



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Carlson Corner
Sale 341-12-08

District: Forest Grove

Date: May 14, 2012

cost summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$1,578,500.67	\$711.96	\$1,579,212.63
		Project Work:	\$(389,500.00)
		Advertised Value:	\$1,189,712.63



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
 Carlson Corner
 Sale 341-12-08

District: Forest Grove

Date: May 14, 2012

timber description

Location: Portions of Sections 19, 20, 29, and 30, T3N, R5W,
 W.M., Washington County, Oregon.

Stand Stocking: 20%

SpecieName	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	20	0	98
Alder (Red)	15	0	98

Volume by Grade	2S	3S	4S	Camprur	Poles / P	Total
Douglas - Fir	2,048	744	98	0	1,221	4,111
Alder (Red)	0	0	0	4	0	4
Total	2,048	744	98	4	1,221	4,115



Timber Sale Appraisal
Carlson Corner
Sale 341-12-08

"STEWARDSHIP IN FORESTRY"

District: Forest Grove

Date: May 14, 2012

comments: Pond Values Used: 1st Quarter Calendar Year 2012.

Western hemlock and Other Conifers Stumpage Price = Pond Value
minus Logging Cost:
\$155.40/MBF = \$430/MBF - \$274.60/MBF

Western redcedar and Other Cedars Stumpage Price = Pond Value
minus Logging Cost:
\$670.40/MBF = \$945/MBF - \$274.60/MBF

SCALING COST ALLOWANCE = \$5.00/MBF

FUEL COST ALLOWANCE = \$4.00/Gallon

HAULING COST ALLOWANCE
Hauling costs equivalent to \$780 daily truck cost.

Other Costs (with Profit & Risk to be added):
Brand and Paint: 4,115 MBF @\$1/MBF = \$4,115
Intermediate Supports: 5 supports x \$200/support = \$1,000
Total Other Costs (with Profit & Risk to be added) = \$5,115

Other Costs (No Profit & Risk added):
Blocking/Waterbarring Skid Roads: 5 hrs @ \$150/hr = \$750
Firewood Sorting: 10 hrs @ \$150/hr = \$1,500
Snag Creation: 100 snags @ \$40/snag = \$4,000
Equipment Cleaning: 3 machines @ \$1,000/machine = \$3,000
TOTAL Other Costs (No Profit & Risk added) = \$9,250

ROAD MAINTENANCE
Move-in: \$2,000
General Road Maintenance: 4.9 miles x \$1,000/mile = \$4,900
TOTAL: \$6,900 / 4,115 MBF = \$1.68/MBF



Timber Sale Appraisal
Carlson Corner
Sale 341-12-08

"STEWARDSHIP IN FORESTRY"

District: Forest Grove

Date: May 14, 2012

logging conditions

combination#: 1 Douglas - Fir 77.56%
 Alder (Red) 100.00%

yarding distance: Medium (800 ft) downhill yarding: No
logging system: Shovel Process: Manual Falling/Delimiting

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

loads / day: 4.0 bd. ft / load: 4,500

cost / mbf: \$139.15

machines: Shovel Logger

combination#: 2 Douglas - Fir 22.44%

yarding distance: Medium (800 ft) downhill yarding: No
logging system: Cable: Small Tower <=40 Process: Manual Falling/Delimiting

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

loads / day: 3.0 bd. ft / load: 4,500

cost / mbf: \$200.07

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



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
 Carlson Corner
 Sale 341-12-08

District: Forest Grove

Date: May 14, 2012

logging costs

Operating Seasons:	2.00	Profit Risk:	15.00%
Project Costs:	\$389,500.00	Other Costs (P/R):	\$5,115.00
Slash Disposal:	\$0.00	Other Costs:	\$9,250.00

Miles of Road

Road Maintenance: \$1.68

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	4.4
Alder (Red)	\$0.00	1.0	4.0

Local Pond Values

Date	Specie	Grade	Value
5/14/12	Douglas - Fir	Poles / Pilings	\$1,000.00



Timber Sale Appraisal
 Carlson Corner
 Sale 341-12-08

"STEWARDSHIP IN FORESTRY"

District: Forest Grove

Date: May 14, 2012

logging costs breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Scaling	Other	Total
Douglas - Fir									
\$152.82	\$1.71	\$2.13	\$78.61	\$1.24	\$35.48	\$0.00	\$5.00	\$2.25	\$279.24
Alder (Red)									
\$139.15	\$1.71	\$2.13	\$172.95	\$1.24	\$47.58	\$0.00	\$5.00	\$2.25	\$372.01

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$663.21	\$383.97	\$0.00
Alder (Red)	\$0.00	\$550.00	\$177.99	\$0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Carlson Corner
Sale 341-12-08

District: Forest Grove

Date: May 14, 2012

summary

Amortized

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00
Alder (Red)	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	4,111	\$383.97	\$1,578,500.67
Alder (Red)	4	\$177.99	\$711.96

Gross Timber Sale Value

Recovery: \$1,579,212.63

Prepared by: Peter Stone

Phone: 503-359-7477

TIMBER SALE SUMMARY

Carlson Corner Contract No. 341-12-08

- Type of Sale:** The timber sale is a 200 acre partial cut with 11 acres of right-of-way. The timber will be sold on a recovery basis at a sealed bid auction.
- Revenue Distribution:** 100% BOF, Washington County
- Sale Acreage:** Acres are net of stream buffers and existing road prisms. Acreage was determined using ESRI ArcMap GIS software.
- Cruise Data:** The Timber Sale was cruised by ODF Cruisers in March of 2012. For more information see Cruise Report.
- Timber Description:** The Timber Sale Area is medium to well stocked, 70 year old Douglas-fir stand with minor amounts of western hemlock, true firs, and hardwoods. The average "Take" Douglas-fir DBH is approximately 20 inches. Estimated average net Douglas-fir volume per acre is 17.3 MBF.
- Topography and Logging Method:** Slopes within the sale areas vary in aspect and vary in range from 5% to 70%. The sale area is 27% cable-based yarding and 73% ground-based yarding.
- Access:** From Forest Grove, head north on Hwy 47 to its junction with Hwy 26. Merge onto Hwy 26 west and continue for approximately 12 miles to the Timber Road. Turn left and continue south 3 miles to the Cochran Road and turn right. Continue west for approximately 2 miles to Carlson Creek Road and turn right. Continue north for approximately 1 mile to Point K.

8. Projects:

Project No. 1: Road Construction and Improvement:	\$64,363.70
Project No. 2: Surfacing:	\$213,014.42
Project No. 3: Crush and Build Stockpiles:	\$104,564.21
Project No. 4: Grass Seed, Fertilized and Mulch:	\$2,639.50
Move In and Equipment Cleaning:	\$4,844.64
TOTAL rounded credit for project work:	\$389,500.00

9. Other Costs:

Other Costs (with Profit & Risk to be added):	
Brand and Paint: 4,115 MBF @\$1/MBF =	\$4,115
Intermediate Supports: 5 supports x \$200/support =	\$1,000
Total Other Costs (with Profit & Risk to be added) =	\$5,115
Other Costs (No Profit & Risk added):	
Blocking/Waterbarring Skid Roads: 5 hrs @ \$150/hr =	\$750
Firewood Sorting: 10 hrs @ \$150/hr =	\$1,500
Snag Creation: 100 snags @ \$40/snag =	\$4,000
Equipment Cleaning: 3 machines @ \$1,000/machine =	\$3,000
TOTAL Other Costs (No Profit & Risk added) =	\$9,250

ROAD MAINTENANCE

Move-in: \$2,000
General Road Maintenance: 4.9 miles x \$1,000/mile = \$4,900
TOTAL: \$6,900 / 4,115 MBF = \$1.68/MBF

PROJECT COST SUMMARY SHEET

Timber Sale: Carlson Corner

Sale Number: 341-12-08

PROJECT NO. 1: ROAD CONSTRUCTION AND IMPROVEMENT

CONSTRUCTION

Road Segment	Length	Cost
C to D	8+00	\$2,359.51
E to F	15+55	\$5,374.74
G to H	18+60	\$5,633.81
I to J	5+60	\$1,654.66
K to L	22+80	\$7,401.10
M to N	13+80	\$4,280.40
Q to R	6+20	\$2,643.37
T to U	5+90	\$1,724.01
	96+45 stations	
	1.83 miles	

