WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

TIMBER NOTICE OF SALE

SALE NAME: *AUGER IN* ***AGREEMENT NO:*** *30-107774*

AUCTION: March 27, 2025 starting at 10:00 a.m., **COUNTY:** Pacific
Pacific Cascade Region Office, Castle Rock, WA

SALE LOCATION: Sale located approximately 6 miles west of Pe Ell, WA

PRODUCTS SOLD AND SALE AREA: All timber, except leave trees bound by yellow "Leave Tree Area" tags, leave trees marked with blue paint, and all down timber existing 5 years prior to the day of sale, all down timber greater than 40 inches diameter, all timber 60 inches DBH and greater, and snags bound by the following;

Unit 1, white "Timber Sale Boundary" tags, pink flagging, reprod, the HM Mainline and HM-3130 roads;

Unit 2, white "Timber Sale Boundary" tags, pink flagging and the RCP-100;

All forest products above located on part(s) of Sections 27, 34 and 35 all in Township 13 North, Range 6 West, W.M., containing 64 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	23.2	8	1,696			37	26		1,248	320	45	20
Hemlock	20.3		552						430	94	24	4
Noble fir	24.1		252						185	61	4	2
Red alder	13.9		61						17	5	39	
Spruce	26.2		23						19	3	1	
Sale Total			2,584									

MINIMUM BID: $695,000.00 **BID METHOD:** Sealed Bids

PERFORMANCE SECURITY: $100,000.00 **SALE TYPE:** Lump Sum

EXPIRATION DATE: October 31, 2027 **ALLOCATION:** Export Restricted

BID DEPOSIT: $69,500.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

HARVEST METHOD: This sale is estimated to be 5% ground based harvest systems and 95% cable harvest systems. Shovel harvesting is restricted to sustained slopes of 45 percent or less. Self-leveling equipment are restricted to sustained slopes of 55 percent or less. Cable-assist equipment are restricted to slopes of 75 percent or less.

ROADS: 25.94 stations of optional construction. 279.45 stations of required prehaul maintenance.

Rock used in accordance with the quantities on the ROCK LIST may be obtained from the Squally Quarry located in Section 28 and 29, T13N, R6W, W.M. and Walville Quarry located in Section 23, T13N, R6W, W.M. on state land at no charge to the Purchaser.

Rock used in accordance with the quantities on the ROCK LIST may be obtained from the P&E Extension Quarry existing stockpiles located in Section 29, T13N, R6W, W.M. and Walville Quarry located in Section 23, T13N, R6W, W.M. on state land at no charge to the Purchaser.

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

See Road Plan for further details. The hauling of forest products will not be permitted from November 1 to April 30 unless authorized in writing by the Contract Administrator.

ACREAGE DETERMINATION

CRUISE METHOD: The sale acres were determined by GPS. The sale area was cruised using a variable plot cruise method.

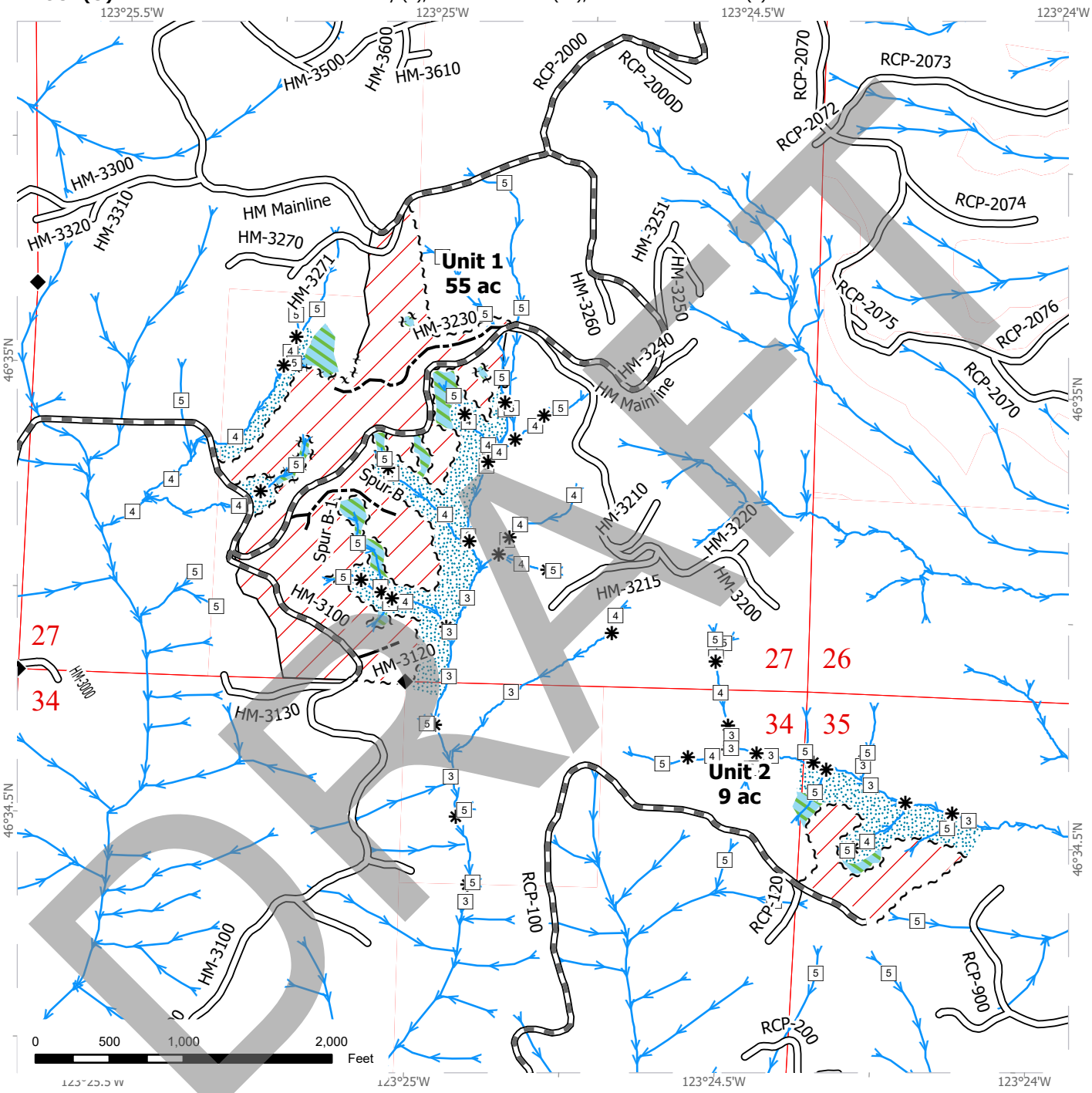
FEES: $43,928.00 is due on day of sale. $9.00 per MBF is due upon removal. These are in addition to the bid price.

SPECIAL REMARKS: Estimated 38 MBF Peeler grade DF, 26 MBF SM grade DF, 119 MBF HQ 2 Saw DF, and 11 MBF HQ 3 Saw DF.

TIMBER SALE MAP

SALE NAME: AUGER IN
AGREEMENT#: 30-107774
TOWNSHIP(S): T13R6W
TRUST(S): Common School and Indemnity (3), Scientific School (10), State Forest Transfer (1)

REGION: Pacific Cascade Region
COUNTY(S): Pacific
ELEVATION RGE: 1000-2000



- Variable Retention Harvest
- Non-Tradeable Leave Clump
- Riparian Mgt Zone
- Existing Roads
- Required Pre-Haul Maintenance
- Optional Construction
- Sale Boundary Tags
- Leave Tree Tags
- Timber Type Change
- Streams
- Stream Type
- Stream Break
- Survey Monument

N

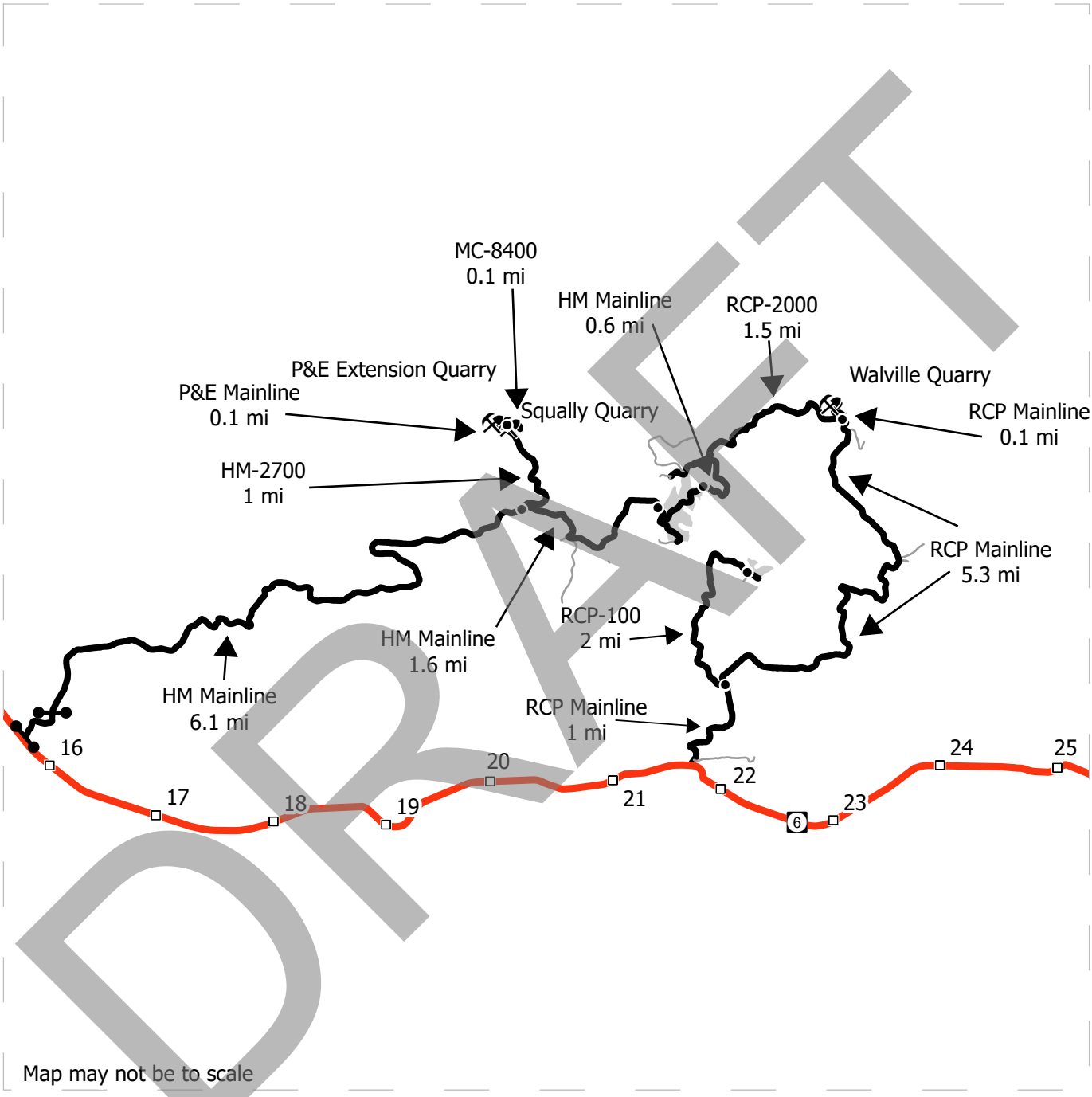
Prepared By: gdey490
Accessed: 01/09/2025 13:13

Modification Date: gdey490 11/1/2024

DRIVING MAP

SALE NAME: AUGER IN
AGREEMENT#: 30-107774
TOWNSHIP(S): T13R6W
TRUST(S): Common School and Indemnity (3), Scientific School (10), State Forest Transfer (1)

REGION: Pacific Cascade Region
COUNTY(S): Pacific
ELEVATION RGE: 1000-2000



- Harvest Unit
- Highway
- Haul Route
- Other Route
- Milepost Marker
- Distance Indicator
- Gate (PCP 1-1)
- Rock Pit
- SR-6

DRIVING DIRECTIONS:

From SR-6, between mile marker 21 and 22, turn right onto the RCP Mainline for all units.
For Unit 1, follow the RCP Mainline for 5.3 miles to turn left onto the RCP-2000.
Follow the RCP-2000 for 1.5 miles to the Halfmoon Mainline.
Turn left onto the Halfmoon Mainline and follow it for 0.6 miles to arrive at Unit 1.
For Unit 2, follow the RCP Mainline for 1 mile then turn left onto the RCP 100.
Follow the RCP-100 for 2 miles to arrive at Unit 2.
For the Walville Quarry, follow the RCP Mainline for 6.4 miles to arrive at the Walville Quarry.
For the Squally Quarry and P&E Extension Quarry, from Unit 1 follow the HM Mainline for 1.6 miles to the HM-2700.
Turn right onto the HM-2700 and follow it for 1 mile then turn right on to the MC-8400 to the Squally Quarry.
Follow the MC-8400 for 0.1 miles to the the Squally Quarry.
From the HM-2700, turn left onto the P&E Mainline and follow for 0.1 miles to the P&E Extension Quarry.

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Prepared By: gdey490
Accessed: 01/09/2025 13:13

Modification Date: gdey490 11/1/2024

Timber Sale Cruise Report
Auger in

Sale Name: AUGER IN

Sale Type: LUMP SUM

Region: PACIFIC CASC

District: LEWIS

Lead Cruiser: Dylan Buchanan

Other Cruisers: Blake Warnstadt, Dillon Adair

Cruise Narrative:
Location: AUGER IN is located approximately 6 miles west of Pe Ell. It can be accessed from SR-6 by turning north between mile markers 21 and 22 onto the RCP Mainline. For Unit 1, follow the RCP Mainline for 5.3 miles and turn left onto the RCP-2000. Follow the RCP-2000 for 1.5 miles to the Halfmoon Mainline and turn left. It is just over a half mile to Unit 1.

For Unit 2, From SR-6, follow the RCP-Mainline for 1 mile and turn left onto the RCP-100. Follow the RCP-100 for 2 miles to arrive at unit 2.

Cruise Design: This sale consists of two variable retention harvest units. They were both cruised using variable radius plots sighted at 4.5 feet. Unit 1 was cruised using a 62.5 BAF with a measure to count plot ratio of 1:1. Unit 2 was cruised using a 54.44 BAF with all plots measured. Bole heights were cruised to an estimated break point 40% of the diameter at 16 feet, or to a 5" top. Conifer logs were cruised to 40' preferred log lengths, hardwoods were cruised to 30' preferred log lengths.

Timber Quality: The AUGER IN timber sale is Douglas Fir dominant. There is a fair amount of Western Hemlock and Noble Fir here as well as some Red Alder and Sitka Spruce. Unit 1 average diameters at 4.5' include DF 22", WH 21.6", NF 24.1", RA 15", and SS 26.2". The DF here looks good and contains a mix of domestic sorts and High-Quality B logs. Observed defects include mostly spike knots and some forks. There are a few mortality pockets from root disease. The WH looks okay, slightly tapered but little defect. The NF looks good with a minimal amount of frost crack present. There is some decent looking RA with a mix of 2,3, and 4 SAW logs. There is some light sweep and forked tops present with a small amount of rot observed. The SS looks okay, they have medium sized branches and minimal forks.

Unit 2 consisted of larger trees with quite a few dead standing stems mixed in. Mostly a DF and WH mix with some smaller RA near the road. Conks were observed on the some of the live DF stems. Some of the larger DF looks good with some 3P available.

Logging and Stand Conditions: AUGER IN has a fair amount of mixed veg cover and moderately steep slopes with some broken ground below the HM Mainline in Unit 1. It is estimated to be logged using 35% ground based and 65% uphill cable logging practices.

