



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Cost Summary Toll Sale 341-06-23

District: Tillamook

Date: 6/9/05

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$2,242,056.96	\$111,334.98	\$2,353,391.94
		Project Work	(\$724,780.00)
		Advertised Value	\$1,628,611.94



Timber Sale Appraisal Timber Description Toll Sale 341-06-23

"STEWARDSHIP IN FORESTRY"

District: Tillamook

Location: Portions of Sections 10,14,15,16,21,22, and 23, T2S, R7W, W.M., Tillamook County, Oregon.

Date: 6/9/05

Stand Stocking: 20%

Species	Avg. DBH	Amortized%	Recovery%
Douglas - Fir	15	0	95
Alder (Red)	15	0	95

Volume by Grade	Douglas - Fir	Alder (Red)	Total
2S	331	19	350
3S	6,194	106	6,300
4S	963	193	1,156
Total	7,488	318	7,806

Comments: Pond Values Used: 1st Quarter 2005.

Combined Maintenance of Toll/Steampot Haul: = \$5.71/mbf

Maintenance of Toll, Bark Shanty, Telephone Shack, Big Bertha Roads (Toll Haul)= \$3.67/mbf

Grading Toll Rd: \$500/mile x 5 miles x 3 times / 7,806 mbf= \$0.96 mbf

Grading additional roads: \$500/mile x 6 miles x 2 times / 7,806 mbf= \$0.77 mbf

Surfacing: 20cy/mile x \$5.00/cy x 8 mmbf x 11 miles/ 7,806 mbf= \$1.12 mbf

Compacting surface: \$11/sta x 581 stations x 1 time / 7,806 mbf= \$0.82 mbf

Maintenance of East Fk. Trask (Steampot Haul Route)= \$2.04 mbf

Grading: \$500/mile x 8.5 miles x 1 time / 7,806 mbf= \$0.54 mbf

Surfacing: 20cy/mile x \$5.00/cy x 8 mmbf x 8.5 miles / 7,806 mbf= \$0.87 mbf

Compacting Surface: \$11/sta x 449 stations x 1 time / 7,806 mbf= \$0.63 mbf

Other (Profit and Risk included): \$212,490.70

Pit run for recently blocked non-project roads: 300 cy @ \$5.50/cy = \$1,650

Surfacing recently blocked access roads: \$13.70/sta x 121 stations= \$1,657.70

Removal of barriers blocking access: \$75 per barrier removal x 8 barriers= \$600

Move-in costs: \$1,995

Clear debris from OHV trails: 13,150 feet at \$0.40/ft.= \$5,260

Block trails (38) and construct OHV rolling dips (10)= 48 @ \$75/ea= \$3,600

Slash piling and sorting: \$110/hr / 50 acres x 613 acres of cable harvest= \$1,348

Trask Public Safety Road Fee: \$25 mbf x 7,806 mbf= \$195,150.00

Install one 18"x 30' culvert to existing logging spur= \$480

Construction of non-project roads: \$150/sta x 5 stations= \$750

Other (add Profit and Risk): \$15,612

Brand and Paint: \$2.00/mbf x 7806 mbf= \$15,612

Cedar value: \$865/mbf - \$324 (logging cost) = \$541/mbf



Timber Sale Appraisal Logging Conditions Toll Sale 341-06-23

"STEWARDSHIP IN FORESTRY"

Combination#: 1	Douglas - Fir	18.63%	
	Alder (Red)	22.94%	
Yarding Distance:	Short (400 ft)		Downhill Yarding: No
Logging System:	Cable: Small Tower <=40		Process: Stroke Delimber
Tree Size:	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF		
Loads/Day:	6		Bd. Ft./Load: 3,500
Cost/MBF:	\$132.04		
Machines:			
	Log Loader (A)		
	Stroke Delimber (A)		
	Tower Yarder (Small)		
Combination#: 2	Douglas - Fir	60.47%	
	Alder (Red)	40.71%	
Yarding Distance:	Medium (800 ft)		Downhill Yarding: No
Logging System:	Cable: Medium Tower >40 - <70		Process: Stroke Delimber
Tree Size:	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF		
Loads/Day:	4		Bd. Ft./Load: 3,500
Cost/MBF:	\$234.47		
Machines:			
	Log Loader (A)		
	Stroke Delimber (A)		
	Tower Yarder (Medium)		
Combination#: 3	Douglas - Fir	20.89%	
	Alder (Red)	36.35%	
Yarding Distance:	Short (400 ft)		Downhill Yarding: Yes
Logging System:	Track Skidder		Process: Feller Buncher
Tree Size:	Small / Thinning 12in (130 Bft/tree), 12-17 logs/MBF		
Loads/Day:	11		Bd. Ft./Load: 3,500
Cost/MBF:	\$91.40		
Machines:			
	Feller Buncher w/ Delimber		
	Log Loader (B)		
	Stroke Delimber (B)		
	Track Skidder		



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Logging Costs Toll Sale 341-06-23

Date: 6/9/05

Operating Seasons: 2.0

Profit & Risk: 12%

Project Costs: \$724,780

Other Costs (P/R): \$15,612

Slash Disposal: \$0

Other Costs: \$212,491

Road Maintenance: \$5.71

Miles of Road			
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	3.5
Alder (Red)	\$0.00	3.0	3.2



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Logging Costs Breakdown Toll Sale 341-06-23

Costs	Douglas - Fir	Alder (Red)
Logging	185.49	158.96
Road Maintenance	6.01	6.01
Fire Protection	0.69	0.69
Hauling	69.16	46.11
Other (P/R appl.)	2.00	2.00
Profit & Risk	31.60	25.65
Slash Disposal	0.00	0.00
Scaling	2.00	0.00
Other	27.22	27.22
Total	324.17	266.64

Amortization	0.00	0.00
Pond Value	623.59	616.75
Stumpage	299.42	350.11
Amortized	0.00	0.00



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal Summary Toll Sale 341-06-23

Amortized

	Douglas - Fir	Alder (Red)
MBF	0.00	0.00
Value	0.00	0.00
Total	0.00	0.00

Unamortized

	Douglas - Fir	Alder (Red)
MBF	7,488.00	318.00
Value	299.42	350.11
Total	2,242,056.96	111,334.98

Gross Timber Sale Value

Recovery \$2,353,391.94

Prepared by: Ed Wallmark

Date: 6/9/05

District: Tillamook

Phone: (503) 842-2545



PROJECT SUMMARY SHEET

Sale: Toll

CONSTRUCTION

Point	A to B	83+80	stations =	\$309,689.18
Point	E to F	14+50	stations =	\$44,663.28
Point	G to H	33+75	stations =	\$125,110.64
SUBTOTAL CONSTRUCTION				\$479,463.10

IMPROVEMENT

Point	A to B	56+30	stations =	\$70,005.04
Point	C to D	14+55	stations =	\$10,314.89
Point	E to F	8+55	stations =	\$11,370.17
Point	I to J	126+05	stations =	\$35,130.41
Point	K to L	148+10	stations =	\$43,220.79
Point	M to N	70+65	stations =	\$19,424.54
SUBTOTAL IMPROVEMENT				\$189,465.84

VACATING

Point	O to P	80+95	stations =	\$35,314.95
Point	Q to R	18+95	stations =	\$7,572.04
Point	S to T	15+30	stations =	\$6,004.96
Point	U	0+00	stations =	\$363.20
SUBTOTAL VACATING				\$49,255.15

SPECIAL PROJECTS

Stream Enhancement at Points V and W	\$1,816.34
SUBTOTAL SPECIAL PROJECTS	\$1,816.34

MOVE IN

A to B, C to D, E to F, and G to H	\$2,014.50
I to J, K to L, and M to N	\$1,322.37
O to P, Q to R, S to T, U, V, and W	\$1,439.15
SUBTOTAL MOVE IN	\$4,776.02

