



TIMBER NOTICE OF SALE

SALE NAME: ACTION ITEM

AGREEMENT NO: 30-105538

AUCTION: October 31, 2024 starting at 10:00 a.m., **COUNTY:** Lewis
Pacific Cascade Region Office, Castle Rock, WA

SALE LOCATION: Sale located approximately 4 miles west of Doty, WA

**PRODUCTS SOLD
AND SALE AREA:**

All timber, except leave trees bound by yellow "Leave Tree Area" tags, leave trees marked with blue paint, down logs existing 7 years prior to the day of sale, and snags bounded by the following:

Unit 1, white "Timber Sale Boundary" tags and pink flagging, Nine Creek Mainline and reprod;

Unit 2, white "Timber Sale Boundary" tags and pink flagging, Nine Creek Mainline, N-500 and reprod;

Unit 3, white "Timber Sale Boundary" tags and pink flagging, N-100 Ext and reprod;

All forest products above located on part(s) of Sections 17, 18, 19 and 20 all in Township 13 North, Range 5 West, W.M., containing 102 acres, more or less.

CERTIFICATION: This sale is certified under the Sustainable Forestry Initiative® program Standard (cert no: BVC-SFIFM-018227)

ESTIMATED SALE VOLUMES AND QUALITY:

Species	Avg DBH	Ring Count	Total MBF	MBF by Grade								
				1P	2P	3P	SM	1S	2S	3S	4S	UT
Douglas fir	24.6	7	2,647			127	500		1,604	351	51	13
Hemlock	19.2		1,996						1,423	447	111	15
Red alder	15.3		153						60	24	68	
Redcedar	27.8		16							16		
Maple	19.4		15						10	3	2	
Spruce	23		8						7	1		
Sale Total			4,835									

MINIMUM BID: \$1,403,000.00

BID METHOD: Sealed Bids

**PERFORMANCE
SECURITY:** \$140,000.00

SALE TYPE: Lump Sum

EXPIRATION DATE: October 31, 2026

ALLOCATION: Export Restricted

BID DEPOSIT: \$140,300.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.



TIMBER NOTICE OF SALE

HARVEST METHOD: Cable, Cable-Assist, and Shovel. This sale is estimated to be 85 percent ground based harvest systems and 15 percent cable/cable assist harvest systems. Shovels will not be permitted on sustained slopes over 45 percent. Self-leveling equipment will not be permitted on sustained slopes over 60 percent. Cable-assist equipment will not be permitted on sustained slopes over 70 percent.

For additional harvesting restrictions see Clause H-140 in the contract.

ROADS: 5.00 stations of required reconstruction. 21.85 stations of optional construction. 41.10 stations of required prehaul maintenance. Rock used in accordance with the quantities on the ROCK LIST may be obtained from the B&E Quarry located in S24, T13N, R6W, W.M. on state land at no charge to the Contractor.

Rock used in accordance with the quantities on the ROCK LIST may be obtained from the existing stockpile(s) in the Wallville Quarry located in S23, T13N, R6W, W.M. on state land at no charge to the Contractor.

Rock used in accordance with the quantities on the ROCK LIST may be obtained from any commercial source at the Contractor's expense.

This sale requires the installation of a fish pipe on the N-100 road. See road plan for further details. Road construction will not be permitted from October 1 to April 30 unless authorized in writing by the Contract Administrator.

ACREAGE DETERMINATION

CRUISE METHOD: The sale acres were determined by GPS. Cruise was completed using variable plot cruise methods.

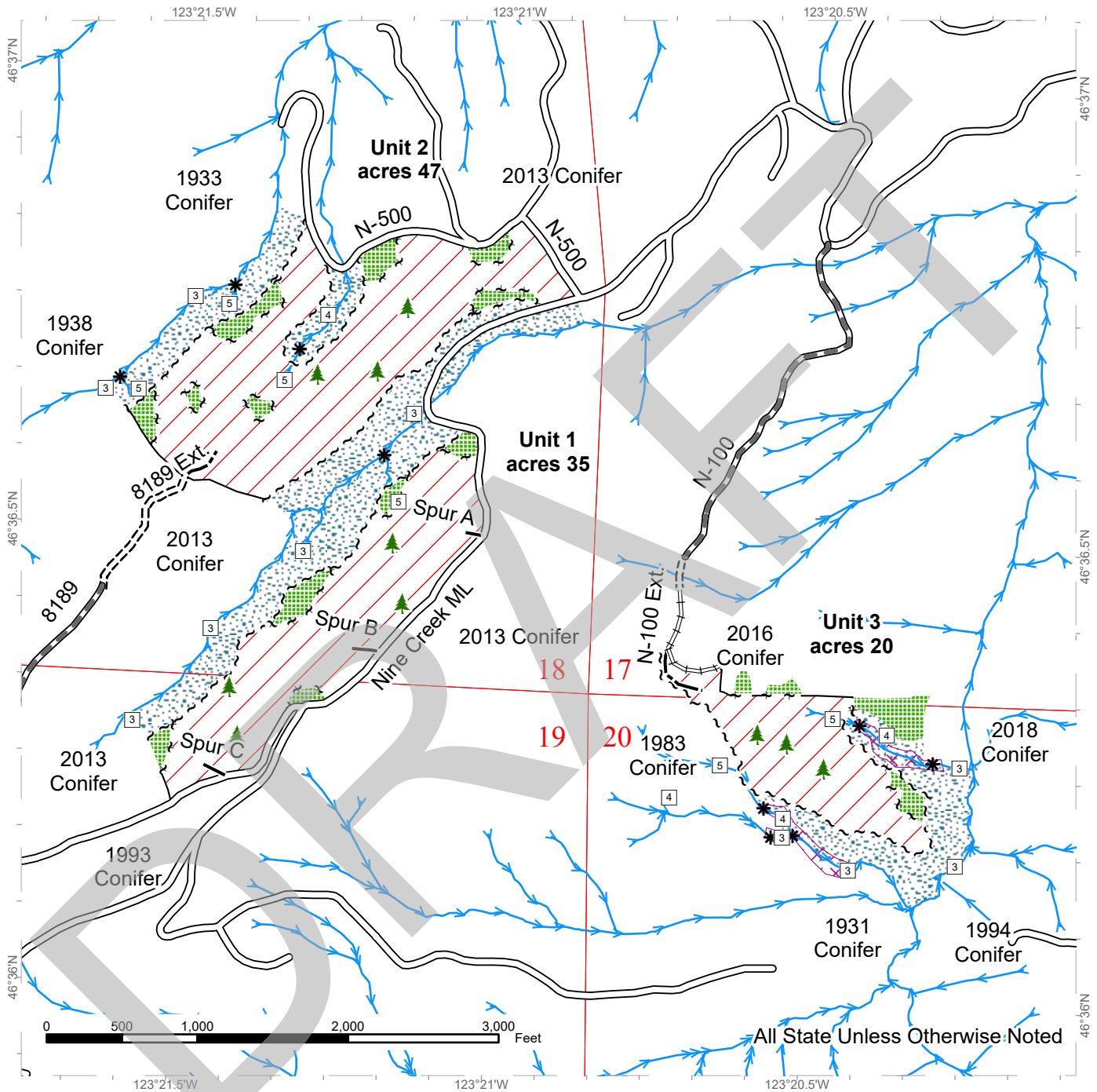
FEES: \$82,195.00 is due on day of sale. \$9.00 per MBF is due upon removal. These are in addition to the bid price.

SPECIAL REMARKS: This sale contains approximately 128 MBF of 3P, 500 MBF SM, 699 MBF HQ 2 Saw and 266 MBF HQ 3 Saw Douglas-fir.

TIMBER SALE MAP

SALE NAME: ACTION ITEM
AGREEMENT #: 30-105538
TOWNSHIP(S): T13R5W
TRUST(S): Common School and Indemnity (3), State Forest Transfer (1)

REGION: Pacific Cascade Region
COUNTY(S): Lewis
ELEVATION RGE: 560-1440

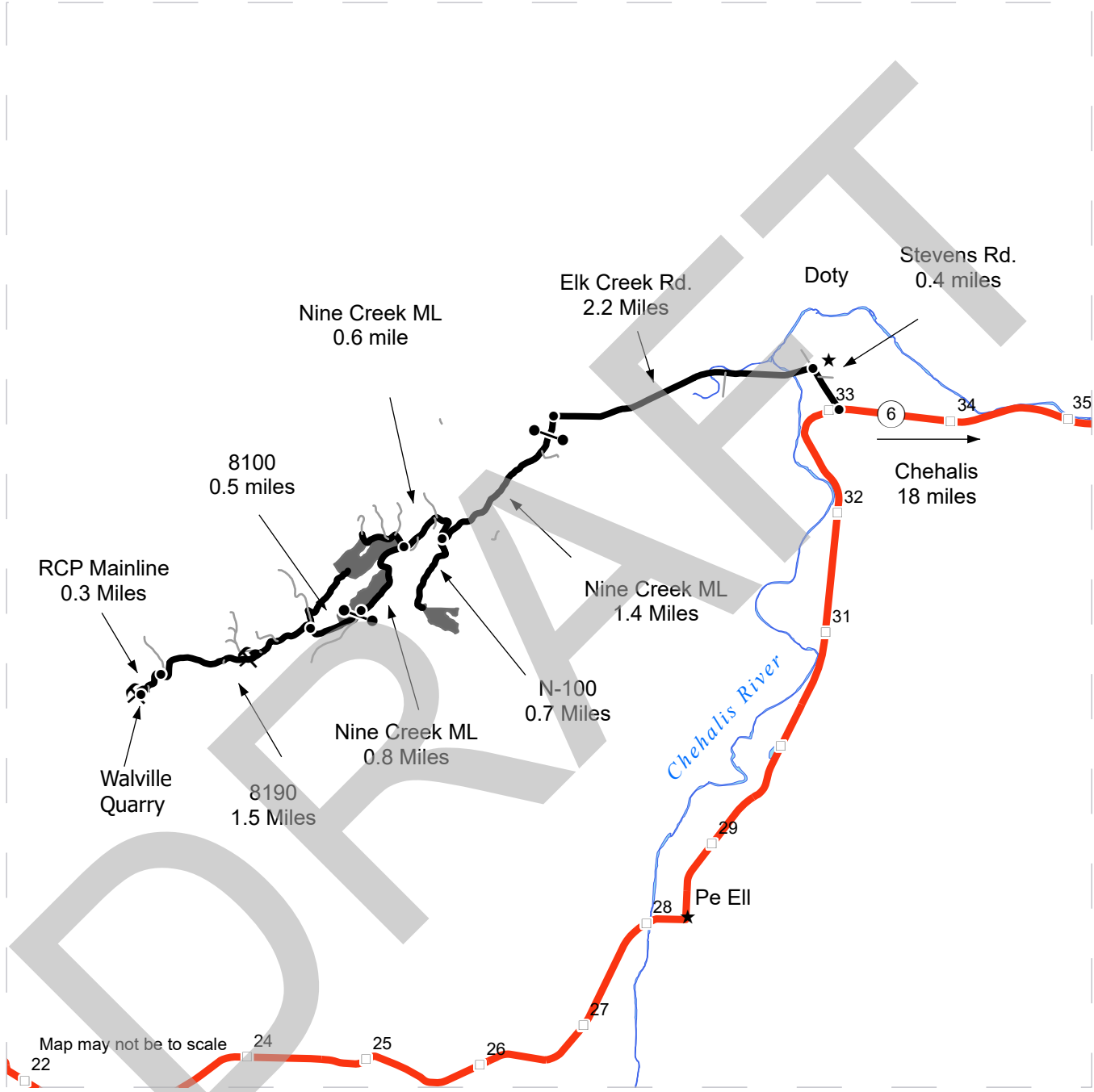


Variable Retention Harvest	Required Reconstruction	Stream Type 5
Leave Tree Area	Optional Construction	Stream Break
Riparian Mgt Zone	Streams	Fish Passage Barrier
Potentially Unstable Slopes	Stream Type 1	Survey Reach Start/End
Existing Roads	Stream Type 2	Leave Tree Area <1/4-acre
Required Pre-Haul Maintenance	Stream Type 3	
Required Construction	Stream Type 4	

DRIVING MAP

SALE NAME: ACTION ITEM
AGREEMENT#: 30-105538
TOWNSHIP(S): T13R5W
TRUST(S): Common School and Indemnity (3), State Forest Transfer (1)

REGION: Pacific Cascade Region
COUNTY(S): Lewis
ELEVATION RGE: 560-1440



- Timber Sale Unit
- Haul Route
- Other Road
- Milepost Markers
- Distance Indicator
- Gate (PCP 1-1)
- Walville Quarry
- Town

DRIVING DIRECTIONS:

At approximately mile marker 33 on SR 6 turn onto Stevens Rd. Continue for 0.4 miles and turn left onto Elk Creek Rd. Follow Elk Creek Rd for 2.2 miles and turn south on the Nine Creek Mainline. Continue on Nine Creek Mainline for 1.4 miles to the N-100. Turn south on the N-100 for 0.7 miles to reach Unit 3. To reach Unit 2, continue on the Nine Creek Mainline for 0.6 miles. To reach Unit 1, continue on the Nine Creek Mainline for 0.8 miles.

To the Walville Quarry, continue another 0.5 miles on the 8100 miles past Unit 2, then 1.5 miles on the 8190 to the RCP Mainline. Continue on the RCP Mainline for 0.3 miles to the Quarry.



Timber Sale Cruise Report ACTION ITEM

Sale Name: ACTION ITEM

Sale Type: SORT

Region: PACIFIC CASC

District: LEWIS

Lead Cruiser: Blake Warnstadt

Other Cruisers: DBuchanan

Cruise Narrative:

Location: ACTION ITEM is located approximately 4 miles SW of Doty. It can be most easily accessed from the Nine Creek ML off Elk Creek Road.

Cruise Design: This sale was cruised using variable radius plots with a 54.44 BAF sighted at 4.5 feet. A 1:1 cruise to count plot ratio was used. Conifers were cruised to 40 foot preferred log lengths and hardwoods cruised to 30 foot preferred log lengths.

Timber Quality: Action Item is mostly Douglas Fir and Western Hemlock.

There is a small amount of Red Alder and a trace amount of Western Red Cedar, Maple, and Sitka Spruce. Douglas Fir log quality is good mix regular domestic, High Quality B, Special Mill, and a few 3P. They have an average diameter of 24.5" at 4.5 feet. Boles are mostly straight with spike knots being the most common defect. Western Hemlock logs are fairly clean, exception being; there is a moderately amount of dwarf mistletoe mixed in. The Red Alder in this sale is minimal but in decent shape.

Logging and Stand Conditions: This sale has mostly gentle slopes and is estimated to be 85% ground based logging. It has been previously commercial thinned with a small amount of old mechanical damage. All three stands have some small pockets of root disease mortality in DF. There is some dwarf mistletoe in a moderate amount of the WH. Units 1 and 2 had some added windfall creating some small holes in these stands. Unit 3 had a live WH observed to have conks growing low in the bole. There is a moderately heavy Western Hemlock understory filled in throughout. Unit 3 has approximately 2.5 acres of younger wind damaged timber in the south end added to the beauties below. This will make room for a landing and improve the access to the Stand.

General Remarks:

Timber Sale Notice Volume (MBF)

Sp	DBH	Rings/In	Age	MBF Volume by Grade						
				All	Peeler	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	24.6			2,647	127	500	1,604	351	51	13
WH	19.2			1,996			1,423	447	111	15
RA	15.3			153			60	24	68	
RC	27.8			16				16		
MA	19.4			15			10	3	2	
SS	23.0			8			7	1		
ALL	20.4			4,835	127	500	3,104	843	232	28

Timber Sale Notice Weight (tons)

Sp	Tons by Grade						
	All	Peeler	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	16,793	661	2,964	9,689	2,930	453	95
WH	16,058			10,484	4,163	1,257	154
RA	1,308			447	190	672	
RC	159				159		
MA	115			68	18	29	
SS	59			44	16		
ALL	34,492	661	2,964	20,731	7,475	2,411	249

Timber Sale Overall Cruise Statistics

BA (sq ft/acre)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR SE (%)	Net Vol (bf/acre)	Vol SE (%)
241.4	3.5	195.6	1.8	47,405	4.0

Timber Sale Unit Cruise Design

Unit	Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
ACTION ITEM U1	B1C: VR, 1 BAF (54.44) Measure/ Count Plots, Sighting Ht = 4.5 ft	35.0	39.4	40	22	1
ACTION ITEM U2	B1C: VR, 1 BAF (54.44) Measure/ Count Plots, Sighting Ht = 4.5 ft	47.0	53.7	51	25	1
ACTION ITEM U3	B1C: VR, 1 BAF (54.44) Measure/ Count Plots, Sighting Ht = 4.5 ft	20.0	23.0	20	12	0
All		102.0	116.1	111	59	2

Timber Sale Log Grade x Sort Summary

Sp	Status	Grade	Sort	Dia	Len	BF Gross	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	17.5	40	9,324	8,871	4.9	5,436.8	904.8
DF	LIVE	2 SAW	HQ-A	16.6	40	1,077	1,049	2.6	664.4	107.0
DF	LIVE	2 SAW	HQ-B	16.9	40	5,970	5,808	2.7	3,587.9	592.4
DF	LIVE	3 PEELER	Domestic	27.9	40	1,250	1,250	0.0	660.9	127.5
DF	LIVE	3 SAW	Domestic	9.2	37	2,722	2,612	4.0	2,329.5	266.4
DF	LIVE	3 SAW	HQ-B	10.0	40	841	830	1.3	600.5	84.7
DF	LIVE	4 SAW	Domestic	6.5	25	525	498	5.2	453.4	50.8
DF	LIVE	CULL	Cull	8.3	4	88	0	100.0	0.0	0.0
DF	LIVE	SPECIAL MILL	HQ-A	18.4	40	4,924	4,906	0.4	2,964.3	500.4

Sp	Status	Grade	Sort	Dia	Len	BF Gross	BF Net	Defect %	Tons	MBF Net
DF	LIVE	UTILITY	Pulp	7.2	14	134	126	5.5	95.2	12.9
MA	LIVE	2 SAW	Domestic	14.6	30	105	100	4.9	68.1	10.2
MA	LIVE	3 SAW	Domestic	10.6	30	26	26	0.0	17.9	2.6
MA	LIVE	4 SAW	Domestic	7.6	19	33	24	27.9	29.1	2.5
RA	LIVE	2 SAW	Domestic	13.8	30	672	589	12.4	446.7	60.1
RA	LIVE	3 SAW	Domestic	11.0	31	260	240	7.6	189.7	24.5
RA	LIVE	4 SAW	Domestic	6.6	30	729	667	8.4	671.8	68.1
RA	LIVE	CULL	Cull	6.2	3	5	0	100.0	0.0	0.0
RC	LIVE	3 SAW	Domestic	14.5	35	205	160	21.8	158.7	16.3
RC	LIVE	CULL	Cull	9.9	6	11	0	100.0	0.0	0.0
SS	LIVE	2 SAW	Domestic	15.9	40	66	66	0.0	43.7	6.7
SS	LIVE	3 SAW	Domestic	7.7	38	13	13	0.0	15.7	1.3
WH	LIVE	2 SAW	Domestic	16.0	40	14,771	13,857	6.2	10,407.1	1,413.5
WH	LIVE	2 SAW	HQ-B	13.6	40	95	93	2.5	76.9	9.5
WH	LIVE	3 SAW	Domestic	9.4	38	4,642	4,381	5.6	4,162.6	446.9
WH	LIVE	4 SAW	Domestic	5.8	30	1,143	1,090	4.7	1,256.9	111.1
WH	LIVE	CULL	Cull	7.4	5	118	0	100.0	0.0	0.0
WH	LIVE	UTILITY	Pulp	7.1	13	150	150	0.0	154.2	15.3

Timber Sale Log Sort x Diameter Bin Summary

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 7	LIVE	Cull	5.4	5	0	100.0	0.0	0.0
DF	5 - 7	LIVE	Pulp	5.7	14	63	0.0	44.5	6.4
DF	5 - 7	LIVE	Domestic	6.5	31	992	3.8	896.2	101.2
DF	8 - 11	LIVE	Domestic	9.7	35	2,053	4.3	1,836.4	209.4
DF	8 - 11	LIVE	Pulp	9.7	14	37	1.0	34.2	3.8
DF	8 - 11	LIVE	Cull	9.9	4	0	100.0	0.0	0.0
DF	8 - 11	LIVE	HQ-B	10.0	40	830	1.3	600.5	84.7
DF	12 - 15	LIVE	Cull	13.4	6	0	100.0	0.0	0.0
DF	12 - 15	LIVE	Pulp	13.4	13	26	21.2	16.6	2.7
DF	12 - 15	LIVE	HQ-B	13.5	40	1,305	1.1	887.8	133.1
DF	12 - 15	LIVE	Domestic	13.6	39	2,338	4.0	1,699.0	238.5
DF	12 - 15	LIVE	HQ-A	14.0	40	1,016	0.5	717.9	103.7
DF	16 - 19	LIVE	HQ-B	17.7	40	2,419	2.9	1,511.4	246.7
DF	16 - 19	LIVE	Domestic	17.9	40	2,582	4.3	1,526.1	263.3
DF	16 - 19	LIVE	HQ-A	17.9	40	1,996	1.2	1,239.0	203.5
DF	20+	LIVE	Cull	21.7	4	0	100.0	0.0	0.0

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	20+	LIVE	HQ-A	22.1	40	2,943	0.6	1,671.8	300.2
DF	20+	LIVE	HQ-B	23.2	40	2,084	3.5	1,188.7	212.6
DF	20+	LIVE	Domestic	24.9	40	5,265	4.4	2,923.0	537.0
MA	5 - 7	LIVE	Domestic	6.6	24	12	15.3	17.9	1.2
MA	8 - 11	LIVE	Domestic	8.7	20	38	15.9	29.1	3.9
MA	12 - 15	LIVE	Domestic	14.6	30	100	4.9	68.1	10.2
RA	5 - 7	LIVE	Cull	5.9	3	0	100.0	0.0	0.0
RA	5 - 7	LIVE	Domestic	5.9	31	431	9.7	460.8	43.9
RA	8 - 11	LIVE	Domestic	9.6	29	477	6.8	400.7	48.7
RA	12 - 15	LIVE	Domestic	13.7	30	544	11.7	410.9	55.5
RA	16 - 19	LIVE	Domestic	16.9	30	44	20.0	35.8	4.5
RC	5 - 7	LIVE	Cull	6.0	6	0	100.0	0.0	0.0
RC	8 - 11	LIVE	Domestic	9.7	29	24	16.9	33.1	2.4
RC	8 - 11	LIVE	Cull	11.1	4	0	100.0	0.0	0.0
RC	12 - 15	LIVE	Domestic	12.9	40	13	7.7	13.4	1.3
RC	16 - 19	LIVE	Domestic	19.8	40	23	55.0	35.3	2.3
RC	20+	LIVE	Cull	20.0	8	0	100.0	0.0	0.0
RC	20+	LIVE	Domestic	22.8	40	101	10.0	77.0	10.3
SS	5 - 7	LIVE	Domestic	7.7	38	13	0.0	15.7	1.3
SS	12 - 15	LIVE	Domestic	15.9	40	66	0.0	43.7	6.7
WH	5 - 7	LIVE	Domestic	5.8	33	1,654	3.9	1,843.7	168.7
WH	5 - 7	LIVE	Cull	6.1	5	0	100.0	0.0	0.0
WH	5 - 7	LIVE	Pulp	6.7	13	108	0.0	102.0	11.1
WH	8 - 11	LIVE	Pulp	8.5	14	42	0.0	52.2	4.3
WH	8 - 11	LIVE	Cull	9.6	7	0	100.0	0.0	0.0
WH	8 - 11	LIVE	Domestic	10.0	36	3,651	4.8	3,391.6	372.4
WH	12 - 15	LIVE	HQ-B	13.6	40	93	2.5	76.9	9.5
WH	12 - 15	LIVE	Domestic	13.7	40	5,024	4.6	4,228.5	512.4
WH	12 - 15	LIVE	Cull	14.0	6	0	100.0	0.0	0.0
WH	16 - 19	LIVE	Domestic	17.4	40	5,248	6.9	3,859.3	535.3
WH	20+	LIVE	Domestic	22.3	40	3,751	8.3	2,503.5	382.6
WH	20+	LIVE	Cull	26.2	8	0	100.0	0.0	0.0

Cruise Unit Report ACTION ITEM U1

Unit Sale Notice Volume (MBF): ACTION ITEM U1

Sp	DBH	Rings/In	Age	MBF Volume by Grade						
				All	Peeler	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
WH	20.1			747			545	164	30	8
DF	25.0			519	15	141	273	76	10	4
RA	14.2			70			22	12	36	
RC	35.3			6				6		
MA	12.0			1					1	
ALL	20.1			1,344	15	141	841	258	78	12

Unit Cruise Design: ACTION ITEM U1

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (54.44) Measure/Count Plots, Sighting Ht = 4.5 ft	35.0	39.4	40	22	1

Unit Cruise Summary: ACTION ITEM U1

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
WH	57	96	2.4	0
DF	30	53	1.3	0
RA	10	13	0.3	0
RC	2	2	0.1	0
MA	1	1	0.0	0
ALL	100	165	4.1	0

Unit Cruise Statistics: ACTION ITEM U1

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
WH	130.7	74.2	11.7	163.4	32.4	4.3	21,347	80.9	12.5
DF	72.1	110.0	17.4	205.7	15.8	2.9	14,838	111.1	17.6
RA	17.7	322.2	51.0	113.2	19.6	6.2	2,003	322.8	51.3
RC	2.7	441.4	69.8	67.8	8.1	5.8	185	441.5	70.0
MA	1.4	632.5	100.0	25.5	0.0	0.0	35	632.5	100.0
ALL	224.6	38.5	6.1	171.0	32.5	3.3	38,408	50.4	6.9

Unit Summary: ACTION ITEM U1

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	30	ALL	25.0	103	132	15,416	14,838	3.8	21.2	72.1	14.4	519.3
MA	LIVE	CUT	1	ALL	12.0	18	22	55	35	37.5	1.7	1.4	0.4	1.2
RA	LIVE	CUT	10	ALL	14.1	62	83	2,189	2,003	8.5	16.3	17.7	4.7	70.1
RC	LIVE	CUT	2	ALL	35.3	70	103	327	185	43.5	0.4	2.7	0.5	6.5
WH	LIVE	CUT	57	ALL	19.9	77	98	23,219	21,347	8.1	60.5	130.7	29.3	747.2
ALL	LIVE	CUT	100	ALL	20.3	79	101	41,206	38,408	6.8	100.1	224.6	49.3	1,344.3
ALL	ALL	ALL	100	ALL	20.3	79	101	41,206	38,408	6.8	100.1	224.6	49.3	1,344.3

Cruise Unit Report ACTION ITEM U2

Unit Sale Notice Volume (MBF): ACTION ITEM U2

Sp	DBH	Rings/In	Age	MBF Volume by Grade						
				All	Peeler	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	27.4			1,297	82	235	830	136	11	4
WH	19.0			1,138			797	261	74	6
RA	11.5			22			5	4	14	
ALL	21.1			2,458	82	235	1,631	401	98	10