SUBTOTAL CONSTRUCTION \$31,071.59

IMPROVEMENTS

Road Segment	Length	Cost
A to B	121+50	\$12,815.05
O to P	25+50	\$17,622.28
S to T	12+00	\$2,854.37
	159+00 stations	
	3.01 miles	

SUBTOTAL IMPROVEMENTS \$33,291.70

TOTAL PROJECT NO. 1 COST = \$64,363.30

PROJECT NO. 2: SURFACING

Road Segment	Amount	Type	Cost
A to B	520 cy	1 1/2" - 0	\$10,649.60
A to B	1,048 cy	3" - 0	\$21,471.23
A to B	160 cy	Reject	\$1,548.80
C to D	670 cy	3" - 0	\$13,996.30
E to F	1,206 cy	3" - 0	\$24,903.90
G to H	1,651 cy	3" - 0	\$32,078.93
I to J	463 cy	3" - 0	\$9,042.39
K to L	1,430 cy	3" - 0	\$26,383.50
M to N	915 cy	3" - 0	\$17,183.70
O to P	60 cy	Reject	\$357.00
O to P	1,726 cy	3" - 0	\$28,565.30
O to P	40 cy	24" - 6	\$238.00
Q to R	495 cy	3" - 0	\$8,286.30
S to T	674 cy	3" - 0	\$10,669.42
T to U	479 cy	3" - 0	\$7,640.05
Total	520 cy	1 1/2" - 0	
	10,757 cy	3" - 0	
	40 cy	24" - 6	
	220 cy	Reject	

TOTAL PROJECT NO. 2 COST = \$213,014.42

PROJECT NO. 3: CRUSH AND BUILD STOCKPILES

Crush and build 2,500cy (stockpile measure)

stockpile of 1 1/2" - 0 rock	
2999cy (trk measure) @ \$11.34	\$34,008.66

Crush and build 6,000cy (stockpile measure)

stockpile of 3"-0 rock	
7163cy (trk measure) @ \$9.85	\$70,555.55

TOTAL PROJECT NO. 3 COST = \$104,564.21

PROJECT NO. 4: GRASS SEED, FERTILIZE, & MULCH

Grass seed and fertilize areas of disturbed

soil.	\$2,639.50
-------	------------

TOTAL PROJECT NO. 4 COST = \$2,639.50

MOVE IN & EQUIPMENT CLEANING \$4,844.64

TOTAL ALL PROJECTS \$389,426.07
TOTAL CREDITS \$389,500.00

SUMMARY OF CONSTRUCTION COST

Timber Sale: Carlson Corner Timber Sale No. : 341-12-08
 Road Segment: A to B (Carlson Cr. Rd.) Improvement: 121+50 stations
2.30 miles

PROJECT NO. 1

EXCAVATION

Grade, Ditch, and Roll 121.50 sta @ \$28.70 per sta = \$3,487.05
 TOTAL EXCAVATION COSTS= **\$3,487.05**

CULVERTS - MATERIALS & INSTALLATION

Culverts

116	LF of 18"	\$2,088.00	40	LF of 24"	\$960.00
96	LF of 42"	\$5,856.00			
		<u>\$7,944.00</u>			<u>\$960.00</u>

Culvert Markers

18 markers \$180.00

Bands

4 ea of 42" @ \$61.00 per ea = 244.00

TOTAL CULVERT COSTS = **\$9,328.00**

PROJECT NO. 1 TOTAL COST = \$12,815.05

PROJECT NO. 2:

SURFACING

0+00-104+30 Spot Rock	500	cy of	1 1/2" - 0	@	\$20.48 per cy =	\$10,240.00
104+30-121+50 8" Lift	722	cy of	3" - 0	@	\$20.48 per cy =	\$14,794.75
Turnouts (2)	28	cy of	3" - 0	@	\$20.48 per cy =	\$573.44
Junctions	148	cy of	3" - 0	@	\$20.48 per cy =	\$3,031.04
Junctions	20	cy of	1 1/2" - 0	@	\$20.48 per cy =	\$409.60
Landing (1)	150	cy of	3" - 0	@	\$20.48 per cy =	\$3,072.00
Culvert Bedding (2)	80	cy of	Reject	@	\$9.68 per cy =	\$774.40
Culvert Bedding (4)	80	cy of	Reject	@	\$9.68 per cy =	\$774.40
Total =						
	520	cy of	1 1/2" - 0		\$20.48 per cy =	\$10,649.60
	1048	cy of	3" - 0		\$20.48 per cy =	\$21,471.23
	160	cy of	Reject		\$9.68 per cy =	\$1,548.80
	<u>1728</u>					

PROJECT NO. 2 TOTAL COST = \$33,669.63

PROJECT NO. 4:

Grass seed and fertilize areas of disturbed soil.	0.10 acres @	\$220.00 per acre =	\$22.00
Mulch	5.00 bales @	\$4.50 per bale =	<u>\$22.50</u>

PROJECT NO. 4 TOTAL COST = \$44.50

TOTAL COST = \$46,529.18

SUMMARY OF CONSTRUCTION COST

Timber Sale: Carlson Corner
Road Segment: C to D

Timber Sale No. : 341-12-08
Construction: 8+00 stations
0.15 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	0.92	acres @	\$980.00	per acre =	\$899.91
Balanced Road Construction	8.00	sta @	\$90.00	per sta =	\$720.00
Construct Turnarounds	1	ea @	\$75.00	per ea =	\$75.00
Construct Landing	1	ea @	\$285.00	per ea =	\$285.00
Construct Roadside Landing	1	ea @	\$150.00	per ea =	\$150.00
Grade, Ditch, and Roll	8.00	sta @	\$28.70	per sta =	\$229.60
				TOTAL EXCAVATION COSTS=	\$2,359.51

PROJECT NO. 1 TOTAL COST = \$2,359.51

PROJECT NO. 2:

SURFACING

	10	" deep =	53 cy/sta		
C to D	424	cy of	3" - 0	@	\$20.89 per cy = \$8,857.36
Turnaround (1)	16	cy of	3" - 0	@	\$20.89 per cy = \$334.24
Roadside Landing (1)	80	cy of	3" - 0	@	\$20.89 per cy = \$1,671.20
Landing (1)	150	cy of	3" - 0	@	\$20.89 per cy = \$3,133.50
Total =	670	cy of	3" - 0		

PROJECT NO. 2 TOTAL COST = \$13,996.30

PROJECT NO. 4:

Grass seed and fertilize areas of disturbed soil. 0.46 acres @ \$220.00 per acre = \$101.01

PROJECT NO. 4 TOTAL COST = \$101.01

TOTAL COST = \$16,456.82

SUMMARY OF CONSTRUCTION COST

Timber Sale: Carlson Corner
 Road Segment: E to F

Timber Sale No. : 341-12-08
 Construction: 15+55 stations
0.29 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	1.78	acres @	\$1,274.00	per acre =	\$2,273.96
Balanced Road Construction	15.55	sta @	\$90.00	per sta =	\$1,399.50
Construct Turnouts	2	ea @	\$60.00	per ea =	\$120.00
Construct Landing	1	ea @	\$285.00	per ea =	\$285.00
Construct Roadside Landing	2	ea @	\$150.00	per ea =	\$300.00
Grade, Ditch, and Roll	15.55	sta @	\$28.70	per sta =	\$446.29
				TOTAL EXCAVATION COSTS=	<u>\$4,824.74</u>

CULVERTS - MATERIALS & INSTALLATION

Culverts

30 LF of 18" \$540.00
\$540.00

Culvert Markers

1 markers \$10.00

TOTAL CULVERT COSTS = \$550.00

PROJECT NO. 1 TOTAL COST = \$5,374.74

PROJECT NO. 2:

SURFACING

	10	" deep =	53 cy/sta		
E to F	824	cy of	3" - 0	@	\$20.65 per cy = \$17,015.60
Turnouts (2)	36	cy of	3" - 0	@	\$20.65 per cy = \$743.40
Turnarounds (1)	16	cy of	3" - 0	@	\$20.65 per cy = \$330.40
Junction	20	cy of	3" - 0	@	\$20.65 per cy = \$413.00
Roadside Landings (2)	160	cy of	3" - 0	@	\$20.65 per cy = \$3,304.00
Landings (1)	150	cy of	3" - 0	@	\$20.65 per cy = \$3,097.50
Total =	1206	cy of	3" - 0		