GRAND TOTAL **\$724,776.45**

SUMMARY OF CONSTRUCTION COST

Sale:	<u>Toll</u>	0+00 0.00	stations miles	Road:	<u>A to B</u>	<u>Stations 0+00 to 56+30</u>	56+30 1.07	stations miles
Construction -				Improvement -				
CLEARING AND GRUBBING -								
Scattering			1.48 acres @	\$815.00 per acre =		\$1,206.20		
Piling - waste area			2.50 acres @	\$905.00 per acre =		\$2,262.50		
Endhaul			0.77 acres @	\$1,500.00 per acre =		\$1,155.00		
				TOTAL CLEARING AND GRUBBING				\$4,623.70
EXCAVATION -								
Road Earthwork			42.90 sta. @	\$30.00 per sta. =		\$1,287.00		
Pullback			139 cy. @	\$1.40 per c.y. =		\$194.60		
Widening - common			2,123 cy. @	\$1.15 per c.y. =		\$2,441.45		
Widening - rippable rock			352 cy. @	\$2.25 per c.y. =		\$792.00		
Widening - rock			229 cy. @	\$4.90 per c.y. =		\$1,122.10		
Ditchline drain excavation			75 cy. @	\$1.40 per c.y. =		\$105.00		
Ditchline excavation			167 cy. @	\$4.55 per c.y. =		\$759.85		
Slope stablization prep.			60 cy. @	\$1.40 per c.y. =		\$84.00		
				TOTAL EXCAVATION				\$6,786.00
ENDHAUL -								
PB to waste area on J C Rd.	48+30	to	50+25	139 cy. @	\$1.55 per c.y. =	\$215.45		
Ditch to waste area on J C Rd.	0+00	to	7+05	32 cy. @	\$2.64 per c.y. =	\$84.48		
Ditch to waste area on J C Rd.	9+60	to	14+30	21 cy. @	\$2.44 per c.y. =	\$51.24		
Ditch to waste area on J C Rd.	19+55	to	33+10	61 cy. @	\$2.10 per c.y. =	\$128.10		
Ditch to waste area on J C Rd.	40+75	to	47+25	29 cy. @	\$1.68 per c.y. =	\$48.72		
Ditch drain to waste area on J C Rd.	47+25	to	51+00	75 cy. @	\$1.56 per c.y. =	\$117.00		
Ditch to waste area on J C Rd.	51+00	to	56+30	24 cy. @	\$1.25 per c.y. =	\$30.00		
W to waste area on J C Rd.	40+75	to	43+15	1073 cy. @	\$1.73 per c.y. =	\$1,856.29		
W to roadway fill 4+40 to 5+15	40+75	to	43+15	687 cy. @	\$1.46 per c.y. =	\$1,003.02		
W to waste area on J C Rd.	48+05	to	50+55	944 cy. @	\$1.33 per c.y. =	\$1,255.52		
Slope Stab. prep to WA on J C Rd.	17+50	to	17+95	60 cy. @	\$2.30 per c.y. =	\$138.00		
Spread & compact roadway fill	4+40	to	5+15	687 cy. @	\$0.35 per c.y. =	\$240.45		
Spread & compact waste area				2458 cy. @	\$0.20 per c.y. =	\$491.60		
						TOTAL ENDHAUL		\$5,659.87
CULVERTS - MATERIALS & INSTALLATION								
			<u>Culverts</u>					
			274 LF of 18"	\$4,658.00		146 LF of 24"	\$3,504.00	
			0 LF of 30"	\$0.00		0 LF of 36"	\$0.00	
			0 LF of 42"	\$0.00		0 LF of 48"	\$0.00	
			0 LF of 54"	\$0.00		0 LF of 60"	\$0.00	
			0 LF of 66"	\$0.00		0 LF of 72"	\$0.00	
				<u>\$4,658.00</u>			<u>\$3,504.00</u>	
			<u>Half Rounds</u>					
			100 LF of 21"	\$1,778.00		0 LF of 30"	\$0.00	
			0 LF of 36"	\$0.00		0 LF of 42"	\$0.00	
				<u>\$1,778.00</u>			<u>\$0.00</u>	
			<u>Culvert Stakes & Markers</u>					
			20 stakes	\$160.00				
			13 markers	\$104.00				
				<u>\$264.00</u>				
						TOTAL CULVERTS		\$10,204.00
ROCK								
Road	0+00 - 56+30	2,500	cy. of 2 1/2"-0"	@	\$11.77 per c.y. =	\$29,425.00		
Road Leveling	2+00 - 50+55	280	cy. of 2 1/2"-0"	@	\$11.88 per c.y. =	\$3,326.40		
Slope Stabilization	17+50 - 17+95	120	cy. of Riprap 48"-36"	@	\$13.67 per c.y. =	\$1,640.40		
Energy Dissapator	5+05	30	cy. of Riprap 48"-24"	@	\$13.46 per c.y. =	\$403.80		
Energy Dissapator	43+30	20	cy. of Riprap 48"-24"	@	\$14.10 per c.y. =	\$282.00		
Energy Dissapator	43+85	30	cy. of Riprap 48"-24"	@	\$14.11 per c.y. =	\$423.30		
Ground Water Drain	47+25 - 51+00	75	cy. of 3"-1"	@	\$17.93 per c.y. =	\$1,344.75		
						<u>TOTAL ROCK</u>		\$36,845.65
SPECIAL PROJECTS								
Construct waste areas, turnouts, and ditchouts -			6.00 hours @	\$130.00 per hour		\$780.00		
Remove buried logs -			1.00 hour @	\$130.00 per hour		\$130.00		
Geotextile fabric & installation - ground water drain -			500 sq. yds. @	\$0.95 per sq. yd.		\$475.00		
Grade and shape road - ditch -			37.10 stations @	\$14.20 per station		\$526.82		
Grade and shape road - outslope & inslope -			19.20 stations @	\$9.75 per station		\$187.20		
Proof-Roll subgrade prior to rocking -			56.30 stations @	\$3.00 per station		\$168.90		
Roll subgrade w/ vibratory roller prior to rocking -			56.30 stations @	\$11.00 per station		\$619.30		
Cut 2 large stumps below subgrade -			2.00 @	\$50.00		\$100.00		
Remove culverts from state lands -			3.00 @	\$275.40 total		\$275.40		
Grass seed and fertilize -			4.56 acres @	\$220.00 per acre		\$1,003.20		
Mulching -			2.70 acres @	\$600.00 per acre		\$1,620.00		
						<u>TOTAL SPECIAL PROJECTS</u>		\$5,885.82
						GRAND TOTAL		\$70,005.04

SUMMARY OF CONSTRUCTION COST

Sale:	<u>Toll</u>				Road:	<u>A to B</u>		<u>Stations 56+30 to 140+10</u>	
Construction -	<u>83+80</u> stations				Improvement -	<u>0+00</u> stations			
	<u>1.59</u> miles					<u>0.00</u> miles			
CLEARING AND GRUBBING -									
Scattering			5.29	acres @	\$815.00	per acre =	\$4,311.35		
Endhaul			4.33	acres @	\$1,500.00	per acre =	\$6,495.00		
					TOTAL CLEARING AND GRUBBING				\$10,806.35
EXCAVATION -									
Common			48,796	cy. @	\$1.15	per c.y. =	\$56,115.40		
Rippable rock			3,755	cy. @	\$2.25	per c.y. =	\$8,448.75		
Rock			6,137	cy. @	\$4.90	per c.y. =	\$30,071.30		
					TOTAL EXCAVATION				\$94,635.45
ENDHAUL -									
W to waste area on J C Rd.	56+30	to	91+40		36,785	cy. @	\$2.12	per c.y. =	\$77,984.20
W to waste area at Point H	91+40	to	140+10		13,335	cy. @	\$2.20	per c.y. =	\$29,337.00
Spread & compact roadway fill	56+30	to	140+10		8,568	cy. @	\$0.35	per c.y. =	\$2,998.80
Spread & compact waste areas					50,120	cy. @	\$0.20	per c.y. =	\$10,024.00
							TOTAL ENDHAUL		\$120,344.00
CULVERTS - MATERIALS & INSTALLATION									
			<u>Culverts</u>						
			102	LF of 18"	\$1,734.00		0	LF of 24"	\$0.00
			0	LF of 30"	\$0.00		0	LF of 36"	\$0.00
			0	LF of 42"	\$0.00		0	LF of 48"	\$0.00
			0	LF of 54"	\$0.00		0	LF of 60"	\$0.00
			0	LF of 66"	\$0.00		0	LF of 72"	\$0.00
					<u>\$1,734.00</u>				<u>\$0.00</u>
			<u>Half Rounds</u>						
			20	LF of 21"	\$355.60		0	LF of 30"	\$0.00
			0	LF of 36"	\$0.00		0	LF of 42"	\$0.00
					<u>\$355.60</u>				<u>\$0.00</u>
			<u>Culvert Stakes & Markers</u>						
			4	stakes	\$32.00				
			3	markers	\$24.00				
					<u>\$56.00</u>				
							TOTAL CULVERTS		\$2,145.60
ROCK									
Road	56+30 - 140+10	5,525	cy. of	4"-0"	@	\$12.43	per c.y. =	\$68,675.75	
Road	56+30 - 85+45	584	cy. of	2 1/2"-0"	@	\$12.11	per c.y. =	\$7,072.24	
							TOTAL ROCK		\$75,747.99
SPECIAL PROJECTS									
Construct culvert lead off ditches, and ditchouts -			4.00	hours @	\$130.00	per hour	\$520.00		
Grade and shape road - ditch			65.20	stations @	\$14.20	per station	\$925.84		
Grade and shape road - outslope			18.60	stations @	\$9.75	per station	\$181.35		
Proof-Roll subgrade prior to rocking			83.80	stations @	\$3.00	per station	\$251.40		
Roll subgrade w/ vibratory roller prior to rocking -			83.80	stations @	\$11.00	per station	\$921.80		
Remove large stumps -			11.5	hours @	\$130.00	per hour	\$1,495.00		
Grass seed and fertilize -			6.35	acres @	\$220.00	per acre	\$1,397.00		
Mulching -			0.07	acres @	\$600.00	per acre	\$42.00		
					TOTAL SPECIAL PROJECTS				\$6,009.79
					GRAND TOTAL				\$309,689.18

