



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
ODR
Sale AT-341-2025-W01074-01

District: Astoria

Date: January 10, 2025

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$1,859,974.00	\$72,889.74	\$1,932,863.74
		Project Work:	(\$214,333.00)
		Advertised Value:	\$1,718,530.74



Timber Sale Appraisal
ODR
Sale AT-341-2025-W01074-01

District: Astoria

Date: January 10, 2025

Timber Description

Location:

Stand Stocking: 80%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	18	0	96
Western Hemlock / Fir	21	0	96
Sitka Spruce	20	0	95
Alder (Red)	12	0	93

Volume by Grade	2S	3S & 4S 6"-11"	3S 12"+	8" - 9"	10" - 11"	12"+	6" - 7"	Total
Douglas - Fir	1,456	1,390	0	0	0	0	0	2,846
Western Hemlock / Fir	1,285	408	152	0	0	0	0	1,845
Sitka Spruce	304	122	34	0	0	0	0	460
Alder (Red)	0	0	0	65	9	110	113	297
Total	3,045	1,920	186	65	9	110	113	5,448

Comments: Pond Values Used: Local Pond Values, July, 2024.

Expected Log Markets: Clatskanie, Warrenton, Forest Grove, Tillamook, Mist, Wauna, Rainier, Noti, Vancouver, WA, Elma, WA, Longview, WA, and Chehalis, WA.

PRICING:

Western Red Cedar and other Cedars stumpage = pond value - (Douglas-fir) logging cost.

\$954.09/MBF = \$1,200/MBF - \$245.91/MBF

Other Costs (with Profit & Risk to be added):

Machine Washing for Invasive Weed Compliance (entering and leaving) = \$4,000

Ditch Filters:

12 bales of straw @ \$12/bale = \$144.00

2 hours of labor (installation/removal) @ \$50/hr = \$100

BPA Right-of-Way Debris & Log Removal:

2 hours of labor @ \$50/hr = \$100

Line-pulling:

1.5 acres @ 1 acre/day x \$400 labor/day = \$600

Steel Roadplate (8'x20')rental and mobilization for utility line protection: 2 plates @ \$450/month x 2 months + \$1,000 Mobilization = \$2,800

Total P&R Cost = \$3,744

Other Costs (No Profit & Risk added): None

SLASH PILING

(See attached appraisal. Includes move-in and pile materials) = \$19,856.60

ROAD MAINTENANCE

(See attached Road Maintenance Cost Summary Sheet)

TOTAL Road Maintenance: \$26,166/5,448 MBF = \$4.80/MBF



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Date: January 10, 2025

Logging Conditions

Combination#: 1

Douglas - Fir	75.00%
Western Hemlock / Fir	75.00%
Sitka Spruce	75.00%
Alder (Red)	75.00%

Logging System: Shovel **Process:** Manual Falling/Delimbing

yarding distance: Medium (800 ft) **downhill yarding:** No

tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF

loads / day: 20 **bd. ft / load:** 4900

cost / mbf: \$102.04

machines: Shovel Logger

Combination#: 2

Douglas - Fir	25.00%
Western Hemlock / Fir	25.00%
Sitka Spruce	25.00%
Alder (Red)	25.00%

Logging System: Cable: Medium Tower >40 - <70 **Process:** Manual Falling/Delimbing

yarding distance: Medium (800 ft) **downhill yarding:** No

tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF

loads / day: 11.5 **bd. ft / load:** 4600

cost / mbf: \$150.81

machines: Log Loader (A)
Tower Yarder (Medium)



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
ODR
Sale AT-341-2025-W01074-01

District: Astoria

Date: January 10, 2025

Logging Costs

Operating Seasons: 3.00	Profit Risk: 12%
Project Costs: \$214,333.00	Other Costs (P/R): \$3,744.00
Slash Disposal: \$19,856.60	Other Costs: \$0.00

Miles of Road

Road Maintenance: \$4.80

Dirt	Rock (Contractor)	Rock (State)	Paved
0.0	0.0	0.0	0.0

Hauling Costs

Species	\$ / MBF	Trips/Day	MBF / Load
Douglas - Fir	\$0.00	3.0	4.7
Western Hemlock / Fir	\$0.00	3.0	4.9
Sitka Spruce	\$0.00	2.0	4.5
Alder (Red)	\$0.00	3.0	4.4



Timber Sale Appraisal ODR Sale AT-341-2025-W01074-01

District: Astoria

Date: January 10, 2025

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
\$114.23	\$4.99	\$2.42	\$92.20	\$0.69	\$25.74	\$3.64	\$2.00	\$0.00	\$245.91
Western Hemlock / Fir									
\$114.23	\$4.99	\$2.42	\$88.43	\$0.69	\$25.29	\$3.64	\$2.00	\$0.00	\$241.69
Sitka Spruce									
\$114.23	\$5.04	\$2.42	\$145.83	\$0.69	\$32.19	\$3.64	\$2.00	\$0.00	\$306.04
Alder (Red)									
\$114.23	\$5.14	\$2.42	\$101.33	\$0.69	\$26.86	\$3.64	\$2.00	\$0.00	\$256.31

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$705.46	\$459.55	\$0.00
Western Hemlock / Fir	\$0.00	\$492.47	\$250.78	\$0.00
Sitka Spruce	\$0.00	\$500.40	\$194.36	\$0.00
Alder (Red)	\$0.00	\$501.73	\$245.42	\$0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal ODR

Sale AT-341-2025-W01074-01

District: Astoria

Date: January 10, 2025

Summary

Amortized

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00
Western Hemlock / Fir	0	\$0.00	\$0.00
Sitka Spruce	0	\$0.00	\$0.00
Alder (Red)	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	2,846	\$459.55	\$1,307,879.30
Western Hemlock / Fir	1,845	\$250.78	\$462,689.10
Sitka Spruce	460	\$194.36	\$89,405.60
Alder (Red)	297	\$245.42	\$72,889.74

Gross Timber Sale Value

Recovery: \$1,932,863.74

Prepared By: Ryan Simpson

Phone: 503-325-5451

Site Prep Appraisal

Sale Number: AT-341-2025-W01074-01

Sale Name: ODR

Date: 08/16/2024

Vegetation Type/Zone	Vegetation Type/Zone Code	Production Rate (hr/ac)	Estimated Piles/Acre	Landing Production Rate (hrs/30 acres)
Doug-fir	A	0.5	0.5	6
Hemlock/Fir	B	1.3	4.5	8
Hemlock/Spruce	C	1.8	6.0	10
Hemlock	D	1.8	6.0	8
Conifer/Hardwood	E	1.0	2.0	8
Whole Tree Yarding	F	0.5	0.5	12

Sale Area	Harvest Type	Veg Type/Zone	Ground Based Yarding Acres	Estimated Piling Hours/Area	Cost/Hour	Total Cost/Area	
1	MC	A	85	43	\$161.00	\$6,842.50	
2	MC	A	17	9	\$161.00	\$1,368.50	
3	MC	A	53	27	\$161.00	\$4,266.50	
4	MC	A	7	4	\$161.00	\$563.50	
5	MC	A	2	1	\$161.00	\$161.00	
6	MC	A	4	2	\$161.00	\$322.00	
In-unit Piling						Sub Total =	\$13,524.00
Sale Area	Number of Landings to be Piled	# cable acres per area	Total Cost/Area	Number of In-Unit Piles	Material Cost/Pile	Total Cost/Area	
1	11	9	\$289.80	53.5	\$5.00	\$267.50	
2	3	0	\$0.00	11.5	\$5.00	\$57.50	
3	5	4	\$128.80	31.5	\$5.00	\$157.50	
4	4	11	\$354.20	7.5	\$5.00	\$37.50	
5	3	15	\$483.00	4	\$5.00	\$20.00	
6	4	19	\$611.80	6	\$5.00	\$30.00	
*Cost includes separating firewood					Materials	Sub Total =	\$570.00
Additional Move-in allowance					Landing Piling	Sub Total =	\$1,867.60
Move-In Allowance	Number of Move-In's	Total Move-In Allowance					
\$1,610.00	1	\$1,610.00	Brush Piler				
\$205.00	1	\$205.00	Dump Truck (12cy)		Move-In	Sub Total =	\$1,815.00
Slash Endhaul	Dump Truck hrs	Cost/Hour	Total	Loader hrs	Cost/Hour	Total	
	8	\$99.00	\$792.00	8	\$161.00	\$1,288.00	
						Sub Total =	\$2,080.00
						Grand Total =	\$19,856.60

Road Maintenance Cost Summary (Interim and Post Harvest)

Sale: ODR
Date: August 16, 2024
By: Ryan Simpson

MBF: 5,448
\$/MBF: \$4.80

Type	Equipment/Rationale	Move-in Rate	Times	Hours	Rate	Cost
First Interim Operations	Grader 14G	\$972	1	8	\$126	\$1,980
Second Interim Operations	Grader 14G	\$972	1	8	\$126	\$1,980
	Dump Truck 12CY	\$205	2	8	\$99	\$1,202
	Rubber tired backhoe	\$401	2	4	\$97	\$1,190
	Vibratory Roller	\$972	1	4	\$97	\$1,360
Final Road Maintenance	Grader 14G	\$972	1	36	\$126	\$5,508
	Dump Truck 12CY	\$205	2	16	\$99	\$1,994
	FE Loader C966	\$931	1	8	\$108	\$1,795
	Vibratory Roller	\$972	1	36	\$97	\$4,464
	Water Truck 2,500 gallon	\$238	1	18	\$113	\$2,272
	Excavator (C315)	\$1,005	1	8	\$127	\$2,021
	Labor			8	\$50	\$400
Total						\$26,166

First and Second Interim Operations Road Maintenance

Production Rates	Miles/day	Distance (miles)	Days	Hours
Grader	3.0	2.0	0.7	5
Vibratory Roller	2.0	1.0	0.5	4

Final Road Maintenance: Grade, Process, and Compact

Production Rates	Miles/day	Distance (miles)	Days	Hours
Grader	1.5	6.8	4.5	36
Vibratory Roller	1.5	6.8	4.5	36

Process and compact: All crushed rock roads
Williamsport Road: 2.2 Miles
Scandinavian Cannery Road: 0.7 Miles
Pipeline Road: 0.8 Miles
Navy Heights Road: 0.4 Miles
Astoria Ridge Road: 0.6 Miles
Crosel Creek Road: 0.3 Miles
Unnamed Spur Roads: 1.8 Miles
Grade & Process Total = 6.8 Miles

Road Maintenance Cost Summary (Interim and Post Harvest)

Sale: ODR
Date: August 16, 2024
By: Ryan Simpson *CB*

MBF: 5,448
\$/MBF: \$4.80

Type	Equipment/Rationale	Move-in Rate	Times	Hours	Rate	Cost
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	Vibratory Roller	\$972	1	36	\$97	\$4,464
	Water Truck 2,500 gallon	\$238	1	18	\$113	\$2,272
	Excavator (C315)	\$1,005	1	8	\$127	\$2,021
	Labor			8	\$50	\$400
Total						\$26,166

First and Second Interim Operations Road Maintenance

Production Rates	Miles/day	Distance (miles)	Days	Hours
Grader	3.0	2.0	0.7	5
Vibratory Roller	2.0	1.0	0.5	4

Final Road Maintenance: Grade, Process, and Compact

Production Rates	Miles/day	Distance (miles)	Days	Hours
Grader	1.5	6.8	4.5	36
Vibratory Roller	1.5	6.8	4.5	36

Process and compact: All crushed rock roads

Williamsport Road: 2.2 Miles

Scandinavian Cannery Road: 0.7 Miles

Pipeline Road: 0.8 Miles

Navy Heights Road: 0.4 Miles

Astoria Ridge Road: 0.6 Miles

Crosel Creek Road: 0.3 Miles

Unnamed Spur Roads: 1.8 Miles

Grade & Process Total = 6.8 Miles

SUMMARY OF ALL PROJECT COSTS

SALE NAME: ODR

Project No. 1: ROAD CONSTRUCTION:

<u>Road segment</u>	<u>Length (Sta)</u>	<u>Length (Mile)</u>	<u>Cost</u>
1A to 1B, 1C to 1D,	53.50	1.01	\$42,869.30
1E to 1F, 1G to 1H,			
1I to 1J, 2A to 2B,			
3A to 3B, 3C to 3D,			
3E, 4A to 4B, 4C to 4D,			
4E to 4F, 4G to 4H,			
5A to 5B, 5C to 5D,			
6A, 6B, and 6C to 6D			
Road Maint.			\$1,506.87
Move-In			\$2,434.89
TOTALS	53.50	1.01	\$46,811

Project No. 2: ROAD IMPROVEMENT:

<u>Road segment</u>	<u>Length (Sta)</u>	<u>Length (Mile)</u>	<u>Cost</u>
I1 to I2, I3 to I4,	523.05	9.91	\$140,429.59
I5 to I6, I7 to I8,			
I9 to I10, I11 to I12,			
I13 to I14, I15 to I16			
I17 to I18, I19 to I20,			
I21 to I22, I23 to I24,			
I25 to I26, and			
I27 to I28			
Road Maint.			\$4,936.13
Move-In			\$7,976.11
TOTALS		9.91	\$153,342

SPECIAL PROJECTS (Move-In and Road Maint. are included separately as needed, for each Special Project):

<u>Description</u>	<u>Length/Vol.</u>	<u>Cost</u>
Proj. 3 Road Vacating		\$7,120.00
Project No. 4 Unauthorized Trail Vacating and Blocking		\$7,060.00
TOTAL		\$14,180

GRAND TOTAL **\$214,333**

Compiled By: Chris Scott

Date: 06/11/2024

Move In and Maintenance Calculator for Construction and Improvement

SALE NAME: ODR _____

Project No. 1: ROAD CONSTRUCTION:

Road segment	Length/Sta	Length/Mile	Cost
1A to 1B, 1C to 1D,	53.50	1.01	\$42,869
1E to 1F, 1G to 1H,			
1I to 1J, 2A to 2B,			
3A to 3B, 3C to 3D,			
3E, 4A to 4B, 4C to 4D,			
4E to 4F, 4G to 4H,			
5A to 5B, 5C to 5D,			
6A, 6B, and 6C to 6D			
TOTALS	53.50	1.01	\$42,869

Project No. 2: ROAD IMPROVEMENT:

Road segment	Length/Sta	Length/Mile	Cost
I1 to I2, I3 to I4,	523.05	9.91	\$140,430
I5 to I6, I7 to I8,			
I9 to I10, I11 to I12,			
I13 to I14, I15 to I16			
I17 to I18, I19 to I20,			
I21 to I22, I23 to I24,			
I25 to I26, and			
I27 to I28			
TOTALS		9.91	\$140,430

MOVE IN (Construction & Improvement Only)

