

PROJECT LOCATION
GRAYLING

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES

PROPOSED HIGHWAY PROJECT
STP-0002(114)/60937
GRAYLING AIRPORT BRIDGE

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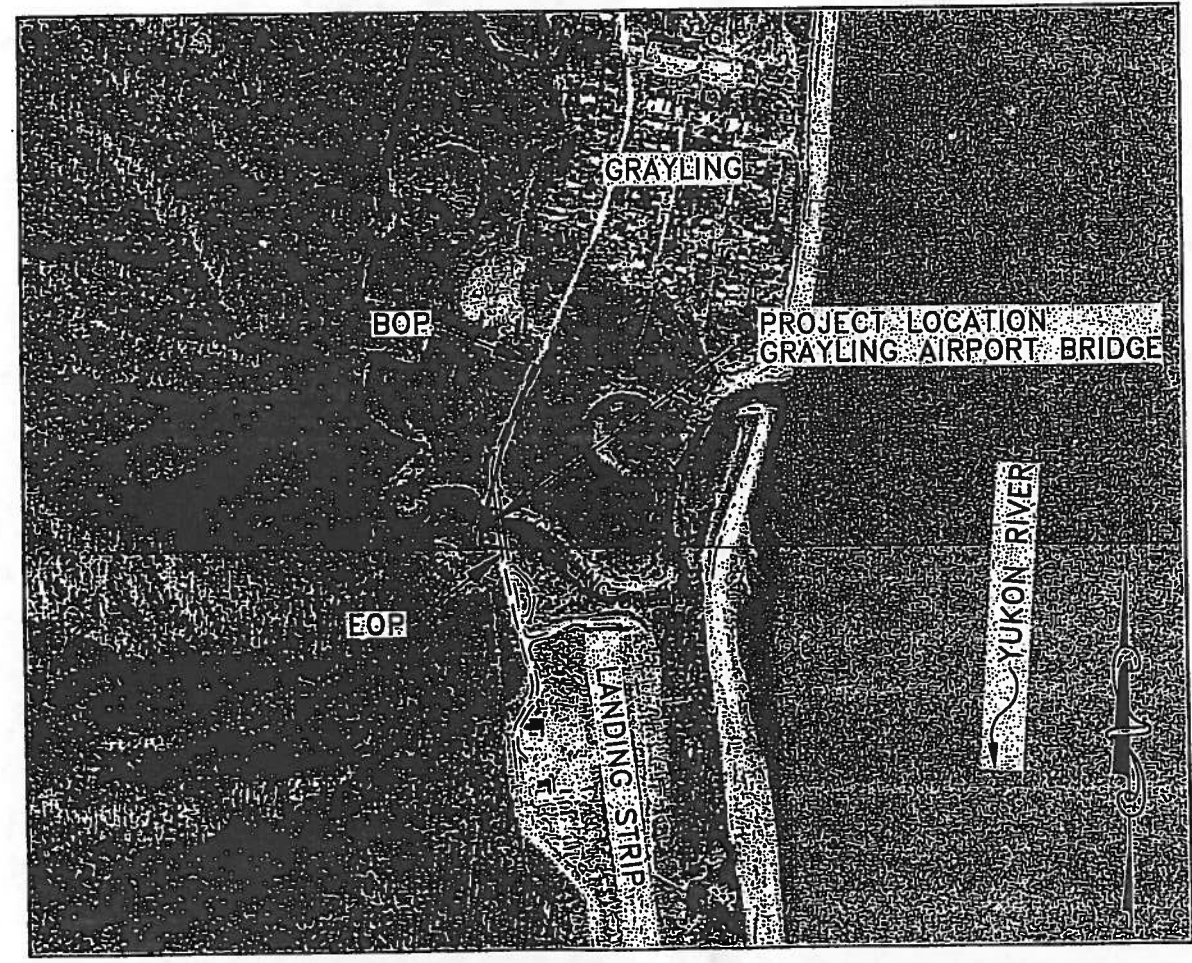
GENERAL NOTES:

- THE BASIS OF VERTICAL CONTROL IS TBM 082700A, NAVD88 ELEVATION 84.46, ON THE STEEL THRESHOLD IN FRONT OF THE MIDDLE OF A WHITE DOOR ON THE EAST SIDE OF THE BLUE AIRPORT MAINTENANCE GARAGE. THE BASIS OF HORIZONTAL CONTROL SHALL BE THE MONUMENTS LOCATED AT THE NE, SE, & SW CORNERS OF THE EXISTING RUNWAY, CONSISTING OF REBAR AND 9105S ALCAPS STAMPED CP3, CP1, & CP2, RESPECTIVELY.
- THERE ARE NO DESIGNATED MATERIAL SITES. GEOTECHNICAL INFORMATION IS AVAILABLE FOR A MATERIAL SITE THAT COULD BE USED FOR THIS PROJECT IN A REPORT ENTITLED "SUPPLEMENTAL GEOTECHNICAL REPORT-ROCK QUARRY MATERIALS SITE (GRAYLING AIRPORT)", DATED JUNE, 2004, & CAN BE OBTAINED UPON REQUEST FROM THE NORTHERN REGIONAL GEOLOGIST, MATERIALS BUILDING, 2301 PEGER ROAD, FAIRBANKS, ALASKA, 99709.

THE FOLLOWING STANDARD DRAWINGS APPLY TO THIS PROJECT:

A-1	G-00.01	G-20.10	S-00.10
D-01.02	G-04.07W	G-31.00	S-01.00
D-04.21	G-09.04W	I-81.00	S-05.01
E-13.00	G-10.01	M-13.01	S-30.03

PROJECT SUMMARY	
WIDTH OF GRADING	24'
LENGTH OF GRADING	1365'
LENGTH OF PAVING	N/A
LENGTH OF PROJECT	1365'

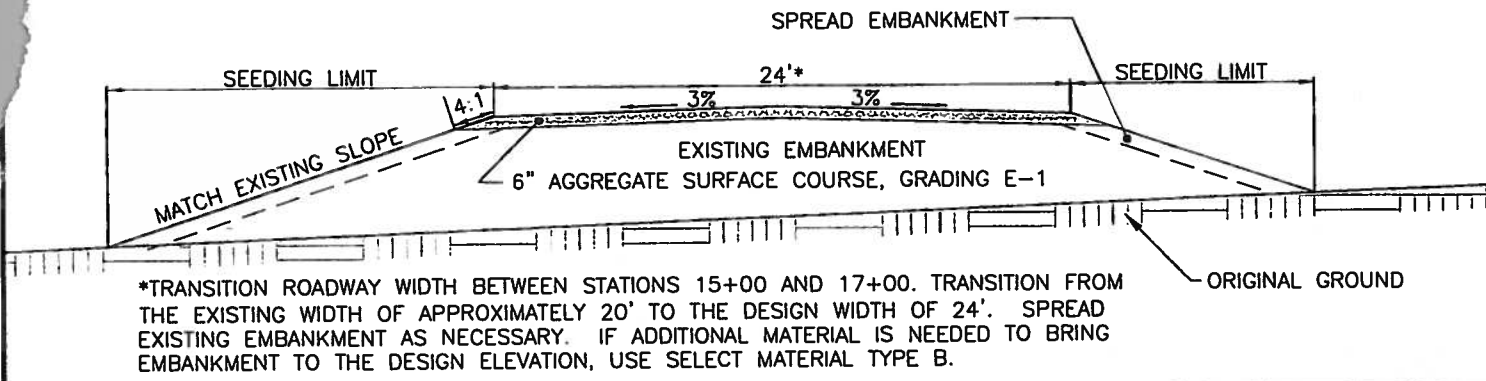


VICINITY MAP
NOT TO SCALE

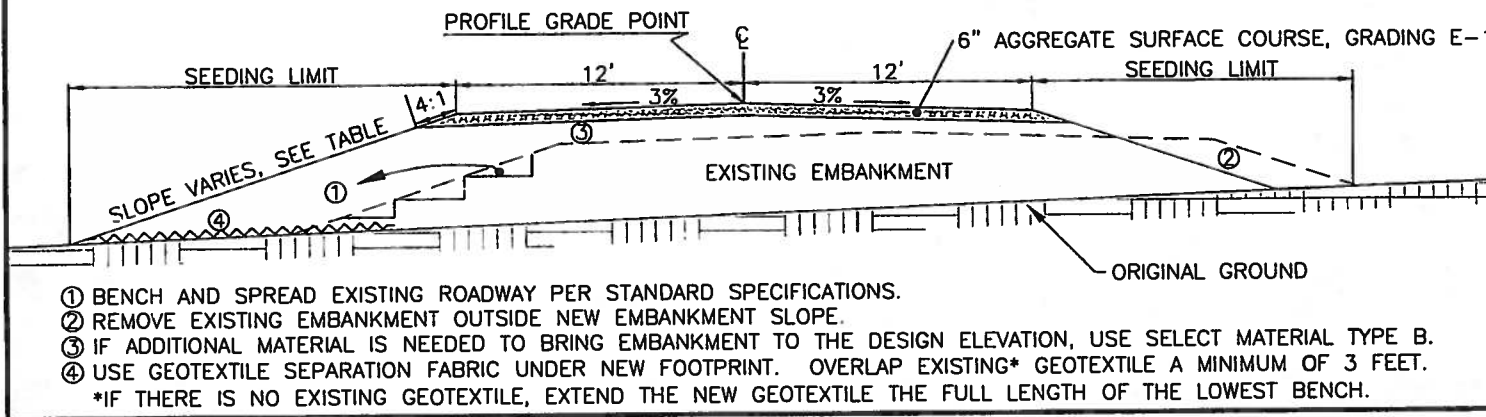
AS ADVERTISED
SEPTEMBER 8 2005
NORTHERN REGION

PLANS DEVELOPED BY: Derek Helmericks UNDER THE SUPERVISION OF: 	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES APPROVED BY: <i>David T. Bloom</i> DATE 5/2/05 David T. Bloom, P.E. Preconstruction Engineer, Northern Region ACCEPTED FOR CONSTRUCTION Andrew J. Niemiec, P.E. Regional Director, Northern Region
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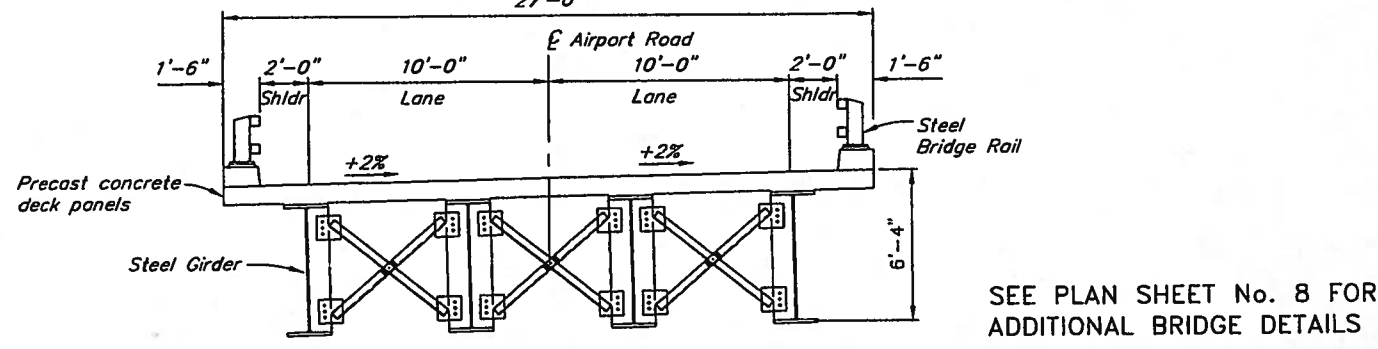
STATION 15+00 (BOP) - 17+00 - RESURFACE AND TRANSITION



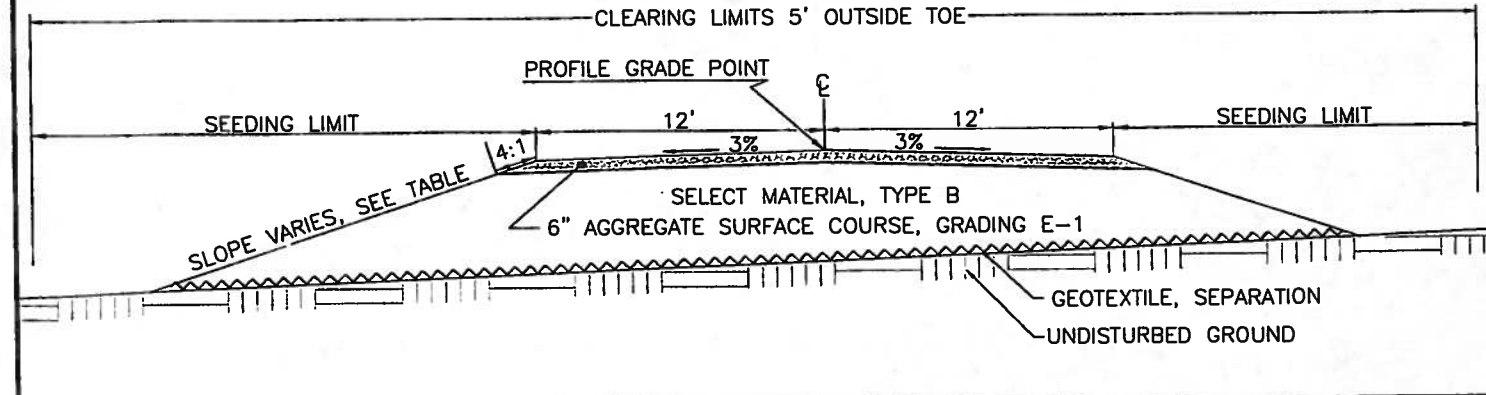
STATION 17+00 - 21+25 - RESURFACE AND REALIGN



STATION 21+25 - 22+73 - BRIDGE



STATION 22+73 - 28+65 (EOP) - NEW ROAD



SLOPE TABLE	
EMBANKMENT HEIGHT H	SLOPE VERTICAL : HORIZONTAL
0 - 5 ft.	4:1
5 - 10 ft.	3:1
OVER 10 ft.	2:1

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	STP-0002(114)/60937	2005	2	25

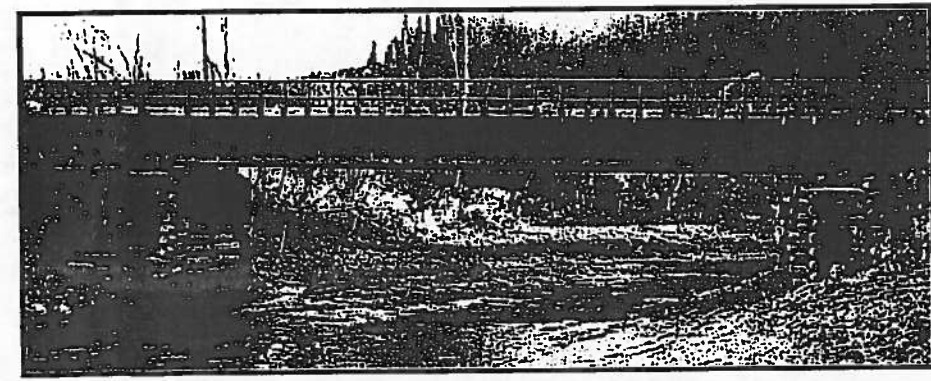
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ESTIMATE OF QUANTITIES

ITEM #	PAY ITEM	PAY UNIT	QUANTITY
201(3B)	CLEARING AND GRUBBING	LUMP SUM	ALL REQUIRED
202(1)	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LUMP SUM	ALL REQUIRED
203(3)	UNCLASSIFIED EXCAVATION	CUBIC YARD	9,000
203(5)	BORROW	CUBIC YARD	14,000
205(3)	FOUNDATION FILL	CUBIC YARD	700
301(4)	AGGREGATE SURFACE COURSE, GRADING E-1	CUBIC YARD	750
501(1)	CLASS A CONCRETE	LUMP SUM	ALL REQUIRED
501(7)	PRECAST CONCRETE MEMBER, DECK PANEL	EACH	29
503(1)	REINFORCING STEEL	LUMP SUM	ALL REQUIRED
503(2)	EPOXY-COATED REINFORCING STEEL	LUMP SUM	ALL REQUIRED
504(1)	STRUCTURAL STEEL	LUMP SUM	ALL REQUIRED
505(5)	FURNISH STRUCTURAL STEEL PILES (HP 12X84)	LINEAR FOOT	1,074
505(6)	DRIVE STRUCTURAL STEEL PILES (HP 12X84)	EACH	16
505(12)	SPECIAL PILE EXCAVATION	CONTINGENT SUM	ALL REQUIRED
507(1)	STEEL BRIDGE RAILING	LINEAR FOOT	368
603(1-24)	24 INCH CSP	LINEAR FOOT	70
603(1-36)	36 INCH CSP	LINEAR FOOT	90
606(11)	EXTRUDER TERMINAL (ET-2000)	EACH	4
606(12)	GUARDRAIL/BRIDGE RAIL CONNECTION	EACH	4
611(1)	RIPRAP, CLASS II	CUBIC YARD	1,115
615(1)	STANDARD SIGN	SQUARE FOOT	35.5
618(3)	SEEDING	LUMP SUM	ALL REQUIRED
630(1)	GEOTEXTILE, SEPARATION	SQUARE YARD	9,250
631(2)	GEOTEXTILE, EROSION CONTROL, CLASS 1	SQUARE YARD	1,170
640(1)	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	ALL REQUIRED
640(4)	WORKER MEALS AND LODGING, OR PER DIEM	LUMP SUM	ALL REQUIRED
641(1)	EROSION AND POLLUTION CONTROL ADMINISTRATION	LUMP SUM	ALL REQUIRED
641(3)	TEMPORARY EROSION AND POLLUTION CONTROL	LUMP SUM	ALL REQUIRED
641(4)	TEMPORARY EROSION AND POLLUTION CONTROL AMENDMENTS	CONTINGENT SUM	ALL REQUIRED
642(1)	CONSTRUCTION SURVEYING	LUMP SUM	ALL REQUIRED
642(3)	THREE PERSON SURVEY PARTY	HOUR	20
642(4)	SET PRIMARY MONUMENT	EACH	1
643(2)	TRAFFIC MAINTENANCE	LUMP SUM	ALL REQUIRED
644(1)	FIELD OFFICE	LUMP SUM	ALL REQUIRED
644(2)	FIELD LABORATORY	LUMP SUM	ALL REQUIRED
644(6)	VEHICLES	LUMP SUM	ALL REQUIRED
662(1)	UTILITY RELOCATE	LUMP SUM	ALL REQUIRED

BRIDGE REMOVAL NOTES:

ITEM 202(1) REMOVAL OF STRUCTURES AND OBSTRUCTIONS, INCLUDES THE COMPLETE REMOVAL OF THE BRIDGE AND ASSOCIATED STRUCTURE SHOWN BELOW. THE EXISTING BRIDGE IS A STEEL GIRDER, WOODEN DECK STRUCTURE. THE BRIDGE IS 92' LONG AND 11' WIDE, WITH A 14 TON LOAD RATING.



TYPICAL SECTION, ESTIMATE OF QUANTITIES



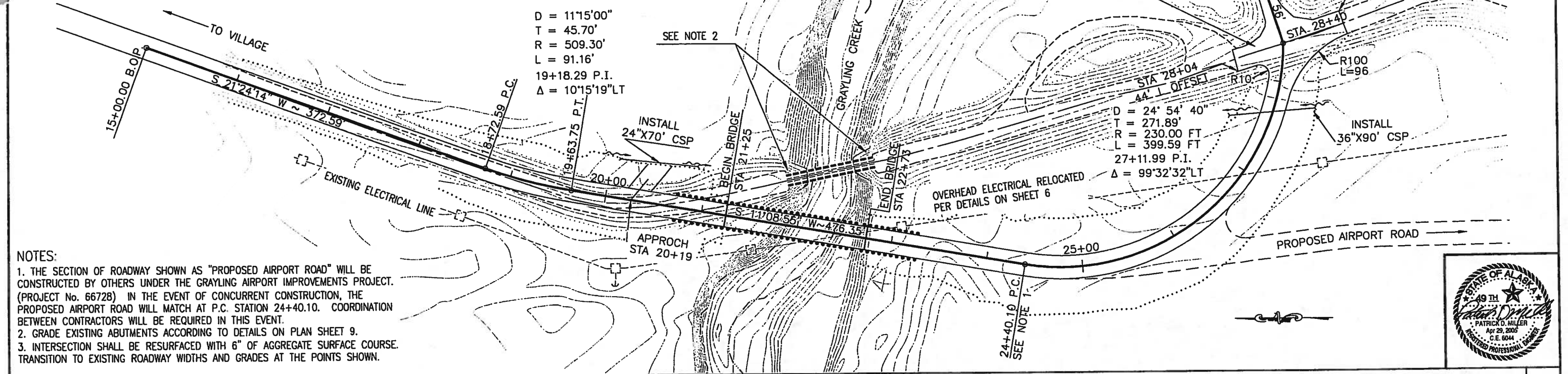
SUPERELEVATION DATA

BEGIN TRANSITION	TRANSITION LENGTH (FEET)	BEGIN FULL SUPERELEVATION	MAXIMUM SUPERELEVATION RATE	END FULL SUPERELEVATION	TRANSITION LENGTH (FEET)	END TRANSITION
20+75	50	21+25*	2%	22+73	50	23+23
24+15	50	24+65	3%	27+80	50	28+30

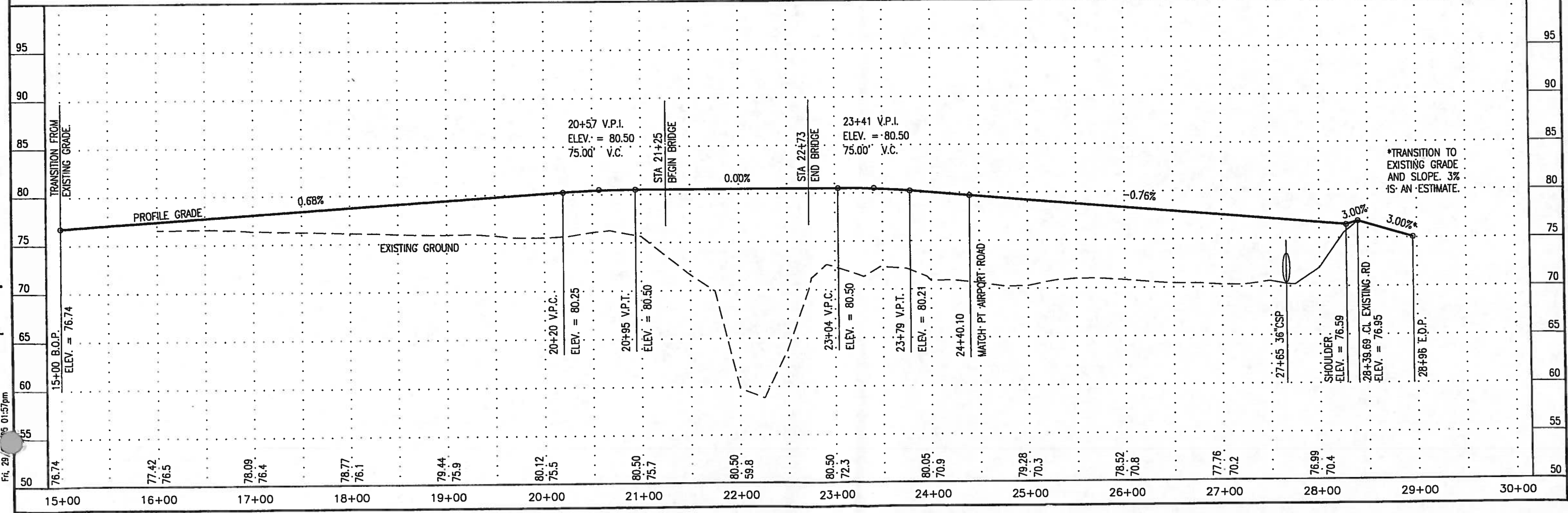
*BEGIN BRIDGE WITH 2% CROSS SLOPE

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	STP-0002(114)/60937	2005	3	25