SUMMARY OF CONSTRUCTION COST

Sale:	<u>Toll</u>	Road:	<u>C to D</u>
Construction -	<u>0+00</u> stations <u>0.00</u> miles	Improvement -	<u>14+55</u> stations <u>0.28</u> miles
CLEARING AND GRUBBING -			
Scattering	0.49	acres @	\$815.00 per acre = <u>\$399.35</u>
			TOTAL CLEARING AND GRUBBING
			\$399.35
EXCAVATION -			
Road Earthwork	13.00	sta. @	\$30.00 per sta. = <u>\$390.00</u>
Widening - common	758	cy. @	\$1.15 per c.y. = <u>\$871.70</u>
			TOTAL EXCAVATION
			\$1,261.70
ENDHAUL -			
W to waste area on J C Rd.	9+25	to	10+80
Spread & compact waste area	758	cy. @	\$0.96 per c.y. = <u>\$727.68</u>
	758	cy. @	\$0.20 per c.y. = <u>\$151.60</u>
			TOTAL ENDHAUL
			\$879.28
CULVERTS - MATERIALS & INSTALLATION			
	<u>Culverts</u>		
	0	LF of 18"	\$0.00
	0	LF of 30"	\$0.00
	0	LF of 42"	\$0.00
	0	LF of 54"	\$0.00
	0	LF of 66"	\$0.00
			<u>\$0.00</u>
	<u>Half Rounds</u>		
	0	LF of 21"	\$0.00
	0	LF of 36"	\$0.00
			<u>\$0.00</u>
	<u>Culvert Stakes & Markers</u>		
	0	stakes	\$0.00
	0	markers	\$0.00
			<u>\$0.00</u>
			TOTAL CULVERTS
			\$0.00
ROCK			
Road	0+00-14+55	557	cy. of 2 1/2"-0" @ \$12.20 per c.y. = <u>\$6,795.40</u>
Road Leveling	8+15 - 9+15	20	cy. of 2 1/2"-0" @ \$12.22 per c.y. = <u>\$244.40</u>
			TOTAL ROCK
			\$7,039.80
SPECIAL PROJECTS			
Construct turnouts, turnarounds, and ditchouts -	2.00	hours @	\$130.00 per hour = <u>\$260.00</u>
Grade and shape road - outslope -	14.55	stations @	\$9.75 per station = <u>\$141.86</u>
Proof-Roll subgrade prior to rocking -	14.55	stations @	\$3.00 per station = <u>\$43.65</u>
Roll subgrade w/ vibratory roller prior to rocking -	14.55	stations @	\$11.00 per station = <u>\$160.05</u>
Grass seed and fertilize -	0.26	acres @	\$220.00 per acre = <u>\$57.20</u>
Mulching -	0.12	acres @	\$600.00 per acre = <u>\$72.00</u>
			TOTAL SPECIAL PROJECTS
			\$734.76
			GRAND TOTAL
			\$10,314.89

SUMMARY OF CONSTRUCTION COST

Sale:	<u>Toll</u>	Road:	<u>E to F</u>	<u>Stations 0+00 to 14+50</u>
Construction -	<u>14+50</u> stations <u>0.27</u> miles	Improvement -	<u>0+00</u> stations <u>0.00</u> miles	
CLEARING AND GRUBBING -				
Scattering		1.00 acres @	\$815.00 per acre =	\$815.00
Piling - waste area		0.14 acres @	\$905.00 per acre =	\$126.70
Endhaul		0.70 acres @	\$1,500.00 per acre =	\$1,050.00
			TOTAL CLEARING AND GRUBBING	\$1,991.70
EXCAVATION -				
Common and rocky		4.65 sta. @	\$125.00 per sta. =	\$581.25
Common		8,717 cy. @	\$1.15 per c.y. =	\$10,024.55
			TOTAL EXCAVATION	\$10,605.80
ENDHAUL -				
W to waste area on J C Rd.	0+00 to 5+75	6,740 cy. @	\$2.02 per c.y. =	\$13,614.80
W to waste area @ Sta. 14+50 on E to F	5+75 to 9+85	1,546 cy. @	\$0.85 per c.y. =	\$1,314.10
Spread & compact roadway fill	1+85 to 9+85	431 cy. @	\$0.35 per c.y. =	\$150.85
Spread & compact waste areas		8,286 cy. @	\$0.20 per c.y. =	\$1,657.20
			TOTAL ENDHAUL	\$16,736.95
CULVERTS - MATERIALS & INSTALLATION				
		<u>Culverts</u>		
		26 LF of 18"	\$442.00	0 LF of 24" \$0.00
		0 LF of 30"	\$0.00	0 LF of 36" \$0.00
		0 LF of 42"	\$0.00	0 LF of 48" \$0.00
		0 LF of 54"	\$0.00	0 LF of 60" \$0.00
		0 LF of 66"	\$0.00	0 LF of 72" \$0.00
			<u>\$442.00</u>	<u>\$0.00</u>
		<u>Half Rounds</u>		
		20 LF of 21"	\$355.60	0 LF of 30" \$0.00
		0 LF of 36"	\$0.00	0 LF of 42" \$0.00
			<u>\$355.60</u>	<u>\$0.00</u>
		<u>Culvert Stakes & Markers</u>		
		4 stakes	\$32.00	
		1 markers	\$8.00	
			<u>\$40.00</u>	
				TOTAL CULVERTS \$837.60
ROCK				
Road	0+00 - 14+50	1,001 cy. of	4"-0" @	\$12.93 per c.y. =
				<u>\$12,942.93</u>
				TOTAL ROCK \$12,942.93
SPECIAL PROJECTS				
Construct waste area, turnouts, and ditchouts -		3.00 hours @	\$130.00 per hour	\$390.00
Grade and shape road - ditch		14.50 stations @	\$14.20 per station	\$205.90
Proof-Roll subgrade prior to rocking		14.50 stations @	\$3.00 per station	\$43.50
Roll subgrade w/ vibratory roller prior to rocking -		14.50 stations @	\$11.00 per station	\$159.50
Remove large stumps -		3.0 hours @	\$130.00 per hour	\$390.00
Grass seed and fertilize -		1.17 acres @	\$220.00 per acre	\$257.40
Mulching -		0.17 acres @	\$600.00 per acre	\$102.00
			TOTAL SPECIAL PROJECTS	\$1,548.30
			GRAND TOTAL	\$44,663.28

SUMMARY OF CONSTRUCTION COST

Sale:	<u>Toll</u>	Road:	<u>E to F</u>	<u>Stations 14+50 to 23+05</u>
Construction -	<u>0+00</u> stations <u>0.00</u> miles	Improvement -	<u>8+55</u> stations <u>0.16</u> miles	
CLEARING AND GRUBBING -				
Scattering	0.71 acres @	\$815.00 per acre =	<u>\$578.65</u>	
		TOTAL CLEARING AND GRUBBING		\$578.65
EXCAVATION -				
Common	8.55 sta. @	\$100.00 per sta. =	\$855.00	
Pullback	432 cy. @	\$1.40 per c.y. =	<u>\$604.80</u>	
		TOTAL EXCAVATION		\$1,459.80
ENDHAUL -				
PB to waste area @ 14+50 on E to F 17+35 to 20+00	432 cy. @	\$0.80 per c.y. =	\$345.60	
Spread & compact	432 cy. @	\$0.20 per c.y. =	<u>\$86.40</u>	
		TOTAL ENDHAUL		\$432.00
CULVERTS - MATERIALS & INSTALLATION				
<u>Culverts</u>				
0 LF of 18"	\$0.00	0 LF of 24"	\$0.00	
0 LF of 30"	\$0.00	0 LF of 36"	\$0.00	
0 LF of 42"	\$0.00	0 LF of 48"	\$0.00	
0 LF of 54"	\$0.00	0 LF of 60"	\$0.00	
0 LF of 66"	<u>\$0.00</u>	0 LF of 72"	<u>\$0.00</u>	
	\$0.00		\$0.00	
<u>Half Rounds</u>				
0 LF of 21"	\$0.00	0 LF of 30"	\$0.00	
0 LF of 36"	<u>\$0.00</u>	0 LF of 42"	<u>\$0.00</u>	
	\$0.00		\$0.00	
<u>Culvert Stakes & Markers</u>				
0 stakes	\$0.00			
0 markers	<u>\$0.00</u>			
	\$0.00			
		TOTAL CULVERTS		\$0.00
ROCK				
Road	14+50 - 23+05 637 cy. of 4"-0"	@ \$12.93 per c.y. =	<u>\$8,236.41</u>	
		TOTAL ROCK		\$8,236.41
SPECIAL PROJECTS				
Construct turnouts, turnarounds, and ditchouts -	1.50 hours @	\$130.00 per hour	\$195.00	
Grade and shape road - ditch	8.55 stations @	\$14.20 per station	\$121.41	
Proof-Roll subgrade prior to rocking	8.55 stations @	\$3.00 per station	\$25.65	
Roll subgrade w/ vibratory roller prior to rocking -	8.55 stations @	\$11.00 per station	\$94.05	
Remove large stumps -	0.5 hours @	\$130.00 per hour	\$65.00	
Grass seed and fertilize -	0.41 acres @	\$220.00 per acre	\$90.20	
Mulching -	0.12 acres @	\$600.00 per acre	\$72.00	
		TOTAL SPECIAL PROJECTS		\$663.31
		GRAND TOTAL		\$11,370.17