Unit Cruise Design: ACTION ITEM U2

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (54.44) Measure/Count Plots, Sighting Ht = 4.5 ft	47.0	53.6	51	25	1

Unit Cruise Summary: ACTION ITEM U2

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	63	104	2.0	0
WH	57	120	2.4	0
RA	5	5	0.1	0
ALL	125	229	4.5	0

Unit Cruise Statistics: ACTION ITEM U2

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	111.0	103.3	14.5	248.6	16.1	2.0	27,600	104.6	14.6
WH	128.1	67.4	9.4	189.1	23.9	3.2	24,221	71.5	9.9
RA	5.3	510.2	71.4	87.5	37.2	16.6	467	511.6	73.4
ALL	244.4	37.1	5.2	213.9	26.8	2.4	52,289	45.8	5.7

Unit Summary: ACTION ITEM U2

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	63	ALL	27.4	113	146	28,419	27,600	2.9	27.1	111.0	21.2	1,297.2
RA	LIVE	CUT	5	ALL	11.5	37	53	550	467	15.1	7.4	5.3	1.6	22.0

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
WH	LIVE	CUT	57	ALL	19.0	82	104	25,625	24,221	5.5	65.1	128.1	29.4	1,138.4
ALL	LIVE	CUT	125	ALL	21.2	87	112	54,594	52,289	4.2	99.6	244.4	52.2	2,457.6
ALL	ALL	ALL	125	ALL	21.2	87	112	54,594	52,289	4.2	99.6	244.4	52.2	2,457.6

DRAFT

Cruise Unit Report ACTION ITEM U3

Unit Sale Notice Volume (MBF): ACTION ITEM U3

Sp	DBH	Rings/In	Age	MBF Volume by Grade						
				All	Peeler	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	20.0			830	31	124	501	139	30	5
WH	15.5			111			81	22	7	1
RA	18.0			61			33	9	18	
MA	20.0			14			10	3	1	
RC	22.9			10				10		
SS	23.0			8			7	1		
ALL	19.0			1,033	31	124	632	184	57	6

Unit Cruise Design: ACTION ITEM U3

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (54.44) Measure/Count Plots, Sighting Ht = 4.5 ft	20.0	23.0	20	12	0

Unit Cruise Summary: ACTION ITEM U3

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	44	71	3.6	0
WH	9	11	0.6	0
RA	10	10	0.5	0
MA	2	2	0.1	0
RC	2	2	0.1	0
SS	1	1	0.1	0
ALL	68	97	4.9	0

Unit Cruise Statistics: ACTION ITEM U3

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	193.3	63.0	14.1	214.8	31.6	4.8	41,514	70.4	14.9
WH	29.9	138.0	30.9	184.9	34.2	11.4	5,535	142.2	32.9
RA	27.2	165.4	37.0	111.2	25.2	8.0	3,028	167.3	37.8
MA	5.4	307.8	68.8	129.0	31.4	22.2	702	309.4	72.3
RC	5.4	307.8	68.8	90.6	92.9	65.7	493	321.5	95.1

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
SS	2.7	447.2	100.0	146.6	0.0	0.0	399	447.2	100.0
ALL	264.0	34.3	7.7	195.7	37.6	4.6	51,672	50.9	8.9

Unit Summary: ACTION ITEM U3

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	44	ALL	20.4	87	115	43,196	41,514	3.9	85.1	193.3	42.8	830.3
MA	LIVE	CUT	2	ALL	20.0	71	88	740	702	5.1	2.5	5.4	1.2	14.0
RA	LIVE	CUT	10	ALL	18.0	70	88	3,374	3,028	10.3	15.4	27.2	6.4	60.6
RC	LIVE	CUT	2	ALL	22.9	44	54	527	493	6.5	1.9	5.4	1.1	9.9
SS	LIVE	CUT	1	ALL	23.0	80	102	399	399	0.0	0.9	2.7	0.6	8.0
WH	LIVE	CUT	9	ALL	15.5	60	85	5,834	5,535	5.1	22.9	29.9	7.6	110.7
ALL	LIVE	CUT	68	ALL	19.4	79	105	54,070	51,672	4.4	128.7	264.0	59.7	1,033.4
ALL	ALL	ALL	68	ALL	19.4	79	105	54,070	51,672	4.4	128.7	264.0	59.7	1,033.4

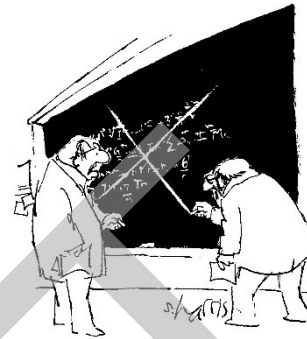
FPHP NEEDED (Y/N) Y

Is abandonment of existing road required? (Y/N) N

PACIFIC CASCADE REGION - ENGINEERING

ROAD PLAN PEER REVIEW CHECKLIST

PROJECT: ACTION ITEM SORTS



This project has been reviewed for the following:

Initials:

- KW **CONTRACT CLAUSES** – Selection of proper clauses. Clauses adequately describe desired work. Clauses do not conflict with maps, details, pit plans, etc. Punctuation, syntax, grammar and organization is correct.
- KW **TYPICAL SECTION SHEET, ROCK LIST, & CULVERT LIST** – Sheets match clauses and maps. Requirements and quantities make sense. Rock List adds up correctly.
- KW **MAPS** – All roads listed in Section 1 are shown on maps. Maps identify locations of all culverts, landings, waste areas, endhaul/overhaul areas, etc. Legend, north arrow and scale are shown. Line types are easy to identify. Map is at a legible scale.
- KW **DETAIL SHEETS** – All detail sheets referred to in the clauses are included. Detail sheets have been edited as necessary.
- KW **PIT PLANS** – Selection of proper clauses. Map clearly shows all areas of development, wasting, stockpiling, reclamation, etc. Development plan appears logical for long term use of pit. Development plan allows for safe operation in the pit.
- KW **ROAD COST SPREADSHEET** –All cost elements captured. Material costs used are current. Summary cells are adding correctly. No conflicts exist between pages. Stationing, culverts and rock volume match the road plan.
- KW **EXCISE TAX SHEET** – Totals match road plan.
- KW **LOGGING PLAN** – Plan matches road plan clauses and maps.

I certify that I have reviewed this project for the elements initialed above and have found that it meets or exceeds Department and Regional Standards to the best of my knowledge.

GRANT GERRITSEN

Originator of Project

02/28/2024

Date

KEITH WYATT

Peer Reviewer

03/01/2024

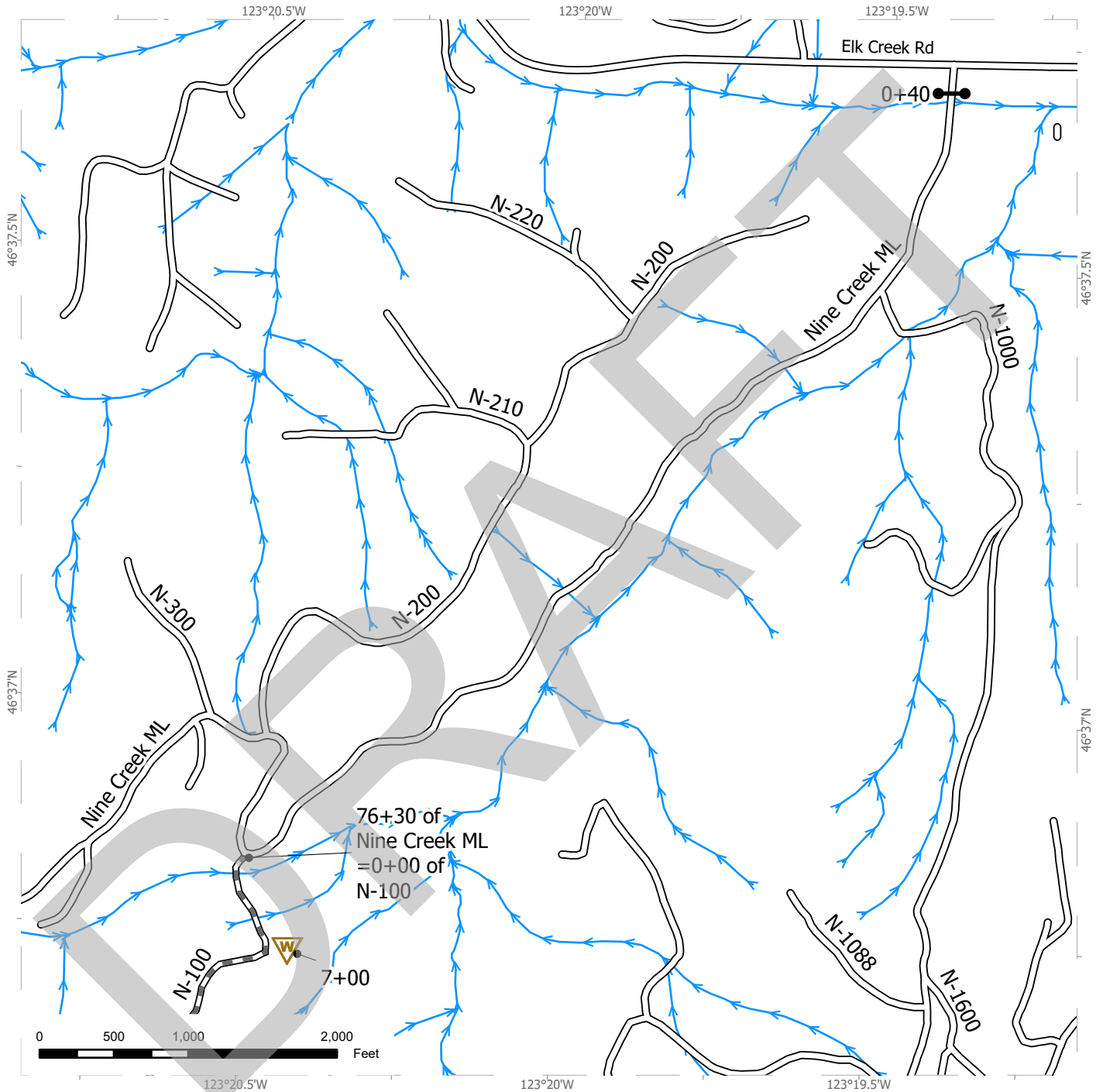
Date

Comments:

ROAD PLAN MAP

SALE NAME: ACTION ITEM
AGREEMENT #: 30-105538
TOWNSHIP(S): T13R5W
TRUST(S): Common School and Indemnity (3), State Forest Transfer (1)

REGION: Pacific Cascade Region
COUNTY(S): Lewis
ELEVATION RGE: 560-1440



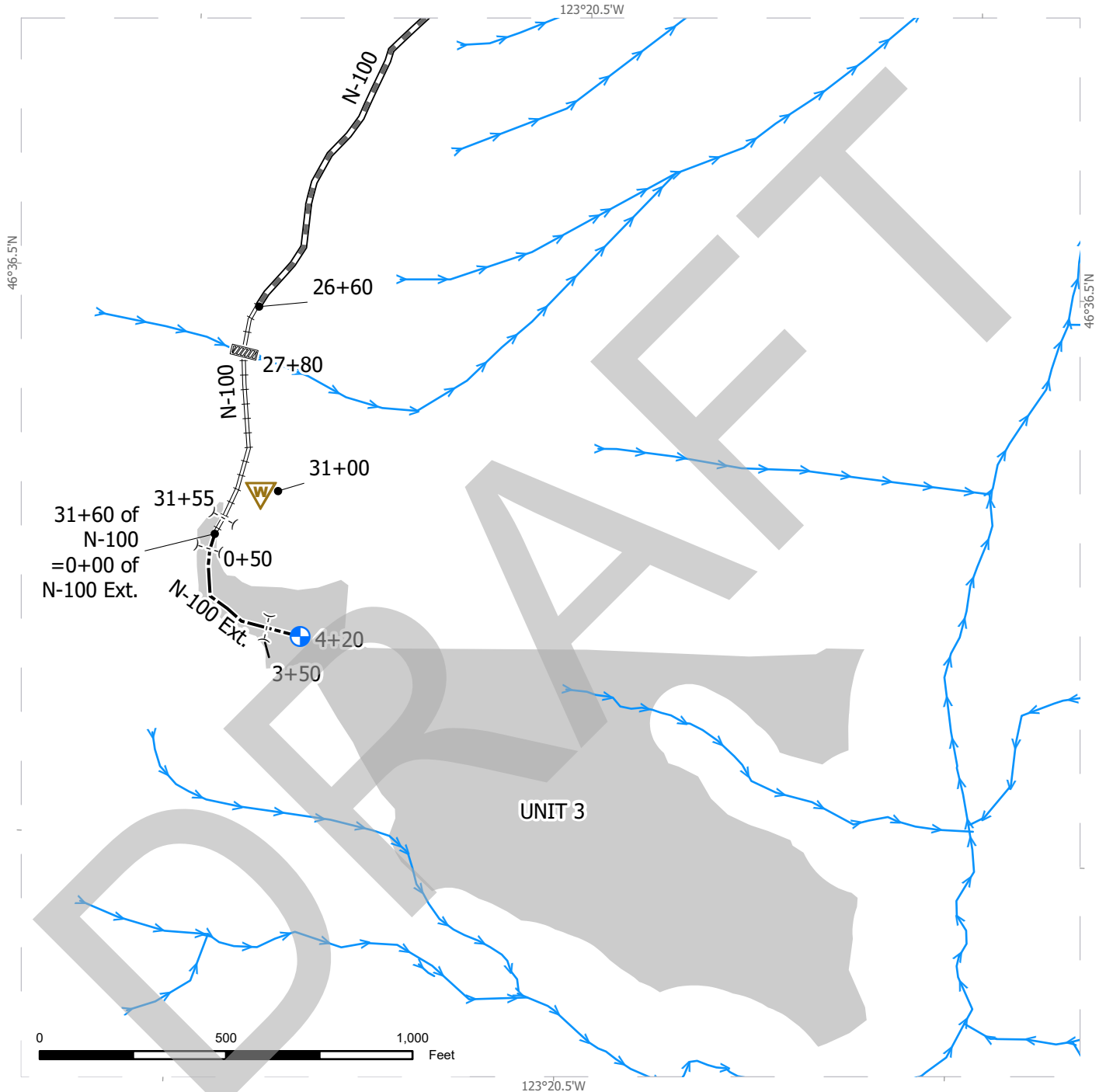
	Existing Roads		Gate (PCP 1-1)
	Required Pre-Haul Maintenance		Waste Area
	Streams		



ROAD PLAN MAP

SALE NAME: ACTION ITEM
AGREEMENT #: 30-105538
TOWNSHIP(S): T13R5W
TRUST(S): Common School and Indemnity (3), State Forest Transfer (1)

REGION: Pacific Cascade Region
COUNTY(S): Lewis
ELEVATION RGE: 560-1440

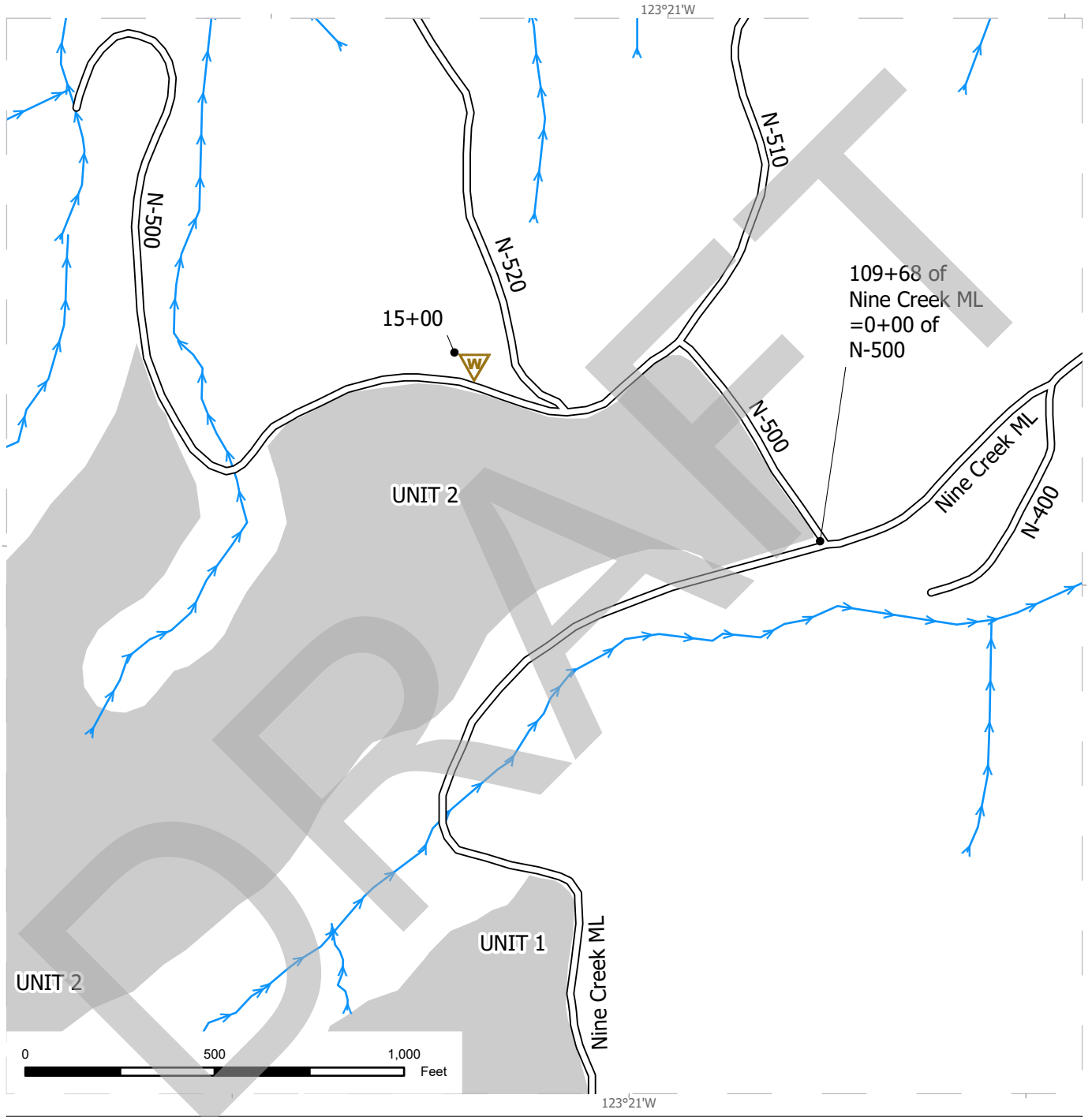


Required Pre-Haul Maintenance	Cross-drain Culvert	Harvest Unit
Required Reconstruction	Culvert	
Optional Construction	Landing - Proposed	
Streams	Waste Area	

ROAD PLAN MAP

SALE NAME: ACTION ITEM
AGREEMENT#: 30-105538
TOWNSHIP(S): T13R5W
TRUST(S): Common School and Indemnity (3), State Forest Transfer (1)

REGION: Pacific Cascade Region
COUNTY(S): Lewis
ELEVATION RGE: 560-1440



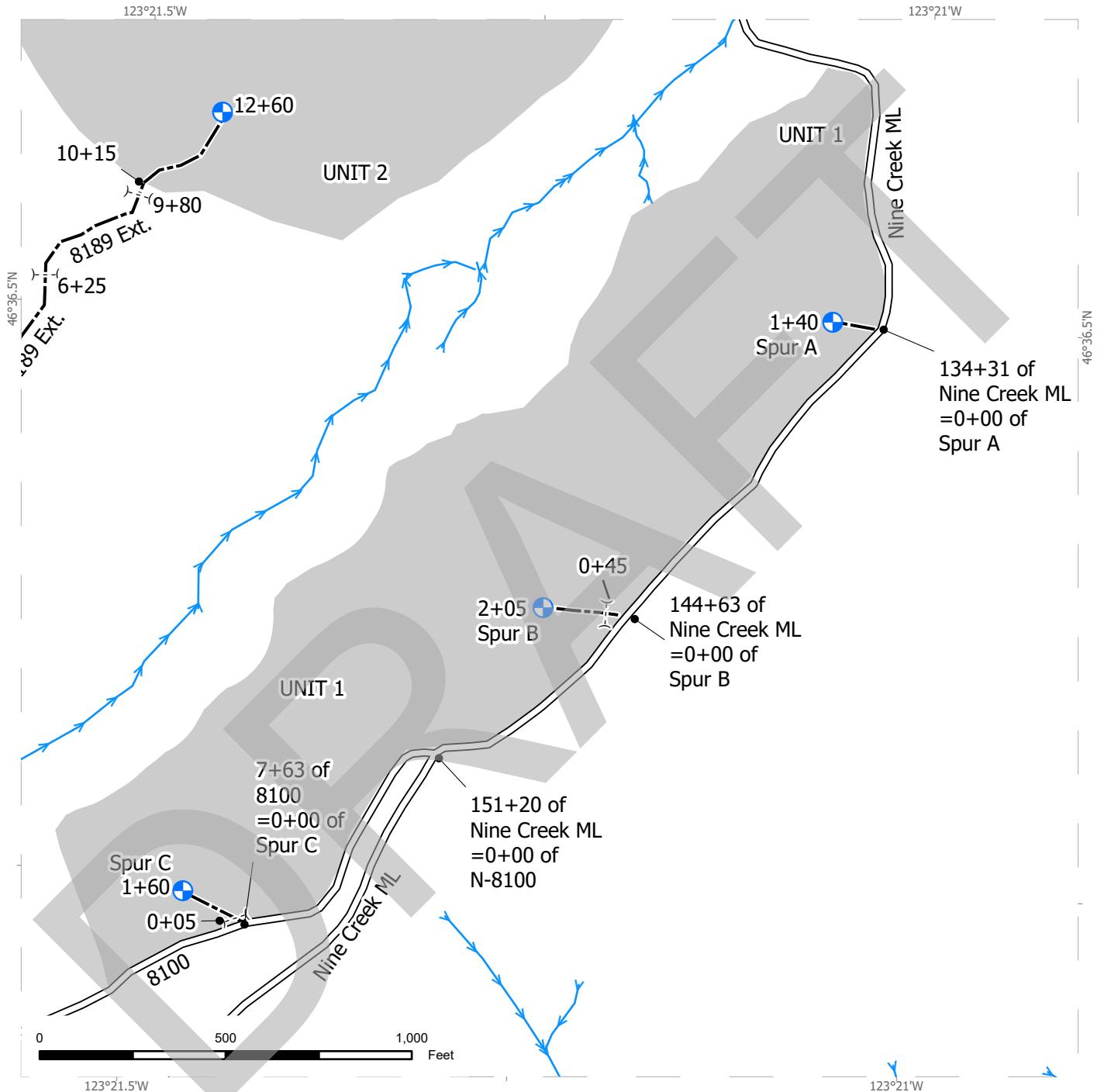
Existing Roads	Waste Area	Harvest Unit
Streams		



ROAD PLAN MAP

SALE NAME: ACTION ITEM
AGREEMENT #: 30-105538
TOWNSHIP(S): T13R5W
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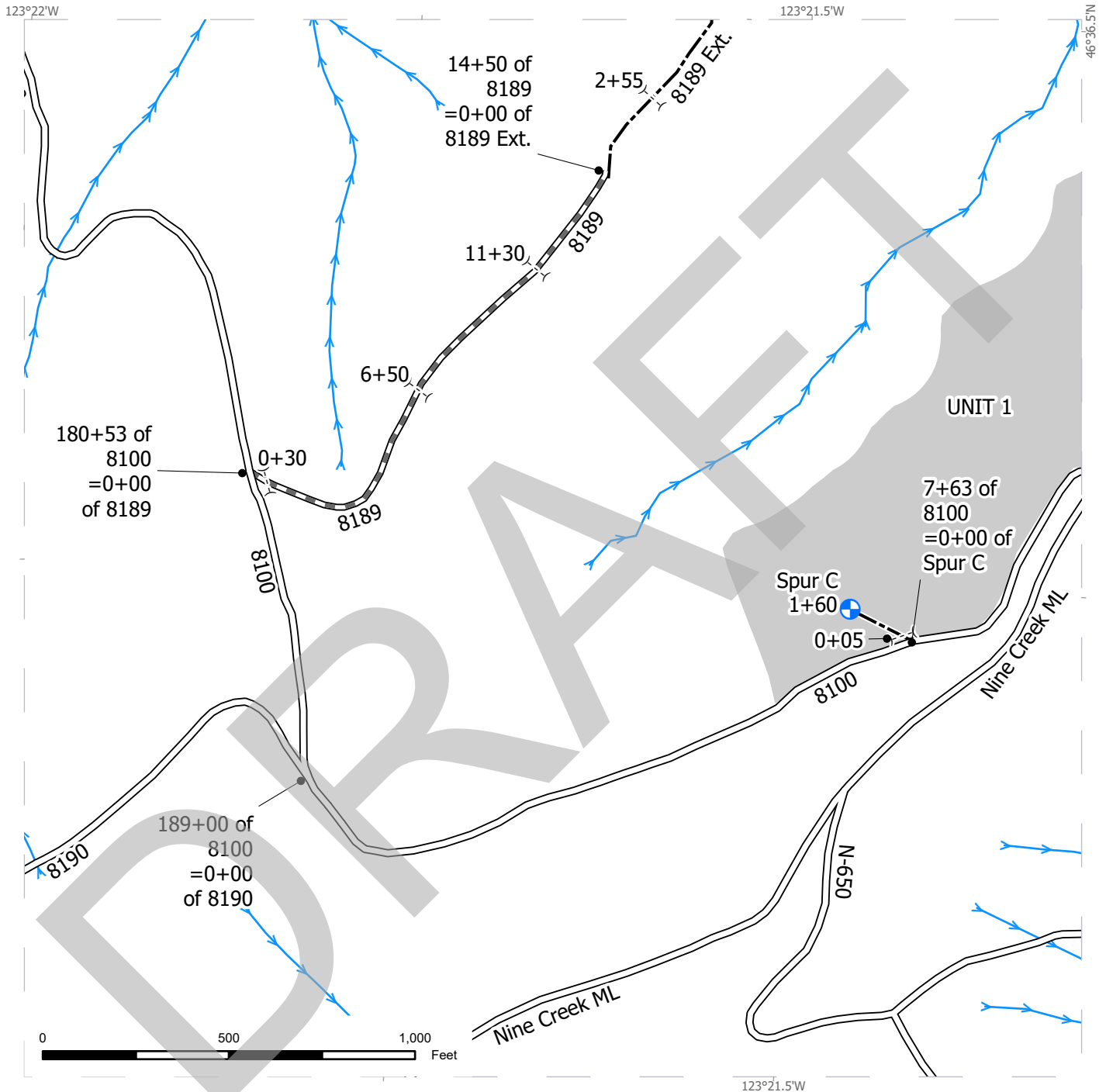
Existing Roads	Cross-drain Culvert	Harvest Unit
Optional Construction	Landing - Proposed	
Streams		



