Timber Sale Appraisal
Cruisin Murphy
Sale TL-341-2021-W00752-01

"STEWARDSHIP IN FORESTRY"

District: Tillamook **Date: January 08, 2020**

Cost Summary

	Conifer	Hardwood	Total
Gross Timber Sale Value	$3,192,085.13	$83,538.00	$3,275,623.13
		Project Work:	($650,350.00)
		Advertised Value:	$2,625,273.13

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District: Tillamook

Date: January 08, 2020

Timber Description

Location: Section(s) 12, 13, 14, 23, 24 of T2S R7W, Section(s) 6, 7, of T2S R6W W.M.

Stand Stocking: 80%

Specie Name	AvgDBH	Amortization (%)	Recovery (%)
Douglas - Fir	20	0	100
Alder (Red)	14	0	100

Volume by Grade	2S	3S & 4S 6"-11"	8" - 9"	10" - 11"	12"+	6" - 7"	Total
Douglas - Fir	7,031	2,882	0	0	0	0	9,913
Alder (Red)	0	0	160	149	178	213	700
Total	7,031	2,882	160	149	178	213	10,613

Comments: Pond Values Used: January 2020
Region: Astoria, Forest Grove, and Tillamook

Western Red Cedar and Other Cedars Stumpage Price = Pond Value – Logging Cost
$1,195/MBF - $346.08/MBF = $848.92/ MBF

Hemlock and Other conifirs Stumpage Price = Pond Value – Logging Cost
$543/MBF - $346.08/MBF = $199.92/ MBF

Pulp (Conifer and Hardwood) Price = $ 2.50/ Ton

BRAND AND PAINT ALLOWANCE = $2.00/ MBF
FUEL COST ALLOWANCE = $3.00/ Gallon
HAULING COST ALLOWANCE
Hauling cost equivalent to $950 daily truck cost
($95.00/hr x 10 hr. = $950)

Other Costs with Profit and Risk to be added:
Non-Project Rd. 1: 1+12 sta. $250/sta. = $280
Non-Project Rd. 2: 5+25 sta. $300/sta. = $1575
Non-Project Rd. 3: 7+77 sta. $250/sta. = $1943
Non-Project Rd. 4: 3+86 sta. $250/sta. = $965
Non-Project Rd. 5: 2+42 sta. $350/sta. = $847
Non-Project Rd. 6: 1+47 sta. $250/sta. = $368
Non-Project Rd. 7: 5+10 sta. $350/sta. = $1785

TOTAL Other Costs with profit and Risk to be added = $7763

Other Costs with No Profit and Risk Added:

Move-in Machine Cleaning: $1,000/machine x 2 machines x 2 seasons = $4,000
Slash piling and sorting (Cable Settings): $5/ac x 285ac. = $1,425
Heliport Construction: $2,000 ($500/area x 4 areas)

Ditch Cleaning and Bank Sluff Removal:
Mobilization: two times – dump truck w/ tilt bed & small excavator: $900 x 2 = $1,800
Small excavator (Cat 312 or equivalent): 40 hours @ $135/ hour = $5,400
Dump truck: 40 hours @ $90/ hour = $3,600

TOTAL Other Costs no Profit and Risk added = $18,225

ROAD MAINTENANCE:
Spot Rocking: 20cy/MMBF/mile x 10.613 MMBF x $8/cy x 17.5 miles / 10,613 MBF= $2.7/MBF
Interim Grading: $1,150/ mile x 17.5 miles x 2 times/ 10,613 MBF = $3.79/MBF
Final Maintenance Grading: $1,500 x 17.5 miles/ 10,613 MBF = $2.47/MBF
Final Maintenance Compaction: $950/mile x 7 miles/ 10,613 MBF = $.63/MBF

Total Road Maintenance: $9.59/MBF
$9.59 x 10,613 MBF = $101,778

Logging Conditions

Combination#: 1

Douglas - Fir 59.12%
Alder (Red) 63.20%

Logging System: Cable: Medium Tower >40 - <70 **Process:** Harvester Head Delimbing
yarding distance: Long (1,500 ft) **downhill yarding:** No
tree size: Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 7 **bd. ft / load:** 4500
cost / mbf: $247.00
machines: Log Loader (A)
Forwarder
Harvester
Tower Yarder (Medium)

Combination#: 2

Douglas - Fir 21.09%
Alder (Red) 24.76%

Logging System: Cable: Medium Tower >40 - <70 **Process:** Harvester Head Delimbing
yarding distance: Short (400 ft) **downhill yarding:** No
tree size: Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 7 **bd. ft / load:** 4100
cost / mbf: $271.09
machines: Log Loader (A)
Forwarder
Harvester
Tower Yarder (Medium)

Combination#: 3

Douglas - Fir 19.80%
Alder (Red) 12.04%

Logging System: Shovel **Process:** Harvester Head Delimbing
yarding distance: Medium (800 ft) **downhill yarding:** No
tree size: Mature / Partial Cut (900 Bft/tree), 3-5 logs/MBF
loads / day: 12 **bd. ft / load:** 4100
cost / mbf: $108.62
machines: Forwarder
Harvester

District: Tillamook **Date: January 08, 2020**

Logging Costs

Operating Seasons:	2.00	**Profit Risk:**	10%
Project Costs:	$650,350.00	**Other Costs (P/R):**	$7,763.00
Slash Disposal:	$0.00	**Other Costs:**	$18,225.00

Miles of Road

Road Maintenance: $9.59

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	4.2
Alder (Red)	$0.00	2.0	4.0

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Date: January 08, 2020

Logging Costs Breakdown

Logging	Road Maint	Fire Protect	Hauling	Other P/R appl	Profit & Risk	Slash Disposal	Brand & Paint	Other	Total
Douglas - Fir									
$224.69	$9.59	$0.83	$75.40	$0.73	$31.12	$0.00	$2.00	$1.72	$346.08
Alder (Red)									
$236.30	$9.59	$0.83	$118.75	$0.73	$36.62	$0.00	$2.00	$1.72	$406.54

Specie	Amortization	Pond Value	Stumpage	Amortized
Douglas - Fir	$0.00	$668.09	$322.01	$0.00
Alder (Red)	$0.00	$525.88	$119.34	$0.00

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District: Tillamook **Date: January 08, 2020**

Summary

Amortized

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

Unamortized

Specie	MBF	Value	Total
Douglas - Fir	9,913	$322.01	$3,192,085.13
Alder (Red)	700	$119.34	$83,538.00

Gross Timber Sale Value

Recovery: $3,275,623.13

Prepared By: Nathan Atchison **Phone:** 503-842-2545

PROJECT SUMMARY SHEET

Sale: Cruisin' Murphy

CONSTRUCTION

Point	I to J	1+60	stations =	$556.11
Point	K to L	5+85	stations =	$26,225.78
Point	CC to DD	2+15	stations =	$7,791.73
Point	II to JJ	5+90	stations =	$17,433.10
			SUBTOTAL CONSTRUCTION	**$52,006.72**

IMPROVEMENT

Point	A to B	161+30	stations =	$88,577.36
Point	C to D	8+75	stations =	$12,026.43
Point	E to F	30+35	stations =	$43,219.45
Point	G to H	2+60	stations =	$5,344.70
Point	I to J	19+35	stations =	$6,795.87
Point	O to P	35+60	stations =	$46,452.23
Point	Q to R	73+60	stations =	$59,982.75
Point	S to T	3+70	stations =	$9,479.80
Point	U to V	131+90	stations =	$34,032.33
Point	W to X	100+75	stations =	$85,927.44
Point	Y to Z	42+90	stations =	$17,979.85
Point	AA to BB	1+55	stations =	$6,584.43
Point	EE to FF	11+90	stations =	$6,466.50
Point	GG to HH	15+25	stations =	$11,910.78
			SUBTOTAL IMPROVEMENT	**$434,779.92**

RECONSTRUCTION

Point	M to N	6+55	stations =	$14,735.23
Point	S to T	19+85	stations =	$33,426.01
			SUBTOTAL RECONSTRUCTION	**$48,161.24**

SPECIAL PROJECTS

Test Holes Site - Murphy Grade	$3,300.00
Construct 3,070 C. Y. stockpile in Stockpile Site 1:	$44,150.00
Construct 1,650 C. Y. stockpile in Stockpile Site 2:	$24,290.00
Construct 2,280 C. Y. stockpile in Stockpile Site 3:	$37,825.00
SUBTOTAL SPECIAL PROJECTS	**$109,565.00**

MOVE IN **$5,837.12**

GRAND TOTAL **$650,350.00**

SUMMARY OF CONSTRUCTION COST

Sale: **Cruisin' Murphy** Road: **A to B**

Construction -	0+00	stations	Improvement -	161+30	stations	Reconstruction -	0+00	stations
	0.00	miles		3.05	miles		0.00	miles

IMPROVEMENT: CLEARING AND GRUBBING -

Widening:144+60 to 145+95	0.072	acres @	$1,275.00	per acre =	$91.80	
				TOTAL CLEARING AND GRUBBING		$91.80

IMPROVEMENT: EXCAVATION -

Widening	380	cy. @	$2.50	per c.y.=	$950.00	
				TOTAL EXCAVATION		$950.00

IMPROVEMENT: ENDHAUL -

Widening	144+60	to	145+70	319	cy. @	$2.19	per c.y.=	$698.61	
Widening	145+70	to	145+95	61	cy. @	$2.20	per c.y.=	$134.20	
Spread & compact				380	cy. @	$0.50	per c.y.=	$190.00	
							TOTAL ENDHAUL		$1,022.81

CULVERTS - MATERIALS & INSTALLATION

Culverts

270	LF of 18"	$5,400.00	
		$5,400.00	

Culvert Stakes & Markers

8 markers		$64.00	
		TOTAL CULVERTS	**$5,464.00**

ROCK

0+00 to	133+20	2,270	cy. of	Crushed	@	$19.39	per c.y.=	$44,015.30	
133+20 to	147+40	490	cy. of	Crushed	@	$18.28	per c.y.=	$8,957.20	
147+40 to	161+30	780	cy. of	Crushed	@	$18.08	per c.y.=	$14,102.40	
Culvert Backfill	48+65	20	cy. of	Crushed	@	$20.53	per c.y.=	$410.60	
Culvert Backfill	99+05	20	cy. of	Crushed	@	$19.44	per c.y.=	$388.80	
Culvert Backfill	105+60	20	cy. of	Crushed	@	$19.30	per c.y.=	$386.00	
Culvert Backfill	113+10	20	cy. of	Crushed	@	$19.14	per c.y.=	$382.80	
Culvert Backfill	116+20	20	cy. of	Crushed	@	$19.08	per c.y.=	$381.60	
Culvert Backfill	147+40	20	cy. of	Crushed	@	$18.41	per c.y.=	$368.20	
Culvert Backfill	150+25	20	cy. of	Crushed	@	$18.34	per c.y.=	$366.80	
Culvert Backfill	156+45	20	cy. of	Crushed	@	$17.43	per c.y.=	$348.60	
Junction Rock	0+00	30	cy. of	Crushed	@	$18.02	per c.y.=	$540.60	
Junction Rock	161+30	30	cy. of	Crushed	@	$20.36	per c.y.=	$610.80	
								TOTAL ROCK	**$71,259.70**

SPECIAL PROJECTS

Replace existing culv. markers @ 52+25, 73+60, 81+00 & 86+85 -	4.00	markers @	$8.00	per marker	$32.00	
Replace existing culv. markers @ 91+65, 97+00, 103+75 & 109+00 -	4.00	markers @	$8.00	per marker	$32.00	
Replace existing culv. markers @ 114+40, 124+90 & 143+05 -	3.00	markers @	$8.00	per marker	$24.00	
Clean culv. inlets/outlets @ 15+50, 32+10, 52+25, 55+90 & 59+95 -	5.00	culverts @	$60.00	per culvert	$300.00	
Clean culv. inlets/outlets @ 66+95, 73+60, 81+00, 86+85 & 91+65 -	5.00	culverts @	$60.00	per culvert	$300.00	
Clean culv. inlets/outlets @ 97+00, 103+75, 109+00, 114+40 & 124+90 -	5.00	culverts @	$60.00	per culvert	$300.00	
Clean culv. inlets/outlets @ 136+90, 143+05 & 153+10 -	3.00	culverts @	$60.00	per culvert	$180.00	
Grade and shape road pror to rocking -	161.30	stations @	$22.00	per station	$3,548.60	
Construct waste area -	2.00	hours @	$165.00	per hour	$330.00	
Construct lead-off ditch @ 48+65 & 159+80 -	2.00	lead-off ditches @	$85.00	per lead-off ditch	$170.00	
Roll road w/ vibratory roller prior to rocking -	161.30	stations @	$17.50	per station	$2,822.75	
Install culv. markers @ 15+50, 32+10, 55+90, 59+95, 66+95, 136+90 & 153+10 -	7.00	markers @	$8.00	per marker	$56.00	
Remove culverts from state lands	1.00	culvert @	$445.90	per culvert	$445.90	
Grass seed and fertilize -	3.76	acres @	$280.00	per acre	$1,052.80	
Mulching -	0.250	acres @	$780.00	per acre	$195.00	
				TOTAL SPECIAL PROJECTS		**$9,789.05**

GRAND TOTAL **$88,577.36**

SUMMARY OF CONSTRUCTION COST

Sale: **Cruisin' Murphy** Road: **C to D**

Construction -	0+00	stations	Improvement -	8+75	stations	Reconstruction -	0+00	stations
	0.00	miles		0.17	miles		0.00	miles

IMPROVEMENT: EXCAVATION -

Road Earthwork	8.75	sta. @	$90.00	per sta. =	$787.50	
				TOTAL EXCAVATION		**$787.50**

ROCK

0+00	to	8+75	500	cy. of	Crushed	@	$19.97	per c.y.=	$9,985.00	
Junction Rock		0+00	30	cy. of	Crushed	@	$19.91	per c.y.=	$597.30	
								TOTAL ROCK		**$10,582.30**

SPECIAL PROJECTS

Construct lead-off ditch @ 0+25, 3+15 & 5+05 -	3.00	lead-off ditches @	$85.00	per lead-off ditch	$255.00	
Grade and shape road prior to rocking -	8.75	stations @	$22.00	per station	$192.50	
Roll road w/ vibratory roller prior to rocking -	8.75	stations @	$17.50	per station	$153.13	
Grass seed and fertilize -	0.20	acres @	$280.00	per acre	$56.00	
				TOTAL SPECIAL PROJECTS		**$656.63**

