



"STEWARDSHIP IN FORESTRY"

Timber Sale Appraisal
Muesial Chairs
Sale TL-341-2023-W00970-01

District: Tillamook

Date: May 04, 2023

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	\$1,603,280.20	\$184,839.68	\$1,788,119.88
		Project Work:	(\$342,840.00)
		Advertised Value:	\$1,445,279.88



Timber Sale Appraisal
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Sale TL-341-2023-W00970-01

District: Tillamook

Date: May 04, 2023

Timber Description

Location: T1N R8W, Sections 25, 26, 35, 36

Stand Stocking: 60%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	18	0	98
Western Hemlock / Fir	17	0	98
Sitka Spruce	14	0	98
Alder (Red)	16	0	95

Volume by Grade	2S	3S & 4S 6" - 11"	8" - 9"	10" - 11"	12"+	6" - 7"	Total
Douglas - Fir	3,015	2,194	0	0	0	0	5,209
Western Hemlock / Fir	142	106	0	0	0	0	248
Sitka Spruce	0	25	0	0	0	0	25
Alder (Red)	0	0	342	479	259	568	1,648
Total	3,157	2,325	342	479	259	568	7,130



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Logging Costs

Operating Seasons: 2.00	Profit Risk: 10%
Project Costs: \$342,840.00	Other Costs (P/R): \$14,260.00
Slash Disposal: \$0.00	Other Costs: \$27,260.00

Miles of Road

Road Maintenance: \$6.46

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	3.0	4.3
Western Hemlock / Fir	\$0.00	4.0	4.6
Sitka Spruce	\$0.00	3.0	3.2
Alder (Red)	\$0.00	5.0	4.0
Other	\$0.00	0.0	0.0



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Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
\$306.05	\$6.59	\$4.88	\$98.84	\$2.00	\$41.84	\$0.00	\$2.00	\$3.82	\$466.02
Western Hemlock / Fir									
\$303.04	\$6.59	\$4.88	\$69.29	\$2.00	\$38.58	\$0.00	\$2.00	\$3.82	\$430.20
Sitka Spruce									
\$304.40	\$6.59	\$4.88	\$132.81	\$2.00	\$45.07	\$0.00	\$2.00	\$3.82	\$501.57
Alder (Red)									
\$313.11	\$6.78	\$4.88	\$65.62	\$2.00	\$39.24	\$0.00	\$2.00	\$3.82	\$437.45

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	\$0.00	\$766.99	\$300.97	\$0.00
Western Hemlock / Fir	\$0.00	\$570.59	\$140.39	\$0.00
Sitka Spruce	\$0.00	\$530.00	\$28.43	\$0.00
Alder (Red)	\$0.00	\$549.61	\$112.16	\$0.00



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Summary

Amortized

Specie	MBF	Value	Total
Douglas - Fir	0	\$0.00	\$0.00
Western Hemlock / Fir	0	\$0.00	\$0.00
Sitka Spruce	0	\$0.00	\$0.00
Alder (Red)	0	\$0.00	\$0.00

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	5,209	\$300.97	\$1,567,752.73
Western Hemlock / Fir	248	\$140.39	\$34,816.72
Sitka Spruce	25	\$28.43	\$710.75
Alder (Red)	1,648	\$112.16	\$184,839.68

Gross Timber Sale Value

Recovery: \$1,788,119.88

Prepared By: Jonah Horn

Phone: 503-842-2545



PROJECT SUMMARY SHEET

Sale: Muesial Chairs

CONSTRUCTION

Point	G to H	15+35	stations =	\$64,230.38
Point	I to J	5+10	stations =	\$8,689.83
Point	K to L	6+20	stations =	\$11,063.16
Point	S to T	3+90	stations =	\$8,206.82
Point	U to V	17+75	stations =	\$45,758.05
Point	W to X	6+50	stations =	\$27,293.20
Point	AA to BB	7+00	stations =	\$11,771.90
Point	EE to FF	0+85	stations =	\$2,945.93
SUBTOTAL CONSTRUCTION				\$179,959.27

IMPROVEMENT

Point	A to B	205+10	stations =	\$25,813.15
Point	C to D	85+15	stations =	\$10,030.47
Point	M to N	217+40	stations =	\$21,902.77
Point	O to P	202+00	stations =	\$23,213.49
Point	Q to R	29+65	stations =	\$23,413.81
Point	CC to DD	19+05	stations =	\$7,036.14
Point	GG to HH	113+25	stations =	\$3,335.85
Point	II to JJ	10+40	stations =	\$6,307.22
Point	Point KK	0+01	stations =	\$1,457.55
SUBTOTAL IMPROVEMENT				\$122,510.45

RECONSTRUCTION

Point	Y to Z	8+45	stations =	\$13,433.86
SUBTOTAL RECONSTRUCTION				\$13,433.86

SPECIAL PROJECTS

Brush	11.2	miles of road	\$13,048.00
Pit Development Work			\$10,450.00
SUBTOTAL SPECIAL PROJECTS			\$23,498.00

MOVE IN

\$3,438.42

GRAND TOTAL

\$342,840.00

SUMMARY OF CONSTRUCTION COST

Sale:	Muesial Chairs	Road:	A to B
Construction -	0+00 0.00	stations miles	Improvement -
	205+10 3.88	stations miles	Reconstruction -
	0+00 0.00	stations miles	

Culvert Stakes & Markers
7 markers \$63.00

TOTAL CULVERTS **\$63.00**

ROCK
Spot Rock As Directed 200 cy. of Crushed @ \$9.62 per c.y. = \$1,924.00
TOTAL ROCK **\$1,924.00**

SPECIAL PROJECTS

Grade and shape road -	205.10	stations @	\$24.40	per station	\$5,004.44
Clean Construct Ditches, culverts, and ditchouts W Endhaul -	119.65	stations @	\$145.00	per station	\$17,349.25
Roll subgrade w/ vibratory roller-0+00 to 75+90	75.90	stations @	\$19.40	per station	\$1,472.46
				TOTAL SPECIAL PROJECTS	\$23,826.15

GRAND TOTAL **\$25,813.15**

SUMMARY OF CONSTRUCTION COST

Sale: **Muesial Chairs**

Road: **C to D**

Construction -	0+00	stations	Improvement -	85+15	stations	Reconstruction -	0+00	stations
	0.00	miles		1.61	miles		0.00	miles

IMPROVEMENT: EXCAVATION -

Ravel & Erosion Control	220	cy. @	\$2.20	per c.y.=	\$484.00
TOTAL EXCAVATION					\$484.00

IMPROVEMENT: ENDHAUL -

Ravel & Erosion Control	220	cy. @	\$2.58	per c.y.=	\$567.60
Spread & compact	220	cy. @	\$0.55	per c.y.=	\$121.00
TOTAL ENDHAUL					\$688.60

ROCK

Spot Rock	As Directed	100	cy. of	Crushed	@	\$8.85	per c.y.=	\$885.00
Landing Rock	47+25, 63+55	140	cy. of	Pit-Run	@	\$11.16	per c.y.=	\$1,562.40
TOTAL ROCK								\$2,447.40

SPECIAL PROJECTS

Construct Landings -	2.00	@	\$410.00	each	\$820.00
Construct WA #3 Access Road -	0.05	hours @	\$220.00	per hour	\$11.00
Construct waste areas -	4.00	hours @	\$220.00	per hour	\$880.00
Remove woody debris from landing	4.00	hours @	\$220.00	per hour	\$880.00
Grade and shape road -	85.15	stations @	\$24.40	per station	\$2,077.66
Roll subgrade w/ vibratory roller prior to rocking -	85.15	stations @	\$19.40	per station	\$1,651.91
Grass seed -	0.29	acres @	\$310.00	per acre	\$89.90
TOTAL SPECIAL PROJECTS					\$6,410.47

GRAND TOTAL **\$10,030.47**

SUMMARY OF CONSTRUCTION COST

Sale:

Muesial Chairs

Road:

G to H

<u>Construction -</u>	<u>15+35</u>	stations	<u>Improvement -</u>	<u>0+00</u>	stations	<u>Reconstruction -</u>	<u>0+00</u>	stations
	0.29	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

<u>Station</u>	<u>to</u>	<u>Station</u>	<u>Avg. Sideslope</u>	<u>Avg. Dist. To W.A. (mi.)</u>	<u>Outslope/Ditch</u>	<u>Cost per Station</u>	=	<u>Endhaul</u>	
0+00		0+60	5%		Ditch	\$350	=	\$85.00	\$295.00
0+60		1+55	20%		Ditch	\$253	=	\$1,180.00	\$1,420.35
1+55		3+70	11%		Ditch	\$198	=	\$1,130.00	\$1,555.70
3+70		7+90	60%		Ditch	\$3,044	=	\$13,765.00	\$26,549.80
7+90		9+50	28%		Ditch	\$304	=		\$486.40
9+50		10+75	67%		Ditch	\$3,746	=	\$4,348.00	\$9,030.50
10+75		12+35	36%		Ditch	\$356	=	\$3,055.00	\$3,624.60
12+35		15+35	12%		Ditch	\$198	=	\$4,267.00	\$4,861.00
TOTAL									\$47,823.35

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>	30	LF of 18"	\$757.50
<u>Culvert Stakes & Markers</u>	1	markers	\$9.00

TOTAL CULVERTS \$766.50

ROCK

0+00 to	15+35	1,150	cy. of	Pit-Run	@	\$10.72 per c.y.=	\$12,328.00
Landing Rock	9+05	70	cy. of	Pit-Run	@	\$10.92 per c.y.=	\$764.40
Approach Widening	0+00	30	cy. of	Pit-Run	@	\$10.92 per c.y.=	\$327.60
Traction Rock	As Directed	30	cy. of	Crushed	@	\$8.85 per c.y.=	\$265.50
TOTAL ROCK							\$13,685.50

SPECIAL PROJECTS

Construct Landing -	1.00	@	\$410.00	each	\$410.00
Endhaul stumps from landing -	0.50	hours @	\$385.00	per hour	\$192.50
Grade and shape road -	15.35	stations @	\$24.40	per station	\$374.54
Roll subgrade	15.35	stations @	\$19.40	per station	\$297.79
Remove large stumps -	5.00	@	\$110.00	each	\$550.00
Grass seed -	0.42	acres @	\$310.00	per acre	\$130.20
TOTAL SPECIAL PROJECTS					\$1,955.03

GRAND TOTAL **\$64,230.38**

SUMMARY OF CONSTRUCTION COST

Sale: **Muesial Chairs**

Road: **I to J**

Construction -	5+10	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.10	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station	=	Drill & Shoot	Endhaul	
0+00		1+00	35%		Outslope	\$375	=			\$375.00
1+00		5+10	25%		Outslope	\$350	=			\$1,435.00
TOTAL										\$1,810.00

ROCK

0+00	to	5+10	390	cy. of	Pit-Run	@	\$11.14	per c.y.=	\$4,344.60	
0+80	to	1+70	20	cy. of	Crushed	@	\$8.85	per c.y.=	\$177.00	
Approach Widening		0+00	30	cy. of	Pit-Run	@	\$11.25	per c.y.=	\$337.50	
Landing Rock		5+10	70	cy. of	Pit-Run	@	\$11.14	per c.y.=	\$779.80	
TOTAL ROCK										\$5,638.90

SPECIAL PROJECTS

Endhaul stumps from landing -	0.25	hours @	\$385.00	per hour	\$96.25	
Construct Landing -	1.00	@	\$410.00	each	\$410.00	
Grade and shape road -	5.10	stations @	\$24.40	per station	\$124.44	
Roll subgrade	5.10	stations @	\$19.40	per station	\$98.94	
Remove large stumps -	4.00	@	\$110.00	each	\$440.00	
Grass seed -	0.23	acres @	\$310.00	per acre	\$71.30	
TOTAL SPECIAL PROJECTS						\$1,240.93

GRAND TOTAL **\$8,689.83**

SUMMARY OF CONSTRUCTION COST

Sale:

Muesial Chairs

Road:

K to L

Construction -	6+20	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.12	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station	=	Drill & Shoot	Endhaul	
0+00		2+25	25%		Ditch	\$350	=			\$787.50
2+25		4+00	45%		Ditch	\$509	=			\$890.75
4+00		6+20	35%		Ditch	\$356	=			\$783.20
									TOTAL	\$2,461.45

ROCK

0+00	to	1+75	180	cy. of	Pit-Run	@	\$11.19	per c.y.=	\$2,014.20	
1+75	to	6+20	380	cy. of	Pit-Run	@	\$11.19	per c.y.=	\$4,252.20	
Landing Rock		6+20	70	cy. of	Pit-Run	@	\$11.19	per c.y.=	\$783.30	
Approach Widening		0+00	30	cy. of	Pit-Run	@	\$11.19	per c.y.=	\$335.70	
									TOTAL ROCK	\$7,385.40

SPECIAL PROJECTS

Endhaul stumps from landing -	0.25	hours @	\$385.00	per hour	\$96.25	
Construct Landing -	1.00	@	\$410.00	each	\$410.00	
Construct Truck Turnaround - STA 5+00	0.50	hours @	\$220.00	per hour	\$110.00	
Grade and shape road -	6.20	stations @	\$24.40	per station	\$151.28	
Roll subgrade w/ vibratory roller prior to rocking -	6.20	stations @	\$19.40	per station	\$120.28	
Remove large stumps -	2.00	@	\$110.00	each	\$220.00	
Grass seed -	0.35	acres @	\$310.00	per acre	\$108.50	
					TOTAL SPECIAL PROJECTS	\$1,216.31

GRAND TOTAL **\$11,063.16**

SUMMARY OF CONSTRUCTION COST

Sale:

Muesial Chairs

Road:

M to N

<u>Construction -</u>	0+00	stations	<u>Improvement -</u>	217+40	stations	<u>Reconstruction -</u>	0+00	stations
	0.00	miles		4.12	miles		0.00	miles