SUMMARY OF CONSTRUCTION COST

Sale:	<u>Toll</u>		Road: <u>G to H</u>
Construction -	<u>33+75</u> stations <u>0.64</u> miles		Improvement - <u>0+00</u> stations <u>0.00</u> miles
CLEARING AND GRUBBING -			
Scattering	1.68 acres @	\$815.00 per acre =	\$1,369.20
Piling - waste area	2.07 acres @	\$905.00 per acre =	\$1,873.35
Endhaul	1.93 acres @	\$1,500.00 per acre =	\$2,895.00
		TOTAL CLEARING AND GRUBBING	\$6,137.55
EXCAVATION -			
Common	3.00 sta. @	\$65.00 per sta. =	\$195.00
Common	2.70 sta. @	\$100.00 per sta. =	\$270.00
Common with pullback of pioneer construction	26,611 cy. @	\$1.40 per c.y. =	\$37,255.40
Rippable rock	1,434 cy. @	\$2.25 per c.y. =	\$3,226.50
		TOTAL EXCAVATION	\$40,946.90
ENDHAUL -			
W to waste area @ Point H	0+00 to 28+05	27,839 cy. @	\$1.16 per c.y. = \$32,293.24
Spread & compact roadway fill	25+00 to 28+05	206 cy. @	\$0.35 per c.y. = \$72.10
Spread & compact waste area		27,839 cy. @	\$0.20 per c.y. = \$5,567.80
			TOTAL ENDHAUL
			\$37,933.14
CULVERTS - MATERIALS & INSTALLATION			
	<u>Culverts</u>		
	112 LF of 18"	\$1,904.00	0 LF of 24" \$0.00
	0 LF of 30"	\$0.00	0 LF of 36" \$0.00
	0 LF of 42"	\$0.00	0 LF of 48" \$0.00
	0 LF of 54"	\$0.00	0 LF of 60" \$0.00
	0 LF of 66"	\$0.00	0 LF of 72" \$0.00
		<u>\$1,904.00</u>	<u>\$0.00</u>
	<u>Half Rounds</u>		
	80 LF of 21"	\$1,422.40	0 LF of 30" \$0.00
	0 LF of 36"	\$0.00	0 LF of 42" \$0.00
		<u>\$1,422.40</u>	<u>\$0.00</u>
	<u>Culvert Stakes & Markers</u>		
	16 stakes	\$128.00	
	4 markers	\$32.00	
		<u>\$160.00</u>	
			TOTAL CULVERTS
			\$3,486.40
ROCK			
Road	0+00 - 33+75	2,260 cy. of 4"-0"	@ \$13.22 per c.y. = \$29,877.20
			TOTAL ROCK
			\$29,877.20
SPECIAL PROJECTS			
Construct waste area, turnouts, turnaround, and ditchouts -	6.00 hours @	\$130.00 per hour	\$780.00
Geotextile fabric & installation -	2,042 sq. yds. @	\$0.95 per sq. yd.	\$1,939.90
Grade and shape road - ditch	33.75 stations @	\$14.20 per station	\$479.25
Proof-Roll subgrade prior to rocking	33.75 stations @	\$3.00 per station	\$101.25
Roll subgrade w/ vibratory roller prior to rocking -	33.75 stations @	\$11.00 per station	\$371.25
Remove large stumps -	7.0 hours @	\$130.00 per hour	\$910.00
Grass seed and fertilize -	3.49 acres @	\$220.00 per acre	\$767.80
Mulching -	2.30 acres @	\$600.00 per acre	\$1,380.00
		TOTAL SPECIAL PROJECTS	\$6,729.45
		GRAND TOTAL	\$125,110.64

SUMMARY OF CONSTRUCTION COST

Sale:	Toll				Road: I to J			
Construction -	0+00	stations			Improvement -	126+05	stations	
	0.00	miles				2.39	miles	
CLEARING AND GRUBBING -								
Scattering			1.74	acres @	\$815.00	per acre =	\$1,418.10	
Piling - waste areas			0.12	acres @	\$905.00	per acre =	\$108.60	
					TOTAL CLEARING AND GRUBBING			\$1,526.70
EXCAVATION -								
Ditchline excavation			284	cy. @	\$4.55	per c.y. =	\$1,292.20	
					TOTAL EXCAVATION			\$1,292.20
ENDHAUL -								
Ditch to waste areas on I to J	0+00	to	126+05		284	cy. @	\$1.45	per c.y. = \$411.80
Spread & compact waste areas					284	cy. @	\$0.20	per c.y. = \$56.80
					TOTAL ENDHAUL			\$468.60
CULVERTS - MATERIALS & INSTALLATION								
			<u>Culverts</u>					
			0	LF of 18"	\$0.00		0	LF of 24" \$0.00
			0	LF of 30"	\$0.00		0	LF of 36" \$0.00
			0	LF of 42"	\$0.00		0	LF of 48" \$0.00
			0	LF of 54"	\$0.00		0	LF of 60" \$0.00
			0	LF of 66"	\$0.00		0	LF of 72" \$0.00
					\$0.00			\$0.00
			<u>Half Rounds</u>					
			0	LF of 21"	\$0.00		0	LF of 30" \$0.00
			0	LF of 36"	\$0.00		0	LF of 42" \$0.00
					\$0.00			\$0.00
			<u>Culvert Stakes & Markers</u>					
			0	stakes	\$0.00			
			0	markers	\$0.00			
					\$0.00			
							TOTAL CULVERTS	\$0.00
ROCK								
Road	0+00 - 126+05		2,545	cy. of	2'-0"	@	\$10.89	per c.y. = \$27,715.05
							TOTAL ROCK	
								\$27,715.05
SPECIAL PROJECTS								
Construct waste areas, turnouts, and ditchouts -			3.00	hours @	\$130.00	per hour	\$390.00	
Grade and shape road - ditch-			126.05	stations @	\$14.20	per station	\$1,789.91	
Roll subgrade w/ vibratory roller prior to rocking -			126.05	stations @	\$11.00	per station	\$1,386.55	
Grass seed and fertilize -			1.57	acres @	\$220.00	per acre	\$345.40	
Mulching -			0.36	acres @	\$600.00	per acre	\$216.00	
					TOTAL SPECIAL PROJECTS			\$4,127.86
GRAND TOTAL								\$35,130.41

SUMMARY OF CONSTRUCTION COST

Sale:	<u>Toll</u>	Road:	<u>K to L</u>
Construction -	<u>0+00</u> stations <u>0.00</u> miles	Improvement -	<u>148+10</u> stations <u>2.80</u> miles
CLEARING AND GRUBBING -			
Scattering	2.04 acres @	\$815.00 per acre =	\$1,662.60
Piling - waste areas	0.12 acres @	\$905.00 per acre =	\$108.60
		TOTAL CLEARING AND GRUBBING	\$1,771.20
EXCAVATION -			
Ditchline excavation	333 cy. @	\$4.55 per c.y. =	\$1,515.15
		TOTAL EXCAVATION	\$1,515.15
ENDHAUL -			
Ditch to waste areas on K to L	0+00 to 148+10	333 cy. @	\$1.86 per c.y. = \$619.38
Spread & compact waste areas		333 cy. @	\$0.20 per c.y. = \$66.60
		TOTAL ENDHAUL	\$685.98
CULVERTS - MATERIALS & INSTALLATION			
	<u>Culverts</u>		
	0 LF of 18"	\$0.00	0 LF of 24" \$0.00
	0 LF of 30"	\$0.00	0 LF of 36" \$0.00
	0 LF of 42"	\$0.00	0 LF of 48" \$0.00
	0 LF of 54"	\$0.00	0 LF of 60" \$0.00
	0 LF of 66"	\$0.00	0 LF of 72" \$0.00
		\$0.00	\$0.00
	<u>Haaf Rounds</u>		
	0 LF of 21"	\$0.00	0 LF of 30" \$0.00
	0 LF of 36"	\$0.00	0 LF of 42" \$0.00
		\$0.00	\$0.00
	<u>Culvert Stakes & Markers</u>		
	0 stakes	\$0.00	
	0 markers	\$0.00	
		\$0.00	
			TOTAL CULVERTS \$0.00
ROCK			
Road	0+00 - 148+10	3,069 cy. of 2'-0" @	\$11.26 per c.y. = \$34,556.94
			TOTAL ROCK \$34,556.94
SPECIAL PROJECTS			
Construct waste areas, turnouts, and ditchouts -	2.50 hours @	\$130.00 per hour	\$325.00
Grade and shape road -	148.10 stations @	\$14.20 per station	\$2,103.02
Roll subgrade w/ vibratory roller prior to rocking -	148.10 stations @	\$11.00 per station	\$1,629.10
Grass seed and fertilize -	1.82 acres @	\$220.00 per acre	\$400.40
Mulching -	0.39 acres @	\$600.00 per acre	\$234.00
		TOTAL SPECIAL PROJECTS	\$4,691.52
		GRAND TOTAL	\$43,220.79

