



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Sunset Rest
Sale fg-341-2020-w00548-01

District: Forest Grove

Date: June 24, 2019

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$2,061,234.06	\$15,881.39	\$2,077,115.45
		Project Work:	(\$71,095.00)
		Advertised Value:	\$2,006,020.45



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Timber Description

Location: Portions of Sections 28, 29 & 32, T4N, R6W, W.M., Clatsop County, Oregon

Stand Stocking: 20%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	21	0	98
Western Hemlock / Fir	17	0	98
Alder (Red)	22	0	95

Volume by Grade	2S	3S & 4S 6"-11"	Camprun	Total
Douglas - Fir	2,523	786	0	3,309
Western Hemlock / Fir	940	634	0	1,574
Alder (Red)	0	0	49	49
Total	3,463	1,420	49	4,932

Comments: LOCAL POND VALUES USED, MAY 2019

WESTERN RED CEDAR AND OTHER CEDARS:
STUMPAGE PRICE = POND VALUE - LOGGING COST
 $\$689.42/\text{MBF} = \$909/\text{MBF} - \$219.58/\text{MBF}$

BRANDING AND PAINTING ALLOWANCE = $\$2.00/\text{MBF}$

FUEL COST ALLOWANCE = $\$3.00/\text{GAL}$

HAULING COST ALLOWANCE = $\$950$ DAILY TRUCK COST

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

OTHER COSTS (NO PROFIT & RISK TO BE ADDED):

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

MACHINE TIME TO PILE LANDING SLASH:
20 HRS @ $\$150/\text{HR} = \$3,000$

SLASH TREATMENT:
40 AC @ $\$200/\text{AC} = \$8,000$

TOTAL OTHER COSTS (NO P&R) = $\$14,000$

ROAD MAINTENANCE:

MOVE IN: $\$3,000$
ROAD MAINTENANCE: 2.6 MILES @ $\$1,200/\text{MI} = \$3,120$
TOTAL: $\$6,120/4,932\text{MBF} = \$1.24/\text{MBF}$



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Logging Conditions

Combination#: 1	Douglas - Fir	100.00%
	Western Hemlock / Fir	100.00%
	Alder (Red)	100.00%
Logging System:	Shovel	Process: Feller Buncher
yarding distance:	Short (400 ft)	downhill yarding: No
tree size:	Mature / Regen Cut (900 Bft/tree), 3-5 logs/MBF	
loads / day:	8	bd. ft / load: 4800
cost / mbf:	\$92.13	
machines:	Feller Buncher w/ Delimber	



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Logging Costs

Operating Seasons: 1.00

Profit Risk: 10%

Project Costs: \$71,095.00

Other Costs (P/R): \$0.00

Slash Disposal: \$0.00

Other Costs: \$14,000.00

Miles of Road

Road Maintenance: \$1.24

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	4.8
Alder (Red)	\$0.00	2.0	4.8



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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									
\$92.13	\$1.26	\$0.89	\$100.94	\$0.00	\$19.52	\$0.00	\$2.00	\$2.84	\$219.58
Western Hemlock / Fir									
\$92.13	\$1.26	\$0.89	\$100.94	\$0.00	\$19.52	\$0.00	\$2.00	\$2.84	\$219.58
Alder (Red)									
\$92.13	\$1.30	\$0.89	\$103.91	\$0.00	\$19.82	\$0.00	\$2.00	\$2.84	\$222.89

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$685.44	\$465.86	\$0.00
Western Hemlock / Fir	\$0.00	\$549.76	\$330.18	\$0.00
Alder (Red)	\$0.00	\$547.00	\$324.11	\$0.00



"STEWARDSHIP IN FORESTRY"

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District: Forest Grove

Date: June 24, 2019

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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	3,309	\$465.86	\$1,541,530.74
Western Hemlock / Fir	1,574	\$330.18	\$519,703.32
Alder (Red)	49	\$324.11	\$15,881.39

Gross Timber Sale Value

Recovery: \$2,077,115.45

Prepared By: Nate Hunter

Phone: 503-359-7434

Timber Sale: Sunset Rest
 Sale Number: FG-341-2020-W00548-01

PROJECT NO. 1: ROCKED ROAD CONSTRUCTION

Road Segment	Length	Cost
B to C	35+25	\$25,167.34
D to E	23+70	\$14,349.82
F to G	14+40	\$9,135.40
	73+35 stations	
	1.39 miles	
Total Rock =		
48 cy	1½" - 0	
5,550 cy	4" - 0	
24 cy	Riprap	
	Move-in =	\$3,837.05
TOTAL PROJECT NO. 1 COST =		\$52,489.61

PROJECT NO. 2: DIRT ROAD CONSTRUCTION

Road Segment	Length	Cost
H to I	10+80	\$3,035.30
	10+80 stations	
	0.20 miles	
	Move-in =	\$239.38
TOTAL PROJECT NO. 2 COST =		\$3,274.68

PROJECT NO. 3: ROAD IMPROVEMENT

Road Segment	Length	Cost
A to B	9+15	\$1,719.40
J	-	\$12,490.62
	9+15 stations	
	0.17 miles	
Total Rock =		
177 cy	1½" - 0	
74 cy	4" - 0	
24 cy	Riprap	
	Move-in =	\$1,120.69
TOTAL PROJECT NO. 3 COST =		\$15,330.71

TOTAL CREDITS \$71,095.00

SUMMARY OF CONSTRUCTION COST

Timber Sale: Sunset Rest Sale Number: FG-341-2020-W00548-01
Road Segment: A to B Improvement: 9+15 stations
0.17 miles

PROJECT NO. 3

Improvement

Install Gate 1 ea @ \$1,200.00 per ea = \$1,200.00
Grade, ditch, & roll 9.15 sta @ \$36.00 per sta = \$329.40

TOTAL IMPROVEMENT COSTS = \$1,529.40

CULVERTS

Markers & Stakes

Culvert Markers 1 ea @ \$10.00 per ea = \$10.00

TOTAL CULVERT COSTS = \$10.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Spot rock	4" - 0	\$0.97	\$1.41	\$1.22	50	\$180.00
				Subtotal =	50	\$180.00

Totals	All Rock =	50
	4" - 0 =	50

TOTAL ROCK COSTS = \$180.00

TOTAL PROJECT COST = \$1,719.40

SUMMARY OF CONSTRUCTION COST

Timber Sale: Sunset Rest
Road Segment: B to C

Sale Number: FG-341-2020-W00548-01
Construction: 35+25 stations
0.67 miles

PROJECT NO. 1

CONSTRUCTION

Clearing & grubbing (scatter)	0.81	ac @	\$1,078.00	per ac =	\$873.18
Balanced road construction	18.25	sta @	\$110.00	per sta =	\$2,007.50
Road widening (drift)	17.00	sta @	\$100.00	per sta =	\$1,700.00
Culvert No. 2					
Excavate & load	59	cy @	\$1.64	per cy =	\$95.94
Endhaul unsuitable fill material	59	cy @	\$0.88	per cy =	\$51.48
Compact waste area	59	cy @	\$0.30	per cy =	\$17.55
Drift, Place and Compact fill	117	cy @	\$2.90	per cy =	\$339.30
Pump culvert installation	1	day @	\$150.00	per day =	\$150.00
Construct Turnouts	3	ea @	\$66.00	per ea =	\$198.00
Construct Turnarounds	1	ea @	\$82.50	per ea =	\$82.50
Construct Landing	1	ea @	\$314.00	per ea =	\$314.00
Grade, ditch, & roll	35.25	sta @	\$36.00	per sta =	\$1,269.00