PROJECT NO. 2 TOTAL COST = \$24,903.90

PROJECT NO. 4:

Grass seed and fertilize areas of disturbed soil. 0.89 acres @ \$220.00 per acre = \$196.34

PROJECT NO. 4 TOTAL COST = \$196.34

TOTAL COST = \$30,474.98

SUMMARY OF CONSTRUCTION COST

Timber Sale: Carlson Corner
 Road Segment: G to H

Timber Sale No. : 341-12-08
 Construction: 18+60 stations
0.35 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	2.13	acres @	\$980.00	per acre =	\$2,092.29
Balanced Road Construction	18.60	sta @	\$90.00	per sta =	\$1,674.00
Construct Turnouts	2	ea @	\$60.00	per ea =	\$120.00
Construct Turnarounds	1	ea @	\$75.00	per ea =	\$75.00
Approach to Landing	1	sta @	\$118.70	per sta =	\$118.70
Construct Roadside Landings	3	sta @	\$150.00	per sta =	\$450.00
Construct Landings	2	ea @	\$285.00	per ea =	\$570.00
Grade, Ditch, and Roll	18.60	sta @	\$28.70	per sta =	\$533.82
TOTAL EXCAVATION COSTS=					\$5,633.81

PROJECT NO. 1 TOTAL COST = \$5,633.81

PROJECT NO. 2:

SURFACING

	10	" deep =	53 cy/sta		
G to H	986	cy of	3" - 0	@	\$19.43 per cy = \$19,157.98
Turnouts (2)	36	cy of	3" - 0	@	\$19.43 per cy = \$699.48
Turnarounds (1)	16	cy of	3" - 0	@	\$19.43 per cy = \$310.88
Junctions	20	cy of	3" - 0	@	\$19.43 per cy = \$388.60
Roadside Landings (3)	240	cy of	3" - 0	@	\$19.43 per cy = \$4,663.20
Landings (2)	300	cy of	3" - 0	@	\$19.43 per cy = \$5,829.00
Approach to landing	53	cy of	3" - 0	@	\$19.43 per cy = \$1,029.79
Total =	1651	cy of	3" - 0		

PROJECT NO. 2 TOTAL COST = \$32,078.93

PROJECT NO. 4:

Grass seed and fertilize areas of disturbed soil. 1.07 acres @ \$220.00 per acre = \$234.85

PROJECT NO. 4 TOTAL COST = \$234.85

TOTAL COST = \$37,947.58

SUMMARY OF CONSTRUCTION COST

Timber Sale: Carlson Corner
 Road Segment: I to J

Timber Sale No. : 341-12-08
 Construction: 5+60 stations
0.11 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	0.64	acres @	\$980.00	per acre =	\$629.94
Balanced Road Construction	5.60	sta @	\$90.00	per sta =	\$504.00
Construct Turnaround (1)	1	ea @	\$75.00	per ea =	\$75.00
Landing	1	ea @	\$285.00	per ea =	\$285.00
Grade, Ditch, and Roll	5.60	sta @	\$28.70	per sta =	\$160.72
				TOTAL EXCAVATION COSTS=	\$1,654.66

PROJECT NO. 1 TOTAL COST = \$1,654.66

PROJECT NO. 2:

SURFACING	10	" deep =	53 cy/sta		
I to J	297	cy of	3" - 0	@	\$19.53 per cy = \$5,800.41
Turnaround (1)	16	cy of	3" - 0	@	\$19.53 per cy = \$312.48
Landing (1)	150	cy of	3" - 0	@	\$19.53 per cy = \$2,929.50
Total =	463	cy of	3" - 0		

PROJECT NO. 2 TOTAL COST = \$9,042.39

PROJECT NO. 4:

Grass seed and fertilize areas of disturbed soil.	0.32	acres @	\$220.00	per acre =	\$70.71
---------------------------------------------------	------	---------	----------	------------	---------

PROJECT NO. 4 TOTAL COST = \$70.71

TOTAL COST = \$10,767.75

SUMMARY OF CONSTRUCTION COST

Timber Sale: Carlson Corner
Road Segment: K to L

Timber Sale No. : 341-12-08
Construction: 22+80 stations
0.43 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	2.62	acres @	\$980.00	per acre =	\$2,564.74
Balanced Road Construction	22.80	sta @	\$90.00	per sta =	\$2,052.00
Construct Turnouts (2)	2	ea @	\$60.00	per ea =	\$120.00
Construct Turnaround (1)	1	ea @	\$75.00	per ea =	\$75.00
Landing	1	ea @	\$285.00	per ea =	\$285.00
Grade, Ditch, and Roll	22.80	sta @	\$28.70	per sta =	\$654.36
				TOTAL EXCAVATION COSTS=	<u>\$5,751.10</u>

CULVERTS - MATERIALS & INSTALLATION

Culverts

90 LF of 18" \$1,620.00
\$1,620.00

Culvert Markers

3 markers \$30.00

TOTAL CULVERT COSTS = \$1,650.00

PROJECT NO. 1 TOTAL COST = \$7,401.10

PROJECT NO. 2:

SURFACING

	10	" deep =	53 cy/sta		
K to L	1,208	cy of	3" - 0	@	\$18.45 per cy = \$22,287.60
Turnouts (2)	36	cy of	3" - 0	@	\$18.45 per cy = \$664.20
Turnaround	16	cy of	3" - 0	@	\$18.45 per cy = \$295.20
Junction	20	cy of	3" - 0	@	\$18.45 per cy = \$369.00
Landing (1)	150	cy of	3" - 0	@	\$18.45 per cy = <u>\$2,767.50</u>
Total =	1430	cy of	3" - 0		

PROJECT NO. 2 TOTAL COST = \$26,383.50

PROJECT NO. 4:

Grass seed and fertilize areas of disturbed soil. 1.31 acres @ \$220.00 per acre = \$287.88

PROJECT NO. 4 TOTAL COST = \$287.88

TOTAL COST = \$34,072.48

SUMMARY OF CONSTRUCTION COST

Timber Sale: Carlson Corner
 Road Segment: M to N

Timber Sale No. : 341-12-08
 Construction: 13+80 stations
0.26 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	1.58	acres @	\$980.00	per acre =	\$1,552.34
Balanced Road Construction	11.80	sta @	\$90.00	per sta =	\$1,062.00
Drift	2.00	sta @	\$150.00	per sta =	\$300.00
Construct Turnouts (1)	1	ea @	\$60.00	per ea =	\$60.00
Construct Turnaround (1)	1	ea @	\$75.00	per ea =	\$75.00
Landing	1	ea @	\$285.00	per ea =	\$285.00
Grade, Ditch, and Roll	13.80	sta @	\$28.70	per sta =	\$396.06
				TOTAL EXCAVATION COSTS =	\$3,730.40

CULVERTS - MATERIALS & INSTALLATION

Culverts

30 LF of 18" \$540.00
\$540.00

Culvert Markers

1 markers \$10.00

TOTAL CULVERT COSTS = **\$550.00**

PROJECT NO. 1 TOTAL COST = \$4,280.40

PROJECT NO. 2:

SURFACING

	10	" deep =	53 cy/sta		
M to N	731	cy of	3" - 0	@	\$18.78 per cy = \$13,728.18
Turnouts (1)	18	cy of	3" - 0	@	\$18.78 per cy = \$338.04
Turnaround	16	cy of	3" - 0	@	\$18.78 per cy = \$300.48
Landing (1)	150	cy of	3" - 0	@	\$18.78 per cy = \$2,817.00
Total =	915	cy of	3" - 0		

PROJECT NO. 2 TOTAL COST = \$17,183.70

PROJECT NO. 4:

Grass seed and fertilize areas of disturbed soil. 0.79 acres @ \$220.00 per acre = \$174.24