Timber Sale Notice Volume (MBF)

				MBF Volume by Grade						
Sp	DBH	Rings/In	Age	All	Peeler	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	23.2	8.0		1,698	37	26	1,248	320	45	20
WH	20.3			551			430	94	24	4
NF	24.1			253			185	61	4	2
RA	13.9			61			17	5	39	
SS	26.2			22			19	3	1	
ALL	20.7	8.0		2,584	37	26	1,899	482	113	27

Timber Sale Notice Weight (tons)

	Tons by Grade						
Sp	All	Peeler	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	12,561	190	143	8,634	2,934	463	196
WH	4,747			3,342	1,069	290	46
NF	1,786			1,186	536	43	22
RA	607			166	42	399	
SS	184			141	33	10	
ALL	19,885	190	143	13,469	4,614	1,204	264

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 (%)
257.7	4.7	158.5	2.4	40,377	5.5

Timber Sale Unit Cruise Design

Unit	Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
AUGER IN U1	B1C: VR, 1 BAF (62.5) Measure/Count Plots, Sighting Ht = 4.5 ft	55.0	67.0	58	28	0
AUGER IN U2	B1: VR, 1 BAF (54.44) Measure All, Sighting Ht = 4.5 ft	9.0	9.7	9	9	0
All		64.0	76.7	67	37	0

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	15.9	40	18,826	17,641	6.3	7,823.1	1,129.0
DF	LIVE	2 SAW	HQ-A	22.3	40	136	136	0.0	46.8	8.7
DF	LIVE	2 SAW	HQ-B	14.3	40	1,753	1,725	1.6	764.5	110.4
DF	LIVE	3 PEELER	Domestic	27.7	40	585	585	0.0	190.5	37.5
DF	LIVE	3 SAW	Domestic	8.9	39	5,080	4,826	5.0	2,845.4	308.9
DF	LIVE	3 SAW	HQ-B	11.5	40	179	179	0.0	88.7	11.4
DF	LIVE	4 SAW	Domestic	6.8	24	749	708	5.5	462.6	45.3
DF	LIVE	CULL	Cull	6.9	5	115	0	100.0	0.0	0.0
DF	LIVE	SPECIAL MILL	HQ-A	24.4	40	409	409	0.0	142.8	26.2
DF	LIVE	UTILITY	Pulp	7.5	15	338	319	5.7	196.3	20.4
NF	LIVE	2 SAW	Domestic	17.2	40	2,986	2,894	3.1	1,185.7	185.2
NF	LIVE	3 SAW	Domestic	10.2	39	980	951	2.9	536.2	60.9
NF	LIVE	4 SAW	Domestic	6.8	22	69	69	0.0	42.5	4.4
NF	LIVE	CULL	Cull	7.8	6	20	0	100.0	0.0	0.0
NF	LIVE	UTILITY	Pulp	7.9	14	37	37	0.0	21.9	2.3
RA	LIVE	2 SAW	Domestic	13.9	30	327	266	18.8	165.9	17.0
RA	LIVE	3 SAW	Domestic	10.9	30	87	78	9.4	41.7	5.0
RA	LIVE	4 SAW	Domestic	6.1	34	638	604	5.4	399.0	38.6
RA	LIVE	CULL	Cull	11.6	7	72	0	100.0	0.0	0.0
SS	LIVE	2 SAW	Domestic	17.4	40	361	291	19.4	140.9	18.6
SS	LIVE	3 SAW	Domestic	8.8	36	45	39	12.4	32.9	2.5
SS	LIVE	4 SAW	Domestic	8.4	25	13	10	19.6	10.4	0.6
WH	LIVE	2 SAW	Domestic	15.4	40	6,980	6,712	3.8	3,341.9	429.6
WH	LIVE	3 SAW	Domestic	8.8	38	1,503	1,462	2.7	1,069.2	93.6
WH	LIVE	4 SAW	Domestic	6.0	30	390	373	4.3	289.5	23.9
WH	LIVE	CULL	Cull	7.0	4	29	0	100.0	0.0	0.0
WH	LIVE	UTILITY	Pulp	7.8	14	65	63	3.0	46.1	4.0

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	6.3	5	0	100.0	0.0	0.0
DF	5 - 7	LIVE	Pulp	6.5	13	126	0.6	67.6	8.1
DF	5 - 7	LIVE	Domestic	6.6	33	1,529	4.1	1,015.0	97.9
DF	8 - 11	LIVE	Cull	8.8	6	0	100.0	0.0	0.0
DF	8 - 11	LIVE	Pulp	9.4	14	82	2.8	49.9	5.3
DF	8 - 11	LIVE	Domestic	9.7	35	3,970	5.5	2,278.4	254.1

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	8 - 11	LIVE	HQ-B	11.5	40	179	0.0	88.7	11.4
DF	12 - 15	LIVE	Pulp	12.0	39	111	12.6	78.8	7.1
DF	12 - 15	LIVE	Domestic	13.6	40	5,945	4.5	2,920.7	380.5
DF	12 - 15	LIVE	HQ-B	13.8	40	1,390	1.6	642.9	89.0
DF	16+	LIVE	Domestic	18.8	40	12,316	6.9	5,107.4	788.2
DF	16+	LIVE	HQ-B	19.7	40	334	1.8	121.6	21.4
DF	16+	LIVE	HQ-A	23.8	40	545	0.0	189.6	34.9
NF	5 - 7	LIVE	Domestic	6.2	23	53	0.0	32.5	3.4
NF	5 - 7	LIVE	Cull	7.3	4	0	100.0	0.0	0.0
NF	5 - 7	LIVE	Pulp	7.5	14	13	0.0	7.4	0.9
NF	8 - 11	LIVE	Pulp	8.2	14	23	0.0	14.5	1.5
NF	8 - 11	LIVE	Cull	8.4	8	0	100.0	0.0	0.0
NF	8 - 11	LIVE	Domestic	10.2	38	967	2.9	546.3	61.9
NF	12 - 15	LIVE	Domestic	15.2	40	584	4.2	258.8	37.4
NF	16+	LIVE	Domestic	18.0	40	2,310	2.8	926.9	147.9
RA	5 - 7	LIVE	Domestic	5.5	34	503	4.9	346.2	32.2
RA	8 - 11	LIVE	Cull	9.0	5	0	100.0	0.0	0.0
RA	8 - 11	LIVE	Domestic	10.2	35	179	8.5	94.6	11.4
RA	12 - 15	LIVE	Domestic	13.1	30	168	24.5	124.9	10.8
RA	16+	LIVE	Domestic	16.6	30	97	6.7	41.0	6.2
RA	16+	LIVE	Cull	19.4	13	0	100.0	0.0	0.0
SS	5 - 7	LIVE	Domestic	7.9	34	12	31.1	14.7	0.8
SS	8 - 11	LIVE	Domestic	9.1	31	37	6.2	28.6	2.4
SS	16+	LIVE	Domestic	17.4	40	291	19.4	140.9	18.6
WH	5 - 7	LIVE	Domestic	6.0	31	764	3.2	590.2	48.9
WH	5 - 7	LIVE	Pulp	6.1	14	39	4.9	27.2	2.5
WH	5 - 7	LIVE	Cull	6.2	3	0	100.0	0.0	0.0
WH	8 - 11	LIVE	Cull	8.6	6	0	100.0	0.0	0.0
WH	8 - 11	LIVE	Pulp	8.7	13	25	0.0	18.9	1.6
WH	8 - 11	LIVE	Domestic	9.5	37	953	3.0	693.1	61.0
WH	12 - 15	LIVE	Domestic	13.5	40	2,892	3.3	1,618.3	185.1
WH	16+	LIVE	Domestic	19.4	40	3,938	4.2	1,799.0	252.1

Cruise Unit Report
AUGER IN U1

Unit Sale Notice Volume (MBF): AUGER IN U1

				MBF Volume by Grade				
Sp	DBH	Rings/In	Age	All	2 Saw	3 Saw	4 Saw	Utility
DF	22.0	8.0		1,484	1,112	308	44	20
WH	21.6			399	312	69	15	3
NF	24.1			253	185	61	4	2
RA	15.0			50	17	5	28	
SS	26.2			22	19	3	1	
ALL	21.1	8.0		2,208	1,645	445	93	25

Unit Cruise Design: AUGER IN U1

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (62.5) Measure/Count Plots, Sighting Ht = 4.5 ft	55.0	67.0	58	28	0

Unit Cruise Summary: AUGER IN U1

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	85	161	2.8	3
WH	29	46	0.8	0
NF	12	25	0.4	0
RA	12	13	0.2	0
SS	3	3	0.1	0
ALL	141	248	4.3	3

Unit Cruise Statistics: AUGER IN 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 (%)
DF	173.5	61.9	8.1	155.5	23.8	2.6	26,982	66.3	8.5
WH	49.6	141.2	18.5	146.4	25.5	4.7	7,256	143.5	19.1
NF	26.9	230.4	30.3	170.7	21.0	6.1	4,598	231.4	30.9
RA	14.0	324.1	42.6	65.2	46.8	13.5	914	327.5	44.7
SS	3.2	431.9	56.7	122.5	38.7	22.3	396	433.6	60.9
ALL	267.2	34.2	4.5	150.2	29.7	2.5	40,145	45.2	5.1

Unit Summary: AUGER IN U1

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	85	ALL	22.1	84	107	28,789	26,982	6.3	65.1	173.5	36.9	1,484.0
NF	LIVE	CUT	12	ALL	24.1	87	111	4,762	4,598	3.4	8.5	26.9	5.5	252.9
RA	LIVE	CUT	12	ALL	15.0	43	59	1,118	914	18.3	11.4	14.0	3.6	50.3
SS	LIVE	CUT	3	ALL	26.2	74	94	487	396	18.7	0.9	3.2	0.6	21.8
WH	LIVE	CUT	29	ALL	21.5	75	94	7,507	7,256	3.3	19.7	49.6	10.7	399.1
ALL	LIVE	CUT	141	ALL	21.5	78	100	42,663	40,145	5.9	105.6	267.2	57.3	2,208.0
ALL	ALL	CUT	141	ALL	21.5	78	100	42,663	40,145	5.9	105.6	267.2	57.3	2,208.0

Cruise Unit Report
AUGER IN U2

Unit Sale Notice Volume (MBF): AUGER IN U2

				MBF Volume by Grade						
Sp	DBH	Rings/In	Age	All	Peeler	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	31.2			214	37	26	136	13	1	1
WH	17.0			152			118	24	9	1
RA	8.5			10					10	
ALL	18.1			376	37	26	253	37	20	2

Unit Cruise Design: AUGER IN U2

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (54.44) Measure All, Sighting Ht = 4.5 ft	9.0	9.7	9	9	0

Unit Cruise Summary: AUGER IN U2

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	14	14	1.6	0
WH	17	17	1.9	0
RA	2	2	0.2	0
ALL	33	33	3.7	0

Unit Cruise Statistics: AUGER IN 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	84.7	120.7	40.2	280.5	20.8	5.6	23,750	122.5	40.6
WH	102.8	93.4	31.1	164.2	40.4	9.8	16,888	101.8	32.6
RA	12.1	300.0	100.0	95.4	7.2	5.1	1,154	300.1	100.1
ALL	199.6	65.4	21.8	209.4	41.9	7.3	41,792	77.7	23.0

Unit Summary: AUGER IN U2

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	14	ALL	31.2	121	155	24,397	23,750	2.6	16.0	84.7	15.2	213.8
RA	LIVE	CUT	2	ALL	8.5	36	59	1,154	1,154	0.0	30.7	12.1	4.1	10.4

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
WH	LIVE	CUT	17	ALL	17.0	56	76	17,887	16,888	5.6	65.2	102.8	24.9	152.0
ALL	LIVE	CUT	33	ALL	18.1	60	83	43,438	41,792	3.8	111.9	199.6	44.3	376.1
ALL	ALL	CUT	33	ALL	18.1	60	83	43,438	41,792	3.8	111.9	199.6	44.3	376.1

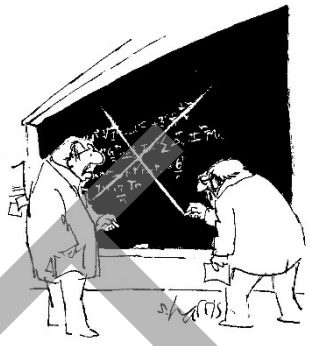
FPHP NEEDED (Y/N) N

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

PACIFIC CASCADE REGION - ENGINEERING

ROAD PLAN PEER REVIEW CHECKLIST

PROJECT: AUGER IN



"That's it? That's peer review?"

This project has been reviewed for the following:

Initials:

___ CJ **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.

___ CJ **TYPICAL SECTION SHEET, ROCK LIST, & CULVERT LIST –** Sheets match clauses and maps. Requirements and quantities make sense. Rock List adds up correctly.

___ CJ **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.

___ CJ **DETAIL SHEETS** – All detail sheets referred to in the clauses are included. Detail sheets have been edited as necessary.

___ CJ **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.

___ CJ **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.

___ CJ **EXCISE TAX SHEET** – Totals match road plan.

___ ___ **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 — 08/08/2024 — Date

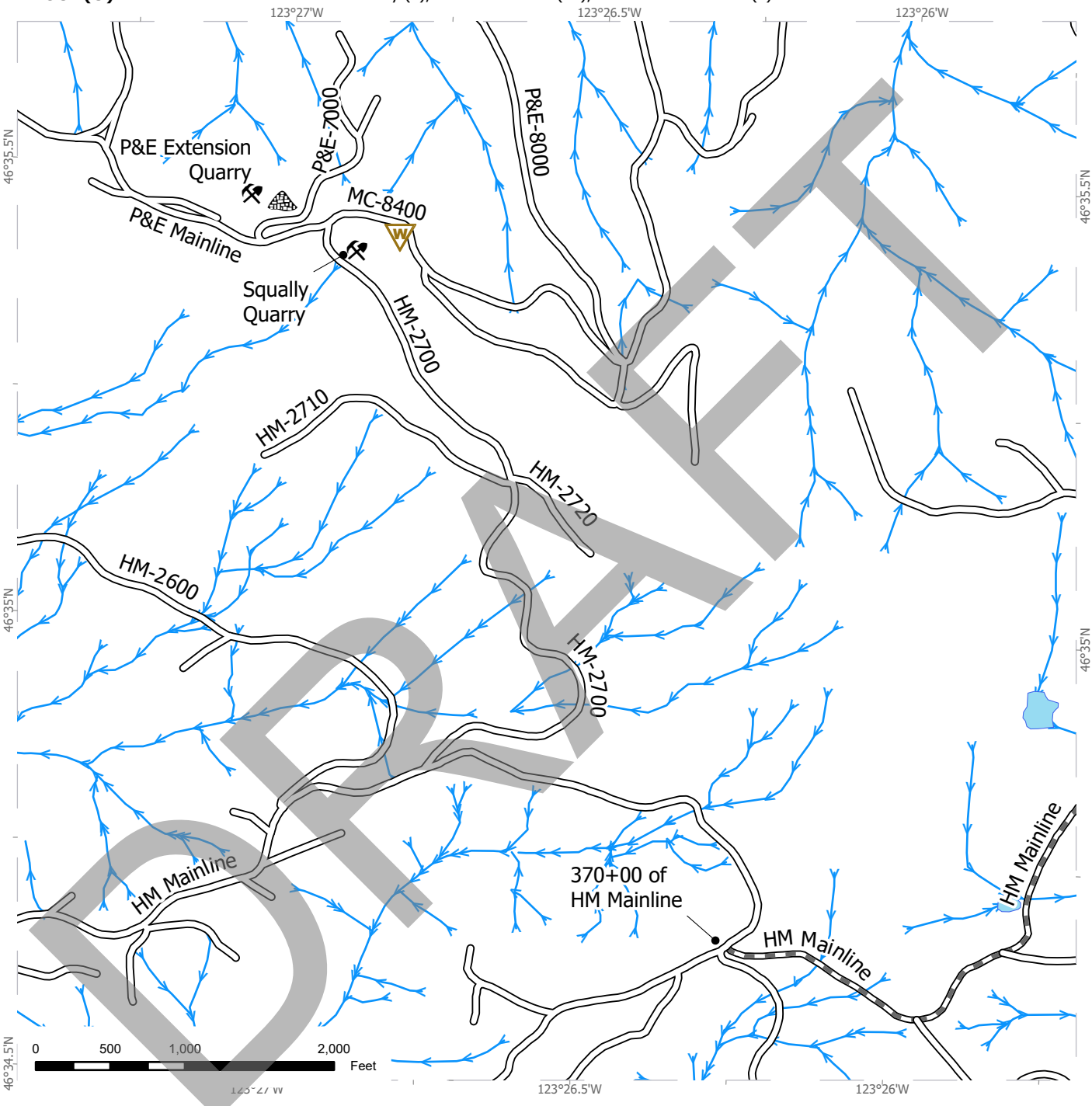
Chace Johanson — Peer Reviewer — 8/13/2024 — Date

Comments:

ROAD PLAN MAP

SALE NAME: AUGER IN
AGREEMENT#: 30-107774
TOWNSHIP(S): T13R6W
TRUST(S): Common School and Indemnity (3), Scientific School (10), State Forest Transfer (1)

REGION: Pacific Cascade Region
COUNTY(S): Pacific
ELEVATION RGE: 1000-2000



Existing Roads
Required Pre-Haul Maintenance
Rock Pit
Stockpile
Waste Area
Streams