ROAD PLAN MAP

SALE NAME: ACTION ITEM
AGREEMENT #: 30-105538
TOWNSHIP(S): T13R5W
TRUST(S): Common School and Indemnity (3), State Forest Transfer (1)

REGION: Pacific Cascade Region
COUNTY(S): Lewis
ELEVATION RGE: 560-1440



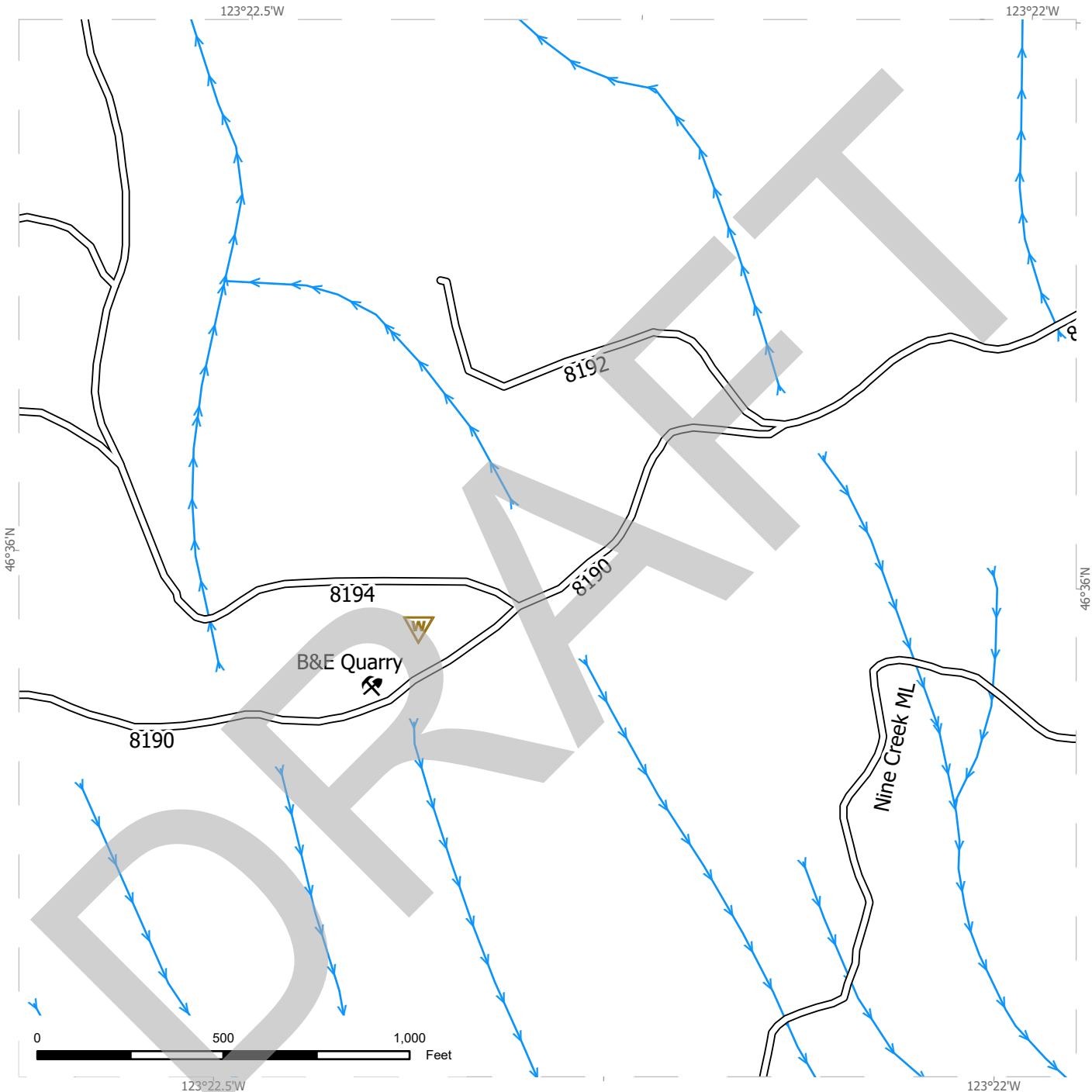
Existing Roads	Cross-drain Culvert	Harvest Unit
Required Pre-Haul Maintenance	Landing - Proposed	
Optional Construction		
Streams		




ROAD PLAN MAP

SALE NAME: ACTION ITEM
AGREEMENT#: 30-105538
TOWNSHIP(S): T13R5W
TRUST(S): Common School and Indemnity (3), State Forest Transfer (1)

REGION: Pacific Cascade Region
COUNTY(S): Lewis
ELEVATION RGE: 560-1440



Existing Roads	Rock Pit
Streams	Waste Area



STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

ACTION ITEM SORTS TIMBER SALE ROAD PLAN
LEWIS COUNTY
LEWIS DISTRICT
PACIFIC CASCADE REGION

AGREEMENT NO.: 30-105538

STAFF ENGINEER: G. GERRITSEN

DRAWN & COMPILED BY: ALICIA COMPTON

SECTION 0 – SCOPE OF PROJECT

0-1 ROAD PLAN SCOPE

Clauses in this road plan apply to all road related work, including landings and rock source development, unless otherwise noted.

0-2 REQUIRED ROADS

The specified work on the following roads is required.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
N-100	0+00 to 26+60	Pre-Haul Maintenance
	26+60 to 31+60	Reconstruction
8189	0+00 to 14+50	Pre-Haul Maintenance

0-3 OPTIONAL ROADS

The specified work on the following roads is not required. Any optional roads built by the Purchaser must meet all the specifications in the road plan.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
N-100-EXT	0+00 to 4+20	Construction
Spur A	0+00 to 1+40	Construction
Spur B	0+00 to 2+05	Construction
Spur C	0+00 to 1+60	Construction
8189-EXT	0+00 to 12+60	Construction

0-4 CONSTRUCTION

Construction includes, but is not limited to: clearing; grubbing; right-of-way debris disposal; excavation and/or embankment to and compaction of subgrade; construction and compaction of waste areas; end haul and compaction of waste; landing construction; acquisition and installation of drainage structures; installation of fish passage structures; manufacture, application and compaction of rock.

0-5 RECONSTRUCTION

Reconstruction includes, but is not limited to: clearing; grubbing; right-of-way debris disposal; acquisition and installation of drainage structures; manufacture, application and compaction of rock.

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
N-100	26+60 to 26+91	Clear, grub and widen subgrade to the dimensions shown on the TYPICAL SECTION SHEET; construct ditches; install culverts as shown on the CULVERT LIST; grade, shape and compact existing road surface; apply rock as shown on the ROCK LIST; grade shape and compact the applied rock.
	28+60 to 31+60	

0-6 PRE-HAUL MAINTENANCE

This project includes, but is not limited to the following pre-haul maintenance requirements:

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
N-100	0+00 to 26+60	Grading, desodding
	1+50 to 3+00	Remove and replace silt fence
8189	0+00 to 14+50	Grading, ditch reconstruction, installation of culverts, addition of turnouts and turnarounds

0-7 POST-HAUL MAINTENANCE

This project includes post-haul road maintenance listed in Clause 9-5 POST-HAUL MAINTENANCE9-5

0-12 DEVELOP ROCK SOURCE

Purchaser may develop an existing rock source. Rock source development involves stripping overburden, waste material disposal, digging, drilling and blasting, etc. Work for developing rock sources is listed in Section 6 ROCK AND SURFACING.

0-13 STRUCTURES

Purchaser shall install a fish passage culvert. Requirements for this structure are listed in Section 7 STRUCTURES.

SECTION 1 – GENERAL

1-1 ROAD PLAN CHANGES

If the Purchaser desires a change from this road plan including, but not limited to, relocation, extension, change in design, or adding roads; a revised road plan must be submitted in writing to the Contract Administrator for consideration. Before work begins, Purchaser shall obtain approval from the State for the submitted plan.

1-2 UNFORESEEN CONDITIONS

Quantities established in this road plan are minimum acceptable values. Additional quantities required by the state due to unforeseen conditions, or Purchaser's choice of construction season or techniques will be at the Purchaser's expense. Unforeseen conditions include, but are not limited to, solid subsurface rock, subsurface springs, saturated ground, and unstable soils.

1-3 ROAD DIMENSIONS

Purchaser shall perform road work in accordance with the dimensions shown on the TYPICAL SECTION SHEET and the specifications within this road plan, unless controlled by construction stakes or design data (plan, profile, and cross-sections).

1-4 ROAD TOLERANCES

Purchaser shall perform road work within the tolerances listed below. The tolerance class for each road is listed on the TYPICAL SECTION SHEET.

<u>Tolerance Class</u>	<u>A</u>	<u>B</u>	<u>C</u>
Road and Subgrade Width (feet)	+1.5	+1.5	+2.0
Subgrade Elevation (feet +/-)	0.5	1.0	2.0
Centerline alignment (feet lt./rt.)	1.0	1.5	3.0

1-6 ORDER OF PRECEDENCE

Any conflict or inconsistency in the road plan will be resolved by giving the documents precedence in the following order:

1. Addenda.
2. Designs or Plans. On designs and plans, figured dimensions shall take precedence over scaled dimensions.
3. Road Plan Clauses.
4. Typical Section Sheet.
5. Standard Lists.
6. Standard Details.
7. Road Plan maps.

In case of any ambiguity or dispute over interpreting the road plan, the Contract Administrator's or designee's decision will be final.

1-7 TEMPORARY ROAD CLOSURE

Purchaser shall notify the Contract Administrator a minimum of 5 business days before the closure of any road.

1-8 REPAIR OR REPLACEMENT OF DAMAGED MATERIALS

Purchaser shall repair or replace all materials, roadway infrastructure, and road components damaged during road work or operation activities. The Contract Administrator will direct repairs and replacements. Repairs to structural materials must be made in accordance with the manufacturer's recommendation and may not begin without written approval from the Contract Administrator.

1-9 DAMAGED METALLIC COATING

Any cut ends, or damaged galvanized or aluminized coating on existing or new bridge components, culverts, downspouts, and flumes must be cleaned and treated with a minimum of two coats of zinc rich paint or cold galvanizing compound.

1-15 ROAD MARKING

Purchaser shall perform road work in accordance with the state’s marked location. All road work is marked as follows:

- Road centerline marked with construction stakes, orange flagging, orange paint and RPs for new construction.
- Road centerline marked with orange flagging, orange paint and RPs for reconstruction.
- Pre-haul maintenance marked with construction stakes and/or painted trees, orange flagging and orange paint.

1-16 CONSTRUCTION STAKES SET BY STATE

Purchaser shall perform work on the following road(s) in accordance with the construction stakes and reference points set in the field for grade and alignment. Reconstruction of existing road grades must conform to the original location except where construction staked or designed.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
N-100	27+74	Fish Passage Install Construction Stakes and RPs

1-18 REFERENCE POINT DAMAGE

Purchaser shall reset reference points (RPs) that were moved or damaged at any time during construction to their original locations. Excavation and embankment may not proceed on road segments controlled by said RPs until Purchaser resets all moved or damaged RPs.

1-20 COMPLETE BY DATE

Purchaser shall complete road work before the start of timber haul.

1-21 HAUL APPROVAL

Purchaser shall not use roads under this road plan for timber hauling other than timber cut on the right-of-way, without written approval from the Contract Administrator.

1-22 WORK NOTIFICATIONS

On the following road(s), Purchaser shall notify the Contract Administrator a minimum of 5 business days before work begins.

<u>Road</u>	<u>Stations</u>
N-100	27+74

1-23 ROAD WORK PHASE APPROVAL

Purchaser shall obtain written approval from the Contract Administrator upon completion of each of the following phases of road work:

- Subgrade construction, drainage installation and subgrade compaction;
- Rock application and compaction.

1-25 ACTIVITY TIMING RESTRICTION

The specified activities are not allowed during the listed closure period(s) unless authorized in writing by the Contract Administrator.

<u>Road</u>	<u>Stations</u>	<u>Activity</u>	<u>Closure Period</u>
All roads	All stations	Road Work	October 1 st through April 30 th
N-100	27+74	Within Ordinary High Water Mark	See Approved FPA

1-26 OPERATING DURING CLOSURE PERIOD

If permission is granted to operate during a closure period listed in Clause 1-25 ACTIVITY TIMING RESTRICTION, Purchaser shall comply with a maintenance plan to include further protection of state resources. Purchaser shall put preventative measures in place before operating during the closure period. Purchaser is required to maintain all haul roads at their own expense. If other operators are using, or desire to use these roads, a joint operating plan must be developed. All parties shall follow this plan.

1-29 SEDIMENT RESTRICTION

Purchaser shall not allow silt-bearing runoff to enter any streams.

1-30 CLOSURE TO PREVENT DAMAGE

In accordance with Contract Clause G-220.1 STATE SUSPENDS OPERATION, the Contract Administrator will suspend road work or hauling right-of-way timber, forest products, or rock under the following conditions:

- Wheel track rutting exceeds 6 inches on jaw run, pit run or native surface roads.
- Wheel track rutting exceeds 2 inches on crushed rock roads.
- Surface or base stability problems persist.
- When, in the opinion of the Contract Administrator excessive road damage or rutting may occur.

Operations must stop unless authority to continue working or hauling is granted in writing by the Contract Administrator. In the event that surface or base stability problems persist, Purchaser shall cease operations, or perform corrective maintenance or repairs, subject to specifications within this road plan. Before and during any suspension, Purchaser shall protect the work from damage or deterioration.

1-32 BRIDGE SURFACE RESTRICTION

The use of metal tracked equipment is not allowed on bridge surfaces at any time. If Purchaser must run equipment on bridge surfaces, then rubber tired equipment or other methods, approved in writing by Contract Administrator, must be used.

If tracked equipment is used on bridge surfaces, Purchaser shall immediately cease all road construction and hauling operations. Purchaser shall remove any dirt, rock, or other material tracked or spilled on the bridge surface(s) and have surface(s) evaluated by the Region Engineer or their designee for any damage caused by transporting equipment. Any damage to the surface(s) will be repaired, at the Purchaser’s expense, as directed by the Contract Administrator.

Purchaser shall have bridges load rated by a Registered Professional Engineer licensed in the State of Washington. All load rating reports, calculations, or drawings must be stamped by the licensed engineer and submitted to the Contract Administrator prior to allowing any work to continue. All damage to the bridge from transporting equipment will be repaired at the Purchaser’s expense.

1-33 SNOW PLOWING RESTRICTION

Snowplowing will be allowed after the execution of a SNOW PLOWING AGREEMENT, which is available from the Contact Administrator upon request. If damage occurs while plowing, further permission to plow may be revoked by the Contract Administrator.

1-40 ROAD APPROACHES TO COUNTY ROADS AND STATE HIGHWAYS

Purchaser shall immediately remove any mud, dirt, rock, or other material tracked or spilled on to county roads and state highways.

If additional damage to the surface, signs, guardrails, etc. occurs then the damage will be repaired, at the Purchaser’s expense, as directed by the Contract Administrator when authorized by the county or WSDOT.

SECTION 2 – MAINTENANCE

2-1 GENERAL ROAD MAINTENANCE

Purchaser shall maintain all roads used under this contract in accordance with the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS for the entire term of this contract. Maintenance is required even during periods of inactivity.

2-2 ROAD MAINTENANCE – PURCHASER MAINTENANCE

Purchaser shall perform maintenance on roads listed in Contract Clause C-050.1 PURCHASER ROAD MAINTENANCE AND REPAIR in accordance with FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS.

2-3 ROAD MAINTENANCE – DESIGNATED MAINTAINER

Purchaser may be required to perform maintenance on roads listed in Contract Clause C-060.1 DESIGNATED ROAD MAINTAINER as directed by the Contract Administrator. Purchaser shall maintain roads in accordance with FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS.

2-4 PASSAGE OF LIGHT VEHICLES

Purchaser shall maintain road(s) in a condition that will allow the passage of light administrative vehicles.

2-5 MAINTENANCE GRADING – EXISTING ROAD

On the following road(s), Purchaser shall use a grader to shape the existing surface before timber haul. Purchaser shall accomplish all grading using a motor grader with a minimum of 175 horsepower.

<u>Road</u>	<u>Stations</u>
N-100	0+00 to 26+60
8189	0+00 to 14+50

2-8 MAINTAINING EROSION CONTROL STRUCTURES

Purchaser shall clean and maintain all erosion control structures. Work must be completed before timber haul and must be done in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL. Excavated material must be scattered outside the grubbing limits or disposed of as specified in Clause 4-36 DISPOSAL OF WASTE MATERIAL.

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

3-5 CLEARING

Purchaser shall fall all vegetative material larger than 2 inches DBH or over 4 feet high between the marked right-of-way boundaries and within waste and debris areas, or if not marked in the field, between the clearing limits specified on the TYPICAL SECTION SHEET. Clearing must be completed before starting excavation and embankment.

3-8 PROHIBITED DECKING AREAS

Purchaser shall not deck right-of-way timber in the following areas:

- Within the grubbing limits.
- Within 50 feet of any stream.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- On slopes greater than 45%.
- Against standing trees, unless approved by the contract administrator.

3-10 GRUBBING

Purchaser shall remove all stumps between the grubbing limits specified on the TYPICAL SECTION SHEET. Purchaser shall also remove stumps with undercut roots outside the grubbing limits. Grubbing must be completed before starting excavation and embankment.

3-12 STUMP PLACEMENT

Purchaser shall place grubbed stumps adjacent to the road shoulder and in compliance with all other clauses in this road plan.

3-14 STUMPS WITHIN DESIGNATED WASTE AREAS

Purchaser is not required to remove stumps within waste areas if they are cut flush with the ground.

3-20 ORGANIC DEBRIS DEFINITION

Organic debris is defined as all components of a tree that remain as by-products after the manufacture of logs, including but not limited to tree tops, branches, limbs, needles, leaves, and stumps that are larger than one cubic foot in volume within the grubbing limits as shown on the TYPICAL SECTION SHEET and ROADSIDE BRUSHING DETAIL.

3-21 DISPOSAL COMPLETION

Purchaser shall remove organic debris from the road surface, ditchlines, and culvert inlets and outlets. Purchaser shall complete all disposal of organic debris, before subgrade compaction, application of rock, and timber haul.

3-22 DESIGNATED WASTE AREA FOR ORGANIC DEBRIS

Waste areas for organic debris are located within the cleared right-of-way or in natural openings as designated or at areas approved in writing by the Contract Administrator.

3-23 PROHIBITED DISPOSAL AREAS

Purchaser shall not place organic debris in the following areas:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream, or wetland.
- On road subgrades, or excavation and embankment slopes.
- On slopes greater than 45%.
- Within the operational area for cable landings where debris may shift or roll.
- On locations where brush can fall into the ditch or onto the road surface.
- Against standing timber.

3-24 BURYING ORGANIC DEBRIS RESTRICTED

Purchaser shall not bury organic debris unless otherwise stated in this plan.

3-25 SCATTERING ORGANIC DEBRIS

Purchaser shall scatter organic debris outside of the grubbing limits and in natural openings unless otherwise detailed in this road plan. Where natural openings are unavailable or restrictive, alternate debris disposal methods are subject to the written approval of the Contract Administrator.

3-32 END HAULING ORGANIC DEBRIS

On slopes greater than 45%, Purchaser shall end haul or push organic debris to the designated waste areas specified in Clause 3-22 DESIGNATED WASTE AREA FOR ORGANIC DEBRIS or to a waste area located by the Contract Administrator.

SECTION 4 – EXCAVATION

4-2 PIONEERING

Pioneering may not extend past construction that will be completed during the current construction season. In addition, the following actions must be taken as pioneering progresses:

- Drainage must be provided on all uncompleted construction.
- Road pioneering operations may not undercut the final cut slope or restrict drainage.
- Culverts at live stream crossings must be installed during pioneering operations prior to embankment.

4-3 ROAD GRADE AND ALIGNMENT STANDARDS

Purchaser shall follow these standards for road grade and alignment, except as designed:

- Grade and alignment must have smooth continuity, without abrupt changes in direction.
- Maximum grades may not exceed 18 percent favorable and 15 percent adverse.
- Minimum curve radius is 60 feet at centerline.
- Maximum grade change for sag vertical curves is 5% in 100 feet.
- Maximum grade change for crest vertical curves is 4% in 100 feet.

4-5 CUT SLOPE RATIO

Purchaser shall construct excavation slopes no steeper than shown on the following table, unless construction staked or designed:

<u>Material Type</u>	<u>Excavation Slope Ratio</u>	<u>Excavation Slope Percent</u>
Common Earth (on side slopes up to 70%)	1:1	100
Common Earth (on slopes over 70%)	¾:1	133
Fractured or loose rock	½:1	200
Hardpan or solid rock	¼:1	400

4-6 EMBANKMENT SLOPE RATIO

Purchaser shall construct embankment slopes no steeper than shown on the following table, unless construction staked or designed:

<u>Material Type</u>	<u>Embankment Slope Ratio</u>	<u>Embankment Slope Percent</u>
Sandy Soils	2:1	50
Common Earth and Rounded Gravel	1½:1	67
Angular Rock	1¼:1	80

4-7 SHAPING CUT AND FILL SLOPE

Purchaser shall construct excavation and embankment slopes to a uniform line and left rough for easier revegetation.

4-8 CURVE WIDENING

The minimum widening placed on the inside of curves is:

- 6 feet for curves of 50 to 79 feet radius.
- 4 feet for curves of 80 to 100 feet radius.

4-9 EMBANKMENT WIDENING

The minimum embankment widening is:

- 2 feet for embankment heights at centerline of 2 to 6 feet.
- 4 feet for embankment heights at centerline of greater than 6 feet.

Purchaser shall apply embankment widening equally to both sides of the road to achieve the required width.

4-21 TURNOUTS

Purchaser shall construct turnouts as designated on the ROCK LIST. Location changes are subject to written approval by the Contract Administrator. Minimum dimensions are shown on the TYPICAL SECTION SHEET.

4-22 TURNAROUNDS

Purchaser shall construct turnarounds as designated on the ROCK LIST. Turnarounds must be no larger than 30 feet long and 30 feet wide. Location changes are subject to written approval by the Contract Administrator.

4-25 DITCH CONSTRUCTION AND RECONSTRUCTION

Purchaser shall construct and reconstruct ditches into the subgrade as specified on the TYPICAL SECTION SHEET. Ditches must be constructed concurrently with construction of the subgrade.

4-27 DITCH WORK – MATERIAL USE PROHIBITED

Purchaser shall not pull ditch material across the road or mix in with the road surface. Excavated material must be disposed of as specified in Clause 4-36 DISPOSAL OF WASTE MATERIAL.

4-28 DITCH DRAINAGE

Ditches must drain to cross-drain culverts or ditchouts.

4-35 WASTE MATERIAL DEFINITION

Waste material is defined as all dirt, rock, mud, or related material that is extraneous or unsuitable for construction material. Waste material, as used in Section 4 EXCAVATION, is not organic debris.

4-36 DISPOSAL OF WASTE MATERIAL

Purchaser may sidecast waste material on side slopes up to 45% if the waste material is compacted and free of organic debris. On side slopes greater than 45%, all waste material must be end hauled or pushed to the designated embankment sites and waste areas identified in Clause 4-37 WASTE AREA LOCATION.

4-37 WASTE AREA LOCATION

Purchaser shall deposit waste material in the listed designated areas. Additional waste areas may also be identified or approved by the Contract Administrator. The amount of material allowed in a waste area is at the discretion of the Contract Administrator.

<u>Waste Area Location</u>	<u>Comments</u>
N-100	7+00, East side of road
	31+00, East side of road
N-500	Sta 15+00, North side of road
8190	See ROCK SOURCE DEVELOPMENT PLAN for location

4-38 PROHIBITED WASTE DISPOSAL AREAS

Purchaser shall not deposit waste material in the following areas:

- Within 25 feet of a cross drain culvert.
- Within 100 feet of a live stream or wetland.
- Within a riparian management zone.
- Within a wetland management zone.
- On side slopes steeper than 45%.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- Within the operational area for cable landings.
- Against standing timber.

4-45 SELECT BORROW

Select borrow consists of granular material, either naturally occurring or processed, and contains no more than 5% clay, organic debris, or trash by volume.

4-48 NATIVE MATERIAL

Native material consists of naturally occurring material that is free of organic debris, trash, and rocks greater than 4 inches in any dimension.

4-55 ROAD SHAPING

Purchaser shall shape the subgrade and surface as shown on the TYPICAL SECTION SHEET. The subgrade and surface shape must ensure runoff in an even, un-concentrated manner, and must be uniform, firm, and rut-free.

4-56 DRY WEATHER SHAPING

The Contract Administrator may require the application of water to facilitate shaping activities. The method of water application is subject to written approval by the Contract Administrator.

4-60 FILL COMPACTION

Purchaser shall compact all embankment and waste material in accordance with the COMPACTION LIST by routing equipment over the entire width of each lift. Waste material may be placed by end-dumping or sidcasting until sufficiently wide enough to support the equipment.

4-61 SUBGRADE COMPACTION

Purchaser shall compact constructed subgrades in accordance with the COMPACTION LIST by routing equipment over the entire width except ditch. Purchaser shall obtain written approval from the Contract Administrator for subgrade compaction before rock application.

4-62 DRY WEATHER COMPACTION

The Contract Administrator may require the application of water to facilitate compaction activities. The method of water application is subject to written approval by the Contract Administrator.

4-63 EXISTING SURFACE COMPACTION

Purchaser shall compact maintained road surfaces in accordance with the COMPACTION LIST by routing equipment over the entire width.

SECTION 5 – DRAINAGE

5-1 REMOVAL OF SHOULDER BERMS

Purchaser shall remove berms from road shoulders, except as directed by the Contract Administrator. The construction of ditchouts is required where ponding could result from the effects of sidecast debris.

5-5 CULVERTS

Purchaser shall install culverts as part of this contract. Culverts must be installed concurrently with subgrade work and must be installed before subgrade compaction and rock application. Culvert locations and the minimum requirements for culvert length and diameter are designated on the CULVERT LIST. Culvert, downspout, and flume lengths may be adjusted to fit as-built conditions and may not terminate directly on unprotected soil. Culverts must be new material and meet the specifications in Clauses 10-15 through 10-24.

5-6 CULVERT TYPE

Purchaser shall install crossdrain culverts made of plastic in accordance with Clauses 10-15 through 10-24.

5-10 CULVERT MARKER INSTALLATION

At all new culverts, Purchaser shall provide and install culvert markers at the inlet in accordance with the CULVERT MARKER INSTALLATION DETAIL.

5-12 UNUSED MATERIALS STATE PROPERTY

On required roads, any materials listed on the CULVERT LIST that are not installed will become the property of the state. Purchaser shall stockpile materials as directed by the Contract Administrator.

5-15 CULVERT INSTALLATION

Culvert installation must be in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL and the Corrugated Polyethylene Pipe Association’s “Recommended Installation Practices for Corrugated Polyethylene Pipe and Fittings”. Corrugated Polyethylene pipe must be installed in a manner consistent with the manufacturer’s recommendations. Culverts shall be banded using lengths of no less than 10 feet, and no more than one length less than 20 feet. Shorter section of banded culvert shall be installed at the inlet end.

