



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Middle Sager
Sale AT-341-2027-W01357-01

District: Astoria

Date: June 17, 2026

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$5,992,685.82	\$17,235.02	\$6,009,920.84
		Project Work:	(\$136,246.00)
		Advertised Value:	\$5,873,674.84



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District: Astoria

Date: June 17, 2026

Timber Description

Location: Portions of Section 3, T5N, R6W, and Sections 34 & 35, T6N, R6W, W.M., Clatsop County, Oregon

Stand Stocking: 80%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	26	0	98
Western Hemlock / Fir	15	0	97
Alder (Red)	11	0	96
Maple	18	0	96

Volume by Grade	2S	3S & 4S 6"-11"	3S 12"+	SM & Better	8" - 9"	12"+	6" - 7"	Camprun	Total
Douglas - Fir	5,118	917	220	4,578	0	0	0	0	10,833
Western Hemlock / Fir	193	111	0	0	0	0	0	0	304
Alder (Red)	0	0	0	0	13	43	54	0	110
Maple	0	0	0	0	0	0	0	41	41
Total	5,311	1,028	220	4,578	13	43	54	41	11,288

Comments: Pond Values Used: Local Pond Values, June, 2026.

Expected Log Markets: Clatskanie, Forest Grove, Mist, Sheridan, St. Helens, Noti, Eugene, Tillamook, Warrenton, Wauna, Willamina, Elma, WA, Longview, WA

PRICING:

Spruce = pond value - (Douglas-fir) logging cost.
 $\$251.10/\text{MBF} = \$525/\text{MBF} - \$273.90/\text{MBF}$

Cedar = pond value - (Douglas-fir) logging cost.
 $\$1,006.10/\text{MBF} = \$1,280/\text{MBF} - \$273.90/\text{MBF}$

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

Machine Washing for Invasive Weed Compliance = \$2,000

Ditch Filters:

6 bales of straw @ \$13.39/bale = \$80.34

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

Waterbar and block unsurfaced roads:

4 hours w/C315 Excavator @ \$127/hour = \$508

Controlled Felling (includes jack cost and directional felling) in larger timber types:
 $\$10/\text{MBF} \times 10,469 \text{ MBF} = \$104,690$

Total P&R Cost = \$107,378.34

Other Costs (No Profit & Risk added): None

SLASH PILING

(See attached appraisal. Includes move-in and pile materials) = \$17,530

ROAD MAINTENANCE

(See attached Road Maintenance Cost Summary Sheet)

TOTAL Road Maintenance: $\$26,431/11,288 \text{ MBF} = \$2.34/\text{MBF}$



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Logging Conditions

Combination#: 1

Douglas - Fir	48.00%
Western Hemlock / Fir	48.00%
Alder (Red)	48.00%
Maple	48.00%

Logging System: Cable: Large Tower >=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: 10
bd. ft / load: 4400
cost / mbf: \$194.98
machines: Log Loader (A)
Tower Yarder (Large)

Combination#: 2

Douglas - Fir	52.00%
Western Hemlock / Fir	52.00%
Alder (Red)	52.00%
Maple	52.00%

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: 15
bd. ft / load: 5000
cost / mbf: \$133.34
machines: Shovel Logger



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Middle Sager Sale AT-341-2027-W01357-01

District: Astoria

Date: June 17, 2026

Logging Costs

Operating Seasons: 3.00

Profit Risk: 12%

Project Costs: \$136,246.00

Other Costs (P/R): \$107,378.34

Slash Disposal: \$17,530.00

Other Costs: \$0.00

Miles of Road

Road Maintenance: \$2.34

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	6.5
Western Hemlock / Fir	\$0.00	3.0	5.5
Alder (Red)	\$0.00	2.0	4.1
Maple	\$0.00	2.0	4.1



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
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District: Astoria

Date: June 17, 2026

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
\$162.93	\$2.39	\$1.17	\$65.38	\$9.51	\$28.97	\$1.55	\$2.00	\$0.00	\$273.90
Western Hemlock / Fir									
\$162.93	\$2.41	\$1.17	\$78.03	\$9.51	\$30.49	\$1.55	\$2.00	\$0.00	\$288.09
Alder (Red)									
\$162.93	\$2.43	\$1.17	\$158.54	\$9.51	\$40.15	\$1.55	\$2.00	\$0.00	\$378.28
Maple									
\$162.93	\$2.43	\$1.17	\$158.54	\$9.51	\$40.15	\$1.55	\$2.00	\$0.00	\$378.28

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$819.56	\$545.66	\$0.00
Western Hemlock / Fir	\$0.00	\$556.35	\$268.26	\$0.00
Alder (Red)	\$0.00	\$528.73	\$150.45	\$0.00
Maple	\$0.00	\$395.00	\$16.72	\$0.00



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Summary

Amortized

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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	10,833	\$545.66	\$5,911,134.78
Western Hemlock / Fir	304	\$268.26	\$81,551.04
Alder (Red)	110	\$150.45	\$16,549.50
Maple	41	\$16.72	\$685.52

Gross Timber Sale Value

Recovery: \$6,009,920.84

Prepared By: Justin Bush

Phone: 503-325-5451

Site Prep Appraisal

Sale Name: Middle Sager
Date: 06/16/2026

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	4
Hemlock/Fir	B	1.0	4.5	6
Hemlock/Spruce	C	1.8	5.0	8
Hemlock	D	1.8	5.0	8
Conifer/Hardwood	E	0.8	2.0	6
Whole Tree Yarding	F	0.5	0.3	10

Sale Area	Harvest Type	Veg Type/Zone	Ground Based Yarding Acres	Estimated Piling Hours/Area	Cost/Hour	Total Cost/Area
Unit 1	CC	E	39	29	\$160.00	\$4,680.00
Unit 2	CC	E	43	32	\$160.00	\$5,160.00
In-unit Piling						Sub Total = \$9,840.00
Sale Area	Number of Landings to be Piled	# acres to Landings per Area	Total Cost/Area	Number of In-Unit Piles	Material Cost/Pile	Total Cost/Area
Unit 1	15	99	\$3,168.00	93	\$5.00	\$465.00
Unit 2	13	61	\$1,952.00	99	\$5.00	\$495.00
*Cost includes separating firewood					Materials	Sub Total = \$960.00
Additional Move-in allowance					Landing Piling	Sub Total = \$5,120.00
Move-In Allowance	Number of Move-In's	Total Move-In Allowance				
\$1,610.00	1	\$1,610.00	Slash piler			
					Move-In	Sub Total = \$1,610.00
Slash Endhaul	Dump Truck hrs	Cost/Hour	Total	Loader hrs	Cost/Hour	Total
	0	\$110.00	\$0.00	0	\$160.00	\$0.00
						Sub Total = \$0.00
						Grand Total = \$17,530.00

Road Maintenance Cost Summary (Interim and Post Harvest)

Sale: Middle Sager
Date: June 17, 2026
By: John Czarnecki

MBF: 11,288
\$/MBF: \$2.34

Type	Equipment/Rationale	Move-in Rate	Times	Hours	Rate	Cost
Interim Operations	Grader 14G	\$972	1	8	\$126	\$1,980
Interim Operations	Grader 14G	\$972	1	8	\$126	\$1,980
	Dump Truck 12CY	\$205	1	8	\$110	\$1,085
	Rubber Tired Backhoe - small	\$401	1	4	\$97	\$789
	Vibratory Roller	\$972	1	8	\$97	\$1,748
Final Road Maintenance	Grader 14G	\$972	1	40	\$126	\$6,012
	Dump Truck 12CY	\$205	2	20	\$110	\$2,610
	FE Loader C966	\$972	1	8	\$105	\$1,812
	Vibratory Roller	\$972	1	40	\$97	\$4,852
	Water Truck 2,500 gallon	\$238	1	8	\$113	\$1,142
	C315 Excavator	\$1,005	1	8	\$127	\$2,021
	Labor			8	\$50	\$400
Total						\$26,431

Interim Operations Road Maintenance

Production Rates	Miles/day	Distance (miles)	Days	Hours
Grader	3.0	3.0	1.0	8

Final Road Maintenance

Production Rates	Miles/day	Distance (miles)	Days	Hours
Grader	1.5	7.5	5.0	40
Vibratory Roller	1.5	7.5	5.0	40

Process and compact: All crushed rock roads

Sager Creek Road = 2.2 miles
West Sager Road = 1.8 miles
Jones Road = 1.5 miles
Sager Ridge Road = 1.3 miles
(Existing) Unnamed Spur Roads = 0.5 miles
New Construction Spur Roads = 0.2 miles
Grade & Process Total = 7.5 miles

SUMMARY OF ALL PROJECT COSTS

SALE NAME: Middle Sager

Project No. 1: ROAD CONSTRUCTION:

<u>Road segment</u>	<u>Length (Sta)</u>	<u>Length (Mile)</u>	<u>Cost</u>
Surfaced			
1A, 1B, 1C to 1D, 1E to 1F, 1G to 1H, 2E to 2F,			
2G, 2H, 2I	9.60	0.18	\$29,188.00
Unsurfaced			
2A to 2B, 2C to 2D	15.00	0.28	\$9,836.00
Road Maint.			\$1,140.28
Move-In			\$3,265.24
TOTALS	24.60	0.46	\$43,430

Project No. 2: ROAD IMPROVEMENT:

<u>Road segment</u>	<u>Length (Sta)</u>	<u>Length (Mile)</u>	<u>Cost</u>
l1 to l2, l3 to l4, l5 to l6, l7 to l8, l9 to l10, l11 to l12, l13	144.70	2.74	\$56,526.98
Road Maint.			\$1,651.72
Move-In			\$4,729.76
TOTALS	144.70	2.74	\$62,908

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. No. 3 Water Hole Improvement		\$2,428.52
Proj. No. 4 Northrup Quarry Development		\$16,580.00
Proj. No. 5 Stream Enhancement		\$10,900.00
TOTAL		\$29,909

GRAND TOTAL **\$136,246**

Compiled By: D. Farner

Date: 06/17/2026

Move In and Maintenance Calculator for Construction and Improvement

SALE NAME: Middle Sager

Project No. 1: ROAD CONSTRUCTION:

	<u>Length/Sta</u>	<u>Length/Mile</u>	<u>Cost</u>
Surfaced			
1A, 1B, 1C to 1D, 1E to 1F,			
1G to 1H, 2E to 2F,			
2G, 2H, 2I	9.60	0.18	\$29,188.00
Unsurfaced			
2A to 2B, 2C to 2D	15.00	0.28	\$9,836.00
TOTALS	24.60	0.46	\$39,024

Project No. 2: ROAD IMPROVEMENT:

	<u>Length/Sta</u>	<u>Length/Mile</u>	<u>Cost</u>
Road segment			
11 to 12, 13 to 14, 15 to 16,			
17 to 18, 19 to 110,			
111 to 112, 113	144.70	2.74	\$56,526.98
TOTALS	144.70	2.74	\$56,527

MOVE IN (Construction & Improvement Only)

	<u>Equipment</u>	<u>Length/Mile</u>	<u>Cost</u>
C330 excavator			\$1,755.00
C315 excavator			\$1,005.00
D8 dozer			\$1,755.00
G14 grader			\$972.00
Vibratory roller			\$972.00
Water truck			\$238.00
20 yd highway dump w/pup X 2			\$478.00
10-12 yd highway dump X 4			\$820.00
TOTAL			\$7,995.00

ROAD MAINTENANCE (Construction & Improvement Only)

	<u>Length/Mile</u>	<u>Cost</u>
From Project Rd. Maintenance		
Cost Summary		\$2,792.00
TOTAL		\$2,792.00

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Middle Sager
ROAD: 1A, 1B, 1C to 1D (1.0 sta.), 1E to 1F (2.0 sta.),
POINTS: 1G to 1H (2.0 sta.), 2A to 2B (9.0 sta.),
2C to 2D (6.0 sta.), 2E to 2F (4.6 sta.), 2G, 2H, 2I

NEW CONSTRUCTION: 24.60 STATIONS
IMPROVEMENT: 144.70 STATIONS

0.47 MILES
2.74 MILES

CLEARING & GRUBBING				
Method	Acres/amount	x	Rate	Cost
1C to 1D scatter outside of right of way	2.87	x	\$ 1,669	\$4,790.03
2A to 2B				
2C to 2D				
2E to 2F				
2H, 2I				
SUB TOTAL FOR CLEARING & GRUBBING				\$4,790

EXCAVATION				
Material	Cy/amount	x	Rate	Cost
1A Clear and stump to r/w tags scatter C330 hr/\$	2	x	\$195.00	\$390.00
End haul excavated material from landing 1B to expand landing C315 hr/\$	4	x	\$127.00	\$508.00
to r/w tags dump truck hr/\$	4	x	\$110.00	\$440.00
vibratory compactor hr/\$	2	x	\$97.00	\$194.00
1B Clear and stump to r/w tags scatter C330 hr/\$	4	x	\$195.00	\$780.00
End haul excavated material to landing 1A (see above)				
Construct ditch across landing for drainage C315 hr/\$	1	x	\$127.00	\$127.00
Balanced construction sta./\$	1	x	\$154.00	\$154.00
Construct landing ldg/\$	1	x	\$487.00	\$487.00
Extra time for stump and grub C330 hr/\$	3	x	\$195.00	\$585.00
Clear trees and debris from existing road and landing				
Scatter				
Reconstruct ditches and ditchouts C315 hr/\$	3	x	\$127.00	\$381.00
Balanced construction sta./\$	2	x	\$154.00	\$308.00
Clear trees and debris from existing road and landing				
Scatter				
Reconstruct ditches and ditchouts C315 hr/\$	3	x	\$127.00	\$381.00
Balanced construction sta./\$	2	x	\$154.00	\$308.00

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 Volume (CY) per		0+00 to 9+00 Number of				
Base Rock	4"-0" crushed	0+00 to 1+00	10	station	63	stations	1	63	\$10.41	\$656
Junction Base Rock	4"-0" crushed	0+00	N/A	junction	110	junctions	1	110	\$10.41	\$1,145
Junction Rock	1 1/2"-0" crushed	0+00	N/A	junction	22	junctions	1	22	\$12.50	\$275
Total Rock for Road Segment:				2A to 2B				195		\$2,076
ROAD SEGMENT 2E to 2F				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	2E to 2F Volume (CY) per		0+00 to 4+60 Number of				
Base Rock	4"-0" crushed	0+00 to 3+60	10	station	63	stations	3.60	227	\$10.41	\$2,361
Base Rock (14' wide)	4"-0" crushed	3+60 to 4+60	12	station	86	stations	1.00	86	\$10.41	\$895
Junction Rock	1 1/2"-0" crushed	0+00	N/A	junction	11	junctions	1.00	11	\$12.50	\$138
Turnarounds	4"-0" crushed	3+60	N/A	turnaround	22	turnarounds	1	22	\$10.41	\$229
Landings	6"-0" pit-run	4+60	N/A	landing	66	landings	1	66	\$11.66	\$770
Total Rock for Road Segment:				2E to 2F				412		\$4,392
ROAD SEGMENT 2G				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	2G Volume (CY) per		N/A Number of				
Junction Rock	1 1/2"-0" crushed	0+00	N/A	junction	11	junctions	1.00	11	\$12.50	\$138
Landings	6"-0" pit-run	0+00	N/A	landing	44	landings	1	44	\$11.66	\$513
Total Rock for Road Segment:				2G				55		\$651
ROAD SEGMENT 2H				POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	2H Volume (CY) per		N/A Number of				
Junction Rock	4"-0" crushed	0+00	N/A	junction	44	junctions	1	44	\$10.41	\$458
Landings	6"-0" pit-run	0+00	N/A	landing	66	landings	1	66	\$11.66	\$770
Total Rock for Road Segment:				2H				110		\$1,228

ROAD SEGMENT			2I		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	junction landing	Number of	N/A				
Junction Rock	4"-0" crushed	0+00	N/A	44	junction	1	junctions	44	\$10.41	\$458	
Landings	6"-0" pit-run	0+00	N/A	66	landing	1	landings	66	\$11.66	\$770	
Total Rock for Road Segment:									110		\$1,228
Processing:											
Water, Process & Compact Base Rock (4"-0"):			Description					No. sta	Rate/sta	Cost	
1C to 1D (1.0 sta.), 2A to 2B (9.0 sta.), 2E to 2F (4.6 sta.)								18.6	\$70.47	\$1,310.74	
1E to 1F (2.0 sta.), 1G to 1H (2.0 sta.)											