TOTAL RECONSTRUCTION COSTS = \$7,098.45

CULVERTS

Culverts and Bands

18" Diameter	180	LF @	\$20.00	per LF =	\$3,600.00
24" Diameter	30	LF @	\$29.00	per LF =	\$870.00
36" Diameter	40	LF @	\$50.00	per LF =	\$2,000.00

Markers & Stakes

Culvert Markers	8	ea @	\$10.00	per ea =	\$80.00
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TOTAL CULVERT COSTS = \$6,550.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Subgrade rock						
Bedding and backfill	1½" - 0	\$2.47	\$8.87	\$0.50	48	\$568.32
Energy dissipator	Riprap	\$0.97	\$2.05	\$1.60	24	\$110.88
				Subtotal =	72	\$679.20
Surfacing rock						
Base rock	4" - 0	\$0.97	\$1.90	\$1.22	2,292	\$9,374.28
Junction	4" - 0	\$0.97	\$1.90	\$1.22	12	\$49.08
Turnout	4" - 0	\$0.97	\$1.90	\$1.22	87	\$355.83
Turnaround	4" - 0	\$0.97	\$1.90	\$1.22	20	\$81.80
70' Landing	4" - 0	\$0.97	\$1.90	\$1.22	180	\$736.20
				Subtotal =	2,591	\$10,597.19

Totals

All Rock =	2,663
1½" - 0 =	48
4" - 0 =	2,591
Riprap =	24

TOTAL ROCK COSTS = \$11,276.39

EROSION CONTROL

Grass seed & fertilizer	0.41	ac @	\$500.00	per ac =	\$202.50
Straw Mulch Bale	4	ea @	\$10.00	per ea =	\$40.00

TOTAL EROSION CONTROL COSTS = \$242.50

TOTAL PROJECT COST = \$25,167.34

SUMMARY OF CONSTRUCTION COST

Timber Sale: Sunset Rest
Road Segment: D to E

Sale Number: FG-341-2020-W00548-01
Construction: 23+70 stations
0.45 miles

PROJECT NO. 1

CONSTRUCTION

Clearing & grubbing (scatter)	1.64	ac @	\$1,078.00	per ac =	\$1,767.92
Balanced road construction	16.20	sta @	\$110.00	per sta =	\$1,782.00
Road widening (drift)	7.50	sta @	\$100.00	per sta =	\$750.00
Turnouts	1	ea @	\$66.00	per ea =	\$66.00
Turnarounds	1	ea @	\$82.50	per ea =	\$82.50
70' Landing	1	ea @	\$314.00	per ea =	\$314.00
Grade, ditch, & roll	23.70	sta @	\$36.00	per sta =	\$853.20

TOTAL CONSTRUCTION COSTS = \$5,615.62

CULVERTS

Culverts and Bands					
18" Diameter	30	LF @	\$20.00	per LF =	\$600.00
Markers & Stakes					
Culvert markers	1	ea @	\$10.00	per ea =	\$10.00

TOTAL CULVERT COSTS = \$610.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Base rock	4" - 0	\$0.97	\$2.11	\$1.22	1,541	\$6,626.30
Junction	4" - 0	\$0.97	\$2.11	\$1.22	24	\$103.20
Turnout	4" - 0	\$0.97	\$2.11	\$1.22	29	\$124.70
Turnaround	4" - 0	\$0.97	\$2.11	\$1.22	20	\$86.00
70' Landing	4" - 0	\$0.97	\$2.11	\$1.22	180	\$774.00
				Subtotal =	1,794	\$7,714.20

Totals

All Rock =	1,794
4" - 0 =	1,794

TOTAL ROCK COSTS = \$7,714.20

EROSION CONTROL

Grass seed & fertilizer	0.82	ac @	\$500.00	per ac =	\$410.00
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TOTAL EROSION CONTROL COSTS = \$410.00

TOTAL PROJECT COST = \$14,349.82

SUMMARY OF CONSTRUCTION COST

Timber Sale: Sunset Rest
Road Segment: F to G

Sale Number: FG-341-2020-W00548-01
Construction: 14+40 stations
0.27 miles

PROJECT NO. 1

CONSTRUCTION

Clearing & grubbing (scatter)	1.00	ac @	\$1,078.00	per ac =	\$1,078.00
Balanced road construction	14.40	sta @	\$110.00	per sta =	\$1,584.00
Turnouts	1	ea @	\$66.00	per ea =	\$66.00
Turnarounds	1	ea @	\$82.50	per ea =	\$82.50
70' Landing	1	ea @	\$314.00	per ea =	\$314.00
Grade, ditch, & roll	14.40	sta @	\$36.00	per sta =	\$518.40

TOTAL CONSTRUCTION COSTS = \$3,642.90

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Base rock	4" - 0	\$0.97	\$2.31	\$1.22	936	\$4,212.00
Turnout	4" - 0	\$0.97	\$2.31	\$1.22	29	\$130.50
Turnaround	4" - 0	\$0.97	\$2.31	\$1.22	20	\$90.00
70' Landing	4" - 0	\$0.97	\$2.31	\$1.22	180	\$810.00
Subtotal =					1,165	\$5,242.50

Totals

All Rock =	1,165
4" - 0 =	1,165

TOTAL ROCK COSTS = \$5,242.50

EROSION CONTROL

Grass seed & fertilizer	0.50	ac @	\$500.00	per ac =	\$250.00
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TOTAL EROSION CONTROL COSTS = \$250.00

TOTAL PROJECT COST = \$9,135.40

SUMMARY OF CONSTRUCTION COST

Timber Sale: Sunset Rest
 Road Segment: H to I

Sale Number: FG-341-2020-W00548-01
 Construction: 10+80 stations
0.20 miles

PROJECT NO. 2

CONSTRUCTION

Clearing & grubbing (scatter)	0.75	ac @	\$1,078.00	per ac =	\$808.50
Balanced road construction	10.80	sta @	\$110.00	per sta =	\$1,188.00
Turnouts	1	ea @	\$66.00	per ea =	\$66.00
Turnarounds	1	ea @	\$82.50	per ea =	\$82.50
70' Landing	1	ea @	\$314.00	per ea =	\$314.00
Grade, ditch, & roll	10.80	sta @	\$36.00	per sta =	\$388.80

TOTAL CONSTRUCTION COSTS = \$2,847.80

EROSION CONTROL

Grass seed & fertilizer	0.38	ac @	\$500.00	per ac =	\$187.50
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TOTAL EROSION CONTROL COSTS = \$187.50

