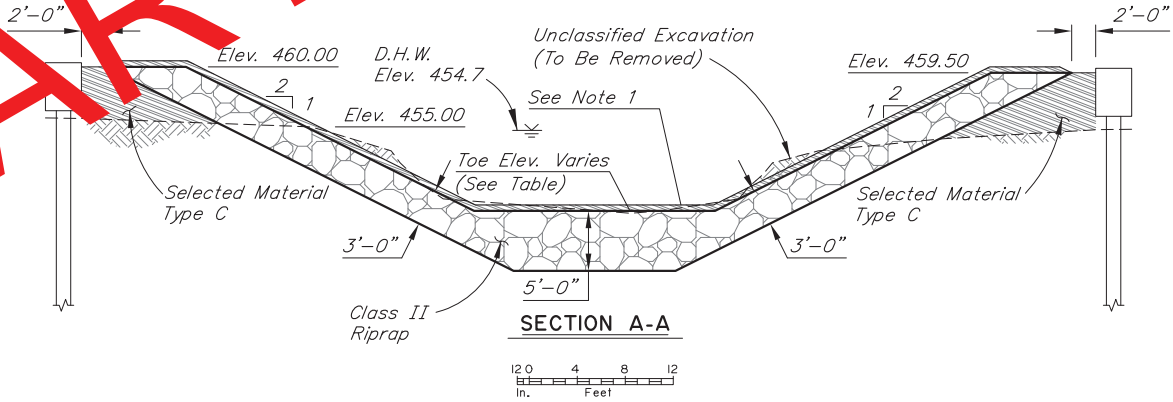
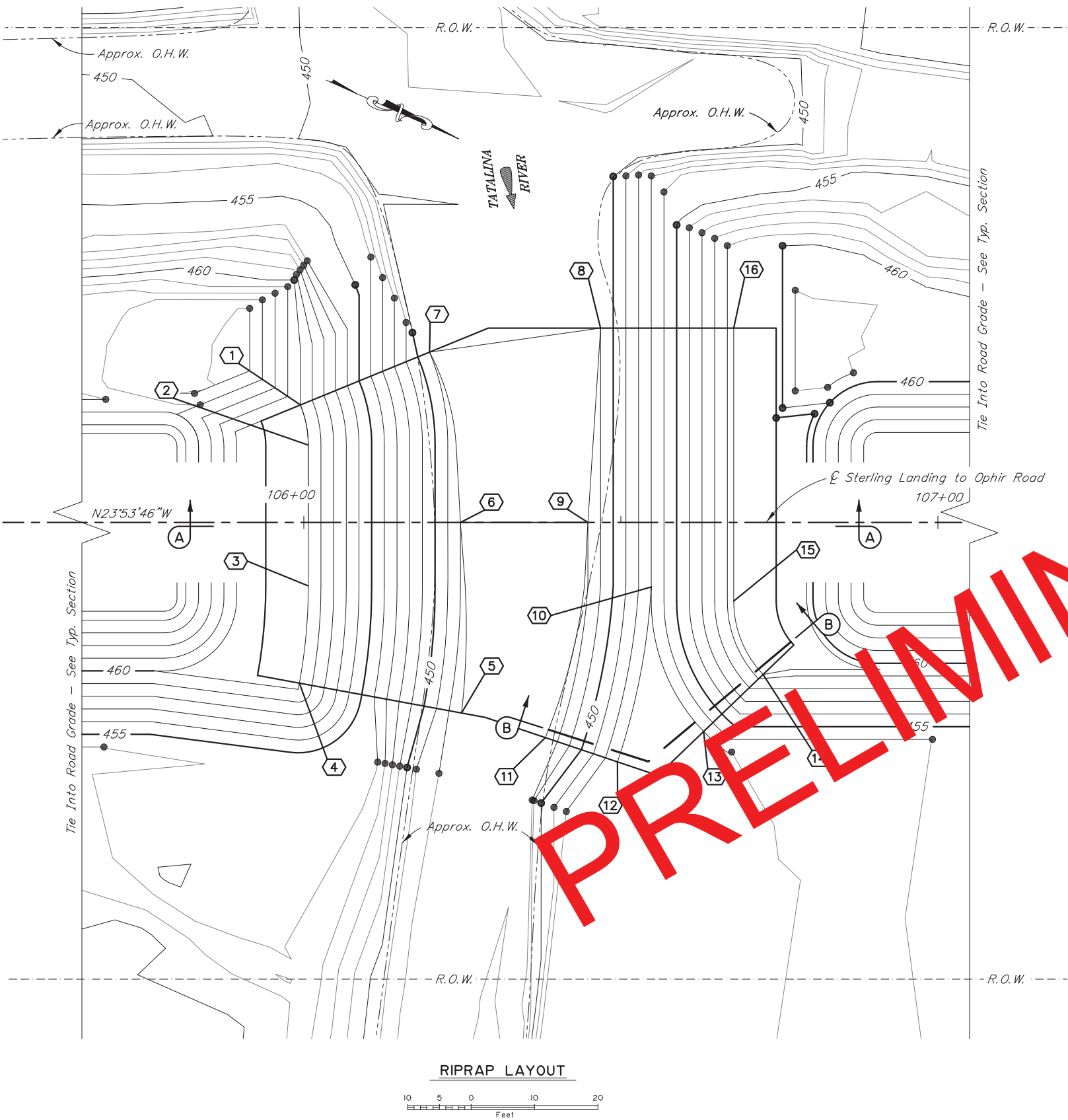
R:\cadd\462-RIPRAP LAYOUT Fri, Feb/21/20 09:42am

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	000S783/Z516210000	2020	N3	TtlShts

HYDRAULIC & HYDROLOGIC SUMMARY, BRIDGE NO. 462			
Flood Frequency (Yr.)	50	100	500
Exceedance Probability (%)	2	1	0.2
Discharge (cfs)	1150	1170	1210
Water Surface Elevation (ft)	454.6	454.7	454.8
Anticipated Add'l Backwater (ft)		0.0	
Contraction Scour (ft)	0.5	0.5	0.6
Pier Scour (ft)			
Abut. Scour (ft)	4.4	4.5	4.5
Long-Term Degradation (ft)		1	

Drainage Area: 75.8 square miles
The hydraulic capacity exceeds the 0.2% annual chance flood in an ice-free channel condition. Riprap provisions to be installed to counter abutment scour potential.

RIPRAP TABLE			
POINT	STATION	OFFSET	ELEVATION
1	105+99.5	18.5 LT	460.0'
2	106+00.7	12.2' LT	460.0'
3	106+00.7	10.0 RT	460.0'
4	105+99.3	25.3' RT	460.0'
5	106+24.9	30.0' RT	447.0'
6	106+24.7	0.0'	448.0'
7	106+19.8	26.8' LT	449.0'
8	106+46.8	30.6' LT	449.0'
9	106+44.8	0.0'	448.0'
10	106+54.8	10.2' RT	453.0'
11	106+38.1	33.9' RT	447.0'
12	106+49.5	37.7' RT	453.0'
13	106+63.1	33.0' RT	453.0'
14	106+72.4	24' RT	459.5'
15	106+67.8	12.4' RT	459.5'
16	106+67.8	30.6' LT	459.5'



- RIPRAP NOTES**
- Details show a 6" fill depth of salvaged streambed material over the top of riprap, but should be interpreted as the filling of interstitial voids. Final fill depths and acceptance of any boulder "protrusions" through the salvaged streambed fill layer will be at the discretion of the Engineer.
 - Toe of riprap elevation to change at a consistent slope during transition from one elevation contour to the next. Provide smooth transitions between the toe elevations shown on the plans

DESIGNED BY:	Michael Knapp	CHECKED:	Dane Palmer
DRAWN BY:	Michael Foster	CHECKED:	Michael Knapp
QUANTITIES BY:	Michael Knapp	CHECKED:	Dane Palmer

PRELIMINARY PLAN

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
BRIDGE SECTION
3132 Channel Drive
Juneau, Alaska 99801
907-465-2975

