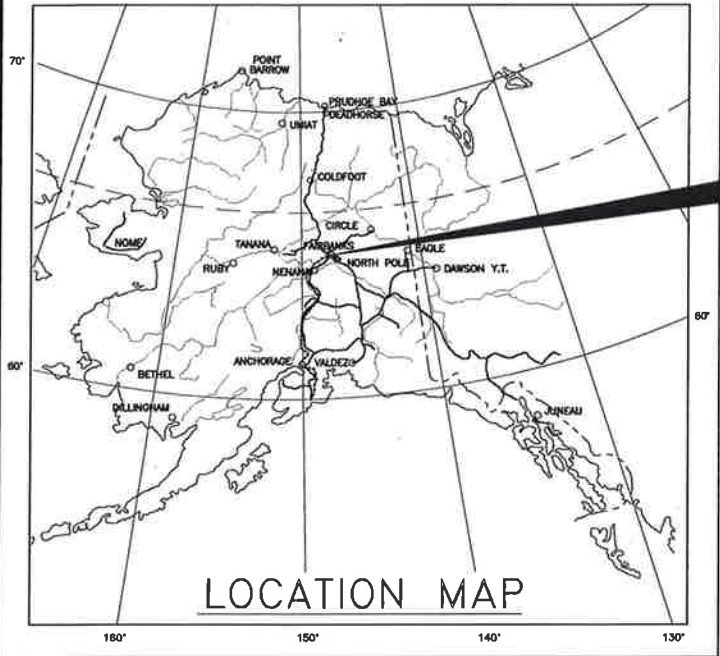


STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	60260	2014	A1	28
CDS ROUTE: 175515 MILEPOINT 0.000 TO 0.882				



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES

PROPOSED HIGHWAY PROJECT
60260
CHENA SMALL TRACTS ROAD
IMPROVEMENTS

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
A1	TITLE SHEET
A2	LEGEND SHEET
B1	TYPICAL SECTIONS
C1	ESTIMATE OF QUANTITIES & GENERAL NOTES
D1	SUMMARIES
E1-E3	CULVERT SUMMARY AND DETAILS
E4	PIPE HAND RAIL DETAILS
F1-F9	PLAN & PROFILES
G1	APPROACHES
H1-H2	SIGNING SUMMARY AND DETAILS
M1-M2	GRS TYPE WALL DETAILS
P1-P2	ESCP
T1-T3	TRAFFIC CONTROL

THE FOLLOWING STANDARD DRAWINGS APPLY TO THIS PROJECT:

- C-04.12
D-01.02, D-04.21
E-13.00
G-00.02, G-04.10S, G-10.01, G-20.11, G-28.00
I-20.14
S-00.11, S-01.00, S-05.01, S-30.03

PROJECT SUMMARY	
WIDTH OF PAVEMENT	8'
LENGTH OF GRADING	4,566'
LENGTH OF PAVING	4,566'
LENGTH OF PROJECT	4,566'



PLANS DEVELOPED BY:
JON HUTCHINSON, THOR BERGSTROM
UNDER THE SUPERVISION OF:



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES

APPROVED BY: *[Signature]* DATE 4/11/2014
Ryan F. Anderson, P.E.
Preconstruction Engineer, Northern Region
ACCEPTED FOR CONSTRUCTION
[Signature] DATE 4/11/14
Steve Titus, P.E.
Regional Director, Northern Region

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	RECOVERED	SET
BLM MONUMENT		
GLO MONUMENT		
USC&GS MONUMENT		
PRIMARY MONUMENT		
CENTERLINE MONUMENT IN CASING		
PRIMARY R.O.W. MONUMENT		
BEARING OBJECT		
MISCELLANEOUS MONUMENT		
LINE OF SIGHT MONUMENT		
CONCRETE R.O.W. MONUMENT		
BENCHMARK		
REBAR AND CAP		
REBAR		
IRON PIPE		
PK NAIL		
SPIKE		
HUB AND TACK		
CONSTRUCTION CENTERLINE		
MISCELLANEOUS CENTERLINE		
STATION EQUATION		
PROJECT RIGHT-OF-WAY LINE		
EXISTING RIGHT-OF-WAY LINE		
EXISTING PROPERTY LINE		
CONTROLLED ACCESS LINE		
EXISTING EASEMENT LINE		
PROPOSED EASEMENT LINE		
PROPOSED CUT SLOPE LIMIT		
PROPOSED FILL SLOPE LIMIT		
SECTION LINE		
1/4 SECTION LINE		
1/16 SECTION LINE		
TOWNSHIP & RANGE LINE		
MEANDER LINE		

	EXISTING	PROPOSED
SANITARY SEWER (FLOW DIRECTION →)		
FUEL LINE		
GAS LINE		
WATER LINE		
METER, VALVE, FIRE HYDRANT		
EXISTING STORM DRAIN (FLOW DIRECTION →)		
PROPOSED STORM DRAIN		
FIBER OPTIC LINE		
DIRECT BURIAL TELEPHONE CABLE		
DIRECT BURIAL ELECTRIC CABLE		
ELECTRIC LINE (OVERHEAD)		
POWER POLE LINE		
JOINT USE POWER & TELEPHONE		
TELEPHONE POLE LINE		
POLE ANCHOR		
STUB POLE (POWER OR TELEPHONE)		
TELEPHONE DUCT		
TELEPHONE PEDESTAL		
BURIED CABLE MARKER		
PIPELINE MARKER OR VALVE		
CATCH BASIN OR DROP INLET		
MANHOLE		
SANITARY SEWER CLEAN OUT		

	EXISTING	PROPOSED
ROADWAY/PAVEMENT EDGE		
FENCE		
CURB AND GUTTER		
DETECTABLE WARNINGS		
GUARDRAIL		
CULVERT PIPE		
SIGN		
MAILBOX		
RAILROAD TRACKS		
RAILROAD DEVICES		
TREE LINE		
WATER BOUNDARY		
ORDINARY HIGH WATER LINE		
FLOW CENTERLINE		
FLOW DIRECTION		
WETLANDS		
EXISTING BUILDINGS		
POST OR BOLLARD		
WELL OR MONITORING WELL		
SEPTIC PIPE		
FUEL TANK FILL PIPE/VENT		
SATELLITE DISH		
TEST HOLE		
CONIFER TREE		
DECIDUOUS TREE		
GRAVE		
THERMOSIPHON		
PARKING METER		
VEHICLE PLUG-IN		
DELINEATOR/GUIDE MARKER		

H = HOUSE
G = GARAGE
M = MERCHANT/STORE
B = BARN
S = SHED
P = PRIVY
SS = SERVICE STATION
W = WAREHOUSE

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	60260	2014	A2	28

ABBREVIATIONS

ADFG	ALASKA DEPARTMENT OF FISH AND GAME
APPROX	APPROXIMATE
ATM	ALASKA TRAFFIC MANUAL
CL	CENTERLINE
CMU	CONCRETE MASONRY UNIT (BLOCK)
DA	DELTA ANGLE
D	DEGREE OF CURVE
DHV	DESIGN HOURLY VOLUME
DIA	DIAMETER
DWG	DRAWING
E	EAST
EA	EACH
EL, ELEV	ELEVATION
EP	EDGE OF PAVEMENT
EXIST	EXISTING
FT	FOOT, FEET
GB	GRADE BREAK
GALV	GALVANIZED
GRS	GEOSYNTHETIC REINFORCED SOIL
HORIZ	HORIZONTAL
IE	INVERT ELEVATION
L	LENGTH OF CURVE
LT	LEFT
MAX	MAXIMUM
MIN	MINIMUM
NOI	NOTICE TO INTENT
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVE
PI	POINT OF INTERSECTION
POC	POINT ON CURVE
POL	POINT ON LINE
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVE
PST	PERFORATED STEEL TUBE
PT	POINT OF TANGENCY
R	RAD, RADIUS
REQ	REQUIRED
ROW	RIGHT OF WAY
RP	RADIUS POINT
RSF	REINFORCED SOIL FOUNDATION
RT	RIGHT
S	SUPERELEVATION, SOUTH
SE	SPOT ELEVATION
SHT	SHEET
SHPO	STATE HISTORIC PRESERVATION OFFICE
SI	STREET INTERSECTION
SPEC	SPECIFICATION
SPP	STRUCTURAL PLATE PIPE
STA	STATION
STD	STANDARD
SWPPP	STORMWATER POLLUTION PREVENTION PLANS
SY	SQUARE YARD
T	TANGENT LENGTH, TRUCKS
TCE	TEMPORARY CONSTRUCTION EASEMENT
TYP	TYPICAL
V	DESIGN SPEED
VERT	VERTICAL
W/	WITH
Ø	DIAMETER OR ROUND
@	AT
&	AND

LEGEND



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STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	60260	2014	C1	28

ESTIMATE OF QUANTITIES			
ITEM NO.	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	7,000
203 (6)	BORROW	TON	15,800
301 (1)	AGGREGATE BASE COURSE, GRADING D1	TON	1,725
401 (1)	ASPHALT CONCRETE, TYPE II; CLASS B	TON	600.5
401 (2)	ASPHALT CEMENT, GRADE 52-28	TON	36
401 (10)	ASPHALT MATERIAL PRICE ADJUSTMENT	CONTINGENT SUM	ALL REQUIRED
514 (100)	GRS WALL	LUMP SUM	ALL REQUIRED
602 (1)-72	STRUCTURAL PLATE PIPE 72 INCH DIAMETER, 12 GAGE	LINEAR FOOT	64
602 (102)	HEADWALL/WINGWALL	EACH	2
603 (1)-18	18 INCH CSP	LINEAR FOOT	300
603 (1)-24	24 INCH CSP	LINEAR FOOT	77
606 (1)	W-BEAM GUARDRAIL	LINEAR FOOT	137.5
606 (6)	REMOVING AND DISPOSING OF GUARDRAIL	LINEAR FOOT	178
606 (13)	PARALLEL GUARDRAIL TERMINAL	EACH	2
609 (2)	CURB & GUTTER, TYPE 1	LINEAR FOOT	25
611 (2)	RIPRAP CLASS I	TON	52
613 (2)	CULVERT MARKER POST	EACH	3
615 (1)	STANDARD SIGN	SQUARE FOOT	128.97
616 (2)	1/2 INCH DIAMETER THAW PIPE	EACH	2
618 (1)	SEEDING	ACRE	2
620 (1)	TOPSOIL	SQUARE YARD	3060
621 (1)	TREE	EACH	189
625 (1)	PIPE HAND RAIL	LINEAR FOOT	280
630 (1)	GEOTEXTILE, SEPARATION	SQUARE YARD	220
639 (3)	APPROACH	EACH	8
640 (1)	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	ALL REQUIRED
641 (1)	EROSION, SEDIMENT AND POLLUTION CONTROL ADMINISTRATION	LUMP SUM	ALL REQUIRED
641 (3)	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL	LUMP SUM	ALL REQUIRED
641 (4)	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL ADDITIVES	CONTINGENT SUM	ALL REQUIRED
641 (6)	WITHHOLDING	CONTINGENT SUM	ALL REQUIRED
642 (1)	CONSTRUCTION SURVEYING	LUMP SUM	ALL REQUIRED
642 (3A)	THREE PERSON SURVEY PARTY	CONTINGENT SUM	ALL REQUIRED
643 (2)	TRAFFIC MAINTENANCE	LUMP SUM	ALL REQUIRED
643 (23)	TRAFFIC PRICE ADJUSTMENT	CONTINGENT SUM	ALL REQUIRED
643 (25)	TRAFFIC CONTROL	CONTINGENT SUM	ALL REQUIRED
670 (1)	PAINTED TRAFFIC MARKINGS	LUMP SUM	ALL REQUIRED

TABLE OF ESTIMATING FACTORS		
ITEM NO.	DESCRIPTION	FACTOR
203 (6)	BORROW	2.0 TONS/CU. YD.
301 (1)	AGGREGATE BASE COURSE, GRADING D1	145 LBS./CU FT.
401 (1)	ASPHALT CONCRETE, TYPE II, CLASS B	115 LBS./SQ. YD.-IN
401 (2)	ASPHALT CEMENT, GRADE PG 52-28	6% OF TOTAL WEIGHT OF MIX FOR 401 (1)
611 (2)	RIPRAP CLASS I	1.7 TONS/CU. YD

TABLE OF LUMP SUM QUANTITIES			
ITEM NO.	DESCRIPTION	ESTIMATE	REMARKS
201 (3B)	CLEARING AND GRUBBING	2.6	ACRES
670 (1)	PAINTED TRAFFIC MARKINGS	95	FT. SEE SHEET D1

GENERAL NOTES:

1. CLEAR TREES AND BRUSH AS NECESSARY AND DIRECTED BY THE ENGINEER TO PROVIDE A CLEAR LINE OF SIGHT AROUND INTERSECTIONS. THIS WORK IS PAID FOR UNDER ITEM 201(3B)
2. BASIS OF VERTICAL AND HORIZONTAL CONTROL FOR THIS PROJECT IS THE CHENA PUMP/CHENA SMALL TRACTS RECORD OF SURVEY FAIRBANKS RECORDING DISTRICT PLAT # 2010-113 DATED 4/21/2010.
3. EXISTING UTILITY LOCATES ARE APPROXIMATE BASED ON PERMIT DRAWINGS. CONTACT UTILITY OWNERS AND LOCATE ALL UNDERGROUND UTILITIES PRIOR TO ANY GROUND DISTURBING ACTIVITIES. SEE SPEC SECTION 105-1.06.
4. ALL MATERIALS AND MATERIAL SOURCES FOR THIS WORK WILL BE CONTRACTOR FURNISHED.
5. PROTECT FROM DAMAGE OR REMOVE AND RE-INSTALL EXISTING IMPROVEMENTS ON PRIVATE PROPERTY UNLESS OTHERWISE NOTED ON THE PLANS. THIS WORK IS SUBSIDIARY TO PAY ITEM 202(1).
6. SEED ALL DISTURBED AREAS UNLESS OTHERWISE NOTED ON THE PLANS.
7. ITEM 609(2) CURB & GUTTER, TYPE I IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE CURB & GUTTER TERMINATION TRANSITION DETAIL ON STD DWG I=20.14. PLACE CURB & GUTTER AT LOCATIONS SHOWN ON SHT F4.
8. IF NO DITCH PROFILE IS GIVEN, GRADE DITCHES TO DRAIN TOWARDS EXISTING DRAINAGE FEATURES AS DIRECTED BY THE ENGINEER. THIS WORK IS SUBSIDIARY TO 603 PAY ITEMS.
9. NOT ALL UTILITIES ARE SHOWN ON THE PLANS. ADDITIONAL UTILITY WORK HAS BEEN CONSTRUCTED SINCE THE DESIGN SURVEY. SEE THE DEPARTMENTS UTILITY PERMITS FOR THE LATEST INFORMATION ON UTILITY LOCATIONS.

ESTIMATE OF QUANTITIES



606(6) GUARDRAIL REMOVAL SUMMARY			
BEGIN STATION	END STATION	LOCATION	LENGTH (FT)
"P" 39+47	"P" 41+25	RT	178

606(1) GUARDRAIL SUMMARY			
BEGIN STATION	END STATION	LOCATION	LENGTH (FT)
"P" 14+02.5	"P" 15+40	RT	137.5

NOTES:

- GUARDRAIL POSTS SHALL BE STEEL.
- CONSTRUCT PARALLEL GUARDRAIL TERMINALS AT EACH END OF GUARDRAIL. CONSTRUCT THE GUARDRAIL TERMINAL WIDENING IN ACCORDANCE WITH THE "STANDARD DETAIL" ON STANDARD DRAWING G-20.11. THE END OFFSET (X) SHALL BE 2 FEET.
- THE PARALLEL END TERMINAL POST HEIGHT SHALL BE 27 AND 3/4 INCHES. USE 25 LINEAR FOOT TRANSITION TO MATCH HEIGHT OF RAIL ELEMENTS AND END TREATMENTS.
- NO REFLECTORS IN END TERMINALS.

202(1) FENCE REMOVAL SUMMARY			
BEGIN STATION	END STATION	LOCATION	LENGTH (FT)
"P" 43+30.7	"P" 44+59.4	LT	131
"P" 52+16.8	"P" 52+77.8	LT	71
TOTAL			202

202(1) CURB & GUTTER REMOVAL SUMMARY				
BEGIN STATION	END STATION	LOCATION	LENGTH (FT)	REMARKS
"P" 26+81.9	"P" 27+00.30	LT	26	MACFARLAND ST WEST SIDE
"P" 27+47.4	"P" 27+63.30	LT	23	MACFARLAND ST EAST SIDE
TOTAL			49	

625(1) PIPE HAND RAIL SUMMARY				
BEGIN STATION	END STATION	LOCATION	LENGTH (FT)	REMARKS
"P" 13+50	"P" 14+70	LT	120	CRIPPLE CREEK SLOUGH
"P" 39+75	"P" 41+35	LT	160	LARK POND
TOTAL			280	

670(1) TRAFFIC MARKINGS SUMMARY		
DESCRIPTION	QUANTITY (FEET)	REMARKS
24"W	95	STOP BARS

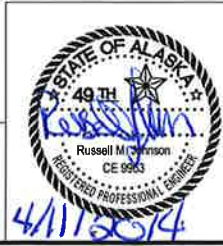
NOTE: STOP BAR TRAFFIC MARKING LOCATIONS MAY BE ADJUSTED AT THE ENGINEER'S DIRECTION.