TOTAL PROJECT COST = \$3,035.30

SUMMARY OF CONSTRUCTION COST

Timber Sale: Sunset Rest
Point: J

Sale Number: FG-341-2020-W00548-01

PROJECT NO. 3

IMPROVEMENT

Culvert No. 10

Remove and stage road surfacing	47	cy @	\$4.80	per cy =	\$223.20
Remove and stage fill armor	12	cy @	\$1.60	per cy =	\$19.20
Excavate & load or place existing fill material	243	cy @	\$1.64	per cy =	\$398.52
Endhaul unsuitable fill material	92	cy @	\$1.25	per cy =	\$114.48
Compact waste area	92	cy @	\$0.30	per cy =	\$27.48
Stage material locally	151	cy @	\$0.70	per cy =	\$105.99
Excavate additional fill material	214	cy @	\$1.64	per cy =	\$350.77
Haul fill material	278	cy @	\$2.30	per cy =	\$639.52
Place and Compact fill	365	cy @	\$2.90	per cy =	\$1,059.37
Pump culvert installation	1	day @	\$150.00	per day =	\$150.00

Cleanout Pads

Construct pad	1	ea @	\$150.00	per ea =	\$150.00
Improve existing pad	1	ea @	\$100.00	per ea =	\$100.00
Excavate additional material	54.00	cy @	\$1.64	per cy =	\$88.56
Haul material	54	cy @	\$2.30	per cy =	\$124.20

TOTAL RECONSTRUCTION COSTS = \$3,551.29

CULVERTS

Culverts and Bands

60" Diameter	50	LF @	\$134.00	per LF =	\$6,700.00
60" Band	2	ea @	\$160.80	per ea =	\$321.60

TOTAL CULVERT COSTS = \$7,021.60

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Culvert rock						
Bedding, backfill	1½" - 0	-	-	\$2.90	47	\$134.85
Fill armor	Riprap	-	-	\$1.60	12	\$19.20
Rock beaver analog	Riprap	\$0.97	\$2.05	\$1.60	12	\$55.44
				Subtotal =	71	\$209.49
Surfacing rock						
Spot rock	1½" - 0	\$2.47	\$8.15	\$1.22	130	\$1,539.20
Maintenance Pads	4" - 0	\$0.97	\$1.52	\$1.22	24	\$89.04
				Subtotal =	154	\$1,628.24

Totals	All Rock =	225
	1½" - 0 =	177
	4" - 0 =	24
	Riprap =	24

TOTAL ROCK COSTS = \$1,837.73

EROSION CONTROL

Straw Mulch Bale	8	ea @	\$10.00	per ea =	\$80.00
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TOTAL EROSION CONTROL COSTS = \$80.00

TOTAL PROJECT COST = \$12,490.62

SUMMARY OF CONSTRUCTION COST

Timber Sale: Sunset Rest

Sale Number: FG-341-2020-W00548-01

MOVE-IN, WITHIN AREA MOVE, & EQUIPMENT CLEANING COSTS

<u>Equipment</u>	<u>Total</u>
Grader	\$670.68
Roller (smooth/grid) & Compactor	\$430.87
Excavator (Large) - Equipment Cleaning	\$1,675.58
Dozer (Large) - Equipment Cleaning	\$1,714.72
Dump Trucks (10cy +)	\$564.12
Water Truck (2,500 Gal)	\$141.15
	<u>TOTAL MOVE-IN COSTS = \$5,197.12</u>

STOCKPILE COST SUMMARY

Timber Sale: Sunset Rest
Sale Number: FG-341-2020-W00548-01
Stockpile Name: West Mac Stockpile and Quarry

4" - 0: 5,624 cy (truck measure)
Riprap: 48 cy (truck measure)
Total truck yardage: 5,672 cy

Rip / gather Riprap	\$2.10	/ cy x	48 cy	cy =	\$100.80
Load dump truck	<u>\$0.80</u>	/ cy x	<u>5,672 cy</u>	cy =	<u>\$4,537.60</u>
				Subtotal:	<u>\$4,638.40</u>

Within Area Move - excavator					\$186.32
Move in loader					<u>\$651.79</u>
				Subtotal:	<u>\$838.11</u>

TOTAL PRODUCTION COST = \$5,476.51

ROCK DEVELOPMENT COST = \$0.97/cy

STOCKPILE COST SUMMARY

Timber Sale: Sunset Rest
Sale Number: FG-341-2020-W00548-01
Stockpile Name: Lower Rock Creek Stockpile

1 1/2" - 0: 225 cy (truck measure)
Total truck yardage: 225 cy

Load dump truck \$0.80 / cy x 225 cy = \$179.60
Subtotal: \$179.60

Move in loader \$374.66
Subtotal: \$374.66

TOTAL PRODUCTION COST = \$554.26

ROCK DEVELOPMENT COST = \$2.47/cy

Timber Sale: Sunset Rest
 Sale Number: FG-341-2020-W00548-01

PROJECT NO. 1: ROCKED ROAD CONSTRUCTION

Road Segment	Length	Cost
B to C	35+25	\$25,167.34
D to E	23+70	\$14,349.82
F to G	14+40	\$9,135.40
	73+35 stations	
	1.39 miles	
Total Rock =		
48 cy	1½" - 0	
5,550 cy	4" - 0	
24 cy	Riprap	
	Move-in =	\$3,837.05
TOTAL PROJECT NO. 1 COST =		\$52,489.61

PROJECT NO. 2: DIRT ROAD CONSTRUCTION

Road Segment	Length	Cost
H to I	10+80	\$3,035.30
	10+80 stations	
	0.20 miles	
	Move-in =	\$239.38
TOTAL PROJECT NO. 2 COST =		\$3,274.68

PROJECT NO. 3: ROAD IMPROVEMENT

Road Segment	Length	Cost
A to B	9+15	\$1,719.40
J	-	\$12,490.62
	9+15 stations	
	0.17 miles	
Total Rock =		
177 cy	1½" - 0	
74 cy	4" - 0	
24 cy	Riprap	
	Move-in =	\$1,120.69
TOTAL PROJECT NO. 3 COST =		\$15,330.71

TOTAL CREDITS \$71,095.00

SUMMARY OF CONSTRUCTION COST

Timber Sale: Sunset Rest Sale Number: FG-341-2020-W00548-01
Road Segment: A to B Improvement: 9+15 stations
0.17 miles

PROJECT NO. 3

Improvement

Install Gate 1 ea @ \$1,200.00 per ea = \$1,200.00
Grade, ditch, & roll 9.15 sta @ \$36.00 per sta = \$329.40

TOTAL IMPROVEMENT COSTS = \$1,529.40

CULVERTS

Markers & Stakes

Culvert Markers 1 ea @ \$10.00 per ea = \$10.00

TOTAL CULVERT COSTS = \$10.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Spot rock	4" - 0	\$0.97	\$1.41	\$1.22	50	\$180.00
				Subtotal =	50	\$180.00