PROJECT NO. 4 TOTAL COST = \$174.24

TOTAL COST = \$21,638.34

SUMMARY OF CONSTRUCTION COST

Timber Sale: Carlson Corner
 Road Segment: O to P

Timber Sale No. : 341-12-08
 Improvement: 25+50 stations
0.48 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	0.59	acres @	\$980.00	per acre =	\$573.69
Drift	9.50	sta @	\$150.00	per sta =	\$1,425.00
Corner Improvement (9+40 - 15+05)					
Excavate and place	800	cy @	\$1.06	per cy =	\$848.00
Excavate and endhaul	500	cy @	\$1.19	per cy =	\$595.00
Compact Waste Area	500	cy @	\$0.25	per cy =	\$125.00
Excavate and waste locally (9+40 - 10+40)	500	cy @	\$1.06	per cy =	\$530.00
Culvert #15					
Excavate existing culvert and fill	50	cy @	\$1.06	per cy =	\$53.00
Endhaul unsuitable fill material	50	cy @	\$1.19	per cy =	\$59.50
Place fill and rock	100	cy @	\$60.00	per cy =	\$6,000.00
Pump culvert installation	5	hr @	\$5.00	per hr =	\$25.00
Culvert #16					
Excavate existing culvert and fill	60	cy @	\$1.06	per cy =	\$63.60
Endhaul unsuitable fill material	60	cy @	\$1.19	per cy =	\$71.40
Place fill and rock	300	cy @	\$2.12	per cy =	\$636.00
Compact fill with plate compactor	2	hr @	\$36.62	per hr =	\$73.24
Pump culvert installation	5	hr @	\$5.00	per hr =	\$25.00
Construct Turnouts (3)	3	ea @	\$60.00	per ea =	\$180.00
Landing	1	ea @	\$285.00	per ea =	\$285.00
Roadside Landing	1	ea @	\$150.00	per ea =	\$150.00
Grade, Ditch, and Roll	25.50	sta @	\$28.70	per sta =	\$731.85
TOTAL EXCAVATION COSTS=					\$12,450.28

CULVERTS - MATERIALS & INSTALLATION

Culverts

180	LF of 18"	<u>\$3,240.00</u>	78	LF of 24"	<u>\$1,872.00</u>
		\$3,240.00			\$1,872.00

Culvert Markers

6 markers	<u>\$60.00</u>
-----------	----------------

TOTAL CULVERT COSTS = \$5,172.00

PROJECT NO. 1 TOTAL COST = \$17,622.28

PROJECT NO. 2:

SURFACING

	10	" deep =	53 cy/sta		
O to P	1,352	cy of	3" - 0	@	\$16.55 per cy = \$22,375.60
Curve Widening	50	cy of	3" - 0	@	\$16.55 per cy = \$827.50
Turnouts (3)	54	cy of	3" - 0	@	\$16.55 per cy = \$893.70
Junction (2)	40	cy of	3" - 0	@	\$16.55 per cy = \$662.00
Landing (1)	150	cy of	3" - 0	@	\$16.55 per cy = \$2,482.50
Roadside Landing (1)	80	cy of	3" - 0	@	\$16.55 per cy = \$1,324.00
Culvert Bedding (3)	60	cy of	Reject	@	\$5.95 per cy = \$357.00
Outlet Riprap (2)	40	cy of	24" - 6"	@	\$5.95 per cy = \$238.00
Total =					
	1726	cy of	3" - 0		\$16.55 per cy = \$28,565.30
	40	cy of	24" - 6"		\$5.95 per cy = \$238.00
	60	cy of	Reject		\$5.95 per cy = \$357.00

PROJECT NO. 2 TOTAL COST = \$29,160.30

PROJECT NO. 4:

Grass seed and fertilize areas of disturbed soil.	0.29	acres @	\$220.00	per acre =	\$64.39
Mulch	5.00	bales @	\$4.50	per bale =	\$22.50

PROJECT NO. 4 TOTAL COST = \$86.89

TOTAL COST = \$46,869.48

SUMMARY OF CONSTRUCTION COST

Timber Sale: Carlson Corner
 Road Segment: Q to R

Timber Sale No. : 341-12-08
 Construction: 6+20 stations
0.12 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	0.71	acres @	\$980.00	per acre =	\$697.43
Balanced Road Construction	4.20	sta @	\$90.00	per sta =	\$378.00
Drift	2.00	sta @	\$150.00	per sta =	\$300.00
Construct Turnaround (1)	1	ea @	\$75.00	per ea =	\$75.00
Landing	1	ea @	\$285.00	per ea =	\$285.00
Grade, Ditch, and Roll	6.20	sta @	\$28.70	per sta =	\$177.94
				TOTAL EXCAVATION COSTS=	<u>\$1,913.37</u>

CULVERTS - MATERIALS & INSTALLATION

Culverts

40 LF of 18" \$720.00
\$720.00

Culvert Markers

1 markers \$10.00

TOTAL CULVERT COSTS = \$730.00

PROJECT NO. 1 TOTAL COST = \$2,643.37

PROJECT NO. 2:

SURFACING

	10	" deep =	53 cy/sta		
Q to R	329	cy of	3" - 0	@	\$16.74 per cy = \$5,507.46
Turnaround	16	cy of	3" - 0	@	\$16.74 per cy = \$267.84
Landing (1)	150	cy of	3" - 0	@	\$16.74 per cy = \$2,511.00
Total =	495	cy of	3" - 0		

PROJECT NO. 2 TOTAL COST = \$8,286.30

PROJECT NO. 4:

Grass seed and fertilize areas of disturbed soil.	0.36	acres @	\$220.00	per acre =	\$78.28
Mulch	2.10	acres @	\$600.00	per acre =	<u>\$1,260.00</u>

PROJECT NO. 4 TOTAL COST = \$1,338.28

TOTAL COST = \$12,267.95

SUMMARY OF CONSTRUCTION COST

Timber Sale: Carlson Corner
Road Segment: S to T

Timber Sale No. : 341-12-08
Improvement: 12+00 stations
0.23 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	0.28	acres @	\$980.00	per acre =	\$269.97	
Balanced Road Construction	12.00	sta @	\$90.00	per sta =	\$1,080.00	
Grade, Ditch, and Roll	12.00	sta @	\$28.70	per sta =	\$344.40	
				TOTAL EXCAVATION COSTS=		\$1,754.37

CULVERTS - MATERIALS & INSTALLATION

Culverts

60 LF of 18" \$1,080.00
\$1,080.00

Culvert Markers

2 markers \$20.00

TOTAL CULVERT COSTS = \$1,100.00

PROJECT NO. 1 TOTAL COST = \$2,854.37

PROJECT NO. 2:

SURFACING

	10	" deep =	53 cy/sta			
S to T	636	cy of	3" - 0	@	\$15.83 per cy =	\$10,067.88
Turnouts (1)	18	cy of	3" - 0	@	\$15.83 per cy =	\$284.94
Junction	20	cy of	3" - 0	@	\$15.83 per cy =	\$316.60
Total =	674	cy of	3" - 0			

PROJECT NO. 2 TOTAL COST = \$10,669.42

PROJECT NO. 4:

Grass seed and fertilize areas of disturbed soil. 0.14 acres @ \$220.00 per acre = \$30.30

PROJECT NO. 4 TOTAL COST = \$30.30

TOTAL COST = \$13,554.10

SUMMARY OF CONSTRUCTION COST

Timber Sale: Carlson Corner Timber Sale No. : 341-12-08
Road Segment: T to U Construction: 5+90 stations
0.11 miles

PROJECT NO. 1

EXCAVATION

Clearing and Grubbing (Scatter)	0.68	acres @	\$980.00	per acre =	\$663.68
Balanced Road Construction	5.90	sta @	\$90.00	per sta =	\$531.00
Construct Turnaround (1)	1	ea @	\$75.00	per ea =	\$75.00
Landing	1	ea @	\$285.00	per ea =	\$285.00
Grade, Ditch, and Roll	5.90	sta @	\$28.70	per sta =	\$169.33
TOTAL EXCAVATION COSTS=					\$1,724.01

PROJECT NO. 1 TOTAL COST = \$1,724.01

PROJECT NO. 2:

SURFACING

	10	" deep =	53 cy/sta		
T to U	313	cy of	3" - 0	@	\$15.95 per cy = \$4,992.35
Turnaround	16	cy of	3" - 0	@	\$15.95 per cy = \$255.20
Landing (1)	150	cy of	3" - 0	@	\$15.95 per cy = \$2,392.50
Total =	479	cy of	3" - 0		

