



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Wolf's End
Sale FG-343-2025-W00951-01

District: Forest Grove

Date: March 27, 2025

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$1,699,522.90	\$0.00	\$1,699,522.90
		Project Work:	(\$344,897.00)
		Advertised Value:	\$1,354,625.90



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Date: March 27, 2025

Timber Description

Location:

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	23	0	98
Western Hemlock / Fir	16	0	98

Volume by Grade	2S	3S & 4S 6"-11"	Total
Douglas - Fir	2,699	673	3,372
Western Hemlock / Fir	365	173	538
Total	3,064	846	3,910

Comments: LOCAL POND VALUES, FEBRUARY 2025

WESTERN REDCEDAR AND OTHER CEDARS STUMPAGE PRICE = POND VALUE MINUS DOUGLAS-FIR LOGGING COST:

$\$881.25 = \$1,180 - \$298.75$

OTHER CONIFERS STUMPAGE PRICE = POND VALUE MINUS WESTERN HEMLOCK LOGGING COST:

$\$192.67 = \$531.61 - \$338.94$

RED ALDER AND OTHER HARDWOODS STUMPAGE PRICE = POND VALUE MINUS DOUGLAS-FIR LOGGING COST:

$\$197.25 = \$496 - \$298.75$

BRANDING AND PAINTING ALLOWANCE = \$2.00/MBF

FUEL COST ALLOWANCE = \$5.00/GAL

HAULING COST ALLOWANCE = \$1,250/DAY

OTHER COSTS (WITH PROFIT & RISK ADDED): N/A

OTHER COSTS (NO PROFIT & RISK ADDED):

EQUIPMENT CLEANING: 3 PIECES @ \$1,000/PIECE = \$3,000

MACHINE TIME TO BLOCK/WATERBAR ROADS AND SKID TRAILS:

30 HOURS X \$200/HOUR = \$6,000

MACHINE TIME TO PILE LANDING SLASH AND SORT FIREWOOD:

30 HOURS X \$200/HOUR = \$6,000

TOTAL OTHER COSTS (NO P&R) = \$15,000

SLASH TREATMENT: 14 ACRES X \$250/ACRE = \$3,500

ROAD MAINTENANCE (INCLUDES SPOT ROCKING, GRADING, & ROLLING):

MOVE IN: \$8,136.87

GENERAL ROAD MAINT: 15.87 miles X \$2,098.25 = \$33,299.23

TOTAL ROAD MAINTENANCE: $\$41,436.10 / 3,910 \text{ MBF} = \$10.60/\text{MBF}$



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Logging Conditions

Combination#: 1 Douglas - Fir 74.00%
 Western Hemlock / Fir 74.00%

Logging System: Cable: Medium Tower >40 - <70 **Process:** Harvester Head Delimbing
yarding distance: Medium (800 ft) **downhill yarding:** No
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 16 **bd. ft / load:** 4713
cost / mbf: \$105.80
machines: Log Loader (A)
 Forwarder
 Harvester
 Tower Yarder (Medium)

Combination#: 2 Douglas - Fir 26.00%
 Western Hemlock / Fir 26.00%

Logging System: Shovel **Process:** Manual Falling/Delimbing
yarding distance: Short (400 ft) **downhill yarding:** No
tree size: Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 19 **bd. ft / load:** 4599
cost / mbf: \$114.44
machines: Shovel Logger



"STEWARDSHIP IN FORESTRY"

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District: Forest Grove

Date: March 27, 2025

Logging Costs

Operating Seasons: 2.00	Profit Risk: 15%
Project Costs: \$344,897.00	Other Costs (P/R): \$0.00
Slash Disposal: \$3,500.00	Other Costs: \$15,000.00

Miles of Road

Road Maintenance: \$10.60

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	4.8
Western Hemlock / Fir	\$0.00	2.0	3.8
Grand Fir	\$0.00	2.0	3.7
Noble Fir	\$0.00	2.0	4.0



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Timber Sale Appraisal
Wolf's End
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District: Forest Grove

Date: March 27, 2025

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
\$108.05	\$10.81	\$2.25	\$132.81	\$0.00	\$38.09	\$0.90	\$2.00	\$3.84	\$298.75
Western Hemlock / Fir									
\$108.05	\$10.81	\$2.25	\$167.76	\$0.00	\$43.33	\$0.90	\$2.00	\$3.84	\$338.94

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$772.02	\$473.27	\$0.00
Western Hemlock / Fir	\$0.00	\$531.61	\$192.67	\$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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	3,372	\$473.27	\$1,595,866.44
Western Hemlock / Fir	538	\$192.67	\$103,656.46