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Middle Sager

ROAD: 11 to 12 (104.80 sta.), 13 to 14 (9.80 sta.), 15 to 16 (15.90 sta.), 17 to 18 (4.00 sta.), 19 to 110 (5.40 sta.), 111 to 112 (4.8 sta.), 113 (0.00 sta.)

POINTS: 113 (0.00 sta.)

NEW CONSTRUCTION: 24.60 STATIONS

IMPROVEMENT: 144.70 STATIONS

0.47 MILES

2.74 MILES

CLEARING & GRUBBING					
Method	Acres/amount	x	Rate	=	Cost
SUB TOTAL FOR CLEARING & GRUBBING					
					\$0

EXCAVATION					
Material	Cy/amount	x	Rate	=	Cost
11 to 12					
79+10 Construct turnaround	C315 hr/\$ 1	x	\$127.00	=	\$127.00
84+60 Expand landing to r/w tags	C315 hr/\$ 3	x	\$127.00	=	\$381.00
Clear and stump to r/w tags, scatter					
15 to 16					
0+00 Junction reconstruction	C315 hr/\$ 4	x	\$127.00	=	\$508.00
Vibratory roller	roller hr/\$ 1	x	\$97.00	=	\$97.00
Grader	14G hr/\$ 2	x	\$126.00	=	\$252.00
5+60 Clear landing, remove trees and debris	C315 hr/\$ 1	x	\$127.00	=	\$127.00
11+60 Construct turnaround	C315 hr/\$ 1	x	\$127.00	=	\$127.00
15+90 Construct landing	landing/\$ 1	x	\$487.00	=	\$487.00
17 to 18					
0+00 to 4+00 Remove trees and stumps to daylight road segment and landing, scatter stumps and debris	C330 hr/\$ 4	x	\$195.00	=	\$780.00
111 to 112					
2+60 Construct turnaround	C315 hr/\$ 1	x	\$127.00	=	\$127.00
113					
Construct turnaround	C315 hr/\$ 1	x	\$127.00	=	\$127.00
SUB TOTAL FOR EXCAVATION					
					\$3,140

CULVERT MATERIALS AND INSTALLATION					
Location	Dia/type	Lineal ft.	Rate	Cost	

Description	Quantity	Rate	Cost	
Other/miscellaneous:				
Culvert stakes & markers:				
11 to 12 (87+60), 19 to 110 (3+00)	2	\$25.23	\$50.46	
SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION				
\$50				

SURFACING									
Subgrade prep:			Description				Stations/ amount	Rate/ sta/amt	Cost
Grade, Shape and Ditch 16':			11 to 12 (104.8 sta.), 13 to 14 (9.8 sta.), 15 to 16 (15.9 sta.),				x	x	\$1,840.58
			17 to 18 (4.0 sta.), 19 to 110 (5.4 sta.), 111 to 112 (4.8 sta.)						
			Subgrade Compaction:						
			11 to 12 (104.8 sta.), 13 to 14 (9.8 sta.), 15 to 16 (15.9 sta.),						
			17 to 18 (4.0 sta.), 19 to 110 (5.4 sta.), 111 to 112 (4.8 sta.)						
Sod Removal and							x		\$718.28
Ditch Reconstruction:			15 to 16 (15.9 sta.), 17 to 18 (4.0 sta.), 111 to 112 (4.8 sta.)						
Scatter with Backhoe:			15 to 16 (15.9 sta.), 17 to 18 (4.0 sta.), 111 to 112 (4.8 sta.)				x		\$275.65
ROAD SEGMENT									
Application	11 to 12 Rock Size and Type	Depth of Rock (inches)	POINT TO POINT		Sta. to Sta. 0+00 to 104+80 Number of	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
			11 to 12 Volume (CY) per	12 to 13 Volume (CY) per					
Surfacing	1 1/2"-0" crushed	3	station	19	stations	55	\$12.50	\$13,063	
Surfacing	1 1/2"-0" crushed	2	station	13	stations	49.8	\$12.50	\$6,093	
Turnouts	1 1/2"-0" crushed	N/A	turnout	11	turnouts	10	\$12.50	\$1,375	
Turnarounds	1 1/2"-0" crushed	N/A	turnaround	11	turnarounds	2	\$12.50	\$275	
Turnarounds	4"-0" crushed	N/A	turnaround	55	turnarounds	1	\$10.41	\$573	
Turnarounds	4"-0" crushed	N/A	turnaround	44	turnarounds	1	\$10.41	\$458	
Junctions	1 1/2"-0" crushed	N/A	junction	11	junctions	4	\$12.50	\$550	
Landings	6"-0" pit-run	N/A	landing	44	landings	1	\$11.66	\$513	
Total Rock for Road Segment:									
						2,011		\$24,899	
ROAD SEGMENT									
Application	13 to 14 Rock Size and Type	Depth of Rock (inches)	POINT TO POINT		Sta. to Sta. 0+00 to 9+80 Number of	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
			13 to 14 Volume (CY) per	14 to 15 Volume (CY) per					
Surfacing	1 1/2"-0" crushed	2	station	13	stations	6.2	\$12.50	\$1,008	
Turnouts	1 1/2"-0" crushed	N/A	turnout	22	turnouts	1	\$12.50	\$275	
Total Rock for Road Segment:									
						103		\$1,283	
ROAD SEGMENT									
Application	15 to 16 Rock Size and Type	Depth of Rock (inches)	POINT TO POINT		Sta. to Sta. 0+00 to 15+90 Number of	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
			15 to 16 Volume (CY) per	16 to 17 Volume (CY) per					
Surfacing	1 1/2"-0" crushed	2	station	13	stations	5.6	\$12.50	\$910	
Surfacing	4"-0" crushed	6	station	38	stations	10.3	\$10.41	\$4,070	
Junction reconstruction/Curve	1 1/2"-0" crushed	N/A	junction	11	junctions	4	\$12.50	\$550	
Turnarounds	4"-0" crushed	N/A	turnaround	44	turnarounds	1	\$10.41	\$458	
Junction reconstruction/Curve	1 1/2"-0" crushed	N/A	junction	11	junctions	7	\$12.50	\$802	
Landings	6"-0" pit-run	N/A	landing	44	landings	2	\$11.66	\$1,026	
Total Rock for Road Segment:									
						717		\$7,816	
ROAD SEGMENT									
Application	17 to 18 Rock Size and Type	Depth of Rock (inches)	POINT TO POINT		Sta. to Sta. 0+00 to 4+00 Number of	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
			17 to 18 Volume (CY) per	18 to 19 Volume (CY) per					
Surfacing	4"-0" crushed	6	station	38	stations	4	\$10.41	\$1,582	
Turnouts	4"-0" crushed	N/A	turnout	11	turnouts	1	\$10.41	\$115	
Total Rock for Road Segment:									
						163		\$1,697	
ROAD SEGMENT									
Application	19 to 110 Rock Size and Type	Depth of Rock (inches)	POINT TO POINT		Sta. to Sta. 0+00 to 5+40 Number of	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
			19 to 110 Volume (CY) per	110 to 111 Volume (CY) per					
Turnarounds	4"-0" crushed	N/A	turnaround	11	turnarounds	1	\$10.41	\$115	
Total Rock for Road Segment:									
						11		\$115	

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
				I11 to I12	I11 to I12 Volume (CY) per station	0+00 to 4+80	Number of			
Surfacing	4"-0" crushed	0+00 to 4+80	6	38	station	4.8	182	\$10.41	\$1,899	
Turnouts	4"-0" crushed	2+50	N/A	44	turnout	1	44	\$10.41	\$458	
Turnarounds	4"-0" crushed	2+50	N/A	11	turnaround	1	11	\$10.41	\$115	
Landings	6"-0" pit-run	4+80	N/A	110	landing	1	110	\$11.66	\$1,283	
Total Rock for Road Segment:										\$3,754
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
				I13	I13 Volume (CY) per turnaround	0+00	Number of			
Turnarounds	4"-0" crushed	0+00	N/A	44	turnaround	1	44	\$10.41	\$458	
Total Rock for Road Segment:										\$458
Processing:										
Description				No. sta		Rate/sta		Cost		
Water, Process & Compact: I1 to I2 (104.80 sta.), I3 to I4 (0+00 to 6+20) 6.2 sta.),				67.85		\$70.47		\$4,781		
I5 to I6 (15.9 sta.), I7 to I8 (4.0 sta.), I11 to I12 (4.8 sta.)				67.85		\$30.29		\$2,055		

Projects Road Maintenance Cost Summary

Sale: Middle Sager
Date: 17-Jun-26
By: D. Farner

Type	Equipment/Rationale			Hours	Rate	Cost
Project Work	Grader 14G			16	\$126	\$2,016
Final Haul	Vibratory Roller			8	\$97	\$776
Road Maintenance						
Total						\$2,792

Production Rates

Grader

Vibratory Roller

Miles/day	Distance(miles)	Days
1.5	0.00	0.0
1.5	0.00	0.0

NOTE: Rock haul routes will share maintenance with other timber sales.

Spot Grade these segments:

Northrup Cr. Rd. (County line to Foster Mainline)

Foster Mainline (Northrup Cr. Rd. to Northrup Quarry Rd.)

Northrup Quarry Rd. (Foster Mainline To Northrup Quarry)

West Sager Cr. Rd. (Sager Cr. Rd. at Hwy 202 to West Sager Cr. Rd.)

West Sager Cr. Rd. (West Sager Cr. Rd. to Sager Cr. Rd.)

Sager Cr. Rd. (Sager Cr. Rd. to Sager Ridge Rd.)

Grade and roll these segments:

Sager Cr. Rd. (Jones Rd. from 1/2 mile to Sager Cr. Rd.)

Waterhole Construction and Access Improvement

Location: Middle Sager WH1

Waterhole Excavation	Hours	\$/Hour	
C315	9	\$ 127.00	\$ 1,143.00
Armoring/Rock Placement/Waste Area Preperation and Shaping	Hours	\$/Hour	
C315	1	\$ 127.00	\$ 127.00
Labor	4	\$ 50.00	\$ 200.00
Seed (1 pound seed \$2.00)			\$ 2.00
Mulch (15 bales \$200.00)			\$ 200.00
Safety Barrier (24"-12" Riprap) 22 cy	CY	\$/CY	
	22	\$ 11.66	\$ 256.52
Partial Equipment Moves			
C315			\$ 500.00
		Total	\$ 2,428.52

Compiled By: D. Farner

Date: 06/17/2026

Northrup Quarry Development and Overburden Removal

Timber Sale: Middle Sager

Location: Northrup Quarry

Waste area clearing and preparation	Hours	\$/Hour	
C330	8	\$ 195.00	\$ 1,560.00
Overburden Removal and Waste Area Shaping	Hours	\$/Hour	
C330	16	\$ 195.00	\$ 3,120.00
Rock Development			
Use of appropriate equipment to produce sufficient quantities for projects			
(Digging, Ripping, Drill and Shoot)	CY	\$/CY	
	900	\$ 9.00	\$ 8,100.00
Partial Equipment Moves			
C330 excavator			\$ 850.00
Rock Drill			\$ 2,100.00
D8 dozer			\$ 850.00
		Total	\$ 16,580.00

Middle Sager
Stream Enhancement
Cable Based Placement

Location	# of Sites	# Key pieces with rootwad attached	Other Structural Pieces	Smaller Pieces (tops) per site	Placement method	Helper/ Labor*	Equipment Rate / Hour*	Hours	Cost per Site	Total Cost per Stream Segment
SE1-SE2	6	1	4	2	Cable Based	\$200	\$650	1	\$850	\$5,100.00
SE3-SE4	6	1	4	2	Cable Based	\$200	\$650	1	\$850	\$5,100.00

Minimum # of pieces per site.

Miscellaneous: 4 hours of equipment time @ \$175/hour for handling and transport of pieces

Grass Seed: \$2.00 per lb. 0 lbs.