5-16 APPROVAL FOR LARGER CULVERT INSTALLATION

Purchaser shall obtain written approval from the Contract Administrator for the installation of culverts 30 inches in diameter and over before backfilling.

5-17 CROSS DRAIN SKEW AND SLOPE

Cross drains, on road grades in excess of 3%, must be skewed at least 30 degrees from perpendicular to the road centerline, except where the cross drain is at the low point in the road culverts will not be skewed. Cross drain culverts must be installed at a slope steeper than the incoming ditch grade, but not less than 3% or more than 10%.

5-18 CULVERT DEPTH OF COVER

Cross drain culverts must be installed with a depth of cover of not less than 1 foot of compacted subgrade over the top of the culvert at the shallowest point.

5-20 ENERGY DISSIPATERS

Purchaser shall install energy dissipaters in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL.

The type of energy dissipater and the amount of material must be consistent with the specifications listed on the CULVERT LIST. No placement by end dumping or dropping of rock is allowed. Energy dissipater installation is subject to approval by the Contract Administrator.

5-25 CATCH BASINS

Purchaser shall construct catch basins in accordance with CULVERT AND DRAINAGE SPECIFICATION DETAIL. Minimum dimensions of catch basins are 3 feet wide and 4 feet long.

5-26 HEADWALLS FOR CROSS DRAIN CULVERTS

Purchaser shall construct headwalls in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all culverts on the CULVERT LIST that specify the placement of rock. Rock must be placed on shoulders, slopes, and around culvert inlets and outlets. Minimum specifications require that rock be placed at a width of one culvert diameter on each side of the culvert opening, and to a height of one culvert diameter above the top of the culvert. Rock may not restrict the flow of water into culvert inlets or catch basins. No placement by end dumping or dropping of rock is allowed.

5-27 ARMORING FOR STREAM CROSSING CULVERTS

At the following culvert(s), Purchaser shall place Light Loose Rip Rap immediately following construction of the embankment. Rock must be placed on shoulders, slopes, and around culvert inlets and outlets as designated on the ROCK LIST and attached culvert design(s). Rock may not restrict the flow of water into culvert inlets or catch basins. No placement by end dumping or dropping of rock is allowed.

<u>Road</u>	<u>Stations</u>	<u>Rock Type</u>
N-100	27+74	Light Loose Rip Rap

5-33 NATIVE SURFACE ROADS

If overwintered, native surface roads must be waterbarred by November 1. Purchaser shall construct waterbars according to the attached NON-DRIVABLE WATERBAR DETAIL at a maximum spacing that will produce a vertical distance of no more than 10 feet between waterbars or between natural drainage paths, and with a maximum spacing of 150 feet.

SECTION 6 – ROCK AND SURFACING

6-2 ROCK SOURCE ON STATE LAND

Rock used in accordance with the quantities on the ROCK LIST may be obtained from the following source(s) on state land at no charge to the Purchaser. Purchaser shall obtain written approval from the Contract Administrator for the use of material from any other source. If other operators are using, or desire to use the rock source(s), a joint operating plan must be developed. All parties shall follow this plan. Purchaser shall notify the Contract Administrator a minimum of 5 business days before starting any operations in the listed locations.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>
B&E Quarry	SW ¼ of NE ¼ of T13R06W S24	Light Loose Rip Rap, 6-Inch Jaw Run, Quarry Spalls

6-3 ROCK SOURCE ON STATE LAND, EXISTING STOCKPILE

Rock used in accordance with the quantities on the ROCK LIST may be obtained from the following existing stockpile(s) on state land at no charge to the Purchaser. Purchaser shall not remove additional yardage without prior written approval from the Contract Administrator. Other stockpiles may not be used.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>	<u>Quantity</u>
Walville Quarry	SE ¼ of SE ¼ of T13R06W S23	Light Loose Rip Rap	31cy
		2 ½-Inch Minus	698cy

6-5 ROCK FROM COMMERCIAL SOURCE

Rock used in accordance with the quantities on the ROCK LIST may be obtained from any commercial source at the Purchaser's expense. Rock sources are subject to written approval by the Contract Administrator before their use.

6-10 ROCK SOURCE DEVELOPMENT PLAN BY STATE

Purchaser shall conduct rock source development and use at the following sources, in accordance with the written ROCK SOURCE DEVELOPMENT PLAN prepared by the State and included in this road plan. Upon completion of operations, the rock source must be left in the condition specified in the ROCK SOURCE DEVELOPMENT PLAN and approved in writing by the Contract Administrator. Purchaser shall notify the Contract Administrator a minimum of 5 business days before starting any operations in the rock source.

<u>Source</u>	<u>Rock Type</u>
B&E Quarry	6-Inch Jaw Run, Light Loose Rip Rap

6-22 FRACTURE REQUIREMENT FOR ROCK

A minimum of 50% by visual inspection of coarse aggregate must have at least one fractured face. Coarse aggregate is the material greater than 1/4-inch in size.

6-23 ROCK GRADATION TYPES

Purchaser shall provide or manufacture rock in accordance with the types and amounts listed in the ROCK LIST. Rock must meet the following specifications for gradation and uniform quality when placed in hauling vehicles. Purchaser shall provide a sieve analysis upon request from the Contract Administrator.

6-28 1 ¼-INCH MINUS CRUSHED ROCK

- % Passing 1 ¼" square sieve 100%
- % Passing 5/8" square sieve 55 - 75%
- % Passing U.S. #4 sieve 20 - 50%

Of the fraction passing the No. 4 sieve, 40% to 60% must pass the No. 10 sieve.

The portion of aggregate retained on the No. 4 sieve may not contain more than 0.2 percent organic debris and trash. All percentages are by weight.

6-32 2 ½-INCH MINUS CRUSHED ROCK

- % Passing 2 ½" square sieve 100%
- % Passing 2" square sieve 65 - 95%
- % Passing 1" square sieve 50 – 80%
- % Passing U.S. #4 sieve 30 – 50%
- % Passing U.S. #40 sieve 16% maximum
- % Passing U.S. #200 sieve 8% maximum

The portion of aggregate retained on the No. 4 sieve may not contain more than 0.2 percent organic debris and trash. All percentages are by weight.

6-39 6-INCH JAW RUN ROCK

% Passing 6" in one dimension	100%
% Passing U.S. #40 sieve	16% maximum
% Passing U.S. #200 sieve	5% maximum

Rock may not contain more than 5 percent organic debris and trash. All percentages are by weight.

6-43 QUARRY SPALLS

% Passing 8" square sieve	100%
% Passing 3" square sieve	40% maximum
% Passing 3/4" square sieve	10% maximum

Rock may not contain more than 5 percent vegetative debris or trash. All percentages are by weight.

6-44 STREAM SIMULATION ROCK

% Passing 5" square sieve	80 - 100%
% Passing 2" square sieve	40 - 60%
% Passing 5/8" square sieve	15 - 35%
% Passing U.S. #4 sieve	5 - 20%
% Passing U.S. #200 sieve	10% maximum

The portion of aggregate retained on the No. 4 sieve may not contain more than 0.2 percent organic debris and/or trash. All percentages are by weight.

6-50 LIGHT LOOSE RIP RAP

Light loose rip rap must consist of angular, hard, sound, and durable stone. It must be free from segregation, seams, cracks, and other defects tending to destroy its resistance to weather. Light loose rip rap must be free of rock fines, soil, organic debris or other extraneous material, and must meet the following requirements:

<u>Quantity</u>	<u>Approximate Size Range</u>
20% to 90%	(18" - 28")
15% to 80%	(8" - 18")
10% to 20%	(3" - 8")

6-55 ROCK APPLICATION MEASURED BY COMPACTED DEPTH

Measurement of specified rock depths are defined as the compacted depth(s) using the compaction methods required in this road plan. Estimated quantities specified in the ROCK LIST are loose yards. Purchaser shall apply adequate amounts of rock to meet the specified rock depths. Specified rock depths are minimum requirements and are not subject to reduction. Unless otherwise stated in Clause 6-75 OPTIONAL ROCK EXCEPTION.

6-56 ROCK MEASUREMENT BY TRUCK VOLUME

Measurement of spot rock, energy dissipaters, culvert backfill, and landing rock is on a cubic yard truck measure basis. Purchaser shall measure each truck box before rock hauling. An average of such volumes for each truck will be used to tally the volume hauled. The Contract Administrator may periodically require that a load be flattened off and its volume calculated. Purchaser shall maintain load tally sheets for each truck and shall give them to the Contract Administrator on a weekly basis during rocking operations.

6-70 APPROVAL BEFORE ROCK APPLICATION

Purchaser shall obtain written approval from the Contract Administrator for subgrade compaction and drainage installation before rock application.

6-71 ROCK APPLICATION

Purchaser shall apply rock in accordance with the specifications and quantities shown on the ROCK LIST. Rock must be spread, shaped, and compacted full width concurrent with rock hauling operations. Road surfaces must be compacted in accordance with the COMPACTION LIST by routing equipment over the entire width.

6-73 ROCK FOR WIDENED PORTIONS

Purchaser shall apply rock to turnarounds, turnouts, and areas with curve widening to the same depth and specifications as the traveled way, unless otherwise specified in the ROCK LIST.

SECTION 7 – STRUCTURES

7-5 STRUCTURE DEBRIS

Purchaser shall not allow debris from the installation or removal of structures to enter any stream. Purchaser shall maintain a clean jobsite, with all materials stored away from the high water mark or other area presenting a risk of the materials entering a stream. Debris entering any stream must be removed immediately and placed in the site(s) designated for stockpiling or disposal. Purchaser shall retrieve all material carried downstream from the jobsite.

7-6 STREAM CROSSING INSTALLATION

Purchaser shall install stream crossing structures in accordance with the manufacturer's requirements, Forest Practices Hydraulic Permit (FPHP), STREAM DIVERSION PROCEDURE and Action Item Fish Crossing design.

7-18 INSTALLATION PRODUCTION SCHEDULE

Purchaser shall provide the Contract Administrator or their designee, with a production schedule showing projected completion dates for the following items before starting construction of the structure(s). Production schedule must include:

- dewatering
- placement of pipe
- channel construction and stream simulation rock application
- subgrade completion
- rock application and compaction

7-19 INSTALLATION STAGE ACCEPTANCE

Purchaser shall ensure that all materials and procedures used during construction comply with the design. Purchaser shall obtain written approval from the Contract Administrator or their designee for each stage of construction, listed in Clause

7-18 INSTALLATION PRODUCTION SCHEDULE, before starting construction on the next stage.

7-55 LARGE CULVERT INSTALLATION

Purchaser shall install a large culvert in accordance with the Action Item Fish Crossing design.

7-56 STEEL PIPE, PIPE ARCH, AND STRUCTURAL PLATE INSTALLATION

Purchaser shall install steel pipe, pipe arches, and structural plate culverts in accordance with the National Corrugated Steel Pipe Association "Installation Manual for Corrugated Steel Pipe, Pipe Arches, and Structural Plate." Installation is subject to the inspection and approval of the Contract Administrator before placement and backfill. The latest edition of the NCSPA Installation Manual can be found at www.ncspa.org.

7-57 CULVERT SHAPE CONTROL

Purchaser shall monitor the culvert shape during backfill and compaction. Special attention must be paid to maintaining the structure’s rise dimensions, concentricity, and smooth uniform curvature. If compaction methods are resulting in peaking or deflection of the culvert, Purchaser shall modify the compaction method to achieve the appropriate end result.

7-58 MATERIAL INSIDE CULVERT

Purchaser shall provide and install Stream Simulation Rock inside the following culvert(s) as specified in the Action Item Fish Crossing design. Stream Simulation Rock must meet the specifications in Clause 6-44 STREAM SIMULATION ROCK and quantities in the ROCK LIST.

<u>Road</u>	<u>Station</u>
N-100	27+74

7-71 GATE CLOSURE DURING HAUL

On the following road(s), Purchaser shall keep gates closed and locked except for passing vehicles.

<u>Road</u>	<u>Station</u>	<u>Comment</u>
Nine Creek ML	0+40	Private Landowner Farm Gate

SECTION 8 – EROSION CONTROL

8-1 SEDIMENT CONTROL STRUCTURES

On the following road(s), Purchaser shall install Silt Fence in accordance with the table below. All other sediment control shall be accomplished using sediment traps, silt fences, settling ponds or other methods as approved in writing by the Contract Administrator.

<u>Road</u>	<u>Stations</u>	<u>Type</u>	<u>Comments</u>
N-100	1+00 to 2+50	Temporary Silt Fence	Remove existing silt fence; install new silt fence in accordance with Silt Fence Detail and Clause 10-6; remove installed fence before conclusion of the contract

8-2 PROTECTION FOR EXPOSED SOIL

Purchaser shall provide and evenly spread a 4-inch layer of straw to all exposed soils within 50 feet of a stream or wetland. Soils must be covered before the first anticipated storm event. Soils may not sit exposed during any rain event.

8-15 REVEGETATION

On the following road(s) and waste areas, Purchaser shall spread seed on all exposed soils resulting from road work activities using manual dispersion. Other methods of covering must be approved in writing by the Contract Administrator. Required seed not spread by the termination of this contract will become the property of the state.

<u>Road</u>	<u>Location</u>	<u>Qty (lbs)*</u>	<u>Type</u>
N-100	1+00 to 3+50	8	Grass Seed
	26+60 to 31+60	15	
Waste Areas		75	

*Quantities are estimates only. Actual quantities may vary and are the responsibility of the Purchaser.

8-16 REVEGETATION SUPPLY

The Purchaser shall provide the grass seed.

8-17 REVEGETATION TIMING

Purchaser shall revegetate after road work is completed. Soils may not be allowed to sit exposed for longer than one month without receiving revegetation treatment unless otherwise approved in writing by the Contract Administrator.

8-19 ASSURANCE FOR SEEDED AREA

Purchaser shall ensure the growth of a uniform and dense crop (at least 50% coverage) of 2-inch tall grass. Purchaser shall reapply the grass seed in areas that have failed to germinate or have been damaged through any cause, restore eroded or disturbed areas, clean up and properly dispose of eroded materials, and reapply the grass seed at no additional cost to the state.

8-25 GRASS SEED

Purchaser shall evenly spread the seed mixture listed below on all exposed soil at a rate of 50 pounds per acre of exposed soil. Grass seed must meet the following specifications:

1. Weed seed may not exceed 0.5% by weight.
2. All seed species must have a minimum 90% germination rate, unless otherwise specified.
3. Seed must be certified.
4. Seed must be furnished in standard containers showing the following information:
 - a. Common name of seed
 - b. Net weight
 - c. Percent of purity
 - d. Percentage of germination
 - e. Percentage of weed seed and inert material
5. Seed must conform to the following mixture unless a comparable mix is approved in writing by the Contract Administrator.

<u>Kind and Variety of Seed in Mixture</u>	<u>% by Weight</u>
Perennial Rye	35-45
Red Fescue	30-40
Highland Bent	5-15
White Clover	10-20
Inert and Other Crop	0.5

SECTION 9 – POST-HAUL ROAD WORK

9-5 POST-HAUL MAINTENANCE

Purchaser shall perform post-haul maintenance in accordance with the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS.

9-10 LANDING DRAINAGE

Purchaser shall provide for drainage of the landing surface.

9-11 LANDING EMBANKMENT

Purchaser shall slope landing embankments to the original construction specifications.

SECTION 10 MATERIALS

10-6 GEOTEXTILE FOR TEMPORARY SILT FENCE

Geotextiles must meet the following minimum requirements for strength and property qualities and must be designed by the manufacturer to be used for filtration. Woven slit-film geotextiles are not allowed. Material must be free of defects, cuts, and tears.

	<u>ASTM Test</u>	<u>Requirements</u>
Type	--	Unsupported between posts
Apparent opening size	D 4751	No. 30 max., No. 100 min.
Water permittivity	D 4491	0.02 sec ⁻¹
Grab tensile strength	D 4632	180 lb in machine direction, 100lb in cross-machine direction
Grab tensile elongation	D 4632	30% max. at 180 lb or more
Ultraviolet stability	D 4355	70% retained after 500 hours of exposure

10-15 CORRUGATED STEEL CULVERT

Metallic coated steel culverts must meet AASHTO M-36 (ASTM A-760) specifications. Culverts must be aluminized (aluminum type 2 coated meeting AASHTO M-274).

10-17 CORRUGATED PLASTIC CULVERT

Polyethylene culverts must meet AASHTO M-294 specifications, or ASTM F-2648 specifications for recycled polyethylene. Culverts must be Type S – double walled with a corrugated exterior and smooth interior.

10-21 METAL BAND

Metal coupling and end bands must meet the AASHTO specification designated for the culvert and must have matching corrugations. Culverts 24 inches and smaller must have bands with a minimum width of 12 inches. Culverts over 24 inches must have bands with a minimum width of 24 inches.

10-22 PLASTIC BAND

Plastic coupling and end bands must meet the AASHTO specification designated for the culvert. Only fittings supplied or recommended by the culvert manufacturer may be used. Couplings must be split coupling band. Split coupling bands must have a minimum of four corrugations, two on each side of the pipe joint.

10-23 RUBBER CULVERT GASKETS

Rubber gaskets must be continuous closed cell, synthetic expanded rubber gaskets conforming to the requirements of ASTM D 1056. Rubber gaskets must be used with all corrugated metal pipe coupling bands.

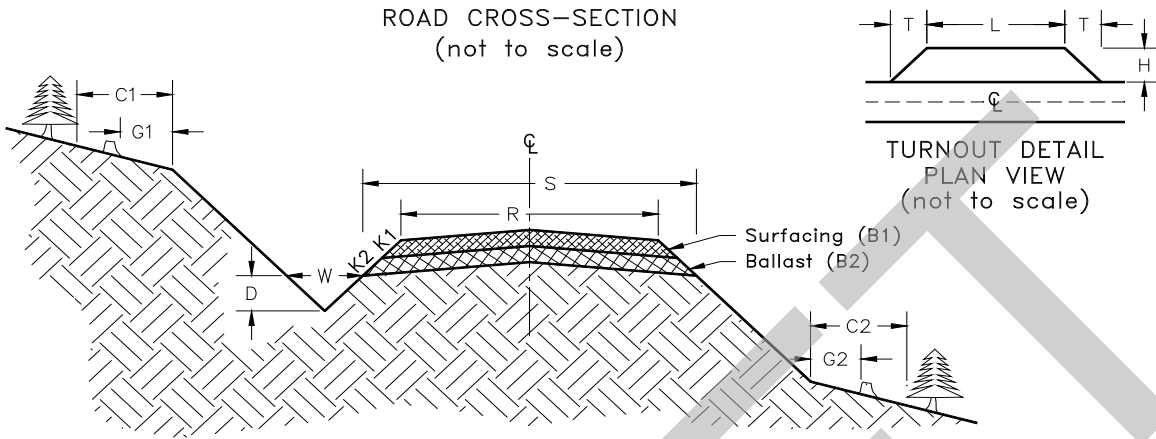
10-24 GAUGE AND CORRUGATION

Unless otherwise stated in the Action Item Fish Crossing design, metal culverts must conform to the following specifications for gage and corrugation as a function of diameter.

<u>Diameter</u>	<u>Gauge</u>	<u>Corrugation</u>
18"	16 (0.064")	2 ² / ₃ " X 1/2"
24" to 48"	14 (0.079")	2 ² / ₃ " X 1/2"
54" to 96"	12 (0.109")	3" X 1"

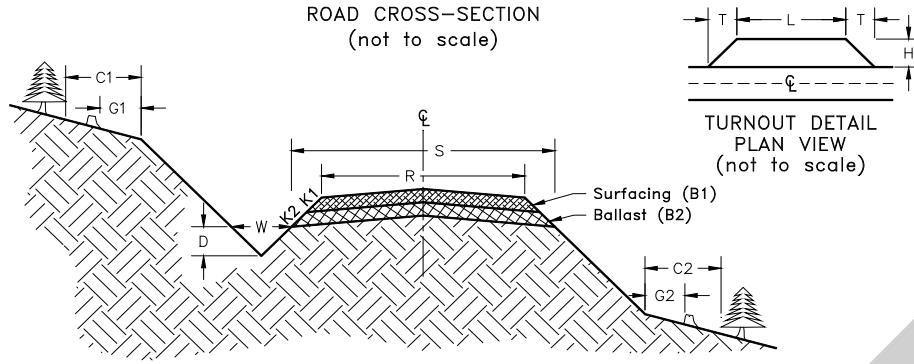
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TYPICAL SECTION SHEET



Road Number	From Station	To Station	Tolerance Class	Subgrade	Road	Ditch	Ditch	Crown @ CL	Grubbing Limits		Clearing Limits	
				Width	Width	Width	Depth		ft	ft	ft	ft
				ft	ft	ft	ft	in	G1	G2	C1	C2
				S	R	W	D					
N-100	0+00	26+60	B	13	12	3	1	4	0	0	0	0
N-100	26+60	31+60	A	17	12	3	1	4	5	5	10	10
N-100-EXT	0+00	4+20	C	17	12	3	1	4	5	5	10	10
8189	0+00	14+50	B	17	12	3	1	4	5	5	10	10
8189-EXT	0+00	12+60	C	17	12	3	1	4	5	5	10	10
Spur A	0+00	1+40	C	17	12	3	1	4	5	5	10	10
Spur B	0+00	2+05	C	17	12	3	1	4	5	5	10	10
Spur C	0+00	1+60	C	17	12	3	1	4	5	5	10	10

ROCK LIST



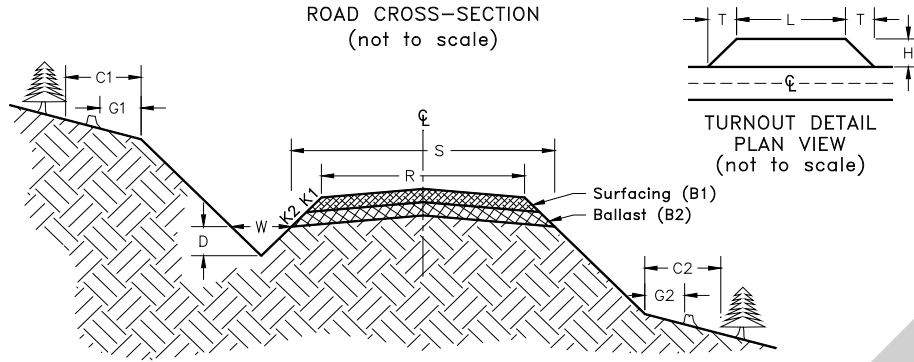
LIGHT LOOSE RIP RAP

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth (in)	C.Y. per Station or Unit	# of Stations or Units	C.Y. Subtotal	Rock Source
			K2	B2				Walville Quarry Stockpile or Commercial Source
N-100	27+80		See Action Item Fish Crossing Design		31	1.00	31	

*Optional Rock in accordance with 6-75

REQUIRED LIGHT LOOSE RIP RAP: 31 CY
 OPTIONAL LIGHT LOOSE RIP RAP: 0 CY

ROCK LIST



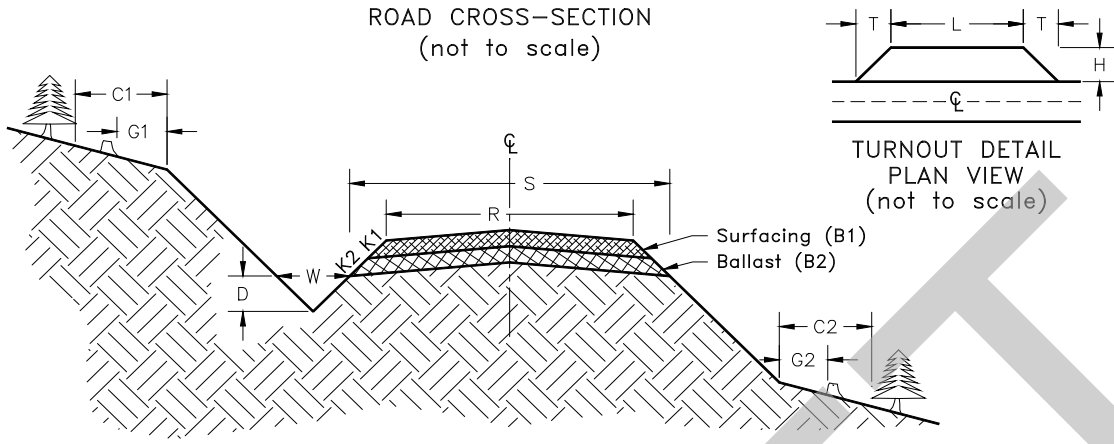
6-INCH JAW RUN

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth (in)	C.Y. per Station or Unit	# of Stations or Units	C.Y. Subtotal	Rock Source B&E Quarry or Commercial Source	Turnout		
									Length	Width	Taper
			K2	B2					L	H	T
N-100	26+60	31+60	1 1/2:1	12	70	5.00	350				
N-100-EXT	* 0+00	4+20	1 1/2:1	18	100	4.20	420				
	* Turnarounds				53	1	53				
	* Landings				81	1	81				
8189	Turnarounds		1 1/2:1	18	53	1	53				
	Turnouts				46	1	46		40	10	25
8189-EXT	* 0+00	12+60	1 1/2:1	18	100	12.60	1260				
	* Turnarounds				53	1	53				
	* Turnouts				46	1	46		40	10	25
	* Landings				81	1	81				
Spur A	* 0+00	1+40	1 1/2:1	18	100	1.40	140				
	* Turnarounds				53	1	53				
	* Landings				81	1	81				
Spur B	* 0+00	2+05	1 1/2:1	18	100	2.05	205				
	* Turnarounds				53	1	53				
	* Landings				81	1	81				
Spur C	* 0+00	1+60	1 1/2:1	18	100	1.60	160				
	* Turnarounds				53	1	53				
	* Landings				81	1	81				

*Optional Rock in accordance with 6-75

REQUIRED 6-INCH JAW RUN: 449 CY
 OPTIONAL 6-INCH JAW RUN: 2901 CY

ROCK LIST



QUARRY SPALLS

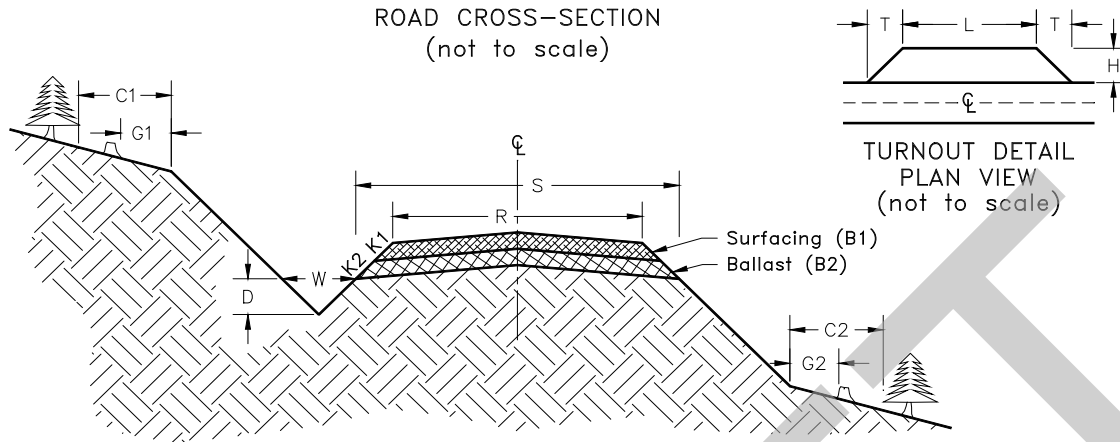
Road Number		Rock Slope	Compacted Rock Depth (in)	C.Y. per Station or Unit	# of Stations or Units	C.Y. Subtotal	Rock Source
		K2	B2				B&E Quarry or Commercial Source
N-100	Inlet/Outlet Armoring Energy Dissipaters			1	1	1	
N-100-EXT	Inlet/Outlet Armoring Energy Dissipaters			1	2	2	
8189	Inlet/Outlet Armoring Energy Dissipaters			1	3	3	
8189-EXT	Inlet/Outlet Armoring Energy Dissipaters			1	3	3	
Spur B	Inlet/Outlet Armoring Energy Dissipaters			1	1	1	
Spur C	Inlet/Outlet Armoring Energy Dissipaters			1	1	1	
				0	1	0	