PROJECT NO. 2 TOTAL COST = \$7,640.05

PROJECT NO. 4:

Grass seed and fertilize areas of disturbed soil.	0.34	acres @	\$220.00	per acre =	\$74.49
---------------------------------------------------	------	---------	----------	------------	---------

PROJECT NO. 4 TOTAL COST = \$74.49

TOTAL COST = \$9,438.56

Move-In & Equipment Cleaning

Timber Sale: _____ Carlson Corner
 Sale Number: _____ 341-12-08

LOWBOY HAUL (One-way)		
DIST. (mi)	ROAD	AVE SPEED (mph)
2.6	Main Lines	7
0.0	Steep Grades	2

No.	EQUIPMENT DESCRIPTION	Equipment Cleaning	Base Cost	Woods Cost	Pilot Cars	Area Move (\$/mile)	Begin Mileage	End Mileage	Total Miles	Within		Total Cost
										Area Cost	Area Cost	
0	Drill & Compressor		\$0.00	\$0.00		\$46.00	0.0	0.0	0.0	\$0.00	\$0.00	\$0.00
0	Brush Cutter		\$0.00	\$0.00		\$4.00	0.0	0.0	0.0	\$0.00	\$0.00	\$0.00
1	Graders		\$300.00	\$66.86		\$3.65	0.0	0.0	0.0	\$0.00	\$0.00	\$366.86
0	Loader (Small)		\$0.00	\$0.00	1	\$3.55	0.0	0.0	0.0	\$0.00	\$0.00	\$0.00
0	Loader (Med. & Large)		\$0.00	\$0.00	1	\$9.00	0.0	0.0	0.0	\$0.00	\$0.00	\$0.00
1	Rollers (smooth/grid) & Compactors		\$308.59	\$100.05		\$5.00	0.0	0.0	2.0	\$10.00	\$0.00	\$418.64
0	Excavators (Small)		\$0.00	\$0.00		\$22.00	0.0	0.0	0.0	\$0.00	\$0.00	\$0.00
0	Excavators (Med.)		\$0.00	\$0.00		\$35.50	0.0	0.0	0.0	\$0.00	\$0.00	\$0.00
1	Excavators (Large)	\$1,000	\$466.14	\$159.69	1	\$44.80	0.0	0.0	2.0	\$89.60	\$1,715.43	\$1,715.43
0	Tired Backhoes/Skidlers		\$0.00	\$0.00		\$3.00	0.0	0.0	0.0	\$0.00	\$0.00	\$0.00
0	Tractors (D6)		\$0.00	\$0.00	2	\$7.10	0.0	0.0	0.0	\$0.00	\$0.00	\$0.00
0	Tractors (D7)		\$0.00	\$0.00	2	\$11.30	0.0	0.0	0.0	\$0.00	\$0.00	\$0.00
1	Tractor (D8)	\$1,000	\$473.80	\$152.86	2	\$15.10	0.0	0.0	2.0	\$30.20	\$1,656.86	\$1,656.86
4	Dump Truck (10 cy +)		\$466.67	\$104.00		\$2.85	0.0	0.0	0.0	\$0.00	\$570.67	\$570.67
0	Dump Truck (Off Hiway)		\$0.00	\$0.00	1	\$4.75	0.0	0.0	0.0	\$0.00	\$0.00	\$0.00
1	Water Truck (1500 Gal)		\$95.00	\$21.18		\$2.85	0.0	0.0	0.0	\$0.00	\$116.18	\$116.18
0	Water Truck (2500 Gal)		\$0.00	\$0.00		\$2.85	0.0	0.0	0.0	\$0.00	\$0.00	\$0.00
TOTAL MOVE-IN COSTS:											\$4,844.64	

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Timber Sale: Carlson Corner
 Sale Number: 341-12-08
 Pit Name: Camp 5

Swell:	<u>130%</u>	1-1/2"-0 (trk measure)	<u>520 cy</u>
Shrinkage:	<u>116%</u>	3"-0 (trk measure)	<u>10,757 cy</u>
Drill Pct.:	<u>85%</u>	1-1/2"-0 Stockpile (trk measure)	<u>2,999 cy</u>
Screening Loss:	<u>15%</u>	3"-0 Stockpile (trk measure)	<u>7,163 cy</u>
		Total Truck Yardage:	<u>21,439 cy</u>
		Total In Place Yardage:	<u>16,491 cy</u>

Pit Development & Cleanup including Clearing and grubbing of
 Waste Area @ adjacent to pit, place overburden
 in Waste Area, spread and compact.

				\$1,000.00
Drill & Shoot (Downholes):	<u>\$2.50 /cy x</u>	<u>19,402 cy</u>	=	\$48,504.35
Push Rock:	<u>\$0.70 /cy x</u>	<u>25,222 cy</u>	=	\$17,655.59
Load Crusher:	<u>\$0.70 /cy x</u>	<u>25,222 cy</u>	=	\$17,655.59
Crushing (1-1/2" - 0):	<u>\$3.00 /cy x</u>	<u>520 cy</u>	=	\$1,560.00
Crushing (3" - 0):	<u>\$2.60 /cy x</u>	<u>10,757 cy</u>	=	\$27,969.24
Crushing (1-1/2"-0 Stockpile):	<u>\$3.00 /cy x</u>	<u>2,999 cy</u>	=	\$8,995.83
Crushing (3"-0 Stockpile):	<u>\$2.60 /cy x</u>	<u>7,163 cy</u>	=	\$18,623.58
Screen Rock	<u>\$0.75 /cy x</u>	<u>25,222 cy</u>	=	\$18,916.70
Load, Haul & Shape Waste Reject	<u>\$0.85 /cy x</u>	<u>3,783 cy</u>	=	\$3,215.84
Load Dump Truck:	<u>\$0.70 /cy x</u>	<u>21,439 cy</u>	=	\$15,007.25
		Subtotal		\$179,103.96

Equipment Cleaning				\$1,000.00
Move in Crusher (Stage3)				\$2,987.00
Set up Crusher				\$3,024.00
Move in and set up Drill and Compressor				\$352.89
Move in Screening Plant				\$465.00
Set up Screening Plant				\$395.00
Move in Excavator				\$652.44
Move in Loaders				\$580.73
Clean Up Pit				\$300.00
Gradation Tests (\$65/2000 cy)	<u>\$65.00</u>	cy/2000cy x	<u>11</u> tests	\$715.00
Change Gradation				\$210.00
		Subtotal		\$10,682.06

PIT DEVELOPMENT COST \$8.85/cy **TOTAL PRODUCTION COST** \$189,786.02

Residual Stand Specifications

Carlson Corner 341-12-08

AREA 1

Residual QMD assumption (from cruise leave tree information) - 25.
Target Relative Density - 36

	Minimum	Target	Maximum
Relative Density	32	36	40
Basal Area	160	180	200
Trees per Acre	47	55	59