Subtotal \$10,200
Misc. \$700
Seed \$0

*Cost includes estimated rates for a yarder, log loader, processor, and a rigging crew

Project Total \$10,900

CRUSHED ROCK COST

SALE NAME:	Middle Sager
PROJECT:	Nos. 1 and 2
Stockpile:	Northrup Stockpile

MATERIAL: 1-1/2"-0"

DATE: 06/16/2026
BY: D. Farner

[illegible]

ROCK HAUL:

Truck type:	<u>D20</u>	No. trucks:	<u>2</u>
Delay min.:	<u>8</u>	Efficiency:	<u>90%</u>

Ave haul:	\$9.97	/cy
Load:	\$0.80	/cy
Spread:	\$1.73	/cy

Truck type:	<u>D12</u>	No. trucks:	<u>4</u>
Delay min.:	<u>6</u>	Efficiency:	<u>90%</u>

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

Production: cy/day = 555

CRUSHED ROCK HAUL COSTS 2,165 cy @ \$12.50 /cy

CRUSHED ROCK COST

SALE NAME:	Middle Sager
PROJECT:	Nos. 1 and 2
Stockpile:	Cow Creek Stockpile

MATERIAL: 4"-0"

DATE: 06/16/2026
BY: D. Farner

[illegible]

ROCK HAUL:

Truck type:	<u>D20</u>	No. trucks:	<u>2</u>
Delay min.:	<u>8</u>	Efficiency:	<u>90%</u>

Ave haul:	\$8.12	/cy
Load:	\$0.80	/cy
Spread:	\$1.49	/cy

Truck type:	<u>D12</u>	No. trucks:	<u>4</u>
Delay min.:	<u>6</u>	Efficiency:	<u>90%</u>

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

Production: cy/day = 681

CRUSHED ROCK HAUL COSTS 1,920 cy @ \$10.41 /cy

CRUSHED ROCK COST

SALE NAME:	Middle Sager
PROJECT:	Nos. 1 2, and 3.
Stockpile:	Northrup Quarry and Stockpile

MATERIAL: Pit-run

DATE: 06/24/2026
BY: D. Farner

[illegible]

ROCK HAUL:

Truck type: D20 No. trucks:
 Delay min.: 8 Efficiency: 85%

Ave haul:	\$10.86	/cy
Load:	\$0.80	/cy
Spread:		/cy

Truck type:	D12	No. trucks:	6
Delay min.:	6	Efficiency:	90%

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

Production: cy/day = 486

CRUSHED ROCK HAUL COSTS

880 cy @ \$11.66 /cy

**Middle Sager
TIMBER CRUISE REPORT
FY 2027**

1. **Sale Area Location:** Portions of Section 3, T5N, R6W, and Sections 34 and 35 of T6N, R6W, W.M., Clatsop County, Oregon.
2. **Fund Distribution:** BOF 90.84% CSL 9.16% **Tax Code:** 8-01 (100%)
3. **Sale Acreage by Area:**

Unit	Harvest Type	Gross Acres	Stream Buffer Acres	Reserve Tree Area	Existing R/W Acres	New R/W	Net Acres	Survey Method
1	Clearcut	120	17	1	3	<1	99	GIS
2	Clearcut	74	10	<1	2	1	61	GIS
3	Right-of-Way	1	-	-	-	-	1	LxW
TOTALS	-	195	27	1	5	1	161	

4. Cruisers and Cruise Dates: Avery Petersen, John Czarnecki, Ryan Simpson, Kevin Berry and Michele Huffman (06/01/2026 through 06/12/2026)

5. Cruise Method and Computation:

Unit 1: The Unit 1 variable plot cruise consists of two timber types, MS_D and MS_E. Timber type MS_D consists of 50 plots cruised with a 54.45 BAF for conifer species and a 27.78 BAF for hardwoods. Plots were arranged on a four chain by two chain spacing with a count to grade ratio of 2:1, resulting in 16 grade plots and 34 count plots*. Timber type MS_E consists of 47 plots cruised with a 40 BAF for conifers and a 27.78 for hardwoods. Plots were arranged on a five chain by two and a half chain spacing with a count to grade ratio of 1:1, resulting in 22 count plots and 25 grade plots*.

Unit 2: The Unit 2 variable plot cruise consists of three timber types, MS_A, MS_B, and MS_C. Timber type MS_A consists of 13 plots cruised with a 33.61 BAF for conifers and a 27.78 BAF for hardwoods. Plots were arranged on a five chain by two chain spacing with a count to grade ratio of 1:1, resulting in six count plots and seven grade plots. Timber type MS_B consists of 23 plots cruised with a 40 BAF for conifers and a 27.78 BAF for hardwoods. Plots were arranged on a four chain by one and half chain spacing with a count to grade ratio of 4:1, resulting in 17 count plots and six grade plots. Timber type MS_C consists of 55 plots cruised with a 71.11 BAF for conifers and a 27.78 for hardwoods. Plots were arranged on a five chain by one and a half chain spacing with a count to grade ratio of 3:1, resulting in 39 count plots and 16 grade plots*.

Unit 3 (R/W): Unit 3 (R/W) is in-unit right-of-way and was cruised with Units 1 and 2.

*The reported number of grade and cruise plots vary from those indicated in the SuperACE reports due to measuring minor species on count plots in the MS_C, MS_D, and MS_E timber types.

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
1	MSAGER	MS_D	00CC	40
1	MSAGER	MS_E	00CC	57
2	MSAGER	MS_A	00CC	13
2	MSAGER	MS_B	00CC	13
2	MSAGER	MS_C	00CC	36

6. Timber Description:

Unit 1: A clearcut with an average age ranging from approximately 103 to 115 years. The stands in this unit were thinned in the early to mid 1970's, and the eastern portion of this unit was again thinned over 15 years ago. The unit consists of Douglas-fir and minor components of western hemlock, red alder, and bigleaf maple. Approximately two acres within Unit 1 was not included in the cruise, but contains incidental volume of a younger, hardwood dominated timber type. This volume was not included in the tables below. Additional species present in negligible amounts include Sitka spruce, western redcedar (leave), and remnant Douglas-fir (leave). Bigleaf maple were encountered on count plots in the MS_D type but none on grade plots. The average maple from the MS_E type is of similar size and quality.

The average Douglas-fir is approximately 30 inches DBH and 111 feet to a merchantable top. The average western hemlock is approximately 17 inches DBH and 51 feet to a merchantable top. The average red alder is approximately 12 inches DBH and 29 feet to a merchantable top. The average bigleaf maple is approximately 17 inches DBH and 40 feet to a merchantable top. Average net volume to be harvested per acre is 71 MBF. All trees were cruised to a merchantable top of six inches DIB, 40% of form point, or an otherwise anticipated break point.

Unit 2: A clearcut consisting of three stands with an ages ranging from 41 to 116 years. The older stand was last thinned in the early 1970's while the mid-aged stand was thinned approximately 13 years ago. The youngest stand has not been thinned. The unit consists primarily of Douglas-fir with minor components of western hemlock, bigleaf maple, and red alder.

The average Douglas-fir is approximately 23 inches DBH and 86 feet to a merchantable top. The average western hemlock is approximately 14 inches DBH and 31 feet to a merchantable top. The average bigleaf maple is approximately 18 inches DBH and 39 feet to a merchantable top. The average red alder is approximately 10 inches DBH and 20 feet to a merchantable top. The average net volume to be harvested per acre is 71 MBF, with a range of 26 to 99 MBF per acre across the different timber types. All trees were cruised to a merchantable top of six inches DIB, 40% of form point, or an otherwise anticipated break point.

Unit 3 (R/W) is approximately one acre of in-unit right-of-way similar in description to the timber in Unit 2. Average net volume to be harvested per acre is 56 MBF.

7. Statistical Analysis and Stand Summary:

Statistics for Stand B.F. volumes

Type	Estimated CV	Target SE%	Actual CV	Actual SE%
Unit 1	52%	8%	43.5%	4.4%
Unit 2	65%	9%	69.3%	7.3%

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.	1P	2P	3P	SM	2 Saw	3 Saw	4 Saw	% D & B	% Sale
Douglas-fir	26"	10,833	832	279	1,983	1,484	5,118	1,038 [†]	99	5.1*	96%
western hemlock	15"	304	-	-	-	-	193	73	38	2.5	3%
TOTALS	--	11,137	832	279	1,983	1,484	5,311	1,111	137	--	--

*An 11% deduction was applied to Douglas-fir volume in the MS_C timber type of the Unit 2 cruise.

[†]This sale includes approximately 220 MBF of 12"+ 3-saw Douglas-fir.

Hardwood

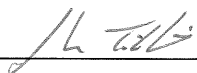
Species	DBH	Net Vol.	12"+	10"-11"	8"-9"	6"-7"	% D & B	% Sale
red alder	11"	110	43	-	13	54	0.0	1%
bigleaf maple	18"	41	15	7	7	12	6.0	<1%
TOTALS	--	151	58	7	20	66	--	--

TOTAL VOLUME	11,288
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9. **Approvals:**

Prepared by: Justin Bush

Date: 06/22/2026

Unit Forester Approval: 

Date: 6/27/2026

10. **Attachments:** Cruise Design and Map (11 pages)
Volume Report (4 pages)
Statistics Report (7 pages)
Log Stock Table (3 pages)
Stand Table Summary (2 pages)

**CRUISE DESIGN
ASTORIA DISTRICT**

Sale Name: Middle Sager

Unit 1

Harvest Type: Clearcut

Approx. Cruise Acres: 101 **Estimated CV%** 52% Net BF/Acre **SE% Objective** 8% Net BF/Acre

Planned Sale Volume: 6,060 MBF **Estimated Sale Area Value/Acre:** \$28,500/Acre

A. Cruise Goals: Stratified cruise of Middle Sager Unit 1

MS_D

Approximately **41 acres**

- (a) Grade minimum 80 conifer trees and 25 hardwood trees.
(b) Sample 51 plots (17 grade/ 34 count); (c) Other goals (____ Determine "automark" thinning standards; X Determine log grades for sale value; ____ Determine snag and leave tree species and sizes.

MS_E

Approximately **60 acres**

- (a) Grade minimum 80 conifer trees and 25 hardwood trees.
(b) Sample 47 plots (25 grade/ 22 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:

MS_D

BAF: 54.45 (conifer)
27.78 (hardwood)

Cruise Line Direction: 303°/123°

Cruise Line Spacing 4 (chains) 264 (Feet)

Cruise Plot Spacing 2 (chains) 132 (Feet)

Grade/Count Ratio 1:2

MS_E

BAF: 40 (conifer)
27.78 (hardwood)

Cruise Line Direction: 141°/321°

Cruise Line Spacing 5 (chains) 330 (Feet)

Cruise Plot Spacing 2.5 (chains) 165 (Feet)

Grade/Count Ratio 1:1

Take plots as marked on cruise map.

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

Common peeler lengths (trim included): 17', 26', 34', and 42'

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.

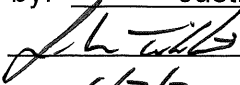
Record dbh to nearest 1/2" for trees < 16", to nearest 1" for trees 16" - 24", and to nearest 2" for trees > 24". If tree diameters are estimated (only estimate on variable plot cruises), then record to closest estimate.

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
- **Oversize Spruce (2-Saw or better): Measure bole height to 27" outside bark. Record separately.**
Bars = : 4"at 66', 3"at 50', and 2"at 33'.
Grade oversized 3-SAW (DIB $\geq$ 12", knots > 2½" 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: Justin Bush

Approved by: 

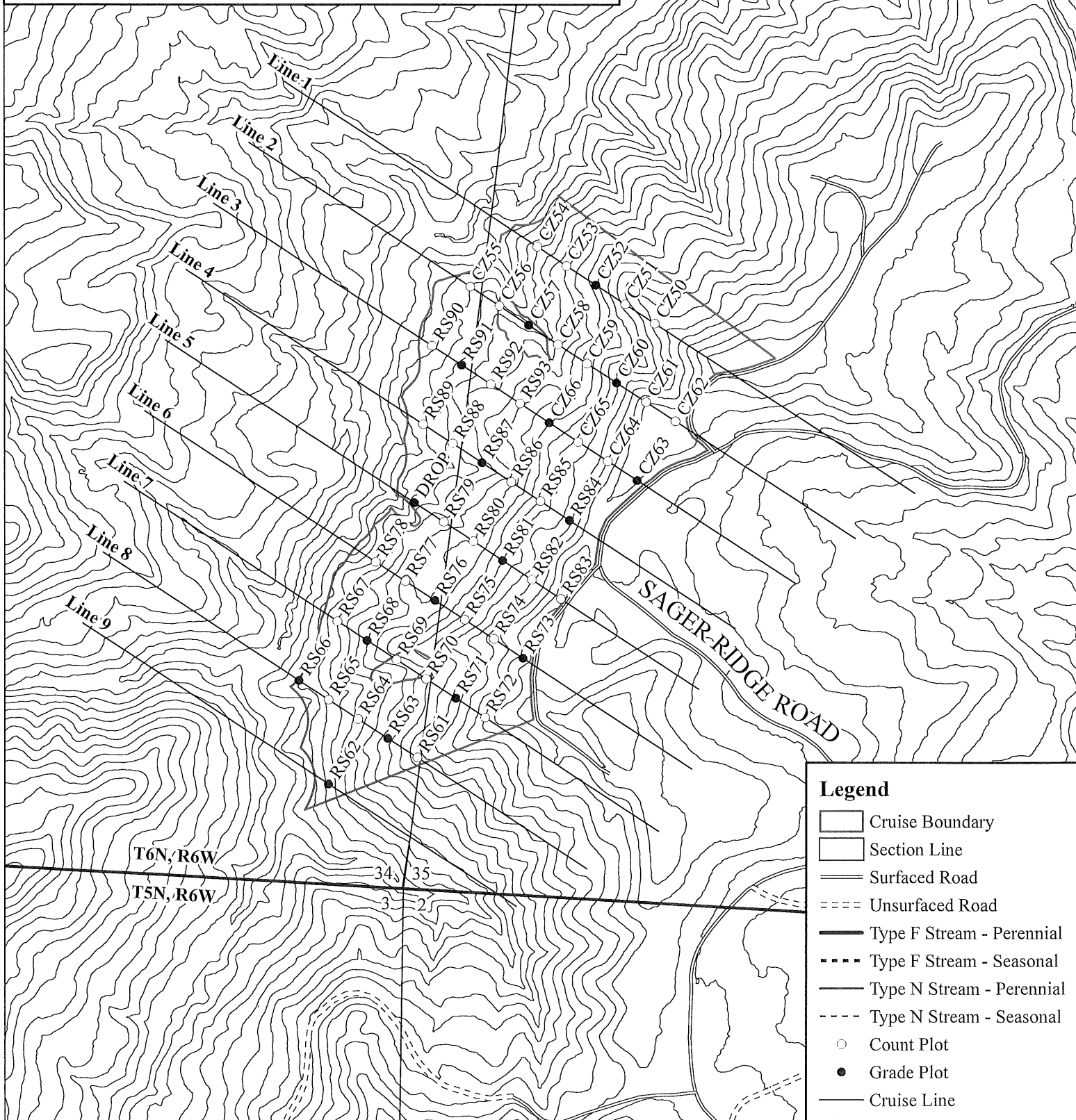
Date: 6/3/2026

OF TIMBER SALE
MIDDLE SAGER
PORTIONS OF SECTIONS 34 & 35,
T6N, R6W, AND SECTION 3,
T5N, R6W, W.M.,
CLATSOP COUNTY, OREGON

1 inch = 500 feet

Contour = 20 feet

AZ: 303°/123°
BAF: 54.45 (conifer)
BAF: 27.78 (hardwood)
Line Spacing: 4 ch. (264 ft)
Plot Spacing: 2 ch. (132 ft)
Count Plots: 34
Grade Plots: 16
Total Plots: 50
Approximate Acres = 40