TATALINA RIVER BRIDGE
STERLING LANDING TO OPHIR ROAD
RIPRAP LAYOUT



BRIDGE NO. 462
DWG. NO. 3

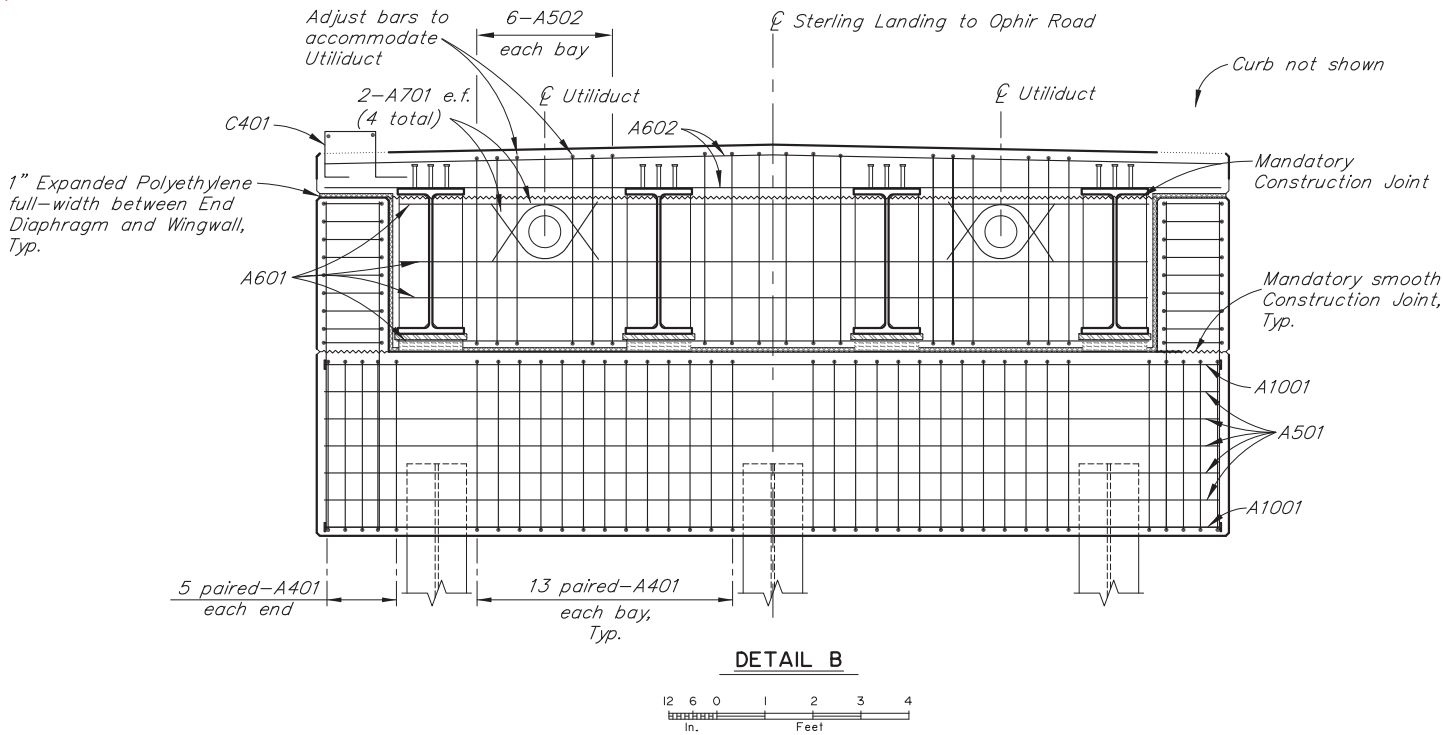
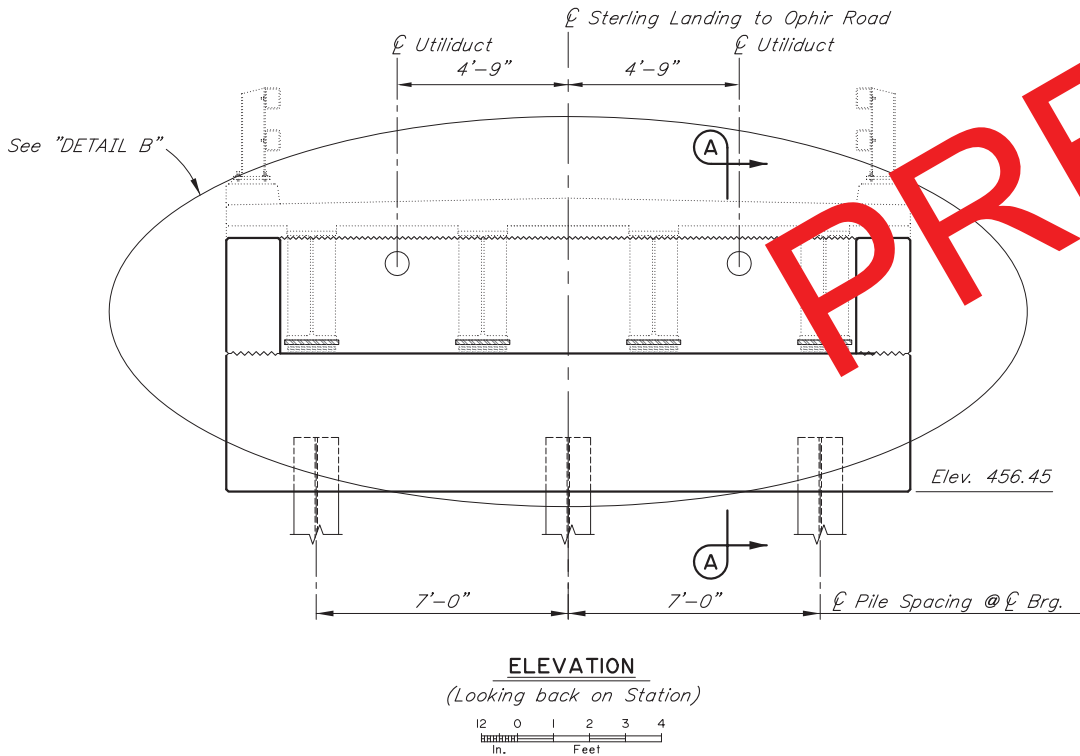
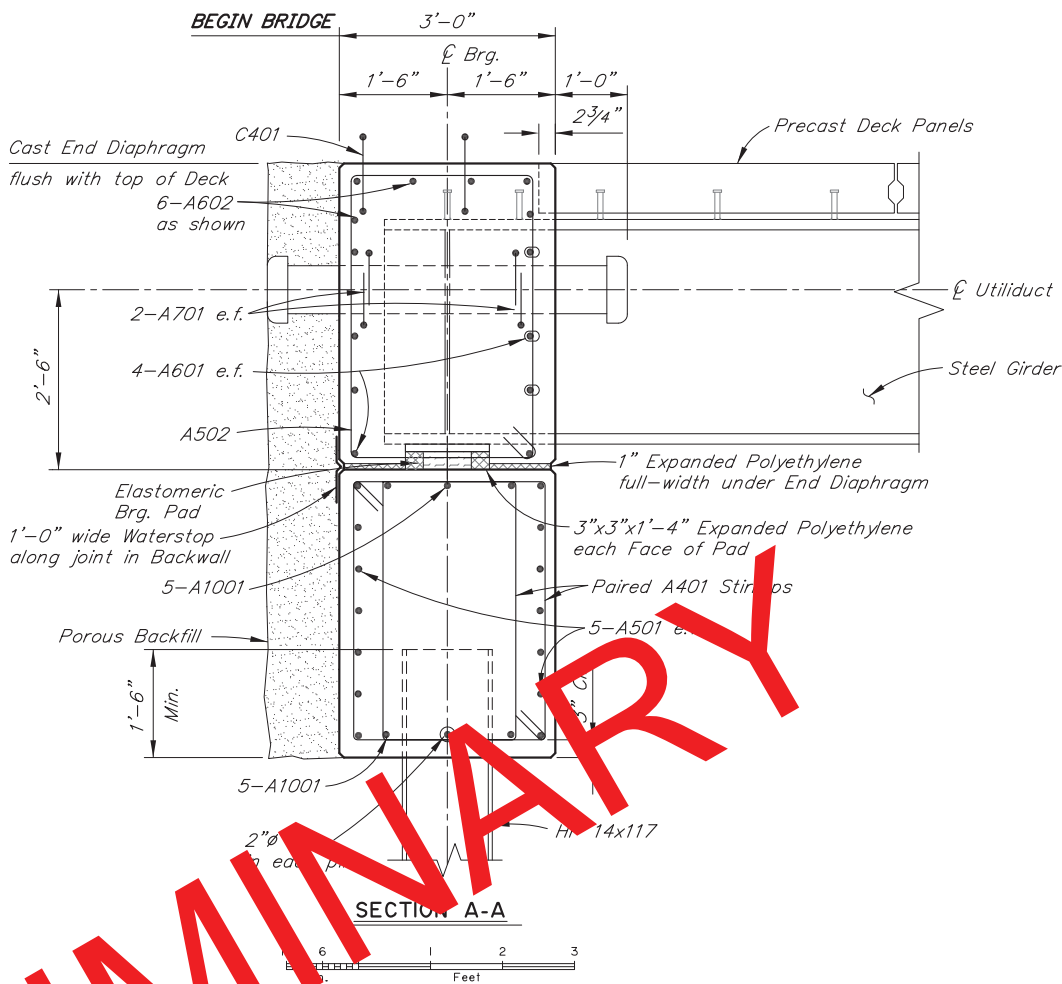
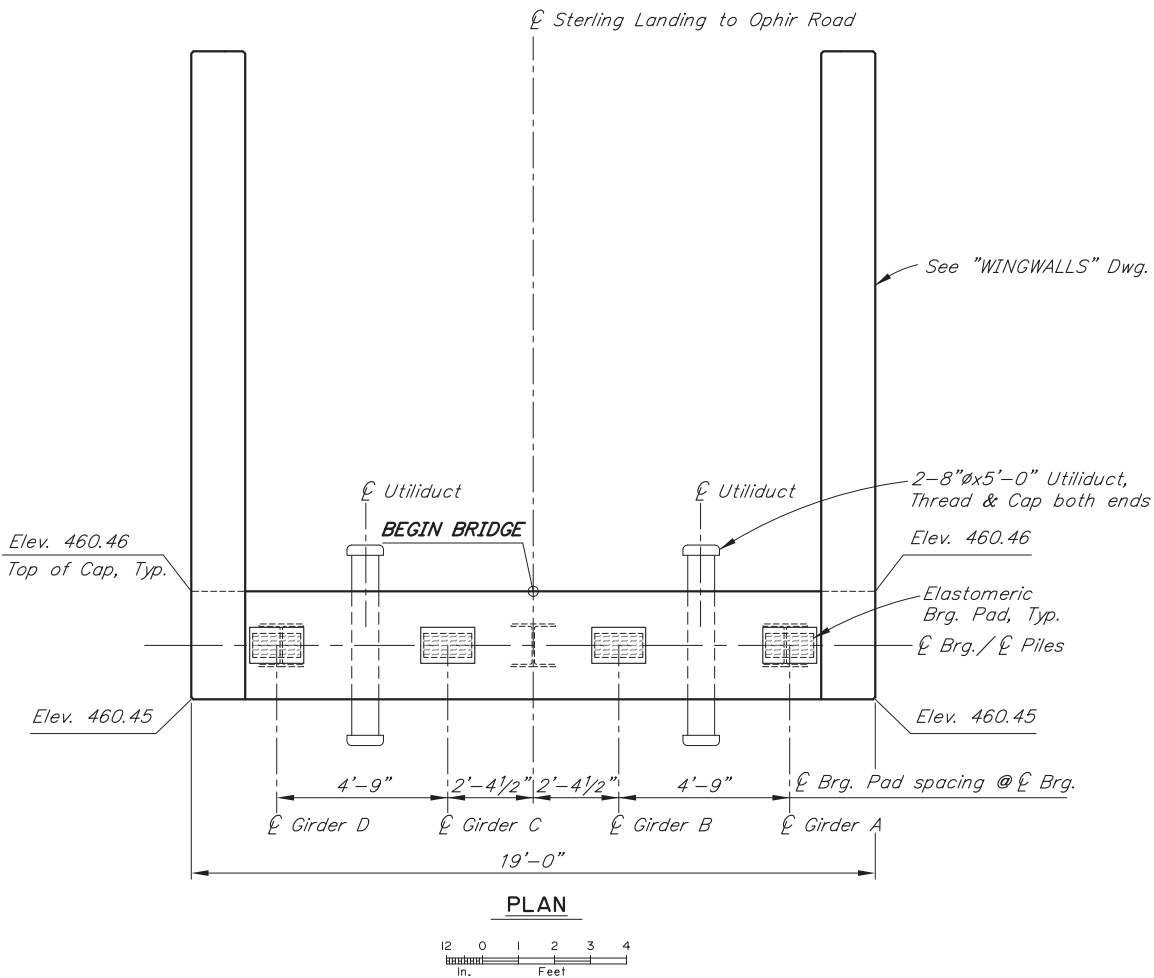
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STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	000S783/Z516210000	2020	N4	TtShts

REINFORCING STEEL - ABUTMENT 1					
MARK	NOTE	SIZE	NO.	LENGTH	TYPE
A401		4	72	12'-5"	STIRRUP
A501		5	10	18'-8"	---
A502	E	5	18	VARIES	STIRRUP
A601	E	6	8	15'-6"	---
A602	E,M	6	6	18'-8"	---
A701	E	7	8	3'-0"	BENT
A1001	H	10	10	18'-8"	---

BENDING DIAGRAM

E - Epoxy-Coated
H - Headed Reinforcing Steel
M - Field adjust to match cross slope



DESIGNED BY:	Elmer Marx	CHECKED:	Checker
DRAWN BY:	Michael Foster	CHECKED:	Elmer Marx
QUANTITIES BY:	Elmer Marx	CHECKED:	Checker