$$RD = BA / \sqrt{DBH}$$

$$BA = \sqrt{DBH} (RD)$$

$$BA/tree = (\pi r^2) / (144)$$

$$TPA = (BA/acre) / (BA/tree)$$

TC PSTATS		PROJECT STATISTICS							PAGE	1	
		PROJECT CARL							DATE	3/13/2012	
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt	
03N	05	19	180	00PC		200.00	60	778	S	W	
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL			60	778	13.0						
CRUISE			34	164	4.8	18,297	.9				
DBH COUNT REFOREST COUNT			26	325	12.5						
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-L	28	54.5	24.6	147	36.3	180.0	46,854	46,854	9,329	9,329	
DOUG FIR-T	118	31.5	20.2	141	15.6	70.3	17,361	17,325	3,557	3,557	
SNAG-L	11	1.9	19.0	109	0.8	3.7					
BL MAPLE-L	2	2.7	14.3	83	0.8	3.0	336	336	81	81	
R ALDER-L	3	.7	16.8	104	0.2	1.0	108	108	33	33	
GR FIR-L	1	.2	19.0	129	0.1	.3	73	73	16	16	
COTWOOD-L	1	.2	20.0	125	0.1	.3	60	60	14	14	
TOTAL	<i>164</i>	<i>91.5</i>	<i>22.8</i>	<i>142</i>	<i>54.2</i>	<i>258.7</i>	<i>64,791</i>	<i>64,755</i>	<i>13,029</i>	<i>13,029</i>	
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-L		46.0	8.8	931	1,021	1,112					
DOUG FIR-T		53.7	4.9	630	663	695					
SNAG-L											
BL MAPLE-L		92.9	87.0	23	175	327					
R ALDER-L		27.3	18.9	141	173	206					
GR FIR-L											
COTWOOD-L											
TOTAL		<i>64.1</i>	<i>5.0</i>	<i>636</i>	<i>670</i>	<i>703</i>	<i>164</i>	<i>41</i>	<i>18</i>		
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-L				54	54	54					
DOUG FIR-T		91.0	11.7	28	31	35					
SNAG-L		315.8	40.7	1	2	3					
BL MAPLE-L		300.9	38.8	2	3	4					
R ALDER-L		774.6	99.9	0	1	1					
GR FIR-L		774.6	99.9	0	0	0					
COTWOOD-L		774.6	99.9	0	0	0					
TOTAL				<i>91</i>	<i>91</i>	<i>91</i>					
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-L				180	180	180					
DOUG FIR-T		87.4	11.3	62	70	78					
SNAG-L		325.3	42.0	2	4	5					
BL MAPLE-L		296.2	38.2	2	3	4					
R ALDER-L		774.6	99.9	0	1	2					
GR FIR-L		774.6	99.9	0	0	1					
COTWOOD-L		774.6	99.9	0	0	1					
TOTAL				<i>259</i>	<i>259</i>	<i>259</i>					
CL	68.1	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15		

PROJECT STATISTICS
PROJECT CARL

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
03N	05	19	180	00PC	200.00	60	778	S	W
DOUG FIR-L					46,854	46,854	46,854		
DOUG FIR-T					88.0	11.3	15,359	17,325	19,291
SNAG-L									
BL MAPLE-L					298.8	38.5	206	336	465
R ALDER-L					774.6	99.9	0	108	217
GR FIR-L					774.6	99.9	0	73	146
COTWOOD-L					774.6	99.9	0	60	119
TOTAL					64,755	64,755	64,755		

Log Stock Table - MBF

T03N R05W S19 Ty00PC 200.00

Project: CARL
Acres 200.00

Page 1
Date 3/13/2012
Time 4:26:38PM

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	L	2M	20	74		74	.8							74							
DF	L	2M	40	7,783		7,783	83.1						413	1744	3562	1369	694				
DF	L	3M	30	29		29	.3			29											
DF	L	3M	32	385		385	4.1			43	102	240									
DF	L	3M	36	82		82	.9			25			58								
DF	L	3M	40	783		783	8.4			101	235	349	97								
DF	L	4M	16	57		57	.6		8	49											
DF	L	4M	20	51		51	.5			51											
DF	L	4M	24	10		10	.1		10												
DF	L	4M	30	44		44	.5			44											
DF	L	4M	40	72		72	.8			72											
DF		Totals		9,371		9,371	72.4		17	385	367	589	568	1744	3637	1369	694				
DF	T	2M	16	28		28	.8					8				21					
DF	T	2M	20	23		23	.7								23						
DF	T	2M	24	12		12	.3								12						
DF	T	2M	40	2,362		2,357	68.0					17	546	662	927	162	43				
DF	T	3M	30	16		16	.5			16											
DF	T	3M	32	104		103	3.0		4	22	55	22									
DF	T	3M	36	79		79	2.3			57	22										
DF	T	3M	40	766		764	22.1		2	77	186	462	37								
DF	T	4M	16	27		27	.8		2	24											
DF	T	4M	20	20		20	.6			20											
DF	T	4M	24	27		27	.8		2	25											
DF	T	4M	30	5		5	.1			5											
DF	T	4M	32	2		2	.1			2											
DF	T	4M	40	3		3	.1		3												
DF		Totals		3,472		3,465	26.8		13	233	278	502	590	662	961	182	43				
BM	L	R	30	67		67	100.0			23		17	27								
BM		Totals		67		67	.5			23		17	27								
GF	L	2M	40	10		10	67.4							10							
GF	L	3M	40	4		4	27.9			4											
GF	L	4M	20	1		1	4.7			1											
GF		Totals		15		15	.1			1	4			10							

Log Stock Table - MBF

T03N R05W S19 Ty00PC	200.00
----------------------	--------

Project: CARL
Acres 200.00

Page 2
Date 3/13/2012
Time 4:26:38PM

Spp	S T	So rt	Gr de	Log Len	Gross MBF	Def %	Net MBF	% Sp	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
RA	L	R		30	22		22	100.0			3	8	5	5				
RA		Totals			22		22	.2			3	8	5	5				
CW	L	R		30	12		12	100.0			2		4		6			
CW		Totals			12		12	.1			2		4		6			
Total		All Species			12,958		12,951	100.0		30	623	680	1117	1191	2423	4598	1551	738

TC PSPCSTGR **Species, Sort Grade - Board Foot Volumes (Project)**

T03N R05W S19 Ty00PC 200.00	Project: CARL	Page 1
	Acres 200.00	Date 3/13/2012
		Time 4:26:39PM

S Spp	So T	Gr rt ad	% Net BdFt	Bd. Ft. per Acre Def% Gross Net			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre	
								Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf		
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99						
DF	L	CU														5	20		0.00	5.8	
DF	L	2M	83		39,288	39,288	7,858				33	67	1			99	40	17	461	2.18	85.2
DF	L	3M	14		6,398	6,398	1,280			88	12			2	30	68	37	9	113	0.79	56.5
DF	L	4M	3		1,168	1,168	234		7	93			46	23		31	23	6	29	0.38	40.1
DF	Totals		72		46,854	46,854	9,371		0	14	30	56	2	1	4	93	34	12	250	1.46	187.6
DF	T	CU															4	18		0.00	.7
DF	T	2M	69	.2	12,121	12,098	2,420			1	64	35	2	0		97	39	15	338	1.66	35.8
DF	T	3M	28	.3	4,823	4,809	962		1	96	4			2	11	88	38	9	110	0.67	43.8
DF	T	4M	3		417	417	83		9	91			56	39	2	3	20	6	24	0.33	17.3
DF	Totals		27	.2	17,361	17,325	3,465		0	29	46	25	3	2	3	92	35	10	177	1.04	97.7
BM	L	R	100		336	336	67			59	41					100	30	10	98	0.79	3.4
BM	Totals		1		336	336	67			59	41					100	30	10	98	0.79	3.4
GF	L	2M	67		49	49	10				100					100	40	14	290	1.42	.2
GF	L	3M	28		20	20	4			100						100	40	9	120	0.76	.2
GF	L	4M	5		3	3	1			100			100				20	6	20	0.32	.2
GF	Totals		0		73	73	15			33	67		5			95	33	10	143	0.93	.5
RA	L	R	100		108	108	22			77	23					100	30	9	83	0.84	1.3
RA	Totals		0		108	108	22			77	23					100	30	9	83	0.84	1.3
CW	L	R	100		60	60	12			46	54					100	30	11	130	0.98	.5
CW	Totals		0		60	60	12			46	54					100	30	11	130	0.98	.5
Totals				0.1	64,791	64,755	12,951		0	19	34	47	2	2	4	92	34	12	223	1.30	291.0

Log Stock Table - MBF

T03N R05W S19 Ty00PC 11.00

Project: CARL
Acres 11.00

Page 1
Date 3/19/2012
Time 2:26:23PM

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
DF		2M	16	2		2	.2					0				1		
DF		2M	20	5		5	.8							5				
DF		2M	24	1		1	.1							1				
DF		2M	40	558		558	79.0				1	53	132	247	84	41		
DF		3M	30	2		2	.3			2								
DF		3M	32	27		27	3.8		0	4	9	14						
DF		3M	36	9		9	1.3			4	1		3					
DF		3M	40	85		85	12.1		0	10	23	45	7					
DF		4M	16	5		5	.7		1	4								
DF		4M	20	4		4	.6			4								
DF		4M	24	2		2	.3		1	1								
DF		4M	30	3		3	.4			3								
DF		4M	32	0		0	.0			0								
DF		4M	40	4		4	.6		0	4								
DF		Totals		706		706	99.1		2	34	35	60	64	132	253	85	41	
BM		R	30	4		4	100.0			1		1	2					
BM		Totals		4		4	.5			1		1	2					
GF		2M	40	1		1	67.4							1				
GF		3M	40	0		0	27.9			0								
GF		4M	20	0		0	4.7			0								
GF		Totals		1		1	.1			0	0			1				
RA		R	30	1		1	100.0			0	0	0	0					
RA		Totals		1		1	.2			0	0	0	0					
CW		R	30	1		1	100.0			0		0		0				
CW		Totals		1		1	.1			0		0		0				
Total		All Species		713		712	100.0		2	34	37	61	66	133	253	85	41	