Gross Timber Sale Value

Recovery: \$1,699,522.90

Prepared By: Adrian Torres

Phone: 503-357-2191

TIMBER SALE SUMMARY
Wolf's End
#FG-341-2025-W00951-01

1. **Location:** Portions of Section 4, T2N, R6W, W.M., Washington County, Oregon.
2. **Type of Sale:** This timber sale is 107 net acres of Clearcut. The timber will be sold on a recovery basis at a sealed bid auction.
3. **Revenue Distribution:** 100% BOF; 100% Washington County
4. **Sale Acreage:** Acres are net of Stream Buffers, Green Tree Retention Areas, and road prisms. Acreage was determined using ESRI ArcMap GIS Pro software.
5. **Cruise:** The Timber Sale was cruised by ODF timber cruisers in January of 2024. For more information, see Cruise Report.
6. **Timber Description:** The Timber Sale Area consists of a well-stocked, 85 year-old stand of Douglas-fir with minor components of western hemlock, noble fir, and grand fir. This timber stand has an average of 182 ft² of basal area and an average Douglas-fir DBH of 23 inches. The estimated average net Douglas-fir volume is approximately 31.5 MBF per acre.
7. **Topography and Logging Method:** Slopes within the Timber Sale Area range from 5% to 80% with variable aspect. The Timber Sale Area is 26% ground-based Yarding and 74% cable-based Yarding. The average horizontal skid trail length is 120 feet and the maximum is approximately 350 feet. The average cable yarding road length is 450 feet and the maximum is approximately 1,350 feet.
8. **Access:** All access to the Timber Sale Area is on surfaced roads. From Forest Grove, travel north on Highway 47 through Banks, then merge onto Highway 26. Continue on Highway 26 westbound for approximately 11.5 miles to Timber Road and turn left. Continue for 3 miles to Cochran Road and turn right. Continue for 3.8 miles to Round Top Road and turn left. Continue for 0.3 miles to Goldminer Spur Road and turn right. Continue for 3.4 miles to Bell Camp Road and turn right. Continue for 2.5 miles to Standard Grade Road and turn right. Continue for 1.3 miles to Standard Grade Loop and turn left. Continue for 0.3 miles to Wolf Creek Grade and turn left. Continue for 2.9 miles to access the Timber Sale Area.
9. **Projects:**

Project No. 1: Road Improvement	\$344,897.00
Total Credit for all Projects	\$344,897.00

PROJECT COST SUMMARY SHEET

Timber Sale: Wolf's End
Sale Number: FG-341-2025-W00951-01

PROJECT NO. 1: ROAD IMPROVEMENT

<u>Road Segment</u>	<u>Length</u>	<u>Cost</u>
A to B	524+60	\$48,208.47
B to C	262+85	\$243,360.78
D to E	29+90	\$29,064.32
F to G	10+80	\$7,207.41
H to I	4+75	\$6,051.57
J to K	12+50	\$3,581.49

845+40 stations
16.01 miles

Total Rock =

1,592 cy	1½" - 0
4,987 cy	4"-0 Jaw-run
816 cy	Pit-run
516 cy	Riprap

Move-in = \$7,422.96

TOTAL PROJECT COST = \$344,897.00

TOTAL CREDITS = \$344,897.00

SUMMARY OF CONSTRUCTION COST

Timber Sale: Wolf's End
Road Segment: A to B

Sale Number: FG-341-2025-W00951-01
Improvement: 524+60 stations
9.94 miles

PROJECT NO. 1: ROAD IMPROVEMENT

IMPROVEMENT

Clearing & grubbing (scatter)	6.03	ac @	\$1,353.60	per acre =	\$8,162.21
End-haul waste from Culvert Nos. 1 & 2					
Haul waste material	48	cy @	\$5.66	per cy =	\$271.68
Shape and compact waste material	62	cy @	\$0.35	per cy =	\$21.70
Improve turnout	13	ea @	\$36.30	per ea =	\$471.90
Improve roadside landing	4	ea @	\$90.75	per ea =	\$363.00
Grade, ditch, & roll	524.60	sta @	\$35.45	per sta =	\$18,597.07

TOTAL IMPROVEMENT COSTS = \$27,887.56

CULVERTS

Culverts and Bands					
18" Diameter	60	lf @	\$22.05	per lf =	\$1,323.00
Markers & Stakes					
Culvert markers	2	ea @	\$12.00	per ea =	\$24.00

TOTAL CULVERT COSTS = \$1,347.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Subgrade rock						
Bedding and backfill	1½" - 0	\$6.33	\$26.27	\$0.55	48	\$1,591.20
				Subtotal =	48	\$1,591.20
Surfacing rock						
Surfacing rock	1½" - 0	\$6.33	\$26.27	\$1.35	15	\$509.25
Spot rock	1½" - 0	\$6.33	\$26.27	\$1.35	24	\$814.80
Junction	1½" - 0	\$6.33	\$26.27	\$1.35	84	\$2,851.80
Turnout	1½" - 0	\$6.33	\$26.27	\$1.35	91	\$3,089.45
Roadside landing	Jaw-run	\$17.40	\$12.46	\$1.35	188	\$5,867.48
				Subtotal =	402	\$13,132.78

Totals	All Rock =	450
	1½" - 0	262
	Jaw-run	188

TOTAL ROCK COSTS = \$14,723.98

EROSION CONTROL

Grass seed & fertilizer	6.03	ac @	\$697.50	per ac =	\$4,205.93
Straw mulch bale	4	ea @	\$11.00	per ea =	\$44.00