ALIGNMENT 'P' CONTROL COORDINATE TABLE			
POINT DESCRIPTION	STATION	NORTHING	EASTING
B.O.P	"P" 10+00.00	3963971.78	1347306.01
P.I	"P" 16+50.05	3963881.48	1347941.43
P.I	"P" 26+48.39	3963851.15	1348939.31
P.I	"P" 36+10.53	3963823.87	1349901.06
P.I	"P" 43+68.96	3963804.20	1350659.23
E.O.P	"P" 55+66.39	3963758.52	1351852.72

ALIGNMENT 'L' CONTROL COORDINATE TABLE			
POINT DESCRIPTION	STATION	NORTHING	EASTING
B.O.P	"P" 10+00.00	3963966.13	1347253.48
P.T	"P" 12+73.88	3963875.47	1347508.85
P.I	"P" 14+83.58	3963866.85	1347718.36
P.O.L	"P" 17+00	3963860.66	1347934.70

630(1) GEOTEXTILE SEPARATION		
BEGIN	END	SQUARE YARD
"P" 39+91	"P" 41+16	220

NOTE: SEE SHEET MI GRS WALL TYPICAL SECTION FOR GEOTEXTILE LOCATION



202(1) REMOVAL OF CULVERTS				
STATION	LOCATION	SIZE (INCH)	LENGTH (FT)	REMARKS
"P" 10+17.4	LT	24	11	CHENA PUMP RD
"P" 14+53.3		48	70	CRIPPLE CREEK SLOUGH
"P" 14+65.5		30	61	CRIPPLE CREEK SLOUGH
"P" 14+70.0		24	62	CRIPPLE CREEK SLOUGH
"P" 15+12.0	LT	24	80	COLGATE CT
"P" 27+21.7	LT	24	151	MACFARLAND ST
"P" 30+75.0	LT	18	30	LIFT STATION
"P" 34+56.5	LT	24	80	TRINIDAD DR
"P" 50+61.0	LT	24	40	PRIVATE DRIVEWAY
		TOTAL	585	

SUMMARY OF CULVERTS							
STATION	LOCATION	NEW CULVERT INSTALLATION			CULVERT MARKER	1/2 INCH DIA THAW PIPE	REMARKS
		602(1)-72 (FEET)	603(1)-18 (FEET)	603(1)-24 (FEET)			
"P" 10+17.4	LT			17	1	1	EXTEND EXISTING CULVERT, SEE NOTE 2
"P" 14+42.2		64			2	1	CRIPPLE CREEK SLOUGH, SEE SHEET E2
"P" 15+12.0	LT			60			COLGATE COURT APPROACH, SEE NOTE 2
"P" 20+13.0	LT		65				PROSPECT DR APPROACH SEE NOTE 2
"P" 30+75.0	LT		45				LIFT STATION APPROACH, SEE NOTE 2
"P" 34+56.50	LT		70				TRINIDAD DR APPROACH, SEE NOTE 2
"P" 50+61.00	LT		60				PRIVATE DRIVEWAY, SEE NOTE 2
"P" 51+71.50	LT		60				DOLLY VARDEN LN APPROACH, SEE NOTE 2
TOTAL		64	300	77	3	2	

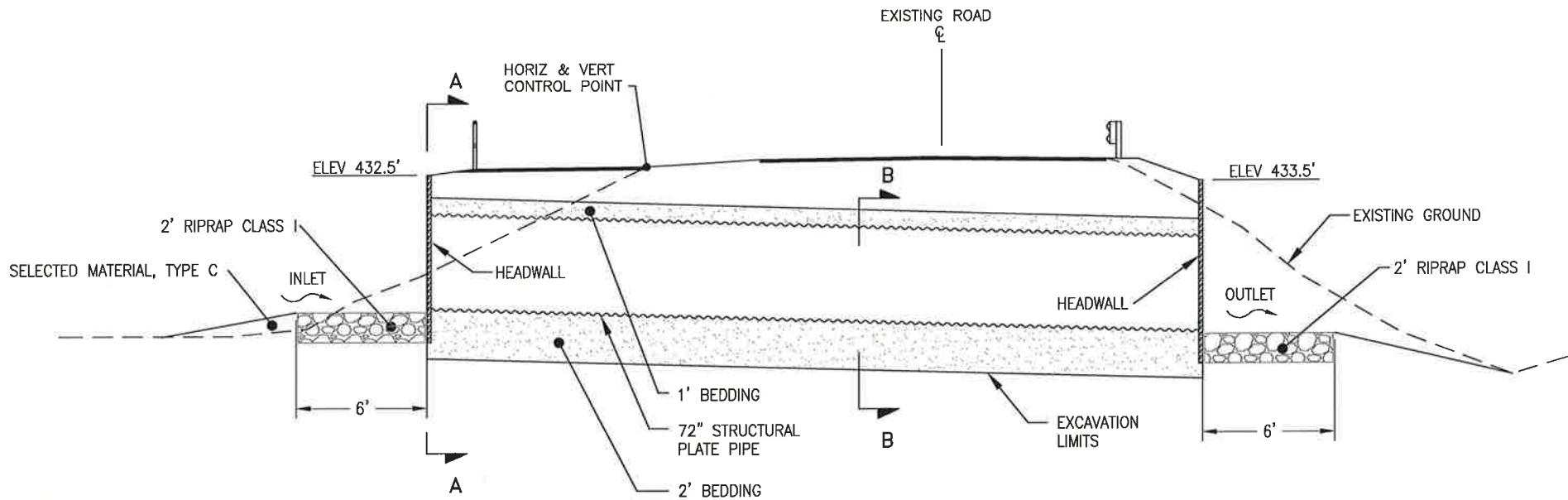
NOTES:

- CULVERTS LENGTHS ARE APPROXIMATE. THE CONTRACTOR MUST FIELD VERIFY CULVERT LENGTHS TO FIT FIELD CONDITIONS.
- INSTALL CULVERT PER THE TYPE "B" DETAIL SHOWN ON STD DWG D-01.02.
- CULVERT LOCATIONS ARE APPROXIMATE AND MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.

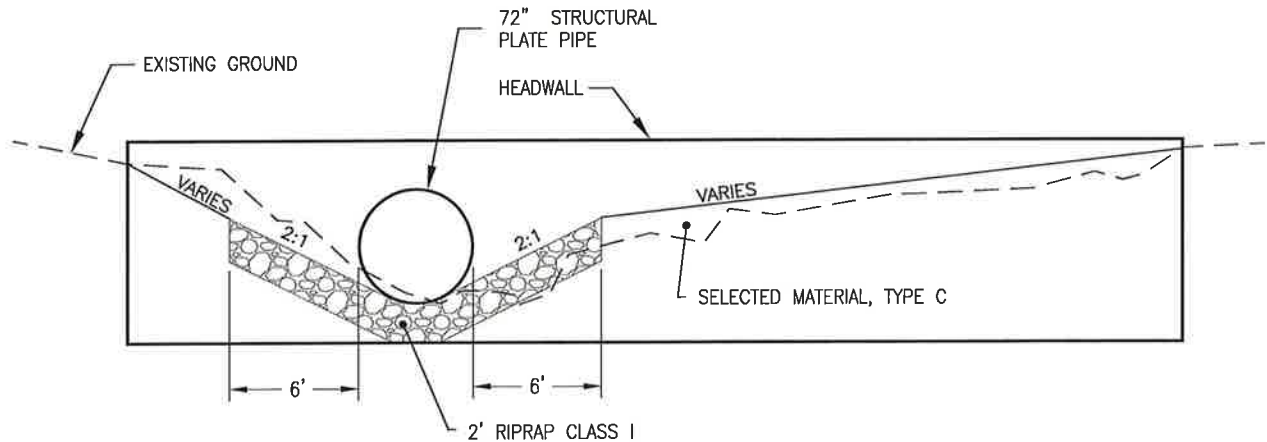


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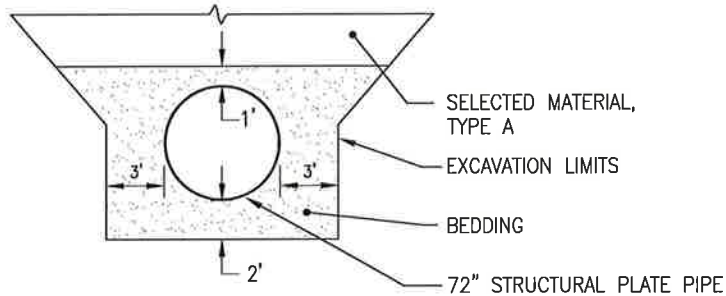
CRIPPLE CREEK SLOUGH CULVERT										
STATION AND OFFSET		PIPE BEARING	PIPE DIAMETER (FT)	PIPE LENGTH (FT)	INLET INVERT ELEVATION (FT)	OUTLET INVERT ELEVATION (FT)	PIPE SLOPE %	PIPE MATERIAL	END TREATMENTS	
INLET	OUTLET								INLET	OUTLET
14+36.5 13.8' LT	14+60.9 45' RT	S 20° 45' 30" E	6	64	425.5	424.0	2.35	SPP	HEADWALL & RIPRAP APRON	HEADWALL & RIPRAP APRON



STA 14+42.2
NTS



SECTION A-A
NTS



SECTION B-B
NTS

HEADWALL CONTROL POINTS		
POINT #	STATION	OFFSET
1	"P" 13+73.7	19.7
2	"P" 13+92.2	12.0
3	"P" 14+32.2	12.0
4	"P" 14+50.6	19.7
5	"P" 14+42.5	50.9
6	"P" 14+65.3	43.3
7	"P" 14+80.3	43.3
8	"P" 14+89.9	47.2

CONTROL POINT LOCATIONS ARE SHOWN ON SHEET F2

HYDRAULIC AND HYDROLOGIC SUMMARY	
CHENA SMALL TRACTS- CRIPPLE CREEK SLOUGH	
DRAINAGE AREA	0.5 SQ MILES
Q2	4 CFS
Q5	10 CFS
Q50	31 CFS

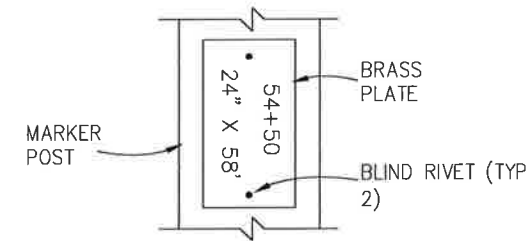
NOTES:

- FIGURES ON THIS SHEET ARE SCHEMATIC. HEADWALL DESIGN AND CONSTRUCTION REQUIREMENTS SHALL CONFORM TO SPECIAL PROVISION 602 OF THE SPECIFICATIONS AND THE NOTES BELOW. SEE PLAN VIEW SHEET F2 FOR HEADWALL LENGTH AND LOCATION.
- RESHAPE THE SLOUGH CHANNEL AT THE INLET AND OUTLET TO ACCOMMODATE THE NEW CULVERT, HEADWALL AND RIPRAP APRONS. RESHAPED CHANNELS SHALL BE GRADED TO DRAIN AWAY FROM THE HEADWALL STRUCTURE(S) AT THE INLET AND OUTLET.
- EXCAVATED MATERIAL MEETING TYPE C SPECIFICATIONS SHALL BE USED TO RE-ESTABLISH THE SLOUGH CHANNEL TO APPROXIMATELY MATCH THE ORIGINAL DIMENSIONS.
- COORDINATE GUARDRAIL AND HANDRAIL POST INSTALLATION TO AVOID HEADWALL TIEBACK STRAPS.

CRIPPLE CREEK SLOUGH
CULVERT/HEADWALL SCHEMATIC

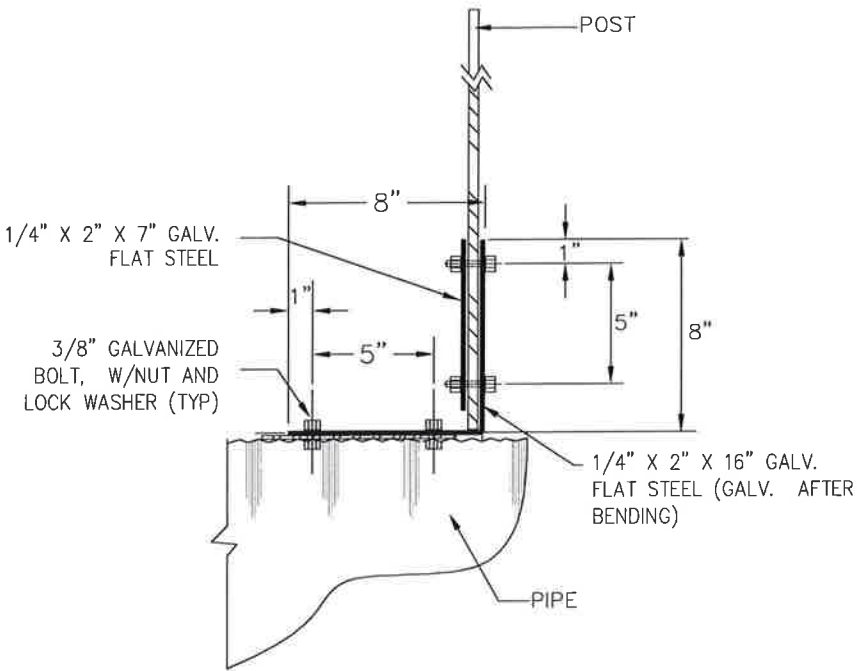


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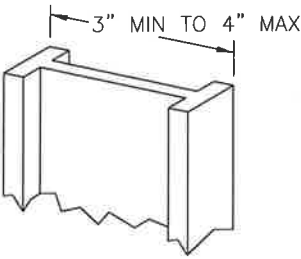


STAMP STATION AND SIZE OF PIPE, USING 3/8" HIGH MINIMUM LETTERS INTO A 2"x4"x0.064" THICK BRASS PLATE. FASTEN PLATE TO THE SIDE FACING TRAFFIC WITH TWO 1/8" DIA. BLIND RIVETS.

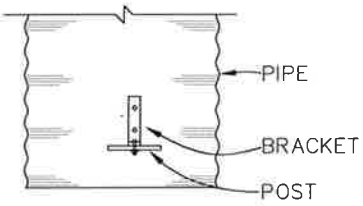
BRASS PLATE DETAIL
N.T.S.



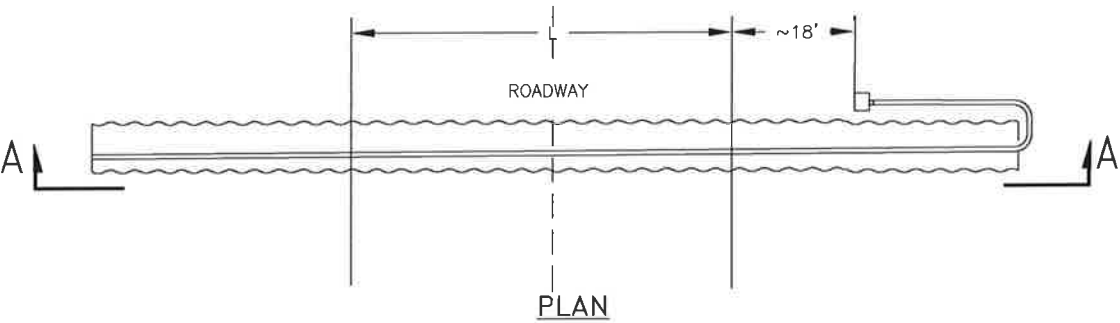
BRACKET DETAIL



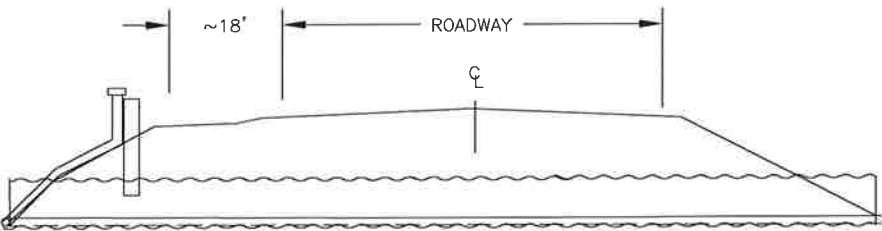
MARKER POST DETAIL



TOP VIEW



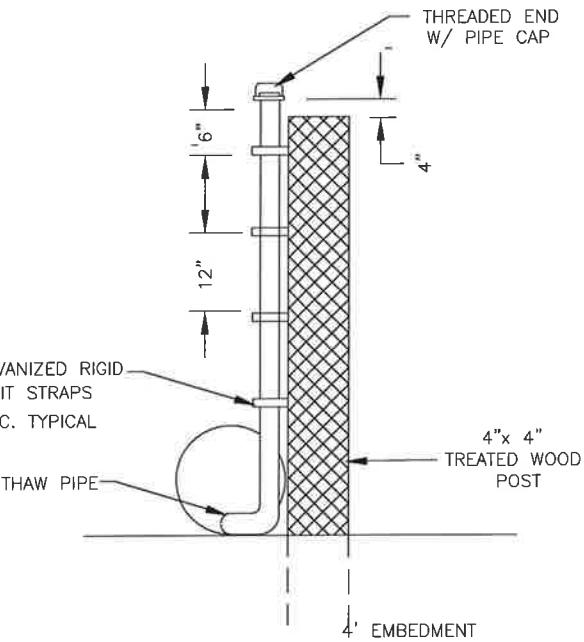
PLAN



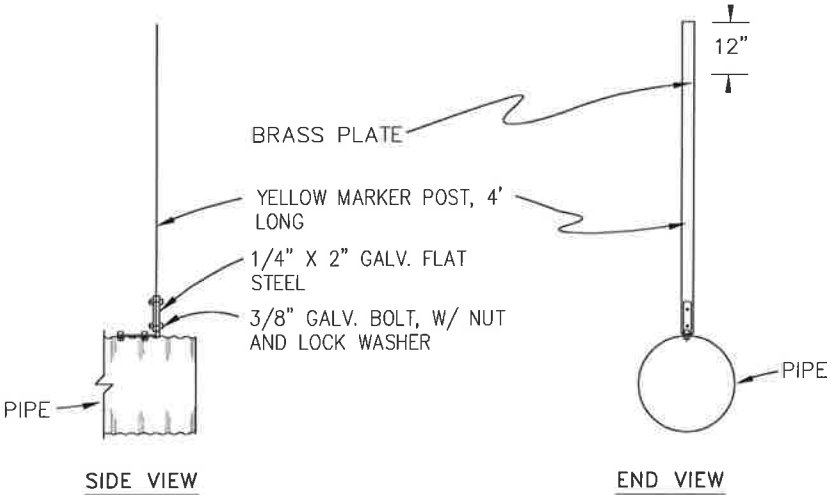
SECTION A-A

THAW PIPE NOTES:

1. INSTALL ONE THAW PIPE IN THE BOTTOM OF THE CULVERT. THAW PIPES SHALL LAY FREELY WITH NO PIPE HANGERS OR ATTACHMENTS. SEE CULVERT SUMMARY FOR THAW PIPE LOCATIONS.
2. ALL THAW PIPES SHALL RUN THE ENTIRE LENGTH OF THE CULVERT AND HAVE NO JOINTS OR COUPLINGS INSIDE THE CULVERT WITHIN 30' OF CULVERT ENDS.
3. FIELD BEND ALL CORNERS, WITHOUT KINKS 180' AROUND CULVERT ENDS FROM INSIDE TO OUTSIDE OF THE CULVERT WITH NO GREATER THAN 1' RADIUS. FITTINGS MAY BEGIN ON OUTSIDE OF THE CULVERT AFTER COMING BACK AT LEAST 6" PAST CULVERT ENDS.
4. THAW PIPES SHALL BE WATER TIGHT WHEN PRESSURIZED AND ABLE TO HOLD ANTIFREEZE. USE THREAD SEALANT ON FITTINGS AND CAP THAW PIPE ENDS.
5. NEATLY RUN THAW PIPES ALONG CULVERT OR EMBANKMENT TO TERMINATION BY SECURELY MOUNTING 5' ABOVE THE GROUND ON NON-ROTTING POSTS. THE POSTS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER AT MINIMUM 2' FROM THE EDGE OF PAVEMENT.
6. INSTALL STAND PIPE ON INLET END.



STAND PIPE



CULVERT MARKER POST DETAILS
N.T.S.

CULVERT MARKER POST NOTES

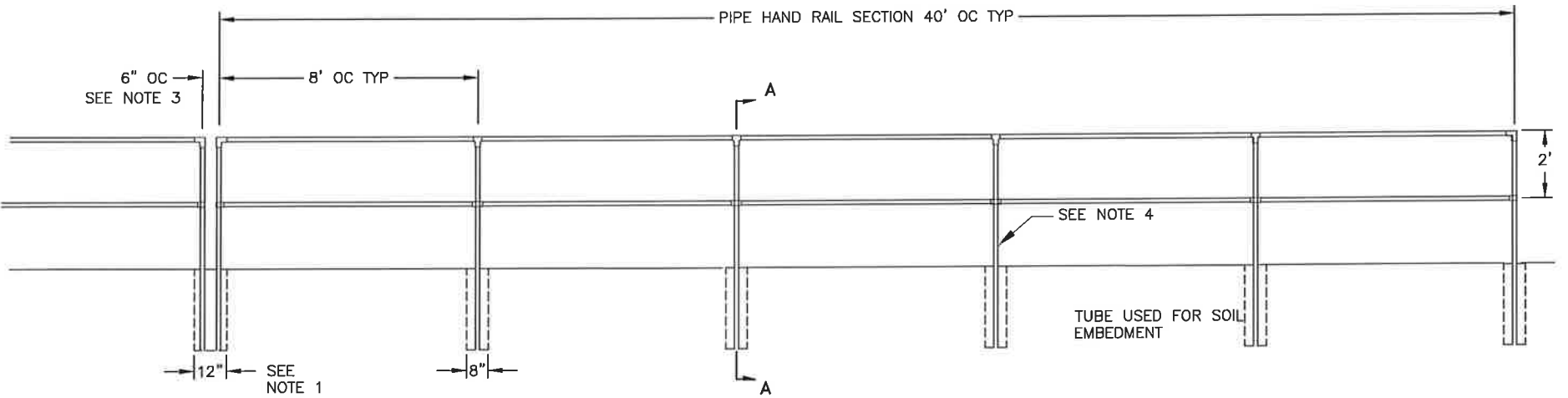
1. DRILL ALL BOLT HOLES. COAT HOLES WITH ZINC RICH PAINT. FLAME CUTTING SHALL NOT BE PERMITTED.
2. MARKER POST ENDS SHALL BE SQUARE.
3. GASKET MATERIAL SHALL BE PLACED BETWEEN DISSIMILAR METALS. GASKET MATERIAL SHALL BE APPROVED PRIOR TO INSTALLATION.
4. NO REFLECTORS ALLOWED ON CULVERT MARKER POSTS.
5. SUBEXCAVATE 2' BELOW CULVERT INVERT AND PLACE 2' MIN. SELECT MATERIAL, TYPE B.