N

Prepared By: accc490
Accessed: 01/09/2025 13:13

Modification Date: accc490 11/7/2024

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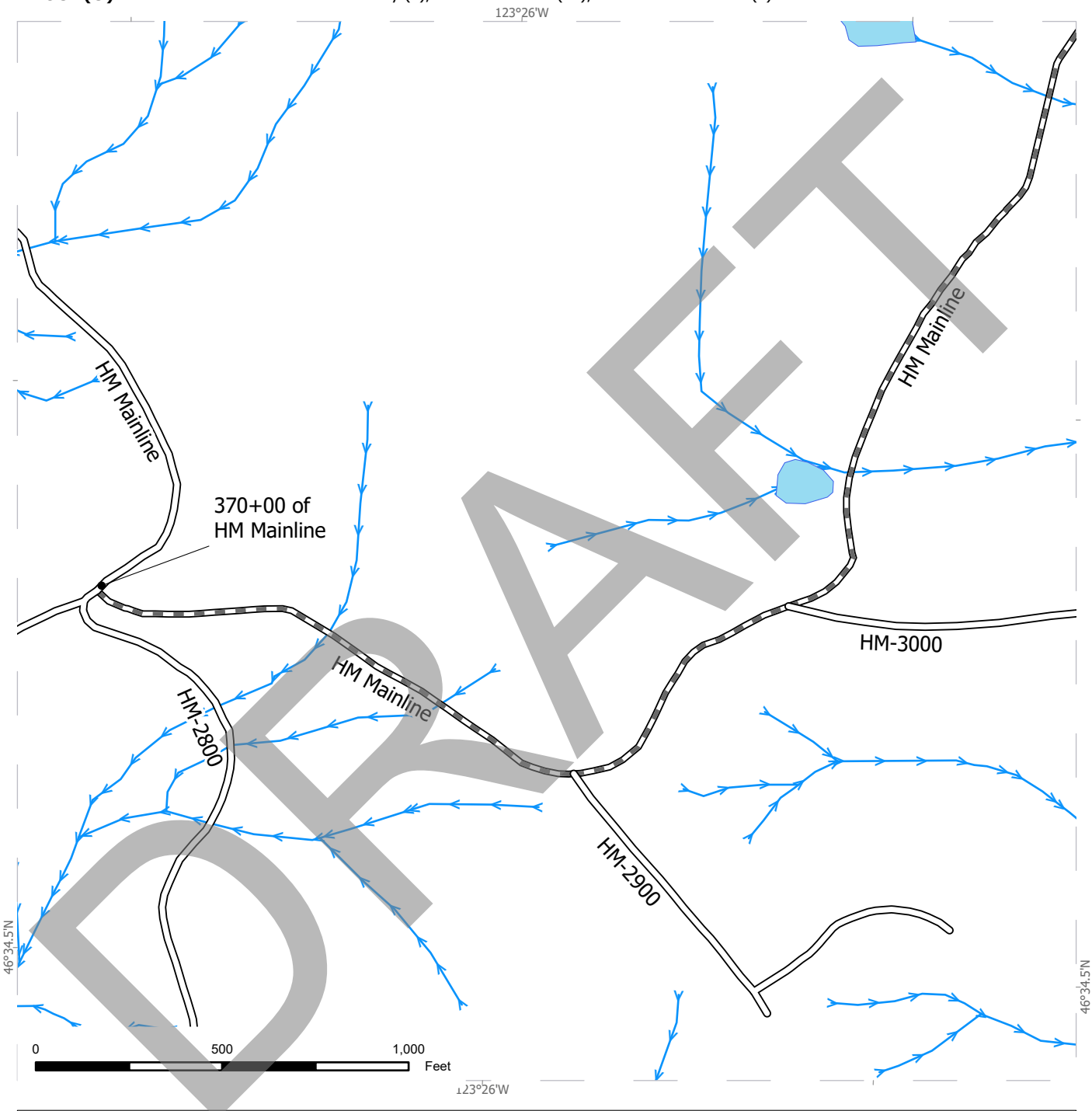

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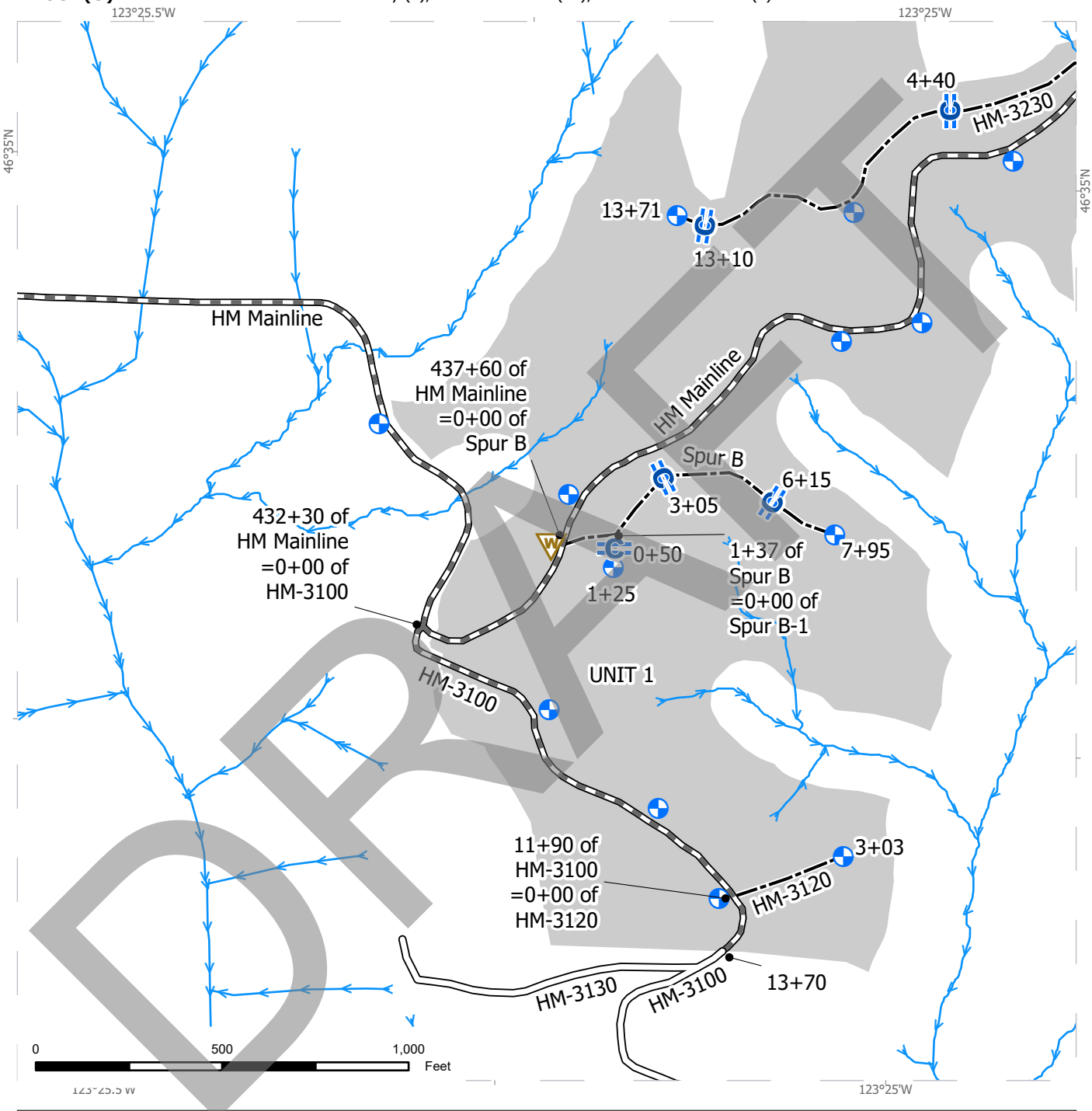

DRAFT

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

Prepared By: accc490
Accessed: 01/09/2025 13:13

Modification Date: accc490 11/7/2024

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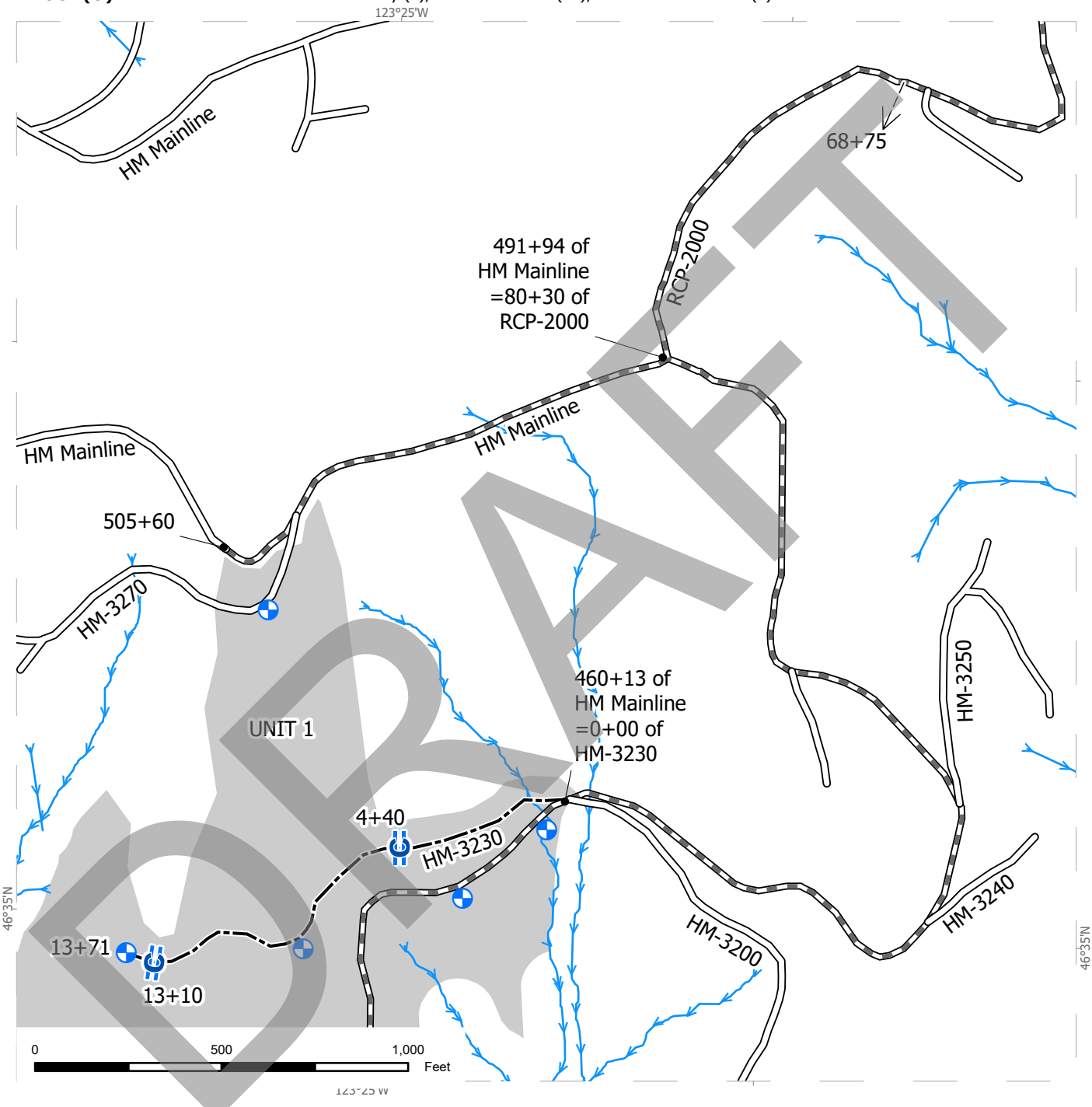

Existing Roads
Required Pre-Haul Maintenance
Optional Construction
Landing - Proposed
Cross-drain Culvert
Ditchout
Harvest Unit
Streams

N

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Accessed: 01/09/2025 13:13

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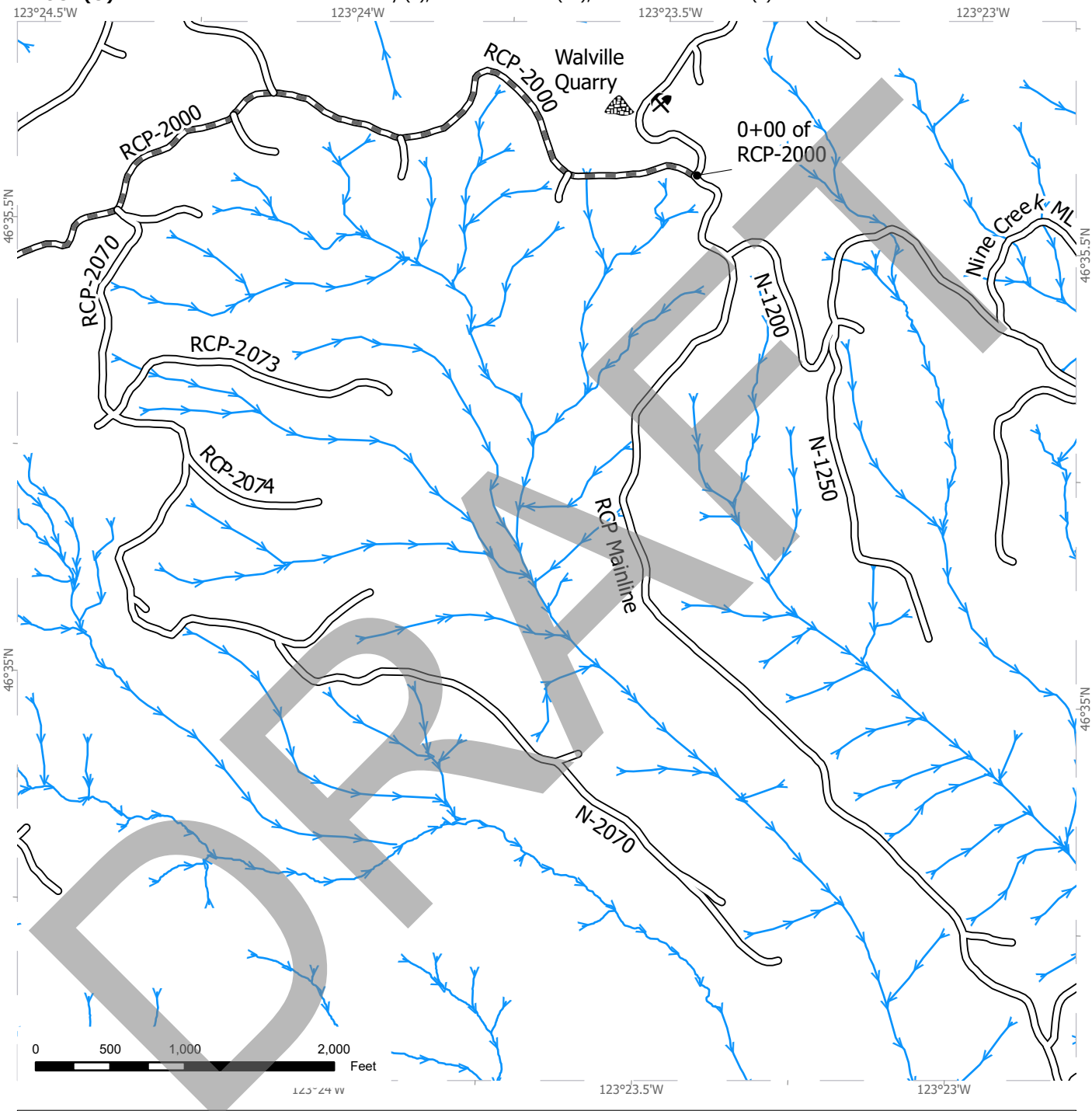

Existing Roads
Required Pre-Haul Maintenance
Rock Pit
Stockpile
Harvest Unit
Streams

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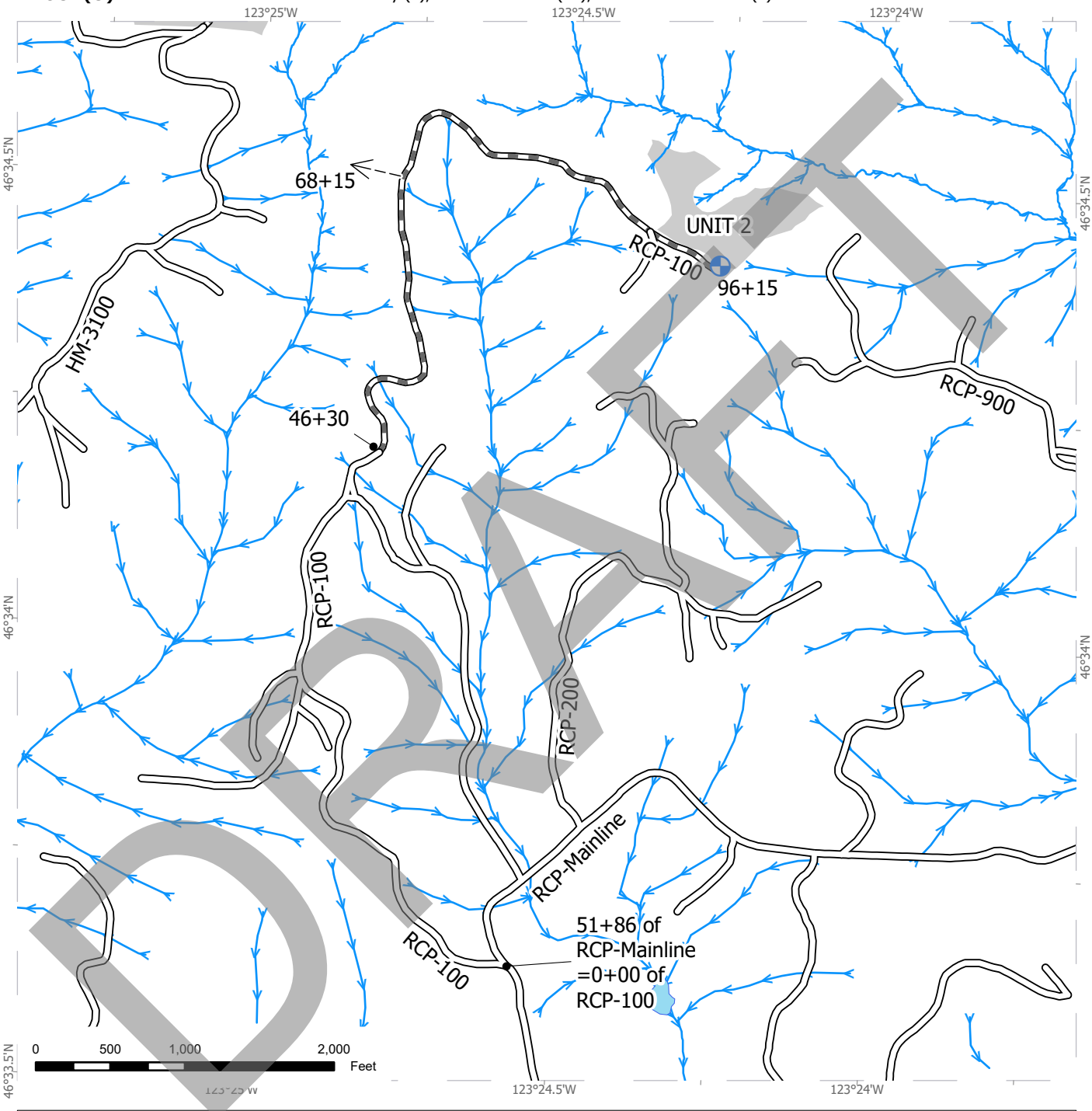

Existing Roads
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Ditchout
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Accessed: 01/09/2025 13:13

Modification Date: accc490 11/7/2024

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

AUGER IN TIMBER SALE ROAD PLAN
LEWIS COUNTY
LEWIS DISTRICT
PACIFIC CASCADE REGION

AGREEMENT NO.: 30-107774 STAFF ENGINEER: GRANT 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.