IMPROVEMENT: CLEARING AND GRUBBING -

IMPROVEMENT: EXCAVATION -

Ravel & Erosion Control	50	cy. @	\$2.80	per c.y.=	\$140.00
TOTAL EXCAVATION					\$140.00

IMPROVEMENT: ENDHAUL -

Ravel & Erosion Control	50	cy. @	\$2.55	per c.y.=	\$127.50
Culvert Fill Waste Material	250	cy. @	\$2.88	per c.y.=	\$720.00
Spread & compact	300	cy. @	\$0.55	per c.y.=	\$165.00
TOTAL ENDHAUL					\$1,012.50

CULVERTS - MATERIALS & INSTALLATION

Culverts

40	LF of 18"	\$1,010.00		30	LF of 24"	\$1,147.50
30	LF of 30"	\$1,500.00		60	LF of 36"	\$5,421.44
		\$2,510.00				\$6,568.94

Culvert Stakes & Markers

22	markers	\$198.00
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TOTAL CULVERTS \$9,276.94

ROCK

Spot Rock	As Directed	100	cy. of	Crushed	@	\$7.88	per c.y.=	\$788.00
Culvert Bedding/ Surfacing	0+90 & 1+95	40	cy. of	Crushed	@	\$8.72	per c.y.=	\$348.80
Energy Dissipator	0+90 & 1+95	10	cy. of	Rip Rap	@	\$4.81	per c.y.=	\$48.10
Culvert Bedding/ Surfacing	104+10	40	cy. of	Crushed	@	\$9.20	per c.y.=	\$368.00
Energy Dissipator	104+10	20	cy. of	Rip Rap	@	\$4.78	per c.y.=	\$95.60
Culvert Bedding/ Surfacing	157+15	40	cy. of	Crushed	@	\$9.68	per c.y.=	\$387.20
Replacement Fill	157+15	100	cy. of	Pit-Run	@	\$10.07	per c.y.=	\$1,007.00
Fill Repair	194+75	70	cy. of	Rip-Rap	@	\$9.18	per c.y.=	\$642.60
Fill Repair	194+75	10	cy. of	Pit-Run	@	\$10.75	per c.y.=	\$107.50
TOTAL ROCK								\$3,792.80

SPECIAL PROJECTS

Remove debris from culvert inlets -	8.00	hours @	\$220.00	per hour	\$1,760.00
Clean Ditches(Endhaul) -	5.00	stations @	\$145.00	per station	\$725.00
Grade and shape road -	104.10	stations @	\$24.40	per station	\$2,540.04
Roll subgrade w/ vibratory roller prior to rocking -	104.10	stations @	\$19.40	per station	\$2,019.54
Transporting Flumes	1.00	hours @	\$115.00	per hour	\$115.00
Remove culverts from state lands	3.00	@	\$368.20	total	\$368.20
Grass seed -	0.13	acres @	\$310.00	per acre	\$40.30
Mulching -	0.130	acres @	\$865.00	per acre	\$112.45
TOTAL SPECIAL PROJECTS					\$7,680.53

GRAND TOTAL \$21,902.77

SUMMARY OF CONSTRUCTION COST

Sale:		Muesial Chairs			Road:		O to P		
Construction -	0+00 0.00	stations miles	<u>Improvement -</u>	202+00 3.83	stations miles	<u>Reconstruction -</u>	0+00 0.00	stations miles	

IMPROVEMENT: EXCAVATION - Ravel & Erosion Control	62	cy. @	\$2.20	per c.y.=	\$136.40	
					TOTAL EXCAVATION	\$136.40

IMPROVEMENT: ENDHAUL - Ravel & Erosion Control	62	cy. @	\$2.49	per c.y.=	\$154.38	
Spread & compact	62	cy. @	\$0.55	per c.y.=	\$34.10	
					TOTAL ENDHAUL	\$188.48

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>	70	LF of 18"	\$1,767.50			
<u>Culvert Stakes & Markers</u>						
	12	markers	\$108.00			
					TOTAL CULVERTS	\$1,875.50

ROCK						
Spot Rock	As Directed	200	cy. of	Crushed	@	\$10.89 per c.y.= \$2,178.00
Turnout Rock	9+30	10	cy. of	Crushed	@	\$11.08 per c.y.= \$110.80
Culvert Bedding/ Surfacing	59+85	20	cy. of	Crushed	@	\$11.80 per c.y.= \$236.00
Culvert Bedding/ Surfacing	79+60	30	cy. of	Crushed	@	\$13.48 per c.y.= \$404.40
Landing Rock	24+95	60	cy. of	Pit-Run	@	\$10.30 per c.y.= \$618.00
Landing Rock	70+60	70	cy. of	Pit-Run	@	\$10.42 per c.y.= \$729.40
Landing Rock	99+05	70	cy. of	Pit-Run	@	\$11.02 per c.y.= \$771.40
Rock Ditch Filter	As Directed	10	cy. of	Drain Rock	@	\$10.55 per c.y.= \$105.50
Stream Crossing Lift	As Directed	100	cy. of	Crushed	@	\$12.40 per c.y.= \$1,240.00
Energy Dissipator	5yds each	10	cy. of	Rip Rap	@	\$6.54 per c.y.= \$65.40
Truck Turnaround	66+45	70	cy. of	Pit-Run	@	\$11.02 per c.y.= \$771.40
						TOTAL ROCK
						\$7,230.30

SPECIAL PROJECTS

Remove debris from culvert inlets -	12.00	hours @	\$220.00	per hour	\$2,640.00	
Construct waste areas -	1.00	hours @	\$220.00	per hour	\$220.00	
Construct Landings -	3.00	@	\$410.00	each	\$1,230.00	
Pull ditch & endhaul waste material	16.00	stations @	\$130.00	per station	\$2,080.00	
Grade and shape road -	202.00	stations @	\$24.40	per station	\$4,928.80	
Roll subgrade w/ vibratory roller prior to rocking -	106.65	stations @	\$19.40	per station	\$2,069.01	
Endhaul stumps from landing -	1.00	hours @	\$385.00	per hour	\$385.00	
Remove culverts from state lands	1.00	@	\$220.70	total	\$220.70	
Grass seed -	0.03	acres @	\$310.00	per acre	\$9.30	
					TOTAL SPECIAL PROJECTS	\$13,782.81

GRAND TOTAL **\$23,213.49**

SUMMARY OF CONSTRUCTION COST

Sale: **Muesial Chairs**

Road: **Q to R**

Construction -	0+00	stations	Improvement -	29+65	stations	Reconstruction -	0+00	stations
	0.00	miles		0.56	miles		0.00	miles

IMPROVEMENT: CLEARING AND GRUBBING -

Widening	0.054	acres @	\$955.00	per acre =	\$51.57
TOTAL CLEARING AND GRUBBING					\$51.57

IMPROVEMENT: EXCAVATION -

Sluff	30	cy. @	\$2.20	per c.y.=	\$66.00
Widening	1529	cy. @	\$2.20	per c.y.=	\$3,363.80
TOTAL EXCAVATION					\$3,429.80

IMPROVEMENT: ENDHAUL -

Sluff	0+00	to	0+00	30	cy. @	\$6.10	per c.y.=	\$183.00
Widening	18+55	to	19+50	29	cy. @	\$4.81	per c.y.=	\$139.49
Widen for Landing	21+00	to	22+50	1500	cy. @	\$4.86	per c.y.=	\$7,290.00
Spread & compact				1559	cy. @	\$0.55	per c.y.=	\$857.45
TOTAL ENDHAUL								\$8,469.94

ROCK

Spot Rock	As Directed	200	cy. of	Crushed	@	\$12.40	per c.y.=	\$2,480.00
Landing Rock	9+00	100	cy. of	Pit-Run	@	\$10.28	per c.y.=	\$1,028.00
Landing Rock	17+65	70	cy. of	Pit-Run	@	\$10.21	per c.y.=	\$714.70
Landing Rock	21+00	60	cy. of	Pit-Run	@	\$10.28	per c.y.=	\$616.80
Landing Rock	28+15	60	cy. of	Pit-Run	@	\$10.43	per c.y.=	\$625.80
Landing Rock	29+35	60	cy. of	Pit-Run	@	\$10.46	per c.y.=	\$627.60
TOTAL ROCK								\$6,092.90

SPECIAL PROJECTS

Move in & Reconstruct Landing at Point R -	3.00	hours @	\$220.00	per hour	\$1,615.43
Construct Landings -	3.00	hours @	\$410.00	per hour	\$1,230.00
Grade and shape road -	29.65	stations @	\$24.40	per station	\$723.46
Endhaul stumps from landing -	2.00	hours @	\$385.00	per hour	\$770.00
Roll subgrade w/ vibratory roller prior to rocking -	29.65	stations @	\$19.40	per station	\$575.21
Remove large stumps -	4.00	@	\$110.00	each	\$440.00
Grass seed -	0.05	acres @	\$310.00	per acre	\$15.50
TOTAL SPECIAL PROJECTS					\$5,369.60

GRAND TOTAL **\$23,413.81**

SUMMARY OF CONSTRUCTION COST

Sale: **Muesial Chairs**

Road: **S to T**

Construction -	3+90	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.07	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station	=	Drill & Shoot	Endhaul	
0+00		0+90	20%		Ditch	\$350	=			\$315.00
0+90		1+45	45%		Ditch	\$509	=			\$279.95
1+45		2+90	50%		Ditch	\$903	=		\$950.00	\$2,259.35
2+90		3+50	25%		Ditch	\$304	=		\$950.00	\$1,132.40
3+50		3+90	15%		Ditch	\$350	=		\$0.00	\$140.00
TOTAL										\$4,126.70

ROCK

0+00 to	1+00	70	cy. of	Pit-Run	@	\$10.46 per c.y.=		\$732.20
Approach Widening	0+00	30	cy. of	Pit-Run	@	\$10.46 per c.y.=		\$313.80
TOTAL ROCK								\$1,046.00

SPECIAL PROJECTS

Construct Landing -	1.00	@	\$410.00	each	\$410.00
Construct ditchouts -	1.00	@	\$60.00	each	\$60.00
Pile material at Point R	5.00	hours @	\$385.00	per hour	\$1,925.00
Grade and shape road -	3.90	stations @	\$24.40	per station	\$95.16
Roll subgrade w/ vibratory roller prior to rocking -	3.90	stations @	\$19.40	per station	\$75.66
Endhaul stumps from landing -	0.50	hours @	\$385.00	per hour	\$192.50
Remove large stumps -	2.00	@	\$110.00	each	\$220.00
Grass seed -	0.18	acres @	\$310.00	per acre	\$55.80
TOTAL SPECIAL PROJECTS					\$3,034.12

GRAND TOTAL **\$8,206.82**

SUMMARY OF CONSTRUCTION COST

Sale:

Muesial Chairs

Road:

U to V

Construction -	17+75	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.34	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station	=	Endhaul	
0+00		4+65	50%	0.01	Ditch	\$903	=	\$2,470.00	\$6,668.95
4+65		12+40	75%	0.03	Ditch	\$1,800	=	\$17,265.00	\$31,215.00
12+40		17+75	25%		Outslope	\$229	=		\$1,225.15
								TOTAL	\$39,109.10

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>	50	LF of 18"	\$1,262.50	
<u>Culvert Stakes & Markers</u>	1	markers	\$9.00	
				TOTAL CULVERTS
				\$1,271.50

ROCK

0+00 to 0+80	50	cy. of	Pit-Run	@	\$10.37 per c.y.=	\$518.50
0+80 to 1+25	100	cy. of	Pit-Run	@	\$10.39 per c.y.=	\$1,039.00
1+25 to 1+50	30	cy. of	Pit-Run	@	\$10.40 per c.y.=	\$312.00
Approach Widening 0+00	30	cy. of	Pit-Run	@	\$10.37 per c.y.=	\$311.10
Culvert Bedding/ Surfacing 0+00	30	cy. of	Crushed	@	\$11.36 per c.y.=	\$340.80
						TOTAL ROCK
						\$2,521.40

SPECIAL PROJECTS

Endhaul stumps from landing -	0.50	hours @	\$385.00	per hour	\$192.50
Construct Landing -	2.00	@	\$410.00	each	\$820.00
Construct ditchouts -	2.00	@	\$60.00	each	\$120.00
Construct Truck Turnaround - STA 14+55	1.00	hours @	\$220.00	per hour	\$220.00
Grade and shape road -	17.75	stations @	\$24.40	per station	\$433.10
Construct Ditch on O to P for culvert	1.00	stations @	\$145.00	per station	\$145.00
Roll subgrade w/ vibratory roller prior to rocking -	17.75	stations @	\$19.40	per station	\$344.35
Remove large stumps -	3.00	@	\$110.00	each	\$330.00
Grass seed -	0.81	acres @	\$310.00	per acre	\$251.10
					TOTAL SPECIAL PROJECTS
					\$2,856.05

GRAND TOTAL **\$45,758.05**

SUMMARY OF CONSTRUCTION COST

Sale:

Muesial Chairs

Road:

W to X

<u>Construction -</u>	<u>6+50</u>	stations	<u>Improvement -</u>	<u>0+00</u>	stations	<u>Reconstruction -</u>	<u>0+00</u>	stations
	0.12	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	<u>Avg. Dist.</u> To W.A. (mi.)	Outslope/Ditch	Cost per Station	=	<u>Drill & Shoot</u>	<u>Endhaul</u>	
0+00		0+50	50%	0.01	Ditch	\$903	=		\$834.00	\$1,285.50
0+50		1+25	25%		Outslope	\$350	=		\$1,251.00	\$1,513.50
1+25		2+05	45%	0.03	Ditch	\$509	=		\$1,251.00	\$1,658.20
2+05		2+80	55%	0.04	Ditch	\$980	=		\$1,251.00	\$1,986.00
2+80		4+50	65%	0.05	Ditch	\$1,800	=		\$2,919.00	\$5,979.00
4+50		5+05	30%		Outslope	\$350	=		\$834.00	\$1,026.50
5+05		6+50	15%		Outslope	\$350	=		\$2,502.00	\$3,009.50
									TOTAL	\$16,458.20