*Optional Rock in accordance with 6-75

REQUIRED QUARRY SPALLS: 21 CY

OPTIONAL QUARRY SPALLS: 0 CY

ROCK LIST



2 1/2 INCH MINUS CRUSHED ROCK

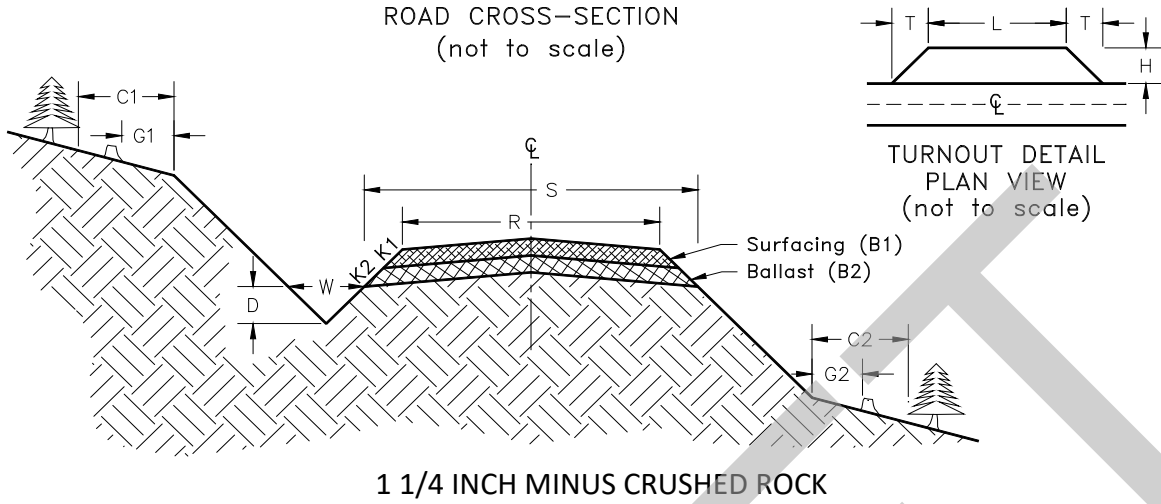
Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth (in)	C.Y. per Station or Unit	# of Stations or Units	C.Y. Subtotal	Rock Source
			K1	B1				Walville Quarry Stockpile or Commercial Source
N-100	0+00	26+60	1 1/2:1	4	20	26.60	532	
	Curve Widening		1 1/2:1	4			16	
N-100	26+60	31+60	1 1/2:1	6	30	5.00	150	

REQUIRED 2 1/2 INCH MINUS CRUSHED ROCK: 698 CY

OPTIONAL 2 1/2 INCH MINUS CRUSHED ROCK: 0 CY

*Optional Rock in accordance with 6-75

ROCK LIST



Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth (in)	C.Y. per Station or Unit	# of Stations or Units	C.Y. Subtotal	Rock Source
			K1	B1				Commercial Source
N-100	Culvert Bedding/ Backfill				90	1	90	

REQUIRED 1 1/4 INCH MINUS CRUSHED ROCK: 90 CY

OPTIONAL 1 1/4 INCH MINUS CRUSHED ROCK: 0 CY

*Optional Rock in accordance with 6-75

CULVERT LIST

Road Number	Location	Culvert			Armoring (C.Y.)			Backfill	Bedding	Inlet	Remarks
		Dia (In)	Length	Type	Inlet	Outlet	Type	Material	Material	Marker	
N-100	27+74	108	55	CMP	14.0	17.0	LL	SB	CR	N	Type 3 Fish Stream Crossing
N-100	31+55	18	30	PD	0.5	0.5	QS	NT	NT	Y	
N-100-EXT	0+50	18	30	PD	0.5	0.5	QS	NT	NT	Y	
N-100-EXT	3+50	18	30	PD	0.5	0.5	QS	NT	NT	Y	
8189	0+30	18	30	PD	0.5	0.5	QS	CR	CR	Y	
8189	6+50	18	30	PD	0.5	0.5	QS	CR	CR	Y	
8189	11+30	18	30	PD	0.5	0.5	QS	CR	CR	Y	
8189-EXT	2+55	18	30	PD	0.5	0.5	QS	NT	NT	Y	
8189-EXT	6+25	18	30	PD	0.5	0.5	QS	NT	NT	Y	
8189-EXT	9+80	18	30	PD	0.5	0.5	QS	NT	NT	Y	
Spur B	0+45	18	30	PD	0.5	0.5	QS	NT	NT	Y	
Spur C	0+05	18	30	PD	0.5	0.5	QS	NT	NT	Y	

Key:

- QS - Quarry Spalls
- SB - Select Borrow
- NT - Native Material
- CR - 1 1/4 Inch Minus Crushed Rock
- LL - Light Loose Rip Rap
- PD - Polyethylene Pipe Double Wall
- CMP - Corrugated Metal Pipe

COMPACTION LIST

Road	Type	Max Depth Per Lift (inches)	Equipment Type	Minimum Equipment Weight (lbs)	Minimum Number of Passes	Maximum Operating Speed (mph)	Maximum Amount of Deflection (inches)
All Roads	Subgrade	12	Vibratory Smooth Drum	14,000	4	3	2
All Roads	Fill	12	Vibratory Smooth Drum	14,000	4	3	2
All Roads	Waste Area	24	Excavation	28,000	-	-	4
All Roads	Pre-haul Surface	6	Vibratory Smooth Drum	14,000	5	3	1
All Roads	Rock	12	Vibratory Smooth Drum	14,000	3	3	1

DRAFT

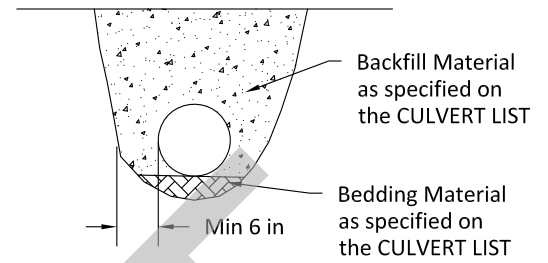
CULVERT AND DRAINAGE SPECIFICATION DETAIL
PAGE 1 OF 2

INSTALLATION REQUIREMENTS:

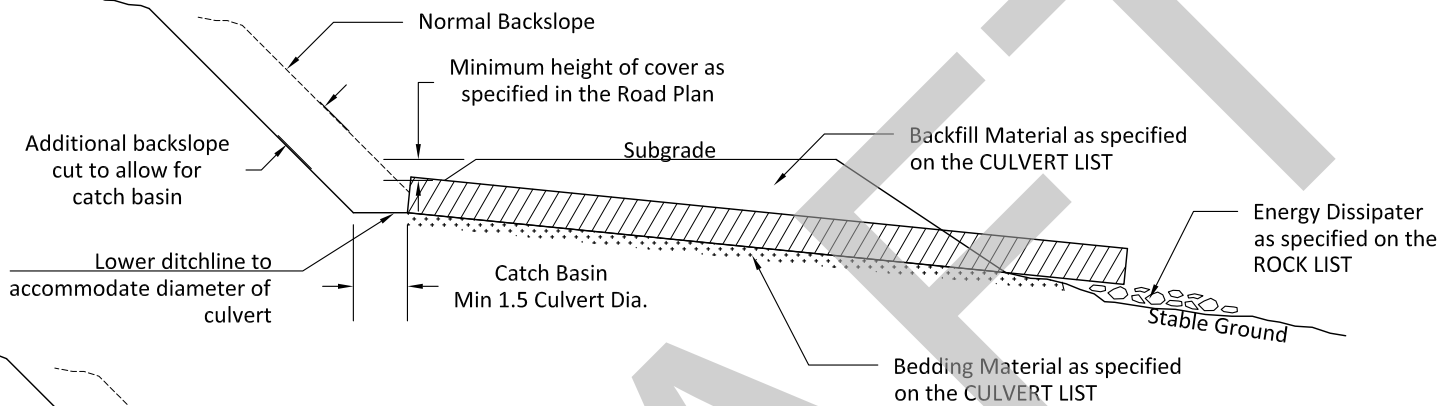
1. Proper preparation of foundation and placement of any required bedding material shall precede the installation of all culverts. This includes necessary leveling of the native trench bottom and compaction of required bedding material to form a uniform, dense, unyielding base. The pipe must be uniformly supported along the barrel.
2. Backfill material shall be compacted under the culvert haunches, around the sides, and above the culvert in accordance with the COMPACTION LIST.

ALL DRAWINGS ARE NOT TO SCALE

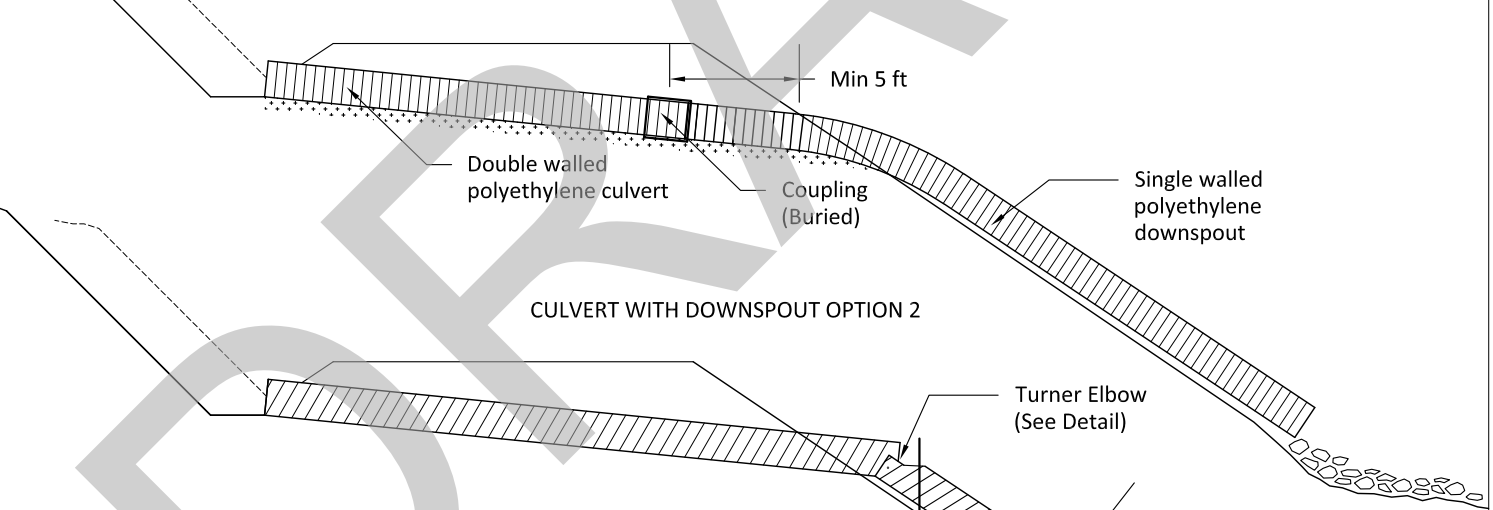
CROSS SECTION



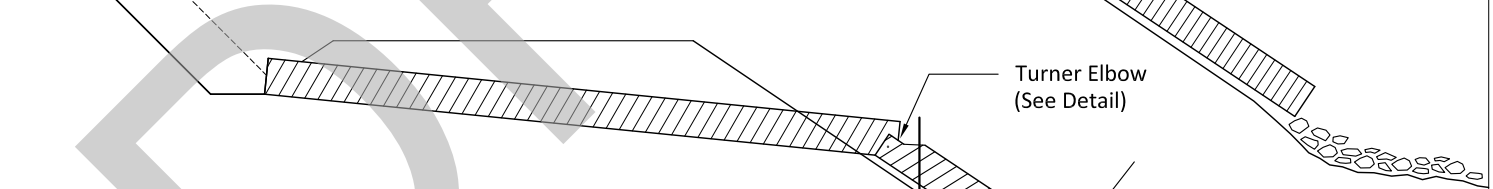
CULVERT PROFILE (TYPICAL)



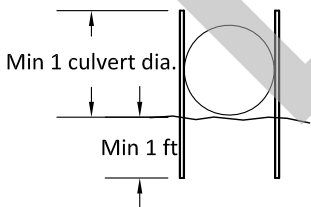
CULVERT WITH DOWNSPOUT OPTION 1



CULVERT WITH DOWNSPOUT OPTION 2

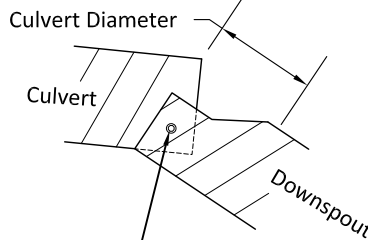


SUPPORT STAKES



Stake Material: T-post with rust protection coating.
Connections: Bolt support stakes to the culvert with $\frac{5}{8}$ " u-bolts, with washers on both the inside and outside of the culvert.
Alternative staking methods may be approved, in writing, by the Contract Administrator.

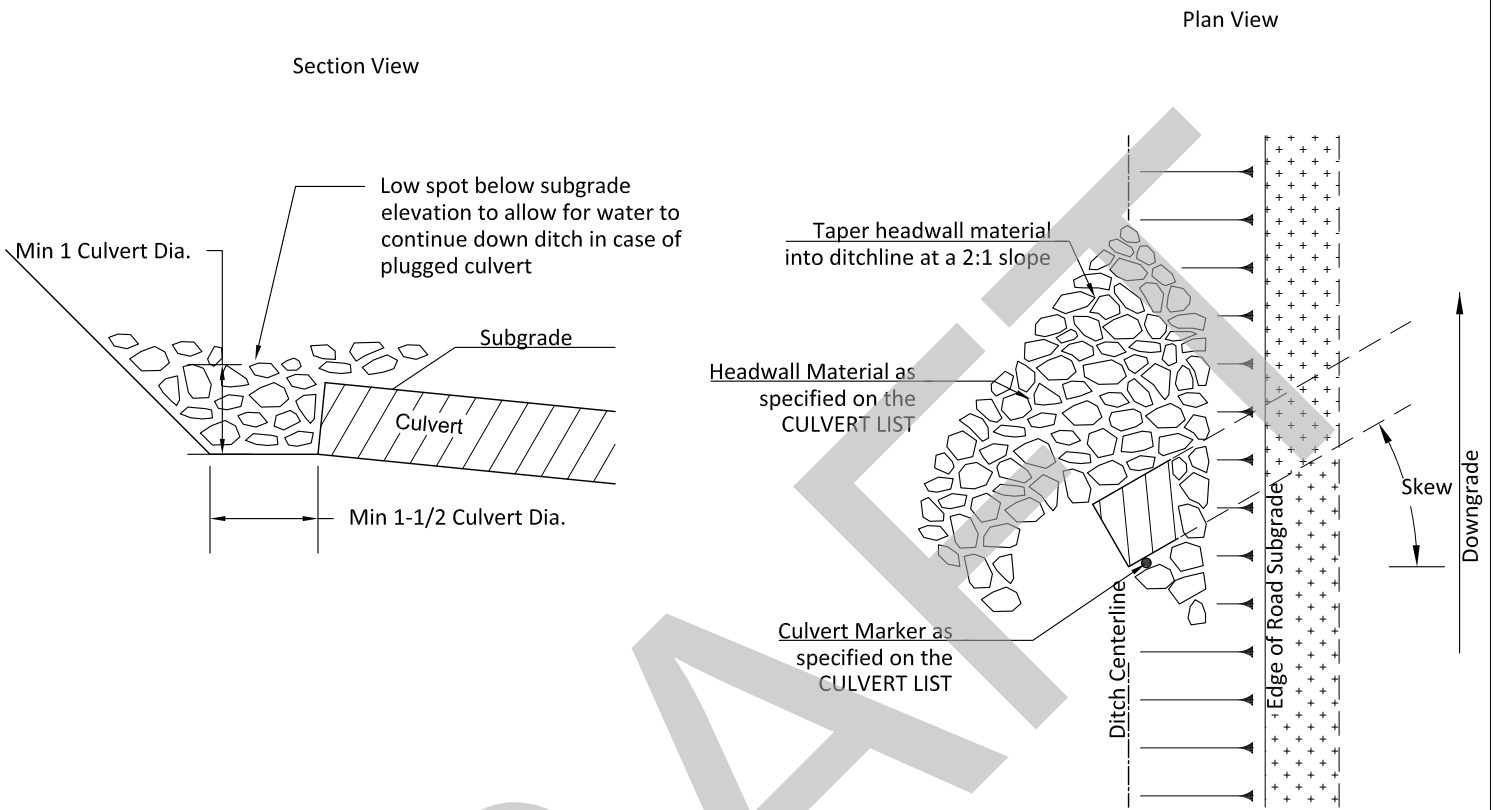
TURNER ELBOW



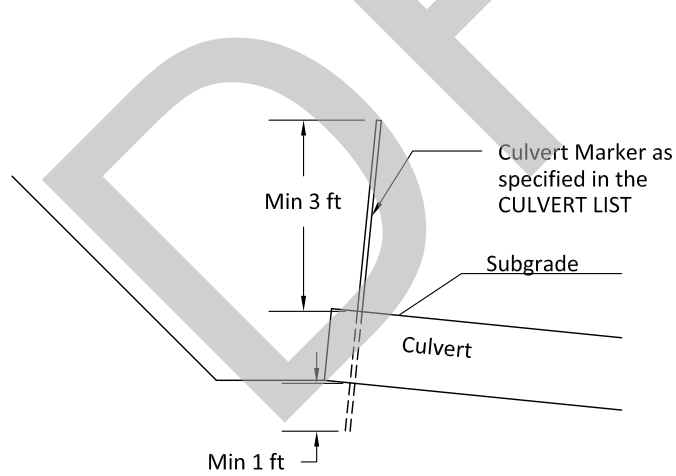
Bolted with $\frac{5}{8}$ " galvanized bolts and washers (both sides)
Downspout must be 6 inches larger in diameter than the culvert.

CULVERT AND DRAINAGE SPECIFICATION DETAIL
PAGE 2 OF 2

HEADWALLS

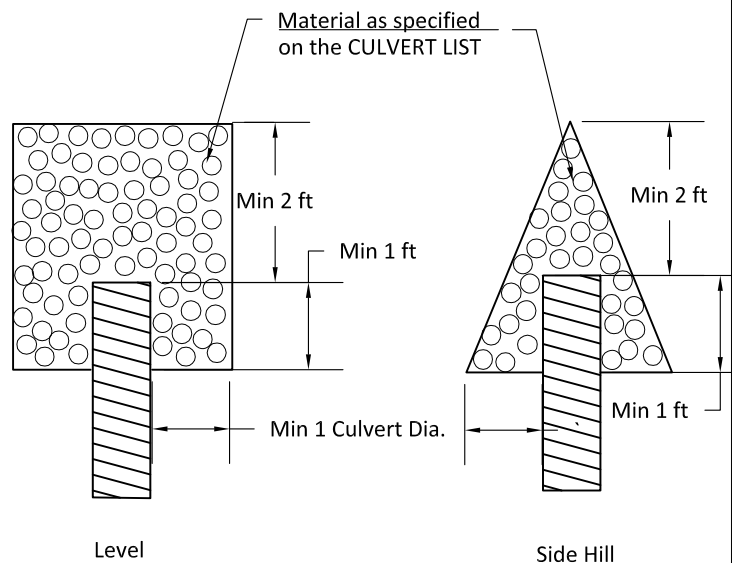


CULVERT MARKERS



Culvert Marker Material: 1 Inch I.D., Schedule 40 PVC Pipe, White. Marker must be capped on the top.
 Culvert Marker Placement: Place on uphill side of culvert, between corrugations if possible.
 Alternative culvert marker types may be approved, in writing, by the Contract Administrator.

ENERGY DISSIPATORS



FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

Page 1 of 2

Cuts and Fills

- Maintain slope lines to a stable gradient compatible with the cut slope/fill slope ratios. Remove slides from ditches and the roadway. Repair fill-failures, in accordance with Clause 4-6 EMBANKMENT SLOPE RATIO, with selected material or material approved by the Contract Administrator. Remove overhanging material from the top of cut slopes.
- Waste material from slides or other sources shall be placed and compacted in stable locations identified in the road plan or approved by the Contract Administrator, so that sediment will not deliver to any streams or wetlands.
- Slide material and debris shall not be mixed into the road surface materials, unless approved by the Contract Administrator.

Surface

- Grade the road surface, turnouts, and shoulders to the original shape on the TYPICAL SECTION SHEET to provide a smooth, rut-free traveled surface and maintain surface water runoff in an even, unconcentrated manner.
- Blading shall not undercut the backslope or cut into geotextile fabric on the road.
- If required by the Contract Administrator, water shall be applied as necessary to control dust and retain fine surface rock.
- Surface material shall not be bladed off the roadway. Replace surface material when lost or worn away, or as directed by the Contract Administrator.
- Remove shoulder berms, created by grading, to facilitate drainage, except as marked or directed by the Contract Administrator.
- For roads with geotextile fabric: spread surface aggregate to fill in soft spots and wheel ruts (barrel spread) to prevent damage to the geotextile fabric.

Drainage

- Prevent silt bearing road surface and ditch runoff from delivering sediment to any streams or wetlands.
- Maintain rolling dips and drivable waterbars as needed to keep them functioning as intended.
- Maintain headwalls to the road shoulder level with material that will resist erosion.
- Maintain energy dissipaters at culvert outlets with non-erodible material or rock.
- Keep ditches, culverts, and other drainage structures clear of obstructions and functioning as intended.
- Inspect and clean culverts at least monthly, with additional inspections during storms and periods of high runoff. This shall be done even during periods of inactivity.

FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

Page 2 of 2

Preventative Maintenance

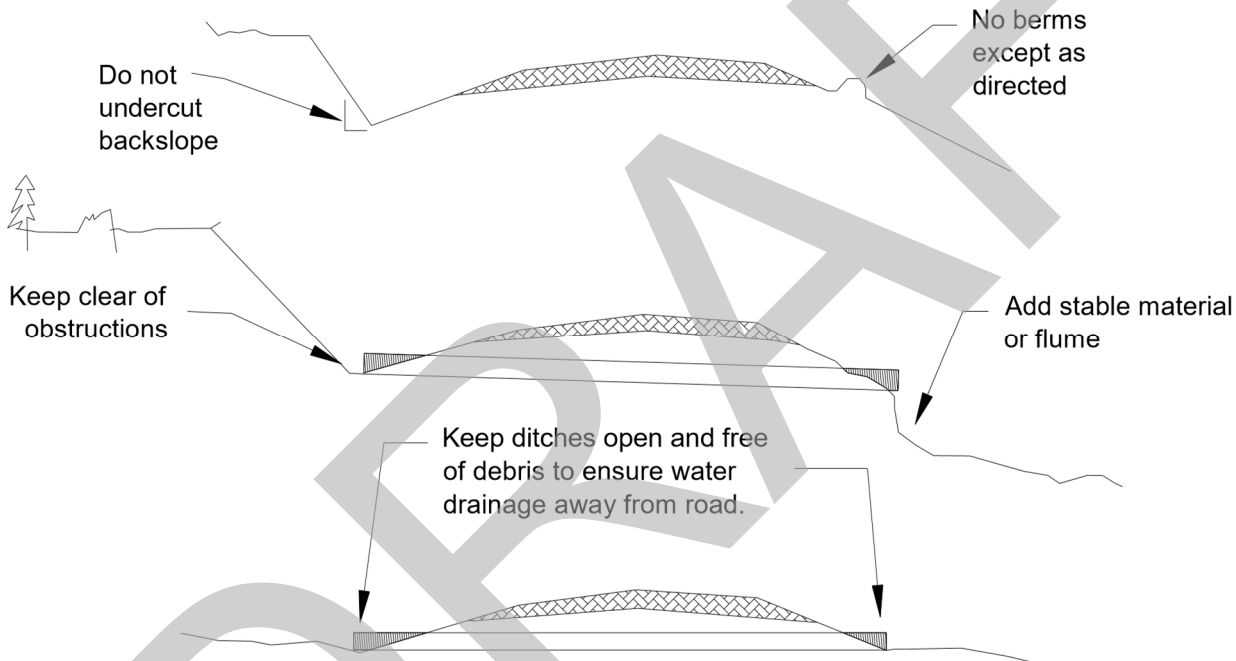
- Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

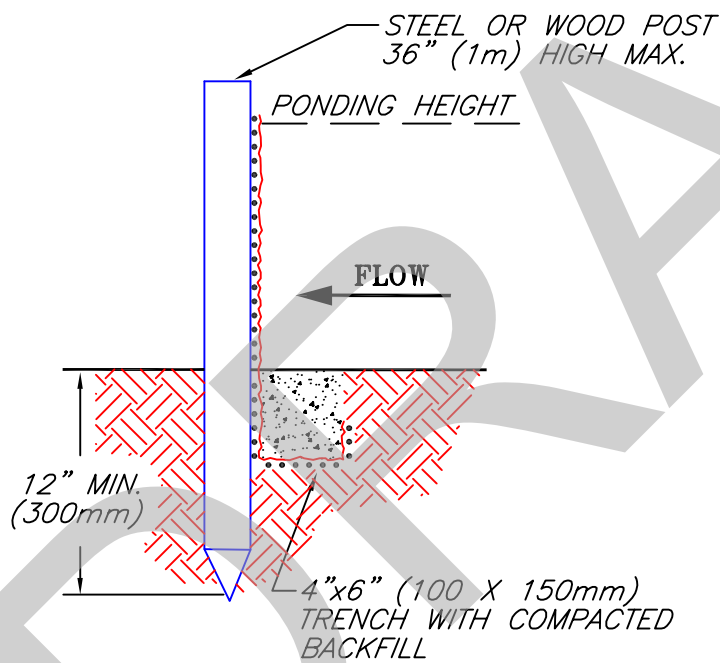
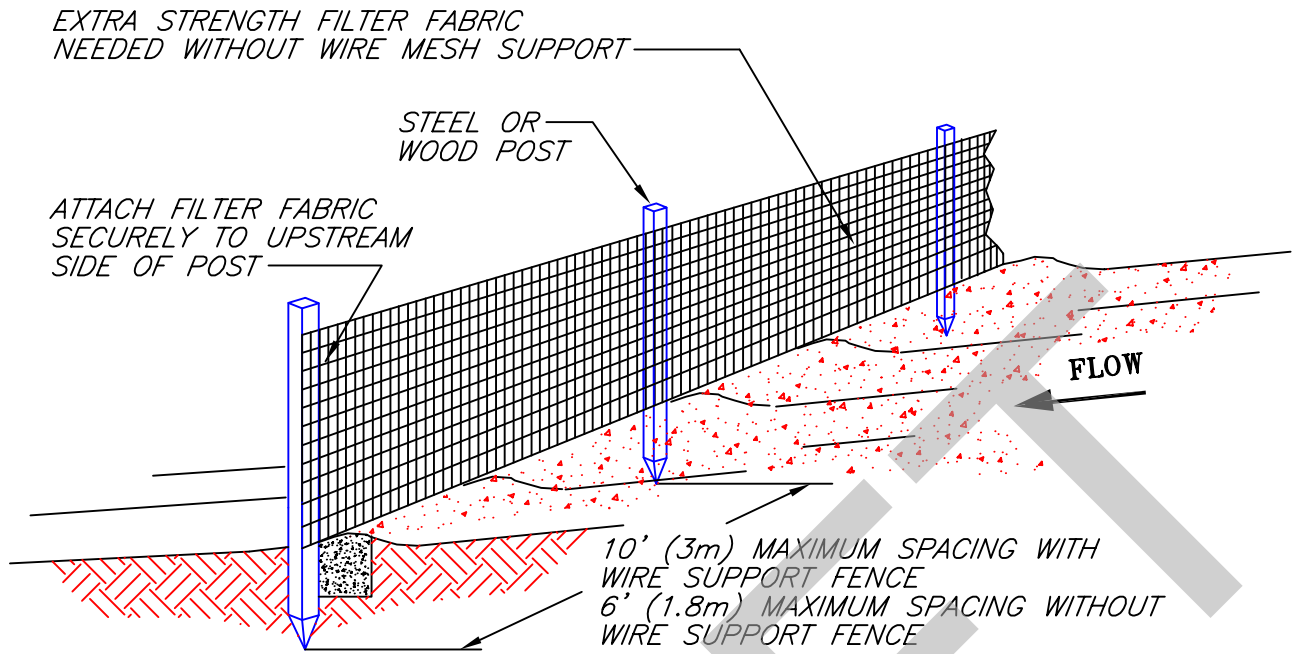
Termination of Use or End of Season

- At the conclusion of logging operations, ensure all conditions of these specifications have been met.