Equipment	Length/Mile	Cost
Vibratory Roller		\$972.00
C315 Excavator		\$1,005.00
C330 Excavator		\$1,755.00
C966 Loader		\$972.00
14G Grader		\$972.00
Water Truck (2,500 gal)		\$238.00
D8 Dozer		\$1,755.00
Off Highway Dump Truck 24cy		\$966.00
Dump Truck and Pup 20cy (x4)		\$956.00
Dump Truck 10cy (x4)		\$820.00
TOTAL		\$10,411.00

ROAD MAINTENANCE (Construction & Improvement Only)

	Length/Mile	Cost
East Big Noise	4.6	\$6,443.00
TOTAL		\$6,443.00

SALE NAME: <u>QDR</u> 1A to 1B (3.75), 1C to 1D (2.95), 1E to 1F (3.65), 1G to 1H (7.85), 1I to 1J (1.3), 2A to 2B (8.2), 3A to 3B (1.5), 3C to 3D (3.2), 4A to 4B (2.35), 4C to 4D (4.05), 4E to 4F (1.15), 4G to 4H (1.4), 5A to 5B (10.4), 5C to 5D (0.65), 6C to 6D (1.2)		NEW CONSTRUCTION: <u>53.50</u> STATIONS <u>1.01</u> MILES	
ROAD: _____ POINTS: <u>3E, 6A, 6B</u>		IMPROVEMENT: _____ STATIONS <u>0.00</u> MILES	

SUB TOTAL FOR CLEARING & GRUBBING	\$7,274
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SUB TOTAL FOR EXCAVATION	\$16,593
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SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION		\$0
Subtotal of Clearing, Exc., Culv.		\$23,867

SURFACING		Subgrade prep:		Description		Stations/ amount	Rate/ sta/amt	Cost
				<u>Grade, Shape and outslope 14":</u>				
				1A to 1B (3.75), 1C to 1D (1.95), 1E to 1F (2.55), 1G to 1H (7.85), 1I to 1J (1.3), 2A to 2B (8.2), 3A to 3B (1.5), 4A to 4B (2.35), 4C to 4D (4.05), 4E to 4F (1.15), 4G to 4H (1.4), 5A to 5B (10.4), 5C to 5D (0.65), 6C to 6D		48.30	x	\$22.89 \$1,105.59
				<u>Grade, Shape and ditch 14":</u>				
				1C to 1D (1.0), 1E to 1F (1.0), 3C to 3D (3.2)		5.20	x	\$30.98 \$161.10
				<u>Subgrade Compaction:</u>				
				(1.3), 2A to 2B (8.2), 3A to 3B (1.5), 3C to 3D (3.2) 4A to 4B (2.35), 4C to 4D (4.05), 4E to 4F (1.15), 4G to 4H (1.4), 5A to 5B (10.4), 5C to 5D (0.65), 6C to 6D (1.2)		53.50	x	\$25.19 \$1,347.67

ROAD SEGMENT		1A to 1B		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per station	Volume (CY) per junctions	Number of stations	Number of junctions			
Base Rock	4"-0" crushed	0+00 to 1+00	8	50		1		50	\$13.44	\$672
Junction Rock	1 1/2"-0" crushed	0+00			22		1	22	\$11.53	\$254
Total Rock for Road Segment:		1A to 1B						72		\$926

ROAD SEGMENT		1C to 1D		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per station	Volume (CY) per junctions	Number of stations	Number of junctions			
Base Rock	4"-0" crushed	0+00 to 1+00	8	50		1		50	\$13.44	\$672
Junction Rock	1 1/2"-0" crushed	0+00			22		1	22	\$11.53	\$254
Total Rock for Road Segment:		1C to 1D						72		\$926

ROAD SEGMENT		1E to 1F		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per station	Volume (CY) per junctions	Number of stations	Number of junctions			
Base Rock	4"-0" crushed	0+00 to 1+00	8	50		1		50	\$13.44	\$672
Junction Rock	1 1/2"-0" crushed	0+00			22		1	22	\$11.53	\$254
Total Rock for Road Segment:		1E to 1F						72		\$926

ROAD SEGMENT		1G to 1H		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per station	Volume (CY) per junctions	Number of stations	Number of junctions			
Base Rock	4"-0" crushed	0+00 to 1+00	8	50		1		50	\$13.44	\$672
Junction Rock	1 1/2"-0" crushed	0+00			22		1	22	\$11.53	\$254
Total Rock for Road Segment:		1G to 1H						72		\$926

Total Rock for Road Segment:		1G to 1H		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per station	Volume (CY) per junctions	Number of stations	Number of junctions			
Base Rock	4"-0" crushed	0+00 to 1+00	8	50		1		50	\$13.44	\$672
Junction Rock	1 1/2"-0" crushed	0+00			22		1	22	\$11.53	\$254
Total Rock for Road Segment:		1G to 1H						72		\$926

ROAD SEGMENT				1I to 1J		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	1I to 1J		1I to 1J		0+00 to 1+30		50	\$13.44	\$672
				Rock	Location	Volume (CY) per station	Number of stations	Number of stations				
Base Rock	4"-0" crushed	0+00 to 1+00	8			50	1			50		
Total Rock for Road Segment:				1I to 1J						50		\$672
ROAD SEGMENT				2A to 2B		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	2A to 2B		2A to 2B		0+00 to 8+20		45	\$13.44	\$605
				Rock	Location	Volume (CY) per junctions	Number of junctions	Number of junctions				
Base Rock	4"-0" crushed	0+00 to 0+90	8			50	0.90			22		\$254
Junction Rock	1 1/2"-0" crushed	0+00				63	0.70			44		\$296
Rock for Fill Stability	6"-0" pit-run	0+90 to 1+60	10									
Total Rock for Road Segment:				2A to 2B						111		\$1,154
ROAD SEGMENT				3A to 3B		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	3A to 3B		3A to 3B		0+00 to 1+50		50	\$13.44	\$672
				Rock	Location	Volume (CY) per station	Number of junctions	Number of junctions				
Base Rock	4"-0" crushed	0+00 to 1+00	8			50	1			22		\$254
Junction Rock	1 1/2"-0" crushed	0+00										
Total Rock for Road Segment:				3A to 3B						72		\$926
ROAD SEGMENT				3C to 3D		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	3C to 3D		3C to 3D		0+00 to 3+20		50	\$13.44	\$672
				Rock	Location	Volume (CY) per station	Number of junctions	Number of junctions				
Base Rock	4"-0" crushed	0+00 to 1+00	8			50	1			22		\$254
Junction Rock	1 1/2"-0" crushed	0+00										
Total Rock for Road Segment:				3C to 3D						72		\$926
ROAD SEGMENT				3E		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	3E		3E		0+00		55	\$13.44	\$739
				Rock	Location	Volume (CY) per landing	Number of landings	Number of landings				
Landings	6"-0" pit-run	0+00	N/A			55	1			55		
Total Rock for Road Segment:				3E						55		\$739
ROAD SEGMENT				4A to 4B		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	4A to 4B		4A to 4B		0+00 to 2+35		50	\$13.44	\$672
				Rock	Location	Volume (CY) per station	Number of stations	Number of stations				
Base Rock	4"-0" crushed	0+00 to 1+00	8			50	1			50		
Total Rock for Road Segment:				4A to 4B						50		\$672

ROAD SEGMENT				4C to 4D		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per station	Number of junctions	0+00 to 1+00	1+00 to 2+00	0+00 to 4+05	Number of stations			
Base Rock	4"-0" crushed	0+00 to 1+00	10	63	1	0+00	1+00	0+00 to 4+05	1	63	\$13.44	\$847
Junction Rock	3/4"-0" crushed	0+00		22	1	0+00	1+00	0+00 to 4+05	1	22	\$11.53	\$254
Total Rock for Road Segment:										85		\$1,100
ROAD SEGMENT				4G to 4H		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per station	Number of junctions	0+00 to 1+00	1+00 to 2+00	0+00 to 1+40	Number of stations			
Base Rock	4"-0" crushed	0+00 to 1+00	10	63	1	0+00	1+00	0+00 to 1+40	1	63	\$13.44	\$847
Junction Rock	3/4"-0" crushed	0+00		22	1	0+00	1+00	0+00 to 1+40	1	22	\$11.53	\$254
Total Rock for Road Segment:										85		\$1,100
ROAD SEGMENT				5A to 5B		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per station	Number of junctions	0+00 to 1+00	1+00 to 2+00	0+00 to 10+40	Number of stations			
Base Rock	4"-0" crushed	0+00 to 1+00	8	50	1	0+00	1+00	0+00 to 10+40	1	50	\$13.44	\$672
Total Rock for Road Segment:										50		\$672
ROAD SEGMENT				6A		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per landing	Number of landings	0+00	1+00	0+00	Number of landings			
Landings	6"-0" pit-run	0+00	N/A	66	1	0+00	1+00	0+00	1	66	\$13.44	\$887
Total Rock for Road Segment:										66		\$887
ROAD SEGMENT				6B		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per landing	Number of landings	0+00	1+00	0+00	Number of landings			
Landings	6"-0" pit-run	0+00	N/A	88	1	0+00	1+00	0+00	1	88	\$13.44	\$1,183
Total Rock for Road Segment:										88		\$1,183
ROAD SEGMENT				6C to 6D		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per station	Number of junctions	0+00 to 1+00	1+00 to 2+00	0+00 to 1+20	Number of stations			
Base Rock	4"-0" crushed	0+00 to 1+00	8	50	1	0+00	1+00	0+00 to 1+20	1	50	\$13.44	\$672
Junction Rock	3/4"-0" crushed	0+00		22	1	0+00	1+00	0+00 to 1+20	1	22	\$11.53	\$254
Total Rock for Road Segment:										72		\$926

Processing:	Description		No. sta	Rate/sta	Cost
	Water, Process & Compact Base Rock (4"-0"):		12.90	\$70.47	\$909.06
	1C to 1D (1.00), 1E to 1F (1.00), 1G to 1H (1.00), 1I to 1J (1.00)				
	2A to 2B (0.90), 3A to 3B (1.00), 3C to 3D (1.00), 4A to 4B (1.00)				
	4C to 4D (1.00), 4G to 4H (1.00), 5A to 5B (1.00), 6C to 6D (1.00)				
SUB TOTAL FOR SURFACING					\$18,183
SPECIAL PROJECTS					
Description		Cy/amount	Rate	Cost	
Pit-run development		253	\$ 3.24	\$ 819.72	
SUB TOTAL FOR SPECIAL PROJECTS					\$820
					Subtotal of Surfacing & Spec. Proj. \$19,003
					Subtotal of Clearing, Exc., Culv. \$23,867
GRAND TOTAL					\$42,869
Compiled By: *		Chris Scott		Date: 06/11/2024	

SUMMARY OF CONSTRUCTION COSTS

SALE NAME:	ODR
ROAD:	I1 to I2 (151.7), I3 to I4 (10.5), I5 to I6 (7.5) I7 to I8 (13.6), I9 to I10 (13.8), I11 to I12 (7.6) I13 to I14 (75.9), I15 to I16 (88.4), I17 to I18 (19.2) I19 to I20 (83.5), I21 to I22 (9.9), I23 to I24 (36.0) I25 to I26 (2.0), I27 to I28 (3.45)

NEW CONSTRUCTION:	_____ STATIONS	_____ 0.00 MILES
IMPROVEMENT:	523.05 STATIONS	9.91 MILES

POINTS:

CLEARING & GRUBBING						
Method	Acres/amount	x	Rate	=	Cost	
		x		=	\$0.00	
		x		=	\$0.00	
		x		=	\$0.00	
SUB TOTAL FOR CLEARING & GRUBBING						

[illegible]

CULVERT MATERIALS AND INSTALLATION									
Location	Dia/type	Lineal ft.	Rate	Cost	Location	Dia/type	Lineal ft.	Rate	Cost
I1 to I2					I13 to I14				
18+80	18"/CPP	30	\$24.37	\$731.10	4+65	18"/CPP	30	\$24.37	\$731.10
40+55	18"/CPP	30	\$24.37	\$731.10	8+75	18"/CPP	30	\$24.37	\$731.10
110+10	18"/CPP	40	\$24.37	\$974.80					\$0.00
138+25	18"/CPP	30	\$24.37	\$731.10					\$0.00
142+05	18"/CPP	60	\$24.37	\$1,462.20					\$0.00
I7 to I8									\$0.00
5+65	See fill reconstruction cost estimate sheet			\$0.00					\$0.00
I9 to I10									\$0.00
11+35	18"/CPP	50	\$24.37	\$1,218.50					\$0.00
				\$0.00					\$0.00

	Description	Quantity	Rate	Cost
Other/miscellaneous:	Seed (\$/acre)	0.10	\$784.00	\$78.40
	Mulch (\$/bale)	8.00	\$13.39	\$107.12
	Labor (\$/hr)	4.00	\$50.00	\$200.00
Culvert stakes & markers:	Install culvert marker	16	\$25.53	\$408.48
				\$0.00
SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION				\$8,105
				<i>Subtotal of Clearing, Exc., Culv.</i>
				\$27,964

SURFACING		Subgrade prep:		Description		Stations/ amount	Rate/ sta/amt	Cost	
				Grade, Shape and Ditch 16'					
				I1 to I2 (151.7), I3 to I4 (10.5), I5 to I6 (7.5), I9 to I10 (13.8), I11 to I12 (7.6), I13 to I14 (75.9), I17 to I18 (19.2), I19 to I20 (83.5) I23 to I24 (36.0)		405.70	x	\$30.98	
				Subgrade Compaction					
				I1 to I2 (151.7), I3 to I4 (10.5), I5 to I6 (7.5), I9 to I10 (13.8), I11 to I12 (7.6), I13 to I14 (75.9), I17 to I18 (19.2), I19 to I20 (83.5) I23 to I24 (36.0)		405.70	x	\$25.19	
				Spot Grade w/ 14G and Compact (\$/hr)					
				I15 to I16 (88.40)		4.00	x	\$126.00	
								\$504.00	
ROAD SEGMENT			I1 to I2		POINT TO POINT		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	I1 to I2					
				Volume (CY) per	Sta. to Sta. 0+00 to 151+70 Number of				
Turnouts	1 1/2"-0" crushed	7+60, 22+25, 53+20, 56+35, 61+30, 65+60, 71+10		turnout 11	7	77	\$11.53	\$888	
Culvert Energy Dissipator	24"-6" riprap	18+80, 40+55, 57+30	N/A	dissipator 11	3	33	\$13.43	\$443	
Culvert Bedding/Backfill	3/4"-0" crushed	18+80, 40+55, 138+25	N/A	culvert 33	3	99	\$11.53	\$1,141	
Culvert Bedding/Backfill	3/4"-0" crushed	110+10	N/A	culvert 44	1	44	\$11.53	\$507	
Culvert Bedding/Backfill	3/4"-0" crushed	142+05	N/A	culvert 66	1	66	\$11.53	\$761	
		22+25 to 28+55, 48+60 to 86+30, 121+65 to							
Surfacing	1 1/2"-0" crushed	142+05	2	station 13	64.4	837	\$11.53	\$9,653	
Turnouts	1 1/2"-0" crushed	26+65, 73+40, 76+00, 83+15 13+55 (2), 17+50, 21+05, 29+30, 30+35, 41+05 (2), 42+95, 48+60, 71+95, 90+45 (2), 102+00 (2), 107+05, 114+70 (2), 117+65		turnout 22	4	88	\$11.53	\$1,015	
Surface Leveling Rock	1 1/2"-0" crushed		N/A	load 11	21	231	\$11.53	\$2,663	
Rock Ditch Filters	6"-4" pit-run	66+95, 74+55	N/A	3 filter series	2	22	\$13.43	\$295	
Turnaround	6"-0" pit-run	76+00		turnaround 22	1	22	\$13.43	\$295	
Turnaround	6"-0" pit-run	83+15, 147+20		turnaround 33	2	66	\$13.43	\$886	
Junctions	1 1/2"-0" crushed	125+05		junction 11	1	11	\$11.53	\$127	
Junctions	1 1/2"-0" crushed	131+55		junction 22	1	22	\$11.53	\$254	
Fill Armoring	24"-6" riprap	142+05	N/A	load 11	8	88	\$13.43	\$1,182	
Total Rock for Road Segment:						1,706		\$20,111	