ROCK

0+00 to	6+50	510	cy. of	Pit-Run	@	\$10.18 per c.y.=	\$5,191.80	
Landing Rock	5+35	80	cy. of	Pit-Run	@	\$10.31 per c.y.=	\$824.80	
Landing Rock	6+50	80	cy. of	Pit-Run	@	\$10.33 per c.y.=	\$826.40	
Approach Widening	0+00	30	cy. of	Pit-Run	@	\$10.18 per c.y.=	\$305.40	
Traction Rock	As Directed	10	cy. of	Crushed	@	\$11.46 per c.y.=	\$114.60	
							TOTAL ROCK	\$7,263.00

SPECIAL PROJECTS

Endhaul stumps from landing -	1.00	hours @	\$385.00	per hour	\$385.00	
Construct Landings -	2.00	@	\$410.00	each	\$820.00	
Grade and shape road -	6.50	stations @	\$24.40	per station	\$158.60	
Roll subgrade w/ vibratory roller prior to rocking -	6.50	stations @	\$19.40	per station	\$126.10	
Remove large stumps -	18.00	@	\$110.00	each	\$1,980.00	
Grass seed -	0.33	acres @	\$310.00	per acre	\$102.30	
					TOTAL SPECIAL PROJECTS	\$3,572.00

GRAND TOTAL **\$27,293.20**

SUMMARY OF CONSTRUCTION COST

Sale: **Muesial Chairs**

Road: **Y to Z**

Construction -	0+00	stations	Improvement -	0+00	stations	Reconstruction -	8+45	stations
	0.00	miles		0.00	miles		0.16	miles

RECONSTRUCTION: CLEARING AND GRUBBING -

Plucking & Scattering	0.37	acres @	\$1,415.00 per mile =	\$523.55	
			TOTAL CLEARING AND GRUBBING		\$523.55

RECONSTRUCTION: EXCAVATION -

Road Earthwork	8.15	sta. @	\$150.00 per sta. =	\$1,222.50	
			TOTAL EXCAVATION		\$1,222.50

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>	50	LF of 18"	\$1,262.50
<u>Culvert Stakes & Markers</u>			
	1	markers	\$9.00

TOTAL CULVERTS \$1,271.50

ROCK

0+00 to	8+45	650	cy. of	Pit-Run	@	\$10.56 per c.y.=	\$6,864.00
0+00 to	4+50	90	cy. of	Crushed	@	\$11.80 per c.y.=	\$1,062.00
Approach Widening	0+00	30	cy. of	Pit-Run	@	\$10.61 per c.y.=	\$318.30
Landing Rock	8+15	80	cy. of	Pit-Run	@	\$10.79 per c.y.=	\$863.20
Culvert Bedding/ Surfacing	0+00	30	cy. of	Crushed	@	\$11.80 per c.y.=	\$354.00
						TOTAL ROCK	\$9,461.50

SPECIAL PROJECTS

Construct Landing -	1.00	@	\$410.00	each	\$410.00
Construct ditchouts -	1.00	@	\$60.00	each	\$60.00
Grade and shape road -	8.45	stations @	\$24.40	per station	\$206.18
Roll subgrade w/ vibratory roller prior to rocking -	8.45	stations @	\$19.40	per station	\$163.93
Grass seed -	0.37	acres @	\$310.00	per acre	\$114.70
			TOTAL SPECIAL PROJECTS		\$954.81

GRAND TOTAL \$13,433.86

SUMMARY OF CONSTRUCTION COST

Sale: **Muesial Chairs**

Road: **AA to BB**

Construction -	7+00	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.13	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station	=	Drill & Shoot	Endhaul		
0+00		7+00	35%		Outslope	\$265				\$1,855.00	
										TOTAL	\$1,855.00

ROCK

0+00	to	1+85	200	cy. of	Pit-Run	@	\$10.97	per c.y.=	\$2,194.00		
1+85	to	7+00	420	cy. of	Pit-Run	@	\$10.80	per c.y.=	\$4,536.00		
Landing Rock		7+00	100	cy. of	Pit-Run	@	\$10.87	per c.y.=	\$1,087.00		
Approach Widening		0+00	30	cy. of	Pit-Run	@	\$10.72	per c.y.=	\$321.60		
										TOTAL ROCK	\$8,138.60

SPECIAL PROJECTS

Endhaul stumps from landing -	0.50	hours @	\$385.00	per hour	\$192.50		
Construct Landing -	1.00	@	\$410.00	each	\$410.00		
Grade and shape road -	7.00	stations @	\$24.40	per station	\$170.80		
Roll subgrade w/ vibratory roller prior to rocking -	7.00	stations @	\$19.40	per station	\$135.80		
Remove large stumps -	7.00	@	\$110.00	each	\$770.00		
Grass seed -	0.32	acres @	\$310.00	per acre	\$99.20		
						TOTAL SPECIAL PROJECTS	\$1,778.30

GRAND TOTAL **\$11,771.90**

SUMMARY OF CONSTRUCTION COST

Sale: **Muesial Chairs**

Road: **CC to DD**

Construction -	0+00	stations	Improvement -	19+05	stations	Reconstruction -	0+00	stations
	0.00	miles		0.36	miles		0.00	miles

IMPROVEMENT: EXCAVATION -

Pullback	216	cy. @	\$2.20	per c.y.=	\$475.20
Widening	96	cy. @	\$2.20	per c.y.=	\$211.20
Ravel & Erosion Control	180	cy. @	\$2.20	per c.y.=	\$396.00
Remove Slide over Road STA 13+30	215	cy. @	\$2.80	per c.y.=	\$602.00
TOTAL EXCAVATION					\$1,684.40

IMPROVEMENT: ENDHAUL -

Pullback	12+15	to	13+55	216	cy. @	\$1.59	per c.y.=	\$343.44
Widening	11+30	to	13+55	82	cy. @	\$1.60	per c.y.=	\$131.20
Widening	12+15	to	12+85	14	cy. @	\$1.74	per c.y.=	\$24.36
Ravel & Erosion Control	0+00	to	0+00	180	cy. @	\$1.74	per c.y.=	\$313.20
Remove Slide over Road STA 13+30				215	cy. @	\$1.74	per c.y.=	\$374.10
Spread & compact				707	cy. @	\$0.55	per c.y.=	\$388.85
TOTAL ENDHAUL								\$1,575.15

ROCK

Loading Turnout	11+90	40	cy. of	Pit-Run	@	\$11.33	per c.y.=	\$453.20
Truck Turnaround	19+05	80	cy. of	Pit-Run	@	\$11.48	per c.y.=	\$918.40
Spot Rock	As Directed	50	cy. of	Crushed	@	\$12.51	per c.y.=	\$625.50
TOTAL ROCK								\$1,997.10

SPECIAL PROJECTS

Remove Debris from Culvert Inlets	2.00	hours @	\$220.00	per hour	\$440.00
Construct Truck turnaround - STA 19+05	1.00	hours @	\$220.00	per hour	\$220.00
Construct waste areas -	1.00	hours @	\$220.00	per hour	\$220.00
Grade and shape road -	19.05	stations @	\$24.40	per station	\$464.82
Roll subgrade w/ vibratory roller prior to rocking -	19.05	stations @	\$19.40	per station	\$369.57
Grass seed -	0.21	acres @	\$310.00	per acre	\$65.10
TOTAL SPECIAL PROJECTS					\$1,779.49

GRAND TOTAL **\$7,036.14**

SUMMARY OF CONSTRUCTION COST

Sale: **Muesial Chairs**

Road: **EE to FF**

Construction -	0+85	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.02	miles		0.00	miles		0.00	miles

CONSTRUCTION: CLEARING, GRUBBING, SCATTERING, EXCAVATION, COMPACTION, LOADING, END-HAULING AND SPREADING/COMPACTING AT WASTE AREA -

Station	to	Station	Avg. Sideslope	Avg. Dist. To W.A. (mi.)	Outslope/Ditch	Cost per Station	=	Drill & Shoot	Endhaul	
0+00		0+85	30%		Ditch	\$356				\$302.60
									TOTAL	\$302.60

ROCK

0+00 to	0+85	70	cy. of	Pit-Run	@	\$11.48	per c.y.=	\$803.60	
Approach Widening	0+00	30	cy. of	Pit-Run	@	\$11.48	per c.y.=	\$344.40	
Landing Rock	0+00	50	cy. of	Pit-Run	@	\$11.48	per c.y.=	\$574.00	
								TOTAL ROCK	\$1,722.00

SPECIAL PROJECTS

Construct Landing -	1.00	@	\$410.00	each	\$410.00	
Construct waste areas -	1.00	hours @	\$220.00	per hour	\$220.00	
Grade and shape road -	0.85	stations @	\$24.40	per station	\$20.74	
Roll subgrade w/ vibratory roller prior to rocking -	0.85	stations @	\$19.40	per station	\$16.49	
Remove large stumps -	2.00	@	\$110.00	each	\$220.00	
Grass seed -	0.11	acres @	\$310.00	per acre	\$34.10	
					TOTAL SPECIAL PROJECTS	\$921.33

GRAND TOTAL **\$2,945.93**

SUMMARY OF CONSTRUCTION COST

Sale: **Muesial Chairs**

Road: **GG to HH**

<u>Construction -</u>	<u>0+00</u>	stations	<u>Improvement -</u>	<u>113+25</u>	stations	<u>Reconstruction -</u>	<u>0+00</u>	stations
	0.00	miles		2.14	miles		0.00	miles

IMPROVEMENT: CLEARING AND GRUBBING -

Clear Woody Debris from Road Prism	12.00	hours @	\$175.00 per hour =	\$2,100.00	
TOTAL CLEARING AND GRUBBING				\$2,100.00	

IMPROVEMENT: EXCAVATION -

Remove small slide	2	hours @	\$220.00 per hour =	\$440.00	
TOTAL EXCAVATION				\$440.00	

ROCK

Energy Dissipator	Point HH	10	cy. of	Pit-Run	@	\$11.82 per c.y.=	\$118.20
Energy Dissipator	Point HH	45	cy. of	Rip-Rap	@	\$8.37 per c.y.=	\$376.65
TOTAL ROCK							\$494.85

SPECIAL PROJECTS

Repair failing culvert outlet - STA 111+50	2.00	hours @	\$135.00 per hour	\$270.00	
Grass seed -	0.10	acres @	\$310.00 per acre	\$31.00	
TOTAL SPECIAL PROJECTS				\$301.00	

GRAND TOTAL	\$3,335.85
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SUMMARY OF CONSTRUCTION COST

Sale: **Muesial Chairs**

Road: **II to JJ**

Construction -	0+00	stations	Improvement -	10+40	stations	Reconstruction -	0+00	stations
	0.00	miles		0.20	miles		0.00	miles

IMPROVEMENT: CLEARING AND GRUBBING -

Alder/Small Tree Grub & Endhaul	1.470	acres @	\$1,500.00	per acre =	\$2,205.00	
					TOTAL CLEARING AND GRUBBING	\$2,205.00

ROCK

Approach Widening	0+00		50	cy. of	Pit-Run	@	\$11.02	per c.y.=	\$551.00	
									TOTAL ROCK	\$551.00

SPECIAL PROJECTS

Construct waste area -	10.00	hours @	\$220.00	per hour	\$2,200.00	
Construct woody debris waste area -	2.00	hours @	\$220.00	per hour	\$440.00	
Grade and shape road -	10.40	stations @	\$24.40	per station	\$253.76	
Roll subgrade w/ vibratory roller prior to rocking -	10.40	stations @	\$19.40	per station	\$201.76	
Grass seed -	1.47	acres @	\$310.00	per acre	\$455.70	
					TOTAL SPECIAL PROJECTS	\$3,551.22

GRAND TOTAL **\$6,307.22**

SUMMARY OF CONSTRUCTION COST

Sale: **Muesial Chairs**

Road: **Point KK**

<u>Construction -</u>	<u>0+00</u>	stations	<u>Improvement -</u>	<u>0+01</u>	stations	<u>Reconstruction -</u>	<u>0+00</u>	stations
	0.00	miles		0.00	miles		0.00	miles

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>	30	LF of 18"	\$757.50
<u>Culvert Stakes & Markers</u>	1	markers	\$9.00

TOTAL CULVERTS **\$766.50**

ROCK

Culvert Bedding/ Surfacing	0+00	30	cy. of	Crushed	@	\$14.56 per c.y.=	\$436.80
Energy Dissipator	0+00	5	cy. of	Rip Rap	@	\$6.09 per c.y.=	\$30.45

TOTAL ROCK **\$467.25**

SPECIAL PROJECTS

Remove culverts from state lands	1.00	@	\$220.70	total	\$220.70
Grass seed -	0.01	acres @	\$310.00	per acre	\$3.10

TOTAL SPECIAL PROJECTS **\$223.80**

GRAND TOTAL **\$1,457.55**

Move-In Calculations for Project Work not Involving Rocking/Pit Work

Sale: **Muesial Chairs**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
17.7	Pavement	30
3.0	Main Lines	7
1.5	Steep Grades	2

No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Within Area Move (\$/mile)	Begin Mileage	End Mileage	Total Miles	Within Area Cost	Total Cost
1	Brush Cutter	\$315.15		\$4.00	0.00	3.92	3.92	\$15.68	\$330.83
1	Graders	\$405.19		\$3.65	0.00	2.51	2.51	\$9.16	\$414.35
1	Excavators (Large)	\$513.25	1	\$44.80	0.00	9.87	9.87	\$442.18	\$955.43
1	Tractor (D8)	\$548.65	2	\$15.10	0.00	7.48	7.48	\$112.95	\$661.60
2	Dump Truck (Off Hiway)	\$974.37	1	\$4.75	0.00	9.87	9.87	\$93.77	\$1,068.14
TOTAL MOVE-IN COSTS:									\$3,438.42

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Jordan Stockpile	Location:	Sec. 29 , T1N, R7W, W.M.
Sale:	Muesial Chairs	Road:	1380 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage:	1.16	Total Truck Loads:	1380 c.y.
Drill Pct.:	0%	In Place Total:	986 c.y.