TOTAL EROSION CONTROL COSTS = \$4,249.93

TOTAL PROJECT COST = \$48,208.47

SUMMARY OF CONSTRUCTION COST

Timber Sale: Wolfs End
Road Segment: B to C

Sale Number: FG-341-2025-W00951-01
Improvement: 262+85 stations
4.98 miles

PROJECT NO. 1: ROAD IMPROVEMENT**IMPROVEMENT**

Clearing & grubbing (scatter)	3.02	ac @	\$1,692.00	per acre =	\$5,109.84
Roadside brushing	0.77	mi @	\$850.00	per mi =	\$654.50
Clean ditch & end-haul waste material to Waste Area No. 1.	1.15	sta @	\$66.00	per sta =	\$75.90
Haul waste material	8	cy @	\$1.09	per cy =	\$8.72
Shape and compact waste material	8	cy @	\$0.35	per cy =	\$2.80
Clean ditch & end-haul waste material to Waste Area No. 2.	4.65	sta @	\$66.00	per sta =	\$306.90
Haul waste material	34	cy @	\$2.27	per cy =	\$77.18
Shape and compact waste material	34	cy @	\$0.35	per cy =	\$11.90
Clean ditch & end-haul waste material to Waste Area No. 3.	6.80	sta @	\$66.00	per sta =	\$448.80
Haul waste material	49	cy @	\$1.20	per cy =	\$58.80
Shape and compact waste material	49	cy @	\$0.35	per cy =	\$17.15
End-haul waste from Culvert Nos. 3, 4, 6-8, 10, 11, 13-25, & 27 to Waste Area No. 1.	504	cy @	\$3.39	per cy =	\$1,708.56
Shape and compact waste material	655	cy @	\$0.35	per cy =	\$229.25
End-haul waste from Culvert Nos. 28-35 & 39 to Waste Area No. 2.	216	cy @	\$1.80	per cy =	\$388.80
Shape and compact waste material	281	cy @	\$0.35	per cy =	\$98.35
End-haul waste from Culvert Nos. 40-42 To Waste Area No. 3.	72	cy @	\$1.75	per cy =	\$126.00
Shape and compact waste material	94	cy @	\$0.35	per cy =	\$32.90
Clean culvert inlet & outlet, scatter waste	3	ea @	\$27.50	per ea =	\$82.50
Clean culvert inlet & outlet, end-haul waste to Waste Area No. 2 at 132+10	1	ea @	\$27.50	per ea =	\$27.50
Haul waste material	1	cy @	\$1.43	per cy =	\$1.43
Shape and compact waste material	1	cy @	\$0.35	per cy =	\$0.35
Remove existing culvert at 123+60	1	ea @	\$165.00	per ea =	\$165.00
Haul waste material	24	cy @	\$1.83	per cy =	\$43.92
Shape and compact waste material	31	cy @	\$0.35	per cy =	\$10.85
Cutslope layback & Bank slough removal to Waste Area No. 1.	885	cy @	\$2.77	per cy =	\$2,451.45
Haul	1,151	cy @	\$2.06	per cy =	\$2,371.06
Shape and compact waste material	1,151	cy @	\$0.35	per cy =	\$402.85
Cutslope layback & Bank slough removal to Waste Area No. 2.	1,574	cy @	\$2.04	per cy =	\$3,210.96
Haul	2,046	cy @	\$2.65	per cy =	\$5,421.90
Shape and compact waste material	2,046	cy @	\$0.35	per cy =	\$716.10
Cutslope layback & Bank slough removal to Waste Area No. 3.	615	cy @	\$2.04	per cy =	\$1,254.60
Haul	800	cy @	\$2.63	per cy =	\$2,104.00
Shape and compact waste material	800	cy @	\$0.35	per cy =	\$280.00
French Drain waste material end-haul to Waste Area No. 1.	156	cy @	\$2.77	per cy =	\$432.12
Haul	203	cy @	\$2.44	per cy =	\$495.32
Compact waste area	203	cy @	\$0.35	per cy =	\$71.05
Geotextile	596	sqr yd @	\$5.40	per sqr yd =	\$3,218.40
Construct settling ponds, end-haul waste to Waste Area No. 1.	27	ea @	\$27.50	per ea =	\$742.50
Haul waste material	35	cy @	\$2.38	per cy =	\$83.30
Shape and compact waste material	35	cy @	\$0.35	per cy =	\$12.25
Construct settling ponds, end-haul waste to Waste Area No. 2.	15	ea @	\$27.50	per ea =	\$412.50
Haul waste material	20	cy @	\$1.70	per cy =	\$34.00
Shape and compact waste material	20	cy @	\$0.35	per cy =	\$7.00
Construct settling ponds, end-haul waste to Waste Area No. 3.	6	ea @	\$27.50	per ea =	\$165.00
Haul waste material	8	cy @	\$1.65	per cy =	\$13.20
Shape and compact waste material	8	cy @	\$0.35	per cy =	\$2.80
Construct drivable waterbar	1	ea @	\$30.25	per ea =	\$30.25
Improve turnout	35	ea @	\$36.30	per ea =	\$1,270.50
Construct roadside landing	4	ea @	\$181.50	per ea =	\$726.00
Excavate, place and & compact fill	360	cy @	\$4.54	per cy =	\$1,634.40
Improve roadside landing	2	ea @	\$90.75	per ea =	\$181.50
Grade, ditch, & roll	262.85	sta @	\$39.65	per sta =	\$10,422.00

TOTAL IMPROVEMENT COSTS = \$47,854.91

SUMMARY OF CONSTRUCTION COST

Timber Sale: Wolf's End
Road Segment: B to C Continued.

Sale Number: FG-341-2025-W00951-01
Improvement: 262+85 stations
4.98 miles

CULVERTS

Culverts and Bands

18" Diameter	960	lf @	\$22.05	per lf =	\$21,168.00
24" Diameter	390	lf @	\$31.90	per lf =	\$12,441.00
30" Diameter	40	lf @	\$42.95	per lf =	\$1,718.00

Half Rounds

30"	120	lf @	\$30.00	per lf =	\$3,600.00
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Markers & Stakes

Culvert markers	57	ea @	\$12.00	per ea =	\$684.00
Half round stakes	16	ea @	\$12.00	per ea =	\$192.00

Additional Installation Cost

Repair culvert inlet	1	hrs @	\$192.50	per hr =	\$192.50
Trim culvert outlet	0.5	hrs @	\$192.50	per hr =	\$96.25