ROAD SEGMENT				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		0+00 to 10+50 Number of				
Turnaround	6"-0" pit-run	4+50		turnaround		1	turnaround	22	\$13.43	\$295
Surfacing	1 1/2"-0" crushed	4+50 to 10+50	2	station		6	stations	78	\$11.53	\$899
Turnaround	6"-0" pit-run	7+90		turnaround		1	turnaround	44	\$13.43	\$591
Surface Leveling Rock	4"-0" crushed	8+50 (2), 9+30	N/A	load		3	loads	33	\$13.43	\$443
Landings	6"-0" pit-run	10+50	N/A	landing		1	landings	55	\$13.43	\$739
Total Rock for Road Segment:				13 to 14				232		\$2,968
ROAD SEGMENT				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		0+00 to 7+50 Number of				
Surface Leveling Rock	4"-0" crushed	1+70, 4+30, 6+25	N/A	load		4	loads	44	\$13.43	\$591
Turnaround	6"-0" pit-run	2+65		turnaround		1	turnaround	33	\$13.43	\$443
Surfacing	4"-0" crushed	6+25 to 7+50	4	station		1.25	stations	16	\$13.43	\$218
Landings	6"-0" pit-run	7+50	N/A	landing		1	landings	55	\$13.43	\$739
Total Rock for Road Segment:				15 to 16				148		\$1,991
ROAD SEGMENT				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		0+00 to 13+60 Number of				
Culvert Bedding/Backfill	3/4"-0" crushed	5+65	N/A	load		6	loads	66	\$11.53	\$761
Road Subgrade Reconst.	4"-0" crushed	5+65	N/A	load		2	loads	22	\$13.43	\$295
Fill Armor	24"-6" riprap	5+65	N/A	load		8	loads	88	\$13.43	\$1,182
Culvert Dissipator Rock	24"-6" riprap	5+65	N/A	load		1	loads	11	\$13.43	\$148
Culvert Inlet Bedding/Armor	6"-0" pit-run	5+65	N/A	load		2	loads	22	\$13.43	\$295
Rock Ditch Filters	6"-4" pit-run	8+20	N/A	3 filter series		1	3 filter series	11	\$13.43	\$148
Total Rock for Road Segment:				17 to 18				220		\$2,829

ROAD SEGMENT				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		0+00 to 13+80	Number of			
Surface Leveling Rock	1 1/2"-0" crushed	2+95 (3)	N/A	load	11	loads	3	33	\$11.53	\$380
Turnaround	6"-0" pit-run	5+95		turnaround	22	turnaround	1	22	\$13.43	\$295
Road Subgrade Reconst.	4"-0" crushed	9+10	N/A	load	11	loads	3	33	\$13.43	\$443
Road Surface Reconst.	1 1/2"-0" crushed	9+10	N/A	load	11	loads	1	11	\$11.53	\$127
Turnaround	6"-0" pit-run	11+10		turnaround	33	turnaround	1	33	\$13.43	\$443
Culvert Bedding/Backfill	3/4"-0" crushed	11+35	N/A	load	11	loads	3	33	\$11.53	\$380
Rock Ditch Filters	6"-4" pit-run	12+50		3 filter series	11	3 filter series	1	11	\$13.43	\$148
Landings	6"-0" pit-run	13+80	N/A	landing	44	landings	1	44	\$13.43	\$591
Total Rock for Road Segment:								220		\$2,808
ROAD SEGMENT				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		0+00 to 7+60	Number of			
Surfacing	1 1/2"-0" crushed	2+30 to 7+00	2	station	13	stations	4.7	61	\$11.53	\$704
Subgrade Leveling Rock	4"-0" crushed	1+10, 2+30, 4+40	N/A	load	11	loads	3	33	\$13.43	\$443
Subgrade Leveling Rock	4"-0" crushed	1+10	N/A	load	22	loads	1	22	\$13.43	\$295
Turnaround	6"-0" pit-run	6+15		turnaround	33	turnaround	1	33	\$13.43	\$443
Landings	6"-0" pit-run	7+60	N/A	landing	66	landings	1	66	\$13.43	\$886
Total Rock for Road Segment:								215		\$2,773

ROAD SEGMENT				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		0+00 to 75+90	Number of			
Surfacing	4"-0" crushed	39+00 to 41+50, 57+60 to 59+00	8	station	57	stations	3.9	222	\$13.43	\$2,985
Surfacing	1 1/2"-0" crushed	39+00 to 41+50, 57+60 to 59+00	2	station	13	stations	3.9	51	\$11.53	\$585
Curve Widening Subgrade	4"-0" crushed	39+00 to 41+52, 57+60 to 59+00	8	load	11	loads	8	88	\$13.43	\$1,182
Curve Widening Surface	1 1/2"-0" crushed	39+00 to 41+53, 10+85 to 14+20, 63+25 to 65+15	2	load	11	loads	2	22	\$11.53	\$254
Traction Rock	1 1/2"-0" crushed	0+00, 4+85, 59+65, 66+65 (2), 68+10	N/A	station	13	stations	5.25	68	\$11.53	\$787
Surface Leveling Rock	1 1/2"-0" crushed	0+90	N/A	load	11	loads	6	66	\$11.53	\$761
Road Subgrade Reconst.	4"-0" crushed	0+90	N/A	load	11	loads	2	22	\$13.43	\$295
Road Surface Reconst.	1 1/2"-0" crushed	0+90	N/A	load	11	loads	1	11	\$11.53	\$127
Culvert Bedding/Backfill	3/4"-0" crushed	4+65, 8+75	N/A	culvert	33	culverts	2	66	\$11.53	\$761
Curve Widening Surface	1 1/2"-0" crushed	11+90		load	22	loads	1	22	\$11.53	\$254
Subgrade Leveling Rock	4"-0" crushed	16+15 (3), 22+30 (2), 23+25, 24+55, 25+50, 32+00 (3), 43+65 (2), 46+70, 48+70 (2), 51+70, 52+75, 54+90, 56+30, 72+70 (2), 74+30	N/A	load	11	loads	23	253	\$13.43	\$3,398
				turnaround	22	turnaround	1	22	\$13.43	\$295
				station	13	stations	13.5	176	\$11.53	\$2,024
				load	11	loads	2	22	\$13.43	\$295
				load	11	loads	1	11	\$11.53	\$127
Turnaround	6"-0" pit-run	72+70	N/A	turnaround	33	turnaround	1	33	\$13.43	\$443
Landings	6"-0" pit-run	75+90	N/A	landing	55	landings	1	55	\$13.43	\$739
Total Rock for Road Segment:				POINT TO POINT		Sta. to Sta.		1,210		\$15,311
Total Rock for Road Segment:				113 to 114		0+00 to 19+20				
ROAD SEGMENT				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		0+00 to 83+50	Number of			
Surfacing	3/4"-0" crushed	4+90 to 11+75	2	station	13	stations	6.85	89	\$11.53	\$1,027
Surface Leveling Rock	3/4"-0" crushed	1+75, 2+70, 6+00, 8+75, 11+20	N/A	load	11	loads	5	55	\$11.53	\$634
Junctions	3/4"-0" crushed	8+75		junction	11	junctions	1	11	\$11.53	\$127
Turnouts	3/4"-0" crushed	11+20		turnout	11	turnouts	1	11	\$11.53	\$127
Total Rock for Road Segment:				POINT TO POINT		Sta. to Sta.		166		\$1,915
Total Rock for Road Segment:				117 to 118		0+00 to 83+50				
ROAD SEGMENT				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	Volume (CY) per		0+00 to 19+20	Number of			
Surface Leveling Rock	1 1/2"-0" crushed	15+40, 19+00, 33+45, 52+30	N/A	load	11	loads	4	44	\$11.53	\$507
Junctions	1 1/2"-0" crushed	15+40		junction	11	junctions	1	11	\$11.53	\$127
Turnaround	6"-0" pit-run	21+60, 29+45		turnaround	33	turnaround	2	66	\$13.43	\$886
Traction Rock	1 1/2"-0" crushed	21+40 to 32+20	2	station	13	stations	10.8	140	\$11.53	\$1,619
Total Rock for Road Segment:				POINT TO POINT		Sta. to Sta.		261		\$3,139
Total Rock for Road Segment:				119 to 120		0+00 to 83+50				

ROAD SEGMENT										
Application	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
				123 to 124	Volume (CY) per	0+00 to 36+00	Number of			
Junctions	1 1/2"-0" crushed	0+00		junction	11		junctions	1	\$11.53	\$127
Surface Leveling Rock	1 1/2"-0" crushed	2+70 (2), 9+00	N/A	load	11		loads	4	\$11.53	\$507
Subgrade Reinforcement	4"-0" crushed	5+90	N/A	load	11		loads	2	\$13.43	\$295
Turnaround	6"-0" pit-run	3+75, 15+70		turnaround	33		turnaround	2	\$13.43	\$886
Total Rock for Road Segment:				123 to 124				143	\$1,816	
ROAD SEGMENT										
Application	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
				125 to 126	Volume (CY) per	0+00 to 2+00	Number of			
Surface Leveling Rock	4"-0" crushed	1+05	N/A	load	11		loads	2	\$13.43	\$295
Landings	6"-0" pit-run	2+00	N/A	landing	55		landings	1	\$13.43	\$739
Total Rock for Road Segment:				125 to 126				77	\$1,034	
Processing:										
				Description				No.sta	Rate/sta	Cost
				Water, Process & Compact:		11 to 12 (87.3), 13 to 14 (10.5), 15 to 16 (6.25)		295.70	\$70.47	\$20,838
						19 to 110 (13.8), 111 to 112 (2.9), 113 to 114 (53.9)				
						117 to 118 (12.35), 119 to 120 (72.7) 123 to 124 (36.0)				
				Traction Rock Water, Process & Compact		11 to 12 (64.4), 15 to 16 (1.25), 111 to 112 (4.7)		110.00	\$70.47	\$7,752
						113 to 114 (22), 117 to 118 (6.85), 119 to 120 (10.8)				
SUB TOTAL FOR SURFACING										\$108,577
SPECIAL PROJECTS										
				Description				Cy/Amount	Rate	Cost
								836	\$3.24	\$2,708.64
				pit-run development				220	\$5.36	\$1,179.20
				riprap development						
SUB TOTAL FOR SPECIAL PROJECTS								Subtotal of Surfacing & Spec. Proj.		\$3,888
								Subtotal of Clearing, Exc., Culv.		\$112,465
										\$27,964
										\$140,430

Compiled By: Chris Scott

Date: 06/11/2024

Fill Reconstruction Cost Estimate

Segment: I7 to I8
 Fill: 1

Station: 5+65
 Height: 10

Materials	Quantity		\$	Total
18"x50', CPP	50		\$13.39	\$669.50
24"-6" Riprap Dissipator	11	cy		\$0.00
24"-6" Riprap Fill Armor	88	cy		\$0.00
Pit run for inlet bedding	22	cy		\$0.00
3/4"-0" Crushed Rock for Bedding/Backfill	66	cy		\$0.00
4"-0" Crushed Rock for Road	22	cy		\$0.00
Erosion Control: Seed	0.1	ac	\$784.00	\$78.40
Erosion Control: Mulch	8	bale	13.39	107.12

\$855.02

Excavation	Rate		CY/amount	Total
<i>Excavate and Reconstruct Fill</i>	\$195.00	hr	10	\$1,950.00
<i>Backfill from I3 to I4 turnaround construction</i>			66	\$0.00
<i>Fill compaction</i>	\$0.87	cy	88	\$76.56
<i>Waste material compaction</i>	\$0.50	cy	234	\$117.00
Fill armor placement w/330, \$/hr	\$195.00	hr	5	\$975.00
Dissipator placement	\$195.00	hr	2	\$390.00
Laborer \$/hr	\$50.00	hr	8	\$400.00

\$3,908.56

*Backfill costed for in cost summary workbook for I3 to I4 turnaround construction

Project Total	\$4,764
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CRUSHED ROCK COST

SALE NAME:	ODR
PROJECT:	All
Stockpile:	Bigfoot Stockpile

DATE: 06/11/2024
BY: Chris Scott

[illegible]

Average Round Trip Distance (miles)	36.18
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ROCK HAUL:

Truck type:	<u>D20</u>	No. trucks:	<u>4</u>
Delay min.:	<u>8</u>	Efficiency:	<u>85%</u>

Ave haul:	\$9.67	/cy
Load:	\$0.66	/cy
Spread:	\$1.20	/cy

Truck type:	<u>D12</u>	No. trucks:	<u>4</u>
Delay min.:	<u>6</u>	Efficiency:	<u>85%</u>

Truck type: D10 No. trucks:
 Delay min.: 5 Efficiency: 85%

Production: cy/day = 744

CRUSHED ROCK HAUL COSTS 2,886 cy @ \$11.53 /cy

PIT RUN ROCK COST

SALE NAME:	ODR
PROJECT:	All
QUARRY:	Big Noise

MATERIAL: Pit Run, Riprap, and 4"-0"

