



Timber Sale Appraisal
Cronin To
Sale TL-341-2027-W01152-01

District: Astoria

Date: June 29, 2026

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$910,987.65	\$157,895.24	\$1,068,882.89
		Project Work:	(\$626,382.00)
		Advertised Value:	\$442,500.89



Timber Sale Appraisal Cronin To Sale TL-341-2027-W01152-01

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Timber Description

Location:

Stand Stocking: 80%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	19	0	97
Western Hemlock / Fir	14	0	95
Alder (Red)	15	0	95
Maple	16	0	95

Volume by Grade	2S	3S & 4S 6"-11"	8" - 9"	10" - 11"	12"+	6" - 7"	Camprun	Total
Douglas - Fir	2,578	1,255	0	0	0	0	0	3,833
Western Hemlock / Fir	310	354	0	0	0	0	0	664
Sitka Spruce	0	0	0	0	0	0	0	0
Red Cedar	0	0	0	0	0	0	0	0
Alder (Red)	0	0	269	429	386	398	0	1,482
Maple	0	0	0	0	0	0	113	113
Total	2,888	1,609	269	429	386	398	113	6,092

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

Expected Log Markets: Tillamook, Warrenton, Forest Grove, Mist, Willamina, Wauna, Longview, WA, and Chehalis, WA.

PRICING:

Western redcedar stumpage = pond value - (Douglas-fir) logging cost.

\$832.16/MBF = \$1,300.00/MBF - \$467.84/MBF

Sitka spruce stumpage = pond value - (Douglas-fir) logging cost.

\$57.16/MBF = \$525.00/MBF - \$467.84/MBF

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

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

Ditch Filters:

5 bales of straw @ \$12/bale = \$60.00

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

Deadman anchor for guylines:

\$1,005 for excavator move in (C315)

20 anchors @ 3 hrs/anchor = 60 hrs

\$127/hr for excavator operation (C315)

\$127/hr x 60 hrs + \$1,005X2 = \$9,630

Dozer (D7) mobilization for tailhold/guyline anchor:

2 move-inS @ \$1,005/move in = \$2,010

Waterbar and block 3B-3C:

Move in C315 Excavator @ \$1,005/move in = \$1,005

4 hrs w/C315 to construct 8 to 10 waterbars @ \$127/hr = \$508

Total Other Costs (with Profit & Risk to be added): \$15,313.00

ADDITIONAL FIRE EQUIPMENT (1,000 Gal Fire Truck): \$40/Day x 90 days x 3 Fire Seasons (Logging) = \$10,800

Weyerhaeuser Road Use Permit: \$14,144.78

Stimson Road Use Permit: \$2,176.08

Other Costs (without Profit & Risk): \$27,120.86

SLASH PILING

(See attached appraisal. Includes move-in and pile materials) = \$24,094

ROAD MAINTENANCE

(See attached Road Maintenance Cost Summary Sheet)

TOTAL Road Maintenance (including culvert removal and disposal fro 3A-3B): \$58,914/6,092 MBF = \$9.67/MBF



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Logging Conditions

Combination#: 1

Douglas - Fir	98.00%
Western Hemlock / Fir	98.00%
Alder (Red)	98.00%
Maple	98.00%

Logging System: Cable: Large Tower >=70 **Process:** Manual Falling/Delimbing

yarding distance: Long (1,500 ft) **downhill yarding:** No

tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF

loads / day: 7 **bd. ft / load:** 4500

cost / mbf: \$272.36

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

Combination#: 2

Douglas - Fir	2.00%
Western Hemlock / Fir	2.00%
Alder (Red)	2.00%
Maple	2.00%

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

yarding distance: Short (400 ft) **downhill yarding:** No

tree size: Mature Private Forest / Regen Cut (250 Bft/tree), 6-11 logs/MBF

loads / day: 13 **bd. ft / load:** 5000

cost / mbf: \$153.85

machines: Shovel Logger



"STEWARDSHIP IN FORESTRY"

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Logging Costs

Operating Seasons: 3.00	Profit Risk: 12%
Project Costs: \$626,382.00	Other Costs (P/R): \$15,313.00
Slash Disposal: \$24,094.00	Other Costs: \$27,120.86

Miles of Road

Road Maintenance: \$9.67

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	2.0	5.2
Western Hemlock / Fir	\$0.00	3.0	5.0
Alder (Red)	\$0.00	2.0	5.0
Maple	\$0.00	2.0	5.0



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Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
\$269.99	\$9.96	\$2.16	\$123.80	\$2.51	\$49.01	\$3.96	\$2.00	\$4.45	\$467.84
Western Hemlock / Fir									
\$269.99	\$10.15	\$2.16	\$87.50	\$2.51	\$44.68	\$3.96	\$2.00	\$4.45	\$427.40
Alder (Red)									
\$269.99	\$10.15	\$2.16	\$131.25	\$2.51	\$49.93	\$3.96	\$2.00	\$4.45	\$476.40
Maple									
\$269.99	\$10.15	\$2.16	\$131.25	\$2.51	\$49.93	\$3.96	\$2.00	\$4.45	\$476.40

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$681.73	\$213.89	\$0.00
Western Hemlock / Fir	\$0.00	\$564.67	\$137.27	\$0.00
Alder (Red)	\$0.00	\$582.82	\$106.42	\$0.00
Maple	\$0.00	\$478.00	\$1.60	\$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	3,833	\$213.89	\$819,840.37
Western Hemlock / Fir	664	\$137.27	\$91,147.28
Alder (Red)	1,482	\$106.42	\$157,714.44
Maple	113	\$1.60	\$180.80

Gross Timber Sale Value

Recovery: \$1,068,882.89

Prepared By: Michele Huffman

Phone: 503-325-5451

Site Prep Appraisal

Sale Name: Cronin Too
Date: 12/01/2025

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	F	0	0	\$145.00	\$0.00	
2	MC	F	0	0	\$145.00	\$0.00	
3	MC	F	6	3	\$145.00	\$435.00	
					In-unit Piling	Sub Total =	\$435.00
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	5	88	\$5,104.00	5	\$5.00	\$25.00	
2	7	73	\$4,234.00	7	\$5.00	\$35.00	
3	6	82	\$4,756.00	9	\$5.00	\$45.00	
*Cost includes separating firewood					Materials	Sub Total =	\$105.00
Additional Move-in allowance					Landing Piling	Sub Total =	\$14,094.00
Move-In Allowance	Number of Move-In's	Total Move-In Allowance					
\$1,290.00	1	\$1,290.00	Brush Piler				
					Move-In	Sub Total =	\$1,290.00
Slash Endhaul Dump Truck hrs	Cost/Hour	Total	Loader hrs	Cost/Hour	Total		
50	\$99.00	\$4,950.00	20	\$161.00	\$3,220.00	Sub Total =	\$8,170.00
						Grand Total =	\$24,094.00

Road Maintenance Cost Summary (Interim and Post Harvest)

Sale:	Cronin Too	MBF:	6,092
Date:	December 1, 2025	\$/MBF:	\$9.67
By:	Michele Huffman		

Type	Equipment/Rationale	Move-in Rate	Times	Hours	Rate	Cost
Interim Road Maintenance + Snow Plowing	Grader 14G	\$972	1	16	\$126	\$2,988
Interim Road Maintenance + Snow Plowing	Grader 14G	\$972	1	16	\$126	\$2,988
	Dump Truck 12CY	\$205	1	16	\$99	\$1,789
	Rubber tired backhoe	\$401	1	8	\$97	\$1,177
Interim Road Maintenance + Snow Plowing	Grader 14G	\$972	1	16	\$126	\$2,988
	Dump Truck 12CY	\$205	1	16	\$99	\$1,789
	Rubber tired backhoe	\$401	1	8	\$97	\$1,177
Final Road Maintenance including culvert removal and disposal (3A-3B)	Grader 14G	\$972	1	112	\$126	\$15,084
	Dump Truck 12CY	\$205	2	56	\$99	\$5,954
	Front End Loader C966	\$972	1	25	\$105	\$3,597
	Vibratory Roller	\$972	1	96	\$97	\$10,284
	Water Truck 2,500 gallon	\$238	1	48	\$113	\$5,662
	C315 Excavator	\$1,005	1	16	\$127	\$3,037
	Labor			8	\$50	\$400
Total						\$58,914

Interim Operations Road Maintenance

Production Rates	Miles/day	Distance (miles)	Days	Hours
Grader x3	3.0	6.0	2.0	16

Final Road Maintenance

Production Rates	Miles/day	Distance (miles)	Days	Hours
Grader	1.5	17.8	11.9	95
Vibratory Roller	1.5	17.8	11.9	95
Grader (Grade Only)	2.0	4.6	2.3	18

	Process and compact:	Grade Only (Private):
Quartz Creek Road	6.4 Miles	
Spruce Run Road	1.5 Miles	3.2 Miles
108 Road	1.8 Miles	
NF Cronin Creek Road	3.9 Miles	
Four Seven Ridge Road	1.4 Miles	1.4 Miles
Unnamed Spurs	2.8 Miles	
Grade & Process Total = 17.8 Miles		Grade Only Total: 4.6 Miles
Total = 22.4 Miles		

SUMMARY OF ALL PROJECT COSTS

SALE NAME: Cronin Too

Project No. 1: SALE ACCESS ROAD CONSTRUCTION and LANDING CONSTRUCTION:

<u>Road segment</u>	<u>Length (Sta)</u>	<u>Length (Mile)</u>	<u>Cost</u>
Surfaced			
1A to 1B, 1C to 1D, 1E to 1F, 1G to 1H, 1I to 1J, 1K to 1L, 2A to 2B, 2C to 2D, 2E to 2F, 2G to 2H, 3A, 3D to 3E, 3F to 3G, 3H to 3I, & 3J to 3K	89.40	1.69	\$182,066
Unsurfaced			
3B to 3C	10.60	0.20	\$17,136
Road Maint.			\$3,527
Move-In			\$6,525
TOTALS	100.00	1.89	\$209,256

Project No. 2: SALE ACCESS ROAD IMPROVEMENT, SURFACE ROCK REPLACEMENT, AND ROAD MAINTENANCE:

<u>Road segment</u>	<u>Length (Sta)</u>	<u>Length (Mile)</u>	<u>Cost</u>
I1 to I2, I3 to I4, I5 to I6, I7 to I8, I9 to I10, I11 to I12, & I13 to I14	1082.00	20.49	\$229,671
Road Maint.			\$4,067
Move-In			\$7,524
TOTALS	1,082.00	20.49	\$241,261

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 Sterling Ridge Rock Crushing		\$158,752
Proj. 4 Piling and Burning		\$17,113
TOTAL		\$175,865

GRAND TOTAL **\$626,382**

Compiled By: C. Hatcher

Date: 01/08/2026

Move In and Maintenance Calculator for Construction and Improvement

SALE NAME: Cronin Too

Project No. 1: ROAD CONSTRUCTION:

Road segment	Length/Sta	Length/Mile	Cost
Surfaced			
1A to 1B, 1C to 1D, 1E to 1F, 1G to 1H, 1I to 1J, 1K to 1L, 2A to 2B, 2C to 2D, 2E to 2F, 2G to 2H, 3A, 3D to 3E, 3F to 3G, 3H to 3I, & 3J to 3K	89.40	1.69	\$182,066.37
Unsurfaced			
3B to 3C	10.60	0.20	\$17,136.43
TOTALS	100.00	1.89	\$199,203

Project No. 2: ROAD IMPROVEMENT:

Road segment	Length/Sta	Length/Mile	Cost
I1 to I2, I3 to I4, I5 to I6, I7 to I8, I9 to I10, I11 to I12, & I13 to I14	1082.00	20.49	\$229,671
TOTALS	1,082.00	20.49	\$229,671

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
14 G Grader		\$972.00
Water Truck (2,500 gal)		\$238.00
Dump Truck 10cy (x5)		\$1,025.00
Dump Truck 20cy (x2)		\$478.00
C518 Backhoe		\$401.00
24 yd3 Off Highway Dump		\$966.00
D8 Dozer		\$1,755.00
Drill and Compressor		\$1,755.00
D8 Dozer		\$1,755.00
TOTAL		\$14,049.00

ROAD MAINTENANCE (Construction & Improvement Only)

	Length/Mile	Cost
Final Project Road Maintenance	4.49	\$7,594.00
TOTAL		\$7,594.00

SUMMARY OF CONSTRUCTION COSTS

SALE NAME: Cronin Too

NEW CONSTRUCTION: 100.00 STATIONS

1.89 MILES

ROAD: 1A to 1B (6.2), 1C to 1D (24.0), 1E to 1F (8.8), 1G to 1H (6.0), 1I to 1J (1.8)
1K to 1L (1.8), 2A to 2B (1.0), 2C to 2D (1.9), 2E to 2F (7.6), 2G to 2H (3.6), 3A (N/A), 3B to 3C (10.6),
3D to 3E (6.6), 3F to 3G (6.4), 3H to 3I (11.7), 3J to 3K (2.0)

CLEARING & GRUBBING

Method	Acres/amount	x	Rate	=	Cost
1C to 1D (5+00 to 20+30), 1E to 1F, 1G to 1H, 1I to 1J, 1K to 1L, 3A, 3B to 3C (5+40 to 10+60), 3D to 3E, 3F to 3G, and 3H to 3I					
Scatter outside of right of way (\$/ac)	5.93	x	\$1,669.00	=	\$9,900.59
1A to 1B, 1C to 1D (0+00 to 5+00, 20+30 to 24+00), 3B to 3C (0+00 to 5+40), and 3J to 3K					
End haul to waste area (C330 and Dump) (\$/hr)	32.00	x	\$305.00	=	\$9,760.00
2A to 2B, 2C to 2D, 2E to 2F, and 2G to 2H					
Pile only and burn with Project No. 4 (\$/ac)	1.29	x	\$1,551.00	=	\$2,008.18
SUB TOTAL FOR CLEARING & GRUBBING					\$21,669