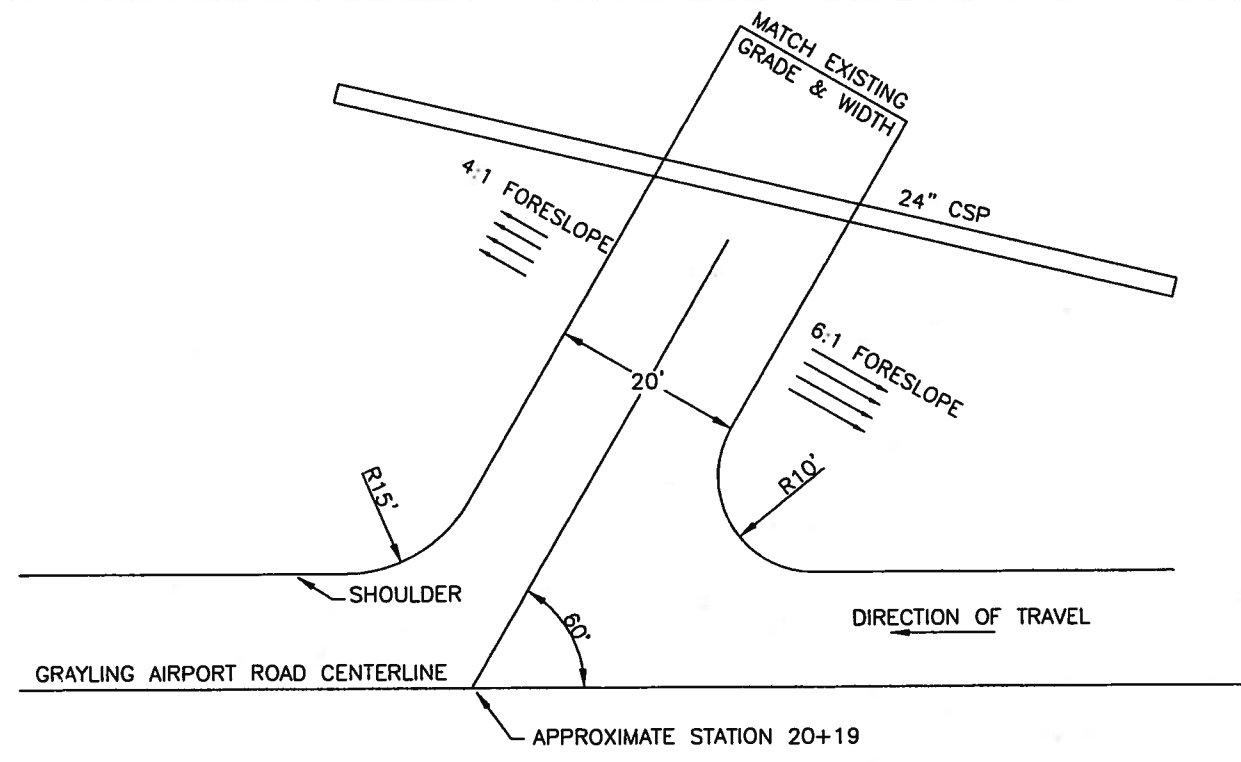
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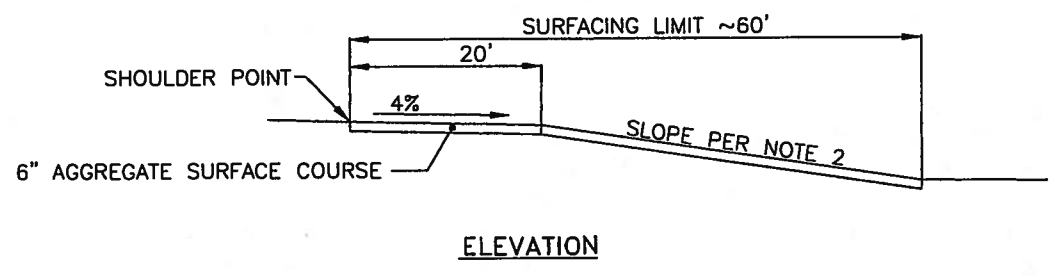
- NOTES:**
1. THE SECTION OF ROADWAY SHOWN AS "PROPOSED AIRPORT ROAD" WILL BE CONSTRUCTED BY OTHERS UNDER THE GRAYLING AIRPORT IMPROVEMENTS PROJECT. (PROJECT No. 66728) IN THE EVENT OF CONCURRENT CONSTRUCTION, THE PROPOSED AIRPORT ROAD WILL MATCH AT P.C. STATION 24+40.10. COORDINATION BETWEEN CONTRACTORS WILL BE REQUIRED IN THIS EVENT.
 2. GRADE EXISTING ABUTMENTS ACCORDING TO DETAILS ON PLAN SHEET 9.
 3. INTERSECTION SHALL BE RESURFACED WITH 6" OF AGGREGATE SURFACE COURSE. TRANSITION TO EXISTING ROADWAY WIDTHS AND GRADES AT THE POINTS SHOWN.



FRI, 29 APR 2005 01:57pm



GRAYLING CREEK ACCESS APPROACH DETAIL



APPROACH NOTES:

1. APPROACH LOCATION, SKEW, & THE MATCH POINT SHOWN ARE APPROXIMATE AND SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR & APPROVED BY THE ENGINEER.
2. SLOPE SHALL NOT EXCEED 10%. TRANSITION GRADE AND WIDTH TO MATCH EXISTING TRAIL WITHIN 60' OF THE SHOULDER.
3. AGGREGATE SURFACE COURSE SHALL EXTEND TO THE TOE OF THE SLOPE, OR 60', WHICHEVER IS LESS. AGGREGATE SURFACE COURSE SHALL BE PAID FOR UNDER ITEM 301(4).
4. CULVERT PLACEMENT SHOWN IS APPROXIMATE AND WILL BE DETERMINED IN THE FIELD BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
5. MATERIALS AND LABOR REQUIRED TO CONSTRUCT THIS APPROACH, OTHER THAN THE AGGREGATE SURFACE COURSE 301(4), SHALL NOT BE MEASURED OR PAID FOR DIRECTLY BUT SHALL BE SUBSIDIARY TO OTHER ITEMS OF PAYMENT.

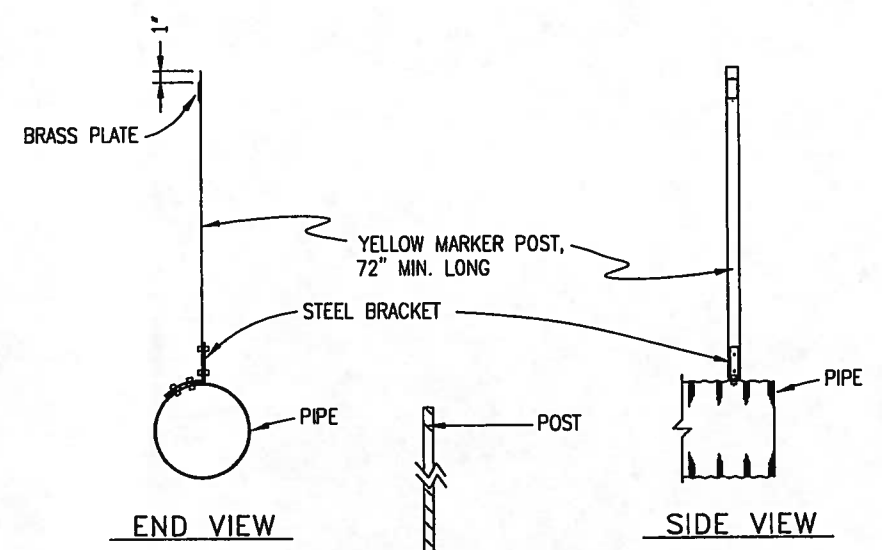
CULVERT SUMMARY					
STATION	COVER HEIGHT (FEET)	PIPE DIAMETER (INCHES)	REMOVE EXISTING (FEET)	NEW PIPE LENGTH (LF)	REMARKS
20+26*	2	24		70	INSTALL MARKER POSTS AT EACH END
27+60	4.5	36		90	INSTALL MARKER POSTS AT EACH END

*LEFT OFFSET APPROXIMATELY 40', TO BE DETERMINED BY THE ENGINEER.

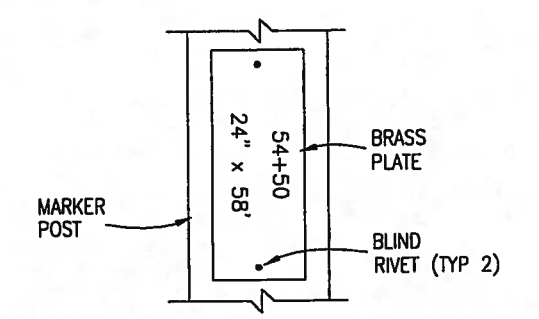
CULVERT NOTES:

1. CULVERT LENGTHS AND LOCATIONS ARE APPROXIMATE AND MAY BE ADJUSTED BY THE ENGINEER.
2. STAKE CULVERTS TO THE TOE OF SLOPE.
3. USE SELECTED MATERIAL, TYPE A, PASSING THE 3" SIEVE WITHIN 1 FT. OF ALL CULVERTS. THIS SELECTED MATERIAL SHALL BE INCIDENTAL TO PAY ITEMS 603(1-24) & 603(1-36) AND SHALL NOT BE PAID FOR DIRECTLY.
4. CULVERT MARKER POSTS SHALL BE INCIDENTAL TO PAY ITEMS 603(1-24) & 603(1-36) AND SHALL NOT BE PAID FOR DIRECTLY.

CULVERT MARKER POST DETAILS



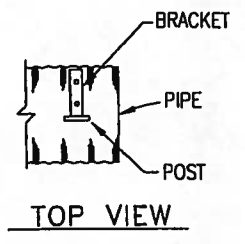
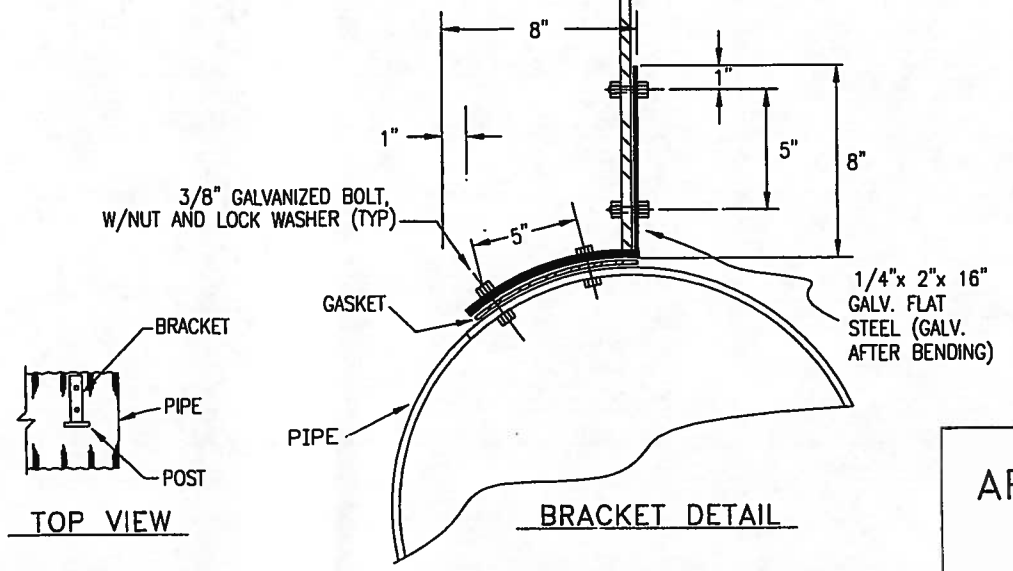
BRASS PLATE DETAIL



STATION AND SIZE OF PIPE TO BE STAMPED USING LETTERS A MINIMUM OF 1/4" HIGH INTO A 2" x 4" x .064" THICK BRASS PLATE. FASTEN PLATE TO THE SIDE OPPOSITE TO THE ADJACENT TRAFFIC DIRECTION WITH TWO 1/8" DIA. BLIND RIVETS.

CULVERT MARKER NOTES:

1. DRILL ALL BOLT HOLES. COAT HOLES IN PIPE WITH ZINC RICH PAINT. FLAME CUTTING SHALL NOT BE PERMITTED.
2. MARKER POST ENDS SHALL BE SQUARE. MARKER POST MAY BE CARSONITE OR WOOD.
3. GASKET MATERIAL SHALL BE PLACED BETWEEN DISSIMILAR METALS. GASKET MATERIAL SHALL BE APPROVED PRIOR TO INSTALLATION.



APPROACH & CULVERT DETAILS



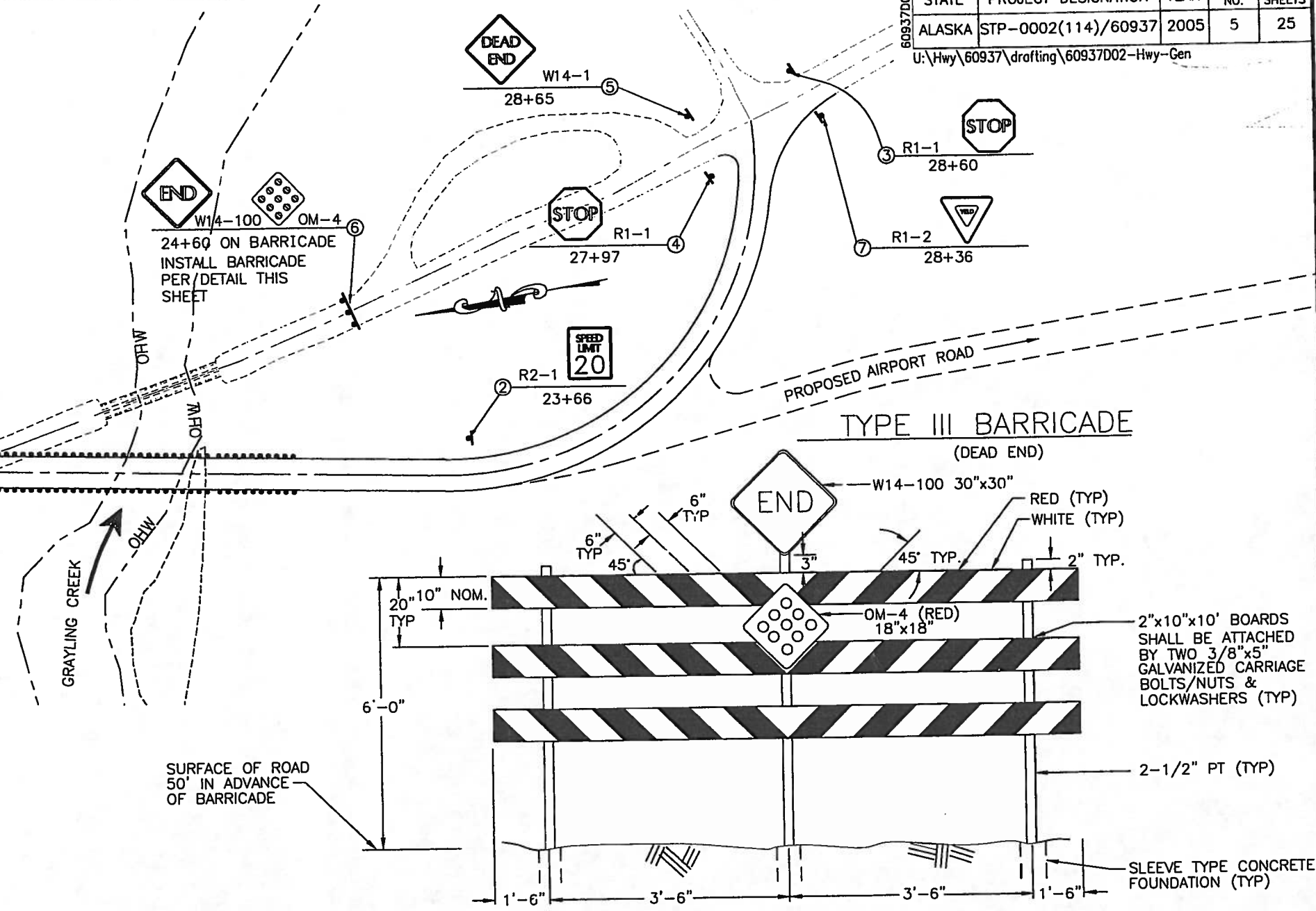
BARRICADE NOTES

1. THE OM-4 SIGN SHALL BE ATTACHED WITH 3/8"x5" GALVANIZED BOLTS THROUGH BOARDS TO POST WITH NUTS & LOCKWASHERS.
2. ALL BOARDS SHALL BE SURFACED LUMBER, PRIMED AND PAINTED (WHITE) AS SPECIFIED UNDER SECTION 615-2.01 OF THE SPECIAL PROVISIONS.
3. THE BARRICADES SHALL BE RED AND WHITE USING TYPE III A (HIGH INTENSITY) REFLECTIVE SHEETING, WITH PRESSURE SENSITIVE ADHESIVE BACKING.
4. ALL WORK AND MATERIALS FOR CONSTRUCTION AND INSTALLATION OF THE TYPE III BARRICADE SHALL BE SUBSIDIARY TO ITEM 615(1) STANDARD SIGN. THE W14-100 AND OM-4 SIGNS SHALL BE PAID FOR BY THE SQ. FT. UNDER ITEM 615(1).

TO VILLAGE

SIGNING NOTES:

1. PRIOR TO INSTALLING POSTS, LOCATE AND PROTECT ALL NEW AND EXISTING UNDERGROUND UTILITIES, INCLUDING BUT NOT LIMITED TO, PIPELINES, INTERCONNECT CABLES, SIGNAL SYSTEMS, LIGHTING SYSTEMS, STORM AND SANITARY SEWERS, WATER SYSTEMS, AND TELEPHONE AND ELECTRICAL CABLES. NOT ALL EXISTING UTILITIES MAY BE SHOWN ON THE PLANS.
2. REVIEW SIGN LOCATIONS IN THE FIELD BEFORE INSTALLATION TO VERIFY THAT THEIR VISIBILITY IS NOT OBSTRUCTED. ADJUST SIGN LOCATIONS AS DIRECTED BY THE ENGINEER.
3. "PST" TYPICALLY STANDS FOR PERFORATED STEEL TUBE.
4. MAINTAIN EXISTING SIGNS UNTIL NEW SIGNS ARE INSTALLED. DO NOT LEAVE DUPLICATE OR CONFLICTING SIGNING AT ANY TIME.
5. REMOVE ALL EXISTING SIGNS THAT ARE DESIGNATED FOR REMOVAL AS DIRECTED BY THE ENGINEER. SEPARATE SIGN PANELS AND POSTS AND DELIVER TO THE DOT MAINTENANCE BUILDING AT GRAYLING. REMOVE THE SIGN FOUNDATION AND BACKFILL THE HOLE AND COMPACT TO THE SATISFACTION OF THE ENGINEER. THE REMOVAL AND SALVAGE OF THESE SIGNS SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED SUBSIDIARY TO THE PAY ITEM 615(1) STANDARD SIGN.
6. THE CONTRACTOR MAY HAVE TO CLEAR BEYOND THE EMBANKMENT SLOPE LIMITS FOR SIGN INSTALLATION AS DIRECTED BY THE ENGINEER. THIS CLEARING SHALL BE CONSIDERED SUBSIDIARY TO SIGN INSTALLATION.
7. INSTALL ALL SINGLE POST SIGNS HAVING A HORIZONTAL DIMENSION 30 INCHES OR GREATER WITH SIGN BRACES IN ACCORDANCE WITH STANDARD DRAWING S-01.00. USE 3/8" BOLTS TO ATTACH BRACING INSTEAD OF THE 5/8" BOLTS SHOWN ON DRAWING S-01.00. THE SIGN BRACE SHALL BE SUBSIDIARY TO THE PAY ITEM 615(1) STANDARD SIGN.
8. INSTALL OM-3 OBJECT MARKERS AT THE FIRST GUARDRAIL POST ADJACENT TO THE BRIDGE WITH THE NEAR EDGE OF THE MARKER IN LINE WITH THE BACK OF THE RAIL. SEE SECTIONS 3C-2 & 3C-3 OF THE ALASKA TRAFFIC MANUAL. INSTALL SIGN BEHIND GUARDRAIL. NEAREST EDGE OF SIGN SHALL BE 3' MINIMUM FROM FACE OF GUARDRAIL.
9. POSTS SHALL BE INSTALLED USING THE SLEEVE TYPE SOIL EMBEDMENT METHOD SHOWN ON STANDARD DRAWING S-30.03.
10. ATTACH ALL SIGNS, FRAMED OR UNFRAMED, TO THEIR SUPPORTS WITH ZINC PLATED 3/8" BOLTS. INSTALL THE TOP EDGE OF SIGNS 1" ABOVE THE TOPS OF POSTS.

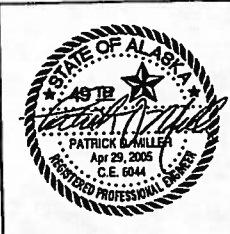


SIGNING SUMMARY

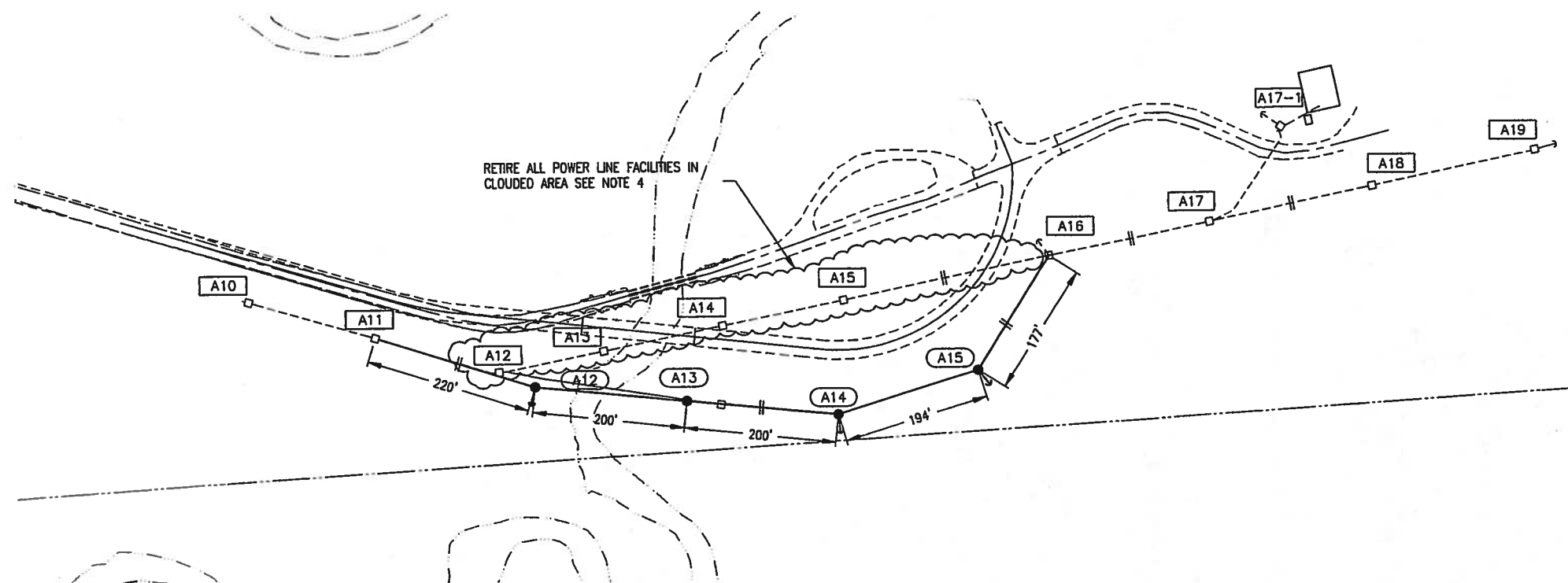
LOCATION NUMBER	STATION	LOCATION		CODE NO.	LEGEND	SIZE	THICKNESS (INCHES)		AREA (SQ FT)	MOUNTING HEIGHT	DIRECTION	POSTS			REMARKS
		LT.	RT.				UNFRAMED	FRAMED				TYPE	SIZE	NO.	
1	16+00		24'	R2-1	SPEED LIMIT 20MPH	24X30	0.125		5	7'	N	PST	2.5"	1	
2	23+66	24'		R2-1	SPEED LIMIT 20MPH	24X30	0.125		5	7'	S	PST	2.5"	1	
3	28+60		43'	R1-1	STOP	24X24	0.125		4	7'		PST	2.5"	1	ON EXISTING ROAD
4	27+97	32'		R1-1	STOP	24X24	0.125		4	7'	NW	PST	2.5"	1	ON EXISTING ROAD
5	28+65	41'		W14-1	DEAD END	30X30	0.125		6.25	7'	SE	PST	2.5"	1	ON EXISTING ROAD
6	24+60	122'		OM-4	OBJECT MARKER	18X18	0.125		2.25		SE	ON BARRICADE			ON BARRICADE
6	24+60	122'		W14-100	END	30X30	0.125		6.25		SE	ON BARRICADE			ON BARRICADE
7	28+36	53'		R1-2	YIELD	30X30	0.125		2.71	7'	NW	PST	2.5"	1	