DATE: 06/11/2024
BY: Chris Scott

Road Segment	Stations	Cubic Yards	ONE WAY HAUL IN MILES							Total Haul
			50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH	
1A to 1B	3.75	50	12.00	1.30	4.00	1.50	1.18	0.60	0.10	20.68
1C to 1D	2.95	50	12.00	1.30	4.00	1.50	1.09	0.55	0.10	20.54
1E to 1F	3.55	50	12.00	1.30	4.00	1.40	1.08	0.30	0.10	20.18
1G to 1H	7.85	50	12.00	1.30	4.00	1.20	1.08	0.30	0.10	19.98
1I to 1J	1.30	50	12.00	1.30	4.00	0.85	0.90	0.30	0.10	19.45
2A to 2B	8.20	89	12.00	1.30	4.00	1.49	1.00	0.40	0.10	20.29
3A to 3B	1.50	50	12.00	1.30	2.50	1.01	0.80	0.30	0.10	18.01
3C to 3D	3.20	50	12.00	1.30	2.50	0.90	0.70	0.66	0.23	18.29
3E	N/A	55	12.00	1.30	2.50	0.90	0.70	0.66	0.20	18.26
4A to 4B	2.35	50	12.00	1.30	4.00	0.74	0.70	0.30	0.10	19.14
4C to 4D	4.05	63	12.00	1.30	4.00	0.74	0.75	0.35	0.15	19.29
4G to 4H	1.40	63	12.00	1.30	4.00	0.74	0.80	0.42	0.15	19.41
5A to 5B	10.40	50	12.00	1.30	4.00	1.20	1.05	0.54	0.10	20.19
6A	N/A	66	12.00	1.30	4.00	1.10	0.90	0.48	0.10	19.88
6B	N/A	88	12.00	1.30	4.00	1.10	0.95	0.52	0.10	19.97
6C to 6D	1.20	50	12.00	1.30	4.00	1.10	1.00	0.56	0.10	20.06
I1 to I2	151.70	231	12.00	1.30	4.00	1.80	1.10	0.40	0.10	20.70
I3 to I4	10.50	154	12.00	1.30	4.00	1.70	1.10	0.48	0.10	20.68
I5 to I6	7.50	148	12.00	1.30	4.00	1.55	1.09	0.40	0.10	20.44
I7 to I8	13.60	154	12.00	1.30	4.00	1.50	1.08	0.40	0.10	20.38
I9 to I10	13.80	143	12.00	1.30	4.00	1.10	0.80	0.49	0.10	19.79
I11 to I12	7.60	154	12.00	1.30	4.00	0.60	0.93	0.45	0.10	19.38
I13 to I14	75.90	718	12.00	1.30	3.50	1.20	1.28	0.30	0.10	19.68
I19 to I20	83.50	66	12.00	1.30	2.50	1.00	0.97	0.30	0.10	18.17
I23 to I24	36.00	88	12.00	1.30	2.50	0.90	0.88	0.45	0.15	18.18
I25 to I26	2.00	77	12.00	1.30	2.50	0.90	0.75	0.45	0.15	18.05
TOTAL	453.80	2,857								AVERAGE
	STA./NO.	CU. YD.								HAUL
CUBIC YARD WEIGHTED HAUL			12.0	1.3	3.7	1.2	1.0	0.4	0.1	19.74

Average Round Trip Distance (miles)	39.49
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ROCK HAUL:

Truck type:	<u>D20</u>	No. trucks:	<u>4</u>
Delay min.:	<u>8</u>	Efficiency:	<u>85%</u>

Ave haul:	\$11.15	/cy
Load:	\$0.79	/cy
Spread:	\$1.49	/cy

Truck type:	<u>D12</u>	No. trucks:	<u>4</u>
Delay min.:	<u>6</u>	Efficiency:	<u>85%</u>

Truck type: D10 No. trucks:
 Delay min.: 5 Efficiency: 85%

Production: cy/day = 645

PIT RUN ROCK HAUL COSTS	2,857 cy @	\$13.43 /cy
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2,857 cy @ \$13.43 /cy

ODR
Vacating Costs (Total)

Work Description	Stations	Pump	C330	C315	D24 trk	D10/12 trk	D-8	Labor	Straw-bales	Seed-lbs
V1 to V2	0+00 to 12+50		18.00			1.00		4.00	20	10
2A to 2B	0+00 to 8+20		13.00					4.00	20.00	10.00
Total Quantity (Hours)		0.00	31.00	0.00	0.00	1.00	0.00	8.00	40.00	20.00
Rates		\$10.00	\$195.00	\$101.00	\$127.00	\$99.00	\$158.00	\$50.00	\$13.39	\$2.00
Total Dollars		\$0	\$6,045	\$0	\$0	\$99	\$0	\$400	\$536	\$40

Total Cost	\$7,120
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Total Stations	20.7
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Total Miles	0.4
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ODR

Vacating Costs V1 to V2

Work Description	Station	Pump	C330	C315	D24 trk	D10/12 trk	D-8	Labor	Straw-bales	Seed-lbs
V1 to V2										
Walk equipment to back end of project			3.00							
V1										
Place stumps to block road	0+00		1.00							
Construct waterbar every 150'	0+00 to 4+50		2.00							
Construct waterbar every 300'	4+50 to 9+70		2.00							
Remove culvert and fill	9+70		8.00					4	20	10
Construct waterbar	12+50		1.00							
Place stumps to block road	12+50		1.00							
V2										
Haul off old culvert						1				
Total Quantity (Hours)		0.00	18.00	0.00	0	1	0	4	20	10
Rates		\$10.00	\$195.00	\$101.00	\$127.00	\$99.00	\$158.00	\$50.00	\$13.39	\$2.00
Total Dollars		\$0	\$3,510	\$0	\$0	\$99	\$0	\$200	\$268	\$20

Total Cost

\$4,097

ODR Vacating Costs 2A to 2B										
Work Description	Station	Pump	C330	C315	D24 trk	D10/12 trk	D-8	Labor	Straw-bales	Seed-lbs
2A										
Construct road block, reestablish ditch	0+00		1.00							
Remove fill and puncheon	1+25		8.00					4	20	10
Pullback sidecast material	1+60 to 8+20		4.00							
2B										
Total Quantity (Hours)		0.00	13.00	0.00	0	0	0	4	20	10
Rates		\$10.00	\$195.00	\$101.00	\$127.00	\$99.00	\$158.00	\$50.00	\$13.39	\$2.00
Total Dollars		\$0	\$2,535	\$0	\$0	\$0	\$0	\$200	\$268	\$20

Total Cost

\$3,023

Projects Road Maintenance Cost Summary

Sale: ODR
Date: 11-Jun-24
By: Chris Scott

Type	Equipment/Rationale			Hours	Rate	Cost
Project Work	Grader 14G			25	\$126	\$3,150
Final Haul	Dump Truck 12CY			2	\$99	\$198
Road	FE Loader C966			1	\$105	\$105
Maintenance	Vibratory Roller			25	\$97	\$2,425
	Water Truck 2,500 gallon			5	\$113	\$565
Total						\$6,443

Production Rates

Grader

Vibratory Roller

Miles/day	Distance(miles)	Days
1.5	4.60	3.1
1.5	4.60	3.1

NOTE:

	Miles
	Miles
	Miles
	Miles
TOTAL= 4.60	Miles

ODR Unauthorized trail vacating and blocking						
Work Description			C315	D10/12 trk		
Construct water bars and block roads			40.00			
Mobilization of excavator and blocking materials.				20.00		
Total Quantity (Hours)			40.00	20		
Rates			\$127.00	\$99.00		
Total Dollars			\$5,080	\$1,980		

Total Cost

\$7,060

ODR

FY 2025

1. **Sale Area Location:** Portions of Sections 14, 15, 16, 21, 22, & 23 of T8N, R9W, W.M., Clatsop County, OR.

- | | | | | |
|-----------|---------------------------|----------|-----------|--------------|
| 2. | Fund Distribution: | BOF 100% | Tax Code: | 1-01 (6.8%) |
| | | | | 1-02 (40.6%) |
| | | | | 1-04 (24.2%) |
| | | | | 1-08 (28.4%) |

- ### 3. Sale Acreage by Area:

Unit	Harvest Type	Gross Acres	Stream Buffer Acres	Reserve Tree Area	Non-Stocked Area	Existing R/W Acres	New R/W	Net Acres	Survey Method
1	Modified Clearcut	134	32	2	-	5	1	94	GIS
2	Modified Clearcut	28	9	>1	-	1	1	17	GIS
3	Modified Clearcut	67	5	2	-	3	<1	57	GIS
4	Modified Clearcut	27	3	2	2	1	1	18	GIS
5	Modified Clearcut	26	7	>1	1	<1	1	17	GIS
6	Modified Clearcut	26	1	1	-	1	<1	23	GIS
7	R/W	4	-	-	-	-	-	4	LxW
TOTALS		312	57	7	3	11	4	230	

- 4. Cruisers and Cruise Dates:** Ryan Simpson, Michele Huffman, John Czarnecki and Avery Petersen (07/24/2024)

5. Cruise Method and Computation:

Units 1, 2, & 3: Units 1, 2 and 3 were variable plot cruised with a 40 BAF. A total of 107 plots were sampled on a three by six chain spacing with a count to grade ratio of 3:1, resulting in 30 grade plots and 77 count plots. One count plot and one grade plot were dropped due to their proximity to the existing road. Due to one of the grade plots having zero trees, SuperAce reports 29 grade plots.

Units 4, 5, & 6: Units 4, 5 and 6 were variable plot cruised with a 33.61 BAF. A total of 73 plots were sampled on a two and a half by four chain spacing with a count to grade ratio of 2:1, resulting in 23 grade plots and 50 count plots. Two grade plots were dropped due to their proximity to the Timber Sale Boundary. Due to one count plot containing a graded tree of a minor species, and three count plots having zero trees, SuperAce reports 24 grade plots, 46 count plots and three blank plots.

Unit 7 (R/W): In-unit Right-of-Way consists of new spur roads and landings within Units 1, 2, 3, 4, 5 & 6. Cruise data for Unit 7 was obtained from both the U123 and U456 cruises. Acreages have been adjusted accordingly.

There are 262 conifer wildlife trees marked outside of reserve tree areas. These trees account for approximately 62 MBF using an average Douglas-fir volume of 236 board feet. There are 8 hardwood wildlife trees marked outside of reserve tree areas. These trees account for approximately 0.6 MBF using an average red alder volume of 75 board feet

Data was collected on Allegro 2 data collectors and downloaded to the Atterbury SuperACE 2008 program for computing. See the attached Cruise Designs for more details on the cruise method. The cruise calculations were processed in the Astoria District office.

UNIT(s)	CRUISE	TRACT	TYPE	ACRES
Unit 1, 2 & 3	ODR	U123	00MC	168
Unit 4, 5 & 6	ODR	U456	00MC	58
Unit 7 (R/W)	ODR	U7 R/W	R/W	4

6. Timber Description:

Units 1, 2 and 3 are modified clearcuts with an average age of 65 years. The stands consist of Douglas-fir and western hemlock with minor components of red alder and Sitka spruce. The average take Douglas-fir is approximately 17 inches DBH and 68 feet to a merchantable top. The average take western hemlock is approximately 21 inches DBH and 59 feet to a merchantable top. The average take red alder is approximately 12 inches DBH and 32 feet to a merchantable top. The average take Sitka spruce is approximately 23 inches DBH and 72 feet to a merchantable top. Average net volume to be harvested per acre is 25 MBF. All trees were cruised to a merchantable top of six inches DIB, 40% of form point, or an otherwise anticipated break point.

Units 4, 5 and 6 are modified clearcuts with an average age of 62 years. The stands consist of Douglas-fir and western hemlock with minor components of red alder and Sitka spruce. The average take Douglas-fir is approximately 19 inches DBH and 73 feet to a merchantable top. The average take western hemlock is approximately 19 inches DBH and 47 feet to a merchantable top. The average take red alder is approximately 14 inches DBH and 45 feet to a merchantable top. The average take Sitka spruce is approximately 14 inches DBH and 37 feet to a merchantable top. Average net volume to be harvested per acre is 21 MBF. All trees were cruised to a merchantable top of six inches DIB, 40% of form point, or an otherwise anticipated break point.

Unit 7 (R/W) is similar to the timber descriptions of all units. Average net volume to be harvested per acre is 25 MBF.

7. Statistical Analysis and Stand Summary:

Statistics for Stand B.F. volumes

Type	Estimated CV	Target SE%	Actual CV	Actual SE%
U123	65.0%	9.0%	46.2%	4.5%
U456	70.0%	11.0%	67.1%	7.8%

8. Volumes by Species and Log Grade:

Volumes by Species and Grade for All Sale Areas: (MBF) Volumes do not include "in-growth."

Conifer

Species	DBH	Net Vol.	2 Saw	3 Saw	4 Saw	% D & B	% Sale
Douglas-fir	18"	2,846	1,456	1,190	200	0.4%	52%
Western hemlock	21"	1,845	1,285	468*	92	1.5%	34%
Sitka spruce	20"	460	304	123*	33	1.6%	8%
TOTALS	--	5,151	3,045	1,781	325	--	--

*This sale includes approximately 152 MBF of 12"+ 3-saw western hemlock and 34 MBF of 12"+ 3-saw Sitka spruce.

Hardwood

Species	DBH	Net Vol.	12"+	10"-11"	8"-9"	6"-7"	% D & B	% Sale
Red alder	12"	297	110	9	65	113	0.3%	5%
TOTALS	--	297	110	9	65	113	--	--

TOTAL VOLUME	5,448 MBF
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9. **Approvals:**

Prepared by: Ryan Simpson

Date: 08/07/2024

Unit Forester Approval: 

Date: 10/24/2024

10. **Attachments:** Cruise Design and Map (7 pages)
Volume Report (4 pages)
Statistics Report (4 pages)
Log Stock Table (3 pages)
Stand Table Summary (2 pages)

**CRUISE DESIGN
ASTORIA DISTRICT**

Sale Name: ODR

Unit U123

Harvest Type: Modified Clearcut

Approx. Cruise Acres: 168 **Estimated CV%** 65 Net BF/Acre **SE% Objective** 9% Net BF/Acre

Planned Sale Volume: 4,654 MBF **Estimated Sale Area Value/Acre:** \$12,088/Acre

A. Cruise Goals: (a) Grade minimum 100 conifer trees and 25 hardwood trees.
(b) Sample 107 plots (30 grade/ 77 count); (c) Other goals (___ Determine "automark" thinning standards; X Determine log grades for sale value; ___ Determine snag and leave tree species and sizes.

B. Cruise Design:

1. Plot Cruises: BAF: 40

Unit 1:

Cruise Line Direction: Unit 1: 26°/206°

Unit 2: 117°/297°

Unit 3: 10°/190°

Cruise Line Spacing 6 (chains) 396 (feet)

Cruise Plot Spacing 3 (chains) 198 (feet)

Grade/Count Ratio 1:3

Take plots as marked on cruise map.

Grade minor species (true fir, cedar, maple, etc.) on count plots if encountered.

DO NOT: record any 22' log lengths, or any 12', 24', or 32' log lengths for hardwoods.

DO NOT: record snags < 15" DBH or record snag measurements on count plots.