EXCAVATION

Material	Cy/amount	x	Rate	=	Cost
1A to 1B					
0+00 to 2+00 Common drift (<50%) (\$/cy)	300	x	\$2.25	=	\$675.00
2+00 to 6+20 Common drift (>50%) (\$/cy)	1000	x	\$2.62	=	\$2,620.00
0+00 to 4+70 Additional drift (\$/cy)	400	x	\$3.50	=	\$1,400.00
0+00 to 6+20 End-haul excavation (\$/cy)	750	x	\$4.99	=	\$3,742.50
0+00 to 6+20 Embankment compaction (\$/cy)	1700	x	\$0.87	=	\$1,479.00
2+10 to 5+50 Cutslope rounding (\$/sta)	3.4	x	\$54.39	=	\$184.93
Waste material compaction (\$/cy)	750	x	\$0.50	=	\$375.00
1C to 1D					
0+00 to 24+00 Balanced construction (\$/sta)	24.0	x	\$154.00	=	\$3,696.00
5+40 Construct turnout (C330) (\$/hr)	1.0	x	\$195.00	=	\$195.00
8+00 Construct ditchout (C330) (\$/hr)	1.0	x	\$195.00	=	\$195.00
12+50, 22+00 Construct turnaround (C330) (\$/hr)	1.0	x	\$195.00	=	\$195.00
24+00 Landing construction (\$/ldg)	1	x	\$487.00	=	\$487.00
1E to 1F					
0+00 to 8+80 Balanced construction (\$/sta)	8.8	x	\$154.00	=	\$1,355.20
5+50 to 7+70 End haul waste material (C330 & Dump) (\$/hr)	4.0	x	\$305.00	=	\$1,220.00
7+00 Construct turnaround (C330) (\$/hr)	1	x	\$195.00	=	\$195.00
1G to 1H					
0+00 to 6+00 Embankment compaction (\$/cy)	2250	x	\$0.87	=	\$1,957.50
0+00 to 6+00 Common drift (>50%) (\$/cy)	1350	x	\$2.62	=	\$3,537.00
2+00 to 6+00 Additional drift (\$/cy)	900	x	\$3.50	=	\$3,150.00
0+00 to 4+20 Cutslope rounding (\$/sta)	4.2	x	\$54.39	=	\$228.44
1I to 1J					
0+00 to 1+60 Embankment compaction (\$/cy)	630	x	\$0.87	=	\$548.10
0+00 to 1+60 Additional dozer time (D8) - Landing and spread (\$/hr)	8	x	\$198.00	=	\$1,584.00
0+00 to 1+60 Road prism drilling and shooting (\$/cy)	990	x	\$6.50	=	\$6,435.00
1K to 1L					
0+00 to 1+80 Balanced construction (\$/sta)	1.8	x	\$154.00	=	\$277.20
1+80 Landing construction (\$/ldg)	1	x	\$487.00	=	\$487.00
2A to 2B					
1+00 Additional dozer time (D8) - Landing and spread (\$/hr)	5.0	x	\$198.00	=	\$990.00
1+00 Landing drilling and shooting (\$/sta)	500.0	x	\$6.50	=	\$3,250.00
2C to 2D					
0+00 to 1+90 Embankment compaction (\$/cy)	41	x	\$0.87	=	\$35.67
0+00 to 1+90 Road prism drilling and shooting (\$/cy)	560	x	\$6.50	=	\$3,640.00
0+00 to 1+00 Cutslope rounding (\$/sta)	1.0	x	\$54.39	=	\$54.39
2E to 2F					
3+00 to 7+60 Drift earth up to 200' (\$/sta)	4.6	x	\$238.00	=	\$1,094.80
3+00 to 7+60 Daylighting and material handling (C330) (\$/hr)	8.0	x	\$195.00	=	\$1,560.00
3+00 Landing drilling and shooting (\$/cy)	250	x	\$6.50	=	\$1,625.00
2G to 2H					
0+00 to 3+60 Rock handling and landing construction C330 (\$/hr)	8	x	\$195.00	=	\$1,560.00
0+00 to 3+60 Rock handling and landing construction D8 (\$/hr)	8	x	\$198.00	=	\$1,584.00
0+00 to 3+60 Road prism drilling and shooting (\$/cy)	2060	x	\$6.50	=	\$13,390.00
3A					
Landing construction (\$/ldg)	1	x	\$487.00	=	\$487.00
3B to 3C					
0+00 to 3+60 Embankment compaction (\$/cy)	2120	x	\$0.87	=	\$1,844.40
0+00 to 10+60 Common drift (<50%) (\$/cy)	1540	x	\$2.25	=	\$3,465.00
0+30 to 5+40 End-haul excavation (\$/cy)	580	x	\$4.99	=	\$2,894.20
1+20 to 2+60, 6+70 to 8+70					
Cutslope rounding (\$/sta)	3.4	x	\$54.39	=	\$184.93
3D to 3E					
0+00 to 6+60 Balanced construction (\$/sta)	6.6	x	\$154.00	=	\$1,016.40
2+80 Landing construction (\$/ldg)	1	x	\$487.00	=	\$487.00

3F to 3G									
0+00 to 6+40	Embankment compaction	(\$/cy)	1670	x	\$0.87	=	\$1,452.90		
1+00 to 4+00, 5+50									
to 6+40	Common drift (<50%)	(\$/cy)	1190	x	\$2.25	=	\$2,677.50		
0+00 to 1+00, 4+00									
to 5+50	Common drift (>50%)	(\$/cy)	250	x	\$2.62	=	\$655.00		
2+50 to 4+00	End-haul excavation material to fill	(\$/cy)	70	x	\$4.99	=	\$349.30		
1+80 to 5+00	Cutslope rounding	(\$/sta.)	3.2	x	\$54.39	=	\$174.05		
3H to 3I									
0+00 to 6+50	Balanced construction	(\$/sta)	6.5	x	\$154.00	=	\$1,001.00		
0+00	Improve junction approach both directions (C33C	(\$/hr)	6.0	x	\$195.00	=	\$1,170.00		
6+50 to 11+60	Embankment compaction	(\$/cy)	1425.0	x	\$0.87	=	\$1,239.75		
6+50 to 11+60	Common drift (<50%)	(\$/cy)	1425.0	x	\$2.25	=	\$3,206.25		
0+00 to 10+40	Cutslope rounding	(\$/sta.)	10.4	x	\$54.39	=	\$565.66		
3J to 3K									
0+00 to 2+00	Balanced construction	(\$/sta)	2.0	x	\$154.00	=	\$308.00		
0+00 to 2+00	End haul waste material (C330 & Dump)	(\$/hr)	10.0	x	\$305.00	=	\$3,050.00		
SUB TOTAL FOR EXCAVATION								\$91,231	

CULVERT MATERIALS AND INSTALLATION									
Location	Dia/type	Lineal ft.	Rate	Cost	Location	Dia/type	Lineal ft.	Rate	Cost
1A to 1B					3B to 3C				
2+40	18" CPP	30	\$29.73	\$891.90	2+30	18" CPP	30	\$29.73	\$891.90
1C to 1D					4+50	18" CPP	30	\$29.73	\$891.90
4+40	18" CPP	30	\$29.73	\$891.90	6+70	18" CPP	30	\$29.73	\$891.90
9+80	18" CPP	40	\$29.73	\$1,189.20	3D to 3E				
14+00	18" CPP	30	\$29.73	\$891.90	3+50	18" CPP	30	\$29.73	\$891.90
15+70	18" CPP	30	\$29.73	\$891.90	3F to 3G				
19+60	18" CPP	30	\$29.73	\$891.90	1+80	18" CPP	30	\$29.73	\$891.90
1E to 1F					3+90	24" CPP	40	\$41.98	\$1,679.20
4+90	18" CPP	40	\$29.73	\$1,189.20	3H to 3I				
1G to 1H					4+00	18" CPP	30	\$29.73	\$891.90
2+00	18" CPP	30	\$29.73	\$891.90	9+00	18" CPP	30	\$29.73	\$891.90
4+00	18" CPP	30	\$29.73	\$891.90					
Other/miscellaneous:					Description	Quantity	Rate	Cost	
					Dissipator Construction	3.00	\$225.33	\$675.99	
Culvert stakes & markers:					6' X 2½" white fiberglass (Carsonite) post	17	\$25.53	\$434.01	
SUB TOTAL FOR CULVERT MATERIALS & INSTALLATION								\$17,654	
								Subtotal of Clearing, Exc., Culv.	
								\$130,554	

SURFACING	Subgrade prep:		Description	Stations/ amount	Rate/ sta./amt	Cost
	All segments	All segments				
			Grade, Shape and Ditch 14' & 16'	100.00	x	\$3,098.00
			Subgrade Compaction	100.00	x	\$2,519.00

ROAD SEGMENT						
Application	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT		Cost
				1A to 1B	Sta. to Sta. 0+00 to 6+20	
Junction Rock	1 1/2"-0" crushed	N/A	N/A	junctions	1 junctions	\$113
Base Rock	4"-0" crushed	0+00 to 6+20	8	station	6.2 stations	\$3,193
Turnouts	4"-0" crushed	1+65	N/A	turnout	1 turnouts	\$227
Culvert Energy Dissipator	24"-6" riprap	2+40	N/A	dissipator	1 dissipators	\$46
Turnarounds	4"-0" crushed	4+90	N/A	turnaround	1 turnarounds	\$340
Landings	6"-0" pit-run	6+20	N/A	landing	1 landings	\$463
Total Rock for Road Segment:				1A to 1B	497	\$4,382

ROAD SEGMENT						
Application	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT		Cost
				1C to 1D	Sta. to Sta. 0+00 to 24+00	
Base Rock	4"-0" crushed	0+00 to 24+00	8	station	24.00 stations	\$12,360
Junction Rock	1 1/2"-0" crushed	0+00	N/A	junctions	1 junctions	\$113
		0+00 to 5+40, 8+90 to 14+40, 16+00 to 23+00	2	station	17.90 stations	\$2,397
Subgrade Reconstruction	4"-0" crushed	22+00	N/A	load	9 loads	\$1,020
Turnouts	4"-0" crushed	5+40, 12+50	N/A	turnout	2 turnouts	\$453
Turnarounds	4"-0" crushed	12+50, 22+00	N/A	turnaround	2 turnarounds	\$680
Landings	6"-0" pit-run	24+00	N/A	landing	1 landings	\$463
Total Rock for Road Segment:				1C to 1D	1,763	\$17,486

ROAD SEGMENT						
Application	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT		Cost
				1E to 1F	Sta. to Sta. 0+00 to 8+80	
Base Rock	4"-0" crushed	0+00 to 8+80	8	station	8.80 stations	\$4,532
Junction Rock	4"-0" crushed	0+00	N/A	junctions	1 junctions	\$113
Turnouts	4"-0" crushed	2+40, 4+90	N/A	turnout	2 turnouts	\$453
Turnarounds	4"-0" crushed	7+00	N/A	turnaround	1 turnarounds	\$340
Landings	6"-0" pit-run	8+80	N/A	landing	1 landings	\$324
Total Rock for Road Segment:				1E to 1F	605	\$5,763

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)	1G to 1H	Sta. to Sta.						
				Volume (CY) per	Number of	0+00 to 6+00					
Base Rock	4"-0" crushed	0+00 to 6+00	8	station	50	stations	6.00	300	\$10.30	\$3,090	
Junction Rock	4"-0" crushed	0+00	N/A	junctions	11	junctions	1	11	\$10.30	\$113	
Traction Rock	1 1/2"-0" crushed	1+40 to 5+00	2	station	13	stations	3.6	47	\$10.30	\$484	
Culvert Energy Dissipator	24"-6" riprap	2+00	N/A	dissipator	11	dissipators	1	11	\$4.21	\$46	
Turnarounds	4"-0" crushed	4+45	N/A	turnaround	33	turnarounds	1	33	\$10.30	\$340	
Landings	6"-0" pit-run	6+00	N/A	landing	77	landings	1	77	\$4.21	\$324	
Total Rock for Road Segment:				1G to 1H				479			

\$4,398

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)	Volume (CY) per	1I to 1J	Number of	0+00 to 1+80				
Base Rock	4"-0" crushed	0+00 to 1+80	8	station	50	stations	1.80	90	\$10.30	\$927	
Turnarounds	4"-0" crushed	0+15	N/A	turnaround	33	turnarounds	1	33	\$10.30	\$340	
Landings	6"-0" pit-run	1+80	N/A	landing	110	landings	1	110	Generated onsite		
Total Rock for Road Segment:				1I to 1J				233			

\$1,267

ROAD SEGMENT			1K to 1L		POINT TO POINT			Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	1K to 1L		Number of	0+00 to 1+80					
				Volume (CY)	per							
Base Rock	4"-0" crushed	0+00 to 1+80	8	station	50	stations	1.80	90	\$10.30	\$927		
Junction Rock	4"-0" crushed	0+00	N/A	junctions	11	junctions	1	11	\$10.30	\$113		
Landings	6"-0" pit-run	1+80	N/A	landing	110	landings	1	110	\$4.21	\$463		
Total Rock for Road Segment:				1K to 1L				211				

\$1,503

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		Number of	0+00 to 1+00					
				Volume (CY)	per							
Base Rock	4"-0" crushed	0+00 to 1+00	8	station	50	stations	1.00	50	\$8.81	\$441		
Junction Rock	4"-0" crushed	0+00	N/A	junctions	11	junctions	1	11	\$8.81	\$97		
Landings	6"-0" pit-run	1+00	N/A	landing	110	landings	1	110	Generated onsite			
Total Rock for Road Segment:				2A to 2B				171				