GRAND TOTAL **$12,026.43**

SUMMARY OF CONSTRUCTION COST

Sale: **Cruisin' Murphy** Road: **E to F**

Construction -	0+00	stations	Improvement -	30+35	stations	Reconstruction -	0+00	stations
	0.00	miles		0.57	miles		0.00	miles

IMPROVEMENT: CLEARING AND GRUBBING -

Widening	0.047	acres @	$860.00	per acre =	$40.42	
Scattering	0.700	acres @	$1,275.00	per acre =	$892.50	
				TOTAL CLEARING AND GRUBBING		**$932.92**

IMPROVEMENT: EXCAVATION -

Road Earthwork	30.35	sta. @	$90.00	per sta. =	$2,731.50	
Widening	302	cy. @	$2.00	per c.y.=	$604.00	
				TOTAL EXCAVATION		**$3,335.50**

IMPROVEMENT: ENDHAUL -

Widening	0+00	to	2+35	272	cy. @	$1.20	per c.y.=	$326.40	
Widening	8+35	to	8+45	20	cy. @	$1.28	per c.y.=	$25.60	
Widening	9+25	to	9+35	10	cy. @	$1.31	per c.y.=	$13.10	
Spread & compact				302	cy. @	$0.50	per c.y.=	$151.00	
							TOTAL ENDHAUL		**$516.10**

CULVERTS - MATERIALS & INSTALLATION

Culverts

90 LF of 18" $1,800.00

$1,800.00

Culvert Stakes & Markers

2 markers $16.00

TOTAL CULVERTS **$1,816.00**

ROCK

0+00 to	5+05	320	cy. of	Jaw-Run	@	$17.53	per c.y.=	$5,609.60	
5+05 to	30+35	940	cy. of	Jaw-Run	@	$17.75	per c.y.=	$16,685.00	
Culvert Backfill	18+65	20	cy. of	Crushed	@	$19.47	per c.y.=	$389.40	
Culvert Backfill	24+70	40	cy. of	Crushed	@	$19.60	per c.y.=	$784.00	
Landing Rock	4+60	150	cy. of	Jaw-Run	@	$19.74	per c.y.=	$2,961.00	
Landing Rock	27+35	150	cy. of	Jaw-Run	@	$20.22	per c.y.=	$3,033.00	
Junction Rock	0+00	30	cy. of	Jaw-Run	@	$17.54	per c.y.=	$526.20	
Energy Dissipator	20+55	5	cy. of	Riprap	@	$19.14	per c.y.=	$95.70	
							TOTAL ROCK		**$30,083.90**

SPECIAL PROJECTS

Construct landing @ 4+60, left -	1.00	landing @	$370.00	per landing	$370.00	
Pull ditch and endhaul waste material from 5+50 to 30+35 -	24.85	stations @	$130.00	per station	$3,230.50	
Construct Waste Area 1 @ 3+70, left -	2.00	hours @	$165.00	per hour	$330.00	
Construct lead-off ditch at 18+65, right -	1.00	lead-off ditch @	$85.00	per lead-off ditch	$85.00	
Replace existing culv. markers @ 11+00, 14+05, 20+55 and 27+95 -	4.00	markers @	$8.00	per marker	$32.00	
Clean culv. inlets/outlets @ 11+00, 14+05, 20+55 and 27+95 -	4.00	culverts@	$65.00	per culvert	$260.00	
Construct landing @ 27+35, right	1.00	landing @	$370.00	per landing	$370.00	
Grade and shape road prior to rocking -	30.35	stations @	$22.00	per station	$667.70	
Roll road w/ vibratory roller prior to rocking -	30.35	stations @	$17.50	per station	$531.13	
Remove culverts from state lands	1.00	culvert @	$445.90	per culvert	$445.90	
Grass seed and fertilize -	0.76	acres @	$280.00	per acre	$212.80	
				TOTAL SPECIAL PROJECTS		**$6,535.03**

GRAND TOTAL **$43,219.45**

SUMMARY OF CONSTRUCTION COST

Sale: **Cruisin' Murphy** Road: **G to H**

Construction -	0+00	stations	Improvement -	2+60	stations	Reconstruction -	0+00	stations
	0.00	miles		0.05	miles		0.00	miles

IMPROVEMENT: CLEARING AND GRUBBING -									
Widening from 0+00 to 2+60, right				0.060	acres @	$860.00	per acre =	$51.60	
Scattering				0.120	acres @	$1,275.00	per acre =	$153.00	
							TOTAL CLEARING AND GRUBBING		**$204.60**
IMPROVEMENT: EXCAVATION -									
Road Earthwork				2.60	sta. @	$90.00	per sta. =	$234.00	
Widening				376	cy. @	$2.00	per c.y.=	$752.00	
							TOTAL EXCAVATION		**$986.00**
IMPROVEMENT: ENDHAUL -									
Widening	0+00	to	2+60	376	cy. @	$1.20	per c.y.=	$451.20	
Spread & compact				376	cy. @	$0.50	per c.y.=	$188.00	
							TOTAL ENDHAUL		**$639.20**
ROCK									
0+00 to	2+60	160	cy. of	Jaw-Run	@	$17.52	per c.y.=	$2,803.20	
Junction Rock	0+00	30	cy. of	Jaw-Run	@	$17.50	per c.y.=	$525.00	
							TOTAL ROCK		**$3,328.20**
SPECIAL PROJECTS									
Grade and shape road prior to rocking -				2.60	stations @	$22.00	per station	$57.20	
Roll road w/ vibratory roller prior to rocking				2.60	stations @	$17.50	per station	$45.50	
Grass seed and fertilize -				0.30	acres @	$280.00	per acre	$84.00	
							TOTAL SPECIAL PROJECTS		**$186.70**
							GRAND TOTAL		**$5,344.70**

SUMMARY OF CONSTRUCTION COST

Sale: **Cruisin' Murphy** Road: **I to J**

Construction -	1+60	stations	Improvement -	19+35	stations	Reconstruction -	0+00	stations
	0.03	miles		0.37	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+60	20%			$174	=			$278.40
									TOTAL	**$278.40**

IMPROVEMENT: CLEARING AND GRUBBING -

Scattering	1.330	acres @	$1,275.00	per acre =	$1,695.75	
				TOTAL CLEARING AND GRUBBING		**$1,695.75**

IMPROVEMENT: EXCAVATION -

Road Earthwork	19.35	sta. @	$90.00	per sta. =	$1,741.50	
				TOTAL EXCAVATION		**$1,741.50**

ROCK

0+00	to	1+00	80	cy. of	Jaw-Run	@	$19.73	per c.y.=	$1,578.40	
Junction Rock		0+00	30	cy. of	Jaw-Run	@	$19.72	per c.y.=	$591.60	
								TOTAL ROCK		**$2,170.00**

SPECIAL PROJECTS

Construct landing @ 20+95 -	1.00	landing @	$370.00	per landing	$370.00	
Grade and shape subgrade -	20.95	stations @	$22.00	per station	$460.90	
Roll subgrade with vibratory roller -	20.95	stations @	$17.50	per station	$366.63	
Grass seed and fertilize -	0.96	acres @	$280.00	per acre	$268.80	
				TOTAL SPECIAL PROJECTS		**$1,466.33**

GRAND TOTAL **$7,351.98**

SUMMARY OF CONSTRUCTION COST

Sale: **Cruisin' Murphy** Road: **K to L**

Construction -	5+85	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.11	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+20	35%		Outslope	$367	=			$807.40
2+20		3+65	70%		Outslope	$3,416	=			$4,953.20
3+65		4+05	48%		Outslope	$339	=			$135.60
4+05		4+50	20%		Outslope	$174	=			$78.30
4+50		5+05	28%		Outslope	$206	=			$113.30
5+05		5+45	30%		Outslope	$239	=			$95.60
5+45		5+85	38%		Outslope	$239	=			$95.60
									TOTAL	**$6,279.00**

ROCK

0+00 to	5+85	420	cy. of	Jaw-Run	@	$20.08 per c.y.=	$8,433.60	
Landing Rock	0+75	150	cy. of	Jaw-Run	@	$20.03 per c.y.=	$3,004.50	
Landing Rock	4+50	150	cy. of	Jaw-Run	@	$20.12 per c.y.=	$3,018.00	
Landing Rock	5+85	150	cy. of	Jaw-Run	@	$20.14 per c.y.=	$3,021.00	
Junction Rock	0+00	30	cy. of	Jaw-Run	@	$20.02 per c.y.=	$600.60	
							TOTAL ROCK	**$18,077.70**

SPECIAL PROJECTS

Construct Waste Area 1 -	2.00	hours @	$180.00	per hour	$360.00	
Construct landings @ 0+80, 4+50 & 5+85 -	3.00	landings @	$370.00	per landing	$1,110.00	
Grade and shape subgrade prior to rocking -	5.85	stations @	$22.00	per station	$128.70	
Roll subgrade w/ vibratory roller prior to rocking -	5.85	stations @	$17.50	per station	$102.38	
Grass seed and fertilize -	0.60	acres @	$280.00	per acre	$168.00	
					TOTAL SPECIAL PROJECTS	**$1,869.08**

GRAND TOTAL **$26,225.78**

SUMMARY OF CONSTRUCTION COST

Sale: **Cruisin' Murphy** Road: **M to N**

Construction -	0+00	stations	Improvement -		stations	Reconstruction -	6+55 stations
	0.00	miles		0.00	miles		0.12 miles

RECONSTRUCTION: CLEARING AND GRUBBING -

Scattering	0.780	acres @	$1,275.00	per acre =	$994.50	
				TOTAL CLEARING AND GRUBBING		**$994.50**

RECONSTRUCTION: EXCAVATION -

Road Earthwork	6.55	sta. @	$90.00	per sta. =	$589.50	
				TOTAL EXCAVATION		**$589.50**

ROCK

0+00	to	6+55	430	cy. of	Jaw-Run	@	$20.24	per c.y.=	$8,703.20	
Junction Rock		0+00	30	cy. of	Jaw-Run	@	$20.16	per c.y.=	$604.80	
Landing Rock		6+55	150	cy. of	Jaw-Run	@	$20.31	per c.y.=	$3,046.50	
									TOTAL ROCK	**$12,354.50**

SPECIAL PROJECTS

Construct landing -	1.00	landing @	$370.00	per landing	$370.00	
Grade and shape subgrade prior to rocking -	6.55	stations @	$22.00	per station	$144.10	
Roll subgrade w/ vibratory roller prior to rocking -	6.55	stations @	$17.50	per station	$114.63	
Grass seed and fertilize -	0.60	acres @	$280.00	per acre	$168.00	
				TOTAL SPECIAL PROJECTS		**$796.73**

GRAND TOTAL **$14,735.23**

SUMMARY OF CONSTRUCTION COST

Sale: **Cruisin' Murphy** Road: **O to P**

Construction -	0+00	stations	Improvement -	35+60	stations	Reconstruction -	0+00	stations
	0.00	miles		0.67	miles		0.00	miles

IMPROVEMENT: CLEARING AND GRUBBING -										
Widening					0.141	acres @	$860.00	per acre =	$121.26	
								TOTAL CLEARING AND GRUBBING		**$121.26**
IMPROVEMENT: EXCAVATION -										
Widening					741	cy. @	$2.00	per c.y.=	$1,482.00	
								TOTAL EXCAVATION		**$1,482.00**
IMPROVEMENT: ENDHAUL -										
Widening	20+15	to	24+25		741	cy. @	$2.39	per c.y.=	$1,770.99	
Spread & compact					741	cy. @	$0.50	per c.y.=	$370.50	
								TOTAL ENDHAUL		**$2,141.49**
ROCK										
0+00 to	35+60	2,030	cy. of	Crushed		@	$17.98	per c.y.=	$36,499.40	
Junction Rock	0+00	30	cy. of	Crushed		@	$18.24	per c.y.=	$547.20	
Junction Rock	35+60	30	cy. of	Crushed		@	$17.73	per c.y.=	$531.90	
Energy Dissipator	3+15	5	cy. of	Riprap		@	$18.87	per c.y.=	$94.35	
Energy Dissipator	31+20	5	cy. of	Riprap		@	$18.27	per c.y.=	$91.35	
								TOTAL ROCK		**$37,764.20**
SPECIAL PROJECTS										
Replace existing culv. markers @ 3+15, 16+45 and 31+20 -					3.00	markers @	$8.00	per markers	$24.00	
Install culvert markers @ 8+75 and 20+15 -					2.00	markers @	$8.00	per markers	$16.00	
Construct waste areas -					2.00	hours @	$130.00	per hour	$260.00	
Cean culvert inlets @ 3+15, 8+75, 16+45, 20+15 & 31+20 -					5.00	inlets @	$60.00	per inlet	$300.00	
Pull ditch & end haul waste material from 0+00 to 20+15 -					20.15	stations @	$130.00	per station	$2,619.50	
Grade and shape road prior to rocking -					35.60	stations @	$22.00	per station	$783.20	
Roll road w/ vibratory roller prior to rocking -					35.60	stations @	$17.50	per station	$623.00	
Grass seed and fertilize -					1.02	acres @	$280.00	per acre	$285.60	
Mulching -					0.041	acres @	$780.00	per acre	$31.98	
								TOTAL SPECIAL PROJECTS		**$4,943.28**
								GRAND TOTAL		**$46,452.23**

SUMMARY OF CONSTRUCTION COST

Sale: **Cruisin' Murphy** Road: **Q to R**

Construction -			Improvement -			Reconstruction -		
	0+00	stations		73+60	stations		0+00	stations
	0.00	miles		1.39	miles		0.00	miles

CULVERTS - MATERIALS & INSTALLATION

Culverts			
260	LF of 18"	$5,200.00	
		$5,200.00	
Culvert Stakes & Markers			
6	markers	$48.00	
		TOTAL CULVERTS	$5,248.00