Road	Stations	Type
HM Mainline	370+00 to 505+60	Pre-Haul Maintenance
HM-3100	0+00 to 13+70	Pre-Haul Maintenance
HM-3270	2+50	Pre-Haul Maintenance
RCP-100	46+30 to 96+15	Pre-Haul Maintenance
RCP-2000	0+00 to 80+30	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.

Road	Stations	Type
HM-3120	0+00 to 3+03	Construction
HM-3230	0+00 to 13+71	Construction
Spur B	0+00 to 7+95	Construction
Spur B-1	0+00 to 1+25	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; manufacture, application and compaction of rock.

0-6 PRE-HAUL MAINTENANCE

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

Road	Stations	Requirements
HM Mainline	370+00 to 505+60	Culvert cleaning, ditch cleaning, apply and compact rock
HM-3100	0+00 to 13+70	Maintenance grading, apply and compact rock
HM-3270	2+50	Construct Landing
RCP-100	46+30 to 96+15	Maintenance grading, ditch cleaning, brushing, construct ditchouts, apply and compact rock
RCP-2000	0+00 to 80+30	Culvert cleaning, ditch cleaning, construct ditchouts, apply and compact rock

0-7 POST-HAUL MAINTENANCE

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

0-12 DEVELOP ROCK SOURCE

Purchaser may develop an existing rock source. Rock source development will involve clearing, stripping, end haul and compaction of waste, drilling, shooting and manufacture of rock. Work for developing rock sources is listed in Section 6 ROCK AND SURFACING and is subject to the requirements of the ROCK SOURCE DEVELOPMENT PLAN.

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.

Tolerance Class	A	B	C
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.

1-8 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.

1-10 WSDOT STANDARD SPECIFICATION REFERENCE

References in this road plan to "WSDOT Standard Specifications" mean the Washington State Department of Transportation's Standard Specifications for Road, Bridge, and Municipal Construction 2023 (M41-10).

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.
- Pre-haul maintenance marked with wooden stakes and/or painted trees, orange flagging and orange paint.

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.

1-21 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.

1-23 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.
- Rock source development.

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.

Road	Stations	Activity	Closure Period
All Roads	All Stations	Construction, Pre-Haul Maintenance	October 1st through April 30th

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 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.

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 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 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.

Road	Stations	Requirements
HM-3100	0+00 to 13+70	Grade and shape prior to rock application
RCP-100	46+30 to 96+15	Grade and shape prior to rock application

2-6 CLEANING CULVERTS

On the following road(s), Purchaser shall clean the inlets and outlets of all culverts and shall obtain written approval from the Contract Administrator before timber haul.

Road	Stations
HM Mainline	453+90, 463+00, 467+25
RCP-2000	1+80, 13+10, 35+60, 42+20, 52+30, 55+70, 73+80

2-7 CLEANING DITCHES, HEADWALLS, AND CATCH BASINS

On the following road(s), Purchaser shall clean ditches, headwalls, and catchbasins. Work must be completed before timber haul and must be done in accordance with the TYPICAL SECTION SHEET and DITCH CLEANING DETAIL. Pulling ditch material across the road or mixing in with the road surface is not allowed.

Road	Stations
HM Mainline	431+50 to 433+50
	448+50 to 471+50
	484+35 to 505+60
RCP-100	46+30 to 96+15
RCP-2000	0+00 to 80+30

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

3-1 BRUSHING

On the following road(s), Purchaser shall cut vegetative material up to 4 inches in diameter, including limbs, as shown on the ROADSIDE BRUSHING DETAIL. Brushing must be achieved by mechanical cutting of brush, trees, and branches. Root systems and stumps of cut vegetation may not be disturbed unless directed by the Contract Administrator. Purchaser shall remove brushing debris from the road surface, ditchlines, and culvert inlets and outlets.

Road	Stations
RCP-100	46+30 to 96+15

3-2 BRUSHING RESTRICTION

Pulling, digging, pushing over, and other non-cutting methods used for vegetation removal may not be used for brushing.

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 and brushing area 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 crossdrain 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:

Material Type	Excavation Slope Ratio	Excavation Slope Percent
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:

Material Type	Embankment Slope Ratio	Embankment Slope Percent
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.

4-29 DITCHOUTS

Purchaser shall construct ditchouts as identified in the CULVERT LIST, as needed, and as directed by the Contract Administrator. Ditchouts must be constructed in a manner that diverts ditch water onto the forest floor and must have excavation backslopes no steeper than a 1:1 ratio.

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.

Waste Area Location	Station	Comments
HM Mainline	437+60	West side, outside of road prism
Squally Quarry/MC-8400	5+66	See Squally Quarry Development Plan Map

4-38 PROHIBITED WASTE DISPOSAL AREAS

Purchaser shall not deposit waste material in the following areas:

- Within 25 feet of a crossdrain 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.

4-48 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 sidecasting 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 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 AND DRAINAGE SPECIFICATION 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.

5-17 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 2 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.

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.

Source	Location	Rock Type	Quantity	Note
Squally Quarry	T13R06W Section 28/29	Select Pit Run, Quarry Spalls	Limited to 3445cy	
Walville Quarry	T13R06W Section 23	Select Pit Run, Quarry Spalls	Limited to 135cy	Production by dig and load

6-3 ROCK SOURCE 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.

Source	Location	Rock Type	Quantity
P&E Extension Quarry	T13R06W Section 29	2 ½ Inch Minus Rock	294cy
Walville Quarry	T13R06W Section 23	2 ½ Inch Minus Rock	744cy

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 may 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.

Source	Rock Type
Squally Quarry	Select Pit Run

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.

6-32 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.

6-41 SELECT PIT RUN ROCK

No more than 50 percent of the rock may be larger than 6 inches in any dimension and no rock may be larger than 12 inches in any dimension. Select Pit Run rock may not contain more than 5 percent by weight of organic debris, dirt, and trash. Rock may require processing to meet this specification.

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.

6-50 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:

Quantity	Approximate Size Range
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. Contractor 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 MEASURMENT BY TRUCK VOLUME

Measurement of spot rock, energy dissipaters, culvert backfill and landing rock is on a cubic yard truck measure basis. Contractor 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. Contractor 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.

6-75 OPTIONAL ROCK EXCEPTION

On the following roads, if hauling takes place from June 1 to September 30, Purchaser may provide and place less rock than shown on the ROCK LIST, when approved in writing by the Contract Administrator.

If less rock is applied, Purchaser shall submit a written plan, for approval, describing how these roads will be constructed, used, maintained, and treated post-haul. Purchaser shall meet post-haul specifications in Section 9 POST-HAUL ROAD WORK, the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS, or other conditions of the approved plan.

Road	Stations	Options
HM-3120	0+00 to 3+03	Select Pit Run
HM-3230	0+00 to 13+71	
Spur B	0+00 to 7+95	
Spur B-1	0+00 to 1+25	

SECTION 8 – EROSION CONTROL

8-1 SEDIMENT CONTROL STRUCTURES

Sediment control shall be accomplished using sediment traps, silt fences, settling ponds, or other methods as approved in writing by the Contract Administrator.

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.

Road	Location	Qty (lbs)*	Type	Comments
HM-3120	0+00 to 3+03	7.6	Grass Seed	Immediately following Construction
HM-3230	0+00 to 13+71	35.2		
Spur B	0+00 to 7+95	20.4		
Spur B-1	0+00 to 1+25	3.2		
Waste Areas	Squally Quarry	50		Immediately following Embankment
	437+60 HM Mainline	50		
Total		166.4		

*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.

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

9-3 CULVERT MATERIAL REMOVED FROM STATE LAND

Culverts removed from roads become the property of the Purchaser and must be removed from state land.

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

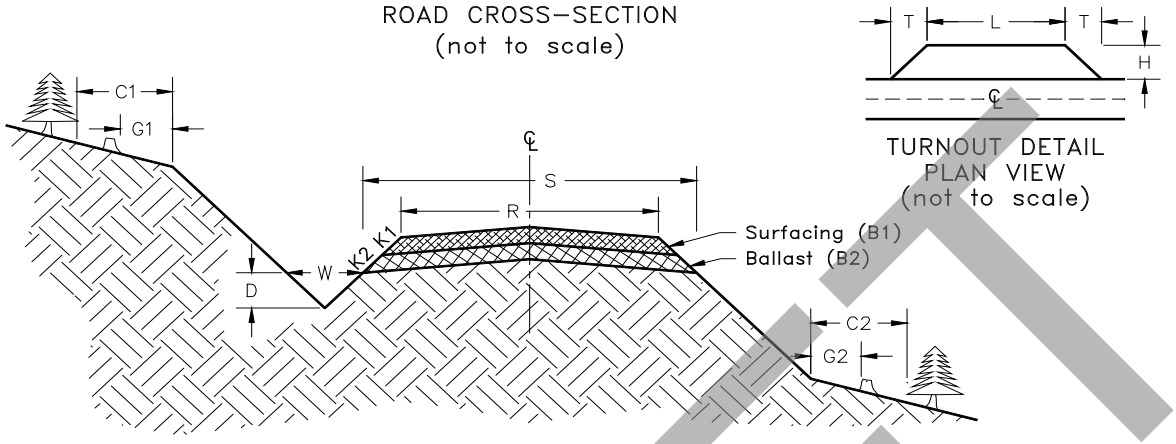
10-17 CORRUGATED PLASTIC CULVERT

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.

10-22 PLASTIC BAND

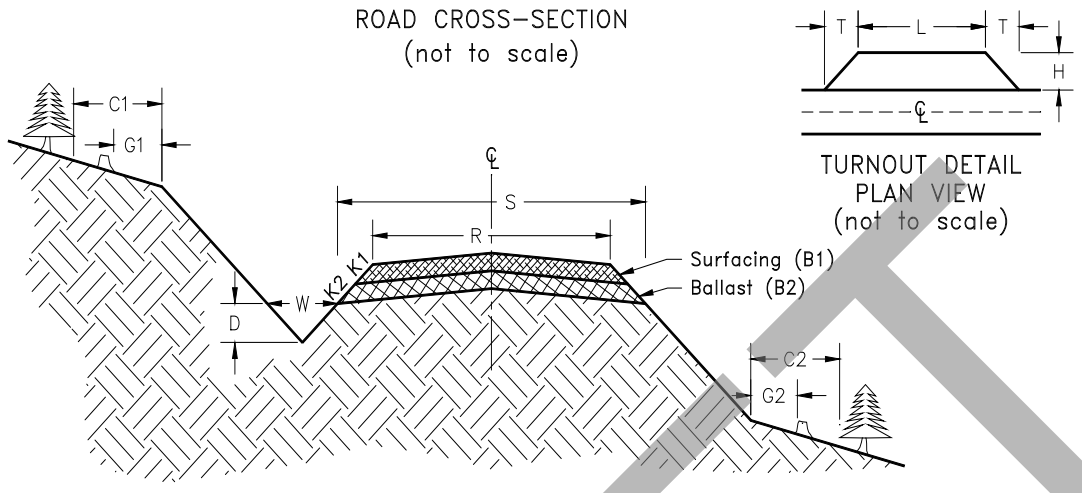
Plastic coupling and end bands must meet the AASHTO specification designated for the culvert. Only fittings supplied or recommended by the culvert manufacturer may be used. Couplings must be split coupling band. Split coupling bands must have a minimum of four corrugations, two on each side of the pipe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

TYPICAL SECTION SHEET



Road Number	From Station	To Station	Tolerance Class	Subgrade Width ft	Road Width ft	Ditch Width ft	Ditch Depth ft	Crown @ CL in	Grubbing Limits ft		Clearing Limits ft	
				S	R	W	D		G1	G2	C1	C2
HM-Mainline	370+00	505+60	A	-	-	3	1	4	-	-	-	-
HM-3100	0+00	13+70	B	-	12	3	1	4	-	-	-	-
HM-3120	0+00	3+03	C	17	12	3	1	4	5	5	10	10
HM-3230	0+00	13+71	C	17	12	3	1	4	5	5	10	10
HM-3270	0+00	4+00	B	-	-	3	1	4	-	-	-	-
RCP-100	46+30	96+15	B	-	12	3	1	4	-	-	-	-
RCP-2000	0+00	80+30	A	-	12	3	1	4	-	-	-	-
Spur B	0+00	7+95	C	17	12	3	1	4	5	5	10	10
Spur B-1	0+00	1+25	C	17	12	3	1	4	5	5	10	10

ROCK LIST



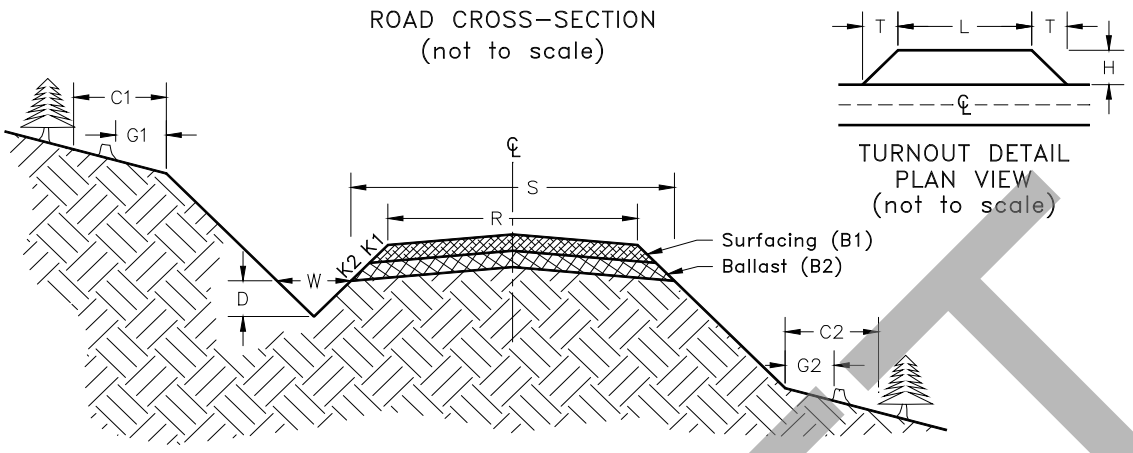
SELECT PIT RUN

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
				K2	B2				Commercial Source Or:
HM-Mainline		Landings				67	6	404	Squally Quarry
HM-3100		Landings				67	3	202	
HM-3120	*	0+00	3+03	1 1/2:1	15	81	3.03	245	
	*	Junctions				15	1	15	
	*	Landings				68	1	68	
HM-3230	*	0+00	13+71	1 1/2:1	15	81	13.71	1111	
	*	Turnarounds				43.5	2	87	
	*	Junctions				15	1	15	
	*	Landings				67.5	2	135	
HM-3270		Landings				68	1	68	
RCP-100		Landings				67.5	2	135	Walville Quarry
Spur B	*	0+00	7+95	1 1/2:1	15	81	7.95	644	Squally Quarry
	*	Turnarounds				43	1	43	
	*	Junctions				15	1	15	
	*	Landings				68	1	68	
Spur B-1	*	0+00	1+25	1 1/2:1	15	81	1.25	101	
	*	Junctions				15	1	15	
	*	Landings				68	1	68	