\$537

ROAD SEGMENT			2C to 2D		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	2C to 2D		Volume (CY) per	Number of	0+00 to 1+90			
Base Rock	4"-0" crushed	0+00 to 1+90	8	station	50	stations	1.90	95	\$8.81	\$837	
Junction Rock	1 1/2"-0" crushed	0+00	N/A	junctions	11	junctions	1	11	\$8.81	\$97	
Traction Rock	1 1/2"-0" crushed	0+00 to 1+00	2	station	13	stations	1.00	13	\$8.81	\$115	
Landings	6"-0" pit-run	1+90	N/A	landing	77	landings	1	77	Generated onsite		

\$1,048

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		Sta. to Sta.				
				Volume (CY) per	Number of	2E to 2F	0+00 to 7+60			
Base Rock	4"-0" crushed	4+00 to 7+60	8	station	50	stations	3.60	180	\$8.81	\$1,586
Junction Rock	4"-0" crushed	3+00	N/A	junctions	11	junctions	1	11	\$8.81	\$97
Traction Rock	1 1/2"-0" crushed	4+00 to 7+60	2	station	13	stations	3.60	47	\$8.81	\$412
Landings	6"-0" pit-run	3+00, 7+60	N/A	landing	77	landings	2	154	Generated onsite	
Total Rock for Road Segment:				2E to 2F				392		\$2,095
ROAD SEGMENT		2G to 2H		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	2G to 2H		Sta. to Sta.				
				Volume (CY) per	Number of	2G to 2H	0+00 to 3+60			
Base Rock	4"-0" crushed	0+00 to 3+60	8	station	50	stations	3.60	180	\$8.81	\$1,586
Junction Rock	4"-0" crushed	0+00	N/A	junctions	11	junctions	1	11	\$8.81	\$97
Landings	6"-0" pit-run	3+60	N/A	landing	110	landings	1	110	Generated onsite	
Total Rock for Road Segment:				2G to 2H				301		\$1,683
ROAD SEGMENT		3A		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	3A		Sta. to Sta.				
				Volume (CY) per	Number of	3A	0+00 to 10+60			
Junction Rock	4"-0" crushed	N/A	N/A	junctions	11	junctions	1	11	\$8.81	\$97
Landings	6"-0" pit-run	N/A	N/A	landing	110	landings	1	110	\$4.21	\$463
Total Rock for Road Segment:				3A				121		\$560
ROAD SEGMENT		3B to 3C		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	3B to 3C		Sta. to Sta.				
				Volume (CY) per	Number of	3B to 3C	0+00 to 10+60			
Base Rock	4"-0" crushed	0+00 to 1+00	8	station	50	stations	1.00	50	\$8.81	\$441
Junction Rock	4"-0" crushed	0+00	N/A	junctions	11	junctions	1	11	\$8.81	\$97
Total Rock for Road Segment:				3B to 3C				61		\$537
ROAD SEGMENT		3D to 3E		POINT TO POINT		Sta. to Sta.		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Location	Depth of Rock (inches)	3D to 3E		Sta. to Sta.				
				Volume (CY) per	Number of	3D to 3E	0+00 to 6+60			
Base Rock	4"-0" crushed	0+00 to 6+60	8	station	50	stations	6.60	330	\$8.81	\$2,907
Junction Rock	4"-0" crushed	0+00	N/A	junctions	11	junctions	1	11	\$8.81	\$97
Traction Rock	1 1/2"-0" crushed	0+00 to 6+60	2	station	13	stations	6.60	86	\$8.81	\$756
Landings	6"-0" pit-run	2+80	N/A	landing	110	landings	1	110	Generated l5 to l6 - costed in end haul	
Culvert Energy Dissipator	24"-6" riprap	3+50	N/A	dissipator	11	dissipators	1	11	Generated l5 to l6 - costed in end haul	
Total Rock for Road Segment:				3D to 3E				548		\$3,760

ROAD SEGMENT			3F to 3G		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		Number of				
Base Rock	4"-0" crushed	0+00 to 6+40	8		station	50	stations	6.40	320	\$8.81	\$2,819
Junction Rock	4"-0" crushed	0+00	N/A		junctions	11	junctions	1	11	\$8.81	\$97
Fill Armoring	24"-6" riprap	0+00 to 1+40, 3+70 to 4+60	N/A		load	11	loads	20	220	Generated 15 to 16 - costed in end haul	
Traction Rock	1 1/2"-0" crushed	1+00 to 5+70	2		station	13	stations	4.70	61	\$8.81	\$538
Landings	6"-0" pit-run	2+20, 6+40	N/A		landing	110	landings	2	220	Generated 15 to 16 - costed in end haul	
Total Rock for Road Segment:			3F to 3G						832		\$3,454
ROAD SEGMENT			3H to 3I		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		Number of				
Base Rock	4"-0" crushed	0+00 to 11+70	8		station	50	stations	11.70	585	\$8.81	\$5,154
Junction Rock	4"-0" crushed	0+00	N/A		junctions	11	junctions	1	11	\$8.81	\$97
Turnouts	4"-0" crushed	8+30	N/A		turnout	22	turnouts	2	44	\$8.81	\$388
Turnarounds	4"-0" crushed	10+10	N/A		turnaround	33	turnarounds	1	33	\$8.81	\$291
Traction Rock	1 1/2"-0" crushed	6+50 to 10+50	2		station	13	stations	4	52	\$8.81	\$458
Turnouts	1 1/2"-0" crushed	8+60	2		turnout	22	turnouts	1	22	\$8.81	\$194
Landings	6"-0" pit-run	11+70	N/A		landing	110	landings	1	110	\$4.21	\$463
Total Rock for Road Segment:			3H to 3I						857		\$7,044
ROAD SEGMENT			3J to 3K		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		Number of				
Base Rock	4"-0" crushed	0+00 to 2+00	8		station	50	stations	2.00	100	\$8.81	\$881
Junction Rock	4"-0" crushed	0+00, 2+00	N/A		junctions	11	junctions	2	22	\$8.81	\$194
Total Rock for Road Segment:			3J to 3K						122		\$1,075

SALE NAME: Conrin Too
 ROAD: 11 to 12 (328.55), 13 to 14 (197.65), 15 to 16 (271.2),
 17 to 18 (117.9), 19 to 110 (8.6), 111 to 112 (143.2), & 113 to 114 (16.4)
 IMPROVEMENT: 1,082.00 STATIONS 20.49 MILES

[illegible]

SURFACING

SURFACING									
Description		Stations/ amount	x	Rate/ sta/amt	Cost				
Subgrade prep: I1 to I2 (179+60 to 326+55), I3 to I4 (0+00 to 108+15), I5 to I6 (0+00 to 48+00, 225+00 to 271+20), I7 to I8, I9 to I10, & I11 to I12, & I13 to I14 I5 to I6 (146+00 to 158+20)									
Grade, Shape and Ditch 16'		635.60	x	\$30.98	\$19,690.89				
Grade, Shape and Outslope 14'		12.20	x	\$22.89	\$279.26				
Subgrade Compaction									
		364.15	x	\$25.19	\$9,172.94				
Sod removal									
		93.95	x	\$29.08	\$2,732.07				
Spot Grade (14G)									
		20.00	x	\$126.00	\$2,520.00				
ROAD SEGMENT I1 to I2									
Application	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
				I1 to I2 Volume (CY) per load	Sta. to Sta. 0+00 to 326+55 Number of loads				
Surface Leveling Rock	1 1/2"-0" crushed	326+55	N/A	11	3	33	\$8.81	\$291	
Surfacing	1 1/2"-0" crushed	214+50, 220+35, 230+25, 238+00, 256+85, 270+35, 286+70, 290+00, 294+10, 297+35	3	19	146.95	2,792	\$8.81	\$24,598	
Turnouts									
	1 1/2"-0" crushed	203+60, 228+45, 233+75, 247+90 (2), 265+35 (3), 296+25	N/A	11	10	110	\$8.81	\$969	
Junctions									
	1 1/2"-0" crushed		N/A	11	9	99	\$8.81	\$872	
Total Rock for Road Segment						3,034		\$26,730	
ROAD SEGMENT I3 to I4									
Application	Rock Size and Type	Location	Depth of Rock (inches)	POINT TO POINT		TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost	
				I3 to I4 Volume (CY) per load	Sta. to Sta. 0+00 to 197+95 Number of loads				
Surface Leveling Rock	1 1/2"-0" crushed		N/A	11	55	605	\$10.30	\$6,232	
Total Rock for Road Segment						605		\$6,232	

ROAD SEGMENT				15 to 16		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	loads	Number of	0+00 to 271+20					
Surface Leveling Rock	1 1/2"-0" crushed	225+00 to 271+20	N/A	load	11		21			231	\$8.81	\$2,035
Surface Leveling Rock	4"-0" crushed	19+20, 30+00, 40+20	N/A	load	11		15			165	\$8.81	\$1,454
Subgrade Base Reconstruction	4"-0" crushed	19+20, 30+00, 40+20	N/A	location	44		3			132	\$8.81	\$1,163
Subgrade Surface Reconstruction	1 1/2"-0" crushed	271+20	N/A	location	22		3			66	\$8.81	\$581
Surfacing	4"-0" crushed	239+50	4	station	25		46.2			1,155	\$8.81	\$10,176
Base Rock	4"-0" crushed	230+00, 236+80, 241+20	8	station	50		1.7			85	\$8.81	\$749
Turnouts	4"-0" crushed	243+60 (3), 246+00 (4), 248+90 (3), 257+30 (4), 262+50 (5), 269+20 (3)	N/A	turnout	22		3			66	\$8.81	\$581
Culvert Bedding and Backfill	3/4"-0" crushed	248+90, 257+30	N/A	load	11		22			242	\$8.81	\$2,132
Culvert Energy Dissipator	24"-6" riprap		N/A	dissipator	11		2			22	Generated Onsite	
Total Rock for Road Segment:										2,164		\$18,871
ROAD SEGMENT				17 to 18		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	loads	Number of	0+00 to 117+90					
Surface Leveling Rock	1 1/2"-0" crushed	0+00	N/A	load	11		25			275	\$8.81	\$2,423
Junctions	1 1/2"-0" crushed	76+80 to 117+90	N/A	load	11		2			22	\$8.81	\$194
Surfacing	1 1/2"-0" crushed	85+80, 98+85, 102+25	3	station	19		41.1			781	\$8.81	\$6,880
Turnouts	1 1/2"-0" crushed	98+85, 102+25	N/A	turnout	22		3			66	\$8.81	\$581
Turnaround	1 1/2"-0" crushed	106+20, 115+10	N/A	turnaround	22		2			44	\$8.81	\$388
Culvert Bedding and Backfill	3/4"-0" crushed	106+20, 115+10	N/A	culvert	44		2			88	\$8.81	\$775
Culvert Energy Dissipator	24"-6" riprap		N/A	dissipator	11		2			22	Generated Onsite	
Total Rock for Road Segment:										1,298		\$11,241
ROAD SEGMENT				19 to 110		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	loads	Number of	0+00 to 8+80					
Junctions	1 1/2"-0" crushed	0+00	N/A	load	11		2			22	\$8.81	\$194
Surfacing	1 1/2"-0" crushed	0+00 to 8+80	2	station	13		8.8			114	\$8.81	\$1,006
Landings	6"-0" pit-run	1+45 (18), 8+80 (9)	N/A	load	11		27			297	Generated from 17 to 18 - costed in end haul	
Total Rock for Road Segment:										433		\$1,202

ROAD SEGMENT		111 to 112	POINT TO POINT		Sta. to Sta.	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Depth of Rock (inches)	111 to 112 Volume (CY) per load	111 to 112 station	0+00 to 143+20 Number of loads stations			
Subgrade Leveling Rock	1 1/2"-0" crushed	N/A	11		25	27.5	\$10.30	\$2,833
Surfacing	1 1/2"-0" crushed	2	13		73.1	950	\$10.30	\$9,788
Total Rock for Road Segment:		111 to 112				1,225		\$12,621
ROAD SEGMENT		113 to 114	POINT TO POINT		Sta. to Sta.	TOTAL VOLUME (CY)	Rate/ Sta./ amt.	Cost
Application	Rock Size and Type	Depth of Rock (inches)	113 to 114 Volume (CY) per load	113 to 114 station	0+00 to 16+40 Number of loads			
Subgrade Leveling Rock	1 1/2"-0" crushed	N/A	11		6	66	\$8.81	\$581
Total Rock for Road Segment:		113 to 114				66		\$581

Processing:		Description		No sta	Rate/sta	Cost
		Water, Process & Compact:		368.60	\$ 70.47	\$25,989.34
		Process & Compact:		368.60	\$ 30.29	\$11,170.95

24"-12" r	24"-6" r	12"-6" r	6"-4" pr	6"-0" pr	4"-0" crushed	1 1/2"-0" crushed	2"-1" drainrock	3/4"-0" crushed	Total
0	44	0	0	297	1,603	6,552	0	330	8,826
SUB TOTAL FOR SURFACING									\$149,032

SPECIAL PROJECTS				Cy/Amount	Rate	Cost
Description				16	\$195.00	\$3,120.00
Waste Area Prep C330				150	\$13.39	\$2,008.50
Straw Bales				40	\$2.00	\$80.00
Seed				40	\$50.00	\$2,000.00
Labor for spreading seed and mulch						
SUB TOTAL FOR SPECIAL PROJECTS						\$7,209
						Subtotal of Surfacing & Spec. Proj. \$156,241
						Subtotal of Clearing, Exc., Culv. \$73,430
GRAND TOTAL						\$229,671