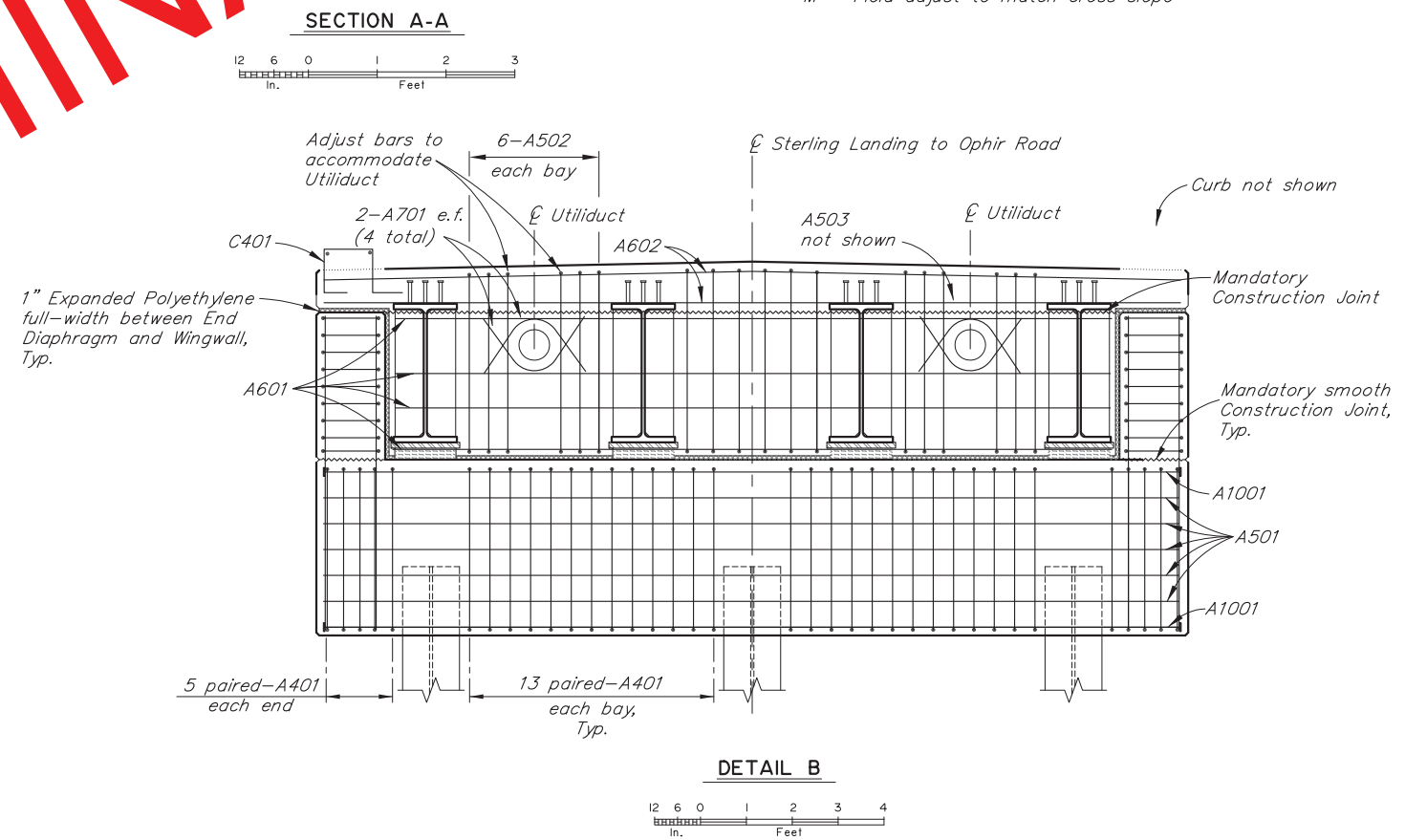
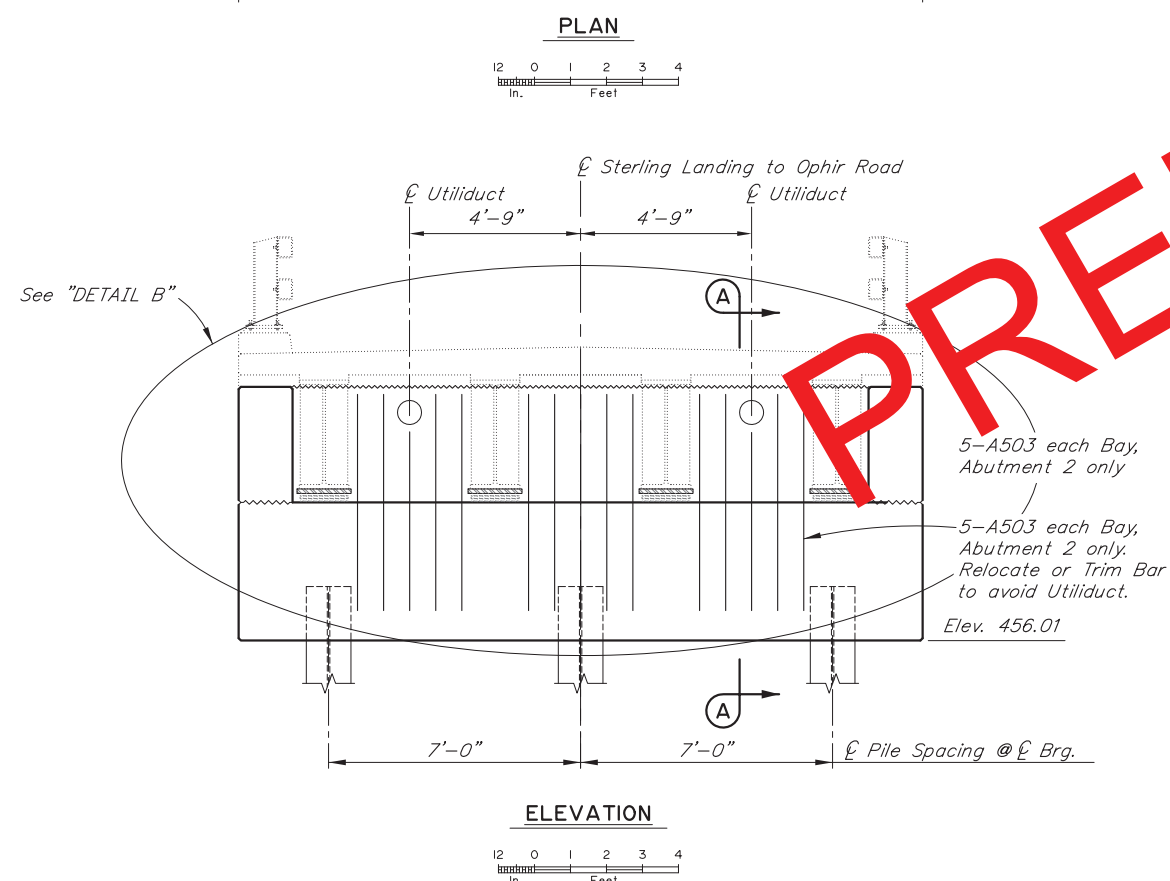
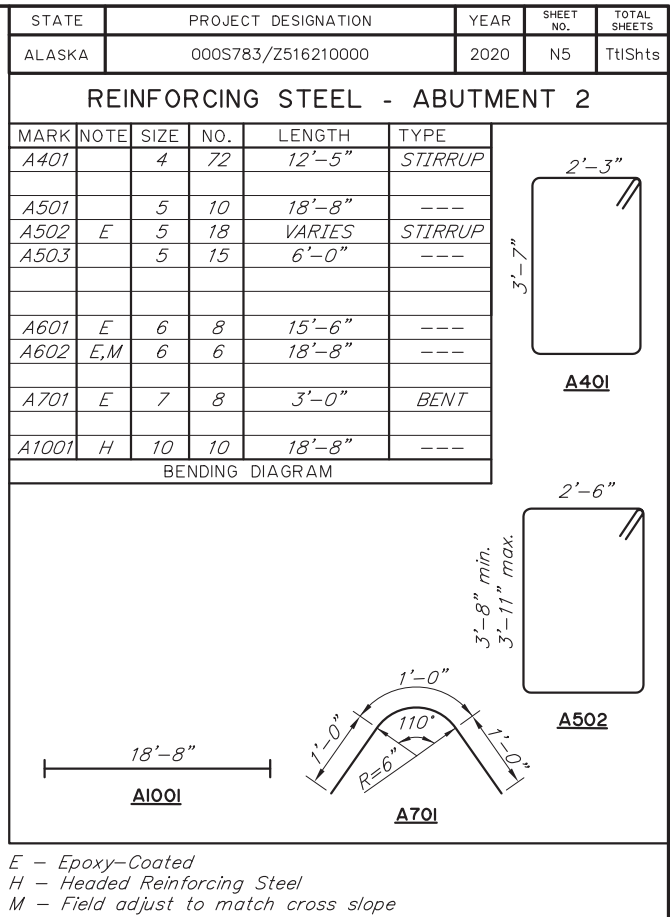
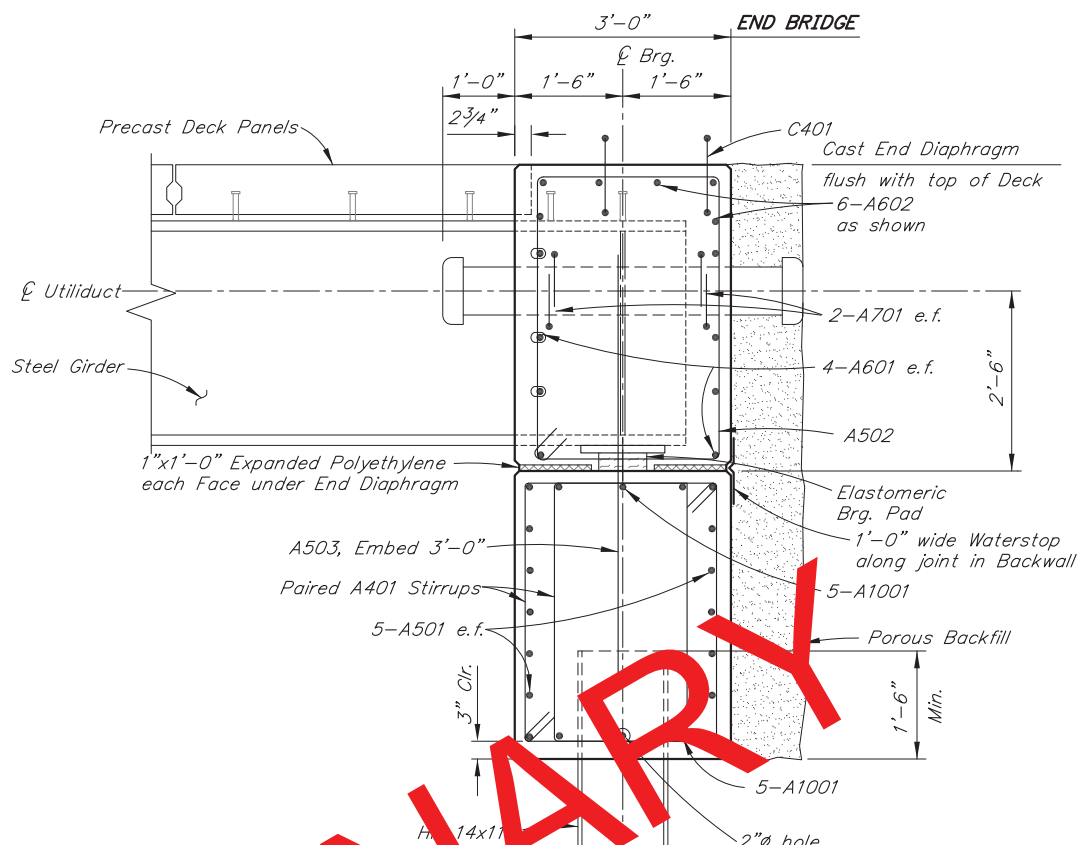
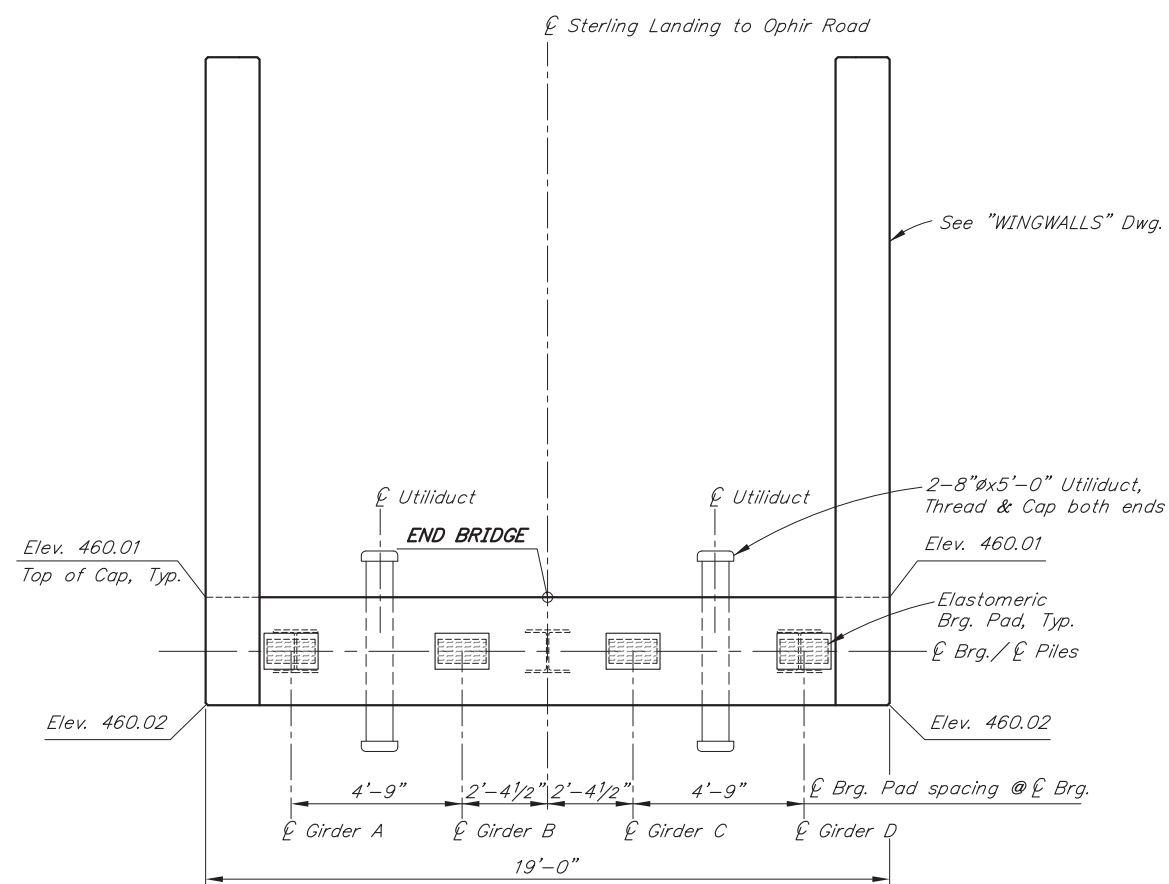
PRELIMINARY PLAN

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
BRIDGE SECTION
3132 Channel Drive
Juneau, Alaska 99801
907-465-2975

TATALINA RIVER BRIDGE
STERLING LANDING TO OPHIR ROAD
ABUTMENT 1



BRIDGE NO. 462
DWG. NO. 4



REINFORCING STEEL - ONE ABUT.					
MARK	NOTE	SIZE	NO.	LENGTH	TYPE
W401		4	72	VARIES	---
W402		4	16	6'-9"	---
W403		4	20	8'-5"	STIRRUP
W501		5	20	VARIES	---
W901		9	4	20'-6"	BENT
W902		9	20	VARIES	---
W903		9	4	18'-6"	BENT
C402	E	4	26	7'-3"	STIRRUP
C502	E	5	4	16'-6"	---

E - Epoxy-Coated

7'-0"