TOTAL: 35.5 SQUARE FEET

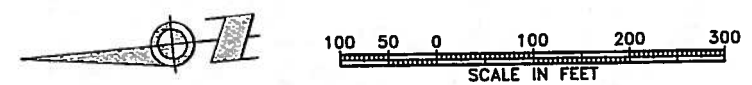
SIGNING NOTES, DETAILS, & SUMMARY



Mon. 02/May/05



RETIRE ALL POWER LINE FACILITIES IN CLOUDED AREA SEE NOTE 4



STAKING SHEET - NEW WORK															
Pole Number	Span Fl.	Primary				Guy & Anchor				Secondary			ROW Clearing	Notes	
		Primary Wire	Line Angle Deg.	Pole	Primary Unit	Ground	Misc.	Trans-former	Type	Lead Fl.	Anchor	Span Fl.			Wire
A11	Exist.	(2) #2 ACSR													SEE NOTE 2
A12	220	(2) #2 ACSR	12	40-4	A2A	M2-11	M52-3 (2) SPLICE MARKER BALL		E1-3	30	F1-4P				R1-50
A13	200	(2) #2 ACSR		45-4	A1A		M52-3 MARKER BALL								R1-50
A14	200	(2) #2 ACSR	23	40-4	A3A		M52-3 MARKER BALL		E1-3	30	F1-4P				R1-50
A15	194	(2) #2 ACSR	41	45-4	A3A	M2-11	M52-3 MARKER BALL		E1-3	30	F1-4P				R1-50
A16	177	(2) #2 ACSR	47	(40-4)	A3A		(2) SPLICE MARKER BALL		E1-3	30	F1-4P				SEE NOTE 3

STAKING SHEET - RETIREMENT															
Pole Number	Span Fl.	Primary				Guy & Anchor				Secondary			ROW Clearing	Notes	
		Primary Wire	Line Angle Deg.	Pole	Primary Unit	Ground	Misc.	Trans-former	Type	Lead Fl.	Anchor	Span Fl.			Wire
A12	172	(2) #2 ACSR	30	40-5	A3A	M2-11			E1-3	30	F1-4P				SEE NOTE 2
A13	140	(2) #2 ACSR		40-5	A1A										
A14	160	(2) #2 ACSR		40-5	A1A										
A15	163	(2) #2 ACSR		40-5	A1A										
A16	276	(2) #2 ACSR		(40-5)	A1A										SEE NOTE 3

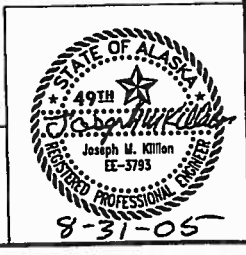
NOTES

- IN THE EVENT THIS CONSTRUCTION OCCURS CONCURRENTLY WITH THE GRAYLING AIRPORT PROJECT, SEE SPECS SECTION 105-1.07 REGARDING CONTRACTOR COORDINATION.
- REFER TO EXISTING POLE A11. EXISTING PRIMARY CONDUCTORS FROM POLE A11 TO POLE A12 ARE TO BE SPLICED AND CONTINUED TO NEW POLE A12.
- REFER TO EXISTING POLE A16. EXISTING PRIMARY POLE TOP UNIT TO BE REMOVED AND REPLACED WITH A3A PRIMARY UNIT. EXISTING PRIMARY CONDUCTORS ARE TO BE SPLICED AND CONTINUED TO NEW POLE A15. PRIMARY CONDUCTORS TO POLE A15 TO BE RETIRED.
- ALL POWER LINE MATERIALS AND EQUIPMENT IN AREA MARKED FOR RETIREMENT ARE TO BE COMPLETELY REMOVED AND DISPOSED OF AS DIRECTED BY THE PROJECT ENGINEER. RETIREMENT UNITS ON STAKING SHEET ARE APPROXIMATE. CONTRACTOR IS TO DETERMINE ACTUAL UNITS TO BE RETIRED IN FIELD AND MARK ANY CORRECTIONS ON AS-BUILT DRAWINGS.
- STANDARD OVERHEAD POWER LINE CONSTRUCTION UNITS ARE SHOWN IN RUS BULLETIN 50-3. AVEC MODIFICATIONS OF RUS STANDARD DRAWINGS AND AVEC CONSTRUCTION SPECIFICATIONS ARE INCLUDED IN AN APPENDIX TO THE SPECIFICATIONS.
- EVERY GUY TO HAVE A GUY GUARD, JOSLYN TYPE J1493Y. INSTALL REFLECTIVE TAPE TO EACH GUY GUARD AS SHOWN IN AVEC DRAWING 00-2 IN APPENDIX D.
- ROW CLEARING UNIT R1-50 REQUIRES CLEARING 50 FEET WIDE, 25 FEET EACH SIDE OF CENTERLINE.
- ARMOR ROD AND PREFORMED TIES ARE REQUIRED ON ALL PRIMARY AND NEUTRAL CONDUCTOR ATTACHMENTS EXCEPT AT DEADENDS.
- EACH NEW POLE SHALL BE SET IN GRAVEL BACKFILL (5 TONS).
- SAG NEW LINE TO MATCH EXISTING LINE.
- ANY PRIMARY VOLTAGE WORK (ABOVE 600 VOLTS) THAT REQUIRES CONNECTING TO AVEC'S SYSTEM REQUIRES THE DE-ENERGIZATION OF AVEC'S FACILITIES AND THE INSTALLATION OF PERSONNEL PROTECTIVE GROUNDS PRIOR TO ENTERING THE PRIMARY ZONE OR WORKING ON THE PRIMARY VOLTAGE EQUIPMENT. COORDINATE THE REQUIRED OUTAGE(S) WITH AVEC'S PLANT OPERATOR IN GRAYLING.
- AVEC MAY REQUIRE INSPECTION, BY AN AVEC REPRESENTATIVE, OF THE NEW POLES, ANCHORS AND GUYS PRIOR TO CONNECTING THE NEW LINE TO AVEC'S SYSTEM. CONTACT BILL STAMM AT AVEC AT (907) 565-5317, ONE WEEK PRIOR TO PROJECT'S COMPLETION, FOR AVEC TO SCHEDULE AN INSPECTION. AFTER INSPECTION AND AFTER ANY REQUIRED CORRECTIONS ARE MADE, THE CONTRACTOR SHALL COORDINATE THE REQUIRED OUTAGE(S) WITH AVEC'S PLANT OPERATOR IN GRAYLING.
- MARKER BALLS SHALL BE P&R SPANGUARD/HELMARK WITH SPANBRITE REFLECTIVE TAPE OPTION, 20" DIAMETER, INTERNATIONAL ORANGE COLOR. INSTALL MIDSPAN ON NEUTRAL PER AVEC STANDARD.

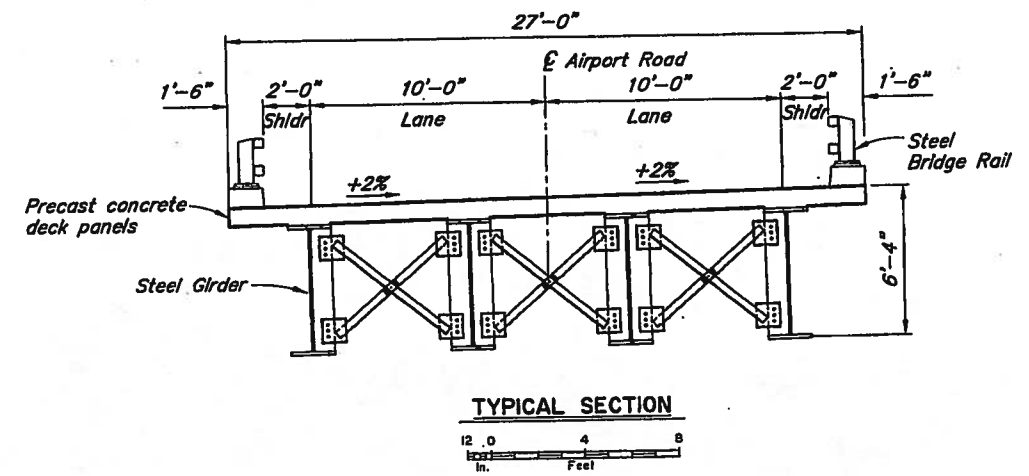
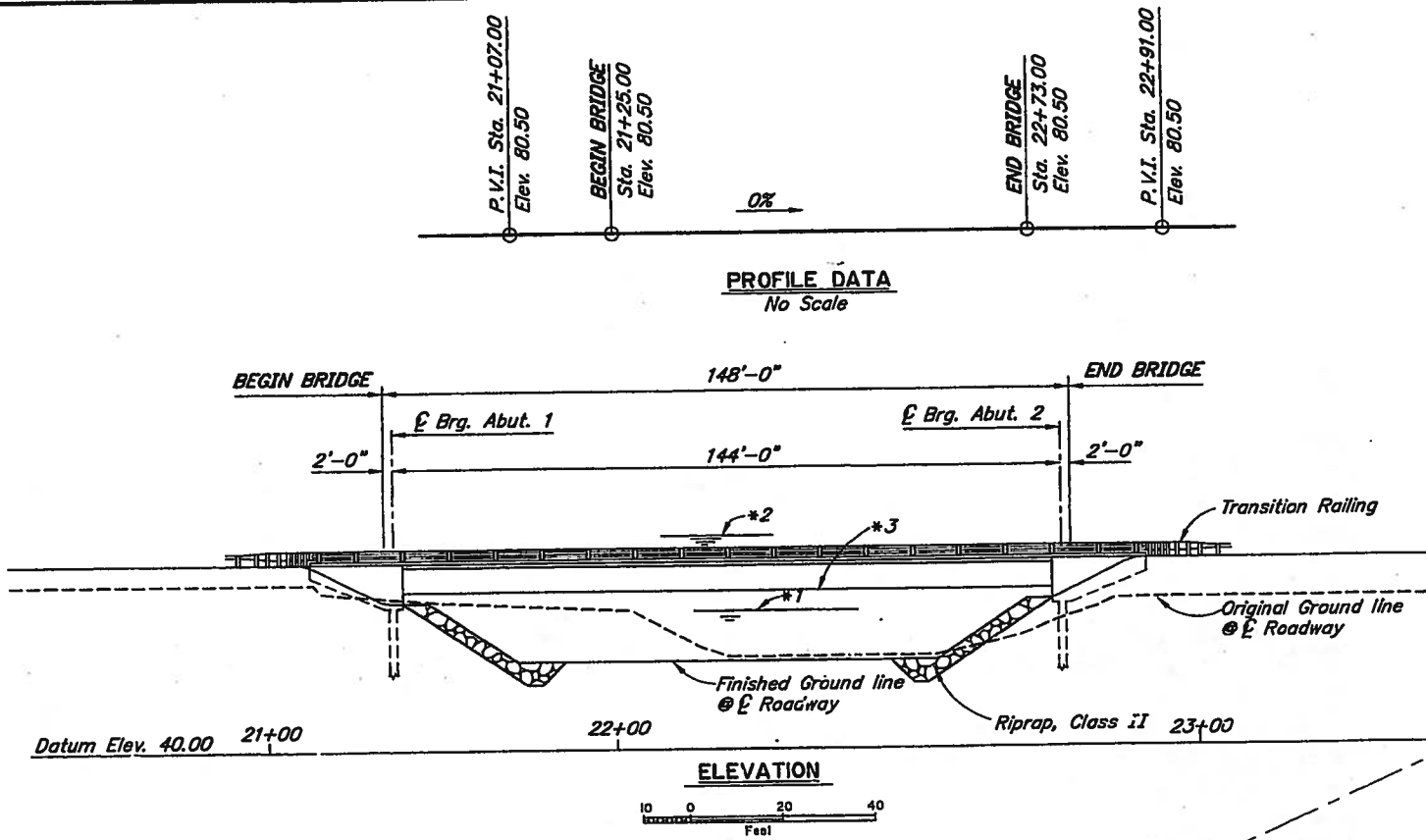
LEGEND

- EXISTING POLE XXX POLE NUMBER, EXISTING POLE
- NEW POLE XXX POLE NUMBER, NEW POLE
- ← GUY & ANCHOR
- || SINGLE-PHASE PRIMARY CONDUCTOR
- ||| TRIPLEX SECONDARY CONDUCTOR

**OVERHEAD ELECTRICAL RELOCATION
GRAYLING BRIDGE PROJECT**



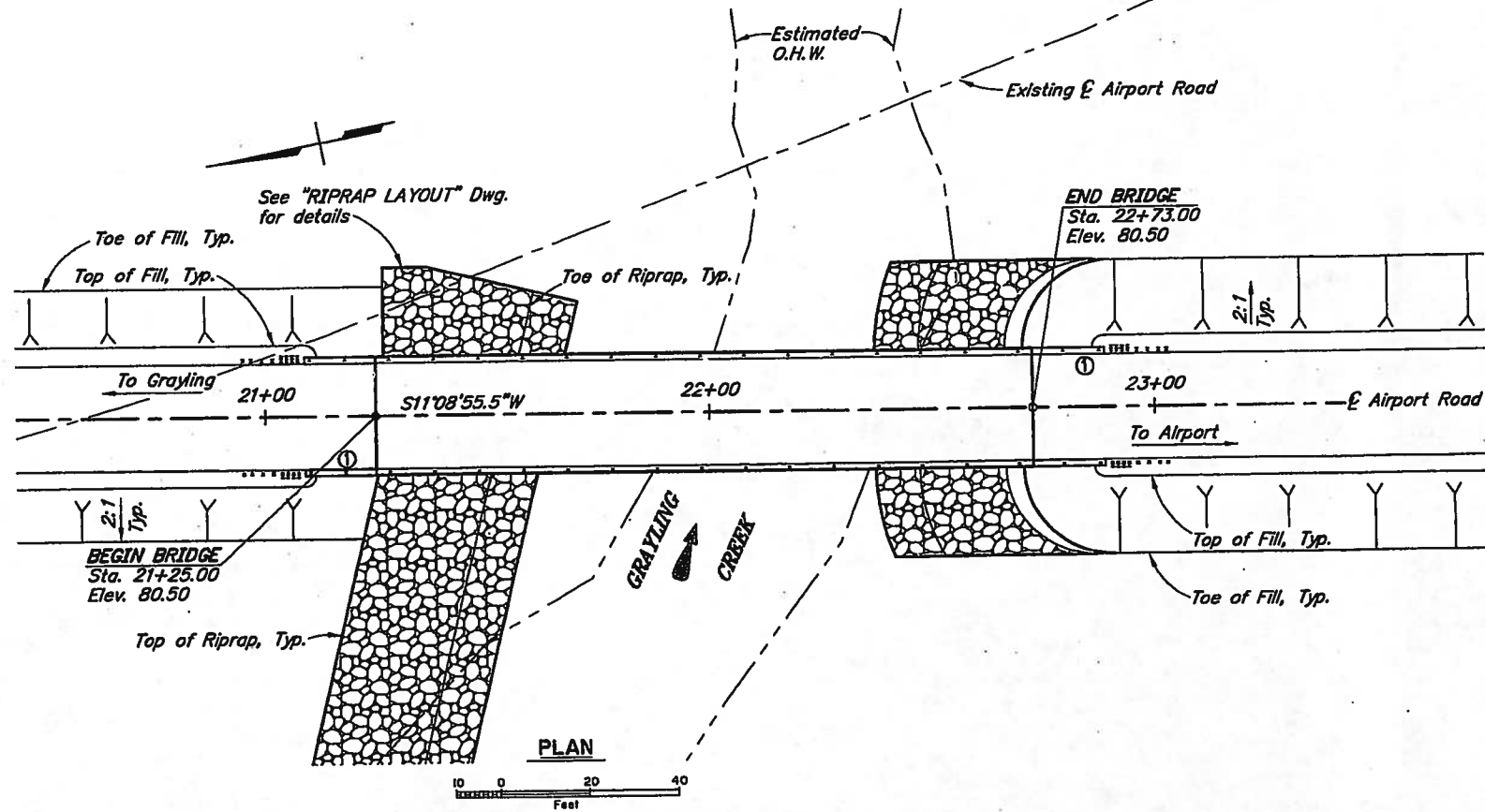
8-31-05



ESTIMATE OF BRIDGE QUANTITIES

ITEM NO.	ITEM	UNIT	SUBST.	SUPERST.	TOTAL
202(1)	Removal of Structures and Obstructions	LS	All Req'd	All Req'd	All Req'd
203(3)	Unclassified Excavation	CY	4400		4400
501(1)	Class A Concrete	LS-CY	61.4		61.4
501(7)	Precast Concrete Member - Deck Panel	LS-EA		29	29
503(1)	Reinforcing Steel	LS-LB	7380		7380
503(2)	Epoxy-Coated Reinforcing Steel	LS-LB	2680	570	3250
504(1)	Structural Steel	LS-LB		246,960	246,960
505(5)	Furnish Structural Steel Piles - HP 12x84	LS-LB	1074		1074
505(6)	Drive Structural Steel Piles - HP 12x84	LS-EA	16		16
505(12)	Special Pile Excavation	CS	All Req'd		All Req'd
507(1)	Steel Bridge Railing	LF		368	368
606(12)	Guardrail/Bridge Rail Connection	EA		4	4
611(1)	Riprap, Class II	CY	1115		1115
631(2)	Geotextile, Erosion Control, Class 1	SY	1170		1170

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



BRIDGE DRAWING INDEX

TITLE	DWG. NO.
GENERAL LAYOUT	1
SITE PLAN	2
RIPRAP LAYOUT	3
ABUTMENTS	4
WINGWALLS	5
FRAMING PLAN	6
GIRDERS	7
GIRDER BEARING DETAILS	8
OPTIONAL FIELD SPLICE	9
CAMBER DETAILS	10
EXTERIOR DECK PANELS	11
INTERIOR DECK PANELS	12
STEEL BRIDGE RAILING	13
LOG OF TEST BORINGS	14-19

- ① Approximate location of Bridge Number Plate.
- *1 D.H.W. Grayling Creek Elev. 65.4
- *2 D.H.W. Yukon River Backwater Elev. 83.6
- *3 Low chord elev. 73.9

DESIGNED BY: Travis Arndt	CHECKED BY: Todd Baris	LAYOUT BY: Travis Arndt	CHECKED BY: Todd Baris
DRAWN BY: Sam Solita	CHECKED BY: Travis Arndt	SPECIFICATIONS BY: Travis Arndt	PLANS & SPEC. COMPARED: Todd Baris
QUANTITIES BY: Travis Arndt	CHECKED BY: Todd Baris	APPROVAL RECOMMENDED BY: Rich Pratt	

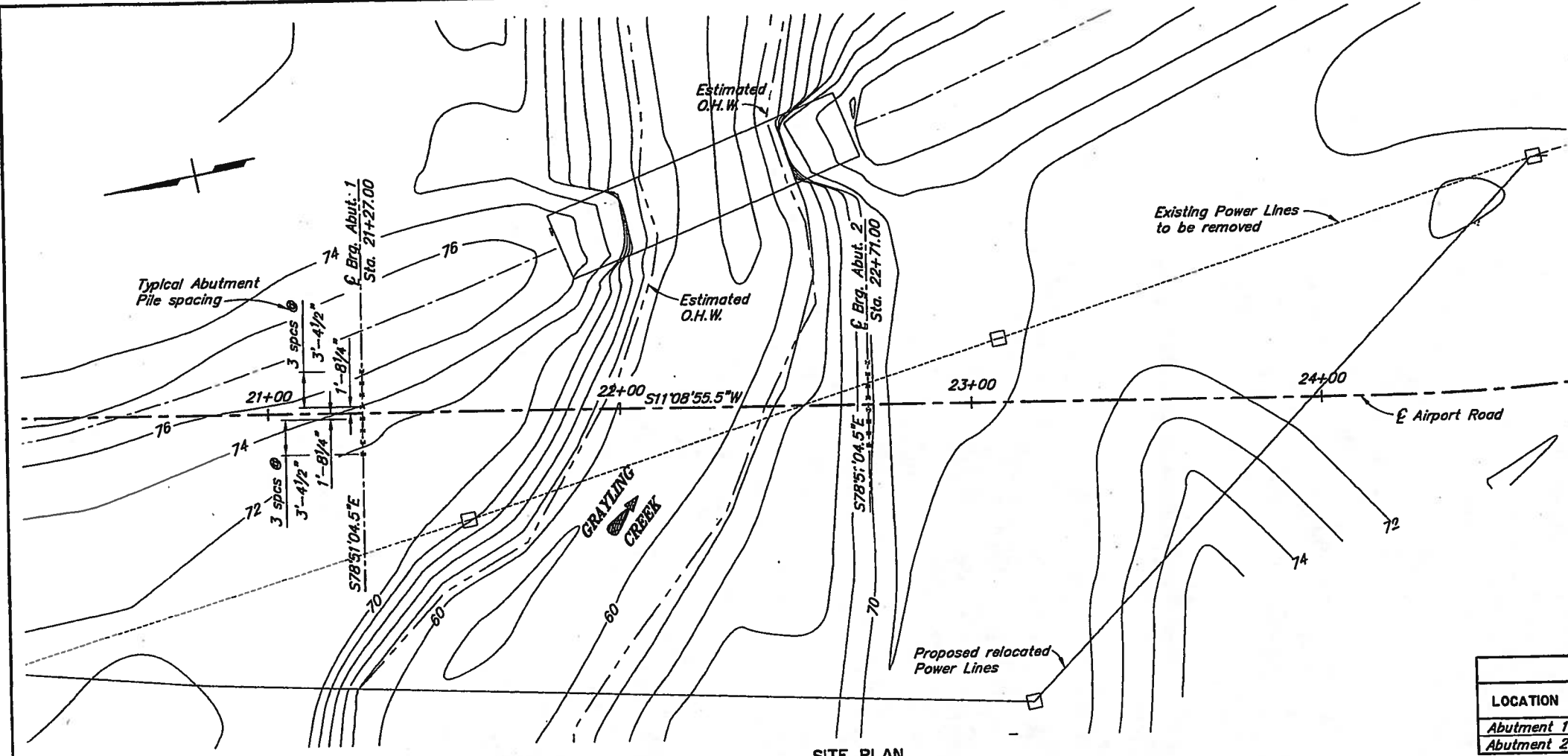
STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
 AND PUBLIC FACILITIES
 BRIDGE SECTION

GRAYLING CREEK BRIDGE
 AIRPORT ROAD
 GENERAL LAYOUT

BRIDGE NO. 1298
 DWG. NO. 1

NOTES

- Design:.....AASHTO LRFD Bridge Design Specifications, Third Edition 2004, with the latest Interim Specifications.
- Live Load:.....HL 93
- Seismic Load:.....A=0.07g
Soil Type I, S = 1.0
Liquefaction Potential = Low
- Dead Load:.....50 psf for all paving.
- Concrete:.....Use Class A-A Concrete for deck. $f_c=4000$ psi
Use Class A Concrete for all other concrete unless otherwise noted. $f_c=4000$ psi
Heavy broom finish on deck panels and all exposed grouted surfaces.
Match grout color to deck panels.
- Reinforcing Steel:.....Use ASTM A706 reinforcing steel. $F_y=60,000$ psi
Space evenly unless otherwise noted.
- Structural Steel:.....Use ASTM A709 Grade 50T3. $F_y=50,000$ psi
Galvanize according to SSPC Coating Guide No. 23.00 or AASHTO M111 after fabrication.
- High Strength Bolts:.....Galvanized ASTM A325 $F_{ult} = 120$ ksl.
Use Zinc coated ASTM F959 load indicating washers.
- Piling:.....Use ASTM A709, Grade 50 steel. $F_y=50,000$ psi
Pile Tip Reinforcement is required.
Use "APF Hard-Bite HP77600-B", "VERSBITE VB312-P" or approved equal.