Debris

- Remove fallen timber, limbs, and stumps from the slopes, roadway, ditchlines, and culvert inlets.





TRENCH DETAIL

NOTES:

1. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
2. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. 9" (225mm) MAXIMUM RECOMMENDED STORAGE HEIGHT.
3. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.

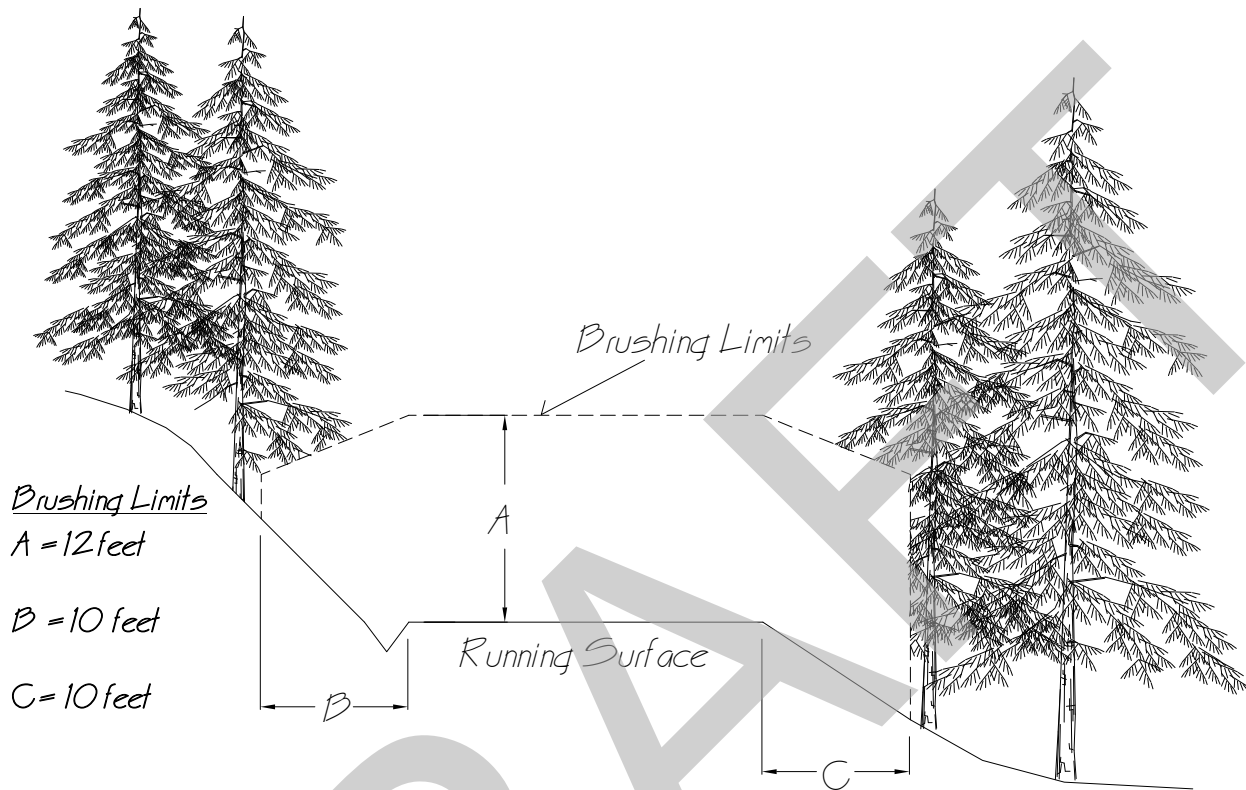
NOT TO SCALE

SILT FENCE

© 1994 JOHN McCULLAH

FILE: SILTFENC

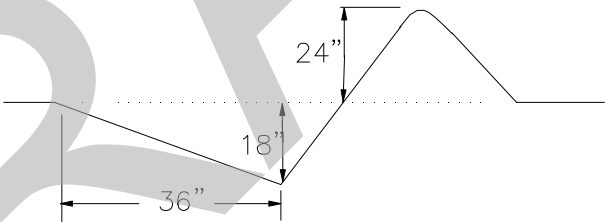
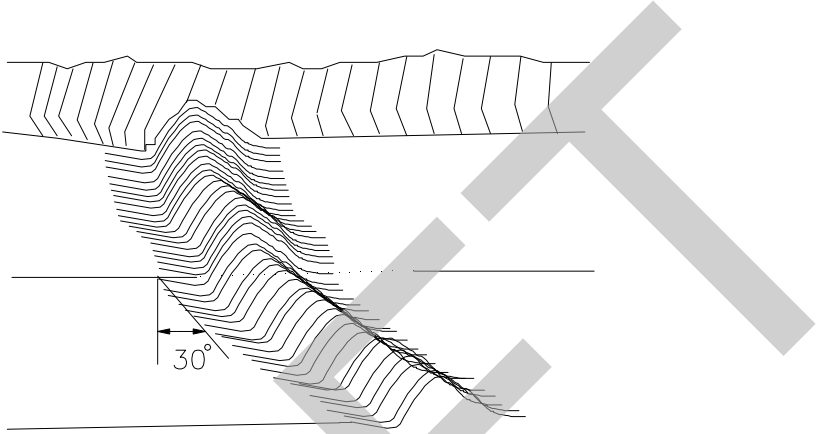
ROADSIDE BRUSHING DETAIL



GENERAL NOTES

- 1) Vegetative material, including limbs, up to 4 inches in diameter shall be cut within the brushing limits shown on the drawing above. This includes vegetative material growing on the running surface.
- 2) Vegetative material shall be cut as near flush with the ground as possible, but shall not extend more than 6 inches above the ground.
- 3) Brushing Limit C may be increased on the inside of curves to improve sight distance if approved by the Contract Administrator

NON-DRIVABLE WATER BAR DETAIL

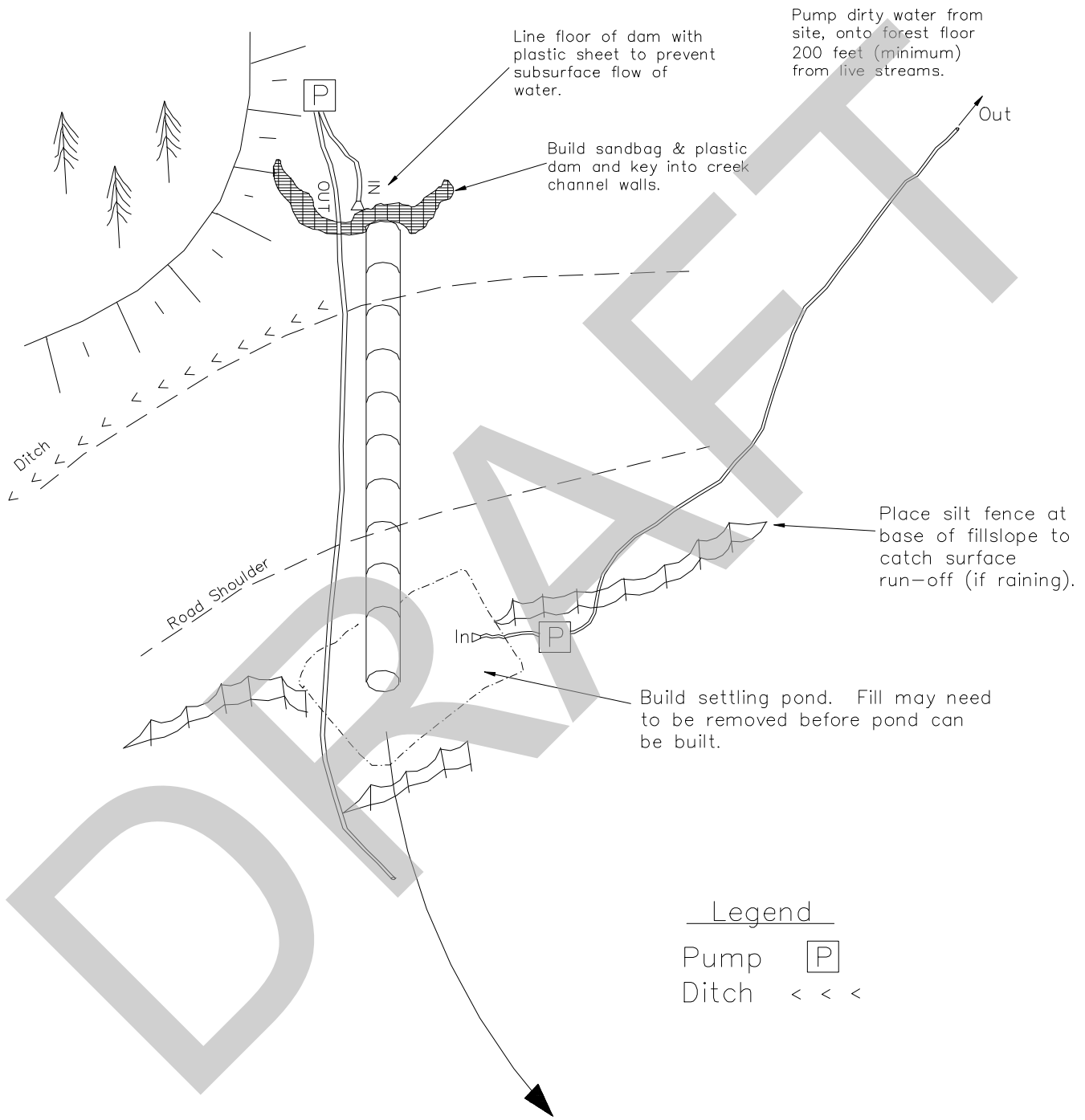


STREAM DIVERSION PROCEDURE

For culvert installation or removal in live waters, sites shall be dewatered within the area of direct influence of the stream. Stream culvert installations or removals will occur as follows, any deviations shall be approved, in writing, by the Contract Administrator.

1. Prior to any work within the high waterline, Purchaser shall contact the Contract Administrator for an on-site pre-work to submit a plan for pumping and/or diverting all stream flow around the work area and pumping and/or diverting any groundwater flow from out of the work area, as approved, in writing, by the Contract Administrator. The SETTLING POND AND PUMP DETAIL, included herein, is an example of a pre-approved dewatering plan.
2. Once the stream has been pumped and/or diverted, stream flow shall not be allowed through the work area until all work below the ordinary high water line has been completed and approved, in writing, by the Contract Administrator.
3. Sedimentation shall be avoided during culvert installation or removal in accordance with Road Plan Clause 1-29 SEDIMENT RESTRICTION.
4. Per Road Plan Clause 8-1 SEDIMENT CONTROL STRUCTURES, Purchaser shall install silt fences or other suitable sediment control methods as approved by the Contract Administrator.
5. Backfill any settling ponds and remove any diversion culverts.
6. Maintain a clean jobsite in accordance with Road Plan Clause 7-5 STRUCTURE DEBRIS.

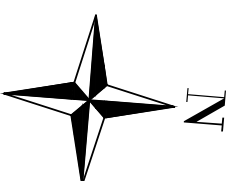
SETTLING POND AND PUMP DETAIL



GENERAL NOTES:

FIELD MEASUREMENTS TAKEN IN OCTOBER OF 2023.

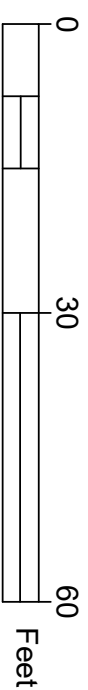
ANY STANDING TIMBER REMOVED FROM THE SITE SHALL BE LEFT WHOLE AND PLACED IN THE CONSTRUCTED INLET CHANNEL FOLLOWING CONSTRUCTION, AS DESIGNATED BY THE DESIGN ENGINEER OR THEIR DESIGNEE.



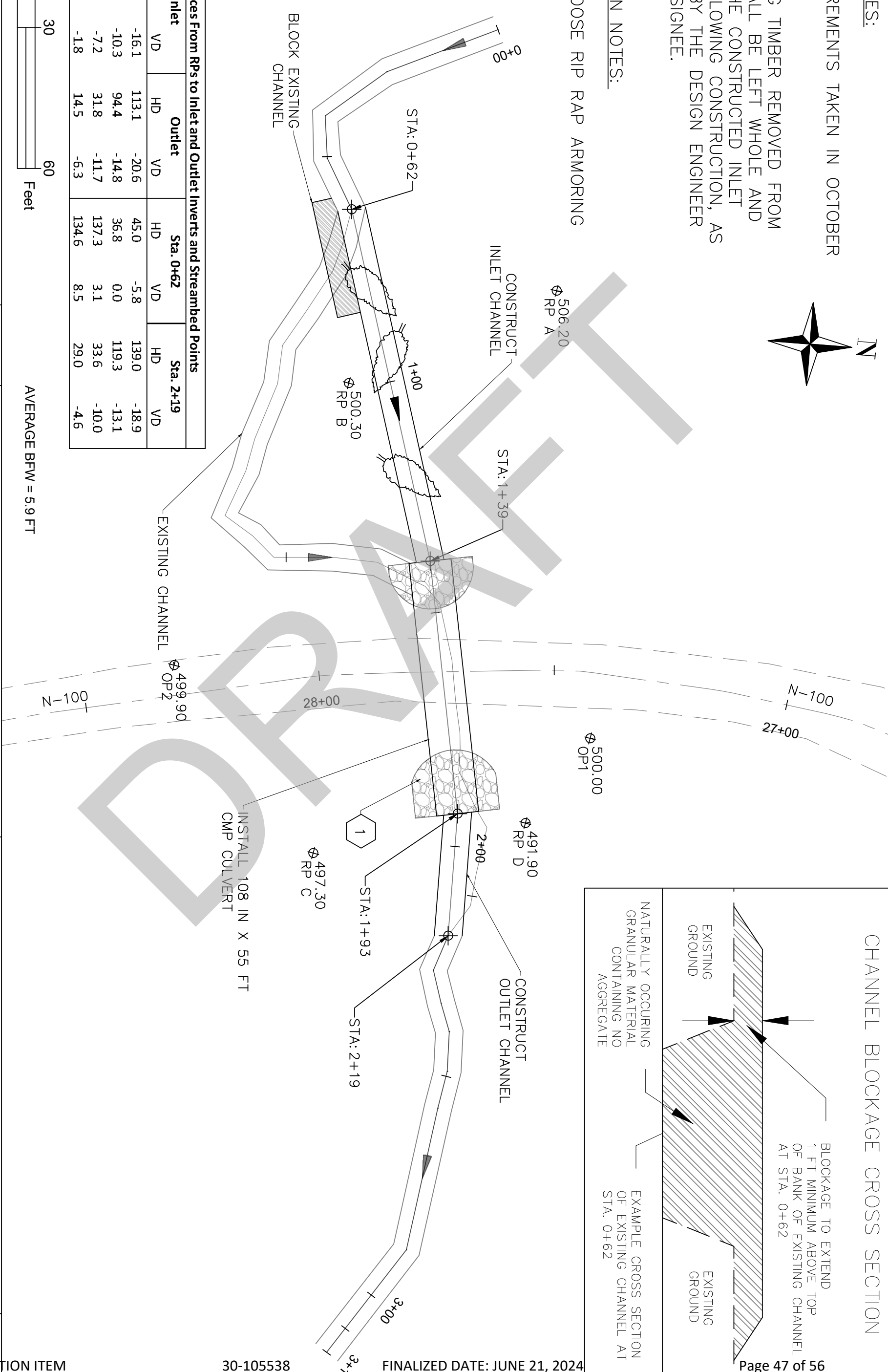
CONSTRUCTION NOTES:

- 1 LIGHT LOOSE RIP RAP ARMORING

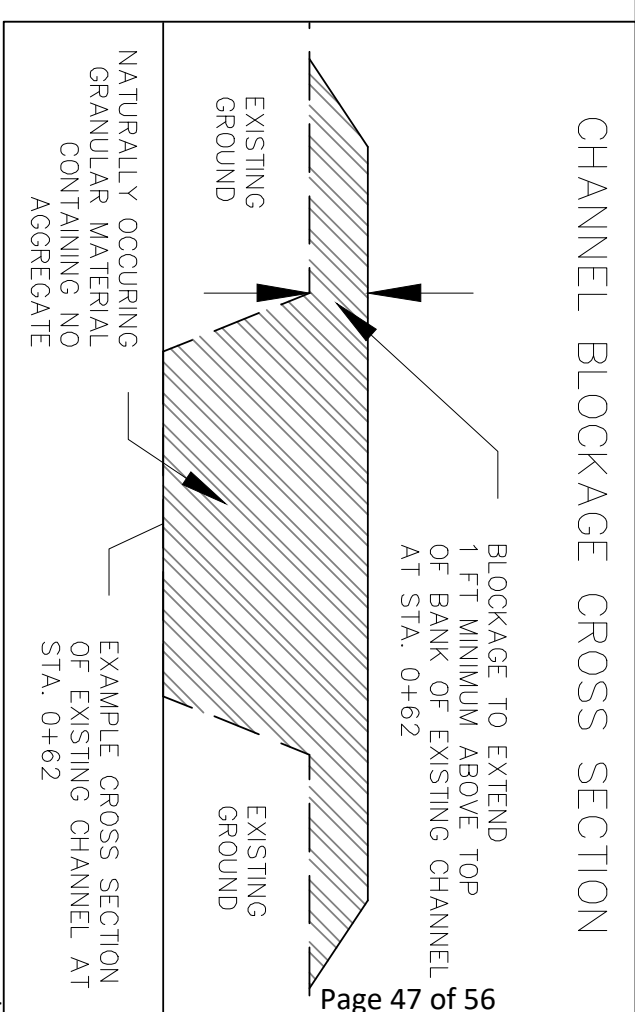
Distances From RPs to Inlet and Outlet Inverts and Streambed Points								
	Inlet		Outlet		Sta. 0+62		Sta. 2+19	
	HD	VD	HD	VD	HD	VD	HD	VD
RP A	63.4	-16.1	113.1	-20.6	45.0	-5.8	139.0	-18.9
RP B	41.6	-10.3	94.4	-14.8	36.8	0.0	119.3	-13.1
RP C	66.8	-7.2	31.8	-11.7	137.3	3.1	33.6	-10.0
RP D	59.2	-1.8	14.5	-6.3	134.6	8.5	29.0	-4.6



AVERAGE BFW = 5.9 FT



CHANNEL BLOCKAGE CROSS SECTION



30-105538

FINALIZED DATE: JUNE 21, 2024

Page 47 of 56

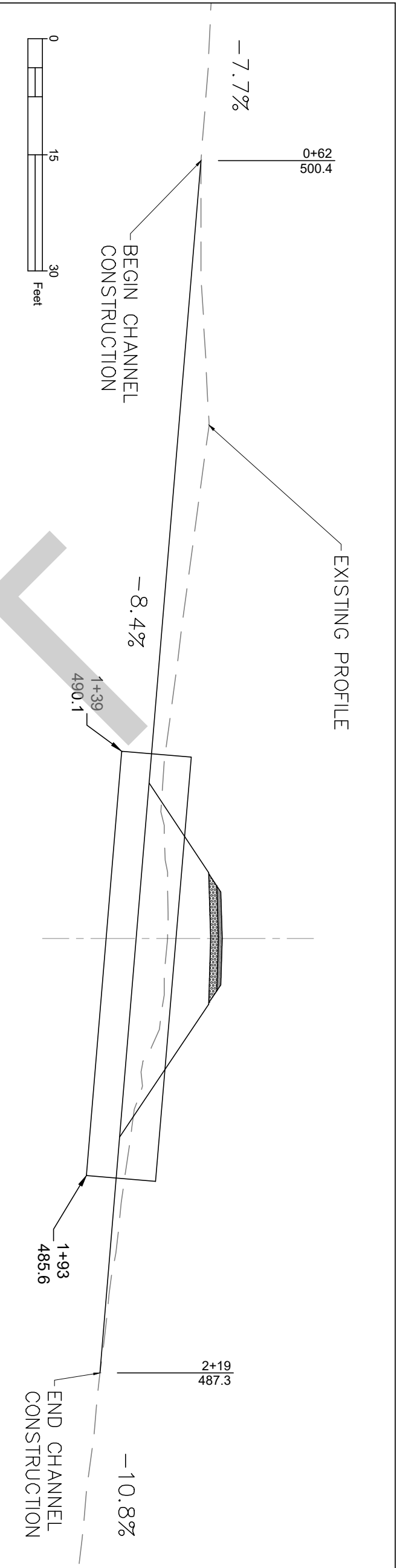


WASHINGTON STATE DEPARTMENT OF
NATURAL RESOURCES

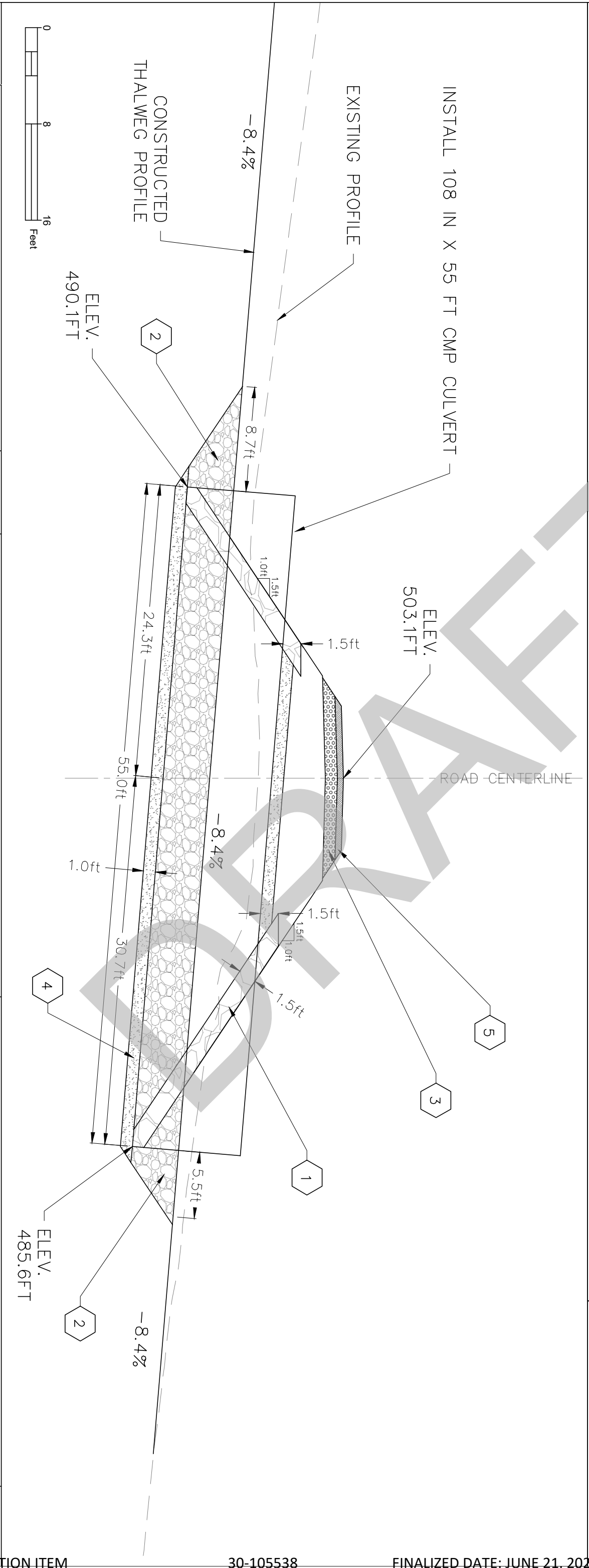
SITE PLAN
ACTION ITEM FISH CROSSING DESIGN
DESIGNED BY: G. GERRITSEN
DRAWN BY: G. GERRITSEN

LEGAL: Sec.17 T13N R05W
LAT & LONG: N46.6070° W123.3481°
DATE: 04/01/2024
REVISION DATE: XXXX/XXXX

ACTION ITEM SHEET 1 OF 4



- CONSTRUCTION NOTES:**
- 1 LIGHT LOOSE RIP RAP ARMORING
 - 2 STREAM SIMULATION ROCK
 - 3 SELECT PIT RUN
 - 4 1 1/4 INCH MINUS CRUSHED ROCK
 - 5 2 1/2 INCH MINUS CRUSHED ROCK