Compiled By:	C. Hatcher	Date:	01/08/2026
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SUMMARY OF ROCK DEVELOPMENT AND CRUSHING COSTS

PROJECT NO. Project No. 3	Timber Sale Name: Cronin Too
Quarry: Sterling Ridge	Swell:
Location: SW 1/4, SE 1/4, Sec. 14, T4N, R9W	Shrink: 16%
County: Clatsop	
By: B. Lampa	Loading Hopper: No
Date: 01/08/2026	

ROCK SIZE	REJECT	GRADATION	STOCKPILE CU. YDS.	TRUCK MEAS CU. YDS.	TOTAL CU. YDS.
3/4"-0"		CR			
1-1/2"-0"	2%	CR	2,000 Truck Msr	5,013	7,333
4"-0"	2%	CR	2,000 Truck Msr	3,792	6,112
6"-0"		PR			
24"-6"		RR			
36"		RR			
TOTAL CUBIC YARDS OF ROCK:			4,000	8,805	13,445

1) MOBILIZATION & SET UP:

EQUIPMENT	QUANTITY	RATE	COST	EQUIPMENT	QUANTITY	RATE	COST
Dump Trucks	1	\$205	\$205				
Screening Plants	2	\$691	\$1,382				
Excavator	1	\$1,755	\$1,755				
D6 Cat	1	\$972	\$972				
Drill & Compressor	1	\$1,755	\$1,755				
Powder	1	\$439	\$439				
2 Stage Crusher	1	\$3,608	\$3,608				
Loader	1	\$1,005	\$1,005				

SUB TOTAL FOR MOBILIZATION

\$11,121

EQUIPMENT SET UP	TIMES	RATE	COST
2 Stage Crusher	1	\$2,714	\$2,714
Screening Plants	2	\$367	\$734
Original Calibration	1	\$680	\$680

SUB TOTAL FOR SET UP COSTS

\$4,495

TOTAL MOBILIZATION & SET UP COSTS

\$15,616

2) CLEARING & GRUBBING

DESCRIPTION	QUANTITY	UNIT	RATE	COST
Clear Slash and Stumps (1 exc.)	24.0	hr	\$195	\$4,680
Pile & Burn Slash and Stumps(1 exc)	24.0	hr	\$127	\$3,048
Move-in Fire Truck for the burning of the Clearing Debris	1.0	ea	\$238	\$238

TOTAL CLEARING & GRUBBING COSTS

\$7,966

3) EXCAVATION

MATERIAL DESCRIPTION	QUANTITY	UNIT	RATE	COST
Overburden Removal (excavate, load haul, spread)	1,500	CY	\$4.99	\$7,485

TOTAL EXCAVATION COSTS

\$7,485

4) DEVELOP ROCK

ROCK SUMMARY			METHOD	%	QUANTITY	RATE	COST
Type	Cu. yd. Vol.	Weight	Ripping	50%	6,723	\$3.80	\$25,546
crushed	13,445	100%	Drill & shoot	50%	6,857	\$3.90	\$26,742
pit run	0	0	Oversize red	2%	269	\$7.70	\$2,071
rip rap	0	0	Other				
Total	13,445						
reject	269	2.0%					

TOTAL ROCK DEVELOPMENT COSTS

\$54,358

5) CALIBRATION & TESTING

DESCRIPTION	NO.	\$/TEST	COST
Calibrate	1	\$558.00	\$558
Calibrate			
Test	6	\$63.60	\$382
Test			

TOTAL CALIBRATION & TESTING COSTS

\$940

6) FEEDING & LOADING

DESCRIPTION	CU. YD. QUANTITY	COST CU. YD.	TOTAL COST
Dig & Feed Rock	13,714	\$1.06	\$14,554

TOTAL FEEDING & LOADING COSTS

\$14,554

7) ROCK CRUSHING

ROCK SIZE	ROCK TYPE	CU. YD. QUANTITY	CRUSHER TYPE	HOURLY PRODUCTION	RATE CU. YD.	TOTAL COST
3/4"-0"	crushed		3 stage w/s	110		
1-1/2"-0"	crushed	7,333	3 stage w/s	120	\$4.02	\$29,454
4"-0"	crushed	6,112	2 stage w/s	140	\$3.07	\$18,773

TOTAL ROCK CRUSHING COSTS

\$48,227

8) STOCKPILING

STOCKPILE SITE PREPARATION

Equipment	Hours	Rate	Total
Dozer	2	\$180.00	\$360.00
Compactor		\$97.00	
Grader		\$126.00	
Excavator		\$195.00	

Rock for Floor (CY)	\$/CY Haul	Total

\$360.00

SUB TOTAL

\$360

HAUL & STOCKPILE

STOCKPILE LOCATION	SIZE	# of TRUCKS	CU. YDS.	RATE	COST
1. Sterling Ridge Quarry	4"-0" Crushed	1	2,000	\$1.42	\$2,840
2. Sterling Ridge Quarry	1 1/2"-0" Crushed	1	2,000	\$1.42	\$2,840
3.					
4.					
5.					
6.					

SUB TOTAL

\$5,681

TOTAL STOCKPILING COSTS

\$6,041

9) MISCELLANEOUS COSTS

DESCRIPTION	COST
Load, Haul, and Spread the reject material at the waste area.	\$538
\$2.00 /CY 269 CY	
Final Quarry Dev., Access Road Const., Waterbarring, Drainage, Block Quarry Access	\$2,340
Waste Area Seed and Mulch	\$688
20 straw bales, 10lbs of seed, 8hrs of labor to spread	

TOTAL MISCELLANEOUS COSTS

\$3,566

10) GRAND TOTAL:

\$158,752

\$/Cubic Yard \$11.81

Footnotes:

HAUL and STOCKPILE COST

SALE NAME: Cronin Too
 QUARRY: Sterling Ridge ROCK TYPE: Crushed

Location 1. Sterling Ridge Qi 4"-0" Crushed		ONE WAY HAUL IN MILES						
		50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH
								0.02
Truck type:	D20	No. trucks:				Ave haul:	\$0.85 /cy	
Delay min.:	8	Efficiency:	85%			Load:	\$0.00 /cy	
Truck type:	D12	No. trucks:	1			Stockpile:	\$0.57 /cy	
Delay min.:	5	Efficiency:	85%					
Truck type:		No. trucks:				Production: cy/day =	1,035	
Delay min.:	5	Efficiency:	85%					
Location 1. Sterling Ridge Quarry		Haul and Stockpile Cost				\$1.42 /cy		

Location 2. Sterling Ridge Qi 1 1/2"-0" Crushed		ONE WAY HAUL IN MILES						
		50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH
								0.02
Truck type:	D20	No. trucks:				Ave haul:	\$0.85 /cy	
Delay min.:	8	Efficiency:	75%			Load:	\$0.00 /cy	
Truck type:	D12	No. trucks:	1			Stockpile:	\$0.57 /cy	
Delay min.:	5	Efficiency:	85%					
Truck type:	D10	No. trucks:				Production: cy/day =	1,035	
Delay min.:	5	Efficiency:	85%					
Location 2. Sterling Ridge Quarry		Haul and Stockpile Cost				\$1.42 /cy		

Location 3. 0 0		ONE WAY HAUL IN MILES						
		50 MPH	30 MPH	25 MPH	20 MPH	15 MPH	10 MPH	5 MPH
Truck type:	D20	No. trucks:				Ave haul:	/cy	
Delay min.:	15	Efficiency:	75%			Load:	/cy	
Truck type:	D12	No. trucks:				Stockpile:	/cy	
Delay min.:	12	Efficiency:	75%					
Truck type:	D10	No. trucks:				Production: cy/day =	0	
Delay min.:	10	Efficiency:	75%					
Location 3. 0		Haul and Stockpile Cost				/cy		

Timber Sale		
Piling and Burning Costs		
Work Description	C330	Labor
Cronin Waste Area Site	50.00	24.00
Unit 2	20.00	8.00
Total Quantity (Hours)	70.00	32.00
Mobilization	\$1,755.00	\$108.00
Rates	\$195.00	\$50.00
Total Dollars	\$15,405	\$1,708

Total Cost	\$17,113
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CRUSHED ROCK COST

SALE NAME:	Cronin Too
PROJECT:	Project No. 1 & 2
Stockpile:	Lost Lake

DATE: 01/08/2026
BY: C. Hatcher

[illegible]

ROCK HAUL:

Truck type:	<u>D20</u>	No. trucks:	<u>2</u>
Delay min.:	<u>8</u>	Efficiency:	<u>85%</u>

Ave haul:	\$8.51	/cy
Load:	\$0.59	/cy
Spread:	\$1.20	/cy

Truck type: D12 No. trucks: 5
 Delay min.: 6 Efficiency: 85%

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

Production: cy/day = 753

CRUSHED ROCK HAUL COSTS 5,008 cy @ \$10.30 /cy

CRUSHED ROCK COST

SALE NAME: Cronin Too

DATE: 01/08/2026

PROJECT: Project No. 1 & 2
Stockpile: Quartz and Sterling

MATERIAL: 3/4"-0", 1 1/2"-0",
& 4"-0"

BY: C. Hatcher

[illegible]

ROCK HAUL:

Truck type:	<u>D20</u>	No. trucks:	<u>2</u>
Delay min.:	<u>8</u>	Efficiency:	<u>85%</u>

Ave haul:	\$7.26	/cy
Load:	\$0.48	/cy
Spread:	\$1.07	/cy

Truck type:	<u>D12</u>	No. trucks:	<u>5</u>
Delay min.:	<u>6</u>	Efficiency:	<u>85%</u>

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

Production: cy/day = 883

CRUSHED ROCK HAUL COSTS

8,768 cy @ \$8.81 /cy

PIT RUN ROCK COST

SALE NAME: Cronin Too
PROJECT: Project No.1
BORROW: 1I to 1J, Area 2 drill/shoot,
Roundabout Quarry

DATE: 01/08/2026
BY: C. Hatcher

[illegible]

ROCK HAUL:

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

Ave haul:	\$2.81	/cy
Load:	\$0.53	/cy
Spread:	\$0.87	/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 = 1,251

PIT RUN ROCK HAUL COSTS

714 cy @ \$4.21 /cy

Projects Road Maintenance Cost Summary

Sale: Cronin Too
Date: 08-Jan-26
By: Cole Hatcher

Type	Equipment/Rationale			Hours	Rate	Cost	
Project Work	Grader 14G			30	\$126	\$3,780	
Final Haul	Vibratory Roller			30	\$97	\$2,910	
Road Maintenance	Water Truck 2,500 gallon			8	\$113	\$904	
Total							\$7,594

Production Rates

Grader

Vibratory Roller

Miles/day	Distance(miles)	Days
1.5	4.49	3.0
1.5	4.49	3.0

NOTE: Sterling Ranch Road	1.57	Miles
Lost Lake Roads	2.92	Miles
		Miles
		Miles
TOTAL=	4.49	Miles

Cronin Too TIMBER CRUISE REPORT FY 2026

1. **Sale Area Location:** Portions of Sections 29, 31, 32, & 33 of T4N, R7W, W.M., Clatsop County, OR.
2. **Fund Distribution:** BOF 100% Tax Code: 8-01 (100%)
3. **Sale Acreage by Area:**

Unit	Harvest Type	Gross Acres	Non-Stocked Area	Stream Buffer Acres	Reserve Tree Area	Existing R/W Acres	New R/W	Net Acres	Survey Method
1	Clearcut	120	3	22	7	<1	-	88	GIS
2	Clearcut	96	5	10	7	1	-	73	GIS
3	Clearcut	114	4	15	6	1	-	88	GIS
4	R/W	<1	-	-	-	-	<1	<1	LxW
TOTAL		330	12	47	20	2	<1	249	

4. Cruisers and Cruise Dates: Avery Petersen, Ryan Simpson, John Czarnecki, Kevin Berry, and Michele Huffman (10/09/2025-10/21/2025)

5. Cruise Method and Computation:

Unit 1 and Unit 2: Unit 1 and Unit 2 were variable plot cruised with a 40 BAF for conifers and a 33.61 BAF for hardwoods. A total of 73 plots were sampled on a 7.5 by 3 chain spacing with a count to grade ratio of 2:1, resulting in 29 grade plots and 44 count plots. Four count plot were dropped due either to inaccessibility or being on or over the timber sale boundary.

Unit 3: Unit 3 was variable plot cruised with a 40 BAF for conifers and a 33.61 BAF for hardwoods. A total of 42 plots were sampled on a 7 by 3 chain spacing with a count to grade ratio of 2:1, resulting in 15 grade plots and 27 count plots. One count plot was dropped due to it landing on an existing road. Plot numbers differ from those in the statistics due to three zero-tree plots as well as minor species being graded on two count plots.

Unit 4 (R/W) consists of approximately 5 acres of non-stocked right-of-way and less than one acre of timber similar to U3.

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
Units 1 & 2	CRONINT	U12	00CC	161
Unit 3	CRONINT	U3	00CC	88

6. Timber Description:

Unit 1 and Unit 2 are clearcuts with an average age of 70 years. The stands consist of Douglas-fir, western hemlock, and red alder, with minor components of bigleaf maple. The average take Douglas-fir is approximately 19 inches DBH and 58 feet to a merchantable top. The average take western hemlock is approximately 21 inches DBH and 63 feet to a merchantable top. The average take red alder is approximately 16 inches DBH and 50 feet to a merchantable top. The average take bigleaf maple is approximately 17 inches DBH and 40 feet to a merchantable top. Average net volume to be harvested per acre is 24 MBF. All trees were cruised to a merchantable top of six inches DIB, 40% of form point, or an otherwise anticipated break point.