ROCK

0+00 to	73+60	2,570	cy. of	Crushed	@	$18.04	per c.y.=	$46,362.80	
Culvert Backfill	10+15	20	cy. of	Crushed	@	$17.18	per c.y.=	$343.60	
Culvert Backfill	14+90	20	cy. of	Crushed	@	$17.28	per c.y.=	$345.60	
Culvert Backfill	23+05	20	cy. of	Crushed	@	$17.45	per c.y.=	$349.00	
Culvert Backfill	34+95	20	cy. of	Crushed	@	$17.71	per c.y.=	$354.20	
Culvert Backfill	45+10	20	cy. of	Crushed	@	$17.93	per c.y.=	$358.60	
Culvert Backfill	50+25	20	cy. of	Crushed	@	$18.04	per c.y.=	$360.80	
Junction Rock	0+00	30	cy. of	Crushed	@	$17.24	per c.y.=	$517.20	
Energy Dissipator	10+15	5	cy. of	Riprap	@	$17.68	per c.y.=	$88.40	
Energy Dissipator	14+90	5	cy. of	Riprap	@	$17.78	per c.y.=	$88.90	
Energy Dissipator	23+05	5	cy. of	Riprap	@	$17.95	per c.y.=	$89.75	
Energy Dissipator	34+95	5	cy. of	Riprap	@	$17.74	per c.y.=	$88.70	
Energy Dissipator	45+10	5	cy. of	Riprap	@	$17.93	per c.y.=	$89.65	
Energy Dissipator	50+25	5	cy. of	Riprap	@	$18.03	per c.y.=	$90.15	
Improve Intersection	52+45	50	cy. of	Crushed	@	$15.28	per c.y.=	$764.00	
								TOTAL ROCK	$50,291.35

SPECIAL PROJECTS

Clean culvert inlets/outlets 37+75 & 67+70 -	2.00	culverts @	$60.00	per culvert	$120.00	
Install culvert marker @ 37+75 -	1.00	culvert @	$8.00	per culvert	$8.00	
Construct lead-off ditch, left, @ 14+90, 24+25 & 35+70 -	3.00	lead-off ditches @	$85.00	per lead-off ditch	$255.00	
Construct lead-off ditch, left & right, @ 37+05 -	2.00	lead-off ditches @	$85.00	per lead-off ditch	$170.00	
Improve existing lead-off ditch, left, @ 1+00, 26+00 @ 41+60 -	3.00	lead-off ditches @	$60.00	per lead-off ditch	$180.00	
Prep Stockpile Site 3 @ 52+45 -	2.00	hours @	$165.00	per hour	$330.00	
Grade and shape road prior to rocking -	73.60	stations @	$22.00	per station	$1,619.20	
Roll road w/ vibratory roller prior to rocking -	73.60	stations @	$17.50	per station	$1,288.00	
Grass seed and fertilize -	1.69	acres @	$280.00	per acre	$473.20	
					TOTAL SPECIAL PROJECTS	$4,443.40

GRAND TOTAL **$59,982.75**

SUMMARY OF CONSTRUCTION COST

Sale: **Cruisin' Murphy** Road: **S to T**

Construction -	0+00	stations	Improvement -	3+70	stations	Reconstruction -	19+85	stations
	0.00	miles		0.07	miles		0.38	miles

IMPROVEMENT: CLEARING AND GRUBBING -

Widening from 0+00 to 3+70, left and right -	0.170	acres @	$860.00	per acre =	$146.20	
Scattering	0.340	acres @	$1,275.00	per acre =	$433.50	
					TOTAL CLEARING AND GRUBBING	**$579.70**

IMPROVEMENT: EXCAVATION -

Road Earthwork	3.70	sta. @	$90.00	per sta. =	$333.00	
Widening	892	cy. @	$2.00	per c.y.=	$1,784.00	
					TOTAL EXCAVATION	**$2,117.00**

IMPROVEMENT: ENDHAUL -

Widening	0+00	to	3+70	446	cy. @	$1.74	per c.y.=	$776.04	
Widening	0+00	to	3+70	446	cy. @	$1.74	per c.y.=	$776.04	
Spread & compact				892	cy. @	$0.50	per c.y.=	$446.00	
								TOTAL ENDHAUL	**$1,998.08**

RECONSTRUCTION: CLEARING AND GRUBBING -

Scattering	3.280	acres @	$1,275.00	per acre =	$4,182.00	
					TOTAL CLEARING AND GRUBBING	**$4,182.00**

RECONSTRUCTION: EXCAVATION -

Road Earthwork	19.85	sta. @	$180.00	per sta. =	$3,573.00	
					TOTAL EXCAVATION	**$3,573.00**

CULVERTS - MATERIALS & INSTALLATION

Culverts

40	LF of 18"	$800.00
		$800.00

Culvert Stakes & Markers

1	markers	$8.00

TOTAL CULVERTS **$808.00**

ROCK

0+00 to	23+60	1,410	cy. of	Jaw-Run	@	$16.40	per c.y.=	$23,124.00	
Culvert Backfill	3+70	20	cy. of	Crushed	@	$17.35	per c.y.=	$347.00	
Junction Rock	0+00	30	cy. of	Jaw-Run	@	$16.19	per c.y.=	$485.70	
Landing Rock	23+60	150	cy. of	Jaw-Run	@	$18.22	per c.y.=	$2,733.00	
								TOTAL ROCK	**$26,689.70**

SPECIAL PROJECTS

Construct landing at 23+60 -	1.00	landing @	$370.00	per landing	$370.00	
Construct lead-off ditch right and left @ 0+00 -	1.00	lead-off ditch @	$85.00	per lead-off ditch	$85.00	
Construct waste areas @ 31+50 on Murphy Grade -	2.50	hours @	$165.00	per hour	$412.50	
Construct lead-off ditch, right, @ 3+70 -	1.00	lead-off ditch @	$85.00	per lead-off ditch	$85.00	
Waterbar rec. trail so it drains into culvert -	2.00	hours @	$165.00	per hour	$330.00	
Grade and shape subgrade prior to rocking -	23.55	stations @	$22.00	per station	$518.10	
Roll subgrade w/ vibratory roller prior to rocking -	23.55	stations @	$17.50	per station	$412.13	
Grass seed and fertilize -	2.44	acres @	$280.00	per acre	$683.20	
Mulching from 0+00 to 3+70 -	0.08	acres @	$780.00	per acre	$62.40	
					TOTAL SPECIAL PROJECTS	**$2,958.33**

GRAND TOTAL **$42,905.81**

SUMMARY OF CONSTRUCTION COST

Sale: **Cruisin' Murphy** Road: **U to V**

Construction -	0+00	stations	Improvement -	131+90	stations	Reconstruction -	0+00	stations
	0.00	miles		2.50	miles		0.00	miles

IMPROVEMENT: CLEARING AND GRUBBING -

Scattering from 119+55 to 122+70 -	0.150	acres @	$1,275.00	per acre =	$191.25	
				TOTAL CLEARING AND GRUBBING		**$191.25**

IMPROVEMENT: EXCAVATION -

Road earthwork from 119+55 to 122+70 -	3.15	sta. @	$180.00	per sta. =	$567.00	
Widening from 87+95 to 91+10 -	600	cy. @	$2.50	per c.y.=	$1,500.00	
				TOTAL EXCAVATION		**$2,067.00**

IMPROVEMENT: ENDHAUL -

Widening	119+55	to	122+70	600	cy. @	$1.46	per c.y.=	$876.00	
Spread & compact				600	cy. @	$0.50	per c.y.=	$300.00	
							TOTAL ENDHAUL		**$1,176.00**

CULVERTS - MATERIALS & INSTALLATION

Culverts					
150	LF of 18"	$3,000.00	190	LF of 24"	$5,890.00
Culvert Stakes & Markers					
11 markers		$88.00			
				TOTAL CULVERTS	**$8,978.00**

ROCK

119+55 to	122+70	350	cy. of	Crushed	@	$17.16	per c.y.=	$6,006.00	
127+80 to	131+90	240	cy. of	Crushed	@	$17.13	per c.y.=	$4,111.20	
Culvert Backfill	16+35	20	cy. of	Crushed	@	$19.09	per c.y.=	$381.80	
Energy Dissipator	16+35	5	cy. of	Riprap	@	$19.59	per c.y.=	$97.95	
Culvert Backfill	31+60	20	cy. of	Crushed	@	$18.76	per c.y.=	$375.20	
Energy Dissipator	31+60	5	cy. of	Riprap	@	$19.26	per c.y.=	$96.30	
Culvert Backfill	32+50	20	cy. of	Crushed	@	$18.74	per c.y.=	$374.80	
Energy Dissipator	32+50	5	cy. of	Riprap	@	$19.24	per c.y.=	$96.20	
Culvert Backfill	44+55	20	cy. of	Crushed	@	$18.48	per c.y.=	$369.60	
Energy Dissipator	44+55	5	cy. of	Riprap	@	$18.98	per c.y.=	$94.90	
Culvert Backfill	47+70	20	cy. of	Crushed	@	$18.42	per c.y.=	$368.40	
Culvert Backfill	66+40	20	cy. of	Crushed	@	$18.02	per c.y.=	$360.40	
Culvert Backfill	76+60	20	cy. of	Crushed	@	$17.80	per c.y.=	$356.00	
Energy Dissipator	76+60	5	cy. of	Riprap	@	$18.30	per c.y.=	$91.50	
Culvert Backfill	79+15	20	cy. of	Crushed	@	$17.74	per c.y.=	$354.80	
Culvert Backfill	81+75	20	cy. of	Crushed	@	$17.69	per c.y.=	$353.80	
Culvert Backfill	85+20	20	cy. of	Crushed	@	$17.61	per c.y.=	$352.20	
Energy Dissipator	85+20	5	cy. of	Riprap	@	$18.11	per c.y.=	$90.55	
Culvert Backfill	92+30	20	cy. of	Crushed	@	$17.46	per c.y.=	$349.20	
Energy Dissipator	92+30	5	cy. of	Riprap	@	$17.96	per c.y.=	$89.80	
Backfill:Removed Culvert	93+10	40	cy. of	Crushed	@	$17.44	per c.y.=	$697.60	
Backfill:Removed Culvert	94+90	40	cy. of	Crushed	@	$17.40	per c.y.=	$696.00	
Energy Dissipator:Drainage Ditch	94+90	30	cy. of	Riprap	@	$17.90	per c.y.=	$537.00	
								TOTAL ROCK	**$16,701.20**

SPECIAL PROJECTS

Install culvert marker @ 0+00, 10+50, 16+90, 28+60, 46+55 & 67+05 -	6.00	markers @	$8.00	per marker	$48.00	
Install culvert marker @ 68+95, 71+45,75+80 -	3.00	markers @	$8.00	per marker	$24.00	
Construct Waste Area 3 @ 127+15 -	5.00	hours @	$165.00	per hour	$825.00	
Construct lead-off ditch @ 47+70, 66+40, 67+05, 79+15, 81+75, 85+20 & 92+30 -	7.00	lead-off ditches @	$85.00	per lead-off ditch	$595.00	
Clean culvert inlet/outlet @ 0+00, 10+50, 28+60 & 68+95 -	4.00	inlets/outlets @	$65.00	per inlet/outlet	$260.00	
Construct drainage ditch @ 94+90 -	5.00	hours @	$165.00	per hour	$825.00	
Construct ditch from 92+30 to 93+10 -	0.80	stations @	$195.00	per station	$156.00	
Grade and shape subgrade prior to rocking from 119+55 to 122+70 -	3.15	stations @	$22.00	per station	$69.30	
Grade and shape road prior to rocking from 127+80 to 131+90 -	4.10	stations @	$22.00	per station	$90.20	
Excavate 2 existing culverts @ 93+10 and 94+90 -	2.00	hours @	$165.00	per hour	$330.00	
Roll subgrade w/ vibratory roller prior to rocking from 119+55 to 122+70 -	3.15	stations @	$17.50	per station	$55.13	
Roll road w/ vibratory roller prior to rocking from 127+80 to 131+90 -	4.10	stations @	$17.50	per station	$71.75	
Remove culverts from state lands	2.00	@	$509.50	total	$509.50	
Grass seed and fertilize -	1.00	acres @	$280.00	per acre	$280.00	
Mulching -	1.00	acres @	$780.00	per acre	$780.00	
				TOTAL SPECIAL PROJECTS		**$4,918.88**

GRAND TOTAL **$34,032.33**

SUMMARY OF CONSTRUCTION COST

Sale: **Cruisin' Murphy** Road: **W to X**

Construction -	0+00	stations	Improvement -	100+75	stations	Reconstruction -	0+00	stations
	0.00	miles		1.91	miles		0.00	miles

IMPROVEMENT: CLEARING AND GRUBBING -

Scattering				0.710	acres @	$1,275.00	per acre =	$905.25	
							TOTAL CLEARING AND GRUBBING		**$905.25**

IMPROVEMENT: EXCAVATION -

Road Earthwork	91+00	to	100+75	9.75	sta. @	$90.00	per sta. =	$877.50	
Slope Stabilization Prep.	0+10	to	0+35	126	cy. @	$2.50	per c.y.=	$315.00	
							TOTAL EXCAVATION		**$1,192.50**

CULVERTS - MATERIALS & INSTALLATION

Culverts

80	LF of 18"	$1,600.00	140	LF of 24"	$4,340.00	
		$1,600.00			$4,340.00	

Culvert Stakes & Markers

5	markers	$40.00		
			TOTAL CULVERTS	**$5,980.00**

ROCK

21+05 to	91+00	1,630	cy. of	Crushed	@	$18.96	per c.y.=	$30,904.80	
91+00 to	100+75	590	cy. of	Jaw-Run	@	$17.98	per c.y.=	$10,608.20	
Culvert Backfill	0+00	20	cy. of	Crushed	@	$17.85	per c.y.=	$357.00	
Energy Dissipator	0+00	5	cy. of	Riprap	@	$18.35	per c.y.=	$91.75	
Culvert Backfill	0+25	20	cy. of	Crushed	@	$17.86	per c.y.=	$357.20	
Slope Stabilization	0+10-0+35	30	cy. of	Riprap	@	$18.36	per c.y.=	$550.80	
Backfill	0+10-0+35	10	cy. of	Pit-Run	@	$17.06	per c.y.=	$170.60	
Energy Dissipator	0+85	5	cy. of	Riprap	@	$18.37	per c.y.=	$91.85	
Culvert Backfill	1+50	20	cy. of	Crushed	@	$17.88	per c.y.=	$357.60	
Energy Dissipator	1+50	5	cy. of	Riprap	@	$18.38	per c.y.=	$91.90	
Culvert Backfill	2+20	20	cy. of	Crushed	@	$17.90	per c.y.=	$358.00	
Energy Dissipator	2+20	5	cy. of	Riprap	@	$18.40	per c.y.=	$92.00	
Culvert Backfill	3+75	20	cy. of	Crushed	@	$17.93	per c.y.=	$358.60	
Energy Dissipator	3+75	5	cy. of	Riprap	@	$18.43	per c.y.=	$92.15	
Landing Rock	84+10	150	cy. of	Jaw-Run	@	$20.10	per c.y.=	$3,015.00	
Landing Rock	89+60	150	cy. of	Jaw-Run	@	$20.21	per c.y.=	$3,031.50	
Landing Rock	90+65	150	cy. of	Jaw-Run	@	$20.24	per c.y.=	$3,036.00	
Landing Rock	100+75	150	cy. of	Jaw-Run	@	$20.45	per c.y.=	$3,067.50	
								TOTAL ROCK	**$56,632.45**