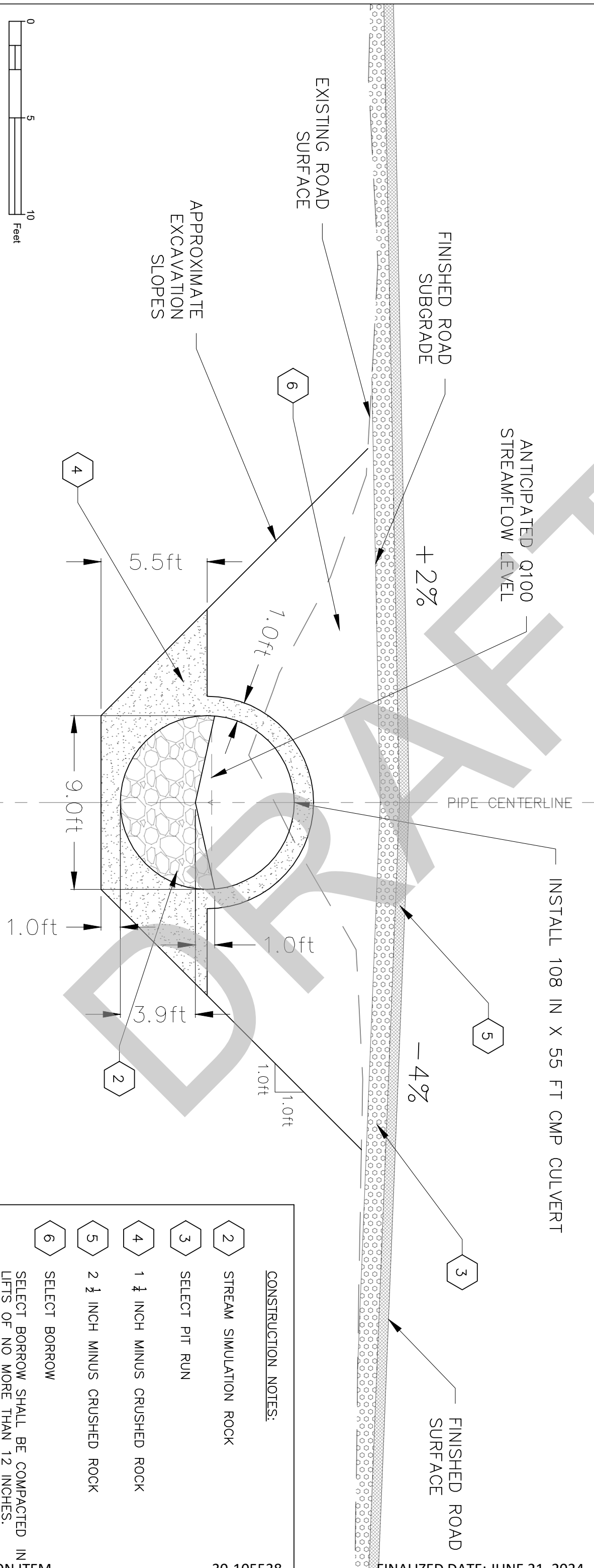
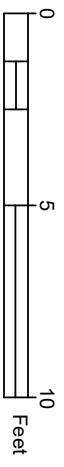
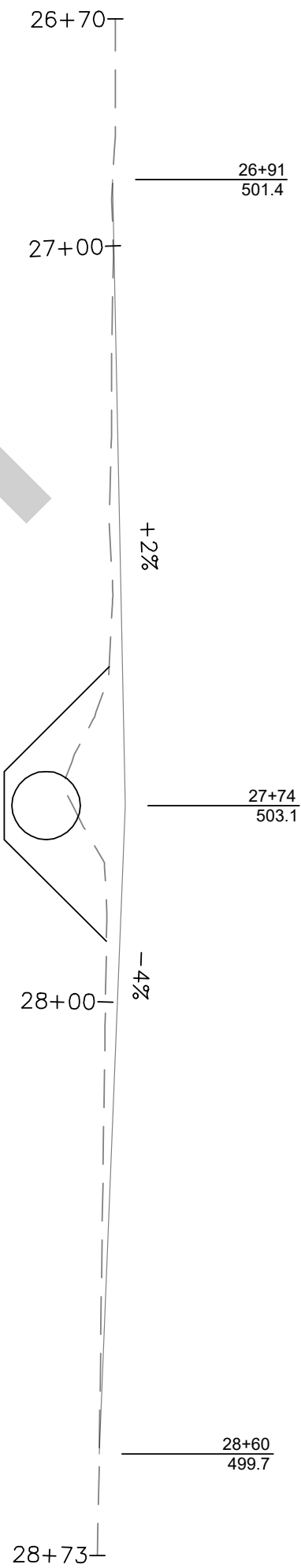
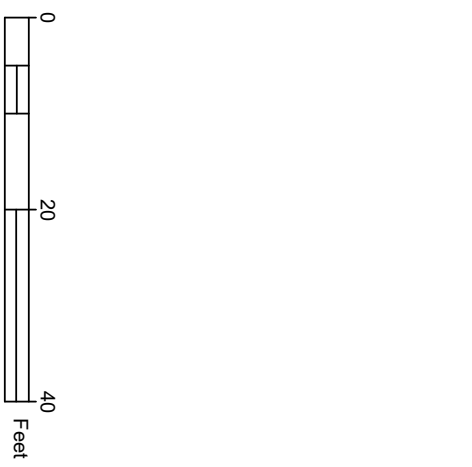
WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

STREAM PROFILE ACTION ITEM FISH CROSSING DESIGN

DESIGNED BY: G. GERRITSEN
DRAWN BY: G. GERRITSEN

LEGAL: Sec. 17 T13N R05W
LAT & LONG: N46.6070° W123.3481°
DATE: 04/01/2024
REVISION DATE: XXXX/XXXX

SHEET 2 OF 4



- CONSTRUCTION NOTES:**
- 2 STREAM SIMULATION ROCK
 - 3 SELECT PIT RUN
 - 4 1 1/4 INCH MINUS CRUSHED ROCK
 - 5 2 1/2 INCH MINUS CRUSHED ROCK
 - 6 SELECT BORROW
- SELECT BORROW SHALL BE COMPACTED IN LIFTS OF NO MORE THAN 12 INCHES.



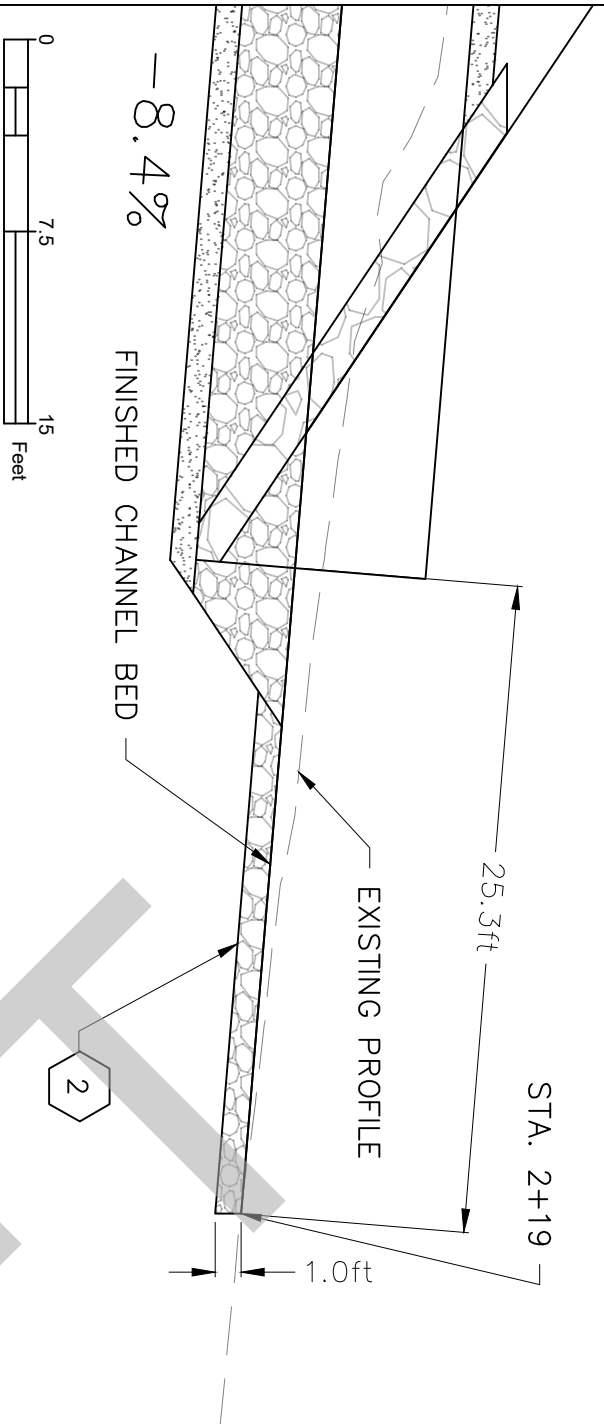
WASHINGTON STATE DEPARTMENT OF
NATURAL RESOURCES

CENTERLINE ROAD PROFILE
ACTION ITEM FISH CROSSING DESIGN
DESIGNED BY: G. GERRITSEN
DRAWN BY: G. GERRITSEN

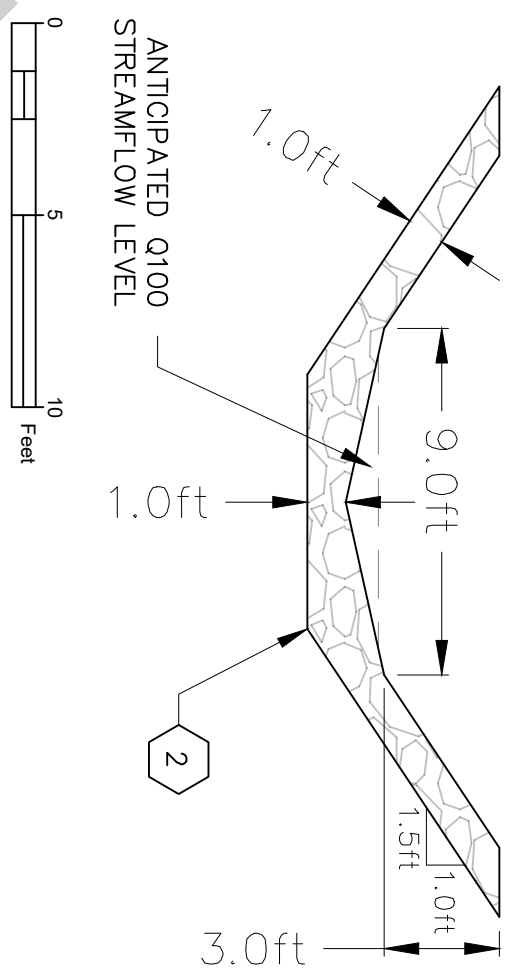
LEGAL: Sec. 17 T 13N R05W
LAT & LONG: N46.6070° W123.3481°
DATE: 04/01/2024
REVISION DATE: XXXX/XXXX

SHEET
3
OF
4

OUTLET CHANNEL PROFILE



CHANNEL CROSS SECTION



CONSTRUCTION NOTES:

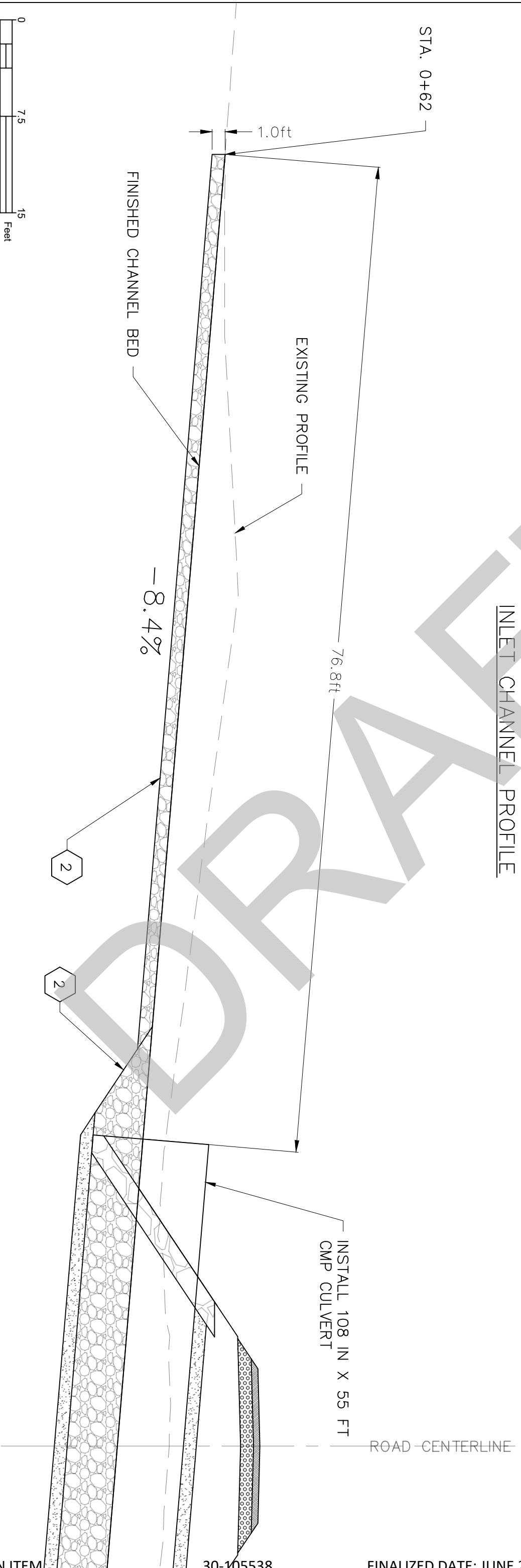
INLET AND OUTLET CHANNEL SHALL BE CONSTRUCTED TO MEET THE FOLLOWING:

CHANNEL BED IS SHAPED TO PROVIDE A DEFINED LOW-FLOW PATH IN THE CENTER OF THE CHANNEL, AND ALLOWS FOR THE ANTICIPATED 5.9FT³/SEC STREAM WIDTH AT TYPICAL STREAMFLOW.

CHANNEL BANKS PROVIDE 3 VERTICAL FEET OF ARMORING ABOVE THE ANTICIPATED TYPICAL STREAMFLOW LEVEL. MINIMUM THICKNESS OF CHANNEL BANK ARMORING IS 1 FT.

2 STREAM SIMULATION ROCK

INLET CHANNEL PROFILE



WASHINGTON STATE DEPARTMENT OF
NATURAL RESOURCES

CHANNEL CONSTRUCTION DETAIL
ACTION ITEM FISH CROSSING DESIGN

DESIGNED BY: G. GERRITSEN
DRAWN BY: G. GERRITSEN

LEGAL: Sec. 17 T13N R05W

LAT & LONG: N46.6070° W123.3481°

DATE: 04/01/2024

REVISION DATE: XXXX/XXXX

SHEET

4

OF

4

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES
PACIFIC CASCADE REGION

B&E QUARRY DEVELOPMENT PLAN

Section 24, Township 13 North, Range 06 West, W.M.

Page 1 of 3

1. Development shall begin in Area A. Once the elevation of Area A is reduced to the elevation of the Existing Pit Floor, development shall proceed into the pit floor within the combined area of Area A and the Existing Pit Floor. Development in any other area must be approved in writing by the Contract Administrator.
2. All vegetation including stumps shall be cleared a minimum of 20 feet beyond the top of all working faces.
3. Overburden shall be end hauled to the designated waste area and compacted. Minimal acceptable compaction is achieved by placing waste material in 2 foot or shallower lifts and routing excavation equipment over entire width of the lifts.
4. Root wads and organic debris larger than one cubic foot in volume shall be separated from overburden material and piled in the designated waste area.
5. Pit faces shall not exceed 25 feet in height and shall be sloped no steeper than ¼:1.
6. Working bench width shall be a minimum of 20 feet.
7. The pit floor shall have continuity of slope, providing drainage to the South at a minimum of 2 percent, unless otherwise approved in writing by Contract Administrator.
8. The location and amount of material to be placed in a stockpile are subject to approval of the Contract Administrator.
9. Oversize material remaining in the rock source at the conclusion of use shall not exceed 5 percent of the total volume mined during that operation. Oversize material is defined as rock fragments larger than two feet in any direction. At the conclusion of operations, oversize material shall be placed as directed by the Contract Administrator.
10. All operations shall be carried out in compliance with all regulations of:
 - a. Regulations and Standards Applicable to Metal and Nonmetal Mining and Milling Operations (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration.
 - b. Safety Standards for Construction Work (296-155 WAC), Washington Department of Labor and Industries.
11. The Operator shall submit an informational drilling and shooting plan to the Contract Administrator 10 working days prior to any drilling (Form # M-126PAC).

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES
PACIFIC CASCADE REGION

B&E QUARRY DEVELOPMENT PLAN

Section 24, Township 13 North, Range 06 West, W.M.

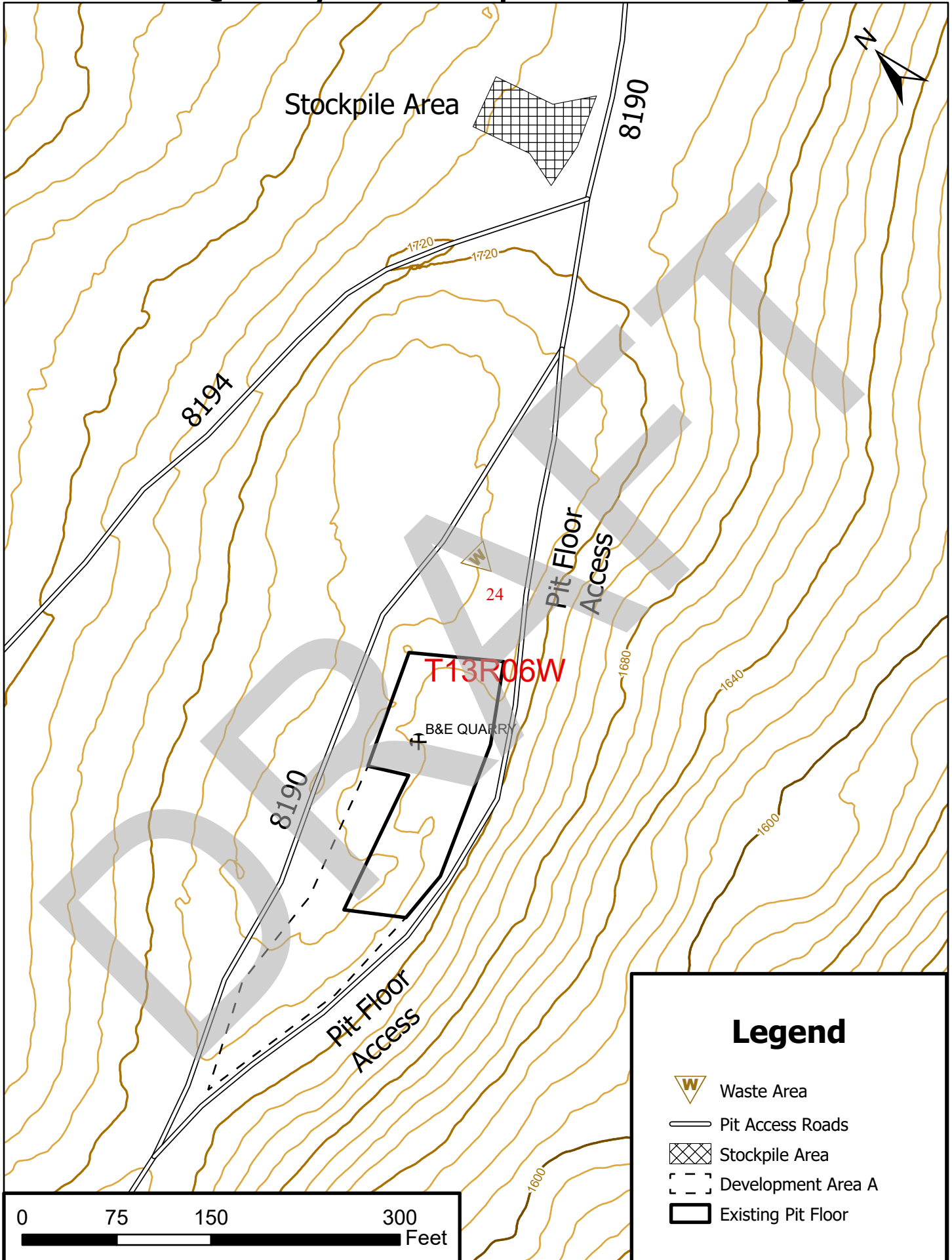
Page 2 of 3

12. Upon completion of pit operations:

- a. The pit floor shall be left in a smooth and neat condition. The surface of pit floors and benches must be uniform and free-draining at a minimum 2% outslope gradient.
- b. All exposed soil in the waste area shall be grass seeded in accordance with Road Plan Clauses 8-15 REVEGETATION and 8-25 GRASS SEED.
- c. Pit faces and walls shall be scaled and cleared of loose and overhanging material.
- d. Benches and faces shall have safety berms constructed or access blocked to highway vehicles.
- e. The area will be left in a condition that will not endanger public safety, damage property, or be hazardous to animal or human life. The site shall be cleared of all temporary structures, equipment and rubbish, and shall be left in a neat and presentable condition.
- f. Prior to termination of the contract, quarry condition and compliance with all terms of the contract shall be approved in writing by the Contract Administrator.

13. Reclamation will not be required following use.

B&E Quarry Development Plan Pg. 3



STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES
PACIFIC CASCADE REGION

INFORMATIONAL BLASTING PLAN

Timber Sale/Project Name: _____ App./Project No.: _____

1. Blaster-in-Charge: Name: _____
Company: _____
Address: _____
Telephone: _____
2. Quarry Name/Location: _____
3. Total Estimated Cubic Yards in Blast (loose): _____
4. Hole Spacing: _____
5. Burden: _____
6. Hole Diameter: _____
7. Hole Depth: _____
8. Sub Drill: _____
9. Number of Holes: _____
10. Stemming Depth: _____
11. Explosive (mfg., name, density, %, V.O.D.): _____
12. Type and Size of Primer (if applicable): _____
13. Total Weight of Primers for Shot: _____
14. Calculated Powder Factor/Cubic Yard: _____
15. Number of Delays (in M.S.): _____

M-126PAC (03/04)

INFORMATIONAL BLASTING PLAN

Page 2 of 3

16. Number of Holes Fired on Each Delay: _____

17. Total Amount of Explosives Fired on Each Delay: _____

18. Type of Blasting Machine: _____

19. Date, Start Drilling: _____

20. Date and Time, Start Loading: _____

21. Date and Time of Blast (approx.): _____

DRAFT

INFORMATIONAL BLASTING PLAN

Page 3 of 3

22. Detail drawing of delay system (show hole pattern and delays in milliseconds). Attach additional sheets if required:

23. Typical cross-section of hole (show primer, main charge, sub drill, and stemming):

23. Submitted by: _____ Date: _____

24. Received by: _____ Date: _____

Note: Attach copies of manufacturer=s data sheet(s) for explosive and caps.

M-126PAC (03/04)

SUMMARY - Road Development Costs

REGION: Pacific Cascade

DISTRICT: Lewis

SALE NAME: Action Item

AGREEMENT #: 30-105538

ROAD NUMBERS:	Optional: N-100-EXT, 8189-EXT, Spur A, Spur B, Spur C			
	Required:	N-100	N-100, 8189	
ROAD STANDARD:	Construction	Reconstruction	Maintenance	
NUMBER OF STATIONS:	21.85	5.00	41.10	
CLEARING & GRUBBING, EXCAVATION AND FILL, MISC.:	\$16,923.77	\$2,129.55	\$2,825.07	
ROAD ROCK:	Optional:	\$54,051.35	\$0.00	\$0.00
	Required:	\$0.00	\$22,087.88	\$10,052.26
	Total:	\$54,051.35	\$22,087.88	\$10,052.26
STOCKPILE:	-	-	-	\$0.00
CULVERTS AND FLUMES:	\$6,461.00	\$923.00	\$2,769.00	
STRUCTURES:	-	\$29,220.20	-	
MOBILIZATION:	\$2,930.78	\$368.79	\$489.23	
TOTAL COSTS:	\$80,366.90	\$54,729.42	\$16,135.56	
COST PER STATION:	\$3,678	\$10,946	\$393	
ROAD DEACTIVATION & ABANDONMENT COSTS:	\$0.00	\$0.00	\$0.00	
	10% OVERHEAD AND GENERAL EXPENSE =		\$15,123.19	
	TOTAL (All Roads) =		\$166,355.07	
	TOTAL (Minus Optional Rock) =		\$112,303.72	
	SALE VOLUME MBF =		4,835	
	TOTAL \$/MBF =		\$34.41	
	TOTAL \$/MBF (Minus Optional Rock) =		\$23.23	

Profit and Risk costs are accounted on an individual basis.

ROCK DEVELOPMENT COST SUMMARY

Pit:	B&E Quarry	Location:	T13R06W
Sale:	Action Item	Road:	3703 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage	1.16	Total Truck Loads:	3703 c.y.
Drill Pct.:	50%	In Place Total:	2645 c.y.

Drill & Shoot:	\$4.50	/cu.yd x	1323	cu.yds.	\$5,953.50
Rip Rock:	\$2.50	/cu.yd x	1322	cu.yds.	\$3,305.00
Push Rock:	\$0.67	/cu.yd x	3703	cu.yds.	\$2,481.01
Load Crusher:	\$0.75	/cu.yd x	3703	cu.yds.	\$2,777.25
Crush 6" Rock:	\$6.50	/cu.yd x	3703	cu.yds.	\$24,069.50
Load Dump Truck:	\$1.50	/cu.yd x	3703	cu.yds.	\$5,554.50
				Subtotal	\$44,140.76

Move In/Set-up Jaw	1	@	\$927.13	=	\$927.13
Move In and set up Drill and Compressor	1	@	\$345.17	=	\$345.17
Move in Loader	1	@	\$458.33	=	\$458.33
Move in Excavator	1	@	\$611.93	=	\$611.93
				Subtotal	\$2,342.56

TOTAL PRODUCTION COSTS \$46,483.32

Base Cost= \$12.55 Per Cu.Yd.