*Optional Rock in accordance with 6-75

REQUIRED SELECT PIT RUN: 809 CY
OPTIONAL SELECT PIT RUN: 2630 CY
TOTAL SELECT PIT RUN: 3439 CY

ROCK LIST

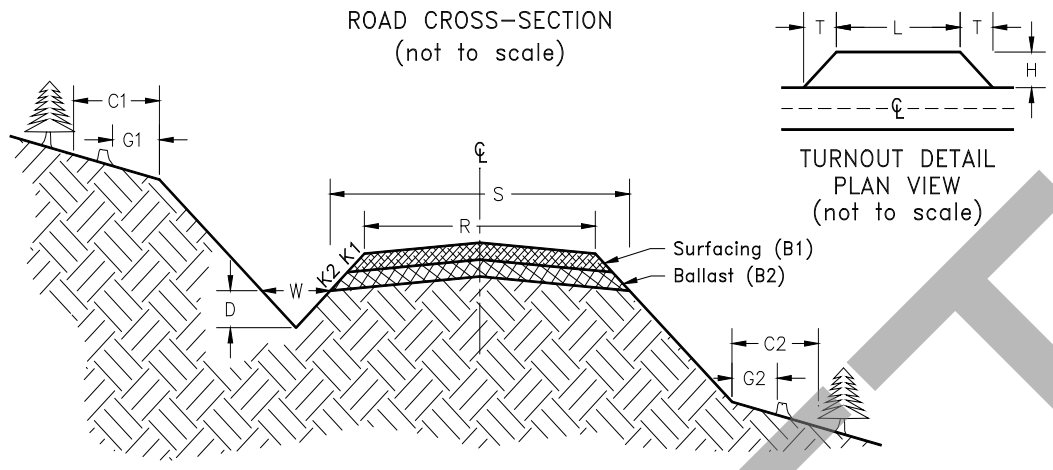


2 1/2-INCH MINUS CRUSHED ROCK

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	Turnout Length	Turnout Width	Turnout Taper
			K1	B1				Commercial Source Or:	L	H	T
HM-Mainline	Spot Rock 428+60						20	P&E Ext. Quarry			
HM-3100	0+00	13+70	1 1/2:1	4	20	13.70	274	Stockpile			
RCP-100	58+75	70+00	1 1/2:1	4	20	11.25	225				
	Spot Rock 84+00	87+00					30				
	Turnouts 59+15, 75+00, 85+90				6.33333	3	19	Walville Quarry	40	10	25
RCP-2000	11+15	13+65	1 1/2:1	4	20	2.50	50	Stockpile			
	16+00	20+00	1 1/2:1	4	20	4.00	80				
	34+75	49+25	1 1/2:1	4	20	14.50	290				
	Spot Rock 0+00	80+30					50				

*Optional Rock in accordance with 6-75

REQUIRED 2 1/2-INCH MINUS CRUSHED ROCK: 1038 CY
OPTIONAL 2 1/2-INCH MINUS CRUSHED ROCK: 0 CY
TOTAL 2 1/2-INCH MINUS CRUSHED ROCK: 1038 CY



QUARRY SPALLS

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				
HM-3230		Headwall Armoring				0.5	2	1.0	Commercial Source or Squally Quarry or Walville Quarry
		Energy Dissipaters				0.5	2	1.0	
Spur B		Headwall Armoring				0.5	2	1.0	
		Energy Dissipaters				0.5	2	1.0	
Spur B-1		Headwall Armoring				0.5	1	0.5	
		Energy Dissipaters				0.5	1	0.5	

*Optional Rock in accordance with 6-75

REQUIRED QUARRY SPALLS: 5 CY
OPTIONAL QUARRY SPALLS: 0 CY
TOTAL QUARRY SPALLS: 5 CY

CULVERT LIST

Road Number	Location	Culvert			Armoring (C.Y.)			Backfill Material	Bedding Material	Inlet Marker	Remarks
		Dia (In)	Length	Type	Inlet	Outlet	Type				
HM-3230	4+40	18	30	PD	0.5	0.5	QS	NT	NT	Y	
HM-3230	13+10	18	30	PD	0.5	0.5	QS	NT	NT	Y	
RCP-100	68+15			DO							Ditchout Left (West)
RCP-2000	68+75			DO							Ditchout Left (South)
Spur B	3+05	18	30	PD	0.5	0.5	QS	NT	NT	Y	
Spur B	6+15	18	30	PD	0.5	0.5	QS	NT	NT	Y	
Spur B-1	0+50	18	30	PD	0.5	0.5	QS	NT	NT	Y	

Key:

NT - Native (bank run)
QS - Quarry Spalls
PD - Polyethylene Pipe Double Wall
DO - Ditchout

COMPACTION LIST

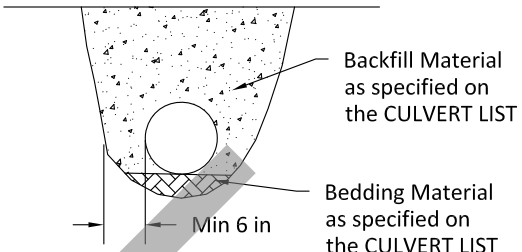
Road	Type	Max Depth Per Lift (inches)	Equipment Type	Equipment Weight (lbs)	Minimum Number of Passes	Maximum Operating Speed (mph)	Maximum Amount of Deflection (inches)
All Roads	Subgrade	12	Vibratory Smooth Drum	20,000	4	3	2
All Roads	Fill	24	Vibratory Smooth Drum	20,000	4	3	2
All Roads	Waste Area	24	Excavation	30,000	-	-	4
All Roads	Pre-haul Surface	6	Vibratory Smooth Drum	20,000	5	3	1
All Roads	Rock	12	Vibratory Smooth Drum	20,000	3	3	1

INSTALLATION REQUIREMENTS:

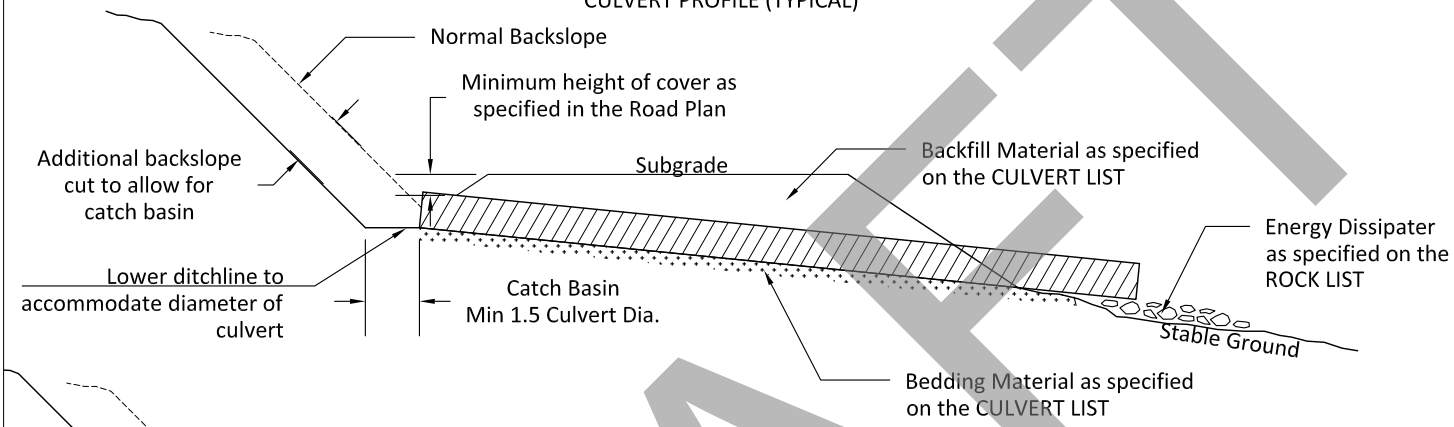
1. Proper preparation of foundation and placement of any required bedding material shall precede the installation of all culverts. This includes necessary leveling of the native trench bottom and compaction of required bedding material to form a uniform, dense, unyielding base. The pipe must be uniformly 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

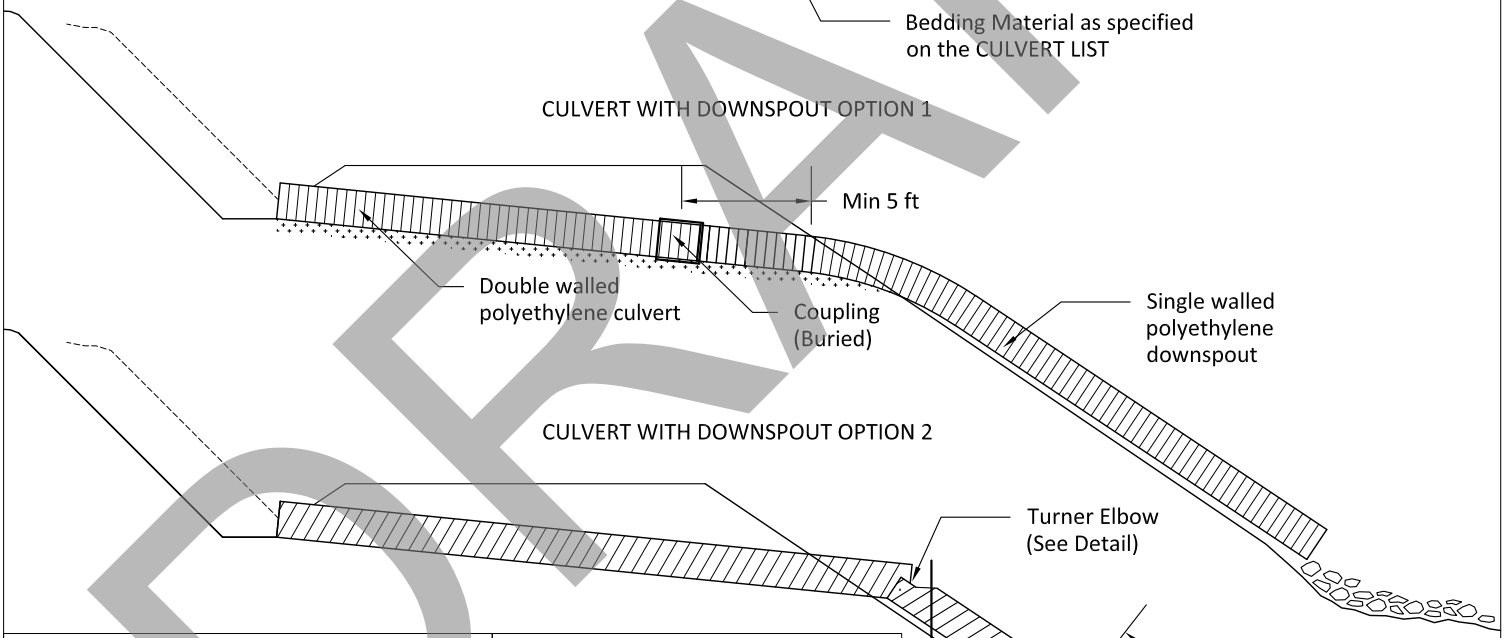
CROSS SECTION



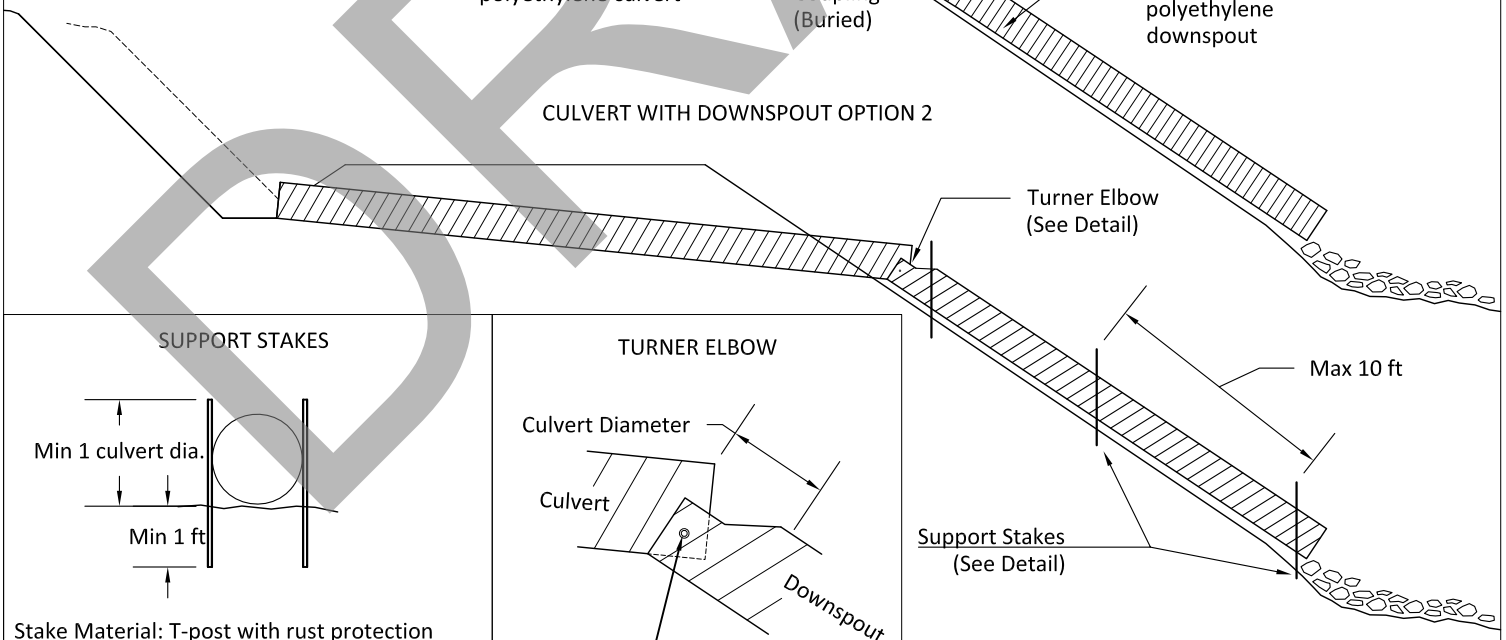
CULVERT PROFILE (TYPICAL)



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.

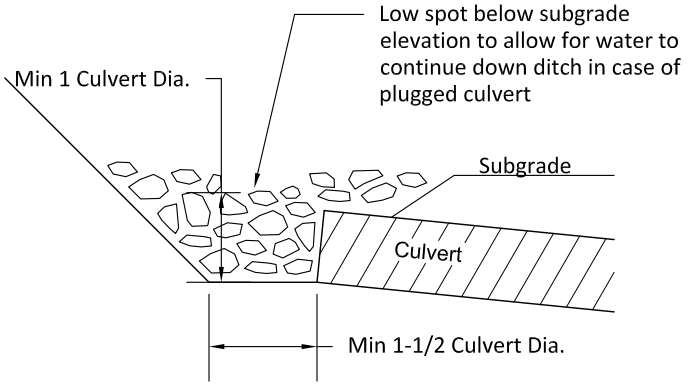
TURNER ELBOW

Bolted with $\frac{5}{8}$" galvanized bolts and washers (both sides)

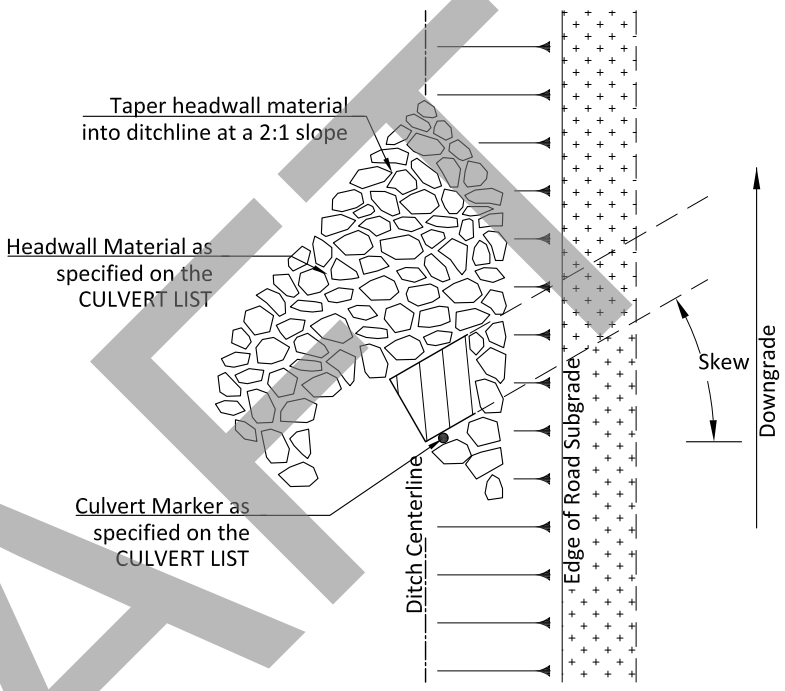
Downspout must be 6 inches larger in diameter than the culvert.