TOTAL CULVERT COSTS = \$40,091.75

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Subgrade rock						
Bedding and backfill	1½" - 0	\$1.60	\$31.62	\$0.55	1,032	\$34,850.64
Energy dissipator	Riprap	\$13.23	\$10.55	\$1.75	360	\$9,190.80
French drain	Riprap	\$13.23	\$10.55	\$1.75	156	\$3,982.68
Subtotal =					1,548	\$48,024.12
Surfacing rock						
Surfacing rock	Jaw-run	\$17.40	\$10.55	\$1.35	2,540	\$74,422.00
Junction	Jaw-run	\$17.40	\$10.55	\$1.35	36	\$1,054.80
Turnout	Jaw-run	\$17.40	\$10.55	\$1.35	490	\$14,357.00
Roadside landing (Improve)	Jaw-run	\$17.40	\$10.55	\$1.35	94	\$2,754.20
Roadside landing (Construct)	Jaw-run	\$17.40	\$10.55	\$1.35	380	\$11,134.00
Subtotal =					3,540	\$103,722.00

Totals

All Rock =	5,088
1½" - 0	1,032
Jaw-run	3,540
Riprap	516

TOTAL ROCK COSTS = \$151,746.12

EROSION CONTROL

Grass seed & fertilizer	3.02	ac @	\$697.50	per ac =	\$2,106.00
Straw mulch acre	0.80	ac @	\$990.00	per ac =	\$792.00
Straw mulch bale	70	ea @	\$11.00	per ea =	\$770.00

TOTAL EROSION CONTROL COSTS = \$3,668.00

TOTAL PROJECT COST = \$243,360.78

SUMMARY OF CONSTRUCTION COST

Timber Sale: Wolf's End
Road Segment: D to E

Sale Number: FG-341-2025-W00951-01
Improvement: 29+90 stations
0.57 miles

PROJECT NO. 1: ROAD IMPROVEMENT

IMPROVEMENT

Clearing & grubbing (scatter)	0.35	ac @	\$1,692.00	per acre =	\$592.00
Roadside brushing	0.57	mi @	\$1,550.00	per mi =	\$883.50
Construct settling ponds, end-haul waste to Waste Area No. 3	3	ea @	\$27.50	per ea =	\$82.50
Haul waste material	4	cy @	\$0.93	per cy =	\$3.72
Shape and compact waste material	4	cy @	\$0.35	per cy =	\$1.40
Construct roadside landing	3	ea @	\$181.50	per ea =	\$544.50
Improve landing	1	ea @	\$121.00	per ea =	\$121.00
Grade, ditch, & roll	29.90	sta @	\$39.65	per sta =	\$1,185.54

TOTAL IMPROVEMENT COSTS = \$3,414.16

CULVERTS

Markers & Stakes					
Culvert markers	1	ea @	\$12.00	per ea =	\$12.00

TOTAL CULVERT COSTS = \$12.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Surfacing rock	Jaw-run	\$17.40	\$1.42	\$1.35	927	\$18,697.59
Roadside landing	Jaw-run	\$17.40	\$1.42	\$1.35	285	\$5,748.45
Landing	Jaw-run	\$17.40	\$1.42	\$1.35	47	\$947.99
Subtotal =					1,259	\$25,394.03

Totals	All Rock =	1,259
	Jaw-run	1,259

TOTAL ROCK COSTS = \$25,394.03

EROSION CONTROL

Grass seed & fertilizer	0.35	ac @	\$697.50	per ac =	\$244.13
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TOTAL EROSION CONTROL COSTS = \$244.13

TOTAL PROJECT COST = \$29,064.32

SUMMARY OF CONSTRUCTION COST

Timber Sale: Wolf's End
 Road Segment: F to G

Sale Number: FG-341-2025-W00951-01
 Improvement: 10+80 stations
0.20 miles

PROJECT NO. 1: ROAD IMPROVEMENT

IMPROVEMENT

Clearing & grubbing (scatter)	0.13	ac @	\$1,692.00	per acre =	\$219.96
Improve roadside landing	1	ea @	\$90.75	per ea =	\$90.75
Improve landing	1	ea @	\$121.00	per ea =	\$121.00
Grade, ditch, & roll	10.80	sta @	\$39.65	per sta =	\$428.22

TOTAL IMPROVEMENT COSTS = \$859.93

CULVERTS

Culverts and Bands					
18" Diameter	40	lf @	\$22.05	per lf =	\$882.00
Markers & Stakes					
Culvert markers	1	ea @	\$12.00	per ea =	\$12.00

TOTAL CULVERT COSTS = \$894.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Subgrade rock						
Bedding and backfill	1½" - 0	\$1.60	\$26.69	\$0.55	24	\$692.16
Subtotal =					24	\$692.16
Surfacing rock						
Surfacing rock	Pit-run	\$7.71	\$0.92	\$1.35	350	\$3,493.00
Junction	Pit-run	\$7.71	\$0.92	\$1.35	24	\$239.52
Roadside landing	Pit-run	\$7.71	\$0.92	\$1.35	47	\$469.06
Landing	Pit-run	\$7.71	\$0.92	\$1.35	47	\$469.06
Subtotal =					468	\$4,670.64

Totals

All Rock =	492
1½" - 0	24
Pit-run	468

TOTAL ROCK COSTS = \$5,362.80

EROSION CONTROL

Grass seed & fertilizer	0.13	ac @	\$697.50	per ac =	\$90.68
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TOTAL EROSION CONTROL COSTS = \$90.68