TIMBER CRUISE MAP

MS_E Cruise

OF TIMBER SALE
MIDDLE SAGER
PORTIONS OF SECTIONS 34 & 35,
T6N, R6W, AND SECTION 3,
T5N, R6W, W.M.,
CLATSOP COUNTY, OREGON

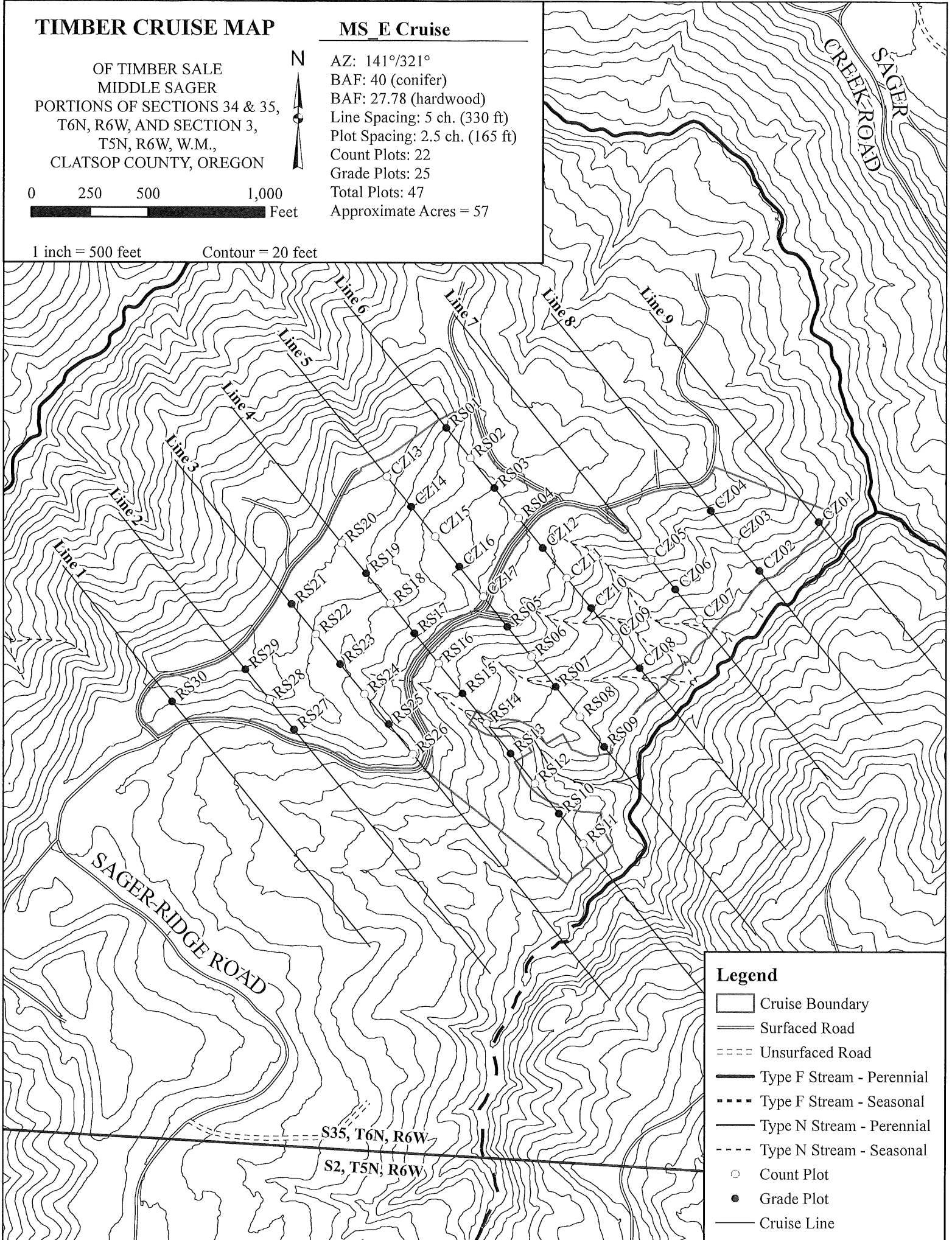
0 250 500 1,000
Feet

1 inch = 500 feet

Contour = 20 feet



AZ: 141°/321°
BAF: 40 (conifer)
BAF: 27.78 (hardwood)
Line Spacing: 5 ch. (330 ft)
Plot Spacing: 2.5 ch. (165 ft)
Count Plots: 22
Grade Plots: 25
Total Plots: 47
Approximate Acres = 57



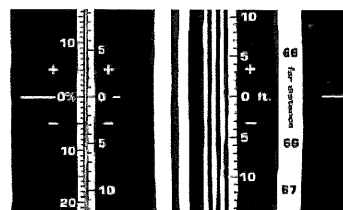
Legend

- Cruise Boundary
- Surfaced Road
- Unsurfaced Road
- Type F Stream - Perennial
- Type F Stream - Seasonal
- Type N Stream - Perennial
- Type N Stream - Seasonal
- Count Plot
- Grade Plot
- Cruise Line

CRUISE DESIGN ASTORIA DISTRICT

Sale Name: Middle SagerUnit 2

Harvest Type: Clearcut

Approx. Cruise Acres: 67 Estimated CV% 65% Net BF/Acre SE% Objective 9% Net BF/AcrePlanned Sale Volume: 3,648 MBF Estimated Sale Area Value/Acre: \$28,800/AcreA. Cruise Goals: Stratified cruise of Middle Sager Unit 2**MS_A**Approximately **13 acres**(a) Grade minimum 30 conifer trees.(b) Sample 13 plots (7 grade/ 6 count); (c) Other goals (Determine "automark" thinning standards; X Determine log grades for sale value; Determine snag and leave tree species and sizes.**MS_B**Approximately **13 acres**(a) Grade minimum 30 conifer trees.(b) Sample 23 plots (6 grade/ 17 count); (c) Other goals (Determine "automark" thinning standards; X Determine log grades for sale value; Determine snag and leave tree species and sizes.**MS_C**Approximately **41 acres**(a) Grade minimum 80 conifer trees and 25 hardwood trees.(b) Sample 55 plots (16 grade/ 39 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:**MS_A**BAF: 33.61 (conifer)27.78 (hardwood)Cruise Line Direction: 126°/306°Cruise Line Spacing: 5 (chains) 330 (feet)Cruise Plot Spacing: 2 (chains) 132 (feet)Grade/Count Ratio: 1:1**MS_C**BAF: 71.11 (conifer)27.78 (Hardwood)Cruise Line Direction: 187°/7°Cruise Line Spacing: 5 (chains) 330 (feet)Cruise Plot Spacing: 1.5 (chains) 99 (feet)Grade/Count Ratio: 1:3**MS_B**BAF: 40 (conifer)27.78 (hardwood)Cruise Line Direction: 84°/264°Cruise Line Spacing: 4 (chains) 264 (feet)Cruise Plot Spacing: 1.5 (chains) 99 (feet)Grade/Count Ratio: 1:4

BAF 71.11 = 16 bars

Take plots as marked on cruise map.

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

Common peeler lengths (trim included): 17', 26', 34', and 42'

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.

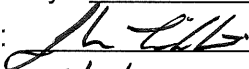
C. Tree Measurements:

1. **Diameter:** Minimum DBH to cruise is 8" for conifers and 8" for hardwoods.
Record dbh to nearest $\frac{1}{2}$ " 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
- **Oversize Spruce (2-Saw or better): Measure bole height to 27" outside bark. Record separately.**
Bars = : 4"at 66', 3"at 50', and 2"at 33'.

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: Justin Bush

Approved by: 

Date: 6/3/2026

TIMBER CRUISE MAP

MS_A Cruise

OF TIMBER SALE
MIDDLE SAGER
PORTIONS OF SECTIONS 34 & 35,
T6N, R6W, AND SECTION 3,
T5N, R6W, W.M.,
CLATSOP COUNTY, OREGON

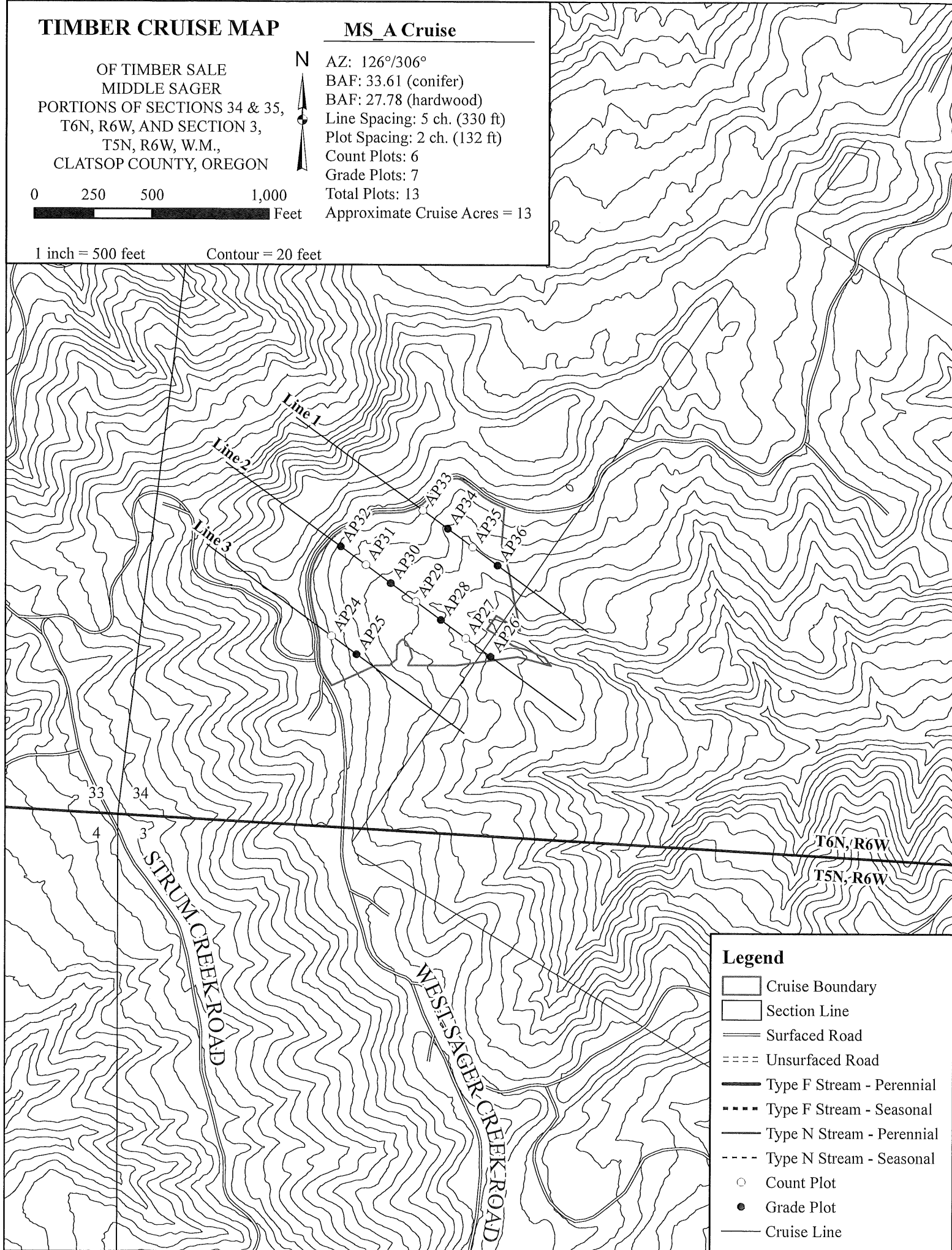


AZ: 126°/306°
BAF: 33.61 (conifer)
BAF: 27.78 (hardwood)
Line Spacing: 5 ch. (330 ft)
Plot Spacing: 2 ch. (132 ft)
Count Plots: 6
Grade Plots: 7
Total Plots: 13
Approximate Cruise Acres = 13

0 250 500 1,000
Feet

1 inch = 500 feet

Contour = 20 feet



TIMBER CRUISE MAP

MS_B Cruise

OF TIMBER SALE
MIDDLE SAGER
PORTIONS OF SECTIONS 34 & 35,
T6N, R6W, AND SECTION 3,
T5N, R6W, W.M.,
CLATSOP COUNTY, OREGON

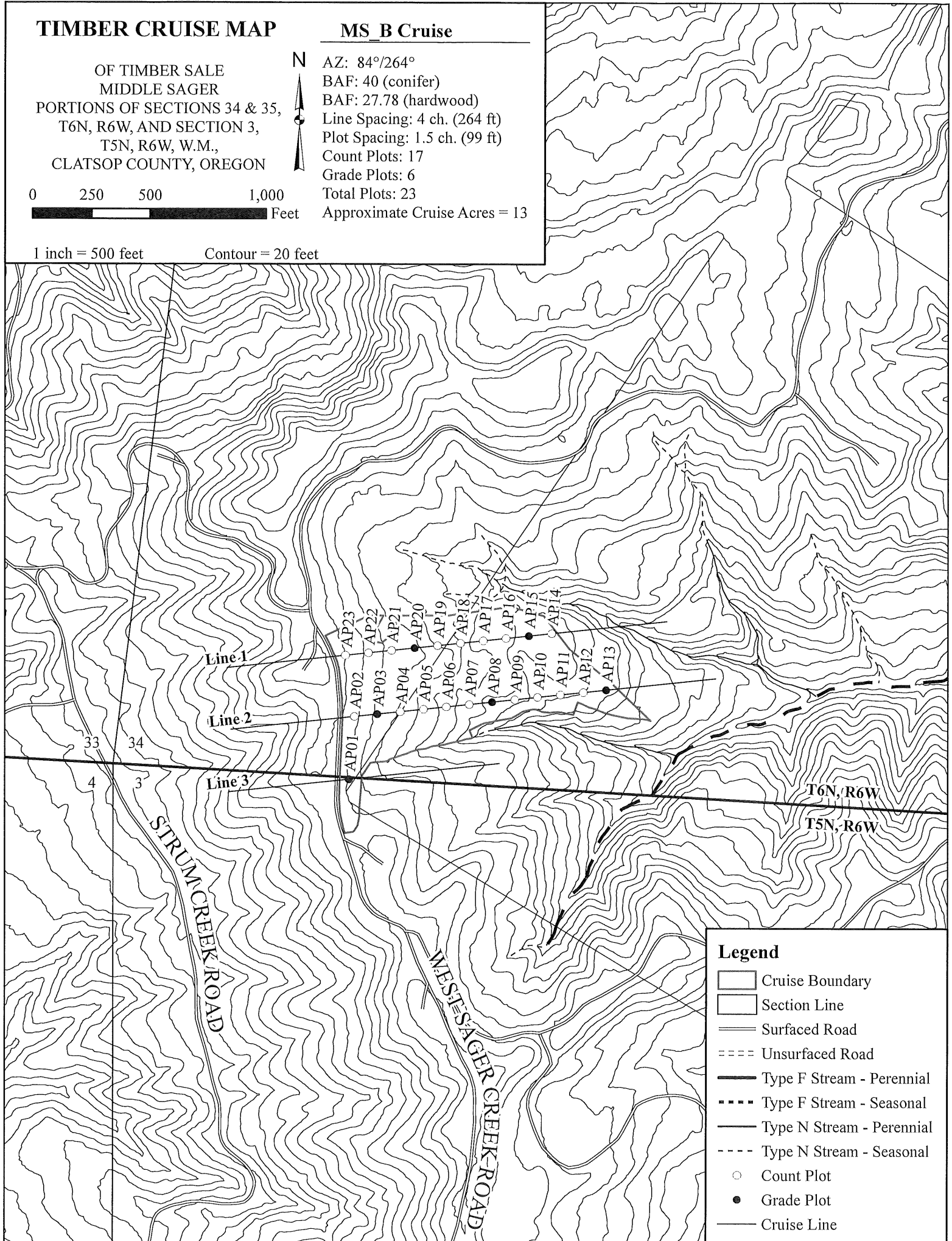


AZ: 84°/264°
BAF: 40 (conifer)
BAF: 27.78 (hardwood)
Line Spacing: 4 ch. (264 ft)
Plot Spacing: 1.5 ch. (99 ft)
Count Plots: 17
Grade Plots: 6
Total Plots: 23
Approximate Cruise Acres = 13