Begin Fill Slope

Steel Bridge Railing Expansion Joint

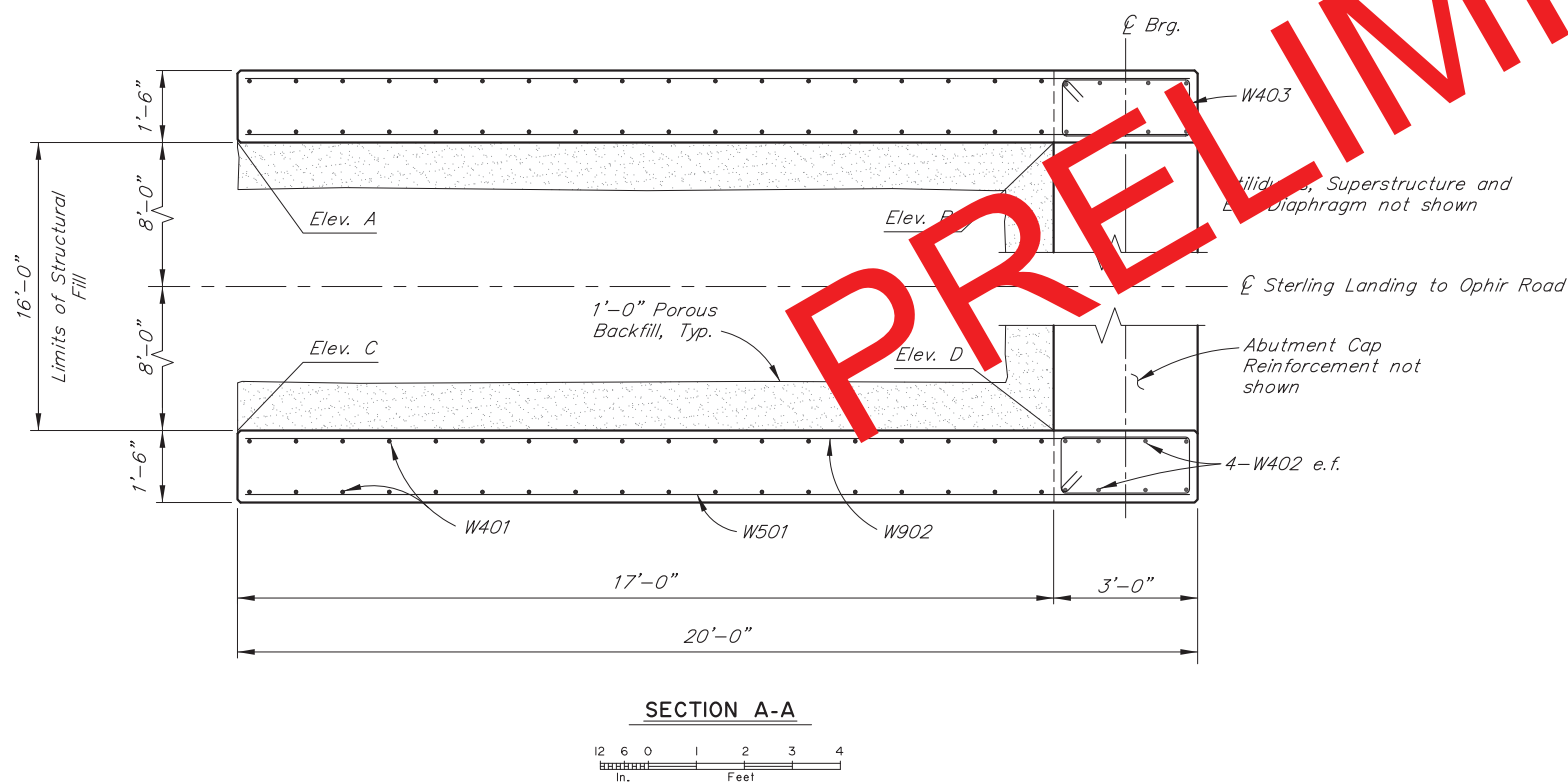
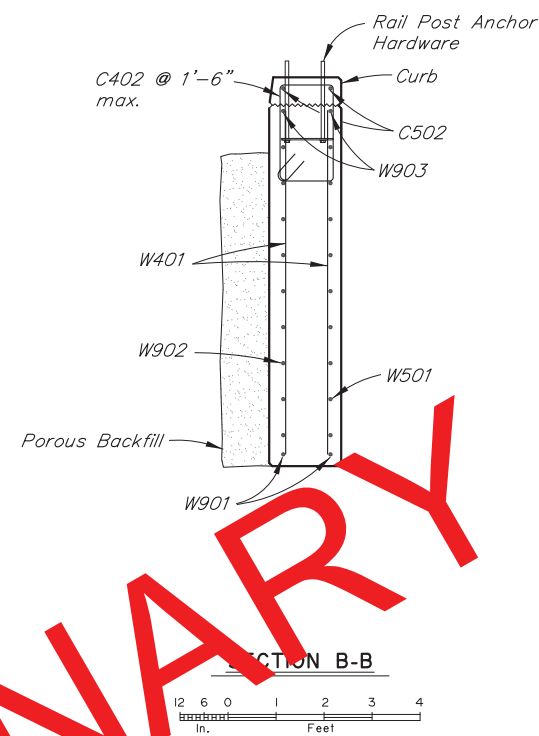
Transition Rail not shown

Finished Groundline

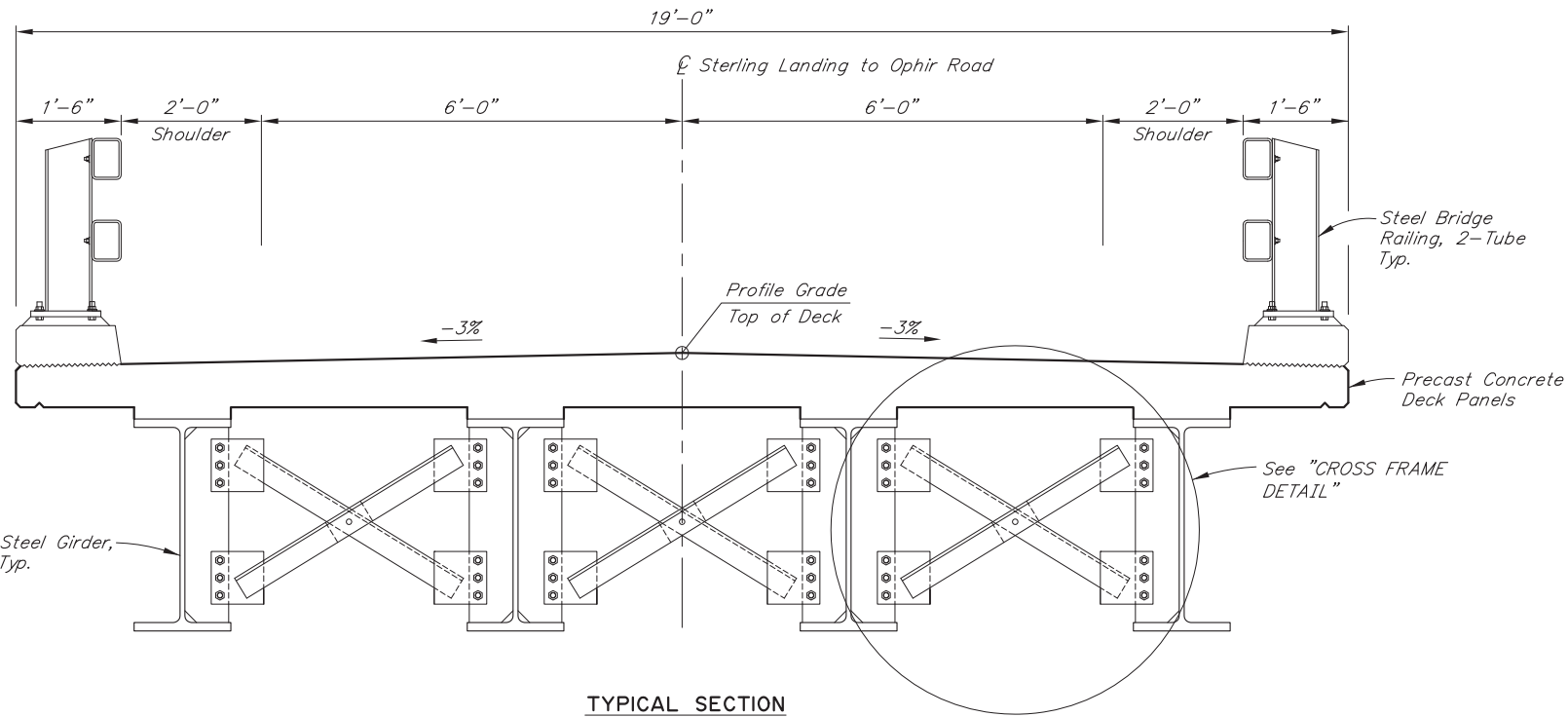
Fill vertical and horizontal surfaces with Silicone Joint Sealant, e.f., Typ.

FINISHED ELEVATION

12 0 1 2 3 4
In. Feet

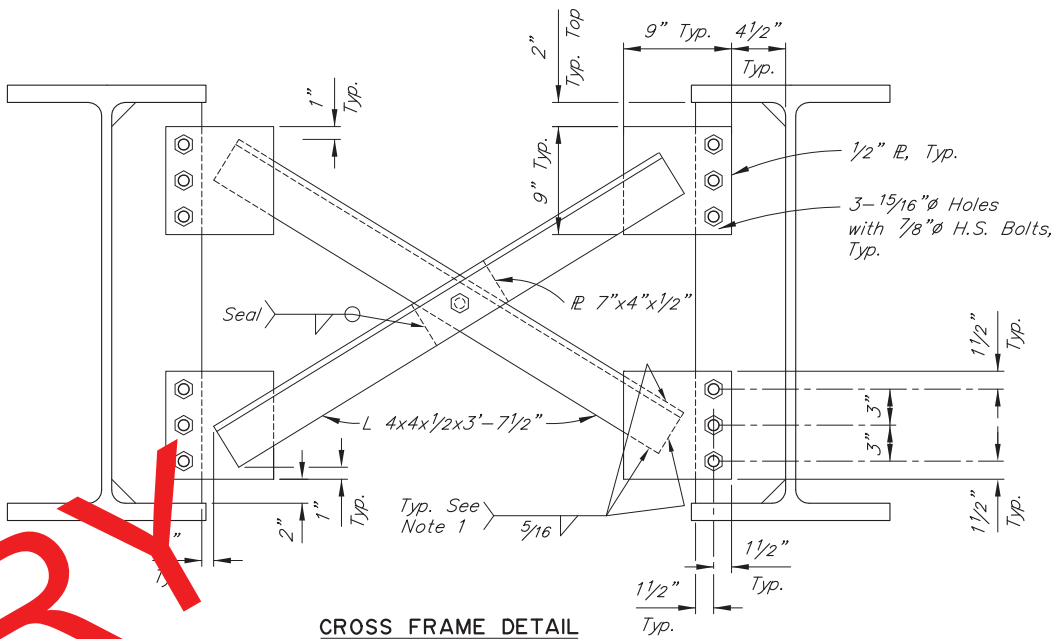


STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	000S783/Z516210000	2020	N7	TtlShts

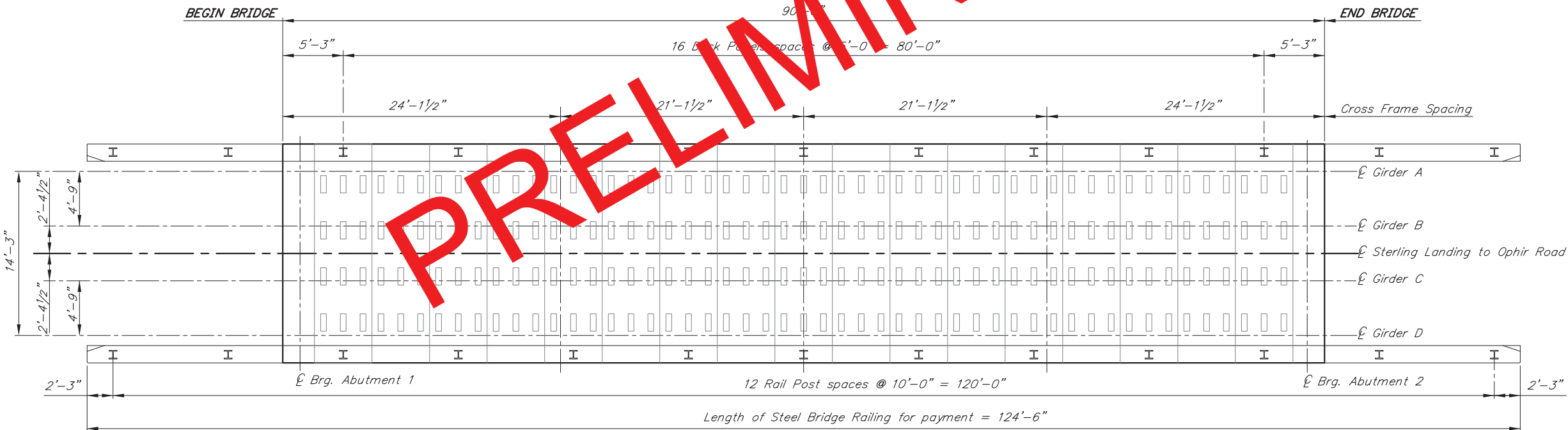
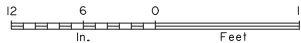


TYPICAL SECTION

12 6 0 1 2 3
In. Feet



CROSS FRAME DETAIL



FRAMING PLAN



NOTES:

1. Terminate welds 1/4" from edge of Plate. Seal weld for galvanizing.

DESIGNED BY:	Elmer Marx	CHECKED:	Checker
DRAWN BY:	Michael Foster	CHECKED:	Elmer Marx
QUANTITIES BY:	Elmer Marx	CHECKED:	Checker

PRELIMINARY PLAN

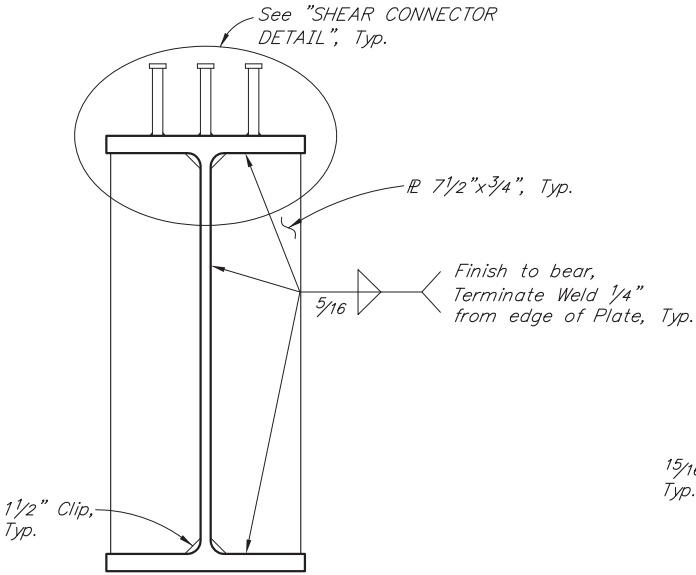
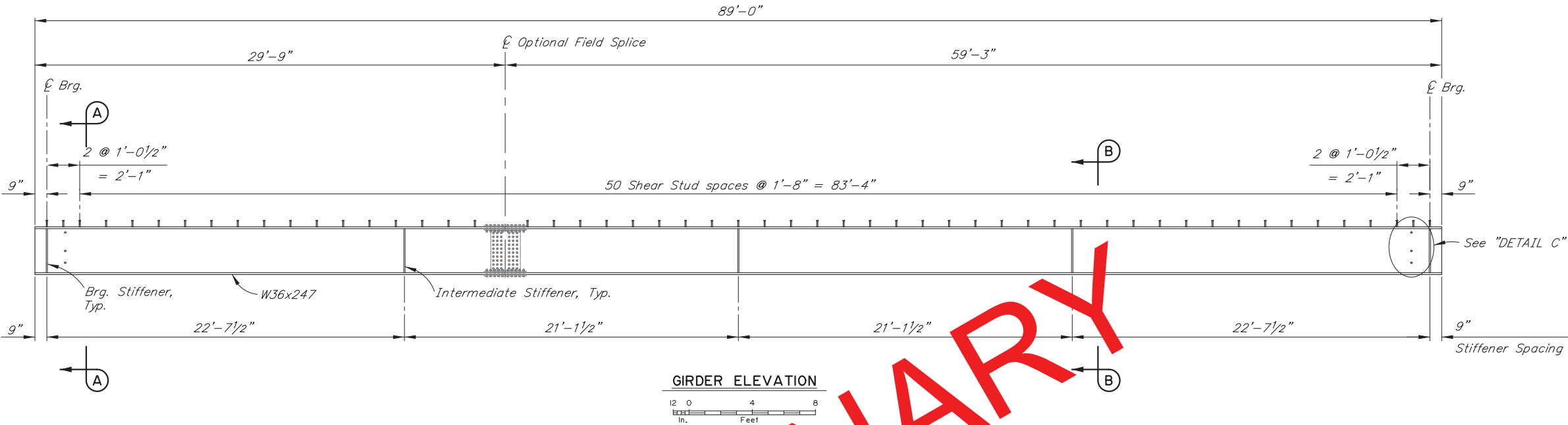
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
BRIDGE SECTION
3132 Channel Drive
Juneau, Alaska 99801
907-465-2975

TATALINA RIVER BRIDGE
STERLING LANDING TO OPHIR ROAD
TYPICAL SECTION AND FRAMING PLAN



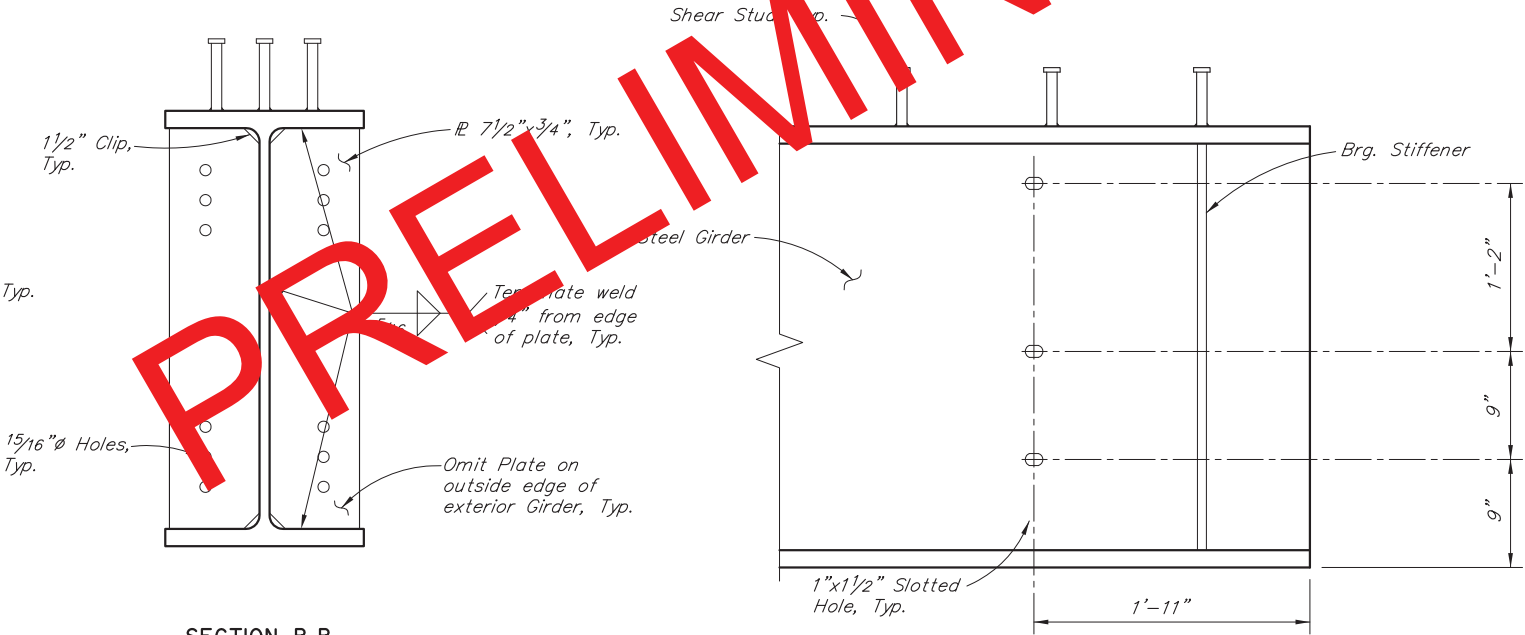
BRIDGE NO. 462
DWG. NO. 7

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	000S783/Z516210000	2020	N8	TtlShts



SECTION A-A
(Bearing Stiffener)

12 6 0 1
In. Feet

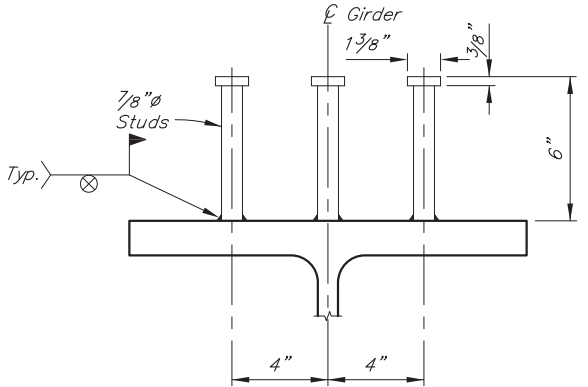


SECTION B-B
(Intermediate Stiffener)

12 6 0 1
In. Feet

DETAIL C

12 6 0 1
In. Feet



SHEAR CONNECTOR DETAIL

6 3 0 1
In. Feet

DESIGNED BY:	Elmer Marx	CHECKED:	Checker
DRAWN BY:	Michael Foster	CHECKED:	Elmer Marx
QUANTITIES BY:	Elmer Marx	CHECKED:	Checker

PRELIMINARY PLAN

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
BRIDGE SECTION
3132 Channel Drive
Juneau, Alaska 99801
907-465-2975

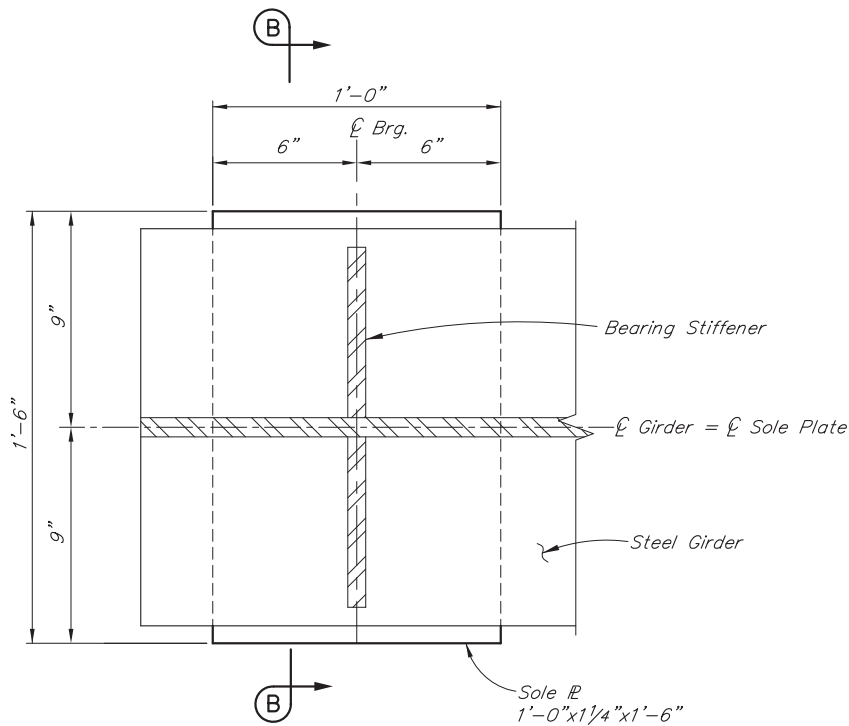
TATALINA RIVER BRIDGE
STERLING LANDING TO OPHIR ROAD
GIRDERS



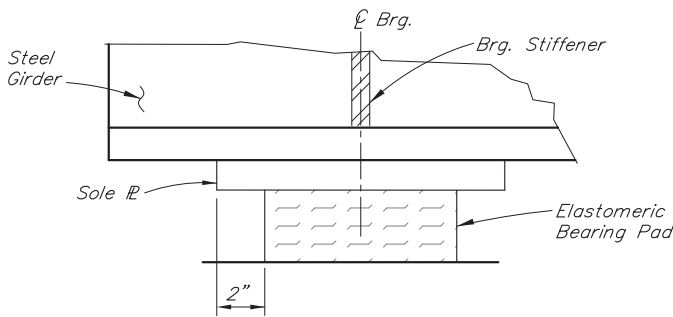
BRIDGE NO. 462
DWG. NO. 8

R:\cad\462\462-1-BEAMS Fri, Feb/21/20 09:42am

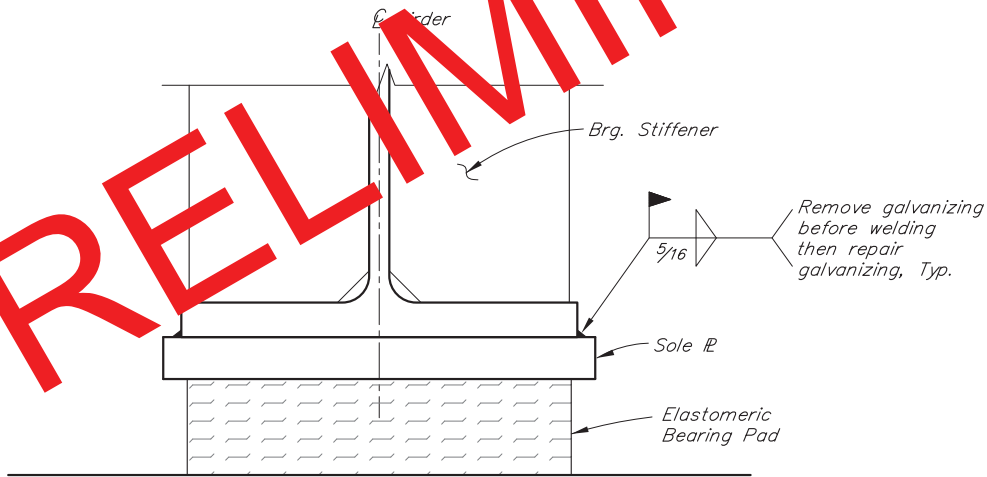
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	000S783/Z516210000	2020	N9	TtIShts