C. Tree Measurements:

1. Diameter: Minimum DBH to cruise is 8" for conifers and 8" for hardwoods.

Record dbh to nearest ½" for trees < 16", to nearest 1" for trees 16" - 24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.

2. Bole Length: Record bole length to nearest foot at TCD. For trees greater than 100 feet in merchantable height, estimating to the nearest 5 feet is acceptable.

3. Top Cruise Diameter (TCD): Minimum top outside bark is 7" for conifers and 7" for hardwoods or 40 % of dob at 16' form point. Generally, use 7" outside bark for trees < 20" dbh and 40% of dob @ FP for conifer trees > 20" dbh.

4. Form Factors: (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; OR (2) Measure a minimum of 20 form factors for each major conifer species on the cruise area and use these to calculate average FF for the species on the cruise. Hardwood form factors are a Standard 87.

5. **Tree Segments:** Record log segments in “standard” log lengths in general use, such as 32’ and 40’ lengths, whenever possible. Do not record odd segments just to maximize grade. Cull segments can be any length. For conifers, minimum merchantable segment length is 12’; for hardwoods, it’s 8’. Maximum segment length is 40’. One foot of trim is assumed for each merch segment. Do not use “double dash” (--) feature on the data recorder except for the top segment of the tree. Hardwoods shall be recorded in 8’ and 10’ multiples.

6. **Species, Sort, and Grade Codes:**

- A. Species: Record as D (Douglas-fir); H (Western hemlock); S (Sitka Spruce); C (Western red cedar); NF (Noble fir); GF (Grand fir); SF (Silver fir); A (Red alder); M (Bigleaf maple); SN (Snag). For “leave trees”, add an “L” to the species code (such as DL, HL, CL, etc.).
- B. Sort: Use code “1” (Domestic).
- C. Grade: A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; R = Camp Run; 0 = Cull
Hardwoods: Alder Grades: 12” + = 1 Sawmill; 10”-12” = 2 Sawmill; 10”-8” = 3 Sawmill; and 8”-6” 4 Sawmill, or R = Camp Run; 0 = Cull.
All Maple Camp Run = R

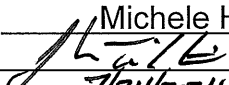
Grade oversized 3-SAW (DIB $\geq$ 12”, knots $> 2\frac{1}{2}$ ” inside scaling cylinder affecting $> 50\%$ of log)

7. **Deductions:** Estimate visible defect or damage as a “length deduction” (most often), or as a “diameter deduction,” as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a “per tree” basis. Steep and broken topography generally results in higher breakage percentages than gentler topography, and hemlock generally breaks more than D-fir and spruce.

8. **Standard Field Procedures:** Plot Type Cruises: Mark cruise line beginning and end points with blue/yellow flagging. Write plot identification numbers and line direction on the ribbon. At each plot, tie yellow flagging above eye level near plot center and another yellow flagging around a sturdy wooden stake marking plot center. On each yellow flagging, write the plot identification number. Between plots, along the cruise line, tie blue flagging at inter-visible points, not to exceed 100’ apart. On “measure/grade” plots write the tree number and/or tree diameter on at least the first measured tree (clockwise from the line direction) in yellow paint. All trees on the plot may be marked this way, if the cruiser chooses.

9. **Cruising Equipment:** Relaskop, Rangefinder, Logger’s Tape (with dbh on back), Compass, Allegro II Data Recorder, Cruise Design, Cruise Map, Yellow Flagging, Blue Flagging, Yellow Paint, Permanent Marker.

10. **Attachments:** A. Cruise Map (showing cruise unit boundaries, roads, streams, approx. acres/unit, cruise lines and plot locations, legal description and section lines, BAF or plot size, measure/count plot ratio, north arrow, and scale.)

Cruise Design by: Michele Huffman
Approved by: 
Date: 7/24/2024

**CRUISE DESIGN
ASTORIA DISTRICT**

Sale Name: ODR

Unit U456

Harvest Type: Modified Clearcut

Approx. Cruise Acres: 58 **Estimated CV%** 70 Net BF/Acre **SE% Objective** 11% Net BF/Acre

Planned Sale Volume: 1,246 MBF **Estimated Sale Area Value/Acre:** \$5,710/Acre

A. Cruise Goals: (a) Grade minimum 80 trees.

(b) Sample 73 plots (23 grade/ 50 count); (c) Other goals (___ Determine "automark" thinning standards; X Determine log grades for sale value; ___ Determine snag and leave tree species and sizes.

B. Cruise Design:

1. Plot Cruises: BAF: 33.61

Unit 1:

Cruise Line Direction: Unit 4: 20°/200°

Unit 5: 0°/180°

Unit 6: 144°/324°

Cruise Line Spacing 4 (chains) 264 (feet)

Cruise Plot Spacing 2.5 (chains) 165 (feet)

Grade/Count Ratio 1:2

Take plots as marked on cruise map.

Grade minor species (true fir, cedar, maple, etc.) on count plots if encountered.

DO NOT: record any 22' log lengths, or any 12', 24', or 32' log lengths for hardwoods.

DO NOT: record snags < 15" DBH or record snag measurements on count plots.

C. Tree Measurements:

1. Diameter: Minimum DBH to cruise is 8" for conifers and 8" for hardwoods.

Record dbh to nearest ½" for trees < 16", to nearest 1" for trees 16" - 24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.

2. Bole Length: Record bole length to nearest foot at TCD. For trees greater than 100 feet in merchantable height, estimating to the nearest 5 feet is acceptable.

3. Top Cruise Diameter (TCD): Minimum top outside bark is 7" for conifers and 7" for hardwoods or 40 % of dob at 16' form point. Generally, use 7" outside bark for trees < 20" dbh and 40% of dob @ FP for conifer trees > 20" dbh.

4. Form Factors: (1) Measure or estimate a 16' form factor for every conifer tree measured/graded; OR (2) Measure a minimum of 20 form factors for each major conifer species on the cruise area and use these to calculate average FF for the species on the cruise. Hardwood form factors are a Standard 87.

5. **Tree Segments:** Record log segments in “standard” log lengths in general use, such as 32’ and 40’ lengths, whenever possible. Do not record odd segments just to maximize grade. Cull segments can be any length. For conifers, minimum merchantable segment length is 12’; for hardwoods, it’s 8’. Maximum segment length is 40’. One foot of trim is assumed for each merch segment. Do not use “double dash” (--) feature on the data recorder except for the top segment of the tree. Hardwoods shall be recorded in 8’ and 10’ multiples.

6. **Species, Sort, and Grade Codes:**

A. Species: Record as D (Douglas-fir); H (Western hemlock); S (Sitka Spruce); C (Western red cedar); NF (Noble fir); GF (Grand fir); SF (Silver fir); A (Red alder); M (Bigleaf maple); SN (Snag). For “leave trees”, add an “L” to the species code (such as DL, HL, CL, etc.).

B. Sort: Use code “1” (Domestic).

C. Grade: A = 1 Peeler; B = 2 Peeler; C = 3 Peeler; D = Special Mill; 2 = 2 Sawmill; 3 = 3 Sawmill; 4 = 4 Sawmill; R = Camp Run; 0 = Cull
Hardwoods: Alder Grades: 12” + = 1 Sawmill; 10”-12” = 2 Sawmill; 10”-8” = 3 Sawmill; and 8”-6” 4 Sawmill, or R = Camp Run; 0 = Cull.
All Maple Camp Run = R

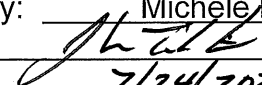
Grade oversized 3-SAW (DIB $\geq$ 12”, knots $> 2\frac{1}{2}$ ” inside scaling cylinder affecting $> 50\%$ of log)

7. **Deductions:** Estimate visible defect or damage as a “length deduction” (most often), or as a “diameter deduction,” as applicable. Estimate hidden defect and breakage (usually some breakage is encountered in trees > 100 feet in height) on a “per tree” basis. Steep and broken topography generally results in higher breakage percentages than gentler topography, and hemlock generally breaks more than D-fir and spruce.

8. **Standard Field Procedures:** Plot Type Cruises: Mark cruise line beginning and end points with blue/yellow flagging. Write plot identification numbers and line direction on the ribbon. At each plot, tie yellow flagging above eye level near plot center and another yellow flagging around a sturdy wooden stake marking plot center. On each yellow flagging, write the plot identification number. Between plots, along the cruise line, tie blue flagging at inter-visible points, not to exceed 100’ apart. On “measure/grade” plots write the tree number and/or tree diameter on at least the first measured tree (clockwise from the line direction) in yellow paint. All trees on the plot may be marked this way, if the cruiser chooses.

9. **Cruising Equipment:** Relaskop, Rangefinder, Logger’s Tape (with dbh on back), Compass, Allegro II Data Recorder, Cruise Design, Cruise Map, Yellow Flagging, Blue Flagging, Yellow Paint, Permanent Marker.

10. **Attachments:** A. Cruise Map (showing cruise unit boundaries, roads, streams, approx. acres/unit, cruise lines and plot locations, legal description and section lines, BAF or plot size, measure/count plot ratio, north arrow, and scale.)

Cruise Design by: Michele Huffman
Approved by: 
Date: 7/24/2024

TIMBER CRUISE MAP

OF TIMBER SALE CONTRACT
NO. AT-341-2025-W01074-01

ODR

PORTIONS OF SECTIONS
14, 15, 16, 21, 22, & 23
OF T8N, R9W, W.M.,

CLATSOP COUNTY, OREGON

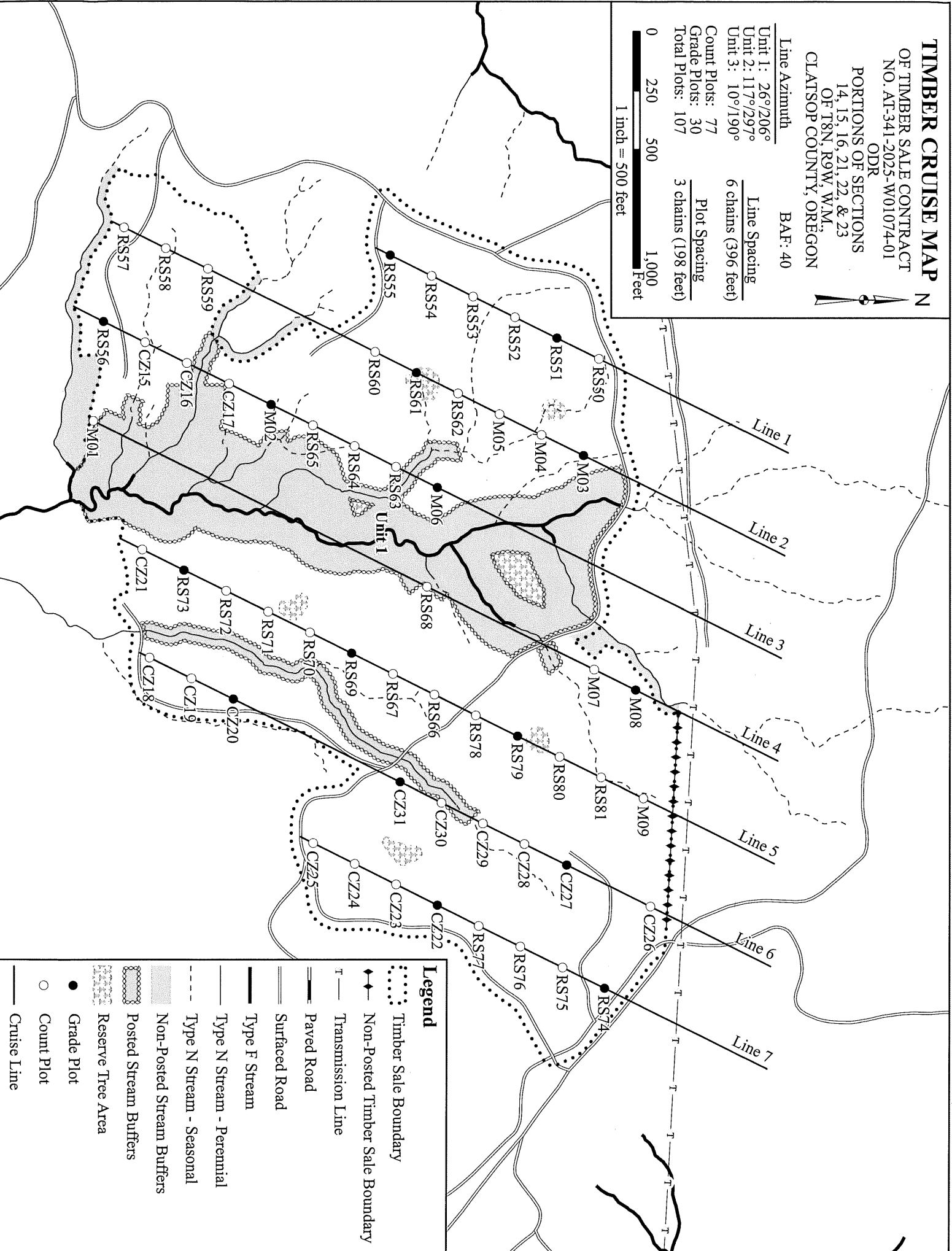


Line Azimuth	BAF: 40
Unit 1: 26°/206°	Line Spacing
Unit 2: 117°/297°	6 chains (396 feet)
Unit 3: 10°/190°	Plot Spacing
Count Plots: 77	3 chains (198 feet)
Grade Plots: 30	
Total Plots: 107	

02505001,000

Feet

1 inch = 500 feet



Legend

- Timber Sale Boundary
- Non-Posted Timber Sale Boundary
- Transmission Line
- Paved Road
- Surfaced Road
- Type F Stream
- Type N Stream - Perennial
- Type N Stream - Seasonal
- Non-Posted Stream Buffers
- Posted Stream Buffers
- Reserve Tree Area
- Grade Plot
- Count Plot
- Cruise Line

Z

ODR

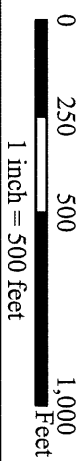
BAF: 40

Line Spacing

6 chains (396 feet)

Plot Scenario

3 chains (198 feet)



- | | | | |
|---|----------------------|---|---------------------------|
|  | Timber Sale Boundary |  | Type F Stream |
|  | Paved Road |  | Type N Stream - Perennial |
|  | Surfaced Road |  | Type N Stream - Seasonal |
|  | Grade Plot |  | Non-Posted Stream Buffers |
|  | Count Plot |  | Posted Stream Buffers |
|  | Dropped Plot |  r | Transmission Line |
|  | Cruise Line |  | Reserve Tree Area |

TIMBER CRUISE MAP

OF TIMBER SALE CONTRACT
NO. AT-341-2025-W01074-01

ODR

PORTIONS OF SECTIONS

14, 15, 16, 21, 22, & 23

OF T8N, R9W, W.M.,

CLATSOP COUNTY, OREGON



Line Azimuth

BAF: 33.61

Unit 4: 20°/200°

Unit 5: 0°/180°

Unit 6: 144°/324°

Line Spacing

4 chains (264 feet)