TOTAL PROJECT COST = \$7,207.41

SUMMARY OF CONSTRUCTION COST

Timber Sale: Wolf's End
Road Segment: H to I

Sale Number: FG-341-2025-W00951-01
Improvement: 4+75 stations
0.09 miles

PROJECT NO. 1: ROAD IMPROVEMENT

IMPROVEMENT

Clearing & grubbing (scatter)	0.06	ac @	\$1,692.00	per acre =	\$101.52
Roadside brushing	0.09	mi @	\$1,550.00	per mi =	\$139.50
Approach to landing	1.15	sta @	\$866.00	per sta =	\$995.90
Improve landing	2	ea @	\$121.00	per ea =	\$242.00
Grade, ditch, & roll	4.75	sta @	\$39.65	per sta =	\$188.34

TOTAL IMPROVEMENT COSTS = \$1,667.26

CULVERTS

Culverts and Bands					
18" Diameter	30	lf @	\$22.05	per lf =	\$661.50
Markers & Stakes					
Culvert markers	1	ea @	\$12.00	per ea =	\$12.00

TOTAL CULVERT COSTS = \$673.50

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Subgrade rock						
Bedding and backfill	1½" - 0	\$1.60	\$26.31	\$0.55	24	\$683.04
Subtotal =					24	\$683.04

Surfacing rock						
Surfacing rock	Pit-run	\$7.71	\$0.86	\$1.35	147	\$1,458.24
Junction	Pit-run	\$7.71	\$0.86	\$1.35	24	\$238.08
Approach to landing	Pit-run	\$7.71	\$0.86	\$1.35	36	\$357.12
Landing	Pit-run	\$7.71	\$0.86	\$1.35	94	\$932.48
Subtotal =					301	\$2,985.92

Totals

All Rock =	325
1½" - 0	24
Pit-run	301

TOTAL ROCK COSTS = \$3,668.96

EROSION CONTROL

Grass seed & fertilizer	0.06	ac @	\$697.50	per ac =	\$41.85
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TOTAL EROSION CONTROL COSTS = \$41.85

TOTAL PROJECT COST = \$6,051.57

SUMMARY OF CONSTRUCTION COST

Timber Sale: Wolf's End
 Road Segment: J to K

Sale Number: FG-341-2025-W00951-01
 Improvement: 12+50 stations
0.24 miles

PROJECT NO. 1: ROAD IMPROVEMENT

IMPROVEMENT

Clearing & grubbing (scatter)	0.15	ac @	\$1,353.60	per acre =	\$203.04
Clean culvert inlet & outlet, end-haul waste	1	ea @	\$27.50	per ea =	\$27.50
Haul waste material	1	cy @	\$8.48	per cy =	\$8.48
Shape and compact waste material	1	cy @	\$0.35	per cy =	\$0.35
Improve roadside landing	1	ea @	\$90.75	per ea =	\$90.75
Grade, ditch, & roll	12.50	sta @	\$39.65	per sta =	\$495.63

TOTAL IMPROVEMENT COSTS = \$825.75

CULVERTS

Markers & Stakes					
Culvert markers	1	ea @	\$12.00	per ea =	\$12.00

TOTAL CULVERT COSTS = \$12.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Spot rock	1½" - 0	\$6.33	\$0.74	\$1.35	250	\$2,105.00
Roadside landing	Pit-run	\$7.71	\$2.07	\$1.35	47	\$523.11
				Subtotal =	297	\$2,628.11

Totals

All Rock =	297
1½" - 0	250
Pit-run	47

TOTAL ROCK COSTS = \$2,628.11

EROSION CONTROL

Grass seed & fertilizer	0.15	ac @	\$697.50	per ac =	\$104.63
Bio-bag	2	ea @	\$5.50	per ea =	\$11.00

TOTAL EROSION CONTROL COSTS = \$115.63

TOTAL PROJECT COST = \$3,581.49

SUMMARY OF CONSTRUCTION COST

Timber Sale: Wolf's End

Sale Number: FG-341-2025-W00951-01

PROJECT No. 1 MOVE-IN, WITHIN AREA MOVE, & CLEANING COSTS

Equipment	Total
Brush Cutter	\$628.05
Grader	\$656.60
Roller (smooth/grid) & Compactor	\$628.05
Excavator (Large) - Equipment Cleaning	\$2,213.36
Dozer (Large) - Equipment Cleaning	\$2,213.36
Dump Truck (10cy +)	\$565.40
Water Truck (2,500 Gal)	\$518.14
TOTAL MOVE-IN COSTS =	\$7,422.96

QUARRY DEVELOPMENT & CRUSHING COST SUMMARY

Timber Sale: Wolf's End
Sale Number: FG-341-2025-W00951-01
Stockpile Name: Bell Camp

1 1/2" - 0: 250 cy (truck measure)
Total truck yardage: 250 cy

<u>Move-in</u>					
Move in loader					\$1,110.54
Move in Dump Trucks					<u>\$246.00</u>
				Subtotal =	<u>\$1,356.54</u>
				Per CY =	<u>\$5.43/cy</u>
<u>1 1/2"-0 Base Cost</u>					
Load dump truck	<u>\$0.90</u>	/ cy x	<u>250</u>	cy =	<u>\$225.00</u>
				Subtotal =	<u>\$225.00</u>
				Per CY =	<u>\$0.90</u>
1 1/2"-0 Cost =					<u>\$6.33/cy</u>

QUARRY DEVELOPMENT & CRUSHING COST SUMMARY

Timber Sale: Wolf's End
Sale Number: FG-341-2025-W00951-01
Stockpile Name: Rock Creek Ridge