LOCATION	PILE TYPE	MINIMUM TIP ELEVATION	ESTIMATED TIP ELEVATION	ULTIMATE CAPACITY	DESIGN LOAD	UPLIFT CAPACITY
Abutment 1	HP 12x84	5.00	5.00	300 k	105 k	85 k
Abutment 2	HP 12x84	5.00	5.00	300 k	105 k	85 k

	50	100	500	F.O.R.†
Flood Frequency (Yr.)	50	100	500	F.O.R.†
Exceedance Probability (%)	2	1	0.2	
Design Discharge (ft ³ /sec)	2460	2880	3940	
Design High Water (ft)	65.4	66.0	67.2	83.6
Anticipated Add'l Backwater (ft)	0.0	0.0		
Contraction Scour (ft)		0.0	0.0	
Abutment Scour (ft)		n.c.	n.c.	
Pier Scour (ft)		n.a.	n.a.	

Drainage Area for this crossing: 88.7 square miles.

Hydraulic Capacity: >>11,400 cfs at Low Superstructure Elevation 73.9 which has an exceedance probability of equal to or less than 0.2 percent.

Total scour equals contraction scour + local scour.

† - Flood Of Record, height caused by Yukon River ice jam, pooled condition at bridge.



ABBREVIATIONS:

- C = Centerline
- P = Plate
- & = and
- @ = at
- Ø = diameter
- Approx. = approximate
- Abut. = Abutment
- bot. = bottom
- Br. = bridge
- btwn. = between
- Brg. = Bearings
- C.I.P. = cast in place
- Clr. = clear, clearance
- Col. = column
- CSL = crosshole sonic logging
- CY = cubic yard
- dia. = diameter
- D.H.W. = Design High Water
- Dwg. = drawing
- EA = each
- Elev. = elevation
- e.f. = each face
- e.w. = each way
- f.f. = far face
- Hwy. = highway
- LB = pound
- LF = linear foot
- LS = lump sum
- Lt. = left
- max. = maximum
- min. = minimum
- MSE = mechanically stabilized earth
- n.a. = not applicable
- n.c. = not calculated
- n.f. = near face
- No. = number
- O.H.W. = ordinary high water
- PT = Post Tensioned
- PVC = point of vertical curve
- PVI = point of vertical intersection
- PVT = point of vertical tangent
- Rt. = right
- spc. = space, spaces
- Sta. = station
- SY = square yard
- Symm. = symmetric
- Typ. = typical



DESIGNED BY: Travis Arndt	CHECKED: Todd Barbs	HYDRAULICS BY: Mark Miles	CHECKED BY: Keith Korr
DRAWN BY: Sam Sallie	CHECKED: Travis Arndt	FOUNDATIONS REVIEWED BY:	
QUANTITIES BY: Travis Arndt	CHECKED: Todd Barbs		

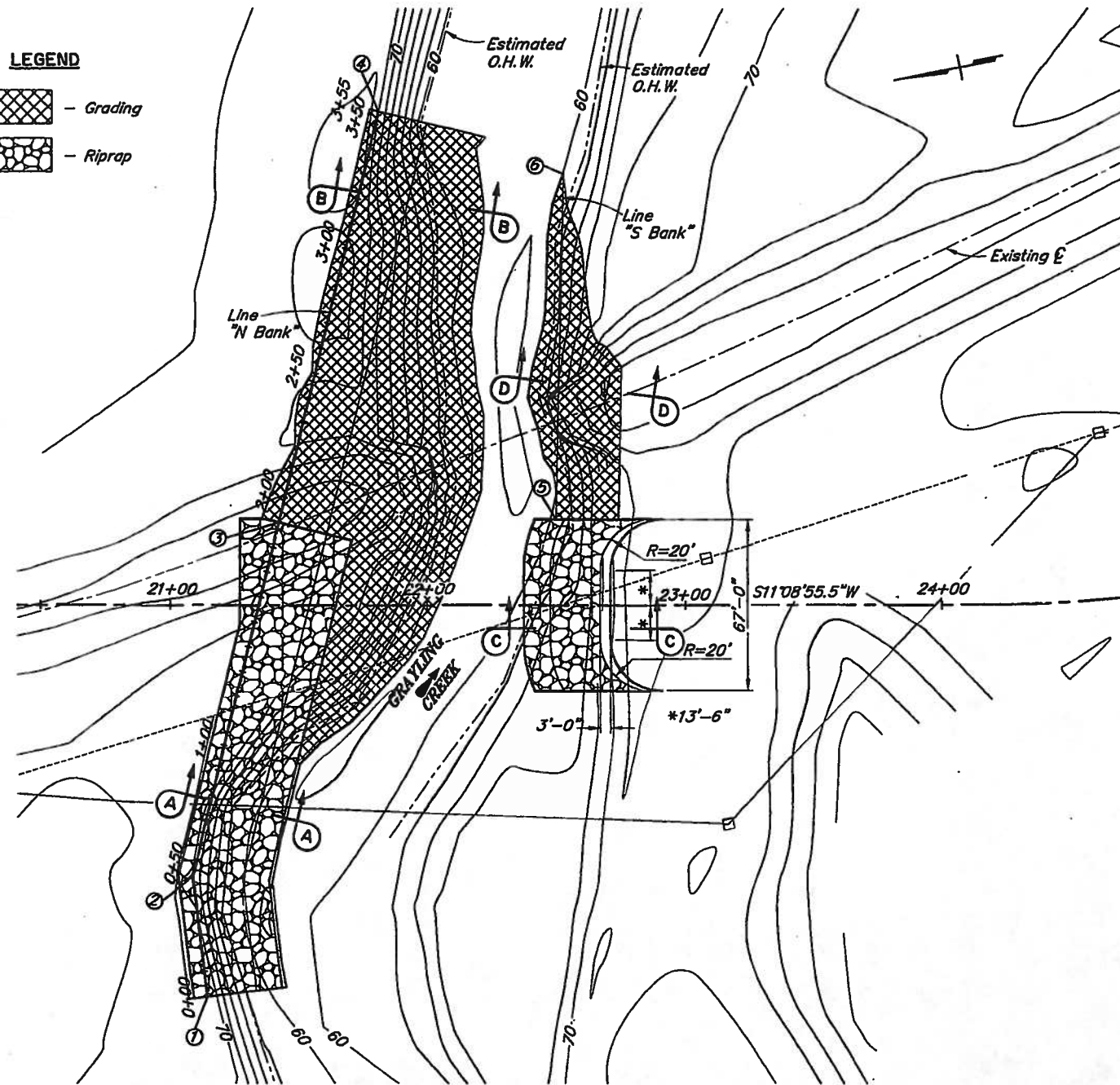
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
BRIDGE SECTION

GRAYLING CREEK BRIDGE
AIRPORT ROAD
SITE PLAN

BRIDGE NO. 1298
DWG. NO. 2

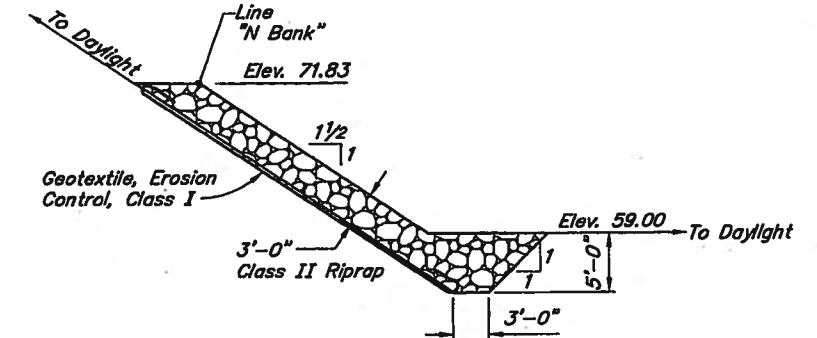
LEGEND

-  - Grading
-  - Riprap

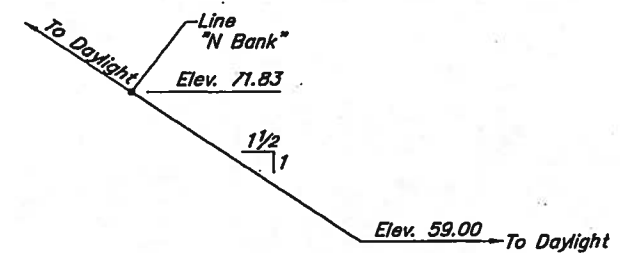


RIPRAP LAYOUT
 30 20 10 0 30 60
 Feet

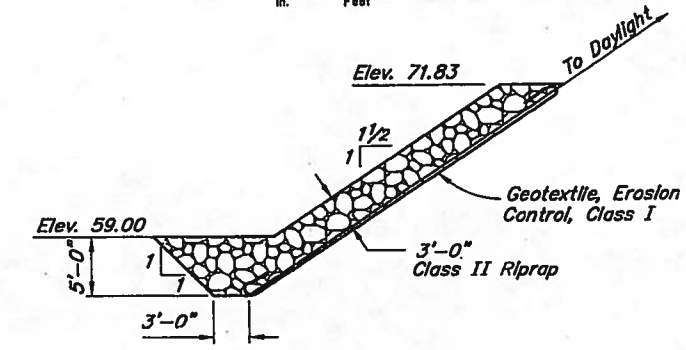
ALIGNMENT LOCATIONS						
	ROADWAY E STATION	ROADWAY E OFFSET	N BANK STATION	N BANK ELEVATION	S BANK STATION	S BANK ELEVATION
①	21+14.16	153.27' R	0+00.00	71.83	—	—
②	21+08.44	106.20' R	0+47.42	71.83	—	—
③	21+42.11	32.35' L	1+90.00	71.83	—	—
④	21+81.07	192.69' L	3+55.00	71.83	—	—
⑤	22+49.84	33.50' L	—	—	0+00.00	60.00
⑥	22+52.67	168.29' L	—	—	1+34.84	60.00



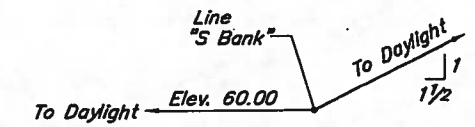
SECTION A-A
 12 0 4 8 12
 in. Feet



SECTION B-B
 12 0 4 8 12
 in. Feet



SECTION C-C
 12 0 4 8 12
 in. Feet

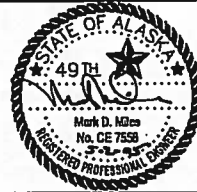


SECTION D-D
 12 0 4 8 12
 in. Feet


NOTE:
 Seed all areas disturbed during grading of the banks above estimated O.H.W. unless stabilized with riprap.

DESIGNED BY: <i>Mark Miles</i>	CHECKED: <i>Travis Arndt</i>
DRAWN BY: <i>Sam Soffie</i>	CHECKED: <i>Mark Miles</i>
QUANTITIES BY: <i>Mark Miles</i>	CHECKED: <i>Travis Arndt</i>

STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
 AND PUBLIC FACILITIES
 BRIDGE SECTION



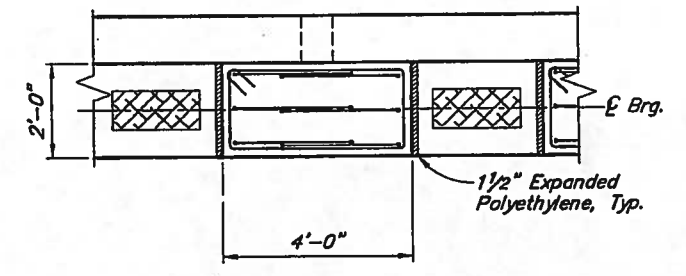
GRAYLING CREEK BRIDGE
 AIRPORT ROAD
 RIPRAP LAYOUT


 BRIDGE NO. 1298
 DWG. NO. 3

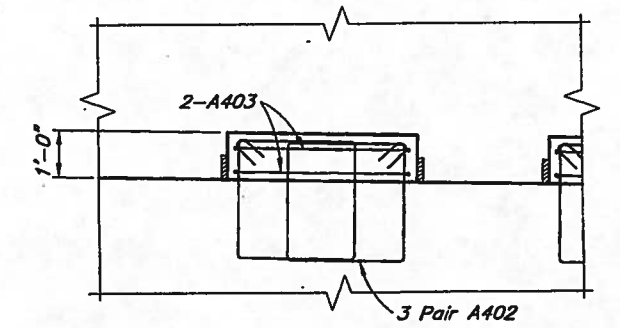
P:\1298\1298-3.dwg, 05/02/2006 09:15:41 AM

REINFORCING STEEL-ONE ABUTMENT						
MARK	SIZE	NO.	LENGTH	TYPE	BENDING DIAGRAM	
b A401	4	34	8'-8"	Bent		
A402	4	18	11'-0"	Bent		
A403	4	6	11'-8"	Bent		
A501	5	37	11'-6"	Bent		
A601	6	12	26'-8"	---		
a A602	6	37	21'-4"	Bent		
b A603	6	6	20'-6"	Bent		
a B401	4	14	26'-8"	---		
a B601	6	8	3'-0"	Bent		
A602	8"	9'-4"				

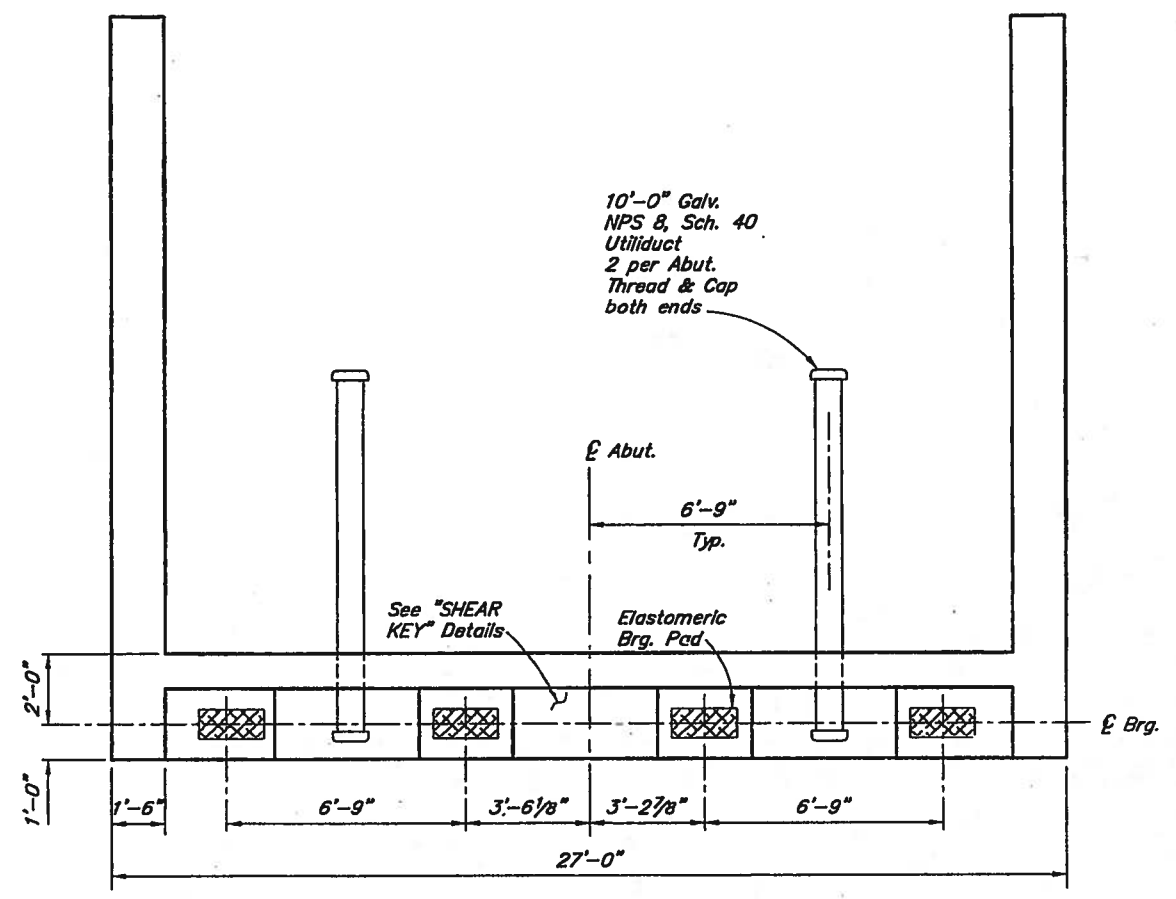
a - Epoxy coated.
b - See "WINGWALLS" Dwg.



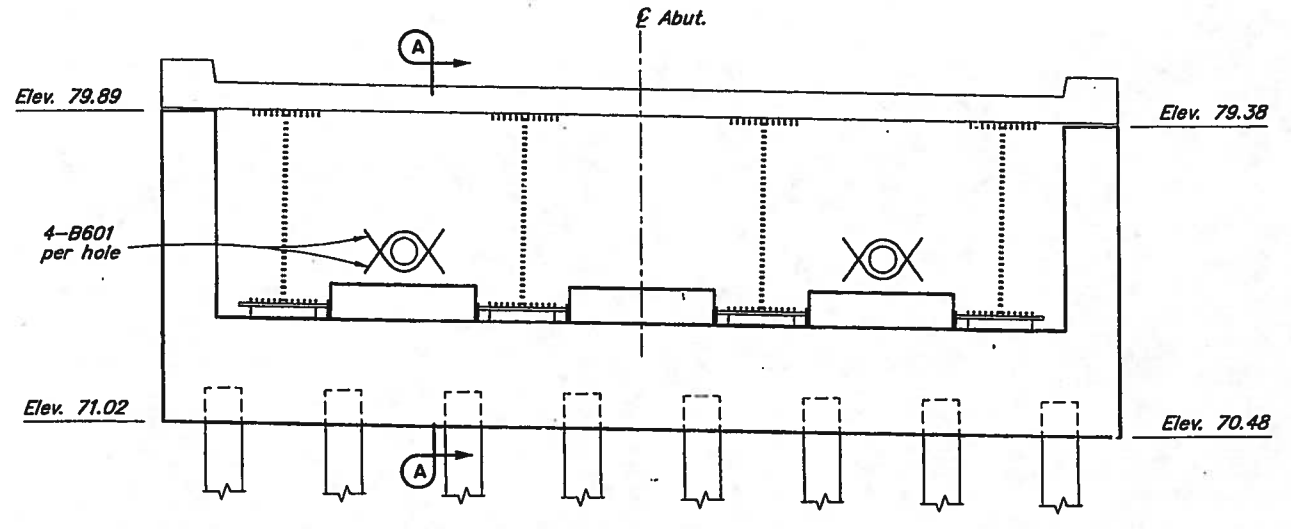
SHEAR KEY - PLAN
12 6 0 1 2 3 4
In. Feet



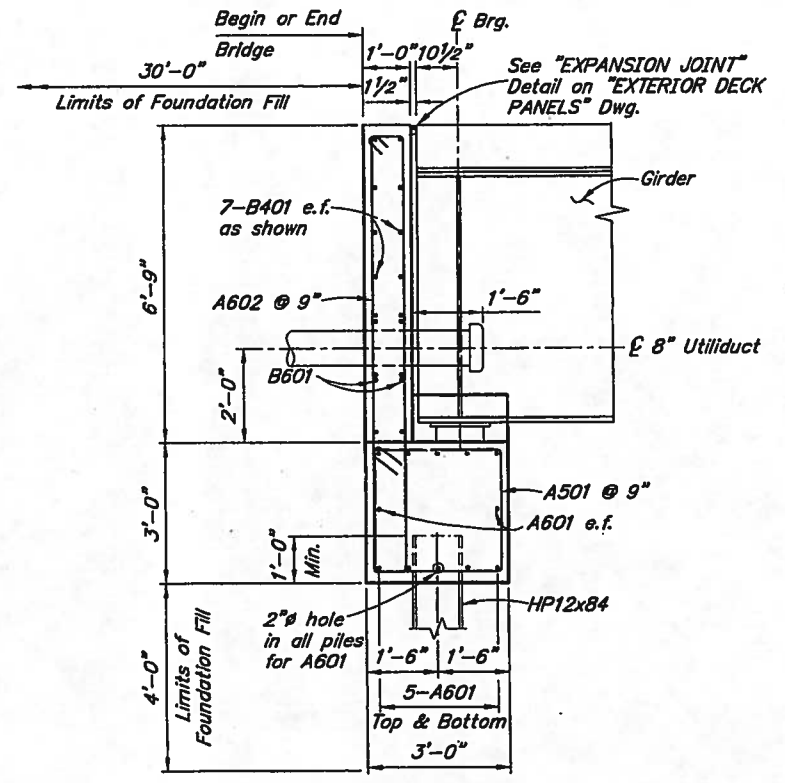
SHEAR KEY - ELEVATION
12 6 0 1 2 3 4
In. Feet



PLAN
12 0 1 2 3 4
In. Feet



ELEVATION
(Looking back on station)
12 0 1 2 3 4
In. Feet



SECTION A-A
12 6 0 1 2 3
In. Feet

DESIGNED BY: <i>Travis Arndt</i>	CHECKED: <i>Todd Barke</i>
DRAWN BY: <i>Sam Solito</i>	CHECKED: <i>Travis Arndt</i>
QUANTITIES BY: <i>Travis Arndt</i>	CHECKED: <i>Todd Barke</i>