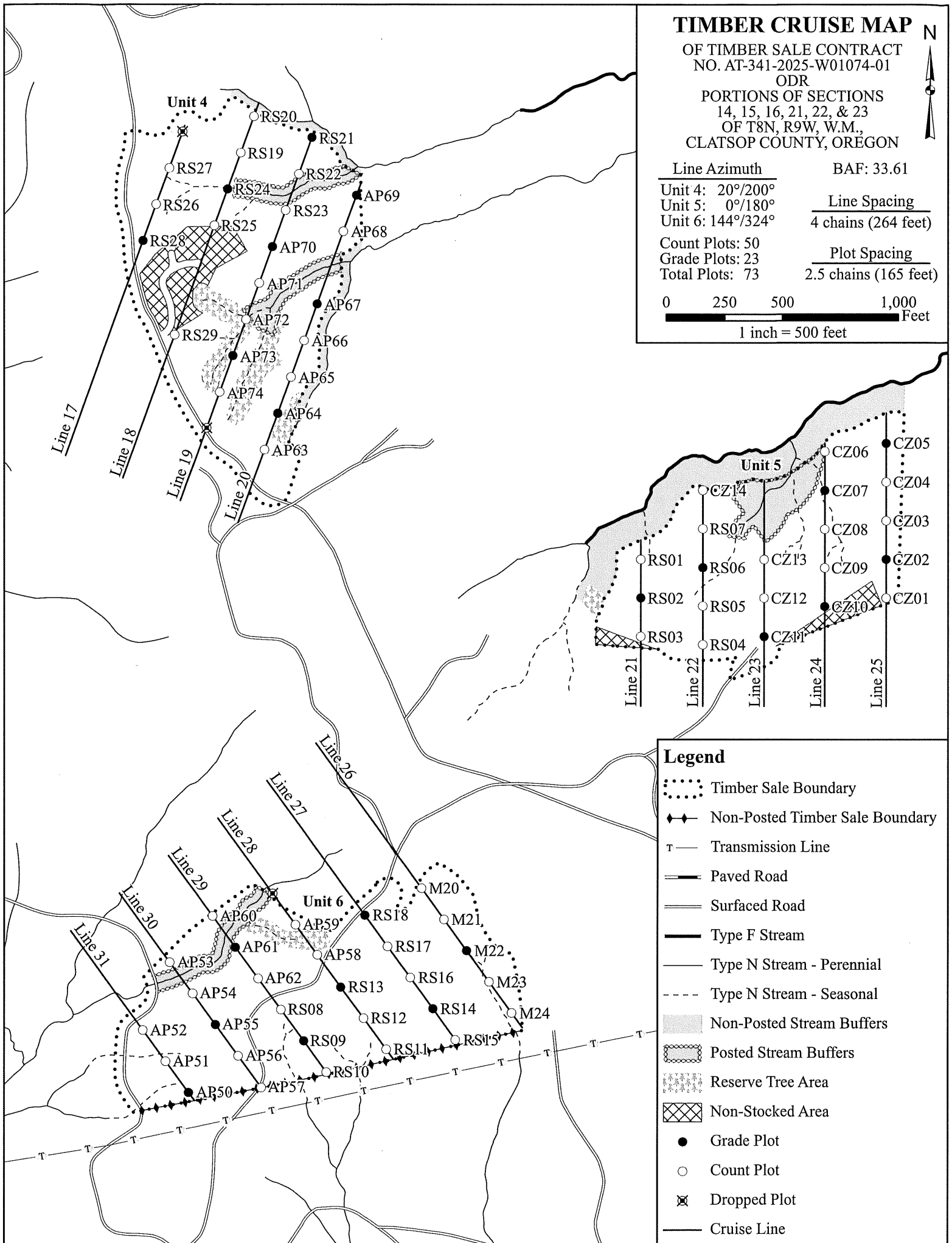
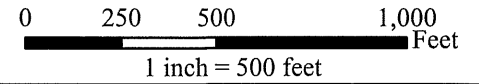
Count Plots: 50

Grade Plots: 23

Total Plots: 73

Plot Spacing

2.5 chains (165 feet)



TC PSCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
T08N R09W S00 TyR/W4.00 T08N R09W S21 Ty00MC168.00 T08N R09W S22 Ty00MC58.00						Project: ODR						Page 1							
						Acres 230.00						Date 8/7/2024							
												Time 2:26:47PM							
S Spp	So Gr T rt ad	%	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre
		Net BdFt	Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
		4-5	6-11	12-16	17+		12-20	21-30	31-35	36-99									
D	DOCU														8	17		0.00	.3
D	DO2S	51	.5	6,360	6,330	1,456			84	16		3	1	96	39	14	287	1.86	22.0
D	DO3S	41	.2	5,183	5,172	1,190		100			0	6	16	77	37	8	99	0.77	52.3
D	DO4S	8	.5	873	869	200		100			60	33	4	3	21	6	28	0.45	31.3
D Totals		52	.4	12,416	12,371	2,846		49	43	8	4	6	8	82	32	9	117	0.98	105.9
H	DOCU														7	20		0.00	.9
H	DO2S	69	1.2	5,652	5,586	1,285			52	48	0	3	2	94	38	15	358	2.37	15.6
H	DO3S	26	1.7	2,069	2,033	468		67	5	27	1	15	10	74	35	9	126	1.21	16.2
H	DO4S	5	4.4	417	399	92		100			77	23			18	7	28	0.55	14.5
H Totals		34	1.5	8,137	8,017	1,845		22	38	40	4	7	4	84	30	11	170	1.57	47.1
S	DO2S	66	2.3	1,354	1,323	304			36	64			10	90	39	16	411	2.65	3.2
S	DO3S	26		533	533	123		72		28			10	90	39	10	155	1.17	3.4
S	DO4S	8	1.7	147	144	33		100			76	24			20	7	28	0.59	5.1
S Totals		8	1.6	2,034	2,001	460		26	24	50	6	2	9	83	31	10	171	1.52	11.7
A	DOCU														6	28		0.00	.3
A	DO1S	36	.9	480	476	110			71	29	7		9	83	36	14	265	2.08	1.8
A	DO2S	3		38	38	9		100				100			26	10	90	0.92	.4
A	DO3S	22		284	284	65		100			6	19	5	69	33	8	73	0.72	3.9
A	DO4S	39		491	491	113		100			18	59	23		25	6	32	0.41	15.4
A Totals		5	.3	1,293	1,289	297		63	26	11	11	30	13	46	27	7	59	0.67	21.8
Totals			0.8	23,881	23,678	5,448		39	39	23	5	8	7	81	31	9	127	1.13	186.5

T		TSPCSTGR		Species, Sort Grade - Board Foot Volumes (Type)										Page		1					
				Project: ODR										Date		8/7/2024					
														Time		2:27:42PM					
T08N R09W S21 T00MC										T08N R09W S21 T00MC											
Twp		Rge		Sec		Tract		Type		Acres		Plots		Sample Trees		CuFt		BdFt			
08N		09W		21		U123		00MC		168.00		107		146		1		W			
S So Gr T rt ad Spp				% Net BdFt	Bd. Ft. per Acre Def% Gross Net			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre
									Log Scale Dia.				Log Length				Ln Dia Bd CF/ Ft In Ft Lf				
									4-5 6-11 12-16 17+				12-20 21-30 31-35 36-99								
D DO CU									88 12				3 1 96				8 17 0.00				.5
D DO 2S				48	.5 6,194 6,163			1,035	88 12				3 1 96				39 14 279 1.84				22.1
D DO 3S				44	.1 5,558 5,550			932	100				0 5 16 79				37 8 100 0.78				55.6
D DO 4S				8	.6 963 958			161	100				58 37 5				21 6 27 0.45				35.2
D Totals				51	.4 12,715 12,670			2,129	51 43 6				4 7 8 81				32 9 112 0.96				113.4
H DO CU																	7 20 0.00				1.1
H DO 2S				69	1.4 6,131 6,048			1,016	54 46				4 96				38 15 354 2.36				17.1
H DO 3S				26	2.0 2,318 2,271			382	68 5 27				17 6 77				35 9 129 1.23				17.6
H DO 4S				5	5.7 436 411			69	100				75 25				18 7 27 0.57				15.1
H Totals				35	1.7 8,886 8,731			1,467	22 39 39				4 8 2 87				31 11 172 1.59				50.9
S DO 2S				68	2.5 1,639 1,598			268	28 72				12 88				39 16 417 2.73				3.8
S DO 3S				25	577 577			97	65 35				100				40 11 195 1.38				3.0
S DO 4S				7	2.3 145 141			24	100				68 32				20 7 32 0.63				4.4
S Totals				9	1.9 2,361 2,317			389	22 19 58				4 2 8 86				32 11 206 1.75				11.2
A DO CU																	6 28 0.00				.4
A DO 1S				44	451 451			76	59 41				89				35 14 264 2.15				1.7
A DO 3S				2	16 16			3	100				100				18 9 40 0.78				.4
A DO 4S				54	548 548			92	100				5 67 28				26 6 34 0.40				16.2
A Totals				4	1,015 1,015			170	56 26 18				9 36 15 40				27 7 54 0.62				18.7
Type Totals					1.0 24,978 24,732			4,155	39 39 23				4 8 6 82				31 9 127 1.14				194.2

T		TSPCSTGR		Species, Sort Grade - Board Foot Volumes (Type)										Page 1							
				Project: ODR										Date 8/7/2024							
														Time 2:27:42PM							
T08N R09W S22 T00MC										T08N R09W S22 T00MC											
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt												
08N	09W	22	U456	00MC	58.00	73	107	1	W												
S So Gr Twp Tract ad Spp			% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
			Def%	Gross	Net	Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/ Lf				
										4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	In	Ft	
D	DO	2S	59	.4	6,805	6,779	393					72	28		3	1	96	39	14	310	1.92
D	DO	3S	35	.5	4,090	4,071	236		100					1	8	19	72	36	8	96	0.77
D	DO	4S	6		610	610	35		100					68	14		18	21	7	31	0.47
D	Totals		56	.4	11,505	11,461	665			41	43	17		4	5	7	83	33	9	136	1.08
H	DO	CU																9	22		0.00
H	DO	2S	71	.4	4,257	4,240	246					45	55	2	3	11	84	37	16	374	2.40
H	DO	3S	22	.3	1,349	1,346	78		64	6	30			4	6	28	62	34	8	111	1.12
H	DO	4S	7		361	361	21		100					82	18			17	7	29	0.50
H	Totals		29	.3	5,967	5,946	345			21	34	46		7	4	14	74	29	10	164	1.50
A	DO	1S	26	2.9	563	546	32					100				31	69	38	14	270	1.95
A	DO	2S	7		145	145	8		100							100		26	10	90	0.92
A	DO	3S	50		1,036	1,036	60		100					2	20	6	72	35	8	76	0.72
A	DO	4S	17		332	332	19		100					77	23			18	6	25	0.42
A	Totals		10	.8	2,076	2,060	119			73	27			13	21	11	55	27	8	68	0.75
S	DO	2S	48		531	531	31					100				100		40	15	360	2.08
S	DO	3S	38		406	406	24		100							51	49	36	8	85	0.77
S	DO	4S	14		152	152	9		100					100				19	6	22	0.51
S	Totals		5		1,088	1,088	63			51	49			14		19	67	28	8	83	0.89
Type Totals				.4	20,636	20,555	1,192			39	39	23		6	6	10	77	31	9	125	1.10

T		TSPCSTGR		Species, Sort Grade - Board Foot Volumes (Type)												Page		1						
				Project: ODR												Date		8/7/2024						
																Time		2:28:08PM						
T08N R09W S00 TR/W												T08N R09W S00 TR/W												
Twp		Rge		Sec		Tract		Type		Acres		Plots		Sample Trees		CuFt		BdFt						
08N		09W		00		U7 R/W		R/W		4.00		180		253		1		W						
S So Gr T rt ad				% Net BdFt		Bd. Ft. per Acre Def% Gross Net			Total Net MBF		Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
											Log Scale Dia.				Log Length				Ln Dia Bd CF/ Ft In Ft Lf					
D DO CU				52		.5 6,867 6,836			27		81 19				3 1 96				8 17 0.00				.3	
D DO 2S				41		.2 5,302 5,289			21		100				1 6 17 77				39 14 292 1.87				23.4	
D DO 3S				7		.4 877 873			3		100				61 30 3 5				37 8 98 0.77				53.7	
D DO 4S																			21 6 28 0.45				31.0	
D Totals				53		.4 13,047 12,999			52		47 43 10				4 6 8 82				33 9 120 1.00				108.5	
H DO CU																			7 21 0.00				.7	
H DO 2S				70		.9 5,728 5,675			23		50 50				1 3 5 91				38 15 363 2.38				15.6	
H DO 3S				24		1.3 2,003 1,978			8		66 6 28				2 13 15 71				35 9 121 1.18				16.4	
H DO 4S				6		2.8 444 431			2		100				78 22				18 7 28 0.53				15.4	
H Totals				33		1.1 8,174 8,084			32		22 36 42				5 6 7 81				30 11 168 1.55				48.1	
A DO CU																			6 28 0.00				.2	
A DO 1S				31		1.9 518 508			2		85 15				4 19 77				37 14 267 2.02				1.9	
A DO 2S				5		85 85			0		100				100				26 10 90 0.92				.9	
A DO 3S				37		611 611			2		100				3 20 6 72				34 8 75 0.72				8.1	
A DO 4S				27		424 424			2		100				38 47 15				22 6 29 0.41				14.4	
A Totals				7		.6 1,637 1,628			7		69 26 5				12 25 12 51				27 8 64 0.71				25.5	
S DO 2S				64		2.2 1,309 1,281			5		39 61				10 90				39 16 408 2.61				3.1	
S DO 3S				28		539 539			2		75 25				14 86				38 9 144 1.11				3.7	
S DO 4S				8		1.5 153 151			1		100				79 21				20 7 27 0.58				5.5	
S Totals				8		1.5 2,001 1,971			8		28 25 47				6 2 10 82				30 10 159 1.45				12.4	
Type Totals						.7 24,860 24,681			99		39 38 23				5 7 8 80				31 9 127 1.12				194.5	