Totals

All Rock =	50
4" - 0 =	50

TOTAL ROCK COSTS = \$180.00

TOTAL PROJECT COST = \$1,719.40

SUMMARY OF CONSTRUCTION COST

Timber Sale: Sunset Rest
Road Segment: B to C

Sale Number: FG-341-2020-W00548-01
Construction: 35+25 stations
0.67 miles

PROJECT NO. 1

CONSTRUCTION

Clearing & grubbing (scatter)	0.81	ac @	\$1,078.00	per ac =	\$873.18
Balanced road construction	18.25	sta @	\$110.00	per sta =	\$2,007.50
Road widening (drift)	17.00	sta @	\$100.00	per sta =	\$1,700.00
Culvert No. 2					
Excavate & load	59	cy @	\$1.64	per cy =	\$95.94
Endhaul unsuitable fill material	59	cy @	\$0.88	per cy =	\$51.48
Compact waste area	59	cy @	\$0.30	per cy =	\$17.55
Drift, Place and Compact fill	117	cy @	\$2.90	per cy =	\$339.30
Pump culvert installation	1	day @	\$150.00	per day =	\$150.00
Construct Turnouts	3	ea @	\$66.00	per ea =	\$198.00
Construct Turnarounds	1	ea @	\$82.50	per ea =	\$82.50
Construct Landing	1	ea @	\$314.00	per ea =	\$314.00
Grade, ditch, & roll	35.25	sta @	\$36.00	per sta =	\$1,269.00

TOTAL RECONSTRUCTION COSTS = \$7,098.45

CULVERTS

Culverts and Bands

18" Diameter	180	LF @	\$20.00	per LF =	\$3,600.00
24" Diameter	30	LF @	\$29.00	per LF =	\$870.00
36" Diameter	40	LF @	\$50.00	per LF =	\$2,000.00

Markers & Stakes

Culvert Markers	8	ea @	\$10.00	per ea =	\$80.00
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TOTAL CULVERT COSTS = \$6,550.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Subgrade rock						
Bedding and backfill	1½" - 0	\$2.47	\$8.87	\$0.50	48	\$568.32
Energy dissipator	Riprap	\$0.97	\$2.05	\$1.60	24	\$110.88
Subtotal =					72	\$679.20
Surfacing rock						
Base rock	4" - 0	\$0.97	\$1.90	\$1.22	2,292	\$9,374.28
Junction	4" - 0	\$0.97	\$1.90	\$1.22	12	\$49.08
Turnout	4" - 0	\$0.97	\$1.90	\$1.22	87	\$355.83
Turnaround	4" - 0	\$0.97	\$1.90	\$1.22	20	\$81.80
70' Landing	4" - 0	\$0.97	\$1.90	\$1.22	180	\$736.20
Subtotal =					2,591	\$10,597.19

Totals

All Rock =	2,663
1½" - 0 =	48
4" - 0 =	2,591
Riprap =	24

TOTAL ROCK COSTS = \$11,276.39

EROSION CONTROL

Grass seed & fertilizer	0.41	ac @	\$500.00	per ac =	\$202.50
Straw Mulch Bale	4	ea @	\$10.00	per ea =	\$40.00

TOTAL EROSION CONTROL COSTS = \$242.50

TOTAL PROJECT COST = \$25,167.34

SUMMARY OF CONSTRUCTION COST

Timber Sale: Sunset Rest
Road Segment: D to E

Sale Number: FG-341-2020-W00548-01
Construction: 23+70 stations
0.45 miles

PROJECT NO. 1

CONSTRUCTION

Clearing & grubbing (scatter)	1.64	ac @	\$1,078.00	per ac =	\$1,767.92
Balanced road construction	16.20	sta @	\$110.00	per sta =	\$1,782.00
Road widening (drift)	7.50	sta @	\$100.00	per sta =	\$750.00
Turnouts	1	ea @	\$66.00	per ea =	\$66.00
Turnarounds	1	ea @	\$82.50	per ea =	\$82.50
70' Landing	1	ea @	\$314.00	per ea =	\$314.00
Grade, ditch, & roll	23.70	sta @	\$36.00	per sta =	\$853.20

TOTAL CONSTRUCTION COSTS = \$5,615.62

CULVERTS

Culverts and Bands					
18" Diameter	30	LF @	\$20.00	per LF =	\$600.00
Markers & Stakes					
Culvert markers	1	ea @	\$10.00	per ea =	\$10.00

TOTAL CULVERT COSTS = \$610.00

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Base rock	4" - 0	\$0.97	\$2.11	\$1.22	1,541	\$6,626.30
Junction	4" - 0	\$0.97	\$2.11	\$1.22	24	\$103.20
Turnout	4" - 0	\$0.97	\$2.11	\$1.22	29	\$124.70
Turnaround	4" - 0	\$0.97	\$2.11	\$1.22	20	\$86.00
70' Landing	4" - 0	\$0.97	\$2.11	\$1.22	180	\$774.00
Subtotal =					1,794	\$7,714.20

Totals

All Rock =	1,794
4" - 0 =	1,794

TOTAL ROCK COSTS = \$7,714.20

EROSION CONTROL

Grass seed & fertilizer	0.82	ac @	\$500.00	per ac =	\$410.00
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TOTAL EROSION CONTROL COSTS = \$410.00

TOTAL PROJECT COST = \$14,349.82

SUMMARY OF CONSTRUCTION COST

Timber Sale: Sunset Rest
Road Segment: F to G

Sale Number: FG-341-2020-W00548-01
Construction: 14+40 stations
0.27 miles

PROJECT NO. 1

CONSTRUCTION

Clearing & grubbing (scatter)	1.00	ac @	\$1,078.00	per ac =	\$1,078.00
Balanced road construction	14.40	sta @	\$110.00	per sta =	\$1,584.00
Turnouts	1	ea @	\$66.00	per ea =	\$66.00
Turnarounds	1	ea @	\$82.50	per ea =	\$82.50
70' Landing	1	ea @	\$314.00	per ea =	\$314.00
Grade, ditch, & roll	14.40	sta @	\$36.00	per sta =	\$518.40

TOTAL CONSTRUCTION COSTS = \$3,642.90

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Surfacing rock						
Base rock	4" - 0	\$0.97	\$2.31	\$1.22	936	\$4,212.00
Turnout	4" - 0	\$0.97	\$2.31	\$1.22	29	\$130.50
Turnaround	4" - 0	\$0.97	\$2.31	\$1.22	20	\$90.00
70' Landing	4" - 0	\$0.97	\$2.31	\$1.22	180	\$810.00
Subtotal =					1,165	\$5,242.50

Totals

All Rock =	1,165
4" - 0 =	1,165

TOTAL ROCK COSTS = \$5,242.50

EROSION CONTROL

Grass seed & fertilizer	0.50	ac @	\$500.00	per ac =	\$250.00
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TOTAL EROSION CONTROL COSTS = \$250.00

TOTAL PROJECT COST = \$9,135.40

SUMMARY OF CONSTRUCTION COST

Timber Sale: Sunset Rest
 Road Segment: H to I

Sale Number: FG-341-2020-W00548-01
 Construction: 10+80 stations
0.20 miles

PROJECT NO. 2

CONSTRUCTION

Clearing & grubbing (scatter)	0.75	ac @	\$1,078.00	per ac =	\$808.50
Balanced road construction	10.80	sta @	\$110.00	per sta =	\$1,188.00
Turnouts	1	ea @	\$66.00	per ea =	\$66.00
Turnarounds	1	ea @	\$82.50	per ea =	\$82.50
70' Landing	1	ea @	\$314.00	per ea =	\$314.00
Grade, ditch, & roll	10.80	sta @	\$36.00	per sta =	\$388.80
TOTAL CONSTRUCTION COSTS =					\$2,847.80