Unit 3 is a clearcut with an average age of 84 years. The stand consists of Douglas-fir, western hemlock, and red alder, with minor components of bigleaf maple. The average take Douglas-fir is approximately 20 inches DBH and 78 feet to a merchantable top. The average take western hemlock is approximately 13 inches DBH and 37 feet to a merchantable top. The average take red alder is approximately 15 inches DBH and 48 feet to a merchantable top. The average take bigleaf maple is approximately 14 inches DBH and 38 feet to a

merchantable top. Average net volume to be harvested per acre is 26 MBF. All trees were cruised to a merchantable top of six inches DIB, 40% of form point, or an otherwise anticipated break point.

7. Statistical Analysis and Stand Summary:

Statistics for Stand B.F. volumes

Type	Estimated CV	Target SE%	Actual CV	Actual SE%
U12	55%	13%	44.1%	5.2%
U3	55%	13%	54.3%	8.4%

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	19"	3,833	2,578	1,043	212	0.5%	63%
Western hemlock	14"	664	310	263	91	1.6%	11%
TOTALS	--	4,497	2,888	1,306	303	--	--

Hardwood

Species	DBH	Net Vol.	12"+	10"-11"	8"-9"	6"-7"	% D & B	% Sale
Red alder	15"	1,482	386	429	269	398	0.9%	24%
Bigleaf maple	16"	113	45	30	25	13	0.3%	2%
TOTALS	--	1,595	431	459	294	411	--	--

TOTAL VOLUME	6,092 MBF
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9. Approvals:

Prepared by: Michele Huffman Date: 11/04/2025
Unit Forester Approval: [Signature] Date: 11/12/2026

10. **Attachments:** Cruise Design and Maps (5 pages)
Volume Reports (3 pages)
Statistics Report (10 pages)
Log Stock Table (3 pages)
Stand Table Summary (2 pages)

**CRUISE DESIGN
ASTORIA DISTRICT**

Sale Name: Cronin Too

Units U12

Harvest Type: Modified Clearcut

Approx. Cruise Acres: 161 **Estimated CV%** 55 Net BF/Acre **SE% Objective** 13% Net BF/Acre

Planned Sale Volume: 3,718 MBF **Estimated Sale Area Value/Acre:** \$4,798/Acre

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

(b) Sample 73 plots (29 grade/44 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: Conifer BAF: 40
Hardwood BAF: 33.61

Cruise Line Direction: U1: 140°/320°

U2: 0°/180°

Cruise Line Spacing 7.5 (chains) 495 (Feet)

Cruise Plot Spacing 3 (chains) 198 (Feet)

Grade/Count Ratio 1:2

Take plots as marked on cruise map.

Grade minor species (true fir, spruce, 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 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.

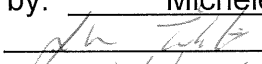
6. Species, Sort, and Grade Codes:

- 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.

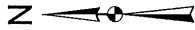
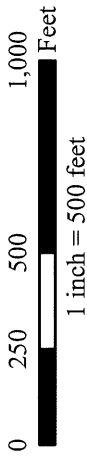
Cruise Design by: Michele Huffman
Approved by: 
Date: 10/9/2025

TIMBER CRUISE MAP

CRONIN TOO
PORTIONS OF SECTIONS 29, 31,
32, & 33, T4N, R7W, W.M.,
CLATSOP COUNTY, OREGON

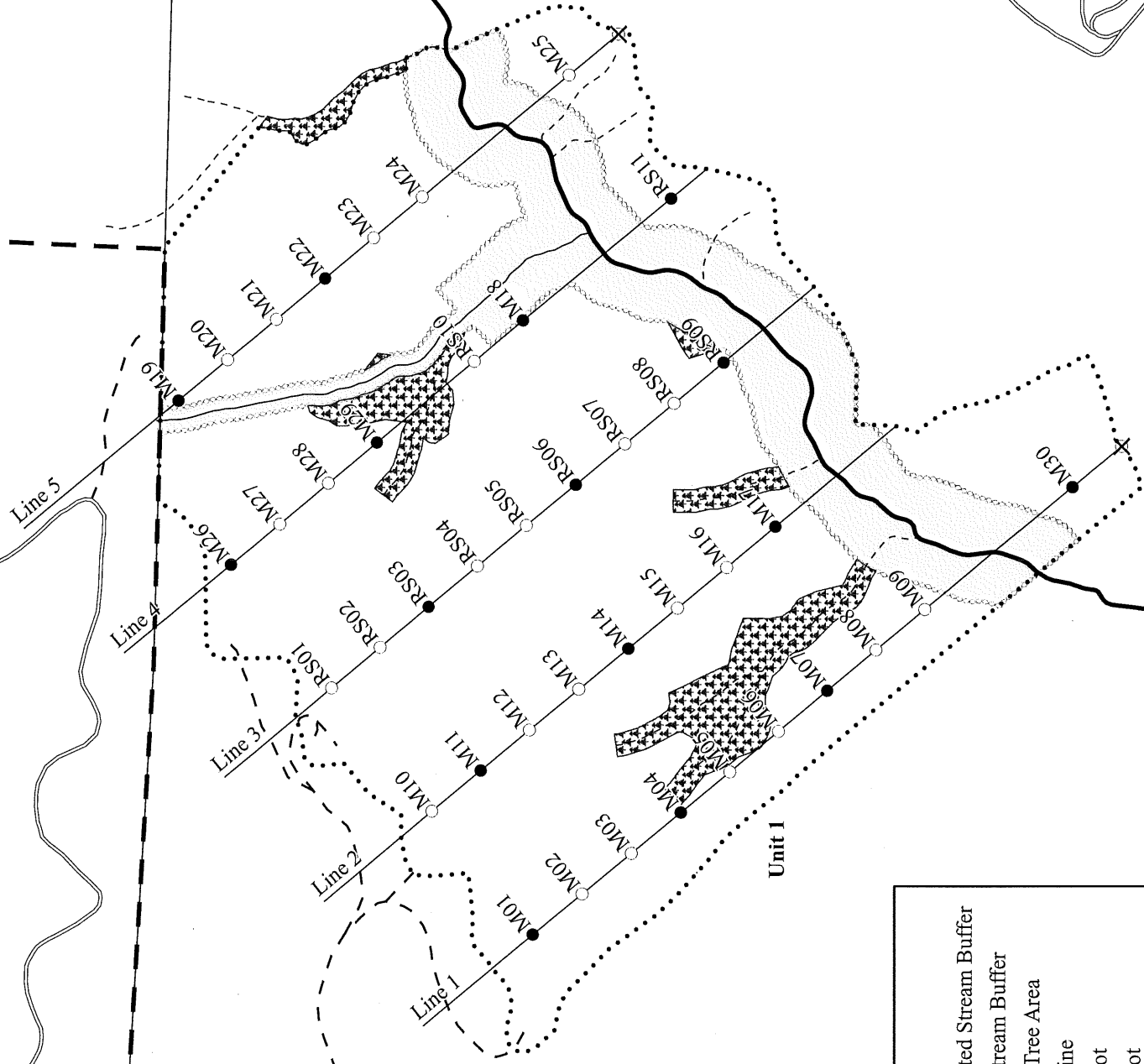
U12 Cruise

Approximate Net Acres: 161
BAF: 40 (Conifers) / 33.61 (Hardwoods)
Unit 1 Azimuth: 140°/320°
Unit 2 Azimuth: 0°/180°
Line Spacing: 7.5 ch. (495 feet)
Plot Spacing: 3 ch. (198 feet)
Grade Plots: 29
Count Plots: 44
Total Plots: 73



Legend

- | | |
|---------------------------|--------------------------|
| Ownership Boundary | Non-Posted Stream Buffer |
| Timber Sale Boundary | Posted Stream Buffer |
| Surfaced Road | Reserve Tree Area |
| New Road Construction | Cruise Line |
| Type F Stream | Count Plot |
| Type N Stream - Perennial | Grade Plot |
| Type N Stream - Seasonal | Dropped Plot |

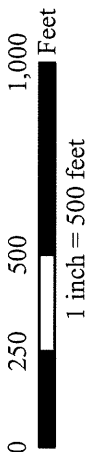
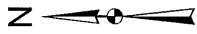


TIMBER CRUISE MAP

CRONIN TOO
PORTIONS OF SECTIONS 29, 31,
32, & 33, T4N, R7W, W.M.,
CLATSOP COUNTY, OREGON

U12 Cruise

Approximate Net Acres: 161
BAF: 40 (Conifers) / 33.61 (Hardwoods)
Unit 1 Azimuth: 140°/320°
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Line Spacing: 7.5 ch. (495 feet)
Plot Spacing: 3 ch. (198 feet)
Grade Plots: 29
Count Plots: 44
Total Plots: 73



Legend

- | | |
|---------------------------|--------------------------|
| Ownership Boundary | Non-Posted Stream Buffer |
| Timber Sale Boundary | Posted Stream Buffer |
| Surfaced Road | Reserve Tree Area |
| New Road Construction | Cruise Line |
| Type F Stream | Count Plot |
| Type N Stream - Perennial | Grade Plot |
| Type N Stream - Seasonal | Dropped Plot |

STATE
PRIVATE

Line 12

Line 11

Line 10

Line 9

Line 8

Line 7

Line 6

Unit 2

CZ01

CZ07

CZ02

CZ03

CZ04

CZ05

CZ06

AP01

AP02

AP03

AP04

AP05

KB01

KB02

KB03

CZ09

CZ10

CZ11

CZ12

AP06

AP07

AP08

AP09

AP10

AP11

AP12

KB04

KB05

KB06

KB07

KB08

29-28

32-33

**CRUISE DESIGN
ASTORIA DISTRICT**

Sale Name: Cronin Too

Units U3

Harvest Type: Modified Clearcut

Approx. Cruise Acres: 88 **Estimated CV%** 55 Net BF/Acre **SE% Objective** 13% Net BF/Acre

Planned Sale Volume: 2,002 MBF **Estimated Sale Area Value/Acre:** \$4,798/Acre

A. Cruise Goals: (a) Grade minimum 80 conifer trees.
(b) Sample 43 plots (15 grade/ 28 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: Conifer BAF: 40
Hardwood BAF: 33.61

Cruise Line Direction:

U3: 360°/180°

Cruise Line Spacing 7 (chains) 462 (Feet)

Cruise Plot Spacing 3 (chains) 198 (Feet)

Grade/Count Ratio 1:2

Take plots as marked on cruise map.

Grade minor species (true fir, spruce, 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 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.

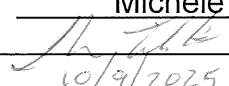
6. Species, Sort, and Grade Codes:

- 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.

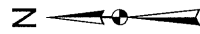
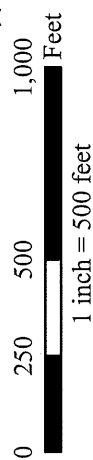
Cruise Design by: Michele Huffman
Approved by: 
Date: 10/9/2025

TIMBER CRUISE MAP

CRONIN TOO
PORTIONS OF SECTIONS 29, 31,
32, & 33, T4N, R7W, W.M.,
CLATSOP COUNTY, OREGON

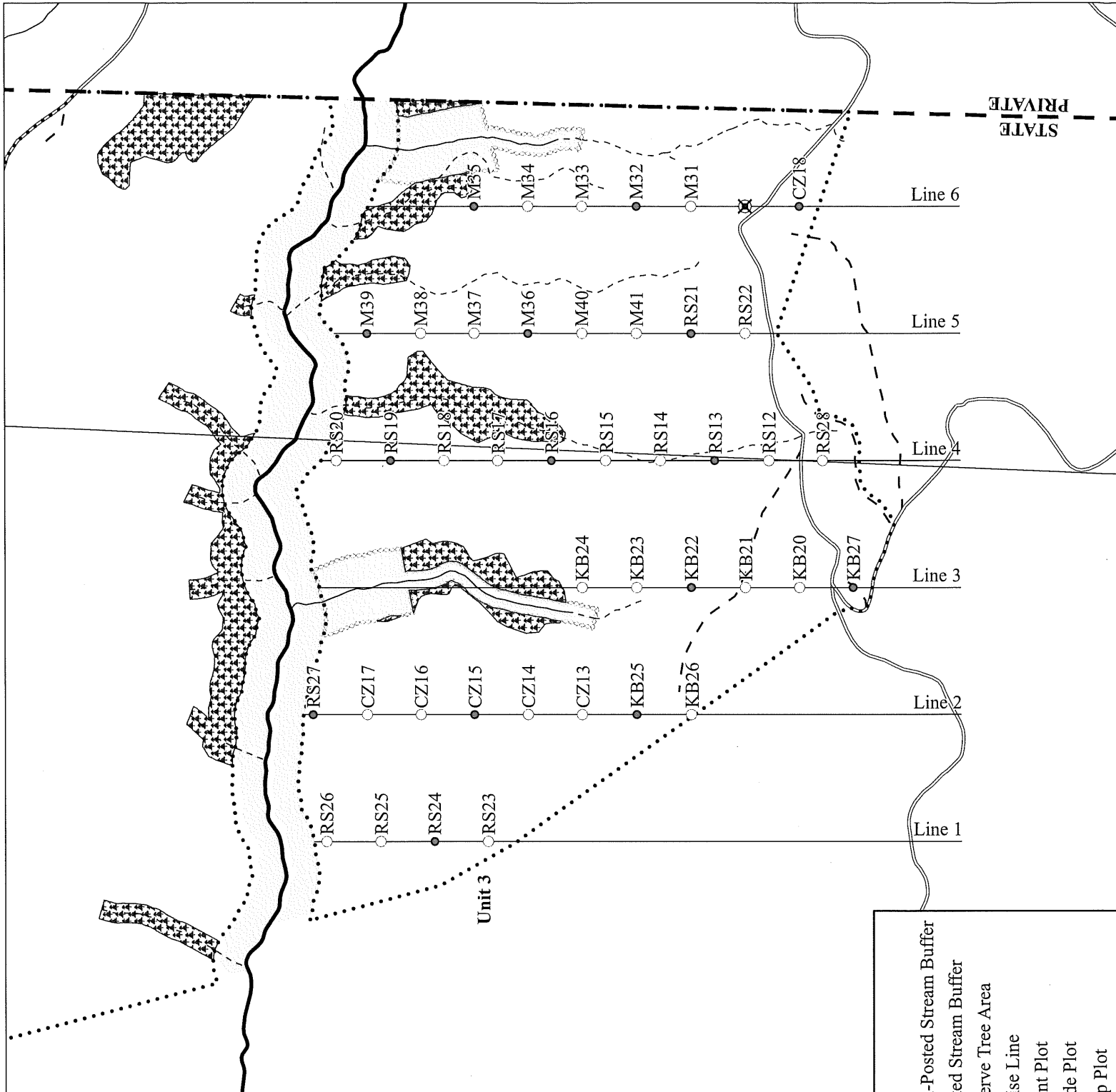
U3 Cruise

Approximate Net Acres: 88
BAF: 40 (Conifers) / 33.61 (Hardwoods)
Unit 3 Azimuth: 0°/180°
Line Spacing: 7 ch. (462 feet)
Plot Spacing: 3 ch. (198 feet)
Grade Plots: 15
Count Plots: 27
Total Plots: 42