Road Segment	Haul Cost /cu.yd.	Application Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds	Speed (Mi/hr.)	One-Way Dist (ft)	ROCK COST	
N-100 Material Inside Culvert	\$8.10	\$6.00	\$12.55	\$26.65	167	15	16110	\$4,450.55	
N-100	\$8.10	\$1.00	\$12.55	\$21.65	350	15	16110	\$7,577.50	
N-100 Backfill	\$8.10	\$1.00	\$12.55	\$21.65	176	15	16110	\$3,810.40	
N-100-EXT Energy Dissipator	\$8.29	\$6.00	\$12.55	\$26.84	2	15	16610	\$53.68	
N-100-EXT	\$8.29	\$1.00	\$12.55	\$21.84	554	15	16610	\$12,099.36	
8189	\$3.56	\$1.00	\$12.55	\$17.11	99	15	4110	\$1,693.89	
8189 Energy Dissipator	\$3.56	\$6.00	\$12.55	\$22.11	3	15	4110	\$66.33	
8189-EXT	\$4.16	\$1.00	\$12.55	\$17.71	1440	15	5714	\$25,502.40	
8189-EXT Energy Dissipator	\$4.16	\$6.00	\$12.55	\$22.71	3	15	5714	\$68.13	
Spur A	\$4.87	\$1.00	\$12.55	\$18.42	274	15	7564	\$5,047.08	
Spur B Energy Dissipator	\$4.45	\$6.00	\$12.55	\$23.00	1	15	6464	\$23.00	
Spur B	\$4.45	\$1.00	\$12.55	\$18.00	339	15	6464	\$6,102.00	
Spur C Inlet and Outlet Armorin	\$3.91	\$6.00	\$12.55	\$22.46	1	15	5040	\$22.46	
Spur C	\$3.91	\$1.00	\$12.55	\$17.46	294	15	5040	\$5,133.24	
					Total C.Y.		3703	Sub Total	\$71,650.02

TOTAL ROCKING COSTS \$71,650.02

ROCK DEVELOPMENT COST SUMMARY

Pit:	<u>Walville Quarry Stockpile</u>	Location:	
Sale:	Action Item	Road:	<u>789 c.y.</u>
Swell:	<u>1.40</u>	Stockpile:	<u>c.y.</u>
Shrinkage	<u>1.16</u>	Total Truck Loads:	<u>789 c.y.</u>
Drill Pct.:	<u>0%</u>	In Place Total:	<u>564 c.y.</u>

Load Dump Truck:	<u>\$1.50</u> /cu.yd x	<u>789</u> cu.yds.	<u>\$1,183.50</u>
		Subtotal	<u>\$1,183.50</u>

Base Cost=	<u>\$1.50</u>	Per Cu.Yd.	TOTAL PRODUCTION COSTS <u>\$1,183.50</u>
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Road Segment	Haul Cost /cu.yd.	Application Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds	Speed (Mi/hr.)	One-way Dist (ft)	ROCK COST
N-100	\$11.53	\$1.00	\$1.50	\$14.03	548	18	30200	\$7,688.44
N-100	\$11.53	\$1.00	\$1.50	\$14.03	150	18	30200	\$2,104.50
N-100 Inlet and Outlet Armorir	\$11.53	\$6.00	\$1.50	\$19.03	31	18	30200	\$589.93
8189 Crossdrain Backfill	\$7.56	\$1.00	\$1.50	\$10.06	60	18	17600	\$603.60
				Total C.Y.	789		Sub Total	\$10,986.47

TOTAL ROCKING COSTS \$10,986.47

ROCK DEVELOPMENT COST SUMMARY

Pit:	Commercial Source	Location:	
Sale:	Action Item	Road:	90 c.y.
Swell:	0.00	Stockpile:	c.y.
Shrinkage	0.00	Total Truck Loads:	90 c.y.
Drill Pct.:	0%	In Place Total:	c.y.

Purchase 1 1/4" Minus Crushed \$13.50 /ton x 130 tons = \$1,755.00
Subtotal \$1,755.00

Base Cost= \$19.50 Per Cu.Yd. TOTAL PRODUCTION COSTS \$1,755.00

Road Segment	Haul Cost /cu.yd.	Application Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds	Speed (Mi/hr.)	One-way Dist (ft)	ROCK COST
N-100 Stream Culvert Bedding	\$19.00	\$1.00	\$19.50	\$39.50	90	15	44880	\$3,555.00
				Total C.Y.	90		Sub Total	\$3,555.00

TOTAL ROCKING COSTS \$3,555.00



SUMMARY OF ROAD

Sale:

Action Item

Road:

N-100

Required Pre-Haul Maintenance- 26+60 stations <div style="border-top: 1px solid black; margin-top: 5px;">0.50</div> miles	Required Reconstruction - 0+00 stations <div style="border-top: 1px solid black; margin-top: 5px;">0.00</div> miles	Required Construction - 0+00 stations <div style="border-top: 1px solid black; margin-top: 5px;">0.00</div> miles
Required Abandonment- 0+00 stations <div style="border-top: 1px solid black; margin-top: 5px;">0.00</div> miles	Optional Reconstruction - 0+00 stations <div style="border-top: 1px solid black; margin-top: 5px;">0.00</div> miles	Optional Construction - 0+00 stations <div style="border-top: 1px solid black; margin-top: 5px;">0.00</div> miles

PRE-HAUL MAINTENANCE

MISC.

Desod, grade and shape existing road surface -	26.60	stations @	\$18.25	per station	\$485.45
Roll shaped road surface w/ vibratory roller prior to rocking -	26.60	stations @	\$9.70	per station	\$258.02
Remove and replace silt fence - 1+00 to 2+50	1.50	@	\$42.11	each	\$63.17
TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC.					\$806.64

ROCK

0+00	to	26+60	548	cy. of	2 1/2 Inch Minus Crushed Rock	@	\$14.03	per c.y.=	\$7,688.44	
									TOTAL ROCK	\$7,688.44

MOBILIZATION

SUBTOTAL **\$139.69**

OVERHEAD & GENERAL EXPENSES

10%

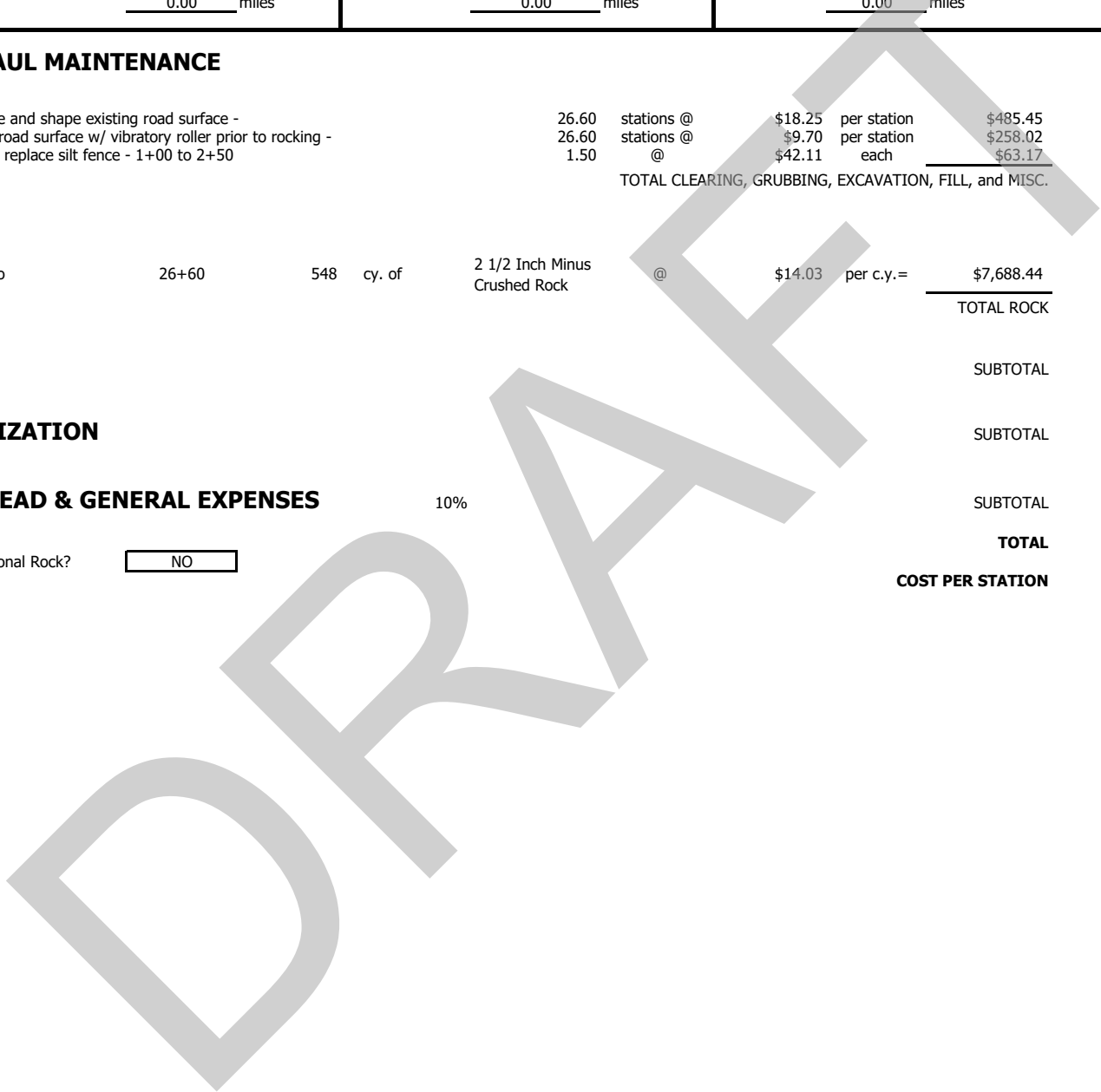
SUBTOTAL **\$863.48**

Optional Rock?

NO

TOTAL **\$9,498.25**

COST PER STATION **\$357.08**



SUMMARY OF ROAD

Sale:

Action Item

Road:

N-100

Required
Pre-Haul Maintenance- 0+00 stations
0.00 miles

Required
Reconstruction - 5+00 stations
0.09 miles

Required
Construction - 0+00 stations
0.00 miles

Required Abandonment- 0+00 stations
0.00 miles

Optional
Reconstruction - 0+00 stations
0.00 miles

Optional
Construction - 0+00 stations
0.00 miles

RECONSTRUCTION

CLEARING/GRUBBING

Scattering Organic Debris 5.00 sta @ \$140.00 per sta \$700.00
Construct waste areas - 2.00 hours @ \$180.00 per hour \$360.00

EXCAVATION

Pull and clean ditch- 5.00 stations @ \$67.19 per station \$335.95
Grade and shape subgrade - 5.00 stations @ \$14.60 per station \$73.00

MISC.

Roll subgrade w/ vibratory roller prior to rocking - 5.00 stations @ \$12.12 per station \$60.60
Apply grass seed per Clause 8-15 - 40.00 lbs @ \$15.00 per lbs \$600.00

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$2,129.55**

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>	30 LF of 18"	\$915.00	0 LF of 24"	\$0.00
		\$915.00		\$0.00
<u>Culvert Stakes & Markers</u>	1 markers	\$8.00		
		\$8.00		
TOTAL CULVERTS				\$923.00

ROCK

26+60 to	31+60	150 cy. of	2 1/2 Inch Minus Crushed Rock	@	\$14.03 per c.y.=	\$2,104.50
Stream Culvert Bedding	27+74	90 cy. of	1 1/4 Inch Minus Crushed Rock	@	\$39.50 per c.y.=	\$3,555.00
Material Inside Culvert	27+74	167 cy. of	Stream Simulation Rock	@	\$26.65 per c.y.=	\$4,450.55
Inlet and Outlet Armoring	27+74	31 cy. of	Light Loose Rip Rap	@	\$19.03 per c.y.=	\$589.93
26+60 to	31+60	350 cy. of	6-Inch Jaw Run	@	\$21.65 per c.y.=	\$7,577.50
Backfill	27+74	176 cy. of	Select Borrow	@	\$21.65 per c.y.=	\$3,810.40
TOTAL ROCK						\$22,087.88

ADDITIONAL REQUIREMENTS

Purchase 108in x 55ft Culvert -	55.00	feet @	\$400.00	per foot	\$22,000.00
Stream diversion installation -	2.00	hrs @	\$256.60	per hr	\$513.20
Stream pumping -	3.00	days @	\$141.60	per day	\$424.80
Excavation and channel construction -	15.00	hours @	\$215.00	per hr	\$3,225.00
Endhaul to waste area -	50.00	c.y. @	\$2.60	per c.y.	\$130.00
Labor -	3.00	days @	\$832.00	per day	\$2,496.00
Backfill structure (on site material) -	176.00	c.y. @	\$2.00	per c.y.	\$352.00
Compact backfill material -	176.00	c.y. @	\$0.45	per c.y.	\$79.20
TOTAL ADDITIONAL REQUIREMENTS					\$29,220.20

SUBTOTAL **\$54,360.63**

MOBILIZATION

SUBTOTAL **\$368.79**

OVERHEAD & GENERAL EXPENSES

10% SUBTOTAL **\$5,472.94**

TOTAL \$60,202.36

Optional Rock? NO

COST PER STATION \$12,040.47

SUMMARY OF ROAD

Sale:	Action Item		Road:	N-100-EXT
	Required Pre-Haul Maintenance- 0+00 stations 0.00 miles	Required Reconstruction - 0+00 stations 0.00 miles	Required Construction - 0+00 stations 0.00 miles	
	Required Abandonment- 0+00 stations 0.00 miles	Optional Reconstruction - 0+00 stations 0.00 miles	Optional Construction - 4+20 stations 0.08 miles	

CONSTRUCTION

CLEARING/GRUBBING

Scatter Organic Debris	4.20	sta @	\$280.00	per sta	\$1,176.00
Remove large stumps -	3.00	@	\$350.00	each	\$1,050.00

EXCAVATION

Road Construction Earthwork	4.20	sta. @	\$269.23	per sta. =	\$1,130.77
Grade and shape subgrade -	4.20	stations @	\$14.60	per station	\$61.32

MISC.

Roll subgrade w/ vibratory roller prior to rocking -	4.20	stations @	\$12.12	per station	\$50.90
Construct turnaround -	1.00	@	\$134.62	each	\$134.62
Construct landing -	1.00	@	\$538.46	each	\$538.46

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. \$4,142.07

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>	60	LF of 18"	\$1,830.00	0	LF of 24"	\$0.00
			\$1,830.00			\$0.00
<u>Culvert Stakes & Markers</u>						
2 markers			\$16.00			
			\$16.00			
				TOTAL CULVERTS		\$1,846.00

ROCK

Energy Dissipator	0+50, 3+50	2	cy. of	Quarry Spalls	@	\$26.84	per c.y. =	\$53.68
0+00 to	4+20	554	cy. of	6-Inch Jaw Run	@	\$21.84	per c.y. =	\$12,099.36
								TOTAL ROCK

\$12,153.04

SUBTOTAL **\$18,141.11**

MOBILIZATION

SUBTOTAL **\$717.30**

OVERHEAD & GENERAL EXPENSES

SUBTOTAL **\$1,885.84**

TOTAL \$20,744.25

Optional Rock? YES

COST PER STATION \$4,939.11

SUMMARY OF ROAD

Sale:	Action Item		Road:	8189	
Required Pre-Haul Maintenance-	14+50 0.27	stations miles	Required Reconstruction -	0+00 0.00	stations miles
Required Abandonment-	0+00 0.00	stations miles	Optional Reconstruction -	0+00 0.00	stations miles
			Required Construction -	0+00 0.00	stations miles
			Optional Construction -	0+00 0.00	stations miles

PRE-HAUL MAINTENANCE

CLEARING

Roadside Brushing 0.27 miles @ \$1,170.00 per mile = \$315.90

EXCAVATION

Reconstruct ditch - 14.50 stations @ \$67.19 per station \$974.26
 Clean culvert inlet and outlet @ sta. 3+90 - 1.00 @ \$53.75 per culvert \$53.75
 Construct turnout @ sta. 9+60 - 1.00 @ \$134.62 each \$134.62
 Construct turnaround @ sta. 14+20 - 1.00 @ \$134.62 each \$134.62

MISC.

Grade and shape existing road surface - 14.50 stations @ \$18.25 per station \$264.63
 Roll shaped road surface w/ vibratory roller prior to rocking - 14.50 stations @ \$9.70 per station \$140.65

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$2,018.43**

CULVERTS - MATERIALS & INSTALLATION

Culverts

90	LF of 18"	\$2,745.00		0	LF of 24"	\$0.00
		\$2,745.00				\$0.00

Culvert Stakes & Markers

3	markers	\$24.00				
		\$24.00			TOTAL CULVERTS	\$2,769.00

ROCK

Crossdrain Backfill	0+30, 6+50, 11+30	60	cy. of	2 1/2 Inch Minus Crushed Rock	@	\$10.06	per c.y. =	\$603.60
0+00 to Energy Dissipator	14+50 +30, 6+50, 11+	99 3	cy. of cy. of	6-Inch Jaw Run Quarry Spalls	@ @	\$17.11 \$22.11	per c.y. = per c.y. =	\$1,693.89 \$66.33
							TOTAL ROCK	\$2,363.82

SUBTOTAL **\$7,151.25**

MOBILIZATION

SUBTOTAL **\$0.00**

OVERHEAD & GENERAL EXPENSES

10% SUBTOTAL **\$715.13**

Optional Rock? NO

TOTAL \$7,866.38

COST PER STATION \$542.51

SUMMARY OF ROAD

Sale:

Action Item

Road:

8189-EXT

Required
Pre-Haul Maintenance- 0+00 stations
0.00 miles

Required
Reconstruction - 0+00 stations
0.00 miles

Required
Construction - 0+00 stations
miles

Required Abandonment- 0+00 stations
0.00 miles

Optional
Reconstruction - 0+00 stations
0.00 miles

Optional
Construction - 12+60 stations
0.24 miles

CONSTRUCTION

CLEARING/GRUBBING

Scattering Organic Debris	12.60	sta @	\$280.00	per sta	\$3,528.00
Remove large stumps -	5.00	@	\$350.00	each	\$1,750.00

EXCAVATION

Road Construction Earthwork	12.60	sta. @	\$152.17	per sta. =	\$1,917.34
Grade and shape subgrade -	12.60	stations @	\$14.60	per station	\$183.96

MISC.

Roll subgrade w/ vibratory roller prior to rocking -	12.60	stations @	\$12.12	per station	\$152.71
Construct turnaround -	1.00	@	\$134.62	each	\$134.62
Construct landing -	1.00	@	\$538.46	each	\$538.46

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. \$8,205.09

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>	90	LF of 18"	\$2,745.00	0	LF of 24"	\$0.00
			\$2,745.00			\$0.00
<u>Culvert Stakes & Markers</u>						
3 markers			\$24.00			
			\$24.00			

TOTAL CULVERTS \$2,769.00

ROCK

0+00 to	12+60	1,440	cy. of	6-Inch Jaw Run	@	\$17.71	per c.y.=	\$25,502.40
Energy Dissipator	+55, 6+25, 9+8	3	cy. of	Quarry Spalls	@	\$22.71	per c.y.=	\$68.13

TOTAL ROCK \$25,570.53

SUBTOTAL \$36,544.62

MOBILIZATION

SUBTOTAL \$1,420.92

OVERHEAD & GENERAL EXPENSES

10% **SUBTOTAL \$3,796.55**

TOTAL \$41,762.09

Optional Rock? YES

COST PER STATION \$3,314.45

SUMMARY OF ROAD

Sale:

Action Item

Road:

Spur A

Required
Pre-Haul Maintenance- 0+00 stations
0.00 miles

Required
Reconstruction - 0+00 stations
0.00 miles

Required
Construction - 0+00 stations
0.00 miles

Required Abandonment- 0+00 stations
0.00 miles

Optional
Reconstruction - 0+00 stations
0.00 miles

Optional
Construction - 1+40 stations
0.03 miles

CONSTRUCTION

CLEARING/GRUBBING

Scattering Organic Debris

1.40 sta @ \$280.00 per sta \$392.00

EXCAVATION

Road Construction Earthwork
Grade and shape subgrade -

1.40 sta. @ \$152.17 per sta. = \$213.04
1.40 stations @ \$14.60 per station \$20.44

MISC.

Roll subgrade w/ vibratory roller prior to rocking -
Construct turnaround -
Construct landing -

1.40 stations @ \$12.12 per station \$16.97
1.00 @ \$134.62 each \$134.62
1.00 @ \$538.46 each \$538.46

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC.

\$1,315.53

ROCK

0+00 to 1+40 274 cy. of

6-Inch Jaw Run @

\$18.42 per c.y. = \$5,047.08

TOTAL ROCK

\$5,047.08

SUBTOTAL

\$6,362.61

MOBILIZATON

SUBTOTAL

\$227.82

OVERHEAD & GENERAL EXPENSES

10%

SUBTOTAL

\$659.04

Optional Rock?

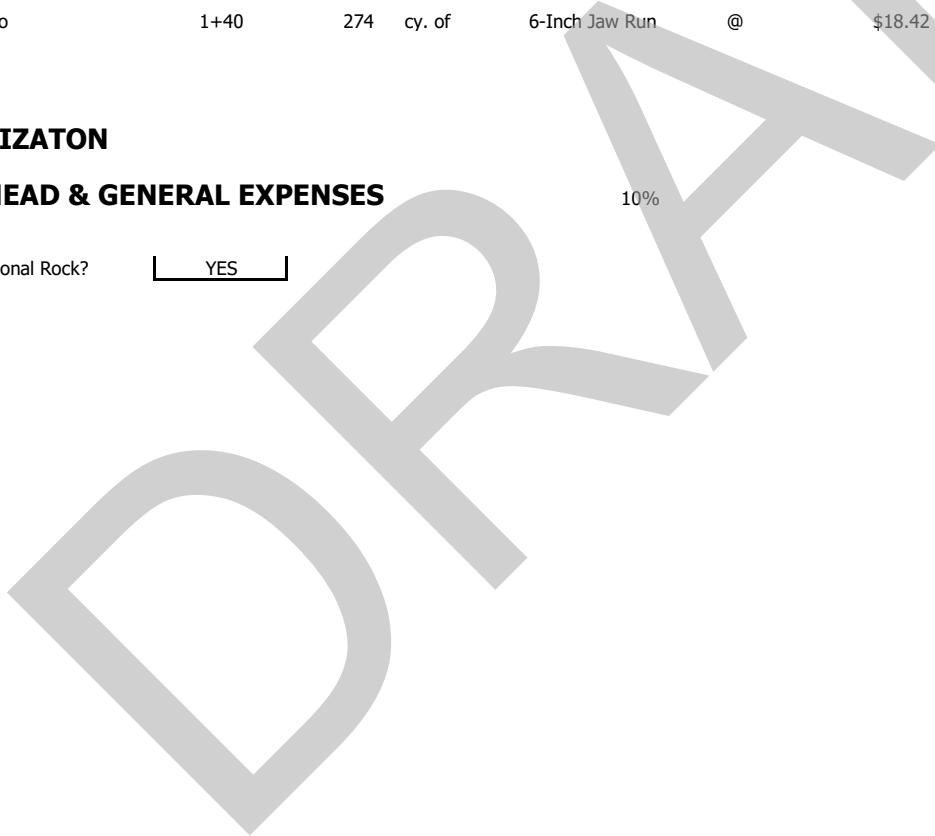
YES

TOTAL

\$7,249.47

COST PER STATION

\$5,178.19



SUMMARY OF ROAD

Sale:

Action Item

Road:

Spur B

Required Pre-Haul Maintenance-	0+00 0.00	stations miles
Required Abandonment-	0+00 0.00	stations miles

Required Reconstruction -	0+00 0.00	stations miles
Optional Reconstruction -	0+00 0.00	stations miles

Required Construction -	0+00 0.00	stations miles
Optional Construction -	2+05 0.04	stations miles

CONSTRUCTION

CLEARING/GRUBBING

Scattering Organic Debris 2.05 sta @ \$280.00 per sta \$574.00

EXCAVATION

Road Construction Earthwork 2.05 sta. @ \$269.23 per sta. = \$551.92
 Grade and shape subgrade - 2.05 stations @ \$14.60 per station \$29.93

MISC.

Roll subgrade w/ vibratory roller prior to rocking - 2.05 stations @ \$12.12 per station \$24.85
 Construct turnaround @ sta. - 1.00 @ \$134.62 each \$134.62
 Construct landing - 1.00 @ \$538.46 each \$538.46

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$1,853.78**

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>	30 LF of 18"	\$915.00	0 LF of 24"	\$0.00
		\$915.00		\$0.00
<u>Culvert Stakes & Markers</u>	1 markers	\$8.00		
		\$8.00		
			TOTAL CULVERTS	\$923.00

ROCK

Energy Dissipator 0+45 1 cy. of Quarry Spalls @ \$23.00 per c.y. = \$23.00
 0+00 to 2+05 339 cy. of 6-Inch Jaw Run @ \$18.00 per c.y. = \$6,102.00

TOTAL ROCK **\$6,125.00**

SUBTOTAL **\$8,901.78**

MOBILIZATION

SUBTOTAL **\$321.03**

OVERHEAD & GENERAL EXPENSES

10% SUBTOTAL **\$922.28**

TOTAL \$10,145.09

Optional Rock? YES

COST PER STATION \$4,948.82

SUMMARY OF ROAD

Sale:	Action Item		Road:	Spur C
	Required Pre-Haul Maintenance- 0+00 stations 0.00 miles	Required Reconstruction - 0+00 stations 0.00 miles	Required Construction - 0+00 stations 0.00 miles	Optional Construction - 1+60 stations 0.03 miles
	Required Abandonment- 0+00 stations 0.00 miles	Optional Reconstruction - 0+00 stations 0.00 miles		

CONSTRUCTION

CLEARING/GRUBBING

Scattering Organic Debris 1.60 sta @ \$280.00 per sta \$448.00

EXCAVATION

Road Construction Earthwork 1.60 sta. @ \$152.17 per sta. = \$243.47
 Grade and shape subgrade - 1.60 stations @ \$14.60 per station \$23.36

MISC.

Roll subgrade w/ vibratory roller prior to rocking - 1.60 stations @ \$12.12 per station \$19.39
 Construct turnaround @ sta. - 1.00 @ \$134.62 each \$134.62
 Construct landing - 1.00 @ \$538.46 each \$538.46

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$1,407.30**

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>	30 LF of 18"	\$915.00		
		\$915.00	0 LF of 24"	\$0.00
				\$0.00

<u>Culvert Stakes & Markers</u>	1 markers	\$8.00		
		\$8.00		
			TOTAL CULVERTS	\$923.00

ROCK

Inlet and Outlet Armoring	0+05	1	cy. of	Quarry Spalls	@	\$22.46	per c.y. =	\$22.46
0+00 to	1+60	294	cy. of	6-Inch Jaw Run	@	\$17.46	per c.y. =	\$5,133.24
								TOTAL ROCK

\$5,155.70

SUBTOTAL **\$7,486.00**

MOBILIZATION

SUBTOTAL **\$243.71**

OVERHEAD & GENERAL EXPENSES

10% SUBTOTAL **\$772.97**

TOTAL \$8,502.68

Optional Rock? YES

COST PER STATION \$5,314.18



WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

FOREST EXCISE TAX ROAD SUMMARY SHEET

Region:

Timber Sale Name:

Application Number:

EXCISE TAX APPLICABLE ACTIVITIES

Construction: linear feet
Road to be constructed (optional and required) but not abandoned

Reconstruction: linear feet
Road to be reconstructed (optional and required) but not abandoned

Abandonment: linear feet
Abandonment of existing roads not reconstructed under the contract

Decommission: linear feet
Road to be made undriveable but not officially abandoned.

Pre-Haul Maintenance: linear feet
Existing road to receive maintenance work (optional and required) prior to haul

EXCISE TAX EXEMPT ACTIVITIES

Temporary Construction: linear feet
Roads to be constructed (optional and required) and then abandoned

Temporary Reconstruction: linear feet
Roads to be reconstructed (optional and required) and then abandoned

All parties must make their own assessment of the taxable or non-taxable status of any work performed under the timber sale contract. The Department of Revenue bears responsibility for determining forest road excise taxes. The Department of Natural Resources developed this form to help estimate the impact of forest excise taxes. However, the information provided may not precisely calculate the actual amount of taxes due. The Department of Revenue is available for consultation by calling 1.800.548.8829.
(Revised 9/18)