EROSION CONTROL

Grass seed & fertilizer	0.38	ac @	\$500.00	per ac =	\$187.50
TOTAL EROSION CONTROL COSTS =					\$187.50

TOTAL PROJECT COST = \$3,035.30

SUMMARY OF CONSTRUCTION COST

Timber Sale: Sunset Rest
Point: J

Sale Number: FG-341-2020-W00548-01

PROJECT NO. 3

IMPROVEMENT

Culvert No. 10

Remove and stage road surfacing	47	cy @	\$4.80	per cy =	\$223.20
Remove and stage fill armor	12	cy @	\$1.60	per cy =	\$19.20
Excavate & load or place existing fill material	243	cy @	\$1.64	per cy =	\$398.52
Endhaul unsuitable fill material	92	cy @	\$1.25	per cy =	\$114.48
Compact waste area	92	cy @	\$0.30	per cy =	\$27.48
Stage material locally	151	cy @	\$0.70	per cy =	\$105.99
Excavate additional fill material	214	cy @	\$1.64	per cy =	\$350.77
Haul fill material	278	cy @	\$2.30	per cy =	\$639.52
Place and Compact fill	365	cy @	\$2.90	per cy =	\$1,059.37
Pump culvert installation	1	day @	\$150.00	per day =	\$150.00

Cleanout Pads

Construct pad	1	ea @	\$150.00	per ea =	\$150.00
Improve existing pad	1	ea @	\$100.00	per ea =	\$100.00
Excavate additional material	54.00	cy @	\$1.64	per cy =	\$88.56
Haul material	54	cy @	\$2.30	per cy =	\$124.20

TOTAL RECONSTRUCTION COSTS = \$3,551.29

CULVERTS

Culverts and Bands

60" Diameter	50	LF @	\$134.00	per LF =	\$6,700.00
60" Band	2	ea @	\$160.80	per ea =	\$321.60

TOTAL CULVERT COSTS = \$7,021.60

ROCK

	Rock Size	Base Cost \$/cy	Haul Cost \$/cy	Placement/ Processing Cost \$/cy	Total CY	Rock Cost
Culvert rock						
Bedding, backfill	1½" - 0	-	-	\$2.90	47	\$134.85
Fill armor	Riprap	-	-	\$1.60	12	\$19.20
Rock beaver analog	Riprap	\$0.97	\$2.05	\$1.60	12	\$55.44
Subtotal =					71	\$209.49
Surfacing rock						
Spot rock	1½" - 0	\$2.47	\$8.15	\$1.22	130	\$1,539.20
Maintenance Pads	4" - 0	\$0.97	\$1.52	\$1.22	24	\$89.04
Subtotal =					154	\$1,628.24

Totals	All Rock =	225
	1½" - 0 =	177
	4" - 0 =	24
	Riprap =	24

TOTAL ROCK COSTS = \$1,837.73

EROSION CONTROL

Straw Mulch Bale

8	ea @	\$10.00	per ea =	\$80.00
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TOTAL EROSION CONTROL COSTS = \$80.00

TOTAL PROJECT COST = \$12,490.62

Timber Sale: Sunset Rest

MOVE-IN, WITHIN AREA MOVE, & EQUIPMENT CLEANING COSTS

<u>Equipment</u>	<u>Total</u>
Grader	\$670.68
Roller (smooth/grid) & Compactor	\$430.87
Excavator (Large) - Equipment Cleaning	\$1,675.58
Dozer (Large) - Equipment Cleaning	\$1,714.72
Dump Trucks (10cy +)	\$564.12
Water Truck (2,500 Gal)	\$141.15
	<u>TOTAL MOVE-IN COSTS = \$5,197.12</u>

STOCKPILE COST SUMMARY

Timber Sale: Sunset Rest
Sale Number: FG-341-2020-W00548-01
Stockpile Name: West Mac Stockpile and Quarry

4" - 0: 5,624 cy (truck measure)
Riprap: 48 cy (truck measure)
Total truck yardage: 5,672 cy

Rip / gather Riprap	\$2.10	/ cy x	48 cy	cy =	\$100.80
Load dump truck	<u>\$0.80</u>	/ cy x	<u>5,672 cy</u>	cy =	<u>\$4,537.60</u>
				Subtotal:	<u>\$4,638.40</u>

Within Area Move - excavator					\$186.32
Move in loader					<u>\$651.79</u>
				Subtotal:	<u>\$838.11</u>

TOTAL PRODUCTION COST = \$5,476.51

ROCK DEVELOPMENT COST = \$0.97/cy

STOCKPILE COST SUMMARY

Timber Sale: Sunset Rest
Sale Number: FG-341-2020-W00548-01
Stockpile Name: Lower Rock Creek Stockpile

1 1/2" - 0: 225 cy (truck measure)
Total truck yardage: 225 cy

Load dump truck \$0.80 / cy x 225 cy = \$179.60
Subtotal: \$179.60

Move in loader \$374.66
Subtotal: \$374.66

TOTAL PRODUCTION COST = \$554.26

ROCK DEVELOPMENT COST = \$2.47/cy

CRUISE REPORT
Sunset Rest
FG-341-2020-W00548-01

1. LOCATION:

Portions of sections 28, 29 and 32, T4N, R6W, W.M. Clatsop County, Oregon.

2. CRUISE DESIGN:

The cruise was designed using an estimated coefficient of variation (CV) of 65%, average stand diameter of 17 inches, sampling error (SE) of 10% and a minimum of 100 grade trees.

3. SAMPLING METHOD:

The Timber Sale Area was cruised in June of 2019 with 35 variable radius grade plots using a 40 BAF prism. Plots were laid out on a 500' x 200' grid. Plots falling on or near existing roads or no-harvest areas were offset 1 chain.

4. CRUISE RESULTS

222 trees were measured and graded producing a cumulative SE of 7.9% on the Basal Area and 8.4% on the 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.

5. DATA PROCESSING:

- a) **Volumes and Statistics,** Cruise estimates and sampling statistics, were derived from Super Ace 2008 cruise software.
- b) **Deductions:** For conifers, two percent of the volume was subtracted from the computed volumes to account for hidden defect and breakage. For hardwoods, five percent of the volume was subtracted from the computed volumes to account for hidden defect and breakage.