1 1/2" - 0: 1,330 cy (truck measure)
Total truck yardage: 1,330 cy

<u>Move-in</u>					
Move in loader					\$827.50
Move in Dump Trucks					\$102.38
				Subtotal =	\$929.88
				Per CY =	\$0.70/cy
<u>1 1/2"-0 Base Cost</u>					
Load dump truck	\$0.90	/ cy x	1,330	cy =	\$1,197.00
				Subtotal =	\$1,197.00
				Per CY =	\$0.90
1 1/2"-0 Cost =					<u>\$1.60/cy</u>

QUARRY DEVELOPMENT & CRUSHING COST SUMMARY

Timber Sale: Wolf's End
Sale Number: FG-341-2025-W00951-01
Quarry Name: Bell Grade

Pit-run: 816 cy (truck measure)
Total truck yardage: 816 cy
Total in place yardage: 628 cy

Swell: 130%
Compaction: 116%

Move-in & Other Base Cost

Quarry development & overburden removal	\$1,592.50
Move in excavator with cleaning	\$1,746.67
Move in Dump Trucks	\$270.00
Clean up quarry	\$500.00
Subtotal =	<u>\$4,109.17</u>
Per CY =	<u>\$5.04/cy</u>

Pit-run Base Cost

Rip rock	<u>\$2.30</u>	/ cy x	<u>628</u>	cy =	\$1,444.40
Load dump truck	<u>\$0.90</u>	/ cy x	<u>816</u>	cy =	\$734.40
Subtotal =					<u>\$2,178.80</u>
Per CY =					<u>\$2.67/cy</u>

Pit-run Base Cost = \$7.71/cy

QUARRY DEVELOPMENT & CRUSHING COST SUMMARY

Timber Sale: Wolf's End
 Sale Number: FG-341-2025-W00951-01
 Quarry Name: Wolf's End

4"-0 Jaw-run: 4,987 cy (truck measure)
 Riprap: 516 cy (truck measure)
 Total truck yardage: 4,987 cy
 Total in place yardage: 4,795 cy
 Oversize - Pile: 20%
 Swell: 130%
 Compaction: 116%

Move-in & Other Base Cost

Quarry development & overburden removal	\$37,849.04
Equipment cleaning & move in excavator	\$2,304.53
Equipment cleaning & move in dozer	\$2,275.49
Move in loader	\$1,146.43
Move in & setup crusher	\$1,825.49
Move in Dump Trucks	\$418.50
Clean up quarry	\$500.00
Subtotal =	\$46,319.48
Per CY =	\$9.29/cy

4"-0 Jaw-run Base Cost

Rip rock	\$3.95	/ cy x	4,795	cy =	\$18,940.25
Oversize - Pile	\$0.80	/ cy x	1,247	cy =	\$997.60
Load crusher	\$0.90	/ cy x	4,987	cy =	\$4,487.85
Crush (Jaw-run)	\$2.31	/ cy x	4,987	cy =	\$11,518.82
Load dump truck	\$0.90	/ cy x	4,987	cy =	\$4,487.85
Subtotal =	\$40,432.37				
Per CY =	\$8.11/cy				

Riprap Base Cost

Rip rock	\$3.95	/ cy x	397	cy =	\$1,568.15
Load dump truck	\$0.90	/ cy x	516	cy =	\$464.40
Subtotal =	\$2,032.55				
Per CY =	\$3.94/cy				

Riprap Base Cost = \$13.23/cy
4"-0 Jaw-run Base Cost = \$17.40/cy

CRUISE REPORT
Wolf's End
#FG-341-2025-W00951-01

1. LOCATION:

Portions of Section 4, T2N, R6W, W.M., Washington County, Oregon.

2. CRUISE DESIGN:

The timber cruise was designed using an estimated coefficient of variation (CV) of 56%, average stand diameter of 18 inches, sampling error (SE) of 9% and a minimum of 100 grade trees.

3. SAMPLING METHOD:

The Timber Sale Area was cruised in January of 2025 with 37 variable radius grade plots using a 40 BAF prism. Plots were laid out 5 chain x 5 chain grid. Plots falling on or near existing roads or no-harvest areas were offset 1 chain.

4. CRUISE RESULTS:

168 trees were measured and graded producing a standard error of 6.8% on the Douglas-fir Basal Area and 7% on the Douglas-fir Net Board Foot Volume.

5. TREE MEASUREMENT AND GRADING:

All sample trees were measured and graded following the Official Log Scaling and Grading Rules as adopted by the NW Log Rules Advisory Group. 40 foot segments were favored.

- a) **Height Standards:** Total tree heights were measured to the nearest foot. Bole heights were calculated to a six inch top.
- b) **Diameter Standards:** Diameters were measured outside bark at breast height to the nearest inch.
- c) **Form Factors:** Measured for each grade tree using a form point of 16 feet.

6. DATA PROCESSING:

- a) **Volumes and Statistics:** Cruise estimates and sampling statistics were derived from SuperAce 2008 cruise software.
- b) **Deductions:** The following percent volume deductions are by species to account for the hidden defect and breakage. For conifers two percent was deducted.