Legend

- | | | | |
|--|---------------------------|--|--------------------------|
| | Ownership Boundary | | Non-Posted Stream Buffer |
| | Timber Sale Boundary | | Posted Stream Buffer |
| | Surfaced Road | | Reserve Tree Area |
| | New Road Construction | | Cruise Line |
| | Type F Stream | | Count Plot |
| | Type N Stream - Perennial | | Grade Plot |
| | Type N Stream - Seasonal | | Drop Plot |



TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																		
T04N R07W S31 Ty00CC 88.00 T04N R07W S32 Ty00CC 161.00				Project: CRONINT Acres 249.00												Page 1 Date 11/3/2025 Time 2:20:17PM						
Spp	S T	So rt	Gr 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		67	.3	10,389	10,355	2,578		1	49	50		3	1	95	39	15	382	2.25	27.1	
D		DO3S		27	.3	4,202	4,188	1,043		93	4	3		2	13	20	66	35	9	96	0.83	43.5
D		DO4S		6	3.4	881	852	212		100				55	41	5		21	6	27	0.48	31.1
D Totals				63	.5	15,472	15,395	3,833		31	34	34		3	8	6	82	32	10	151	1.22	101.7
H		DO2S		46	.5	1,253	1,246	310			51	49			12	88	39	15	387	2.30	3.2	
H		DO3S		40	3.4	1,094	1,057	263		87	13			2	19	24	55	34	9	94	0.89	11.2
H		DO4S		14		364	364	91		100				70	30			19	6	23	0.40	15.6
H Totals				11	1.6	2,710	2,666	664		48	29	23		10	12	15	63	27	8	89	0.92	30.1
M		DOCU															30	10		0.00	1.0	
M		DO1S		39	.8	181	180	45			100			25	42	12	21	26	14	179	1.78	1.0
M		DO2S		27		119	119	30		100				35		36	29	26	10	95	0.93	1.3
M		DO3S		22		99	99	25		100				16	16	57	11	26	8	62	0.86	1.6
M		DO4S		12		54	54	13		100				46	24		30	22	6	30	0.55	1.8
M Totals				2	.3	452	451	113 142		60	40			28	23	27	22	26	9	68	0.79	6.6
A		DOCU															9	9		0.00	1.3	
A		DO1S		26	1.0	1,564	1,548	386			95	5		4	23	20	53	33	13	200	1.66	7.7
A		DO2S		28	1.3	1,744	1,722	429		100					10		90	37	10	150	1.15	11.5
A		DO3S		19	.5	1,085	1,080	269		100				4	16	13	68	34	9	87	0.80	12.4
A		DO4S		27	.8	1,614	1,600	398		100				29	20	17	34	25	7	38	0.57	42.2
A Totals				24	.9	6,007	5,951	1,482		74	25	1		9	17	12	61	29	8	79	0.85	75.2
Totals					0.7	24,642	24,463	6,012 6,001		44	31	24		6	11	9	74	30	9	115	1.05	213.6

T	TSPCSTGR	Species, Sort Grade - Board Foot Volumes (Type)													Page	1			
		Project: CRONINT													Date	11/3/2025			
															Time	2:20:17PM			
T04N R07W S32 T00CC										T04N R07W S32 T00CC									
Twp	Rge	Sec	Tract		Type	Acres	Plots		Sample Trees		CuFt		BdFt						
04N	07W	32	U12TAKE		00CC	161.00	73		153		1		W						
S So Gr T rt 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	Lf								
D	DO	2S	65	.5	10,909	10,860	1,748	1	48	51	5	2	94	39	15	375	2.27	28.9	
D	DO	3S	28	.2	4,748	4,737	763	90	5	5	2	14	22	62	35	9	97	0.86	48.7
D	DO	4S	7	4.2	1,097	1,051	169	100			45	50	6		22	6	28	0.50	37.1
D Totals			70	.6	16,755	16,648	2,680	33	32	35	3	10	8	79	32	10	145	1.21	114.8
A	DO	CU													5	10		0.00	1.2
A	DO	1S	33		1,911	1,911	308			100	4	27	18	50	32	13	190	1.62	10.0
A	DO	2S	22	2.2	1,295	1,266	204	100				15		85	36	10	143	1.16	8.9
A	DO	3S	15		833	833	134	100			7	11	14	68	32	9	86	0.82	9.7
A	DO	4S	30	1.2	1,705	1,685	271	100			24	22	9	45	27	7	40	0.61	42.3
A Totals			24	.9	5,744	5,695	917	66	34		10	20	11	59	29	8	79	0.88	72.2
M	DO	CU													30	10		0.00	1.5
M	DO	1S	43	1.0	206	204	33			100	27	58	16		25	14	193	1.98	1.1
M	DO	2S	28		131	131	21	100			50		50		23	10	83	0.91	1.6
M	DO	3S	20		93	93	15	100			18		64	18	29	8	66	0.86	1.4
M	DO	4S	9		38	38	6	100			100				17	6	22	0.46	1.7
M Totals			2	.5	468	465	75	56	44		38	25	34	4	25	9	63	0.75	7.3
H	DO	2S	45		416	416	67			100				100	40	23	975	4.50	.4
H	DO	3S	51	2.2	483	472	76	60	40			34	8	58	34	11	146	1.33	3.2
H	DO	4S	4		35	35	6	100			100				17	6	20	0.52	1.8
H Totals			4	1.2	934	923	149	35	20	45	4	17	4	75	29	10	170	1.52	5.4
Type Totals				.7	23,900	23,732	3,821	41	32	26	6	13	9	72	30	9	119	1.09	199.7

T TSPCSTGR		Species, Sort Grade - Board Foot Volumes (Type)										Page 1								
Project: CRONINT										Date	11/3/2025									
										Time	2:20:17PM									
T04N R07W S31 T00CC										T04N R07W S31 T00CC										
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt											
04N	07W	31	U3TAKE	00CC	88.00	42	91	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/ Lf	
									</											

TC PSTATS			PROJECT STATISTICS						PAGE	1	
			PROJECT		CRONINT					DATE	12/11/2025
TWP	RGE	SC	TRACT	TYPE		ACRES		PLOTS	TREES	CuFt	BdFt
04N	07	31	U3TAKE	00CC		249.00		115	591	1	W
04N	07W	32	U12TAKE	00CC							
				TREES		ESTIMATED TOTAL		PERCENT SAMPLE			
			PLOTS	TREES	PER PLOT		TREES	TREES			
TOTAL			115	591	5.1						
CRUISE			45	244	5.4		31,822		.8		
DBH COUNT											
REFOREST											
COUNT			67	336	5.0						
BLANKS			3								
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			115	54.6	18.7	63	24.0	103.9	15,472	15,395	3,979
R ALDER			85	46.8	15.3	49	15.3	59.9	6,007	5,951	1,868
WHEMLOCK			27	21.8	13.8	39	6.1	22.7	2,710	2,666	749
BL MAPLE			17	4.5	16.1	40	1.6	6.5	452	451	134
TOTAL			244	127.8	16.6	53	47.3	193.0	24,642	24,463	6,729
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		87.8	8.2	452	492	533					
R ALDER		55.0	6.0	144	153	162					
WHEMLOCK		140.3	27.5	224	309	393					
BL MAPLE		78.4	19.6	98	122	146					
TOTAL		112.9	7.2	304	328	352	509	127	57		
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		106.6	9.9	49	55	60					
R ALDER		127.3	11.9	41	47	52					
WHEMLOCK		265.8	24.8	16	22	27					
BL MAPLE		320.8	29.9	3	5	6					
TOTAL		62.6	5.8	120	128	135	156	39	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		92.4	8.6	95	104	113					
R ALDER		124.7	11.6	53	60	67					
WHEMLOCK		229.5	21.4	18	23	28					
BL MAPLE		300.8	28.0	5	6	8					
TOTAL		44.9	4.2	185	193	201	81	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		89.9	8.4	14,105	15,395	16,685					
R ALDER		127.7	11.9	5,243	5,951	6,659					
WHEMLOCK		229.3	21.4	2,097	2,666	3,236					
BL MAPLE		356.8	33.2	301	451	601					
TOTAL		48.2	4.5	23,366	24,463	25,560	93	23	10		

TC TSTATS				STATISTICS				PAGE	1		
				PROJECT	CRONINT	DATE 12/11/2025					
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
04N	07W	32	U12TAKE	00CC	161.00	73	380	1	W		
				TREES	ESTIMATED	PERCENT					
				PER PLOT	TOTAL	SAMPLE					
					TREES	TREES					
TOTAL				73	380	5.2					
CRUISE				28	153	5.5	18,791	.8			
DBH COUNT											
REFOREST											
COUNT				45	227	5.0					
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		88	65.7	18.5	58	28.4	122.2	16,755	16,648	4,418	
R ALDER		50	43.7	15.9	50	15.0	59.9	5,744	5,695	1,833	
BL MAPLE		11	4.7	16.9	40	1.8	7.4	468	465	136	
WHEMLOCK		4	2.6	20.6	63	1.3	6.0	934	923	238	
TOTAL		153	116.7	17.5	55	46.7	195.4	23,900	23,732	6,625	
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		95.3	10.1	413	459	506					
R ALDER		51.8	7.3	141	152	163					
BL MAPLE		80.6	25.5	91	123	154					
WHEMLOCK		139.2	79.5	141	688	1,234					
TOTAL		116.3	9.4	309	341	373	540	135	60		
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		90.2	10.5	59	66	73					
R ALDER		126.8	14.8	37	44	50					
BL MAPLE		290.2	33.9	3	5	6					
WHEMLOCK		323.6	37.8	2	3	4					
TOTAL		47.1	5.5	110	117	123	88	22	10		
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		81.5	9.5	111	122	134					
R ALDER		126.7	14.8	51	60	69					
BL MAPLE		276.8	32.4	5	7	10					
WHEMLOCK		325.7	38.1	4	6	8					
TOTAL		39.9	4.7	186	195	205	64	16	7		
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		82.8	9.7	15,036	16,648	18,261					
R ALDER		130.8	15.3	4,824	5,695	6,566					
BL MAPLE		313.2	36.6	295	465	636					
WHEMLOCK		343.3	40.1	552	923	1,293					
TOTAL		44.3	5.2	22,501	23,732	24,962	79	20	9		

TC TSTATS				STATISTICS				PAGE	1		
				PROJECT	CRONINT	DATE 12/11/2025					
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
04N	07W	31	U3TAKE	00CC	88.00	42	211	1	W		
				TREES	ESTIMATED	PERCENT					
				PER PLOT	TOTAL	SAMPLE					
					TREES	TREES					
TOTAL				42	211	5.0					
CRUISE				17	91	5.4	13,030	.7			
DBH COUNT											
REFOREST											
COUNT				22	109	5.0					
BLANKS				3							
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		27	34.1	19.5	78	16.0	70.5	13,126	13,101	3,176	3,176
R ALDER		35	52.7	14.5	48	15.8	60.0	6,488	6,419	1,931	1,931
WHEMLOCK		23	57.0	13.1	37	14.7	53.3	5,961	5,856	1,682	1,682
BL MAPLE		6	4.2	14.4	38	1.3	4.8	424	424	132	132
TOTAL		91	148.1	15.3	50	48.3	188.6	26,000	25,801	6,921	6,921
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		67.1	13.1	520	599	678					
R ALDER		60.0	10.1	139	154	170					
WHEMLOCK		105.7	22.5	188	243	297					
BL MAPLE		81.8	36.4	77	122	166					
TOTAL		105.5	11.1	273	306	340	445	111	49		
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		143.8	22.2	27	34	42					
R ALDER		128.3	19.8	42	53	63					
WHEMLOCK		156.4	24.1	43	57	71					
BL MAPLE		386.1	59.5	2	4	7					
TOTAL		76.1	11.7	131	148	165	231	58	26		
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		109.1	16.8	59	70	82					
R ALDER		122.1	18.8	49	60	71					
WHEMLOCK		144.1	22.2	41	53	65					
BL MAPLE		364.9	56.3	2	5	8					
TOTAL		53.8	8.3	173	189	204	115	29	13		
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		104.2	16.1	10,996	13,101	15,206					
R ALDER		124.2	19.1	5,190	6,419	7,648					
WHEMLOCK		148.9	22.9	4,512	5,856	7,200					
BL MAPLE		444.0	68.4	134	424	715					
TOTAL		54.3	8.4	23,642	25,801	27,960	118	29	13		