SPECIAL PROJECTS

Construct Waste Areas 4 & 5 -	8.00	hours @	$165.00	per hour	$1,320.00	
Install culv. markers @ 0+85, 5+15, 35+80, 43+35, 50+20, 76+25, 85+05 & 88+4	8.00	markers @	$8.00	per marker	$64.00	
Excavate landing @ 84+10 -	30.00	hours @	$165.00	per hour	$4,950.00	
Haul material from excavated landing @ 84+10 -	30.00	hours @	$85.00	per hour	$2,550.00	
Compact waste material from landing construction @ 84+10 @ Waste Area 5 -	30.00	hours @	$125.00	per hour	$3,750.00	
Clear and grub landing @ 84+10 -	0.25	acres @	$1,275.00	per acre	$318.75	
Construct landings @ 89+60, 90+65 and 100+75 -	3.00	landings @	$370.00	per landing	$1,110.00	
Grade and shape road from 21+05 to 91+00 prior to rocking -	69.95	stations @	$22.00	per station	$1,538.90	
Grade and shape subgrade from 91+00 to 100+75 prior to rocking -	9.75	stations @	$22.00	per station	$214.50	
Construct lead-off ditch @ 1+50 & 2+20 -	2.00	lead-off ditches @	$85.00	per lead-off ditch	$170.00	
Excavate catch basin @ 0+25 -	2.00	hours @	$165.00	per hour	$330.00	
Roll road w/ vibratory roller from 21+05 to 91+00 prior to rocking -	69.95	stations @	$17.50	per station	$1,224.13	
Reconstruct fill slope from 0+10 to 0+35 w/ a medium excavator -	10.00	hours @	$165.00	per hour	$1,650.00	
End-haul excavated material from fill slope reconstruction -	10.00	hours @	$85.00	per hour	$850.00	
Roll subgrade w/ vibratory roller from 91+00 to 100+75 prior to rocking -	9.75	@	$0.00	total	$0.00	
Grass seed and fertilize -	1.86	acres @	$280.00	per acre	$520.80	
Mulching -	0.250	acres @	$780.00	per acre	$195.00	
					TOTAL SPECIAL PROJECTS	**$20,756.08**

GRAND TOTAL **$85,927.44**

SUMMARY OF CONSTRUCTION COST

Sale: **Cruisin' Murphy** Road: **Y to Z**

Construction -	0+00	stations	Improvement -	42+90	stations	Reconstruction -	0+00	stations
	0.00	miles		0.81	miles		0.00	miles

IMPROVEMENT: EXCAVATION -

Road Earthwork	42.90	sta. @	$25.00	per sta. =	$1,072.50	
				TOTAL EXCAVATION		$1,072.50

ROCK

0+00	to	1+00	80	cy. of	Jaw-Run	@	$16.96	per c.y.=	$1,356.80	
40+20	to	42+90	170	cy. of	Jaw-Run	@	$17.47	per c.y.=	$2,969.90	
Junction Rock		0+00	30	cy. of	Jaw-Run	@	$16.95	per c.y.=	$508.50	
Landing Rock		21+50	150	cy. of	Jaw-Run	@	$19.29	per c.y.=	$2,893.50	
Landing Rock		25+75	150	cy. of	Jaw-Run	@	$19.38	per c.y.=	$2,907.00	
Landing Rock		36+75	150	cy. of	Jaw-Run	@	$19.62	per c.y.=	$2,943.00	
Junction Rock		42+90	30	cy. of	Jaw-Run	@	$17.47	per c.y.=	$524.10	
									TOTAL ROCK	$14,102.80

SPECIAL PROJECTS

Construct landings @ 21+50, 25+75 & 36+75 -	3.00	landings @	$370.00	per landing	$1,110.00	
Grade and shape road -	42.90	stations @	$22.00	per station	$943.80	
Roll road w/ vibratory roller -	42.90	stations @	$17.50	per station	$750.75	
				TOTAL SPECIAL PROJECTS		$2,804.55

GRAND TOTAL **$17,979.85**

SUMMARY OF CONSTRUCTION COST

Sale: **Cruisin' Murphy** Road: **AA to BB**

Construction -	0+00	stations	Improvement -	1+55	stations	Reconstruction -	0+00	stations
	0.00	miles		0.03	miles		0.00	miles

ROCK

0+00 to	1+55	140	cy. of	Jaw-Run	@	$19.16	per c.y.=	$2,682.40	
Junction Rock	0+00	30	cy. of	Jaw-Run	@	$19.14	per c.y.=	$574.20	
Landing Rock	1+55	150	cy. of	Jaw-Run	@	$19.18	per c.y.=	$2,877.00	
								TOTAL ROCK	**$6,133.60**

SPECIAL PROJECTS

Construct landing @ 1+55 -	1.00	landing @	$370.00	per landing	$370.00	
Grade and shape road prior to rocking -	1.55	stations @	$22.00	per station	$34.10	
Roll road w/ vibratory roller prior to rocking -	1.55	stations @	$17.50	per station	$27.13	
Grass seed and fertilize -	0.07	acres @	$280.00	per acre	$19.60	
					TOTAL SPECIAL PROJECTS	**$450.83**

GRAND TOTAL **$6,584.43**

SUMMARY OF CONSTRUCTION COST

Sale: **Cruisin' Murphy** Road: **CC to DD**

Construction -	2+15	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.04	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+15	25%			$206	=			$442.90
									TOTAL	**$442.90**

ROCK

0+00	to	2+15	170	cy. of	Jaw-Run	@	$19.53	per c.y.=	$3,320.10	
Junction Rock		0+00	30	cy. of	Jaw-Run	@	$19.51	per c.y.=	$585.30	
Landing Rock		2+15	150	cy. of	Jaw-Run	@	$19.55	per c.y.=	$2,932.50	
									TOTAL ROCK	**$6,837.90**

SPECIAL PROJECTS

Construct landing at 2+15 -	1.00	landing @	$370.00	per landing	$370.00	
Grade and shape subgrade prior to rocking -	2.15	stations @	$22.00	per station	$47.30	
Roll subgrade w/ vibratory roller prior to rocking -	2.15	stations @	$17.50	per station	$37.63	
Grass seed and fertilize -	0.20	acres @	$280.00	per acre	$56.00	
					TOTAL SPECIAL PROJECTS	**$510.93**

GRAND TOTAL **$7,791.73**

SUMMARY OF CONSTRUCTION COST

Sale: **Cruisin' Murphy** Road: **EE to FF**

Construction -	0+00	stations	Improvement -	11+90	stations	Reconstruction -	0+00	stations
	0.00	miles		0.23	miles		0.00	miles

IMPROVEMENT: CLEARING AND GRUBBING -

Scattering	1.090	acres @	$1,275.00	per acre =	$1,389.75	
				TOTAL CLEARING AND GRUBBING		**$1,389.75**

IMPROVEMENT: EXCAVATION -

Road Earthwork	11.90	sta. @	$90.00	per sta. =	$1,071.00	
				TOTAL EXCAVATION		**$1,071.00**

ROCK

0+00	to	1+00	80	cy. of	Jaw-Run	@	$19.28	per c.y.=	$1,542.40	
Junction Rock		0+00	30	cy. of	Jaw-Run	@	$19.27	per c.y.=	$578.10	
								TOTAL ROCK		**$2,120.50**

SPECIAL PROJECTS

Construct landings @ 5+90, 7+00 & 11+90 -	3.00	landings @	$370.00	per landing	$1,110.00	
Grade and shape subgrade -	11.90	stations @	$22.00	per station	$261.80	
Roll subgrade w/ vibratory roller -	11.90	stations @	$17.50	per station	$208.25	
Grass seed and fertilize -	1.09	acres @	$280.00	per acre	$305.20	
				TOTAL SPECIAL PROJECTS		**$1,885.25**

GRAND TOTAL **$6,466.50**

SUMMARY OF CONSTRUCTION COST

Sale: **Cruisin' Murphy** Road: **GG to HH**

Construction -	0+00	stations	Improvement -	15+25	stations	Reconstruction -	0+00	stations
	0.00	miles		0.29	miles		0.00	miles

ROCK

0+00 to	15+25	400	cy. of	Jaw-Run	@	$14.15	per c.y.=	$5,660.00	
Junction Rock	0+00	30	cy. of	Jaw-Run	@	$12.45	per c.y.=	$373.50	
Landing Rock	15+25	150	cy. of	Jaw-Run	@	$20.23	per c.y.=	$3,034.50	
								TOTAL ROCK	**$9,068.00**

SPECIAL PROJECTS

Construct landing @ 15+25 -	1.00	landing @	$370.00	per landing	$370.00	
Excavate junction corner -	10.00	hours @	$165.00	per hour	$1,650.00	
Construct lead-off ditch @ 8+10, right, and 12+50, left -	2.00	lead-off ditches @	$85.00	per lead-off ditch	$170.00	
Grade and shape road prior to rocking -	15.25	stations @	$22.00	per station	$335.50	
Roll road w/ vibratory roller prior to rocking -	15.25	stations @	$17.50	per station	$266.88	
Grass seed and fertilize -	0.18	acres @	$280.00	per acre	$50.40	
				TOTAL SPECIAL PROJECTS		**$2,842.78**
				GRAND TOTAL		**$11,910.78**

SUMMARY OF CONSTRUCTION COST

Sale: **Cruisin' Murphy** Road: **II to JJ**

Construction -	5+90	stations	Improvement -	0+00	stations	Reconstruction -	0+00	stations
	0.11	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+95	25%			$206	=			$607.70
2+95		5+90	40%			$303	=			$893.85
									TOTAL	$1,501.55

ROCK

0+00	to	5+90	400	cy. of	Jaw-Run	@	$20.27 per c.y.=	$8,108.00	
Junction Rock		0+00	30	cy. of	Jaw-Run	@	$20.21 per c.y.=	$606.30	
Landing Rock		3+90	150	cy. of	Jaw-Run	@	$20.29 per c.y.=	$3,043.50	
Landing Rock		5+90	150	cy. of	Jaw-Run	@	$20.33 per c.y.=	$3,049.50	
								TOTAL ROCK	$14,807.30

SPECIAL PROJECTS

Construct landings @ 3+90 & 5+90 -	2.00	landings @	$370.00	per landing	$740.00	
Grade and shape subgrade prior to rocking -	5.90	stations @	$22.00	per station	$129.80	
Roll subgrade w/ vibratory roller prior to rocking -	5.90	stations @	$17.50	per station	$103.25	
Grass seed and fertilize -	0.54	acres @	$280.00	per acre	$151.20	
					TOTAL SPECIAL PROJECTS	$1,124.25

GRAND TOTAL **$17,433.10**

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Cruiser Creek Pit - Crushed	Location:	Sec. 16 , T1S, R7W, W.M.	
Sale:	**Cruisin' Murphy**		Road:	12025 c.y.
Swell:	1.40		Stockpile:	7000 c.y.
Shirinkage	1.16		Total Truck Loads:	19025 c.y.
Drill Pct.:	100%		In Place Total:	13589 c.y.

Pit development & cleanup including clearing and grubbing of waste area, place overburden in waste area, spread and compact.						$7,100.00
Drill & Shoot:	$3.25	/cu.yd.	x	13589 cu.yds.	=	$44,164.25
Push Rock:	$1.00	/cu.yd.	x	19025 cu.yds.	=	$19,025.00
Load Crusher:	$1.00	/cu.yd.	x	19025 cu.yds.	=	$19,025.00
Crush Rock:	$4.25	/cu.yd.	x	19025 cu.yds.	=	$80,856.25
Load Dump Truck:	$1.00	/cu.yd.	x	19025 cu.yds.	=	$19,025.00
Oversize Reduction:	$6.00	/cu.yd.	x	1903 cu.yds.	=	$11,418.00
					Subtotal	$200,613.50

Move In/Set-up Crusher					$3,275.00
Move In and set up Drill and Compressor	1	@	$964.36	=	$964.36
Move in Roller and Compactor	1	@	$533.50	=	$533.50
Move in Grader	1	@	$929.76	=	$929.76
Move in D-8	1	@	$1,073.86	=	$1,073.86
Move in Loader	1	@	$932.86	=	$932.86
Move in Excavator	1	@	$1,047.86	=	$1,047.86
Move in Trucks	6	@	$194.69	=	$1,168.14
Move in Water Truck	1	@	$194.69	=	$194.69
Change Gradation					
				Subtotal	$10,120.03
				TOTAL PRODUCTION COSTS	$210,733.53

Base Cost= $11.08 Per Cu.Yd.