SUMMARY OF CONSTRUCTION COST

Sale:	Toll		Road: M to N
Construction -	<u>0+00</u> stations <u>0.00</u> miles		Improvement - <u>70+65</u> stations <u>1.34</u> miles
CLEARING AND GRUBBING -			
Scattering		0.97 acres @	\$815.00 per acre = \$790.55
Piling - waste area		0.06 acres @	\$905.00 per acre = \$54.30
			TOTAL CLEARING AND GRUBBING
			\$844.85
EXCAVATION -			
Ditchline excavation		159 cy. @	\$4.55 per c.y. = \$723.45
			TOTAL EXCAVATION
			\$723.45
ENDHAUL -			
Ditch to waste area on M to N	0+00	to	70+65
Spread & compact waste area		159 cy. @	\$1.29 per c.y. = \$205.11
		159 cy. @	\$0.20 per c.y. = \$31.80
			TOTAL ENDHAUL
			\$236.91
CULVERTS - MATERIALS & INSTALLATION			
		<u>Culverts</u>	
		0 LF of 18"	\$0.00
		0 LF of 30"	\$0.00
		0 LF of 42"	\$0.00
		0 LF of 54"	\$0.00
		0 LF of 66"	\$0.00
			<u>\$0.00</u>
		<u>Havf Rounds</u>	
		0 LF of 21"	\$0.00
		0 LF of 36"	\$0.00
			<u>\$0.00</u>
		<u>Culvert Stakes & Markers</u>	
		0 stakes	\$0.00
		0 markers	\$0.00
			<u>\$0.00</u>
			TOTAL CULVERTS
			\$0.00
ROCK			
Road	0+00-70+65	1,465 cy. of	2"-0" @
			\$10.47 per c.y. = \$15,338.55
			TOTAL ROCK
			\$15,338.55
SPECIAL PROJECTS			
Construct waste area, turnouts, and ditchouts -		1.50 hours @	\$130.00 per hour \$195.00
Grade and shape road -		70.65 stations @	\$14.20 per station \$1,003.23
Roll subgrade w/ vibratory roller prior to rocking -		70.65 stations @	\$11.00 per station \$777.15
Grass seed and fertilize -		0.87 acres @	\$220.00 per acre \$191.40
Mulching -		0.19 acres @	\$600.00 per acre \$114.00
			TOTAL SPECIAL PROJECTS
			\$2,280.78
			GRAND TOTAL
			\$19,424.54

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	North Fork Trask	Location:	SE1/4 SE1/4 Sec.25 , T1S, R8W, W.M.
Sale:	<u>Toll</u>	Road & Riprap:	<u>14,900 c.y.</u>
Swell:	<u>1.40</u>	Stockpile:	<u> c.y.</u>
Shrinkage:	<u>1.16</u>	Total Truck Loads:	<u>14,900 c.y.</u>
Drill Pct.:	<u>100%</u>	In Place Total:	<u>10,643 c.y.</u>

Pit Development & Cleanup include the following: Clearing and grubbing of pit & Waste area, access road construction, end-hauling of overburden and other waste, Placing and compacting overburden and waste in waste area, and grass seeding and mulch waste area.					\$6,767.95
Drill & Shoot:	\$2.10 /cu.yd.	x	10,643 cu.yds.	=	\$22,350.30
Push Rock:	\$0.60 /cu.yd.	x	14,900 cu.yds.	=	\$8,940.00
Load Screen and Crusher:	\$0.60 /cu.yd.	x	14,700 cu.yds.	=	\$8,820.00
Screen Rock Prior to Crushing:	\$0.75 /cu.yd.	x	14,700 cu.yds.	=	\$11,025.00
Crush 2 1/2"-0" Rock:	\$2.25 /cu.yd.	x	3,941 cu.yds.	=	\$8,867.25
Crush 4"-0" Rock:	\$1.85 /cu.yd.	x	9,423 cu.yds.	=	\$17,432.55
Load Dump Truck - Screened Reject:	\$0.60 /cu.yd.	x	1,336 cu.yds.	=	\$801.60
Load Dump Truck - Crushed Rock:	\$0.60 /cu.yd.	x	13,364 cu.yds.	=	\$8,018.40
Load Dump Truck - Riprap:	\$1.40 /cu.yd.	x	200 cu.yds.	=	\$280.00
End-haul Screened Reject to Waste Area:	\$0.94 /cu.yd.	x	1,336 cu.yds.	=	\$1,255.84
Oversize Reduction:	\$4.50 /cu.yd.	x	298 cu.yds.	=	\$1,341.00
Change Gradation					210.00
					Subtotal \$96,109.89

All Equipment is moved in from Toll Pit

Move In & Set-up Crusher & Screen					\$3,740.00
Move In and set up Drill and Compressor	1	@	\$189.71	=	\$189.71
Move in Roller and Compactor	1	@	\$189.71	=	\$189.71
Move in Grader	1	@	\$96.48	=	\$96.48
Move in D-8	1	@	\$320.52	=	\$320.52
Move in Loader	1	@	\$300.94	=	\$300.94
Move in Excavator	1	@	\$347.88	=	\$347.88
Move in Trucks	5	@	\$52.92	=	\$264.60
Move in Water Truck	1	@	\$62.20	=	\$62.20
Move in Fire Truck	1	@	\$52.92	=	\$52.92
					Subtotal \$5,564.96

Base Cost=	<u>\$6.82</u>	Per Cu.Yd.	TOTAL PRODUCTION COSTS	\$101,674.85
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Road Segment	Haul Cost /cu.yd.	Proc Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds	ROCK COST
A to B Road 0+00 - 56+30 2 1/2"-0"	3.65	1.30	6.82	11.77	2,500	29,425.00
A to B Road Leveling 2+00 - 50+55 2 1/2"-0"	3.76	1.30	6.82	11.88	280	3,326.40
A to B Road 56+30 - 140+10 4"-0"	4.31	1.30	6.82	12.43	5,525	68,675.75
A to B Road 56+30 - 85+45 2 1/2"-0"	3.99	1.30	6.82	12.11	584	7,072.24
A to B Slope Stabilization Riprap 48"-36"	5.45	1.40	6.82	13.67	120	1,640.40
A to B Energy Dissapator Riprap 48"-24"	5.24	1.40	6.82	13.46	30	403.80
A to B Energy Dissapator Riprap 48"-24"	5.88	1.40	6.82	14.10	20	282.00
A to B Energy Dissapator Riprap 48"-24"	5.89	1.40	6.82	14.11	30	423.30
C to D 2 1/2"-0"	4.08	1.30	6.82	12.20	557	6,795.40
C to D Road Leveling 21/2"-0"	4.10	1.30	6.82	12.22	20	244.40
E to F Road 4"-0"	4.81	1.30	6.82	12.93	1,638	21,179.34
G to H Road 4"-0"	5.10	1.30	6.82	13.22	2,260	29,877.20
				Total C.Y.	13,564	Sub Total 169,345.23

TOTAL ROCKING COSTS	169,345.23
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ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Toll	Location:	N1/2 NE1/4 Sec.16 , T2S, R7W, W.M.
Sale:	Toll	Road:	7,610 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage:	1.16	Total Truck Loads:	7,610 c.y.
Drill Pct.:	100%	In Place Total:	5,436 c.y.

Pit Development & Cleanup include the following: Clearing and grubbing of pit & Waste area, access road construction, end-hauling of overburden and other waste, Placing and compacting overburden and waste in waste area, and grass seeding and mulch waste area.				\$4,076.35
Drill & Shoot:	\$2.10 /cu.yd.	x	5,436 cu.yds.	= \$11,415.60
Push Rock:	\$0.60 /cu.yd.	x	7,610 cu.yds.	= \$4,566.00
Load Screen and Crusher:	\$0.60 /cu.yd.	x	7,610 cu.yds.	= \$4,566.00
Screen Rock Prior to Crushing:	\$0.75 /cu.yd.	x	7,610 cu.yds.	= \$5,707.50
Crush 2"-0" Rock:	\$2.30 /cu.yd.	x	7,079 cu.yds.	= \$16,281.70
Load Dump Truck - Rock:	\$0.60 /cu.yd.	x	7,079 cu.yds.	= \$4,247.40
Load Dump Truck - Screened Reject:	\$0.60 /cu.yd.	x	531 cu.yds.	= \$318.60
End-haul Screened Reject to Waste Area:	\$1.24 /cu.yd.	x	531 cu.yds.	= \$658.44
Oversize Reduction:	\$4.50 /cu.yd.	x	152 cu.yds.	= \$684.00
Subtotal				\$52,521.59

Move In & Set-up Crusher & Screen				\$4,400.00
Move In and set up Drill and Compressor	1	@	\$277.19	= \$277.19
Move in Roller and Compactor	1	@	\$277.19	= \$277.19
Move in Grader	1	@	\$154.27	= \$154.27
Move in D-8	1	@	\$452.20	= \$452.20
Move in Loader	1	@	\$411.14	= \$411.14
Move in Excavator	1	@	\$474.95	= \$474.95
Move in Trucks	5	@	\$83.89	= \$419.45
Move in Water Truck	1	@	\$98.60	= \$98.60
Move in Fire Truck	1	@	\$83.89	= \$83.89
Subtotal				\$7,048.88

Base Cost=	\$7.83	Per Cu.Yd.	TOTAL PRODUCTION COSTS \$59,570.47
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Road Segment	Haul Cost /cu.yd.	Proc Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds	ROCK COST
I to J Road 2"-0"	1.76	1.30	7.83	10.89	2,545	27,715.05
K to L Road 2"-0"	2.13	1.30	7.83	11.26	3,069	34,556.94
M to N Road 2"-0"	1.34	1.30	7.83	10.47	1,465	15,338.55
					Total C.Y. 7,079	Sub Total 77,610.54

TOTAL ROCKING COSTS	77,610.54
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ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Sale:	Toll		
Pit:	Pacific Coast Rock	Location:	Garibladi off Ekroth Rd. @ PCR Plant
Rock:	3" - 1" Drain Rock	Drain	75 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage	1.16	Total Truck Loads:	75 c.y.
Drill Pct.:	100%	In Place Total:	c.y.