6. CRUISERS: The sale was cruised by Kenton Burns, Mark Savage, Adrian Torres and Nate Hunter.

Prepared by: Nate Hunter 6-12-19

Reviewed by: Erik Marcy 6-25-19
Erik Marcy Date

TC PSTATS			PROJECT STATISTICS						PAGE 1		
			PROJECT		SUNREST		DATE		6/19/2019		
TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
04N	06	29	SUNREST	0001	88.00	35	222	S	W		
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL			35	222	6.3						
CRUISE			35	222	6.3	10,849	2.0				
DBH COUNT											
REFOREST											
COUNT											
BLANKS											
100 %											
STAND SUMMARY											
SAMPLE TREES			TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR			143	68.3	20.9	126	35.7	163.4	38,755	38,377	7,801
WHEMLOCK			72	52.8	16.9	118	20.0	82.3	17,215	17,107	3,717
NOB FIR			4	.8	32.2	127	0.8	4.6	1,182	1,166	221
R ALDER			3	1.4	21.6	96	0.7	3.4	599	599	122
TOTAL			222	123.3	19.4	122	57.6	253.7	57,752	57,249	11,861
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			61.7	5.2	862	909	957				
WHEMLOCK			65.8	8.0	478	520	562				
NOB FIR			39.2	22.4	1,199	1,545	1,891				
R ALDER			63.6	44.0	297	530	763				
TOTAL			68.1	4.7	757	794	831	185	46	21	
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			54.9	4.7	172	180	188				
WHEMLOCK			58.2	7.1	103	111	119				
NOB FIR			26.7	15.3	243	287	330				
R ALDER			58.4	40.4	63	107	150				
TOTAL			60.0	4.1	153	159	166	144	36	16	
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			73.2	12.4	60	68	77				
WHEMLOCK			110.6	18.7	43	53	63				
NOB FIR			360.7	60.9	0	1	1				
R ALDER			349.5	59.0	1	1	2				
TOTAL			61.2	10.3	111	123	136	150	37	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			52.9	8.9	149	163	178				
WHEMLOCK			102.7	17.4	68	82	97				
NOB FIR			353.3	59.7	2	5	7				
R ALDER			331.4	56.0	2	3	5				
TOTAL			46.5	7.9	234	254	274	86	22	10	
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			59.4	10.0	34,530	38,377	42,224				
WHEMLOCK			104.7	17.7	14,083	17,107	20,131				
NOB FIR			345.7	58.4	485	1,166	1,847				
R ALDER			339.7	57.4	256	599	943				

TC PSTATS		PROJECT STATISTICS							PAGE	2
		PROJECT SUNREST							DATE	6/19/2019
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
04N	06	29	SUNREST	0001		88.00	35	222	S	W
CL	68.1	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.00	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
TOTAL		49.9	8.4	52,420	57,249	62,078	100	25	11	
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		58.2	9.8	7,034	7,801	8,567				
WHEMLOCK		105.2	17.8	3,057	3,717	4,377				
NOB FIR		348.4	58.8	91	221	351				
R ALDER		334.2	56.4	53	122	191				
TOTAL		50.4	8.5	10,851	11,861	12,871	102	25	11	

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																		
<div>T04N R06W S29 Ty000188.00</div>				Project: SUNREST														Page 1				
				Acres 88.00														Date 6/19/2019				
																		Time 6:21:07AM				
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre Def%GrossNet			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						
WH			CU															4	12		0.00	.4
WH			2M	57	.9	9,914	9,824	864				67	33	0		20	80	38	14	305	1.62	32.2
WH			3M	36	.3	6,260	6,242	549			92	8				8	92	39	8	107	0.64	58.1
WH			4M	7		1,041	1,041	92		100				45	25	5	25	22	6	29	0.35	36.5
WH Totals				30	.6	17,215	17,107	1,505		40	41	19		3	2	15	81	34	9	135	0.86	127.2
DF			CU															8	15		0.00	2.2
DF			2M	76	1.2	29,621	29,263	2,575				37	63	1	7	15	77	38	16	421	2.11	69.5
DF			3M	20	.3	7,679	7,659	674			93	7				2	12	38	9	111	0.69	69.2
DF			4M	4		1,455	1,455	128		100				31	36	17	16	23	6	31	0.38	47.2
DF Totals				67	1.0	38,755	38,377	3,377		22	30	48		2	7	15	77	34	11	204	1.22	188.1
RA			CU															4	27		0.00	.2
RA			CR	100		599	599	53		14	55	32			8	6	86	35	13	282	1.64	2.1
RA Totals				1		599	599	53		14	55	32			8	6	86	32	15	252	1.61	2.4
NF			2M	91	1.5	1,079	1,063	94				14	86	10		17	73	37	21	695	3.31	1.5
NF			3M	8		92	92	8			26	74				10	90	36	9	138	1.22	.7
NF			4M	1		11	11	1		100				38	62			22	6	30	0.70	.4
NF Totals				2	1.4	1,182	1,166	103		3	18	79		9	1	16	74	35	16	454	2.49	2.6
Totals					0.9	57,752	57,249	5,038		27	33	40		2	5	15	78	34	10	179	1.09	320.1

TC PLOGSTVB				Log Stock Table - MBF															
T04N R06W S29 Ty0001 88.00				Project: SUNREST Acres 88.00										Page 2 Date 6/19/2019 Time 6:21:07AM					
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	32	19		19	.6			19									
DF		4M	34	2		2	.1			2									
DF		4M	36	21		21	.6			21									
DF		Totals		3,410		3,377	67.0			236	192	326	343	445	870	746	185	34	
RA		CR	24	4		4	7.9					4							
RA		CR	32	3		3	5.8					3							
RA		CR	40	46		46	86.3						12	17		17			
RA		Totals		53		53	1.0					7	12	17		17			
NF		2M	16	9		9	8.8											9	
NF		2M	32	16		16	15.5										16		
NF		2M	40	70	2.0	69	66.8							8	14	31	16		
NF		3M	26	1		1	.8				1								
NF		3M	40	7		7	7.1				1			6					
NF		4M	20	0		0	.4				0								
NF		4M	24	1		1	.6				1								
NF		Totals		104	1.4	103	2.0			2	1			14	14	31	32	9	
Total		All Species		5,082		5,038	100.0			423	383	557	649	706	1121	887	268	43	