0 250 500 1,000 Feet

1 inch = 500 feet

Contour = 20 feet



Legend

- Cruise Boundary
- Section Line
- Surfaced Road
- Unsurfaced Road
- Type F Stream - Perennial
- Type F Stream - Seasonal
- Type N Stream - Perennial
- Type N Stream - Seasonal
- Count Plot
- Grade Plot
- Cruise Line

TIMBER CRUISE MAP

MS_C Cruise

OF TIMBER SALE
MIDDLE SAGER
PORTIONS OF SECTIONS 34 & 35,
T5N, R6W, AND SECTION 3,
T6N, R6W, W.M.,
CLATSOP COUNTY, OREGON

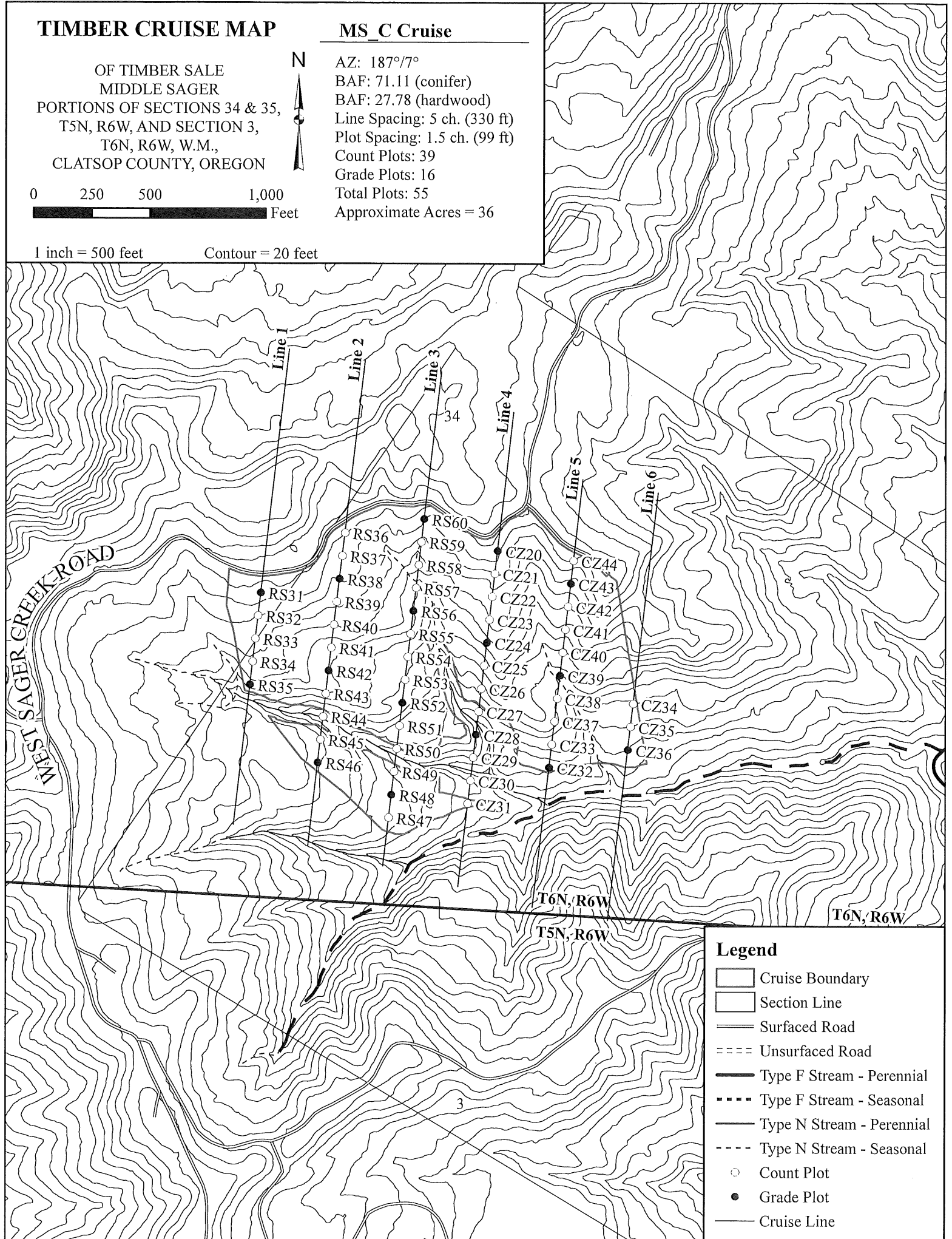


0 250 500 1,000
Feet

AZ: 187°/7°
BAF: 71.11 (conifer)
BAF: 27.78 (hardwood)
Line Spacing: 5 ch. (330 ft)
Plot Spacing: 1.5 ch. (99 ft)
Count Plots: 39
Grade Plots: 16
Total Plots: 55
Approximate Acres = 36

1 inch = 500 feet

Contour = 20 feet



TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																		
T06N R06W S34 TyR/W THRU T06N R06W S35 Ty00CC				Project:		MSAGER										Page		1				
				Acres		159.00										Date		6/17/2026				
																Time		1:11:53PM				
S Spp	So T	Gr rt	ad	%	Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre
										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					
M	DO	1S		36	3.1	94	91	15	100				30	70			24	13	138	1.56	.7	
M	DO	2S		17	8.9	47	42	7	100				41			59	27	10	92	1.23	.5	
M	DO	3S		17		41	41	7	50					50		50	39	10	184	1.61	.2	
M	DO	4S		30	10.7	84	75	12	100				21	14		65	28	7	40	0.75	1.9	
M Totals				0	6.0	266	250	41	55	37	8	24	30	8	38	28	9	78	1.05	3.2		
D	DO	2S		47	5.0	33,891	32,192	5,118		29	71	2	4	4	91	36	17	491	2.72	65.5		
D	DO	3S		9	1.8	6,647	6,529	1,038	78	3	19	6	7	16	70	35	9	114	0.87	57.5		
D	DO	4S		1	3.0	643	623	99	100			62	38			19	6	25	0.41	24.9		
D	DO	1P		8	5.9	5,559	5,233	832			100		13	3	84	39	32	1975	7.84	2.6		
D	DO	2P		3	1.3	1,775	1,753	279			100		4		96	41	33	2346	8.53	.7		
D	DO	3P		18	6.5	13,347	12,473	1,983			100	0		4	95	41	26	1403	5.18	8.9		
D	DO	SM		14	6.3	9,963	9,336	1,484		4	96		1	2	97	40	21	691	3.25	13.5		
D Totals				96	5.1	71,826	68,138	10,833	8	14	77	2	4	4	89	34	14	392	2.23	173.7		
A	DO	1S		38		269	269	43		81	19		66	15	19	31	13	208	1.60	1.3		
A	DO	3S		12		82	82	13	100			22		19	59	22	8	52	0.69	1.6		
A	DO	4S		50		340	340	54	100			52	48			20	6	28	0.47	12.2		
A Totals				1		691	691	110	61	32	7	28	50	8	14	21	7	46	0.64	15.1		
H	DO	2S		63	3.3	1,255	1,214	193		45	55	2		21	76	36	15	335	2.35	3.6		
H	DO	3S		24	1.6	470	462	73	88		12	1	10	16	73	35	8	92	0.87	5.0		
H	DO	4S		13		240	240	38	100			73	27			19	6	25	0.45	9.5		
H Totals				3	2.5	1,965	1,916	304	34	28	38	11	6	17	66	27	9	106	1.12	18.1		
Totals					5.0	74,747	70,994	11,288	10	15	75	3	5	5	88	32	13	338	2.06	210.1		

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
T06N R06W S35 Ty00CC40.00 T06N R06W S35 Ty00CC57.00				Project: MSAGER										Page 1							
				Acres 97.00										Date 6/17/2026							
				Unit 1										Time 11:13:43AM							
S Spp	So T	Gr rt	ad	% Net BdFt	Bd. Ft. per Acre Def% Gross Net			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre
									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					
A		DO1S		51		440	440	43			81	19		66	15	19	31	13	208	1.60	2.1
A		DO3S		2		16	16	2		100						100	40	8	90	1.00	.2
A		DO4S		47		397	397	38		100			39	61			22	7	32	0.50	12.2
A Totals				1		853	853	83		48	42	10	18	63	8	11	24	8	59	0.72	14.5
D		DO2S		57	3.0	40,772	39,564	3,838			24	76	2	3	3	93	37	18	556	3.01	71.2
D		DO3S		8	.4	5,381	5,361	520		59	4	37	7	10	16	68	34	10	149	1.13	36.0
D		DO4S			5.5	271	256	25		100			67	33			19	7	25	0.48	10.1
D		DO1P		6		4,243	4,243	412				100		17	6	76	37	32	1994	8.43	2.1
D		DO2P		4		2,572	2,572	249				100		4		96	41	32	2341	8.50	1.1
D		DO3P		14	.4	9,695	9,654	936				100			6	94	41	26	1529	5.65	6.3
D		DOSM		11	.4	7,232	7,205	699			7	93		1	3	96	40	20	711	3.41	10.1
D Totals				96	1.9	70,166	68,855	6,679		5	15	80	2	4	5	90	35	16	503	2.75	136.9
H		DO2S		53	6.2	854	801	78			29	71	6		41	54	34	16	346	2.60	2.3
H		DO3S		41	2.0	644	632	61		85		15	2	6	19	73	35	8	95	0.85	6.6
H		DO4S		6		77	77	7		100			40	60			21	6	28	0.53	2.8
H Totals				2	4.1	1,575	1,510	146		41	16	44	6	6	29	59	32	9	129	1.16	11.7
M		DO1S		14	17.6	27	22	2			100			100			24	14	140	1.79	.2
M		DO2S		27	4.7	43	41	4		100						100	39	10	147	1.61	.3
M		DO3S		14		22	22	2		100						100	40	8	90	0.93	.2
M		DO4S		45	14.6	79	67	7		100			9	15		76	34	7	51	0.78	1.3
M Totals				0	10.7	171	153	15		85	15		4	21		75	34	8	77	0.99	2.0
Totals					1.9	72,765	71,371	6,923		6	15	79	2	5	5	88	34	15	432	2.50	165.2

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																			
T06N R06W S34 Ty00CC12.50 T06N R06W S34 Ty00CC12.80 T06N R06W S34 Ty00CC35.60				Project: MSAGER				Acres60.90								Unit 2				Page 1 Date 6/17/2026 Time 10:49:46AM			
S Spp	So T	Gr 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		DO2S		30	10.7	23,179	20,695	1,260				43	57	2	6	6	87	36	16	365	2.13	56.7	
D		DO3S		13	3.2	8,614	8,337	508			97	2	1	6	4	17	72	35	8	92	0.71	91.0	
D		DO4S		1	2.2	1,223	1,196	73			100			60	40			19	6	25	0.38	48.1	
D		DO1P		11	11.0	7,670	6,826	416					100		8		92	40	32	1958	7.34	3.5	
D		DO2P			11.0	533	474	29					100				100	42	34	2394	8.73	.2	
D		DO3P		26	11.4	19,189	16,998	1,035					100	1		3	97	41	26	1307	4.81	13.0	
D		DOSM		19	11.0	14,332	12,755	777					100		1		99	40	21	675	3.12	18.9	
D Totals				95	10.0	74,739	67,281	4,097			14	14	73	3	4	4	89	33	12	291	1.71	231.4	
M		DO1S		49		196	196	12				100		36	64			24	13	138	1.52	1.4	
M		DO2S		11	14.3	52	45	3			100			100				20	10	60	0.80	.7	
M		DO3S		18		70	70	4			25		75			75	25	38	13	380	3.08	.2	
M		DO4S		22	5.5	90	85	5			100			35	13		52	23	6	32	0.71	2.7	
M Totals				1	3.0	408	396	24			37	50	13	36	35	13	16	23	9	79	1.09	5.0	
A		DO3S		42		186	186	11			100			26		21	53	21	8	49	0.65	3.8	
A		DO4S		58	.0	253	253	15			100			83	17			16	6	21	0.41	12.3	
A Totals				1		439	439	27			100			59	10	9	23	17	7	27	0.48	16.0	
H		DO2S		72	1.3	1,872	1,848	113				56	44			8	92	38	15	327	2.21	5.7	
H		DO3S		8		194	194	12			100				29		71	33	8	77	0.98	2.5	
H		DO4S		20		500	500	30			100			81	19			18	6	25	0.43	20.1	
H Totals				4	.9	2,565	2,541	155			27	40	32	16	6	6	72	24	8	90	1.08	28.3	
Totals					9.6	78,151	70,656	4,303			15	15	70	4	4	5	87	31	11	252	1.61	280.7	