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
BRIDGE SECTION

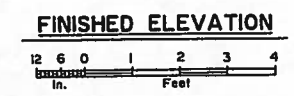
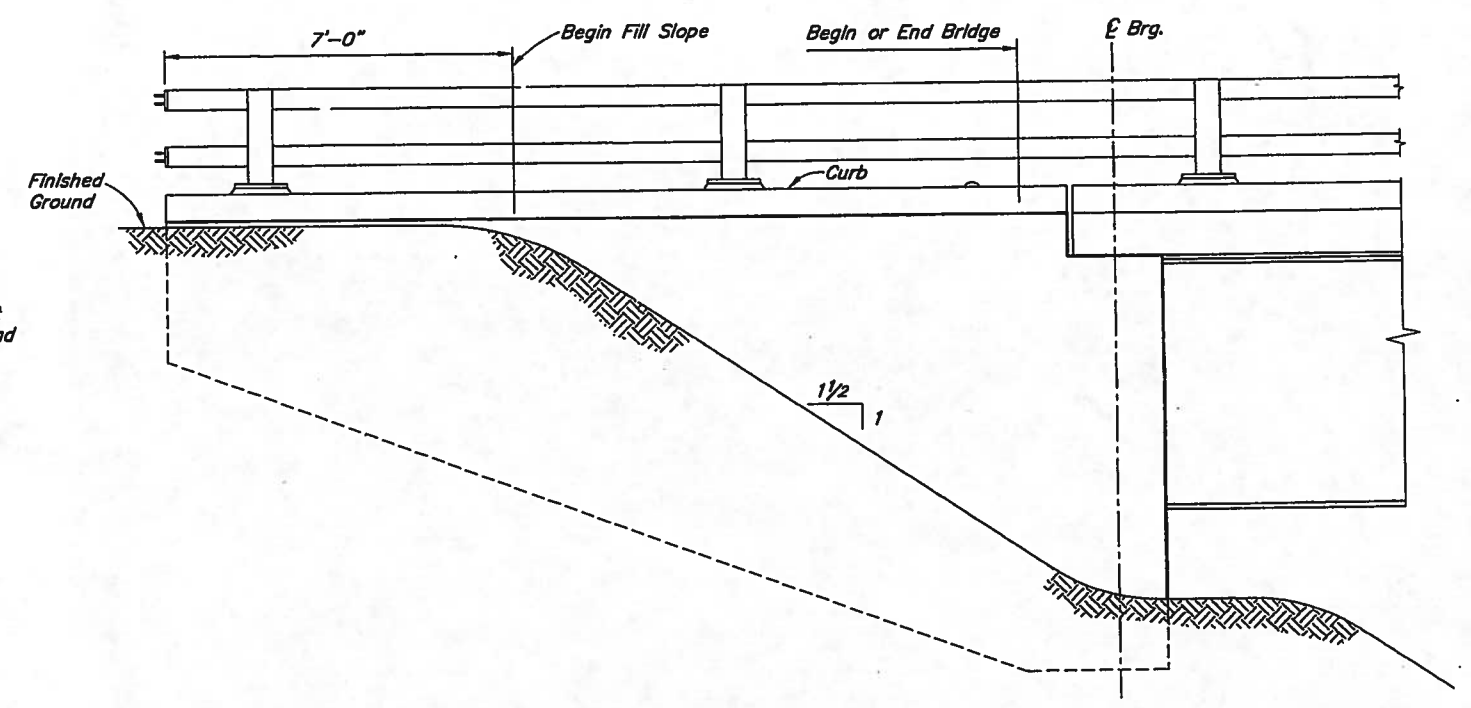
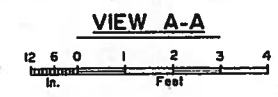
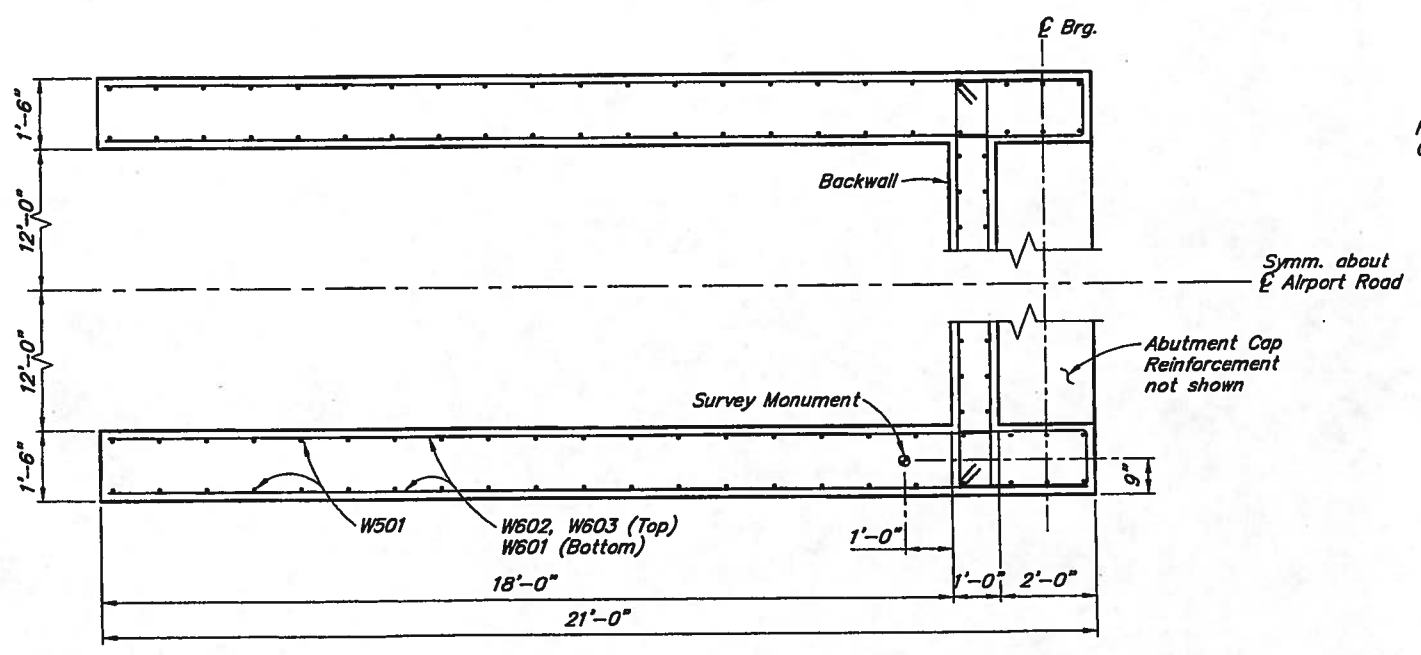
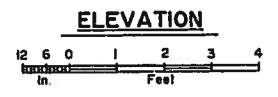
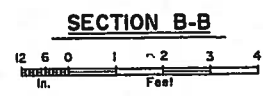
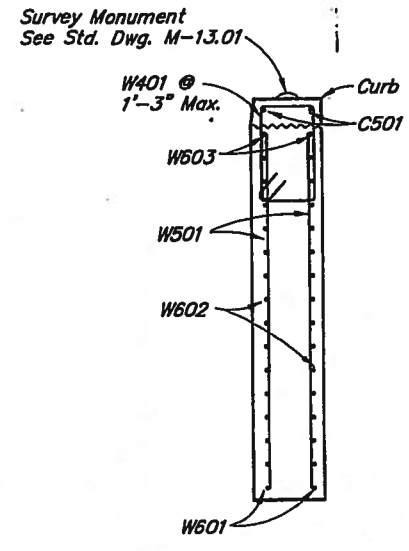
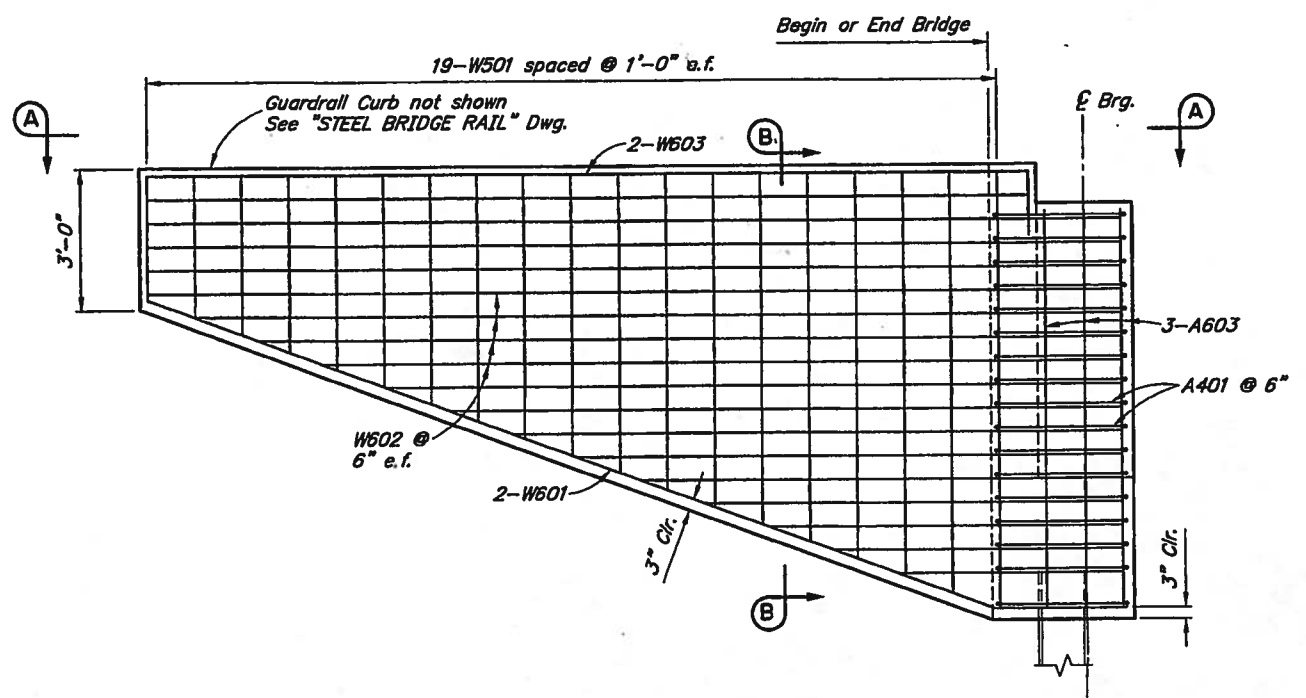


GRAYLING CREEK BRIDGE
AIRPORT ROAD
ABUTMENTS

BRIDGE NO. 1298
DWG. NO. 4

REINFORCING STEEL-ONE ABUTMENT					BENDING DIAGRAM	
MARK	SIZE	NO.	LENGTH	TYPE		
a C501	5	4	18'-6"		2'-7" to 9'-4"	
a W401	4	32	7'-2"	Bent	19'-0"	
W501	5	76	Varies		6'-6"	
W601	6	4	21'-10"	Bent	17'-10"	
W602	6	68	Varies		2'-10"	
W603	6	4	20'-2"	Bent	4'-8" to 20'-8"	

a - Epoxy coated.



DESIGNED BY: <i>Travis Arndt</i>	CHECKED: <i>Todd Barla</i>
DRAWN BY: <i>Sam Solla</i>	CHECKED: <i>Travis Arndt</i>
QUANTITIES BY: <i>Travis Arndt</i>	CHECKED: <i>Todd Barla</i>

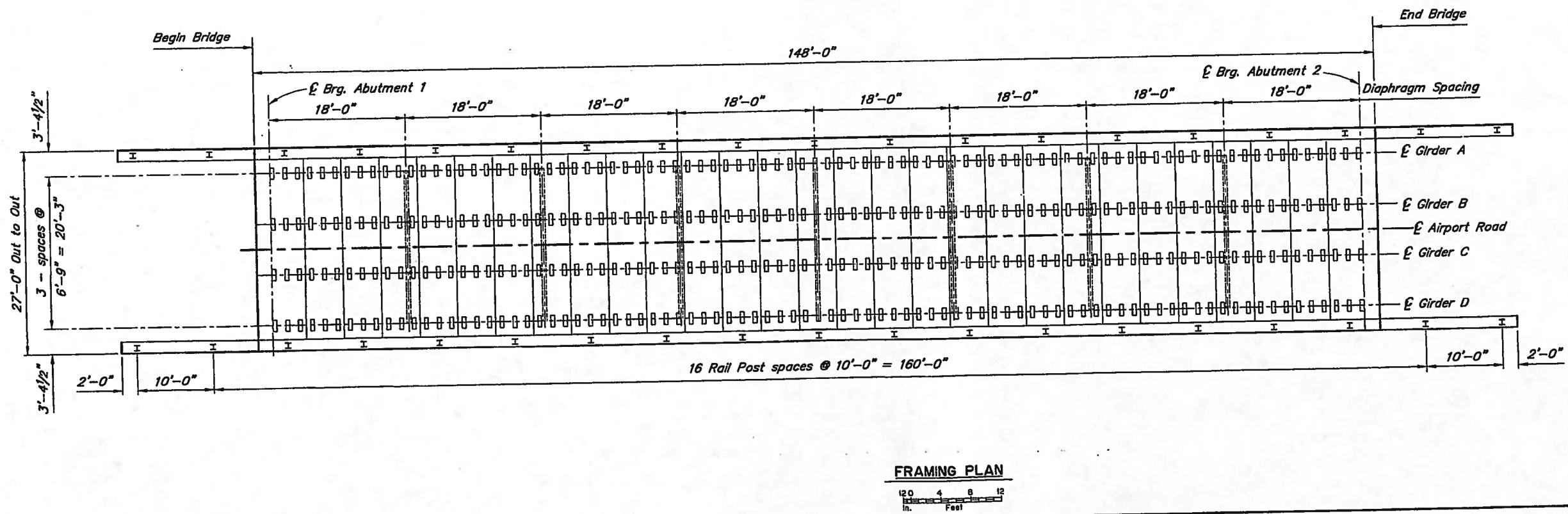
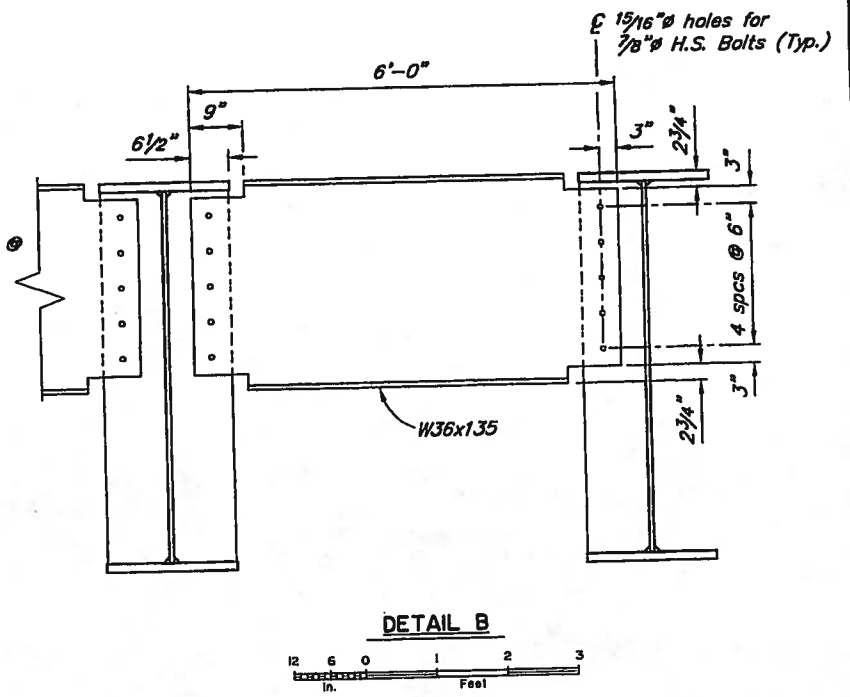
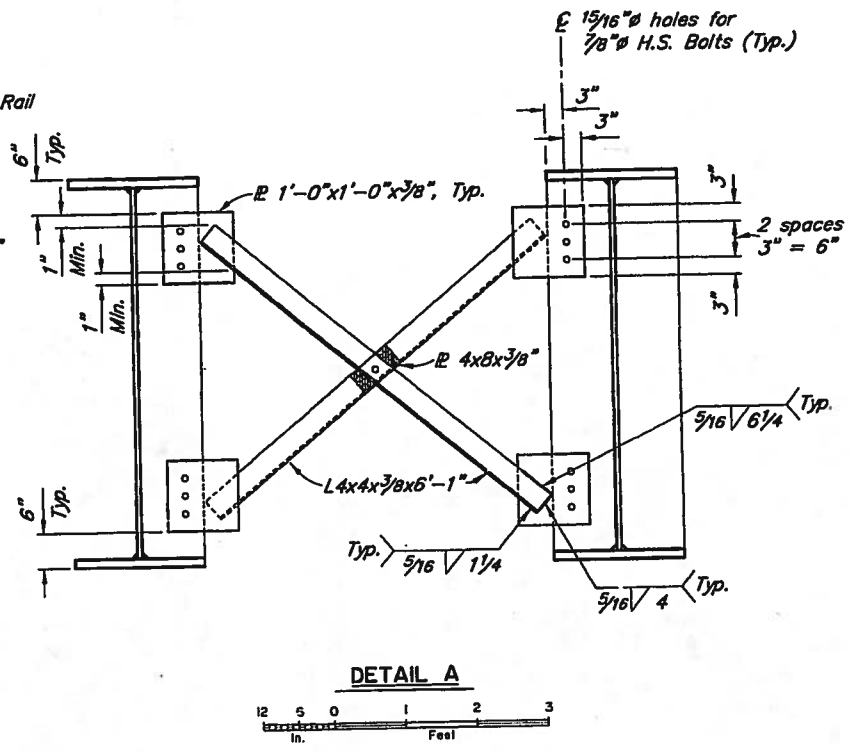
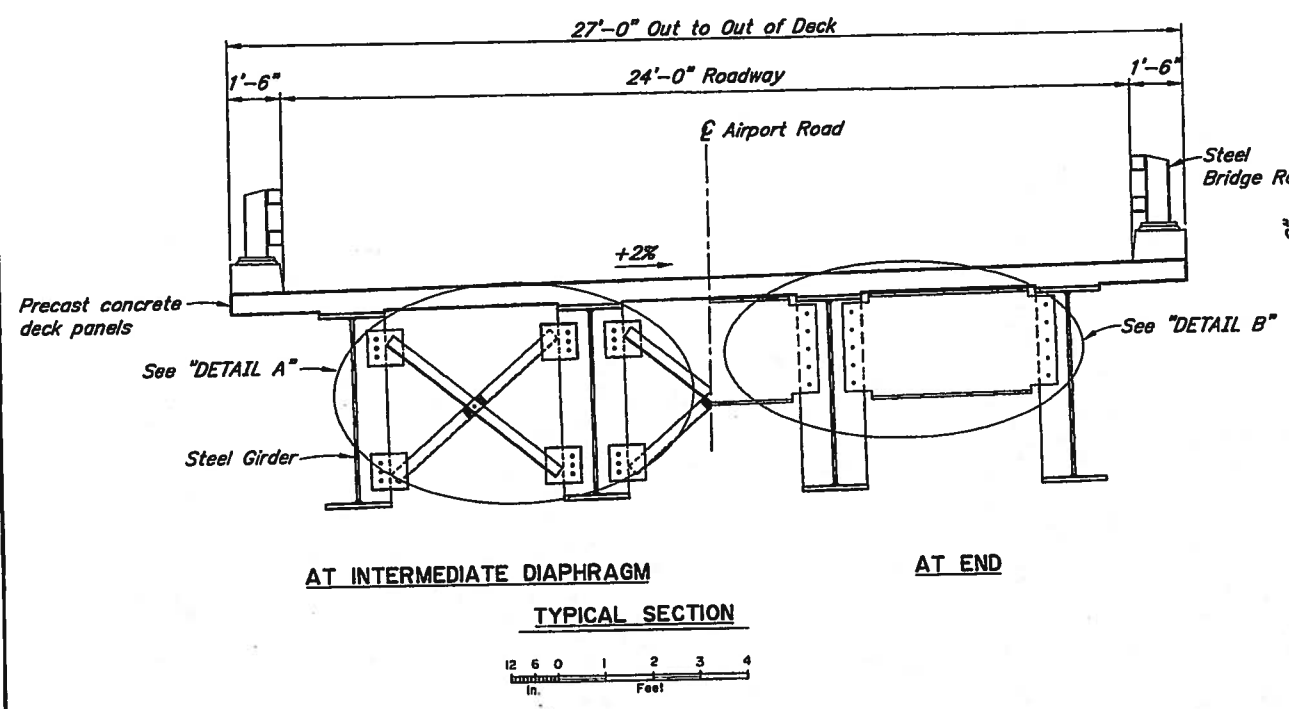
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
BRIDGE SECTION



GRAYLING CREEK BRIDGE
AIRPORT ROAD
WINGWALLS

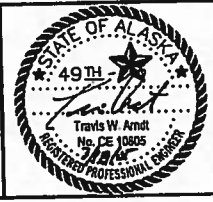
BRIDGE NO. 1298
DWG. NO. 5

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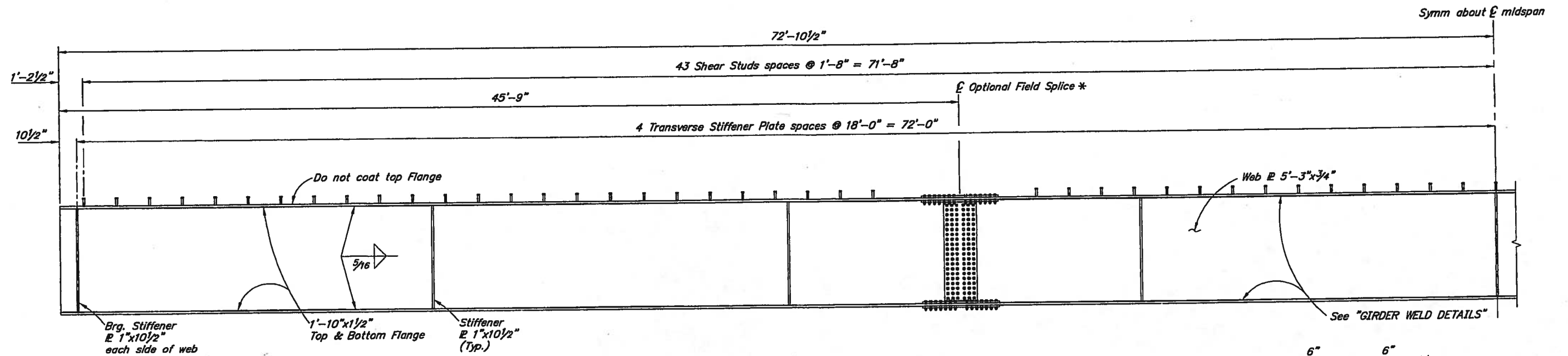
DESIGNED BY: <i>Travis Arndt</i>	CHECKED: <i>Todd Baris</i>
<i>Travis Arndt</i>	<i>Todd Baris</i>
DRAWN BY: <i>Sam Sallie</i>	CHECKED: <i>Travis Arndt</i>
<i>Sam Sallie</i>	<i>Travis Arndt</i>
QUANTITIES BY: <i>Travis Arndt</i>	CHECKED: <i>Todd Baris</i>
<i>Travis Arndt</i>	<i>Todd Baris</i>

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
BRIDGE SECTION

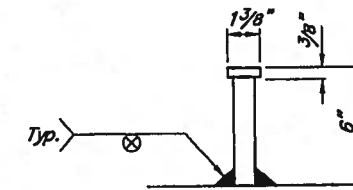


GRAYLING CREEK BRIDGE
AIRPORT ROAD
FRAMING PLAN

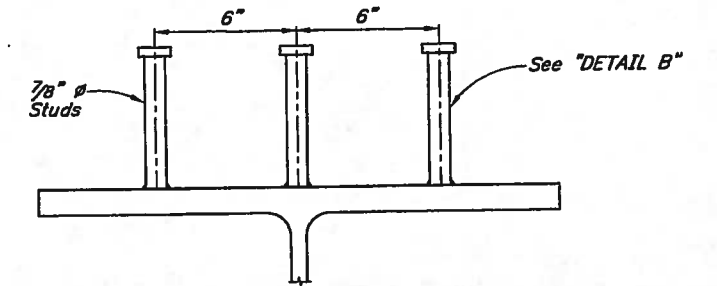
BRIDGE NO. 1298
DWG. NO. 6



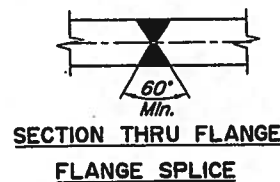
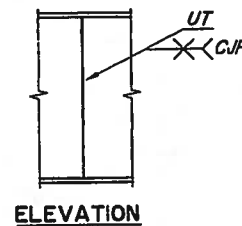
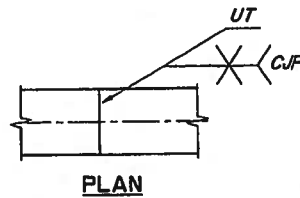
GIRDER ELEVATION



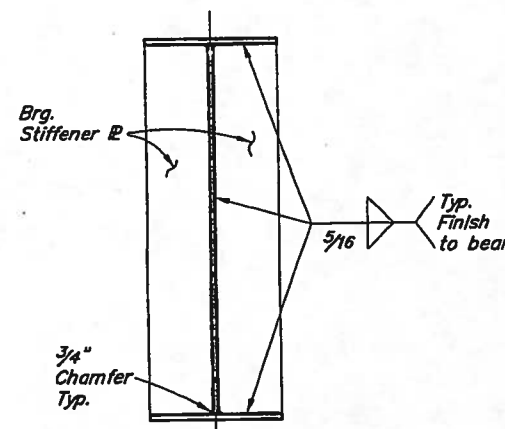
DETAIL B
No Scale



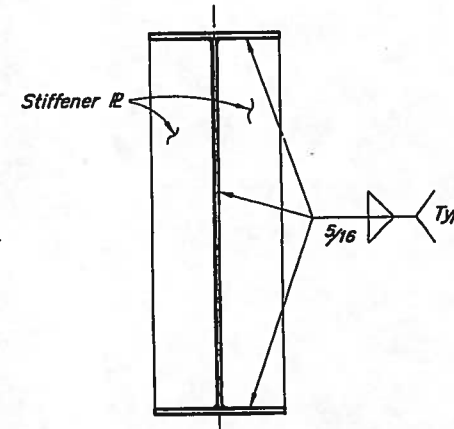
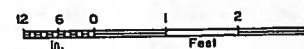
SHEAR CONNECTOR DETAIL



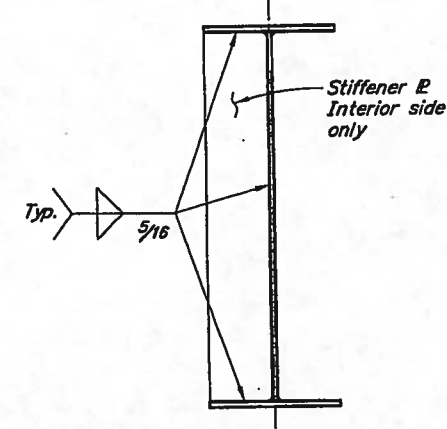
GIRDER WELD DETAILS
No Scale



SECTION - BEARING STIFFENER



SECTION - INTERIOR GIRDER
TRANSVERSE STIFFENER



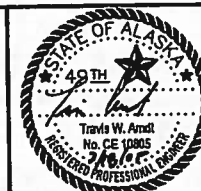
SECTION - EXTERIOR GIRDER
TRANSVERSE STIFFENER



* Only one optional field splice per girder.