7. CRUISERS: The sale was cruised by Mark Savage, Adrian Torres, and Colton Turner.

Prepared by: Adrian Torres 03-27-2025

Reviewed by: Mark Savage 03-27-2025
Date

TC PSTATS				PROJECT STATISTICS				PAGE	1		
				PROJECT	WOLFSEND			DATE	1/16/2025		
TWP	RGE	SC	TRACT	TYPE	ACRES		PLOTS	TREES	CuFt	BdFt	
T2N	R6	04	U1	00CC	107.00		37	171	S	W	
					TREES	ESTIMATED	PERCENT				
					PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES				
TOTAL			37	171	4.6						
CRUISE			37	171	4.6	8,152	2.1				
DBH COUNT											
REFOREST											
COUNT											
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			140	53.8	22.7	127	31.8	151.4	32,233	32,157	6,927
DOUG FIR-S			3	2.0	17.3	65	0.8	3.2			
WHEMLOCK			23	17.1	16.3	80	6.2	24.9	4,031	4,031	930
NOB FIR			3	.7	29.2	125	0.6	3.2	713	704	149
GR FIR			2	2.5	12.5	68	0.6	2.2	408	408	79
TOTAL			171	76.2	21.1	113	40.3	184.9	37,385	37,299	8,085
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			54.4	4.6	717	752	787				
DOUG FIR-S											
WHEMLOCK			89.7	19.1	368	454	541				
NOB FIR			52.2	36.1	724	1,133	1,543				
GR FIR			137.7	129.0	1,535		3,515				
TOTAL			65.5	5.0	679	715	750	171	43	19	
CL	68.1	COEFF	SAMPLE TREES - CF					# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5		10	15	
DOUG FIR			46.1	3.9	152	158	165				
DOUG FIR-S											
WHEMLOCK			81.2	17.3	82	99	117				
NOB FIR			44.1	30.5	164	236	308				
GR FIR			137.3	128.6	291		665				
TOTAL			57.3	4.4	144	151	157	131	33	15	
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			52.2	8.6	49	54	58				
DOUG FIR-S			343.7	56.5	1	2	3				
WHEMLOCK			174.4	28.6	12	17	22				
NOB FIR			355.0	58.3	0	1	1				
GR FIR			583.7	95.9	0	3	5				
TOTAL			55.5	9.1	69	76	83	123	31	14	
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			41.4	6.8	141	151	162				
DOUG FIR-S			341.3	56.1	1	3	5				
WHEMLOCK			133.3	21.9	19	25	30				
NOB FIR			341.3	56.1	1	3	5				
GR FIR			424.1	69.7	1	2	4				
TOTAL			26.7	4.4	177	185	193	28	7	3	

PROJECT STATISTICS
PROJECT WOLFSEND

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
T2N	R6	04	U1	00CC	107.00	37	171	S	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
DOUG FIR		42.9	7.0	29,892	32,157	34,421			
DOUG FIR-S									
WHEMLOCK		138.5	22.7	3,114	4,031	4,947			
NOB FIR		346.6	56.9	303	704	1,104			
GR FIR		481.0	79.0	86	408	731			
TOTAL		35.9	5.9	35,100	37,299	39,498	51	13	6

CL	68.1	COEFF	NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR		41.5	6.8	6,455	6,927	7,398			
DOUG FIR-S									
WHEMLOCK		133.0	21.8	727	930	1,133			
NOB FIR		343.0	56.3	65	149	233			
GR FIR		472.7	77.6	18	79	141			
TOTAL		32.1	5.3	7,659	8,085	8,511	41	10	5

TC		PSPCSTGR Species, Sort Grade - Board Foot Volumes (Project)																			
<div>TT2N RR6W S04 Ty00CC107.00</div>				Project: WOLFSEND												Page 1					
				Acres 107.00												Date 1/16/2025					
																Time 11:44:21AM					
Spp	S T	So rt	Gr 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	
					Def%	Gross	Net		4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99					
WH		2M		63		2,553	2,553	273			44	56				100	40	16	416	2.09	6.1
WH		3M		28		1,142	1,142	122		100					22	78	38	8	86	0.62	13.3
WH		4M		9		335	335	36		100			10	25	35	31	27	6	43	0.49	7.7
WH Totals				11		4,031	4,031	431		37	28	35	1	2	9	88	35	9	148	0.97	27.2
DF		CU															9	23		0.00	1.4
DF		2M		80	.3	25,819	25,743	2,754			49	51	0	0	1	99	40	16	397	2.00	64.9
DF		3M		16		5,314	5,314	569		99	1		0	1	1	97	39	9	112	0.77	47.4
DF		4M		4		1,100	1,100	118		100			19	44	24	13	24	6	33	0.40	33.6
DF Totals				86	.2	32,233	32,157	3,441		20	39	41	1	2	1	95	36	11	218	1.31	147.3
DF	S		CU														31	8		0.00	3.2
DF Totals																	31	8		0.00	3.2
GF		2M		71		292	292	31				100				100	40	28	1425	6.22	.2
GF		3M		5		18	18	2		100						100	40	11	180	1.90	.1
GF		4M		24		98	98	10		100					100		31	6	40	0.27	2.4
GF Totals				1		408	408	44		29		71			24	76	32	8	148	0.90	2.8
NF		2M		89	1.0	638	632	68			8	92				100	40	18	584	2.89	1.1
NF		3M		9	5.1	62	59	6		100						100	40	9	123	1.06	.5
NF		4M		2		13	13	1		100			100				16	6	24	0.47	.5
NF Totals				2	1.3	713	704	75		10	8	82	2			98	34	13	335	2.10	2.1
Totals					0.2	37,385	37,299	3,991		22	37	41	1	2	3	94	36	11	204	1.24	182.6

TC		PSTNDSUM		Stand Table Summary										Page 2	
														Date: 1/16/2025	
<div>TT2N RR6W S04 Ty00CC107.00</div>				Project		WOLFSEND						Time: 11:44:22AM			
				Acres		107.00						Grown Year:			
S Sp	T	Tot					Average Log		Net		Net		Totals		
		Sample	FF	Av	Trees/	BA/	Logs	Net	Net	Tons/	Cu.Ft.	Bd.Ft.			
		DBH	Trees	16'	Ht	Acre	Acre	Acre	Cu.Ft.	Bd.Ft.	Acre	Acre	Tons	Cunits	MBF
DF S		Totals	3	83	65	1.998	3.24								
Totals			171	87	113	76.184	184.86	177.92	45.4	209.6	232.49	8,085	37,299	24,876	8,651 3,991