HEADWALLS

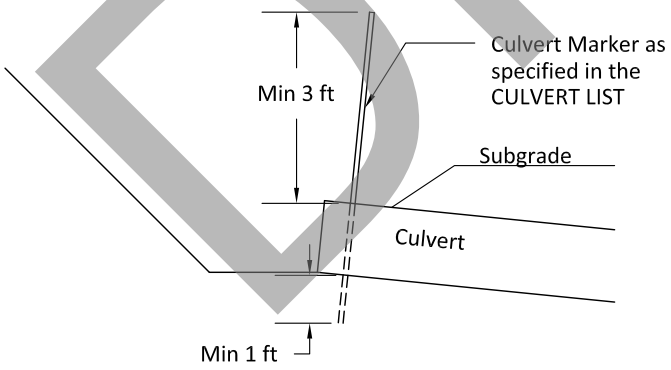
Section View



Plan View

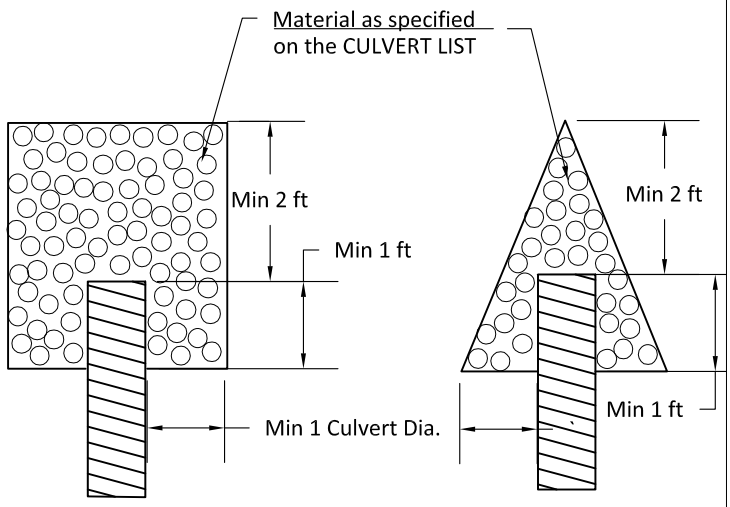


CULVERT MARKERS



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 DISSIPATERS



Min Energy Dissipater Depth: 1 Culvert Dia.

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 and shape 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.

Preventative Maintenance

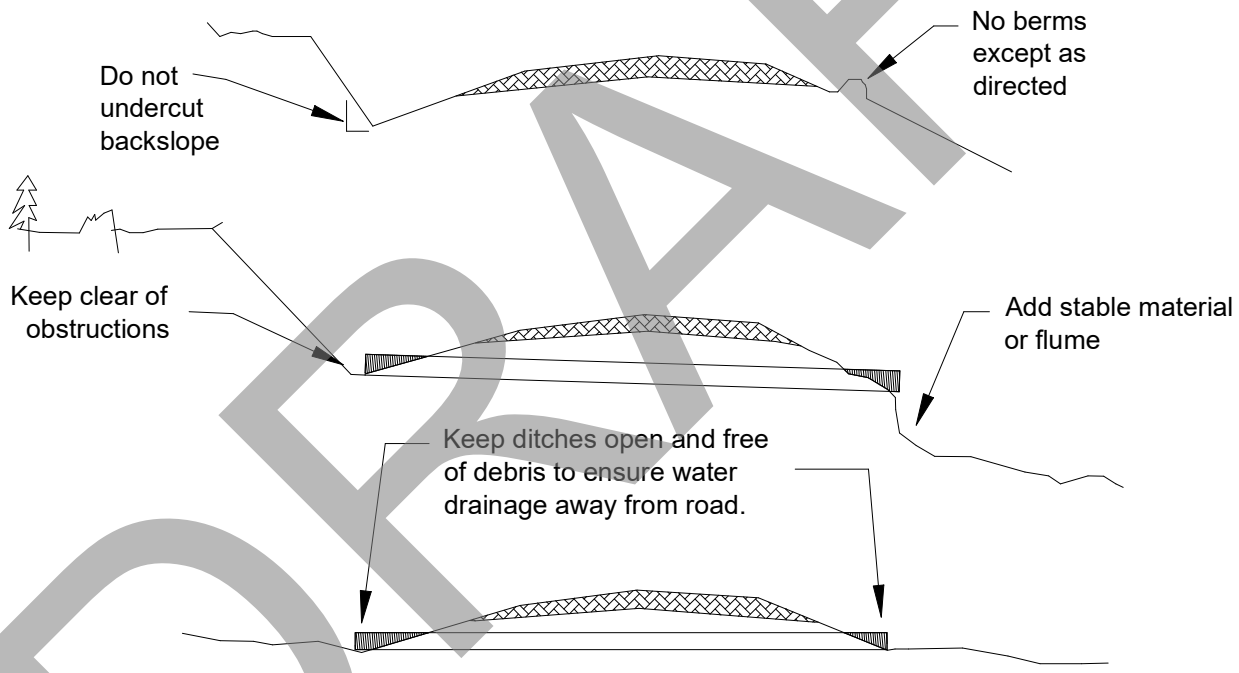
- Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

Termination of Use or End of Season

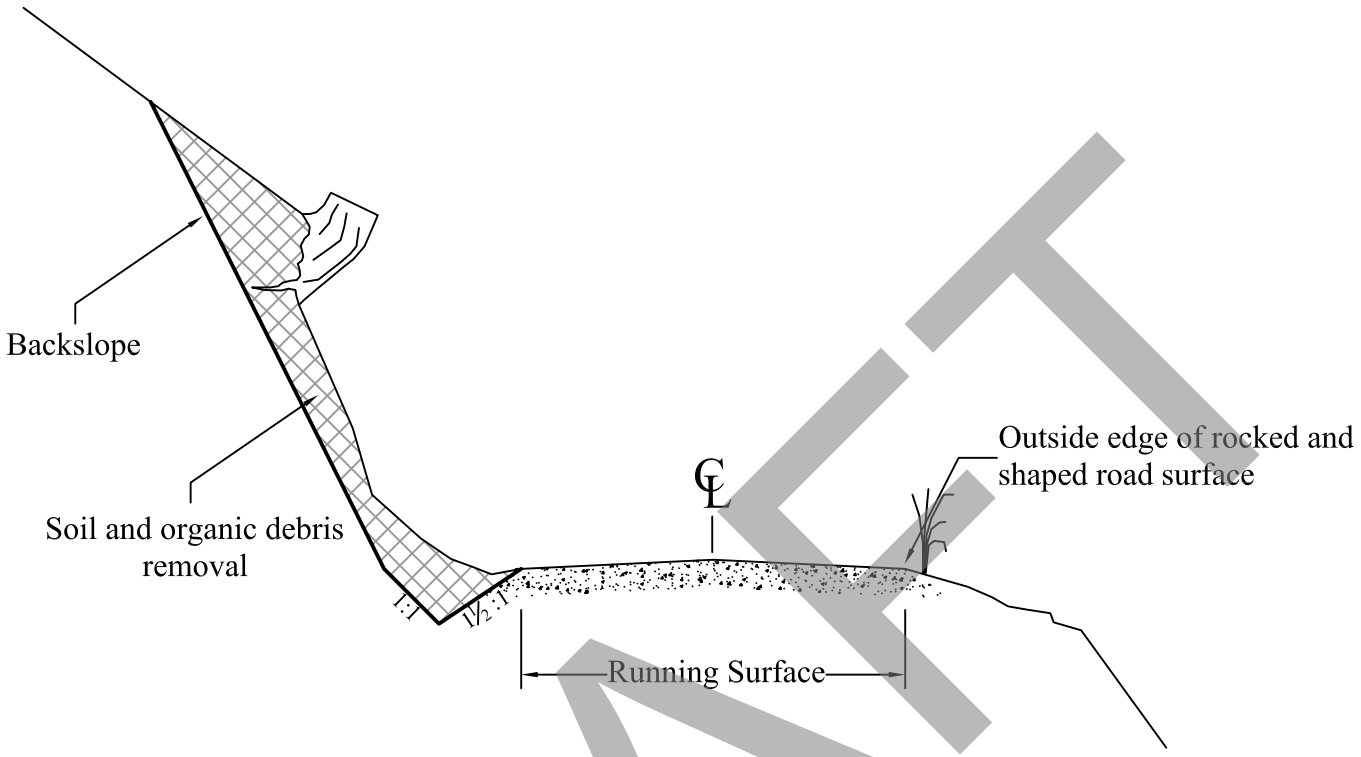
- At the conclusion of logging operations, ensure all conditions of these specifications have been met.

Debris

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



Ditch Cleaning Detail



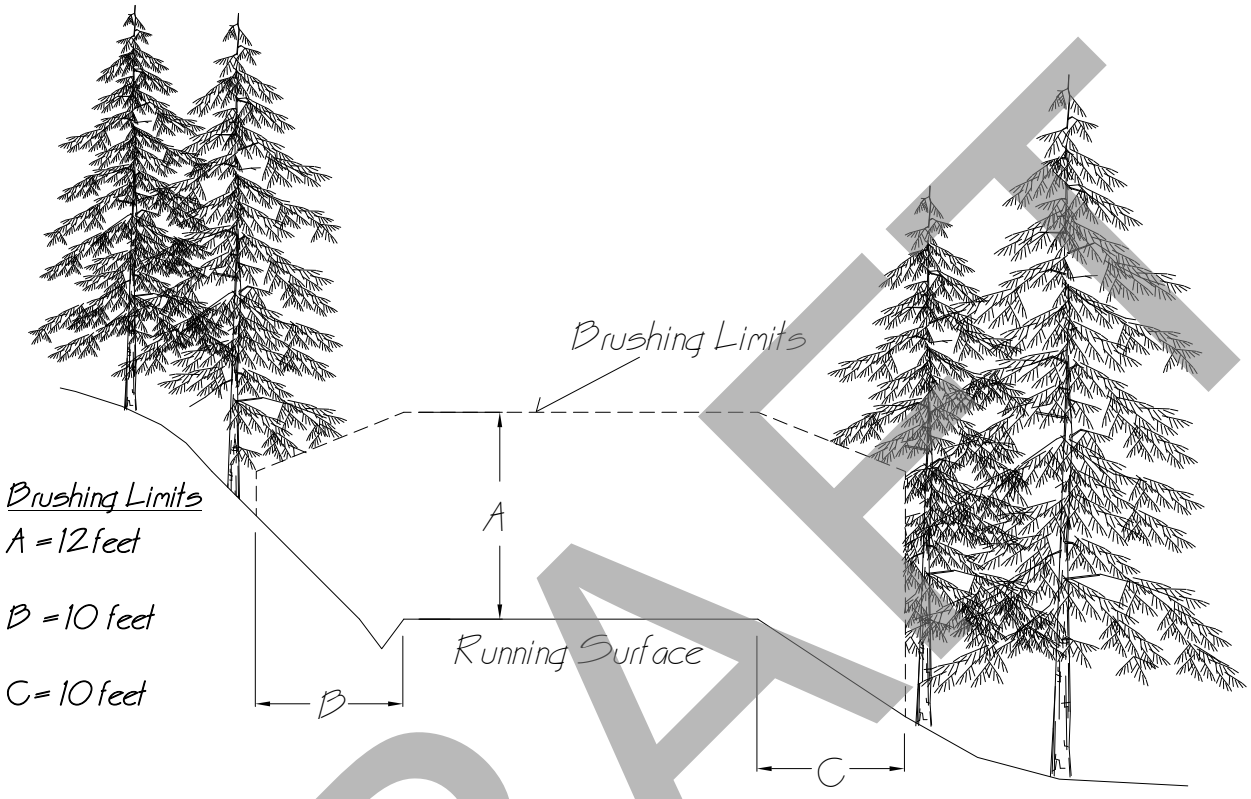
1. The backslope shall be no steeper than 1/2:1, unless the material is hardpan or solid rock, in which case it may be 1/4:1.

2. If there is sufficient width for the ditch without affecting the cut bank, then removing bank material is not required.

3. If there is insufficient width to clean or construct a ditch without disturbing more than 15 vertical feet of bank, the Contract Administrator may authorize changes to this plan in order to still meet the intent of having a ditch, while staying within the excavation limits already set.

4. Ditch cleaning or construction shall not shrink the running surface of the road.

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

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES
PACIFIC CASCADE REGION

SQUALLY QUARRY DEVELOPMENT PLAN
Section 28/29, Township 13 North, Range 06 West, W.M.

1. Development shall occur in Areas A or B. Purchaser shall not reduce the elevation of the pit floor below 1880ft as shown in the attached profiles. Development in any other area must be approved in writing by the Contract Administrator.

2. Trees shall be cleared to a minimum of ¾ of the height of the tallest tree adjacent to the working face. All vegetation within 20 feet of the top of all working faces shall be cleared, including stumps.

3. Overburden shall be end hauled to the designated waste area and compacted. Minimal acceptable compaction is achieved as detailed in the COMPACTION LIST.

4. Root wads and organic debris larger than one cubic foot in volume shall be separated and piled separately from overburden material in the designated waste area.

5. Pit faces shall not exceed 25 feet in height; solid rock faces shall be sloped no steeper than ¼:1, diggable rock faces shall be sloped no steeper than ½:1.

6. Working bench width shall be a minimum of 20 feet.

7. The pit floor shall have continuity of slope, providing drainage to the Southwest 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 in the designated Oversize Storage Area.

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. 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 3% 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.

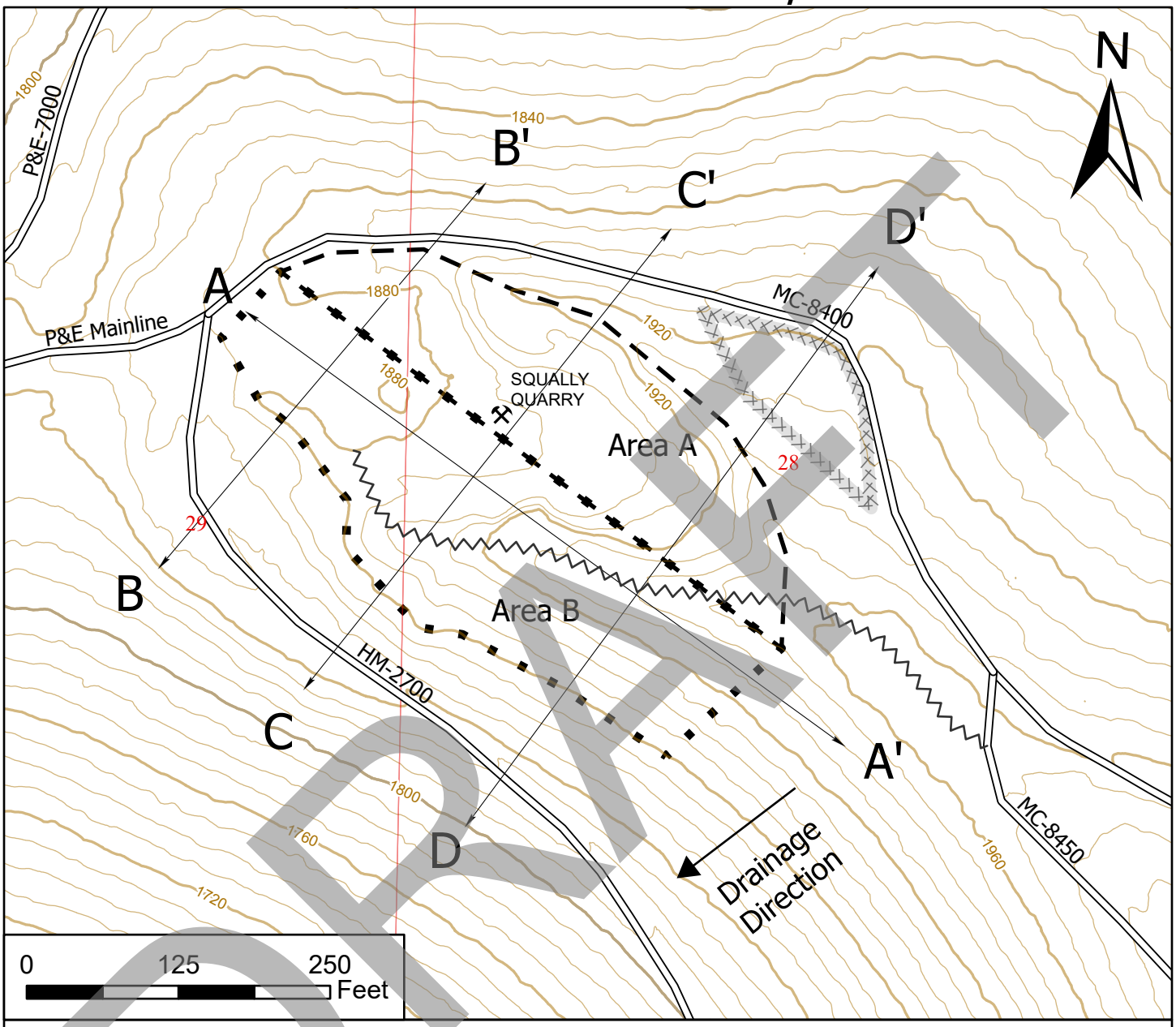
    e. The area will be left in a condition that will not endanger public safety, damage property, or be hazardous to animal or human life. The site shall be cleared of all temporary structures, equipment and rubbish, and shall be left in a neat and presentable condition.