DESIGNED BY: <i>Travis Arndt</i>	CHECKED: <i>Todd Baris</i>
DRAWN BY: <i>Sam Sells</i>	CHECKED: <i>Travis Arndt</i>
QUANTITIES BY: <i>Travis Arndt</i>	CHECKED: <i>Todd Baris</i>

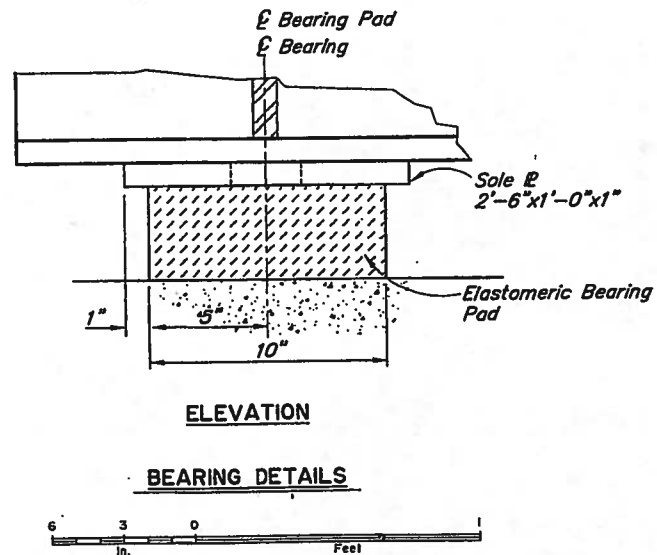
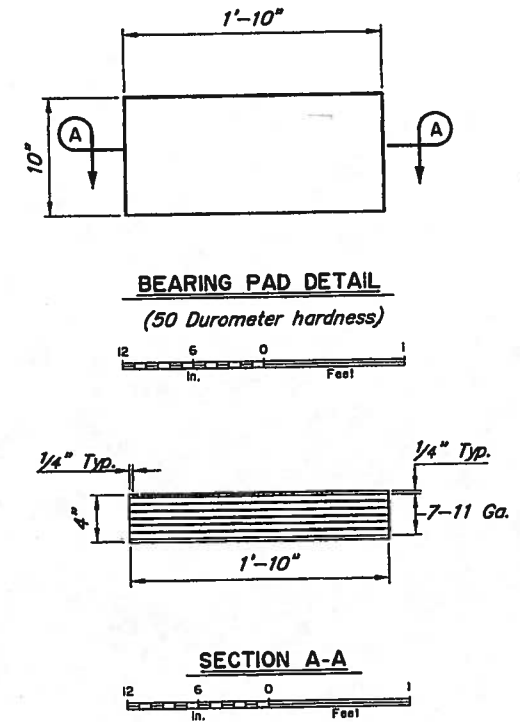
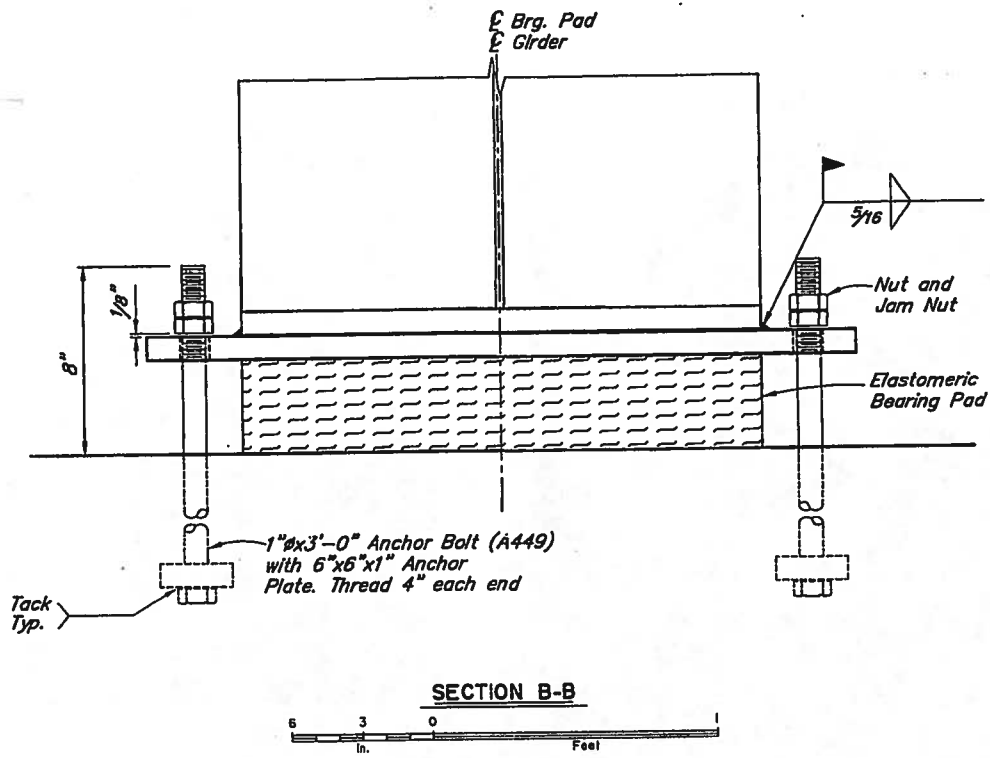
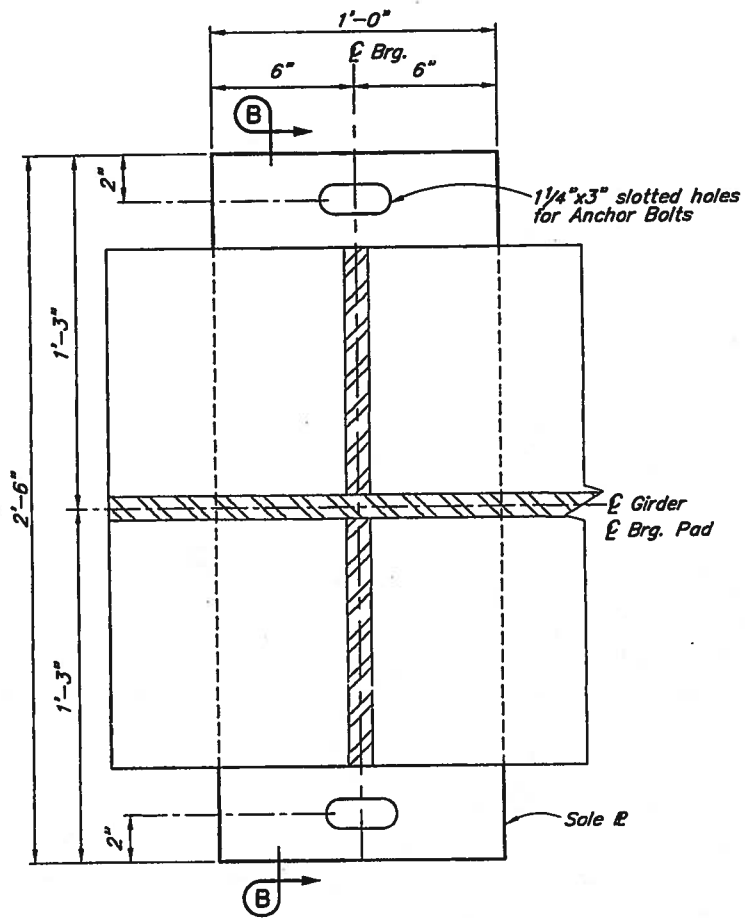
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
BRIDGE SECTION



GRAYLING CREEK BRIDGE
AIRPORT ROAD
GIRDERS

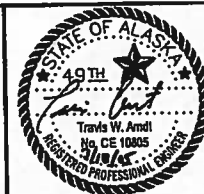


BRIDGE NO. 1298
DWG. NO. 7



DESIGNED BY: <i>Travis Amdt</i>	CHECKED: <i>Todd Baris</i>
DRAWN BY: <i>Sam Saffie</i>	CHECKED: <i>Travis Amdt</i>
QUANTITIES BY: <i>Travis Amdt</i>	CHECKED: <i>Todd Baris</i>

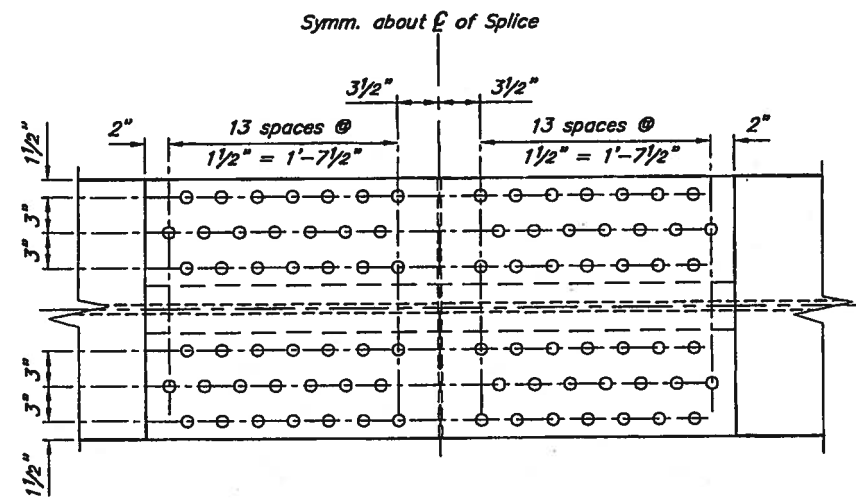
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
BRIDGE SECTION



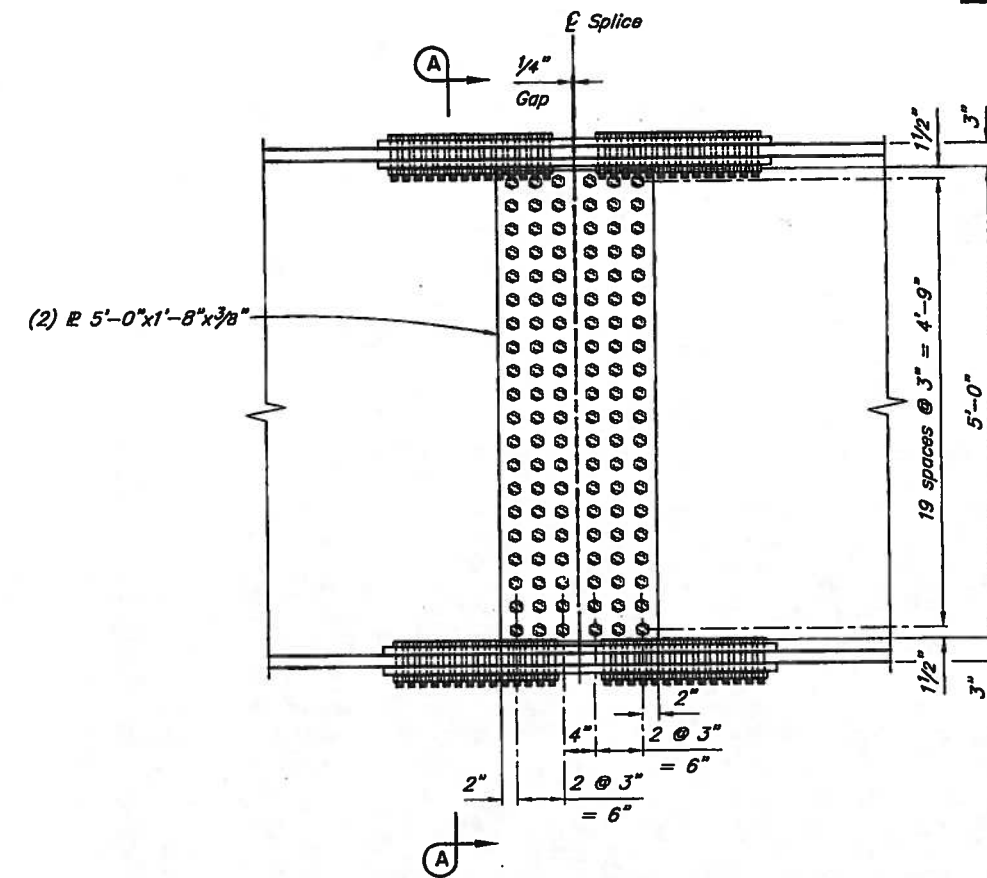
GRAYLING CREEK BRIDGE
AIRPORT ROAD
GIRDER BEARING DETAILS



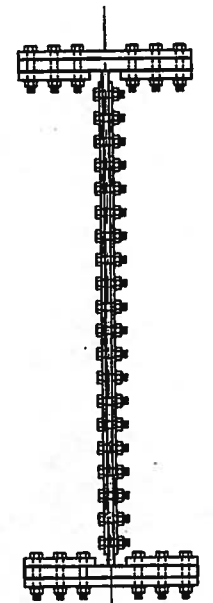
BRIDGE NO. 1298
DWG. NO. 8



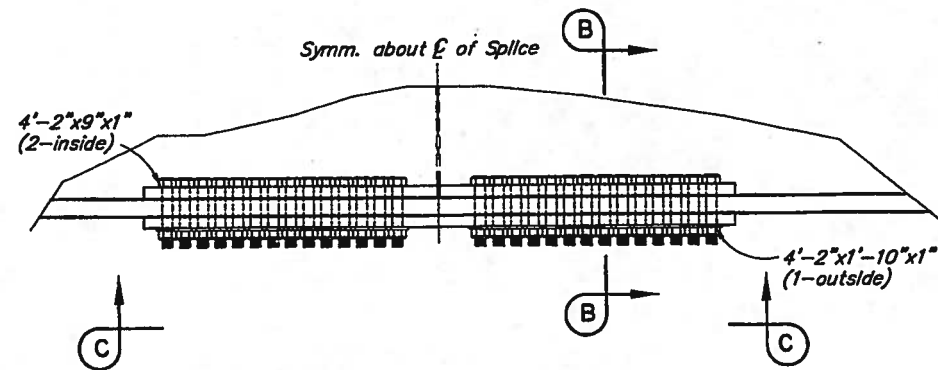
VIEW C-C



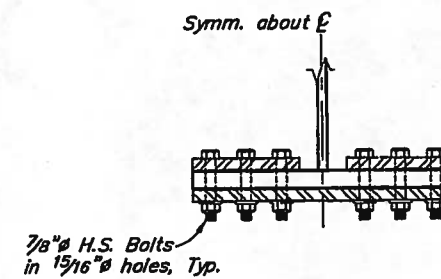
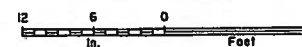
FIELD SPLICE CONNECTION DETAIL



SECTION A-A



FLANGE SPLICE

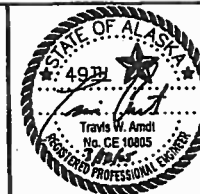


SECTION B-B



DESIGNED BY: <i>Travis Arndt</i>	CHECKED: <i>Todd Borfs</i>
DRAWN BY: <i>Sam Stoffe</i>	CHECKED: <i>Travis Arndt</i>
QUANTITIES BY: <i>Travis Arndt</i>	CHECKED: <i>Todd Borfs</i>

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
BRIDGE SECTION

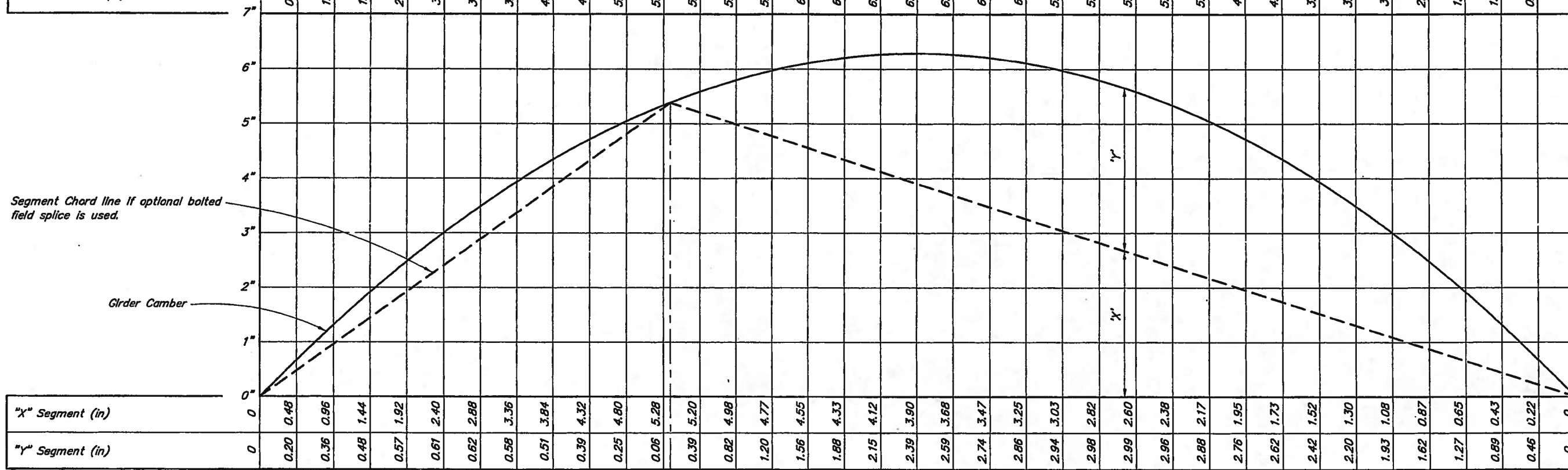


GRAYLING CREEK BRIDGE
AIRPORT ROAD
OPTIONAL FIELD SPLICE



BRIDGE NO. 1298
DWG. NO. 9

Distance from \bar{C} Brg. Abut. 1 (ft)	0	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	104	108	112	116	120	124	128	132	136	140	144
Girder + Deck Deflection (in)	0	0.55	1.07	1.55	2.01	2.43	2.83	3.19	3.52	3.81	4.08	4.32	4.52	4.69	4.83	4.94	5.02	5.07	5.09	5.07	5.02	4.94	4.83	4.69	4.52	4.32	4.08	3.81	3.52	3.19	2.83	2.43	2.01	1.55	1.07	0.55	0
Rail + Asphalt Deflection (in)	0	0.13	0.25	0.37	0.48	0.58	0.67	0.75	0.83	0.90	0.97	1.02	1.07	1.11	1.14	1.17	1.19	1.20	1.20	1.20	1.19	1.17	1.14	1.11	1.07	1.02	0.97	0.90	0.83	0.75	0.67	0.58	0.48	0.37	0.25	0.13	0
Total Deflection (in)	0	0.68	1.32	1.92	2.49	3.01	3.50	3.94	4.35	4.71	5.05	5.34	5.59	5.80	5.97	6.11	6.21	6.27	6.29	6.27	6.21	6.11	5.97	5.80	5.59	5.34	5.05	4.71	4.35	3.94	3.50	3.01	2.49	1.92	1.32	0.68	0
"x" Segment (in)	0	0.48	0.96	1.44	1.92	2.40	2.88	3.36	3.84	4.32	4.80	5.28	5.20	4.98	4.77	4.55	4.33	4.12	3.90	3.68	3.47	3.25	3.03	2.82	2.60	2.38	2.17	1.95	1.73	1.52	1.30	1.08	0.87	0.65	0.43	0.22	0
"y" Segment (in)	0	0.20	0.36	0.48	0.57	0.61	0.62	0.58	0.51	0.39	0.25	0.06	0.39	0.82	1.20	1.56	1.88	2.15	2.39	2.59	2.74	2.86	2.94	2.98	2.99	2.96	2.88	2.76	2.62	2.42	2.20	1.93	1.62	1.27	0.89	0.46	0



Segment Chord line if optional bolted field splice is used.

Girder Camber

\bar{C} Optional Bolted Field Splice

CAMBER DIAGRAM
No Scale


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

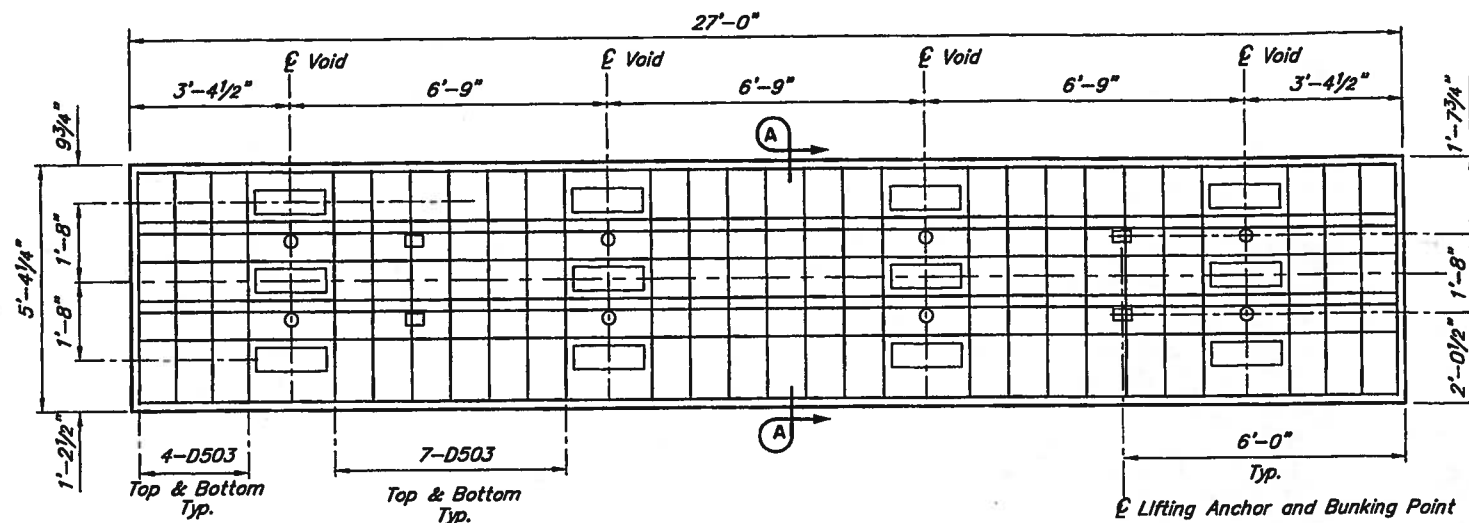
DESIGNED BY: <i>Travis Arndt</i>	CHECKED: <i>Todd Baris</i>
<i>Travis Arndt</i>	<i>Todd Baris</i>
DRAWN BY: <i>Sam Solito</i>	CHECKED: <i>Travis Arndt</i>
<i>Sam Solito</i>	<i>Travis Arndt</i>
QUANTITIES BY: <i>Travis Arndt</i>	CHECKED: <i>Todd Baris</i>
<i>Travis Arndt</i>	<i>Todd Baris</i>