CULVERT DETAILS

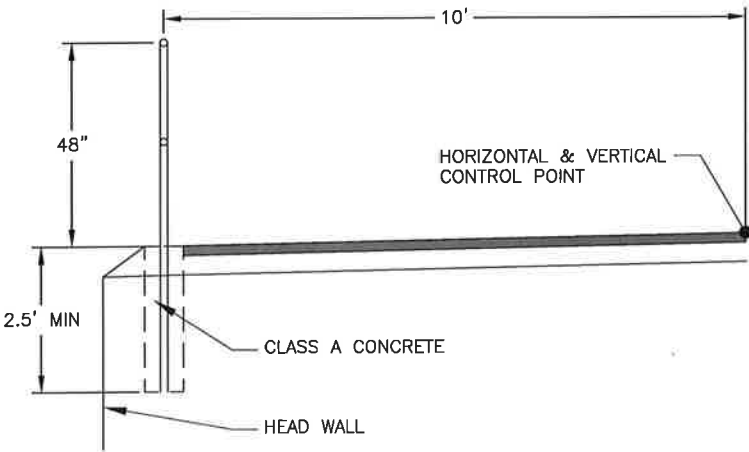


4/11/2014

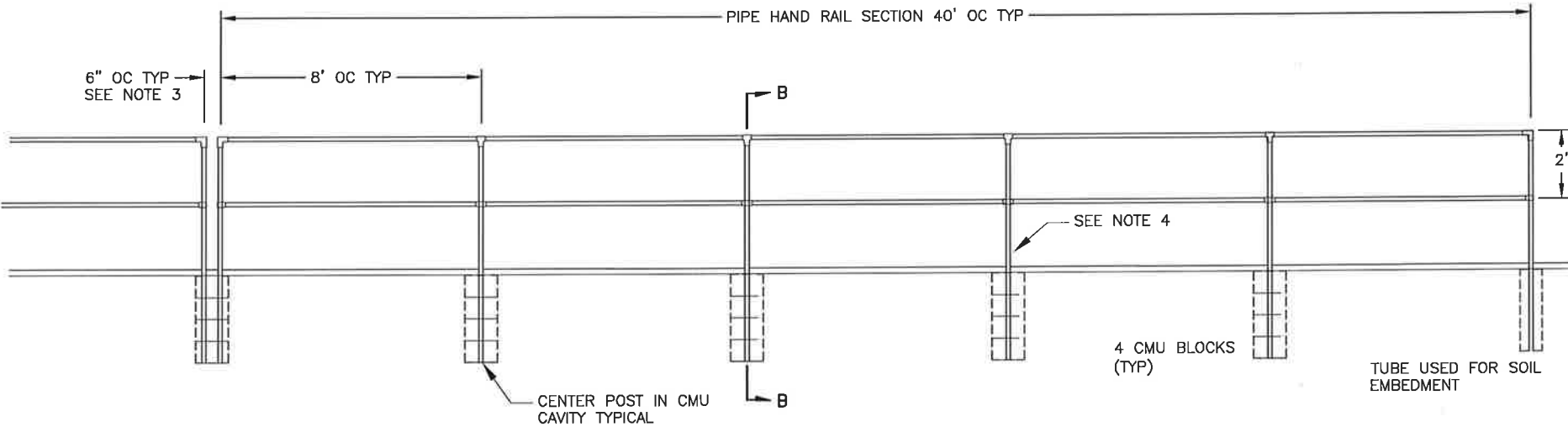
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	60260	2014	E4	28



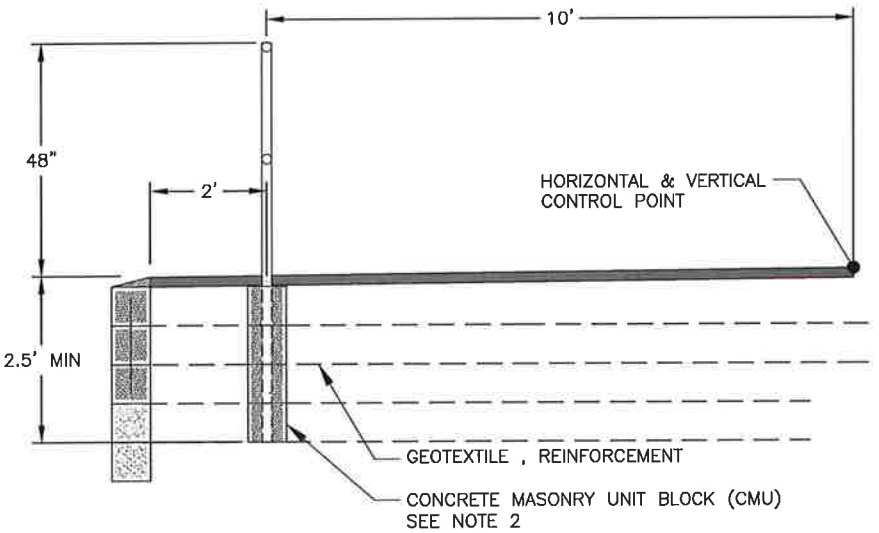
PIPE HAND RAIL DETAIL (AT CRIPPLE CREEK SLOUGH)
N.T.S.
"P"13+50 TO "P"14+70



TYPICAL SECTION A-A
N.T.S.



PIPE HAND RAIL DETAIL (ALONG GRS WALL)
N.T.S.
"P"39+75 TO "P"41+35



TYPICAL SECTION B-B
N.T.S.

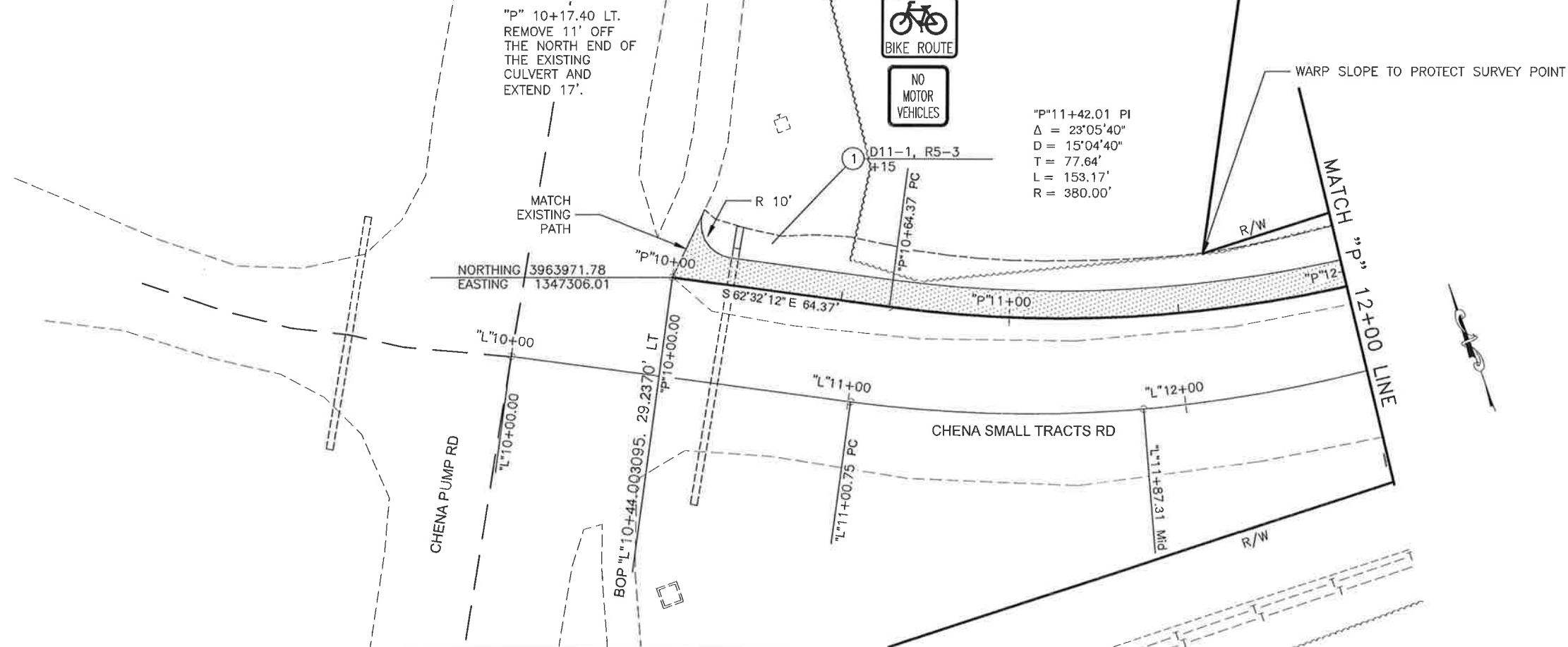
PIPE HAND RAIL NOTES:

- 1 MINIMUM 12" DIAMETER (DIA) TUBE SHALL BE USED BETWEEN PIPE HAND RAIL SECTIONS TO PROVIDE A SINGLE FOUNDATION FOR THE TWO ADJACENT END-POSTS.
- 2 PIPE HAND RAIL FOUNDATION AT GRS WALL WILL BE MADE OF HOLLOW CMU BLOCKS FILLED WITH CLASS A CONCRETE AS SHOWN ON THE PLANS. REMOVE GEOTEXTILE, REINFORCEMENT FROM CAVITIES OF CMU BLOCKS BY CUTTING PRIOR TO PLACEMENT OF VERTICAL PIPE FOR HAND RAIL AND CONCRETE FILL.
- 3 ADJACENT END-POSTS OF THE PIPE HAND RAIL SECTION SHALL BE SPACED AT 6" O.C. TO PRODUCE A NOMINAL 4" CLEAR SPACE BETWEEN THE PIPE HAND RAIL SECTIONS.
- 4 VERTICAL PIPE SHALL BE CONTINUOUS FROM THE BOTTOM OF THE HOLE TO TOP RAIL. FILL GROUND SOCKET COMPLETELY WITH CONCRETE AND SHAPE EXPOSED CONCRETE TO SHED WATER.
- 5 PIPE HAND RAIL SHALL BE CLAMP-TYPE CONSTRUCTION. SET SCREWS AND LIKE FASTENERS SHALL BE POSITIONED AWAY FROM PEDESTRIAN TRAFFIC.

PIPE HAND RAIL DETAIL



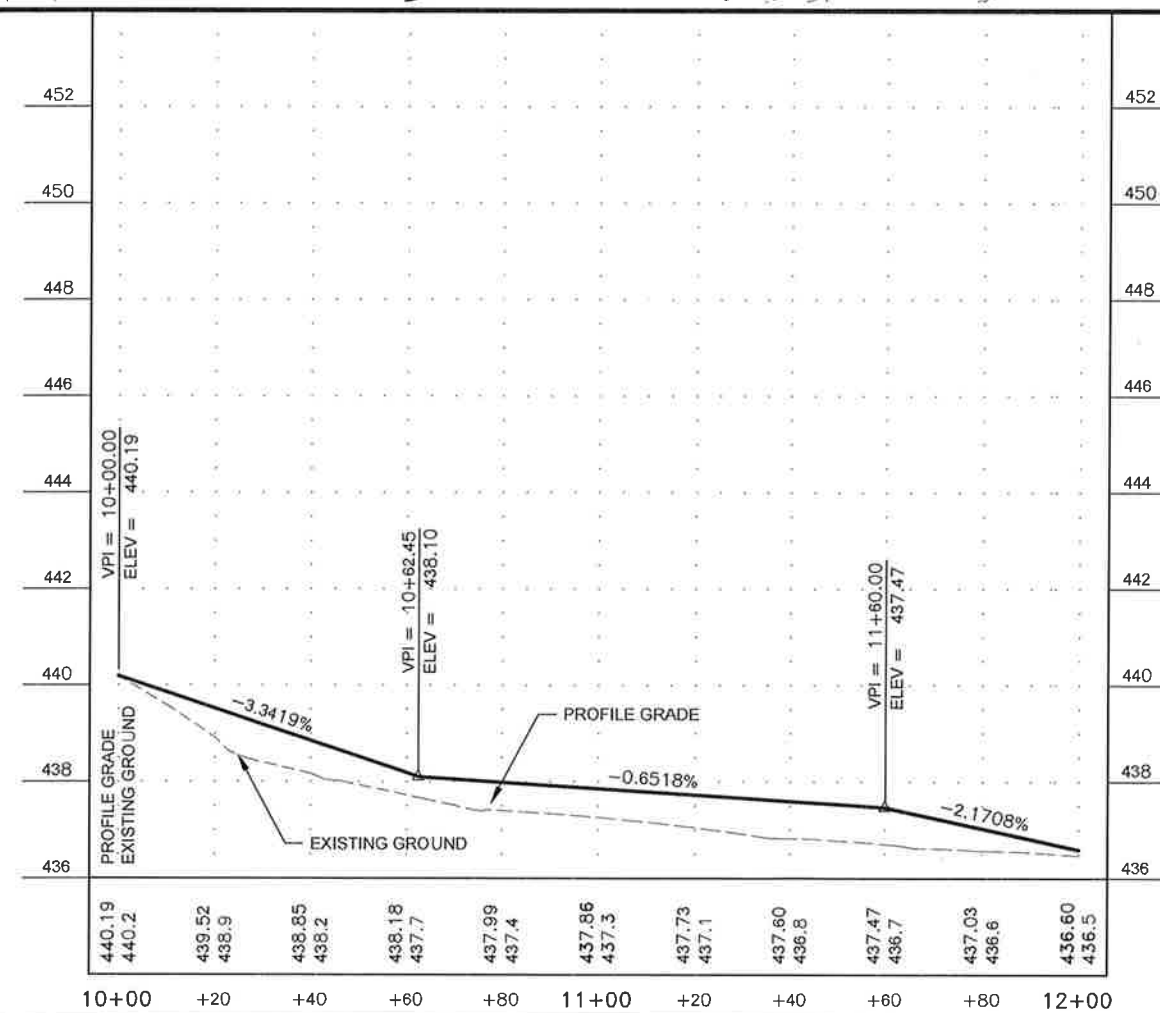
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	60260	2014	F1	28



ASPHALT KEY
NEW ASPHALT PAVEMENT

TRAFFIC MARKING KEY	
24"W	24" WHITE LINE

 RIPRAP CLASS I KEY
NEW RIPRAP CLASS I



"P" 14+42.2 LT
INSTALL 70"x64' SPP, SKEW 22.5
SEE SHEET E2 FOR HEADWALL END
TREATMENT SUMMARY

"P" 14+24.00 TO 14+44.50 LT
PLACE GEOTEXTILE AND RIRAP CLASS I
AT CULVERT INLET

"P" 14+52.50 TO 14+71.50 RT
PLACE GEOTEXTILE AND RIRAP CLASS I
AT CULVERT OUTLET

"P" 13+50.00 TO 14+70.0 LT
INSTALL 120' OF PIPE HAND RAIL

"P" 14+53.3 LT
REMOVE 48"x70' CSP

"P" 14+65.50 LT
REMOVE 30"x61' CSP

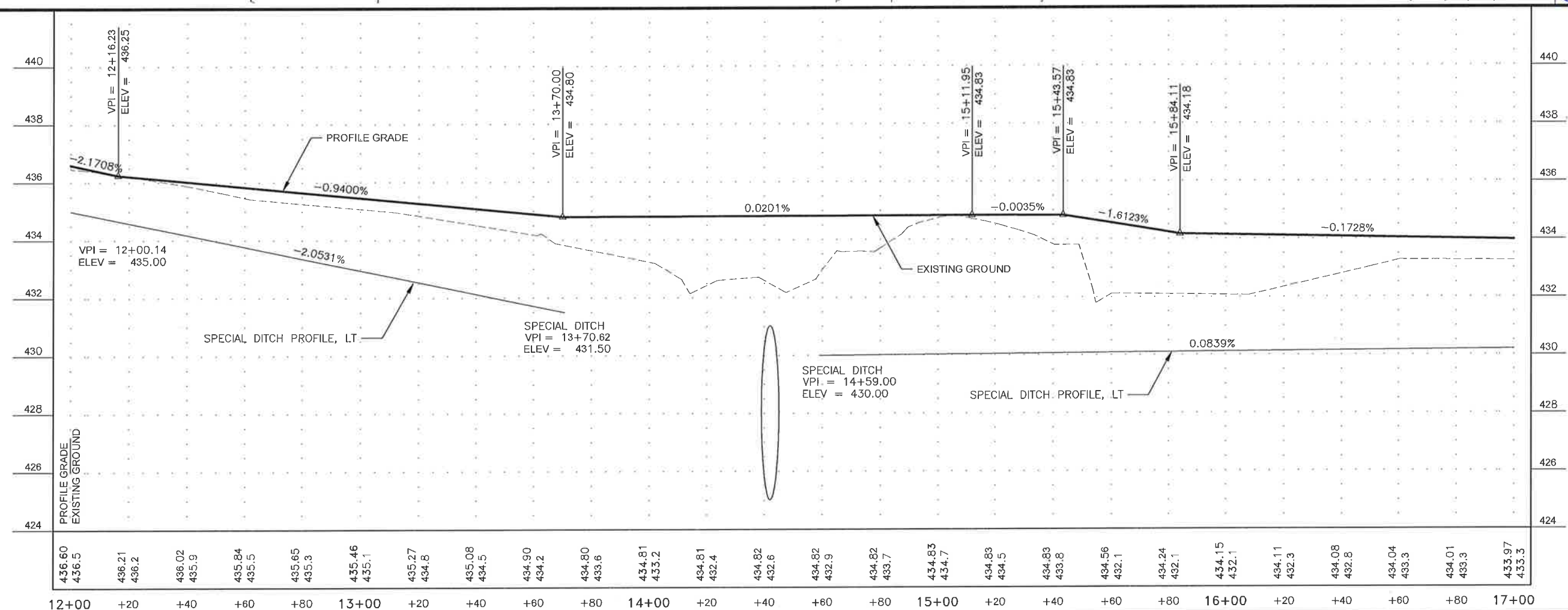
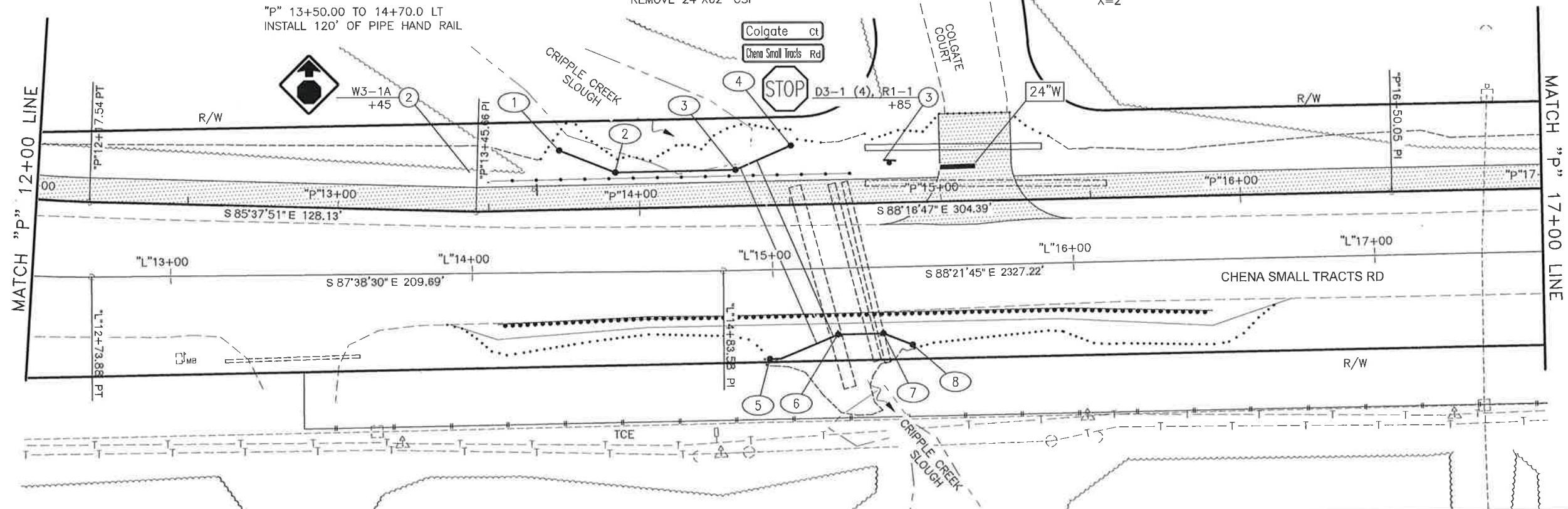
"P" 14+70.00 LT
REMOVE 24"x62' CSP