Load Dump Truck: \$1.20 /cu.yd. x 1380 cu.yds. = \$1,656.00

Subtotal \$1,656.00

Move in Loader	1	@	\$398.25	=	\$398.25
Move in Trucks	2	@	\$117.12	=	\$234.24
				Subtotal	\$632.49

Base Cost= \$1.66 Per Cu.Yd. TOTAL PRODUCTION COSTS \$2,288.49

Road Segment	Haul Cost \$/cu.yd.	Proc Cost \$/cu.yd.	Base/load Cost. \$/cu.yd.	Cost \$/cu.yd.	Number Cu. Yds	ROCK COST
A to B Spot Rock (Crushed)	4.41	3.55	1.66	9.62	200	\$1,924.00
C to D Spot Rock (Crushed)	3.64	3.55	1.66	8.85	100	\$885.00
G to H Traction Rock (Crushed)	3.64	3.55	1.66	8.85	30	\$265.50
I to J 80 170 (Crushed)	3.64	3.55	1.66	8.85	20	\$177.00
M to N Spot Rock (Crushed)	2.67	3.55	1.66	7.88	100	\$788.00
M to N Culvert Bedding/ Surfacing (Crushed)	3.51	3.55	1.66	8.72	40	\$348.80
M to N Culvert Bedding/ Surfacing (Crushed)	3.99	3.55	1.66	9.20	40	\$368.00
M to N Culvert Bedding/ Surfacing (Crushed)	4.47	3.55	1.66	9.68	40	\$387.20
O to P Spot Rock (Crushed)	5.68	3.55	1.66	10.89	200	\$2,178.00
O to P Turnout Rock (Crushed)	5.87	3.55	1.66	11.08	10	\$110.80
O to P Culvert Bedding/ Surfacing (Crushed)	6.59	3.55	1.66	11.80	20	\$236.00
O to P Culvert Bedding/ Surfacing (Crushed)	8.27	3.55	1.66	13.48	30	\$404.40
O to P Rock Ditch Filter (Drain Rock)	5.34	3.55	1.66	10.55	10	\$105.50
O to P Stream Crossing Lift (Crushed)	7.19	3.55	1.66	12.40	100	\$1,240.00
Q to R Spot Rock (Crushed)	7.19	3.55	1.66	12.40	200	\$2,480.00
U to V Culvert Bedding/ Surfacing (Crushed)	6.15	3.55	1.66	11.36	30	\$340.80
W to X Traction Rock (Crushed)	6.25	3.55	1.66	11.46	10	\$114.60
Y to Z 0 450 (Crushed)	6.59	3.55	1.66	11.80	90	\$1,062.00
Y to Z Culvert Bedding/ Surfacing (Crushed)	6.59	3.55	1.66	11.80	30	\$354.00
CC to DD Spot Rock (Crushed)	7.30	3.55	1.66	12.51	50	\$625.50
Point KK Culvert Bedding/ Surfacing 0 (Crushed)	9.35	3.55	1.66	14.56	30	\$436.80
Total C.Y.					1380	Sub Total \$14,831.90

TOTAL ROCKING COSTS \$14,831.90

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Cedar Butte Pit	Location:	Sec. 23 , T1N, R8W, W.M.
Sale:	Muesial Chairs	Road:	2550 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage	1.16	Total Truck Loads:	2550 c.y.
Drill Pct.:	25%	In Place Total:	1821 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact. Project #2

Drill & Shoot:	\$4.32	/cu.yd.	x	455	cu.yds.	=	\$1,965.60
Rip Rock:	\$3.35	/cu.yd.	x	1366	cu.yds.	=	\$4,576.10
Push Rock:	\$1.20	/cu.yd.	x	2550	cu.yds.	=	\$3,060.00
Load Dump Truck:	\$1.20	/cu.yd.	x	2550	cu.yds.	=	\$3,060.00

Subtotal \$12,661.70

Move in Excavator	1	@	\$513.25	=	\$513.25
				Subtotal	\$513.25

TOTAL PRODUCTION COSTS \$13,174.95

Base Cost= \$5.17 Per Cu.Yd.

Road Segment	Haul Cost \$/cu.yd.	Proc Cost \$/cu.yd.	Base Cost. \$/cu.yd.	Cost \$/cu.yd.	Number Cu. Yds	ROCK COST
C to D Landing Rock (Pit-Run)	4.34	1.65	5.17	11.16	140	\$1,562.40
G to H 0 1535 (Pit-Run)	3.90	1.65	5.17	10.72	1150	\$12,328.00
G to H Landing Rock (Pit-Run)	4.10	1.65	5.17	10.92	70	\$764.40
G to H Approach Widening (Pit-Run)	4.10	1.65	5.17	10.92	30	\$327.60
I to J 0 510 (Pit-Run)	4.32	1.65	5.17	11.14	390	\$4,344.60
I to J Approach Widening (Pit-Run)	4.43	1.65	5.17	11.25	30	\$337.50
I to J Landing Rock (Pit-Run)	4.32	1.65	5.17	11.14	70	\$779.80
K to L 0 175 (Pit-Run)	4.37	1.65	5.17	11.19	180	\$2,014.20
K to L 175 620 (Pit-Run)	4.37	1.65	5.17	11.19	380	\$4,252.20
K to L Landing Rock (Pit-Run)	4.37	1.65	5.17	11.19	70	\$783.30
K to L Approach Widening (Pit-Run)	4.37	1.65	5.17	11.19	30	\$335.70
GG to HH Energy Dissipator (Pit-Run)	5.00	1.65	5.17	11.82	10	\$118.20
Total C.Y.					2550	Sub Total \$27,947.90

TOTAL ROCKING COSTS \$27,947.90

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Muesial Creek Pit	Location:	Sec. 35, T1N, R8W, W.M.
Sale:	Muesial Chairs	Road:	3570 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage:	1.16	Total Truck Loads:	3570 c.y.
Drill Pct.:	0%	In Place Total:	2550 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden in Waste Area, spread and compact. Project #2

Rip Rock:	\$4.02 /cu.yd.	x	2550 cu.yds.	=	\$10,251.00
Push Rock:	\$1.20 /cu.yd.	x	3570 cu.yds.	=	\$4,284.00
Load Dump Truck:	\$1.20 /cu.yd.	x	3570 cu.yds.	=	\$4,284.00

Subtotal \$18,819.00

Move In/Set-up Crusher					\$0.00
Move in Roller and Compactor	1	@	\$311.40	=	\$311.40
Move in Grader	1	@	\$405.19	=	\$405.19
Move in D-8	1	@	\$548.65	=	\$548.65
Move in Loader	1	@	\$398.25	=	\$398.25
Move in Excavator	1	@	\$513.25	=	\$513.25
Move in Trucks	3	@	\$117.12	=	\$351.36
Move in Water Truck	1	@	\$117.12	=	\$117.12

Subtotal \$2,645.22

TOTAL PRODUCTION COSTS \$21,464.22

Base Cost= \$6.01 Per Cu.Yd.

Road Segment	Haul Cost \$/cu.yd.	Proc Cost \$/cu.yd.	Base Cost. \$/cu.yd.	Cost \$/cu.yd.	Number Cu. Yds	ROCK COST
M to N Replacement Fill (Pit-Run)	2.41	1.65	6.01	10.07	100	\$1,007.00
M to N Fill Repair (Pit-Run)	3.09	1.65	6.01	10.75	10	\$107.50
O to P Landing Rock (Pit-Run)	2.64	1.65	6.01	10.30	60	\$618.00
O to P Landing Rock (Pit-Run)	2.76	1.65	6.01	10.42	70	\$729.40
O to P Landing Rock (Pit-Run)	3.36	1.65	6.01	11.02	70	\$771.40
O to P Truck Turnaround (Pit-Run)	3.36	1.65	6.01	11.02	70	\$771.40
Q to R Landing Rock (Pit-Run)	2.62	1.65	6.01	10.28	100	\$1,028.00
Q to R Landing Rock (Pit-Run)	2.55	1.65	6.01	10.21	70	\$714.70
Q to R Landing Rock (Pit-Run)	2.62	1.65	6.01	10.28	60	\$616.80
Q to R Landing Rock (Pit-Run)	2.77	1.65	6.01	10.43	60	\$625.80
Q to R Landing Rock (Pit-Run)	2.80	1.65	6.01	10.46	60	\$627.60
S to T 0 100 (Pit-Run)	2.80	1.65	6.01	10.46	70	\$732.20
S to T Approach Widening (Pit-Run)	2.80	1.65	6.01	10.46	30	\$313.80
U to V 0 80 (Pit-Run)	2.71	1.65	6.01	10.37	50	\$518.50
U to V 80 125 (Pit-Run)	2.73	1.65	6.01	10.39	100	\$1,039.00
U to V 125 150 (Pit-Run)	2.74	1.65	6.01	10.40	30	\$312.00
U to V Approach Widening (Pit-Run)	2.71	1.65	6.01	10.37	30	\$311.10
W to X 0 650 (Pit-Run)	2.52	1.65	6.01	10.18	510	\$5,191.80
W to X Landing Rock (Pit-Run)	2.65	1.65	6.01	10.31	80	\$824.80
W to X Landing Rock (Pit-Run)	2.67	1.65	6.01	10.33	80	\$826.40
W to X Approach Widening (Pit-Run)	2.52	1.65	6.01	10.18	30	\$305.40
Y to Z 0 845 (Pit-Run)	2.95	1.60	6.01	10.56	650	\$6,864.00
Y to Z Approach Widening (Pit-Run)	2.95	1.65	6.01	10.61	30	\$318.30
Y to Z Landing Rock (Pit-Run)	3.13	1.65	6.01	10.79	80	\$863.20
AA to BB 0 185 (Pit-Run)	3.06	1.90	6.01	10.97	200	\$2,194.00
AA to BB 185 700 (Pit-Run)	3.14	1.65	6.01	10.80	420	\$4,536.00
AA to BB Landing Rock (Pit-Run)	3.21	1.65	6.01	10.87	100	\$1,087.00
AA to BB Approach Widening (Pit-Run)	3.06	1.65	6.01	10.72	30	\$321.60
CC to DD Loading Turnout (Pit-Run)	3.67	1.65	6.01	11.33	40	\$453.20
CC to DD Truck Turnaround (Pit-Run)	3.82	1.65	6.01	11.48	80	\$918.40
EE to FF 0 85 (Pit-Run)	3.82	1.65	6.01	11.48	70	\$803.60
EE to FF Approach Widening (Pit-Run)	3.82	1.65	6.01	11.48	30	\$344.40
EE to FF Landing Rock (Pit-Run)	3.82	1.65	6.01	11.48	50	\$574.00
II to JJ Approach Widening 0+00 (Pit-Rt)	3.36	1.65	6.01	11.02	50	\$551.00

Total C.Y. 3570 Sub Total \$37,821.30

TOTAL ROCKING COSTS \$37,821.30

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Rip Rap Stockpiles	Location:	Sec. 26, T1N, R8W, W.M.
Sale:	Muesial Chairs	Road:	160 c.y.
Swell:	1.40	Stockpile:	c.y.
Shrinkage:	1.16	Total Truck Loads:	160 c.y.
Drill Pct.:	0%	In Place Total:	114 c.y.

Load Dump Truck: \$1.20 /cu.yd. x 160 cu.yds. = \$192.00

Subtotal \$192.00

Base Cost= \$1.20 Per Cu.Yd.

TOTAL PRODUCTION COSTS \$192.00

Road Segment	Haul Cost \$/cu.yd.	Proc Cost \$/cu.yd.	Base Cost. \$/cu.yd.	Cost \$/cu.yd.	Number Cu. Yds	ROCK COST
M to N Energy Dissipator (Rip Rap)	2.71	0.90	1.20	4.81	10	\$48.10
M to N Energy Dissipator (Rip Rap)	2.68	0.90	1.20	4.78	20	\$95.60
M to N Fill Repair (Rip-Rap)	7.08	0.90	1.20	9.18	70	\$642.60
O to P Energy Dissipator (Rip Rap)	4.44	0.90	1.20	6.54	10	\$65.40
GG to HH Energy Dissipator (Rip-Rap)	6.27	0.90	1.20	8.37	45	\$376.65
Point KK Energy Dissipator 0 (Rip Rap)	3.99	0.90	1.20	6.09	5	\$30.45
				Total C.Y.	160	Sub Total
						\$1,258.80

TOTAL ROCKING COSTS \$1,258.80



OREGON DEPARTMENT OF FORESTRY CRUISE REPORT Muesial Creek

1. Type of Sale

Regeneration harvest, Recovery

2. Legal Description

Sections 25, 26, 35, and 36 of T1N R8W. Tillamook County, W.M.

3. Sale Acreage

Sale acreage was determined by GPS and orthophotographs along with GIS.

	<u>ACRES</u>	
	<u>Gross</u>	<u>Net</u>
Unit 1 (Modified Clearcut)	115	82
Unit 2 (Modified Clearcut)	109	84
Unit 3 (Modified Clearcut)	52	35
Unit 4 (Modified Clearcut)	140	116
Total	415	317

Gross Acres

Area within the Timber Sale Boundary signs

Net acres

Used for calculating the advertised volume.

Gross acres, less green tree retention, roads, Non-required thinning areas, and riparian areas classified as Special Stewardship in LMCS inside the sale boundary.

4. Cruising Procedures

A. Cruise Method

The timber sale was cruised using variable plot sampling. The unit was cruised by ODF staff February to April 2023. All conifers 8” DBH and greater containing 20 board feet and all hardwoods 10” DBH and greater containing 30 board feet were recorded on all plots. Species, DBH (to nearest inch), merchantable bole length (to nearest foot), form factor, and defect were recorded for all measure trees. Merchantable heights were recorded to 6” and 7” outside bark for conifers and hardwoods, respectively.