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
BRIDGE SECTION

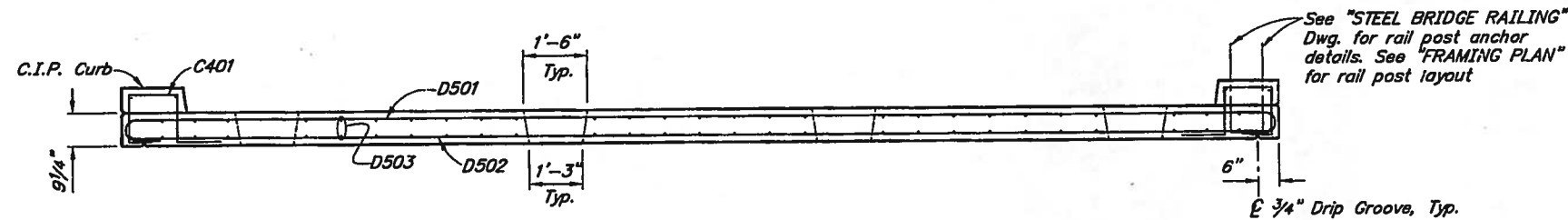


GRAYLING CREEK BRIDGE
AIRPORT ROAD
CAMBER DETAILS

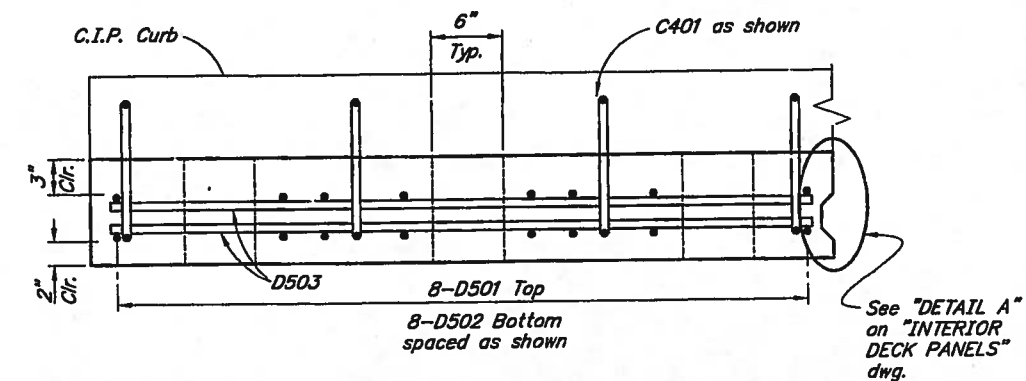

BRIDGE NO. 1298
DWG. NO. 10



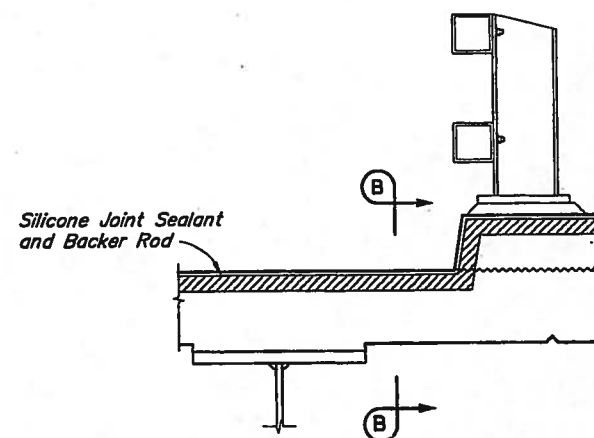
DECK PANEL - PLAN



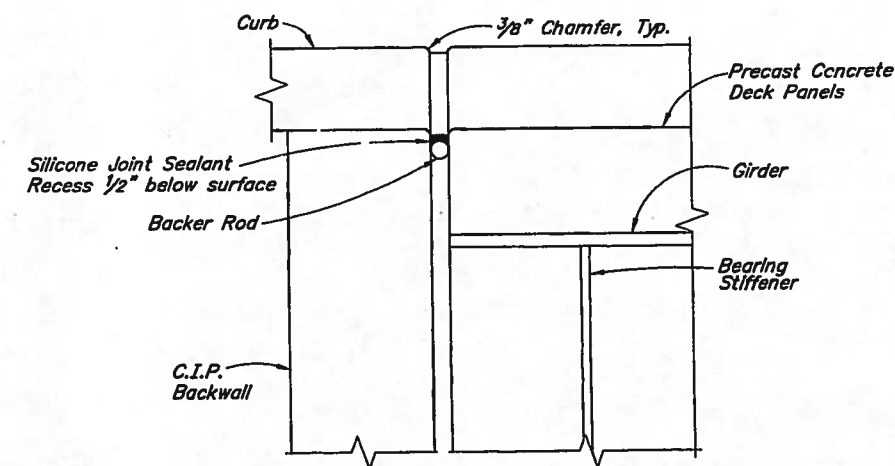
DECK PANEL - ELEVATION



SECTION A-A



EXPANSION JOINT



SECTION B-B

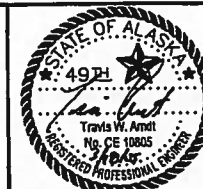


REINFORCING STEEL-ONE EXTERIOR PANEL					
MARK	SIZE	NO.	LENGTH	TYPE	BENDING DIAGRAM
C401	4	8	4'-7"	Bent	
D501	5	8	27'-10"	Bent	
D502	5	8	26'-8"	---	
D503	5	58	4'-10 3/4"	---	

a - Epoxy coat all reinforcement

DESIGNED BY: <i>Travis Arndt</i>	CHECKED: <i>Todd Barte</i>
DRAWN BY: <i>Sam Solito</i>	CHECKED: <i>Travis Arndt</i>
QUANTITIES BY: <i>Travis Arndt</i>	CHECKED: <i>Todd Barte</i>

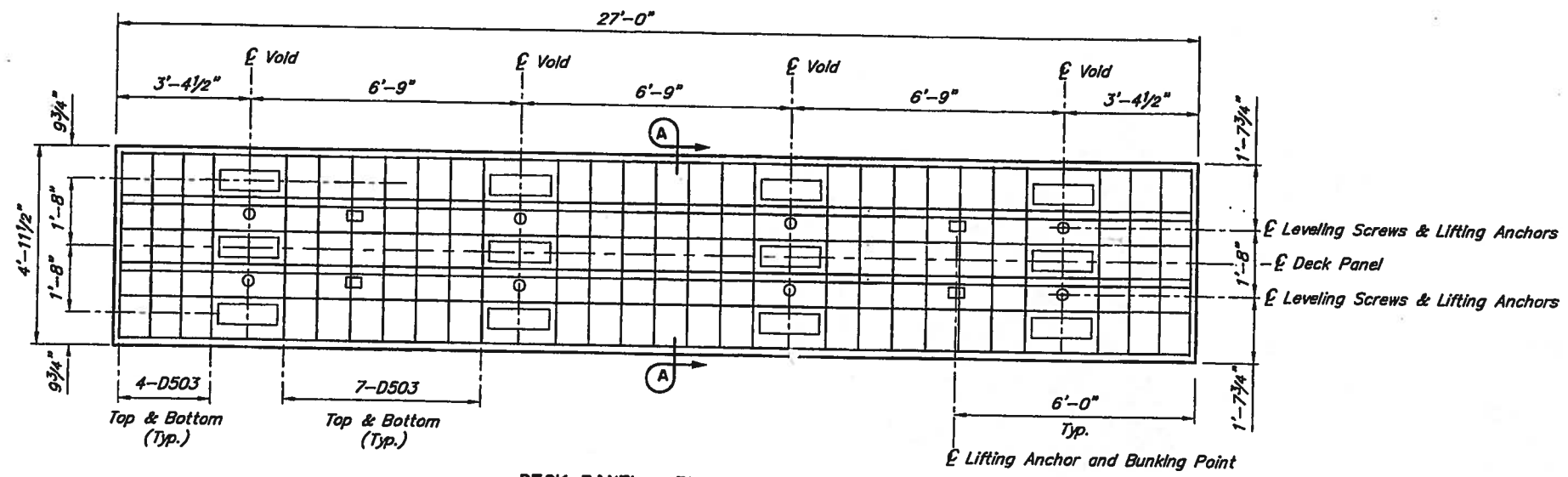
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
BRIDGE SECTION



GRAYLING CREEK BRIDGE
AIRPORT ROAD
EXTERIOR DECK PANELS



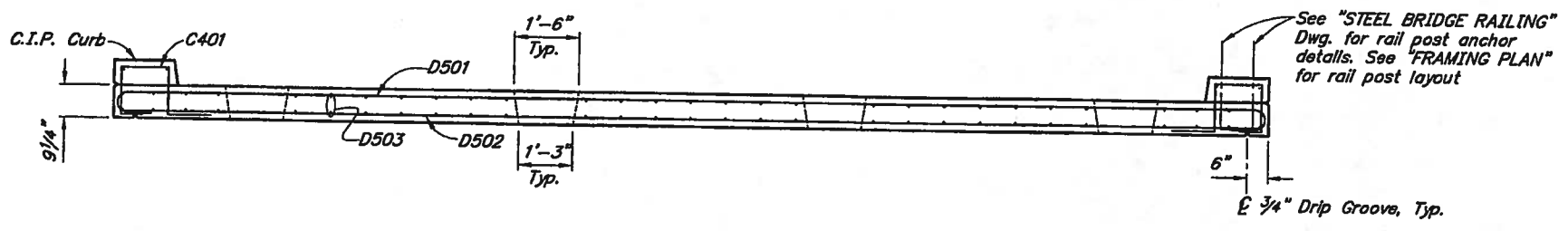
BRIDGE NO. 1298
DWG. NO. 11



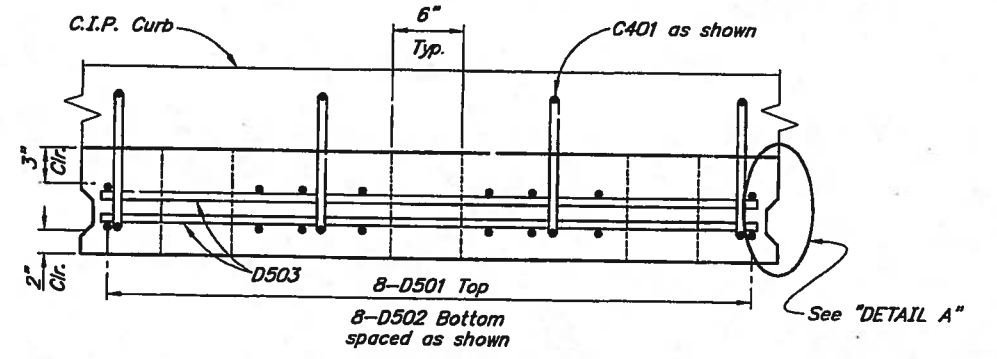
DECK PANEL - PLAN
 12 6 0 1 2 3 4
 In. Feet

a REINFORCING STEEL-ONE INTERIOR PANEL					
MARK	SIZE	NO.	LENGTH	TYPE	BENDING DIAGRAM
C401	4	8	4'-7"	Bent	
D501	5	8	27'-10"	Bent	
D502	5	8	26'-8"	---	
D503	5	58	4'-7 1/2"	---	

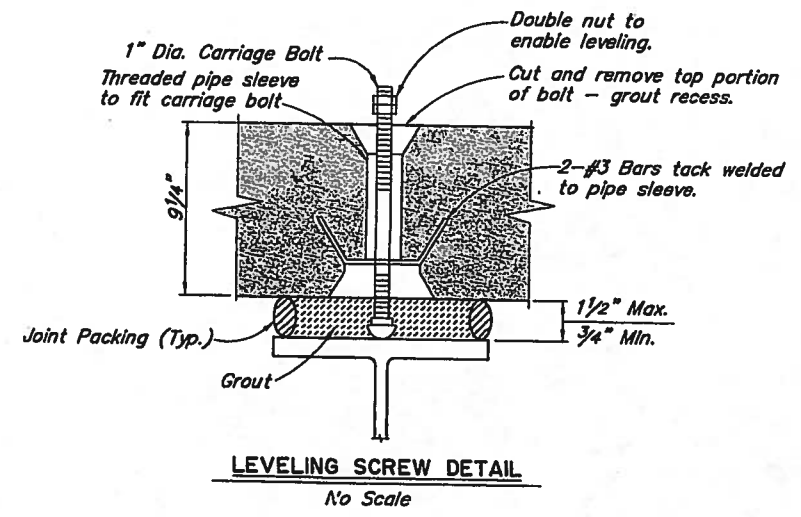
a - Epoxy coat all reinforcement



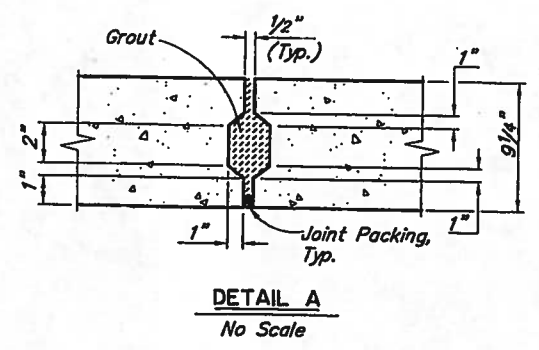
DECK PANEL - ELEVATION
 12 6 0 1 2 3 4
 In. Feet



SECTION A-A
 12 6 0 1
 In. Feet



LEVELING SCREW DETAIL
 No Scale



DETAIL A
 No Scale

DESIGNED BY: <i>Travis Arndt</i>	CHECKED: <i>Todd Baris</i>
DRAWN BY: <i>Sam Solite</i>	CHECKED: <i>Travis Arndt</i>
QUANTITIES BY: <i>Travis Arndt</i>	CHECKED: <i>Todd Baris</i>

STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
 AND PUBLIC FACILITIES
 BRIDGE SECTION

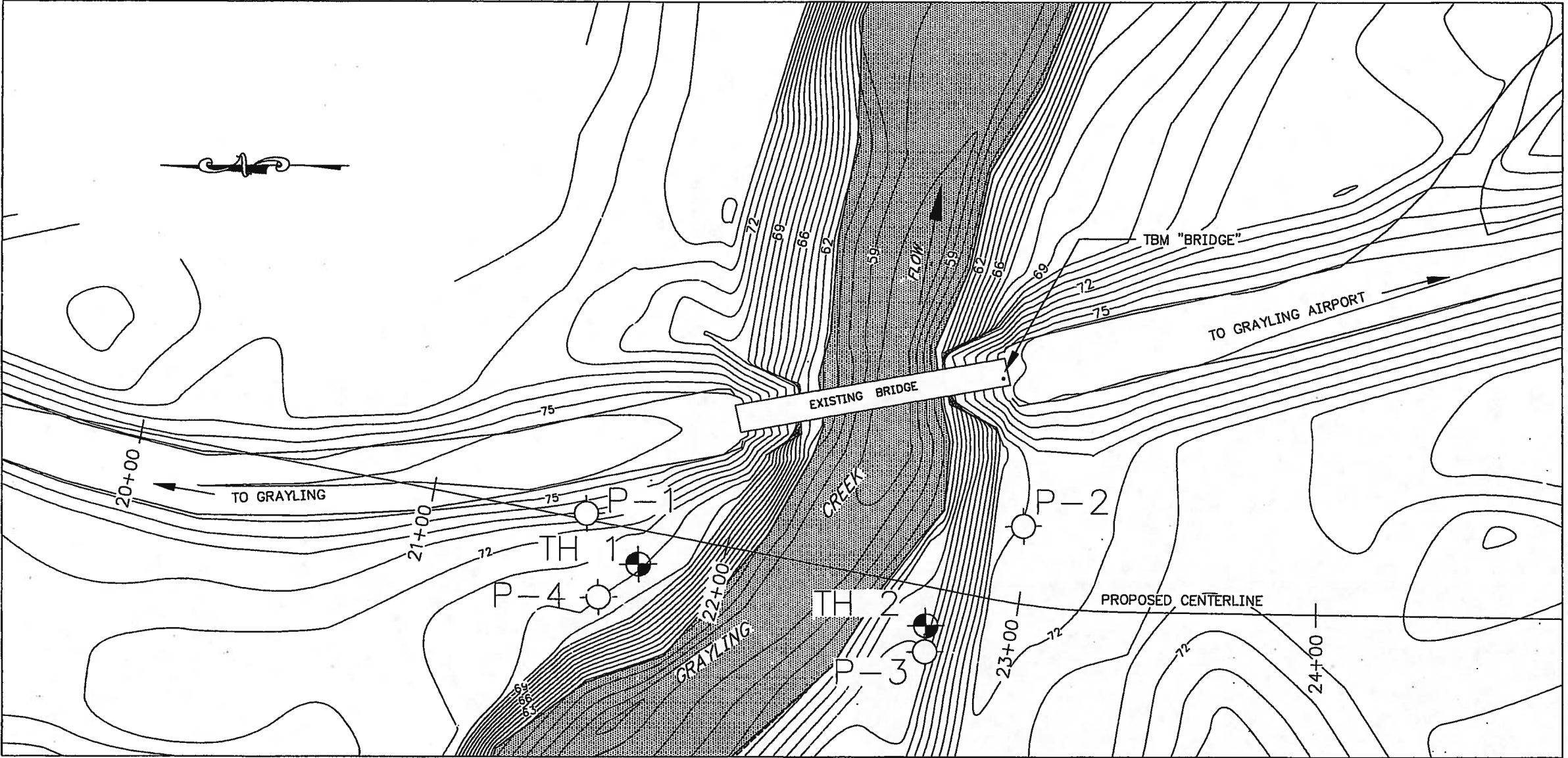


GRAYLING CREEK BRIDGE
 AIRPORT ROAD
 INTERIOR DECK PANELS

BRIDGE NO. 1298
 DWG. NO. 12

REVISIONS			STATE	PROJECT DESIGNATION	YEAR	SHEET No.	TOTAL SHEETS
No.	DATE	DESCRIPTION	ALASKA	STP-0002/(114)/60937	2005	20	25

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 DATE: 2/14/2005 1:35PM
 LAYOUT: FINAL
 SCALE: N/A
 DESIGNED BY: [blank]
 CHECKED BY: [blank]
 CRAFTED BY: [blank]



SUMMARY OF TEST HOLES

TEST HOLE DESIGNATION	STATION	OFFSET	ELEVATION
PEN. 1	21+52.0	2.1' L	75.1'
PEN. 4	21+61.3	24.9' R	70.4'
T.H. 1	21+72.0	11.5' R	70.2'
T.H. 2	22+71.0	13.1' R	65.1'
PEN. 3	22+72.3	21.8' R	65.5'
PEN. 2	22+97.5	26.1' L	72.0'











STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
 AND PUBLIC FACILITIES

**GRAYLING AIRPORT BRIDGE
 GENERAL LAYOUT**






STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	STP 0002/(114) 60937	2005	21	25

Graphic Symbols
(Two or more soil symbols may be used together to indicate a combination of soil types.)

-  Cobbles and/or Boulders
-  Gravel (Gr)
-  Sand (Sa)
-  Silt (Si)
-  Clay (Cl)
-  Organics (Org)
-  Bedrock (Bx)
-  Ice (Ice)

Soil Size Distribution
Based on U.S. Standard Sieve Sizes:
Boulders: > 12"
Cobbles: 3" to 12"
Gravel: #4 to 3"
Sand: #200 to #4
Silt/Clay: < #200

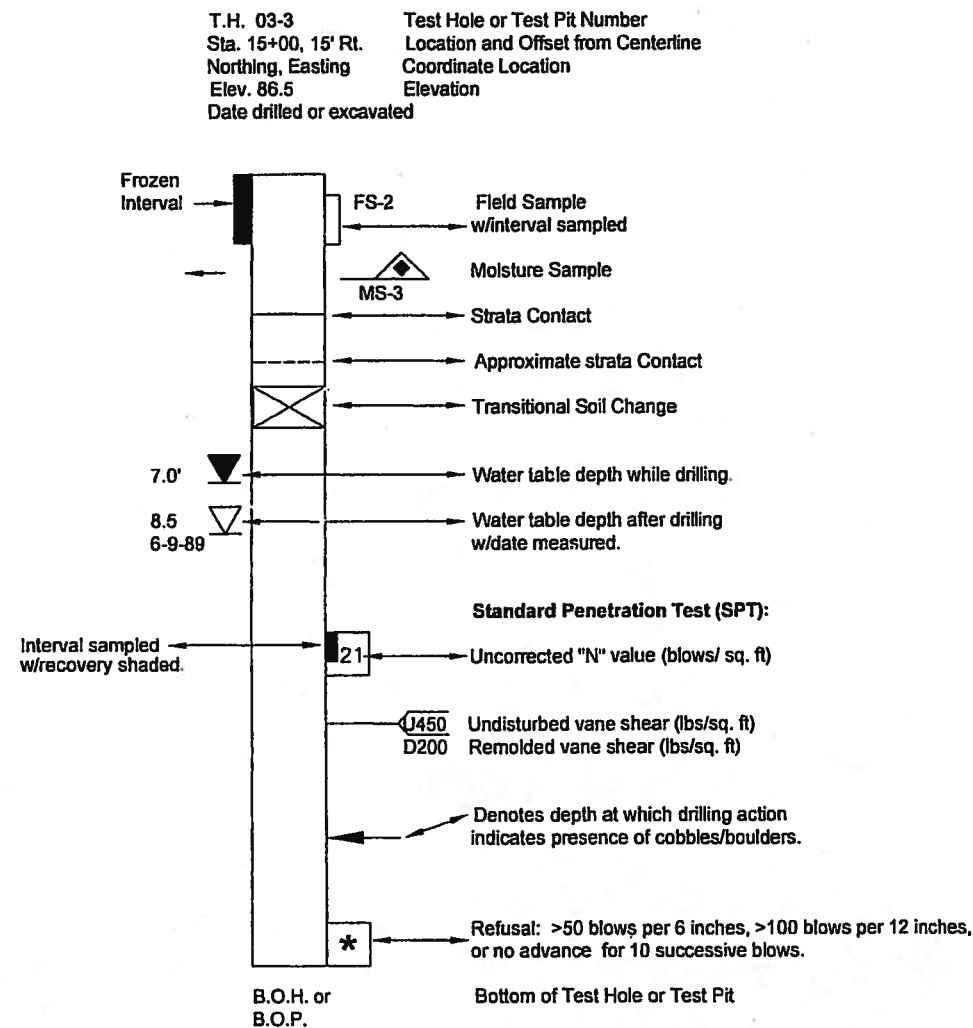
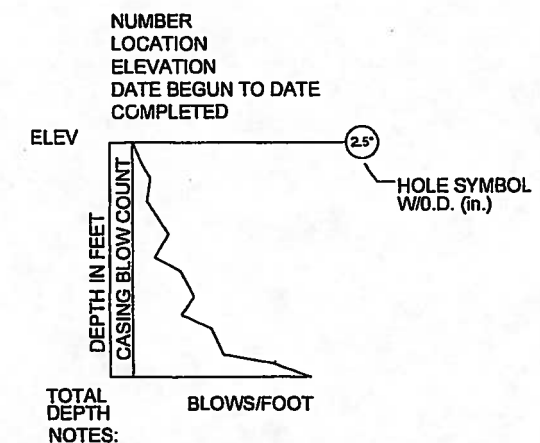
NOTE: All soils encountered are field-classified by the Geologist. Laboratory classifications are made on selected samples. The field classifications are adjusted if necessary, to match the laboratory classification.

- Plan View Symbols**
-  Power Auger Test Hole
 -  Hand Auger Test Hole
 -  Hand Probe Depth At Location
 -  Hand Dug Test Pit
 -  Dozer/Backhoe Pit

GENERAL NOTES

- Horizontal and Vertical Geometry with topographic data furnished by P.D.C. Inc.
- P.D.C. provided the coordinates of the centerline of the roadway during the fall of 2000 survey.
- Test holes and continuous penetrometers were located by swing ties from the ends of the existing bridge and centerline of roadway.
- Test hole and continuous penetrometers were measured from the existing P.K. nail (elevation 76.18 feet) in a plank on the south end of the existing bridge as provided by P.D.C. Inc using a rod and level.

TYPICAL PENETROMETER TEST LOG



NOTE: ABBREVIATED TEST HOLE AND PENETROMETER LOGS ARE SHOWN. SEE GEOLOGY REPORT, GRAYLING AIRPORT BRIDGE No. 1298, OCTOBER 2003 FOR COMPLETE DATA.