15+12.00
STRUCT APPROACH
ALL 24"x60' CSP
OVE 24"x80' CMP

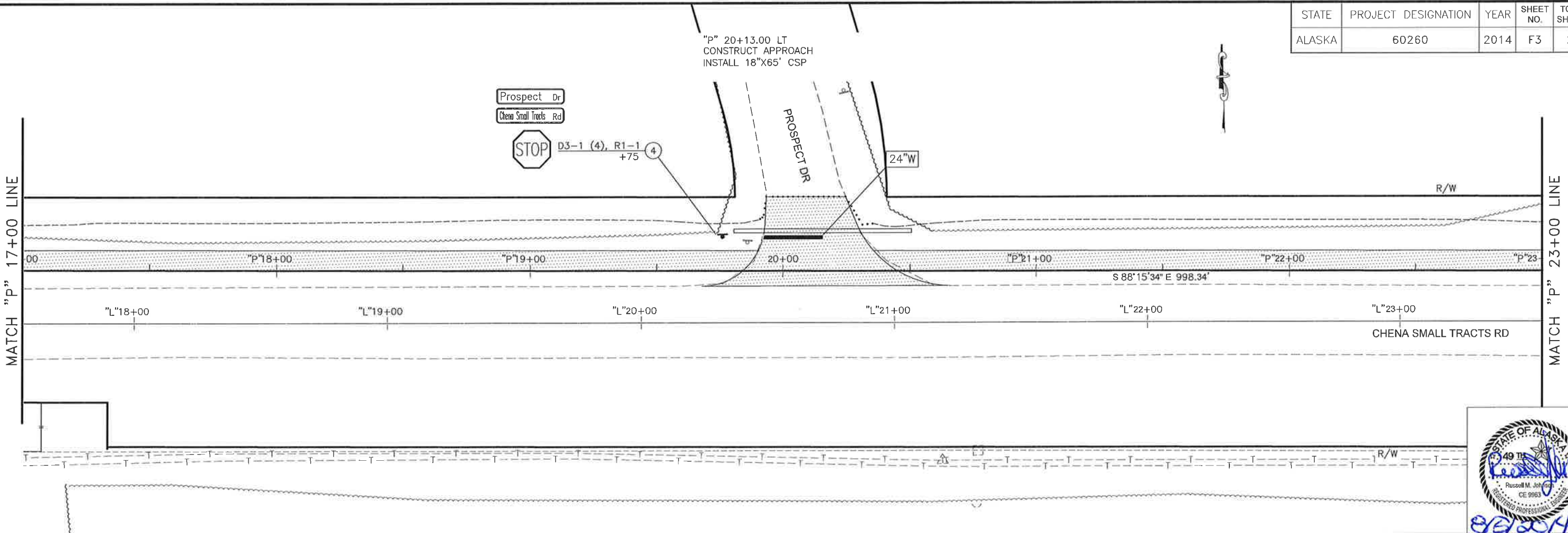
"P" 14+02.50 TO 15+40.00 RT
INSTALL 137.5' OF GUARDRAIL

INSTALL GUARDRAIL END TERMINALS AND
CONSTRUCT GUARDRAIL EMBANKMENT
WIDENING IN ACCORDANCE WITH STANDARD
DRAWING G-20.11, WHERE END OFFSET
X=2'

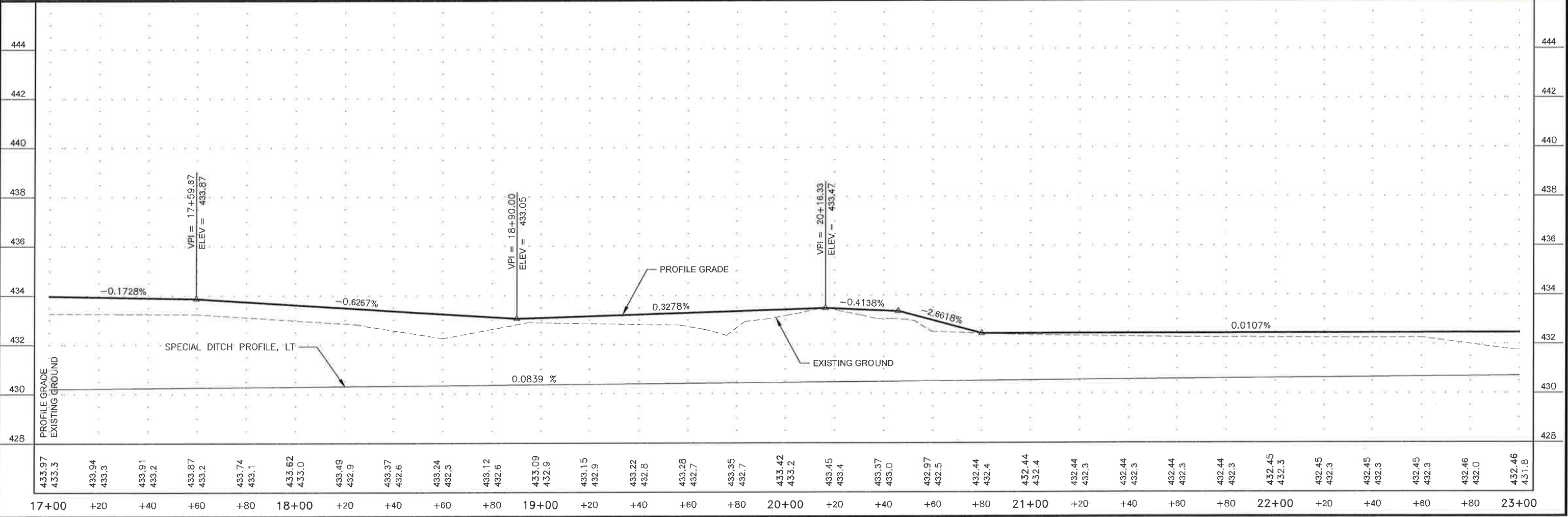
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	60260	2014	F2	28



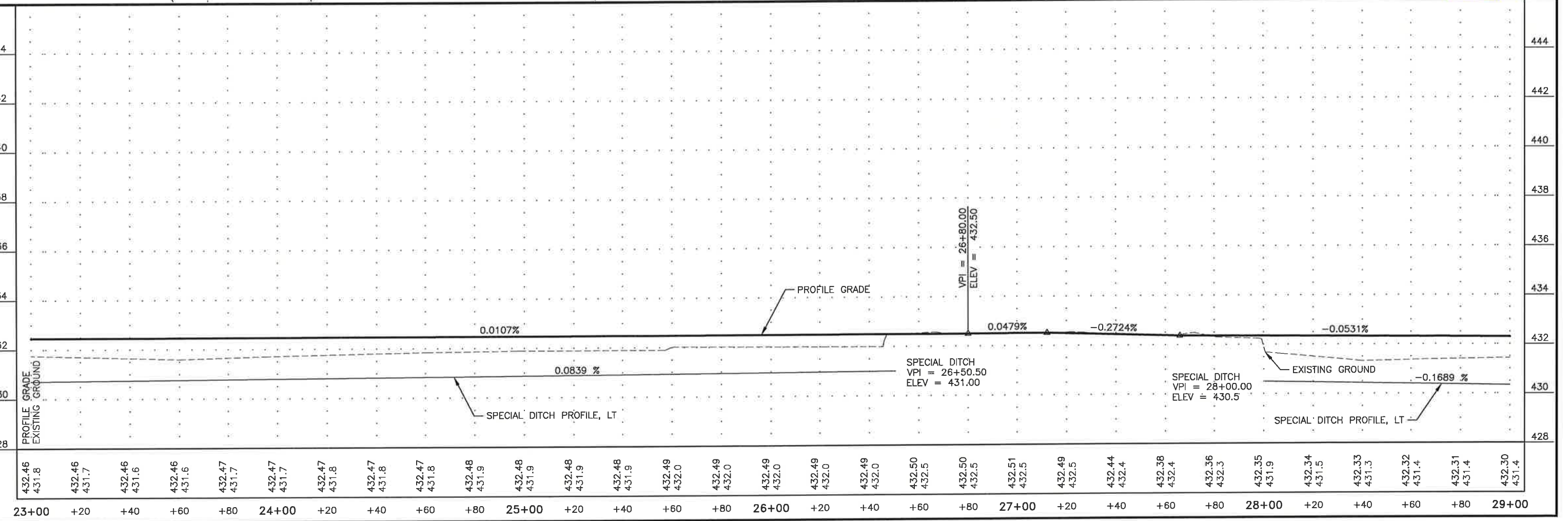
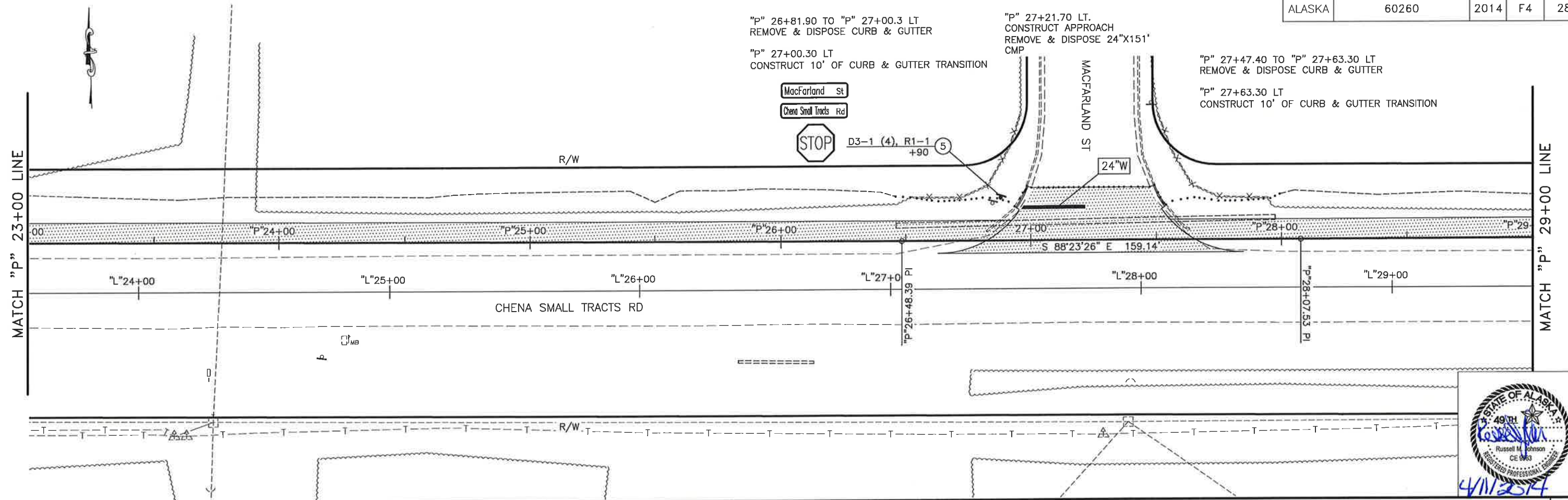
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	60260	2014	F3	28



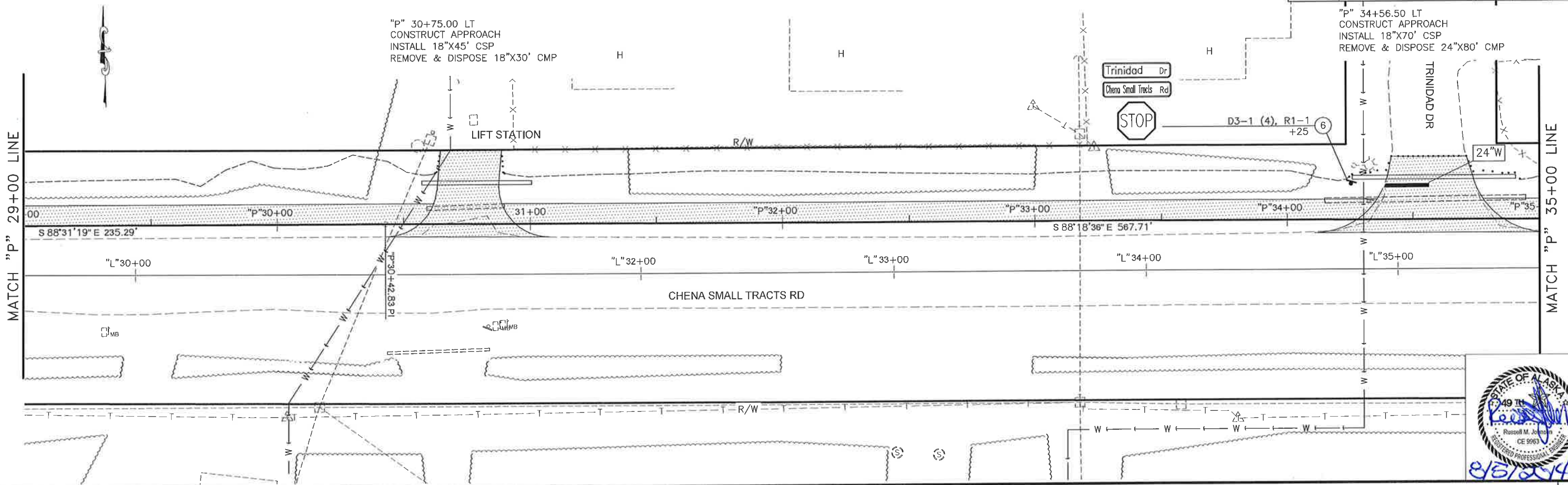
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STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	60260	2014	F4	28