TC PSTATS			PROJECT STATISTICS							PAGE	1	
			PROJECT		ODR					DATE	8/7/2024	
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt		
08N	09	00	U7 R/W	R/W		230.00	360	1,684	1	W		
08N	09W	21	U123	00MC								
08N	09W	22	U456	00MC								
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL			360	1684	4.7							
CRUISE			106	506	4.8	23,683	2.1					
DBH COUNT												
REFOREST												
COUNT			246	1164	4.7							
BLANKS			8									
100 %												
STAND SUMMARY												
			SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR			256	52.3	17.5	69	20.9	87.3	12,416	12,371	3,380	3,380
WHEMLOCK			188	26.5	20.5	56	13.4	60.7	8,137	8,017	2,243	2,243
R ALDER			34	17.3	12.3	36	4.1	14.3	1,293	1,289	391	391
S SPRUCE			22	6.4	19.9	58	3.1	13.9	2,034	2,001	545	545
SNAG			6	.4	18.6	89	0.2	.8				
TOTAL			506	103.0	17.7	59	42.0	176.9	23,881	23,678	6,559	6,559
CONFIDENCE LIMITS OF THE SAMPLE												
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR												
CL	68.1	COEFF		SAMPLE TREES - BF					# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH			5	10	15	
DOUG FIR		65.0	4.1	325	339	352						
WHEMLOCK		71.5	5.2	472	497	523						
R ALDER		99.0	17.0	135	163	191						
S SPRUCE		132.6	28.9	469	659	850						
SNAG												
TOTAL		87.1	3.9	380	396	411			303	76	34	
CL	68.1	COEFF		TREES/ACRE					# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH			5	10	15	
DOUG FIR		180.5	9.5	47	52	57						
WHEMLOCK		218.4	11.5	23	27	30						
R ALDER		384.1	20.2	14	17	21						
S SPRUCE		318.0	16.7	5	6	7						
SNAG		983.2	51.8	0	0	1						
TOTAL		135.0	7.1	96	103	110			727	182	81	
CL	68.1	COEFF		BASAL AREA/ACRE					# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH			5	10	15	
DOUG FIR		170.8	9.0	79	87	95						
WHEMLOCK		211.5	11.1	54	61	67						
R ALDER		350.9	18.5	12	14	17						
S SPRUCE		344.6	18.1	11	14	16						
SNAG		999.6	52.6	0	1	1						
TOTAL		130.0	6.8	165	177	189			675	169	75	
CL	68.1	COEFF		NET BF/ACRE					# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH			5	10	15	
DOUG FIR		171.8	9.0	11,251	12,371	13,490						
WHEMLOCK		211.2	11.1	7,126	8,017	8,909						
R ALDER		351.0	18.5	1,051	1,289	1,527						
S SPRUCE		366.2	19.3	1,615	2,001	2,387						
SNAG												
TOTAL		131.1	6.9	22,043	23,678	25,313			687	172	76	

TC TSTATS				STATISTICS				PAGE	1				
				PROJECT	ODR	DATE 8/7/2024							
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt				
08N	09W	21	U123	00MC	168.00	107	497	1	W				
				TREES	ESTIMATED	PERCENT							
				PER PLOT	TOTAL	SAMPLE							
					TREES	TREES							
TOTAL				107	497	4.6							
CRUISE				29	146	5.0	17,839	.8					
DBH COUNT													
REFOREST													
COUNT				77	351	4.6							
BLANKS				1									
100 %													
STAND SUMMARY													
				SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS			
				TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC			
										NET			
										GROSS			
										CF/AC			
										NET			
										CF/AC			
DOUG FIR				83	56.5	17.2	68	22.1	91.6	12,715	12,670	3,501	3,501
WHEMLOCK				49	27.5	21.0	59	14.5	66.5	8,886	8,731	2,473	2,473
S SPRUCE				8	5.1	23.2	72	3.1	15.0	2,361	2,317	622	622
R ALDER				5	16.6	11.5	32	3.5	12.0	1,015	1,015	308	308
SNAG				1	.4	19.0	114	0.2	.7				
TOTAL				146	106.2	17.9	60	43.9	185.8	24,978	24,732	6,904	6,904
CONFIDENCE LIMITS OF THE SAMPLE													
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR													
CL: 68.1 %		COEFF		SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.			
SD: 1.0		VAR.%		S.E.%		LOW		AVG		HIGH			
										5 10 15			
DOUG FIR		59.8		6.6		286		306		326			
WHEMLOCK		64.5		9.2		443		488		532			
S SPRUCE		120.5		45.4		453		830		1,207			
R ALDER		127.9		63.5		73		200		327			
SNAG													
TOTAL		89.6		7.4		361		390		419			
										321 80 36			
CL: 68.1 %		COEFF		TREES/ACRE				# OF PLOTS REQ.		INF. POP.			
SD: 1.0		VAR.%		S.E.%		LOW		AVG		HIGH			
										5 10 15			
DOUG FIR		91.8		8.9		52		57		62			
WHEMLOCK		121.1		11.7		24		28		31			
S SPRUCE		218.4		21.1		4		5		6			
R ALDER		261.4		25.3		12		17		21			
SNAG		728.0		70.3		0		0		1			
TOTAL		51.8		5.0		101		106		112			
										107 27 12			
CL: 68.1 %		COEFF		BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.			
SD: 1.0		VAR.%		S.E.%		LOW		AVG		HIGH			
										5 10 15			
DOUG FIR		85.3		8.2		84		92		99			
WHEMLOCK		115.0		11.1		59		67		74			
S SPRUCE		215.9		20.9		12		15		18			
R ALDER		244.0		23.6		9		12		15			
SNAG		728.0		70.3		0		1		1			
TOTAL		44.5		4.3		178		186		194			
										79 20 9			
CL: 68.1 %		COEFF		NET BF/ACRE				# OF PLOTS REQ.		INF. POP.			
SD: 1.0		VAR.%		S.E.%		LOW		AVG		HIGH			
										5 10 15			
DOUG FIR		87.9		8.5		11,594		12,670		13,746			
WHEMLOCK		115.1		11.1		7,760		8,731		9,702			
S SPRUCE		218.6		21.1		1,828		2,317		2,806			
R ALDER		242.9		23.5		777		1,015		1,253			
SNAG													
TOTAL		46.2		4.5		23,628		24,732		25,837			
										85 21 9			

TC TSTATS				STATISTICS				PAGE	1
				PROJECT	ODR	DATE 8/7/2024			
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
08N	09W	22	U456	00MC	58.00	73	345	1	W
				TREES	ESTIMATED	PERCENT			
				PER PLOT	TOTAL	SAMPLE			
					TREES	TREES			

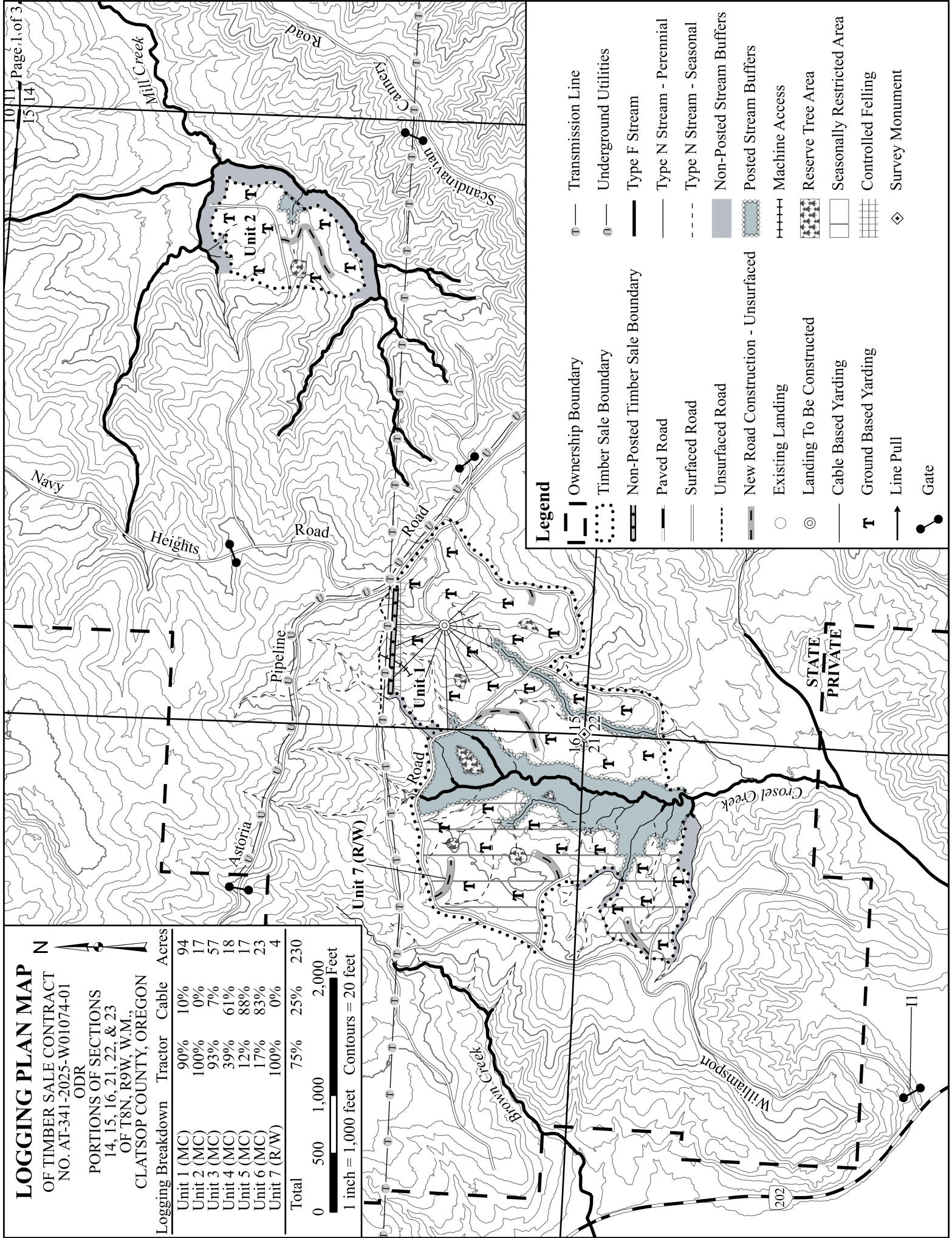
TC TSTATS				STATISTICS				PAGE	1	
				(PROJECT ODR				DATE	8/7/2024	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
08N	09W	00	U7 R/W	R/W	4.00	180	842	1	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL	180	842	4.7							
CRUISE	53	253	4.8	430	58.8					
DBH COUNT										
REFOREST										
COUNT	123	582	4.7							
BLANKS	4									
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	128	53.3	17.6	69	21.5	90.4	13,047	12,999	3,529	3,529
WHEMLOCK	94	28.4	19.8	53	13.6	60.7	8,174	8,084	2,223	2,223
R ALDER	17	18.2	13.1	40	4.7	17.1	1,637	1,628	493	493
S SPRUCE	11	7.1	19.0	54	3.2	14.0	2,001	1,971	540	540
SNAG	3	.5	18.3	61	0.2	.9				
TOTAL	253	107.5	17.7	59	43.6	183.2	24,860	24,681	6,785	6,785
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	SAMPLE TREES - BF					# OF TREES REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15	
DOUG FIR	65.1	5.7	319	339	358					
WHEMLOCK	71.7	7.4	461	497	534					
R ALDER	100.6	25.1	122	163	204					
S SPRUCE	135.9	42.9	376	659	942					
SNAG										
TOTAL	87.2	5.5	374	396	417	304	76	34		
CL: 68.1 %	COEFF	TREES/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15	
DOUG FIR	99.0	7.4	49	53	57					
WHEMLOCK	144.8	10.8	25	28	31					
R ALDER	274.2	20.4	14	18	22					
S SPRUCE	222.4	16.6	6	7	8					
SNAG	668.2	49.8	0	0	1					
TOTAL	62.1	4.6	103	107	112	154	38	17		
CL: 68.1 %	COEFF	BASAL AREA/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15	
DOUG FIR	96.0	7.1	84	90	97					
WHEMLOCK	123.9	9.2	55	61	66					
R ALDER	261.5	19.5	14	17	20					
S SPRUCE	218.4	16.3	12	14	16					
SNAG	665.2	49.5	0	1	1					
TOTAL	52.4	3.9	176	183	190	110	27	12		
CL: 68.1 %	COEFF	NET BF/ACRE					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH		5	10	15	
DOUG FIR	99.6	7.4	12,035	12,999	13,963					
WHEMLOCK	125.1	9.3	7,330	8,084	8,837					
R ALDER	265.4	19.8	1,306	1,628	1,949					
S SPRUCE	222.5	16.6	1,644	1,971	2,298					
SNAG										
TOTAL	54.6	4.1	23,677	24,681	25,685	119	30	13		

TC PLOGSTVB		Log Stock Table - MBF																	
T08N R09W S00 TyR/W 4.00 T08N R09W S21 Ty00MC 168.00 T08N R09W S22 Ty00MC 58.00							Project: ODR Acres 230.00							Page 1 Date 8/7/2024 Time 3:13:22PM					
S Spp	T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches											
								2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
D		DO 2S	24	18		18	.6					10	8						
D		DO 2S	28	4	5.9	4	.1					4							
D		DO 2S	30	22		22	.8					17	5						
D		DO 2S	32	20		20	.7					20							
D		DO 2S	36	53		53	1.9					19	23	11					
D		DO 2S	40	1,345		1,339	47.0					454	398	432	54				
D		DO 3S	20	5		5	.2					5							
D		DO 3S	24	41		41	1.4				6	36							
D		DO 3S	26	1		1	.1				1								
D		DO 3S	30	26		26	.9			3	14	9							
D		DO 3S	32	186		186	6.5			88	49	49							
D		DO 3S	34	10		10	.3			10									
D		DO 3S	36	75		75	2.7			30	32	13							
D		DO 3S	38	49		49	1.7			39		11							
D		DO 3S	40	799		796	28.0			121	233	442							
D		DO 4S	14	2		2	.1			2									
D		DO 4S	16	53		53	1.9			46	8								
D		DO 4S	18	15		15	.5			14	1								
D		DO 4S	20	49		49	1.7			36	13								
D		DO 4S	24	12		12	.4			12									
D		DO 4S	26	28		28	1.0			28									
D		DO 4S	28	7		7	.3			7									
D		DO 4S	30	20	4.8	19	.7			19									
D		DO 4S	34	8		8	.3			8									
D		DO 4S	38	7		7	.2			7									
D		Totals		2,856		2,845	52.2			469	357	564	525	433	443	54			
H		DO 2S	16	5		5	.3							5					
H		DO 2S	24	47	7.0	44	2.4					17		27					
H		DO 2S	32	22		22	1.2					8	6	8					
H		DO 2S	34	7		7	.4					0	7						
H		DO 2S	36	43		43	2.3					33		9					
H		DO 2S	38	3		3	.2					3							
H		DO 2S	40	1,173	1.0	1,161	63.0					177	226	542	206	10			
H		DO 3S	20	3		3	.2			0		2	1						
H		DO 3S	24	18		18	1.0					18							
H		DO 3S	26	11		11	.6				11								