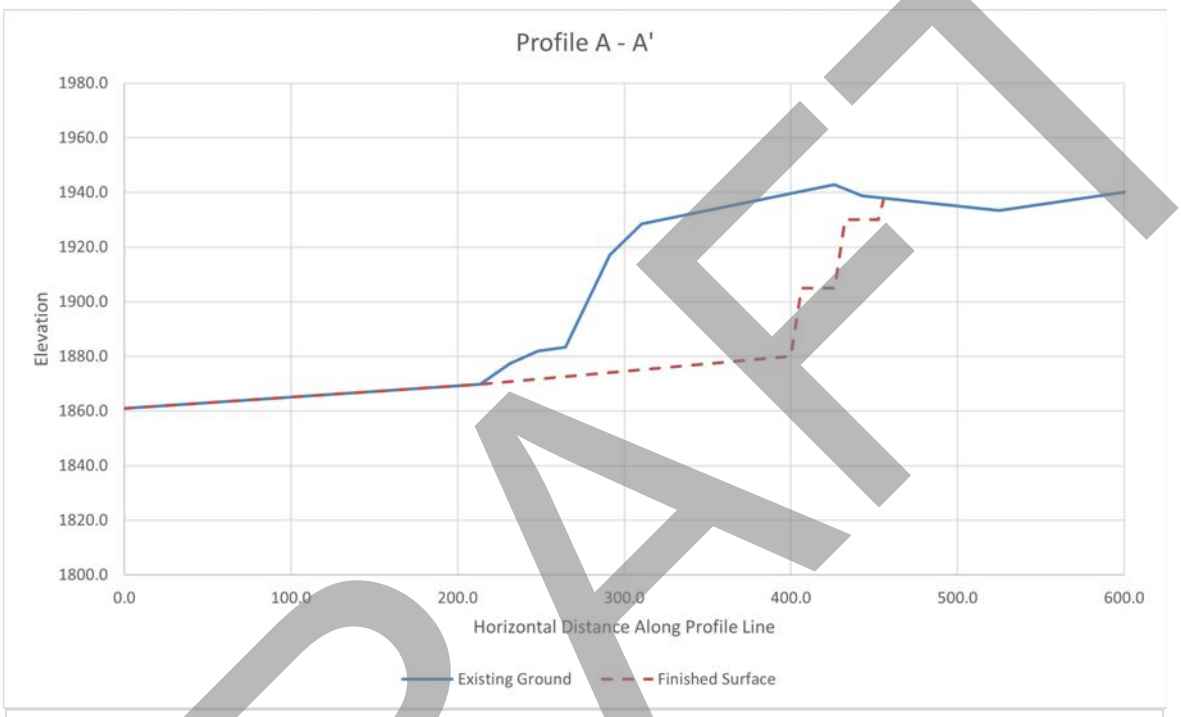
    f. Prior to termination of the contract, quarry condition and compliance with all terms of the contract shall be approved in writing by the Contract Administrator.

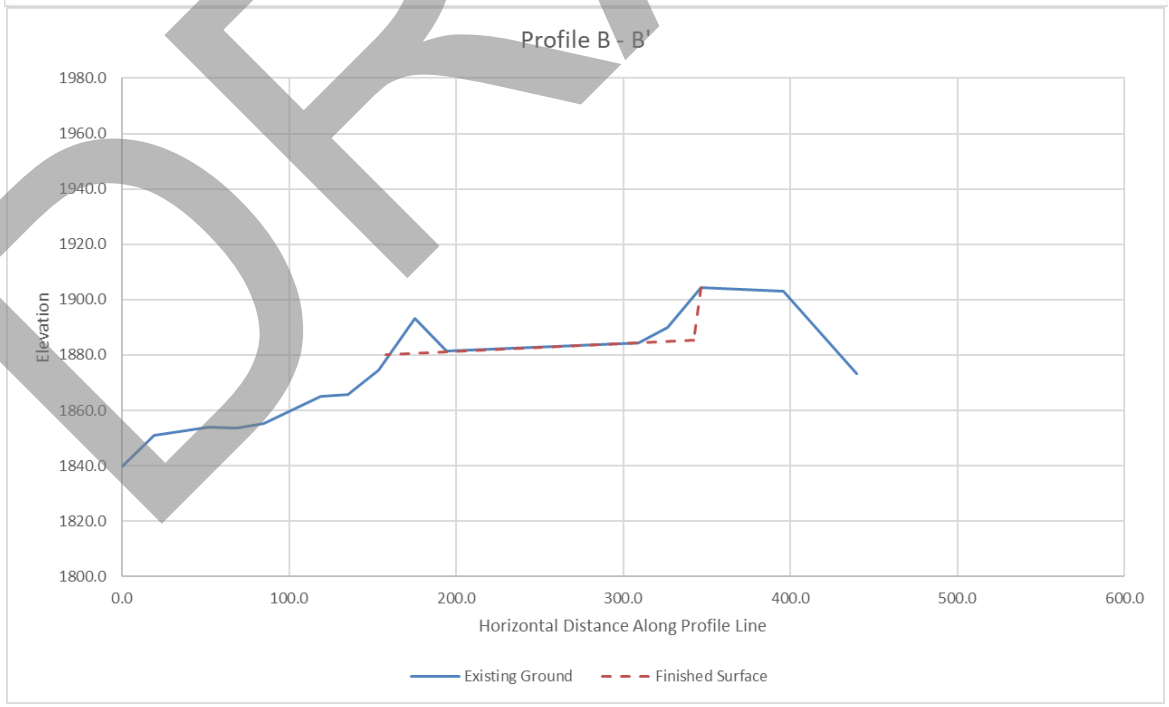
12. Reclamation will not be required following use.

Squally Quarry Development Plan Pg. 3 of 5

T13R06W Section 28/29

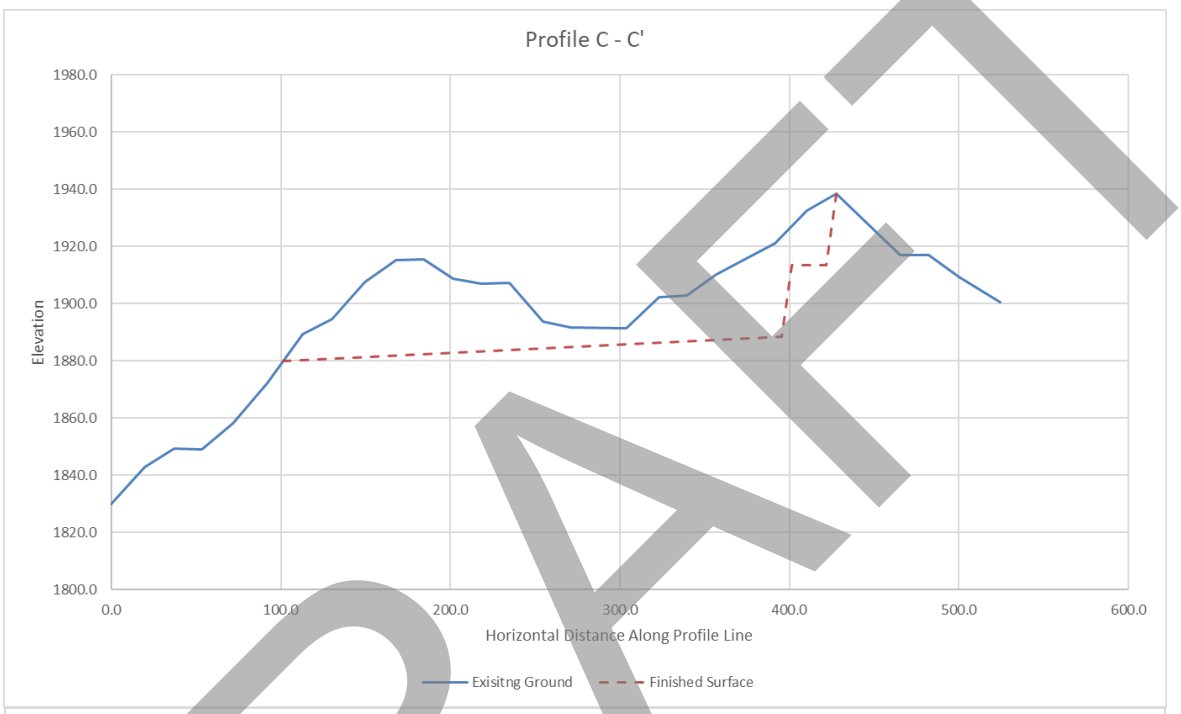


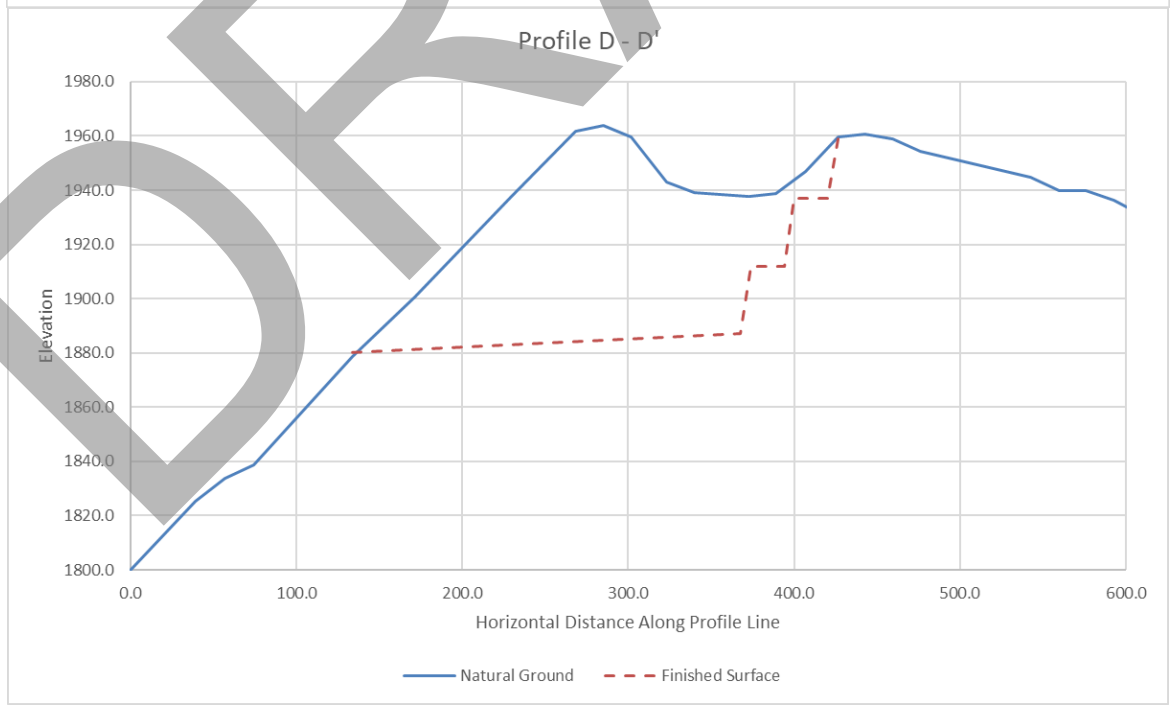




STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES
PACIFIC CASCADE REGION

SQUALLY QUARRY DEVELOPMENT PLAN
Section 28/29, Township 13 North, Range 06 West, W.M.





SUMMARY - Road Development Costs

REGION: Pacific Cascade
DISTRICT: Lewis

SALE/PROJECT NAME: Auger In AGREEMENT #: 30-107774

ROAD NUMBERS: Optional: HM-3120, HM-3230, Spur B, Spur B-1

Required: HM-Mainline, HM-3100, HM-3270, RCP-100, RCP-2000

ROAD STANDARD:		Construction	Reconstruction	Maintenance
NUMBER OF STATIONS:		25.94	0.00	279.45
CLEARING & GRUBBING, EXCAVATION AND FILL, MISC.:		$14,009.46	$0.00	$21,407.89
ROAD ROCK:				
	Optional:	$38,983.74	$0.00	$0.00
	Required:	$0.00	$0.00	$24,382.83
	Total:	$38,983.74	$0.00	$24,382.83
STOCKPILE:				$0.00
CULVERTS AND FLUMES:		$4,615.00	$0.00	$0.00
STRUCTURES:				
MOBILIZATION:		$4,005.02	$0.00	$6,120.08
TOTAL COSTS:		$61,613.22	$0.00	$51,910.80
COST PER STATION:		$2,375	$0	$186
ROAD DEACTIVATION & ABANDONMENT COSTS:		$0.00	$0.00	$0.00

10% OVERHEAD AND GENERAL EXPENSE = $11,352.41
TOTAL (All Roads) = $124,876.43
TOTAL (Minus Optional Rock) = $85,892.69
SALE VOLUME MBF = 2,584
TOTAL $/MBF = $48.33
TOTAL $/MBF (Minus Optional Rock) = $33.24

Profit and Risk costs are accounted on an individual basis.

SUMMARY OF ROAD

Sale: **Auger In** Road: **HM-Mainline**

Required Pre-Haul Maintenance-	135+60	stations	Required Reconstruction -	0+00	stations	Required Construction -	0+00	stations
	2.57	miles		0.00	miles		0.00	miles
Required Abandonment-		stations	Optional Reconstruction -		stations	Optional Construction -		stations
	0.00	miles		0.00	miles		0.00	miles

PRE-HAUL MAINTENANCE

EXCAVATION

Clean ditch- 431+50 to 433+50, 448+50 to 471+50, 484+35 to 505+60	46.25	stations @	$67.19	per station	$3,107.54
MISC.					
Construct landing -	6.00	@	$538.46	each	$3,230.76
				TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC.	**$6,518.30**

ROCK

Spot Rock		0+00	20	cy. of	2 1/2-Inch Minus Crushed Rock	@	$10.73	per c.y.=	$214.60
370+00	to	505+60	404	cy. of	Select Pit Run	@	$14.54	per c.y.=	$5,874.16
								TOTAL ROCK	**$6,088.76**
								SUBTOTAL	**$12,607.06**

MOBILIZATION

SUBTOTAL **$1,863.45**

OVERHEAD & GENERAL EXPENSES

10%

SUBTOTAL **$1,447.05**

TOTAL **$15,917.56**

Optional Rock? NO

COST PER STATION **$117.39**

SUMMARY OF ROAD

Sale: **Auger In** Road: **HM-3100**

Required Pre-Haul Maintenance-	13+70	stations	Required Reconstruction -	0+00	stations	Required Construction -		stations
	0.26	miles		0.00	miles		0.00	miles
Required Abandonment-		stations	Optional Reconstruction -		stations	Optional Construction -	0+00	stations
	0.00	miles		0.00	miles		0.00	miles

PRE-HAUL MAINTENANCE

MISC.