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																									
T06N R06W S34 TyR/W .50 T06N R06W S34 TyR/W .20 T06N R06W S34 TyR/W .40						Project: MSAGER						Acres 1.10						unit 3 R/W						Page 1		Date 6/17/2026		Time 10:47:17AM	
S Spp	So T	Gr rt	ad	%	Net BdFt	Bd. Ft. per Acre Def% Gross Net			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre							
										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		DO2S		35		7.8	20,156	18,578	20				54	46	1	4	4	90	37	16	344	2.04	54.0						
D		DO3S		18		1.9	9,506	9,329	10			97	2	1	3	3	16	78	36	8	97	0.73	96.1						
D		DO4S		2		1.3	1,317	1,300	1			100			63	37			19	6	25	0.40	51.7						
D		DO1P		9		11.0	4,771	4,246	5					100		8		92	40	32	1958	7.34	2.2						
D		DO2P				11.0	331	295	0					100				100	42	34	2394	8.73	.1						
D		DO3P		20		11.4	11,937	10,574	12					100	1		3	97	41	26	1307	4.81	8.1						
D		DOSM		16		11.0	8,915	7,935	9					100		1		99	40	21	675	3.12	11.8						
D Totals					93		8.2	56,933	52,256	57		20	20	60	3	4	5	89	33	11	233	1.46	223.9						
M		DO1S		53			373	373	0			100			25	75			25	13	143	1.51	2.6						
M		DO2S		4		14.3	33	28	0			100			100				20	10	60	0.80	.5						
M		DO3S		23			155	155	0			25		75			75	25	38	13	380	3.08	.4						
M		DO4S		20		2.2	140	137	0			100			40	18		42	24	6	35	0.72	3.9						
M Totals					1		1.1	700	693	1		29	54	17	25	44	17	14	25	9	93	1.21	7.4						
A		DO3S		52			202	202	0			100			15		43	42	25	8	59	0.66	3.4						
A		DO4S		48			179	179	0			100			85	15			16	6	21	0.40	8.7						
A Totals					1		381	381	0		100				48	7	23	22	18	7	31	0.50	12.2						
H		DO2S		79		.8	2,480	2,462	3			26	74				4	96	39	16	429	2.64	5.7						
H		DO3S		10			338	338	0			100				11		89	35	9	90	1.14	3.7						
H		DO4S		11			311	311	0			100			81	19			18	6	25	0.43	12.6						
H Totals					6		.6	3,130	3,111	3		21	21	58	8	3	3	86	26	9	141	1.44	22.0						
Totals							7.7	61,144	56,441	62		21	20	59	4	4	5	87	31	11	213	1.43	265.5						

TC PSTATS			PROJECT STATISTICS							PAGE	1	
			PROJECT MSAGER							DATE	6/17/2026	
TWP	RGE	SC	TRACT	TYPE	UNITS	ACRES	PLOTS	TREES	CuFt	BdFt		
06N	06	34	MS_A_R/W	R/W	THR	1,2,3R/W	159.00	279	1,541	1	W	
06N	06W	35	MS_E_TAKE	00CC		AVG. SIZE						
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL			279	1541	5.5							
CRUISE			105	556	5.3	14,746	3.8					
DBH COUNT												
REFOREST												
COUNT			172	959	5.6							
BLANKS			2									
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			466	63.5	26.3	97	46.8	240.3	71,826	68,138	13,603	13,120
WHEMLOCK			35	13.4	15.3	38	4.4	17.2	1,965	1,916	550	543
R ALDER			24	13.4	11.4	25	2.8	9.5	691	691	204	204
BL MAPLE			27	2.4	17.7	40	1.0	4.0	266	250	92	92
SNAG			4	.0	17.4	88	0.0	.0				
TOTAL			556	92.7	23.1	76	56.3	271.1	74,747	70,994	14,449	13,959
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			85.0	3.9	1,765	1,837	1,909					
WHEMLOCK			106.5	18.0	233	285	336					
R ALDER			146.7	30.6	55	79	103					
BL MAPLE			165.6	32.5	147	217	287					
SNAG												
TOTAL			99.0	4.2	1,505	1,571	1,637	391	98	43		
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			121.0	7.2	59	63	68					
WHEMLOCK			335.1	20.0	11	13	16					
R ALDER			326.3	19.5	11	13	16					
BL MAPLE			542.7	32.5	2	2	3					
SNAG			922.0	55.1	0	0	0					
TOTAL			104.9	6.3	87	93	99	439	110	49		
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			96.5	5.8	226	240	254					
WHEMLOCK			265.2	15.9	14	17	20					
R ALDER			311.6	18.6	8	10	11					
BL MAPLE			543.1	32.5	3	4	5					
SNAG			768.1	45.9	0	0	0					
TOTAL			89.3	5.3	257	271	286	318	80	35		
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			100.7	6.0	64,034	68,138	72,241					
WHEMLOCK			278.3	16.6	1,597	1,916	2,235					
R ALDER			313.1	18.7	562	691	821					
BL MAPLE			604.5	36.2	159	250	340					
SNAG												
TOTAL			97.3	5.8	66,860	70,994	75,128	378	95	42		

TC PSTATS					PROJECT STATISTICS					PAGE	1	
					PROJECT	MSAGER	DATE 6/17/2026					
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt			
06N	06	35	MS_D TAKE	00CC	Unit 1	97.00	97	559	1	W		
06N	06W	35	MS_E TAKE	00CC								
					TREES	ESTIMATED	PERCENT					
					PER PLOT	TOTAL	SAMPLE					
					TREES	TREES	TREES					
TOTAL			97	559	5.8							
CRUISE			43	234	5.4	6,574		3.6				
DBH COUNT												
REFOREST												
COUNT			54	318	5.9							
BLANKS												
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			204	45.6	30.4	111	41.8	230.5	70,166	68,855	13,229	13,229
WHEMLOCK			13	7.6	17.4	51	3.0	12.6	1,575	1,510	441	430
R ALDER			10	12.7	12.4	29	3.0	10.8	853	853	250	250
BL MAPLE			7	1.8	17.3	40	0.7	3.0	171	153	68	68
TOTAL			234	67.8	26.4	87	50.0	256.8	72,765	71,371	13,988	13,977
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			72.6	5.1	2,211	2,330	2,448					
WHEMLOCK			115.6	33.3	241	362	482					
R ALDER			140.2	46.6	64	120	176					
BL MAPLE			55.2	22.5	80	103	126					
TOTAL			84.1	5.5	1,946	2,059	2,173	283	71	31		
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			87.9	8.9	42	46	50					
WHEMLOCK			238.2	24.2	6	8	9					
R ALDER			220.5	22.4	10	13	16					
BL MAPLE			411.8	41.8	1	2	3					
TOTAL			61.4	6.2	64	68	72	150	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			51.6	5.2	218	230	243					
WHEMLOCK			215.1	21.8	10	13	15					
R ALDER			217.0	22.0	8	11	13					
BL MAPLE			379.6	38.5	2	3	4					
TOTAL			41.2	4.2	246	257	268	68	17	8		
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			47.4	4.8	65,541	68,855	72,170					
WHEMLOCK			212.2	21.5	1,185	1,510	1,835					
R ALDER			216.7	22.0	665	853	1,040					
BL MAPLE			404.9	41.1	90	153	216					
TOTAL			43.5	4.4	68,221	71,371	74,522	76	19	8		

TC PSTATS						PROJECT STATISTICS				PAGE 1		
						PROJECT	MSAGER	DATE 6/17/2026				
TWP	RGE	SC	TRACT	TYPE	UNIT 1 WHOLE STAND	ACRES	PLOTS	TREES	CuFt	BdFt		
06N	06	35	MS_D	00CC		97.00	97	584	1	W		
06N	06W	35	MS_E	00CC								
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL			97	584	6.0							
CRUISE			45	252	5.6	6,901	3.7					
DBH COUNT												
REFOREST												
COUNT			52	312	6.0							
BLANKS												
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			204	45.6	30.4	111	41.8	230.5	70,166	68,855	13,229	13,229
WHEMLOCK			13	7.6	17.4	51	3.0	12.6	1,575	1,510	441	430
R ALDER			10	12.7	12.4	29	3.0	10.8	853	853	250	250
SNAG			13	2.6	25.3	82	1.8	9.1				
BL MAPLE			7	1.8	17.3	40	0.7	3.0	171	153	68	68
CEDLEAV			2	.4	25.6	79	0.3	1.3	216	216	59	59
OGDF			2	.0	80.3	174	0.1	.9	459	452	66	66
SPRUCELV			1	.4	16.0	25	0.1	.5	14	11	8	8
TOTAL			252	71.1	26.3	86	52.4	268.7	73,454	72,050	14,121	14,110
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		72.6	5.1	2,211	2,330	2,448						
WHEMLOCK		115.6	33.3	241	362	482						
R ALDER		140.2	46.6	64	120	176						
SNAG												
BL MAPLE		55.2	22.5	80	103	126						
CEDLEAV		112.7	105.5		1,180	2,425						
OGDF		18.3	17.2	14,808	17,880	20,952						
SPRUCELV												
TOTAL		109.1	6.9	1,922	2,064	2,205		476	119	53		
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		87.9	8.9	42	46	50						
WHEMLOCK		238.2	24.2	6	8	9						
R ALDER		220.5	22.4	10	13	16						
SNAG		297.4	30.2	2	3	3						
BL MAPLE		411.8	41.8	1	2	3						
CEDLEAV		638.0	64.7	0	0	1						
OGDF		984.9	99.9	0	0	0						
SPRUCELV		984.9	99.9	0	0	1						
TOTAL		57.3	5.8	67	71	75		131	33	15		
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		51.6	5.2	218	230	243						
WHEMLOCK		215.1	21.8	10	13	15						
R ALDER		217.0	22.0	8	11	13						
SNAG		251.1	25.5	7	9	11						
BL MAPLE		379.6	38.5	2	3	4						
CEDLEAV		562.7	57.1	1	1	2						
OGDF		984.9	99.9	0	1	2						

PROJECT STATISTICS								PAGE	2	
TC PSTATS				PROJECT	MSAGER			DATE	6/17/2026	
TWP	RGE	SC	TRACT	TYPE	ACRES		PLOTS	TREES	CuFt	BdFt
06N	06	35	MS_D	00CC	97.00		97	584	1	W
06N	06W	35	MS_E	00CC						
CL	68.1		COEFF		BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.
SD:	1.00		VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
SPRUCELV			984.9	99.9	0	1	1			
TOTAL			37.9	3.8	258	269	279	57	14	6
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			47.4	4.8	65,541	68,855	72,170			
WHEMLOCK			212.2	21.5	1,185	1,510	1,835			
R ALDER			216.7	22.0	665	853	1,040			
SNAG										
BL MAPLE			404.9	41.1	90	153	216			
CEDLEAV			581.3	59.0	88	216	343			
OGDF			984.9	99.9	0	452	903			
SPRUCELV			984.9	99.9	0	11	21			
TOTAL			43.5	4.4	68,871	72,050	75,228	76	19	8

TC PSTATS			PROJECT STATISTICS						PAGE	1		
			PROJECT		MSAGER				DATE	6/17/2026		
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt			
06N	06	34	MS_A TAKE	00CC	Unit 2	60.90	91	488	1	W		
06N	06W	34	MS_B TAKE	00CC								
06N	06W	34	MS_C TAKE	00CC								
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL			91	488	5.4							
CRUISE			31	159	5.1	8,038	2.0					
DBH COUNT												
REFOREST												
COUNT			59	320	5.4							
BLANKS			1									
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			131	91.5	22.7	86	53.9	256.4	74,739	67,281	14,236	12,988
WHEMLOCK			11	22.6	14.0	31	6.5	24.3	2,565	2,541	719	719
BL MAPLE			10	3.2	18.0	39	1.3	5.6	408	396	129	129
R ALDER			7	14.7	9.8	20	2.5	7.7	439	439	131	131
TOTAL			159	132.0	20.2	68	65.4	294.0	78,151	70,656	15,215	13,967
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			92.0	8.0	1,336	1,453	1,570					
WHEMLOCK			88.9	28.1	172	239	306					
BL MAPLE			164.4	54.7	116	257	398					
R ALDER			95.2	38.7	31	50	69					
TOTAL			106.3	8.4	1,128	1,232	1,336	451	113	50		
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			77.0	8.1	84	92	99					
WHEMLOCK			261.3	27.4	16	23	29					
BL MAPLE			475.5	49.8	2	3	5					
R ALDER			322.7	33.8	10	15	20					
TOTAL			66.7	7.0	123	132	141	177	44	20		
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			58.2	6.1	241	256	272					
WHEMLOCK			208.6	21.9	19	24	30					
BL MAPLE			489.7	51.3	3	6	8					
R ALDER			305.6	32.0	5	8	10					
TOTAL			52.3	5.5	278	294	310	109	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			73.6	7.7	62,098	67,281	72,464					
WHEMLOCK			234.3	24.5	1,917	2,541	3,164					
BL MAPLE			512.3	53.7	183	396	608					
R ALDER			276.7	29.0	312	439	566					
TOTAL			69.7	7.3	65,499	70,656	75,813	194	48	22		

TC PSTATS					PROJECT STATISTICS					PAGE	1	
					PROJECT	MSAGER	DATE					6/17/2026
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt			
06N	06	34	MS_A	00CC	UNIT 2 WHOLE STAND	62.00	91	494	1	W		
06N	06W	34	MS_B	00CC								
06N	06W	34	MS_C	00CC								
					TREES	ESTIMATED	PERCENT					
					PER PLOT	TOTAL	SAMPLE					
						TREES	TREES					
TOTAL			91	494	5.4							
CRUISE			31	163	5.3	8,273		2.0				
DBH COUNT												
REFOREST												
COUNT			59	321	5.4							
BLANKS			1									
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			131	91.5	22.6	86	53.7	255.7	74,423	67,014	14,188	12,949
WHEMLOCK			11	22.5	14.1	31	6.5	24.3	2,575	2,551	721	721
BL MAPLE			10	3.2	18.0	39	1.3	5.6	413	401	130	130
R ALDER			7	14.6	9.8	20	2.4	7.7	438	438	131	131
SNAG			4	1.6	18.2	92	0.7	3.0				
TOTAL			163	133.4	20.2	68	66.0	296.3	77,849	70,404	15,170	13,930
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			92.0	8.0	1,336	1,453	1,570					
WHEMLOCK			88.9	28.1	172	239	306					
BL MAPLE			164.4	54.7	116	257	398					
R ALDER			95.2	38.7	31	50	69					
SNAG												
TOTAL			108.8	8.5	1,100	1,202	1,304	472	118	52		
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			77.1	8.1	84	91	99					
WHEMLOCK			260.9	27.3	16	23	29					
BL MAPLE			478.6	50.1	2	3	5					
R ALDER			322.4	33.8	10	15	19					
SNAG			500.0	52.4	1	2	3					
TOTAL			65.0	6.8	124	133	143	169	42	19		
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			58.1	6.1	240	256	271					
WHEMLOCK			209.1	21.9	19	24	30					
BL MAPLE			493.1	51.6	3	6	9					
R ALDER			305.2	32.0	5	8	10					
SNAG			438.2	45.9	2	3	4					
TOTAL			51.1	5.3	280	296	312	104	26	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			73.3	7.7	61,873	67,014	72,156					
WHEMLOCK			236.1	24.7	1,920	2,551	3,182					
BL MAPLE			515.5	54.0	185	401	618					
R ALDER			276.9	29.0	311	438	565					
SNAG												
TOTAL			69.3	7.3	65,291	70,404	75,517	192	48	21		