TC PLOGSTVB		Log Stock Table - MBF																		
T08N R09W S00 TyR/W4.00 T08N R09W S21 Ty00MC168.00 T08N R09W S22 Ty00MC58.00				Project: ODR Acres230.00										Page3 Date8/7/2024 Time3:13:22PM						
Spp	S T	So rt	Gr de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches											
									2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
A		DO	3S	40	45		45	15.3			11	34								
A		DO	4S	16	17		17	5.9			17									
A		DO	4S	20	3		3	.9			3									
A		DO	4S	24	38		38	12.8			38									
A		DO	4S	28	29		29	9.8			29									
A		DO	4S	32	26		26	8.7			26									
A		Totals			297		296	5.4			128	50	9	56	10	44				
Total		All Species			5,493		5,446	100.0			783	533	789	885	749	1271	317	69	50	

TC PSTNDSUM		Stand Table Summary										Page 1			
												Date: 8/7/2024			
T08N R09W S00 TyR/W 4.00					Project ODR					Time: 3:14:14PM					
T08N R09W S21 Ty00MC 168.00					Acres 230.00					Grown Year:					
T08N R09W S22 Ty00MC 58.00															
S Spec T	Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	T o t a l s		
	DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
D	8	2	86	62	2.344	.82	2.34	6.0	20.0		14	47		32	11
D	9	2	83	52	1.852	.82	1.85	10.0	30.0		19	56		43	13
D	10	4	87	93	2.289	1.25	3.79	10.4	44.2		40	167		91	38
D	11	2	85	70	1.240	.82	1.24	16.0	60.0		20	74		46	17
D	12	6	86	94	2.138	1.68	3.73	14.7	52.8		55	197		126	45
D	13	4	84	77	1.776	1.64	2.66	17.0	56.7		45	151		104	35
D	14	16	86	94	5.398	5.77	10.03	20.1	71.3		201	715		463	165
D	15	22	84	91	6.433	7.84	12.20	22.1	77.9		269	950		619	219
D	16	4	86	101	1.172	1.64	2.34	26.3	95.0		62	223		142	51
D	17	18	85	102	3.441	5.42	7.40	29.1	105.4		216	780		496	179
D	18	24	86	111	4.513	7.88	10.90	30.7	109.7		335	1,196		770	275
D	19	24	85	96	4.790	9.43	10.41	33.9	112.8		353	1,175		812	270
D	20	18	84	104	2.664	5.81	5.90	40.0	136.5		236	806		543	185
D	21	22	83	98	3.258	7.84	7.20	40.9	140.7		294	1,013		676	233
D	22	12	85	110	1.419	3.75	3.95	40.1	155.9		158	615		364	141
D	23	24	86	110	2.865	8.27	7.16	49.1	188.8		352	1,352		810	311
D	24	22	86	110	2.248	7.06	5.96	50.1	197.5		299	1,177		687	271
D	25	10	86	115	1.086	3.70	2.78	59.3	235.4		165	654		379	151
D	26	8	84	114	.572	2.11	1.49	60.7	238.7		91	357		209	82
D	27	4	84	94	.314	1.25	.74	63.7	233.1		47	172		108	39
D	29	2	86	120	.178	.82	.54	67.3	286.7		36	153		83	35
D	31	4	84	113	.238	1.25	.71	75.3	340.5		54	243		124	56
D	32	2	86	132	.077	.43	.23	92.0	420.0		21	97		49	22
D	Totals	256	85	95	52.307	87.28	105.57	32.0	117.2		3,380	12,371		7,775	2,845
H	9	4	89	17	2.923	1.29	2.92	5.0	20.0		15	58		34	13
H	10	6	88	21	2.895	1.58	2.90	7.4	23.6		21	68		49	16
H	11	2	85	37	.436	.29	.44	12.0	40.0		5	17		12	4
H	12	2	83	21	.366	.29	.37	10.0	30.0		4	11		8	3
H	13	4	88	45	.624	.58	.62	19.0	60.0		12	37		27	9
H	14	2	86	56	.269	.29	.27	29.0	70.0		8	19		18	4
H	16	10	86	58	1.856	2.59	3.30	21.4	64.3		71	212		163	49
H	17	8	85	89	2.547	4.02	5.09	30.4	102.5		155	522		356	120
H	19	6	85	81	.660	1.30	1.32	36.5	113.3		48	150		111	34
H	20	10	85	84	1.972	4.30	4.08	39.2	129.0		160	526		368	121
H	21	14	85	85	1.614	3.88	3.23	46.3	154.3		149	498		343	114
H	22	14	85	87	2.013	5.32	4.14	48.6	165.7		201	685		462	158
H	23	6	86	92	.796	2.30	1.59	58.6	206.3		93	328		214	75
H	24	14	85	94	1.553	4.88	3.20	62.5	223.3		200	714		459	164
H	25	10	86	93	.842	2.87	1.85	58.4	219.8		108	407		249	94
H	26	12	84	92	.781	2.88	1.72	68.7	254.5		118	437		271	101
H	27	16	84	93	1.659	6.60	3.46	76.7	282.2		266	977		611	225
H	28	8	83	95	.772	3.30	1.61	83.4	305.6		134	492		309	113
H	29	4	82	101	.438	2.01	1.09	80.2	314.0		88	344		202	79
H	30	4	84	108	.117	.58	.35	75.7	343.3		27	121		61	28
H	32	6	82	97	.411	2.30	.87	109.8	425.9		96	372		221	86
H	33	2	86	104	.048	.29	.10	131.0	570.0		13	55		29	13
H	34	4	81	88	.205	1.29	.36	131.4	469.3		48	171		110	39
H	35	10	85	90	.322	2.15	.64	129.0	536.0		83	346		191	80
H	37	2	66	64	.039	.29	.04	78.0	150.0		3	6		7	1
H	38	2	81	87	.127	1.00	.25	147.5	535.0		38	136		86	31
H	41	2	82	108	.109	1.00	.22	143.0	625.0		31	137		72	31
H	42	2	79	93	.030	.29	.06	190.5	730.0		11	44		26	10
H	46	2	79	88	.087	1.00	.17	217.0	725.0		38	126		87	29

TC PSTNDSUM		Stand Table Summary										Page Date:	2 8/7/2024
T08N R09W S00 TyR/W 4.00 T08N R09W S21 Ty00MC 168.00 T08N R09W S22 Ty00MC 58.00		Project ODR Acres 230.00										Time:	3:14:14PM
												Grown Year:	
S SpC T	DBH	Sample Trees	Tot FF 16'	Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons Cunits MBF
H	Totals	188	86	69	26.514	60.74	46.27	48.5	173.3		2,243	8,017	5,158 1,844
S	11	2	86	26	1.389	.92	1.39	10.0	20.0		14	28	32 6
S	14	2	83	51	.858	.92	.86	25.0	60.0		21	51	49 12
S	15	2	86	90	1.131	1.39	2.26	25.0	90.0		57	204	130 47
S	20	2	82	75	.636	1.39	1.27	40.0	105.0		51	134	117 31
S	21	2	85	114	.381	.92	1.14	42.0	176.7		48	202	110 46
S	22	2	86	64	.526	1.39	1.05	41.5	145.0		44	152	100 35
S	25	4	83	110	.814	2.77	2.04	64.4	242.0		131	492	301 113
S	27	2	83	125	.349	1.39	1.05	69.7	293.3		73	307	168 71
S	32	2	85	66	.248	1.39	.50	91.5	320.0		45	159	105 37
S	55	2	83	103	.084	1.39	.17	362.0	1615.0		61	272	140 62
S	Totals	22	85	72	6.416	13.85	11.72	46.5	170.7		545	2,001	1,253 460
A	8	2	86	54	5.057	1.77	5.06	8.0	30.0		40	152	93 35
A	9	2	86	58	3.995	1.77	4.00	11.0	30.0		44	120	101 28
A	10	4	86	50	1.661	.91	1.66	12.0	45.0		20	75	46 17
A	12	6	87	60	3.401	2.67	4.55	15.0	48.7		68	222	157 51
A	14	4	86	76	.847	.91	1.69	18.8	65.0		32	110	73 25
A	15	2	87	79	.369	.45	.74	22.0	75.0		16	55	37 13
A	18	2	87	42	.256	.45	.26	32.0	60.0		8	15	19 4
A	19	4	86	60	.460	.91	.69	35.3	93.3		24	64	56 15
A	22	2	86	69	.669	1.77	1.34	43.5	135.0		58	181	134 42
A	23	2	87	59	.157	.45	.31	42.5	155.0		13	49	31 11
A	24	2	86	82	.144	.45	.29	60.5	215.0		17	62	40 14
A	33	2	67	107	.297	1.77	.89	55.0	206.7		49	184	113 42
A	Totals	34	86	59	17.313	14.26	21.48	18.2	60.0		391	1,289	900 296
SN	17	2	89	35	.077	.12							
SN	19	4	89	101	.342	.67							
SN	Totals	6	89	89	.418	.79							
Totals		506	85	81	102.968	176.92	185.04	35.4	128.0		6,559	23,678	15,085 5,446



LOGGING PLAN MAP

OF TIMBER SALE CONTRACT
NO. AT-341-2025-W01074-01

ODR

PORTIONS OF SECTIONS

14, 15, 16, 21, 22, & 23

OF T8N, R9W, W.M.,

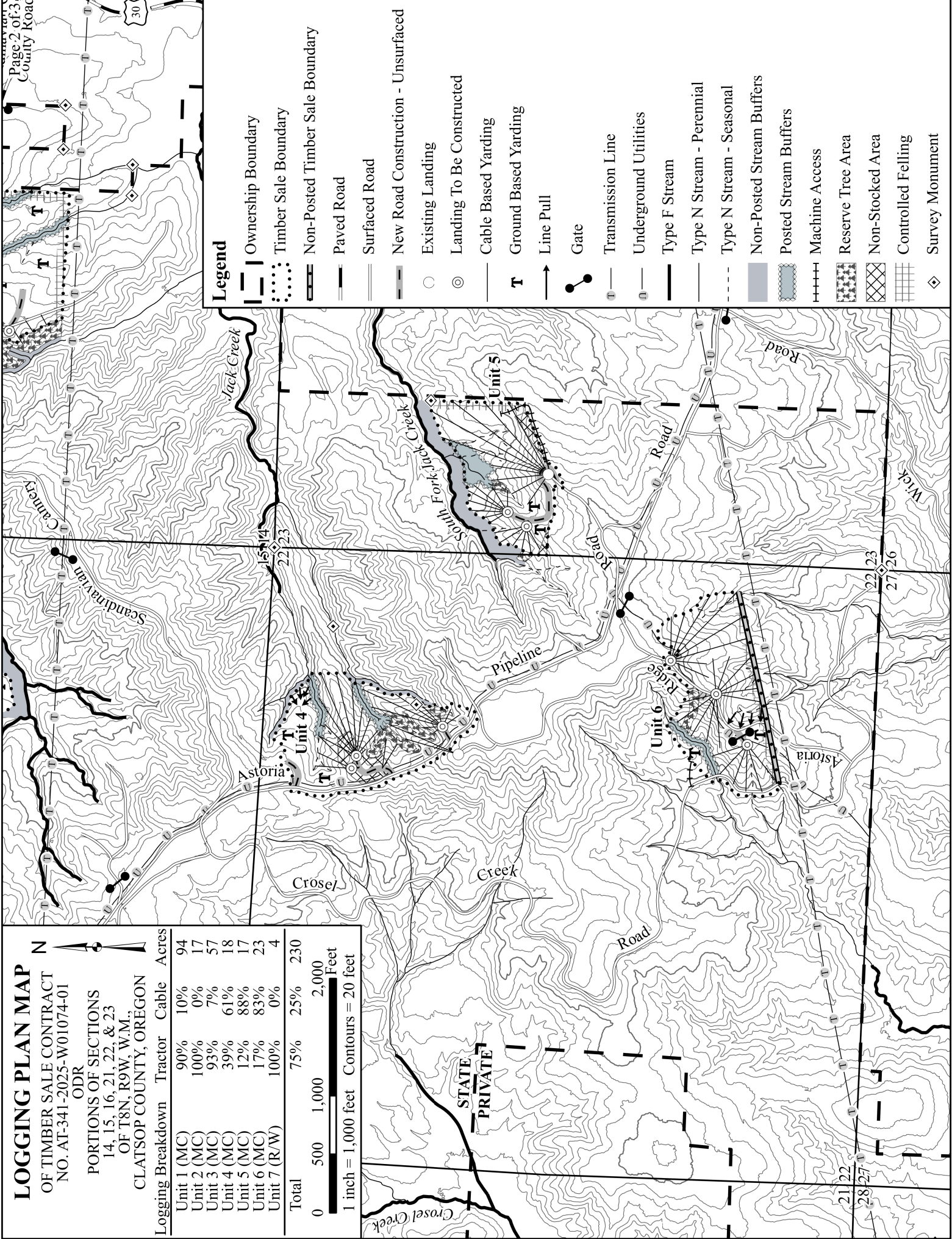
CLATSOP COUNTY, OREGON

Logging Breakdown	Tractor	Cable	Acres
Unit 1 (MC)	90%	10%	94
Unit 2 (MC)	100%	0%	17
Unit 3 (MC)	93%	7%	57
Unit 4 (MC)	39%	61%	18
Unit 5 (MC)	12%	88%	17
Unit 6 (MC)	17%	83%	23
Unit 7 (R/W)	100%	0%	4

Total 230



STATE
PRIVATE



Legend

- Ownership Boundary
- Timber Sale Boundary
- Non-Posted Timber Sale Boundary
- Paved Road
- Surfaced Road
- New Road Construction - Unsurfaced
- Existing Landing
- Landing To Be Constructed
- Cable Based Yarding
- Ground Based Yarding
- Line Pull
- Gate
- Transmission Line
- Underground Utilities
- Type F Stream
- Type N Stream - Perennial
- Type N Stream - Seasonal
- Non-Posted Stream Buffers
- Posted Stream Buffers
- Machine Access
- Reserve Tree Area
- Non-Stocked Area
- Controlled Felling
- Survey Monument

LOGGING PLAN MAP

OF TIMBER SALE CONTRACT
NO. AT-341-2025-W01074-01

ODR
PORTIONS OF SECTIONS
14, 15, 16, 21, 22, & 23
OF T8N, R9W, W.M.,
CLATSOP COUNTY, OREGON

Logging Breakdown	Tractor	Cable	Acres
Unit 1 (MC)	90%	10%	94
Unit 2 (MC)	100%	0%	17
Unit 3 (MC)	93%	7%	57
Unit 4 (MC)	39%	61%	18
Unit 5 (MC)	12%	88%	17
Unit 6 (MC)	17%	83%	23
Unit 7 (R/W)	100%	0%	4
Total	75%	25%	230

05001,0002,000

Feet

1 inch = 1,000 feet

Contours = 20 feet