<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">T03N R05W S19 Ty00PC</td> <td style="padding: 2px; text-align: right;">11.00</td> </tr> </table>	T03N R05W S19 Ty00PC	11.00	Project: CARL Acres 11.00	Page 1 Date 3/19/2012 Time 2:26:24PM
T03N R05W S19 Ty00PC	11.00			

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					
DF		CU															5	20		0.00	6.5
DF		2M		80	.0	51,408	51,386	565		0	41	59	1	0		99	39	16	425	2.02	121.0
DF		3M		17	.1	11,221	11,208	123	0	91	9			2	22	76	37	9	112	0.74	100.4
DF		4M		3		1,585	1,585	17	8	92			49	27	1	24	22	6	28	0.36	57.4
DF	Totals			99	.1	64,215	64,179	706	0	18	34	47	2	1	4	93	34	12	225	1.31	285.3
BM		R		100		336	336	4		59	41				100		30	10	98	0.79	3.4
BM	Totals			1		336	336	4		59	41				100		30	10	98	0.79	3.4
GF		2M		67		49	49	1			100					100	40	14	290	1.42	.2
GF		3M		28		20	20	0		100						100	40	9	120	0.76	.2
GF		4M		5		3	3	0		100			100				20	6	20	0.32	.2
GF	Totals			0		73	73	1		33	67		5		95		33	10	143	0.93	.5
RA		R		100		108	108	1		77	23				100		30	9	83	0.84	1.3
RA	Totals			0		108	108	1		77	23				100		30	9	83	0.84	1.3
CW		R		100		60	60	1		46	54				100		30	11	130	0.98	.5
CW	Totals			0		60	60	1		46	54				100		30	11	130	0.98	.5
Totals					0.1	64,791	64,755	712	0	19	34	47	2	2	4	92	34	12	223	1.30	291.0

TC PSTNDSUM		Stand Table Summary										Page	2				
												Date:	3/13/2012				
T03N R05W S19 Ty00PC		200.00		Project				CARL		Time:		4:26:40PM					
				Acres				200.00		Grown Year:							
S Spc	T	DBH	Sample Trees	FF 16'	Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals			
									Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF	
SNL		14	1		17	.312	.33										
SNL		19	1		17	.169	.33										
SNL		20	1		17	.153	.33										
SNL		24	3		17	.318	1.00										
SNL		30	1		17	.068	.33										
SNL		40	1		17	.038	.33										
SNL		50	1		17	.024	.33										
SNL		Totals	11	88	36	1.869	3.67										
Totals			164	88	140	91.486	258.67	284.51	45.8	227.6	370.97	13,029	64,755	74,194	26,058	12,951	

TC		PSTNDSUM											Stand Table Summary			Page	1
													Date:	3/19/2012			
		T03N R05W S19 Ty00PC		11.00		Project					CARL		Time:		2:26:26PM		
						Acres					11.00		Grown Year:				
S Spc	T	DBH	Sample Trees	FF 16'	Tot Av Ht	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals			
									Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF	
DF		13	1	85	99	.647	.60	1.29	14.6	60.0	.54	19	78	6	2	1	
DF		14	5	87	122	8.244	8.81	16.49	20.2	91.0	9.48	333	1,501	104	37	17	
DF		15	1	89	133	.486	.60	1.46	18.7	90.0	.78	27	131	9	3	1	
DF		16	9	87	125	3.842	5.36	10.67	21.3	94.8	6.47	227	1,012	71	25	11	
DF		17	4	89	131	1.513	2.38	4.16	24.9	113.6	2.95	103	473	32	11	5	
DF		18	11	89	136	3.710	6.56	11.13	27.5	123.0	8.72	306	1,369	96	34	15	
DF		19	7	88	141	2.119	4.17	6.36	31.5	143.3	5.71	200	911	63	22	10	
DF		20	9	87	147	5.132	11.20	15.67	35.7	164.5	15.94	559	2,578	175	62	28	
DF		21	16	89	135	6.390	15.37	19.91	36.5	177.6	20.72	727	3,537	228	80	39	
DF		22	21	88	143	11.370	30.01	37.22	38.9	183.4	41.23	1,447	6,825	454	159	75	
DF		23	8	89	154	3.674	10.60	11.85	48.5	236.8	16.37	574	2,806	180	63	31	
DF		24	16	88	155	10.462	32.87	37.19	47.7	234.8	50.51	1,772	8,731	556	195	96	
DF		25	10	87	156	3.460	11.79	13.31	48.3	245.2	18.33	643	3,265	202	71	36	
DF		26	7	89	158	7.459	27.50	27.77	53.1	274.2	42.01	1,474	7,613	462	162	84	
DF		27	6	88	145	6.767	26.91	23.98	56.2	275.3	38.43	1,348	6,603	423	148	73	
DF		28	3	90	165	.418	1.79	1.53	68.1	362.7	2.97	104	556	33	11	6	
DF		29	4	89	144	3.063	14.05	10.85	67.7	347.2	20.92	734	3,767	230	81	41	
DF		30	3	88	165	3.929	19.29	15.72	70.0	374.2	31.35	1,100	5,880	345	121	65	
DF		32	2	88	187	1.258	7.02	5.03	90.6	511.4	13.00	456	2,573	143	50	28	
DF		33	1	90	169	.100	.60	.40	91.8	515.0	1.05	37	207	12	4	2	
DF		34	1	89	158	1.020	6.43	4.08	90.6	512.5	10.53	370	2,090	116	41	23	
DF		36	1	87	138	.909	6.43	2.73	118.6	613.3	9.22	324	1,673	101	36	18	
DF		Totals	146	88	145	85.971	250.33	278.80	46.2	230.2	367.24	12,885	64,179	4,040	1,417	706	
BM		12	1	91	70	1.910	1.50	1.91	15.1	60.0	.77	29	115	8	3	1	
BM		19	1	83	116	.762	1.50	1.52	34.3	145.0	1.38	52	221	15	6	2	
BM		Totals	2	89	83	2.672	3.00	3.43	23.6	97.7	2.15	81	336	24	9	4	
RA		15	1	73	105	.272	.33	.54	19.1	60.0	.29	10	33	3	1	0	
RA		17	1	74	107	.211	.33	.42	27.3	95.0	.32	12	40	3	1	0	
RA		19	1	73	98	.169	.33	.34	32.4	105.0	.30	11	36	3	1	0	
RA		Totals	3	73	104	.652	1.00	1.30	25.2	83.0	.90	33	108	10	4	1	
GF		19	1	89	129	.169	.33	.51	31.1	143.3	.35	16	73	4	2	1	
GF		Totals	1	89	129	.169	.33	.51	31.1	143.3	.35	16	73	4	2	1	
CW		20	1	83	125	.153	.33	.46	29.5	130.0	.33	14	60	4	1	1	
CW		Totals	1	83	125	.153	.33	.46	29.5	130.0	.33	14	60	4	1	1	
SN		12	1	88	100	.424	.33										
SN		13	1	17		.362	.33										
SN		14	1	17		.312	.33										
SN		19	1	17		.169	.33										
SN		20	1	17		.153	.33										
SN		24	3	17		.318	1.00										
SN		30	1	17		.068	.33										
SN		40	1	17		.038	.33										
SN		50	1	17		.024	.33										
SN		Totals	11	88	36	1.869	3.67										
Totals			164	88	140	91.486	258.67	284.51	45.8	227.6	370.97	13,029	64,755	4,081	1,433	712	