TC TSTATS				STATISTICS				PAGE	1		
				PROJECT	CRONINT	DATE				12/11/2025	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
04N	07W	32	U12	00CC	161.00	73	390	1	W		
				TREES	ESTIMATED	PERCENT					
				PER PLOT	TOTAL	SAMPLE					
					TREES	TREES					
STAND SUMMARY											
				AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
				DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC

TC TSTATS				STATISTICS				PAGE	2
				PROJECT	CRONINT			DATE	12/11/2025
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
04N	07W	32	U12	00CC	161.00	73	390	1	W
CL:	68.1 %	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
TOTAL		44.1	5.2	22,530	23,757	24,983	78	19	9

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	CRONINT	DATE 12/11/2025				
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
04N	07W	31	U3	00CC	88.00	42	218	1	W	
				TREES	ESTIMATED	PERCENT				
				TOTAL	SAMPLE					
				PLOTS	TREES	PER PLOT	TREES	TREES		
TOTAL		42	218	5.2						
CRUISE		17	92	5.4	13,299	.7				
DBH COUNT										
REFOREST										
COUNT		22	114	5.2						
BLANKS		3								
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		27	34.1	19.5	78	16.0	70.5	13,126	13,101	3,176
R ALDER		35	52.7	14.5	48	15.8	60.0	6,488	6,419	1,931
WHEMLOCK		23	57.0	13.1	37	14.7	53.3	5,961	5,856	1,682
SNAG		1	3.1	20.0	46	1.5	6.7			
BL MAPLE		6	4.2	14.4	38	1.3	4.8	424	424	132
TOTAL		92	151.1	15.4	50	49.8	195.3	26,000	25,801	6,921
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		67.1	13.1	520	599	678				
R ALDER		60.0	10.1	139	154	170				
WHEMLOCK		105.7	22.5	188	243	297				
SNAG										
BL MAPLE		81.8	36.4	77	122	166				
TOTAL		106.6	11.1	269	303	337	454	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		143.8	22.2	27	34	42				
R ALDER		128.3	19.8	42	53	63				
WHEMLOCK		156.4	24.1	43	57	71				
SNAG		262.3	40.4	2	3	4				
BL MAPLE		386.1	59.5	2	4	7				
TOTAL		73.5	11.3	134	151	168	216	54	24	
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		109.1	16.8	59	70	82				
R ALDER		122.1	18.8	49	60	71				
WHEMLOCK		144.1	22.2	41	53	65				
SNAG		262.3	40.4	4	7	9				
BL MAPLE		364.9	56.3	2	5	8				
TOTAL		51.0	7.9	180	195	211	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		104.2	16.1	10,996	13,101	15,206				
R ALDER		124.2	19.1	5,190	6,419	7,648				
WHEMLOCK		148.9	22.9	4,512	5,856	7,200				
SNAG										
BL MAPLE		444.0	68.4	134	424	715				
TOTAL		54.3	8.4	23,642	25,801	27,960	118	29	13	

TC PLOGSTVB			Log Stock Table - MBF																
T04N R07W S31 Ty00CC 88.00					Project: CRONINT										Page 1				
T04N R07W S32 Ty00CC 161.00					Acres 249.00										Date 11/3/2025				
															Time 2:23:38PM				
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+
D	DO	2S	24	41		41	1.1							19	22				
D	DO	2S	26	19		19	.5						9	10					
D	DO	2S	28	20		20	.5									20			
D	DO	2S	30	10		10	.3						10						
D	DO	2S	32	26		26	.7								26				
D	DO	2S	34	5		5	.1							5					
D	DO	2S	36	12		12	.3						12						
D	DO	2S	40	2,454		2,446	63.8					20	393	580	989	388	39	36	
D	DO	3S	16	8		8	.2					8							
D	DO	3S	20	9		9	.2				9								
D	DO	3S	24	61		61	1.6			2	3	57							
D	DO	3S	26	7		7	.2				3	4							
D	DO	3S	28	18		18	.5				14	4							
D	DO	3S	30	49		49	1.3			4	18	15			13				
D	DO	3S	32	176	1.0	174	4.5			11	79	84							
D	DO	3S	34	31		31	.8			20	11								
D	DO	3S	36	85		85	2.2			22	63								
D	DO	3S	40	602		601	15.7			183	165	193		25		36			
D	DO	4S	12	11		11	.3			10	1								
D	DO	4S	14	1		1	.0				1								
D	DO	4S	16	42		42	1.1			31	9	2							
D	DO	4S	18	10		10	.3			10									
D	DO	4S	20	51		51	1.3			46	5								
D	DO	4S	24	48		48	1.3			45	3								
D	DO	4S	26	3		3	.1			3									
D	DO	4S	28	24	8.7	22	.6			22									
D	DO	4S	30	16	17.3	14	.4			14									
D	DO	4S	32	12	20.0	10	.3			10									
D	Totals			3,853		3,833	62.9			431	383	388	424	638	1050	443	39	36	
H	DO	2S	32	37		37	5.6					10				27			
H	DO	2S	40	275		273	41.1					49		23	105	54	43		
H	DO	3S	20	9	44.4	5	.7							5					
H	DO	3S	24	23		23	3.5				23								
H	DO	3S	28	5		5	.8			5									
H	DO	3S	30	23	7.7	21	3.1					21							
H	DO	3S	32	45	4.9	43	6.5			11	4	28							

TC PLOGSTVB		Log Stock Table - MBF																	
T04N R07W S31 Ty00CC 88.00 T04N R07W S32 Ty00CC 161.00		Project: CRONINT Acres 249.00		Page 2 Date 11/3/2025 Time 2:23:38PM															
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+
H	DO	3S	34	21		21	3.2			15		6							
H	DO	3S	38	10	14.3	9	1.3			9									
H	DO	3S	40	136		136	20.5			32	14	65	24						
H	DO	4S	12	8		8	1.2			8									
H	DO	4S	16	14		14	2.1			14									
H	DO	4S	18	12		12	1.8			12									
H	DO	4S	20	30		30	4.4			27	3								
H	DO	4S	26	11		11	1.7			11									
H	DO	4S	28	4		4	.6			4									
H	DO	4S	30	12		12	1.9			12									
H	Totals			675	1.6	664	10.9			161	44	114	89	28	105	80	43		
M	DO	1S	12	2		2	2.1					2							
M	DO	1S	18	9		9	7.8						9						
M	DO	1S	26	9		9	8.4						9						
M	DO	1S	30	9		9	8.5							9					
M	DO	1S	32	5	6.2	5	4.6					5							
M	DO	1S	40	10		10	8.5					10							
M	DO	2S	18	7		7	6.3					7							
M	DO	2S	20	3		3	3.1					3							
M	DO	2S	32	11		11	9.4					11							
M	DO	2S	40	9		9	7.7					9							
M	DO	3S	12	1		1	1.0				1								
M	DO	3S	20	3		3	2.4				3								
M	DO	3S	24	4		4	3.5				4								
M	DO	3S	32	10		10	8.6				10								
M	DO	3S	34	4		4	4.0				4								
M	DO	3S	40	3		3	2.3				3								
M	DO	4S	16	3		3	2.4			3									
M	DO	4S	18	3		3	3.0			3									
M	DO	4S	26	3		3	2.9			3									
M	DO	4S	40	4		4	3.6			4									
M	Totals			113		112	1.8			13	25	30	17	18	9				
A	DO	1S	16	14		14	.9					14							
A	DO	1S	24	48		48	3.2					16	32						
A	DO	1S	26	17		17	1.1						17						

TC PLOGSTVB		Log Stock Table - MBF																		
T04N R07W S31 Ty00CC 88.00				Project: CRONINT										Page 3						
T04N R07W S32 Ty00CC 161.00				Acres 249.00										Date 11/3/2025						
														Time 2:23:38PM						
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	1S	30	29	12.0	25	1.7				7	19							
A		DO	1S	32	55		55	3.7				35	20							
A		DO	1S	34	20		20	1.4					20							
A		DO	1S	40	206		206	13.9				134	72							
A		DO	2S	24	16	22.2	13	.9				13								
A		DO	2S	26	30		30	2.0				30								
A		DO	2S	36	19		19	1.3				19								
A		DO	2S	40	369		367	24.8				367								
A		DO	3S	16	10		10	.7			10									
A		DO	3S	26	15		15	1.0			15									
A		DO	3S	30	27		27	1.9			27									
A		DO	3S	32	19		19	1.3			19									
A		DO	3S	34	16		16	1.1			16									
A		DO	3S	36	39		39	2.6			39									
A		DO	3S	38	15		15	1.0			15									
A		DO	3S	40	129		128	8.6			128									
A		DO	4S	12	11		11	.8		8	3									
A		DO	4S	14	2		2	.1		2										
A		DO	4S	16	31	5.8	29	2.0		29										
A		DO	4S	18	35		35	2.4		35										
A		DO	4S	20	39		39	2.6		39										
A		DO	4S	24	22		22	1.5		22										
A		DO	4S	26	26		26	1.7		26										
A		DO	4S	28	18		18	1.2		18										
A		DO	4S	30	18	8.9	16	1.1		16										
A		DO	4S	32	51		51	3.4		51										
A		DO	4S	34	16		16	1.1		16										
A		DO	4S	36	30		30	2.0		30										
A		DO	4S	40	104		104	7.0		93	11									
A		Totals			1,496		1,482	24.3		384	283	429	206	159	20					
CL		DO	3S	28	4		4	100.0		4										
CL		Totals			4		4	.1		4										
Total		All Species			6,140		6,095	100.0		994	734	961	736	843	1185	524	82	36		

TC PSTNDSUM		Stand Table Summary										Page 1		
												Date: 11/3/2025		
T04N R07W S31 Ty00CC 88.00 T04N R07W S32 Ty00CC 161.00					Project CRONINT					Time: 2:20:18PM				
					Acres 249.00					Grown Year:				
S Spec T	Tot						Average Log		Net Net		Totals			
	Sample DBH	FF Trees	Av 16' 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	1	83 17	2.032	.90	2.03	5.0	20.0		10	41		25	10
D	11	4	86 75	5.479	3.62	5.48	16.5	57.6		90	316		225	79
D	12	2	85 66	2.318	1.82	3.49	12.6	36.7		44	128		110	32
D	13	5	86 64	4.897	4.51	6.87	16.3	48.5		112	334		278	83
D	14	9	84 74	7.605	8.13	11.85	19.8	62.1		235	736		585	183
D	15	9	87 68	6.584	8.08	10.97	20.1	65.3		220	717		548	179
D	16	3	85 87	1.947	2.72	3.27	26.8	90.1		88	294		218	73
D	17	1	85 86	.570	.90	1.14	26.5	90.0		30	103		75	26
D	18	3	86 110	1.538	2.72	3.58	32.7	114.4		117	410		292	102
D	19	4	86 81	1.824	3.59	3.65	32.8	105.0		119	383		297	95
D	20	7	85 101	2.881	6.28	7.00	35.9	126.5		251	885		626	220
D	21	8	88 110	3.027	7.28	7.58	41.7	162.8		316	1,233		787	307
D	22	5	86 122	1.729	4.56	4.50	46.7	185.5		210	834		523	208
D	23	5	85 95	1.556	4.49	3.42	48.4	170.0		166	582		412	145
D	24	6	86 112	1.730	5.44	4.33	54.1	210.0		234	910		584	227
D	25	3	89 115	.797	2.72	1.86	64.4	265.6		120	493		298	123
D	26	7	85 108	1.718	6.33	3.93	66.3	256.5		260	1,008		648	251
D	27	7	88 117	1.605	6.38	3.91	72.8	308.1		284	1,204		708	300
D	28	10	87 120	2.105	9.00	5.69	73.2	314.1		416	1,786		1,037	445
D	29	3	86 123	.593	2.72	1.58	79.9	356.9		126	565		315	141
D	30	2	87 126	.366	1.80	.91	92.8	420.0		85	384		211	96
D	31	1	92 113	.171	.90	.51	79.7	403.3		41	207		102	52
D	32	6	85 109	.965	5.39	2.57	85.9	374.4		221	963		550	240
D	33	1	89 140	.155	.92	.47	106.0	526.7		49	245		123	61
D	34	1	85 125	.146	.92	.44	99.3	456.7		44	200		109	50
D	35	1	85 115	.134	.90	.40	95.7	453.3		39	183		96	46
D	43	1	86 151	.089	.90	.27	183.7	940.0		49	251		122	63
D	Totals	115	86 85	54.562	103.91	101.70	39.1	151.4		3,979	15,395		9,907	3,833
A	10	1	86 26	1.111	.61	1.11	8.0	30.0		9	33		22	8
A	11	6	86 59	5.764	3.80	7.60	12.8	39.7		97	301		242	75
A	12	6	87 68	5.271	4.14	7.24	16.5	52.6		120	381		298	95
A	13	5	86 66	4.016	3.70	5.70	18.9	63.1		108	360		268	90
A	14	6	87 66	4.030	4.31	6.61	19.6	60.6		130	401		323	100
A	15	13	86 65	7.515	9.22	10.89	25.1	73.9		273	805		681	200
A	16	12	86 71	6.051	8.45	10.12	26.8	84.5		271	856		675	213
A	17	8	86 80	3.502	5.52	6.51	31.2	103.4		203	674		506	168
A	18	10	86 73	3.905	6.90	7.81	30.6	102.2		239	798		596	199
A	19	4	87 74	1.572	3.10	3.14	33.9	107.5		107	338		265	84
A	20	6	87 63	2.052	4.48	3.83	34.7	113.9		133	436		331	109
A	21	3	87 72	.965	2.32	1.61	45.8	136.0		74	219		183	54
A	23	3	86 76	.630	1.82	1.05	58.6	224.0		62	235		153	59
A	24	1	86 56	.246	.77	.25	81.0	200.0		20	49		50	12
A	26	1	86 60	.210	.77	.42	54.0	155.0		23	65		56	16
A	Totals	85	86 67	46.841	59.91	73.89	25.3	80.5		1,868	5,951		4,650	1,482
H	8	2	90 26	4.695	1.64	4.70	4.5	15.0		21	70		53	18
H	9	1	89 19	1.855	.82	1.85	6.0	30.0		11	56		28	14
H	10	2	89 35	3.005	1.64	3.01	9.0	25.0		27	75		67	19
H	11	2	87 53	2.484	1.64	2.48	15.0	45.0		37	112		93	28
H	12	2	87 68	2.087	1.64	3.13	16.0	50.0		50	157		125	39
H	13	1	83 47	.889	.82	.89	21.0	50.0		19	44		46	11
H	14	1	88 73	.767	.82	1.53	18.0	70.0		28	107		69	27
H	16	3	84 69	1.872	2.61	3.16	25.7	75.6		81	239		202	59