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 0 13320 (Crushed)	5.11	3.20	11.08	19.39	2270	$44,015.30
A to B 13320 14740 (Crushed)	4.00	3.20	11.08	18.28	490	$8,957.20
A to B 14740 16130 (Crushed)	3.80	3.20	11.08	18.08	780	$14,102.40
A to B Culvert Backfill (Crushed)	7.95	1.50	11.08	20.53	20	$410.60
A to B Culvert Backfill (Crushed)	6.86	1.50	11.08	19.44	20	$388.80
A to B Culvert Backfill (Crushed)	6.72	1.50	11.08	19.30	20	$386.00
A to B Culvert Backfill (Crushed)	6.56	1.50	11.08	19.14	20	$382.80
A to B Culvert Backfill (Crushed)	6.50	1.50	11.08	19.08	20	$381.60
A to B Culvert Backfill (Crushed)	5.83	1.50	11.08	18.41	20	$368.20
A to B Culvert Backfill (Crushed)	5.76	1.50	11.08	18.34	20	$366.80
A to B Culvert Backfill (Crushed)	4.85	1.50	11.08	17.43	20	$348.60
A to B Junction Rock (Crushed)	3.74	3.20	11.08	18.02	30	$540.60
A to B Junction Rock (Crushed)	6.08	3.20	11.08	20.36	30	$610.80
C to D 0 875 (Crushed)	5.69	3.20	11.08	19.97	500	$9,985.00
C to D Junction Rock (Crushed)	5.63	3.20	11.08	19.91	30	$597.30
E to F Culvert Backfill (Crushed)	6.89	1.50	11.08	19.47	20	$389.40
E to F Culvert Backfill (Crushed)	7.02	1.50	11.08	19.60	40	$784.00
E to F Energy Dissipator (Riprap)	6.36	1.70	11.08	19.14	5	$95.70
O to P 0 3560 (Crushed)	3.70	3.20	11.08	17.98	2030	$36,499.40
O to P Junction Rock (Crushed)	3.96	3.20	11.08	18.24	30	$547.20
O to P Junction Rock (Crushed)	3.45	3.20	11.08	17.73	30	$531.90
O to P Energy Dissipator (Riprap)	5.79	2.00	11.08	18.87	5	$94.35
O to P Energy Dissipator (Riprap)	5.19	2.00	11.08	18.27	5	$91.35
Q to R 0 7360 (Crushed)	3.76	3.20	11.08	18.04	2570	$46,362.80
Q to R Culvert Backfill (Crushed)	4.60	1.50	11.08	17.18	20	$343.60
Q to R Culvert Backfill (Crushed)	4.70	1.50	11.08	17.28	20	$345.60
Q to R Culvert Backfill (Crushed)	4.87	1.50	11.08	17.45	20	$349.00
Q to R Culvert Backfill (Crushed)	5.13	1.50	11.08	17.71	20	$354.20
Q to R Culvert Backfill (Crushed)	5.35	1.50	11.08	17.93	20	$358.60
Q to R Culvert Backfill (Crushed)	5.46	1.50	11.08	18.04	20	$360.80
Q to R Junction Rock (Crushed)	2.96	3.20	11.08	17.24	30	$517.20
Q to R Energy Dissipator (Riprap)	4.60	2.00	11.08	17.68	5	$88.40
Q to R Energy Dissipator (Riprap)	4.70	2.00	11.08	17.78	5	$88.90
Q to R Energy Dissipator (Riprap)	4.87	2.00	11.08	17.95	5	$89.75
Q to R Energy Dissipator (Riprap)	4.66	2.00	11.08	17.74	5	$88.70
Q to R Energy Dissipator (Riprap)	4.85	2.00	11.08	17.93	5	$89.65

Q to R Energy Dissipator (Riprap)	4.95	2.00	11.08	18.03	5		$90.15
Q to R Improve Intersection (Crushed)	2.50	1.70	11.08	15.28	50		$764.00
S to T Culvert Backfill (Crushed)	4.77	1.50	11.08	17.35	20		$347.00
U to V 11955 12270 (Crushed)	2.88	3.20	11.08	17.16	350		$6,006.00
U to V 12780 13190 (Crushed)	2.85	3.20	11.08	17.13	240		$4,111.20
U to V Culvert Backfill (Crushed)	6.51	1.50	11.08	19.09	20		$381.80
U to V Energy Dissipator (Riprap)	6.51	2.00	11.08	19.59	5		$97.95
U to V Culvert Backfill (Crushed)	6.18	1.50	11.08	18.76	20		$375.20
U to V Energy Dissipator (Riprap)	6.18	2.00	11.08	19.26	5		$96.30
U to V Culvert Backfill (Crushed)	6.16	1.50	11.08	18.74	20		$374.80
U to V Energy Dissipator (Riprap)	6.16	2.00	11.08	19.24	5		$96.20
U to V Culvert Backfill (Crushed)	5.90	1.50	11.08	18.48	20		$369.60
U to V Energy Dissipator (Riprap)	5.90	2.00	11.08	18.98	5		$94.90
U to V Culvert Backfill (Crushed)	5.84	1.50	11.08	18.42	20		$368.40
U to V Culvert Backfill (Crushed)	5.44	1.50	11.08	18.02	20		$360.40
U to V Culvert Backfill (Crushed)	5.22	1.50	11.08	17.80	20		$356.00
U to V Energy Dissipator (Riprap)	5.22	2.00	11.08	18.30	5		$91.50
U to V Culvert Backfill (Crushed)	5.16	1.50	11.08	17.74	20		$354.80
U to V Culvert Backfill (Crushed)	5.11	1.50	11.08	17.69	20		$353.80
U to V Culvert Backfill (Crushed)	5.03	1.50	11.08	17.61	20		$352.20
U to V Energy Dissipator (Riprap)	5.03	2.00	11.08	18.11	5		$90.55
U to V Culvert Backfill (Crushed)	4.88	1.50	11.08	17.46	20		$349.20
U to V Energy Dissipator (Riprap)	4.88	2.00	11.08	17.96	5		$89.80
U to V Backfill:Removed Culvert (Crushed)	4.86	1.50	11.08	17.44	40		$697.60
U to V Backfill:Removed Culvert (Crushed)	4.82	1.50	11.08	17.40	40		$696.00
U to V Energy Dissipator:Drainage Ditch (Riprap)	4.82	2.00	11.08	17.90	30		$537.00
W to X 2105 9100 (Crushed)	4.68	3.20	11.08	18.96	1630		$30,904.80
W to X Culvert Backfill (Crushed)	5.27	1.50	11.08	17.85	20		$357.00
W to X Energy Dissipator (Riprap)	5.27	2.00	11.08	18.35	5		$91.75
W to X Culvert Backfill (Crushed)	5.28	1.50	11.08	17.86	20		$357.20
W to X Slope Stabilization (Riprap)	5.28	2.00	11.08	18.36	30		$550.80
W to X Backfill (Pit-Run)	5.28	0.70	11.08	17.06	10		$170.60
W to X Energy Dissipator (Riprap)	5.29	2.00	11.08	18.37	5		$91.85
W to X Culvert Backfill (Crushed)	5.30	1.50	11.08	17.88	20		$357.60
W to X Energy Dissipator (Riprap)	5.30	2.00	11.08	18.38	5		$91.90
W to X Culvert Backfill (Crushed)	5.32	1.50	11.08	17.90	20		$358.00
W to X Energy Dissipator (Riprap)	5.32	2.00	11.08	18.40	5		$92.00
W to X Culvert Backfill (Crushed)	5.35	1.50	11.08	17.93	20		$358.60
W to X Energy Dissipator (Riprap)	5.35	2.00	11.08	18.43	5		$92.15
				Total C.Y.	12025	Sub Total	$222,089.10

TOTAL ROCKING COSTS	$222,089.10

ROCK PIT DEVELOPMENT AND CRUSHING COST SUMMARY

Pit:	Cruiser Creek Pit - Jaw-Run	Location:	Sec. 16 , T1S, R7W, W.M.	
Sale:	**Cruisin' Murphy**		Road:	9030 c.y.
Swell:	1.40		Stockpile:	c.y.
Shirinkage	1.16		Total Truck Loads:	9030 c.y.
Drill Pct.:	100%		In Place Total:	6450 c.y.

Pit development & cleanup including clearing and grubbing of waste area, place overburden in waste area and spread and compact costs. $3,300.00

Drill & Shoot:	$3.25	/cu.yd.	x	6450	cu.yds.	=	$20,962.50
Push Rock:	$1.00	/cu.yd.	x	9030	cu.yds.	=	$9,030.00
Load Crusher:	$1.00	/cu.yd.	x	9030	cu.yds.	=	$9,030.00
Crush Rock:	$3.50	/cu.yd.	x	9030	cu.yds.	=	$31,605.00
Load Dump Truck:	$1.00	/cu.yd.	x	9030	cu.yds.	=	$9,030.00
Oversize Reduction:	$6.00	/cu.yd.	x	903	cu.yds.	=	$5,418.00

Subtotal $88,375.50

Equipment move-in costs are covered in the move-in costs in the Cruiser Creek Pit.

Change Gradation $275.00

Subtotal $275.00

TOTAL PRODUCTION COSTS $88,650.50

Base Cost= $9.82 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
E to F 0 505 (Jaw-Run)	4.51	3.20	9.82	17.53	320	$5,609.60
E to F 505 3035 (Jaw-Run)	4.73	3.20	9.82	17.75	940	$16,685.00
E to F Landing Rock (Jaw-Run)	6.72	3.20	9.82	19.74	150	$2,961.00
E to F Landing Rock (Jaw-Run)	7.20	3.20	9.82	20.22	150	$3,033.00
E to F Junction Rock (Jaw-Run)	4.52	3.20	9.82	17.54	30	$526.20
G to H 0 260 (Jaw-Run)	4.50	3.20	9.82	17.52	160	$2,803.20
G to H Junction Rock (Jaw-Run)	4.48	3.20	9.82	17.50	30	$525.00
I to J 0 100 (Jaw-Run)	6.71	3.20	9.82	19.73	80	$1,578.40
I to J Junction Rock (Jaw-Run)	6.70	3.20	9.82	19.72	30	$591.60
K to L 0 585 (Jaw-Run)	7.06	3.20	9.82	20.08	420	$8,433.60
K to L Landing Rock (Jaw-Run)	7.01	3.20	9.82	20.03	150	$3,004.50
K to L Landing Rock (Jaw-Run)	7.10	3.20	9.82	20.12	150	$3,018.00
K to L Landing Rock (Jaw-Run)	7.12	3.20	9.82	20.14	150	$3,021.00
K to L Junction Rock (Jaw-Run)	7.00	3.20	9.82	20.02	30	$600.60
M to N 0 655 (Jaw-Run)	7.22	3.20	9.82	20.24	430	$8,703.20
M to N Junction Rock (Jaw-Run)	7.14	3.20	9.82	20.16	30	$604.80
M to N Landing Rock (Jaw-Run)	7.29	3.20	9.82	20.31	150	$3,046.50
S to T 0 2360 (Jaw-Run)	3.38	3.20	9.82	16.40	1410	$23,124.00
S to T Junction Rock (Jaw-Run)	3.17	3.20	9.82	16.19	30	$485.70
S to T Landing Rock (Jaw-Run)	5.20	3.20	9.82	18.22	150	$2,733.00
W to X 9100 10075 (Jaw-Run)	4.96	3.20	9.82	17.98	590	$10,608.20
W to X Landing Rock (Jaw-Run)	7.08	3.20	9.82	20.10	150	$3,015.00
W to X Landing Rock (Jaw-Run)	7.19	3.20	9.82	20.21	150	$3,031.50
W to X Landing Rock (Jaw-Run)	7.22	3.20	9.82	20.24	150	$3,036.00
W to X Landing Rock (Jaw-Run)	7.43	3.20	9.82	20.45	150	$3,067.50
Y to Z 0 100 (Jaw-Run)	3.94	3.20	9.82	16.96	80	$1,356.80
Y to Z 4020 4290 (Jaw-Run)	4.45	3.20	9.82	17.47	170	$2,969.90
Y to Z Junction Rock (Jaw-Run)	3.93	3.20	9.82	16.95	30	$508.50
Y to Z Landing Rock (Jaw-Run)	6.27	3.20	9.82	19.29	150	$2,893.50
Y to Z Landing Rock (Jaw-Run)	6.36	3.20	9.82	19.38	150	$2,907.00
Y to Z Landing Rock (Jaw-Run)	6.60	3.20	9.82	19.62	150	$2,943.00
Y to Z Junction Rock (Jaw-Run)	4.45	3.20	9.82	17.47	30	$524.10
AA to BB 0 155 (Jaw-Run)	6.14	3.20	9.82	19.16	140	$2,682.40
AA to BB Junction Rock (Jaw-Run)	6.12	3.20	9.82	19.14	30	$574.20
AA to BB Landing Rock (Jaw-Run)	6.16	3.20	9.82	19.18	150	$2,877.00
CC to DD 0 215 (Jaw-Run)	6.51	3.20	9.82	19.53	170	$3,320.10
CC to DD Junction Rock (Jaw-Run)	6.49	3.20	9.82	19.51	30	$585.30
CC to DD Landing Rock (Jaw-Run)	6.53	3.20	9.82	19.55	150	$2,932.50
EE to FF 0 100 (Jaw-Run)	6.26	3.20	9.82	19.28	80	$1,542.40
EE to FF Junction Rock (Jaw-Run)	6.25	3.20	9.82	19.27	30	$578.10
GG to HH 0 1525 (Jaw-Run)	1.13	3.20	9.82	14.15	400	$5,660.00
GG to HH Junction Rock (Jaw-Run)	1.13	1.50	9.82	12.45	30	$373.50
GG to HH Landing Rock (Jaw-Run)	7.21	3.20	9.82	20.23	150	$3,034.50
II to JJ 0 590 (Jaw-Run)	7.25	3.20	9.82	20.27	400	$8,108.00
II to JJ Junction Rock 0 (Jaw-Run)	7.19	3.20	9.82	20.21	30	$606.30
II to JJ Landing Rock 390 (Jaw-Run)	7.27	3.20	9.82	20.29	150	$3,043.50
II to JJ Landing Rock 590 (Jaw-Run)	7.31	3.20	9.82	20.33	150	$3,049.50
				Total C.Y.	9030	Sub Total $166,916.20

TOTAL ROCKING COSTS $166,916.20

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

Sale: **Cruisin' Murphy**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
13.0	Pavement	30
5.0	Main Lines	7
8.0	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	Graders	$929.76		$3.65	0.00	5.00	5	$18.25	$948.01
1	Loader (Large)	$1,019.11	1	$9.00	0.00	5.00	5	$45.00	$1,064.11
1	Rollers (smooth/grid) & Compactors	$533.50		$5.00	0.00	5.00	5	$25.00	$558.50
1	Excavators (Large)	$1,047.86	1	$44.80	0.00	5.00	5	$224.00	$1,271.86
1	Tractor (D8)	$1,073.86	2	$15.10	0.00	5.00	5	$75.50	$1,149.36
3	Dump Truck (10 cy +)	$584.07		$2.85	0.00	5.00	5	$42.75	$626.82
1	Water Truck (1500 Gal)	$204.21		$2.85	0.00	5.00	5	$14.25	$218.46
					TOTAL MOVE-IN COSTS:				$5,837.12

OREGON DEPARTMENT OF FORESTRY
CRUISE REPORT
Cruisin Murphy

1. Type of Sale
Regeneration harvest, Recovery

2. Legal Description
Section(s) 12, 13, 14, 23, 24 of T2S R7W, Section(s) 6, 7, 18 of T2S R6W W.M.

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

	ACRES	
	Gross	Net
Unit 1 (Modified Clearcut)	85	66
Unit 2 (Modified Clearcut)	125	111
Unit 3 (Modified Clearcut)	117	90
Unit 4 (Modified Clearcut)	98	82

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 areas were cruised using variable plot sampling. All four areas were cruised by the marketing unit in 2019. Plot and cruise line spacing for the contract cruise was 175’ x 700’. 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 the nearest inch), merchantable bole length (to the nearest foot), form factor, and defect were recorded for all trees. Merchantable heights were recorded to 6” and 7” outside bark for conifers and hardwoods, respectively.