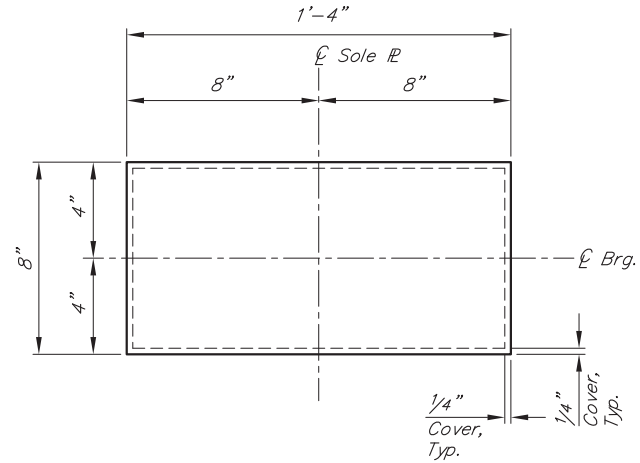
PLAN



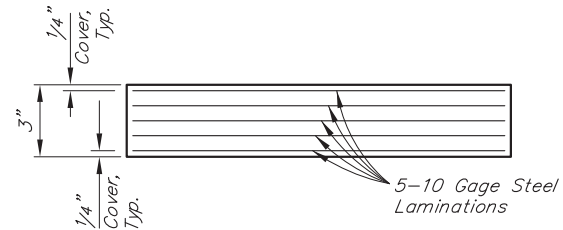
ELEVATION
BEARING DETAILS



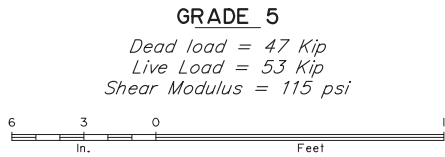
SECTION B-B



PLAN



ELEVATION
ELASTOMERIC BEARING PAD



DESIGNED BY:	Elmer Marx	CHECKED:	Checker
DRAWN BY:	Michael Foster	CHECKED:	Elmer Marx
QUANTITIES BY:	Elmer Marx	CHECKED:	Checker

PRELIMINARY PLAN

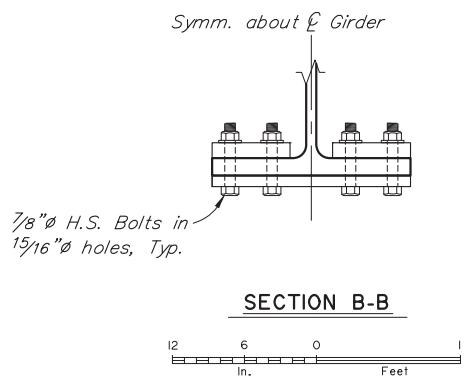
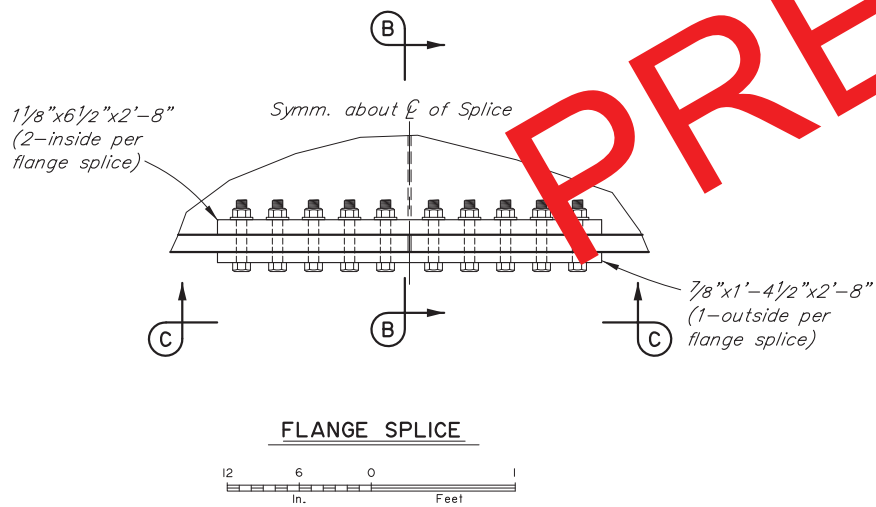
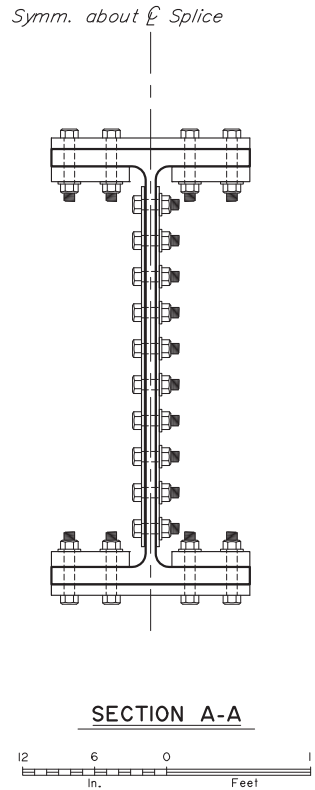
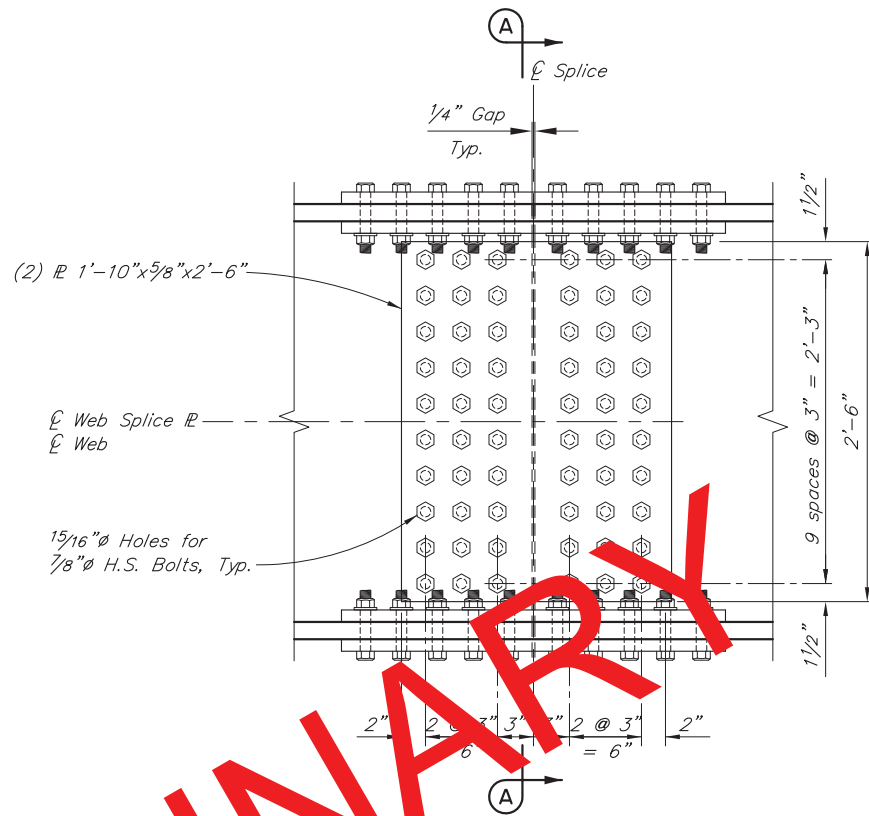
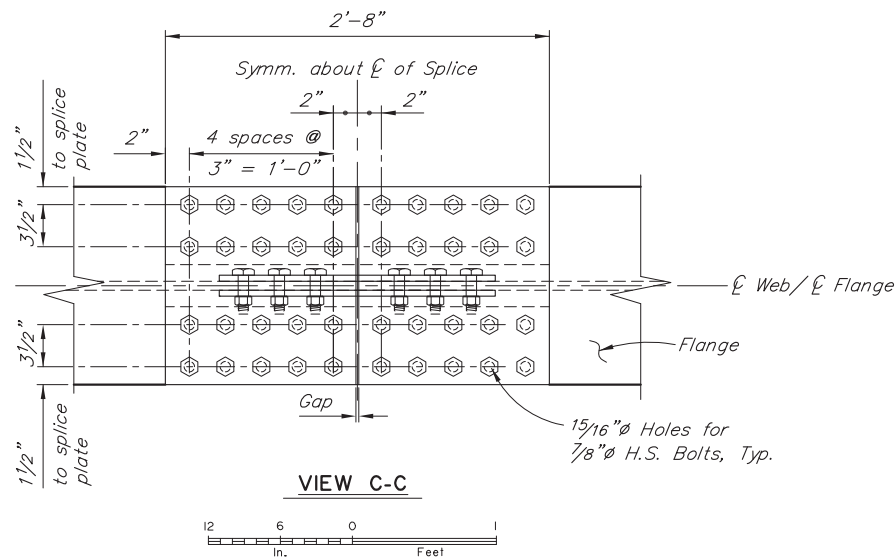
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
BRIDGE SECTION
3132 Channel Drive
Juneau, Alaska 99801
907-465-2975

TATALINA RIVER BRIDGE
STERLING LANDING TO OPHIR ROAD
GIRDER DETAILS



BRIDGE NO. 462
DWG. NO. 9

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	000S783/Z516210000	2020	N10	Tt1Shts



NOTE:
1. Girders and splice plates must be galvanized in accordance with SSPC CS23.00, to provide Class B surface condition for slip-critical connection.

DESIGNED BY:	Elmer Marx	CHECKED:	Checker
DRAWN BY:	Michael Foster	CHECKED:	Elmer Marx
QUANTITIES BY:	Elmer Marx	CHECKED:	Checker

PRELIMINARY PLAN

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
BRIDGE SECTION
3132 Channel Drive
Juneau, Alaska 99801
907-465-2975

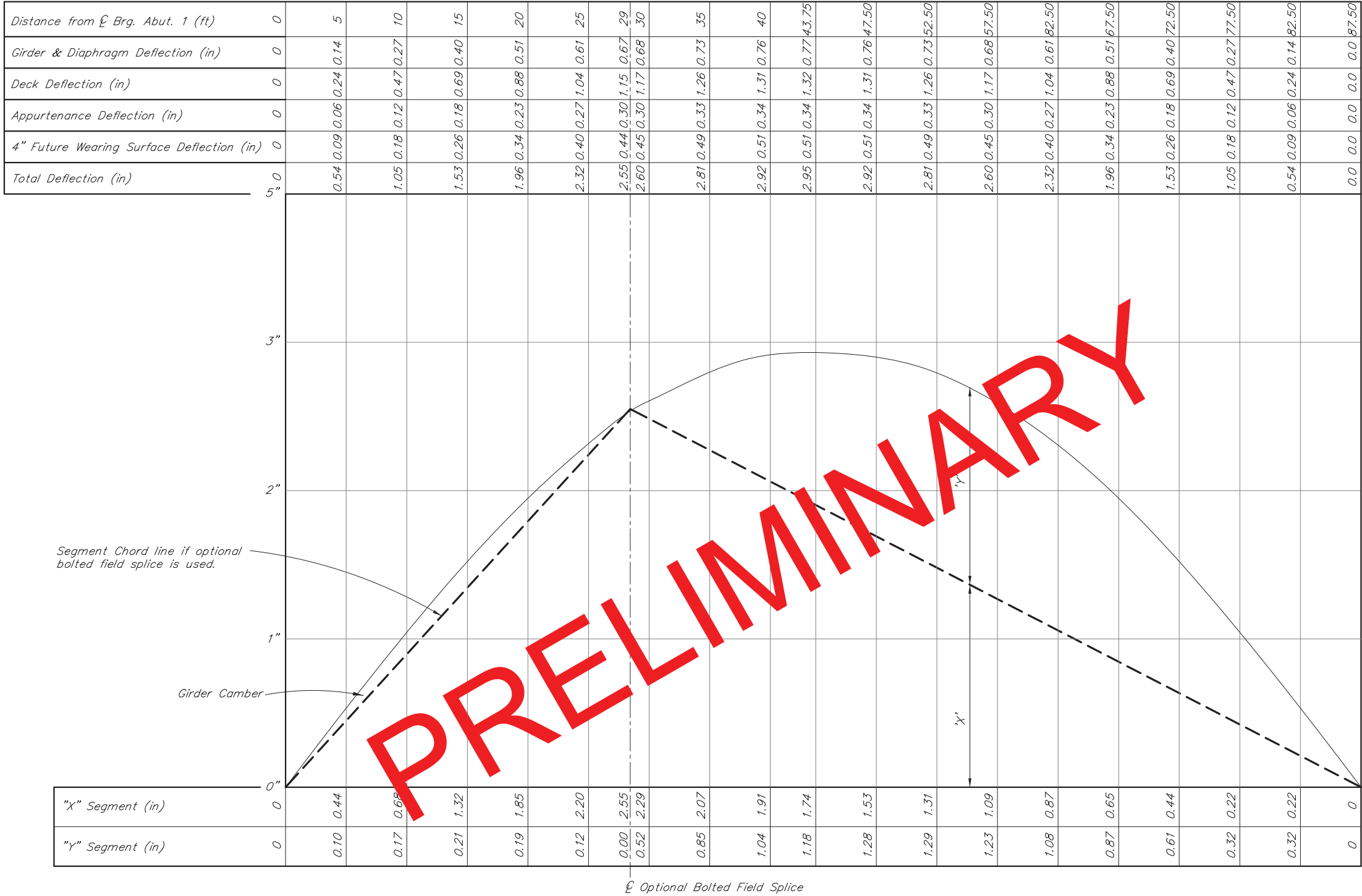
TATALINA RIVER BRIDGE
STERLING LANDING TO OPHIR ROAD
OPTIONAL BOLTED FIELD SPLICE



BRIDGE NO. 462
DWG. NO. 10

R:\cod\462\462-1-CAMBER Fri, Feb/21/20 09:42am

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	000S783/Z516210000	2020	N11	Tt1Shts



CAMBER DIAGRAM

No Scale

Camber Notes:

- Segment Chord line is a straight line through the top of the web connecting the $\mathcal{E}$ of bearing @ Abutment to $\mathcal{E}$ of field splice.
- Minimum camber (sum of $x+y$) is provided. Maximum additional camber may vary up to $\frac{1}{2}$ " at the mid-span. Additional camber shall vary parabolically.