TC PSTATS					PROJECT STATISTICS				PAGE	1		
					PROJECT	MSAGER	DATE 6/17/2026					
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt			
06N	06	34	MS_A R/W	R/W	Unit 3 R/w 1.10	91	494	1	W			
06N	06W	34	MS_B R/W	R/W								
06N	06W	34	MS_C R/W	R/W								
					TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL			91	494	5.4							
CRUISE			31	163	5.3	134	121.4					
DBH COUNT												
REFOREST												
COUNT			59	321	5.4							
BLANKS			1									
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			131	89.8	21.1	85	47.6	218.7	56,933	52,256	11,523	10,747
WHEMLOCK			11	16.3	16.6	37	6.0	24.5	3,130	3,111	835	835
BL MAPLE			10	4.5	19.2	43	2.1	9.1	700	693	223	223
R ALDER			7	10.2	10.1	23	1.8	5.7	381	381	113	113
SNAG			4	1.3	17.4	88	0.5	2.2				
TOTAL			163	122.1	19.8	72	58.5	260.1	61,144	56,441	12,694	11,917
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			92.0	8.0	1,336	1,453	1,570					
WHEMLOCK			88.9	28.1	172	239	306					
BL MAPLE			164.4	54.7	116	257	398					
R ALDER			95.2	38.7	31	50	69					
SNAG												
TOTAL			108.8	8.5	1,100	1,202	1,304	472	118		52	
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			104.1	10.9	80	90	100					
WHEMLOCK			239.8	25.1	12	16	20					
BL MAPLE			647.9	67.9	1	4	8					
R ALDER			307.0	32.1	7	10	13					
SNAG			522.0	54.7	1	1	2					
TOTAL			79.0	8.3	112	122	132	249	62		28	
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			79.7	8.3	200	219	237					
WHEMLOCK			287.1	30.1	17	25	32					
BL MAPLE			630.1	66.0	3	9	15					
R ALDER			300.9	31.5	4	6	7					
SNAG			432.5	45.3	1	2	3					
TOTAL			72.5	7.6	240	260	280	210	52		23	
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			71.6	7.5	48,338	52,256	56,174					
WHEMLOCK			355.9	37.3	1,951	3,111	4,270					
BL MAPLE			629.1	65.9	236	693	1,149					
R ALDER			341.8	35.8	245	381	518					
SNAG												
TOTAL			67.5	7.1	52,448	56,441	60,433	182	46		20	

TC PLOGSTVB				Log Stock Table - MBF															
T06N R06W S34 TyR/W THRU T06N R06W S35 Ty00CC				Project: MSAGER				Acres 159.00				Page 1							
								Date 6/17/2026				Time 11:17:15AM							
S T Spp	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+
M	DO	1S	16	4		4	10.9					4							
M	DO	1S	24	3	17.6	2	5.4					2							
M	DO	1S	30	8		8	20.2				8								
M	DO	2S	20	3	14.3	3	7.0				3								
M	DO	2S	38	2		2	6.0				2								
M	DO	2S	40	2	11.1	2	4.0				2								
M	DO	3S	32	3		3	8.3										3		
M	DO	3S	40	3		3	8.3			3									
M	DO	4S	12	0		0	1.2		0										
M	DO	4S	16	0		0	1.0		0	0									
M	DO	4S	18	1		1	2.6		1										
M	DO	4S	20	1		1	1.6			1									
M	DO	4S	30	2	12.5	2	4.2		2										
M	DO	4S	36	4	16.7	3	7.8		3										
M	DO	4S	38	5	10.9	5	11.6		5										
M	Totals			42	6.0	40	.4		11	4	7	8	7				3		
D	DO	2S	12	25	80.0	5	.0				2	3					0		
D	DO	2S	14	2		2	.0				2								
D	DO	2S	16	18	8.3	16	.2				7	6			3				
D	DO	2S	18	16	5.4	15	.1				11	4							
D	DO	2S	20	56	19.6	45	.4				22	12	7		4				
D	DO	2S	24	94	4.7	90	.8				26	26	30	8					
D	DO	2S	26	79	16.1	66	.6				25	35	6				0		
D	DO	2S	28	11	3.2	11	.1				2	9							
D	DO	2S	30	25	9.0	23	.2				8	5		4	6				
D	DO	2S	32	143	5.6	135	1.3				33	29	65	8					
D	DO	2S	34	47	4.0	45	.4				9	9	16				11		
D	DO	2S	36	41		41	.4				13	2	15	10					
D	DO	2S	38	23	1.8	23	.2				15		8						
D	DO	2S	40	4,808	4.3	4,601	42.5				277	494	1039	1057	997	653	84		
D	DO	3S	12	3	4.9	2	.0				1	1							
D	DO	3S	14	2	11.0	2	.0				1	1							
D	DO	3S	16	15	3.8	14	.1		1	8		4		2					
D	DO	3S	18	17	7.2	16	.1			14		2							
D	DO	3S	20	32	5.3	31	.3		6	18		3	3	1					
D	DO	3S	24	37	4.5	35	.3		7	17		2	1	7					

TC PLOGSTVB			Log Stock Table - MBF																
T06N R06W S34 TyR/W THRU T06N R06W S35 Ty00CC				Project:		MSAGER										Page 2			
				Acres		159.00										Date 6/17/2026			
																Time 11:17:15AM			
S T Spp	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+
D	DO	3S	26	21	1.2	21	.2			2		10		1		7			
D	DO	3S	28	10	6.2	9	.1			1		5		3					
D	DO	3S	30	8		8	.1			1		6							
D	DO	3S	32	127	3.5	122	1.1			29	52	18	3			7	10	4	
D	DO	3S	34	49		48	.4			23	10	10		2		2			
D	DO	3S	36	80	1.8	78	.7			42	18	14		4					
D	DO	3S	38	28	3.0	27	.3			7	11	7		2					
D	DO	3S	40	629		623	5.8			75	169	226		3	21	11	54	51 13	
D	DO	4S	12	3	3.5	3	.0			1		2							
D	DO	4S	14	1	11.0	1	.0					1							
D	DO	4S	16	40	1.1	40	.4			37	3								
D	DO	4S	18	9	7.4	8	.1			4	2	1							
D	DO	4S	20	10	3.2	9	.1			8	2								
D	DO	4S	24	15		15	.1			14	1								
D	DO	4S	26	16		16	.1			16									
D	DO	4S	28	4		4	.0			4									
D	DO	4S	30	3		3	.0			3									
D	DO	4S	32	1	100.0														
D	DO	1P	26	111	3.9	107	1.0									22	67	18	
D	DO	1P	34	27		27	.2										27		
D	DO	1P	42	746	6.4	698	6.4										698		
D	DO	2P	26	10		10	.1											10	
D	DO	2P	42	272	1.3	268	2.5										268		
D	DO	3P	17	7	11.0	6	.1									6			
D	DO	3P	34	88	3.8	85	.8									85			
D	DO	3P	42	2,028	6.7	1,893	17.5									1856	36		
D	DO	SM	26	19	6.8	18	.2									18			
D	DO	SM	34	24		24	.2							11		13			
D	DO	SM	40	1,541	6.4	1,442	13.3							15	266	1077	61	24	
D	Totals			11,420	5.1	10,834	96.0			265	284	359	456	666	1502	2232	3105	1839 125	
A	DO	1S	30	28		28	25.8					28							
A	DO	1S	34	6		6	5.8					6							
A	DO	1S	40	8		8	7.2							8					
A	DO	3S	12	3		3	2.7			3									

TC PLOGSTVB				Log Stock Table - MBF																
T06N R06W S34 TyR/W THRU T06N R06W S35 Ty00CC				Project: MSAGER				Page 3												
				Acres 159.00				Date 6/17/2026												
				Time 11:17:15AM																
S Spp	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	32	2		2	2.3				2								
A		DO	3S	40	8		8	7.0				8								
A		DO	4S	12	5		5	4.3			5									
A		DO	4S	16	13		13	12.2			13									
A		DO	4S	18	9		9	8.0			9									
A		DO	4S	20	1		1	.9			1									
A		DO	4S	24	5		5	4.6			5									
A		DO	4S	26	11		11	10.3			11									
A		DO	4S	30	10		10	9.0			10									
A		Totals			110		110	1.0			54	13		35		8				
H		DO	2S	8	1	100.0														
H		DO	2S	16	4		4	1.5						4						
H		DO	2S	32	42	1.8	41	13.4					9		32					
H		DO	2S	40	152	3.2	148	48.5					35	37	58		17			
H		DO	3S	20	1		1	.4			1									
H		DO	3S	26	2		2	.6				2								
H		DO	3S	30	5		5	1.8			4	2								
H		DO	3S	32	11		11	3.7			11									
H		DO	3S	36	14		14	4.4			5	9								
H		DO	3S	40	41	3.0	40	13.2			3	7	21		9					
H		DO	4S	12	1		1	.3			1									
H		DO	4S	16	14		14	4.6			14									
H		DO	4S	18	9		9	2.8			8	1								
H		DO	4S	20	5		5	1.5			2	3								
H		DO	4S	24	6		6	1.9			6									
H		DO	4S	26	0		0	.1			0									
H		DO	4S	30	4		4	1.5			4									
H		Totals			312	2.5	305	2.7			56	23	23	44	42	99		17		
Total		All Species			11,885	5.0	11,288	100.0			386	325	389	543	714	1609	2232	3122	1843	125

TC		PSTNDSUM		Stand Table Summary										Page		1	
														Date:		6/17/2026	
T06N R06W S34 TyR/W THRU T06N R06W S35 Ty00CC				Project MSAGER										Time:		11:17:53AM	
				Acres 159.00										Grown Year:			
S Spec	T	Sample		Tot					Average Log		Net		Net		Totals		
		DBH	Trees	FF 16'	Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Cu.Ft. Acre	Bd.Ft. Acre	Tons	Cunits	MBF	
D		9	4	86	77	2.939	1.30	2.94	13.0	55.0		38	162		61	26	
D		10	4	86	108	2.380	1.30	4.76	10.8	40.0		51	190		81	30	
D		11	6	85	117	2.951	1.95	5.90	12.2	43.3		72	256		114	41	
D		12	5	85	103	2.308	1.81	3.96	16.4	61.7		65	244		103	39	
D		13	5	87	82	2.308	2.13	4.62	14.3	49.4		66	228		105	36	
D		14	15	87	94	5.271	5.63	9.56	20.1	71.3		192	682		306	108	
D		15	6	84	92	1.366	1.68	2.73	22.1	76.8		60	210		96	33	
D		16	14	86	93	3.604	5.03	7.21	25.2	90.4		182	652		289	104	
D		17	5	84	106	.806	1.27	1.85	28.2	99.9		52	185		83	29	
D		18	4	87	111	.428	.76	1.07	29.6	110.0		32	118		50	19	
D		19	17	86	110	2.425	4.77	6.26	32.1	118.8		201	744		320	118	
D		20	7	86	112	2.209	4.82	5.37	38.5	140.6		207	755		329	120	
D		21	14	85	123	2.246	5.40	6.03	41.6	147.3		251	888		399	141	
D		22	14	86	125	2.145	5.66	6.24	43.5	178.4		271	1,113		431	177	
D		23	17	86	134	1.881	5.43	5.33	50.4	204.9		269	1,093		427	174	
D		24	14	87	152	1.650	5.18	5.42	53.3	232.1		289	1,259		460	200	
D		25	4	85	156	.604	2.06	1.81	64.1	212.5		116	385		185	61	
D		26	9	86	139	.726	2.68	2.32	60.2	265.1		139	614		222	98	
D		27	8	88	152	1.407	5.59	4.48	71.3	309.6		320	1,388		509	221	
D		28	10	88	140	1.021	4.36	3.18	69.0	320.6		220	1,020		349	162	
D		29	21	88	161	2.633	12.08	8.88	76.6	374.6		681	3,328		1,083	529	
D		30	6	87	164	.711	3.49	2.53	78.1	386.7		197	977		314	155	
D		31	19	87	157	1.880	9.85	6.49	81.6	394.8		529	2,562		842	407	
D		32	15	86	168	1.633	9.12	5.88	91.0	464.9		535	2,734		851	435	
D		33	25	86	166	2.168	12.87	7.74	93.2	495.5		721	3,834		1,147	610	
D		34	8	88	179	.717	4.52	2.87	97.9	549.8		281	1,576		446	251	
D		35	18	87	169	1.497	10.00	5.38	102.0	575.4		549	3,096		873	492	
D		36	21	86	165	2.010	14.21	6.98	118.5	682.0		826	4,758		1,314	756	
D		37	20	86	172	1.548	11.56	5.58	122.1	706.8		681	3,944		1,083	627	
D		38	13	86	174	.892	7.03	3.25	128.2	743.5		417	2,416		663	384	
D		39	11	87	176	.787	6.53	3.02	131.5	785.6		397	2,374		632	377	
D		40	17	86	177	1.102	9.62	4.23	140.1	798.1		593	3,375		942	537	
D		41	11	87	188	.763	7.00	3.05	145.7	878.8		445	2,682		707	426	
D		42	8	86	174	.587	5.65	2.19	157.2	904.8		344	1,978		546	314	
D		43	9	87	184	.664	6.69	2.51	173.6	1068.0		436	2,679		693	426	
D		44	6	86	192	.387	4.09	1.65	163.0	977.8		268	1,611		427	256	
D		45	10	86	184	.496	5.48	2.07	163.3	979.4		339	2,030		538	323	
D		46	9	87	164	.523	6.03	2.00	166.8	909.6		334	1,819		531	289	
D		47	4	86	184	.210	2.53	.49	178.7	1039.1		88	510		139	81	
D		48	9	85	177	.575	7.23	1.93	196.1	1099.0		378	2,117		600	337	
D		49	2	87	185	.119	1.56	.48	211.9	1173.6		101	560		161	89	
D		50	3	85	173	.152	2.08	.57	221.6	1290.0		127	737		201	117	
D		51	5	84	187	.289	4.10	1.08	239.4	1419.7		259	1,538		412	245	
D		52	1	86	206	.071	1.05	.28	260.3	1505.0		74	427		117	68	
D		54	4	85	190	.125	1.99	.56	219.9	1299.8		124	730		196	116	
D		55	2	86	175	.095	1.56	.38	254.0	1415.3		96	536		153	85	
D		56	1	89	159	.030	.51	.09	334.0	456.7		30	41		48	7	
D		57	1	82	153	.029	.51	.09	317.7	1640.0		28	143		44	23	
D		58	1	83	154	.028	.51	.08	334.3	1766.7		28	149		45	24	
D		61	2	86	172	.051	1.03	.18	343.1	1957.1		61	347		97	55	
D		65	1	86	159	.022	.51	.07	435.0	2370.0		29	159		46	25	
D		69	1	85	174	.020	.51	.08	399.8	2355.0		32	187		50	30	
D		Totals	466	86	131	63.486	240.32	173.70	75.5	392.3		13,120	68,138		20,860	10,834	