B. Plot size
Unit	BAF
1	27.78
2	27.78
3	27.78
4	27.78

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.

Cruise Statistics (Board Foot Volumes)			
Unit	Number of Plots	SE (%)	CV (%)
1	18	10.0	41.2
2	35	7.7	45.8
3	28	7.2	37.4
4	25	9.2	45.3
Total	105	8.5	42.4

6. Hidden Defect and Breakage

A 1% reduction for conifers and a 2% reduction for hardwood volumes were applied for hidden defect and breakage.

7. Timber Description

All sale units burned in the 1933 Tillamook Fire. Major portions of the sale units burned again in 1939’s Saddle Mountain Fire. All sale units have portions that were aerially seeded in the early 1950’s and planted in the mid-1960’s. However, most seeding dates are unknown for this sale.

Stand management consisted of commercial thinning over most of the timber sale. Units 1 and 2 were thinned in 1997 with Toll Bark Thin. Units 3 and 4 were thinned in 2002 with Murphy Simmons Thin.

Sale Unit	Species	DBH	Merchantable Bole Height (feet)	Merchantable top (inches inside bark)
1	Douglas-fir	18.9	87	6
	Red Alder	14.2	48	7
2	Douglas-fir	20.5	94	6
	Red Alder	16.4	53	7
3	Douglas-fir	21.4	91	6
4	Douglas-fir	21.1	90	6
	Red Alder	13.4	50	7

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

8. Cruiser /Dates

All units were cruised by marketing unit in 2019.

9. Revenue Distribution

FDF 100%

Tax Code: 902 – 100%

Deed Numbers: 157, 159

10. Attachments

Volume Summary

Stand Table

Log Stock Tables

Logging Plan

11. Stand and Log Stock Tables Species Key

DF – Douglas-fir take
RA – Red alder take
OC – Other conifer

TC TSTNDSUM

Stand Table Summary

Project **CRUMURP2**

T02S R07W S14 TFINL

T02S R07W S14 TFINL

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
02S	07W	14	AREA1	FINL	66.00	18	81

Page: 1
Date: 12/17/2019
Time: 9:04:18AM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF		13	2	88	86	4.709	4.34	7.06	16.0	53.3	3.22	113	377	212	75	25
DF		14	2	87	79	4.060	4.34	8.12	14.2	50.0	3.30	116	406	218	76	27
DF		15	3	88	93	5.306	6.51	10.61	19.4	80.0	5.86	206	849	387	136	56
DF		16	5	87	102	7.772	10.85	15.54	24.0	94.0	10.63	373	1,461	702	246	96
DF		17	4	89	110	5.508	8.68	12.39	26.7	110.0	9.43	331	1,363	623	218	90
DF		18	6	88	109	7.369	13.02	17.19	28.2	108.6	13.81	485	1,867	912	320	123
DF		19	12	88	114	13.227	26.04	34.17	30.1	121.3	29.28	1,027	4,145	1,933	678	274
DF		20	5	89	115	4.974	10.85	13.93	31.3	133.6	12.42	436	1,860	820	288	123
DF		21	4	88	112	3.609	8.68	9.02	39.0	160.0	10.03	352	1,444	662	232	95
DF		22	6	88	122	4.933	13.02	13.15	43.3	188.1	16.23	570	2,475	1,071	376	163
DF		23	4	88	120	3.009	8.68	8.27	44.7	195.5	10.55	370	1,617	696	244	107
DF		24	6	89	128	4.145	13.02	11.74	48.1	217.6	16.08	564	2,556	1,062	372	169
DF		25	2	89	144	1.273	4.34	3.82	57.5	273.3	6.26	220	1,044	413	145	69
DF		26	1	89	126	.589	2.17	1.77	55.3	253.3	2.78	98	447	184	64	30
DF		27	1	87	131	.546	2.17	1.64	61.9	293.3	2.89	101	480	191	67	32
DF		32	1	90	126	.389	2.17	1.17	77.1	363.3	2.56	90	424	169	59	28
DF		Totals	64	88	109	71.417	138.90	169.61	32.1	134.5	155.35	5,451	22,815	10,253	3,598	1,506
RA		10	1	90	66	3.163	1.72	3.16	9.3	30.0	.80	29	95	53	19	6
RA		11	1	91	73	2.614	1.72	2.61	16.3	70.0	1.17	42	183	77	28	12
RA		12	2	87	62	4.392	3.45	4.39	16.2	60.0	1.96	71	264	129	47	17
RA		13	2	86	81	3.743	3.45	5.61	18.1	63.3	2.80	102	356	185	67	23
RA		14	2	84	85	3.227	3.45	6.45	17.2	62.5	3.05	111	403	202	73	27
RA		15	2	88	82	2.811	3.45	5.62	18.6	77.5	2.87	105	436	190	69	29
RA		16	3	84	61	3.706	5.17	3.71	30.6	83.3	3.12	114	309	206	75	20
RA		17	1	90	69	1.094	1.72	2.19	22.0	85.0	1.32	48	186	87	32	12
RA		19	1	86	92	.876	1.72	1.75	26.8	105.0	1.29	47	184	85	31	12
RA		24	1	79	68	.549	1.72	1.10	44.0	130.0	1.33	48	143	88	32	9
RA		25	1	86	77	.506	1.72	1.01	34.0	135.0	.95	34	137	62	23	9
RA		Totals	17	87	73	26.681	29.32	37.62	20.0	71.6	20.68	752	2,694	1,365	496	178
Totals			81	88	99	98.098	168.22	207.22	29.9	123.1	176.03	6203	25,509	11,618	4,094	1,684

TC TLOGSTVB

Log Stock Table - MBF

Project: CRUMURP2

T02S R07W S14 TFINL **T02S R07W S14 TFINL**

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	1
02S	07W	14	AREA1	FINL	66.00	18	81	Date	12/17/2019
								Time	9:04:17AM

Spp	S T	So rt	Gr de	Log Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF		CO	2	16	11		11	.7								11				
DF		CO	2	32	31		31	2.0						15	15					
DF		CO	2	36	8		8	.5						8						
DF		CO	2	40	881	.7	875	58.1						345	215	294	22			
DF		CO	3	16	9		9	.6						9						
DF		CO	3	32	52	6.0	49	3.3				37	12							
DF		CO	3	36	8		8	.5			3			6						
DF		CO	3	40	403	.1	403	26.8			67	110	188	37						
DF		CO	4	12	2		2	.1		2										
DF		CO	4	13	2		2	.1		2										
DF		CO	4	14	1		1	.1				1								
DF		CO	4	15	5		5	.3		5										
DF		CO	4	16	5		5	.4		5										
DF		CO	4	17	5		5	.3		5										
DF		CO	4	19	4		4	.2		3	1									
DF		CO	4	21	4		4	.2		4										
DF		CO	4	22	1		1	.1		1										
DF		CO	4	23	1		1	.1			1									
DF		CO	4	25	4		4	.2		2	1									
DF		CO	4	27	1		1	.1			1									
DF		CO	4	28	2		2	.1		2										
DF		CO	4	29	3		3	.2		2	2									
DF		CO	4	30	8		8	.5		8										
DF		CO	4	31	5		5	.4		4	2									
DF		CO	4	32	2		2	.1		2										
DF		CO	4	33	3		3	.2		3										
DF		CO	4	36	13		13	.8		10	3									
DF		CO	4	37	3		3	.2		3										
DF		CO	4	38	15		15	1.0		15										
DF		CO	4	39	6		6	.4		6										
DF		CO	4	40	18		18	1.2		18										
DF		Totals			1,515		1,506	89.4		99	81	149	200	421	230	305	22			
RA		H	2	30	20	7.2	19	10.5						10	8					
RA		H	3	24	8		8	4.5								8				
RA		H	3	32	21	4.4	20	11.2					20							
RA		H	3	40	25		25	13.9					25							
RA		H	4	13	2		2	1.2			2									
RA		H	4	14	1		1	.8			1									
RA		H	4	15	2		2	1.0			2									
RA		H	4	19	2		2	1.4			2									
RA		H	4	20	1		1	.6			1									
RA		H	4	21	5	21.6	4	2.2			4									
RA		H	4	22	3		3	1.6			3									
RA		H	4	25	4		4	2.4			4									
RA		H	4	26	1		1	.6			1									
RA		H	4	29	8	25.0	6	3.5			6									
RA		H	4	38	5		5	2.8			5									
RA		H	4	40	77	3.2	74	41.7			25	49								
RA		Totals			186	4.3	178	10.6			57	49	45	10	8	8				

TC TLOGSTVB

Log Stock Table - MBF

Project: CRUMURP2

T02S R07W S14 TFINL **T02S R07W S14 TFINL**

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page 2
02S	07W	14	AREA1	FINL	66.00	18	81	Date 12/17/2019
								Time 9:04:17AM

Spp	S T	So rt	Gr de	Log Len	Gross MBF	% Def	Net MBF	% Spc	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
Total All Species					1,701	1.0	1,684	100.0		99	138	198	245	431	238	313	22			

TC TSTNDSUM

Stand Table Summary

Project CRUMURP2

T02S R07W S13 TFINL

T02S R07W S13 TFINL

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
02S	07W	13	AREA 2	FINL	111.00	35	126

Page: 1
Date: 12/17/2019
Time: 8:52:07AM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF		11	2	87	73	4.663	3.08	4.66	12.6	50.0	1.68	59	233	186	65	26
DF		12	1	88	88	1.959	1.54	3.92	11.5	45.0	1.28	45	176	142	50	20
DF		14	2	87	93	2.879	3.08	4.32	20.7	76.7	2.55	89	331	282	99	37
DF		15	2	89	113	2.508	3.08	6.27	19.2	86.0	3.43	120	539	381	134	60
DF		16	2	89	124	2.204	3.08	6.61	20.6	95.0	3.89	136	628	431	151	70
DF		17	7	88	109	6.834	10.77	16.60	24.3	98.2	11.49	403	1,630	1,275	447	181
DF		18	3	89	114	2.612	4.62	6.97	27.0	111.2	5.36	188	775	595	209	86
DF		19	5	89	112	3.908	7.69	10.94	28.0	114.3	8.72	306	1,250	968	340	139
DF		20	9	89	122	6.348	13.85	17.63	33.6	150.0	16.86	592	2,645	1,872	657	294
DF		21	15	89	121	9.597	23.08	26.87	35.9	157.4	27.51	965	4,229	3,053	1,071	469
DF		22	5	89	133	2.915	7.69	8.74	41.7	192.0	10.40	365	1,679	1,155	405	186
DF		23	7	90	135	3.733	10.77	11.20	46.2	214.3	14.74	517	2,400	1,636	574	266
DF		24	7	89	124	3.429	10.77	9.31	50.6	223.2	13.41	471	2,077	1,489	522	231
DF		25	11	89	122	4.966	16.93	13.54	54.6	245.3	21.08	740	3,322	2,340	821	369
DF		26	3	90	143	1.252	4.62	3.76	64.0	312.2	6.86	241	1,173	761	267	130
DF		27	5	89	134	1.935	7.69	5.81	61.1	295.3	10.11	355	1,715	1,123	394	190
DF		28	2	89	129	.720	3.08	2.16	65.1	305.0	4.01	141	659	445	156	73
DF		29	3	89	145	1.006	4.62	2.35	80.9	411.4	5.42	190	966	601	211	107
DF		30	2	90	131	.627	3.08	1.88	79.4	400.0	4.26	149	752	472	166	84
DF		31	2	89	138	.587	3.08	1.76	78.9	383.3	3.96	139	675	440	154	75
DF		32	2	89	142	.551	3.08	1.65	93.1	500.0	4.38	154	827	487	171	92
DF		34	1	90	145	.244	1.54	.73	101.4	513.3	2.12	74	376	235	82	42
DF		Totals	98	89	117	65.478	150.81	167.68	38.4	173.3	183.51	6,439	29,058	20,370	7,147	3,225
RA		11	2	88	66	2.494	1.65	3.74	9.8	46.7	1.01	37	175	112	41	19
RA		13	2	91	75	1.786	1.65	2.68	15.2	56.7	1.12	41	152	125	45	17
RA		14	2	92	95	1.540	1.65	3.08	19.4	90.0	1.65	60	277	183	66	31
RA		16	2	89	88	1.179	1.65	2.36	18.2	75.0	1.18	43	177	131	48	20
RA		17	4	91	78	2.089	3.29	3.66	23.4	94.3	2.35	85	345	261	95	38
RA		18	6	91	89	2.795	4.94	4.66	29.6	116.0	3.79	138	540	421	153	60
RA		19	4	92	86	1.672	3.29	2.51	25.4	96.7	1.75	64	242	194	71	27
RA		20	3	93	86	1.132	2.47	1.89	30.8	122.0	1.60	58	230	177	65	26
RA		22	1	92	91	.312	.82	.31	69.5	280.0	.60	22	87	66	24	10
RA		27	1	92	90	.207	.82	.41	63.7	275.0	.73	26	114	80	29	13
RA		Totals	27	91	82	15.206	22.22	25.29	22.7	92.5	15.77	574	2,339	1,751	637	260
OC		16	1	82	52	.568	.79									
OC		Totals	1	82	52	.568	.79									
Totals			126	89	110	81.252	173.82	192.97	36.3	162.7	199.29	7013	31,397	22,121	7,784	3,485

TC TLOGSTVB

Log Stock Table - MBF

Project: CRUMURP2

T02S R07W S13 TFINL | **T02S R07W S13 TFINL**

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	
02S	07W	13	AREA 2	FINL	111.00	35	126	Page 1 Date 12/17/2019 Time 8:52:06AM