B. Plot size

Unit	BAF	Spacing
1	40.00	300’ x 300’
2	40.00	325’ x 325’
3	27.7	300’ x 300’
4	27.7	350’ x 350’

C. Grading System

All trees were graded according to Columbia River Log Scaling and Grading Rules. Log lengths favored 40' lengths.

5. Computation Procedure

Plot data was entered into SuperAce for computation of basal area, advertised volume, volume summary, log stock table, and stand table for each species and type.

Net sale acreage was used for volume calculation.

Unit	Cruise Statistics (Board Foot Volumes)			
	Acres	Number of Plots	SE (%)	CV (%)
1	82	32	9.5	54.1
2	84	29	12.4	65.9
3	35	14	15.6	56.4
4	116	38	7.2	44.3
Project Total	317	113	5.2	55.4

6. Hidden Defect and Breakage

A 2% reduction for conifers and a 4% reduction for hardwood volumes were applied for hidden defect and breakage.

7. Timber Description

Unit 1 is modified clearcut. The Unit is Douglas-fir dominated stand, with (17%) of red alder, and a minor component of western hemlock and western redcedar. The alder on the south side of the ridge was sprayed in the 1970's. One Western redcedar per acre was cruised and will be a reserved species.

Unit 2 is modified clearcut. The Unit is a mixed stand with of Douglas-fir (62%) and red alder (37%) and a minor component of western hemlock. Unit 2 has no past management.

Unit 3 is modified clearcut. The Unit is mixed stand of Douglas-fir (66%) and red alder (33%) and a minor component of western hemlock. Unit 3 has no past management.

Unit 4 is modified clearcut. The Unit is mixed stand of Douglas-fir (73%) and red alder (19%) and a minor component of western hemlock and Sitka spruce. The southern portion of the unit (approximately 40 acres) was thinned in 2002 as part of the Muesial Five Thin. Seven acres located on the South side of Upper Muesial Creek Road was sprayed for Alder in the 1970's. One noble fir per acre was cruised, and reserved.

Sale Unit	Age	Species	DBH	Merchantable Bole Height (feet)	Merchantable top (inches inside bark)
1	66	Douglas-fir	18.3	73	5
		Western hemlock	18.8	54	5
		Red alder	14.6	40	6
2	66	Douglas-fir	18.8	69	5
		Western hemlock	15.5	37	5
		Red alder	16.5	47	6
		Sitka Spruce	11	15	5
3	66	Douglas-fir	17.7	70	5
		Western Hemlock	16	48	5
		Red alder	16.9	48	6
4	66	Douglas-fir	18.3	74	5
		Western Hemlock	16.7	48	5
		Red alder	16.3	48	6

Above data derived from Statistics (type) report using SuperAce 2008, developed by Atterbury consultants, Inc.

8. Cruiser /Dates

ODF Staff Cruised; February-April 2023.

Revenue Distribution

BOF – 100%

Tax Code: 5600 (43%)

902 (57%)

Deed Numbers: 161, 162

Attachments

Volume Summary Table

Stand Table

Log Stock Table

Species, Sort, Grade Table

Logging Plan

9. Stand and Log Stock Tables Species Key

DF – Douglas-fir

RA – Red alder

OC – Other Conifer

SS- Sitka Spruce

WH- Western Hemlock

RC- Western Red Cedar

NF- Noble fir

Stand Table Summary																
UNIT 1																
Project MChairs																
T01N R08W S25 T0100										T01N R08W S25 T0100						
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1							
01N	08W	25	264	0100	82.00	32	114	Date:	05/03/2021							
								Time:	1:56:57PM							
S Spc	T	Sample		Av	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals			
		DBH	Trees	FF 16'				Ht Tot	Net Cu.Ft.				Net Bd.Ft.	Tons	Cunits	MBF
DF		10	2	94	66	9.955	5.43	9.96	12.8	60.0	3.62	127	597	297	104	49
DF		11	1	77	66	4.114	2.71	4.11	15.5	40.0	1.82	64	165	149	52	13
DF		13	3	82	82	8.836	8.14	11.78	19.7	65.0	6.61	232	766	542	190	63
DF		15	4	83	91	8.849	10.86	17.70	19.8	68.7	9.97	350	1,217	818	287	100
DF		16	3	83	86	5.833	8.14	9.72	26.1	92.0	7.22	253	894	592	208	73
DF		17	8	83	84	13.779	21.72	20.67	28.2	95.0	16.60	583	1,963	1,362	478	161
DF		18	5	85	108	7.681	13.57	16.90	30.5	115.5	14.68	515	1,951	1,204	422	160
DF		19	2	86	107	2.758	5.43	5.52	35.7	132.5	5.61	197	731	460	161	60
DF		20	2	84	132	2.489	5.43	7.47	31.3	121.7	6.66	234	908	546	192	74
DF		21	9	83	113	10.158	24.43	23.70	39.7	143.3	26.82	941	3,397	2,199	772	279
DF		22	7	82	110	7.199	19.00	17.48	37.6	147.1	18.75	658	2,571	1,537	539	211
DF		23	4	84	120	3.764	10.86	10.35	43.3	179.1	12.78	448	1,854	1,048	368	152
DF		25	4	83	112	3.186	10.86	6.37	56.1	203.8	10.18	357	1,298	835	293	106
DF		26	2	84	121	1.473	5.43	4.42	53.9	226.7	6.78	238	1,001	556	195	82
DF		27	2	84	116	1.366	5.43	2.73	58.6	237.5	4.56	160	649	374	131	53
DF		28	1	80	140	.635	2.71	1.90	63.9	256.7	3.47	122	489	285	100	40
DF		29	2	84	136	1.184	5.43	3.55	69.3	308.3	7.01	246	1,095	575	202	90
DF		30	1	86	128	.553	2.71	1.11	95.0	425.0	2.99	105	470	245	86	39
DF		32	1	75	116	.486	2.71	.97	109.0	390.0	3.02	106	379	248	87	31
DF		38	1	83	114	.345	2.71	.69	157.6	720.0	3.10	109	496	254	89	41
DF	Totals	64	84	96		94.641	173.75	177.10	34.1	129.3	172.27	6,045	22,892	14,126	4,957	1,877
RA		10	2	75	53	5.806	3.17	5.81	9.6	35.0	1.54	56	203	126	46	17
RA		11	4	72	62	9.597	6.33	7.20	15.5	43.3	3.08	112	312	252	92	26
RA		12	4	77	54	8.064	6.33	8.06	16.6	47.5	3.69	134	383	302	110	31
RA		13	4	77	68	6.871	6.33	6.87	24.0	65.0	4.53	165	447	372	135	37
RA		14	4	81	56	5.924	6.33	7.41	17.9	56.0	3.65	133	415	300	109	34
RA		15	5	82	65	6.451	7.92	10.32	19.1	56.3	5.41	197	581	444	161	48
RA		16	4	74	74	4.536	6.33	5.67	30.6	70.0	4.78	174	397	392	142	33
RA		17	3	76	64	3.013	4.75	4.02	31.4	75.0	3.47	126	301	285	104	25
RA		18	3	77	82	2.688	4.75	4.48	34.3	94.0	4.23	154	421	347	126	35
RA		19	2	79	60	1.608	3.17	1.61	33.2	115.0	1.47	53	185	120	44	15
RA		20	4	86	86	2.903	6.33	5.81	36.8	125.0	5.88	214	726	482	175	60
RA		21	2	74	67	1.317	3.17									
RA		22	2	77	64	1.200	3.17	1.80	48.6	100.0	2.40	87	180	197	72	15
RA		23	1	65	55	.549	1.58									
RA		25	1	78	55	.464	1.58	.93	35.9	125.0	.92	33	116	75	27	10
RA	Totals	45	77	63		60.991	71.25	69.98	23.4	66.7	45.05	1,638	4,666	3,694	1,343	383
WH		14	1	93	64	3.508	3.75	3.51	25.4	90.0	2.85	89	316	234	73	26
WH		43	1	66	104	.372	3.75	.74	91.1	430.0	2.17	68	320	178	56	26
WH	Totals	2	90	68		3.880	7.50	4.25	36.9	149.5	5.02	157	636	412	129	52
RC		16	1	80	61	.895	1.25	.90	33.3	70.0	.70	30	63	57	24	5
RC	Totals	1	80	61		.895	1.25	.90	33.3	70.0	0.70	30	63	57	24	5
OC		19	1	65	29	.635	1.25									
OC	Totals	1	65	29		.635	1.25									
Totals		113	81	82		161.042	255.00	252.22	31.2	112.0	223.04	7869	28,257	18,289	6,453	2,317

TC		Stand Table Summary														
TSTNDSUM		Project MChairs														
T01N R08W S35 T0100											T01N R08W S35 T0100					
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1							
01N	08W	35	786	0100	116.00	38	174	Date:	05/03/2021							
								Time:	1:56:57PM							
S Spc	T	Sample		Av	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	T o t a l s			
		DBH	Trees	FF 16'				Ht Tot	Net Cu.Ft.				Net Bd.Ft.	Tons	Cunits	MBF
DF		8	1	80	74	3.474	1.21	6.95	4.4	20.0	.87	30	139	100	35	16
DF		9	1	83	83	3.953	1.75	3.95	9.5	40.0	1.07	38	158	125	44	18
DF		10	1	74	50	2.224	1.21	2.22	9.2	30.0	.58	20	67	68	24	8
DF		12	3	77	92	4.633	3.64	6.18	16.6	55.0	2.92	102	340	339	119	39
DF		13	1	82	83	1.316	1.21	2.63	13.5	45.0	1.01	36	118	117	41	14
DF		14	3	83	71	3.403	3.64	5.67	17.4	54.0	2.81	99	306	326	114	36
DF		15	9	82	100	9.329	11.45	17.67	21.8	78.6	11.00	386	1,389	1,276	448	161
DF		16	4	79	110	3.474	4.85	6.95	25.5	92.5	5.05	177	643	585	205	75
DF		17	6	83	106	4.955	7.81	10.68	26.8	99.9	8.16	286	1,067	946	332	124
DF		18	6	85	108	4.722	8.34	10.43	30.4	114.6	9.03	317	1,195	1,048	368	139
DF		19	4	83	106	2.464	4.85	4.93	35.5	125.0	4.98	175	616	578	203	71
DF		20	6	84	110	3.335	7.28	7.78	36.1	135.0	8.01	281	1,051	929	326	122
DF		21	10	83	103	5.042	12.13	11.09	40.2	136.8	12.71	446	1,518	1,474	517	176
DF		22	6	84	101	2.757	7.28	5.05	49.7	170.9	7.15	251	864	830	291	100
DF		23	6	82	111	2.522	7.28	6.73	42.5	160.6	8.15	286	1,080	945	332	125
DF		24	5	83	115	1.930	6.06	5.02	49.9	200.8	7.13	250	1,008	828	290	117
DF		25	3	84	125	1.067	3.64	3.20	49.1	203.3	4.48	157	651	520	182	76
DF		27	2	84	110	.610	2.43	1.22	76.7	315.0	2.67	94	384	309	109	45
DF		28	3	86	118	.851	3.64	1.99	78.1	350.0	4.42	155	695	513	180	81
DF		29	2	82	137	.529	2.43	1.59	69.6	306.7	3.15	110	486	365	128	56
DF		30	1	86	129	.247	1.21	.74	69.7	300.0	1.47	52	222	171	60	26
DF		31	4	83	137	1.027	5.38	3.08	77.9	348.0	6.84	240	1,072	794	279	124
DF		32	1	96	136	.217	1.21	.65	99.2	583.3	1.84	65	380	214	75	44
DF		35	1	81	157	.182	1.21	.54	112.8	540.0	1.75	61	294	203	71	34
DF		36	1	83	161	.172	1.21	.51	125.9	643.3	1.85	65	331	214	75	38
DF		38	3	85	150	.462	3.64	1.69	109.0	599.1	5.26	185	1,015	610	214	118
DF		40	1	77	119	.139	1.21	.42	118.3	473.3	1.41	49	197	163	57	23
DF		41	1	88	164	.132	1.21	.53	132.1	745.0	1.99	70	394	231	81	46
DF		49	1	49	128	.093	1.21	.19	97.2	355.0	.51	18	66	60	21	8
DF		Totals	96	82	100	65.260	119.63	130.29	34.5	136.2	128.28	4,501	17,748	14,880	5,221	2,059
RA		11	1	81	88	1.909	1.26	1.91	17.1	60.0	.90	33	115	104	38	13
RA		12	4	73	77	6.415	5.04	6.41	20.3	52.5	3.59	131	337	416	151	39
RA		13	3	77	53	4.099	3.78	4.10	19.3	46.7	2.18	79	191	253	92	22
RA		14	5	75	63	6.409	6.85	6.41	26.8	59.0	4.73	172	378	549	199	44
RA		15	5	71	83	5.132	6.30	8.21	14.9	46.2	3.36	122	380	389	142	44
RA		16	7	81	66	6.711	9.37	8.52	27.4	74.1	6.42	233	631	745	271	73
RA		17	6	73	63	5.146	8.11	5.94	22.6	56.6	3.69	134	336	428	156	39
RA		18	7	79	74	4.989	8.82	7.84	30.8	93.6	6.64	241	734	770	280	85
RA		19	7	70	84	4.478	8.82	6.40	30.0	84.0	5.29	192	537	613	223	62
RA		20	5	75	73	2.887	6.30	4.62	32.7	78.8	4.15	151	364	481	175	42
RA		21	2	65	64	1.047	2.52	1.05	35.0	70.0	1.01	37	73	117	43	9
RA		22	2	62	77	.954	2.52	1.43	31.7	83.3	1.25	45	119	145	53	14
RA		23	1	75	66	.437	1.26	.87	40.5	110.0	.97	35	96	113	41	11
RA		24	1	92	70	.401	1.26	.80	38.3	195.0	.84	31	156	98	36	18
RA		27	1	94	73	.456	1.81	.91	52.0	235.0	1.30	47	214	151	55	25
RA		32	1	60	86	.226	1.26	.45	103.1	150.0	1.28	47	68	148	54	8
RA		Totals	58	75	71	51.695	75.27	65.88	26.3	71.8	47.59	1,730	4,730	5,520	2,007	549
WH		9	1	78	41	2.620	1.16	2.62	6.4	20.0	.53	17	52	62	19	6
WH		14	2	79	47	2.166	2.32	2.17	22.4	40.0	1.55	49	87	180	56	10
WH		16	1	89	77	.829	1.16									
WH		17	1	88	83	.734	1.16	.73	41.1	180.0	.97	30	132	112	35	15