TC		PLOGSTVB		Log Stock Table - MBF																	
TT2N RR6W S04 Ty00CC107.00				Project: Acres		WOLFSEND107.00										Page1					
																Date1/16/2025					
																Time11:44:20AM					
S T Spp	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches														
							2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+			
WH	2M	40	273		273	63.4					46		34	154	40						
WH	3M	33	9		9	2.0			9												
WH	3M	35	18		18	4.2			18												
WH	3M	37	2		2	.5			2												
WH	3M	40	93		93	21.6			12	50	31										
WH	4M	13	3		3	.6			3												
WH	4M	17	1		1	.2			1												
WH	4M	22	5		5	1.2			5												
WH	4M	23	2		2	.5			2												
WH	4M	26	1		1	.2				1											
WH	4M	27	1		1	.2			1												
WH	4M	32	2		2	.5			2												
WH	4M	35	10		10	2.4			2	9											
WH	4M	37	2		2	.5			2												
WH	4M	40	9		9	2.0			9												
WH	Totals		431		431	10.8			67	60	31	46	34	154	40						
DF	2M	20	11		11	.3									11						
DF	2M	24	13		13	.4										13					
DF	2M	32	16		16	.5									16						
DF	2M	40	2,723		2,715	78.9					461	527	1173	476	78						
DF	3M	20	1		1	.0				1											
DF	3M	21	1		1	.0				1											
DF	3M	26	1		1	.0				1											
DF	3M	30	4		4	.1			3	1											
DF	3M	32	5		5	.1			5												
DF	3M	35	3		3	.1			3												
DF	3M	36	4		4	.1			4												
DF	3M	37	10		10	.3			10												
DF	3M	38	8		8	.2			8												
DF	3M	39	15		15	.4			15												
DF	3M	40	516		516	15.0			48	168	294	6									
DF	4M	12	1		1	.0			1												
DF	4M	13	2		2	.1			2												
DF	4M	14	3		3	.1			2	1											
DF	4M	15	5		5	.1			5												
DF	4M	16	3		3	.1			3												

TC		PLOGSTVB		Log Stock Table - MBF															
<div>TT2N RR6W S04 Ty00CC107.00</div>				Project:		WOLFSEND										Page		2	
				Acres		107.00										Date		1/16/2025	
																Time		11:44:20AM	
Spp	S T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches											
								2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF		4M	17	1		1	.0			1									
DF		4M	18	1		1	.0			1									
DF		4M	19	3		3	.1			3									
DF		4M	20	6		6	.2			5	1								
DF		4M	21	5		5	.1			5									
DF		4M	22	6		6	.2			6									
DF		4M	23	3		3	.1			3									
DF		4M	24	1		1	.0			1									
DF		4M	25	10		10	.3			10									
DF		4M	26	9		9	.3			9									
DF		4M	27	5		5	.1			5									
DF		4M	28	5		5	.1			5									
DF		4M	29	3		3	.1			3									
DF		4M	30	5		5	.1			5									
DF		4M	31	6		6	.2			6									
DF		4M	32	10		10	.3			10									
DF		4M	33	4		4	.1			4									
DF		4M	34	4		4	.1			4									
DF		4M	35	4		4	.1			4									
DF		4M	36	4		4	.1			4									
DF		4M	37	3		3	.1			3									
DF		4M	39	2		2	.1			2									
DF		4M	40	7		7	.2			7									
DF		Totals		3,449		3,441	86.2			212	175	294	467	527	1173	502	91		
GF		2M	40	31		31	71.5										11	20	
GF		3M	40	2		2	4.5					2							
GF		4M	31	10		10	24.0			10									
GF		Totals		44		44	1.1			10		2					11	20	
NF		2M	40	68		68	89.8					6		24		18	20		
NF		3M	40	7	5.1	6	8.4			2	5								
NF		4M	15	1		1	.9			1									
NF		4M	18	1		1	.9			1									
NF		Totals		76	1.3	75	1.9			1	2	5	6	24		18	20		
Total		All Species		4,000		3,991	100.0			291	236	331	519	561	1351	560	122	20	

Volume Summary
(Shown in MBF)
Wolf's End
FG-341-2025-W00951-01
March 2025

TIMBER SALE AREA: CC (107 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	Cruise Volume	2,754	569	118	3,441
	Hidden D&B (2%)	(55)	(11)	(3)	(69)
	NET TOTAL	2,699	558	115	3,372
	% of Total	80	17	3	
Western hemlock	Cruise Volume	273	122	36	431
	Hidden D&B (2%)	(5)	(3)	(1)	(9)
	NET TOTAL	268	119	35	422
	% of Total	64	28	8	
Noble fir	Cruise Volume	68	6	1	75
	Hidden D&B (2%)	(1)	(0)	(0)	(1)
	NET TOTAL	67	6	1	74
	% of Total	91	8	1	
Grand fir	Cruise Volume	31	2	10	43
	Hidden D&B (2%)	(1)	(0)	(0)	(1)
	NET TOTAL	30	2	10	42
	% of Total	71	5	24	

SALE TOTAL				
SPECIES	2 SAW	3 SAW	4 SAW	TOTAL
Douglas-fir	2,699	558	115	3,372
Western hemlock	268	119	35	422
Noble fir	67	6	1	74
Grand fir	30	2	10	42
Total	3,064	685	161	3,910