Carlson Corner
341-12-08
Volume Summary (Shown in MBF)
March 2012

Area 1: Partial Cut (200 Acres)

SPECIES		Poles	2 SAW	3 SAW	4 SAW	CAMPRUN	TOTAL
Douglas-fir	Cruise Volume	1,015	1,694	673	83	0	3,465
	In-Growth						
2%	Hidden D&B	(0)	(34)	(13)	(2)	(0)	(49)
	Total	1,015	1,660	660	81	0	3,416
	<i>% Total</i>	30	49	19	2	0	

Area 2: Right-of-Way (11 Acres)

SPECIES		Poles	2 SAW	3 SAW	4 SAW	CAMPRUN	TOTAL
Douglas-fir	Cruise Volume	206	396	86	18	0	706
	In-Growth						
	Hidden D&B	(0)	(8)	(2)	(1)	(0)	(14)
	Total	206	388	84	17	0	695
	<i>% Total</i>	30	56	12	2	0	

SPECIES		Poles	2 SAW	3 SAW	4 SAW	CAMPRUN	TOTAL
Red alder and other hardwoods	Cruise Volume	0	0	0	0	5	5
	In-Growth						
	Hidden D&B	(0)	(0)	(0)	(0)	(1)	(1)
	Total	0	0	0	0	4	4
	<i>% Total</i>						

SALE TOTALS

SPECIES	Poles	2 SAW	3 SAW	4 SAW	CAMPRUN	TOTAL (MBF)
Douglas-fir	1,221	2,048	744	98	0	4,111
Red alder	0	0	0	0	4	4
Total	1,221	2,048	744	98	4	4,115

CRUISE REPORT
Carlson Corner
341-12-08

1. SAMPLING INTENSITY:

The cruise design assumed a Coefficient of Variation (CV%) of 70%, an average stand diameter of 18 inches, a desired sampling error (SE%) of 11% and a minimum sample size of 100 grade trees. Pre-cruise plots indicated that 5 to 6 grade trees per plot could be realized with a variable radius plot using a 20 BAF prism.

2. SAMPLING METHOD:

The area was cruised in March of 2012 with 31 grade plots and 29 count plots using a 20 BAF prism. Plots were laid out on a (5) chain x (5) chain grid. Plots falling on or near existing roads or no-harvest areas were offset 1 chain. Cruisers 'thinned' plots to 160 ft² of basal area by assigning a 'Take' or 'Leave' status to each tree in every plot.

3. CRUISE RESULTS

164 trees were measured and graded producing a sampling error of 11.3% on both the board foot volume and basal area.

4. TREE MEASUREMENT AND GRADING:

All (grade plot) sample trees were measured and graded following Columbia River Log Scale grade rules and favoring 40 foot segments. Pole volume was calculated as a percent of total net board feet (30%). Proportional volumes were removed from sawlog grades.

All grade plot 'Take' trees were measured and graded following Columbia River Log Scale grade rules and favoring 40 foot segments.

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** were measured for each grade tree using a form point of 16 feet.

5. DATA PROCESSING

a) **Volumes and Statistics,** Cruise and grown forward volume estimates, and sampling statistics, were derived from Super Ace 2008 cruise software.

b) **Deductions:** Two percent of the volume was subtracted from the computed sawlog volumes to account for hidden defect and breakage.

6. Cruisers: The sale was cruised by ODF cruisers (Savage, Koch, Stone).

Prepared by:

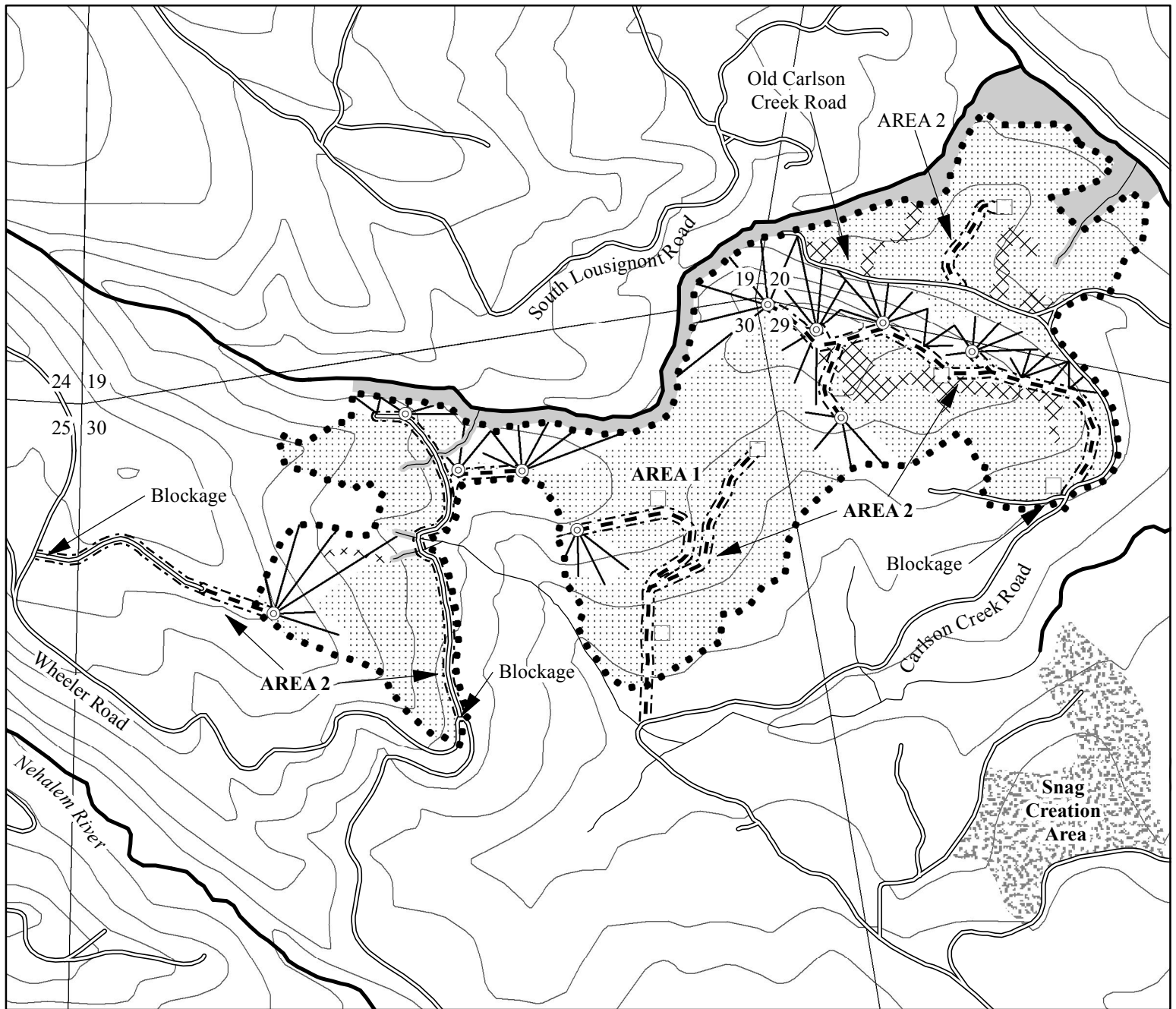
ODF Forester

Date

Reviewed by:

Eric Foucht

Date



Legend

- Timber Sale Boundary
- Existing Road
- - - New Road Construction
- · - · Right-of-Way Boundary
- Type F Stream
- Type N Stream
- Unposted Stream Buffer
- ⊙ Cable Landing
- Tractor Landing
- ↙ Cable Logging Area
- ▤ Tractor Logging Area
- ▨ Snag Creation Area
- ▩ Optional Thinning Area
- Section Line
- 80 Ft Elevation Contours

LOGGING PLAN

OF TIMBER SALE CONTRACT NO. 341-12-08
 CARLSON CORNER
 PORTIONS OF SECTIONS 19, 20, 29, 30, T3N, R5W, W.M.,
 WASHINGTON COUNTY, OREGON

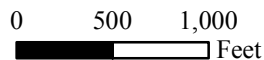
Forest Grove District GIS
 March 2012

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

	TRACTOR	CABLE
AREA 1	146	54
AREA 2	11	0
TOTAL	157	54