TC		PSTNDSUM		Stand Table Summary										Page Date:		1 6/19/2019	
T04N R06W S29 Ty0001				88.00		Project SUNREST							Time:		6:21:08AM		
						Acres 88.00							Grown Year:				
S Spec	T	Sample		Tot		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net		Net Bd.Ft. Acre	Totals			
		DBH	Trees	FF 16'	Av Ht				Net Cu.Ft.	Net Bd.Ft.	Tons/ Acre	Cu.Ft. Acre		Tons	Cunits	MBF	
DF		8	1	84	60	3.274	1.14	3.27	3.7	20.0	.35	12	65	30	11	6	
DF		10	2	88	84	4.191	2.29	4.19	12.8	60.0	1.52	53	251	134	47	22	
DF		11	1	88	99	1.732	1.14	3.46	10.4	50.0	1.03	36	173	91	32	15	
DF		12	1	88	111	1.455	1.14	2.91	13.4	60.0	1.11	39	175	98	34	15	
DF		13	2	90	116	2.480	2.29	4.96	16.6	75.0	2.35	83	372	207	73	33	
DF		14	4	89	112	4.276	4.57	9.62	17.2	77.8	4.71	165	748	415	145	66	
DF		15	4	89	117	3.725	4.57	8.38	21.5	97.8	5.13	180	820	452	158	72	
DF		16	5	88	104	4.093	5.71	9.82	20.8	90.8	5.82	204	892	512	180	79	
DF		17	7	89	127	5.075	8.00	13.78	24.8	111.6	9.74	342	1,537	857	301	135	
DF		18	2	88	144	1.293	2.29	3.88	28.0	133.3	3.10	109	517	273	96	46	
DF		19	5	89	141	2.902	5.71	8.71	32.2	151.3	7.99	280	1,318	703	247	116	
DF		20	12	89	131	6.286	13.71	17.81	35.4	156.5	17.95	630	2,787	1,580	554	245	
DF		21	3	88	141	1.425	3.43	3.80	43.1	201.2	4.67	164	765	411	144	67	
DF		22	7	88	142	3.031	8.00	9.52	41.3	196.4	11.22	394	1,870	987	346	165	
DF		23	4	89	146	1.584	4.57	5.15	45.6	224.6	6.69	235	1,157	589	207	102	
DF		24	4	88	140	1.455	4.57	4.73	47.8	220.0	6.44	226	1,040	567	199	92	
DF		25	7	90	134	2.347	8.00	7.38	53.0	259.1	11.14	391	1,911	980	344	168	
DF		26	15	88	147	4.650	17.14	16.43	52.4	261.9	24.53	861	4,302	2,159	757	379	
DF		27	5	88	147	1.437	5.71	5.17	57.2	291.1	8.44	296	1,506	743	261	133	
DF		28	11	88	146	2.940	12.57	10.16	63.9	319.7	18.49	649	3,247	1,627	571	286	
DF		29	7	88	149	1.744	8.00	6.73	61.3	322.2	11.75	412	2,168	1,034	363	191	
DF		30	15	88	150	3.492	17.14	13.04	69.1	356.6	25.69	901	4,649	2,261	793	409	
DF		31	5	87	151	1.090	5.71	3.92	77.5	391.1	8.67	304	1,535	763	268	135	
DF		32	4	89	143	.819	4.57	3.07	75.3	414.0	6.59	231	1,271	580	203	112	
DF		33	1	90	160	.192	1.14	.77	82.4	482.5	1.81	63	371	159	56	33	
DF		34	1	85	173	.181	1.14	.73	93.6	497.5	1.93	68	361	170	60	32	
DF		35	1	84	166	.171	1.14	.68	82.9	462.5	1.62	57	316	142	50	28	
DF		36	2	87	161	.323	2.29	1.29	98.1	551.2	3.62	127	713	318	112	63	
DF		37	1	89	140	.153	1.14	.46	128.2	680.0	1.68	59	312	148	52	27	
DF		38	1	86	142	.145	1.14	.58	98.1	515.0	1.62	57	299	143	50	26	
DF		40	2	90	152	.262	2.29	1.05	101.0	512.5	3.02	106	537	265	93	47	
DF		44	1	90	160	.108	1.14	.43	154.0	900.0	1.90	67	390	167	59	34	
DF		Totals	143	88	126	68.333	163.43	185.89	42.0	206.5	222.32	7,801	38,377	19,564	6,864	3,377	
WH		10	4	91	90	8.382	4.57	10.48	11.2	54.0	3.77	118	566	331	104	50	
WH		11	1	86	107	1.732	1.14	1.73	18.5	70.0	1.03	32	121	90	28	11	
WH		12	2	87	114	2.910	2.29	4.37	18.8	80.0	2.62	82	349	231	72	31	
WH		13	5	90	112	6.199	5.71	12.40	17.6	80.0	6.98	218	992	614	192	87	
WH		14	1	94	143	1.069	1.14	3.21	19.1	96.7	1.96	61	310	172	54	27	
WH		15	5	90	124	4.656	5.71	13.04	19.9	92.9	8.32	260	1,211	732	229	107	
WH		16	9	91	130	7.367	10.29	22.10	21.9	98.5	15.50	484	2,177	1,364	426	192	
WH		17	2	89	121	1.450	2.29	3.63	28.1	124.0	3.26	102	450	287	90	40	
WH		18	5	90	130	3.234	5.71	9.70	28.6	130.0	8.86	277	1,261	780	244	111	
WH		19	7	89	120	4.063	8.00	11.03	32.1	140.0	11.34	354	1,544	998	312	136	
WH		20	7	90	126	3.667	8.00	9.95	38.8	177.4	12.34	386	1,765	1,086	339	155	
WH		21	2	91	118	.950	2.29	2.38	45.1	200.0	3.43	107	475	302	94	42	
WH		22	3	91	142	1.299	3.43	4.76	39.0	200.9	5.94	186	957	523	163	84	
WH		23	2	85	132	.792	2.29	2.38	44.2	196.7	3.36	105	467	296	93	41	
WH		24	5	87	139	1.819	5.71	5.82	51.1	241.9	9.53	298	1,408	838	262	124	
WH		25	3	84	122	1.006	3.43	3.02	51.8	220.0	5.00	156	664	440	137	58	
WH		26	1	86	132	.310	1.14	.93	59.9	270.0	1.78	56	251	157	49	22	
WH		27	2	90	110	.575	2.29	1.72	56.8	263.3	3.13	98	454	276	86	40	
WH		29	3	89	122	.747	3.43	2.24	73.0	345.6	5.24	164	775	461	144	68	
WH		32	1	92	102	.205	1.14	.61	79.4	410.0	1.56	49	252	137	43	22	

TC		PSTNDSUM										Stand Table Summary					Page Date:		2 6/19/2019																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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TIMBER SALE SUMMARY
Sunset Rest
FG-341-2020-W00548-01

1. **Location:** Portions of Sections 28, 29 & 32, T4N, R6W, W.M., Clatsop County, Oregon.
2. **Type of Sale:** This timber sale is 88 net acres of Modified Clearcut. The timber will be sold on a recovery basis at a sealed bid auction.
3. **Revenue Distribution:** 100% BOF, Clatsop County.
4. **Sale Acreage:** Acres are net of stream buffers and road prisms. Acreage was determined using ESRI ArcMap GIS software.
5. **Cruise:** The Timber Sale was cruised by ODF Cruisers in June of 2019.
6. **Timber Description:** The Timber Sale Area consists of a well stocked 70-year-old Douglas-fir and western hemlock stand with minor amounts of noble fir and red alder. The stand has an average of 254 ft² of basal area (all species), an average Douglas-fir DBH of 21 inches and an estimated average net Douglas-fir volume of approximately 38 MBF per acre. Western hemlock average DBH was 17 inches and an estimated average net volume of approximately 17 MBF per acre.
7. **Volume Summary:**

SALE TOTAL

SPECIES		2 SAW	3 SAW	4 SAW	CAMPRUN	TOTAL
Douglas-fir		2,523	661	125	0	3,309
Western hemlock		848	538	87	0	1,473
Noble fir		92	8	1	0	101
Red alder		0	0	0	49	49
NET TOTAL						4,932

8. **Topography and Logging Method:** Slopes within the sale areas range from 0% to 40%, with a southern aspect. The timber sale is 100% ground-based. The average horizontal skid trail length is 400'.
9. **Access:** Access to the Timber Sale Area is on surfaced all-weather roads. From Forest Grove, travel north on Highway 47 through Banks then merge onto Highway 26 westbound and continue for approximately 20 miles to McGregor Road, which is just before the 29-mile marker. Turn right and continue north for approximately 1 mile to vacated spur on left (Point A).
10. **Projects:**