Grade and shape existing road surface -	13.70	stations @	$18.25	per station	$250.03	
Roll shaped road surface w/ vibratory roller prior to rocking -	13.70	stations @	$9.70	per station	$132.89	
Construct landings	3.00	@	$538.46	each	$1,615.38	
		TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC.				**$1,998.30**

ROCK

0+00	to	13+70	274	cy. of	2 1/2-Inch Minus Crushed Rock	@	$10.43	per c.y.=	$2,857.82	
0+00	to	13+70	202	cy. of	Select Pit Run	@	$14.24	per c.y.=	$2,876.48	
									TOTAL ROCK	**$5,734.30**
									SUBTOTAL	**$7,732.60**

MOBILIZATION

SUBTOTAL **$571.27**

OVERHEAD & GENERAL EXPENSES

10% SUBTOTAL **$830.39**

TOTAL **$9,134.26**

Optional Rock? NO

COST PER STATION **$666.73**

SUMMARY OF ROAD

Sale: **Auger In** Road: **HM-3120**

Required Pre-Haul Maintenance-	0+00 stations 0.00 miles	Required Reconstruction -	stations 0.00 miles	Required Construction -	stations 0.00 miles
Required Abandonment-	stations 0.00 miles	Optional Reconstruction -	0+00 stations 0.00 miles	Optional Construction -	3+03 stations 0.06 miles

CONSTRUCTION

CLEARING/GRUBBING						
Scattering Organic Debris	3.03	sta @	$280.00	per sta	$848.40	
EXCAVATION						
Road Construction Earthwork	3.03	sta. @	$152.17	per sta. =	$461.08	
Grade and shape subgrade -	3.03	stations @	$14.60	per station	$44.24	
MISC.						
Roll subgrade w/ vibratory roller prior to rocking -	3.03	stations @	$12.12	per station	$36.72	
Construct landing -	1.00	@	$538.46	each	$538.46	
Grass seed and fertilize -	7.60	lbs @	$4.00	per lbs	$30.40	
				TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC.		**$1,959.30**

ROCK

0+00	to	3+03	328	cy. of	Select Pit Run	@	$14.49	per c.y.=	$4,752.72
								TOTAL ROCK	**$4,752.72**
								SUBTOTAL	**$6,712.02**

MOBILIZATION

SUBTOTAL **$560.12**

OVERHEAD & GENERAL EXPENSES

10% SUBTOTAL **$727.21**

TOTAL **$7,999.35**

Optional Rock? YES

COST PER STATION **$2,640.05**

SUMMARY OF ROAD

Sale: **Auger In** Road: **HM-3230**

Required Pre-Haul Maintenance-	0+00 stations 0.00 miles	Required Reconstruction -	stations 0.00 miles	Required Construction -	stations miles
Required Abandonment-	stations 0.00 miles	Optional Reconstruction -	0+00 stations 0.00 miles	Optional Construction -	13+71 stations 0.26 miles

CONSTRUCTION

CLEARING/GRUBBING						
Scattering Organic Debris	13.71	sta @	$280.00	per sta	$3,838.80	
EXCAVATION						
Road Construction Earthwork	13.71	sta. @	$152.17	per sta. =	$2,086.25	
Grade and shape subgrade -	13.71	stations @	$14.60	per station	$200.17	
MISC.						
Roll subgrade w/ vibratory roller prior to rocking -	13.71	stations @	$12.12	per station	$166.17	
Construct turnaround @ sta. -	2.00	@	$134.62	each	$269.24	
Construct landing -	2.00	@	$538.46	each	$1,076.92	
Grass seed and fertilize -	35.20	lbs @	$4.00	per lbs	$140.80	
				TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC.		**$7,778.35**

CULVERTS - MATERIALS & INSTALLATION

Culverts						
60	LF of 18"	$1,830.00	0	LF of 24"	$0.00	
Culvert Stakes & Markers						
2 markers		$16.00				
		$16.00			TOTAL CULVERTS	**$1,846.00**

ROCK

Energy Dissipator	0+00	1	cy. of	Quarry Spalls	@	$20.24	per c.y.=	$20.24	
0+00 to	13+71	1,348	cy. of	Select Pit Run	@	$15.24	per c.y.=	$20,543.52	
Inlet Headwall	0+00	1	cy. of	Quarry Spalls	@	$20.24	per c.y.=	$20.24	
								TOTAL ROCK	**$20,584.00**
								SUBTOTAL	**$30,208.35**

MOBILIZATION

SUBTOTAL **$2,223.67**

OVERHEAD & GENERAL EXPENSES

10% SUBTOTAL **$3,243.20**

TOTAL **$35,675.22**

Optional Rock? YES

COST PER STATION **$2,602.13**

SUMMARY OF ROAD

Sale: **Auger In** Road: **HM-3270**

Required Pre-Haul Maintenance-	0+01 stations 0.00 miles	Required Reconstruction -	stations 0.00 miles	Required Construction -	stations 0.00 miles
Required Abandonment-	stations 0.00 miles	Optional Reconstruction -	0+00 stations 0.00 miles	Optional Construction -	0+00 stations 0.00 miles

PRE-HAUL MAINTENANCE

MISC.

Construct landings				1.00	@	$538.46	each	$538.46
					TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC.			**$538.46**

ROCK

Landing Rock	68	cy. of	Select Pit Run		@	$16.69	per c.y.=	$1,134.92
							TOTAL ROCK	**$1,134.92**
							SUBTOTAL	**$1,673.38**

MOBILIZATON

SUBTOTAL **$153.93**

OVERHEAD & GENERAL EXPENSES

10% SUBTOTAL **$182.73**

TOTAL **$2,010.04**

Optional Rock? NO

COST PER STATION **N/A**

SUMMARY OF ROAD

Sale: **Auger In** Road: **RCP-100**

Required Pre-Haul Maintenance-	49+85	stations	Required Reconstruction -		stations	Required Construction -		stations
	0.94	miles		0.00	miles		0.00	miles
Required Abandonment-		stations	Optional Reconstruction -	0+00	stations	Optional Construction -	0+00	stations
	0.00	miles		0.00	miles		0.00	miles

PRE-HAUL MAINTENANCE

CLEARING						
Roadside Brushing	0.94	miles @	$1,170.00	per mile =	$1,099.80	
EXCAVATION						
Construct ditchouts -	1.00	@	$71.67	each	$71.67	
Pull and clean ditch-	49.85	stations @	$67.19	per station	$3,349.42	
MISC.						
Grade and shape existing road surface -	49.85	stations @	$18.25	per station	$909.76	
Roll shaped road surface w/ vibratory roller prior to rocking -	14.25	stations @	$9.70	per station	$138.23	
Construt landings	2.00	@	$538.46	each	$1,076.92	
		TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC.				**$6,645.80**

ROCK

46+30	to	96+15	244	cy. of	2 1/2-Inch Minus Crushed Rock	@	$17.35	per c.y.=	$4,233.40
Spot Rock		0+00	30	cy. of	2 1/2-Inch Minus Crushed Rock	@	$17.35	per c.y.=	$520.50
46+30	to	96+15	135	cy. of	Select Pit Run	@	$17.35	per c.y.=	$2,342.25
								TOTAL ROCK	**$7,096.15**
								SUBTOTAL	**$13,741.95**

MOBILIZATION

SUBTOTAL **$1,899.90**

OVERHEAD & GENERAL EXPENSES

10% SUBTOTAL **$1,564.19**

TOTAL **$17,206.04**

Optional Rock? NO

COST PER STATION **$345.16**

SUMMARY OF ROAD

Sale: **Auger In** Road: **RCP-2000**

Required Pre-Haul Maintenance-	80+30	stations	Required Reconstruction -		stations	Required Construction -		stations
	1.52	miles		0.00	miles		0.00	miles
Required Abandonment-		stations	Optional Reconstruction -	0+00	stations	Optional Construction -	0+00	stations
	0.00	miles		0.00	miles		0.00	miles

PRE-HAUL MAINTENANCE

EXCAVATION

Construct ditchouts -	1.00	@	$71.67	each	$71.67	
Pull and clean ditch-	80.30	stations @	$67.19	per station	$5,395.36	

MISC.

Clean culvert inlet and outlet -	4.00	@	$60.00	each	$240.00	
				TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC.		**$5,707.03**

ROCK

0+00	to	80+30	420	cy. of	2 1/2-Inch Minus Crushed	@	$9.21	per c.y.=	$3,868.20	
Spot Rock		0+00	50	cy. of	2 1/2-Inch Minus Crushed	@	$9.21	per c.y.=	$460.50	
									TOTAL ROCK	**$4,328.70**
									SUBTOTAL	**$10,035.73**

MOBILIZATION

SUBTOTAL **$1,631.52**

OVERHEAD & GENERAL EXPENSES

10% SUBTOTAL **$1,166.73**

TOTAL **$12,833.98**

Optional Rock? NO

COST PER STATION **$159.83**

SUMMARY OF ROAD

Sale: **Auger In** Road: **Spur B**

Required Pre-Haul Maintenance-	0+00 stations 0.00 miles	Required Reconstruction -	stations 0.00 miles	Required Construction -	stations 0.00 miles
Required Abandonment-	stations 0.00 miles	Optional Reconstruction -	0+00 stations 0.00 miles	Optional Construction -	7+95 stations 0.15 miles

CONSTRUCTION

CLEARING/GRUBBING						
Scattering Organic Debris	7.95	sta @	$280.00	per sta	$2,226.00	
EXCAVATION						
Road Construction Earthwork	7.95	sta. @	$152.17	per sta. =	$1,209.75	
Grade and shape subgrade -	7.95	stations @	$14.60	per station	$116.07	
MISC.						
Roll subgrade w/ vibratory roller prior to rocking -	7.95	stations @	$12.12	per station	$96.35	
Grass seed and fertilize -	20.40	lbs @	$4.00	per lbs	$81.60	
				TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC.		**$3,729.77**

CULVERTS - MATERIALS & INSTALLATION

Culverts							
60	LF of 18"	$1,830.00		0	LF of 24"	$0.00	
Culvert Stakes & Markers							
2 markers		$16.00					
		$16.00				TOTAL CULVERTS	**$1,846.00**

ROCK

Energy Dissipater	0+00	1	cy. of	Quarry Spalls	@	$19.26	per c.y.=	$19.26	
0+00 to	7+95	770	cy. of	Select Pit Run	@	$14.26	per c.y.=	$10,980.20	
Inlet Headwall	0+00	1	cy. of	Quarry Spalls	@	$19.26	per c.y.=	$19.26	
								TOTAL ROCK	**$11,018.72**
								SUBTOTAL	**$16,594.49**

MOBILIZATION

SUBTOTAL **$1,066.27**

OVERHEAD & GENERAL EXPENSES

10% SUBTOTAL **$1,766.08**

TOTAL **$19,426.84**

Optional Rock? YES

COST PER STATION **$2,443.63**

SUMMARY OF ROAD

Sale: **Auger In** Road: **Spur B-1**

Required Pre-Haul Maintenance-	0+00	stations	Required Reconstruction -	0+00	stations	Required Construction -		stations
	0.00	miles		0.00	miles		0.00	miles
Required Abandonment-		stations	Optional Reconstruction -		stations	Optional Construction -	1+25	stations
	0.00	miles		0.00	miles		0.02	miles

CONSTRUCTION

CLEARING/GRUBBING						
Scattering Organic Debris	1.25	sta @	$280.00	per sta	$350.00	
EXCAVATION						
Road Construction Earthwork	1.25	sta. @	$116.67	per sta. =	$145.84	
Grade and shape subgrade -	1.25	stations @	$14.60	per station	$18.25	
MISC.						
Roll subgrade w/ vibratory roller prior to rocking -	1.25	stations @	$12.12	per station	$15.15	
Grass seed and fertilize -	3.20	lbs @	$4.00	per lbs	$12.80	
		TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC.				**$542.04**

CULVERTS - MATERIALS & INSTALLATION

Culverts							
30	LF of 18"	$915.00		0	LF of 24"	$0.00	
Culvert Stakes & Markers							
1	markers	$8.00					
		$8.00				TOTAL CULVERTS	**$923.00**

ROCK

Energy Dissipator	0+00	0.5	cy. of	Quarry Spalls	@	$19.18	per c.y.=	$9.59	
0+00 to	1+25	184	cy. of	Select Pit Run	@	$14.18	per c.y.=	$2,609.12	
Inlet Headwall	0+00	0.5	cy. of	Quarry Spalls	@	$19.18	per c.y.=	$9.59	
								TOTAL ROCK	**$2,628.30**
								SUBTOTAL	**$4,093.34**
MOBILIZATION								SUBTOTAL	**$154.96**
OVERHEAD & GENERAL EXPENSES				10%				SUBTOTAL	**$424.83**
								TOTAL	**$4,673.13**
Optional Rock? YES								**COST PER STATION**	**$3,738.50**

ROCK DEVELOPMENT COST SUMMARY

Pit:	Squally Quarry	Location:	T13R06W S28/29		
Sale:	**Auger In**		Road:		3310 c.y.
Swell:	1.40		Stockpile:		c.y.
Shrinkage	1.16		Total Truck Loads:		3310 c.y.
Drill Pct.:	0%		Bank Total:		2364 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact.	$4.31	/cu.yd x	778	cu.yds.	$3,353.18
Rip Rock:	$2.50	/cu.yd x	2364	cu.yds.	$5,910.00
Push Rock:	$0.67	/cu.yd x	3310	cu.yds.	$2,217.70
Load Dump Truck:	$1.50	/cu.yd x	3310	cu.yds.	$4,965.00
				Subtotal	$16,445.88

Move in Loader	1	@	$491.67	=	$491.67
Move in Excavator	1	@	$637.59	=	$637.59
				Subtotal	$1,129.26
			TOTAL PRODUCTION COSTS		$17,575.14

Base Cost= $5.31 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
HM-Mainline Select Pit Run Total	$8.23	$1.00	$5.31	$14.54	404	15	16460	$5,874.16
HM-3100 Select Pit Run Total	$7.93	$1.00	$5.31	$14.24	202	15	15665	$2,876.48
HM-3120 Select Pit Run Total	$8.18	$1.00	$5.31	$14.49	328	15	16321	$4,752.72
HM-3230 Energy Dissipator	$8.93	$6.00	$5.31	$20.24	1	15	18295	$20.24
HM-3230 Select Pit Run Total	$8.93	$1.00	$5.31	$15.24	1348	15	18295	$20,543.52
HM-3230 Inlet Headwall	$8.93	$6.00	$5.31	$20.24	1	15	18295	$20.24
HM-3270 Select Pit Run Total	$10.38	$1.00	$5.31	$16.69	68	15	22130	$1,134.92
Spur B Energy Dissipater	$7.95	$6.00	$5.31	$19.26	1	15	15715	$19.26
Spur B Select Pit Run Total	$7.95	$1.00	$5.31	$14.26	770	15	15715	$10,980.20
Spur B Inlet Headwall	$7.95	$6.00	$5.31	$19.26	1	15	15715	$19.26
Spur B-1 Energy Dissipator	$7.87	$6.00	$5.31	$19.18	1	15	15500	$19.18
Spur B-1 Select Pit Run Total	$7.87	$1.00	$5.31	$14.18	184	15	15500	$2,609.12
Spur B-1 Inlet Headwall	$7.87	$6.00	$5.31	$19.18	1	15	15500	$19.18
				Total C.Y.	3310		Sub Total	$48,888.48

TOTAL ROCKING COSTS $48,888.48

ROCK DEVELOPMENT COST SUMMARY

Pit:	Walville Quarry Stockpile	Location:	T13R06W S23
Sale:	**Auger In**	Road:	879 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage	1.16	Total Truck Loads:	879 c.y.
Drill Pct.:	0%	Bank Total:	628 c.y.

Rip Rock:	$2.50	/cu.yd	x	628	cu.yds.	=	$1,570.00
Push Rock:	$0.67	/cu.yd	x	879	cu.yds.	=	$588.93
Load Dump Truck:	$1.50	/cu.yd	x	879	cu.yds.	=	$1,318.50
					Subtotal		$3,477.43

Move in Excavator	1	@	$637.59	=	$637.59
				Subtotal	$637.59
			TOTAL PRODUCTION COSTS		$4,115.02

Base Cost= $4.68 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
RCP-100 2 1/2-Inch Minus	$11.67	$1.00	$4.68	$17.35	244	18	30640	$4,233.40
RCP-100 Spot Rock	$11.67	$1.00	$4.68	$17.35	30	18	30640	$520.50
RCP-100 Select Pit Run	$11.67	$1.00	$4.68	$17.35	135	18	30640	$2,342.25
RCP-2000 2 1/2-Inch Minus	$3.53	$1.00	$4.68	$9.21	420	18	4860	$3,868.20
RCP-2000 Spot Rock	$3.53	$1.00	$4.68	$9.21	50	18	4860	$460.50
				Total C.Y.	879		Sub Total	$11,424.85

TOTAL ROCKING COSTS $11,424.85

ROCK DEVELOPMENT COST SUMMARY

Pit:	P&E Extension Quarry Stockpile	Location:	T13R06W S29
Sale:	**Auger In**	Road:	294 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage	1.16	Total Truck Loads:	294 c.y.
Drill Pct.:	0%	Bank Total:	

Load Dump Truck: $1.50 /cu.yd x 294 cu.yds. $441.00

Subtotal $441.00

Move in covered by Squally Quarry move-in; the two Quarries are 500ft apart

TOTAL PRODUCTION COSTS $441.00

Base Cost= $1.50 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
HM-Mainline Spot Rock	$8.23	$1.00	$1.50	$10.73	20	15	16460	$214.60
HM-3100	$7.93	$1.00	$1.50	$10.43	274	15	15665	$2,857.82
				Total C.Y.	294		Sub Total	$3,072.42

TOTAL ROCKING COSTS $3,072.42

Road Building Move-In Calculations

Sale: **Auger In**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
50.0	Highway	50
9.0	County/ Mainline	25
	Steep Grades	10

No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Within Area Move ($/mile)	Begin Mileage	End Mileage	Total Miles	Within Area Cost	Total Cost
1	Brush Cutter	$613.80		$16.50	0.00	0.00	0	$0.00	$613.80
1	Graders	$595.20		$16.00	0.00	0.00	0	$0.00	$595.20
1	Loader (Med. & Large)	$595.20		$16.00	0.00	0.00	0	$0.00	$595.20
1	Rollers & Compactors	$595.20		$16.00	0.00	0.00	0	$0.00	$595.20
1	Excavators (Med.)	$595.20		$16.00	0.00	0.00	0	$0.00	$595.20
1	Excavators (Large)	$595.20	2	$16.00	0.00	0.00	0	$0.00	$708.35
1	Tractors (D6)	$613.80		$16.50	0.00	0.00	0	$0.00	$613.80
1	Tractor (D8)	$595.20	2	$16.00	0.00	0.00	0	$0.00	$708.35
5	Dump Truck (10 cy +)	$1,020.00		$15.00	0.00	0.00	0	$0.00	$5,100.00

	TOTAL MOVE-IN COSTS:	$10,125.10