Spp	S T	So rt	Gr de	Log Len	Gross MBF	% Def	Net MBF	% Spc	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
									Net Volume by Scaling Diameter in Inches											
DF		CO	2	20	10		10	.3								10				
DF		CO	2	30	19		19	.6							19					
DF		CO	2	32	7		7	.2							7					
DF		CO	2	38	27		27	.8									27			
DF		CO	2	40	2,206	1.0	2,184	67.7						366	575	944	271	27		
DF		CO	3	28	2		2	.1				2								
DF		CO	3	30	5		5	.1			2	2								
DF		CO	3	31	2		2	.1				2								
DF		CO	3	32	55		55	1.7			12	28	15							
DF		CO	3	33	3		3	.1			3									
DF		CO	3	35	3		3	.1			3									
DF		CO	3	36	24		24	.8			10	15								
DF		CO	3	39	7		7	.2			3	3								
DF		CO	3	40	716	.4	713	22.1			78	190	330	88	27					
DF		CO	4	13	3		3	.1		3		1								
DF		CO	4	14	2		2	.1		1	1									
DF		CO	4	15	9		9	.3		9										
DF		CO	4	16	11		11	.3		9	2									
DF		CO	4	17	5		5	.2		4	1									
DF		CO	4	18	5		5	.2		4		1								
DF		CO	4	19	3		3	.1		2		1								
DF		CO	4	20	6		6	.2		3	1	1								
DF		CO	4	21	2		2	.1		2										
DF		CO	4	22	8		8	.2		8										
DF		CO	4	23	1		1	.0		1										
DF		CO	4	24	2		2	.1		2										
DF		CO	4	25	8		8	.3		2	6									
DF		CO	4	26	10		10	.3		10										
DF		CO	4	27	13		13	.4		4	9									
DF		CO	4	28	2		2	.0			2									
DF		CO	4	29	10		10	.3		10										
DF		CO	4	30	2		2	.1			2									
DF		CO	4	33	5		5	.2		3	3									
DF		CO	4	34	6		6	.2		6										
DF		CO	4	35	3		3	.1		3										
DF		CO	4	36	18		18	.6		18										
DF		CO	4	38	9		9	.3		6		3								
DF		CO	4	39	2		2	.1		2										
DF		CO	4	40	15		15	.5		15										
DF		CO	4	41	4		4	.1		4										
DF		Totals			3,250		3,225	92.5		131	137	250	345	454	628	954	298	27		
RA		H	2	16	13		13	4.9						5		7				
RA		H	2	18	15		15	5.9						8	8					
RA		H	2	20	16		16	6.3							16					
RA		H	2	21	9		9	3.3						9						
RA		H	2	28	10	4.0	10	3.9							10					
RA		H	2	32	18		18	7.0						18						
RA		H	2	33	10	4.2	10	3.7							10					
RA		H	2	40	22	3.6	21	8.2							10	12				
RA		H	3	14	5		5	1.9					5							
RA		H	3	20	6		6	2.1						6						

TC TLOGSTVB

Log Stock Table - MBF

Project: **CRUMURP2**

T02S R07W S13 TFINL **T02S R07W S13 TFINL**

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	2
02S	07W	13	AREA 2	FINL	111.00	35	126	Date	12/17/2019
								Time	8:52:06AM

Spp	S T	So rt	Gr de	Log Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
RA		H	3	21	3		3	1.1					3							
RA		H	3	22	2		2	.7			2									
RA		H	3	32	8	6.3	8	3.0						8						
RA		H	3	40	49		49	18.9					49							
RA		H	4	13	1		1	.4			1									
RA		H	4	17	7		7	2.7			7									
RA		H	4	18	2		2	.6			2									
RA		H	4	19	1		1	.4			1									
RA		H	4	20	3		3	1.2			3									
RA		H	4	22	1		1	.4			1									
RA		H	4	23	2		2	.8			2									
RA		H	4	24	2		2	.6			2									
RA		H	4	26	2		2	.6			2									
RA		H	4	27	2		2	.9			2									
RA		H	4	28	3		3	1.0			3									
RA		H	4	30	3		3	1.1			3									
RA		H	4	34	5		5	1.9			5									
RA		H	4	36	3		3	1.1			3									
RA		H	4	40	40		40	15.5			15	25								
RA		Totals			262		260	7.5			52	25	57	53	53	19				
Total All Species					3,512		3,485	100.0		131	189	276	402	507	681	973	298	27		

TC TSTNDSUM

Stand Table Summary

Project **CRUMURP2**

T02S R07W S07 TFINL

T02S R07W S07 TFINL

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
02S	07W	07	AREA 3	FINL	90.00	28	92

Page: 1
Date: 12/17/201
Time: 8:50:32AM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF		11	1	87	73	2.759	1.82	2.76	13.6	40.0	1.07	38	110	96	34	10
DF		12	2	85	79	4.636	3.64	9.27	10.7	40.0	2.83	99	371	255	89	33
DF		14	1	89	93	1.703	1.82	3.41	15.3	55.0	1.48	52	187	133	47	17
DF		15	4	88	96	5.935	7.28	11.87	21.1	88.8	7.15	251	1,053	643	226	95
DF		16	1	80	102	1.304	1.82	2.61	23.9	80.0	1.77	62	209	160	56	19
DF		17	3	89	103	3.465	5.46	8.09	25.0	101.4	5.76	202	820	519	182	74
DF		18	4	89	113	4.121	7.28	10.30	28.0	114.0	8.21	288	1,175	739	259	106
DF		19	5	88	107	4.624	9.10	12.95	26.0	105.0	9.58	336	1,359	862	302	122
DF		20	3	88	110	2.504	5.46	6.68	30.6	116.2	5.83	204	776	524	184	70
DF		21	9	89	118	6.813	16.39	18.17	37.3	163.8	19.32	678	2,975	1,739	610	268
DF		22	8	89	127	5.518	14.57	16.55	39.6	179.6	18.70	656	2,973	1,683	590	268
DF		23	3	89	124	1.893	5.46	5.68	40.6	177.8	6.58	231	1,010	592	208	91
DF		24	8	89	131	4.636	14.57	13.33	50.5	230.4	19.19	673	3,072	1,727	606	276
DF		25	6	89	127	3.205	10.92	9.61	51.1	233.9	14.01	492	2,249	1,261	443	202
DF		26	6	90	132	2.963	10.92	8.89	58.7	278.9	14.87	522	2,479	1,338	469	223
DF		27	2	88	122	.916	3.64	2.75	56.9	260.0	4.45	156	714	401	141	64
DF		28	6	90	130	2.555	10.92	7.24	67.1	314.1	13.85	486	2,274	1,246	437	205
DF		29	7	89	137	2.779	12.75	8.73	70.7	349.5	17.60	617	3,052	1,584	556	275
DF		30	5	89	127	1.855	9.10	5.56	72.0	340.7	11.42	401	1,895	1,028	361	171
DF		31	1	90	128	.347	1.82	1.04	79.7	386.7	2.37	83	403	213	75	36
DF		32	1	89	129	.326	1.82	.98	87.4	450.0	2.44	86	440	219	77	40
DF		33	2	89	129	.613	3.64	1.84	92.8	475.0	4.87	171	874	438	154	79
DF		34	1	89	131	.289	1.82	.87	97.8	483.3	2.41	85	419	217	76	38
DF		35	1	89	135	.273	1.82	.82	99.9	533.3	2.33	82	436	209	73	39
DF		36	1	90	132	.258	1.82	.77	98.6	486.7	2.17	76	376	195	69	34
DF		Totals	91	88	113	66.289	165.69	170.76	41.1	185.6	200.26	7,027	31,701	18,023	6,324	2,853
OC		17	1	87	89	.629	.99									
OC		Totals	1	87	89	.629	.99									
Totals			92	88	113	66.918	166.68	170.76	41.1	185.6	200.26	7027	31,701	18,023	6,324	2,853

TC TLOGSTVB

Log Stock Table - MBF

Project: CRUMURP2

T02S R07W S07 TFINL **T02S R07W S07 TFINL**

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	Page	1
02S	07W	07	AREA 3	FINL	90.00	28	92	Date	12/17/2019
								Time	8:50:32AM

Spp	S T	So rt	Gr de	Log Len	Gross MBF	% Def	Net MBF	% Spc	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF		CO	2	20	11	30.0	8	.3								8				
DF		CO	2	32	18		18	.6							8	10				
DF		CO	2	40	2,103	.5	2,093	73.4						334	426	732	492	109		
DF		CO	3	17	1		1	.1					1							
DF		CO	3	19	1		1	.0				1								
DF		CO	3	21	5		5	.2				5								
DF		CO	3	22	1		1	.0		1										
DF		CO	3	24	20		20	.7						20						
DF		CO	3	25	2		2	.1					2							
DF		CO	3	26	2		2	.1				2								
DF		CO	3	27	2		2	.1				2								
DF		CO	3	28	14		14	.5			2	12								
DF		CO	3	32	36		36	1.3			7	17	13							
DF		CO	3	33	2		2	.1			2									
DF		CO	3	34	2		2	.1			2									
DF		CO	3	35	3		3	.1			3									
DF		CO	3	36	3		3	.1			3									
DF		CO	3	37	3		3	.1				3								
DF		CO	3	39	3		3	.1			3									
DF		CO	3	40	521	2.2	509	17.9			43	141	265	51	10					
DF		CO	4	12	1		1	.0		1										
DF		CO	4	13	6		6	.2		5	1									
DF		CO	4	14	3		3	.1		1	2									
DF		CO	4	15	1		1	.0				1								
DF		CO	4	16	6		6	.2		3	3									
DF		CO	4	17	7		7	.3		4	2	1								
DF		CO	4	18	3		3	.1		2		1								
DF		CO	4	19	5		5	.2		3	1	1								
DF		CO	4	20	5		5	.2		3		1								
DF		CO	4	21	9		9	.3		8	1									
DF		CO	4	22	2		2	.1		2										
DF		CO	4	23	2		2	.1		1	2									
DF		CO	4	24	10		10	.4		6	1	2								
DF		CO	4	25	2		2	.1		2										
DF		CO	4	27	2		2	.1		2										
DF		CO	4	28	5		5	.2		5										
DF		CO	4	29	5		5	.2		5										
DF		CO	4	30	4		4	.1		2	2									
DF		CO	4	31	2		2	.1		2										
DF		CO	4	32	2		2	.1		2										
DF		CO	4	33	2		2	.1		2										
DF		CO	4	35	5		5	.2		5										
DF		CO	4	36	13		13	.5		13										
DF		CO	4	38	12		12	.4		12										
DF		CO	4	40	10		10	.3		10										
DF		Totals			2,877		2,853	100.0		103	79	190	282	405	444	750	492	109		
Total All Species					2,877		2,853	100.0		103	79	190	282	405	444	750	492	109		

TC TSTNDSUM

Stand Table Summary

Project **CRUMURPH**

T02S R06W S07 TFINL **T02S R06W S07 TFINL**

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	
02S	06W	07	AREA 4	FINL	82.00	25	99	Page: 1 Date: 04/06/202(Time: 10:13:25AM

Spc	S T	DBH	Sample Trees	FF 16'	Av Ht Tot	Trees/ Acre	BA/ Acre	Logs Acre	Average Log Net Cu.Ft.	Average Log Net Bd.Ft.	Tons/ Acre	Net Cu.Ft. Acre	Net Bd.Ft. Acre	Totals Tons	Totals Cunits	Totals MBF
DF		8	1	85	66	4.981	1.74	4.98	7.1	40.0	1.00	35	199	82	29	16
DF		10	1	89	96	3.188	1.74	6.38	9.5	50.0	1.73	61	319	142	50	26
DF		11	1	86	70	2.635	1.74	2.63	14.8	60.0	1.11	39	158	91	32	13
DF		12	1	88	93	2.214	1.74	4.43	11.3	45.0	1.42	50	199	117	41	16
DF		14	1	89	94	1.626	1.74	3.25	18.3	75.0	1.69	59	244	139	49	20
DF		15	1	87	90	1.417	1.74	2.83	18.7	75.0	1.51	53	213	124	44	17
DF		16	1	89	114	1.245	1.74	3.74	19.2	86.7	2.04	72	324	167	59	27
DF		17	2	89	107	2.206	3.48	4.41	28.8	115.0	3.62	127	507	297	104	42
DF		19	4	89	119	3.532	6.95	9.71	29.9	125.5	8.28	291	1,219	679	238	100
DF		20	5	89	115	3.985	8.69	10.36	33.8	139.2	9.97	350	1,443	818	287	118
DF		21	4	89	116	2.891	6.95	7.95	35.0	149.1	7.93	278	1,186	650	228	97
DF		22	10	89	124	6.586	17.39	19.10	38.6	173.4	21.01	737	3,313	1,723	605	272
DF		23	6	89	129	3.616	10.43	10.85	43.6	197.8	13.47	473	2,145	1,105	388	176
DF		24	9	89	129	4.981	15.65	14.39	48.0	223.5	19.69	691	3,216	1,615	567	264
DF		25	4	89	130	2.040	6.95	6.12	51.9	240.0	9.05	317	1,469	742	260	120
DF		26	10	89	133	4.716	17.39	12.26	59.6	281.5	20.83	731	3,452	1,708	599	283
DF		27	4	90	140	1.749	6.95	5.25	64.2	315.8	9.60	337	1,657	787	276	136
DF		28	8	90	134	3.253	13.91	9.76	65.8	317.9	18.29	642	3,102	1,500	526	254
DF		29	4	89	145	1.516	6.95	4.55	77.7	395.0	10.07	353	1,797	826	290	147
DF		30	4	90	132	1.417	6.95	4.25	76.1	372.5	9.22	323	1,583	756	265	130
DF		31	2	90	147	.663	3.48	1.99	89.3	461.7	5.07	178	919	415	146	75
DF		32	1	90	150	.311	1.74	.93	96.4	503.3	2.57	90	470	210	74	39
DF		34	1	89	147	.276	1.74	.83	110.1	593.3	2.60	91	491	213	75	40
DF		Totals	85	89	114	61.045	147.79	150.96	42.3	196.2	181.78	6,378	29,624	14,906	5,230	2,429
RA		10	3	93	106	11.284	6.15	11.28	11.3	50.0	3.50	127	564	287	104	46
RA		11	1	93	108	3.108	2.05	3.11	13.0	50.0	1.11	40	155	91	33	13
RA		12	1	94	110	2.612	2.05	2.61	16.7	60.0	1.20	44	157	98	36	13
RA		14	1	93	108	1.919	2.05	1.92	22.4	60.0	1.18	43	115	97	35	9
RA		15	2	93	97	3.343	4.10	5.02	23.8	96.7	3.28	119	485	269	98	40
RA		16	1	92	162	1.469	2.05	4.41	23.6	116.7	2.86	104	514	235	85	42
RA		20	2	94	112	1.881	4.10	4.70	37.1	166.0	4.79	174	780	393	143	64
RA		21	2	94	120	1.706	4.10	2.56	48.4	233.3	3.41	124	597	279	102	49
RA		Totals	13	93	110	27.322	26.67	35.61	21.8	94.6	21.34	776	3,368	1,750	636	276
Totals			98	90	113	88.367	174.46	186.56	38.3	176.8	203.12	7154	32,992	16,656	5,866	2,705