3"-1" Drain Rock -
 Loaded in Dump Truck 75 cu.yds. x \$7.50 /cu.yd. = \$562.50
Subtotal \$562.50

Base Cost= \$7.50 Per Cu.Yd. TOTAL PRODUCTION COSTS \$562.50

Road Segment	Haul Cost /cu.yd.	Proc Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds	ROCK COST
A to B 47+25 to 51+00	9.53	0.90	7.50	17.93	75	1,344.75
				Total C.Y.	75	Sub Total 1,344.75

TOTAL ROCKING COSTS 1,344.75

Move-In Calculations

Sale: **Toll**
I to J, K to L, and M to N

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
26.2	Highway	40
4.8	Main Lines	12
5.0	Steep Grades	5

No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Within Area Move (\$/mile)	Begin Mileage	End Mileage	Total Miles	Within Area Cost	Total Cost
0	Drill & Compressor	\$0.00		\$46.00	0.00	0.00	0	\$0.00	\$0.00
0	Brush Cutter	\$0.00		\$4.00	0.00	0.00	0	\$0.00	\$0.00
1	Graders	\$154.27		\$3.65	0.00	2.50	2.5	\$9.13	\$163.40
0	Loader (Small)	\$0.00	1	\$3.55	0.00	0.00	0	\$0.00	\$0.00
0	Loader (Med. & Large)	\$0.00	1	\$9.00	0.00	0.00	0	\$0.00	\$0.00
0	Rollers & Compactors	\$0.00		\$5.00	0.00	0.00	0	\$0.00	\$0.00
0	Excavators (Small)	\$0.00		\$22.00	0.00	0.00	0	\$0.00	\$0.00
0	Excavators (Med.)	\$0.00		\$35.50	0.00	0.00	0	\$0.00	\$0.00
0	Excavators (Large)	\$0.00	1	\$44.80	0.00	0.00	0	\$0.00	\$0.00
1	Tired Backhoes/Skidders	\$277.19		\$3.00	0.00	6.30	6.3	\$18.90	\$296.09
0	Tractors (D6)	\$0.00	2	\$7.10	0.00	0.00	0	\$0.00	\$0.00
1	Tractors (D7)	\$426.21	2	\$11.30	0.00	6.30	6.3	\$71.19	\$497.40
0	Tractor (D8)	\$0.00	2	\$15.10	0.00	0.00	0	\$0.00	\$0.00
3	Dump Truck (10 cy +)	\$251.66		\$2.85	0.00	2.50	2.5	\$21.38	\$273.04
0	Dump Truck (Off Hiway)	\$0.00	1	\$4.75	0.00	0.00	0	\$0.00	\$0.00
0	Water Truck (1500 Gal)	\$0.00		\$2.85	0.00	0.00	0	\$0.00	\$0.00
0	Water Truck (2500 Gal)	\$0.00		\$2.85	0.00	0.00	0	\$0.00	\$0.00
1	Fire Truck	\$83.89		\$2.85	0.00	3.00	3	\$8.55	\$92.44
0	Jaw	\$1,066.00							
0	2-Stage Crusher	\$1,597.00							
0	3-Stage Crusher	\$2,489.00							

TOTAL MOVE-IN COSTS:	\$1,322.37
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Move-In Calculations

Sale: **Toll**

A to B, C to D, E to F, and G to H

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
27.4	Highway	40
5.3	Main Lines	12
0.0	Steep Grades	5

No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Within Area Move (\$/mile)	Begin Mileage	End Mileage	Total Miles	Within	
								Area Cost	Total Cost
1	Drill & Compressor	\$221.64		\$46.00	0.00	3.60	3.6	\$165.60	\$387.24
0	Brush Cutter	\$0.00		\$4.00	0.00	0.00	0	\$0.00	\$0.00
0	Graders	\$0.00		\$3.65	0.00	0.00	0	\$0.00	\$0.00
0	Loader (Small)	\$0.00	1	\$3.55	0.00	0.00	0	\$0.00	\$0.00
0	Loader (Med. & Large)	\$0.00	1	\$9.00	0.00	0.00	0	\$0.00	\$0.00
0	Rollers & Compactors	\$0.00		\$5.00	0.00	0.00	0	\$0.00	\$0.00
0	Excavators (Small)	\$0.00		\$22.00	0.00	0.00	0	\$0.00	\$0.00
0	Excavators (Med.)	\$0.00		\$35.50	0.00	0.00	0	\$0.00	\$0.00
1	Excavators (Large)	\$331.78	1	\$44.80	0.00	2.90	2.9	\$129.92	\$461.70
0	Tired Backhoes/Skidlers	\$0.00		\$3.00	0.00	0.00	0	\$0.00	\$0.00
0	Tractors (D6)	\$0.00	2	\$7.10	0.00	0.00	0	\$0.00	\$0.00
1	Tractors (D7)	\$312.55	2	\$11.30	0.00	3.80	3.8	\$42.94	\$355.49
1	Tractor (D8)	\$326.80	2	\$15.10	0.00	2.90	2.9	\$43.79	\$370.59
5	Dump Truck (10 cy +)	\$321.10		\$2.85	0.00	3.50	3.5	\$49.88	\$370.98
0	Dump Truck (Off Hiway)	\$0.00	1	\$4.75	0.00	0.00	0	\$0.00	\$0.00
0	Water Truck (1500 Gal)	\$0.00		\$2.85	0.00	0.00	0	\$0.00	\$0.00
0	Water Truck (2500 Gal)	\$0.00		\$2.85	0.00	0.00	0	\$0.00	\$0.00
1	Fire Truck	\$64.22		\$2.85	0.00	1.50	1.5	\$4.28	\$68.50
0	Jaw	\$1,066.00							
0	2-Stage Crusher	\$1,597.00							
0	3-Stage Crusher	\$2,489.00							

TOTAL MOVE-IN COSTS:	\$2,014.50
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SUMMARY OF VACATING COST

Sale:	<u>Toll (potholes vacating)</u>				Road:	<u>O to P</u>			
Construction -	0+00		stations		Vacate -	80+95		stations	
	0.00		miles			1.53		miles	
EXCAVATION -									
Establish stream channel -				4.00	hours @	\$140.00	per hour	\$560.00	
Remove stream crossings/fills -				15.00	hours @	\$140.00	per hour	\$2,100.00	
Remove cross drains -				7.00	@	\$105.00	each	\$735.00	
								TOTAL EXCAVATION	\$2,835.00
ROCK									
Block Road	0+00	70	cy. of	Riprap	@	\$17.55 per c.y.=		\$1,228.50	
Block Road	5+50	10	cy. of	Riprap	@	\$17.55 per c.y.=		\$175.50	
Block Road	80+95	50	cy. of	Riprap	@	\$17.55 per c.y.=		\$877.50	TOTAL ROCK
									\$2,281.50
SPECIAL PROJECTS									
Rip Road Surface to a 1 foot depth					See Attached Spreadsheet			\$1,418.25	
Stream enhancement -				2.00	hours @	\$168.00	per hour	\$336.00	
Construct waterbars -				28	@	\$25.00	each	\$700.00	
Construct tank traps @ stations: 1+95, 40+30, and 80+95 -				3	@	\$75.00	each	\$225.00	
Establish ditchline between stations 60+90 and 63+15 -				67	c.y.	\$1.15	per c.y.	\$77.05	
Remove culverts from state lands -				12	@	\$675.00	total	\$675.00	
Haul culverts to Tillamook District Office -				8	@	\$570.00	total	\$570.00	
Scatter brush and trees -				2.5	hours @	\$140.00	per hour	\$350.00	
Grass seed and fertilize -				1.86	acres @	\$220.00	per acre	\$409.20	
Mulching -				1.86	acres @	\$600.00	per acre	\$1,116.00	
								TOTAL SPECIAL PROJECTS	\$30,198.45
GRAND TOTAL								\$35,314.95	