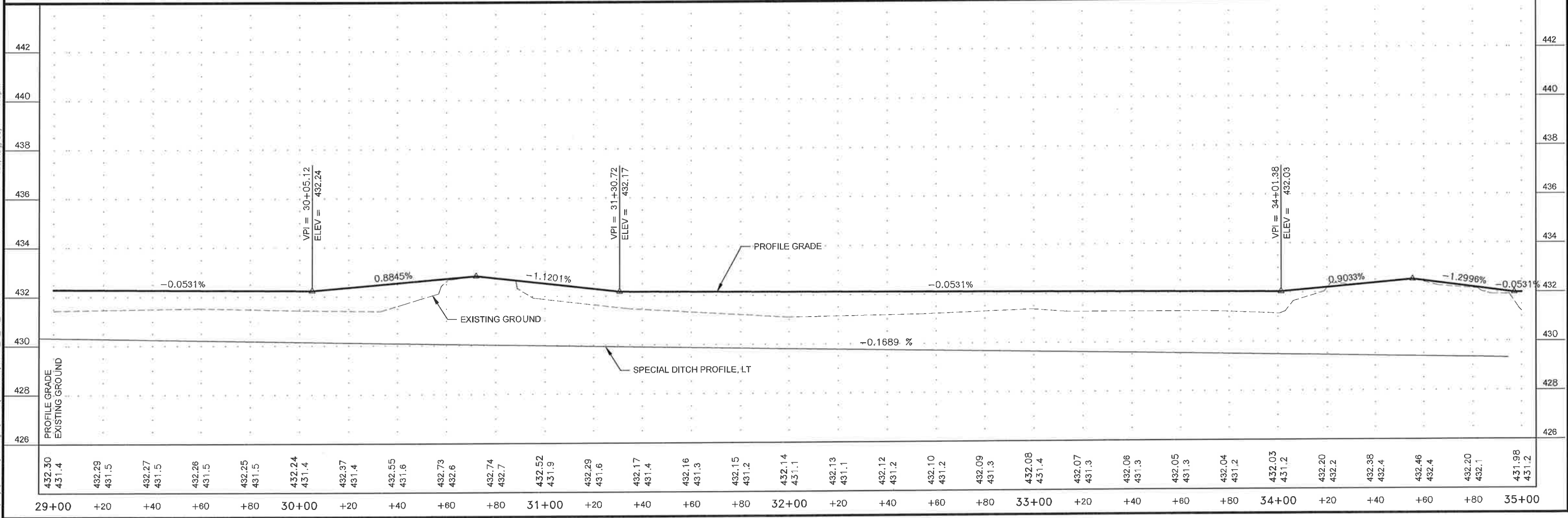


STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	60260	2014	F5	28

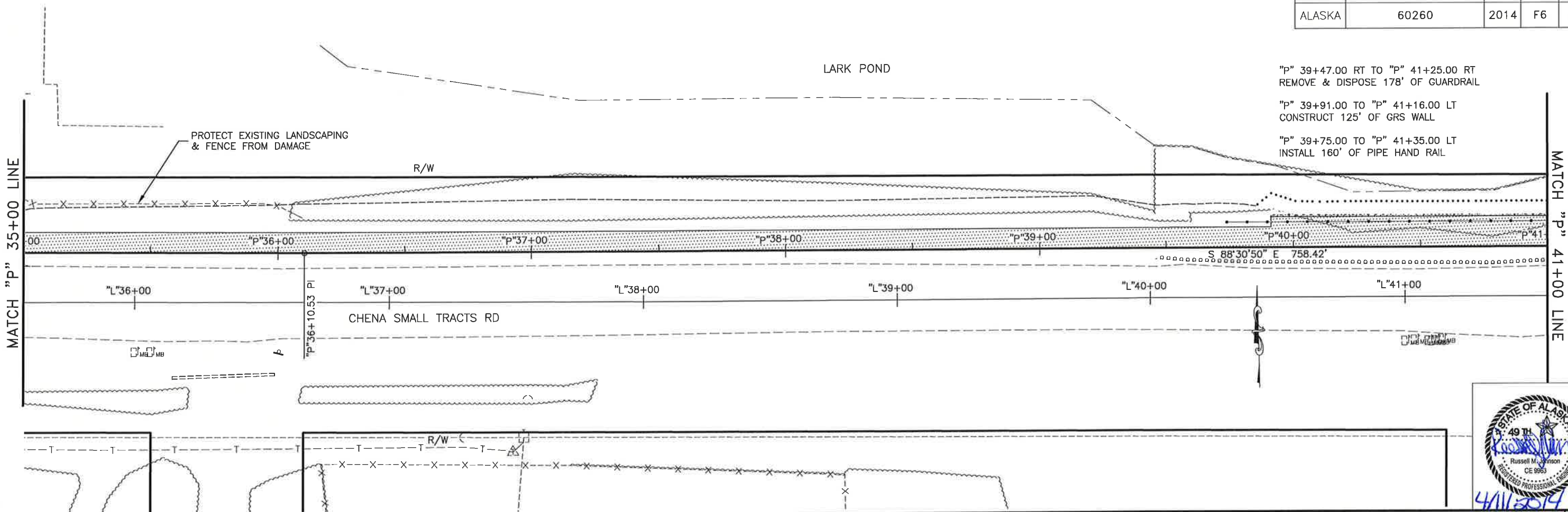


8/6/2014

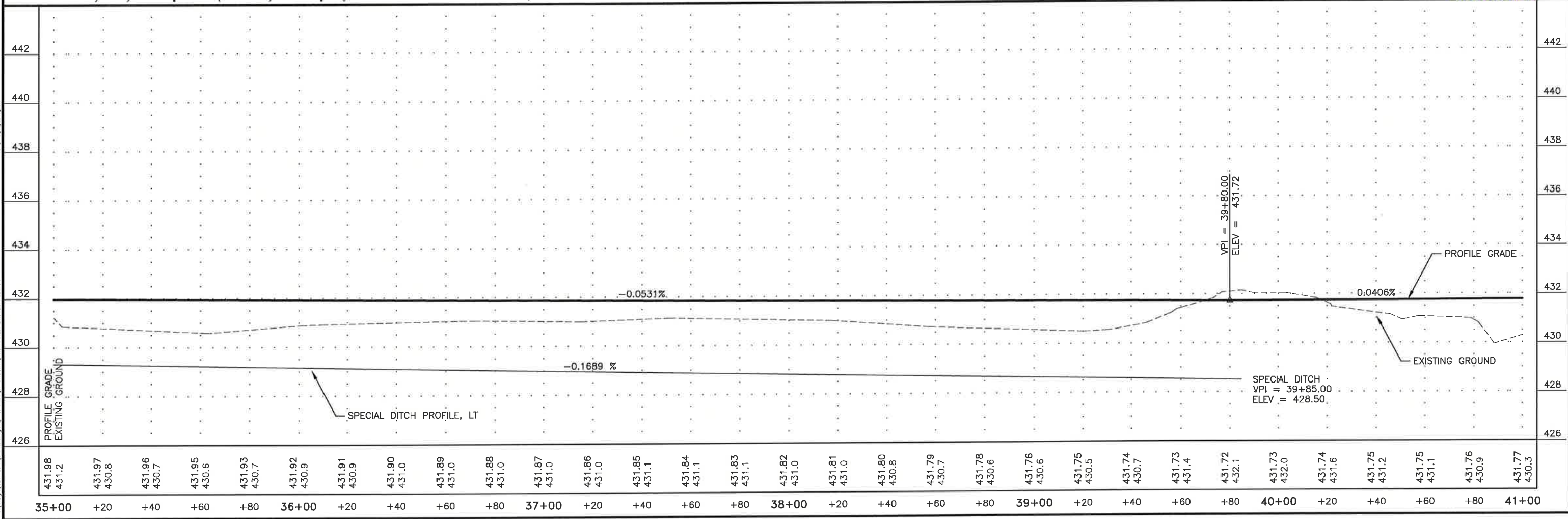
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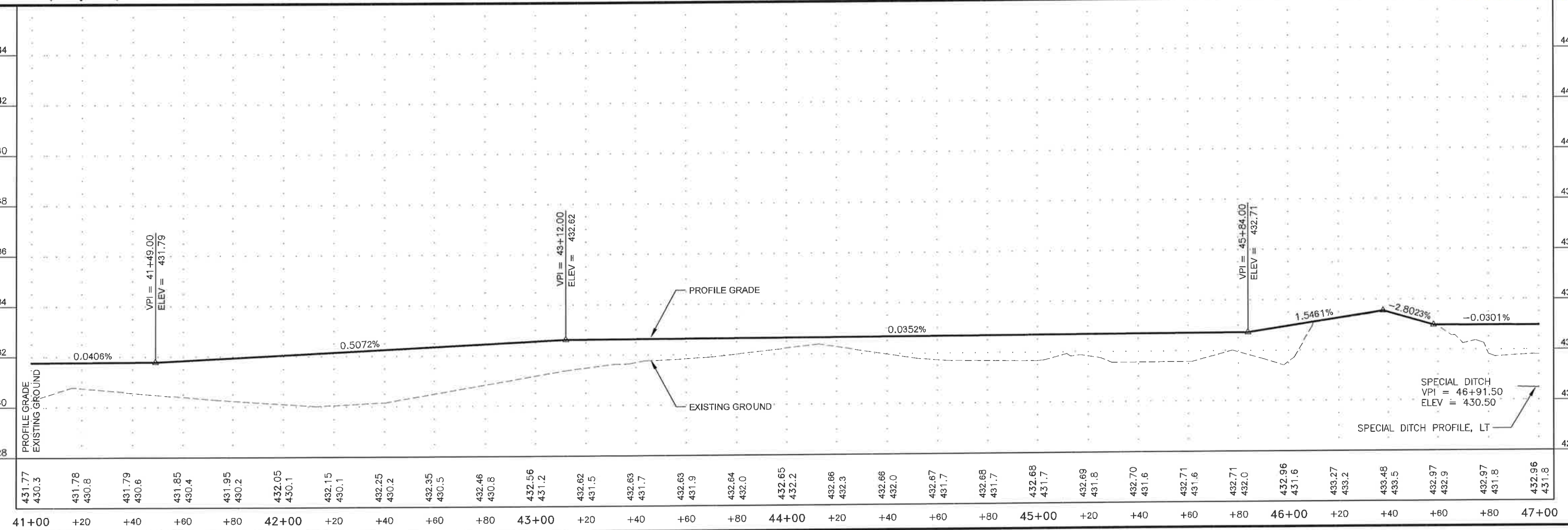
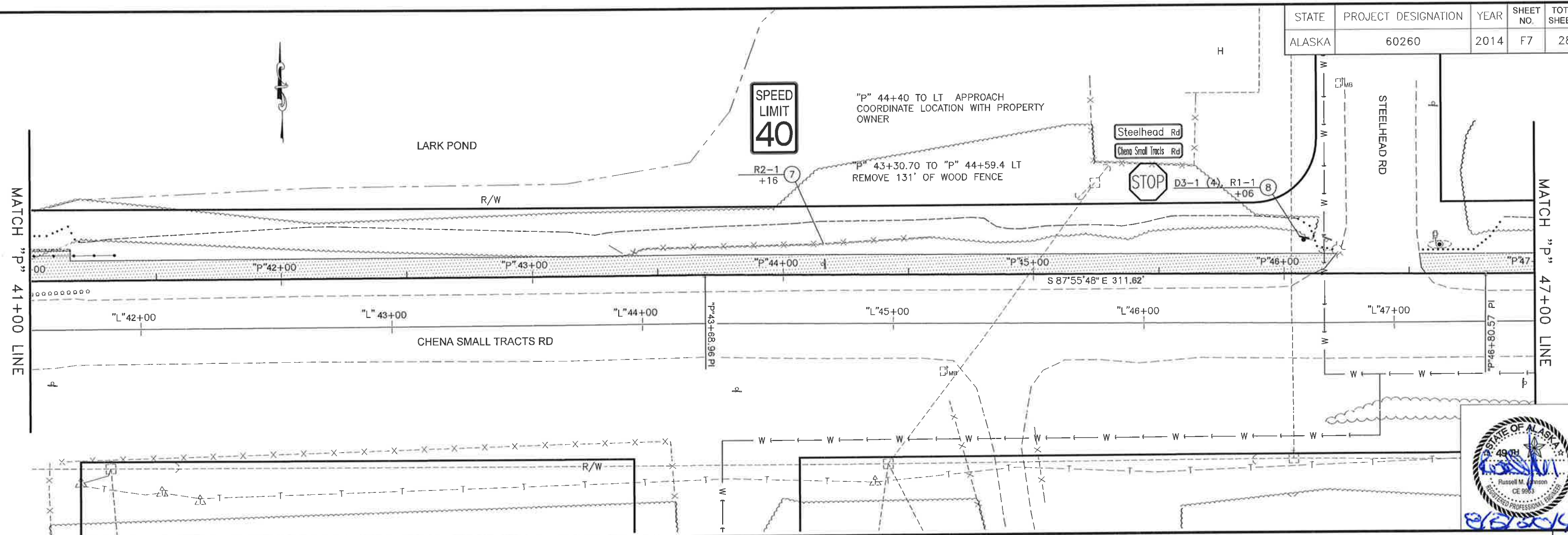
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	60260	2014	F6	28



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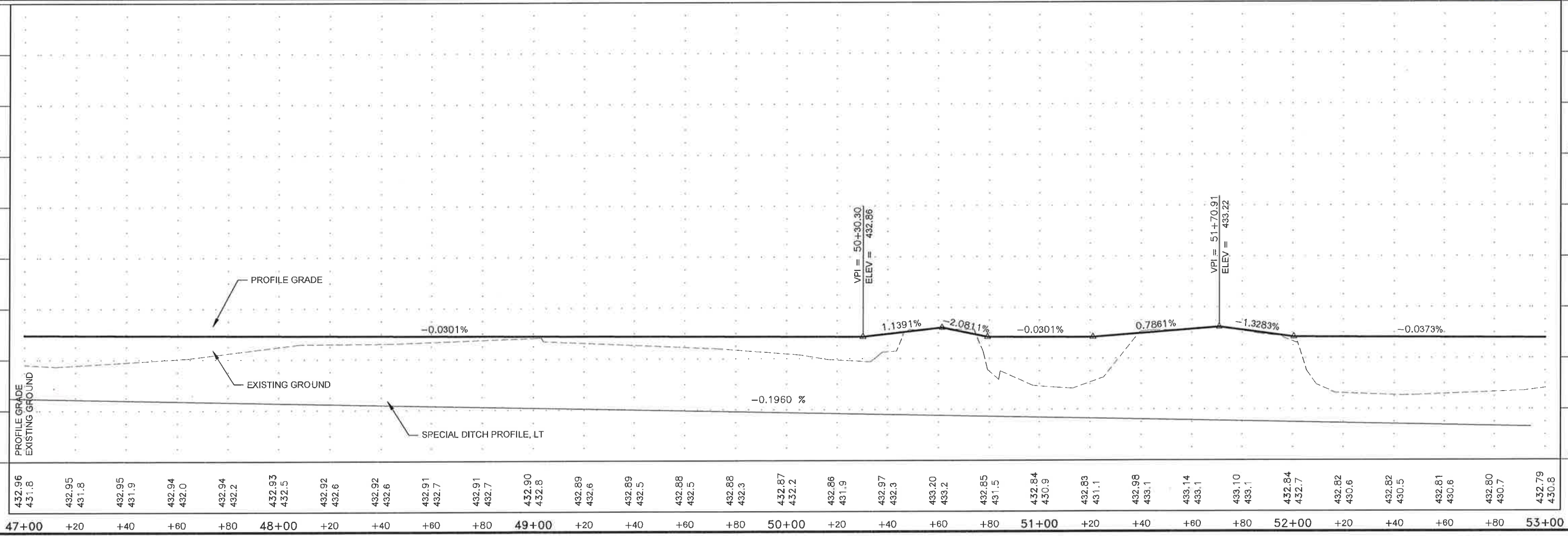
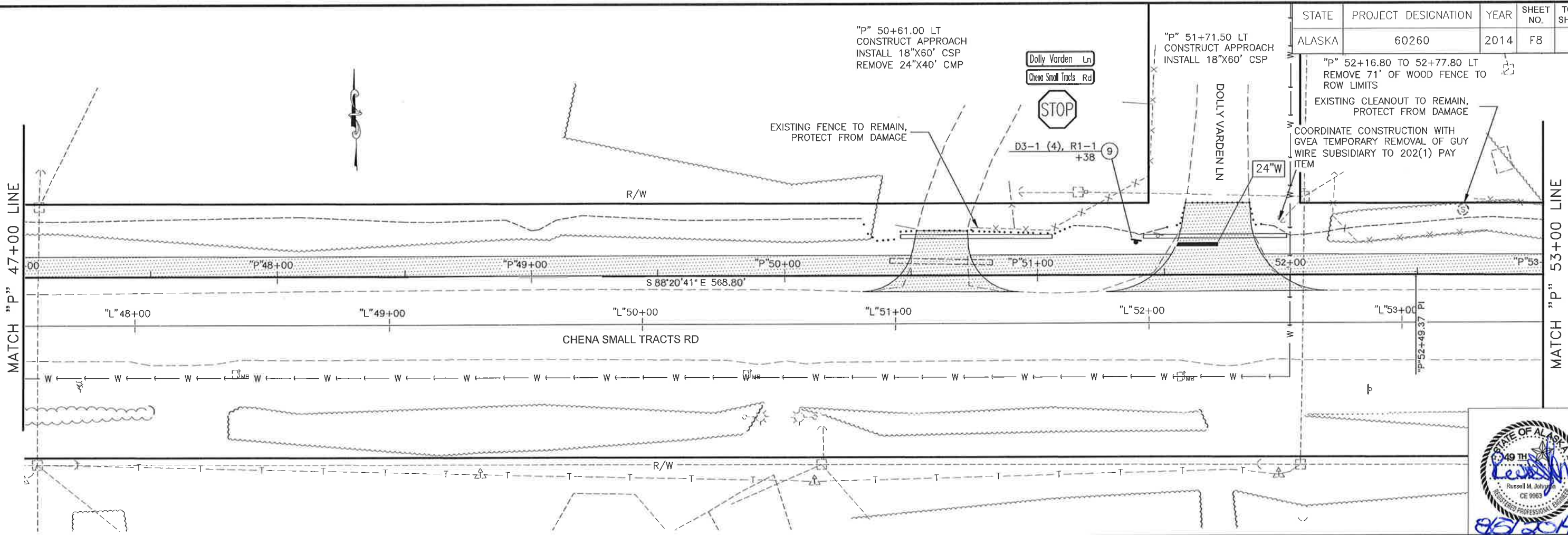


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ALASKA	60260	2014	F7	28



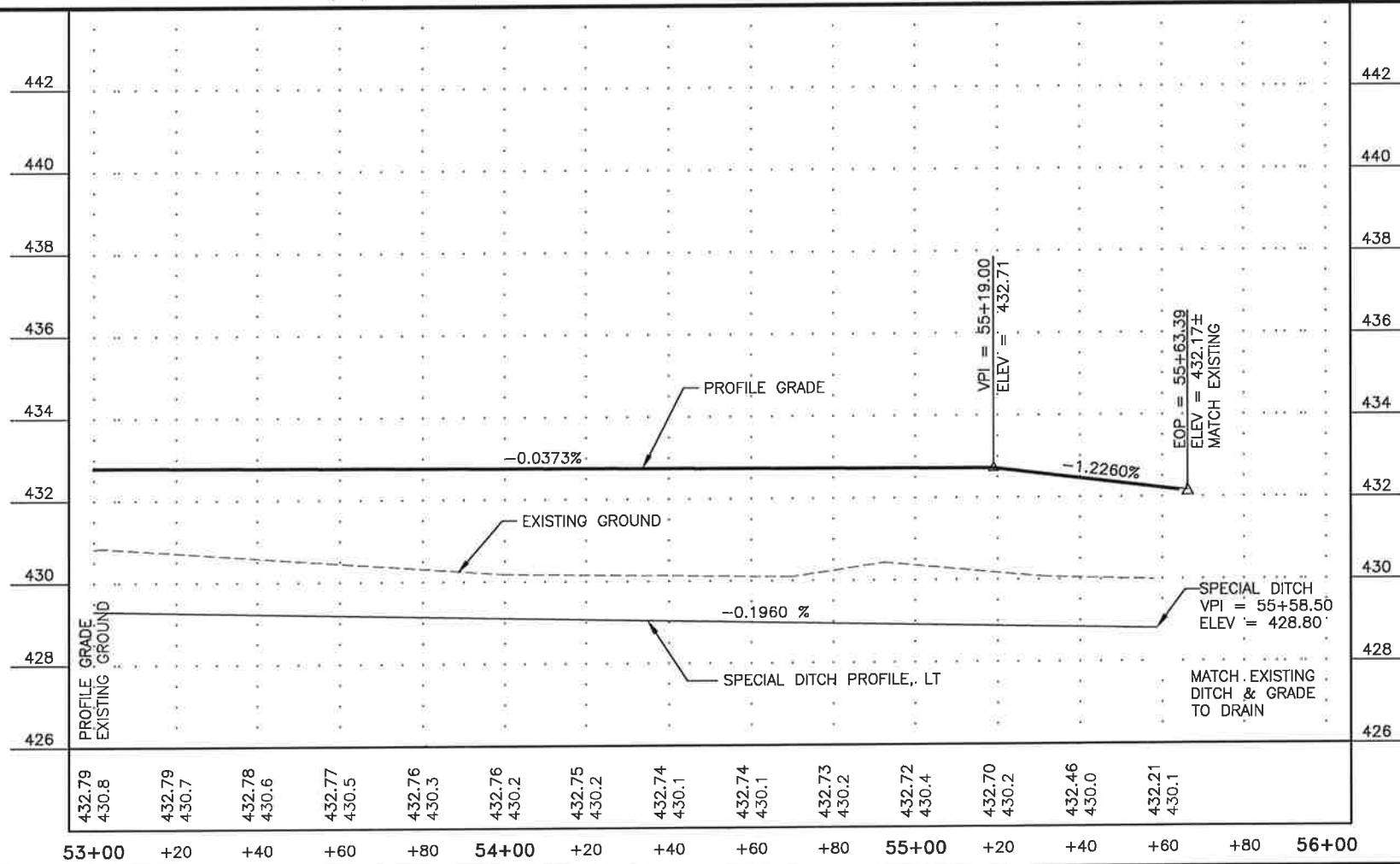
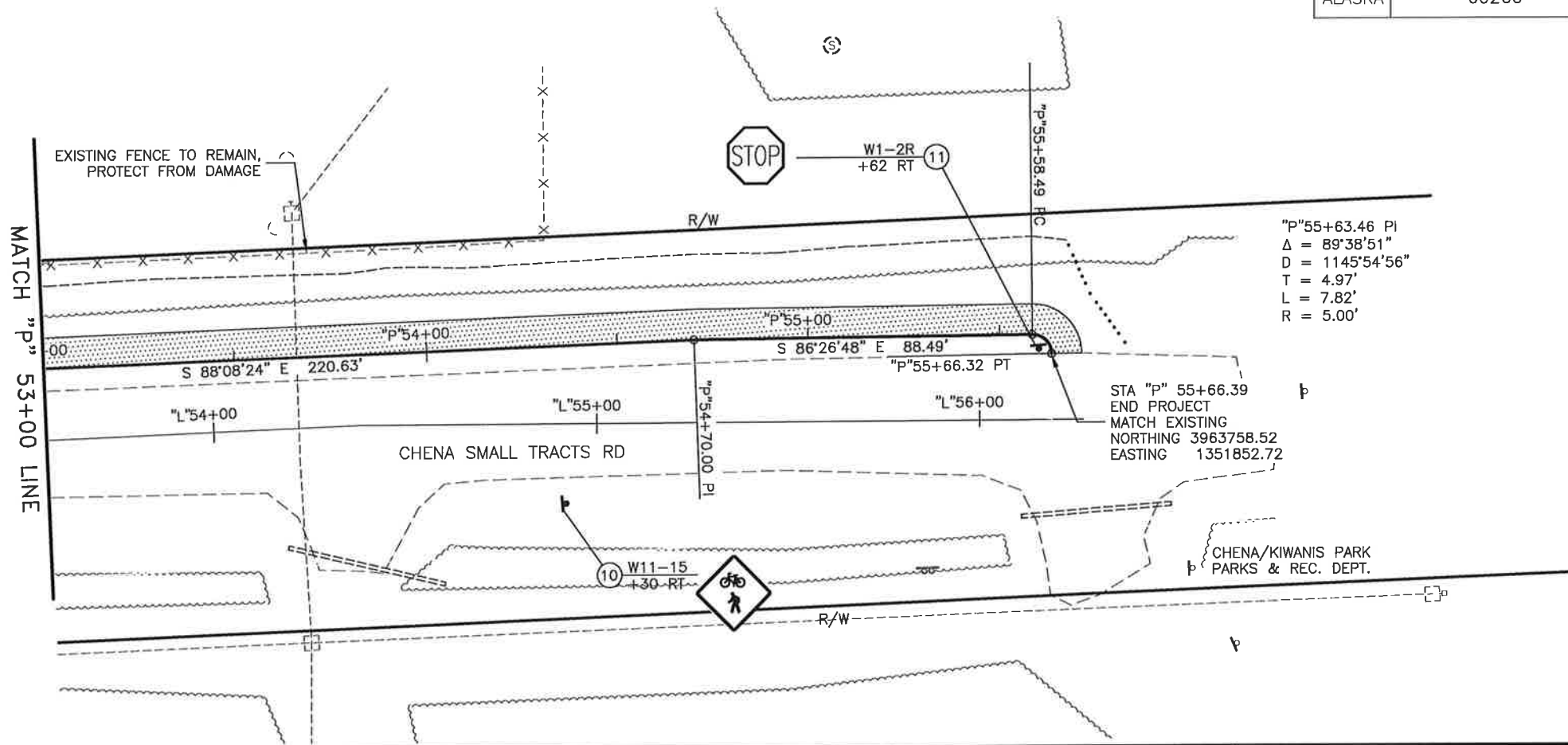
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STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	60260	2014	F8	28