DESIGNED BY:	Elmer Marx	CHECKED:	Checker
DRAWN BY:	Michael Foster	CHECKED:	Elmer Marx
QUANTITIES BY:	Elmer Marx	CHECKED:	Checker

PRELIMINARY PLAN

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
BRIDGE SECTION
3132 Channel Drive
Juneau, Alaska 99801
907-465-2975

TATALINA RIVER BRIDGE
STERLING LANDING TO OPHIR ROAD
CAMBER DETAIL



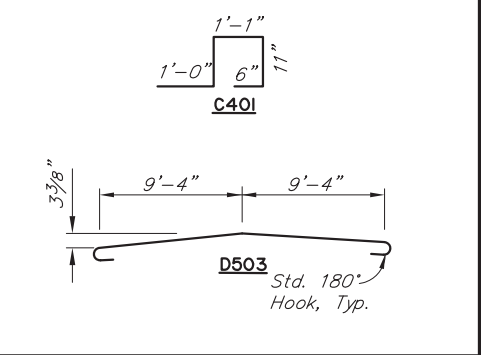
BRIDGE NO. 462
DWG. NO. II

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	000S783/Z516210000	2020	N12	Tt1Shts

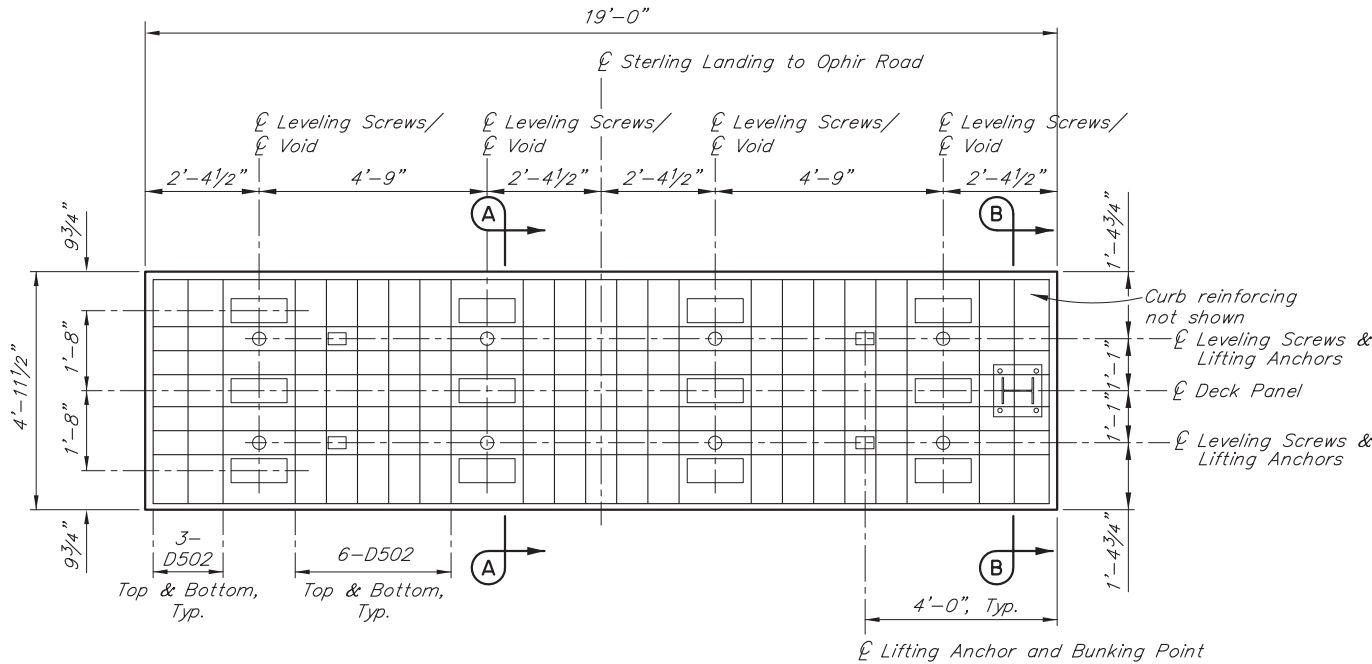
REINFORCING STEEL - ONE PANEL

MARK	NOTE	SIZE	NO.	LENGTH	TYPE
C401	E	4	8	4'-5"	BENT
C501	E,L	5	4	90'-2"	---
D501	E	5	8	18'-8"	---
D502	E	5	48	4'-7"	---
D503	E,M	5	8	19'-10"	BENT

BENDING DIAGRAM



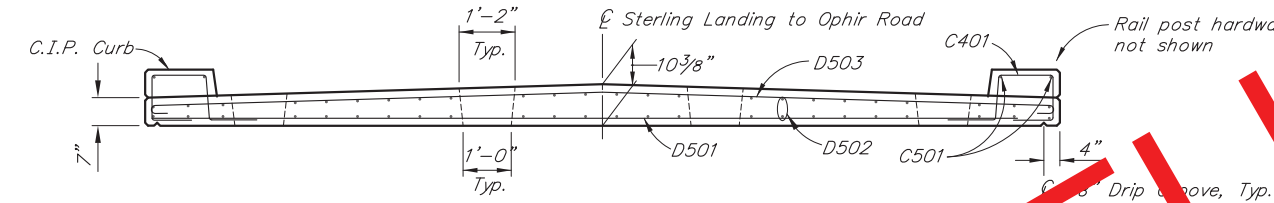
E - Epoxy-Coated reinforcing steel
M - Adjust to match cross slope
L - Splices permitted. Splice length not included.



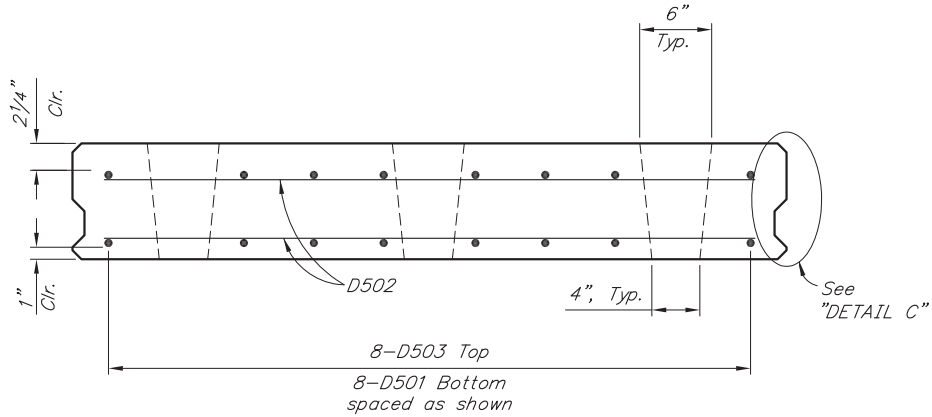
PANEL WITHOUT POST
(8 total)

PANEL WITH RAIL POST
(9 total)

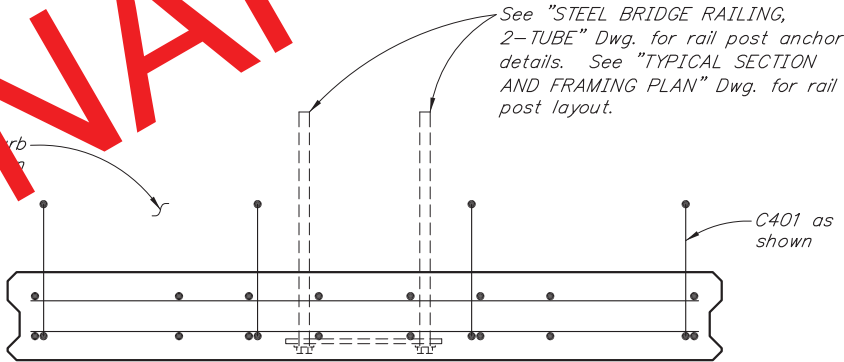
DECK PANEL - PLAN



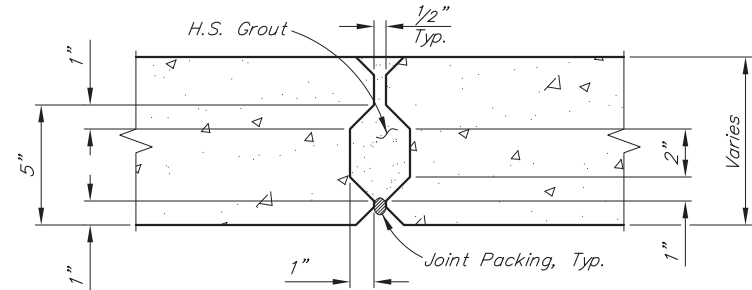
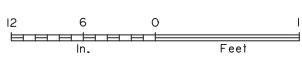
DECK PANEL - SECTION



SECTION A-A

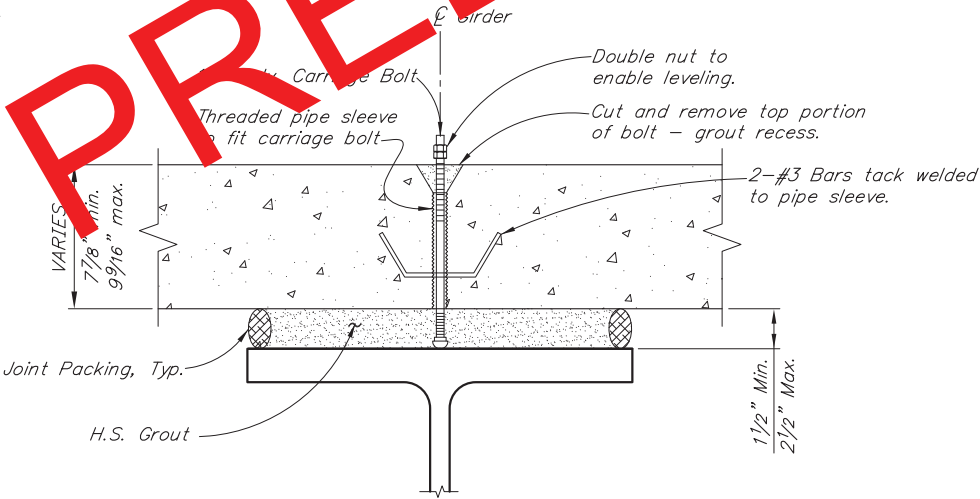


SECTION B-B



DETAIL C

No Scale



LEVELING SCREW DETAIL

No Scale

NOTES:

1. Provide heavy broom finish on deck panels and grouted surfaces.
2. Match grout color to deck panels.
3. Roughen surface under curbs.
4. Rotate hook bars to provide minimum clear cover.
5. Leveling Screws must be in contact with girders prior to grouting or applying loads.