TC		PSTNDSUM		Stand Table Summary										Page		2	
														Date:		11/3/2025	
T04N R07W S31 Ty00CC 88.00 T04N R07W S32 Ty00CC 161.00				Project				CRONINT				Time:		2:20:18PM			
				Acres				249.00				Grown Year:					
S Spe	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		17	2	85	101	1.040	1.64	2.60	28.0	98.0		73	255		181	63	
H		18	1	85	106	.464	.82	.93	40.0	135.0		37	125		92	31	
H		20	1	85	65	.447	.97	.89	33.5	100.0		30	89		75	22	
H		21	2	86	92	.746	1.79	1.49	48.2	156.4		72	233		179	58	
H		23	1	86	107	.284	.82	.57	66.0	260.0		37	148		93	37	
H		24	2	85	109	.522	1.64	1.30	58.0	230.0		76	300		188	75	
H		27	1	77	89	.206	.82	.41	77.0	235.0		32	97		79	24	
H		28	1	88	81	.192	.82	.38	72.0	330.0		28	126		69	31	
H		31	1	88	91	.156	.82	.31	106.5	450.0		33	141		83	35	
H		36	1	86	145	.138	.97	.41	138.0	706.7		57	292		142	73	
H		Totals	27	87	53	21.847	22.75	30.05	24.9	88.7		749	2,666		1,864	664	
M		11	1	82	44	.429	.28	.43	13.0	30.0		6	13		14	3	
M		12	1	87	79	.551	.43	1.10	13.0	45.0		14	50		36	12	
M		13	2	87	46	.940	.87	.47	14.0	60.0		7	28		16	7	
M		14	1	87	41	.265	.28	.26	19.0	60.0		5	16		13	4	
M		15	3	86	71	.814	1.00	1.40	23.0	74.9		32	105		80	26	
M		17	2	84	45	.454	.72	.45	24.3	63.7		11	29		27	7	
M		18	1	87	110	.160	.28	.32	35.5	150.0		11	48		28	12	
M		19	1	87	45	.220	.43	.44	23.0	95.0		10	42		25	10	
M		20	1	86	67	.198	.43	.40	33.0	130.0		13	52		33	13	
M		22	1	87	39	.164	.43										
M		24	1	87	43	.138	.43	.14	61.0	150.0		8	21		21	5	
M		25	1	86	55	.127	.43	.13	77.0	300.0		10	38		24	9	
M		30	1	87	59	.088	.43	.09	79.0	120.0		7	11		17	3	
M		Totals	17	86	57	4.547	6.46	5.63	23.9	80.1		134	451		335	112	
Totals		244		86	72	127.797	193.03	211.28	31.9	115.8		6,729	24,463		16,756	6,091	

LOGGING PLAN MAP

OF TIMBER SALE CONTRACT
NO. TL-341-2027-W01152-01
CRONIN TOO

PORTIONS OF SECTIONS 29,
31, 32, & 33, T4N, R7W, W.M.,
CLATSOP COUNTY, OREGON

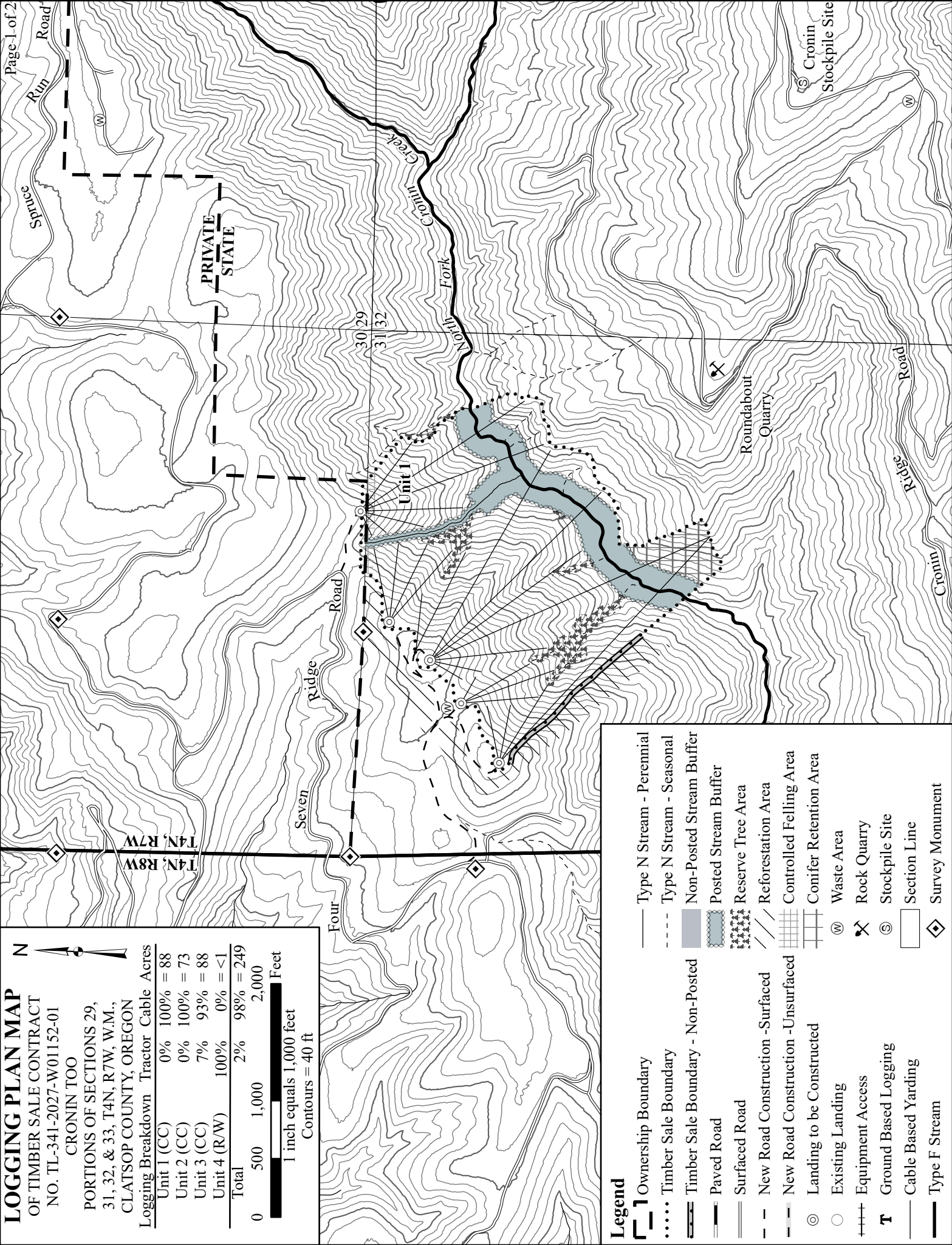
Logging Breakdown	Tractor	Cable	Acres
Unit 1 (CC)	0%	100%	= 88
Unit 2 (CC)	0%	100%	= 73
Unit 3 (CC)	7%	93%	= 88
Unit 4 (R/W)	100%	0%	= <1
Total	2%	98%	= 249

05001,0002,000

1 inch equals 1,000 feet

Contours = 40 ft

Feet



- Legend**
- Ownership Boundary

Timber Sale Boundary

Timber Sale Boundary - Non-Posted

Paved Road

Surfaced Road

New Road Construction - Surfaced

New Road Construction - Unsurfaced

Landing to be Constructed

Existing Landing

Equipment Access

Ground Based Logging

Cable Based Logging

Type F Stream

Type N Stream - Perennial

Type N Stream - Seasonal

Non-Posted Stream Buffer

Posted Stream Buffer

Reserve Tree Area

Reforestation Area

Controlled Felling Area

Conifer Retention Area

Waste Area

Rock Quarry

Stockpile Site

Section Line

Survey Monument

LOGGING PLAN MAP

OF TIMBER SALE CONTRACT

NO. TL-341-2027-W01152-01

CRONIN TOO

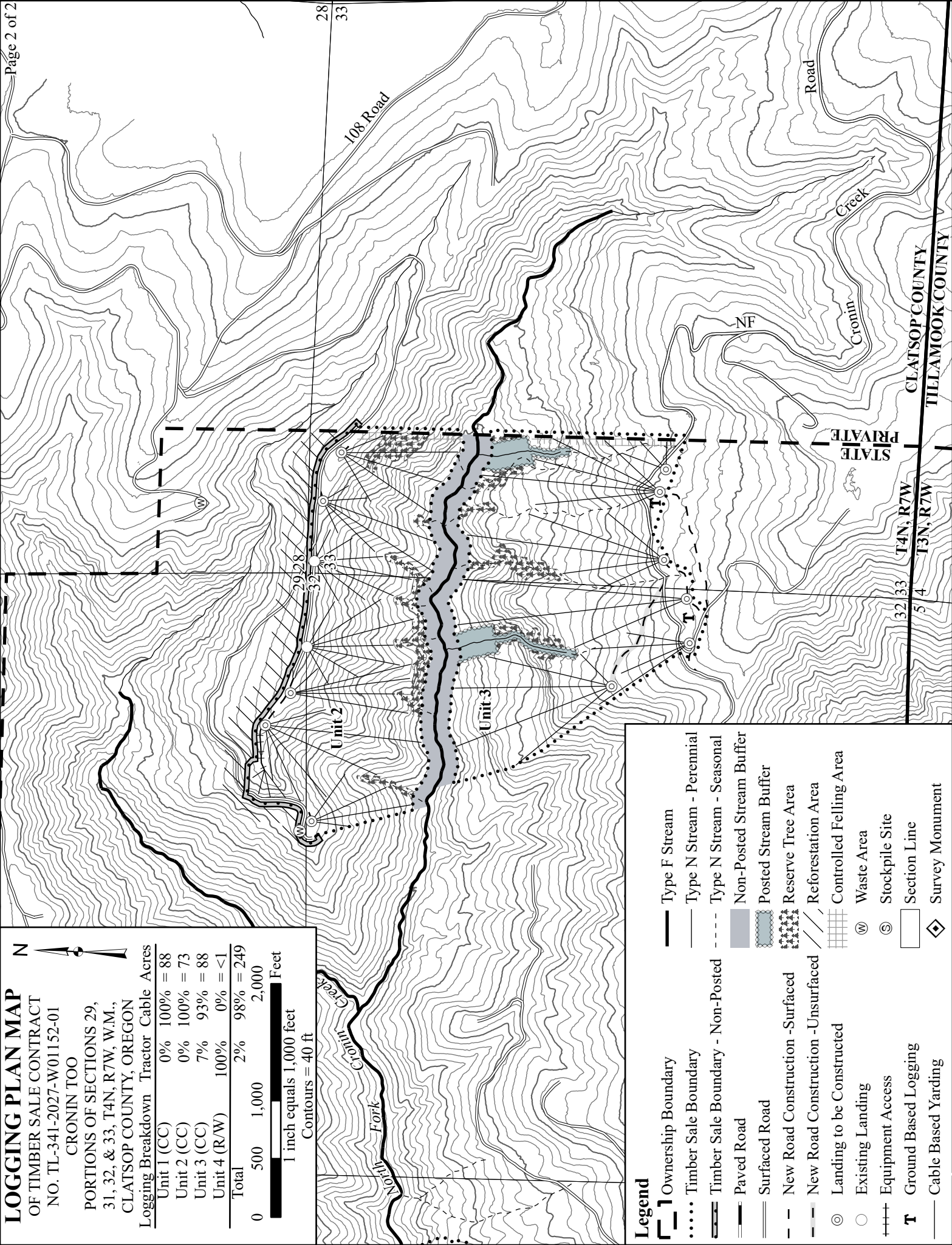
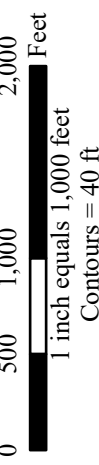
PORTIONS OF SECTIONS 29,

31, 32, & 33, T4N, R7W, W.M.,

CLATSOP COUNTY, OREGON

Logging Breakdown	Tractor	Cable	Acres
Unit 1 (CC)	0%	100%	= 88
Unit 2 (CC)	0%	100%	= 73
Unit 3 (CC)	7%	93%	= 88
Unit 4 (R/W)	100%	0%	= <1

Total	2%	98%	= 249
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