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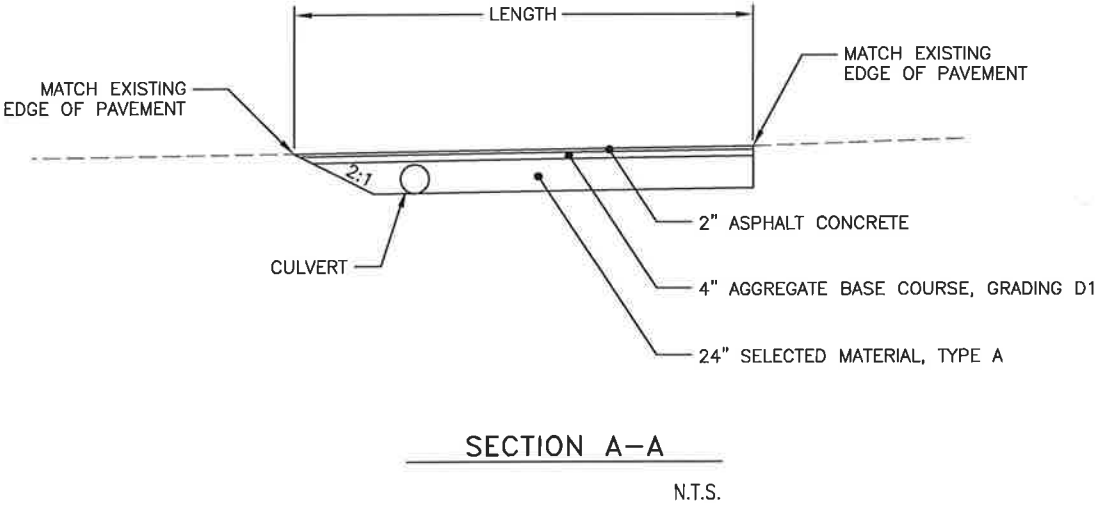
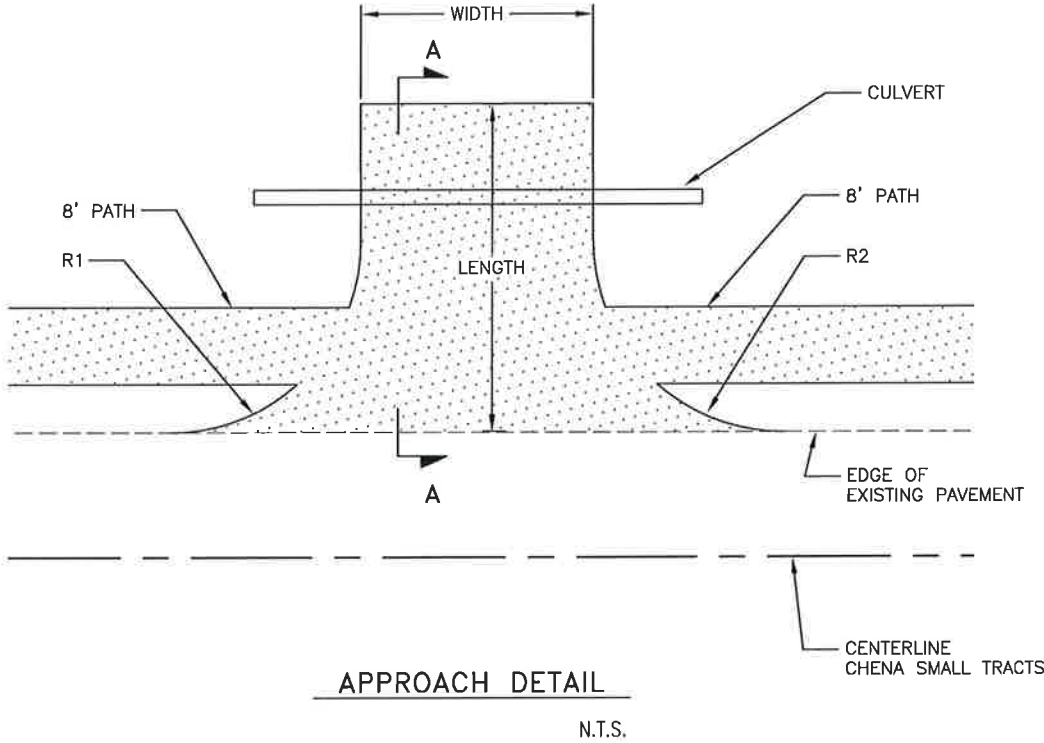
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	60260	2014	F9	28



STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	60260	2014	G1	28

639(3) APPROACHES SUMMARY					
STATION	R1 (FT)	R2 (FT)	WIDTH (FT)	LENGTH (FT)	REMARKS
"P" 15+12.00	20	20	24	37	COLGATE DR
"P" 20+13.00	25	40	32	35	PROSPECT DR
"P" 27+21.70	40	40	47	26	MACFARLAND ST
"P" 30+75.00	20	20	24	34	LIFT STATION
"P" 34+56.50	30	30	30	30	TRINIDAD DR
"P" 40+40.00	20	20	14	24	PRIVATE DRIVEWAY
"P" 50+61.00	20	20	20	24	PRIVATE DRIVEWAY
"P" 51+71.50	30	20	28	35	DOLLY VARDEN LN

NOTE: APPROACH WIDTHS, LENGTH, AND RADII MAY BE ADJUSTED TO MATCH EXISTING CONDITIONS, AS DIRECTED BY THE ENGINEER.



APPROACHES



LOCATION NUMBER	STATION	OFFSET		ASDS CODE	LEGEND	SIZE HxV (INCHES)	BRACING/ FRAMING		AREA (SQ FT)	MOUNTING HEIGHT	DIRECTION	POSTS		REMARKS	
		LT.	RT.				BRACED	FRAMED				TYPE	SIZE (INCHES)		NO.
1	"P" 10+15	x		D11-1	BIKE ROUTE w/ symbol	30x24	x		5.00		W	PST	2.5	1	
				R5-3	NO MOTOR VEHICLES	24x24			4.00						
2	"P" 13+45	x		W3-1A	STOP AHEAD (symbol)	36x36	x		9.00		E	PST	2.5	1	
3	"P" 14+85	x		D3-1	Colgate Ct	30x8			1.67		E	PST	2.5	1	
				D3-1	Colgate Ct	30x8			1.67		W				
				D3-1	Chena Small Tracts Rd	48x8			2.67		N				Use "B" Series Lettering
				D3-1	Chena Small Tracts Rd	48x8			2.67		S				Use "B" Series Lettering
				R1-1	STOP	30x30	x		6.25		N				
4	"P" 19+75	x		D3-1	Prospect Dr	30x8			1.67		E	PST	2.5	1	
				D3-1	Prospect Dr	30x8			1.67		W				
				D3-1	Chena Small Tracts Rd	48x8			2.67		N				Use "B" Series Lettering
				D3-1	Chena Small Tracts Rd	48x8			2.67		S				Use "B" Series Lettering
				R1-1	STOP	30x30	x		6.25		N				
5	"P" 26+90	x		D3-1	MacFarland St	36x8			2.00		E	PST	2.5	1	
				D3-1	MacFarland St	36x8			2.00		W				
				D3-1	Chena Small Tracts Rd	48x8			2.67		N				Use "B" Series Lettering
				D3-1	Chena Small Tracts Rd	48x8			2.67		S				Use "B" Series Lettering
				R1-1	STOP	30x30	x		6.25		N				
6	"P" 34+25	x		D3-1	Trinidad Dr	30x8			1.67		E	PST	2.5	1	
				D3-1	Trinidad Dr	30x8			1.67		W				
				D3-1	Chena Small Tracts Rd	48x8			2.67		N				Use "B" Series Lettering
				D3-1	Chena Small Tracts Rd	48x8			2.67		S				Use "B" Series Lettering
				R1-1	STOP	30x30	x		6.25		N				
7	"P" 44+16	x		R2-1	SPEED LIMIT 40	30x36	x		7.50		E	PST	2.5	1	
8	"P" 46+06	x		D3-1	Steelhead Rd	36x8			2.00		E	PST	2.5	1	
				D3-1	Steelhead Rd	36x8			2.00		W				
				D3-1	Chena Small Tracts Rd	48x8			2.67		N				Use "B" Series Lettering
				D3-1	Chena Small Tracts Rd	48x8			2.67		S				Use "B" Series Lettering
				R1-1	STOP	30x30	x		6.25		N				
9	"P" 51+38	x		D3-1	Dolly Varden Ln	42x8			2.33		E	PST	2.5	1	
				D3-1	Dolly Varden Ln	42x8			2.33		W				
				D3-1	Chena Small Tracts Rd	48x8			2.67		N				Use "B" Series Lettering
				D3-1	Chena Small Tracts Rd	48x8			2.67		S				Use "B" Series Lettering
				R1-1	STOP	30x30	x		6.25		N				
10	"P" 54+30		x	W11-15	BIKE CROSSING (symbol)	36x36	x		9.00		W	PST	2.5	1	
11	"P" 55+62	x		R1-1	STOP	18x18	x		2.25	5'	N	PST	2.5	1	STOP sign oriented for pathway users
									128.97	KEY:					

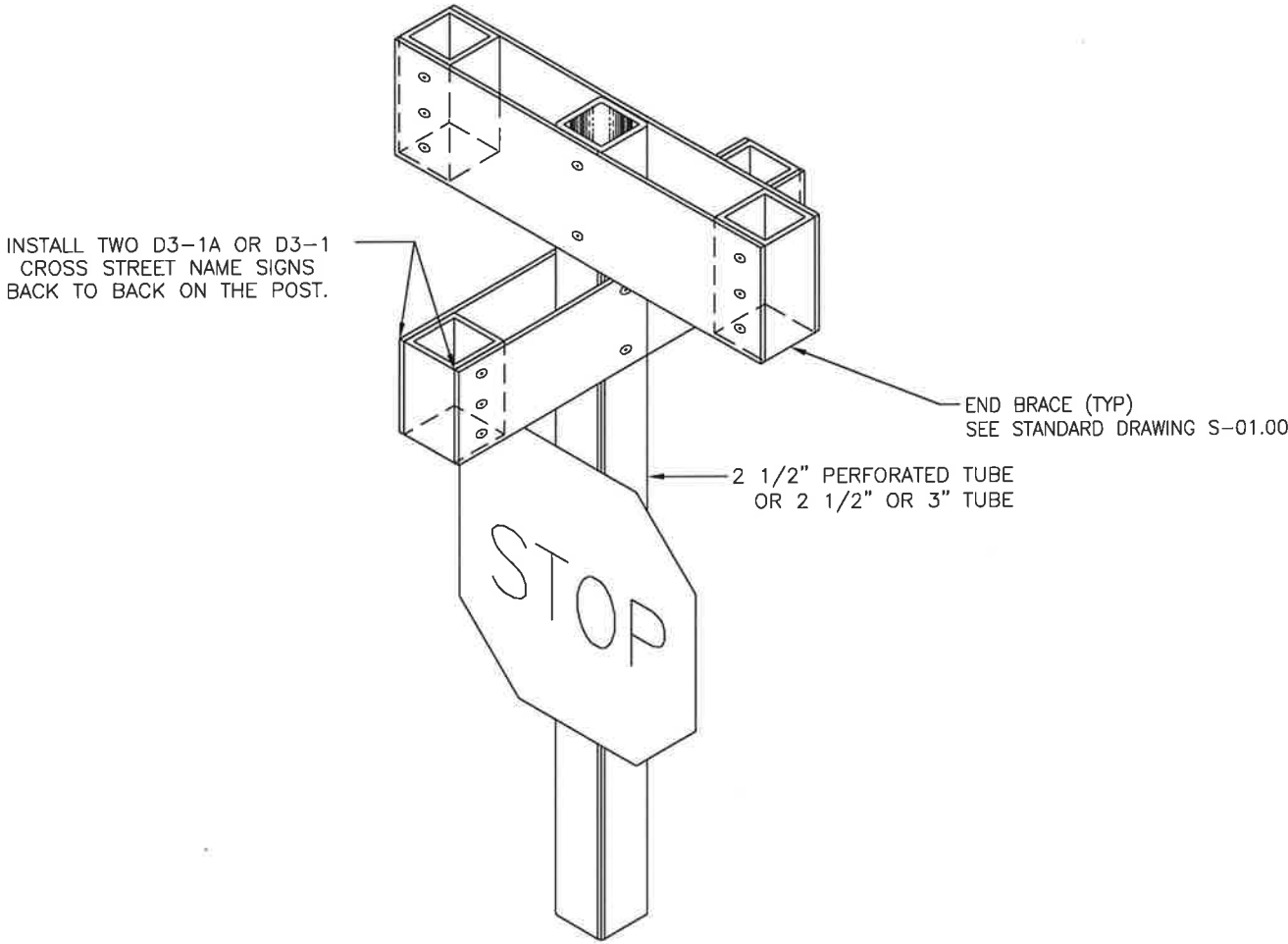
KEY:
PST = PERFORATED STEEL TUBE

SIGNING NOTES

1. MOUNT SIGNS THAT PROJECT OVER OR WITHIN 2 FEET OF THE PATH WITH A MOUNTING HEIGHT OF 8 FEET.
2. MOUNTING HEIGHT AS PER STANDARD DRAWING S-05.01 UNLESS OTHERWISE NOTED.
3. DETERMINE POST LENGTH IN THE FIELD. DO NOT EXTEND POST ABOVE TOP OF THE SIGN.
3. INSTALL PST SIGN POSTS WITH SLEEVE TYPE CONCRETE FOUNDATION PER STANDARD DRAWING S-30.03.
4. INSTALL ALL SINGLE POST SIGNS, EXCEPT D3-1 SERIES, WITH HORIZONTAL DIMENSIONS OF 30 INCHES OR GREATER, WITH "TUBE POST SIGN BRACING" AS SHOWN ON STANDARD DRAWING S-01.00. USE 3/8 GALVANIZED BOLTS WITH GALVANIZED SPIT LOCK WASHERS AND NUTS TO ATTACH BRACING INSTEAD OF THE 5/8" BOLTS AND NYLON LOCKING NUTS SHOWN ON S-01.00.
5. MAINTAIN EXISTING SIGNS UNTIL NEW SIGNS ARE INSTALLED. DO NOT LEAVE DUPLICATE OR CONFLICTING SIGNING UP AT ANY TIME.
6. LOCATE AND PROJECT ALL NEW AND EXISTING UNDERGROUND UTILITIES, INCLUDING BUT NOT LIMITED TO: LIGHTING SYSTEMS, STORM AND SANITARY SEWERS, WATER SYSTEMS, TELEPHONE AND ELECTRICAL CABLES, PRIOR INSTALLING SIGN POSTS. NOT ALL EXISTING UTILITIES MAY BE SHOWN ON THE PLANS.
7. INSTALL WEATHER TIGHT CAPS ON ALL PIPE AND TUBE POSTS, EXCEPT PERFORATED TUBING.
8. INSTALL D3-1 SIGNS ABOVE THEIR RESPECTIVE STOP SIGNS. WHEN TWO D3-1 SERIES SIGNS ARE TO BE LOCATED ON THE SAME POST, INSTALL THE CROSS STREET PANEL IN THE LOWER POSITION.
9. D3-1 SERIES SIGNS REQUIRE TWO SEPARATE SINGLE SIDED PANELS. END BRACE PANELS PER SMALL STREET NAME SIGN BRACING DETAILS IN STANDARD DRAWING S-01.00.
10. USE A 3" HORIZONTAL SPACING BETWEEN WORDS ON D3-1 SIGNS UNLESS OTHERWISE NOTED.
11. USE SERIES C LETTERS FOR D3-1 SIGN UNLESS OTHERWISE NOTED.
12. REMOVE AND DISPOSE ALL EXISTING SIGNS, AND EXISTING SIGNS FOUNDATIONS SHOWN ON THE PLAN AND PROFILE SHEETS. THIS WORK IS SUBSIDIARY TO ITEM 615(1).
13. FABRICATE ALL SIGNS FROM 0.125" THICK SHEET ALUMINUM.

SIGNING SUMMARY

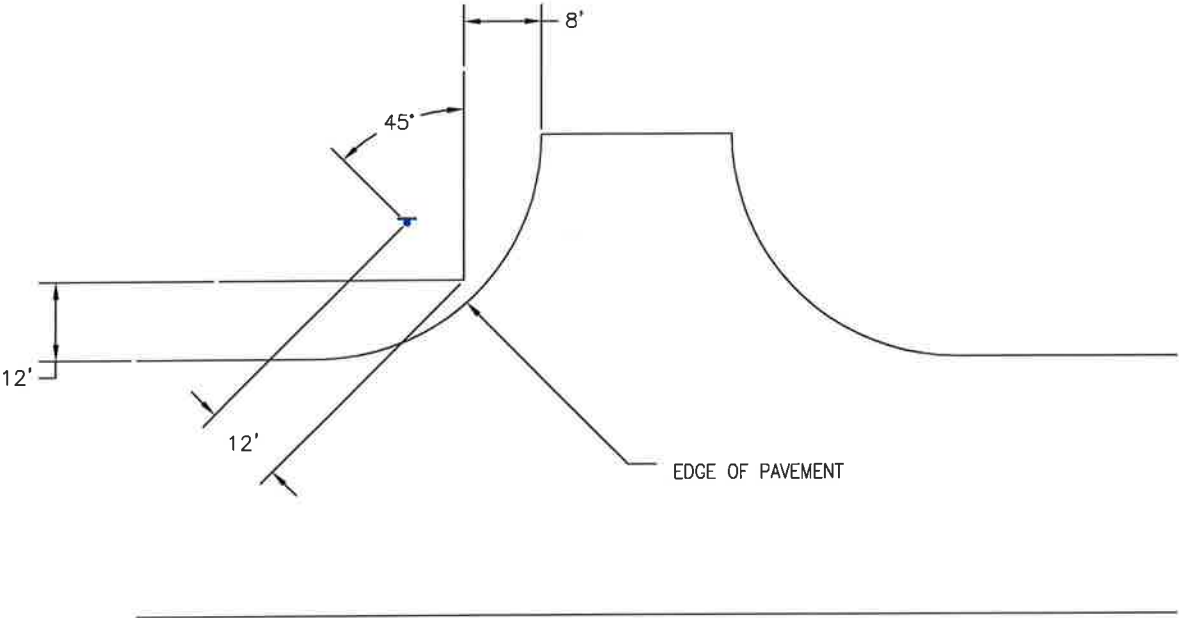




STREET NAME SIGN

STREET NAME SIGN NOTE:

VERTICALLY SEPARATE SIGNS MOUNTED ON THE SAME POST BY 2 1/2 INCHES, EXCEPT D3-1 CROSS STREET NAME SIGNS WHICH VERTICALLY ABUT.