SUMMARY OF VACATING COST

Sale:	<u>Toll (potholes vacating)</u>					Road:	<u>Q to R</u>
Construction -	<u>0+00</u> stations <u>0.00</u> miles					Vacate -	<u>18+95</u> stations <u>0.36</u> miles
EXCAVATION -							
Remove cross drains -		3.00	@	\$105.00	each		<u>\$315.00</u>
							TOTAL EXCAVATION
							\$189.50
ROCK							
Block Road	0+00	20	cy. of	Riprap	@	\$17.69 per c.y.=	<u>\$353.80</u>
							TOTAL ROCK
							\$353.80
SPECIAL PROJECTS							
Rip Road Surface to a 1 foot depth				See Attached Spreadsheet			\$336.27
Construct waterbars -		7.00	@	\$25.00	each		\$175.00
Construct tank traps @ stations: 0+00 and 18+95 -		2.00	@	\$75.00	each		\$150.00
Haul culverts to Tillamook District Office -		3.00	@	\$365.40	total		\$365.40
Scatter brush and trees -		1.0	hours @	\$140.00	per hour		\$140.00
Grass seed and fertilize -		0.44	acres @	\$220.00	per acre		\$96.80
Mulching -		0.44	acres @	\$600.00	per acre		\$264.00
							TOTAL SPECIAL PROJECTS
							\$7,028.74
						GRAND TOTAL	\$7,572.04

SUMMARY OF VACATING COST

Sale:	<u>Toll (potholes vacating)</u>		Road:	<u>S to T</u>
Construction -	<u>0+00</u> stations <u>0.00</u> miles		Vacate -	<u>15+30</u> stations <u>0.29</u> miles
EXCAVATION -				
Remove stream crossings/fills -		2.00	hours @	\$140.00
Remove cross drains -		1.00	@	\$105.00
			per hour	\$280.00
			each	\$105.00
				<u>TOTAL EXCAVATION</u>
				\$385.00
ROCK				
Block Road	0+00	20	cy. of	Riprap
			@	\$17.87 per c.y.=
				<u>\$357.40</u>
				<u>TOTAL ROCK</u>
				\$357.40
SPECIAL PROJECTS				
Rip Road Surface to a 1 foot depth			See Attached Spreadsheet	\$272.52
Construct waterbars -		6.00	@	\$25.00
Construct tank traps @ station: 0+10-		1.00	@	\$75.00
Haul culverts to Tillamook District Office -		1	@	\$282.90
Grass seed and fertilize -		0.35	acres @	\$220.00
Mulching -		0.35	acres @	\$600.00
				per acre
				per acre
				total
				total
				<u>TOTAL SPECIAL PROJECTS</u>
				\$5,262.56
				GRAND TOTAL
				\$6,004.96

SUMMARY OF VACATING COST

Sale:	<u>Toll (potholes vacating)</u>		Road:	<u>Point U</u>								
Construction -	<table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: right;">0+00</td> <td style="text-align: right;">stations</td> </tr> <tr> <td style="border-top: 1px solid black; text-align: right;">0.00</td> <td style="border-top: 1px solid black; text-align: right;">miles</td> </tr> </table>	0+00	stations	0.00	miles		Vacate -	<table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: right;">0+00</td> <td style="text-align: right;">stations</td> </tr> <tr> <td style="border-top: 1px solid black; text-align: right;">0.00</td> <td style="border-top: 1px solid black; text-align: right;">miles</td> </tr> </table>	0+00	stations	0.00	miles
0+00	stations											
0.00	miles											
0+00	stations											
0.00	miles											
ROCK												
Block Road	0+00	20 cy. of Riprap	@	\$18.16 per c.y. =								
				<table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: right;">\$363.20</td> </tr> <tr> <td style="border-top: 1px solid black; text-align: right;">TOTAL ROCK</td> </tr> </table>	\$363.20	TOTAL ROCK	\$363.20					
\$363.20												
TOTAL ROCK												
				GRAND TOTAL	\$363.20							

SUMMARY OF CONSTRUCTION COST

Sale:	<u>Toll (Stream Enhancement)</u>		Road: <u>Point V</u>									
Construction -	<table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: right;">0+00</td> <td style="text-align: left;">stations</td> </tr> <tr> <td style="text-align: right;"><u>0.00</u></td> <td style="text-align: left;">miles</td> </tr> </table>	0+00	stations	<u>0.00</u>	miles		Improvement -	<table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: right;">0+00</td> <td style="text-align: left;">stations</td> </tr> <tr> <td style="text-align: right;"><u>0.00</u></td> <td style="text-align: left;">miles</td> </tr> </table>	0+00	stations	<u>0.00</u>	miles
0+00	stations											
<u>0.00</u>	miles											
0+00	stations											
<u>0.00</u>	miles											
CUTTING -												
Cut Trees	2.00 hours @	\$30.00 per hour =	<u>\$60.00</u>									
			TOTAL CUTTING	\$60.00								
SPECIAL PROJECTS												
Log Placement and Tipping	3.00 hours @	\$140.00 per hour	\$420.00									
Rip Access Roads		See Attached Sheet	\$18.17									
Grass seed -	0.50 acres @	\$220.00 per acre	\$110.00									
Mulching -	0.500 acres @	\$600.00 per acre	\$300.00									
			TOTAL SPECIAL PROJECTS	\$848.17								
			GRAND TOTAL	\$908.17								

SUMMARY OF CONSTRUCTION COST

Sale:	<u>Toll (Stream Enhancement)</u>	Road:	<u>Point W</u>
Construction -	$\frac{0+00 \text{ stations}}{0.00 \text{ miles}}$	Improvement -	$\frac{0+00 \text{ stations}}{0.00 \text{ miles}}$
CUTTING			
Cut Trees		2.00 hours @ \$30.00 per hour =	\$60.00
		TOTAL CUTTING	\$60.00
SPECIAL PROJECTS			
Log Placement and Tipping		3.00 hours @ \$140.00 per hour	\$420.00
Rip Access Roads		See Attached Sheet	\$18.17
Grass seed -		0.50 acres @ \$220.00 per acre	\$110.00
Mulching -		0.500 acres @ \$600.00 per acre	\$300.00
		TOTAL SPECIAL PROJECTS	\$848.17
		GRAND TOTAL	\$908.17

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Rip Rap	Location:	Sec. , TN, RW, W.M.
Sale:	Toll (potholes vacating)	Road:	190 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage	1.16	Total Truck Loads:	190 c.y.
Drill Pct.:	0%	In Place Total:	136 c.y.

Move in Excavator	1	@	\$778.71	=	\$778.71
Move in Trucks	3	@	\$258.54	=	\$775.62
				Subtotal	\$1,554.33

Base Cost=	\$8.18	Per Cu.Yd.			
			TOTAL PRODUCTION COSTS		\$1,554.33

Road Segment	Haul Cost /cu.yd.	Placement Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds	ROCK COST
O to P Block Road	7.97	1.40	8.18	17.55	70	1,228.50
O to P Block Road	7.97	1.40	8.18	17.55	10	175.50
O to P Block Road	7.97	1.40	8.18	17.55	50	877.50
Q to R Block Road	8.11	1.40	8.18	17.69	20	353.80
S to T Block Road	8.29	1.40	8.18	17.87	20	357.40
Point U Block Road	7.98	2.00	8.18	18.16	20	363.20
				Total C.Y.	190	Sub Total 3,355.90

TOTAL ROCKING COSTS	3,355.90
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Move-In Calculations

Sale: **Toll (potholes vacating) and (stream enhancement)**

O to P, Q to R, S to T, U, V, and W

LOWBOY HAUL (Round Trip)		
DIST.	ROADWAY	AVE SPEED
26.0	Highway	35
5.0	Main Lines	10
5.0	Steep	5

No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Within Area Move (\$/mile)	Begin Mileage	End Mileage	Total Miles	Within Area Cost	Total Cost
1	Excavators (Large)	\$522.76	1	\$44.80	0.00	0.00	2	\$89.60	\$612.36
1	Tractor (D8)	\$498.57	2	\$15.10	0.00	0.00	2	\$30.20	\$528.77
1	Crummy	\$99.34		\$2.85	0.00	0.00	0	\$0.00	\$99.34
1	Dump Truck	\$99.34		\$2.85	0.00	0.00	0	\$0.00	\$99.34
1	Water Truck (1500 Gal)	\$99.34		\$2.85	0.00	0.00	0	\$0.00	\$99.34

	TOTAL MOVE-IN COSTS:	\$1,439.15
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**OREGON DEPARTMENT OF FORESTRY
CRUISE REPORT**

Toll

"STEWARDSHIP IN FORESTRY"

1. **Type of Sale:** Regeneration harvest – Recovery
2. **Legal Description:** Portions of Sections 10, 14, 15, 16, 21, 22, and 23, T2S, R7W, W.M., Tillamook County, Oregon.
3. **Sale Acreage:** The sale boundary was plotted on a digital orthophotograph and the acreage was calculated with GIS.