UNIT 1

Log Stock Table - MBF

Project: MChairs

T01N R08W S25 T0100

T01N R08W S25 T0100

Twp Rge Sec Tract Type Acres Plots Sample Trees Page
 01N 08W 25 264 0100 82.00 32 114 Date 5/3/2023
 Time 1:56:55PM

Spp	T	S	So	Gr	Log	Gross	% Def	Net	% 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		CO	2		40	1,033	.4	1,029	54.8					302	370	259	65	33		
DF		CO	3		31	3		3	.2											
DF		CO	3		40	677	.3	675	36.0		170	240	212	46	8					
DF		CO	4		12	2		2	.1			1	1							
DF		CO	4		13	1		1	.0		1									
DF		CO	4		14	3		3	.1		3									
DF		CO	4		15	2		2	.1		2									
DF		CO	4		16	2		2	.1		2									
DF		CO	4		17	5		5	.3		5									
DF		CO	4		18	2		2	.1		2									
DF		CO	4		19	5		5	.3		3	2								
DF		CO	4		20	2		2	.1		2									
DF		CO	4		21	4		4	.2		4									
DF		CO	4		22	3		3	.1		3									
DF		CO	4		23	4		4	.2		4									
DF		CO	4		24	13		13	.7		13									
DF		CO	4		25	5		5	.3		5									
DF		CO	4		26	6		6	.3		4	2								
DF		CO	4		27	8		8	.4		2	5								
DF		CO	4		29	5		5	.3		5									
DF		CO	4		32	8		8	.4		8									
DF		CO	4		33	6		6	.3		6									
DF		CO	4		34	6	25.0	4	.2		4									
DF		CO	4		35	3		3	.2		3									
DF		CO	4		37	6		6	.3		6									
DF		CO	4		39	13		13	.7		13									
DF		CO	4		40	60		60	3.2		9	8	22	21						
DF		Totals				1,884		1,877	81.0		103	193	265	233	348	378	259	65	33	
RA		H	3		20	9	4.3	8	2.2							8				
RA		H	3		40	112	.7	111	29.1				36	75						
RA		H	4		15	1		1	.3		1									
RA		H	4		18	11		11	2.8		11									
RA		H	4		19	6		6	1.6			6								
RA		H	4		20	5		5	1.2		5									
RA		H	4		21	2		2	.6		2									
RA		H	4		22	18		18	4.7		7	11								
RA		H	4		23	4		4	1.1		4									
RA		H	4		24	5		5	1.4		5									
RA		H	4		25	2		2	.5		2									
RA		H	4		26	9		9	2.4		9									
RA		H	4		27	2		2	.5		2									
RA		H	4		29	7		7	1.7		7									
RA		H	4		30	6		6	1.5			6								
RA		H	4		31	4		4	1.0		4									
RA		H	4		32	22	6.5	20	5.3		12	8								
RA		H	4		34	10		10	2.6		10									
RA		H	4		35	10		10	2.6		10									
RA		H	4		36	26	4.7	24	6.4		24									
RA		H	4		39	15	5.5	14	3.7		14									
RA		H	4		40	107	3.3	103	27.0		34	70								

T01N R08W S25 T0100 **T01N R08W S25 T0100**
Twp Rge Sec Tract Type Acres Plots Sample Trees **Page 2**
01N 08W 25 264 0100 82.00 32 114 **Date 5/3/2023**
Time 1:56:55PM

SPP	T	S	So	Gr	Log	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
RA					Totals	391	2.1	383	16.5			162	101	36	75		8			
WH		CO	2		40	21		21	41.0									21		
WH		CO	3		40	26		26	49.7				26							
WH		CO	4		26	5		5	9.4						5					
WH					Totals	52		52	2.2				26		5			21		
RC		CO	3		40	5		5	100.0			5								
RC					Totals	5		5	.2			5								
Total All Species						2,332		2,317	100.0		103	359	393	269	428	378	268	86	33	

UNIT 2

Species, Sort Grade - Board Foot Volumes (Type)

Project: MChairs

Page 1

Date 4/26/2023

Time 2:26:19PM

T01N R08W S36 T0100 T01N R08W S36 T0100

Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt BdFt
 01N 08W 36 263 0100 60.00 29 83 S W

Spp	So	Gr	%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
				Net BdFt	Def%	Gross		Net	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					
RA	H	2	8	1.2	574	567	34	100				100				40	14	264	1.82	2.1	
RA	H	3	42		2,902	2,902	174	88	12				12		88	37	11	157	1.32	18.5	
RA	H	4	50	2.0	3,409	3,340	200	100					7	20	11	62	30	7	55	0.66	61.1
RA Totals			37	1.1	6,884	6,809	409	87	13				3	15	5	76	32	8	83	0.87	81.8
DF	CO	2	60	1.9	6,931	6,798	408		58	42					100	40	15	368	2.14	18.5	
DF	CO	3	31	.7	3,609	3,584	215	98	2						100	40	8	104	0.80	34.5	
DF	CO	4	9		933	933	56	91	9				34	27	18	21	24	5	27	0.41	34.7
DF Totals			62	1.4	11,473	11,315	679	7	32	36	25		3	2	1	94	33	9	129	1.03	87.7
WH	CO	4	100		84	84	5	100							47	53	36	5	40	0.81	2.1
WH Totals			0		84	84	5	100							47	53	36	5	40	0.81	2.1
Type Totals				1.3	18,442	18,208	1,092	5	52	27	16		3	7	3	87	33	8	106	0.95	171.6

UNIT 2														Stand Table Summary		
Project														MChairs		
T01N R08W S36 T0100										T01N R08W S36 T0100						
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1							
01N	08W	36	263	0100	84.00	29	83	Date:	05/03/2022							
								Time:	2:01:03PM							
S Spc	T	Sample		Av		Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals		
		DBH	Trees	FF 16'	Ht Tot				Net Cu.Ft.	Net Bd.Ft.				Tons	Cunits	MBF
DF		13	3	83	67	9.268	8.54	15.45	13.2	44.0	5.80	204	680	487	171	57
DF		14	3	84	69	7.991	8.54	13.32	16.0	52.0	6.08	213	693	511	179	58
DF		15	1	87	87	2.320	2.85	4.64	18.7	75.0	2.48	87	348	208	73	29
DF		16	3	85	69	6.118	8.54	10.20	21.5	66.0	6.25	219	673	525	184	57
DF		18	2	82	112	3.223	5.70	8.06	27.8	102.0	6.37	224	822	535	188	69
DF		20	2	88	113	2.610	5.70	6.53	35.4	142.0	6.58	231	927	553	194	78
DF		21	1	78	59	1.184	2.85	1.18	56.9	120.0	1.92	67	142	161	57	12
DF		22	2	87	106	2.157	5.70	4.31	49.7	200.0	6.12	215	863	514	180	72
DF		23	1	85	115	.987	2.85	2.96	38.4	166.7	3.24	114	493	272	95	41
DF		24	2	82	108	1.813	5.70	3.63	59.0	220.0	6.10	214	798	512	180	67
DF		25	3	82	113	2.506	8.54	5.85	57.4	218.6	9.57	336	1,278	804	282	107
DF		26	1	81	101	.772	2.85	1.54	67.5	235.0	2.97	104	363	249	88	30
DF		27	4	84	121	2.865	11.39	6.45	73.2	308.9	13.44	472	1,991	1,129	396	167
DF		28	1	83	115	.666	2.85	.67	120.9	530.0	2.29	80	353	193	68	30
DF		29	1	85	119	.621	2.85	1.86	64.7	273.3	3.44	121	509	289	101	43
DF		32	1	86	111	.510	2.85	1.02	108.4	375.0	3.15	111	382	265	93	32
DF		Totals	31	84	87	45.612	88.28	87.66	34.3	129.1	85.80	3,010	11,315	7,207	2,529	950
RA		10	1	83	64	3.561	1.94	3.56	11.5	40.0	1.13	41	142	95	34	12
RA		11	1	78	92	2.943	1.94	2.94	19.6	60.0	1.59	58	177	133	49	15
RA		12	1	86	23	2.473	1.94									
RA		13	4	84	76	8.429	7.77	12.64	16.6	58.3	5.77	210	738	485	176	62
RA		14	3	79	55	5.451	5.83	5.45	16.0	56.7	2.41	87	309	202	73	26
RA		15	4	83	81	6.331	7.77	9.50	24.5	80.0	6.39	232	760	537	195	64
RA		16	6	74	66	8.346	11.65	8.35	27.2	68.3	6.25	227	570	525	191	48
RA		17	4	81	71	4.929	7.77	7.39	27.0	81.7	5.49	200	604	461	168	51
RA		18	4	79	60	4.396	7.77	6.59	29.9	80.0	5.43	197	528	456	166	44
RA		19	6	82	78	5.919	11.65	10.85	34.4	103.6	10.27	373	1,125	863	314	94
RA		20	3	77	64	2.671	5.83	3.56	41.9	112.5	4.10	149	401	345	125	34
RA		21	4	75	58	3.230	7.77	3.23	37.4	117.5	3.32	121	380	279	102	32
RA		22	4	81	54	2.943	7.77	3.68	48.3	118.0	4.89	178	434	411	149	36
RA		23	2	88	66	1.346	3.88	2.02	52.6	160.0	2.92	106	323	245	89	27
RA		26	1	82	70	.527	1.94	1.05	56.1	160.0	1.63	59	169	137	50	14
RA		27	1	87	62	.488	1.94	.98	51.6	155.0	1.39	50	151	116	42	13
RA		Totals	49	80	67	63.984	95.17	81.80	28.0	83.2	62.97	2,290	6,809	5,290	1,924	572
WH		15	1	74	47	1.124	1.38	1.12	27.6	40.0	.99	31	45	83	26	4
WH		16	1	75	45	.988	1.38	.99	30.0	40.0	.95	30	40	80	25	3
WH		Totals	2	74	46	2.112	2.76	2.11	28.7	40.0	1.94	61	84	163	51	7
SS		11	1	50	17	4.180	2.76									
SS		Totals	1	50	17	4.180	2.76									
Totals			83	81	73	115.888	188.97	171.57	31.2	106.1	150.71	5361	18,208	12,660	4,503	1,529

UNIT 2

Log Stock Table - MBF

Project: MCHAIRS

T01N R08W S36 T0100

T01N R08W S36 T0100

Twp Rge Sec Tract Type Acres Plots Sample Trees Page
01N 08W 36 263 0100 84.00 29 83 Date 5/3/2023
Time 2:01:03PM

Spp	T	S	So	Gr	Log	Gross	% Def	Net	% Spc	Net Volume by Scaling Diameter in Inches										
										MBF	MBF	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23
RA	H	2	40			48	1.2	48	8.3					20	28					
RA	H	3	25			20		20	3.6					20						
RA	H	3	29			8		8	1.4					8						
RA	H	3	40			215		215	37.6					186	17	13				
RA	H	4	12			1		1	.1											
RA	H	4	13			3		3	.5											
RA	H	4	16			3		3	.6											
RA	H	4	17			1		1	.2											
RA	H	4	18			2		2	.3											
RA	H	4	19			7		7	1.3											
RA	H	4	20			3		3	.5											
RA	H	4	21			11		11	1.9											
RA	H	4	23			14		14	2.4											
RA	H	4	24			4		4	.7											
RA	H	4	25			3		3	.5											
RA	H	4	27			22		22	3.9											
RA	H	4	28			2		2	.4											
RA	H	4	31			12		12	2.1											
RA	H	4	33			6		6	1.0											
RA	H	4	35			14	7.4	13	2.3											
RA	H	4	36			11		11	1.9											
RA	H	4	38			5		5	.9											
RA	H	4	39			19	4.9	18	3.1											
RA	H	4	40			144	2.7	140	24.6					21	92	27				
RA	Totals					578	1.1	572	37.4			137	117	242	36	41				
DF	CO	2	40			582	1.9	571	60.1					64	243	238	26			
DF	CO	3	40			303	.7	301	31.7					48	201	46	6			
DF	CO	4	14			5		5	.5			3		1	1					
DF	CO	4	15			4		4	.5			4								
DF	CO	4	17			4		4	.5			4								
DF	CO	4	18			3		3	.4			3								
DF	CO	4	19			10		10	1.0			10								
DF	CO	4	23			2		2	.2			2								
DF	CO	4	24			5		5	.5			5								
DF	CO	4	25			6		6	.6			6								
DF	CO	4	26			8		8	.8			8								
DF	CO	4	34			9		9	.9			9								
DF	CO	4	35			5		5	.5						5					
DF	CO	4	37			7		7	.7			7								
DF	CO	4	38			5		5	.6			5								
DF	CO	4	40			4		4	.5			4								
DF	Totals					964	1.4	950	62.1			71	49	207	46	70	243	238	26	
WH	CO	4	35			3		3	46.8			3								
WH	CO	4	36			4		4	53.2			4								
WH	Totals					7		7	.5			7								
Total All Species						1,549	1.3	1,529	100.0			78	186	323	287	107	284	238	26	

UNIT 3

Species, Sort Grade - Board Foot Volumes (Type)