Project No. 1: Rocked Road Construction	\$52,489.61
Project No. 2: Dirt Road Construction	\$3,274.68
Project No. 2: Road Improvement	<u>\$15,330.71</u>
 Total credits	 \$71,095.00

VOLUME SUMMARY
(Shown in MBF)
Sunset Rest
FG-341-2020-W00548-01
June 2019

AREA 1:MC (88 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	CAMPRUN	TOTAL
Douglas-fir	Cruise Volume	2,575	674	128	0	3,377
	Hidden D&B (2%)	(52)	(13)	(3)	(0)	(68)
	NET TOTAL	2,523	661	125	0	3,309
	% of Total	76	20	4	0	

AREA 1:MC (88 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	CAMPRUN	TOTAL
Western hemlock	Cruise Volume	865	549	89	0	1,503
	Hidden D&B (2%)	(17)	(11)	(2)	(0)	(30)
	NET TOTAL	848	538	87	0	1,473
	% of Total	58	37	6	0	

AREA 1:MC (88 ACRES)

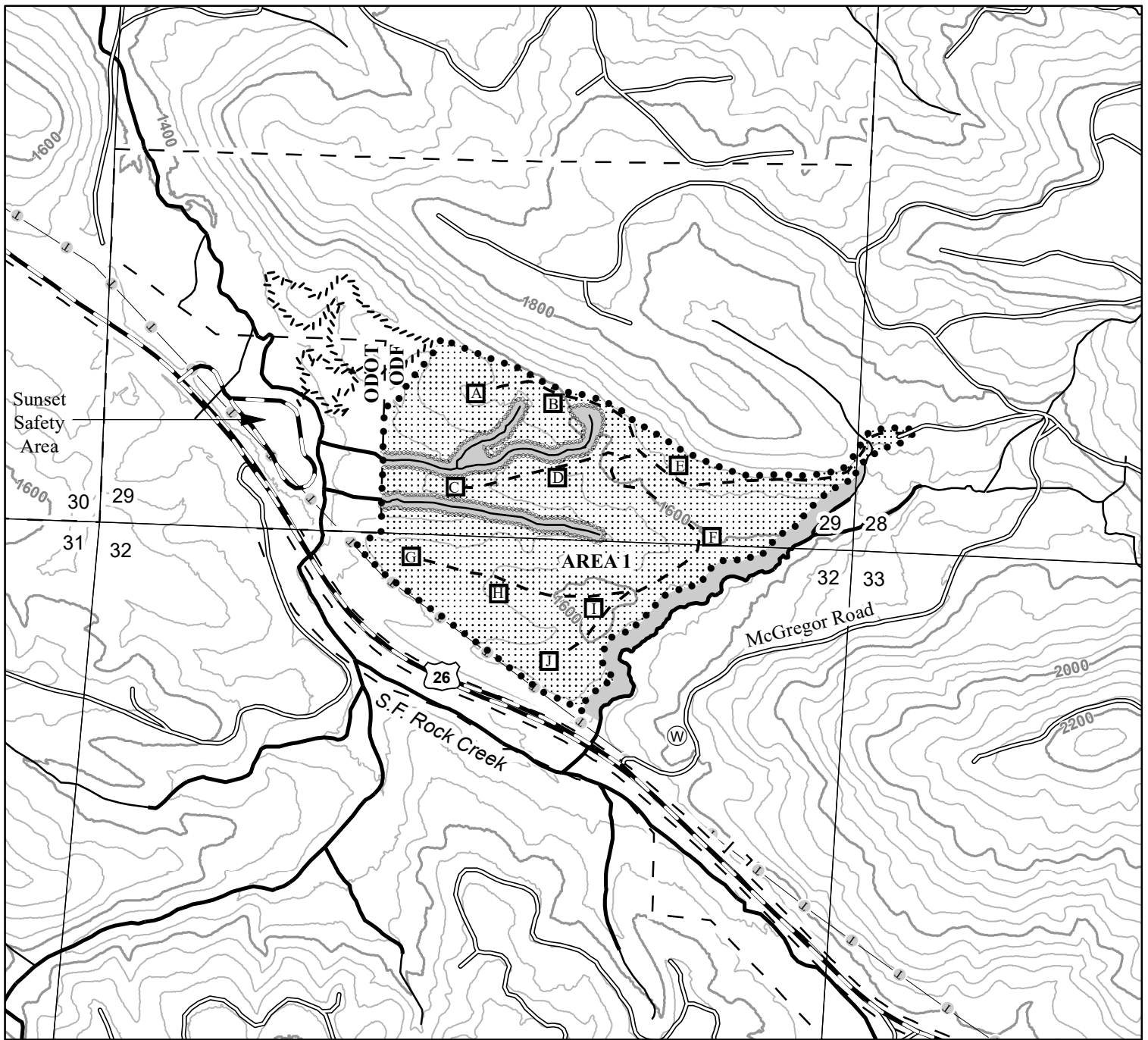
SPECIES		2 SAW	3 SAW	4 SAW	CAMPRUN	TOTAL
Noble fir	Cruise Volume	94	8	1	0	103
	Hidden D&B (2%)	(2)	(0)	(0)	(0)	(2)
	NET TOTAL	92	8	1	0	101
	% of Total	91	8	1	0	

AREA 1:MC (88 ACRES)

SPECIES		2 SAW	3 SAW	4 SAW	CAMPRUN	TOTAL
Red alder	Cruise Volume	0	0	0	52	52
	Hidden D&B (5%)	(0)	(0)	(0)	(3)	(3)
	NET TOTAL	0	0	0	49	49
	% of Total	0	0	0	100	

SALE TOTAL

SPECIES		2 SAW	3 SAW	4 SAW	CAMPRUN	TOTAL
Douglas-fir		2,523	661	125	0	3,309
Western hemlock		848	538	87	0	1,473
Noble fir		92	8	1	0	101
Red alder		0	0	0	49	49
NET TOTAL						4,932



LEGEND

- Timber Sale Boundary
- Stream Buffer Boundary
- ODF Ownership Boundary
- Surfaced Road
- Paved Road
- New Road Construction
- Recreation Trail
- Type-F Stream
- Type-N Stream
- Stream Buffer
- Tractor Yarding Area
- Tractor Landing
- W Waste Area
- Buried Electric Transmission Lines
- 40 Foot Countour Band
- 200 Foot Countour Band
- Section Line

LOGGING PLAN

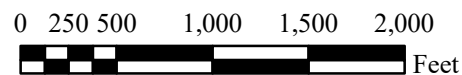
FOR TIMBER SALE CONTRACT #FG-341-2020-W00548-01
 SUNSET REST
 PORTIONS OF SECTIONS 28, 29, & 32, T4N, R6W, W.M.
 CLATSOP COUNTY, OREGON

Forest Grove District GIS
 June, 2019

This product is for informational use and may not be
 suitable for legal, engineering, or surveying purposes.

1:12,000

1 inch = 1,000 feet



APPROXIMATE NET ACRES

	TRACTOR	CABLE
AREA 1	88	0
TOTAL	88	0