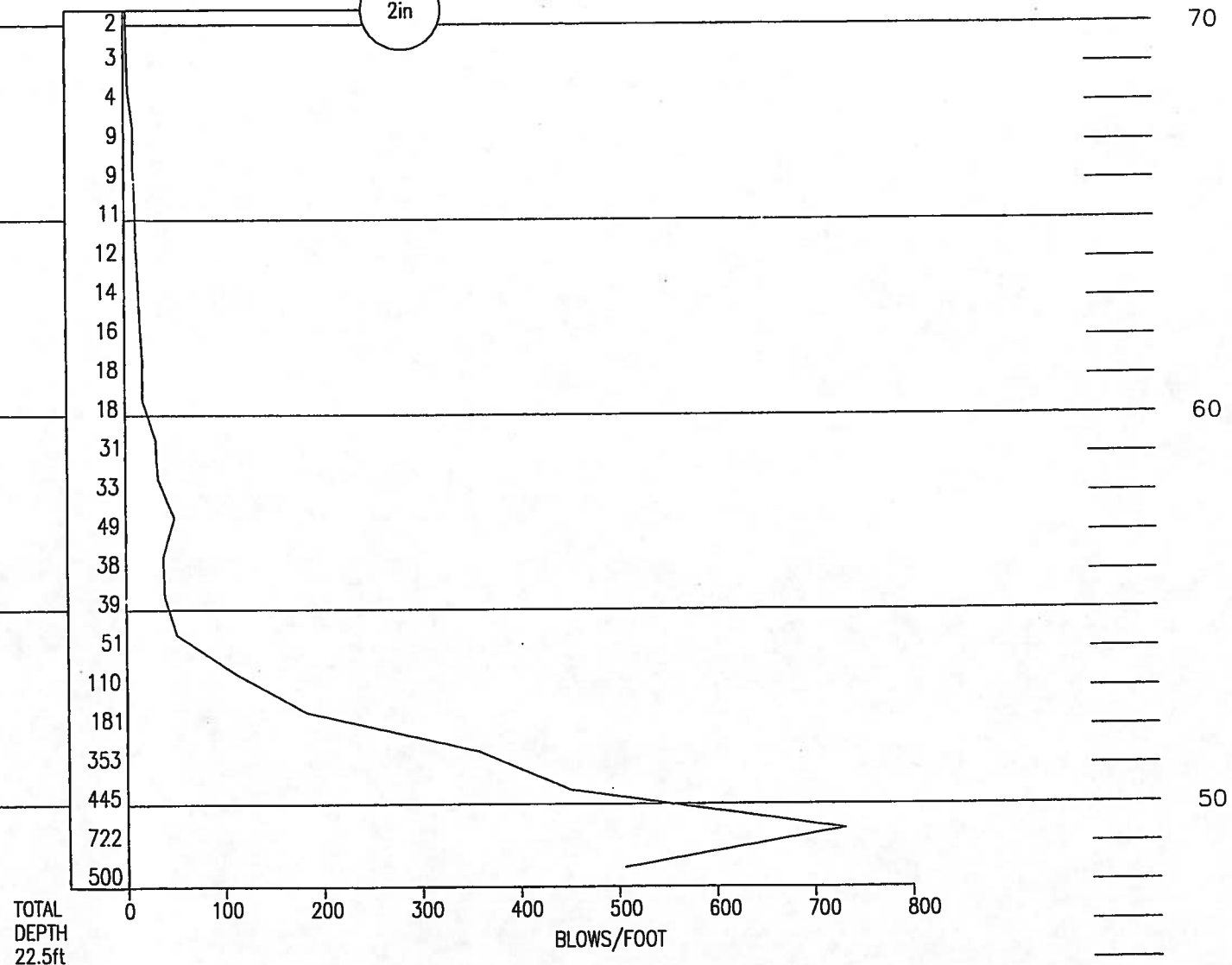
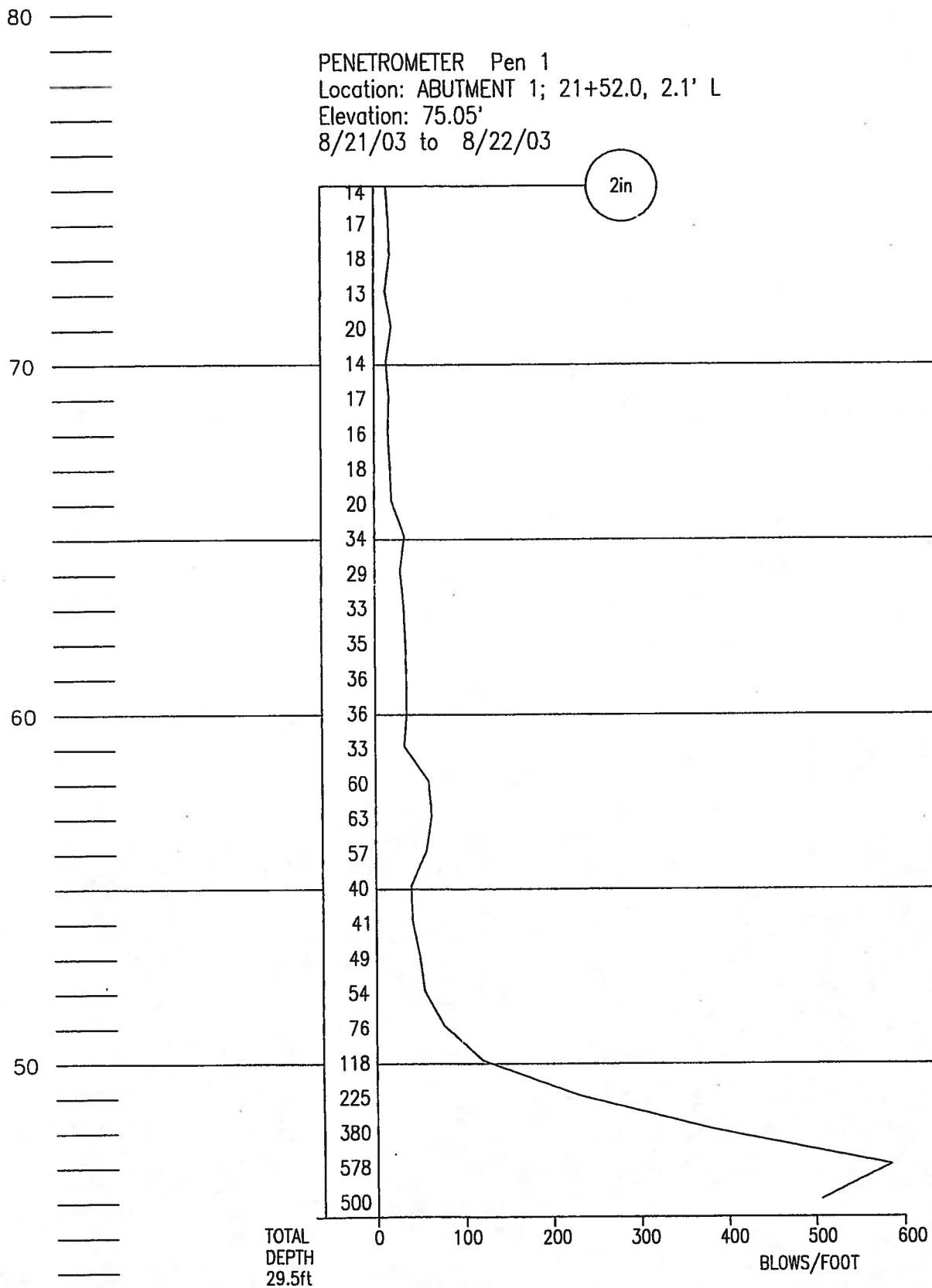
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
ABBREVIATED TEST HOLE & PENETROMETER LOGS
GRAYLING AIRPORT BRIDGE
TEST HOLE LOG AND
PENETROMETER EXPLANATION

DESIGNED BY: [] CHECKED BY: [] DRAFTED BY: []
 SHEETS: [] SCALE: [] LAYOUT: [] LEGEND: []
 DATE: 3/14/2005 TIME: 10:50AM
 DRAWING LOCATION: []
 FILE: []

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	STP-0002/ (114)/60937	2005	22	25

PENETROMETER Pen 1
 Location: ABUTMENT 1; 21+52.0, 2.1' L
 Elevation: 75.05'
 8/21/03 to 8/22/03

PENETROMETER Pen 4
 Location: ABUTMENT 1; 21+61.3, 24.9' R
 Elevation: 70.37'
 8/22/03 to 8/22/03



DRAWING LOCATION: NORTH BRIDGE STRUCTURE GRAYLING AP BR 1298\DATA\GINT\TH.dwg
 DATE: 3/11/2005 4:00PM
 TIME: 4:00PM
 LAYOUT: P1_P4
 SCALE: N/A
 XREFS:
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 CHECKED BY: ASP

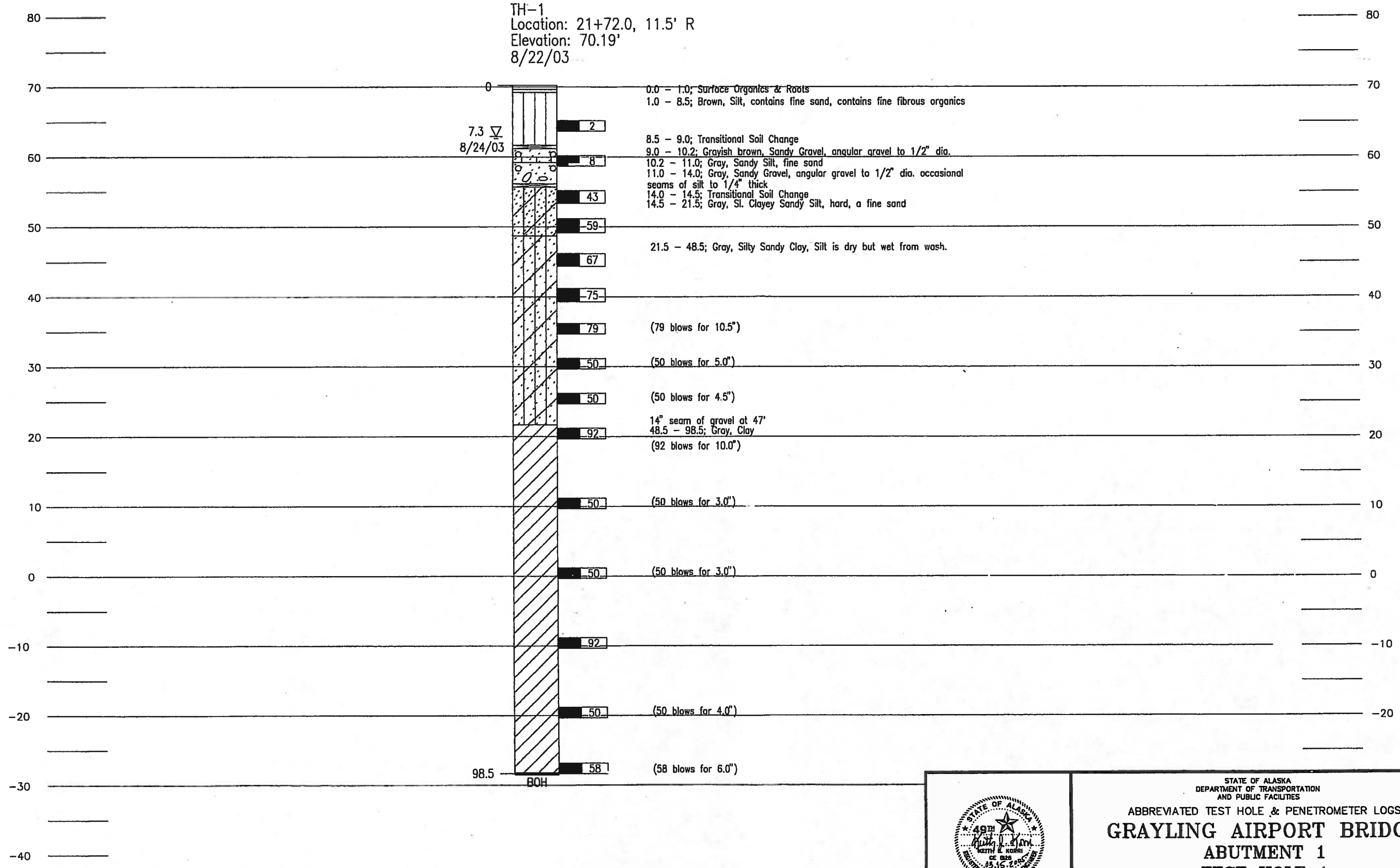


STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
 AND PUBLIC FACILITIES
 ABBREVIATED TEST HOLE & PENETROMETER LOGS
GRAYLING AIRPORT BRIDGE
ABUTMENT 1
PENETROMETER 1 & 4

BRIDGE NO: 1298
 DRAWING NO: 3 OF 6

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	STP-0002/ (114)/60937	2005	23	25

TH-1
 Location: 21+72.0, 11.5' R
 Elevation: 70.19'
 8/22/03



DESIGNED BY: INDIAN REGION
 CHECKED BY: []
 DRAFTED BY: []
 SHEETS: []
 SCALE: N/A
 LAYOUT: TH1
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 DATE: 3/11/2005
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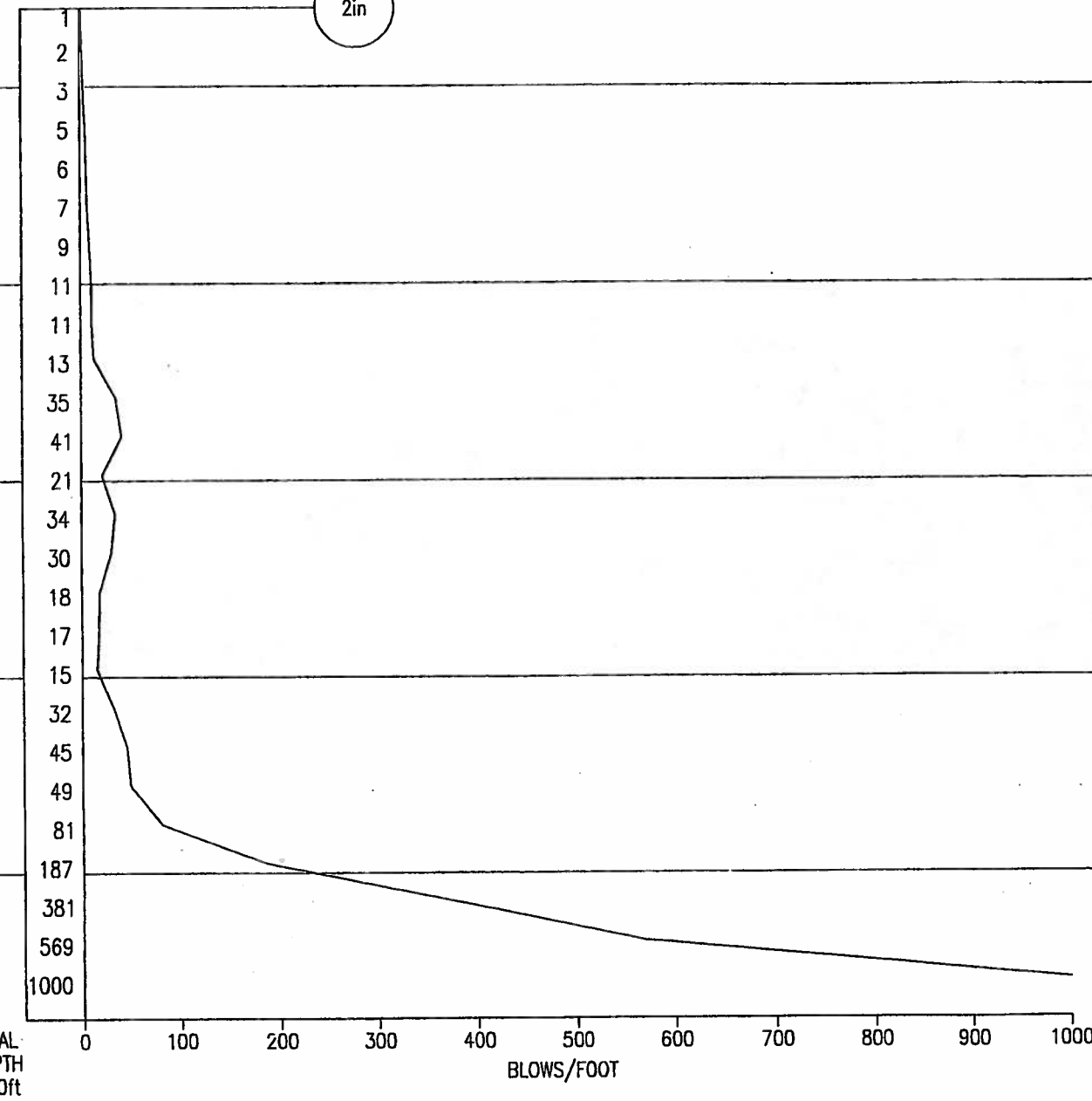


STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
 AND PUBLIC FACILITIES
 ABBREVIATED TEST HOLE & PENETROMETER LOGS
GRAYLING AIRPORT BRIDGE
ABUTMENT 1
TEST HOLE 1

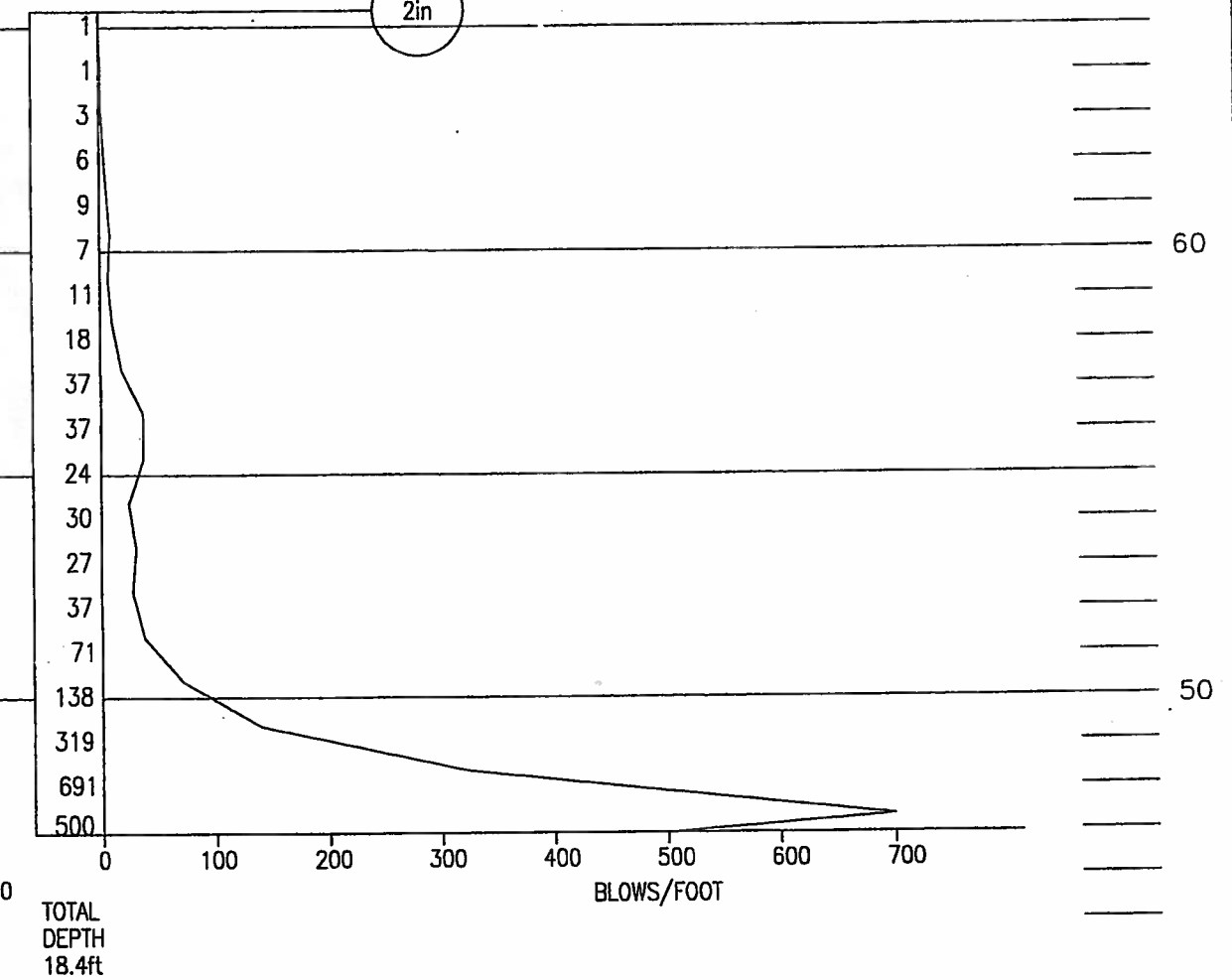
BRIDGE NO: 1298
 DRAWING NO: 4 OF 6

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	STP-0002/ (114)/60937	2005	24	25

PENETROMETER Pen 2
 Location: ABUTMENT 2; 22+97.5, 26.1' L
 Elevation: 71.98'
 8/21/03 to 8/21/03



PENETROMETER Pen 3
 Location: ABUTMENT 2; 22+72.3, 21.8' R
 Elevation: 65.46'
 8/21/03 to 8/21/03



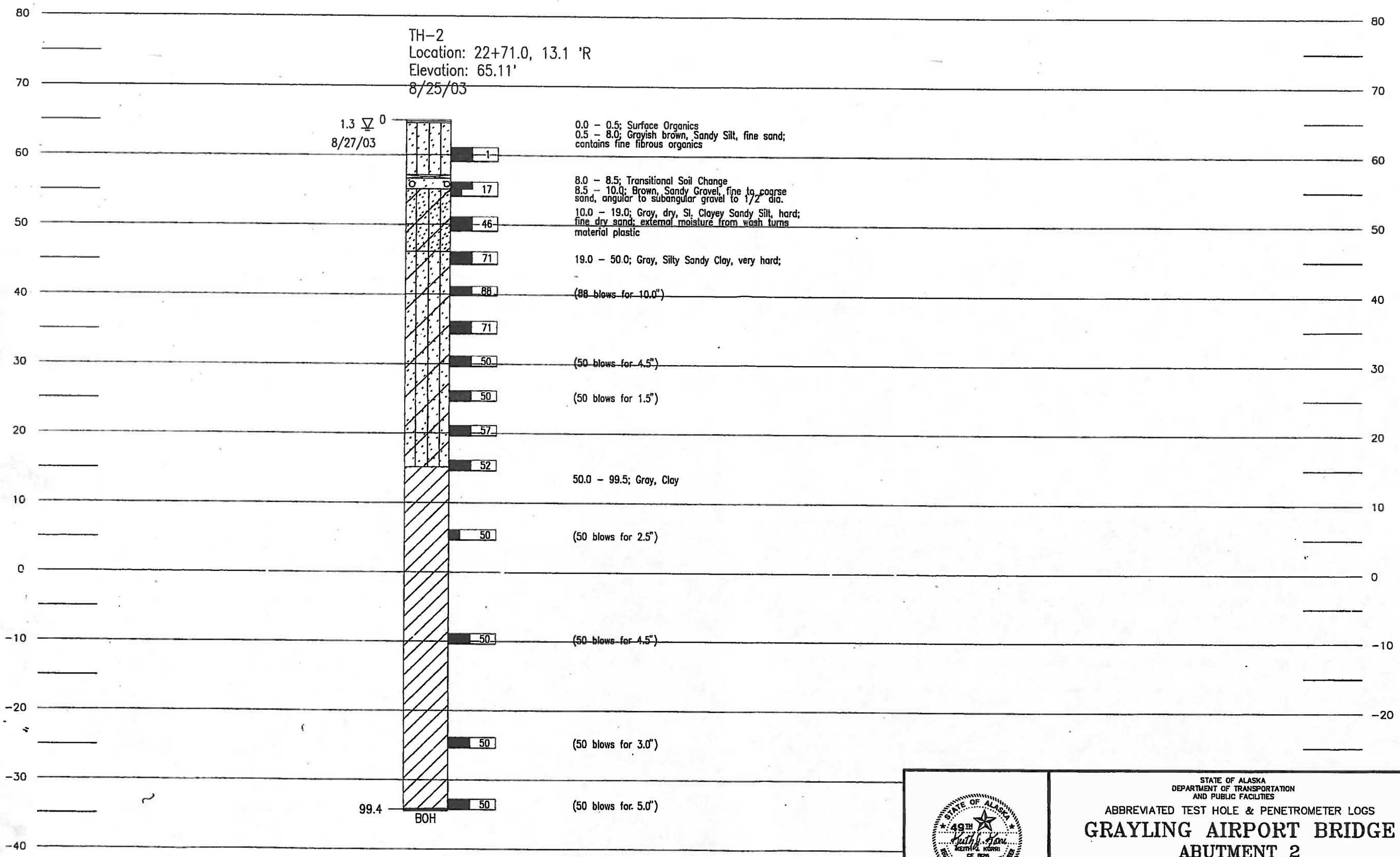
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 LAYOUT: PL_P3
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STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
 AND PUBLIC FACILITIES
 ABBREVIATED TEST HOLE & PENETROMETER LOGS
GRAYLING AIRPORT BRIDGE
ABUTMENT 2
PENETROMETER 2 & 3
 BRIDGE NO: 1298
 DRAWING NO: 5 OF 6

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	STP-0002/ (114)/60937	2005	25	25

DESIGNED BY: NORTHERN REGION
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 DRAWN BY: [blank]
 TRIPS
 SCALE: N/A
 LAYOUT: TH2
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 DATE: 3/11/2005
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STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
 AND PUBLIC FACILITIES
 ABBREVIATED TEST HOLE & PENETROMETER LOGS
GRAYLING AIRPORT BRIDGE
ABUTMENT 2
TEST HOLE 2