Project: MChairs

Page 1

Date 4/26/2023

Time 2:28:56PM

															T01N R08W S36 T0100					
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt											
01N	08W	36	60	0100	48.00	14	56	S	W											
S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre
				Def%	Gross	Net		Log Scale Dia.				Log Length				Ln	Dia	Bd	CF/ Lf	
								4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99	Ft	In	Ft		
RA	H	3	57	.6	3,507	3,487	167	71	29			5	7	9	79	37	11	160	1.30	21.8
RA	H	4	43	1.0	2,641	2,615	126	100				10	1	2	87	33	7	62	0.76	42.1
RA	Totals		33	.7	6,147	6,102	293	83	17			7	5	6	82	34	8	95	0.96	63.9
DF	CO	2	62		7,660	7,660	368		46	54					100	40	16	414	2.26	18.5
DF	CO	3	29		3,519	3,519	169	94	6			2	1	1	95	39	8	104	0.76	33.8
DF	CO	4	9		1,087	1,087	52	89	11			18	44	9	29	28	5	31	0.33	35.2
DF	Totals		66		12,266	12,266	589	8	28	30	34	2	4	1	92	35	9	140	0.98	87.5
WH	CO	3	100		298	298	14	100							100	40	7	70	0.83	4.3
WH	Totals		2		298	298	14	100							100	40	7	70	0.83	4.3
Type Totals				.2	18,712	18,666	896	5	47	25	22	4	4	3	89	35	9	120	0.97	155.7

Stand Table Summary																
UNIT 3																
Project MChairs																
Unit 3												T01N R08W S36 T0100				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:								
01N	08W	36	60	0100	35.00	14	56	1								
								Date:	05/03/2022							
								Time:	2:02:32PM							
S Spc	T	Sample		Av	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Tons/ Acre	Net	Net	T o t a l s			
		DBH	Trees	FF 16'				Ht Tot	Net Cu.Ft.		Net Bd.Ft.	Cu.Ft. Acre	Bd.Ft. Acre	Tons	Cunits	MBF
DF		10	2	80	59	11.194	6.11	11.19	11.2	35.0	3.59	126	392	126	44	14
DF		11	1	82	91	4.626	3.05	4.63	17.1	60.0	2.26	79	278	79	28	10
DF		13	2	82	108	6.624	6.11	13.25	16.5	60.0	6.22	218	795	218	76	28
DF		15	1	78	85	2.488	3.05	4.98	18.2	55.0	2.58	90	274	90	32	10
DF		16	1	81	108	2.186	3.05	4.37	26.1	95.0	3.25	114	415	114	40	15
DF		17	1	81	93	1.937	3.05	3.87	26.3	90.0	2.91	102	349	102	36	12
DF		18	1	86	87	1.728	3.05	3.46	28.1	105.0	2.77	97	363	97	34	13
DF		20	2	84	107	2.799	6.11	5.60	39.8	140.0	6.35	223	784	222	78	27
DF		22	3	80	124	3.469	9.16	10.41	36.4	135.6	10.79	379	1,411	378	133	49
DF		23	3	83	117	3.174	9.16	8.46	43.9	173.8	10.60	372	1,471	371	130	51
DF		25	1	88	127	.896	3.05	2.69	49.5	223.3	3.79	133	600	133	46	21
DF		26	1	82	136	.828	3.05	2.48	55.6	233.3	3.93	138	580	138	48	20
DF		27	3	87	108	2.303	9.16	5.37	67.1	284.3	10.28	361	1,528	360	126	53
DF		29	1	88	156	.666	3.05	2.66	61.7	330.0	4.68	164	878	164	57	31
DF		30	1	88	118	.622	3.05	1.87	70.7	326.7	3.76	132	609	132	46	21
DF		37	1	96	122	.409	3.05	1.23	119.3	683.3	4.17	146	838	146	51	29
DF		41	1	91	116	.333	3.05	1.00	134.3	703.3	3.82	134	703	134	47	25
DF		Totals	26	82	95	46.280	79.37	87.51	34.4	140.2	85.75	3,009	12,266	3,001	1,053	429
RA		12	2	75	67	8.015	6.29	4.01	23.8	70.0	2.62	95	281	92	33	10
RA		13	2	82	76	6.829	6.29	6.83	23.2	65.0	4.35	158	444	152	55	16
RA		15	2	88	65	5.130	6.29	5.13	30.1	90.0	4.24	154	462	148	54	16
RA		16	4	82	75	9.017	12.59	13.53	25.1	76.7	9.33	339	1,037	327	119	36
RA		17	4	79	77	7.987	12.59	11.98	31.8	96.7	10.46	380	1,158	366	133	41
RA		18	3	81	83	5.343	9.44	5.34	38.9	130.0	5.71	208	695	200	73	24
RA		19	4	77	59	6.394	12.59	4.80	43.8	130.0	5.78	210	623	202	74	22
RA		20	1	60	94	1.443	3.15	1.44	22.7	90.0	.90	33	130	32	11	5
RA		21	4	74	63	5.234	12.59	7.85	44.6	96.7	9.64	350	759	337	123	27
RA		23	2	73	56	2.182	6.29	2.18	42.4	165.0	2.55	93	360	89	32	13
RA		26	1	82	53	.854	3.15	.85	86.9	180.0	2.04	74	154	71	26	5
RA		Totals	29	79	71	58.428	91.28	63.94	32.8	95.4	57.62	2,095	6,102	2,017	733	214
WH		16	1	86	59	4.263	5.95	4.26	33.3	70.0	4.54	142	298	159	50	10
WH		Totals	1	86	59	4.263	5.95	4.26	33.3	70.0	4.54	142	298	159	50	10
Totals			56	81	81	108.972	176.60	155.72	33.7	119.9	147.91	5246	18,666	5,177	1,836	653

UNIT 3

Log Stock Table - MBF
Project: MChairs

T01N R08W S36 T0100

Twp 01N **Rge** 08W **Sec** 36 **Tract** 60 **Type** 0100 **Acres** 35.00 **Plots** 14 **Sample Trees** 56 **Page** 1
Date 5/3/2023 **Time** 2:02:31PM

Spp	T	S	So	Gr	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+	
RA	H	3	16				6		6	2.6				6									
RA	H	3	30				9		9	4.1				9									
RA	H	3	34				11		11	5.4					11								
RA	H	3	38				9		9	4.1				9									
RA	H	3	40				88	.8	88	41.0				69	18								
RA	H	4	14				1		1	.4				1									
RA	H	4	16				3		3	1.4				3									
RA	H	4	17				1		1	.6				1									
RA	H	4	18				4		4	1.7				4									
RA	H	4	21				1		1	.5				1									
RA	H	4	31				2		2	.9				2									
RA	H	4	38				6		6	2.9				6									
RA	H	4	40				74	1.2	73	34.4				42	32								
RA	Totals						215		214	32.7				53	38	87	24	11					
DF	CO	2	40				268		268	62.5					42	61	92	34	39				
DF	CO	3	20				3		3	.7					3								
DF	CO	3	22				1		1	.2				1									
DF	CO	3	23				1		1	.2				1									
DF	CO	3	35				2		2	.4				2									
DF	CO	3	38				5		5	1.1				5									
DF	CO	3	40				112		112	26.2				18	40	50	4						
DF	CO	4	15				2		2	.5				1									
DF	CO	4	17				1		1	.2				1									
DF	CO	4	19				2		2	.4				1									
DF	CO	4	20				3		3	.6				2	1								
DF	CO	4	24				1		1	.3				1									
DF	CO	4	27				2		2	.6				1	1								
DF	CO	4	28				6		6	1.4				6									
DF	CO	4	29				2		2	.4				2									
DF	CO	4	30				6		6	1.3				6									
DF	CO	4	32				3		3	.8				3									
DF	CO	4	38				8		8	1.8				8									
DF	CO	4	39				3		3	.7				3									
DF	Totals						429		429	65.7			34	22	43	55	50	61	92	34	39		
WH	CO	3	40				10		10	100.0				10									
WH	Totals						10		10	1.6				10									
Total All Species							655		653	100.0			34	86	81	142	73	72	92	34	39		

Unit 4

Species, Sort Grade - Board Foot Volumes (Type)

Project: MChairs

Page 1
Date 4/26/2023
Time 2:25:25PM

T01N R08W S35 T0100
Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt BdFt
01N 08W 35 786 0100 100.00 38 174 S W

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log				Logs Per /Acre	
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf		
									4-5	6-11	12-16	17+	12-20	21-30	31-35	36-99						
DF		CO	2	58	.5	10,492	10,443	1,044			56	44				100	40	15	361	2.08	28.9	
DF		CO	3	33	.1	5,766	5,761	576	0	96	4			1	1	3	95	39	8	108	0.79	53.3
DF		CO	4	9	.3	1,549	1,544	154	84	10	6			10	27	33	30	29	5	35	0.35	44.6
DF	Totals			72	.3	17,806	17,748	1,775	7	32	35	26		1	3	4	92	36	9	140	0.99	126.8
RA		H	2	4		231	231	23			36	64			64	36		30	15	276	2.24	.8
RA		H	3	36	4.1	1,751	1,680	168		74	14	11		11	19	5	65	34	11	141	1.30	11.9
RA		H	4	60	1.6	2,865	2,819	282		100				5	18	12	65	32	7	53	0.66	53.1
RA	Totals			19	2.4	4,847	4,730	473		86	7	7		7	21	11	62	33	7	72	0.80	65.9
WH		CO	2	66	.9	1,071	1,062	106			52	48				100		40	15	388	2.16	2.7
WH		CO	3	20		317	317	32		76	24					100		40	10	157	1.13	2.0
WH		CO	4	14		207	207	21	81	19				17	31	30	21	26	6	31	0.50	6.7
WH	Totals			6	.6	1,594	1,585	159	11	18	39	32		2	4	4	90	32	9	138	1.14	11.5
SS		CO	3	88		194	194	19		36	64			17	47	36		33	14	248	1.64	.8
SS		CO	4	12		24	24	2	61	39					39	61		32	6	46	0.45	.5
SS	Totals			1		218	218	22	7	36	57			15	46	7	32	33	11	166	1.17	1.3
NF		CO	2	96		202	202	20			100					100		40	24	1030	4.30	.2
NF		CO	3	4		8	8	1		100					100			23	10	80	1.26	.1
NF	Totals			1		210	210	21		4	96				4	96		34	19	713	3.62	.3
Type Totals					.8	24,676	24,490	2,449	6	41	29	23		3	7	5	86	35	8	119	0.95	205.8

UNIT 4														Stand Table Summary		
Project														MChairs		
T01N R08W S35 T0100										T01N R08W S35 T0100						
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	1							
01N	08W	35	786	0100	116.00	38	174	Date:	05/03/2021							
								Time:	1:59:31PM							
S Spc	T	Sample		Av	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals			
		DBH	Trees	FF 16'				Ht Tot	Net Cu.Ft.				Net Bd.Ft.	Tons	Cunits	MBF
DF		8	1	80	74	3.474	1.21	6.95	4.4	20.0	.87	30	139	100	35	16
DF		9	1	83	83	3.953	1.75	3.95	9.5	40.0	1.07	38	158	125	44	18
DF		10	1	74	50	2.224	1.21	2.22	9.2	30.0	.58	20	67	68	24	8
DF		12	3	77	92	4.633	3.64	6.18	16.6	55.0	2.92	102	340	339	119	39
DF		13	1	82	83	1.316	1.21	2.63	13.5	45.0	1.01	36	118	117	41	14
DF		14	3	83	71	3.403	3.64	5.67	17.4	54.0	2.81	99	306	326	114	36
DF		15	9	82	100	9.329	11.45	17.67	21.8	78.6	11.00	386	1,389	1,276	448	161
DF		16	4	79	110	3.474	4.85	6.95	25.5	92.5	5.05	177	643	585	205	75
DF		17	6	83	106	4.955	7.81	10.68	26.8	99.9	8.16	286	1,067	946	332	124
DF		18	6	85	108	4.722	8.34	10.43	30.4	114.6	9.03	317	1,195	1,048	368	139
DF		19	4	83	106	2.464	4.85	4.93	35.5	125.0	4.98	175	616	578	203	71
DF		20	6	84	110	3.335	7.28	7.78	36.1	135.0	8.01	281	1,051	929	326	122
DF		21	10	83	103	5.042	12.13	11.09	40.2	136.8	12.71	446	1,518	1,474	517	176
DF		22	6	84	101	2.757	7.28	5.05	49.7	170.9	7.15	251	864	830	291	100
DF		23	6	82	111	2.522	7.28	6.73	42.5	160.6	8.15	286	1,080	945	332	125
DF		24	5	83	115	1.930	6.06	5.02	49.9	200.8	7.13	250	1,008	828	290	117
DF		25	3	84	125	1.067	3.64	3.20	49.1	203.3	4.48	157	651	520	182	76
DF		27	2	84	110	.610	2.43	1.22	76.7	315.0	2.67	94	384	309	109	45
DF		28	3	86	118	.851	3.64	1.99	78.1	350.0	4.42	155	695	513	180	81
DF		29	2	82	137	.529	2.43	1.59	69.6	306.7	3.15	110	486	365	128	56
DF		30	1	86	129	.247	1.21	.74	69.7	300.0	1.47	52	222	171	60	26
DF		31	4	83	137	1.027	5.38	3.08	77.9	348.0	6.84	240	1,072	794	279	124
DF		32	1	96	136	.217	1.21	.65	99.2	583.3	1.84	65	380	214	75	44
DF		35	1	81	157	.182	1.21	.54	112.8	540.0	1.75	61	294	203	71	34
DF		36	1	83	161	.172	1.21	.51	125.9	643.3	1.85	65	331	214	75	38
DF		38	3	85	150	.462	3.64	1.69	109.0	599.1	5.26	185	1,015	610	214	118
DF		40	1	77	119	.139	1.21	.42	118.3	473.3	1.41	49	197	163	57	23
DF		41	1	88	164	.132	1.21	.53	132.1	745.0	1.99	70	394	231	81	46
DF		49	1	49	128	.093	1.21	.19	97.2	355.0	.51	18	66	60	21	8
DF		Totals	96	82	100	65.260	119.63	130.29	34.5	136.2	128.28	4,501	17,748	14,880	5,221	2,059
RA		11	1	81	88	1.909	1.26	1.91	17.1	60.0	.90	33	115	104	38	13
RA		12	4	73	77	6.415	5.04	6.41	20.3	52.5	3.59	131	337	416	151	39
RA		13	3	77	53	4.099	3.78	4.10	19.3	46.7	2.18	79	191	253	92	22
RA		14	5	75	63	6.409	6.85	6.41	26.8	59.0	4.73	172	378	549	199	44
RA		15	5	71	83	5.132	6.30	8.21	14.9	46.2	3.36	122	380	389	142	44
RA		16	7	81	66	6.711	9.37	8.52	27.4	74.1	6.42	233	631	745	271	73
RA		17	6	73	63	5.146	8.11	5.94	22.6	56.6	3.69	134	336	428	156	39
RA		18	7	79	74	4.989	8.82	7.84	30.8	93.6	6.64	241	734	770	280	85
RA		19	7	70	84	4.478	8.82	6.40	30.0	84.0	5.29	192	537	613	223	62
RA		20	5	75	73	2.887	6.30	4.62	32.7	78.8	4.15	151	364	481	175	42
RA		21	2	65	64	1.047	2.52	1.05	35.0	70.0	1.01	37	73	117	43	9
RA		22	2	62	77	.954	2.52	1.43	31.7	83.3	1.25	45	119	145	53	14
RA		23	1	75	66	.437	1.26	.87	40.5	110.0	.97	35	96	113	41	11
RA		24	1	92	70	.401	1.26	.80	38.3	195.0	.84	31	156	98	36	18
RA		27	1	94	73	.456	1.81	.91	52.0	235.0	1.30	47	214	151	55	25
RA		32	1	60	86	.226	1.26	.45	103.1	150.0	1.28	47	68	148	54	8
RA		Totals	58	75	71	51.695	75.27	65.88	26.3	71.8	47.59	1,730	4,730	5,520	2,007	549
WH		9	1	78	41	2.620	1.16	2.62	6.4	20.0	.53	17	52	62	19	6
WH		14	2	79	47	2.166	2.32	2.17	22.4	40.0	1.55	49	87	180	56	10
WH		16	1	89	77	.829	1.16									
WH		17	1	88	83	.734	1.16	.73	41.1	180.0	.97	30	132	112	35	15