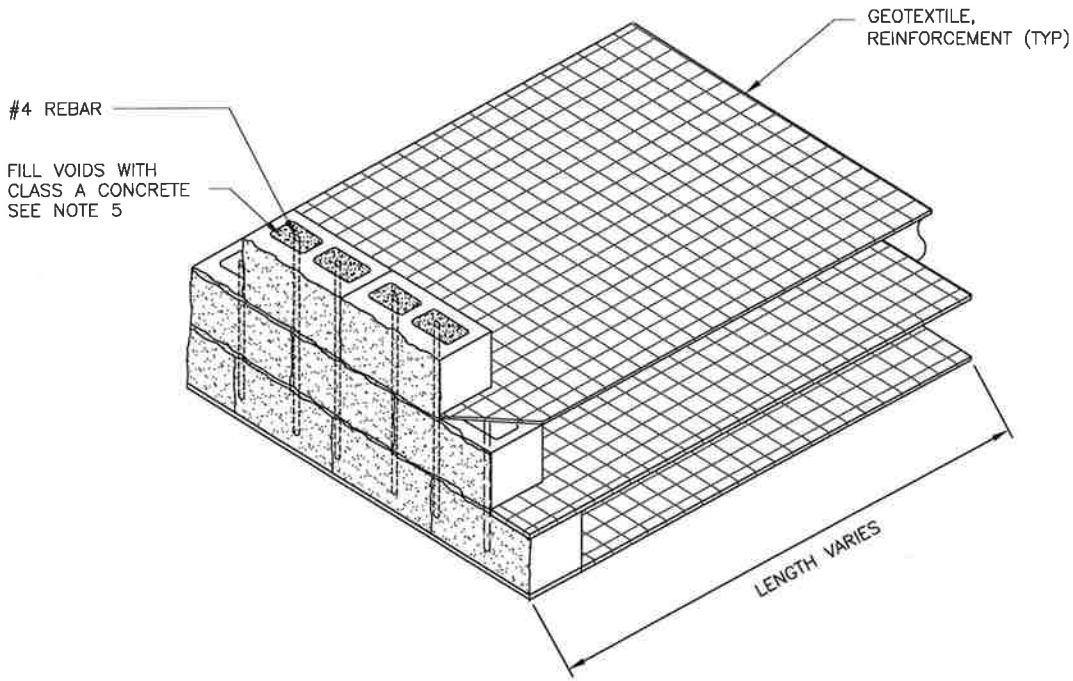
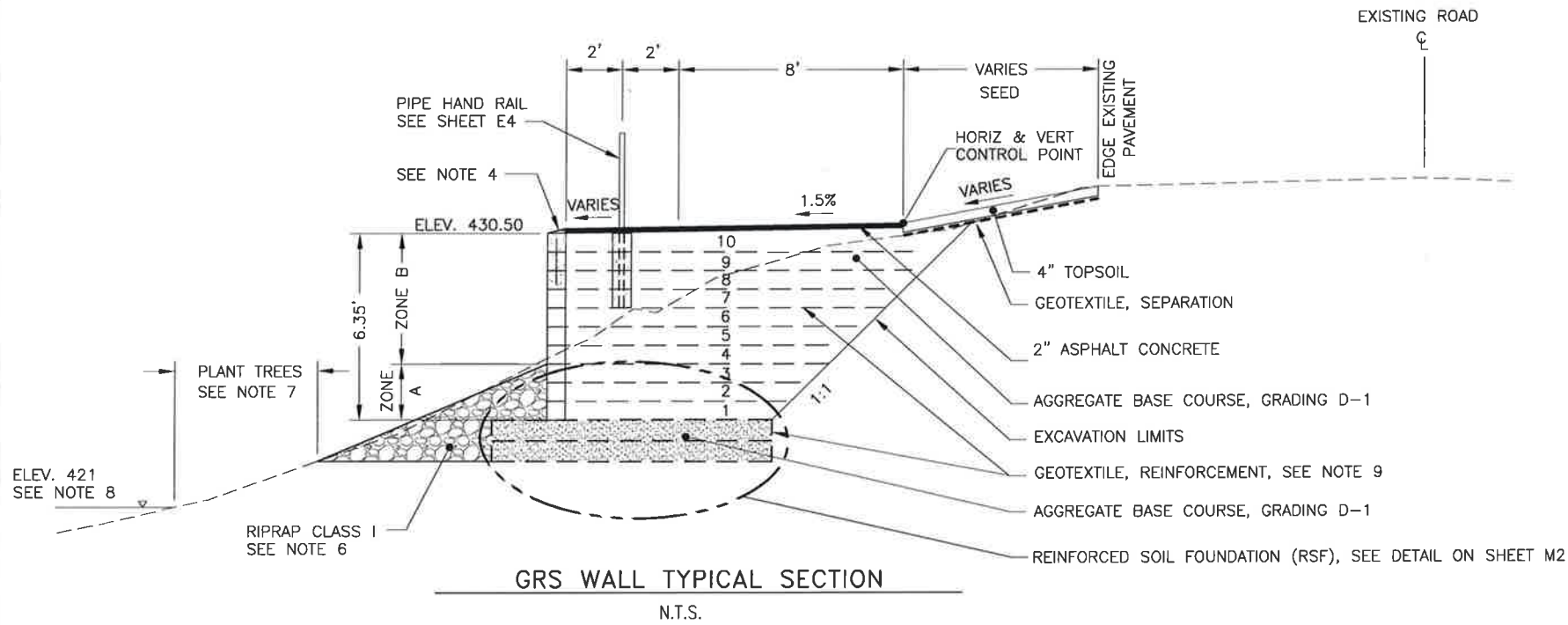
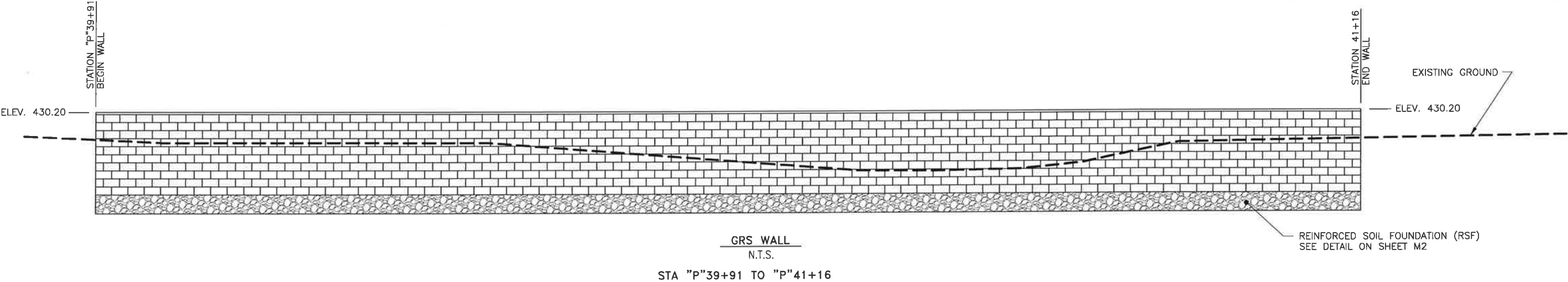
STOP SIGN PLACEMENT DETAIL

NOTE:
SIGN LOCATIONS MAY BE ADJUSTED IN THE FIELD AS DIRECTED BY THE ENGINEER.

FASTENER SPECIFICATION TABLE		
FASTENERS	STEEL	STAINLESS STEEL
BOLTS	ASTM A 307	ASTM F 593
NUTS	ASTM A 563	ASTM F 594
WASHERS	ASTM A 36	ASTM A 480



STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	60260	2013	M1	28



NOTES:

1. ZONE A, THE FIRST 3 COURSES SHALL BE SOLID CMU BLOCKS
2. ZONE B, CONSTRUCTED OF HOLLOW CMU BLOCKS, BROWN IN COLOR WITH A TEXTURE SPLIT FACE
3. VERTICAL WALL FACE BATTER = 0 DEGREES
4. ON THE TOP ROW OF CMU BLOCKS CREATE A MORTAR CAPPING APPROX 2 INCH THICK SLOPED TO DRAIN AS SHOWN ON GRS WALL TYPICAL SECTION
5. FILL VOIDS IN THE TOP 3 COURSES OF CUMs. REMOVE GEOTEXTILE REINFORCEMENT FROM THE CAVITIES OF THE TOP TWO ROWS OF BLOCKS BY CUTTING PRIOR TO PLACING THE REINFORCING STEEL AND CLASS A CONCRETE
6. INSTALL RIPRAP UP TO THE THIRD ROW OF CMU BLOCKS
7. PLANT TREES IN FRONT OF THE RIPRAP. SEE TREE DETAIL ON SHEET M2
8. WATER ELEVATION TAKEN NOVEMBER 2011. THE WATER ELEVATION VARIED DURING THE TIME OF SURVEY AND WILL VARY SEASONALLY
9. PLACE BACKFILL IN A MANOR THAT PREVENTS THE FORMATION OF WRINKLES IN THE GEOTEXTILE

GRS WALL

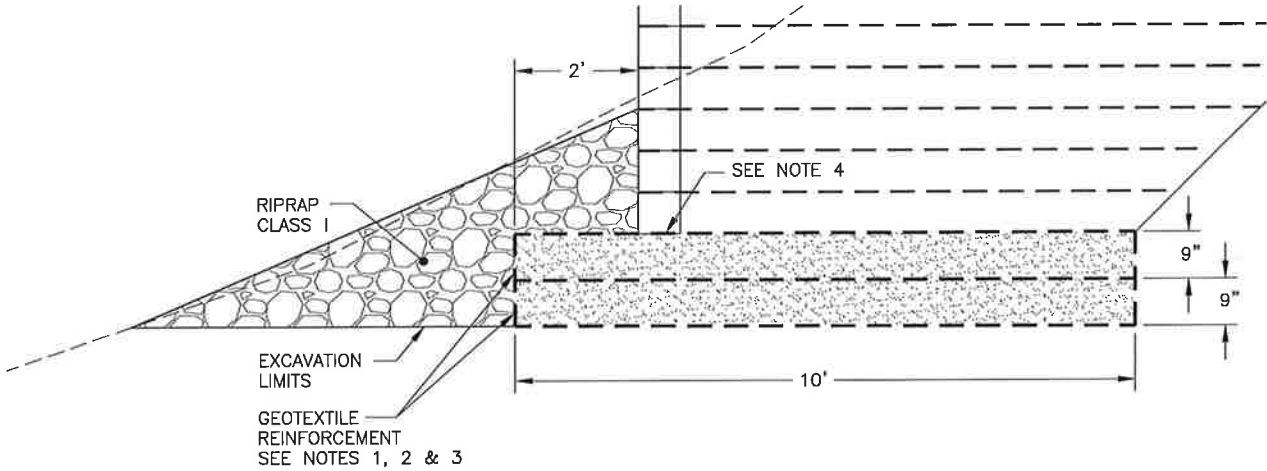


\\Hwy\60260\6 Design\11 Drafting\GRS WALL DETAILS-M2 GRS WALL DETAILS Frs Feb/28/14 02:27pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	60260	2014	M2	28

GRS WALL 514 (100) ESTIMATE OF QUANTITIES									
GEOTEXTILE, REINFORCEMENT *				FACE CONCRETE BLOCK (CMU)		PIPE RAIL FOUNDATION (CMU)	BACKFILL FOR RSF AND GRS	REINFORCING STEEL USED TO PIN TOP 3 ROWS TOGETHER ~ 20 INCH LONG (FT)	RIPRAP CLASS I (TON)
LAYER	LENGTH (FT)	WIDTH (FT)	AREA (SY)	SOLID PLAIN	HOLLOW BROWN & TEXTURED	HOLLOW BLOCK PLAIN	AGGREGATE BASE COURSE, GRADING D-1 (CU. YD)		
RSF (WRAP)	125	26	361				35		
RSF (INTERMEDIATE)	125	10	139				35		
RSF (ENDS)			10						
ROW 1				96			24		
ROW 2	125	8.5	119	96			26		
ROW 3	125	9	125	96			28		
ROW 4	125	10	139		96		30		
ROW 5	125	10	139		96		32		
ROW 6	125	11	153		96		34		
ROW 7	125	12	167		96	12	36		
ROW 8	125	12	167		96	12	39		
ROW 9	125	13	181		96	12	40		
ROW 10	125	13	181		96	12	48		
TOTAL				288	672	48	410	192	44

* PER NEAT LINE DIMENSIONS

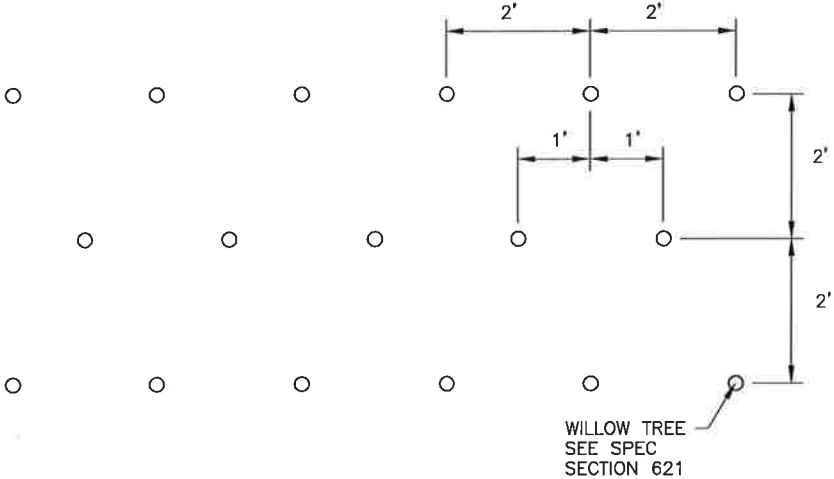


REINFORCED SOIL FOUNDATION (RSF) DETAIL

N.T.S.

NOTES:

1. PLACE EXTERNAL GEOTEXTILE, REINFORCEMENT TO FULLY WRAP BOTTOM AND SIDES OF RSF EXCAVATION ALLOWING FOR A MINIMUM THREE FOOT OVERLAP, PER SPECIAL PROVISION 630-3.01
2. PLACE, GRADE, LEVEL AND COMPACT 9-INCH LIFT OF RSF BACKFILL (AGGREGATE BASE COURSE, GRADING D-1). FULLY COMPACT TO 95% COMPACTION
3. FULLY WRAP THE RSF WITH THE EXTERNAL GEOTEXTILE, REINFORCEMENT WITH A MINIMUM THREE FOOT OVERLAP, PER SPECIAL PROVISION 630-3.01
4. PLACE A LEVELING COURSE IF NEEDED, SEE SPECIAL PROVISION SECTION 514-3.01 6.



TREE DETAIL

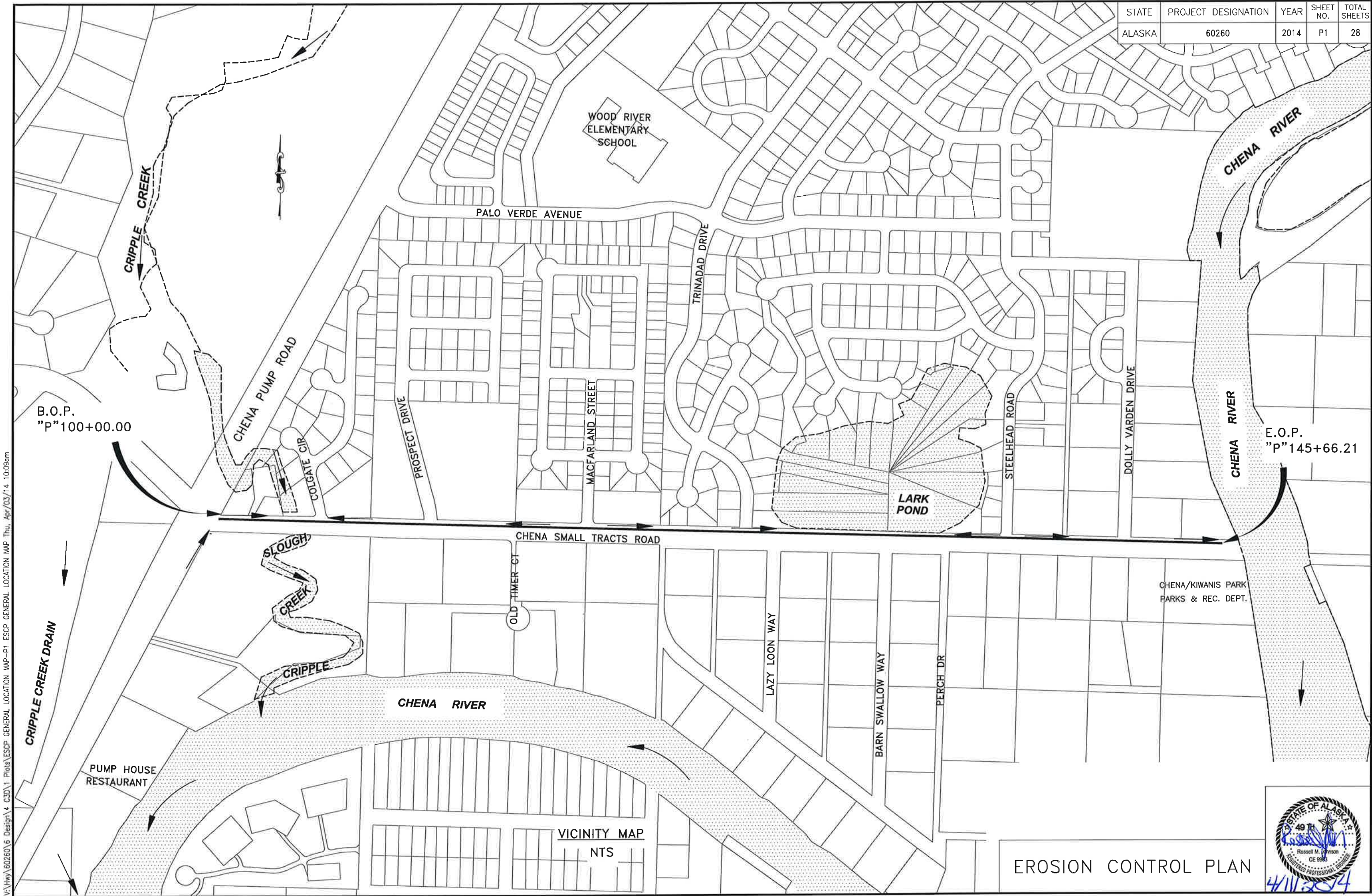
N.T.S.

STA "P"39+91 TO "P"41+16

GRS WALL



STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	60260	2014	P1	28



V:\Hwy\60260\6 Design\4 C3D\1 Plans\ESCP GENERAL LOCATION MAP-P1 ESCP GENERAL LOCATION MAP Thu, Apr/03/14 10:09am

V:\HWY\60260\6 Design\4 CSD\1 Plots\ESCP NOTES-ESCP NOTES Fri, Feb/28/14 09:37am

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	60260	2014	P2	28

ESCP NOTES:

1. A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS REQUIRED FOR THIS PROJECT. SEDIMENT CONTROL MEASURES AND TEMPORARY EROSION CONTROL FEATURES SHALL BE BASED ON THE LATEST BEST MANAGEMENT PRACTICES (BMP'S), AND THE DEPARTMENT'S ALASKA STORM WATER POLLUTION PREVENTION PLAN GUIDE. THE CONTRACTOR SHALL USE THE ESCP INFORMATION AND CONTROLS PROVIDED ON THESE PLANS AS GENERAL GUIDANCE IN DEVELOPING THE STORM WATER POLLUTION PREVENTION PLAN.
2. REQUIRED CONTROLS
- A. TEMPORARY SEDIMENT AND EROSION CONTROLS

I. SEDIMENT CONTROLS AT CULVERT INLETS AND OUTLETS

II. SEDIMENT CONTROLS INSTALLED AT THE TOE OF ALL SLOPES

III. SEDIMENT CONTROLS IN DITCHES INCLUDE DITCH LINING, ROCK CHECK DAMS AND SEEDING/MULCHING.

IV. SEDIMENT SHALL BE CONTROLLED AND PREVENTED FROM ENTERING CRIPPLE CREEK SLOUGH, LARK POND AND THE CHENA RIVER.

V. PERIMETER PROTECTION SHALL BE PLACED AROUND ANY AREAS OF EXPOSED ERODIBLE SOILS
- B. STABILIZATION

I. SEASONAL SUSPENSION OF WORK.

1. THE CONTRACTOR SHALL STABILIZE ERODIBLE SLOPES PRIOR TO SEASONAL SUSPENSION OF WORK. SLOPE STABILIZATION SHALL BE MAINTAINED THROUGHOUT SPRING THAW UNTIL EARTH DISTURBING ACTIVITIES ARE RESUMED.

2. PROVIDE PERIMETER PROTECTION AT THE TOE CONSISTING OF ONE OF THE FOLLOWING CONTROLS: UPLAND VEGETATIVE BUFFER, GRAVEL OR SNOW BERM, FIBER ROLL, OR SILT FENCE. PERIMETER PROTECTION WILL BE PROVIDED FOR ALL SLOPES NOT HAVING ESTABLISHED PLANT GROWTH.

3. ALL WORK DONE AFTER SEEDING CUT-OFF DATES AND ALL AREAS WHERE SEED IS NOT ESTABLISHED ON DATE OF SEASONAL SUSPENSION OF WORK SHALL BE MULCHED AND TACKIFIED FOR SEASONAL SHUTDOWN. DUE TO FLOW PATTERN, ADDITIONAL PROTECTION MAY BE NECESSARY AT LOWER ELEVATIONS NEAR THE EOP.

4. BACKSLOPES AND CONSTRUCTED DITCHES ALSO REQUIRE TEMPORARY COVER IF THEY HAVE EXPOSED SOILS. THE USE OF BLANKETS, OR TURF REINFORCEMENT MATS MAY BE USED DEPENDING UPON GRADIENT AND SOIL TYPE.