DESIGNED BY:	Elmer Marx	CHECKED:	Checker
DRAWN BY:	Michael Foster	CHECKED:	Elmer Marx
QUANTITIES BY:	Elmer Marx	CHECKED:	Checker

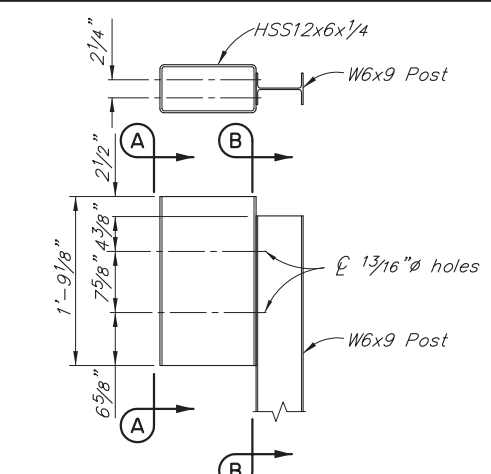
PRELIMINARY PLAN

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
BRIDGE SECTION
3132 Channel Drive
Juneau, Alaska 99801
907-465-2975

TATALINA RIVER BRIDGE
STERLING LANDING TO OPHIR ROAD
DECK PANELS

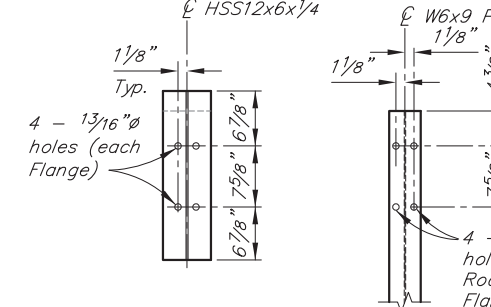


BRIDGE NO. 462
DWG. NO. 12

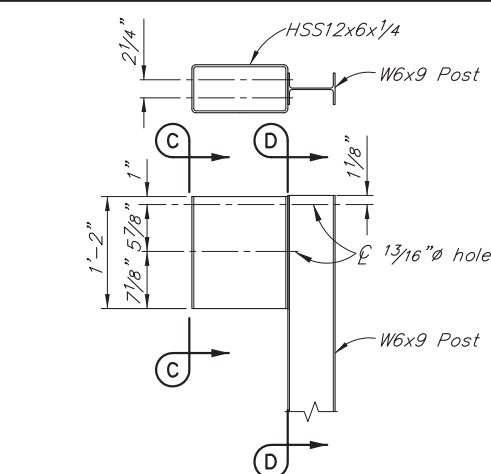


THRIE BEAM STEEL BLOCKOUT - LONG

See Note 4 for additional details

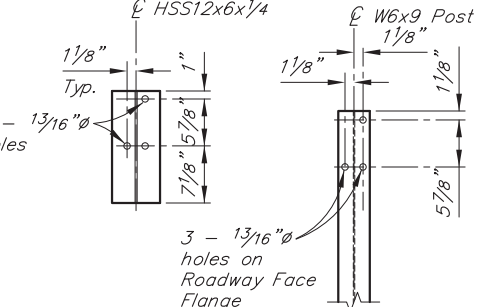


VIEW A-A SECTION B-B

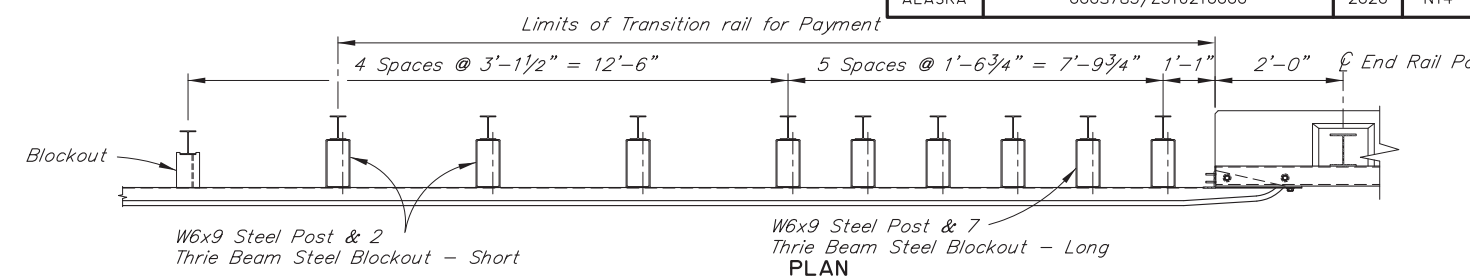


THRIE BEAM STEEL BLOCKOUT - SHORT

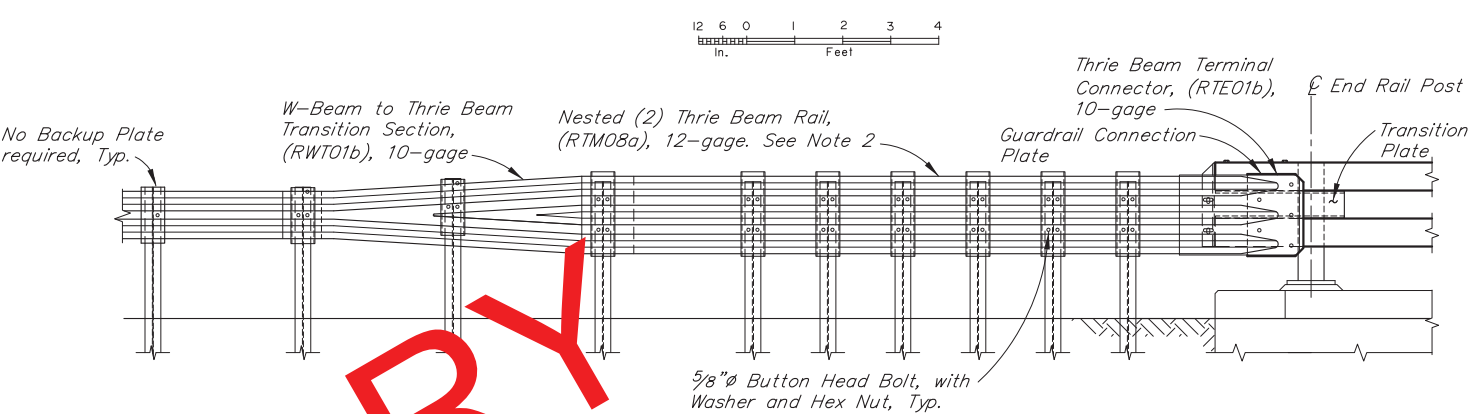
See Note 4 for additional details



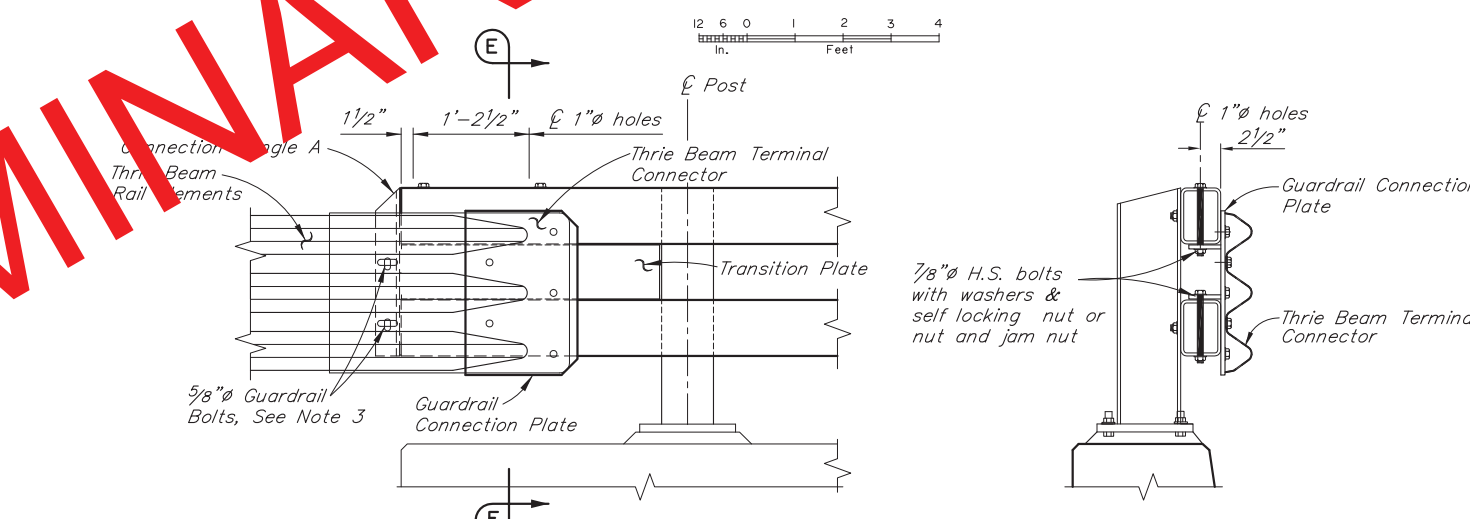
VIEW C-C SECTION D-D



PLAN

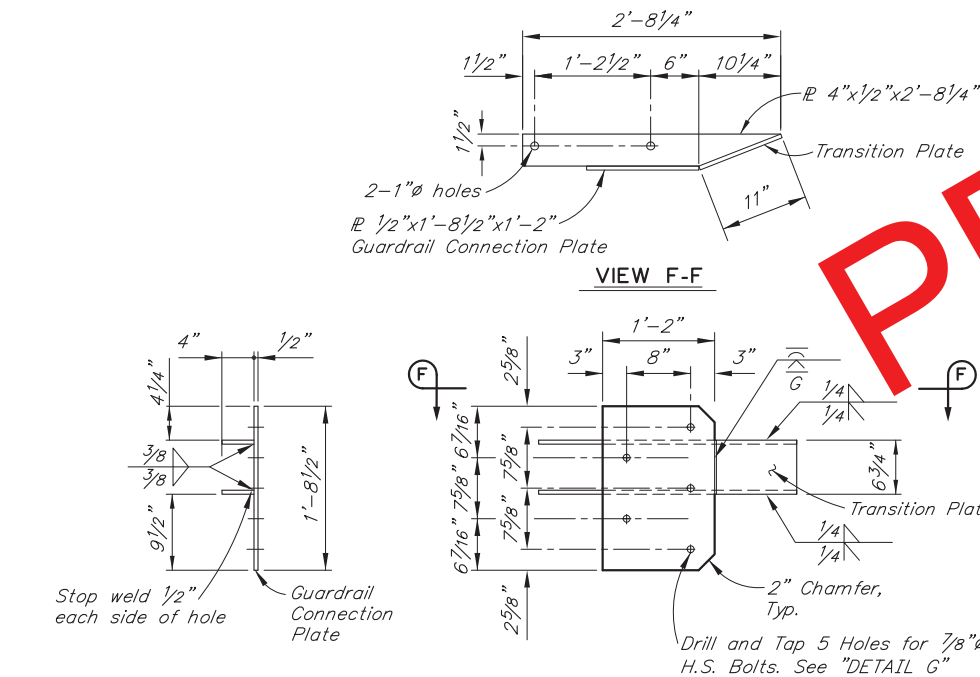


ELEVATION

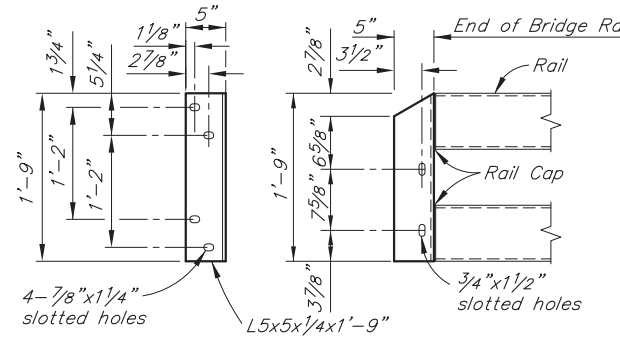


TRANSITION CONNECTION - ELEVATION

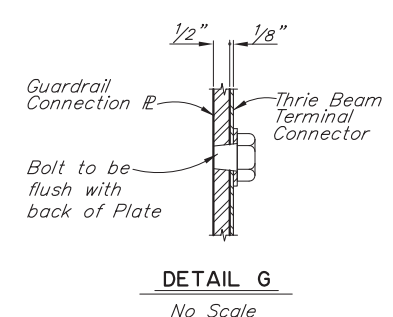
SECTION E-E



GUARDRAIL CONNECTION PLATE DETAILS



CONNECTION ANGLE A



DETAIL G

NOTES:

- All guardrail and guardrail connection hardware to conform to AASHTO M 180. Use H.S. Bolts conforming to ASTM A325. All other steel conforms to ASTM A709 Grade 36.
- Lap approach guardrail to prevent snags from oncoming traffic.
- Provide 4 1/2" horizontal slots in approach guardrail. Adjust guardrail bolts for sliding fit.
- Conform to G-00, G-05S and G-10 of the Standard Plans for all guardrail details not shown.

PRELIMINARY

R:\cdd\462\462-1-TRANSITION Fri, Feb/21/20 09:42am

DESIGNED BY:	Elmer Marx	CHECKED:	Checker
DRAWN BY:	Michael Foster	CHECKED:	Elmer Marx
QUANTITIES BY:	Elmer Marx	CHECKED:	Checker

PRELIMINARY PLAN

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
BRIDGE SECTION
3132 Channel Drive
Juneau, Alaska 99801
907-465-2975

TATALINA RIVER BRIDGE
STERLING LANDING TO OPHIR ROAD
TRANSITION RAIL

BRIDGE NO. 462
DWG. NO. 14