Area	Harvest Type	Sale	Net
1	Retention Cut	345	289
2	Modified Clearcut	130	105
3	Modified Clearcut	113	90
4	Modified Clearcut	116	96
5	Modified Clearcut	124	111
6	Modified Clearcut	142	119
Total		970	810

Sale Acres

Area within the Timber Sale Boundary signs

Net acres for calculating the advertised volume

Sale acres, less green tree retention, less roads, and less riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

4. **Cruising Procedures:**
 - A. **Cruise Method:** Cruise lines were established with a bearing of 45 degrees running NW/NE and SW/SE, 750 feet apart. Plots were taken every 300 feet along grid lines with the target of one plot per six acres across the sale area. A total of 141 plots were taken. On every plot, tree count by species and diameter was recorded, and alder was graded. On every other plot, all trees were measured and graded, and Douglas-fir form was measured. Diameters were recorded to the nearest 1", heights to the nearest foot. Diameters were taken at 4.5' above the ground on the uphill side. Conifers with diameters of 8" or larger and hardwoods with diameters of 9" or larger were recorded. The cruise had a coefficient of variation of 43.4 and a SE% of 3.7 for the net board feet/acre.

- B. **Plot size:** All plots were variable radius full point plots. A BAF of 20 was used for conifers in all areas. A BAF of 10 was used for hardwoods. The point of tree observation was 4.5 feet.
- C. **Grading System:** Tree heights were measured to a 6" merchantable top for conifers and 8" for hardwoods. Douglas-fir was graded using Columbia River rules favoring a 40' log. Alder was graded to the top end diameter for determining sort while still favoring a 40' log. 2S equals 12" and greater, 3S equals 10" and 11", and 4S equals 8" and 9".
- D. **Defect and Breakage:** A 5% defect and breakage reduction was applied to conifers and a 10% reduction to hardwood volumes.
- E. **Cruiser Names / Dates:** Ed Wallmark, Jim Neuman, Jasen McCoy. February, 2005.
5. **Computation Procedures:** Plot data was entered into SuperAce for computation of stand tables. Take and leave trees were determined and SuperAce was rerun to compute basal area, V-BAR, stand tables and diameters. This data was entered into a volume summary worksheet to compute sale volumes.
6. **Timber Description:** The sale contains 45 year old Douglas-fir with symptoms of Swiss Needle Cast and scattered patches of red alder concentrated mainly in riparian areas.
7. **Revenue Distribution:**
100% FDF
Tax Code: 9-1
Deed No. 169, 209
96% Rehabilitation Obligated
8. **Appendices:**
- Volume Summary
- Logging Plan



"STEWARDSHIP IN FORESTRY"

Toll

Volume Summary

Area I Retention Cut							
289 acres							
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	14	68	108	7.3	2110	5%	2005
Alder	13	13	56	0.7	202	10%	182
TOTAL					2312		2187

Area II Modified Clearcut							
105 acres							
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	16	89	104	9.3	977	5%	928
Alder	14	14	50	0.7	74	10%	67
TOTAL					1051		995

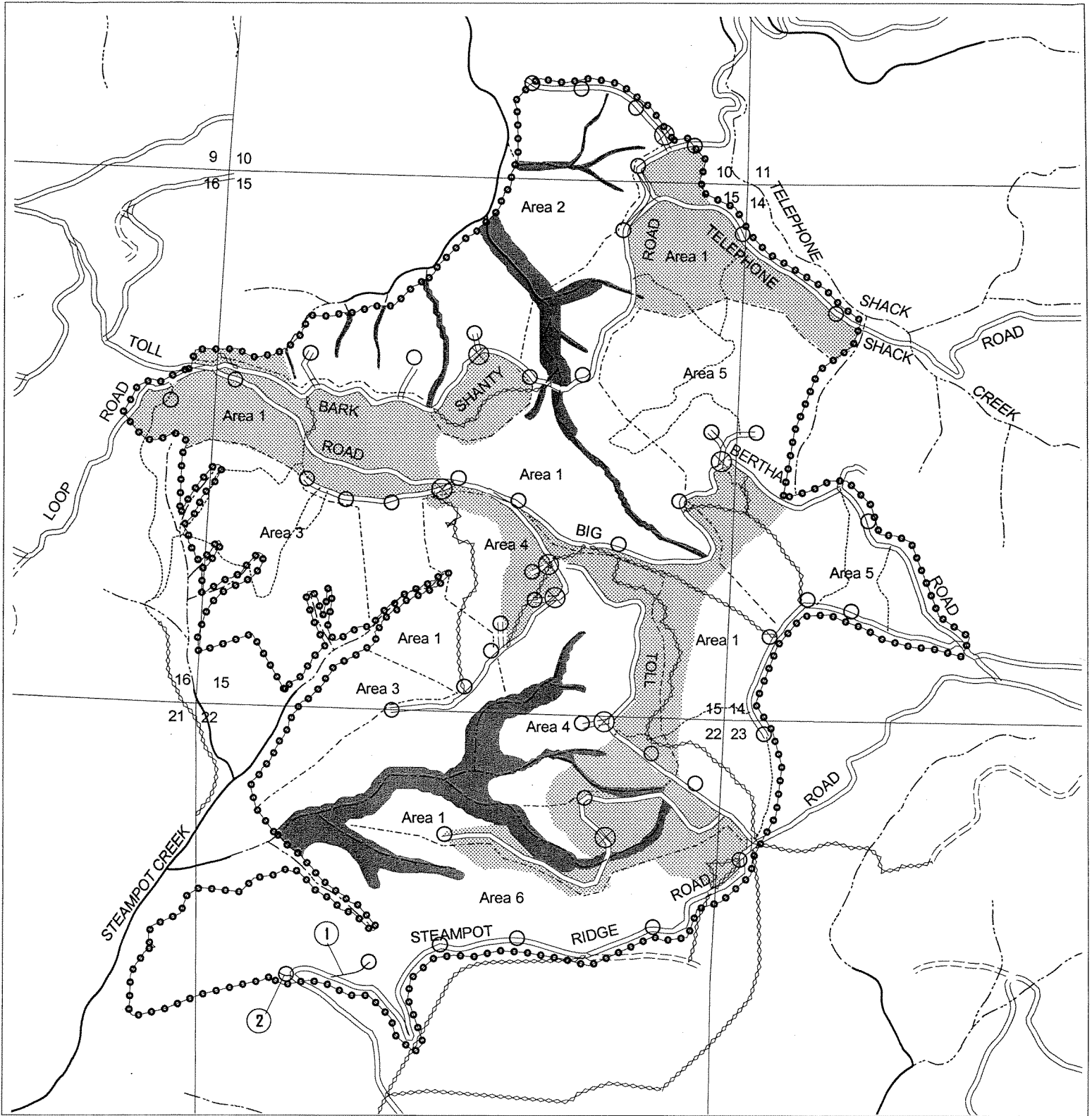
Area III Modified Clearcut							
90 acres							
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	15	125	117	14.6	1314	5%	1248
Alder	14	3	26	0.1	9	10%	8
TOTAL					1323		1256

Area IV Modified Clearcut							
96 acres							
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	15	101	110	11.1	1066	5%	1013
Alder	18	3	22	0.1	10	10%	9
TOTAL					1076		1022

Area V Modified Clearcut							
111 acres							
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	13	99	107	10.6	1177	5%	1118
Alder	13	10	32	0.3	33	10%	30
TOTAL					1210		1148

Area VI Modified Clearcut							
119 acres							
SPECIES	QMD	Basal Area Per Acre	V-BAR	Vol/Acre MBF	Volume MBF	D & B	Net Vol MBF
Douglas-fir	17	92	113	10.4	1238	5%	1176
Alder	15	7	30	0.2	24	10%	22
TOTAL					1262		1198

TOTAL SALE VOLUME			
SPECIES	MBF	D&B	Net Vol. (MBF)
Douglas-fir	7882	5%	7488
Alder	352	10%	318
TOTAL	8234		7806



- Landing
- ▲ Domestic water supply
- ⊗ Blocked
- Cable yarding
- ▨ Ground yarding
- ▩ Helicopter yarding
- ▧ Downhill yarding
- Buffer
- ▨ Non-required thinning
- - - Area boundary
- Sale boundary
- - - Ownership boundary
- Perennial Type-F stream
- - - Perennial Type-N stream
- Surfaced road
- - - Unsurfaced road
- State highway
- County road
- ② Non-project road
- - - Swing road
- - - Abandoned road
- OHV trail
- - - Non-motorized trail
- T T Transmission line

LOGGING PLAN
 Timber Sale Contract No. 341-06-23
 Toll
 Portions of Sections 10, 14, 15, 16, 21,
 22, and 23, T2S, R7W, W. M.
 Tillamook County, Oregon



Area	Type of Operation	Acres Sale	Acres Net
1	Retention Cut	345	289
2	Modified Clearcut	130	105
3	Modified Clearcut	113	90
4	Modified Clearcut	116	96
5	Modified Clearcut	124	111
6	Modified Clearcut	142	119
Total		970	810

Tillamook District GIS
 03-23-2005
 This product is for informational use and
 may not have been prepared for, or suitable
 for legal, engineering, or surveying purposes.