TC		TSTNDSUM		Stand Table Summary													
Project										MChairs							
T01N R08W S35 T0100										T01N R08W S35 T0100							
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page:	2								
01N	08W	35	786	0100	116.00	38	174	Date:	05/03/2022								
								Time:	1:59:31PM								
Spc	T	Sample		Av	Trees/ Acre	BA/ Acre	Logs Acre	Average Log		Net Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals				
		DBH	Trees	FF 16'				Ht Tot	Net Cu.Ft.				Net Bd.Ft.	Tons	Cunits	MBF	
WH		18	1	86	94	.655	1.16	1.31	30.7	120.0	1.29	40	157	149	47	18	
WH		21	2	88	102	.962	2.32	2.41	40.3	164.0	3.11	97	395	360	113	46	
WH		26	2	84	104	.628	2.32	1.26	72.2	302.5	2.90	91	380	337	105	44	
WH		29	1	86	102	.252	1.16	.50	89.7	360.0	1.45	45	182	168	52	21	
WH		30	1	92	97	.236	1.16	.47	97.5	425.0	1.47	46	200	171	53	23	
WH		Totals		12	83	67	9.082	13.89	11.47	36.2	138.2	13.27	415	1,585	1,539	481	184
SS		17	2	85	73	.928	1.46	.46	42.4	150.0	.51	20	70	59	23	8	
SS		19	1	50	75	.371	.73	.37	9.5	40.0	.09	4	15	11	4	2	
SS		29	1	83	105	.159	.73	.48	56.4	280.0	.70	27	134	81	31	16	
SS		Totals		4	76	77	1.458	2.92	1.31	38.2	166.2	1.31	50	218	151	58	25
NF		37	1	93	124	.098	.73	.29	124.3	713.3	.88	37	210	102	42	24	
NF		Totals		1	93	124	.098	.73	.29	124.3	713.3	0.88	37	210	102	42	24
OC		19	1	82	69	.557	1.10										
OC		20	1	88	96	.503	1.10										
OC		Totals		2	85	82	1.060	2.19									
Totals		173	79	86		128.654	214.64	209.24	32.2	117.0	191.32	6733	24,490	22,193	7,810	2,841	

TC		TLOGSTVB		Log Stock Table - MBF					Project: MChairs															
T01N R08W S35 T0100								T01N R08W S35 T0100																
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	2															
01N	08W	35	786	0100	116.00	38	174	Date	5/3/2023															
								Time	1:59:31PM															
Spp	T	S	So	Gr	Log	Gross	%	Net	%	Net Volume by Scaling Diameter in Inches														
										MBF	Def	MBF	Spc	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39
RA	H	4	22			2		2	.5			2												
RA	H	4	23			4		4	.7				4											
RA	H	4	24			12		12	2.3			7	5											
RA	H	4	25			4		4	.7			4												
RA	H	4	26			7		7	1.3			2	5											
RA	H	4	28			14		14	2.6			10	4											
RA	H	4	30			12		12	2.1			12												
RA	H	4	31			5		5	.9			5												
RA	H	4	33			8		8	1.5			8												
RA	H	4	34			9		9	1.7			9												
RA	H	4	35			17		17	3.1			17												
RA	H	4	36			16	10.0	14	2.6			14												
RA	H	4	38			8		8	1.5			8												
RA	H	4	39			7		7	1.3			7												
RA	H	4	40			195	1.9	191	34.8			109	81											
RA	Totals					562	2.4	549	19.3			241	99	132	31	7	17	22						
WH	CO	2	40			124	.9	123	67.0					29	13	61	21							
WH	CO	3	40			37		37	20.0			13	15	9										
WH	CO	4	16			1		1	.6		1													
WH	CO	4	17			3		3	1.7				3											
WH	CO	4	22			8		8	4.1		6	1												
WH	CO	4	33			2		2	1.2		2													
WH	CO	4	34			5		5	2.7		5													
WH	CO	4	36			5		5	2.7		5													
WH	Totals					185		184	6.5		19	17	15	37	13	61	21							
SS	CO	3	16			4		4	15.3							4								
SS	CO	3	30			11		11	41.6								11							
SS	CO	3	40			8		8	31.9				8											
SS	CO	4	30			1		1	4.4			1												
SS	CO	4	33			2		2	6.8		2													
SS	Totals					25		25	.9		2	1	8			4	11							
NF	CO	2	40			23		23	96.3							7						17		
NF	CO	3	23			1		1	3.7				1											
NF	Totals					24		24	.9				1			7						17		
Total All Species						2,862		2,841	100.0		172	397	356	419	413	285	435	169	169	25				



"STEWARDSHIP IN FORESTRY"

Muesial Chairs

Volume Summary

Area 1-Modified Clearcut				
264		82 acres		
SPECIES	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	22.892	1877.1	2%	1840
Hemlock	0.636	52.2	2%	51
	0.0	0	2%	0
	0.0	0	2%	0
Alder	4.666	382.6	4%	367
TOTAL	28.19	2312		2258

Areas 2-Modified Clearcut				
263		84 acres		
SPECIES	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	11.315	950.5	2%	931
Hemlock	0.084	7	2%	7
Spruce	0.000	0	2%	0
Noble Fir	0.000	0	2%	0
Alder	6.809	572.0	4%	549
TOTAL	18.21	1530		1487

Areas 3-Modified Clearcut				
60		35 acres		
SPECIES	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	12.266	429	2%	420
Hemlock	0.298	10	2%	10
	0.0	0	2%	0
	0.0	0	2%	0
Alder	6.102	214	4%	205
TOTAL	18.7	653		635



"STEWARDSHIP IN FORESTRY"

Muesial Chairs

Volume Summary

Areas 4-Modified Clearcut				
786		116 acres		
SPECIES	Cruised Net	Cruised Net	Hidden	Net Sale
	MBF/ Acre	MBF	D&B	MBF
Douglas-fir	17.748	2059	2%	2018
Hemlock	1.585	184	2%	180
Spruce	0.218	25	2%	25
	0.000	0	2%	0
Alder	4.730	549	4%	527
TOTAL	24.3	2817.0		2750

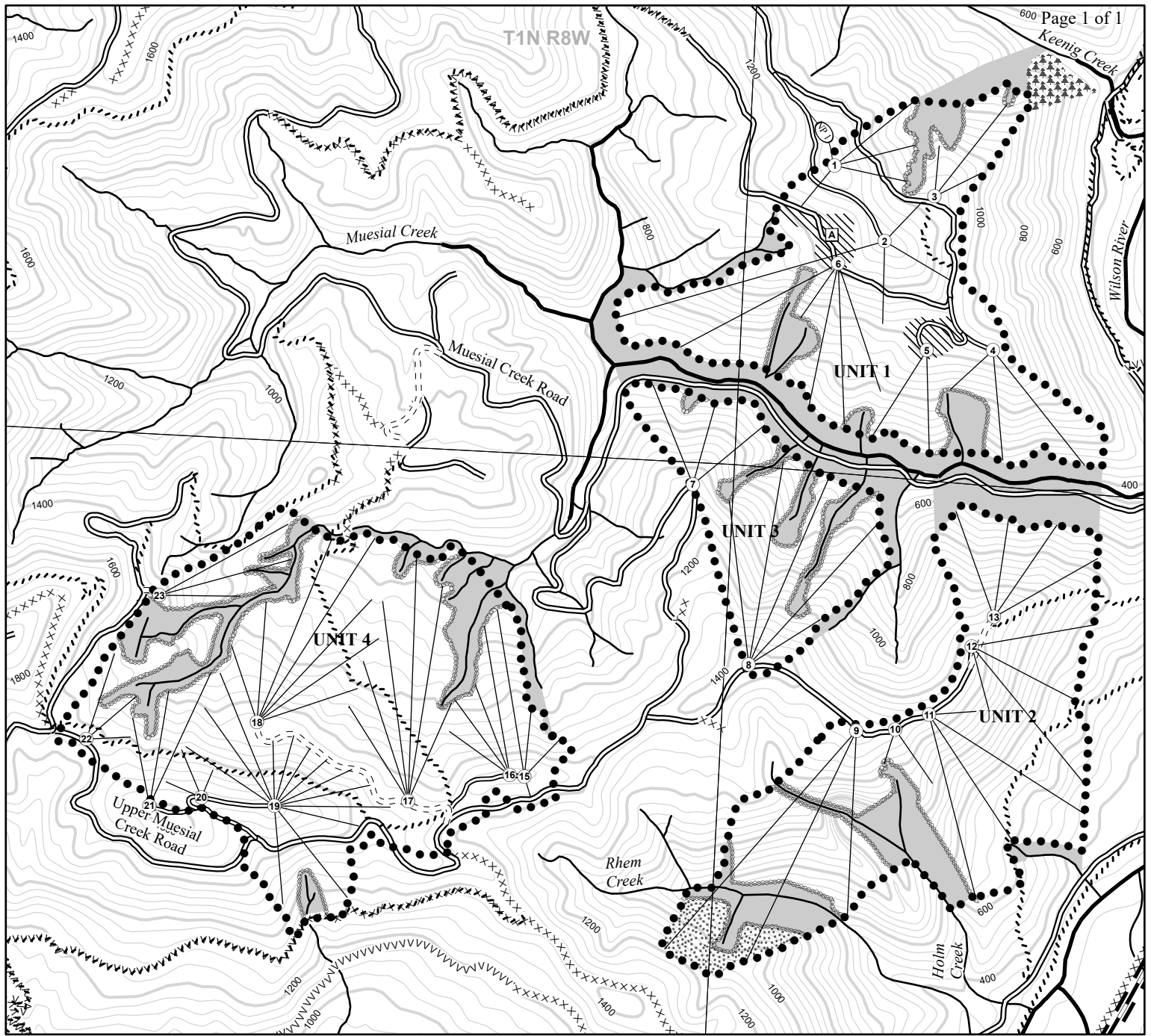


"STEWARDSHIP IN FORESTRY"

Muesial Chairs

Volume Summary

TOTAL SALE VOLUME		317	acres
SPECIES	Cruised Net (MBF)	Net Sale (MBF)	
Douglas-fir	5316	5209	
Hemlock	253	248	
Spruce	25	25	
	0	0	
Red Alder	1718	1648	
TOTAL	7312	7130	



- Legend**
- Cable Landing
 - Tractor Landing
 - Recreation Trail
 - == Highways
 - == Surfaced Road
 - - - Unsurfaced Road
 - xx Blocked Road
 - v v v Abandoned Road
 - Type-F Stream
 - Type-N Stream
 - 200' Contour
 - 40' Contour
 - ⊖ Riparian Boundary
 - Timber Sale Boundary
 - ▬ Property Line
 - Cable Logging
 - ⊘ Cable - Downhill
 - ▨ Ground Based
 - ▲ Green Tree Retention
 - Sections

LOGGING PLAN

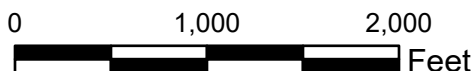
FOR TIMBER SALE CONTRACT #TL-341-2024-W00970-01
 MUESIAL CHAIRS
 PORTIONS OF SECTIONS 25, 26, 35, & 36, T1N, R8W, W.M.
 TILLAMOOK COUNTY, OREGON

Tillamook District GIS
 MAY, 2023

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



NET ACRES

	GROUND	CABLE	TOTAL
UNIT 1	5	77	82
UNIT 2	0	84	84
UNIT 3	0	35	35
UNIT 4	0	116	116
TOTAL	5	312	317