TC PSTNDSUM		Stand Table Summary										Page 2			
												Date: 6/17/2026			
T06N R06W S34 TyR/W THRU T06N R06W S35 Ty00CC					Project MSAGER					Time: 11:17:53AM					
					Acres 159.00					Grown Year:					
S Spec T	Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals		
	DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
H	8	2	88	20	2.236	.78	2.24	5.0	20.0		11	45	18	7	
H	9	2	86	29	1.767	.78	1.77	6.0	20.0		11	35	17	6	
H	10	2	86	18	1.431	.78	1.43	7.0	30.0		10	43	16	7	
H	11	3	82	45	2.223	1.47	2.22	13.3	39.4		30	87	47	14	
H	12	1	83	45	.698	.55	.70	16.0	40.0		11	28	18	4	
H	14	2	83	64	1.025	1.10	1.54	19.7	53.3		30	82	48	13	
H	16	1	85	99	.392	.55	.78	31.0	115.0		24	90	39	14	
H	18	2	88	91	.442	.78	.88	37.0	125.0		33	110	52	18	
H	19	1	86	73	.278	.55	.56	32.5	100.0		18	56	29	9	
H	21	5	82	78	.877	2.11	1.75	41.4	127.2		73	223	115	35	
H	22	1	86	77	.208	.55	.42	47.5	165.0		20	68	31	11	
H	23	2	83	78	.271	.78	.54	50.0	165.0		27	89	43	14	
H	25	4	84	81	.632	2.15	1.26	58.3	220.5		74	279	117	44	
H	27	3	81	70	.174	.69	.38	56.0	184.0		21	70	34	11	
H	28	3	85	95	.672	2.87	1.34	84.1	319.5		113	429	180	68	
H	34	1	85	135	.109	.69	.33	115.7	550.0		38	180	60	29	
H	Totals	35	85	50	13.434	17.17	18.14	29.9	105.6		543	1,916	864	305	
A	8	4	87	19	2.883	1.01	2.88	4.5	15.0		13	43	21	7	
A	9	2	86	19	1.537	.68	1.54	5.5	25.0		8	38	13	6	
A	10	4	86	18	1.845	1.01	1.85	6.5	25.0		12	46	19	7	
A	11	4	87	31	3.387	2.24	3.39	10.5	33.0		36	112	57	18	
A	12	3	86	47	1.772	1.39	1.99	14.6	41.1		29	82	46	13	
A	13	2	86	92	.321	.30	.64	19.5	70.0		13	45	20	7	
A	15	2	81	29	.410	.50	.41	19.0	40.0		8	16	12	3	
A	18	2	87	71	1.184	2.09	2.18	32.2	114.3		70	249	111	40	
A	24	1	87	99	.108	.34	.22	70.5	275.0		15	59	24	9	
A	Totals	24	86	33	13.448	9.55	15.09	13.5	45.8		204	691	324	110	
M	13	2	86	45	.289	.27	.58	10.5	35.0		6	20	10	3	
M	14	1	86	48	.198	.21	.20	22.0	50.0		4	10	7	2	
M	16	4	86	47	.495	.69	.49	29.9	59.2		15	29	24	5	
M	17	3	86	48	.481	.76	.48	32.5	60.0		16	29	25	5	
M	18	4	87	60	.226	.40	.45	24.5	82.5		11	37	18	6	
M	19	7	87	47	.446	.88	.65	31.5	105.6		20	69	32	11	
M	20	1	86	56	.097	.21	.19	29.5	90.0		6	17	9	3	
M	25	3	87	51	.121	.41	.12	76.2	140.6		9	17	15	3	
M	50	2	86	52	.015	.20	.03	176.0	725.0		5	21	8	3	
M	Totals	27	86	49	2.368	4.03	3.20	28.9	78.1		92	250	147	40	
SN	13	1	89	81	.003	.00									
SN	14	1	88	73	.003	.00									
SN	17	1	89	72	.002	.00									
SN	28	1	89	150	.002	.01									
SN	Totals	4	89	88	.009	.02									
Totals		556	86	103	92.745	271.08	210.13	66.4	337.9		13,959	70,994	22,195	11,288	

LOGGING PLAN MAP

OF TIMBER SALE CONTRACT
NO. AT-341-2027-W01357-01
MIDDLE SAGER
PORTIONS OF SECTIONS
34 & 35 OF T6N, R6W, AND
SECTION 3 OF T5N, R6W, W.M.,
CLATSOP COUNTY, OREGON

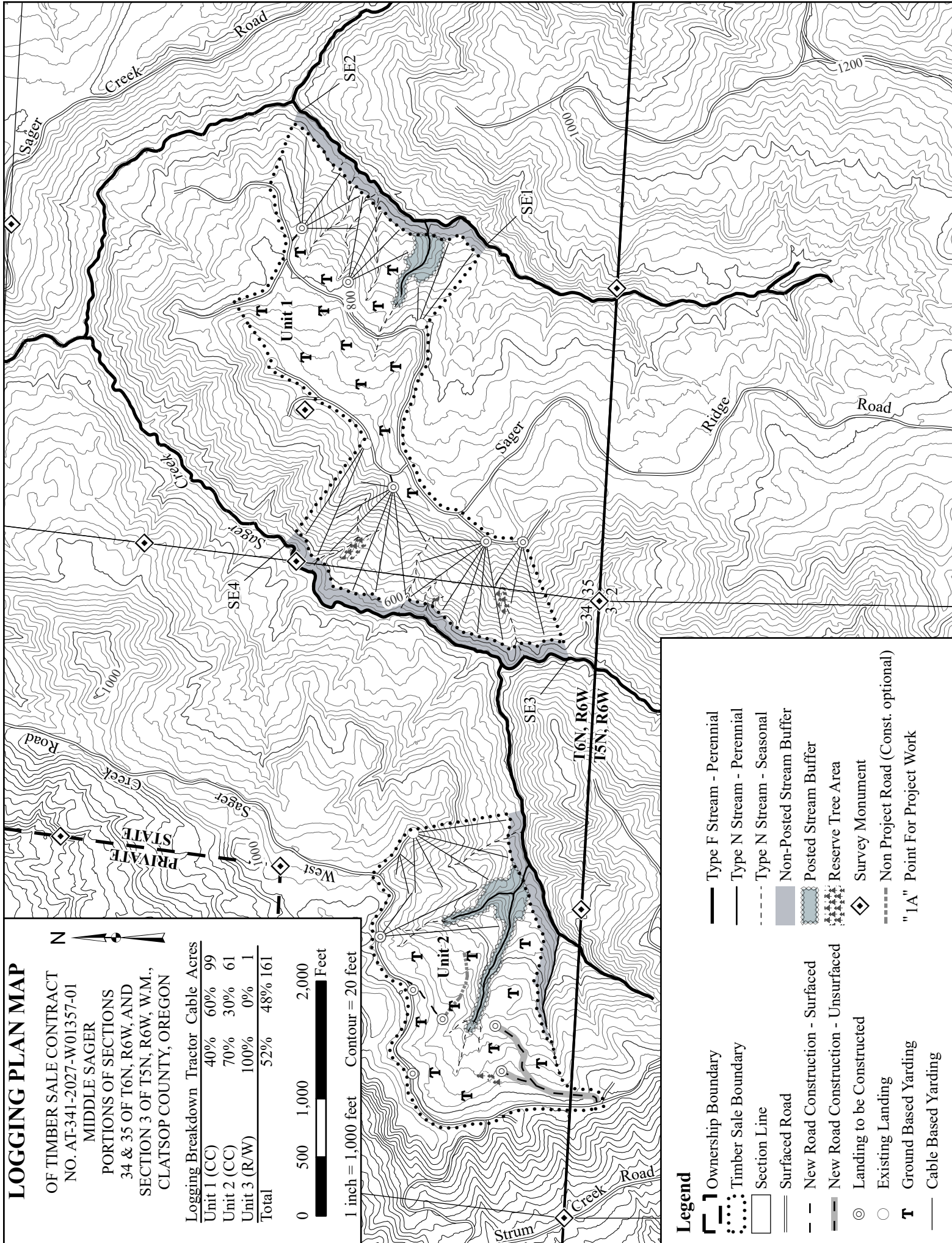
Logging Breakdown	Tractor	Cable	Acres
Unit 1 (CC)	40%	60%	99
Unit 2 (CC)	70%	30%	61
Unit 3 (R/W)	100%	0%	1
Total	52%	48%	161

1 inch = 1,000 feet Contour = 20 feet

0 500 1,000 2,000 Feet

Legend

- Ownership Boundary
- Timber Sale Boundary
- Section Line
- Surfaced Road
- New Road Construction - Surfaced
- New Road Construction - Unsurfaced
- Landing to be Constructed
- Existing Landing
- Ground Based Yarding
- Cable Based Yarding
- Type F Stream - Perennial
- Type N Stream - Perennial
- Type N Stream - Seasonal
- Non-Posted Stream Buffer
- Posted Stream Buffer
- Reserve Tree Area
- Survey Monument
- Non Project Road (Const. optional)
- "1A" Point For Project Work

[illegible][illegible]

LOGGING PLAN MAP

OF TIMBER SALE CONTRACT
NO. AT-341-2027-W01357-01
MIDDLE SAGER
PORTIONS OF SECTIONS
34 & 35 OF T6N, R6W, AND
SECTION 3 OF T5N, R6W, W.M.,
CLATSOP COUNTY, OREGON

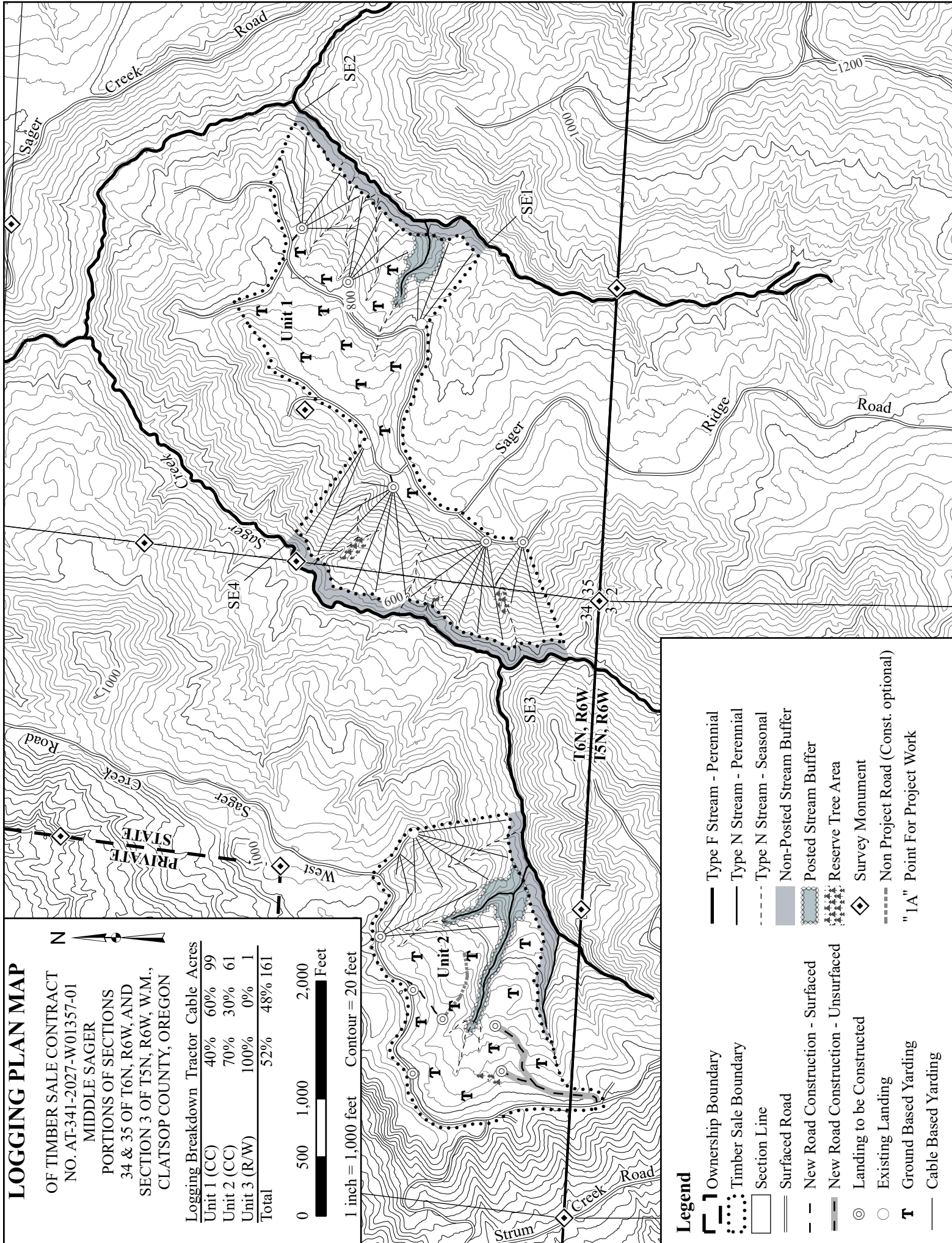
Logging Breakdown	Tractor Cable	Acres
Unit 1 (CC)	40%	60% 99
Unit 2 (CC)	70%	30% 61
Unit 3 (R/W)	100%	0% 1
Total	52%	48% 161

1 inch = 1,000 feet Contour = 20 feet

0 500 1,000 2,000 Feet

Legend

- Ownership Boundary
- Timber Sale Boundary
- Section Line
- Surfaced Road
- New Road Construction - Surfaced
- New Road Construction - Unsurfaced
- Landing to be Constructed
- Existing Landing
- Ground Based Yarding
- Cable Based Yarding
- Type F Stream - Perennial
- Type N Stream - Perennial
- Type N Stream - Seasonal
- Non-Posted Stream Buffer
- Posted Stream Buffer
- Reserve Tree Area
- Survey Monument
- Non Project Road (Const. optional)
- "1A" Point For Project Work



LOGGING PLAN MAP

OF TIMBER SALE CONTRACT
NO. AT-341-2027-W01357-01
MIDDLE SAGER
PORTIONS OF SECTIONS
34 & 35 OF T6N, R6W, AND
SECTION 3 OF T5N, R6W, W.M.,
CLATSOP COUNTY, OREGON

Logging Breakdown	Tractor Cable	Acres
Unit 1 (CC)	40%	60% 99
Unit 2 (CC)	70%	30% 61
Unit 3 (R/W)	100%	0% 1
Total	52%	48% 161

1 inch = 1,000 feet Contour = 20 feet

0 500 1,000 2,000 Feet

Legend

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