TC TLOGSTVB

Log Stock Table - MBF

Project: **CRUMURPH**

T02S R06W S07 TFINL

T02S R06W S07 TFINL

Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees
02S	06W	07	AREA 4	FINL	82.00	25	99

Page 1
Date 4/6/2020
Time 10:13:26AM

Spp	S T	So rt	Gr de	Log Len	Gross MBF	% Def	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches 2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+
DF		CO	2	32	6		6	.3						6						
DF		CO	2	36	21	3.7	20	.8								20				
DF		CO	2	40	1,850	.2	1,847	76.0						236	452	713	420	26		
DF		CO	3	25	2		2	.1				2								
DF		CO	3	26	1		1	.1				1								
DF		CO	3	28	1		1	.1				1								
DF		CO	3	29	1		1	.1				1								
DF		CO	3	32	6		6	.3			2	4								
DF		CO	3	33	2		2	.1			2									
DF		CO	3	34	4		4	.2			2	2								
DF		CO	3	35	7		7	.3			4	2								
DF		CO	3	36	16		16	.7			8	8								
DF		CO	3	37	5		5	.2			2	3								
DF		CO	3	40	399		399	16.4			62	127	210							
DF		CO	4	13	1		1	.1		0	1									
DF		CO	4	14	1		1	.0			1									
DF		CO	4	15	8		8	.3		7	1									
DF		CO	4	16	5		5	.2		1	4									
DF		CO	4	17	6		6	.2		4	2									
DF		CO	4	18	1		1	.0			1									
DF		CO	4	19	5		5	.2		1	2	1								
DF		CO	4	20	8		8	.3		7	1									
DF		CO	4	21	4		4	.2			4									
DF		CO	4	22	3		3	.1		1	2									
DF		CO	4	23	1		1	.1			1									
DF		CO	4	24	12		12	.5		9	1	1								
DF		CO	4	25	10		10	.4		5	4									
DF		CO	4	26	8		8	.3		5	3									
DF		CO	4	27	7		7	.3		7										
DF		CO	4	29	3		3	.1			3									
DF		CO	4	32	4		4	.2		4										
DF		CO	4	35	16		16	.7		16										
DF		CO	4	36	3		3	.1		3										
DF		CO	4	40	6		6	.2		6										
DF		Totals			2,433		2,429	89.8		76	115	155	210	242	452	733	420	26		
RA		H	2	28	20		20	7.1								20				
RA		H	2	40	75	3.1	73	26.4							73					
RA		H	3	40	56	2.1	55	19.9					32	23						
RA		H	4	17	2		2	.6			2									
RA		H	4	24	4		4	1.5			4									
RA		H	4	29	5		5	1.7			5									
RA		H	4	30	3		3	1.1			3									
RA		H	4	31	12		12	4.5			12									
RA		H	4	35	28		28	10.2			28									
RA		H	4	38	4		4	1.5			4									
RA		H	4	39	13		13	4.7			13									
RA		H	4	40	59	2.3	57	20.8			28	30								
RA		Totals			281	1.7	276	10.2			99	30	32	23	73	20				
Total All Species					2,714		2,705	100.0		76	214	184	242	265	525	752	420	26		

Cruisin Murphy

Volume Summary

Unit 1-Modified Clearcut				
	66 acres			
SPECIES	Cruised Net MBF/ Acre	Cruised Net MBF	Hidden D&B	Net Sale MBF
Douglas-fir	22.8	1506	1%	1491
Red Alder	2.70	178	2%	174
Bigleaf Maple	0.00	0	2%	0
TOTAL	25.5	1684		1665

Unit 2-Modified Clearcut				
	111 acres			
SPECIES	Cruised Net MBF/ Acre	Cruised Net MBF	Hidden D&B	Net Sale MBF
Douglas-fir	29.05	3225	1%	3192
Red Alder	2.342	260	2%	255
TOTAL	31.4	3485		3447

Unit 3-Modified Clearcut				
	90 acres			
SPECIES	Cruised Net MBF/ Acre	Cruised Net MBF	Hidden D&B	Net Sale MBF
Douglas-fir	31.700	2853	1%	2825
Red Alder	0.0	0	2%	0
TOTAL	31.7	2853		2825

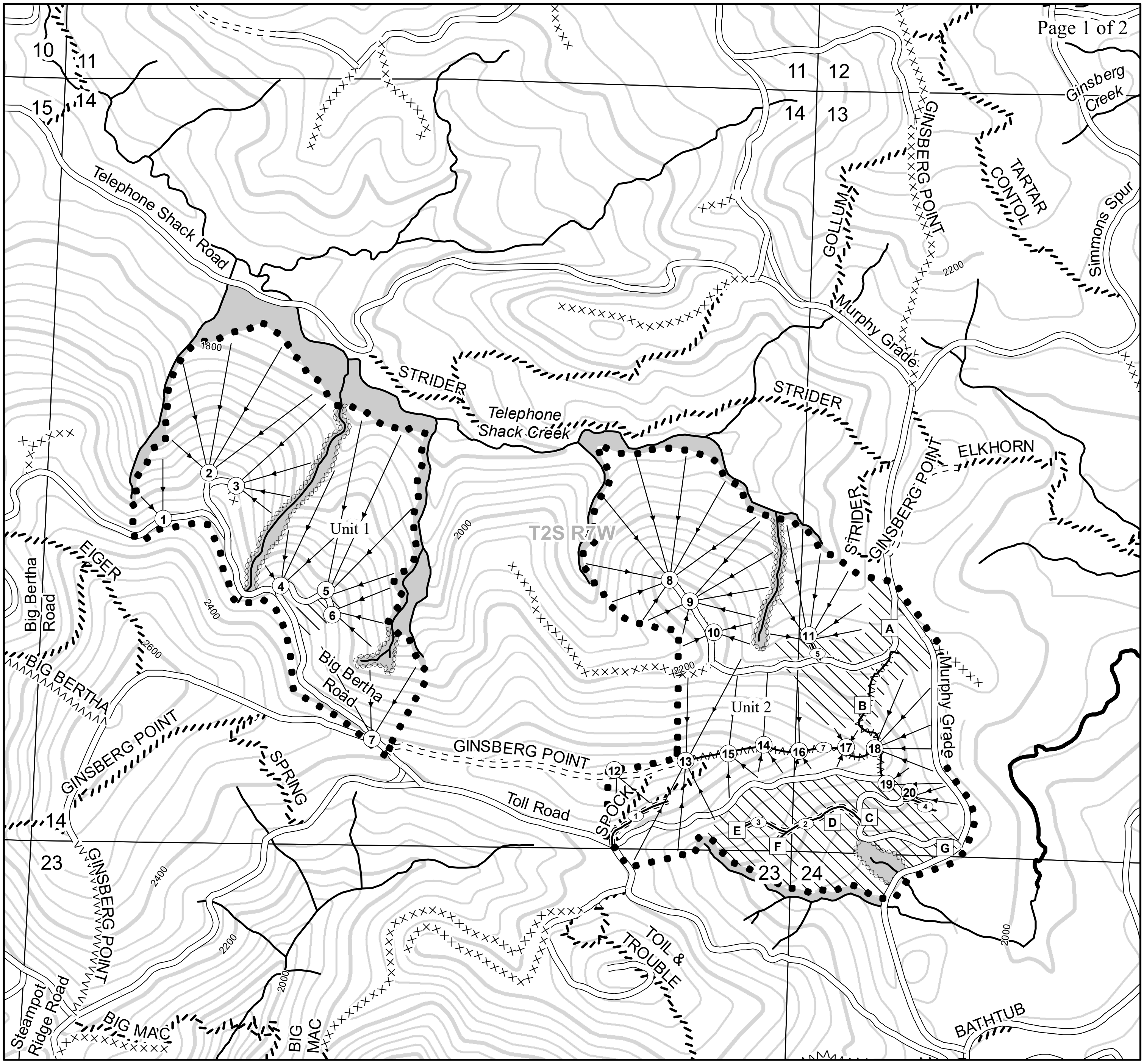
Unit 4-Modified Clearcut				
	82 acres			
SPECIES	Cruised Net MBF/ Acre	Cruised Net MBF	Hidden D&B	Net Sale MBF
Douglas-fir	29.62	2429	1%	2405
Alder	3.4	276	2%	270
TOTAL	33.0	2705		2675

TOTAL SALE VOLUME 349 acres

Cruisin Murphy

Volume Summary

SPECIES	Cruised Net (MBF)	Net Sale (MBF)
Douglas-fir	10013	9913
Western hemlock	0	0
Sitka Spruce	0	0
Bigleaf Maple	0	0
Red Alder	714	700
TOTAL	10727	10613



LOGGING PLAN

FOR TIMBER SALE CONTRACT TL-341-2021-W00752-01
CRUISIN MURPHY
PORTIONS OF SECTION(S) 12, 13, 14, 23, 24 of T2S R7W,
SECTION(S) 6, 7, of T2S R6W W.M..
TILLAMOOK COUNTY, OREGON

Tillamook District GIS
Febuary 2020
This product is for informational use and may not be suitable for legal, engineering, or surveying purposes.

Timber Sale Boundary
Surfaced Road
Unsurfaced Road
Abandoned road
Blocked road
Type-F Stream
Type-N Stream
Cable Corridor
Cable Landing
Tractor Landing
Sections
Ground Yarding
1 Non-Project
Motorized Trail
200 Foot Contour Band
40 Foot Contour Band
Buffer Posted
Stream Buffer

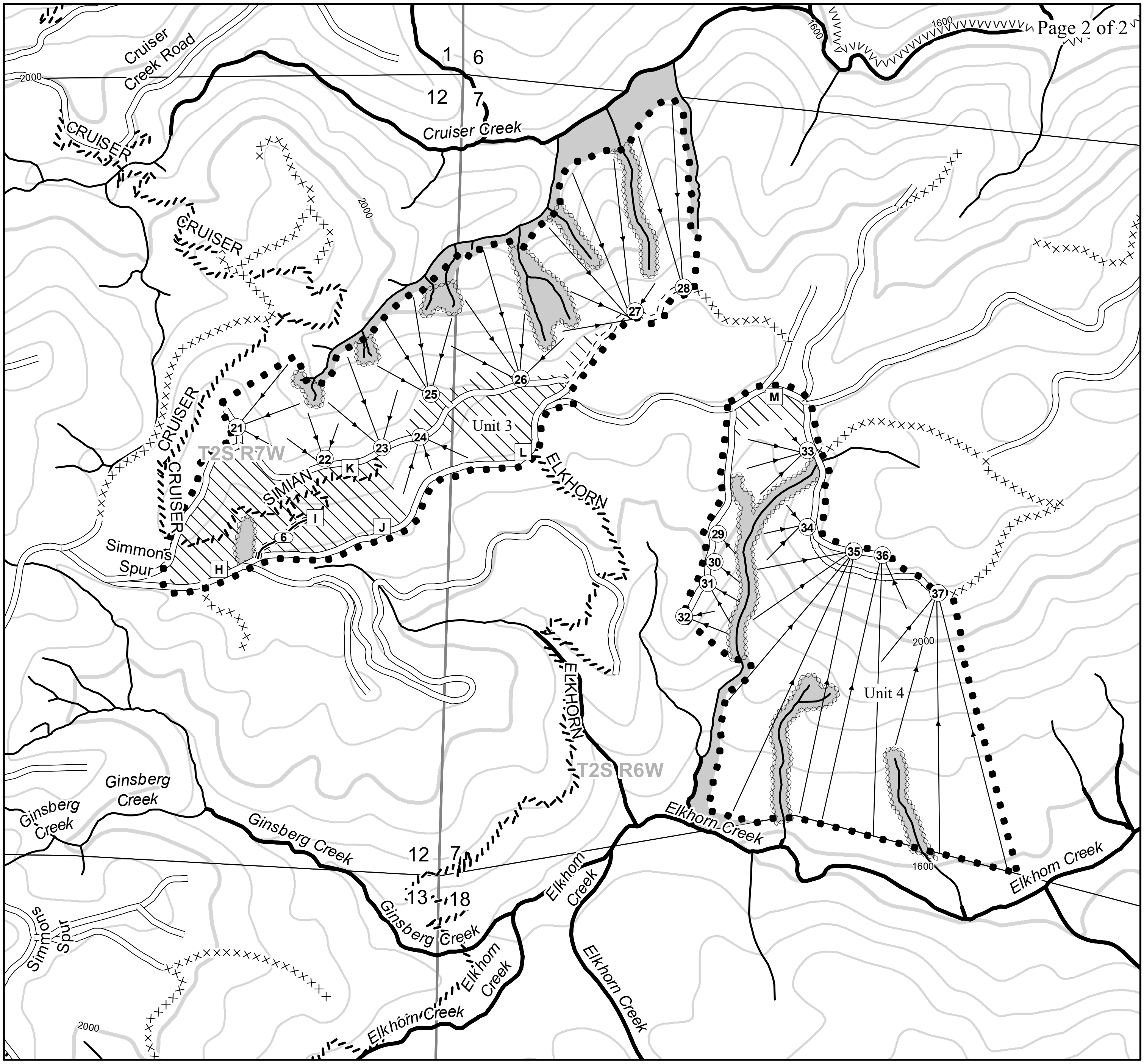
1:12,000
1 inch = 1,000 feet

0 250 500 1,000 1,500 2,000 Feet

N

NET ACRES

	TRACTOR	CABLE
UNIT 1	1	65
UNIT 2	33	78
UNIT 3	30	60
UNIT 4	2	80
TOTAL	66	284



- Timber Sale Boundary
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- Unsurfaced Road
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