II. PERMANENT

1. SIDESLOPE SEEDING AND MAINTAINING EXISTING VEGETATION WILL BE THE PRIMARY PERMANENT STABILIZATION FOR NEW SLOPES

2. DISTURBED GROUND WILL BE STABILIZED BY PERMANENT SEEDING, MULCHING, AND THE APPLICATION OF TACKIFIERS.

ESCP ELEMENTS:

PROJECT SITE-SPECIFIC CONDITIONS

1. MEAN ANNUAL PRECIPITATION: 10.34 INCHES
2. THE 2 YEAR, 24 HOUR PRECIPITATION: 1.17 INCHES
3. CURRENT SOIL TYPE: IS SILT, CHANGES TO SELECTED MATERIAL, TYPE A FORE-SLOPE AND DITCH LINING IN CUT DITCHES
4. LANDSCAPE TOPOGRAPHY: FLAT
5. DRAINAGE: WATER DRAINS OFF THE CROWNED ROADWAY INTO DITCHES. ON THE WEST END OF THE PROJECT WATER DRAINS TOWARDS CRIPPLE CREEK SLOUGH. IN THE MIDDLE OF THE PROJECT WATER DRAINS TO AN OLD GRAVEL PIT (LARK POND) LOCATED ON THE NORTH SIDE OF THE ROAD. ON THE EAST END OF THE PROJECT WATER DRAINS TOWARDS THE CHENA RIVER. SURFACE WATER IS FILTERED IN NATURAL VEGETATION.
6. TYPE OF VEGETATION: CONTAINS BUT IS NOT LIMITED TO GRASS, WILLOWS, BIRCH, POPLAR AND SPRUCE

PROJECT AREAS

	AREA (ACRE)
PROJECT TOTAL	3.7
DISTURBED TOTAL	2.6
USACE SECTION 404 PERMIT	0.10
CONSTRUCTION GENERAL PERMIT	2.5

PERCENTAGE IMPERVIOUS AREA BEFORE CONSTRUCTION: 4%
RUNOFF COEFFICIENT BEFORE CONSTRUCTION: ~0.2
PERCENTAGE IMPERVIOUS AREA AFTER CONSTRUCTION: 30%
RUNOFF COEFFICIENT AFTER CONSTRUCTION: ~0.4

7. RECEIVING WATERS : WETLANDS CRIPPLE CREEK SLOUGH, LARK POND AND CHENA RIVER
8. BASED ON USFWS AND ADFG DATA: NO ENDANGERED SPECIES
9. NO HISTORIC PROPERTIES: SHPO CONCURRENCE IN APPENDIX A

RUN-OFF COEFFICIENTS

TYPE OF SURFACE	RUNOFF COEFFICIENT (C)
PAVED	0.7-0.9
GRAVEL ROADWAY OR SHOULDERS	0.4-0.6
CUT, FILL SLOPES	0.5-0.7
GRASSED AREAS	0.1-0.7
WOODS	0.1-0.3

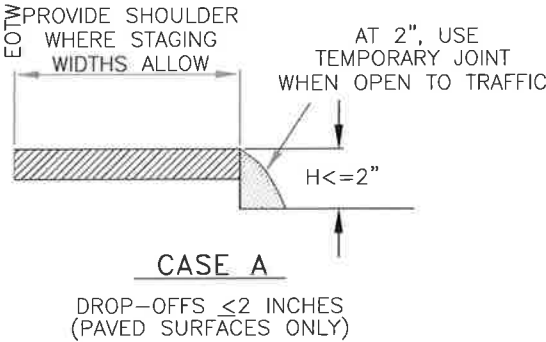
NOTE: FROM HYDRAULIC CIRCULAR #12, "DRAINAGE OF HIGHWAY PAVEMENTS", MARCH 1984, PAGE 12. FOR FLAT SLOPES AND/OR PERMEABLE SOILS, USE LOWER VALUE. FOR STEEP SLOPES AND/OR IMPERMEABLE SOILS, USE HIGHER VALUES.

EROSION & SEDIMENT CONTROLS SHOWN ON THESE PLAN SHEETS ARE AS DESCRIBED IN THE ALASKA STORMWATER GUIDE, EFFECTIVE JUNE, 2009.

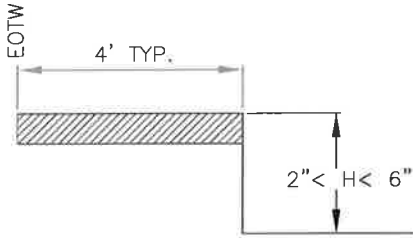
ESCP NOTES



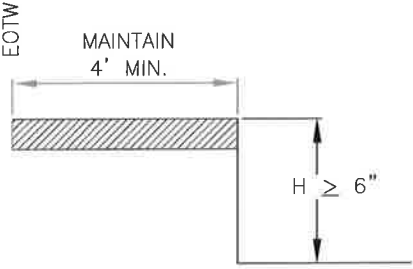
VERTICAL DROP-OFFS



1. USE "UNEVEN LANES" (CW8-11) SIGNS FOR ALL DROP-OFFS IN BETWEEN TRAFFIC LANES.
2. LEAVE NO DROP-OFFS > 1.5" IN THE TRAFFIC LANE OR ACTIVE WHEEL TRACK.

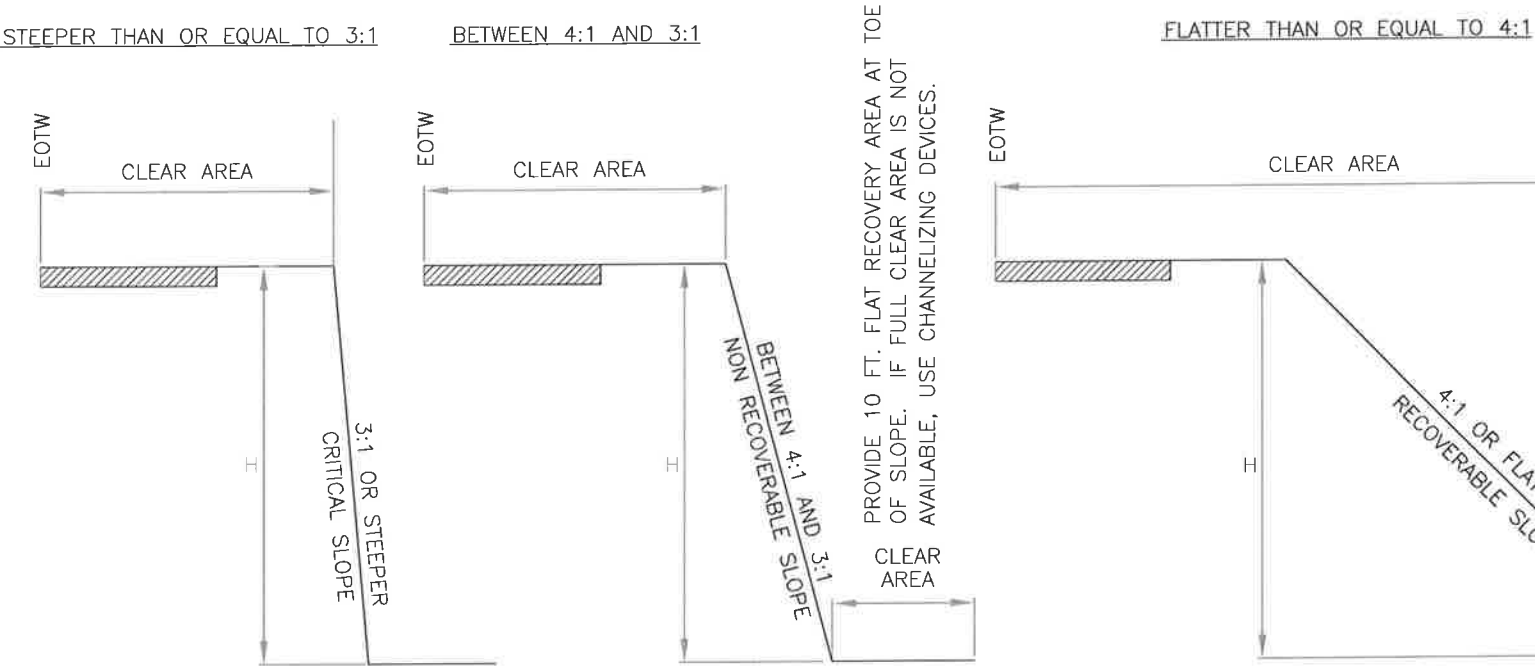


1. PLACE CONES OR CANDLES FOR DROP-OFFS ≥ 4 FEET AND ≤ 30 FEET FROM THE EOTW.
2. USE DRUMS OR TYPE II BARRICADES FOR DROP-OFFS < 4 FEET FROM THE EOTW.



1. PLACE DRUMS OR TYPE II BARRICADES FOR DROP-OFFS ≤ 24" WITHIN THE CLEAR AREA.
2. PROVIDE PORTABLE CONCRETE BARRIER FOR DROP-OFFS >24" WITHIN 15 FEET OF THE EOTW. USE DRUMS OR TYPE II BARRICADES IF BEYOND 15 FEET.

FILL SLOPES



CLEAR AREA REQUIREMENTS			
	LOW SPEED < = 35 MPH	INTERMEDIATE SPEED 40 MPH TO 45 MPH	HIGH SPEED ≥ = 50 MPH
RURAL	15'	24'	30'
URBAN	10' DITCH SECTIONS, OR 2' BEHIND CURB	15' DITCH CONDITIONS, OR 2' BEHIND CURB	15' DITCH CONDITIONS, OR 2' BEHIND CURB

CHANNELIZING DEVICE REQUIREMENTS FOR SLOPES 3:1 OR STEEPER WITHIN THE CLEAR AREA		
	H <= 15'	H > 15'
< 2000 VPD LOW VOLUME	CANDLES OR CONES	TYPE II BARRICADES OR DRUMS
> 2000 VPD	TYPE II BARRICADE OR DRUMS	PORTABLE CONCRETE BARRIER OR TEMPORARY GUARDRAIL

TRAFFIC CONTROL NOTES:

1. USE THE EXISTING CROSS-SECTION (PRIOR TO CONSTRUCTION) AS A BASIS FOR DETERMINING WHEN CHANNELIZING DEVICES ARE NEEDED.
2. INSTALL CHANNELIZING DEVICES WHEN THE HORIZONTAL OR VERTICAL CURVATURE IS MADE MORE SEVERE.
3. INSTALL FLEXIBLE DELINEATORS WHEN ALL VEGETATION OVER 4 FEET HIGH IS CLEARED FROM FILL SLOPES THAT ARE 3:1 OR STEEPER IN THE CLEAR AREA.
4. USE PORTABLE CONCRETE BARRIER FOR WARRANTING CONDITIONS WHICH LAST LONGER THAN 3 DAYS. FOR CONDITIONS LASTING LESS THAN 3 DAYS, OTHER CHANNELIZING DEVICES MAY BE INSTALLED.
5. TERMINATE RUNS OF PORTABLE CONCRETE BARRIER USING THE FOLLOWING METHODS:

- A) CONNECT TO A PORTABLE CRASH CUSHION, OR
- B) PROVIDE A CONCRETE BARRIER WITH THRIE BEAM TRANSITION TO W-BEAM GUARDRAIL, TREATED WITH A PARALLEL TERMINAL (SEE SECTION 710).
- C) FLARE THE ENDS OF THE PORTABLE CONCRETE BARRIER AWAY FROM THE ROADWAY AT A RATE OF 7:1 ON A COMPACTED SLOPE OF 6:1 OR FLATTER, OUTSIDE OF THE CLEAR AREA. INSTALL A SLOPING PORTABLE CONCRETE BARRIER END TREATMENT, OR
- D) BURY IN THE BACKSLOPE.

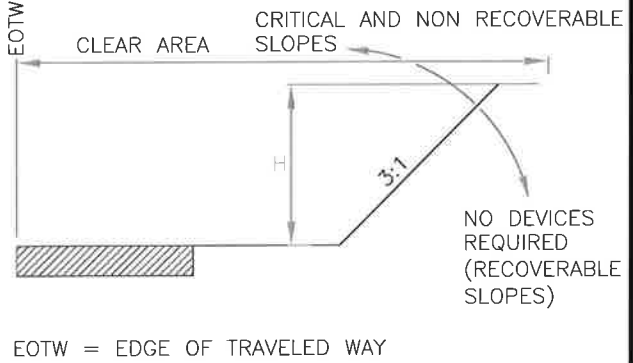
6. TERMINATE THE RUNS OF TEMPORARY W-BEAM GUARDRAIL USING THE FOLLOWING METHODS:

- A) PROVIDE A PARALLEL TERMINAL (SEE SECTION 710)
- B) FLARE THE ENDS OF THE TEMPORARY GUARDRAIL AWAY FROM THE ROADWAY AT A RATE OF 6:1 ON A COMPACTED SLOPE OF 6:1 OR FLATTER OUTSIDE OF THE CLEAR AREA, TERMINATE WITH A STANDARD W-BEAM END SECTION, OR
- C) BURY IN THE BACKSLOPE.

EQUIPMENT NOTES:

1. WHEN THERE IS ACTIVE, NONMOBILE CONSTRUCTION EQUIPMENT WITHIN THE CLEAR AREA, DELINEATE THE ROADSIDE WITH TRAFFIC CONES.
2. SEPARATE PROCEDURES ARE REQUIRED FOR MOBILE WORK ZONE OPERATIONS AND SHORT DURATION WORK OF LESS THAN 12 HOURS.

CUT SLOPES

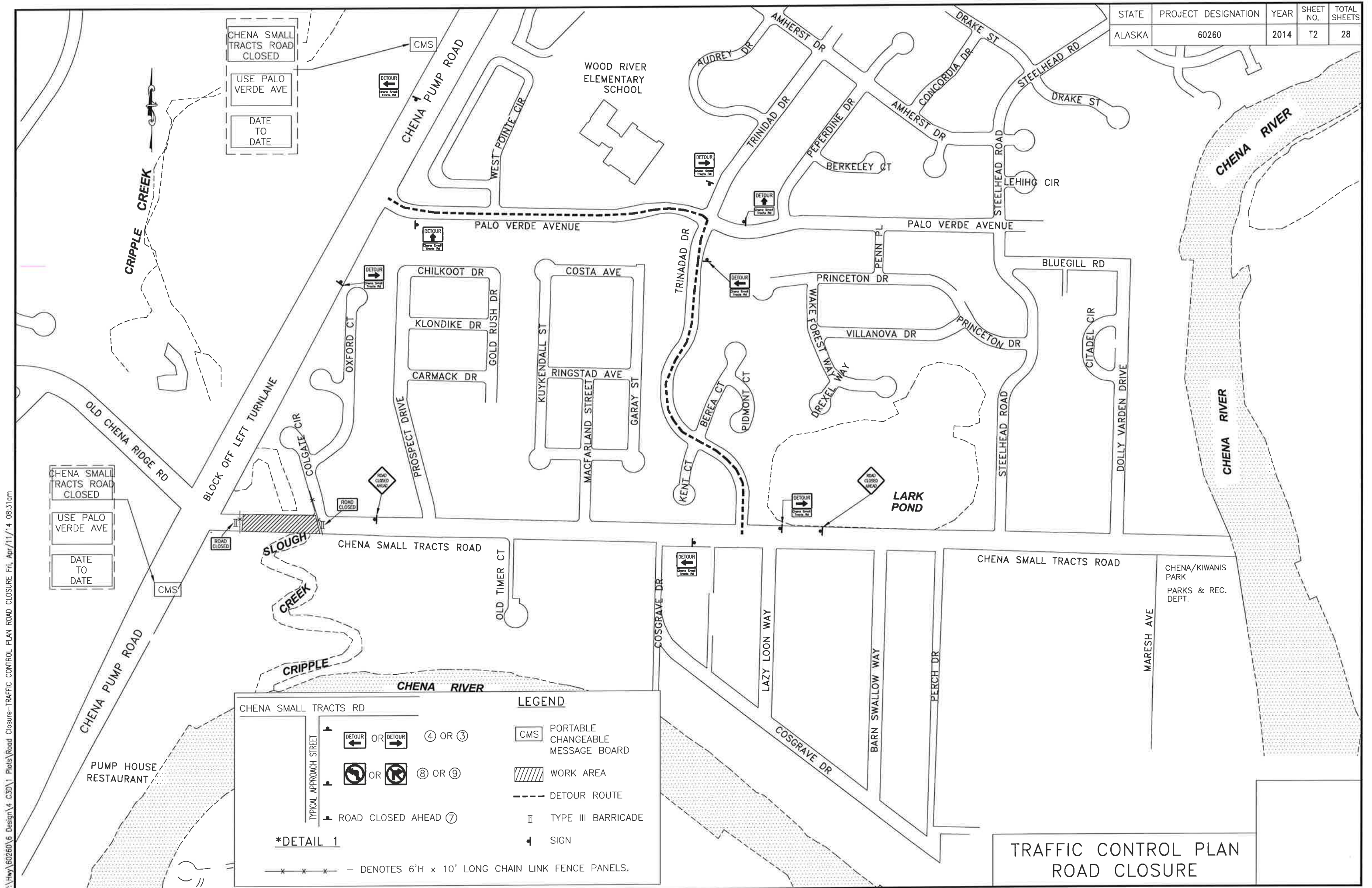


WINTER SHUTDOWN NOTES:

1. WHEN REQUIRED, USE CHANNELIZING DEVICES WHICH CAN BE MAINTAINED OVER WINTER.
2. NO CHANNELIZING DEVICES ARE REQUIRED IF:
 - A) CONSTRUCTION SLOPES ARE RECOVERABLE, AND
 - B) SLOPES ARE SMOOTH AND COMPACTED, AND
 - C) REQUIRED CLEAR AREA IS PROVIDED

TRAFFIC CONTROL

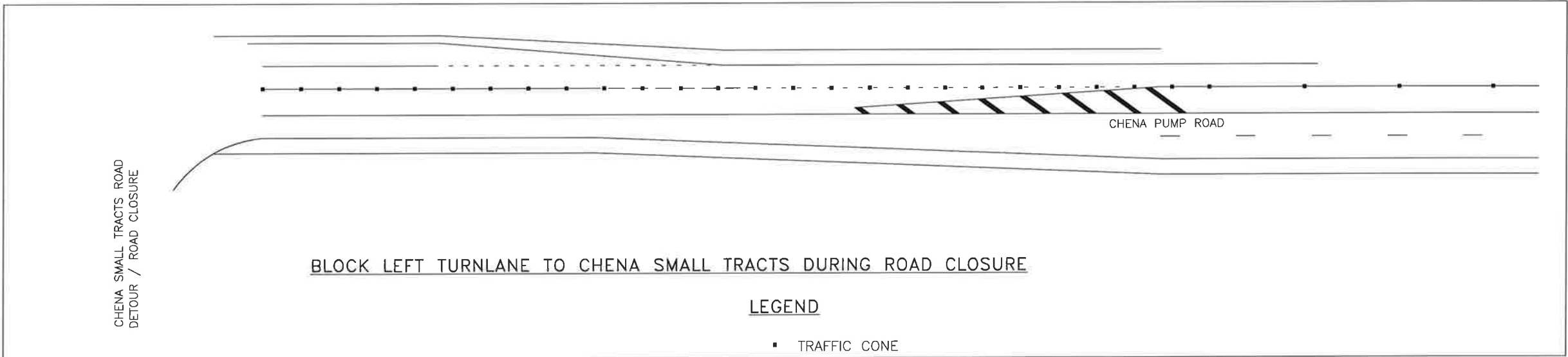
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	60260	2014	T2	28



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STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	60260	2014	T3	28

SIGN	ASDS CODE	LEGEND	SIZE HxV (INCHES)
①	R11-2		48X30
②	R11-4		60X30
③	M4-9R		48X36
④	M4-9L		48X36
⑤	M4-103		60X48
⑥	SPECIAL 1		48X20
⑦	CW14-103		36X36
⑧	R3-2		30X30
⑨	R3-1		30X30



TRAFFIC CONTROL PLAN
SIGN LAYOUTS